



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 28, 2026 – 08:54 PM UTC

PDB ID : 4V55 / pdb_00004v55
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with gentamicin and 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 : 2007-06-17
Resolution : 4.00 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

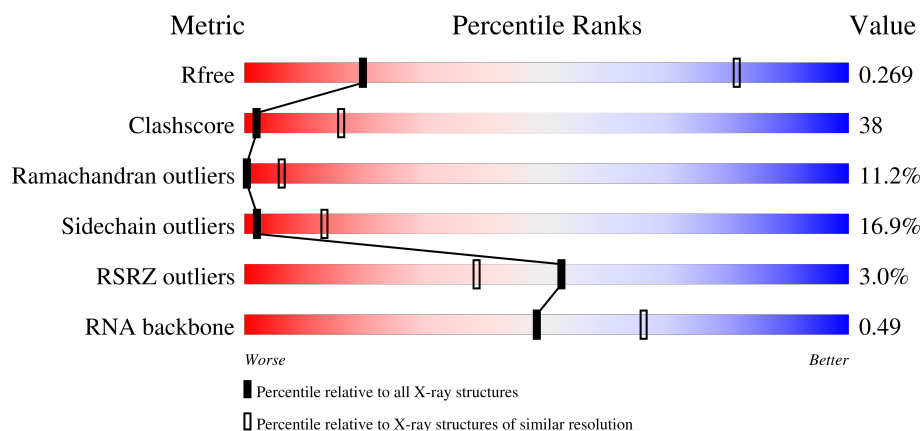
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.00 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1082 (4.20-3.80)
Clashscore	190562	1129 (4.20-3.80)
Ramachandran outliers	187476	1064 (4.20-3.80)
Sidechain outliers	187428	1055 (4.20-3.80)
RSRZ outliers	180081	1082 (4.20-3.80)
RNA backbone	3983	1017 (4.84-3.10)

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1542	24% 62% 12% ..
1	CA	1542	22% 65% 12% ..
2	AC	232	2% 28% 48% 12% 11%

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Mol	Chain	Length	Quality of chain
2	CC	232	
3	AD	205	
3	CD	205	
4	AE	166	
4	CE	166	
5	AF	135	
5	CF	135	
6	AG	178	
6	CG	178	
7	AH	129	
7	CH	129	
8	AI	129	
8	CI	129	
9	AJ	103	
9	CJ	103	
10	AK	128	
10	CK	128	
11	AL	123	
11	CL	123	
12	AM	117	
12	CM	117	
13	AN	100	
13	CN	100	
14	AO	89	
14	CO	89	

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Mol	Chain	Length	Quality of chain
15	AP	82	
15	CP	82	
16	AQ	83	
16	CQ	83	
17	AR	74	
17	CR	74	
18	AS	91	
18	CS	91	
19	AT	86	
19	CT	86	
20	AB	240	
20	CB	240	
21	AU	70	
21	CU	70	
22	BA	120	
22	DA	120	
23	BB	2904	
23	DB	2904	
24	BI	141	
24	DI	141	
25	BC	272	
25	DC	272	
26	BD	209	
26	DD	209	
27	BK	123	

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Mol	Chain	Length	Quality of chain
27	DK	123	
28	BP	114	
28	DP	114	
29	BE	201	
29	DE	201	
30	BY	58	
30	DY	58	
31	B0	56	
31	D0	56	
32	B4	38	
32	D4	38	
33	B1	54	
33	D1	54	
34	B3	64	
34	D3	64	
35	BV	94	
35	DV	94	
36	B2	46	
36	D2	46	
37	BL	144	
37	DL	144	
38	BM	136	
38	DM	136	
39	BX	63	
39	DX	63	

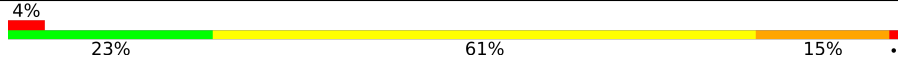
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Mol	Chain	Length	Quality of chain
40	BH	149	
40	DH	149	
41	BJ	142	
41	DJ	142	
42	BN	127	
42	DN	127	
43	BO	117	
43	DO	117	
44	BQ	117	
44	DQ	117	
45	BS	110	
45	DS	110	
46	BU	103	
46	DU	103	
47	BF	178	
47	DF	178	
48	BG	176	
48	DG	176	
49	BR	103	
49	DR	103	
50	BT	100	
50	DT	100	
51	BZ	78	
51	DZ	78	
52	BW	84	

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Mol	Chain	Length	Quality of chain
52	DW	84	
53	B6	185	
53	D6	185	

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	1623	-	-	-	X
54	MG	AA	1637	-	-	-	X

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 287083 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
			1021	634	206	178	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	C	N	O	S	0	0	0
			960	593	196	166	5			

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

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

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

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

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

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

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

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

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

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

- 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			

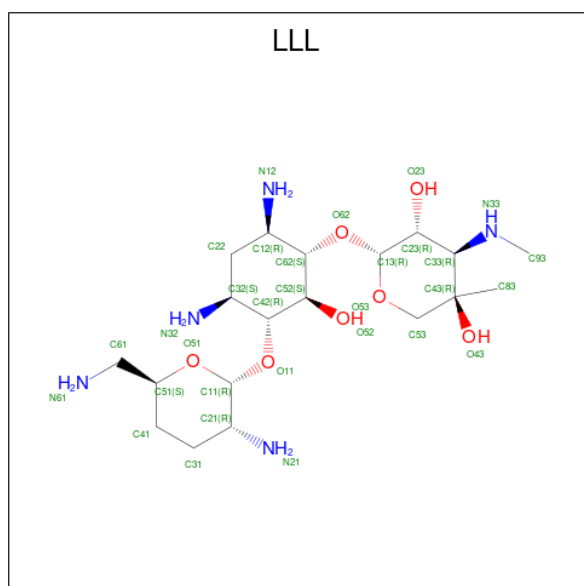
- Molecule 53 is a protein called 50S ribosomal protein RRF.

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

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

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

- Molecule 55 is (2R,3R,4R,5R)-2-((1S,2S,3R,4S,6R)-4,6-DIAMINO-3-((2R,3R,6S)-3-AMINO-6-(AMINOMETHYL)-TETRAHYDRO-2H-PYRAN-2-YLOXY)-2-HYDROXYCYCLOHEXYLOXY)-5-METHYL-4-(METHYLAMINO)-TETRAHYDRO-2H-PYRAN-3,5-DIOL (CCD ID: LLL) (formula: C₁₉H₃₉N₅O₇).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	AA	1	Total	C	N	O	0	0
			31	19	5	7		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	BB	1	Total	C	N	O	0	0
			31	19	5	7		
55	CA	1	Total	C	N	O	0	0
			31	19	5	7		
55	DB	1	Total	C	N	O	0	0
			31	19	5	7		

- Molecule 56 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	287	Total	O	0	0
			287	287		
57	AE	3	Total	O	0	0
			3	3		
57	AK	1	Total	O	0	0
			1	1		
57	AL	3	Total	O	0	0
			3	3		
57	AN	4	Total	O	0	0
			4	4		
57	AT	2	Total	O	0	0
			2	2		
57	BB	492	Total	O	0	0
			492	492		
57	BC	6	Total	O	0	0
			6	6		
57	BD	1	Total	O	0	0
			1	1		
57	BE	3	Total	O	0	0
			3	3		
57	BL	3	Total	O	0	0
			3	3		
57	BT	1	Total	O	0	0
			1	1		

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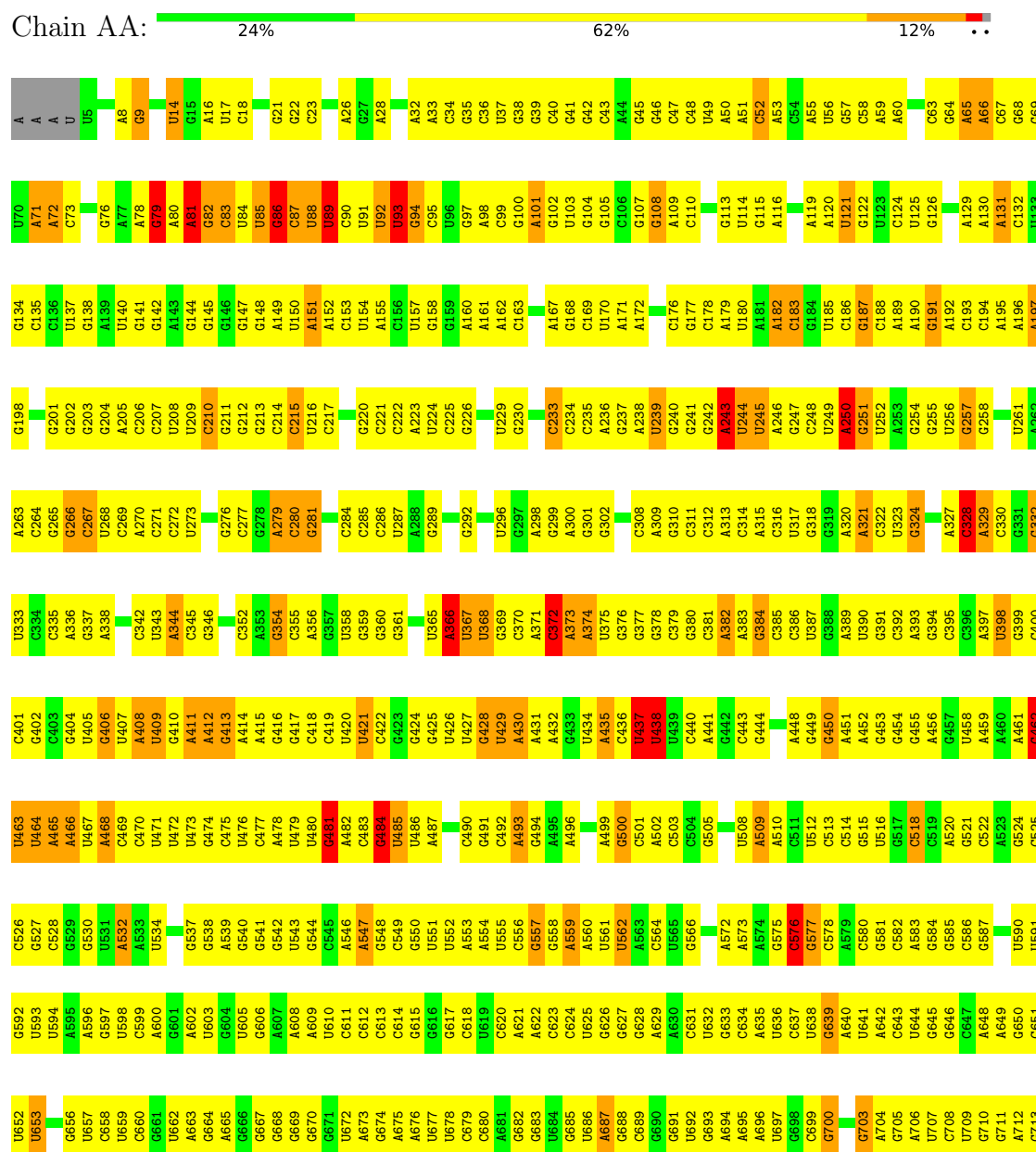
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	CA	296	Total 296	O 296	0	0
57	CE	3	Total 3	O 3	0	0
57	CK	1	Total 1	O 1	0	0
57	CL	3	Total 3	O 3	0	0
57	CN	4	Total 4	O 4	0	0
57	CT	2	Total 2	O 2	0	0
57	DB	500	Total 500	O 500	0	0
57	DC	6	Total 6	O 6	0	0
57	DE	2	Total 2	O 2	0	0
57	DL	2	Total 2	O 2	0	0
57	DR	1	Total 1	O 1	0	0
57	DT	1	Total 1	O 1	0	0

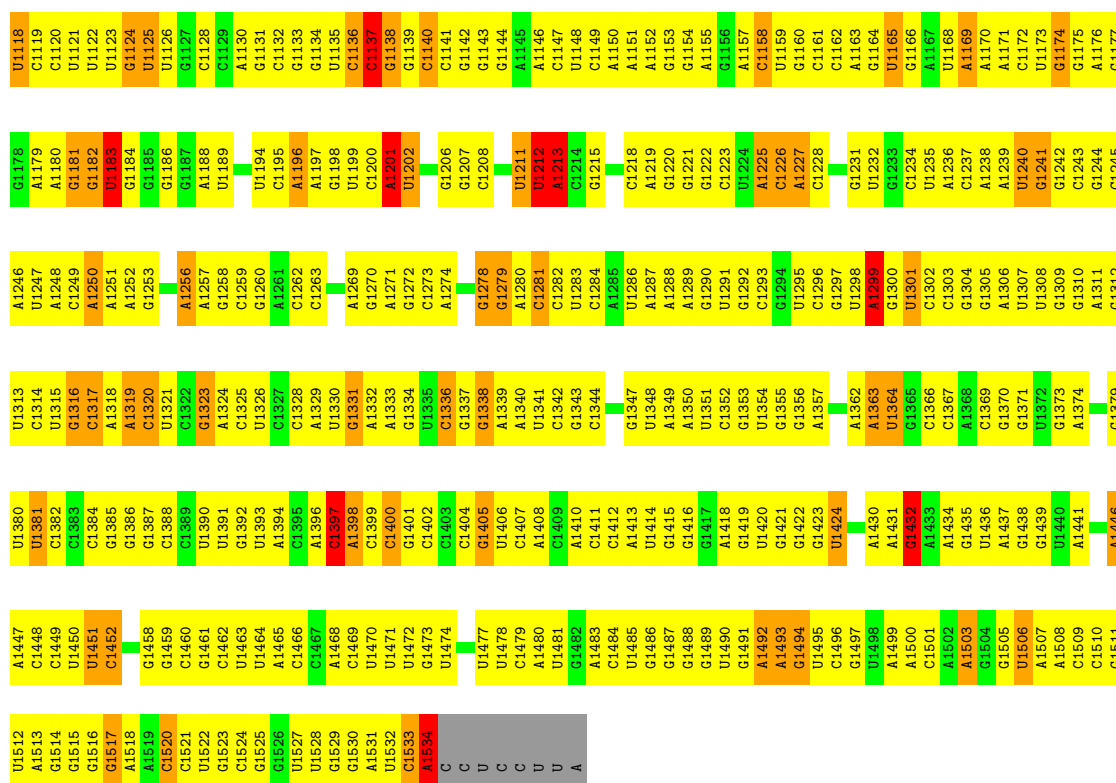
3 Residue-property plots

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.

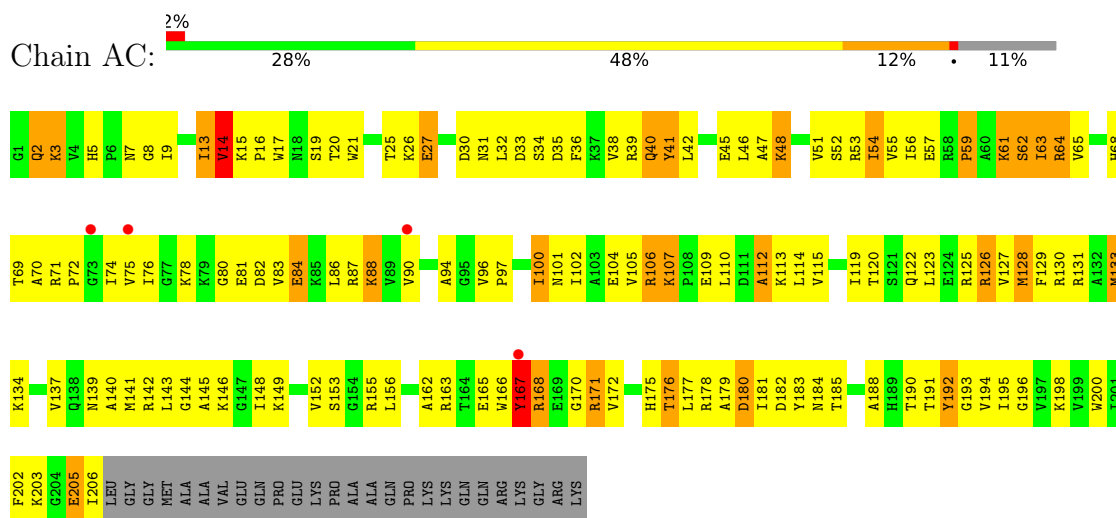
• Molecule 1: 16S rRNA



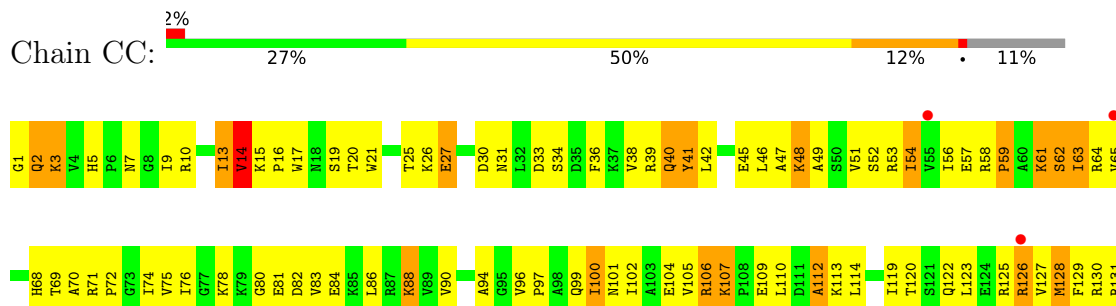
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A194	A195	A196	A197	A198	A199	A200	A201	A202	A203	A204	A205	A206	A207	A208	A209	A210	A211	A212	A213	A214	A215	A216	A217	A218	A219	A220	A221	A222	A223	A224	A225	A226	A227	A228	A229	A230	A231	A232	A233	A234	A235	A236	A237	A238	A239	A240	A241	A242	A243	A244	A245	A246	A247	A248	A249	A250	A251	A252	A253	A254	A255	A256	A257	A258	A259	A260	A261	A262	A263	A264	A265	A266	A267	A268	A269	A270	A271	A272	A273	A274	A275	A276	A277	A278	A279	A280	A281	A282	A283	A284	A285	A286	A287	A288	A289	A290	A291	A292	A293	A294	A295	A296	A297	A298	A299	A300	A301	A302	A303	A304	A305	A306	A307	A308	A309	A310	A311	A312	A313	A314	A315	A316	A317	A318	A319	A320	A321	A322	A323	A324	A325	A326	A327	A328	A329	A330	A331	A332	A333	A334	A335	A336	A337	A338	A339	A340	A341	A342	A343	A344	A345	A346	A347	A348	A349	A350	A351	A352	A353	A354	A355	A356	A357	A358	A359	A360	A361	A362	A363	A364	A365	A366	A367	A368	A369	A370	A371	A372	A373	A374	A375	A376	A377	A378	A379	A380	A381	A382	A383	A384	A385	A386	A387	A388	A389	A390	A391	A392	A393	A394	A395	A396	A397	A398	A399	A400	A401	A402	A403	A404	A405	A406	A407	A408	A409	A410	A411	A412	A413	A414	A415	A416	A417	A418	A419	A420	A421	A422	A423	A424	A425	A426	A427	A428	A429	A430	A431	A432	A433	A434	A435	A436	A437	A438	A439	A440	A441	A442	A443	A444	A445	A446	A447	A448	A449	A450	A451	A452	A453	A454	A455	A456	A457	A458	A459	A460	A461	A462	A463	A464	A465	A466	A467	A468	A469	A470	A471	A472	A473	A474	A475	A476	A477	A478	A479	A480	A481	A482	A483	A484	A485	A486	A487	A488	A489	A490	A491	A492	A493	A494	A495	A496	A497	A498	A499	A500	A501	A502	A503	A504	A505	A506	A507	A508	A509	A510	A511	A512	A513	A514	A515	A516	A517	A518	A519	A520	A521	A522	A523	A524	A525	A526	A527	A528	A529	A530	A531	A532	A533	A534	A535	A536	A537	A538	A539	A540	A541	A542	A543	A544	A545	A546	A547	A548	A549	A550	A551	A552	A553	A554	A555	A556	A557	A558	A559	A560	A561	A562	A563	A564	A565	A566	A567	A568	A569	A570	A571	A572	A573	A574	A575	A576	A577	A578	A579	A580	A581	A582	A583	A584	A585	A586	A587	A588	A589	A590	A591	A592	A593	A594	A595	A596	A597	A598	A599	A600	A601	A602	A603	A604	A605	A606	A607	A608	A609	A610	A611	A612	A613	A614	A615	A616	A617	A618	A619	A620	A621	A622	A623	A624	A625	A626	A627	A628	A629	A630	A631	A632	A633	A634	A635	A636	A637	A638	A639	A640	A641	A642	A643	A644	A645	A646	A647	A648	A649	A650	A651	A652	A653	A654	A655	A656	A657	A658	A659	A660	A661	A662	A663	A664	A665	A666	A667	A668	A669	A670	A671	A672	A673	A674	A675	A676	A677	A678	A679	A680	A681	A682	A683	A684	A685	A686	A687	A688	A689	A690	A691	A692	A693	A694	A695	A696	A697	A698	A699	A700	A701	A702	A703	A704	A705	A706	A707	A708	A709	A710	A711	A712	A713	A714	A715	A716	A717	A718	A719	A720	A721	A722	A723	A724	A725	A726	A727	A728	A729	A730	A731	A732	A733	A734	A735	A736	A737	A738	A739	A740	A741	A742	A743	A744	A745	A746	A747	A748	A749	A750	A751	A752	A753	A754	A755	A756	A757	A758	A759	A760	A761	A762	A763	A764	A765	A766	A767	A768	A769	A770	A771	A772	A773	A774	A775	A776	A777	A778	A779	A780	A781	A782	A783	A784	A785	A786	A787	A788	A789	A790	A791	A792	A793	A794	A795	A796	A797	A798	A799	A800	A801	A802	A803	A804	A805	A806	A807	A808	A809	A810	A811	A812	A813	A814	A815	A816	A817	A818	A819	A820	A821	A822	A823	A824	A825	A826	A827	A828	A829	A830	A831	A832	A833	A834	A835	A836	A837	A838	A839	A840	A841	A842	A843	A844	A845	A846	A847	A848	A849	A850	A851	A852	A853	A854	A855	A856	A857	A858	A859	A860	A861	A862	A863	A864	A865	A866	A867	A868	A869	A870	A871	A872	A873	A874	A875	A876	A877	A878	A879	A880	A881	A882	A883	A884	A885	A886	A887	A888	A889	A890	A891	A892	A893	A894	A895	A896	A897	A898	A899	A900	A901	A902	A903	A904	A905	A906	A907	A908	A909	A910	A911	A912	A913	A914	A915	A916	A917	A918	A919	A920	A921	A922	A923	A924	A925	A926	A927	A928	A929	A930	A931	A932	A933	A934	A935	A936	A937	A938	A939	A940	A941	A942	A943	A944	A945	A946	A947	A948	A949	A950	A951	A952	A953	A954	A955	A956	A957	A958	A959	A960	A961	A962	A963	A964	A965	A966	A967	A968	A969	A970	A971	A972	A973	A974	A975	A976	A977	A978	A979	A980	A981	A982	A983	A984	A985	A986	A987	A988	A989	A990	A991	A992	A993	A994	A995	A996	A997	A998	A999	G1000	G1001	G1002	G1003	G1004	G1005	G1006	G1007	G1008	G1009	G1010	G1011	G1012	G1013	G1014	G1015	G1016	G1017	G1018	G1019	G1020	G1021	G1022	G1023	G1024	G1025	G1026	G1027	G1028	G1029	G1030	G1031	G1032	G1033	G1034	G1035	G1036	G1037	G1038	G1039	G1101	G1105	G1106	G1107	G1108	G1109	G1110	G1111	G1112	G1113	G1114	G1115	G1116	G1117	G1118	G1119	G1120	G1121	G1122	G1123	G1124	G1125	G1126	G1127	G1128	G1129	G1130	G1131	G1132	G1133	G1134

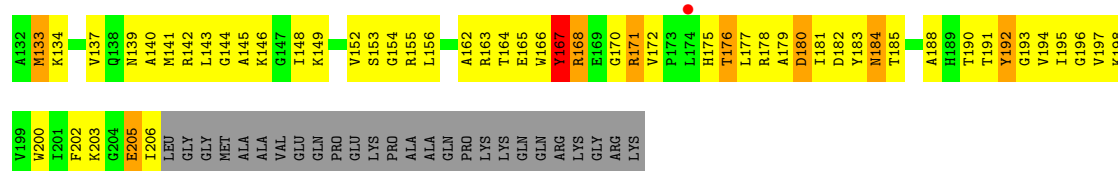


• Molecule 2: 30S ribosomal protein S3

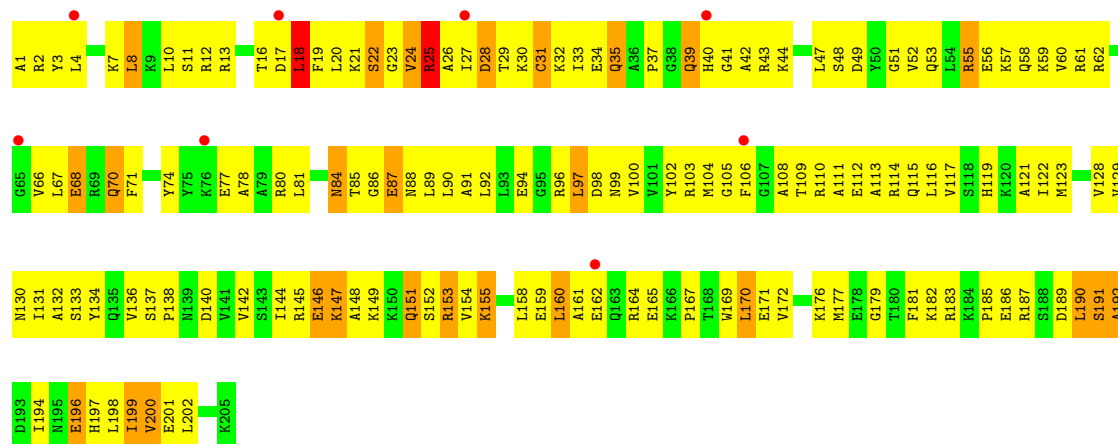


• Molecule 2: 30S ribosomal protein S3

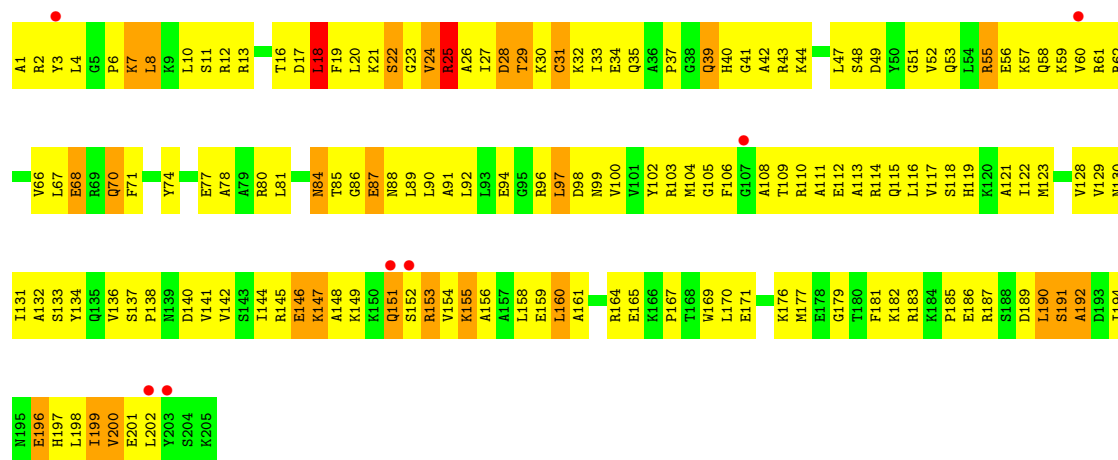




• Molecule 3: 30S ribosomal protein S4

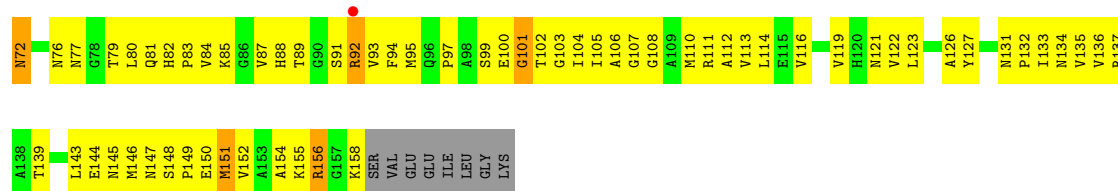


• Molecule 3: 30S ribosomal protein S4



• Molecule 4: 30S ribosomal protein S5

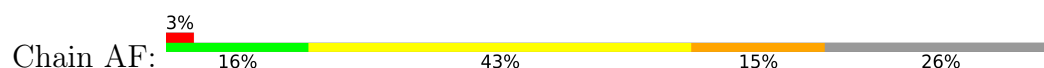




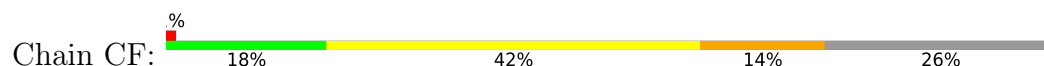
• Molecule 4: 30S ribosomal protein S5



• Molecule 5: 30S ribosomal protein S6

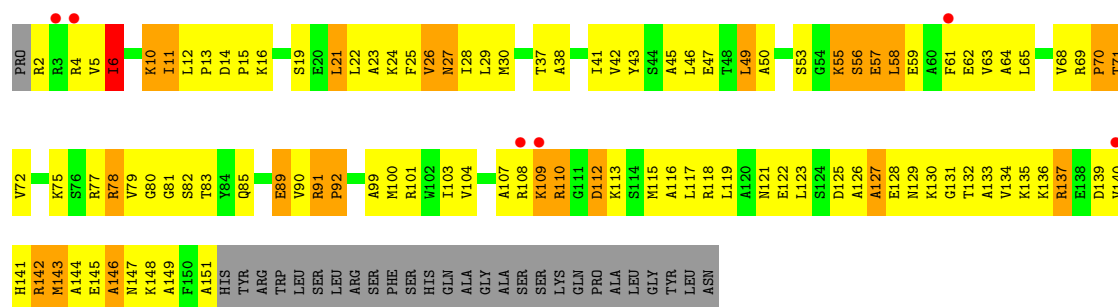


• Molecule 5: 30S ribosomal protein S6

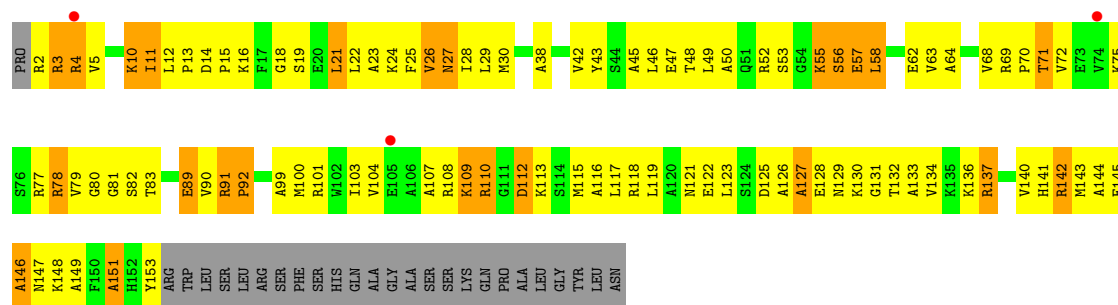


• Molecule 6: 30S ribosomal protein S7

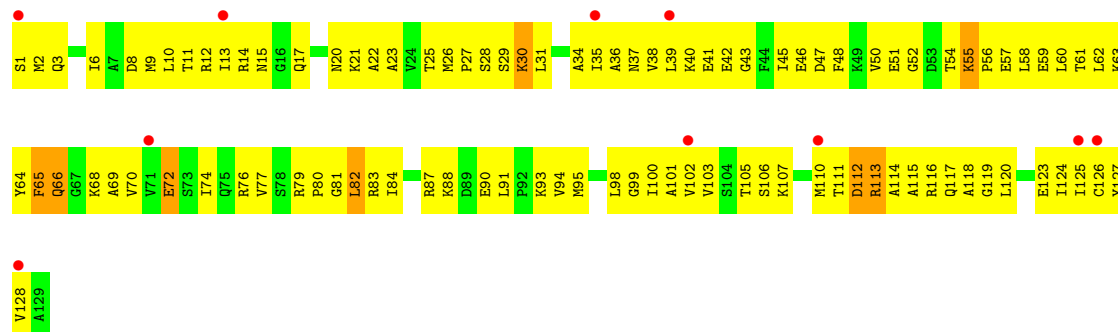




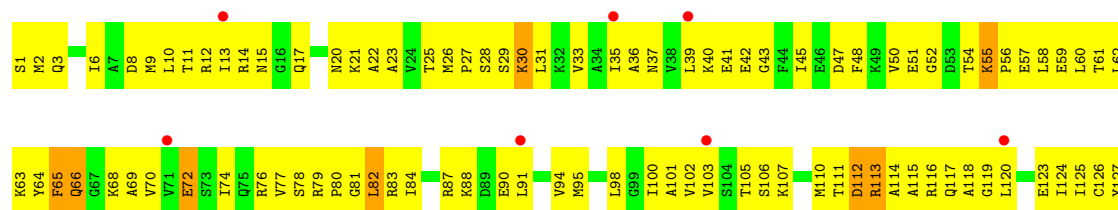
• Molecule 6: 30S ribosomal protein S7



• Molecule 7: 30S ribosomal protein S8

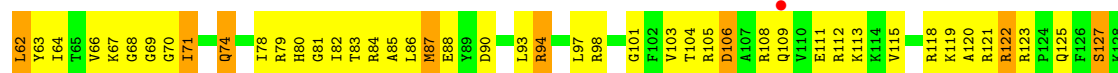
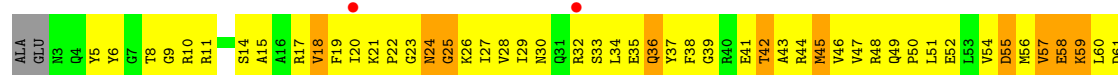


• Molecule 7: 30S ribosomal protein S8

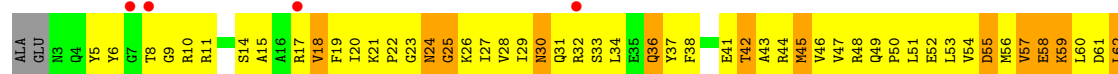




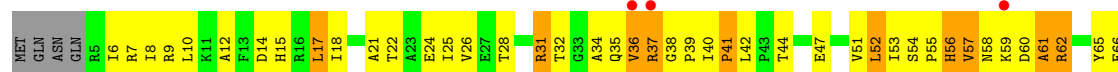
- Molecule 8: 30S ribosomal protein S9



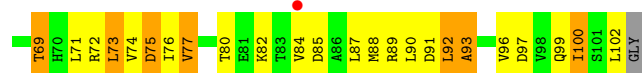
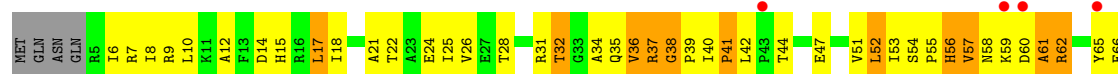
- Molecule 8: 30S ribosomal protein S9



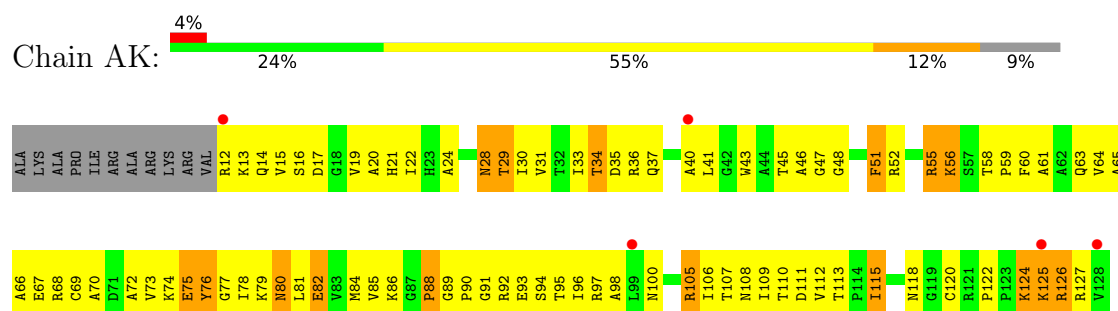
- Molecule 9: 30S ribosomal protein S10



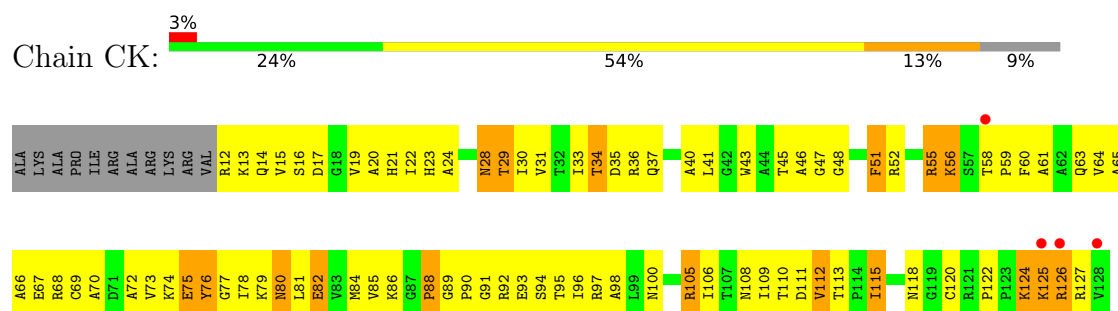
- Molecule 9: 30S ribosomal protein S10



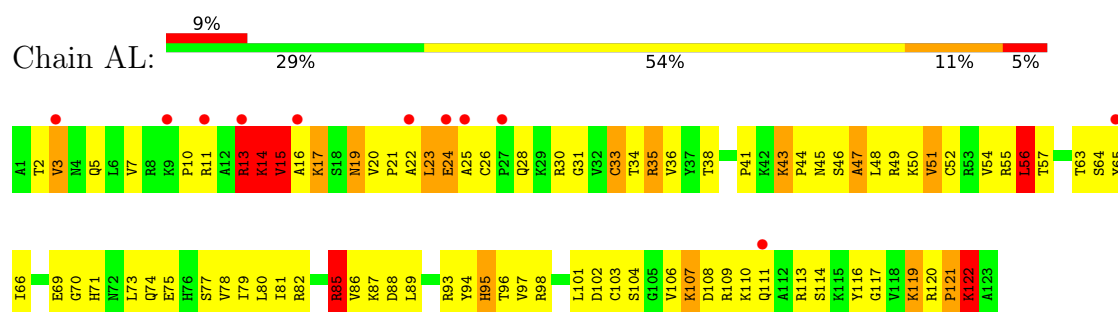
- Molecule 10: 30S ribosomal protein S11



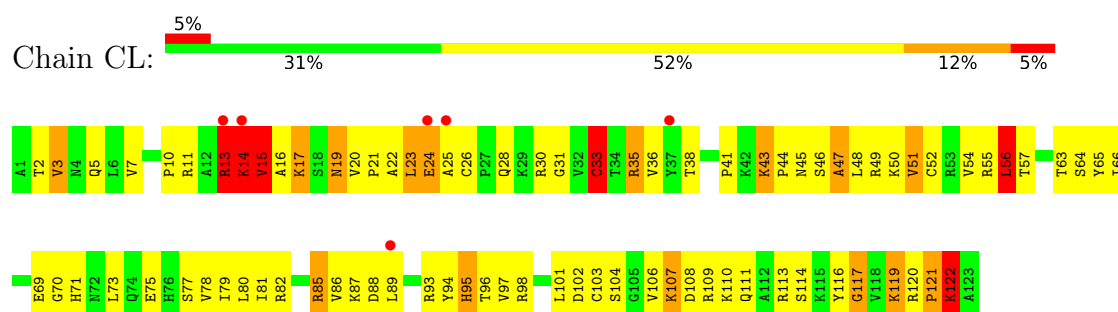
- Molecule 10: 30S ribosomal protein S11



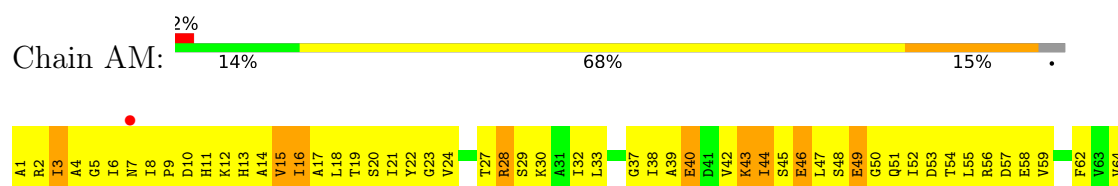
- Molecule 11: 30S ribosomal protein S12



- Molecule 11: 30S ribosomal protein S12

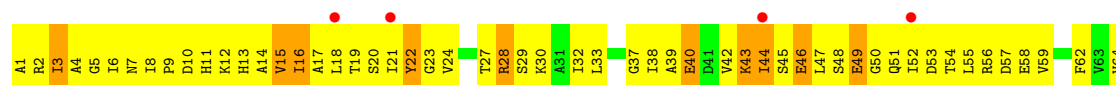


- Molecule 12: 30S ribosomal protein S13

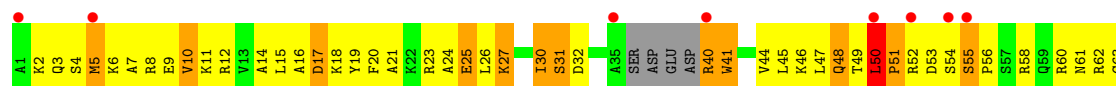




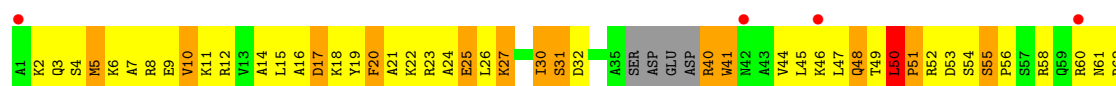
• Molecule 12: 30S ribosomal protein S13



• Molecule 13: 30S ribosomal protein S14



• Molecule 13: 30S ribosomal protein S14

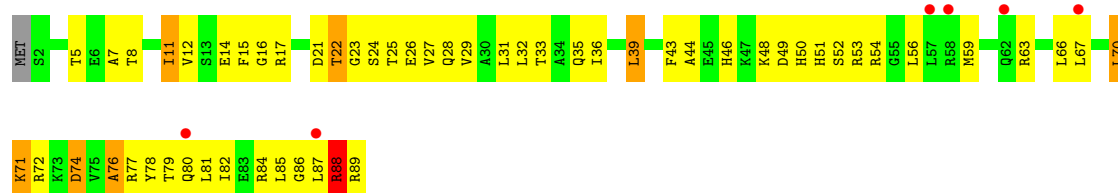


• Molecule 14: 30S ribosomal protein S15

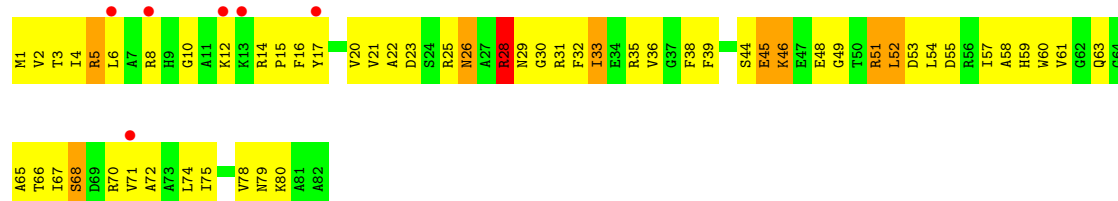


• Molecule 14: 30S ribosomal protein S15

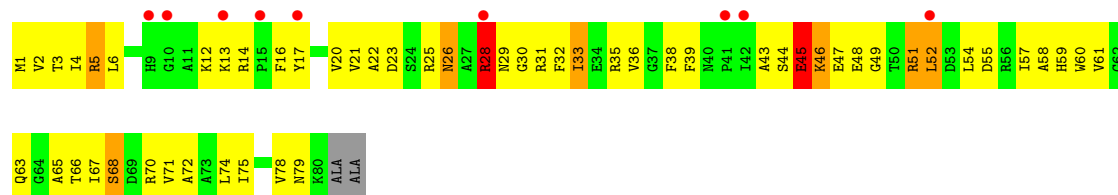




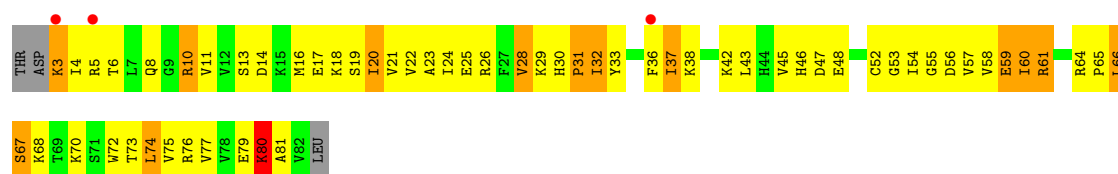
• Molecule 15: 30S ribosomal protein S16



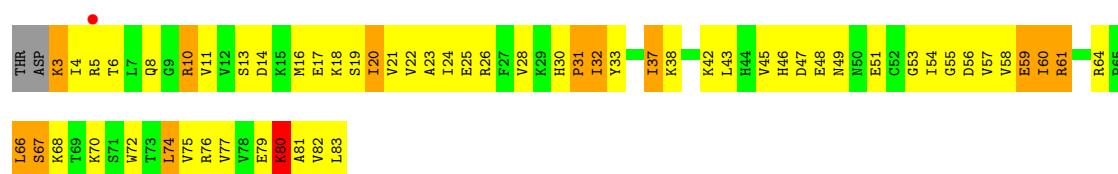
• Molecule 15: 30S ribosomal protein S16



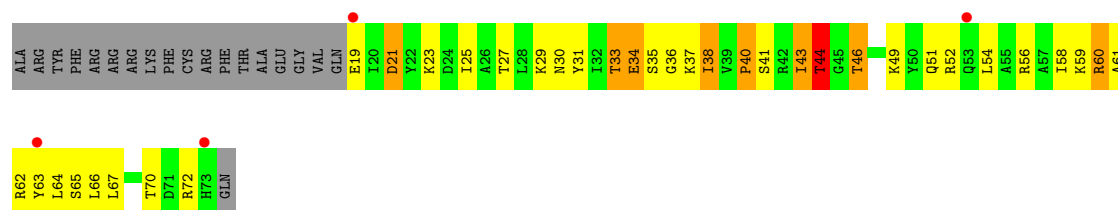
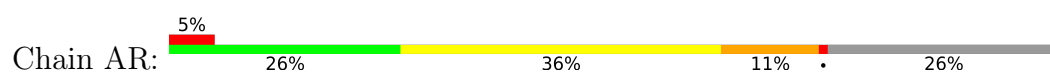
• Molecule 16: 30S ribosomal protein S17



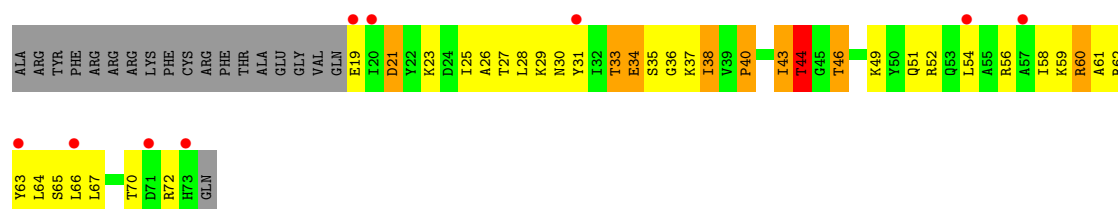
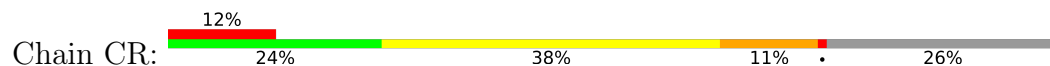
• Molecule 16: 30S ribosomal protein S17



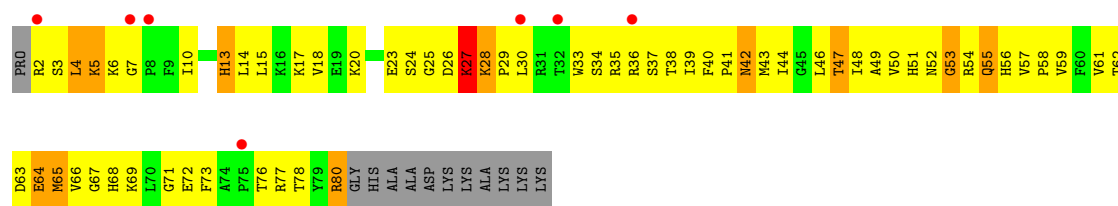
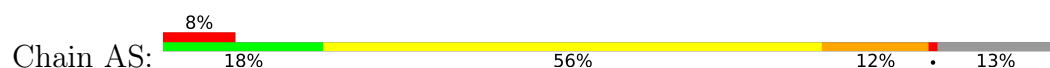
• Molecule 17: 30S ribosomal protein S18



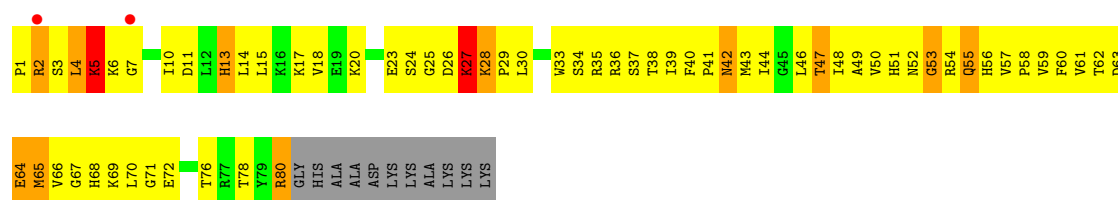
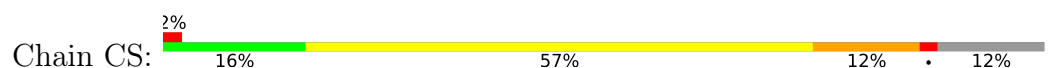
- Molecule 17: 30S ribosomal protein S18



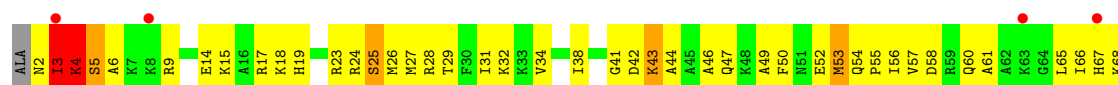
- Molecule 18: 30S ribosomal protein S19



- Molecule 18: 30S ribosomal protein S19

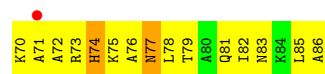


- Molecule 19: 30S ribosomal protein S20

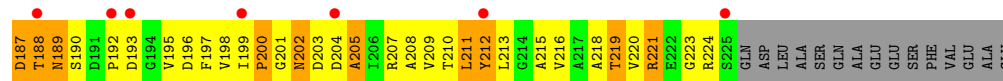
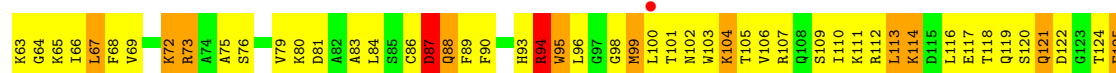
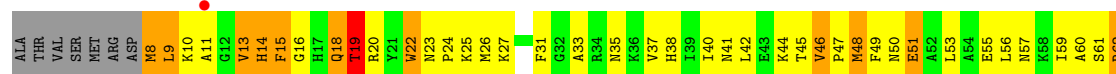




• Molecule 19: 30S ribosomal protein S20



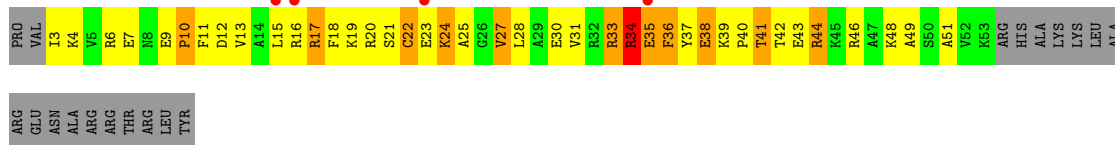
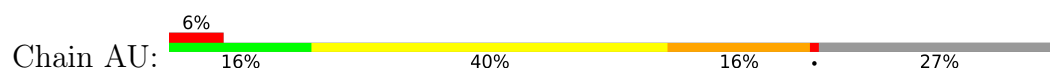
• Molecule 20: 30S ribosomal protein S2



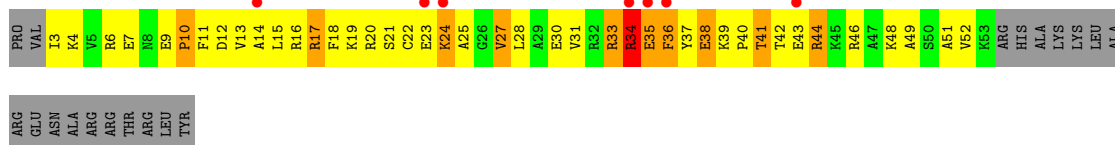
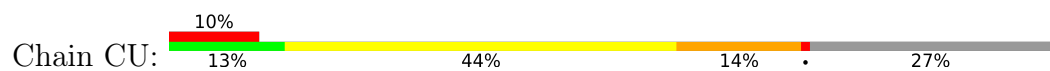
• Molecule 20: 30S ribosomal protein S2



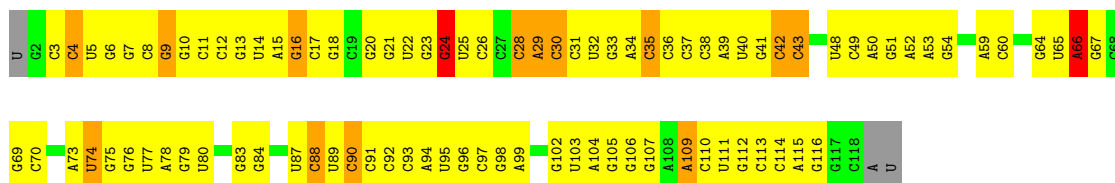
• Molecule 21: 30S ribosomal protein S21



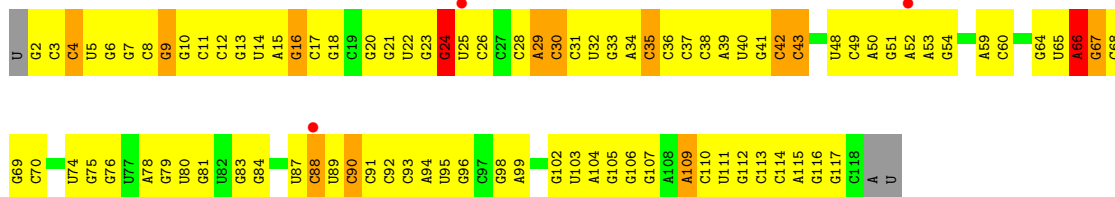
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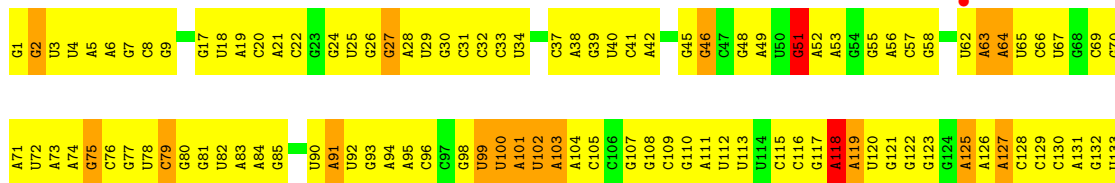
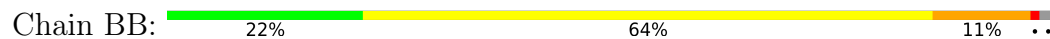
• Molecule 22: 5S rRNA



• Molecule 22: 5S rRNA



• Molecule 23: 23S rRNA







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	C2902	U2778	A2778	C2709	C2644	G2582	C2515	U2446	A2380	C2254	
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• Molecule 23: 23S rRNA

Chain DB: 22% 63% 12% ..

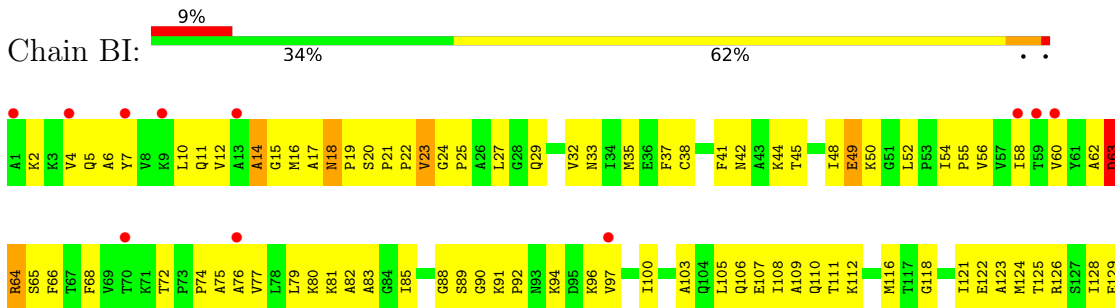
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G1137	G1068	U999	U934	G869	U606	A730	G669	U607	U545	A472	C407	C335	C274	G132
G1138	A1069	U870	C935	U870	U607	C731	A670	A608	U546	G477	C408	C336	C275	U133
G1139	A1001	U871	A936	U871	A609	G736	C672	A609	A547	A478	C409	C337	U276	G134
C1140	G1002	U872	C937	U872	C610	C737	C673	C610	G549	A479	G410	G338	G277	U135
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A1142	A1077	G875	G940	G874	G612	A739	G675	G612	C551	G481	A412	C341	A278	U137
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A1144	A1080	C876	G942	C876	U813	C740	A677	A614	G553	A483	C414	A343	U280	U139
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C1150	A1086	G	G948	G	A819	U747	U683	A621	G559	A493	U421	A349	U286	A145
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C1158	G1091	U	G953	U	U824	U755	U688	A626	C564	G500	U427	G356	G291	A222
G1159	G1092	C	G954	C	A825	A756	A689	A627	C565	G500	U428	C357	U292	A223
U1160	G1093	C	U955	C	U826	G757	G690	A627	U566	G500	A429	U358	G295	U150
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G1162	A1095	G	C957	G	U828	G759	C692	A631	U568	A505	U431	U360	G297	A156
U1163	U1096	A	U958	A	U828	G760	C693	A632	G569	A506	U432	G361	G298	G159
C1164	A1097	C	A959	C	G831	A761	C694	A633	U570	A507	C433	A362	A299	A160
A1165	U1098	U	A960	U	U832	G761	U694	A634	U571	A508	C434	G363	G300	A161
G1166	G1099	U	C961	U	A833	A764	G696	C635	A572	C509	U435	C364	G301	C230
C1167	C1100	A	G962	A	G834	G765	G697	C636	U573	C510	C436	U365	C302	U162
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A1170	A1103	A999	C965	A900	C837	G768	U700	U639	U576	A513	C440	A371	U306	A165
G1171	G1036	C901	U967	C901	U839	U770	G701	C640	G577	A514	U441	G372	G307	U166
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U1174	G1041	G	U970	G	U842	A773	G704	A644	A582	C517	C444	A375	A310	A172
A1175	C1042	A909	G971	A909	A845	G774	A706	C645	G583	U519	C445	G377	G311	A173
G1176	C1043	A910	A972	A910	U846	G775	G707	U646	C584	U520	U446	G378	A312	U174
U1177	C1044	A911	A973	A911	U847	G776	G708	G647	G585	U521	C446	G379	G247	G175
C1178	C1045	C912	G974	C912	U847	G777	U709	G648	G586	A522	U451	C383	G248	A176
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U1180	G1047	U913	A979	U913	A849	G780	G711	C650	U588	G524	A453	C385	G250	G178
C1181	A1048	G	A980	G	U850	A781	G712	G651	U589	U525	A454	G386	A251	C179
U1182	C1049	A917	A981	A917	C851	A782	G713	U652	A590	A526	C455	U387	G252	G180
G1183	U1119	A918	C982	A918	U852	A783	U714	U653	U591	C527	C456	U388	C253	A181
U1184	A1051	U919	A983	U919	C853	G784	A715	A654	A592	A528	A457	A391	U321	A182
G1185	C1052	A920	C984	A920	C854	G785	A716	A655	U593	G531	C458	U392	A322	C183
C1186	C1053	C921	G855	C921	G855	G786	C717	G656	U594	A532	U459	C393	C323	G184
G1187	A1054	C922	C986	C922	G856	C787	A718	U657	C595	A533	A460	U394	A324	C185
U1188	G1055	A925	G857	A925	G857	A788	C719	U658	U596	G533	C461	U395	G325	G186
A1189	G1056	G926	G858	G926	G858	U789	U720	G659	G597	U534	C461	G396	G326	A187
G1190	A1057	A927	G859	A927	G859	A794	A721	C660	U598	A538	U464	G400	G327	G189
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G1192	U1060	A928	C992	A928	A861	C796	A722	A661	G600	G539	A466	A401	G329	C192
U1193	U1061	U929	G993	U929	G862	C797	G725	G664	C601	C540	G467	A402	A330	A191
A1194	G1062	C930	A963	C930	A863	G797	G726	U665	A602	C541	U403	G468	A256	A195
G1195	G1063	U931	C964	U931	G864	G799	A727	A666	A603	C542	C469	A404	G266	A196

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C	G2069	A2001	A1927	U1865	U1796	C1727	G1661	U1584	G1521	G1489	A1395	C1330	A1262	G1197
U	A2071	C2001	A1928	A1866	G1797	C1728	U1662	C1585	U1522	U1460	U1396	G1331	U1263	U1198
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	U2074	A2009	A1932	C1869	C1800	G1731	A1665	A1591	A1525	C1463	C1399	G1334	U1267	U1201
	U2075	G2010	G1933	C1870	A1801	G1732	A1666	C1592	C1526	G1464	U1400	C1335	U1202	G1202
	U2076	U2011	C1934	A1871	A1802	C1733	G1667	C1593	G1527	U1401	U1402	C1336	A1268	U1203
	A2077	G2012	G1935	C1873	A1803	G1734	A1668	U1594	A1528	U1402	A1269	G1337	A1269	A1204
	U2078	A2013	A1936	C1874	C1804	G1735	A1669	C1595	G1529	U1403	C1270	G1338	C1270	A1205
	U2079	G2014	A1937	A1875	C1806	A1736	G1670	A1596	C1533	U1405	U1272	U1340	G1206	G1206
	A2080	A2015	G1937	A1876	G1807	G1737	U1671	A1597	U1534	U1406	A1273	G1341	C1207	C1208
	U2081	U2016	G1938	A1877	G1807	G1738	G1674	A1598	A1535	G1407	U1274	U1341	U1273	C1208
	A2082	A2019	C1940	C1878	G1811	A1739	G1675	U1599	C1536	G1408	A1274	C1345	A1274	U1209
	G2083	C2020	C1941	G1879	U1812	G1740	G1676	C1600	C1539	G1409	A1275	C1346	A1275	G1210
	C2084	A2021	U1943	U1880	G1813	C1741	A1677	U1600	U1540	U1411	A1276	G1347	A1276	C1211
	C2145	C2022	U1944	C1881	G1814	U1742	A1678	A1603	G1541	U1412	G1277	C1348	C1277	A1213
	C2146	U2022	U1944	U1882	A1815	G1743	A1679	C1604	C1541	U1413	G1278	C1349	G1279	U1214
	A2147	C2023	G1945	U1883	C1816	A1744	A1679	C1605	U1542	U1416	G1280	C1350	G1280	G1215
	G2148	G2024	U1946	G1884	G1817	A1745	U1680	C1606	G1543	G1478	A1287	C1351	G1281	G1216
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	U2091	G2027	C1949	C1887	U1820	A1754	U1683	A1609	G1546	U1481	C1290	G1354	C1290	U1224
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	G2093	C2029	U1955	A1889	C1822	U1759	C1685	C1611	A1543	G1483	U1287	G1356	C1221	G1220
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	C2095	U2031	C1957	G1891	G1824	C1760	G1687	G1613	U1550	U1485	C1289	G1358	U1223	G1223
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	A2101	A2037	C1965	A1897	C1830	G1766	U1693	G1623	C1556	G1427	G1295	G1368	G1295	G1235
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	U2109	A2048	C1973	C1905	C1844	C1774	A1705	U1636	C1564	A1502	G1310	U1376	U1242	U1242
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	U	C2060	A1977	G1907	G1845	G1776	C1708	C1639	A1566	A1504	G1310	G1378	U1244	G1244
	G	A2051	C2060	C1908	G1846	U1777	U1709	A1640	G1567	U1504	G1314	G1379	G1245	G1245
	A	A2052	G1983	G1909	A1847	U1778	G1710	U1641	U1568	A1505	C1315	U1379	G1246	A1246
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	A	C2055	G1986	A1912	A1853	U1784	A1713	U1648	A1571	A1508	G1318	G1382	U1249	U1249
	C	G2056	A1987	A1913	A1854	A1785	U1714	U1649	G1572	A1509	C1319	G1383	G1250	G1250
	U	A2060	G1988	U1915	A1854	A1786	G1715	U1648	C1573	U1510	G1320	A1385	U1251	G1251
	G	A2061	C1989	A1916	U1855	A1787	U1716	G1649	C1574	C1512	A1321	G1386	G1252	U1252
	U	C2062	U1991	A1917	U1856	C1788	G1717	A1650	U1575	G1513	A1322	C1387	A1253	A1253
	C	A2063	G1992	A1918	G1857	U1789	G1718	A1652	C1576	G1514	C1323	G1388	G1324	G1266
	G	C2064	U1993	A1919	U1858	C1790	G1719	G1653	C1577	A1515	U1325	G1389	U1257	G1266
	A2184	C2065	C1994	U1919	G1860	A1791	U1720	A1654	U1578	G1516	G1326	U1390	C1257	G1266
	U2185	G2066	G1995	U1923	G1861	G1792	G1721	A1655	A1579	G1517	U1326	U1391	U1258	U1258
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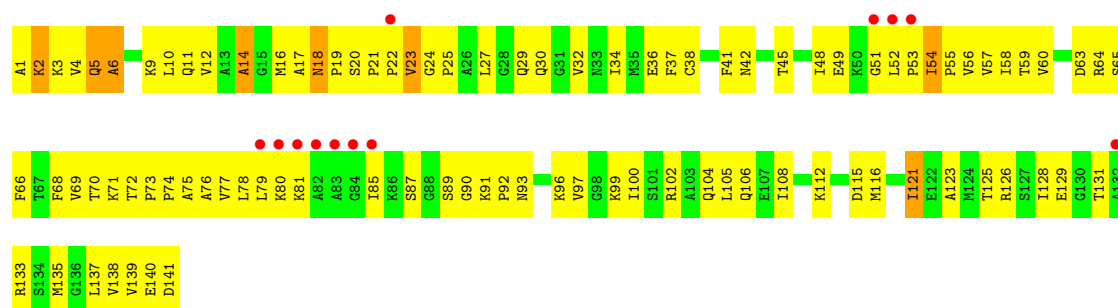


- Molecule 24: 50S ribosomal protein L11

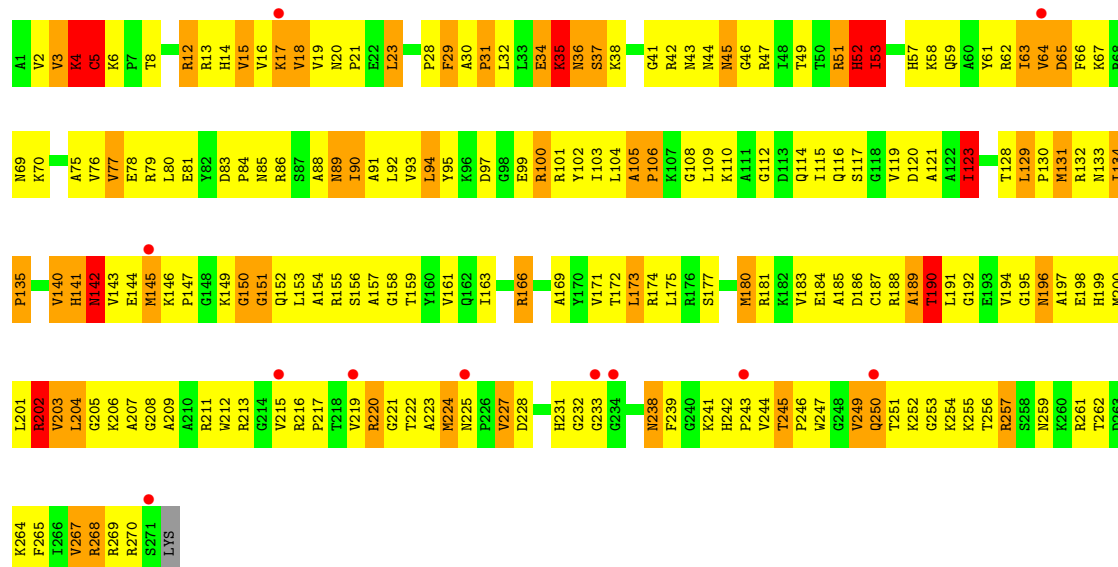




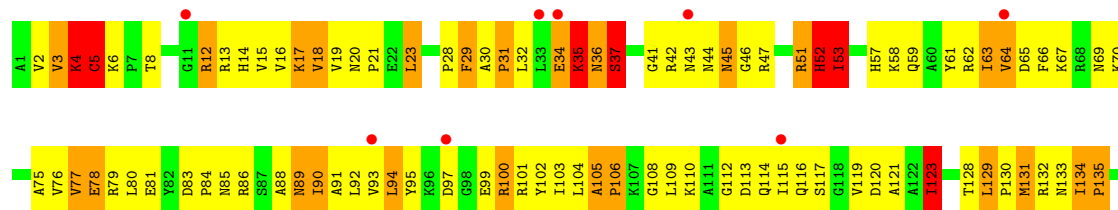
• Molecule 24: 50S ribosomal protein L11

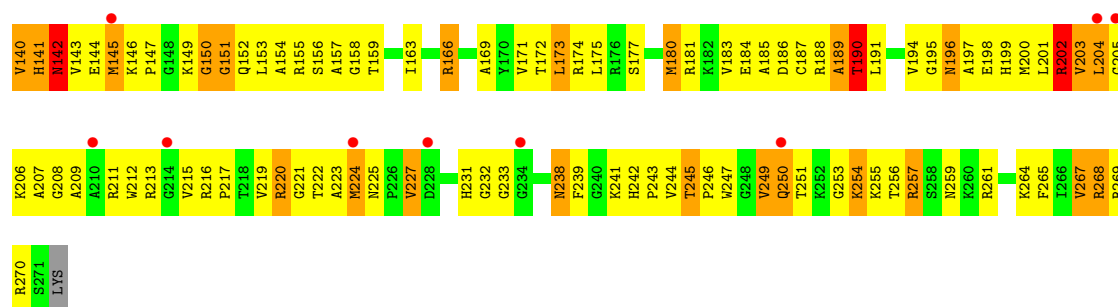


• Molecule 25: 50S ribosomal protein L2

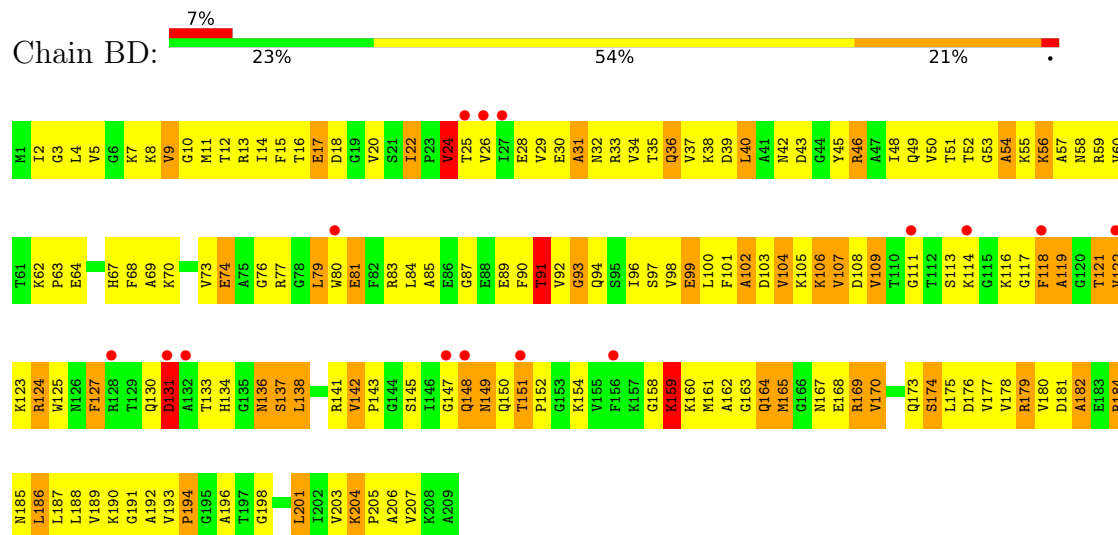


• Molecule 25: 50S ribosomal protein L2

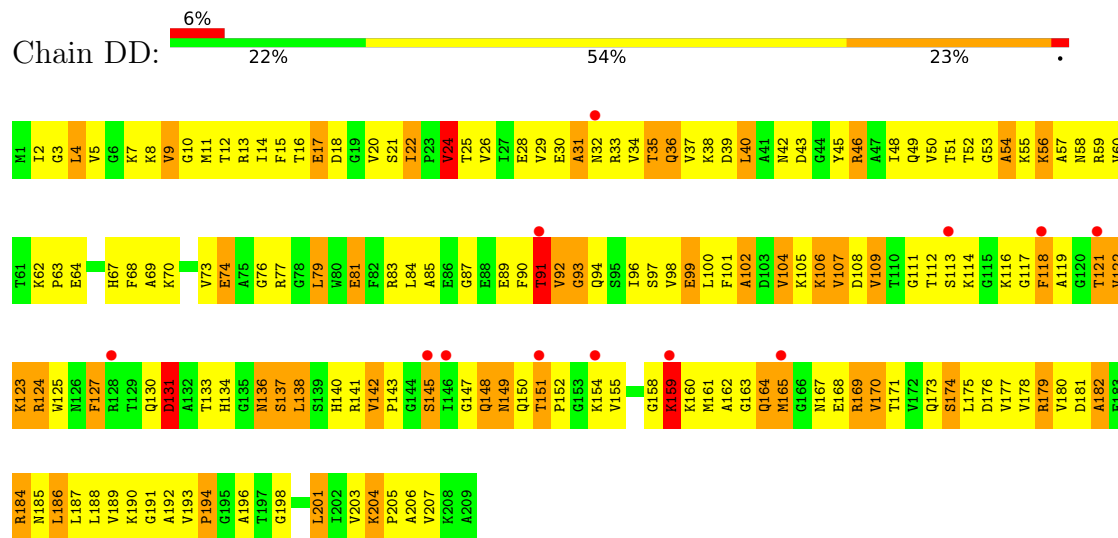




• Molecule 26: 50S ribosomal protein L3



• Molecule 26: 50S ribosomal protein L3

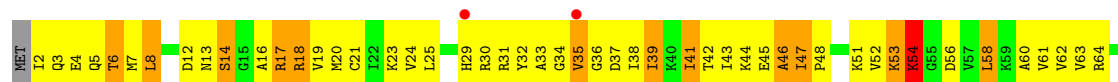


• Molecule 27: 50S ribosomal protein L14

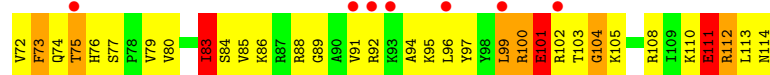
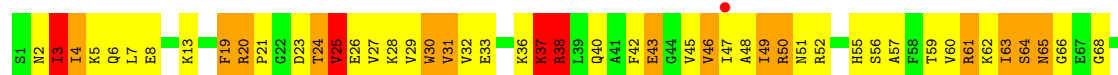




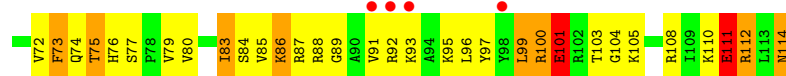
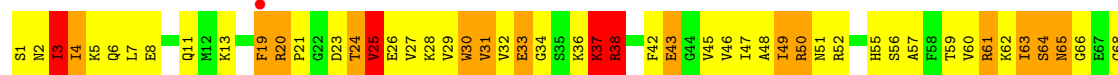
• Molecule 27: 50S ribosomal protein L14



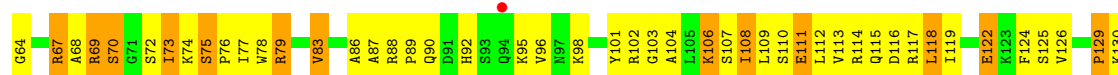
• Molecule 28: 50S ribosomal protein L19

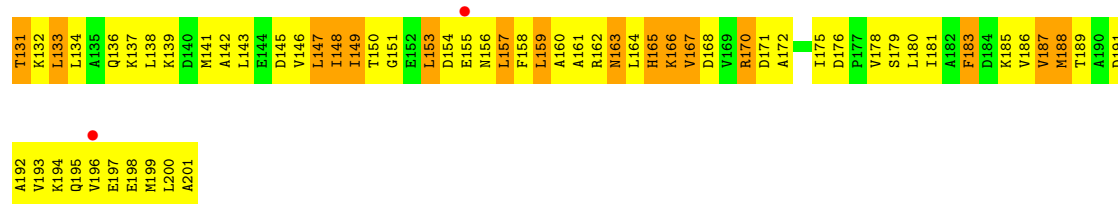


• Molecule 28: 50S ribosomal protein L19

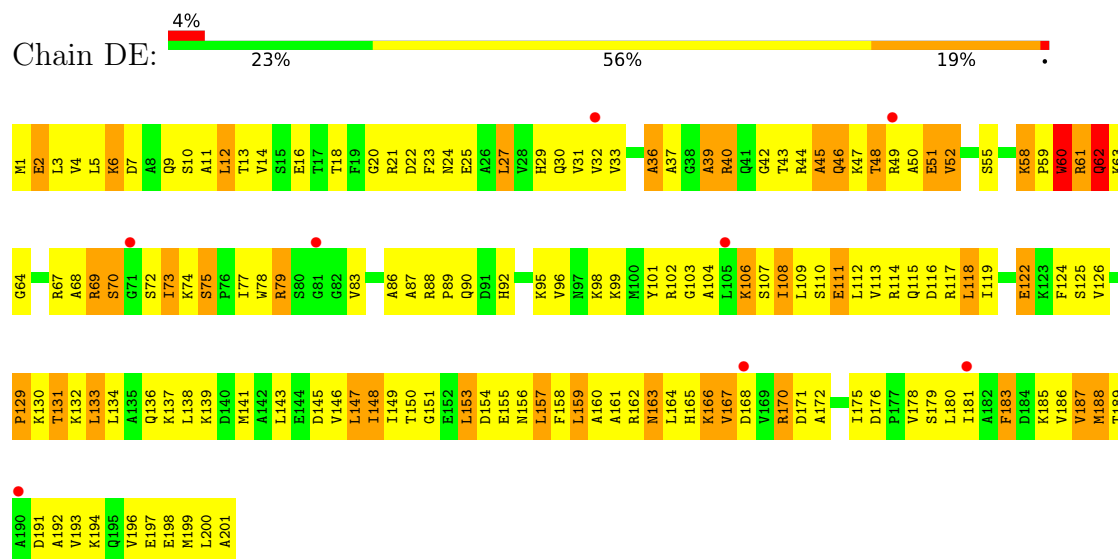


• Molecule 29: 50S ribosomal protein L4

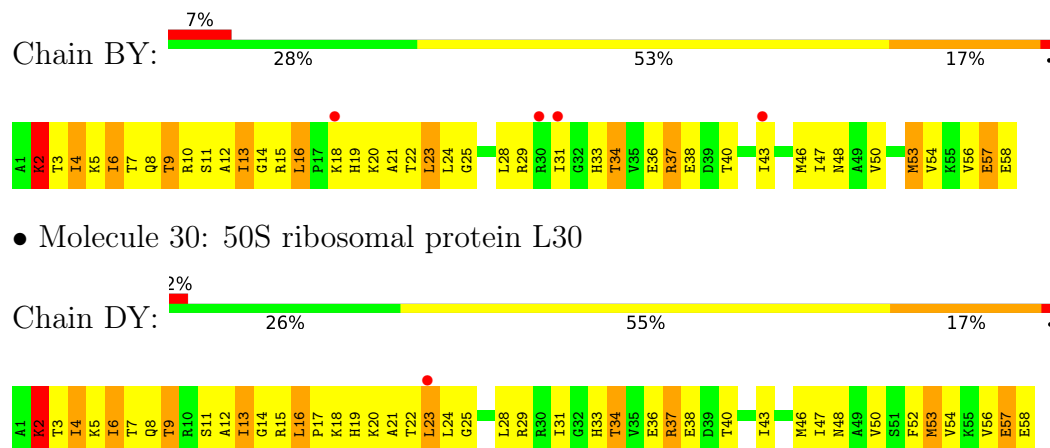




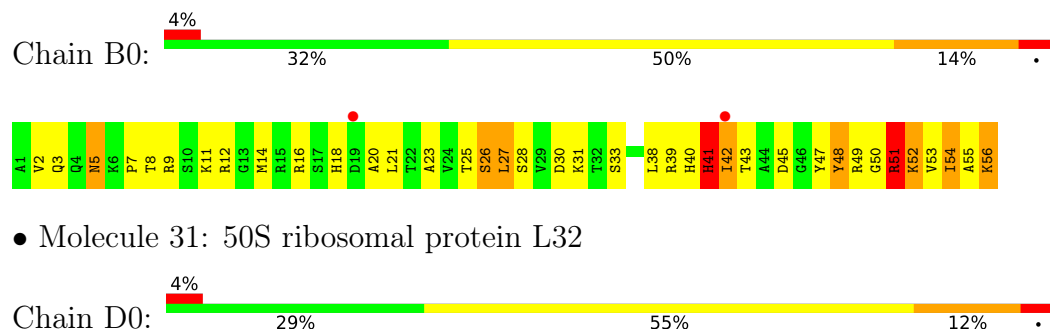
• Molecule 29: 50S ribosomal protein L4



• Molecule 30: 50S ribosomal protein L30



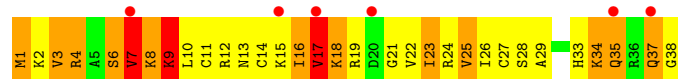
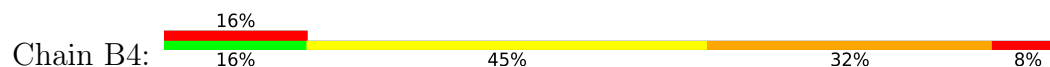
• Molecule 31: 50S ribosomal protein L32



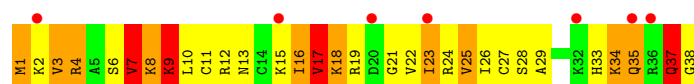
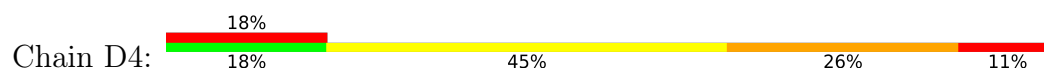
• Molecule 31: 50S ribosomal protein L32



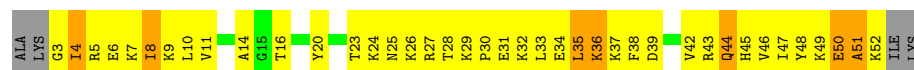
- Molecule 32: 50S ribosomal protein L36



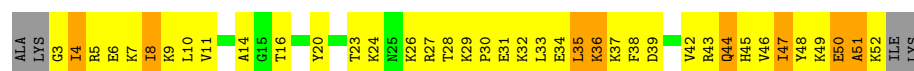
- Molecule 32: 50S ribosomal protein L36



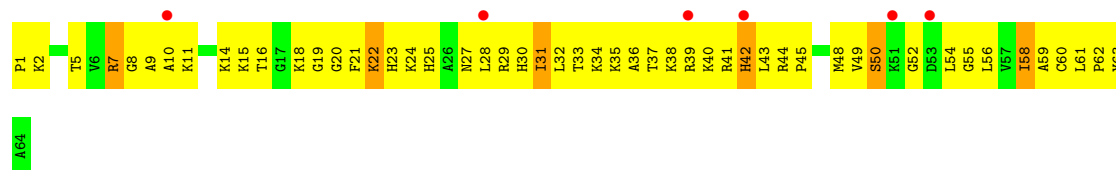
- Molecule 33: 50S ribosomal protein L33



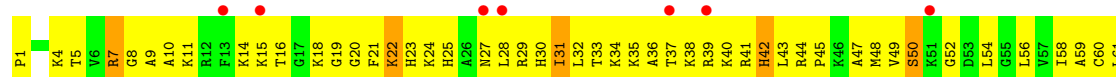
- Molecule 33: 50S ribosomal protein L33



- Molecule 34: 50S ribosomal protein L35



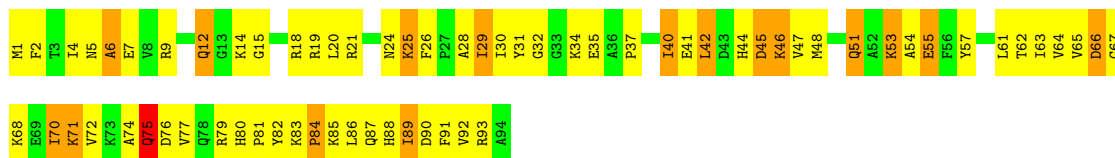
- Molecule 34: 50S ribosomal protein L35





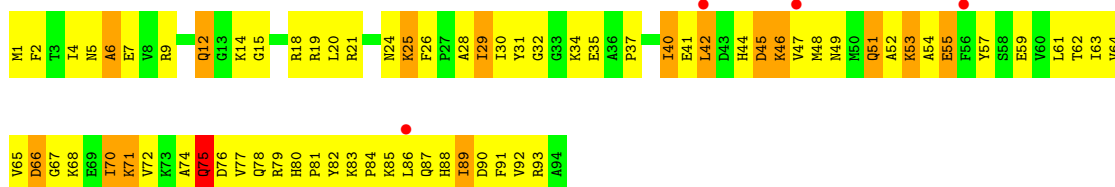
• Molecule 35: 50S ribosomal protein L25

Chain BV: 28% 54% 17%



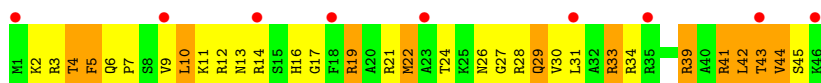
• Molecule 35: 50S ribosomal protein L25

Chain DV: 4% 23% 60% 16%



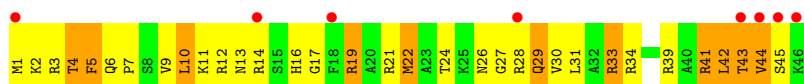
• Molecule 36: 50S ribosomal protein L34

Chain B2: 20% 30% 43% 26%



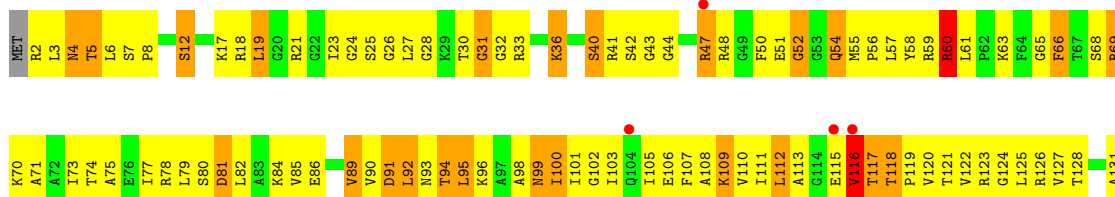
• Molecule 36: 50S ribosomal protein L34

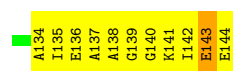
Chain D2: 17% 28% 48% 24%



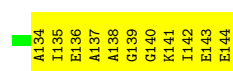
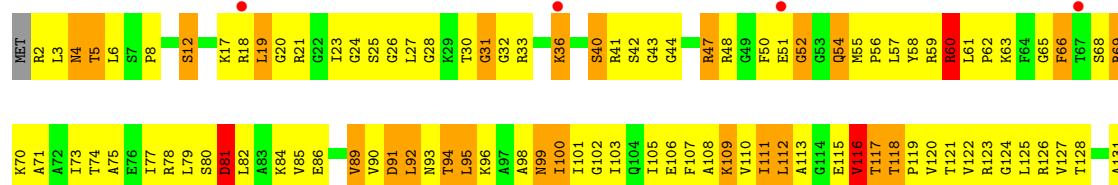
• Molecule 37: 50S ribosomal protein L15

Chain BL: 3% 24% 57% 17%

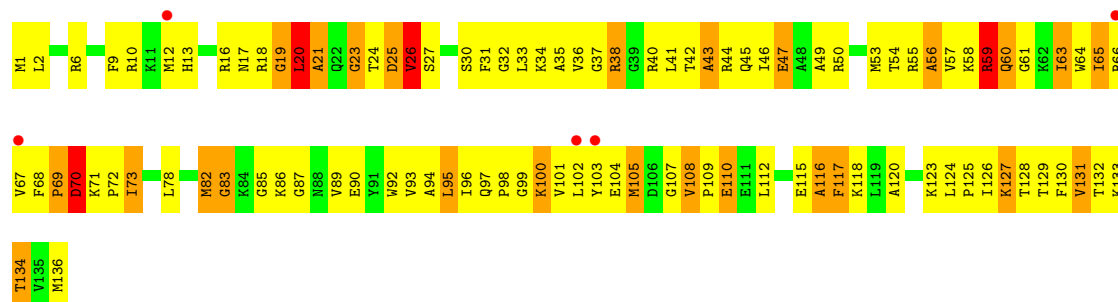




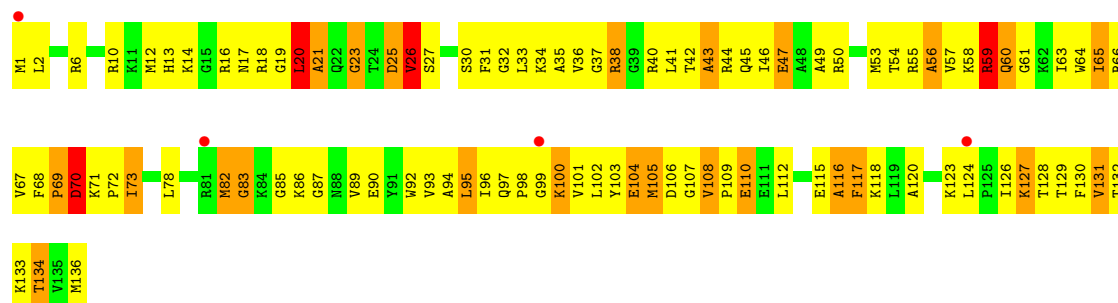
• Molecule 37: 50S ribosomal protein L15



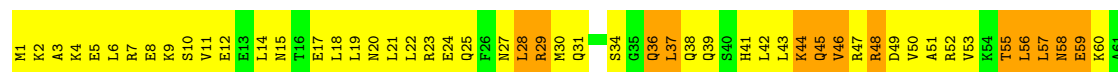
• Molecule 38: 50S ribosomal protein L16



• Molecule 38: 50S ribosomal protein L16



• Molecule 39: 50S ribosomal protein L29





• Molecule 39: 50S ribosomal protein L29

Chain DX: 13% 63% 24%



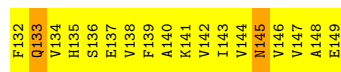
• Molecule 40: 50S ribosomal protein L9

Chain BH: 3% 17% 50% 28% 5%



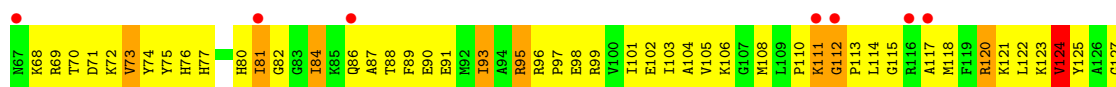
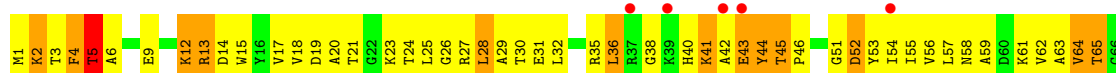
• Molecule 40: 50S ribosomal protein L9

Chain DH: % 21% 56% 19% .



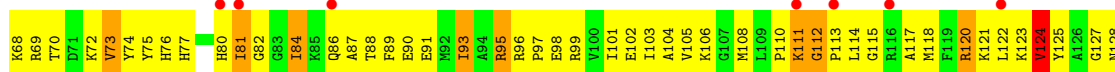
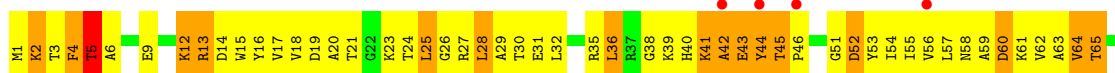
• Molecule 41: 50S ribosomal protein L13

Chain BJ: 8% 23% 59% 16% .

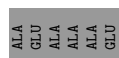
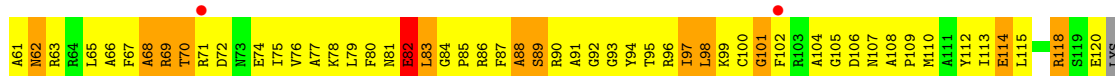
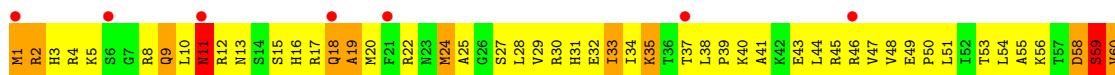
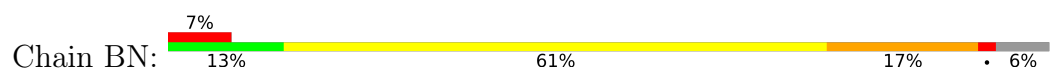




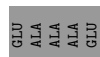
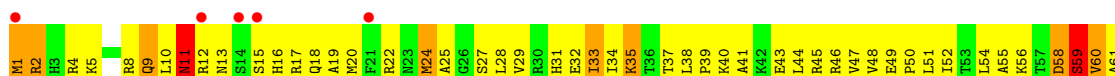
- Molecule 41: 50S ribosomal protein L13



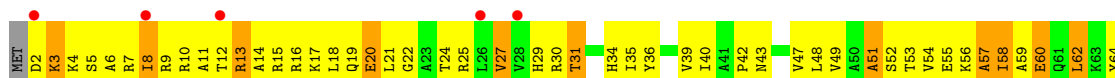
- Molecule 42: 50S ribosomal protein L17



- Molecule 42: 50S ribosomal protein L17

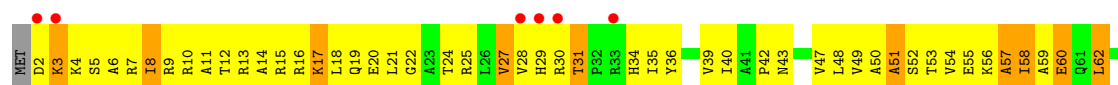


- Molecule 43: 50S ribosomal protein L18





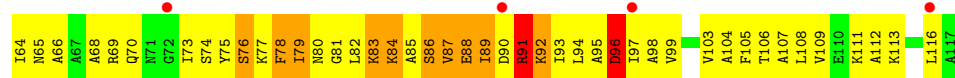
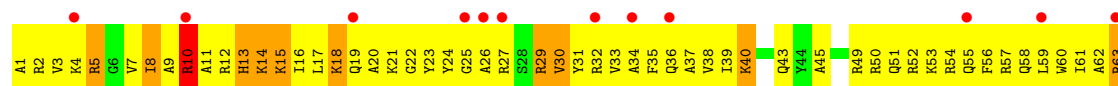
• Molecule 43: 50S ribosomal protein L18



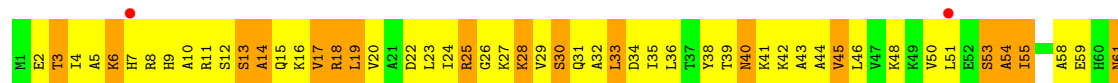
• Molecule 44: 50S ribosomal protein L20



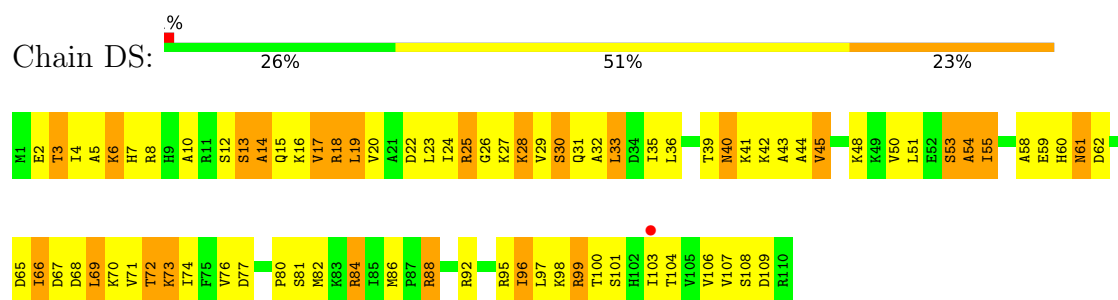
• Molecule 44: 50S ribosomal protein L20



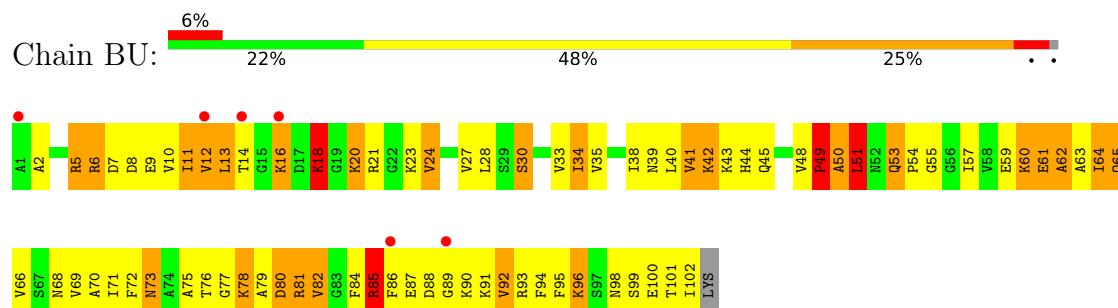
• Molecule 45: 50S ribosomal protein L22



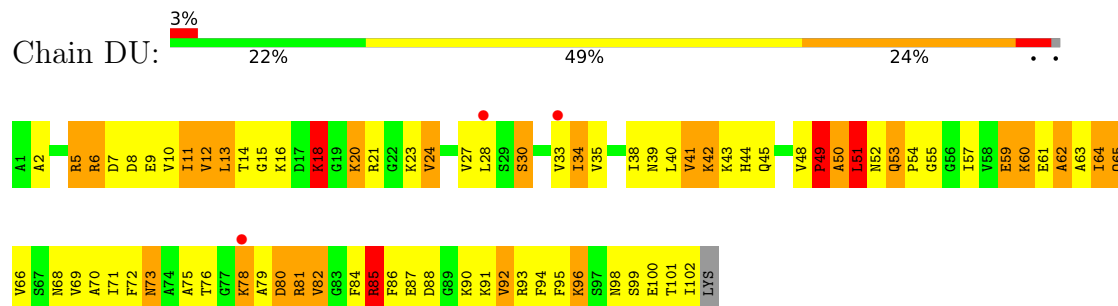
• Molecule 45: 50S ribosomal protein L22



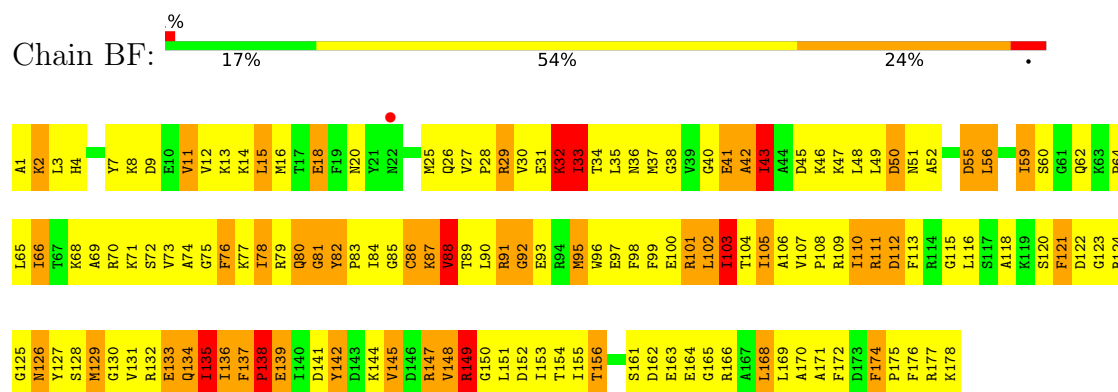
- Molecule 46: 50S ribosomal protein L24



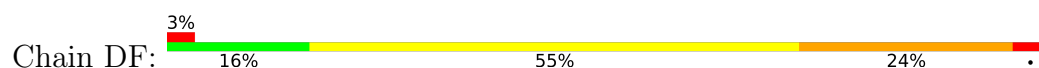
- Molecule 46: 50S ribosomal protein L24

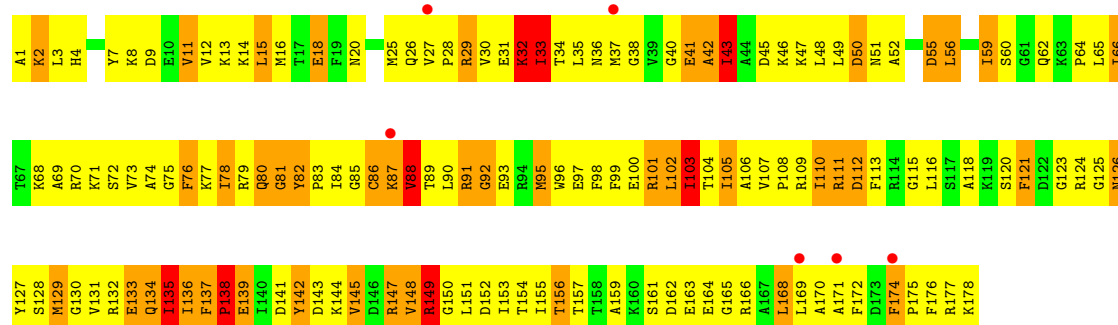


- Molecule 47: 50S ribosomal protein L5

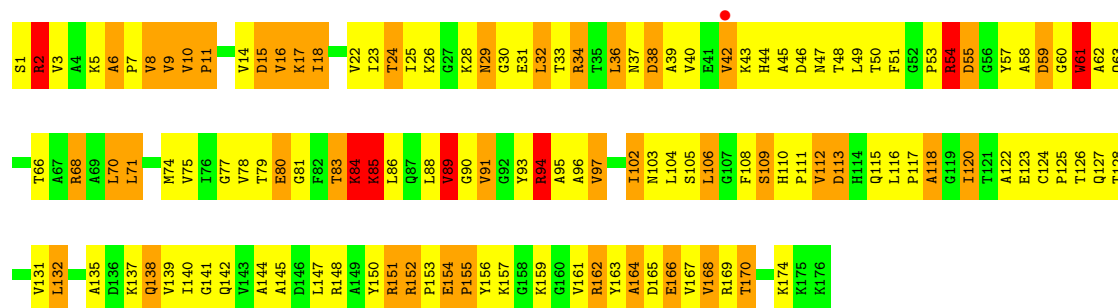


- Molecule 47: 50S ribosomal protein L5

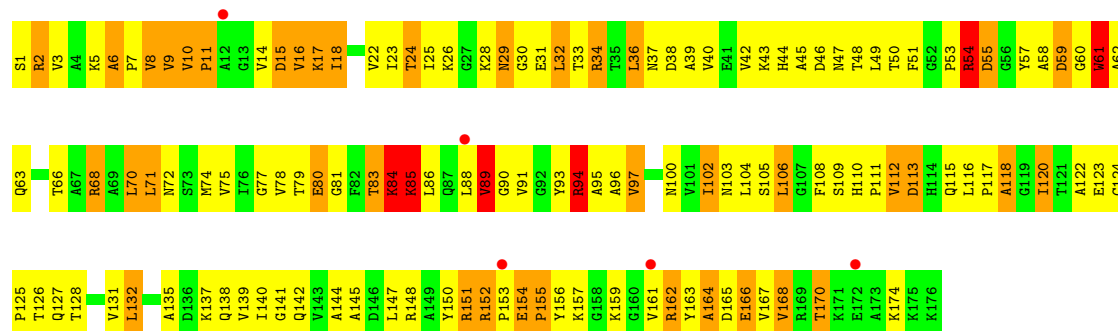




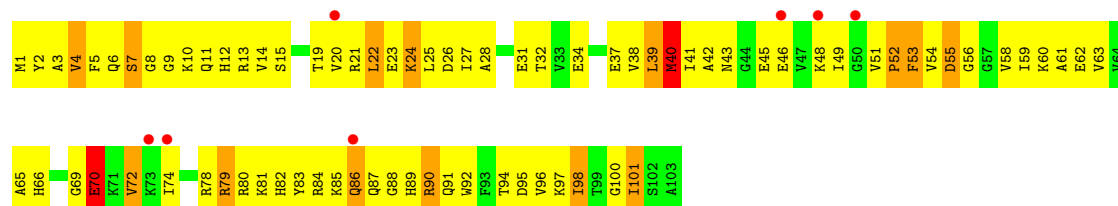
• Molecule 48: 50S ribosomal protein L6



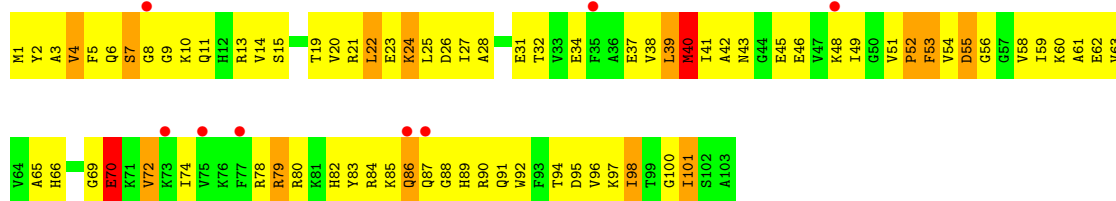
• Molecule 48: 50S ribosomal protein L6



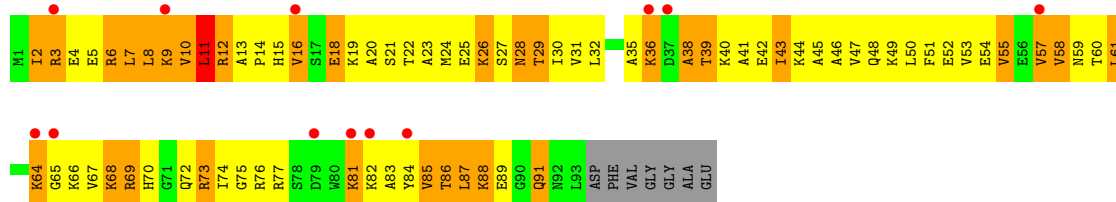
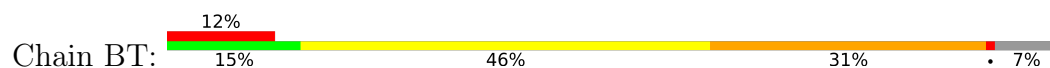
• Molecule 49: 50S ribosomal protein L21



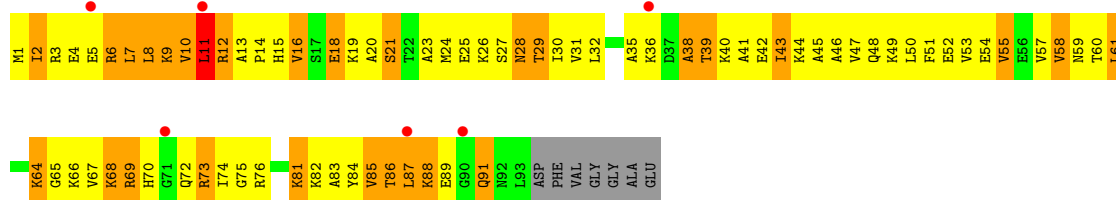
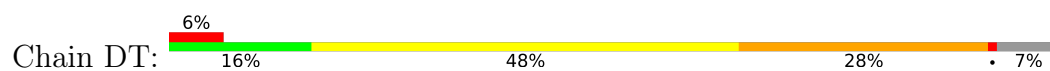
• Molecule 49: 50S ribosomal protein L21



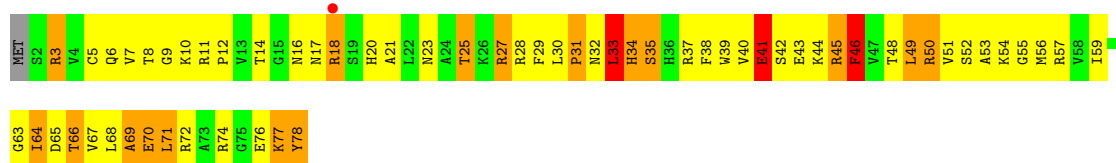
• Molecule 50: 50S ribosomal protein L23



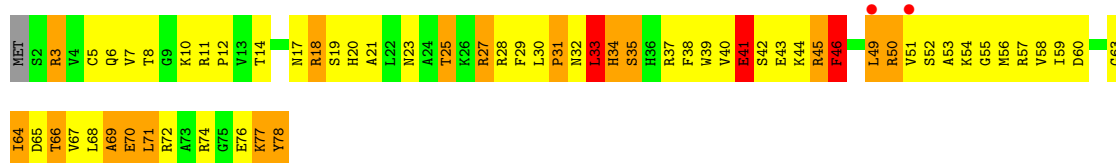
• Molecule 50: 50S ribosomal protein L23



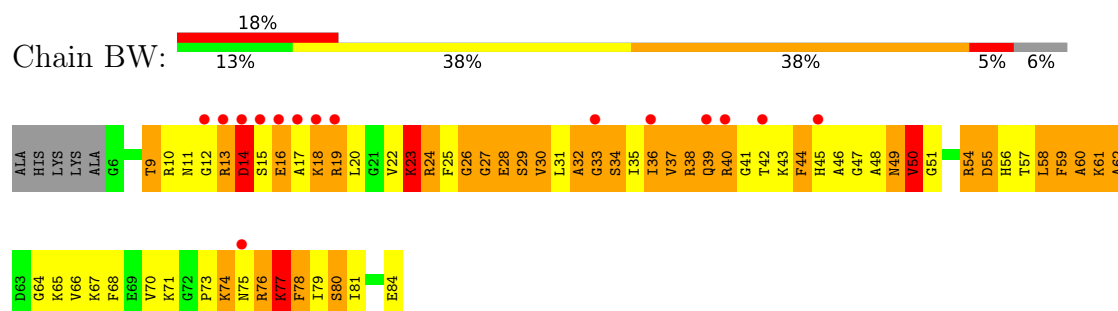
• Molecule 51: 50S ribosomal protein L28



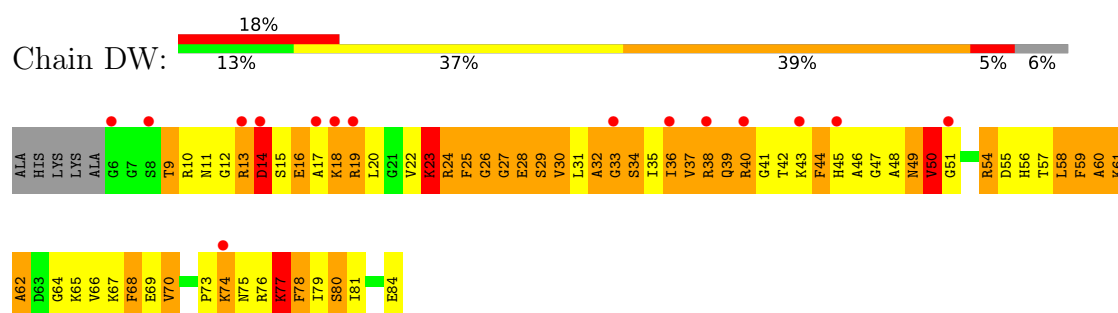
• Molecule 51: 50S ribosomal protein L28



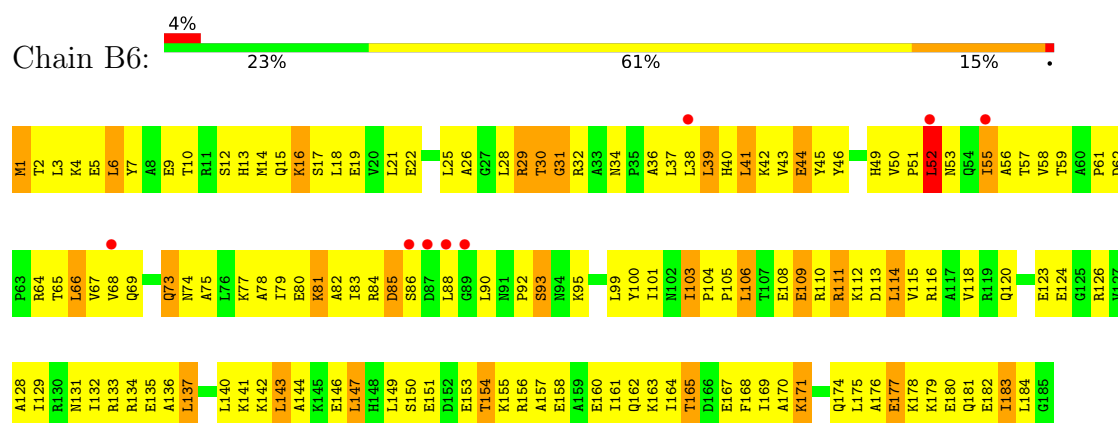
- Molecule 52: 50S ribosomal protein L27



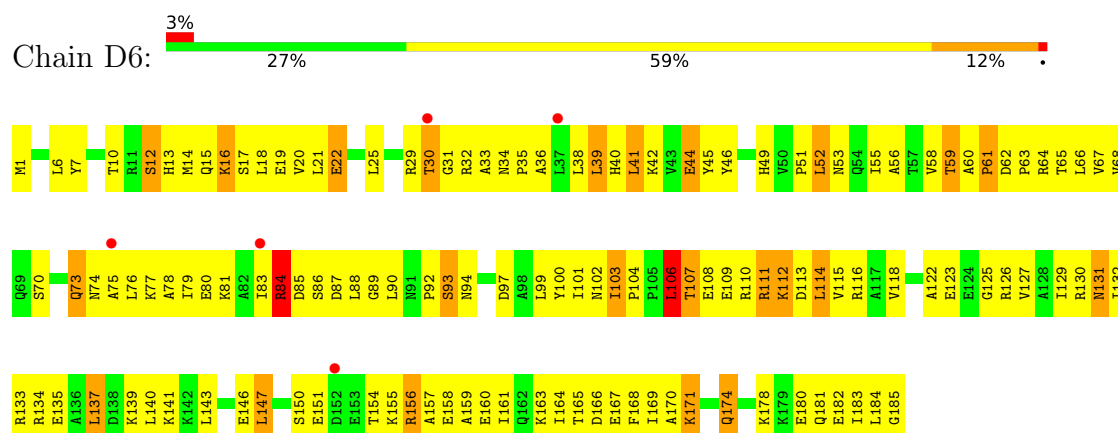
- Molecule 52: 50S ribosomal protein L27



- Molecule 53: 50S ribosomal protein RRF



- Molecule 53: 50S ribosomal protein RRF



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.54Å 378.89Å 736.90Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 4.00 40.00 – 4.15	Depositor EDS
% Data completeness (in resolution range)	87.4 (40.00-4.00) 87.3 (40.00-4.15)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.14 (at 4.15Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.261 , 0.305 0.232 , 0.269	Depositor DCC
R_{free} test set	18876 reflections (4.93%)	wwPDB-VP
Wilson B-factor (Å ²)	133.1	Xtriage
Anisotropy	0.323	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 64.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	287083	wwPDB-VP
Average B, all atoms (Å ²)	72.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.69% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: LLL, 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	0.29	1/36762 (0.0%)	0.67	52/57350 (0.1%)
1	CA	0.28	2/36762 (0.0%)	0.67	46/57350 (0.1%)
2	AC	0.27	0/1651	0.69	0/2225
2	CC	0.27	0/1651	0.69	0/2225
3	AD	0.26	0/1665	0.71	0/2227
3	CD	0.27	0/1665	0.71	0/2227
4	AE	0.27	0/1118	0.74	0/1504
4	CE	0.27	0/1118	0.74	0/1504
5	AF	0.28	0/835	0.70	0/1128
5	CF	0.28	0/835	0.70	0/1128
6	AG	0.28	0/1187	0.77	2/1591 (0.1%)
6	CG	0.28	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	0/1033	0.71	0/1375
9	AJ	0.29	0/796	0.76	0/1077
9	CJ	0.29	0/796	0.76	0/1077
10	AK	0.30	0/893	0.78	0/1205
10	CK	0.31	0/893	0.78	0/1205
11	AL	0.27	0/969	0.79	0/1300
11	CL	0.27	0/969	0.78	0/1300
12	AM	0.27	0/892	0.73	0/1193
12	CM	0.27	0/884	0.73	0/1181
13	AN	0.28	0/785	0.75	0/1043
13	CN	0.28	0/785	0.75	0/1043
14	AO	0.26	0/722	0.76	3/964 (0.3%)
14	CO	0.26	0/722	0.75	3/964 (0.3%)
15	AP	0.29	0/659	0.76	1/884 (0.1%)
15	CP	0.29	0/648	0.76	1/870 (0.1%)
16	AQ	0.27	0/657	0.66	0/881
16	CQ	0.27	0/666	0.66	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.28	0/462	0.71	0/621
17	CR	0.28	0/462	0.71	0/621
18	AS	0.27	0/652	0.72	0/877
18	CS	0.27	0/660	0.77	1/888 (0.1%)
19	AT	0.28	0/671	0.68	0/888
19	CT	0.28	0/671	0.67	0/888
20	AB	0.30	0/1735	0.73	0/2338
20	CB	0.28	0/1735	0.71	0/2338
21	AU	0.28	0/430	0.76	0/570
21	CU	0.28	0/430	0.77	1/570 (0.2%)
22	BA	0.29	0/2803	0.67	4/4371 (0.1%)
22	DA	0.29	0/2803	0.68	3/4371 (0.1%)
23	BB	0.27	1/68314 (0.0%)	0.65	64/106569 (0.1%)
23	DB	0.29	2/68314 (0.0%)	0.68	83/106569 (0.1%)
24	BI	0.32	0/1046	0.82	1/1410 (0.1%)
24	DI	0.34	0/1046	0.85	0/1410
25	BC	0.27	0/2121	0.76	1/2852 (0.0%)
25	DC	0.27	0/2121	0.76	1/2852 (0.0%)
26	BD	0.28	0/1586	0.77	3/2134 (0.1%)
26	DD	0.28	0/1586	0.76	2/2134 (0.1%)
27	BK	0.29	0/939	0.83	2/1258 (0.2%)
27	DK	0.29	0/939	0.83	2/1258 (0.2%)
28	BP	0.27	0/929	0.81	2/1242 (0.2%)
28	DP	0.27	0/929	0.79	2/1242 (0.2%)
29	BE	0.27	0/1571	0.85	5/2113 (0.2%)
29	DE	0.28	0/1571	0.85	6/2113 (0.3%)
30	BY	0.29	0/453	0.78	0/605
30	DY	0.29	0/453	0.78	0/605
31	B0	0.27	0/450	0.80	1/599 (0.2%)
31	D0	0.28	0/450	0.86	1/599 (0.2%)
32	B4	0.27	0/303	0.75	0/397
32	D4	0.27	0/303	0.76	0/397
33	B1	0.29	0/416	0.73	0/554
33	D1	0.29	0/416	0.73	0/554
34	B3	0.28	0/513	0.74	0/676
34	D3	0.28	0/513	0.74	0/676
35	BV	0.27	0/766	0.75	0/1025
35	DV	0.27	0/766	0.74	0/1025
36	B2	0.29	0/380	0.86	1/498 (0.2%)
36	D2	0.29	0/380	0.86	1/498 (0.2%)
37	BL	0.28	0/1054	0.78	0/1403
37	DL	0.28	0/1054	0.79	0/1403
38	BM	0.29	0/1093	0.78	1/1460 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DM	0.29	0/1093	0.78	1/1460 (0.1%)
39	BX	0.26	0/510	0.85	2/677 (0.3%)
39	DX	0.25	0/510	0.85	2/677 (0.3%)
40	BH	0.29	0/1122	0.73	1/1515 (0.1%)
40	DH	0.29	0/1122	0.74	1/1515 (0.1%)
41	BJ	0.29	0/1152	0.75	1/1551 (0.1%)
41	DJ	0.29	0/1152	0.75	1/1551 (0.1%)
42	BN	0.28	0/973	0.88	1/1301 (0.1%)
42	DN	0.28	0/973	0.88	1/1301 (0.1%)
43	BO	0.27	0/902	0.84	2/1209 (0.2%)
43	DO	0.27	0/902	0.84	3/1209 (0.2%)
44	BQ	0.27	0/960	0.90	5/1278 (0.4%)
44	DQ	0.27	0/960	0.90	5/1278 (0.4%)
45	BS	0.28	0/864	0.86	3/1156 (0.3%)
45	DS	0.28	0/864	0.87	3/1156 (0.3%)
46	BU	0.27	0/787	0.72	0/1051
46	DU	0.27	0/787	0.73	0/1051
47	BF	0.28	0/1444	0.83	1/1937 (0.1%)
47	DF	0.28	0/1444	0.83	1/1937 (0.1%)
48	BG	0.29	0/1343	0.80	4/1816 (0.2%)
48	DG	0.30	0/1343	0.79	4/1816 (0.2%)
49	BR	0.25	0/829	0.68	0/1107
49	DR	0.25	0/829	0.68	0/1107
50	BT	0.27	0/744	0.93	3/994 (0.3%)
50	DT	0.27	0/744	0.92	3/994 (0.3%)
51	BZ	0.27	0/635	0.85	1/848 (0.1%)
51	DZ	0.27	0/635	0.85	1/848 (0.1%)
52	BW	0.30	0/603	0.79	1/797 (0.1%)
52	DW	0.30	0/603	0.80	1/797 (0.1%)
53	B6	0.29	0/1497	0.82	2/2017 (0.1%)
53	D6	0.38	0/1497	0.88	3/2017 (0.1%)
All	All	0.28	6/309353 (0.0%)	0.70	355/462003 (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	16
1	CA	0	17
23	BB	0	35

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Mol	Chain	#Chirality outliers	#Planarity outliers
23	DB	0	47
All	All	0	115

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	1213	A	P-OP1	-8.17	1.32	1.49
1	AA	1213	A	P-OP2	-8.05	1.32	1.49
23	BB	1086	A	C5-C6	-7.45	1.26	1.41
23	DB	1086	A	C5-C6	-7.44	1.26	1.41
1	CA	1125	U	P-OP1	-6.09	1.36	1.49
23	DB	2318	G	O3'-P	-5.06	1.53	1.61

All (355) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1124	G	OP1-P-O3'	-15.61	61.16	108.00
1	CA	366	A	C2'-C3'-O3'	12.65	128.47	109.50
1	AA	366	A	C2'-C3'-O3'	12.61	128.41	109.50
1	CA	1213	A	O5'-P-OP1	-11.86	72.42	108.00
1	AA	1213	A	O5'-P-OP2	-11.15	74.56	108.00
23	DB	2204	G	O5'-P-OP1	-10.99	75.02	108.00
23	BB	2204	G	O5'-P-OP2	-10.66	76.02	108.00
23	BB	2791	G	O5'-P-OP1	-10.33	77.02	108.00
23	DB	2791	G	O5'-P-OP2	-10.24	77.29	108.00
14	AO	80	GLN	OE1-CD-NE2	-9.79	112.81	122.60
14	CO	80	GLN	OE1-CD-NE2	-9.79	112.81	122.60
23	BB	2790	U	OP1-P-O3'	9.75	137.26	108.00
23	DB	2790	U	OP2-P-O3'	9.72	137.17	108.00
23	DB	2203	U	OP1-P-O3'	9.61	136.82	108.00
23	BB	2203	U	OP2-P-O3'	9.48	136.44	108.00
1	AA	1124	G	OP1-P-O3'	-9.36	79.92	108.00
1	AA	328	C	C2'-C3'-O3'	9.14	123.21	109.50
1	CA	328	C	C2'-C3'-O3'	9.14	123.21	109.50
23	DB	544	C	C4'-C3'-O3'	8.97	122.86	109.40
53	D6	106	LEU	N-CA-C	8.87	123.27	110.24
23	DB	2106	U	C4'-C3'-O3'	-8.77	99.85	113.00
23	BB	2336	A	C4'-C3'-O3'	-8.24	97.05	109.40
23	BB	1552	A	C4'-C3'-O3'	8.19	125.29	113.00
50	DT	43	ILE	N-CA-C	-8.16	105.29	111.90
50	BT	43	ILE	N-CA-C	-8.16	105.29	111.90
23	BB	2204	G	O5'-P-OP1	8.12	132.37	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2791	G	O5'-P-OP2	8.09	132.26	108.00
23	DB	101	A	C4'-C3'-O3'	-8.08	97.28	109.40
23	DB	2791	G	O5'-P-OP1	8.05	132.15	108.00
23	DB	2204	G	O5'-P-OP2	7.96	131.89	108.00
23	DB	1552	A	C4'-C3'-O3'	7.94	124.90	113.00
1	CA	1534	A	C2'-C3'-O3'	-7.90	97.65	109.50
51	DZ	69	ALA	N-CA-C	-7.86	102.66	111.07
51	BZ	69	ALA	N-CA-C	-7.84	102.69	111.07
1	CA	1124	G	O3'-P-O5'	7.79	115.68	104.00
1	AA	79	G	C4'-C3'-O3'	7.79	124.68	113.00
23	BB	2790	U	O3'-P-O5'	-7.74	92.38	104.00
23	DB	1350	C	C5'-C4'-C3'	-7.72	104.42	116.00
39	BX	55	THR	N-CA-C	-7.71	102.81	111.14
39	DX	55	THR	N-CA-C	-7.68	102.85	111.14
23	BB	573	U	C4'-C3'-O3'	-7.67	97.89	109.40
1	CA	366	A	C4'-C3'-O3'	7.65	120.88	109.40
23	DB	2501	C	C4'-C3'-O3'	-7.64	101.54	113.00
23	DB	2282	G	C2'-C3'-O3'	7.58	120.87	109.50
1	AA	1124	G	O3'-P-O5'	7.52	115.28	104.00
23	BB	2282	G	C2'-C3'-O3'	7.48	120.72	109.50
23	BB	2585	U	C4'-C3'-O3'	-7.41	98.29	109.40
23	DB	2790	U	O3'-P-O5'	-7.41	92.89	104.00
23	DB	2203	U	O3'-P-O5'	-7.40	92.89	104.00
1	AA	243	A	C4'-C3'-O3'	7.38	120.48	109.40
1	CA	1201	A	C2'-C3'-O3'	7.34	120.51	109.50
23	DB	1523	U	C4'-C3'-O3'	-7.31	102.03	113.00
22	DA	117	G	C4'-C3'-O3'	-7.30	102.05	113.00
1	AA	1201	A	C2'-C3'-O3'	7.30	120.44	109.50
23	DB	2585	U	C4'-C3'-O3'	-7.28	98.48	109.40
47	BF	33	ILE	N-CA-C	-7.23	102.04	110.21
23	DB	1818	U	C4'-C3'-O3'	-7.20	102.21	113.00
47	DF	33	ILE	N-CA-C	-7.19	102.09	110.21
1	CA	1049	U	C2'-C3'-O3'	7.14	120.22	109.50
1	AA	1049	U	C2'-C3'-O3'	7.10	120.15	109.50
23	BB	479	A	C4'-C3'-O3'	-7.08	98.78	109.40
1	CA	1136	C	C4'-C3'-O3'	-7.02	102.47	113.00
53	D6	103	ILE	N-CA-C	7.02	114.50	107.55
23	BB	2501	C	C4'-C3'-O3'	-7.02	102.47	113.00
23	DB	2336	A	C4'-C3'-O3'	-7.01	98.88	109.40
23	BB	2203	U	O3'-P-O5'	-6.95	93.57	104.00
1	AA	1409	C	C5'-C4'-C3'	-6.95	105.58	116.00
53	D6	111	ARG	N-CA-C	-6.93	103.65	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2447	G	C4'-C3'-O3'	-6.92	99.02	109.40
1	AA	1136	C	C4'-C3'-O3'	-6.89	102.67	113.00
23	DB	479	A	C4'-C3'-O3'	-6.88	99.08	109.40
45	BS	53	SER	N-CA-C	-6.88	104.78	113.72
23	DB	127	A	C4'-C3'-O3'	-6.87	102.69	113.00
45	DS	53	SER	N-CA-C	-6.87	104.79	113.72
23	BB	1584	U	C4'-C3'-O3'	6.86	123.30	113.00
1	CA	243	A	C4'-C3'-O3'	6.77	119.55	109.40
6	AG	146	ALA	N-CA-C	-6.76	105.15	113.19
1	AA	366	A	C4'-C3'-O3'	6.75	119.52	109.40
1	CA	1424	U	C5'-C4'-C3'	-6.72	105.92	116.00
1	AA	557	G	C4'-C3'-O3'	-6.69	102.96	113.00
45	BS	54	ALA	N-CA-C	-6.68	105.13	113.55
23	BB	1523	U	C4'-C3'-O3'	-6.68	102.98	113.00
45	DS	54	ALA	N-CA-C	-6.66	105.16	113.55
14	CO	80	GLN	CG-CD-NE2	6.65	126.38	116.40
14	AO	80	GLN	CG-CD-NE2	6.64	126.36	116.40
22	BA	66	A	C4'-C3'-O3'	-6.64	103.04	113.00
1	CA	557	G	C4'-C3'-O3'	-6.63	103.05	113.00
50	BT	85	VAL	N-CA-C	6.63	116.65	110.42
50	DT	85	VAL	N-CA-C	6.63	116.65	110.42
23	BB	1552	A	N9-C1'-C2'	-6.62	102.08	112.00
1	CA	1137	C	C4'-C3'-O3'	-6.61	103.08	113.00
1	AA	1183	U	C4'-C3'-O3'	-6.61	103.09	113.00
23	BB	876	C	C4'-C3'-O3'	6.59	122.89	113.00
6	CG	146	ALA	N-CA-C	-6.51	105.20	113.01
23	DB	1109	C	C5'-C4'-C3'	-6.48	106.28	116.00
44	BQ	99	VAL	N-CA-C	-6.47	105.40	111.48
44	DQ	99	VAL	N-CA-C	-6.46	105.41	111.48
23	DB	573	U	C4'-C3'-O3'	-6.45	99.72	109.40
23	BB	2266	A	C5'-C4'-C3'	6.45	124.88	115.20
23	DB	2746	U	C4'-C3'-O3'	6.43	122.65	113.00
23	BB	1126	A	C5'-C4'-C3'	-6.42	105.56	115.20
23	DB	2619	C	C5'-C4'-C3'	-6.42	106.36	116.00
1	CA	1183	U	C4'-C3'-O3'	-6.42	103.38	113.00
23	DB	99	U	C4'-C3'-O3'	-6.41	103.38	113.00
28	BP	49	ILE	N-CA-C	6.41	116.85	107.75
23	BB	2480	C	C5'-C4'-C3'	6.39	125.59	116.00
23	DB	1552	A	N9-C1'-C2'	-6.38	102.43	112.00
1	AA	811	C	C4'-C3'-O3'	-6.38	103.43	113.00
29	DE	39	ALA	N-CA-C	-6.36	105.52	113.28
29	BE	39	ALA	N-CA-C	-6.36	105.53	113.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	1375	U	C4'-C3'-O3'	-6.35	103.48	113.00
23	BB	2434	A	C4'-C3'-O3'	6.34	118.91	109.40
23	DB	2480	C	C5'-C4'-C3'	6.31	125.47	116.00
1	AA	1301	U	N1-C1'-C2'	6.30	121.45	112.00
1	CA	1301	U	N1-C1'-C2'	6.29	121.43	112.00
23	DB	773	U	C4'-C3'-O3'	-6.28	103.58	113.00
23	BB	568	U	C4'-C3'-O3'	-6.23	103.65	113.00
22	DA	66	A	C4'-C3'-O3'	-6.22	103.66	113.00
1	CA	1065	U	C2'-C3'-O3'	6.22	118.83	109.50
1	AA	1065	U	C2'-C3'-O3'	6.21	118.81	109.50
1	CA	1032	G	C5'-C4'-C3'	-6.21	106.69	116.00
1	CA	121	U	C4'-C3'-O3'	6.20	118.70	109.40
23	BB	2580	U	C4'-C3'-O3'	-6.20	103.70	113.00
23	BB	2104	C	C4'-C3'-O3'	6.19	122.28	113.00
53	B6	31	GLY	N-CA-C	-6.19	98.51	113.18
1	CA	40	C	C5'-C4'-C3'	-6.18	106.74	116.00
15	CP	45	GLU	N-CA-C	-6.17	104.34	112.24
23	BB	690	G	C5'-C4'-C3'	-6.16	106.76	116.00
43	DO	84	GLU	N-CA-C	-6.15	104.69	111.82
15	AP	45	GLU	N-CA-C	-6.12	104.40	112.24
23	BB	1818	U	C4'-C3'-O3'	-6.12	103.81	113.00
43	BO	84	GLU	N-CA-C	-6.12	104.67	111.71
1	CA	811	C	C4'-C3'-O3'	-6.12	103.81	113.00
18	CS	5	LYS	CB-CA-C	-6.12	108.90	117.23
31	B0	41	HIS	N-CA-C	6.11	118.42	108.76
31	D0	41	HIS	N-CA-C	6.11	118.41	108.76
53	B6	111	ARG	N-CA-C	-6.10	104.71	111.36
23	DB	1814	G	C4'-C3'-O3'	-6.10	103.86	113.00
23	DB	745	G	C5'-C4'-C3'	-6.06	106.91	116.00
39	DX	44	LYS	N-CA-C	-6.05	104.59	111.07
39	BX	44	LYS	N-CA-C	-6.05	104.60	111.07
23	DB	353	C	C5'-C4'-C3'	-6.05	106.93	116.00
1	AA	1137	C	C4'-C3'-O3'	-6.01	103.98	113.00
50	BT	26	LYS	N-CA-C	-5.93	105.89	113.01
1	AA	81	A	C5'-C4'-C3'	5.93	124.09	115.20
23	DB	461	C	C5'-C4'-C3'	-5.92	107.12	116.00
23	DB	2148	G	C4'-C3'-O3'	5.92	118.28	109.40
44	DQ	92	LYS	N-CA-C	-5.89	106.14	113.38
23	BB	1350	C	C5'-C4'-C3'	-5.88	107.18	116.00
26	BD	22	ILE	N-CA-C	5.87	114.42	107.73
26	DD	22	ILE	N-CA-C	5.87	114.42	107.73
1	CA	166	U	C5'-C4'-C3'	-5.84	107.23	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	1476	U	C4'-C3'-O3'	5.84	118.16	109.40
1	CA	1125	U	O5'-P-OP1	-5.83	90.51	108.00
22	BA	28	C	C5'-C4'-C3'	-5.83	107.26	116.00
1	CA	765	G	N9-C1'-C2'	-5.82	103.26	112.00
44	BQ	92	LYS	N-CA-C	-5.82	106.15	113.72
28	DP	3	ILE	N-CA-C	-5.81	104.67	111.00
23	DB	2266	A	C5'-C4'-C3'	5.81	123.91	115.20
50	DT	26	LYS	N-CA-C	-5.80	105.91	112.87
28	BP	3	ILE	N-CA-C	-5.80	104.68	111.00
1	AA	765	G	N9-C1'-C2'	-5.80	103.30	112.00
29	BE	36	ALA	N-CA-C	-5.80	104.87	111.07
23	DB	1237	A	C4'-C3'-O3'	-5.79	104.31	113.00
29	DE	6	LYS	CB-CA-C	-5.78	109.89	116.54
23	DB	1519	G	C5'-C4'-C3'	-5.77	107.34	116.00
43	BO	104	GLN	N-CA-C	-5.77	104.68	110.97
1	AA	1165	U	C4'-C3'-O3'	5.76	121.64	113.00
23	DB	2276	G	O3'-P-O5'	5.76	112.64	104.00
23	DB	690	G	C5'-C4'-C3'	-5.76	107.37	116.00
23	DB	2182	U	C4'-C3'-O3'	5.76	121.64	113.00
1	CA	1043	G	N9-C1'-C2'	5.75	120.63	112.00
23	DB	2108	A	C4'-C3'-O3'	5.75	121.63	113.00
29	DE	36	ALA	N-CA-C	-5.75	104.92	111.07
23	BB	560	C	C5'-C4'-C3'	-5.74	107.38	116.00
26	DD	174	SER	CB-CA-C	-5.74	109.94	116.54
43	DO	104	GLN	N-CA-C	-5.74	104.71	110.97
1	AA	1043	G	N9-C1'-C2'	5.72	120.58	112.00
23	BB	555	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	CA	1165	U	C4'-C3'-O3'	5.71	121.56	113.00
26	BD	174	SER	CB-CA-C	-5.71	109.98	116.54
23	BB	773	U	C4'-C3'-O3'	-5.70	104.44	113.00
1	AA	101	A	C5'-C4'-C3'	-5.68	107.47	116.00
1	CA	975	A	C2'-C3'-O3'	5.68	118.02	109.50
52	BW	26	GLY	N-CA-C	-5.67	106.73	113.99
23	BB	1237	A	C4'-C3'-O3'	-5.67	104.50	113.00
1	CA	765	G	C4'-C3'-O3'	5.65	121.48	113.00
23	BB	2760	C	C5'-C4'-C3'	-5.65	107.52	116.00
52	DW	26	GLY	N-CA-C	-5.64	106.77	113.99
1	CA	1212	U	O3'-P-O5'	5.63	112.44	104.00
21	CU	14	ALA	N-CA-C	5.62	117.49	111.36
48	DG	6	ALA	CA-C-N	5.60	124.80	118.97
48	DG	6	ALA	C-N-CA	5.60	124.80	118.97
1	CA	1250	A	C5'-C4'-C3'	5.59	124.39	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	765	G	C4'-C3'-O3'	5.59	121.39	113.00
48	BG	6	ALA	CA-C-N	5.59	124.78	118.97
48	BG	6	ALA	C-N-CA	5.59	124.78	118.97
23	DB	2096	C	C5'-C4'-C3'	-5.59	107.62	116.00
1	CA	243	A	C2'-C3'-O3'	5.58	117.87	109.50
23	DB	2790	U	C2'-C3'-O3'	-5.58	105.33	113.70
22	BA	24	G	C4'-C3'-O3'	-5.58	104.64	113.00
1	AA	243	A	C2'-C3'-O3'	5.57	117.86	109.50
23	DB	1170	C	C5'-C4'-C3'	-5.57	107.64	116.00
1	AA	1299	A	C4'-C3'-O3'	-5.56	104.65	113.00
36	D2	29	GLN	N-CA-C	-5.56	106.57	113.19
23	DB	1592	C	C5'-C4'-C3'	5.56	124.34	116.00
1	AA	40	C	C5'-C4'-C3'	-5.56	107.66	116.00
23	BB	2211	A	C4'-C3'-O3'	-5.56	104.67	113.00
42	BN	62	ASN	N-CA-C	-5.55	106.21	112.87
1	AA	960	U	C4'-C3'-O3'	5.55	117.73	109.40
36	B2	29	GLN	N-CA-C	-5.55	106.59	113.19
26	BD	103	ASP	N-CA-C	-5.54	106.30	112.57
1	CA	1432	G	N9-C1'-C2'	-5.54	105.69	114.00
42	DN	62	ASN	N-CA-C	-5.54	106.22	112.87
23	BB	1237	A	N9-C1'-C2'	5.53	120.30	112.00
23	DB	139	U	C4'-C3'-O3'	5.53	117.70	109.40
1	AA	1432	G	N9-C1'-C2'	-5.52	105.72	114.00
1	CA	1037	C	C4'-C3'-O3'	5.51	121.26	113.00
29	DE	157	LEU	N-CA-C	-5.51	107.11	113.88
1	AA	1037	C	C4'-C3'-O3'	5.50	121.25	113.00
23	DB	125	A	C4'-C3'-O3'	5.49	117.64	109.40
1	AA	438	U	N1-C1'-C2'	-5.49	105.77	114.00
1	CA	438	U	N1-C1'-C2'	-5.48	105.78	114.00
23	BB	1340	U	C4'-C3'-O3'	-5.47	104.79	113.00
23	DB	1847	A	C4'-C3'-O3'	-5.47	104.79	113.00
28	DP	49	ILE	N-CA-C	5.45	116.89	108.44
45	BS	19	LEU	N-CA-C	-5.44	107.18	113.88
23	DB	162	U	C4'-C3'-O3'	5.44	117.56	109.40
23	BB	222	A	C4'-C3'-O3'	-5.44	101.25	109.40
23	BB	1337	G	C5'-C4'-C3'	-5.43	107.85	116.00
23	DB	2336	A	C2'-C3'-O3'	5.43	117.65	109.50
23	DB	2211	A	C4'-C3'-O3'	-5.43	104.86	113.00
45	DS	19	LEU	N-CA-C	-5.43	107.21	113.88
23	BB	2430	A	C4'-C3'-O3'	-5.42	104.86	113.00
23	DB	1584	U	C4'-C3'-O3'	5.42	121.13	113.00
43	DO	83	LEU	N-CA-C	-5.42	107.33	114.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	1237	A	N9-C1'-C2'	5.40	120.11	112.00
23	BB	1439	A	N9-C1'-C2'	-5.40	103.90	112.00
23	BB	461	C	C5'-C4'-C3'	-5.39	107.91	116.00
1	AA	1032	G	C5'-C4'-C3'	-5.38	107.93	116.00
23	BB	745	G	C5'-C4'-C3'	-5.38	107.93	116.00
23	BB	2619	C	C5'-C4'-C3'	-5.36	107.96	116.00
23	BB	1314	C	C5'-C4'-C3'	-5.36	107.96	116.00
23	BB	2456	C	C5'-C4'-C3'	-5.35	107.97	116.00
40	BH	25	TYR	N-CA-C	-5.35	106.45	112.87
23	DB	349	U	C4'-C3'-O3'	-5.35	104.97	113.00
48	BG	10	VAL	CA-C-N	5.35	126.53	119.84
48	BG	10	VAL	C-N-CA	5.35	126.53	119.84
23	DB	544	C	O4'-C4'-C3'	-5.34	100.75	106.10
23	BB	2203	U	C2'-C3'-O3'	-5.34	105.69	113.70
48	DG	10	VAL	CA-C-N	5.34	126.52	119.84
48	DG	10	VAL	C-N-CA	5.34	126.52	119.84
40	DH	25	TYR	N-CA-C	-5.34	106.47	112.87
23	BB	2283	C	C5'-C4'-C3'	-5.33	108.00	116.00
1	CA	1493	A	C4'-C3'-O3'	5.33	120.99	113.00
23	DB	1931	U	C4'-C3'-O3'	-5.33	105.01	113.00
1	AA	368	U	C4'-C3'-O3'	-5.32	105.01	113.00
23	BB	2391	G	C4'-C3'-O3'	-5.32	101.42	109.40
23	DB	2405	G	C4'-C3'-O3'	-5.32	105.02	113.00
23	DB	2105	U	C4'-C3'-O3'	-5.31	105.04	113.00
23	DB	560	C	C5'-C4'-C3'	-5.30	108.04	116.00
23	BB	405	U	C5'-C4'-C3'	5.29	123.94	116.00
23	DB	1104	C	C4'-C3'-O3'	5.29	120.94	113.00
25	BC	19	VAL	N-CA-C	5.29	115.47	107.80
23	BB	127	A	C5'-C4'-C3'	-5.29	108.07	116.00
23	BB	1476	U	C4'-C3'-O3'	5.28	117.32	109.40
1	CA	406	G	C4'-C3'-O3'	-5.27	105.09	113.00
1	AA	1250	A	C5'-C4'-C3'	5.27	123.90	116.00
29	BE	60	TRP	N-CA-C	5.27	122.03	110.80
29	DE	60	TRP	N-CA-C	5.27	122.02	110.80
6	CG	143	MET	N-CA-C	-5.26	105.23	110.97
1	CA	845	A	C4'-C3'-O3'	5.26	120.89	113.00
23	DB	2430	A	N9-C1'-C2'	5.25	119.87	112.00
25	DC	19	VAL	N-CA-C	5.24	115.40	107.80
1	AA	576	C	C5'-C4'-C3'	5.24	123.06	115.20
6	AG	143	MET	N-CA-C	-5.24	105.26	110.97
38	BM	117	PHE	N-CA-C	-5.23	106.59	112.87
23	DB	2430	A	C4'-C3'-O3'	-5.23	105.15	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	773	U	C5'-C4'-C3'	-5.23	108.16	116.00
23	DB	2580	U	C4'-C3'-O3'	-5.23	105.16	113.00
38	DM	117	PHE	N-CA-C	-5.22	106.60	112.87
27	DK	119	ALA	N-CA-C	5.21	121.33	109.81
27	BK	119	ALA	N-CA-C	5.21	121.32	109.81
23	DB	125	A	C2'-C3'-O3'	5.21	117.32	109.50
23	BB	2430	A	N9-C1'-C2'	5.21	119.81	112.00
1	CA	1518	A	C4'-C3'-O3'	-5.21	105.19	113.00
22	BA	73	A	C4'-C3'-O3'	-5.20	105.19	113.00
1	CA	1299	A	C4'-C3'-O3'	-5.20	105.20	113.00
1	AA	1397	C	C2'-C3'-O3'	5.20	117.30	109.50
1	AA	1518	A	C4'-C3'-O3'	-5.20	105.20	113.00
23	DB	555	G	C4'-C3'-O3'	-5.20	105.20	113.00
23	BB	1350	C	C4'-C3'-O3'	-5.20	105.20	113.00
44	BQ	103	VAL	N-CA-C	-5.18	105.45	110.42
44	DQ	103	VAL	N-CA-C	-5.18	105.45	110.42
1	CA	1397	C	C2'-C3'-O3'	5.17	117.26	109.50
23	DB	1047	G	C5'-C4'-C3'	-5.17	107.45	115.20
23	BB	1789	A	C5'-C4'-C3'	-5.16	108.26	116.00
1	CA	368	U	C4'-C3'-O3'	-5.16	105.26	113.00
23	BB	2266	A	C4'-C3'-O3'	-5.16	101.66	109.40
27	BK	121	GLU	N-CA-C	5.16	114.95	108.45
1	AA	417	G	C5'-C4'-C3'	-5.16	108.26	116.00
23	DB	2733	A	N9-C1'-C2'	-5.15	104.28	112.00
22	DA	24	G	C4'-C3'-O3'	-5.15	105.28	113.00
23	DB	101	A	C5'-C4'-C3'	5.15	122.92	115.20
23	BB	1287	A	C4'-C3'-O3'	-5.14	105.28	113.00
24	BI	63	ASP	N-CA-C	-5.14	107.30	113.21
23	DB	1759	A	C4'-C3'-O3'	-5.13	105.30	113.00
23	DB	1927	A	C4'-C3'-O3'	-5.13	105.30	113.00
1	CA	71	A	C4'-C3'-O3'	5.12	117.08	109.40
23	DB	2501	C	N1-C1'-C2'	5.12	119.68	112.00
23	DB	1053	C	C4'-C3'-O3'	5.12	120.67	113.00
27	DK	121	GLU	N-CA-C	5.11	114.89	108.45
23	DB	1818	U	N1-C1'-C2'	5.10	119.66	112.00
44	DQ	96	ASP	N-CA-C	-5.10	107.01	113.18
29	BE	183	PHE	CB-CA-C	-5.10	109.16	115.89
1	AA	250	A	C4'-C3'-O3'	-5.10	105.35	113.00
14	AO	44	ALA	N-CA-C	-5.10	105.23	111.75
29	BE	157	LEU	N-CA-C	-5.09	107.13	113.55
14	CO	44	ALA	N-CA-C	-5.09	105.23	111.75
23	DB	898	C	C4'-C3'-O3'	5.09	120.64	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	844	G	C4'-C3'-O3'	5.09	120.63	113.00
1	AA	925	G	C4'-C3'-O3'	-5.08	105.37	113.00
44	BQ	96	ASP	N-CA-C	-5.08	107.03	113.18
29	DE	183	PHE	CB-CA-C	-5.08	109.19	115.89
23	DB	1439	A	N9-C1'-C2'	-5.07	104.39	112.00
1	AA	1212	U	O3'-P-O5'	5.07	111.60	104.00
1	AA	481	G	C4'-C3'-O3'	-5.06	105.40	113.00
1	CA	372	C	C2'-C3'-O3'	5.06	117.10	109.50
1	AA	838	G	C4'-C3'-O3'	5.06	120.59	113.00
23	BB	1699	G	C4'-C3'-O3'	-5.06	101.81	109.40
23	BB	784	G	C4'-C3'-O3'	-5.06	105.41	113.00
23	DB	2318	G	O3'-P-O5'	5.06	111.59	104.00
23	DB	2473	U	C4'-C3'-O3'	-5.05	105.42	113.00
23	BB	2405	G	C4'-C3'-O3'	-5.05	105.43	113.00
1	AA	372	C	C2'-C3'-O3'	5.04	117.06	109.50
1	AA	344	A	C4'-C3'-O3'	-5.04	101.84	109.40
41	DJ	42	ALA	N-CA-C	-5.04	104.30	110.65
1	AA	93	U	C5'-C4'-C3'	-5.04	108.44	116.00
23	DB	1314	C	C5'-C4'-C3'	-5.04	108.44	116.00
23	BB	783	A	C4'-C3'-O3'	5.04	120.55	113.00
23	DB	958	U	C5'-C4'-C3'	5.04	123.55	116.00
1	AA	89	U	N1-C1'-C2'	5.03	119.55	112.00
1	CA	484	G	C2'-C3'-O3'	5.03	117.05	109.50
44	DQ	19	GLN	N-CA-C	-5.03	106.43	113.37
1	AA	1490	U	C5'-C4'-C3'	-5.03	108.46	116.00
1	AA	437	U	N1-C1'-C2'	5.03	119.54	112.00
23	DB	1699	G	C4'-C3'-O3'	-5.03	101.86	109.40
1	AA	406	G	C4'-C3'-O3'	-5.02	105.47	113.00
1	AA	484	G	C2'-C3'-O3'	5.01	117.02	109.50
44	BQ	19	GLN	N-CA-C	-5.01	106.45	113.37
1	CA	159	G	C5'-C4'-C3'	-5.01	108.49	116.00
23	DB	299	A	N9-C1'-C2'	5.01	119.51	112.00
23	BB	2213	U	C5'-C4'-C3'	-5.01	108.49	116.00
1	AA	298	A	C4'-C3'-O3'	-5.00	105.49	113.00
41	BJ	42	ALA	N-CA-C	-5.00	104.35	110.65

There are no chirality outliers.

All (115) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1331	G	Sidechain

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Mol	Chain	Res	Type	Group
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	462	G	Sidechain
1	AA	481	G	Sidechain
1	AA	496	A	Sidechain
1	AA	703	G	Sidechain
1	AA	86	G	Sidechain
1	AA	992	U	Sidechain
23	BB	1047	G	Sidechain
23	BB	1054	A	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	118	A	Sidechain
23	BB	1347	A	Sidechain
23	BB	1439	A	Sidechain
23	BB	1734	G	Sidechain
23	BB	1738	G	Sidechain
23	BB	1814	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	1869	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2266	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	232	G	Sidechain
23	BB	2454	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2503	A	Sidechain
23	BB	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2834	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	2883	A	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	299	A	Sidechain
23	BB	370	G	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	630	G	Sidechain
23	BB	727	A	Sidechain
23	BB	757	G	Sidechain
1	CA	1048	G	Sidechain
1	CA	1331	G	Sidechain
1	CA	1405	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	462	G	Sidechain
1	CA	481	G	Sidechain
1	CA	496	A	Sidechain
1	CA	575	G	Sidechain
1	CA	703	G	Sidechain
1	CA	992	U	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1377	G	Sidechain
23	DB	1426	G	Sidechain
23	DB	1432	G	Sidechain
23	DB	1439	A	Sidechain
23	DB	1533	C	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1721	G	Sidechain
23	DB	1734	G	Sidechain
23	DB	1774	C	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	1869	G	Sidechain
23	DB	2062	A	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	2135	A	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2266	A	Sidechain
23	DB	2267	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	2279	G	Sidechain
23	DB	232	G	Sidechain
23	DB	2454	G	Sidechain
23	DB	2471	A	Sidechain
23	DB	2503	A	Sidechain
23	DB	2508	G	Sidechain
23	DB	2587	A	Sidechain
23	DB	2638	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2770	G	Sidechain
23	DB	2834	G	Sidechain
23	DB	2848	G	Sidechain
23	DB	2857	G	Sidechain
23	DB	2868	A	Sidechain
23	DB	2883	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	729	G	Sidechain
23	DB	757	G	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32831	0	16521	1298	0
1	CA	32831	0	16521	1352	0
2	AC	1624	0	1699	148	0
2	CC	1624	0	1699	150	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	AD	1643	0	1710	177	0
3	CD	1643	0	1710	173	0
4	AE	1105	0	1148	100	0
4	CE	1105	0	1148	103	0
5	AF	817	0	808	98	0
5	CF	817	0	808	97	0
6	AG	1174	0	1230	120	0
6	CG	1196	0	1246	112	0
7	AH	979	0	1034	104	0
7	CH	979	0	1034	107	0
8	AI	1022	0	1070	151	0
8	CI	1021	0	1070	153	0
9	AJ	786	0	828	78	0
9	CJ	786	0	828	80	0
10	AK	877	0	887	114	0
10	CK	877	0	887	118	0
11	AL	955	0	1019	102	0
11	CL	955	0	1019	99	0
12	AM	883	0	944	128	0
12	CM	876	0	937	126	0
13	AN	774	0	827	124	0
13	CN	774	0	827	134	0
14	AO	714	0	734	64	0
14	CO	714	0	734	59	0
15	AP	649	0	666	58	0
15	CP	638	0	656	58	0
16	AQ	648	0	691	73	0
16	CQ	657	0	702	72	0
17	AR	455	0	478	53	0
17	CR	455	0	478	60	0
18	AS	637	0	665	88	0
18	CS	644	0	675	90	0
19	AT	665	0	714	71	0
19	CT	665	0	714	74	0
20	AB	1704	0	1732	234	0
20	CB	1704	0	1732	225	0
21	AU	425	0	449	83	0
21	CU	425	0	449	92	0
22	BA	2507	0	1270	107	0
22	DA	2507	0	1270	109	0
23	BB	60995	0	30678	2534	0
23	DB	60995	0	30678	2547	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	BI	1032	0	1088	126	0
24	DI	1032	0	1088	189	0
25	BC	2082	0	2157	255	0
25	DC	2082	0	2157	253	0
26	BD	1565	0	1616	217	0
26	DD	1565	0	1616	231	0
27	BK	930	0	1000	131	0
27	DK	930	0	1000	128	0
28	BP	917	0	965	102	0
28	DP	917	0	965	109	0
29	BE	1552	0	1619	201	0
29	DE	1552	0	1619	188	0
30	BY	449	0	491	52	0
30	DY	449	0	491	57	0
31	B0	444	0	461	54	0
31	D0	444	0	461	51	0
32	B4	302	0	340	39	0
32	D4	302	0	340	46	0
33	B1	409	0	440	58	0
33	D1	409	0	440	55	0
34	B3	504	0	574	60	0
34	D3	504	0	574	54	0
35	BV	753	0	780	100	0
35	DV	753	0	780	105	0
36	B2	377	0	418	40	0
36	D2	377	0	418	39	0
37	BL	1045	0	1117	155	0
37	DL	1045	0	1117	162	0
38	BM	1074	0	1157	136	0
38	DM	1074	0	1157	131	0
39	BX	509	0	543	60	0
39	DX	509	0	543	63	0
40	BH	1111	0	1148	194	0
40	DH	1111	0	1148	166	0
41	BJ	1129	0	1162	145	0
41	DJ	1129	0	1162	148	0
42	BN	960	0	1000	139	0
42	DN	960	0	1000	133	0
43	BO	892	0	923	99	0
43	DO	892	0	923	104	0
44	BQ	947	0	1022	176	0
44	DQ	947	0	1022	182	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
45	BS	857	0	922	106	0
45	DS	857	0	922	104	0
46	BU	779	0	834	120	0
46	DU	779	0	834	115	0
47	BF	1420	0	1460	236	0
47	DF	1420	0	1460	229	0
48	BG	1323	0	1374	227	0
48	DG	1323	0	1374	198	0
49	BR	816	0	839	116	0
49	DR	816	0	839	130	0
50	BT	738	0	807	132	0
50	DT	738	0	807	129	0
51	BZ	625	0	652	86	0
51	DZ	625	0	652	87	0
52	BW	596	0	610	123	0
52	DW	596	0	610	130	0
53	B6	1478	0	1526	195	0
53	D6	1478	0	1526	161	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	AA	31	0	39	0	0
55	BB	31	0	39	2	0
55	CA	31	0	39	3	0
55	DB	31	0	39	0	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	287	0	0	1	0
57	AE	3	0	0	0	0
57	AK	1	0	0	0	0
57	AL	3	0	0	0	0
57	AN	4	0	0	0	0
57	AT	2	0	0	0	0
57	BB	492	0	0	8	0
57	BC	6	0	0	0	0
57	BD	1	0	0	0	0
57	BE	3	0	0	0	0
57	BL	3	0	0	0	0
57	BT	1	0	0	0	0
57	CA	296	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	CE	3	0	0	0	0
57	CK	1	0	0	0	0
57	CL	3	0	0	0	0
57	CN	4	0	0	0	0
57	CT	2	0	0	0	0
57	DB	500	0	0	7	0
57	DC	6	0	0	0	0
57	DE	2	0	0	0	0
57	DL	2	0	0	0	0
57	DR	1	0	0	0	0
57	DT	1	0	0	0	0
All	All	287083	0	193870	18347	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 38.

All (18347) 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	1.36	1.20
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.23	1.17
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.28	1.14
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.29	1.11
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.33	1.11
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.10	1.10
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.09	1.10
23:BB:322:A:H2'	29:BE:163:ASN:HD21	1.02	1.10
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.23	1.10
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB2	1.27	1.09
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.35	1.09
23:DB:1099:G:C8	24:DI:3:LYS:N	2.20	1.09
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.17	1.08
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB2	1.29	1.08
13:AN:63:CYS:HB3	13:AN:67:GLY:H	1.16	1.07
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.12	1.07
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.39	1.05
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.34	1.05
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.36	1.05
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.86	1.05
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.36	1.04
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	1.40	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.21	1.04
53:D6:33:ALA:HA	53:D6:103:ILE:HD13	1.36	1.04
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.38	1.03
1:AA:1125:U:OP1	9:AJ:37:ARG:NH1	1.92	1.03
21:CU:16:ARG:HA	21:CU:16:ARG:HE	1.23	1.03
23:BB:2305:U:H5''	47:BF:130:GLY:HA3	1.41	1.03
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.40	1.03
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.40	1.03
43:DO:67:ASN:H	43:DO:70:ALA:HB3	1.22	1.03
9:AJ:17:LEU:HD22	9:AJ:96:VAL:HG13	1.41	1.02
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.24	1.02
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.92	1.02
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.41	1.02
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.37	1.02
1:CA:1532:U:H2'	1:CA:1533:C:H5''	1.42	1.02
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.41	1.02
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.42	1.01
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.22	1.01
1:CA:202:G:HO2'	1:CA:468:A:H8	1.01	1.01
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.26	1.01
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.24	1.01
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.42	1.00
45:DS:73:LYS:HE3	45:DS:74:ILE:H	1.26	1.00
40:BH:2:GLN:HA	40:BH:20:ASN:HA	1.41	1.00
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.43	1.00
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.26	1.00
40:DH:2:GLN:HA	40:DH:20:ASN:HA	1.41	1.00
52:BW:39:GLN:HE21	52:BW:42:THR:HB	1.27	1.00
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.40	1.00
40:DH:31:VAL:HB	40:DH:32:PRO:CD	1.92	0.99
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.43	0.99
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.40	0.99
37:BL:124:GLY:N	37:BL:143:GLU:HG3	1.76	0.99
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.42	0.99
45:BS:73:LYS:HE3	45:BS:74:ILE:H	1.27	0.99
2:CC:76:ILE:HA	2:CC:83:VAL:HG23	1.42	0.99
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.42	0.98
21:AU:16:ARG:HA	21:AU:16:ARG:HE	1.25	0.98
37:DL:124:GLY:N	37:DL:143:GLU:HG3	1.76	0.98
44:DQ:111:LYS:HB2	49:DR:48:LYS:HZ2	1.25	0.98
52:DW:39:GLN:HE21	52:DW:42:THR:HB	1.24	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.44	0.98
13:CN:68:ARG:HH12	13:CN:70:HIS:HB2	1.28	0.98
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.42	0.98
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.28	0.98
40:BH:31:VAL:HB	40:BH:32:PRO:CD	1.93	0.98
39:DX:28:LEU:HD13	39:DX:37:LEU:HD11	1.46	0.97
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.46	0.97
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.46	0.97
53:B6:30:THR:C	53:B6:32:ARG:H	1.69	0.97
1:AA:202:G:HO2'	1:AA:468:A:H8	1.06	0.97
23:BB:877:A:H2'	23:BB:899:A:N1	1.80	0.97
23:DB:45:G:H5''	23:DB:46:G:H5'	1.46	0.97
23:DB:898:C:H2'	23:DB:899:A:H5''	1.46	0.97
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.47	0.97
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.28	0.96
23:DB:704:G:H2'	23:DB:726:G:H22	1.30	0.96
35:DV:1:MET:HE3	35:DV:2:PHE:H	1.29	0.96
35:DV:62:THR:HG22	35:DV:71:LYS:HG2	1.47	0.96
18:CS:18:VAL:HG21	18:CS:43:MET:HG2	1.45	0.96
40:DH:62:LEU:HG	40:DH:66:ASN:HD21	1.31	0.95
40:DH:65:ALA:HB1	40:DH:138:VAL:HG21	1.48	0.95
18:AS:51:HIS:HA	18:AS:56:HIS:HA	1.48	0.95
4:CE:156:ARG:HA	4:CE:158:LYS:HZ2	1.31	0.95
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.45	0.95
48:DG:8:VAL:HG11	48:DG:49:LEU:HB2	1.47	0.95
46:BU:70:ALA:HB1	46:BU:79:ALA:HB3	1.47	0.95
46:DU:70:ALA:HB1	46:DU:79:ALA:HB3	1.45	0.95
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.62	0.95
10:AK:110:THR:HG22	21:AU:4:LYS:HA	1.45	0.95
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.31	0.95
40:DH:80:ILE:HD11	40:DH:147:VAL:H	1.32	0.95
53:B6:32:ARG:HB2	53:B6:103:ILE:HG12	1.47	0.95
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.29	0.95
35:BV:62:THR:HG22	35:BV:71:LYS:HG2	1.48	0.95
48:BG:8:VAL:HG11	48:BG:49:LEU:HB2	1.47	0.95
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.45	0.95
23:DB:138:U:H4'	23:DB:139:U:H2'	1.45	0.95
40:DH:7:ASP:HA	40:DH:15:LEU:HD22	1.49	0.95
53:B6:29:ARG:HH22	53:B6:110:ARG:HD3	1.32	0.94
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.49	0.94
45:DS:66:ILE:HD13	45:DS:66:ILE:H	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.31	0.94
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.16	0.94
18:AS:18:VAL:HG21	18:AS:43:MET:HG2	1.45	0.94
1:CA:981:U:H4'	13:CN:60:ARG:HD2	1.50	0.94
39:BX:28:LEU:HD13	39:BX:37:LEU:HD11	1.49	0.94
18:CS:51:HIS:HA	18:CS:56:HIS:HA	1.47	0.94
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.48	0.94
42:DN:24:MET:HE3	42:DN:44:LEU:HB2	1.50	0.94
8:CI:51:LEU:HB3	8:CI:56:MET:HG2	1.48	0.94
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.47	0.94
48:BG:17:LYS:HZ2	48:BG:18:ILE:H	1.14	0.93
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.32	0.93
44:BQ:54:ARG:HB3	44:BQ:58:GLN:HE22	1.33	0.93
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.32	0.93
11:CL:120:ARG:HG2	11:CL:121:PRO:HD2	1.50	0.93
47:BF:163:GLU:HA	47:BF:166:ARG:HD2	1.49	0.93
20:AB:202:ASN:HD22	20:AB:204:ASP:H	1.14	0.93
30:BY:16:LEU:HD22	30:BY:16:LEU:H	1.34	0.93
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.33	0.93
23:BB:322:A:C2'	29:BE:163:ASN:HD21	1.82	0.93
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.17	0.93
1:AA:1086:U:H3	1:AA:1099:G:H22	1.17	0.93
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.50	0.93
26:DD:5:VAL:H	26:DD:32:ASN:HD21	0.93	0.93
40:DH:72:ILE:HG12	40:DH:108:VAL:HG11	1.51	0.93
23:BB:460:A:H4'	50:BT:72:GLN:HB2	1.51	0.92
23:BB:2471:A:HO2'	23:BB:2472:G:H8	0.93	0.92
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.17	0.92
44:DQ:54:ARG:HB3	44:DQ:58:GLN:HE22	1.34	0.92
47:DF:109:ARG:HB3	47:DF:135:ILE:HD13	1.51	0.92
12:CM:70:ARG:HH21	47:DF:136:ILE:HB	1.30	0.92
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.31	0.92
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.65	0.92
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.52	0.92
48:DG:17:LYS:HZ2	48:DG:18:ILE:H	1.08	0.92
23:DB:161:A:H3'	23:DB:162:U:H5''	1.50	0.92
1:AA:812:G:HO2'	1:AA:813:U:H6	0.95	0.92
50:BT:38:ALA:HB1	50:BT:43:ILE:HD11	1.52	0.92
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.34	0.92
23:BB:322:A:H2'	29:BE:163:ASN:ND2	1.84	0.92
35:BV:1:MET:HE3	35:BV:2:PHE:H	1.34	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:24:MET:HE3	42:BN:44:LEU:HB2	1.52	0.92
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.52	0.92
23:BB:2751:G:H5'	48:BG:2:ARG:HD3	1.52	0.92
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.50	0.92
1:CA:600:A:H5''	7:CH:88:LYS:HD2	1.52	0.92
40:BH:116:ARG:HG2	40:BH:131:SER:HB2	1.52	0.91
1:AA:532:A:H62	2:AC:191:THR:HB	1.34	0.91
30:DY:16:LEU:H	30:DY:16:LEU:HD22	1.34	0.91
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.51	0.91
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.52	0.91
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.50	0.91
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.49	0.91
12:CM:3:ILE:HG12	12:CM:52:ILE:HD11	1.49	0.91
47:BF:109:ARG:HB3	47:BF:135:ILE:HD13	1.52	0.91
23:BB:704:G:H2'	23:BB:726:G:H22	1.33	0.91
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.52	0.91
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.50	0.91
23:DB:1099:G:H8	24:DI:3:LYS:H	1.04	0.91
12:AM:3:ILE:HG12	12:AM:52:ILE:HD11	1.51	0.91
3:CD:160:LEU:HD13	3:CD:160:LEU:H	1.35	0.91
23:DB:281:C:H2'	23:DB:282:A:C8	2.06	0.91
26:BD:5:VAL:H	26:BD:32:ASN:HD21	0.95	0.91
32:B4:2:LYS:HD3	32:B4:4:ARG:HE	1.34	0.91
19:AT:38:ILE:HD11	19:AT:82:ILE:HG22	1.53	0.91
23:BB:161:A:H3'	23:BB:162:U:H5''	1.51	0.91
23:DB:2266:A:H4'	23:DB:2267:A:N7	1.85	0.91
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.36	0.91
8:AI:25:GLY:HA3	8:AI:57:VAL:HA	1.50	0.90
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.49	0.90
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.52	0.90
52:BW:50:VAL:HG23	52:BW:61:LYS:HD3	1.52	0.90
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.51	0.90
32:D4:2:LYS:HD3	32:D4:4:ARG:HE	1.34	0.90
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.51	0.90
50:DT:38:ALA:HB1	50:DT:43:ILE:HD11	1.52	0.90
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.54	0.90
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.36	0.90
23:DB:972:A:H3'	23:DB:973:A:H5''	1.54	0.90
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.37	0.90
52:DW:50:VAL:HG23	52:DW:61:LYS:HD3	1.53	0.90
1:CA:974:A:H4'	1:CA:975:A:H5'	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.52	0.90
23:BB:2355:G:H4'	52:BW:20:LEU:HD13	1.50	0.90
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.54	0.90
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.35	0.90
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.52	0.90
1:AA:600:A:H5''	7:AH:88:LYS:HD2	1.54	0.89
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.50	0.89
48:DG:79:THR:HG22	48:DG:80:GLU:HG2	1.55	0.89
23:BB:423:A:H5'	23:BB:424:G:H5'	1.51	0.89
23:BB:858:G:N3	23:BB:2268:A:H2'	1.86	0.89
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.37	0.89
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.37	0.89
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.54	0.89
11:AL:120:ARG:HG2	11:AL:121:PRO:HD2	1.52	0.89
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.55	0.89
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.55	0.89
23:DB:1060:U:N3	23:DB:1088:A:N7	2.21	0.89
23:DB:2798:U:H1'	23:DB:2800:A:N6	1.87	0.89
47:DF:163:GLU:HA	47:DF:166:ARG:HD2	1.50	0.89
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.37	0.89
48:BG:15:ASP:HB3	48:BG:26:LYS:H	1.33	0.89
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.55	0.89
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.37	0.89
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.37	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
20:CB:96:LEU:HB2	20:CB:99:MET:HE3	1.54	0.89
19:AT:4:LYS:HD2	19:AT:5:SER:H	1.38	0.89
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.55	0.89
23:DB:1024:G:H3'	23:DB:1025:G:H5''	1.53	0.88
49:DR:8:GLY:HA3	49:DR:23:GLU:HB2	1.55	0.88
23:BB:45:G:H5''	23:BB:46:G:H5'	1.55	0.88
40:BH:7:ASP:HA	40:BH:15:LEU:HD22	1.53	0.88
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.87	0.88
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.54	0.88
22:DA:2:G:H2'	22:DA:3:C:C6	2.08	0.88
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.86	0.88
23:DB:2109:U:H3	23:DB:2180:U:H2'	1.37	0.88
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.20	0.88
4:AE:156:ARG:HA	4:AE:158:LYS:HZ2	1.34	0.88
43:BO:3:LYS:HD3	43:BO:3:LYS:H	1.38	0.88
51:BZ:76:GLU:HG3	51:BZ:77:LYS:H	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	1.73	0.88
23:BB:972:A:H3'	23:BB:973:A:H5''	1.55	0.88
37:DL:143:GLU:HG2	37:DL:144:GLU:N	1.89	0.88
48:DG:15:ASP:HB3	48:DG:26:LYS:H	1.36	0.88
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.55	0.88
1:CA:699:C:H2'	1:CA:700:G:H5''	1.53	0.88
1:CA:812:G:HO2'	1:CA:813:U:H6	0.93	0.88
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.56	0.88
9:CJ:52:LEU:H	9:CJ:52:LEU:HD12	1.38	0.88
26:BD:105:LYS:HD2	26:BD:177:VAL:HG22	1.54	0.88
1:CA:60:A:H4'	1:CA:61:G:H5'	1.52	0.88
1:AA:840:C:H2'	1:AA:842:U:H5''	1.54	0.88
8:AI:27:ILE:HG21	8:AI:34:LEU:HD13	1.55	0.88
53:D6:38:LEU:HD12	53:D6:58:VAL:HG11	1.53	0.88
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	1.54	0.88
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.51	0.88
23:BB:1244:A:H5''	37:BL:8:PRO:HD3	1.56	0.87
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.54	0.87
47:DF:135:ILE:HD11	47:DF:137:PHE:HB3	1.55	0.87
2:CC:133:MET:HE1	2:CC:165:GLU:HG2	1.54	0.87
53:B6:38:LEU:HA	53:B6:41:LEU:HD13	1.56	0.87
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.39	0.87
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.73	0.87
1:AA:974:A:H4'	1:AA:975:A:H5'	1.53	0.87
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.37	0.87
48:BG:79:THR:HG22	48:BG:80:GLU:HG2	1.56	0.87
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.55	0.87
1:AA:1144:G:N2	1:AA:1146:A:H62	1.72	0.87
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.89	0.87
53:D6:32:ARG:HB2	53:D6:103:ILE:HG23	1.56	0.87
2:AC:133:MET:HE1	2:AC:165:GLU:HG2	1.56	0.87
19:CT:4:LYS:HD2	19:CT:5:SER:H	1.39	0.87
23:DB:962:G:H21	23:DB:2250:G:H22	1.22	0.87
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.57	0.87
13:AN:30:ILE:HG21	13:AN:44:VAL:HG21	1.57	0.87
13:CN:30:ILE:HG21	13:CN:44:VAL:HG21	1.56	0.87
23:BB:75:G:H4'	39:BX:48:ARG:HH22	1.40	0.87
23:BB:1024:G:H3'	23:BB:1025:G:H5''	1.56	0.87
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.87
53:B6:112:LYS:HB3	53:B6:116:ARG:NH2	1.90	0.87
23:BB:141:G:H1	50:BT:2:ILE:HD12	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.57	0.86
44:DQ:111:LYS:HB2	49:DR:48:LYS:NZ	1.88	0.86
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.57	0.86
53:D6:92:PRO:HA	53:D6:101:ILE:HG12	1.56	0.86
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.54	0.86
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.57	0.86
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.39	0.86
1:AA:865:A:H5'	1:AA:1078:U:O4	1.75	0.86
47:BF:125:GLY:HA2	47:BF:162:ASP:HA	1.56	0.86
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.39	0.86
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.40	0.86
1:CA:840:C:H2'	1:CA:842:U:H5''	1.55	0.86
1:CA:1144:G:N2	1:CA:1146:A:H62	1.73	0.86
1:AA:93:U:H5''	1:AA:94:G:OP2	1.76	0.86
9:AJ:52:LEU:H	9:AJ:52:LEU:HD12	1.40	0.86
44:BQ:63:ARG:HH22	44:BQ:96:ASP:HA	1.38	0.86
1:CA:1493:A:H2'	23:DB:1913:A:N6	1.89	0.86
23:BB:2134:A:H2'	23:BB:2135:A:H8	1.38	0.86
53:B6:78:ALA:HA	53:B6:81:LYS:HD2	1.57	0.86
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.56	0.86
26:DD:105:LYS:HD2	26:DD:177:VAL:HG22	1.57	0.86
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.57	0.86
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.57	0.86
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.56	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.91	0.86
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.09	0.86
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.39	0.86
47:BF:33:ILE:HD12	47:BF:95:MET:HG2	1.54	0.86
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.40	0.86
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.57	0.86
3:CD:60:VAL:HB	3:CD:194:ILE:HD11	1.58	0.86
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.75	0.86
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.41	0.86
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.75	0.86
47:BF:135:ILE:HD11	47:BF:137:PHE:HB3	1.57	0.86
29:DE:119:ILE:HD11	29:DE:185:LYS:HE3	1.56	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.41	0.86
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.57	0.86
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.23	0.86
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.41	0.86
23:BB:181:A:H2'	23:BB:182:A:C8	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:67:VAL:HB	50:DT:76:ARG:HG3	1.57	0.85
29:BE:102:ARG:HD3	29:BE:201:ALA:H	1.41	0.85
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.56	0.85
49:DR:2:TYR:HB2	49:DR:42:ALA:HB2	1.56	0.85
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.58	0.85
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.57	0.85
14:AO:36:ILE:HD11	14:AO:59:MET:HB2	1.57	0.85
23:BB:2266:A:H4'	23:BB:2267:A:N7	1.90	0.85
44:BQ:111:LYS:HB2	49:BR:48:LYS:HZ2	1.41	0.85
50:BT:67:VAL:HB	50:BT:76:ARG:HG3	1.55	0.85
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.59	0.85
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.56	0.85
14:CO:36:ILE:HD11	14:CO:59:MET:HB2	1.58	0.85
23:DB:2502:G:H5'	23:DB:2503:A:H5''	1.58	0.85
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.59	0.85
23:BB:38:A:O2'	29:BE:43:THR:HA	1.75	0.85
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.42	0.85
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.42	0.85
36:B2:21:ARG:HD2	36:B2:43:THR:HG21	1.58	0.85
1:CA:1086:U:H3	1:CA:1099:G:H22	1.19	0.85
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.11	0.85
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.39	0.85
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.41	0.85
53:D6:35:PRO:HD3	53:D6:60:ALA:HB2	1.59	0.85
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.39	0.85
10:CK:24:ALA:HA	10:CK:29:THR:HG22	1.59	0.85
23:DB:1244:A:H5''	37:DL:8:PRO:HD3	1.57	0.85
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.56	0.85
16:AQ:75:VAL:HG23	16:AQ:76:ARG:H	1.42	0.85
23:BB:962:G:H21	23:BB:2250:G:H22	1.25	0.85
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.77	0.85
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.57	0.85
35:BV:70:ILE:HD13	35:BV:71:LYS:H	1.42	0.85
45:BS:66:ILE:HA	45:BS:69:LEU:HD22	1.59	0.85
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	1.56	0.85
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.77	0.85
44:DQ:63:ARG:HH22	44:DQ:96:ASP:HA	1.41	0.85
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.57	0.85
51:DZ:76:GLU:HG3	51:DZ:77:LYS:H	1.42	0.85
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.58	0.84
23:BB:1804:C:OP1	25:BC:256:THR:HB	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:27:ILE:HG21	8:CI:34:LEU:HD13	1.59	0.84
29:DE:110:SER:HB3	29:DE:114:ARG:HH12	1.41	0.84
20:AB:96:LEU:HB2	20:AB:99:MET:HE3	1.57	0.84
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.41	0.84
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.59	0.84
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.76	0.84
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.57	0.84
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.58	0.84
35:DV:70:ILE:HD13	35:DV:71:LYS:H	1.43	0.84
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.60	0.84
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.42	0.84
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.43	0.84
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.26	0.84
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.57	0.84
51:DZ:38:PHE:HE2	51:DZ:51:VAL:HG21	1.42	0.84
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.60	0.84
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.43	0.84
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.60	0.84
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.60	0.84
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.41	0.84
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.75	0.84
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.42	0.84
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.43	0.84
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.24	0.84
1:AA:79:G:H2'	1:AA:80:A:C8	2.11	0.84
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.43	0.84
24:DI:27:LEU:H	24:DI:27:LEU:HD23	1.42	0.84
36:D2:21:ARG:HD2	36:D2:43:THR:HG21	1.59	0.84
1:AA:699:C:H2'	1:AA:700:G:H5''	1.58	0.84
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.12	0.84
23:DB:2109:U:N3	23:DB:2180:U:H2'	1.93	0.84
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.42	0.84
45:DS:66:ILE:HA	45:DS:69:LEU:HD22	1.59	0.84
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.59	0.84
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.60	0.83
29:BE:119:ILE:HD11	29:BE:185:LYS:HE3	1.60	0.83
40:BH:68:ARG:HB2	40:BH:134:VAL:HG11	1.58	0.83
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	1.93	0.83
28:DP:56:SER:HB2	28:DP:75:THR:HG21	1.60	0.83
48:DG:94:ARG:HB2	48:DG:127:GLN:HG2	1.60	0.83
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:95:PHE:HE1	46:DU:102:ILE:HB	1.42	0.83
3:AD:60:VAL:HB	3:AD:194:ILE:HD11	1.59	0.83
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.40	0.83
20:CB:118:THR:O	20:CB:122:ASP:HB3	1.79	0.83
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.41	0.83
16:CQ:75:VAL:HG23	16:CQ:76:ARG:H	1.43	0.83
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.61	0.83
45:DS:36:LEU:H	45:DS:36:LEU:HD22	1.43	0.83
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.43	0.83
29:BE:110:SER:HB3	29:BE:114:ARG:HH12	1.43	0.83
45:BS:36:LEU:HD22	45:BS:36:LEU:H	1.43	0.83
19:CT:38:ILE:HD11	19:CT:82:ILE:HG22	1.59	0.83
22:DA:98:G:N1	35:DV:14:LYS:HB2	1.94	0.83
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.41	0.83
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.43	0.83
47:DF:33:ILE:HD12	47:DF:95:MET:HG2	1.58	0.83
53:D6:38:LEU:HA	53:D6:41:LEU:HD13	1.59	0.83
46:BU:95:PHE:HE1	46:BU:102:ILE:HB	1.44	0.83
48:BG:94:ARG:HB2	48:BG:127:GLN:HG2	1.61	0.83
51:BZ:38:PHE:HE2	51:BZ:51:VAL:HG21	1.41	0.83
23:DB:2720:U:H5''	28:DP:52:ARG:NH2	1.94	0.83
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.60	0.83
23:BB:189:G:H2'	23:BB:205:G:H22	1.44	0.83
23:BB:2144:G:N2	23:BB:2147:A:H4'	1.94	0.83
23:DB:181:A:H2'	23:DB:182:A:C8	2.13	0.83
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.43	0.83
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.61	0.83
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.83
40:BH:90:LEU:HD21	40:BH:146:VAL:HG21	1.59	0.83
8:CI:38:PHE:HZ	8:CI:74:GLN:HB3	1.43	0.83
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.60	0.83
23:DB:96:C:H4'	39:DX:41:HIS:ND1	1.91	0.83
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.41	0.83
28:DP:75:THR:HG23	28:DP:76:HIS:H	1.43	0.83
43:DO:3:LYS:HD3	43:DO:3:LYS:H	1.43	0.83
32:B4:17:VAL:HG12	32:B4:18:LYS:H	1.44	0.83
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.61	0.83
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.42	0.82
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.59	0.82
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.58	0.82
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:79:G:H2'	1:AA:80:A:H8	1.43	0.82
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.61	0.82
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	1.61	0.82
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.62	0.82
37:BL:143:GLU:HG2	37:BL:144:GLU:N	1.89	0.82
5:CF:62:MET:HG3	5:CF:64:VAL:HG23	1.61	0.82
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.79	0.82
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.60	0.82
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.27	0.82
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.82
20:CB:198:VAL:HG12	20:CB:200:PRO:HD3	1.60	0.82
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.44	0.82
23:DB:2548:U:H1'	27:DK:23:LYS:NZ	1.93	0.82
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.44	0.82
44:DQ:87:VAL:HB	49:DR:52:PRO:HG3	1.61	0.82
32:D4:17:VAL:HG12	32:D4:18:LYS:H	1.42	0.82
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.44	0.82
40:DH:46:PHE:HA	40:DH:50:ARG:HH21	1.44	0.82
1:AA:97:G:H2'	1:AA:98:A:O4'	1.80	0.82
1:CA:269:C:H2'	1:CA:270:A:C8	2.15	0.82
20:AB:94:ARG:HE	20:AB:94:ARG:N	1.77	0.82
23:BB:2502:G:H5'	23:BB:2503:A:H5''	1.58	0.82
29:BE:118:LEU:HD21	29:BE:188:MET:HE2	1.62	0.82
47:DF:125:GLY:HA2	47:DF:162:ASP:HA	1.61	0.82
23:DB:1098:A:H2'	24:DI:4:VAL:N	1.95	0.82
27:DK:41:ILE:HG13	27:DK:42:THR:N	1.95	0.82
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.44	0.82
29:DE:118:LEU:HD21	29:DE:188:MET:HE2	1.61	0.82
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.62	0.81
23:DB:322:A:H2'	29:DE:163:ASN:HD21	1.45	0.81
23:DB:1099:G:P	24:DI:3:LYS:HA	2.20	0.81
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.45	0.81
51:DZ:30:LEU:H	51:DZ:30:LEU:HD23	1.44	0.81
39:BX:12:GLU:HA	39:BX:15:ASN:HD21	1.44	0.81
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.62	0.81
23:DB:2366:A:H4'	52:DW:61:LYS:HE2	1.62	0.81
35:DV:77:VAL:HG23	35:DV:89:ILE:HG23	1.62	0.81
45:DS:10:ALA:HB3	45:DS:101:SER:HB2	1.61	0.81
1:AA:973:G:H3'	1:AA:974:A:H5''	1.62	0.81
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.28	0.81
23:BB:616:A:H3'	23:BB:617:G:H8	1.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.80	0.81
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.62	0.81
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.60	0.81
23:DB:1099:G:P	24:DI:4:VAL:H	2.02	0.81
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.45	0.81
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.61	0.81
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.62	0.81
20:CB:94:ARG:HE	20:CB:94:ARG:N	1.78	0.81
23:DB:404:A:H4'	23:DB:405:U:H5'	1.63	0.81
23:DB:2179:C:O2	23:DB:2179:C:H2'	1.80	0.81
5:AF:62:MET:HG3	5:AF:64:VAL:HG23	1.62	0.81
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.63	0.81
40:BH:73:ASN:HD22	40:BH:74:ALA:H	1.25	0.81
52:BW:39:GLN:HG2	52:BW:40:ARG:N	1.95	0.81
53:B6:58:VAL:HG22	53:B6:68:VAL:HG22	1.63	0.81
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.63	0.81
40:DH:132:PHE:O	40:DH:139:PHE:HA	1.80	0.81
53:D6:30:THR:C	53:D6:32:ARG:H	1.86	0.81
42:BN:2:ARG:HG2	42:BN:5:LYS:HB2	1.62	0.81
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	1.61	0.81
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	1.61	0.81
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.45	0.81
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.61	0.81
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.16	0.81
50:DT:15:HIS:H	50:DT:32:LEU:HA	1.46	0.81
8:AI:38:PHE:HZ	8:AI:74:GLN:HB3	1.46	0.81
18:AS:30:LEU:H	18:AS:48:ILE:HA	1.45	0.81
28:BP:56:SER:HB2	28:BP:75:THR:HG21	1.63	0.81
51:BZ:35:SER:HA	51:BZ:50:ARG:HA	1.63	0.81
53:B6:143:LEU:O	53:B6:147:LEU:HG	1.80	0.81
23:DB:616:A:H3'	23:DB:617:G:H8	1.45	0.81
1:AA:269:C:H2'	1:AA:270:A:C8	2.15	0.81
8:AI:48:ARG:HA	8:AI:51:LEU:HD12	1.63	0.81
1:CA:505:G:H5'	1:CA:534:U:H2'	1.62	0.81
1:CA:1170:A:H5'	20:CB:138:ARG:HH12	1.46	0.81
16:CQ:79:GLU:HG3	16:CQ:80:LYS:HZ1	1.46	0.81
1:AA:505:G:H5'	1:AA:534:U:H2'	1.63	0.80
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.21	0.80
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	1.64	0.80
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	1.96	0.80
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.61	0.80
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.44	0.80
23:BB:129:C:H2'	23:BB:130:C:C6	2.17	0.80
23:BB:858:G:H21	23:BB:2268:A:H3'	1.45	0.80
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.63	0.80
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.61	0.80
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.62	0.80
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.46	0.80
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.16	0.80
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.63	0.80
1:AA:764:C:H2'	1:AA:765:G:H5'	1.63	0.80
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.62	0.80
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.64	0.80
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.46	0.80
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.81	0.80
43:DO:27:VAL:HG21	43:DO:40:ILE:HD12	1.63	0.80
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.12	0.80
33:B1:47:ILE:HD12	33:B1:47:ILE:H	1.45	0.80
33:B1:49:LYS:HG3	33:B1:50:GLU:H	1.44	0.80
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.62	0.80
38:BM:37:GLY:HA3	38:BM:127:LYS:HZ2	1.46	0.80
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.62	0.80
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.24	0.80
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.62	0.80
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.64	0.80
40:BH:72:ILE:HD12	40:BH:110:VAL:HG11	1.64	0.80
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.63	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
38:DM:134:THR:HG22	38:DM:136:MET:H	1.45	0.80
42:DN:80:PHE:O	42:DN:85:PRO:HD3	1.81	0.80
48:DG:115:GLN:CD	48:DG:115:GLN:H	1.89	0.80
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.62	0.80
6:AG:104:VAL:HG12	6:AG:108:ARG:HD2	1.64	0.80
23:BB:1060:U:OP2	24:BI:74:PRO:HA	1.80	0.80
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.64	0.80
23:DB:2579:C:H1'	26:DD:130:GLN:HE22	1.46	0.80
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.64	0.80
45:BS:10:ALA:HB3	45:BS:101:SER:HB2	1.64	0.80
23:BB:1459:G:H4'	23:BB:1461:C:N4	1.96	0.80
40:BH:116:ARG:NH1	40:BH:133:GLN:HB2	1.97	0.80
43:BO:27:VAL:HG21	43:BO:40:ILE:HD12	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:34:LEU:HD21	8:AI:48:ARG:HE	1.48	0.79
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.13	0.79
50:BT:11:LEU:H	50:BT:11:LEU:HD22	1.47	0.79
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.79	0.79
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.64	0.79
42:DN:2:ARG:HG2	42:DN:5:LYS:HB2	1.65	0.79
10:AK:24:ALA:HA	10:AK:29:THR:HG22	1.64	0.79
23:BB:181:A:H2'	23:BB:182:A:H8	1.45	0.79
23:BB:287:G:H2'	23:BB:288:U:C6	2.17	0.79
28:BP:75:THR:HG23	28:BP:76:HIS:H	1.44	0.79
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.64	0.79
23:DB:1099:G:H5''	24:DI:3:LYS:N	1.98	0.79
1:AA:842:U:H2'	1:AA:843:U:O3'	1.83	0.79
38:BM:37:GLY:HA3	38:BM:127:LYS:NZ	1.97	0.79
1:CA:981:U:H5''	13:CN:5:MET:HE1	1.64	0.79
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.63	0.79
17:CR:34:GLU:CD	17:CR:34:GLU:H	1.90	0.79
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.46	0.79
34:B3:18:LYS:HD2	34:B3:20:GLY:H	1.47	0.79
50:BT:15:HIS:H	50:BT:32:LEU:HA	1.46	0.79
3:CD:149:LYS:HD3	3:CD:177:MET:HG3	1.65	0.79
23:DB:858:G:N3	23:DB:2268:A:H2'	1.97	0.79
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.48	0.79
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	1.96	0.79
6:AG:142:ARG:HH11	6:AG:142:ARG:HB2	1.47	0.79
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.63	0.79
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.65	0.79
1:CA:764:C:H2'	1:CA:765:G:H5'	1.65	0.79
23:DB:2741:A:H2'	23:DB:2742:G:O4'	1.82	0.79
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.65	0.79
51:DZ:35:SER:HA	51:DZ:50:ARG:HA	1.62	0.79
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.22	0.79
20:AB:156:LEU:H	20:AB:156:LEU:HD12	1.48	0.79
48:BG:115:GLN:CD	48:BG:115:GLN:H	1.90	0.79
51:BZ:30:LEU:HD23	51:BZ:30:LEU:H	1.46	0.79
53:B6:134:ARG:NH2	53:B6:135:GLU:HG2	1.98	0.79
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.48	0.79
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.65	0.79
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.65	0.79
23:BB:1082:U:C4	23:BB:1086:A:C2	2.71	0.79
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.16	0.79
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.62	0.79
22:DA:2:G:H2'	22:DA:3:C:H6	1.47	0.79
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.45	0.79
40:DH:86:ASP:HB2	40:DH:89:LYS:HD3	1.65	0.79
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	1.62	0.79
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.65	0.79
1:AA:376:G:H5''	15:AP:5:ARG:HB2	1.65	0.79
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.65	0.79
23:BB:135:U:H2'	23:BB:136:G:C8	2.18	0.79
48:BG:157:LYS:HB3	48:BG:159:LYS:HG3	1.63	0.79
1:CA:1399:C:H4'	1:CA:1400:C:C5'	2.12	0.79
11:CL:48:LEU:HD22	53:D6:84:ARG:HH12	1.47	0.79
23:DB:1916:A:H2'	23:DB:1917:U:O4'	1.83	0.79
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	1.98	0.79
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	1.64	0.79
1:AA:116:A:H61	1:AA:313:A:H1'	1.48	0.78
6:AG:148:LYS:HG3	6:AG:151:ALA:HB3	1.63	0.78
23:BB:364:C:H2'	23:BB:365:U:C6	2.18	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	1.99	0.78
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.48	0.78
23:DB:90:U:H3'	23:DB:91:A:H5''	1.64	0.78
23:BB:163:C:H2'	23:BB:164:C:O4'	1.83	0.78
35:BV:31:TYR:HB3	35:BV:37:PRO:HG3	1.66	0.78
51:BZ:76:GLU:HG3	51:BZ:77:LYS:N	1.98	0.78
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.63	0.78
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.63	0.78
17:CR:34:GLU:HB2	21:CU:18:PHE:HZ	1.46	0.78
25:DC:41:GLY:HA3	25:DC:53:ILE:HG21	1.66	0.78
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.65	0.78
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.66	0.78
38:DM:37:GLY:HA3	38:DM:127:LYS:HZ2	1.46	0.78
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.47	0.78
23:DB:1804:C:OP1	25:DC:256:THR:HB	1.82	0.78
23:DB:2144:G:O2'	23:DB:2146:C:H5''	1.83	0.78
23:DB:2346:A:H3'	23:DB:2347:C:H5''	1.63	0.78
35:DV:31:TYR:HB3	35:DV:37:PRO:HG3	1.65	0.78
48:DG:84:LYS:HB3	48:DG:132:LEU:O	1.83	0.78
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.63	0.78
13:AN:63:CYS:HB3	13:AN:67:GLY:N	1.95	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2798:U:H1'	23:BB:2800:A:N6	1.99	0.78
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.84	0.78
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.48	0.78
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.65	0.78
8:CI:34:LEU:HD21	8:CI:48:ARG:HE	1.47	0.78
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.47	0.78
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.81	0.78
23:DB:1324:G:H1'	23:DB:1616:A:N6	1.97	0.78
38:DM:43:ALA:O	38:DM:46:ILE:HG12	1.84	0.78
47:DF:33:ILE:HD13	47:DF:98:PHE:HD2	1.46	0.78
1:AA:781:A:H2'	1:AA:782:A:H5'	1.66	0.78
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.66	0.78
48:BG:36:LEU:HD22	48:BG:36:LEU:H	1.48	0.78
1:CA:946:A:H2'	1:CA:947:G:C8	2.19	0.78
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.29	0.78
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.09	0.78
23:DB:163:C:H2'	23:DB:164:C:O4'	1.84	0.78
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.82	0.78
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.66	0.78
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.64	0.78
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.66	0.78
16:AQ:79:GLU:HG3	16:AQ:80:LYS:HZ1	1.47	0.78
17:AR:34:GLU:HB2	21:AU:18:PHE:HZ	1.47	0.78
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.18	0.78
23:DB:38:A:O2'	29:DE:43:THR:HA	1.84	0.78
22:BA:66:A:H61	22:BA:107:G:H2'	1.49	0.78
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.48	0.78
44:BQ:111:LYS:HB2	49:BR:48:LYS:NZ	1.99	0.78
2:CC:156:LEU:HD11	2:CC:165:GLU:HB2	1.65	0.78
23:DB:1175:A:H3'	23:DB:1176:U:H5'	1.64	0.78
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.49	0.78
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.78
35:DV:72:VAL:HG21	35:DV:91:PHE:HB3	1.66	0.78
1:AA:946:A:H2'	1:AA:947:G:C8	2.19	0.78
35:BV:70:ILE:HG12	35:BV:72:VAL:HG13	1.66	0.78
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.66	0.78
48:BG:84:LYS:HB3	48:BG:132:LEU:O	1.83	0.78
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.66	0.78
1:CA:781:A:H2'	1:CA:782:A:H5'	1.66	0.78
29:DE:145:ASP:HA	29:DE:166:LYS:HB3	1.66	0.78
21:AU:43:GLU:HA	21:AU:46:ARG:HD2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:129:C:H2'	23:BB:130:C:H6	1.48	0.78
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.24	0.78
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	1.98	0.78
18:CS:61:VAL:HA	18:CS:65:MET:SD	2.23	0.78
23:DB:281:C:H2'	23:DB:282:A:H8	1.47	0.78
52:DW:39:GLN:HG2	52:DW:40:ARG:N	1.99	0.78
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.18	0.77
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.18	0.77
21:CU:43:GLU:HA	21:CU:46:ARG:HD2	1.66	0.77
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.24	0.77
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.46	0.77
27:BK:41:ILE:HG13	27:BK:42:THR:N	1.98	0.77
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.66	0.77
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.31	0.77
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.49	0.77
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	1.98	0.77
23:DB:181:A:H2'	23:DB:182:A:H8	1.46	0.77
23:DB:547:A:H5'	23:DB:548:G:H21	1.48	0.77
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.66	0.77
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.29	0.77
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.49	0.77
46:BU:81:ARG:HH21	46:BU:81:ARG:H	1.33	0.77
13:CN:63:CYS:HB3	13:CN:67:GLY:N	1.99	0.77
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.48	0.77
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.65	0.77
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.67	0.77
33:B1:9:LYS:HD3	33:B1:9:LYS:H	1.48	0.77
44:BQ:87:VAL:HB	49:BR:52:PRO:HG3	1.64	0.77
1:CA:376:G:H5''	15:CP:5:ARG:HB2	1.66	0.77
1:CA:973:G:H3'	1:CA:974:A:H5''	1.64	0.77
1:CA:1078:U:H4'	4:CE:137:ARG:HH12	1.49	0.77
1:CA:1534:A:H62	21:CU:44:ARG:HH12	1.29	0.77
6:CG:142:ARG:HB2	6:CG:142:ARG:HH11	1.50	0.77
34:D3:18:LYS:HD2	34:D3:20:GLY:H	1.50	0.77
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.64	0.77
23:BB:942:G:H2'	23:BB:943:A:O4'	1.84	0.77
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.48	0.77
40:BH:90:LEU:HD11	40:BH:146:VAL:HG11	1.66	0.77
41:BJ:36:LEU:HD12	41:BJ:121:LYS:HE3	1.66	0.77
1:CA:842:U:H2'	1:CA:843:U:O3'	1.84	0.77
6:CG:57:GLU:CD	6:CG:57:GLU:H	1.93	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:142:A:H2'	23:DB:143:C:C6	2.19	0.77
28:DP:26:GLU:HB3	28:DP:84:SER:HB3	1.67	0.77
3:AD:10:LEU:HB3	3:AD:62:ARG:HD3	1.66	0.77
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.64	0.77
23:BB:98:G:H22	46:BU:6:ARG:NH1	1.82	0.77
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.66	0.77
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.67	0.77
53:B6:106:LEU:HD23	53:B6:106:LEU:H	1.50	0.77
3:CD:70:GLN:HE22	3:CD:96:ARG:HH12	1.32	0.77
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.48	0.77
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.19	0.77
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.67	0.77
39:DX:12:GLU:HA	39:DX:15:ASN:HD21	1.48	0.77
22:BA:104:A:H2'	22:BA:105:G:O4'	1.85	0.77
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.66	0.77
28:BP:4:ILE:C	28:BP:6:GLN:H	1.92	0.77
39:BX:37:LEU:HD23	39:BX:39:GLN:H	1.49	0.77
42:DN:107:ASN:HD21	45:DS:40:ASN:HD22	1.32	0.77
1:AA:993:G:H2'	1:AA:995:C:H41	1.50	0.77
23:BB:773:U:H5'	23:BB:774:G:OP2	1.85	0.77
23:BB:1551:A:H3'	23:BB:1552:A:H5''	1.67	0.77
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.65	0.77
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.00	0.77
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.85	0.77
23:DB:102:U:H2'	39:DX:2:LYS:HE3	1.66	0.77
23:DB:1911:U:H2'	23:DB:1918:A:N1	1.99	0.77
1:AA:239:U:OP1	1:AA:239:U:H4'	1.83	0.77
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.66	0.77
23:BB:1203:U:H1'	37:BL:4:ASN:ND2	1.95	0.77
23:BB:2563:U:H2'	23:BB:2565:A:OP2	1.85	0.77
23:BB:2720:U:H5''	28:BP:52:ARG:NH2	2.00	0.77
37:BL:6:LEU:HD23	37:BL:6:LEU:H	1.46	0.77
1:CA:1328:C:H5''	12:CM:27:THR:HG21	1.65	0.77
9:CJ:51:VAL:HG23	13:CN:80:ARG:HB2	1.67	0.77
9:CJ:52:LEU:HG	9:CJ:62:ARG:HE	1.50	0.77
10:CK:55:ARG:HH12	10:CK:60:PHE:HD1	1.32	0.77
23:DB:547:A:H5'	23:DB:548:G:N2	1.99	0.77
23:DB:1082:U:C4	23:DB:1086:A:C2	2.73	0.77
23:DB:1551:A:H3'	23:DB:1552:A:H5''	1.67	0.77
23:DB:2800:A:H2'	23:DB:2801:G:O4'	1.85	0.77
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:981:U:H5''	13:AN:5:MET:HE1	1.66	0.77
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.15	0.77
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.10	0.77
28:BP:7:LEU:HD12	28:BP:7:LEU:H	1.49	0.77
37:BL:121:THR:HB	37:BL:141:LYS:HD2	1.66	0.77
38:BM:43:ALA:O	38:BM:46:ILE:HG12	1.84	0.77
48:DG:36:LEU:H	48:DG:36:LEU:HD22	1.50	0.77
1:AA:1458:G:H5''	19:AT:25:SER:HB2	1.67	0.76
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.20	0.76
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.84	0.76
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.65	0.76
42:BN:80:PHE:O	42:BN:85:PRO:HD3	1.83	0.76
53:B6:30:THR:C	53:B6:32:ARG:N	2.40	0.76
1:CA:116:A:H61	1:CA:313:A:H1'	1.49	0.76
1:CA:269:C:H2'	1:CA:270:A:H8	1.50	0.76
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.66	0.76
40:DH:54:LEU:HD22	40:DH:58:LEU:HD11	1.65	0.76
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.84	0.76
50:DT:29:THR:H	50:DT:91:GLN:HE22	1.32	0.76
1:AA:1328:C:H5''	12:AM:27:THR:HG21	1.68	0.76
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.14	0.76
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.66	0.76
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.85	0.76
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.85	0.76
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.68	0.76
1:CA:993:G:H2'	1:CA:995:C:H41	1.49	0.76
18:CS:30:LEU:H	18:CS:48:ILE:HA	1.48	0.76
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.21	0.76
28:DP:7:LEU:H	28:DP:7:LEU:HD12	1.51	0.76
39:DX:37:LEU:HD23	39:DX:39:GLN:H	1.50	0.76
3:AD:149:LYS:HD3	3:AD:177:MET:HG3	1.67	0.76
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.85	0.76
28:BP:26:GLU:HB3	28:BP:84:SER:HB3	1.67	0.76
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	1.66	0.76
1:CA:1226:C:H4'	1:CA:1227:A:OP1	1.84	0.76
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.49	0.76
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.66	0.76
23:BB:90:U:H3'	23:BB:91:A:H5''	1.67	0.76
26:BD:106:LYS:HB3	26:BD:206:ALA:N	2.00	0.76
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.50	0.76
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.67	0.76
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.00	0.76
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.49	0.76
38:BM:134:THR:HG22	38:BM:136:MET:H	1.48	0.76
1:CA:674:G:H2'	1:CA:675:A:H8	1.49	0.76
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.21	0.76
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.85	0.76
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.67	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.65	0.76
35:DV:70:ILE:HG12	35:DV:72:VAL:HG13	1.68	0.76
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.50	0.76
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.66	0.76
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.01	0.76
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.50	0.76
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.68	0.76
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.21	0.76
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.67	0.76
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.00	0.76
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.66	0.76
53:D6:137:LEU:HD13	53:D6:161:ILE:HG21	1.68	0.76
1:AA:674:G:H2'	1:AA:675:A:H8	1.51	0.76
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.65	0.76
10:AK:55:ARG:HH12	10:AK:60:PHE:HD1	1.31	0.76
23:BB:590:A:H2'	23:BB:591:U:C6	2.21	0.76
25:BC:132:ARG:HD3	25:BC:166:ARG:HH12	1.51	0.76
1:CA:1534:A:N6	21:CU:44:ARG:HH22	1.84	0.76
22:DA:66:A:H61	22:DA:107:G:H2'	1.51	0.76
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.51	0.76
1:AA:532:A:N6	2:AC:191:THR:HB	2.01	0.76
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.66	0.76
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.67	0.76
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.51	0.76
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.50	0.76
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.86	0.76
40:BH:130:VAL:HG23	40:BH:142:VAL:HB	1.67	0.76
49:BR:7:SER:HB2	49:BR:22:LEU:HB3	1.68	0.76
1:CA:575:G:H4'	1:CA:576:C:O5'	1.85	0.76
3:CD:10:LEU:HB3	3:CD:62:ARG:HD3	1.67	0.76
23:DB:590:A:H2'	23:DB:591:U:C6	2.21	0.76
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.67	0.76
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.48	0.76
50:DT:11:LEU:HD22	50:DT:11:LEU:H	1.51	0.76
4:AE:93:VAL:HG13	4:AE:126:ALA:HB2	1.68	0.76
6:AG:21:LEU:HD23	6:AG:21:LEU:H	1.51	0.76
17:AR:34:GLU:CD	17:AR:34:GLU:H	1.94	0.76
23:BB:274:C:H2'	23:BB:275:C:O4'	1.85	0.76
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.67	0.76
1:CA:1534:A:N6	21:CU:44:ARG:HH12	1.83	0.76
3:CD:155:LYS:HA	3:CD:158:LEU:HD12	1.66	0.76
26:DD:106:LYS:HB3	26:DD:206:ALA:N	2.00	0.76
48:DG:157:LYS:HB3	48:DG:159:LYS:HG3	1.67	0.76
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.68	0.75
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.68	0.75
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.51	0.75
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.51	0.75
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.68	0.75
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.67	0.75
53:D6:81:LYS:C	53:D6:84:ARG:HH21	1.94	0.75
1:AA:373:A:H1'	1:AA:481:G:N3	2.01	0.75
6:AG:23:ALA:O	6:AG:26:VAL:HG22	1.87	0.75
23:BB:79:C:O2'	23:BB:346:A:H1'	1.86	0.75
23:BB:137:U:H2'	23:BB:138:U:O4'	1.87	0.75
23:BB:404:A:H4'	23:BB:405:U:H5'	1.69	0.75
23:BB:2144:G:H2'	23:BB:2146:C:H5'	1.67	0.75
1:CA:1170:A:H5'	20:CB:138:ARG:NH1	2.00	0.75
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.68	0.75
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.15	0.75
23:DB:2305:U:H5''	47:DF:130:GLY:HA3	1.67	0.75
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.68	0.75
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.67	0.75
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.26	0.75
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.51	0.75
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.67	0.75
21:AU:36:PHE:HB3	21:AU:40:PRO:CD	2.14	0.75
22:BA:49:C:H2'	22:BA:50:A:H8	1.51	0.75
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.21	0.75
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.51	0.75
35:BV:72:VAL:HG12	35:BV:93:ARG:HA	1.69	0.75
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.68	0.75
13:CN:26:LEU:HD23	13:CN:27:LYS:H	1.51	0.75
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.22	0.75
23:DB:1597:A:H5''	23:DB:1598:A:H5'	1.67	0.75
51:DZ:76:GLU:HG3	51:DZ:77:LYS:N	1.99	0.75
52:DW:39:GLN:NE2	52:DW:42:THR:HB	2.00	0.75
53:D6:61:PRO:HG2	53:D6:67:VAL:HG13	1.65	0.75
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.52	0.75
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	1.86	0.75
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.68	0.75
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.02	0.75
3:AD:70:GLN:HE22	3:AD:96:ARG:HH12	1.34	0.75
3:AD:155:LYS:HA	3:AD:158:LEU:HD12	1.67	0.75
10:AK:22:ILE:HD12	10:AK:85:VAL:HG22	1.69	0.75
23:BB:423:A:H5'	23:BB:424:G:C5'	2.16	0.75
26:BD:34:VAL:CG1	26:BD:94:GLN:H	1.99	0.75
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.68	0.75
42:BN:107:ASN:HD21	45:BS:40:ASN:HD22	1.33	0.75
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.22	0.75
25:DC:132:ARG:HD3	25:DC:166:ARG:HH12	1.48	0.75
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.50	0.75
23:BB:2346:A:H3'	23:BB:2347:C:H5''	1.68	0.75
47:BF:33:ILE:HD13	47:BF:98:PHE:HD2	1.50	0.75
51:BZ:49:LEU:H	51:BZ:49:LEU:HD12	1.51	0.75
53:B6:50:VAL:HG21	53:B6:55:ILE:HD13	1.68	0.75
1:CA:1534:A:H62	21:CU:44:ARG:HH22	1.35	0.75
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.68	0.75
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.52	0.75
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.67	0.75
23:DB:878:A:H1'	23:DB:899:A:H62	1.52	0.75
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.17	0.75
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.32	0.75
48:DG:17:LYS:HZ2	48:DG:18:ILE:N	1.83	0.75
1:AA:1032:G:H5''	1:AA:1032:G:N3	2.02	0.75
9:AJ:51:VAL:HG23	13:AN:80:ARG:HB2	1.68	0.75
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.22	0.75
35:BV:77:VAL:HG23	35:BV:89:ILE:HG23	1.68	0.75
40:BH:68:ARG:HG3	40:BH:134:VAL:HG21	1.68	0.75
50:BT:55:VAL:HA	50:BT:87:LEU:HA	1.69	0.75
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.85	0.75
23:DB:1099:G:H5''	24:DI:2:LYS:C	2.11	0.75
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.69	0.75
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.69	0.75
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.17	0.75
38:DM:108:VAL:HG13	38:DM:112:LEU:HB3	1.69	0.75
44:DQ:29:ARG:HH11	44:DQ:29:ARG:HB3	1.52	0.75
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.69	0.75
48:DG:37:ASN:HD21	48:DG:40:VAL:HB	1.52	0.75
1:AA:484:G:H4'	1:AA:485:U:O5'	1.87	0.75
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.69	0.75
50:BT:29:THR:H	50:BT:91:GLN:HE22	1.33	0.75
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.67	0.75
52:BW:18:LYS:HE2	52:BW:19:ARG:NH2	2.01	0.75
11:CL:48:LEU:HD22	53:D6:84:ARG:NH1	2.02	0.75
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.51	0.75
49:DR:4:VAL:O	49:DR:38:VAL:HA	1.87	0.75
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.67	0.75
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.51	0.75
23:DB:106:C:H2'	23:DB:107:G:H8	1.52	0.75
37:DL:82:LEU:HD23	37:DL:90:VAL:HG21	1.69	0.75
23:BB:1258:U:H4'	29:BE:79:ARG:HD2	1.69	0.74
23:BB:1942:C:O4'	53:B6:133:ARG:NH1	2.15	0.74
23:BB:2800:A:H2'	23:BB:2801:G:O4'	1.86	0.74
20:CB:96:LEU:HD21	20:CB:146:SER:HB2	1.66	0.74
20:CB:156:LEU:H	20:CB:156:LEU:HD12	1.51	0.74
23:DB:580:U:H2'	23:DB:581:C:C6	2.22	0.74
28:DP:4:ILE:C	28:DP:6:GLN:H	1.93	0.74
38:DM:37:GLY:HA3	38:DM:127:LYS:NZ	2.02	0.74
43:DO:35:ILE:HG13	43:DO:71:ALA:HB2	1.69	0.74
44:DQ:26:ALA:HA	44:DQ:29:ARG:HG3	1.69	0.74
20:AB:96:LEU:HD21	20:AB:146:SER:HB2	1.68	0.74
35:BV:72:VAL:HG21	35:BV:91:PHE:HB3	1.67	0.74
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.52	0.74
47:DF:41:GLU:HB2	47:DF:48:LEU:HD11	1.67	0.74
9:AJ:52:LEU:HG	9:AJ:62:ARG:HE	1.52	0.74
23:BB:1729:U:H3'	23:BB:1730:C:H4'	1.69	0.74
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.68	0.74
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.51	0.74
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.22	0.74
2:CC:48:LYS:HD3	2:CC:48:LYS:H	1.51	0.74
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.22	0.74
37:DL:121:THR:HB	37:DL:141:LYS:HD2	1.70	0.74
6:AG:57:GLU:CD	6:AG:57:GLU:H	1.94	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.68	0.74
23:BB:1024:G:C3'	23:BB:1025:G:H5''	2.17	0.74
25:BC:41:GLY:HA3	25:BC:53:ILE:HG21	1.68	0.74
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.18	0.74
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.51	0.74
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.87	0.74
53:D6:107:THR:O	53:D6:111:ARG:HB2	1.87	0.74
1:AA:269:C:H2'	1:AA:270:A:H8	1.51	0.74
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.88	0.74
8:AI:21:LYS:HG2	8:AI:22:PRO:HD2	1.69	0.74
12:AM:70:ARG:HH22	47:BF:112:ASP:HB3	1.52	0.74
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.36	0.74
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.52	0.74
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	1.69	0.74
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.68	0.74
28:DP:50:ARG:HB2	28:DP:56:SER:HB3	1.67	0.74
33:D1:9:LYS:HD3	33:D1:9:LYS:H	1.51	0.74
35:DV:77:VAL:HG12	38:DM:136:MET:HG2	1.68	0.74
40:DH:84:ALA:HA	40:DH:90:LEU:HA	1.69	0.74
45:DS:27:LYS:O	45:DS:32:ALA:HB2	1.88	0.74
2:AC:48:LYS:HD3	2:AC:48:LYS:H	1.52	0.74
23:BB:280:U:H2'	23:BB:281:C:C6	2.21	0.74
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.23	0.74
1:CA:1311:A:N7	18:CS:1:PRO:HG3	2.02	0.74
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.52	0.74
23:DB:721:A:H2'	23:DB:722:A:H8	1.53	0.74
23:DB:2814:A:H4'	31:D0:25:THR:HG21	1.69	0.74
40:DH:54:LEU:HA	40:DH:58:LEU:HG	1.70	0.74
47:DF:49:LEU:HD11	47:DF:66:ILE:HD12	1.68	0.74
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.53	0.74
37:BL:135:ILE:HG12	37:BL:140:GLY:HA3	1.69	0.74
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.68	0.74
47:BF:41:GLU:HB2	47:BF:48:LEU:HD11	1.69	0.74
1:CA:1080:A:H5''	4:CE:20:VAL:HG11	1.70	0.74
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	1.88	0.74
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.69	0.74
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	2.03	0.74
35:DV:42:LEU:HD23	35:DV:42:LEU:H	1.51	0.74
23:BB:580:U:H2'	23:BB:581:C:C6	2.23	0.74
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.53	0.74
28:BP:50:ARG:HB2	28:BP:56:SER:HB3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:26:ASN:HA	36:B2:29:GLN:HB3	1.69	0.74
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.68	0.74
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.68	0.74
53:B6:108:GLU:O	53:B6:112:LYS:HG3	1.87	0.74
1:CA:373:A:H1'	1:CA:481:G:N3	2.02	0.74
1:CA:484:G:H4'	1:CA:485:U:O5'	1.87	0.74
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.70	0.74
19:CT:43:LYS:HA	19:CT:85:LEU:HD11	1.70	0.74
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.23	0.74
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.68	0.74
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.87	0.74
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.70	0.74
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.70	0.74
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.70	0.74
26:BD:148:GLN:HG3	26:BD:152:PRO:HB3	1.69	0.74
37:BL:121:THR:HG22	37:BL:141:LYS:HB3	1.70	0.74
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.27	0.74
23:DB:138:U:O3'	23:DB:139:U:H3'	1.87	0.74
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.21	0.74
27:DK:107:LEU:H	27:DK:107:LEU:HD12	1.52	0.74
37:DL:79:LEU:HB3	37:DL:115:GLU:O	1.88	0.74
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.70	0.74
44:DQ:89:ILE:HB	49:DR:11:GLN:HE22	1.51	0.74
50:DT:55:VAL:HA	50:DT:87:LEU:HA	1.70	0.74
1:AA:21:G:H2'	1:AA:22:G:C8	2.23	0.74
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.69	0.74
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.53	0.74
23:BB:532:A:H4'	23:BB:533:G:C8	2.22	0.74
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.23	0.74
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.70	0.74
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.70	0.74
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.70	0.74
4:CE:143:LEU:O	4:CE:146:MET:HG2	1.88	0.74
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.01	0.74
40:DH:117:LEU:HD12	40:DH:118:PRO:HD2	1.69	0.74
46:DU:14:THR:HB	46:DU:68:ASN:HB3	1.70	0.74
49:DR:7:SER:HB2	49:DR:22:LEU:HB3	1.69	0.74
1:AA:91:U:O5'	1:AA:91:U:H6	1.69	0.73
4:AE:143:LEU:O	4:AE:146:MET:HG2	1.88	0.73
23:BB:140:C:H4'	23:BB:141:G:H21	1.52	0.73
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.88	0.73
29:BE:108:ILE:HD11	29:BE:181:ILE:HB	1.69	0.73
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.68	0.73
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.70	0.73
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.51	0.73
23:DB:2728:U:H5'	27:DK:70:ARG:NH2	2.03	0.73
30:DY:6:ILE:HG22	30:DY:56:VAL:HA	1.69	0.73
37:DL:135:ILE:HG12	37:DL:140:GLY:HA3	1.68	0.73
46:DU:11:ILE:HG22	46:DU:70:ALA:HB3	1.70	0.73
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.70	0.73
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.70	0.73
23:BB:152:A:H2'	23:BB:153:U:C6	2.23	0.73
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.22	0.73
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.03	0.73
47:BF:115:GLY:HA2	47:BF:177:ARG:HH11	1.52	0.73
48:BG:89:VAL:HB	48:BG:159:LYS:HA	1.70	0.73
1:CA:841:C:H3'	1:CA:843:U:OP2	1.88	0.73
23:DB:1024:G:C3'	23:DB:1025:G:H5''	2.18	0.73
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.88	0.73
28:DP:75:THR:HG23	28:DP:76:HIS:N	2.02	0.73
29:DE:148:ILE:HD13	29:DE:187:VAL:HG21	1.70	0.73
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.68	0.73
6:AG:43:TYR:O	6:AG:47:GLU:HG2	1.88	0.73
1:CA:21:G:H2'	1:CA:22:G:C8	2.23	0.73
1:CA:518:C:H2'	1:CA:530:G:C8	2.24	0.73
6:CG:21:LEU:HD23	6:CG:21:LEU:H	1.51	0.73
22:DA:104:A:H2'	22:DA:105:G:O4'	1.87	0.73
23:DB:2471:A:HO2'	23:DB:2472:G:H8	1.35	0.73
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.53	0.73
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.23	0.73
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.69	0.73
3:AD:70:GLN:HE22	3:AD:96:ARG:NH1	1.85	0.73
5:AF:88:MET:SD	17:AR:64:LEU:HD11	2.28	0.73
11:AL:17:LYS:HE3	11:AL:17:LYS:N	2.03	0.73
13:AN:26:LEU:HD23	13:AN:27:LYS:H	1.53	0.73
22:BA:83:G:OP1	30:BY:16:LEU:HD21	1.88	0.73
23:BB:1338:G:H4'	50:BT:18:GLU:HG3	1.70	0.73
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.24	0.73
29:BE:148:ILE:HD13	29:BE:187:VAL:HG21	1.70	0.73
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	2.02	0.73
38:BM:67:VAL:HG11	38:BM:102:LEU:HD13	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.04	0.73
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.52	0.73
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.69	0.73
23:DB:137:U:H2'	23:DB:138:U:O4'	1.89	0.73
23:DB:423:A:H5'	23:DB:424:G:H5'	1.71	0.73
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.23	0.73
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.03	0.73
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.69	0.73
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.71	0.73
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.69	0.73
43:BO:24:THR:HG22	43:BO:42:PRO:HD3	1.70	0.73
44:BQ:29:ARG:HH11	44:BQ:29:ARG:HB3	1.53	0.73
48:BG:51:PHE:HD2	48:BG:68:ARG:HG2	1.53	0.73
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.23	0.73
3:CD:70:GLN:HE22	3:CD:96:ARG:NH1	1.86	0.73
23:DB:359:G:H2'	23:DB:360:U:H5'	1.70	0.73
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.69	0.73
40:DH:115:VAL:HB	40:DH:132:PHE:CD1	2.22	0.73
40:DH:133:GLN:HA	40:DH:138:VAL:O	1.89	0.73
43:DO:24:THR:HG22	43:DO:42:PRO:HD3	1.71	0.73
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.52	0.73
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.70	0.73
18:AS:43:MET:O	18:AS:46:LEU:HB2	1.88	0.73
19:AT:43:LYS:HA	19:AT:85:LEU:HD11	1.70	0.73
38:BM:108:VAL:HG13	38:BM:112:LEU:HB3	1.68	0.73
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.54	0.73
18:CS:43:MET:O	18:CS:46:LEU:HB2	1.89	0.73
23:DB:495:G:N2	45:DS:61:ASN:HD21	1.85	0.73
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.54	0.73
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.69	0.73
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.04	0.73
51:DZ:49:LEU:H	51:DZ:49:LEU:HD12	1.53	0.73
10:AK:63:GLN:HG3	10:AK:98:ALA:HB2	1.70	0.73
23:BB:287:G:H2'	23:BB:288:U:H6	1.51	0.73
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.23	0.73
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.69	0.73
23:DB:1172:C:H2'	23:DB:1173:U:O4'	1.88	0.73
35:DV:72:VAL:HG12	35:DV:93:ARG:HA	1.70	0.73
36:D2:26:ASN:HA	36:D2:29:GLN:HB3	1.71	0.73
50:DT:73:ARG:HB3	50:DT:73:ARG:HH21	1.53	0.73
2:AC:65:VAL:HG21	2:AC:90:VAL:HG11	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.69	0.73
28:BP:75:THR:HG23	28:BP:76:HIS:N	2.02	0.73
46:BU:14:THR:HB	46:BU:68:ASN:HB3	1.70	0.73
2:CC:72:PRO:O	2:CC:76:ILE:HG12	1.89	0.73
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.24	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.68	0.73
48:DG:89:VAL:HB	48:DG:159:LYS:HA	1.70	0.73
37:BL:79:LEU:HB3	37:BL:115:GLU:O	1.89	0.73
46:BU:11:ILE:HG22	46:BU:70:ALA:HB3	1.71	0.73
49:BR:4:VAL:O	49:BR:38:VAL:HA	1.88	0.73
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.71	0.73
23:DB:286:U:H2'	23:DB:287:G:C8	2.24	0.73
1:AA:560:A:H4'	1:AA:561:U:H5''	1.69	0.73
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.89	0.73
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.70	0.73
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.71	0.73
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.19	0.73
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.54	0.73
53:B6:32:ARG:HH22	53:B6:88:LEU:HA	1.54	0.73
22:DA:49:C:H2'	22:DA:50:A:H8	1.53	0.73
23:DB:898:C:C2'	23:DB:899:A:H5''	2.19	0.73
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.71	0.73
46:DU:81:ARG:H	46:DU:81:ARG:HH21	1.37	0.73
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.71	0.73
53:D6:106:LEU:HG	53:D6:111:ARG:HD2	1.68	0.73
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.24	0.72
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.71	0.72
23:BB:321:U:H5''	29:BE:131:THR:HG23	1.71	0.72
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.53	0.72
23:BB:2723:C:H5''	42:BN:1:MET:HE2	1.71	0.72
7:CH:17:GLN:HE21	7:CH:62:LEU:HD23	1.54	0.72
17:CR:37:LYS:HZ3	21:CU:22:CYS:HB2	1.54	0.72
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.69	0.72
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.88	0.72
34:D3:5:THR:HG22	34:D3:62:PRO:HD2	1.69	0.72
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.55	0.72
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.04	0.72
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.71	0.72
25:BC:102:TYR:O	25:BC:103:ILE:HG13	1.90	0.72
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.14	0.72
45:BS:17:VAL:C	45:BS:19:LEU:H	1.97	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.54	0.72
14:CO:26:GLU:HG3	14:CO:81:LEU:HD12	1.71	0.72
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.24	0.72
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.52	0.72
37:DL:124:GLY:H	37:DL:143:GLU:HG3	1.53	0.72
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.70	0.72
42:DN:83:LEU:HA	42:DN:86:ARG:HG3	1.70	0.72
1:AA:337:G:H2'	1:AA:338:A:C8	2.25	0.72
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.53	0.72
23:BB:98:G:H22	46:BU:6:ARG:HH12	1.36	0.72
23:BB:2147:A:OP1	23:BB:2148:G:H1'	1.90	0.72
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.71	0.72
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	1.71	0.72
2:CC:141:MET:HE3	2:CC:141:MET:HA	1.71	0.72
2:CC:190:THR:HG22	2:CC:191:THR:H	1.52	0.72
6:CG:43:TYR:O	6:CG:47:GLU:HG2	1.89	0.72
23:DB:773:U:H5'	23:DB:774:G:OP2	1.88	0.72
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.55	0.72
23:BB:1597:A:H5''	23:BB:1598:A:H5'	1.69	0.72
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.04	0.72
1:CA:337:G:H2'	1:CA:338:A:C8	2.24	0.72
8:CI:21:LYS:HG2	8:CI:22:PRO:HD2	1.72	0.72
23:DB:423:A:H5'	23:DB:424:G:C5'	2.19	0.72
23:DB:742:A:H2'	23:DB:743:A:H8	1.55	0.72
23:DB:1459:G:H4'	23:DB:1461:C:N4	2.03	0.72
23:DB:2105:U:H2'	23:DB:2106:U:O4'	1.89	0.72
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.22	0.72
37:DL:121:THR:HG22	37:DL:141:LYS:HB3	1.71	0.72
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.05	0.72
8:AI:56:MET:C	8:AI:58:GLU:H	1.97	0.72
23:BB:141:G:H5''	23:BB:142:A:C8	2.23	0.72
23:BB:988:A:P	30:BY:11:SER:HB3	2.29	0.72
23:DB:455:C:N3	23:DB:472:A:H2'	2.04	0.72
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	1.72	0.72
2:AC:190:THR:HG22	2:AC:191:THR:H	1.54	0.72
23:BB:709:U:H2'	23:BB:710:U:C6	2.24	0.72
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.90	0.72
23:BB:1459:G:H4'	23:BB:1461:C:H42	1.54	0.72
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.72	0.72
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.04	0.72
36:B2:30:VAL:HA	36:B2:33:ARG:HH22	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:107:ASN:HD21	45:BS:40:ASN:ND2	1.88	0.72
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.25	0.72
51:BZ:17:ASN:HB2	51:BZ:25:THR:HB	1.72	0.72
16:CQ:20:ILE:HD13	16:CQ:47:ASP:HB3	1.70	0.72
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.70	0.72
23:DB:918:A:H2'	23:DB:919:U:H5'	1.69	0.72
23:DB:1459:G:H4'	23:DB:1461:C:H42	1.52	0.72
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.55	0.72
38:DM:36:VAL:HB	38:DM:127:LYS:O	1.89	0.72
45:DS:17:VAL:C	45:DS:19:LEU:H	1.97	0.72
48:DG:61:TRP:HA	48:DG:61:TRP:CE3	2.24	0.72
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.70	0.72
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.71	0.72
10:AK:105:ARG:HH21	21:AU:10:PRO:HB3	1.55	0.72
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.89	0.72
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.54	0.72
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.04	0.72
10:CK:63:GLN:HG3	10:CK:98:ALA:HB2	1.70	0.72
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.71	0.72
35:DV:53:LYS:HD3	35:DV:55:GLU:H	1.53	0.72
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.71	0.72
49:DR:66:HIS:ND1	49:DR:94:THR:HG22	2.04	0.72
4:AE:35:LEU:HD21	4:AE:136:VAL:HG11	1.72	0.72
20:AB:121:GLN:HE21	20:AB:122:ASP:H	1.38	0.72
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.54	0.72
23:BB:2073:C:H5''	25:BC:227:VAL:HG12	1.70	0.72
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.71	0.72
5:CF:9:MET:HE1	17:CR:64:LEU:HA	1.70	0.72
23:DB:95:A:H4'	39:DX:38:GLN:O	1.90	0.72
23:DB:721:A:H2'	23:DB:722:A:C8	2.25	0.72
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.03	0.72
23:DB:2531:A:OP2	48:DG:174:LYS:HB3	1.90	0.72
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.24	0.72
1:AA:518:C:H2'	1:AA:530:G:C8	2.23	0.72
12:AM:70:ARG:HH22	47:BF:112:ASP:CB	2.03	0.72
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.55	0.72
37:BL:103:ILE:HD12	37:BL:103:ILE:H	1.55	0.72
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.54	0.72
47:BF:35:LEU:HD13	47:BF:56:LEU:HD11	1.72	0.72
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.71	0.72
9:CJ:35:GLN:HG2	9:CJ:77:VAL:HB	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:165:A:H2'	23:DB:166:U:H6	1.55	0.72
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.20	0.72
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HE3	1.71	0.72
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.90	0.72
23:BB:142:A:H2'	23:BB:143:C:C6	2.25	0.72
23:BB:2741:A:H2'	23:BB:2742:G:O4'	1.89	0.72
1:CA:120:A:H2'	1:CA:121:U:H5''	1.72	0.72
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.55	0.72
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.72	0.72
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.72	0.72
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.72	0.72
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.24	0.71
5:AF:9:MET:HE1	17:AR:64:LEU:HA	1.72	0.71
33:B1:7:LYS:HD2	34:B3:33:THR:HG21	1.70	0.71
48:BG:37:ASN:HD21	48:BG:40:VAL:HB	1.52	0.71
23:DB:140:C:H4'	23:DB:141:G:C6	2.25	0.71
23:DB:1454:C:H1'	42:DN:60:VAL:HG13	1.72	0.71
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.25	0.71
3:AD:105:GLY:HA3	3:AD:158:LEU:HD23	1.72	0.71
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.55	0.71
53:B6:113:ASP:HA	53:B6:116:ARG:HD2	1.72	0.71
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.04	0.71
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HG22	1.70	0.71
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.72	0.71
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.04	0.71
46:DU:49:PRO:HA	46:DU:53:GLN:HG3	1.73	0.71
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.71	0.71
12:AM:106:ARG:HD3	12:AM:111:PRO:HA	1.71	0.71
20:AB:67:LEU:HD11	20:AB:150:ILE:HD12	1.71	0.71
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.71	0.71
23:BB:320:A:H2'	29:BE:131:THR:OG1	1.91	0.71
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	1.89	0.71
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	1.90	0.71
23:BB:1942:C:C4'	53:B6:133:ARG:HH12	2.03	0.71
27:BK:36:GLY:HA2	27:BK:62:VAL:O	1.90	0.71
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.73	0.71
1:CA:239:U:H4'	1:CA:239:U:OP1	1.88	0.71
23:DB:709:U:H2'	23:DB:710:U:C6	2.25	0.71
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.05	0.71
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.25	0.71
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.73	0.71
32:D4:15:LYS:O	32:D4:16:ILE:HB	1.88	0.71
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.71	0.71
48:DG:51:PHE:HD2	48:DG:68:ARG:HG2	1.56	0.71
23:BB:783:A:H8	23:BB:784:G:H4'	1.53	0.71
29:BE:131:THR:HG22	29:BE:160:ALA:HA	1.72	0.71
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.25	0.71
1:CA:1532:U:C2'	1:CA:1533:C:H5''	2.18	0.71
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.71
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.70	0.71
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.37	0.71
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.89	0.71
39:DX:31:GLN:HG2	39:DX:37:LEU:HB2	1.73	0.71
40:DH:14:SER:HB3	40:DH:17:ASP:HB2	1.71	0.71
51:DZ:33:LEU:HA	51:DZ:52:SER:HA	1.72	0.71
16:AQ:20:ILE:HD13	16:AQ:47:ASP:HB3	1.73	0.71
23:BB:608:A:H2'	23:BB:609:A:C8	2.25	0.71
37:BL:93:ASN:HD22	37:BL:94:THR:H	1.36	0.71
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.72	0.71
48:BG:17:LYS:HZ2	48:BG:18:ILE:N	1.88	0.71
52:BW:18:LYS:HE3	52:BW:18:LYS:HA	1.72	0.71
1:CA:560:A:H4'	1:CA:561:U:H5''	1.73	0.71
15:CP:74:LEU:O	15:CP:78:VAL:HG12	1.90	0.71
23:DB:165:A:H2'	23:DB:166:U:C6	2.25	0.71
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.25	0.71
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.56	0.71
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	1.70	0.71
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.91	0.71
2:AC:141:MET:HA	2:AC:141:MET:HE3	1.71	0.71
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.71	0.71
19:AT:4:LYS:HD2	19:AT:5:SER:N	2.04	0.71
23:BB:721:A:H2'	23:BB:722:A:H8	1.55	0.71
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.04	0.71
23:BB:2579:C:H1'	26:BD:130:GLN:HE22	1.55	0.71
29:BE:153:LEU:HG	29:BE:154:ASP:N	2.05	0.71
32:B4:15:LYS:O	32:B4:16:ILE:HB	1.88	0.71
35:BV:53:LYS:HD3	35:BV:55:GLU:H	1.54	0.71
37:BL:82:LEU:HD23	37:BL:90:VAL:HG21	1.71	0.71
42:BN:83:LEU:HA	42:BN:86:ARG:HG3	1.73	0.71
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.55	0.71
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.72	0.71
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.25	0.71
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.71
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.72	0.71
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.71	0.71
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.70	0.71
44:DQ:30:VAL:CG1	44:DQ:33:VAL:HG22	2.21	0.71
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.06	0.71
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.71	0.71
23:BB:2548:U:H1'	27:BK:23:LYS:NZ	2.04	0.71
53:B6:123:GLU:HA	53:B6:126:ARG:HH11	1.56	0.71
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.05	0.71
23:DB:608:A:H2'	23:DB:609:A:C8	2.26	0.71
29:DE:150:THR:HG21	29:DE:153:LEU:HA	1.72	0.71
40:DH:131:SER:HB2	40:DH:141:LYS:HA	1.73	0.71
49:DR:31:GLU:H	49:DR:63:VAL:HG22	1.55	0.71
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.72	0.71
22:BA:49:C:H2'	22:BA:50:A:C8	2.25	0.71
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.56	0.71
48:BG:61:TRP:HA	48:BG:61:TRP:CE3	2.25	0.71
52:BW:39:GLN:NE2	52:BW:42:THR:HB	2.03	0.71
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.72	0.71
23:DB:289:G:H2'	23:DB:290:U:C6	2.25	0.71
23:DB:1729:U:H3'	23:DB:1730:C:H4'	1.72	0.71
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.06	0.71
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.16	0.71
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.26	0.71
10:AK:52:ARG:HH12	10:AK:56:LYS:HE3	1.56	0.71
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.05	0.71
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.26	0.71
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	1.73	0.71
17:CR:52:ARG:HB3	17:CR:56:ARG:HH21	1.56	0.71
23:DB:118:A:OP2	23:DB:119:A:H5''	1.91	0.71
47:DF:35:LEU:HD13	47:DF:56:LEU:HD11	1.71	0.71
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.55	0.71
15:AP:74:LEU:O	15:AP:78:VAL:HG12	1.90	0.71
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.91	0.71
40:BH:53:GLU:HA	40:BH:57:LYS:HG2	1.73	0.71
2:CC:59:PRO:HG2	2:CC:62:SER:OG	1.91	0.71
19:CT:68:LYS:HE2	19:CT:68:LYS:HA	1.71	0.71
22:DA:49:C:H2'	22:DA:50:A:C8	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:152:A:H2'	23:DB:153:U:C6	2.26	0.71
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.88	0.71
37:DL:93:ASN:HD22	37:DL:94:THR:H	1.36	0.71
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.04	0.71
1:AA:1313:U:OP2	18:AS:5:LYS:HA	1.91	0.70
17:AR:52:ARG:HB3	17:AR:56:ARG:HH21	1.56	0.70
23:BB:17:G:H2'	23:BB:18:U:C6	2.25	0.70
23:BB:743:A:O2'	23:BB:744:U:H5'	1.90	0.70
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.25	0.70
23:BB:2814:A:H4'	31:B0:25:THR:HG21	1.73	0.70
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.71	0.70
1:CA:664:G:H22	1:CA:741:G:H1	1.38	0.70
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.73	0.70
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.72	0.70
3:AD:84:ASN:HD22	4:AE:101:GLY:CA	2.04	0.70
5:AF:42:TRP:NE1	5:AF:61:LEU:HD23	2.06	0.70
20:AB:187:ASP:OD1	20:AB:203:ASP:HB3	1.92	0.70
23:BB:1060:U:C4	23:BB:1088:A:N6	2.59	0.70
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.56	0.70
23:BB:2356:U:H5''	52:BW:16:GLU:HG3	1.72	0.70
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.70	0.70
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.25	0.70
3:CD:43:ARG:NH1	3:CD:44:LYS:H	1.86	0.70
8:CI:94:ARG:HA	8:CI:97:LEU:HG	1.72	0.70
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.73	0.70
23:DB:30:G:H2'	23:DB:31:C:C6	2.25	0.70
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.56	0.70
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	2.06	0.70
51:DZ:18:ARG:HA	51:DZ:23:ASN:O	1.91	0.70
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HB	1.72	0.70
14:AO:35:GLN:O	14:AO:39:LEU:HB2	1.90	0.70
26:BD:53:GLY:HA3	26:BD:77:ARG:HG3	1.70	0.70
1:CA:1032:G:N3	1:CA:1032:G:H5''	2.05	0.70
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.73	0.70
13:CN:27:LYS:HA	13:CN:31:SER:HB2	1.73	0.70
23:DB:27:G:HO2'	23:DB:28:A:H8	1.39	0.70
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.06	0.70
28:DP:56:SER:HB2	28:DP:75:THR:CG2	2.20	0.70
53:D6:25:LEU:HD21	53:D6:118:VAL:HG13	1.72	0.70
23:BB:919:U:H2'	23:BB:920:A:C8	2.27	0.70
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.37	0.70
1:CA:1534:A:H62	21:CU:44:ARG:NH1	1.87	0.70
19:CT:4:LYS:HD2	19:CT:5:SER:N	2.05	0.70
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.57	0.70
19:AT:68:LYS:HE2	19:AT:68:LYS:HA	1.73	0.70
21:AU:34:ARG:HD3	21:AU:39:LYS:HZ2	1.56	0.70
23:BB:329:G:H1	46:BU:16:LYS:HG2	1.56	0.70
23:BB:2286:G:H3'	33:B1:29:LYS:HZ1	1.56	0.70
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.73	0.70
26:BD:8:LYS:HB2	26:BD:201:LEU:HD11	1.74	0.70
40:BH:116:ARG:HH12	40:BH:133:GLN:HB2	1.56	0.70
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.55	0.70
1:CA:927:G:H4'	1:CA:1503:A:N7	2.06	0.70
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.27	0.70
11:CL:24:GLU:HB2	11:CL:26:CYS:HG	1.54	0.70
23:DB:626:A:H2'	37:DL:78:ARG:NH1	2.05	0.70
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.56	0.70
25:DC:144:GLU:HG3	25:DC:151:GLY:N	2.07	0.70
36:D2:30:VAL:HA	36:D2:33:ARG:HH22	1.53	0.70
39:DX:1:MET:O	39:DX:5:GLU:HG2	1.92	0.70
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.05	0.70
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.26	0.70
1:AA:179:A:H2'	1:AA:180:U:O4'	1.91	0.70
23:BB:118:A:H5'	23:BB:119:A:H8	1.57	0.70
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.06	0.70
30:BY:6:ILE:HG22	30:BY:56:VAL:HA	1.71	0.70
39:BX:1:MET:O	39:BX:5:GLU:HG2	1.91	0.70
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.74	0.70
50:BT:29:THR:H	50:BT:91:GLN:NE2	1.89	0.70
51:BZ:33:LEU:HA	51:BZ:52:SER:HA	1.72	0.70
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.92	0.70
9:CJ:53:ILE:HG22	9:CJ:61:ALA:HB1	1.74	0.70
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.73	0.70
13:CN:5:MET:O	13:CN:8:ARG:HB2	1.91	0.70
20:CB:61:SER:HA	20:CB:224:ARG:HA	1.74	0.70
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.72	0.70
1:AA:562:U:H1'	11:AL:11:ARG:HB3	1.73	0.70
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.56	0.70
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.71	0.70
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.74	0.70
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:7:LYS:HD2	34:D3:33:THR:HG21	1.74	0.70
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.73	0.70
20:AB:61:SER:HA	20:AB:224:ARG:HA	1.74	0.70
21:AU:24:LYS:HZ3	21:AU:25:ALA:H	1.39	0.70
23:BB:62:U:H3'	23:BB:63:A:C8	2.27	0.70
23:BB:626:A:H2'	37:BL:78:ARG:NH1	2.06	0.70
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.07	0.70
48:BG:152:ARG:NH2	48:BG:162:ARG:HA	2.06	0.70
1:CA:562:U:H1'	11:CL:11:ARG:HB3	1.74	0.70
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.73	0.70
8:CI:56:MET:C	8:CI:58:GLU:H	1.98	0.70
21:CU:36:PHE:HB3	21:CU:40:PRO:CD	2.14	0.70
23:DB:278:A:H2'	23:DB:278:A:N3	2.06	0.70
23:DB:1583:A:H4'	23:DB:1585:C:C4	2.27	0.70
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.27	0.70
26:DD:105:LYS:HE3	26:DD:176:ASP:HB3	1.72	0.70
42:DN:107:ASN:HD21	45:DS:40:ASN:ND2	1.89	0.70
12:AM:21:ILE:HG22	12:AM:23:GLY:H	1.55	0.70
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.72	0.70
23:BB:581:C:H2'	23:BB:582:A:C8	2.26	0.70
40:BH:14:SER:HB3	40:BH:17:ASP:HB2	1.73	0.70
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.73	0.70
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.74	0.70
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.73	0.70
14:CO:35:GLN:O	14:CO:39:LEU:HB2	1.91	0.70
23:DB:458:G:N2	23:DB:469:G:H2'	2.06	0.70
23:DB:2867:G:H2'	23:DB:2867:G:N3	2.07	0.70
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.73	0.70
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.74	0.70
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	1.91	0.70
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.22	0.70
53:D6:131:ASN:O	53:D6:135:GLU:HG3	1.92	0.70
1:AA:926:G:H3'	1:AA:1505:G:H21	1.56	0.70
7:AH:17:GLN:HE21	7:AH:62:LEU:HD23	1.57	0.70
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.07	0.70
23:BB:1843:C:H4'	25:BC:253:GLY:HA3	1.74	0.70
23:BB:2134:A:H2'	23:BB:2135:A:C8	2.24	0.70
37:BL:70:LYS:O	37:BL:73:ILE:HG12	1.92	0.70
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	1.92	0.70
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.74	0.70
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.26	0.70
3:CD:11:SER:HA	3:CD:18:LEU:HD22	1.74	0.70
3:CD:88:ASN:O	3:CD:92:LEU:HD23	1.92	0.70
10:CK:52:ARG:HH12	10:CK:56:LYS:HE3	1.57	0.70
23:DB:162:U:H4'	23:DB:163:C:OP1	1.92	0.70
23:DB:2266:A:C4'	23:DB:2267:A:N7	2.55	0.70
29:DE:153:LEU:HG	29:DE:154:ASP:N	2.05	0.70
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.07	0.70
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.73	0.70
52:DW:18:LYS:HE2	52:DW:19:ARG:NH2	2.06	0.70
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.27	0.69
16:AQ:66:LEU:HD12	16:AQ:66:LEU:H	1.57	0.69
27:BK:107:LEU:H	27:BK:107:LEU:HD12	1.55	0.69
28:BP:56:SER:HB2	28:BP:75:THR:CG2	2.22	0.69
28:BP:112:ARG:HH11	28:BP:112:ARG:HB2	1.57	0.69
1:CA:932:C:H5''	6:CG:3:ARG:HG2	1.73	0.69
4:CE:35:LEU:HD21	4:CE:136:VAL:HG11	1.74	0.69
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.57	0.69
23:DB:855:G:N2	52:DW:23:LYS:HG2	2.04	0.69
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	1.92	0.69
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.27	0.69
35:DV:40:ILE:H	35:DV:40:ILE:HD13	1.57	0.69
1:AA:715:A:H2'	1:AA:716:A:H8	1.56	0.69
1:AA:780:A:O2'	1:AA:781:A:H5''	1.91	0.69
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.26	0.69
8:AI:27:ILE:HB	8:AI:34:LEU:HB2	1.74	0.69
13:AN:48:GLN:O	13:AN:51:PRO:HD2	1.92	0.69
18:AS:35:ARG:NH2	18:AS:52:ASN:HA	2.07	0.69
23:BB:30:G:H2'	23:BB:31:C:C6	2.27	0.69
40:BH:122:LEU:H	40:BH:122:LEU:HD12	1.57	0.69
23:DB:27:G:H22	23:DB:512:G:H2'	1.55	0.69
23:DB:2354:C:H4'	52:DW:31:LEU:HD22	1.73	0.69
12:AM:48:SER:HB2	12:AM:51:GLN:HG3	1.74	0.69
14:AO:36:ILE:HD13	14:AO:59:MET:HE3	1.72	0.69
23:BB:1082:U:N3	23:BB:1086:A:C2	2.60	0.69
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.07	0.69
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.56	0.69
25:BC:209:ALA:O	25:BC:213:ARG:HB2	1.92	0.69
35:BV:4:ILE:HB	35:BV:63:ILE:HG13	1.74	0.69
4:CE:93:VAL:HG13	4:CE:126:ALA:HB2	1.72	0.69
5:CF:16:GLU:CD	5:CF:16:GLU:H	1.98	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.56	0.69
8:CI:21:LYS:O	8:CI:60:LEU:HB2	1.92	0.69
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	1.74	0.69
11:CL:54:VAL:HG12	11:CL:55:ARG:H	1.57	0.69
16:CQ:3:LYS:HE2	16:CQ:3:LYS:HA	1.74	0.69
16:CQ:8:GLN:HA	16:CQ:59:GLU:HA	1.74	0.69
21:CU:34:ARG:HD3	21:CU:39:LYS:HZ2	1.58	0.69
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.07	0.69
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.74	0.69
23:BB:162:U:H4'	23:BB:163:C:OP1	1.93	0.69
23:BB:918:A:H2'	23:BB:919:U:H5'	1.73	0.69
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.07	0.69
34:B3:5:THR:HG22	34:B3:62:PRO:HD2	1.74	0.69
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.56	0.69
1:CA:1313:U:OP2	18:CS:5:LYS:HA	1.92	0.69
15:CP:25:ARG:HD3	15:CP:25:ARG:H	1.57	0.69
23:DB:360:U:H2'	23:DB:361:G:C8	2.28	0.69
23:DB:877:A:H2'	23:DB:900:A:H61	1.58	0.69
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.74	0.69
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	1.91	0.69
42:DN:34:ILE:O	42:DN:112:TYR:HA	1.93	0.69
1:AA:35:G:H2'	1:AA:36:C:C6	2.28	0.69
8:AI:26:LYS:H	8:AI:61:ASP:CB	2.06	0.69
10:AK:115:ILE:HD11	17:AR:72:ARG:NH1	2.07	0.69
23:BB:680:C:H2'	23:BB:681:G:H8	1.57	0.69
23:BB:1657:U:H4'	26:BD:138:LEU:HB3	1.74	0.69
25:BC:81:GLU:HB2	25:BC:90:ILE:HG22	1.75	0.69
29:BE:150:THR:HG21	29:BE:153:LEU:HA	1.72	0.69
32:B4:10:LEU:HD12	32:B4:33:HIS:HA	1.74	0.69
50:BT:73:ARG:HB3	50:BT:73:ARG:HH21	1.56	0.69
51:BZ:18:ARG:HA	51:BZ:23:ASN:O	1.93	0.69
52:BW:33:GLY:O	52:BW:34:SER:HB2	1.92	0.69
1:CA:179:A:H2'	1:CA:180:U:O4'	1.93	0.69
1:CA:763:G:H2'	1:CA:764:C:H6	1.57	0.69
23:DB:729:G:C8	25:DC:206:LYS:HE3	2.28	0.69
25:DC:102:TYR:O	25:DC:103:ILE:HG13	1.93	0.69
37:DL:93:ASN:O	37:DL:95:LEU:HD12	1.92	0.69
40:DH:31:VAL:O	40:DH:32:PRO:C	2.34	0.69
47:DF:115:GLY:HA2	47:DF:177:ARG:HH11	1.56	0.69
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.74	0.69
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:53:ASP:HA	13:AN:58:ARG:HD3	1.74	0.69
22:BA:35:C:H2'	22:BA:36:C:H5'	1.75	0.69
23:BB:642:U:O2	23:BB:644:A:H3'	1.92	0.69
23:BB:721:A:H2'	23:BB:722:A:C8	2.26	0.69
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.57	0.69
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.28	0.69
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.28	0.69
23:BB:2746:U:H5'	48:BG:138:GLN:HA	1.73	0.69
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.74	0.69
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.72	0.69
1:CA:764:C:C2'	1:CA:765:G:H5'	2.22	0.69
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.27	0.69
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.28	0.69
21:CU:24:LYS:HZ3	21:CU:25:ALA:H	1.41	0.69
23:DB:2073:C:H5''	25:DC:227:VAL:HG12	1.73	0.69
23:DB:2108:A:H2'	23:DB:2108:A:N3	2.07	0.69
23:DB:2109:U:H2'	23:DB:2180:U:H3	1.58	0.69
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.74	0.69
3:AD:43:ARG:NH1	3:AD:44:LYS:H	1.89	0.69
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.92	0.69
20:AB:65:LYS:HA	20:AB:89:PHE:HE1	1.58	0.69
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.74	0.69
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.57	0.69
23:BB:2366:A:H2'	23:BB:2367:G:O4'	1.93	0.69
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.27	0.69
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.55	0.69
42:BN:34:ILE:O	42:BN:112:TYR:HA	1.92	0.69
48:BG:10:VAL:CG2	48:BG:48:THR:HA	2.22	0.69
49:BR:31:GLU:H	49:BR:63:VAL:HG22	1.57	0.69
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.75	0.69
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.18	0.69
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.58	0.69
29:DE:130:LYS:C	29:DE:132:LYS:H	2.01	0.69
47:DF:161:SER:OG	47:DF:164:GLU:HG3	1.92	0.69
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.28	0.69
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.28	0.69
3:AD:97:LEU:HB2	3:AD:134:TYR:HB3	1.74	0.69
11:AL:35:ARG:NH1	11:AL:35:ARG:HA	2.08	0.69
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.75	0.69
17:AR:21:ASP:OD1	17:AR:23:LYS:HG3	1.93	0.69
23:BB:2309:A:H61	47:BF:75:GLY:HA3	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.74	0.69
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.74	0.69
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.73	0.69
51:BZ:64:ILE:HD12	51:BZ:64:ILE:H	1.58	0.69
53:B6:30:THR:HG22	53:B6:183:ILE:HG12	1.73	0.69
53:B6:177:GLU:OE2	53:B6:178:LYS:HG2	1.91	0.69
1:CA:135:C:O2	15:CP:1:MET:HB2	1.92	0.69
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.91	0.69
1:CA:1399:C:H4'	1:CA:1400:C:H5'	1.73	0.69
1:CA:1483:A:H2'	1:CA:1484:C:O4'	1.93	0.69
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.75	0.69
8:CI:25:GLY:HA3	8:CI:57:VAL:CA	2.23	0.69
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.92	0.69
8:CI:42:THR:O	8:CI:45:MET:HG2	1.93	0.69
12:CM:106:ARG:HD3	12:CM:111:PRO:HA	1.74	0.69
18:CS:35:ARG:NH2	18:CS:52:ASN:HA	2.07	0.69
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.75	0.69
20:CB:119:GLN:HG3	20:CB:136:ARG:HH11	1.58	0.69
23:DB:543:G:C6	23:DB:544:C:H1'	2.27	0.69
23:DB:571:U:H3'	49:DR:80:ARG:HH12	1.56	0.69
23:DB:878:A:C1'	23:DB:899:A:H62	2.06	0.69
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.08	0.69
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.74	0.69
25:DC:209:ALA:O	25:DC:213:ARG:HB2	1.93	0.69
35:DV:4:ILE:HB	35:DV:63:ILE:HG13	1.73	0.69
40:DH:68:ARG:HH12	40:DH:134:VAL:HG11	1.57	0.69
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	1.92	0.69
53:D6:86:SER:HB3	53:D6:88:LEU:HD13	1.74	0.69
53:D6:93:SER:HB3	53:D6:100:TYR:O	1.92	0.69
1:AA:764:C:C2'	1:AA:765:G:H5'	2.22	0.69
12:AM:44:ILE:HA	12:AM:47:LEU:HG	1.74	0.69
23:BB:1060:U:O2	23:BB:1088:A:N7	2.26	0.69
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	1.75	0.69
40:BH:31:VAL:O	40:BH:32:PRO:C	2.34	0.69
40:BH:66:ASN:N	40:BH:66:ASN:HD22	1.90	0.69
43:BO:35:ILE:HG13	43:BO:71:ALA:HB2	1.75	0.69
47:BF:147:ARG:HD2	47:BF:148:VAL:HG22	1.74	0.69
7:CH:45:ILE:HG21	7:CH:60:LEU:HD21	1.75	0.69
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.93	0.69
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	1.74	0.69
23:DB:2653:U:H3'	23:DB:2654:A:H2'	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:93:U:H6	1:AA:93:U:O5'	1.75	0.69
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.08	0.69
11:AL:17:LYS:HE3	11:AL:17:LYS:H	1.58	0.69
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.73	0.69
23:BB:345:A:H1'	23:BB:346:A:H2	1.57	0.69
23:BB:495:G:N2	45:BS:61:ASN:HD21	1.90	0.69
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.91	0.69
40:BH:73:ASN:HD22	40:BH:74:ALA:N	1.90	0.69
42:BN:114:GLU:HG2	42:BN:115:LEU:N	2.07	0.69
5:CF:42:TRP:NE1	5:CF:61:LEU:HD23	2.08	0.69
23:DB:858:G:H21	23:DB:2268:A:H3'	1.58	0.69
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.56	0.69
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.73	0.69
29:DE:131:THR:HG22	29:DE:160:ALA:HA	1.73	0.69
40:DH:41:LYS:O	40:DH:44:ILE:HG12	1.92	0.69
40:DH:49:ALA:HB3	40:DH:50:ARG:NH2	2.06	0.69
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.56	0.69
45:DS:73:LYS:HB3	45:DS:106:VAL:HB	1.73	0.69
52:DW:18:LYS:HA	52:DW:18:LYS:HE3	1.74	0.69
3:AD:11:SER:HA	3:AD:18:LEU:HD22	1.75	0.68
20:AB:63:LYS:HG2	20:AB:224:ARG:HH12	1.58	0.68
23:BB:1812:U:H1'	25:BC:43:ASN:HD21	1.56	0.68
53:B6:29:ARG:NH2	53:B6:110:ARG:HH11	1.91	0.68
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.27	0.68
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.09	0.68
23:DB:1161:C:H4'	49:DR:8:GLY:O	1.93	0.68
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.28	0.68
48:DG:10:VAL:CG2	48:DG:48:THR:HA	2.22	0.68
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.29	0.68
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.94	0.68
20:AB:202:ASN:HD22	20:AB:204:ASP:N	1.90	0.68
23:BB:102:U:H4'	23:BB:103:A:OP2	1.91	0.68
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	1.92	0.68
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.75	0.68
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.28	0.68
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	1.76	0.68
23:DB:171:U:H2'	23:DB:172:A:C8	2.28	0.68
23:DB:532:A:H4'	23:DB:533:G:C8	2.28	0.68
23:DB:580:U:H2'	23:DB:581:C:H6	1.58	0.68
23:DB:845:A:C2	23:DB:847:U:H1'	2.28	0.68
23:DB:852:U:H2'	23:DB:853:C:C6	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.28	0.68
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.29	0.68
26:DD:53:GLY:HA3	26:DD:77:ARG:HG3	1.74	0.68
32:D4:10:LEU:HD12	32:D4:33:HIS:HA	1.74	0.68
23:BB:90:U:H3'	23:BB:91:A:C5'	2.21	0.68
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.09	0.68
23:BB:2751:G:H2'	23:BB:2751:G:N3	2.08	0.68
30:BY:40:THR:O	30:BY:43:ILE:HG22	1.94	0.68
42:BN:34:ILE:HB	42:BN:113:ILE:HG22	1.74	0.68
1:CA:1458:G:H5''	19:CT:25:SER:HB2	1.74	0.68
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.09	0.68
23:DB:784:G:O2'	23:DB:785:G:H5''	1.94	0.68
23:DB:833:A:H2'	23:DB:834:G:C8	2.28	0.68
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.58	0.68
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.75	0.68
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.28	0.68
50:DT:29:THR:H	50:DT:91:GLN:NE2	1.89	0.68
1:AA:147:G:H2'	1:AA:148:G:C8	2.28	0.68
7:AH:51:GLU:HG2	7:AH:52:GLY:H	1.58	0.68
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.59	0.68
23:BB:848:C:H2'	23:BB:849:A:H8	1.59	0.68
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.74	0.68
23:BB:2799:A:H4'	23:BB:2800:A:O4'	1.94	0.68
43:BO:47:VAL:HG12	43:BO:48:LEU:H	1.59	0.68
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.24	0.68
53:B6:32:ARG:NH2	53:B6:88:LEU:HA	2.08	0.68
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.74	0.68
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.57	0.68
15:CP:3:THR:HG22	15:CP:66:THR:HB	1.76	0.68
23:DB:742:A:H2'	23:DB:743:A:C8	2.28	0.68
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.56	0.68
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.29	0.68
48:DG:102:ILE:HG13	48:DG:116:LEU:HD11	1.75	0.68
5:AF:16:GLU:CD	5:AF:16:GLU:H	2.01	0.68
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.75	0.68
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.74	0.68
12:AM:2:ARG:HD3	12:AM:2:ARG:H	1.58	0.68
18:AS:61:VAL:HA	18:AS:65:MET:SD	2.33	0.68
23:BB:782:A:N3	25:BC:224:MET:HB3	2.08	0.68
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.28	0.68
23:BB:2143:C:H2'	23:BB:2144:G:O4'	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2728:U:H5'	27:BK:70:ARG:NH2	2.09	0.68
26:BD:105:LYS:HE3	26:BD:176:ASP:HB3	1.76	0.68
40:BH:73:ASN:HB3	40:BH:141:LYS:HZ1	1.58	0.68
40:BH:90:LEU:HB2	40:BH:123:ARG:HB3	1.76	0.68
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.76	0.68
44:BQ:26:ALA:HA	44:BQ:29:ARG:HG3	1.76	0.68
48:BG:84:LYS:CB	48:BG:132:LEU:H	2.06	0.68
49:BR:19:THR:HG22	49:BR:97:LYS:HG3	1.75	0.68
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.74	0.68
1:CA:1534:A:H62	21:CU:44:ARG:NH2	1.91	0.68
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.57	0.68
20:CB:130:LYS:HA	20:CB:133:ALA:HB3	1.75	0.68
23:DB:2384:U:H5''	23:DB:2386:A:OP1	1.93	0.68
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.75	0.68
25:DC:81:GLU:HB2	25:DC:90:ILE:HG22	1.75	0.68
42:DN:34:ILE:HB	42:DN:113:ILE:HG22	1.76	0.68
51:DZ:17:ASN:HB2	51:DZ:25:THR:HB	1.73	0.68
1:AA:539:A:H2'	1:AA:540:G:C8	2.28	0.68
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.33	0.68
1:AA:1399:C:H4'	1:AA:1400:C:H5''	1.74	0.68
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.59	0.68
20:AB:139:GLU:HG2	20:AB:143:LEU:HD11	1.75	0.68
23:BB:364:C:H2'	23:BB:365:U:H6	1.56	0.68
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.29	0.68
23:BB:2384:U:H5''	23:BB:2386:A:OP1	1.94	0.68
23:BB:2748:A:H4'	48:BG:3:VAL:HG21	1.76	0.68
30:BY:6:ILE:HG21	30:BY:47:ILE:HD12	1.75	0.68
37:BL:93:ASN:O	37:BL:95:LEU:HD12	1.93	0.68
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	2.08	0.68
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.75	0.68
53:B6:114:LEU:HB3	53:B6:183:ILE:HG21	1.76	0.68
15:CP:4:ILE:HG12	15:CP:21:VAL:HG22	1.76	0.68
23:DB:141:G:H3'	23:DB:141:G:N3	2.09	0.68
23:DB:189:G:H2'	23:DB:205:G:H22	1.58	0.68
26:DD:148:GLN:HG3	26:DD:152:PRO:HB3	1.74	0.68
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.08	0.68
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.28	0.68
16:AQ:3:LYS:HE2	16:AQ:3:LYS:HA	1.75	0.68
23:BB:592:A:H2'	23:BB:593:U:C6	2.28	0.68
23:BB:833:A:H2'	23:BB:834:G:C8	2.28	0.68
38:BM:36:VAL:HB	38:BM:127:LYS:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:10:VAL:HG23	48:BG:48:THR:HA	1.75	0.68
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.09	0.68
1:CA:35:G:H2'	1:CA:36:C:C6	2.29	0.68
1:CA:715:A:H2'	1:CA:716:A:H8	1.57	0.68
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.09	0.68
13:CN:48:GLN:O	13:CN:51:PRO:HD2	1.94	0.68
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.76	0.68
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.59	0.68
27:DK:36:GLY:HA2	27:DK:62:VAL:O	1.93	0.68
53:D6:52:LEU:HD21	53:D6:58:VAL:HG23	1.74	0.68
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.93	0.68
22:BA:75:G:H1'	35:BV:29:ILE:HG12	1.75	0.68
23:BB:1176:U:H2'	23:BB:1177:G:O4'	1.94	0.68
23:BB:1515:A:H2'	23:BB:1516:G:O4'	1.94	0.68
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	1.93	0.68
47:BF:31:GLU:O	47:BF:32:LYS:HD3	1.94	0.68
20:CB:67:LEU:HD11	20:CB:150:ILE:HD12	1.75	0.68
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.59	0.68
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.92	0.68
28:DP:112:ARG:HB2	28:DP:112:ARG:HH11	1.58	0.68
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	2.07	0.68
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.74	0.68
8:AI:25:GLY:HA3	8:AI:57:VAL:CA	2.23	0.68
8:AI:94:ARG:HA	8:AI:97:LEU:HG	1.75	0.68
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	1.76	0.68
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.94	0.68
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.76	0.68
40:BH:80:ILE:HB	40:BH:144:VAL:HG13	1.76	0.68
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	2.08	0.68
46:BU:49:PRO:HA	46:BU:53:GLN:HG3	1.74	0.68
53:B6:111:ARG:O	53:B6:115:VAL:HG23	1.94	0.68
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.29	0.68
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.08	0.68
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.18	0.68
23:DB:90:U:H3'	23:DB:91:A:C5'	2.24	0.68
23:DB:571:U:H3'	49:DR:80:ARG:NH1	2.08	0.68
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.29	0.68
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.59	0.68
29:DE:118:LEU:HA	29:DE:186:VAL:HG13	1.76	0.68
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.74	0.68
1:AA:120:A:H2'	1:AA:121:U:H5''	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.08	0.68
17:AR:37:LYS:HZ3	21:AU:22:CYS:HB2	1.58	0.68
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.59	0.68
27:BK:54:LYS:HD2	27:BK:54:LYS:H	1.59	0.68
53:B6:95:LYS:HB3	53:B6:100:TYR:CE2	2.29	0.68
1:CA:215:C:H2'	1:CA:216:U:C6	2.29	0.68
1:CA:817:C:H1'	1:CA:819:A:H5'	1.75	0.68
17:CR:21:ASP:OD1	17:CR:23:LYS:HG3	1.94	0.68
23:DB:224:U:O4	23:DB:420:C:H5'	1.94	0.68
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.29	0.68
45:DS:6:LYS:HB2	45:DS:103:ILE:O	1.94	0.68
47:DF:16:MET:O	47:DF:20:ASN:HA	1.94	0.68
48:DG:10:VAL:HG23	48:DG:48:THR:HA	1.74	0.68
6:AG:4:ARG:HE	6:AG:6:ILE:HG23	1.57	0.67
8:AI:55:ASP:HB2	8:AI:59:LYS:HE3	1.74	0.67
14:AO:26:GLU:OE2	14:AO:77:ARG:HD2	1.94	0.67
23:BB:28:A:H61	23:BB:512:G:H1'	1.59	0.67
23:BB:224:U:O4	23:BB:420:C:H5'	1.94	0.67
23:BB:2657:A:H4'	48:BG:91:VAL:HG21	1.76	0.67
26:BD:148:GLN:HB2	26:BD:152:PRO:CG	2.23	0.67
29:BE:118:LEU:HA	29:BE:186:VAL:HG13	1.76	0.67
1:CA:780:A:O2'	1:CA:781:A:H5''	1.93	0.67
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.75	0.67
14:CO:26:GLU:OE2	14:CO:77:ARG:HD2	1.93	0.67
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG13	1.76	0.67
20:CB:122:ASP:OD1	20:CB:124:THR:HG22	1.95	0.67
21:CU:42:THR:HB	21:CU:46:ARG:CZ	2.24	0.67
23:DB:1913:A:H4'	23:DB:1914:C:H5''	1.77	0.67
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.09	0.67
26:DD:8:LYS:HB2	26:DD:201:LEU:HD11	1.77	0.67
26:DD:124:ARG:HA	26:DD:165:MET:SD	2.34	0.67
40:DH:68:ARG:NH1	40:DH:134:VAL:HG11	2.08	0.67
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	1.76	0.67
16:AQ:8:GLN:HA	16:AQ:59:GLU:HA	1.76	0.67
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.29	0.67
4:CE:37:VAL:HA	4:CE:47:PHE:HA	1.76	0.67
23:DB:286:U:H2'	23:DB:287:G:H8	1.57	0.67
23:DB:1104:C:H2'	23:DB:1105:U:C6	2.30	0.67
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.76	0.67
44:DQ:18:LYS:C	44:DQ:20:ALA:H	2.02	0.67
1:AA:270:A:H2'	1:AA:271:C:C6	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.29	0.67
14:AO:26:GLU:HG3	14:AO:81:LEU:HD12	1.75	0.67
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.76	0.67
23:BB:139:U:H3'	23:BB:140:C:H5''	1.75	0.67
23:BB:917:A:H5''	23:BB:2268:A:H61	1.58	0.67
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.76	0.67
5:CF:53:LYS:HZ2	5:CF:53:LYS:H	1.42	0.67
22:DA:111:U:H2'	22:DA:112:G:C8	2.30	0.67
23:DB:848:C:H2'	23:DB:849:A:H8	1.58	0.67
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.57	0.67
23:DB:2213:U:O2	23:DB:2213:U:H2'	1.93	0.67
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.58	0.67
25:DC:239:PHE:O	25:DC:241:LYS:HG3	1.93	0.67
29:DE:58:LYS:HD3	29:DE:58:LYS:N	2.09	0.67
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.75	0.67
1:AA:812:G:O2'	1:AA:813:U:H6	1.74	0.67
8:AI:20:ILE:HA	8:AI:62:LEU:HB3	1.76	0.67
12:AM:14:ALA:HB3	12:AM:40:GLU:HA	1.76	0.67
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.30	0.67
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	1.75	0.67
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.58	0.67
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	1.94	0.67
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.24	0.67
53:B6:42:LYS:HA	53:B6:51:PRO:HA	1.76	0.67
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.59	0.67
16:CQ:66:LEU:H	16:CQ:66:LEU:HD12	1.59	0.67
20:CB:22:TRP:HB3	20:CB:38:HIS:CE1	2.30	0.67
30:DY:40:THR:O	30:DY:43:ILE:HG22	1.94	0.67
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.10	0.67
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.08	0.67
11:AL:20:VAL:HG12	11:AL:93:ARG:HB3	1.76	0.67
23:BB:528:A:C2	23:BB:2042:A:H2'	2.30	0.67
23:BB:717:C:H3'	23:BB:718:A:H5''	1.76	0.67
29:BE:21:ARG:HH11	29:BE:106:LYS:HD2	1.60	0.67
29:BE:58:LYS:HD3	29:BE:58:LYS:H	1.59	0.67
47:BF:49:LEU:HD11	47:BF:66:ILE:HD12	1.75	0.67
47:BF:107:VAL:HG11	47:BF:175:PRO:HG3	1.76	0.67
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.76	0.67
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.75	0.67
20:CB:65:LYS:HA	20:CB:89:PHE:HE1	1.58	0.67
23:DB:1535:A:H3'	23:DB:1536:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.74	0.67
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.29	0.67
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.58	0.67
47:DF:41:GLU:O	47:DF:43:ILE:HG22	1.94	0.67
48:DG:84:LYS:CB	48:DG:132:LEU:H	2.06	0.67
52:DW:33:GLY:O	52:DW:34:SER:HB2	1.92	0.67
1:AA:836:G:OP2	17:AR:49:LYS:HE2	1.95	0.67
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.30	0.67
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.95	0.67
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.77	0.67
19:AT:56:ILE:O	19:AT:60:GLN:HG2	1.94	0.67
23:BB:580:U:H2'	23:BB:581:C:H6	1.60	0.67
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.30	0.67
42:BN:109:PRO:C	42:BN:110:MET:HE2	2.19	0.67
45:BS:73:LYS:HB3	45:BS:106:VAL:HB	1.75	0.67
1:CA:235:C:H2'	1:CA:236:A:H8	1.59	0.67
18:CS:42:ASN:N	18:CS:42:ASN:HD22	1.93	0.67
23:DB:150:U:H2'	23:DB:151:C:C6	2.30	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.58	0.67
26:DD:20:VAL:HA	27:DK:72:PRO:HB3	1.77	0.67
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.02	0.67
1:AA:484:G:H4'	1:AA:485:U:C5'	2.24	0.67
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.30	0.67
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.10	0.67
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.06	0.67
23:BB:189:G:H2'	23:BB:205:G:N2	2.10	0.67
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.30	0.67
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.30	0.67
40:BH:139:PHE:O	40:BH:140:ALA:HB2	1.95	0.67
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.09	0.67
49:BR:66:HIS:ND1	49:BR:94:THR:HG22	2.10	0.67
53:B6:38:LEU:HD13	53:B6:83:ILE:HD12	1.76	0.67
1:CA:1343:G:H1'	8:CI:122:ARG:HH12	1.59	0.67
23:DB:718:A:H3'	23:DB:719:C:H6	1.58	0.67
23:DB:2306:C:C5	23:DB:2307:G:H2'	2.30	0.67
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.10	0.67
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.10	0.67
2:AC:126:ARG:HH21	2:AC:191:THR:HG23	1.60	0.67
23:BB:27:G:H1'	23:BB:513:A:N6	2.10	0.67
23:BB:78:U:H2'	23:BB:79:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:718:A:H3'	23:BB:719:C:H6	1.59	0.67
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.75	0.67
40:BH:73:ASN:HB3	40:BH:141:LYS:NZ	2.09	0.67
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.30	0.67
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.77	0.67
25:DC:204:LEU:HD22	25:DC:209:ALA:HB1	1.76	0.67
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.10	0.67
30:DY:6:ILE:O	30:DY:34:THR:HA	1.95	0.67
39:DX:10:SER:H	39:DX:60:LYS:HE2	1.60	0.67
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	1.95	0.67
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.75	0.67
1:AA:719:C:H1'	17:AR:37:LYS:HB2	1.77	0.67
14:AO:29:VAL:HG11	14:AO:67:LEU:HD21	1.77	0.67
20:AB:18:GLN:O	20:AB:37:VAL:HG23	1.95	0.67
23:BB:950:G:H2'	23:BB:951:C:C6	2.30	0.67
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.29	0.67
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.76	0.67
23:BB:2266:A:C4'	23:BB:2267:A:N7	2.57	0.67
23:BB:2529:G:H4'	48:BG:174:LYS:HG3	1.76	0.67
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.76	0.67
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.24	0.67
44:BQ:78:PHE:CZ	44:BQ:82:LEU:HD11	2.30	0.67
49:BR:3:ALA:O	49:BR:13:ARG:HA	1.95	0.67
53:B6:30:THR:HG22	53:B6:179:LYS:HD3	1.77	0.67
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.30	0.67
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.10	0.67
12:CM:33:LEU:HD13	12:CM:39:ALA:O	1.95	0.67
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	1.95	0.67
23:DB:62:U:H3'	23:DB:63:A:C8	2.29	0.67
23:DB:120:U:H4'	23:DB:121:G:H5''	1.76	0.67
23:DB:1125:G:H5'	32:D4:37:GLN:HE21	1.59	0.67
23:DB:2485:G:O2'	23:DB:2486:C:H5'	1.95	0.67
23:DB:2799:A:H4'	23:DB:2800:A:O4'	1.94	0.67
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.09	0.67
39:DX:48:ARG:O	39:DX:51:ALA:HB3	1.95	0.67
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.10	0.67
49:DR:34:GLU:HA	49:DR:59:ILE:O	1.95	0.67
1:AA:1081:A:OP2	4:AE:51:LYS:HE2	1.94	0.67
1:AA:1144:G:H21	1:AA:1146:A:H62	1.41	0.67
11:AL:54:VAL:HG12	11:AL:55:ARG:H	1.60	0.67
13:AN:20:PHE:HD1	13:AN:24:ALA:HB2	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.76	0.67
22:BA:54:G:H21	47:BF:25:MET:HE3	1.60	0.67
23:BB:95:A:H4'	39:BX:38:GLN:O	1.95	0.67
23:BB:849:A:H2'	23:BB:850:U:C6	2.29	0.67
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.30	0.67
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.76	0.67
29:BE:130:LYS:C	29:BE:132:LYS:H	2.03	0.67
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.75	0.67
41:BJ:36:LEU:HD21	41:BJ:122:LEU:HB2	1.76	0.67
1:CA:154:U:H2'	1:CA:155:A:C8	2.30	0.67
1:CA:975:A:H4'	1:CA:976:G:O5'	1.95	0.67
15:CP:20:VAL:HG23	15:CP:35:ARG:HA	1.76	0.67
22:DA:35:C:H2'	22:DA:36:C:H5'	1.75	0.67
23:DB:19:A:H2'	23:DB:20:C:C6	2.30	0.67
23:DB:28:A:N6	23:DB:512:G:H1'	2.10	0.67
23:DB:704:G:H1'	23:DB:727:A:H61	1.60	0.67
23:DB:1082:U:N3	23:DB:1086:A:C2	2.63	0.67
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.30	0.67
23:DB:2366:A:H2'	23:DB:2367:G:O4'	1.94	0.67
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.75	0.67
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.60	0.67
1:AA:215:C:H2'	1:AA:216:U:C6	2.30	0.66
1:AA:664:G:H22	1:AA:741:G:H1	1.40	0.66
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.60	0.66
5:AF:100:SER:HA	17:AR:23:LYS:CE	2.25	0.66
13:AN:27:LYS:HA	13:AN:31:SER:HB2	1.76	0.66
18:AS:28:LYS:HD2	18:AS:28:LYS:H	1.60	0.66
23:BB:2144:G:H5''	23:BB:2146:C:OP2	1.96	0.66
45:BS:6:LYS:HB2	45:BS:103:ILE:O	1.95	0.66
1:CA:454:G:H2'	1:CA:455:G:H8	1.61	0.66
1:CA:836:G:OP2	17:CR:49:LYS:HE2	1.95	0.66
11:CL:35:ARG:HA	11:CL:35:ARG:NH1	2.10	0.66
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.10	0.66
13:CN:20:PHE:HD1	13:CN:24:ALA:HB2	1.59	0.66
20:CB:18:GLN:O	20:CB:37:VAL:HG23	1.94	0.66
23:DB:173:A:H2'	23:DB:174:U:C6	2.30	0.66
23:DB:479:A:N3	23:DB:481:G:H5''	2.09	0.66
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.28	0.66
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.75	0.66
40:DH:69:ALA:HA	40:DH:140:ALA:HB2	1.78	0.66
43:DO:47:VAL:HG12	43:DO:48:LEU:H	1.58	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:978:A:H5'	1:AA:1362:A:N6	2.10	0.66
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.76	0.66
9:AJ:10:LEU:HB2	9:AJ:72:ARG:HB2	1.78	0.66
23:BB:2144:G:H3'	23:BB:2145:C:H3'	1.78	0.66
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.28	0.66
23:BB:2639:A:H2'	23:BB:2640:G:O4'	1.95	0.66
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.77	0.66
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.77	0.66
53:B6:42:LYS:HB3	53:B6:49:HIS:O	1.93	0.66
3:CD:84:ASN:HD22	4:CE:101:GLY:CA	2.08	0.66
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.77	0.66
10:CK:22:ILE:HD12	10:CK:85:VAL:HG22	1.78	0.66
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.60	0.66
23:DB:172:A:H2'	23:DB:173:A:C8	2.30	0.66
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.29	0.66
29:DE:18:THR:HG22	29:DE:106:LYS:NZ	2.10	0.66
29:DE:58:LYS:HD3	29:DE:58:LYS:H	1.60	0.66
30:DY:6:ILE:HG21	30:DY:47:ILE:HD12	1.77	0.66
47:DF:107:VAL:HG11	47:DF:175:PRO:HG3	1.75	0.66
53:D6:19:GLU:HA	53:D6:22:GLU:CD	2.20	0.66
1:AA:454:G:H2'	1:AA:455:G:H8	1.61	0.66
1:AA:1278:G:H4'	1:AA:1279:G:H5'	1.77	0.66
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.10	0.66
23:BB:458:G:N2	23:BB:469:G:H2'	2.10	0.66
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.60	0.66
41:BJ:117:ALA:HA	41:BJ:120:ARG:HD2	1.76	0.66
1:CA:147:G:H2'	1:CA:148:G:C8	2.30	0.66
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.95	0.66
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.78	0.66
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.10	0.66
11:CL:20:VAL:HG12	11:CL:93:ARG:HB3	1.76	0.66
12:CM:48:SER:HB2	12:CM:51:GLN:HG3	1.75	0.66
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.31	0.66
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.94	0.66
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.76	0.66
48:DG:152:ARG:NH2	48:DG:162:ARG:HA	2.11	0.66
1:AA:56:U:H2'	1:AA:57:G:H8	1.60	0.66
3:AD:18:LEU:HB2	3:AD:20:LEU:HG	1.76	0.66
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.59	0.66
23:BB:594:U:H2'	23:BB:595:C:C6	2.30	0.66
23:BB:2720:U:H5''	28:BP:52:ARG:HH22	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:20:VAL:HA	27:BK:72:PRO:HB3	1.76	0.66
40:BH:83:LYS:HB3	40:BH:91:PHE:HB2	1.75	0.66
44:BQ:18:LYS:C	44:BQ:20:ALA:H	2.02	0.66
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.10	0.66
47:BF:16:MET:O	47:BF:20:ASN:HA	1.96	0.66
47:BF:30:VAL:HG21	47:BF:96:TRP:HE1	1.61	0.66
1:CA:920:U:H2'	1:CA:921:U:C6	2.31	0.66
23:DB:365:U:H2'	23:DB:366:C:C6	2.29	0.66
23:DB:593:U:H2'	23:DB:594:U:C6	2.30	0.66
23:DB:1535:A:H5''	23:DB:1536:C:H5	1.61	0.66
23:DB:1657:U:O2'	23:DB:1658:C:H5'	1.96	0.66
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.66
26:DD:148:GLN:HB2	26:DD:152:PRO:CG	2.22	0.66
49:DR:3:ALA:O	49:DR:13:ARG:HA	1.95	0.66
50:DT:18:GLU:C	50:DT:20:ALA:H	2.04	0.66
1:AA:817:C:H1'	1:AA:819:A:H5'	1.78	0.66
4:AE:25:LYS:HG3	4:AE:26:GLY:H	1.61	0.66
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	1.77	0.66
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.10	0.66
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.31	0.66
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.21	0.66
50:BT:18:GLU:C	50:BT:20:ALA:H	2.04	0.66
1:CA:17:U:H2'	1:CA:18:C:H6	1.61	0.66
4:CE:25:LYS:HG3	4:CE:26:GLY:H	1.61	0.66
10:CK:115:ILE:HD11	17:CR:72:ARG:NH1	2.11	0.66
12:CM:15:VAL:HG23	12:CM:40:GLU:HB3	1.77	0.66
14:CO:36:ILE:HD13	14:CO:59:MET:HE3	1.76	0.66
23:DB:704:G:H1'	23:DB:727:A:N6	2.11	0.66
23:DB:743:A:O2'	23:DB:744:U:H5'	1.96	0.66
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.28	0.66
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.30	0.66
23:DB:2253:G:H22	53:D6:151:GLU:CD	2.03	0.66
23:DB:2331:G:H4'	52:DW:39:GLN:HA	1.76	0.66
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.76	0.66
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.24	0.66
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.76	0.66
44:DQ:91:ARG:NH1	49:DR:11:GLN:H	1.92	0.66
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.76	0.66
1:AA:394:G:H2'	1:AA:395:C:H6	1.61	0.66
1:AA:981:U:H4'	13:AN:60:ARG:CD	2.25	0.66
18:AS:42:ASN:N	18:AS:42:ASN:HD22	1.92	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:14:U:H4'	22:BA:70:C:O2	1.96	0.66
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.30	0.66
23:BB:2213:U:H2'	23:BB:2213:U:O2	1.94	0.66
23:BB:2653:U:O2'	48:BG:109:SER:HB2	1.95	0.66
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.59	0.66
47:BF:161:SER:OG	47:BF:164:GLU:HG3	1.96	0.66
1:CA:33:A:H2'	1:CA:34:C:H6	1.59	0.66
1:CA:394:G:H2'	1:CA:395:C:H6	1.61	0.66
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.96	0.66
23:DB:135:U:H2'	23:DB:136:G:C8	2.31	0.66
23:DB:850:U:O2'	30:DY:22:THR:HG22	1.96	0.66
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.30	0.66
25:DC:221:GLY:C	25:DC:223:ALA:H	2.04	0.66
38:DM:96:ILE:HD11	38:DM:126:ILE:HD13	1.78	0.66
1:AA:841:C:H3'	1:AA:843:U:OP2	1.95	0.66
13:AN:5:MET:O	13:AN:8:ARG:HB2	1.95	0.66
18:AS:69:LYS:O	18:AS:72:GLU:HG2	1.96	0.66
21:AU:40:PRO:HA	21:AU:44:ARG:HD2	1.78	0.66
23:BB:477:A:H2'	23:BB:478:A:C8	2.31	0.66
23:BB:2144:G:C2'	23:BB:2146:C:H5'	2.24	0.66
23:BB:2286:G:H3'	33:B1:29:LYS:NZ	2.11	0.66
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.95	0.66
48:BG:7:PRO:O	48:BG:8:VAL:HB	1.96	0.66
1:CA:978:A:H5'	1:CA:1362:A:N6	2.11	0.66
23:DB:581:C:H2'	23:DB:582:A:C8	2.30	0.66
23:DB:1192:G:O2'	23:DB:1193:G:H5'	1.95	0.66
42:DN:114:GLU:HG2	42:DN:115:LEU:N	2.08	0.66
53:D6:42:LYS:HB3	53:D6:49:HIS:HB3	1.78	0.66
1:AA:154:U:H2'	1:AA:155:A:C8	2.31	0.66
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.30	0.66
10:AK:115:ILE:HD11	17:AR:72:ARG:HH12	1.61	0.66
20:AB:20:ARG:HA	20:AB:38:HIS:CE1	2.31	0.66
23:BB:28:A:N6	23:BB:512:G:H1'	2.11	0.66
23:BB:655:A:H4'	23:BB:656:G:H5'	1.78	0.66
23:BB:1258:U:C4'	29:BE:79:ARG:HD2	2.25	0.66
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.59	0.66
25:BC:57:HIS:CG	25:BC:58:LYS:H	2.14	0.66
39:BX:48:ARG:O	39:BX:51:ALA:HB3	1.95	0.66
40:BH:8:LYS:O	40:BH:13:GLY:HA3	1.96	0.66
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.08	0.66
47:BF:41:GLU:O	47:BF:43:ILE:HG22	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:17:U:H2'	1:CA:18:C:C6	2.31	0.66
1:CA:238:A:H2'	1:CA:239:U:H5''	1.77	0.66
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.59	0.66
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.78	0.66
9:CJ:10:LEU:HB2	9:CJ:72:ARG:HB2	1.76	0.66
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.11	0.66
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.31	0.66
23:DB:2639:A:H2'	23:DB:2640:G:O4'	1.96	0.66
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.95	0.66
26:DD:68:PHE:C	26:DD:73:VAL:HB	2.19	0.66
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.60	0.66
36:D2:26:ASN:O	36:D2:30:VAL:HG23	1.96	0.66
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.21	0.66
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.77	0.66
50:DT:38:ALA:O	50:DT:39:THR:HB	1.95	0.66
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.93	0.66
1:AA:662:U:H2'	1:AA:663:A:C8	2.31	0.66
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.77	0.66
18:AS:10:ILE:HB	18:AS:14:LEU:HD11	1.78	0.66
20:AB:98:GLY:HA2	20:AB:101:THR:HG22	1.78	0.66
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.26	0.66
38:BM:17:ASN:HD21	38:BM:95:LEU:HG	1.58	0.66
50:BT:38:ALA:O	50:BT:39:THR:HB	1.95	0.66
1:CA:279:A:H5''	1:CA:280:C:H3'	1.78	0.66
1:CA:539:A:H2'	1:CA:540:G:C8	2.31	0.66
8:CI:27:ILE:HB	8:CI:34:LEU:HB2	1.76	0.66
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.78	0.66
23:DB:2267:A:H5''	23:DB:2268:A:H5'	1.78	0.66
23:DB:2333:A:H5'	23:DB:2335:A:H1'	1.77	0.66
23:DB:2646:C:H2'	23:DB:2647:U:O4'	1.95	0.66
28:DP:50:ARG:CB	28:DP:56:SER:HB3	2.25	0.66
42:DN:79:LEU:HA	42:DN:83:LEU:HD12	1.77	0.66
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	1.96	0.66
1:AA:22:G:H2'	1:AA:23:C:H6	1.60	0.66
13:AN:11:LYS:O	13:AN:15:LEU:HG	1.95	0.66
23:BB:1350:C:H5'	23:BB:1351:C:OP2	1.95	0.66
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.31	0.66
26:BD:68:PHE:C	26:BD:73:VAL:HB	2.20	0.66
50:BT:69:ARG:CZ	50:BT:69:ARG:HA	2.26	0.66
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.75	0.66
2:CC:14:VAL:HG11	2:CC:178:ARG:HA	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.31	0.66
8:CI:20:ILE:HA	8:CI:62:LEU:HB3	1.77	0.66
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.36	0.66
12:CM:14:ALA:HB3	12:CM:40:GLU:HA	1.76	0.66
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.11	0.66
22:DA:90:C:OP1	38:DM:16:ARG:HB2	1.96	0.66
23:DB:782:A:N3	25:DC:224:MET:HB3	2.10	0.66
23:DB:2098:U:H2'	23:DB:2099:U:C1'	2.26	0.66
23:DB:2728:U:H5'	27:DK:70:ARG:HH21	1.61	0.66
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.78	0.66
41:DJ:117:ALA:HA	41:DJ:120:ARG:HD2	1.78	0.66
47:DF:31:GLU:O	47:DF:32:LYS:HD3	1.96	0.66
47:DF:72:SER:HB2	47:DF:80:GLN:H	1.60	0.66
1:AA:72:A:H2'	1:AA:73:C:C6	2.30	0.65
4:AE:37:VAL:HA	4:AE:47:PHE:HA	1.77	0.65
5:AF:53:LYS:HB2	5:AF:54:LEU:HD22	1.78	0.65
15:AP:54:LEU:HD22	15:AP:80:LYS:HE2	1.77	0.65
23:BB:72:U:O2'	23:BB:73:A:H5'	1.96	0.65
23:BB:572:A:OP2	49:BR:80:ARG:NH2	2.30	0.65
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.31	0.65
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.30	0.65
25:BC:221:GLY:C	25:BC:223:ALA:H	2.03	0.65
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.77	0.65
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.10	0.65
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.60	0.65
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.77	0.65
8:CI:55:ASP:HB2	8:CI:59:LYS:HE3	1.76	0.65
12:CM:44:ILE:HA	12:CM:47:LEU:HG	1.78	0.65
23:DB:702:U:H2'	23:DB:703:U:C6	2.31	0.65
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.10	0.65
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.11	0.65
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.96	0.65
29:DE:110:SER:HB3	29:DE:114:ARG:NH1	2.10	0.65
43:DO:67:ASN:N	43:DO:70:ALA:HB3	2.05	0.65
46:DU:12:VAL:HA	46:DU:69:VAL:HA	1.78	0.65
49:DR:66:HIS:CG	49:DR:94:THR:HG22	2.31	0.65
1:AA:950:U:H2'	1:AA:951:G:H8	1.61	0.65
8:AI:42:THR:O	8:AI:45:MET:HG2	1.95	0.65
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.21	0.65
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.32	0.65
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:124:ARG:HA	26:BD:165:MET:SD	2.36	0.65
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.78	0.65
1:CA:484:G:H4'	1:CA:485:U:C5'	2.26	0.65
8:CI:26:LYS:H	8:CI:61:ASP:CB	2.08	0.65
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.11	0.65
21:CU:3:ILE:HG21	21:CU:19:LYS:HD2	1.78	0.65
23:DB:947:A:H2'	23:DB:948:C:C6	2.31	0.65
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.61	0.65
23:DB:2637:U:OP1	26:DD:83:ARG:HD3	1.97	0.65
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.97	0.65
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.07	0.65
47:DF:32:LYS:HB2	47:DF:90:LEU:O	1.96	0.65
49:DR:19:THR:HG22	49:DR:97:LYS:HG3	1.77	0.65
1:AA:382:A:H2'	1:AA:383:A:C8	2.31	0.65
1:AA:473:U:H2'	1:AA:474:G:H8	1.61	0.65
2:AC:14:VAL:HG11	2:AC:178:ARG:HA	1.77	0.65
3:AD:160:LEU:HD22	3:AD:161:ALA:N	2.11	0.65
12:AM:15:VAL:HG23	12:AM:40:GLU:HB3	1.78	0.65
20:AB:63:LYS:HA	20:AB:224:ARG:HH11	1.62	0.65
23:BB:171:U:H2'	23:BB:172:A:C8	2.31	0.65
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.61	0.65
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.31	0.65
23:BB:1870:C:H3'	23:BB:1871:A:C8	2.31	0.65
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.95	0.65
25:BC:128:THR:HA	25:BC:190:THR:HA	1.78	0.65
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	1.78	0.65
1:CA:89:U:H2'	1:CA:90:C:O4'	1.95	0.65
1:CA:235:C:H2'	1:CA:236:A:C8	2.31	0.65
1:CA:371:A:O2'	1:CA:372:C:H5'	1.96	0.65
1:CA:1144:G:H21	1:CA:1146:A:H62	1.44	0.65
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	1.78	0.65
22:DA:54:G:H21	47:DF:25:MET:HE3	1.61	0.65
23:DB:1012:U:O4	41:DJ:30:THR:HG21	1.97	0.65
23:DB:1117:C:O2'	23:DB:1118:C:H5'	1.96	0.65
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.31	0.65
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.76	0.65
53:D6:67:VAL:HG12	53:D6:100:TYR:CE1	2.31	0.65
1:AA:135:C:O2	15:AP:1:MET:HB2	1.97	0.65
12:AM:33:LEU:HD13	12:AM:39:ALA:O	1.96	0.65
23:BB:27:G:H22	23:BB:512:G:H2'	1.62	0.65
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.10	0.65
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.10	0.65
29:BE:37:ALA:C	29:BE:39:ALA:H	2.04	0.65
29:BE:46:GLN:HB2	29:BE:87:ALA:O	1.96	0.65
39:BX:29:ARG:HH12	50:BT:12:ARG:HG2	1.62	0.65
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.60	0.65
2:CC:179:ALA:HB3	2:CC:181:ILE:HD11	1.79	0.65
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.11	0.65
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.79	0.65
23:DB:28:A:H61	23:DB:512:G:H1'	1.60	0.65
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.59	0.65
23:DB:1515:A:H2'	23:DB:1516:G:O4'	1.96	0.65
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.62	0.65
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.62	0.65
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.78	0.65
37:DL:70:LYS:O	37:DL:73:ILE:HG12	1.96	0.65
38:DM:19:GLY:N	38:DM:38:ARG:HH12	1.93	0.65
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.26	0.65
9:AJ:56:HIS:H	13:AN:80:ARG:NH2	1.94	0.65
20:AB:151:LYS:HG3	20:AB:152:ASP:N	2.12	0.65
22:BA:5:U:H2'	22:BA:6:G:H8	1.62	0.65
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.11	0.65
24:BI:121:ILE:HA	24:BI:124:MET:HE3	1.77	0.65
40:BH:134:VAL:HG13	40:BH:135:HIS:H	1.61	0.65
44:BQ:10:ARG:HA	44:BQ:13:HIS:HB2	1.76	0.65
46:BU:65:GLN:HB2	46:BU:68:ASN:ND2	2.11	0.65
5:CF:20:GLY:O	5:CF:24:ARG:HD3	1.96	0.65
10:CK:24:ALA:HA	10:CK:29:THR:CG2	2.26	0.65
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.60	0.65
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.10	0.65
47:DF:30:VAL:HG21	47:DF:96:TRP:HE1	1.62	0.65
47:DF:101:ARG:CZ	47:DF:138:PRO:HB2	2.27	0.65
1:AA:22:G:H2'	1:AA:23:C:C6	2.32	0.65
1:AA:736:C:H2'	1:AA:737:C:C6	2.32	0.65
1:AA:1343:G:H1'	8:AI:122:ARG:HH12	1.60	0.65
6:AG:71:THR:HG23	6:AG:72:VAL:HG22	1.77	0.65
9:AJ:85:ASP:HA	9:AJ:88:MET:SD	2.36	0.65
23:BB:571:U:H3'	49:BR:80:ARG:NH1	2.12	0.65
23:BB:704:G:H1'	23:BB:727:A:H61	1.61	0.65
23:BB:873:C:H2'	23:BB:874:G:C8	2.32	0.65
23:BB:1131:G:H1'	23:BB:1133:A:H62	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.11	0.65
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.96	0.65
26:BD:28:GLU:HG3	26:BD:185:ASN:O	1.96	0.65
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.61	0.65
38:BM:42:THR:OG1	38:BM:45:GLN:HG3	1.97	0.65
42:BN:83:LEU:HA	42:BN:86:ARG:HB2	1.77	0.65
1:CA:719:C:H1'	17:CR:37:LYS:HB2	1.78	0.65
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.77	0.65
12:CM:78:ARG:O	12:CM:82:LEU:HB2	1.97	0.65
21:CU:40:PRO:HA	21:CU:44:ARG:HD2	1.79	0.65
23:DB:78:U:H2'	23:DB:79:C:C6	2.32	0.65
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.78	0.65
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.78	0.65
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.78	0.65
53:D6:58:VAL:HG22	53:D6:68:VAL:HG13	1.79	0.65
1:AA:401:C:H2'	1:AA:402:G:H8	1.60	0.65
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.62	0.65
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	1.97	0.65
4:AE:156:ARG:HA	4:AE:158:LYS:NZ	2.11	0.65
8:AI:20:ILE:HG13	8:AI:62:LEU:HD12	1.78	0.65
13:AN:46:LYS:HZ2	18:AS:10:ILE:H	1.41	0.65
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	1.79	0.65
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE2	1.79	0.65
20:AB:80:LYS:HG3	20:AB:81:ASP:H	1.62	0.65
23:BB:324:A:H2'	23:BB:325:G:O4'	1.96	0.65
23:BB:855:G:H21	52:BW:23:LYS:CG	2.04	0.65
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.32	0.65
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.96	0.65
38:BM:19:GLY:N	38:BM:38:ARG:HH12	1.92	0.65
1:CA:56:U:H2'	1:CA:57:G:H8	1.61	0.65
1:CA:1162:C:H2'	1:CA:1163:A:H8	1.59	0.65
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.62	0.65
20:CB:20:ARG:HA	20:CB:38:HIS:CE1	2.32	0.65
23:DB:532:A:N3	23:DB:532:A:H2'	2.11	0.65
23:DB:849:A:H2'	23:DB:850:U:C6	2.32	0.65
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.75	0.65
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.79	0.65
26:DD:182:ALA:O	26:DD:184:ARG:HG2	1.97	0.65
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.79	0.65
48:DG:43:LYS:HB2	48:DG:50:THR:HB	1.77	0.65
1:AA:763:G:H2'	1:AA:764:C:H6	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.32	0.65
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.78	0.65
11:AL:98:ARG:HH21	11:AL:104:SER:C	2.04	0.65
22:BA:111:U:H2'	22:BA:112:G:C8	2.31	0.65
23:BB:150:U:H2'	23:BB:151:C:C6	2.32	0.65
23:BB:1268:A:H2'	23:BB:1269:A:O4'	1.96	0.65
23:BB:1580:A:H2'	23:BB:1581:G:O4'	1.96	0.65
23:BB:2391:G:H1'	23:BB:2424:C:N4	2.12	0.65
40:BH:78:VAL:HG12	40:BH:143:ILE:O	1.97	0.65
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.61	0.65
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.22	0.65
1:CA:736:C:H2'	1:CA:737:C:C6	2.32	0.65
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.26	0.65
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.61	0.65
3:CD:148:ALA:O	3:CD:151:GLN:HB2	1.95	0.65
10:CK:19:VAL:HG12	10:CK:82:GLU:HB2	1.79	0.65
14:CO:29:VAL:HG11	14:CO:67:LEU:HD21	1.79	0.65
22:DA:14:U:H4'	22:DA:70:C:O2	1.96	0.65
23:DB:280:U:H2'	23:DB:281:C:C6	2.31	0.65
23:DB:458:G:H22	23:DB:469:G:H2'	1.61	0.65
23:DB:919:U:H2'	23:DB:920:A:C8	2.31	0.65
23:DB:968:C:H2'	23:DB:969:G:H8	1.61	0.65
23:DB:2548:U:H1'	27:DK:23:LYS:HZ1	1.62	0.65
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.79	0.65
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.12	0.65
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.77	0.65
48:DG:7:PRO:O	48:DG:8:VAL:HB	1.95	0.65
7:AH:37:ASN:O	7:AH:41:GLU:HG2	1.97	0.65
13:AN:63:CYS:CB	13:AN:67:GLY:H	2.03	0.65
23:BB:176:A:H3'	23:BB:177:G:N2	2.12	0.65
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.62	0.65
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.59	0.65
28:BP:50:ARG:CB	28:BP:56:SER:HB3	2.26	0.65
30:BY:6:ILE:O	30:BY:34:THR:HA	1.97	0.65
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.79	0.65
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	1.97	0.65
47:BF:141:ASP:O	47:BF:145:VAL:HG13	1.96	0.65
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.27	0.65
48:BG:122:ALA:HB2	48:BG:132:LEU:HB3	1.79	0.65
1:CA:677:U:H1'	10:CK:120:CYS:SG	2.36	0.65
5:CF:53:LYS:H	5:CF:53:LYS:NZ	1.94	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.27	0.65
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.78	0.65
19:CT:27:MET:O	19:CT:31:ILE:HG13	1.97	0.65
21:CU:16:ARG:HA	21:CU:16:ARG:NE	2.05	0.65
23:DB:170:U:H2'	23:DB:171:U:C6	2.32	0.65
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.32	0.65
29:DE:21:ARG:HH11	29:DE:106:LYS:HD2	1.62	0.65
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.79	0.65
39:DX:1:MET:HG2	39:DX:4:LYS:NZ	2.11	0.65
47:DF:141:ASP:O	47:DF:145:VAL:HG13	1.97	0.65
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.27	0.65
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.10	0.65
6:AG:109:LYS:HE2	6:AG:109:LYS:HA	1.79	0.65
20:AB:86:CYS:HB2	20:AB:221:ARG:NH1	2.12	0.65
23:BB:162:U:H2'	23:BB:162:U:O2	1.96	0.65
23:BB:532:A:H2'	23:BB:532:A:N3	2.12	0.65
23:BB:1092:C:OP1	23:BB:2475:C:H4'	1.97	0.65
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.31	0.65
37:BL:95:LEU:HA	37:BL:98:ALA:HB3	1.78	0.65
40:BH:80:ILE:HD11	40:BH:102:ALA:HB2	1.77	0.65
47:BF:7:TYR:O	47:BF:11:VAL:HB	1.97	0.65
1:CA:17:U:O2'	1:CA:18:C:H5'	1.95	0.65
1:CA:87:C:H2'	1:CA:88:U:C6	2.32	0.65
1:CA:673:A:H2'	1:CA:674:G:C8	2.32	0.65
7:CH:37:ASN:O	7:CH:41:GLU:HG2	1.97	0.65
16:CQ:79:GLU:HG3	16:CQ:80:LYS:NZ	2.11	0.65
20:CB:119:GLN:HG3	20:CB:136:ARG:NH1	2.12	0.65
23:DB:176:A:O2'	23:DB:177:G:H5'	1.97	0.65
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.31	0.65
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.11	0.65
42:DN:83:LEU:HA	42:DN:86:ARG:HB2	1.79	0.65
43:DO:89:ASP:HA	43:DO:116:GLN:O	1.96	0.65
47:DF:7:TYR:O	47:DF:11:VAL:HB	1.97	0.65
53:D6:92:PRO:CA	53:D6:101:ILE:HG12	2.27	0.65
1:AA:268:U:H2'	1:AA:269:C:C6	2.32	0.64
1:AA:845:A:N3	1:AA:845:A:H2'	2.10	0.64
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.62	0.64
3:AD:28:ASP:HA	3:AD:33:ILE:HG21	1.79	0.64
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	1.79	0.64
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.05	0.64
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1942:C:C1'	53:B6:133:ARG:HH12	2.09	0.64
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.12	0.64
25:BC:144:GLU:HG3	25:BC:151:GLY:N	2.12	0.64
44:BQ:27:ARG:HA	44:BQ:33:VAL:HG23	1.79	0.64
45:BS:17:VAL:HG13	45:BS:43:ALA:HB1	1.79	0.64
1:CA:719:C:H2'	17:CR:38:ILE:CD1	2.26	0.64
2:CC:48:LYS:HD3	2:CC:48:LYS:N	2.13	0.64
3:CD:160:LEU:HD22	3:CD:161:ALA:N	2.12	0.64
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.79	0.64
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.97	0.64
23:DB:2108:A:H4'	23:DB:2150:C:H4'	1.79	0.64
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.64
37:DL:93:ASN:ND2	37:DL:94:THR:H	1.94	0.64
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.61	0.64
40:DH:8:LYS:O	40:DH:13:GLY:HA3	1.96	0.64
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.78	0.64
41:DJ:59:ALA:C	41:DJ:61:LYS:H	2.05	0.64
50:DT:69:ARG:CZ	50:DT:69:ARG:HA	2.26	0.64
1:AA:238:A:H2'	1:AA:239:U:H5''	1.79	0.64
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.79	0.64
7:AH:45:ILE:HG21	7:AH:60:LEU:HD21	1.78	0.64
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.80	0.64
23:BB:64:A:H2'	23:BB:65:U:C6	2.32	0.64
23:BB:136:G:H2'	23:BB:137:U:C6	2.32	0.64
23:BB:704:G:H1'	23:BB:727:A:N6	2.12	0.64
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.32	0.64
23:BB:2331:G:H4'	52:BW:39:GLN:HA	1.80	0.64
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.78	0.64
39:BX:29:ARG:NH1	50:BT:12:ARG:HG2	2.12	0.64
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.73	0.64
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.08	0.64
52:BW:24:ARG:HB2	52:BW:65:LYS:HB3	1.78	0.64
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.79	0.64
12:CM:2:ARG:HG3	12:CM:6:ILE:HA	1.79	0.64
23:DB:544:C:H2'	23:DB:545:U:C5	2.32	0.64
23:DB:1350:C:H5'	23:DB:1351:C:OP2	1.97	0.64
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.63	0.64
25:DC:131:MET:HA	25:DC:134:ILE:HG23	1.79	0.64
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.63	0.64
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.12	0.64
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.97	0.64
4:AE:156:ARG:HD2	7:AH:42:GLU:O	1.98	0.64
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.12	0.64
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.22	0.64
20:AB:33:ALA:HA	20:AB:38:HIS:HA	1.78	0.64
23:BB:172:A:H2'	23:BB:173:A:C8	2.31	0.64
23:BB:570:G:H2'	23:BB:2030:A:N7	2.12	0.64
23:BB:664:G:H2'	23:BB:665:U:C6	2.33	0.64
23:BB:1012:U:O4	41:BJ:30:THR:HG21	1.96	0.64
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.79	0.64
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.79	0.64
25:BC:239:PHE:O	25:BC:241:LYS:HG3	1.98	0.64
27:BK:113:MET:HE2	27:BK:116:ILE:HD11	1.78	0.64
43:BO:67:ASN:N	43:BO:70:ALA:HB3	2.06	0.64
49:BR:34:GLU:HA	49:BR:59:ILE:O	1.97	0.64
1:CA:382:A:H2'	1:CA:383:A:C8	2.32	0.64
1:CA:389:A:H3'	1:CA:390:U:H6	1.61	0.64
2:CC:25:THR:HG23	13:CN:75:LYS:HD3	1.80	0.64
5:CF:53:LYS:HB2	5:CF:54:LEU:HD22	1.78	0.64
8:CI:20:ILE:HG13	8:CI:62:LEU:HD12	1.78	0.64
20:CB:148:GLY:O	20:CB:151:LYS:HG2	1.98	0.64
23:DB:659:G:H21	29:DE:30:GLN:NE2	1.95	0.64
23:DB:680:C:H2'	23:DB:681:G:H8	1.62	0.64
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.28	0.64
23:DB:1458:U:H5''	23:DB:1459:G:OP1	1.97	0.64
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.33	0.64
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.32	0.64
28:DP:89:GLY:HA2	28:DP:111:GLU:C	2.23	0.64
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.05	0.64
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.10	0.64
53:D6:93:SER:OG	53:D6:100:TYR:HB2	1.97	0.64
1:AA:370:C:O2'	1:AA:371:A:H5'	1.98	0.64
5:AF:20:GLY:O	5:AF:24:ARG:HD3	1.96	0.64
15:AP:61:VAL:HA	15:AP:65:ALA:HB3	1.78	0.64
23:BB:138:U:O3'	23:BB:139:U:H2'	1.98	0.64
23:BB:142:A:C2	50:BT:2:ILE:HG22	2.32	0.64
23:BB:417:C:H2'	23:BB:418:C:C6	2.32	0.64
23:BB:609:A:H2'	23:BB:610:C:O4'	1.97	0.64
23:BB:729:G:C8	25:BC:206:LYS:HE3	2.33	0.64
23:BB:904:G:H2'	23:BB:905:A:H8	1.61	0.64
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.62	0.64
25:BC:43:ASN:ND2	25:BC:44:ASN:H	1.95	0.64
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.80	0.64
27:BK:71:ARG:NE	27:BK:71:ARG:HA	2.11	0.64
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.63	0.64
53:B6:29:ARG:NH2	53:B6:110:ARG:HD3	2.07	0.64
2:CC:52:SER:HB3	2:CC:114:LEU:HG	1.78	0.64
3:CD:22:SER:HB2	3:CD:109:THR:HG22	1.80	0.64
6:CG:71:THR:HG23	6:CG:72:VAL:HG22	1.78	0.64
10:CK:80:ASN:HD22	10:CK:80:ASN:H	1.46	0.64
11:CL:17:LYS:HE3	11:CL:17:LYS:H	1.62	0.64
18:CS:10:ILE:HB	18:CS:14:LEU:HD11	1.79	0.64
23:DB:155:A:H2'	23:DB:156:A:C8	2.32	0.64
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.97	0.64
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.33	0.64
23:DB:2103:C:H5''	23:DB:2104:C:OP2	1.98	0.64
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.79	0.64
27:DK:99:ILE:HD13	27:DK:118:LEU:HD22	1.79	0.64
1:AA:224:U:H2'	1:AA:225:C:C6	2.32	0.64
1:AA:441:A:H61	1:AA:493:A:N6	1.96	0.64
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.61	0.64
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.78	0.64
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.61	0.64
10:AK:92:ARG:HH11	10:AK:92:ARG:HG2	1.62	0.64
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.78	0.64
22:BA:90:C:OP1	38:BM:16:ARG:HB2	1.98	0.64
25:BC:86:ARG:NH1	25:BC:86:ARG:HB3	2.13	0.64
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.78	0.64
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.78	0.64
1:CA:33:A:H2'	1:CA:34:C:C6	2.33	0.64
1:CA:358:U:H2'	1:CA:359:G:C8	2.32	0.64
5:CF:88:MET:SD	17:CR:64:LEU:HD11	2.38	0.64
13:CN:46:LYS:HZ2	18:CS:10:ILE:H	1.43	0.64
15:CP:3:THR:HB	15:CP:66:THR:O	1.98	0.64
20:CB:98:GLY:HA2	20:CB:101:THR:HG22	1.77	0.64
20:CB:151:LYS:HG3	20:CB:152:ASP:N	2.12	0.64
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.32	0.64
23:DB:904:G:H2'	23:DB:905:A:H8	1.62	0.64
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.13	0.64
23:DB:1523:U:H5''	23:DB:1524:G:C8	2.33	0.64
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:128:THR:HA	25:DC:190:THR:HA	1.79	0.64
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.62	0.64
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.80	0.64
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.13	0.64
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.10	0.64
1:AA:33:A:H2'	1:AA:34:C:H6	1.62	0.64
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.80	0.64
8:AI:43:ALA:O	8:AI:46:VAL:HG22	1.97	0.64
18:AS:10:ILE:HG22	18:AS:38:THR:H	1.63	0.64
23:BB:1432:G:H2'	23:BB:1433:A:C8	2.33	0.64
23:BB:1657:U:O2'	23:BB:1658:C:H5'	1.97	0.64
23:BB:2400:G:O2'	23:BB:2401:U:H5'	1.97	0.64
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.28	0.64
40:BH:103:VAL:HG21	40:BH:110:VAL:HG22	1.78	0.64
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.12	0.64
53:B6:15:GLN:HB3	53:B6:16:LYS:HZ2	1.62	0.64
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.33	0.64
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.28	0.64
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.06	0.64
7:CH:113:ARG:HH21	7:CH:114:ALA:HA	1.62	0.64
23:DB:464:U:H2'	23:DB:465:G:O4'	1.98	0.64
23:DB:528:A:C2	23:DB:2042:A:H2'	2.32	0.64
23:DB:934:U:H2'	23:DB:935:C:C6	2.33	0.64
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.32	0.64
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	1.80	0.64
47:DF:7:TYR:O	47:DF:12:VAL:HG23	1.98	0.64
53:D6:93:SER:O	53:D6:99:LEU:HA	1.98	0.64
1:AA:224:U:H2'	1:AA:225:C:H6	1.63	0.64
1:AA:390:U:H2'	1:AA:391:G:H8	1.63	0.64
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.12	0.64
8:AI:44:ARG:O	8:AI:47:VAL:HG22	1.98	0.64
23:BB:730:A:H3'	57:BB:3595:HOH:O	1.96	0.64
23:BB:917:A:H5''	23:BB:2268:A:N6	2.13	0.64
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.33	0.64
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.63	0.64
35:BV:15:GLY:O	35:BV:19:ARG:HG3	1.98	0.64
53:B6:44:GLU:HG2	53:B6:49:HIS:CE1	2.33	0.64
1:CA:430:A:OP1	3:CD:8:LEU:HB2	1.97	0.64
1:CA:520:A:O2'	11:CL:69:GLU:HG2	1.97	0.64
1:CA:678:U:H2'	1:CA:679:C:C6	2.32	0.64
1:CA:981:U:H4'	13:CN:60:ARG:CD	2.25	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.27	0.64
23:DB:19:A:H2'	23:DB:20:C:H6	1.62	0.64
23:DB:72:U:O2'	23:DB:73:A:H5'	1.98	0.64
23:DB:279:A:H2'	23:DB:280:U:H5'	1.79	0.64
23:DB:942:G:H2'	23:DB:943:A:O4'	1.98	0.64
23:DB:1301:A:O2'	23:DB:1302:A:H2'	1.97	0.64
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.63	0.64
29:DE:189:THR:O	29:DE:193:VAL:HG23	1.98	0.64
47:DF:31:GLU:HB3	47:DF:156:THR:O	1.97	0.64
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.62	0.64
14:AO:81:LEU:HD23	14:AO:85:LEU:HD13	1.78	0.64
16:AQ:25:GLU:HB3	16:AQ:38:LYS:HD3	1.79	0.64
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.63	0.64
21:AU:42:THR:HB	21:AU:46:ARG:CZ	2.27	0.64
23:BB:19:A:H2'	23:BB:20:C:C6	2.32	0.64
23:BB:479:A:N3	23:BB:481:G:H5''	2.12	0.64
23:BB:784:G:O2'	23:BB:785:G:H5''	1.98	0.64
23:BB:1438:U:H2'	23:BB:1439:A:O4'	1.98	0.64
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.98	0.64
23:BB:2485:G:O2'	23:BB:2486:C:H5'	1.98	0.64
23:BB:2675:A:N1	23:BB:2732:G:O6	2.31	0.64
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	1.78	0.64
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.78	0.64
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.63	0.64
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.13	0.64
52:BW:47:GLY:HA3	52:BW:80:SER:HB3	1.78	0.64
1:CA:16:A:O2'	1:CA:1080:A:H4'	1.98	0.64
1:CA:320:A:H2'	1:CA:321:A:C8	2.33	0.64
1:CA:845:A:H2'	1:CA:845:A:N3	2.11	0.64
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.63	0.64
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	1.79	0.64
13:CN:11:LYS:O	13:CN:15:LEU:HG	1.97	0.64
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.13	0.64
23:DB:95:A:H1'	39:DX:40:SER:OG	1.98	0.64
25:DC:57:HIS:CG	25:DC:58:LYS:H	2.15	0.64
47:DF:62:GLN:HE22	47:DF:90:LEU:HD13	1.61	0.64
47:DF:177:ARG:CZ	47:DF:177:ARG:HA	2.27	0.64
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.61	0.64
51:DZ:5:CYS:HB3	51:DZ:10:LYS:N	2.12	0.64
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.13	0.64
23:BB:1139:G:O2'	23:BB:1140:C:H5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.32	0.64
23:BB:2282:G:OP1	23:BB:2283:C:H1'	1.98	0.64
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.63	0.64
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.33	0.64
27:BK:99:ILE:HD13	27:BK:118:LEU:HD22	1.78	0.64
28:BP:89:GLY:HA2	28:BP:111:GLU:C	2.22	0.64
40:BH:2:GLN:O	40:BH:3:VAL:HG22	1.97	0.64
40:BH:135:HIS:HB2	40:BH:138:VAL:HG23	1.80	0.64
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.80	0.64
47:BF:111:ARG:HH11	47:BF:135:ILE:HG21	1.63	0.64
50:BT:68:LYS:O	50:BT:69:ARG:HB2	1.98	0.64
1:CA:441:A:H61	1:CA:493:A:N6	1.96	0.64
1:CA:859:G:H2'	1:CA:860:A:C8	2.33	0.64
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.79	0.64
2:CC:126:ARG:HH21	2:CC:191:THR:HG23	1.63	0.64
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.80	0.64
20:CB:195:VAL:HG12	20:CB:197:PHE:H	1.61	0.64
23:DB:27:G:H1'	23:DB:513:A:N6	2.13	0.64
23:DB:69:C:O2'	23:DB:70:G:H5'	1.98	0.64
23:DB:1082:U:N3	23:DB:1086:A:C6	2.65	0.64
23:DB:2776:A:H4'	23:DB:2777:G:H5''	1.79	0.64
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.63	0.64
44:DQ:10:ARG:HA	44:DQ:13:HIS:HB2	1.78	0.64
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.98	0.64
48:DG:38:ASP:CG	48:DG:39:ALA:H	2.06	0.64
51:DZ:64:ILE:H	51:DZ:64:ILE:HD12	1.61	0.64
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.79	0.64
23:BB:64:A:H2'	23:BB:65:U:H6	1.62	0.64
23:BB:143:C:H2'	23:BB:144:A:C8	2.33	0.64
23:BB:852:U:H2'	23:BB:853:C:C6	2.33	0.64
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	1.98	0.64
25:BC:66:PHE:HB2	25:BC:150:GLY:O	1.98	0.64
26:BD:113:SER:CB	26:BD:168:GLU:H	2.10	0.64
44:BQ:54:ARG:HB3	44:BQ:58:GLN:NE2	2.10	0.64
49:BR:66:HIS:CG	49:BR:94:THR:HG22	2.33	0.64
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.80	0.64
50:BT:55:VAL:HG13	50:BT:85:VAL:HG12	1.80	0.64
1:CA:473:U:H2'	1:CA:474:G:H8	1.63	0.64
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.79	0.64
7:CH:48:PHE:HA	7:CH:59:GLU:O	1.97	0.64
11:CL:23:LEU:HG	11:CL:24:GLU:HG3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:125:A:O2'	36:D2:13:ASN:HB3	1.97	0.64
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.63	0.64
23:DB:2010:G:H5''	45:DS:42:LYS:HB2	1.80	0.64
23:DB:2563:U:H2'	23:DB:2565:A:OP2	1.98	0.64
40:DH:4:ILE:HG13	40:DH:18:GLN:HB2	1.80	0.64
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HB2	1.80	0.64
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.12	0.64
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	1.99	0.64
1:AA:389:A:H3'	1:AA:390:U:H6	1.63	0.63
11:AL:23:LEU:HG	11:AL:24:GLU:HG3	1.80	0.63
23:BB:1240:U:O2'	23:BB:1241:A:H5''	1.98	0.63
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.33	0.63
23:BB:1932:A:H2'	23:BB:1933:G:O4'	1.97	0.63
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.34	0.63
23:BB:2303:G:H4'	47:BF:121:PHE:O	1.98	0.63
23:BB:2366:A:H4'	52:BW:61:LYS:HE2	1.80	0.63
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.12	0.63
25:BC:180:MET:O	25:BC:267:VAL:HG23	1.98	0.63
27:BK:8:LEU:HD12	27:BK:8:LEU:N	2.13	0.63
48:BG:10:VAL:O	48:BG:10:VAL:HG12	1.98	0.63
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.13	0.63
53:B6:90:LEU:HB3	53:B6:101:ILE:CG2	2.29	0.63
1:CA:22:G:H2'	1:CA:23:C:H6	1.62	0.63
1:CA:1054:C:H1'	1:CA:1196:A:C5	2.33	0.63
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.13	0.63
3:CD:28:ASP:HA	3:CD:33:ILE:HG21	1.80	0.63
3:CD:137:SER:HB3	3:CD:138:PRO:HD2	1.80	0.63
8:CI:43:ALA:O	8:CI:46:VAL:HG22	1.98	0.63
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.13	0.63
12:CM:76:ILE:HG22	12:CM:80:MET:HE2	1.79	0.63
15:CP:1:MET:HA	15:CP:1:MET:HE3	1.78	0.63
15:CP:48:GLU:HG3	15:CP:49:GLY:H	1.63	0.63
20:CB:187:ASP:HB3	20:CB:201:GLY:O	1.98	0.63
23:DB:1224:U:H4'	49:DR:88:GLY:O	1.98	0.63
23:DB:1475:G:H1'	23:DB:1476:U:H5	1.62	0.63
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.12	0.63
26:DD:36:GLN:O	26:DD:36:GLN:HG3	1.98	0.63
37:DL:110:VAL:HG23	37:DL:126:ARG:O	1.98	0.63
46:DU:70:ALA:HB1	46:DU:79:ALA:CB	2.25	0.63
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.62	0.63
1:AA:235:C:H2'	1:AA:236:A:H8	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:155:A:H2'	23:BB:156:A:C8	2.33	0.63
23:BB:1192:G:O2'	23:BB:1193:G:H5'	1.98	0.63
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.34	0.63
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.63	0.63
25:BC:123:ILE:HD13	25:BC:135:PRO:HG2	1.80	0.63
28:BP:52:ARG:HG2	28:BP:52:ARG:HH11	1.63	0.63
37:BL:110:VAL:HG23	37:BL:126:ARG:O	1.98	0.63
42:BN:37:THR:HB	42:BN:40:LYS:HG3	1.80	0.63
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.81	0.63
46:BU:85:ARG:NE	46:BU:85:ARG:HA	2.14	0.63
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.79	0.63
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.80	0.63
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.78	0.63
1:CA:301:G:H2'	1:CA:302:G:H8	1.62	0.63
1:CA:699:C:C2'	1:CA:700:G:H5''	2.26	0.63
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.32	0.63
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.34	0.63
10:CK:75:GLU:CD	10:CK:75:GLU:H	2.06	0.63
23:DB:730:A:H3'	57:DB:3609:HOH:O	1.98	0.63
23:DB:969:G:H2'	23:DB:970:U:C6	2.33	0.63
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.80	0.63
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.81	0.63
32:D4:19:ARG:C	32:D4:21:GLY:H	2.06	0.63
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.80	0.63
53:D6:10:THR:O	53:D6:14:MET:HG3	1.96	0.63
1:AA:301:G:H2'	1:AA:302:G:H8	1.63	0.63
1:AA:437:U:H2'	1:AA:438:U:O4'	1.98	0.63
1:AA:678:U:H2'	1:AA:679:C:C6	2.33	0.63
1:AA:920:U:H2'	1:AA:921:U:C6	2.33	0.63
2:AC:52:SER:HB3	2:AC:114:LEU:HG	1.80	0.63
10:AK:80:ASN:CB	10:AK:105:ARG:HB3	2.28	0.63
20:AB:22:TRP:HB3	20:AB:38:HIS:CE1	2.33	0.63
23:BB:81:G:H2'	23:BB:82:U:O4'	1.98	0.63
23:BB:742:A:H2'	23:BB:743:A:H8	1.63	0.63
23:BB:968:C:H2'	23:BB:969:G:H8	1.63	0.63
23:BB:1082:U:N3	23:BB:1086:A:C6	2.67	0.63
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.33	0.63
37:BL:93:ASN:ND2	37:BL:94:THR:H	1.96	0.63
38:BM:96:ILE:HD11	38:BM:126:ILE:HD13	1.79	0.63
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.79	0.63
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.24	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:15:HIS:O	50:BT:16:VAL:C	2.42	0.63
1:CA:950:U:H2'	1:CA:951:G:H8	1.63	0.63
4:CE:21:SER:HB2	4:CE:28:ARG:HE	1.64	0.63
4:CE:156:ARG:HA	4:CE:158:LYS:NZ	2.11	0.63
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.80	0.63
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.81	0.63
23:DB:609:A:H2'	23:DB:610:C:O4'	1.98	0.63
23:DB:655:A:H4'	23:DB:656:G:H5'	1.79	0.63
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.34	0.63
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.33	0.63
23:DB:2359:C:O3'	34:D3:50:SER:HB3	1.98	0.63
40:DH:70:GLU:OE1	40:DH:71:LYS:HG3	1.98	0.63
47:DF:102:LEU:HD13	47:DF:102:LEU:C	2.23	0.63
50:DT:68:LYS:O	50:DT:69:ARG:CB	2.46	0.63
51:DZ:64:ILE:O	51:DZ:68:LEU:HG	1.99	0.63
53:D6:30:THR:C	53:D6:32:ARG:N	2.54	0.63
53:D6:61:PRO:HG2	53:D6:67:VAL:CG1	2.29	0.63
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.80	0.63
1:AA:918:A:H2'	1:AA:919:A:C8	2.33	0.63
19:AT:27:MET:O	19:AT:31:ILE:HG13	1.99	0.63
20:AB:172:ILE:H	20:AB:172:ILE:HD12	1.64	0.63
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.33	0.63
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	1.99	0.63
25:BC:70:LYS:NZ	25:BC:99:GLU:HB3	2.13	0.63
27:BK:7:MET:SD	27:BK:20:MET:HB2	2.38	0.63
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.98	0.63
48:BG:15:ASP:HB2	48:BG:26:LYS:HB3	1.79	0.63
1:CA:193:C:H2'	1:CA:194:C:C6	2.34	0.63
1:CA:268:U:H2'	1:CA:269:C:C6	2.34	0.63
1:CA:865:A:H2'	1:CA:866:C:C6	2.34	0.63
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.34	0.63
2:CC:70:ALA:HA	2:CC:105:VAL:HG21	1.80	0.63
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE2	1.80	0.63
23:DB:79:C:O2'	23:DB:346:A:H1'	1.98	0.63
23:DB:969:G:H2'	23:DB:970:U:H6	1.63	0.63
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	1.99	0.63
37:DL:95:LEU:HA	37:DL:98:ALA:HB3	1.78	0.63
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.81	0.63
47:DF:128:SER:HB3	47:DF:154:THR:HG23	1.80	0.63
48:DG:26:LYS:HB2	48:DG:32:LEU:HG	1.79	0.63
1:AA:320:A:H2'	1:AA:321:A:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:719:C:H2'	17:AR:38:ILE:CD1	2.28	0.63
3:AD:53:GLN:HB3	3:AD:202:LEU:HB2	1.81	0.63
5:AF:42:TRP:HE1	5:AF:61:LEU:HD23	1.63	0.63
12:AM:2:ARG:HG3	12:AM:6:ILE:HA	1.79	0.63
15:AP:3:THR:HG22	15:AP:66:THR:HB	1.81	0.63
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.13	0.63
23:BB:557:C:H2'	23:BB:558:U:C6	2.34	0.63
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.32	0.63
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.33	0.63
23:BB:2886:A:H62	31:B0:39:ARG:CD	2.11	0.63
26:BD:36:GLN:O	26:BD:36:GLN:HG3	1.98	0.63
41:BJ:19:ASP:HA	41:BJ:57:LEU:HB3	1.81	0.63
46:BU:42:LYS:HG3	46:BU:57:ILE:HG21	1.80	0.63
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.12	0.63
50:BT:68:LYS:O	50:BT:69:ARG:CB	2.46	0.63
53:B6:163:LYS:O	53:B6:167:GLU:HG3	1.99	0.63
1:CA:224:U:H2'	1:CA:225:C:C6	2.33	0.63
1:CA:270:A:H2'	1:CA:271:C:C6	2.32	0.63
1:CA:411:A:C4	1:CA:413:G:H1'	2.33	0.63
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.13	0.63
10:CK:92:ARG:HH11	10:CK:92:ARG:HG2	1.64	0.63
12:CM:2:ARG:HD3	12:CM:2:ARG:H	1.62	0.63
23:DB:357:C:H2'	23:DB:358:U:C6	2.33	0.63
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.33	0.63
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.33	0.63
23:DB:1268:A:H2'	23:DB:1269:A:O4'	1.98	0.63
23:DB:1273:U:H4'	23:DB:1275:A:OP2	1.98	0.63
23:DB:2786:U:H5'	26:DD:70:LYS:HG3	1.80	0.63
38:DM:42:THR:O	38:DM:44:ARG:N	2.32	0.63
40:DH:94:ILE:HG22	40:DH:122:LEU:CB	2.29	0.63
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.79	0.63
48:DG:122:ALA:HB2	48:DG:132:LEU:HB3	1.80	0.63
52:DW:59:PHE:CE2	52:DW:61:LYS:HD2	2.34	0.63
1:AA:411:A:C4	1:AA:413:G:H1'	2.33	0.63
1:AA:678:U:H2'	1:AA:679:C:H6	1.63	0.63
1:AA:975:A:H4'	1:AA:976:G:O5'	1.97	0.63
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.34	0.63
1:AA:1301:U:O2	1:AA:1301:U:H2'	1.97	0.63
2:AC:133:MET:HE2	2:AC:152:VAL:HG21	1.79	0.63
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.80	0.63
19:AT:29:THR:HA	19:AT:32:LYS:HE3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.34	0.63
23:BB:2376:A:H2'	23:BB:2377:A:O4'	1.98	0.63
24:BI:20:SER:O	24:BI:25:PRO:HD2	1.99	0.63
29:BE:1:MET:HE3	29:BE:2:GLU:H	1.63	0.63
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.80	0.63
40:BH:67:ALA:O	40:BH:71:LYS:HB2	1.99	0.63
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.06	0.63
1:CA:41:G:H2'	1:CA:42:G:H8	1.64	0.63
1:CA:577:G:O2'	1:CA:578:C:H5'	1.99	0.63
1:CA:678:U:H2'	1:CA:679:C:H6	1.63	0.63
1:CA:918:A:H2'	1:CA:919:A:C8	2.34	0.63
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.81	0.63
4:CE:21:SER:CB	4:CE:28:ARG:HE	2.10	0.63
4:CE:52:ALA:H	4:CE:58:ALA:HB2	1.64	0.63
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.80	0.63
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.81	0.63
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.62	0.63
10:CK:105:ARG:HH21	21:CU:10:PRO:HB3	1.64	0.63
20:CB:33:ALA:HA	20:CB:38:HIS:HA	1.80	0.63
23:DB:495:G:H21	45:DS:61:ASN:HD21	1.45	0.63
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	1.98	0.63
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.98	0.63
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.33	0.63
23:DB:2377:A:H2'	23:DB:2378:A:C8	2.33	0.63
25:DC:32:LEU:HD22	25:DC:63:ILE:HG13	1.80	0.63
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.73	0.63
52:DW:24:ARG:HB2	52:DW:65:LYS:HB3	1.79	0.63
1:AA:499:A:H4'	1:AA:500:G:H5'	1.79	0.63
1:AA:577:G:O2'	1:AA:578:C:H5'	1.99	0.63
1:AA:1480:A:H2'	1:AA:1481:U:O4'	1.99	0.63
8:AI:18:VAL:HG21	8:AI:82:ILE:N	2.14	0.63
17:AR:19:GLU:HG3	17:AR:54:LEU:HD12	1.81	0.63
23:BB:680:C:H2'	23:BB:681:G:C8	2.34	0.63
23:BB:956:G:O4'	38:BM:82:MET:HE1	1.98	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.32	0.63
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.34	0.63
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.28	0.63
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.06	0.63
41:BJ:98:GLU:CD	41:BJ:98:GLU:H	2.06	0.63
44:BQ:35:PHE:C	44:BQ:37:ALA:H	2.06	0.63
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:38:ASP:CG	48:BG:39:ALA:H	2.07	0.63
48:BG:102:ILE:HG13	48:BG:116:LEU:HD11	1.79	0.63
1:CA:1099:G:OP1	20:CB:94:ARG:HD3	1.98	0.63
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.81	0.63
22:DA:8:C:O2'	43:DO:40:ILE:HD13	1.99	0.63
23:DB:5:A:H2'	23:DB:6:A:C8	2.34	0.63
23:DB:642:U:O2	23:DB:644:A:H3'	1.99	0.63
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.62	0.63
23:DB:2142:A:H2'	23:DB:2143:C:O4'	1.99	0.63
25:DC:180:MET:O	25:DC:267:VAL:HG23	1.98	0.63
28:DP:3:ILE:HD13	28:DP:7:LEU:HD11	1.79	0.63
49:DR:3:ALA:HB2	49:DR:101:ILE:HD11	1.80	0.63
3:AD:84:ASN:HD22	4:AE:101:GLY:HA3	1.64	0.63
10:AK:19:VAL:HG12	10:AK:82:GLU:HB2	1.79	0.63
10:AK:106:ILE:HD11	10:AK:109:ILE:HD11	1.80	0.63
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.64	0.63
22:BA:10:G:H2'	22:BA:11:C:O4'	1.98	0.63
23:BB:2553:G:H2'	23:BB:2554:U:H4'	1.81	0.63
40:BH:130:VAL:O	40:BH:131:SER:C	2.42	0.63
43:BO:89:ASP:HA	43:BO:116:GLN:O	1.98	0.63
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.11	0.63
45:BS:20:VAL:O	45:BS:23:LEU:HB2	1.99	0.63
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.80	0.63
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.79	0.63
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	1.79	0.63
47:BF:72:SER:HA	47:BF:78:ILE:HG22	1.81	0.63
51:BZ:71:LEU:HD12	51:BZ:78:TYR:HD2	1.64	0.63
53:B6:29:ARG:HH22	53:B6:110:ARG:CD	2.08	0.63
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.64	0.63
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.13	0.63
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.64	0.63
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.29	0.63
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	1.99	0.63
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.64	0.63
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.98	0.63
32:D4:22:VAL:HB	32:D4:24:ARG:HE	1.64	0.63
45:DS:31:GLN:O	45:DS:35:ILE:HG12	1.99	0.63
47:DF:111:ARG:HH11	47:DF:135:ILE:HG21	1.63	0.63
1:AA:235:C:H2'	1:AA:236:A:C8	2.33	0.63
1:AA:285:C:H2'	1:AA:286:C:H6	1.63	0.63
1:AA:999:C:H2'	1:AA:1000:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:50:ALA:HB2	6:AG:57:GLU:HG3	1.80	0.63
12:AM:78:ARG:O	12:AM:82:LEU:HB2	1.98	0.63
15:AP:3:THR:HB	15:AP:66:THR:O	1.99	0.63
23:BB:139:U:H3'	23:BB:140:C:C5'	2.28	0.63
23:BB:1914:C:H2'	23:BB:1915:U:O4'	1.98	0.63
23:BB:2023:C:O2'	23:BB:2024:G:H5'	1.99	0.63
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.80	0.63
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.81	0.63
44:BQ:30:VAL:HG22	44:BQ:31:TYR:H	1.63	0.63
47:BF:7:TYR:O	47:BF:12:VAL:HG23	1.99	0.63
47:BF:102:LEU:C	47:BF:102:LEU:HD13	2.23	0.63
1:CA:431:A:H2'	1:CA:432:A:O4'	1.98	0.63
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.81	0.63
3:CD:169:TRP:HB2	3:CD:183:ARG:HD2	1.79	0.63
15:CP:22:ALA:HA	15:CP:33:ILE:HG13	1.80	0.63
23:DB:64:A:H2'	23:DB:65:U:H6	1.63	0.63
24:DI:121:ILE:HD13	24:DI:121:ILE:N	2.13	0.63
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.80	0.63
27:DK:71:ARG:CB	27:DK:72:PRO:HD2	2.23	0.63
30:DY:50:VAL:O	30:DY:54:VAL:HG22	1.99	0.63
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.81	0.63
48:DG:17:LYS:NZ	48:DG:18:ILE:H	1.92	0.63
1:AA:90:C:H2'	1:AA:91:U:C5	2.34	0.62
1:AA:285:C:H2'	1:AA:286:C:C6	2.34	0.62
1:AA:390:U:H2'	1:AA:391:G:C8	2.33	0.62
1:AA:430:A:OP1	3:AD:8:LEU:HB2	1.98	0.62
21:AU:3:ILE:HG21	21:AU:19:LYS:HD2	1.81	0.62
21:AU:16:ARG:CZ	21:AU:19:LYS:HE2	2.29	0.62
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.18	0.62
23:BB:173:A:H2'	23:BB:174:U:C6	2.34	0.62
23:BB:365:U:H2'	23:BB:366:C:C6	2.34	0.62
23:BB:479:A:O2'	23:BB:481:G:H5'	1.98	0.62
23:BB:969:G:H2'	23:BB:970:U:C6	2.34	0.62
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.62	0.62
23:BB:1939:U:H5'	23:BB:1939:U:H6	1.64	0.62
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.34	0.62
23:BB:2185:U:H2'	23:BB:2186:G:H8	1.64	0.62
23:BB:2658:C:H5'	48:BG:159:LYS:NZ	2.13	0.62
42:BN:79:LEU:HA	42:BN:83:LEU:HD12	1.79	0.62
46:BU:10:VAL:O	46:BU:21:ARG:HA	1.99	0.62
47:BF:31:GLU:HB3	47:BF:156:THR:O	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:285:C:H2'	1:CA:286:C:C6	2.34	0.62
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.80	0.62
5:CF:100:SER:HA	17:CR:23:LYS:CE	2.28	0.62
9:CJ:56:HIS:H	13:CN:80:ARG:NH2	1.97	0.62
11:CL:98:ARG:HH21	11:CL:104:SER:C	2.07	0.62
19:CT:56:ILE:O	19:CT:60:GLN:HG2	1.99	0.62
23:DB:62:U:H2'	23:DB:63:A:O4'	1.99	0.62
23:DB:559:G:H21	44:DQ:51:GLN:NE2	1.96	0.62
23:DB:1266:G:H22	23:DB:2012:G:H2'	1.64	0.62
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.14	0.62
23:DB:1501:G:O2'	23:DB:1502:A:H5'	1.99	0.62
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.33	0.62
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.33	0.62
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.64	0.62
26:DD:114:LYS:HD2	26:DD:116:LYS:NZ	2.13	0.62
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.80	0.62
33:D1:3:GLY:O	33:D1:4:ILE:HG12	1.98	0.62
47:DF:72:SER:HA	47:DF:78:ILE:HG22	1.80	0.62
53:D6:14:MET:HE1	53:D6:165:THR:HA	1.80	0.62
1:AA:41:G:H2'	1:AA:42:G:H8	1.65	0.62
1:AA:216:U:H2'	1:AA:217:C:C6	2.34	0.62
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.34	0.62
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.13	0.62
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.81	0.62
13:AN:10:VAL:HB	13:AN:11:LYS:NZ	2.15	0.62
15:AP:26:ASN:ND2	15:AP:31:ARG:HB3	2.14	0.62
19:AT:19:HIS:O	19:AT:23:ARG:HG2	1.99	0.62
20:AB:148:GLY:O	20:AB:151:LYS:HG2	2.00	0.62
22:BA:39:A:O2'	22:BA:40:U:H5'	1.99	0.62
23:BB:705:A:N6	23:BB:726:G:O2'	2.32	0.62
23:BB:979:A:H2'	23:BB:982:C:N4	2.14	0.62
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.34	0.62
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.34	0.62
26:BD:154:LYS:HD3	26:BD:154:LYS:H	1.64	0.62
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.80	0.62
29:BE:134:LEU:HD21	29:BE:161:ALA:HB2	1.80	0.62
29:BE:161:ALA:HA	29:BE:164:LEU:HD12	1.81	0.62
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.13	0.62
41:BJ:57:LEU:HD21	41:BJ:128:ASN:HA	1.80	0.62
53:B6:55:ILE:HG23	53:B6:79:ILE:HD11	1.81	0.62
1:CA:285:C:H2'	1:CA:286:C:H6	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:390:U:H2'	1:CA:391:G:C8	2.34	0.62
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.14	0.62
4:CE:156:ARG:CA	4:CE:158:LYS:HZ2	2.10	0.62
6:CG:58:LEU:H	6:CG:58:LEU:HD23	1.63	0.62
18:CS:69:LYS:O	18:CS:72:GLU:HG2	1.98	0.62
20:CB:139:GLU:HG2	20:CB:143:LEU:HD11	1.79	0.62
23:DB:717:C:H3'	23:DB:718:A:H5''	1.79	0.62
23:DB:2439:A:N7	23:DB:2586:U:H4'	2.14	0.62
25:DC:43:ASN:ND2	25:DC:44:ASN:H	1.96	0.62
27:DK:71:ARG:HA	27:DK:71:ARG:NE	2.13	0.62
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	1.80	0.62
40:DH:88:GLY:O	40:DH:124:THR:HA	2.00	0.62
43:DO:18:LEU:HD23	43:DO:25:ARG:HD3	1.80	0.62
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.39	0.62
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.80	0.62
49:DR:38:VAL:O	49:DR:53:PHE:HB3	1.99	0.62
1:AA:358:U:H2'	1:AA:359:G:C8	2.34	0.62
3:AD:147:LYS:HZ2	3:AD:147:LYS:C	2.07	0.62
4:AE:35:LEU:HD22	4:AE:133:ILE:HA	1.80	0.62
7:AH:48:PHE:HA	7:AH:59:GLU:O	1.98	0.62
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.80	0.62
12:AM:43:LYS:O	12:AM:46:GLU:HG3	1.99	0.62
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.81	0.62
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.80	0.62
20:AB:65:LYS:H	20:AB:158:ASP:CG	2.07	0.62
23:BB:464:U:H2'	23:BB:465:G:O4'	1.98	0.62
23:BB:2880:C:H1'	42:BN:93:GLY:H	1.63	0.62
40:BH:89:LYS:O	40:BH:90:LEU:HD12	2.00	0.62
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.80	0.62
1:CA:437:U:H2'	1:CA:438:U:O4'	1.98	0.62
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.34	0.62
7:CH:113:ARG:NH2	7:CH:114:ALA:HA	2.14	0.62
20:CB:55:GLU:HG3	20:CB:197:PHE:CZ	2.34	0.62
23:DB:27:G:N2	23:DB:512:G:H2'	2.14	0.62
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.62	0.62
23:DB:1179:G:H2'	23:DB:1180:U:O4'	1.99	0.62
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.63	0.62
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.33	0.62
25:DC:86:ARG:HB3	25:DC:86:ARG:NH1	2.14	0.62
28:DP:56:SER:O	28:DP:75:THR:HG22	1.99	0.62
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:61:LEU:O	35:DV:71:LYS:HA	1.99	0.62
37:DL:23:ILE:HD12	49:DR:84:ARG:HE	1.65	0.62
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.28	0.62
48:DG:58:ALA:C	48:DG:60:GLY:H	2.07	0.62
1:AA:394:G:H2'	1:AA:395:C:C6	2.34	0.62
1:AA:950:U:H2'	1:AA:951:G:C8	2.34	0.62
1:AA:1423:G:H2'	1:AA:1424:U:H6	1.62	0.62
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.63	0.62
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.15	0.62
20:AB:55:GLU:HG3	20:AB:197:PHE:CZ	2.34	0.62
20:AB:102:ASN:OD1	20:AB:105:THR:HB	1.99	0.62
23:BB:647:G:H2'	23:BB:648:G:C8	2.35	0.62
23:BB:1871:A:H2'	23:BB:1872:A:C8	2.35	0.62
29:BE:200:LEU:O	29:BE:201:ALA:HB3	1.97	0.62
52:BW:74:LYS:HE2	52:BW:74:LYS:HA	1.81	0.62
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.80	0.62
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.00	0.62
18:CS:20:LYS:O	18:CS:23:GLU:HG3	1.99	0.62
23:DB:17:G:H2'	23:DB:18:U:C6	2.34	0.62
23:DB:594:U:H2'	23:DB:595:C:C6	2.35	0.62
23:DB:947:A:H2'	23:DB:948:C:H6	1.63	0.62
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.62
24:DI:27:LEU:H	24:DI:27:LEU:CD2	2.11	0.62
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.28	0.62
41:DJ:57:LEU:HD21	41:DJ:128:ASN:HA	1.80	0.62
42:DN:9:GLN:O	42:DN:17:ARG:HD3	1.99	0.62
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.81	0.62
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.24	0.62
48:DG:102:ILE:HD12	48:DG:147:LEU:HD21	1.80	0.62
1:AA:371:A:O2'	1:AA:372:C:H5'	1.99	0.62
1:AA:520:A:O2'	11:AL:69:GLU:HG2	2.00	0.62
7:AH:28:SER:OG	7:AH:56:PRO:HB2	2.00	0.62
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.79	0.62
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.81	0.62
13:AN:14:ALA:HB1	13:AN:18:LYS:HE3	1.81	0.62
20:AB:187:ASP:HB3	20:AB:201:GLY:O	1.99	0.62
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.34	0.62
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.34	0.62
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	1.82	0.62
45:BS:66:ILE:H	45:BS:66:ILE:CD1	2.10	0.62
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:69:ALA:HA	51:BZ:72:ARG:HH12	1.65	0.62
53:B6:2:THR:OG1	53:B6:5:GLU:HG3	1.98	0.62
1:CA:62:U:H4'	1:CA:378:G:N2	2.14	0.62
1:CA:216:U:H2'	1:CA:217:C:C6	2.34	0.62
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.17	0.62
1:CA:394:G:H2'	1:CA:395:C:C6	2.34	0.62
1:CA:434:U:H3'	1:CA:435:A:H8	1.63	0.62
12:CM:80:MET:C	12:CM:82:LEU:H	2.06	0.62
23:DB:81:G:H2'	23:DB:82:U:O4'	1.99	0.62
23:DB:441:U:H2'	23:DB:442:G:H8	1.65	0.62
23:DB:836:G:H2'	23:DB:837:C:C6	2.34	0.62
23:DB:863:A:H2'	23:DB:864:G:C8	2.34	0.62
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.33	0.62
23:DB:1174:U:H4'	23:DB:1176:U:H1'	1.80	0.62
23:DB:1373:A:H2'	23:DB:1374:G:O4'	2.00	0.62
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.35	0.62
46:DU:86:PHE:HB3	46:DU:90:LYS:O	1.98	0.62
47:DF:134:GLN:C	47:DF:136:ILE:H	2.06	0.62
51:DZ:71:LEU:HD12	51:DZ:78:TYR:HD2	1.65	0.62
1:AA:266:G:O2'	1:AA:267:C:H3'	1.99	0.62
18:AS:20:LYS:O	18:AS:23:GLU:HG3	2.00	0.62
19:AT:82:ILE:C	19:AT:85:LEU:HD22	2.24	0.62
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.34	0.62
23:BB:62:U:H2'	23:BB:63:A:O4'	2.00	0.62
23:BB:315:G:H2'	23:BB:316:C:C6	2.34	0.62
23:BB:863:A:H2'	23:BB:864:G:C8	2.35	0.62
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.00	0.62
23:BB:1788:C:O2'	23:BB:1789:A:H5'	1.98	0.62
23:BB:2291:U:O2'	23:BB:2374:C:H1'	1.99	0.62
23:BB:2306:C:C5	23:BB:2307:G:H2'	2.34	0.62
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.29	0.62
23:BB:2746:U:OP1	48:BG:141:GLY:HA3	1.99	0.62
39:BX:1:MET:HG2	39:BX:4:LYS:NZ	2.15	0.62
40:BH:32:PRO:HG3	51:BZ:39:TRP:HB3	1.82	0.62
53:B6:10:THR:HG23	53:B6:14:MET:HE3	1.81	0.62
53:B6:32:ARG:HH22	53:B6:88:LEU:CA	2.12	0.62
1:CA:22:G:H2'	1:CA:23:C:C6	2.34	0.62
1:CA:859:G:H2'	1:CA:860:A:H8	1.62	0.62
1:CA:1404:C:H2'	1:CA:1405:G:H8	1.61	0.62
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.64	0.62
17:CR:37:LYS:NZ	21:CU:22:CYS:HB2	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:29:THR:HA	19:CT:32:LYS:HE3	1.81	0.62
21:CU:42:THR:HB	21:CU:46:ARG:NE	2.14	0.62
22:DA:10:G:H2'	22:DA:11:C:O4'	1.99	0.62
23:DB:1913:A:H4'	23:DB:1914:C:C5'	2.30	0.62
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.34	0.62
27:DK:58:LEU:HD23	27:DK:58:LEU:N	2.15	0.62
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.15	0.62
38:DM:42:THR:OG1	38:DM:45:GLN:HG3	2.00	0.62
43:DO:94:ARG:HD2	43:DO:97:PHE:O	1.98	0.62
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.80	0.62
45:DS:20:VAL:O	45:DS:23:LEU:HB2	1.99	0.62
48:DG:46:ASP:CG	48:DG:47:ASN:H	2.07	0.62
48:DG:61:TRP:HA	48:DG:61:TRP:HE3	1.64	0.62
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.14	0.62
1:AA:17:U:H2'	1:AA:18:C:C6	2.35	0.62
1:AA:1314:C:H41	18:AS:3:SER:HB3	1.65	0.62
1:AA:1319:A:H4'	1:AA:1320:C:OP1	1.98	0.62
7:AH:113:ARG:NH2	7:AH:114:ALA:HA	2.15	0.62
9:AJ:66:GLU:HB3	13:AN:98:ALA:HB2	1.82	0.62
16:AQ:58:VAL:HG12	16:AQ:77:VAL:HG13	1.80	0.62
17:AR:27:THR:HG22	17:AR:31:TYR:HE1	1.65	0.62
23:BB:176:A:O2'	23:BB:177:G:H5'	1.99	0.62
23:BB:455:C:N3	23:BB:472:A:H2'	2.15	0.62
23:BB:1535:A:O2'	23:BB:1536:C:H5'	2.00	0.62
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.65	0.62
23:BB:2267:A:H5''	23:BB:2268:A:H5'	1.80	0.62
26:BD:114:LYS:HD2	26:BD:116:LYS:NZ	2.15	0.62
38:BM:42:THR:O	38:BM:44:ARG:N	2.33	0.62
40:BH:117:LEU:HD21	40:BH:128:HIS:CE1	2.34	0.62
47:BF:155:ILE:HD12	47:BF:155:ILE:H	1.65	0.62
50:BT:2:ILE:N	50:BT:2:ILE:HD13	2.15	0.62
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.15	0.62
1:CA:1149:C:H2'	1:CA:1150:A:C8	2.35	0.62
8:CI:18:VAL:HG21	8:CI:82:ILE:N	2.15	0.62
10:CK:115:ILE:HD11	17:CR:72:ARG:HH12	1.65	0.62
11:CL:85:ARG:HG3	11:CL:86:VAL:N	2.15	0.62
23:DB:64:A:H2'	23:DB:65:U:C6	2.35	0.62
23:DB:257:C:H2'	23:DB:258:G:O4'	2.00	0.62
23:DB:851:C:O4'	30:DY:46:MET:HG2	2.00	0.62
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.29	0.62
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2376:A:H2'	23:DB:2377:A:O4'	2.00	0.62
29:DE:37:ALA:C	29:DE:39:ALA:H	2.07	0.62
31:D0:21:LEU:HD12	45:DS:19:LEU:O	1.99	0.62
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	1.82	0.62
47:DF:33:ILE:HD13	47:DF:98:PHE:CD2	2.34	0.62
51:DZ:35:SER:HB3	51:DZ:50:ARG:HG3	1.80	0.62
53:D6:33:ALA:CB	53:D6:63:PRO:HA	2.29	0.62
1:AA:193:C:H2'	1:AA:194:C:C6	2.34	0.62
1:AA:524:G:H2'	1:AA:525:C:C6	2.35	0.62
1:AA:634:C:H2'	1:AA:635:A:H8	1.65	0.62
1:AA:673:A:H2'	1:AA:674:G:C8	2.34	0.62
1:AA:859:G:H2'	1:AA:860:A:H8	1.65	0.62
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.65	0.62
7:AH:87:ARG:H	7:AH:90:GLU:HB2	1.65	0.62
13:AN:40:ARG:NH1	18:AS:6:LYS:HB2	2.15	0.62
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.00	0.62
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.35	0.62
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	1.99	0.62
23:BB:2439:A:N7	23:BB:2586:U:H4'	2.14	0.62
23:BB:2732:G:H5'	23:BB:2733:A:O4'	1.99	0.62
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.81	0.62
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.80	0.62
49:BR:49:ILE:HD13	49:BR:51:VAL:O	2.00	0.62
1:CA:880:C:H2'	1:CA:881:G:H8	1.65	0.62
3:CD:53:GLN:HB3	3:CD:202:LEU:HB2	1.79	0.62
13:CN:5:MET:HG2	13:CN:8:ARG:HH11	1.64	0.62
20:CB:172:ILE:HD12	20:CB:172:ILE:H	1.63	0.62
23:DB:394:C:O2'	23:DB:395:U:H5'	2.00	0.62
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.00	0.62
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.25	0.62
35:DV:15:GLY:O	35:DV:19:ARG:HG3	1.99	0.62
50:DT:15:HIS:O	50:DT:16:VAL:C	2.42	0.62
1:AA:868:C:H2'	1:AA:869:G:O4'	2.00	0.62
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.81	0.62
13:AN:5:MET:HG2	13:AN:8:ARG:HH11	1.65	0.62
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.30	0.62
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.64	0.62
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.35	0.62
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.62
28:BP:31:VAL:HG12	28:BP:38:ARG:O	2.00	0.62
47:BF:105:ILE:C	47:BF:108:PRO:HD2	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:77:LYS:O	53:B6:81:LYS:HG3	2.00	0.62
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.65	0.62
2:CC:133:MET:HE2	2:CC:152:VAL:HG21	1.81	0.62
18:CS:29:PRO:HA	18:CS:47:THR:O	2.00	0.62
20:CB:40:ILE:HD13	20:CB:201:GLY:HA2	1.80	0.62
23:DB:347:A:H2'	23:DB:348:A:H8	1.64	0.62
23:DB:364:C:H2'	23:DB:365:U:C6	2.35	0.62
23:DB:624:C:O2'	23:DB:657:U:H5''	2.00	0.62
23:DB:921:C:H2'	23:DB:922:C:H6	1.65	0.62
23:DB:1258:U:H4'	29:DE:79:ARG:HD2	1.82	0.62
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.35	0.62
26:DD:159:LYS:HZ2	26:DD:160:LYS:N	1.98	0.62
34:D3:20:GLY:HA3	34:D3:48:MET:HE3	1.81	0.62
36:D2:33:ARG:HH21	36:D2:33:ARG:HB2	1.65	0.62
44:DQ:30:VAL:HG12	44:DQ:33:VAL:HG22	1.82	0.62
46:DU:65:GLN:HB2	46:DU:68:ASN:ND2	2.15	0.62
47:DF:60:SER:HB2	47:DF:62:GLN:OE1	2.00	0.62
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.25	0.62
1:AA:636:U:H2'	1:AA:637:C:C6	2.34	0.62
2:AC:149:LYS:HA	2:AC:168:ARG:HB2	1.82	0.62
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.34	0.62
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.15	0.62
28:BP:3:ILE:HD13	28:BP:7:LEU:HD11	1.82	0.62
32:B4:22:VAL:HB	32:B4:24:ARG:HE	1.65	0.62
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.15	0.62
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.14	0.62
1:CA:1301:U:H2'	1:CA:1301:U:O2	1.97	0.62
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.15	0.62
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	1.99	0.62
20:CB:80:LYS:HG3	20:CB:81:ASP:H	1.64	0.62
23:DB:171:U:H2'	23:DB:172:A:H8	1.65	0.62
23:DB:324:A:H2'	23:DB:325:G:O4'	2.00	0.62
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.34	0.62
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.35	0.62
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.30	0.62
42:DN:109:PRO:C	42:DN:110:MET:HE2	2.25	0.62
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.07	0.62
48:DG:15:ASP:HB2	48:DG:26:LYS:HB3	1.81	0.62
53:D6:52:LEU:HD23	53:D6:53:ASN:N	2.15	0.62
1:AA:431:A:H2'	1:AA:432:A:O4'	2.00	0.61
1:AA:958:A:H61	18:AS:53:GLY:HA3	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:169:TRP:HB2	3:AD:183:ARG:HD2	1.81	0.61
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.15	0.61
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.82	0.61
20:AB:128:LEU:HG	20:AB:132:GLU:HG2	1.82	0.61
23:BB:140:C:H4'	23:BB:141:G:N2	2.14	0.61
23:BB:165:A:H2'	23:BB:166:U:H6	1.64	0.61
23:BB:321:U:H1'	29:BE:162:ARG:HH11	1.64	0.61
23:BB:826:U:H2'	23:BB:828:U:O4'	2.00	0.61
23:BB:828:U:H4'	23:BB:831:G:N1	2.15	0.61
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.63	0.61
23:BB:1551:A:C3'	23:BB:1552:A:H5''	2.30	0.61
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.62	0.61
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.65	0.61
23:BB:2728:U:H5'	27:BK:70:ARG:HH21	1.63	0.61
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.34	0.61
25:BC:32:LEU:HD22	25:BC:63:ILE:HG13	1.82	0.61
25:BC:204:LEU:HD22	25:BC:209:ALA:HB1	1.81	0.61
29:BE:110:SER:HB3	29:BE:114:ARG:NH1	2.11	0.61
40:BH:134:VAL:HG13	40:BH:135:HIS:N	2.14	0.61
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.33	0.61
47:BF:32:LYS:HB2	47:BF:90:LEU:O	1.99	0.61
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.25	0.61
48:BG:58:ALA:C	48:BG:60:GLY:H	2.07	0.61
48:BG:102:ILE:HD12	48:BG:147:LEU:HD21	1.81	0.61
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.34	0.61
1:CA:436:C:O2'	1:CA:437:U:H5'	2.00	0.61
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.81	0.61
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.35	0.61
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.64	0.61
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.34	0.61
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.00	0.61
44:DQ:63:ARG:HH21	44:DQ:64:ILE:CD1	2.12	0.61
47:DF:103:ILE:HD11	47:DF:174:PHE:HA	1.82	0.61
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.82	0.61
52:DW:74:LYS:HE2	52:DW:74:LYS:HA	1.82	0.61
1:AA:279:A:H5''	1:AA:280:C:H3'	1.82	0.61
1:AA:859:G:H2'	1:AA:860:A:C8	2.35	0.61
1:AA:1054:C:H1'	1:AA:1196:A:C5	2.35	0.61
1:AA:1319:A:H3'	18:AS:2:ARG:HA	1.81	0.61
4:AE:33:THR:HG22	4:AE:51:LYS:HB3	1.81	0.61
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:75:GLU:CD	10:AK:75:GLU:H	2.08	0.61
12:AM:77:LYS:HA	12:AM:80:MET:HE3	1.80	0.61
23:BB:111:A:H2'	23:BB:112:U:O4'	1.99	0.61
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.65	0.61
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.65	0.61
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.82	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
27:BK:71:ARG:CB	27:BK:72:PRO:HD2	2.25	0.61
28:BP:56:SER:O	28:BP:75:THR:HG22	2.01	0.61
43:BO:18:LEU:HD23	43:BO:25:ARG:HD3	1.81	0.61
1:CA:41:G:H2'	1:CA:42:G:C8	2.34	0.61
1:CA:194:C:O2'	1:CA:195:A:H5'	2.00	0.61
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.99	0.61
6:CG:50:ALA:HB2	6:CG:57:GLU:HG3	1.82	0.61
10:CK:106:ILE:HD11	10:CK:109:ILE:HD11	1.80	0.61
10:CK:108:ASN:HD21	21:CU:6:ARG:HD2	1.65	0.61
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.13	0.61
23:DB:1169:A:H2'	23:DB:1170:C:H6	1.64	0.61
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.30	0.61
26:DD:29:VAL:O	26:DD:185:ASN:HB3	1.99	0.61
38:DM:127:LYS:H	38:DM:127:LYS:HD2	1.64	0.61
40:DH:135:HIS:H	40:DH:138:VAL:HB	1.64	0.61
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD13	1.66	0.61
45:DS:66:ILE:H	45:DS:66:ILE:CD1	2.10	0.61
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.30	0.61
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	1.81	0.61
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.36	0.61
2:AC:48:LYS:HD3	2:AC:48:LYS:N	2.14	0.61
4:AE:89:THR:HG21	4:AE:134:ASN:ND2	2.15	0.61
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.82	0.61
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.34	0.61
11:AL:107:LYS:NZ	11:AL:107:LYS:H	1.97	0.61
20:AB:126:ASP:C	20:AB:127:LYS:HD2	2.26	0.61
23:BB:165:A:H2'	23:BB:166:U:C6	2.35	0.61
23:BB:171:U:H2'	23:BB:172:A:H8	1.66	0.61
23:BB:184:C:H2'	23:BB:185:G:H8	1.64	0.61
23:BB:220:G:H1	23:BB:427:U:H2'	1.65	0.61
23:BB:257:C:H2'	23:BB:258:G:O4'	2.00	0.61
23:BB:934:U:H2'	23:BB:935:C:C6	2.35	0.61
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.16	0.61
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.24	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.15	0.61
44:BQ:89:ILE:HB	49:BR:11:GLN:HE22	1.63	0.61
49:BR:3:ALA:HB2	49:BR:101:ILE:HD11	1.81	0.61
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.14	0.61
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.36	0.61
1:CA:812:G:O2'	1:CA:813:U:H6	1.73	0.61
1:CA:950:U:H2'	1:CA:951:G:C8	2.35	0.61
3:CD:147:LYS:HZ3	3:CD:147:LYS:HB2	1.66	0.61
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.47	0.61
14:CO:81:LEU:HD23	14:CO:85:LEU:HD13	1.81	0.61
18:CS:28:LYS:H	18:CS:28:LYS:HD2	1.64	0.61
20:CB:49:PHE:O	20:CB:53:LEU:HD13	1.99	0.61
22:DA:39:A:O2'	22:DA:40:U:H5'	2.00	0.61
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.33	0.61
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.35	0.61
23:DB:1551:A:C3'	23:DB:1552:A:H5''	2.30	0.61
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.66	0.61
23:DB:2144:G:O2'	23:DB:2145:C:H5'	2.00	0.61
23:DB:2800:A:H2'	23:DB:2801:G:C1'	2.30	0.61
24:DI:126:ARG:HH11	24:DI:126:ARG:HB3	1.65	0.61
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.81	0.61
27:DK:60:ALA:HA	27:DK:87:LEU:HD23	1.82	0.61
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.29	0.61
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.01	0.61
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.66	0.61
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.13	0.61
1:AA:68:G:H5'	1:AA:171:A:H1'	1.81	0.61
1:AA:68:G:H5'	1:AA:171:A:O2'	1.99	0.61
1:AA:1074:G:C4'	20:AB:102:ASN:HB2	2.30	0.61
8:AI:48:ARG:O	8:AI:52:GLU:HG2	2.00	0.61
23:BB:742:A:H2'	23:BB:743:A:C8	2.35	0.61
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.34	0.61
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.00	0.61
23:BB:2800:A:H2'	23:BB:2801:G:C1'	2.30	0.61
32:B4:19:ARG:C	32:B4:21:GLY:H	2.07	0.61
37:BL:57:LEU:C	37:BL:59:ARG:H	2.07	0.61
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HD2	1.83	0.61
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.07	0.61
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.99	0.61
9:CJ:85:ASP:HA	9:CJ:88:MET:SD	2.40	0.61
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:128:LEU:HD12	20:CB:129:THR:H	1.65	0.61
23:DB:582:A:H2'	23:DB:583:G:H8	1.65	0.61
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.64	0.61
23:DB:2137:U:O2'	23:DB:2138:G:H5'	2.00	0.61
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.15	0.61
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.00	0.61
29:DE:126:VAL:HG22	29:DE:133:LEU:HD12	1.82	0.61
44:DQ:54:ARG:HB3	44:DQ:58:GLN:NE2	2.12	0.61
45:DS:17:VAL:HG13	45:DS:43:ALA:HB1	1.82	0.61
1:AA:33:A:H2'	1:AA:34:C:C6	2.35	0.61
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.35	0.61
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.35	0.61
6:AG:110:ARG:HD2	6:AG:122:GLU:HB2	1.83	0.61
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.63	0.61
23:BB:599:A:O2'	23:BB:600:G:H5'	2.00	0.61
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.14	0.61
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.01	0.61
27:BK:72:PRO:O	27:BK:74:GLY:N	2.34	0.61
34:B3:20:GLY:HA3	34:B3:48:MET:HE3	1.83	0.61
36:B2:33:ARG:HB2	36:B2:33:ARG:HH21	1.65	0.61
39:BX:10:SER:H	39:BX:60:LYS:HE2	1.64	0.61
44:BQ:57:ARG:HH22	44:BQ:92:LYS:HE2	1.66	0.61
44:BQ:91:ARG:NH1	49:BR:11:GLN:H	1.98	0.61
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.83	0.61
53:B6:14:MET:SD	53:B6:129:ILE:HG23	2.41	0.61
53:B6:29:ARG:HH22	53:B6:110:ARG:HH11	1.48	0.61
1:CA:499:A:H4'	1:CA:500:G:H5'	1.82	0.61
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.01	0.61
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.35	0.61
1:CA:1347:G:C8	8:CI:108:ARG:HB3	2.35	0.61
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.01	0.61
11:CL:107:LYS:NZ	11:CL:107:LYS:H	1.97	0.61
19:CT:78:LEU:O	19:CT:82:ILE:HG23	2.01	0.61
23:DB:126:A:H5'	36:D2:19:ARG:CG	2.29	0.61
23:DB:323:C:H2'	29:DE:163:ASN:OD1	2.01	0.61
23:DB:543:G:H21	23:DB:545:U:H5'	1.66	0.61
23:DB:592:A:H2'	23:DB:593:U:C6	2.35	0.61
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.36	0.61
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.36	0.61
23:DB:1222:U:P	49:DR:90:ARG:HH22	2.23	0.61
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.65	0.61
26:DD:28:GLU:HG3	26:DD:185:ASN:O	2.00	0.61
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.83	0.61
40:DH:115:VAL:HG22	40:DH:117:LEU:H	1.64	0.61
44:DQ:30:VAL:HG22	44:DQ:31:TYR:H	1.64	0.61
44:DQ:83:LYS:HA	44:DQ:83:LYS:NZ	2.16	0.61
53:D6:52:LEU:O	53:D6:55:ILE:HG22	2.00	0.61
53:D6:70:SER:HB3	53:D6:76:LEU:HD12	1.81	0.61
1:AA:541:G:O2'	3:AD:39:GLN:HB3	2.00	0.61
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.82	0.61
13:AN:12:ARG:HD3	13:AN:58:ARG:HB3	1.82	0.61
16:AQ:68:LYS:C	16:AQ:70:LYS:H	2.09	0.61
22:BA:5:U:H2'	22:BA:6:G:C8	2.36	0.61
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.66	0.61
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.35	0.61
23:BB:2758:A:H2'	23:BB:2759:G:O4'	2.01	0.61
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.83	0.61
25:BC:131:MET:HA	25:BC:134:ILE:HG23	1.82	0.61
40:BH:5:LEU:HD12	40:BH:17:ASP:HB2	1.83	0.61
43:BO:94:ARG:HD2	43:BO:97:PHE:O	1.99	0.61
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	2.01	0.61
1:CA:923:A:H2'	1:CA:924:C:C6	2.36	0.61
3:CD:47:LEU:HD23	3:CD:51:GLY:C	2.25	0.61
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.82	0.61
9:CJ:44:THR:HG23	9:CJ:69:THR:O	2.01	0.61
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.15	0.61
20:CB:63:LYS:HA	20:CB:224:ARG:HH11	1.64	0.61
23:DB:417:C:H2'	23:DB:418:C:C6	2.36	0.61
23:DB:873:C:H2'	23:DB:874:G:C8	2.36	0.61
23:DB:1175:A:N3	23:DB:1175:A:H2'	2.13	0.61
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.35	0.61
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.83	0.61
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.16	0.61
53:D6:156:ARG:O	53:D6:159:ALA:HB3	2.00	0.61
1:AA:41:G:H2'	1:AA:42:G:C8	2.35	0.61
1:AA:919:A:O2'	1:AA:920:U:H5'	2.00	0.61
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.36	0.61
1:AA:1399:C:H4'	1:AA:1400:C:H5'	1.81	0.61
3:AD:187:ARG:O	3:AD:191:SER:HB3	1.99	0.61
4:AE:21:SER:CB	4:AE:28:ARG:HE	2.13	0.61
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.82	0.61
23:BB:116:C:H2'	23:BB:117:G:O4'	2.00	0.61
23:BB:571:U:H3'	49:BR:80:ARG:HH12	1.66	0.61
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.35	0.61
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.66	0.61
23:BB:2095:A:H2'	23:BB:2096:C:C6	2.35	0.61
23:BB:2212:A:H1'	23:BB:2213:U:H3	1.65	0.61
23:BB:2257:U:O2'	23:BB:2258:C:H5'	2.01	0.61
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.35	0.61
23:BB:2646:C:H2'	23:BB:2647:U:O4'	1.99	0.61
23:BB:2704:C:H2'	23:BB:2705:A:O4'	1.99	0.61
23:BB:2840:C:OP1	42:BN:50:PRO:HA	2.01	0.61
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.65	0.61
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.14	0.61
29:BE:18:THR:HG22	29:BE:106:LYS:NZ	2.15	0.61
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.64	0.61
40:BH:75:LEU:HB3	40:BH:78:VAL:CG2	2.30	0.61
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.30	0.61
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.82	0.61
1:CA:370:C:O2'	1:CA:371:A:H5'	2.00	0.61
1:CA:634:C:H2'	1:CA:635:A:H8	1.64	0.61
1:CA:662:U:O2'	1:CA:836:G:H5''	2.01	0.61
1:CA:1134:G:C2	1:CA:1135:U:H1'	2.35	0.61
4:CE:156:ARG:HD2	7:CH:42:GLU:O	2.01	0.61
15:CP:26:ASN:ND2	15:CP:31:ARG:HB3	2.15	0.61
23:DB:654:A:C2'	23:DB:655:A:H5''	2.31	0.61
23:DB:1240:U:O2'	23:DB:1241:A:H5''	2.01	0.61
23:DB:2149:U:H2'	23:DB:2150:C:C6	2.36	0.61
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.66	0.61
23:DB:2810:A:H2'	23:DB:2811:G:O4'	1.99	0.61
29:DE:46:GLN:HB2	29:DE:87:ALA:O	1.99	0.61
40:DH:24:GLY:O	40:DH:28:ASN:HB2	2.01	0.61
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.81	0.61
1:AA:243:A:H4'	1:AA:244:U:H5'	1.82	0.61
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.36	0.61
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.01	0.61
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.41	0.61
6:AG:108:ARG:HA	6:AG:115:MET:HE1	1.83	0.61
21:AU:42:THR:HB	21:AU:46:ARG:NE	2.15	0.61
23:BB:806:C:O2'	23:BB:807:U:H5'	2.00	0.61
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.00	0.61
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.35	0.61
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	1.82	0.61
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	1.99	0.61
41:BJ:72:LYS:HG3	41:BJ:89:PHE:HB2	1.83	0.61
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.81	0.61
1:CA:474:G:H2'	1:CA:475:C:C6	2.35	0.61
1:CA:493:A:H5'	1:CA:494:G:OP2	2.00	0.61
6:CG:108:ARG:HA	6:CG:115:MET:HE1	1.80	0.61
23:DB:144:A:H2'	23:DB:145:C:C6	2.35	0.61
23:DB:570:G:H2'	23:DB:2030:A:N7	2.16	0.61
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.36	0.61
29:DE:102:ARG:HD3	29:DE:201:ALA:H	1.66	0.61
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.16	0.61
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.16	0.61
53:D6:7:TYR:CZ	53:D6:160:GLU:HG2	2.36	0.61
10:AK:80:ASN:H	10:AK:80:ASN:HD22	1.49	0.61
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.66	0.61
15:AP:59:HIS:O	15:AP:63:GLN:HG3	2.01	0.61
23:BB:593:U:H2'	23:BB:594:U:C6	2.35	0.61
23:BB:1046:A:H4'	23:BB:1047:G:H5''	1.83	0.61
28:BP:50:ARG:HB2	28:BP:56:SER:CB	2.30	0.61
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.16	0.61
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.82	0.61
42:BN:9:GLN:O	42:BN:17:ARG:HD3	2.00	0.61
47:BF:72:SER:HB2	47:BF:80:GLN:H	1.65	0.61
50:BT:40:LYS:HG2	50:BT:60:THR:HG23	1.83	0.61
52:BW:59:PHE:CE2	52:BW:61:LYS:HD2	2.34	0.61
53:B6:90:LEU:HB3	53:B6:101:ILE:HG21	1.83	0.61
1:CA:266:G:O2'	1:CA:267:C:H3'	2.01	0.61
1:CA:999:C:H2'	1:CA:1000:A:C8	2.35	0.61
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.36	0.61
7:CH:8:ASP:O	7:CH:12:ARG:HB2	2.01	0.61
23:DB:627:A:H62	37:DL:112:LEU:HD23	1.65	0.61
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.36	0.61
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.66	0.61
26:DD:154:LYS:HD3	26:DD:154:LYS:H	1.65	0.61
27:DK:71:ARG:HB3	27:DK:72:PRO:CD	2.26	0.61
37:DL:57:LEU:C	37:DL:59:ARG:H	2.07	0.61
38:DM:58:LYS:N	38:DM:58:LYS:HD2	2.16	0.61
42:DN:37:THR:HB	42:DN:40:LYS:HG3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:24:VAL:HA	46:DU:35:VAL:HA	1.83	0.61
49:DR:31:GLU:H	49:DR:63:VAL:CG2	2.12	0.61
1:AA:272:C:H2'	1:AA:273:U:H6	1.66	0.61
1:AA:434:U:H3'	1:AA:435:A:H8	1.66	0.61
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.36	0.61
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.36	0.61
2:AC:25:THR:HG23	13:AN:75:LYS:HD3	1.83	0.61
23:BB:458:G:H22	23:BB:469:G:H2'	1.65	0.61
23:BB:581:C:H2'	23:BB:582:A:H8	1.64	0.61
23:BB:836:G:H2'	23:BB:837:C:C6	2.35	0.61
23:BB:873:C:H2'	23:BB:874:G:H8	1.66	0.61
23:BB:947:A:H2'	23:BB:948:C:C6	2.35	0.61
23:BB:967:U:H2'	23:BB:968:C:C6	2.36	0.61
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.35	0.61
27:BK:99:ILE:H	27:BK:118:LEU:HD23	1.66	0.61
35:BV:70:ILE:HD13	35:BV:71:LYS:N	2.15	0.61
41:BJ:44:TYR:C	41:BJ:44:TYR:CD2	2.79	0.61
1:CA:524:G:H2'	1:CA:525:C:C6	2.36	0.61
1:CA:672:U:H2'	1:CA:673:A:C8	2.36	0.61
8:CI:49:GLN:NE2	8:CI:79:ARG:HH11	1.98	0.61
12:CM:30:LYS:HG3	12:CM:40:GLU:OE2	2.01	0.61
13:CN:12:ARG:HD3	13:CN:58:ARG:HB3	1.82	0.61
18:CS:14:LEU:HD22	18:CS:34:SER:OG	2.01	0.61
19:CT:79:THR:O	19:CT:82:ILE:HG13	2.01	0.61
19:CT:82:ILE:C	19:CT:85:LEU:HD22	2.26	0.61
22:DA:5:U:H2'	22:DA:6:G:H8	1.66	0.61
23:DB:139:U:C2	50:DT:1:MET:HB3	2.36	0.61
23:DB:184:C:H2'	23:DB:185:G:H8	1.66	0.61
23:DB:878:A:H5'	23:DB:900:A:H61	1.65	0.61
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.36	0.61
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.31	0.61
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.36	0.61
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.31	0.61
48:DG:15:ASP:HB3	48:DG:26:LYS:N	2.13	0.61
49:DR:49:ILE:HD13	49:DR:51:VAL:O	2.01	0.61
50:DT:25:GLU:OE1	50:DT:30:ILE:HA	2.01	0.61
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.33	0.61
1:AA:17:U:O2'	1:AA:18:C:H5'	2.01	0.60
1:AA:1460:C:H2'	1:AA:1461:G:C8	2.36	0.60
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.36	0.60
2:AC:40:GLN:HG3	2:AC:41:TYR:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.15	0.60
12:AM:22:TYR:HB3	12:AM:69:ARG:CZ	2.31	0.60
23:BB:131:A:H2'	23:BB:132:G:H8	1.66	0.60
23:BB:871:U:H2'	23:BB:872:U:H6	1.66	0.60
23:BB:1131:G:N2	23:BB:2024:G:H21	1.99	0.60
23:BB:1523:U:H5''	23:BB:1524:G:C8	2.36	0.60
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.66	0.60
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.66	0.60
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.81	0.60
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.16	0.60
37:BL:56:PRO:O	37:BL:59:ARG:HB2	2.01	0.60
40:BH:4:ILE:HG13	40:BH:18:GLN:HB2	1.82	0.60
40:BH:24:GLY:O	40:BH:28:ASN:HB2	2.01	0.60
40:BH:89:LYS:HZ3	40:BH:89:LYS:HA	1.65	0.60
47:BF:134:GLN:C	47:BF:136:ILE:H	2.08	0.60
53:B6:93:SER:OG	53:B6:100:TYR:HB2	2.01	0.60
1:CA:719:C:H2'	17:CR:38:ILE:HD11	1.83	0.60
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.36	0.60
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.66	0.60
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.36	0.60
10:CK:80:ASN:CB	10:CK:105:ARG:HB3	2.30	0.60
12:CM:43:LYS:O	12:CM:46:GLU:HG3	2.01	0.60
14:CO:77:ARG:O	14:CO:81:LEU:HB2	2.01	0.60
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.36	0.60
23:DB:506:G:H1'	23:DB:507:A:C8	2.36	0.60
23:DB:828:U:H4'	23:DB:831:G:N1	2.16	0.60
23:DB:1125:G:C5'	32:D4:37:GLN:HE21	2.14	0.60
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.83	0.60
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.34	0.60
23:DB:1657:U:H4'	26:DD:138:LEU:HB3	1.83	0.60
26:DD:79:LEU:N	26:DD:79:LEU:HD22	2.16	0.60
26:DD:113:SER:CB	26:DD:168:GLU:H	2.13	0.60
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.65	0.60
34:D3:49:VAL:CG2	34:D3:54:LEU:HD13	2.31	0.60
41:DJ:72:LYS:HG3	41:DJ:89:PHE:HB2	1.83	0.60
50:DT:68:LYS:O	50:DT:69:ARG:HB2	1.98	0.60
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.41	0.60
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.16	0.60
19:AT:81:GLN:C	19:AT:83:ASN:H	2.10	0.60
23:BB:664:G:H2'	23:BB:665:U:H6	1.66	0.60
23:BB:670:A:H5''	37:BL:42:SER:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.83	0.60
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.15	0.60
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.31	0.60
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.01	0.60
48:BG:17:LYS:NZ	48:BG:18:ILE:H	1.93	0.60
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.26	0.60
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.34	0.60
53:B6:28:LEU:O	53:B6:37:LEU:HD13	2.01	0.60
53:B6:57:THR:N	53:B6:69:GLN:O	2.34	0.60
53:B6:131:ASN:O	53:B6:135:GLU:HG3	2.00	0.60
1:CA:243:A:H4'	1:CA:244:U:H5'	1.82	0.60
1:CA:462:G:H2'	1:CA:463:U:C6	2.36	0.60
1:CA:919:A:O2'	1:CA:920:U:H5'	2.01	0.60
6:CG:77:ARG:HG3	6:CG:79:VAL:HG23	1.82	0.60
12:CM:22:TYR:HB3	12:CM:69:ARG:NH2	2.16	0.60
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.16	0.60
15:CP:60:TRP:HB3	15:CP:65:ALA:HB2	1.83	0.60
23:DB:477:A:H2'	23:DB:478:A:C8	2.36	0.60
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.26	0.60
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.65	0.60
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.35	0.60
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.66	0.60
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.31	0.60
27:DK:7:MET:SD	27:DK:20:MET:HB2	2.40	0.60
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HD2	1.82	0.60
42:DN:72:ASP:O	42:DN:75:ILE:HG13	2.01	0.60
46:DU:60:LYS:HE2	46:DU:60:LYS:HA	1.83	0.60
47:DF:105:ILE:C	47:DF:108:PRO:HD2	2.26	0.60
53:D6:134:ARG:HH22	53:D6:135:GLU:HG2	1.66	0.60
1:AA:16:A:O2'	1:AA:17:U:H5'	2.00	0.60
1:AA:493:A:H5'	1:AA:494:G:OP2	2.01	0.60
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.01	0.60
6:AG:147:ASN:CA	10:AK:55:ARG:HH21	2.12	0.60
8:AI:26:LYS:N	8:AI:61:ASP:HB2	2.15	0.60
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.83	0.60
23:BB:172:A:H2'	23:BB:173:A:H8	1.66	0.60
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.37	0.60
23:BB:654:A:H2'	23:BB:655:A:H5''	1.83	0.60
23:BB:962:G:N2	23:BB:2250:G:H22	1.99	0.60
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.01	0.60
23:BB:2787:C:C1'	26:BD:63:PRO:HG3	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:10:GLY:HA2	28:BP:4:ILE:HD11	1.83	0.60
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.01	0.60
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.31	0.60
47:BF:62:GLN:HE22	47:BF:90:LEU:HD13	1.66	0.60
1:CA:390:U:H2'	1:CA:391:G:H8	1.65	0.60
1:CA:636:U:H2'	1:CA:637:C:C6	2.35	0.60
2:CC:61:LYS:O	2:CC:96:VAL:HB	2.01	0.60
3:CD:171:GLU:O	3:CD:179:GLY:HA2	2.01	0.60
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.83	0.60
27:DK:72:PRO:O	27:DK:74:GLY:N	2.34	0.60
27:DK:118:LEU:O	27:DK:120:PRO:HD2	2.00	0.60
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.00	0.60
13:AN:60:ARG:O	13:AN:62:ARG:N	2.35	0.60
23:BB:374:A:N6	23:BB:400:G:H1'	2.16	0.60
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.37	0.60
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.36	0.60
23:BB:2415:G:H4'	37:BL:66:PHE:HB2	1.83	0.60
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.32	0.60
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.01	0.60
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.36	0.60
29:BE:30:GLN:HG2	29:BE:30:GLN:O	2.01	0.60
30:BY:37:ARG:HA	30:BY:37:ARG:HE	1.66	0.60
45:BS:31:GLN:O	45:BS:35:ILE:HG12	2.02	0.60
45:BS:33:LEU:HG	45:BS:51:LEU:HD23	1.82	0.60
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.16	0.60
1:CA:1313:U:OP1	18:CS:6:LYS:HD3	2.01	0.60
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.00	0.60
6:CG:110:ARG:HD2	6:CG:122:GLU:HB2	1.82	0.60
8:CI:48:ARG:O	8:CI:52:GLU:HG2	2.01	0.60
19:CT:19:HIS:O	19:CT:23:ARG:HG2	1.99	0.60
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.36	0.60
23:DB:30:G:H4'	23:DB:1215:G:H5'	1.84	0.60
23:DB:968:C:H2'	23:DB:969:G:C8	2.36	0.60
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.01	0.60
23:DB:1866:A:H2'	23:DB:1867:G:O4'	2.01	0.60
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.35	0.60
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.15	0.60
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.16	0.60
25:DC:245:THR:O	25:DC:247:TRP:N	2.35	0.60
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	1.82	0.60
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:24:GLU:O	39:DX:28:LEU:HG	2.01	0.60
44:DQ:108:LEU:HA	49:DR:48:LYS:HD3	1.82	0.60
53:D6:73:GLN:HG3	53:D6:74:ASN:H	1.67	0.60
1:AA:412:A:H1'	1:AA:413:G:H8	1.67	0.60
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	2.01	0.60
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.02	0.60
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.02	0.60
6:AG:77:ARG:HG3	6:AG:79:VAL:HG23	1.83	0.60
9:AJ:51:VAL:CG2	13:AN:80:ARG:HB2	2.31	0.60
9:AJ:55:PRO:HA	13:AN:80:ARG:HH21	1.66	0.60
12:AM:78:ARG:CZ	12:AM:78:ARG:HB3	2.31	0.60
14:AO:8:THR:O	14:AO:12:VAL:HG23	2.01	0.60
19:AT:67:HIS:ND1	19:AT:68:LYS:HG2	2.16	0.60
23:BB:141:G:N1	50:BT:2:ILE:HD12	2.13	0.60
23:BB:184:C:H2'	23:BB:185:G:C8	2.36	0.60
23:BB:673:C:H5''	29:BE:76:PRO:HD2	1.84	0.60
23:BB:1076:C:H4'	24:BI:94:LYS:NZ	2.17	0.60
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.02	0.60
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.66	0.60
31:B0:21:LEU:HD12	45:BS:19:LEU:O	2.01	0.60
44:BQ:91:ARG:HB2	49:BR:11:GLN:OE1	2.01	0.60
51:BZ:64:ILE:O	51:BZ:68:LEU:HG	2.02	0.60
1:CA:662:U:H2'	1:CA:663:A:C8	2.36	0.60
1:CA:806:C:H2'	1:CA:807:A:C8	2.36	0.60
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.65	0.60
4:CE:95:MET:HE1	4:CE:139:THR:HG23	1.82	0.60
18:CS:10:ILE:HG22	18:CS:38:THR:H	1.65	0.60
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.02	0.60
23:DB:2386:A:C2	52:DW:38:ARG:HB3	2.35	0.60
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.36	0.60
26:DD:31:ALA:HA	26:DD:97:SER:HA	1.83	0.60
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.16	0.60
27:DK:99:ILE:H	27:DK:118:LEU:HD23	1.65	0.60
36:D2:22:MET:SD	36:D2:28:ARG:HG2	2.42	0.60
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.79	0.60
44:DQ:35:PHE:C	44:DQ:37:ALA:H	2.07	0.60
44:DQ:91:ARG:CZ	49:DR:11:GLN:H	2.15	0.60
53:D6:35:PRO:HB2	53:D6:58:VAL:O	2.01	0.60
53:D6:45:TYR:CZ	53:D6:75:ALA:HB2	2.36	0.60
1:AA:401:C:H2'	1:AA:402:G:C8	2.35	0.60
1:AA:404:G:OP1	3:AD:114:ARG:HD3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.65	0.60
1:AA:1347:G:C8	8:AI:108:ARG:HB3	2.36	0.60
1:AA:1464:U:P	28:BP:108:ARG:HH22	2.24	0.60
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.36	0.60
12:AM:80:MET:C	12:AM:82:LEU:H	2.06	0.60
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.66	0.60
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.01	0.60
23:BB:170:U:H2'	23:BB:171:U:C6	2.36	0.60
23:BB:441:U:H2'	23:BB:442:G:H8	1.65	0.60
23:BB:776:G:H4'	23:BB:777:G:O5'	2.02	0.60
23:BB:2147:A:H5'	23:BB:2148:G:H4'	1.82	0.60
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.66	0.60
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.65	0.60
25:BC:245:THR:O	25:BC:247:TRP:N	2.35	0.60
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.16	0.60
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.01	0.60
37:BL:59:ARG:C	37:BL:61:LEU:H	2.09	0.60
41:BJ:63:ALA:HA	41:BJ:69:ARG:HH12	1.67	0.60
44:BQ:83:LYS:HA	44:BQ:83:LYS:NZ	2.17	0.60
46:BU:35:VAL:HB	46:BU:38:ILE:HB	1.83	0.60
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.83	0.60
53:B6:15:GLN:HB3	53:B6:16:LYS:NZ	2.16	0.60
53:B6:38:LEU:O	53:B6:41:LEU:HB2	2.01	0.60
1:CA:833:G:H2'	1:CA:834:U:C6	2.36	0.60
1:CA:1302:C:OP2	12:CM:16:ILE:HD11	2.00	0.60
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.36	0.60
12:CM:22:TYR:HB3	12:CM:69:ARG:CZ	2.31	0.60
12:CM:77:LYS:HA	12:CM:80:MET:HE3	1.84	0.60
16:CQ:31:PRO:O	16:CQ:32:ILE:HB	2.01	0.60
23:DB:558:U:O3'	41:DJ:111:LYS:HE2	2.01	0.60
23:DB:2283:C:H5''	23:DB:2389:G:O2'	2.02	0.60
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.84	0.60
29:DE:149:ILE:HG23	29:DE:188:MET:HA	1.83	0.60
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.82	0.60
36:D2:3:ARG:HA	36:D2:3:ARG:NE	2.15	0.60
40:DH:7:ASP:CG	40:DH:8:LYS:H	2.08	0.60
48:DG:84:LYS:HG3	48:DG:132:LEU:N	2.16	0.60
49:DR:58:VAL:HG22	49:DR:59:ILE:H	1.67	0.60
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.84	0.60
1:AA:190:A:H2'	1:AA:191:G:O4'	2.02	0.60
1:AA:844:G:C2'	1:AA:845:A:H8	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:86:ARG:CZ	17:AR:63:TYR:HB3	2.31	0.60
20:AB:40:ILE:HD13	20:AB:201:GLY:HA2	1.84	0.60
23:BB:27:G:H1'	23:BB:513:A:H61	1.66	0.60
23:BB:845:A:C2	23:BB:847:U:H1'	2.37	0.60
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.17	0.60
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.20	0.60
48:BG:61:TRP:HA	48:BG:61:TRP:HE3	1.67	0.60
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.02	0.60
53:B6:10:THR:CG2	53:B6:14:MET:HE3	2.32	0.60
53:B6:167:GLU:O	53:B6:170:ALA:HB3	2.01	0.60
1:CA:313:A:H2'	1:CA:314:C:C6	2.37	0.60
1:CA:763:G:H2'	1:CA:764:C:C6	2.37	0.60
3:CD:77:GLU:HG3	3:CD:81:LEU:HG	1.84	0.60
9:CJ:6:ILE:HB	9:CJ:76:ILE:HD11	1.83	0.60
21:CU:3:ILE:CD1	21:CU:19:LYS:HA	2.31	0.60
22:DA:75:G:H1'	35:DV:29:ILE:HG12	1.83	0.60
23:DB:878:A:H1'	23:DB:899:A:N6	2.17	0.60
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.37	0.60
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.16	0.60
42:DN:87:PHE:C	42:DN:89:SER:H	2.10	0.60
45:DS:33:LEU:HG	45:DS:51:LEU:HD23	1.83	0.60
48:DG:10:VAL:HG12	48:DG:10:VAL:O	2.00	0.60
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.32	0.60
1:AA:981:U:C5'	13:AN:5:MET:HE1	2.32	0.60
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.66	0.60
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.16	0.60
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.17	0.60
3:AD:22:SER:H	3:AD:109:THR:HG22	1.67	0.60
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.66	0.60
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.84	0.60
12:AM:76:ILE:HG22	12:AM:80:MET:HE2	1.83	0.60
13:AN:26:LEU:O	13:AN:30:ILE:N	2.34	0.60
22:BA:91:C:H2'	22:BA:92:C:H6	1.66	0.60
23:BB:594:U:H2'	23:BB:595:C:H6	1.66	0.60
23:BB:855:G:O2'	52:BW:23:LYS:HD3	2.02	0.60
23:BB:2066:C:O2'	23:BB:2067:G:H5'	2.01	0.60
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.36	0.60
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.31	0.60
25:BC:16:VAL:N	25:BC:203:VAL:HG12	2.17	0.60
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.83	0.60
34:B3:49:VAL:CG2	34:B3:54:LEU:HD13	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.37	0.60
46:BU:60:LYS:HA	46:BU:60:LYS:HE2	1.84	0.60
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.36	0.60
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.37	0.60
3:CD:89:LEU:CD2	3:CD:199:ILE:HD11	2.31	0.60
7:CH:87:ARG:H	7:CH:90:GLU:HB2	1.65	0.60
8:CI:26:LYS:N	8:CI:61:ASP:HB2	2.17	0.60
20:CB:124:THR:O	20:CB:124:THR:HG23	2.00	0.60
23:DB:141:G:O6	50:DT:2:ILE:HD12	2.01	0.60
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.30	0.60
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.37	0.60
25:DC:16:VAL:H	25:DC:203:VAL:HG12	1.67	0.60
25:DC:123:ILE:HD13	25:DC:135:PRO:HG2	1.83	0.60
33:D1:8:ILE:CD1	33:D1:51:ALA:HA	2.31	0.60
39:DX:3:ALA:O	39:DX:6:LEU:HB2	2.02	0.60
46:DU:41:VAL:HG22	46:DU:60:LYS:O	2.02	0.60
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.26	0.60
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.82	0.60
1:AA:17:U:H2'	1:AA:18:C:H6	1.66	0.60
1:AA:880:C:H2'	1:AA:881:G:H8	1.65	0.60
3:AD:171:GLU:O	3:AD:179:GLY:HA2	2.02	0.60
4:AE:156:ARG:CA	4:AE:158:LYS:HZ2	2.09	0.60
12:AM:22:TYR:HB3	12:AM:69:ARG:NH2	2.17	0.60
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.67	0.60
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.16	0.60
23:BB:1922:G:N7	55:BB:3111:LLL:H221	2.16	0.60
23:BB:2269:G:H4'	52:BW:19:ARG:HH12	1.67	0.60
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.37	0.60
41:BJ:38:GLY:O	41:BJ:43:GLU:HB2	2.02	0.60
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.81	0.60
46:BU:65:GLN:HB2	46:BU:68:ASN:HD22	1.67	0.60
47:BF:109:ARG:HB3	47:BF:135:ILE:CD1	2.30	0.60
1:CA:272:C:H2'	1:CA:273:U:H6	1.67	0.60
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.67	0.60
2:CC:128:MET:H	2:CC:128:MET:HE3	1.66	0.60
21:CU:40:PRO:C	21:CU:42:THR:H	2.10	0.60
23:DB:967:U:H2'	23:DB:968:C:C6	2.37	0.60
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.41	0.60
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.02	0.60
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.36	0.60
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1505:A:H2'	23:DB:1506:U:H6	1.67	0.60
23:DB:2332:C:H1'	23:DB:2336:A:N7	2.16	0.60
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.37	0.60
31:D0:43:THR:HG23	31:D0:47:TYR:O	2.01	0.60
38:DM:17:ASN:HD21	38:DM:95:LEU:HG	1.65	0.60
41:DJ:19:ASP:HA	41:DJ:57:LEU:HB3	1.82	0.60
44:DQ:4:LYS:HZ3	44:DQ:7:VAL:HG22	1.67	0.60
47:DF:87:LYS:C	47:DF:88:VAL:HG23	2.26	0.60
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.31	0.60
53:D6:154:THR:O	53:D6:157:ALA:HB3	2.02	0.60
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.82	0.60
14:AO:77:ARG:O	14:AO:81:LEU:HB2	2.01	0.60
15:AP:60:TRP:HB3	15:AP:65:ALA:HB2	1.84	0.60
23:BB:1270:C:H5''	23:BB:1271:G:H5'	1.84	0.60
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.66	0.60
23:BB:2637:U:OP1	26:BD:83:ARG:HD3	2.00	0.60
44:BQ:79:ILE:HA	44:BQ:82:LEU:HD12	1.84	0.60
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.02	0.60
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	2.01	0.60
1:CA:73:C:H2'	1:CA:74:A:H8	1.67	0.60
1:CA:215:C:H2'	1:CA:216:U:H6	1.67	0.60
1:CA:410:G:P	3:CD:25:ARG:HE	2.24	0.60
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.37	0.60
3:CD:25:ARG:HH11	3:CD:26:ALA:H	1.50	0.60
7:CH:23:ALA:CB	7:CH:61:THR:HA	2.32	0.60
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HB3	1.84	0.60
17:CR:27:THR:HG22	17:CR:31:TYR:HE1	1.67	0.60
23:DB:37:C:O2'	29:DE:45:ALA:HA	2.02	0.60
23:DB:144:A:H2'	23:DB:145:C:H6	1.67	0.60
37:DL:56:PRO:O	37:DL:59:ARG:HB2	2.01	0.60
38:DM:50:ARG:O	38:DM:53:MET:HB3	2.01	0.60
40:DH:113:SER:H	40:DH:132:PHE:HE1	1.48	0.60
43:DO:68:LYS:H	43:DO:102:ARG:HD2	1.67	0.60
45:DS:72:THR:HG21	45:DS:108:SER:HB3	1.84	0.60
47:DF:104:THR:C	47:DF:105:ILE:HG13	2.27	0.60
2:AC:126:ARG:HA	2:AC:126:ARG:HH11	1.67	0.59
3:AD:52:VAL:HG12	3:AD:198:LEU:HD21	1.84	0.59
3:AD:89:LEU:CD2	3:AD:199:ILE:HD11	2.32	0.59
7:AH:8:ASP:O	7:AH:12:ARG:HB2	2.02	0.59
7:AH:102:VAL:HG12	7:AH:125:ILE:HD12	1.84	0.59
8:AI:5:TYR:CD2	8:AI:88:GLU:HB2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:79:GLU:HG3	16:AQ:80:LYS:NZ	2.15	0.59
23:BB:278:A:N3	23:BB:278:A:H2'	2.17	0.59
23:BB:572:A:P	49:BR:80:ARG:HH22	2.24	0.59
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.67	0.59
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.67	0.59
25:BC:64:VAL:O	25:BC:65:ASP:HB3	2.01	0.59
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.37	0.59
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.84	0.59
48:BG:10:VAL:HG21	48:BG:47:ASN:O	2.02	0.59
53:B6:45:TYR:O	53:B6:46:TYR:HB2	2.01	0.59
1:CA:1030:U:H5'	1:CA:1031:C:N3	2.17	0.59
2:CC:126:ARG:HH11	2:CC:126:ARG:HA	1.67	0.59
10:CK:17:ASP:HA	10:CK:80:ASN:O	2.02	0.59
17:CR:19:GLU:HG3	17:CR:54:LEU:HD12	1.82	0.59
20:CB:213:LEU:O	20:CB:216:VAL:HG22	2.02	0.59
23:DB:526:A:N6	23:DB:2626:C:H4'	2.17	0.59
23:DB:854:C:O2'	23:DB:855:G:H5'	2.01	0.59
23:DB:1788:C:O2'	23:DB:1789:A:H5'	2.02	0.59
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.02	0.59
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.36	0.59
30:DY:6:ILE:HD13	30:DY:6:ILE:N	2.17	0.59
44:DQ:57:ARG:HH22	44:DQ:92:LYS:HE2	1.67	0.59
1:AA:191:G:H2'	1:AA:192:A:H8	1.67	0.59
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.38	0.59
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.84	0.59
23:BB:5:A:H2'	23:BB:6:A:C8	2.37	0.59
23:BB:441:U:H2'	23:BB:442:G:C8	2.37	0.59
23:BB:495:G:H21	45:BS:61:ASN:HD21	1.49	0.59
23:BB:1652:A:OP1	42:BN:8:ARG:HD3	2.02	0.59
23:BB:2377:A:H2'	23:BB:2378:A:C8	2.37	0.59
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.38	0.59
23:BB:2776:A:H4'	23:BB:2777:G:H5''	1.84	0.59
27:BK:60:ALA:HA	27:BK:87:LEU:HD23	1.82	0.59
35:BV:61:LEU:O	35:BV:71:LYS:HA	2.01	0.59
40:BH:83:LYS:HD2	40:BH:91:PHE:CD1	2.37	0.59
47:BF:103:ILE:HD11	47:BF:174:PHE:HA	1.83	0.59
48:BG:24:THR:HG22	48:BG:34:ARG:HB3	1.83	0.59
53:B6:32:ARG:HD3	53:B6:103:ILE:HG23	1.84	0.59
53:B6:177:GLU:O	53:B6:181:GLN:HG3	2.01	0.59
1:CA:224:U:H2'	1:CA:225:C:H6	1.66	0.59
1:CA:1314:C:H41	18:CS:3:SER:HB3	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:113:ALA:O	3:CD:117:VAL:HG23	2.02	0.59
4:CE:53:ARG:HH21	4:CE:54:GLU:HG3	1.67	0.59
21:CU:11:PHE:HD1	21:CU:11:PHE:O	1.85	0.59
21:CU:36:PHE:CD2	21:CU:39:LYS:HB2	2.37	0.59
23:DB:285:G:H2'	23:DB:286:U:O4'	2.03	0.59
23:DB:496:G:H1'	45:DS:61:ASN:ND2	2.17	0.59
23:DB:664:G:H2'	23:DB:665:U:H6	1.67	0.59
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.37	0.59
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.67	0.59
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.02	0.59
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.02	0.59
26:DD:25:THR:HG21	26:DD:193:VAL:CG2	2.32	0.59
30:DY:37:ARG:HE	30:DY:37:ARG:HA	1.68	0.59
32:D4:25:VAL:O	32:D4:26:ILE:HD13	2.02	0.59
34:D3:24:LYS:NZ	34:D3:28:LEU:HB3	2.17	0.59
37:DL:59:ARG:C	37:DL:61:LEU:H	2.09	0.59
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.16	0.59
48:DG:94:ARG:C	48:DG:94:ARG:HE	2.10	0.59
49:DR:4:VAL:HG23	49:DR:39:LEU:H	1.66	0.59
50:DT:40:LYS:HG2	50:DT:60:THR:HG23	1.84	0.59
53:D6:18:LEU:O	53:D6:21:LEU:HB3	2.01	0.59
1:AA:939:G:H5''	6:AG:101:ARG:NH1	2.16	0.59
3:AD:77:GLU:HG3	3:AD:81:LEU:HG	1.84	0.59
8:AI:71:ILE:H	8:AI:71:ILE:HD12	1.67	0.59
12:AM:44:ILE:O	12:AM:47:LEU:HB2	2.02	0.59
18:AS:14:LEU:HD22	18:AS:34:SER:OG	2.02	0.59
19:AT:79:THR:O	19:AT:82:ILE:HG13	2.02	0.59
20:AB:49:PHE:O	20:AB:53:LEU:HD13	2.02	0.59
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.67	0.59
23:BB:69:C:O2'	23:BB:70:G:H5'	2.03	0.59
23:BB:374:A:H61	23:BB:400:G:H1'	1.67	0.59
23:BB:1441:G:H4'	23:BB:1628:G:OP1	2.03	0.59
23:BB:1518:C:H2'	23:BB:1519:G:H8	1.66	0.59
23:BB:2653:U:H3'	23:BB:2654:A:H2'	1.83	0.59
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.84	0.59
26:BD:31:ALA:HA	26:BD:97:SER:HA	1.85	0.59
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.01	0.59
44:BQ:63:ARG:HH21	44:BQ:64:ILE:CD1	2.15	0.59
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.33	0.59
1:CA:541:G:O2'	3:CD:39:GLN:HB3	2.02	0.59
2:CC:13:ILE:C	2:CC:15:LYS:H	2.10	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:181:ILE:HD12	2:CC:181:ILE:N	2.17	0.59
3:CD:22:SER:H	3:CD:109:THR:HG22	1.67	0.59
3:CD:84:ASN:HD22	4:CE:101:GLY:HA3	1.65	0.59
8:CI:82:ILE:O	8:CI:86:LEU:HD13	2.02	0.59
12:CM:44:ILE:O	12:CM:47:LEU:HB2	2.02	0.59
20:CB:120:SER:HA	20:CB:125:PHE:CD2	2.37	0.59
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.01	0.59
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.37	0.59
25:DC:64:VAL:O	25:DC:65:ASP:HB3	2.02	0.59
30:DY:6:ILE:HD13	30:DY:6:ILE:H	1.66	0.59
31:D0:12:ARG:HD2	31:D0:16:ARG:NH1	2.17	0.59
36:D2:3:ARG:HA	36:D2:3:ARG:CZ	2.32	0.59
40:DH:18:GLN:HE21	40:DH:39:ALA:HB1	1.67	0.59
41:DJ:98:GLU:CD	41:DJ:98:GLU:H	2.10	0.59
46:DU:42:LYS:HG3	46:DU:57:ILE:HG21	1.82	0.59
50:DT:81:LYS:HG3	50:DT:82:LYS:H	1.67	0.59
53:D6:126:ARG:O	53:D6:130:ARG:HG3	2.02	0.59
53:D6:134:ARG:NH2	53:D6:135:GLU:HG2	2.16	0.59
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.36	0.59
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.38	0.59
4:AE:52:ALA:H	4:AE:58:ALA:HB2	1.66	0.59
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.02	0.59
23:BB:19:A:H2'	23:BB:20:C:H6	1.65	0.59
23:BB:350:G:H2'	23:BB:351:C:O4'	2.02	0.59
23:BB:419:U:H2'	23:BB:420:C:C6	2.37	0.59
23:BB:550:C:OP1	41:BJ:2:LYS:HE3	2.03	0.59
23:BB:921:C:H2'	23:BB:922:C:H6	1.67	0.59
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.66	0.59
23:BB:2032:G:N2	26:BD:150:GLN:HB3	2.17	0.59
23:BB:2718:G:H4'	28:BP:95:LYS:HB2	1.83	0.59
26:BD:46:ARG:NH1	26:BD:85:ALA:HA	2.17	0.59
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.32	0.59
47:BF:87:LYS:C	47:BF:88:VAL:HG23	2.27	0.59
50:BT:50:LEU:HD22	50:BT:50:LEU:H	1.67	0.59
52:BW:37:VAL:HG13	52:BW:55:ASP:C	2.27	0.59
53:B6:88:LEU:HD23	53:B6:90:LEU:HD12	1.85	0.59
1:CA:205:A:H2'	1:CA:206:C:C6	2.37	0.59
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.66	0.59
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.37	0.59
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.01	0.59
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.43	0.59
7:CH:28:SER:OG	7:CH:56:PRO:HB2	2.02	0.59
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.83	0.59
19:CT:67:HIS:ND1	19:CT:68:LYS:HG2	2.17	0.59
20:CB:94:ARG:HE	20:CB:94:ARG:H	1.50	0.59
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.03	0.59
23:DB:1082:U:O4	23:DB:1086:A:C2	2.56	0.59
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.37	0.59
23:DB:1758:U:O4	23:DB:2695:U:H4'	2.02	0.59
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.37	0.59
25:DC:70:LYS:NZ	25:DC:99:GLU:HB3	2.18	0.59
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.30	0.59
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.65	0.59
40:DH:118:PRO:O	40:DH:119:ASN:HB3	2.02	0.59
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.27	0.59
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.38	0.59
1:AA:462:G:H2'	1:AA:463:U:C6	2.37	0.59
2:AC:126:ARG:NH2	2:AC:191:THR:HG23	2.16	0.59
11:AL:24:GLU:HB2	11:AL:26:CYS:HG	1.68	0.59
15:AP:48:GLU:HG3	15:AP:49:GLY:H	1.66	0.59
21:AU:11:PHE:HD1	21:AU:11:PHE:O	1.86	0.59
23:BB:27:G:N2	23:BB:512:G:H2'	2.17	0.59
23:BB:275:C:H2'	23:BB:276:U:O4'	2.02	0.59
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.37	0.59
23:BB:1387:A:C4'	23:BB:1469:A:H1'	2.32	0.59
23:BB:2810:A:H2'	23:BB:2811:G:O4'	2.03	0.59
24:BI:27:LEU:H	24:BI:27:LEU:CD2	2.14	0.59
41:BJ:57:LEU:CG	41:BJ:128:ASN:H	2.16	0.59
44:BQ:51:GLN:HA	44:BQ:54:ARG:HD2	1.85	0.59
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD13	1.68	0.59
46:BU:2:ALA:HB3	46:BU:5:ARG:NH2	2.17	0.59
49:BR:5:PHE:O	49:BR:11:GLN:HA	2.01	0.59
49:BR:58:VAL:HG22	49:BR:59:ILE:H	1.66	0.59
52:BW:59:PHE:CD2	52:BW:61:LYS:HD2	2.38	0.59
15:CP:23:ASP:O	15:CP:26:ASN:HB2	2.03	0.59
17:CR:33:THR:HG23	17:CR:37:LYS:O	2.02	0.59
20:CB:86:CYS:HB2	20:CB:221:ARG:NH1	2.17	0.59
23:DB:141:G:C6	50:DT:2:ILE:HG21	2.38	0.59
23:DB:370:G:O2'	23:DB:423:A:H3'	2.03	0.59
23:DB:401:A:H2'	23:DB:402:A:C8	2.37	0.59
23:DB:559:G:H21	44:DQ:51:GLN:HE22	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:664:G:H2'	23:DB:665:U:C6	2.37	0.59
23:DB:1652:A:OP1	42:DN:8:ARG:HD3	2.03	0.59
23:DB:1718:G:H2'	23:DB:1719:G:H8	1.67	0.59
23:DB:2179:C:O2	23:DB:2179:C:C2'	2.51	0.59
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.18	0.59
29:DE:30:GLN:HG2	29:DE:30:GLN:O	2.02	0.59
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.34	0.59
1:AA:104:G:O2'	1:AA:105:G:H5'	2.01	0.59
1:AA:833:G:H2'	1:AA:834:U:C6	2.36	0.59
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.84	0.59
2:AC:180:ASP:OD1	2:AC:203:LYS:HB2	2.02	0.59
3:AD:148:ALA:O	3:AD:151:GLN:HB2	2.02	0.59
8:AI:6:TYR:HA	8:AI:18:VAL:O	2.03	0.59
12:AM:1:ALA:C	12:AM:8:ILE:HG22	2.28	0.59
16:AQ:6:THR:HG22	16:AQ:61:ARG:HB3	1.84	0.59
20:AB:86:CYS:HB3	20:AB:88:GLN:CD	2.28	0.59
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.38	0.59
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.37	0.59
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.02	0.59
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.01	0.59
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.38	0.59
23:BB:2881:U:O3'	42:BN:96:ARG:HD3	2.03	0.59
26:BD:16:THR:HB	26:BD:18:ASP:OD1	2.03	0.59
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.03	0.59
38:BM:127:LYS:HD2	38:BM:127:LYS:H	1.67	0.59
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.03	0.59
48:BG:84:LYS:HG3	48:BG:132:LEU:N	2.18	0.59
53:B6:18:LEU:O	53:B6:21:LEU:HB3	2.03	0.59
1:CA:191:G:H2'	1:CA:192:A:H8	1.66	0.59
1:CA:207:C:H3'	1:CA:208:U:C6	2.38	0.59
1:CA:844:G:C2'	1:CA:845:A:H8	2.15	0.59
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.03	0.59
3:CD:52:VAL:HG12	3:CD:198:LEU:HD21	1.85	0.59
4:CE:89:THR:HG21	4:CE:134:ASN:ND2	2.18	0.59
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.16	0.59
8:CI:6:TYR:HA	8:CI:18:VAL:O	2.03	0.59
16:CQ:68:LYS:C	16:CQ:70:LYS:H	2.10	0.59
23:DB:6:A:H2'	23:DB:7:G:H8	1.68	0.59
23:DB:189:G:H2'	23:DB:205:G:N2	2.16	0.59
23:DB:639:U:H2'	23:DB:640:C:C6	2.37	0.59
23:DB:863:A:H2'	23:DB:864:G:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1339:G:N2	23:DB:1603:A:H1'	2.17	0.59
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.83	0.59
37:DL:95:LEU:HB2	37:DL:101:ILE:HG13	1.83	0.59
45:DS:7:HIS:HB3	45:DS:103:ILE:HB	1.85	0.59
52:DW:37:VAL:HG13	52:DW:55:ASP:C	2.27	0.59
52:DW:47:GLY:HA3	52:DW:80:SER:HB3	1.84	0.59
1:AA:72:A:H2'	1:AA:73:C:H6	1.68	0.59
1:AA:251:G:N3	1:AA:266:G:O6	2.36	0.59
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.66	0.59
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.43	0.59
18:AS:62:THR:HB	18:AS:64:GLU:OE1	2.02	0.59
20:AB:63:LYS:HG2	20:AB:224:ARG:NH1	2.18	0.59
21:AU:36:PHE:HD2	21:AU:39:LYS:HD2	1.68	0.59
23:BB:675:A:H4'	29:BE:60:TRP:CZ2	2.38	0.59
23:BB:823:C:H2'	23:BB:824:U:C6	2.38	0.59
23:BB:969:G:H2'	23:BB:970:U:H6	1.67	0.59
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.33	0.59
23:BB:1475:G:H1'	23:BB:1476:U:H5	1.68	0.59
23:BB:1769:U:O2'	23:BB:1770:G:H5'	2.03	0.59
23:BB:2309:A:N6	47:BF:75:GLY:HA3	2.17	0.59
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.38	0.59
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	2.03	0.59
23:BB:2881:U:H2'	23:BB:2882:A:O4'	2.03	0.59
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.17	0.59
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.02	0.59
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.17	0.59
29:BE:149:ILE:HG23	29:BE:188:MET:HA	1.85	0.59
29:BE:194:LYS:O	29:BE:197:GLU:HB3	2.03	0.59
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.10	0.59
40:BH:75:LEU:HB3	40:BH:78:VAL:HG21	1.84	0.59
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.18	0.59
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	2.01	0.59
49:BR:40:MET:O	49:BR:41:ILE:HD13	2.03	0.59
51:BZ:35:SER:CA	51:BZ:50:ARG:HA	2.32	0.59
1:CA:840:C:C2	1:CA:842:U:H4'	2.37	0.59
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.37	0.59
2:CC:126:ARG:NH2	2:CC:191:THR:HG23	2.18	0.59
23:DB:581:C:H2'	23:DB:582:A:H8	1.67	0.59
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.83	0.59
23:DB:904:G:H2'	23:DB:905:A:C8	2.37	0.59
23:DB:928:A:O2'	30:DY:37:ARG:HD3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1043:C:H2'	23:DB:1044:C:O4'	2.02	0.59
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.37	0.59
23:DB:1387:A:C4'	23:DB:1469:A:H1'	2.33	0.59
25:DC:145:MET:HE1	25:DC:181:ARG:NH1	2.18	0.59
28:DP:31:VAL:O	28:DP:32:VAL:HB	2.02	0.59
30:DY:16:LEU:H	30:DY:16:LEU:CD2	2.12	0.59
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.03	0.59
40:DH:119:ASN:OD1	40:DH:121:VAL:HG13	2.03	0.59
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.02	0.59
48:DG:6:ALA:HB3	48:DG:68:ARG:HG3	1.85	0.59
1:AA:93:U:C3'	1:AA:94:G:H4'	2.33	0.59
1:AA:1074:G:H4'	20:AB:102:ASN:HB2	1.85	0.59
23:BB:121:G:H2'	23:BB:122:G:H8	1.67	0.59
23:BB:394:C:O2'	23:BB:395:U:H5'	2.03	0.59
23:BB:661:A:H1'	37:BL:12:SER:O	2.01	0.59
23:BB:848:C:H2'	23:BB:849:A:C8	2.37	0.59
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.37	0.59
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.68	0.59
43:BO:70:ALA:O	43:BO:74:VAL:HG23	2.02	0.59
47:BF:101:ARG:CZ	47:BF:138:PRO:HB2	2.33	0.59
51:BZ:35:SER:HB3	51:BZ:50:ARG:HG3	1.84	0.59
53:B6:25:LEU:HD22	53:B6:179:LYS:HG2	1.85	0.59
1:CA:376:G:H2'	1:CA:377:G:H8	1.68	0.59
1:CA:401:C:H2'	1:CA:402:G:H8	1.67	0.59
1:CA:713:G:H2'	1:CA:714:G:C8	2.38	0.59
1:CA:939:G:H5''	6:CG:101:ARG:NH1	2.17	0.59
2:CC:86:LEU:O	2:CC:90:VAL:HG23	2.02	0.59
8:CI:56:MET:SD	8:CI:57:VAL:N	2.76	0.59
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.84	0.59
16:CQ:66:LEU:HD13	16:CQ:70:LYS:HG2	1.84	0.59
23:DB:30:G:H2'	23:DB:31:C:H6	1.67	0.59
23:DB:950:G:H2'	23:DB:951:C:C6	2.38	0.59
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.38	0.59
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.02	0.59
25:DC:185:ALA:C	25:DC:187:CYS:H	2.10	0.59
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.84	0.59
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.15	0.59
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HB	1.84	0.59
50:DT:50:LEU:H	50:DT:50:LEU:HD22	1.68	0.59
53:D6:80:GLU:CD	53:D6:92:PRO:HB2	2.26	0.59
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:23:ARG:O	13:AN:26:LEU:HD22	2.02	0.59
20:AB:57:ASN:HB2	20:AB:223:GLY:HA3	1.85	0.59
23:BB:321:U:H4'	29:BE:159:LEU:O	2.03	0.59
23:BB:780:G:H21	23:BB:783:A:H62	1.49	0.59
23:BB:950:G:H2'	23:BB:951:C:H6	1.67	0.59
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.59
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.66	0.59
23:BB:2010:G:H5''	45:BS:42:LYS:HB2	1.85	0.59
23:BB:2657:A:O2'	48:BG:159:LYS:NZ	2.36	0.59
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.84	0.59
25:BC:149:LYS:HG2	25:BC:152:GLN:NE2	2.18	0.59
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.03	0.59
39:BX:29:ARG:HG2	50:BT:12:ARG:HH21	1.67	0.59
40:BH:128:HIS:HE1	40:BH:130:VAL:HG13	1.68	0.59
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.67	0.59
48:BG:6:ALA:HB3	48:BG:68:ARG:HG3	1.85	0.59
53:B6:43:VAL:O	53:B6:49:HIS:HA	2.03	0.59
1:CA:191:G:H2'	1:CA:192:A:C8	2.38	0.59
1:CA:549:C:H2'	1:CA:550:G:C8	2.37	0.59
1:CA:981:U:C5'	13:CN:5:MET:HE1	2.32	0.59
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.83	0.59
13:CN:23:ARG:O	13:CN:26:LEU:HD22	2.02	0.59
16:CQ:8:GLN:HB3	16:CQ:59:GLU:HB2	1.84	0.59
18:CS:27:LYS:HG3	18:CS:28:LYS:HD2	1.84	0.59
20:CB:63:LYS:HG2	20:CB:224:ARG:HH12	1.67	0.59
20:CB:65:LYS:H	20:CB:158:ASP:CG	2.11	0.59
23:DB:315:G:H2'	23:DB:316:C:C6	2.38	0.59
23:DB:321:U:H1'	29:DE:162:ARG:NH1	2.18	0.59
23:DB:575:A:O2'	23:DB:576:U:H5'	2.02	0.59
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.38	0.59
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.67	0.59
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.37	0.59
23:DB:2016:U:H1'	31:D0:2:VAL:HG11	1.85	0.59
23:DB:2019:A:H2	23:DB:2035:G:H22	1.48	0.59
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.02	0.59
25:DC:173:LEU:HD13	25:DC:173:LEU:H	1.67	0.59
28:DP:31:VAL:HG12	28:DP:38:ARG:O	2.02	0.59
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.83	0.59
46:DU:85:ARG:HA	46:DU:85:ARG:NE	2.16	0.59
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.32	0.59
1:AA:865:A:H2'	1:AA:866:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.38	0.59
23:BB:322:A:OP1	29:BE:162:ARG:HB3	2.02	0.59
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.37	0.59
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.68	0.59
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.38	0.59
29:BE:108:ILE:HD13	29:BE:108:ILE:O	2.03	0.59
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.03	0.59
42:BN:12:ARG:HG2	42:BN:16:HIS:ND1	2.18	0.59
44:BQ:30:VAL:HG12	44:BQ:33:VAL:HG22	1.84	0.59
46:BU:21:ARG:HD3	46:BU:72:PHE:CG	2.37	0.59
46:BU:72:PHE:HA	46:BU:78:LYS:O	2.03	0.59
47:BF:32:LYS:HA	47:BF:95:MET:HE2	1.85	0.59
53:B6:57:THR:O	53:B6:68:VAL:HA	2.03	0.59
53:B6:75:ALA:O	53:B6:79:ILE:HG13	2.03	0.59
53:B6:84:ARG:O	53:B6:85:ASP:C	2.45	0.59
1:CA:706:A:C4'	10:CK:30:ILE:HD11	2.33	0.59
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.68	0.59
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.85	0.59
19:CT:81:GLN:C	19:CT:83:ASN:H	2.09	0.59
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.18	0.59
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.50	0.59
23:DB:599:A:O2'	23:DB:600:G:H5'	2.03	0.59
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.38	0.59
23:DB:1871:A:H2'	23:DB:1872:A:C8	2.38	0.59
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.37	0.59
37:DL:93:ASN:O	37:DL:95:LEU:N	2.36	0.59
41:DJ:30:THR:HG23	41:DJ:31:GLU:H	1.68	0.59
41:DJ:64:VAL:O	41:DJ:68:LYS:HD2	2.03	0.59
1:AA:410:G:P	3:AD:25:ARG:HE	2.26	0.58
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.38	0.58
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.67	0.58
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.85	0.58
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.03	0.58
10:AK:24:ALA:HA	10:AK:29:THR:CG2	2.31	0.58
15:AP:75:ILE:HG22	15:AP:80:LYS:HG3	1.84	0.58
23:BB:3:U:H2'	23:BB:4:U:C6	2.38	0.58
23:BB:93:G:H2'	23:BB:94:A:O4'	2.01	0.58
23:BB:494:G:OP1	45:BS:8:ARG:HD3	2.03	0.58
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.03	0.58
23:BB:1930:G:H22	23:BB:1969:A:P	2.26	0.58
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:31:VAL:O	28:BP:32:VAL:HB	2.03	0.58
39:BX:52:ARG:O	39:BX:55:THR:HB	2.02	0.58
40:BH:31:VAL:O	40:BH:33:GLN:N	2.36	0.58
40:BH:125:THR:HB	40:BH:146:VAL:HB	1.84	0.58
42:BN:87:PHE:C	42:BN:89:SER:H	2.10	0.58
1:CA:437:U:H1'	3:CD:115:GLN:NE2	2.17	0.58
1:CA:709:U:H2'	1:CA:710:G:H8	1.68	0.58
11:CL:86:VAL:HB	11:CL:89:LEU:HB2	1.85	0.58
13:CN:52:ARG:HH11	13:CN:58:ARG:HH21	1.51	0.58
13:CN:71:GLY:O	13:CN:79:SER:HA	2.04	0.58
14:CO:21:ASP:C	14:CO:23:GLY:H	2.11	0.58
18:CS:62:THR:HB	18:CS:64:GLU:OE1	2.03	0.58
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.03	0.58
21:CU:16:ARG:CZ	21:CU:19:LYS:HE2	2.33	0.58
23:DB:419:U:H2'	23:DB:420:C:C6	2.38	0.58
23:DB:783:A:H8	23:DB:784:G:H4'	1.67	0.58
23:DB:1491:G:H5'	25:DC:97:ASP:OD1	2.03	0.58
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.03	0.58
23:DB:2144:G:C2	23:DB:2146:C:H5'	2.38	0.58
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.37	0.58
26:DD:141:ARG:O	26:DD:141:ARG:HG3	2.03	0.58
28:DP:24:THR:O	28:DP:25:VAL:HG22	2.03	0.58
29:DE:175:ILE:HD11	29:DE:180:LEU:HD11	1.85	0.58
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.67	0.58
34:D3:16:THR:OG1	34:D3:48:MET:HE1	2.03	0.58
35:DV:53:LYS:HZ1	35:DV:54:ALA:HB3	1.67	0.58
38:DM:19:GLY:N	38:DM:38:ARG:HH22	2.01	0.58
41:DJ:38:GLY:O	41:DJ:43:GLU:HB2	2.03	0.58
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.03	0.58
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.67	0.58
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.28	0.58
48:DG:10:VAL:HG21	48:DG:47:ASN:O	2.03	0.58
50:DT:2:ILE:HD13	50:DT:2:ILE:N	2.18	0.58
1:AA:194:C:O2'	1:AA:195:A:H5'	2.03	0.58
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.03	0.58
23:BB:921:C:H2'	23:BB:922:C:C6	2.38	0.58
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.02	0.58
23:BB:2007:U:O2'	23:BB:2008:C:H5'	2.03	0.58
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.39	0.58
43:BO:58:ILE:O	43:BO:62:LEU:HD23	2.03	0.58
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:81:LYS:HG3	50:BT:82:LYS:H	1.67	0.58
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.66	0.58
1:CA:236:A:H2'	1:CA:237:G:H8	1.68	0.58
1:CA:452:A:H2'	1:CA:453:G:O4'	2.02	0.58
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.03	0.58
1:CA:1250:A:H2'	1:CA:1251:A:H8	1.68	0.58
1:CA:1420:U:H2'	1:CA:1421:G:C8	2.39	0.58
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.37	0.58
12:CM:78:ARG:HH22	18:CS:64:GLU:HB2	1.67	0.58
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.68	0.58
16:CQ:25:GLU:HB3	16:CQ:38:LYS:HD3	1.83	0.58
16:CQ:80:LYS:H	16:CQ:80:LYS:CE	2.14	0.58
23:DB:135:U:H2'	23:DB:136:G:H8	1.65	0.58
23:DB:848:C:H2'	23:DB:849:A:C8	2.37	0.58
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.03	0.58
23:DB:2187:U:H2'	23:DB:2188:U:C5	2.39	0.58
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.18	0.58
23:DB:2572:A:OP2	26:DD:151:THR:HB	2.03	0.58
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.68	0.58
23:DB:2881:U:H2'	23:DB:2882:A:O4'	2.02	0.58
25:DC:94:LEU:HD13	25:DC:100:ARG:HD2	1.85	0.58
44:DQ:10:ARG:CZ	44:DQ:10:ARG:HB2	2.31	0.58
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.33	0.58
49:DR:63:VAL:HA	49:DR:95:ASP:O	2.03	0.58
3:AD:22:SER:HB2	3:AD:109:THR:HG22	1.86	0.58
10:AK:45:THR:HG23	10:AK:48:GLY:HA3	1.84	0.58
11:AL:35:ARG:HA	11:AL:35:ARG:HH11	1.69	0.58
12:AM:30:LYS:HG3	12:AM:40:GLU:OE2	2.04	0.58
23:BB:131:A:H2'	23:BB:132:G:C8	2.38	0.58
23:BB:182:A:O2'	23:BB:183:C:H5'	2.03	0.58
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.03	0.58
23:BB:1354:A:H2'	23:BB:1355:G:O4'	2.03	0.58
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.37	0.58
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.38	0.58
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.02	0.58
23:BB:2528:U:O2'	23:BB:2529:G:H3'	2.03	0.58
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.84	0.58
26:BD:25:THR:HG21	26:BD:193:VAL:CG2	2.34	0.58
26:BD:141:ARG:O	26:BD:142:VAL:HG13	2.04	0.58
32:B4:25:VAL:O	32:B4:26:ILE:HD13	2.03	0.58
38:BM:19:GLY:N	38:BM:38:ARG:HH22	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:116:ARG:CG	40:BH:131:SER:HB2	2.30	0.58
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.32	0.58
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.33	0.58
49:BR:4:VAL:HG23	49:BR:39:LEU:H	1.68	0.58
1:CA:18:C:H4'	1:CA:1078:U:O2	2.03	0.58
1:CA:73:C:H2'	1:CA:74:A:C8	2.38	0.58
1:CA:236:A:H2'	1:CA:237:G:C8	2.38	0.58
1:CA:501:C:H2'	1:CA:502:A:H8	1.66	0.58
1:CA:812:G:H2'	1:CA:812:G:N3	2.18	0.58
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.85	0.58
5:CF:42:TRP:HE1	5:CF:61:LEU:HD23	1.66	0.58
19:CT:43:LYS:HD3	19:CT:43:LYS:N	2.19	0.58
23:DB:5:A:H2'	23:DB:6:A:H8	1.69	0.58
23:DB:632:A:H2'	23:DB:633:A:C8	2.38	0.58
23:DB:987:C:H2'	23:DB:988:A:O4'	2.04	0.58
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.38	0.58
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.17	0.58
27:DK:19:VAL:HB	27:DK:41:ILE:HD11	1.85	0.58
27:DK:113:MET:HE2	27:DK:116:ILE:HD11	1.83	0.58
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.85	0.58
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.83	0.58
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.38	0.58
46:DU:65:GLN:HB2	46:DU:68:ASN:HD22	1.68	0.58
47:DF:134:GLN:NE2	47:DF:136:ILE:HD13	2.18	0.58
53:D6:33:ALA:HA	53:D6:103:ILE:CD1	2.23	0.58
53:D6:110:ARG:O	53:D6:114:LEU:HD13	2.04	0.58
1:AA:237:G:H2'	1:AA:238:A:H8	1.68	0.58
1:AA:237:G:H5''	16:AQ:26:ARG:NH2	2.18	0.58
1:AA:1250:A:H2'	1:AA:1251:A:H8	1.65	0.58
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.13	0.58
4:AE:53:ARG:HH21	4:AE:54:GLU:HG3	1.66	0.58
12:AM:3:ILE:HA	12:AM:56:ARG:HH11	1.68	0.58
13:AN:20:PHE:CD1	13:AN:24:ALA:HB2	2.38	0.58
23:BB:297:G:OP1	46:BU:91:LYS:HD3	2.02	0.58
23:BB:966:G:HO2'	23:BB:2267:A:H2	1.52	0.58
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.38	0.58
23:BB:1210:G:H5'	23:BB:1212:G:H5'	1.85	0.58
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.39	0.58
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.37	0.58
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.03	0.58
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:175:LEU:HD21	26:BD:191:GLY:O	2.03	0.58
31:B0:43:THR:HG23	31:B0:47:TYR:O	2.03	0.58
38:BM:58:LYS:HD2	38:BM:58:LYS:N	2.17	0.58
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.02	0.58
48:BG:46:ASP:CG	48:BG:47:ASN:H	2.10	0.58
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.39	0.58
3:CD:152:SER:O	3:CD:155:LYS:HG2	2.03	0.58
4:CE:52:ALA:N	4:CE:58:ALA:HB2	2.17	0.58
14:CO:8:THR:O	14:CO:12:VAL:HG23	2.03	0.58
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	1.85	0.58
21:CU:16:ARG:NH1	21:CU:19:LYS:HE2	2.18	0.58
23:DB:161:A:C3'	23:DB:162:U:H5''	2.29	0.58
23:DB:693:A:H2'	23:DB:694:U:C6	2.38	0.58
23:DB:857:G:O2'	23:DB:858:G:H5'	2.03	0.58
23:DB:1001:A:H2'	23:DB:1002:G:O4'	2.04	0.58
23:DB:2602:A:OP1	23:DB:2602:A:H3'	2.03	0.58
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.68	0.58
23:DB:2872:A:O2'	23:DB:2873:A:H5''	2.03	0.58
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.37	0.58
24:DI:2:LYS:NZ	24:DI:2:LYS:HB3	2.19	0.58
53:D6:44:GLU:HG2	53:D6:49:HIS:CE1	2.38	0.58
53:D6:115:VAL:HG13	53:D6:180:GLU:HG2	1.84	0.58
1:AA:658:C:O2'	1:AA:659:U:H5'	2.03	0.58
1:AA:1298:U:H2'	6:AG:113:LYS:NZ	2.18	0.58
9:AJ:44:THR:HG23	9:AJ:69:THR:O	2.03	0.58
17:AR:37:LYS:NZ	21:AU:22:CYS:HB2	2.18	0.58
17:AR:52:ARG:HB3	17:AR:56:ARG:NH2	2.18	0.58
20:AB:47:PRO:O	20:AB:51:GLU:HB2	2.03	0.58
20:AB:221:ARG:HH11	20:AB:221:ARG:HB3	1.68	0.58
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.37	0.58
23:BB:179:C:H2'	23:BB:180:G:O4'	2.03	0.58
23:BB:460:A:H4'	50:BT:72:GLN:CB	2.31	0.58
23:BB:506:G:H5''	23:BB:509:C:O2'	2.04	0.58
23:BB:624:C:O2'	23:BB:657:U:H5''	2.03	0.58
25:BC:173:LEU:H	25:BC:173:LEU:HD13	1.68	0.58
29:BE:126:VAL:HG22	29:BE:133:LEU:HD12	1.84	0.58
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.03	0.58
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	2.04	0.58
44:BQ:107:ALA:HB1	49:BR:48:LYS:HE2	1.85	0.58
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.01	0.58
53:B6:4:LYS:O	53:B6:7:TYR:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:16:A:O2'	1:CA:17:U:H5'	2.04	0.58
1:CA:358:U:H2'	1:CA:359:G:H8	1.68	0.58
1:CA:412:A:H1'	1:CA:413:G:H8	1.68	0.58
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.68	0.58
12:CM:78:ARG:HB3	12:CM:78:ARG:CZ	2.33	0.58
13:CN:60:ARG:O	13:CN:62:ARG:N	2.37	0.58
14:CO:14:GLU:HB3	14:CO:84:ARG:HH22	1.68	0.58
23:DB:1085:A:H1'	23:DB:1105:U:H1'	1.86	0.58
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.04	0.58
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.39	0.58
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.67	0.58
23:DB:2732:G:H5'	23:DB:2733:A:O4'	2.02	0.58
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.85	0.58
32:D4:15:LYS:O	32:D4:16:ILE:CB	2.50	0.58
40:DH:27:ARG:H	40:DH:31:VAL:CG2	2.16	0.58
44:DQ:79:ILE:O	44:DQ:79:ILE:HD13	2.03	0.58
47:DF:78:ILE:C	47:DF:79:ARG:HG3	2.27	0.58
48:DG:120:ILE:HG13	48:DG:140:ILE:HG22	1.85	0.58
1:AA:355:C:O2'	1:AA:356:A:H5'	2.03	0.58
1:AA:599:C:O2'	1:AA:600:A:H5'	2.02	0.58
1:AA:602:A:O2'	1:AA:603:U:H5'	2.04	0.58
1:AA:923:A:H2'	1:AA:924:C:C6	2.37	0.58
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.38	0.58
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.69	0.58
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.86	0.58
23:BB:251:A:H2'	23:BB:252:G:O4'	2.04	0.58
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.03	0.58
23:BB:2531:A:H5''	48:BG:156:TYR:CZ	2.38	0.58
25:BC:94:LEU:HA	25:BC:100:ARG:HA	1.86	0.58
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.03	0.58
32:B4:15:LYS:O	32:B4:16:ILE:CB	2.51	0.58
37:BL:93:ASN:O	37:BL:95:LEU:N	2.36	0.58
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.38	0.58
44:BQ:91:ARG:HH22	49:BR:10:LYS:HB3	1.68	0.58
47:BF:104:THR:C	47:BF:105:ILE:HG13	2.27	0.58
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.69	0.58
49:BR:38:VAL:O	49:BR:53:PHE:HB3	2.03	0.58
53:B6:80:GLU:C	53:B6:82:ALA:H	2.11	0.58
53:B6:123:GLU:HA	53:B6:126:ARG:NH1	2.17	0.58
1:CA:251:G:N3	1:CA:266:G:O6	2.36	0.58
1:CA:714:G:H2'	1:CA:715:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:920:U:H2'	1:CA:921:U:H6	1.68	0.58
1:CA:1298:U:H2'	6:CG:113:LYS:HZ2	1.67	0.58
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.19	0.58
8:CI:41:GLU:C	8:CI:43:ALA:H	2.12	0.58
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.85	0.58
23:DB:145:C:H2'	23:DB:146:A:H8	1.68	0.58
23:DB:383:C:H5''	23:DB:385:C:OP2	2.03	0.58
23:DB:704:G:H2'	23:DB:726:G:N2	2.12	0.58
23:DB:1082:U:C2	23:DB:1086:A:C6	2.91	0.58
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.69	0.58
23:DB:2283:C:H2'	23:DB:2284:A:H5'	1.85	0.58
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.87	0.58
27:DK:116:ILE:HD12	27:DK:117:SER:N	2.18	0.58
40:DH:96:THR:HG23	40:DH:97:ARG:N	2.18	0.58
40:DH:124:THR:HG23	40:DH:128:HIS:CE1	2.39	0.58
44:DQ:79:ILE:HA	44:DQ:82:LEU:HD12	1.84	0.58
47:DF:32:LYS:HA	47:DF:95:MET:HE2	1.85	0.58
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.02	0.58
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.85	0.58
53:D6:60:ALA:HA	53:D6:66:LEU:HD12	1.85	0.58
53:D6:73:GLN:HG3	53:D6:74:ASN:N	2.18	0.58
1:AA:272:C:H2'	1:AA:273:U:C6	2.38	0.58
1:AA:376:G:OP1	15:AP:5:ARG:HB2	2.04	0.58
1:AA:470:C:H2'	1:AA:471:U:C6	2.39	0.58
1:AA:672:U:H2'	1:AA:673:A:C8	2.38	0.58
1:AA:793:U:O2	1:AA:1516:G:H4'	2.04	0.58
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.84	0.58
1:AA:1382:C:H4'	6:AG:78:ARG:HH21	1.68	0.58
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.67	0.58
2:AC:139:ASN:O	2:AC:143:LEU:HD23	2.04	0.58
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.03	0.58
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.19	0.58
17:AR:38:ILE:HG22	17:AR:58:ILE:HG21	1.86	0.58
23:BB:477:A:H2'	23:BB:478:A:H8	1.66	0.58
23:BB:633:A:H8	23:BB:633:A:O5'	1.87	0.58
23:BB:904:G:H2'	23:BB:905:A:C8	2.38	0.58
23:BB:922:C:H1'	52:BW:22:VAL:CG2	2.33	0.58
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.69	0.58
23:BB:2354:C:H4'	52:BW:31:LEU:HD22	1.85	0.58
23:BB:2680:U:OP2	26:BD:114:LYS:HD3	2.03	0.58
25:BC:18:VAL:HG11	25:BC:202:ARG:HD2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.85	0.58
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.18	0.58
34:B3:41:ARG:HG3	34:B3:44:ARG:HH22	1.68	0.58
43:BO:68:LYS:H	43:BO:102:ARG:HD2	1.67	0.58
44:BQ:15:LYS:HD2	44:BQ:16:ILE:HD12	1.84	0.58
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	2.16	0.58
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.18	0.58
1:CA:425:G:H2'	1:CA:426:U:C6	2.38	0.58
1:CA:715:A:H2'	1:CA:716:A:C8	2.38	0.58
1:CA:922:G:H2'	1:CA:923:A:C8	2.38	0.58
1:CA:1314:C:H3'	18:CS:5:LYS:NZ	2.18	0.58
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.03	0.58
17:CR:38:ILE:HG22	17:CR:58:ILE:HG21	1.86	0.58
23:DB:594:U:H2'	23:DB:595:C:H6	1.68	0.58
23:DB:958:U:N3	38:DM:16:ARG:HB3	2.17	0.58
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.38	0.58
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.69	0.58
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.04	0.58
25:DC:104:LEU:H	25:DC:104:LEU:HD12	1.68	0.58
34:D3:41:ARG:HG3	34:D3:44:ARG:HH22	1.68	0.58
40:DH:31:VAL:O	40:DH:33:GLN:N	2.36	0.58
40:DH:77:THR:HA	40:DH:143:ILE:O	2.03	0.58
42:DN:12:ARG:HG2	42:DN:16:HIS:ND1	2.19	0.58
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.18	0.58
48:DG:37:ASN:HD21	48:DG:40:VAL:CB	2.16	0.58
51:DZ:71:LEU:O	51:DZ:74:ARG:HG2	2.03	0.58
52:DW:28:GLU:HG3	52:DW:29:SER:H	1.69	0.58
53:D6:143:LEU:O	53:D6:147:LEU:HG	2.04	0.58
1:AA:35:G:H2'	1:AA:36:C:H6	1.67	0.58
1:AA:806:C:H2'	1:AA:807:A:C8	2.39	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.39	0.58
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.38	0.58
2:AC:181:ILE:HD12	2:AC:181:ILE:N	2.19	0.58
3:AD:25:ARG:HH11	3:AD:26:ALA:H	1.52	0.58
4:AE:28:ARG:CZ	4:AE:30:PHE:HB3	2.33	0.58
4:AE:95:MET:HE1	4:AE:139:THR:HG23	1.85	0.58
13:AN:60:ARG:HG3	13:AN:62:ARG:HG3	1.86	0.58
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.86	0.58
21:AU:36:PHE:CD2	21:AU:39:LYS:HB2	2.38	0.58
23:BB:273:G:O2'	23:BB:274:C:H5'	2.04	0.58
23:BB:1339:G:N2	23:BB:1603:A:H1'	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:37:ASP:O	27:BK:62:VAL:HG23	2.04	0.58
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.84	0.58
40:BH:79:THR:CG2	40:BH:145:ASN:HB2	2.33	0.58
40:BH:79:THR:HB	40:BH:145:ASN:HB2	1.85	0.58
49:BR:31:GLU:H	49:BR:63:VAL:CG2	2.16	0.58
53:B6:133:ARG:O	53:B6:134:ARG:C	2.47	0.58
53:B6:155:LYS:HD3	53:B6:158:GLU:OE2	2.04	0.58
1:CA:129:A:H1'	1:CA:130:A:C8	2.38	0.58
1:CA:328:C:H4'	1:CA:329:A:H5''	1.85	0.58
1:CA:512:U:O2'	1:CA:513:C:H5'	2.04	0.58
1:CA:1008:U:H2'	1:CA:1009:U:H5''	1.86	0.58
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.37	0.58
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.39	0.58
2:CC:190:THR:HG22	2:CC:191:THR:N	2.18	0.58
15:CP:68:SER:OG	15:CP:71:VAL:HG12	2.03	0.58
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.68	0.58
23:DB:374:A:N6	23:DB:400:G:H1'	2.17	0.58
23:DB:705:A:N6	23:DB:726:G:H1'	2.19	0.58
23:DB:864:G:O2'	23:DB:865:C:H5'	2.04	0.58
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.39	0.58
23:DB:2825:G:H2'	23:DB:2826:A:H5'	1.86	0.58
32:D4:13:ASN:O	32:D4:27:CYS:HA	2.04	0.58
42:DN:13:ASN:C	42:DN:15:SER:H	2.10	0.58
44:DQ:52:ARG:C	44:DQ:54:ARG:H	2.10	0.58
46:DU:11:ILE:HD13	46:DU:11:ILE:O	2.04	0.58
47:DF:109:ARG:HB3	47:DF:135:ILE:CD1	2.30	0.58
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.86	0.58
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.18	0.58
52:DW:59:PHE:CD2	52:DW:61:LYS:HD2	2.39	0.58
53:D6:25:LEU:CD2	53:D6:118:VAL:HG13	2.33	0.58
53:D6:32:ARG:HB2	53:D6:103:ILE:CG2	2.33	0.58
1:AA:452:A:H2'	1:AA:453:G:O4'	2.04	0.58
1:AA:714:G:H2'	1:AA:715:A:C8	2.39	0.58
1:AA:953:G:H2'	1:AA:954:G:O4'	2.03	0.58
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.04	0.58
4:AE:52:ALA:N	4:AE:58:ALA:HB2	2.18	0.58
9:AJ:91:ASP:C	9:AJ:92:LEU:HD13	2.29	0.58
11:AL:85:ARG:HG3	11:AL:86:VAL:N	2.17	0.58
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.04	0.58
23:BB:1172:C:H2'	23:BB:1173:U:O4'	2.03	0.58
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:16:LEU:H	30:BY:16:LEU:CD2	2.12	0.58
33:B1:6:GLU:HB2	33:B1:52:LYS:NZ	2.18	0.58
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.52	0.58
38:BM:50:ARG:O	38:BM:53:MET:HB3	2.03	0.58
40:BH:84:ALA:HB2	40:BH:146:VAL:HG12	1.86	0.58
40:BH:103:VAL:HG11	40:BH:110:VAL:HG22	1.86	0.58
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.18	0.58
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.29	0.58
44:BQ:91:ARG:HG2	44:BQ:93:ILE:HG22	1.85	0.58
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.34	0.58
46:BU:80:ASP:HB2	46:BU:96:LYS:N	2.19	0.58
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.33	0.58
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.28	0.58
1:CA:520:A:OP1	11:CL:48:LEU:HD12	2.04	0.58
2:CC:40:GLN:HG3	2:CC:41:TYR:H	1.67	0.58
2:CC:180:ASP:OD1	2:CC:203:LYS:HB2	2.03	0.58
20:CB:57:ASN:HB2	20:CB:223:GLY:HA3	1.84	0.58
20:CB:120:SER:HA	20:CB:125:PHE:CE2	2.38	0.58
23:DB:1365:A:OP2	51:DZ:3:ARG:HB2	2.03	0.58
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.04	0.58
23:DB:1508:A:H3'	23:DB:1509:A:C4	2.38	0.58
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.39	0.58
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.69	0.58
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.04	0.58
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.29	0.58
33:D1:6:GLU:HB2	33:D1:52:LYS:NZ	2.19	0.58
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	2.03	0.58
5:AF:53:LYS:NZ	5:AF:53:LYS:H	2.02	0.58
10:AK:105:ARG:NH2	21:AU:10:PRO:HB3	2.18	0.58
18:AS:68:HIS:HB3	18:AS:72:GLU:CD	2.28	0.58
19:AT:43:LYS:N	19:AT:43:LYS:HD3	2.18	0.58
22:BA:43:C:O2'	47:BF:91:ARG:HD2	2.03	0.58
23:BB:115:C:H2'	23:BB:116:C:H6	1.68	0.58
23:BB:944:C:H2'	57:BB:3321:HOH:O	2.04	0.58
23:BB:987:C:H2'	23:BB:988:A:O4'	2.04	0.58
23:BB:1082:U:O4	23:BB:1086:A:C2	2.56	0.58
23:BB:1458:U:H5''	23:BB:1459:G:OP1	2.01	0.58
23:BB:1577:C:H2'	23:BB:1578:U:O4'	2.04	0.58
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.39	0.58
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.85	0.58
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:114:LYS:HD2	26:BD:116:LYS:HZ1	1.68	0.58
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.67	0.58
42:BN:62:ASN:O	42:BN:66:ALA:HB2	2.04	0.58
42:BN:72:ASP:O	42:BN:75:ILE:HG13	2.04	0.58
47:BF:33:ILE:HD13	47:BF:98:PHE:CD2	2.37	0.58
48:BG:17:LYS:HB3	48:BG:24:THR:H	1.68	0.58
49:BR:69:GLY:O	49:BR:90:ARG:HG2	2.04	0.58
1:CA:448:A:H2'	1:CA:449:G:C8	2.38	0.58
1:CA:734:G:O2'	17:CR:59:LYS:HD3	2.04	0.58
1:CA:906:A:O2'	1:CA:907:A:H5''	2.04	0.58
1:CA:1081:A:OP1	4:CE:22:LYS:HB2	2.03	0.58
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.03	0.58
23:DB:245:G:H2'	23:DB:246:C:H6	1.68	0.58
23:DB:547:A:N1	23:DB:548:G:H1'	2.19	0.58
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.04	0.58
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.39	0.58
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.03	0.58
25:DC:245:THR:C	25:DC:247:TRP:H	2.12	0.58
26:DD:108:ASP:OD2	26:DD:173:GLN:HA	2.04	0.58
46:DU:73:ASN:C	46:DU:75:ALA:H	2.11	0.58
49:DR:69:GLY:O	49:DR:90:ARG:HG2	2.03	0.58
52:DW:13:ARG:HG3	52:DW:14:ASP:H	1.69	0.58
1:AA:49:U:O2'	1:AA:50:A:H2'	2.04	0.57
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.23	0.57
2:AC:13:ILE:C	2:AC:15:LYS:H	2.12	0.57
3:AD:47:LEU:HD23	3:AD:51:GLY:C	2.29	0.57
7:AH:23:ALA:CB	7:AH:61:THR:HA	2.33	0.57
8:AI:28:VAL:HA	8:AI:32:ARG:O	2.04	0.57
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.17	0.57
19:AT:15:LYS:HA	19:AT:18:LYS:CE	2.33	0.57
22:BA:29:A:H3'	22:BA:30:C:H6	1.69	0.57
23:BB:30:G:H2'	23:BB:31:C:H6	1.68	0.57
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.04	0.57
23:BB:1171:G:C3'	23:BB:1172:C:H4'	2.34	0.57
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.39	0.57
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.04	0.57
23:BB:1812:U:H4'	25:BC:44:ASN:OD1	2.03	0.57
23:BB:2144:G:H1'	23:BB:2148:G:C2	2.39	0.57
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.18	0.57
45:BS:72:THR:HG21	45:BS:108:SER:HB3	1.86	0.57
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.34	0.57
1:CA:793:U:O2	1:CA:1516:G:H4'	2.04	0.57
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.67	0.57
3:CD:151:GLN:HE21	3:CD:153:ARG:HD2	1.69	0.57
3:CD:160:LEU:H	3:CD:160:LEU:CD1	2.12	0.57
23:DB:494:G:OP1	45:DS:8:ARG:HD3	2.04	0.57
23:DB:716:A:H2'	23:DB:717:C:H5''	1.86	0.57
23:DB:921:C:H2'	23:DB:922:C:C6	2.39	0.57
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.04	0.57
23:DB:1915:U:H2'	23:DB:1916:A:C8	2.39	0.57
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.03	0.57
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.04	0.57
23:DB:2190:G:H2'	23:DB:2191:A:O4'	2.04	0.57
23:DB:2257:U:O2'	23:DB:2258:C:H5'	2.04	0.57
23:DB:2579:C:H1'	26:DD:130:GLN:NE2	2.18	0.57
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.67	0.57
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.39	0.57
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.86	0.57
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.69	0.57
37:DL:131:ALA:HA	37:DL:134:ALA:HB3	1.85	0.57
41:DJ:88:THR:HG22	41:DJ:91:GLU:HG3	1.86	0.57
44:DQ:86:SER:CB	49:DR:51:VAL:HA	2.34	0.57
47:DF:101:ARG:NH2	47:DF:138:PRO:HB2	2.18	0.57
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.04	0.57
53:D6:90:LEU:HB3	53:D6:101:ILE:HG21	1.85	0.57
1:AA:191:G:H2'	1:AA:192:A:C8	2.38	0.57
1:AA:358:U:H2'	1:AA:359:G:H8	1.69	0.57
1:AA:939:G:H5''	6:AG:101:ARG:CZ	2.34	0.57
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.04	0.57
1:AA:1410:A:H2'	1:AA:1411:C:H6	1.69	0.57
16:AQ:8:GLN:HB3	16:AQ:59:GLU:HB2	1.85	0.57
22:BA:35:C:C2'	22:BA:36:C:H5'	2.34	0.57
23:BB:693:A:H2'	23:BB:694:U:C6	2.39	0.57
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.69	0.57
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.40	0.57
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.04	0.57
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.68	0.57
30:BY:4:ILE:CD1	30:BY:58:GLU:HG3	2.34	0.57
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.04	0.57
46:BU:41:VAL:HG22	46:BU:60:LYS:O	2.03	0.57
48:BG:37:ASN:HD21	48:BG:40:VAL:CB	2.15	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:6:GLN:HE21	49:BR:7:SER:C	2.12	0.57
51:BZ:5:CYS:HB3	51:BZ:10:LYS:N	2.18	0.57
1:CA:56:U:H2'	1:CA:57:G:C8	2.39	0.57
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.18	0.57
9:CJ:12:ALA:N	9:CJ:18:ILE:HD12	2.20	0.57
9:CJ:91:ASP:C	9:CJ:92:LEU:HD13	2.29	0.57
20:CB:19:THR:O	20:CB:37:VAL:HA	2.04	0.57
23:DB:172:A:H2'	23:DB:173:A:H8	1.67	0.57
23:DB:277:G:H4'	23:DB:278:A:N7	2.19	0.57
23:DB:877:A:H2'	23:DB:900:A:N6	2.20	0.57
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.67	0.57
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.04	0.57
23:DB:2491:U:H5''	23:DB:2570:G:H5''	1.87	0.57
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.67	0.57
24:DI:121:ILE:H	24:DI:121:ILE:CD1	2.14	0.57
25:DC:159:THR:O	25:DC:194:VAL:HG12	2.04	0.57
29:DE:5:LEU:HG	29:DE:12:LEU:HD22	1.86	0.57
35:DV:63:ILE:O	35:DV:70:ILE:HD12	2.03	0.57
37:DL:23:ILE:HD12	49:DR:84:ARG:NE	2.19	0.57
37:DL:119:PRO:HA	37:DL:138:ALA:O	2.04	0.57
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.29	0.57
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.68	0.57
53:D6:38:LEU:HD11	53:D6:66:LEU:HD23	1.85	0.57
1:AA:436:C:O2'	1:AA:437:U:H5'	2.05	0.57
1:AA:532:A:C8	2:AC:192:TYR:HD2	2.21	0.57
1:AA:632:U:H5''	1:AA:633:G:C8	2.39	0.57
1:AA:797:C:O2'	1:AA:798:U:H5'	2.04	0.57
1:AA:840:C:C2	1:AA:842:U:H4'	2.40	0.57
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.05	0.57
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.68	0.57
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.04	0.57
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	1.86	0.57
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.19	0.57
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.69	0.57
21:AU:3:ILE:CD1	21:AU:19:LYS:HA	2.33	0.57
23:BB:118:A:N3	23:BB:178:G:H1'	2.20	0.57
23:BB:125:A:H5'	36:B2:19:ARG:HD3	1.85	0.57
23:BB:716:A:H2'	23:BB:717:C:H5''	1.85	0.57
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.35	0.57
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.84	0.57
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.05	0.57
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.32	0.57
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.04	0.57
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.19	0.57
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.67	0.57
1:CA:404:G:OP1	3:CD:114:ARG:HD3	2.03	0.57
1:CA:502:A:H2'	1:CA:503:C:H6	1.68	0.57
1:CA:953:G:H2'	1:CA:954:G:O4'	2.04	0.57
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.39	0.57
2:CC:76:ILE:HG22	2:CC:80:GLY:HA2	1.86	0.57
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.70	0.57
17:CR:52:ARG:HB3	17:CR:56:ARG:NH2	2.18	0.57
23:DB:364:C:H2'	23:DB:365:U:H6	1.69	0.57
23:DB:1354:A:H2'	23:DB:1355:G:O4'	2.03	0.57
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.05	0.57
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.39	0.57
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.33	0.57
25:DC:94:LEU:HA	25:DC:100:ARG:HA	1.86	0.57
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.69	0.57
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.19	0.57
49:DR:6:GLN:HE21	49:DR:7:SER:C	2.11	0.57
1:AA:586:C:H5''	7:AH:81:GLY:HA2	1.84	0.57
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.04	0.57
6:AG:24:LYS:O	6:AG:28:ILE:HG12	2.04	0.57
7:AH:47:ASP:CG	7:AH:48:PHE:N	2.62	0.57
13:AN:41:TRP:HD1	13:AN:44:VAL:HG23	1.69	0.57
13:AN:71:GLY:O	13:AN:79:SER:HA	2.04	0.57
14:AO:14:GLU:HB3	14:AO:84:ARG:HH22	1.69	0.57
23:BB:151:C:H2'	23:BB:152:A:H8	1.69	0.57
23:BB:702:U:H2'	23:BB:703:U:C6	2.39	0.57
23:BB:1045:C:H4'	23:BB:1047:G:O4'	2.04	0.57
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.68	0.57
23:BB:1758:U:O4	23:BB:2695:U:H4'	2.04	0.57
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.34	0.57
26:BD:33:ARG:HE	26:BD:74:GLU:HB3	1.69	0.57
34:B3:50:SER:C	34:B3:52:GLY:H	2.12	0.57
38:BM:131:VAL:HG12	38:BM:132:THR:H	1.70	0.57
39:BX:39:GLN:O	39:BX:42:LEU:HB2	2.04	0.57
40:BH:103:VAL:HG21	40:BH:110:VAL:H	1.69	0.57
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.04	0.57
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:11:ILE:CG2	46:BU:70:ALA:HB3	2.34	0.57
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.34	0.57
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.85	0.57
1:CA:237:G:H2'	1:CA:238:A:H8	1.69	0.57
1:CA:355:C:O2'	1:CA:356:A:H5'	2.04	0.57
1:CA:470:C:H2'	1:CA:471:U:C6	2.40	0.57
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.69	0.57
1:CA:1298:U:H2'	6:CG:113:LYS:NZ	2.20	0.57
2:CC:185:THR:HG22	2:CC:198:LYS:HA	1.85	0.57
10:CK:80:ASN:HD22	10:CK:80:ASN:N	2.01	0.57
17:CR:44:THR:HB	17:CR:46:THR:HG22	1.87	0.57
23:DB:106:C:H2'	23:DB:107:G:C8	2.37	0.57
23:DB:982:C:O2	23:DB:982:C:H5'	2.03	0.57
23:DB:1098:A:O5'	24:DI:3:LYS:HG2	2.04	0.57
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.67	0.57
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.70	0.57
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.39	0.57
23:DB:2680:U:OP2	26:DD:114:LYS:HD3	2.04	0.57
26:DD:141:ARG:O	26:DD:142:VAL:HG13	2.03	0.57
28:DP:77:SER:OG	28:DP:79:VAL:HG22	2.04	0.57
46:DU:8:ASP:O	46:DU:23:LYS:HA	2.05	0.57
46:DU:11:ILE:CG2	46:DU:70:ALA:HB3	2.33	0.57
48:DG:25:ILE:HD13	48:DG:74:MET:HE2	1.85	0.57
49:DR:19:THR:HB	49:DR:96:VAL:O	2.05	0.57
1:AA:734:G:O2'	17:AR:59:LYS:HD3	2.03	0.57
1:AA:906:A:O2'	1:AA:907:A:H5''	2.03	0.57
1:AA:922:G:H2'	1:AA:923:A:C8	2.39	0.57
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.39	0.57
2:AC:34:SER:O	2:AC:38:VAL:HG22	2.04	0.57
2:AC:120:THR:HG22	2:AC:188:ALA:HB2	1.85	0.57
6:AG:149:ALA:HB2	10:AK:55:ARG:CZ	2.35	0.57
23:BB:582:A:H2'	23:BB:583:G:H8	1.69	0.57
23:BB:585:G:H2'	23:BB:1251:C:H42	1.69	0.57
23:BB:962:G:H21	23:BB:2250:G:N2	1.99	0.57
23:BB:1080:A:O2'	24:BI:126:ARG:HB2	2.04	0.57
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.39	0.57
23:BB:2312:U:O2	47:BF:38:GLY:HA3	2.03	0.57
23:BB:2602:A:OP1	23:BB:2602:A:H3'	2.04	0.57
45:BS:31:GLN:C	45:BS:33:LEU:H	2.13	0.57
46:BU:8:ASP:O	46:BU:23:LYS:HA	2.04	0.57
46:BU:9:GLU:HG3	46:BU:21:ARG:HD2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:104:G:O2'	1:CA:105:G:H5'	2.04	0.57
20:CB:45:THR:HA	20:CB:48:MET:HG3	1.86	0.57
23:DB:1278:C:O3'	42:DN:34:ILE:HG23	2.05	0.57
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.04	0.57
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.05	0.57
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.69	0.57
29:DE:194:LYS:O	29:DE:197:GLU:HB3	2.03	0.57
40:DH:119:ASN:HD21	40:DH:121:VAL:CG1	2.18	0.57
41:DJ:63:ALA:HA	41:DJ:69:ARG:HH12	1.70	0.57
46:DU:9:GLU:HG3	46:DU:21:ARG:HD2	1.86	0.57
48:DG:24:THR:HG22	48:DG:34:ARG:HB3	1.87	0.57
51:DZ:35:SER:CA	51:DZ:50:ARG:HA	2.32	0.57
1:AA:715:A:H2'	1:AA:716:A:C8	2.37	0.57
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.04	0.57
1:AA:1134:G:C2	1:AA:1135:U:H1'	2.39	0.57
12:AM:92:ARG:HA	12:AM:92:ARG:NE	2.20	0.57
16:AQ:75:VAL:HG23	16:AQ:76:ARG:N	2.16	0.57
20:AB:94:ARG:HE	20:AB:94:ARG:H	1.51	0.57
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.04	0.57
23:BB:674:G:H4'	29:BE:69:ARG:HB3	1.84	0.57
23:BB:753:A:H2'	23:BB:754:U:C6	2.39	0.57
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.04	0.57
23:BB:1076:C:H5''	24:BI:94:LYS:HZ1	1.70	0.57
23:BB:1171:G:H3'	23:BB:1172:C:H4'	1.87	0.57
24:BI:116:MET:HE1	24:BI:124:MET:O	2.05	0.57
33:B1:7:LYS:HD3	33:B1:23:THR:HG22	1.87	0.57
39:BX:24:GLU:O	39:BX:28:LEU:HG	2.05	0.57
39:BX:51:ALA:O	39:BX:55:THR:N	2.38	0.57
40:BH:66:ASN:HD22	40:BH:66:ASN:H	1.51	0.57
40:BH:90:LEU:CD1	40:BH:146:VAL:HG11	2.34	0.57
42:BN:54:LEU:HD11	42:BN:62:ASN:HB3	1.86	0.57
47:BF:78:ILE:C	47:BF:79:ARG:HG3	2.28	0.57
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.20	0.57
1:CA:272:C:H2'	1:CA:273:U:C6	2.39	0.57
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.04	0.57
9:CJ:55:PRO:HA	13:CN:80:ARG:HH21	1.69	0.57
13:CN:26:LEU:O	13:CN:30:ILE:N	2.37	0.57
23:DB:27:G:H1'	23:DB:513:A:H61	1.69	0.57
23:DB:124:G:O2'	23:DB:125:A:H5''	2.04	0.57
23:DB:647:G:H2'	23:DB:648:G:C8	2.39	0.57
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.69	0.57
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.04	0.57
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.69	0.57
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.04	0.57
23:DB:1843:C:H4'	25:DC:253:GLY:HA3	1.85	0.57
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.69	0.57
23:DB:1946:U:H5'	53:D6:123:GLU:OE1	2.04	0.57
23:DB:2081:U:OP1	51:DZ:19:SER:HB3	2.05	0.57
23:DB:2212:A:H1'	23:DB:2213:U:H3	1.69	0.57
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.04	0.57
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	2.04	0.57
45:DS:36:LEU:H	45:DS:36:LEU:CD2	2.15	0.57
53:D6:36:ALA:HA	53:D6:39:LEU:HD23	1.87	0.57
1:AA:641:U:H4'	7:AH:106:SER:O	2.05	0.57
1:AA:699:C:C2'	1:AA:700:G:H5''	2.31	0.57
1:AA:713:G:H2'	1:AA:714:G:C8	2.40	0.57
1:AA:719:C:H2'	17:AR:38:ILE:HD11	1.85	0.57
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.69	0.57
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.40	0.57
2:AC:76:ILE:HG22	2:AC:80:GLY:HA2	1.87	0.57
8:AI:56:MET:SD	8:AI:57:VAL:N	2.77	0.57
14:AO:21:ASP:C	14:AO:23:GLY:H	2.12	0.57
23:BB:8:C:O2'	23:BB:9:G:H5'	2.04	0.57
23:BB:104:A:H2'	23:BB:105:C:O4'	2.04	0.57
23:BB:138:U:H2'	23:BB:140:C:H4'	1.86	0.57
23:BB:425:G:O2'	23:BB:426:C:H5'	2.05	0.57
23:BB:587:C:O2'	37:BL:19:LEU:HD13	2.03	0.57
23:BB:947:A:H2'	23:BB:948:C:H6	1.70	0.57
23:BB:1636:U:H2'	23:BB:1637:A:H8	1.69	0.57
23:BB:1655:A:H2'	23:BB:1656:C:O4'	2.05	0.57
23:BB:2283:C:H2'	23:BB:2284:A:H5'	1.85	0.57
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.05	0.57
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.05	0.57
25:BC:185:ALA:C	25:BC:187:CYS:H	2.12	0.57
27:BK:87:LEU:HB2	27:BK:93:GLN:O	2.04	0.57
27:BK:116:ILE:HD12	27:BK:117:SER:N	2.19	0.57
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.23	0.57
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.34	0.57
48:BG:120:ILE:HG13	48:BG:140:ILE:HG22	1.85	0.57
50:BT:25:GLU:OE1	50:BT:30:ILE:HA	2.04	0.57
52:BW:35:ILE:HG12	52:BW:35:ILE:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:42:LYS:HA	53:B6:50:VAL:O	2.05	0.57
53:B6:157:ALA:O	53:B6:161:ILE:HG12	2.05	0.57
1:CA:49:U:O2'	1:CA:50:A:H2'	2.04	0.57
1:CA:1460:C:H2'	1:CA:1461:G:C8	2.38	0.57
1:CA:1534:A:H62	21:CU:44:ARG:CZ	2.17	0.57
8:CI:5:TYR:CD2	8:CI:88:GLU:HB2	2.40	0.57
8:CI:94:ARG:HH11	8:CI:94:ARG:CB	2.16	0.57
10:CK:16:SER:HA	10:CK:79:LYS:HE3	1.87	0.57
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.18	0.57
23:DB:170:U:H2'	23:DB:171:U:H6	1.69	0.57
23:DB:251:A:H2'	23:DB:252:G:O4'	2.05	0.57
23:DB:657:U:H2'	23:DB:658:U:C6	2.39	0.57
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.69	0.57
23:DB:1870:C:H3'	23:DB:1871:A:C8	2.38	0.57
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.40	0.57
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.32	0.57
23:DB:2720:U:H5''	28:DP:52:ARG:HH22	1.65	0.57
23:DB:2723:C:H5''	42:DN:1:MET:HE2	1.87	0.57
23:DB:2849:U:N3	23:DB:2867:G:C8	2.73	0.57
29:DE:29:HIS:HA	29:DE:32:VAL:HG22	1.87	0.57
35:DV:53:LYS:NZ	35:DV:54:ALA:HB3	2.18	0.57
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.40	0.57
40:DH:135:HIS:CG	40:DH:136:SER:H	2.22	0.57
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.04	0.57
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.68	0.57
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.85	0.57
46:DU:35:VAL:HB	46:DU:38:ILE:HB	1.85	0.57
1:AA:706:A:C4'	10:AK:30:ILE:HD11	2.35	0.57
1:AA:1313:U:OP1	18:AS:6:LYS:HD3	2.05	0.57
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.34	0.57
23:BB:417:C:H2'	23:BB:418:C:H6	1.69	0.57
23:BB:561:G:HO2'	44:BQ:44:TYR:HH	1.50	0.57
23:BB:639:U:H2'	23:BB:640:C:C6	2.40	0.57
23:BB:688:U:O2'	23:BB:689:A:H5'	2.05	0.57
23:BB:854:C:O2'	23:BB:855:G:H5'	2.05	0.57
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.40	0.57
23:BB:2254:C:O2	53:B6:150:SER:HB2	2.04	0.57
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.17	0.57
23:BB:2652:C:O2'	23:BB:2653:U:H5'	2.04	0.57
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.39	0.57
25:BC:245:THR:C	25:BC:247:TRP:H	2.13	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:12:THR:HG22	26:BD:13:ARG:H	1.70	0.57
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.04	0.57
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.85	0.57
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.04	0.57
33:B1:8:ILE:CD1	33:B1:51:ALA:HA	2.35	0.57
37:BL:57:LEU:HD13	37:BL:60:ARG:NH1	2.20	0.57
42:BN:13:ASN:C	42:BN:15:SER:H	2.13	0.57
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.04	0.57
45:BS:29:VAL:HA	45:BS:32:ALA:HB3	1.86	0.57
45:BS:36:LEU:H	45:BS:36:LEU:CD2	2.16	0.57
47:BF:34:THR:O	47:BF:89:THR:HA	2.03	0.57
48:BG:15:ASP:HB3	48:BG:26:LYS:N	2.11	0.57
48:BG:53:PRO:HG3	48:BG:61:TRP:CD2	2.40	0.57
49:BR:2:TYR:CB	49:BR:42:ALA:HB2	2.33	0.57
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.40	0.57
53:B6:114:LEU:O	53:B6:118:VAL:HG23	2.05	0.57
53:B6:151:GLU:O	53:B6:155:LYS:HG2	2.05	0.57
1:CA:312:C:H2'	1:CA:313:A:C8	2.40	0.57
1:CA:707:U:H2'	1:CA:708:C:C6	2.40	0.57
1:CA:1352:C:H2'	1:CA:1353:G:H8	1.69	0.57
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.05	0.57
4:CE:81:GLN:HG2	4:CE:148:SER:HA	1.87	0.57
12:CM:11:HIS:H	12:CM:45:SER:HB3	1.69	0.57
13:CN:10:VAL:HB	13:CN:11:LYS:NZ	2.20	0.57
20:CB:49:PHE:HA	20:CB:212:TYR:OH	2.05	0.57
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.69	0.57
21:CU:36:PHE:HD2	21:CU:39:LYS:HD2	1.69	0.57
23:DB:265:A:O2'	23:DB:266:G:H4'	2.05	0.57
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.67	0.57
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.04	0.57
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.40	0.57
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.40	0.57
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.68	0.57
26:DD:46:ARG:NH1	26:DD:85:ALA:HA	2.18	0.57
35:DV:29:ILE:HD13	35:DV:31:TYR:HE2	1.70	0.57
36:D2:31:LEU:HD22	36:D2:42:LEU:HD12	1.86	0.57
39:DX:52:ARG:O	39:DX:55:THR:HB	2.05	0.57
44:DQ:91:ARG:HB2	49:DR:11:GLN:OE1	2.05	0.57
51:DZ:32:ASN:C	51:DZ:33:LEU:HD12	2.30	0.57
1:AA:376:G:H2'	1:AA:377:G:H8	1.70	0.57
1:AA:474:G:H2'	1:AA:475:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1080:A:OP1	4:AE:51:LYS:HD2	2.05	0.57
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.87	0.57
13:AN:52:ARG:HH11	13:AN:58:ARG:HH21	1.53	0.57
15:AP:68:SER:OG	15:AP:71:VAL:HG12	2.05	0.57
20:AB:213:LEU:O	20:AB:216:VAL:HG22	2.04	0.57
21:AU:16:ARG:NH1	21:AU:19:LYS:HE2	2.19	0.57
23:BB:96:C:H4'	39:BX:41:HIS:ND1	2.20	0.57
23:BB:170:U:H2'	23:BB:171:U:H6	1.69	0.57
23:BB:654:A:C2'	23:BB:655:A:H5''	2.34	0.57
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.39	0.57
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.05	0.57
40:BH:112:LYS:C	40:BH:114:GLU:H	2.13	0.57
42:BN:97:ILE:HD12	42:BN:98:LEU:H	1.69	0.57
45:BS:73:LYS:HE3	45:BS:74:ILE:N	2.10	0.57
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.39	0.57
48:BG:36:LEU:HD22	48:BG:36:LEU:N	2.19	0.57
48:BG:94:ARG:C	48:BG:94:ARG:HE	2.13	0.57
48:BG:153:PRO:HA	48:BG:159:LYS:O	2.05	0.57
53:B6:14:MET:HB3	53:B6:168:PHE:CD2	2.40	0.57
1:CA:796:C:OP1	10:CK:127:ARG:HB3	2.05	0.57
1:CA:882:C:O2'	1:CA:883:C:H5'	2.05	0.57
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.05	0.57
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.69	0.57
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.04	0.57
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.86	0.57
13:CN:20:PHE:CD1	13:CN:24:ALA:HB2	2.38	0.57
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.03	0.57
22:DA:5:U:H2'	22:DA:6:G:C8	2.39	0.57
23:DB:582:A:H2'	23:DB:583:G:C8	2.39	0.57
23:DB:616:A:H3'	23:DB:617:G:C8	2.35	0.57
23:DB:813:U:H2'	23:DB:814:C:C6	2.39	0.57
23:DB:960:A:H61	38:DM:82:MET:HE2	1.70	0.57
23:DB:996:A:H4'	44:DQ:91:ARG:CD	2.35	0.57
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.04	0.57
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.19	0.57
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.69	0.57
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.85	0.57
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.57
29:DE:141:MET:O	29:DE:143:LEU:HG	2.05	0.57
47:DF:155:ILE:H	47:DF:155:ILE:HD12	1.70	0.57
53:D6:67:VAL:HG12	53:D6:100:TYR:HE1	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:812:G:N3	1:AA:812:G:H2'	2.19	0.57
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.70	0.57
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.04	0.57
1:AA:1450:U:H2'	1:AA:1452:C:C4	2.40	0.57
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.05	0.57
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.40	0.57
17:AR:33:THR:HG23	17:AR:37:LYS:O	2.05	0.57
20:AB:45:THR:HA	20:AB:48:MET:HG3	1.86	0.57
22:BA:22:U:H2'	22:BA:23:G:C8	2.40	0.57
23:BB:17:G:H2'	23:BB:18:U:H6	1.69	0.57
23:BB:107:G:O2'	23:BB:108:G:H5'	2.05	0.57
23:BB:154:U:H2'	23:BB:155:A:C8	2.40	0.57
23:BB:526:A:N6	23:BB:2626:C:H4'	2.20	0.57
23:BB:736:C:H2'	23:BB:737:C:C6	2.40	0.57
23:BB:813:U:H2'	23:BB:814:C:C6	2.39	0.57
23:BB:909:A:H2'	23:BB:912:C:H5	1.69	0.57
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.40	0.57
23:BB:1507:C:H2'	23:BB:1508:A:H4'	1.86	0.57
23:BB:1533:C:H2'	23:BB:1534:U:C6	2.40	0.57
23:BB:1872:A:H8	23:BB:1872:A:O5'	1.87	0.57
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.40	0.57
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.69	0.57
23:BB:2820:A:OP1	42:BN:4:ARG:HA	2.05	0.57
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.20	0.57
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.05	0.57
37:BL:131:ALA:HA	37:BL:134:ALA:HB3	1.85	0.57
1:CA:60:A:H4'	1:CA:61:G:OP1	2.05	0.57
1:CA:552:U:H2'	1:CA:553:A:C8	2.40	0.57
1:CA:1029:U:O5'	1:CA:1029:U:H6	1.88	0.57
1:CA:1149:C:H2'	1:CA:1150:A:H8	1.68	0.57
1:CA:1492:A:H2'	1:CA:1493:A:C8	2.40	0.57
18:CS:68:HIS:HB3	18:CS:72:GLU:CD	2.30	0.57
20:CB:10:LYS:HB3	20:CB:211:LEU:HD21	1.87	0.57
23:DB:550:C:H2'	23:DB:551:G:H8	1.70	0.57
23:DB:654:A:H2'	23:DB:655:A:H5''	1.86	0.57
23:DB:730:A:O2'	23:DB:731:C:H5'	2.05	0.57
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.20	0.57
23:DB:871:U:H2'	23:DB:872:U:H6	1.70	0.57
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.68	0.57
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.05	0.57
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.70	0.57
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.40	0.57
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.40	0.57
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.87	0.57
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.35	0.57
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.44	0.57
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.18	0.57
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.04	0.57
46:DU:84:PHE:HD2	46:DU:91:LYS:HG2	1.70	0.57
50:DT:14:PRO:HA	50:DT:32:LEU:CB	2.35	0.57
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.05	0.57
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.16	0.57
1:AA:93:U:OP1	1:AA:94:G:H5''	2.05	0.56
1:AA:313:A:H2'	1:AA:314:C:C6	2.40	0.56
1:AA:575:G:H4'	1:AA:576:C:O5'	2.05	0.56
1:AA:636:U:H2'	1:AA:637:C:H6	1.70	0.56
3:AD:84:ASN:HD22	4:AE:101:GLY:HA2	1.68	0.56
8:AI:5:TYR:HD2	8:AI:88:GLU:HB2	1.68	0.56
11:AL:81:ILE:CG2	11:AL:94:TYR:HB3	2.35	0.56
18:AS:35:ARG:HH21	18:AS:52:ASN:HA	1.69	0.56
23:BB:383:C:H5''	23:BB:385:C:OP2	2.05	0.56
23:BB:418:C:H2'	23:BB:419:U:C6	2.40	0.56
23:BB:510:C:H2'	23:BB:511:U:O4'	2.04	0.56
23:BB:1345:C:H5'	23:BB:1396:U:H5	1.70	0.56
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.40	0.56
25:BC:104:LEU:H	25:BC:104:LEU:HD12	1.70	0.56
28:BP:61:ARG:NH1	28:BP:100:ARG:HA	2.20	0.56
29:BE:29:HIS:HA	29:BE:32:VAL:HG22	1.87	0.56
32:B4:7:VAL:HG23	32:B4:35:GLN:CB	2.33	0.56
36:B2:22:MET:SD	36:B2:28:ARG:HG2	2.44	0.56
40:BH:41:LYS:C	40:BH:43:ASN:H	2.11	0.56
42:BN:72:ASP:C	42:BN:74:GLU:H	2.13	0.56
46:BU:81:ARG:HH21	46:BU:81:ARG:N	2.00	0.56
47:BF:134:GLN:NE2	47:BF:136:ILE:HD13	2.20	0.56
1:CA:441:A:H61	1:CA:493:A:H61	1.53	0.56
1:CA:1020:G:N3	1:CA:1020:G:H2'	2.19	0.56
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.05	0.56
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.04	0.56
1:CA:1450:U:H2'	1:CA:1452:C:C4	2.40	0.56
8:CI:5:TYR:HD2	8:CI:88:GLU:HB2	1.70	0.56
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.19	0.56
18:CS:35:ARG:HH21	18:CS:52:ASN:HA	1.68	0.56
22:DA:12:C:H4'	22:DA:13:G:OP1	2.05	0.56
22:DA:35:C:C2'	22:DA:36:C:H5'	2.35	0.56
23:DB:591:U:H1'	34:D3:1:PRO:N	2.20	0.56
23:DB:636:G:O5'	37:DL:128:THR:HG22	2.05	0.56
23:DB:670:A:H5''	37:DL:42:SER:HB2	1.88	0.56
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.39	0.56
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.40	0.56
23:DB:2598:A:OP1	25:DC:233:GLY:HA2	2.03	0.56
23:DB:2900:A:O2'	23:DB:2901:C:H5'	2.05	0.56
27:DK:70:ARG:HB3	27:DK:76:VAL:HG13	1.87	0.56
38:DM:131:VAL:HG12	38:DM:132:THR:H	1.69	0.56
46:DU:66:VAL:O	46:DU:69:VAL:HG22	2.05	0.56
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.20	0.56
53:D6:14:MET:SD	53:D6:164:ILE:HG22	2.45	0.56
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.40	0.56
2:AC:128:MET:H	2:AC:128:MET:HE3	1.69	0.56
10:AK:17:ASP:HB3	10:AK:80:ASN:HD21	1.67	0.56
20:AB:86:CYS:HB3	20:AB:88:GLN:NE2	2.19	0.56
22:BA:12:C:H4'	22:BA:13:G:OP1	2.06	0.56
23:BB:568:U:O2'	23:BB:570:G:N7	2.35	0.56
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.39	0.56
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.05	0.56
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.40	0.56
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.40	0.56
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.12	0.56
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.30	0.56
27:BK:120:PRO:HA	28:BP:65:ASN:ND2	2.19	0.56
47:BF:107:VAL:O	47:BF:110:ILE:HG22	2.04	0.56
50:BT:5:GLU:HA	50:BT:8:LEU:HD12	1.87	0.56
1:CA:509:A:O2'	1:CA:510:A:H5'	2.06	0.56
1:CA:1018:G:H2'	1:CA:1019:A:H8	1.70	0.56
7:CH:47:ASP:CG	7:CH:48:PHE:N	2.63	0.56
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.16	0.56
23:DB:234:U:H2'	23:DB:235:U:H6	1.71	0.56
23:DB:414:C:H2'	23:DB:415:A:C8	2.40	0.56
23:DB:441:U:H2'	23:DB:442:G:C8	2.39	0.56
23:DB:611:C:H2'	23:DB:612:G:O4'	2.04	0.56
23:DB:992:C:H4'	49:DR:74:ILE:HD13	1.87	0.56
23:DB:1843:C:H5''	25:DC:250:GLN:HE21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.39	0.56
23:DB:2391:G:H1'	23:DB:2424:C:N4	2.20	0.56
23:DB:2529:G:H5''	48:DG:174:LYS:HB2	1.87	0.56
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.04	0.56
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.05	0.56
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.04	0.56
46:DU:2:ALA:HB3	46:DU:5:ARG:NH2	2.20	0.56
46:DU:80:ASP:HB2	46:DU:96:LYS:N	2.19	0.56
48:DG:17:LYS:HB3	48:DG:24:THR:H	1.69	0.56
48:DG:66:THR:O	48:DG:70:LEU:HB2	2.06	0.56
51:DZ:69:ALA:HA	51:DZ:72:ARG:HH12	1.71	0.56
53:D6:76:LEU:HD11	53:D6:97:ASP:C	2.30	0.56
1:AA:56:U:H2'	1:AA:57:G:C8	2.38	0.56
1:AA:502:A:H2'	1:AA:503:C:H6	1.69	0.56
1:AA:512:U:O2'	1:AA:513:C:H5'	2.06	0.56
1:AA:549:C:H2'	1:AA:550:G:C8	2.40	0.56
1:AA:763:G:H2'	1:AA:764:C:C6	2.40	0.56
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.28	0.56
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.05	0.56
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.40	0.56
2:AC:2:GLN:HE22	2:AC:3:LYS:NZ	2.04	0.56
5:AF:47:LEU:HD12	5:AF:54:LEU:O	2.04	0.56
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.05	0.56
15:AP:23:ASP:O	15:AP:26:ASN:HB2	2.05	0.56
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.71	0.56
20:AB:45:THR:HG23	20:AB:200:PRO:HG2	1.87	0.56
20:AB:124:THR:HA	20:AB:127:LYS:NZ	2.20	0.56
23:BB:27:G:HO2'	23:BB:28:A:H8	1.50	0.56
23:BB:392:U:O2'	23:BB:393:C:H5'	2.06	0.56
23:BB:485:C:O2'	23:BB:486:C:H5'	2.05	0.56
23:BB:564:C:H1'	44:BQ:36:GLN:OE1	2.06	0.56
23:BB:828:U:H2'	23:BB:829:A:C8	2.40	0.56
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.40	0.56
23:BB:1056:G:H8	23:BB:1056:G:O5'	1.88	0.56
23:BB:1141:U:H5''	41:BJ:27:ARG:HH21	1.71	0.56
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.41	0.56
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.05	0.56
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.05	0.56
23:BB:2212:A:H1'	23:BB:2213:U:N3	2.19	0.56
26:BD:38:LYS:HE2	26:BD:43:ASP:OD2	2.05	0.56
30:BY:6:ILE:N	30:BY:6:ILE:HD13	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B0:12:ARG:HD2	31:B0:16:ARG:NH1	2.21	0.56
31:B0:54:ILE:H	42:BN:118:ARG:HH12	1.52	0.56
34:B3:16:THR:OG1	34:B3:48:MET:HE1	2.05	0.56
40:BH:41:LYS:HA	40:BH:44:ILE:HG13	1.87	0.56
41:BJ:44:TYR:C	41:BJ:44:TYR:HD2	2.12	0.56
42:BN:58:ASP:O	42:BN:59:SER:HB3	2.05	0.56
43:BO:82:ALA:O	43:BO:87:ILE:HB	2.04	0.56
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CG1	2.35	0.56
44:BQ:93:ILE:O	44:BQ:96:ASP:HB3	2.05	0.56
47:BF:92:GLY:HA2	47:BF:95:MET:HE3	1.87	0.56
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.05	0.56
50:BT:7:LEU:HA	50:BT:9:LYS:HE3	1.86	0.56
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.87	0.56
1:CA:401:C:H2'	1:CA:402:G:C8	2.40	0.56
1:CA:415:A:H3'	1:CA:416:G:H8	1.69	0.56
1:CA:868:C:H2'	1:CA:869:G:O4'	2.06	0.56
1:CA:958:A:H61	18:CS:53:GLY:HA3	1.69	0.56
1:CA:991:U:H2'	1:CA:1212:U:C2	2.40	0.56
1:CA:1010:U:O2'	1:CA:1011:C:H5'	2.05	0.56
1:CA:1212:U:H5'	1:CA:1213:A:OP1	2.06	0.56
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.05	0.56
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.05	0.56
6:CG:30:MET:HA	6:CG:38:ALA:HB2	1.87	0.56
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.87	0.56
11:CL:81:ILE:CG2	11:CL:94:TYR:HB3	2.36	0.56
12:CM:10:ASP:HB3	12:CM:45:SER:HB3	1.88	0.56
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.31	0.56
12:CM:94:LEU:HB3	12:CM:95:PRO:HD2	1.86	0.56
12:CM:102:LYS:HG3	12:CM:103:THR:OG1	2.06	0.56
13:CN:70:HIS:O	13:CN:71:GLY:C	2.48	0.56
17:CR:44:THR:C	17:CR:46:THR:H	2.12	0.56
19:CT:79:THR:HA	19:CT:82:ILE:HG12	1.87	0.56
20:CB:96:LEU:CD2	20:CB:146:SER:HB2	2.36	0.56
20:CB:119:GLN:HB3	20:CB:125:PHE:HB2	1.87	0.56
23:DB:76:C:O2'	23:DB:77:G:H5'	2.05	0.56
23:DB:91:A:H1'	23:DB:92:U:C6	2.41	0.56
23:DB:184:C:H2'	23:DB:185:G:C8	2.40	0.56
23:DB:374:A:H61	23:DB:400:G:H1'	1.71	0.56
23:DB:538:A:H2'	23:DB:539:G:O4'	2.04	0.56
23:DB:557:C:H2'	23:DB:558:U:C6	2.40	0.56
23:DB:666:A:H4'	37:DL:48:ARG:HD3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:680:C:H2'	23:DB:681:G:C8	2.39	0.56
23:DB:776:G:H4'	23:DB:777:G:O5'	2.05	0.56
23:DB:823:C:H2'	23:DB:824:U:C6	2.40	0.56
23:DB:850:U:H2'	23:DB:851:C:C6	2.40	0.56
23:DB:873:C:H2'	23:DB:874:G:H8	1.68	0.56
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.05	0.56
23:DB:1098:A:C4	24:DI:3:LYS:O	2.59	0.56
23:DB:1131:G:N2	23:DB:2024:G:H21	2.03	0.56
23:DB:1161:C:H1'	49:DR:9:GLY:HA3	1.86	0.56
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.04	0.56
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.68	0.56
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.05	0.56
23:DB:2318:G:C6	23:DB:2319:G:N1	2.73	0.56
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.21	0.56
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.06	0.56
23:DB:2757:A:H2'	23:DB:2757:A:N3	2.19	0.56
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.41	0.56
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.70	0.56
26:DD:12:THR:HG22	26:DD:13:ARG:H	1.70	0.56
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.35	0.56
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.12	0.56
30:DY:4:ILE:CD1	30:DY:58:GLU:HG3	2.35	0.56
35:DV:70:ILE:HD13	35:DV:71:LYS:N	2.16	0.56
39:DX:39:GLN:O	39:DX:42:LEU:HB2	2.05	0.56
40:DH:40:THR:O	40:DH:42:LYS:N	2.38	0.56
43:DO:70:ALA:O	43:DO:74:VAL:HG23	2.04	0.56
43:DO:82:ALA:O	43:DO:87:ILE:HB	2.05	0.56
48:DG:54:ARG:HD3	48:DG:54:ARG:C	2.31	0.56
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.40	0.56
1:AA:312:C:H2'	1:AA:313:A:H8	1.71	0.56
1:AA:484:G:H4'	1:AA:485:U:H5'	1.88	0.56
1:AA:709:U:H2'	1:AA:710:G:H8	1.70	0.56
1:AA:736:C:H2'	1:AA:737:C:H6	1.70	0.56
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.71	0.56
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.40	0.56
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.70	0.56
3:AD:98:ASP:HB3	3:AD:132:ALA:HB1	1.88	0.56
7:AH:72:GLU:CD	7:AH:72:GLU:H	2.13	0.56
10:AK:43:TRP:HA	10:AK:69:CYS:SG	2.45	0.56
11:AL:43:LYS:HE3	11:AL:44:PRO:HD3	1.88	0.56
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:10:LYS:HB3	20:AB:211:LEU:HD21	1.88	0.56
20:AB:19:THR:O	20:AB:37:VAL:HA	2.05	0.56
22:BA:91:C:H2'	22:BA:92:C:C6	2.41	0.56
23:BB:493:G:H2'	23:BB:494:G:O4'	2.05	0.56
23:BB:667:U:H2'	23:BB:668:A:O4'	2.06	0.56
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.40	0.56
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.40	0.56
23:BB:2019:A:H4'	44:BQ:33:VAL:HG11	1.87	0.56
23:BB:2250:G:H8	23:BB:2250:G:O5'	1.89	0.56
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.05	0.56
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.70	0.56
37:BL:42:SER:C	37:BL:44:GLY:H	2.12	0.56
41:BJ:88:THR:HG22	41:BJ:91:GLU:HG3	1.87	0.56
48:BG:85:LYS:HB2	48:BG:164:ALA:HB3	1.88	0.56
49:BR:19:THR:HB	49:BR:96:VAL:O	2.05	0.56
10:CK:77:GLY:O	10:CK:79:LYS:HE3	2.05	0.56
11:CL:80:LEU:HD13	11:CL:101:LEU:HD11	1.87	0.56
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.06	0.56
23:DB:115:C:O2'	23:DB:116:C:H5'	2.06	0.56
23:DB:285:G:H2'	23:DB:286:U:C6	2.41	0.56
23:DB:639:U:H2'	23:DB:640:C:H6	1.71	0.56
23:DB:813:U:H2'	23:DB:814:C:H6	1.69	0.56
23:DB:1210:G:H5'	23:DB:1212:G:H5'	1.86	0.56
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.71	0.56
23:DB:1439:A:C6	23:DB:1552:A:N7	2.74	0.56
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.39	0.56
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.06	0.56
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.71	0.56
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.05	0.56
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.41	0.56
25:DC:255:LYS:C	25:DC:257:ARG:H	2.14	0.56
26:DD:4:LEU:HD21	26:DD:100:LEU:HB3	1.87	0.56
26:DD:12:THR:HG22	26:DD:13:ARG:N	2.20	0.56
26:DD:122:VAL:H	26:DD:127:PHE:HB2	1.70	0.56
29:DE:61:ARG:NH1	29:DE:64:GLY:HA3	2.20	0.56
35:DV:30:ILE:HA	35:DV:91:PHE:O	2.05	0.56
40:DH:57:LYS:HG3	40:DH:58:LEU:HD23	1.86	0.56
42:DN:58:ASP:O	42:DN:59:SER:HB3	2.04	0.56
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.04	0.56
1:AA:178:C:O2'	1:AA:179:A:H5'	2.06	0.56
1:AA:714:G:N2	1:AA:777:A:H1'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:920:U:H2'	1:AA:921:U:H6	1.70	0.56
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.88	0.56
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.05	0.56
15:AP:1:MET:HA	15:AP:1:MET:HE3	1.86	0.56
16:AQ:66:LEU:HD13	16:AQ:70:LYS:HG2	1.87	0.56
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.06	0.56
22:BA:32:U:H1'	22:BA:52:A:N7	2.21	0.56
23:BB:118:A:OP2	23:BB:119:A:H2'	2.06	0.56
23:BB:252:G:O2'	23:BB:253:C:H5'	2.05	0.56
23:BB:611:C:H2'	23:BB:612:G:O4'	2.05	0.56
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.87	0.56
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.40	0.56
23:BB:1454:C:H1'	42:BN:60:VAL:HG13	1.87	0.56
23:BB:1675:C:H2'	23:BB:1676:A:O4'	2.06	0.56
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.39	0.56
23:BB:2147:A:H5'	23:BB:2148:G:C4'	2.36	0.56
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.71	0.56
24:BI:10:LEU:O	24:BI:10:LEU:HD12	2.05	0.56
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.86	0.56
25:BC:202:ARG:NH1	25:BC:213:ARG:HE	2.03	0.56
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.35	0.56
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.88	0.56
40:BH:27:ARG:H	40:BH:31:VAL:CG2	2.19	0.56
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.16	0.56
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.88	0.56
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.17	0.56
47:BF:120:SER:HG	47:BF:127:TYR:HD2	1.54	0.56
1:CA:237:G:H5''	16:CQ:26:ARG:NH2	2.21	0.56
1:CA:658:C:O2'	1:CA:659:U:H5'	2.06	0.56
3:CD:94:GLU:CD	3:CD:99:ASN:HD21	2.14	0.56
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.40	0.56
5:CF:71:ILE:O	5:CF:75:GLU:HG3	2.06	0.56
12:CM:3:ILE:HA	12:CM:56:ARG:HH11	1.69	0.56
23:DB:178:G:O2'	23:DB:179:C:H5'	2.06	0.56
23:DB:283:G:H3'	23:DB:284:U:H5''	1.87	0.56
23:DB:521:U:H2'	23:DB:522:A:C8	2.41	0.56
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.06	0.56
23:DB:2144:G:H2'	23:DB:2145:C:O3'	2.05	0.56
23:DB:2189:U:H2'	23:DB:2190:G:H5'	1.86	0.56
23:DB:2876:G:H5''	28:DP:2:ASN:HB2	1.87	0.56
30:DY:15:ARG:O	30:DY:20:LYS:HE3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.54	0.56
40:DH:65:ALA:CB	40:DH:138:VAL:HG21	2.29	0.56
41:DJ:44:TYR:C	41:DJ:44:TYR:HD2	2.13	0.56
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.15	0.56
42:DN:54:LEU:HD11	42:DN:62:ASN:HB3	1.87	0.56
44:DQ:93:ILE:O	44:DQ:96:ASP:HB3	2.06	0.56
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.34	0.56
53:D6:135:GLU:O	53:D6:139:LYS:HG3	2.06	0.56
1:AA:129:A:H1'	1:AA:130:A:C8	2.40	0.56
1:AA:501:C:H2'	1:AA:502:A:H8	1.69	0.56
1:AA:1123:U:O2'	1:AA:1124:G:H5'	2.06	0.56
1:AA:1149:C:H2'	1:AA:1150:A:H8	1.70	0.56
2:AC:185:THR:HG22	2:AC:198:LYS:HA	1.87	0.56
4:AE:81:GLN:H	4:AE:146:MET:HE3	1.69	0.56
6:AG:134:VAL:HB	6:AG:137:ARG:NH2	2.20	0.56
8:AI:62:LEU:HD22	8:AI:62:LEU:H	1.70	0.56
8:AI:94:ARG:HH11	8:AI:94:ARG:CB	2.16	0.56
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.21	0.56
23:BB:1373:A:H2'	23:BB:1374:G:O4'	2.06	0.56
23:BB:2491:U:H5''	23:BB:2570:G:H5''	1.88	0.56
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.71	0.56
28:BP:77:SER:OG	28:BP:79:VAL:HG22	2.04	0.56
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.85	0.56
50:BT:69:ARG:HB3	50:BT:74:ILE:HD12	1.87	0.56
1:CA:634:C:H2'	1:CA:635:A:C8	2.41	0.56
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.39	0.56
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.41	0.56
2:CC:39:ARG:NH1	2:CC:56:ILE:HD12	2.21	0.56
6:CG:56:SER:OG	6:CG:58:LEU:HG	2.06	0.56
7:CH:72:GLU:CD	7:CH:72:GLU:H	2.12	0.56
8:CI:28:VAL:HA	8:CI:32:ARG:O	2.05	0.56
8:CI:44:ARG:O	8:CI:47:VAL:HG22	2.05	0.56
20:CB:47:PRO:O	20:CB:51:GLU:HB2	2.05	0.56
20:CB:68:PHE:O	20:CB:90:PHE:HA	2.06	0.56
20:CB:205:ALA:O	20:CB:209:VAL:HG22	2.05	0.56
21:CU:3:ILE:HD13	21:CU:19:LYS:HA	1.87	0.56
23:DB:479:A:O2'	23:DB:481:G:H5'	2.05	0.56
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.21	0.56
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.41	0.56
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.06	0.56
23:DB:2742:G:O2'	23:DB:2743:U:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.41	0.56
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.31	0.56
1:AA:621:A:H2'	1:AA:622:A:C8	2.40	0.56
1:AA:1086:U:H3	1:AA:1099:G:N2	1.95	0.56
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.70	0.56
8:AI:56:MET:HG3	8:AI:57:VAL:HG23	1.87	0.56
11:AL:107:LYS:H	11:AL:107:LYS:HZ2	1.53	0.56
12:AM:11:HIS:H	12:AM:45:SER:HB3	1.69	0.56
13:AN:70:HIS:O	13:AN:71:GLY:C	2.49	0.56
13:AN:73:LEU:HD12	13:AN:83:VAL:HG21	1.86	0.56
16:AQ:31:PRO:O	16:AQ:32:ILE:HB	2.04	0.56
17:AR:44:THR:HB	17:AR:46:THR:HG22	1.88	0.56
21:AU:40:PRO:C	21:AU:42:THR:H	2.12	0.56
23:BB:538:A:H2'	23:BB:539:G:O4'	2.05	0.56
23:BB:569:U:H2'	23:BB:570:G:O4'	2.05	0.56
23:BB:1649:G:O2'	23:BB:1650:A:H5'	2.05	0.56
23:BB:1946:U:O2'	23:BB:1947:C:H5'	2.06	0.56
23:BB:2019:A:H2	23:BB:2035:G:H22	1.54	0.56
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.71	0.56
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.38	0.56
23:BB:2391:G:H1'	23:BB:2424:C:H41	1.70	0.56
37:BL:89:VAL:HA	37:BL:121:THR:O	2.05	0.56
37:BL:119:PRO:HA	37:BL:138:ALA:O	2.05	0.56
41:BJ:30:THR:HG23	41:BJ:31:GLU:H	1.70	0.56
44:BQ:108:LEU:HA	49:BR:48:LYS:HD3	1.86	0.56
46:BU:73:ASN:HD21	46:BU:76:THR:H	1.53	0.56
46:BU:81:ARG:H	46:BU:81:ARG:NH2	2.04	0.56
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.15	0.56
1:CA:373:A:H3'	1:CA:373:A:OP2	2.05	0.56
1:CA:413:G:N1	3:CD:32:LYS:HE2	2.20	0.56
1:CA:478:A:H2'	1:CA:479:U:O4'	2.05	0.56
1:CA:1014:A:H4'	18:CS:13:HIS:CD2	2.40	0.56
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.41	0.56
2:CC:19:SER:O	13:CN:93:PRO:HB3	2.06	0.56
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.05	0.56
3:CD:123:MET:HB2	3:CD:128:VAL:HA	1.88	0.56
5:CF:47:LEU:HD12	5:CF:54:LEU:O	2.05	0.56
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.04	0.56
10:CK:17:ASP:HB3	10:CK:80:ASN:HD21	1.67	0.56
10:CK:70:ALA:C	10:CK:72:ALA:H	2.13	0.56
10:CK:95:THR:HG23	10:CK:96:ILE:H	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:78:ARG:NH2	18:CS:64:GLU:HB2	2.21	0.56
13:CN:63:CYS:CB	13:CN:67:GLY:H	2.06	0.56
14:CO:49:ASP:CG	14:CO:52:SER:HB2	2.30	0.56
14:CO:79:THR:HA	14:CO:82:ILE:HD12	1.87	0.56
19:CT:3:ILE:O	19:CT:4:LYS:HB2	2.05	0.56
20:CB:202:ASN:HD22	20:CB:204:ASP:N	1.94	0.56
23:DB:154:U:H2'	23:DB:155:A:C8	2.40	0.56
23:DB:347:A:H2'	23:DB:348:A:C8	2.40	0.56
23:DB:822:G:O2'	23:DB:823:C:H5'	2.05	0.56
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.85	0.56
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.05	0.56
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.53	0.56
23:DB:2389:G:H5''	23:DB:2390:U:H5'	1.87	0.56
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.40	0.56
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.06	0.56
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.21	0.56
40:DH:5:LEU:HD12	40:DH:17:ASP:HB2	1.88	0.56
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.88	0.56
49:DR:19:THR:HG22	49:DR:97:LYS:HA	1.88	0.56
1:AA:85:U:H4'	1:AA:86:G:H4'	1.88	0.56
1:AA:270:A:H2'	1:AA:271:C:H6	1.70	0.56
1:AA:413:G:N1	3:AD:32:LYS:HE2	2.21	0.56
1:AA:662:U:O2'	1:AA:836:G:H5''	2.05	0.56
1:AA:1240:U:H5	6:AG:115:MET:HE3	1.70	0.56
1:AA:1314:C:H3'	18:AS:5:LYS:NZ	2.21	0.56
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.88	0.56
5:AF:43:GLY:HA2	5:AF:58:HIS:CE1	2.41	0.56
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	1.86	0.56
6:AG:56:SER:OG	6:AG:58:LEU:HG	2.05	0.56
10:AK:108:ASN:HD21	21:AU:6:ARG:HD2	1.70	0.56
12:AM:10:ASP:HB3	12:AM:45:SER:HB3	1.86	0.56
14:AO:60:VAL:HG11	23:BB:715:A:O4'	2.05	0.56
20:AB:186:VAL:O	20:AB:200:PRO:HA	2.06	0.56
23:BB:687:C:H2'	23:BB:688:U:O4'	2.06	0.56
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.41	0.56
23:BB:2135:A:H61	23:BB:2156:G:C2'	2.19	0.56
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.69	0.56
26:BD:4:LEU:HD21	26:BD:100:LEU:HB3	1.87	0.56
28:BP:4:ILE:HA	28:BP:7:LEU:HD13	1.88	0.56
29:BE:5:LEU:CD1	29:BE:10:SER:HB2	2.25	0.56
29:BE:175:ILE:HD11	29:BE:180:LEU:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HB	1.88	0.56
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.87	0.56
52:BW:28:GLU:HG3	52:BW:29:SER:H	1.71	0.56
1:CA:69:G:N2	1:CA:71:A:H62	2.04	0.56
1:CA:635:A:H2'	1:CA:636:U:C6	2.41	0.56
1:CA:672:U:H2'	1:CA:673:A:H8	1.69	0.56
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.70	0.56
10:CK:12:ARG:N	10:CK:76:TYR:HA	2.21	0.56
10:CK:92:ARG:NH1	21:CU:20:ARG:HH21	2.02	0.56
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.36	0.56
13:CN:14:ALA:HB1	13:CN:18:LYS:HE3	1.87	0.56
16:CQ:6:THR:HG22	16:CQ:61:ARG:HB3	1.88	0.56
23:DB:141:G:H2'	23:DB:142:A:O4'	2.06	0.56
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.41	0.56
23:DB:2001:C:H4'	23:DB:2689:U:O2'	2.06	0.56
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.70	0.56
23:DB:2210:U:N3	23:DB:2212:A:N7	2.54	0.56
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.20	0.56
23:DB:2393:U:H5''	37:DL:62:PRO:HG3	1.87	0.56
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.31	0.56
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.04	0.56
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.04	0.56
26:DD:9:VAL:O	28:DP:4:ILE:HD11	2.06	0.56
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.06	0.56
29:DE:29:HIS:C	29:DE:31:VAL:H	2.14	0.56
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.36	0.56
42:DN:78:LYS:HG3	42:DN:83:LEU:HG	1.88	0.56
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	2.05	0.56
47:DF:34:THR:O	47:DF:89:THR:HA	2.06	0.56
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.06	0.56
1:AA:71:A:H61	1:AA:99:C:H1'	1.70	0.56
1:AA:236:A:H2'	1:AA:237:G:C8	2.41	0.56
1:AA:328:C:H4'	1:AA:329:A:H5''	1.88	0.56
1:AA:394:G:O2'	1:AA:395:C:H5'	2.06	0.56
1:AA:861:G:O2'	1:AA:862:C:H5'	2.05	0.56
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.39	0.56
1:AA:1137:C:O2'	1:AA:1138:G:H5''	2.06	0.56
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.69	0.56
2:AC:82:ASP:O	2:AC:86:LEU:HG	2.04	0.56
20:AB:49:PHE:HA	20:AB:212:TYR:OH	2.05	0.56
20:AB:122:ASP:C	20:AB:124:THR:H	2.14	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:234:U:H2'	23:BB:235:U:H6	1.71	0.56
23:BB:657:U:H2'	23:BB:658:U:C6	2.41	0.56
23:BB:697:G:H2'	23:BB:698:C:C6	2.41	0.56
23:BB:1263:U:O2'	31:B0:7:PRO:HD2	2.05	0.56
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.06	0.56
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.06	0.56
23:BB:2822:G:H2'	23:BB:2823:A:H5''	1.88	0.56
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.40	0.56
31:B0:38:LEU:HD22	31:B0:41:HIS:NE2	2.21	0.56
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.19	0.56
46:BU:24:VAL:HA	46:BU:35:VAL:HA	1.86	0.56
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.06	0.56
50:BT:74:ILE:HG13	50:BT:75:GLY:H	1.70	0.56
1:CA:376:G:OP1	15:CP:5:ARG:HB2	2.05	0.56
1:CA:599:C:O2'	1:CA:600:A:H5'	2.05	0.56
1:CA:783:C:O2'	1:CA:784:A:H5'	2.06	0.56
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.06	0.56
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.88	0.56
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.36	0.56
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.21	0.56
23:DB:654:A:O2'	23:DB:655:A:H5''	2.06	0.56
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.71	0.56
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.41	0.56
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.06	0.56
43:DO:58:ILE:O	43:DO:62:LEU:HD23	2.06	0.56
46:DU:72:PHE:HA	46:DU:78:LYS:O	2.06	0.56
47:DF:107:VAL:O	47:DF:110:ILE:HG22	2.05	0.56
49:DR:5:PHE:O	49:DR:11:GLN:HA	2.06	0.56
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	1.88	0.56
1:AA:373:A:H3'	1:AA:373:A:OP2	2.06	0.56
1:AA:415:A:H3'	1:AA:416:G:H8	1.70	0.56
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.41	0.56
8:AI:41:GLU:C	8:AI:43:ALA:H	2.14	0.56
23:BB:125:A:H3'	23:BB:126:A:H5'	1.88	0.56
23:BB:282:A:H2'	23:BB:283:G:C8	2.41	0.56
23:BB:864:G:O2'	23:BB:865:C:H5'	2.06	0.56
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.15	0.56
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.71	0.56
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.71	0.56
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.40	0.56
23:BB:2060:A:H3'	29:BE:63:LYS:HZ1	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.71	0.56
26:BD:159:LYS:HZ2	26:BD:160:LYS:N	2.04	0.56
28:BP:36:LYS:C	28:BP:37:LYS:HD3	2.30	0.56
29:BE:29:HIS:C	29:BE:31:VAL:H	2.14	0.56
37:BL:74:THR:HA	37:BL:107:PHE:O	2.06	0.56
40:BH:139:PHE:O	40:BH:140:ALA:CB	2.54	0.56
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.36	0.56
45:BS:7:HIS:HB3	45:BS:103:ILE:HB	1.88	0.56
46:BU:40:LEU:HA	46:BU:60:LYS:O	2.06	0.56
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.06	0.56
1:CA:797:C:O2'	1:CA:798:U:H5'	2.06	0.56
1:CA:861:G:O2'	1:CA:862:C:H5'	2.05	0.56
1:CA:939:G:H5''	6:CG:101:ARG:CZ	2.36	0.56
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.40	0.56
1:CA:1240:U:H5	6:CG:115:MET:HE3	1.71	0.56
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.41	0.56
1:CA:1491:G:C5	55:CA:1662:LLL:H21	2.41	0.56
2:CC:30:ASP:HA	13:CN:64:ARG:HH12	1.70	0.56
2:CC:139:ASN:O	2:CC:143:LEU:HD23	2.06	0.56
5:CF:38:ARG:HD3	5:CF:97:THR:HA	1.87	0.56
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.06	0.56
6:CG:121:ASN:N	6:CG:121:ASN:HD22	2.03	0.56
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.06	0.56
16:CQ:56:ASP:N	16:CQ:81:ALA:HB2	2.21	0.56
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.35	0.56
23:DB:38:A:N3	29:DE:43:THR:HB	2.20	0.56
23:DB:966:G:HO2'	23:DB:2267:A:H2	1.54	0.56
23:DB:1559:U:H3'	23:DB:1560:G:H5'	1.88	0.56
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.05	0.56
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.70	0.56
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.41	0.56
23:DB:2652:C:O2'	23:DB:2653:U:H5'	2.06	0.56
25:DC:149:LYS:HG2	25:DC:152:GLN:NE2	2.22	0.56
26:DD:69:ALA:N	26:DD:73:VAL:HB	2.21	0.56
37:DL:89:VAL:HA	37:DL:121:THR:O	2.06	0.56
41:DJ:55:ILE:O	41:DJ:55:ILE:HG13	2.05	0.56
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.36	0.56
47:DF:163:GLU:HA	47:DF:166:ARG:CD	2.30	0.56
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.36	0.56
1:AA:66:A:O2'	1:AA:67:C:H5'	2.06	0.55
1:AA:211:G:H2'	1:AA:212:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:336:A:O2'	1:AA:337:G:H5'	2.06	0.55
1:AA:407:U:O2'	3:AD:112:GLU:HG3	2.06	0.55
1:AA:1008:U:H2'	1:AA:1009:U:H5''	1.87	0.55
1:AA:1033:G:H2'	1:AA:1034:G:O4'	2.06	0.55
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.40	0.55
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.31	0.55
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.06	0.55
2:AC:190:THR:HG22	2:AC:191:THR:N	2.20	0.55
3:AD:94:GLU:CD	3:AD:99:ASN:HD21	2.14	0.55
7:AH:105:THR:OG1	7:AH:110:MET:HE3	2.07	0.55
22:BA:106:G:H2'	22:BA:107:G:C8	2.41	0.55
23:BB:5:A:H2'	23:BB:6:A:H8	1.70	0.55
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.07	0.55
23:BB:518:G:H4'	45:BS:18:ARG:NH2	2.21	0.55
23:BB:575:A:O2'	23:BB:576:U:H5'	2.06	0.55
23:BB:1987:A:H2'	23:BB:1988:G:C8	2.41	0.55
23:BB:2560:A:H2'	23:BB:2561:U:C6	2.41	0.55
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.70	0.55
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.41	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.55
29:BE:155:GLU:O	29:BE:159:LEU:HB2	2.06	0.55
33:B1:3:GLY:C	33:B1:5:ARG:H	2.14	0.55
43:BO:49:VAL:HG11	43:BO:82:ALA:CA	2.36	0.55
44:BQ:34:ALA:O	44:BQ:37:ALA:HB3	2.06	0.55
44:BQ:68:ALA:HB1	44:BQ:73:ILE:HG23	1.88	0.55
46:BU:70:ALA:HB1	46:BU:79:ALA:CB	2.28	0.55
48:BG:25:ILE:HD13	48:BG:74:MET:HE2	1.88	0.55
1:CA:476:U:H2'	1:CA:477:C:C6	2.41	0.55
1:CA:586:C:H5''	7:CH:81:GLY:HA2	1.88	0.55
1:CA:676:A:H2'	1:CA:677:U:C6	2.41	0.55
1:CA:737:C:H2'	1:CA:738:C:H6	1.71	0.55
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	2.03	0.55
5:CF:43:GLY:HA2	5:CF:58:HIS:CE1	2.41	0.55
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.88	0.55
7:CH:83:ARG:C	7:CH:84:ILE:HG13	2.31	0.55
10:CK:45:THR:HG23	10:CK:48:GLY:HA3	1.87	0.55
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.20	0.55
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.87	0.55
18:CS:6:LYS:HD2	18:CS:6:LYS:N	2.20	0.55
22:DA:22:U:H2'	22:DA:23:G:C8	2.40	0.55
22:DA:91:C:H2'	22:DA:92:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:425:G:O2'	23:DB:426:C:H5'	2.07	0.55
23:DB:674:G:H4'	29:DE:69:ARG:HB3	1.88	0.55
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.06	0.55
23:DB:1580:A:H2'	23:DB:1581:G:O4'	2.05	0.55
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.41	0.55
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.41	0.55
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.06	0.55
23:DB:2386:A:N3	52:DW:38:ARG:HD2	2.21	0.55
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.41	0.55
23:DB:2498:C:O2'	23:DB:2499:C:H5'	2.05	0.55
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.36	0.55
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.21	0.55
28:DP:4:ILE:HA	28:DP:7:LEU:HD13	1.88	0.55
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.71	0.55
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	1.88	0.55
35:DV:63:ILE:HD12	35:DV:63:ILE:N	2.21	0.55
39:DX:51:ALA:O	39:DX:55:THR:N	2.36	0.55
43:DO:70:ALA:C	43:DO:72:ALA:H	2.13	0.55
48:DG:84:LYS:HG3	48:DG:131:VAL:CA	2.36	0.55
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.06	0.55
1:AA:323:U:H2'	1:AA:324:G:O4'	2.06	0.55
1:AA:478:A:H2'	1:AA:479:U:O4'	2.06	0.55
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.88	0.55
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.06	0.55
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.89	0.55
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.05	0.55
10:AK:80:ASN:HD22	10:AK:80:ASN:N	2.04	0.55
13:AN:30:ILE:HG21	13:AN:44:VAL:CG2	2.35	0.55
16:AQ:16:MET:HB3	16:AQ:19:SER:HB2	1.86	0.55
18:AS:29:PRO:HA	18:AS:47:THR:O	2.06	0.55
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.22	0.55
23:BB:559:G:H1'	44:BQ:55:GLN:HE21	1.71	0.55
23:BB:1372:U:H1'	23:BB:2214:C:C4	2.41	0.55
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.41	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.36	0.55
25:BC:90:ILE:CD1	25:BC:102:TYR:HB3	2.37	0.55
25:BC:121:ALA:HB3	25:BC:129:LEU:HD11	1.88	0.55
26:BD:141:ARG:O	26:BD:141:ARG:HG3	2.06	0.55
37:BL:57:LEU:HA	37:BL:60:ARG:NE	2.21	0.55
40:BH:18:GLN:HE21	40:BH:39:ALA:HB1	1.71	0.55
46:BU:64:ILE:HG13	46:BU:65:GLN:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:39:LEU:HG	53:B6:40:HIS:H	1.70	0.55
1:CA:633:G:H2'	1:CA:634:C:C6	2.42	0.55
1:CA:821:G:O2'	1:CA:822:U:H5'	2.06	0.55
1:CA:1173:U:H2'	1:CA:1174:G:C8	2.41	0.55
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.41	0.55
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	2.07	0.55
10:CK:36:ARG:HH11	10:CK:36:ARG:HG3	1.70	0.55
12:CM:15:VAL:HG22	12:CM:33:LEU:HD12	1.88	0.55
19:CT:79:THR:HA	19:CT:82:ILE:CG1	2.36	0.55
23:DB:1534:U:H2'	23:DB:1536:C:C5	2.40	0.55
23:DB:1649:G:O2'	23:DB:1650:A:H5'	2.06	0.55
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.40	0.55
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.06	0.55
23:DB:2680:U:H5'	26:DD:194:PRO:HA	1.88	0.55
26:DD:16:THR:HB	26:DD:18:ASP:OD1	2.07	0.55
26:DD:148:GLN:O	26:DD:149:ASN:HB2	2.05	0.55
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.31	0.55
35:DV:31:TYR:CB	35:DV:37:PRO:HG3	2.36	0.55
43:DO:25:ARG:O	43:DO:39:VAL:HA	2.06	0.55
43:DO:49:VAL:HG11	43:DO:82:ALA:CA	2.36	0.55
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CG1	2.36	0.55
48:DG:53:PRO:HG3	48:DG:61:TRP:CD2	2.40	0.55
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.05	0.55
51:DZ:40:VAL:O	51:DZ:42:SER:N	2.39	0.55
1:AA:168:G:O2'	1:AA:169:C:H5'	2.06	0.55
4:AE:21:SER:HB2	4:AE:28:ARG:HE	1.70	0.55
6:AG:30:MET:HA	6:AG:38:ALA:HB2	1.87	0.55
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.70	0.55
12:AM:71:GLU:HA	12:AM:74:MET:HG2	1.89	0.55
17:AR:44:THR:C	17:AR:46:THR:H	2.15	0.55
20:AB:95:TRP:HZ2	20:AB:100:LEU:HD22	1.71	0.55
23:BB:151:C:H2'	23:BB:152:A:C8	2.41	0.55
23:BB:870:U:O2'	23:BB:871:U:H5'	2.06	0.55
23:BB:1434:A:H62	23:BB:1558:C:H42	1.55	0.55
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.41	0.55
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.07	0.55
23:BB:2743:U:H2'	23:BB:2744:G:O4'	2.05	0.55
23:BB:2745:C:H1'	48:BG:142:GLN:OE1	2.06	0.55
23:BB:2860:A:H8	23:BB:2860:A:O5'	1.89	0.55
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.21	0.55
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:25:ARG:HG3	43:BO:27:VAL:HG23	1.89	0.55
46:BU:40:LEU:H	46:BU:40:LEU:HD12	1.70	0.55
46:BU:66:VAL:O	46:BU:69:VAL:HG22	2.06	0.55
50:BT:30:ILE:HG12	50:BT:31:VAL:N	2.20	0.55
50:BT:50:LEU:C	50:BT:52:GLU:H	2.14	0.55
53:B6:141:LYS:HE3	53:B6:142:LYS:CE	2.36	0.55
1:CA:61:G:H4'	1:CA:386:C:O2'	2.06	0.55
1:CA:336:A:O2'	1:CA:337:G:H5'	2.06	0.55
1:CA:1200:C:C3'	1:CA:1201:A:H5'	2.36	0.55
1:CA:1493:A:H2'	23:DB:1913:A:H61	1.71	0.55
2:CC:57:GLU:O	2:CC:63:ILE:HA	2.06	0.55
5:CF:6:ILE:HD11	5:CF:8:PHE:HD2	1.72	0.55
23:DB:145:C:H2'	23:DB:146:A:C8	2.40	0.55
23:DB:637:A:H5''	37:DL:112:LEU:HD22	1.89	0.55
23:DB:1522:A:OP1	23:DB:1522:A:H8	1.90	0.55
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.41	0.55
23:DB:2675:A:N1	23:DB:2732:G:O6	2.39	0.55
23:DB:2893:A:H5''	23:DB:2894:G:H5'	1.88	0.55
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.22	0.55
39:DX:1:MET:HB3	39:DX:5:GLU:OE1	2.05	0.55
40:DH:27:ARG:H	40:DH:31:VAL:HG23	1.70	0.55
45:DS:73:LYS:HE3	45:DS:74:ILE:N	2.09	0.55
50:DT:50:LEU:C	50:DT:52:GLU:H	2.14	0.55
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.88	0.55
1:AA:312:C:H2'	1:AA:313:A:C8	2.41	0.55
1:AA:520:A:OP1	11:AL:48:LEU:HD12	2.07	0.55
1:AA:634:C:H2'	1:AA:635:A:C8	2.41	0.55
1:AA:883:C:O2'	1:AA:884:U:H5'	2.06	0.55
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.42	0.55
1:AA:1226:C:H5''	12:AM:101:THR:HB	1.88	0.55
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.41	0.55
2:AC:133:MET:O	2:AC:137:VAL:HG23	2.06	0.55
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.06	0.55
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HB3	1.88	0.55
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.87	0.55
13:AN:16:ALA:HA	13:AN:54:SER:O	2.07	0.55
14:AO:79:THR:HA	14:AO:82:ILE:HD12	1.88	0.55
23:BB:994:C:H3'	44:BQ:53:LYS:NZ	2.21	0.55
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.89	0.55
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.07	0.55
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:255:LYS:C	25:BC:257:ARG:H	2.13	0.55
29:BE:48:THR:HG23	29:BE:88:ARG:HH12	1.71	0.55
30:BY:28:LEU:HA	30:BY:33:HIS:HD2	1.71	0.55
38:BM:17:ASN:ND2	38:BM:95:LEU:HG	2.20	0.55
46:BU:73:ASN:C	46:BU:75:ALA:H	2.14	0.55
53:B6:30:THR:CG2	53:B6:179:LYS:HD3	2.36	0.55
1:CA:95:C:H2'	1:CA:95:C:O2	2.05	0.55
1:CA:674:G:H2'	1:CA:675:A:C8	2.38	0.55
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.55
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.41	0.55
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.41	0.55
3:CD:56:GLU:O	3:CD:60:VAL:HG12	2.06	0.55
4:CE:99:SER:C	4:CE:101:GLY:H	2.14	0.55
11:CL:35:ARG:HA	11:CL:35:ARG:HH11	1.69	0.55
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.06	0.55
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.88	0.55
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.05	0.55
26:DD:33:ARG:HE	26:DD:74:GLU:HB3	1.71	0.55
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.41	0.55
38:DM:53:MET:HE1	38:DM:103:TYR:CD2	2.41	0.55
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.89	0.55
44:DQ:91:ARG:HG2	44:DQ:93:ILE:HG22	1.87	0.55
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.40	0.55
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.89	0.55
50:DT:30:ILE:HG12	50:DT:31:VAL:N	2.20	0.55
53:D6:33:ALA:HB2	53:D6:63:PRO:HA	1.87	0.55
1:AA:441:A:H61	1:AA:493:A:H61	1.53	0.55
1:AA:1014:A:H4'	18:AS:13:HIS:CD2	2.42	0.55
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.42	0.55
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.71	0.55
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.06	0.55
12:AM:15:VAL:HG22	12:AM:33:LEU:HD12	1.87	0.55
23:BB:454:A:H3'	23:BB:455:C:H5'	1.89	0.55
23:BB:785:G:H2'	23:BB:786:C:C6	2.41	0.55
23:BB:863:A:H2'	23:BB:864:G:H8	1.71	0.55
23:BB:1779:U:C5	23:BB:1784:A:N7	2.75	0.55
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.41	0.55
40:BH:9:VAL:HG12	40:BH:12:LEU:HG	1.87	0.55
40:BH:54:LEU:HD12	40:BH:55:GLU:H	1.71	0.55
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.07	0.55
42:BN:65:LEU:O	42:BN:68:ALA:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.06	0.55
48:BG:153:PRO:CG	48:BG:162:ARG:HB3	2.35	0.55
53:B6:12:SER:O	53:B6:16:LYS:HD2	2.06	0.55
53:B6:84:ARG:HG3	53:B6:85:ASP:OD1	2.07	0.55
1:CA:35:G:H2'	1:CA:36:C:H6	1.69	0.55
1:CA:140:U:H2'	1:CA:141:G:H8	1.71	0.55
1:CA:501:C:H2'	1:CA:502:A:C8	2.41	0.55
1:CA:692:U:C2	1:CA:694:A:H5''	2.41	0.55
1:CA:845:A:H5''	1:CA:846:G:C8	2.42	0.55
1:CA:880:C:O2'	1:CA:881:G:H5'	2.07	0.55
1:CA:986:U:H2'	1:CA:987:G:O4'	2.06	0.55
1:CA:1179:A:H4'	8:CI:104:THR:HA	1.87	0.55
1:CA:1260:G:H4'	1:CA:1283:U:O2'	2.07	0.55
4:CE:28:ARG:CZ	4:CE:30:PHE:HB3	2.37	0.55
9:CJ:44:THR:HG23	9:CJ:69:THR:C	2.32	0.55
12:CM:77:LYS:HG2	12:CM:81:ASP:OD1	2.06	0.55
13:CN:60:ARG:NH2	13:CN:69:PRO:HB3	2.21	0.55
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.88	0.55
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.69	0.55
23:DB:354:A:H2'	23:DB:355:U:C6	2.42	0.55
23:DB:718:A:H2'	23:DB:719:C:H5'	1.88	0.55
23:DB:917:A:H5''	23:DB:2268:A:N6	2.22	0.55
23:DB:1203:U:H4'	37:DL:3:LEU:HD12	1.87	0.55
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.06	0.55
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.41	0.55
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.72	0.55
27:DK:87:LEU:HB2	27:DK:93:GLN:O	2.06	0.55
27:DK:120:PRO:HA	28:DP:65:ASN:ND2	2.22	0.55
28:DP:36:LYS:C	28:DP:37:LYS:HD3	2.32	0.55
37:DL:81:ASP:HA	37:DL:84:LYS:HE3	1.89	0.55
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.87	0.55
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.06	0.55
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.37	0.55
52:DW:39:GLN:CG	52:DW:40:ARG:N	2.69	0.55
53:D6:33:ALA:HB2	53:D6:63:PRO:O	2.06	0.55
1:AA:81:A:O2'	1:AA:82:G:N7	2.40	0.55
1:AA:860:A:H2'	1:AA:861:G:O4'	2.06	0.55
1:AA:1179:A:H4'	8:AI:104:THR:HA	1.88	0.55
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.21	0.55
14:AO:49:ASP:CG	14:AO:52:SER:HB2	2.31	0.55
18:AS:6:LYS:HD2	18:AS:6:LYS:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:78:LEU:O	19:AT:82:ILE:HG23	2.06	0.55
22:BA:32:U:H2'	22:BA:33:G:O4'	2.07	0.55
23:BB:850:U:H2'	23:BB:851:C:C6	2.41	0.55
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.72	0.55
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.42	0.55
23:BB:1829:A:HO2'	25:BC:14:HIS:CD2	2.25	0.55
23:BB:2438:U:O2'	23:BB:2439:A:H5''	2.06	0.55
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.06	0.55
26:BD:69:ALA:N	26:BD:73:VAL:HB	2.21	0.55
30:BY:50:VAL:O	30:BY:54:VAL:HG22	2.07	0.55
40:BH:57:LYS:NZ	40:BH:58:LEU:HB2	2.21	0.55
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.88	0.55
1:CA:1137:C:H1'	1:CA:1138:G:N1	2.22	0.55
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.71	0.55
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.21	0.55
7:CH:105:THR:OG1	7:CH:110:MET:HE3	2.06	0.55
10:CK:16:SER:HA	10:CK:79:LYS:HG2	1.88	0.55
10:CK:92:ARG:HH11	21:CU:20:ARG:HH21	1.53	0.55
23:DB:807:U:H2'	23:DB:808:G:H8	1.71	0.55
23:DB:934:U:H2'	23:DB:935:C:H6	1.69	0.55
23:DB:1138:G:H21	41:DJ:108:MET:CE	2.18	0.55
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.70	0.55
23:DB:2098:U:H2'	23:DB:2099:U:H1'	1.89	0.55
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	1.89	0.55
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.22	0.55
25:DC:189:ALA:C	25:DC:190:THR:HG23	2.32	0.55
29:DE:1:MET:HE3	29:DE:2:GLU:H	1.72	0.55
29:DE:49:ARG:O	29:DE:74:LYS:HD3	2.07	0.55
30:DY:29:ARG:H	30:DY:33:HIS:CD2	2.24	0.55
37:DL:42:SER:C	37:DL:44:GLY:H	2.14	0.55
38:DM:19:GLY:C	38:DM:20:LEU:HD22	2.32	0.55
47:DF:34:THR:HA	47:DF:89:THR:HA	1.88	0.55
47:DF:92:GLY:HA2	47:DF:95:MET:HE3	1.88	0.55
52:DW:37:VAL:HG13	52:DW:55:ASP:O	2.06	0.55
1:AA:261:U:H2'	1:AA:263:A:OP2	2.06	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.55
1:AA:991:U:H2'	1:AA:1212:U:C2	2.42	0.55
1:AA:1030:U:H4'	1:AA:1031:C:C4	2.41	0.55
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.71	0.55
10:AK:17:ASP:HA	10:AK:80:ASN:O	2.06	0.55
12:AM:102:LYS:HG3	12:AM:103:THR:OG1	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:38:A:N3	29:BE:43:THR:HB	2.22	0.55
23:BB:281:C:H2'	23:BB:282:A:H8	1.70	0.55
23:BB:320:A:H4'	23:BB:322:A:N7	2.22	0.55
23:BB:350:G:H2'	23:BB:351:C:C6	2.41	0.55
23:BB:528:A:N1	23:BB:2042:A:H2'	2.22	0.55
23:BB:632:A:H2'	23:BB:633:A:C8	2.42	0.55
23:BB:1203:U:H3'	23:BB:1204:A:H5''	1.89	0.55
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.07	0.55
25:BC:20:ASN:HD22	25:BC:23:LEU:HD13	1.72	0.55
27:BK:64:ARG:HB2	27:BK:83:ALA:HB3	1.88	0.55
27:BK:107:LEU:C	27:BK:109:SER:H	2.15	0.55
34:B3:9:ALA:C	34:B3:11:LYS:H	2.13	0.55
34:B3:39:ARG:O	34:B3:43:LEU:HG	2.07	0.55
35:BV:14:LYS:HE2	35:BV:18:ARG:HH21	1.72	0.55
35:BV:31:TYR:CB	35:BV:37:PRO:HG3	2.36	0.55
39:BX:45:GLN:O	39:BX:47:ARG:N	2.40	0.55
44:BQ:50:ARG:N	44:BQ:50:ARG:HD2	2.22	0.55
44:BQ:52:ARG:C	44:BQ:54:ARG:H	2.14	0.55
53:B6:32:ARG:HH22	53:B6:88:LEU:C	2.14	0.55
1:CA:190:A:H2'	1:CA:191:G:O4'	2.07	0.55
1:CA:502:A:H2'	1:CA:503:C:C6	2.42	0.55
1:CA:636:U:H2'	1:CA:637:C:H6	1.71	0.55
1:CA:1030:U:H4'	1:CA:1031:C:C4	2.42	0.55
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.71	0.55
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.07	0.55
20:CB:57:ASN:HB3	20:CB:219:THR:O	2.07	0.55
20:CB:186:VAL:O	20:CB:200:PRO:HA	2.07	0.55
23:DB:340:A:H2'	23:DB:341:C:O4'	2.06	0.55
23:DB:506:G:H5''	23:DB:509:C:O2'	2.07	0.55
23:DB:705:A:N6	23:DB:726:G:O2'	2.40	0.55
23:DB:719:C:O2'	23:DB:720:U:H5'	2.06	0.55
23:DB:857:G:C2'	23:DB:858:G:H5'	2.36	0.55
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.22	0.55
23:DB:2511:U:H2'	23:DB:2512:C:C6	2.42	0.55
23:DB:2758:A:O2'	23:DB:2759:G:H5'	2.07	0.55
26:DD:114:LYS:HD2	26:DD:116:LYS:HZ1	1.71	0.55
31:D0:38:LEU:HD22	31:D0:41:HIS:NE2	2.22	0.55
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.37	0.55
42:DN:65:LEU:O	42:DN:68:ALA:HB3	2.06	0.55
43:DO:25:ARG:HG3	43:DO:27:VAL:HG23	1.88	0.55
45:DS:50:VAL:HA	45:DS:53:SER:HB2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.89	0.55
50:DT:69:ARG:HB3	50:DT:74:ILE:HD12	1.89	0.55
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.06	0.55
1:AA:45:G:H2'	1:AA:46:G:H8	1.70	0.55
1:AA:384:G:H2'	1:AA:385:C:C6	2.42	0.55
1:AA:986:U:H2'	1:AA:987:G:O4'	2.07	0.55
3:AD:81:LEU:HB2	3:AD:88:ASN:ND2	2.22	0.55
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.06	0.55
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.89	0.55
4:AE:99:SER:C	4:AE:101:GLY:H	2.15	0.55
4:AE:156:ARG:HB3	7:AH:43:GLY:HA3	1.89	0.55
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.07	0.55
17:AR:61:ALA:HB3	17:AR:67:LEU:HD12	1.89	0.55
23:BB:3:U:H2'	23:BB:4:U:H6	1.71	0.55
23:BB:559:G:H21	44:BQ:51:GLN:NE2	2.04	0.55
23:BB:584:C:OP1	44:BQ:5:ARG:HB3	2.07	0.55
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.41	0.55
23:BB:1086:A:H4'	23:BB:1103:A:N1	2.21	0.55
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.41	0.55
23:BB:2144:G:H22	23:BB:2147:A:H4'	1.71	0.55
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.07	0.55
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.36	0.55
25:BC:20:ASN:ND2	25:BC:23:LEU:HD13	2.21	0.55
26:BD:148:GLN:O	26:BD:149:ASN:HB2	2.07	0.55
27:BK:102:PRO:HD3	28:BP:65:ASN:HB2	1.89	0.55
40:BH:72:ILE:O	40:BH:72:ILE:HG23	2.07	0.55
41:BJ:55:ILE:O	41:BJ:55:ILE:HG13	2.06	0.55
44:BQ:91:ARG:HD3	49:BR:11:GLN:OE1	2.07	0.55
47:BF:131:VAL:HG22	47:BF:151:LEU:O	2.06	0.55
53:B6:106:LEU:HD23	53:B6:106:LEU:N	2.22	0.55
1:CA:590:U:H2'	1:CA:591:U:C6	2.42	0.55
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.06	0.55
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.71	0.55
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.06	0.55
7:CH:17:GLN:NE2	7:CH:62:LEU:HB3	2.22	0.55
7:CH:40:LYS:HD2	7:CH:47:ASP:HA	1.88	0.55
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.72	0.55
15:CP:23:ASP:CG	15:CP:25:ARG:HE	2.14	0.55
23:DB:150:U:H2'	23:DB:151:C:H6	1.68	0.55
23:DB:176:A:H3'	23:DB:177:G:N2	2.20	0.55
23:DB:256:A:O2'	23:DB:257:C:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:709:U:H2'	23:DB:710:U:H6	1.70	0.55
23:DB:852:U:H2'	23:DB:853:C:H6	1.71	0.55
23:DB:1535:A:O2'	23:DB:1536:C:H5'	2.07	0.55
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.06	0.55
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.41	0.55
23:DB:2135:A:H2'	23:DB:2135:A:N3	2.21	0.55
23:DB:2365:G:H4'	52:DW:59:PHE:HD1	1.70	0.55
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.36	0.55
38:DM:105:MET:HB2	38:DM:117:PHE:CZ	2.42	0.55
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.07	0.55
44:DQ:91:ARG:HD3	49:DR:11:GLN:OE1	2.07	0.55
45:DS:58:ALA:HB1	45:DS:69:LEU:HD21	1.88	0.55
46:DU:35:VAL:HB	46:DU:38:ILE:CB	2.37	0.55
46:DU:40:LEU:H	46:DU:40:LEU:HD12	1.71	0.55
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.72	0.55
48:DG:153:PRO:HA	48:DG:159:LYS:O	2.07	0.55
1:AA:369:G:O2'	1:AA:370:C:H5'	2.07	0.55
1:AA:880:C:O2'	1:AA:881:G:H5'	2.07	0.55
1:AA:1029:U:O5'	1:AA:1029:U:H6	1.89	0.55
1:AA:1110:A:H2'	1:AA:1111:A:H8	1.72	0.55
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.07	0.55
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.06	0.55
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.22	0.55
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	2.06	0.55
6:AG:22:LEU:O	6:AG:26:VAL:HG13	2.06	0.55
8:AI:49:GLN:NE2	8:AI:79:ARG:HH11	2.04	0.55
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.06	0.55
11:AL:54:VAL:HG21	11:AL:79:ILE:HD11	1.89	0.55
15:AP:23:ASP:CG	15:AP:25:ARG:HE	2.15	0.55
16:AQ:22:VAL:HG12	16:AQ:23:ALA:N	2.21	0.55
23:BB:152:A:H2'	23:BB:153:U:H6	1.71	0.55
23:BB:363:G:H2'	23:BB:364:C:C6	2.41	0.55
23:BB:647:G:H2'	23:BB:648:G:H8	1.71	0.55
23:BB:693:A:H2'	23:BB:694:U:H6	1.71	0.55
23:BB:753:A:H2'	23:BB:754:U:H6	1.72	0.55
23:BB:807:U:H2'	23:BB:808:G:H8	1.72	0.55
23:BB:982:C:H5'	23:BB:982:C:O2	2.06	0.55
23:BB:1252:G:N2	44:BQ:32:ARG:HB3	2.20	0.55
23:BB:1583:A:H4'	23:BB:1585:C:C4	2.42	0.55
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.06	0.55
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.71	0.55
23:BB:2460:U:H2'	23:BB:2461:A:H8	1.71	0.55
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.22	0.55
25:BC:18:VAL:CG1	25:BC:202:ARG:HD2	2.37	0.55
27:BK:97:THR:C	27:BK:98:ARG:HE	2.14	0.55
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.72	0.55
35:BV:29:ILE:HD13	35:BV:31:TYR:HE2	1.70	0.55
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.89	0.55
46:BU:11:ILE:HD13	46:BU:11:ILE:O	2.07	0.55
46:BU:85:ARG:NH1	46:BU:86:PHE:H	2.05	0.55
51:BZ:27:ARG:HD2	51:BZ:29:PHE:CE1	2.41	0.55
52:BW:13:ARG:HG3	52:BW:14:ASP:H	1.71	0.55
1:CA:923:A:H2'	1:CA:924:C:H6	1.72	0.55
3:CD:77:GLU:OE1	3:CD:80:ARG:HD3	2.07	0.55
10:CK:111:ASP:CB	21:CU:19:LYS:HE3	2.23	0.55
23:DB:460:A:P	36:D2:41:ARG:HH12	2.29	0.55
23:DB:950:G:H2'	23:DB:951:C:H6	1.71	0.55
23:DB:1109:C:O5'	23:DB:1109:C:H6	1.90	0.55
23:DB:1396:U:O4'	23:DB:1396:U:O2	2.22	0.55
23:DB:2098:U:H2'	23:DB:2099:U:O4'	2.07	0.55
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.42	0.55
25:DC:78:GLU:OE1	25:DC:94:LEU:HD22	2.07	0.55
30:DY:4:ILE:HD13	30:DY:58:GLU:HG3	1.89	0.55
30:DY:7:THR:HG23	30:DY:34:THR:OG1	2.07	0.55
34:D3:24:LYS:HZ3	34:D3:28:LEU:HB3	1.71	0.55
34:D3:50:SER:C	34:D3:52:GLY:H	2.14	0.55
40:DH:49:ALA:HB3	40:DH:50:ARG:CZ	2.37	0.55
40:DH:87:GLU:N	40:DH:87:GLU:CD	2.64	0.55
42:DN:92:GLY:HA2	42:DN:94:TYR:CZ	2.42	0.55
43:DO:105:ALA:C	43:DO:107:ALA:H	2.14	0.55
46:DU:40:LEU:HA	46:DU:60:LYS:O	2.06	0.55
49:DR:40:MET:O	49:DR:41:ILE:HD13	2.06	0.55
52:DW:49:ASN:C	52:DW:50:VAL:HG22	2.32	0.55
53:D6:55:ILE:CG2	53:D6:56:ALA:N	2.69	0.55
1:AA:437:U:H1'	3:AD:115:GLN:NE2	2.22	0.55
1:AA:521:G:O2'	1:AA:522:C:H5'	2.07	0.55
1:AA:580:C:H2'	1:AA:581:G:O4'	2.07	0.55
1:AA:737:C:H2'	1:AA:738:C:H6	1.72	0.55
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.22	0.55
2:AC:57:GLU:O	2:AC:63:ILE:HA	2.07	0.55
5:AF:80:PHE:CE1	25:BC:123:ILE:HD13	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.72	0.55
10:AK:35:ASP:OD1	10:AK:37:GLN:HB2	2.07	0.55
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.22	0.55
20:AB:125:PHE:HD2	20:AB:125:PHE:H	1.55	0.55
20:AB:172:ILE:HG22	20:AB:176:ASN:HD21	1.72	0.55
22:BA:113:C:H2'	22:BA:114:C:H6	1.72	0.55
23:BB:755:U:H2'	23:BB:756:A:H8	1.72	0.55
23:BB:1848:A:H2'	23:BB:1849:G:H8	1.72	0.55
23:BB:2872:A:O2'	23:BB:2873:A:H5''	2.06	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.07	0.55
29:BE:27:LEU:O	29:BE:31:VAL:HG23	2.06	0.55
35:BV:63:ILE:O	35:BV:70:ILE:HD12	2.07	0.55
40:BH:80:ILE:HD13	40:BH:98:ASP:HB2	1.87	0.55
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.75	0.55
44:BQ:79:ILE:HD13	44:BQ:79:ILE:O	2.07	0.55
44:BQ:94:LEU:HD21	49:BR:11:GLN:HB2	1.89	0.55
45:BS:50:VAL:HA	45:BS:53:SER:HB2	1.89	0.55
48:BG:25:ILE:HG22	48:BG:78:VAL:HG11	1.88	0.55
48:BG:66:THR:O	48:BG:70:LEU:HB2	2.07	0.55
48:BG:94:ARG:CB	48:BG:127:GLN:HG2	2.35	0.55
48:BG:108:PHE:HE1	48:BG:151:ARG:HD3	1.72	0.55
52:BW:50:VAL:HG23	52:BW:61:LYS:CD	2.32	0.55
53:B6:134:ARG:CZ	53:B6:135:GLU:HG2	2.37	0.55
1:CA:190:A:O5'	1:CA:190:A:H8	1.90	0.55
1:CA:502:A:H4'	1:CA:550:G:H4'	1.89	0.55
1:CA:575:G:O2'	1:CA:821:G:H5'	2.07	0.55
1:CA:736:C:H2'	1:CA:737:C:H6	1.69	0.55
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.71	0.55
1:CA:1382:C:H4'	6:CG:78:ARG:HH21	1.72	0.55
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.88	0.55
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.22	0.55
20:CB:102:ASN:OD1	20:CB:105:THR:HB	2.06	0.55
22:DA:103:U:O2'	22:DA:104:A:H5'	2.07	0.55
23:DB:351:C:H2'	23:DB:352:A:C8	2.41	0.55
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.72	0.55
23:DB:1958:C:O2'	23:DB:1959:G:H5'	2.07	0.55
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.41	0.55
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.42	0.55
23:DB:2282:G:H5''	23:DB:2283:C:O4'	2.06	0.55
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.06	0.55
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:27:GLY:O	36:D2:30:VAL:HB	2.06	0.55
37:DL:74:THR:HA	37:DL:107:PHE:O	2.06	0.55
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.07	0.55
40:DH:94:ILE:HG22	40:DH:122:LEU:HB2	1.88	0.55
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.37	0.55
42:DN:72:ASP:C	42:DN:74:GLU:H	2.14	0.55
47:DF:131:VAL:HG22	47:DF:151:LEU:O	2.07	0.55
48:DG:83:THR:HA	48:DG:84:LYS:HZ1	1.72	0.55
48:DG:97:VAL:CG2	48:DG:124:CYS:HB2	2.36	0.55
51:DZ:6:GLN:HE22	51:DZ:50:ARG:H	1.55	0.55
1:AA:490:C:H2'	1:AA:491:G:C8	2.42	0.54
1:AA:676:A:H2'	1:AA:677:U:C6	2.42	0.54
1:AA:783:C:O2'	1:AA:784:A:H5'	2.07	0.54
1:AA:882:C:O2'	1:AA:883:C:H5'	2.06	0.54
1:AA:923:A:H2'	1:AA:924:C:H6	1.72	0.54
1:AA:961:U:H3	1:AA:983:A:N6	2.06	0.54
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.21	0.54
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.07	0.54
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.42	0.54
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.71	0.54
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.69	0.54
10:AK:70:ALA:C	10:AK:72:ALA:H	2.15	0.54
11:AL:79:ILE:HD12	11:AL:96:THR:HG22	1.90	0.54
12:AM:77:LYS:HG2	12:AM:81:ASP:OD1	2.08	0.54
19:AT:3:ILE:O	19:AT:4:LYS:HB2	2.08	0.54
23:BB:49:A:H5''	23:BB:51:G:O4'	2.07	0.54
23:BB:277:G:H1'	23:BB:361:G:O6	2.06	0.54
23:BB:972:A:C3'	23:BB:973:A:H5''	2.33	0.54
23:BB:1639:C:H2'	23:BB:1640:A:H5'	1.89	0.54
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.07	0.54
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.05	0.54
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.07	0.54
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.06	0.54
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.43	0.54
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.32	0.54
35:BV:30:ILE:HA	35:BV:91:PHE:O	2.07	0.54
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.22	0.54
37:BL:19:LEU:O	37:BL:21:ARG:HG2	2.07	0.54
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.36	0.54
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.07	0.54
42:BN:62:ASN:N	42:BN:62:ASN:HD22	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.07	0.54
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.37	0.54
50:BT:67:VAL:HG23	50:BT:75:GLY:O	2.07	0.54
52:BW:49:ASN:C	52:BW:50:VAL:HG22	2.32	0.54
1:CA:168:G:O2'	1:CA:169:C:H5'	2.06	0.54
1:CA:384:G:H2'	1:CA:385:C:C6	2.42	0.54
1:CA:472:U:H2'	1:CA:473:U:C6	2.43	0.54
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.41	0.54
1:CA:1226:C:H5''	12:CM:101:THR:HB	1.89	0.54
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.37	0.54
2:CC:120:THR:HG22	2:CC:188:ALA:HB2	1.87	0.54
3:CD:61:ARG:HH21	3:CD:67:LEU:HD23	1.71	0.54
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.06	0.54
12:CM:1:ALA:C	12:CM:8:ILE:HG22	2.33	0.54
13:CN:47:LEU:C	13:CN:49:THR:H	2.15	0.54
19:CT:15:LYS:HA	19:CT:18:LYS:CE	2.37	0.54
20:CB:16:GLY:HA2	20:CB:40:ILE:CD1	2.37	0.54
22:DA:64:G:O2'	22:DA:65:U:H5'	2.07	0.54
23:DB:37:C:O2'	23:DB:38:A:H5'	2.06	0.54
23:DB:573:U:O2'	23:DB:574:A:H3'	2.07	0.54
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.08	0.54
23:DB:870:U:O2'	23:DB:871:U:H5'	2.06	0.54
23:DB:899:A:OP1	23:DB:899:A:H4'	2.05	0.54
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.71	0.54
23:DB:1667:G:OP1	27:DK:6:THR:HA	2.07	0.54
23:DB:1693:U:H1'	25:DC:13:ARG:HH21	1.72	0.54
23:DB:2579:C:O2'	26:DD:136:ASN:HA	2.06	0.54
23:DB:2882:A:H3'	23:DB:2883:A:H5''	1.88	0.54
24:DI:54:ILE:HD13	24:DI:54:ILE:C	2.31	0.54
25:DC:132:ARG:HD3	25:DC:166:ARG:NH1	2.21	0.54
25:DC:202:ARG:NH1	25:DC:213:ARG:HE	2.05	0.54
26:DD:36:GLN:OE1	26:DD:38:LYS:HE3	2.08	0.54
33:D1:14:ALA:HB3	33:D1:16:THR:HG22	1.89	0.54
37:DL:134:ALA:O	37:DL:137:ALA:HB3	2.06	0.54
40:DH:69:ALA:O	40:DH:73:ASN:HB2	2.07	0.54
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.22	0.54
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.07	0.54
47:DF:134:GLN:O	47:DF:136:ILE:N	2.40	0.54
48:DG:94:ARG:CB	48:DG:127:GLN:HG2	2.35	0.54
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.70	0.54
53:D6:134:ARG:NH1	53:D6:134:ARG:HB3	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:H61	3:AD:53:GLN:HE22	1.55	0.54
1:AA:335:C:H2'	1:AA:336:A:C8	2.42	0.54
1:AA:575:G:O2'	1:AA:821:G:H5'	2.07	0.54
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.07	0.54
6:AG:134:VAL:HB	6:AG:137:ARG:HH21	1.72	0.54
8:AI:21:LYS:CG	8:AI:22:PRO:HD2	2.37	0.54
11:AL:86:VAL:HB	11:AL:89:LEU:HB2	1.87	0.54
20:AB:42:LEU:HA	20:AB:45:THR:OG1	2.08	0.54
21:AU:3:ILE:HD13	21:AU:19:LYS:HA	1.89	0.54
23:BB:228:C:O2	23:BB:418:C:H4'	2.07	0.54
23:BB:634:C:H2'	23:BB:635:C:H6	1.72	0.54
23:BB:968:C:H2'	23:BB:969:G:C8	2.41	0.54
23:BB:2266:A:C4	23:BB:2272:U:H5	2.24	0.54
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.41	0.54
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.42	0.54
23:BB:2846:G:H2'	23:BB:2847:U:C6	2.42	0.54
23:BB:2849:U:N3	23:BB:2867:G:C8	2.76	0.54
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.42	0.54
24:BI:58:ILE:HD12	24:BI:58:ILE:N	2.22	0.54
26:BD:53:GLY:C	26:BD:76:GLY:HA2	2.32	0.54
27:BK:70:ARG:HB3	27:BK:76:VAL:HG13	1.89	0.54
32:B4:13:ASN:O	32:B4:27:CYS:HA	2.07	0.54
43:BO:71:ALA:O	43:BO:106:LEU:HB3	2.06	0.54
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.38	0.54
47:BF:11:VAL:HG21	47:BF:172:PHE:HE1	1.72	0.54
48:BG:162:ARG:NH2	48:BG:168:VAL:HG21	2.22	0.54
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.37	0.54
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.37	0.54
1:CA:62:U:H2'	1:CA:63:C:C6	2.42	0.54
1:CA:76:G:H2'	1:CA:77:A:C8	2.42	0.54
1:CA:367:U:OP1	1:CA:395:C:H1'	2.07	0.54
1:CA:598:U:H2'	1:CA:599:C:C6	2.42	0.54
1:CA:965:U:OP1	1:CA:1198:G:H5''	2.08	0.54
1:CA:1249:C:H4'	8:CI:37:TYR:OH	2.07	0.54
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.07	0.54
11:CL:35:ARG:NH2	11:CL:36:VAL:HG22	2.23	0.54
12:CM:92:ARG:HA	12:CM:92:ARG:NE	2.21	0.54
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.07	0.54
22:DA:29:A:H3'	22:DA:30:C:H6	1.72	0.54
23:DB:99:U:H5	46:DU:6:ARG:HH22	1.53	0.54
23:DB:321:U:H1'	29:DE:162:ARG:HH11	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:634:C:H2'	23:DB:635:C:H6	1.72	0.54
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.42	0.54
23:DB:2514:U:H2'	23:DB:2515:C:H6	1.72	0.54
23:DB:2868:A:H2'	23:DB:2869:G:H8	1.72	0.54
23:DB:2881:U:O3'	42:DN:96:ARG:HD3	2.07	0.54
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.20	0.54
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.21	0.54
26:DD:169:ARG:O	26:DD:170:VAL:HG22	2.07	0.54
26:DD:175:LEU:HD21	26:DD:191:GLY:O	2.07	0.54
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.08	0.54
33:D1:7:LYS:HD3	33:D1:23:THR:HG22	1.90	0.54
35:DV:28:ALA:HB2	35:DV:89:ILE:HD12	1.88	0.54
37:DL:75:ALA:HB2	37:DL:105:ILE:HG21	1.89	0.54
42:DN:11:ASN:O	42:DN:12:ARG:HB2	2.07	0.54
44:DQ:68:ALA:HB1	44:DQ:73:ILE:HG23	1.88	0.54
44:DQ:85:ALA:O	44:DQ:86:SER:C	2.50	0.54
45:DS:28:LYS:HD2	45:DS:29:VAL:H	1.73	0.54
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.89	0.54
46:DU:73:ASN:HD21	46:DU:76:THR:H	1.54	0.54
47:DF:110:ILE:HG21	47:DF:113:PHE:HB3	1.89	0.54
48:DG:25:ILE:HG22	48:DG:78:VAL:HG11	1.90	0.54
1:AA:723:U:O4'	21:AU:48:LYS:HD3	2.08	0.54
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.07	0.54
1:AA:1320:C:O2'	1:AA:1321:U:H5'	2.07	0.54
3:AD:151:GLN:HE21	3:AD:153:ARG:HD2	1.72	0.54
5:AF:6:ILE:HD11	5:AF:8:PHE:HD2	1.73	0.54
5:AF:71:ILE:HG13	5:AF:72:ASP:N	2.18	0.54
8:AI:5:TYR:CD1	8:AI:20:ILE:HG22	2.42	0.54
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.38	0.54
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.89	0.54
20:AB:57:ASN:HB3	20:AB:219:THR:O	2.07	0.54
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD13	2.41	0.54
20:AB:118:THR:O	20:AB:121:GLN:HB3	2.08	0.54
23:BB:26:G:H1'	23:BB:514:A:N6	2.22	0.54
23:BB:736:C:H2'	23:BB:737:C:H6	1.73	0.54
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.71	0.54
23:BB:1439:A:C6	23:BB:1552:A:N7	2.75	0.54
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.07	0.54
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.71	0.54
23:BB:2271:G:H2'	23:BB:2272:U:O4'	2.07	0.54
23:BB:2312:U:H5'	47:BF:84:ILE:HD12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:108:ASP:OD2	26:BD:173:GLN:HA	2.07	0.54
27:BK:71:ARG:HB3	27:BK:72:PRO:CD	2.28	0.54
33:B1:14:ALA:HB3	33:B1:16:THR:HG22	1.89	0.54
35:BV:24:ASN:HB3	35:BV:44:HIS:HB3	1.89	0.54
36:B2:3:ARG:HA	36:B2:3:ARG:CZ	2.37	0.54
39:BX:20:ASN:N	39:BX:20:ASN:HD22	2.06	0.54
43:BO:70:ALA:C	43:BO:72:ALA:H	2.15	0.54
45:BS:55:ILE:O	45:BS:58:ALA:HB3	2.08	0.54
48:BG:5:LYS:HE3	48:BG:61:TRP:CZ2	2.41	0.54
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.89	0.54
1:CA:160:A:H2'	1:CA:161:A:O4'	2.07	0.54
1:CA:211:G:H2'	1:CA:212:G:O4'	2.07	0.54
1:CA:335:C:H2'	1:CA:336:A:C8	2.42	0.54
1:CA:709:U:H2'	1:CA:710:G:C8	2.41	0.54
1:CA:764:C:H2'	1:CA:765:G:C5'	2.37	0.54
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.72	0.54
3:CD:169:TRP:C	3:CD:182:LYS:HB2	2.33	0.54
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.22	0.54
23:DB:460:A:H2'	23:DB:461:C:O4'	2.07	0.54
23:DB:547:A:C6	23:DB:548:G:H1'	2.42	0.54
23:DB:909:A:H2'	23:DB:912:C:H5	1.70	0.54
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.42	0.54
23:DB:1098:A:C3'	24:DI:3:LYS:HA	2.26	0.54
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.41	0.54
23:DB:1987:A:H2'	23:DB:1988:G:C8	2.42	0.54
23:DB:2271:G:H2'	23:DB:2272:U:O4'	2.06	0.54
23:DB:2572:A:OP2	26:DD:152:PRO:HD3	2.08	0.54
29:DE:27:LEU:O	29:DE:31:VAL:HG23	2.08	0.54
41:DJ:84:ILE:O	41:DJ:84:ILE:HG23	2.07	0.54
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.07	0.54
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.07	0.54
50:DT:23:ALA:C	50:DT:25:GLU:H	2.15	0.54
1:AA:107:G:O6	19:AT:9:ARG:HD3	2.08	0.54
1:AA:208:U:H2'	1:AA:210:C:C4	2.43	0.54
1:AA:502:A:H2'	1:AA:503:C:C6	2.42	0.54
1:AA:672:U:H2'	1:AA:673:A:H8	1.73	0.54
1:AA:1030:U:H5'	1:AA:1031:C:N3	2.22	0.54
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.73	0.54
2:AC:19:SER:O	13:AN:93:PRO:HB3	2.08	0.54
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.07	0.54
10:AK:52:ARG:HH12	10:AK:56:LYS:CE	2.19	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.38	0.54
23:BB:141:G:C2	50:BT:2:ILE:HG21	2.41	0.54
23:BB:285:G:H2'	23:BB:286:U:C6	2.43	0.54
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.72	0.54
23:BB:1718:G:H2'	23:BB:1719:G:H8	1.72	0.54
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.73	0.54
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.55	0.54
28:BP:3:ILE:HD13	28:BP:3:ILE:C	2.32	0.54
36:B2:16:HIS:HB3	36:B2:21:ARG:NH1	2.23	0.54
38:BM:105:MET:HB2	38:BM:117:PHE:CZ	2.43	0.54
39:BX:56:LEU:O	39:BX:57:LEU:HB2	2.08	0.54
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.72	0.54
46:BU:84:PHE:HD2	46:BU:91:LYS:HG2	1.72	0.54
53:B6:140:LEU:HD21	53:B6:157:ALA:HB3	1.88	0.54
1:CA:157:U:O2'	1:CA:158:G:H5'	2.06	0.54
1:CA:676:A:H2'	1:CA:677:U:H6	1.72	0.54
1:CA:714:G:N2	1:CA:777:A:H1'	2.22	0.54
4:CE:113:VAL:CG1	4:CE:136:VAL:HG23	2.37	0.54
5:CF:99:ALA:O	5:CF:100:SER:HB2	2.07	0.54
11:CL:54:VAL:HG21	11:CL:79:ILE:HD11	1.90	0.54
20:CB:93:HIS:O	20:CB:94:ARG:C	2.51	0.54
20:CB:94:ARG:N	20:CB:94:ARG:NE	2.53	0.54
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD22	1.72	0.54
20:CB:117:GLU:HA	20:CB:140:LEU:HD21	1.89	0.54
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.07	0.54
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.07	0.54
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.42	0.54
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.08	0.54
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.71	0.54
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.06	0.54
25:DC:264:LYS:HG3	25:DC:265:PHE:CD2	2.43	0.54
34:D3:9:ALA:C	34:D3:11:LYS:H	2.15	0.54
44:DQ:34:ALA:O	44:DQ:37:ALA:HB3	2.07	0.54
46:DU:54:PRO:HG2	46:DU:55:GLY:H	1.72	0.54
46:DU:81:ARG:HH21	46:DU:81:ARG:N	2.04	0.54
48:DG:5:LYS:HE3	48:DG:61:TRP:CZ2	2.42	0.54
49:DR:49:ILE:HD12	49:DR:49:ILE:O	2.08	0.54
50:DT:7:LEU:C	50:DT:9:LYS:H	2.16	0.54
1:AA:1200:C:C3'	1:AA:1201:A:H5'	2.38	0.54
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.23	0.54
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:91:A:H1'	23:BB:92:U:C6	2.43	0.54
23:BB:121:G:H2'	23:BB:122:G:C8	2.43	0.54
23:BB:1936:A:H2	23:BB:1943:U:O4	1.90	0.54
23:BB:2144:G:H21	23:BB:2147:A:H4'	1.66	0.54
26:BD:169:ARG:O	26:BD:170:VAL:HG22	2.08	0.54
29:BE:61:ARG:NH1	29:BE:64:GLY:HA3	2.22	0.54
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.22	0.54
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.38	0.54
46:BU:13:LEU:H	46:BU:13:LEU:HD12	1.73	0.54
49:BR:39:LEU:HB3	49:BR:53:PHE:HA	1.89	0.54
1:CA:668:G:O2'	1:CA:669:G:H5'	2.08	0.54
1:CA:961:U:H3	1:CA:983:A:N6	2.05	0.54
1:CA:1314:C:OP2	18:CS:5:LYS:HG2	2.08	0.54
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.08	0.54
11:CL:43:LYS:HE3	11:CL:44:PRO:HD3	1.89	0.54
13:CN:80:ARG:HG3	13:CN:81:ILE:N	2.23	0.54
21:CU:36:PHE:O	21:CU:39:LYS:HG3	2.06	0.54
23:DB:320:A:H4'	23:DB:322:A:N7	2.23	0.54
23:DB:806:C:O2'	23:DB:807:U:H5'	2.06	0.54
23:DB:807:U:H2'	23:DB:808:G:C8	2.43	0.54
23:DB:877:A:C2'	23:DB:900:A:H61	2.18	0.54
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.43	0.54
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.42	0.54
23:DB:2746:U:O3'	48:DG:137:LYS:HD3	2.08	0.54
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.55	0.54
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.37	0.54
35:DV:2:PHE:O	35:DV:4:ILE:HG13	2.07	0.54
37:DL:57:LEU:HA	37:DL:60:ARG:NE	2.23	0.54
37:DL:92:LEU:CD2	37:DL:124:GLY:HA3	2.38	0.54
41:DJ:72:LYS:CB	41:DJ:89:PHE:H	2.21	0.54
43:DO:5:SER:HA	43:DO:8:ILE:CD1	2.35	0.54
51:DZ:17:ASN:O	51:DZ:18:ARG:C	2.51	0.54
53:D6:122:ALA:O	53:D6:126:ARG:HG3	2.08	0.54
1:AA:620:C:N1	3:AD:131:ILE:HD13	2.23	0.54
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.07	0.54
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.07	0.54
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.07	0.54
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.07	0.54
16:AQ:24:ILE:HD12	16:AQ:24:ILE:N	2.23	0.54
20:AB:128:LEU:HB3	20:AB:132:GLU:HB3	1.88	0.54
23:BB:20:C:O2'	23:BB:21:A:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:107:G:H2'	23:BB:108:G:H8	1.73	0.54
23:BB:405:U:OP2	23:BB:405:U:H4'	2.08	0.54
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.70	0.54
23:BB:1566:A:H5'	25:BC:213:ARG:NH1	2.22	0.54
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.43	0.54
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.08	0.54
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.72	0.54
29:BE:48:THR:C	29:BE:50:ALA:H	2.15	0.54
30:BY:6:ILE:HD13	30:BY:6:ILE:H	1.72	0.54
35:BV:4:ILE:CD1	35:BV:61:LEU:HB3	2.37	0.54
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.22	0.54
48:BG:15:ASP:CB	48:BG:26:LYS:HB3	2.38	0.54
1:CA:148:G:N3	1:CA:1446:A:H2	2.05	0.54
6:CG:80:GLY:C	6:CG:82:SER:H	2.15	0.54
13:CN:41:TRP:HD1	13:CN:44:VAL:HG23	1.72	0.54
14:CO:71:LYS:HB2	14:CO:78:TYR:CD2	2.43	0.54
16:CQ:10:ARG:NH2	16:CQ:55:GLY:HA2	2.23	0.54
19:CT:15:LYS:HD3	19:CT:18:LYS:HE3	1.89	0.54
20:CB:45:THR:HG23	20:CB:200:PRO:HG2	1.88	0.54
23:DB:335:C:O2'	23:DB:336:C:H5'	2.07	0.54
23:DB:855:G:O2'	52:DW:23:LYS:HD3	2.06	0.54
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.07	0.54
23:DB:1376:C:H3'	57:DB:3278:HOH:O	2.07	0.54
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.42	0.54
25:DC:121:ALA:HB3	25:DC:129:LEU:HD11	1.90	0.54
27:DK:97:THR:C	27:DK:98:ARG:HE	2.15	0.54
29:DE:47:LYS:HA	29:DE:51:GLU:HG3	1.90	0.54
30:DY:18:LYS:O	30:DY:22:THR:HG23	2.08	0.54
33:D1:3:GLY:C	33:D1:5:ARG:H	2.14	0.54
35:DV:63:ILE:H	35:DV:70:ILE:HD11	1.71	0.54
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.38	0.54
40:DH:88:GLY:O	40:DH:90:LEU:HD12	2.08	0.54
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CE1	2.42	0.54
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.75	0.54
47:DF:92:GLY:N	47:DF:95:MET:HE3	2.23	0.54
48:DG:7:PRO:O	48:DG:8:VAL:CB	2.56	0.54
1:AA:301:G:H2'	1:AA:302:G:C8	2.43	0.54
1:AA:472:U:H2'	1:AA:473:U:C6	2.43	0.54
1:AA:590:U:H2'	1:AA:591:U:C6	2.43	0.54
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.43	0.54
3:AD:90:LEU:H	3:AD:90:LEU:HD22	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.38	0.54
13:AN:80:ARG:HG3	13:AN:81:ILE:N	2.22	0.54
15:AP:78:VAL:O	15:AP:79:ASN:C	2.49	0.54
23:BB:7:G:H2'	23:BB:8:C:C6	2.43	0.54
23:BB:142:A:H2'	23:BB:143:C:C5	2.42	0.54
23:BB:340:A:H2'	23:BB:341:C:O4'	2.08	0.54
23:BB:418:C:H2'	23:BB:419:U:H6	1.73	0.54
23:BB:496:G:H1'	45:BS:61:ASN:ND2	2.22	0.54
23:BB:630:G:H4'	23:BB:640:C:O2'	2.08	0.54
23:BB:809:G:H2'	23:BB:810:U:C6	2.43	0.54
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.07	0.54
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.43	0.54
23:BB:2020:A:O2'	23:BB:2021:C:H5'	2.07	0.54
23:BB:2103:C:OP1	23:BB:2103:C:H4'	2.07	0.54
23:BB:2285:C:OP1	33:B1:25:ASN:ND2	2.40	0.54
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.72	0.54
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.07	0.54
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.08	0.54
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.90	0.54
34:B3:24:LYS:NZ	34:B3:28:LEU:HB3	2.23	0.54
38:BM:41:LEU:HD13	38:BM:46:ILE:HG22	1.89	0.54
42:BN:106:ASP:C	42:BN:108:ALA:H	2.16	0.54
44:BQ:85:ALA:O	44:BQ:86:SER:C	2.50	0.54
44:BQ:90:ASP:O	44:BQ:94:LEU:HB2	2.08	0.54
48:BG:34:ARG:HH11	48:BG:34:ARG:N	1.97	0.54
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.07	0.54
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.23	0.54
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.89	0.54
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.07	0.54
23:DB:26:G:H1'	23:DB:514:A:N6	2.21	0.54
23:DB:102:U:H2'	39:DX:2:LYS:CE	2.36	0.54
23:DB:208:C:H2'	23:DB:209:C:H6	1.73	0.54
23:DB:585:G:H2'	23:DB:1251:C:H42	1.72	0.54
23:DB:974:G:OP2	49:DR:78:ARG:HD3	2.07	0.54
23:DB:1179:G:O2'	23:DB:1180:U:H5'	2.08	0.54
23:DB:1222:U:O2'	23:DB:1223:G:H5'	2.07	0.54
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.23	0.54
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.73	0.54
23:DB:2822:G:H2'	23:DB:2823:A:H5''	1.89	0.54
25:DC:90:ILE:CD1	25:DC:102:TYR:HB3	2.37	0.54
33:D1:7:LYS:HA	33:D1:23:THR:HG22	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:9:ARG:HA	35:DV:41:GLU:OE2	2.08	0.54
43:DO:71:ALA:O	43:DO:106:LEU:HB3	2.07	0.54
44:DQ:86:SER:HB3	49:DR:52:PRO:HD3	1.89	0.54
46:DU:13:LEU:H	46:DU:13:LEU:HD12	1.72	0.54
47:DF:1:ALA:O	47:DF:4:HIS:HB3	2.07	0.54
49:DR:39:LEU:HA	49:DR:53:PHE:HA	1.89	0.54
49:DR:58:VAL:HG22	49:DR:59:ILE:N	2.23	0.54
52:DW:32:ALA:C	52:DW:34:SER:H	2.15	0.54
1:AA:157:U:O2'	1:AA:158:G:H5'	2.07	0.54
1:AA:205:A:H2'	1:AA:206:C:C6	2.43	0.54
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.08	0.54
1:AA:425:G:H2'	1:AA:426:U:C6	2.43	0.54
1:AA:692:U:C2	1:AA:694:A:H5''	2.42	0.54
1:AA:1249:C:H4'	8:AI:37:TYR:OH	2.07	0.54
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.23	0.54
6:AG:121:ASN:N	6:AG:121:ASN:HD22	2.04	0.54
10:AK:90:PRO:C	10:AK:92:ARG:H	2.14	0.54
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.08	0.54
20:AB:68:PHE:O	20:AB:90:PHE:HA	2.07	0.54
22:BA:40:U:H1'	22:BA:43:C:C5	2.43	0.54
23:BB:150:U:H2'	23:BB:151:C:H6	1.71	0.54
23:BB:350:G:H2'	23:BB:351:C:H6	1.73	0.54
23:BB:719:C:O2'	23:BB:720:U:H5'	2.08	0.54
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.73	0.54
23:BB:1465:G:H2'	23:BB:1466:U:O4'	2.08	0.54
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.23	0.54
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.07	0.54
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.20	0.54
39:BX:34:SER:HB2	39:BX:36:GLN:OE1	2.08	0.54
40:BH:44:ILE:C	40:BH:46:PHE:H	2.16	0.54
42:BN:83:LEU:HA	42:BN:86:ARG:CG	2.38	0.54
43:BO:105:ALA:C	43:BO:107:ALA:H	2.15	0.54
48:BG:16:VAL:HG11	48:BG:44:HIS:CE1	2.43	0.54
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CD1	2.42	0.54
53:B6:30:THR:HA	53:B6:183:ILE:HG12	1.89	0.54
1:CA:312:C:H2'	1:CA:313:A:H8	1.70	0.54
1:CA:1110:A:H2'	1:CA:1111:A:H8	1.73	0.54
2:CC:26:LYS:HE2	2:CC:27:GLU:HG3	1.88	0.54
6:CG:22:LEU:O	6:CG:26:VAL:HG13	2.08	0.54
6:CG:99:ALA:O	6:CG:103:ILE:HG13	2.08	0.54
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.08	0.54
13:CN:16:ALA:HA	13:CN:54:SER:O	2.07	0.54
20:CB:130:LYS:HA	20:CB:130:LYS:HE2	1.88	0.54
22:DA:32:U:H2'	22:DA:33:G:O4'	2.07	0.54
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.08	0.54
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.08	0.54
23:DB:2142:A:H2'	23:DB:2143:C:C1'	2.38	0.54
23:DB:2149:U:H2'	23:DB:2150:C:H6	1.73	0.54
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.42	0.54
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.38	0.54
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.08	0.54
29:DE:149:ILE:HG23	29:DE:188:MET:CA	2.38	0.54
40:DH:124:THR:HG23	40:DH:128:HIS:HE1	1.72	0.54
41:DJ:57:LEU:CG	41:DJ:128:ASN:H	2.17	0.54
43:DO:69:ASP:O	43:DO:72:ALA:HB3	2.08	0.54
43:DO:89:ASP:HA	43:DO:116:GLN:HB3	1.90	0.54
48:DG:15:ASP:CB	48:DG:26:LYS:HB3	2.38	0.54
48:DG:123:GLU:HG2	48:DG:124:CYS:H	1.71	0.54
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.37	0.54
49:DR:39:LEU:HB3	49:DR:53:PHE:HA	1.90	0.54
1:AA:215:C:H2'	1:AA:216:U:H6	1.70	0.54
1:AA:532:A:H62	2:AC:191:THR:CB	2.15	0.54
1:AA:586:C:O2'	1:AA:587:G:H5'	2.07	0.54
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.72	0.54
5:AF:99:ALA:O	5:AF:100:SER:HB2	2.08	0.54
20:AB:93:HIS:HB2	20:AB:145:ASN:O	2.08	0.54
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.23	0.54
22:BA:113:C:H2'	22:BA:114:C:C6	2.43	0.54
23:BB:591:U:H1'	34:B3:1:PRO:N	2.23	0.54
23:BB:1396:U:O4'	23:BB:1396:U:O2	2.23	0.54
23:BB:1841:U:H2'	23:BB:1842:G:H8	1.71	0.54
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.42	0.54
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.71	0.54
26:BD:60:VAL:HA	26:BD:64:GLU:OE2	2.08	0.54
28:BP:75:THR:CG2	28:BP:76:HIS:H	2.18	0.54
29:BE:108:ILE:HG12	37:BL:2:ARG:HH22	1.72	0.54
29:BE:149:ILE:HG23	29:BE:188:MET:CA	2.38	0.54
35:BV:63:ILE:HB	35:BV:70:ILE:HD11	1.90	0.54
39:BX:1:MET:HB3	39:BX:5:GLU:OE1	2.07	0.54
40:BH:54:LEU:O	40:BH:58:LEU:N	2.34	0.54
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CE1	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:23:LYS:HZ2	41:BJ:142:ILE:HG12	1.72	0.54
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.08	0.54
44:BQ:57:ARG:HH12	44:BQ:61:ILE:HD11	1.72	0.54
48:BG:37:ASN:ND2	48:BG:38:ASP:H	2.05	0.54
50:BT:23:ALA:C	50:BT:25:GLU:H	2.15	0.54
52:BW:32:ALA:C	52:BW:34:SER:H	2.16	0.54
53:B6:39:LEU:HG	53:B6:40:HIS:N	2.23	0.54
1:CA:107:G:O6	19:CT:9:ARG:HD3	2.07	0.54
1:CA:317:U:H2'	1:CA:318:G:H8	1.71	0.54
1:CA:484:G:H4'	1:CA:485:U:H5'	1.89	0.54
1:CA:806:C:H2'	1:CA:807:A:H8	1.73	0.54
1:CA:999:C:H2'	1:CA:1000:A:H8	1.72	0.54
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.72	0.54
3:CD:22:SER:N	3:CD:109:THR:HG22	2.22	0.54
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.43	0.54
4:CE:156:ARG:HB3	7:CH:43:GLY:HA3	1.90	0.54
8:CI:56:MET:C	8:CI:58:GLU:N	2.66	0.54
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.90	0.54
12:CM:71:GLU:HA	12:CM:74:MET:HG2	1.90	0.54
18:CS:48:ILE:HB	18:CS:59:VAL:HG23	1.90	0.54
20:CB:69:VAL:HB	20:CB:162:VAL:HB	1.90	0.54
23:DB:283:G:H2'	23:DB:284:U:O4'	2.07	0.54
23:DB:297:G:OP1	46:DU:91:LYS:HD3	2.07	0.54
23:DB:320:A:C2	29:DE:163:ASN:HB3	2.43	0.54
23:DB:633:A:H8	23:DB:633:A:O5'	1.90	0.54
23:DB:1054:A:H2'	23:DB:1055:G:O4'	2.08	0.54
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.43	0.54
23:DB:2100:G:H2'	23:DB:2101:A:O4'	2.08	0.54
23:DB:2306:C:C3'	23:DB:2307:G:H5'	2.38	0.54
23:DB:2364:C:O2'	23:DB:2365:G:H5'	2.08	0.54
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.08	0.54
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.08	0.54
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.23	0.54
25:DC:145:MET:SD	25:DC:153:LEU:HD21	2.48	0.54
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.23	0.54
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.89	0.54
35:DV:63:ILE:HB	35:DV:70:ILE:HD11	1.90	0.54
43:DO:30:ARG:HH11	43:DO:30:ARG:HG3	1.71	0.54
44:DQ:89:ILE:HB	49:DR:11:GLN:NE2	2.21	0.54
44:DQ:91:ARG:HH12	49:DR:10:LYS:HB3	1.73	0.54
48:DG:153:PRO:CG	48:DG:162:ARG:HB3	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:45:ALA:HA	50:DT:48:GLN:CG	2.38	0.54
50:DT:74:ILE:HG13	50:DT:75:GLY:H	1.73	0.54
53:D6:90:LEU:HB3	53:D6:101:ILE:CG2	2.38	0.54
53:D6:123:GLU:HA	53:D6:126:ARG:NH1	2.22	0.54
1:AA:448:A:H2'	1:AA:449:G:C8	2.43	0.54
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.23	0.54
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.08	0.54
1:AA:1260:G:H4'	1:AA:1283:U:O2'	2.07	0.54
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.23	0.54
13:AN:14:ALA:HA	13:AN:17:ASP:OD2	2.08	0.54
20:AB:22:TRP:CZ3	20:AB:24:PRO:HA	2.43	0.54
20:AB:96:LEU:CD2	20:AB:146:SER:HB2	2.37	0.54
23:BB:202:U:H2'	23:BB:203:A:C8	2.43	0.54
23:BB:338:G:N2	23:BB:339:U:H1'	2.23	0.54
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.72	0.54
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.42	0.54
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.22	0.54
26:BD:7:LYS:HE2	26:BD:198:GLY:HA2	1.89	0.54
26:BD:12:THR:HG22	26:BD:13:ARG:N	2.22	0.54
38:BM:65:ILE:HG23	38:BM:103:TYR:CE2	2.43	0.54
39:BX:3:ALA:O	39:BX:6:LEU:HB2	2.08	0.54
40:BH:69:ALA:HA	40:BH:140:ALA:HB2	1.90	0.54
41:BJ:36:LEU:O	41:BJ:51:GLY:HA3	2.08	0.54
41:BJ:59:ALA:O	41:BJ:62:VAL:HG12	2.08	0.54
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.72	0.54
48:BG:16:VAL:HG11	48:BG:44:HIS:NE2	2.23	0.54
52:BW:18:LYS:O	52:BW:34:SER:HA	2.08	0.54
53:B6:6:LEU:O	53:B6:9:GLU:HB3	2.07	0.54
53:B6:73:GLN:HG3	53:B6:74:ASN:H	1.73	0.54
1:CA:113:G:H2'	1:CA:114:U:C6	2.43	0.54
1:CA:628:G:O2'	1:CA:629:A:H5'	2.08	0.54
1:CA:720:C:H5''	17:CR:40:PRO:HA	1.90	0.54
1:CA:934:C:H5''	57:CA:1748:HOH:O	2.08	0.54
1:CA:1180:A:P	8:CI:98:ARG:HH22	2.31	0.54
2:CC:2:GLN:HE22	2:CC:3:LYS:NZ	2.05	0.54
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.08	0.54
3:CD:147:LYS:HD3	3:CD:148:ALA:N	2.22	0.54
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.07	0.54
6:CG:45:ALA:HB3	6:CG:119:LEU:HD23	1.89	0.54
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.90	0.54
8:CI:22:PRO:HA	8:CI:60:LEU:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:70:ARG:NE	47:DF:136:ILE:HG21	2.23	0.54
20:CB:31:PHE:N	20:CB:41:ASN:HB2	2.23	0.54
23:DB:3:U:H2'	23:DB:4:U:C6	2.42	0.54
23:DB:217:A:H2'	23:DB:218:A:O4'	2.08	0.54
23:DB:418:C:H2'	23:DB:419:U:C6	2.42	0.54
23:DB:590:A:H2'	23:DB:591:U:H6	1.71	0.54
23:DB:850:U:H5''	30:DY:18:LYS:HD3	1.90	0.54
23:DB:956:G:N2	23:DB:959:A:H3'	2.23	0.54
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	2.07	0.54
23:DB:1203:U:H3'	23:DB:1204:A:H5''	1.89	0.54
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.42	0.54
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.73	0.54
23:DB:1842:G:H1'	25:DC:242:HIS:NE2	2.23	0.54
23:DB:2093:G:H5'	40:DH:22:LYS:HD2	1.90	0.54
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.08	0.54
40:DH:94:ILE:O	40:DH:122:LEU:HD23	2.07	0.54
43:DO:68:LYS:H	43:DO:102:ARG:CD	2.21	0.54
44:DQ:91:ARG:HH22	49:DR:10:LYS:HB3	1.73	0.54
50:DT:14:PRO:HA	50:DT:32:LEU:HB3	1.90	0.54
50:DT:67:VAL:HG23	50:DT:75:GLY:O	2.08	0.54
52:DW:77:LYS:O	52:DW:78:PHE:HB2	2.07	0.54
1:AA:190:A:H8	1:AA:190:A:O5'	1.91	0.53
1:AA:590:U:H2'	1:AA:591:U:H6	1.72	0.53
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.08	0.53
3:AD:123:MET:HB2	3:AD:128:VAL:HA	1.90	0.53
7:AH:17:GLN:NE2	7:AH:62:LEU:HB3	2.23	0.53
8:AI:5:TYR:HD1	8:AI:20:ILE:HG22	1.72	0.53
8:AI:56:MET:C	8:AI:58:GLU:N	2.66	0.53
11:AL:35:ARG:NH2	11:AL:36:VAL:HG22	2.23	0.53
16:AQ:80:LYS:CE	16:AQ:80:LYS:H	2.21	0.53
18:AS:10:ILE:HG22	18:AS:38:THR:N	2.23	0.53
20:AB:112:ARG:HE	20:AB:116:LEU:HD11	1.72	0.53
23:BB:145:C:H2'	23:BB:146:A:H8	1.73	0.53
23:BB:175:G:O2'	23:BB:176:A:H5'	2.08	0.53
23:BB:362:A:H3'	23:BB:363:G:H8	1.72	0.53
23:BB:534:U:H5'	44:BQ:41:ALA:HB1	1.91	0.53
23:BB:909:A:H2'	23:BB:912:C:C5	2.43	0.53
23:BB:1130:U:C2	23:BB:2025:C:H5''	2.43	0.53
23:BB:1248:G:O2'	44:BQ:2:ARG:HA	2.08	0.53
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.08	0.53
23:BB:1669:A:O3'	23:BB:2549:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1878:G:H2'	23:BB:1879:C:H6	1.72	0.53
23:BB:2262:U:H1'	23:BB:2328:A:H1'	1.90	0.53
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.08	0.53
25:BC:78:GLU:OE1	25:BC:94:LEU:HD22	2.09	0.53
35:BV:30:ILE:O	35:BV:37:PRO:HA	2.09	0.53
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.76	0.53
45:BS:13:SER:OG	45:BS:14:ALA:N	2.41	0.53
46:BU:9:GLU:O	46:BU:72:PHE:N	2.41	0.53
47:BF:60:SER:HB2	47:BF:62:GLN:OE1	2.08	0.53
47:BF:102:LEU:C	47:BF:104:THR:H	2.15	0.53
48:BG:38:ASP:CG	48:BG:39:ALA:N	2.66	0.53
53:B6:83:ILE:HG22	53:B6:90:LEU:HB2	1.89	0.53
1:CA:499:A:H4'	1:CA:500:G:OP1	2.08	0.53
1:CA:590:U:H2'	1:CA:591:U:H6	1.73	0.53
1:CA:724:G:O2'	1:CA:725:G:H5'	2.07	0.53
1:CA:1005:A:H2'	1:CA:1006:G:O4'	2.08	0.53
1:CA:1221:G:O3'	18:CS:76:THR:HG21	2.08	0.53
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.08	0.53
1:CA:1396:A:H4'	1:CA:1397:C:H5''	1.90	0.53
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.08	0.53
3:CD:146:GLU:HB3	3:CD:149:LYS:HE3	1.88	0.53
7:CH:112:ASP:CG	7:CH:113:ARG:H	2.16	0.53
8:CI:50:PRO:HD3	8:CI:79:ARG:HG3	1.90	0.53
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.72	0.53
10:CK:105:ARG:NH2	21:CU:10:PRO:HB3	2.23	0.53
12:CM:38:ILE:HG13	12:CM:55:LEU:CD2	2.37	0.53
18:CS:10:ILE:HG22	18:CS:38:THR:N	2.23	0.53
22:DA:48:U:H2'	22:DA:49:C:C6	2.43	0.53
22:DA:94:A:H2'	22:DA:95:U:O4'	2.08	0.53
23:DB:136:G:H2'	23:DB:137:U:C6	2.43	0.53
23:DB:1258:U:C4'	29:DE:79:ARG:HD2	2.37	0.53
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.09	0.53
23:DB:2560:A:H2'	23:DB:2561:U:C6	2.43	0.53
23:DB:2746:U:H5''	48:DG:137:LYS:HG2	1.89	0.53
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.90	0.53
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.38	0.53
26:DD:53:GLY:C	26:DD:76:GLY:HA2	2.32	0.53
26:DD:68:PHE:HB3	26:DD:73:VAL:CG2	2.33	0.53
29:DE:61:ARG:O	29:DE:62:GLN:C	2.50	0.53
30:DY:2:LYS:HD3	30:DY:2:LYS:H	1.73	0.53
33:D1:36:LYS:HG2	33:D1:47:ILE:HG13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:3:THR:HB	41:DJ:44:TYR:OH	2.08	0.53
41:DJ:30:THR:HG23	41:DJ:31:GLU:N	2.23	0.53
44:DQ:57:ARG:HH12	44:DQ:61:ILE:HD11	1.70	0.53
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.66	0.53
47:DF:161:SER:HG	47:DF:164:GLU:HG3	1.72	0.53
52:DW:50:VAL:O	52:DW:59:PHE:HB3	2.08	0.53
1:AA:378:G:O2'	1:AA:379:C:H5'	2.07	0.53
1:AA:920:U:O2'	1:AA:921:U:H5'	2.09	0.53
1:AA:921:U:H2'	1:AA:922:G:C8	2.43	0.53
3:AD:2:ARG:HB3	3:AD:114:ARG:NH2	2.24	0.53
3:AD:146:GLU:HB3	3:AD:149:LYS:HE3	1.90	0.53
4:AE:113:VAL:CG1	4:AE:136:VAL:HG23	2.38	0.53
5:AF:3:HIS:NE2	5:AF:65:GLU:HG3	2.23	0.53
5:AF:38:ARG:HD3	5:AF:97:THR:HA	1.89	0.53
23:BB:76:C:O2'	23:BB:77:G:H5'	2.08	0.53
23:BB:547:A:C3'	23:BB:548:G:H5'	2.38	0.53
23:BB:674:G:HO2'	29:BE:60:TRP:HH2	1.56	0.53
23:BB:962:G:H2'	23:BB:963:U:C6	2.43	0.53
23:BB:2530:A:H3'	48:BG:156:TYR:OH	2.08	0.53
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.08	0.53
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.39	0.53
25:BC:166:ARG:HB3	25:BC:171:VAL:HG22	1.90	0.53
25:BC:189:ALA:C	25:BC:190:THR:HG23	2.33	0.53
29:BE:5:LEU:HG	29:BE:12:LEU:HD22	1.90	0.53
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.48	0.53
36:B2:31:LEU:HD22	36:B2:42:LEU:HD12	1.90	0.53
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.73	0.53
39:BX:29:ARG:HH21	39:BX:29:ARG:CB	2.21	0.53
40:BH:73:ASN:HD22	40:BH:73:ASN:N	2.06	0.53
40:BH:124:THR:HG22	40:BH:125:THR:N	2.23	0.53
42:BN:32:GLU:HB3	42:BN:115:LEU:HG	1.90	0.53
42:BN:71:ARG:HG2	42:BN:71:ARG:HH21	1.73	0.53
44:BQ:91:ARG:HB2	44:BQ:94:LEU:HD23	1.89	0.53
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.89	0.53
45:BS:36:LEU:HD22	45:BS:36:LEU:N	2.19	0.53
46:BU:80:ASP:OD1	46:BU:95:PHE:HB3	2.08	0.53
47:BF:101:ARG:NH2	47:BF:138:PRO:HB2	2.22	0.53
48:BG:54:ARG:HD3	48:BG:54:ARG:C	2.34	0.53
50:BT:29:THR:HA	50:BT:86:THR:HA	1.89	0.53
1:CA:369:G:O2'	1:CA:370:C:H5'	2.08	0.53
1:CA:632:U:H5''	1:CA:633:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:707:U:H2'	1:CA:708:C:H6	1.73	0.53
1:CA:955:U:H1'	1:CA:1227:A:H62	1.73	0.53
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.90	0.53
12:CM:21:ILE:HG23	12:CM:65:GLU:OE2	2.09	0.53
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.73	0.53
21:CU:42:THR:O	21:CU:46:ARG:HG3	2.09	0.53
22:DA:87:U:H2'	22:DA:88:C:O5'	2.09	0.53
23:DB:691:C:O2'	23:DB:692:C:H5'	2.08	0.53
23:DB:973:A:H1'	23:DB:1188:U:C5	2.43	0.53
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.70	0.53
23:DB:1899:A:O2'	23:DB:1900:A:H5''	2.07	0.53
23:DB:2282:G:OP1	23:DB:2283:C:H1'	2.07	0.53
23:DB:2528:U:O2'	23:DB:2529:G:H3'	2.08	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.38	0.53
26:DD:102:ALA:HA	26:DD:180:VAL:HG21	1.89	0.53
28:DP:3:ILE:HD13	28:DP:3:ILE:C	2.33	0.53
28:DP:59:THR:OG1	28:DP:72:VAL:HG12	2.08	0.53
44:DQ:91:ARG:HB2	44:DQ:94:LEU:HD23	1.89	0.53
47:DF:3:LEU:HD21	47:DF:172:PHE:HB3	1.90	0.53
48:DG:37:ASN:ND2	48:DG:38:ASP:H	2.05	0.53
53:D6:64:ARG:N	53:D6:64:ARG:HD2	2.24	0.53
1:AA:668:G:O2'	1:AA:669:G:H5'	2.08	0.53
1:AA:678:U:O2'	1:AA:679:C:H5'	2.08	0.53
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.90	0.53
1:AA:1206:G:C4'	2:AC:192:TYR:HA	2.36	0.53
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.08	0.53
3:AD:22:SER:N	3:AD:109:THR:HG22	2.24	0.53
3:AD:55:ARG:HH11	3:AD:55:ARG:HG3	1.72	0.53
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	1.91	0.53
7:AH:112:ASP:CG	7:AH:113:ARG:H	2.17	0.53
8:AI:26:LYS:H	8:AI:61:ASP:HB2	1.72	0.53
17:AR:34:GLU:CD	17:AR:34:GLU:N	2.65	0.53
23:BB:217:A:H2'	23:BB:218:A:O4'	2.09	0.53
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.73	0.53
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.39	0.53
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.41	0.53
23:BB:2109:U:H2'	23:BB:2110:G:C8	2.44	0.53
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.73	0.53
23:BB:2543:G:H5'	23:BB:2543:G:H8	1.74	0.53
23:BB:2572:A:OP2	26:BD:152:PRO:HD3	2.08	0.53
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:59:THR:OG1	28:BP:72:VAL:HG12	2.08	0.53
36:B2:10:LEU:HD22	36:B2:14:ARG:NE	2.23	0.53
37:BL:19:LEU:HD23	37:BL:31:GLY:HA3	1.89	0.53
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.90	0.53
43:BO:25:ARG:O	43:BO:39:VAL:HA	2.08	0.53
46:BU:95:PHE:CE1	46:BU:102:ILE:HB	2.34	0.53
47:BF:124:ARG:HB3	47:BF:126:ASN:OD1	2.08	0.53
49:BR:4:VAL:CG2	49:BR:39:LEU:HG	2.37	0.53
1:CA:641:U:H4'	7:CH:106:SER:O	2.07	0.53
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.43	0.53
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.43	0.53
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.43	0.53
10:CK:52:ARG:HH12	10:CK:56:LYS:CE	2.21	0.53
13:CN:14:ALA:HA	13:CN:17:ASP:OD2	2.07	0.53
23:DB:222:A:N6	23:DB:232:G:H1'	2.24	0.53
23:DB:1423:G:H2'	23:DB:1424:G:H8	1.72	0.53
23:DB:1712:U:H2'	23:DB:1713:A:N7	2.23	0.53
23:DB:2259:U:H2'	23:DB:2260:C:H6	1.73	0.53
23:DB:2330:G:H1'	52:DW:38:ARG:HB2	1.90	0.53
23:DB:2438:U:O2'	23:DB:2439:A:H5''	2.08	0.53
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.38	0.53
27:DK:105:ARG:HB3	27:DK:122:VAL:HG12	1.91	0.53
27:DK:107:LEU:C	27:DK:109:SER:H	2.17	0.53
40:DH:68:ARG:O	40:DH:72:ILE:HG13	2.08	0.53
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.75	0.53
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.08	0.53
44:DQ:83:LYS:HA	44:DQ:83:LYS:HZ2	1.73	0.53
48:DG:108:PHE:H	48:DG:108:PHE:HD1	1.56	0.53
51:DZ:27:ARG:HD2	51:DZ:29:PHE:CE1	2.43	0.53
1:AA:16:A:O2'	4:AE:20:VAL:HG13	2.08	0.53
1:AA:244:U:O4	1:AA:906:A:H1'	2.08	0.53
1:AA:552:U:H2'	1:AA:553:A:C8	2.43	0.53
1:AA:676:A:H2'	1:AA:677:U:H6	1.73	0.53
1:AA:724:G:H2'	1:AA:725:G:H8	1.74	0.53
1:AA:845:A:H5''	1:AA:846:G:C8	2.44	0.53
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.23	0.53
1:AA:1297:G:H1'	1:AA:1298:U:H5	1.73	0.53
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.24	0.53
4:AE:80:LEU:HA	4:AE:146:MET:HE1	1.90	0.53
20:AB:83:ALA:O	20:AB:88:GLN:HB2	2.09	0.53
20:AB:162:VAL:CG1	20:AB:184:ALA:HB2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:116:C:H1'	23:BB:127:A:N3	2.23	0.53
23:BB:813:U:H2'	23:BB:814:C:H6	1.72	0.53
23:BB:839:U:H1'	23:BB:1191:G:H1'	1.90	0.53
23:BB:857:G:C2'	23:BB:858:G:H5'	2.38	0.53
23:BB:934:U:H2'	23:BB:935:C:H6	1.73	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.37	0.53
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.43	0.53
23:BB:1712:U:H2'	23:BB:1713:A:N7	2.23	0.53
23:BB:1883:U:H2'	23:BB:1884:G:H1'	1.90	0.53
23:BB:2579:C:O2'	26:BD:136:ASN:HA	2.08	0.53
29:BE:61:ARG:O	29:BE:62:GLN:C	2.50	0.53
30:BY:15:ARG:O	30:BY:20:LYS:HE3	2.09	0.53
35:BV:31:TYR:HA	35:BV:93:ARG:NH2	2.24	0.53
40:BH:64:ALA:H	40:BH:66:ASN:ND2	2.07	0.53
42:BN:92:GLY:HA2	42:BN:94:TYR:CZ	2.43	0.53
43:BO:111:ARG:HB2	43:BO:117:PHE:CZ	2.43	0.53
45:BS:58:ALA:HB1	45:BS:69:LEU:HD21	1.89	0.53
50:BT:44:LYS:O	50:BT:48:GLN:HG2	2.08	0.53
53:B6:4:LYS:HA	53:B6:7:TYR:CD2	2.43	0.53
1:CA:586:C:O2'	1:CA:587:G:H5'	2.08	0.53
1:CA:890:G:O2'	1:CA:906:A:N6	2.42	0.53
1:CA:977:A:H1'	1:CA:982:U:O4	2.08	0.53
1:CA:1147:C:O2'	8:CI:17:ARG:HD2	2.09	0.53
1:CA:1170:A:C5'	20:CB:138:ARG:HH12	2.20	0.53
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.73	0.53
2:CC:106:ARG:HD2	2:CC:106:ARG:H	1.74	0.53
8:CI:51:LEU:HB3	8:CI:56:MET:CG	2.31	0.53
23:DB:179:C:H2'	23:DB:180:G:O4'	2.07	0.53
23:DB:228:C:O2	23:DB:418:C:H4'	2.09	0.53
23:DB:322:A:C2'	29:DE:163:ASN:HD21	2.20	0.53
23:DB:417:C:H2'	23:DB:418:C:H6	1.72	0.53
23:DB:981:A:H2'	23:DB:982:C:H5''	1.90	0.53
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.71	0.53
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.09	0.53
23:DB:2212:A:H1'	23:DB:2213:U:N3	2.24	0.53
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.43	0.53
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.18	0.53
45:DS:36:LEU:HD22	45:DS:36:LEU:N	2.19	0.53
46:DU:9:GLU:O	46:DU:72:PHE:N	2.42	0.53
48:DG:36:LEU:HD22	48:DG:36:LEU:N	2.21	0.53
48:DG:132:LEU:N	48:DG:132:LEU:HD23	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:155:PRO:HA	48:DG:170:THR:HA	1.90	0.53
53:D6:150:SER:O	53:D6:154:THR:HG22	2.08	0.53
1:AA:182:A:O2'	1:AA:183:C:H3'	2.08	0.53
1:AA:539:A:H2'	1:AA:540:G:H8	1.71	0.53
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.43	0.53
1:AA:1298:U:H2'	6:AG:113:LYS:HZ1	1.72	0.53
3:AD:25:ARG:HD3	3:AD:25:ARG:C	2.33	0.53
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.38	0.53
6:AG:19:SER:HB2	6:AG:21:LEU:HD21	1.91	0.53
9:AJ:44:THR:HG23	9:AJ:69:THR:C	2.33	0.53
10:AK:92:ARG:NH1	21:AU:20:ARG:HH21	2.07	0.53
20:AB:16:GLY:HA2	20:AB:40:ILE:CD1	2.38	0.53
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.43	0.53
23:BB:126:A:O2'	23:BB:127:A:H5'	2.08	0.53
23:BB:460:A:P	36:B2:41:ARG:HH12	2.31	0.53
23:BB:819:A:N6	23:BB:1189:A:H1'	2.24	0.53
23:BB:1460:U:H5''	23:BB:1461:C:O4'	2.08	0.53
23:BB:1695:G:H2'	23:BB:1696:G:O4'	2.08	0.53
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.43	0.53
23:BB:2267:A:N6	23:BB:2272:U:C4	2.76	0.53
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.72	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
26:BD:37:VAL:CG2	26:BD:91:THR:HA	2.39	0.53
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.09	0.53
30:BY:18:LYS:O	30:BY:22:THR:HG23	2.08	0.53
35:BV:77:VAL:HG12	38:BM:136:MET:HG2	1.90	0.53
41:BJ:30:THR:HG23	41:BJ:31:GLU:N	2.23	0.53
43:BO:106:LEU:CA	43:BO:109:ALA:HB3	2.38	0.53
1:CA:686:U:O4	1:CA:703:G:H1'	2.09	0.53
1:CA:724:G:H2'	1:CA:725:G:H8	1.72	0.53
1:CA:860:A:H2'	1:CA:861:G:O4'	2.08	0.53
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.09	0.53
1:CA:1310:G:O2'	1:CA:1311:A:H5'	2.09	0.53
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.73	0.53
2:CC:148:ILE:HA	2:CC:200:TRP:O	2.09	0.53
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.08	0.53
9:CJ:53:ILE:HG23	9:CJ:54:SER:N	2.24	0.53
9:CJ:92:LEU:HD22	9:CJ:92:LEU:H	1.73	0.53
19:CT:42:ASP:OD1	19:CT:44:ALA:HB3	2.08	0.53
23:DB:18:U:H2'	23:DB:19:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:20:C:O2'	23:DB:21:A:H5'	2.07	0.53
23:DB:138:U:H2'	23:DB:140:C:N1	2.24	0.53
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.07	0.53
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.72	0.53
23:DB:1577:C:H2'	23:DB:1578:U:O4'	2.09	0.53
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.72	0.53
23:DB:1930:G:H2'	23:DB:1968:G:C6	2.43	0.53
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.08	0.53
23:DB:2293:G:H2'	23:DB:2294:G:H8	1.72	0.53
23:DB:2458:G:H2'	23:DB:2458:G:N3	2.24	0.53
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.71	0.53
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.89	0.53
26:DD:37:VAL:CG2	26:DD:91:THR:HA	2.37	0.53
34:D3:30:HIS:HD2	34:D3:31:ILE:H	1.57	0.53
36:D2:2:LYS:HD2	36:D2:6:GLN:NE2	2.23	0.53
37:DL:30:THR:O	37:DL:31:GLY:C	2.51	0.53
42:DN:59:SER:C	42:DN:61:ALA:H	2.17	0.53
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.09	0.53
43:DO:35:ILE:HG13	43:DO:71:ALA:CB	2.36	0.53
45:DS:13:SER:OG	45:DS:14:ALA:N	2.41	0.53
47:DF:102:LEU:C	47:DF:104:THR:H	2.16	0.53
51:DZ:71:LEU:HD12	51:DZ:78:TYR:CD2	2.43	0.53
1:AA:148:G:N3	1:AA:1446:A:H2	2.06	0.53
1:AA:335:C:H2'	1:AA:336:A:H8	1.74	0.53
1:AA:686:U:O4	1:AA:703:G:H1'	2.08	0.53
1:AA:955:U:H1'	1:AA:1227:A:H62	1.74	0.53
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.07	0.53
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.09	0.53
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.08	0.53
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.43	0.53
10:AK:124:LYS:O	21:AU:33:ARG:NE	2.29	0.53
12:AM:10:ASP:HB2	12:AM:11:HIS:ND1	2.24	0.53
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.90	0.53
18:AS:48:ILE:HB	18:AS:59:VAL:HG23	1.90	0.53
20:AB:93:HIS:O	20:AB:94:ARG:C	2.51	0.53
21:AU:31:VAL:HG12	21:AU:31:VAL:O	2.08	0.53
23:BB:37:C:H4'	23:BB:451:U:OP1	2.07	0.53
23:BB:296:U:H2'	23:BB:297:G:H8	1.73	0.53
23:BB:321:U:H1'	29:BE:162:ARG:NH1	2.24	0.53
23:BB:513:A:H8	23:BB:513:A:O5'	1.91	0.53
23:BB:1060:U:O2	23:BB:1088:A:C8	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2511:U:H2'	23:BB:2512:C:C6	2.44	0.53
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.44	0.53
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.39	0.53
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.74	0.53
25:BC:94:LEU:HD13	25:BC:100:ARG:HD2	1.91	0.53
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.89	0.53
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.89	0.53
35:BV:28:ALA:HB2	35:BV:89:ILE:HD12	1.89	0.53
37:BL:136:GLU:HA	37:BL:140:GLY:H	1.74	0.53
38:BM:41:LEU:O	38:BM:94:ALA:N	2.42	0.53
40:BH:82:SER:HB2	40:BH:94:ILE:HG12	1.90	0.53
48:BG:97:VAL:CG2	48:BG:124:CYS:HB2	2.39	0.53
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.49	0.53
52:BW:37:VAL:HG13	52:BW:55:ASP:O	2.07	0.53
1:CA:74:A:H2'	1:CA:75:G:C8	2.43	0.53
1:CA:386:C:C2'	1:CA:387:U:H5'	2.38	0.53
1:CA:580:C:H2'	1:CA:581:G:O4'	2.09	0.53
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.39	0.53
1:CA:1108:G:H2'	1:CA:1109:C:H5'	1.90	0.53
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.74	0.53
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.09	0.53
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.91	0.53
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.24	0.53
9:CJ:53:ILE:HG23	9:CJ:54:SER:H	1.74	0.53
13:CN:60:ARG:HG3	13:CN:62:ARG:HG3	1.91	0.53
22:DA:91:C:H2'	22:DA:92:C:C6	2.43	0.53
23:DB:277:G:H2'	23:DB:277:G:N3	2.24	0.53
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.09	0.53
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.09	0.53
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.73	0.53
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.09	0.53
23:DB:1571:A:H2'	23:DB:1572:A:H8	1.73	0.53
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.44	0.53
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.08	0.53
37:DL:136:GLU:HA	37:DL:140:GLY:H	1.74	0.53
39:DX:20:ASN:N	39:DX:20:ASN:HD22	2.06	0.53
41:DJ:23:LYS:NZ	41:DJ:142:ILE:HG12	2.23	0.53
44:DQ:15:LYS:HD2	44:DQ:16:ILE:HD12	1.90	0.53
44:DQ:50:ARG:HD2	44:DQ:50:ARG:N	2.24	0.53
45:DS:31:GLN:C	45:DS:33:LEU:H	2.15	0.53
46:DU:64:ILE:HG13	46:DU:65:GLN:H	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:16:VAL:HG11	48:DG:44:HIS:CE1	2.44	0.53
48:DG:23:ILE:HG21	48:DG:71:LEU:HD11	1.90	0.53
53:D6:15:GLN:HA	53:D6:168:PHE:HE2	1.74	0.53
53:D6:35:PRO:HA	53:D6:66:LEU:HD21	1.91	0.53
1:AA:764:C:N4	1:AA:812:G:H1	2.06	0.53
1:AA:939:G:H5'	6:AG:101:ARG:NH2	2.24	0.53
2:AC:30:ASP:HA	13:AN:64:ARG:HH12	1.73	0.53
3:AD:61:ARG:HH21	3:AD:67:LEU:HD23	1.74	0.53
9:AJ:53:ILE:HG23	9:AJ:54:SER:H	1.73	0.53
10:AK:16:SER:HA	10:AK:79:LYS:HE3	1.91	0.53
11:AL:54:VAL:HG12	11:AL:55:ARG:N	2.22	0.53
15:AP:12:LYS:C	15:AP:14:ARG:H	2.16	0.53
22:BA:74:U:H2'	22:BA:75:G:O4'	2.08	0.53
23:BB:245:G:H2'	23:BB:246:C:H6	1.72	0.53
23:BB:582:A:H2'	23:BB:583:G:C8	2.44	0.53
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.23	0.53
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.09	0.53
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.43	0.53
23:BB:1987:A:H2'	23:BB:1988:G:H8	1.73	0.53
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.09	0.53
23:BB:2361:G:O2'	23:BB:2362:C:H5'	2.09	0.53
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.09	0.53
42:BN:59:SER:C	42:BN:61:ALA:H	2.17	0.53
47:BF:69:ALA:HB2	47:BF:82:TYR:HB3	1.91	0.53
47:BF:163:GLU:HA	47:BF:166:ARG:CD	2.32	0.53
48:BG:7:PRO:O	48:BG:8:VAL:CB	2.57	0.53
1:CA:188:C:H2'	1:CA:189:A:O4'	2.09	0.53
1:CA:229:U:H2'	1:CA:230:G:H8	1.74	0.53
1:CA:711:G:O2'	1:CA:712:A:H5'	2.07	0.53
1:CA:839:C:H2'	1:CA:840:C:O4'	2.09	0.53
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.43	0.53
3:CD:41:GLY:C	3:CD:43:ARG:H	2.15	0.53
5:CF:3:HIS:NE2	5:CF:65:GLU:HG3	2.23	0.53
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.22	0.53
8:CI:26:LYS:N	8:CI:61:ASP:CB	2.71	0.53
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.91	0.53
11:CL:20:VAL:HG23	11:CL:20:VAL:O	2.08	0.53
23:DB:755:U:H2'	23:DB:756:A:H8	1.74	0.53
23:DB:1878:G:H2'	23:DB:1879:C:H6	1.73	0.53
23:DB:2391:G:H1'	23:DB:2424:C:H41	1.74	0.53
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:3:GLN:HG2	27:DK:4:GLU:N	2.24	0.53
29:DE:124:PHE:HD1	29:DE:125:SER:N	2.07	0.53
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.08	0.53
33:D1:26:LYS:HB3	33:D1:52:LYS:HZ2	1.74	0.53
35:DV:14:LYS:HE2	35:DV:18:ARG:HH21	1.74	0.53
37:DL:19:LEU:O	37:DL:21:ARG:HG2	2.07	0.53
44:DQ:51:GLN:HA	44:DQ:54:ARG:HD2	1.91	0.53
45:DS:6:LYS:HB3	45:DS:104:THR:HG23	1.90	0.53
46:DU:95:PHE:CE1	46:DU:102:ILE:HB	2.33	0.53
53:D6:154:THR:HG23	53:D6:155:LYS:N	2.23	0.53
1:AA:142:G:N3	1:AA:196:A:H2	2.07	0.53
1:AA:476:U:H2'	1:AA:477:C:C6	2.44	0.53
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.43	0.53
6:AG:10:LYS:HB2	6:AG:10:LYS:NZ	2.24	0.53
8:AI:22:PRO:HA	8:AI:60:LEU:HB2	1.91	0.53
8:AI:50:PRO:HD3	8:AI:79:ARG:HG3	1.90	0.53
18:AS:27:LYS:HG3	18:AS:28:LYS:HD2	1.90	0.53
20:AB:40:ILE:HG21	20:AB:200:PRO:O	2.09	0.53
20:AB:124:THR:HA	20:AB:127:LYS:HZ2	1.74	0.53
20:AB:133:ALA:O	20:AB:137:THR:HG23	2.09	0.53
23:BB:560:C:H2'	23:BB:561:G:O4'	2.09	0.53
23:BB:817:C:H2'	23:BB:818:G:O4'	2.08	0.53
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.23	0.53
23:BB:2144:G:H5'	23:BB:2145:C:H5''	1.90	0.53
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.09	0.53
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.39	0.53
25:BC:145:MET:HE1	25:BC:181:ARG:NH1	2.24	0.53
26:BD:125:TRP:CG	26:BD:160:LYS:HB3	2.44	0.53
27:BK:73:ASP:O	28:BP:74:GLN:HG3	2.09	0.53
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.33	0.53
33:B1:51:ALA:O	33:B1:52:LYS:C	2.51	0.53
37:BL:55:MET:HE3	37:BL:55:MET:HA	1.91	0.53
40:BH:27:ARG:H	40:BH:31:VAL:HG23	1.74	0.53
40:BH:48:GLU:HA	40:BH:51:ARG:NH2	2.23	0.53
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.89	0.53
49:BR:49:ILE:HD12	49:BR:49:ILE:O	2.09	0.53
50:BT:7:LEU:C	50:BT:9:LYS:H	2.17	0.53
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.09	0.53
51:BZ:33:LEU:HA	51:BZ:51:VAL:O	2.08	0.53
1:CA:244:U:O4	1:CA:906:A:H1'	2.08	0.53
1:CA:270:A:H2'	1:CA:271:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:337:G:H2'	1:CA:338:A:H8	1.73	0.53
1:CA:394:G:O2'	1:CA:395:C:H5'	2.09	0.53
1:CA:818:G:C3'	1:CA:819:A:H5''	2.39	0.53
1:CA:930:C:H2'	1:CA:931:C:H6	1.74	0.53
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.74	0.53
1:CA:1320:C:O2'	1:CA:1321:U:H5'	2.09	0.53
2:CC:40:GLN:HG3	2:CC:41:TYR:N	2.23	0.53
3:CD:98:ASP:HB3	3:CD:132:ALA:HB1	1.89	0.53
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.34	0.53
23:DB:6:A:H2'	23:DB:7:G:C8	2.44	0.53
23:DB:547:A:H2'	23:DB:547:A:N3	2.24	0.53
23:DB:634:C:H2'	23:DB:635:C:C6	2.44	0.53
23:DB:660:C:H2'	23:DB:661:A:H8	1.74	0.53
23:DB:771:G:O2'	23:DB:772:C:H5'	2.08	0.53
23:DB:965:C:O2'	23:DB:966:G:H5'	2.09	0.53
23:DB:1647:U:H3'	23:DB:1647:U:P	2.49	0.53
23:DB:1774:C:H2'	23:DB:1774:C:O2	2.09	0.53
23:DB:2109:U:H2'	23:DB:2180:U:N3	2.22	0.53
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.44	0.53
23:DB:2189:U:C2'	23:DB:2190:G:H5'	2.39	0.53
26:DD:15:PHE:H	26:DD:15:PHE:HD1	1.56	0.53
35:DV:65:VAL:C	35:DV:67:GLY:H	2.17	0.53
37:DL:99:ASN:O	37:DL:100:ILE:HB	2.09	0.53
51:DZ:41:GLU:O	51:DZ:44:LYS:HD2	2.09	0.53
53:D6:55:ILE:HG23	53:D6:56:ALA:N	2.24	0.53
53:D6:167:GLU:O	53:D6:170:ALA:HB3	2.09	0.53
1:AA:82:G:H8	1:AA:82:G:O5'	1.92	0.53
1:AA:229:U:H2'	1:AA:230:G:C8	2.43	0.53
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.72	0.53
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.43	0.53
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.39	0.53
9:AJ:76:ILE:HD12	9:AJ:76:ILE:O	2.09	0.53
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.44	0.53
14:AO:33:THR:HG23	14:AO:63:ARG:NH1	2.24	0.53
19:AT:43:LYS:HD3	19:AT:43:LYS:H	1.74	0.53
22:BA:11:C:OP1	52:BW:71:LYS:HG2	2.09	0.53
23:BB:41:C:H2'	23:BB:42:A:O4'	2.09	0.53
23:BB:264:C:O2'	23:BB:265:A:H5''	2.09	0.53
23:BB:616:A:H3'	23:BB:617:G:C8	2.34	0.53
23:BB:730:A:O2'	23:BB:731:C:H5'	2.08	0.53
23:BB:1244:A:H5''	37:BL:8:PRO:CD	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1445:G:H2'	23:BB:1446:C:C6	2.44	0.53
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.08	0.53
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.44	0.53
23:BB:2595:G:O6	25:BC:238:ASN:ND2	2.42	0.53
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.74	0.53
25:BC:86:ARG:HB3	25:BC:86:ARG:CZ	2.38	0.53
27:BK:109:SER:HB2	27:BK:111:LYS:HE2	1.91	0.53
28:BP:20:ARG:HD3	28:BP:112:ARG:NH2	2.24	0.53
29:BE:51:GLU:O	29:BE:52:VAL:C	2.52	0.53
33:B1:9:LYS:HD3	33:B1:9:LYS:N	2.21	0.53
35:BV:53:LYS:NZ	35:BV:54:ALA:HB3	2.24	0.53
36:B2:10:LEU:HD21	36:B2:14:ARG:HH11	1.73	0.53
40:BH:47:PHE:HA	40:BH:50:ARG:HH21	1.73	0.53
40:BH:90:LEU:HD21	40:BH:146:VAL:CG2	2.34	0.53
43:BO:14:ALA:C	43:BO:16:ARG:H	2.17	0.53
45:BS:20:VAL:HG23	45:BS:23:LEU:HD12	1.90	0.53
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.48	0.53
48:BG:123:GLU:HG2	48:BG:124:CYS:H	1.73	0.53
49:BR:58:VAL:HG22	49:BR:59:ILE:N	2.23	0.53
53:B6:2:THR:HG23	53:B6:5:GLU:OE1	2.09	0.53
53:B6:61:PRO:HD3	53:B6:67:VAL:HG22	1.91	0.53
53:B6:64:ARG:HD2	53:B6:64:ARG:N	2.23	0.53
1:CA:96:U:H2'	1:CA:97:G:C8	2.43	0.53
1:CA:212:G:H2'	1:CA:213:G:H8	1.74	0.53
1:CA:770:C:O2'	1:CA:771:G:H5'	2.08	0.53
2:CC:133:MET:O	2:CC:137:VAL:HG23	2.08	0.53
4:CE:25:LYS:HG3	4:CE:26:GLY:N	2.24	0.53
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.24	0.53
8:CI:50:PRO:O	8:CI:54:VAL:HG22	2.08	0.53
20:CB:64:GLY:O	20:CB:66:ILE:HG12	2.08	0.53
20:CB:159:ALA:HB1	20:CB:183:PHE:HE1	1.74	0.53
23:DB:393:C:O2'	23:DB:394:C:H5'	2.08	0.53
23:DB:466:A:N3	23:DB:683:U:H1'	2.24	0.53
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.09	0.53
23:DB:1381:G:H1'	23:DB:1571:A:N1	2.24	0.53
23:DB:2267:A:N6	23:DB:2272:U:C4	2.76	0.53
23:DB:2530:A:H5'	48:DG:174:LYS:HD2	1.90	0.53
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.73	0.53
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.33	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.91	0.53
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.48	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.44	0.53
32:D4:19:ARG:C	32:D4:21:GLY:N	2.67	0.53
35:DV:77:VAL:HG11	38:DM:136:MET:O	2.09	0.53
37:DL:19:LEU:HD23	37:DL:31:GLY:HA3	1.90	0.53
40:DH:9:VAL:HG12	40:DH:12:LEU:HG	1.90	0.53
50:DT:7:LEU:HA	50:DT:9:LYS:HE3	1.89	0.53
1:AA:366:A:H2	1:AA:394:G:H1	1.57	0.53
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.23	0.53
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.09	0.53
3:AD:147:LYS:HD3	3:AD:148:ALA:N	2.24	0.53
7:AH:40:LYS:HD2	7:AH:47:ASP:HA	1.90	0.53
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.91	0.53
16:AQ:60:ILE:HG12	16:AQ:72:TRP:HE3	1.73	0.53
23:BB:63:A:H8	23:BB:63:A:OP2	1.92	0.53
23:BB:780:G:H1	25:BC:228:ASP:CG	2.17	0.53
23:BB:1046:A:C4'	23:BB:1047:G:H5''	2.39	0.53
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.09	0.53
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.09	0.53
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.08	0.53
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.44	0.53
23:BB:2248:C:H2'	23:BB:2249:U:O4'	2.09	0.53
23:BB:2332:C:H1'	23:BB:2336:A:N7	2.23	0.53
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.09	0.53
23:BB:2543:G:H2'	23:BB:2544:G:O4'	2.08	0.53
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.43	0.53
25:BC:128:THR:HA	25:BC:190:THR:CA	2.38	0.53
27:BK:71:ARG:HA	27:BK:71:ARG:HE	1.73	0.53
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.91	0.53
38:BM:127:LYS:H	38:BM:127:LYS:CD	2.19	0.53
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.24	0.53
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.24	0.53
49:BR:39:LEU:HA	49:BR:53:PHE:HA	1.91	0.53
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.34	0.53
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.08	0.53
53:B6:43:VAL:N	53:B6:50:VAL:O	2.37	0.53
53:B6:56:ALA:HB2	53:B6:79:ILE:CD1	2.38	0.53
1:CA:764:C:N4	1:CA:812:G:H1	2.07	0.53
1:CA:1342:C:H5'	8:CI:127:SER:HA	1.91	0.53
1:CA:1374:A:H4'	6:CG:27:ASN:OD1	2.10	0.53
1:CA:1398:A:H8	1:CA:1398:A:H5'	1.74	0.53
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:196:GLU:CD	3:CD:196:GLU:H	2.16	0.53
8:CI:21:LYS:CG	8:CI:22:PRO:HD2	2.37	0.53
8:CI:37:TYR:HE2	8:CI:74:GLN:HG2	1.73	0.53
16:CQ:22:VAL:HG12	16:CQ:23:ALA:N	2.24	0.53
23:DB:6:A:O2'	23:DB:7:G:H5'	2.09	0.53
23:DB:252:G:O2'	23:DB:253:C:H5'	2.09	0.53
23:DB:361:G:O2'	23:DB:362:A:H5'	2.09	0.53
23:DB:483:A:H2'	23:DB:484:C:O4'	2.09	0.53
23:DB:679:C:H2'	23:DB:680:C:H6	1.74	0.53
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.92	0.53
26:DD:125:TRP:CG	26:DD:160:LYS:HB3	2.44	0.53
31:D0:47:TYR:CZ	31:D0:52:LYS:HG3	2.44	0.53
35:DV:4:ILE:CD1	35:DV:61:LEU:HB3	2.39	0.53
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.09	0.53
43:DO:111:ARG:HB2	43:DO:117:PHE:CZ	2.44	0.53
47:DF:121:PHE:HB3	47:DF:127:TYR:CE1	2.44	0.53
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.24	0.53
48:DG:59:ASP:O	48:DG:63:GLN:HB2	2.09	0.53
53:D6:84:ARG:CZ	53:D6:84:ARG:HB2	2.39	0.53
1:AA:696:A:H2'	1:AA:697:U:C6	2.44	0.52
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.44	0.52
1:AA:1049:U:H2'	13:AN:2:LYS:HD3	1.91	0.52
1:AA:1060:U:H5''	9:AJ:53:ILE:HG12	1.90	0.52
2:AC:39:ARG:NH1	2:AC:56:ILE:HD12	2.23	0.52
2:AC:126:ARG:HH22	2:AC:190:THR:CG2	2.21	0.52
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.09	0.52
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.91	0.52
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.24	0.52
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.39	0.52
7:AH:83:ARG:C	7:AH:84:ILE:HG13	2.32	0.52
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.30	0.52
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.91	0.52
10:AK:95:THR:HG23	10:AK:96:ILE:H	1.73	0.52
18:AS:54:ARG:HB3	18:AS:55:GLN:HE21	1.74	0.52
18:AS:80:ARG:HA	18:AS:80:ARG:HE	1.74	0.52
19:AT:79:THR:HA	19:AT:82:ILE:CG1	2.39	0.52
23:BB:83:A:N1	23:BB:101:A:H5'	2.24	0.52
23:BB:138:U:H2'	23:BB:140:C:C4'	2.39	0.52
23:BB:738:G:H2'	23:BB:739:A:C8	2.44	0.52
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.44	0.52
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1341:G:H3'	23:BB:1397:U:O2	2.09	0.52
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.09	0.52
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.09	0.52
23:BB:1936:A:OP1	23:BB:1937:A:H5'	2.08	0.52
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.44	0.52
23:BB:2830:C:H1'	23:BB:2836:U:O4'	2.08	0.52
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.74	0.52
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.71	0.52
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.44	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.74	0.52
27:BK:19:VAL:HB	27:BK:41:ILE:HD11	1.92	0.52
35:BV:9:ARG:HA	35:BV:41:GLU:OE2	2.09	0.52
40:BH:73:ASN:N	40:BH:73:ASN:ND2	2.56	0.52
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.91	0.52
42:BN:11:ASN:O	42:BN:12:ARG:HB2	2.08	0.52
42:BN:78:LYS:HG3	42:BN:83:LEU:HG	1.90	0.52
48:BG:155:PRO:HA	48:BG:170:THR:HA	1.90	0.52
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	2.08	0.52
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.08	0.52
1:CA:74:A:H2'	1:CA:75:G:H8	1.74	0.52
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.90	0.52
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.09	0.52
1:CA:1310:G:H2'	1:CA:1311:A:O4'	2.09	0.52
1:CA:1356:G:O2'	1:CA:1357:A:H5'	2.09	0.52
3:CD:90:LEU:HD22	3:CD:90:LEU:H	1.74	0.52
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.90	0.52
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.90	0.52
20:CB:22:TRP:CZ3	20:CB:24:PRO:HA	2.43	0.52
23:DB:1204:A:H1'	23:DB:1206:G:N7	2.24	0.52
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.44	0.52
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.08	0.52
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.74	0.52
23:DB:2266:A:C4	23:DB:2272:U:H5	2.26	0.52
23:DB:2284:A:OP2	33:D1:5:ARG:HG3	2.09	0.52
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.73	0.52
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.44	0.52
29:DE:18:THR:HG22	29:DE:106:LYS:HZ1	1.74	0.52
35:DV:79:ARG:NH1	38:DM:134:THR:HG21	2.24	0.52
42:DN:106:ASP:C	42:DN:108:ALA:H	2.16	0.52
44:DQ:90:ASP:O	44:DQ:94:LEU:HB2	2.08	0.52
45:DS:28:LYS:HD3	45:DS:69:LEU:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.09	0.52
47:DF:120:SER:HG	47:DF:127:TYR:HD2	1.56	0.52
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.10	0.52
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.96	0.52
49:DR:49:ILE:HG21	49:DR:54:VAL:CA	2.39	0.52
1:AA:140:U:H2'	1:AA:141:G:H8	1.74	0.52
1:AA:343:U:O2'	1:AA:344:A:H2'	2.08	0.52
1:AA:501:C:H2'	1:AA:502:A:C8	2.44	0.52
1:AA:1367:C:H5''	8:AI:115:VAL:HG23	1.91	0.52
1:AA:1404:C:H2'	1:AA:1405:G:H8	1.73	0.52
4:AE:25:LYS:HG3	4:AE:26:GLY:N	2.24	0.52
8:AI:93:LEU:HD13	8:AI:97:LEU:HD11	1.91	0.52
11:AL:80:LEU:HB3	11:AL:97:VAL:CG2	2.39	0.52
22:BA:94:A:H2'	22:BA:95:U:O4'	2.09	0.52
22:BA:116:G:H4'	43:BO:54:VAL:HG22	1.91	0.52
23:BB:242:G:H5''	34:B3:63:TYR:CE2	2.44	0.52
23:BB:401:A:H2'	23:BB:402:A:C8	2.43	0.52
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.75	0.52
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.09	0.52
23:BB:1654:A:H61	23:BB:2049:G:P	2.32	0.52
23:BB:1841:U:H2'	23:BB:1842:G:C8	2.43	0.52
23:BB:1930:G:H2'	23:BB:1968:G:C6	2.44	0.52
23:BB:1965:C:H5''	23:BB:1966:A:H2'	1.91	0.52
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.74	0.52
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.45	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.24	0.52
25:BC:132:ARG:HD3	25:BC:166:ARG:NH1	2.22	0.52
27:BK:3:GLN:HG2	27:BK:4:GLU:N	2.23	0.52
33:B1:36:LYS:HG2	33:B1:47:ILE:HG13	1.91	0.52
35:BV:2:PHE:O	35:BV:4:ILE:HG13	2.09	0.52
37:BL:79:LEU:HB2	37:BL:113:ALA:HB3	1.91	0.52
37:BL:81:ASP:HA	37:BL:84:LYS:HE3	1.89	0.52
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.39	0.52
45:BS:25:ARG:HE	45:BS:74:ILE:HG23	1.74	0.52
46:BU:54:PRO:HG2	46:BU:55:GLY:H	1.73	0.52
51:BZ:17:ASN:O	51:BZ:18:ARG:C	2.51	0.52
1:CA:90:C:H2'	1:CA:91:U:C6	2.44	0.52
1:CA:142:G:N3	1:CA:196:A:H2	2.07	0.52
1:CA:229:U:H2'	1:CA:230:G:C8	2.45	0.52
1:CA:327:A:O2'	1:CA:328:C:O4'	2.25	0.52
1:CA:1458:G:H5'	19:CT:26:MET:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:13:ILE:O	2:CC:15:LYS:N	2.42	0.52
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.08	0.52
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.10	0.52
10:CK:43:TRP:HA	10:CK:69:CYS:SG	2.49	0.52
16:CQ:45:VAL:HG12	16:CQ:46:HIS:H	1.74	0.52
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.44	0.52
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD13	2.44	0.52
20:CB:162:VAL:CG1	20:CB:184:ALA:HB2	2.39	0.52
22:DA:74:U:H2'	22:DA:75:G:C8	2.44	0.52
22:DA:106:G:H2'	22:DA:107:G:C8	2.43	0.52
23:DB:93:G:H2'	23:DB:94:A:O4'	2.09	0.52
23:DB:231:A:H3'	23:DB:232:G:H8	1.75	0.52
23:DB:431:U:O2'	23:DB:432:A:H5'	2.09	0.52
23:DB:899:A:H2'	23:DB:900:A:O4'	2.09	0.52
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.72	0.52
23:DB:1779:U:C5	23:DB:1784:A:N7	2.78	0.52
23:DB:1930:G:H2'	23:DB:1968:G:O6	2.08	0.52
23:DB:1930:G:H22	23:DB:1969:A:P	2.32	0.52
23:DB:2309:A:H61	47:DF:75:GLY:HA3	1.75	0.52
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.22	0.52
23:DB:2667:C:H2'	23:DB:2668:G:O4'	2.09	0.52
23:DB:2852:G:O2'	23:DB:2853:C:H5'	2.10	0.52
25:DC:15:VAL:HG22	25:DC:205:GLY:HA3	1.91	0.52
29:DE:155:GLU:O	29:DE:159:LEU:HB2	2.08	0.52
42:DN:62:ASN:O	42:DN:66:ALA:HB2	2.08	0.52
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.23	0.52
45:DS:55:ILE:O	45:DS:58:ALA:HB3	2.09	0.52
1:AA:81:A:H2'	1:AA:83:C:C5	2.44	0.52
9:AJ:52:LEU:HG	9:AJ:62:ARG:NE	2.24	0.52
11:AL:3:VAL:CG1	16:AQ:33:TYR:HB3	2.39	0.52
12:AM:78:ARG:HH22	18:AS:64:GLU:HB2	1.73	0.52
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	2.08	0.52
20:AB:139:GLU:HG2	20:AB:143:LEU:CD1	2.39	0.52
21:AU:40:PRO:C	21:AU:42:THR:N	2.68	0.52
23:BB:765:C:O2'	23:BB:766:U:H5'	2.10	0.52
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.45	0.52
23:BB:1657:U:C2'	23:BB:1658:C:H5'	2.40	0.52
23:BB:2730:C:H2'	23:BB:2731:G:C8	2.45	0.52
23:BB:2757:A:H2	48:BG:63:GLN:HE22	1.56	0.52
27:BK:105:ARG:HB3	27:BK:122:VAL:HG12	1.91	0.52
29:BE:108:ILE:HG12	37:BL:2:ARG:NH2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:7:THR:HG23	30:BY:34:THR:OG1	2.09	0.52
35:BV:65:VAL:C	35:BV:67:GLY:H	2.18	0.52
37:BL:92:LEU:CD2	37:BL:124:GLY:HA3	2.39	0.52
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.35	0.52
41:BJ:58:ASN:CA	41:BJ:127:GLY:HA2	2.35	0.52
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.91	0.52
43:BO:47:VAL:O	43:BO:48:LEU:HD23	2.09	0.52
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HA	1.75	0.52
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.09	0.52
1:CA:98:A:H2'	1:CA:99:C:C6	2.44	0.52
1:CA:208:U:H2'	1:CA:210:C:C4	2.44	0.52
1:CA:299:G:H2'	1:CA:300:A:C8	2.44	0.52
1:CA:342:C:O2'	1:CA:343:U:H5'	2.09	0.52
1:CA:621:A:H2'	1:CA:622:A:C8	2.45	0.52
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.24	0.52
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.09	0.52
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	1.89	0.52
20:CB:127:LYS:C	20:CB:127:LYS:HD2	2.33	0.52
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	1.91	0.52
22:DA:32:U:H1'	22:DA:52:A:N7	2.23	0.52
23:DB:101:A:OP1	23:DB:101:A:O4'	2.26	0.52
23:DB:338:G:N2	23:DB:339:U:H1'	2.23	0.52
23:DB:738:G:H1'	23:DB:759:G:N2	2.24	0.52
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.36	0.52
23:DB:876:C:H2'	23:DB:877:A:O4'	2.09	0.52
23:DB:1033:U:C5	32:D4:15:LYS:HE3	2.45	0.52
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.09	0.52
23:DB:2250:G:H8	23:DB:2250:G:O5'	1.93	0.52
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.73	0.52
23:DB:2679:A:H2'	23:DB:2680:U:C6	2.45	0.52
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.39	0.52
24:DI:126:ARG:NH1	24:DI:126:ARG:HB3	2.24	0.52
25:DC:28:PRO:HB3	25:DC:81:GLU:OE1	2.09	0.52
28:DP:75:THR:CG2	28:DP:76:HIS:H	2.17	0.52
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.91	0.52
29:DE:200:LEU:O	29:DE:201:ALA:HB3	2.09	0.52
38:DM:41:LEU:HD13	38:DM:46:ILE:HG22	1.91	0.52
38:DM:65:ILE:HG23	38:DM:103:TYR:CE2	2.45	0.52
40:DH:119:ASN:HD21	40:DH:121:VAL:HG13	1.74	0.52
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.09	0.52
42:DN:83:LEU:HA	42:DN:86:ARG:CG	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:106:LEU:CA	43:DO:109:ALA:HB3	2.39	0.52
50:DT:40:LYS:HE2	50:DT:58:VAL:O	2.09	0.52
50:DT:47:VAL:HG13	50:DT:51:PHE:CD1	2.44	0.52
51:DZ:33:LEU:HA	51:DZ:51:VAL:O	2.10	0.52
53:D6:80:GLU:HB2	53:D6:99:LEU:CD1	2.40	0.52
1:AA:499:A:H4'	1:AA:500:G:OP1	2.09	0.52
1:AA:707:U:H2'	1:AA:708:C:C6	2.45	0.52
1:AA:709:U:H2'	1:AA:710:G:C8	2.43	0.52
1:AA:1226:C:H5''	12:AM:101:THR:CB	2.40	0.52
1:AA:1480:A:O2'	1:AA:1481:U:H5'	2.10	0.52
3:AD:34:GLU:O	3:AD:34:GLU:HG3	2.09	0.52
11:AL:49:ARG:HD2	11:AL:49:ARG:H	1.75	0.52
13:AN:9:GLU:OE2	13:AN:60:ARG:HG2	2.10	0.52
13:AN:47:LEU:C	13:AN:49:THR:H	2.16	0.52
19:AT:60:GLN:HB3	19:AT:65:LEU:HD23	1.91	0.52
20:AB:65:LYS:HB2	20:AB:158:ASP:OD2	2.09	0.52
21:AU:36:PHE:O	21:AU:39:LYS:HG3	2.08	0.52
23:BB:279:A:N1	23:BB:362:A:H4'	2.25	0.52
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.45	0.52
23:BB:1827:U:O2'	23:BB:1828:G:H5'	2.09	0.52
23:BB:1831:G:O2'	23:BB:1832:C:H5'	2.08	0.52
23:BB:2243:U:H2'	23:BB:2244:U:H6	1.71	0.52
23:BB:2286:G:C8	23:BB:2286:G:H5'	2.44	0.52
23:BB:2757:A:H2	48:BG:63:GLN:NE2	2.07	0.52
26:BD:101:PHE:O	26:BD:180:VAL:HG11	2.09	0.52
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.09	0.52
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.09	0.52
41:BJ:45:THR:O	41:BJ:45:THR:HG23	2.08	0.52
41:BJ:72:LYS:CB	41:BJ:89:PHE:H	2.22	0.52
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	2.09	0.52
47:BF:125:GLY:HA2	47:BF:162:ASP:CA	2.36	0.52
1:CA:98:A:H2'	1:CA:99:C:H6	1.75	0.52
1:CA:473:U:H2'	1:CA:474:G:C8	2.44	0.52
1:CA:818:G:C2'	1:CA:819:A:H5''	2.39	0.52
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.44	0.52
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.24	0.52
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.44	0.52
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.10	0.52
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.77	0.52
20:CB:40:ILE:HG21	20:CB:200:PRO:O	2.09	0.52
21:CU:11:PHE:O	21:CU:13:VAL:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:40:PRO:C	21:CU:42:THR:N	2.66	0.52
23:DB:289:G:H2'	23:DB:290:U:H6	1.71	0.52
23:DB:995:C:O4'	44:DQ:56:PHE:HD1	1.93	0.52
23:DB:1228:G:O2'	23:DB:1229:C:H5'	2.10	0.52
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.70	0.52
23:DB:1640:A:H5'	23:DB:1640:A:H8	1.74	0.52
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.10	0.52
23:DB:2360:G:P	34:D3:50:SER:HB3	2.49	0.52
23:DB:2594:C:O2'	23:DB:2595:G:H5'	2.10	0.52
23:DB:2880:C:C1'	42:DN:91:ALA:HB3	2.39	0.52
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.52
27:DK:73:ASP:O	28:DP:74:GLN:HG3	2.09	0.52
30:DY:28:LEU:HA	30:DY:33:HIS:HD2	1.74	0.52
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.25	0.52
36:D2:16:HIS:HB3	36:D2:21:ARG:NH1	2.24	0.52
39:DX:29:ARG:CB	39:DX:29:ARG:HH21	2.22	0.52
41:DJ:36:LEU:O	41:DJ:51:GLY:HA3	2.10	0.52
43:DO:83:LEU:HD12	43:DO:87:ILE:O	2.09	0.52
47:DF:137:PHE:O	47:DF:139:GLU:N	2.43	0.52
49:DR:40:MET:HG3	49:DR:48:LYS:HA	1.92	0.52
53:D6:102:ASN:O	53:D6:104:PRO:HD3	2.09	0.52
1:AA:229:U:H2'	1:AA:230:G:H8	1.73	0.52
1:AA:236:A:H2'	1:AA:237:G:H8	1.73	0.52
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.09	0.52
6:AG:80:GLY:C	6:AG:82:SER:H	2.17	0.52
7:AH:55:LYS:HA	7:AH:55:LYS:HE3	1.90	0.52
7:AH:77:VAL:HG21	7:AH:127:TYR:CE1	2.45	0.52
9:AJ:37:ARG:HA	9:AJ:37:ARG:NE	2.25	0.52
11:AL:20:VAL:O	11:AL:20:VAL:HG23	2.09	0.52
12:AM:28:ARG:NH1	12:AM:32:ILE:HD12	2.24	0.52
16:AQ:10:ARG:NH2	16:AQ:55:GLY:HA2	2.25	0.52
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.74	0.52
20:AB:132:GLU:CD	20:AB:136:ARG:HE	2.18	0.52
23:BB:6:A:H2'	23:BB:7:G:H8	1.75	0.52
23:BB:110:G:O2'	23:BB:111:A:H5'	2.10	0.52
23:BB:483:A:H2'	23:BB:484:C:O4'	2.09	0.52
23:BB:755:U:H2'	23:BB:756:A:C8	2.44	0.52
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.10	0.52
23:BB:1266:G:H22	23:BB:2012:G:H2'	1.73	0.52
23:BB:1563:U:H2'	23:BB:1564:C:C6	2.44	0.52
23:BB:2594:C:O2'	23:BB:2595:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:9:VAL:O	28:BP:4:ILE:HD11	2.10	0.52
26:BD:122:VAL:H	26:BD:127:PHE:HB2	1.74	0.52
29:BE:49:ARG:O	29:BE:74:LYS:HD3	2.09	0.52
33:B1:7:LYS:HA	33:B1:23:THR:HG22	1.91	0.52
33:B1:39:ASP:OD1	33:B1:42:VAL:HG23	2.10	0.52
34:B3:32:LEU:HA	34:B3:35:LYS:HD2	1.92	0.52
36:B2:28:ARG:C	36:B2:30:VAL:H	2.16	0.52
38:BM:19:GLY:C	38:BM:20:LEU:HD22	2.34	0.52
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.10	0.52
43:BO:69:ASP:O	43:BO:72:ALA:HB3	2.09	0.52
50:BT:14:PRO:HA	50:BT:32:LEU:HB3	1.92	0.52
50:BT:40:LYS:HE2	50:BT:58:VAL:O	2.09	0.52
53:B6:58:VAL:HA	53:B6:67:VAL:O	2.09	0.52
1:CA:16:A:O2'	4:CE:20:VAL:HG13	2.10	0.52
1:CA:972:C:P	9:CJ:59:LYS:HD3	2.50	0.52
1:CA:991:U:H2'	1:CA:1212:U:O2	2.09	0.52
1:CA:1240:U:O4	6:CG:29:LEU:HG	2.09	0.52
1:CA:1269:A:H2	1:CA:1312:G:N3	2.07	0.52
3:CD:55:ARG:HH11	3:CD:55:ARG:HG3	1.75	0.52
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.25	0.52
5:CF:61:LEU:HD12	5:CF:63:ASN:OD1	2.10	0.52
5:CF:81:ASN:O	5:CF:83:ALA:N	2.43	0.52
6:CG:50:ALA:CB	6:CG:57:GLU:HG3	2.39	0.52
18:CS:50:VAL:O	18:CS:57:VAL:HG22	2.09	0.52
19:CT:38:ILE:HD11	19:CT:82:ILE:CG2	2.36	0.52
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.74	0.52
23:DB:925:A:O2'	23:DB:926:G:H5'	2.09	0.52
23:DB:1031:G:N3	32:D4:38:GLY:O	2.43	0.52
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.45	0.52
23:DB:1941:C:O2	53:D6:133:ARG:NH2	2.42	0.52
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.44	0.52
23:DB:2487:G:H2'	23:DB:2488:G:C8	2.44	0.52
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.09	0.52
26:DD:101:PHE:O	26:DD:102:ALA:HB2	2.10	0.52
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.91	0.52
33:D1:51:ALA:O	33:D1:52:LYS:C	2.53	0.52
38:DM:31:PHE:HD1	38:DM:105:MET:HB3	1.75	0.52
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.90	0.52
42:DN:62:ASN:N	42:DN:62:ASN:HD22	2.07	0.52
47:DF:102:LEU:HD13	47:DF:102:LEU:O	2.10	0.52
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:109:A:H4'	1:AA:110:C:OP2	2.09	0.52
1:AA:113:G:H2'	1:AA:114:U:C6	2.45	0.52
1:AA:160:A:H2'	1:AA:161:A:O4'	2.08	0.52
1:AA:367:U:OP1	1:AA:395:C:H1'	2.10	0.52
1:AA:453:G:H2'	1:AA:454:G:C8	2.44	0.52
1:AA:720:C:H5''	17:AR:40:PRO:HA	1.92	0.52
1:AA:770:C:O2'	1:AA:771:G:H5'	2.09	0.52
1:AA:807:A:H2'	1:AA:808:C:C6	2.44	0.52
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.09	0.52
3:AD:169:TRP:C	3:AD:182:LYS:HB2	2.35	0.52
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.09	0.52
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.09	0.52
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.25	0.52
11:AL:113:ARG:NH2	11:AL:120:ARG:HA	2.24	0.52
12:AM:2:ARG:HD3	12:AM:2:ARG:N	2.24	0.52
13:AN:24:ALA:O	13:AN:27:LYS:HD2	2.09	0.52
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.77	0.52
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.39	0.52
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.10	0.52
22:BA:20:G:H2'	22:BA:21:G:H8	1.75	0.52
23:BB:850:U:H5''	30:BY:18:LYS:HD3	1.91	0.52
23:BB:912:C:H2'	23:BB:913:U:C6	2.45	0.52
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.73	0.52
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.74	0.52
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.44	0.52
23:BB:2259:U:H2'	23:BB:2260:C:C6	2.45	0.52
23:BB:2364:C:O2'	23:BB:2365:G:H5'	2.10	0.52
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.45	0.52
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.24	0.52
25:BC:116:GLN:HG2	25:BC:117:SER:N	2.25	0.52
25:BC:131:MET:HE2	25:BC:187:CYS:O	2.10	0.52
29:BE:171:ASP:CG	29:BE:172:ALA:H	2.17	0.52
29:BE:188:MET:HG3	29:BE:192:ALA:HB3	1.92	0.52
32:B4:17:VAL:HG11	32:B4:19:ARG:HE	1.74	0.52
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.37	0.52
49:BR:49:ILE:HG21	49:BR:54:VAL:CA	2.39	0.52
50:BT:45:ALA:HA	50:BT:48:GLN:CG	2.39	0.52
52:BW:10:ARG:O	52:BW:11:ASN:HB2	2.09	0.52
53:B6:73:GLN:HG3	53:B6:74:ASN:N	2.25	0.52
1:CA:301:G:H2'	1:CA:302:G:C8	2.43	0.52
1:CA:323:U:H2'	1:CA:324:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:490:C:H2'	1:CA:491:G:C8	2.44	0.52
1:CA:1172:C:O2'	1:CA:1173:U:H5'	2.10	0.52
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.75	0.52
2:CC:71:ARG:O	2:CC:75:VAL:HG23	2.10	0.52
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.24	0.52
6:CG:91:ARG:CB	6:CG:92:PRO:HD2	2.40	0.52
9:CJ:9:ARG:CB	9:CJ:99:GLN:HB2	2.18	0.52
9:CJ:37:ARG:HA	9:CJ:37:ARG:NE	2.25	0.52
9:CJ:52:LEU:HG	9:CJ:62:ARG:NE	2.21	0.52
10:CK:90:PRO:C	10:CK:92:ARG:H	2.18	0.52
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.77	0.52
19:CT:34:VAL:HG11	19:CT:78:LEU:HD13	1.92	0.52
20:CB:42:LEU:HA	20:CB:45:THR:OG1	2.09	0.52
23:DB:493:G:H2'	23:DB:494:G:O4'	2.09	0.52
23:DB:899:A:H2'	23:DB:900:A:C8	2.44	0.52
23:DB:1411:U:H2'	23:DB:1412:U:C6	2.44	0.52
23:DB:1473:G:O2'	23:DB:1474:U:H5'	2.10	0.52
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.45	0.52
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.74	0.52
23:DB:1958:C:H2'	23:DB:1959:G:H8	1.74	0.52
23:DB:1987:A:H2'	23:DB:1988:G:H8	1.75	0.52
23:DB:2377:A:H2'	23:DB:2378:A:H8	1.73	0.52
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.18	0.52
35:DV:28:ALA:CB	35:DV:89:ILE:HD12	2.40	0.52
39:DX:56:LEU:O	39:DX:57:LEU:HB2	2.09	0.52
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.34	0.52
53:D6:80:GLU:HB2	53:D6:99:LEU:HD13	1.92	0.52
1:AA:412:A:H1'	1:AA:413:G:C8	2.45	0.52
1:AA:483:C:H2'	1:AA:484:G:C8	2.45	0.52
1:AA:999:C:H2'	1:AA:1000:A:H8	1.72	0.52
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.24	0.52
2:AC:13:ILE:N	2:AC:13:ILE:HD13	2.25	0.52
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.10	0.52
19:AT:42:ASP:OD1	19:AT:44:ALA:HB3	2.10	0.52
22:BA:13:G:H2'	22:BA:14:U:H5''	1.92	0.52
23:BB:84:A:H4'	23:BB:85:G:O5'	2.10	0.52
23:BB:370:G:O2'	23:BB:423:A:H3'	2.09	0.52
23:BB:956:G:C1'	38:BM:82:MET:HE1	2.40	0.52
23:BB:1376:C:H3'	57:BB:3500:HOH:O	2.09	0.52
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.45	0.52
23:BB:2060:A:C2'	29:BE:63:LYS:HZ1	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2322:A:H3'	23:BB:2323:G:H8	1.74	0.52
23:BB:2680:U:P	26:BD:114:LYS:HB3	2.50	0.52
24:BI:62:ALA:C	24:BI:64:ARG:H	2.16	0.52
25:BC:28:PRO:HB3	25:BC:81:GLU:OE1	2.09	0.52
29:BE:115:GLN:O	29:BE:117:ARG:HG3	2.09	0.52
29:BE:141:MET:O	29:BE:143:LEU:HG	2.09	0.52
35:BV:79:ARG:HA	35:BV:86:LEU:HA	1.91	0.52
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.91	0.52
44:BQ:59:LEU:HD13	44:BQ:59:LEU:C	2.35	0.52
45:BS:28:LYS:HD3	45:BS:69:LEU:O	2.10	0.52
47:BF:134:GLN:OE1	47:BF:136:ILE:HA	2.09	0.52
48:BG:23:ILE:HD11	48:BG:42:VAL:HG11	1.92	0.52
48:BG:59:ASP:O	48:BG:63:GLN:HB2	2.09	0.52
49:BR:54:VAL:HG13	49:BR:56:GLY:O	2.09	0.52
51:BZ:40:VAL:O	51:BZ:42:SER:N	2.42	0.52
51:BZ:41:GLU:O	51:BZ:44:LYS:HD2	2.09	0.52
53:B6:30:THR:HB	53:B6:183:ILE:N	2.24	0.52
1:CA:109:A:H4'	1:CA:110:C:OP2	2.10	0.52
1:CA:178:C:O2'	1:CA:179:A:H5'	2.10	0.52
1:CA:1329:A:OP1	12:CM:28:ARG:HB2	2.08	0.52
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.45	0.52
3:CD:60:VAL:CB	3:CD:194:ILE:HD11	2.35	0.52
5:CF:45:ARG:HG2	5:CF:46:GLN:N	2.25	0.52
6:CG:78:ARG:HH12	6:CG:79:VAL:C	2.18	0.52
7:CH:63:LYS:HD2	7:CH:70:VAL:HG21	1.90	0.52
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.09	0.52
20:CB:10:LYS:HD3	20:CB:211:LEU:HD21	1.91	0.52
21:CU:31:VAL:O	21:CU:31:VAL:HG12	2.09	0.52
21:CU:36:PHE:HD2	21:CU:39:LYS:HB2	1.75	0.52
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.92	0.52
23:DB:944:C:H2'	57:DB:3331:HOH:O	2.09	0.52
23:DB:1339:G:H21	23:DB:1603:A:H1'	1.75	0.52
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.45	0.52
23:DB:1965:C:H5''	23:DB:1966:A:H2'	1.91	0.52
23:DB:2013:A:N3	45:DS:88:ARG:NH1	2.58	0.52
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.74	0.52
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.74	0.52
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.09	0.52
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.45	0.52
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.73	0.52
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:20:ASN:ND2	25:DC:23:LEU:HD13	2.25	0.52
26:DD:90:PHE:HD2	26:DD:94:GLN:HG3	1.75	0.52
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.37	0.52
27:DK:64:ARG:HB2	27:DK:83:ALA:HB3	1.92	0.52
29:DE:48:THR:HG23	29:DE:88:ARG:HH12	1.74	0.52
38:DM:41:LEU:O	38:DM:94:ALA:N	2.42	0.52
39:DX:45:GLN:O	39:DX:47:ARG:N	2.42	0.52
40:DH:44:ILE:O	40:DH:48:GLU:HB2	2.10	0.52
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.40	0.52
41:DJ:45:THR:O	41:DJ:45:THR:HG23	2.09	0.52
42:DN:81:ASN:O	42:DN:85:PRO:HD2	2.09	0.52
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.24	0.52
48:DG:34:ARG:N	48:DG:34:ARG:HD3	2.24	0.52
50:DT:25:GLU:HA	50:DT:28:ASN:O	2.10	0.52
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.10	0.52
1:AA:1110:A:H2'	1:AA:1111:A:C8	2.45	0.52
1:AA:1137:C:H1'	1:AA:1138:G:N1	2.24	0.52
1:AA:1269:A:H2	1:AA:1312:G:N3	2.08	0.52
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.10	0.52
1:AA:1316:G:H5'	1:AA:1317:C:OP2	2.09	0.52
3:AD:41:GLY:C	3:AD:43:ARG:H	2.17	0.52
7:AH:79:ARG:NH1	7:AH:82:LEU:HB3	2.25	0.52
10:AK:16:SER:HA	10:AK:79:LYS:HG2	1.91	0.52
10:AK:55:ARG:NH1	10:AK:60:PHE:HD1	2.05	0.52
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.91	0.52
12:AM:29:SER:O	12:AM:32:ILE:HG22	2.10	0.52
13:AN:46:LYS:NZ	18:AS:10:ILE:H	2.06	0.52
19:AT:79:THR:HA	19:AT:82:ILE:HG12	1.91	0.52
20:AB:130:LYS:O	20:AB:134:LEU:HG	2.09	0.52
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	1.92	0.52
22:BA:103:U:O2'	22:BA:104:A:H5'	2.09	0.52
23:BB:263:G:H2'	23:BB:264:C:O4'	2.10	0.52
23:BB:433:C:H2'	23:BB:434:U:C6	2.45	0.52
23:BB:548:G:H5''	23:BB:549:G:C4	2.44	0.52
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.44	0.52
23:BB:1176:U:H6	23:BB:1176:U:O5'	1.93	0.52
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.45	0.52
23:BB:1418:G:H1'	23:BB:1580:A:H61	1.75	0.52
23:BB:2311:A:O2'	47:BF:84:ILE:HG21	2.10	0.52
23:BB:2353:G:H1'	52:BW:30:VAL:HG13	1.91	0.52
23:BB:2712:C:H2'	23:BB:2714:G:O3'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.74	0.52
25:BC:93:VAL:HG21	25:BC:115:ILE:HD11	1.92	0.52
25:BC:264:LYS:HG3	25:BC:265:PHE:CD2	2.45	0.52
26:BD:113:SER:HB3	26:BD:167:ASN:HA	1.92	0.52
26:BD:178:VAL:HB	26:BD:188:LEU:CB	2.36	0.52
30:BY:4:ILE:HD13	30:BY:58:GLU:HG3	1.90	0.52
34:B3:24:LYS:HZ2	34:B3:28:LEU:HB3	1.75	0.52
35:BV:4:ILE:HD11	35:BV:61:LEU:HB3	1.92	0.52
37:BL:23:ILE:HD12	49:BR:84:ARG:HE	1.74	0.52
38:BM:31:PHE:HD1	38:BM:105:MET:HB3	1.74	0.52
43:BO:110:ALA:O	43:BO:115:LEU:HB2	2.10	0.52
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.67	0.52
47:BF:137:PHE:O	47:BF:139:GLU:N	2.42	0.52
52:BW:50:VAL:O	52:BW:59:PHE:HB3	2.09	0.52
53:B6:38:LEU:HD22	53:B6:83:ILE:HD12	1.92	0.52
1:CA:378:G:O2'	1:CA:379:C:H5'	2.09	0.52
1:CA:620:C:N1	3:CD:131:ILE:HD13	2.24	0.52
1:CA:960:U:H4'	1:CA:961:U:C5'	2.39	0.52
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.23	0.52
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.45	0.52
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.09	0.52
3:CD:25:ARG:HD3	3:CD:25:ARG:C	2.34	0.52
3:CD:84:ASN:HD22	4:CE:101:GLY:HA2	1.73	0.52
6:CG:21:LEU:HG	6:CG:22:LEU:H	1.75	0.52
6:CG:130:LYS:N	6:CG:134:VAL:HG21	2.25	0.52
7:CH:102:VAL:HG12	7:CH:125:ILE:HD12	1.92	0.52
11:CL:107:LYS:C	11:CL:109:ARG:H	2.17	0.52
12:CM:19:THR:HG22	12:CM:29:SER:CB	2.40	0.52
13:CN:9:GLU:OE2	13:CN:60:ARG:HG2	2.09	0.52
13:CN:24:ALA:O	13:CN:27:LYS:HD2	2.09	0.52
15:CP:12:LYS:C	15:CP:14:ARG:H	2.18	0.52
20:CB:172:ILE:HG22	20:CB:176:ASN:HD21	1.74	0.52
23:DB:454:A:H3'	23:DB:455:C:H5'	1.92	0.52
23:DB:603:A:H4'	23:DB:604:G:O5'	2.10	0.52
23:DB:936:A:H2'	23:DB:937:C:C6	2.45	0.52
23:DB:1060:U:O2	23:DB:1088:A:C8	2.63	0.52
23:DB:1509:A:H5'	23:DB:1510:G:H5'	1.91	0.52
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.10	0.52
23:DB:1829:A:H2'	23:DB:1830:C:H5'	1.92	0.52
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.09	0.52
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:39:ILE:H	27:DK:39:ILE:HD13	1.75	0.52
27:DK:71:ARG:HA	27:DK:71:ARG:HE	1.75	0.52
29:DE:18:THR:HG22	29:DE:106:LYS:CE	2.40	0.52
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.57	0.52
29:DE:188:MET:HG2	29:DE:193:VAL:CG2	2.36	0.52
32:D4:7:VAL:HG23	32:D4:35:GLN:CB	2.38	0.52
35:DV:57:TYR:HE2	38:DM:136:MET:HE2	1.75	0.52
38:DM:33:LEU:HD22	38:DM:128:THR:HB	1.92	0.52
40:DH:131:SER:HB2	40:DH:141:LYS:CA	2.40	0.52
44:DQ:77:LYS:O	44:DQ:80:ASN:HB3	2.09	0.52
44:DQ:94:LEU:CD1	49:DR:13:ARG:HB2	2.40	0.52
50:DT:64:LYS:HD2	50:DT:64:LYS:H	1.75	0.52
52:DW:37:VAL:C	52:DW:38:ARG:HG2	2.34	0.52
1:AA:956:U:O2'	1:AA:957:U:H5'	2.09	0.52
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.45	0.52
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.09	0.52
3:AD:151:GLN:HB3	3:AD:154:VAL:HG23	1.92	0.52
9:AJ:9:ARG:CB	9:AJ:99:GLN:HB2	2.20	0.52
20:AB:69:VAL:HB	20:AB:162:VAL:HB	1.91	0.52
22:BA:64:G:O2'	22:BA:65:U:H5'	2.10	0.52
23:BB:21:A:H2'	23:BB:22:C:C6	2.45	0.52
23:BB:639:U:H2'	23:BB:640:C:H6	1.74	0.52
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.45	0.52
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.44	0.52
23:BB:1843:C:H5''	25:BC:250:GLN:HE21	1.73	0.52
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.75	0.52
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.10	0.52
30:BY:56:VAL:HG12	30:BY:57:GLU:N	2.25	0.52
35:BV:63:ILE:HD12	35:BV:63:ILE:H	1.75	0.52
40:BH:73:ASN:ND2	40:BH:74:ALA:H	2.03	0.52
40:BH:131:SER:O	40:BH:133:GLN:N	2.41	0.52
42:BN:67:PHE:O	42:BN:68:ALA:C	2.52	0.52
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.73	0.52
47:BF:115:GLY:CA	47:BF:177:ARG:HH11	2.21	0.52
48:BG:84:LYS:H	48:BG:85:LYS:HD2	1.74	0.52
48:BG:88:LEU:HD11	48:BG:94:ARG:N	2.25	0.52
53:B6:36:ALA:O	53:B6:39:LEU:HD23	2.10	0.52
1:CA:97:G:H5'	1:CA:98:A:OP2	2.10	0.52
1:CA:723:U:O4'	21:CU:48:LYS:HD3	2.10	0.52
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.25	0.52
1:CA:1250:A:H4'	8:CI:69:GLY:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:H1'	18:CS:72:GLU:N	2.25	0.52
2:CC:155:ARG:H	2:CC:162:ALA:CB	2.23	0.52
3:CD:81:LEU:HB2	3:CD:88:ASN:ND2	2.24	0.52
12:CM:28:ARG:HH12	12:CM:59:VAL:HA	1.75	0.52
13:CN:26:LEU:HD12	13:CN:44:VAL:HG13	1.92	0.52
13:CN:63:CYS:HB3	13:CN:68:ARG:H	1.75	0.52
19:CT:85:LEU:HD23	19:CT:86:ALA:N	2.22	0.52
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.27	0.52
20:CB:83:ALA:O	20:CB:88:GLN:HB2	2.09	0.52
22:DA:40:U:H1'	22:DA:43:C:C5	2.44	0.52
23:DB:138:U:O5'	23:DB:138:U:H6	1.92	0.52
23:DB:445:C:O2'	23:DB:446:G:H5'	2.09	0.52
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.91	0.52
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.75	0.52
23:DB:1256:G:H21	29:DE:77:ILE:CG2	2.23	0.52
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.74	0.52
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.45	0.52
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.10	0.52
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.44	0.52
25:DC:6:LYS:O	25:DC:8:THR:HG23	2.10	0.52
25:DC:18:VAL:CG1	25:DC:202:ARG:HD2	2.40	0.52
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	1.92	0.52
32:D4:17:VAL:HG11	32:D4:19:ARG:HE	1.75	0.52
35:DV:31:TYR:HA	35:DV:93:ARG:NH2	2.25	0.52
41:DJ:58:ASN:HD22	41:DJ:61:LYS:HD2	1.74	0.52
42:DN:93:GLY:C	42:DN:95:THR:H	2.18	0.52
44:DQ:51:GLN:O	44:DQ:54:ARG:HB2	2.10	0.52
46:DU:85:ARG:NH1	46:DU:86:PHE:H	2.07	0.52
47:DF:78:ILE:HA	47:DF:82:TYR:CD1	2.45	0.52
47:DF:135:ILE:C	47:DF:136:ILE:HG12	2.34	0.52
48:DG:144:ALA:HB1	48:DG:163:TYR:HE1	1.75	0.52
48:DG:162:ARG:NH2	48:DG:168:VAL:HG21	2.24	0.52
1:AA:64:G:H4'	1:AA:65:A:H3'	1.91	0.52
1:AA:635:A:H2'	1:AA:636:U:C6	2.44	0.52
1:AA:821:G:O2'	1:AA:822:U:H5'	2.09	0.52
1:AA:987:G:H2'	1:AA:988:G:H8	1.74	0.52
1:AA:993:G:C2'	1:AA:995:C:H41	2.22	0.52
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.09	0.52
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.10	0.52
1:AA:1389:C:H2'	1:AA:1390:U:H6	1.75	0.52
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:2:GLN:HE22	2:AC:3:LYS:HZ3	1.57	0.52
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.24	0.52
3:AD:57:LYS:HD3	3:AD:57:LYS:C	2.35	0.52
5:AF:1:MET:HG2	5:AF:67:PRO:HB3	1.92	0.52
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.09	0.52
7:AH:63:LYS:HD2	7:AH:70:VAL:HG21	1.92	0.52
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.74	0.52
11:AL:107:LYS:C	11:AL:109:ARG:H	2.17	0.52
13:AN:50:LEU:HG	13:AN:51:PRO:HD3	1.91	0.52
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.45	0.52
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.28	0.52
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.35	0.52
20:AB:84:LEU:C	20:AB:86:CYS:H	2.18	0.52
20:AB:166:ASP:OD2	20:AB:190:SER:HA	2.10	0.52
22:BA:32:U:H4'	22:BA:52:A:H62	1.75	0.52
23:BB:30:G:H4'	23:BB:1215:G:H5'	1.92	0.52
23:BB:62:U:O2'	23:BB:63:A:H5'	2.10	0.52
23:BB:141:G:H3'	23:BB:142:A:O4'	2.10	0.52
23:BB:337:C:H2'	23:BB:338:G:O4'	2.10	0.52
23:BB:587:C:N3	37:BL:33:ARG:NH2	2.57	0.52
23:BB:773:U:H4'	25:BC:45:ASN:O	2.09	0.52
23:BB:945:A:H3'	23:BB:946:C:H5''	1.92	0.52
23:BB:1667:G:OP1	27:BK:6:THR:HA	2.09	0.52
23:BB:1789:A:P	25:BC:220:ARG:HD3	2.50	0.52
23:BB:2719:G:O2'	23:BB:2720:U:H5'	2.11	0.52
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.92	0.52
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.44	0.52
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.25	0.52
27:BK:75:SER:HA	28:BP:72:VAL:O	2.09	0.52
36:B2:27:GLY:O	36:B2:30:VAL:HB	2.10	0.52
37:BL:30:THR:O	37:BL:31:GLY:C	2.51	0.52
37:BL:60:ARG:C	37:BL:61:LEU:HD12	2.35	0.52
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.25	0.52
44:BQ:20:ALA:HA	44:BQ:23:TYR:CE1	2.45	0.52
44:BQ:60:TRP:HB3	44:BQ:92:LYS:O	2.10	0.52
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.65	0.52
47:BF:34:THR:HA	47:BF:89:THR:HA	1.91	0.52
48:BG:106:LEU:O	48:BG:108:PHE:HD1	1.92	0.52
50:BT:2:ILE:HD13	50:BT:2:ILE:H	1.75	0.52
51:BZ:39:TRP:HA	51:BZ:46:PHE:CD2	2.45	0.52
1:CA:1047:G:H21	1:CA:1215:G:C4'	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.10	0.52
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.72	0.52
2:CC:183:TYR:HE1	2:CC:198:LYS:HB3	1.75	0.52
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.39	0.52
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.75	0.52
4:CE:149:PRO:HG2	4:CE:150:GLU:OE1	2.10	0.52
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.25	0.52
14:CO:71:LYS:NZ	14:CO:72:ARG:HA	2.25	0.52
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.45	0.52
21:CU:40:PRO:O	21:CU:42:THR:N	2.43	0.52
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.36	0.52
23:DB:2635:A:C5'	26:DD:79:LEU:HB2	2.40	0.52
25:DC:18:VAL:HG11	25:DC:202:ARG:HD2	1.92	0.52
29:DE:129:PRO:HD3	29:DE:156:ASN:OD1	2.10	0.52
29:DE:171:ASP:CG	29:DE:172:ALA:H	2.18	0.52
30:DY:16:LEU:O	30:DY:19:HIS:HB2	2.10	0.52
35:DV:4:ILE:O	35:DV:63:ILE:HG23	2.10	0.52
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.28	0.52
38:DM:35:ALA:HB3	38:DM:99:GLY:H	1.73	0.52
41:DJ:6:ALA:CB	41:DJ:45:THR:HG21	2.39	0.52
45:DS:41:LYS:HB3	45:DS:41:LYS:NZ	2.25	0.52
52:DW:49:ASN:HA	52:DW:61:LYS:H	1.75	0.52
53:D6:78:ALA:HA	53:D6:81:LYS:HD2	1.91	0.52
1:AA:337:G:H2'	1:AA:338:A:H8	1.75	0.51
1:AA:560:A:H5'	1:AA:566:G:N2	2.25	0.51
1:AA:613:C:P	3:AD:80:ARG:HH21	2.33	0.51
1:AA:628:G:O2'	1:AA:629:A:H5'	2.10	0.51
1:AA:900:A:O2'	1:AA:901:A:H5'	2.11	0.51
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.11	0.51
1:AA:1374:A:H4'	6:AG:27:ASN:OD1	2.10	0.51
1:AA:1396:A:H4'	1:AA:1397:C:H5''	1.93	0.51
3:AD:196:GLU:CD	3:AD:196:GLU:H	2.18	0.51
10:AK:15:VAL:HB	10:AK:78:ILE:CD1	2.40	0.51
11:AL:49:ARG:HD2	11:AL:49:ARG:N	2.24	0.51
12:AM:2:ARG:HA	12:AM:6:ILE:O	2.09	0.51
13:AN:17:ASP:HA	13:AN:21:ALA:CB	2.40	0.51
18:AS:66:VAL:HG23	18:AS:67:GLY:H	1.73	0.51
19:AT:38:ILE:HD11	19:AT:82:ILE:CG2	2.31	0.51
20:AB:10:LYS:HD3	20:AB:211:LEU:HD21	1.92	0.51
23:BB:195:A:H1'	23:BB:250:G:N2	2.26	0.51
23:BB:445:C:O2'	23:BB:446:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:466:A:N3	23:BB:683:U:H1'	2.25	0.51
23:BB:704:G:H2'	23:BB:726:G:N2	2.13	0.51
23:BB:956:G:N2	23:BB:959:A:H3'	2.25	0.51
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.10	0.51
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.45	0.51
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.45	0.51
23:BB:2109:U:O2'	23:BB:2110:G:H5'	2.10	0.51
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.40	0.51
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.10	0.51
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.75	0.51
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.45	0.51
43:BO:89:ASP:HA	43:BO:116:GLN:HB3	1.92	0.51
47:BF:78:ILE:HA	47:BF:82:TYR:CD1	2.44	0.51
1:CA:8:A:H61	3:CD:53:GLN:HE22	1.58	0.51
1:CA:182:A:O2'	1:CA:183:C:H3'	2.10	0.51
1:CA:420:U:O2'	1:CA:421:U:H5''	2.10	0.51
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.10	0.51
1:CA:805:C:O2'	1:CA:806:C:H5'	2.10	0.51
1:CA:1110:A:H2'	1:CA:1111:A:C8	2.45	0.51
1:CA:1118:U:H5''	8:CI:105:ARG:HG3	1.91	0.51
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	1.93	0.51
6:CG:115:MET:HA	6:CG:118:ARG:HD2	1.92	0.51
10:CK:15:VAL:HB	10:CK:78:ILE:CD1	2.39	0.51
15:CP:22:ALA:HB2	15:CP:32:PHE:HA	1.92	0.51
16:CQ:24:ILE:HD12	16:CQ:24:ILE:N	2.24	0.51
18:CS:54:ARG:HB3	18:CS:55:GLN:HE21	1.75	0.51
23:DB:584:C:OP1	44:DQ:5:ARG:HB3	2.10	0.51
23:DB:809:G:H2'	23:DB:810:U:C6	2.45	0.51
23:DB:820:A:H2'	23:DB:821:A:O4'	2.10	0.51
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.51
23:DB:1441:G:H4'	23:DB:1628:G:OP1	2.10	0.51
23:DB:1454:C:C1'	42:DN:60:VAL:HG13	2.40	0.51
23:DB:2460:U:H2'	23:DB:2461:A:H8	1.75	0.51
23:DB:2529:G:O3'	48:DG:174:LYS:HE2	2.09	0.51
23:DB:2823:A:O2'	23:DB:2824:C:H5'	2.11	0.51
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.45	0.51
25:DC:173:LEU:HD13	25:DC:173:LEU:N	2.25	0.51
34:D3:30:HIS:HD2	34:D3:31:ILE:N	2.08	0.51
35:DV:63:ILE:HD12	35:DV:63:ILE:H	1.76	0.51
42:DN:71:ARG:HG2	42:DN:71:ARG:HH21	1.75	0.51
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:108:LEU:HD23	49:DR:48:LYS:HD3	1.91	0.51
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.92	0.51
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.73	0.51
47:DF:124:ARG:HB3	47:DF:126:ASN:OD1	2.10	0.51
49:DR:4:VAL:HG21	49:DR:40:MET:HB2	1.92	0.51
52:DW:18:LYS:O	52:DW:34:SER:HA	2.10	0.51
53:D6:65:THR:CA	53:D6:103:ILE:HD12	2.40	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:CG	2.40	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:CD1	2.39	0.51
1:AA:965:U:OP1	1:AA:1198:G:H5'	2.10	0.51
1:AA:1250:A:H4'	8:AI:69:GLY:O	2.10	0.51
1:AA:1460:C:H2'	1:AA:1461:G:H8	1.75	0.51
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.44	0.51
1:AA:1509:C:O2'	1:AA:1510:C:H5'	2.11	0.51
2:AC:165:GLU:OE2	2:AC:165:GLU:HA	2.09	0.51
5:AF:3:HIS:CD2	5:AF:3:HIS:N	2.78	0.51
22:BA:54:G:H21	47:BF:25:MET:CE	2.24	0.51
23:BB:143:C:H5'	50:BT:3:ARG:NH1	2.26	0.51
23:BB:265:A:O2'	23:BB:266:G:H4'	2.10	0.51
23:BB:279:A:H2'	23:BB:280:U:H5'	1.93	0.51
23:BB:841:G:O2'	23:BB:842:U:H5'	2.11	0.51
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.70	0.51
23:BB:2679:A:H2'	23:BB:2680:U:C6	2.46	0.51
25:BC:145:MET:SD	25:BC:153:LEU:HD21	2.50	0.51
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.57	0.51
26:BD:10:GLY:HA3	26:BD:26:VAL:N	2.19	0.51
27:BK:14:SER:HB2	27:BK:51:LYS:H	1.75	0.51
37:BL:40:SER:OG	37:BL:41:ARG:HG3	2.10	0.51
38:BM:40:ARG:HB3	38:BM:95:LEU:HD12	1.92	0.51
41:BJ:87:ALA:HA	41:BJ:91:GLU:OE1	2.10	0.51
42:BN:82:GLU:C	42:BN:84:GLY:H	2.18	0.51
42:BN:93:GLY:C	42:BN:95:THR:H	2.18	0.51
43:BO:83:LEU:HD12	43:BO:87:ILE:O	2.09	0.51
45:BS:28:LYS:HD2	45:BS:29:VAL:H	1.75	0.51
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.10	0.51
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.25	0.51
50:BT:68:LYS:HD3	50:BT:68:LYS:N	2.25	0.51
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.43	0.51
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.44	0.51
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	1.91	0.51
53:B6:7:TYR:OH	53:B6:157:ALA:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:150:SER:O	53:B6:154:THR:HG22	2.09	0.51
1:CA:58:C:O2'	1:CA:59:A:H5'	2.10	0.51
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.10	0.51
1:CA:1494:G:N7	55:CA:1662:LLL:N32	2.58	0.51
13:CN:17:ASP:HA	13:CN:21:ALA:HB2	1.92	0.51
13:CN:52:ARG:C	13:CN:54:SER:H	2.18	0.51
23:DB:144:A:O2'	23:DB:145:C:H5'	2.11	0.51
23:DB:264:C:O2'	23:DB:265:A:H5''	2.09	0.51
23:DB:850:U:O2'	30:DY:22:THR:HA	2.10	0.51
23:DB:970:U:H1'	23:DB:985:C:P	2.50	0.51
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.75	0.51
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.75	0.51
23:DB:2808:G:HO2'	23:DB:2809:A:H8	1.58	0.51
27:DK:37:ASP:O	27:DK:62:VAL:HG23	2.09	0.51
28:DP:23:ASP:HA	28:DP:88:ARG:HA	1.92	0.51
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.24	0.51
38:DM:17:ASN:ND2	38:DM:95:LEU:HG	2.25	0.51
39:DX:23:ARG:O	39:DX:27:ASN:HB2	2.10	0.51
42:DN:82:GLU:C	42:DN:84:GLY:H	2.18	0.51
47:DF:65:LEU:O	47:DF:86:CYS:HA	2.10	0.51
48:DG:71:LEU:HD13	48:DG:74:MET:SD	2.50	0.51
10:AK:111:ASP:CB	21:AU:19:LYS:HE3	2.28	0.51
13:AN:60:ARG:NH2	13:AN:69:PRO:HB3	2.25	0.51
20:AB:218:ALA:HA	20:AB:221:ARG:HG2	1.92	0.51
23:BB:18:U:H2'	23:BB:19:A:H8	1.76	0.51
23:BB:506:G:H1'	23:BB:507:A:C8	2.45	0.51
23:BB:548:G:H5''	23:BB:549:G:O4'	2.10	0.51
23:BB:576:U:H2'	23:BB:577:G:C8	2.45	0.51
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.25	0.51
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.10	0.51
23:BB:1301:A:O2'	23:BB:1302:A:H2'	2.10	0.51
23:BB:1559:U:H3'	23:BB:1560:G:H5'	1.91	0.51
23:BB:1722:A:N6	23:BB:1738:G:H1'	2.26	0.51
23:BB:1753:G:N2	23:BB:1755:A:H3'	2.26	0.51
23:BB:2825:G:H2'	23:BB:2826:A:H5'	1.93	0.51
31:B0:47:TYR:CZ	31:B0:52:LYS:HG3	2.45	0.51
32:B4:19:ARG:C	32:B4:21:GLY:N	2.68	0.51
37:BL:99:ASN:O	37:BL:100:ILE:HB	2.10	0.51
41:BJ:84:ILE:O	41:BJ:84:ILE:HG23	2.09	0.51
43:BO:68:LYS:H	43:BO:102:ARG:CD	2.22	0.51
44:BQ:35:PHE:C	44:BQ:37:ALA:N	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:65:LEU:O	47:BF:86:CYS:HA	2.09	0.51
47:BF:129:MET:HE3	47:BF:129:MET:O	2.10	0.51
47:BF:134:GLN:O	47:BF:136:ILE:N	2.43	0.51
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.35	0.51
1:CA:984:C:O2'	1:CA:985:C:H5'	2.11	0.51
1:CA:1017:U:H2'	1:CA:1018:G:C8	2.45	0.51
1:CA:1034:G:H2'	1:CA:1035:A:H5'	1.93	0.51
1:CA:1308:U:H3'	12:CM:97:ARG:HH11	1.76	0.51
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.10	0.51
16:CQ:68:LYS:O	16:CQ:70:LYS:N	2.44	0.51
23:DB:154:U:H2'	23:DB:155:A:H8	1.75	0.51
23:DB:693:A:H2'	23:DB:694:U:H6	1.74	0.51
23:DB:871:U:H2'	23:DB:872:U:C6	2.44	0.51
23:DB:898:C:H2'	23:DB:898:C:O2	2.10	0.51
23:DB:1141:U:H4'	23:DB:1142:A:C1'	2.41	0.51
23:DB:1718:G:H2'	23:DB:1719:G:C8	2.46	0.51
23:DB:2291:U:O2'	23:DB:2374:C:H1'	2.09	0.51
23:DB:2457:U:O2'	23:DB:2458:G:H5'	2.11	0.51
25:DC:86:ARG:HB3	25:DC:86:ARG:CZ	2.40	0.51
25:DC:239:PHE:HD1	25:DC:241:LYS:H	1.58	0.51
26:DD:38:LYS:HE2	26:DD:43:ASP:OD2	2.10	0.51
27:DK:75:SER:HA	28:DP:72:VAL:O	2.11	0.51
28:DP:61:ARG:NH1	28:DP:100:ARG:HA	2.25	0.51
28:DP:74:GLN:O	28:DP:76:HIS:N	2.44	0.51
29:DE:58:LYS:O	29:DE:60:TRP:N	2.44	0.51
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.75	0.51
41:DJ:23:LYS:HZ1	41:DJ:142:ILE:HA	1.75	0.51
41:DJ:23:LYS:HZ2	41:DJ:142:ILE:HG12	1.75	0.51
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.26	0.51
44:DQ:104:ALA:O	44:DQ:106:THR:N	2.40	0.51
45:DS:97:LEU:HD22	45:DS:97:LEU:N	2.25	0.51
48:DG:84:LYS:H	48:DG:85:LYS:HD2	1.75	0.51
53:D6:7:TYR:CE2	53:D6:160:GLU:HG2	2.44	0.51
53:D6:12:SER:O	53:D6:16:LYS:HD2	2.10	0.51
53:D6:123:GLU:HA	53:D6:126:ARG:HH11	1.74	0.51
1:AA:960:U:H4'	1:AA:961:U:C5'	2.40	0.51
1:AA:964:A:H2'	1:AA:965:U:H5''	1.91	0.51
1:AA:1118:U:H5''	8:AI:105:ARG:HG3	1.92	0.51
1:AA:1221:G:O3'	18:AS:76:THR:HG21	2.09	0.51
5:AF:92:THR:O	5:AF:93:LYS:HB2	2.09	0.51
13:AN:23:ARG:C	13:AN:25:GLU:H	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:68:LYS:O	16:AQ:70:LYS:N	2.42	0.51
20:AB:80:LYS:O	20:AB:84:LEU:HB2	2.11	0.51
21:AU:11:PHE:O	21:AU:13:VAL:N	2.43	0.51
22:BA:111:U:H2'	22:BA:112:G:H8	1.75	0.51
23:BB:1042:G:H2'	23:BB:1043:C:C6	2.46	0.51
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.10	0.51
23:BB:2060:A:C3'	29:BE:63:LYS:HZ1	2.24	0.51
23:BB:2074:U:O2'	23:BB:2075:U:H5'	2.09	0.51
23:BB:2472:G:H2'	23:BB:2529:G:N2	2.25	0.51
35:BV:53:LYS:HZ1	35:BV:54:ALA:HB3	1.76	0.51
39:BX:23:ARG:O	39:BX:27:ASN:HB2	2.10	0.51
40:BH:111:ALA:N	40:BH:132:PHE:HZ	2.08	0.51
41:BJ:23:LYS:NZ	41:BJ:142:ILE:HG12	2.25	0.51
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.10	0.51
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.26	0.51
48:BG:54:ARG:O	48:BG:55:ASP:C	2.54	0.51
50:BT:55:VAL:CA	50:BT:87:LEU:HA	2.39	0.51
51:BZ:68:LEU:HD13	51:BZ:78:TYR:CE1	2.46	0.51
1:CA:696:A:H2'	1:CA:697:U:C6	2.44	0.51
1:CA:956:U:O2'	1:CA:957:U:H5'	2.10	0.51
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.45	0.51
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.45	0.51
5:CF:67:PRO:O	5:CF:70:VAL:HG22	2.09	0.51
6:CG:126:ALA:C	6:CG:128:GLU:H	2.18	0.51
8:CI:5:TYR:CD1	8:CI:20:ILE:HG22	2.46	0.51
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.92	0.51
12:CM:2:ARG:HA	12:CM:6:ILE:O	2.11	0.51
12:CM:106:ARG:HH12	12:CM:109:LYS:HE3	1.74	0.51
13:CN:50:LEU:HG	13:CN:51:PRO:HD3	1.92	0.51
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.10	0.51
19:CT:57:VAL:HG23	19:CT:58:ASP:H	1.75	0.51
22:DA:33:G:O2'	22:DA:34:A:H5'	2.11	0.51
23:DB:26:G:H1'	23:DB:514:A:H61	1.76	0.51
23:DB:558:U:O2'	23:DB:559:G:H5'	2.11	0.51
23:DB:814:C:O2'	23:DB:815:C:H5'	2.09	0.51
23:DB:1862:G:O2'	23:DB:1863:G:H5'	2.10	0.51
23:DB:2349:G:OP2	34:D3:41:ARG:HD3	2.10	0.51
23:DB:2487:G:H2'	23:DB:2488:G:H8	1.75	0.51
23:DB:2529:G:H4'	48:DG:174:LYS:HE2	1.92	0.51
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.11	0.51
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:48:THR:C	29:DE:50:ALA:H	2.16	0.51
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.46	0.51
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.10	0.51
41:DJ:80:HIS:O	41:DJ:81:ILE:C	2.53	0.51
46:DU:6:ARG:HH21	46:DU:6:ARG:HG2	1.76	0.51
47:DF:131:VAL:C	47:DF:133:GLU:H	2.19	0.51
48:DG:10:VAL:HG13	48:DG:14:VAL:HG21	1.92	0.51
49:DR:54:VAL:HG13	49:DR:56:GLY:O	2.11	0.51
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.75	0.51
1:AA:207:C:H3'	1:AA:208:U:C6	2.45	0.51
1:AA:256:U:H3'	1:AA:257:G:H8	1.74	0.51
1:AA:767:A:H2'	1:AA:768:A:C8	2.45	0.51
1:AA:767:A:H2'	1:AA:768:A:H8	1.75	0.51
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.74	0.51
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.10	0.51
3:AD:116:LEU:O	3:AD:122:ILE:HG12	2.11	0.51
5:AF:100:SER:HA	17:AR:23:LYS:NZ	2.26	0.51
6:AG:91:ARG:CB	6:AG:92:PRO:HD2	2.40	0.51
7:AH:76:ARG:HG2	7:AH:79:ARG:HB3	1.93	0.51
9:AJ:6:ILE:HA	9:AJ:102:LEU:O	2.10	0.51
15:AP:26:ASN:OD1	15:AP:31:ARG:HD3	2.10	0.51
20:AB:86:CYS:O	20:AB:88:GLN:N	2.41	0.51
23:BB:159:G:O2'	23:BB:160:A:H5''	2.11	0.51
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.09	0.51
23:BB:2358:A:H2'	23:BB:2359:C:O4'	2.11	0.51
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.11	0.51
26:BD:15:PHE:H	26:BD:15:PHE:HD1	1.54	0.51
28:BP:29:VAL:HG12	28:BP:80:VAL:HA	1.93	0.51
35:BV:28:ALA:CB	35:BV:89:ILE:HD12	2.40	0.51
40:BH:4:ILE:HA	40:BH:18:GLN:HA	1.93	0.51
40:BH:63:ALA:O	40:BH:64:ALA:HB2	2.10	0.51
40:BH:81:ALA:CB	40:BH:147:VAL:H	2.24	0.51
42:BN:49:GLU:OE2	42:BN:95:THR:HG22	2.10	0.51
44:BQ:83:LYS:HA	44:BQ:83:LYS:HZ2	1.76	0.51
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.38	0.51
45:BS:6:LYS:HB3	45:BS:104:THR:HG23	1.91	0.51
49:BR:4:VAL:HG21	49:BR:40:MET:HB2	1.92	0.51
52:BW:37:VAL:CG1	52:BW:38:ARG:H	2.18	0.51
53:B6:104:PRO:O	53:B6:105:PRO:C	2.52	0.51
1:CA:974:A:C4'	1:CA:975:A:H5'	2.34	0.51
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:30:ILE:C	13:CN:32:ASP:H	2.18	0.51
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	2.11	0.51
20:CB:65:LYS:HA	20:CB:89:PHE:CE1	2.43	0.51
23:DB:18:U:H2'	23:DB:19:A:H8	1.76	0.51
23:DB:661:A:H1'	37:DL:12:SER:O	2.10	0.51
23:DB:736:C:H2'	23:DB:737:C:C6	2.46	0.51
23:DB:1041:G:H2'	23:DB:1042:G:H8	1.75	0.51
23:DB:2289:G:O2'	23:DB:2290:G:H5'	2.11	0.51
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.09	0.51
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.51	0.51
27:DK:102:PRO:HD3	28:DP:65:ASN:HB2	1.93	0.51
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.45	0.51
40:DH:5:LEU:HD22	40:DH:9:VAL:HG21	1.93	0.51
41:DJ:87:ALA:HA	41:DJ:91:GLU:OE1	2.10	0.51
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.93	0.51
43:DO:14:ALA:O	43:DO:18:LEU:HB2	2.09	0.51
43:DO:47:VAL:O	43:DO:48:LEU:HD23	2.09	0.51
44:DQ:20:ALA:HA	44:DQ:23:TYR:CE1	2.45	0.51
48:DG:85:LYS:HB2	48:DG:164:ALA:HB3	1.91	0.51
49:DR:83:TYR:HE2	49:DR:85:LYS:HE3	1.75	0.51
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.39	0.51
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.10	0.51
1:AA:317:U:H2'	1:AA:318:G:H8	1.75	0.51
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.24	0.51
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.11	0.51
1:AA:1073:U:H4'	20:AB:104:LYS:HE3	1.91	0.51
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.46	0.51
3:AD:80:ARG:NH1	3:AD:81:LEU:HD23	2.26	0.51
5:AF:64:VAL:HG12	5:AF:65:GLU:N	2.26	0.51
5:AF:71:ILE:O	5:AF:75:GLU:HG3	2.10	0.51
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.25	0.51
8:AI:84:ARG:O	8:AI:87:MET:HB3	2.10	0.51
12:AM:84:CYS:SG	12:AM:86:ARG:HB2	2.51	0.51
14:AO:22:THR:HA	14:AO:27:VAL:HG11	1.92	0.51
15:AP:38:PHE:CD2	15:AP:51:ARG:HB2	2.45	0.51
18:AS:43:MET:O	18:AS:61:VAL:HB	2.10	0.51
19:AT:85:LEU:HD23	19:AT:86:ALA:N	2.24	0.51
20:AB:117:GLU:HA	20:AB:140:LEU:HD21	1.91	0.51
21:AU:42:THR:O	21:AU:46:ARG:HG3	2.10	0.51
23:BB:143:C:O5'	23:BB:143:C:H6	1.94	0.51
23:BB:145:C:H2'	23:BB:146:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:377:G:O2'	23:BB:378:C:H5'	2.11	0.51
23:BB:870:U:C2'	23:BB:871:U:H5'	2.41	0.51
23:BB:939:G:O2'	23:BB:940:G:H5'	2.10	0.51
23:BB:986:C:O2'	23:BB:987:C:H5'	2.10	0.51
23:BB:996:A:H4'	44:BQ:91:ARG:CD	2.41	0.51
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.10	0.51
23:BB:1103:A:H3'	23:BB:1104:C:H6	1.76	0.51
23:BB:1395:A:H4'	23:BB:1397:U:H5	1.74	0.51
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.75	0.51
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.11	0.51
23:BB:1930:G:H2'	23:BB:1968:G:O6	2.10	0.51
23:BB:2190:G:H2'	23:BB:2191:A:H8	1.75	0.51
23:BB:2323:G:O2'	23:BB:2324:U:H5'	2.11	0.51
23:BB:2351:G:H2'	23:BB:2365:G:H22	1.75	0.51
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.46	0.51
26:BD:90:PHE:CD2	26:BD:94:GLN:HG3	2.46	0.51
27:BK:63:VAL:HG21	27:BK:85:VAL:HG23	1.92	0.51
29:BE:47:LYS:HA	29:BE:51:GLU:HG3	1.93	0.51
29:BE:150:THR:OG1	29:BE:151:GLY:N	2.44	0.51
35:BV:4:ILE:O	35:BV:63:ILE:HG23	2.10	0.51
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.45	0.51
40:BH:68:ARG:NH2	40:BH:71:LYS:HB3	2.26	0.51
40:BH:124:THR:HG22	40:BH:125:THR:H	1.76	0.51
43:BO:52:SER:O	43:BO:58:ILE:HD12	2.10	0.51
48:BG:23:ILE:HG21	48:BG:71:LEU:HD11	1.92	0.51
53:B6:144:ALA:HA	53:B6:149:LEU:HG	1.92	0.51
1:CA:678:U:O2'	1:CA:679:C:H5'	2.10	0.51
1:CA:883:C:O2'	1:CA:884:U:H5'	2.10	0.51
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.10	0.51
1:CA:1316:G:H5'	1:CA:1317:C:OP2	2.09	0.51
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.09	0.51
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.10	0.51
1:CA:1415:G:O2'	1:CA:1416:G:H5'	2.10	0.51
3:CD:151:GLN:HB3	3:CD:154:VAL:HG23	1.93	0.51
10:CK:65:ALA:O	10:CK:68:ARG:HB3	2.10	0.51
15:CP:26:ASN:OD1	15:CP:31:ARG:HD3	2.10	0.51
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.91	0.51
20:CB:84:LEU:C	20:CB:86:CYS:H	2.18	0.51
20:CB:218:ALA:HA	20:CB:221:ARG:HG2	1.92	0.51
23:DB:962:G:H2'	23:DB:963:U:H6	1.75	0.51
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.10	0.51
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.10	0.51
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.10	0.51
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.44	0.51
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.10	0.51
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.25	0.51
26:DD:178:VAL:HB	26:DD:188:LEU:CB	2.35	0.51
33:D1:24:LYS:NZ	33:D1:33:LEU:HB2	2.25	0.51
35:DV:30:ILE:O	35:DV:37:PRO:HA	2.10	0.51
38:DM:127:LYS:H	38:DM:127:LYS:CD	2.18	0.51
39:DX:7:ARG:HA	39:DX:7:ARG:NE	2.25	0.51
40:DH:3:VAL:HA	40:DH:39:ALA:HB2	1.92	0.51
40:DH:90:LEU:HB2	40:DH:123:ARG:HA	1.93	0.51
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.45	0.51
46:DU:80:ASP:OD1	46:DU:95:PHE:HB3	2.09	0.51
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.93	0.51
1:AA:45:G:H2'	1:AA:46:G:C8	2.46	0.51
1:AA:151:A:H2'	1:AA:152:A:H5'	1.93	0.51
1:AA:454:G:O2'	1:AA:455:G:H5'	2.11	0.51
1:AA:714:G:C2	1:AA:777:A:H1'	2.46	0.51
1:AA:818:G:C2'	1:AA:819:A:H5''	2.41	0.51
1:AA:1010:U:O2'	1:AA:1011:C:H5'	2.10	0.51
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.45	0.51
3:AD:56:GLU:O	3:AD:60:VAL:HG12	2.11	0.51
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.10	0.51
5:AF:67:PRO:O	5:AF:70:VAL:HG22	2.11	0.51
7:AH:29:SER:O	7:AH:30:LYS:C	2.54	0.51
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.92	0.51
8:AI:23:GLY:HA3	8:AI:61:ASP:OD1	2.10	0.51
9:AJ:12:ALA:N	9:AJ:18:ILE:HD12	2.25	0.51
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.11	0.51
22:BA:95:U:H2'	22:BA:96:G:C8	2.46	0.51
23:BB:37:C:O2'	23:BB:38:A:H5'	2.11	0.51
23:BB:712:G:H2'	23:BB:713:G:O4'	2.11	0.51
23:BB:809:G:H2'	23:BB:810:U:H6	1.75	0.51
23:BB:857:G:O2'	23:BB:858:G:H5'	2.11	0.51
23:BB:1050:A:H2'	23:BB:1051:G:C8	2.46	0.51
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.10	0.51
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.46	0.51
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.45	0.51
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2415:G:C4'	37:BL:66:PHE:HB2	2.40	0.51
23:BB:2458:G:H2'	23:BB:2458:G:N3	2.25	0.51
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.45	0.51
23:BB:2588:G:H2'	23:BB:2589:A:O4'	2.10	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	0.51
25:BC:211:ARG:C	25:BC:213:ARG:H	2.18	0.51
26:BD:49:GLN:HE21	26:BD:79:LEU:HD12	1.75	0.51
26:BD:174:SER:O	26:BD:175:LEU:HB2	2.11	0.51
27:BK:39:ILE:HD13	27:BK:39:ILE:H	1.76	0.51
27:BK:88:ASN:ND2	27:BK:89:ASN:N	2.59	0.51
38:BM:21:ALA:HB1	38:BM:100:LYS:HG2	1.93	0.51
38:BM:117:PHE:HA	38:BM:120:ALA:HB3	1.93	0.51
41:BJ:80:HIS:O	41:BJ:81:ILE:C	2.53	0.51
43:BO:53:THR:O	43:BO:59:ALA:HB2	2.11	0.51
45:BS:97:LEU:N	45:BS:97:LEU:HD22	2.25	0.51
47:BF:99:PHE:HA	47:BF:102:LEU:HD12	1.93	0.51
47:BF:135:ILE:C	47:BF:136:ILE:HG12	2.35	0.51
49:BR:7:SER:HB2	49:BR:22:LEU:HD22	1.93	0.51
49:BR:74:ILE:HB	49:BR:87:GLN:O	2.11	0.51
1:CA:335:C:H2'	1:CA:336:A:H8	1.75	0.51
1:CA:598:U:H2'	1:CA:599:C:H6	1.76	0.51
1:CA:637:C:O2'	1:CA:638:U:H5'	2.11	0.51
1:CA:1200:C:H3'	1:CA:1201:A:H5'	1.92	0.51
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.11	0.51
2:CC:165:GLU:HA	2:CC:165:GLU:OE2	2.10	0.51
5:CF:92:THR:O	5:CF:93:LYS:HB2	2.11	0.51
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.11	0.51
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.11	0.51
9:CJ:12:ALA:CB	9:CJ:96:VAL:HG12	2.35	0.51
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.41	0.51
12:CM:16:ILE:HG23	12:CM:17:ALA:N	2.26	0.51
13:CN:23:ARG:C	13:CN:25:GLU:H	2.18	0.51
22:DA:59:A:H2'	22:DA:60:C:O4'	2.11	0.51
23:DB:151:C:H2'	23:DB:152:A:H8	1.76	0.51
23:DB:225:C:O2'	23:DB:226:A:H5'	2.10	0.51
23:DB:988:A:P	30:DY:11:SER:HB3	2.50	0.51
23:DB:1287:A:N7	42:DN:105:GLY:HA3	2.26	0.51
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.75	0.51
23:DB:2472:G:H2'	23:DB:2529:G:N2	2.26	0.51
23:DB:2732:G:C3'	23:DB:2733:A:H5'	2.39	0.51
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:116:GLN:HG2	25:DC:117:SER:N	2.24	0.51
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.25	0.51
26:DD:179:ARG:HH11	26:DD:179:ARG:CB	2.24	0.51
27:DK:14:SER:HB2	27:DK:51:LYS:H	1.76	0.51
27:DK:88:ASN:ND2	27:DK:89:ASN:N	2.59	0.51
30:DY:25:GLY:C	30:DY:46:MET:HE1	2.36	0.51
38:DM:21:ALA:HB1	38:DM:100:LYS:HG2	1.93	0.51
47:DF:3:LEU:HD11	47:DF:172:PHE:CD1	2.45	0.51
49:DR:24:LYS:HA	49:DR:94:THR:CG2	2.40	0.51
1:AA:552:U:H4'	11:AL:82:ARG:HG2	1.93	0.51
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.10	0.51
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.45	0.51
1:AA:1314:C:OP2	18:AS:5:LYS:HG2	2.11	0.51
1:AA:1492:A:H2'	1:AA:1493:A:O4'	2.11	0.51
2:AC:26:LYS:HE2	2:AC:27:GLU:HG3	1.91	0.51
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.45	0.51
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.26	0.51
11:AL:23:LEU:HG	11:AL:24:GLU:N	2.25	0.51
13:AN:92:ILE:HG21	13:AN:95:LEU:HD22	1.93	0.51
15:AP:28:ARG:C	15:AP:30:GLY:H	2.19	0.51
16:AQ:11:VAL:HG23	16:AQ:56:ASP:O	2.10	0.51
17:AR:52:ARG:HG3	17:AR:52:ARG:HH11	1.76	0.51
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.11	0.51
23:BB:1653:G:O6	42:BN:11:ASN:ND2	2.44	0.51
23:BB:2188:U:H2'	23:BB:2189:U:H6	1.76	0.51
23:BB:2282:G:H5''	23:BB:2283:C:O4'	2.11	0.51
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.94	0.51
23:BB:2618:G:H2'	23:BB:2619:C:H6	1.76	0.51
23:BB:2884:U:O2	31:B0:49:ARG:HG2	2.11	0.51
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.24	0.51
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.76	0.51
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.11	0.51
39:BX:28:LEU:HB3	39:BX:43:LEU:HD21	1.93	0.51
42:BN:83:LEU:HA	42:BN:86:ARG:CB	2.40	0.51
47:BF:168:LEU:O	47:BF:170:ALA:N	2.43	0.51
51:BZ:30:LEU:H	51:BZ:30:LEU:CD2	2.21	0.51
1:CA:61:G:O2'	1:CA:62:U:H5'	2.10	0.51
1:CA:343:U:O2'	1:CA:344:A:H2'	2.10	0.51
1:CA:649:A:H2'	1:CA:650:G:O4'	2.11	0.51
1:CA:939:G:H5''	6:CG:101:ARG:NH2	2.26	0.51
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:80:ASN:ND2	10:CK:80:ASN:H	2.09	0.51
11:CL:23:LEU:HG	11:CL:24:GLU:N	2.25	0.51
11:CL:49:ARG:N	11:CL:49:ARG:HD2	2.25	0.51
13:CN:50:LEU:HD23	13:CN:51:PRO:HD3	1.92	0.51
14:CO:5:THR:O	14:CO:8:THR:HB	2.10	0.51
20:CB:63:LYS:HG2	20:CB:224:ARG:NH1	2.25	0.51
22:DA:116:G:H4'	43:DO:54:VAL:HG22	1.92	0.51
23:DB:237:C:O2'	23:DB:238:C:H5'	2.11	0.51
23:DB:418:C:H2'	23:DB:419:U:H6	1.76	0.51
23:DB:720:U:H2'	23:DB:721:A:C8	2.45	0.51
23:DB:994:C:H3'	44:DQ:53:LYS:NZ	2.26	0.51
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.45	0.51
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.10	0.51
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.44	0.51
23:DB:2354:C:H4'	52:DW:31:LEU:CD2	2.40	0.51
23:DB:2359:C:O2'	23:DB:2360:G:H5'	2.10	0.51
23:DB:2403:C:O2'	23:DB:2404:U:H5'	2.10	0.51
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.74	0.51
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.09	0.51
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.41	0.51
26:DD:60:VAL:HA	26:DD:64:GLU:OE2	2.11	0.51
28:DP:4:ILE:C	28:DP:6:GLN:N	2.61	0.51
39:DX:34:SER:HB2	39:DX:36:GLN:OE1	2.11	0.51
43:DO:7:ARG:HA	43:DO:10:ARG:CD	2.41	0.51
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE2	1.93	0.51
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.91	0.51
48:DG:23:ILE:HD11	48:DG:42:VAL:HG11	1.91	0.51
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.51	0.51
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CD1	2.45	0.51
1:AA:212:G:H2'	1:AA:213:G:H8	1.76	0.51
1:AA:473:U:H2'	1:AA:474:G:C8	2.42	0.51
1:AA:764:C:H2'	1:AA:765:G:C5'	2.37	0.51
1:AA:820:U:H4'	1:AA:821:G:OP2	2.11	0.51
1:AA:1123:U:H4'	9:AJ:39:PRO:HD2	1.93	0.51
1:AA:1147:C:O2'	8:AI:17:ARG:HD2	2.11	0.51
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.75	0.51
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.76	0.51
2:AC:106:ARG:HD2	2:AC:106:ARG:H	1.75	0.51
3:AD:60:VAL:CB	3:AD:194:ILE:HD11	2.37	0.51
3:AD:110:ARG:HG3	3:AD:110:ARG:HH11	1.76	0.51
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:12:ARG:N	10:AK:76:TYR:HA	2.26	0.51
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.46	0.51
22:BA:48:U:H2'	22:BA:49:C:C6	2.46	0.51
23:BB:256:A:O2'	23:BB:257:C:H5'	2.11	0.51
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.46	0.51
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.45	0.51
23:BB:2313:C:H5''	47:BF:87:LYS:HE2	1.93	0.51
23:BB:2314:A:H2'	23:BB:2315:G:H8	1.76	0.51
23:BB:2786:U:H5'	26:BD:70:LYS:HG3	1.92	0.51
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.75	0.51
26:BD:55:LYS:C	26:BD:57:ALA:H	2.19	0.51
40:BH:49:ALA:HB3	40:BH:50:ARG:NH2	2.25	0.51
40:BH:83:LYS:O	40:BH:91:PHE:HD1	1.93	0.51
40:BH:114:GLU:HB3	40:BH:133:GLN:C	2.36	0.51
42:BN:9:GLN:O	42:BN:11:ASN:N	2.43	0.51
43:BO:6:ALA:O	43:BO:10:ARG:HG3	2.11	0.51
44:BQ:104:ALA:O	44:BQ:106:THR:N	2.41	0.51
45:BS:33:LEU:HA	45:BS:36:LEU:HD23	1.92	0.51
47:BF:79:ARG:O	47:BF:80:GLN:C	2.54	0.51
47:BF:131:VAL:C	47:BF:133:GLU:H	2.19	0.51
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	1.92	0.51
1:CA:549:C:H2'	1:CA:550:G:H8	1.74	0.51
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.74	0.51
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.76	0.51
7:CH:87:ARG:N	7:CH:90:GLU:HB2	2.26	0.51
8:CI:94:ARG:HA	8:CI:97:LEU:CG	2.40	0.51
12:CM:29:SER:O	12:CM:32:ILE:HG22	2.11	0.51
18:CS:68:HIS:HB3	18:CS:72:GLU:OE2	2.11	0.51
20:CB:65:LYS:HB2	20:CB:158:ASP:OD2	2.10	0.51
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.36	0.51
23:DB:175:G:O2'	23:DB:176:A:H5'	2.11	0.51
23:DB:437:U:H2'	23:DB:438:G:C8	2.45	0.51
23:DB:718:A:H5'	23:DB:719:C:C5	2.45	0.51
23:DB:753:A:H2'	23:DB:754:U:C6	2.45	0.51
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.45	0.51
23:DB:1432:G:H2'	23:DB:1433:A:C8	2.45	0.51
23:DB:1785:A:O2'	23:DB:1786:A:H2'	2.11	0.51
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.45	0.51
23:DB:2138:G:H2'	23:DB:2139:U:C6	2.46	0.51
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.11	0.51
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.11	0.51
26:DD:11:MET:HA	26:DD:24:VAL:O	2.11	0.51
26:DD:117:GLY:O	26:DD:118:PHE:C	2.54	0.51
36:D2:19:ARG:O	36:D2:22:MET:HB2	2.11	0.51
37:DL:55:MET:HA	37:DL:55:MET:HE3	1.93	0.51
40:DH:121:VAL:HA	40:DH:123:ARG:HD3	1.93	0.51
47:DF:11:VAL:HG21	47:DF:172:PHE:HE1	1.74	0.51
51:DZ:39:TRP:HA	51:DZ:46:PHE:CD2	2.45	0.51
51:DZ:39:TRP:HE1	51:DZ:41:GLU:HG2	1.76	0.51
53:D6:183:ILE:C	53:D6:185:GLY:H	2.19	0.51
1:AA:58:C:O2'	1:AA:59:A:H5'	2.10	0.51
1:AA:113:G:O4'	1:AA:354:G:H4'	2.11	0.51
1:AA:342:C:O2'	1:AA:343:U:H5'	2.11	0.51
1:AA:420:U:O2'	1:AA:421:U:H5''	2.11	0.51
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.39	0.51
3:AD:103:ARG:NH2	3:AD:110:ARG:HH21	2.09	0.51
8:AI:37:TYR:HE2	8:AI:74:GLN:HG2	1.76	0.51
18:AS:20:LYS:O	18:AS:20:LYS:HD2	2.11	0.51
19:AT:54:GLN:HG3	19:AT:75:LYS:HE3	1.93	0.51
23:BB:154:U:H2'	23:BB:155:A:H8	1.76	0.51
23:BB:584:C:H2'	23:BB:585:G:C8	2.45	0.51
23:BB:858:G:H21	23:BB:2268:A:C3'	2.19	0.51
23:BB:936:A:H2'	23:BB:937:C:C6	2.46	0.51
23:BB:1204:A:H1'	23:BB:1206:G:N7	2.26	0.51
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.46	0.51
23:BB:1387:A:H4'	23:BB:1469:A:H1'	1.93	0.51
23:BB:1445:G:H2'	23:BB:1446:C:H6	1.76	0.51
23:BB:1765:U:H2'	23:BB:1766:G:H8	1.76	0.51
23:BB:2289:G:O2'	23:BB:2290:G:H5'	2.11	0.51
23:BB:2321:U:H3'	23:BB:2321:U:O2	2.10	0.51
23:BB:2847:U:H5''	28:BP:94:ALA:CB	2.41	0.51
25:BC:144:GLU:HB3	25:BC:187:CYS:HB3	1.92	0.51
26:BD:85:ALA:C	26:BD:87:GLY:H	2.19	0.51
28:BP:74:GLN:O	28:BP:76:HIS:N	2.44	0.51
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.29	0.51
40:BH:125:THR:CB	40:BH:146:VAL:HB	2.40	0.51
41:BJ:58:ASN:HD22	41:BJ:61:LYS:HD2	1.76	0.51
43:BO:6:ALA:CB	43:BO:10:ARG:HH11	2.24	0.51
44:BQ:57:ARG:HG2	44:BQ:57:ARG:HH11	1.76	0.51
47:BF:3:LEU:HD21	47:BF:172:PHE:HB3	1.92	0.51
48:BG:118:ALA:C	48:BG:120:ILE:H	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:19:THR:HG22	49:BR:97:LYS:HA	1.93	0.51
52:BW:26:GLY:O	52:BW:27:GLY:C	2.54	0.51
1:CA:57:G:H2'	1:CA:58:C:C6	2.46	0.51
1:CA:465:A:H2'	1:CA:466:A:H3'	1.92	0.51
1:CA:521:G:O2'	1:CA:522:C:H5'	2.10	0.51
1:CA:577:G:C6	1:CA:812:G:N2	2.79	0.51
1:CA:602:A:O2'	1:CA:603:U:H5'	2.11	0.51
1:CA:612:C:H2'	1:CA:613:C:C6	2.45	0.51
1:CA:1154:G:O2'	1:CA:1155:A:H5'	2.11	0.51
1:CA:1186:G:H4'	8:CI:111:GLU:OE1	2.11	0.51
1:CA:1226:C:H5''	12:CM:101:THR:CB	2.41	0.51
1:CA:1297:G:H1'	1:CA:1298:U:H5	1.74	0.51
2:CC:88:LYS:C	2:CC:88:LYS:HD2	2.36	0.51
3:CD:48:SER:O	3:CD:49:ASP:C	2.54	0.51
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.41	0.51
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.91	0.51
12:CM:15:VAL:CG2	12:CM:40:GLU:HB3	2.41	0.51
22:DA:95:U:H2'	22:DA:96:G:C8	2.46	0.51
23:DB:834:G:O2'	23:DB:835:C:H5'	2.11	0.51
23:DB:927:A:H2'	23:DB:928:A:C8	2.46	0.51
23:DB:1044:C:O3'	23:DB:1047:G:H5'	2.11	0.51
23:DB:1248:G:OP1	29:DE:44:ARG:NH1	2.44	0.51
23:DB:1357:C:O2'	23:DB:1358:G:H5'	2.11	0.51
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.46	0.51
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.11	0.51
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.75	0.51
25:DC:171:VAL:HG23	25:DC:185:ALA:CB	2.41	0.51
26:DD:7:LYS:HE2	26:DD:198:GLY:HA2	1.92	0.51
26:DD:90:PHE:CD2	26:DD:94:GLN:HG3	2.46	0.51
28:DP:20:ARG:HH21	28:DP:20:ARG:HG2	1.76	0.51
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.26	0.51
37:DL:57:LEU:HD13	37:DL:60:ARG:NH1	2.26	0.51
37:DL:60:ARG:C	37:DL:61:LEU:HD12	2.36	0.51
38:DM:117:PHE:HA	38:DM:120:ALA:HB3	1.93	0.51
47:DF:78:ILE:HA	47:DF:82:TYR:CG	2.46	0.51
47:DF:79:ARG:O	47:DF:80:GLN:C	2.54	0.51
48:DG:38:ASP:CG	48:DG:39:ALA:N	2.67	0.51
48:DG:155:PRO:CA	48:DG:170:THR:HA	2.41	0.51
50:DT:29:THR:HA	50:DT:86:THR:HA	1.92	0.51
1:AA:188:C:H2'	1:AA:189:A:O4'	2.11	0.50
1:AA:213:G:H5''	1:AA:214:C:H5	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:332:G:O2'	1:AA:333:U:H5'	2.11	0.50
1:AA:429:U:H4'	1:AA:430:A:O5'	2.11	0.50
1:AA:513:C:H2'	1:AA:514:C:H6	1.76	0.50
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.11	0.50
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.75	0.50
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.77	0.50
23:BB:244:A:H1'	23:BB:255:A:N6	2.27	0.50
23:BB:431:U:O2'	23:BB:432:A:H5'	2.12	0.50
23:BB:779:U:O2'	23:BB:780:G:H5'	2.10	0.50
23:BB:1218:G:H2'	23:BB:1219:U:O4'	2.10	0.50
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.76	0.50
23:BB:1277:G:H2'	23:BB:1278:C:O4'	2.11	0.50
23:BB:1515:A:H4'	23:BB:1556:C:O2'	2.10	0.50
23:BB:1829:A:N6	23:BB:1977:A:N6	2.59	0.50
23:BB:1942:C:C1'	53:B6:133:ARG:NH1	2.73	0.50
23:BB:2425:A:H5''	23:BB:2426:A:H3'	1.93	0.50
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.26	0.50
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.11	0.50
26:BD:117:GLY:O	26:BD:118:PHE:C	2.54	0.50
29:BE:29:HIS:O	29:BE:32:VAL:HG22	2.11	0.50
39:BX:7:ARG:NE	39:BX:7:ARG:HA	2.25	0.50
41:BJ:28:LEU:HD23	41:BJ:29:ALA:N	2.25	0.50
46:BU:27:VAL:CG2	46:BU:33:VAL:HG12	2.39	0.50
47:BF:79:ARG:O	47:BF:82:TYR:HB2	2.11	0.50
48:BG:108:PHE:HD1	48:BG:108:PHE:H	1.57	0.50
48:BG:132:LEU:N	48:BG:132:LEU:HD23	2.26	0.50
48:BG:155:PRO:CA	48:BG:170:THR:HA	2.41	0.50
49:BR:24:LYS:HA	49:BR:94:THR:CG2	2.40	0.50
53:B6:133:ARG:NH1	53:B6:162:GLN:OE1	2.42	0.50
1:CA:151:A:H2'	1:CA:152:A:H5'	1.93	0.50
1:CA:697:U:O2	1:CA:798:U:H1'	2.11	0.50
1:CA:921:U:H2'	1:CA:922:G:C8	2.45	0.50
1:CA:1343:G:H1'	8:CI:122:ARG:NH1	2.24	0.50
1:CA:1410:A:C6	1:CA:1491:G:C6	2.99	0.50
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.46	0.50
3:CD:110:ARG:HH11	3:CD:110:ARG:HG3	1.76	0.50
4:CE:44:ARG:HD2	4:CE:72:ASN:ND2	2.26	0.50
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.10	0.50
5:CF:71:ILE:HG13	5:CF:72:ASP:N	2.20	0.50
10:CK:75:GLU:CD	10:CK:75:GLU:N	2.69	0.50
12:CM:70:ARG:HH21	47:DF:136:ILE:CB	2.13	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:40:ARG:NH1	18:CS:6:LYS:O	2.44	0.50
18:CS:48:ILE:HB	18:CS:59:VAL:CG2	2.41	0.50
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.76	0.50
23:DB:152:A:H2'	23:DB:153:U:H6	1.73	0.50
23:DB:414:C:H2'	23:DB:415:A:H8	1.76	0.50
23:DB:755:U:H2'	23:DB:756:A:C8	2.47	0.50
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.12	0.50
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.46	0.50
29:DE:191:ASP:O	29:DE:194:LYS:HB3	2.11	0.50
32:D4:17:VAL:HG12	32:D4:18:LYS:N	2.20	0.50
34:D3:4:LYS:O	37:DL:48:ARG:NH2	2.41	0.50
48:DG:18:ILE:HA	48:DG:22:VAL:O	2.11	0.50
50:DT:55:VAL:CA	50:DT:87:LEU:HA	2.39	0.50
50:DT:81:LYS:HG3	50:DT:82:LYS:N	2.25	0.50
52:DW:24:ARG:HA	52:DW:66:VAL:N	2.26	0.50
52:DW:26:GLY:O	52:DW:27:GLY:C	2.54	0.50
53:D6:12:SER:OG	53:D6:13:HIS:N	2.44	0.50
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.76	0.50
1:AA:1034:G:H2'	1:AA:1035:A:H5'	1.92	0.50
3:AD:100:VAL:HG21	3:AD:136:VAL:HG21	1.93	0.50
3:AD:164:ARG:HG3	3:AD:165:GLU:N	2.27	0.50
6:AG:71:THR:C	6:AG:90:VAL:HG22	2.37	0.50
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.93	0.50
8:AI:50:PRO:O	8:AI:54:VAL:HG22	2.10	0.50
8:AI:70:GLY:O	8:AI:74:GLN:HB2	2.11	0.50
10:AK:65:ALA:O	10:AK:68:ARG:HB3	2.11	0.50
10:AK:109:ILE:CG2	21:AU:16:ARG:HH12	2.24	0.50
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.11	0.50
13:AN:26:LEU:HD12	13:AN:44:VAL:HG13	1.92	0.50
22:BA:59:A:H2'	22:BA:60:C:O4'	2.11	0.50
23:BB:285:G:H2'	23:BB:286:U:H6	1.76	0.50
23:BB:506:G:H4'	23:BB:509:C:O2	2.11	0.50
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.47	0.50
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.76	0.50
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.76	0.50
24:BI:63:ASP:C	24:BI:65:SER:H	2.19	0.50
25:BC:6:LYS:O	25:BC:8:THR:HG23	2.10	0.50
25:BC:181:ARG:NH2	25:BC:265:PHE:HB3	2.26	0.50
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	1.94	0.50
29:BE:191:ASP:O	29:BE:194:LYS:HB3	2.11	0.50
41:BJ:41:LYS:O	44:BQ:66:ALA:HB1	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:16:ARG:HD3	43:BO:19:GLN:NE2	2.26	0.50
47:BF:102:LEU:HD13	47:BF:102:LEU:O	2.11	0.50
48:BG:25:ILE:CG2	48:BG:78:VAL:HG21	2.42	0.50
48:BG:115:GLN:CD	48:BG:115:GLN:N	2.66	0.50
51:BZ:71:LEU:HD12	51:BZ:78:TYR:CD2	2.44	0.50
1:CA:46:G:O2'	1:CA:365:U:H1'	2.12	0.50
1:CA:256:U:H3'	1:CA:257:G:H8	1.76	0.50
1:CA:412:A:H1'	1:CA:413:G:C8	2.46	0.50
1:CA:429:U:H4'	1:CA:430:A:O5'	2.10	0.50
1:CA:864:A:H2'	1:CA:865:A:C8	2.47	0.50
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.76	0.50
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.11	0.50
3:CD:116:LEU:O	3:CD:122:ILE:HG12	2.11	0.50
5:CF:1:MET:HG2	5:CF:67:PRO:HB3	1.93	0.50
5:CF:16:GLU:CD	5:CF:16:GLU:N	2.68	0.50
6:CG:26:VAL:HG12	6:CG:42:VAL:HG11	1.94	0.50
8:CI:22:PRO:HA	8:CI:60:LEU:CB	2.41	0.50
11:CL:107:LYS:H	11:CL:107:LYS:HZ2	1.60	0.50
12:CM:10:ASP:HB2	12:CM:11:HIS:ND1	2.25	0.50
13:CN:50:LEU:CD2	13:CN:51:PRO:HD3	2.41	0.50
14:CO:71:LYS:HD3	14:CO:72:ARG:N	2.26	0.50
23:DB:24:G:H1'	45:DS:77:ASP:HB3	1.92	0.50
23:DB:337:C:H2'	23:DB:338:G:O4'	2.12	0.50
23:DB:359:G:H2'	23:DB:360:U:C5'	2.39	0.50
23:DB:679:C:H2'	23:DB:680:C:C6	2.46	0.50
23:DB:1021:A:H61	23:DB:1142:A:H61	1.59	0.50
23:DB:1188:U:O2'	23:DB:1189:A:H5'	2.11	0.50
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.75	0.50
23:DB:1418:G:H1'	23:DB:1580:A:H61	1.76	0.50
23:DB:1534:U:H6	23:DB:1534:U:O5'	1.94	0.50
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.46	0.50
23:DB:1883:U:H2'	23:DB:1884:G:C1'	2.41	0.50
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.11	0.50
23:DB:1938:A:O2'	23:DB:1939:U:H5''	2.11	0.50
23:DB:1946:U:O2'	23:DB:1947:C:H5'	2.11	0.50
23:DB:2074:U:O2'	23:DB:2075:U:H5'	2.11	0.50
23:DB:2298:A:N1	23:DB:2321:U:C5	2.79	0.50
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.77	0.50
23:DB:2367:G:O2'	23:DB:2368:C:H5'	2.11	0.50
23:DB:2580:U:H5'	26:DD:136:ASN:H	1.75	0.50
23:DB:2598:A:H5''	25:DC:233:GLY:HA2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.20	0.50
25:DC:132:ARG:HA	25:DC:166:ARG:NH1	2.27	0.50
25:DC:180:MET:HB3	25:DC:267:VAL:HG23	1.93	0.50
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.26	0.50
26:DD:70:LYS:HD3	26:DD:70:LYS:C	2.35	0.50
29:DE:115:GLN:O	29:DE:117:ARG:HG3	2.11	0.50
29:DE:196:VAL:O	29:DE:200:LEU:HD23	2.10	0.50
30:DY:56:VAL:HG12	30:DY:57:GLU:N	2.25	0.50
35:DV:20:LEU:HB3	35:DV:25:LYS:O	2.11	0.50
40:DH:115:VAL:HB	40:DH:132:PHE:HD1	1.76	0.50
41:DJ:41:LYS:O	44:DQ:66:ALA:HB1	2.11	0.50
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.11	0.50
42:DN:72:ASP:C	42:DN:74:GLU:N	2.69	0.50
42:DN:72:ASP:HB3	42:DN:75:ILE:CG1	2.41	0.50
44:DQ:57:ARG:NH2	44:DQ:92:LYS:HE2	2.26	0.50
48:DG:54:ARG:O	48:DG:55:ASP:C	2.54	0.50
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.37	0.50
1:AA:171:A:H2'	1:AA:172:A:C8	2.46	0.50
1:AA:418:C:H2'	1:AA:419:C:H6	1.75	0.50
1:AA:682:G:O2'	1:AA:683:G:H5'	2.11	0.50
1:AA:991:U:H2'	1:AA:1212:U:O2	2.11	0.50
1:AA:1023:U:O2'	1:AA:1024:G:H5'	2.12	0.50
1:AA:1343:G:C1'	8:AI:122:ARG:HH12	2.25	0.50
4:AE:155:LYS:HA	7:AH:65:PHE:CG	2.46	0.50
8:AI:118:ARG:HG2	8:AI:118:ARG:O	2.10	0.50
10:AK:36:ARG:HH11	10:AK:36:ARG:HG3	1.75	0.50
14:AO:71:LYS:NZ	14:AO:72:ARG:HA	2.26	0.50
20:AB:64:GLY:O	20:AB:66:ILE:HG12	2.10	0.50
22:BA:114:C:H1'	43:BO:47:VAL:HG21	1.94	0.50
23:BB:1248:G:OP1	29:BE:44:ARG:NH1	2.44	0.50
23:BB:1322:A:H4'	45:BS:82:MET:HE1	1.92	0.50
23:BB:1370:C:H2'	23:BB:1371:G:C8	2.47	0.50
23:BB:1520:U:H2'	23:BB:1521:G:O4'	2.11	0.50
23:BB:2626:C:H2'	23:BB:2627:G:C8	2.47	0.50
23:BB:2760:C:C2'	23:BB:2761:A:H5'	2.42	0.50
23:BB:2840:C:H5''	42:BN:53:THR:HG21	1.93	0.50
25:BC:4:LYS:HE2	25:BC:5:CYS:H	1.76	0.50
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.93	0.50
26:BD:114:LYS:HD2	26:BD:116:LYS:HE3	1.92	0.50
27:BK:71:ARG:O	27:BK:72:PRO:C	2.55	0.50
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.93	0.50
42:BN:81:ASN:O	42:BN:85:PRO:HD2	2.11	0.50
47:BF:59:ILE:HG12	47:BF:137:PHE:CE2	2.46	0.50
53:B6:31:GLY:HA2	53:B6:106:LEU:HD21	1.94	0.50
1:CA:144:G:H2'	1:CA:145:G:O4'	2.12	0.50
1:CA:454:G:O2'	1:CA:455:G:H5'	2.11	0.50
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.10	0.50
1:CA:1303:C:H2'	1:CA:1304:G:O4'	2.12	0.50
1:CA:1333:A:H3'	1:CA:1334:G:H8	1.75	0.50
3:CD:57:LYS:HD3	3:CD:57:LYS:C	2.35	0.50
5:CF:13:ASP:O	5:CF:14:GLN:HG2	2.12	0.50
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.12	0.50
8:CI:5:TYR:HD1	8:CI:20:ILE:HG22	1.76	0.50
12:CM:12:LYS:O	12:CM:43:LYS:HA	2.12	0.50
13:CN:92:ILE:HG21	13:CN:95:LEU:HD22	1.94	0.50
15:CP:4:ILE:O	15:CP:71:VAL:HG11	2.10	0.50
19:CT:60:GLN:HB3	19:CT:65:LEU:HD23	1.93	0.50
22:DA:13:G:H2'	22:DA:14:U:H5''	1.92	0.50
22:DA:48:U:H2'	22:DA:49:C:H6	1.77	0.50
22:DA:52:A:C2'	22:DA:53:A:H5'	2.41	0.50
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.93	0.50
23:DB:528:A:N1	23:DB:2042:A:H2'	2.26	0.50
23:DB:531:C:H5''	23:DB:532:A:C5	2.46	0.50
23:DB:1720:U:C2'	23:DB:1721:G:H5'	2.41	0.50
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.77	0.50
23:DB:1848:A:H2'	23:DB:1849:G:H8	1.76	0.50
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.46	0.50
23:DB:2351:G:H2'	23:DB:2365:G:H22	1.76	0.50
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.93	0.50
25:DC:20:ASN:HD22	25:DC:23:LEU:HD13	1.76	0.50
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.92	0.50
26:DD:34:VAL:HA	26:DD:50:VAL:HG12	1.92	0.50
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.47	0.50
28:DP:25:VAL:HA	28:DP:85:VAL:C	2.36	0.50
28:DP:29:VAL:HG12	28:DP:80:VAL:HA	1.93	0.50
29:DE:193:VAL:O	29:DE:197:GLU:HB2	2.11	0.50
33:D1:9:LYS:HD3	33:D1:9:LYS:N	2.24	0.50
36:D2:28:ARG:C	36:D2:30:VAL:H	2.18	0.50
40:DH:4:ILE:HA	40:DH:18:GLN:HA	1.92	0.50
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.47	0.50
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.50
1:AA:95:C:O2	1:AA:95:C:H2'	2.11	0.50
1:AA:169:C:O2'	1:AA:170:U:H5'	2.11	0.50
1:AA:202:G:O2'	1:AA:468:A:H8	1.83	0.50
1:AA:284:C:O2'	1:AA:285:C:H5'	2.12	0.50
1:AA:651:C:H2'	1:AA:652:U:C6	2.46	0.50
1:AA:711:G:O2'	1:AA:712:A:H5'	2.12	0.50
1:AA:806:C:H2'	1:AA:807:A:H8	1.76	0.50
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.47	0.50
1:AA:1202:U:O2	13:AN:66:THR:HG21	2.10	0.50
7:AH:12:ARG:HD3	7:AH:26:MET:HE2	1.93	0.50
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.12	0.50
12:AM:21:ILE:HG23	12:AM:65:GLU:OE2	2.11	0.50
14:AO:5:THR:O	14:AO:8:THR:HB	2.11	0.50
15:AP:22:ALA:HB2	15:AP:32:PHE:HA	1.94	0.50
20:AB:120:SER:HA	20:AB:125:PHE:CD1	2.46	0.50
20:AB:159:ALA:HB1	20:AB:183:PHE:HE1	1.76	0.50
23:BB:6:A:O2'	23:BB:7:G:H5'	2.11	0.50
23:BB:225:C:O2'	23:BB:226:A:H5'	2.11	0.50
23:BB:608:A:H2'	23:BB:609:A:H8	1.76	0.50
23:BB:634:C:H2'	23:BB:635:C:C6	2.46	0.50
23:BB:920:A:H2'	23:BB:921:C:O4'	2.11	0.50
23:BB:988:A:O5'	30:BY:11:SER:HB3	2.11	0.50
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.46	0.50
23:BB:1829:A:H2'	23:BB:1830:C:H5'	1.93	0.50
23:BB:2135:A:N6	23:BB:2156:G:O2'	2.39	0.50
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.76	0.50
23:BB:2814:A:C4'	31:B0:25:THR:HG21	2.40	0.50
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.93	0.50
25:BC:221:GLY:O	25:BC:223:ALA:N	2.45	0.50
26:BD:114:LYS:HE3	26:BD:116:LYS:HG2	1.93	0.50
33:B1:8:ILE:HG13	33:B1:51:ALA:HA	1.94	0.50
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.25	0.50
43:BO:5:SER:HA	43:BO:8:ILE:CD1	2.41	0.50
46:BU:11:ILE:HD13	46:BU:20:LYS:H	1.76	0.50
47:BF:92:GLY:O	47:BF:95:MET:HB3	2.11	0.50
47:BF:99:PHE:HA	47:BF:102:LEU:CD1	2.42	0.50
50:BT:81:LYS:HG3	50:BT:82:LYS:N	2.26	0.50
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.37	0.50
1:CA:169:C:O2'	1:CA:170:U:H5'	2.11	0.50
1:CA:415:A:N1	1:CA:428:G:O6	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.25	0.50
2:CC:53:ARG:HG2	2:CC:54:ILE:H	1.76	0.50
2:CC:142:ARG:C	2:CC:144:GLY:H	2.19	0.50
3:CD:71:PHE:O	3:CD:74:TYR:HB2	2.11	0.50
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.93	0.50
10:CK:17:ASP:HB3	10:CK:80:ASN:CG	2.36	0.50
10:CK:43:TRP:HZ3	10:CK:45:THR:HG22	1.75	0.50
12:CM:28:ARG:NH1	12:CM:32:ILE:HD12	2.27	0.50
12:CM:49:GLU:HG3	12:CM:53:ASP:OD1	2.11	0.50
13:CN:17:ASP:HA	13:CN:21:ALA:CB	2.41	0.50
13:CN:30:ILE:HG21	13:CN:44:VAL:CG2	2.34	0.50
22:DA:88:C:H2'	22:DA:89:U:C6	2.46	0.50
23:DB:622:G:OP1	37:DL:103:ILE:HD13	2.12	0.50
23:DB:687:C:H2'	23:DB:688:U:O4'	2.11	0.50
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.12	0.50
23:DB:1257:C:H5'	29:DE:78:TRP:CZ3	2.46	0.50
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.47	0.50
23:DB:1445:G:H2'	23:DB:1446:C:C6	2.47	0.50
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.75	0.50
23:DB:2041:U:H2'	23:DB:2042:A:H8	1.76	0.50
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.77	0.50
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.46	0.50
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.76	0.50
25:DC:64:VAL:HG11	25:DC:66:PHE:CE2	2.47	0.50
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.11	0.50
33:D1:8:ILE:HG13	33:D1:51:ALA:HA	1.93	0.50
35:DV:79:ARG:HA	35:DV:86:LEU:HA	1.91	0.50
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.93	0.50
42:DN:67:PHE:O	42:DN:68:ALA:C	2.55	0.50
42:DN:101:GLY:O	42:DN:102:PHE:HB2	2.11	0.50
47:DF:78:ILE:HD12	47:DF:78:ILE:N	2.26	0.50
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.93	0.50
51:DZ:43:GLU:C	51:DZ:45:ARG:H	2.19	0.50
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	2.11	0.50
1:AA:16:A:HO2'	1:AA:17:U:H5'	1.77	0.50
1:AA:598:U:H2'	1:AA:599:C:C6	2.47	0.50
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.77	0.50
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.76	0.50
3:AD:48:SER:O	3:AD:49:ASP:C	2.55	0.50
6:AG:126:ALA:C	6:AG:128:GLU:H	2.19	0.50
7:AH:87:ARG:N	7:AH:90:GLU:HB2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:30:ILE:O	13:AN:40:ARG:HA	2.12	0.50
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.92	0.50
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.26	0.50
17:AR:62:ARG:C	17:AR:63:TYR:HD2	2.19	0.50
19:AT:15:LYS:HD3	19:AT:18:LYS:HE3	1.94	0.50
20:AB:128:LEU:CD1	20:AB:129:THR:H	2.23	0.50
22:BA:28:C:H5'	22:BA:29:A:OP2	2.11	0.50
23:BB:784:G:H5''	25:BC:225:ASN:OD1	2.11	0.50
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.77	0.50
23:BB:1813:G:H1'	25:BC:49:THR:OG1	2.12	0.50
23:BB:1900:A:N1	23:BB:1970:A:C6	2.80	0.50
23:BB:2306:C:C3'	23:BB:2307:G:H5'	2.38	0.50
23:BB:2658:C:H5'	48:BG:159:LYS:HZ1	1.75	0.50
25:BC:64:VAL:HG11	25:BC:66:PHE:CE2	2.47	0.50
25:BC:69:ASN:O	25:BC:70:LYS:C	2.55	0.50
26:BD:40:LEU:HA	26:BD:45:TYR:H	1.77	0.50
26:BD:102:ALA:HA	26:BD:180:VAL:HG21	1.93	0.50
29:BE:106:LYS:HE2	29:BE:200:LEU:HB3	1.94	0.50
38:BM:49:ALA:HA	38:BM:123:LYS:HG3	1.94	0.50
43:BO:14:ALA:O	43:BO:18:LEU:HB2	2.12	0.50
47:BF:92:GLY:N	47:BF:95:MET:HE3	2.26	0.50
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.39	0.50
53:B6:30:THR:HB	53:B6:182:GLU:C	2.36	0.50
1:CA:140:U:H2'	1:CA:141:G:C8	2.45	0.50
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.11	0.50
1:CA:767:A:H2'	1:CA:768:A:H8	1.77	0.50
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.75	0.50
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.11	0.50
3:CD:12:ARG:HG2	3:CD:33:ILE:HA	1.93	0.50
3:CD:34:GLU:O	3:CD:34:GLU:HG3	2.10	0.50
4:CE:9:GLU:O	4:CE:40:ASP:HA	2.12	0.50
5:CF:3:HIS:CE1	5:CF:65:GLU:HG3	2.46	0.50
5:CF:64:VAL:HG12	5:CF:65:GLU:N	2.26	0.50
6:CG:19:SER:HB2	6:CG:21:LEU:HD21	1.94	0.50
15:CP:28:ARG:C	15:CP:30:GLY:H	2.19	0.50
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	1.92	0.50
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.12	0.50
23:DB:41:C:H2'	23:DB:42:A:O4'	2.10	0.50
23:DB:765:C:O2'	23:DB:766:U:H5'	2.11	0.50
23:DB:817:C:H2'	23:DB:818:G:O4'	2.11	0.50
23:DB:962:G:H2'	23:DB:963:U:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1047:G:H1'	23:DB:1111:A:N6	2.26	0.50
23:DB:1495:A:H2'	23:DB:1496:A:H8	1.77	0.50
23:DB:2106:U:H2'	23:DB:2107:G:H8	1.76	0.50
23:DB:2497:A:H5''	57:DB:3696:HOH:O	2.10	0.50
23:DB:2720:U:H5''	28:DP:52:ARG:HH21	1.73	0.50
25:DC:90:ILE:HD13	25:DC:103:ILE:O	2.11	0.50
25:DC:93:VAL:HG21	25:DC:115:ILE:HD11	1.92	0.50
26:DD:10:GLY:HA2	28:DP:4:ILE:HD11	1.94	0.50
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.12	0.50
29:DE:29:HIS:O	29:DE:32:VAL:HG22	2.11	0.50
40:DH:131:SER:OG	40:DH:132:PHE:N	2.45	0.50
43:DO:6:ALA:HB3	43:DO:10:ARG:HH11	1.76	0.50
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.75	0.50
43:DO:16:ARG:HD3	43:DO:19:GLN:NE2	2.27	0.50
43:DO:52:SER:OG	43:DO:54:VAL:HG12	2.10	0.50
48:DG:108:PHE:HE1	48:DG:151:ARG:HD3	1.75	0.50
48:DG:140:ILE:HD12	48:DG:141:GLY:N	2.27	0.50
49:DR:32:THR:HA	49:DR:61:ALA:O	2.11	0.50
53:D6:65:THR:C	53:D6:103:ILE:HD12	2.37	0.50
1:AA:502:A:H4'	1:AA:550:G:H4'	1.93	0.50
1:AA:559:A:H4'	1:AA:560:A:H3'	1.93	0.50
1:AA:649:A:H2'	1:AA:650:G:O4'	2.12	0.50
5:AF:97:THR:O	5:AF:98:GLU:CD	2.55	0.50
8:AI:122:ARG:NH1	8:AI:122:ARG:HG3	2.26	0.50
12:AM:12:LYS:O	12:AM:43:LYS:HA	2.11	0.50
12:AM:19:THR:HG22	12:AM:29:SER:CB	2.42	0.50
12:AM:79:LEU:HB3	12:AM:84:CYS:SG	2.51	0.50
15:AP:4:ILE:O	15:AP:71:VAL:HG11	2.11	0.50
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.11	0.50
23:BB:146:A:H2'	23:BB:147:C:C6	2.46	0.50
23:BB:181:A:H1'	23:BB:435:C:H5'	1.92	0.50
23:BB:523:C:H4'	23:BB:540:C:O2	2.11	0.50
23:BB:955:U:H5'	38:BM:86:LYS:HE2	1.93	0.50
23:BB:1768:C:O2'	23:BB:1958:C:H4'	2.12	0.50
23:BB:2518:A:N3	23:BB:2518:A:H2'	2.27	0.50
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.12	0.50
24:BI:29:GLN:HE21	24:BI:29:GLN:HA	1.76	0.50
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.12	0.50
35:BV:14:LYS:CE	35:BV:18:ARG:HH21	2.24	0.50
35:BV:57:TYR:CE2	38:BM:136:MET:HE2	2.46	0.50
37:BL:77:ILE:HB	37:BL:109:LYS:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:98:GLU:HB3	41:BJ:124:VAL:HG21	1.93	0.50
44:BQ:57:ARG:NH2	44:BQ:92:LYS:HE2	2.25	0.50
47:BF:3:LEU:HD11	47:BF:172:PHE:CD1	2.47	0.50
47:BF:131:VAL:HG23	47:BF:133:GLU:H	1.77	0.50
47:BF:177:ARG:HA	47:BF:177:ARG:NE	2.26	0.50
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	1.94	0.50
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.76	0.50
50:BT:38:ALA:HB3	50:BT:81:LYS:NZ	2.26	0.50
1:CA:279:A:H5'	1:CA:281:G:C5'	2.41	0.50
1:CA:987:G:H2'	1:CA:988:G:H8	1.76	0.50
1:CA:1367:C:H5''	8:CI:115:VAL:HG23	1.93	0.50
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.46	0.50
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.12	0.50
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.26	0.50
14:CO:22:THR:HA	14:CO:27:VAL:HG11	1.94	0.50
14:CO:33:THR:HG23	14:CO:63:ARG:NH1	2.27	0.50
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.27	0.50
18:CS:80:ARG:HA	18:CS:80:ARG:HE	1.74	0.50
23:DB:159:G:O2'	23:DB:160:A:H5''	2.12	0.50
23:DB:622:G:H2'	23:DB:623:C:H6	1.77	0.50
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.11	0.50
23:DB:1883:U:H2'	23:DB:1884:G:H1'	1.93	0.50
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.12	0.50
25:DC:166:ARG:HB3	25:DC:171:VAL:HG22	1.92	0.50
25:DC:211:ARG:C	25:DC:213:ARG:H	2.19	0.50
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.93	0.50
29:DE:126:VAL:CG2	29:DE:133:LEU:HB2	2.42	0.50
38:DM:40:ARG:HB3	38:DM:95:LEU:HD12	1.93	0.50
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.93	0.50
52:DW:37:VAL:CG1	52:DW:38:ARG:H	2.21	0.50
1:AA:977:A:H1'	1:AA:982:U:O4	2.12	0.50
1:AA:1240:U:O4	6:AG:29:LEU:HG	2.12	0.50
1:AA:1325:C:O2'	1:AA:1326:U:H5'	2.12	0.50
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.93	0.50
3:AD:12:ARG:HG2	3:AD:33:ILE:HA	1.93	0.50
4:AE:82:HIS:CD2	7:AH:95:MET:HG3	2.47	0.50
6:AG:115:MET:HA	6:AG:118:ARG:HD2	1.94	0.50
10:AK:33:ILE:CB	10:AK:73:VAL:HG11	2.30	0.50
12:AM:12:LYS:H	12:AM:44:ILE:CD1	2.25	0.50
12:AM:78:ARG:NH2	18:AS:64:GLU:HB2	2.26	0.50
13:AN:7:ALA:O	13:AN:11:LYS:HG2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:30:ILE:C	13:AN:32:ASP:H	2.18	0.50
19:AT:57:VAL:HG23	19:AT:58:ASP:H	1.76	0.50
20:AB:65:LYS:HA	20:AB:89:PHE:CE1	2.43	0.50
20:AB:94:ARG:N	20:AB:94:ARG:NE	2.54	0.50
23:BB:18:U:H2'	23:BB:19:A:C8	2.45	0.50
23:BB:63:A:OP2	23:BB:63:A:H2'	2.12	0.50
23:BB:80:G:N3	23:BB:294:A:C2	2.79	0.50
23:BB:549:G:H4'	23:BB:550:C:C6	2.47	0.50
23:BB:871:U:H2'	23:BB:872:U:C6	2.45	0.50
23:BB:958:U:N3	38:BM:16:ARG:HB3	2.27	0.50
23:BB:1113:U:H2'	23:BB:1114:C:C6	2.47	0.50
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.12	0.50
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.74	0.50
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.12	0.50
23:BB:2457:U:O2'	23:BB:2458:G:H5'	2.11	0.50
23:BB:2458:G:H1'	23:BB:2460:U:O4	2.12	0.50
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.42	0.50
27:BK:47:ILE:HG23	27:BK:48:PRO:HD2	1.94	0.50
29:BE:75:SER:O	29:BE:78:TRP:N	2.45	0.50
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.11	0.50
33:B1:44:GLN:HA	33:B1:44:GLN:OE1	2.12	0.50
37:BL:89:VAL:HG23	37:BL:123:ARG:HB2	1.94	0.50
40:BH:3:VAL:HA	40:BH:39:ALA:HB2	1.94	0.50
41:BJ:3:THR:HB	41:BJ:44:TYR:OH	2.12	0.50
47:BF:69:ALA:HB3	47:BF:80:GLN:O	2.11	0.50
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.93	0.50
48:BG:58:ALA:C	48:BG:60:GLY:N	2.70	0.50
52:BW:24:ARG:HA	52:BW:66:VAL:N	2.27	0.50
1:CA:91:U:O5'	1:CA:91:U:H6	1.95	0.50
1:CA:453:G:H2'	1:CA:454:G:C8	2.47	0.50
1:CA:640:A:O2'	1:CA:641:U:H5'	2.12	0.50
1:CA:1423:G:H2'	1:CA:1424:U:C6	2.46	0.50
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.45	0.50
6:CG:68:VAL:HG13	6:CG:133:ALA:HB1	1.94	0.50
7:CH:29:SER:O	7:CH:30:LYS:C	2.55	0.50
9:CJ:52:LEU:H	9:CJ:52:LEU:CD1	2.17	0.50
19:CT:43:LYS:HD3	19:CT:43:LYS:H	1.76	0.50
21:CU:42:THR:HB	21:CU:46:ARG:NH2	2.26	0.50
22:DA:16:G:O2'	22:DA:17:C:H5'	2.11	0.50
23:DB:141:G:O6	50:DT:2:ILE:HG21	2.10	0.50
23:DB:408:G:O2'	23:DB:409:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:522:A:H2'	23:DB:523:C:C6	2.47	0.50
23:DB:576:U:H2'	23:DB:577:G:C8	2.46	0.50
23:DB:679:C:O2'	23:DB:680:C:H5'	2.11	0.50
23:DB:1330:C:O2'	23:DB:1331:G:H5'	2.12	0.50
23:DB:1551:A:H5''	23:DB:1552:A:OP2	2.12	0.50
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.11	0.50
23:DB:1915:U:H2'	23:DB:1916:A:H8	1.74	0.50
23:DB:2361:G:OP1	34:D3:25:HIS:HA	2.12	0.50
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.47	0.50
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.47	0.50
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.75	0.50
23:DB:2840:C:O2'	23:DB:2841:C:H5'	2.12	0.50
27:DK:7:MET:HE1	27:DK:44:LYS:CB	2.41	0.50
28:DP:4:ILE:O	28:DP:6:GLN:N	2.44	0.50
29:DE:23:PHE:HA	29:DE:107:SER:OG	2.11	0.50
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.22	0.50
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.27	0.50
52:DW:51:GLY:HA3	52:DW:59:PHE:HB3	1.93	0.50
53:D6:80:GLU:HG3	53:D6:92:PRO:HG2	1.92	0.50
1:AA:818:G:C3'	1:AA:819:A:H5''	2.42	0.50
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.94	0.50
12:AM:1:ALA:CA	12:AM:8:ILE:HG22	2.42	0.50
16:AQ:56:ASP:N	16:AQ:81:ALA:HB2	2.26	0.50
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.75	0.50
23:BB:572:A:H3'	23:BB:573:U:O4'	2.11	0.50
23:BB:852:U:H2'	23:BB:853:C:H6	1.75	0.50
23:BB:1060:U:O4	24:BI:131:THR:HG22	2.12	0.50
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.11	0.50
23:BB:1439:A:N7	23:BB:1440:U:C2	2.79	0.50
23:BB:1461:C:H2'	23:BB:1462:C:H6	1.77	0.50
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.77	0.50
23:BB:1692:U:H2'	23:BB:1694:C:C4	2.47	0.50
23:BB:1793:C:H2'	23:BB:1794:A:C8	2.47	0.50
23:BB:2247:A:H3'	57:BB:3266:HOH:O	2.11	0.50
23:BB:2529:G:H4'	48:BG:174:LYS:CG	2.39	0.50
23:BB:2732:G:C3'	23:BB:2733:A:H5'	2.39	0.50
25:BC:15:VAL:HG22	25:BC:205:GLY:HA3	1.93	0.50
26:BD:148:GLN:HG3	26:BD:152:PRO:CB	2.39	0.50
30:BY:16:LEU:O	30:BY:19:HIS:HB2	2.11	0.50
30:BY:25:GLY:C	30:BY:46:MET:HE1	2.37	0.50
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.12	0.50
40:BH:64:ALA:H	40:BH:66:ASN:HD21	1.58	0.50
40:BH:128:HIS:HB3	40:BH:144:VAL:HB	1.92	0.50
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.26	0.50
43:BO:35:ILE:HG13	43:BO:71:ALA:CB	2.41	0.50
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.11	0.50
47:BF:110:ILE:HG21	47:BF:113:PHE:HB3	1.93	0.50
48:BG:18:ILE:HA	48:BG:22:VAL:O	2.12	0.50
48:BG:144:ALA:HB1	48:BG:163:TYR:HE1	1.77	0.50
50:BT:40:LYS:HA	50:BT:43:ILE:HD12	1.94	0.50
52:BW:37:VAL:C	52:BW:38:ARG:HG2	2.37	0.50
53:B6:113:ASP:HA	53:B6:116:ARG:CD	2.39	0.50
1:CA:440:C:O2'	1:CA:441:A:H5'	2.12	0.50
1:CA:448:A:H2'	1:CA:449:G:H8	1.77	0.50
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.27	0.50
1:CA:1489:G:H2'	1:CA:1490:U:C6	2.46	0.50
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.27	0.50
9:CJ:59:LYS:HG3	9:CJ:60:ASP:N	2.27	0.50
13:CN:12:ARG:HE	13:CN:58:ARG:NH1	2.10	0.50
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.12	0.50
20:CB:80:LYS:O	20:CB:84:LEU:HB2	2.12	0.50
22:DA:20:G:H2'	22:DA:21:G:H8	1.77	0.50
23:DB:348:A:H2'	23:DB:349:U:O4'	2.11	0.50
23:DB:377:G:O2'	23:DB:378:C:H5'	2.12	0.50
23:DB:521:U:H2'	23:DB:522:A:H8	1.75	0.50
23:DB:1372:U:H1'	23:DB:2214:C:C4	2.47	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
26:DD:40:LEU:HA	26:DD:45:TYR:H	1.76	0.50
27:DK:47:ILE:HG23	27:DK:48:PRO:HD2	1.94	0.50
37:DL:40:SER:OG	37:DL:41:ARG:HG3	2.11	0.50
39:DX:17:GLU:HB3	39:DX:53:VAL:HG11	1.94	0.50
40:DH:131:SER:HA	40:DH:140:ALA:O	2.12	0.50
41:DJ:26:GLY:O	41:DJ:30:THR:HG22	2.12	0.50
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.27	0.50
42:DN:9:GLN:O	42:DN:11:ASN:N	2.45	0.50
46:DU:11:ILE:HD13	46:DU:20:LYS:H	1.75	0.50
47:DF:99:PHE:HA	47:DF:102:LEU:HD12	1.93	0.50
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	1.94	0.50
48:DG:106:LEU:O	48:DG:108:PHE:HD1	1.95	0.50
50:DT:32:LEU:O	50:DT:83:ALA:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:38:ALA:HB3	50:DT:81:LYS:NZ	2.27	0.50
50:DT:40:LYS:HA	50:DT:43:ILE:HD12	1.93	0.50
50:DT:44:LYS:O	50:DT:48:GLN:HG2	2.12	0.50
1:AA:392:C:H2'	1:AA:393:A:H8	1.77	0.50
1:AA:948:C:O2'	1:AA:949:A:H5'	2.12	0.50
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.11	0.50
6:AG:146:ALA:C	10:AK:55:ARG:HH21	2.20	0.50
8:AI:15:ALA:O	8:AI:66:VAL:HG23	2.12	0.50
8:AI:41:GLU:H	8:AI:44:ARG:NH1	2.10	0.50
8:AI:93:LEU:HD12	8:AI:94:ARG:N	2.26	0.50
9:AJ:28:THR:HG21	9:AJ:90:LEU:HD22	1.93	0.50
16:AQ:17:GLU:O	16:AQ:18:LYS:HB2	2.11	0.50
18:AS:48:ILE:HB	18:AS:59:VAL:CG2	2.41	0.50
20:AB:121:GLN:HE21	20:AB:122:ASP:N	2.07	0.50
22:BA:16:G:O2'	22:BA:17:C:H5'	2.12	0.50
22:BA:87:U:H2'	22:BA:88:C:O5'	2.12	0.50
23:BB:460:A:H2'	23:BB:461:C:O4'	2.12	0.50
23:BB:514:A:N6	23:BB:515:A:N6	2.59	0.50
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.75	0.50
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.12	0.50
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.12	0.50
23:BB:2302:U:O2'	23:BB:2303:G:H5'	2.11	0.50
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.76	0.50
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.76	0.50
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.12	0.50
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.11	0.50
29:BE:58:LYS:O	29:BE:60:TRP:N	2.45	0.50
29:BE:124:PHE:HD1	29:BE:125:SER:N	2.09	0.50
30:BY:7:THR:HG22	30:BY:8:GLN:N	2.27	0.50
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.46	0.50
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.12	0.50
44:BQ:108:LEU:HD23	49:BR:48:LYS:HD3	1.94	0.50
48:BG:10:VAL:HG13	48:BG:14:VAL:HG21	1.93	0.50
53:B6:59:THR:O	53:B6:61:PRO:HD3	2.11	0.50
1:CA:418:C:H2'	1:CA:419:C:H6	1.76	0.50
1:CA:483:C:H2'	1:CA:484:G:C8	2.47	0.50
1:CA:925:G:O2'	1:CA:926:G:H5''	2.11	0.50
1:CA:1049:U:H2'	13:CN:2:LYS:HD3	1.93	0.50
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.11	0.50
1:CA:1123:U:H4'	9:CJ:39:PRO:HD2	1.93	0.50
1:CA:1132:C:O2'	1:CA:1133:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1137:C:O2'	1:CA:1138:G:H5''	2.11	0.50
6:CG:2:ARG:HH11	6:CG:2:ARG:HB2	1.77	0.50
7:CH:23:ALA:HB1	7:CH:61:THR:HA	1.94	0.50
22:DA:54:G:H21	47:DF:25:MET:CE	2.25	0.50
23:DB:296:U:H2'	23:DB:297:G:H8	1.77	0.50
23:DB:704:G:C2'	23:DB:726:G:H22	2.15	0.50
23:DB:945:A:H3'	23:DB:946:C:H5''	1.93	0.50
23:DB:991:C:H5''	23:DB:1185:G:H2'	1.94	0.50
23:DB:1439:A:N7	23:DB:1440:U:C2	2.80	0.50
23:DB:1441:G:O2'	23:DB:1442:U:H5'	2.12	0.50
23:DB:1854:A:H2	23:DB:2087:G:N3	2.10	0.50
23:DB:1936:A:H2	23:DB:1943:U:O4	1.95	0.50
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.12	0.50
23:DB:2309:A:H2'	23:DB:2310:C:C6	2.47	0.50
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.93	0.50
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.50
25:DC:41:GLY:CA	25:DC:53:ILE:HG21	2.40	0.50
25:DC:145:MET:HB2	25:DC:152:GLN:NE2	2.27	0.50
29:DE:129:PRO:HG3	29:DE:156:ASN:HA	1.93	0.50
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.26	0.50
36:D2:4:THR:O	36:D2:5:PHE:HB2	2.12	0.50
37:DL:79:LEU:HB2	37:DL:113:ALA:HB3	1.92	0.50
39:DX:42:LEU:O	39:DX:46:VAL:HG23	2.12	0.50
40:DH:7:ASP:CG	40:DH:8:LYS:N	2.70	0.50
43:DO:6:ALA:CB	43:DO:10:ARG:HH11	2.25	0.50
46:DU:21:ARG:HH11	46:DU:21:ARG:HG3	1.77	0.50
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.92	0.50
48:DG:88:LEU:HD11	48:DG:94:ARG:N	2.27	0.50
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.37	0.50
53:D6:84:ARG:C	53:D6:86:SER:N	2.68	0.50
1:AA:91:U:O5'	1:AA:91:U:C6	2.59	0.49
1:AA:890:G:O2'	1:AA:906:A:N6	2.45	0.49
2:AC:110:LEU:HD22	2:AC:145:ALA:HB2	1.94	0.49
2:AC:134:LYS:HG3	2:AC:167:TYR:HE2	1.77	0.49
2:AC:183:TYR:HE1	2:AC:198:LYS:HB3	1.76	0.49
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.27	0.49
4:AE:28:ARG:NH1	4:AE:30:PHE:HB3	2.27	0.49
5:AF:54:LEU:C	5:AF:56:LYS:H	2.20	0.49
6:AG:145:GLU:C	6:AG:147:ASN:H	2.18	0.49
6:AG:149:ALA:H	10:AK:55:ARG:NH2	2.10	0.49
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:92:LEU:HD13	9:AJ:92:LEU:N	2.27	0.49
10:AK:77:GLY:O	10:AK:79:LYS:HE3	2.11	0.49
14:AO:71:LYS:HZ2	14:AO:72:ARG:HA	1.76	0.49
16:AQ:11:VAL:O	16:AQ:54:ILE:HG13	2.12	0.49
18:AS:68:HIS:HB3	18:AS:72:GLU:OE2	2.11	0.49
21:AU:24:LYS:NZ	21:AU:25:ALA:H	2.09	0.49
23:BB:208:C:H2'	23:BB:209:C:H6	1.76	0.49
23:BB:516:C:O2'	23:BB:517:C:H5'	2.12	0.49
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.40	0.49
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.47	0.49
23:BB:2144:G:H2'	23:BB:2146:C:C5'	2.39	0.49
23:BB:2311:A:O2'	47:BF:84:ILE:HD13	2.12	0.49
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.12	0.49
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.93	0.49
25:BC:199:HIS:C	25:BC:201:LEU:H	2.20	0.49
26:BD:114:LYS:HD2	26:BD:116:LYS:CE	2.42	0.49
27:BK:88:ASN:HD22	27:BK:89:ASN:N	2.09	0.49
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.42	0.49
29:BE:136:GLN:HE22	29:BE:139:LYS:HD3	1.77	0.49
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.42	0.49
41:BJ:110:PRO:O	41:BJ:115:GLY:HA3	2.12	0.49
43:BO:106:LEU:HA	43:BO:109:ALA:HB3	1.94	0.49
47:BF:78:ILE:HA	47:BF:82:TYR:CG	2.46	0.49
47:BF:121:PHE:HB3	47:BF:127:TYR:CE1	2.47	0.49
49:BR:32:THR:HA	49:BR:61:ALA:O	2.11	0.49
52:BW:16:GLU:CD	52:BW:16:GLU:N	2.70	0.49
1:CA:1423:G:H2'	1:CA:1424:U:H6	1.78	0.49
1:CA:1484:C:O2'	1:CA:1485:U:H5'	2.13	0.49
7:CH:14:ARG:HG3	7:CH:15:ASN:N	2.27	0.49
8:CI:119:LYS:C	8:CI:121:ARG:H	2.20	0.49
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.41	0.49
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.12	0.49
19:CT:77:ASN:O	19:CT:81:GLN:HG3	2.11	0.49
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.75	0.49
22:DA:50:A:OP1	43:DO:68:LYS:HB2	2.12	0.49
23:DB:606:U:OP2	29:DE:99:LYS:HD2	2.11	0.49
23:DB:1141:U:OP2	41:DJ:65:THR:HG21	2.12	0.49
23:DB:1275:A:H2'	23:DB:1275:A:N3	2.27	0.49
23:DB:1562:U:H2'	23:DB:1563:U:H6	1.74	0.49
23:DB:1793:C:H2'	23:DB:1794:A:H8	1.77	0.49
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.37	0.49
29:DE:5:LEU:CD1	29:DE:10:SER:HB2	2.30	0.49
29:DE:51:GLU:O	29:DE:52:VAL:C	2.53	0.49
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.47	0.49
40:DH:5:LEU:O	40:DH:6:LEU:HB2	2.12	0.49
40:DH:117:LEU:HD13	40:DH:130:VAL:HG13	1.94	0.49
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.27	0.49
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.27	0.49
42:DN:83:LEU:HA	42:DN:86:ARG:CB	2.41	0.49
42:DN:102:PHE:N	42:DN:102:PHE:HD1	2.10	0.49
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.29	0.49
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.42	0.49
53:D6:65:THR:N	53:D6:103:ILE:HD12	2.26	0.49
1:AA:465:A:H2'	1:AA:466:A:H3'	1.94	0.49
1:AA:724:G:O2'	1:AA:725:G:H5'	2.12	0.49
1:AA:974:A:C4'	1:AA:975:A:H5'	2.34	0.49
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.27	0.49
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.76	0.49
1:AA:1356:G:O2'	1:AA:1357:A:H5'	2.11	0.49
2:AC:13:ILE:O	2:AC:15:LYS:N	2.44	0.49
14:AO:24:SER:HB3	14:AO:27:VAL:CG2	2.41	0.49
14:AO:53:ARG:HD2	23:BB:715:A:N6	2.27	0.49
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.26	0.49
23:BB:277:G:H5''	23:BB:278:A:N7	2.28	0.49
23:BB:414:C:H2'	23:BB:415:A:C8	2.47	0.49
23:BB:622:G:H2'	23:BB:623:C:C6	2.47	0.49
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.11	0.49
23:BB:2362:C:OP1	34:B3:39:ARG:NE	2.42	0.49
25:BC:202:ARG:HH11	25:BC:213:ARG:HH21	1.60	0.49
26:BD:9:VAL:O	26:BD:9:VAL:HG22	2.12	0.49
26:BD:68:PHE:HB3	26:BD:73:VAL:CG2	2.34	0.49
26:BD:90:PHE:HD2	26:BD:94:GLN:HG3	1.77	0.49
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.93	0.49
27:BK:39:ILE:HD13	27:BK:39:ILE:N	2.27	0.49
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.42	0.49
29:BE:47:LYS:HA	29:BE:88:ARG:HH11	1.77	0.49
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.22	0.49
37:BL:134:ALA:O	37:BL:137:ALA:HB3	2.12	0.49
38:BM:35:ALA:HB3	38:BM:99:GLY:H	1.77	0.49
40:BH:44:ILE:C	40:BH:46:PHE:N	2.70	0.49
40:BH:84:ALA:HA	40:BH:90:LEU:HD12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.70	0.49
42:BN:24:MET:O	42:BN:27:SER:HB3	2.13	0.49
42:BN:61:ALA:C	42:BN:63:ARG:N	2.70	0.49
42:BN:72:ASP:HB3	42:BN:75:ILE:HG13	1.94	0.49
42:BN:102:PHE:N	42:BN:102:PHE:HD1	2.11	0.49
44:BQ:23:TYR:CD2	44:BQ:23:TYR:N	2.80	0.49
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.11	0.49
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.12	0.49
53:B6:16:LYS:HA	53:B6:19:GLU:OE2	2.11	0.49
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.49
1:CA:638:U:H2'	1:CA:639:G:O4'	2.12	0.49
1:CA:946:A:H2'	1:CA:947:G:H8	1.73	0.49
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.47	0.49
1:CA:1202:U:O2	13:CN:66:THR:HG21	2.12	0.49
1:CA:1350:A:OP2	8:CI:119:LYS:HE3	2.12	0.49
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.11	0.49
6:CG:145:GLU:C	6:CG:148:LYS:H	2.20	0.49
8:CI:24:ASN:CG	8:CI:25:GLY:N	2.69	0.49
11:CL:113:ARG:NH2	11:CL:120:ARG:HA	2.27	0.49
13:CN:7:ALA:O	13:CN:11:LYS:HG2	2.12	0.49
13:CN:50:LEU:H	13:CN:51:PRO:CD	2.25	0.49
14:CO:14:GLU:HB3	14:CO:84:ARG:NH2	2.26	0.49
17:CR:52:ARG:HH11	17:CR:52:ARG:HG3	1.77	0.49
17:CR:62:ARG:C	17:CR:63:TYR:HD2	2.20	0.49
18:CS:43:MET:O	18:CS:61:VAL:HB	2.12	0.49
20:CB:93:HIS:HB2	20:CB:145:ASN:O	2.12	0.49
23:DB:118:A:N3	23:DB:178:G:H1'	2.28	0.49
23:DB:146:A:H2'	23:DB:147:C:C6	2.47	0.49
23:DB:878:A:H5'	23:DB:900:A:N1	2.27	0.49
23:DB:981:A:H2'	23:DB:982:C:C5'	2.42	0.49
23:DB:1033:U:H5	32:D4:15:LYS:HE3	1.76	0.49
23:DB:1165:A:H2'	23:DB:1166:G:H8	1.77	0.49
23:DB:1640:A:O2'	23:DB:1641:A:H5'	2.13	0.49
23:DB:1994:C:O2'	23:DB:1995:U:H5'	2.13	0.49
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.12	0.49
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.13	0.49
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.77	0.49
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.12	0.49
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.95	0.49
26:DD:159:LYS:HZ2	26:DD:159:LYS:C	2.20	0.49
32:D4:2:LYS:CD	32:D4:4:ARG:HE	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:57:TYR:CE2	38:DM:136:MET:HE2	2.47	0.49
40:DH:75:LEU:HD23	40:DH:75:LEU:N	2.27	0.49
40:DH:113:SER:N	40:DH:132:PHE:HE1	2.09	0.49
41:DJ:59:ALA:C	41:DJ:61:LYS:N	2.70	0.49
48:DG:16:VAL:HG11	48:DG:44:HIS:NE2	2.27	0.49
48:DG:139:VAL:O	48:DG:142:GLN:HB3	2.12	0.49
52:DW:10:ARG:O	52:DW:11:ASN:HB2	2.11	0.49
53:D6:58:VAL:HG12	53:D6:66:LEU:HG	1.94	0.49
1:AA:299:G:H2'	1:AA:300:A:C8	2.46	0.49
1:AA:437:U:H5''	3:AD:151:GLN:NE2	2.26	0.49
1:AA:450:G:N7	1:AA:481:G:O6	2.46	0.49
1:AA:674:G:H2'	1:AA:675:A:C8	2.40	0.49
1:AA:833:G:H2'	1:AA:834:U:H6	1.77	0.49
1:AA:839:C:H2'	1:AA:840:C:O4'	2.11	0.49
1:AA:1458:G:H5'	19:AT:26:MET:HB2	1.94	0.49
2:AC:155:ARG:H	2:AC:162:ALA:CB	2.25	0.49
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.94	0.49
10:AK:113:THR:HG21	21:AU:28:LEU:HD11	1.94	0.49
11:AL:21:PRO:HG2	11:AL:94:TYR:OH	2.12	0.49
11:AL:113:ARG:HH21	11:AL:120:ARG:HA	1.77	0.49
12:AM:28:ARG:HH12	12:AM:59:VAL:HA	1.76	0.49
14:AO:85:LEU:HD12	14:AO:85:LEU:N	2.27	0.49
21:AU:36:PHE:HD2	21:AU:39:LYS:HB2	1.78	0.49
23:BB:593:U:H2'	23:BB:594:U:C5	2.47	0.49
23:BB:665:U:H2'	23:BB:666:A:H8	1.77	0.49
23:BB:707:G:O2'	23:BB:708:G:H5'	2.11	0.49
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.11	0.49
23:BB:870:U:H5''	38:BM:6:ARG:O	2.12	0.49
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.76	0.49
23:BB:1523:U:H5''	23:BB:1524:G:H8	1.78	0.49
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.77	0.49
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.48	0.49
23:BB:2514:U:H2'	23:BB:2515:C:H6	1.77	0.49
23:BB:2716:C:O2'	23:BB:2717:C:H5'	2.12	0.49
23:BB:2812:G:H2'	23:BB:2813:A:C8	2.47	0.49
23:BB:2856:A:H2'	23:BB:2857:G:C8	2.48	0.49
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.12	0.49
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.31	0.49
26:BD:169:ARG:O	26:BD:170:VAL:O	2.30	0.49
32:B4:1:MET:HG3	32:B4:34:LYS:HG2	1.95	0.49
35:BV:63:ILE:H	35:BV:70:ILE:HD11	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:19:ARG:O	36:B2:22:MET:HB2	2.11	0.49
40:BH:54:LEU:HA	40:BH:57:LYS:NZ	2.27	0.49
45:BS:96:ILE:O	45:BS:96:ILE:HG23	2.11	0.49
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.93	0.49
48:BG:104:LEU:HD22	48:BG:106:LEU:HD22	1.93	0.49
49:BR:20:VAL:HG12	49:BR:21:ARG:N	2.27	0.49
53:B6:95:LYS:HB3	53:B6:100:TYR:HE2	1.76	0.49
53:B6:110:ARG:O	53:B6:114:LEU:HD13	2.12	0.49
1:CA:45:G:H2'	1:CA:46:G:H8	1.76	0.49
1:CA:153:C:O2'	1:CA:154:U:H5'	2.12	0.49
1:CA:379:C:O2'	1:CA:380:G:H5'	2.12	0.49
1:CA:409:U:H2'	1:CA:410:G:C8	2.46	0.49
1:CA:455:G:H2'	1:CA:456:A:C8	2.47	0.49
1:CA:551:U:H2'	1:CA:552:U:C6	2.47	0.49
1:CA:862:C:O2'	1:CA:863:U:H5'	2.12	0.49
1:CA:964:A:H2'	1:CA:965:U:H5''	1.94	0.49
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.42	0.49
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.11	0.49
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.12	0.49
2:CC:128:MET:H	2:CC:128:MET:CE	2.25	0.49
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.76	0.49
6:CG:145:GLU:C	6:CG:147:ASN:H	2.19	0.49
8:CI:93:LEU:HD13	8:CI:97:LEU:HD11	1.94	0.49
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.47	0.49
13:CN:9:GLU:HB2	13:CN:62:ARG:CZ	2.41	0.49
14:CO:28:GLN:O	14:CO:32:LEU:HD23	2.12	0.49
22:DA:32:U:H4'	22:DA:52:A:H62	1.76	0.49
23:DB:139:U:N3	50:DT:1:MET:HE2	2.27	0.49
23:DB:485:C:O2'	23:DB:486:C:H5'	2.12	0.49
23:DB:584:C:P	44:DQ:5:ARG:HD3	2.52	0.49
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.48	0.49
23:DB:912:C:H2'	23:DB:913:U:C6	2.47	0.49
23:DB:958:U:O4	38:DM:16:ARG:HA	2.13	0.49
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.46	0.49
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.12	0.49
23:DB:1416:G:O2'	23:DB:1417:C:H6	1.95	0.49
23:DB:1442:U:O2'	23:DB:1443:U:H5'	2.12	0.49
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.47	0.49
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.48	0.49
23:DB:2588:G:H2'	23:DB:2589:A:O4'	2.12	0.49
23:DB:2791:G:H2'	23:DB:2792:A:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:128:THR:HA	25:DC:190:THR:CA	2.40	0.49
26:DD:55:LYS:C	26:DD:57:ALA:H	2.20	0.49
26:DD:101:PHE:O	26:DD:180:VAL:HG11	2.11	0.49
26:DD:118:PHE:HE2	42:DN:1:MET:HB3	1.78	0.49
29:DE:47:LYS:HA	29:DE:88:ARG:HH11	1.76	0.49
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.12	0.49
34:D3:32:LEU:HA	34:D3:35:LYS:HD2	1.94	0.49
37:DL:41:ARG:HG2	37:DL:41:ARG:HH21	1.78	0.49
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.40	0.49
42:DN:24:MET:O	42:DN:27:SER:HB3	2.12	0.49
43:DO:29:HIS:HB3	43:DO:36:TYR:HB2	1.95	0.49
50:DT:40:LYS:O	50:DT:43:ILE:HB	2.13	0.49
52:DW:39:GLN:CG	52:DW:42:THR:HB	2.42	0.49
53:D6:15:GLN:HA	53:D6:168:PHE:CE2	2.47	0.49
1:AA:1154:G:O2'	1:AA:1155:A:H5'	2.11	0.49
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.13	0.49
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.13	0.49
2:AC:53:ARG:HG2	2:AC:54:ILE:H	1.77	0.49
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.13	0.49
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.46	0.49
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.12	0.49
6:AG:130:LYS:N	6:AG:134:VAL:HG21	2.27	0.49
8:AI:24:ASN:CG	8:AI:25:GLY:N	2.70	0.49
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.77	0.49
8:AI:119:LYS:C	8:AI:121:ARG:H	2.20	0.49
9:AJ:12:ALA:CB	9:AJ:96:VAL:HG12	2.37	0.49
10:AK:92:ARG:HH11	21:AU:20:ARG:HH21	1.59	0.49
12:AM:70:ARG:HH12	47:BF:112:ASP:CG	2.21	0.49
22:BA:93:C:O2'	22:BA:94:A:H5'	2.12	0.49
23:BB:246:C:H2'	23:BB:247:G:H5'	1.94	0.49
23:BB:728:G:O2'	23:BB:730:A:H8	1.96	0.49
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.75	0.49
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.61	0.49
23:BB:1858:A:H2'	23:BB:1859:U:O4'	2.13	0.49
23:BB:2886:A:N6	31:B0:39:ARG:CZ	2.75	0.49
28:BP:20:ARG:HG2	28:BP:20:ARG:HH21	1.76	0.49
28:BP:110:LYS:N	28:BP:110:LYS:HD2	2.27	0.49
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.11	0.49
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.27	0.49
40:BH:57:LYS:HZ2	40:BH:58:LEU:HB2	1.76	0.49
40:BH:105:ALA:C	40:BH:107:GLY:H	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:139:VAL:O	48:BG:142:GLN:HB3	2.12	0.49
53:B6:7:TYR:CE1	53:B6:160:GLU:HG2	2.47	0.49
1:CA:284:C:O2'	1:CA:285:C:H5'	2.12	0.49
1:CA:302:G:O2'	1:CA:303:A:H5'	2.12	0.49
1:CA:820:U:H4'	1:CA:821:G:OP2	2.13	0.49
1:CA:1421:G:O2'	1:CA:1422:G:H5'	2.13	0.49
1:CA:1460:C:H2'	1:CA:1461:G:H8	1.78	0.49
3:CD:100:VAL:HG21	3:CD:136:VAL:HG21	1.93	0.49
4:CE:155:LYS:HA	7:CH:65:PHE:CG	2.48	0.49
5:CF:81:ASN:O	5:CF:82:ASP:C	2.55	0.49
6:CG:68:VAL:CG1	6:CG:133:ALA:HB1	2.43	0.49
8:CI:51:LEU:HD22	8:CI:56:MET:HE3	1.94	0.49
10:CK:33:ILE:CB	10:CK:73:VAL:HG11	2.30	0.49
13:CN:50:LEU:N	13:CN:51:PRO:CD	2.76	0.49
20:CB:15:PHE:O	20:CB:40:ILE:HD12	2.12	0.49
23:DB:207:A:H2'	23:DB:208:C:O4'	2.12	0.49
23:DB:513:A:H8	23:DB:513:A:O5'	1.95	0.49
23:DB:1021:A:H61	23:DB:1142:A:N6	2.10	0.49
23:DB:1518:C:H2'	23:DB:1519:G:H8	1.78	0.49
23:DB:1526:C:O2'	23:DB:1527:G:H5'	2.11	0.49
23:DB:1789:A:P	25:DC:220:ARG:HD3	2.52	0.49
23:DB:2134:A:H5'	23:DB:2135:A:OP2	2.13	0.49
23:DB:2148:G:O3'	23:DB:2149:U:H6	1.95	0.49
23:DB:2466:C:OP1	32:D4:4:ARG:HD2	2.12	0.49
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.48	0.49
25:DC:144:GLU:HB3	25:DC:187:CYS:HB3	1.94	0.49
27:DK:112:PHE:O	27:DK:113:MET:C	2.55	0.49
29:DE:150:THR:OG1	29:DE:151:GLY:N	2.45	0.49
37:DL:77:ILE:HB	37:DL:109:LYS:O	2.13	0.49
40:DH:113:SER:N	40:DH:132:PHE:CE1	2.81	0.49
41:DJ:98:GLU:HB3	41:DJ:124:VAL:HG21	1.93	0.49
44:DQ:77:LYS:HE2	44:DQ:116:LEU:HD13	1.93	0.49
45:DS:51:LEU:C	45:DS:53:SER:H	2.19	0.49
47:DF:127:TYR:HB2	47:DF:155:ILE:HD13	1.94	0.49
48:DG:104:LEU:HD22	48:DG:106:LEU:HD22	1.94	0.49
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	1.93	0.49
51:DZ:7:VAL:HG11	51:DZ:51:VAL:HG13	1.93	0.49
1:AA:140:U:H2'	1:AA:141:G:C8	2.47	0.49
1:AA:264:C:H4'	16:AQ:64:ARG:HD2	1.93	0.49
1:AA:430:A:OP1	3:AD:8:LEU:HD23	2.12	0.49
1:AA:509:A:O2'	1:AA:510:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:642:A:H2'	1:AA:643:C:H6	1.77	0.49
1:AA:862:C:O2'	1:AA:863:U:H5'	2.11	0.49
1:AA:957:U:H4'	18:AS:78:THR:HB	1.94	0.49
1:AA:1308:U:H3'	12:AM:97:ARG:HH11	1.78	0.49
1:AA:1363:A:N3	1:AA:1363:A:H2'	2.27	0.49
2:AC:109:GLU:OE2	2:AC:143:LEU:HG	2.13	0.49
3:AD:26:ALA:HA	3:AD:30:LYS:CE	2.42	0.49
6:AG:46:LEU:HG	6:AG:57:GLU:HB3	1.94	0.49
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.43	0.49
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.95	0.49
9:AJ:10:LEU:O	9:AJ:71:LEU:HA	2.12	0.49
10:AK:30:ILE:HG22	10:AK:45:THR:CB	2.42	0.49
20:AB:8:MET:HA	20:AB:11:ALA:HB3	1.94	0.49
20:AB:119:GLN:C	20:AB:125:PHE:HB3	2.37	0.49
23:BB:571:U:O2'	23:BB:573:U:O5'	2.30	0.49
23:BB:1059:G:N2	24:BI:130:GLY:HA3	2.28	0.49
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.77	0.49
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.47	0.49
23:BB:2548:U:H1'	27:BK:23:LYS:HZ1	1.73	0.49
23:BB:2751:G:H2'	23:BB:2751:G:OP1	2.12	0.49
26:BD:15:PHE:CD1	26:BD:15:PHE:N	2.80	0.49
29:BE:37:ALA:C	29:BE:39:ALA:N	2.69	0.49
29:BE:129:PRO:HG3	29:BE:156:ASN:HA	1.95	0.49
32:B4:17:VAL:HG12	32:B4:18:LYS:N	2.22	0.49
33:B1:24:LYS:NZ	33:B1:33:LEU:HB2	2.26	0.49
35:BV:5:ASN:HA	35:BV:64:VAL:O	2.12	0.49
36:B2:4:THR:O	36:B2:5:PHE:HB2	2.11	0.49
37:BL:75:ALA:HB2	37:BL:105:ILE:HG21	1.94	0.49
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.78	0.49
40:BH:65:ALA:HB1	40:BH:134:VAL:HG21	1.94	0.49
42:BN:47:VAL:O	42:BN:51:LEU:HD13	2.12	0.49
42:BN:72:ASP:HB3	42:BN:75:ILE:CG1	2.42	0.49
46:BU:87:GLU:OE2	46:BU:88:ASP:HB2	2.12	0.49
48:BG:93:TYR:O	48:BG:94:ARG:HG3	2.12	0.49
50:BT:40:LYS:O	50:BT:43:ILE:HB	2.12	0.49
51:BZ:7:VAL:HG11	51:BZ:51:VAL:HG13	1.95	0.49
53:B6:30:THR:CG2	53:B6:183:ILE:HG12	2.42	0.49
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.13	0.49
1:CA:313:A:H2'	1:CA:314:C:H6	1.77	0.49
1:CA:682:G:O2'	1:CA:683:G:H5'	2.12	0.49
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:76:ILE:CG2	2:CC:80:GLY:HA2	2.43	0.49
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.95	0.49
7:CH:113:ARG:C	7:CH:113:ARG:HE	2.21	0.49
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.11	0.49
9:CJ:76:ILE:O	9:CJ:76:ILE:HD12	2.13	0.49
14:CO:82:ILE:O	14:CO:86:GLY:N	2.45	0.49
23:DB:96:C:H4'	39:DX:41:HIS:CG	2.46	0.49
23:DB:477:A:H2'	23:DB:478:A:H8	1.78	0.49
23:DB:707:G:O2'	23:DB:708:G:H5'	2.12	0.49
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.12	0.49
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.46	0.49
23:DB:1680:U:H2'	23:DB:1681:G:O4'	2.12	0.49
23:DB:2015:A:C2	31:D0:2:VAL:HG22	2.47	0.49
23:DB:2491:U:H5''	23:DB:2570:G:C5'	2.41	0.49
23:DB:2505:G:O2'	23:DB:2506:U:H5'	2.12	0.49
23:DB:2626:C:H2'	23:DB:2627:G:C8	2.48	0.49
23:DB:2718:G:H4'	28:DP:95:LYS:HB2	1.94	0.49
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.77	0.49
25:DC:43:ASN:HD22	25:DC:44:ASN:H	1.61	0.49
27:DK:71:ARG:O	27:DK:72:PRO:C	2.55	0.49
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	1.94	0.49
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.27	0.49
29:DE:4:VAL:C	29:DE:6:LYS:H	2.20	0.49
39:DX:49:ASP:O	39:DX:50:VAL:C	2.54	0.49
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.42	0.49
43:DO:14:ALA:C	43:DO:16:ARG:H	2.20	0.49
46:DU:87:GLU:OE2	46:DU:88:ASP:HB2	2.12	0.49
48:DG:93:TYR:O	48:DG:94:ARG:HG3	2.13	0.49
50:DT:21:SER:HB3	50:DT:31:VAL:CG2	2.43	0.49
50:DT:68:LYS:HD3	50:DT:68:LYS:N	2.27	0.49
1:AA:16:A:HO2'	4:AE:20:VAL:HG13	1.77	0.49
1:AA:153:C:O2'	1:AA:154:U:H5'	2.13	0.49
1:AA:192:A:O2'	1:AA:193:C:H5'	2.13	0.49
1:AA:984:C:O2'	1:AA:985:C:H5'	2.12	0.49
2:AC:54:ILE:HG12	2:AC:54:ILE:O	2.12	0.49
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.81	0.49
5:AF:81:ASN:O	5:AF:84:VAL:HG12	2.12	0.49
5:AF:81:ASN:O	5:AF:83:ALA:N	2.45	0.49
6:AG:21:LEU:HG	6:AG:22:LEU:H	1.76	0.49
7:AH:23:ALA:HB1	7:AH:61:THR:HA	1.94	0.49
9:AJ:6:ILE:HB	9:AJ:76:ILE:HD11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:75:GLU:CD	10:AK:75:GLU:N	2.70	0.49
13:AN:41:TRP:CD1	13:AN:44:VAL:HG23	2.47	0.49
15:AP:28:ARG:CD	15:AP:29:ASN:H	2.25	0.49
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.13	0.49
23:BB:52:A:N7	23:BB:117:G:N2	2.60	0.49
23:BB:129:C:H4'	23:BB:1348:C:O2'	2.12	0.49
23:BB:521:U:H2'	23:BB:522:A:C8	2.47	0.49
23:BB:607:U:O4	23:BB:619:G:H2'	2.12	0.49
23:BB:741:U:H2'	23:BB:742:A:C8	2.47	0.49
23:BB:1251:C:H2'	44:BQ:5:ARG:HH12	1.77	0.49
23:BB:1404:C:O2'	23:BB:1405:U:H5'	2.12	0.49
23:BB:1562:U:H2'	23:BB:1563:U:H6	1.77	0.49
23:BB:2015:A:H2'	23:BB:2016:U:O4'	2.11	0.49
23:BB:2580:U:H5'	26:BD:136:ASN:H	1.77	0.49
23:BB:2893:A:H5''	23:BB:2894:G:H5'	1.94	0.49
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.13	0.49
26:BD:101:PHE:O	26:BD:102:ALA:HB2	2.13	0.49
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.27	0.49
29:BE:23:PHE:HA	29:BE:107:SER:OG	2.12	0.49
34:B3:30:HIS:HD2	34:B3:31:ILE:N	2.10	0.49
35:BV:80:HIS:CD2	35:BV:81:PRO:HD2	2.48	0.49
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.13	0.49
38:BM:12:MET:HE2	38:BM:71:LYS:NZ	2.28	0.49
41:BJ:40:HIS:ND1	41:BJ:41:LYS:HG3	2.28	0.49
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.48	0.49
43:BO:93:ASP:C	43:BO:95:SER:H	2.20	0.49
47:BF:37:MET:HG2	47:BF:52:ALA:HB1	1.95	0.49
49:BR:40:MET:HG3	49:BR:48:LYS:HA	1.95	0.49
52:BW:30:VAL:HG21	52:BW:59:PHE:CE1	2.47	0.49
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.47	0.49
2:CC:38:VAL:O	2:CC:42:LEU:HD23	2.12	0.49
2:CC:126:ARG:HH22	2:CC:190:THR:CG2	2.24	0.49
3:CD:26:ALA:HA	3:CD:30:LYS:CE	2.42	0.49
8:CI:93:LEU:HD12	8:CI:94:ARG:N	2.28	0.49
10:CK:64:VAL:O	10:CK:67:GLU:HG2	2.13	0.49
10:CK:109:ILE:CG2	21:CU:16:ARG:HH12	2.26	0.49
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.12	0.49
13:CN:19:TYR:HA	13:CN:23:ARG:HG3	1.94	0.49
17:CR:34:GLU:CD	17:CR:34:GLU:N	2.63	0.49
20:CB:42:LEU:O	20:CB:46:VAL:HG12	2.12	0.49
20:CB:86:CYS:O	20:CB:88:GLN:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:139:GLU:HG2	20:CB:143:LEU:CD1	2.42	0.49
22:DA:115:A:O2'	22:DA:116:G:H5'	2.12	0.49
23:DB:49:A:H5''	23:DB:51:G:O4'	2.13	0.49
23:DB:659:G:N2	29:DE:30:GLN:NE2	2.60	0.49
23:DB:1252:G:H1	44:DQ:36:GLN:CD	2.21	0.49
23:DB:1822:C:O2'	23:DB:1823:G:H5'	2.12	0.49
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.12	0.49
23:DB:1824:G:OP1	25:DC:51:ARG:HD3	2.12	0.49
23:DB:1942:C:C4'	53:D6:133:ARG:HH12	2.24	0.49
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.47	0.49
25:DC:221:GLY:O	25:DC:223:ALA:N	2.45	0.49
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.12	0.49
38:DM:19:GLY:CA	38:DM:97:GLN:HB2	2.39	0.49
40:DH:131:SER:HB2	40:DH:141:LYS:HG3	1.95	0.49
44:DQ:65:ASN:HD21	44:DQ:69:ARG:HH11	1.59	0.49
44:DQ:91:ARG:HH12	49:DR:10:LYS:CB	2.24	0.49
47:DF:69:ALA:HB3	47:DF:80:GLN:O	2.13	0.49
48:DG:25:ILE:CG2	48:DG:78:VAL:HG21	2.43	0.49
48:DG:94:ARG:NH2	48:DG:104:LEU:HA	2.27	0.49
48:DG:118:ALA:C	48:DG:120:ILE:H	2.19	0.49
49:DR:20:VAL:HG12	49:DR:21:ARG:N	2.28	0.49
1:AA:608:A:H2'	1:AA:609:A:O4'	2.13	0.49
1:AA:677:U:H2'	1:AA:678:U:H6	1.77	0.49
1:AA:1008:U:H2'	1:AA:1009:U:C5'	2.42	0.49
1:AA:1119:C:O2'	1:AA:1120:C:H5'	2.12	0.49
1:AA:1226:C:H5'	12:AM:94:LEU:HD13	1.93	0.49
1:AA:1314:C:N4	18:AS:3:SER:HB3	2.26	0.49
2:AC:142:ARG:C	2:AC:144:GLY:H	2.20	0.49
4:AE:82:HIS:HE1	4:AE:146:MET:HA	1.78	0.49
6:AG:11:ILE:H	6:AG:11:ILE:HD12	1.77	0.49
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.11	0.49
10:AK:82:GLU:HG2	10:AK:108:ASN:HB2	1.95	0.49
14:AO:53:ARG:HD2	23:BB:715:A:H61	1.77	0.49
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.13	0.49
21:AU:40:PRO:O	21:AU:42:THR:N	2.46	0.49
23:BB:26:G:H1'	23:BB:514:A:H61	1.77	0.49
23:BB:100:U:H2'	23:BB:100:U:OP1	2.13	0.49
23:BB:518:G:H4'	45:BS:18:ARG:CZ	2.43	0.49
23:BB:600:G:H2'	23:BB:601:C:C6	2.48	0.49
23:BB:1023:U:H2'	23:BB:1024:G:C5'	2.42	0.49
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1647:U:P	23:BB:1647:U:H3'	2.52	0.49
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.13	0.49
23:BB:2454:G:H1'	57:BB:3366:HOH:O	2.13	0.49
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.78	0.49
23:BB:2830:C:O4'	23:BB:2836:U:H5'	2.13	0.49
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.43	0.49
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.95	0.49
27:BK:110:GLU:HA	27:BK:113:MET:CG	2.42	0.49
28:BP:4:ILE:O	28:BP:6:GLN:N	2.44	0.49
29:BE:88:ARG:O	29:BE:90:GLN:HG3	2.13	0.49
32:B4:11:CYS:HB3	32:B4:33:HIS:CE1	2.47	0.49
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.27	0.49
44:BQ:65:ASN:HD21	44:BQ:69:ARG:HH11	1.61	0.49
45:BS:51:LEU:C	45:BS:53:SER:H	2.20	0.49
46:BU:82:VAL:CG1	46:BU:93:ARG:HB3	2.43	0.49
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.95	0.49
48:BG:71:LEU:HD13	48:BG:74:MET:SD	2.52	0.49
52:BW:39:GLN:CG	52:BW:42:THR:HB	2.43	0.49
1:CA:592:G:O2'	1:CA:593:U:H5'	2.12	0.49
1:CA:708:C:O2'	1:CA:709:U:H5'	2.12	0.49
1:CA:729:A:H2'	1:CA:730:G:H8	1.78	0.49
1:CA:957:U:H4'	18:CS:78:THR:HB	1.94	0.49
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.27	0.49
1:CA:1170:A:P	20:CB:138:ARG:HH12	2.35	0.49
1:CA:1493:A:OP1	55:CA:1662:LLL:H51	2.13	0.49
5:CF:97:THR:O	5:CF:98:GLU:CD	2.56	0.49
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.95	0.49
8:CI:41:GLU:C	8:CI:43:ALA:N	2.70	0.49
13:CN:64:ARG:HB2	13:CN:77:GLY:O	2.12	0.49
20:CB:59:ILE:HD12	20:CB:60:ALA:N	2.28	0.49
22:DA:102:G:O2'	22:DA:103:U:H5'	2.13	0.49
23:DB:138:U:H2'	23:DB:140:C:C1'	2.42	0.49
23:DB:305:C:O2'	23:DB:306:U:H5'	2.13	0.49
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.47	0.49
23:DB:994:C:O2	49:DR:10:LYS:HE3	2.13	0.49
23:DB:1256:G:H21	29:DE:77:ILE:HG22	1.76	0.49
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.12	0.49
27:DK:35:VAL:HG12	27:DK:69:VAL:CG2	2.42	0.49
27:DK:39:ILE:HD13	27:DK:60:ALA:O	2.13	0.49
33:D1:44:GLN:HA	33:D1:44:GLN:OE1	2.12	0.49
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:30:THR:O	37:DL:32:GLY:N	2.46	0.49
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.13	0.49
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.42	0.49
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.77	0.49
44:DQ:57:ARG:HH11	44:DQ:57:ARG:HG2	1.77	0.49
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	1.94	0.49
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.12	0.49
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.28	0.49
52:DW:23:LYS:O	52:DW:24:ARG:C	2.56	0.49
53:D6:29:ARG:NH2	53:D6:87:ASP:O	2.46	0.49
53:D6:67:VAL:O	53:D6:67:VAL:HG23	2.12	0.49
1:AA:241:G:O2'	1:AA:242:G:H5'	2.13	0.49
1:AA:415:A:N1	1:AA:428:G:O6	2.46	0.49
1:AA:624:C:H2'	1:AA:625:U:H6	1.77	0.49
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.95	0.49
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.77	0.49
2:AC:148:ILE:O	2:AC:168:ARG:HG2	2.13	0.49
5:AF:62:MET:HG3	5:AF:64:VAL:CG2	2.39	0.49
6:AG:125:ASP:HB3	6:AG:130:LYS:HB3	1.94	0.49
8:AI:22:PRO:HA	8:AI:60:LEU:CB	2.43	0.49
13:AN:50:LEU:N	13:AN:51:PRO:CD	2.75	0.49
13:AN:52:ARG:C	13:AN:54:SER:H	2.21	0.49
16:AQ:46:HIS:CE1	16:AQ:48:GLU:HG2	2.47	0.49
16:AQ:66:LEU:O	16:AQ:67:SER:HB2	2.13	0.49
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.43	0.49
23:BB:666:A:H4'	37:BL:48:ARG:HD3	1.94	0.49
23:BB:1411:U:H2'	23:BB:1412:U:C6	2.48	0.49
23:BB:1806:C:C2'	23:BB:1807:G:H5'	2.42	0.49
23:BB:2015:A:N3	31:B0:2:VAL:HG22	2.27	0.49
23:BB:2136:G:H2'	23:BB:2137:U:C6	2.47	0.49
23:BB:2149:U:H2'	23:BB:2150:C:C6	2.47	0.49
23:BB:2244:U:H2'	23:BB:2245:U:C6	2.48	0.49
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.12	0.49
23:BB:2457:U:H2'	23:BB:2458:G:H5'	1.93	0.49
23:BB:2519:U:C6	23:BB:2542:A:N6	2.81	0.49
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	2.13	0.49
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.42	0.49
25:BC:159:THR:N	25:BC:194:VAL:CG1	2.75	0.49
25:BC:221:GLY:C	25:BC:223:ALA:N	2.70	0.49
26:BD:36:GLN:OE1	26:BD:38:LYS:HE3	2.13	0.49
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:38:ARG:HB3	38:BM:98:PRO:HD3	1.95	0.49
40:BH:7:ASP:CG	40:BH:8:LYS:N	2.71	0.49
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.12	0.49
47:BF:34:THR:O	47:BF:35:LEU:HB2	2.12	0.49
47:BF:98:PHE:O	47:BF:102:LEU:HD12	2.12	0.49
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.93	0.49
48:BG:54:ARG:O	48:BG:57:TYR:HD1	1.96	0.49
49:BR:1:MET:HE3	49:BR:101:ILE:CG2	2.43	0.49
50:BT:47:VAL:HG13	50:BT:51:PHE:CD1	2.48	0.49
53:B6:129:ILE:O	53:B6:132:ILE:HB	2.12	0.49
1:CA:248:C:O2'	1:CA:249:U:H5'	2.12	0.49
1:CA:844:G:H8	1:CA:844:G:OP2	1.96	0.49
1:CA:920:U:O2'	1:CA:921:U:H5'	2.11	0.49
1:CA:1130:A:H2'	1:CA:1131:G:C8	2.48	0.49
1:CA:1490:U:C2'	1:CA:1491:G:H5'	2.42	0.49
2:CC:170:GLY:O	2:CC:172:VAL:HG23	2.13	0.49
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.11	0.49
6:CG:149:ALA:HB1	10:CK:59:PRO:HB2	1.94	0.49
11:CL:3:VAL:CG1	16:CQ:33:TYR:HB3	2.43	0.49
13:CN:2:LYS:O	13:CN:6:LYS:HG3	2.13	0.49
14:CO:8:THR:O	14:CO:11:ILE:HG22	2.13	0.49
20:CB:182:VAL:O	20:CB:195:VAL:HG13	2.13	0.49
22:DA:52:A:H2'	22:DA:53:A:H5'	1.94	0.49
22:DA:113:C:H2'	22:DA:114:C:C6	2.47	0.49
23:DB:533:G:H2'	23:DB:534:U:C6	2.48	0.49
23:DB:600:G:H2'	23:DB:601:C:C6	2.48	0.49
23:DB:667:U:H2'	23:DB:668:A:O4'	2.13	0.49
23:DB:697:G:H2'	23:DB:698:C:C6	2.47	0.49
23:DB:796:C:H2'	23:DB:797:G:H8	1.78	0.49
23:DB:960:A:H61	38:DM:82:MET:CE	2.25	0.49
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.48	0.49
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.27	0.49
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.76	0.49
23:DB:2361:G:O2'	23:DB:2362:C:H5'	2.13	0.49
23:DB:2439:A:C8	23:DB:2586:U:H4'	2.48	0.49
23:DB:2825:G:H5''	23:DB:2825:G:N3	2.27	0.49
23:DB:2830:C:H1'	23:DB:2836:U:O4'	2.13	0.49
25:DC:120:ASP:CG	25:DC:121:ALA:H	2.21	0.49
25:DC:153:LEU:HD13	25:DC:175:LEU:CD2	2.43	0.49
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.13	0.49
27:DK:19:VAL:CB	27:DK:41:ILE:HD11	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:39:ILE:HD13	27:DK:39:ILE:N	2.27	0.49
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.12	0.49
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.28	0.49
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.77	0.49
42:DN:65:LEU:HD11	42:DN:69:ARG:CZ	2.43	0.49
43:DO:93:ASP:C	43:DO:95:SER:H	2.21	0.49
47:DF:79:ARG:O	47:DF:82:TYR:HB2	2.13	0.49
52:DW:16:GLU:CD	52:DW:16:GLU:N	2.71	0.49
52:DW:77:LYS:HZ3	52:DW:77:LYS:HB2	1.78	0.49
1:AA:82:G:C6	1:AA:88:U:O2	2.65	0.49
1:AA:248:C:O2'	1:AA:249:U:H5'	2.13	0.49
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.13	0.49
1:AA:386:C:C2'	1:AA:387:U:H5'	2.43	0.49
1:AA:584:G:O2'	1:AA:585:G:H5'	2.12	0.49
1:AA:638:U:H2'	1:AA:639:G:O4'	2.13	0.49
1:AA:697:U:O2	1:AA:798:U:H1'	2.12	0.49
1:AA:1303:C:H2'	1:AA:1304:G:O4'	2.12	0.49
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.13	0.49
1:AA:1499:A:H1'	1:AA:1520:C:H5'	1.94	0.49
16:AQ:10:ARG:HH21	16:AQ:55:GLY:H	1.60	0.49
18:AS:42:ASN:N	18:AS:42:ASN:ND2	2.61	0.49
19:AT:15:LYS:HA	19:AT:18:LYS:HE3	1.95	0.49
19:AT:34:VAL:HG11	19:AT:78:LEU:HD13	1.94	0.49
20:AB:31:PHE:N	20:AB:41:ASN:HB2	2.28	0.49
20:AB:42:LEU:O	20:AB:46:VAL:HG12	2.13	0.49
20:AB:116:LEU:HA	20:AB:119:GLN:HG2	1.95	0.49
23:BB:246:C:N4	34:B3:7:ARG:HG2	2.27	0.49
23:BB:296:U:H2'	23:BB:297:G:C8	2.47	0.49
23:BB:416:U:H2'	23:BB:417:C:C6	2.48	0.49
23:BB:840:C:H2'	23:BB:841:G:H8	1.78	0.49
23:BB:919:U:O5'	23:BB:919:U:H6	1.95	0.49
23:BB:992:C:H2'	23:BB:993:G:H8	1.78	0.49
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.77	0.49
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.43	0.49
23:BB:1901:A:H2'	23:BB:1902:C:C6	2.48	0.49
23:BB:2397:G:H2'	23:BB:2398:U:H6	1.78	0.49
23:BB:2442:C:O2'	23:BB:2443:C:H5'	2.13	0.49
23:BB:2598:A:OP1	25:BC:233:GLY:HA2	2.12	0.49
23:BB:2886:A:H3'	23:BB:2887:A:H8	1.78	0.49
24:BI:2:LYS:HB3	24:BI:2:LYS:NZ	2.27	0.49
25:BC:171:VAL:HG23	25:BC:185:ALA:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:212:TRP:C	25:BC:212:TRP:CD1	2.91	0.49
27:BK:34:GLY:O	27:BK:36:GLY:N	2.46	0.49
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.12	0.49
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.12	0.49
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.78	0.49
38:BM:97:GLN:N	38:BM:97:GLN:OE1	2.46	0.49
44:BQ:35:PHE:O	44:BQ:39:ILE:HG12	2.13	0.49
44:BQ:56:PHE:HA	44:BQ:59:LEU:HB3	1.95	0.49
47:BF:64:PRO:HB3	47:BF:88:VAL:HG21	1.95	0.49
50:BT:18:GLU:C	50:BT:20:ALA:N	2.71	0.49
52:BW:23:LYS:O	52:BW:24:ARG:C	2.56	0.49
1:CA:167:A:O2'	1:CA:168:G:H5'	2.12	0.49
1:CA:692:U:H2'	1:CA:694:A:OP2	2.12	0.49
1:CA:692:U:O2	1:CA:694:A:H5''	2.12	0.49
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.94	0.49
1:CA:1430:A:H2'	1:CA:1431:A:O4'	2.12	0.49
3:CD:28:ASP:HA	3:CD:33:ILE:CG2	2.43	0.49
3:CD:80:ARG:NH1	3:CD:81:LEU:HD23	2.28	0.49
8:CI:122:ARG:NH1	8:CI:122:ARG:HG3	2.28	0.49
11:CL:48:LEU:O	11:CL:49:ARG:C	2.56	0.49
13:CN:52:ARG:C	13:CN:54:SER:N	2.70	0.49
17:CR:34:GLU:HB2	21:CU:18:PHE:CZ	2.38	0.49
20:CB:109:SER:O	20:CB:112:ARG:HB3	2.13	0.49
22:DA:87:U:C2'	22:DA:88:C:O5'	2.61	0.49
23:DB:351:C:H2'	23:DB:352:A:H8	1.78	0.49
23:DB:433:C:H2'	23:DB:434:U:C6	2.48	0.49
23:DB:878:A:H5'	23:DB:900:A:N6	2.26	0.49
23:DB:1161:C:C1'	49:DR:9:GLY:HA3	2.43	0.49
23:DB:2025:C:H2'	23:DB:2026:U:H6	1.78	0.49
23:DB:2107:G:H2'	23:DB:2108:A:C8	2.48	0.49
25:DC:69:ASN:O	25:DC:70:LYS:C	2.56	0.49
30:DY:13:ILE:HG22	30:DY:14:GLY:N	2.28	0.49
38:DM:55:ARG:HG3	38:DM:55:ARG:NH2	2.27	0.49
39:DX:29:ARG:NH1	50:DT:12:ARG:HG2	2.28	0.49
42:DN:47:VAL:O	42:DN:51:LEU:HD13	2.13	0.49
42:DN:56:LYS:HD2	42:DN:88:ALA:HA	1.94	0.49
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.12	0.49
51:DZ:30:LEU:H	51:DZ:30:LEU:CD2	2.19	0.49
1:AA:72:A:H61	1:AA:98:A:H2	1.59	0.49
1:AA:692:U:O2	1:AA:694:A:H5''	2.13	0.49
1:AA:745:G:H2'	1:AA:746:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.11	0.49
4:AE:131:ASN:ND2	4:AE:133:ILE:HB	2.28	0.49
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	1.93	0.49
20:AB:103:TRP:CZ3	20:AB:107:ARG:HD2	2.47	0.49
20:AB:216:VAL:O	20:AB:220:VAL:HG23	2.13	0.49
21:AU:10:PRO:HB2	2:CC:71:ARG:CD	2.43	0.49
23:BB:162:U:O2	23:BB:162:U:C2'	2.61	0.49
23:BB:207:A:H2'	23:BB:208:C:O4'	2.13	0.49
23:BB:299:A:N6	23:BB:322:A:O2'	2.45	0.49
23:BB:572:A:H5''	23:BB:573:U:OP2	2.13	0.49
23:BB:692:C:H5''	25:BC:38:LYS:HB2	1.95	0.49
23:BB:705:A:N6	23:BB:726:G:H1'	2.27	0.49
23:BB:718:A:H2'	23:BB:719:C:H5'	1.95	0.49
23:BB:720:U:H2'	23:BB:721:A:C8	2.47	0.49
23:BB:807:U:H2'	23:BB:808:G:C8	2.48	0.49
23:BB:981:A:H2'	23:BB:982:C:C5'	2.43	0.49
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.48	0.49
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.78	0.49
23:BB:1937:A:N7	23:BB:1939:U:H2'	2.28	0.49
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.13	0.49
23:BB:2751:G:H5''	48:BG:3:VAL:HG13	1.95	0.49
25:BC:180:MET:HB3	25:BC:267:VAL:HG23	1.95	0.49
27:BK:7:MET:HE1	27:BK:44:LYS:CB	2.43	0.49
28:BP:25:VAL:HA	28:BP:85:VAL:C	2.37	0.49
31:B0:43:THR:HG23	31:B0:47:TYR:C	2.38	0.49
39:BX:49:ASP:O	39:BX:50:VAL:C	2.56	0.49
41:BJ:77:HIS:CD2	41:BJ:84:ILE:H	2.30	0.49
45:BS:24:ILE:CG2	45:BS:71:VAL:HG11	2.34	0.49
47:BF:55:ASP:OD2	47:BF:149:ARG:HG3	2.13	0.49
53:B6:3:LEU:HD11	53:B6:149:LEU:HD11	1.95	0.49
53:B6:106:LEU:HD12	53:B6:111:ARG:HD2	1.93	0.49
1:CA:100:G:H2'	1:CA:101:A:O4'	2.13	0.49
1:CA:430:A:OP1	3:CD:8:LEU:HD23	2.13	0.49
1:CA:443:C:H2'	1:CA:444:G:C8	2.48	0.49
1:CA:745:G:H2'	1:CA:746:A:C8	2.47	0.49
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.95	0.49
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.13	0.49
5:CF:54:LEU:C	5:CF:56:LYS:H	2.21	0.49
6:CG:71:THR:HG22	6:CG:141:HIS:CE1	2.47	0.49
9:CJ:12:ALA:H	9:CJ:18:ILE:HD12	1.76	0.49
23:DB:7:G:H2'	23:DB:8:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:84:A:H4'	23:DB:85:G:O5'	2.13	0.49
23:DB:191:A:H2'	23:DB:192:C:C6	2.48	0.49
23:DB:565:C:O2'	23:DB:566:U:H5'	2.13	0.49
23:DB:622:G:H2'	23:DB:623:C:C6	2.48	0.49
23:DB:782:A:C2	25:DC:224:MET:HB3	2.48	0.49
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.77	0.49
23:DB:1845:G:O2'	23:DB:1846:G:H5'	2.12	0.49
23:DB:2015:A:H2'	23:DB:2016:U:O4'	2.13	0.49
25:DC:4:LYS:HE2	25:DC:5:CYS:H	1.77	0.49
25:DC:199:HIS:C	25:DC:201:LEU:H	2.20	0.49
25:DC:212:TRP:C	25:DC:212:TRP:CD1	2.90	0.49
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.13	0.49
35:DV:4:ILE:HD11	35:DV:61:LEU:HB3	1.95	0.49
38:DM:32:GLY:HA3	38:DM:103:TYR:O	2.13	0.49
38:DM:69:PRO:C	38:DM:71:LYS:H	2.21	0.49
39:DX:1:MET:HG2	39:DX:4:LYS:HZ3	1.77	0.49
41:DJ:28:LEU:HD23	41:DJ:29:ALA:N	2.28	0.49
41:DJ:114:LEU:O	41:DJ:117:ALA:HB3	2.13	0.49
44:DQ:35:PHE:C	44:DQ:37:ALA:N	2.70	0.49
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.12	0.49
46:DU:24:VAL:HG22	46:DU:35:VAL:HG22	1.95	0.49
49:DR:40:MET:CG	49:DR:48:LYS:HA	2.43	0.49
51:DZ:49:LEU:HD13	51:DZ:51:VAL:CG2	2.43	0.49
53:D6:93:SER:N	53:D6:100:TYR:O	2.45	0.49
53:D6:151:GLU:HA	53:D6:154:THR:HG22	1.95	0.49
1:AA:409:U:H2'	1:AA:410:G:C8	2.48	0.48
1:AA:643:C:H5'	7:AH:31:LEU:HD13	1.95	0.48
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.43	0.48
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.28	0.48
10:AK:70:ALA:C	10:AK:72:ALA:N	2.71	0.48
14:AO:71:LYS:HB2	14:AO:78:TYR:CD2	2.48	0.48
19:AT:49:ALA:HA	19:AT:52:GLU:CD	2.38	0.48
22:BA:53:A:C2'	22:BA:54:G:H5'	2.43	0.48
23:BB:573:U:O2'	23:BB:574:A:H3'	2.13	0.48
23:BB:635:C:H2'	23:BB:636:G:C8	2.47	0.48
23:BB:753:A:O2'	23:BB:754:U:H5'	2.13	0.48
23:BB:796:C:H2'	23:BB:797:G:C8	2.47	0.48
23:BB:946:C:H2'	23:BB:947:A:H8	1.78	0.48
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.28	0.48
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.94	0.48
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1640:A:O2'	23:BB:1641:A:H5'	2.12	0.48
23:BB:1730:C:O2'	23:BB:1731:G:N2	2.45	0.48
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.48	0.48
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.77	0.48
25:BC:79:ARG:HD2	25:BC:81:GLU:CG	2.44	0.48
25:BC:243:PRO:O	25:BC:250:GLN:HA	2.12	0.48
28:BP:23:ASP:HA	28:BP:88:ARG:HA	1.95	0.48
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.27	0.48
45:BS:41:LYS:NZ	45:BS:41:LYS:HB3	2.28	0.48
46:BU:43:LYS:HD3	46:BU:44:HIS:N	2.28	0.48
48:BG:112:VAL:HG12	48:BG:113:ASP:N	2.28	0.48
52:BW:49:ASN:HA	52:BW:61:LYS:H	1.78	0.48
53:B6:80:GLU:CD	53:B6:92:PRO:HB2	2.38	0.48
1:CA:171:A:H2'	1:CA:172:A:C8	2.48	0.48
1:CA:642:A:H2'	1:CA:643:C:H6	1.77	0.48
1:CA:767:A:H2'	1:CA:768:A:C8	2.47	0.48
1:CA:833:G:H2'	1:CA:834:U:H6	1.77	0.48
1:CA:911:U:H2'	1:CA:912:C:C6	2.48	0.48
1:CA:968:A:H4'	1:CA:969:A:OP2	2.13	0.48
1:CA:1143:G:O2'	1:CA:1144:G:H5'	2.13	0.48
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.13	0.48
3:CD:145:ARG:HB3	3:CD:147:LYS:HD2	1.95	0.48
3:CD:164:ARG:HG3	3:CD:165:GLU:N	2.28	0.48
7:CH:123:GLU:HG2	7:CH:124:ILE:O	2.13	0.48
11:CL:73:LEU:HD21	11:CL:103:CYS:SG	2.53	0.48
14:CO:85:LEU:HD12	14:CO:85:LEU:N	2.28	0.48
20:CB:42:LEU:HA	20:CB:45:THR:CB	2.43	0.48
21:CU:3:ILE:HD11	21:CU:22:CYS:SG	2.53	0.48
22:DA:23:G:H2'	22:DA:24:G:C8	2.48	0.48
22:DA:75:G:H2'	22:DA:76:G:C8	2.48	0.48
22:DA:88:C:H2'	22:DA:89:U:C5	2.48	0.48
23:DB:299:A:N6	23:DB:322:A:O2'	2.44	0.48
23:DB:307:G:N2	23:DB:309:A:H3'	2.28	0.48
23:DB:451:U:OP1	29:DE:47:LYS:HD2	2.14	0.48
23:DB:545:U:C5	23:DB:546:U:H1'	2.48	0.48
23:DB:909:A:H2'	23:DB:912:C:C5	2.48	0.48
23:DB:1439:A:N7	23:DB:1440:U:N1	2.61	0.48
23:DB:1812:U:H4'	25:DC:44:ASN:OD1	2.12	0.48
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.27	0.48
23:DB:2047:C:H2'	23:DB:2048:G:H8	1.77	0.48
23:DB:2213:U:O2	23:DB:2213:U:C2'	2.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2276:G:OP2	38:DM:85:GLY:N	2.46	0.48
23:DB:2323:G:O2'	23:DB:2324:U:H5'	2.13	0.48
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.13	0.48
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.54	0.48
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.47	0.48
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.27	0.48
25:DC:15:VAL:HG13	25:DC:204:LEU:O	2.13	0.48
29:DE:88:ARG:O	29:DE:90:GLN:HG3	2.13	0.48
30:DY:5:LYS:O	30:DY:57:GLU:HB2	2.12	0.48
38:DM:31:PHE:HB3	38:DM:130:PHE:CZ	2.47	0.48
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.26	0.48
38:DM:49:ALA:HA	38:DM:123:LYS:HG3	1.95	0.48
42:DN:102:PHE:N	42:DN:102:PHE:CD1	2.80	0.48
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.13	0.48
44:DQ:86:SER:HB2	49:DR:51:VAL:HA	1.93	0.48
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.13	0.48
44:DQ:108:LEU:CA	49:DR:48:LYS:HD3	2.43	0.48
46:DU:27:VAL:CG2	46:DU:33:VAL:HG12	2.40	0.48
48:DG:58:ALA:C	48:DG:60:GLY:N	2.70	0.48
48:DG:154:GLU:C	48:DG:156:TYR:H	2.21	0.48
49:DR:14:VAL:HG22	49:DR:15:SER:H	1.76	0.48
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.43	0.48
53:D6:59:THR:O	53:D6:61:PRO:HD3	2.12	0.48
1:AA:399:G:H2'	1:AA:400:C:C6	2.48	0.48
1:AA:440:C:O2'	1:AA:441:A:H5'	2.13	0.48
1:AA:958:A:N1	18:AS:53:GLY:C	2.71	0.48
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.43	0.48
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	1.95	0.48
4:AE:44:ARG:HD2	4:AE:72:ASN:ND2	2.28	0.48
5:AF:81:ASN:O	5:AF:82:ASP:C	2.56	0.48
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	1.94	0.48
20:AB:59:ILE:HD12	20:AB:60:ALA:N	2.29	0.48
20:AB:69:VAL:HB	20:AB:162:VAL:CB	2.43	0.48
23:BB:178:G:O2'	23:BB:179:C:H5'	2.13	0.48
23:BB:603:A:H4'	23:BB:604:G:O5'	2.13	0.48
23:BB:672:C:H2'	23:BB:673:C:C6	2.48	0.48
23:BB:820:A:H2'	23:BB:821:A:O4'	2.12	0.48
23:BB:1165:A:H2'	23:BB:1166:G:H8	1.78	0.48
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.76	0.48
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.13	0.48
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2323:G:C2'	23:BB:2324:U:H5'	2.42	0.48
23:BB:2367:G:O2'	23:BB:2368:C:H5'	2.13	0.48
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.13	0.48
23:BB:2560:A:H2'	23:BB:2561:U:H6	1.77	0.48
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.13	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.28	0.48
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.13	0.48
25:BC:173:LEU:HD13	25:BC:173:LEU:N	2.27	0.48
29:BE:193:VAL:O	29:BE:197:GLU:HB2	2.12	0.48
34:B3:30:HIS:HD2	34:B3:31:ILE:H	1.61	0.48
35:BV:28:ALA:HA	35:BV:88:HIS:CE1	2.48	0.48
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.13	0.48
38:BM:47:GLU:CD	38:BM:50:ARG:HH11	2.20	0.48
41:BJ:114:LEU:O	41:BJ:117:ALA:HB3	2.14	0.48
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HB	2.47	0.48
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.27	0.48
51:BZ:63:GLY:O	51:BZ:66:THR:N	2.46	0.48
52:BW:65:LYS:O	52:BW:81:ILE:HA	2.14	0.48
1:CA:176:C:H2'	1:CA:177:G:N3	2.28	0.48
1:CA:233:C:H2'	1:CA:234:C:H6	1.78	0.48
1:CA:613:C:P	3:CD:80:ARG:HH21	2.36	0.48
1:CA:810:C:O2'	1:CA:811:C:H5'	2.13	0.48
1:CA:903:G:O2'	1:CA:904:U:H5'	2.13	0.48
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.95	0.48
12:CM:106:ARG:HH12	12:CM:109:LYS:CE	2.26	0.48
20:CB:216:VAL:O	20:CB:220:VAL:HG23	2.13	0.48
23:DB:608:A:H2'	23:DB:609:A:H8	1.76	0.48
23:DB:1050:A:H2'	23:DB:1051:G:H8	1.79	0.48
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.76	0.48
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.45	0.48
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.43	0.48
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.74	0.48
23:DB:2886:A:H62	31:D0:39:ARG:CD	2.26	0.48
25:DC:174:ARG:HD3	25:DC:180:MET:HE1	1.94	0.48
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.94	0.48
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	1.95	0.48
38:DM:55:ARG:HG3	38:DM:55:ARG:HH21	1.77	0.48
40:DH:47:PHE:O	40:DH:51:ARG:N	2.45	0.48
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.37	0.48
46:DU:48:VAL:H	46:DU:53:GLN:HB2	1.78	0.48
47:DF:33:ILE:HB	47:DF:90:LEU:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:163:GLU:CA	47:DF:166:ARG:HD2	2.35	0.48
49:DR:74:ILE:HB	49:DR:87:GLN:O	2.12	0.48
53:D6:16:LYS:O	53:D6:20:VAL:HG23	2.13	0.48
1:AA:233:C:H2'	1:AA:234:C:H6	1.79	0.48
1:AA:960:U:O3'	1:AA:1223:C:H4'	2.13	0.48
1:AA:1227:A:O2'	12:AM:113:LYS:HE2	2.13	0.48
1:AA:1342:C:H5'	8:AI:127:SER:HA	1.94	0.48
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.12	0.48
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.94	0.48
3:AD:138:PRO:C	3:AD:140:ASP:H	2.22	0.48
5:AF:3:HIS:CE1	5:AF:95:ALA:HB2	2.49	0.48
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.13	0.48
6:AG:71:THR:HG22	6:AG:141:HIS:CE1	2.48	0.48
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.95	0.48
11:AL:48:LEU:O	11:AL:49:ARG:C	2.56	0.48
14:AO:14:GLU:HB3	14:AO:84:ARG:NH2	2.27	0.48
23:BB:522:A:H2'	23:BB:523:C:C6	2.47	0.48
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.95	0.48
23:BB:1353:A:O2'	23:BB:1354:A:H5'	2.13	0.48
23:BB:1439:A:N7	23:BB:1440:U:N1	2.62	0.48
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.14	0.48
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.48	0.48
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.47	0.48
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.48	0.48
23:BB:2667:C:H2'	23:BB:2668:G:O4'	2.13	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.43	0.48
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.24	0.48
38:BM:69:PRO:C	38:BM:71:LYS:H	2.21	0.48
42:BN:63:ARG:HD2	42:BN:80:PHE:CD2	2.48	0.48
42:BN:72:ASP:C	42:BN:74:GLU:N	2.68	0.48
43:BO:3:LYS:HD3	43:BO:3:LYS:N	2.18	0.48
43:BO:6:ALA:HB3	43:BO:10:ARG:HH11	1.78	0.48
44:BQ:94:LEU:HD12	49:BR:13:ARG:HB2	1.94	0.48
46:BU:38:ILE:HG23	46:BU:39:ASN:N	2.29	0.48
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.12	0.48
53:B6:14:MET:HE1	53:B6:165:THR:HG23	1.96	0.48
53:B6:85:ASP:O	53:B6:86:SER:HB2	2.12	0.48
53:B6:134:ARG:HH22	53:B6:135:GLU:HG2	1.75	0.48
1:CA:76:G:H2'	1:CA:77:A:H8	1.78	0.48
1:CA:131:A:H2'	1:CA:132:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:254:G:O2'	1:CA:255:G:H5'	2.13	0.48
1:CA:389:A:H3'	1:CA:390:U:C6	2.46	0.48
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.12	0.48
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.79	0.48
4:CE:82:HIS:CD2	7:CH:95:MET:HG3	2.48	0.48
7:CH:9:MET:O	7:CH:13:ILE:HG13	2.13	0.48
8:CI:23:GLY:HA3	8:CI:61:ASP:OD1	2.13	0.48
9:CJ:73:LEU:CD1	9:CJ:75:ASP:HB2	2.43	0.48
15:CP:38:PHE:CD2	15:CP:51:ARG:HB2	2.49	0.48
16:CQ:10:ARG:HH21	16:CQ:55:GLY:H	1.61	0.48
18:CS:20:LYS:O	18:CS:20:LYS:HD2	2.14	0.48
19:CT:71:ALA:O	19:CT:74:HIS:HB2	2.13	0.48
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.25	0.48
20:CB:69:VAL:HB	20:CB:162:VAL:CB	2.44	0.48
23:DB:62:U:H3'	23:DB:63:A:H8	1.77	0.48
23:DB:138:U:H2'	23:DB:140:C:O4'	2.13	0.48
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.44	0.48
23:DB:839:U:H2'	23:DB:840:C:C6	2.48	0.48
23:DB:917:A:H5''	23:DB:2268:A:H61	1.78	0.48
23:DB:1335:C:H2'	23:DB:1336:A:C8	2.49	0.48
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.13	0.48
23:DB:1515:A:H4'	23:DB:1556:C:O2'	2.12	0.48
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.48	0.48
23:DB:2309:A:N6	47:DF:75:GLY:HA3	2.29	0.48
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.48	0.48
23:DB:2814:A:C4'	31:D0:25:THR:HG21	2.41	0.48
25:DC:243:PRO:O	25:DC:250:GLN:HA	2.12	0.48
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.95	0.48
27:DK:63:VAL:HG21	27:DK:85:VAL:HG23	1.94	0.48
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.12	0.48
35:DV:5:ASN:HA	35:DV:64:VAL:O	2.12	0.48
44:DQ:35:PHE:O	44:DQ:39:ILE:HG12	2.13	0.48
44:DQ:60:TRP:HB3	44:DQ:92:LYS:O	2.13	0.48
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HA	1.77	0.48
46:DU:38:ILE:HG23	46:DU:39:ASN:N	2.27	0.48
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.95	0.48
48:DG:29:ASN:HD21	48:DG:81:GLY:HA2	1.77	0.48
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.37	0.48
49:DR:7:SER:HB2	49:DR:22:LEU:HD22	1.93	0.48
51:DZ:53:ALA:C	51:DZ:55:GLY:H	2.20	0.48
53:D6:36:ALA:CA	53:D6:39:LEU:HD23	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:33:A:O2'	1:AA:34:C:H5'	2.13	0.48
1:AA:189:A:H2'	1:AA:190:A:C8	2.47	0.48
1:AA:633:G:H2'	1:AA:634:C:C6	2.48	0.48
1:AA:658:C:H2'	1:AA:659:U:H6	1.78	0.48
1:AA:972:C:P	9:AJ:59:LYS:HD3	2.53	0.48
1:AA:1182:G:H4'	1:AA:1183:U:C5'	2.44	0.48
1:AA:1186:G:H4'	8:AI:111:GLU:OE1	2.12	0.48
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.48	0.48
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.48	0.48
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.29	0.48
8:AI:71:ILE:HD12	8:AI:71:ILE:N	2.28	0.48
12:AM:78:ARG:NH2	12:AM:82:LEU:HD11	2.28	0.48
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.27	0.48
18:AS:50:VAL:O	18:AS:57:VAL:HG22	2.13	0.48
20:AB:25:LYS:HD3	20:AB:193:ASP:OD2	2.14	0.48
20:AB:109:SER:O	20:AB:112:ARG:HB3	2.13	0.48
23:BB:559:G:H21	44:BQ:51:GLN:HE22	1.60	0.48
23:BB:584:C:OP2	44:BQ:5:ARG:HD3	2.14	0.48
23:BB:1172:C:H2'	23:BB:1173:U:C1'	2.43	0.48
23:BB:1339:G:H21	23:BB:1603:A:H1'	1.78	0.48
23:BB:1456:G:O2'	23:BB:1457:U:H5'	2.13	0.48
23:BB:1672:A:O4'	23:BB:2553:G:H4'	2.13	0.48
23:BB:1708:C:O2'	23:BB:1709:U:H5'	2.14	0.48
23:BB:1785:A:O2'	23:BB:1786:A:H2'	2.12	0.48
23:BB:1983:G:H4'	23:BB:2606:C:H4'	1.95	0.48
23:BB:2795:C:O5'	23:BB:2795:C:H6	1.96	0.48
24:BI:135:MET:HE2	24:BI:137:LEU:HD11	1.95	0.48
27:BK:35:VAL:HG12	27:BK:69:VAL:CG2	2.43	0.48
29:BE:126:VAL:CG2	29:BE:133:LEU:HB2	2.43	0.48
35:BV:44:HIS:O	35:BV:45:ASP:C	2.56	0.48
37:BL:143:GLU:CG	37:BL:144:GLU:H	1.98	0.48
43:BO:30:ARG:HG3	43:BO:30:ARG:HH11	1.78	0.48
43:BO:56:LYS:O	43:BO:60:GLU:HG2	2.13	0.48
44:BQ:91:ARG:CB	44:BQ:94:LEU:HD23	2.44	0.48
48:BG:83:THR:HA	48:BG:84:LYS:HZ3	1.76	0.48
53:B6:123:GLU:O	53:B6:124:GLU:C	2.54	0.48
1:CA:83:C:H1'	1:CA:84:U:C6	2.48	0.48
1:CA:551:U:H2'	1:CA:552:U:H6	1.77	0.48
1:CA:737:C:H2'	1:CA:738:C:C6	2.48	0.48
1:CA:897:C:C2'	1:CA:898:G:H5'	2.43	0.48
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.48	0.48
1:CA:1349:A:P	8:CI:119:LYS:HD2	2.53	0.48
5:CF:53:LYS:NZ	5:CF:53:LYS:N	2.61	0.48
8:CI:70:GLY:O	8:CI:74:GLN:HB2	2.14	0.48
8:CI:118:ARG:HG2	8:CI:118:ARG:O	2.12	0.48
9:CJ:80:THR:HG21	9:CJ:82:LYS:HE2	1.96	0.48
15:CP:28:ARG:CD	15:CP:29:ASN:H	2.26	0.48
20:CB:57:ASN:HB2	20:CB:223:GLY:CA	2.43	0.48
20:CB:112:ARG:HE	20:CB:116:LEU:HD11	1.77	0.48
23:DB:357:C:H2'	23:DB:358:U:C5	2.48	0.48
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.37	0.48
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.47	0.48
23:DB:1372:U:O2'	23:DB:1373:A:H5'	2.12	0.48
23:DB:2020:A:O2'	23:DB:2021:C:H5'	2.13	0.48
23:DB:2092:U:H4'	23:DB:2093:G:O5'	2.14	0.48
23:DB:2352:A:H8	23:DB:2352:A:O5'	1.96	0.48
23:DB:2700:A:O2'	23:DB:2701:U:H5'	2.13	0.48
24:DI:76:ALA:O	24:DI:135:MET:HE1	2.13	0.48
25:DC:21:PRO:C	25:DC:23:LEU:H	2.22	0.48
35:DV:28:ALA:HA	35:DV:88:HIS:CE1	2.48	0.48
40:DH:7:ASP:CA	40:DH:15:LEU:HD22	2.33	0.48
43:DO:56:LYS:O	43:DO:57:ALA:C	2.55	0.48
45:DS:29:VAL:CA	45:DS:32:ALA:HB3	2.43	0.48
47:DF:11:VAL:O	47:DF:12:VAL:HB	2.12	0.48
47:DF:34:THR:O	47:DF:35:LEU:HB2	2.13	0.48
47:DF:121:PHE:HB3	47:DF:127:TYR:CZ	2.47	0.48
53:D6:18:LEU:HD21	53:D6:171:LYS:HB3	1.95	0.48
53:D6:41:LEU:HD23	53:D6:83:ILE:HD13	1.94	0.48
1:AA:398:U:H2'	1:AA:399:G:H8	1.78	0.48
1:AA:610:U:O2	1:AA:610:U:O4'	2.31	0.48
1:AA:612:C:H2'	1:AA:613:C:C6	2.47	0.48
1:AA:677:U:H2'	1:AA:678:U:C6	2.48	0.48
1:AA:906:A:C2'	1:AA:907:A:H5''	2.44	0.48
2:AC:38:VAL:O	2:AC:42:LEU:HD23	2.13	0.48
8:AI:26:LYS:N	8:AI:61:ASP:CB	2.70	0.48
9:AJ:88:MET:SD	9:AJ:88:MET:N	2.87	0.48
13:AN:50:LEU:HD23	13:AN:51:PRO:HD3	1.95	0.48
17:AR:60:ARG:O	17:AR:64:LEU:HD13	2.13	0.48
23:BB:191:A:H2'	23:BB:192:C:C6	2.48	0.48
23:BB:391:A:H1'	23:BB:411:G:O4'	2.13	0.48
23:BB:393:C:O2'	23:BB:394:C:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:836:G:H2'	23:BB:837:C:H6	1.78	0.48
23:BB:1076:C:C5'	24:BI:94:LYS:NZ	2.76	0.48
23:BB:1286:A:H1'	23:BB:1288:G:OP2	2.13	0.48
23:BB:1365:A:OP2	51:BZ:3:ARG:HB2	2.13	0.48
23:BB:1693:U:H4'	23:BB:1694:C:OP2	2.14	0.48
23:BB:1951:U:H2'	23:BB:1953:A:OP2	2.14	0.48
23:BB:1984:G:O2'	23:BB:1985:C:H5'	2.13	0.48
23:BB:2015:A:C2	31:B0:2:VAL:HG13	2.47	0.48
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.13	0.48
23:BB:2359:C:O2'	23:BB:2360:G:H5'	2.13	0.48
25:BC:153:LEU:HD13	25:BC:175:LEU:CD2	2.43	0.48
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.48	0.48
26:BD:151:THR:N	26:BD:152:PRO:CD	2.77	0.48
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.95	0.48
29:BE:4:VAL:C	29:BE:6:LYS:H	2.21	0.48
30:BY:13:ILE:HG22	30:BY:14:GLY:N	2.28	0.48
35:BV:20:LEU:HB3	35:BV:25:LYS:O	2.13	0.48
39:BX:23:ARG:O	39:BX:27:ASN:N	2.46	0.48
40:BH:99:ILE:HG13	40:BH:115:VAL:HG12	1.95	0.48
45:BS:59:GLU:OE2	45:BS:66:ILE:HG23	2.13	0.48
50:BT:32:LEU:O	50:BT:83:ALA:HB2	2.13	0.48
53:B6:129:ILE:HA	53:B6:132:ILE:HD12	1.94	0.48
1:CA:492:C:H2'	1:CA:493:A:N3	2.29	0.48
1:CA:539:A:H2'	1:CA:540:G:H8	1.74	0.48
1:CA:735:C:O2'	1:CA:736:C:H5'	2.12	0.48
1:CA:859:G:O2'	1:CA:860:A:H5'	2.13	0.48
1:CA:1008:U:H2'	1:CA:1009:U:C5'	2.42	0.48
1:CA:1133:G:H2'	1:CA:1134:G:O4'	2.13	0.48
1:CA:1246:A:H2'	1:CA:1247:U:O4'	2.14	0.48
2:CC:102:ILE:HD12	2:CC:102:ILE:N	2.29	0.48
4:CE:99:SER:HB3	4:CE:102:THR:OG1	2.14	0.48
6:CG:125:ASP:HB3	6:CG:130:LYS:HB3	1.96	0.48
7:CH:77:VAL:HG21	7:CH:127:TYR:CE1	2.47	0.48
8:CI:84:ARG:O	8:CI:87:MET:HB3	2.13	0.48
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.48	0.48
12:CM:84:CYS:SG	12:CM:86:ARG:HB2	2.53	0.48
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.12	0.48
15:CP:52:LEU:CD2	15:CP:75:ILE:HA	2.43	0.48
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.95	0.48
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.94	0.48
23:DB:787:C:H5''	23:DB:788:A:H5'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1252:G:N2	44:DQ:32:ARG:HB3	2.28	0.48
23:DB:1439:A:N7	23:DB:1440:U:C6	2.82	0.48
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.13	0.48
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.13	0.48
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.43	0.48
29:DE:58:LYS:HB2	29:DE:60:TRP:CD1	2.48	0.48
29:DE:75:SER:O	29:DE:78:TRP:N	2.47	0.48
35:DV:44:HIS:O	35:DV:45:ASP:C	2.55	0.48
35:DV:70:ILE:CD1	35:DV:71:LYS:H	2.22	0.48
37:DL:42:SER:C	37:DL:44:GLY:N	2.72	0.48
38:DM:18:ARG:HD2	38:DM:18:ARG:HA	1.66	0.48
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.14	0.48
46:DU:14:THR:O	46:DU:18:LYS:HG2	2.12	0.48
46:DU:86:PHE:HE1	46:DU:88:ASP:HB3	1.78	0.48
46:DU:94:PHE:HB3	46:DU:101:THR:HA	1.96	0.48
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.14	0.48
49:DR:2:TYR:HB2	49:DR:42:ALA:CB	2.37	0.48
52:DW:30:VAL:HG21	52:DW:59:PHE:CE1	2.48	0.48
53:D6:64:ARG:C	53:D6:103:ILE:HB	2.39	0.48
1:AA:100:G:H2'	1:AA:101:A:O4'	2.13	0.48
1:AA:844:G:H8	1:AA:844:G:OP2	1.97	0.48
1:AA:1200:C:H3'	1:AA:1201:A:H5'	1.95	0.48
2:AC:46:LEU:HD12	2:AC:75:VAL:HG22	1.95	0.48
6:AG:46:LEU:HG	6:AG:57:GLU:CB	2.44	0.48
7:AH:6:ILE:O	7:AH:10:LEU:HG	2.13	0.48
7:AH:40:LYS:HE3	7:AH:47:ASP:OD1	2.12	0.48
8:AI:20:ILE:HG12	8:AI:86:LEU:HD12	1.95	0.48
9:AJ:73:LEU:CD1	9:AJ:75:ASP:HB2	2.43	0.48
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.95	0.48
18:AS:39:ILE:HB	18:AS:66:VAL:HA	1.94	0.48
22:BA:50:A:OP1	43:BO:68:LYS:HB2	2.14	0.48
22:BA:88:C:H2'	22:BA:89:U:C6	2.48	0.48
23:BB:176:A:H3'	23:BB:177:G:H21	1.78	0.48
23:BB:322:A:P	29:BE:163:ASN:HD22	2.36	0.48
23:BB:1287:A:N7	42:BN:105:GLY:HA3	2.28	0.48
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.48	0.48
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.13	0.48
23:BB:2752:C:H3'	23:BB:2753:A:H8	1.77	0.48
24:BI:63:ASP:C	24:BI:65:SER:N	2.71	0.48
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.79	0.48
29:BE:103:GLY:O	29:BE:106:LYS:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:118:LEU:HD23	29:BE:186:VAL:HG13	1.95	0.48
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.14	0.48
34:B3:50:SER:O	34:B3:52:GLY:N	2.46	0.48
37:BL:68:SER:HB2	37:BL:71:ALA:H	1.78	0.48
38:BM:33:LEU:HD22	38:BM:128:THR:HB	1.96	0.48
40:BH:5:LEU:HD22	40:BH:9:VAL:HG21	1.96	0.48
40:BH:132:PHE:HB2	40:BH:142:VAL:CG2	2.43	0.48
42:BN:101:GLY:O	42:BN:102:PHE:HB2	2.14	0.48
45:BS:10:ALA:C	45:BS:12:SER:H	2.22	0.48
51:BZ:6:GLN:HE22	51:BZ:50:ARG:H	1.61	0.48
1:CA:82:G:H2'	1:CA:83:C:C6	2.49	0.48
1:CA:261:U:H2'	1:CA:263:A:OP2	2.13	0.48
1:CA:332:G:O2'	1:CA:333:U:H5'	2.13	0.48
1:CA:652:U:H1'	1:CA:653:U:C5	2.48	0.48
1:CA:932:C:OP1	6:CG:3:ARG:HD3	2.14	0.48
1:CA:993:G:C2'	1:CA:995:C:H41	2.22	0.48
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.49	0.48
3:CD:25:ARG:NH1	3:CD:30:LYS:HE3	2.29	0.48
3:CD:138:PRO:C	3:CD:140:ASP:H	2.21	0.48
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.48	0.48
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.14	0.48
6:CG:110:ARG:HH11	6:CG:110:ARG:HB3	1.79	0.48
23:DB:318:C:O2'	23:DB:319:G:H5'	2.14	0.48
23:DB:419:U:H2'	23:DB:420:C:H6	1.77	0.48
23:DB:514:A:N6	23:DB:515:A:N6	2.61	0.48
23:DB:736:C:H2'	23:DB:737:C:H6	1.79	0.48
23:DB:991:C:H5'	23:DB:991:C:H6	1.77	0.48
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.87	0.48
23:DB:1460:U:H5''	23:DB:1461:C:O4'	2.13	0.48
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.47	0.48
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.13	0.48
23:DB:2330:G:O2'	23:DB:2331:G:H5'	2.14	0.48
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.49	0.48
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.76	0.48
26:DD:114:LYS:HE3	26:DD:116:LYS:HG2	1.96	0.48
35:DV:63:ILE:HB	35:DV:70:ILE:CD1	2.44	0.48
35:DV:80:HIS:CD2	35:DV:81:PRO:HD2	2.49	0.48
36:D2:10:LEU:HD22	36:D2:14:ARG:NE	2.28	0.48
37:DL:55:MET:HE2	37:DL:59:ARG:HE	1.77	0.48
39:DX:23:ARG:HA	39:DX:27:ASN:H	1.78	0.48
40:DH:87:GLU:CD	40:DH:87:GLU:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:125:THR:HA	40:DH:146:VAL:CG1	2.44	0.48
47:DF:134:GLN:C	47:DF:136:ILE:N	2.71	0.48
47:DF:169:LEU:O	47:DF:174:PHE:HB2	2.14	0.48
48:DG:75:VAL:O	48:DG:78:VAL:HG22	2.14	0.48
52:DW:48:ALA:O	52:DW:61:LYS:HB2	2.13	0.48
53:D6:114:LEU:HB3	53:D6:183:ILE:HG21	1.95	0.48
1:AA:737:C:H2'	1:AA:738:C:C6	2.49	0.48
1:AA:830:G:H2'	1:AA:831:A:H8	1.79	0.48
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.14	0.48
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.14	0.48
1:AA:1278:G:H4'	1:AA:1279:G:O5'	2.14	0.48
2:AC:39:ARG:CZ	2:AC:56:ILE:HD12	2.44	0.48
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.14	0.48
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	1.95	0.48
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.60	0.48
8:AI:51:LEU:HD22	8:AI:56:MET:HE3	1.95	0.48
9:AJ:59:LYS:HG3	9:AJ:60:ASP:N	2.28	0.48
10:AK:64:VAL:O	10:AK:67:GLU:HG2	2.12	0.48
10:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.96	0.48
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.28	0.48
23:BB:98:G:H2'	23:BB:99:U:H5'	1.95	0.48
23:BB:621:A:H2'	23:BB:622:G:O4'	2.13	0.48
23:BB:685:A:H1'	23:BB:688:U:O4	2.13	0.48
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.46	0.48
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.79	0.48
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.49	0.48
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.14	0.48
23:BB:1833:C:O2'	23:BB:1834:U:H5'	2.13	0.48
23:BB:2215:C:H2'	23:BB:2216:G:H8	1.78	0.48
23:BB:2314:A:H4'	47:BF:34:THR:HG21	1.94	0.48
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.29	0.48
29:BE:72:SER:C	29:BE:74:LYS:H	2.21	0.48
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.12	0.48
29:BE:196:VAL:HA	29:BE:199:MET:HB3	1.96	0.48
33:B1:7:LYS:CD	34:B3:33:THR:HG21	2.42	0.48
33:B1:10:LEU:HD23	33:B1:35:LEU:HD21	1.96	0.48
37:BL:101:ILE:HG22	37:BL:105:ILE:HG13	1.96	0.48
38:BM:18:ARG:HA	38:BM:18:ARG:HD2	1.66	0.48
40:BH:90:LEU:CG	40:BH:146:VAL:HG11	2.43	0.48
40:BH:108:VAL:HG12	40:BH:109:GLU:N	2.28	0.48
42:BN:63:ARG:O	42:BN:66:ALA:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:108:LEU:CA	49:BR:48:LYS:HD3	2.44	0.48
48:BG:94:ARG:NH2	48:BG:105:SER:N	2.62	0.48
53:B6:109:GLU:HA	53:B6:112:LYS:HD2	1.95	0.48
1:CA:189:A:H2'	1:CA:190:A:C8	2.49	0.48
1:CA:747:A:H2'	1:CA:748:G:O4'	2.13	0.48
1:CA:807:A:H2'	1:CA:808:C:C6	2.49	0.48
2:CC:110:LEU:HD22	2:CC:145:ALA:HB2	1.96	0.48
3:CD:2:ARG:NH1	3:CD:114:ARG:HG3	2.28	0.48
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.94	0.48
9:CJ:92:LEU:HD13	9:CJ:92:LEU:N	2.28	0.48
11:CL:49:ARG:HD2	11:CL:49:ARG:H	1.77	0.48
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.96	0.48
13:CN:46:LYS:NZ	18:CS:10:ILE:H	2.10	0.48
14:CO:71:LYS:HB2	14:CO:78:TYR:CG	2.49	0.48
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.43	0.48
20:CB:103:TRP:CZ3	20:CB:107:ARG:HD2	2.49	0.48
22:DA:53:A:C2'	22:DA:54:G:H5'	2.43	0.48
23:DB:191:A:O2'	23:DB:192:C:H5'	2.14	0.48
23:DB:712:G:H2'	23:DB:713:G:O4'	2.14	0.48
23:DB:930:G:H1'	30:DY:24:LEU:HD11	1.96	0.48
23:DB:1099:G:H5''	24:DI:2:LYS:HB2	1.96	0.48
23:DB:1455:G:H5'	42:DN:60:VAL:HG21	1.95	0.48
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.48	0.48
23:DB:2143:C:C4	23:DB:2144:G:H1'	2.48	0.48
23:DB:2290:G:H2'	23:DB:2291:U:C6	2.49	0.48
25:DC:264:LYS:HG3	25:DC:265:PHE:HD2	1.79	0.48
26:DD:30:GLU:HB2	26:DD:52:THR:CG2	2.44	0.48
26:DD:125:TRP:CE3	26:DD:160:LYS:HD3	2.49	0.48
36:D2:34:ARG:HG2	36:D2:34:ARG:NH1	2.28	0.48
37:DL:116:VAL:HG22	37:DL:117:THR:N	2.28	0.48
40:DH:49:ALA:O	40:DH:53:GLU:HB2	2.13	0.48
42:DN:69:ARG:HD3	42:DN:69:ARG:H	1.79	0.48
45:DS:10:ALA:C	45:DS:12:SER:H	2.21	0.48
45:DS:24:ILE:CG2	45:DS:71:VAL:HG11	2.34	0.48
47:DF:41:GLU:CB	47:DF:48:LEU:HD11	2.40	0.48
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.77	0.48
47:DF:115:GLY:CA	47:DF:177:ARG:HH11	2.26	0.48
47:DF:131:VAL:HG23	47:DF:133:GLU:H	1.79	0.48
48:DG:54:ARG:O	48:DG:57:TYR:HD1	1.97	0.48
48:DG:163:TYR:O	48:DG:165:ASP:N	2.47	0.48
52:DW:65:LYS:O	52:DW:81:ILE:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:131:A:H2'	1:AA:132:C:C6	2.49	0.48
1:AA:182:A:H1'	1:AA:183:C:C5	2.49	0.48
1:AA:314:C:O2'	1:AA:315:A:H5'	2.14	0.48
1:AA:549:C:H2'	1:AA:550:G:H8	1.76	0.48
1:AA:624:C:H2'	1:AA:625:U:C6	2.48	0.48
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.48	0.48
3:AD:25:ARG:HH11	3:AD:25:ARG:HB2	1.79	0.48
3:AD:94:GLU:HB2	3:AD:190:LEU:HD11	1.96	0.48
12:AM:49:GLU:HG3	12:AM:53:ASP:OD1	2.13	0.48
20:AB:15:PHE:O	20:AB:40:ILE:HD12	2.14	0.48
20:AB:26:MET:HE1	20:AB:186:VAL:HG23	1.96	0.48
23:BB:31:C:O2'	23:BB:32:C:H5'	2.14	0.48
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.14	0.48
23:BB:48:G:O3'	23:BB:51:G:H5'	2.12	0.48
23:BB:349:U:H2'	23:BB:350:G:C8	2.48	0.48
23:BB:435:C:H2'	23:BB:436:C:H5'	1.96	0.48
23:BB:713:G:H21	23:BB:718:A:H2	1.62	0.48
23:BB:965:C:C2'	23:BB:966:G:H5'	2.43	0.48
23:BB:1535:A:H5''	23:BB:1536:C:H5	1.79	0.48
23:BB:2207:C:H2'	23:BB:2208:C:C6	2.48	0.48
23:BB:2365:G:H4'	52:BW:59:PHE:CD1	2.49	0.48
23:BB:2387:U:H1'	52:BW:38:ARG:CZ	2.44	0.48
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.31	0.48
23:BB:2635:A:C5'	26:BD:79:LEU:HB2	2.43	0.48
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.49	0.48
23:BB:2751:G:OP2	48:BG:2:ARG:HD2	2.13	0.48
25:BC:128:THR:CG2	25:BC:190:THR:HG22	2.43	0.48
26:BD:70:LYS:HD3	26:BD:70:LYS:C	2.38	0.48
29:BE:130:LYS:C	29:BE:132:LYS:N	2.71	0.48
30:BY:16:LEU:HD23	30:BY:19:HIS:CD2	2.48	0.48
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.82	0.48
37:BL:116:VAL:HG22	37:BL:117:THR:N	2.29	0.48
38:BM:32:GLY:HA3	38:BM:103:TYR:O	2.14	0.48
39:BX:5:GLU:O	39:BX:8:GLU:HB2	2.13	0.48
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.79	0.48
42:BN:102:PHE:N	42:BN:102:PHE:CD1	2.81	0.48
43:BO:29:HIS:HB3	43:BO:36:TYR:HB2	1.95	0.48
43:BO:56:LYS:O	43:BO:57:ALA:C	2.57	0.48
47:BF:15:LEU:HD12	47:BF:27:VAL:HB	1.95	0.48
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.14	0.48
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:49:ASN:CB	52:BW:81:ILE:HG12	2.41	0.48
53:B6:110:ARG:O	53:B6:114:LEU:HD22	2.12	0.48
1:CA:33:A:O2'	1:CA:34:C:H5'	2.14	0.48
1:CA:182:A:H1'	1:CA:183:C:C5	2.48	0.48
1:CA:543:U:O2'	1:CA:544:G:H5'	2.14	0.48
1:CA:622:A:H2'	1:CA:623:C:H5'	1.95	0.48
1:CA:797:C:OP1	10:CK:125:LYS:HG2	2.13	0.48
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.13	0.48
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.14	0.48
2:CC:59:PRO:HG3	2:CC:64:ARG:HH21	1.78	0.48
5:CF:6:ILE:HD11	5:CF:8:PHE:CD2	2.49	0.48
16:CQ:14:ASP:OD1	16:CQ:53:GLY:HA2	2.13	0.48
19:CT:43:LYS:CA	19:CT:85:LEU:HD11	2.41	0.48
19:CT:81:GLN:C	19:CT:83:ASN:N	2.72	0.48
22:DA:28:C:H2'	22:DA:29:A:O4'	2.14	0.48
22:DA:37:C:H2'	22:DA:38:C:O4'	2.14	0.48
23:DB:285:G:H2'	23:DB:286:U:H6	1.78	0.48
23:DB:465:G:N2	23:DB:684:G:H1'	2.29	0.48
23:DB:550:C:H2'	23:DB:551:G:C8	2.49	0.48
23:DB:560:C:H2'	23:DB:561:G:O4'	2.14	0.48
23:DB:649:G:H2'	23:DB:650:C:C6	2.49	0.48
23:DB:785:G:H2'	23:DB:786:C:C6	2.49	0.48
23:DB:1173:U:O5'	23:DB:1173:U:H6	1.97	0.48
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.13	0.48
23:DB:1563:U:H2'	23:DB:1564:C:C6	2.48	0.48
23:DB:1783:A:H5'	23:DB:2608:G:H4'	1.95	0.48
23:DB:1858:A:H2'	23:DB:1859:U:O4'	2.13	0.48
23:DB:2188:U:H2'	23:DB:2189:U:O4'	2.14	0.48
23:DB:2243:U:O2'	23:DB:2244:U:H5'	2.14	0.48
23:DB:2265:U:H3'	23:DB:2266:A:H5''	1.95	0.48
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.14	0.48
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.95	0.48
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.43	0.48
29:DE:72:SER:C	29:DE:74:LYS:H	2.22	0.48
30:DY:9:THR:HB	30:DY:53:MET:O	2.14	0.48
36:D2:34:ARG:HG2	36:D2:34:ARG:HH11	1.78	0.48
39:DX:23:ARG:O	39:DX:27:ASN:N	2.47	0.48
41:DJ:74:TYR:HE2	41:DJ:103:ILE:HD11	1.78	0.48
41:DJ:77:HIS:CD2	41:DJ:84:ILE:H	2.32	0.48
42:DN:63:ARG:HD2	42:DN:80:PHE:CD2	2.48	0.48
45:DS:33:LEU:HA	45:DS:36:LEU:HD23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:111:ARG:HH11	47:DF:135:ILE:CG2	2.27	0.48
1:AA:652:U:H1'	1:AA:653:U:C5	2.49	0.48
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.47	0.48
2:AC:88:LYS:HD2	2:AC:88:LYS:C	2.39	0.48
2:AC:170:GLY:O	2:AC:172:VAL:HG23	2.14	0.48
6:AG:145:GLU:C	6:AG:147:ASN:N	2.72	0.48
9:AJ:8:ILE:HD12	9:AJ:75:ASP:HA	1.96	0.48
13:AN:53:ASP:HA	13:AN:58:ARG:CD	2.42	0.48
14:AO:50:HIS:O	14:AO:53:ARG:HB3	2.14	0.48
19:AT:49:ALA:O	19:AT:52:GLU:HG2	2.13	0.48
20:AB:128:LEU:HD12	20:AB:132:GLU:HB2	1.96	0.48
20:AB:162:VAL:O	20:AB:184:ALA:HA	2.13	0.48
23:BB:279:A:C2	23:BB:362:A:H4'	2.48	0.48
23:BB:318:C:O2'	23:BB:319:G:H5'	2.14	0.48
23:BB:1064:C:C1'	24:BI:90:GLY:HA2	2.44	0.48
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.49	0.48
23:BB:1403:A:O2'	23:BB:1404:C:H5'	2.14	0.48
23:BB:1508:A:H3'	23:BB:1509:A:C4	2.49	0.48
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.14	0.48
23:BB:1899:A:O2'	23:BB:1900:A:H5''	2.14	0.48
23:BB:2330:G:O2'	23:BB:2331:G:H5'	2.13	0.48
23:BB:2621:G:OP1	26:BD:124:ARG:NH2	2.47	0.48
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.53	0.48
29:BE:18:THR:HG22	29:BE:106:LYS:CE	2.44	0.48
30:BY:25:GLY:HA3	30:BY:46:MET:HE1	1.95	0.48
37:BL:42:SER:C	37:BL:44:GLY:N	2.71	0.48
38:BM:53:MET:HE1	38:BM:103:TYR:CD2	2.49	0.48
40:BH:5:LEU:O	40:BH:6:LEU:HB2	2.12	0.48
40:BH:10:ALA:O	40:BH:12:LEU:N	2.43	0.48
41:BJ:20:ALA:HA	41:BJ:23:LYS:HG3	1.96	0.48
41:BJ:26:GLY:O	41:BJ:30:THR:HG22	2.13	0.48
46:BU:35:VAL:O	46:BU:38:ILE:HG22	2.14	0.48
46:BU:48:VAL:HG22	46:BU:48:VAL:O	2.12	0.48
47:BF:45:ASP:O	47:BF:46:LYS:HB2	2.13	0.48
50:BT:55:VAL:HG22	50:BT:87:LEU:CD2	2.44	0.48
50:BT:64:LYS:H	50:BT:64:LYS:HD2	1.78	0.48
53:B6:32:ARG:CD	53:B6:103:ILE:HG23	2.44	0.48
53:B6:56:ALA:HB1	53:B6:68:VAL:CG1	2.44	0.48
1:CA:559:A:H4'	1:CA:560:A:H3'	1.96	0.48
1:CA:685:G:O2'	1:CA:686:U:H5'	2.13	0.48
1:CA:961:U:H3	1:CA:983:A:H62	1.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1098:C:O2'	1:CA:1099:G:H5'	2.14	0.48
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.79	0.48
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.48	0.48
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.78	0.48
3:CD:17:ASP:C	3:CD:19:PHE:H	2.22	0.48
6:CG:145:GLU:CA	6:CG:148:LYS:HB2	2.33	0.48
7:CH:55:LYS:HA	7:CH:55:LYS:HE3	1.95	0.48
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.14	0.48
13:CN:53:ASP:HA	13:CN:58:ARG:CD	2.42	0.48
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.14	0.48
20:CB:110:ILE:HA	20:CB:147:LEU:HD13	1.96	0.48
20:CB:166:ASP:OD2	20:CB:190:SER:HA	2.13	0.48
23:DB:8:C:O2'	23:DB:9:G:H5'	2.14	0.48
23:DB:98:G:H22	46:DU:6:ARG:NH1	2.12	0.48
23:DB:121:G:H2'	23:DB:122:G:C8	2.48	0.48
23:DB:151:C:O2'	23:DB:152:A:H5'	2.14	0.48
23:DB:877:A:N6	23:DB:898:C:N3	2.62	0.48
23:DB:986:C:O2'	23:DB:987:C:H5'	2.14	0.48
23:DB:1104:C:H2'	23:DB:1105:U:H6	1.75	0.48
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.48	0.48
23:DB:1404:C:O2'	23:DB:1405:U:H5'	2.14	0.48
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.47	0.48
23:DB:2259:U:H2'	23:DB:2260:C:C6	2.49	0.48
23:DB:2301:C:O2'	23:DB:2302:U:H5'	2.14	0.48
23:DB:2331:G:C4'	52:DW:39:GLN:HA	2.43	0.48
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.79	0.48
23:DB:2855:C:O2'	23:DB:2856:A:H5'	2.13	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
25:DC:221:GLY:C	25:DC:223:ALA:N	2.70	0.48
26:DD:18:ASP:O	28:DP:30:TRP:HZ3	1.96	0.48
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.42	0.48
29:DE:103:GLY:O	29:DE:106:LYS:HB2	2.14	0.48
29:DE:188:MET:HG3	29:DE:192:ALA:HB3	1.95	0.48
35:DV:1:MET:CE	35:DV:2:PHE:H	2.13	0.48
36:D2:31:LEU:HD22	36:D2:42:LEU:CD1	2.43	0.48
42:DN:32:GLU:HB3	42:DN:115:LEU:HG	1.95	0.48
42:DN:72:ASP:HB3	42:DN:75:ILE:HG13	1.95	0.48
43:DO:24:THR:O	43:DO:90:VAL:HB	2.13	0.48
45:DS:20:VAL:HG23	45:DS:23:LEU:HD12	1.96	0.48
47:DF:45:ASP:C	47:DF:47:LYS:H	2.22	0.48
47:DF:69:ALA:HB2	47:DF:82:TYR:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:151:LEU:HD12	47:DF:152:ASP:N	2.29	0.48
50:DT:18:GLU:C	50:DT:20:ALA:N	2.71	0.48
1:AA:28:A:N3	1:AA:296:U:H4'	2.29	0.48
1:AA:233:C:O2'	1:AA:234:C:H5'	2.14	0.48
1:AA:685:G:O2'	1:AA:686:U:H5'	2.14	0.48
1:AA:805:C:O2'	1:AA:806:C:H5'	2.14	0.48
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.13	0.48
2:AC:59:PRO:HG3	2:AC:64:ARG:HH21	1.79	0.48
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.13	0.48
6:AG:64:ALA:HA	6:AG:127:ALA:HA	1.95	0.48
7:AH:113:ARG:C	7:AH:113:ARG:HE	2.22	0.48
12:AM:16:ILE:HG23	12:AM:17:ALA:N	2.27	0.48
12:AM:84:CYS:O	12:AM:88:LEU:HG	2.14	0.48
13:AN:50:LEU:H	13:AN:51:PRO:CD	2.24	0.48
13:AN:60:ARG:HG3	13:AN:62:ARG:CG	2.43	0.48
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.14	0.48
23:BB:281:C:H2'	23:BB:282:A:C8	2.48	0.48
23:BB:670:A:H4'	23:BB:671:C:H5'	1.96	0.48
23:BB:1139:G:O2'	23:BB:1143:A:N1	2.47	0.48
23:BB:1300:G:H4'	23:BB:1301:A:O5'	2.13	0.48
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.13	0.48
23:BB:1509:A:H5'	23:BB:1510:G:H5'	1.95	0.48
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.14	0.48
23:BB:1793:C:H2'	23:BB:1794:A:H8	1.79	0.48
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.48	0.48
23:BB:2529:G:H5''	48:BG:174:LYS:HB2	1.96	0.48
23:BB:2603:G:O2'	23:BB:2604:U:H5'	2.13	0.48
25:BC:83:ASP:HB2	25:BC:90:ILE:HB	1.96	0.48
25:BC:94:LEU:HA	25:BC:100:ARG:HB3	1.96	0.48
25:BC:245:THR:C	25:BC:247:TRP:N	2.72	0.48
28:BP:5:LYS:H	28:BP:8:GLU:HG3	1.79	0.48
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.96	0.48
36:B2:34:ARG:HH11	36:B2:34:ARG:HG2	1.78	0.48
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.16	0.48
42:BN:8:ARG:HB3	42:BN:43:GLU:OE2	2.13	0.48
47:BF:102:LEU:O	47:BF:103:ILE:HG22	2.13	0.48
50:BT:53:VAL:HG12	50:BT:54:GLU:N	2.28	0.48
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.14	0.48
53:B6:26:ALA:C	53:B6:28:LEU:H	2.21	0.48
1:CA:207:C:H3'	1:CA:208:U:C5	2.49	0.48
1:CA:412:A:H4'	1:CA:413:G:OP1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:556:C:O2'	1:CA:557:G:H5'	2.13	0.48
1:CA:714:G:C2	1:CA:777:A:H1'	2.49	0.48
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.95	0.48
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.79	0.48
5:CF:38:ARG:NH2	5:CF:63:ASN:HD21	2.09	0.48
6:CG:145:GLU:C	6:CG:147:ASN:N	2.72	0.48
7:CH:40:LYS:HE3	7:CH:47:ASP:OD1	2.13	0.48
19:CT:15:LYS:HA	19:CT:18:LYS:HE3	1.96	0.48
22:DA:113:C:H2'	22:DA:114:C:H6	1.78	0.48
23:DB:37:C:H4'	23:DB:451:U:OP1	2.13	0.48
23:DB:544:C:H2'	23:DB:545:U:C4	2.49	0.48
23:DB:546:U:H5'	23:DB:547:A:OP1	2.14	0.48
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.79	0.48
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.13	0.48
23:DB:1456:G:O2'	23:DB:1457:U:H5'	2.14	0.48
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.49	0.48
23:DB:1730:C:O2'	23:DB:1731:G:N2	2.46	0.48
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.49	0.48
23:DB:2150:C:H2'	23:DB:2151:U:H6	1.77	0.48
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.48	0.48
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.14	0.48
26:DD:15:PHE:CD1	26:DD:15:PHE:N	2.81	0.48
27:DK:34:GLY:O	27:DK:36:GLY:N	2.47	0.48
28:DP:6:GLN:HE22	28:DP:7:LEU:HG	1.79	0.48
28:DP:75:THR:O	28:DP:80:VAL:HG11	2.13	0.48
29:DE:137:LYS:O	29:DE:141:MET:HG3	2.13	0.48
33:D1:24:LYS:HZ2	33:D1:33:LEU:HB2	1.79	0.48
33:D1:37:LYS:O	33:D1:45:HIS:HA	2.14	0.48
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.78	0.48
37:DL:89:VAL:HG23	37:DL:123:ARG:HB2	1.95	0.48
40:DH:10:ALA:O	40:DH:12:LEU:N	2.44	0.48
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.79	0.48
43:DO:52:SER:O	43:DO:58:ILE:HD12	2.14	0.48
43:DO:53:THR:O	43:DO:59:ALA:HB2	2.14	0.48
47:DF:102:LEU:HB2	47:DF:106:ALA:HB3	1.95	0.48
1:AA:82:G:N2	1:AA:88:U:O3'	2.47	0.47
1:AA:327:A:H1'	1:AA:329:A:O4'	2.13	0.47
1:AA:373:A:C1'	1:AA:481:G:H1'	2.44	0.47
1:AA:379:C:O2'	1:AA:380:G:H5'	2.14	0.47
1:AA:443:C:H2'	1:AA:444:G:C8	2.48	0.47
1:AA:669:G:O2'	1:AA:670:G:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:897:C:C2'	1:AA:898:G:H5'	2.44	0.47
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.41	0.47
5:AF:6:ILE:HD11	5:AF:8:PHE:CD2	2.49	0.47
7:AH:36:ALA:HA	7:AH:39:LEU:HD12	1.96	0.47
10:AK:30:ILE:HG22	10:AK:45:THR:OG1	2.14	0.47
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.49	0.47
13:AN:19:TYR:HA	13:AN:23:ARG:HG3	1.96	0.47
13:AN:40:ARG:NH1	18:AS:6:LYS:O	2.47	0.47
13:AN:50:LEU:CD2	13:AN:51:PRO:HD3	2.43	0.47
13:AN:60:ARG:CZ	13:AN:69:PRO:HB3	2.44	0.47
18:AS:10:ILE:O	18:AS:10:ILE:HG13	2.13	0.47
18:AS:66:VAL:C	18:AS:68:HIS:H	2.22	0.47
19:AT:83:ASN:C	19:AT:85:LEU:H	2.21	0.47
20:AB:57:ASN:HB2	20:AB:223:GLY:CA	2.44	0.47
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.14	0.47
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.96	0.47
22:BA:33:G:O2'	22:BA:34:A:H5'	2.14	0.47
23:BB:454:A:H3'	23:BB:455:C:C5'	2.44	0.47
23:BB:718:A:H3'	23:BB:719:C:C6	2.46	0.47
23:BB:718:A:H5'	23:BB:719:C:C5	2.48	0.47
23:BB:1060:U:H5	24:BI:131:THR:HG22	1.74	0.47
23:BB:1571:A:H2'	23:BB:1572:A:H8	1.77	0.47
23:BB:1720:U:C2'	23:BB:1721:G:H5'	2.44	0.47
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.79	0.47
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.78	0.47
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.08	0.47
28:BP:52:ARG:HB2	28:BP:55:HIS:O	2.14	0.47
29:BE:192:ALA:O	29:BE:196:VAL:HG23	2.13	0.47
34:B3:18:LYS:HD2	34:B3:19:GLY:N	2.29	0.47
40:BH:10:ALA:C	40:BH:12:LEU:H	2.22	0.47
40:BH:52:ALA:HA	40:BH:56:ALA:HB3	1.96	0.47
41:BJ:115:GLY:HA2	41:BJ:118:MET:HE3	1.96	0.47
42:BN:61:ALA:C	42:BN:63:ARG:H	2.22	0.47
45:BS:2:GLU:O	45:BS:3:THR:C	2.57	0.47
47:BF:27:VAL:O	47:BF:29:ARG:HD2	2.14	0.47
47:BF:45:ASP:C	47:BF:47:LYS:H	2.22	0.47
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.79	0.47
48:BG:29:ASN:HD21	48:BG:81:GLY:HA2	1.79	0.47
52:BW:51:GLY:HA3	52:BW:59:PHE:HB3	1.94	0.47
53:B6:38:LEU:HB3	53:B6:41:LEU:HD22	1.95	0.47
53:B6:42:LYS:HA	53:B6:51:PRO:CA	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:42:LYS:HA	53:B6:50:VAL:C	2.38	0.47
1:CA:192:A:O2'	1:CA:193:C:H5'	2.13	0.47
1:CA:830:G:H2'	1:CA:831:A:H8	1.79	0.47
1:CA:906:A:C2'	1:CA:907:A:H5''	2.44	0.47
1:CA:1060:U:H5''	9:CJ:53:ILE:HG12	1.95	0.47
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.14	0.47
1:CA:1228:C:OP1	12:CM:113:LYS:HB2	2.14	0.47
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.96	0.47
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.82	0.47
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.29	0.47
7:CH:76:ARG:HG2	7:CH:79:ARG:HB3	1.95	0.47
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.14	0.47
10:CK:88:PRO:HD3	21:CU:28:LEU:HD13	1.96	0.47
12:CM:79:LEU:HB3	12:CM:84:CYS:SG	2.54	0.47
14:CO:21:ASP:O	14:CO:23:GLY:N	2.45	0.47
16:CQ:80:LYS:H	16:CQ:80:LYS:HE3	1.79	0.47
17:CR:59:LYS:O	17:CR:62:ARG:HB2	2.13	0.47
23:DB:270:A:OP1	23:DB:271:G:H5'	2.13	0.47
23:DB:296:U:H2'	23:DB:297:G:C8	2.49	0.47
23:DB:303:G:H2'	23:DB:304:U:C6	2.49	0.47
23:DB:710:U:H2'	23:DB:711:G:H8	1.78	0.47
23:DB:725:G:H2'	23:DB:726:G:O4'	2.14	0.47
23:DB:767:U:O2'	23:DB:768:G:H5'	2.14	0.47
23:DB:1263:U:O2'	31:D0:7:PRO:HD2	2.14	0.47
23:DB:1322:A:H4'	45:DS:82:MET:HE1	1.96	0.47
23:DB:1349:C:H2'	23:DB:1350:C:C6	2.49	0.47
23:DB:1669:A:O3'	23:DB:2549:G:H5'	2.13	0.47
23:DB:1877:A:H2'	23:DB:1878:G:C8	2.49	0.47
23:DB:2144:G:C3'	23:DB:2145:C:H5'	2.44	0.47
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.49	0.47
28:DP:5:LYS:H	28:DP:8:GLU:HG3	1.79	0.47
29:DE:47:LYS:CA	29:DE:51:GLU:HG3	2.44	0.47
33:D1:10:LEU:HB2	33:D1:20:TYR:HB2	1.95	0.47
33:D1:39:ASP:OD1	33:D1:42:VAL:HG23	2.14	0.47
39:DX:5:GLU:O	39:DX:8:GLU:HB2	2.15	0.47
43:DO:35:ILE:CG1	43:DO:102:ARG:HE	2.27	0.47
45:DS:59:GLU:OE2	45:DS:66:ILE:HG23	2.15	0.47
45:DS:99:ARG:H	45:DS:99:ARG:HG2	1.45	0.47
46:DU:92:VAL:HG11	46:DU:101:THR:HG23	1.95	0.47
47:DF:15:LEU:HD12	47:DF:27:VAL:HB	1.94	0.47
47:DF:102:LEU:O	47:DF:103:ILE:HG22	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:168:LEU:O	47:DF:170:ALA:N	2.45	0.47
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.77	0.47
53:D6:78:ALA:HA	53:D6:81:LYS:HB2	1.96	0.47
1:AA:747:A:H2'	1:AA:748:G:O4'	2.14	0.47
1:AA:810:C:O2'	1:AA:811:C:H5'	2.13	0.47
1:AA:864:A:H2'	1:AA:865:A:C8	2.50	0.47
1:AA:911:U:H2'	1:AA:912:C:C6	2.49	0.47
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.14	0.47
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.78	0.47
3:AD:28:ASP:HA	3:AD:33:ILE:CG2	2.43	0.47
3:AD:55:ARG:HG3	3:AD:55:ARG:NH1	2.27	0.47
7:AH:45:ILE:C	7:AH:63:LYS:HE3	2.39	0.47
14:AO:82:ILE:O	14:AO:86:GLY:N	2.47	0.47
23:BB:309:A:H1'	23:BB:329:G:N3	2.29	0.47
23:BB:782:A:C2	25:BC:224:MET:HB3	2.48	0.47
23:BB:796:C:H2'	23:BB:797:G:H8	1.79	0.47
23:BB:855:G:N3	52:BW:23:LYS:HG2	2.28	0.47
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.44	0.47
23:BB:2354:C:H4'	52:BW:31:LEU:CD2	2.43	0.47
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.14	0.47
26:BD:34:VAL:HA	26:BD:50:VAL:HG12	1.95	0.47
30:BY:5:LYS:O	30:BY:57:GLU:HB2	2.13	0.47
33:B1:26:LYS:HB3	33:B1:52:LYS:HZ2	1.80	0.47
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.14	0.47
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.39	0.47
37:BL:30:THR:O	37:BL:32:GLY:N	2.47	0.47
37:BL:57:LEU:HA	37:BL:60:ARG:HE	1.79	0.47
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.13	0.47
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HA	2.29	0.47
47:BF:37:MET:HE3	47:BF:151:LEU:HB3	1.95	0.47
48:BG:94:ARG:C	48:BG:94:ARG:NE	2.72	0.47
49:BR:26:ASP:O	49:BR:27:ILE:HD13	2.14	0.47
49:BR:53:PHE:N	49:BR:53:PHE:CD1	2.80	0.47
50:BT:50:LEU:HD22	50:BT:50:LEU:N	2.28	0.47
51:BZ:69:ALA:HA	51:BZ:72:ARG:NH1	2.29	0.47
52:BW:54:ARG:C	52:BW:56:HIS:H	2.22	0.47
52:BW:67:LYS:O	52:BW:68:PHE:HB2	2.13	0.47
53:B6:137:LEU:CD1	53:B6:161:ILE:HG21	2.43	0.47
1:CA:238:A:C2'	1:CA:239:U:H5''	2.42	0.47
1:CA:308:C:H2'	1:CA:309:A:H8	1.79	0.47
1:CA:327:A:H1'	1:CA:329:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1226:C:H5'	12:CM:94:LEU:HD13	1.95	0.47
1:CA:1281:C:H5'	1:CA:1282:C:H5	1.78	0.47
1:CA:1406:U:H2'	1:CA:1407:C:O4'	2.14	0.47
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.74	0.47
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.78	0.47
3:CD:197:HIS:ND1	3:CD:198:LEU:N	2.62	0.47
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.14	0.47
10:CK:124:LYS:O	21:CU:33:ARG:NE	2.33	0.47
10:CK:125:LYS:O	21:CU:33:ARG:NH2	2.46	0.47
13:CN:41:TRP:CD1	13:CN:44:VAL:HG23	2.49	0.47
14:CO:89:ARG:HH22	23:DB:715:A:H5''	1.79	0.47
18:CS:52:ASN:CG	18:CS:53:GLY:N	2.72	0.47
19:CT:49:ALA:O	19:CT:52:GLU:HG2	2.13	0.47
20:CB:86:CYS:HB3	20:CB:88:GLN:NE2	2.29	0.47
23:DB:181:A:H1'	23:DB:435:C:H5'	1.97	0.47
23:DB:584:C:OP2	44:DQ:5:ARG:HD3	2.14	0.47
23:DB:1187:G:H5''	49:DR:83:TYR:CZ	2.48	0.47
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.14	0.47
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.13	0.47
23:DB:2248:C:H2'	23:DB:2249:U:O4'	2.14	0.47
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.49	0.47
23:DB:2722:G:O2'	23:DB:2723:C:H5'	2.14	0.47
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.49	0.47
25:DC:35:LYS:O	25:DC:36:ASN:HB2	2.14	0.47
26:DD:49:GLN:HE21	26:DD:79:LEU:HD12	1.79	0.47
27:DK:88:ASN:HD22	27:DK:89:ASN:N	2.11	0.47
28:DP:110:LYS:N	28:DP:110:LYS:HD2	2.29	0.47
31:D0:41:HIS:HB3	42:DN:99:LYS:HB2	1.96	0.47
33:D1:31:GLU:CD	33:D1:31:GLU:H	2.21	0.47
37:DL:89:VAL:O	37:DL:89:VAL:HG13	2.14	0.47
37:DL:135:ILE:HG12	37:DL:140:GLY:CA	2.40	0.47
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.22	0.47
40:DH:135:HIS:HB3	40:DH:138:VAL:HG23	1.96	0.47
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.43	0.47
41:DJ:115:GLY:HA2	41:DJ:118:MET:HE3	1.96	0.47
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.13	0.47
43:DO:6:ALA:O	43:DO:9:ARG:HG3	2.14	0.47
43:DO:30:ARG:NH1	43:DO:102:ARG:HB2	2.28	0.47
43:DO:106:LEU:HA	43:DO:109:ALA:HB3	1.94	0.47
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.70	0.47
50:DT:6:ARG:HB3	50:DT:6:ARG:NH1	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:53:VAL:HG12	50:DT:54:GLU:N	2.28	0.47
50:DT:61:LEU:O	50:DT:81:LYS:HA	2.13	0.47
53:D6:151:GLU:O	53:D6:154:THR:HG22	2.14	0.47
1:AA:93:U:O5'	1:AA:93:U:C6	2.62	0.47
1:AA:94:G:H1'	1:AA:95:C:C5	2.50	0.47
1:AA:378:G:HO2'	1:AA:379:C:H5'	1.79	0.47
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.14	0.47
1:AA:708:C:O2'	1:AA:709:U:H5'	2.14	0.47
1:AA:1117:A:H5''	8:AI:105:ARG:NH2	2.29	0.47
1:AA:1287:A:H2'	1:AA:1288:A:H8	1.80	0.47
2:AC:76:ILE:CG2	2:AC:80:GLY:HA2	2.43	0.47
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.95	0.47
3:AD:18:LEU:HD11	3:AD:59:LYS:HG3	1.96	0.47
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.29	0.47
10:AK:125:LYS:O	21:AU:33:ARG:NH2	2.47	0.47
13:AN:63:CYS:CB	13:AN:79:SER:HG	2.28	0.47
15:AP:38:PHE:CD1	15:AP:39:PHE:N	2.82	0.47
20:AB:121:GLN:NE2	20:AB:122:ASP:HB2	2.30	0.47
23:BB:465:G:N2	23:BB:684:G:H1'	2.29	0.47
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.14	0.47
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.79	0.47
23:BB:2049:G:N2	26:BD:161:MET:HE2	2.29	0.47
23:BB:2145:C:H3'	23:BB:2146:C:C5'	2.44	0.47
23:BB:2282:G:O2'	23:BB:2283:C:OP2	2.28	0.47
23:BB:2571:U:H4'	26:BD:151:THR:HG21	1.96	0.47
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.50	0.47
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.13	0.47
25:BC:141:HIS:NE2	25:BC:194:VAL:HA	2.29	0.47
25:BC:264:LYS:HG3	25:BC:265:PHE:HD2	1.79	0.47
30:BY:47:ILE:HG23	30:BY:54:VAL:HG21	1.95	0.47
35:BV:63:ILE:HB	35:BV:70:ILE:CD1	2.44	0.47
36:B2:34:ARG:HG2	36:B2:34:ARG:NH1	2.29	0.47
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.44	0.47
38:BM:26:VAL:CG2	38:BM:133:LYS:HA	2.45	0.47
47:BF:169:LEU:O	47:BF:174:PHE:HB2	2.14	0.47
50:BT:6:ARG:HB3	50:BT:6:ARG:NH1	2.30	0.47
53:B6:52:LEU:HD11	53:B6:83:ILE:HD11	1.95	0.47
53:B6:126:ARG:HG2	53:B6:169:ILE:HD12	1.96	0.47
53:B6:141:LYS:HE3	53:B6:142:LYS:HE3	1.96	0.47
1:CA:222:C:H2'	1:CA:223:A:H8	1.78	0.47
1:CA:279:A:C5'	1:CA:280:C:H3'	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:366:A:H2	1:CA:394:G:H1	1.57	0.47
1:CA:1023:U:O2'	1:CA:1024:G:H5'	2.15	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.30	0.47
1:CA:1166:G:N1	1:CA:1169:A:OP2	2.47	0.47
1:CA:1256:A:H4'	1:CA:1258:G:C8	2.49	0.47
1:CA:1291:U:O2'	1:CA:1292:G:H5'	2.14	0.47
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.80	0.47
1:CA:1343:G:C1'	8:CI:122:ARG:HH12	2.24	0.47
1:CA:1499:A:H1'	1:CA:1520:C:H5'	1.95	0.47
3:CD:146:GLU:HA	3:CD:149:LYS:CG	2.40	0.47
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.96	0.47
11:CL:21:PRO:HG2	11:CL:94:TYR:OH	2.13	0.47
14:CO:50:HIS:O	14:CO:53:ARG:HB3	2.14	0.47
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.96	0.47
19:CT:72:ALA:HA	19:CT:75:LYS:HD3	1.95	0.47
20:CB:165:ALA:HB3	20:CB:186:VAL:HG12	1.96	0.47
22:DA:95:U:H2'	22:DA:96:G:H8	1.79	0.47
23:DB:516:C:O2'	23:DB:517:C:H5'	2.14	0.47
23:DB:920:A:H2'	23:DB:921:C:O4'	2.14	0.47
23:DB:1218:G:H2'	23:DB:1219:U:O4'	2.14	0.47
23:DB:1841:U:H2'	23:DB:1842:G:H8	1.79	0.47
23:DB:2303:G:H4'	47:DF:121:PHE:O	2.14	0.47
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.48	0.47
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.14	0.47
23:DB:2787:C:C1'	26:DD:63:PRO:HG3	2.42	0.47
27:DK:54:LYS:HD2	27:DK:54:LYS:N	2.27	0.47
29:DE:11:ALA:O	29:DE:12:LEU:HD22	2.14	0.47
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.14	0.47
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.82	0.47
35:DV:31:TYR:O	35:DV:92:VAL:HG13	2.15	0.47
35:DV:48:MET:SD	35:DV:85:LYS:HA	2.54	0.47
37:DL:81:ASP:HA	37:DL:84:LYS:CE	2.45	0.47
40:DH:122:LEU:C	40:DH:124:THR:H	2.21	0.47
42:DN:28:LEU:HD23	42:DN:113:ILE:HG23	1.95	0.47
42:DN:41:ALA:C	42:DN:43:GLU:N	2.72	0.47
43:DO:83:LEU:HD13	43:DO:115:LEU:HD22	1.95	0.47
44:DQ:56:PHE:HA	44:DQ:59:LEU:HB3	1.95	0.47
46:DU:43:LYS:HD3	46:DU:44:HIS:N	2.29	0.47
47:DF:55:ASP:OD2	47:DF:149:ARG:HG3	2.14	0.47
48:DG:115:GLN:CD	48:DG:115:GLN:N	2.65	0.47
49:DR:53:PHE:N	49:DR:53:PHE:CD1	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.94	0.47
1:AA:132:C:H5''	19:AT:68:LYS:HZ2	1.79	0.47
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.14	0.47
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.14	0.47
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.50	0.47
1:AA:1298:U:H4'	1:AA:1299:A:C4	2.50	0.47
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.15	0.47
6:AG:148:LYS:HG3	6:AG:151:ALA:CB	2.40	0.47
9:AJ:80:THR:O	9:AJ:84:VAL:HG23	2.14	0.47
11:AL:80:LEU:HD13	11:AL:101:LEU:HD11	1.95	0.47
20:AB:125:PHE:HD2	20:AB:126:ASP:N	2.13	0.47
23:BB:231:A:H3'	23:BB:232:G:H8	1.79	0.47
23:BB:580:U:O2'	23:BB:581:C:H5'	2.15	0.47
23:BB:679:C:O2'	23:BB:680:C:H5'	2.14	0.47
23:BB:923:G:N2	52:BW:23:LYS:HE3	2.29	0.47
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.79	0.47
23:BB:991:C:H5''	23:BB:1185:G:H2'	1.97	0.47
23:BB:1171:G:H3'	23:BB:1172:C:C4'	2.44	0.47
23:BB:1222:U:P	49:BR:90:ARG:HH22	2.37	0.47
23:BB:1862:G:O2'	23:BB:1863:G:H5'	2.13	0.47
23:BB:2349:G:OP2	34:B3:41:ARG:HD3	2.15	0.47
23:BB:2390:U:O5'	34:B3:34:LYS:NZ	2.46	0.47
23:BB:2663:G:H2'	23:BB:2664:G:H8	1.79	0.47
23:BB:2840:C:H5''	42:BN:53:THR:CG2	2.44	0.47
23:BB:2901:C:O2	23:BB:2901:C:H2'	2.14	0.47
25:BC:35:LYS:HD2	25:BC:37:SER:OG	2.14	0.47
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.29	0.47
25:BC:245:THR:HG23	25:BC:249:VAL:O	2.14	0.47
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	1.97	0.47
28:BP:6:GLN:HE22	28:BP:7:LEU:HG	1.80	0.47
28:BP:83:ILE:HD13	28:BP:83:ILE:O	2.14	0.47
34:B3:14:LYS:O	34:B3:21:PHE:O	2.32	0.47
34:B3:36:ALA:O	34:B3:40:LYS:HG3	2.15	0.47
37:BL:41:ARG:HH21	37:BL:41:ARG:HG2	1.78	0.47
42:BN:41:ALA:C	42:BN:43:GLU:H	2.23	0.47
43:BO:83:LEU:HD13	43:BO:115:LEU:HD22	1.96	0.47
44:BQ:27:ARG:HG3	44:BQ:27:ARG:HH11	1.80	0.47
44:BQ:51:GLN:O	44:BQ:54:ARG:HB2	2.14	0.47
45:BS:29:VAL:CA	45:BS:32:ALA:HB3	2.44	0.47
46:BU:9:GLU:OE2	46:BU:21:ARG:HD2	2.15	0.47
46:BU:92:VAL:HG11	46:BU:101:THR:HG23	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:95:ALA:HA	48:BG:104:LEU:HD23	1.97	0.47
50:BT:69:ARG:NE	50:BT:70:HIS:H	2.12	0.47
1:CA:528:C:H41	11:CL:45:ASN:CG	2.22	0.47
1:CA:663:A:H5'	1:CA:836:G:OP1	2.14	0.47
1:CA:922:G:H2'	1:CA:923:A:H8	1.78	0.47
1:CA:1330:U:C2'	1:CA:1331:G:H5'	2.45	0.47
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.29	0.47
4:CE:131:ASN:ND2	4:CE:133:ILE:HB	2.29	0.47
5:CF:46:GLN:CD	5:CF:47:LEU:H	2.22	0.47
6:CG:46:LEU:HG	6:CG:57:GLU:HB3	1.96	0.47
9:CJ:92:LEU:HD22	9:CJ:92:LEU:N	2.29	0.47
13:CN:47:LEU:C	13:CN:49:THR:N	2.71	0.47
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.33	0.47
16:CQ:74:LEU:C	16:CQ:74:LEU:HD13	2.40	0.47
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.14	0.47
20:CB:162:VAL:O	20:CB:184:ALA:HA	2.15	0.47
21:CU:25:ALA:C	21:CU:27:VAL:H	2.22	0.47
23:DB:139:U:H3	50:DT:1:MET:HE2	1.78	0.47
23:DB:688:U:O2'	23:DB:689:A:H5'	2.14	0.47
23:DB:770:G:O2'	23:DB:771:G:H5'	2.13	0.47
23:DB:773:U:H4'	25:DC:45:ASN:O	2.14	0.47
23:DB:958:U:H3	38:DM:16:ARG:CB	2.27	0.47
23:DB:1655:A:H2'	23:DB:1656:C:O4'	2.14	0.47
23:DB:1841:U:H2'	23:DB:1842:G:C8	2.50	0.47
23:DB:1872:A:H8	23:DB:1872:A:O5'	1.96	0.47
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.14	0.47
23:DB:2148:G:H3'	23:DB:2148:G:OP2	2.14	0.47
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.49	0.47
23:DB:2618:G:H2'	23:DB:2619:C:H6	1.79	0.47
23:DB:2724:U:H2'	23:DB:2725:A:C8	2.50	0.47
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.13	0.47
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.29	0.47
29:DE:192:ALA:O	29:DE:196:VAL:HG23	2.14	0.47
34:D3:7:ARG:NH1	34:D3:7:ARG:HG3	2.29	0.47
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.14	0.47
42:DN:75:ILE:HD12	42:DN:76:VAL:N	2.29	0.47
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.15	0.47
52:DW:30:VAL:HG13	52:DW:30:VAL:O	2.14	0.47
52:DW:50:VAL:HB	52:DW:51:GLY:H	1.52	0.47
1:AA:46:G:O2'	1:AA:365:U:H1'	2.15	0.47
1:AA:300:A:H2'	1:AA:301:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:591:U:H2'	1:AA:592:G:H8	1.78	0.47
1:AA:631:C:H5''	1:AA:632:U:O4'	2.14	0.47
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.49	0.47
1:AA:1308:U:OP1	12:AM:95:PRO:HA	2.13	0.47
1:AA:1320:C:H1'	18:AS:72:GLU:N	2.30	0.47
4:AE:154:ALA:HB1	7:AH:65:PHE:CZ	2.49	0.47
13:AN:52:ARG:C	13:AN:54:SER:N	2.72	0.47
13:AN:63:CYS:HB3	13:AN:68:ARG:H	1.80	0.47
22:BA:6:G:H2'	22:BA:7:G:C8	2.50	0.47
22:BA:13:G:O2'	22:BA:15:A:H5'	2.13	0.47
22:BA:28:C:H2'	22:BA:29:A:O4'	2.15	0.47
23:BB:24:G:H2'	23:BB:25:U:O4'	2.14	0.47
23:BB:199:A:O2'	23:BB:200:U:H5'	2.15	0.47
23:BB:392:U:H2'	23:BB:393:C:H6	1.79	0.47
23:BB:484:C:H2'	23:BB:485:C:H6	1.79	0.47
23:BB:1021:A:H61	23:BB:1142:A:N6	2.12	0.47
23:BB:2040:G:H2'	23:BB:2041:U:O4'	2.15	0.47
23:BB:2050:C:H2'	23:BB:2051:A:O4'	2.14	0.47
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.49	0.47
23:BB:2187:U:H2'	23:BB:2188:U:H6	1.76	0.47
23:BB:2300:C:O2'	23:BB:2301:C:H5'	2.15	0.47
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.44	0.47
25:BC:245:THR:HG23	25:BC:249:VAL:HB	1.95	0.47
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.49	0.47
33:B1:3:GLY:C	33:B1:5:ARG:N	2.72	0.47
33:B1:6:GLU:HB2	33:B1:52:LYS:HZ3	1.78	0.47
39:BX:23:ARG:HA	39:BX:27:ASN:H	1.79	0.47
39:BX:59:GLU:N	39:BX:59:GLU:OE2	2.47	0.47
42:BN:41:ALA:C	42:BN:43:GLU:N	2.72	0.47
46:BU:6:ARG:HG2	46:BU:6:ARG:HH21	1.80	0.47
47:BF:77:LYS:HD2	47:BF:79:ARG:HE	1.79	0.47
50:BT:25:GLU:HA	50:BT:28:ASN:O	2.14	0.47
50:BT:31:VAL:C	50:BT:32:LEU:HD23	2.40	0.47
52:BW:43:LYS:HB2	52:BW:58:LEU:HD21	1.96	0.47
1:CA:201:G:H2'	1:CA:202:G:C8	2.49	0.47
1:CA:276:G:O2'	1:CA:277:C:H5'	2.15	0.47
1:CA:373:A:H2'	1:CA:374:A:H8	1.80	0.47
1:CA:608:A:H2'	1:CA:609:A:O4'	2.14	0.47
1:CA:930:C:H2'	1:CA:931:C:C6	2.49	0.47
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.97	0.47
3:CD:94:GLU:HB2	3:CD:190:LEU:HD11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:68:VAL:CG2	6:CG:126:ALA:HB1	2.44	0.47
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.41	0.47
7:CH:110:MET:HG3	7:CH:115:ALA:HB2	1.96	0.47
9:CJ:8:ILE:HD12	9:CJ:75:ASP:HA	1.96	0.47
14:CO:17:ARG:HG2	14:CO:24:SER:HB2	1.96	0.47
18:CS:42:ASN:N	18:CS:42:ASN:ND2	2.62	0.47
19:CT:49:ALA:HA	19:CT:52:GLU:CD	2.39	0.47
19:CT:83:ASN:C	19:CT:85:LEU:H	2.22	0.47
22:DA:93:C:O2'	22:DA:94:A:H5'	2.15	0.47
23:DB:3:U:H2'	23:DB:4:U:H6	1.80	0.47
23:DB:17:G:H2'	23:DB:18:U:H6	1.79	0.47
23:DB:1014:A:O2'	23:DB:1015:U:H5'	2.13	0.47
23:DB:1181:U:O2'	23:DB:1182:G:H5'	2.15	0.47
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.15	0.47
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.14	0.47
23:DB:1773:A:H2'	23:DB:1774:C:O4'	2.14	0.47
23:DB:1773:A:N7	23:DB:1829:A:H1'	2.30	0.47
23:DB:2425:A:H5''	23:DB:2426:A:H3'	1.96	0.47
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.80	0.47
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.15	0.47
23:DB:2719:G:O2'	23:DB:2720:U:H5'	2.14	0.47
23:DB:2801:G:H3'	23:DB:2802:G:H8	1.80	0.47
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.30	0.47
25:DC:245:THR:C	25:DC:247:TRP:N	2.71	0.47
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.14	0.47
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.29	0.47
30:DY:5:LYS:HG2	30:DY:36:GLU:HB2	1.96	0.47
30:DY:25:GLY:HA3	30:DY:46:MET:HE1	1.95	0.47
39:DX:59:GLU:N	39:DX:59:GLU:OE2	2.47	0.47
40:DH:141:LYS:HD2	40:DH:141:LYS:N	2.30	0.47
47:DF:45:ASP:O	47:DF:46:LYS:HB2	2.15	0.47
47:DF:92:GLY:CA	47:DF:95:MET:HE3	2.44	0.47
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.30	0.47
49:DR:60:LYS:N	49:DR:100:GLY:HA3	2.22	0.47
50:DT:50:LEU:O	50:DT:52:GLU:N	2.42	0.47
1:AA:279:A:C5'	1:AA:280:C:H3'	2.43	0.47
1:AA:618:C:H1'	15:AP:14:ARG:NH1	2.30	0.47
1:AA:797:C:OP1	10:AK:125:LYS:HG2	2.15	0.47
1:AA:1148:U:O4'	8:AI:17:ARG:HD3	2.13	0.47
1:AA:1272:G:H2'	1:AA:1273:C:C6	2.50	0.47
5:AF:13:ASP:O	5:AF:14:GLN:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:16:GLU:CD	5:AF:16:GLU:N	2.71	0.47
12:AM:15:VAL:CG2	12:AM:40:GLU:HB3	2.43	0.47
13:AN:47:LEU:C	13:AN:49:THR:N	2.72	0.47
18:AS:52:ASN:CG	18:AS:53:GLY:N	2.71	0.47
22:BA:95:U:H2'	22:BA:96:G:H8	1.79	0.47
23:BB:349:U:H2'	23:BB:350:G:H8	1.79	0.47
23:BB:622:G:H2'	23:BB:623:C:H6	1.79	0.47
23:BB:1138:G:H21	41:BJ:108:MET:CE	2.27	0.47
23:BB:1241:A:H2'	23:BB:1242:U:C5'	2.43	0.47
23:BB:1275:A:H2'	23:BB:1275:A:N3	2.30	0.47
23:BB:1334:G:O2'	23:BB:1335:C:H5'	2.15	0.47
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.15	0.47
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.79	0.47
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.29	0.47
23:BB:2028:U:H2'	23:BB:2029:G:O4'	2.15	0.47
23:BB:2103:C:H3'	23:BB:2104:C:C2	2.50	0.47
23:BB:2473:U:O2	23:BB:2473:U:H2'	2.15	0.47
23:BB:2515:C:P	41:BJ:81:ILE:HD11	2.55	0.47
25:BC:21:PRO:C	25:BC:23:LEU:H	2.23	0.47
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.96	0.47
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.29	0.47
26:BD:179:ARG:HH11	26:BD:179:ARG:CB	2.28	0.47
27:BK:121:GLU:O	27:BK:122:VAL:C	2.57	0.47
28:BP:4:ILE:C	28:BP:6:GLN:N	2.61	0.47
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.30	0.47
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.46	0.47
33:B1:11:VAL:HG23	33:B1:50:GLU:HB3	1.97	0.47
40:BH:79:THR:CB	40:BH:145:ASN:HB2	2.44	0.47
43:BO:52:SER:OG	43:BO:54:VAL:HG12	2.15	0.47
45:BS:66:ILE:HD13	45:BS:66:ILE:N	2.16	0.47
46:BU:94:PHE:HB3	46:BU:101:THR:HA	1.97	0.47
47:BF:40:GLY:HA2	47:BF:84:ILE:HG23	1.96	0.47
47:BF:74:ALA:CB	47:BF:78:ILE:HD13	2.44	0.47
47:BF:121:PHE:HB3	47:BF:127:TYR:CZ	2.50	0.47
53:B6:77:LYS:C	53:B6:81:LYS:HE3	2.40	0.47
1:CA:222:C:H2'	1:CA:223:A:C8	2.49	0.47
1:CA:237:G:O2'	1:CA:238:A:H5'	2.15	0.47
1:CA:300:A:H2'	1:CA:301:G:O4'	2.14	0.47
1:CA:429:U:H1'	1:CA:430:A:H5''	1.95	0.47
1:CA:542:G:O2'	1:CA:543:U:H5'	2.14	0.47
1:CA:584:G:O2'	1:CA:585:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:591:U:H2'	1:CA:592:G:H8	1.79	0.47
1:CA:610:U:O2	1:CA:610:U:O4'	2.31	0.47
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.80	0.47
8:CI:83:THR:OG1	8:CI:97:LEU:HD13	2.14	0.47
10:CK:35:ASP:OD1	10:CK:37:GLN:HB2	2.13	0.47
10:CK:85:VAL:HG21	10:CK:96:ILE:HD11	1.96	0.47
12:CM:78:ARG:NH2	12:CM:82:LEU:HD11	2.29	0.47
20:CB:195:VAL:HG12	20:CB:197:PHE:N	2.28	0.47
23:DB:819:A:N6	23:DB:1189:A:H1'	2.30	0.47
23:DB:870:U:C2'	23:DB:871:U:H5'	2.45	0.47
23:DB:948:C:H2'	23:DB:949:G:C8	2.50	0.47
23:DB:1223:G:OP2	49:DR:90:ARG:NH1	2.47	0.47
23:DB:1345:C:H5'	23:DB:1396:U:H5	1.80	0.47
23:DB:1475:G:H1'	23:DB:1476:U:C5	2.47	0.47
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.60	0.47
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.15	0.47
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.79	0.47
23:DB:2193:G:H2'	23:DB:2194:U:C6	2.49	0.47
23:DB:2235:G:H2'	23:DB:2236:U:C6	2.50	0.47
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.78	0.47
23:DB:2680:U:P	26:DD:114:LYS:HB3	2.54	0.47
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.62	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.15	0.47
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.30	0.47
25:DC:158:GLY:H	25:DC:194:VAL:HG13	1.80	0.47
26:DD:169:ARG:O	26:DD:170:VAL:O	2.31	0.47
29:DE:37:ALA:C	29:DE:39:ALA:N	2.71	0.47
33:D1:11:VAL:HG23	33:D1:50:GLU:HB3	1.95	0.47
37:DL:68:SER:HB2	37:DL:71:ALA:H	1.79	0.47
38:DM:66:ARG:CZ	38:DM:101:VAL:HG11	2.44	0.47
38:DM:108:VAL:HG21	38:DM:112:LEU:HD12	1.97	0.47
39:DX:29:ARG:HH12	50:DT:12:ARG:HG2	1.79	0.47
40:DH:70:GLU:H	40:DH:70:GLU:HG3	1.57	0.47
40:DH:128:HIS:C	40:DH:143:ILE:HG23	2.39	0.47
46:DU:48:VAL:HG22	46:DU:48:VAL:O	2.13	0.47
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.14	0.47
51:DZ:27:ARG:HD3	51:DZ:28:ARG:H	1.80	0.47
1:AA:68:G:C5'	1:AA:171:A:H1'	2.44	0.47
1:AA:68:G:H2'	1:AA:69:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:78:A:H8	1:AA:78:A:O5'	1.97	0.47
1:AA:245:U:H2'	1:AA:246:A:H5'	1.97	0.47
1:AA:276:G:O2'	1:AA:277:C:H5'	2.15	0.47
1:AA:279:A:H5'	1:AA:281:G:C5'	2.44	0.47
1:AA:327:A:O2'	1:AA:328:C:O4'	2.28	0.47
1:AA:376:G:H5''	15:AP:5:ARG:CB	2.41	0.47
1:AA:614:C:O2'	1:AA:615:G:H5'	2.15	0.47
1:AA:1085:U:H3'	1:AA:1086:U:C6	2.49	0.47
1:AA:1258:G:C6	1:AA:1278:G:N1	2.82	0.47
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.97	0.47
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.79	0.47
1:AA:1514:G:H2'	1:AA:1515:G:H8	1.79	0.47
3:AD:17:ASP:C	3:AD:19:PHE:H	2.23	0.47
4:AE:99:SER:HB3	4:AE:102:THR:OG1	2.14	0.47
8:AI:94:ARG:HA	8:AI:97:LEU:CG	2.41	0.47
9:AJ:92:LEU:HD22	9:AJ:92:LEU:N	2.30	0.47
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.96	0.47
13:AN:64:ARG:HB2	13:AN:77:GLY:O	2.14	0.47
20:AB:42:LEU:HA	20:AB:45:THR:CB	2.44	0.47
20:AB:72:LYS:O	20:AB:73:ARG:C	2.58	0.47
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.14	0.47
20:AB:162:VAL:HG13	20:AB:184:ALA:CB	2.43	0.47
21:AU:48:LYS:HG3	21:AU:49:ALA:N	2.30	0.47
22:BA:115:A:O2'	22:BA:116:G:H5'	2.14	0.47
23:BB:244:A:H2'	23:BB:245:G:O4'	2.15	0.47
23:BB:534:U:H1'	44:BQ:44:TYR:HB3	1.95	0.47
23:BB:819:A:OP2	23:BB:1187:G:N2	2.47	0.47
23:BB:1021:A:H61	23:BB:1142:A:H61	1.61	0.47
23:BB:1150:C:O2'	23:BB:1151:A:H5'	2.15	0.47
23:BB:1376:C:O2'	23:BB:1377:G:H5'	2.15	0.47
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.49	0.47
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.76	0.47
23:BB:1754:A:H2'	23:BB:1755:A:O4'	2.13	0.47
23:BB:1790:C:O2'	25:BC:207:ALA:CB	2.61	0.47
23:BB:1942:C:C1'	53:B6:133:ARG:HH22	2.28	0.47
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.14	0.47
23:BB:2049:G:H21	26:BD:161:MET:HE2	1.80	0.47
23:BB:2313:C:H4'	47:BF:87:LYS:HB3	1.96	0.47
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.50	0.47
23:BB:2572:A:OP2	26:BD:151:THR:HB	2.13	0.47
23:BB:2663:G:H2'	23:BB:2664:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.13	0.47
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.29	0.47
25:BC:106:PRO:O	25:BC:109:LEU:HB3	2.15	0.47
25:BC:157:ALA:HB1	25:BC:196:ASN:HB3	1.97	0.47
25:BC:171:VAL:HG23	25:BC:185:ALA:CB	2.44	0.47
26:BD:106:LYS:HD3	26:BD:106:LYS:N	2.29	0.47
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.39	0.47
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.62	0.47
29:BE:75:SER:O	29:BE:78:TRP:HB2	2.15	0.47
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.96	0.47
30:BY:9:THR:HB	30:BY:53:MET:O	2.14	0.47
32:B4:11:CYS:HB3	32:B4:33:HIS:HE1	1.79	0.47
33:B1:24:LYS:HZ2	33:B1:33:LEU:HB2	1.79	0.47
33:B1:31:GLU:CD	33:B1:31:GLU:H	2.21	0.47
34:B3:7:ARG:O	34:B3:8:GLY:C	2.58	0.47
40:BH:5:LEU:HD12	40:BH:17:ASP:CB	2.43	0.47
42:BN:12:ARG:HG2	42:BN:16:HIS:CG	2.49	0.47
42:BN:65:LEU:HD11	42:BN:69:ARG:CZ	2.44	0.47
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.96	0.47
47:BF:33:ILE:HB	47:BF:90:LEU:HB2	1.97	0.47
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.97	0.47
47:BF:102:LEU:HB2	47:BF:106:ALA:HB3	1.95	0.47
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.30	0.47
48:BG:75:VAL:O	48:BG:78:VAL:HG22	2.15	0.47
48:BG:163:TYR:O	48:BG:165:ASP:N	2.47	0.47
50:BT:82:LYS:HD3	50:BT:84:TYR:HE1	1.79	0.47
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.32	0.47
53:B6:9:GLU:HG3	53:B6:13:HIS:NE2	2.30	0.47
53:B6:53:ASN:C	53:B6:55:ILE:H	2.21	0.47
1:CA:203:G:H1'	1:CA:465:A:N6	2.30	0.47
1:CA:213:G:H5''	1:CA:214:C:H5	1.80	0.47
1:CA:385:C:O2'	1:CA:386:C:H5'	2.15	0.47
1:CA:449:G:H2'	1:CA:450:G:C8	2.50	0.47
1:CA:469:C:H2'	1:CA:470:C:O4'	2.15	0.47
1:CA:482:A:H2'	1:CA:483:C:O4'	2.15	0.47
1:CA:576:C:OP2	1:CA:576:C:H3'	2.14	0.47
1:CA:618:C:H1'	15:CP:14:ARG:NH1	2.29	0.47
1:CA:643:C:H5'	7:CH:31:LEU:HD13	1.96	0.47
1:CA:658:C:H2'	1:CA:659:U:H6	1.79	0.47
1:CA:825:A:H2'	1:CA:826:C:H6	1.80	0.47
1:CA:925:G:C2	1:CA:927:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1182:G:H4'	1:CA:1183:U:H5'	1.96	0.47
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.95	0.47
2:CC:202:PHE:HZ	2:CC:205:GLU:HG2	1.79	0.47
3:CD:16:THR:HG22	3:CD:17:ASP:H	1.78	0.47
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.95	0.47
3:CD:55:ARG:HG3	3:CD:55:ARG:NH1	2.29	0.47
3:CD:149:LYS:HD3	3:CD:177:MET:CG	2.42	0.47
5:CF:62:MET:HG3	5:CF:64:VAL:CG2	2.39	0.47
6:CG:58:LEU:HD23	6:CG:58:LEU:N	2.30	0.47
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.96	0.47
10:CK:30:ILE:HG22	10:CK:45:THR:CB	2.44	0.47
12:CM:84:CYS:O	12:CM:88:LEU:HG	2.15	0.47
18:CS:27:LYS:HB3	18:CS:27:LYS:HZ3	1.79	0.47
21:CU:33:ARG:CZ	21:CU:34:ARG:HG2	2.44	0.47
23:DB:360:U:H2'	23:DB:361:G:N9	2.29	0.47
23:DB:526:A:N6	23:DB:2626:C:C4'	2.77	0.47
23:DB:566:U:H2'	23:DB:567:U:O4'	2.15	0.47
23:DB:1052:C:H2'	23:DB:1053:C:C6	2.50	0.47
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.58	0.47
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.79	0.47
23:DB:1279:G:H2'	23:DB:1280:G:O4'	2.13	0.47
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.79	0.47
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.50	0.47
23:DB:1533:C:H2'	23:DB:1534:U:C6	2.49	0.47
23:DB:1826:G:P	25:DC:221:GLY:H	2.38	0.47
23:DB:1844:C:OP1	25:DC:254:LYS:HA	2.15	0.47
23:DB:1868:C:H2'	23:DB:1869:G:O4'	2.14	0.47
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.80	0.47
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.14	0.47
23:DB:2540:C:H2'	23:DB:2541:A:C8	2.50	0.47
23:DB:2708:G:H2'	23:DB:2709:G:H8	1.79	0.47
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.15	0.47
23:DB:2774:C:OP1	26:DD:169:ARG:HG3	2.15	0.47
23:DB:2805:C:H2'	23:DB:2806:C:H6	1.79	0.47
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.97	0.47
25:DC:64:VAL:HG21	25:DC:86:ARG:CZ	2.45	0.47
27:DK:121:GLU:O	27:DK:122:VAL:C	2.57	0.47
28:DP:52:ARG:HB2	28:DP:55:HIS:O	2.14	0.47
29:DE:122:GLU:OE1	29:DE:122:GLU:N	2.46	0.47
29:DE:196:VAL:HA	29:DE:199:MET:HB3	1.96	0.47
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:37:ARG:HG3	30:DY:38:GLU:OE2	2.14	0.47
31:D0:43:THR:HG23	31:D0:47:TYR:C	2.39	0.47
31:D0:54:ILE:H	42:DN:118:ARG:HH12	1.62	0.47
34:D3:18:LYS:HD2	34:D3:19:GLY:N	2.30	0.47
38:DM:26:VAL:CG2	38:DM:133:LYS:HA	2.44	0.47
40:DH:89:LYS:N	40:DH:89:LYS:HD2	2.30	0.47
42:DN:12:ARG:HG2	42:DN:16:HIS:CG	2.50	0.47
42:DN:61:ALA:C	42:DN:63:ARG:N	2.70	0.47
46:DU:14:THR:O	46:DU:18:LYS:HA	2.14	0.47
47:DF:2:LYS:H	47:DF:2:LYS:HG2	1.52	0.47
48:DG:94:ARG:C	48:DG:94:ARG:NE	2.72	0.47
49:DR:21:ARG:C	49:DR:22:LEU:HD23	2.40	0.47
50:DT:21:SER:HB3	50:DT:31:VAL:HG22	1.96	0.47
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.29	0.47
51:DZ:7:VAL:HG21	51:DZ:59:ILE:CD1	2.42	0.47
52:DW:37:VAL:O	52:DW:38:ARG:HG2	2.14	0.47
52:DW:43:LYS:HB2	52:DW:58:LEU:HD21	1.96	0.47
53:D6:38:LEU:HB3	53:D6:41:LEU:HD22	1.96	0.47
53:D6:63:PRO:HD2	53:D6:64:ARG:NH1	2.30	0.47
53:D6:113:ASP:HA	53:D6:116:ARG:HD2	1.95	0.47
1:AA:801:U:H2'	1:AA:802:A:C8	2.49	0.47
1:AA:812:G:OP2	1:AA:902:G:N2	2.46	0.47
1:AA:946:A:H2'	1:AA:947:G:H8	1.73	0.47
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.97	0.47
3:AD:96:ARG:HH12	3:AD:133:SER:HB3	1.80	0.47
8:AI:21:LYS:N	8:AI:61:ASP:O	2.48	0.47
8:AI:83:THR:OG1	8:AI:97:LEU:HD13	2.14	0.47
10:AK:85:VAL:HG21	10:AK:96:ILE:HD11	1.96	0.47
12:AM:106:ARG:HH12	12:AM:109:LYS:HE3	1.80	0.47
13:AN:17:ASP:O	13:AN:21:ALA:HB3	2.15	0.47
13:AN:55:SER:HB2	13:AN:58:ARG:HD2	1.97	0.47
22:BA:48:U:H2'	22:BA:49:C:H6	1.80	0.47
23:BB:329:G:H1	46:BU:16:LYS:CG	2.24	0.47
23:BB:438:G:O2'	23:BB:439:A:H5'	2.14	0.47
23:BB:540:C:O2'	23:BB:541:A:H5'	2.15	0.47
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.49	0.47
23:BB:1468:U:H2'	23:BB:1522:A:H61	1.80	0.47
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.13	0.47
23:BB:1599:U:OP1	50:BT:40:LYS:HG3	2.15	0.47
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.80	0.47
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.80	0.47
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.80	0.47
26:BD:3:GLY:O	26:BD:4:LEU:HD13	2.15	0.47
26:BD:31:ALA:HA	26:BD:96:ILE:O	2.15	0.47
26:BD:90:PHE:N	26:BD:94:GLN:OE1	2.44	0.47
33:B1:34:GLU:HG2	33:B1:49:LYS:HD3	1.97	0.47
35:BV:66:ASP:CG	35:BV:68:LYS:HE2	2.40	0.47
35:BV:93:ARG:H	35:BV:93:ARG:HG3	1.51	0.47
38:BM:18:ARG:C	38:BM:38:ARG:HH22	2.23	0.47
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.96	0.47
40:BH:27:ARG:O	40:BH:28:ASN:ND2	2.47	0.47
40:BH:62:LEU:HD12	40:BH:62:LEU:N	2.29	0.47
43:BO:24:THR:O	43:BO:90:VAL:HB	2.15	0.47
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.97	0.47
51:BZ:63:GLY:O	51:BZ:67:VAL:N	2.41	0.47
52:BW:44:PHE:HE2	52:BW:76:ARG:CZ	2.27	0.47
1:CA:250:A:H1'	1:CA:252:U:C5	2.49	0.47
1:CA:1148:U:O4'	8:CI:17:ARG:HD3	2.15	0.47
1:CA:1242:G:H2'	1:CA:1243:C:C6	2.50	0.47
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.50	0.47
2:CC:13:ILE:HD13	2:CC:13:ILE:H	1.79	0.47
6:CG:71:THR:C	6:CG:90:VAL:HG22	2.40	0.47
12:CM:80:MET:C	12:CM:82:LEU:N	2.71	0.47
20:CB:187:ASP:O	20:CB:189:ASN:N	2.48	0.47
23:DB:283:G:H3'	23:DB:284:U:C5'	2.45	0.47
23:DB:305:C:H2'	23:DB:306:U:C6	2.50	0.47
23:DB:812:C:H4'	44:DQ:12:ARG:HH22	1.79	0.47
23:DB:861:A:H2'	23:DB:862:G:O4'	2.15	0.47
23:DB:956:G:C1'	38:DM:82:MET:HE1	2.44	0.47
23:DB:1100:C:C5	24:DI:1:ALA:O	2.68	0.47
23:DB:1535:A:H5''	23:DB:1536:C:C5	2.44	0.47
23:DB:1726:C:O5'	23:DB:1726:C:H6	1.97	0.47
23:DB:2060:A:H3'	29:DE:63:LYS:HZ1	1.80	0.47
23:DB:2811:G:OP1	26:DD:62:LYS:HD2	2.15	0.47
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.47
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.96	0.47
29:DE:171:ASP:CG	29:DE:172:ALA:N	2.73	0.47
32:D4:22:VAL:HB	32:D4:24:ARG:NE	2.28	0.47
32:D4:35:GLN:HB2	32:D4:35:GLN:HE21	1.54	0.47
34:D3:22:LYS:CA	34:D3:48:MET:HA	2.42	0.47
35:DV:30:ILE:HG12	35:DV:91:PHE:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:123:LYS:O	38:DM:124:LEU:C	2.58	0.47
40:DH:135:HIS:CD2	40:DH:136:SER:H	2.32	0.47
45:DS:2:GLU:O	45:DS:3:THR:C	2.58	0.47
47:DF:40:GLY:HA2	47:DF:84:ILE:HG23	1.96	0.47
49:DR:91:GLN:HG3	49:DR:92:TRP:H	1.80	0.47
50:DT:51:PHE:HB3	50:DT:53:VAL:HG23	1.96	0.47
51:DZ:20:HIS:O	51:DZ:21:ALA:HB3	2.15	0.47
52:DW:35:ILE:O	52:DW:37:VAL:N	2.48	0.47
53:D6:174:GLN:O	53:D6:178:LYS:HG3	2.14	0.47
1:AA:108:G:H5'	1:AA:109:A:H5''	1.97	0.47
1:AA:429:U:H1'	1:AA:430:A:H5''	1.97	0.47
1:AA:626:G:O2'	1:AA:627:G:H5'	2.15	0.47
1:AA:637:C:O2'	1:AA:638:U:H5'	2.15	0.47
1:AA:719:C:H2'	17:AR:38:ILE:HD13	1.97	0.47
1:AA:968:A:H4'	1:AA:969:A:OP2	2.13	0.47
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.50	0.47
5:AF:38:ARG:NH1	5:AF:96:VAL:HG12	2.30	0.47
8:AI:122:ARG:HG3	8:AI:122:ARG:HH11	1.80	0.47
9:AJ:12:ALA:H	9:AJ:18:ILE:HD12	1.80	0.47
9:AJ:56:HIS:H	13:AN:80:ARG:HH22	1.62	0.47
11:AL:43:LYS:CE	11:AL:44:PRO:HD3	2.45	0.47
19:AT:57:VAL:HG23	19:AT:58:ASP:N	2.29	0.47
20:AB:33:ALA:CA	20:AB:38:HIS:HA	2.42	0.47
20:AB:182:VAL:O	20:AB:195:VAL:HG13	2.14	0.47
22:BA:102:G:O2'	22:BA:103:U:H5'	2.14	0.47
23:BB:226:A:H2'	23:BB:227:A:C8	2.49	0.47
23:BB:322:A:C2	23:BB:340:A:C6	3.03	0.47
23:BB:564:C:OP2	49:BR:79:ARG:NH2	2.48	0.47
23:BB:668:A:H2'	23:BB:670:A:H62	1.78	0.47
23:BB:692:C:H2'	23:BB:693:A:H8	1.80	0.47
23:BB:962:G:H2'	23:BB:963:U:H6	1.78	0.47
23:BB:979:A:H3'	23:BB:980:A:C5'	2.45	0.47
23:BB:1201:U:H2'	23:BB:1202:G:C8	2.49	0.47
23:BB:1215:G:H2'	23:BB:1216:G:H8	1.80	0.47
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.80	0.47
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.15	0.47
23:BB:1845:G:O2'	23:BB:1846:G:H5'	2.14	0.47
23:BB:2060:A:H1'	57:BB:3545:HOH:O	2.15	0.47
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.30	0.47
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.15	0.47
23:BB:2747:G:H8	23:BB:2747:G:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2882:A:H3'	23:BB:2883:A:H5''	1.97	0.47
25:BC:90:ILE:HD13	25:BC:103:ILE:O	2.14	0.47
25:BC:259:ASN:C	25:BC:261:ARG:H	2.23	0.47
27:BK:109:SER:C	27:BK:111:LYS:H	2.23	0.47
28:BP:75:THR:O	28:BP:80:VAL:HG11	2.14	0.47
37:BL:135:ILE:HG12	37:BL:140:GLY:CA	2.40	0.47
38:BM:108:VAL:HG21	38:BM:112:LEU:HD12	1.96	0.47
40:BH:76:GLU:O	40:BH:77:THR:C	2.57	0.47
40:BH:132:PHE:HB3	40:BH:140:ALA:HB3	1.97	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:NE	2.29	0.47
44:BQ:108:LEU:CD2	49:BR:48:LYS:HB2	2.45	0.47
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.14	0.47
47:BF:45:ASP:O	47:BF:47:LYS:HD3	2.15	0.47
47:BF:101:ARG:O	47:BF:105:ILE:HB	2.14	0.47
48:BG:154:GLU:C	48:BG:156:TYR:H	2.21	0.47
53:B6:18:LEU:HD11	53:B6:175:LEU:HD22	1.96	0.47
53:B6:32:ARG:CB	53:B6:103:ILE:HG12	2.32	0.47
1:CA:92:U:H2'	1:CA:93:U:C6	2.49	0.47
1:CA:102:G:H2'	1:CA:103:U:H6	1.79	0.47
1:CA:113:G:H2'	1:CA:114:U:H6	1.79	0.47
1:CA:309:A:H2'	1:CA:310:G:H8	1.79	0.47
1:CA:449:G:H2'	1:CA:450:G:H8	1.78	0.47
1:CA:451:A:H4'	1:CA:452:A:O4'	2.14	0.47
1:CA:451:A:H5'	15:CP:70:ARG:HH22	1.79	0.47
1:CA:521:G:OP1	11:CL:50:LYS:HE2	2.15	0.47
1:CA:632:U:O2	1:CA:632:U:H3'	2.15	0.47
4:CE:93:VAL:HG12	4:CE:94:PHE:N	2.30	0.47
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.15	0.47
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.14	0.47
6:CG:2:ARG:NH1	6:CG:2:ARG:CB	2.78	0.47
6:CG:26:VAL:HA	6:CG:42:VAL:HG21	1.97	0.47
10:CK:113:THR:HG21	21:CU:28:LEU:HD11	1.95	0.47
11:CL:47:ALA:O	11:CL:48:LEU:HD23	2.15	0.47
13:CN:45:LEU:HD23	13:CN:46:LYS:HD3	1.97	0.47
13:CN:55:SER:HB2	13:CN:58:ARG:HD2	1.97	0.47
13:CN:60:ARG:CZ	13:CN:69:PRO:HB3	2.45	0.47
13:CN:63:CYS:HB2	13:CN:79:SER:CB	2.44	0.47
18:CS:66:VAL:C	18:CS:68:HIS:H	2.23	0.47
20:CB:151:LYS:HG3	20:CB:152:ASP:H	1.79	0.47
23:DB:151:C:H2'	23:DB:152:A:C8	2.50	0.47
23:DB:635:C:H2'	23:DB:636:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:836:G:H2'	23:DB:837:C:H6	1.78	0.47
23:DB:1936:A:OP1	23:DB:1937:A:H5'	2.15	0.47
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.14	0.47
23:DB:2266:A:H4'	23:DB:2267:A:C8	2.49	0.47
23:DB:2529:G:H4'	48:DG:174:LYS:CG	2.45	0.47
25:DC:57:HIS:CG	25:DC:58:LYS:N	2.82	0.47
26:DD:114:LYS:HD2	26:DD:116:LYS:HE3	1.96	0.47
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.96	0.47
28:DP:20:ARG:HD3	28:DP:112:ARG:NH2	2.30	0.47
29:DE:1:MET:HB2	29:DE:16:GLU:CA	2.45	0.47
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.96	0.47
30:DY:7:THR:HG22	30:DY:8:GLN:N	2.30	0.47
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.30	0.47
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.25	0.47
35:DV:46:LYS:N	35:DV:46:LYS:HD2	2.30	0.47
37:DL:79:LEU:CG	37:DL:113:ALA:H	2.28	0.47
37:DL:91:ASP:HA	37:DL:123:ARG:HB3	1.97	0.47
38:DM:31:PHE:CE2	38:DM:110:GLU:HA	2.50	0.47
42:DN:59:SER:O	42:DN:61:ALA:N	2.38	0.47
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.82	0.47
48:DG:104:LEU:HD22	48:DG:106:LEU:CD2	2.45	0.47
1:AA:93:U:P	1:AA:94:G:H5''	2.55	0.47
1:AA:144:G:H2'	1:AA:145:G:O4'	2.14	0.47
1:AA:167:A:O2'	1:AA:168:G:H5'	2.15	0.47
1:AA:195:A:H1'	1:AA:222:C:O2'	2.15	0.47
1:AA:418:C:H2'	1:AA:419:C:C6	2.50	0.47
1:AA:451:A:H5'	15:AP:70:ARG:HH22	1.78	0.47
1:AA:556:C:O2'	1:AA:557:G:H5'	2.15	0.47
1:AA:869:G:H4'	1:AA:872:A:C8	2.50	0.47
1:AA:951:G:O2'	1:AA:952:U:H5'	2.15	0.47
6:AG:145:GLU:C	6:AG:148:LYS:H	2.22	0.47
7:AH:14:ARG:HG3	7:AH:15:ASN:N	2.30	0.47
10:AK:92:ARG:HH11	10:AK:92:ARG:CG	2.27	0.47
14:AO:46:HIS:O	14:AO:48:LYS:N	2.46	0.47
20:AB:164:ASP:CG	20:AB:203:ASP:HB2	2.40	0.47
22:BA:52:A:OP1	22:BA:52:A:H4'	2.14	0.47
23:BB:24:G:H1'	45:BS:77:ASP:HB3	1.96	0.47
23:BB:547:A:C2'	23:BB:548:G:H5'	2.45	0.47
23:BB:559:G:H22	44:BQ:48:ASP:CG	2.23	0.47
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.49	0.47
23:BB:1522:A:H8	23:BB:1522:A:OP1	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1710:G:H4'	23:BB:2858:C:O2	2.15	0.47
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.50	0.47
23:BB:2041:U:H2'	23:BB:2042:A:H8	1.79	0.47
23:BB:2540:C:H2'	23:BB:2541:A:C8	2.50	0.47
29:BE:20:GLY:O	29:BE:21:ARG:C	2.58	0.47
35:BV:1:MET:CE	35:BV:2:PHE:H	2.15	0.47
35:BV:48:MET:SD	35:BV:85:LYS:HA	2.55	0.47
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.45	0.47
38:BM:20:LEU:HD13	38:BM:20:LEU:N	2.30	0.47
41:BJ:74:TYR:HE2	41:BJ:103:ILE:HD11	1.80	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:CD	2.45	0.47
45:BS:41:LYS:O	45:BS:44:ALA:HB3	2.15	0.47
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.15	0.47
49:BR:23:GLU:O	49:BR:24:LYS:C	2.58	0.47
51:BZ:39:TRP:HE1	51:BZ:41:GLU:HG2	1.80	0.47
1:CA:645:G:O2'	1:CA:646:G:H5'	2.15	0.47
1:CA:958:A:N1	18:CS:53:GLY:C	2.73	0.47
1:CA:1033:G:H5''	1:CA:1034:G:OP2	2.15	0.47
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.48	0.47
1:CA:1436:U:H2'	1:CA:1437:A:C8	2.50	0.47
1:CA:1533:C:C2'	1:CA:1534:A:H3'	2.36	0.47
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.80	0.47
4:CE:52:ALA:HB3	4:CE:58:ALA:N	2.30	0.47
5:CF:100:SER:HA	17:CR:23:LYS:NZ	2.30	0.47
6:CG:130:LYS:H	6:CG:134:VAL:HG21	1.80	0.47
7:CH:17:GLN:HG2	7:CH:62:LEU:HD23	1.96	0.47
14:CO:39:LEU:HD23	14:CO:43:PHE:HE1	1.80	0.47
15:CP:38:PHE:CD1	15:CP:39:PHE:N	2.83	0.47
18:CS:33:TRP:C	18:CS:35:ARG:H	2.22	0.47
18:CS:64:GLU:OE1	18:CS:64:GLU:N	2.48	0.47
19:CT:38:ILE:HD13	19:CT:85:LEU:HD13	1.96	0.47
22:DA:13:G:O2'	22:DA:15:A:H5'	2.14	0.47
22:DA:28:C:H5'	22:DA:29:A:OP2	2.15	0.47
23:DB:702:U:H2'	23:DB:703:U:H6	1.79	0.47
23:DB:796:C:H2'	23:DB:797:G:C8	2.50	0.47
23:DB:947:A:HO2'	23:DB:984:A:H2	1.58	0.47
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.50	0.47
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.50	0.47
23:DB:1864:U:O2'	23:DB:1865:U:H5'	2.14	0.47
23:DB:2052:A:OP1	26:DD:145:SER:HA	2.15	0.47
23:DB:2052:A:O3'	26:DD:149:ASN:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2663:G:H2'	23:DB:2664:G:H8	1.80	0.47
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.80	0.47
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.98	0.47
25:DC:141:HIS:NE2	25:DC:194:VAL:HA	2.29	0.47
26:DD:151:THR:N	26:DD:152:PRO:CD	2.78	0.47
32:D4:12:ARG:HG3	32:D4:13:ASN:ND2	2.30	0.47
34:D3:7:ARG:HG3	34:D3:7:ARG:HH11	1.80	0.47
37:DL:119:PRO:HB3	37:DL:139:GLY:O	2.15	0.47
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.15	0.47
40:DH:27:ARG:O	40:DH:28:ASN:ND2	2.47	0.47
40:DH:127:GLU:HB2	40:DH:143:ILE:HG21	1.97	0.47
40:DH:140:ALA:O	40:DH:142:VAL:HG23	2.15	0.47
41:DJ:13:ARG:HB3	41:DJ:53:TYR:HD2	1.80	0.47
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HA	2.30	0.47
45:DS:2:GLU:O	45:DS:3:THR:O	2.33	0.47
46:DU:9:GLU:OE2	46:DU:21:ARG:HD2	2.14	0.47
46:DU:86:PHE:CE1	46:DU:88:ASP:HB3	2.49	0.47
46:DU:86:PHE:HB2	46:DU:92:VAL:HB	1.97	0.47
47:DF:138:PRO:HA	47:DF:142:TYR:CE2	2.50	0.47
1:AA:398:U:H2'	1:AA:399:G:C8	2.50	0.46
1:AA:1080:A:O3'	4:AE:20:VAL:HG11	2.15	0.46
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.97	0.46
3:AD:2:ARG:NH1	3:AD:114:ARG:HG3	2.30	0.46
4:AE:44:ARG:HD2	4:AE:72:ASN:HD22	1.79	0.46
4:AE:144:GLU:O	4:AE:144:GLU:HG2	2.15	0.46
10:AK:80:ASN:ND2	10:AK:80:ASN:H	2.12	0.46
11:AL:121:PRO:O	11:AL:122:LYS:HB3	2.15	0.46
13:AN:9:GLU:HB2	13:AN:62:ARG:CZ	2.45	0.46
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.97	0.46
16:AQ:37:ILE:H	16:AQ:37:ILE:HG13	1.41	0.46
16:AQ:74:LEU:C	16:AQ:74:LEU:HD13	2.40	0.46
18:AS:40:PHE:HB3	18:AS:41:PRO:HD2	1.97	0.46
23:BB:135:U:H2'	23:BB:136:G:H8	1.77	0.46
23:BB:190:A:N6	23:BB:207:A:H1'	2.30	0.46
23:BB:564:C:O2'	23:BB:565:C:H5'	2.15	0.46
23:BB:654:A:O2'	23:BB:655:A:H5''	2.15	0.46
23:BB:682:G:O2'	23:BB:683:U:H5'	2.15	0.46
23:BB:1025:G:OP1	23:BB:1025:G:H8	1.98	0.46
23:BB:1279:G:H2'	23:BB:1280:G:O4'	2.15	0.46
23:BB:2623:G:H4'	23:BB:2825:G:C8	2.51	0.46
23:BB:2680:U:H5'	26:BD:194:PRO:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2805:C:H2'	23:BB:2806:C:C6	2.51	0.46
25:BC:76:VAL:HG12	25:BC:114:GLN:CG	2.34	0.46
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.40	0.46
33:B1:36:LYS:HG2	33:B1:47:ILE:HA	1.97	0.46
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.20	0.46
40:BH:12:LEU:HD21	40:BH:25:TYR:HE2	1.79	0.46
41:BJ:6:ALA:HB3	41:BJ:45:THR:CG2	2.44	0.46
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.80	0.46
44:BQ:77:LYS:O	44:BQ:80:ASN:HB3	2.15	0.46
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.15	0.46
46:BU:14:THR:O	46:BU:18:LYS:HG2	2.15	0.46
47:BF:11:VAL:HG13	47:BF:171:ALA:HB1	1.97	0.46
48:BG:9:VAL:C	48:BG:11:PRO:HD3	2.40	0.46
50:BT:41:ALA:C	50:BT:43:ILE:H	2.23	0.46
1:CA:113:G:O4'	1:CA:354:G:H4'	2.14	0.46
1:CA:162:A:H2'	1:CA:163:C:O4'	2.15	0.46
1:CA:213:G:H3'	1:CA:214:C:H6	1.80	0.46
1:CA:546:A:P	3:CD:68:GLU:HB3	2.55	0.46
1:CA:653:U:C4	7:CH:55:LYS:HE2	2.50	0.46
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.80	0.46
2:CC:171:ARG:HH11	2:CC:171:ARG:HB2	1.80	0.46
3:CD:146:GLU:CD	3:CD:147:LYS:H	2.22	0.46
5:CF:9:MET:HE1	17:CR:64:LEU:CA	2.41	0.46
8:CI:5:TYR:O	8:CI:20:ILE:N	2.48	0.46
8:CI:41:GLU:H	8:CI:44:ARG:NH1	2.13	0.46
8:CI:46:VAL:HG23	8:CI:47:VAL:N	2.30	0.46
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.15	0.46
13:CN:30:ILE:HG22	13:CN:31:SER:N	2.30	0.46
20:CB:42:LEU:HA	20:CB:45:THR:HB	1.97	0.46
20:CB:164:ASP:CG	20:CB:203:ASP:HB2	2.40	0.46
21:CU:49:ALA:O	21:CU:52:VAL:HG12	2.15	0.46
22:DA:111:U:H2'	22:DA:112:G:H8	1.74	0.46
23:DB:65:U:H2'	23:DB:66:C:H6	1.79	0.46
23:DB:235:U:H2'	23:DB:236:C:C6	2.50	0.46
23:DB:244:A:H2'	23:DB:245:G:O4'	2.15	0.46
23:DB:584:C:H2'	23:DB:585:G:C8	2.49	0.46
23:DB:633:A:OP1	37:DL:71:ALA:HB2	2.15	0.46
23:DB:705:A:H2'	23:DB:706:A:H8	1.80	0.46
23:DB:718:A:H3'	23:DB:719:C:C6	2.44	0.46
23:DB:992:C:H2'	23:DB:993:G:H8	1.81	0.46
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.88	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1190:G:O5'	37:DL:32:GLY:HA2	2.15	0.46
23:DB:1309:G:H4'	36:D2:7:PRO:CB	2.44	0.46
23:DB:1434:A:H62	23:DB:1558:C:H42	1.61	0.46
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.31	0.46
23:DB:1566:A:H5'	25:DC:213:ARG:NH1	2.30	0.46
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.50	0.46
23:DB:2103:C:H3'	23:DB:2104:C:O2	2.14	0.46
23:DB:2243:U:H2'	23:DB:2244:U:H6	1.80	0.46
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.66	0.46
26:DD:90:PHE:O	26:DD:91:THR:C	2.58	0.46
26:DD:114:LYS:HD2	26:DD:116:LYS:CE	2.44	0.46
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	1.97	0.46
40:DH:115:VAL:HG22	40:DH:117:LEU:N	2.28	0.46
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.79	0.46
44:DQ:105:PHE:HA	44:DQ:108:LEU:CD1	2.40	0.46
44:DQ:108:LEU:HD23	49:DR:48:LYS:CD	2.45	0.46
44:DQ:109:VAL:O	44:DQ:113:LYS:HG3	2.15	0.46
47:DF:132:ARG:O	47:DF:133:GLU:HB2	2.15	0.46
49:DR:14:VAL:CG2	49:DR:15:SER:N	2.78	0.46
49:DR:61:ALA:HB2	49:DR:98:ILE:HA	1.96	0.46
51:DZ:39:TRP:CE2	51:DZ:41:GLU:HA	2.50	0.46
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.44	0.46
52:DW:67:LYS:O	52:DW:68:PHE:HB2	2.14	0.46
1:AA:26:A:N6	1:AA:558:G:H1'	2.30	0.46
1:AA:707:U:H2'	1:AA:708:C:H6	1.80	0.46
3:AD:12:ARG:HA	3:AD:33:ILE:HD12	1.98	0.46
5:AF:49:TYR:CE1	17:AR:65:SER:HA	2.49	0.46
6:AG:26:VAL:HG12	6:AG:42:VAL:HG11	1.96	0.46
8:AI:38:PHE:CZ	8:AI:74:GLN:HB3	2.38	0.46
10:AK:90:PRO:C	10:AK:92:ARG:N	2.74	0.46
12:AM:73:SER:HB2	12:AM:74:MET:HE2	1.97	0.46
12:AM:80:MET:C	12:AM:82:LEU:N	2.72	0.46
13:AN:7:ALA:O	13:AN:8:ARG:C	2.59	0.46
16:AQ:45:VAL:HG21	16:AQ:60:ILE:HG21	1.97	0.46
19:AT:53:MET:HA	19:AT:56:ILE:CD1	2.44	0.46
19:AT:71:ALA:O	19:AT:74:HIS:HB2	2.16	0.46
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.79	0.46
23:BB:1473:G:O2'	23:BB:1474:U:H5'	2.15	0.46
23:BB:1539:U:H2'	23:BB:1539:U:O2	2.15	0.46
23:BB:1883:U:H2'	23:BB:1884:G:C1'	2.45	0.46
23:BB:1925:C:H42	55:BB:3111:LLL:H412	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2266:A:H1'	23:BB:2272:U:O4	2.15	0.46
23:BB:2327:A:H2'	23:BB:2328:A:C8	2.50	0.46
23:BB:2883:A:OP1	31:B0:48:TYR:HE1	1.98	0.46
25:BC:57:HIS:CG	25:BC:58:LYS:N	2.81	0.46
29:BE:1:MET:HB2	29:BE:16:GLU:CA	2.45	0.46
32:B4:16:ILE:HA	32:B4:24:ARG:O	2.14	0.46
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.80	0.46
38:BM:55:ARG:HG3	38:BM:55:ARG:NH2	2.30	0.46
40:BH:68:ARG:HB2	40:BH:134:VAL:CG1	2.38	0.46
44:BQ:20:ALA:O	44:BQ:21:LYS:C	2.58	0.46
45:BS:95:ARG:HA	45:BS:95:ARG:NE	2.31	0.46
46:BU:86:PHE:CE1	46:BU:88:ASP:HB3	2.50	0.46
47:BF:26:GLN:O	47:BF:27:VAL:C	2.57	0.46
47:BF:116:LEU:HD21	47:BF:174:PHE:HE2	1.81	0.46
48:BG:93:TYR:CD1	48:BG:106:LEU:HB2	2.50	0.46
51:BZ:45:ARG:O	51:BZ:46:PHE:HB2	2.15	0.46
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.43	0.46
53:B6:16:LYS:HE3	53:B6:16:LYS:N	2.31	0.46
53:B6:30:THR:HA	53:B6:183:ILE:CG1	2.45	0.46
53:B6:30:THR:HG23	53:B6:179:LYS:NZ	2.31	0.46
53:B6:150:SER:OG	53:B6:153:GLU:HG3	2.15	0.46
1:CA:26:A:H61	1:CA:558:G:H1'	1.80	0.46
1:CA:677:U:H2'	1:CA:678:U:H6	1.81	0.46
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.15	0.46
3:CD:12:ARG:HA	3:CD:33:ILE:HD12	1.98	0.46
5:CF:38:ARG:NH2	5:CF:63:ASN:ND2	2.64	0.46
9:CJ:24:GLU:CD	9:CJ:90:LEU:HD11	2.40	0.46
13:CN:46:LYS:HE3	18:CS:15:LEU:HD12	1.96	0.46
20:CB:72:LYS:O	20:CB:73:ARG:C	2.58	0.46
20:CB:161:PHE:CE2	20:CB:216:VAL:HG11	2.50	0.46
23:DB:494:G:O2'	23:DB:495:G:H5'	2.15	0.46
23:DB:558:U:P	41:DJ:113:PRO:HG2	2.55	0.46
23:DB:668:A:H2'	23:DB:670:A:H62	1.80	0.46
23:DB:851:C:O2'	23:DB:852:U:H5'	2.15	0.46
23:DB:939:G:O2'	23:DB:940:G:H5'	2.15	0.46
23:DB:1085:A:C1'	23:DB:1105:U:H1'	2.44	0.46
23:DB:1098:A:H3'	24:DI:3:LYS:HB3	1.96	0.46
23:DB:1102:C:O2'	23:DB:1103:A:H5'	2.16	0.46
23:DB:1174:U:H4'	23:DB:1176:U:C1'	2.44	0.46
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.51	0.46
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1523:U:H5''	23:DB:1524:G:H8	1.76	0.46
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.15	0.46
23:DB:2228:G:H2'	23:DB:2229:U:H6	1.79	0.46
23:DB:2294:G:P	43:DO:94:ARG:HH11	2.38	0.46
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.50	0.46
23:DB:2730:C:H2'	23:DB:2731:G:C8	2.49	0.46
23:DB:2880:C:O4'	42:DN:91:ALA:HB3	2.14	0.46
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.97	0.46
25:DC:35:LYS:HD2	25:DC:37:SER:OG	2.16	0.46
25:DC:157:ALA:HB1	25:DC:196:ASN:HB3	1.96	0.46
35:DV:80:HIS:HD2	35:DV:83:LYS:H	1.63	0.46
36:D2:10:LEU:HD21	36:D2:14:ARG:HH11	1.78	0.46
38:DM:38:ARG:HB3	38:DM:98:PRO:HD3	1.97	0.46
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.97	0.46
43:DO:58:ILE:HG22	43:DO:62:LEU:CD2	2.45	0.46
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.97	0.46
47:DF:77:LYS:HD2	47:DF:79:ARG:HE	1.80	0.46
48:DG:79:THR:CG2	48:DG:80:GLU:HG2	2.37	0.46
53:D6:70:SER:HB3	53:D6:76:LEU:HG	1.98	0.46
1:AA:311:C:O2'	1:AA:312:C:H5'	2.15	0.46
1:AA:482:A:H2'	1:AA:483:C:O4'	2.16	0.46
1:AA:521:G:OP1	11:AL:50:LYS:HE2	2.15	0.46
1:AA:1451:U:H5''	1:AA:1452:C:OP2	2.16	0.46
1:AA:1489:G:H2'	1:AA:1490:U:C6	2.51	0.46
2:AC:146:LYS:HB2	2:AC:202:PHE:O	2.15	0.46
2:AC:202:PHE:HZ	2:AC:205:GLU:HG2	1.79	0.46
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.79	0.46
4:AE:149:PRO:HG2	4:AE:150:GLU:OE1	2.16	0.46
8:AI:78:ILE:O	8:AI:82:ILE:HG13	2.16	0.46
12:AM:75:SER:O	12:AM:78:ARG:HB2	2.15	0.46
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.79	0.46
13:AN:30:ILE:HG22	13:AN:31:SER:N	2.29	0.46
14:AO:84:ARG:C	14:AO:85:LEU:HD12	2.41	0.46
15:AP:38:PHE:CE2	15:AP:51:ARG:HD3	2.50	0.46
19:AT:14:GLU:O	19:AT:17:ARG:HB3	2.15	0.46
23:BB:225:C:H2'	23:BB:226:A:O4'	2.15	0.46
23:BB:345:A:H1'	23:BB:346:A:C2	2.43	0.46
23:BB:660:C:H2'	23:BB:661:A:H8	1.79	0.46
23:BB:760:G:H2'	23:BB:761:A:O4'	2.14	0.46
23:BB:1270:C:H5''	23:BB:1271:G:C5'	2.45	0.46
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1485:U:O2'	23:BB:1486:U:H5'	2.15	0.46
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.14	0.46
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.49	0.46
26:BD:11:MET:HA	26:BD:24:VAL:O	2.15	0.46
29:BE:129:PRO:HD3	29:BE:156:ASN:OD1	2.15	0.46
29:BE:137:LYS:O	29:BE:141:MET:HG3	2.16	0.46
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.73	0.46
30:BY:37:ARG:HG3	30:BY:38:GLU:OE2	2.15	0.46
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.20	0.46
44:BQ:108:LEU:HD23	49:BR:48:LYS:CD	2.46	0.46
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.19	0.46
1:CA:108:G:H5'	1:CA:109:A:H5''	1.97	0.46
1:CA:292:G:O2'	1:CA:609:A:N6	2.48	0.46
1:CA:360:G:O2'	1:CA:361:G:H5'	2.15	0.46
1:CA:635:A:H2'	1:CA:636:U:H6	1.80	0.46
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.51	0.46
1:CA:1186:G:H21	13:CN:100:TRP:C	2.23	0.46
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.77	0.46
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.15	0.46
6:CG:46:LEU:HG	6:CG:57:GLU:CB	2.45	0.46
7:CH:1:SER:O	7:CH:3:GLN:HG3	2.14	0.46
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.14	0.46
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.28	0.46
10:CK:70:ALA:C	10:CK:72:ALA:N	2.70	0.46
11:CL:19:ASN:HD22	11:CL:19:ASN:HA	1.52	0.46
12:CM:2:ARG:HD3	12:CM:2:ARG:N	2.28	0.46
15:CP:17:TYR:HB2	15:CP:39:PHE:HD2	1.81	0.46
18:CS:10:ILE:O	18:CS:10:ILE:HG13	2.15	0.46
20:CB:102:ASN:O	20:CB:106:VAL:HG23	2.15	0.46
21:CU:3:ILE:CG2	21:CU:19:LYS:HD2	2.45	0.46
23:DB:510:C:H2'	23:DB:511:U:O4'	2.15	0.46
23:DB:572:A:H5''	23:DB:573:U:OP2	2.15	0.46
23:DB:937:C:H2'	23:DB:938:G:H8	1.80	0.46
23:DB:962:G:H21	23:DB:2250:G:N2	2.02	0.46
23:DB:979:A:H2'	23:DB:982:C:N4	2.30	0.46
23:DB:1117:C:C2'	23:DB:1118:C:H5'	2.46	0.46
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.79	0.46
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.16	0.46
23:DB:1463:C:H2'	23:DB:1464:G:H8	1.81	0.46
23:DB:1465:G:H2'	23:DB:1466:U:O4'	2.15	0.46
23:DB:2021:C:OP1	31:D0:8:THR:HG21	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2149:U:O2'	23:DB:2150:C:H5'	2.15	0.46
23:DB:2376:A:H1'	43:DO:111:ARG:HH12	1.81	0.46
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.51	0.46
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.15	0.46
23:DB:2553:G:H2'	23:DB:2554:U:H4'	1.97	0.46
23:DB:2635:A:H5'	26:DD:79:LEU:HB2	1.97	0.46
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.50	0.46
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.14	0.46
25:DC:83:ASP:HB2	25:DC:90:ILE:HB	1.97	0.46
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.45	0.46
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.31	0.46
33:D1:10:LEU:HD23	33:D1:35:LEU:HD21	1.98	0.46
34:D3:36:ALA:O	34:D3:40:LYS:HG3	2.15	0.46
35:DV:32:GLY:O	35:DV:93:ARG:HD2	2.15	0.46
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.16	0.46
38:DM:31:PHE:CD1	38:DM:105:MET:HB3	2.50	0.46
40:DH:3:VAL:HA	40:DH:39:ALA:N	2.31	0.46
42:DN:41:ALA:C	42:DN:43:GLU:H	2.23	0.46
42:DN:63:ARG:HA	42:DN:80:PHE:CE2	2.50	0.46
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.29	0.46
44:DQ:55:GLN:O	44:DQ:59:LEU:HB2	2.15	0.46
47:DF:101:ARG:O	47:DF:105:ILE:HB	2.14	0.46
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.45	0.46
47:DF:129:MET:HE3	47:DF:129:MET:O	2.14	0.46
47:DF:134:GLN:OE1	47:DF:136:ILE:HA	2.14	0.46
48:DG:22:VAL:HG22	48:DG:36:LEU:HD12	1.97	0.46
48:DG:108:PHE:C	48:DG:110:HIS:H	2.24	0.46
53:D6:183:ILE:C	53:D6:185:GLY:N	2.73	0.46
1:AA:147:G:H2'	1:AA:148:G:H8	1.78	0.46
1:AA:301:G:O2'	1:AA:302:G:H5'	2.16	0.46
1:AA:455:G:H2'	1:AA:456:A:C8	2.51	0.46
1:AA:469:C:H2'	1:AA:470:C:O4'	2.16	0.46
1:AA:640:A:O2'	1:AA:641:U:H5'	2.15	0.46
1:AA:961:U:H3	1:AA:983:A:H62	1.63	0.46
2:AC:128:MET:H	2:AC:128:MET:CE	2.28	0.46
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.98	0.46
6:AG:146:ALA:C	10:AK:55:ARG:NH2	2.73	0.46
11:AL:49:ARG:H	11:AL:49:ARG:CD	2.29	0.46
14:AO:8:THR:O	14:AO:11:ILE:HG22	2.15	0.46
14:AO:17:ARG:HG2	14:AO:24:SER:HB2	1.98	0.46
14:AO:25:THR:CG2	14:AO:70:LEU:HD23	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:64:GLU:OE1	18:AS:64:GLU:N	2.48	0.46
22:BA:40:U:O2'	22:BA:41:G:H5'	2.16	0.46
23:BB:29:U:H2'	23:BB:30:G:C8	2.50	0.46
23:BB:65:U:H2'	23:BB:66:C:H6	1.80	0.46
23:BB:82:U:H2'	23:BB:83:A:C8	2.51	0.46
23:BB:481:G:C2	23:BB:507:A:C4	3.03	0.46
23:BB:927:A:H2'	23:BB:928:A:C8	2.51	0.46
23:BB:1517:G:O2'	23:BB:1518:C:H5'	2.16	0.46
23:BB:2407:A:H2'	23:BB:2408:U:C6	2.51	0.46
23:BB:2563:U:O2	23:BB:2565:A:H8	1.99	0.46
23:BB:2756:U:OP2	32:B4:19:ARG:HG2	2.15	0.46
25:BC:35:LYS:O	25:BC:36:ASN:HB2	2.15	0.46
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.16	0.46
25:BC:174:ARG:HD3	25:BC:180:MET:HE1	1.96	0.46
27:BK:68:GLY:HA3	27:BK:78:ARG:HB3	1.97	0.46
37:BL:79:LEU:CG	37:BL:113:ALA:H	2.29	0.46
40:BH:41:LYS:C	40:BH:43:ASN:N	2.71	0.46
42:BN:29:VAL:HG13	42:BN:83:LEU:HD21	1.96	0.46
43:BO:30:ARG:NH1	43:BO:102:ARG:HB2	2.31	0.46
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.16	0.46
48:BG:10:VAL:H	48:BG:48:THR:HG22	1.80	0.46
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.40	0.46
50:BT:10:VAL:HG21	50:BT:42:GLU:HG3	1.96	0.46
53:B6:32:ARG:HB2	53:B6:103:ILE:CG2	2.46	0.46
53:B6:78:ALA:HA	53:B6:81:LYS:CD	2.38	0.46
1:CA:840:C:N3	1:CA:842:U:H4'	2.31	0.46
1:CA:1130:A:H5'	8:CI:19:PHE:CE2	2.50	0.46
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.45	0.46
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.31	0.46
8:CI:44:ARG:HH11	8:CI:44:ARG:HG2	1.79	0.46
9:CJ:6:ILE:HA	9:CJ:102:LEU:O	2.15	0.46
11:CL:23:LEU:O	11:CL:25:ALA:N	2.49	0.46
11:CL:79:ILE:C	11:CL:101:LEU:HD12	2.40	0.46
12:CM:65:GLU:O	12:CM:66:GLY:C	2.59	0.46
15:CP:20:VAL:CG2	15:CP:32:PHE:HB2	2.46	0.46
19:CT:27:MET:HE3	19:CT:31:ILE:HD11	1.97	0.46
19:CT:54:GLN:HG3	19:CT:75:LYS:HE3	1.97	0.46
19:CT:57:VAL:HG23	19:CT:58:ASP:N	2.30	0.46
23:DB:31:C:O2'	23:DB:32:C:H5'	2.16	0.46
23:DB:794:A:H2'	23:DB:795:C:C6	2.50	0.46
23:DB:870:U:H5''	38:DM:6:ARG:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.26	0.46
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.15	0.46
23:DB:1685:C:H2'	23:DB:1686:C:H6	1.81	0.46
23:DB:1742:U:H2'	23:DB:1743:G:H8	1.80	0.46
23:DB:2420:C:OP1	34:D3:33:THR:HB	2.15	0.46
23:DB:2784:U:H4'	26:DD:42:ASN:O	2.15	0.46
24:DI:69:VAL:O	24:DI:69:VAL:HG23	2.14	0.46
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.54	0.46
25:DC:28:PRO:O	25:DC:30:ALA:N	2.48	0.46
25:DC:208:GLY:O	25:DC:209:ALA:C	2.58	0.46
28:DP:112:ARG:HB2	28:DP:112:ARG:NH1	2.27	0.46
36:D2:11:LYS:O	36:D2:12:ARG:C	2.59	0.46
37:DL:57:LEU:C	37:DL:59:ARG:N	2.74	0.46
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.98	0.46
39:DX:10:SER:N	39:DX:60:LYS:HE2	2.27	0.46
40:DH:5:LEU:HD11	40:DH:12:LEU:O	2.15	0.46
40:DH:78:VAL:HG12	40:DH:79:THR:N	2.31	0.46
44:DQ:108:LEU:CD2	49:DR:48:LYS:HB2	2.45	0.46
47:DF:11:VAL:HG13	47:DF:171:ALA:HB1	1.96	0.46
47:DF:26:GLN:O	47:DF:27:VAL:C	2.58	0.46
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.15	0.46
50:DT:45:ALA:HA	50:DT:48:GLN:HB2	1.97	0.46
50:DT:55:VAL:HG22	50:DT:87:LEU:CD2	2.45	0.46
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.43	0.46
53:D6:113:ASP:HA	53:D6:116:ARG:HG2	1.98	0.46
1:AA:66:A:C2'	1:AA:67:C:H5'	2.44	0.46
1:AA:90:C:H2'	1:AA:91:U:C6	2.50	0.46
1:AA:286:C:H2'	1:AA:287:U:C6	2.50	0.46
1:AA:292:G:O2'	1:AA:609:A:N6	2.49	0.46
1:AA:551:U:H2'	1:AA:552:U:C6	2.50	0.46
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.30	0.46
1:AA:1117:A:H4'	8:AI:105:ARG:NH1	2.30	0.46
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.79	0.46
3:AD:2:ARG:O	3:AD:3:TYR:HB3	2.15	0.46
3:AD:55:ARG:HA	3:AD:55:ARG:NE	2.30	0.46
7:AH:9:MET:O	7:AH:13:ILE:HG13	2.15	0.46
7:AH:110:MET:HG3	7:AH:115:ALA:HB2	1.97	0.46
8:AI:55:ASP:O	8:AI:59:LYS:HE3	2.16	0.46
8:AI:56:MET:O	8:AI:58:GLU:HG2	2.16	0.46
8:AI:74:GLN:O	8:AI:78:ILE:HG13	2.16	0.46
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:23:LEU:O	11:AL:25:ALA:N	2.48	0.46
12:AM:95:PRO:HB2	12:AM:99:GLN:OE1	2.16	0.46
13:AN:12:ARG:HE	13:AN:58:ARG:NH1	2.13	0.46
19:AT:77:ASN:O	19:AT:81:GLN:HG3	2.15	0.46
20:AB:147:LEU:O	20:AB:151:LYS:N	2.47	0.46
22:BA:78:A:H2'	22:BA:79:G:O4'	2.16	0.46
23:BB:419:U:H2'	23:BB:420:C:H6	1.78	0.46
23:BB:532:A:O2'	23:BB:2021:C:H5	1.97	0.46
23:BB:671:C:O2'	23:BB:672:C:H5'	2.15	0.46
23:BB:699:A:H4'	23:BB:1634:A:C5	2.50	0.46
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.80	0.46
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.16	0.46
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.78	0.46
23:BB:2844:G:H2'	23:BB:2845:U:O4'	2.16	0.46
25:BC:64:VAL:HG21	25:BC:86:ARG:CZ	2.45	0.46
29:BE:60:TRP:HB3	29:BE:61:ARG:H	1.33	0.46
35:BV:65:VAL:O	35:BV:66:ASP:HB3	2.16	0.46
40:BH:68:ARG:O	40:BH:72:ILE:HG22	2.15	0.46
40:BH:89:LYS:HA	40:BH:89:LYS:NZ	2.31	0.46
40:BH:128:HIS:O	40:BH:143:ILE:HA	2.15	0.46
40:BH:128:HIS:CG	40:BH:144:VAL:HB	2.50	0.46
41:BJ:13:ARG:HB3	41:BJ:53:TYR:CD2	2.50	0.46
41:BJ:70:THR:HG22	41:BJ:90:GLU:OE2	2.16	0.46
42:BN:2:ARG:HG2	42:BN:5:LYS:CB	2.40	0.46
42:BN:75:ILE:HD12	42:BN:76:VAL:N	2.30	0.46
47:BF:42:ALA:O	47:BF:43:ILE:C	2.59	0.46
51:BZ:33:LEU:O	51:BZ:34:HIS:CG	2.69	0.46
1:CA:317:U:H2'	1:CA:318:G:C8	2.50	0.46
1:CA:651:C:H2'	1:CA:652:U:C6	2.50	0.46
1:CA:1320:C:H1'	18:CS:72:GLU:CA	2.45	0.46
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.15	0.46
2:CC:5:HIS:HD2	2:CC:7:ASN:H	1.62	0.46
2:CC:46:LEU:HD12	2:CC:75:VAL:HG22	1.97	0.46
7:CH:6:ILE:O	7:CH:10:LEU:HG	2.15	0.46
7:CH:45:ILE:HG21	7:CH:60:LEU:CD2	2.44	0.46
7:CH:91:LEU:HD12	7:CH:116:ARG:HB2	1.97	0.46
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.16	0.46
13:CN:20:PHE:HD2	13:CN:54:SER:O	1.99	0.46
16:CQ:11:VAL:O	16:CQ:54:ILE:HG13	2.15	0.46
17:CR:38:ILE:HG23	17:CR:62:ARG:NH2	2.30	0.46
18:CS:41:PRO:O	18:CS:44:ILE:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:16:ARG:O	21:CU:17:ARG:C	2.58	0.46
22:DA:17:C:O2'	22:DA:18:G:H5'	2.16	0.46
23:DB:121:G:H2'	23:DB:122:G:H8	1.80	0.46
23:DB:742:A:O2'	23:DB:743:A:H5'	2.15	0.46
23:DB:794:A:H2'	23:DB:795:C:H6	1.80	0.46
23:DB:833:A:H2'	23:DB:834:G:H8	1.78	0.46
23:DB:960:A:C4'	23:DB:2457:U:H4'	2.46	0.46
23:DB:979:A:H3'	23:DB:980:A:C5'	2.45	0.46
23:DB:1099:G:O4'	24:DI:3:LYS:O	2.33	0.46
23:DB:1914:C:H2'	23:DB:1915:U:H5'	1.98	0.46
23:DB:2560:A:H2'	23:DB:2561:U:H6	1.79	0.46
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.15	0.46
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.79	0.46
25:DC:204:LEU:CD2	25:DC:209:ALA:HB1	2.45	0.46
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.31	0.46
29:DE:88:ARG:HB3	29:DE:89:PRO:HD2	1.98	0.46
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.45	0.46
29:DE:160:ALA:C	29:DE:162:ARG:H	2.24	0.46
32:D4:2:LYS:HZ3	32:D4:4:ARG:HG3	1.80	0.46
33:D1:32:LYS:NZ	33:D1:52:LYS:HA	2.31	0.46
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.80	0.46
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.98	0.46
43:DO:56:LYS:HG2	43:DO:60:GLU:OE1	2.15	0.46
44:DQ:91:ARG:CB	44:DQ:94:LEU:HD23	2.44	0.46
45:DS:15:GLN:O	45:DS:19:LEU:HB2	2.15	0.46
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.30	0.46
49:DR:39:LEU:HB2	49:DR:49:ILE:HD11	1.97	0.46
50:DT:60:THR:HB	50:DT:81:LYS:HD2	1.98	0.46
50:DT:69:ARG:NE	50:DT:70:HIS:H	2.13	0.46
1:AA:26:A:H61	1:AA:558:G:H1'	1.80	0.46
1:AA:36:C:OP1	11:AL:119:LYS:HD2	2.16	0.46
1:AA:132:C:H5''	19:AT:68:LYS:NZ	2.29	0.46
1:AA:213:G:H3'	1:AA:214:C:H6	1.79	0.46
1:AA:239:U:H6	1:AA:239:U:C5'	2.28	0.46
1:AA:486:U:H2'	1:AA:487:A:H8	1.80	0.46
1:AA:512:U:H2'	1:AA:513:C:C6	2.51	0.46
1:AA:593:U:H2'	1:AA:594:U:C6	2.51	0.46
1:AA:617:G:C4'	15:AP:46:LYS:HE2	2.42	0.46
1:AA:824:G:O2'	1:AA:825:A:H5'	2.15	0.46
1:AA:884:U:H4'	1:AA:885:G:H5''	1.96	0.46
1:AA:922:G:H2'	1:AA:923:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.51	0.46
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.16	0.46
3:AD:185:PRO:HB2	3:AD:190:LEU:HG	1.98	0.46
4:AE:52:ALA:HB3	4:AE:58:ALA:N	2.30	0.46
10:AK:43:TRP:HZ3	10:AK:45:THR:HG22	1.79	0.46
14:AO:71:LYS:HD3	14:AO:72:ARG:N	2.31	0.46
20:AB:98:GLY:O	20:AB:102:ASN:N	2.48	0.46
23:BB:414:C:H2'	23:BB:415:A:H8	1.80	0.46
23:BB:470:A:H2'	23:BB:471:A:C8	2.51	0.46
23:BB:548:G:H5''	23:BB:549:G:N3	2.31	0.46
23:BB:584:C:H2'	23:BB:585:G:H8	1.79	0.46
23:BB:698:C:H4'	23:BB:734:A:H61	1.80	0.46
23:BB:814:C:O2'	23:BB:815:C:H5'	2.16	0.46
23:BB:822:G:O2'	23:BB:823:C:H5'	2.16	0.46
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.80	0.46
23:BB:1418:G:H1'	23:BB:1580:A:N6	2.30	0.46
23:BB:1689:A:H2'	23:BB:1690:A:H8	1.80	0.46
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.49	0.46
23:BB:2352:A:N1	52:BW:30:VAL:HG11	2.31	0.46
23:BB:2491:U:H5''	23:BB:2570:G:C5'	2.45	0.46
23:BB:2555:U:H2'	23:BB:2556:C:O4'	2.15	0.46
23:BB:2712:C:H3'	23:BB:2714:G:H5''	1.98	0.46
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.80	0.46
24:BI:35:MET:SD	24:BI:35:MET:C	2.98	0.46
28:BP:19:PHE:CE2	28:BP:25:VAL:HG11	2.51	0.46
36:B2:13:ASN:O	36:B2:17:GLY:HA3	2.16	0.46
37:BL:55:MET:HE2	37:BL:59:ARG:HE	1.80	0.46
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.98	0.46
38:BM:55:ARG:HG3	38:BM:55:ARG:HH21	1.81	0.46
41:BJ:23:LYS:HZ1	41:BJ:142:ILE:HA	1.81	0.46
41:BJ:43:GLU:O	41:BJ:44:TYR:C	2.57	0.46
41:BJ:133:ALA:C	41:BJ:135:GLN:H	2.23	0.46
42:BN:31:HIS:O	42:BN:33:ILE:HG13	2.16	0.46
44:BQ:77:LYS:HE2	44:BQ:116:LEU:HD13	1.95	0.46
47:BF:118:ALA:HA	47:BF:176:PHE:CE2	2.51	0.46
48:BG:9:VAL:O	48:BG:11:PRO:HD3	2.16	0.46
50:BT:61:LEU:O	50:BT:81:LYS:HA	2.16	0.46
53:B6:55:ILE:CG2	53:B6:79:ILE:HD11	2.44	0.46
53:B6:61:PRO:HD2	53:B6:65:THR:O	2.16	0.46
1:CA:26:A:N6	1:CA:558:G:H1'	2.30	0.46
1:CA:45:G:H2'	1:CA:46:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:513:C:H2'	1:CA:514:C:H6	1.80	0.46
1:CA:626:G:O2'	1:CA:627:G:H5'	2.15	0.46
1:CA:1289:A:H2'	1:CA:1290:G:H5'	1.97	0.46
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.51	0.46
2:CC:155:ARG:H	2:CC:162:ALA:HB1	1.81	0.46
3:CD:55:ARG:NE	3:CD:55:ARG:HA	2.30	0.46
5:CF:70:VAL:HG23	5:CF:71:ILE:N	2.30	0.46
6:CG:11:ILE:H	6:CG:11:ILE:HD12	1.79	0.46
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.98	0.46
8:CI:20:ILE:HG12	8:CI:86:LEU:HD12	1.96	0.46
9:CJ:28:THR:HG21	9:CJ:90:LEU:HD22	1.97	0.46
10:CK:20:ALA:HB2	10:CK:81:LEU:HD12	1.97	0.46
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.16	0.46
11:CL:43:LYS:CE	11:CL:44:PRO:HD3	2.45	0.46
12:CM:16:ILE:HG23	12:CM:17:ALA:H	1.81	0.46
15:CP:22:ALA:CB	15:CP:32:PHE:HA	2.45	0.46
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.98	0.46
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.96	0.46
20:CB:33:ALA:CA	20:CB:38:HIS:HA	2.44	0.46
23:DB:523:C:H4'	23:DB:540:C:O2	2.16	0.46
23:DB:647:G:H2'	23:DB:648:G:H8	1.81	0.46
23:DB:671:C:O2'	23:DB:672:C:H5'	2.16	0.46
23:DB:755:U:O2'	23:DB:756:A:H5'	2.16	0.46
23:DB:839:U:H1'	23:DB:1191:G:H1'	1.97	0.46
23:DB:965:C:C2'	23:DB:966:G:H5'	2.46	0.46
23:DB:998:C:H3'	57:DB:3273:HOH:O	2.15	0.46
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.98	0.46
23:DB:1403:A:O2'	23:DB:1404:C:H5'	2.15	0.46
23:DB:1804:C:P	25:DC:256:THR:HB	2.56	0.46
23:DB:2076:U:O4'	23:DB:2076:U:O2	2.32	0.46
23:DB:2152:G:H2'	23:DB:2153:C:O4'	2.15	0.46
23:DB:2204:G:O2'	23:DB:2205:A:H5'	2.15	0.46
23:DB:2223:G:C2'	23:DB:2224:G:H5'	2.46	0.46
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.80	0.46
23:DB:2397:G:H2'	23:DB:2398:U:H6	1.81	0.46
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.51	0.46
24:DI:140:GLU:H	24:DI:140:GLU:CD	2.23	0.46
25:DC:79:ARG:HD2	25:DC:81:GLU:CG	2.45	0.46
25:DC:106:PRO:O	25:DC:109:LEU:HB3	2.15	0.46
25:DC:245:THR:HG23	25:DC:249:VAL:O	2.16	0.46
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:106:LYS:CE	29:DE:200:LEU:HB3	2.46	0.46
36:D2:28:ARG:C	36:D2:30:VAL:N	2.74	0.46
38:DM:35:ALA:HB2	38:DM:100:LYS:H	1.79	0.46
38:DM:97:GLN:N	38:DM:97:GLN:OE1	2.48	0.46
40:DH:53:GLU:OE1	40:DH:54:LEU:HD23	2.15	0.46
40:DH:68:ARG:NH1	40:DH:68:ARG:HG3	2.29	0.46
41:DJ:13:ARG:HB3	41:DJ:53:TYR:CD2	2.51	0.46
41:DJ:110:PRO:O	41:DJ:115:GLY:HA3	2.15	0.46
45:DS:41:LYS:O	45:DS:44:ALA:HB3	2.16	0.46
48:DG:148:ARG:HB2	48:DG:161:VAL:O	2.16	0.46
48:DG:152:ARG:HD2	48:DG:152:ARG:HA	1.68	0.46
50:DT:10:VAL:HG21	50:DT:42:GLU:HG3	1.98	0.46
51:DZ:63:GLY:O	51:DZ:67:VAL:HG23	2.15	0.46
53:D6:163:LYS:HE3	53:D6:167:GLU:OE1	2.15	0.46
1:AA:72:A:N6	1:AA:98:A:H2	2.13	0.46
1:AA:162:A:H2'	1:AA:163:C:O4'	2.16	0.46
1:AA:309:A:H2'	1:AA:310:G:H8	1.80	0.46
1:AA:546:A:P	3:AD:68:GLU:HB3	2.56	0.46
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.81	0.46
1:AA:1130:A:H2'	1:AA:1131:G:C8	2.51	0.46
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.15	0.46
2:AC:64:ARG:HD3	2:AC:64:ARG:HA	1.70	0.46
4:AE:47:PHE:HZ	4:AE:137:ARG:HH21	1.62	0.46
5:AF:38:ARG:HH21	5:AF:63:ASN:ND2	2.14	0.46
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.31	0.46
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.44	0.46
10:AK:17:ASP:HB3	10:AK:80:ASN:CG	2.41	0.46
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.31	0.46
20:AB:23:ASN:ND2	20:AB:23:ASN:C	2.72	0.46
20:AB:110:ILE:HA	20:AB:147:LEU:HD13	1.97	0.46
20:AB:165:ALA:HB3	20:AB:186:VAL:HG12	1.97	0.46
23:BB:118:A:H5'	23:BB:119:A:C8	2.44	0.46
23:BB:242:G:OP2	34:B3:2:LYS:NZ	2.38	0.46
23:BB:670:A:H3'	37:BL:43:GLY:H	1.81	0.46
23:BB:856:G:H2'	23:BB:857:G:C8	2.51	0.46
23:BB:1161:C:H2'	23:BB:1162:G:H8	1.80	0.46
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.96	0.46
23:BB:1956:U:H2'	23:BB:1957:C:H5'	1.97	0.46
23:BB:2352:A:C6	52:BW:30:VAL:HG11	2.50	0.46
23:BB:2377:A:H2'	23:BB:2378:A:H8	1.76	0.46
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.78	0.46
25:BC:158:GLY:H	25:BC:194:VAL:HG13	1.80	0.46
26:BD:14:ILE:HG23	26:BD:22:ILE:HB	1.96	0.46
26:BD:30:GLU:HB2	26:BD:52:THR:CG2	2.46	0.46
29:BE:29:HIS:C	29:BE:31:VAL:N	2.74	0.46
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.97	0.46
33:B1:37:LYS:O	33:B1:45:HIS:HA	2.15	0.46
34:B3:33:THR:HG23	34:B3:34:LYS:N	2.31	0.46
35:BV:30:ILE:HG12	35:BV:91:PHE:HB2	1.98	0.46
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.31	0.46
42:BN:28:LEU:HD23	42:BN:113:ILE:HG23	1.96	0.46
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.16	0.46
45:BS:15:GLN:O	45:BS:19:LEU:HB2	2.16	0.46
46:BU:14:THR:O	46:BU:18:LYS:HA	2.16	0.46
46:BU:40:LEU:HD12	46:BU:40:LEU:N	2.31	0.46
47:BF:138:PRO:HA	47:BF:142:TYR:CE2	2.50	0.46
50:BT:51:PHE:HB3	50:BT:53:VAL:HG23	1.97	0.46
52:BW:37:VAL:HG22	52:BW:55:ASP:O	2.16	0.46
52:BW:64:GLY:C	52:BW:65:LYS:HG3	2.41	0.46
53:B6:43:VAL:O	53:B6:50:VAL:N	2.48	0.46
53:B6:128:ALA:O	53:B6:132:ILE:HG13	2.15	0.46
1:CA:28:A:N3	1:CA:296:U:H4'	2.31	0.46
1:CA:241:G:O2'	1:CA:242:G:H5'	2.14	0.46
1:CA:255:G:H1'	16:CQ:17:GLU:OE2	2.16	0.46
1:CA:614:C:O2'	1:CA:615:G:H5'	2.15	0.46
1:CA:624:C:H2'	1:CA:625:U:C6	2.51	0.46
1:CA:947:G:H2'	1:CA:948:C:C6	2.50	0.46
1:CA:1119:C:O2'	1:CA:1120:C:H5'	2.15	0.46
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.46	0.46
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.50	0.46
8:CI:20:ILE:HG23	8:CI:60:LEU:HD12	1.98	0.46
11:CL:121:PRO:O	11:CL:122:LYS:HB3	2.16	0.46
23:DB:264:C:C2'	23:DB:265:A:H5''	2.46	0.46
23:DB:457:A:N1	23:DB:470:A:H5''	2.31	0.46
23:DB:465:G:H2'	23:DB:466:A:C8	2.51	0.46
23:DB:571:U:O2'	23:DB:573:U:O5'	2.34	0.46
23:DB:642:U:H2'	23:DB:644:A:OP2	2.15	0.46
23:DB:1795:C:O2'	23:DB:1796:U:H5'	2.15	0.46
23:DB:1900:A:N1	23:DB:1970:A:C6	2.84	0.46
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.80	0.46
26:DD:90:PHE:N	26:DD:94:GLN:OE1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:113:SER:HB3	26:DD:167:ASN:HA	1.97	0.46
27:DK:72:PRO:C	27:DK:74:GLY:N	2.73	0.46
27:DK:87:LEU:O	27:DK:88:ASN:C	2.59	0.46
30:DY:7:THR:HA	30:DY:34:THR:HA	1.97	0.46
34:D3:7:ARG:O	34:D3:8:GLY:C	2.58	0.46
40:DH:80:ILE:HD11	40:DH:147:VAL:N	2.14	0.46
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.97	0.46
40:DH:144:VAL:O	40:DH:144:VAL:HG23	2.16	0.46
41:DJ:21:THR:O	41:DJ:62:VAL:HA	2.15	0.46
48:DG:10:VAL:CG1	48:DG:14:VAL:HG21	2.46	0.46
50:DT:29:THR:CB	50:DT:86:THR:HA	2.46	0.46
50:DT:45:ALA:O	50:DT:48:GLN:HB2	2.16	0.46
53:D6:41:LEU:CD2	53:D6:83:ILE:HD13	2.45	0.46
1:AA:78:A:H2'	1:AA:79:G:C8	2.51	0.46
1:AA:176:C:H2'	1:AA:177:G:N3	2.31	0.46
1:AA:449:G:H2'	1:AA:450:G:H8	1.80	0.46
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.16	0.46
2:AC:102:ILE:HD12	2:AC:102:ILE:N	2.31	0.46
2:AC:112:ALA:HB2	2:AC:182:ASP:O	2.16	0.46
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.31	0.46
6:AG:47:GLU:OE1	6:AG:57:GLU:HG2	2.16	0.46
9:AJ:80:THR:HG21	9:AJ:82:LYS:HE2	1.98	0.46
12:AM:106:ARG:HH12	12:AM:109:LYS:CE	2.29	0.46
14:AO:74:ASP:OD1	14:AO:77:ARG:HG3	2.16	0.46
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.98	0.46
18:AS:65:MET:HG3	18:AS:73:PHE:CZ	2.51	0.46
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD22	2.50	0.46
21:AU:11:PHE:O	21:AU:11:PHE:CD1	2.69	0.46
23:BB:222:A:N6	23:BB:232:G:H1'	2.30	0.46
23:BB:320:A:OP1	29:BE:130:LYS:HE3	2.16	0.46
23:BB:402:A:H2'	23:BB:403:U:O4'	2.15	0.46
23:BB:834:G:O2'	23:BB:835:C:H5'	2.15	0.46
23:BB:866:A:H61	23:BB:913:U:C1'	2.29	0.46
23:BB:960:A:C4'	23:BB:2457:U:H4'	2.46	0.46
23:BB:971:G:H2'	23:BB:972:A:O4'	2.15	0.46
23:BB:1428:C:H2'	23:BB:1569:A:OP2	2.16	0.46
23:BB:1438:U:O2'	23:BB:1439:A:H5'	2.15	0.46
23:BB:1442:U:O2'	23:BB:1443:U:H5'	2.16	0.46
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.50	0.46
23:BB:1547:C:H2'	23:BB:1548:A:C8	2.51	0.46
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1804:C:P	25:BC:256:THR:HB	2.56	0.46
23:BB:1854:A:H2	23:BB:2087:G:N3	2.14	0.46
23:BB:2206:C:O2'	23:BB:2207:C:H5'	2.16	0.46
23:BB:2320:U:H4'	23:BB:2321:U:C2	2.51	0.46
23:BB:2453:A:H4'	23:BB:2573:C:OP2	2.16	0.46
23:BB:2487:G:H2'	23:BB:2488:G:C8	2.51	0.46
23:BB:2791:G:H2'	23:BB:2792:A:O4'	2.15	0.46
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.31	0.46
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.50	0.46
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.21	0.46
25:BC:169:ALA:O	25:BC:185:ALA:HB3	2.16	0.46
26:BD:122:VAL:O	26:BD:122:VAL:HG12	2.16	0.46
29:BE:147:LEU:O	29:BE:168:ASP:O	2.34	0.46
37:BL:79:LEU:CG	37:BL:112:LEU:HA	2.43	0.46
38:BM:123:LYS:O	38:BM:124:LEU:C	2.58	0.46
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.31	0.46
42:BN:56:LYS:HD2	42:BN:88:ALA:HA	1.98	0.46
43:BO:55:GLU:O	43:BO:56:LYS:C	2.59	0.46
47:BF:31:GLU:O	47:BF:32:LYS:O	2.34	0.46
47:BF:47:LYS:HA	47:BF:50:ASP:OD1	2.16	0.46
47:BF:92:GLY:CA	47:BF:95:MET:HE3	2.45	0.46
47:BF:134:GLN:HE21	47:BF:134:GLN:HB3	1.53	0.46
48:BG:79:THR:CG2	48:BG:80:GLU:HG2	2.38	0.46
50:BT:55:VAL:HG22	50:BT:87:LEU:HD23	1.98	0.46
51:BZ:43:GLU:C	51:BZ:45:ARG:H	2.22	0.46
51:BZ:49:LEU:HD13	51:BZ:51:VAL:CG2	2.46	0.46
1:CA:8:A:H5'	4:CE:105:ILE:HG22	1.98	0.46
1:CA:149:A:O2'	1:CA:150:U:H5'	2.16	0.46
1:CA:458:U:H2'	1:CA:459:A:H8	1.81	0.46
1:CA:878:A:H1'	7:CH:3:GLN:OE1	2.15	0.46
1:CA:1014:A:H5''	18:CS:13:HIS:HB3	1.98	0.46
1:CA:1258:G:C6	1:CA:1278:G:N1	2.83	0.46
2:CC:33:ASP:O	2:CC:36:PHE:HB3	2.16	0.46
4:CE:82:HIS:HE1	4:CE:146:MET:HA	1.79	0.46
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.51	0.46
7:CH:45:ILE:C	7:CH:63:LYS:HE3	2.41	0.46
10:CK:92:ARG:HH11	10:CK:92:ARG:CG	2.28	0.46
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.51	0.46
16:CQ:66:LEU:O	16:CQ:67:SER:HB2	2.16	0.46
20:CB:11:ALA:C	20:CB:13:VAL:H	2.24	0.46
23:DB:21:A:H2'	23:DB:22:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:231:A:H3'	23:DB:232:G:C8	2.51	0.46
23:DB:246:C:H2'	23:DB:247:G:H5'	1.98	0.46
23:DB:438:G:O2'	23:DB:439:A:H5'	2.16	0.46
23:DB:570:G:N7	23:DB:2030:A:N6	2.63	0.46
23:DB:876:C:H3'	23:DB:877:A:C8	2.50	0.46
23:DB:920:A:H2'	23:DB:921:C:C6	2.50	0.46
23:DB:2073:C:C5'	25:DC:227:VAL:HG12	2.42	0.46
23:DB:2293:G:H2'	23:DB:2294:G:C8	2.49	0.46
23:DB:2543:G:H2'	23:DB:2544:G:O4'	2.16	0.46
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.16	0.46
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.16	0.46
27:DK:64:ARG:HD2	27:DK:102:PRO:O	2.16	0.46
28:DP:45:VAL:O	28:DP:47:ILE:HG23	2.16	0.46
31:D0:30:ASP:HB3	31:D0:33:SER:O	2.16	0.46
38:DM:47:GLU:CD	38:DM:50:ARG:HH11	2.24	0.46
38:DM:66:ARG:HB2	38:DM:101:VAL:HG13	1.97	0.46
41:DJ:114:LEU:HG	41:DJ:118:MET:HE2	1.97	0.46
42:DN:24:MET:HG2	42:DN:44:LEU:HD13	1.97	0.46
44:DQ:86:SER:HB2	49:DR:51:VAL:HG12	1.97	0.46
47:DF:74:ALA:CB	47:DF:78:ILE:HD13	2.45	0.46
49:DR:23:GLU:O	49:DR:24:LYS:C	2.58	0.46
50:DT:11:LEU:HD22	50:DT:11:LEU:N	2.26	0.46
51:DZ:45:ARG:O	51:DZ:46:PHE:HB2	2.15	0.46
52:DW:49:ASN:O	52:DW:50:VAL:HG13	2.16	0.46
53:D6:180:GLU:O	53:D6:184:LEU:HG	2.16	0.46
1:AA:237:G:H2'	1:AA:238:A:C8	2.48	0.46
1:AA:254:G:O2'	1:AA:255:G:H5'	2.16	0.46
1:AA:551:U:H2'	1:AA:552:U:H6	1.81	0.46
1:AA:859:G:O2'	1:AA:860:A:H5'	2.16	0.46
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.51	0.46
1:AA:1248:A:C2	8:AI:71:ILE:HD11	2.51	0.46
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.15	0.46
2:AC:142:ARG:NH2	2:AC:143:LEU:HD21	2.31	0.46
5:AF:46:GLN:CD	5:AF:47:LEU:H	2.24	0.46
6:AG:26:VAL:HA	6:AG:42:VAL:HG21	1.98	0.46
6:AG:137:ARG:HE	6:AG:137:ARG:HB3	1.39	0.46
13:AN:60:ARG:CG	13:AN:62:ARG:HE	2.29	0.46
14:AO:28:GLN:O	14:AO:32:LEU:HD23	2.16	0.46
17:AR:63:TYR:N	17:AR:63:TYR:HD2	2.14	0.46
22:BA:88:C:H2'	22:BA:89:U:C5	2.51	0.46
22:BA:104:A:H5'	35:BV:75:GLN:HE21	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:289:G:H2'	23:BB:290:U:O4'	2.15	0.46
23:BB:408:G:O2'	23:BB:409:G:H5'	2.16	0.46
23:BB:649:G:H2'	23:BB:650:C:C6	2.50	0.46
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.15	0.46
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.78	0.46
23:BB:2025:C:H2'	23:BB:2026:U:H6	1.80	0.46
23:BB:2150:C:H2'	23:BB:2151:U:O4'	2.16	0.46
23:BB:2213:U:O2	23:BB:2213:U:C2'	2.61	0.46
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.15	0.46
23:BB:2876:G:H2'	23:BB:2877:G:O4'	2.16	0.46
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.15	0.46
25:BC:29:PHE:C	25:BC:31:PRO:HD2	2.41	0.46
25:BC:43:ASN:HD22	25:BC:44:ASN:N	2.13	0.46
25:BC:108:GLY:C	25:BC:110:LYS:H	2.24	0.46
28:BP:99:LEU:HD22	28:BP:99:LEU:HA	1.81	0.46
29:BE:111:GLU:HG2	29:BE:114:ARG:HH21	1.81	0.46
29:BE:148:ILE:HA	29:BE:187:VAL:CB	2.43	0.46
33:B1:10:LEU:HB2	33:B1:20:TYR:HB2	1.97	0.46
39:BX:10:SER:N	39:BX:60:LYS:HE2	2.31	0.46
42:BN:69:ARG:HD3	42:BN:69:ARG:H	1.81	0.46
48:BG:108:PHE:C	48:BG:110:HIS:H	2.24	0.46
52:BW:48:ALA:O	52:BW:61:LYS:HB2	2.16	0.46
53:B6:133:ARG:O	53:B6:136:ALA:N	2.49	0.46
1:CA:560:A:H5'	1:CA:566:G:N2	2.29	0.46
1:CA:593:U:H2'	1:CA:594:U:C6	2.51	0.46
1:CA:631:C:H5''	1:CA:632:U:O4'	2.16	0.46
1:CA:876:C:H1'	7:CH:11:THR:HG21	1.98	0.46
1:CA:884:U:H4'	1:CA:885:G:H5''	1.98	0.46
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.94	0.46
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.16	0.46
1:CA:1278:G:H4'	1:CA:1279:G:O5'	2.14	0.46
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.15	0.46
2:CC:112:ALA:HB2	2:CC:182:ASP:O	2.16	0.46
2:CC:142:ARG:NH2	2:CC:143:LEU:HD21	2.31	0.46
4:CE:87:VAL:HG23	4:CE:92:ARG:HA	1.98	0.46
4:CE:110:MET:HE2	4:CE:126:ALA:H	1.80	0.46
20:CB:86:CYS:SG	20:CB:87:ASP:N	2.89	0.46
20:CB:116:LEU:HA	20:CB:119:GLN:HG2	1.96	0.46
20:CB:150:ILE:O	20:CB:151:LYS:C	2.59	0.46
22:DA:40:U:O2'	22:DA:41:G:H5'	2.16	0.46
23:DB:96:C:H4'	39:DX:41:HIS:HD1	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:302:C:H2'	23:DB:303:G:H8	1.81	0.46
23:DB:435:C:H2'	23:DB:436:C:H5'	1.98	0.46
23:DB:544:C:H2'	23:DB:545:U:C6	2.50	0.46
23:DB:580:U:O2'	23:DB:581:C:H5'	2.15	0.46
23:DB:699:A:H4'	23:DB:1634:A:N7	2.31	0.46
23:DB:1210:G:C5'	23:DB:1212:G:H5'	2.46	0.46
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.50	0.46
23:DB:1552:A:H2'	23:DB:1553:A:C5'	2.44	0.46
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.16	0.46
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.51	0.46
25:DC:181:ARG:NH2	25:DC:265:PHE:HB3	2.31	0.46
26:DD:4:LEU:N	26:DD:4:LEU:HD22	2.31	0.46
26:DD:56:LYS:HD3	26:DD:58:ASN:HB3	1.97	0.46
27:DK:12:ASP:HB3	27:DK:85:VAL:HG13	1.98	0.46
27:DK:115:ILE:HG23	27:DK:116:ILE:H	1.81	0.46
38:DM:33:LEU:HD22	38:DM:128:THR:CB	2.46	0.46
39:DX:28:LEU:HB3	39:DX:43:LEU:HD21	1.98	0.46
40:DH:48:GLU:HA	40:DH:51:ARG:CZ	2.46	0.46
41:DJ:9:GLU:N	41:DJ:9:GLU:CD	2.74	0.46
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.51	0.46
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.31	0.46
42:DN:63:ARG:O	42:DN:66:ALA:HB3	2.16	0.46
43:DO:58:ILE:H	43:DO:58:ILE:HG13	1.61	0.46
44:DQ:20:ALA:O	44:DQ:21:LYS:C	2.58	0.46
48:DG:112:VAL:HG12	48:DG:113:ASP:N	2.29	0.46
49:DR:70:GLU:CD	49:DR:70:GLU:N	2.74	0.46
1:AA:149:A:O2'	1:AA:150:U:H5'	2.16	0.46
1:AA:210:C:H1'	1:AA:211:G:N1	2.30	0.46
1:AA:411:A:H62	1:AA:413:G:H21	1.64	0.46
1:AA:663:A:H5'	1:AA:836:G:OP1	2.16	0.46
1:AA:993:G:H2'	1:AA:993:G:N3	2.31	0.46
1:AA:1078:U:HO2'	4:AE:137:ARG:HH12	1.61	0.46
1:AA:1133:G:H2'	1:AA:1134:G:O4'	2.15	0.46
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.15	0.46
1:AA:1320:C:H41	18:AS:36:ARG:HB3	1.81	0.46
3:AD:106:PHE:CD1	3:AD:158:LEU:HD21	2.51	0.46
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.16	0.46
8:AI:5:TYR:O	8:AI:20:ILE:N	2.48	0.46
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.46	0.46
12:AM:3:ILE:HA	12:AM:56:ARG:NH1	2.31	0.46
12:AM:64:VAL:HA	12:AM:68:LEU:CD1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:43:LYS:CA	19:AT:85:LEU:HD11	2.42	0.46
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.13	0.46
23:BB:19:A:OP1	44:BQ:22:GLY:N	2.49	0.46
23:BB:39:G:O2'	23:BB:40:U:H5'	2.16	0.46
23:BB:170:U:O2'	23:BB:171:U:H5'	2.15	0.46
23:BB:533:G:H2'	23:BB:534:U:C6	2.50	0.46
23:BB:559:G:H1'	44:BQ:55:GLN:NE2	2.30	0.46
23:BB:732:C:H2'	23:BB:733:G:O4'	2.16	0.46
23:BB:1228:G:O2'	23:BB:1229:C:H5'	2.16	0.46
23:BB:1244:A:C5'	37:BL:7:SER:HA	2.45	0.46
23:BB:1597:A:C5'	23:BB:1598:A:H5'	2.43	0.46
23:BB:1864:U:O2'	23:BB:1865:U:H5'	2.16	0.46
23:BB:2147:A:C5'	23:BB:2148:G:H4'	2.46	0.46
23:BB:2322:A:H2'	23:BB:2323:G:O4'	2.16	0.46
23:BB:2886:A:N6	31:B0:39:ARG:NE	2.58	0.46
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.51	0.46
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.46	0.46
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.29	0.46
27:BK:5:GLN:HA	27:BK:20:MET:SD	2.57	0.46
27:BK:18:ARG:O	27:BK:45:GLU:HB2	2.16	0.46
27:BK:25:LEU:HD12	27:BK:39:ILE:HA	1.98	0.46
29:BE:106:LYS:CE	29:BE:200:LEU:HB3	2.46	0.46
33:B1:3:GLY:O	33:B1:5:ARG:N	2.49	0.46
33:B1:4:ILE:HB	33:B1:27:ARG:HG3	1.98	0.46
40:BH:3:VAL:HA	40:BH:39:ALA:N	2.30	0.46
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.15	0.46
43:BO:6:ALA:O	43:BO:9:ARG:HG3	2.15	0.46
43:BO:31:THR:HG23	43:BO:34:HIS:C	2.41	0.46
44:BQ:94:LEU:CD2	49:BR:11:GLN:HB2	2.46	0.46
47:BF:41:GLU:CB	47:BF:48:LEU:HD11	2.43	0.46
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.46	0.46
48:BG:22:VAL:HG22	48:BG:36:LEU:HD12	1.97	0.46
48:BG:77:GLY:HA3	48:BG:135:ALA:O	2.16	0.46
51:BZ:39:TRP:CE2	51:BZ:41:GLU:HA	2.51	0.46
52:BW:35:ILE:O	52:BW:37:VAL:N	2.49	0.46
52:BW:43:LYS:O	52:BW:58:LEU:HD11	2.15	0.46
1:CA:16:A:HO2'	1:CA:1080:A:H4'	1.79	0.46
1:CA:398:U:H2'	1:CA:399:G:H8	1.80	0.46
1:CA:677:U:H2'	1:CA:678:U:C6	2.51	0.46
1:CA:947:G:H5''	12:CM:106:ARG:HB2	1.98	0.46
1:CA:1076:U:O2'	1:CA:1077:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1448:C:H2'	1:CA:1449:C:H6	1.81	0.46
1:CA:1490:U:H2'	1:CA:1491:G:H5'	1.97	0.46
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.51	0.46
3:CD:18:LEU:HD11	3:CD:59:LYS:HG3	1.97	0.46
3:CD:149:LYS:O	3:CD:177:MET:HE3	2.16	0.46
5:CF:3:HIS:CE1	5:CF:95:ALA:HB2	2.51	0.46
5:CF:49:TYR:CE1	17:CR:65:SER:HA	2.51	0.46
7:CH:1:SER:O	7:CH:3:GLN:N	2.49	0.46
9:CJ:88:MET:SD	9:CJ:88:MET:N	2.89	0.46
10:CK:80:ASN:ND2	10:CK:80:ASN:N	2.64	0.46
10:CK:82:GLU:HG2	10:CK:108:ASN:HB2	1.98	0.46
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.37	0.46
11:CL:52:CYS:SG	11:CL:66:ILE:HD11	2.56	0.46
11:CL:113:ARG:HH21	11:CL:120:ARG:HA	1.80	0.46
16:CQ:46:HIS:CE1	16:CQ:48:GLU:HG2	2.50	0.46
23:DB:246:C:N4	34:D3:7:ARG:HG2	2.31	0.46
23:DB:738:G:H2'	23:DB:739:A:C8	2.51	0.46
23:DB:838:C:C2	23:DB:941:A:C6	3.04	0.46
23:DB:1179:G:C2'	23:DB:1180:U:H5'	2.46	0.46
23:DB:1387:A:H4'	23:DB:1469:A:H1'	1.98	0.46
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.51	0.46
23:DB:1806:C:C2'	23:DB:1807:G:H5'	2.46	0.46
23:DB:2137:U:C2'	23:DB:2138:G:H5'	2.46	0.46
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.51	0.46
23:DB:2571:U:H4'	26:DD:151:THR:HG21	1.97	0.46
34:D3:23:HIS:ND1	34:D3:24:LYS:N	2.64	0.46
35:DV:24:ASN:O	35:DV:26:PHE:N	2.49	0.46
35:DV:65:VAL:O	35:DV:66:ASP:HB3	2.16	0.46
39:DX:20:ASN:N	39:DX:20:ASN:ND2	2.64	0.46
40:DH:109:GLU:OE2	40:DH:111:ALA:HB2	2.16	0.46
40:DH:119:ASN:ND2	40:DH:121:VAL:HG13	2.31	0.46
41:DJ:58:ASN:CA	41:DJ:127:GLY:HA2	2.39	0.46
42:DN:61:ALA:C	42:DN:63:ARG:H	2.22	0.46
43:DO:55:GLU:O	43:DO:56:LYS:C	2.58	0.46
44:DQ:73:ILE:HG13	44:DQ:74:SER:N	2.30	0.46
44:DQ:86:SER:CB	49:DR:51:VAL:HG12	2.46	0.46
47:DF:62:GLN:NE2	47:DF:90:LEU:HD13	2.30	0.46
53:D6:67:VAL:HG12	53:D6:100:TYR:CD1	2.51	0.46
1:AA:451:A:H4'	1:AA:452:A:O4'	2.15	0.45
1:AA:605:U:H2'	1:AA:606:G:C8	2.51	0.45
1:AA:667:G:H4'	14:AO:51:HIS:ND1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:876:C:H1'	7:AH:11:THR:HG21	1.98	0.45
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.51	0.45
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.81	0.45
5:AF:9:MET:HE1	17:AR:64:LEU:CA	2.42	0.45
6:AG:2:ARG:C	6:AG:4:ARG:N	2.74	0.45
8:AI:29:ILE:HG12	8:AI:64:ILE:HB	1.98	0.45
11:AL:31:GLY:HA2	11:AL:56:LEU:HA	1.97	0.45
13:AN:63:CYS:HB2	13:AN:79:SER:HG	1.81	0.45
14:AO:39:LEU:HD23	14:AO:43:PHE:HE1	1.79	0.45
15:AP:22:ALA:CB	15:AP:32:PHE:HA	2.46	0.45
20:AB:178:LEU:HB2	20:AB:180:ILE:HG12	1.98	0.45
21:AU:36:PHE:CD2	21:AU:39:LYS:HD2	2.51	0.45
23:BB:674:G:O2'	29:BE:60:TRP:HH2	1.98	0.45
23:BB:1124:G:H1'	32:B4:38:GLY:OXT	2.15	0.45
23:BB:1208:C:O2'	23:BB:1209:U:H5'	2.16	0.45
23:BB:1210:G:H5'	23:BB:1212:G:C5'	2.45	0.45
23:BB:1439:A:N7	23:BB:1440:U:C6	2.84	0.45
23:BB:1812:U:C4'	25:BC:44:ASN:HD21	2.29	0.45
23:BB:2215:C:O2'	23:BB:2216:G:H5'	2.16	0.45
23:BB:2428:G:N2	37:BL:54:GLN:OE1	2.49	0.45
23:BB:2691:C:O2'	23:BB:2692:G:H5'	2.16	0.45
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.81	0.45
23:BB:2872:A:H1'	23:BB:2873:A:C8	2.51	0.45
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.97	0.45
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.98	0.45
26:BD:94:GLN:HG2	26:BD:94:GLN:O	2.15	0.45
28:BP:45:VAL:O	28:BP:47:ILE:HG23	2.16	0.45
29:BE:134:LEU:HD23	29:BE:161:ALA:N	2.31	0.45
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.15	0.45
34:B3:23:HIS:ND1	34:B3:24:LYS:N	2.64	0.45
36:B2:2:LYS:HD2	36:B2:6:GLN:NE2	2.31	0.45
36:B2:10:LEU:HD21	36:B2:14:ARG:NH1	2.30	0.45
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.97	0.45
37:BL:96:LYS:HE2	37:BL:103:ILE:HA	1.97	0.45
40:BH:65:ALA:HB3	40:BH:135:HIS:HE1	1.81	0.45
40:BH:110:VAL:HB	40:BH:132:PHE:CZ	2.51	0.45
43:BO:58:ILE:HG22	43:BO:62:LEU:CD2	2.46	0.45
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.16	0.45
47:BF:49:LEU:C	47:BF:49:LEU:HD13	2.40	0.45
50:BT:9:LYS:O	50:BT:9:LYS:HG2	2.15	0.45
51:BZ:38:PHE:CE2	51:BZ:51:VAL:HG21	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:71:LEU:HD11	51:BZ:78:TYR:HB3	1.98	0.45
53:B6:18:LEU:HD21	53:B6:171:LYS:HD2	1.97	0.45
53:B6:32:ARG:NH2	53:B6:88:LEU:O	2.45	0.45
53:B6:112:LYS:O	53:B6:116:ARG:HG2	2.16	0.45
1:CA:564:C:C5	16:CQ:32:ILE:HD11	2.51	0.45
1:CA:1004:A:H2'	1:CA:1005:A:O4'	2.16	0.45
3:CD:41:GLY:C	3:CD:43:ARG:N	2.73	0.45
6:CG:64:ALA:HA	6:CG:127:ALA:HA	1.98	0.45
10:CK:108:ASN:ND2	21:CU:6:ARG:HD2	2.30	0.45
11:CL:46:SER:O	11:CL:47:ALA:HB2	2.16	0.45
19:CT:43:LYS:CB	19:CT:85:LEU:HD21	2.46	0.45
20:CB:10:LYS:O	20:CB:13:VAL:HG23	2.16	0.45
20:CB:46:VAL:O	20:CB:49:PHE:HB2	2.15	0.45
20:CB:68:PHE:CE1	20:CB:88:GLN:HB3	2.51	0.45
20:CB:125:PHE:C	20:CB:127:LYS:HE3	2.40	0.45
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.51	0.45
23:DB:78:U:H2'	23:DB:79:C:H6	1.76	0.45
23:DB:402:A:H2'	23:DB:403:U:O4'	2.16	0.45
23:DB:518:G:H4'	45:DS:18:ARG:CZ	2.47	0.45
23:DB:522:A:H2'	23:DB:523:C:H6	1.80	0.45
23:DB:655:A:H4'	23:DB:656:G:OP1	2.16	0.45
23:DB:946:C:H2'	23:DB:947:A:H8	1.81	0.45
23:DB:956:G:O4'	38:DM:82:MET:HE1	2.15	0.45
23:DB:1161:C:H2'	23:DB:1162:G:H8	1.81	0.45
23:DB:1695:G:H2'	23:DB:1696:G:O4'	2.15	0.45
23:DB:1765:U:H2'	23:DB:1766:G:H8	1.82	0.45
23:DB:1956:U:H2'	23:DB:1957:C:H5'	1.97	0.45
23:DB:2215:C:O2'	23:DB:2216:G:H5'	2.16	0.45
23:DB:2223:G:H2'	23:DB:2224:G:H5'	1.99	0.45
23:DB:2461:A:H1'	23:DB:2492:U:C2	2.51	0.45
23:DB:2691:C:O2'	23:DB:2692:G:H5'	2.16	0.45
24:DI:70:THR:O	24:DI:70:THR:HG23	2.15	0.45
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.30	0.45
26:DD:122:VAL:HG12	26:DD:122:VAL:O	2.16	0.45
29:DE:18:THR:HG22	29:DE:106:LYS:HE2	1.96	0.45
29:DE:106:LYS:HE2	29:DE:200:LEU:HB3	1.97	0.45
32:D4:25:VAL:HG11	32:D4:35:GLN:NE2	2.31	0.45
34:D3:33:THR:HG23	34:D3:34:LYS:N	2.30	0.45
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.41	0.45
43:DO:56:LYS:O	43:DO:60:GLU:HG2	2.16	0.45
44:DQ:87:VAL:CB	49:DR:52:PRO:HG3	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:99:PHE:HA	47:DF:102:LEU:CD1	2.45	0.45
47:DF:116:LEU:HD21	47:DF:174:PHE:HE2	1.81	0.45
48:DG:9:VAL:C	48:DG:11:PRO:HD3	2.41	0.45
48:DG:154:GLU:O	48:DG:156:TYR:N	2.42	0.45
49:DR:55:ASP:OD2	49:DR:55:ASP:N	2.50	0.45
1:AA:486:U:H2'	1:AA:487:A:C8	2.51	0.45
1:AA:582:C:O2'	1:AA:583:A:H5'	2.16	0.45
1:AA:688:G:O2'	1:AA:689:C:H5'	2.16	0.45
1:AA:766:A:H2'	1:AA:767:A:O4'	2.16	0.45
1:AA:899:C:H2'	1:AA:900:A:O4'	2.16	0.45
1:AA:903:G:O2'	1:AA:904:U:H5'	2.16	0.45
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.50	0.45
4:AE:24:VAL:O	4:AE:25:LYS:C	2.59	0.45
5:AF:31:GLY:C	5:AF:33:GLU:H	2.24	0.45
6:AG:145:GLU:CA	6:AG:148:LYS:HB2	2.34	0.45
7:AH:1:SER:O	7:AH:3:GLN:HG3	2.16	0.45
7:AH:91:LEU:HD12	7:AH:116:ARG:HB2	1.98	0.45
11:AL:79:ILE:C	11:AL:101:LEU:HD12	2.40	0.45
12:AM:9:PRO:HB3	12:AM:20:SER:CB	2.46	0.45
12:AM:15:VAL:O	12:AM:16:ILE:C	2.59	0.45
15:AP:52:LEU:HD23	15:AP:54:LEU:HG	1.98	0.45
20:AB:8:MET:O	20:AB:9:LEU:O	2.33	0.45
20:AB:164:ASP:OD1	20:AB:203:ASP:HB2	2.17	0.45
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.29	0.45
21:AU:10:PRO:HB2	2:CC:71:ARG:HD3	1.97	0.45
23:BB:572:A:H5''	49:BR:80:ARG:NH2	2.31	0.45
23:BB:981:A:H2'	23:BB:982:C:H5''	1.98	0.45
23:BB:1774:C:O2	23:BB:1774:C:H2'	2.16	0.45
23:BB:2144:G:H5'	23:BB:2145:C:O3'	2.15	0.45
25:BC:34:GLU:HG3	25:BC:34:GLU:O	2.15	0.45
26:BD:24:VAL:HG23	26:BD:189:VAL:O	2.17	0.45
26:BD:90:PHE:O	26:BD:91:THR:C	2.59	0.45
30:BY:57:GLU:OE1	30:BY:57:GLU:HA	2.16	0.45
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.80	0.45
37:BL:119:PRO:HB3	37:BL:139:GLY:O	2.16	0.45
38:BM:31:PHE:CD1	38:BM:105:MET:HB3	2.51	0.45
45:BS:36:LEU:HB3	45:BS:48:LYS:HB2	1.98	0.45
47:BF:111:ARG:HH11	47:BF:135:ILE:CG2	2.28	0.45
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.84	0.45
53:B6:1:MET:N	53:B6:5:GLU:OE2	2.48	0.45
1:CA:237:G:H2'	1:CA:238:A:C8	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:407:U:O2'	3:CD:112:GLU:HG3	2.16	0.45
1:CA:947:G:H2'	1:CA:948:C:H6	1.81	0.45
1:CA:1064:G:P	1:CA:1386:G:H4'	2.56	0.45
1:CA:1081:A:OP1	4:CE:21:SER:O	2.35	0.45
1:CA:1086:U:H3	1:CA:1099:G:N2	1.99	0.45
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.98	0.45
3:CD:106:PHE:CD1	3:CD:158:LEU:HD21	2.51	0.45
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.32	0.45
8:CI:41:GLU:O	8:CI:43:ALA:N	2.49	0.45
8:CI:56:MET:O	8:CI:58:GLU:HG2	2.15	0.45
10:CK:13:LYS:HD2	10:CK:76:TYR:CE2	2.50	0.45
11:CL:36:VAL:HG23	11:CL:36:VAL:O	2.16	0.45
12:CM:75:SER:O	12:CM:78:ARG:HB2	2.16	0.45
12:CM:94:LEU:C	12:CM:108:ARG:HG2	2.41	0.45
14:CO:25:THR:O	14:CO:29:VAL:HG23	2.16	0.45
16:CQ:42:LYS:O	16:CQ:43:LEU:HD12	2.16	0.45
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	1.98	0.45
20:CB:33:ALA:CB	20:CB:38:HIS:HA	2.46	0.45
20:CB:147:LEU:O	20:CB:148:GLY:C	2.60	0.45
22:DA:78:A:H2'	22:DA:79:G:O4'	2.16	0.45
23:DB:16:C:O2'	23:DB:17:G:H5'	2.16	0.45
23:DB:182:A:O2'	23:DB:183:C:H5'	2.16	0.45
23:DB:519:U:O2'	23:DB:520:G:H5'	2.17	0.45
23:DB:677:A:O2'	23:DB:2071:A:H5'	2.16	0.45
23:DB:811:U:H2'	37:DL:21:ARG:HA	1.99	0.45
23:DB:826:U:H2'	23:DB:828:U:O4'	2.15	0.45
23:DB:866:A:H61	23:DB:913:U:C1'	2.29	0.45
23:DB:899:A:H2'	23:DB:900:A:H8	1.81	0.45
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.16	0.45
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.17	0.45
23:DB:1520:U:H2'	23:DB:1521:G:O4'	2.17	0.45
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.32	0.45
23:DB:1998:A:OP2	26:DD:141:ARG:NH2	2.48	0.45
23:DB:2364:C:C2'	23:DB:2365:G:H5'	2.46	0.45
23:DB:2663:G:H2'	23:DB:2664:G:C8	2.51	0.45
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.16	0.45
25:DC:259:ASN:C	25:DC:261:ARG:H	2.24	0.45
27:DK:110:GLU:HA	27:DK:113:MET:CG	2.46	0.45
28:DP:4:ILE:HA	28:DP:7:LEU:CD1	2.46	0.45
38:DM:20:LEU:N	38:DM:20:LEU:HD13	2.32	0.45
40:DH:40:THR:OG1	40:DH:43:ASN:ND2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:78:ARG:HG3	49:DR:78:ARG:HH21	1.81	0.45
50:DT:39:THR:HG22	50:DT:42:GLU:H	1.81	0.45
50:DT:69:ARG:HA	50:DT:69:ARG:NE	2.31	0.45
52:DW:43:LYS:O	52:DW:58:LEU:HD11	2.16	0.45
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.17	0.45
53:D6:58:VAL:HG22	53:D6:68:VAL:HG22	1.97	0.45
1:AA:238:A:C2'	1:AA:239:U:H5''	2.45	0.45
1:AA:611:C:H2'	1:AA:612:C:H6	1.81	0.45
1:AA:714:G:H21	1:AA:777:A:H1'	1.81	0.45
3:AD:197:HIS:ND1	3:AD:198:LEU:N	2.63	0.45
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.99	0.45
8:AI:103:VAL:HG23	8:AI:104:THR:N	2.30	0.45
13:AN:88:MET:C	13:AN:90:GLY:H	2.23	0.45
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.17	0.45
20:AB:161:PHE:CE2	20:AB:216:VAL:HG11	2.50	0.45
22:BA:49:C:O2'	22:BA:50:A:H5'	2.17	0.45
23:BB:155:A:H2'	23:BB:156:A:H8	1.77	0.45
23:BB:548:G:H3'	23:BB:548:G:N3	2.31	0.45
23:BB:630:G:N2	23:BB:632:A:H3'	2.32	0.45
23:BB:635:C:O2'	23:BB:639:U:H5''	2.15	0.45
23:BB:675:A:O2'	29:BE:62:GLN:NE2	2.49	0.45
23:BB:720:U:H2'	23:BB:721:A:H8	1.80	0.45
23:BB:979:A:H2'	23:BB:982:C:H42	1.79	0.45
23:BB:1287:A:O2'	23:BB:1288:G:H5'	2.15	0.45
23:BB:1526:C:O2'	23:BB:1527:G:H5'	2.15	0.45
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.16	0.45
23:BB:2143:C:N3	23:BB:2148:G:O6	2.49	0.45
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.51	0.45
23:BB:2693:G:H2'	23:BB:2694:G:C8	2.47	0.45
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.31	0.45
25:BC:146:LYS:HG2	25:BC:147:PRO:HD2	1.97	0.45
26:BD:38:LYS:HD2	26:BD:81:GLU:OE1	2.17	0.45
29:BE:5:LEU:HD22	29:BE:122:GLU:HG3	1.98	0.45
35:BV:24:ASN:O	35:BV:26:PHE:N	2.49	0.45
36:B2:28:ARG:C	36:B2:30:VAL:N	2.73	0.45
37:BL:92:LEU:HD23	37:BL:124:GLY:HA3	1.98	0.45
39:BX:5:GLU:HA	39:BX:5:GLU:OE2	2.16	0.45
41:BJ:25:LEU:HD13	41:BJ:25:LEU:C	2.41	0.45
44:BQ:30:VAL:CG1	44:BQ:31:TYR:N	2.78	0.45
44:BQ:52:ARG:C	44:BQ:54:ARG:N	2.74	0.45
45:BS:107:VAL:HG22	45:BS:108:SER:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:86:PHE:HE1	46:BU:88:ASP:HB3	1.79	0.45
47:BF:1:ALA:O	47:BF:2:LYS:C	2.59	0.45
48:BG:94:ARG:HB2	48:BG:127:GLN:O	2.17	0.45
50:BT:21:SER:HB3	50:BT:31:VAL:CG2	2.46	0.45
50:BT:36:LYS:O	50:BT:36:LYS:HD3	2.16	0.45
50:BT:50:LEU:O	50:BT:52:GLU:N	2.43	0.45
53:B6:56:ALA:HB2	53:B6:79:ILE:HD13	1.97	0.45
53:B6:109:GLU:HA	53:B6:112:LYS:CD	2.47	0.45
1:CA:114:U:H2'	1:CA:115:G:C8	2.51	0.45
1:CA:193:C:H2'	1:CA:194:C:C5	2.52	0.45
1:CA:418:C:H2'	1:CA:419:C:C6	2.51	0.45
1:CA:617:G:C4'	15:CP:46:LYS:HE2	2.45	0.45
1:CA:801:U:H2'	1:CA:802:A:C8	2.50	0.45
1:CA:865:A:H2'	1:CA:866:C:H6	1.76	0.45
1:CA:935:A:O2'	1:CA:936:C:H5'	2.17	0.45
1:CA:1064:G:OP1	1:CA:1386:G:H4'	2.16	0.45
1:CA:1206:G:C4'	2:CC:192:TYR:HA	2.37	0.45
1:CA:1317:C:H2'	1:CA:1318:A:O4'	2.16	0.45
1:CA:1479:C:H2'	1:CA:1480:A:H8	1.80	0.45
2:CC:13:ILE:C	2:CC:15:LYS:N	2.75	0.45
10:CK:60:PHE:O	10:CK:63:GLN:HB3	2.15	0.45
12:CM:1:ALA:CA	12:CM:8:ILE:HG22	2.47	0.45
16:CQ:16:MET:HB2	16:CQ:19:SER:O	2.16	0.45
18:CS:39:ILE:HG13	18:CS:68:HIS:O	2.15	0.45
20:CB:23:ASN:C	20:CB:23:ASN:ND2	2.73	0.45
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD22	2.52	0.45
21:CU:40:PRO:HG2	21:CU:41:THR:H	1.81	0.45
22:DA:106:G:H2'	22:DA:107:G:O4'	2.15	0.45
23:DB:129:C:H2'	23:DB:130:C:C6	2.52	0.45
23:DB:245:G:H2'	23:DB:246:C:C6	2.49	0.45
23:DB:728:G:O2'	23:DB:730:A:H8	1.99	0.45
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.47	0.45
23:DB:1136:G:H2'	23:DB:1137:G:H8	1.81	0.45
23:DB:1464:G:O2'	23:DB:1465:G:H5'	2.16	0.45
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.17	0.45
23:DB:1993:U:H4'	26:DD:133:THR:HG22	1.97	0.45
23:DB:2356:U:H5'	52:DW:16:GLU:HG3	1.97	0.45
23:DB:2362:C:OP2	34:D3:43:LEU:HD21	2.16	0.45
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.16	0.45
25:DC:67:LYS:O	25:DC:188:ARG:HD3	2.16	0.45
25:DC:183:VAL:HG22	25:DC:184:GLU:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.52	0.45
26:DD:16:THR:HG22	26:DD:17:GLU:H	1.81	0.45
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.98	0.45
26:DD:137:SER:C	26:DD:138:LEU:HD22	2.42	0.45
27:DK:88:ASN:HD22	27:DK:89:ASN:H	1.65	0.45
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.98	0.45
29:DE:75:SER:O	29:DE:78:TRP:HB2	2.16	0.45
33:D1:3:GLY:C	33:D1:5:ARG:N	2.73	0.45
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.42	0.45
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.97	0.45
38:DM:108:VAL:HG22	38:DM:109:PRO:HD2	1.99	0.45
40:DH:68:ARG:HG3	40:DH:68:ARG:HH11	1.80	0.45
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD11	2.52	0.45
41:DJ:95:ARG:O	41:DJ:95:ARG:HD3	2.17	0.45
44:DQ:60:TRP:CZ2	44:DQ:93:ILE:HB	2.52	0.45
47:DF:49:LEU:HD13	47:DF:49:LEU:C	2.41	0.45
47:DF:141:ASP:HB3	47:DF:144:LYS:HB2	1.98	0.45
47:DF:174:PHE:HB3	47:DF:176:PHE:CD1	2.51	0.45
47:DF:177:ARG:HA	47:DF:177:ARG:NE	2.31	0.45
50:DT:9:LYS:O	50:DT:9:LYS:HG2	2.16	0.45
50:DT:31:VAL:C	50:DT:32:LEU:HD23	2.42	0.45
51:DZ:63:GLY:HA3	51:DZ:66:THR:OG1	2.17	0.45
1:AA:151:A:C2'	1:AA:152:A:H5'	2.47	0.45
1:AA:449:G:H2'	1:AA:450:G:C8	2.52	0.45
1:AA:577:G:C6	1:AA:812:G:N2	2.85	0.45
1:AA:645:G:O2'	1:AA:646:G:H5'	2.16	0.45
1:AA:696:A:H2'	1:AA:697:U:H6	1.80	0.45
1:AA:903:G:H2'	1:AA:904:U:C6	2.51	0.45
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.47	0.45
1:AA:1060:U:OP1	9:AJ:53:ILE:HD11	2.17	0.45
1:AA:1347:G:H8	8:AI:108:ARG:HB3	1.80	0.45
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.51	0.45
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.17	0.45
2:AC:46:LEU:HD11	2:AC:75:VAL:HG13	1.98	0.45
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.15	0.45
6:AG:147:ASN:N	10:AK:55:ARG:HH21	2.14	0.45
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.98	0.45
9:AJ:55:PRO:O	9:AJ:56:HIS:HB3	2.15	0.45
18:AS:33:TRP:C	18:AS:35:ARG:H	2.24	0.45
22:BA:87:U:C2'	22:BA:88:C:O5'	2.64	0.45
23:BB:130:C:O2'	23:BB:131:A:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:315:G:H2'	23:BB:316:C:H6	1.82	0.45
23:BB:832:U:H2'	23:BB:833:A:C8	2.51	0.45
23:BB:973:A:H1'	23:BB:1188:U:C5	2.52	0.45
23:BB:2282:G:H5'	23:BB:2389:G:H1'	1.98	0.45
23:BB:2373:G:H2'	23:BB:2374:C:C6	2.51	0.45
23:BB:2601:C:C2	23:BB:2603:G:N7	2.85	0.45
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.46	0.45
23:BB:2849:U:H5'	23:BB:2868:A:N1	2.31	0.45
29:BE:51:GLU:H	29:BE:51:GLU:HG2	1.54	0.45
31:B0:5:ASN:O	31:B0:7:PRO:HD3	2.16	0.45
31:B0:42:ILE:HD11	42:BN:98:LEU:HD12	1.97	0.45
35:BV:31:TYR:O	35:BV:92:VAL:HG13	2.16	0.45
40:BH:3:VAL:HB	40:BH:37:VAL:O	2.17	0.45
41:BJ:13:ARG:HB3	41:BJ:53:TYR:HD2	1.80	0.45
41:BJ:127:GLY:O	41:BJ:128:ASN:HB2	2.16	0.45
44:BQ:86:SER:HB3	49:BR:52:PRO:HD3	1.97	0.45
48:BG:84:LYS:HG3	48:BG:131:VAL:CB	2.46	0.45
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.31	0.45
48:BG:152:ARG:HD2	48:BG:152:ARG:HA	1.68	0.45
50:BT:45:ALA:HA	50:BT:48:GLN:HB2	1.99	0.45
51:BZ:27:ARG:HD3	51:BZ:28:ARG:H	1.81	0.45
1:CA:57:G:H2'	1:CA:58:C:H6	1.81	0.45
1:CA:221:C:O2'	1:CA:222:C:H5'	2.17	0.45
1:CA:405:U:O4	3:CD:1:ALA:HA	2.16	0.45
1:CA:435:A:H2'	1:CA:435:A:N3	2.32	0.45
1:CA:824:G:O2'	1:CA:825:A:H5'	2.15	0.45
1:CA:843:U:H5'	1:CA:844:G:N7	2.31	0.45
1:CA:993:G:H2'	1:CA:993:G:N3	2.32	0.45
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.52	0.45
1:CA:1483:A:H3'	1:CA:1484:C:H6	1.81	0.45
6:CG:144:ALA:O	6:CG:146:ALA:N	2.41	0.45
7:CH:72:GLU:CD	7:CH:72:GLU:N	2.75	0.45
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.98	0.45
16:CQ:11:VAL:HG23	16:CQ:56:ASP:O	2.16	0.45
17:CR:27:THR:O	17:CR:30:ASN:HB2	2.17	0.45
23:DB:729:G:H2'	23:DB:729:G:N3	2.30	0.45
23:DB:1023:U:H2'	23:DB:1024:G:C5'	2.46	0.45
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.80	0.45
23:DB:1050:A:H2'	23:DB:1051:G:C8	2.51	0.45
23:DB:1270:C:H5''	23:DB:1271:G:H5'	1.98	0.45
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1418:G:H1'	23:DB:1580:A:N6	2.31	0.45
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.52	0.45
23:DB:2081:U:C5'	51:DZ:25:THR:HG21	2.46	0.45
23:DB:2432:A:O2'	23:DB:2433:A:H5'	2.16	0.45
24:DI:10:LEU:HD12	24:DI:10:LEU:C	2.40	0.45
24:DI:59:THR:O	24:DI:59:THR:HG23	2.17	0.45
24:DI:116:MET:HE1	24:DI:128:ILE:CG1	2.46	0.45
25:DC:108:GLY:C	25:DC:110:LYS:H	2.24	0.45
37:DL:59:ARG:C	37:DL:61:LEU:N	2.75	0.45
37:DL:81:ASP:CG	37:DL:100:ILE:HD11	2.41	0.45
40:DH:86:ASP:HB3	40:DH:87:GLU:OE2	2.16	0.45
42:DN:2:ARG:HG2	42:DN:5:LYS:CB	2.42	0.45
43:DO:31:THR:HG23	43:DO:34:HIS:C	2.42	0.45
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CB	2.46	0.45
44:DQ:94:LEU:HD21	49:DR:11:GLN:HB2	1.97	0.45
45:DS:14:ALA:C	45:DS:16:LYS:H	2.25	0.45
45:DS:28:LYS:O	45:DS:71:VAL:HG12	2.17	0.45
46:DU:73:ASN:HB3	46:DU:95:PHE:CE2	2.52	0.45
48:DG:10:VAL:H	48:DG:48:THR:HG22	1.81	0.45
50:DT:8:LEU:HD22	50:DT:46:ALA:HA	1.98	0.45
52:DW:40:ARG:HE	52:DW:45:HIS:HE1	1.64	0.45
1:AA:52:C:H2'	1:AA:53:A:C8	2.51	0.45
1:AA:585:G:O2'	1:AA:586:C:H5'	2.17	0.45
1:AA:592:G:O2'	1:AA:593:U:H5'	2.16	0.45
1:AA:735:C:O2'	1:AA:736:C:H5'	2.16	0.45
1:AA:843:U:H5'	1:AA:844:G:N7	2.32	0.45
1:AA:1240:U:C5	6:AG:115:MET:HE3	2.51	0.45
2:AC:33:ASP:O	2:AC:36:PHE:HB3	2.17	0.45
7:AH:68:LYS:HG3	7:AH:69:ALA:H	1.80	0.45
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.97	0.45
10:AK:73:VAL:O	10:AK:76:TYR:HB2	2.16	0.45
12:AM:10:ASP:CA	12:AM:44:ILE:HD13	2.42	0.45
16:AQ:60:ILE:HB	16:AQ:73:THR:O	2.16	0.45
17:AR:51:GLN:HA	17:AR:51:GLN:HE21	1.82	0.45
18:AS:65:MET:HG3	18:AS:73:PHE:CE2	2.51	0.45
19:AT:79:THR:HG22	19:AT:83:ASN:HD21	1.82	0.45
20:AB:98:GLY:HA2	20:AB:101:THR:CG2	2.45	0.45
23:BB:237:C:O2'	23:BB:238:C:H5'	2.17	0.45
23:BB:245:G:H2'	23:BB:246:C:C6	2.52	0.45
23:BB:246:C:C2'	23:BB:247:G:H5'	2.46	0.45
23:BB:329:G:O6	46:BU:16:LYS:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:539:G:H2'	23:BB:540:C:C6	2.52	0.45
23:BB:699:A:H4'	23:BB:1634:A:N7	2.32	0.45
23:BB:755:U:O2'	23:BB:756:A:H5'	2.16	0.45
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.16	0.45
23:BB:1460:U:H3'	23:BB:1461:C:H5'	1.98	0.45
23:BB:1870:C:OP2	23:BB:1870:C:H4'	2.16	0.45
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.16	0.45
23:BB:2751:G:N3	23:BB:2751:G:C2'	2.77	0.45
23:BB:2814:A:O2'	23:BB:2815:C:H5'	2.17	0.45
23:BB:2883:A:OP1	31:B0:48:TYR:CE1	2.70	0.45
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.95	0.45
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	1.99	0.45
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.16	0.45
26:BD:163:GLY:O	26:BD:164:GLN:C	2.59	0.45
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.52	0.45
37:BL:57:LEU:O	37:BL:61:LEU:HD13	2.16	0.45
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.17	0.45
40:BH:62:LEU:HD12	40:BH:62:LEU:H	1.82	0.45
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	1.98	0.45
43:BO:14:ALA:C	43:BO:16:ARG:N	2.75	0.45
45:BS:2:GLU:O	45:BS:3:THR:O	2.34	0.45
47:BF:151:LEU:HD12	47:BF:152:ASP:N	2.32	0.45
48:BG:36:LEU:H	48:BG:36:LEU:CD2	2.24	0.45
48:BG:60:GLY:O	48:BG:62:ALA:N	2.50	0.45
48:BG:112:VAL:HG13	48:BG:150:TYR:CE2	2.52	0.45
1:CA:372:C:H4'	1:CA:373:A:H5'	1.99	0.45
1:CA:502:A:H2'	1:CA:503:C:O4'	2.17	0.45
1:CA:526:C:OP2	11:CL:87:LYS:HE3	2.16	0.45
1:CA:802:A:H2'	1:CA:803:G:O4'	2.16	0.45
1:CA:857:C:H2'	1:CA:858:G:O4'	2.16	0.45
1:CA:858:G:O6	1:CA:869:G:H3'	2.17	0.45
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.78	0.45
2:CC:194:VAL:HG12	2:CC:195:ILE:N	2.31	0.45
3:CD:77:GLU:CA	3:CD:80:ARG:HG2	2.41	0.45
8:CI:21:LYS:N	8:CI:61:ASP:O	2.48	0.45
9:CJ:55:PRO:O	9:CJ:56:HIS:HB3	2.17	0.45
9:CJ:92:LEU:HB2	9:CJ:93:ALA:H	1.55	0.45
11:CL:49:ARG:H	11:CL:49:ARG:CD	2.29	0.45
12:CM:9:PRO:HB3	12:CM:20:SER:CB	2.46	0.45
12:CM:15:VAL:O	12:CM:16:ILE:C	2.60	0.45
12:CM:52:ILE:CD1	12:CM:55:LEU:HD12	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:26:GLU:HG3	14:CO:81:LEU:CD1	2.43	0.45
20:CB:184:ALA:O	20:CB:199:ILE:HB	2.17	0.45
23:DB:225:C:H2'	23:DB:226:A:O4'	2.15	0.45
23:DB:506:G:H4'	23:DB:509:C:O2	2.17	0.45
23:DB:518:G:H4'	45:DS:18:ARG:NH2	2.31	0.45
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.51	0.45
23:DB:2758:A:C2	23:DB:2759:G:H1'	2.51	0.45
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.16	0.45
25:DC:15:VAL:HG22	25:DC:204:LEU:O	2.16	0.45
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.17	0.45
27:DK:75:SER:HB2	28:DP:73:PHE:HA	1.99	0.45
27:DK:111:LYS:N	27:DK:111:LYS:HD3	2.32	0.45
29:DE:130:LYS:C	29:DE:132:LYS:N	2.69	0.45
29:DE:172:ALA:O	29:DE:199:MET:HE3	2.17	0.45
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.98	0.45
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.31	0.45
37:DL:81:ASP:O	37:DL:82:LEU:HB2	2.17	0.45
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.49	0.45
40:DH:10:ALA:C	40:DH:12:LEU:H	2.23	0.45
40:DH:117:LEU:HD12	40:DH:118:PRO:CD	2.40	0.45
44:DQ:108:LEU:HD23	49:DR:48:LYS:HB2	1.98	0.45
47:DF:98:PHE:O	47:DF:102:LEU:HD12	2.17	0.45
47:DF:101:ARG:HH12	47:DF:138:PRO:HB2	1.82	0.45
1:AA:803:G:H2'	1:AA:804:U:O4'	2.16	0.45
1:AA:857:C:H2'	1:AA:858:G:O4'	2.16	0.45
1:AA:1152:A:OP1	9:AJ:70:HIS:ND1	2.49	0.45
1:AA:1385:G:H2'	1:AA:1386:G:H8	1.81	0.45
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.16	0.45
2:AC:166:TRP:O	2:AC:167:TYR:CB	2.65	0.45
4:AE:93:VAL:HG12	4:AE:94:PHE:N	2.32	0.45
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.16	0.45
7:AH:35:ILE:O	7:AH:39:LEU:HG	2.16	0.45
7:AH:123:GLU:HG2	7:AH:124:ILE:O	2.15	0.45
10:AK:20:ALA:HB2	10:AK:81:LEU:HD12	1.99	0.45
12:AM:50:GLY:O	12:AM:54:THR:HG23	2.17	0.45
12:AM:65:GLU:O	12:AM:66:GLY:C	2.59	0.45
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.51	0.45
15:AP:17:TYR:HB2	15:AP:39:PHE:HD2	1.81	0.45
18:AS:41:PRO:O	18:AS:44:ILE:HG22	2.16	0.45
20:AB:33:ALA:CB	20:AB:38:HIS:HA	2.47	0.45
21:AU:42:THR:HB	21:AU:46:ARG:NH2	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:52:A:H2'	23:BB:53:A:C8	2.51	0.45
23:BB:336:C:O2'	23:BB:337:C:H5'	2.17	0.45
23:BB:438:G:H2'	23:BB:439:A:H8	1.80	0.45
23:BB:531:C:H5''	23:BB:532:A:C5	2.51	0.45
23:BB:558:U:O2'	23:BB:559:G:H5'	2.17	0.45
23:BB:670:A:H4'	23:BB:671:C:C5'	2.46	0.45
23:BB:786:C:H5''	23:BB:1780:A:N7	2.31	0.45
23:BB:965:C:O2'	23:BB:966:G:H5'	2.16	0.45
23:BB:1297:C:H2'	23:BB:1298:C:H6	1.81	0.45
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.52	0.45
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.16	0.45
23:BB:2103:C:H5'	23:BB:2104:C:OP2	2.17	0.45
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.82	0.45
23:BB:2204:G:O2'	23:BB:2205:A:H5'	2.16	0.45
23:BB:2227:A:H2'	23:BB:2228:G:O4'	2.16	0.45
23:BB:2250:G:C6	38:BM:83:GLY:HA3	2.52	0.45
23:BB:2582:G:O2'	23:BB:2583:G:H5'	2.16	0.45
24:BI:92:PRO:C	24:BI:94:LYS:H	2.25	0.45
25:BC:67:LYS:O	25:BC:188:ARG:HD3	2.16	0.45
25:BC:145:MET:HB2	25:BC:152:GLN:NE2	2.31	0.45
27:BK:88:ASN:HD22	27:BK:89:ASN:H	1.64	0.45
29:BE:113:VAL:HG22	29:BE:118:LEU:HD12	1.98	0.45
39:BX:21:LEU:HD21	39:BX:50:VAL:HG11	1.98	0.45
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.51	0.45
47:BF:132:ARG:O	47:BF:133:GLU:HB2	2.16	0.45
1:CA:60:A:O2'	19:CT:4:LYS:HD3	2.17	0.45
1:CA:245:U:H2'	1:CA:246:A:H5'	1.98	0.45
1:CA:301:G:O2'	1:CA:302:G:H5'	2.16	0.45
1:CA:425:G:H2'	1:CA:426:U:H6	1.81	0.45
1:CA:1308:U:OP1	12:CM:95:PRO:HA	2.16	0.45
2:CC:5:HIS:ND1	13:CN:88:MET:HB3	2.32	0.45
2:CC:112:ALA:O	2:CC:113:LYS:C	2.59	0.45
4:CE:29:ILE:O	4:CE:29:ILE:HG22	2.17	0.45
4:CE:80:LEU:HA	4:CE:146:MET:HE1	1.97	0.45
5:CF:86:ARG:NH2	17:CR:63:TYR:HB3	2.31	0.45
6:CG:69:ARG:HA	6:CG:99:ALA:HB2	1.98	0.45
6:CG:72:VAL:HA	6:CG:89:GLU:HA	1.99	0.45
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.98	0.45
10:CK:55:ARG:NH1	10:CK:60:PHE:HD1	2.05	0.45
13:CN:17:ASP:O	13:CN:21:ALA:HB3	2.17	0.45
20:CB:62:ARG:HD2	20:CB:62:ARG:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:178:LEU:HB2	20:CB:180:ILE:HG12	1.99	0.45
21:CU:48:LYS:HG3	21:CU:49:ALA:N	2.32	0.45
22:DA:114:C:H1'	43:DO:47:VAL:HG21	1.98	0.45
23:DB:160:A:H2'	23:DB:161:A:C8	2.51	0.45
23:DB:349:U:O2'	23:DB:350:G:H5'	2.17	0.45
23:DB:428:A:O2'	23:DB:429:A:H5'	2.15	0.45
23:DB:485:C:HO2'	45:DS:60:HIS:HE2	1.65	0.45
23:DB:675:A:H4'	29:DE:62:GLN:HE22	1.81	0.45
23:DB:720:U:H2'	23:DB:721:A:H8	1.80	0.45
23:DB:851:C:H2'	23:DB:852:U:H6	1.81	0.45
23:DB:937:C:H2'	23:DB:938:G:C8	2.52	0.45
23:DB:979:A:H2'	23:DB:982:C:H42	1.82	0.45
23:DB:1045:C:P	23:DB:1047:G:H5'	2.57	0.45
23:DB:1048:A:H2'	23:DB:1049:C:C6	2.51	0.45
23:DB:1210:G:H5'	23:DB:1212:G:C5'	2.45	0.45
23:DB:1210:G:H1'	23:DB:1212:G:C2	2.52	0.45
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.80	0.45
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.51	0.45
23:DB:1582:C:H2'	23:DB:1583:A:O4'	2.17	0.45
23:DB:2106:U:H2'	23:DB:2107:G:C8	2.51	0.45
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.30	0.45
23:DB:2209:G:H2'	23:DB:2210:U:C5	2.51	0.45
23:DB:2356:U:C5'	52:DW:16:GLU:HG3	2.47	0.45
23:DB:2549:G:O2'	23:DB:2550:G:H5'	2.17	0.45
25:DC:29:PHE:C	25:DC:31:PRO:HD2	2.42	0.45
27:DK:18:ARG:O	27:DK:45:GLU:HB2	2.17	0.45
27:DK:38:ILE:HD11	27:DK:112:PHE:HZ	1.82	0.45
29:DE:113:VAL:HG22	29:DE:118:LEU:HD12	1.99	0.45
29:DE:149:ILE:HD11	29:DE:172:ALA:HA	1.99	0.45
30:DY:47:ILE:HG23	30:DY:54:VAL:HG21	1.99	0.45
37:DL:96:LYS:HE2	37:DL:103:ILE:HA	1.99	0.45
40:DH:111:ALA:O	40:DH:112:LYS:C	2.60	0.45
41:DJ:128:ASN:O	41:DJ:129:GLU:HG3	2.17	0.45
42:DN:29:VAL:HG13	42:DN:83:LEU:HD21	1.98	0.45
42:DN:31:HIS:O	42:DN:33:ILE:HG13	2.17	0.45
44:DQ:7:VAL:O	44:DQ:11:ALA:HB2	2.17	0.45
44:DQ:23:TYR:N	44:DQ:23:TYR:CD2	2.82	0.45
45:DS:14:ALA:C	45:DS:16:LYS:N	2.74	0.45
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.17	0.45
46:DU:35:VAL:O	46:DU:38:ILE:HG22	2.17	0.45
46:DU:81:ARG:H	46:DU:81:ARG:NH2	2.09	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:14:LYS:O	47:DF:18:GLU:HB2	2.16	0.45
47:DF:165:GLY:O	47:DF:169:LEU:HD12	2.17	0.45
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.41	0.45
48:DG:95:ALA:HA	48:DG:104:LEU:HD23	1.98	0.45
1:AA:193:C:H2'	1:AA:194:C:C5	2.51	0.45
1:AA:201:G:H2'	1:AA:202:G:C8	2.51	0.45
1:AA:372:C:H4'	1:AA:373:A:H5'	1.99	0.45
1:AA:373:A:H1'	1:AA:481:G:H1'	1.98	0.45
1:AA:404:G:O2'	1:AA:405:U:H5'	2.16	0.45
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.45
1:AA:1241:G:H2'	1:AA:1242:G:C8	2.50	0.45
1:AA:1446:A:H2'	1:AA:1447:A:H8	1.82	0.45
2:AC:5:HIS:HD2	2:AC:7:ASN:H	1.63	0.45
3:AD:122:ILE:O	3:AD:128:VAL:HG23	2.17	0.45
6:AG:68:VAL:HG13	6:AG:133:ALA:HB1	1.98	0.45
10:AK:126:ARG:HB2	21:AU:33:ARG:CD	2.44	0.45
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.32	0.45
14:AO:78:TYR:CE1	14:AO:82:ILE:HD11	2.52	0.45
20:AB:46:VAL:O	20:AB:49:PHE:HB2	2.17	0.45
20:AB:187:ASP:O	20:AB:189:ASN:N	2.50	0.45
23:BB:460:A:C4'	50:BT:72:GLN:HB2	2.36	0.45
23:BB:553:G:H2'	23:BB:554:U:O4'	2.15	0.45
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.99	0.45
23:BB:1189:A:H2'	23:BB:1190:G:O4'	2.16	0.45
23:BB:1241:A:O4'	23:BB:1241:A:N3	2.50	0.45
23:BB:1357:C:O2'	23:BB:1358:G:H5'	2.17	0.45
23:BB:2626:C:H2'	23:BB:2627:G:H8	1.82	0.45
23:BB:2793:C:H2'	23:BB:2794:C:C6	2.51	0.45
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.29	0.45
24:BI:135:MET:HE2	24:BI:137:LEU:CD1	2.47	0.45
25:BC:90:ILE:HD11	25:BC:102:TYR:HB3	1.99	0.45
25:BC:120:ASP:CG	25:BC:121:ALA:H	2.25	0.45
26:BD:125:TRP:CE3	26:BD:160:LYS:HD3	2.52	0.45
27:BK:112:PHE:O	27:BK:113:MET:C	2.59	0.45
33:B1:35:LEU:N	33:B1:35:LEU:CD2	2.80	0.45
35:BV:75:GLN:HB2	35:BV:90:ASP:O	2.17	0.45
37:BL:80:SER:HA	37:BL:115:GLU:HB2	1.98	0.45
37:BL:105:ILE:HG22	37:BL:106:GLU:N	2.31	0.45
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.17	0.45
38:BM:19:GLY:H	38:BM:38:ARG:NH1	2.04	0.45
43:BO:35:ILE:CG1	43:BO:102:ARG:HE	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:23:LYS:N	46:BU:23:LYS:HD2	2.31	0.45
46:BU:64:ILE:HG13	46:BU:65:GLN:N	2.32	0.45
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.64	0.45
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.42	0.45
49:BR:61:ALA:HB2	49:BR:98:ILE:HA	1.98	0.45
50:BT:11:LEU:HD22	50:BT:11:LEU:N	2.23	0.45
53:B6:59:THR:O	53:B6:67:VAL:HG22	2.16	0.45
1:CA:308:C:H2'	1:CA:309:A:C8	2.52	0.45
1:CA:886:G:O2'	1:CA:887:G:H5'	2.17	0.45
1:CA:932:C:H5''	6:CG:3:ARG:CG	2.43	0.45
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.16	0.45
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.17	0.45
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.98	0.45
2:CC:78:LYS:O	2:CC:78:LYS:HG3	2.16	0.45
2:CC:119:ILE:O	2:CC:123:LEU:HG	2.17	0.45
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.17	0.45
4:CE:85:LYS:HG3	4:CE:93:VAL:O	2.16	0.45
6:CG:80:GLY:O	6:CG:82:SER:N	2.50	0.45
7:CH:12:ARG:HD3	7:CH:26:MET:HE2	1.99	0.45
11:CL:31:GLY:HA2	11:CL:56:LEU:HA	1.97	0.45
12:CM:12:LYS:O	12:CM:43:LYS:HG3	2.17	0.45
14:CO:71:LYS:HZ2	14:CO:72:ARG:HA	1.82	0.45
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.79	0.45
16:CQ:80:LYS:NZ	16:CQ:80:LYS:N	2.64	0.45
19:CT:53:MET:HA	19:CT:56:ILE:CD1	2.45	0.45
20:CB:98:GLY:HA2	20:CB:101:THR:CG2	2.44	0.45
23:DB:263:G:H2'	23:DB:264:C:O4'	2.16	0.45
23:DB:394:C:C2'	23:DB:395:U:H5'	2.46	0.45
23:DB:540:C:O2'	23:DB:541:A:H5'	2.16	0.45
23:DB:626:A:OP1	23:DB:654:A:N6	2.49	0.45
23:DB:814:C:H2'	23:DB:815:C:H6	1.82	0.45
23:DB:1099:G:O5'	24:DI:3:LYS:C	2.58	0.45
23:DB:1144:A:O2'	23:DB:1145:C:H5'	2.16	0.45
23:DB:1439:A:N3	23:DB:1553:A:C6	2.85	0.45
23:DB:2513:A:H2'	23:DB:2514:U:C6	2.52	0.45
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.17	0.45
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.82	0.45
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.82	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	0.45
25:DC:216:ARG:HE	25:DC:217:PRO:HD2	1.82	0.45
25:DC:245:THR:HG23	25:DC:249:VAL:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:109:SER:C	27:DK:111:LYS:H	2.24	0.45
29:DE:29:HIS:C	29:DE:31:VAL:N	2.74	0.45
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.98	0.45
30:DY:57:GLU:HA	30:DY:57:GLU:OE1	2.16	0.45
36:D2:13:ASN:O	36:D2:17:GLY:HA3	2.17	0.45
37:DL:79:LEU:CG	37:DL:112:LEU:HA	2.43	0.45
41:DJ:21:THR:C	41:DJ:23:LYS:N	2.75	0.45
46:DU:28:LEU:C	46:DU:30:SER:N	2.75	0.45
47:DF:31:GLU:O	47:DF:32:LYS:O	2.34	0.45
48:DG:8:VAL:HG22	48:DG:51:PHE:HE2	1.82	0.45
48:DG:54:ARG:HD2	48:DG:57:TYR:CE1	2.51	0.45
48:DG:88:LEU:C	48:DG:88:LEU:HD12	2.42	0.45
50:DT:36:LYS:HD3	50:DT:36:LYS:O	2.17	0.45
50:DT:49:LYS:HB2	50:DT:50:LEU:HD22	1.99	0.45
1:AA:222:C:H2'	1:AA:223:A:H8	1.81	0.45
1:AA:255:G:H2'	1:AA:256:U:C6	2.52	0.45
1:AA:265:G:H5'	16:AQ:65:PRO:O	2.17	0.45
1:AA:286:C:H2'	1:AA:287:U:H6	1.82	0.45
1:AA:688:G:H5'	10:AK:48:GLY:HA2	1.99	0.45
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.17	0.45
1:AA:1186:G:H21	13:AN:100:TRP:C	2.25	0.45
1:AA:1283:U:H2'	1:AA:1284:C:H6	1.81	0.45
2:AC:112:ALA:O	2:AC:113:LYS:C	2.60	0.45
2:AC:149:LYS:HE2	2:AC:200:TRP:CZ3	2.52	0.45
3:AD:29:THR:HB	3:AD:30:LYS:HD3	1.97	0.45
4:AE:110:MET:HE2	4:AE:126:ALA:H	1.82	0.45
5:AF:79:ARG:HH21	5:AF:87:SER:HB3	1.81	0.45
6:AG:68:VAL:CG2	6:AG:126:ALA:HB1	2.47	0.45
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.99	0.45
12:AM:5:GLY:O	12:AM:6:ILE:HB	2.16	0.45
19:AT:27:MET:HE3	19:AT:31:ILE:HD11	1.99	0.45
21:AU:16:ARG:O	21:AU:17:ARG:C	2.59	0.45
23:BB:6:A:H2'	23:BB:7:G:C8	2.52	0.45
23:BB:62:U:H3'	23:BB:63:A:H8	1.76	0.45
23:BB:215:G:H4'	23:BB:216:A:OP1	2.16	0.45
23:BB:539:G:H2'	23:BB:540:C:H6	1.82	0.45
23:BB:636:G:H3'	37:BL:128:THR:HG21	1.99	0.45
23:BB:674:G:C4'	29:BE:69:ARG:HB3	2.45	0.45
23:BB:920:A:H2'	23:BB:921:C:C6	2.52	0.45
23:BB:1119:U:H2'	23:BB:1120:G:H8	1.82	0.45
23:BB:1338:G:O2'	23:BB:1339:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1350:C:N4	23:BB:1382:G:O6	2.49	0.45
23:BB:1423:G:H2'	23:BB:1424:G:H8	1.82	0.45
23:BB:1449:G:O2'	23:BB:1450:G:H5'	2.17	0.45
23:BB:1463:C:H2'	23:BB:1464:G:H8	1.81	0.45
23:BB:1495:A:H2'	23:BB:1496:A:H8	1.81	0.45
23:BB:1765:U:H2'	23:BB:1766:G:C8	2.52	0.45
23:BB:2238:G:H4'	23:BB:2239:G:OP1	2.17	0.45
23:BB:2293:G:H2'	23:BB:2294:G:H8	1.81	0.45
23:BB:2849:U:H4'	23:BB:2850:A:O5'	2.17	0.45
24:BI:72:THR:HG21	24:BI:111:THR:O	2.17	0.45
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.52	0.45
26:BD:13:ARG:HH12	28:BP:74:GLN:NE2	2.14	0.45
27:BK:11:ALA:O	27:BK:100:PHE:N	2.47	0.45
27:BK:19:VAL:CB	27:BK:41:ILE:HD11	2.46	0.45
27:BK:53:LYS:HD3	27:BK:53:LYS:H	1.82	0.45
28:BP:101:GLU:OE2	28:BP:101:GLU:N	2.50	0.45
37:BL:123:ARG:HD2	37:BL:124:GLY:N	2.31	0.45
38:BM:66:ARG:HB2	38:BM:101:VAL:HG13	1.97	0.45
39:BX:20:ASN:N	39:BX:20:ASN:ND2	2.65	0.45
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.16	0.45
40:BH:7:ASP:CA	40:BH:15:LEU:HD22	2.36	0.45
40:BH:13:GLY:O	40:BH:14:SER:HB2	2.17	0.45
41:BJ:21:THR:C	41:BJ:23:LYS:H	2.25	0.45
41:BJ:95:ARG:O	41:BJ:95:ARG:HD3	2.17	0.45
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.17	0.45
44:BQ:60:TRP:CE2	44:BQ:93:ILE:HB	2.52	0.45
44:BQ:89:ILE:C	44:BQ:91:ARG:H	2.24	0.45
44:BQ:91:ARG:HH12	49:BR:10:LYS:HA	1.81	0.45
47:BF:127:TYR:HB2	47:BF:155:ILE:HD13	1.99	0.45
47:BF:137:PHE:O	47:BF:138:PRO:C	2.60	0.45
49:BR:40:MET:CG	49:BR:48:LYS:HA	2.47	0.45
49:BR:83:TYR:HE2	49:BR:85:LYS:HE3	1.81	0.45
51:BZ:53:ALA:C	51:BZ:55:GLY:H	2.22	0.45
1:CA:42:G:H2'	1:CA:43:C:C6	2.52	0.45
1:CA:398:U:H2'	1:CA:399:G:C8	2.52	0.45
1:CA:602:A:H2'	1:CA:603:U:C6	2.51	0.45
1:CA:624:C:H2'	1:CA:625:U:H6	1.80	0.45
1:CA:719:C:H2'	17:CR:38:ILE:HD13	1.97	0.45
1:CA:960:U:O3'	1:CA:1223:C:H4'	2.16	0.45
1:CA:1314:C:H3'	18:CS:5:LYS:HZ3	1.81	0.45
1:CA:1340:A:O2'	1:CA:1341:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:156:LEU:HG	2:CC:163:ARG:O	2.17	0.45
3:CD:2:ARG:O	3:CD:3:TYR:HB3	2.17	0.45
6:CG:50:ALA:HB2	6:CG:57:GLU:CA	2.47	0.45
7:CH:17:GLN:HE21	7:CH:62:LEU:HB3	1.81	0.45
11:CL:2:THR:O	11:CL:5:GLN:HB2	2.17	0.45
12:CM:78:ARG:HA	12:CM:81:ASP:OD2	2.17	0.45
13:CN:92:ILE:HD12	13:CN:92:ILE:N	2.32	0.45
20:CB:9:LEU:C	20:CB:11:ALA:H	2.25	0.45
23:DB:112:U:H2'	23:DB:113:U:H5'	1.99	0.45
23:DB:131:A:H2'	23:DB:132:G:H8	1.81	0.45
23:DB:309:A:H1'	23:DB:329:G:N3	2.31	0.45
23:DB:325:G:O2'	23:DB:326:G:H5'	2.15	0.45
23:DB:1048:A:H8	23:DB:1048:A:P	2.40	0.45
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.16	0.45
23:DB:1176:U:O5'	23:DB:1176:U:H6	2.00	0.45
23:DB:1434:A:H4'	23:DB:1434:A:OP1	2.17	0.45
23:DB:1439:A:C5	23:DB:1552:A:N6	2.84	0.45
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.51	0.45
23:DB:1797:G:C6	23:DB:1823:G:C6	3.05	0.45
23:DB:1811:G:O2'	23:DB:1812:U:H5'	2.16	0.45
23:DB:2789:C:H2'	23:DB:2893:A:N7	2.32	0.45
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.16	0.45
25:DC:43:ASN:HD22	25:DC:44:ASN:N	2.15	0.45
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.40	0.45
25:DC:159:THR:N	25:DC:194:VAL:CG1	2.80	0.45
27:DK:35:VAL:CG2	27:DK:36:GLY:H	2.06	0.45
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.33	0.45
30:DY:11:SER:OG	30:DY:13:ILE:HG13	2.16	0.45
34:D3:30:HIS:CD2	34:D3:31:ILE:N	2.85	0.45
37:DL:127:VAL:HG22	37:DL:128:THR:N	2.31	0.45
38:DM:35:ALA:HB3	38:DM:100:LYS:H	1.82	0.45
41:DJ:43:GLU:O	41:DJ:44:TYR:C	2.59	0.45
41:DJ:44:TYR:O	41:DJ:45:THR:CB	2.65	0.45
44:DQ:106:THR:O	44:DQ:109:VAL:HB	2.16	0.45
46:DU:64:ILE:HG13	46:DU:65:GLN:N	2.32	0.45
51:DZ:69:ALA:HA	51:DZ:72:ARG:NH1	2.32	0.45
52:DW:54:ARG:C	52:DW:56:HIS:H	2.25	0.45
52:DW:59:PHE:HE2	52:DW:61:LYS:HA	1.81	0.45
53:D6:65:THR:HG23	53:D6:101:ILE:O	2.17	0.45
1:AA:221:C:O2'	1:AA:222:C:H5'	2.17	0.45
1:AA:384:G:H2'	1:AA:385:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:468:A:H3'	1:AA:469:C:C6	2.52	0.45
1:AA:502:A:H2'	1:AA:503:C:O4'	2.16	0.45
1:AA:1060:U:C5'	9:AJ:53:ILE:HG12	2.47	0.45
1:AA:1073:U:O2'	20:AB:102:ASN:OD1	2.33	0.45
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.81	0.45
1:AA:1463:U:OP1	28:BP:108:ARG:HD2	2.16	0.45
1:AA:1473:G:H2'	1:AA:1474:U:C6	2.51	0.45
5:AF:3:HIS:CE1	5:AF:65:GLU:HG3	2.52	0.45
7:AH:17:GLN:HG2	7:AH:62:LEU:HD23	1.99	0.45
9:AJ:41:PRO:HG2	9:AJ:42:LEU:H	1.81	0.45
11:AL:19:ASN:HD22	11:AL:19:ASN:HA	1.52	0.45
13:AN:2:LYS:O	13:AN:6:LYS:HG3	2.17	0.45
14:AO:21:ASP:O	14:AO:21:ASP:CG	2.59	0.45
14:AO:21:ASP:O	14:AO:23:GLY:N	2.47	0.45
23:BB:161:A:C3'	23:BB:162:U:H5''	2.35	0.45
23:BB:664:G:O2'	23:BB:665:U:H5'	2.17	0.45
23:BB:693:A:O2'	23:BB:694:U:H5'	2.16	0.45
23:BB:780:G:N2	23:BB:783:A:H62	2.15	0.45
23:BB:806:C:O2'	23:BB:2445:G:H4'	2.16	0.45
23:BB:838:C:C2	23:BB:941:A:C6	3.05	0.45
23:BB:994:C:H3'	44:BQ:53:LYS:HZ2	1.82	0.45
23:BB:1491:G:H5'	25:BC:97:ASP:OD1	2.17	0.45
23:BB:1680:U:O2	23:BB:1763:G:H3'	2.16	0.45
23:BB:1915:U:H3'	23:BB:1916:A:C8	2.52	0.45
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.51	0.45
23:BB:2586:U:H2'	23:BB:2587:A:H8	1.82	0.45
23:BB:2702:G:H2'	23:BB:2703:C:H6	1.82	0.45
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.50	0.45
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.97	0.45
25:BC:43:ASN:HD22	25:BC:44:ASN:H	1.60	0.45
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.47	0.45
26:BD:137:SER:C	26:BD:138:LEU:HD22	2.42	0.45
27:BK:39:ILE:HD13	27:BK:60:ALA:O	2.16	0.45
29:BE:1:MET:HB3	29:BE:14:VAL:HG23	1.99	0.45
30:BY:56:VAL:HG12	30:BY:57:GLU:H	1.82	0.45
32:B4:25:VAL:HG11	32:B4:35:GLN:NE2	2.32	0.45
37:BL:81:ASP:CG	37:BL:100:ILE:HD11	2.41	0.45
37:BL:91:ASP:HA	37:BL:123:ARG:HB3	1.97	0.45
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.32	0.45
38:BM:23:GLY:O	38:BM:101:VAL:HG12	2.17	0.45
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:44:HIS:O	48:BG:46:ASP:N	2.49	0.45
48:BG:154:GLU:CG	48:BG:156:TYR:HB2	2.47	0.45
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.79	0.45
1:CA:82:G:O2'	1:CA:83:C:H5'	2.16	0.45
1:CA:215:C:O2'	1:CA:216:U:H5'	2.17	0.45
1:CA:389:A:N3	1:CA:389:A:H2'	2.32	0.45
1:CA:669:G:O2'	1:CA:670:G:H5'	2.17	0.45
1:CA:778:G:H2'	1:CA:779:C:H6	1.80	0.45
1:CA:778:G:H2'	1:CA:779:C:C6	2.52	0.45
1:CA:1054:C:H1'	1:CA:1196:A:C4	2.51	0.45
1:CA:1408:A:H5'	23:DB:1912:A:N6	2.32	0.45
2:CC:125:ARG:O	2:CC:126:ARG:HB2	2.17	0.45
3:CD:29:THR:HB	3:CD:30:LYS:HD3	1.98	0.45
10:CK:13:LYS:HD2	10:CK:76:TYR:HE2	1.81	0.45
10:CK:28:ASN:ND2	10:CK:56:LYS:HD2	2.32	0.45
11:CL:54:VAL:CG2	11:CL:79:ILE:HD11	2.47	0.45
14:CO:84:ARG:C	14:CO:85:LEU:HD12	2.42	0.45
16:CQ:68:LYS:C	16:CQ:70:LYS:N	2.75	0.45
23:DB:208:C:H2'	23:DB:209:C:C6	2.51	0.45
23:DB:320:A:OP1	29:DE:130:LYS:HE3	2.17	0.45
23:DB:468:G:H5''	29:DE:55:SER:HB2	1.98	0.45
23:DB:850:U:O3'	30:DY:22:THR:HG22	2.17	0.45
23:DB:928:A:H2'	23:DB:929:U:C6	2.51	0.45
23:DB:1201:U:H2'	23:DB:1202:G:C8	2.52	0.45
23:DB:1257:C:H5'	29:DE:78:TRP:CH2	2.51	0.45
23:DB:1281:G:O2'	23:DB:1282:U:H5'	2.17	0.45
23:DB:1468:U:H2'	23:DB:1522:A:H61	1.81	0.45
23:DB:1731:G:O2'	23:DB:1732:C:H5''	2.17	0.45
23:DB:2019:A:H4'	44:DQ:33:VAL:HG11	1.98	0.45
23:DB:2428:G:H5''	23:DB:2429:G:OP1	2.17	0.45
23:DB:2515:C:P	41:DJ:81:ILE:HD11	2.57	0.45
23:DB:2702:G:H2'	23:DB:2703:C:H6	1.81	0.45
23:DB:2846:G:OP1	28:DP:51:ASN:HB2	2.17	0.45
25:DC:94:LEU:HA	25:DC:100:ARG:HB3	1.98	0.45
26:DD:16:THR:HG22	26:DD:17:GLU:N	2.32	0.45
27:DK:5:GLN:HA	27:DK:20:MET:SD	2.57	0.45
35:DV:51:GLN:NE2	35:DV:79:ARG:HH22	2.14	0.45
37:DL:57:LEU:HA	37:DL:60:ARG:HE	1.82	0.45
40:DH:4:ILE:CD1	40:DH:44:ILE:HG22	2.47	0.45
43:DO:30:ARG:HG3	43:DO:30:ARG:NH1	2.32	0.45
45:DS:74:ILE:HD12	45:DS:104:THR:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:107:VAL:HG22	45:DS:108:SER:N	2.31	0.45
47:DF:42:ALA:O	47:DF:43:ILE:C	2.59	0.45
48:DG:43:LYS:O	48:DG:50:THR:N	2.49	0.45
49:DR:72:VAL:CG2	49:DR:89:HIS:HB3	2.46	0.45
49:DR:91:GLN:HG3	49:DR:92:TRP:N	2.32	0.45
50:DT:18:GLU:O	50:DT:20:ALA:N	2.48	0.45
50:DT:55:VAL:HG22	50:DT:87:LEU:HD23	1.99	0.45
51:DZ:33:LEU:O	51:DZ:34:HIS:CG	2.70	0.45
51:DZ:63:GLY:O	51:DZ:66:THR:N	2.50	0.45
1:AA:113:G:H2'	1:AA:114:U:H6	1.81	0.45
1:AA:203:G:H1'	1:AA:465:A:N6	2.31	0.45
1:AA:508:U:H1'	1:AA:509:A:N7	2.32	0.45
1:AA:737:C:O2'	1:AA:738:C:H5'	2.17	0.45
1:AA:947:G:H2'	1:AA:948:C:C6	2.52	0.45
1:AA:958:A:N6	18:AS:53:GLY:HA3	2.29	0.45
1:AA:1242:G:H2'	1:AA:1243:C:C6	2.53	0.45
1:AA:1314:C:H3'	18:AS:5:LYS:HZ1	1.82	0.45
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.16	0.45
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.51	0.45
1:AA:1441:A:C2	28:BP:113:LEU:HD22	2.51	0.45
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.16	0.45
2:AC:171:ARG:HB2	2:AC:171:ARG:NH1	2.32	0.45
3:AD:29:THR:CG2	3:AD:30:LYS:HD3	2.48	0.45
4:AE:57:ALA:O	4:AE:61:LYS:HG2	2.17	0.45
5:AF:80:PHE:HE1	25:BC:123:ILE:HD13	1.82	0.45
7:AH:94:VAL:HG21	7:AH:100:ILE:C	2.42	0.45
16:AQ:45:VAL:HA	16:AQ:72:TRP:O	2.17	0.45
17:AR:59:LYS:O	17:AR:62:ARG:HB2	2.16	0.45
18:AS:58:PRO:O	18:AS:59:VAL:HG13	2.17	0.45
19:AT:38:ILE:HD13	19:AT:85:LEU:HD13	1.99	0.45
20:AB:48:MET:H	20:AB:48:MET:HG2	1.36	0.45
21:AU:13:VAL:O	21:AU:13:VAL:HG13	2.17	0.45
21:AU:25:ALA:C	21:AU:27:VAL:H	2.24	0.45
22:BA:9:G:OP1	43:BO:25:ARG:NH1	2.50	0.45
22:BA:37:C:H2'	22:BA:38:C:O4'	2.17	0.45
23:BB:39:G:H2'	23:BB:40:U:C6	2.52	0.45
23:BB:90:U:H2'	23:BB:91:A:C2	2.52	0.45
23:BB:250:G:H2'	23:BB:251:A:C8	2.52	0.45
23:BB:259:G:H2'	23:BB:260:G:H8	1.82	0.45
23:BB:264:C:C2'	23:BB:265:A:H5''	2.47	0.45
23:BB:651:G:OP1	34:B3:18:LYS:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:833:A:H1'	37:BL:52:GLY:N	2.31	0.45
23:BB:970:U:H1'	23:BB:985:C:P	2.57	0.45
23:BB:1249:U:O4'	44:BQ:3:VAL:HG21	2.16	0.45
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.17	0.45
23:BB:2013:A:N3	45:BS:88:ARG:NH1	2.65	0.45
23:BB:2399:G:H2'	23:BB:2400:G:H8	1.82	0.45
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.17	0.45
23:BB:2708:G:H2'	23:BB:2709:G:H8	1.82	0.45
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.51	0.45
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.99	0.45
25:BC:15:VAL:HG22	25:BC:204:LEU:O	2.16	0.45
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.40	0.45
26:BD:4:LEU:N	26:BD:4:LEU:HD22	2.32	0.45
26:BD:158:GLY:O	26:BD:160:LYS:N	2.50	0.45
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.16	0.45
27:BK:87:LEU:HD12	27:BK:92:GLU:HA	1.99	0.45
29:BE:150:THR:HG21	29:BE:153:LEU:CA	2.44	0.45
30:BY:23:LEU:CD1	30:BY:28:LEU:HB2	2.47	0.45
31:B0:30:ASP:HB3	31:B0:33:SER:O	2.17	0.45
34:B3:14:LYS:O	34:B3:15:LYS:C	2.60	0.45
35:BV:42:LEU:HD11	35:BV:89:ILE:HD11	1.99	0.45
36:B2:11:LYS:O	36:B2:12:ARG:C	2.61	0.45
38:BM:57:VAL:O	38:BM:59:ARG:N	2.45	0.45
40:BH:25:TYR:CD2	40:BH:30:LEU:HD11	2.52	0.45
40:BH:49:ALA:O	40:BH:53:GLU:HB2	2.17	0.45
40:BH:50:ARG:O	40:BH:54:LEU:HD21	2.17	0.45
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.46	0.45
41:BJ:31:GLU:O	41:BJ:32:LEU:C	2.60	0.45
44:BQ:63:ARG:CZ	44:BQ:96:ASP:HA	2.47	0.45
45:BS:13:SER:HB3	45:BS:16:LYS:HE3	1.99	0.45
46:BU:73:ASN:HB3	46:BU:95:PHE:CE2	2.52	0.45
47:BF:59:ILE:H	47:BF:59:ILE:HG13	1.51	0.45
47:BF:131:VAL:O	47:BF:132:ARG:HB2	2.17	0.45
52:BW:75:ASN:O	52:BW:76:ARG:HB2	2.17	0.45
1:CA:186:C:H2'	1:CA:187:G:O4'	2.17	0.45
1:CA:213:G:C8	1:CA:214:C:C5	3.05	0.45
1:CA:784:A:H2'	1:CA:785:G:H8	1.82	0.45
1:CA:900:A:O2'	1:CA:901:A:H5'	2.15	0.45
1:CA:1240:U:C5	6:CG:115:MET:HE3	2.52	0.45
2:CC:130:ARG:HA	2:CC:133:MET:HE3	1.99	0.45
5:CF:3:HIS:CD2	5:CF:92:THR:HG23	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:11:ARG:HA	8:CI:105:ARG:CZ	2.46	0.45
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	1.97	0.45
8:CI:103:VAL:HG23	8:CI:104:THR:N	2.32	0.45
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.52	0.45
20:CB:40:ILE:HD13	20:CB:201:GLY:CA	2.46	0.45
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.98	0.45
21:CU:24:LYS:HE2	21:CU:25:ALA:HB2	1.99	0.45
23:DB:173:A:H2'	23:DB:174:U:H6	1.82	0.45
23:DB:220:G:H1	23:DB:427:U:H2'	1.81	0.45
23:DB:244:A:H1'	23:DB:255:A:N6	2.32	0.45
23:DB:274:C:H6	23:DB:274:C:O5'	2.00	0.45
23:DB:282:A:H2'	23:DB:283:G:O4'	2.17	0.45
23:DB:416:U:H2'	23:DB:417:C:C6	2.52	0.45
23:DB:596:U:H2'	23:DB:597:G:H8	1.82	0.45
23:DB:713:G:O2'	23:DB:714:U:H5'	2.18	0.45
23:DB:841:G:O2'	23:DB:842:U:H5'	2.16	0.45
23:DB:931:U:C4	23:DB:1167:C:H1'	2.52	0.45
23:DB:972:A:C3'	23:DB:973:A:H5''	2.36	0.45
23:DB:1098:A:O5'	24:DI:3:LYS:CG	2.64	0.45
23:DB:1111:A:H3'	23:DB:1111:A:OP2	2.17	0.45
23:DB:1210:G:N3	23:DB:1212:G:N2	2.65	0.45
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.47	0.45
23:DB:1568:G:H4'	25:DC:58:LYS:CB	2.47	0.45
23:DB:1877:A:H2'	23:DB:1878:G:O4'	2.17	0.45
23:DB:2693:G:H2'	23:DB:2694:G:C8	2.50	0.45
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.52	0.45
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.82	0.45
26:DD:56:LYS:CD	26:DD:58:ASN:HB3	2.47	0.45
29:DE:176:ASP:OD1	29:DE:176:ASP:C	2.59	0.45
30:DY:37:ARG:HG2	30:DY:43:ILE:HD11	1.97	0.45
30:DY:56:VAL:HG12	30:DY:57:GLU:H	1.81	0.45
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.52	0.45
37:DL:3:LEU:O	37:DL:5:THR:HG23	2.17	0.45
38:DM:116:ALA:C	38:DM:118:LYS:N	2.72	0.45
40:DH:99:ILE:O	40:DH:103:VAL:HG12	2.16	0.45
41:DJ:40:HIS:ND1	41:DJ:41:LYS:HG3	2.32	0.45
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.25	0.45
42:DN:8:ARG:HB3	42:DN:43:GLU:OE2	2.17	0.45
42:DN:90:ARG:HB3	42:DN:94:TYR:CE1	2.52	0.45
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.32	0.45
47:DF:91:ARG:O	47:DF:92:GLY:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:147:ARG:CZ	47:DF:147:ARG:HB3	2.46	0.45
52:DW:32:ALA:C	52:DW:34:SER:N	2.74	0.45
1:AA:222:C:H2'	1:AA:223:A:C8	2.52	0.44
1:AA:596:A:H2'	1:AA:597:G:H8	1.82	0.44
1:AA:947:G:H4'	12:AM:107:THR:OG1	2.17	0.44
1:AA:1014:A:H5''	18:AS:13:HIS:HB3	1.98	0.44
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.50	0.44
1:AA:1291:U:O2'	1:AA:1292:G:H5'	2.17	0.44
1:AA:1309:G:H2'	1:AA:1310:G:H8	1.81	0.44
4:AE:93:VAL:HG22	4:AE:126:ALA:CB	2.47	0.44
5:AF:3:HIS:CD2	5:AF:92:THR:HG23	2.52	0.44
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.52	0.44
6:AG:68:VAL:CG1	6:AG:133:ALA:HB1	2.47	0.44
7:AH:17:GLN:HE21	7:AH:62:LEU:HB3	1.82	0.44
7:AH:110:MET:SD	7:AH:115:ALA:HB2	2.57	0.44
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.99	0.44
17:AR:38:ILE:HG23	17:AR:62:ARG:NH2	2.32	0.44
22:BA:17:C:O2'	22:BA:18:G:H5'	2.17	0.44
22:BA:98:G:N1	35:BV:14:LYS:HB2	2.32	0.44
23:BB:78:U:H2'	23:BB:79:C:H6	1.79	0.44
23:BB:82:U:H2'	23:BB:83:A:O4'	2.17	0.44
23:BB:202:U:H2'	23:BB:203:A:O4'	2.16	0.44
23:BB:627:A:H4'	23:BB:628:G:OP1	2.17	0.44
23:BB:642:U:H2'	23:BB:644:A:OP2	2.17	0.44
23:BB:655:A:H4'	23:BB:656:G:OP1	2.16	0.44
23:BB:840:C:H2'	23:BB:841:G:C8	2.52	0.44
23:BB:973:A:H8	23:BB:973:A:OP1	2.00	0.44
23:BB:1510:G:O2'	23:BB:1511:G:H5'	2.18	0.44
23:BB:1584:U:H6	23:BB:1584:U:O5'	2.00	0.44
23:BB:1689:A:O2'	23:BB:1690:A:H5'	2.18	0.44
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.82	0.44
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.82	0.44
23:BB:2658:C:H5'	48:BG:159:LYS:HZ2	1.79	0.44
26:BD:4:LEU:HD21	26:BD:100:LEU:CB	2.47	0.44
26:BD:16:THR:HG22	26:BD:17:GLU:H	1.82	0.44
29:BE:88:ARG:HB3	29:BE:89:PRO:HD2	1.99	0.44
31:B0:41:HIS:HB2	42:BN:99:LYS:C	2.42	0.44
32:B4:22:VAL:HB	32:B4:24:ARG:NE	2.31	0.44
38:BM:35:ALA:HB3	38:BM:100:LYS:H	1.82	0.44
40:BH:112:LYS:C	40:BH:114:GLU:N	2.75	0.44
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:93:ASP:C	43:BO:95:SER:N	2.74	0.44
46:BU:53:GLN:N	46:BU:54:PRO:CD	2.80	0.44
47:BF:74:ALA:HB3	47:BF:78:ILE:HD13	1.99	0.44
49:BR:25:LEU:H	49:BR:94:THR:HG21	1.82	0.44
50:BT:49:LYS:HB2	50:BT:50:LEU:HD22	1.98	0.44
1:CA:205:A:H2'	1:CA:206:C:H6	1.81	0.44
1:CA:693:G:P	10:CK:126:ARG:HH12	2.38	0.44
1:CA:696:A:H2'	1:CA:697:U:H6	1.81	0.44
1:CA:1034:G:C2'	1:CA:1035:A:H5'	2.47	0.44
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.82	0.44
1:CA:1320:C:H41	18:CS:36:ARG:HB3	1.82	0.44
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.52	0.44
2:CC:148:ILE:O	2:CC:168:ARG:HG2	2.17	0.44
3:CD:10:LEU:HD12	3:CD:20:LEU:CD1	2.47	0.44
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.52	0.44
7:CH:65:PHE:CG	7:CH:66:GLN:N	2.85	0.44
10:CK:108:ASN:ND2	21:CU:6:ARG:HB2	2.32	0.44
13:CN:60:ARG:CG	13:CN:62:ARG:HE	2.29	0.44
19:CT:49:ALA:HA	19:CT:52:GLU:OE2	2.17	0.44
20:CB:83:ALA:C	20:CB:88:GLN:NE2	2.76	0.44
23:DB:593:U:H2'	23:DB:594:U:H6	1.80	0.44
23:DB:850:U:H2'	23:DB:851:C:H6	1.82	0.44
23:DB:951:C:O2'	23:DB:952:G:H5'	2.17	0.44
23:DB:1083:U:H1'	23:DB:1086:A:H61	1.81	0.44
23:DB:1190:G:O2'	23:DB:1191:G:H5'	2.17	0.44
23:DB:1507:C:H2'	23:DB:1508:A:H4'	1.99	0.44
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.78	0.44
23:DB:1713:A:H4'	23:DB:1714:U:OP2	2.17	0.44
23:DB:1722:A:N6	23:DB:1738:G:H1'	2.32	0.44
23:DB:2232:C:O2'	23:DB:2233:U:H5'	2.17	0.44
23:DB:2330:G:H21	52:DW:38:ARG:HA	1.80	0.44
23:DB:2545:G:O2'	23:DB:2546:U:H5'	2.17	0.44
23:DB:2798:U:H4'	23:DB:2800:A:N1	2.32	0.44
23:DB:2899:A:H2'	23:DB:2900:A:H8	1.82	0.44
25:DC:80:LEU:HD22	25:DC:109:LEU:HD12	1.98	0.44
25:DC:146:LYS:HG2	25:DC:147:PRO:HD2	1.99	0.44
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.82	0.44
26:DD:94:GLN:HG2	26:DD:94:GLN:O	2.15	0.44
27:DK:85:VAL:HG21	27:DK:115:ILE:HD11	2.00	0.44
35:DV:14:LYS:CE	35:DV:18:ARG:HH21	2.31	0.44
38:DM:38:ARG:CA	38:DM:98:PRO:HD3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:26:ALA:C	40:DH:28:ASN:N	2.75	0.44
41:DJ:31:GLU:O	41:DJ:32:LEU:C	2.60	0.44
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.17	0.44
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.17	0.44
45:DS:25:ARG:HE	45:DS:74:ILE:HG23	1.82	0.44
48:DG:112:VAL:HG13	48:DG:150:TYR:CE2	2.52	0.44
49:DR:26:ASP:O	49:DR:27:ILE:HD13	2.17	0.44
50:DT:25:GLU:C	50:DT:27:SER:N	2.74	0.44
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.65	0.44
53:D6:45:TYR:CE2	53:D6:75:ALA:HB2	2.52	0.44
53:D6:65:THR:HG22	53:D6:66:LEU:N	2.31	0.44
53:D6:155:LYS:O	53:D6:156:ARG:C	2.60	0.44
1:AA:125:U:H2'	1:AA:126:G:C8	2.52	0.44
1:AA:154:U:H2'	1:AA:155:A:H8	1.80	0.44
1:AA:458:U:H2'	1:AA:459:A:H8	1.82	0.44
1:AA:483:C:H2'	1:AA:484:G:N7	2.32	0.44
1:AA:861:G:H2'	1:AA:862:C:H6	1.82	0.44
1:AA:878:A:H1'	7:AH:3:GLN:OE1	2.17	0.44
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.29	0.44
3:AD:78:ALA:O	3:AD:85:THR:HA	2.18	0.44
3:AD:146:GLU:CD	3:AD:147:LYS:H	2.26	0.44
6:AG:53:SER:C	6:AG:55:LYS:H	2.25	0.44
14:AO:71:LYS:HB2	14:AO:78:TYR:CG	2.52	0.44
21:AU:33:ARG:CZ	21:AU:34:ARG:HG2	2.47	0.44
23:BB:125:A:H3'	23:BB:126:A:C5'	2.47	0.44
23:BB:151:C:O2'	23:BB:152:A:H5'	2.18	0.44
23:BB:270:A:OP1	23:BB:271:G:H5'	2.17	0.44
23:BB:626:A:OP1	23:BB:654:A:N6	2.49	0.44
23:BB:672:C:O2'	23:BB:673:C:H5'	2.16	0.44
23:BB:828:U:H4'	23:BB:831:G:H1	1.80	0.44
23:BB:975:A:H1'	23:BB:990:A:C2	2.53	0.44
23:BB:1109:C:H3'	23:BB:1110:G:C8	2.52	0.44
23:BB:1203:U:C4'	37:BL:3:LEU:HD12	2.44	0.44
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.81	0.44
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.82	0.44
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.17	0.44
23:BB:1993:U:H4'	26:BD:133:THR:HG22	1.98	0.44
23:BB:2030:A:H4'	23:BB:2031:A:H5'	2.00	0.44
23:BB:2135:A:H3'	23:BB:2136:G:C8	2.49	0.44
23:BB:2149:U:O2'	23:BB:2150:C:H5'	2.17	0.44
23:BB:2217:G:O2'	23:BB:2218:G:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2467:C:O2'	23:BB:2468:A:H5'	2.17	0.44
23:BB:2636:C:O5'	26:BD:81:GLU:HB2	2.17	0.44
23:BB:2812:G:H2'	23:BB:2813:A:O4'	2.17	0.44
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.44
24:BI:64:ARG:C	24:BI:64:ARG:HD2	2.42	0.44
25:BC:43:ASN:N	25:BC:47:ARG:O	2.50	0.44
25:BC:141:HIS:HB2	25:BC:192:GLY:O	2.17	0.44
26:BD:108:ASP:OD2	26:BD:206:ALA:HA	2.17	0.44
29:BE:24:ASN:O	29:BE:25:GLU:C	2.61	0.44
29:BE:176:ASP:OD1	29:BE:176:ASP:C	2.60	0.44
33:B1:26:LYS:HB2	33:B1:52:LYS:HD2	1.99	0.44
46:BU:85:ARG:CD	46:BU:86:PHE:H	2.20	0.44
47:BF:14:LYS:O	47:BF:18:GLU:HB2	2.17	0.44
48:BG:46:ASP:N	48:BG:46:ASP:OD2	2.50	0.44
48:BG:90:GLY:HA2	48:BG:159:LYS:HE2	1.98	0.44
52:BW:59:PHE:HE2	52:BW:61:LYS:HA	1.81	0.44
53:B6:30:THR:CB	53:B6:183:ILE:HG12	2.47	0.44
53:B6:39:LEU:O	53:B6:53:ASN:ND2	2.50	0.44
1:CA:552:U:H4'	11:CL:82:ARG:HG2	1.99	0.44
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.16	0.44
1:CA:1473:G:H2'	1:CA:1474:U:C6	2.52	0.44
3:CD:21:LYS:C	3:CD:23:GLY:H	2.25	0.44
4:CE:144:GLU:O	4:CE:144:GLU:HG2	2.16	0.44
8:CI:10:ARG:HB3	8:CI:15:ALA:HA	1.99	0.44
9:CJ:22:THR:O	9:CJ:26:VAL:HG23	2.17	0.44
12:CM:87:GLY:HA2	12:CM:90:HIS:HD2	1.82	0.44
15:CP:61:VAL:CA	15:CP:65:ALA:HB3	2.47	0.44
16:CQ:61:ARG:HH11	16:CQ:61:ARG:HG2	1.82	0.44
17:CR:63:TYR:N	17:CR:63:TYR:HD2	2.15	0.44
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.16	0.44
23:DB:98:G:H22	46:DU:6:ARG:HH12	1.64	0.44
23:DB:280:U:H2'	23:DB:281:C:C5	2.52	0.44
23:DB:753:A:H2'	23:DB:754:U:H6	1.81	0.44
23:DB:819:A:OP2	23:DB:1187:G:N2	2.47	0.44
23:DB:1039:A:H2'	23:DB:1040:A:H8	1.81	0.44
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.18	0.44
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.17	0.44
23:DB:1241:A:H2'	23:DB:1242:U:C5'	2.44	0.44
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.82	0.44
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.17	0.44
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.17	0.44
23:DB:2065:C:H2'	23:DB:2066:C:C6	2.52	0.44
23:DB:2188:U:H3'	23:DB:2189:U:H6	1.83	0.44
23:DB:2286:G:C8	23:DB:2286:G:H5'	2.52	0.44
23:DB:2360:G:OP1	34:D3:50:SER:HB3	2.17	0.44
23:DB:2808:G:O2'	23:DB:2809:A:H8	2.01	0.44
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.80	0.44
25:DC:90:ILE:HD11	25:DC:102:TYR:HB3	1.99	0.44
26:DD:116:LYS:HA	26:DD:116:LYS:HD3	1.87	0.44
27:DK:25:LEU:HD12	27:DK:39:ILE:HA	1.99	0.44
27:DK:116:ILE:C	27:DK:118:LEU:H	2.24	0.44
29:DE:1:MET:HB2	29:DE:16:GLU:HA	1.99	0.44
29:DE:20:GLY:O	29:DE:21:ARG:C	2.60	0.44
29:DE:109:LEU:HD12	29:DE:112:LEU:HD12	1.98	0.44
29:DE:122:GLU:H	29:DE:122:GLU:CD	2.24	0.44
30:DY:16:LEU:HD22	30:DY:16:LEU:N	2.16	0.44
33:D1:4:ILE:HB	33:D1:27:ARG:HG3	1.98	0.44
37:DL:92:LEU:HD22	37:DL:124:GLY:HA3	1.97	0.44
38:DM:26:VAL:HG22	38:DM:133:LYS:HA	1.99	0.44
38:DM:53:MET:HE1	38:DM:103:TYR:CG	2.51	0.44
42:DN:13:ASN:C	42:DN:15:SER:N	2.75	0.44
44:DQ:109:VAL:CG1	44:DQ:113:LYS:HE3	2.47	0.44
45:DS:36:LEU:HB3	45:DS:48:LYS:HB2	1.99	0.44
46:DU:41:VAL:N	46:DU:60:LYS:O	2.50	0.44
47:DF:45:ASP:O	47:DF:47:LYS:HD3	2.17	0.44
48:DG:17:LYS:NZ	48:DG:17:LYS:HA	2.32	0.44
51:DZ:39:TRP:HA	51:DZ:46:PHE:HD2	1.82	0.44
52:DW:23:LYS:HZ3	52:DW:24:ARG:HG3	1.79	0.44
53:D6:31:GLY:HA2	53:D6:106:LEU:HD22	2.00	0.44
1:AA:63:C:H2'	1:AA:64:G:H5'	2.00	0.44
1:AA:137:U:H2'	1:AA:138:G:H8	1.82	0.44
1:AA:237:G:O2'	1:AA:238:A:H5'	2.18	0.44
1:AA:825:A:H2'	1:AA:826:C:H6	1.81	0.44
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.17	0.44
2:AC:13:ILE:C	2:AC:15:LYS:N	2.76	0.44
7:AH:72:GLU:CD	7:AH:72:GLU:N	2.75	0.44
9:AJ:24:GLU:CD	9:AJ:90:LEU:HD11	2.43	0.44
10:AK:125:LYS:O	21:AU:33:ARG:CZ	2.65	0.44
13:AN:26:LEU:HD12	13:AN:44:VAL:CG1	2.48	0.44
20:AB:68:PHE:CE1	20:AB:88:GLN:HB3	2.51	0.44
20:AB:126:ASP:O	20:AB:127:LYS:HD2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:42:C:O2'	47:BF:91:ARG:NH1	2.51	0.44
23:BB:31:C:C2'	23:BB:32:C:H5'	2.47	0.44
23:BB:55:G:H2'	23:BB:56:A:H8	1.82	0.44
23:BB:142:A:O2'	50:BT:3:ARG:NH1	2.51	0.44
23:BB:285:G:O2'	23:BB:286:U:H5'	2.17	0.44
23:BB:532:A:N3	23:BB:532:A:C2'	2.80	0.44
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.52	0.44
23:BB:741:U:H2'	23:BB:742:A:H8	1.82	0.44
23:BB:1081:U:C5'	24:BI:126:ARG:HD2	2.47	0.44
23:BB:1210:G:N3	23:BB:1212:G:N2	2.65	0.44
23:BB:1439:A:N3	23:BB:1553:A:C6	2.86	0.44
23:BB:1795:C:O2'	23:BB:1796:U:H5'	2.18	0.44
23:BB:1885:A:H2'	23:BB:1886:U:O4'	2.18	0.44
23:BB:2210:U:N3	23:BB:2212:A:N7	2.65	0.44
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.17	0.44
23:BB:2795:C:H2'	23:BB:2796:U:C1'	2.47	0.44
23:BB:2803:G:O2'	23:BB:2804:U:H5'	2.17	0.44
23:BB:2856:A:H2'	23:BB:2857:G:H8	1.83	0.44
25:BC:28:PRO:O	25:BC:30:ALA:N	2.50	0.44
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.17	0.44
26:BD:55:LYS:H	26:BD:76:GLY:H	1.65	0.44
26:BD:83:ARG:HH21	26:BD:83:ARG:HG3	1.83	0.44
27:BK:47:ILE:HG23	27:BK:48:PRO:N	2.31	0.44
27:BK:116:ILE:C	27:BK:118:LEU:H	2.25	0.44
28:BP:62:LYS:O	28:BP:63:ILE:HB	2.18	0.44
30:BY:7:THR:HA	30:BY:34:THR:HA	1.98	0.44
33:B1:35:LEU:N	33:B1:35:LEU:HD23	2.32	0.44
33:B1:39:ASP:O	33:B1:43:ARG:N	2.51	0.44
35:BV:80:HIS:HD2	35:BV:83:LYS:H	1.66	0.44
38:BM:31:PHE:HB3	38:BM:130:PHE:CZ	2.52	0.44
38:BM:66:ARG:HB2	38:BM:101:VAL:O	2.17	0.44
41:BJ:12:LYS:H	41:BJ:12:LYS:HG2	1.68	0.44
41:BJ:23:LYS:HZ2	41:BJ:142:ILE:HG23	1.82	0.44
42:BN:87:PHE:C	42:BN:89:SER:N	2.76	0.44
44:BQ:40:LYS:HA	44:BQ:43:GLN:OE1	2.17	0.44
44:BQ:55:GLN:O	44:BQ:59:LEU:HB2	2.17	0.44
45:BS:71:VAL:HG22	45:BS:71:VAL:O	2.17	0.44
50:BT:69:ARG:HA	50:BT:69:ARG:NE	2.31	0.44
1:CA:36:C:O2'	1:CA:37:U:H5'	2.17	0.44
1:CA:239:U:H6	1:CA:239:U:C5'	2.30	0.44
1:CA:392:C:H2'	1:CA:393:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:512:U:H2'	1:CA:513:C:C6	2.52	0.44
1:CA:958:A:N6	18:CS:53:GLY:HA3	2.32	0.44
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.79	0.44
2:CC:2:GLN:HE22	2:CC:3:LYS:HZ3	1.63	0.44
2:CC:54:ILE:HG12	2:CC:54:ILE:O	2.17	0.44
6:CG:121:ASN:N	6:CG:121:ASN:ND2	2.64	0.44
8:CI:27:ILE:HD13	8:CI:34:LEU:HD22	1.99	0.44
9:CJ:56:HIS:H	13:CN:80:ARG:HH22	1.66	0.44
11:CL:33:CYS:O	11:CL:75:GLU:O	2.35	0.44
20:CB:147:LEU:O	20:CB:151:LYS:N	2.48	0.44
23:DB:550:C:OP1	41:DJ:2:LYS:HE3	2.17	0.44
23:DB:1277:G:H2'	23:DB:1278:C:O4'	2.17	0.44
23:DB:1510:G:O2'	23:DB:1511:G:H5'	2.18	0.44
23:DB:1870:C:OP2	23:DB:1870:C:H4'	2.16	0.44
23:DB:2032:G:N2	26:DD:150:GLN:HB3	2.32	0.44
23:DB:2144:G:N2	23:DB:2146:C:O4'	2.49	0.44
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.52	0.44
23:DB:2472:G:H3'	23:DB:2475:C:N4	2.32	0.44
23:DB:2519:U:C6	23:DB:2542:A:N6	2.86	0.44
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.18	0.44
25:DC:70:LYS:HD2	25:DC:101:ARG:NH2	2.32	0.44
26:DD:117:GLY:O	26:DD:164:GLN:HA	2.18	0.44
26:DD:118:PHE:O	26:DD:119:ALA:HB3	2.17	0.44
37:DL:103:ILE:H	37:DL:103:ILE:CD1	2.26	0.44
40:DH:3:VAL:HB	40:DH:37:VAL:O	2.16	0.44
41:DJ:25:LEU:HD13	41:DJ:25:LEU:C	2.41	0.44
46:DU:73:ASN:HB3	46:DU:95:PHE:CD2	2.52	0.44
48:DG:37:ASN:ND2	48:DG:40:VAL:HB	2.26	0.44
48:DG:46:ASP:CG	48:DG:47:ASN:N	2.75	0.44
48:DG:60:GLY:O	48:DG:62:ALA:N	2.50	0.44
1:AA:208:U:H2'	1:AA:210:C:N3	2.33	0.44
1:AA:787:A:C2	1:AA:796:C:N3	2.86	0.44
1:AA:811:C:H4'	1:AA:900:A:N6	2.32	0.44
1:AA:1155:A:O2'	1:AA:1156:G:H5'	2.18	0.44
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.82	0.44
5:AF:64:VAL:CG1	5:AF:65:GLU:N	2.80	0.44
6:AG:71:THR:O	6:AG:89:GLU:HA	2.17	0.44
9:AJ:22:THR:O	9:AJ:26:VAL:HG23	2.17	0.44
11:AL:64:SER:HA	11:AL:94:TYR:O	2.17	0.44
11:AL:119:LYS:H	11:AL:119:LYS:HG2	1.51	0.44
12:AM:53:ASP:HA	12:AM:56:ARG:NH2	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:94:LEU:C	12:AM:108:ARG:HG2	2.42	0.44
13:AN:30:ILE:H	13:AN:30:ILE:HD12	1.83	0.44
13:AN:50:LEU:HG	13:AN:51:PRO:CD	2.48	0.44
15:AP:58:ALA:O	15:AP:59:HIS:C	2.60	0.44
23:BB:220:G:N1	23:BB:427:U:H2'	2.29	0.44
23:BB:394:C:C2'	23:BB:395:U:H5'	2.48	0.44
23:BB:494:G:O2'	23:BB:495:G:H5'	2.16	0.44
23:BB:532:A:N1	23:BB:2020:A:H1'	2.32	0.44
23:BB:584:C:P	44:BQ:5:ARG:HD3	2.57	0.44
23:BB:588:U:OP2	37:BL:17:LYS:HE2	2.16	0.44
23:BB:589:U:H2'	23:BB:590:A:C8	2.53	0.44
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.34	0.44
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.18	0.44
23:BB:1454:C:C1'	42:BN:60:VAL:HG13	2.48	0.44
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.52	0.44
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.18	0.44
23:BB:2215:C:H2'	23:BB:2216:G:C8	2.53	0.44
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.17	0.44
23:BB:2432:A:O2'	23:BB:2433:A:H5'	2.17	0.44
23:BB:2650:U:H2'	23:BB:2651:C:C6	2.52	0.44
23:BB:2719:G:H4'	23:BB:2846:G:O3'	2.18	0.44
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.52	0.44
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.82	0.44
26:BD:25:THR:HG21	26:BD:193:VAL:HG21	2.00	0.44
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.47	0.44
26:BD:118:PHE:O	26:BD:119:ALA:HB3	2.16	0.44
32:B4:11:CYS:N	32:B4:14:CYS:SG	2.91	0.44
35:BV:57:TYR:HE2	38:BM:136:MET:HE2	1.81	0.44
39:BX:39:GLN:CB	39:BX:42:LEU:HD22	2.48	0.44
40:BH:54:LEU:O	40:BH:55:GLU:C	2.59	0.44
41:BJ:28:LEU:HD23	41:BJ:29:ALA:H	1.83	0.44
46:BU:20:LYS:HB2	46:BU:20:LYS:NZ	2.32	0.44
47:BF:134:GLN:C	47:BF:136:ILE:N	2.72	0.44
47:BF:174:PHE:HB3	47:BF:176:PHE:CD1	2.53	0.44
48:BG:43:LYS:O	48:BG:50:THR:N	2.51	0.44
49:BR:70:GLU:CD	49:BR:70:GLU:N	2.75	0.44
52:BW:49:ASN:O	52:BW:50:VAL:HG13	2.18	0.44
53:B6:34:ASN:O	53:B6:66:LEU:HD21	2.16	0.44
53:B6:174:GLN:CG	53:B6:178:LYS:HE2	2.47	0.44
1:CA:154:U:H2'	1:CA:155:A:H8	1.80	0.44
1:CA:201:G:O2'	1:CA:202:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:411:A:H62	1:CA:413:G:H21	1.66	0.44
1:CA:899:C:H2'	1:CA:900:A:O4'	2.17	0.44
1:CA:903:G:H2'	1:CA:904:U:C6	2.52	0.44
1:CA:1250:A:O3'	8:CI:68:GLY:HA2	2.17	0.44
1:CA:1342:C:O2'	8:CI:125:GLN:CB	2.66	0.44
3:CD:102:TYR:HE1	3:CD:109:THR:HA	1.82	0.44
6:CG:14:ASP:H	6:CG:19:SER:H	1.66	0.44
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.33	0.44
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.99	0.44
12:CM:89:ARG:HD3	12:CM:95:PRO:O	2.18	0.44
13:CN:47:LEU:O	13:CN:49:THR:N	2.50	0.44
19:CT:24:ARG:HD3	19:CT:28:ARG:NH2	2.32	0.44
19:CT:67:HIS:CE1	19:CT:68:LYS:HE3	2.53	0.44
19:CT:79:THR:HG22	19:CT:83:ASN:HD21	1.83	0.44
21:CU:36:PHE:CD2	21:CU:39:LYS:HD2	2.51	0.44
23:DB:275:C:H2'	23:DB:276:U:O4'	2.16	0.44
23:DB:291:G:H2'	23:DB:292:U:H6	1.81	0.44
23:DB:322:A:C2	23:DB:340:A:C6	3.04	0.44
23:DB:332:A:O2'	23:DB:334:C:OP2	2.35	0.44
23:DB:392:U:O2'	23:DB:393:C:H5'	2.18	0.44
23:DB:484:C:H2'	23:DB:485:C:H6	1.82	0.44
23:DB:696:G:O2'	23:DB:697:G:H5'	2.17	0.44
23:DB:973:A:OP1	23:DB:973:A:H8	2.01	0.44
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.83	0.44
23:DB:1310:G:H1'	23:DB:1611:C:H5'	1.99	0.44
23:DB:1423:G:H2'	23:DB:1424:G:C8	2.53	0.44
23:DB:1445:G:H2'	23:DB:1446:C:H6	1.83	0.44
23:DB:1633:G:O2'	23:DB:1634:A:H5''	2.18	0.44
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.82	0.44
23:DB:2407:A:H2'	23:DB:2408:U:C6	2.51	0.44
23:DB:2455:G:O2'	23:DB:2456:C:H5'	2.17	0.44
23:DB:2636:C:O2'	23:DB:2637:U:H5'	2.18	0.44
23:DB:2805:C:H2'	23:DB:2806:C:C6	2.52	0.44
25:DC:76:VAL:O	25:DC:93:VAL:O	2.36	0.44
25:DC:92:LEU:HD12	25:DC:101:ARG:O	2.17	0.44
25:DC:204:LEU:HB3	25:DC:209:ALA:CB	2.47	0.44
26:DD:4:LEU:HD21	26:DD:100:LEU:CB	2.47	0.44
26:DD:83:ARG:HH21	26:DD:83:ARG:HG3	1.82	0.44
27:DK:99:ILE:HB	27:DK:118:LEU:HD22	1.99	0.44
28:DP:26:GLU:HG3	28:DP:43:GLU:HG2	1.99	0.44
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.83	0.44
32:D4:11:CYS:HB3	32:D4:33:HIS:CE1	2.52	0.44
34:D3:14:LYS:O	34:D3:15:LYS:C	2.60	0.44
34:D3:38:LYS:O	34:D3:39:ARG:C	2.60	0.44
35:DV:6:ALA:C	35:DV:65:VAL:HG12	2.42	0.44
38:DM:26:VAL:HB	38:DM:104:GLU:OE2	2.17	0.44
39:DX:21:LEU:HD21	39:DX:50:VAL:HG11	1.98	0.44
41:DJ:57:LEU:HD11	41:DJ:129:GLU:H	1.83	0.44
41:DJ:75:TYR:CD1	41:DJ:86:GLN:HB3	2.53	0.44
44:DQ:40:LYS:HA	44:DQ:43:GLN:OE1	2.17	0.44
47:DF:27:VAL:O	47:DF:29:ARG:HD2	2.16	0.44
47:DF:31:GLU:O	47:DF:31:GLU:HG3	2.17	0.44
1:AA:42:G:H2'	1:AA:43:C:C6	2.53	0.44
1:AA:79:G:H8	1:AA:79:G:OP2	2.01	0.44
1:AA:85:U:H4'	1:AA:86:G:C4'	2.48	0.44
1:AA:179:A:O2'	1:AA:180:U:H5'	2.18	0.44
1:AA:729:A:H2'	1:AA:730:G:H8	1.82	0.44
1:AA:1034:G:C2'	1:AA:1035:A:H5'	2.47	0.44
1:AA:1108:G:H2'	1:AA:1109:C:H5'	2.00	0.44
1:AA:1110:A:H3'	57:AA:1896:HOH:O	2.16	0.44
1:AA:1250:A:O3'	8:AI:68:GLY:HA2	2.17	0.44
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.80	0.44
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.83	0.44
6:AG:55:LYS:H	6:AG:55:LYS:HG2	1.53	0.44
7:AH:20:ASN:HA	7:AH:64:TYR:OH	2.17	0.44
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.47	0.44
10:AK:60:PHE:O	10:AK:63:GLN:HB3	2.18	0.44
10:AK:72:ALA:O	10:AK:75:GLU:HG2	2.18	0.44
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.53	0.44
16:AQ:68:LYS:C	16:AQ:70:LYS:N	2.74	0.44
17:AR:27:THR:O	17:AR:30:ASN:HB2	2.16	0.44
18:AS:33:TRP:CE3	18:AS:33:TRP:N	2.86	0.44
19:AT:3:ILE:H	19:AT:3:ILE:HG13	1.31	0.44
20:AB:68:PHE:N	20:AB:68:PHE:CD1	2.85	0.44
22:BA:75:G:H1	22:BA:102:G:N2	2.15	0.44
23:BB:305:C:H2'	23:BB:306:U:C6	2.52	0.44
23:BB:547:A:H2'	23:BB:548:G:H5'	1.99	0.44
23:BB:767:U:O2'	23:BB:768:G:H5'	2.18	0.44
23:BB:974:G:OP2	49:BR:78:ARG:HD3	2.18	0.44
23:BB:1047:G:O2'	23:BB:1110:G:N2	2.44	0.44
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.80	0.44
23:BB:1322:A:OP1	45:BS:11:ARG:HD2	2.16	0.44
23:BB:1416:G:O2'	23:BB:1417:C:H6	2.00	0.44
23:BB:1921:G:H2'	23:BB:1922:G:O4'	2.17	0.44
23:BB:1958:C:H2'	23:BB:1959:G:H8	1.82	0.44
23:BB:2211:A:OP2	23:BB:2211:A:H4'	2.18	0.44
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.52	0.44
23:BB:2309:A:H2'	23:BB:2310:C:C6	2.53	0.44
23:BB:2461:A:H1'	23:BB:2492:U:C2	2.52	0.44
25:BC:142:ASN:O	25:BC:142:ASN:CG	2.60	0.44
26:BD:18:ASP:O	28:BP:30:TRP:HZ3	2.00	0.44
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.29	0.44
27:BK:87:LEU:O	27:BK:88:ASN:C	2.60	0.44
27:BK:99:ILE:HB	27:BK:118:LEU:HD22	1.99	0.44
29:BE:47:LYS:CA	29:BE:51:GLU:HG3	2.47	0.44
29:BE:122:GLU:OE1	29:BE:122:GLU:N	2.51	0.44
33:B1:32:LYS:NZ	33:B1:52:LYS:HA	2.33	0.44
39:BX:58:ASN:O	39:BX:59:GLU:C	2.60	0.44
40:BH:24:GLY:C	40:BH:26:ALA:N	2.73	0.44
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD11	2.53	0.44
42:BN:63:ARG:HA	42:BN:80:PHE:CE2	2.53	0.44
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CA	2.30	0.44
45:BS:28:LYS:O	45:BS:71:VAL:HG12	2.17	0.44
46:BU:5:ARG:HG2	46:BU:5:ARG:HH21	1.82	0.44
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.18	0.44
48:BG:30:GLY:H	48:BG:78:VAL:HA	1.82	0.44
49:BR:37:GLU:O	49:BR:39:LEU:HD23	2.17	0.44
50:BT:21:SER:HB3	50:BT:31:VAL:HG22	1.98	0.44
50:BT:47:VAL:HG12	50:BT:47:VAL:O	2.17	0.44
53:B6:67:VAL:HA	53:B6:99:LEU:O	2.18	0.44
53:B6:109:GLU:O	53:B6:112:LYS:HB2	2.17	0.44
1:CA:36:C:OP1	11:CL:119:LYS:HD2	2.18	0.44
1:CA:1315:U:H5	18:CS:5:LYS:HE2	1.82	0.44
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.52	0.44
2:CC:39:ARG:CZ	2:CC:56:ILE:HD12	2.48	0.44
2:CC:76:ILE:HA	2:CC:83:VAL:CG2	2.31	0.44
3:CD:197:HIS:HA	3:CD:200:VAL:HG13	2.00	0.44
6:CG:4:ARG:HB2	6:CG:4:ARG:HH11	1.82	0.44
8:CI:14:SER:HB2	8:CI:69:GLY:HA3	1.99	0.44
9:CJ:53:ILE:HG13	13:CN:84:ARG:NE	2.33	0.44
12:CM:49:GLU:O	12:CM:50:GLY:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:73:SER:HB2	12:CM:74:MET:HE2	1.99	0.44
13:CN:60:ARG:HG3	13:CN:62:ARG:CG	2.47	0.44
14:CO:88:ARG:NH1	14:CO:88:ARG:HB2	2.33	0.44
17:CR:66:LEU:O	17:CR:67:LEU:HG	2.17	0.44
21:CU:13:VAL:O	21:CU:13:VAL:HG13	2.17	0.44
22:DA:42:C:O2'	47:DF:91:ARG:NH1	2.50	0.44
23:DB:19:A:OP1	44:DQ:22:GLY:N	2.50	0.44
23:DB:89:A:O2'	23:DB:90:U:H5'	2.16	0.44
23:DB:283:G:H2'	23:DB:284:U:C1'	2.48	0.44
23:DB:283:G:H5''	23:DB:284:U:OP2	2.18	0.44
23:DB:524:G:O2'	23:DB:525:U:H5'	2.17	0.44
23:DB:1173:U:H2'	23:DB:1174:U:O4'	2.17	0.44
23:DB:1654:A:H61	23:DB:2049:G:P	2.41	0.44
23:DB:1657:U:C2'	23:DB:1658:C:H5'	2.47	0.44
23:DB:1869:G:H2'	23:DB:1871:A:N7	2.32	0.44
23:DB:1914:C:C2'	23:DB:1915:U:H5'	2.48	0.44
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.53	0.44
23:DB:2383:G:H2'	23:DB:2384:U:C6	2.52	0.44
23:DB:2518:A:H2'	23:DB:2518:A:N3	2.32	0.44
23:DB:2884:U:O2	31:D0:49:ARG:HG2	2.18	0.44
24:DI:116:MET:HE1	24:DI:128:ILE:HG13	1.98	0.44
25:DC:14:HIS:O	25:DC:15:VAL:C	2.61	0.44
26:DD:107:VAL:CG1	26:DD:108:ASP:N	2.80	0.44
26:DD:163:GLY:O	26:DD:164:GLN:C	2.60	0.44
31:D0:5:ASN:O	31:D0:7:PRO:HD3	2.16	0.44
34:D3:40:LYS:C	34:D3:42:HIS:N	2.73	0.44
35:DV:42:LEU:HD23	35:DV:42:LEU:N	2.25	0.44
37:DL:75:ALA:HB3	37:DL:108:ALA:HB2	1.98	0.44
38:DM:60:GLN:H	38:DM:60:GLN:HG2	1.50	0.44
41:DJ:133:ALA:C	41:DJ:135:GLN:H	2.25	0.44
44:DQ:91:ARG:HE	44:DQ:94:LEU:CD2	2.31	0.44
47:DF:118:ALA:HA	47:DF:176:PHE:CE2	2.53	0.44
48:DG:84:LYS:HG3	48:DG:131:VAL:CB	2.48	0.44
50:DT:6:ARG:HB3	50:DT:6:ARG:CZ	2.46	0.44
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.16	0.44
1:AA:114:U:H2'	1:AA:115:G:C8	2.53	0.44
1:AA:121:U:OP1	1:AA:121:U:H3'	2.17	0.44
1:AA:185:U:H2'	1:AA:186:C:C6	2.53	0.44
1:AA:317:U:H2'	1:AA:318:G:C8	2.52	0.44
1:AA:373:A:H2'	1:AA:374:A:H8	1.82	0.44
1:AA:389:A:H2'	1:AA:389:A:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:528:C:H41	11:AL:45:ASN:CG	2.25	0.44
1:AA:708:C:H2'	1:AA:709:U:H6	1.83	0.44
3:AD:10:LEU:HD12	3:AD:20:LEU:CD1	2.48	0.44
4:AE:64:GLU:HG3	4:AE:65:LYS:N	2.32	0.44
7:AH:58:LEU:HD22	7:AH:60:LEU:HB2	2.00	0.44
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.99	0.44
12:AM:89:ARG:HD3	12:AM:95:PRO:O	2.17	0.44
13:AN:26:LEU:HD23	13:AN:27:LYS:N	2.28	0.44
13:AN:50:LEU:CG	13:AN:51:PRO:HD3	2.48	0.44
14:AO:28:GLN:O	14:AO:29:VAL:C	2.60	0.44
18:AS:49:ALA:C	18:AS:56:HIS:HB3	2.43	0.44
19:AT:4:LYS:HE3	19:AT:6:ALA:H	1.82	0.44
20:AB:62:ARG:HD2	20:AB:62:ARG:H	1.82	0.44
21:AU:3:ILE:HD11	21:AU:22:CYS:SG	2.57	0.44
22:BA:30:C:H2'	22:BA:31:C:H5'	2.00	0.44
23:BB:526:A:N6	23:BB:2626:C:C4'	2.80	0.44
23:BB:596:U:H2'	23:BB:597:G:C8	2.53	0.44
23:BB:757:G:H2'	23:BB:758:C:H5'	2.00	0.44
23:BB:928:A:H2'	23:BB:929:U:O4'	2.18	0.44
23:BB:1518:C:H2'	23:BB:1519:G:C8	2.49	0.44
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.17	0.44
23:BB:1668:A:H1'	23:BB:1670:C:C5	2.52	0.44
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.80	0.44
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.17	0.44
23:BB:2485:G:H5''	38:BM:125:PRO:HG3	1.99	0.44
25:BC:132:ARG:HA	25:BC:166:ARG:NH1	2.32	0.44
26:BD:49:GLN:NE2	26:BD:79:LEU:HD12	2.33	0.44
27:BK:85:VAL:HG21	27:BK:115:ILE:HD11	2.00	0.44
29:BE:58:LYS:HB2	29:BE:60:TRP:CD1	2.52	0.44
34:B3:22:LYS:CA	34:B3:48:MET:HA	2.44	0.44
39:BX:1:MET:HG2	39:BX:4:LYS:HZ3	1.82	0.44
40:BH:128:HIS:CE1	40:BH:130:VAL:HG22	2.52	0.44
46:BU:24:VAL:HG22	46:BU:35:VAL:HG22	1.99	0.44
47:BF:33:ILE:HG22	47:BF:34:THR:N	2.32	0.44
48:BG:140:ILE:HD12	48:BG:141:GLY:N	2.33	0.44
49:BR:39:LEU:CB	49:BR:53:PHE:HA	2.47	0.44
50:BT:29:THR:CB	50:BT:86:THR:HA	2.48	0.44
50:BT:74:ILE:HG13	50:BT:75:GLY:N	2.31	0.44
52:BW:30:VAL:HG13	52:BW:30:VAL:O	2.18	0.44
53:B6:80:GLU:HB2	53:B6:92:PRO:HB2	1.99	0.44
1:CA:151:A:C2'	1:CA:152:A:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:233:C:O2'	1:CA:234:C:H5'	2.17	0.44
1:CA:255:G:H2'	1:CA:256:U:C6	2.53	0.44
1:CA:375:U:OP1	15:CP:70:ARG:NH1	2.51	0.44
1:CA:386:C:H2'	1:CA:387:U:H5'	1.99	0.44
1:CA:663:A:O3'	17:CR:52:ARG:NH2	2.48	0.44
1:CA:787:A:C2	1:CA:796:C:N3	2.86	0.44
1:CA:818:G:H3'	1:CA:819:A:H5''	1.99	0.44
1:CA:909:A:H2'	1:CA:910:C:O4'	2.18	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.18	0.44
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.18	0.44
2:CC:126:ARG:HA	2:CC:126:ARG:NH1	2.32	0.44
3:CD:41:GLY:O	3:CD:43:ARG:N	2.51	0.44
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.32	0.44
5:CF:100:SER:HA	17:CR:23:LYS:HD3	2.00	0.44
10:CK:110:THR:HA	21:CU:19:LYS:HZ1	1.82	0.44
13:CN:50:LEU:CG	13:CN:51:PRO:HD3	2.47	0.44
20:CB:150:ILE:O	20:CB:150:ILE:HG12	2.17	0.44
22:DA:6:G:H2'	22:DA:7:G:C8	2.52	0.44
23:DB:544:C:O2'	23:DB:545:U:O5'	2.36	0.44
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.83	0.44
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.17	0.44
23:DB:1858:A:C2	23:DB:1859:U:H1'	2.53	0.44
23:DB:2100:G:H2'	23:DB:2101:A:C8	2.53	0.44
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.53	0.44
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.52	0.44
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.82	0.44
23:DB:2893:A:H4'	23:DB:2894:G:H5'	2.00	0.44
24:DI:2:LYS:HD2	24:DI:2:LYS:N	2.32	0.44
25:DC:61:TYR:HA	25:DC:85:ASN:OD1	2.18	0.44
26:DD:85:ALA:C	26:DD:87:GLY:H	2.25	0.44
26:DD:148:GLN:HG3	26:DD:152:PRO:CB	2.44	0.44
29:DE:48:THR:C	29:DE:50:ALA:N	2.76	0.44
31:D0:33:SER:OG	31:D0:35:GLU:HG2	2.17	0.44
33:D1:36:LYS:HG2	33:D1:47:ILE:HA	1.99	0.44
37:DL:123:ARG:HD2	37:DL:124:GLY:N	2.32	0.44
37:DL:143:GLU:CG	37:DL:144:GLU:H	1.99	0.44
40:DH:27:ARG:CZ	51:DZ:60:ASP:HA	2.46	0.44
41:DJ:20:ALA:HA	41:DJ:23:LYS:HG3	1.99	0.44
42:DN:34:ILE:HG22	42:DN:35:LYS:N	2.32	0.44
42:DN:55:ALA:HB1	42:DN:80:PHE:H	1.82	0.44
44:DQ:17:LEU:O	44:DQ:17:LEU:HG	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:74:SER:O	44:DQ:75:TYR:C	2.61	0.44
45:DS:95:ARG:NE	45:DS:95:ARG:HA	2.33	0.44
46:DU:10:VAL:HA	46:DU:70:ALA:O	2.17	0.44
46:DU:53:GLN:N	46:DU:54:PRO:CD	2.80	0.44
47:DF:137:PHE:O	47:DF:138:PRO:C	2.60	0.44
48:DG:34:ARG:H	48:DG:34:ARG:CD	2.31	0.44
48:DG:34:ARG:NH1	48:DG:34:ARG:HG2	2.32	0.44
48:DG:94:ARG:NH2	48:DG:105:SER:N	2.66	0.44
50:DT:74:ILE:HG13	50:DT:75:GLY:N	2.32	0.44
1:AA:16:A:N1	1:AA:919:A:H2	2.16	0.44
1:AA:602:A:H2'	1:AA:603:U:C6	2.53	0.44
1:AA:635:A:H2'	1:AA:636:U:H6	1.83	0.44
1:AA:801:U:H2'	1:AA:802:A:H8	1.82	0.44
1:AA:1074:G:O4'	20:AB:102:ASN:HB2	2.17	0.44
1:AA:1147:C:H2'	1:AA:1148:U:H6	1.83	0.44
1:AA:1436:U:H2'	1:AA:1437:A:H8	1.82	0.44
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.18	0.44
2:AC:78:LYS:O	2:AC:78:LYS:HG3	2.18	0.44
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	2.00	0.44
13:AN:88:MET:C	13:AN:90:GLY:N	2.76	0.44
17:AR:34:GLU:HB2	21:AU:18:PHE:CZ	2.38	0.44
19:AT:81:GLN:C	19:AT:83:ASN:N	2.72	0.44
20:AB:19:THR:O	20:AB:20:ARG:HD2	2.17	0.44
20:AB:69:VAL:HG12	20:AB:168:GLU:HG3	2.00	0.44
20:AB:147:LEU:O	20:AB:148:GLY:C	2.60	0.44
21:AU:40:PRO:HG2	21:AU:41:THR:H	1.82	0.44
23:BB:265:A:O2'	23:BB:266:G:C4'	2.65	0.44
23:BB:335:C:O2'	23:BB:336:C:H5'	2.17	0.44
23:BB:400:G:N7	51:BZ:57:ARG:NH1	2.65	0.44
23:BB:704:G:O2'	23:BB:727:A:N6	2.51	0.44
23:BB:811:U:H2'	37:BL:21:ARG:HA	2.00	0.44
23:BB:991:C:H5'	23:BB:991:C:H6	1.83	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.99	0.44
23:BB:1782:U:H2'	23:BB:1783:A:H5'	1.98	0.44
23:BB:2294:G:O2'	23:BB:2295:C:H5'	2.18	0.44
23:BB:2303:G:H1'	47:BF:122:ASP:OD2	2.17	0.44
23:BB:2365:G:N7	34:B3:38:LYS:NZ	2.61	0.44
23:BB:2650:U:H2'	23:BB:2651:C:H6	1.81	0.44
57:BB:3453:HOH:O	29:BE:98:LYS:HD3	2.17	0.44
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:63:ASP:O	24:BI:65:SER:N	2.50	0.44
25:BC:4:LYS:HB3	25:BC:5:CYS:H	1.57	0.44
25:BC:204:LEU:HB3	25:BC:209:ALA:CB	2.48	0.44
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	2.00	0.44
29:BE:11:ALA:O	29:BE:12:LEU:HD22	2.18	0.44
31:B0:11:LYS:HA	31:B0:14:MET:HE3	1.98	0.44
34:B3:40:LYS:C	34:B3:42:HIS:N	2.75	0.44
35:BV:46:LYS:HD2	35:BV:46:LYS:N	2.33	0.44
37:BL:96:LYS:HE3	37:BL:102:GLY:O	2.17	0.44
38:BM:38:ARG:CA	38:BM:98:PRO:HD3	2.47	0.44
38:BM:42:THR:HA	38:BM:93:VAL:HA	2.00	0.44
38:BM:100:LYS:HD3	38:BM:101:VAL:H	1.83	0.44
40:BH:58:LEU:HG	40:BH:62:LEU:HD23	1.99	0.44
40:BH:133:GLN:O	40:BH:133:GLN:CD	2.60	0.44
41:BJ:6:ALA:CB	41:BJ:45:THR:HG21	2.44	0.44
41:BJ:21:THR:O	41:BJ:62:VAL:HA	2.18	0.44
43:BO:75:GLY:O	43:BO:78:VAL:HG23	2.18	0.44
45:BS:13:SER:CB	45:BS:16:LYS:HE3	2.47	0.44
48:BG:37:ASN:ND2	48:BG:40:VAL:HB	2.26	0.44
48:BG:104:LEU:HD22	48:BG:106:LEU:CD2	2.47	0.44
48:BG:167:VAL:O	48:BG:168:VAL:HB	2.17	0.44
50:BT:6:ARG:HB3	50:BT:6:ARG:CZ	2.47	0.44
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CE1	2.52	0.44
1:CA:195:A:H1'	1:CA:222:C:O2'	2.18	0.44
1:CA:402:G:O2'	1:CA:403:C:H5'	2.17	0.44
1:CA:846:G:H2'	1:CA:847:G:C8	2.53	0.44
1:CA:878:A:H1'	7:CH:3:GLN:CD	2.42	0.44
1:CA:902:G:O2'	1:CA:903:G:H5'	2.18	0.44
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.53	0.44
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.82	0.44
3:CD:122:ILE:O	3:CD:128:VAL:HG23	2.18	0.44
3:CD:197:HIS:CG	3:CD:198:LEU:N	2.86	0.44
4:CE:79:THR:OG1	4:CE:97:PRO:HA	2.18	0.44
5:CF:92:THR:HG22	5:CF:94:HIS:N	2.10	0.44
5:CF:99:ALA:O	5:CF:100:SER:CB	2.65	0.44
7:CH:17:GLN:HG2	7:CH:62:LEU:CD2	2.47	0.44
8:CI:55:ASP:O	8:CI:59:LYS:HE3	2.17	0.44
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	2.00	0.44
10:CK:125:LYS:O	21:CU:33:ARG:CZ	2.66	0.44
12:CM:46:GLU:CD	12:CM:46:GLU:C	2.86	0.44
14:CO:15:PHE:CD1	14:CO:15:PHE:N	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:44:LYS:O	20:CB:47:PRO:HD2	2.17	0.44
20:CB:53:LEU:HA	20:CB:56:LEU:HD13	2.00	0.44
20:CB:71:THR:HG23	20:CB:92:ASN:O	2.18	0.44
23:DB:39:G:O2'	23:DB:40:U:H5'	2.18	0.44
23:DB:526:A:H62	23:DB:2626:C:H4'	1.82	0.44
23:DB:612:G:H2'	23:DB:614:A:H5''	1.99	0.44
23:DB:784:G:HO2'	23:DB:785:G:H5''	1.82	0.44
23:DB:858:G:N2	23:DB:2269:G:OP2	2.50	0.44
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.99	0.44
23:DB:1054:A:H2'	23:DB:1055:G:C8	2.53	0.44
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.18	0.44
23:DB:1098:A:C8	24:DI:3:LYS:CB	3.00	0.44
23:DB:1452:G:C4	23:DB:2702:G:C6	3.06	0.44
23:DB:1904:G:N3	23:DB:1928:A:H2	2.16	0.44
23:DB:2623:G:H4'	23:DB:2825:G:C8	2.52	0.44
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.43	0.44
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.47	0.44
25:DC:90:ILE:HD13	25:DC:103:ILE:C	2.43	0.44
25:DC:106:PRO:HB3	25:DC:141:HIS:CE1	2.52	0.44
25:DC:185:ALA:C	25:DC:187:CYS:N	2.76	0.44
25:DC:202:ARG:HH11	25:DC:213:ARG:HH21	1.66	0.44
26:DD:24:VAL:HG23	26:DD:189:VAL:O	2.17	0.44
26:DD:122:VAL:N	26:DD:127:PHE:HB2	2.33	0.44
27:DK:61:VAL:HG13	27:DK:87:LEU:CD2	2.47	0.44
28:DP:49:ILE:HG12	28:DP:50:ARG:N	2.33	0.44
28:DP:62:LYS:O	28:DP:63:ILE:HB	2.17	0.44
29:DE:136:GLN:HE22	29:DE:139:LYS:HD3	1.81	0.44
35:DV:63:ILE:HG22	35:DV:65:VAL:HG13	2.00	0.44
38:DM:12:MET:HE2	38:DM:71:LYS:NZ	2.32	0.44
38:DM:37:GLY:O	38:DM:126:ILE:HG21	2.18	0.44
40:DH:24:GLY:C	40:DH:26:ALA:N	2.72	0.44
41:DJ:55:ILE:HG22	41:DJ:123:LYS:HB2	2.00	0.44
43:DO:18:LEU:HD11	43:DO:91:SER:HB3	1.99	0.44
44:DQ:89:ILE:C	44:DQ:91:ARG:H	2.25	0.44
45:DS:59:GLU:HA	45:DS:59:GLU:OE1	2.17	0.44
46:DU:73:ASN:C	46:DU:75:ALA:N	2.75	0.44
47:DF:127:TYR:CB	47:DF:155:ILE:HD13	2.48	0.44
47:DF:137:PHE:N	47:DF:137:PHE:CD2	2.82	0.44
48:DG:6:ALA:HB3	48:DG:68:ARG:CD	2.48	0.44
52:DW:29:SER:O	52:DW:30:VAL:HB	2.18	0.44
1:AA:675:A:H2'	1:AA:676:A:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:714:G:N3	1:AA:777:A:H1'	2.33	0.44
1:AA:764:C:N4	1:AA:812:G:N1	2.66	0.44
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.83	0.44
1:AA:1099:G:H2'	1:AA:1100:C:C6	2.52	0.44
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.17	0.44
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.53	0.44
2:AC:119:ILE:O	2:AC:123:LEU:HG	2.18	0.44
3:AD:145:ARG:HB3	3:AD:147:LYS:HD2	2.00	0.44
5:AF:36:ILE:HG12	5:AF:64:VAL:HG22	2.00	0.44
8:AI:78:ILE:HG22	8:AI:82:ILE:HD11	2.00	0.44
11:AL:54:VAL:CG2	11:AL:79:ILE:HD11	2.47	0.44
12:AM:12:LYS:O	12:AM:43:LYS:HG3	2.18	0.44
12:AM:46:GLU:CD	12:AM:46:GLU:C	2.85	0.44
16:AQ:80:LYS:H	16:AQ:80:LYS:HE3	1.83	0.44
22:BA:6:G:H2'	22:BA:7:G:H8	1.82	0.44
22:BA:49:C:OP1	43:BO:102:ARG:N	2.48	0.44
23:BB:99:U:H5	46:BU:6:ARG:HH22	1.63	0.44
23:BB:360:U:O2'	23:BB:361:G:H5'	2.18	0.44
23:BB:590:A:H2'	23:BB:591:U:H6	1.75	0.44
23:BB:851:C:H2'	23:BB:852:U:H6	1.82	0.44
23:BB:1222:U:O2'	23:BB:1223:G:H5'	2.18	0.44
23:BB:1318:U:H2'	23:BB:1319:C:C6	2.53	0.44
23:BB:1419:A:H2'	23:BB:1421:G:C8	2.52	0.44
23:BB:1752:C:H2'	23:BB:1753:G:C8	2.53	0.44
23:BB:2230:G:H4'	51:BZ:31:PRO:O	2.18	0.44
23:BB:2244:U:H2'	23:BB:2245:U:O4'	2.18	0.44
23:BB:2526:G:O2'	32:B4:1:MET:HB2	2.18	0.44
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.83	0.44
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.31	0.44
28:BP:110:LYS:HD2	28:BP:110:LYS:H	1.83	0.44
29:BE:95:LYS:HD3	29:BE:95:LYS:C	2.43	0.44
29:BE:149:ILE:HD11	29:BE:172:ALA:HA	1.99	0.44
30:BY:37:ARG:HG2	30:BY:43:ILE:HD11	2.00	0.44
32:B4:13:ASN:OD1	32:B4:29:ALA:HB2	2.17	0.44
35:BV:32:GLY:O	35:BV:93:ARG:HD2	2.16	0.44
36:B2:31:LEU:HD22	36:B2:42:LEU:CD1	2.48	0.44
38:BM:108:VAL:HG22	38:BM:109:PRO:HD2	1.99	0.44
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.81	0.44
40:BH:80:ILE:HD11	40:BH:102:ALA:CB	2.47	0.44
41:BJ:21:THR:C	41:BJ:23:LYS:N	2.74	0.44
45:BS:31:GLN:C	45:BS:33:LEU:N	2.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:34:ARG:H	48:BG:34:ARG:CD	2.29	0.44
48:BG:88:LEU:C	48:BG:88:LEU:HD12	2.43	0.44
49:BR:55:ASP:OD2	49:BR:55:ASP:N	2.50	0.44
49:BR:59:ILE:HA	49:BR:101:ILE:H	1.83	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:N	2.33	0.44
50:BT:58:VAL:O	50:BT:58:VAL:HG13	2.18	0.44
52:BW:79:ILE:HG22	52:BW:80:SER:N	2.33	0.44
53:B6:88:LEU:HD23	53:B6:90:LEU:CD1	2.47	0.44
1:CA:136:C:O2'	1:CA:137:U:H5'	2.18	0.44
1:CA:286:C:H2'	1:CA:287:U:C6	2.52	0.44
1:CA:551:U:O2'	11:CL:82:ARG:HD2	2.18	0.44
1:CA:691:G:H1'	1:CA:696:A:N6	2.33	0.44
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.53	0.44
1:CA:1347:G:H8	8:CI:108:ARG:HB3	1.80	0.44
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.83	0.44
1:CA:1479:C:O2'	1:CA:1480:A:H5'	2.18	0.44
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.18	0.44
2:CC:166:TRP:O	2:CC:167:TYR:CB	2.65	0.44
4:CE:24:VAL:O	4:CE:25:LYS:C	2.60	0.44
4:CE:59:ILE:H	4:CE:59:ILE:HG13	1.64	0.44
7:CH:79:ARG:NH1	7:CH:82:LEU:HB3	2.32	0.44
8:CI:38:PHE:CZ	8:CI:74:GLN:HB3	2.34	0.44
8:CI:71:ILE:H	8:CI:71:ILE:CD1	2.30	0.44
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.17	0.44
12:CM:5:GLY:O	12:CM:6:ILE:HB	2.17	0.44
13:CN:80:ARG:HH11	13:CN:80:ARG:HG2	1.82	0.44
20:CB:122:ASP:CG	20:CB:124:THR:HG22	2.42	0.44
23:DB:139:U:O2'	50:DT:1:MET:HA	2.18	0.44
23:DB:155:A:H2'	23:DB:156:A:H8	1.79	0.44
23:DB:246:C:C2'	23:DB:247:G:H5'	2.48	0.44
23:DB:438:G:H2'	23:DB:439:A:H8	1.82	0.44
23:DB:518:G:H2'	23:DB:519:U:C6	2.53	0.44
23:DB:564:C:O2'	23:DB:565:C:H5'	2.18	0.44
23:DB:878:A:N3	23:DB:899:A:N7	2.66	0.44
23:DB:1395:A:H4'	23:DB:1397:U:H5	1.80	0.44
23:DB:1823:G:O2'	23:DB:1824:G:H5'	2.18	0.44
23:DB:1830:C:H2'	23:DB:1831:G:C8	2.52	0.44
23:DB:1831:G:O2'	23:DB:1832:C:H5'	2.18	0.44
23:DB:2081:U:H4'	51:DZ:25:THR:HG21	1.99	0.44
23:DB:2839:G:O2'	23:DB:2840:C:H5'	2.18	0.44
24:DI:80:LYS:HG3	24:DI:135:MET:HE1	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.48	0.44
25:DC:76:VAL:HG12	25:DC:114:GLN:CG	2.36	0.44
27:DK:99:ILE:HD13	27:DK:118:LEU:CD2	2.47	0.44
33:D1:16:THR:HG21	33:D1:39:ASP:OD2	2.18	0.44
38:DM:93:VAL:HG22	38:DM:94:ALA:H	1.82	0.44
39:DX:27:ASN:HD22	39:DX:27:ASN:HA	1.61	0.44
40:DH:62:LEU:O	40:DH:63:ALA:C	2.61	0.44
40:DH:135:HIS:HB3	40:DH:138:VAL:CG2	2.48	0.44
43:DO:105:ALA:C	43:DO:107:ALA:N	2.76	0.44
43:DO:106:LEU:HG	43:DO:107:ALA:N	2.33	0.44
43:DO:109:ALA:O	43:DO:113:ALA:N	2.49	0.44
44:DQ:27:ARG:HH11	44:DQ:27:ARG:HG3	1.83	0.44
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.18	0.44
47:DF:64:PRO:HB3	47:DF:88:VAL:HG21	1.99	0.44
47:DF:74:ALA:HB1	47:DF:76:PHE:CD2	2.53	0.44
48:DG:34:ARG:HH11	48:DG:34:ARG:HG2	1.82	0.44
49:DR:1:MET:HE3	49:DR:101:ILE:CG2	2.48	0.44
49:DR:39:LEU:CB	49:DR:53:PHE:HA	2.48	0.44
50:DT:41:ALA:C	50:DT:43:ILE:H	2.25	0.44
52:DW:49:ASN:CB	52:DW:81:ILE:HG12	2.43	0.44
53:D6:39:LEU:HG	53:D6:40:HIS:H	1.81	0.44
53:D6:51:PRO:O	53:D6:52:LEU:C	2.61	0.44
53:D6:79:ILE:HG22	53:D6:80:GLU:N	2.32	0.44
53:D6:155:LYS:HA	53:D6:158:GLU:OE2	2.18	0.44
1:AA:412:A:H4'	1:AA:413:G:OP1	2.18	0.44
1:AA:551:U:O2'	11:AL:82:ARG:HD2	2.17	0.44
1:AA:598:U:H2'	1:AA:599:C:H6	1.81	0.44
1:AA:835:U:O2'	1:AA:836:G:H5'	2.17	0.44
1:AA:845:A:H3'	1:AA:846:G:H8	1.83	0.44
2:AC:137:VAL:HA	2:AC:148:ILE:CD1	2.40	0.44
3:AD:77:GLU:CA	3:AD:80:ARG:HG2	2.41	0.44
6:AG:78:ARG:HH12	6:AG:79:VAL:C	2.26	0.44
6:AG:121:ASN:N	6:AG:121:ASN:ND2	2.65	0.44
9:AJ:52:LEU:HA	9:AJ:62:ARG:H	1.83	0.44
13:AN:63:CYS:HB2	13:AN:79:SER:CB	2.48	0.44
15:AP:6:LEU:HD23	15:AP:17:TYR:CB	2.48	0.44
16:AQ:74:LEU:HD22	16:AQ:75:VAL:H	1.80	0.44
22:BA:20:G:H2'	22:BA:21:G:C8	2.52	0.44
23:BB:668:A:C2	23:BB:670:A:C6	3.06	0.44
23:BB:717:C:C3'	23:BB:718:A:H5''	2.46	0.44
23:BB:1082:U:C2	23:BB:1086:A:N1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1141:U:H4'	23:BB:1142:A:C1'	2.47	0.44
23:BB:1330:C:O2'	23:BB:1331:G:H5'	2.17	0.44
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.53	0.44
23:BB:1938:A:O2'	23:BB:1939:U:H5''	2.16	0.44
23:BB:2549:G:O2'	23:BB:2550:G:H5'	2.17	0.44
23:BB:2562:U:H2'	23:BB:2563:U:H5'	1.99	0.44
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.18	0.44
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.32	0.44
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.51	0.44
25:BC:42:ARG:HG3	25:BC:46:GLY:O	2.18	0.44
25:BC:43:ASN:ND2	25:BC:44:ASN:N	2.66	0.44
25:BC:76:VAL:HG23	25:BC:76:VAL:O	2.17	0.44
25:BC:80:LEU:HD22	25:BC:109:LEU:HD12	1.99	0.44
26:BD:56:LYS:HD3	26:BD:58:ASN:HB3	1.99	0.44
26:BD:107:VAL:CG1	26:BD:108:ASP:N	2.80	0.44
27:BK:72:PRO:C	27:BK:74:GLY:N	2.73	0.44
28:BP:112:ARG:HB2	28:BP:112:ARG:NH1	2.27	0.44
29:BE:2:GLU:OE1	29:BE:13:THR:N	2.51	0.44
29:BE:160:ALA:O	29:BE:161:ALA:HB3	2.18	0.44
34:B3:38:LYS:O	34:B3:39:ARG:C	2.60	0.44
38:BM:26:VAL:HG22	38:BM:133:LYS:HA	2.00	0.44
39:BX:42:LEU:O	39:BX:46:VAL:HG23	2.18	0.44
40:BH:104:THR:HA	40:BH:109:GLU:OE2	2.18	0.44
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.48	0.44
42:BN:90:ARG:HB3	42:BN:94:TYR:CE1	2.53	0.44
44:BQ:86:SER:CB	49:BR:51:VAL:HA	2.48	0.44
46:BU:86:PHE:HB2	46:BU:92:VAL:HB	2.00	0.44
47:BF:91:ARG:O	47:BF:92:GLY:C	2.60	0.44
47:BF:147:ARG:CZ	47:BF:147:ARG:HB3	2.48	0.44
48:BG:10:VAL:CG1	48:BG:14:VAL:HG21	2.48	0.44
49:BR:9:GLY:C	49:BR:10:LYS:HD2	2.43	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:H	1.81	0.44
53:B6:14:MET:CE	53:B6:165:THR:HG23	2.47	0.44
1:CA:92:U:O2'	1:CA:93:U:H5'	2.17	0.44
1:CA:455:G:H2'	1:CA:456:A:H8	1.82	0.44
1:CA:586:C:O2'	7:CH:3:GLN:NE2	2.51	0.44
1:CA:702:A:C8	23:DB:1848:A:H1'	2.53	0.44
1:CA:720:C:C5'	17:CR:40:PRO:HA	2.48	0.44
1:CA:996:A:H2'	1:CA:997:U:C6	2.52	0.44
1:CA:1158:C:O2'	20:CB:131:LYS:HB2	2.18	0.44
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1212:U:C5'	1:CA:1213:A:OP1	2.66	0.44
4:CE:82:HIS:CE1	4:CE:146:MET:HA	2.53	0.44
9:CJ:52:LEU:HA	9:CJ:62:ARG:H	1.82	0.44
10:CK:90:PRO:C	10:CK:92:ARG:N	2.76	0.44
10:CK:109:ILE:HG22	21:CU:16:ARG:HH12	1.83	0.44
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.48	0.44
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.48	0.44
13:CN:88:MET:C	13:CN:90:GLY:H	2.26	0.44
13:CN:97:LYS:NZ	13:CN:97:LYS:HB3	2.31	0.44
17:CR:36:GLY:HA3	17:CR:70:THR:HA	1.99	0.44
20:CB:8:MET:HB2	20:CB:9:LEU:H	1.59	0.44
20:CB:86:CYS:HB2	20:CB:221:ARG:HH11	1.83	0.44
23:DB:31:C:C2'	23:DB:32:C:H5'	2.47	0.44
23:DB:361:G:H2'	23:DB:362:A:H8	1.82	0.44
23:DB:635:C:H2'	23:DB:636:G:H8	1.83	0.44
23:DB:753:A:O2'	23:DB:754:U:H5'	2.17	0.44
23:DB:948:C:H2'	23:DB:949:G:H8	1.83	0.44
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.18	0.44
23:DB:1082:U:H2'	23:DB:1083:U:O4'	2.18	0.44
23:DB:1095:A:N6	24:DI:29:GLN:HE22	2.16	0.44
23:DB:1237:A:HO2'	23:DB:1238:G:C4'	2.30	0.44
23:DB:1248:G:O2'	44:DQ:2:ARG:HA	2.18	0.44
23:DB:1411:U:H2'	23:DB:1412:U:H6	1.82	0.44
23:DB:1639:C:C2'	23:DB:1640:A:H5''	2.48	0.44
23:DB:1729:U:C5'	23:DB:1730:C:H4'	2.48	0.44
23:DB:1829:A:N6	23:DB:1977:A:N6	2.66	0.44
23:DB:1942:C:H4'	53:D6:133:ARG:HH12	1.83	0.44
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.82	0.44
23:DB:2109:U:C4	23:DB:2181:U:C5	3.06	0.44
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.18	0.44
23:DB:2751:G:H2'	23:DB:2751:G:N3	2.32	0.44
23:DB:2884:U:H4'	31:D0:49:ARG:NH2	2.33	0.44
25:DC:99:GLU:HG2	25:DC:100:ARG:N	2.33	0.44
26:DD:3:GLY:O	26:DD:4:LEU:HD13	2.17	0.44
27:DK:104:THR:OG1	27:DK:107:LEU:HD11	2.17	0.44
29:DE:134:LEU:HD23	29:DE:161:ALA:N	2.32	0.44
35:DV:75:GLN:HB2	35:DV:90:ASP:O	2.17	0.44
38:DM:46:ILE:CG1	38:DM:47:GLU:N	2.81	0.44
39:DX:39:GLN:CB	39:DX:42:LEU:HD22	2.47	0.44
40:DH:32:PRO:O	40:DH:33:GLN:HB2	2.18	0.44
40:DH:80:ILE:HD12	40:DH:80:ILE:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:104:THR:HA	40:DH:108:VAL:O	2.18	0.44
40:DH:110:VAL:HG22	40:DH:110:VAL:O	2.17	0.44
41:DJ:120:ARG:HE	41:DJ:120:ARG:HB3	1.50	0.44
44:DQ:87:VAL:HG12	44:DQ:88:GLU:N	2.33	0.44
48:DG:30:GLY:H	48:DG:78:VAL:HA	1.83	0.44
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.82	0.44
1:AA:14:U:O2	1:AA:17:U:H5	2.00	0.43
1:AA:564:C:H1'	16:AQ:32:ILE:O	2.18	0.43
1:AA:985:C:H2'	1:AA:986:U:C6	2.53	0.43
1:AA:1003:G:H21	1:AA:1005:A:C5'	2.31	0.43
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.52	0.43
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.17	0.43
1:AA:1272:G:H2'	1:AA:1273:C:H6	1.83	0.43
1:AA:1342:C:O2'	8:AI:125:GLN:CB	2.66	0.43
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.33	0.43
8:AI:10:ARG:HB3	8:AI:15:ALA:HA	1.98	0.43
8:AI:48:ARG:O	8:AI:52:GLU:N	2.42	0.43
8:AI:112:ARG:O	8:AI:112:ARG:HG3	2.17	0.43
11:AL:21:PRO:C	11:AL:23:LEU:H	2.25	0.43
11:AL:36:VAL:O	11:AL:36:VAL:HG23	2.16	0.43
20:AB:103:TRP:O	20:AB:107:ARG:HG2	2.17	0.43
23:BB:241:A:O2'	34:B3:2:LYS:NZ	2.50	0.43
23:BB:428:A:O2'	23:BB:429:A:H5'	2.18	0.43
23:BB:1021:A:H2	23:BB:1122:G:H4'	1.83	0.43
23:BB:1081:U:H5'	24:BI:126:ARG:HD2	1.99	0.43
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.48	0.43
23:BB:1262:A:H2'	23:BB:1263:U:O4'	2.17	0.43
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.18	0.43
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.53	0.43
23:BB:1665:A:O2'	23:BB:1666:G:H5'	2.17	0.43
23:BB:1788:C:C2'	23:BB:1789:A:H5'	2.48	0.43
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.83	0.43
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.17	0.43
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.78	0.43
23:BB:2428:G:H5''	23:BB:2429:G:OP1	2.18	0.43
23:BB:2545:G:O2'	23:BB:2546:U:H5'	2.17	0.43
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.53	0.43
26:BD:149:ASN:N	26:BD:152:PRO:HG2	2.33	0.43
27:BK:64:ARG:HG2	27:BK:79:PHE:CD2	2.53	0.43
27:BK:79:PHE:O	27:BK:81:GLY:N	2.51	0.43
27:BK:99:ILE:HD13	27:BK:118:LEU:CD2	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.48	0.43
29:BE:109:LEU:HD12	29:BE:112:LEU:HD12	1.98	0.43
37:BL:92:LEU:HD22	37:BL:124:GLY:HA3	2.00	0.43
37:BL:102:GLY:O	37:BL:105:ILE:HG12	2.18	0.43
38:BM:82:MET:HE3	38:BM:82:MET:HB3	1.92	0.43
44:BQ:7:VAL:O	44:BQ:11:ALA:HB2	2.18	0.43
44:BQ:10:ARG:HB2	44:BQ:10:ARG:NH1	2.33	0.43
44:BQ:74:SER:O	44:BQ:75:TYR:C	2.60	0.43
46:BU:48:VAL:H	46:BU:53:GLN:HB2	1.81	0.43
46:BU:73:ASN:HB3	46:BU:95:PHE:CD2	2.52	0.43
47:BF:115:GLY:HA2	47:BF:177:ARG:NH1	2.25	0.43
47:BF:165:GLY:O	47:BF:169:LEU:HD12	2.17	0.43
48:BG:167:VAL:HG21	48:BG:169:ARG:HH12	1.83	0.43
48:BG:168:VAL:HG12	48:BG:170:THR:HG23	1.99	0.43
49:BR:39:LEU:HB2	49:BR:49:ILE:HD11	1.99	0.43
51:BZ:59:ILE:HG23	51:BZ:67:VAL:HG21	2.00	0.43
53:B6:56:ALA:HB1	53:B6:68:VAL:HG12	2.00	0.43
53:B6:112:LYS:HB3	53:B6:116:ARG:HH22	1.77	0.43
1:CA:85:U:O2	1:CA:85:U:O4'	2.33	0.43
1:CA:508:U:H1'	1:CA:509:A:N7	2.33	0.43
1:CA:604:G:H2'	1:CA:605:U:O4'	2.18	0.43
1:CA:613:C:H2'	1:CA:614:C:C6	2.53	0.43
1:CA:679:C:O2'	1:CA:680:C:H5'	2.18	0.43
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.53	0.43
1:CA:1160:G:O2'	1:CA:1161:C:H5'	2.17	0.43
1:CA:1461:G:O2'	1:CA:1462:C:H5'	2.17	0.43
2:CC:113:LYS:HB2	2:CC:184:ASN:OD1	2.18	0.43
3:CD:39:GLN:HG3	3:CD:40:HIS:N	2.32	0.43
3:CD:98:ASP:OD2	3:CD:99:ASN:N	2.49	0.43
3:CD:167:PRO:HB2	3:CD:170:LEU:HD21	2.00	0.43
4:CE:57:ALA:O	4:CE:61:LYS:HG2	2.18	0.43
4:CE:64:GLU:HG3	4:CE:65:LYS:N	2.31	0.43
4:CE:73:VAL:HG12	4:CE:146:MET:HE2	2.00	0.43
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.33	0.43
8:CI:5:TYR:HD2	8:CI:88:GLU:CB	2.30	0.43
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.33	0.43
9:CJ:36:VAL:HG12	9:CJ:38:GLY:H	1.83	0.43
11:CL:82:ARG:HG2	11:CL:82:ARG:HH11	1.83	0.43
13:CN:50:LEU:HG	13:CN:51:PRO:CD	2.48	0.43
20:CB:46:VAL:CG1	20:CB:47:PRO:HD3	2.36	0.43
21:CU:3:ILE:HG22	21:CU:19:LYS:NZ	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:20:G:H2'	22:DA:21:G:C8	2.52	0.43
23:DB:131:A:H2'	23:DB:132:G:C8	2.53	0.43
23:DB:467:G:O2'	23:DB:468:G:H5'	2.18	0.43
23:DB:690:G:H2'	23:DB:691:C:O4'	2.17	0.43
23:DB:780:G:H21	23:DB:783:A:H62	1.64	0.43
23:DB:784:G:H5''	25:DC:225:ASN:OD1	2.18	0.43
23:DB:823:C:H2'	23:DB:824:U:H6	1.83	0.43
23:DB:1052:C:H2'	23:DB:1053:C:H6	1.83	0.43
23:DB:1106:G:H2'	23:DB:1107:G:C8	2.53	0.43
23:DB:1400:U:H6	23:DB:1400:U:O5'	2.01	0.43
23:DB:1509:A:H4'	23:DB:1510:G:O4'	2.18	0.43
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.31	0.43
23:DB:1818:U:C4	25:DC:152:GLN:HB3	2.53	0.43
23:DB:1865:U:HO2'	23:DB:1866:A:H8	1.64	0.43
23:DB:2145:C:O4'	23:DB:2145:C:O2	2.35	0.43
23:DB:2235:G:H2'	23:DB:2236:U:H6	1.81	0.43
23:DB:2309:A:H2'	23:DB:2310:C:H6	1.83	0.43
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.53	0.43
24:DI:45:THR:C	24:DI:48:ILE:HG22	2.43	0.43
26:DD:92:VAL:O	26:DD:93:GLY:C	2.60	0.43
26:DD:158:GLY:O	26:DD:160:LYS:N	2.51	0.43
26:DD:168:GLU:O	26:DD:169:ARG:C	2.61	0.43
26:DD:187:LEU:HD12	26:DD:188:LEU:N	2.33	0.43
28:DP:64:SER:O	28:DP:66:GLY:N	2.45	0.43
30:DY:16:LEU:HD23	30:DY:19:HIS:CD2	2.53	0.43
31:D0:11:LYS:HA	31:D0:14:MET:HE3	1.99	0.43
37:DL:3:LEU:HA	37:DL:6:LEU:HD21	2.00	0.43
37:DL:93:ASN:ND2	37:DL:94:THR:N	2.65	0.43
37:DL:105:ILE:HG22	37:DL:106:GLU:N	2.33	0.43
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.99	0.43
38:DM:42:THR:HA	38:DM:93:VAL:HA	1.99	0.43
43:DO:75:GLY:O	43:DO:78:VAL:HG23	2.18	0.43
44:DQ:63:ARG:CZ	44:DQ:96:ASP:HA	2.47	0.43
48:DG:154:GLU:CG	48:DG:156:TYR:HB2	2.47	0.43
52:DW:37:VAL:HG22	52:DW:55:ASP:O	2.18	0.43
1:AA:37:U:H2'	1:AA:38:G:H8	1.83	0.43
1:AA:57:G:H2'	1:AA:58:C:H6	1.81	0.43
1:AA:585:G:H2'	1:AA:586:C:O4'	2.19	0.43
1:AA:693:G:P	10:AK:126:ARG:HH12	2.41	0.43
1:AA:1003:G:N2	1:AA:1005:A:C5'	2.81	0.43
1:AA:1014:A:H2'	1:AA:1015:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1114:C:H2'	1:AA:1115:U:C6	2.54	0.43
1:AA:1309:G:H2'	1:AA:1310:G:C8	2.54	0.43
2:AC:8:GLY:HA3	13:AN:88:MET:SD	2.58	0.43
3:AD:167:PRO:HB2	3:AD:170:LEU:HD21	2.00	0.43
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	2.00	0.43
6:AG:14:ASP:H	6:AG:19:SER:H	1.64	0.43
8:AI:5:TYR:HD2	8:AI:88:GLU:CB	2.31	0.43
10:AK:80:ASN:ND2	10:AK:80:ASN:N	2.67	0.43
12:AM:2:ARG:O	12:AM:4:ALA:N	2.51	0.43
14:AO:87:LEU:O	14:AO:88:ARG:C	2.61	0.43
15:AP:20:VAL:CG2	15:AP:32:PHE:HB2	2.48	0.43
15:AP:52:LEU:CD2	15:AP:75:ILE:HA	2.48	0.43
20:AB:53:LEU:HA	20:AB:56:LEU:HD13	2.00	0.43
20:AB:151:LYS:HG3	20:AB:152:ASP:H	1.79	0.43
22:BA:23:G:H2'	22:BA:24:G:C8	2.54	0.43
22:BA:75:G:H2'	22:BA:76:G:C8	2.53	0.43
22:BA:79:G:O2'	22:BA:80:U:H5'	2.18	0.43
23:BB:550:C:O2	23:BB:550:C:H2'	2.18	0.43
23:BB:732:C:O2'	23:BB:733:G:H5'	2.18	0.43
23:BB:1063:G:O3'	24:BI:88:GLY:HA3	2.18	0.43
23:BB:1076:C:C4'	24:BI:94:LYS:HE3	2.39	0.43
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.83	0.43
23:BB:1210:G:H1'	23:BB:1212:G:C2	2.53	0.43
23:BB:1332:G:N3	23:BB:1332:G:H5'	2.33	0.43
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.32	0.43
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.54	0.43
23:BB:1541:C:H2'	23:BB:1542:U:H6	1.83	0.43
23:BB:1613:G:O2'	36:B2:3:ARG:HD2	2.18	0.43
23:BB:1718:G:H2'	23:BB:1719:G:C8	2.51	0.43
23:BB:1870:C:H5'	23:BB:1871:A:N7	2.33	0.43
23:BB:1903:G:H2'	23:BB:1904:G:H8	1.83	0.43
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.19	0.43
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.53	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.18	0.43
26:BD:92:VAL:O	26:BD:93:GLY:C	2.60	0.43
26:BD:117:GLY:O	26:BD:164:GLN:HA	2.18	0.43
28:BP:27:VAL:O	28:BP:42:PHE:N	2.51	0.43
29:BE:160:ALA:C	29:BE:162:ARG:H	2.26	0.43
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.46	0.43
41:BJ:96:ARG:CZ	41:BJ:99:ARG:HD2	2.49	0.43
42:BN:34:ILE:HG22	42:BN:35:LYS:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.18	0.43
46:BU:53:GLN:H	46:BU:53:GLN:CD	2.26	0.43
50:BT:25:GLU:C	50:BT:27:SER:N	2.75	0.43
53:B6:84:ARG:O	53:B6:86:SER:N	2.51	0.43
1:CA:384:G:H2'	1:CA:385:C:H6	1.82	0.43
1:CA:728:A:O2'	1:CA:729:A:H5'	2.18	0.43
1:CA:830:G:H2'	1:CA:831:A:C8	2.53	0.43
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.18	0.43
1:CA:1117:A:H5''	8:CI:105:ARG:NH2	2.33	0.43
1:CA:1152:A:H2'	1:CA:1153:G:C8	2.53	0.43
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.33	0.43
1:CA:1451:U:H5''	1:CA:1452:C:OP2	2.18	0.43
1:CA:1459:G:O2'	1:CA:1460:C:H5'	2.17	0.43
3:CD:29:THR:CG2	3:CD:30:LYS:HD3	2.48	0.43
9:CJ:41:PRO:HG2	9:CJ:42:LEU:H	1.83	0.43
12:CM:15:VAL:HG22	12:CM:33:LEU:CD1	2.48	0.43
14:CO:74:ASP:OD1	14:CO:77:ARG:HG3	2.18	0.43
16:CQ:79:GLU:C	16:CQ:81:ALA:H	2.26	0.43
19:CT:14:GLU:O	19:CT:17:ARG:HB3	2.18	0.43
20:CB:101:THR:HG22	20:CB:174:GLU:CD	2.43	0.43
23:DB:308:G:H2'	23:DB:309:A:O4'	2.19	0.43
23:DB:405:U:OP2	23:DB:405:U:H4'	2.18	0.43
23:DB:539:G:H2'	23:DB:540:C:C6	2.53	0.43
23:DB:584:C:H2'	23:DB:585:G:H8	1.83	0.43
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.51	0.43
23:DB:840:C:H2'	23:DB:841:G:H8	1.82	0.43
23:DB:1025:G:OP1	23:DB:1025:G:H8	2.01	0.43
23:DB:1508:A:H3'	23:DB:1509:A:C5	2.53	0.43
23:DB:2010:G:O2'	23:DB:2011:U:H5'	2.19	0.43
23:DB:2509:G:N2	23:DB:2510:C:H1'	2.33	0.43
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.53	0.43
25:DC:14:HIS:O	25:DC:203:VAL:HG11	2.18	0.43
25:DC:132:ARG:HA	25:DC:166:ARG:HH11	1.83	0.43
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.32	0.43
29:DE:1:MET:HB3	29:DE:14:VAL:HG23	2.00	0.43
33:D1:32:LYS:HZ2	33:D1:52:LYS:HA	1.83	0.43
33:D1:35:LEU:HD23	33:D1:35:LEU:N	2.33	0.43
41:DJ:58:ASN:O	41:DJ:60:ASP:N	2.44	0.43
45:DS:28:LYS:HD2	45:DS:30:SER:H	1.83	0.43
48:DG:15:ASP:CB	48:DG:26:LYS:H	2.19	0.43
49:DR:9:GLY:C	49:DR:10:LYS:HD2	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:1:MET:H3	50:DT:1:MET:HG2	1.70	0.43
53:D6:143:LEU:HG	53:D6:147:LEU:HD11	1.99	0.43
1:AA:64:G:O3'	1:AA:65:A:H3'	2.18	0.43
1:AA:313:A:H2'	1:AA:314:C:H6	1.83	0.43
1:AA:490:C:H2'	1:AA:491:G:H8	1.83	0.43
1:AA:626:G:H2'	1:AA:627:G:C8	2.53	0.43
1:AA:830:G:H2'	1:AA:831:A:C8	2.53	0.43
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.53	0.43
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.19	0.43
1:AA:1463:U:H2'	1:AA:1464:U:H6	1.82	0.43
2:AC:53:ARG:HB3	2:AC:68:HIS:CD2	2.53	0.43
6:AG:110:ARG:HB2	6:AG:118:ARG:HB3	2.01	0.43
8:AI:14:SER:HB2	8:AI:69:GLY:HA3	1.99	0.43
20:AB:20:ARG:HA	20:AB:38:HIS:HE1	1.83	0.43
20:AB:134:LEU:HA	20:AB:137:THR:OG1	2.17	0.43
20:AB:150:ILE:HG12	20:AB:150:ILE:O	2.18	0.43
23:BB:307:G:N1	23:BB:310:A:OP2	2.50	0.43
23:BB:596:U:H2'	23:BB:597:G:H8	1.83	0.43
23:BB:671:C:H2'	23:BB:672:C:C6	2.53	0.43
23:BB:1726:C:H2'	23:BB:1727:C:H6	1.82	0.43
23:BB:1731:G:O2'	23:BB:1732:C:H5''	2.18	0.43
23:BB:1799:G:H4'	23:BB:1800:C:O5'	2.18	0.43
23:BB:2277:G:OP1	38:BM:86:LYS:N	2.51	0.43
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.81	0.43
23:BB:2513:A:H2'	23:BB:2514:U:C6	2.54	0.43
23:BB:2852:G:O2'	23:BB:2853:C:H5'	2.17	0.43
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.53	0.43
24:BI:4:VAL:O	24:BI:4:VAL:HG13	2.18	0.43
27:BK:113:MET:HE2	27:BK:116:ILE:CD1	2.47	0.43
29:BE:18:THR:HG22	29:BE:106:LYS:HE2	2.00	0.43
29:BE:18:THR:HG22	29:BE:106:LYS:HZ1	1.83	0.43
37:BL:101:ILE:CG2	37:BL:105:ILE:HG13	2.48	0.43
40:BH:66:ASN:N	40:BH:66:ASN:ND2	2.61	0.43
41:BJ:88:THR:O	41:BJ:89:PHE:C	2.62	0.43
48:BG:29:ASN:ND2	48:BG:77:GLY:O	2.51	0.43
48:BG:94:ARG:HH21	48:BG:105:SER:H	1.67	0.43
48:BG:148:ARG:HB2	48:BG:161:VAL:O	2.18	0.43
1:CA:9:G:N7	1:CA:558:G:O2'	2.49	0.43
1:CA:238:A:C3'	1:CA:239:U:H5''	2.49	0.43
1:CA:555:U:H2'	1:CA:556:C:H6	1.83	0.43
1:CA:585:G:O2'	1:CA:586:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:667:G:H4'	14:CO:51:HIS:ND1	2.33	0.43
1:CA:772:U:O2'	1:CA:773:G:H5'	2.18	0.43
1:CA:1473:G:O2'	1:CA:1474:U:H5'	2.19	0.43
2:CC:58:ARG:HG2	2:CC:63:ILE:HG23	2.01	0.43
2:CC:109:GLU:OE2	2:CC:143:LEU:HG	2.19	0.43
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.99	0.43
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.18	0.43
6:CG:45:ALA:HB2	6:CG:116:ALA:O	2.18	0.43
8:CI:34:LEU:HD11	8:CI:47:VAL:HG21	2.00	0.43
8:CI:83:THR:HA	8:CI:86:LEU:HD22	1.99	0.43
8:CI:87:MET:SD	8:CI:87:MET:C	3.02	0.43
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.18	0.43
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.49	0.43
14:CO:78:TYR:CE1	14:CO:82:ILE:HD11	2.53	0.43
14:CO:87:LEU:O	14:CO:88:ARG:C	2.61	0.43
18:CS:49:ALA:C	18:CS:56:HIS:HB3	2.44	0.43
20:CB:25:LYS:HD3	20:CB:193:ASP:OD2	2.18	0.43
22:DA:15:A:O2'	22:DA:16:G:H5'	2.19	0.43
22:DA:43:C:H4'	47:DF:91:ARG:NE	2.33	0.43
22:DA:66:A:N6	22:DA:107:G:H2'	2.28	0.43
23:DB:222:A:H61	23:DB:232:G:H1'	1.83	0.43
23:DB:309:A:N3	23:DB:329:G:O2'	2.46	0.43
23:DB:341:C:O2'	23:DB:342:A:H5'	2.17	0.43
23:DB:544:C:H4'	23:DB:545:U:OP1	2.18	0.43
23:DB:589:U:H2'	23:DB:590:A:C8	2.54	0.43
23:DB:671:C:H2'	23:DB:672:C:C6	2.53	0.43
23:DB:812:C:O2'	23:DB:813:U:H5'	2.18	0.43
23:DB:919:U:O5'	23:DB:919:U:H6	2.01	0.43
23:DB:996:A:H4'	44:DQ:91:ARG:NE	2.33	0.43
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.48	0.43
23:DB:1108:U:H2'	23:DB:1109:C:H5'	2.00	0.43
23:DB:1124:G:O2'	32:D4:37:GLN:HG2	2.18	0.43
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.53	0.43
23:DB:1790:C:H2'	23:DB:1791:A:N7	2.32	0.43
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.83	0.43
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.83	0.43
23:DB:2694:G:O2'	23:DB:2695:U:H5'	2.18	0.43
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.43
26:DD:32:ASN:HB3	26:DD:50:VAL:HG21	2.00	0.43
28:DP:29:VAL:HB	28:DP:79:VAL:O	2.18	0.43
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:30:ASP:OD2	31:D0:31:LYS:N	2.50	0.43
33:D1:26:LYS:HB2	33:D1:52:LYS:HD2	1.99	0.43
37:DL:4:ASN:O	37:DL:6:LEU:N	2.50	0.43
38:DM:19:GLY:N	38:DM:38:ARG:NH1	2.65	0.43
38:DM:23:GLY:O	38:DM:101:VAL:HG12	2.17	0.43
38:DM:57:VAL:O	38:DM:59:ARG:N	2.46	0.43
39:DX:58:ASN:O	39:DX:59:GLU:C	2.60	0.43
40:DH:77:THR:HG22	40:DH:143:ILE:C	2.43	0.43
41:DJ:3:THR:HG21	44:DQ:60:TRP:NE1	2.15	0.43
41:DJ:19:ASP:OD2	41:DJ:58:ASN:HB2	2.18	0.43
41:DJ:96:ARG:CZ	41:DJ:99:ARG:HD2	2.48	0.43
43:DO:93:ASP:C	43:DO:95:SER:N	2.76	0.43
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CA	2.31	0.43
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.20	0.43
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.48	0.43
48:DG:168:VAL:HG12	48:DG:170:THR:HG23	2.00	0.43
49:DR:59:ILE:HA	49:DR:101:ILE:H	1.83	0.43
50:DT:57:VAL:CG2	50:DT:58:VAL:H	2.17	0.43
52:DW:44:PHE:HE2	52:DW:76:ARG:CZ	2.30	0.43
52:DW:77:LYS:HD3	52:DW:77:LYS:HA	1.85	0.43
53:D6:140:LEU:O	53:D6:141:LYS:C	2.59	0.43
1:AA:186:C:H2'	1:AA:187:G:O4'	2.18	0.43
1:AA:250:A:H1'	1:AA:252:U:C5	2.54	0.43
1:AA:543:U:O2'	1:AA:544:G:H5'	2.19	0.43
1:AA:625:U:H4'	15:AP:16:PHE:CZ	2.53	0.43
1:AA:935:A:O2'	1:AA:936:C:H5'	2.18	0.43
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.84	0.43
1:AA:1231:G:O2'	1:AA:1232:U:H5'	2.19	0.43
1:AA:1340:A:O2'	1:AA:1341:U:H5'	2.17	0.43
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.18	0.43
2:AC:194:VAL:HG12	2:AC:195:ILE:N	2.34	0.43
3:AD:81:LEU:HB2	3:AD:88:ASN:HD22	1.82	0.43
3:AD:197:HIS:CG	3:AD:198:LEU:N	2.87	0.43
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.53	0.43
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	2.00	0.43
8:AI:21:LYS:O	8:AI:61:ASP:N	2.48	0.43
8:AI:46:VAL:HG23	8:AI:47:VAL:N	2.32	0.43
12:AM:15:VAL:HG22	12:AM:33:LEU:CD1	2.49	0.43
13:AN:46:LYS:HE3	18:AS:15:LEU:HD12	1.99	0.43
16:AQ:79:GLU:C	16:AQ:81:ALA:H	2.25	0.43
20:AB:150:ILE:O	20:AB:151:LYS:C	2.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:38:GLU:C	21:AU:40:PRO:CD	2.89	0.43
23:BB:39:G:H2'	23:BB:40:U:H6	1.83	0.43
23:BB:123:G:H4'	23:BB:1376:C:O5'	2.19	0.43
23:BB:598:U:H2'	23:BB:599:A:C8	2.53	0.43
23:BB:656:G:H2'	23:BB:657:U:O4'	2.18	0.43
23:BB:739:A:H5''	23:BB:1784:A:C2	2.54	0.43
23:BB:794:A:H2'	23:BB:795:C:C6	2.53	0.43
23:BB:920:A:H2'	23:BB:921:C:H6	1.83	0.43
23:BB:1076:C:H4'	24:BI:94:LYS:HZ2	1.82	0.43
23:BB:1351:C:H2'	23:BB:1352:U:C1'	2.48	0.43
23:BB:1822:C:O2'	23:BB:1823:G:H5'	2.19	0.43
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.53	0.43
23:BB:2635:A:H5'	26:BD:79:LEU:HB2	2.00	0.43
23:BB:2774:C:OP1	26:BD:169:ARG:HG3	2.19	0.43
23:BB:2805:C:H2'	23:BB:2806:C:H6	1.81	0.43
23:BB:2877:G:O2'	23:BB:2878:U:H5'	2.18	0.43
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.82	0.43
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.33	0.43
25:BC:70:LYS:HD2	25:BC:101:ARG:NH2	2.33	0.43
26:BD:32:ASN:HB3	26:BD:50:VAL:CG2	2.48	0.43
29:BE:145:ASP:OD1	29:BE:183:PHE:HA	2.18	0.43
36:B2:33:ARG:HH21	36:B2:33:ARG:CB	2.31	0.43
37:BL:85:VAL:HG22	37:BL:94:THR:HG21	1.99	0.43
38:BM:63:ILE:HD12	38:BM:63:ILE:N	2.32	0.43
40:BH:57:LYS:O	40:BH:61:VAL:HG12	2.18	0.43
40:BH:72:ILE:O	40:BH:141:LYS:NZ	2.52	0.43
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.99	0.43
42:BN:28:LEU:O	42:BN:32:GLU:HA	2.19	0.43
42:BN:32:GLU:O	42:BN:114:GLU:HA	2.18	0.43
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.83	0.43
44:BQ:81:GLY:HA3	44:BQ:112:ALA:HB1	2.00	0.43
44:BQ:108:LEU:HD23	49:BR:48:LYS:HB2	2.00	0.43
49:BR:81:LYS:HA	49:BR:81:LYS:HD3	1.89	0.43
1:CA:37:U:H2'	1:CA:38:G:H8	1.84	0.43
1:CA:125:U:H2'	1:CA:126:G:C8	2.54	0.43
1:CA:286:C:H2'	1:CA:287:U:H6	1.83	0.43
1:CA:636:U:O2'	1:CA:637:C:H5'	2.18	0.43
1:CA:926:G:H3'	1:CA:1505:G:H21	1.84	0.43
1:CA:948:C:O2'	1:CA:949:A:H5'	2.17	0.43
1:CA:958:A:N6	1:CA:959:A:N1	2.66	0.43
1:CA:958:A:P	18:CS:54:ARG:HH22	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.18	0.43
2:CC:46:LEU:HD11	2:CC:75:VAL:HG13	1.98	0.43
6:CG:80:GLY:C	6:CG:82:SER:N	2.75	0.43
6:CG:125:ASP:HB3	6:CG:131:GLY:N	2.34	0.43
7:CH:58:LEU:HD22	7:CH:60:LEU:HB2	2.00	0.43
7:CH:110:MET:SD	7:CH:115:ALA:HB2	2.59	0.43
10:CK:92:ARG:HH11	21:CU:20:ARG:NH2	2.16	0.43
12:CM:3:ILE:HA	12:CM:56:ARG:NH1	2.32	0.43
17:CR:51:GLN:HE21	17:CR:51:GLN:HA	1.82	0.43
20:CB:114:LYS:NZ	20:CB:152:ASP:OD1	2.52	0.43
22:DA:4:C:H2'	22:DA:5:U:C6	2.54	0.43
23:DB:471:A:OP1	29:DE:79:ARG:NH1	2.51	0.43
23:DB:596:U:H2'	23:DB:597:G:C8	2.54	0.43
23:DB:622:G:O2'	23:DB:623:C:H5'	2.18	0.43
23:DB:664:G:O2'	23:DB:665:U:H5'	2.19	0.43
23:DB:847:U:H2'	23:DB:848:C:C6	2.53	0.43
23:DB:920:A:H2'	23:DB:921:C:H6	1.83	0.43
23:DB:1099:G:N7	24:DI:3:LYS:HD3	2.33	0.43
23:DB:1213:A:N1	23:DB:1237:A:H1'	2.34	0.43
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.54	0.43
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.18	0.43
23:DB:1845:G:C6	23:DB:1896:G:C6	3.07	0.43
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.18	0.43
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.82	0.43
23:DB:2834:G:H2'	23:DB:2879:A:H61	1.84	0.43
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.18	0.43
26:DD:55:LYS:H	26:DD:76:GLY:H	1.67	0.43
26:DD:147:GLY:C	26:DD:148:GLN:HG2	2.44	0.43
27:DK:64:ARG:HG2	27:DK:79:PHE:CD2	2.53	0.43
29:DE:24:ASN:O	29:DE:25:GLU:C	2.61	0.43
32:D4:13:ASN:OD1	32:D4:29:ALA:HB2	2.18	0.43
37:DL:131:ALA:HA	37:DL:134:ALA:CB	2.48	0.43
38:DM:105:MET:HB2	38:DM:117:PHE:CE2	2.53	0.43
40:DH:135:HIS:CG	40:DH:136:SER:N	2.86	0.43
41:DJ:72:LYS:HB3	41:DJ:89:PHE:H	1.84	0.43
42:DN:33:ILE:C	42:DN:34:ILE:HG13	2.43	0.43
42:DN:52:ILE:O	42:DN:55:ALA:HB3	2.18	0.43
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.52	0.43
46:DU:73:ASN:ND2	46:DU:76:THR:H	2.15	0.43
49:DR:63:VAL:O	49:DR:63:VAL:HG23	2.18	0.43
50:DT:50:LEU:C	50:DT:52:GLU:N	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:68:LEU:HD13	51:DZ:78:TYR:CE1	2.53	0.43
1:AA:590:U:OP1	7:AH:29:SER:HA	2.18	0.43
1:AA:704:A:C2	1:AA:705:G:H1'	2.53	0.43
1:AA:757:U:O2'	1:AA:758:C:H5'	2.18	0.43
1:AA:772:U:O2'	1:AA:773:G:H5'	2.19	0.43
1:AA:856:C:O2'	1:AA:857:C:H5'	2.18	0.43
1:AA:999:C:O5'	1:AA:999:C:H6	2.00	0.43
1:AA:1054:C:H1'	1:AA:1196:A:C4	2.53	0.43
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.53	0.43
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.18	0.43
2:AC:130:ARG:HA	2:AC:133:MET:HE3	1.99	0.43
4:AE:85:LYS:HG3	4:AE:93:VAL:O	2.18	0.43
5:AF:92:THR:HG22	5:AF:94:HIS:N	2.11	0.43
5:AF:99:ALA:O	5:AF:100:SER:CB	2.66	0.43
5:AF:100:SER:HA	17:AR:23:LYS:CD	2.48	0.43
6:AG:2:ARG:C	6:AG:4:ARG:H	2.25	0.43
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.19	0.43
8:AI:41:GLU:C	8:AI:43:ALA:N	2.72	0.43
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.34	0.43
14:AO:43:PHE:CE1	14:AO:56:LEU:HD22	2.54	0.43
16:AQ:16:MET:HB2	16:AQ:19:SER:O	2.19	0.43
19:AT:2:ASN:CG	19:AT:3:ILE:N	2.76	0.43
20:AB:195:VAL:HG12	20:AB:197:PHE:N	2.30	0.43
20:AB:202:ASN:HD22	20:AB:202:ASN:C	2.27	0.43
22:BA:54:G:N2	47:BF:25:MET:HE3	2.31	0.43
22:BA:106:G:H2'	22:BA:107:G:O4'	2.18	0.43
23:BB:165:A:H2'	23:BB:166:U:O4'	2.18	0.43
23:BB:332:A:O2'	23:BB:334:C:OP2	2.36	0.43
23:BB:622:G:O2'	23:BB:623:C:H5'	2.18	0.43
23:BB:691:C:O2'	23:BB:692:C:H5'	2.17	0.43
23:BB:971:G:O2'	23:BB:972:A:H5'	2.19	0.43
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.83	0.43
23:BB:1173:U:H2'	23:BB:1174:U:C4'	2.47	0.43
23:BB:1464:G:O2'	23:BB:1465:G:H5'	2.18	0.43
23:BB:1476:U:HO2'	23:BB:1477:A:H8	1.66	0.43
23:BB:1573:G:H2'	23:BB:1574:C:H5'	2.01	0.43
23:BB:2019:A:C4'	44:BQ:33:VAL:HG11	2.48	0.43
23:BB:2081:U:C5'	51:BZ:25:THR:HG21	2.49	0.43
23:BB:2472:G:H1	23:BB:2477:U:P	2.42	0.43
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.53	0.43
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:16:THR:HG22	26:BD:17:GLU:N	2.33	0.43
27:BK:58:LEU:HD23	27:BK:58:LEU:H	1.80	0.43
28:BP:45:VAL:H	28:BP:60:VAL:HB	1.83	0.43
29:BE:146:VAL:CG1	29:BE:187:VAL:HG23	2.48	0.43
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.47	0.43
35:BV:72:VAL:HG12	35:BV:93:ARG:CA	2.44	0.43
36:B2:12:ARG:HG2	36:B2:44:VAL:HG11	1.99	0.43
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.84	0.43
40:BH:111:ALA:HB3	40:BH:114:GLU:CG	2.48	0.43
40:BH:116:ARG:H	40:BH:130:VAL:HG12	1.82	0.43
41:BJ:44:TYR:O	41:BJ:45:THR:CB	2.66	0.43
41:BJ:75:TYR:CD1	41:BJ:86:GLN:HB3	2.52	0.43
46:BU:98:ASN:O	46:BU:99:SER:C	2.61	0.43
47:BF:35:LEU:HD13	47:BF:56:LEU:CD1	2.46	0.43
47:BF:111:ARG:HD2	47:BF:111:ARG:N	2.33	0.43
50:BT:8:LEU:HD22	50:BT:46:ALA:HA	1.99	0.43
51:BZ:56:MET:HA	51:BZ:59:ILE:HG12	1.99	0.43
52:BW:32:ALA:C	52:BW:34:SER:N	2.75	0.43
53:B6:80:GLU:CG	53:B6:92:PRO:HB2	2.48	0.43
1:CA:208:U:H2'	1:CA:210:C:N3	2.33	0.43
1:CA:314:C:O2'	1:CA:315:A:H5'	2.19	0.43
1:CA:450:G:N7	1:CA:481:G:O6	2.51	0.43
1:CA:614:C:C2'	1:CA:615:G:H5'	2.49	0.43
1:CA:657:U:H1'	14:CO:22:THR:O	2.18	0.43
1:CA:744:C:O2'	1:CA:745:G:H5'	2.18	0.43
1:CA:768:A:O2'	1:CA:769:G:H5'	2.19	0.43
2:CC:134:LYS:HG3	2:CC:167:TYR:HE2	1.83	0.43
3:CD:169:TRP:HB2	3:CD:183:ARG:O	2.19	0.43
8:CI:30:ASN:O	8:CI:31:GLN:HB2	2.19	0.43
8:CI:45:MET:SD	8:CI:45:MET:N	2.92	0.43
11:CL:21:PRO:C	11:CL:23:LEU:H	2.25	0.43
12:CM:10:ASP:CA	12:CM:44:ILE:HD13	2.42	0.43
13:CN:7:ALA:O	13:CN:8:ARG:C	2.60	0.43
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.83	0.43
13:CN:68:ARG:HH12	13:CN:70:HIS:CB	2.14	0.43
13:CN:87:ALA:CA	13:CN:92:ILE:HD13	2.47	0.43
14:CO:28:GLN:O	14:CO:29:VAL:C	2.61	0.43
19:CT:2:ASN:CG	19:CT:3:ILE:N	2.76	0.43
20:CB:162:VAL:HG13	20:CB:184:ALA:CB	2.44	0.43
20:CB:164:ASP:OD1	20:CB:203:ASP:HB2	2.18	0.43
22:DA:65:U:C2'	22:DA:66:A:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:28:A:O2'	23:DB:29:U:H5'	2.17	0.43
23:DB:39:G:H2'	23:DB:40:U:C6	2.54	0.43
23:DB:287:G:H2'	23:DB:287:G:N3	2.33	0.43
23:DB:444:C:O2'	23:DB:445:C:H5'	2.18	0.43
23:DB:699:A:H2'	23:DB:700:G:O4'	2.18	0.43
23:DB:819:A:H5'	23:DB:973:A:N1	2.34	0.43
23:DB:840:C:H2'	23:DB:841:G:C8	2.53	0.43
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.36	0.43
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.53	0.43
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.83	0.43
23:DB:1387:A:H5'	23:DB:1469:A:H1'	2.00	0.43
23:DB:1445:G:O2'	23:DB:1446:C:H5'	2.19	0.43
23:DB:1556:C:H2'	23:DB:1557:C:C6	2.54	0.43
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.19	0.43
23:DB:1789:A:OP2	25:DC:220:ARG:HD3	2.18	0.43
23:DB:1854:A:H2'	23:DB:1855:U:H5'	2.00	0.43
23:DB:1905:C:O2'	23:DB:1929:G:H1'	2.18	0.43
23:DB:2015:A:N3	31:D0:2:VAL:HG22	2.33	0.43
23:DB:2265:U:H3'	23:DB:2266:A:C5'	2.49	0.43
23:DB:2395:C:H2'	23:DB:2396:G:O4'	2.19	0.43
23:DB:2774:C:P	26:DD:169:ARG:HG3	2.58	0.43
25:DC:89:ASN:HD22	25:DC:89:ASN:HA	1.52	0.43
26:DD:35:THR:O	26:DD:36:GLN:HB3	2.17	0.43
27:DK:17:ARG:O	27:DK:18:ARG:C	2.62	0.43
28:DP:45:VAL:H	28:DP:60:VAL:HB	1.83	0.43
33:D1:3:GLY:O	33:D1:5:ARG:N	2.52	0.43
35:DV:35:GLU:HG3	35:DV:93:ARG:CZ	2.48	0.43
36:D2:43:THR:O	36:D2:44:VAL:C	2.62	0.43
39:DX:55:THR:C	39:DX:56:LEU:O	2.58	0.43
40:DH:5:LEU:HD12	40:DH:17:ASP:CB	2.47	0.43
40:DH:110:VAL:O	40:DH:110:VAL:HG13	2.18	0.43
41:DJ:55:ILE:CG2	41:DJ:123:LYS:HB2	2.49	0.43
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	2.01	0.43
45:DS:66:ILE:O	45:DS:69:LEU:HB2	2.19	0.43
47:DF:68:LYS:HG3	47:DF:81:GLY:O	2.18	0.43
47:DF:74:ALA:HB3	47:DF:78:ILE:HD13	2.01	0.43
51:DZ:41:GLU:CD	51:DZ:41:GLU:C	2.87	0.43
51:DZ:71:LEU:HD11	51:DZ:78:TYR:HB3	1.99	0.43
52:DW:37:VAL:HB	52:DW:38:ARG:HD3	2.00	0.43
1:AA:85:U:O2	1:AA:85:U:O4'	2.35	0.43
1:AA:591:U:H2'	1:AA:592:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.94	0.43
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.19	0.43
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.19	0.43
2:AC:156:LEU:HG	2:AC:163:ARG:O	2.18	0.43
3:AD:146:GLU:HA	3:AD:149:LYS:CG	2.43	0.43
4:AE:93:VAL:HG22	4:AE:126:ALA:HB1	2.00	0.43
5:AF:53:LYS:H	5:AF:53:LYS:HZ2	1.66	0.43
5:AF:86:ARG:HD2	17:AR:63:TYR:O	2.19	0.43
6:AG:69:ARG:HA	6:AG:99:ALA:HB2	2.01	0.43
6:AG:144:ALA:O	6:AG:146:ALA:N	2.43	0.43
8:AI:50:PRO:HD3	8:AI:79:ARG:CG	2.47	0.43
12:AM:18:LEU:HD23	12:AM:21:ILE:HD12	2.00	0.43
16:AQ:14:ASP:OD1	16:AQ:53:GLY:HA2	2.17	0.43
16:AQ:42:LYS:O	16:AQ:43:LEU:HD12	2.19	0.43
17:AR:36:GLY:HA3	17:AR:70:THR:HA	2.00	0.43
18:AS:25:GLY:O	18:AS:27:LYS:HE2	2.18	0.43
22:BA:65:U:C2'	22:BA:66:A:H5'	2.48	0.43
23:BB:322:A:H1'	23:BB:339:U:O2	2.18	0.43
23:BB:557:C:H2'	23:BB:558:U:H6	1.81	0.43
23:BB:758:C:O2	23:BB:1981:A:H2	2.02	0.43
23:BB:771:G:O2'	23:BB:772:C:H5'	2.19	0.43
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.53	0.43
23:BB:1183:U:O2'	23:BB:1184:U:H5'	2.18	0.43
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.53	0.43
23:BB:1671:U:H2'	23:BB:1673:G:OP2	2.18	0.43
23:BB:1783:A:N1	23:BB:2587:A:H2'	2.34	0.43
23:BB:1811:G:O2'	23:BB:1812:U:H5'	2.19	0.43
23:BB:1846:G:N2	23:BB:1848:A:N6	2.67	0.43
23:BB:1900:A:N1	23:BB:1970:A:C5	2.86	0.43
23:BB:2190:G:H2'	23:BB:2191:A:C8	2.53	0.43
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.48	0.43
23:BB:2269:G:O3'	52:BW:18:LYS:HG2	2.18	0.43
23:BB:2671:G:H2'	23:BB:2672:U:H6	1.82	0.43
23:BB:2848:G:N2	23:BB:2867:G:C2	2.85	0.43
25:BC:80:LEU:HD21	25:BC:109:LEU:HB2	2.00	0.43
26:BD:67:HIS:O	26:BD:70:LYS:HB3	2.19	0.43
27:BK:75:SER:HB2	28:BP:73:PHE:HA	1.99	0.43
37:BL:115:GLU:N	37:BL:115:GLU:OE1	2.52	0.43
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.47	0.43
40:BH:137:GLU:HG3	40:BH:138:VAL:N	2.33	0.43
41:BJ:73:VAL:O	41:BJ:74:TYR:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:24:MET:CG	42:BN:44:LEU:HD22	2.49	0.43
42:BN:33:ILE:C	42:BN:34:ILE:HG13	2.43	0.43
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CB	2.49	0.43
45:BS:88:ARG:N	45:BS:92:ARG:O	2.49	0.43
46:BU:86:PHE:CG	46:BU:87:GLU:N	2.86	0.43
47:BF:79:ARG:H	47:BF:82:TYR:HB2	1.84	0.43
48:BG:54:ARG:HD2	48:BG:57:TYR:CE1	2.54	0.43
48:BG:148:ARG:HB2	48:BG:152:ARG:HH21	1.84	0.43
49:BR:63:VAL:HG23	49:BR:63:VAL:O	2.18	0.43
50:BT:18:GLU:O	50:BT:20:ALA:N	2.48	0.43
50:BT:45:ALA:O	50:BT:48:GLN:HB2	2.19	0.43
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.18	0.43
53:B6:142:LYS:HE2	53:B6:142:LYS:HA	2.00	0.43
1:CA:476:U:H2'	1:CA:477:C:O4'	2.18	0.43
1:CA:596:A:H2'	1:CA:597:G:H8	1.83	0.43
1:CA:605:U:H2'	1:CA:606:G:C8	2.53	0.43
1:CA:714:G:H21	1:CA:777:A:H1'	1.83	0.43
1:CA:872:A:C4	1:CA:874:G:N7	2.87	0.43
1:CA:1015:G:N2	1:CA:1218:C:O2	2.51	0.43
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.19	0.43
1:CA:1366:C:O2'	1:CA:1367:C:H5'	2.19	0.43
4:CE:44:ARG:HD2	4:CE:72:ASN:HD22	1.82	0.43
8:CI:50:PRO:HD3	8:CI:79:ARG:CG	2.49	0.43
10:CK:30:ILE:HG22	10:CK:45:THR:OG1	2.18	0.43
12:CM:2:ARG:O	12:CM:4:ALA:N	2.52	0.43
12:CM:53:ASP:HA	12:CM:56:ARG:NH2	2.34	0.43
13:CN:64:ARG:HD3	13:CN:64:ARG:HA	1.79	0.43
14:CO:21:ASP:O	14:CO:21:ASP:CG	2.60	0.43
17:CR:60:ARG:O	17:CR:64:LEU:HD13	2.17	0.43
20:CB:83:ALA:O	20:CB:88:GLN:NE2	2.52	0.43
20:CB:84:LEU:HD23	20:CB:84:LEU:O	2.18	0.43
22:DA:4:C:H2'	22:DA:5:U:H6	1.84	0.43
23:DB:233:A:H61	23:DB:428:A:H61	1.65	0.43
23:DB:620:G:O6	29:DE:98:LYS:HE2	2.18	0.43
23:DB:630:G:H4'	23:DB:640:C:O2'	2.18	0.43
23:DB:638:G:H2'	23:DB:639:U:C6	2.53	0.43
23:DB:672:C:H2'	23:DB:673:C:C6	2.53	0.43
23:DB:832:U:H2'	23:DB:833:A:C8	2.53	0.43
23:DB:1241:A:O4'	23:DB:1241:A:N3	2.50	0.43
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.81	0.43
23:DB:1563:U:O2'	23:DB:1564:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2199:A:H5'	23:DB:2200:C:OP2	2.17	0.43
23:DB:2262:U:H1'	23:DB:2328:A:H1'	2.01	0.43
23:DB:2298:A:C2	23:DB:2321:U:C5	3.06	0.43
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.46	0.43
25:DC:4:LYS:HB3	25:DC:5:CYS:H	1.56	0.43
27:DK:24:VAL:CG1	27:DK:33:ALA:HB2	2.47	0.43
29:DE:161:ALA:HB1	29:DE:167:VAL:HG22	2.00	0.43
39:DX:22:LEU:HG	39:DX:23:ARG:HG2	2.01	0.43
40:DH:96:THR:CG2	40:DH:97:ARG:H	2.18	0.43
40:DH:131:SER:HB2	40:DH:141:LYS:CG	2.49	0.43
41:DJ:38:GLY:CA	41:DJ:51:GLY:HA2	2.49	0.43
43:DO:73:ALA:O	43:DO:77:ALA:N	2.52	0.43
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.19	0.43
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.17	0.43
46:DU:20:LYS:HB2	46:DU:20:LYS:NZ	2.33	0.43
46:DU:82:VAL:CG1	46:DU:93:ARG:HB3	2.46	0.43
47:DF:37:MET:HG2	47:DF:52:ALA:HB1	2.00	0.43
47:DF:59:ILE:HG12	47:DF:137:PHE:CE2	2.53	0.43
47:DF:125:GLY:HA2	47:DF:162:ASP:CA	2.40	0.43
48:DG:9:VAL:O	48:DG:11:PRO:HD3	2.18	0.43
48:DG:100:ASN:O	48:DG:116:LEU:HD13	2.19	0.43
49:DR:51:VAL:O	49:DR:52:PRO:C	2.62	0.43
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.33	0.43
1:AA:597:G:H2'	1:AA:598:U:H5'	2.01	0.43
1:AA:656:G:O2'	1:AA:657:U:H5'	2.17	0.43
1:AA:865:A:H2'	1:AA:866:C:H6	1.80	0.43
1:AA:978:A:H5'	1:AA:1362:A:H61	1.84	0.43
1:AA:1133:G:O2'	1:AA:1134:G:H5'	2.19	0.43
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.54	0.43
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.34	0.43
1:AA:1258:G:C4	1:AA:1278:G:N2	2.86	0.43
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.34	0.43
2:AC:125:ARG:O	2:AC:126:ARG:HB2	2.18	0.43
4:AE:79:THR:OG1	4:AE:97:PRO:HA	2.19	0.43
6:AG:125:ASP:HB3	6:AG:131:GLY:N	2.34	0.43
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.49	0.43
12:AM:49:GLU:O	12:AM:50:GLY:C	2.62	0.43
17:AR:66:LEU:O	17:AR:67:LEU:HG	2.18	0.43
18:AS:39:ILE:HG13	18:AS:68:HIS:O	2.19	0.43
20:AB:42:LEU:HA	20:AB:45:THR:HB	2.00	0.43
20:AB:86:CYS:HB2	20:AB:221:ARG:HH11	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:193:U:H4'	23:BB:803:U:H5'	2.01	0.43
23:BB:518:G:H2'	23:BB:519:U:C6	2.54	0.43
23:BB:1063:G:O2'	24:BI:88:GLY:HA3	2.18	0.43
23:BB:1251:C:OP2	44:BQ:5:ARG:NE	2.50	0.43
23:BB:1399:C:H2'	23:BB:1400:U:C6	2.54	0.43
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.84	0.43
23:BB:1685:C:H2'	23:BB:1686:C:H6	1.83	0.43
23:BB:1930:G:C2'	23:BB:1931:U:OP2	2.67	0.43
23:BB:2065:C:H2'	23:BB:2066:C:C6	2.53	0.43
23:BB:2103:C:H3'	23:BB:2104:C:O2	2.19	0.43
23:BB:2189:U:O2'	23:BB:2190:G:H5'	2.18	0.43
23:BB:2282:G:O3'	23:BB:2283:C:H4'	2.19	0.43
23:BB:2348:U:OP1	34:B3:37:THR:HG21	2.19	0.43
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.53	0.43
23:BB:2641:G:H2'	23:BB:2642:G:H8	1.82	0.43
24:BI:32:VAL:HG22	24:BI:60:VAL:HG21	2.01	0.43
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.33	0.43
26:BD:13:ARG:HG3	26:BD:15:PHE:CE1	2.53	0.43
26:BD:85:ALA:C	26:BD:87:GLY:N	2.77	0.43
26:BD:125:TRP:CD1	26:BD:160:LYS:HB3	2.53	0.43
29:BE:37:ALA:O	29:BE:39:ALA:N	2.50	0.43
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.19	0.43
38:BM:116:ALA:C	38:BM:118:LYS:N	2.74	0.43
40:BH:9:VAL:CG1	40:BH:12:LEU:HG	2.48	0.43
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.19	0.43
43:BO:56:LYS:HG2	43:BO:60:GLU:OE1	2.19	0.43
44:BQ:87:VAL:HG12	44:BQ:88:GLU:N	2.33	0.43
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	2.01	0.43
46:BU:49:PRO:O	46:BU:50:ALA:HB2	2.17	0.43
52:BW:40:ARG:HE	52:BW:45:HIS:HE1	1.66	0.43
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.66	0.43
1:CA:177:G:N3	1:CA:177:G:O4'	2.51	0.43
1:CA:687:A:C2	1:CA:704:A:C5	3.07	0.43
1:CA:1446:A:H2'	1:CA:1447:A:H8	1.84	0.43
2:CC:45:GLU:C	2:CC:46:LEU:HD22	2.44	0.43
2:CC:122:GLN:O	2:CC:127:VAL:HG22	2.19	0.43
2:CC:137:VAL:HA	2:CC:148:ILE:CD1	2.39	0.43
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.53	0.43
6:CG:110:ARG:HB2	6:CG:118:ARG:HB3	2.00	0.43
10:CK:70:ALA:HA	10:CK:73:VAL:CG2	2.49	0.43
11:CL:108:ASP:O	11:CL:110:LYS:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:52:ILE:HA	12:CM:55:LEU:HG	2.00	0.43
14:CO:31:LEU:HD23	14:CO:31:LEU:HA	1.87	0.43
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.53	0.43
23:DB:126:A:O2'	23:DB:127:A:H5'	2.18	0.43
23:DB:235:U:H2'	23:DB:236:C:H6	1.83	0.43
23:DB:263:G:H2'	23:DB:264:C:C6	2.53	0.43
23:DB:372:G:N7	51:DZ:57:ARG:HB3	2.33	0.43
23:DB:670:A:H3'	37:DL:43:GLY:H	1.83	0.43
23:DB:1076:C:O2'	23:DB:1077:A:H5'	2.19	0.43
23:DB:1387:A:C5'	23:DB:1469:A:H1'	2.48	0.43
23:DB:1460:U:H3'	23:DB:1461:C:H5'	2.01	0.43
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.18	0.43
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.84	0.43
23:DB:2680:U:O2'	26:DD:11:MET:HE3	2.19	0.43
25:DC:90:ILE:HG23	25:DC:91:ALA:N	2.32	0.43
25:DC:142:ASN:O	25:DC:142:ASN:CG	2.62	0.43
25:DC:169:ALA:O	25:DC:185:ALA:HB3	2.18	0.43
25:DC:196:ASN:O	25:DC:197:ALA:HB3	2.18	0.43
26:DD:15:PHE:CD2	28:DP:77:SER:HA	2.53	0.43
29:DE:3:LEU:O	29:DE:12:LEU:HB2	2.19	0.43
31:D0:2:VAL:HG12	31:D0:3:GLN:N	2.33	0.43
32:D4:6:SER:O	32:D4:7:VAL:C	2.60	0.43
32:D4:22:VAL:O	32:D4:24:ARG:N	2.52	0.43
34:D3:30:HIS:O	34:D3:31:ILE:C	2.61	0.43
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.51	0.43
37:DL:60:ARG:O	37:DL:61:LEU:HD12	2.19	0.43
40:DH:2:GLN:O	40:DH:3:VAL:O	2.37	0.43
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.30	0.43
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.18	0.43
42:DN:96:ARG:HG2	42:DN:98:LEU:HD22	2.01	0.43
44:DQ:52:ARG:C	44:DQ:54:ARG:N	2.72	0.43
47:DF:33:ILE:HG22	47:DF:34:THR:N	2.33	0.43
47:DF:41:GLU:O	47:DF:43:ILE:N	2.52	0.43
47:DF:174:PHE:HA	47:DF:175:PRO:HD2	1.87	0.43
48:DG:77:GLY:HA3	48:DG:135:ALA:O	2.19	0.43
48:DG:167:VAL:O	48:DG:168:VAL:HB	2.19	0.43
53:D6:38:LEU:O	53:D6:41:LEU:HB2	2.18	0.43
1:AA:8:A:H5'	4:AE:105:ILE:HG22	2.01	0.43
1:AA:385:C:O2'	1:AA:386:C:H5'	2.19	0.43
1:AA:389:A:H3'	1:AA:390:U:C6	2.48	0.43
1:AA:492:C:H2'	1:AA:493:A:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:524:G:H2'	1:AA:525:C:H6	1.82	0.43
1:AA:552:U:H4'	11:AL:82:ARG:CG	2.48	0.43
1:AA:613:C:H2'	1:AA:614:C:C6	2.53	0.43
1:AA:751:U:C2'	1:AA:752:G:H5'	2.48	0.43
1:AA:872:A:C4	1:AA:874:G:N7	2.87	0.43
1:AA:921:U:H2'	1:AA:922:G:O4'	2.19	0.43
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.19	0.43
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.17	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.43
1:AA:1297:G:H1'	1:AA:1298:U:C5	2.52	0.43
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.18	0.43
2:AC:126:ARG:HA	2:AC:126:ARG:NH1	2.32	0.43
3:AD:160:LEU:HD23	3:AD:164:ARG:HH21	1.83	0.43
4:AE:55:VAL:O	4:AE:59:ILE:HG13	2.19	0.43
5:AF:74:LEU:HA	5:AF:77:THR:OG1	2.19	0.43
6:AG:58:LEU:HD23	6:AG:58:LEU:N	2.32	0.43
6:AG:135:LYS:HD3	6:AG:139:ASP:OD2	2.19	0.43
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.34	0.43
7:AH:25:THR:O	7:AH:26:MET:HB3	2.19	0.43
12:AM:78:ARG:HH22	12:AM:82:LEU:HD11	1.83	0.43
14:AO:36:ILE:CD1	14:AO:59:MET:HE3	2.44	0.43
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	2.01	0.43
23:BB:363:G:H2'	23:BB:364:C:C5	2.53	0.43
23:BB:377:G:H2'	23:BB:378:C:H6	1.84	0.43
23:BB:499:U:H2'	23:BB:500:G:O4'	2.19	0.43
23:BB:545:U:H2'	23:BB:547:A:OP2	2.19	0.43
23:BB:686:U:O2'	36:B2:5:PHE:HA	2.19	0.43
23:BB:823:C:H2'	23:BB:824:U:H6	1.79	0.43
23:BB:910:A:H2'	23:BB:911:A:C8	2.53	0.43
23:BB:1197:G:O2'	23:BB:1198:U:H5'	2.19	0.43
23:BB:1294:U:C2'	23:BB:1295:C:H5'	2.48	0.43
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.54	0.43
23:BB:1680:U:H2'	23:BB:1681:G:O4'	2.18	0.43
23:BB:1720:U:H2'	23:BB:1721:G:O4'	2.19	0.43
23:BB:1742:U:H2'	23:BB:1743:G:H8	1.82	0.43
23:BB:1797:G:C6	23:BB:1823:G:C6	3.07	0.43
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.18	0.43
23:BB:2098:U:H2'	23:BB:2099:U:C6	2.53	0.43
23:BB:2209:G:H2'	23:BB:2210:U:C5	2.52	0.43
23:BB:2313:C:H5''	47:BF:87:LYS:CE	2.49	0.43
23:BB:2322:A:H3'	23:BB:2323:G:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2397:G:H2'	23:BB:2398:U:C6	2.53	0.43
23:BB:2439:A:H4'	23:BB:2440:C:O5'	2.19	0.43
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.19	0.43
23:BB:2570:G:H2'	23:BB:2571:U:O4'	2.19	0.43
23:BB:2606:C:O2'	23:BB:2607:G:H5'	2.18	0.43
23:BB:2694:G:H2'	23:BB:2695:U:C6	2.53	0.43
25:BC:208:GLY:O	25:BC:209:ALA:C	2.60	0.43
27:BK:64:ARG:HD2	27:BK:102:PRO:O	2.19	0.43
31:B0:27:LEU:HB2	31:B0:28:SER:H	1.65	0.43
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.50	0.43
38:BM:46:ILE:CG1	38:BM:47:GLU:N	2.81	0.43
38:BM:105:MET:HB2	38:BM:117:PHE:HZ	1.84	0.43
40:BH:80:ILE:CD1	40:BH:102:ALA:HB2	2.44	0.43
40:BH:104:THR:HG23	40:BH:104:THR:O	2.19	0.43
40:BH:133:GLN:HE21	40:BH:135:HIS:C	2.27	0.43
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG22	1.81	0.43
48:BG:10:VAL:N	48:BG:48:THR:HG22	2.34	0.43
48:BG:34:ARG:HH11	48:BG:34:ARG:HG2	1.84	0.43
48:BG:37:ASN:HD22	48:BG:38:ASP:H	1.67	0.43
51:BZ:49:LEU:HD12	51:BZ:49:LEU:N	2.28	0.43
52:BW:58:LEU:N	52:BW:58:LEU:HD22	2.34	0.43
1:CA:207:C:H2'	1:CA:208:U:O4'	2.19	0.43
1:CA:333:U:H2'	1:CA:334:C:C6	2.54	0.43
1:CA:431:A:C2	1:CA:432:A:H1'	2.54	0.43
1:CA:982:U:OP2	13:CN:60:ARG:NH1	2.52	0.43
1:CA:985:C:H2'	1:CA:986:U:C6	2.53	0.43
1:CA:1060:U:OP1	9:CJ:53:ILE:HD11	2.18	0.43
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.51	0.43
1:CA:1342:C:O2'	8:CI:125:GLN:HB2	2.19	0.43
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.54	0.43
4:CE:47:PHE:HZ	4:CE:137:ARG:HH21	1.66	0.43
7:CH:35:ILE:O	7:CH:39:LEU:HG	2.19	0.43
7:CH:94:VAL:HG21	7:CH:100:ILE:C	2.44	0.43
8:CI:30:ASN:HD22	8:CI:30:ASN:HA	1.67	0.43
8:CI:122:ARG:HG3	8:CI:122:ARG:HH11	1.82	0.43
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.49	0.43
10:CK:23:HIS:O	10:CK:29:THR:HA	2.19	0.43
11:CL:120:ARG:CG	11:CL:121:PRO:HD2	2.36	0.43
12:CM:12:LYS:H	12:CM:44:ILE:CD1	2.31	0.43
23:DB:40:U:O2'	23:DB:41:C:H5'	2.19	0.43
23:DB:627:A:N6	37:DL:112:LEU:HD23	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:682:G:O2'	23:DB:683:U:H5'	2.19	0.43
23:DB:1063:G:O2'	23:DB:1064:C:H5'	2.18	0.43
23:DB:1161:C:H2'	23:DB:1162:G:C8	2.54	0.43
23:DB:1260:A:O2'	23:DB:1261:C:H5'	2.19	0.43
23:DB:1287:A:O2'	23:DB:1288:G:H5'	2.18	0.43
23:DB:1534:U:O2'	23:DB:1535:A:H2'	2.19	0.43
23:DB:1671:U:N3	23:DB:1674:G:OP2	2.48	0.43
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.18	0.43
23:DB:2547:A:H5''	27:DK:29:HIS:NE2	2.34	0.43
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.18	0.43
23:DB:2787:C:H2'	23:DB:2788:C:C6	2.53	0.43
23:DB:2809:A:N6	23:DB:2891:U:H4'	2.34	0.43
25:DC:196:ASN:C	25:DC:198:GLU:H	2.27	0.43
27:DK:87:LEU:HD12	27:DK:92:GLU:HA	2.00	0.43
29:DE:146:VAL:CG1	29:DE:187:VAL:HG23	2.48	0.43
29:DE:176:ASP:O	29:DE:180:LEU:HG	2.18	0.43
37:DL:124:GLY:CA	37:DL:143:GLU:HG3	2.49	0.43
40:DH:12:LEU:HD21	40:DH:25:TYR:HE2	1.83	0.43
41:DJ:3:THR:CB	41:DJ:44:TYR:OH	2.67	0.43
43:DO:36:TYR:N	43:DO:36:TYR:CD2	2.87	0.43
47:DF:131:VAL:O	47:DF:132:ARG:HB2	2.17	0.43
48:DG:168:VAL:HG12	48:DG:170:THR:CG2	2.48	0.43
49:DR:25:LEU:H	49:DR:94:THR:HG21	1.83	0.43
49:DR:86:GLN:HE21	49:DR:86:GLN:HB2	1.55	0.43
53:D6:62:ASP:OD1	53:D6:65:THR:HB	2.18	0.43
1:AA:52:C:H2'	1:AA:53:A:H8	1.84	0.43
1:AA:80:A:C5	1:AA:81:A:H1'	2.53	0.43
1:AA:177:G:N3	1:AA:177:G:O4'	2.51	0.43
1:AA:355:C:C2'	1:AA:356:A:H5'	2.48	0.43
1:AA:622:A:H2'	1:AA:623:C:H5'	1.99	0.43
1:AA:643:C:H2'	1:AA:644:U:H6	1.84	0.43
1:AA:692:U:H2'	1:AA:694:A:OP2	2.19	0.43
1:AA:1130:A:H5'	8:AI:19:PHE:CE2	2.54	0.43
1:AA:1281:C:H5'	1:AA:1282:C:H5	1.84	0.43
1:AA:1320:C:H1'	18:AS:72:GLU:CA	2.49	0.43
3:AD:97:LEU:HD12	3:AD:136:VAL:HG22	2.01	0.43
3:AD:164:ARG:HG3	3:AD:165:GLU:H	1.84	0.43
6:AG:63:VAL:HG12	6:AG:127:ALA:HB1	2.01	0.43
7:AH:80:PRO:C	7:AH:82:LEU:H	2.26	0.43
8:AI:56:MET:O	8:AI:58:GLU:N	2.51	0.43
10:AK:82:GLU:HG3	10:AK:107:THR:OG1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:16:ILE:HG23	12:AM:17:ALA:H	1.83	0.43
14:AO:15:PHE:N	14:AO:15:PHE:CD1	2.87	0.43
14:AO:21:ASP:C	14:AO:23:GLY:N	2.77	0.43
14:AO:31:LEU:HD23	14:AO:31:LEU:HA	1.89	0.43
20:AB:118:THR:HA	20:AB:121:GLN:HB3	2.00	0.43
23:BB:28:A:O2'	23:BB:29:U:H5'	2.17	0.43
23:BB:275:C:N3	23:BB:276:U:H1'	2.34	0.43
23:BB:1144:A:O2'	23:BB:1145:C:H5'	2.19	0.43
23:BB:1455:G:H5'	42:BN:60:VAL:HG21	2.00	0.43
23:BB:1468:U:H2'	23:BB:1522:A:N6	2.34	0.43
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.84	0.43
23:BB:1844:C:O3'	25:BC:255:LYS:HE2	2.18	0.43
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.53	0.43
23:BB:2109:U:H2'	23:BB:2110:G:O4'	2.19	0.43
23:BB:2680:U:O2'	26:BD:11:MET:HE3	2.19	0.43
23:BB:2702:G:H2'	23:BB:2703:C:C6	2.53	0.43
23:BB:2727:A:O3'	27:BK:70:ARG:NH2	2.51	0.43
23:BB:2752:C:O2	23:BB:2752:C:H2'	2.18	0.43
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.54	0.43
25:BC:15:VAL:HG13	25:BC:204:LEU:O	2.19	0.43
25:BC:61:TYR:HA	25:BC:85:ASN:CG	2.44	0.43
25:BC:196:ASN:O	25:BC:197:ALA:HB3	2.19	0.43
26:BD:130:GLN:O	26:BD:131:ASP:C	2.61	0.43
28:BP:64:SER:O	28:BP:66:GLY:N	2.47	0.43
32:B4:6:SER:O	32:B4:7:VAL:C	2.62	0.43
32:B4:9:LYS:O	32:B4:10:LEU:HD23	2.19	0.43
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.84	0.43
37:BL:118:THR:O	37:BL:120:VAL:HG23	2.19	0.43
38:BM:127:LYS:HD2	38:BM:127:LYS:N	2.32	0.43
40:BH:2:GLN:O	40:BH:3:VAL:O	2.37	0.43
44:BQ:106:THR:O	44:BQ:109:VAL:HB	2.19	0.43
47:BF:29:ARG:CD	47:BF:29:ARG:H	2.31	0.43
48:BG:17:LYS:HZ2	48:BG:17:LYS:HA	1.84	0.43
48:BG:97:VAL:HA	48:BG:102:ILE:HA	2.01	0.43
48:BG:162:ARG:CZ	48:BG:168:VAL:HG21	2.49	0.43
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.44	0.43
51:BZ:7:VAL:HG21	51:BZ:59:ILE:CD1	2.44	0.43
53:B6:29:ARG:O	53:B6:30:THR:O	2.37	0.43
53:B6:51:PRO:O	53:B6:52:LEU:C	2.61	0.43
53:B6:90:LEU:O	53:B6:92:PRO:HD3	2.19	0.43
1:CA:62:U:H2'	1:CA:63:C:H6	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:159:G:H5'	1:CA:160:A:OP2	2.18	0.43
1:CA:560:A:C6	1:CA:566:G:O4'	2.71	0.43
1:CA:611:C:H2'	1:CA:612:C:H6	1.82	0.43
1:CA:704:A:C2	1:CA:705:G:H1'	2.53	0.43
1:CA:803:G:H2'	1:CA:804:U:O4'	2.18	0.43
1:CA:812:G:OP2	1:CA:902:G:N2	2.50	0.43
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.49	0.43
1:CA:1206:G:O4'	2:CC:193:GLY:N	2.52	0.43
1:CA:1297:G:H1'	1:CA:1298:U:C5	2.53	0.43
1:CA:1324:A:H2'	1:CA:1325:C:C6	2.54	0.43
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.81	0.43
2:CC:5:HIS:O	2:CC:9:ILE:HG22	2.19	0.43
2:CC:106:ARG:HG2	2:CC:106:ARG:O	2.19	0.43
3:CD:100:VAL:HG11	3:CD:142:VAL:HG21	2.01	0.43
3:CD:202:LEU:O	3:CD:202:LEU:HD12	2.19	0.43
5:CF:31:GLY:C	5:CF:33:GLU:H	2.26	0.43
5:CF:64:VAL:CG1	5:CF:65:GLU:N	2.81	0.43
6:CG:43:TYR:HA	6:CG:46:LEU:HB3	2.01	0.43
8:CI:17:ARG:O	8:CI:64:ILE:HA	2.18	0.43
8:CI:66:VAL:CG1	8:CI:74:GLN:HG3	2.49	0.43
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.18	0.43
11:CL:2:THR:O	11:CL:3:VAL:C	2.61	0.43
11:CL:23:LEU:C	11:CL:25:ALA:N	2.76	0.43
16:CQ:30:HIS:HD2	16:CQ:37:ILE:HD11	1.84	0.43
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.84	0.43
18:CS:14:LEU:O	18:CS:18:VAL:HG12	2.18	0.43
20:CB:19:THR:O	20:CB:20:ARG:HD2	2.19	0.43
20:CB:48:MET:H	20:CB:48:MET:HG2	1.36	0.43
21:CU:24:LYS:NZ	21:CU:25:ALA:H	2.11	0.43
22:DA:9:G:OP1	43:DO:25:ARG:NH1	2.52	0.43
22:DA:52:A:OP1	22:DA:52:A:H4'	2.18	0.43
23:DB:132:G:H2'	23:DB:133:U:C6	2.53	0.43
23:DB:202:U:H2'	23:DB:203:A:O4'	2.19	0.43
23:DB:739:A:H5''	23:DB:1784:A:C2	2.54	0.43
23:DB:760:G:C2'	23:DB:761:A:H5'	2.49	0.43
23:DB:809:G:H2'	23:DB:810:U:H6	1.82	0.43
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.19	0.43
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.18	0.43
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.19	0.43
23:DB:2269:G:H4'	52:DW:19:ARG:HH12	1.83	0.43
23:DB:2332:C:C1'	23:DB:2336:A:N7	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.45	0.43
23:DB:2864:G:H2'	23:DB:2865:U:C6	2.54	0.43
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.54	0.43
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.44	0.43
29:DE:118:LEU:HD23	29:DE:186:VAL:HG13	2.00	0.43
32:D4:25:VAL:HB	32:D4:35:GLN:HE21	1.84	0.43
33:D1:35:LEU:N	33:D1:35:LEU:CD2	2.82	0.43
34:D3:20:GLY:HA3	34:D3:48:MET:CE	2.49	0.43
35:DV:72:VAL:HG12	35:DV:93:ARG:CA	2.46	0.43
37:DL:55:MET:HE2	37:DL:59:ARG:NE	2.33	0.43
37:DL:92:LEU:HD23	37:DL:124:GLY:HA3	2.00	0.43
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.54	0.43
43:DO:28:VAL:HG21	43:DO:103:VAL:HG13	2.00	0.43
45:DS:2:GLU:O	45:DS:107:VAL:O	2.37	0.43
47:DF:37:MET:HE3	47:DF:151:LEU:HB3	1.99	0.43
48:DG:10:VAL:HG13	48:DG:14:VAL:CG2	2.49	0.43
48:DG:145:ALA:O	48:DG:148:ARG:HD2	2.18	0.43
1:AA:152:A:H2'	1:AA:153:C:O4'	2.18	0.43
1:AA:392:C:H2'	1:AA:393:A:C8	2.54	0.43
1:AA:410:G:H2'	1:AA:429:U:C5	2.54	0.43
1:AA:490:C:H2'	1:AA:491:G:O4'	2.19	0.43
1:AA:537:G:H5''	11:AL:109:ARG:NH1	2.34	0.43
1:AA:555:U:H2'	1:AA:556:C:H6	1.83	0.43
1:AA:587:G:H4'	7:AH:3:GLN:HA	2.01	0.43
1:AA:691:G:H1'	1:AA:696:A:N6	2.33	0.43
1:AA:947:G:H2'	1:AA:948:C:H6	1.83	0.43
1:AA:1114:C:H2'	1:AA:1115:U:H6	1.84	0.43
3:AD:21:LYS:C	3:AD:23:GLY:H	2.27	0.43
10:AK:16:SER:N	10:AK:77:GLY:O	2.43	0.43
11:AL:2:THR:O	11:AL:3:VAL:C	2.62	0.43
12:AM:77:LYS:O	12:AM:80:MET:HB2	2.19	0.43
16:AQ:10:ARG:O	16:AQ:10:ARG:HG3	2.19	0.43
18:AS:39:ILE:HB	18:AS:66:VAL:O	2.19	0.43
19:AT:24:ARG:HD3	19:AT:28:ARG:NH2	2.34	0.43
20:AB:121:GLN:NE2	20:AB:122:ASP:H	2.12	0.43
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.54	0.43
23:BB:57:C:H2'	23:BB:58:G:H8	1.84	0.43
23:BB:116:C:O2'	23:BB:117:G:H5'	2.19	0.43
23:BB:208:C:H2'	23:BB:209:C:C6	2.53	0.43
23:BB:960:A:H61	38:BM:82:MET:CE	2.32	0.43
23:BB:1064:C:O4'	24:BI:90:GLY:HA2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.19	0.43
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	2.00	0.43
23:BB:1350:C:H2'	23:BB:1350:C:O2	2.19	0.43
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.53	0.43
23:BB:1628:G:O2'	23:BB:1629:U:H5'	2.18	0.43
23:BB:1824:G:OP1	25:BC:51:ARG:HD3	2.19	0.43
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.54	0.43
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.18	0.43
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.19	0.43
23:BB:1994:C:O2'	23:BB:1995:U:H5'	2.18	0.43
23:BB:2064:C:H1'	23:BB:2450:A:C5	2.54	0.43
23:BB:2444:G:P	29:BE:63:LYS:HD2	2.59	0.43
23:BB:2521:C:H2'	23:BB:2522:U:C6	2.54	0.43
23:BB:2779:U:H5''	23:BB:2780:G:H3'	2.01	0.43
25:BC:41:GLY:CA	25:BC:53:ILE:HG21	2.42	0.43
25:BC:90:ILE:HG23	25:BC:91:ALA:N	2.33	0.43
26:BD:187:LEU:HD12	26:BD:188:LEU:N	2.34	0.43
27:BK:17:ARG:O	27:BK:18:ARG:C	2.62	0.43
31:B0:2:VAL:HG12	31:B0:3:GLN:H	1.84	0.43
31:B0:41:HIS:O	31:B0:42:ILE:O	2.37	0.43
37:BL:75:ALA:HB3	37:BL:108:ALA:HB2	2.01	0.43
38:BM:93:VAL:HG22	38:BM:94:ALA:H	1.83	0.43
42:BN:1:MET:HE3	42:BN:3:HIS:CD2	2.54	0.43
42:BN:70:THR:O	42:BN:70:THR:OG1	2.37	0.43
42:BN:107:ASN:ND2	45:BS:40:ASN:ND2	2.62	0.43
43:BO:64:TYR:HD2	43:BO:67:ASN:HB2	1.84	0.43
43:BO:106:LEU:HG	43:BO:107:ALA:N	2.34	0.43
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.19	0.43
48:BG:34:ARG:N	48:BG:34:ARG:CD	2.81	0.43
48:BG:91:VAL:O	48:BG:93:TYR:N	2.49	0.43
48:BG:106:LEU:N	48:BG:106:LEU:HD23	2.34	0.43
53:B6:41:LEU:CD2	53:B6:83:ILE:HD13	2.49	0.43
1:CA:52:C:H2'	1:CA:53:A:C8	2.53	0.43
1:CA:137:U:H2'	1:CA:138:G:H8	1.84	0.43
1:CA:197:A:H1'	1:CA:198:G:C1'	2.49	0.43
1:CA:220:G:O2'	1:CA:221:C:H5'	2.18	0.43
1:CA:356:A:H1'	1:CA:368:U:O2'	2.18	0.43
1:CA:373:A:C1'	1:CA:481:G:H1'	2.48	0.43
1:CA:483:C:H2'	1:CA:484:G:N7	2.34	0.43
1:CA:766:A:H2'	1:CA:767:A:O4'	2.18	0.43
1:CA:947:G:H4'	12:CM:107:THR:OG1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1101:A:H62	20:CB:173:LYS:HE3	1.83	0.43
1:CA:1160:G:H4'	20:CB:130:LYS:HB2	2.01	0.43
1:CA:1272:G:H2'	1:CA:1273:C:C6	2.54	0.43
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.53	0.43
1:CA:1492:A:H2'	1:CA:1493:A:H8	1.84	0.43
3:CD:7:LYS:HB3	3:CD:20:LEU:HB3	2.01	0.43
3:CD:24:VAL:HG23	3:CD:25:ARG:N	2.32	0.43
3:CD:103:ARG:NH2	3:CD:110:ARG:HH21	2.16	0.43
4:CE:82:HIS:NE2	7:CH:95:MET:HE2	2.34	0.43
5:CF:38:ARG:NH1	5:CF:96:VAL:HG12	2.34	0.43
6:CG:118:ARG:H	6:CG:118:ARG:HG3	1.65	0.43
8:CI:19:PHE:HB2	8:CI:63:TYR:CB	2.45	0.43
9:CJ:8:ILE:HD12	9:CJ:8:ILE:N	2.34	0.43
20:CB:101:THR:HG23	20:CB:102:ASN:H	1.83	0.43
22:DA:24:G:O2'	22:DA:25:U:H5''	2.19	0.43
22:DA:54:G:N2	47:DF:25:MET:HE3	2.31	0.43
23:DB:63:A:H8	23:DB:63:A:OP2	2.02	0.43
23:DB:90:U:H2'	23:DB:91:A:C2	2.54	0.43
23:DB:660:C:H2'	23:DB:661:A:C8	2.54	0.43
23:DB:672:C:O2'	23:DB:673:C:H5'	2.18	0.43
23:DB:745:G:O2'	23:DB:748:G:H1'	2.19	0.43
23:DB:958:U:H5''	23:DB:959:A:O5'	2.18	0.43
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.53	0.43
23:DB:1467:U:O2'	23:DB:1468:U:H5'	2.19	0.43
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.54	0.43
23:DB:1613:G:O4'	36:D2:3:ARG:HG3	2.18	0.43
23:DB:2206:C:O2'	23:DB:2207:C:H5'	2.19	0.43
23:DB:2231:U:H2'	23:DB:2232:C:O4'	2.18	0.43
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.18	0.43
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.19	0.43
23:DB:2760:C:O2	23:DB:2760:C:H2'	2.19	0.43
23:DB:2793:C:H2'	23:DB:2794:C:C6	2.54	0.43
27:DK:43:ILE:HD12	27:DK:56:ASP:HB2	2.01	0.43
28:DP:83:ILE:HD13	28:DP:83:ILE:O	2.18	0.43
29:DE:95:LYS:HD3	29:DE:95:LYS:C	2.43	0.43
29:DE:111:GLU:HG2	29:DE:114:ARG:HH21	1.84	0.43
29:DE:148:ILE:HA	29:DE:187:VAL:CB	2.43	0.43
33:D1:36:LYS:HA	33:D1:46:VAL:O	2.19	0.43
34:D3:22:LYS:HA	34:D3:47:ALA:O	2.19	0.43
38:DM:25:ASP:OD2	38:DM:25:ASP:N	2.52	0.43
38:DM:38:ARG:HA	38:DM:98:PRO:HD3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:63:ARG:H	44:DQ:63:ARG:HG3	1.57	0.43
46:DU:40:LEU:HD12	46:DU:40:LEU:N	2.32	0.43
46:DU:73:ASN:OD1	46:DU:75:ALA:HB3	2.17	0.43
47:DF:135:ILE:HD12	47:DF:135:ILE:O	2.19	0.43
48:DG:30:GLY:N	48:DG:78:VAL:HA	2.34	0.43
48:DG:126:THR:C	48:DG:128:THR:N	2.76	0.43
52:DW:50:VAL:HG23	52:DW:61:LYS:CD	2.35	0.43
52:DW:61:LYS:HB3	52:DW:62:ALA:H	1.46	0.43
53:D6:123:GLU:O	53:D6:127:VAL:HG23	2.19	0.43
1:AA:36:C:O2'	1:AA:37:U:H5'	2.19	0.42
1:AA:170:U:O2'	1:AA:171:A:H5'	2.18	0.42
1:AA:185:U:H2'	1:AA:186:C:H6	1.84	0.42
1:AA:308:C:H2'	1:AA:309:A:H8	1.84	0.42
1:AA:648:A:O2'	1:AA:649:A:H5'	2.19	0.42
1:AA:728:A:O2'	1:AA:729:A:H5'	2.19	0.42
1:AA:747:A:N6	1:AA:748:G:C6	2.87	0.42
1:AA:802:A:H2'	1:AA:803:G:O4'	2.18	0.42
1:AA:948:C:H2'	1:AA:949:A:H8	1.85	0.42
1:AA:961:U:N3	1:AA:983:A:N6	2.67	0.42
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.19	0.42
1:AA:1350:A:OP2	8:AI:119:LYS:HE3	2.19	0.42
1:AA:1532:U:C2	1:AA:1534:A:H5''	2.54	0.42
3:AD:41:GLY:C	3:AD:43:ARG:N	2.75	0.42
4:AE:53:ARG:NH2	4:AE:54:GLU:HG3	2.33	0.42
7:AH:54:THR:HG23	7:AH:55:LYS:N	2.34	0.42
9:AJ:14:ASP:OD1	9:AJ:17:LEU:HB2	2.19	0.42
9:AJ:53:ILE:HG13	13:AN:84:ARG:NE	2.34	0.42
10:AK:70:ALA:HA	10:AK:73:VAL:CG2	2.49	0.42
10:AK:109:ILE:HG22	21:AU:16:ARG:HH12	1.84	0.42
13:AN:92:ILE:HD12	13:AN:92:ILE:N	2.34	0.42
16:AQ:30:HIS:HD2	16:AQ:37:ILE:HD11	1.84	0.42
18:AS:17:LYS:HB3	18:AS:30:LEU:HD22	2.00	0.42
20:AB:10:LYS:C	20:AB:13:VAL:HG23	2.44	0.42
20:AB:125:PHE:CD2	20:AB:126:ASP:N	2.87	0.42
21:AU:3:ILE:CG2	21:AU:19:LYS:HD2	2.49	0.42
21:AU:28:LEU:C	21:AU:30:GLU:N	2.76	0.42
23:BB:305:C:O2'	23:BB:306:U:H5'	2.19	0.42
23:BB:689:A:H2'	23:BB:690:G:H8	1.84	0.42
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.53	0.42
23:BB:2020:A:H5'	31:B0:8:THR:HB	2.01	0.42
23:BB:2051:A:H5'	23:BB:2578:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.54	0.42
23:BB:2223:G:H2'	23:BB:2224:G:H5'	2.01	0.42
23:BB:2373:G:O2'	23:BB:2374:C:H5'	2.19	0.42
23:BB:2485:G:C2'	23:BB:2486:C:H5'	2.48	0.42
23:BB:2526:G:N3	32:B4:1:MET:N	2.62	0.42
25:BC:211:ARG:C	25:BC:213:ARG:N	2.77	0.42
26:BD:168:GLU:O	26:BD:169:ARG:C	2.61	0.42
29:BE:122:GLU:CD	29:BE:122:GLU:H	2.25	0.42
29:BE:136:GLN:NE2	29:BE:139:LYS:HD3	2.34	0.42
29:BE:161:ALA:HB1	29:BE:167:VAL:HG22	2.01	0.42
34:B3:9:ALA:C	34:B3:11:LYS:N	2.77	0.42
37:BL:81:ASP:O	37:BL:82:LEU:HB2	2.19	0.42
38:BM:43:ALA:C	38:BM:45:GLN:N	2.73	0.42
38:BM:46:ILE:HG13	38:BM:47:GLU:N	2.32	0.42
40:BH:147:VAL:HG12	40:BH:148:ALA:H	1.84	0.42
41:BJ:45:THR:H	41:BJ:46:PRO:CD	2.25	0.42
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.52	0.42
44:BQ:38:VAL:O	44:BQ:39:ILE:C	2.61	0.42
44:BQ:73:ILE:HG13	44:BQ:74:SER:N	2.34	0.42
45:BS:59:GLU:CD	45:BS:66:ILE:HG23	2.44	0.42
47:BF:68:LYS:HG3	47:BF:81:GLY:O	2.19	0.42
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	2.34	0.42
48:BG:8:VAL:HG22	48:BG:51:PHE:HE2	1.84	0.42
48:BG:34:ARG:NH1	48:BG:34:ARG:HG2	2.33	0.42
48:BG:90:GLY:HA2	48:BG:159:LYS:HB3	2.01	0.42
51:BZ:63:GLY:O	51:BZ:67:VAL:HG23	2.19	0.42
52:BW:29:SER:O	52:BW:30:VAL:HB	2.19	0.42
53:B6:30:THR:HG21	53:B6:182:GLU:OE2	2.19	0.42
1:CA:17:U:O4'	1:CA:1080:A:O4'	2.37	0.42
1:CA:63:C:H5'	1:CA:64:G:OP2	2.18	0.42
1:CA:66:A:H4'	1:CA:173:U:C4	2.54	0.42
1:CA:230:G:O2'	1:CA:231:U:H5'	2.18	0.42
1:CA:404:G:O2'	1:CA:405:U:H5'	2.19	0.42
1:CA:481:G:O2'	1:CA:482:A:H8	2.02	0.42
1:CA:545:C:O2'	1:CA:546:A:H5'	2.19	0.42
1:CA:734:G:H2'	1:CA:735:C:H6	1.84	0.42
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.34	0.42
1:CA:1060:U:C5'	9:CJ:53:ILE:HG12	2.49	0.42
1:CA:1314:C:N4	18:CS:3:SER:HB3	2.32	0.42
2:CC:26:LYS:CG	2:CC:27:GLU:HG3	2.47	0.42
2:CC:155:ARG:H	2:CC:162:ALA:CA	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:30:PHE:CD2	4:CE:30:PHE:N	2.87	0.42
4:CE:55:VAL:O	4:CE:59:ILE:HG13	2.19	0.42
7:CH:25:THR:O	7:CH:26:MET:HB3	2.19	0.42
7:CH:51:GLU:HG2	7:CH:52:GLY:N	2.29	0.42
12:CM:77:LYS:O	12:CM:80:MET:HB2	2.19	0.42
18:CS:58:PRO:O	18:CS:59:VAL:HG13	2.18	0.42
20:CB:9:LEU:C	20:CB:11:ALA:N	2.77	0.42
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.19	0.42
20:CB:113:LEU:HD23	20:CB:114:LYS:N	2.34	0.42
23:DB:265:A:O2'	23:DB:266:G:C4'	2.67	0.42
23:DB:699:A:H4'	23:DB:1634:A:C5	2.54	0.42
23:DB:851:C:H2'	23:DB:852:U:C6	2.54	0.42
23:DB:1168:G:C6	23:DB:1182:G:C6	3.07	0.42
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.18	0.42
23:DB:1392:A:C5	23:DB:1393:A:C6	3.07	0.42
23:DB:1486:U:O2'	23:DB:1487:U:H5'	2.19	0.42
23:DB:1754:A:OP1	28:DP:93:LYS:HD3	2.19	0.42
23:DB:2151:U:O2'	23:DB:2152:G:H5'	2.19	0.42
23:DB:2359:C:O3'	34:D3:50:SER:CB	2.64	0.42
23:DB:2479:U:OP1	23:DB:2537:U:H1'	2.18	0.42
23:DB:2572:A:P	26:DD:152:PRO:HD3	2.59	0.42
23:DB:2752:C:H2'	23:DB:2753:A:O4'	2.19	0.42
23:DB:2756:U:C1'	23:DB:2757:A:H5''	2.48	0.42
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.32	0.42
25:DC:140:VAL:O	25:DC:141:HIS:HB2	2.19	0.42
25:DC:202:ARG:HH21	25:DC:202:ARG:CB	2.31	0.42
25:DC:202:ARG:HH21	25:DC:202:ARG:HB2	1.83	0.42
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.19	0.42
26:DD:67:HIS:O	26:DD:70:LYS:HB3	2.19	0.42
26:DD:177:VAL:O	26:DD:177:VAL:HG23	2.19	0.42
28:DP:97:TYR:O	28:DP:100:ARG:HD3	2.20	0.42
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.19	0.42
37:DL:3:LEU:O	37:DL:5:THR:N	2.51	0.42
37:DL:84:LYS:C	37:DL:86:GLU:H	2.27	0.42
42:DN:96:ARG:HG2	42:DN:98:LEU:CD2	2.49	0.42
46:DU:11:ILE:HA	46:DU:20:LYS:O	2.19	0.42
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	2.01	0.42
48:DG:43:LYS:N	48:DG:50:THR:O	2.47	0.42
48:DG:97:VAL:HA	48:DG:102:ILE:HA	2.01	0.42
51:DZ:39:TRP:NE1	51:DZ:41:GLU:HG2	2.34	0.42
53:D6:38:LEU:CD1	53:D6:66:LEU:HD23	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:9:G:N7	1:AA:558:G:O2'	2.50	0.42
1:AA:102:G:H2'	1:AA:103:U:H6	1.84	0.42
1:AA:134:G:H2'	1:AA:135:C:O4'	2.19	0.42
1:AA:542:G:O2'	1:AA:543:U:H5'	2.19	0.42
1:AA:642:A:H2'	1:AA:643:C:C6	2.54	0.42
1:AA:676:A:O2'	1:AA:677:U:H5'	2.18	0.42
1:AA:708:C:H2'	1:AA:709:U:C6	2.54	0.42
1:AA:916:U:H2'	1:AA:917:G:H8	1.84	0.42
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.19	0.42
1:AA:1398:A:H5'	1:AA:1398:A:H8	1.83	0.42
1:AA:1434:A:H2'	1:AA:1435:G:C8	2.54	0.42
4:AE:29:ILE:O	4:AE:29:ILE:HG22	2.17	0.42
5:AF:9:MET:HA	5:AF:58:HIS:O	2.19	0.42
13:AN:97:LYS:NZ	13:AN:97:LYS:HB3	2.34	0.42
20:AB:187:ASP:O	20:AB:188:THR:C	2.62	0.42
21:AU:3:ILE:HG22	21:AU:19:LYS:NZ	2.34	0.42
23:BB:527:C:H5'	57:BB:3416:HOH:O	2.19	0.42
23:BB:527:C:O2	23:BB:527:C:O4'	2.34	0.42
23:BB:699:A:H2'	23:BB:700:G:O4'	2.19	0.42
23:BB:851:C:O2'	23:BB:852:U:H5'	2.18	0.42
23:BB:1281:G:O2'	23:BB:1282:U:H5'	2.18	0.42
23:BB:1713:A:H4'	23:BB:1714:U:OP2	2.19	0.42
23:BB:2234:G:O2'	23:BB:2235:G:H5'	2.18	0.42
23:BB:2301:C:O2'	23:BB:2302:U:H5'	2.18	0.42
23:BB:2748:A:H1'	48:BG:66:THR:HB	2.01	0.42
23:BB:2845:U:O3'	28:BP:52:ARG:NH1	2.51	0.42
25:BC:14:HIS:O	25:BC:15:VAL:C	2.60	0.42
25:BC:66:PHE:CD2	25:BC:104:LEU:HD11	2.54	0.42
25:BC:204:LEU:CD2	25:BC:209:ALA:HB1	2.49	0.42
26:BD:14:ILE:HG23	26:BD:14:ILE:O	2.18	0.42
26:BD:32:ASN:HB3	26:BD:50:VAL:HG21	2.00	0.42
26:BD:56:LYS:CD	26:BD:58:ASN:HB3	2.49	0.42
28:BP:52:ARG:HG2	28:BP:52:ARG:NH1	2.32	0.42
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	2.01	0.42
31:B0:28:SER:HB2	31:B0:39:ARG:HG2	2.01	0.42
32:B4:25:VAL:HB	32:B4:35:GLN:HE21	1.84	0.42
35:BV:35:GLU:HG3	35:BV:93:ARG:CZ	2.49	0.42
38:BM:31:PHE:CE2	38:BM:110:GLU:HA	2.53	0.42
38:BM:35:ALA:HB2	38:BM:100:LYS:H	1.84	0.42
38:BM:66:ARG:CB	38:BM:101:VAL:HG13	2.49	0.42
38:BM:66:ARG:HD2	38:BM:101:VAL:HG11	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:80:ILE:HB	40:BH:144:VAL:CG1	2.48	0.42
40:BH:106:ALA:C	40:BH:108:VAL:H	2.27	0.42
42:BN:22:ARG:HG3	42:BN:70:THR:HA	2.02	0.42
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	2.00	0.42
44:BQ:75:TYR:O	44:BQ:76:SER:C	2.62	0.42
45:BS:25:ARG:NE	45:BS:74:ILE:HG23	2.35	0.42
45:BS:28:LYS:HD2	45:BS:30:SER:H	1.85	0.42
46:BU:10:VAL:HA	46:BU:70:ALA:O	2.19	0.42
46:BU:21:ARG:HG3	46:BU:21:ARG:HH11	1.83	0.42
47:BF:141:ASP:HB3	47:BF:144:LYS:HB2	2.01	0.42
48:BG:43:LYS:O	48:BG:49:LEU:HA	2.20	0.42
50:BT:43:ILE:O	50:BT:46:ALA:HB3	2.18	0.42
1:CA:121:U:OP1	1:CA:121:U:H3'	2.18	0.42
1:CA:537:G:H5''	11:CL:109:ARG:NH1	2.34	0.42
1:CA:591:U:H2'	1:CA:592:G:C8	2.53	0.42
1:CA:801:U:H2'	1:CA:802:A:H8	1.84	0.42
1:CA:908:A:H2'	1:CA:909:A:H8	1.84	0.42
1:CA:1030:U:H5'	1:CA:1031:C:C2	2.54	0.42
1:CA:1117:A:H4'	8:CI:105:ARG:NH1	2.34	0.42
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.84	0.42
1:CA:1347:G:C8	8:CI:108:ARG:HD2	2.54	0.42
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.55	0.42
1:CA:1534:A:N6	21:CU:44:ARG:NH2	2.56	0.42
3:CD:96:ARG:NH1	3:CD:133:SER:HA	2.34	0.42
6:CG:22:LEU:O	6:CG:25:PHE:HB3	2.19	0.42
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	2.01	0.42
10:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.49	0.42
11:CL:13:ARG:O	11:CL:14:LYS:HB3	2.20	0.42
11:CL:64:SER:HA	11:CL:94:TYR:O	2.19	0.42
16:CQ:30:HIS:CG	16:CQ:33:TYR:HB2	2.54	0.42
17:CR:25:ILE:O	17:CR:29:LYS:HG3	2.19	0.42
20:CB:16:GLY:O	20:CB:17:HIS:HB2	2.18	0.42
23:DB:26:G:H1'	23:DB:515:A:H61	1.84	0.42
23:DB:315:G:H2'	23:DB:316:C:H6	1.84	0.42
23:DB:358:U:H2'	23:DB:359:G:O4'	2.19	0.42
23:DB:506:G:H1'	23:DB:507:A:H8	1.82	0.42
23:DB:692:C:H2'	23:DB:693:A:H8	1.84	0.42
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.19	0.42
23:DB:1833:C:H2'	23:DB:1834:U:H6	1.83	0.42
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.19	0.42
23:DB:2109:U:O2'	23:DB:2110:G:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2215:C:H2'	23:DB:2216:G:H8	1.84	0.42
23:DB:2269:G:O3'	52:DW:18:LYS:HG2	2.19	0.42
23:DB:2756:U:H4'	23:DB:2757:A:O5'	2.18	0.42
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.53	0.42
26:DD:25:THR:HG21	26:DD:193:VAL:HG21	1.99	0.42
26:DD:130:GLN:O	26:DD:131:ASP:C	2.61	0.42
26:DD:193:VAL:O	26:DD:194:PRO:O	2.37	0.42
27:DK:115:ILE:CG2	27:DK:116:ILE:N	2.81	0.42
29:DE:7:ASP:N	29:DE:7:ASP:OD2	2.52	0.42
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.34	0.42
30:DY:23:LEU:CD1	30:DY:28:LEU:HB2	2.49	0.42
32:D4:11:CYS:HB3	32:D4:33:HIS:HE1	1.84	0.42
33:D1:39:ASP:O	33:D1:43:ARG:N	2.51	0.42
35:DV:77:VAL:CG2	35:DV:89:ILE:HG23	2.43	0.42
37:DL:96:LYS:HE3	37:DL:102:GLY:O	2.19	0.42
39:DX:2:LYS:HB2	39:DX:3:ALA:H	1.62	0.42
40:DH:125:THR:CA	40:DH:146:VAL:HB	2.48	0.42
41:DJ:35:ARG:HG3	41:DJ:52:ASP:OD1	2.19	0.42
41:DJ:127:GLY:O	41:DJ:128:ASN:HB2	2.19	0.42
42:DN:25:ALA:HB1	42:DN:48:VAL:CG1	2.49	0.42
44:DQ:14:LYS:HA	44:DQ:17:LEU:HB3	2.01	0.42
44:DQ:70:GLN:HA	44:DQ:70:GLN:NE2	2.34	0.42
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	2.01	0.42
46:DU:10:VAL:O	46:DU:21:ARG:HG2	2.18	0.42
46:DU:41:VAL:O	46:DU:59:GLU:HG3	2.18	0.42
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.65	0.42
47:DF:79:ARG:H	47:DF:82:TYR:HB2	1.84	0.42
48:DG:6:ALA:HB3	48:DG:68:ARG:CG	2.49	0.42
48:DG:10:VAL:N	48:DG:48:THR:HG22	2.35	0.42
1:AA:220:G:O2'	1:AA:221:C:H5'	2.20	0.42
1:AA:435:A:N3	1:AA:435:A:H2'	2.32	0.42
1:AA:731:G:OP1	1:AA:766:A:H1'	2.20	0.42
1:AA:1256:A:H4'	1:AA:1258:G:C8	2.53	0.42
1:AA:1258:G:C2	1:AA:1278:G:N2	2.88	0.42
2:AC:155:ARG:H	2:AC:162:ALA:HB1	1.83	0.42
3:AD:61:ARG:HG2	3:AD:66:VAL:O	2.20	0.42
6:AG:148:LYS:O	6:AG:151:ALA:HB3	2.19	0.42
8:AI:20:ILE:HG23	8:AI:60:LEU:HD12	2.00	0.42
10:AK:122:PRO:HD2	21:AU:35:GLU:HG2	2.00	0.42
11:AL:2:THR:O	11:AL:5:GLN:HB2	2.18	0.42
12:AM:68:LEU:O	12:AM:72:ILE:HB	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:118:THR:O	20:AB:124:THR:OG1	2.38	0.42
20:AB:168:GLU:O	20:AB:169:HIS:C	2.62	0.42
22:BA:66:A:N6	22:BA:107:G:H2'	2.27	0.42
23:BB:388:G:N7	23:BB:390:U:H2'	2.35	0.42
23:BB:643:A:C5	23:BB:644:A:N7	2.87	0.42
23:BB:1079:C:O2'	24:BI:133:ARG:NH2	2.52	0.42
23:BB:1103:A:H2'	23:BB:1104:C:O4'	2.19	0.42
23:BB:1192:G:C2'	23:BB:1193:G:H5'	2.49	0.42
23:BB:1387:A:H5'	23:BB:1469:A:O2'	2.19	0.42
23:BB:2403:C:O2'	23:BB:2404:U:H5'	2.19	0.42
23:BB:2599:G:O2'	23:BB:2600:A:H5'	2.20	0.42
23:BB:2875:C:O2'	23:BB:2876:G:H5'	2.19	0.42
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.42
25:BC:180:MET:HB2	25:BC:268:ARG:CB	2.49	0.42
25:BC:196:ASN:C	25:BC:198:GLU:H	2.26	0.42
25:BC:211:ARG:HD2	25:BC:215:VAL:O	2.19	0.42
25:BC:231:HIS:HA	25:BC:241:LYS:HE3	2.01	0.42
26:BD:193:VAL:O	26:BD:194:PRO:O	2.37	0.42
29:BE:67:ARG:NH1	29:BE:70:SER:OG	2.52	0.42
29:BE:187:VAL:HG12	29:BE:188:MET:N	2.34	0.42
35:BV:76:ASP:O	35:BV:89:ILE:HG22	2.19	0.42
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	2.01	0.42
38:BM:57:VAL:O	38:BM:60:GLN:HG2	2.19	0.42
40:BH:32:PRO:O	40:BH:33:GLN:HB2	2.18	0.42
40:BH:90:LEU:HD22	40:BH:123:ARG:HA	2.01	0.42
40:BH:104:THR:O	40:BH:105:ALA:HB2	2.18	0.42
41:BJ:72:LYS:HB3	41:BJ:89:PHE:H	1.85	0.42
42:BN:24:MET:HG2	42:BN:44:LEU:HD13	2.00	0.42
43:BO:4:LYS:O	43:BO:5:SER:C	2.63	0.42
44:BQ:83:LYS:O	44:BQ:84:LYS:C	2.62	0.42
45:BS:66:ILE:O	45:BS:69:LEU:HB2	2.19	0.42
46:BU:11:ILE:HA	46:BU:20:LYS:O	2.19	0.42
47:BF:111:ARG:O	47:BF:112:ASP:HB2	2.19	0.42
48:BG:116:LEU:HD23	48:BG:120:ILE:HD13	2.00	0.42
49:BR:7:SER:HB3	49:BR:12:HIS:ND1	2.35	0.42
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.50	0.42
51:BZ:63:GLY:HA3	51:BZ:66:THR:OG1	2.20	0.42
53:B6:38:LEU:HD22	53:B6:83:ILE:CD1	2.49	0.42
1:CA:486:U:H2'	1:CA:487:A:H8	1.85	0.42
1:CA:490:C:H2'	1:CA:491:G:O4'	2.19	0.42
1:CA:553:A:N6	1:CA:554:A:N6	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:620:C:H2'	1:CA:621:A:C8	2.55	0.42
1:CA:656:G:O2'	1:CA:657:U:H5'	2.20	0.42
1:CA:688:G:H5'	10:CK:48:GLY:HA2	2.01	0.42
1:CA:844:G:OP2	1:CA:844:G:H3'	2.20	0.42
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.18	0.42
3:CD:18:LEU:C	3:CD:20:LEU:N	2.78	0.42
3:CD:78:ALA:O	3:CD:85:THR:HA	2.19	0.42
5:CF:46:GLN:CG	5:CF:47:LEU:N	2.81	0.42
5:CF:69:GLU:O	5:CF:73:GLU:HG2	2.18	0.42
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.35	0.42
8:CI:42:THR:C	8:CI:45:MET:HG2	2.44	0.42
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	2.00	0.42
16:CQ:17:GLU:C	16:CQ:19:SER:H	2.27	0.42
20:CB:26:MET:HE1	20:CB:186:VAL:HG23	1.99	0.42
20:CB:62:ARG:O	20:CB:63:LYS:C	2.63	0.42
21:CU:28:LEU:C	21:CU:30:GLU:N	2.76	0.42
21:CU:34:ARG:HD2	21:CU:35:GLU:N	2.35	0.42
22:DA:51:G:H2'	22:DA:52:A:O5'	2.20	0.42
22:DA:83:G:H4'	30:DY:52:PHE:CE2	2.54	0.42
23:DB:11:C:H2'	23:DB:12:U:H5'	2.01	0.42
23:DB:55:G:H2'	23:DB:56:A:H8	1.84	0.42
23:DB:66:C:O2'	23:DB:67:U:H5'	2.19	0.42
23:DB:279:A:N6	23:DB:361:G:O2'	2.52	0.42
23:DB:336:C:O2'	23:DB:337:C:H5'	2.19	0.42
23:DB:433:C:O2'	23:DB:434:U:H5'	2.19	0.42
23:DB:580:U:O3'	44:DQ:30:VAL:CG2	2.67	0.42
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	2.02	0.42
23:DB:1351:C:H2'	23:DB:1352:U:C1'	2.49	0.42
23:DB:1461:C:H2'	23:DB:1462:C:H6	1.83	0.42
23:DB:1665:A:O2'	23:DB:1666:G:H5'	2.20	0.42
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.54	0.42
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.49	0.42
23:DB:1887:C:C2'	23:DB:1888:G:H5'	2.48	0.42
23:DB:1983:G:H4'	23:DB:2606:C:H4'	1.99	0.42
23:DB:2012:G:OP1	45:DS:98:LYS:HG2	2.18	0.42
23:DB:2040:G:H2'	23:DB:2041:U:O4'	2.19	0.42
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.19	0.42
23:DB:2434:A:H8	23:DB:2434:A:H2'	1.70	0.42
23:DB:2472:G:C3'	23:DB:2475:C:H42	2.32	0.42
23:DB:2521:C:H2'	23:DB:2522:U:C6	2.54	0.42
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:131:MET:HE2	25:DC:187:CYS:O	2.19	0.42
26:DD:111:GLY:H	26:DD:194:PRO:CG	2.32	0.42
27:DK:79:PHE:HZ	27:DK:104:THR:HG23	1.84	0.42
28:DP:50:ARG:HB3	28:DP:57:ALA:O	2.19	0.42
29:DE:88:ARG:HA	29:DE:88:ARG:HD3	1.93	0.42
40:DH:24:GLY:C	40:DH:26:ALA:H	2.26	0.42
41:DJ:40:HIS:HE1	41:DJ:41:LYS:HE3	1.84	0.42
41:DJ:110:PRO:HB2	41:DJ:111:LYS:HE3	2.01	0.42
42:DN:70:THR:O	42:DN:70:THR:OG1	2.35	0.42
43:DO:51:ALA:CB	43:DO:78:VAL:HG22	2.45	0.42
44:DQ:83:LYS:O	44:DQ:84:LYS:C	2.60	0.42
44:DQ:91:ARG:HH12	49:DR:10:LYS:CA	2.32	0.42
48:DG:166:GLU:HG2	48:DG:167:VAL:N	2.34	0.42
52:DW:49:ASN:OD1	52:DW:80:SER:HA	2.19	0.42
1:AA:92:U:C2'	1:AA:93:U:O5'	2.67	0.42
1:AA:481:G:O2'	1:AA:482:A:H8	2.02	0.42
1:AA:501:C:H1'	1:AA:549:C:H1'	2.00	0.42
1:AA:532:A:C8	2:AC:192:TYR:CD2	3.06	0.42
1:AA:693:G:H2'	1:AA:694:A:O4'	2.19	0.42
1:AA:784:A:H2'	1:AA:785:G:H8	1.84	0.42
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.19	0.42
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.20	0.42
2:AC:13:ILE:HD13	2:AC:13:ILE:H	1.82	0.42
2:AC:140:ALA:CB	2:AC:148:ILE:HD12	2.50	0.42
3:AD:25:ARG:O	3:AD:26:ALA:HB3	2.19	0.42
3:AD:29:THR:CB	3:AD:30:LYS:HD3	2.50	0.42
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	2.19	0.42
9:AJ:65:TYR:HA	13:AN:96:LYS:O	2.20	0.42
11:AL:23:LEU:C	11:AL:25:ALA:N	2.77	0.42
11:AL:73:LEU:HD21	11:AL:103:CYS:SG	2.59	0.42
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	2.02	0.42
14:AO:17:ARG:HG2	14:AO:24:SER:CB	2.50	0.42
20:AB:40:ILE:HD13	20:AB:201:GLY:CA	2.49	0.42
22:BA:8:C:H2'	22:BA:9:G:O4'	2.20	0.42
23:BB:196:A:H2'	23:BB:196:A:N3	2.35	0.42
23:BB:387:U:H4'	23:BB:388:G:O4'	2.19	0.42
23:BB:484:C:H2'	23:BB:485:C:C6	2.54	0.42
23:BB:735:A:H2'	23:BB:736:C:O4'	2.19	0.42
23:BB:839:U:H2'	23:BB:840:C:C6	2.54	0.42
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.54	0.42
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1131:G:N2	23:BB:2024:G:N2	2.65	0.42
23:BB:1392:A:H2'	23:BB:1393:A:C8	2.54	0.42
23:BB:1547:C:H2'	23:BB:1548:A:H8	1.84	0.42
23:BB:1796:U:O2'	23:BB:1797:G:H5'	2.19	0.42
23:BB:1851:U:H2'	23:BB:1852:U:C6	2.54	0.42
23:BB:1877:A:H2'	23:BB:1878:G:O4'	2.20	0.42
23:BB:2028:U:O2'	23:BB:2029:G:H5'	2.19	0.42
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.54	0.42
23:BB:2106:U:H2'	23:BB:2107:G:H8	1.85	0.42
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.54	0.42
23:BB:2834:G:H2'	23:BB:2879:A:H61	1.85	0.42
23:BB:2876:G:H5''	28:BP:2:ASN:HB2	2.01	0.42
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.20	0.42
26:BD:177:VAL:O	26:BD:177:VAL:HG23	2.18	0.42
30:BY:9:THR:HB	30:BY:10:ARG:H	1.71	0.42
35:BV:42:LEU:H	35:BV:42:LEU:CD2	2.23	0.42
37:BL:3:LEU:HA	37:BL:6:LEU:HD21	2.01	0.42
37:BL:103:ILE:H	37:BL:103:ILE:CD1	2.29	0.42
40:BH:24:GLY:C	40:BH:26:ALA:H	2.26	0.42
40:BH:114:GLU:HB3	40:BH:133:GLN:O	2.20	0.42
41:BJ:103:ILE:HG13	41:BJ:104:ALA:N	2.35	0.42
41:BJ:133:ALA:C	41:BJ:135:GLN:N	2.78	0.42
42:BN:59:SER:C	42:BN:61:ALA:N	2.76	0.42
44:BQ:14:LYS:HA	44:BQ:17:LEU:HB3	2.01	0.42
46:BU:41:VAL:N	46:BU:60:LYS:O	2.53	0.42
47:BF:163:GLU:O	47:BF:166:ARG:HB2	2.19	0.42
48:BG:30:GLY:N	48:BG:78:VAL:HA	2.34	0.42
49:BR:2:TYR:HB2	49:BR:42:ALA:CB	2.38	0.42
53:B6:10:THR:HG22	53:B6:164:ILE:HG21	2.01	0.42
53:B6:114:LEU:HB3	53:B6:183:ILE:CG2	2.46	0.42
1:CA:16:A:N1	1:CA:919:A:H2	2.16	0.42
1:CA:83:C:O2'	1:CA:84:U:H2'	2.19	0.42
1:CA:263:A:OP1	19:CT:73:ARG:NH1	2.52	0.42
1:CA:582:C:O2'	1:CA:583:A:H5'	2.18	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.34	0.42
1:CA:894:G:O2'	1:CA:895:G:H5'	2.18	0.42
1:CA:1180:A:H5''	1:CA:1181:G:OP2	2.18	0.42
1:CA:1515:G:O2'	1:CA:1516:G:H5'	2.19	0.42
3:CD:61:ARG:HG2	3:CD:66:VAL:O	2.19	0.42
3:CD:160:LEU:HD23	3:CD:164:ARG:HH21	1.84	0.42
6:CG:10:LYS:HB2	6:CG:10:LYS:NZ	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:71:THR:O	6:CG:89:GLU:HA	2.19	0.42
12:CM:13:HIS:HB2	12:CM:16:ILE:CG2	2.50	0.42
12:CM:22:TYR:HB2	12:CM:65:GLU:HA	2.00	0.42
15:CP:6:LEU:HD23	15:CP:17:TYR:CB	2.50	0.42
16:CQ:45:VAL:HA	16:CQ:72:TRP:O	2.19	0.42
20:CB:187:ASP:O	20:CB:188:THR:C	2.62	0.42
22:DA:98:G:O6	35:DV:14:LYS:N	2.41	0.42
23:DB:52:A:H2'	23:DB:53:A:C8	2.54	0.42
23:DB:391:A:H1'	23:DB:411:G:O4'	2.20	0.42
23:DB:484:C:H2'	23:DB:485:C:C6	2.54	0.42
23:DB:621:A:H2'	23:DB:622:G:O4'	2.19	0.42
23:DB:996:A:O2'	44:DQ:91:ARG:HD2	2.19	0.42
23:DB:1082:U:C2	23:DB:1086:A:N1	2.87	0.42
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.83	0.42
23:DB:1361:G:H2'	23:DB:1362:C:C6	2.55	0.42
23:DB:1422:G:O2'	23:DB:1423:G:H5'	2.19	0.42
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.19	0.42
23:DB:2211:A:H4'	23:DB:2211:A:OP2	2.19	0.42
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.54	0.42
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.42
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.19	0.42
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.20	0.42
26:DD:107:VAL:N	26:DD:206:ALA:H	2.17	0.42
33:D1:50:GLU:O	33:D1:51:ALA:HB2	2.19	0.42
37:DL:57:LEU:O	37:DL:61:LEU:HD13	2.19	0.42
37:DL:102:GLY:O	37:DL:105:ILE:HG12	2.19	0.42
40:DH:124:THR:O	40:DH:146:VAL:HG11	2.19	0.42
40:DH:127:GLU:HB2	40:DH:143:ILE:CG2	2.49	0.42
47:DF:47:LYS:HA	47:DF:50:ASP:OD1	2.19	0.42
47:DF:111:ARG:N	47:DF:111:ARG:HD2	2.34	0.42
48:DG:72:ASN:O	48:DG:75:VAL:HB	2.18	0.42
52:DW:64:GLY:C	52:DW:65:LYS:HG3	2.43	0.42
1:AA:586:C:C5'	7:AH:81:GLY:HA2	2.49	0.42
1:AA:1160:G:O2'	1:AA:1161:C:H5'	2.20	0.42
1:AA:1349:A:P	8:AI:119:LYS:HD2	2.59	0.42
2:AC:16:PRO:HG2	2:AC:53:ARG:NH2	2.35	0.42
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	2.01	0.42
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.35	0.42
8:AI:27:ILE:HD13	8:AI:34:LEU:HD22	2.02	0.42
8:AI:41:GLU:O	8:AI:43:ALA:N	2.53	0.42
11:AL:46:SER:O	11:AL:47:ALA:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:11:ALA:C	20:AB:13:VAL:H	2.26	0.42
20:AB:188:THR:C	20:AB:190:SER:H	2.26	0.42
21:AU:20:ARG:H	21:AU:20:ARG:HD2	1.84	0.42
22:BA:15:A:O2'	22:BA:16:G:H5'	2.20	0.42
23:BB:115:C:O2'	23:BB:116:C:H5'	2.20	0.42
23:BB:253:C:H2'	23:BB:254:G:O4'	2.19	0.42
23:BB:308:G:H2'	23:BB:309:A:O4'	2.20	0.42
23:BB:598:U:H2'	23:BB:599:A:H8	1.84	0.42
23:BB:725:G:H2'	23:BB:726:G:O4'	2.19	0.42
23:BB:960:A:H4'	23:BB:2457:U:H4'	2.01	0.42
23:BB:1130:U:O2'	23:BB:1131:G:H2'	2.18	0.42
23:BB:1309:G:H4'	36:B2:7:PRO:CB	2.48	0.42
23:BB:1322:A:C2'	23:BB:1323:C:H5'	2.49	0.42
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.54	0.42
23:BB:1553:A:HO2'	23:BB:1554:U:H2'	1.83	0.42
23:BB:1779:U:H5	23:BB:1784:A:N7	2.17	0.42
23:BB:1789:A:OP2	25:BC:220:ARG:HD3	2.18	0.42
23:BB:2228:G:N2	51:BZ:34:HIS:CE1	2.87	0.42
23:BB:2393:U:H2'	23:BB:2394:C:C6	2.54	0.42
23:BB:2654:A:N1	23:BB:2665:A:H5''	2.34	0.42
23:BB:2724:U:H2'	23:BB:2725:A:C8	2.54	0.42
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.20	0.42
25:BC:76:VAL:O	25:BC:93:VAL:O	2.37	0.42
28:BP:29:VAL:O	28:BP:40:GLN:N	2.53	0.42
34:B3:30:HIS:CD2	34:B3:31:ILE:N	2.88	0.42
36:B2:6:GLN:HA	36:B2:7:PRO:HD2	1.89	0.42
38:BM:19:GLY:N	38:BM:38:ARG:NH1	2.64	0.42
39:BX:27:ASN:HD22	39:BX:27:ASN:HA	1.62	0.42
44:BQ:91:ARG:HH12	49:BR:10:LYS:CB	2.32	0.42
45:BS:95:ARG:C	45:BS:96:ILE:HG22	2.45	0.42
48:BG:112:VAL:HG13	48:BG:150:TYR:HE2	1.84	0.42
49:BR:7:SER:CB	49:BR:22:LEU:HD22	2.50	0.42
49:BR:14:VAL:CG2	49:BR:15:SER:N	2.82	0.42
50:BT:39:THR:O	50:BT:40:LYS:HB2	2.20	0.42
51:BZ:53:ALA:O	51:BZ:55:GLY:N	2.44	0.42
52:BW:28:GLU:C	52:BW:30:VAL:N	2.76	0.42
53:B6:176:ALA:O	53:B6:180:GLU:HB2	2.19	0.42
1:CA:87:C:H2'	1:CA:88:U:H6	1.81	0.42
1:CA:430:A:OP2	3:CD:6:PRO:HA	2.19	0.42
1:CA:625:U:H4'	15:CP:16:PHE:CZ	2.55	0.42
2:CC:146:LYS:HB2	2:CC:202:PHE:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	2.01	0.42
4:CE:158:LYS:HZ1	7:CH:63:LYS:NZ	2.18	0.42
6:CG:48:THR:O	6:CG:52:ARG:HG3	2.19	0.42
9:CJ:80:THR:O	9:CJ:84:VAL:HG23	2.19	0.42
12:CM:49:GLU:O	12:CM:52:ILE:HG22	2.19	0.42
13:CN:5:MET:HA	13:CN:8:ARG:HD2	2.01	0.42
13:CN:52:ARG:NH1	13:CN:58:ARG:HH21	2.17	0.42
16:CQ:82:VAL:C	16:CQ:83:LEU:HD22	2.43	0.42
17:CR:54:LEU:HD23	17:CR:58:ILE:HD11	2.02	0.42
19:CT:3:ILE:H	19:CT:3:ILE:HG13	1.30	0.42
19:CT:66:ILE:HG13	19:CT:70:LYS:HE3	2.01	0.42
19:CT:69:ASN:O	19:CT:72:ALA:HB3	2.19	0.42
20:CB:98:GLY:N	20:CB:174:GLU:OE2	2.53	0.42
22:DA:42:C:C6	47:DF:65:LEU:HD22	2.54	0.42
23:DB:79:C:O2'	23:DB:346:A:C1'	2.66	0.42
23:DB:139:U:C4	50:DT:1:MET:HE2	2.54	0.42
23:DB:234:U:H2'	23:DB:235:U:O4'	2.19	0.42
23:DB:265:A:HO2'	23:DB:266:G:H4'	1.84	0.42
23:DB:300:A:H2'	23:DB:334:C:H1'	2.02	0.42
23:DB:481:G:C2	23:DB:507:A:C4	3.08	0.42
23:DB:547:A:C2	23:DB:548:G:H1'	2.54	0.42
23:DB:918:A:C2'	23:DB:919:U:H5'	2.44	0.42
23:DB:1597:A:C5'	23:DB:1598:A:H5'	2.43	0.42
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.54	0.42
23:DB:2143:C:H3'	23:DB:2144:G:H8	1.84	0.42
23:DB:2212:A:O3'	23:DB:2213:U:C4	2.73	0.42
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.34	0.42
25:DC:76:VAL:O	25:DC:78:GLU:N	2.52	0.42
25:DC:211:ARG:C	25:DC:213:ARG:N	2.78	0.42
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	2.01	0.42
28:DP:86:LYS:HB3	28:DP:87:ARG:H	1.58	0.42
36:D2:9:VAL:CG1	36:D2:10:LEU:N	2.81	0.42
40:DH:113:SER:HB2	40:DH:132:PHE:CZ	2.53	0.42
41:DJ:12:LYS:H	41:DJ:12:LYS:HG2	1.66	0.42
41:DJ:103:ILE:HG13	41:DJ:104:ALA:N	2.35	0.42
42:DN:28:LEU:O	42:DN:32:GLU:HA	2.19	0.42
46:DU:86:PHE:CG	46:DU:87:GLU:N	2.87	0.42
47:DF:98:PHE:C	47:DF:100:GLU:N	2.76	0.42
47:DF:163:GLU:O	47:DF:166:ARG:HB2	2.19	0.42
48:DG:28:LYS:O	48:DG:30:GLY:N	2.53	0.42
48:DG:43:LYS:O	48:DG:49:LEU:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:44:HIS:O	48:DG:46:ASP:N	2.52	0.42
53:D6:125:GLY:O	53:D6:129:ILE:HG13	2.19	0.42
1:AA:213:G:N3	1:AA:213:G:H2'	2.35	0.42
1:AA:255:G:H1'	16:AQ:17:GLU:OE2	2.20	0.42
1:AA:614:C:C2'	1:AA:615:G:H5'	2.50	0.42
1:AA:880:C:H2'	1:AA:881:G:C8	2.51	0.42
1:AA:1315:U:H5	18:AS:5:LYS:HE2	1.84	0.42
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.20	0.42
3:AD:172:VAL:O	3:AD:172:VAL:HG13	2.20	0.42
4:AE:62:ALA:O	4:AE:65:LYS:HB2	2.19	0.42
12:AM:70:ARG:HH22	47:BF:112:ASP:CG	2.28	0.42
18:AS:66:VAL:HG23	18:AS:67:GLY:N	2.35	0.42
19:AT:49:ALA:HA	19:AT:52:GLU:OE2	2.18	0.42
20:AB:60:ALA:HB1	20:AB:220:VAL:HG13	2.02	0.42
21:AU:34:ARG:NH1	21:AU:39:LYS:NZ	2.67	0.42
22:BA:13:G:C5	22:BA:70:C:H4'	2.54	0.42
23:BB:372:G:N7	51:BZ:57:ARG:HB3	2.34	0.42
23:BB:415:A:H2'	23:BB:416:U:C6	2.55	0.42
23:BB:522:A:H2'	23:BB:523:C:H6	1.84	0.42
23:BB:546:U:H5'	23:BB:548:G:O6	2.20	0.42
23:BB:816:C:O2'	23:BB:817:C:H5'	2.19	0.42
23:BB:826:U:H5''	23:BB:2428:G:O3'	2.19	0.42
23:BB:877:A:H2'	23:BB:899:A:C6	2.51	0.42
23:BB:1027:A:N3	23:BB:2488:G:H5''	2.34	0.42
23:BB:1028:A:N3	23:BB:2486:C:O2'	2.51	0.42
23:BB:1439:A:C5	23:BB:1552:A:N6	2.86	0.42
23:BB:1516:G:H2'	23:BB:1517:G:H8	1.85	0.42
23:BB:1702:G:H2'	23:BB:1703:G:O4'	2.19	0.42
23:BB:1734:G:O2'	23:BB:1735:A:H5'	2.20	0.42
23:BB:2032:G:N7	23:BB:2454:G:H1'	2.33	0.42
23:BB:2745:C:O2'	48:BG:142:GLN:HB2	2.20	0.42
25:BC:130:PRO:C	25:BC:132:ARG:N	2.77	0.42
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.83	0.42
25:BC:216:ARG:HE	25:BC:217:PRO:HD2	1.83	0.42
25:BC:262:THR:O	25:BC:265:PHE:N	2.49	0.42
27:BK:71:ARG:CZ	27:BK:72:PRO:HD3	2.50	0.42
27:BK:104:THR:OG1	27:BK:107:LEU:HD11	2.18	0.42
35:BV:70:ILE:CD1	35:BV:71:LYS:N	2.82	0.42
37:BL:47:ARG:CB	37:BL:47:ARG:HH21	2.32	0.42
37:BL:127:VAL:HG22	37:BL:128:THR:N	2.34	0.42
38:BM:63:ILE:HD12	38:BM:63:ILE:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:85:GLY:HA3	40:BH:91:PHE:CE1	2.54	0.42
42:BN:55:ALA:HB1	42:BN:80:PHE:H	1.83	0.42
43:BO:36:TYR:CD2	43:BO:36:TYR:N	2.87	0.42
45:BS:95:ARG:HG3	45:BS:97:LEU:HD21	2.02	0.42
45:BS:99:ARG:H	45:BS:99:ARG:HG2	1.44	0.42
45:BS:108:SER:OG	45:BS:109:ASP:N	2.52	0.42
46:BU:73:ASN:ND2	46:BU:76:THR:H	2.16	0.42
47:BF:74:ALA:HB1	47:BF:76:PHE:CD2	2.54	0.42
48:BG:154:GLU:O	48:BG:156:TYR:N	2.42	0.42
50:BT:25:GLU:C	50:BT:27:SER:H	2.28	0.42
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.19	0.42
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.84	0.42
52:BW:44:PHE:HE2	52:BW:76:ARG:NE	2.17	0.42
52:BW:77:LYS:HZ3	52:BW:77:LYS:HB2	1.85	0.42
53:B6:30:THR:HG23	53:B6:179:LYS:HZ2	1.85	0.42
1:CA:152:A:H2'	1:CA:153:C:O4'	2.19	0.42
1:CA:321:A:O2'	1:CA:322:C:H5'	2.20	0.42
1:CA:373:A:H1'	1:CA:481:G:H1'	2.02	0.42
1:CA:479:U:O2'	1:CA:480:U:H5'	2.19	0.42
1:CA:643:C:H5''	7:CH:31:LEU:HD22	2.01	0.42
1:CA:728:A:H2'	1:CA:729:A:C8	2.55	0.42
1:CA:856:C:O2'	1:CA:857:C:H5'	2.20	0.42
1:CA:1099:G:H2'	1:CA:1100:C:C6	2.55	0.42
1:CA:1149:C:OP2	8:CI:10:ARG:NH1	2.52	0.42
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.54	0.42
1:CA:1421:G:N2	1:CA:1479:C:O2	2.52	0.42
3:CD:164:ARG:HG3	3:CD:165:GLU:H	1.85	0.42
7:CH:68:LYS:HG3	7:CH:69:ALA:H	1.84	0.42
13:CN:27:LYS:H	13:CN:27:LYS:HG3	1.67	0.42
13:CN:72:PHE:CZ	13:CN:77:GLY:HA2	2.54	0.42
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.19	0.42
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	2.01	0.42
18:CS:33:TRP:N	18:CS:33:TRP:CE3	2.87	0.42
20:CB:123:GLY:O	20:CB:125:PHE:N	2.52	0.42
20:CB:188:THR:C	20:CB:190:SER:H	2.27	0.42
22:DA:49:C:O2'	22:DA:50:A:H5'	2.19	0.42
23:DB:233:A:N6	23:DB:428:A:H61	2.17	0.42
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.85	0.42
23:DB:1099:G:H3'	24:DI:2:LYS:HA	2.01	0.42
23:DB:1131:G:H1'	23:DB:1133:A:H62	1.85	0.42
23:DB:1183:U:O2'	23:DB:1184:U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1880:U:H2'	23:DB:1881:C:C6	2.55	0.42
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.54	0.42
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.20	0.42
23:DB:2473:U:O2	23:DB:2473:U:H2'	2.19	0.42
23:DB:2544:G:H2'	23:DB:2545:G:H8	1.84	0.42
23:DB:2601:C:C2	23:DB:2603:G:N7	2.88	0.42
23:DB:2652:C:C2'	23:DB:2653:U:H5'	2.49	0.42
23:DB:2840:C:OP1	42:DN:50:PRO:HA	2.20	0.42
25:DC:231:HIS:HA	25:DC:241:LYS:HE3	2.02	0.42
26:DD:31:ALA:HA	26:DD:96:ILE:O	2.19	0.42
26:DD:125:TRP:CD1	26:DD:160:LYS:HB3	2.54	0.42
27:DK:38:ILE:HD13	27:DK:61:VAL:HG12	2.01	0.42
28:DP:61:ARG:HB3	28:DP:61:ARG:HH21	1.85	0.42
29:DE:46:GLN:HB3	29:DE:86:ALA:CA	2.50	0.42
32:D4:2:LYS:HD3	32:D4:4:ARG:NE	2.18	0.42
37:DL:80:SER:HA	37:DL:115:GLU:HB2	2.02	0.42
40:DH:73:ASN:CG	40:DH:142:VAL:HG22	2.45	0.42
40:DH:135:HIS:N	40:DH:138:VAL:HB	2.30	0.42
40:DH:143:ILE:HG22	40:DH:144:VAL:N	2.35	0.42
47:DF:141:ASP:O	47:DF:143:ASP:N	2.53	0.42
48:DG:106:LEU:HD23	48:DG:106:LEU:N	2.35	0.42
49:DR:39:LEU:CA	49:DR:53:PHE:HA	2.49	0.42
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.20	0.42
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	2.02	0.42
51:DZ:53:ALA:C	51:DZ:55:GLY:N	2.77	0.42
52:DW:69:GLU:HB3	52:DW:70:VAL:H	1.65	0.42
53:D6:112:LYS:O	53:D6:113:ASP:C	2.63	0.42
1:AA:197:A:H1'	1:AA:198:G:C1'	2.50	0.42
1:AA:564:C:C5	16:AQ:32:ILE:HD11	2.54	0.42
1:AA:653:U:C4	7:AH:55:LYS:HE2	2.54	0.42
1:AA:687:A:C2	1:AA:704:A:C5	3.08	0.42
1:AA:720:C:H6	1:AA:720:C:O5'	2.03	0.42
1:AA:974:A:OP2	13:AN:80:ARG:NH1	2.53	0.42
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.55	0.42
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.19	0.42
1:AA:1446:A:H2'	1:AA:1447:A:C8	2.55	0.42
2:AC:133:MET:HE2	2:AC:152:VAL:CG2	2.49	0.42
3:AD:100:VAL:HG11	3:AD:142:VAL:HG21	2.00	0.42
3:AD:169:TRP:HB2	3:AD:183:ARG:O	2.20	0.42
4:AE:87:VAL:HG22	4:AE:88:HIS:N	2.35	0.42
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:80:GLY:O	6:AG:82:SER:N	2.52	0.42
6:AG:110:ARG:HH11	6:AG:110:ARG:HB3	1.84	0.42
7:AH:17:GLN:HG2	7:AH:62:LEU:CD2	2.49	0.42
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	2.02	0.42
12:AM:33:LEU:HD22	12:AM:38:ILE:HB	2.01	0.42
13:AN:30:ILE:O	13:AN:32:ASP:N	2.45	0.42
20:AB:9:LEU:C	20:AB:11:ALA:H	2.28	0.42
20:AB:63:LYS:HA	20:AB:224:ARG:NH1	2.31	0.42
20:AB:86:CYS:SG	20:AB:87:ASP:N	2.93	0.42
20:AB:113:LEU:HD23	20:AB:114:LYS:N	2.34	0.42
20:AB:207:ARG:O	20:AB:211:LEU:HB2	2.19	0.42
22:BA:83:G:O2'	22:BA:84:G:H5'	2.20	0.42
23:BB:143:C:H1'	50:BT:2:ILE:O	2.19	0.42
23:BB:243:U:OP1	34:B3:5:THR:OG1	2.38	0.42
23:BB:629:G:H2'	23:BB:630:G:C8	2.55	0.42
23:BB:711:G:O2'	23:BB:712:G:H5'	2.20	0.42
23:BB:820:A:H1'	23:BB:943:A:O2'	2.19	0.42
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.50	0.42
23:BB:1245:G:OP1	37:BL:8:PRO:HG2	2.19	0.42
23:BB:1348:C:H2'	23:BB:1349:C:H5'	2.00	0.42
23:BB:1521:G:O5'	23:BB:1522:A:H2'	2.20	0.42
23:BB:1639:C:C2'	23:BB:1640:A:H5'	2.50	0.42
23:BB:1651:G:H2'	23:BB:1652:A:O4'	2.19	0.42
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.20	0.42
23:BB:1833:C:H2'	23:BB:1834:U:H6	1.85	0.42
23:BB:1847:A:H1'	23:BB:1848:A:N7	2.35	0.42
23:BB:1882:U:O2'	23:BB:1883:U:H5'	2.19	0.42
23:BB:2001:C:H4'	23:BB:2689:U:O2'	2.20	0.42
23:BB:2018:G:O2'	23:BB:2019:A:H5'	2.19	0.42
23:BB:2155:U:H3'	23:BB:2156:G:C8	2.55	0.42
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.84	0.42
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.85	0.42
23:BB:2886:A:N7	31:B0:39:ARG:NE	2.67	0.42
26:BD:147:GLY:C	26:BD:148:GLN:HG2	2.45	0.42
29:BE:149:ILE:O	29:BE:188:MET:HA	2.20	0.42
31:B0:38:LEU:HD23	31:B0:39:ARG:N	2.35	0.42
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.19	0.42
35:BV:48:MET:HE3	35:BV:51:GLN:OE1	2.19	0.42
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.35	0.42
40:BH:49:ALA:O	40:BH:53:GLU:N	2.53	0.42
40:BH:114:GLU:O	40:BH:132:PHE:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:13:ASN:C	42:BN:15:SER:N	2.77	0.42
44:BQ:17:LEU:O	44:BQ:17:LEU:HG	2.19	0.42
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.84	0.42
46:BU:72:PHE:CZ	46:BU:77:GLY:HA2	2.55	0.42
46:BU:73:ASN:OD1	46:BU:75:ALA:HB3	2.20	0.42
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.35	0.42
48:BG:145:ALA:O	48:BG:148:ARG:HD2	2.20	0.42
48:BG:166:GLU:HG2	48:BG:167:VAL:N	2.35	0.42
48:BG:167:VAL:HG23	48:BG:168:VAL:N	2.26	0.42
1:CA:212:G:H2'	1:CA:213:G:C8	2.54	0.42
1:CA:311:C:O2'	1:CA:312:C:H5'	2.19	0.42
1:CA:751:U:C2'	1:CA:752:G:H5'	2.50	0.42
1:CA:764:C:N4	1:CA:812:G:N1	2.67	0.42
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.42
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.81	0.42
1:CA:1231:G:O2'	1:CA:1232:U:H5'	2.20	0.42
1:CA:1314:C:H3'	18:CS:5:LYS:HZ1	1.83	0.42
3:CD:81:LEU:HB2	3:CD:88:ASN:HD22	1.84	0.42
5:CF:36:ILE:HG12	5:CF:64:VAL:HG22	2.01	0.42
8:CI:112:ARG:O	8:CI:112:ARG:HG3	2.19	0.42
10:CK:126:ARG:HA	10:CK:126:ARG:HE	1.85	0.42
11:CL:98:ARG:NH2	11:CL:104:SER:OG	2.51	0.42
12:CM:18:LEU:HD23	12:CM:21:ILE:HD12	2.01	0.42
14:CO:85:LEU:O	14:CO:86:GLY:C	2.62	0.42
17:CR:43:ILE:O	17:CR:44:THR:HG23	2.20	0.42
18:CS:17:LYS:HB3	18:CS:30:LEU:HD22	2.00	0.42
20:CB:10:LYS:C	20:CB:13:VAL:HG23	2.45	0.42
20:CB:69:VAL:HG12	20:CB:168:GLU:HG3	2.02	0.42
20:CB:89:PHE:HE2	20:CB:152:ASP:O	2.03	0.42
22:DA:76:G:H21	35:DV:78:GLN:HE22	1.67	0.42
23:DB:1434:A:N6	23:DB:1558:C:H42	2.18	0.42
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.54	0.42
23:DB:1605:C:H1'	23:DB:1610:A:C8	2.55	0.42
23:DB:2188:U:H3'	23:DB:2189:U:C6	2.55	0.42
23:DB:2285:C:OP2	33:D1:5:ARG:HD3	2.19	0.42
23:DB:2794:C:H2'	23:DB:2795:C:H6	1.83	0.42
23:DB:2800:A:H2'	23:DB:2801:G:H1'	2.02	0.42
23:DB:2812:G:H2'	23:DB:2813:A:O4'	2.20	0.42
25:DC:76:VAL:O	25:DC:76:VAL:HG23	2.20	0.42
25:DC:211:ARG:HD2	25:DC:215:VAL:O	2.20	0.42
27:DK:53:LYS:HD3	27:DK:53:LYS:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:68:GLY:HA3	27:DK:78:ARG:HB3	2.01	0.42
29:DE:2:GLU:OE1	29:DE:13:THR:N	2.53	0.42
29:DE:145:ASP:OD1	29:DE:183:PHE:HA	2.19	0.42
31:D0:18:HIS:C	31:D0:20:ALA:H	2.28	0.42
34:D3:14:LYS:O	34:D3:21:PHE:O	2.36	0.42
37:DL:24:GLY:C	37:DL:26:GLY:H	2.27	0.42
37:DL:101:ILE:HG22	37:DL:105:ILE:HG13	2.02	0.42
40:DH:27:ARG:HG2	40:DH:27:ARG:HH21	1.83	0.42
40:DH:119:ASN:ND2	40:DH:121:VAL:HG22	2.35	0.42
41:DJ:21:THR:C	41:DJ:23:LYS:H	2.27	0.42
41:DJ:73:VAL:O	41:DJ:74:TYR:HB2	2.19	0.42
42:DN:24:MET:CG	42:DN:44:LEU:HD22	2.50	0.42
43:DO:7:ARG:HA	43:DO:10:ARG:CZ	2.49	0.42
45:DS:4:ILE:HG22	45:DS:106:VAL:HA	2.01	0.42
46:DU:53:GLN:H	46:DU:53:GLN:CD	2.27	0.42
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	2.01	0.42
48:DG:8:VAL:CG1	48:DG:49:LEU:HB2	2.35	0.42
48:DG:29:ASN:ND2	48:DG:77:GLY:O	2.52	0.42
48:DG:37:ASN:HD22	48:DG:38:ASP:H	1.68	0.42
49:DR:37:GLU:O	49:DR:39:LEU:HD23	2.20	0.42
52:DW:79:ILE:HG22	52:DW:80:SER:N	2.33	0.42
53:D6:29:ARG:O	53:D6:30:THR:O	2.37	0.42
1:AA:87:C:N3	1:AA:88:U:H1'	2.35	0.42
1:AA:360:G:O2'	1:AA:361:G:H5'	2.20	0.42
1:AA:401:C:O2'	1:AA:402:G:H5'	2.19	0.42
1:AA:420:U:C2'	1:AA:421:U:H5''	2.50	0.42
1:AA:479:U:O2'	1:AA:480:U:H5'	2.19	0.42
1:AA:547:A:H4'	1:AA:548:G:O5'	2.20	0.42
1:AA:922:G:H4'	4:AE:24:VAL:HA	2.01	0.42
1:AA:1206:G:O4'	2:AC:193:GLY:N	2.53	0.42
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.35	0.42
3:AD:104:MET:HG2	3:AD:170:LEU:CD1	2.50	0.42
3:AD:147:LYS:HB2	3:AD:147:LYS:NZ	2.35	0.42
3:AD:159:GLU:O	3:AD:162:GLU:HB3	2.20	0.42
6:AG:50:ALA:HB2	6:AG:57:GLU:CA	2.50	0.42
6:AG:130:LYS:H	6:AG:134:VAL:HG21	1.85	0.42
8:AI:24:ASN:ND2	8:AI:57:VAL:O	2.53	0.42
11:AL:13:ARG:O	11:AL:14:LYS:HB3	2.20	0.42
11:AL:74:GLN:HB3	11:AL:75:GLU:H	1.57	0.42
11:AL:108:ASP:O	11:AL:110:LYS:HG2	2.19	0.42
13:AN:68:ARG:HH12	13:AN:70:HIS:CB	2.16	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:73:LYS:O	14:AO:74:ASP:HB2	2.20	0.42
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	2.01	0.42
20:AB:95:TRP:HZ3	20:AB:174:GLU:OE2	2.03	0.42
20:AB:204:ASP:O	20:AB:208:ALA:HB3	2.20	0.42
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	2.01	0.42
23:BB:7:G:H4'	41:BJ:15:TRP:CZ2	2.55	0.42
23:BB:659:G:H4'	29:BE:95:LYS:HB3	2.01	0.42
23:BB:784:G:H5''	25:BC:225:ASN:CG	2.44	0.42
23:BB:984:A:HO2'	23:BB:985:C:C5'	2.33	0.42
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.84	0.42
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.20	0.42
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.81	0.42
23:BB:1541:C:H2'	23:BB:1542:U:O4'	2.20	0.42
23:BB:1666:G:OP1	27:BK:82:ASN:ND2	2.50	0.42
23:BB:1668:A:N3	23:BB:1670:C:C4	2.87	0.42
23:BB:1714:U:O5'	23:BB:1714:U:H6	2.03	0.42
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.34	0.42
23:BB:2038:G:H2'	23:BB:2039:U:O4'	2.20	0.42
23:BB:2142:A:H2'	23:BB:2143:C:N1	2.34	0.42
23:BB:2293:G:H2'	23:BB:2294:G:C8	2.55	0.42
23:BB:2352:A:H8	23:BB:2352:A:O5'	2.03	0.42
23:BB:2352:A:N6	23:BB:2365:G:O2'	2.51	0.42
23:BB:2511:U:O5'	23:BB:2511:U:H6	2.02	0.42
23:BB:2544:G:H1'	23:BB:2646:C:H5'	2.01	0.42
23:BB:2677:G:H2'	23:BB:2678:C:H6	1.83	0.42
23:BB:2809:A:N6	23:BB:2891:U:H4'	2.35	0.42
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	2.00	0.42
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.19	0.42
25:BC:185:ALA:C	25:BC:187:CYS:N	2.78	0.42
26:BD:186:LEU:CD2	28:BP:3:ILE:HD11	2.46	0.42
27:BK:19:VAL:HG23	27:BK:41:ILE:HD11	2.01	0.42
27:BK:79:PHE:HZ	27:BK:104:THR:HG23	1.85	0.42
27:BK:115:ILE:CG2	27:BK:116:ILE:N	2.82	0.42
28:BP:4:ILE:HA	28:BP:7:LEU:CD1	2.48	0.42
29:BE:165:HIS:CD2	29:BE:166:LYS:HG2	2.55	0.42
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.35	0.42
35:BV:63:ILE:HG22	35:BV:65:VAL:HG13	2.00	0.42
35:BV:83:LYS:HA	35:BV:84:PRO:HD3	1.95	0.42
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.34	0.42
36:B2:43:THR:O	36:B2:44:VAL:C	2.62	0.42
39:BX:36:GLN:HB2	39:BX:37:LEU:H	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:46:VAL:O	39:BX:49:ASP:HB2	2.20	0.42
40:BH:28:ASN:HD22	40:BH:28:ASN:HA	1.62	0.42
40:BH:134:VAL:CG1	40:BH:135:HIS:H	2.31	0.42
40:BH:144:VAL:HG12	40:BH:145:ASN:N	2.34	0.42
41:BJ:75:TYR:HD1	41:BJ:86:GLN:HB3	1.85	0.42
45:BS:14:ALA:C	45:BS:16:LYS:H	2.28	0.42
46:BU:10:VAL:O	46:BU:21:ARG:HG2	2.20	0.42
46:BU:65:GLN:HE21	46:BU:65:GLN:HB3	1.52	0.42
46:BU:80:ASP:O	46:BU:81:ARG:C	2.61	0.42
48:BG:42:VAL:HA	48:BG:50:THR:O	2.20	0.42
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.20	0.42
49:BR:60:LYS:N	49:BR:100:GLY:HA3	2.22	0.42
50:BT:50:LEU:C	50:BT:52:GLU:N	2.76	0.42
1:CA:91:U:H2'	1:CA:92:U:H6	1.84	0.42
1:CA:182:A:H1'	1:CA:183:C:H5	1.84	0.42
1:CA:279:A:OP1	1:CA:281:G:H5'	2.20	0.42
1:CA:376:G:H5''	15:CP:5:ARG:CB	2.43	0.42
1:CA:592:G:H2'	1:CA:593:U:O4'	2.20	0.42
1:CA:961:U:N3	1:CA:983:A:N6	2.66	0.42
1:CA:1242:G:H2'	1:CA:1243:C:H6	1.84	0.42
1:CA:1258:G:C4	1:CA:1278:G:N2	2.87	0.42
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.85	0.42
5:CF:61:LEU:HD12	5:CF:62:MET:H	1.85	0.42
7:CH:21:LYS:O	7:CH:22:ALA:C	2.62	0.42
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.20	0.42
8:CI:56:MET:O	8:CI:58:GLU:N	2.52	0.42
10:CK:72:ALA:O	10:CK:75:GLU:HG2	2.19	0.42
10:CK:95:THR:CG2	10:CK:96:ILE:N	2.83	0.42
11:CL:86:VAL:CG1	11:CL:89:LEU:HB2	2.50	0.42
12:CM:32:ILE:HD11	12:CM:58:GLU:HB3	2.02	0.42
14:CO:74:ASP:OD1	14:CO:76:ALA:HB3	2.19	0.42
16:CQ:46:HIS:CB	16:CQ:70:LYS:HE2	2.48	0.42
20:CB:23:ASN:HD22	20:CB:24:PRO:N	2.18	0.42
20:CB:53:LEU:HD12	20:CB:53:LEU:N	2.34	0.42
20:CB:98:GLY:O	20:CB:102:ASN:N	2.52	0.42
20:CB:173:LYS:C	20:CB:173:LYS:HD2	2.45	0.42
22:DA:8:C:H2'	22:DA:9:G:O4'	2.20	0.42
23:DB:141:G:N3	23:DB:141:G:C3'	2.80	0.42
23:DB:312:G:H5'	23:DB:331:C:O2'	2.20	0.42
23:DB:458:G:O2'	23:DB:459:U:P	2.78	0.42
23:DB:564:C:OP2	49:DR:79:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:917:A:H2'	23:DB:918:A:O4'	2.19	0.42
23:DB:932:U:O2	23:DB:932:U:O4'	2.38	0.42
23:DB:1139:G:O2'	23:DB:1143:A:N1	2.47	0.42
23:DB:1265:A:H5'	57:DB:3659:HOH:O	2.19	0.42
23:DB:1620:G:H4'	36:D2:1:MET:HG2	2.02	0.42
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.53	0.42
23:DB:2186:G:H2'	23:DB:2187:U:O4'	2.19	0.42
23:DB:2655:G:O2'	23:DB:2656:U:P	2.77	0.42
23:DB:2671:G:H2'	23:DB:2672:U:H6	1.84	0.42
23:DB:2755:C:O2'	23:DB:2756:U:H2'	2.20	0.42
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.54	0.42
23:DB:2813:A:O2'	23:DB:2814:A:H5'	2.19	0.42
23:DB:2876:G:H2'	23:DB:2877:G:O4'	2.20	0.42
23:DB:2877:G:O2'	23:DB:2878:U:H5'	2.20	0.42
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.01	0.42
24:DI:126:ARG:NH1	24:DI:126:ARG:CB	2.83	0.42
25:DC:43:ASN:ND2	25:DC:44:ASN:N	2.67	0.42
25:DC:80:LEU:HD21	25:DC:109:LEU:HB2	2.02	0.42
25:DC:80:LEU:HD23	25:DC:91:ALA:HB2	2.00	0.42
25:DC:198:GLU:O	25:DC:201:LEU:HB2	2.19	0.42
25:DC:255:LYS:C	25:DC:256:THR:HG23	2.44	0.42
26:DD:96:ILE:N	26:DD:96:ILE:HD12	2.34	0.42
26:DD:109:VAL:HG11	26:DD:193:VAL:HG11	2.02	0.42
27:DK:99:ILE:N	27:DK:118:LEU:HD23	2.34	0.42
29:DE:47:LYS:HB3	29:DE:51:GLU:CB	2.42	0.42
29:DE:187:VAL:HG12	29:DE:188:MET:N	2.35	0.42
33:D1:8:ILE:CG1	33:D1:51:ALA:HA	2.49	0.42
35:DV:26:PHE:CE1	35:DV:89:ILE:HD11	2.55	0.42
38:DM:116:ALA:C	38:DM:118:LYS:H	2.26	0.42
38:DM:127:LYS:HD2	38:DM:127:LYS:N	2.31	0.42
39:DX:27:ASN:HA	39:DX:30:MET:HG2	2.00	0.42
39:DX:59:GLU:CD	39:DX:60:LYS:H	2.27	0.42
40:DH:25:TYR:CD2	40:DH:30:LEU:HD11	2.54	0.42
42:DN:93:GLY:C	42:DN:95:THR:N	2.78	0.42
43:DO:50:ALA:C	43:DO:78:VAL:HG13	2.45	0.42
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.19	0.42
46:DU:98:ASN:O	46:DU:99:SER:C	2.61	0.42
47:DF:111:ARG:O	47:DF:112:ASP:HB2	2.20	0.42
50:DT:58:VAL:O	50:DT:58:VAL:HG13	2.20	0.42
50:DT:89:GLU:C	50:DT:91:GLN:H	2.28	0.42
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:72:ARG:HB3	51:DZ:78:TYR:HE2	1.84	0.42
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.49	0.42
1:AA:60:A:O2'	19:AT:4:LYS:HD3	2.20	0.42
1:AA:85:U:H4'	1:AA:86:G:H5''	2.02	0.42
1:AA:611:C:H2'	1:AA:612:C:C6	2.55	0.42
1:AA:632:U:H3'	1:AA:632:U:O2	2.18	0.42
1:AA:636:U:O2'	1:AA:637:C:H5'	2.19	0.42
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.83	0.42
1:AA:1380:U:O4	6:AG:2:ARG:HA	2.20	0.42
1:AA:1462:C:H2'	1:AA:1463:U:C6	2.55	0.42
2:AC:134:LYS:HG3	2:AC:167:TYR:CE2	2.54	0.42
3:AD:57:LYS:HE2	3:AD:61:ARG:HH11	1.85	0.42
5:AF:38:ARG:NH2	5:AF:63:ASN:HD21	2.18	0.42
5:AF:100:SER:HA	17:AR:23:LYS:HD3	2.01	0.42
6:AG:118:ARG:H	6:AG:118:ARG:HG3	1.66	0.42
11:AL:98:ARG:NH2	11:AL:104:SER:C	2.75	0.42
17:AR:41:SER:HA	17:AR:51:GLN:OE1	2.20	0.42
19:AT:43:LYS:CB	19:AT:85:LEU:HD21	2.49	0.42
20:AB:53:LEU:HD12	20:AB:53:LEU:N	2.35	0.42
22:BA:75:G:N1	22:BA:102:G:N2	2.68	0.42
22:BA:94:A:O2'	22:BA:95:U:H5'	2.20	0.42
23:BB:143:C:H2'	23:BB:144:A:H8	1.81	0.42
23:BB:679:C:H2'	23:BB:680:C:H6	1.85	0.42
23:BB:705:A:H2'	23:BB:706:A:H8	1.85	0.42
23:BB:810:U:O4	37:BL:30:THR:HG22	2.20	0.42
23:BB:840:C:O2'	23:BB:841:G:H5'	2.20	0.42
23:BB:922:C:H2'	23:BB:923:G:H8	1.85	0.42
23:BB:954:G:H5'	23:BB:955:U:OP2	2.19	0.42
23:BB:963:U:O2'	23:BB:964:C:H5'	2.20	0.42
23:BB:1141:U:P	41:BJ:27:ARG:HE	2.42	0.42
23:BB:1366:A:H2'	23:BB:1367:A:O4'	2.20	0.42
23:BB:1598:A:H2'	23:BB:1599:U:O4'	2.19	0.42
23:BB:1726:C:O5'	23:BB:1726:C:H6	2.03	0.42
23:BB:1728:C:O2	23:BB:1728:C:H2'	2.19	0.42
23:BB:1754:A:N1	23:BB:2716:C:O2'	2.53	0.42
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.19	0.42
23:BB:2197:U:O4	23:BB:2224:G:H2'	2.20	0.42
23:BB:2266:A:H4'	23:BB:2267:A:C8	2.52	0.42
23:BB:2583:G:H2'	23:BB:2584:U:O4'	2.20	0.42
23:BB:2597:G:C6	23:BB:2598:A:N6	2.87	0.42
23:BB:2721:A:H2'	23:BB:2722:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:38:ILE:HD11	27:BK:112:PHE:HZ	1.84	0.42
27:BK:61:VAL:HG13	27:BK:87:LEU:CD2	2.50	0.42
28:BP:49:ILE:HG12	28:BP:50:ARG:N	2.34	0.42
29:BE:154:ASP:OD2	29:BE:157:LEU:HB3	2.19	0.42
31:B0:9:ARG:O	31:B0:12:ARG:HB3	2.20	0.42
31:B0:18:HIS:C	31:B0:20:ALA:H	2.27	0.42
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	2.01	0.42
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.55	0.42
35:BV:31:TYR:O	35:BV:92:VAL:HA	2.20	0.42
35:BV:79:ARG:H	35:BV:79:ARG:HG2	1.63	0.42
37:BL:60:ARG:O	37:BL:61:LEU:HD12	2.20	0.42
40:BH:70:GLU:CD	40:BH:70:GLU:H	2.28	0.42
40:BH:116:ARG:HB2	40:BH:131:SER:N	2.35	0.42
42:BN:18:GLN:O	42:BN:19:ALA:HB2	2.20	0.42
42:BN:30:ARG:HH11	42:BN:30:ARG:HG2	1.85	0.42
46:BU:73:ASN:C	46:BU:75:ALA:N	2.77	0.42
47:BF:2:LYS:HD2	47:BF:100:GLU:HG2	2.01	0.42
48:BG:28:LYS:O	48:BG:30:GLY:N	2.53	0.42
51:BZ:59:ILE:HG22	51:BZ:64:ILE:HG13	2.02	0.42
52:BW:73:PRO:O	52:BW:74:LYS:HB2	2.20	0.42
53:B6:88:LEU:HB3	53:B6:90:LEU:HG	2.01	0.42
1:CA:279:A:H5'	1:CA:281:G:H5'	2.02	0.42
1:CA:489:C:O2'	1:CA:490:C:H5'	2.20	0.42
1:CA:587:G:H4'	7:CH:3:GLN:HA	2.02	0.42
1:CA:766:A:H2'	1:CA:767:A:C8	2.55	0.42
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.54	0.42
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.85	0.42
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.55	0.42
2:CC:71:ARG:O	2:CC:74:ILE:HG22	2.20	0.42
4:CE:44:ARG:HA	4:CE:71:ILE:O	2.20	0.42
5:CF:74:LEU:HA	5:CF:77:THR:OG1	2.20	0.42
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.19	0.42
6:CG:147:ASN:C	6:CG:149:ALA:N	2.77	0.42
7:CH:17:GLN:CD	7:CH:69:ALA:HB1	2.45	0.42
7:CH:20:ASN:HA	7:CH:64:TYR:OH	2.19	0.42
8:CI:51:LEU:CB	8:CI:56:MET:HG2	2.34	0.42
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.46	0.42
16:CQ:75:VAL:CG2	16:CQ:76:ARG:H	2.24	0.42
21:CU:20:ARG:HD2	21:CU:20:ARG:H	1.85	0.42
22:DA:30:C:H2'	22:DA:31:C:H5'	2.01	0.42
22:DA:79:G:O2'	22:DA:80:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:808:G:OP2	37:DL:36:LYS:HE2	2.20	0.42
23:DB:1297:C:H2'	23:DB:1298:C:H6	1.85	0.42
23:DB:1324:G:C6	23:DB:1331:G:C6	3.07	0.42
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.54	0.42
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.82	0.42
23:DB:2380:C:H5''	43:DO:17:LYS:HZ1	1.84	0.42
23:DB:2466:C:N4	23:DB:2467:C:N4	2.68	0.42
23:DB:2593:U:H2'	23:DB:2594:C:C6	2.55	0.42
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	2.01	0.42
26:DD:14:ILE:O	26:DD:14:ILE:HG23	2.20	0.42
26:DD:32:ASN:HB3	26:DD:50:VAL:CG2	2.50	0.42
26:DD:108:ASP:OD2	26:DD:206:ALA:HA	2.20	0.42
26:DD:108:ASP:N	26:DD:204:LYS:O	2.53	0.42
27:DK:61:VAL:O	27:DK:61:VAL:HG23	2.20	0.42
32:D4:16:ILE:HA	32:D4:24:ARG:O	2.20	0.42
35:DV:49:ASN:O	35:DV:52:ALA:HB3	2.19	0.42
35:DV:76:ASP:O	35:DV:89:ILE:HG22	2.20	0.42
35:DV:83:LYS:O	35:DV:85:LYS:N	2.53	0.42
37:DL:120:VAL:HG12	37:DL:121:THR:N	2.35	0.42
42:DN:74:GLU:O	42:DN:77:ALA:HB3	2.20	0.42
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	2.00	0.42
43:DO:74:VAL:O	43:DO:78:VAL:HG22	2.20	0.42
44:DQ:75:TYR:O	44:DQ:76:SER:C	2.62	0.42
46:DU:49:PRO:O	46:DU:50:ALA:HB2	2.20	0.42
47:DF:31:GLU:C	47:DF:32:LYS:HD3	2.44	0.42
48:DG:94:ARG:HB2	48:DG:127:GLN:O	2.20	0.42
51:DZ:35:SER:HA	51:DZ:49:LEU:O	2.19	0.42
51:DZ:56:MET:HA	51:DZ:59:ILE:HG12	2.02	0.42
52:DW:28:GLU:C	52:DW:30:VAL:N	2.77	0.42
53:D6:7:TYR:CE1	53:D6:160:GLU:HG2	2.54	0.42
1:AA:356:A:H1'	1:AA:368:U:O2'	2.20	0.42
1:AA:679:C:O2'	1:AA:680:C:H5'	2.19	0.42
1:AA:907:A:O2'	1:AA:908:A:H5'	2.20	0.42
1:AA:1125:U:OP1	9:AJ:37:ARG:HG3	2.19	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.20	0.42
3:AD:30:LYS:HE2	3:AD:30:LYS:HB2	1.92	0.42
3:AD:31:CYS:O	3:AD:32:LYS:HB2	2.19	0.42
6:AG:42:VAL:O	6:AG:46:LEU:HB2	2.20	0.42
6:AG:80:GLY:C	6:AG:82:SER:N	2.76	0.42
10:AK:97:ARG:O	10:AK:98:ALA:C	2.62	0.42
12:AM:96:VAL:C	12:AM:98:GLY:H	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:29:LYS:HE3	16:AQ:36:PHE:CZ	2.54	0.42
19:AT:47:GLN:O	19:AT:50:PHE:HB3	2.19	0.42
20:AB:121:GLN:NE2	20:AB:122:ASP:N	2.68	0.42
21:AU:34:ARG:NH1	21:AU:39:LYS:HZ2	2.18	0.42
21:AU:34:ARG:CD	21:AU:39:LYS:HZ2	2.29	0.42
22:BA:24:G:O2'	22:BA:25:U:H5''	2.20	0.42
23:BB:562:U:C4	23:BB:2036:C:O4'	2.73	0.42
23:BB:703:U:H2'	23:BB:704:G:O4'	2.20	0.42
23:BB:745:G:O2'	23:BB:748:G:H1'	2.20	0.42
23:BB:807:U:P	37:BL:36:LYS:HD3	2.60	0.42
23:BB:917:A:H3'	23:BB:918:A:H8	1.84	0.42
23:BB:1045:C:O5'	23:BB:1046:A:H5''	2.19	0.42
23:BB:1236:G:H2'	23:BB:1237:A:H8	1.85	0.42
23:BB:1310:G:H1'	23:BB:1611:C:H5'	2.02	0.42
23:BB:1435:G:H2'	23:BB:1436:G:C8	2.54	0.42
23:BB:1476:U:O2'	23:BB:1477:A:P	2.78	0.42
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.54	0.42
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.54	0.42
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.55	0.42
23:BB:1814:G:H2'	23:BB:1815:A:C8	2.55	0.42
23:BB:2346:A:C3'	23:BB:2347:C:H5''	2.43	0.42
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.20	0.42
23:BB:2834:G:H2'	23:BB:2879:A:N6	2.35	0.42
26:BD:29:VAL:C	26:BD:185:ASN:HB3	2.45	0.42
27:BK:12:ASP:HB3	27:BK:85:VAL:HG13	2.01	0.42
29:BE:69:ARG:HH11	29:BE:69:ARG:HG2	1.85	0.42
29:BE:147:LEU:C	29:BE:148:ILE:HG12	2.45	0.42
32:B4:12:ARG:HG3	32:B4:13:ASN:ND2	2.35	0.42
33:B1:50:GLU:O	33:B1:51:ALA:HB2	2.19	0.42
37:BL:84:LYS:C	37:BL:86:GLU:H	2.27	0.42
37:BL:101:ILE:HG22	37:BL:102:GLY:N	2.35	0.42
37:BL:118:THR:HA	37:BL:119:PRO:HD3	1.90	0.42
37:BL:131:ALA:HA	37:BL:134:ALA:CB	2.49	0.42
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	2.02	0.42
40:BH:14:SER:HB3	40:BH:17:ASP:CB	2.48	0.42
40:BH:89:LYS:HZ3	40:BH:89:LYS:CA	2.30	0.42
41:BJ:57:LEU:HD11	41:BJ:129:GLU:H	1.85	0.42
41:BJ:102:GLU:O	41:BJ:106:LYS:HB2	2.20	0.42
46:BU:42:LYS:O	46:BU:57:ILE:HG23	2.20	0.42
46:BU:73:ASN:N	46:BU:73:ASN:HD22	2.17	0.42
47:BF:51:ASN:O	47:BF:55:ASP:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:88:LEU:HD11	48:BG:94:ARG:H	1.83	0.42
50:BT:10:VAL:O	50:BT:12:ARG:N	2.53	0.42
50:BT:29:THR:N	50:BT:91:GLN:HE22	2.10	0.42
50:BT:48:GLN:HA	50:BT:48:GLN:NE2	2.35	0.42
50:BT:67:VAL:C	50:BT:68:LYS:HD3	2.44	0.42
51:BZ:65:ASP:O	51:BZ:69:ALA:HB2	2.20	0.42
53:B6:80:GLU:C	53:B6:82:ALA:N	2.77	0.42
1:CA:86:G:H1'	1:CA:87:C:O4'	2.19	0.42
1:CA:585:G:H2'	1:CA:586:C:O4'	2.19	0.42
1:CA:586:C:C5'	7:CH:81:GLY:HA2	2.49	0.42
1:CA:648:A:O2'	1:CA:649:A:H5'	2.20	0.42
1:CA:659:U:H2'	1:CA:660:C:C6	2.55	0.42
1:CA:1085:U:H3'	1:CA:1086:U:H6	1.84	0.42
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.73	0.42
2:CC:14:VAL:O	2:CC:15:LYS:HD2	2.20	0.42
3:CD:29:THR:CB	3:CD:30:LYS:HD3	2.50	0.42
8:CI:26:LYS:H	8:CI:61:ASP:HB2	1.76	0.42
8:CI:120:ALA:C	8:CI:121:ARG:HG2	2.44	0.42
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	2.19	0.42
9:CJ:65:TYR:HA	13:CN:96:LYS:O	2.20	0.42
10:CK:61:ALA:O	10:CK:64:VAL:HG12	2.20	0.42
13:CN:5:MET:SD	13:CN:60:ARG:NH1	2.93	0.42
13:CN:22:LYS:C	13:CN:25:GLU:CD	2.88	0.42
14:CO:17:ARG:HG2	14:CO:24:SER:CB	2.49	0.42
16:CQ:10:ARG:O	16:CQ:22:VAL:HG13	2.20	0.42
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.31	0.42
20:CB:168:GLU:O	20:CB:169:HIS:C	2.63	0.42
21:CU:11:PHE:O	21:CU:11:PHE:CD1	2.67	0.42
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	2.00	0.42
22:DA:16:G:C5	22:DA:69:G:C2	3.08	0.42
23:DB:69:C:H2'	23:DB:70:G:C8	2.55	0.42
23:DB:170:U:O2'	23:DB:171:U:H5'	2.19	0.42
23:DB:416:U:O2'	23:DB:417:C:H5'	2.19	0.42
23:DB:593:U:H2'	23:DB:594:U:C5	2.54	0.42
23:DB:958:U:C5'	38:DM:14:LYS:HZ1	2.32	0.42
23:DB:1068:G:C6	23:DB:1069:A:N6	2.88	0.42
23:DB:1099:G:P	24:DI:4:VAL:N	2.83	0.42
23:DB:1146:C:H2'	23:DB:1147:A:C8	2.55	0.42
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.47	0.42
23:DB:1190:G:H5''	37:DL:32:GLY:C	2.45	0.42
23:DB:1199:U:C5'	44:DQ:4:LYS:HD3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1286:A:H1'	23:DB:1288:G:OP2	2.20	0.42
23:DB:1468:U:H2'	23:DB:1522:A:N6	2.35	0.42
23:DB:1565:C:H5''	25:DC:17:LYS:NZ	2.35	0.42
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.20	0.42
23:DB:1956:U:C2'	23:DB:1957:C:H5'	2.49	0.42
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.19	0.42
23:DB:2143:C:H2'	23:DB:2144:G:O4'	2.20	0.42
23:DB:2336:A:O2'	23:DB:2337:G:P	2.78	0.42
23:DB:2727:A:O3'	27:DK:70:ARG:NH2	2.49	0.42
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.84	0.42
23:DB:2823:A:C2'	23:DB:2824:C:H5'	2.50	0.42
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.47	0.42
24:DI:131:THR:O	24:DI:135:MET:HG3	2.19	0.42
25:DC:23:LEU:HA	25:DC:23:LEU:HD12	1.86	0.42
25:DC:90:ILE:HD13	25:DC:90:ILE:HA	1.89	0.42
28:DP:101:GLU:N	28:DP:101:GLU:OE2	2.52	0.42
30:DY:17:PRO:C	30:DY:19:HIS:H	2.28	0.42
32:D4:1:MET:HG3	32:D4:34:LYS:HG2	2.02	0.42
33:D1:38:PHE:HB2	33:D1:45:HIS:CE1	2.55	0.42
35:DV:53:LYS:HE2	35:DV:53:LYS:HA	2.01	0.42
35:DV:72:VAL:CG2	35:DV:91:PHE:HB3	2.45	0.42
38:DM:43:ALA:C	38:DM:45:GLN:N	2.73	0.42
41:DJ:40:HIS:ND1	41:DJ:41:LYS:N	2.68	0.42
42:DN:62:ASN:O	42:DN:80:PHE:HZ	2.03	0.42
44:DQ:81:GLY:O	44:DQ:82:LEU:C	2.62	0.42
45:DS:68:ASP:OD1	45:DS:68:ASP:N	2.51	0.42
46:DU:20:LYS:HB2	46:DU:20:LYS:HZ3	1.84	0.42
46:DU:73:ASN:N	46:DU:73:ASN:HD22	2.17	0.42
50:DT:69:ARG:HE	50:DT:70:HIS:H	1.67	0.42
1:AA:182:A:HO2'	1:AA:183:C:H3'	1.84	0.41
1:AA:296:U:O2'	1:AA:556:C:O2	2.38	0.41
1:AA:605:U:H2'	1:AA:606:G:H8	1.84	0.41
1:AA:843:U:OP2	1:AA:843:U:H4'	2.19	0.41
1:AA:878:A:H1'	7:AH:3:GLN:CD	2.45	0.41
1:AA:903:G:H2'	1:AA:904:U:H6	1.85	0.41
1:AA:1180:A:H5''	1:AA:1181:G:OP2	2.19	0.41
1:AA:1201:A:H5''	1:AA:1201:A:H8	1.85	0.41
2:AC:53:ARG:HB3	2:AC:68:HIS:HB2	2.02	0.41
2:AC:71:ARG:O	2:AC:74:ILE:HG22	2.20	0.41
3:AD:102:TYR:HE1	3:AD:109:THR:HA	1.85	0.41
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.20	0.41
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.20	0.41
6:AG:85:GLN:HA	6:AG:85:GLN:OE1	2.20	0.41
6:AG:147:ASN:C	6:AG:149:ALA:N	2.77	0.41
8:AI:60:LEU:HD23	8:AI:60:LEU:N	2.35	0.41
12:AM:93:GLY:O	12:AM:108:ARG:HG3	2.20	0.41
13:AN:12:ARG:NE	13:AN:58:ARG:NH1	2.68	0.41
14:AO:25:THR:O	14:AO:29:VAL:HG23	2.20	0.41
18:AS:52:ASN:CG	18:AS:53:GLY:H	2.28	0.41
19:AT:28:ARG:HA	19:AT:31:ILE:HD12	2.02	0.41
20:AB:163:ILE:CG2	20:AB:164:ASP:H	2.22	0.41
22:BA:15:A:N3	22:BA:15:A:O4'	2.53	0.41
23:BB:303:G:H2'	23:BB:304:U:C6	2.55	0.41
23:BB:457:A:N1	23:BB:470:A:H5''	2.35	0.41
23:BB:673:C:C2'	23:BB:674:G:H5'	2.49	0.41
23:BB:960:A:H61	38:BM:82:MET:HE2	1.85	0.41
23:BB:1058:U:O2'	23:BB:1059:G:H5'	2.20	0.41
23:BB:1256:G:H21	29:BE:77:ILE:HG22	1.85	0.41
23:BB:1260:A:O2'	23:BB:1261:C:H5'	2.20	0.41
23:BB:1441:G:O2'	23:BB:1442:U:H5'	2.19	0.41
23:BB:1877:A:H2'	23:BB:1878:G:C8	2.55	0.41
23:BB:2076:U:O2	23:BB:2076:U:O4'	2.38	0.41
23:BB:2863:C:O2'	23:BB:2864:G:H5'	2.19	0.41
24:BI:48:ILE:O	24:BI:49:GLU:HB3	2.20	0.41
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.50	0.41
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	2.02	0.41
26:BD:109:VAL:HG11	26:BD:193:VAL:HG11	2.02	0.41
27:BK:38:ILE:HD13	27:BK:61:VAL:HG12	2.02	0.41
27:BK:88:ASN:HB3	27:BK:92:GLU:O	2.20	0.41
28:BP:47:ILE:HG13	28:BP:48:ALA:N	2.35	0.41
28:BP:97:TYR:O	28:BP:100:ARG:HD3	2.20	0.41
37:BL:101:ILE:HG22	37:BL:105:ILE:CG1	2.50	0.41
37:BL:120:VAL:HG12	37:BL:121:THR:N	2.35	0.41
38:BM:105:MET:HB2	38:BM:117:PHE:CE2	2.56	0.41
38:BM:108:VAL:CG1	38:BM:112:LEU:HB3	2.45	0.41
40:BH:26:ALA:C	40:BH:28:ASN:N	2.75	0.41
40:BH:40:THR:O	40:BH:41:LYS:HB2	2.20	0.41
42:BN:25:ALA:HB1	42:BN:48:VAL:CG1	2.50	0.41
43:BO:109:ALA:O	43:BO:113:ALA:N	2.52	0.41
44:BQ:70:GLN:NE2	44:BQ:70:GLN:HA	2.34	0.41
48:BG:10:VAL:HG13	48:BG:14:VAL:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:39:LEU:CA	49:BR:53:PHE:HA	2.49	0.41
49:BR:51:VAL:O	49:BR:52:PRO:C	2.62	0.41
51:BZ:41:GLU:CD	51:BZ:41:GLU:C	2.87	0.41
52:BW:28:GLU:O	52:BW:30:VAL:N	2.53	0.41
1:CA:296:U:O2'	1:CA:556:C:O2	2.36	0.41
1:CA:464:U:H2'	1:CA:466:A:OP2	2.20	0.41
1:CA:467:U:O2	1:CA:467:U:H2'	2.19	0.41
1:CA:643:C:H2'	1:CA:644:U:H6	1.84	0.41
1:CA:852:G:H2'	1:CA:853:C:H6	1.85	0.41
1:CA:1028:C:H3'	1:CA:1029:U:C6	2.54	0.41
1:CA:1108:G:H5'	2:CC:175:HIS:ND1	2.34	0.41
1:CA:1201:A:O2'	1:CA:1202:U:OP2	2.29	0.41
2:CC:10:ARG:CZ	2:CC:181:ILE:HD13	2.50	0.41
3:CD:47:LEU:HD21	3:CD:55:ARG:HD2	2.01	0.41
5:CF:100:SER:HA	17:CR:23:LYS:CD	2.49	0.41
6:CG:47:GLU:OE1	6:CG:57:GLU:HG2	2.19	0.41
8:CI:46:VAL:CG2	8:CI:47:VAL:N	2.83	0.41
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.20	0.41
12:CM:33:LEU:HD22	12:CM:38:ILE:HB	2.02	0.41
19:CT:26:MET:SD	19:CT:26:MET:C	3.03	0.41
20:CB:68:PHE:N	20:CB:68:PHE:CD1	2.87	0.41
20:CB:122:ASP:CG	20:CB:123:GLY:N	2.77	0.41
23:DB:79:C:O2'	23:DB:346:A:C8	2.73	0.41
23:DB:307:G:N1	23:DB:310:A:OP2	2.51	0.41
23:DB:470:A:H2'	23:DB:471:A:C8	2.55	0.41
23:DB:810:U:O4	37:DL:30:THR:HG22	2.20	0.41
23:DB:827:U:H5'	23:DB:828:U:O5'	2.21	0.41
23:DB:1397:U:H5''	23:DB:1398:C:H5	1.85	0.41
23:DB:1539:U:O2	23:DB:1539:U:H2'	2.21	0.41
23:DB:1769:U:O2'	23:DB:1770:G:H5'	2.20	0.41
23:DB:2467:C:O2'	23:DB:2468:A:H5'	2.20	0.41
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.19	0.41
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.50	0.41
23:DB:2848:G:H22	23:DB:2867:G:N2	2.16	0.41
25:DC:6:LYS:O	25:DC:8:THR:N	2.48	0.41
26:DD:13:ARG:HG3	26:DD:15:PHE:CE1	2.54	0.41
27:DK:113:MET:O	27:DK:114:LYS:C	2.63	0.41
29:DE:170:ARG:HH12	29:DE:176:ASP:CB	2.33	0.41
31:D0:38:LEU:HD13	31:D0:41:HIS:CE1	2.54	0.41
34:D3:50:SER:C	34:D3:52:GLY:N	2.78	0.41
40:DH:42:LYS:O	40:DH:45:GLU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:70:THR:HG22	41:DJ:90:GLU:OE2	2.19	0.41
45:DS:4:ILE:CG2	45:DS:106:VAL:HG13	2.50	0.41
45:DS:95:ARG:C	45:DS:96:ILE:HG22	2.44	0.41
47:DF:29:ARG:CD	47:DF:29:ARG:H	2.33	0.41
48:DG:46:ASP:N	48:DG:46:ASP:OD2	2.53	0.41
49:DR:49:ILE:HD13	49:DR:53:PHE:N	2.35	0.41
51:DZ:38:PHE:CE2	51:DZ:51:VAL:HG21	2.34	0.41
51:DZ:59:ILE:HG22	51:DZ:64:ILE:HG13	2.02	0.41
1:AA:182:A:H1'	1:AA:183:C:H5	1.85	0.41
1:AA:212:G:H2'	1:AA:213:G:C8	2.55	0.41
1:AA:215:C:O2'	1:AA:216:U:H5'	2.20	0.41
1:AA:239:U:H6	1:AA:239:U:H5'	1.85	0.41
1:AA:626:G:H2'	1:AA:627:G:H8	1.85	0.41
1:AA:657:U:H1'	14:AO:22:THR:O	2.19	0.41
1:AA:728:A:H2'	1:AA:729:A:C8	2.55	0.41
1:AA:734:G:H2'	1:AA:735:C:H6	1.85	0.41
1:AA:766:A:H2'	1:AA:767:A:C8	2.55	0.41
1:AA:812:G:O2'	1:AA:813:U:C6	2.61	0.41
1:AA:846:G:N3	1:AA:846:G:H2'	2.35	0.41
1:AA:852:G:H2'	1:AA:853:C:H6	1.85	0.41
1:AA:909:A:H2'	1:AA:910:C:O4'	2.19	0.41
1:AA:982:U:OP2	13:AN:60:ARG:NH1	2.53	0.41
1:AA:1226:C:H5'	12:AM:94:LEU:CD1	2.49	0.41
1:AA:1505:G:H5''	1:AA:1506:U:O5'	2.20	0.41
2:AC:106:ARG:O	2:AC:106:ARG:HG2	2.19	0.41
3:AD:1:ALA:O	3:AD:2:ARG:HG2	2.19	0.41
3:AD:194:ILE:O	3:AD:194:ILE:HG23	2.19	0.41
4:AE:111:ARG:HG3	4:AE:112:ALA:N	2.35	0.41
4:AE:151:MET:O	4:AE:154:ALA:HB3	2.20	0.41
7:AH:17:GLN:CD	7:AH:69:ALA:HB1	2.45	0.41
11:AL:23:LEU:HG	11:AL:24:GLU:CG	2.49	0.41
16:AQ:52:CYS:HB2	16:AQ:58:VAL:HG11	2.02	0.41
20:AB:68:PHE:N	20:AB:68:PHE:HD1	2.18	0.41
20:AB:125:PHE:HD2	20:AB:126:ASP:H	1.66	0.41
22:BA:109:A:H2'	22:BA:110:C:O4'	2.20	0.41
23:BB:26:G:H1'	23:BB:515:A:N6	2.35	0.41
23:BB:534:U:H5'	44:BQ:41:ALA:CB	2.50	0.41
23:BB:709:U:H2'	23:BB:710:U:H6	1.77	0.41
23:BB:936:A:H2'	23:BB:937:C:H6	1.84	0.41
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.55	0.41
23:BB:1081:U:O2'	24:BI:118:GLY:HA2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1241:A:N3	23:BB:1241:A:H5'	2.35	0.41
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.55	0.41
23:BB:2142:A:H2'	23:BB:2143:C:C1'	2.49	0.41
23:BB:2456:C:H2'	23:BB:2457:U:O4'	2.20	0.41
23:BB:2472:G:H3'	23:BB:2475:C:N4	2.35	0.41
23:BB:2698:U:H2'	23:BB:2699:C:H6	1.83	0.41
23:BB:2733:A:O2'	23:BB:2734:A:H5'	2.19	0.41
25:BC:23:LEU:HD12	25:BC:23:LEU:HA	1.86	0.41
25:BC:32:LEU:CD2	25:BC:63:ILE:HG13	2.50	0.41
25:BC:69:ASN:HB3	25:BC:70:LYS:H	1.58	0.41
25:BC:76:VAL:O	25:BC:78:GLU:N	2.53	0.41
25:BC:106:PRO:HB3	25:BC:141:HIS:CE1	2.56	0.41
25:BC:156:SER:HB3	25:BC:159:THR:HG21	2.02	0.41
27:BK:115:ILE:HG23	27:BK:116:ILE:H	1.83	0.41
32:B4:7:VAL:O	32:B4:8:LYS:O	2.38	0.41
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.21	0.41
38:BM:31:PHE:CZ	38:BM:110:GLU:HA	2.55	0.41
39:BX:27:ASN:HA	39:BX:30:MET:HG2	2.02	0.41
40:BH:9:VAL:O	40:BH:10:ALA:O	2.38	0.41
40:BH:73:ASN:ND2	40:BH:74:ALA:N	2.62	0.41
40:BH:124:THR:O	40:BH:125:THR:HB	2.20	0.41
41:BJ:9:GLU:CD	41:BJ:9:GLU:N	2.77	0.41
46:BU:51:LEU:N	46:BU:53:GLN:NE2	2.68	0.41
47:BF:31:GLU:C	47:BF:32:LYS:HD3	2.44	0.41
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.84	0.41
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	2.02	0.41
48:BG:96:ALA:HB3	48:BG:103:ASN:O	2.20	0.41
53:B6:31:GLY:N	53:B6:183:ILE:HA	2.35	0.41
53:B6:142:LYS:O	53:B6:146:GLU:HB2	2.20	0.41
1:CA:27:G:H2'	1:CA:28:A:H8	1.85	0.41
1:CA:370:C:H2'	1:CA:371:A:H8	1.85	0.41
1:CA:768:A:H5'	1:CA:1524:C:H1'	2.01	0.41
1:CA:781:A:C2'	1:CA:782:A:H5'	2.45	0.41
1:CA:835:U:O2'	1:CA:836:G:H5'	2.20	0.41
1:CA:903:G:H2'	1:CA:904:U:H6	1.85	0.41
1:CA:1003:G:H21	1:CA:1005:A:C5'	2.32	0.41
1:CA:1019:A:H2'	1:CA:1020:G:H8	1.81	0.41
1:CA:1170:A:H5''	20:CB:138:ARG:HH22	1.84	0.41
1:CA:1380:U:O4	6:CG:2:ARG:HB2	2.20	0.41
1:CA:1505:G:H5''	1:CA:1506:U:O5'	2.20	0.41
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:46:GLN:HG3	5:CF:47:LEU:N	2.35	0.41
7:CH:63:LYS:CD	7:CH:70:VAL:HG21	2.50	0.41
10:CK:16:SER:N	10:CK:77:GLY:O	2.45	0.41
13:CN:30:ILE:O	13:CN:32:ASP:N	2.47	0.41
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.21	0.41
20:CB:53:LEU:H	20:CB:53:LEU:CD1	2.34	0.41
20:CB:204:ASP:O	20:CB:205:ALA:HB3	2.20	0.41
23:DB:195:A:H1'	23:DB:250:G:N2	2.35	0.41
23:DB:199:A:O2'	23:DB:200:U:H5'	2.20	0.41
23:DB:262:A:H2'	23:DB:263:G:O4'	2.19	0.41
23:DB:685:A:H1'	23:DB:688:U:O4	2.20	0.41
23:DB:1131:G:N2	23:DB:2024:G:N2	2.67	0.41
23:DB:1813:G:H4'	25:DC:42:ARG:O	2.20	0.41
23:DB:1822:C:H2'	23:DB:1823:G:H8	1.84	0.41
23:DB:2143:C:H3'	23:DB:2144:G:C8	2.54	0.41
23:DB:2262:U:H2'	23:DB:2263:C:H6	1.86	0.41
23:DB:2302:U:O2'	23:DB:2303:G:H5'	2.19	0.41
23:DB:2334:U:H5'	43:DO:12:THR:HB	2.03	0.41
23:DB:2583:G:O2'	23:DB:2584:U:H5'	2.20	0.41
23:DB:2727:A:O2'	27:DK:70:ARG:NH2	2.53	0.41
23:DB:2798:U:H1'	23:DB:2800:A:C6	2.53	0.41
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.35	0.41
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.50	0.41
26:DD:21:SER:HB2	27:DK:73:ASP:HA	2.02	0.41
26:DD:159:LYS:O	26:DD:160:LYS:C	2.62	0.41
27:DK:3:GLN:CG	27:DK:4:GLU:N	2.83	0.41
28:DP:3:ILE:CD1	28:DP:7:LEU:HD11	2.49	0.41
29:DE:3:LEU:HD23	29:DE:14:VAL:CG2	2.50	0.41
29:DE:108:ILE:HG12	37:DL:2:ARG:NH2	2.35	0.41
35:DV:70:ILE:CG1	35:DV:71:LYS:N	2.84	0.41
37:DL:55:MET:HG3	37:DL:59:ARG:CB	2.50	0.41
38:DM:66:ARG:CB	38:DM:101:VAL:HG13	2.50	0.41
38:DM:82:MET:O	38:DM:83:GLY:C	2.63	0.41
39:DX:36:GLN:HB2	39:DX:37:LEU:H	1.65	0.41
40:DH:83:LYS:HG2	40:DH:149:GLU:CG	2.51	0.41
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	2.02	0.41
45:DS:25:ARG:HH21	45:DS:74:ILE:HG23	1.85	0.41
46:DU:90:LYS:HB3	46:DU:90:LYS:HE2	1.90	0.41
47:DF:3:LEU:HD13	47:DF:3:LEU:O	2.20	0.41
52:DW:39:GLN:NE2	52:DW:43:LYS:HG2	2.35	0.41
53:D6:61:PRO:HD3	53:D6:67:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:168:PHE:O	53:D6:169:ILE:C	2.64	0.41
1:AA:85:U:H4'	1:AA:86:G:C5'	2.50	0.41
1:AA:204:G:H2'	1:AA:205:A:C8	2.55	0.41
1:AA:263:A:OP1	19:AT:73:ARG:NH1	2.53	0.41
1:AA:464:U:H2'	1:AA:466:A:OP2	2.20	0.41
1:AA:476:U:H2'	1:AA:477:C:O4'	2.21	0.41
1:AA:526:C:OP2	11:AL:87:LYS:HE3	2.19	0.41
1:AA:768:A:H5'	1:AA:1524:C:H1'	2.03	0.41
1:AA:782:A:H2'	1:AA:783:C:O4'	2.20	0.41
1:AA:812:G:OP1	1:AA:812:G:H4'	2.20	0.41
1:AA:846:G:H2'	1:AA:847:G:C8	2.55	0.41
1:AA:1032:G:H2'	1:AA:1033:G:H5'	2.02	0.41
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.84	0.41
3:AD:117:VAL:HA	3:AD:122:ILE:HG12	2.01	0.41
3:AD:197:HIS:HA	3:AD:200:VAL:HG13	2.03	0.41
4:AE:30:PHE:CD2	4:AE:30:PHE:N	2.88	0.41
4:AE:148:SER:HB2	4:AE:149:PRO:HD2	2.02	0.41
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.20	0.41
5:AF:88:MET:HE2	5:AF:90:MET:SD	2.61	0.41
6:AG:107:ALA:HA	6:AG:110:ARG:HD2	2.00	0.41
7:AH:117:GLN:C	7:AH:119:GLY:N	2.77	0.41
9:AJ:17:LEU:HD11	9:AJ:95:GLY:HA3	2.03	0.41
10:AK:13:LYS:HD2	10:AK:76:TYR:CE2	2.56	0.41
12:AM:78:ARG:HH11	12:AM:78:ARG:HG2	1.86	0.41
14:AO:57:LEU:HD11	23:BB:715:A:N6	2.35	0.41
15:AP:8:ARG:HH11	15:AP:8:ARG:HG2	1.86	0.41
15:AP:54:LEU:O	15:AP:55:ASP:C	2.64	0.41
16:AQ:30:HIS:CG	16:AQ:33:TYR:HB2	2.55	0.41
20:AB:103:TRP:CH2	20:AB:107:ARG:HD2	2.54	0.41
23:BB:109:C:C5'	23:BB:348:A:H4'	2.50	0.41
23:BB:308:G:O2'	46:BU:16:LYS:NZ	2.45	0.41
23:BB:465:G:H2'	23:BB:466:A:C8	2.55	0.41
23:BB:812:C:O2'	23:BB:813:U:H5'	2.20	0.41
23:BB:911:A:N6	38:BM:9:PHE:HB3	2.35	0.41
23:BB:1139:G:H2'	23:BB:1140:C:H6	1.86	0.41
23:BB:1146:C:H2'	23:BB:1147:A:C8	2.56	0.41
23:BB:1220:G:O2'	23:BB:1221:C:H5'	2.21	0.41
23:BB:1314:C:O2'	23:BB:1315:C:H5'	2.20	0.41
23:BB:1404:C:H2'	23:BB:1405:U:H6	1.85	0.41
23:BB:1805:A:H2'	23:BB:1806:C:C6	2.55	0.41
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2456:C:H6	23:BB:2456:C:O5'	2.03	0.41
23:BB:2472:G:C3'	23:BB:2475:C:H42	2.33	0.41
23:BB:2806:C:H2'	23:BB:2807:U:O4'	2.20	0.41
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.50	0.41
25:BC:14:HIS:O	25:BC:203:VAL:HG11	2.20	0.41
25:BC:255:LYS:C	25:BC:256:THR:HG23	2.44	0.41
27:BK:70:ARG:CB	27:BK:76:VAL:HG22	2.45	0.41
28:BP:26:GLU:HG3	28:BP:43:GLU:HG2	2.02	0.41
28:BP:31:VAL:HG13	28:BP:32:VAL:N	2.35	0.41
28:BP:50:ARG:HB3	28:BP:57:ALA:O	2.19	0.41
29:BE:3:LEU:O	29:BE:12:LEU:HB2	2.20	0.41
30:BY:7:THR:O	30:BY:54:VAL:HA	2.20	0.41
34:B3:30:HIS:O	34:B3:31:ILE:C	2.62	0.41
38:BM:69:PRO:HB2	38:BM:92:TRP:HB3	2.02	0.41
40:BH:133:GLN:HA	40:BH:139:PHE:HA	2.01	0.41
42:BN:62:ASN:N	42:BN:62:ASN:ND2	2.68	0.41
42:BN:93:GLY:C	42:BN:95:THR:N	2.78	0.41
42:BN:108:ALA:O	42:BN:110:MET:HE3	2.20	0.41
43:BO:25:ARG:HG2	43:BO:25:ARG:HH21	1.84	0.41
46:BU:23:LYS:HD2	46:BU:23:LYS:H	1.85	0.41
47:BF:31:GLU:O	47:BF:31:GLU:HG3	2.19	0.41
47:BF:141:ASP:CG	47:BF:144:LYS:HD3	2.46	0.41
48:BG:163:TYR:C	48:BG:165:ASP:N	2.78	0.41
1:CA:27:G:H2'	1:CA:28:A:C8	2.55	0.41
1:CA:370:C:H2'	1:CA:371:A:C8	2.55	0.41
1:CA:1147:C:H2'	1:CA:1148:U:C6	2.54	0.41
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.20	0.41
1:CA:1470:U:O2'	1:CA:1471:U:H5'	2.20	0.41
1:CA:1499:A:H2'	1:CA:1500:A:H8	1.84	0.41
2:CC:16:PRO:HG2	2:CC:53:ARG:NH2	2.35	0.41
6:CG:107:ALA:HA	6:CG:110:ARG:HD2	2.02	0.41
7:CH:11:THR:HG22	7:CH:14:ARG:NH1	2.30	0.41
8:CI:56:MET:CG	8:CI:57:VAL:N	2.83	0.41
12:CM:22:TYR:HB3	12:CM:69:ARG:NH1	2.35	0.41
12:CM:93:GLY:O	12:CM:108:ARG:HG3	2.20	0.41
13:CN:26:LEU:HD23	13:CN:27:LYS:N	2.27	0.41
14:CO:7:ALA:O	14:CO:11:ILE:HG22	2.20	0.41
20:CB:152:ASP:O	20:CB:153:MET:HB2	2.19	0.41
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.28	0.41
23:DB:495:G:H21	45:DS:61:ASN:ND2	2.16	0.41
23:DB:900:A:O2'	23:DB:901:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:936:A:H2'	23:DB:937:C:H6	1.83	0.41
23:DB:1036:G:C5	23:DB:1120:G:C6	3.09	0.41
23:DB:1137:G:O2'	23:DB:1138:G:H5'	2.20	0.41
23:DB:1353:A:C8	23:DB:1378:A:N6	2.88	0.41
23:DB:1559:U:H3'	23:DB:1560:G:C5'	2.49	0.41
23:DB:1687:G:O2'	23:DB:1688:U:H5'	2.20	0.41
23:DB:1928:A:H2'	23:DB:1929:G:O4'	2.20	0.41
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.55	0.41
23:DB:2026:U:C2	23:DB:2027:G:C8	3.09	0.41
23:DB:2526:G:H2'	23:DB:2527:C:H6	1.86	0.41
23:DB:2598:A:OP1	25:DC:233:GLY:CA	2.67	0.41
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.20	0.41
23:DB:2624:G:H1'	31:D0:18:HIS:CE1	2.55	0.41
23:DB:2642:G:O2'	23:DB:2643:G:H5'	2.20	0.41
23:DB:2677:G:H2'	23:DB:2678:C:H6	1.85	0.41
23:DB:2702:G:H2'	23:DB:2703:C:C6	2.55	0.41
23:DB:2772:C:H4'	26:DD:171:THR:HG22	2.01	0.41
23:DB:2883:A:OP1	31:D0:48:TYR:HE1	2.03	0.41
24:DI:63:ASP:C	24:DI:65:SER:H	2.27	0.41
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.44	0.41
25:DC:180:MET:HB2	25:DC:268:ARG:CB	2.50	0.41
26:DD:12:THR:O	26:DD:24:VAL:HG12	2.19	0.41
28:DP:52:ARG:HG2	28:DP:52:ARG:NH1	2.31	0.41
28:DP:110:LYS:HD2	28:DP:110:LYS:H	1.86	0.41
29:DE:150:THR:HG21	29:DE:153:LEU:CA	2.43	0.41
31:D0:51:ARG:O	31:D0:52:LYS:HB2	2.20	0.41
32:D4:9:LYS:O	32:D4:10:LEU:HD23	2.21	0.41
34:D3:22:LYS:HA	34:D3:48:MET:CA	2.47	0.41
35:DV:66:ASP:CG	35:DV:68:LYS:HE2	2.44	0.41
40:DH:41:LYS:HA	40:DH:44:ILE:CD1	2.49	0.41
41:DJ:25:LEU:HA	41:DJ:28:LEU:HD22	2.01	0.41
42:DN:59:SER:C	42:DN:61:ALA:N	2.76	0.41
44:DQ:94:LEU:CD2	49:DR:11:GLN:HB2	2.50	0.41
47:DF:141:ASP:O	47:DF:144:LYS:N	2.54	0.41
48:DG:93:TYR:CD1	48:DG:106:LEU:HB2	2.55	0.41
49:DR:7:SER:OG	49:DR:8:GLY:N	2.53	0.41
50:DT:9:LYS:C	50:DT:9:LYS:HD2	2.44	0.41
50:DT:10:VAL:O	50:DT:11:LEU:C	2.63	0.41
52:DW:58:LEU:N	52:DW:58:LEU:HD22	2.35	0.41
53:D6:14:MET:HE2	53:D6:129:ILE:CG2	2.50	0.41
1:AA:191:G:H8	1:AA:191:G:OP2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:513:C:H2'	1:AA:514:C:C6	2.55	0.41
1:AA:659:U:H2'	1:AA:660:C:C6	2.54	0.41
1:AA:663:A:H2'	1:AA:664:G:C8	2.54	0.41
1:AA:978:A:H5'	1:AA:1362:A:H62	1.85	0.41
1:AA:1342:C:O2'	8:AI:125:GLN:HB2	2.20	0.41
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.31	0.41
5:AF:46:GLN:CG	5:AF:47:LEU:N	2.83	0.41
5:AF:69:GLU:O	5:AF:73:GLU:HG2	2.20	0.41
7:AH:1:SER:O	7:AH:3:GLN:N	2.53	0.41
7:AH:11:THR:HG22	7:AH:14:ARG:NH1	2.32	0.41
7:AH:46:GLU:N	7:AH:63:LYS:HB2	2.36	0.41
8:AI:87:MET:SD	8:AI:87:MET:C	3.03	0.41
11:AL:33:CYS:O	11:AL:75:GLU:O	2.37	0.41
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.29	0.41
14:AO:25:THR:HG21	14:AO:70:LEU:HD23	2.03	0.41
19:AT:82:ILE:O	19:AT:85:LEU:HD22	2.20	0.41
20:AB:138:ARG:HA	20:AB:141:GLU:OE1	2.21	0.41
21:AU:23:GLU:HA	21:AU:27:VAL:HG21	2.02	0.41
22:BA:3:C:H2'	22:BA:4:C:O4'	2.20	0.41
22:BA:51:G:H2'	22:BA:52:A:O5'	2.21	0.41
22:BA:64:G:H2'	22:BA:65:U:H6	1.85	0.41
23:BB:273:G:C2'	23:BB:274:C:H5'	2.50	0.41
23:BB:307:G:N2	23:BB:309:A:H3'	2.34	0.41
23:BB:323:C:H6	23:BB:1205:A:N1	2.18	0.41
23:BB:381:G:H5''	51:BZ:16:ASN:ND2	2.35	0.41
23:BB:638:G:H2'	23:BB:639:U:C6	2.55	0.41
23:BB:665:U:H2'	23:BB:666:A:C8	2.53	0.41
23:BB:851:C:H2'	23:BB:852:U:C6	2.55	0.41
23:BB:972:A:OP2	23:BB:974:G:H5''	2.20	0.41
23:BB:1559:U:H3'	23:BB:1560:G:C5'	2.50	0.41
23:BB:1930:G:N2	23:BB:1969:A:O5'	2.53	0.41
23:BB:1940:U:H5''	23:BB:1940:U:O2	2.20	0.41
23:BB:2395:C:H2'	23:BB:2396:G:O4'	2.21	0.41
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	2.21	0.41
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.21	0.41
26:BD:108:ASP:N	26:BD:204:LYS:O	2.53	0.41
26:BD:116:LYS:HB2	26:BD:165:MET:HB3	2.02	0.41
26:BD:122:VAL:N	26:BD:127:PHE:HB2	2.35	0.41
27:BK:3:GLN:CG	27:BK:4:GLU:N	2.83	0.41
27:BK:7:MET:HE1	27:BK:44:LYS:HG3	2.02	0.41
29:BE:3:LEU:HD23	29:BE:14:VAL:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B0:41:HIS:CD2	31:B0:41:HIS:N	2.86	0.41
35:BV:83:LYS:O	35:BV:85:LYS:N	2.53	0.41
37:BL:78:ARG:NH2	37:BL:78:ARG:HB3	2.35	0.41
38:BM:25:ASP:OD2	38:BM:25:ASP:N	2.53	0.41
40:BH:65:ALA:HB3	40:BH:135:HIS:CE1	2.54	0.41
40:BH:89:LYS:HB3	40:BH:90:LEU:H	1.58	0.41
40:BH:124:THR:CG2	40:BH:125:THR:H	2.32	0.41
41:BJ:35:ARG:HG3	41:BJ:52:ASP:OD1	2.21	0.41
42:BN:96:ARG:HG2	42:BN:98:LEU:HD22	2.02	0.41
43:BO:11:ALA:C	43:BO:13:ARG:N	2.78	0.41
44:BQ:91:ARG:HH12	49:BR:10:LYS:CA	2.34	0.41
46:BU:88:ASP:CG	46:BU:89:GLY:H	2.29	0.41
47:BF:32:LYS:CA	47:BF:95:MET:HE2	2.48	0.41
47:BF:41:GLU:O	47:BF:43:ILE:N	2.53	0.41
51:BZ:64:ILE:H	51:BZ:64:ILE:CD1	2.24	0.41
51:BZ:72:ARG:HB3	51:BZ:78:TYR:HE2	1.86	0.41
1:CA:124:C:O2'	1:CA:125:U:H5'	2.20	0.41
1:CA:410:G:H2'	1:CA:429:U:C5	2.55	0.41
1:CA:940:C:H2'	1:CA:941:G:C8	2.56	0.41
1:CA:951:G:O2'	1:CA:952:U:H5'	2.20	0.41
1:CA:1057:G:O2'	1:CA:1058:G:H5'	2.19	0.41
1:CA:1060:U:H5''	9:CJ:53:ILE:CD1	2.50	0.41
1:CA:1354:U:O2'	1:CA:1355:G:H5'	2.21	0.41
1:CA:1446:A:H2'	1:CA:1447:A:C8	2.55	0.41
3:CD:25:ARG:HH11	3:CD:25:ARG:HB2	1.84	0.41
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.35	0.41
12:CM:12:LYS:HB3	12:CM:13:HIS:H	1.69	0.41
13:CN:5:MET:SD	13:CN:8:ARG:HD3	2.60	0.41
13:CN:72:PHE:O	13:CN:73:LEU:HD23	2.19	0.41
20:CB:30:ILE:C	20:CB:41:ASN:HB2	2.46	0.41
22:DA:15:A:N3	22:DA:15:A:O4'	2.53	0.41
22:DA:109:A:H2'	22:DA:110:C:O4'	2.20	0.41
23:DB:76:C:HO2'	39:DX:55:THR:CB	2.33	0.41
23:DB:82:U:H2'	23:DB:83:A:C8	2.55	0.41
23:DB:205:G:HO2'	23:DB:206:U:P	2.43	0.41
23:DB:532:A:N3	23:DB:532:A:C2'	2.82	0.41
23:DB:532:A:HO2'	23:DB:2021:C:H5	1.65	0.41
23:DB:543:G:H2'	23:DB:544:C:H4'	2.02	0.41
23:DB:553:G:H2'	23:DB:554:U:O4'	2.20	0.41
23:DB:833:A:H1'	37:DL:52:GLY:N	2.35	0.41
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1250:G:OP2	37:DL:21:ARG:NH2	2.53	0.41
23:DB:1289:C:O2'	23:DB:1290:C:H5'	2.20	0.41
23:DB:2144:G:C2'	23:DB:2145:C:H5'	2.51	0.41
23:DB:2182:U:H2'	23:DB:2183:A:H8	1.84	0.41
23:DB:2217:G:H2'	23:DB:2218:G:H8	1.84	0.41
23:DB:2300:C:O2'	23:DB:2301:C:H5'	2.19	0.41
23:DB:2645:G:H4'	23:DB:2732:G:H2'	2.03	0.41
23:DB:2654:A:N1	23:DB:2665:A:H5''	2.36	0.41
23:DB:2689:U:H4'	23:DB:2690:U:OP2	2.20	0.41
23:DB:2880:C:H1'	42:DN:93:GLY:H	1.85	0.41
25:DC:43:ASN:N	25:DC:47:ARG:O	2.53	0.41
25:DC:61:TYR:HA	25:DC:85:ASN:CG	2.45	0.41
26:DD:32:ASN:N	26:DD:96:ILE:O	2.52	0.41
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	2.02	0.41
30:DY:7:THR:O	30:DY:54:VAL:HA	2.21	0.41
33:D1:37:LYS:HB2	33:D1:48:TYR:CD2	2.56	0.41
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.34	0.41
37:DL:118:THR:O	37:DL:120:VAL:HG23	2.19	0.41
38:DM:46:ILE:HG13	38:DM:47:GLU:N	2.35	0.41
38:DM:66:ARG:HB2	38:DM:101:VAL:O	2.20	0.41
41:DJ:75:TYR:HD1	41:DJ:86:GLN:HB3	1.85	0.41
43:DO:9:ARG:O	43:DO:10:ARG:C	2.62	0.41
44:DQ:38:VAL:O	44:DQ:39:ILE:C	2.62	0.41
45:DS:71:VAL:HG13	45:DS:71:VAL:O	2.21	0.41
47:DF:134:GLN:HE21	47:DF:134:GLN:HB3	1.54	0.41
53:D6:147:LEU:HD23	53:D6:147:LEU:N	2.34	0.41
53:D6:174:GLN:HE21	53:D6:174:GLN:HB3	1.58	0.41
1:AA:79:G:C8	1:AA:79:G:OP2	2.73	0.41
1:AA:124:C:O2'	1:AA:125:U:H5'	2.21	0.41
1:AA:138:G:C6	1:AA:226:G:C6	3.09	0.41
1:AA:308:C:H2'	1:AA:309:A:C8	2.56	0.41
1:AA:818:G:H3'	1:AA:819:A:H5''	2.02	0.41
1:AA:840:C:N3	1:AA:842:U:H4'	2.35	0.41
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.21	0.41
1:AA:1260:G:O5'	1:AA:1284:C:H4'	2.21	0.41
2:AC:114:LEU:O	2:AC:115:VAL:C	2.63	0.41
3:AD:47:LEU:HD21	3:AD:55:ARG:HD2	2.02	0.41
4:AE:43:GLY:O	4:AE:72:ASN:HA	2.20	0.41
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	2.02	0.41
5:AF:86:ARG:NH2	17:AR:63:TYR:HB3	2.35	0.41
7:AH:21:LYS:O	7:AH:22:ALA:C	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:31:ARG:H	9:AJ:31:ARG:HG3	1.60	0.41
11:AL:113:ARG:O	11:AL:114:SER:C	2.64	0.41
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.85	0.41
13:AN:47:LEU:O	13:AN:49:THR:N	2.53	0.41
14:AO:88:ARG:NH1	14:AO:88:ARG:HB2	2.36	0.41
15:AP:1:MET:O	15:AP:1:MET:HG3	2.19	0.41
17:AR:43:ILE:O	17:AR:44:THR:HG23	2.20	0.41
20:AB:204:ASP:O	20:AB:205:ALA:HB3	2.19	0.41
22:BA:3:C:H6	22:BA:3:C:O5'	2.04	0.41
22:BA:76:G:O2'	22:BA:77:U:H5'	2.21	0.41
23:BB:612:G:H2'	23:BB:614:A:H5''	2.02	0.41
23:BB:635:C:H2'	23:BB:636:G:H8	1.86	0.41
23:BB:765:C:H2'	23:BB:766:U:H6	1.85	0.41
23:BB:1309:G:OP1	36:B2:9:VAL:N	2.48	0.41
23:BB:1348:C:C3'	23:BB:1349:C:H5'	2.50	0.41
23:BB:1434:A:N6	23:BB:1558:C:H42	2.18	0.41
23:BB:1535:A:H5''	23:BB:1536:C:C5	2.55	0.41
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.55	0.41
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.21	0.41
23:BB:2055:C:H5'	23:BB:2056:G:O5'	2.20	0.41
23:BB:2144:G:H3'	23:BB:2145:C:C3'	2.48	0.41
23:BB:2263:C:H4'	23:BB:2329:U:H4'	2.02	0.41
23:BB:2352:A:C2'	23:BB:2353:G:H5'	2.51	0.41
23:BB:2667:C:O2	48:BG:110:HIS:CE1	2.74	0.41
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.86	0.41
23:BB:2848:G:N3	23:BB:2849:U:H5	2.19	0.41
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.20	0.41
26:BD:159:LYS:O	26:BD:160:LYS:C	2.63	0.41
28:BP:50:ARG:CD	28:BP:56:SER:HB3	2.51	0.41
28:BP:99:LEU:HA	28:BP:102:ARG:HG3	2.03	0.41
29:BE:7:ASP:OD2	29:BE:7:ASP:N	2.54	0.41
29:BE:41:GLN:O	29:BE:42:GLY:O	2.39	0.41
29:BE:103:GLY:O	29:BE:104:ALA:C	2.63	0.41
29:BE:146:VAL:HG12	29:BE:147:LEU:N	2.35	0.41
30:BY:5:LYS:HG2	30:BY:36:GLU:HB2	2.03	0.41
35:BV:1:MET:O	35:BV:62:THR:HG23	2.20	0.41
37:BL:24:GLY:C	37:BL:26:GLY:H	2.27	0.41
37:BL:93:ASN:ND2	37:BL:94:THR:N	2.66	0.41
38:BM:53:MET:HE1	38:BM:103:TYR:CG	2.56	0.41
39:BX:22:LEU:HG	39:BX:23:ARG:HG2	2.03	0.41
40:BH:54:LEU:HA	40:BH:57:LYS:HZ2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:89:LYS:NZ	40:BH:123:ARG:HB3	2.35	0.41
45:BS:14:ALA:C	45:BS:16:LYS:N	2.77	0.41
46:BU:13:LEU:HD12	46:BU:68:ASN:C	2.45	0.41
47:BF:98:PHE:C	47:BF:100:GLU:N	2.76	0.41
48:BG:51:PHE:CE2	48:BG:68:ARG:HA	2.55	0.41
48:BG:126:THR:C	48:BG:128:THR:N	2.76	0.41
50:BT:39:THR:HG22	50:BT:42:GLU:H	1.83	0.41
51:BZ:9:GLY:O	51:BZ:11:ARG:HG3	2.19	0.41
52:BW:77:LYS:HA	52:BW:77:LYS:HD3	1.88	0.41
53:B6:29:ARG:HE	53:B6:32:ARG:NH2	2.18	0.41
1:CA:108:G:N3	1:CA:108:G:O4'	2.53	0.41
1:CA:407:U:H3'	1:CA:408:A:H8	1.86	0.41
1:CA:468:A:H3'	1:CA:469:C:C6	2.56	0.41
1:CA:558:G:H8	1:CA:559:A:H2'	1.86	0.41
1:CA:659:U:O2'	1:CA:660:C:H5'	2.20	0.41
1:CA:894:G:H2'	1:CA:895:G:H8	1.85	0.41
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.21	0.41
1:CA:1061:G:OP2	2:CC:1:GLY:O	2.38	0.41
1:CA:1148:U:H5'	8:CI:6:TYR:OH	2.21	0.41
1:CA:1188:A:H2'	1:CA:1189:U:O4'	2.19	0.41
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.82	0.41
2:CC:58:ARG:HA	2:CC:62:SER:O	2.21	0.41
3:CD:115:GLN:HG3	3:CD:119:HIS:ND1	2.35	0.41
3:CD:141:VAL:HA	3:CD:179:GLY:O	2.21	0.41
5:CF:4:TYR:CD2	5:CF:71:ILE:HD13	2.56	0.41
7:CH:117:GLN:C	7:CH:119:GLY:N	2.77	0.41
12:CM:50:GLY:O	12:CM:54:THR:HG23	2.20	0.41
13:CN:12:ARG:CD	13:CN:58:ARG:HB3	2.49	0.41
15:CP:58:ALA:O	15:CP:59:HIS:C	2.63	0.41
16:CQ:57:VAL:HB	16:CQ:79:GLU:CB	2.50	0.41
17:CR:44:THR:CB	17:CR:46:THR:HG22	2.50	0.41
20:CB:169:HIS:HA	20:CB:172:ILE:HD13	2.02	0.41
21:CU:3:ILE:HD12	21:CU:19:LYS:HA	2.01	0.41
23:DB:137:U:P	23:DB:137:U:H6	2.43	0.41
23:DB:328:U:H4'	46:DU:65:GLN:CD	2.45	0.41
23:DB:406:G:O2'	23:DB:407:G:H5'	2.21	0.41
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.51	0.41
23:DB:1120:G:O2'	23:DB:1121:C:H5'	2.21	0.41
23:DB:1353:A:O2'	23:DB:1354:A:H5'	2.21	0.41
23:DB:1376:C:O2'	23:DB:1377:G:H5'	2.21	0.41
23:DB:1689:A:O2'	23:DB:1690:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1903:G:H2'	23:DB:1904:G:H8	1.85	0.41
23:DB:1940:U:O2	23:DB:1940:U:H5''	2.21	0.41
23:DB:2230:G:H4'	51:DZ:31:PRO:O	2.19	0.41
23:DB:2262:U:O2'	23:DB:2263:C:H5'	2.21	0.41
23:DB:2397:G:H2'	23:DB:2398:U:C6	2.56	0.41
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.56	0.41
57:DB:3693:HOH:O	41:DJ:39:LYS:HE3	2.21	0.41
25:DC:75:ALA:CB	25:DC:93:VAL:HG22	2.50	0.41
25:DC:91:ALA:HB3	25:DC:105:ALA:HB2	1.99	0.41
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	2.02	0.41
26:DD:124:ARG:HG3	26:DD:125:TRP:CD1	2.55	0.41
28:DP:27:VAL:HG21	28:DP:73:PHE:CE2	2.56	0.41
28:DP:91:VAL:CG2	28:DP:96:LEU:HD21	2.51	0.41
29:DE:154:ASP:OD2	29:DE:157:LEU:HB3	2.20	0.41
31:D0:9:ARG:O	31:D0:12:ARG:HB3	2.20	0.41
32:D4:10:LEU:HD12	32:D4:33:HIS:CA	2.48	0.41
35:DV:5:ASN:OD1	35:DV:5:ASN:N	2.54	0.41
37:DL:77:ILE:O	37:DL:110:VAL:O	2.37	0.41
40:DH:9:VAL:CG1	40:DH:12:LEU:HG	2.50	0.41
41:DJ:68:LYS:O	41:DJ:69:ARG:C	2.64	0.41
43:DO:14:ALA:C	43:DO:16:ARG:N	2.76	0.41
45:DS:71:VAL:O	45:DS:71:VAL:HG22	2.19	0.41
46:DU:23:LYS:HD2	46:DU:23:LYS:H	1.86	0.41
46:DU:80:ASP:O	46:DU:81:ARG:C	2.62	0.41
48:DG:42:VAL:HA	48:DG:50:THR:O	2.20	0.41
49:DR:61:ALA:CB	49:DR:98:ILE:HA	2.51	0.41
50:DT:21:SER:O	50:DT:25:GLU:HB2	2.20	0.41
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	2.01	0.41
1:AA:279:A:OP1	1:AA:281:G:H5'	2.19	0.41
1:AA:844:G:OP2	1:AA:844:G:H3'	2.21	0.41
1:AA:893:C:H2'	1:AA:894:G:C8	2.55	0.41
1:AA:1025:U:O2'	1:AA:1026:G:N7	2.53	0.41
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.56	0.41
2:AC:84:GLU:OE2	2:AC:87:ARG:HD3	2.21	0.41
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.21	0.41
7:AH:55:LYS:HA	7:AH:55:LYS:CE	2.50	0.41
7:AH:58:LEU:CD2	7:AH:60:LEU:HB2	2.50	0.41
8:AI:45:MET:SD	8:AI:45:MET:N	2.94	0.41
10:AK:92:ARG:NH1	10:AK:92:ARG:CG	2.83	0.41
11:AL:22:ALA:O	11:AL:23:LEU:O	2.39	0.41
11:AL:35:ARG:HH12	11:AL:75:GLU:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:2:ARG:H	12:AM:2:ARG:CD	2.31	0.41
12:AM:6:ILE:O	12:AM:7:ASN:C	2.63	0.41
14:AO:85:LEU:O	14:AO:86:GLY:C	2.62	0.41
20:AB:114:LYS:NZ	20:AB:152:ASP:OD1	2.54	0.41
20:AB:184:ALA:O	20:AB:199:ILE:HB	2.20	0.41
23:BB:382:A:H2'	23:BB:383:C:O4'	2.20	0.41
23:BB:566:U:H2'	23:BB:567:U:O4'	2.20	0.41
23:BB:675:A:N3	23:BB:2443:C:O2'	2.52	0.41
23:BB:692:C:H2'	23:BB:693:A:C8	2.55	0.41
23:BB:765:C:H2'	23:BB:766:U:C6	2.56	0.41
23:BB:798:G:O2'	23:BB:799:G:H5'	2.21	0.41
23:BB:1253:A:H4'	23:BB:1254:A:OP2	2.20	0.41
23:BB:1722:A:H61	23:BB:1738:G:H1'	1.85	0.41
23:BB:1892:C:O2'	23:BB:1893:C:H5'	2.20	0.41
23:BB:2010:G:H2'	23:BB:2011:U:C6	2.56	0.41
23:BB:2016:U:H1'	31:B0:2:VAL:HG11	2.02	0.41
23:BB:2063:C:O2	23:BB:2450:A:N1	2.54	0.41
23:BB:2080:A:H2'	23:BB:2081:U:C6	2.56	0.41
23:BB:2145:C:O2	23:BB:2145:C:H2'	2.21	0.41
23:BB:2212:A:O3'	23:BB:2213:U:C4	2.73	0.41
23:BB:2358:A:N6	37:BL:54:GLN:HE22	2.18	0.41
23:BB:2641:G:H2'	23:BB:2642:G:C8	2.56	0.41
23:BB:2645:G:H4'	23:BB:2732:G:H2'	2.02	0.41
23:BB:2893:A:H4'	23:BB:2894:G:H5'	2.02	0.41
24:BI:91:LYS:O	24:BI:91:LYS:HG3	2.20	0.41
25:BC:196:ASN:OD1	25:BC:199:HIS:N	2.54	0.41
27:BK:2:ILE:HG13	27:BK:33:ALA:O	2.20	0.41
29:BE:138:LEU:O	29:BE:142:ALA:N	2.54	0.41
29:BE:151:GLY:CA	29:BE:195:GLN:HE22	2.34	0.41
30:BY:47:ILE:O	30:BY:48:ASN:C	2.64	0.41
33:B1:16:THR:HG21	33:B1:39:ASP:OD2	2.21	0.41
33:B1:20:TYR:CD2	33:B1:37:LYS:HD3	2.55	0.41
35:BV:89:ILE:HD13	35:BV:91:PHE:CZ	2.56	0.41
37:BL:55:MET:HG3	37:BL:59:ARG:CB	2.51	0.41
41:BJ:68:LYS:O	41:BJ:69:ARG:C	2.62	0.41
43:BO:7:ARG:HA	43:BO:10:ARG:CZ	2.51	0.41
43:BO:9:ARG:O	43:BO:10:ARG:C	2.64	0.41
44:BQ:16:ILE:C	44:BQ:18:LYS:H	2.28	0.41
44:BQ:81:GLY:O	44:BQ:82:LEU:C	2.64	0.41
45:BS:95:ARG:O	45:BS:96:ILE:HG22	2.21	0.41
46:BU:41:VAL:HG23	46:BU:42:LYS:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.33	0.41
47:BF:98:PHE:C	47:BF:100:GLU:H	2.28	0.41
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	2.03	0.41
53:B6:111:ARG:NH2	53:B6:184:LEU:HA	2.36	0.41
1:CA:377:G:O2'	1:CA:378:G:H5'	2.20	0.41
1:CA:486:U:H2'	1:CA:487:A:C8	2.56	0.41
1:CA:555:U:H2'	1:CA:556:C:C6	2.56	0.41
1:CA:691:G:H1'	1:CA:696:A:H61	1.85	0.41
1:CA:708:C:H2'	1:CA:709:U:H6	1.84	0.41
1:CA:780:A:C2	1:CA:803:G:C6	3.09	0.41
1:CA:817:C:C2	1:CA:819:A:O4'	2.74	0.41
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.20	0.41
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.20	0.41
3:CD:22:SER:H	3:CD:109:THR:CG2	2.33	0.41
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.20	0.41
4:CE:28:ARG:NH1	4:CE:30:PHE:HB3	2.36	0.41
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	2.03	0.41
6:CG:53:SER:C	6:CG:55:LYS:H	2.27	0.41
8:CI:17:ARG:HH21	8:CI:65:THR:HG21	1.85	0.41
11:CL:88:ASP:C	11:CL:89:LEU:HD22	2.45	0.41
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.85	0.41
13:CN:9:GLU:HB2	13:CN:62:ARG:NE	2.35	0.41
14:CO:16:GLY:HA2	14:CO:27:VAL:CG2	2.50	0.41
17:CR:26:ALA:HA	17:CR:29:LYS:HE3	2.02	0.41
18:CS:25:GLY:O	18:CS:27:LYS:HE2	2.20	0.41
18:CS:52:ASN:CG	18:CS:53:GLY:H	2.29	0.41
20:CB:27:LYS:HD2	20:CB:28:PRO:HD3	2.02	0.41
20:CB:111:LYS:O	20:CB:114:LYS:HB2	2.21	0.41
23:DB:27:G:O2'	23:DB:28:A:H8	2.01	0.41
23:DB:545:U:C4	23:DB:548:G:OP1	2.74	0.41
23:DB:741:U:H2'	23:DB:742:A:C8	2.55	0.41
23:DB:1097:U:C2	23:DB:1098:A:H1'	2.56	0.41
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.55	0.41
23:DB:1274:A:C2	23:DB:1302:A:H2	2.38	0.41
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.21	0.41
23:DB:1348:C:C3'	23:DB:1349:C:H5'	2.51	0.41
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.55	0.41
23:DB:1573:G:H2'	23:DB:1574:C:H5'	2.01	0.41
23:DB:1885:A:H3'	23:DB:1886:U:C6	2.56	0.41
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.20	0.41
23:DB:2259:U:H1'	23:DB:2427:C:C2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.20	0.41
23:DB:2373:G:H2'	23:DB:2374:C:C6	2.55	0.41
23:DB:2580:U:C5'	26:DD:136:ASN:H	2.33	0.41
23:DB:2582:G:O2'	23:DB:2583:G:H5'	2.20	0.41
23:DB:2617:U:H2'	23:DB:2618:G:O4'	2.20	0.41
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.85	0.41
24:DI:4:VAL:O	24:DI:5:GLN:O	2.39	0.41
25:DC:66:PHE:CD1	25:DC:66:PHE:N	2.88	0.41
26:DD:29:VAL:C	26:DD:185:ASN:HB3	2.45	0.41
28:DP:4:ILE:CG2	28:DP:5:LYS:H	2.17	0.41
28:DP:27:VAL:O	28:DP:42:PHE:N	2.53	0.41
31:D0:41:HIS:CD2	31:D0:41:HIS:N	2.87	0.41
35:DV:42:LEU:HD11	35:DV:89:ILE:HD11	2.03	0.41
39:DX:25:GLN:HE21	39:DX:25:GLN:HB3	1.60	0.41
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.36	0.41
45:DS:66:ILE:HG12	45:DS:67:ASP:N	2.35	0.41
48:DG:34:ARG:N	48:DG:34:ARG:CD	2.83	0.41
48:DG:97:VAL:HG21	48:DG:124:CYS:HB2	2.01	0.41
53:D6:38:LEU:O	53:D6:52:LEU:HB3	2.21	0.41
1:AA:21:G:H2'	1:AA:22:G:H8	1.77	0.41
1:AA:125:U:H2'	1:AA:126:G:H8	1.84	0.41
1:AA:913:A:H4'	1:AA:914:A:OP1	2.20	0.41
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.21	0.41
1:AA:1102:A:O2'	1:AA:1103:C:H5'	2.20	0.41
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.56	0.41
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.85	0.41
2:AC:5:HIS:O	2:AC:9:ILE:HG22	2.20	0.41
2:AC:146:LYS:HB2	2:AC:202:PHE:CD2	2.56	0.41
2:AC:176:THR:O	2:AC:177:LEU:C	2.64	0.41
3:AD:13:ARG:HA	3:AD:37:PRO:CG	2.51	0.41
6:AG:70:PRO:O	6:AG:71:THR:HB	2.20	0.41
7:AH:45:ILE:HG21	7:AH:60:LEU:CD2	2.48	0.41
11:AL:15:VAL:O	11:AL:16:ALA:C	2.63	0.41
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.18	0.41
16:AQ:46:HIS:CB	16:AQ:70:LYS:HE2	2.49	0.41
18:AS:14:LEU:O	18:AS:18:VAL:HG12	2.21	0.41
18:AS:35:ARG:HB2	18:AS:71:GLY:CA	2.50	0.41
19:AT:34:VAL:CG1	19:AT:78:LEU:HD22	2.50	0.41
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.61	0.41
20:AB:44:LYS:O	20:AB:47:PRO:HD2	2.21	0.41
20:AB:101:THR:HA	20:AB:178:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:24:LYS:HE2	21:AU:25:ALA:HB2	2.02	0.41
23:BB:329:G:N1	46:BU:16:LYS:HG2	2.30	0.41
23:BB:364:C:O2'	23:BB:365:U:H5'	2.21	0.41
23:BB:508:A:N6	45:BS:9:HIS:CD2	2.89	0.41
23:BB:1056:G:H1'	23:BB:1103:A:H62	1.86	0.41
23:BB:1224:U:H4'	49:BR:88:GLY:O	2.21	0.41
23:BB:1534:U:O5'	23:BB:1534:U:H6	2.03	0.41
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.21	0.41
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.54	0.41
23:BB:2361:G:H2'	23:BB:2362:C:O4'	2.20	0.41
23:BB:2394:C:O2'	23:BB:2395:C:H5'	2.20	0.41
23:BB:2846:G:OP1	28:BP:51:ASN:HB2	2.21	0.41
23:BB:2849:U:O4	28:BP:20:ARG:NH1	2.54	0.41
25:BC:90:ILE:HD13	25:BC:103:ILE:C	2.46	0.41
25:BC:99:GLU:HG2	25:BC:100:ARG:N	2.35	0.41
26:BD:104:VAL:HG11	26:BD:205:PRO:HB3	2.02	0.41
26:BD:159:LYS:HZ2	26:BD:159:LYS:C	2.28	0.41
28:BP:3:ILE:CD1	28:BP:7:LEU:HD11	2.50	0.41
29:BE:48:THR:C	29:BE:50:ALA:N	2.75	0.41
35:BV:51:GLN:NE2	35:BV:79:ARG:HH22	2.18	0.41
38:BM:33:LEU:HD23	38:BM:33:LEU:HA	1.90	0.41
40:BH:9:VAL:HB	40:BH:13:GLY:CA	2.51	0.41
40:BH:82:SER:HB2	40:BH:94:ILE:CG1	2.49	0.41
40:BH:101:ASP:HA	40:BH:104:THR:HG22	2.03	0.41
42:BN:82:GLU:C	42:BN:84:GLY:N	2.79	0.41
43:BO:51:ALA:CB	43:BO:78:VAL:HG22	2.48	0.41
47:BF:64:PRO:CA	47:BF:88:VAL:HG22	2.48	0.41
47:BF:105:ILE:O	47:BF:109:ARG:HB2	2.21	0.41
48:BG:97:VAL:HG21	48:BG:124:CYS:HB2	2.03	0.41
48:BG:144:ALA:O	48:BG:147:LEU:HB2	2.20	0.41
48:BG:168:VAL:HG12	48:BG:170:THR:CG2	2.49	0.41
53:B6:41:LEU:O	53:B6:52:LEU:HB2	2.21	0.41
1:CA:31:G:H5'	1:CA:306:A:C2	2.56	0.41
1:CA:499:A:H1'	1:CA:500:G:C8	2.56	0.41
1:CA:557:G:H2'	1:CA:558:G:O4'	2.21	0.41
1:CA:564:C:H1'	16:CQ:32:ILE:O	2.21	0.41
1:CA:708:C:H2'	1:CA:709:U:C6	2.56	0.41
1:CA:916:U:H2'	1:CA:917:G:H8	1.86	0.41
1:CA:948:C:H2'	1:CA:949:A:H8	1.85	0.41
1:CA:1463:U:H2'	1:CA:1464:U:H6	1.82	0.41
2:CC:25:THR:HG23	13:CN:75:LYS:CD	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:80:LEU:HD11	4:CE:95:MET:HG3	2.03	0.41
5:CF:9:MET:HA	5:CF:58:HIS:O	2.20	0.41
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.36	0.41
5:CF:73:GLU:HG2	5:CF:73:GLU:H	1.69	0.41
6:CG:19:SER:HB2	6:CG:21:LEU:CD2	2.51	0.41
6:CG:19:SER:OG	6:CG:22:LEU:HD12	2.21	0.41
10:CK:126:ARG:HA	10:CK:126:ARG:NE	2.36	0.41
11:CL:15:VAL:O	11:CL:16:ALA:C	2.63	0.41
14:CO:56:LEU:HD12	14:CO:59:MET:HE2	2.02	0.41
16:CQ:10:ARG:O	16:CQ:10:ARG:HG3	2.20	0.41
18:CS:13:HIS:ND1	18:CS:13:HIS:N	2.69	0.41
20:CB:63:LYS:HA	20:CB:224:ARG:NH1	2.34	0.41
22:DA:2:G:O2'	22:DA:3:C:H5'	2.20	0.41
23:DB:182:A:H2'	23:DB:183:C:H6	1.85	0.41
23:DB:480:A:H3'	23:DB:481:G:H5''	2.03	0.41
23:DB:485:C:H2'	23:DB:486:C:H6	1.86	0.41
23:DB:584:C:O2'	23:DB:585:G:H5'	2.20	0.41
23:DB:649:G:H2'	23:DB:650:C:H6	1.86	0.41
23:DB:657:U:H2'	23:DB:658:U:H6	1.83	0.41
23:DB:1207:C:O2'	23:DB:1208:C:H5'	2.21	0.41
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.56	0.41
23:DB:1350:C:O2	23:DB:1350:C:H2'	2.20	0.41
23:DB:1417:C:O2'	23:DB:1418:G:H5'	2.21	0.41
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.55	0.41
23:DB:1526:C:C2'	23:DB:1527:G:H5'	2.51	0.41
23:DB:1652:A:P	42:DN:8:ARG:HD3	2.61	0.41
23:DB:2394:C:H2'	23:DB:2395:C:C6	2.55	0.41
23:DB:2599:G:O2'	23:DB:2600:A:H5'	2.20	0.41
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.41
25:DC:34:GLU:O	25:DC:35:LYS:C	2.64	0.41
25:DC:42:ARG:HG3	25:DC:46:GLY:O	2.21	0.41
25:DC:66:PHE:CD2	25:DC:104:LEU:HD11	2.56	0.41
26:DD:13:ARG:HH12	28:DP:74:GLN:NE2	2.19	0.41
26:DD:14:ILE:HG23	26:DD:22:ILE:HB	2.02	0.41
26:DD:14:ILE:HG13	28:DP:11:GLN:HE22	1.85	0.41
26:DD:117:GLY:O	26:DD:119:ALA:N	2.53	0.41
28:DP:31:VAL:HG13	28:DP:32:VAL:N	2.35	0.41
28:DP:91:VAL:HG21	28:DP:96:LEU:HD21	2.03	0.41
35:DV:76:ASP:H	35:DV:90:ASP:HB2	1.86	0.41
36:D2:12:ARG:HG2	36:D2:44:VAL:HG11	2.03	0.41
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.22	0.41
39:DX:5:GLU:HA	39:DX:5:GLU:OE2	2.21	0.41
42:DN:2:ARG:O	42:DN:2:ARG:NE	2.42	0.41
42:DN:34:ILE:HB	42:DN:113:ILE:CG2	2.48	0.41
45:DS:17:VAL:C	45:DS:19:LEU:N	2.66	0.41
47:DF:98:PHE:C	47:DF:100:GLU:H	2.28	0.41
50:DT:10:VAL:O	50:DT:12:ARG:N	2.54	0.41
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CE1	2.55	0.41
53:D6:84:ARG:C	53:D6:86:SER:H	2.27	0.41
53:D6:181:GLN:O	53:D6:182:GLU:C	2.64	0.41
1:AA:553:A:N6	1:AA:554:A:N6	2.69	0.41
1:AA:643:C:H5''	7:AH:31:LEU:HD22	2.03	0.41
1:AA:744:C:O2'	1:AA:745:G:H5'	2.20	0.41
1:AA:778:G:H2'	1:AA:779:C:C6	2.56	0.41
1:AA:1032:G:C2'	1:AA:1033:G:H5'	2.51	0.41
1:AA:1033:G:H5''	1:AA:1034:G:OP2	2.20	0.41
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.85	0.41
3:AD:43:ARG:NH1	3:AD:43:ARG:HB3	2.35	0.41
3:AD:149:LYS:O	3:AD:177:MET:HE3	2.20	0.41
5:AF:11:HIS:HA	5:AF:85:ILE:HD11	2.02	0.41
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.36	0.41
5:AF:61:LEU:HD12	5:AF:62:MET:H	1.85	0.41
6:AG:19:SER:HB2	6:AG:21:LEU:CD2	2.49	0.41
7:AH:50:VAL:HG13	7:AH:50:VAL:O	2.21	0.41
10:AK:93:GLU:O	10:AK:94:SER:C	2.64	0.41
11:AL:63:THR:O	11:AL:94:TYR:HB2	2.20	0.41
11:AL:82:ARG:HG2	11:AL:82:ARG:HH11	1.86	0.41
12:AM:22:TYR:HB3	12:AM:69:ARG:NH1	2.35	0.41
18:AS:41:PRO:C	18:AS:43:MET:N	2.78	0.41
23:BB:66:C:O2'	23:BB:67:U:H5'	2.21	0.41
23:BB:234:U:H2'	23:BB:235:U:O4'	2.20	0.41
23:BB:476:G:O4'	23:BB:505:A:H2	2.03	0.41
23:BB:532:A:O2'	23:BB:2021:C:C5	2.74	0.41
23:BB:602:A:H4'	23:BB:604:G:O3'	2.20	0.41
23:BB:622:G:OP1	37:BL:103:ILE:HD13	2.20	0.41
23:BB:649:G:H2'	23:BB:650:C:H6	1.86	0.41
23:BB:740:C:OP1	23:BB:1784:A:H2'	2.20	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:HD2	2.02	0.41
23:BB:1068:G:C6	23:BB:1069:A:N6	2.88	0.41
23:BB:1273:U:H4'	23:BB:1275:A:P	2.60	0.41
23:BB:1689:A:H2'	23:BB:1690:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1830:C:H2'	23:BB:1831:G:C8	2.55	0.41
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.21	0.41
23:BB:2260:C:H2'	23:BB:2261:C:H6	1.85	0.41
23:BB:2437:G:H2'	23:BB:2438:U:C6	2.55	0.41
23:BB:2494:G:H2'	23:BB:2495:G:H8	1.86	0.41
23:BB:2657:A:H2'	23:BB:2658:C:O4'	2.20	0.41
23:BB:2746:U:C5'	48:BG:138:GLN:HA	2.45	0.41
23:BB:2880:C:O2'	42:BN:93:GLY:HA3	2.20	0.41
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.55	0.41
25:BC:130:PRO:O	25:BC:132:ARG:N	2.53	0.41
25:BC:180:MET:HB2	25:BC:268:ARG:HB2	2.03	0.41
26:BD:77:ARG:HB2	26:BD:80:TRP:HH2	1.86	0.41
26:BD:96:ILE:HD12	26:BD:96:ILE:N	2.36	0.41
27:BK:110:GLU:HA	27:BK:113:MET:HG2	2.02	0.41
31:B0:2:VAL:HG12	31:B0:3:GLN:N	2.36	0.41
37:BL:25:SER:C	37:BL:27:LEU:N	2.79	0.41
38:BM:41:LEU:HA	38:BM:45:GLN:OE1	2.21	0.41
38:BM:54:THR:O	38:BM:56:ALA:N	2.54	0.41
41:BJ:45:THR:N	41:BJ:46:PRO:CD	2.84	0.41
43:BO:12:THR:HG23	43:BO:16:ARG:HH11	1.84	0.41
45:BS:2:GLU:O	45:BS:107:VAL:O	2.38	0.41
47:BF:37:MET:SD	47:BF:56:LEU:HD23	2.61	0.41
50:BT:22:THR:O	50:BT:26:LYS:N	2.36	0.41
53:B6:7:TYR:CD1	53:B6:160:GLU:HG2	2.56	0.41
53:B6:22:GLU:H	53:B6:22:GLU:HG3	1.63	0.41
1:CA:181:A:N6	1:CA:195:A:OP2	2.54	0.41
1:CA:586:C:C2'	1:CA:587:G:H5'	2.51	0.41
1:CA:605:U:O2'	1:CA:606:G:H5'	2.21	0.41
1:CA:834:U:H2'	1:CA:835:U:H6	1.85	0.41
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.21	0.41
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.20	0.41
2:CC:152:VAL:O	2:CC:164:THR:HG23	2.21	0.41
4:CE:111:ARG:HG3	4:CE:112:ALA:N	2.36	0.41
5:CF:22:ILE:O	5:CF:26:THR:HG23	2.21	0.41
8:CI:60:LEU:N	8:CI:60:LEU:HD23	2.35	0.41
12:CM:6:ILE:O	12:CM:7:ASN:C	2.63	0.41
17:CR:31:TYR:CG	17:CR:54:LEU:HD11	2.56	0.41
19:CT:75:LYS:O	19:CT:78:LEU:HB2	2.20	0.41
20:CB:23:ASN:HD22	20:CB:23:ASN:C	2.28	0.41
20:CB:30:ILE:HD11	20:CB:188:THR:HG22	2.03	0.41
20:CB:50:ASN:O	20:CB:51:GLU:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:103:TRP:CH2	20:CB:107:ARG:HD2	2.56	0.41
22:DA:83:G:OP1	30:DY:16:LEU:HD21	2.21	0.41
22:DA:116:G:H4'	43:DO:54:VAL:HG13	2.02	0.41
23:DB:527:C:O2	23:DB:527:C:O4'	2.36	0.41
23:DB:569:U:H2'	23:DB:570:G:O4'	2.21	0.41
23:DB:673:C:C2'	23:DB:674:G:H5'	2.51	0.41
23:DB:799:G:C6	23:DB:800:A:C6	3.09	0.41
23:DB:920:A:O2'	23:DB:921:C:H5'	2.20	0.41
23:DB:955:U:H5'	38:DM:86:LYS:HE2	2.02	0.41
23:DB:973:A:H1'	23:DB:1188:U:C6	2.56	0.41
23:DB:1040:A:O2'	23:DB:1041:G:H5'	2.21	0.41
23:DB:1575:C:O2'	23:DB:1576:U:H5'	2.21	0.41
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.56	0.41
23:DB:1970:A:H1'	23:DB:1972:G:C8	2.56	0.41
23:DB:2071:A:H2'	23:DB:2072:C:H6	1.83	0.41
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.85	0.41
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
23:DB:2795:C:H6	23:DB:2795:C:O5'	2.04	0.41
23:DB:2883:A:OP1	31:D0:48:TYR:CE1	2.74	0.41
25:DC:30:ALA:C	25:DC:32:LEU:H	2.28	0.41
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.89	0.41
25:DC:69:ASN:HB3	25:DC:70:LYS:H	1.58	0.41
28:DP:47:ILE:HG13	28:DP:48:ALA:N	2.35	0.41
30:DY:47:ILE:O	30:DY:48:ASN:C	2.63	0.41
31:D0:50:GLY:O	31:D0:51:ARG:C	2.63	0.41
32:D4:22:VAL:O	32:D4:24:ARG:HG3	2.20	0.41
36:D2:21:ARG:HD2	36:D2:43:THR:CG2	2.42	0.41
40:DH:9:VAL:HB	40:DH:13:GLY:CA	2.50	0.41
40:DH:121:VAL:C	40:DH:122:LEU:HD22	2.45	0.41
41:DJ:29:ALA:O	41:DJ:30:THR:C	2.63	0.41
42:DN:22:ARG:HG3	42:DN:70:THR:HA	2.02	0.41
42:DN:25:ALA:HA	42:DN:44:LEU:HD11	2.03	0.41
44:DQ:15:LYS:O	44:DQ:16:ILE:C	2.64	0.41
44:DQ:91:ARG:HH12	49:DR:10:LYS:HA	1.85	0.41
45:DS:13:SER:CB	45:DS:16:LYS:HE3	2.51	0.41
47:DF:35:LEU:HD13	47:DF:56:LEU:CD1	2.45	0.41
47:DF:38:GLY:HA2	47:DF:85:GLY:HA3	2.03	0.41
47:DF:137:PHE:HB2	47:DF:138:PRO:CD	2.46	0.41
48:DG:116:LEU:HD23	48:DG:120:ILE:HD13	2.02	0.41
50:DT:27:SER:O	50:DT:28:ASN:CB	2.69	0.41
52:DW:57:THR:O	52:DW:59:PHE:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:154:THR:HG23	53:D6:155:LYS:H	1.83	0.41
53:D6:174:GLN:HG2	53:D6:178:LYS:HE2	2.03	0.41
1:AA:426:U:H2'	1:AA:427:U:C6	2.56	0.41
1:AA:555:U:H2'	1:AA:556:C:C6	2.56	0.41
1:AA:720:C:C5'	17:AR:40:PRO:HA	2.50	0.41
1:AA:765:G:O6	1:AA:811:C:C5	2.74	0.41
1:AA:852:G:H2'	1:AA:853:C:C6	2.56	0.41
1:AA:987:G:H2'	1:AA:988:G:C8	2.55	0.41
1:AA:1073:U:H4'	20:AB:104:LYS:CE	2.51	0.41
1:AA:1222:G:C2'	1:AA:1223:C:H5'	2.51	0.41
1:AA:1301:U:O2	1:AA:1301:U:C2'	2.67	0.41
1:AA:1384:C:O2'	1:AA:1385:G:H5'	2.20	0.41
1:AA:1418:A:H2	23:BB:1948:G:N3	2.19	0.41
1:AA:1419:G:H2'	1:AA:1420:U:C6	2.56	0.41
1:AA:1436:U:H2'	1:AA:1437:A:C8	2.55	0.41
2:AC:63:ILE:HD11	2:AC:94:ALA:CB	2.50	0.41
3:AD:25:ARG:HB2	3:AD:26:ALA:H	1.65	0.41
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	2.03	0.41
3:AD:110:ARG:HG3	3:AD:110:ARG:NH1	2.35	0.41
3:AD:182:LYS:NZ	3:AD:182:LYS:HB3	2.36	0.41
4:AE:9:GLU:O	4:AE:40:ASP:HA	2.20	0.41
4:AE:87:VAL:HG23	4:AE:92:ARG:HA	2.02	0.41
5:AF:37:HIS:ND1	5:AF:95:ALA:HB1	2.36	0.41
5:AF:54:LEU:HD22	5:AF:54:LEU:N	2.36	0.41
5:AF:70:VAL:HG23	5:AF:71:ILE:H	1.85	0.41
6:AG:49:LEU:HD23	6:AG:49:LEU:HA	1.86	0.41
6:AG:119:LEU:O	6:AG:123:LEU:HG	2.21	0.41
6:AG:147:ASN:C	6:AG:149:ALA:H	2.29	0.41
7:AH:65:PHE:CG	7:AH:66:GLN:N	2.85	0.41
7:AH:74:ILE:HG23	7:AH:74:ILE:O	2.21	0.41
8:AI:11:ARG:HA	8:AI:105:ARG:CZ	2.50	0.41
9:AJ:6:ILE:O	9:AJ:75:ASP:HA	2.21	0.41
11:AL:88:ASP:C	11:AL:89:LEU:HD22	2.45	0.41
11:AL:98:ARG:NH2	11:AL:104:SER:OG	2.54	0.41
13:AN:50:LEU:HG	13:AN:51:PRO:N	2.36	0.41
15:AP:36:VAL:O	15:AP:36:VAL:HG13	2.20	0.41
16:AQ:61:ARG:HH11	16:AQ:61:ARG:HG2	1.85	0.41
18:AS:23:GLU:HG3	18:AS:24:SER:H	1.86	0.41
20:AB:83:ALA:C	20:AB:88:GLN:NE2	2.79	0.41
20:AB:96:LEU:HB2	20:AB:99:MET:CE	2.41	0.41
20:AB:101:THR:HG22	20:AB:174:GLU:CD	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:35:GLU:HB3	21:AU:36:PHE:H	1.51	0.41
22:BA:83:G:P	30:BY:16:LEU:HD21	2.60	0.41
23:BB:26:G:H2'	23:BB:27:G:O4'	2.21	0.41
23:BB:57:C:H2'	23:BB:58:G:C8	2.55	0.41
23:BB:132:G:O2'	23:BB:133:U:H5'	2.21	0.41
23:BB:142:A:HO2'	50:BT:3:ARG:NH1	2.18	0.41
23:BB:633:A:H2'	23:BB:634:C:O4'	2.20	0.41
23:BB:665:U:O2'	23:BB:666:A:H5'	2.21	0.41
23:BB:747:U:OP2	45:BS:90:LYS:HD2	2.21	0.41
23:BB:809:G:O2'	23:BB:810:U:H5'	2.21	0.41
23:BB:928:A:H2'	23:BB:929:U:C6	2.55	0.41
23:BB:974:G:O5'	23:BB:1186:G:N2	2.50	0.41
23:BB:991:C:H2'	23:BB:992:C:H6	1.86	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:CZ	2.51	0.41
23:BB:1056:G:H1'	23:BB:1103:A:N6	2.36	0.41
23:BB:1062:G:H2'	23:BB:1063:G:H8	1.85	0.41
23:BB:1106:G:H2'	23:BB:1107:G:H8	1.85	0.41
23:BB:1161:C:H2'	23:BB:1162:G:C8	2.56	0.41
23:BB:1244:A:C5'	37:BL:8:PRO:HD3	2.40	0.41
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.56	0.41
23:BB:1508:A:H3'	23:BB:1509:A:C5	2.55	0.41
23:BB:1551:A:H5''	23:BB:1552:A:OP2	2.20	0.41
23:BB:1657:U:H4'	26:BD:138:LEU:CB	2.49	0.41
23:BB:1733:G:H2'	23:BB:1734:G:H8	1.85	0.41
23:BB:1802:A:C6	23:BB:1817:G:N2	2.89	0.41
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.56	0.41
23:BB:1945:G:C4	23:BB:1946:U:C5	3.09	0.41
23:BB:1956:U:C2'	23:BB:1957:C:H5'	2.51	0.41
23:BB:2010:G:H2'	23:BB:2011:U:H6	1.85	0.41
23:BB:2145:C:H3'	23:BB:2146:C:H5'	2.02	0.41
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.55	0.41
23:BB:2259:U:H1'	23:BB:2427:C:C2	2.56	0.41
23:BB:2266:A:N3	23:BB:2272:U:H5	2.18	0.41
23:BB:2291:U:OP1	23:BB:2381:A:H5'	2.21	0.41
23:BB:2361:G:OP1	34:B3:25:HIS:HA	2.21	0.41
23:BB:2408:U:H2'	23:BB:2409:G:C8	2.55	0.41
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.20	0.41
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.56	0.41
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.86	0.41
23:BB:2669:G:O2'	23:BB:2670:A:H5'	2.21	0.41
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.55	0.41
23:BB:2800:A:C2'	23:BB:2801:G:O4'	2.65	0.41
24:BI:15:GLY:O	24:BI:16:MET:HB2	2.19	0.41
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.41
25:BC:17:LYS:H	25:BC:17:LYS:HG3	1.58	0.41
25:BC:80:LEU:HD23	25:BC:91:ALA:HB2	2.02	0.41
25:BC:154:ALA:HB2	25:BC:161:VAL:HG23	2.02	0.41
26:BD:13:ARG:HD2	28:BP:55:HIS:ND1	2.35	0.41
26:BD:117:GLY:O	26:BD:119:ALA:N	2.54	0.41
27:BK:35:VAL:CG2	27:BK:36:GLY:H	2.08	0.41
27:BK:58:LEU:CD1	27:BK:86:LEU:HB3	2.50	0.41
27:BK:87:LEU:HB2	27:BK:93:GLN:C	2.46	0.41
27:BK:109:SER:O	27:BK:113:MET:HG2	2.21	0.41
31:B0:38:LEU:HD13	31:B0:41:HIS:CE1	2.56	0.41
32:B4:33:HIS:O	32:B4:35:GLN:N	2.54	0.41
34:B3:21:PHE:O	34:B3:22:LYS:HB3	2.20	0.41
35:BV:6:ALA:C	35:BV:65:VAL:HG12	2.45	0.41
35:BV:77:VAL:HG11	38:BM:136:MET:O	2.20	0.41
37:BL:50:PHE:O	37:BL:52:GLY:N	2.54	0.41
37:BL:55:MET:HE2	37:BL:59:ARG:NE	2.36	0.41
37:BL:91:ASP:HB2	37:BL:94:THR:OG1	2.20	0.41
38:BM:58:LYS:O	38:BM:59:ARG:HB3	2.21	0.41
38:BM:124:LEU:HA	38:BM:125:PRO:HD3	1.89	0.41
39:BX:29:ARG:CZ	50:BT:12:ARG:HE	2.34	0.41
39:BX:31:GLN:HG2	39:BX:37:LEU:H	1.86	0.41
39:BX:56:LEU:O	39:BX:57:LEU:CB	2.67	0.41
41:BJ:30:THR:HA	41:BJ:108:MET:SD	2.60	0.41
41:BJ:40:HIS:ND1	41:BJ:41:LYS:N	2.68	0.41
42:BN:8:ARG:HE	42:BN:8:ARG:HB2	1.61	0.41
42:BN:34:ILE:HB	42:BN:113:ILE:CG2	2.46	0.41
43:BO:18:LEU:HD11	43:BO:91:SER:HB3	2.02	0.41
43:BO:20:GLU:OE2	43:BO:21:LEU:N	2.54	0.41
43:BO:105:ALA:C	43:BO:107:ALA:N	2.77	0.41
45:BS:3:THR:HG21	45:BS:58:ALA:HA	2.02	0.41
45:BS:4:ILE:HG22	45:BS:106:VAL:HA	2.02	0.41
45:BS:33:LEU:HG	45:BS:51:LEU:CD2	2.50	0.41
47:BF:3:LEU:O	47:BF:3:LEU:HD13	2.21	0.41
47:BF:118:ALA:HA	47:BF:176:PHE:HE2	1.86	0.41
48:BG:17:LYS:NZ	48:BG:17:LYS:HA	2.35	0.41
48:BG:46:ASP:CG	48:BG:47:ASN:N	2.78	0.41
48:BG:120:ILE:HD13	48:BG:120:ILE:C	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:148:ARG:HD3	48:BG:152:ARG:HD3	2.03	0.41
49:BR:49:ILE:HD13	49:BR:53:PHE:N	2.36	0.41
49:BR:86:GLN:HE21	49:BR:86:GLN:HB2	1.54	0.41
50:BT:10:VAL:O	50:BT:11:LEU:C	2.63	0.41
53:B6:39:LEU:CG	53:B6:40:HIS:N	2.83	0.41
53:B6:68:VAL:HG11	53:B6:79:ILE:HG21	2.02	0.41
1:CA:34:C:H2'	1:CA:35:G:C8	2.56	0.41
1:CA:213:G:H3'	1:CA:214:C:C6	2.55	0.41
1:CA:693:G:H2'	1:CA:694:A:O4'	2.21	0.41
1:CA:720:C:O5'	1:CA:720:C:H6	2.03	0.41
1:CA:869:G:H4'	1:CA:872:A:C8	2.56	0.41
1:CA:891:U:O2'	1:CA:892:A:H5'	2.21	0.41
1:CA:1003:G:N2	1:CA:1005:A:C5'	2.83	0.41
1:CA:1084:G:H2'	1:CA:1085:U:C6	2.55	0.41
1:CA:1251:A:O2'	1:CA:1252:A:H5'	2.21	0.41
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.55	0.41
1:CA:1381:U:O2'	1:CA:1382:C:H5'	2.21	0.41
1:CA:1418:A:O4'	23:DB:1959:G:H4'	2.21	0.41
2:CC:53:ARG:HB3	2:CC:68:HIS:CD2	2.55	0.41
2:CC:149:LYS:HE2	2:CC:200:TRP:CZ3	2.54	0.41
2:CC:152:VAL:HA	2:CC:197:VAL:HG22	2.02	0.41
3:CD:87:GLU:OE1	3:CD:91:ALA:HB2	2.20	0.41
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.84	0.41
4:CE:117:ALA:HB3	4:CE:119:VAL:HG23	2.03	0.41
4:CE:157:GLY:O	4:CE:158:LYS:HB2	2.20	0.41
5:CF:4:TYR:CE2	5:CF:71:ILE:HD13	2.55	0.41
5:CF:11:HIS:HA	5:CF:85:ILE:HD11	2.02	0.41
5:CF:81:ASN:HB3	5:CF:84:VAL:HG12	2.02	0.41
6:CG:19:SER:OG	6:CG:22:LEU:HB2	2.21	0.41
6:CG:151:ALA:HB3	6:CG:153:TYR:CE1	2.56	0.41
7:CH:29:SER:O	7:CH:33:VAL:HG23	2.21	0.41
7:CH:58:LEU:CD2	7:CH:60:LEU:HB2	2.51	0.41
7:CH:82:LEU:O	7:CH:82:LEU:HD13	2.21	0.41
8:CI:21:LYS:O	8:CI:61:ASP:N	2.48	0.41
8:CI:129:ARG:HD2	8:CI:129:ARG:O	2.21	0.41
11:CL:22:ALA:O	11:CL:23:LEU:O	2.39	0.41
13:CN:40:ARG:HH11	18:CS:6:LYS:HB2	1.86	0.41
13:CN:88:MET:C	13:CN:90:GLY:N	2.78	0.41
14:CO:46:HIS:O	14:CO:48:LYS:N	2.47	0.41
15:CP:1:MET:HE3	15:CP:1:MET:CA	2.46	0.41
15:CP:20:VAL:HG21	15:CP:32:PHE:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:28:LEU:C	17:CR:30:ASN:H	2.29	0.41
18:CS:50:VAL:HG22	18:CS:70:LEU:HD21	2.03	0.41
19:CT:47:GLN:O	19:CT:50:PHE:HB3	2.20	0.41
20:CB:20:ARG:HB3	20:CB:20:ARG:CZ	2.51	0.41
20:CB:35:ASN:ND2	20:CB:36:LYS:HE2	2.36	0.41
21:CU:23:GLU:HA	21:CU:27:VAL:HG21	2.02	0.41
22:DA:12:C:N3	52:DW:73:PRO:HG3	2.35	0.41
22:DA:13:G:C5	22:DA:70:C:H4'	2.56	0.41
23:DB:86:G:O2'	23:DB:104:A:H4'	2.20	0.41
23:DB:182:A:H2'	23:DB:183:C:C6	2.56	0.41
23:DB:453:A:N3	23:DB:457:A:O2'	2.51	0.41
23:DB:512:G:OP2	23:DB:1235:G:H5'	2.20	0.41
23:DB:686:U:H1'	36:D2:6:GLN:O	2.21	0.41
23:DB:776:G:H4'	23:DB:777:G:C5'	2.50	0.41
23:DB:816:C:O2'	23:DB:817:C:H5'	2.21	0.41
23:DB:910:A:H2'	23:DB:911:A:C8	2.56	0.41
23:DB:960:A:H4'	23:DB:2457:U:H4'	2.02	0.41
23:DB:1082:U:C4	23:DB:1086:A:N1	2.85	0.41
23:DB:1348:C:H2'	23:DB:1349:C:H5'	2.03	0.41
23:DB:1357:C:H2'	23:DB:1358:G:C8	2.56	0.41
23:DB:1369:G:O2'	23:DB:1370:C:H5'	2.21	0.41
23:DB:1370:C:H2'	23:DB:1371:G:C8	2.55	0.41
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.83	0.41
23:DB:1900:A:N1	23:DB:1970:A:C5	2.89	0.41
23:DB:2064:C:H1'	23:DB:2450:A:C5	2.56	0.41
23:DB:2338:C:O2'	23:DB:2339:C:H5'	2.21	0.41
23:DB:2368:C:H2'	23:DB:2369:A:C8	2.55	0.41
23:DB:2756:U:H1'	23:DB:2757:A:H5''	2.02	0.41
23:DB:2830:C:O4'	23:DB:2836:U:H5'	2.21	0.41
23:DB:2853:C:H2'	23:DB:2854:G:H8	1.86	0.41
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.41
24:DI:53:PRO:HG2	24:DI:77:VAL:HG11	2.01	0.41
24:DI:68:PHE:N	24:DI:68:PHE:CD1	2.89	0.41
25:DC:64:VAL:HG11	25:DC:66:PHE:CZ	2.56	0.41
25:DC:156:SER:HB3	25:DC:159:THR:HG21	2.03	0.41
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.51	0.41
26:DD:118:PHE:CE2	42:DN:1:MET:HB3	2.56	0.41
26:DD:121:THR:C	26:DD:123:LYS:H	2.29	0.41
27:DK:58:LEU:HD23	27:DK:58:LEU:H	1.83	0.41
28:DP:111:GLU:C	28:DP:111:GLU:CD	2.89	0.41
29:DE:69:ARG:O	29:DE:70:SER:OG	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:103:GLY:O	29:DE:104:ALA:C	2.63	0.41
29:DE:147:LEU:O	29:DE:168:ASP:O	2.38	0.41
31:D0:55:ALA:C	31:D0:56:LYS:HG3	2.45	0.41
32:D4:33:HIS:O	32:D4:35:GLN:N	2.54	0.41
34:D3:28:LEU:HD21	34:D3:44:ARG:HA	2.03	0.41
35:DV:1:MET:HB3	35:DV:59:GLU:OE1	2.21	0.41
37:DL:25:SER:C	37:DL:27:LEU:H	2.29	0.41
37:DL:91:ASP:HB2	37:DL:94:THR:OG1	2.21	0.41
37:DL:111:ILE:N	37:DL:111:ILE:HD13	2.35	0.41
38:DM:19:GLY:H	38:DM:38:ARG:NH1	2.05	0.41
38:DM:54:THR:O	38:DM:56:ALA:N	2.53	0.41
38:DM:100:LYS:HD3	38:DM:101:VAL:H	1.86	0.41
40:DH:32:PRO:HA	51:DZ:39:TRP:CD1	2.56	0.41
40:DH:45:GLU:C	40:DH:47:PHE:N	2.76	0.41
40:DH:98:ASP:C	40:DH:100:ALA:N	2.79	0.41
41:DJ:4:PHE:C	41:DJ:5:THR:HG22	2.46	0.41
41:DJ:101:ILE:O	41:DJ:105:VAL:HG22	2.20	0.41
42:DN:107:ASN:ND2	45:DS:40:ASN:ND2	2.64	0.41
43:DO:36:TYR:N	43:DO:36:TYR:HD2	2.19	0.41
43:DO:105:ALA:HA	43:DO:108:ASP:OD2	2.21	0.41
44:DQ:63:ARG:HH22	44:DQ:95:ALA:C	2.29	0.41
45:DS:108:SER:OG	45:DS:109:ASP:N	2.54	0.41
47:DF:32:LYS:CA	47:DF:95:MET:HE2	2.48	0.41
47:DF:121:PHE:HD1	47:DF:127:TYR:OH	2.03	0.41
48:DG:26:LYS:HA	48:DG:32:LEU:H	1.86	0.41
48:DG:148:ARG:HB2	48:DG:152:ARG:HH21	1.85	0.41
48:DG:163:TYR:C	48:DG:165:ASP:N	2.78	0.41
49:DR:31:GLU:O	49:DR:63:VAL:HG22	2.21	0.41
50:DT:14:PRO:HA	50:DT:32:LEU:HB2	2.02	0.41
51:DZ:59:ILE:HG23	51:DZ:67:VAL:HG21	2.02	0.41
51:DZ:64:ILE:H	51:DZ:64:ILE:CD1	2.27	0.41
53:D6:22:GLU:H	53:D6:22:GLU:HG3	1.54	0.41
53:D6:45:TYR:O	53:D6:46:TYR:C	2.64	0.41
53:D6:64:ARG:HA	53:D6:103:ILE:HB	2.02	0.41
53:D6:77:LYS:O	53:D6:81:LYS:HG3	2.21	0.41
53:D6:86:SER:C	53:D6:88:LEU:N	2.75	0.41
1:AA:108:G:N3	1:AA:108:G:O4'	2.53	0.41
1:AA:126:G:H4'	1:AA:634:C:O2	2.21	0.41
1:AA:321:A:O2'	1:AA:322:C:H5'	2.20	0.41
1:AA:659:U:O2'	1:AA:660:C:H5'	2.21	0.41
1:AA:675:A:O2'	1:AA:676:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:908:A:H2'	1:AA:909:A:H8	1.85	0.41
1:AA:947:G:H5''	12:AM:106:ARG:HB2	2.02	0.41
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.20	0.41
1:AA:1188:A:H2'	1:AA:1189:U:O4'	2.21	0.41
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.56	0.41
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.85	0.41
2:AC:45:GLU:C	2:AC:46:LEU:HD22	2.46	0.41
2:AC:155:ARG:H	2:AC:162:ALA:CA	2.34	0.41
4:AE:82:HIS:NE2	7:AH:95:MET:HE2	2.36	0.41
6:AG:142:ARG:HH11	6:AG:142:ARG:CB	2.26	0.41
7:AH:34:ALA:O	7:AH:38:VAL:HG23	2.21	0.41
7:AH:93:LYS:HG3	7:AH:116:ARG:NH2	2.36	0.41
8:AI:90:ASP:HB3	8:AI:93:LEU:CD2	2.51	0.41
10:AK:13:LYS:HD2	10:AK:76:TYR:HE2	1.86	0.41
12:AM:78:ARG:HA	12:AM:81:ASP:OD2	2.20	0.41
20:AB:62:ARG:O	20:AB:63:LYS:C	2.64	0.41
21:AU:3:ILE:HD12	21:AU:19:LYS:HA	2.01	0.41
23:BB:77:G:H2'	23:BB:78:U:O4'	2.21	0.41
23:BB:616:A:H4'	29:BE:101:TYR:CZ	2.56	0.41
23:BB:675:A:P	29:BE:60:TRP:HZ2	2.44	0.41
23:BB:729:G:H2'	23:BB:729:G:N3	2.35	0.41
23:BB:794:A:H2'	23:BB:795:C:H6	1.85	0.41
23:BB:1079:C:C2	23:BB:1080:A:C8	3.09	0.41
23:BB:1081:U:O2'	23:BB:1082:U:H5'	2.21	0.41
23:BB:1411:U:O2'	23:BB:1412:U:H5'	2.21	0.41
23:BB:2049:G:C2'	23:BB:2050:C:H5'	2.51	0.41
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.21	0.41
23:BB:2338:C:O2'	23:BB:2339:C:H5'	2.20	0.41
23:BB:2452:C:H2'	23:BB:2453:A:C8	2.56	0.41
23:BB:2507:C:C2	23:BB:2583:G:C2	3.08	0.41
23:BB:2571:U:O3'	26:BD:151:THR:HB	2.20	0.41
23:BB:2823:A:O2'	23:BB:2824:C:H5'	2.21	0.41
24:BI:17:ALA:C	24:BI:19:PRO:HD2	2.46	0.41
26:BD:40:LEU:HA	26:BD:45:TYR:N	2.36	0.41
26:BD:91:THR:HG23	26:BD:92:VAL:N	2.28	0.41
26:BD:107:VAL:N	26:BD:206:ALA:H	2.19	0.41
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.21	0.41
38:BM:17:ASN:HD22	38:BM:17:ASN:HA	1.70	0.41
38:BM:82:MET:O	38:BM:83:GLY:C	2.64	0.41
39:BX:41:HIS:CD2	39:BX:41:HIS:N	2.89	0.41
39:BX:55:THR:C	39:BX:56:LEU:O	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:5:LEU:HD11	40:BH:12:LEU:O	2.21	0.41
41:BJ:102:GLU:HG3	41:BJ:124:VAL:HG11	2.02	0.41
41:BJ:110:PRO:HB2	41:BJ:111:LYS:HE3	2.02	0.41
42:BN:74:GLU:O	42:BN:77:ALA:HB3	2.21	0.41
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.21	0.41
47:BF:7:TYR:HA	47:BF:11:VAL:HB	2.02	0.41
49:BR:78:ARG:HH21	49:BR:78:ARG:HG3	1.86	0.41
50:BT:39:THR:HG23	50:BT:42:GLU:H	1.86	0.41
51:BZ:54:LYS:C	51:BZ:56:MET:N	2.77	0.41
51:BZ:77:LYS:O	51:BZ:78:TYR:HB3	2.21	0.41
52:BW:28:GLU:C	52:BW:30:VAL:H	2.29	0.41
1:CA:17:U:H4'	1:CA:1079:G:O2'	2.20	0.41
1:CA:213:G:H2'	1:CA:213:G:N3	2.35	0.41
1:CA:239:U:H6	1:CA:239:U:H5'	1.86	0.41
1:CA:420:U:C2'	1:CA:421:U:H5''	2.51	0.41
1:CA:729:A:H2'	1:CA:730:G:C8	2.56	0.41
1:CA:987:G:H2'	1:CA:988:G:C8	2.56	0.41
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.39	0.41
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.56	0.41
1:CA:1221:G:OP1	1:CA:1321:U:N3	2.52	0.41
1:CA:1226:C:H5'	12:CM:94:LEU:CD1	2.51	0.41
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.56	0.41
2:CC:63:ILE:HD11	2:CC:94:ALA:CB	2.51	0.41
2:CC:109:GLU:HG2	2:CC:139:ASN:HB3	2.03	0.41
4:CE:93:VAL:HG22	4:CE:126:ALA:CB	2.50	0.41
6:CG:63:VAL:HG12	6:CG:127:ALA:HB1	2.02	0.41
10:CK:36:ARG:HH11	10:CK:36:ARG:CG	2.34	0.41
15:CP:52:LEU:HD21	15:CP:75:ILE:HA	2.03	0.41
15:CP:54:LEU:O	15:CP:55:ASP:C	2.63	0.41
19:CT:4:LYS:HE3	19:CT:6:ALA:H	1.85	0.41
20:CB:185:ILE:HG12	20:CB:199:ILE:HG21	2.03	0.41
21:CU:42:THR:O	21:CU:43:GLU:C	2.64	0.41
23:DB:572:A:C2	23:DB:2033:A:C2	3.09	0.41
23:DB:620:G:H5'	23:DB:620:G:N3	2.35	0.41
23:DB:675:A:OP1	29:DE:60:TRP:CZ2	2.74	0.41
23:DB:775:G:H4'	23:DB:776:G:H5'	2.02	0.41
23:DB:853:C:H2'	23:DB:854:C:H6	1.86	0.41
23:DB:856:G:H2'	23:DB:857:G:C8	2.56	0.41
23:DB:956:G:H1'	38:DM:82:MET:HE1	2.03	0.41
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	2.21	0.41
23:DB:1419:A:H2'	23:DB:1421:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1434:A:H62	23:DB:1558:C:N4	2.18	0.41
23:DB:1765:U:H2'	23:DB:1766:G:C8	2.56	0.41
23:DB:1819:A:OP1	25:DC:154:ALA:HA	2.21	0.41
23:DB:1856:U:C2'	23:DB:1857:G:H5'	2.51	0.41
23:DB:1940:U:O2	23:DB:1940:U:O4'	2.38	0.41
23:DB:2108:A:C8	23:DB:2108:A:OP2	2.74	0.41
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.85	0.41
23:DB:2544:G:H1'	23:DB:2646:C:H5'	2.02	0.41
23:DB:2659:G:O2'	23:DB:2661:G:N7	2.45	0.41
23:DB:2743:U:H2'	23:DB:2744:G:H5''	2.03	0.41
23:DB:2882:A:C3'	23:DB:2883:A:H5''	2.52	0.41
24:DI:5:GLN:O	24:DI:6:ALA:CB	2.69	0.41
24:DI:90:GLY:C	24:DI:91:LYS:HD2	2.45	0.41
24:DI:129:GLU:O	24:DI:133:ARG:HG3	2.21	0.41
25:DC:76:VAL:HA	25:DC:113:ASP:O	2.21	0.41
25:DC:157:ALA:C	25:DC:159:THR:H	2.29	0.41
26:DD:91:THR:O	26:DD:92:VAL:C	2.63	0.41
26:DD:124:ARG:HA	26:DD:165:MET:HE1	2.03	0.41
26:DD:159:LYS:O	26:DD:161:MET:HG2	2.20	0.41
27:DK:7:MET:HE1	27:DK:44:LYS:HG3	2.03	0.41
28:DP:19:PHE:HE2	28:DP:25:VAL:HG11	1.85	0.41
28:DP:96:LEU:O	28:DP:99:LEU:HB2	2.21	0.41
28:DP:114:ASN:HD22	28:DP:114:ASN:HA	1.53	0.41
29:DE:5:LEU:HD22	29:DE:122:GLU:HG3	2.02	0.41
29:DE:130:LYS:O	29:DE:132:LYS:N	2.53	0.41
31:D0:38:LEU:HD23	31:D0:39:ARG:N	2.36	0.41
33:D1:26:LYS:HD2	33:D1:30:PRO:HA	2.02	0.41
37:DL:59:ARG:O	37:DL:61:LEU:N	2.54	0.41
38:DM:12:MET:HE2	38:DM:71:LYS:HZ3	1.85	0.41
40:DH:90:LEU:HD22	40:DH:122:LEU:O	2.20	0.41
40:DH:128:HIS:O	40:DH:144:VAL:HG22	2.21	0.41
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HB2	2.03	0.41
45:DS:3:THR:HG21	45:DS:58:ALA:HA	2.02	0.41
45:DS:31:GLN:C	45:DS:33:LEU:N	2.77	0.41
45:DS:99:ARG:HE	45:DS:99:ARG:HB3	1.55	0.41
50:DT:47:VAL:HG12	50:DT:47:VAL:O	2.21	0.41
51:DZ:56:MET:C	51:DZ:58:VAL:N	2.78	0.41
51:DZ:69:ALA:C	51:DZ:70:GLU:O	2.64	0.41
52:DW:24:ARG:CZ	52:DW:25:PHE:C	2.94	0.41
1:AA:142:G:O2'	1:AA:196:A:N1	2.52	0.40
1:AA:207:C:H3'	1:AA:208:U:C5	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:213:G:H3'	1:AA:214:C:C6	2.55	0.40
1:AA:238:A:H3'	1:AA:239:U:H5''	2.04	0.40
1:AA:592:G:H2'	1:AA:593:U:O4'	2.21	0.40
1:AA:791:G:C6	1:AA:792:A:N7	2.89	0.40
1:AA:902:G:O2'	1:AA:903:G:H5'	2.20	0.40
1:AA:1206:G:O2'	1:AA:1207:G:H5'	2.22	0.40
1:AA:1243:C:O2'	1:AA:1244:G:H5'	2.21	0.40
3:AD:34:GLU:O	3:AD:34:GLU:CG	2.68	0.40
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.21	0.40
8:AI:85:ALA:C	8:AI:87:MET:N	2.77	0.40
12:AM:12:LYS:HB3	12:AM:13:HIS:H	1.71	0.40
13:AN:52:ARG:HB3	13:AN:53:ASP:H	1.73	0.40
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	2.02	0.40
15:AP:61:VAL:CA	15:AP:65:ALA:HB3	2.48	0.40
16:AQ:57:VAL:HB	16:AQ:79:GLU:CB	2.51	0.40
19:AT:67:HIS:CE1	19:AT:68:LYS:HE3	2.55	0.40
20:AB:9:LEU:C	20:AB:11:ALA:N	2.79	0.40
20:AB:46:VAL:HA	20:AB:49:PHE:HD2	1.84	0.40
22:BA:16:G:C5	22:BA:69:G:C2	3.09	0.40
22:BA:97:C:H2'	22:BA:98:G:H5'	2.03	0.40
23:BB:1:G:C2	23:BB:2:G:N7	2.89	0.40
23:BB:41:C:O2'	23:BB:42:A:H5'	2.21	0.40
23:BB:70:G:O2'	23:BB:113:U:H4'	2.21	0.40
23:BB:122:G:O2'	23:BB:123:G:H5'	2.21	0.40
23:BB:278:A:N3	23:BB:278:A:C2'	2.83	0.40
23:BB:651:G:O2'	23:BB:652:U:H5'	2.21	0.40
23:BB:1171:G:C4	23:BB:1172:C:H1'	2.55	0.40
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.20	0.40
23:BB:1825:U:H2'	23:BB:1826:G:C8	2.56	0.40
23:BB:2231:U:H2'	23:BB:2232:C:C6	2.56	0.40
23:BB:2538:C:O2'	23:BB:2539:C:H5'	2.21	0.40
23:BB:2557:G:C6	23:BB:2558:C:N4	2.89	0.40
23:BB:2579:C:H1'	26:BD:130:GLN:NE2	2.28	0.40
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.21	0.40
23:BB:2760:C:H2'	23:BB:2761:A:H5'	2.03	0.40
27:BK:99:ILE:N	27:BK:118:LEU:HD23	2.34	0.40
27:BK:108:ARG:C	27:BK:113:MET:HE3	2.46	0.40
27:BK:111:LYS:HD3	27:BK:111:LYS:N	2.36	0.40
32:B4:11:CYS:SG	32:B4:12:ARG:N	2.94	0.40
32:B4:22:VAL:O	32:B4:24:ARG:HG3	2.21	0.40
41:BJ:43:GLU:O	41:BJ:45:THR:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:36:TYR:N	43:BO:36:TYR:HD2	2.19	0.40
44:BQ:93:ILE:HG23	44:BQ:94:LEU:CD2	2.50	0.40
46:BU:60:LYS:HG3	46:BU:61:GLU:H	1.87	0.40
50:BT:21:SER:O	50:BT:25:GLU:HB2	2.21	0.40
1:CA:16:A:N1	1:CA:919:A:C2	2.89	0.40
1:CA:501:C:H1'	1:CA:549:C:H1'	2.03	0.40
1:CA:665:A:H2'	1:CA:732:C:O2	2.21	0.40
1:CA:675:A:H2'	1:CA:676:A:H8	1.86	0.40
1:CA:768:A:H4'	1:CA:1523:G:N2	2.37	0.40
1:CA:1112:C:O2	2:CC:178:ARG:HB3	2.20	0.40
1:CA:1140:C:O2'	1:CA:1141:C:H5'	2.21	0.40
1:CA:1413:A:N6	1:CA:1488:G:C6	2.89	0.40
3:CD:25:ARG:O	3:CD:26:ALA:HB3	2.21	0.40
6:CG:16:LYS:HB3	6:CG:43:TYR:CE1	2.56	0.40
6:CG:119:LEU:O	6:CG:123:LEU:HG	2.21	0.40
7:CH:77:VAL:C	7:CH:79:ARG:H	2.29	0.40
8:CI:27:ILE:CB	8:CI:34:LEU:HB2	2.48	0.40
8:CI:33:SER:CB	8:CI:36:GLN:HB2	2.49	0.40
10:CK:28:ASN:HD22	10:CK:46:ALA:HB3	1.81	0.40
11:CL:13:ARG:H	11:CL:13:ARG:HG2	1.72	0.40
11:CL:116:TYR:O	11:CL:117:GLY:C	2.64	0.40
12:CM:68:LEU:O	12:CM:72:ILE:HB	2.22	0.40
14:CO:70:LEU:HD12	14:CO:78:TYR:CB	2.51	0.40
17:CR:38:ILE:CG2	17:CR:58:ILE:HG21	2.50	0.40
18:CS:46:LEU:O	18:CS:60:PHE:HA	2.21	0.40
19:CT:82:ILE:O	19:CT:85:LEU:HD22	2.21	0.40
22:DA:67:G:O2'	22:DA:68:C:H5'	2.21	0.40
23:DB:15:G:O2'	23:DB:16:C:H5'	2.21	0.40
23:DB:48:G:O3'	23:DB:51:G:H5'	2.21	0.40
23:DB:319:G:H2'	23:DB:320:A:O4'	2.21	0.40
23:DB:545:U:C6	23:DB:546:U:H1'	2.56	0.40
23:DB:717:C:C3'	23:DB:718:A:H5''	2.48	0.40
23:DB:877:A:C2	23:DB:901:C:N4	2.89	0.40
23:DB:1215:G:H2'	23:DB:1216:G:H8	1.86	0.40
23:DB:1249:U:O4'	44:DQ:3:VAL:HG21	2.21	0.40
23:DB:1372:U:H4'	23:DB:2213:U:O2	2.21	0.40
23:DB:1373:A:H4'	23:DB:2212:A:N3	2.36	0.40
23:DB:1754:A:N1	23:DB:2716:C:O2'	2.55	0.40
23:DB:2352:A:C2'	23:DB:2353:G:H5'	2.51	0.40
23:DB:2595:G:H1	25:DC:238:ASN:ND2	2.19	0.40
23:DB:2597:G:C6	23:DB:2598:A:N6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2798:U:H1'	23:DB:2800:A:H61	1.77	0.40
25:DC:30:ALA:O	25:DC:32:LEU:N	2.48	0.40
26:DD:116:LYS:HB2	26:DD:165:MET:HB3	2.03	0.40
26:DD:136:ASN:HD21	26:DD:140:HIS:N	2.19	0.40
27:DK:54:LYS:H	27:DK:54:LYS:CD	2.31	0.40
29:DE:126:VAL:HG21	29:DE:133:LEU:HB2	2.03	0.40
37:DL:70:LYS:HE3	37:DL:107:PHE:HE2	1.86	0.40
40:DH:112:LYS:O	40:DH:112:LYS:HG3	2.21	0.40
42:DN:52:ILE:HD13	42:DN:87:PHE:CE2	2.56	0.40
46:DU:12:VAL:HG22	46:DU:69:VAL:CG1	2.42	0.40
47:DF:33:ILE:HG21	47:DF:98:PHE:CE2	2.55	0.40
47:DF:157:THR:C	47:DF:159:ALA:H	2.29	0.40
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.20	0.40
50:DT:39:THR:O	50:DT:40:LYS:HB2	2.21	0.40
50:DT:40:LYS:HG2	50:DT:60:THR:CG2	2.51	0.40
50:DT:59:ASN:O	50:DT:83:ALA:O	2.39	0.40
53:D6:87:ASP:OD2	53:D6:88:LEU:HD12	2.21	0.40
1:AA:36:C:H2'	1:AA:37:U:O4'	2.22	0.40
1:AA:82:G:H1'	1:AA:89:U:O4'	2.21	0.40
1:AA:370:C:H2'	1:AA:371:A:C8	2.55	0.40
1:AA:370:C:H2'	1:AA:371:A:H8	1.85	0.40
1:AA:375:U:OP1	15:AP:70:ARG:NH1	2.53	0.40
1:AA:455:G:H2'	1:AA:456:A:H8	1.87	0.40
1:AA:734:G:H21	17:AR:63:TYR:HE1	1.59	0.40
1:AA:927:G:N1	1:AA:1391:U:C2	2.89	0.40
1:AA:1028:C:H3'	1:AA:1029:U:C6	2.57	0.40
1:AA:1080:A:OP1	4:AE:49:TYR:HE2	2.04	0.40
1:AA:1164:G:H2'	1:AA:1165:U:C6	2.56	0.40
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.56	0.40
1:AA:1242:G:H2'	1:AA:1243:C:H6	1.86	0.40
2:AC:126:ARG:HH21	2:AC:191:THR:CG2	2.31	0.40
5:AF:22:ILE:O	5:AF:26:THR:HG23	2.21	0.40
7:AH:39:LEU:CD2	7:AH:128:VAL:HG21	2.52	0.40
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	2.03	0.40
8:AI:10:ARG:HA	8:AI:14:SER:O	2.21	0.40
8:AI:66:VAL:CG1	8:AI:74:GLN:HG3	2.51	0.40
9:AJ:21:ALA:O	9:AJ:25:ILE:HG13	2.22	0.40
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	2.21	0.40
10:AK:51:PHE:HD1	10:AK:51:PHE:O	2.03	0.40
12:AM:2:ARG:HA	12:AM:6:ILE:C	2.47	0.40
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:52:ILE:HA	12:AM:55:LEU:HG	2.02	0.40
20:AB:50:ASN:O	20:AB:51:GLU:C	2.64	0.40
20:AB:143:LEU:O	20:AB:147:LEU:N	2.53	0.40
22:BA:116:G:H4'	43:BO:54:VAL:HG13	2.02	0.40
23:BB:409:G:H2'	23:BB:410:G:C8	2.56	0.40
23:BB:547:A:H2'	23:BB:547:A:N3	2.36	0.40
23:BB:679:C:H2'	23:BB:680:C:C6	2.56	0.40
23:BB:858:G:N2	23:BB:2269:G:OP2	2.54	0.40
23:BB:1210:G:C5'	23:BB:1212:G:H5'	2.50	0.40
23:BB:1586:A:H8	23:BB:1586:A:O5'	2.04	0.40
23:BB:1819:A:OP1	25:BC:154:ALA:HA	2.22	0.40
23:BB:2026:U:C2	23:BB:2027:G:C8	3.09	0.40
23:BB:2231:U:H2'	23:BB:2232:C:O4'	2.21	0.40
23:BB:2353:G:H1'	52:BW:30:VAL:HG12	2.01	0.40
25:BC:64:VAL:HG11	25:BC:66:PHE:CZ	2.56	0.40
27:BK:113:MET:O	27:BK:114:LYS:C	2.64	0.40
27:BK:113:MET:O	27:BK:116:ILE:HG13	2.22	0.40
28:BP:46:VAL:HA	28:BP:60:VAL:HG12	2.02	0.40
29:BE:170:ARG:HH22	29:BE:176:ASP:HB3	1.86	0.40
31:B0:51:ARG:O	31:B0:52:LYS:HB2	2.22	0.40
34:B3:54:LEU:O	34:B3:55:GLY:C	2.64	0.40
37:BL:69:ARG:HD3	37:BL:69:ARG:O	2.20	0.40
37:BL:90:VAL:CB	37:BL:122:VAL:HG12	2.49	0.40
38:BM:38:ARG:HA	38:BM:98:PRO:HD3	2.02	0.40
41:BJ:19:ASP:OD2	41:BJ:58:ASN:HB2	2.21	0.40
41:BJ:38:GLY:CA	41:BJ:51:GLY:HA2	2.51	0.40
41:BJ:112:GLY:N	41:BJ:113:PRO:HD2	2.23	0.40
43:BO:74:VAL:O	43:BO:78:VAL:HG22	2.21	0.40
43:BO:88:LYS:HG2	43:BO:89:ASP:N	2.37	0.40
44:BQ:91:ARG:HE	44:BQ:94:LEU:CD2	2.34	0.40
45:BS:68:ASP:OD1	45:BS:68:ASP:N	2.53	0.40
50:BT:59:ASN:O	50:BT:83:ALA:O	2.38	0.40
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.21	0.40
51:BZ:54:LYS:HA	51:BZ:57:ARG:CD	2.46	0.40
52:BW:75:ASN:CG	52:BW:76:ARG:N	2.79	0.40
1:CA:182:A:H5''	1:CA:182:A:N3	2.37	0.40
1:CA:202:G:H2'	1:CA:203:G:H8	1.86	0.40
1:CA:208:U:H6	1:CA:208:U:O5'	2.05	0.40
1:CA:210:C:H1'	1:CA:211:G:N1	2.36	0.40
1:CA:611:C:H2'	1:CA:612:C:C6	2.55	0.40
1:CA:646:G:O2'	1:CA:647:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:688:G:O2'	1:CA:689:C:H5'	2.21	0.40
1:CA:740:U:O2'	1:CA:741:G:H5'	2.21	0.40
1:CA:751:U:H2'	1:CA:752:G:O4'	2.21	0.40
1:CA:812:G:OP1	1:CA:812:G:H4'	2.21	0.40
1:CA:834:U:H6	1:CA:834:U:O5'	2.03	0.40
1:CA:852:G:H2'	1:CA:853:C:C6	2.56	0.40
1:CA:907:A:O2'	1:CA:908:A:H5'	2.22	0.40
1:CA:1143:G:H2'	1:CA:1144:G:H8	1.86	0.40
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.56	0.40
1:CA:1478:U:O2'	1:CA:1479:C:H5'	2.22	0.40
2:CC:176:THR:O	2:CC:177:LEU:C	2.63	0.40
3:CD:156:ALA:O	3:CD:159:GLU:HB3	2.22	0.40
4:CE:99:SER:C	4:CE:101:GLY:N	2.78	0.40
4:CE:151:MET:O	4:CE:154:ALA:HB3	2.21	0.40
5:CF:86:ARG:HD2	17:CR:63:TYR:O	2.21	0.40
5:CF:97:THR:O	5:CF:98:GLU:HB3	2.20	0.40
5:CF:100:SER:HA	17:CR:23:LYS:HE2	2.03	0.40
6:CG:14:ASP:CB	6:CG:19:SER:H	2.34	0.40
7:CH:50:VAL:O	7:CH:50:VAL:HG13	2.21	0.40
9:CJ:10:LEU:HD12	9:CJ:72:ARG:HB2	2.03	0.40
12:CM:12:LYS:H	12:CM:44:ILE:HD12	1.86	0.40
13:CN:72:PHE:CG	13:CN:73:LEU:N	2.89	0.40
15:CP:12:LYS:O	15:CP:13:LYS:HB2	2.22	0.40
15:CP:38:PHE:HE2	15:CP:51:ARG:HH11	1.69	0.40
18:CS:14:LEU:HD23	18:CS:14:LEU:H	1.86	0.40
18:CS:23:GLU:HG3	18:CS:24:SER:H	1.87	0.40
19:CT:27:MET:HE3	19:CT:31:ILE:CD1	2.50	0.40
20:CB:65:LYS:HG2	20:CB:89:PHE:CE1	2.56	0.40
23:DB:107:G:C2	23:DB:108:G:C8	3.10	0.40
23:DB:196:A:N3	23:DB:196:A:H2'	2.36	0.40
23:DB:454:A:H3'	23:DB:455:C:C5'	2.50	0.40
23:DB:460:A:H4'	50:DT:72:GLN:CB	2.42	0.40
23:DB:954:G:H5'	23:DB:955:U:OP2	2.21	0.40
23:DB:1055:G:C2'	23:DB:1056:G:H5'	2.52	0.40
23:DB:1057:A:C8	23:DB:1086:A:C8	3.09	0.40
23:DB:1251:C:OP2	44:DQ:5:ARG:NE	2.55	0.40
23:DB:1521:G:O5'	23:DB:1522:A:H2'	2.21	0.40
23:DB:1892:C:O2'	23:DB:1893:C:H5'	2.21	0.40
23:DB:1916:A:H2'	23:DB:1917:U:C6	2.57	0.40
23:DB:2142:A:H2'	23:DB:2143:C:H1'	2.03	0.40
23:DB:2283:C:H2'	23:DB:2284:A:C5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.86	0.40
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.22	0.40
23:DB:2834:G:H2'	23:DB:2879:A:N6	2.36	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
25:DC:130:PRO:O	25:DC:132:ARG:N	2.54	0.40
26:DD:62:LYS:N	26:DD:63:PRO:CD	2.85	0.40
26:DD:104:VAL:HG11	26:DD:205:PRO:HB3	2.03	0.40
26:DD:133:THR:HG23	26:DD:134:HIS:CD2	2.56	0.40
27:DK:2:ILE:HG13	27:DK:33:ALA:O	2.21	0.40
27:DK:79:PHE:O	27:DK:81:GLY:N	2.51	0.40
28:DP:1:SER:H1	28:DP:4:ILE:CG1	2.34	0.40
28:DP:31:VAL:O	28:DP:32:VAL:CB	2.69	0.40
28:DP:33:GLU:HB3	28:DP:34:GLY:H	1.56	0.40
31:D0:41:HIS:O	31:D0:42:ILE:O	2.39	0.40
35:DV:1:MET:O	35:DV:62:THR:HG23	2.21	0.40
38:DM:57:VAL:O	38:DM:60:GLN:HG2	2.21	0.40
40:DH:94:ILE:HG22	40:DH:122:LEU:HB3	2.00	0.40
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.86	0.40
41:DJ:102:GLU:O	41:DJ:106:LYS:HB2	2.21	0.40
44:DQ:25:GLY:C	44:DQ:27:ARG:N	2.79	0.40
45:DS:17:VAL:O	45:DS:19:LEU:N	2.54	0.40
46:DU:5:ARG:HG2	46:DU:5:ARG:HH21	1.85	0.40
46:DU:28:LEU:C	46:DU:30:SER:H	2.29	0.40
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.21	0.40
48:DG:88:LEU:CB	48:DG:161:VAL:HG22	2.50	0.40
50:DT:43:ILE:O	50:DT:46:ALA:HB3	2.22	0.40
53:D6:13:HIS:HB3	53:D6:132:ILE:HD13	2.04	0.40
53:D6:166:ASP:O	53:D6:167:GLU:C	2.63	0.40
1:AA:93:U:C2	1:AA:95:C:C5	3.10	0.40
1:AA:202:G:H2'	1:AA:203:G:H8	1.85	0.40
1:AA:279:A:P	1:AA:281:G:H5'	2.61	0.40
1:AA:620:C:H2'	1:AA:621:A:C8	2.56	0.40
1:AA:844:G:H2'	1:AA:845:A:H8	1.86	0.40
1:AA:1015:G:N2	1:AA:1218:C:O2	2.53	0.40
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.36	0.40
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.21	0.40
3:AD:87:GLU:OE1	3:AD:91:ALA:HB2	2.22	0.40
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.84	0.40
8:AI:11:ARG:NH2	8:AI:106:ASP:OD1	2.55	0.40
8:AI:46:VAL:CG2	8:AI:47:VAL:N	2.84	0.40
8:AI:90:ASP:HB3	8:AI:93:LEU:HG	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:34:THR:HG23	11:AL:55:ARG:HB2	2.03	0.40
12:AM:1:ALA:O	12:AM:3:ILE:HG13	2.21	0.40
12:AM:52:ILE:CD1	12:AM:55:LEU:HD12	2.39	0.40
13:AN:40:ARG:HH11	18:AS:6:LYS:HB2	1.85	0.40
13:AN:45:LEU:HD23	13:AN:46:LYS:HD3	2.02	0.40
14:AO:70:LEU:HD12	14:AO:78:TYR:CB	2.51	0.40
16:AQ:46:HIS:NE2	16:AQ:48:GLU:HG2	2.37	0.40
16:AQ:60:ILE:H	16:AQ:60:ILE:HD13	1.86	0.40
17:AR:25:ILE:O	17:AR:29:LYS:HG3	2.22	0.40
19:AT:66:ILE:HG13	19:AT:70:LYS:HE3	2.04	0.40
20:AB:111:LYS:O	20:AB:114:LYS:HB2	2.21	0.40
20:AB:218:ALA:C	20:AB:220:VAL:N	2.79	0.40
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.36	0.40
23:BB:535:G:O4'	44:BQ:48:ASP:HB3	2.21	0.40
23:BB:686:U:H4'	23:BB:687:C:OP2	2.20	0.40
23:BB:951:C:O2'	23:BB:952:G:H5'	2.22	0.40
23:BB:1151:A:H2'	23:BB:1152:C:O4'	2.22	0.40
23:BB:1335:C:H2'	23:BB:1336:A:C8	2.55	0.40
23:BB:1551:A:H3'	23:BB:1552:A:C5'	2.42	0.40
23:BB:1605:C:H1'	23:BB:1610:A:C8	2.57	0.40
23:BB:1687:G:O2'	23:BB:1688:U:H5'	2.21	0.40
23:BB:2071:A:H2'	23:BB:2072:C:H6	1.78	0.40
23:BB:2362:C:OP2	34:B3:43:LEU:HD21	2.22	0.40
23:BB:2513:A:C2	26:BD:148:GLN:OE1	2.75	0.40
23:BB:2655:G:O2'	23:BB:2656:U:P	2.80	0.40
23:BB:2655:G:H1'	23:BB:2656:U:H5	1.86	0.40
25:BC:120:ASP:OD2	25:BC:120:ASP:N	2.54	0.40
25:BC:166:ARG:CB	25:BC:171:VAL:HG22	2.50	0.40
25:BC:250:GLN:C	25:BC:252:LYS:H	2.29	0.40
29:BE:2:GLU:OE1	29:BE:2:GLU:HA	2.21	0.40
31:B0:30:ASP:OD2	31:B0:31:LYS:N	2.53	0.40
31:B0:50:GLY:O	31:B0:51:ARG:C	2.63	0.40
31:B0:55:ALA:O	31:B0:56:LYS:C	2.64	0.40
37:BL:4:ASN:O	37:BL:6:LEU:N	2.54	0.40
38:BM:33:LEU:HD22	38:BM:128:THR:CB	2.51	0.40
41:BJ:3:THR:CB	41:BJ:44:TYR:OH	2.70	0.40
41:BJ:26:GLY:C	41:BJ:28:LEU:N	2.80	0.40
41:BJ:132:HIS:O	41:BJ:133:ALA:C	2.64	0.40
42:BN:62:ASN:O	42:BN:80:PHE:HZ	2.04	0.40
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	2.02	0.40
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.71	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:28:LEU:C	46:BU:30:SER:N	2.77	0.40
48:BG:26:LYS:HA	48:BG:32:LEU:H	1.86	0.40
48:BG:43:LYS:N	48:BG:50:THR:O	2.48	0.40
48:BG:62:ALA:O	48:BG:66:THR:HG22	2.21	0.40
51:BZ:39:TRP:HA	51:BZ:46:PHE:HD2	1.83	0.40
51:BZ:53:ALA:C	51:BZ:55:GLY:N	2.79	0.40
1:CA:90:C:H2'	1:CA:91:U:C5	2.55	0.40
1:CA:175:C:O2'	1:CA:176:C:H5'	2.21	0.40
1:CA:238:A:H3'	1:CA:239:U:H5''	2.02	0.40
1:CA:413:G:O6	3:CD:32:LYS:HG3	2.20	0.40
1:CA:482:A:C2	1:CA:483:C:H1'	2.56	0.40
1:CA:652:U:H1'	1:CA:653:U:H5	1.86	0.40
1:CA:767:A:H3'	57:CA:1855:HOH:O	2.20	0.40
1:CA:777:A:H2'	1:CA:778:G:C8	2.55	0.40
1:CA:782:A:H2'	1:CA:783:C:O4'	2.20	0.40
1:CA:812:G:O2'	1:CA:813:U:O5'	2.39	0.40
1:CA:818:G:O2'	1:CA:819:A:H5''	2.21	0.40
1:CA:1131:G:O2'	1:CA:1132:C:H5'	2.21	0.40
1:CA:1147:C:H2'	1:CA:1148:U:H6	1.86	0.40
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	2.03	0.40
2:CC:146:LYS:HB2	2:CC:202:PHE:CD2	2.56	0.40
3:CD:13:ARG:HA	3:CD:37:PRO:CG	2.51	0.40
3:CD:110:ARG:HG3	3:CD:110:ARG:NH1	2.36	0.40
4:CE:15:ILE:HB	4:CE:35:LEU:O	2.21	0.40
4:CE:62:ALA:O	4:CE:65:LYS:HB2	2.21	0.40
8:CI:78:ILE:HG22	8:CI:82:ILE:HD11	2.02	0.40
11:CL:86:VAL:CB	11:CL:89:LEU:HB2	2.51	0.40
16:CQ:49:ASN:C	16:CQ:51:GLU:N	2.79	0.40
17:CR:28:LEU:C	17:CR:30:ASN:N	2.78	0.40
22:DA:80:U:H2'	22:DA:81:G:C8	2.57	0.40
22:DA:83:G:O2'	22:DA:84:G:H5'	2.21	0.40
23:DB:76:C:O2'	39:DX:55:THR:HG21	2.20	0.40
23:DB:98:G:H2'	23:DB:99:U:H5'	2.03	0.40
23:DB:572:A:H3'	23:DB:573:U:O4'	2.22	0.40
23:DB:1064:C:O2'	23:DB:1065:U:H5'	2.20	0.40
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.22	0.40
23:DB:1403:A:H2'	23:DB:1404:C:H6	1.85	0.40
23:DB:1856:U:H2'	23:DB:1857:G:H5'	2.02	0.40
23:DB:2028:U:H2'	23:DB:2029:G:O4'	2.21	0.40
23:DB:2032:G:N7	23:DB:2454:G:H1'	2.37	0.40
23:DB:2036:C:H2'	23:DB:2037:A:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.21	0.40
23:DB:2471:A:O2'	23:DB:2472:G:P	2.79	0.40
23:DB:2691:C:C4	23:DB:2719:G:N2	2.89	0.40
25:DC:130:PRO:C	25:DC:132:ARG:N	2.79	0.40
28:DP:49:ILE:HG12	28:DP:50:ARG:H	1.87	0.40
31:D0:28:SER:HB2	31:D0:39:ARG:HG2	2.03	0.40
33:D1:6:GLU:HB2	33:D1:52:LYS:HZ3	1.86	0.40
33:D1:20:TYR:CD2	33:D1:37:LYS:HD3	2.56	0.40
36:D2:6:GLN:HA	36:D2:7:PRO:HD2	1.89	0.40
37:DL:21:ARG:HA	37:DL:21:ARG:HD3	1.99	0.40
37:DL:127:VAL:HG22	37:DL:128:THR:O	2.21	0.40
39:DX:56:LEU:O	39:DX:57:LEU:CB	2.68	0.40
41:DJ:28:LEU:HD23	41:DJ:29:ALA:H	1.86	0.40
43:DO:67:ASN:O	43:DO:69:ASP:N	2.55	0.40
44:DQ:45:ALA:O	44:DQ:49:ARG:N	2.50	0.40
44:DQ:60:TRP:CE2	44:DQ:93:ILE:HB	2.56	0.40
47:DF:33:ILE:HG22	47:DF:90:LEU:HD23	2.03	0.40
1:AA:84:U:C3'	1:AA:86:G:H21	2.34	0.40
1:AA:515:G:O2'	1:AA:516:U:H5'	2.22	0.40
1:AA:1108:G:H5'	2:AC:175:HIS:ND1	2.37	0.40
1:AA:1295:U:H2'	1:AA:1296:C:C6	2.56	0.40
1:AA:1424:U:H2'	1:AA:1425:U:C6	2.57	0.40
1:AA:1495:U:O2'	1:AA:1496:C:H5'	2.20	0.40
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.87	0.40
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.56	0.40
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.37	0.40
6:AG:61:PHE:O	6:AG:65:LEU:HD13	2.22	0.40
8:AI:27:ILE:CB	8:AI:34:LEU:HB2	2.46	0.40
11:AL:23:LEU:HG	11:AL:24:GLU:H	1.86	0.40
11:AL:86:VAL:CG1	11:AL:89:LEU:HB2	2.51	0.40
16:AQ:17:GLU:C	16:AQ:19:SER:H	2.28	0.40
20:AB:169:HIS:CG	20:AB:170:ILE:N	2.89	0.40
21:AU:34:ARG:HD2	21:AU:35:GLU:N	2.36	0.40
23:BB:90:U:OP2	23:BB:91:A:H3'	2.21	0.40
23:BB:125:A:C3'	23:BB:126:A:H5'	2.52	0.40
23:BB:263:G:H2'	23:BB:264:C:C6	2.55	0.40
23:BB:540:C:H2'	23:BB:541:A:H8	1.85	0.40
23:BB:673:C:H2'	23:BB:674:G:H5'	2.02	0.40
23:BB:675:A:H4'	29:BE:60:TRP:HZ2	1.85	0.40
23:BB:783:A:C8	23:BB:784:G:H4'	2.43	0.40
23:BB:783:A:H4'	23:BB:1779:U:O2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:787:C:H3'	23:BB:791:C:H41	1.86	0.40
23:BB:1281:G:H2'	23:BB:1282:U:C6	2.56	0.40
23:BB:2010:G:O2'	23:BB:2011:U:H5'	2.21	0.40
23:BB:2135:A:H61	23:BB:2156:G:H1'	1.86	0.40
23:BB:2297:A:C2	23:BB:2320:U:H1'	2.56	0.40
23:BB:2386:A:N3	52:BW:38:ARG:HD2	2.37	0.40
23:BB:2559:C:O2'	23:BB:2560:A:H5'	2.22	0.40
23:BB:2611:C:O2'	23:BB:2612:C:H5'	2.20	0.40
23:BB:2787:C:H2'	23:BB:2788:C:C6	2.56	0.40
25:BC:92:LEU:HD12	25:BC:101:ARG:O	2.22	0.40
25:BC:188:ARG:NH2	25:BC:188:ARG:HG2	2.37	0.40
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.21	0.40
26:BD:24:VAL:HG23	26:BD:189:VAL:H	1.86	0.40
26:BD:24:VAL:HG23	26:BD:189:VAL:N	2.37	0.40
28:BP:6:GLN:C	28:BP:8:GLU:N	2.78	0.40
33:B1:9:LYS:O	33:B1:50:GLU:O	2.39	0.40
38:BM:101:VAL:HG13	38:BM:101:VAL:O	2.21	0.40
39:BX:59:GLU:CD	39:BX:60:LYS:H	2.29	0.40
41:BJ:44:TYR:HB2	44:BQ:63:ARG:HD2	2.02	0.40
42:BN:118:ARG:HE	42:BN:118:ARG:HB3	1.46	0.40
43:BO:3:LYS:H	43:BO:3:LYS:CD	2.19	0.40
43:BO:25:ARG:HD2	43:BO:93:ASP:HB2	2.02	0.40
45:BS:25:ARG:HE	45:BS:74:ILE:CG2	2.34	0.40
45:BS:29:VAL:HG23	45:BS:70:LYS:CA	2.50	0.40
47:BF:37:MET:HE3	47:BF:151:LEU:HD23	2.03	0.40
47:BF:135:ILE:HD12	47:BF:135:ILE:O	2.21	0.40
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.51	0.40
48:BG:93:TYR:N	48:BG:93:TYR:CD2	2.90	0.40
48:BG:94:ARG:HG2	48:BG:127:GLN:NE2	2.36	0.40
49:BR:14:VAL:HG22	49:BR:15:SER:H	1.84	0.40
50:BT:89:GLU:C	50:BT:91:GLN:H	2.28	0.40
52:BW:57:THR:O	52:BW:59:PHE:N	2.55	0.40
53:B6:36:ALA:HB1	53:B6:39:LEU:HD23	2.03	0.40
1:CA:21:G:H2'	1:CA:22:G:H8	1.79	0.40
1:CA:42:G:H2'	1:CA:43:C:H6	1.87	0.40
1:CA:134:G:H2'	1:CA:135:C:O4'	2.20	0.40
1:CA:185:U:H2'	1:CA:186:C:C6	2.57	0.40
1:CA:714:G:N3	1:CA:777:A:H1'	2.37	0.40
1:CA:824:G:C6	1:CA:877:G:C6	3.09	0.40
1:CA:966:G:H2'	1:CA:967:C:C6	2.57	0.40
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.86	0.40
1:CA:1105:A:H2'	1:CA:1106:G:C8	2.53	0.40
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.86	0.40
4:CE:93:VAL:HG22	4:CE:126:ALA:HB1	2.04	0.40
7:CH:39:LEU:CD2	7:CH:128:VAL:HG21	2.51	0.40
7:CH:77:VAL:HG12	7:CH:78:SER:N	2.37	0.40
9:CJ:28:THR:O	9:CJ:32:THR:HG22	2.21	0.40
12:CM:6:ILE:CD1	47:DF:144:LYS:HE3	2.51	0.40
12:CM:96:VAL:C	12:CM:98:GLY:H	2.29	0.40
15:CP:45:GLU:O	15:CP:47:GLU:N	2.50	0.40
15:CP:46:LYS:O	15:CP:47:GLU:HB2	2.22	0.40
16:CQ:46:HIS:NE2	16:CQ:48:GLU:HG2	2.37	0.40
17:CR:31:TYR:CD1	17:CR:54:LEU:HD11	2.57	0.40
18:CS:39:ILE:HB	18:CS:66:VAL:O	2.22	0.40
22:DA:6:G:H2'	22:DA:7:G:H8	1.86	0.40
22:DA:13:G:C2'	22:DA:14:U:H5''	2.50	0.40
22:DA:102:G:H2'	22:DA:103:U:H6	1.86	0.40
23:DB:26:G:H1'	23:DB:515:A:N6	2.36	0.40
23:DB:123:G:H4'	23:DB:1376:C:O5'	2.20	0.40
23:DB:291:G:H2'	23:DB:292:U:C6	2.56	0.40
23:DB:372:G:O2'	23:DB:373:U:P	2.78	0.40
23:DB:458:G:HO2'	23:DB:459:U:P	2.44	0.40
23:DB:577:G:OP1	23:DB:2502:G:H2'	2.22	0.40
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.52	0.40
23:DB:1332:G:H5'	23:DB:1332:G:N3	2.36	0.40
23:DB:1424:G:O2'	23:DB:1425:G:H5'	2.22	0.40
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.57	0.40
23:DB:2206:C:H2'	23:DB:2207:C:H6	1.87	0.40
23:DB:2227:A:H2'	23:DB:2228:G:O4'	2.21	0.40
23:DB:2345:G:H5'	23:DB:2347:C:O4'	2.22	0.40
23:DB:2562:U:H4'	27:DK:25:LEU:HD23	2.02	0.40
23:DB:2636:C:H4'	26:DD:81:GLU:CD	2.47	0.40
23:DB:2657:A:C2'	23:DB:2658:C:H5'	2.52	0.40
24:DI:16:MET:N	24:DI:42:ASN:OD1	2.54	0.40
24:DI:91:LYS:HD2	24:DI:91:LYS:N	2.36	0.40
26:DD:49:GLN:NE2	26:DD:79:LEU:HD12	2.36	0.40
26:DD:161:MET:O	26:DD:161:MET:HG3	2.22	0.40
27:DK:38:ILE:HD11	27:DK:112:PHE:CZ	2.56	0.40
27:DK:108:ARG:O	27:DK:113:MET:HE3	2.22	0.40
28:DP:25:VAL:HA	28:DP:85:VAL:CA	2.51	0.40
29:DE:108:ILE:HG12	37:DL:2:ARG:HH22	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:147:LEU:C	29:DE:148:ILE:HG12	2.46	0.40
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.22	0.40
35:DV:31:TYR:O	35:DV:92:VAL:HA	2.21	0.40
37:DL:47:ARG:HH21	37:DL:47:ARG:CB	2.35	0.40
37:DL:50:PHE:O	37:DL:52:GLY:N	2.54	0.40
37:DL:69:ARG:HD3	37:DL:69:ARG:O	2.22	0.40
37:DL:78:ARG:HB3	37:DL:78:ARG:NH2	2.37	0.40
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.22	0.40
41:DJ:15:TRP:C	41:DJ:16:TYR:CD1	3.00	0.40
41:DJ:41:LYS:HB3	41:DJ:42:ALA:H	1.64	0.40
42:DN:51:LEU:O	42:DN:55:ALA:N	2.54	0.40
43:DO:9:ARG:HA	43:DO:12:THR:OG1	2.21	0.40
43:DO:16:ARG:HD3	43:DO:16:ARG:HA	1.94	0.40
43:DO:51:ALA:CB	43:DO:78:VAL:HG13	2.52	0.40
44:DQ:97:ILE:HG13	44:DQ:105:PHE:HB2	2.04	0.40
45:DS:88:ARG:N	45:DS:92:ARG:O	2.49	0.40
46:DU:51:LEU:N	46:DU:53:GLN:NE2	2.69	0.40
47:DF:51:ASN:O	47:DF:55:ASP:HB2	2.21	0.40
49:DR:46:GLU:HG3	49:DR:46:GLU:O	2.22	0.40
51:DZ:54:LYS:C	51:DZ:56:MET:N	2.77	0.40
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.86	0.40
1:AA:373:A:O4'	1:AA:481:G:H1'	2.22	0.40
1:AA:491:G:O2'	1:AA:492:C:H5'	2.22	0.40
1:AA:982:U:H4'	1:AA:983:A:O4'	2.20	0.40
1:AA:992:U:C2	1:AA:1043:G:N7	2.90	0.40
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.57	0.40
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.37	0.40
1:AA:1237:C:H3'	1:AA:1336:C:N4	2.36	0.40
1:AA:1309:G:OP1	12:AM:90:HIS:NE2	2.53	0.40
1:AA:1347:G:C8	8:AI:108:ARG:HD2	2.56	0.40
2:AC:32:LEU:O	2:AC:35:ASP:HB2	2.21	0.40
4:AE:155:LYS:O	4:AE:158:LYS:HD2	2.21	0.40
6:AG:19:SER:OG	6:AG:22:LEU:HB2	2.21	0.40
8:AI:35:GLU:O	8:AI:39:GLY:HA3	2.21	0.40
10:AK:125:LYS:O	10:AK:126:ARG:C	2.64	0.40
12:AM:32:ILE:HD11	12:AM:58:GLU:HB3	2.03	0.40
12:AM:49:GLU:O	12:AM:52:ILE:HG22	2.22	0.40
13:AN:87:ALA:CA	13:AN:92:ILE:HD13	2.51	0.40
15:AP:53:ASP:O	15:AP:54:LEU:C	2.64	0.40
17:AR:49:LYS:HA	17:AR:52:ARG:NH1	2.36	0.40
18:AS:51:HIS:HB2	18:AS:56:HIS:CD2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:77:ARG:H	18:AS:77:ARG:HG2	1.62	0.40
20:AB:161:PHE:HA	20:AB:183:PHE:O	2.21	0.40
22:BA:102:G:H2'	22:BA:103:U:H6	1.86	0.40
23:BB:191:A:O2'	23:BB:192:C:H5'	2.22	0.40
23:BB:235:U:H2'	23:BB:236:C:C6	2.56	0.40
23:BB:265:A:N6	23:BB:427:U:O2'	2.54	0.40
23:BB:457:A:H61	23:BB:470:A:H5''	1.87	0.40
23:BB:467:G:N7	36:B2:39:ARG:NH2	2.69	0.40
23:BB:538:A:N6	23:BB:555:G:O2'	2.53	0.40
23:BB:738:G:H1'	23:BB:759:G:N2	2.37	0.40
23:BB:861:A:H2'	23:BB:862:G:O4'	2.22	0.40
23:BB:918:A:C2'	23:BB:919:U:H5'	2.47	0.40
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.83	0.40
23:BB:1024:G:P	23:BB:1025:G:H3'	2.62	0.40
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.86	0.40
23:BB:1190:G:O5'	37:BL:32:GLY:HA2	2.22	0.40
23:BB:1507:C:C2'	23:BB:1508:A:H4'	2.51	0.40
23:BB:1693:U:H1'	25:BC:13:ARG:HH21	1.87	0.40
23:BB:2095:A:H2'	23:BB:2096:C:H6	1.83	0.40
23:BB:2235:G:H2'	23:BB:2236:U:C6	2.56	0.40
23:BB:2321:U:O2	23:BB:2321:U:C3'	2.69	0.40
23:BB:2364:C:C2'	23:BB:2365:G:H5'	2.52	0.40
23:BB:2618:G:H2'	23:BB:2619:C:C6	2.57	0.40
23:BB:2789:C:H2'	23:BB:2893:A:N7	2.36	0.40
23:BB:2820:A:C8	42:BN:4:ARG:HD3	2.56	0.40
25:BC:34:GLU:O	25:BC:35:LYS:C	2.63	0.40
25:BC:66:PHE:CD1	25:BC:66:PHE:N	2.89	0.40
25:BC:89:ASN:HD22	25:BC:89:ASN:HA	1.52	0.40
25:BC:91:ALA:HB3	25:BC:105:ALA:HB2	2.00	0.40
26:BD:69:ALA:CA	26:BD:73:VAL:HB	2.51	0.40
27:BK:98:ARG:HE	27:BK:98:ARG:N	2.20	0.40
29:BE:83:VAL:HG12	29:BE:86:ALA:HA	2.03	0.40
30:BY:10:ARG:O	30:BY:53:MET:HE3	2.21	0.40
32:B4:22:VAL:O	32:B4:24:ARG:N	2.54	0.40
33:B1:8:ILE:CG1	33:B1:51:ALA:HA	2.51	0.40
33:B1:37:LYS:HB2	33:B1:48:TYR:CD2	2.57	0.40
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.57	0.40
34:B3:50:SER:C	34:B3:52:GLY:N	2.77	0.40
36:B2:26:ASN:HA	36:B2:29:GLN:CB	2.46	0.40
36:B2:30:VAL:HG22	36:B2:33:ARG:HH22	1.87	0.40
37:BL:25:SER:C	37:BL:27:LEU:H	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:56:LEU:C	39:BX:59:GLU:OE2	2.65	0.40
40:BH:57:LYS:C	40:BH:59:ALA:H	2.30	0.40
43:BO:67:ASN:O	43:BO:69:ASP:N	2.54	0.40
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HD12	2.56	0.40
44:BQ:109:VAL:O	44:BQ:113:LYS:HG3	2.21	0.40
45:BS:34:ASP:O	45:BS:38:TYR:HD1	2.04	0.40
48:BG:74:MET:O	48:BG:78:VAL:HG13	2.22	0.40
48:BG:126:THR:O	48:BG:128:THR:N	2.55	0.40
49:BR:49:ILE:HG21	49:BR:54:VAL:HA	2.03	0.40
49:BR:72:VAL:CG2	49:BR:89:HIS:HB3	2.49	0.40
49:BR:98:ILE:N	49:BR:98:ILE:HD12	2.36	0.40
53:B6:137:LEU:HD13	53:B6:161:ILE:HG21	2.03	0.40
1:CA:191:G:H8	1:CA:191:G:OP2	2.04	0.40
1:CA:620:C:C6	3:CD:131:ILE:HD13	2.56	0.40
1:CA:675:A:O2'	1:CA:676:A:H5'	2.22	0.40
1:CA:749:A:O2'	1:CA:750:C:H5'	2.22	0.40
1:CA:846:G:H3'	1:CA:847:G:H8	1.87	0.40
1:CA:982:U:H4'	1:CA:983:A:O4'	2.22	0.40
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.86	0.40
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.21	0.40
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.21	0.40
1:CA:1133:G:O2'	1:CA:1134:G:H5'	2.22	0.40
1:CA:1248:A:C2	8:CI:71:ILE:HD11	2.56	0.40
2:CC:26:LYS:HE2	2:CC:27:GLU:CG	2.52	0.40
2:CC:99:GLN:N	2:CC:99:GLN:CD	2.80	0.40
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	2.04	0.40
7:CH:80:PRO:C	7:CH:82:LEU:H	2.29	0.40
7:CH:113:ARG:HA	7:CH:116:ARG:NH1	2.37	0.40
10:CK:93:GLU:O	10:CK:94:SER:C	2.65	0.40
10:CK:97:ARG:O	10:CK:98:ALA:C	2.63	0.40
10:CK:110:THR:HG22	21:CU:4:LYS:CA	2.37	0.40
10:CK:122:PRO:HD2	21:CU:35:GLU:HG2	2.02	0.40
11:CL:63:THR:O	11:CL:94:TYR:HB2	2.22	0.40
11:CL:113:ARG:O	11:CL:114:SER:C	2.64	0.40
15:CP:1:MET:O	15:CP:1:MET:HG3	2.21	0.40
18:CS:11:ASP:N	18:CS:14:LEU:HD21	2.37	0.40
18:CS:35:ARG:HB2	18:CS:71:GLY:CA	2.51	0.40
19:CT:38:ILE:HD11	19:CT:82:ILE:HA	2.04	0.40
19:CT:50:PHE:HE2	19:CT:75:LYS:HA	1.86	0.40
21:CU:34:ARG:NH1	21:CU:39:LYS:NZ	2.70	0.40
23:DB:96:C:H2'	23:DB:97:C:H6	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:111:A:O2'	23:DB:112:U:H5'	2.21	0.40
23:DB:162:U:O2	23:DB:162:U:H2'	2.21	0.40
23:DB:202:U:H2'	23:DB:203:A:C8	2.57	0.40
23:DB:265:A:H2'	23:DB:266:G:O4'	2.21	0.40
23:DB:392:U:H2'	23:DB:393:C:H6	1.85	0.40
23:DB:415:A:H2'	23:DB:416:U:C6	2.56	0.40
23:DB:651:G:O2'	23:DB:652:U:H5'	2.21	0.40
23:DB:754:U:H2'	23:DB:755:U:C6	2.57	0.40
23:DB:845:A:N1	23:DB:847:U:H1'	2.36	0.40
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.21	0.40
23:DB:1332:G:N7	23:DB:1609:A:O2'	2.53	0.40
23:DB:1473:G:C6	23:DB:1519:G:C6	3.10	0.40
23:DB:1689:A:H2'	23:DB:1690:A:H8	1.86	0.40
23:DB:1948:G:C6	23:DB:1959:G:C6	3.10	0.40
23:DB:2143:C:N3	23:DB:2144:G:H1'	2.36	0.40
23:DB:2263:C:H4'	23:DB:2329:U:H4'	2.03	0.40
23:DB:2356:U:H4'	52:DW:16:GLU:OE1	2.21	0.40
23:DB:2410:G:H2'	23:DB:2411:A:O4'	2.21	0.40
23:DB:2485:G:H4'	38:DM:123:LYS:O	2.22	0.40
23:DB:2679:A:H2'	23:DB:2680:U:H6	1.85	0.40
24:DI:102:ARG:O	24:DI:106:GLN:HG3	2.22	0.40
25:DC:119:VAL:HA	25:DC:133:ASN:ND2	2.36	0.40
26:DD:154:LYS:HG2	26:DD:155:VAL:N	2.36	0.40
27:DK:88:ASN:HB3	27:DK:92:GLU:O	2.22	0.40
32:D4:8:LYS:HG3	32:D4:9:LYS:HD3	2.04	0.40
35:DV:70:ILE:CD1	35:DV:71:LYS:N	2.82	0.40
38:DM:69:PRO:HB2	38:DM:92:TRP:HB3	2.03	0.40
38:DM:93:VAL:HG22	38:DM:94:ALA:N	2.37	0.40
38:DM:126:ILE:HD12	38:DM:126:ILE:N	2.37	0.40
39:DX:35:GLY:O	39:DX:37:LEU:N	2.54	0.40
40:DH:14:SER:HB3	40:DH:17:ASP:CB	2.45	0.40
43:DO:70:ALA:C	43:DO:72:ALA:N	2.80	0.40
45:DS:25:ARG:NH2	45:DS:74:ILE:HG23	2.37	0.40
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.21	0.40
49:DR:49:ILE:HG21	49:DR:54:VAL:HA	2.04	0.40
49:DR:49:ILE:HG21	49:DR:54:VAL:N	2.37	0.40
51:DZ:65:ASP:O	51:DZ:69:ALA:HB2	2.21	0.40
51:DZ:65:ASP:O	51:DZ:69:ALA:N	2.54	0.40
52:DW:48:ALA:HB3	52:DW:81:ILE:O	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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%)	151 (74%)	38 (19%)	15 (7%)	1	13
2	CC	204/232 (88%)	152 (74%)	37 (18%)	15 (7%)	1	13
3	AD	203/205 (99%)	151 (74%)	39 (19%)	13 (6%)	1	15
3	CD	203/205 (99%)	148 (73%)	42 (21%)	13 (6%)	1	15
4	AE	148/166 (89%)	117 (79%)	25 (17%)	6 (4%)	2	21
4	CE	148/166 (89%)	117 (79%)	25 (17%)	6 (4%)	2	21
5	AF	98/135 (73%)	64 (65%)	25 (26%)	9 (9%)	0	10
5	CF	98/135 (73%)	65 (66%)	24 (24%)	9 (9%)	0	10
6	AG	148/178 (83%)	106 (72%)	33 (22%)	9 (6%)	1	15
6	CG	150/178 (84%)	112 (75%)	29 (19%)	9 (6%)	1	16
7	AH	127/129 (98%)	98 (77%)	23 (18%)	6 (5%)	2	19
7	CH	127/129 (98%)	96 (76%)	25 (20%)	6 (5%)	2	19
8	AI	125/129 (97%)	99 (79%)	17 (14%)	9 (7%)	1	13
8	CI	125/129 (97%)	98 (78%)	18 (14%)	9 (7%)	1	13
9	AJ	96/103 (93%)	70 (73%)	13 (14%)	13 (14%)	0	3
9	CJ	96/103 (93%)	71 (74%)	12 (12%)	13 (14%)	0	3
10	AK	115/128 (90%)	87 (76%)	22 (19%)	6 (5%)	1	18
10	CK	115/128 (90%)	87 (76%)	22 (19%)	6 (5%)	1	18
11	AL	121/123 (98%)	73 (60%)	33 (27%)	15 (12%)	0	4
11	CL	121/123 (98%)	75 (62%)	31 (26%)	15 (12%)	0	4
12	AM	112/117 (96%)	79 (70%)	24 (21%)	9 (8%)	1	12
12	CM	111/117 (95%)	76 (68%)	25 (22%)	10 (9%)	0	10
13	AN	92/100 (92%)	59 (64%)	26 (28%)	7 (8%)	1	13
13	CN	92/100 (92%)	60 (65%)	24 (26%)	8 (9%)	0	10
14	AO	86/89 (97%)	59 (69%)	22 (26%)	5 (6%)	1	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CO	86/89 (97%)	60 (70%)	22 (26%)	4 (5%)	2	19
15	AP	80/82 (98%)	59 (74%)	16 (20%)	5 (6%)	1	15
15	CP	78/82 (95%)	56 (72%)	16 (20%)	6 (8%)	1	12
16	AQ	78/83 (94%)	58 (74%)	15 (19%)	5 (6%)	1	15
16	CQ	79/83 (95%)	59 (75%)	15 (19%)	5 (6%)	1	15
17	AR	53/74 (72%)	41 (77%)	9 (17%)	3 (6%)	1	17
17	CR	53/74 (72%)	41 (77%)	9 (17%)	3 (6%)	1	17
18	AS	77/91 (85%)	60 (78%)	12 (16%)	5 (6%)	1	15
18	CS	78/91 (86%)	61 (78%)	11 (14%)	6 (8%)	1	12
19	AT	83/86 (96%)	63 (76%)	15 (18%)	5 (6%)	1	16
19	CT	83/86 (96%)	62 (75%)	16 (19%)	5 (6%)	1	16
20	AB	216/240 (90%)	142 (66%)	57 (26%)	17 (8%)	1	12
20	CB	216/240 (90%)	134 (62%)	65 (30%)	17 (8%)	1	12
21	AU	49/70 (70%)	28 (57%)	11 (22%)	10 (20%)	0	1
21	CU	49/70 (70%)	28 (57%)	12 (24%)	9 (18%)	0	2
24	BI	139/141 (99%)	120 (86%)	14 (10%)	5 (4%)	2	23
24	DI	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	2	23
25	BC	269/272 (99%)	155 (58%)	66 (24%)	48 (18%)	0	2
25	DC	269/272 (99%)	155 (58%)	65 (24%)	49 (18%)	0	2
26	BD	207/209 (99%)	122 (59%)	54 (26%)	31 (15%)	0	3
26	DD	207/209 (99%)	124 (60%)	51 (25%)	32 (16%)	0	3
27	BK	119/123 (97%)	78 (66%)	24 (20%)	17 (14%)	0	3
27	DK	119/123 (97%)	78 (66%)	24 (20%)	17 (14%)	0	3
28	BP	112/114 (98%)	61 (54%)	32 (29%)	19 (17%)	0	2
28	DP	112/114 (98%)	61 (54%)	34 (30%)	17 (15%)	0	3
29	BE	199/201 (99%)	125 (63%)	50 (25%)	24 (12%)	0	4
29	DE	199/201 (99%)	125 (63%)	51 (26%)	23 (12%)	0	5
30	BY	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	0	10
30	DY	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	0	10
31	B0	54/56 (96%)	39 (72%)	8 (15%)	7 (13%)	0	4
31	D0	54/56 (96%)	39 (72%)	8 (15%)	7 (13%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	B4	36/38 (95%)	16 (44%)	10 (28%)	10 (28%)	0	0
32	D4	36/38 (95%)	16 (44%)	10 (28%)	10 (28%)	0	0
33	B1	48/54 (89%)	37 (77%)	7 (15%)	4 (8%)	0	11
33	D1	48/54 (89%)	36 (75%)	8 (17%)	4 (8%)	0	11
34	B3	62/64 (97%)	35 (56%)	21 (34%)	6 (10%)	0	9
34	D3	62/64 (97%)	34 (55%)	22 (36%)	6 (10%)	0	9
35	BV	92/94 (98%)	64 (70%)	22 (24%)	6 (6%)	1	15
35	DV	92/94 (98%)	62 (67%)	24 (26%)	6 (6%)	1	15
36	B2	44/46 (96%)	30 (68%)	10 (23%)	4 (9%)	0	10
36	D2	44/46 (96%)	30 (68%)	10 (23%)	4 (9%)	0	10
37	BL	141/144 (98%)	89 (63%)	31 (22%)	21 (15%)	0	3
37	DL	141/144 (98%)	89 (63%)	32 (23%)	20 (14%)	0	3
38	BM	134/136 (98%)	84 (63%)	29 (22%)	21 (16%)	0	3
38	DM	134/136 (98%)	83 (62%)	31 (23%)	20 (15%)	0	3
39	BX	61/63 (97%)	36 (59%)	17 (28%)	8 (13%)	0	3
39	DX	61/63 (97%)	36 (59%)	17 (28%)	8 (13%)	0	3
40	BH	147/149 (99%)	76 (52%)	46 (31%)	25 (17%)	0	2
40	DH	147/149 (99%)	91 (62%)	33 (22%)	23 (16%)	0	3
41	BJ	140/142 (99%)	85 (61%)	37 (26%)	18 (13%)	0	4
41	DJ	140/142 (99%)	85 (61%)	36 (26%)	19 (14%)	0	3
42	BN	118/127 (93%)	76 (64%)	29 (25%)	13 (11%)	0	6
42	DN	118/127 (93%)	77 (65%)	28 (24%)	13 (11%)	0	6
43	BO	114/117 (97%)	74 (65%)	29 (25%)	11 (10%)	0	9
43	DO	114/117 (97%)	75 (66%)	27 (24%)	12 (10%)	0	7
44	BQ	115/117 (98%)	75 (65%)	31 (27%)	9 (8%)	1	12
44	DQ	115/117 (98%)	75 (65%)	29 (25%)	11 (10%)	0	9
45	BS	108/110 (98%)	68 (63%)	29 (27%)	11 (10%)	0	8
45	DS	108/110 (98%)	66 (61%)	31 (29%)	11 (10%)	0	8
46	BU	100/103 (97%)	58 (58%)	23 (23%)	19 (19%)	0	2
46	DU	100/103 (97%)	59 (59%)	22 (22%)	19 (19%)	0	2
47	BF	176/178 (99%)	103 (58%)	44 (25%)	29 (16%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DF	176/178 (99%)	105 (60%)	42 (24%)	29 (16%)	0	3
48	BG	174/176 (99%)	99 (57%)	42 (24%)	33 (19%)	0	2
48	DG	174/176 (99%)	101 (58%)	41 (24%)	32 (18%)	0	2
49	BR	101/103 (98%)	72 (71%)	20 (20%)	9 (9%)	0	10
49	DR	101/103 (98%)	74 (73%)	18 (18%)	9 (9%)	0	10
50	BT	91/100 (91%)	48 (53%)	23 (25%)	20 (22%)	0	1
50	DT	91/100 (91%)	46 (50%)	27 (30%)	18 (20%)	0	1
51	BZ	75/78 (96%)	50 (67%)	13 (17%)	12 (16%)	0	3
51	DZ	75/78 (96%)	50 (67%)	13 (17%)	12 (16%)	0	3
52	BW	77/84 (92%)	28 (36%)	23 (30%)	26 (34%)	0	0
52	DW	77/84 (92%)	28 (36%)	24 (31%)	25 (32%)	0	0
53	B6	183/185 (99%)	162 (88%)	16 (9%)	5 (3%)	4	28
53	D6	183/185 (99%)	152 (83%)	24 (13%)	7 (4%)	2	22
All	All	11607/12284 (94%)	7731 (67%)	2581 (22%)	1295 (11%)	0	6

All (1295) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	14	VAL
2	AC	54	ILE
2	AC	205	GLU
3	AD	24	VAL
3	AD	25	ARG
5	AF	92	THR
6	AG	6	ILE
6	AG	71	THR
8	AI	8	THR
9	AJ	57	VAL
10	AK	126	ARG
11	AL	13	ARG
11	AL	23	LEU
11	AL	121	PRO
12	AM	15	VAL
12	AM	111	PRO
13	AN	50	LEU
13	AN	61	ASN
15	AP	28	ARG

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Mol	Chain	Res	Type
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	73	ARG
20	AB	94	ARG
20	AB	188	THR
21	AU	12	ASP
21	AU	35	GLU
24	BI	18	ASN
25	BC	17	LYS
25	BC	51	ARG
25	BC	59	GLN
25	BC	77	VAL
25	BC	141	HIS
26	BD	9	VAL
26	BD	74	GLU
26	BD	91	THR
26	BD	102	ALA
26	BD	106	LYS
26	BD	107	VAL
26	BD	159	LYS
26	BD	169	ARG
26	BD	170	VAL
26	BD	194	PRO
26	BD	196	ALA
27	BK	17	ARG
27	BK	18	ARG
27	BK	31	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	73	ASP
27	BK	119	ALA
27	BK	120	PRO
28	BP	25	VAL
28	BP	50	ARG
28	BP	64	SER
28	BP	75	THR
28	BP	100	ARG
29	BE	62	GLN

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Mol	Chain	Res	Type
29	BE	79	ARG
29	BE	165	HIS
30	BY	2	LYS
31	B0	23	ALA
31	B0	42	ILE
32	B4	16	ILE
33	B1	51	ALA
35	BV	25	LYS
36	B2	5	PHE
37	BL	31	GLY
37	BL	54	GLN
37	BL	89	VAL
37	BL	100	ILE
37	BL	111	ILE
37	BL	116	VAL
38	BM	56	ALA
38	BM	59	ARG
38	BM	78	LEU
39	BX	2	LYS
40	BH	3	VAL
40	BH	6	LEU
40	BH	10	ALA
40	BH	14	SER
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	64	ALA
40	BH	125	THR
40	BH	140	ALA
41	BJ	4	PHE
41	BJ	5	THR
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	81	ILE
41	BJ	111	LYS
41	BJ	124	VAL
42	BN	11	ASN
42	BN	58	ASP
42	BN	82	GLU
45	BS	3	THR
45	BS	14	ALA
45	BS	40	ASN

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Mol	Chain	Res	Type
46	BU	6	ARG
46	BU	18	LYS
46	BU	50	ALA
47	BF	32	LYS
47	BF	80	GLN
47	BF	112	ASP
47	BF	138	PRO
47	BF	148	VAL
47	BF	149	ARG
48	BG	11	PRO
48	BG	83	THR
48	BG	91	VAL
48	BG	94	ARG
49	BR	7	SER
50	BT	16	VAL
50	BT	38	ALA
50	BT	39	THR
50	BT	69	ARG
50	BT	88	LYS
51	BZ	33	LEU
51	BZ	45	ARG
51	BZ	46	PHE
51	BZ	77	LYS
52	BW	14	ASP
52	BW	30	VAL
52	BW	50	VAL
52	BW	61	LYS
53	B6	30	THR
2	CC	14	VAL
2	CC	54	ILE
2	CC	205	GLU
3	CD	24	VAL
3	CD	25	ARG
5	CF	92	THR
6	CG	71	THR
7	CH	65	PHE
8	CI	8	THR
9	CJ	57	VAL
10	CK	126	ARG
11	CL	13	ARG
11	CL	23	LEU
11	CL	121	PRO

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Mol	Chain	Res	Type
12	CM	15	VAL
12	CM	111	PRO
13	CN	50	LEU
13	CN	61	ASN
15	CP	28	ARG
15	CP	44	SER
16	CQ	32	ILE
20	CB	15	PHE
20	CB	19	THR
20	CB	22	TRP
20	CB	73	ARG
20	CB	94	ARG
20	CB	131	LYS
20	CB	153	MET
20	CB	188	THR
21	CU	12	ASP
21	CU	35	GLU
24	DI	5	GLN
24	DI	18	ASN
25	DC	51	ARG
25	DC	59	GLN
25	DC	77	VAL
25	DC	141	HIS
26	DD	9	VAL
26	DD	74	GLU
26	DD	91	THR
26	DD	102	ALA
26	DD	106	LYS
26	DD	107	VAL
26	DD	159	LYS
26	DD	169	ARG
26	DD	170	VAL
26	DD	182	ALA
26	DD	194	PRO
26	DD	196	ALA
27	DK	17	ARG
27	DK	18	ARG
27	DK	31	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	73	ASP
27	DK	92	GLU

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Mol	Chain	Res	Type
27	DK	119	ALA
27	DK	120	PRO
28	DP	25	VAL
28	DP	50	ARG
28	DP	64	SER
28	DP	75	THR
28	DP	100	ARG
29	DE	62	GLN
29	DE	79	ARG
29	DE	165	HIS
30	DY	2	LYS
31	D0	23	ALA
31	D0	42	ILE
32	D4	16	ILE
33	D1	51	ALA
35	DV	25	LYS
36	D2	5	PHE
37	DL	31	GLY
37	DL	54	GLN
37	DL	89	VAL
37	DL	100	ILE
37	DL	111	ILE
37	DL	116	VAL
38	DM	56	ALA
38	DM	59	ARG
38	DM	78	LEU
39	DX	2	LYS
40	DH	3	VAL
40	DH	6	LEU
40	DH	10	ALA
40	DH	14	SER
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	86	ASP
40	DH	148	ALA
41	DJ	4	PHE
41	DJ	5	THR
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	81	ILE
41	DJ	111	LYS

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Mol	Chain	Res	Type
42	DN	11	ASN
42	DN	58	ASP
42	DN	82	GLU
45	DS	3	THR
45	DS	14	ALA
45	DS	40	ASN
46	DU	6	ARG
46	DU	18	LYS
46	DU	50	ALA
47	DF	32	LYS
47	DF	80	GLN
47	DF	112	ASP
47	DF	135	ILE
47	DF	138	PRO
47	DF	148	VAL
47	DF	149	ARG
48	DG	11	PRO
48	DG	83	THR
48	DG	91	VAL
48	DG	94	ARG
49	DR	7	SER
50	DT	16	VAL
50	DT	38	ALA
50	DT	39	THR
50	DT	69	ARG
50	DT	88	LYS
51	DZ	33	LEU
51	DZ	45	ARG
51	DZ	46	PHE
51	DZ	77	LYS
52	DW	14	ASP
52	DW	30	VAL
52	DW	50	VAL
52	DW	61	LYS
52	DW	62	ALA
53	D6	30	THR
53	D6	41	LEU
53	D6	84	ARG
2	AC	47	ALA
2	AC	180	ASP
3	AD	31	CYS
3	AD	191	SER

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Mol	Chain	Res	Type
4	AE	20	VAL
4	AE	108	GLY
5	AF	82	ASP
5	AF	85	ILE
5	AF	95	ALA
6	AG	112	ASP
7	AH	2	MET
7	AH	65	PHE
8	AI	57	VAL
8	AI	127	SER
9	AJ	32	THR
9	AJ	34	ALA
9	AJ	36	VAL
9	AJ	75	ASP
10	AK	88	PRO
11	AL	24	GLU
11	AL	70	GLY
11	AL	117	GLY
11	AL	122	LYS
13	AN	71	GLY
14	AO	22	THR
14	AO	74	ASP
17	AR	44	THR
18	AS	7	GLY
18	AS	27	LYS
18	AS	53	GLY
20	AB	14	HIS
20	AB	18	GLN
20	AB	87	ASP
20	AB	153	MET
21	AU	34	ARG
24	BI	14	ALA
24	BI	64	ARG
25	BC	4	LYS
25	BC	29	PHE
25	BC	35	LYS
25	BC	36	ASN
25	BC	52	HIS
25	BC	94	LEU
25	BC	140	VAL
25	BC	151	GLY
25	BC	222	THR

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Mol	Chain	Res	Type
25	BC	232	GLY
26	BD	93	GLY
26	BD	122	VAL
26	BD	145	SER
26	BD	149	ASN
26	BD	181	ASP
26	BD	182	ALA
26	BD	184	ARG
27	BK	92	GLU
28	BP	31	VAL
28	BP	37	LYS
28	BP	38	ARG
28	BP	101	GLU
28	BP	111	GLU
29	BE	42	GLY
29	BE	45	ALA
29	BE	167	VAL
30	BY	4	ILE
30	BY	34	THR
31	B0	51	ARG
31	B0	52	LYS
32	B4	4	ARG
32	B4	7	VAL
32	B4	8	LYS
32	B4	23	ILE
32	B4	34	LYS
32	B4	37	GLN
33	B1	4	ILE
34	B3	31	ILE
34	B3	50	SER
37	BL	5	THR
37	BL	36	LYS
37	BL	51	GLU
37	BL	60	ARG
38	BM	13	HIS
38	BM	69	PRO
38	BM	83	GLY
38	BM	87	GLY
38	BM	116	ALA
39	BX	9	LYS
39	BX	45	GLN
39	BX	58	ASN

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Mol	Chain	Res	Type
40	BH	5	LEU
40	BH	8	LYS
40	BH	11	ASN
40	BH	12	LEU
40	BH	29	PHE
40	BH	54	LEU
40	BH	105	ALA
40	BH	132	PHE
41	BJ	41	LYS
41	BJ	43	GLU
41	BJ	52	ASP
41	BJ	73	VAL
41	BJ	84	ILE
42	BN	10	LEU
42	BN	19	ALA
42	BN	60	VAL
42	BN	101	GLY
43	BO	13	ARG
43	BO	22	GLY
43	BO	100	HIS
44	BQ	86	SER
44	BQ	87	VAL
44	BQ	91	ARG
45	BS	25	ARG
45	BS	65	ASP
45	BS	96	ILE
46	BU	5	ARG
46	BU	42	LYS
46	BU	49	PRO
46	BU	61	GLU
46	BU	62	ALA
46	BU	85	ARG
46	BU	92	VAL
47	BF	78	ILE
47	BF	87	LYS
47	BF	92	GLY
47	BF	103	ILE
47	BF	135	ILE
48	BG	8	VAL
48	BG	61	TRP
48	BG	84	LYS
48	BG	85	LYS

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Mol	Chain	Res	Type
48	BG	102	ILE
48	BG	117	PRO
48	BG	125	PRO
48	BG	164	ALA
48	BG	170	THR
49	BR	24	LYS
49	BR	43	ASN
49	BR	70	GLU
49	BR	101	ILE
50	BT	19	LYS
50	BT	58	VAL
51	BZ	31	PRO
51	BZ	41	GLU
51	BZ	71	LEU
52	BW	9	THR
52	BW	34	SER
52	BW	36	ILE
52	BW	58	LEU
52	BW	62	ALA
52	BW	70	VAL
53	B6	41	LEU
53	B6	52	LEU
53	B6	85	ASP
2	CC	3	LYS
2	CC	47	ALA
2	CC	104	GLU
2	CC	180	ASP
3	CD	31	CYS
3	CD	191	SER
4	CE	20	VAL
4	CE	108	GLY
5	CF	82	ASP
5	CF	85	ILE
5	CF	95	ALA
6	CG	81	GLY
6	CG	112	ASP
6	CG	127	ALA
7	CH	2	MET
8	CI	57	VAL
8	CI	127	SER
9	CJ	32	THR
9	CJ	34	ALA

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Mol	Chain	Res	Type
9	CJ	36	VAL
9	CJ	61	ALA
9	CJ	75	ASP
10	CK	88	PRO
11	CL	24	GLU
11	CL	70	GLY
11	CL	117	GLY
11	CL	122	LYS
12	CM	49	GLU
13	CN	71	GLY
14	CO	22	THR
14	CO	74	ASP
15	CP	79	ASN
17	CR	44	THR
18	CS	27	LYS
18	CS	53	GLY
20	CB	14	HIS
20	CB	18	GLN
21	CU	34	ARG
25	DC	4	LYS
25	DC	17	LYS
25	DC	29	PHE
25	DC	36	ASN
25	DC	52	HIS
25	DC	140	VAL
25	DC	142	ASN
25	DC	151	GLY
25	DC	195	GLY
25	DC	220	ARG
25	DC	222	THR
25	DC	232	GLY
26	DD	93	GLY
26	DD	122	VAL
26	DD	145	SER
26	DD	149	ASN
26	DD	181	ASP
26	DD	184	ARG
28	DP	31	VAL
28	DP	38	ARG
28	DP	101	GLU
28	DP	111	GLU
29	DE	42	GLY

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Mol	Chain	Res	Type
29	DE	45	ALA
29	DE	167	VAL
30	DY	4	ILE
30	DY	34	THR
31	D0	51	ARG
31	D0	52	LYS
32	D4	4	ARG
32	D4	7	VAL
32	D4	8	LYS
32	D4	23	ILE
32	D4	34	LYS
32	D4	37	GLN
33	D1	4	ILE
34	D3	31	ILE
34	D3	50	SER
37	DL	5	THR
37	DL	51	GLU
37	DL	52	GLY
37	DL	60	ARG
38	DM	13	HIS
38	DM	69	PRO
38	DM	83	GLY
38	DM	87	GLY
38	DM	116	ALA
39	DX	9	LYS
39	DX	45	GLN
39	DX	58	ASN
40	DH	5	LEU
40	DH	8	LYS
40	DH	11	ASN
40	DH	12	LEU
40	DH	29	PHE
40	DH	89	LYS
40	DH	121	VAL
41	DJ	41	LYS
41	DJ	43	GLU
41	DJ	52	ASP
41	DJ	73	VAL
41	DJ	84	ILE
41	DJ	124	VAL
42	DN	10	LEU
42	DN	19	ALA

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Mol	Chain	Res	Type
42	DN	60	VAL
42	DN	100	CYS
42	DN	101	GLY
43	DO	13	ARG
43	DO	60	GLU
43	DO	100	HIS
44	DQ	76	SER
44	DQ	86	SER
44	DQ	87	VAL
44	DQ	91	ARG
45	DS	25	ARG
45	DS	65	ASP
45	DS	96	ILE
46	DU	5	ARG
46	DU	49	PRO
46	DU	61	GLU
46	DU	62	ALA
46	DU	85	ARG
46	DU	92	VAL
47	DF	78	ILE
47	DF	87	LYS
47	DF	92	GLY
47	DF	103	ILE
47	DF	142	TYR
48	DG	8	VAL
48	DG	61	TRP
48	DG	84	LYS
48	DG	85	LYS
48	DG	102	ILE
48	DG	117	PRO
48	DG	125	PRO
48	DG	164	ALA
49	DR	43	ASN
49	DR	70	GLU
49	DR	101	ILE
50	DT	19	LYS
51	DZ	31	PRO
51	DZ	35	SER
51	DZ	41	GLU
51	DZ	71	LEU
52	DW	9	THR
52	DW	32	ALA

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Mol	Chain	Res	Type
52	DW	34	SER
52	DW	36	ILE
52	DW	58	LEU
52	DW	70	VAL
53	D6	52	LEU
53	D6	89	GLY
2	AC	3	LYS
2	AC	59	PRO
2	AC	100	ILE
2	AC	104	GLU
2	AC	153	SER
2	AC	176	THR
3	AD	18	LEU
3	AD	22	SER
3	AD	42	ALA
3	AD	86	GLY
3	AD	192	ALA
5	AF	54	LEU
5	AF	62	MET
6	AG	70	PRO
6	AG	127	ALA
7	AH	82	LEU
8	AI	25	GLY
8	AI	42	THR
9	AJ	38	GLY
9	AJ	61	ALA
9	AJ	62	ARG
9	AJ	74	VAL
10	AK	124	LYS
12	AM	49	GLU
13	AN	31	SER
14	AO	76	ALA
15	AP	33	ILE
15	AP	52	LEU
19	AT	76	ALA
20	AB	76	SER
20	AB	95	TRP
20	AB	114	LYS
21	AU	41	THR
24	BI	23	VAL
25	BC	3	VAL
25	BC	37	SER

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Mol	Chain	Res	Type
25	BC	53	ILE
25	BC	88	ALA
25	BC	131	MET
25	BC	135	PRO
25	BC	142	ASN
25	BC	145	MET
25	BC	195	GLY
25	BC	220	ARG
25	BC	246	PRO
25	BC	250	GLN
26	BD	31	ALA
26	BD	118	PHE
26	BD	127	PHE
26	BD	136	ASN
26	BD	164	GLN
27	BK	6	THR
27	BK	16	ALA
27	BK	46	ALA
28	BP	30	TRP
28	BP	65	ASN
28	BP	73	PHE
29	BE	46	GLN
29	BE	52	VAL
29	BE	61	ARG
29	BE	69	ARG
29	BE	106	LYS
29	BE	166	LYS
29	BE	188	MET
31	B0	48	TYR
31	B0	54	ILE
32	B4	9	LYS
32	B4	18	LYS
33	B1	36	LYS
34	B3	10	ALA
34	B3	29	ARG
35	BV	71	LYS
35	BV	75	GLN
36	B2	45	SER
37	BL	52	GLY
37	BL	94	THR
38	BM	43	ALA
38	BM	72	PRO

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Mol	Chain	Res	Type
38	BM	134	THR
39	BX	36	GLN
39	BX	46	VAL
40	BH	73	ASN
40	BH	131	SER
42	BN	68	ALA
42	BN	88	ALA
42	BN	100	CYS
43	BO	51	ALA
43	BO	60	GLU
43	BO	68	LYS
43	BO	99	TYR
44	BQ	10	ARG
44	BQ	76	SER
45	BS	13	SER
45	BS	80	PRO
47	BF	9	ASP
47	BF	11	VAL
47	BF	28	PRO
47	BF	42	ALA
47	BF	133	GLU
47	BF	142	TYR
48	BG	2	ARG
48	BG	29	ASN
48	BG	32	LEU
48	BG	45	ALA
48	BG	111	PRO
48	BG	112	VAL
48	BG	118	ALA
48	BG	151	ARG
48	BG	152	ARG
49	BR	65	ALA
50	BT	11	LEU
50	BT	28	ASN
50	BT	35	ALA
51	BZ	34	HIS
51	BZ	35	SER
51	BZ	70	GLU
52	BW	15	SER
52	BW	27	GLY
52	BW	29	SER
52	BW	32	ALA

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Mol	Chain	Res	Type
52	BW	59	PHE
52	BW	60	ALA
52	BW	77	LYS
2	CC	59	PRO
2	CC	176	THR
3	CD	18	LEU
3	CD	22	SER
3	CD	42	ALA
3	CD	86	GLY
3	CD	192	ALA
5	CF	54	LEU
5	CF	62	MET
6	CG	70	PRO
6	CG	151	ALA
7	CH	82	LEU
8	CI	25	GLY
8	CI	42	THR
9	CJ	38	GLY
9	CJ	56	HIS
9	CJ	74	VAL
10	CK	124	LYS
11	CL	47	ALA
12	CM	3	ILE
12	CM	105	ALA
13	CN	31	SER
13	CN	48	GLN
14	CO	76	ALA
14	CO	88	ARG
15	CP	33	ILE
15	CP	52	LEU
18	CS	4	LEU
18	CS	7	GLY
19	CT	76	ALA
20	CB	87	ASP
20	CB	95	TRP
20	CB	114	LYS
20	CB	205	ALA
21	CU	41	THR
24	DI	23	VAL
25	DC	3	VAL
25	DC	35	LYS
25	DC	53	ILE

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Mol	Chain	Res	Type
25	DC	88	ALA
25	DC	94	LEU
25	DC	131	MET
25	DC	135	PRO
25	DC	145	MET
25	DC	246	PRO
25	DC	250	GLN
26	DD	31	ALA
26	DD	118	PHE
26	DD	127	PHE
26	DD	136	ASN
26	DD	164	GLN
27	DK	6	THR
27	DK	16	ALA
27	DK	46	ALA
28	DP	37	LYS
28	DP	65	ASN
28	DP	73	PHE
29	DE	46	GLN
29	DE	106	LYS
29	DE	166	LYS
29	DE	188	MET
31	D0	48	TYR
31	D0	54	ILE
32	D4	9	LYS
32	D4	18	LYS
33	D1	36	LYS
34	D3	10	ALA
34	D3	22	LYS
34	D3	29	ARG
35	DV	71	LYS
35	DV	75	GLN
36	D2	45	SER
37	DL	36	LYS
37	DL	94	THR
38	DM	43	ALA
38	DM	72	PRO
38	DM	134	THR
39	DX	36	GLN
39	DX	46	VAL
40	DH	41	LYS
40	DH	113	SER

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Mol	Chain	Res	Type
42	DN	68	ALA
42	DN	88	ALA
43	DO	22	GLY
43	DO	51	ALA
43	DO	68	LYS
43	DO	99	TYR
44	DQ	10	ARG
45	DS	13	SER
45	DS	80	PRO
46	DU	42	LYS
47	DF	9	ASP
47	DF	11	VAL
47	DF	28	PRO
47	DF	42	ALA
47	DF	133	GLU
48	DG	2	ARG
48	DG	32	LEU
48	DG	45	ALA
48	DG	111	PRO
48	DG	118	ALA
48	DG	151	ARG
48	DG	152	ARG
48	DG	170	THR
49	DR	24	LYS
49	DR	65	ALA
50	DT	11	LEU
50	DT	28	ASN
50	DT	35	ALA
51	DZ	3	ARG
51	DZ	34	HIS
51	DZ	70	GLU
52	DW	15	SER
52	DW	27	GLY
52	DW	28	GLU
52	DW	59	PHE
52	DW	60	ALA
52	DW	77	LYS
53	D6	112	LYS
2	AC	107	LYS
2	AC	112	ALA
2	AC	167	TYR
3	AD	68	GLU

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Mol	Chain	Res	Type
3	AD	108	ALA
4	AE	43	GLY
4	AE	100	GLU
4	AE	101	GLY
6	AG	81	GLY
7	AH	30	LYS
7	AH	112	ASP
9	AJ	56	HIS
9	AJ	93	ALA
10	AK	14	GLN
10	AK	89	GLY
11	AL	10	PRO
11	AL	14	LYS
11	AL	47	ALA
12	AM	3	ILE
12	AM	16	ILE
12	AM	81	ASP
12	AM	105	ALA
13	AN	30	ILE
13	AN	48	GLN
16	AQ	67	SER
18	AS	63	ASP
19	AT	3	ILE
19	AT	46	ALA
20	AB	205	ALA
21	AU	9	GLU
21	AU	21	SER
21	AU	36	PHE
25	BC	34	GLU
25	BC	105	ALA
25	BC	186	ASP
25	BC	190	THR
25	BC	196	ASN
25	BC	200	MET
25	BC	202	ARG
25	BC	204	LEU
26	BD	109	VAL
26	BD	121	THR
27	BK	14	SER
27	BK	54	LYS
27	BK	110	GLU
29	BE	21	ARG

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Mol	Chain	Res	Type
29	BE	70	SER
30	BY	9	THR
31	B0	26	SER
34	B3	22	LYS
35	BV	6	ALA
35	BV	45	ASP
37	BL	4	ASN
37	BL	19	LEU
37	BL	81	ASP
37	BL	99	ASN
37	BL	117	THR
38	BM	20	LEU
38	BM	21	ALA
38	BM	70	ASP
40	BH	7	ASP
40	BH	9	VAL
41	BJ	13	ARG
41	BJ	134	ALA
42	BN	70	THR
43	BO	98	GLN
44	BQ	15	LYS
44	BQ	88	GLU
45	BS	18	ARG
45	BS	61	ASN
46	BU	24	VAL
46	BU	96	LYS
47	BF	41	GLU
47	BF	43	ILE
47	BF	81	GLY
48	BG	9	VAL
48	BG	16	VAL
48	BG	59	ASP
48	BG	97	VAL
49	BR	40	MET
50	BT	8	LEU
50	BT	29	THR
50	BT	66	LYS
51	BZ	3	ARG
52	BW	28	GLU
52	BW	40	ARG
2	CC	100	ILE
2	CC	107	LYS

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Mol	Chain	Res	Type
2	CC	112	ALA
2	CC	153	SER
2	CC	167	TYR
3	CD	68	GLU
3	CD	108	ALA
4	CE	43	GLY
4	CE	100	GLU
5	CF	14	GLN
6	CG	3	ARG
6	CG	92	PRO
9	CJ	62	ARG
9	CJ	93	ALA
11	CL	10	PRO
11	CL	85	ARG
12	CM	22	TYR
12	CM	81	ASP
15	CP	46	LYS
16	CQ	67	SER
18	CS	2	ARG
18	CS	63	ASP
19	CT	41	GLY
19	CT	46	ALA
20	CB	76	SER
21	CU	9	GLU
21	CU	21	SER
21	CU	36	PHE
24	DI	14	ALA
25	DC	5	CYS
25	DC	34	GLU
25	DC	37	SER
25	DC	105	ALA
25	DC	186	ASP
25	DC	190	THR
25	DC	196	ASN
25	DC	200	MET
25	DC	204	LEU
26	DD	109	VAL
26	DD	121	THR
27	DK	14	SER
27	DK	54	LYS
27	DK	110	GLU
28	DP	30	TRP

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Mol	Chain	Res	Type
28	DP	86	LYS
29	DE	27	LEU
29	DE	52	VAL
29	DE	61	ARG
29	DE	68	ALA
29	DE	69	ARG
29	DE	70	SER
30	DY	9	THR
31	D0	26	SER
35	DV	6	ALA
35	DV	45	ASP
37	DL	4	ASN
37	DL	19	LEU
37	DL	81	ASP
37	DL	99	ASN
37	DL	117	THR
38	DM	20	LEU
38	DM	21	ALA
38	DM	70	ASP
39	DX	37	LEU
40	DH	7	ASP
40	DH	9	VAL
40	DH	96	THR
41	DJ	13	ARG
43	DO	57	ALA
43	DO	98	GLN
44	DQ	15	LYS
44	DQ	88	GLU
45	DS	18	ARG
45	DS	30	SER
45	DS	61	ASN
46	DU	24	VAL
46	DU	51	LEU
46	DU	59	GLU
46	DU	96	LYS
47	DF	41	GLU
47	DF	81	GLY
48	DG	9	VAL
48	DG	16	VAL
48	DG	29	ASN
48	DG	54	ARG
48	DG	97	VAL

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Mol	Chain	Res	Type
48	DG	109	SER
48	DG	112	VAL
49	DR	40	MET
50	DT	8	LEU
50	DT	29	THR
50	DT	58	VAL
52	DW	12	GLY
2	AC	133	MET
3	AD	27	ILE
4	AE	77	ASN
5	AF	94	HIS
6	AG	92	PRO
7	AH	66	GLN
8	AI	55	ASP
9	AJ	41	PRO
10	AK	125	LYS
11	AL	33	CYS
11	AL	56	LEU
11	AL	85	ARG
12	AM	66	GLY
12	AM	104	ASN
13	AN	51	PRO
14	AO	88	ARG
15	AP	46	LYS
16	AQ	80	LYS
17	AR	40	PRO
17	AR	43	ILE
18	AS	4	LEU
20	AB	189	ASN
20	AB	200	PRO
21	AU	22	CYS
21	AU	37	TYR
24	BI	49	GLU
25	BC	5	CYS
25	BC	84	PRO
25	BC	189	ALA
25	BC	238	ASN
25	BC	254	LYS
26	BD	54	ALA
26	BD	131	ASP
26	BD	162	ALA
27	BK	93	GLN

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Mol	Chain	Res	Type
27	BK	108	ARG
28	BP	4	ILE
28	BP	86	LYS
29	BE	27	LEU
29	BE	68	ALA
29	BE	73	ILE
29	BE	83	VAL
29	BE	96	VAL
33	B1	50	GLU
36	B2	22	MET
37	BL	58	TYR
37	BL	66	PHE
38	BM	27	SER
38	BM	82	MET
39	BX	37	LEU
40	BH	83	LYS
41	BJ	14	ASP
42	BN	89	SER
45	BS	30	SER
46	BU	12	VAL
46	BU	16	LYS
46	BU	41	VAL
46	BU	45	GLN
46	BU	51	LEU
46	BU	59	GLU
47	BF	93	GLU
47	BF	110	ILE
47	BF	156	THR
48	BG	54	ARG
48	BG	109	SER
49	BR	52	PRO
49	BR	98	ILE
50	BT	77	ARG
50	BT	86	THR
50	BT	91	GLN
51	BZ	18	ARG
52	BW	12	GLY
52	BW	23	LYS
52	BW	37	VAL
52	BW	78	PHE
53	B6	81	LYS
2	CC	133	MET

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Mol	Chain	Res	Type
3	CD	27	ILE
4	CE	77	ASN
4	CE	101	GLY
5	CF	94	HIS
7	CH	30	LYS
7	CH	66	GLN
7	CH	112	ASP
8	CI	55	ASP
10	CK	14	GLN
10	CK	125	LYS
11	CL	14	LYS
11	CL	56	LEU
12	CM	16	ILE
12	CM	66	GLY
12	CM	104	ASN
13	CN	30	ILE
13	CN	51	PRO
17	CR	40	PRO
17	CR	43	ILE
19	CT	3	ILE
19	CT	4	LYS
25	DC	84	PRO
25	DC	189	ALA
25	DC	202	ARG
25	DC	238	ASN
25	DC	254	LYS
26	DD	54	ALA
26	DD	112	THR
26	DD	131	ASP
27	DK	93	GLN
28	DP	4	ILE
29	DE	73	ILE
29	DE	83	VAL
29	DE	96	VAL
29	DE	131	THR
33	D1	50	GLU
36	D2	22	MET
37	DL	58	TYR
37	DL	66	PHE
38	DM	26	VAL
38	DM	82	MET
40	DH	109	GLU

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Mol	Chain	Res	Type
40	DH	119	ASN
41	DJ	14	ASP
41	DJ	134	ALA
42	DN	70	THR
42	DN	89	SER
43	DO	27	VAL
43	DO	115	LEU
44	DQ	78	PHE
46	DU	12	VAL
46	DU	16	LYS
46	DU	41	VAL
47	DF	43	ILE
47	DF	93	GLU
47	DF	110	ILE
47	DF	156	THR
48	DG	59	ASP
49	DR	52	PRO
49	DR	98	ILE
50	DT	66	LYS
50	DT	86	THR
50	DT	91	GLN
51	DZ	18	ARG
52	DW	23	LYS
52	DW	29	SER
52	DW	40	ARG
52	DW	78	PHE
53	D6	61	PRO
3	AD	35	GLN
5	AF	14	GLN
8	AI	101	GLY
8	AI	106	ASP
11	AL	15	VAL
19	AT	4	LYS
19	AT	41	GLY
26	BD	119	ALA
29	BE	129	PRO
29	BE	131	THR
34	B3	58	ILE
35	BV	84	PRO
37	BL	143	GLU
38	BM	24	THR
38	BM	26	VAL

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Mol	Chain	Res	Type
38	BM	73	ILE
40	BH	44	ILE
42	BN	59	SER
43	BO	27	VAL
43	BO	57	ALA
47	BF	136	ILE
48	BG	38	ASP
48	BG	168	VAL
50	BT	55	VAL
52	BW	55	ASP
52	BW	76	ARG
3	CD	29	THR
8	CI	71	ILE
8	CI	101	GLY
8	CI	106	ASP
9	CJ	41	PRO
10	CK	89	GLY
11	CL	33	CYS
13	CN	20	PHE
16	CQ	80	LYS
20	CB	200	PRO
21	CU	37	TYR
24	DI	6	ALA
25	DC	63	ILE
25	DC	78	GLU
26	DD	143	PRO
26	DD	162	ALA
34	D3	58	ILE
35	DV	84	PRO
38	DM	27	SER
38	DM	73	ILE
38	DM	106	ASP
41	DJ	60	ASP
42	DN	59	SER
44	DQ	18	LYS
44	DQ	89	ILE
46	DU	45	GLN
47	DF	136	ILE
48	DG	168	VAL
50	DT	55	VAL
52	DW	68	PHE
6	AG	5	VAL

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Mol	Chain	Res	Type
26	BD	143	PRO
28	BP	104	GLY
41	BJ	64	VAL
41	BJ	112	GLY
44	BQ	89	ILE
47	BF	82	TYR
48	BG	89	VAL
48	BG	155	PRO
11	CL	15	VAL
16	CQ	28	VAL
29	DE	129	PRO
39	DX	62	GLY
41	DJ	112	GLY
41	DJ	139	VAL
47	DF	82	TYR
48	DG	89	VAL
48	DG	155	PRO
52	DW	37	VAL
16	AQ	31	PRO
25	BC	63	ILE
25	BC	64	VAL
25	BC	106	PRO
25	BC	150	GLY
26	BD	24	VAL
28	BP	63	ILE
28	BP	83	ILE
30	BY	13	ILE
32	B4	17	VAL
39	BX	62	GLY
41	BJ	139	VAL
43	BO	8	ILE
47	BF	88	VAL
50	BT	10	VAL
6	CG	91	ARG
16	CQ	31	PRO
25	DC	150	GLY
26	DD	24	VAL
27	DK	101	GLY
28	DP	63	ILE
32	D4	17	VAL
41	DJ	64	VAL
43	DO	8	ILE

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Mol	Chain	Res	Type
46	DU	82	VAL
47	DF	88	VAL
47	DF	105	ILE
50	DT	10	VAL
5	AF	51	ILE
8	AI	71	ILE
9	AJ	100	ILE
25	BC	123	ILE
28	BP	46	VAL
38	BM	19	GLY
38	BM	23	GLY
46	BU	82	VAL
47	BF	105	ILE
5	CF	51	ILE
11	CL	3	VAL
25	DC	18	VAL
25	DC	64	VAL
25	DC	106	PRO
25	DC	123	ILE
28	DP	46	VAL
29	DE	59	PRO
29	DE	187	VAL
47	DF	145	VAL
48	DG	18	ILE
50	DT	65	GLY
6	AG	91	ARG
11	AL	3	VAL
14	AO	36	ILE
16	AQ	28	VAL
21	AU	10	PRO
25	BC	15	VAL
25	BC	18	VAL
29	BE	59	PRO
29	BE	187	VAL
36	B2	44	VAL
37	BL	28	GLY
40	BH	88	GLY
47	BF	145	VAL
48	BG	18	ILE
9	CJ	100	ILE
20	CB	194	GLY
21	CU	10	PRO

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Mol	Chain	Res	Type
25	DC	31	PRO
26	DD	92	VAL
36	D2	44	VAL
37	DL	28	GLY
38	DM	23	GLY
47	DF	123	GLY
52	DW	33	GLY
25	BC	31	PRO
44	BQ	30	VAL
47	BF	123	GLY
50	BT	57	VAL
50	BT	65	GLY
52	BW	33	GLY
25	DC	203	VAL
30	DY	13	ILE
44	DQ	30	VAL

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AC	170/189 (90%)	142 (84%)	28 (16%)	2	13
2	CC	170/189 (90%)	143 (84%)	27 (16%)	2	15
3	AD	172/172 (100%)	145 (84%)	27 (16%)	2	15
3	CD	172/172 (100%)	145 (84%)	27 (16%)	2	15
4	AE	113/125 (90%)	95 (84%)	18 (16%)	2	15
4	CE	113/125 (90%)	95 (84%)	18 (16%)	2	15
5	AF	87/116 (75%)	73 (84%)	14 (16%)	2	14
5	CF	87/116 (75%)	73 (84%)	14 (16%)	2	14
6	AG	123/146 (84%)	100 (81%)	23 (19%)	1	11
6	CG	125/146 (86%)	103 (82%)	22 (18%)	2	12
7	AH	104/104 (100%)	98 (94%)	6 (6%)	18	42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	CH	104/104 (100%)	98 (94%)	6 (6%)	18	42
8	AI	105/106 (99%)	90 (86%)	15 (14%)	3	17
8	CI	105/106 (99%)	89 (85%)	16 (15%)	3	15
9	AJ	86/90 (96%)	74 (86%)	12 (14%)	3	17
9	CJ	86/90 (96%)	74 (86%)	12 (14%)	3	17
10	AK	90/98 (92%)	75 (83%)	15 (17%)	2	13
10	CK	90/98 (92%)	74 (82%)	16 (18%)	2	12
11	AL	103/103 (100%)	85 (82%)	18 (18%)	2	13
11	CL	103/103 (100%)	85 (82%)	18 (18%)	2	13
12	AM	92/95 (97%)	79 (86%)	13 (14%)	3	17
12	CM	91/95 (96%)	78 (86%)	13 (14%)	3	17
13	AN	79/83 (95%)	64 (81%)	15 (19%)	1	10
13	CN	79/83 (95%)	64 (81%)	15 (19%)	1	10
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%)	58 (89%)	7 (11%)	6	24
15	CP	65/65 (100%)	58 (89%)	7 (11%)	6	24
16	AQ	74/77 (96%)	62 (84%)	12 (16%)	2	14
16	CQ	75/77 (97%)	63 (84%)	12 (16%)	2	14
17	AR	48/64 (75%)	40 (83%)	8 (17%)	2	13
17	CR	48/64 (75%)	40 (83%)	8 (17%)	2	13
18	AS	70/78 (90%)	58 (83%)	12 (17%)	2	13
18	CS	71/78 (91%)	58 (82%)	13 (18%)	2	12
19	AT	65/65 (100%)	56 (86%)	9 (14%)	3	17
19	CT	65/65 (100%)	56 (86%)	9 (14%)	3	17
20	AB	180/198 (91%)	148 (82%)	32 (18%)	2	12
20	CB	180/198 (91%)	150 (83%)	30 (17%)	2	13
21	AU	44/60 (73%)	35 (80%)	9 (20%)	1	8
21	CU	44/60 (73%)	35 (80%)	9 (20%)	1	8
24	BI	109/109 (100%)	108 (99%)	1 (1%)	70	76
24	DI	109/109 (100%)	105 (96%)	4 (4%)	30	52

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	BC	216/217 (100%)	181 (84%)	35 (16%)	2	14
25	DC	216/217 (100%)	182 (84%)	34 (16%)	2	15
26	BD	164/164 (100%)	131 (80%)	33 (20%)	1	9
26	DD	164/164 (100%)	130 (79%)	34 (21%)	1	7
27	BK	102/104 (98%)	83 (81%)	19 (19%)	1	11
27	DK	102/104 (98%)	83 (81%)	19 (19%)	1	11
28	BP	99/99 (100%)	82 (83%)	17 (17%)	2	13
28	DP	99/99 (100%)	82 (83%)	17 (17%)	2	13
29	BE	165/165 (100%)	139 (84%)	26 (16%)	2	15
29	DE	165/165 (100%)	140 (85%)	25 (15%)	3	15
30	BY	48/48 (100%)	40 (83%)	8 (17%)	2	13
30	DY	48/48 (100%)	40 (83%)	8 (17%)	2	13
31	B0	47/47 (100%)	39 (83%)	8 (17%)	2	13
31	D0	47/47 (100%)	38 (81%)	9 (19%)	1	10
32	B4	34/34 (100%)	24 (71%)	10 (29%)	0	3
32	D4	34/34 (100%)	25 (74%)	9 (26%)	0	4
33	B1	45/48 (94%)	42 (93%)	3 (7%)	15	39
33	D1	45/48 (94%)	41 (91%)	4 (9%)	9	31
34	B3	51/51 (100%)	47 (92%)	4 (8%)	11	35
34	D3	51/51 (100%)	47 (92%)	4 (8%)	11	35
35	BV	78/78 (100%)	64 (82%)	14 (18%)	2	12
35	DV	78/78 (100%)	64 (82%)	14 (18%)	2	12
36	B2	38/38 (100%)	29 (76%)	9 (24%)	1	5
36	D2	38/38 (100%)	29 (76%)	9 (24%)	1	5
37	BL	102/103 (99%)	90 (88%)	12 (12%)	5	21
37	DL	102/103 (99%)	89 (87%)	13 (13%)	4	20
38	BM	109/109 (100%)	85 (78%)	24 (22%)	1	6
38	DM	109/109 (100%)	85 (78%)	24 (22%)	1	6
39	BX	55/55 (100%)	45 (82%)	10 (18%)	2	12
39	DX	55/55 (100%)	45 (82%)	10 (18%)	2	12
40	BH	114/114 (100%)	76 (67%)	38 (33%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
40	DH	114/114 (100%)	92 (81%)	22 (19%)	1	10
41	BJ	116/116 (100%)	101 (87%)	15 (13%)	4	19
41	DJ	116/116 (100%)	101 (87%)	15 (13%)	4	19
42	BN	100/103 (97%)	81 (81%)	19 (19%)	1	10
42	DN	100/103 (97%)	81 (81%)	19 (19%)	1	10
43	BO	86/87 (99%)	70 (81%)	16 (19%)	1	11
43	DO	86/87 (99%)	70 (81%)	16 (19%)	1	11
44	BQ	89/89 (100%)	76 (85%)	13 (15%)	3	16
44	DQ	89/89 (100%)	76 (85%)	13 (15%)	3	16
45	BS	93/93 (100%)	75 (81%)	18 (19%)	1	10
45	DS	93/93 (100%)	75 (81%)	18 (19%)	1	10
46	BU	83/84 (99%)	64 (77%)	19 (23%)	1	6
46	DU	83/84 (99%)	63 (76%)	20 (24%)	1	5
47	BF	149/149 (100%)	112 (75%)	37 (25%)	1	4
47	DF	149/149 (100%)	112 (75%)	37 (25%)	1	4
48	BG	137/137 (100%)	108 (79%)	29 (21%)	1	7
48	DG	137/137 (100%)	109 (80%)	28 (20%)	1	8
49	BR	84/84 (100%)	71 (84%)	13 (16%)	2	15
49	DR	84/84 (100%)	72 (86%)	12 (14%)	3	17
50	BT	80/84 (95%)	63 (79%)	17 (21%)	1	7
50	DT	80/84 (95%)	63 (79%)	17 (21%)	1	7
51	BZ	67/68 (98%)	55 (82%)	12 (18%)	2	12
51	DZ	67/68 (98%)	56 (84%)	11 (16%)	2	14
52	BW	59/62 (95%)	41 (70%)	18 (30%)	0	2
52	DW	59/62 (95%)	41 (70%)	18 (30%)	0	2
53	B6	157/157 (100%)	130 (83%)	27 (17%)	2	13
53	D6	157/157 (100%)	130 (83%)	27 (17%)	2	13
All	All	9647/10014 (96%)	8014 (83%)	1633 (17%)	2	13

All (1633) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN

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Mol	Chain	Res	Type
2	AC	13	ILE
2	AC	14	VAL
2	AC	17	TRP
2	AC	20	THR
2	AC	27	GLU
2	AC	40	GLN
2	AC	41	TYR
2	AC	48	LYS
2	AC	61	LYS
2	AC	62	SER
2	AC	63	ILE
2	AC	64	ARG
2	AC	84	GLU
2	AC	88	LYS
2	AC	100	ILE
2	AC	101	ASN
2	AC	106	ARG
2	AC	107	LYS
2	AC	126	ARG
2	AC	128	MET
2	AC	131	ARG
2	AC	167	TYR
2	AC	168	ARG
2	AC	171	ARG
2	AC	184	ASN
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	28	ASP
3	AD	35	GLN
3	AD	39	GLN
3	AD	55	ARG
3	AD	70	GLN
3	AD	84	ASN
3	AD	87	GLU
3	AD	97	LEU
3	AD	146	GLU
3	AD	147	LYS

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Mol	Chain	Res	Type
3	AD	151	GLN
3	AD	153	ARG
3	AD	155	LYS
3	AD	160	LEU
3	AD	170	LEU
3	AD	176	LYS
3	AD	186	GLU
3	AD	189	ASP
3	AD	190	LEU
3	AD	196	GLU
3	AD	199	ILE
3	AD	200	VAL
4	AE	9	GLU
4	AE	23	THR
4	AE	31	SER
4	AE	45	VAL
4	AE	51	LYS
4	AE	61	LYS
4	AE	64	GLU
4	AE	69	ASN
4	AE	70	MET
4	AE	72	ASN
4	AE	92	ARG
4	AE	119	VAL
4	AE	123	LEU
4	AE	127	TYR
4	AE	145	ASN
4	AE	147	ASN
4	AE	151	MET
4	AE	156	ARG
5	AF	3	HIS
5	AF	6	ILE
5	AF	7	VAL
5	AF	16	GLU
5	AF	39	LEU
5	AF	53	LYS
5	AF	55	HIS
5	AF	61	LEU
5	AF	65	GLU
5	AF	69	GLU
5	AF	71	ILE
5	AF	89	VAL

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Mol	Chain	Res	Type
5	AF	90	MET
5	AF	98	GLU
6	AG	6	ILE
6	AG	10	LYS
6	AG	11	ILE
6	AG	16	LYS
6	AG	21	LEU
6	AG	26	VAL
6	AG	27	ASN
6	AG	49	LEU
6	AG	55	LYS
6	AG	56	SER
6	AG	57	GLU
6	AG	58	LEU
6	AG	62	GLU
6	AG	75	LYS
6	AG	78	ARG
6	AG	89	GLU
6	AG	109	LYS
6	AG	110	ARG
6	AG	117	LEU
6	AG	132	THR
6	AG	137	ARG
6	AG	142	ARG
6	AG	143	MET
7	AH	55	LYS
7	AH	57	GLU
7	AH	72	GLU
7	AH	107	LYS
7	AH	111	THR
7	AH	113	ARG
8	AI	18	VAL
8	AI	24	ASN
8	AI	30	ASN
8	AI	36	GLN
8	AI	45	MET
8	AI	58	GLU
8	AI	59	LYS
8	AI	62	LEU
8	AI	67	LYS
8	AI	74	GLN
8	AI	87	MET

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Mol	Chain	Res	Type
8	AI	94	ARG
8	AI	109	GLN
8	AI	122	ARG
8	AI	123	ARG
9	AJ	17	LEU
9	AJ	31	ARG
9	AJ	37	ARG
9	AJ	47	GLU
9	AJ	52	LEU
9	AJ	69	THR
9	AJ	73	LEU
9	AJ	77	VAL
9	AJ	87	LEU
9	AJ	89	ARG
9	AJ	92	LEU
9	AJ	97	ASP
10	AK	28	ASN
10	AK	29	THR
10	AK	34	THR
10	AK	51	PHE
10	AK	55	ARG
10	AK	56	LYS
10	AK	75	GLU
10	AK	76	TYR
10	AK	80	ASN
10	AK	82	GLU
10	AK	84	MET
10	AK	100	ASN
10	AK	105	ARG
10	AK	115	ILE
10	AK	118	ASN
11	AL	13	ARG
11	AL	14	LYS
11	AL	15	VAL
11	AL	17	LYS
11	AL	19	ASN
11	AL	28	GLN
11	AL	35	ARG
11	AL	38	THR
11	AL	43	LYS
11	AL	51	VAL
11	AL	56	LEU

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Mol	Chain	Res	Type
11	AL	77	SER
11	AL	85	ARG
11	AL	95	HIS
11	AL	102	ASP
11	AL	107	LYS
11	AL	119	LYS
11	AL	122	LYS
12	AM	28	ARG
12	AM	40	GLU
12	AM	43	LYS
12	AM	44	ILE
12	AM	46	GLU
12	AM	57	ASP
12	AM	65	GLU
12	AM	71	GLU
12	AM	79	LEU
12	AM	82	LEU
12	AM	91	ARG
12	AM	102	LYS
12	AM	103	THR
13	AN	3	GLN
13	AN	4	SER
13	AN	5	MET
13	AN	10	VAL
13	AN	17	ASP
13	AN	25	GLU
13	AN	27	LYS
13	AN	40	ARG
13	AN	41	TRP
13	AN	50	LEU
13	AN	55	SER
13	AN	65	GLN
13	AN	68	ARG
13	AN	96	LYS
13	AN	97	LYS
14	AO	11	ILE
14	AO	39	LEU
14	AO	54	ARG
14	AO	66	LEU
14	AO	70	LEU
14	AO	71	LYS
14	AO	88	ARG

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Mol	Chain	Res	Type
15	AP	2	VAL
15	AP	5	ARG
15	AP	26	ASN
15	AP	28	ARG
15	AP	45	GLU
15	AP	51	ARG
15	AP	68	SER
16	AQ	3	LYS
16	AQ	4	ILE
16	AQ	5	ARG
16	AQ	10	ARG
16	AQ	20	ILE
16	AQ	37	ILE
16	AQ	59	GLU
16	AQ	60	ILE
16	AQ	61	ARG
16	AQ	66	LEU
16	AQ	74	LEU
16	AQ	80	LYS
17	AR	21	ASP
17	AR	33	THR
17	AR	34	GLU
17	AR	35	SER
17	AR	38	ILE
17	AR	44	THR
17	AR	46	THR
17	AR	60	ARG
18	AS	4	LEU
18	AS	5	LYS
18	AS	13	HIS
18	AS	26	ASP
18	AS	27	LYS
18	AS	28	LYS
18	AS	42	ASN
18	AS	47	THR
18	AS	55	GLN
18	AS	64	GLU
18	AS	65	MET
18	AS	80	ARG
19	AT	3	ILE
19	AT	4	LYS
19	AT	5	SER

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Mol	Chain	Res	Type
19	AT	25	SER
19	AT	43	LYS
19	AT	53	MET
19	AT	69	ASN
19	AT	74	HIS
19	AT	77	ASN
20	AB	8	MET
20	AB	13	VAL
20	AB	19	THR
20	AB	27	LYS
20	AB	35	ASN
20	AB	46	VAL
20	AB	48	MET
20	AB	51	GLU
20	AB	62	ARG
20	AB	67	LEU
20	AB	72	LYS
20	AB	87	ASP
20	AB	88	GLN
20	AB	94	ARG
20	AB	99	MET
20	AB	104	LYS
20	AB	113	LEU
20	AB	121	GLN
20	AB	125	PHE
20	AB	127	LYS
20	AB	128	LEU
20	AB	142	LYS
20	AB	144	GLU
20	AB	156	LEU
20	AB	176	ASN
20	AB	187	ASP
20	AB	196	ASP
20	AB	202	ASN
20	AB	211	LEU
20	AB	212	TYR
20	AB	219	THR
20	AB	221	ARG
21	AU	7	GLU
21	AU	15	LEU
21	AU	17	ARG
21	AU	24	LYS

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Mol	Chain	Res	Type
21	AU	27	VAL
21	AU	33	ARG
21	AU	34	ARG
21	AU	38	GLU
21	AU	44	ARG
24	BI	63	ASP
25	BC	4	LYS
25	BC	5	CYS
25	BC	12	ARG
25	BC	23	LEU
25	BC	35	LYS
25	BC	45	ASN
25	BC	52	HIS
25	BC	53	ILE
25	BC	62	ARG
25	BC	65	ASP
25	BC	89	ASN
25	BC	90	ILE
25	BC	100	ARG
25	BC	123	ILE
25	BC	129	LEU
25	BC	134	ILE
25	BC	142	ASN
25	BC	155	ARG
25	BC	166	ARG
25	BC	172	THR
25	BC	173	LEU
25	BC	180	MET
25	BC	190	THR
25	BC	191	LEU
25	BC	202	ARG
25	BC	203	VAL
25	BC	224	MET
25	BC	227	VAL
25	BC	245	THR
25	BC	249	VAL
25	BC	251	THR
25	BC	257	ARG
25	BC	267	VAL
25	BC	268	ARG
25	BC	269	ARG
26	BD	2	ILE

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Mol	Chain	Res	Type
26	BD	17	GLU
26	BD	24	VAL
26	BD	35	THR
26	BD	36	GLN
26	BD	40	LEU
26	BD	46	ARG
26	BD	48	ILE
26	BD	56	LYS
26	BD	59	ARG
26	BD	79	LEU
26	BD	81	GLU
26	BD	84	LEU
26	BD	89	GLU
26	BD	91	THR
26	BD	99	GLU
26	BD	104	VAL
26	BD	123	LYS
26	BD	124	ARG
26	BD	131	ASP
26	BD	137	SER
26	BD	138	LEU
26	BD	142	VAL
26	BD	148	GLN
26	BD	151	THR
26	BD	159	LYS
26	BD	165	MET
26	BD	179	ARG
26	BD	186	LEU
26	BD	190	LYS
26	BD	201	LEU
26	BD	204	LYS
26	BD	207	VAL
27	BK	2	ILE
27	BK	8	LEU
27	BK	32	TYR
27	BK	39	ILE
27	BK	41	ILE
27	BK	47	ILE
27	BK	52	VAL
27	BK	53	LYS
27	BK	54	LYS
27	BK	58	LEU

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Mol	Chain	Res	Type
27	BK	67	LYS
27	BK	72	PRO
27	BK	86	LEU
27	BK	104	THR
27	BK	105	ARG
27	BK	107	LEU
27	BK	111	LYS
27	BK	113	MET
27	BK	120	PRO
28	BP	3	ILE
28	BP	19	PHE
28	BP	20	ARG
28	BP	24	THR
28	BP	25	VAL
28	BP	28	LYS
28	BP	33	GLU
28	BP	37	LYS
28	BP	38	ARG
28	BP	43	GLU
28	BP	61	ARG
28	BP	83	ILE
28	BP	99	LEU
28	BP	101	GLU
28	BP	111	GLU
28	BP	112	ARG
28	BP	114	ASN
29	BE	2	GLU
29	BE	9	GLN
29	BE	12	LEU
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	62	GLN
29	BE	67	ARG
29	BE	75	SER
29	BE	108	ILE
29	BE	111	GLU
29	BE	116	ASP
29	BE	118	LEU

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Mol	Chain	Res	Type
29	BE	122	GLU
29	BE	133	LEU
29	BE	147	LEU
29	BE	148	ILE
29	BE	149	ILE
29	BE	153	LEU
29	BE	159	LEU
29	BE	163	ASN
29	BE	170	ARG
29	BE	198	GLU
30	BY	2	LYS
30	BY	3	THR
30	BY	6	ILE
30	BY	16	LEU
30	BY	23	LEU
30	BY	37	ARG
30	BY	53	MET
30	BY	57	GLU
31	B0	5	ASN
31	B0	26	SER
31	B0	27	LEU
31	B0	41	HIS
31	B0	45	ASP
31	B0	51	ARG
31	B0	53	VAL
31	B0	56	LYS
32	B4	1	MET
32	B4	3	VAL
32	B4	6	SER
32	B4	7	VAL
32	B4	9	LYS
32	B4	17	VAL
32	B4	25	VAL
32	B4	28	SER
32	B4	35	GLN
32	B4	37	GLN
33	B1	8	ILE
33	B1	35	LEU
33	B1	44	GLN
34	B3	7	ARG
34	B3	27	ASN
34	B3	42	HIS

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Mol	Chain	Res	Type
34	B3	61	LEU
35	BV	7	GLU
35	BV	12	GLN
35	BV	29	ILE
35	BV	34	LYS
35	BV	40	ILE
35	BV	42	LEU
35	BV	46	LYS
35	BV	51	GLN
35	BV	53	LYS
35	BV	55	GLU
35	BV	66	ASP
35	BV	70	ILE
35	BV	75	GLN
35	BV	89	ILE
36	B2	4	THR
36	B2	10	LEU
36	B2	19	ARG
36	B2	24	THR
36	B2	33	ARG
36	B2	39	ARG
36	B2	41	ARG
36	B2	42	LEU
36	B2	43	THR
37	BL	12	SER
37	BL	40	SER
37	BL	47	ARG
37	BL	60	ARG
37	BL	69	ARG
37	BL	91	ASP
37	BL	92	LEU
37	BL	95	LEU
37	BL	109	LYS
37	BL	112	LEU
37	BL	116	VAL
37	BL	118	THR
38	BM	1	MET
38	BM	10	ARG
38	BM	20	LEU
38	BM	25	ASP
38	BM	26	VAL
38	BM	30	SER

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Mol	Chain	Res	Type
38	BM	38	ARG
38	BM	47	GLU
38	BM	59	ARG
38	BM	60	GLN
38	BM	63	ILE
38	BM	65	ILE
38	BM	70	ASP
38	BM	89	VAL
38	BM	90	GLU
38	BM	95	LEU
38	BM	100	LYS
38	BM	104	GLU
38	BM	105	MET
38	BM	108	VAL
38	BM	110	GLU
38	BM	115	GLU
38	BM	127	LYS
38	BM	131	VAL
39	BX	11	VAL
39	BX	14	LEU
39	BX	18	LEU
39	BX	25	GLN
39	BX	28	LEU
39	BX	29	ARG
39	BX	48	ARG
39	BX	56	LEU
39	BX	57	LEU
39	BX	59	GLU
40	BH	3	VAL
40	BH	12	LEU
40	BH	15	LEU
40	BH	17	ASP
40	BH	28	ASN
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	43	ASN
40	BH	44	ILE
40	BH	47	PHE
40	BH	53	GLU
40	BH	54	LEU
40	BH	57	LYS

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Mol	Chain	Res	Type
40	BH	60	GLU
40	BH	62	LEU
40	BH	66	ASN
40	BH	68	ARG
40	BH	70	GLU
40	BH	71	LYS
40	BH	73	ASN
40	BH	76	GLU
40	BH	87	GLU
40	BH	89	LYS
40	BH	101	ASP
40	BH	109	GLU
40	BH	112	LYS
40	BH	114	GLU
40	BH	116	ARG
40	BH	121	VAL
40	BH	127	GLU
40	BH	130	VAL
40	BH	136	SER
40	BH	137	GLU
40	BH	138	VAL
40	BH	141	LYS
40	BH	143	ILE
40	BH	147	VAL
41	BJ	2	LYS
41	BJ	5	THR
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	36	LEU
41	BJ	65	THR
41	BJ	71	ASP
41	BJ	76	HIS
41	BJ	93	ILE
41	BJ	95	ARG
41	BJ	120	ARG
41	BJ	124	VAL
41	BJ	129	GLU
41	BJ	136	GLN
41	BJ	138	GLN
42	BN	1	MET
42	BN	2	ARG
42	BN	9	GLN

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Mol	Chain	Res	Type
42	BN	11	ASN
42	BN	18	GLN
42	BN	20	MET
42	BN	24	MET
42	BN	33	ILE
42	BN	35	LYS
42	BN	46	ARG
42	BN	59	SER
42	BN	69	ARG
42	BN	82	GLU
42	BN	83	LEU
42	BN	97	ILE
42	BN	98	LEU
42	BN	114	GLU
42	BN	118	ARG
42	BN	120	GLU
43	BO	3	LYS
43	BO	17	LYS
43	BO	20	GLU
43	BO	31	THR
43	BO	43	ASN
43	BO	58	ILE
43	BO	62	LEU
43	BO	68	LYS
43	BO	78	VAL
43	BO	80	GLU
43	BO	83	LEU
43	BO	98	GLN
43	BO	100	HIS
43	BO	104	GLN
43	BO	106	LEU
43	BO	115	LEU
44	BQ	5	ARG
44	BQ	8	ILE
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	14	LYS
44	BQ	29	ARG
44	BQ	40	LYS
44	BQ	63	ARG
44	BQ	79	ILE
44	BQ	83	LYS

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Mol	Chain	Res	Type
44	BQ	84	LYS
44	BQ	91	ARG
44	BQ	96	ASP
45	BS	6	LYS
45	BS	17	VAL
45	BS	22	ASP
45	BS	28	LYS
45	BS	33	LEU
45	BS	39	THR
45	BS	45	VAL
45	BS	55	ILE
45	BS	62	ASP
45	BS	66	ILE
45	BS	69	LEU
45	BS	72	THR
45	BS	73	LYS
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	99	ARG
45	BS	100	THR
46	BU	7	ASP
46	BU	11	ILE
46	BU	13	LEU
46	BU	18	LYS
46	BU	20	LYS
46	BU	30	SER
46	BU	34	ILE
46	BU	49	PRO
46	BU	51	LEU
46	BU	53	GLN
46	BU	60	LYS
46	BU	64	ILE
46	BU	65	GLN
46	BU	71	ILE
46	BU	73	ASN
46	BU	78	LYS
46	BU	80	ASP
46	BU	81	ARG
46	BU	85	ARG
47	BF	2	LYS
47	BF	13	LYS

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Mol	Chain	Res	Type
47	BF	15	LEU
47	BF	18	GLU
47	BF	29	ARG
47	BF	32	LYS
47	BF	33	ILE
47	BF	43	ILE
47	BF	50	ASP
47	BF	55	ASP
47	BF	56	LEU
47	BF	59	ILE
47	BF	66	ILE
47	BF	70	ARG
47	BF	76	PHE
47	BF	86	CYS
47	BF	88	VAL
47	BF	91	ARG
47	BF	95	MET
47	BF	97	GLU
47	BF	101	ARG
47	BF	102	LEU
47	BF	103	ILE
47	BF	111	ARG
47	BF	121	PHE
47	BF	126	ASN
47	BF	129	MET
47	BF	134	GLN
47	BF	135	ILE
47	BF	137	PHE
47	BF	138	PRO
47	BF	139	GLU
47	BF	147	ARG
47	BF	149	ARG
47	BF	168	LEU
47	BF	174	PHE
47	BF	178	LYS
48	BG	1	SER
48	BG	2	ARG
48	BG	15	ASP
48	BG	17	LYS
48	BG	24	THR
48	BG	31	GLU
48	BG	34	ARG

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Mol	Chain	Res	Type
48	BG	36	LEU
48	BG	42	VAL
48	BG	54	ARG
48	BG	55	ASP
48	BG	61	TRP
48	BG	68	ARG
48	BG	70	LEU
48	BG	71	LEU
48	BG	80	GLU
48	BG	84	LYS
48	BG	85	LYS
48	BG	86	LEU
48	BG	89	VAL
48	BG	94	ARG
48	BG	106	LEU
48	BG	113	ASP
48	BG	120	ILE
48	BG	132	LEU
48	BG	138	GLN
48	BG	154	GLU
48	BG	162	ARG
48	BG	166	GLU
49	BR	4	VAL
49	BR	22	LEU
49	BR	39	LEU
49	BR	40	MET
49	BR	45	GLU
49	BR	53	PHE
49	BR	55	ASP
49	BR	70	GLU
49	BR	72	VAL
49	BR	79	ARG
49	BR	82	HIS
49	BR	86	GLN
49	BR	90	ARG
50	BT	2	ILE
50	BT	3	ARG
50	BT	4	GLU
50	BT	6	ARG
50	BT	7	LEU
50	BT	9	LYS
50	BT	11	LEU

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Mol	Chain	Res	Type
50	BT	12	ARG
50	BT	18	GLU
50	BT	24	MET
50	BT	36	LYS
50	BT	61	LEU
50	BT	64	LYS
50	BT	68	LYS
50	BT	73	ARG
50	BT	81	LYS
50	BT	87	LEU
51	BZ	25	THR
51	BZ	27	ARG
51	BZ	33	LEU
51	BZ	37	ARG
51	BZ	41	GLU
51	BZ	46	PHE
51	BZ	48	THR
51	BZ	49	LEU
51	BZ	50	ARG
51	BZ	64	ILE
51	BZ	66	THR
51	BZ	78	TYR
52	BW	13	ARG
52	BW	14	ASP
52	BW	16	GLU
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	44	PHE
52	BW	49	ASN
52	BW	50	VAL
52	BW	54	ARG
52	BW	74	LYS
52	BW	77	LYS
52	BW	80	SER
52	BW	84	GLU
53	B6	1	MET
53	B6	6	LEU

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Mol	Chain	Res	Type
53	B6	16	LYS
53	B6	17	SER
53	B6	29	ARG
53	B6	39	LEU
53	B6	44	GLU
53	B6	52	LEU
53	B6	55	ILE
53	B6	62	ASP
53	B6	66	LEU
53	B6	73	GLN
53	B6	93	SER
53	B6	103	ILE
53	B6	106	LEU
53	B6	109	GLU
53	B6	114	LEU
53	B6	120	GLN
53	B6	137	LEU
53	B6	143	LEU
53	B6	147	LEU
53	B6	154	THR
53	B6	156	ARG
53	B6	165	THR
53	B6	171	LYS
53	B6	177	GLU
53	B6	183	ILE
2	CC	2	GLN
2	CC	13	ILE
2	CC	14	VAL
2	CC	17	TRP
2	CC	20	THR
2	CC	27	GLU
2	CC	40	GLN
2	CC	41	TYR
2	CC	48	LYS
2	CC	61	LYS
2	CC	62	SER
2	CC	63	ILE
2	CC	84	GLU
2	CC	88	LYS
2	CC	100	ILE
2	CC	101	ASN
2	CC	106	ARG

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Mol	Chain	Res	Type
2	CC	107	LYS
2	CC	126	ARG
2	CC	128	MET
2	CC	131	ARG
2	CC	167	TYR
2	CC	168	ARG
2	CC	171	ARG
2	CC	184	ASN
2	CC	192	TYR
2	CC	206	ILE
3	CD	4	LEU
3	CD	7	LYS
3	CD	8	LEU
3	CD	18	LEU
3	CD	25	ARG
3	CD	28	ASP
3	CD	35	GLN
3	CD	39	GLN
3	CD	55	ARG
3	CD	70	GLN
3	CD	84	ASN
3	CD	87	GLU
3	CD	97	LEU
3	CD	118	SER
3	CD	146	GLU
3	CD	147	LYS
3	CD	151	GLN
3	CD	153	ARG
3	CD	155	LYS
3	CD	160	LEU
3	CD	176	LYS
3	CD	186	GLU
3	CD	189	ASP
3	CD	190	LEU
3	CD	196	GLU
3	CD	199	ILE
3	CD	200	VAL
4	CE	9	GLU
4	CE	23	THR
4	CE	31	SER
4	CE	45	VAL
4	CE	51	LYS

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Mol	Chain	Res	Type
4	CE	61	LYS
4	CE	64	GLU
4	CE	69	ASN
4	CE	70	MET
4	CE	72	ASN
4	CE	92	ARG
4	CE	119	VAL
4	CE	123	LEU
4	CE	127	TYR
4	CE	145	ASN
4	CE	147	ASN
4	CE	151	MET
4	CE	156	ARG
5	CF	3	HIS
5	CF	6	ILE
5	CF	7	VAL
5	CF	16	GLU
5	CF	39	LEU
5	CF	53	LYS
5	CF	55	HIS
5	CF	61	LEU
5	CF	65	GLU
5	CF	69	GLU
5	CF	71	ILE
5	CF	89	VAL
5	CF	90	MET
5	CF	98	GLU
6	CG	4	ARG
6	CG	5	VAL
6	CG	10	LYS
6	CG	11	ILE
6	CG	21	LEU
6	CG	26	VAL
6	CG	27	ASN
6	CG	49	LEU
6	CG	55	LYS
6	CG	56	SER
6	CG	57	GLU
6	CG	58	LEU
6	CG	62	GLU
6	CG	75	LYS
6	CG	78	ARG

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Mol	Chain	Res	Type
6	CG	89	GLU
6	CG	109	LYS
6	CG	110	ARG
6	CG	117	LEU
6	CG	132	THR
6	CG	137	ARG
6	CG	142	ARG
7	CH	55	LYS
7	CH	57	GLU
7	CH	72	GLU
7	CH	107	LYS
7	CH	111	THR
7	CH	113	ARG
8	CI	18	VAL
8	CI	24	ASN
8	CI	30	ASN
8	CI	36	GLN
8	CI	45	MET
8	CI	53	LEU
8	CI	58	GLU
8	CI	59	LYS
8	CI	62	LEU
8	CI	67	LYS
8	CI	74	GLN
8	CI	87	MET
8	CI	94	ARG
8	CI	109	GLN
8	CI	122	ARG
8	CI	123	ARG
9	CJ	17	LEU
9	CJ	31	ARG
9	CJ	37	ARG
9	CJ	47	GLU
9	CJ	52	LEU
9	CJ	69	THR
9	CJ	73	LEU
9	CJ	77	VAL
9	CJ	87	LEU
9	CJ	89	ARG
9	CJ	92	LEU
9	CJ	97	ASP
10	CK	28	ASN

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Mol	Chain	Res	Type
10	CK	29	THR
10	CK	34	THR
10	CK	51	PHE
10	CK	55	ARG
10	CK	56	LYS
10	CK	75	GLU
10	CK	76	TYR
10	CK	80	ASN
10	CK	82	GLU
10	CK	84	MET
10	CK	100	ASN
10	CK	105	ARG
10	CK	112	VAL
10	CK	115	ILE
10	CK	118	ASN
11	CL	13	ARG
11	CL	14	LYS
11	CL	15	VAL
11	CL	17	LYS
11	CL	19	ASN
11	CL	28	GLN
11	CL	33	CYS
11	CL	35	ARG
11	CL	38	THR
11	CL	43	LYS
11	CL	51	VAL
11	CL	56	LEU
11	CL	77	SER
11	CL	95	HIS
11	CL	102	ASP
11	CL	107	LYS
11	CL	119	LYS
11	CL	122	LYS
12	CM	28	ARG
12	CM	40	GLU
12	CM	43	LYS
12	CM	44	ILE
12	CM	46	GLU
12	CM	57	ASP
12	CM	65	GLU
12	CM	71	GLU
12	CM	79	LEU

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Mol	Chain	Res	Type
12	CM	82	LEU
12	CM	91	ARG
12	CM	102	LYS
12	CM	103	THR
13	CN	3	GLN
13	CN	4	SER
13	CN	5	MET
13	CN	10	VAL
13	CN	17	ASP
13	CN	25	GLU
13	CN	27	LYS
13	CN	40	ARG
13	CN	41	TRP
13	CN	50	LEU
13	CN	55	SER
13	CN	65	GLN
13	CN	68	ARG
13	CN	96	LYS
13	CN	97	LYS
14	CO	11	ILE
14	CO	39	LEU
14	CO	54	ARG
14	CO	66	LEU
14	CO	70	LEU
14	CO	71	LYS
14	CO	88	ARG
15	CP	2	VAL
15	CP	5	ARG
15	CP	26	ASN
15	CP	28	ARG
15	CP	45	GLU
15	CP	51	ARG
15	CP	68	SER
16	CQ	3	LYS
16	CQ	4	ILE
16	CQ	5	ARG
16	CQ	10	ARG
16	CQ	20	ILE
16	CQ	37	ILE
16	CQ	59	GLU
16	CQ	60	ILE
16	CQ	61	ARG

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Mol	Chain	Res	Type
16	CQ	66	LEU
16	CQ	74	LEU
16	CQ	80	LYS
17	CR	21	ASP
17	CR	33	THR
17	CR	34	GLU
17	CR	35	SER
17	CR	38	ILE
17	CR	44	THR
17	CR	46	THR
17	CR	60	ARG
18	CS	2	ARG
18	CS	4	LEU
18	CS	5	LYS
18	CS	13	HIS
18	CS	26	ASP
18	CS	27	LYS
18	CS	28	LYS
18	CS	42	ASN
18	CS	47	THR
18	CS	55	GLN
18	CS	64	GLU
18	CS	65	MET
18	CS	80	ARG
19	CT	3	ILE
19	CT	4	LYS
19	CT	5	SER
19	CT	25	SER
19	CT	43	LYS
19	CT	53	MET
19	CT	69	ASN
19	CT	74	HIS
19	CT	77	ASN
20	CB	8	MET
20	CB	13	VAL
20	CB	19	THR
20	CB	27	LYS
20	CB	35	ASN
20	CB	46	VAL
20	CB	48	MET
20	CB	51	GLU
20	CB	62	ARG

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Mol	Chain	Res	Type
20	CB	67	LEU
20	CB	72	LYS
20	CB	87	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	99	MET
20	CB	104	LYS
20	CB	113	LEU
20	CB	122	ASP
20	CB	127	LYS
20	CB	129	THR
20	CB	142	LYS
20	CB	144	GLU
20	CB	156	LEU
20	CB	176	ASN
20	CB	196	ASP
20	CB	202	ASN
20	CB	211	LEU
20	CB	212	TYR
20	CB	219	THR
20	CB	221	ARG
21	CU	7	GLU
21	CU	15	LEU
21	CU	17	ARG
21	CU	24	LYS
21	CU	27	VAL
21	CU	33	ARG
21	CU	34	ARG
21	CU	38	GLU
21	CU	44	ARG
24	DI	2	LYS
24	DI	36	GLU
24	DI	54	ILE
24	DI	121	ILE
25	DC	4	LYS
25	DC	5	CYS
25	DC	12	ARG
25	DC	23	LEU
25	DC	35	LYS
25	DC	37	SER
25	DC	45	ASN
25	DC	52	HIS

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Mol	Chain	Res	Type
25	DC	53	ILE
25	DC	62	ARG
25	DC	89	ASN
25	DC	90	ILE
25	DC	100	ARG
25	DC	123	ILE
25	DC	129	LEU
25	DC	134	ILE
25	DC	142	ASN
25	DC	155	ARG
25	DC	166	ARG
25	DC	172	THR
25	DC	173	LEU
25	DC	180	MET
25	DC	190	THR
25	DC	191	LEU
25	DC	202	ARG
25	DC	224	MET
25	DC	227	VAL
25	DC	245	THR
25	DC	249	VAL
25	DC	251	THR
25	DC	257	ARG
25	DC	267	VAL
25	DC	268	ARG
25	DC	269	ARG
26	DD	2	ILE
26	DD	4	LEU
26	DD	17	GLU
26	DD	24	VAL
26	DD	35	THR
26	DD	36	GLN
26	DD	40	LEU
26	DD	46	ARG
26	DD	48	ILE
26	DD	56	LYS
26	DD	59	ARG
26	DD	79	LEU
26	DD	81	GLU
26	DD	84	LEU
26	DD	89	GLU
26	DD	91	THR

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Mol	Chain	Res	Type
26	DD	99	GLU
26	DD	104	VAL
26	DD	123	LYS
26	DD	124	ARG
26	DD	131	ASP
26	DD	137	SER
26	DD	138	LEU
26	DD	142	VAL
26	DD	148	GLN
26	DD	151	THR
26	DD	159	LYS
26	DD	165	MET
26	DD	179	ARG
26	DD	186	LEU
26	DD	190	LYS
26	DD	201	LEU
26	DD	204	LYS
26	DD	207	VAL
27	DK	8	LEU
27	DK	21	CYS
27	DK	32	TYR
27	DK	39	ILE
27	DK	41	ILE
27	DK	47	ILE
27	DK	52	VAL
27	DK	53	LYS
27	DK	54	LYS
27	DK	58	LEU
27	DK	67	LYS
27	DK	72	PRO
27	DK	76	VAL
27	DK	86	LEU
27	DK	104	THR
27	DK	105	ARG
27	DK	107	LEU
27	DK	111	LYS
27	DK	120	PRO
28	DP	3	ILE
28	DP	19	PHE
28	DP	20	ARG
28	DP	24	THR
28	DP	25	VAL

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Mol	Chain	Res	Type
28	DP	28	LYS
28	DP	33	GLU
28	DP	37	LYS
28	DP	38	ARG
28	DP	43	GLU
28	DP	61	ARG
28	DP	83	ILE
28	DP	99	LEU
28	DP	101	GLU
28	DP	111	GLU
28	DP	112	ARG
28	DP	114	ASN
29	DE	2	GLU
29	DE	9	GLN
29	DE	12	LEU
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	62	GLN
29	DE	67	ARG
29	DE	75	SER
29	DE	108	ILE
29	DE	111	GLU
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU
29	DE	133	LEU
29	DE	147	LEU
29	DE	148	ILE
29	DE	153	LEU
29	DE	159	LEU
29	DE	163	ASN
29	DE	170	ARG
29	DE	198	GLU
30	DY	2	LYS
30	DY	3	THR
30	DY	6	ILE
30	DY	16	LEU
30	DY	23	LEU

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Mol	Chain	Res	Type
30	DY	37	ARG
30	DY	53	MET
30	DY	57	GLU
31	D0	5	ASN
31	D0	26	SER
31	D0	27	LEU
31	D0	37	HIS
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	3	VAL
32	D4	7	VAL
32	D4	9	LYS
32	D4	17	VAL
32	D4	25	VAL
32	D4	28	SER
32	D4	35	GLN
32	D4	37	GLN
33	D1	8	ILE
33	D1	35	LEU
33	D1	44	GLN
33	D1	47	ILE
34	D3	7	ARG
34	D3	27	ASN
34	D3	42	HIS
34	D3	61	LEU
35	DV	7	GLU
35	DV	12	GLN
35	DV	29	ILE
35	DV	34	LYS
35	DV	40	ILE
35	DV	42	LEU
35	DV	46	LYS
35	DV	51	GLN
35	DV	53	LYS
35	DV	55	GLU
35	DV	66	ASP
35	DV	70	ILE
35	DV	75	GLN

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Mol	Chain	Res	Type
35	DV	89	ILE
36	D2	4	THR
36	D2	10	LEU
36	D2	19	ARG
36	D2	24	THR
36	D2	33	ARG
36	D2	39	ARG
36	D2	41	ARG
36	D2	42	LEU
36	D2	43	THR
37	DL	12	SER
37	DL	40	SER
37	DL	47	ARG
37	DL	60	ARG
37	DL	69	ARG
37	DL	81	ASP
37	DL	91	ASP
37	DL	92	LEU
37	DL	95	LEU
37	DL	109	LYS
37	DL	112	LEU
37	DL	116	VAL
37	DL	118	THR
38	DM	1	MET
38	DM	10	ARG
38	DM	20	LEU
38	DM	25	ASP
38	DM	26	VAL
38	DM	30	SER
38	DM	38	ARG
38	DM	47	GLU
38	DM	59	ARG
38	DM	60	GLN
38	DM	63	ILE
38	DM	65	ILE
38	DM	70	ASP
38	DM	89	VAL
38	DM	90	GLU
38	DM	95	LEU
38	DM	100	LYS
38	DM	104	GLU
38	DM	105	MET

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Mol	Chain	Res	Type
38	DM	108	VAL
38	DM	110	GLU
38	DM	115	GLU
38	DM	127	LYS
38	DM	131	VAL
39	DX	11	VAL
39	DX	14	LEU
39	DX	18	LEU
39	DX	25	GLN
39	DX	28	LEU
39	DX	29	ARG
39	DX	48	ARG
39	DX	56	LEU
39	DX	57	LEU
39	DX	59	GLU
40	DH	3	VAL
40	DH	12	LEU
40	DH	15	LEU
40	DH	17	ASP
40	DH	28	ASN
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	58	LEU
40	DH	70	GLU
40	DH	75	LEU
40	DH	76	GLU
40	DH	79	THR
40	DH	94	ILE
40	DH	114	GLU
40	DH	115	VAL
40	DH	121	VAL
40	DH	124	THR
40	DH	129	GLU
40	DH	133	GLN
40	DH	137	GLU
40	DH	145	ASN
41	DJ	2	LYS
41	DJ	5	THR
41	DJ	12	LYS
41	DJ	25	LEU
41	DJ	28	LEU

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Mol	Chain	Res	Type
41	DJ	36	LEU
41	DJ	65	THR
41	DJ	76	HIS
41	DJ	93	ILE
41	DJ	95	ARG
41	DJ	120	ARG
41	DJ	124	VAL
41	DJ	129	GLU
41	DJ	136	GLN
41	DJ	138	GLN
42	DN	1	MET
42	DN	2	ARG
42	DN	9	GLN
42	DN	11	ASN
42	DN	18	GLN
42	DN	20	MET
42	DN	24	MET
42	DN	33	ILE
42	DN	35	LYS
42	DN	46	ARG
42	DN	59	SER
42	DN	69	ARG
42	DN	82	GLU
42	DN	83	LEU
42	DN	97	ILE
42	DN	98	LEU
42	DN	114	GLU
42	DN	118	ARG
42	DN	120	GLU
43	DO	3	LYS
43	DO	17	LYS
43	DO	20	GLU
43	DO	31	THR
43	DO	43	ASN
43	DO	58	ILE
43	DO	62	LEU
43	DO	68	LYS
43	DO	78	VAL
43	DO	80	GLU
43	DO	83	LEU
43	DO	98	GLN
43	DO	100	HIS

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Mol	Chain	Res	Type
43	DO	104	GLN
43	DO	106	LEU
43	DO	115	LEU
44	DQ	5	ARG
44	DQ	8	ILE
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	14	LYS
44	DQ	29	ARG
44	DQ	40	LYS
44	DQ	63	ARG
44	DQ	79	ILE
44	DQ	83	LYS
44	DQ	84	LYS
44	DQ	91	ARG
44	DQ	96	ASP
45	DS	6	LYS
45	DS	17	VAL
45	DS	22	ASP
45	DS	28	LYS
45	DS	33	LEU
45	DS	39	THR
45	DS	45	VAL
45	DS	55	ILE
45	DS	62	ASP
45	DS	66	ILE
45	DS	69	LEU
45	DS	72	THR
45	DS	73	LYS
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG
45	DS	99	ARG
45	DS	100	THR
46	DU	7	ASP
46	DU	11	ILE
46	DU	13	LEU
46	DU	18	LYS
46	DU	20	LYS
46	DU	30	SER
46	DU	34	ILE
46	DU	49	PRO

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Mol	Chain	Res	Type
46	DU	51	LEU
46	DU	52	ASN
46	DU	53	GLN
46	DU	60	LYS
46	DU	64	ILE
46	DU	65	GLN
46	DU	71	ILE
46	DU	73	ASN
46	DU	78	LYS
46	DU	80	ASP
46	DU	81	ARG
46	DU	85	ARG
47	DF	2	LYS
47	DF	13	LYS
47	DF	15	LEU
47	DF	18	GLU
47	DF	29	ARG
47	DF	32	LYS
47	DF	33	ILE
47	DF	43	ILE
47	DF	50	ASP
47	DF	55	ASP
47	DF	56	LEU
47	DF	59	ILE
47	DF	66	ILE
47	DF	70	ARG
47	DF	76	PHE
47	DF	86	CYS
47	DF	88	VAL
47	DF	91	ARG
47	DF	95	MET
47	DF	97	GLU
47	DF	101	ARG
47	DF	102	LEU
47	DF	103	ILE
47	DF	111	ARG
47	DF	121	PHE
47	DF	126	ASN
47	DF	129	MET
47	DF	134	GLN
47	DF	135	ILE
47	DF	137	PHE

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Mol	Chain	Res	Type
47	DF	138	PRO
47	DF	139	GLU
47	DF	147	ARG
47	DF	149	ARG
47	DF	168	LEU
47	DF	174	PHE
47	DF	178	LYS
48	DG	1	SER
48	DG	2	ARG
48	DG	15	ASP
48	DG	17	LYS
48	DG	24	THR
48	DG	31	GLU
48	DG	34	ARG
48	DG	36	LEU
48	DG	54	ARG
48	DG	55	ASP
48	DG	61	TRP
48	DG	68	ARG
48	DG	70	LEU
48	DG	71	LEU
48	DG	80	GLU
48	DG	84	LYS
48	DG	85	LYS
48	DG	86	LEU
48	DG	89	VAL
48	DG	94	ARG
48	DG	106	LEU
48	DG	113	ASP
48	DG	120	ILE
48	DG	132	LEU
48	DG	138	GLN
48	DG	154	GLU
48	DG	162	ARG
48	DG	166	GLU
49	DR	4	VAL
49	DR	22	LEU
49	DR	39	LEU
49	DR	40	MET
49	DR	45	GLU
49	DR	53	PHE
49	DR	55	ASP

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Mol	Chain	Res	Type
49	DR	70	GLU
49	DR	72	VAL
49	DR	79	ARG
49	DR	82	HIS
49	DR	86	GLN
50	DT	2	ILE
50	DT	3	ARG
50	DT	4	GLU
50	DT	6	ARG
50	DT	7	LEU
50	DT	9	LYS
50	DT	11	LEU
50	DT	12	ARG
50	DT	18	GLU
50	DT	21	SER
50	DT	24	MET
50	DT	61	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	73	ARG
50	DT	81	LYS
50	DT	87	LEU
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	33	LEU
51	DZ	37	ARG
51	DZ	41	GLU
51	DZ	46	PHE
51	DZ	49	LEU
51	DZ	50	ARG
51	DZ	64	ILE
51	DZ	66	THR
51	DZ	78	TYR
52	DW	13	ARG
52	DW	14	ASP
52	DW	16	GLU
52	DW	18	LYS
52	DW	19	ARG
52	DW	23	LYS
52	DW	24	ARG
52	DW	25	PHE
52	DW	38	ARG

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Mol	Chain	Res	Type
52	DW	39	GLN
52	DW	44	PHE
52	DW	49	ASN
52	DW	50	VAL
52	DW	54	ARG
52	DW	74	LYS
52	DW	77	LYS
52	DW	80	SER
52	DW	84	GLU
53	D6	1	MET
53	D6	6	LEU
53	D6	12	SER
53	D6	16	LYS
53	D6	17	SER
53	D6	22	GLU
53	D6	34	ASN
53	D6	39	LEU
53	D6	44	GLU
53	D6	59	THR
53	D6	73	GLN
53	D6	84	ARG
53	D6	85	ASP
53	D6	93	SER
53	D6	94	ASN
53	D6	106	LEU
53	D6	107	THR
53	D6	108	GLU
53	D6	109	GLU
53	D6	114	LEU
53	D6	131	ASN
53	D6	137	LEU
53	D6	146	GLU
53	D6	147	LEU
53	D6	156	ARG
53	D6	171	LYS
53	D6	174	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (353) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	31	ASN

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Mol	Chain	Res	Type
2	AC	99	GLN
2	AC	122	GLN
2	AC	138	GLN
2	AC	139	ASN
3	AD	35	GLN
3	AD	53	GLN
3	AD	70	GLN
3	AD	115	GLN
3	AD	135	GLN
3	AD	151	GLN
3	AD	163	GLN
4	AE	81	GLN
4	AE	82	HIS
4	AE	131	ASN
5	AF	3	HIS
5	AF	46	GLN
5	AF	63	ASN
5	AF	68	GLN
6	AG	27	ASN
6	AG	67	ASN
6	AG	121	ASN
7	AH	3	GLN
7	AH	37	ASN
7	AH	66	GLN
7	AH	117	GLN
8	AI	30	ASN
8	AI	36	GLN
8	AI	49	GLN
8	AI	80	HIS
9	AJ	20	GLN
10	AK	21	HIS
10	AK	28	ASN
10	AK	80	ASN
10	AK	118	ASN
11	AL	5	GLN
11	AL	19	ASN
11	AL	28	GLN
11	AL	45	ASN
11	AL	111	GLN
12	AM	7	ASN
12	AM	90	HIS
14	AO	37	ASN

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Mol	Chain	Res	Type
14	AO	40	GLN
15	AP	63	GLN
16	AQ	8	GLN
16	AQ	50	ASN
18	AS	42	ASN
18	AS	55	GLN
19	AT	19	HIS
19	AT	47	GLN
19	AT	83	ASN
20	AB	14	HIS
20	AB	17	HIS
20	AB	23	ASN
20	AB	35	ASN
20	AB	41	ASN
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	20	ASN
25	BC	24	HIS
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	126	ASN
26	BD	130	GLN
26	BD	136	ASN
26	BD	173	GLN
27	BK	5	GLN
27	BK	13	ASN
27	BK	88	ASN
27	BK	89	ASN
28	BP	6	GLN
28	BP	40	GLN

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Mol	Chain	Res	Type
28	BP	114	ASN
29	BE	24	ASN
29	BE	30	GLN
29	BE	62	GLN
29	BE	97	ASN
29	BE	136	GLN
29	BE	163	ASN
29	BE	195	GLN
30	BY	33	HIS
30	BY	48	ASN
31	B0	3	GLN
32	B4	35	GLN
33	B1	25	ASN
35	BV	44	HIS
35	BV	49	ASN
35	BV	51	GLN
35	BV	75	GLN
35	BV	80	HIS
35	BV	88	HIS
36	B2	13	ASN
36	B2	29	GLN
37	BL	4	ASN
37	BL	93	ASN
37	BL	104	GLN
38	BM	13	HIS
38	BM	17	ASN
38	BM	60	GLN
39	BX	15	ASN
39	BX	20	ASN
39	BX	25	GLN
39	BX	27	ASN
39	BX	31	GLN
39	BX	39	GLN
39	BX	45	GLN
40	BH	2	GLN
40	BH	18	GLN
40	BH	20	ASN
40	BH	28	ASN
40	BH	43	ASN
40	BH	66	ASN
40	BH	73	ASN
40	BH	128	HIS

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Mol	Chain	Res	Type
40	BH	135	HIS
40	BH	145	ASN
41	BJ	138	GLN
42	BN	11	ASN
42	BN	62	ASN
42	BN	107	ASN
43	BO	19	GLN
43	BO	29	HIS
43	BO	38	GLN
43	BO	43	ASN
43	BO	61	GLN
43	BO	67	ASN
44	BQ	51	GLN
44	BQ	55	GLN
44	BQ	58	GLN
44	BQ	70	GLN
45	BS	7	HIS
45	BS	40	ASN
45	BS	57	ASN
45	BS	61	ASN
46	BU	65	GLN
46	BU	68	ASN
46	BU	73	ASN
47	BF	51	ASN
47	BF	134	GLN
48	BG	19	ASN
48	BG	29	ASN
48	BG	37	ASN
48	BG	44	HIS
48	BG	103	ASN
48	BG	110	HIS
48	BG	115	GLN
48	BG	127	GLN
49	BR	6	GLN
49	BR	43	ASN
49	BR	86	GLN
49	BR	91	GLN
50	BT	91	GLN
51	BZ	17	ASN
51	BZ	20	HIS
51	BZ	23	ASN
51	BZ	36	HIS

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Mol	Chain	Res	Type
52	BW	39	GLN
52	BW	56	HIS
52	BW	75	ASN
53	B6	120	GLN
53	B6	131	ASN
53	B6	174	GLN
53	B6	181	GLN
2	CC	2	GLN
2	CC	31	ASN
2	CC	99	GLN
2	CC	122	GLN
2	CC	139	ASN
3	CD	35	GLN
3	CD	53	GLN
3	CD	58	GLN
3	CD	70	GLN
3	CD	115	GLN
3	CD	135	GLN
3	CD	151	GLN
3	CD	163	GLN
4	CE	81	GLN
4	CE	82	HIS
4	CE	131	ASN
5	CF	46	GLN
5	CF	63	ASN
5	CF	68	GLN
6	CG	8	GLN
6	CG	27	ASN
6	CG	67	ASN
6	CG	121	ASN
7	CH	3	GLN
7	CH	37	ASN
7	CH	66	GLN
7	CH	117	GLN
8	CI	30	ASN
8	CI	36	GLN
8	CI	49	GLN
8	CI	80	HIS
9	CJ	20	GLN
10	CK	21	HIS
10	CK	28	ASN
10	CK	80	ASN

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Mol	Chain	Res	Type
10	CK	118	ASN
11	CL	5	GLN
11	CL	19	ASN
11	CL	28	GLN
11	CL	45	ASN
11	CL	111	GLN
12	CM	7	ASN
13	CN	34	ASN
14	CO	37	ASN
14	CO	40	GLN
15	CP	63	GLN
16	CQ	8	GLN
16	CQ	50	ASN
18	CS	42	ASN
18	CS	55	GLN
19	CT	19	HIS
19	CT	20	ASN
19	CT	47	GLN
19	CT	83	ASN
20	CB	14	HIS
20	CB	17	HIS
20	CB	23	ASN
20	CB	35	ASN
20	CB	41	ASN
20	CB	145	ASN
20	CB	202	ASN
24	DI	5	GLN
24	DI	29	GLN
24	DI	33	ASN
24	DI	93	ASN
25	DC	20	ASN
25	DC	24	HIS
25	DC	43	ASN
25	DC	59	GLN
25	DC	133	ASN
25	DC	152	GLN
25	DC	162	GLN
25	DC	225	ASN
25	DC	238	ASN
26	DD	32	ASN
26	DD	36	GLN
26	DD	126	ASN

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Mol	Chain	Res	Type
26	DD	130	GLN
26	DD	136	ASN
26	DD	173	GLN
27	DK	3	GLN
27	DK	5	GLN
27	DK	13	ASN
27	DK	88	ASN
27	DK	89	ASN
27	DK	93	GLN
28	DP	6	GLN
28	DP	40	GLN
28	DP	114	ASN
29	DE	9	GLN
29	DE	24	ASN
29	DE	30	GLN
29	DE	62	GLN
29	DE	136	GLN
29	DE	195	GLN
30	DY	33	HIS
30	DY	48	ASN
32	D4	35	GLN
32	D4	37	GLN
34	D3	42	HIS
35	DV	44	HIS
35	DV	49	ASN
35	DV	51	GLN
35	DV	78	GLN
35	DV	80	HIS
35	DV	88	HIS
36	D2	13	ASN
37	DL	4	ASN
37	DL	38	GLN
37	DL	54	GLN
37	DL	93	ASN
37	DL	104	GLN
38	DM	13	HIS
38	DM	17	ASN
38	DM	60	GLN
39	DX	15	ASN
39	DX	20	ASN
39	DX	25	GLN
39	DX	27	ASN

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Mol	Chain	Res	Type
39	DX	31	GLN
39	DX	39	GLN
39	DX	45	GLN
40	DH	2	GLN
40	DH	18	GLN
40	DH	20	ASN
40	DH	28	ASN
40	DH	43	ASN
40	DH	66	ASN
40	DH	133	GLN
40	DH	135	HIS
41	DJ	136	GLN
41	DJ	138	GLN
42	DN	11	ASN
42	DN	62	ASN
42	DN	107	ASN
43	DO	19	GLN
43	DO	29	HIS
43	DO	38	GLN
43	DO	43	ASN
43	DO	61	GLN
44	DQ	51	GLN
44	DQ	55	GLN
44	DQ	58	GLN
44	DQ	70	GLN
45	DS	7	HIS
45	DS	40	ASN
45	DS	57	ASN
45	DS	61	ASN
46	DU	65	GLN
46	DU	68	ASN
46	DU	73	ASN
47	DF	51	ASN
47	DF	134	GLN
48	DG	19	ASN
48	DG	29	ASN
48	DG	37	ASN
48	DG	44	HIS
48	DG	103	ASN
48	DG	115	GLN
48	DG	127	GLN
49	DR	6	GLN

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Mol	Chain	Res	Type
49	DR	43	ASN
49	DR	86	GLN
49	DR	89	HIS
49	DR	91	GLN
50	DT	91	GLN
51	DZ	17	ASN
51	DZ	20	HIS
51	DZ	23	ASN
51	DZ	36	HIS
52	DW	39	GLN
52	DW	56	HIS
52	DW	75	ASN
53	D6	24	ASN
53	D6	49	HIS
53	D6	54	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	244 (15%)	21 (1%)
1	CA	1529/1542 (99%)	235 (15%)	19 (1%)
22	BA	116/120 (96%)	17 (14%)	0
22	DA	116/120 (96%)	16 (13%)	0
23	BB	2837/2904 (97%)	458 (16%)	17 (0%)
23	DB	2837/2904 (97%)	436 (15%)	22 (0%)
All	All	8964/9132 (98%)	1406 (15%)	79 (0%)

All (1406) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	14	U
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	65	A
1	AA	66	A

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Mol	Chain	Res	Type
1	AA	71	A
1	AA	72	A
1	AA	76	G
1	AA	79	G
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	92	U
1	AA	93	U
1	AA	94	G
1	AA	108	G
1	AA	119	A
1	AA	121	U
1	AA	122	G
1	AA	131	A
1	AA	151	A
1	AA	182	A
1	AA	183	C
1	AA	191	G
1	AA	197	A
1	AA	209	U
1	AA	210	C
1	AA	215	C
1	AA	233	C
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

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Mol	Chain	Res	Type
1	AA	289	G
1	AA	316	C
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	373	A
1	AA	374	A
1	AA	381	C
1	AA	382	A
1	AA	384	G
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
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	438	U
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

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Mol	Chain	Res	Type
1	AA	484	G
1	AA	485	U
1	AA	493	A
1	AA	500	G
1	AA	509	A
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	639	G
1	AA	653	U
1	AA	665	A
1	AA	687	A
1	AA	695	A
1	AA	700	G
1	AA	721	G
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	747	A
1	AA	748	G
1	AA	755	G
1	AA	781	A
1	AA	782	A
1	AA	787	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	813	U
1	AA	815	A
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	828	U
1	AA	829	G
1	AA	841	C

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Mol	Chain	Res	Type
1	AA	842	U
1	AA	843	U
1	AA	844	G
1	AA	846	G
1	AA	847	G
1	AA	907	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	931	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	1004	A
1	AA	1009	U
1	AA	1020	G
1	AA	1025	U
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1034	G
1	AA	1049	U
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

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Mol	Chain	Res	Type
1	AA	1118	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1158	C
1	AA	1159	U
1	AA	1168	U
1	AA	1169	A
1	AA	1171	A
1	AA	1174	G
1	AA	1181	G
1	AA	1182	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	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1240	U
1	AA	1241	G
1	AA	1256	A
1	AA	1257	A
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1299	A
1	AA	1300	G
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C

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Mol	Chain	Res	Type
1	AA	1323	G
1	AA	1336	C
1	AA	1363	A
1	AA	1364	U
1	AA	1381	U
1	AA	1398	A
1	AA	1400	C
1	AA	1410	A
1	AA	1432	G
1	AA	1446	A
1	AA	1451	U
1	AA	1452	C
1	AA	1492	A
1	AA	1497	G
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1532	U
1	AA	1533	C
1	AA	1534	A
22	BA	4	C
22	BA	9	G
22	BA	16	G
22	BA	24	G
22	BA	26	C
22	BA	29	A
22	BA	30	C
22	BA	35	C
22	BA	42	C
22	BA	43	C
22	BA	66	A
22	BA	67	G
22	BA	74	U
22	BA	88	C
22	BA	90	C
22	BA	99	A
22	BA	109	A
23	BB	2	G
23	BB	27	G

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Mol	Chain	Res	Type
23	BB	33	C
23	BB	34	U
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	79	C
23	BB	91	A
23	BB	99	U
23	BB	100	U
23	BB	101	A
23	BB	102	U
23	BB	103	A
23	BB	118	A
23	BB	119	A
23	BB	120	U
23	BB	125	A
23	BB	128	C
23	BB	139	U
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	143	C
23	BB	144	A
23	BB	149	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	215	G
23	BB	216	A
23	BB	221	A
23	BB	222	A
23	BB	225	C
23	BB	230	G
23	BB	233	A
23	BB	248	G

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Mol	Chain	Res	Type
23	BB	250	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	268	C
23	BB	271	G
23	BB	275	C
23	BB	277	G
23	BB	279	A
23	BB	280	U
23	BB	281	C
23	BB	291	G
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	352	A
23	BB	353	C
23	BB	355	U
23	BB	363	G
23	BB	371	A
23	BB	372	G
23	BB	383	C
23	BB	386	G
23	BB	387	U
23	BB	396	G
23	BB	411	G
23	BB	412	A
23	BB	423	A
23	BB	424	G
23	BB	444	C
23	BB	451	U
23	BB	455	C
23	BB	456	C
23	BB	457	A
23	BB	479	A
23	BB	480	A
23	BB	481	G

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Mol	Chain	Res	Type
23	BB	491	G
23	BB	492	A
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	531	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	563	A
23	BB	573	U
23	BB	575	A
23	BB	586	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
23	BB	653	U
23	BB	654	A
23	BB	655	A
23	BB	656	G
23	BB	671	C
23	BB	686	U
23	BB	717	C
23	BB	718	A
23	BB	719	C
23	BB	727	A
23	BB	730	A
23	BB	746	U
23	BB	747	U

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Mol	Chain	Res	Type
23	BB	764	A
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	859	G
23	BB	869	G
23	BB	874	G
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	953	G
23	BB	955	U
23	BB	961	C
23	BB	973	A
23	BB	974	G
23	BB	982	C
23	BB	983	A
23	BB	985	C
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

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Mol	Chain	Res	Type
23	BB	1033	U
23	BB	1046	A
23	BB	1047	G
23	BB	1055	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	1115	G
23	BB	1116	G
23	BB	1126	A
23	BB	1132	U
23	BB	1133	A
23	BB	1134	A
23	BB	1135	C
23	BB	1136	G
23	BB	1139	G
23	BB	1141	U
23	BB	1142	A
23	BB	1143	A
23	BB	1157	G
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1176	U
23	BB	1179	G
23	BB	1186	G
23	BB	1195	G
23	BB	1204	A
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	1273	U
23	BB	1275	A
23	BB	1276	A
23	BB	1301	A
23	BB	1302	A
23	BB	1321	A
23	BB	1325	U
23	BB	1337	G
23	BB	1341	G
23	BB	1359	A
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	1420	A
23	BB	1426	G
23	BB	1427	A
23	BB	1428	C
23	BB	1434	A
23	BB	1451	C
23	BB	1453	A
23	BB	1454	C
23	BB	1459	G
23	BB	1461	C
23	BB	1470	A
23	BB	1471	G
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	1497	U

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Mol	Chain	Res	Type
23	BB	1504	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1510	G
23	BB	1524	G
23	BB	1535	A
23	BB	1540	G
23	BB	1552	A
23	BB	1558	C
23	BB	1559	U
23	BB	1567	G
23	BB	1569	A
23	BB	1578	U
23	BB	1583	A
23	BB	1585	C
23	BB	1588	G
23	BB	1607	C
23	BB	1608	A
23	BB	1610	A
23	BB	1613	G
23	BB	1619	G
23	BB	1634	A
23	BB	1635	A
23	BB	1640	A
23	BB	1647	U
23	BB	1648	U
23	BB	1674	G
23	BB	1681	G
23	BB	1700	A
23	BB	1703	G
23	BB	1713	A
23	BB	1714	U
23	BB	1715	G
23	BB	1730	C
23	BB	1731	G
23	BB	1733	G
23	BB	1738	G
23	BB	1764	C
23	BB	1773	A
23	BB	1782	U
23	BB	1800	C

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Mol	Chain	Res	Type
23	BB	1816	C
23	BB	1829	A
23	BB	1870	C
23	BB	1876	A
23	BB	1884	G
23	BB	1906	G
23	BB	1913	A
23	BB	1927	A
23	BB	1929	G
23	BB	1930	G
23	BB	1937	A
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1944	U
23	BB	1955	U
23	BB	1963	U
23	BB	1966	A
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	1996	C
23	BB	1997	C
23	BB	2020	A
23	BB	2022	U
23	BB	2023	C
23	BB	2031	A
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2096	C
23	BB	2102	G
23	BB	2103	C
23	BB	2108	A
23	BB	2134	A

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Mol	Chain	Res	Type
23	BB	2136	G
23	BB	2137	U
23	BB	2138	G
23	BB	2144	G
23	BB	2145	C
23	BB	2146	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	2156	G
23	BB	2157	G
23	BB	2180	U
23	BB	2181	U
23	BB	2182	U
23	BB	2183	A
23	BB	2184	A
23	BB	2187	U
23	BB	2188	U
23	BB	2192	U
23	BB	2198	A
23	BB	2199	A
23	BB	2203	U
23	BB	2204	G
23	BB	2212	A
23	BB	2225	A
23	BB	2238	G
23	BB	2239	G
23	BB	2250	G
23	BB	2266	A
23	BB	2268	A
23	BB	2279	G
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	2311	A
23	BB	2321	U

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Mol	Chain	Res	Type
23	BB	2322	A
23	BB	2325	G
23	BB	2335	A
23	BB	2337	G
23	BB	2345	G
23	BB	2347	C
23	BB	2361	G
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	2425	A
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
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2535	G
23	BB	2552	U
23	BB	2554	U
23	BB	2566	A
23	BB	2567	G
23	BB	2573	C
23	BB	2582	G
23	BB	2586	U
23	BB	2609	U
23	BB	2613	U
23	BB	2619	C
23	BB	2629	U
23	BB	2630	G
23	BB	2634	A

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Mol	Chain	Res	Type
23	BB	2646	C
23	BB	2654	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2739	U
23	BB	2744	G
23	BB	2751	G
23	BB	2752	C
23	BB	2757	A
23	BB	2759	G
23	BB	2760	C
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	2802	G
23	BB	2808	G
23	BB	2820	A
23	BB	2821	A
23	BB	2823	A
23	BB	2833	U
23	BB	2834	G
23	BB	2836	U
23	BB	2866	U
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2901	C
23	BB	2902	C
23	BB	2903	U
1	CA	9	G
1	CA	14	U
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C

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Mol	Chain	Res	Type
1	CA	51	A
1	CA	52	C
1	CA	55	A
1	CA	61	G
1	CA	71	A
1	CA	72	A
1	CA	76	G
1	CA	83	C
1	CA	84	U
1	CA	87	C
1	CA	94	G
1	CA	97	G
1	CA	108	G
1	CA	119	A
1	CA	121	U
1	CA	122	G
1	CA	131	A
1	CA	151	A
1	CA	182	A
1	CA	183	C
1	CA	191	G
1	CA	197	A
1	CA	209	U
1	CA	210	C
1	CA	215	C
1	CA	239	U
1	CA	240	G
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	316	C
1	CA	321	A
1	CA	328	C

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Mol	Chain	Res	Type
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
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	382	A
1	CA	384	G
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	414	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	484	G
1	CA	485	U
1	CA	493	A
1	CA	500	G

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Mol	Chain	Res	Type
1	CA	509	A
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	639	G
1	CA	653	U
1	CA	665	A
1	CA	687	A
1	CA	695	A
1	CA	700	G
1	CA	721	G
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	781	A
1	CA	782	A
1	CA	787	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
1	CA	819	A
1	CA	821	G
1	CA	828	U
1	CA	829	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	846	G

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Mol	Chain	Res	Type
1	CA	847	G
1	CA	907	A
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	969	A
1	CA	971	G
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	1004	A
1	CA	1009	U
1	CA	1020	G
1	CA	1025	U
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1034	G
1	CA	1049	U
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
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	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G

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Mol	Chain	Res	Type
1	CA	1140	C
1	CA	1158	C
1	CA	1159	U
1	CA	1168	U
1	CA	1169	A
1	CA	1174	G
1	CA	1181	G
1	CA	1182	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	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1240	U
1	CA	1241	G
1	CA	1256	A
1	CA	1257	A
1	CA	1278	G
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1286	U
1	CA	1299	A
1	CA	1300	G
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	1363	A
1	CA	1364	U
1	CA	1381	U

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Mol	Chain	Res	Type
1	CA	1398	A
1	CA	1400	C
1	CA	1419	G
1	CA	1432	G
1	CA	1446	A
1	CA	1451	U
1	CA	1452	C
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1534	A
22	DA	4	C
22	DA	9	G
22	DA	16	G
22	DA	24	G
22	DA	26	C
22	DA	29	A
22	DA	30	C
22	DA	35	C
22	DA	42	C
22	DA	43	C
22	DA	66	A
22	DA	67	G
22	DA	88	C
22	DA	90	C
22	DA	99	A
22	DA	109	A
23	DB	27	G
23	DB	33	C
23	DB	34	U
23	DB	46	G
23	DB	51	G
23	DB	63	A
23	DB	64	A

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Mol	Chain	Res	Type
23	DB	71	A
23	DB	74	A
23	DB	75	G
23	DB	79	C
23	DB	99	U
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	103	A
23	DB	114	U
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	142	A
23	DB	143	C
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	181	A
23	DB	196	A
23	DB	199	A
23	DB	215	G
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	225	C
23	DB	230	G
23	DB	233	A
23	DB	248	G
23	DB	250	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	271	G
23	DB	277	G
23	DB	278	A
23	DB	280	U
23	DB	281	C

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Mol	Chain	Res	Type
23	DB	282	A
23	DB	284	U
23	DB	286	U
23	DB	287	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	346	A
23	DB	347	A
23	DB	350	G
23	DB	358	U
23	DB	371	A
23	DB	372	G
23	DB	383	C
23	DB	386	G
23	DB	387	U
23	DB	396	G
23	DB	411	G
23	DB	412	A
23	DB	423	A
23	DB	424	G
23	DB	444	C
23	DB	451	U
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	491	G
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	512	G
23	DB	527	C
23	DB	531	C

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Mol	Chain	Res	Type
23	DB	532	A
23	DB	533	G
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	550	C
23	DB	561	G
23	DB	563	A
23	DB	573	U
23	DB	574	A
23	DB	575	A
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	653	U
23	DB	654	A
23	DB	656	G
23	DB	671	C
23	DB	686	U
23	DB	717	C
23	DB	718	A
23	DB	719	C
23	DB	730	A
23	DB	747	U
23	DB	764	A
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

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Mol	Chain	Res	Type
23	DB	828	U
23	DB	846	U
23	DB	847	U
23	DB	859	G
23	DB	869	G
23	DB	874	G
23	DB	875	G
23	DB	876	C
23	DB	899	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	953	G
23	DB	955	U
23	DB	961	C
23	DB	973	A
23	DB	974	G
23	DB	983	A
23	DB	985	C
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1024	G
23	DB	1025	G
23	DB	1033	U
23	DB	1046	A
23	DB	1047	G
23	DB	1048	A
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1098	A
23	DB	1111	A
23	DB	1112	G
23	DB	1116	G

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Mol	Chain	Res	Type
23	DB	1122	G
23	DB	1126	A
23	DB	1127	A
23	DB	1132	U
23	DB	1133	A
23	DB	1134	A
23	DB	1135	C
23	DB	1136	G
23	DB	1141	U
23	DB	1142	A
23	DB	1143	A
23	DB	1157	G
23	DB	1174	U
23	DB	1176	U
23	DB	1195	G
23	DB	1204	A
23	DB	1205	A
23	DB	1206	G
23	DB	1211	C
23	DB	1212	G
23	DB	1237	A
23	DB	1238	G
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
23	DB	1272	A
23	DB	1273	U
23	DB	1275	A
23	DB	1276	A
23	DB	1301	A
23	DB	1302	A
23	DB	1321	A
23	DB	1325	U
23	DB	1337	G
23	DB	1341	G
23	DB	1345	C

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Mol	Chain	Res	Type
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	1420	A
23	DB	1426	G
23	DB	1427	A
23	DB	1428	C
23	DB	1434	A
23	DB	1451	C
23	DB	1453	A
23	DB	1454	C
23	DB	1459	G
23	DB	1461	C
23	DB	1470	A
23	DB	1471	G
23	DB	1476	U
23	DB	1477	A
23	DB	1478	G
23	DB	1482	G
23	DB	1490	A
23	DB	1493	C
23	DB	1497	U
23	DB	1504	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	1540	G
23	DB	1552	A
23	DB	1558	C
23	DB	1559	U
23	DB	1567	G
23	DB	1569	A
23	DB	1578	U

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Mol	Chain	Res	Type
23	DB	1583	A
23	DB	1584	U
23	DB	1585	C
23	DB	1607	C
23	DB	1608	A
23	DB	1610	A
23	DB	1613	G
23	DB	1616	A
23	DB	1634	A
23	DB	1635	A
23	DB	1640	A
23	DB	1647	U
23	DB	1648	U
23	DB	1674	G
23	DB	1700	A
23	DB	1713	A
23	DB	1715	G
23	DB	1716	U
23	DB	1727	C
23	DB	1730	C
23	DB	1731	G
23	DB	1733	G
23	DB	1738	G
23	DB	1746	A
23	DB	1764	C
23	DB	1772	A
23	DB	1773	A
23	DB	1800	C
23	DB	1816	C
23	DB	1829	A
23	DB	1870	C
23	DB	1872	A
23	DB	1876	A
23	DB	1884	G
23	DB	1906	G
23	DB	1912	A
23	DB	1913	A
23	DB	1914	C
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1937	A

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Mol	Chain	Res	Type
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1944	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	2020	A
23	DB	2022	U
23	DB	2023	C
23	DB	2031	A
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	2099	U
23	DB	2102	G
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	2138	G
23	DB	2144	G
23	DB	2147	A
23	DB	2148	G
23	DB	2149	U
23	DB	2156	G
23	DB	2157	G
23	DB	2180	U

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Mol	Chain	Res	Type
23	DB	2190	G
23	DB	2193	G
23	DB	2198	A
23	DB	2203	U
23	DB	2204	G
23	DB	2212	A
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2250	G
23	DB	2266	A
23	DB	2268	A
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2297	A
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2311	A
23	DB	2320	U
23	DB	2321	U
23	DB	2322	A
23	DB	2325	G
23	DB	2335	A
23	DB	2337	G
23	DB	2347	C
23	DB	2361	G
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	2425	A
23	DB	2426	A
23	DB	2429	G
23	DB	2430	A
23	DB	2434	A
23	DB	2441	U
23	DB	2448	A

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Mol	Chain	Res	Type
23	DB	2472	G
23	DB	2476	A
23	DB	2491	U
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2535	G
23	DB	2554	U
23	DB	2566	A
23	DB	2567	G
23	DB	2573	C
23	DB	2586	U
23	DB	2609	U
23	DB	2613	U
23	DB	2629	U
23	DB	2630	G
23	DB	2634	A
23	DB	2646	C
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2739	U
23	DB	2744	G
23	DB	2748	A
23	DB	2757	A
23	DB	2760	C
23	DB	2778	A
23	DB	2791	G
23	DB	2796	U
23	DB	2799	A
23	DB	2800	A
23	DB	2801	G
23	DB	2802	G
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2823	A
23	DB	2832	U
23	DB	2833	U

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Mol	Chain	Res	Type
23	DB	2834	G
23	DB	2836	U
23	DB	2850	A
23	DB	2866	U
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2883	A
23	DB	2903	U

All (79) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	81	A
1	AA	239	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	960	U
1	AA	975	A
1	AA	1049	U
1	AA	1065	U
1	AA	1124	G
1	AA	1168	U
1	AA	1201	A
1	AA	1226	C
1	AA	1397	C
1	AA	1451	U
23	BB	63	A
23	BB	102	U
23	BB	162	U
23	BB	508	A
23	BB	546	U
23	BB	670	A
23	BB	1205	A
23	BB	1210	G

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Mol	Chain	Res	Type
23	BB	1301	A
23	BB	1419	A
23	BB	1943	U
23	BB	2062	A
23	BB	2282	G
23	BB	2336	A
23	BB	2425	A
23	BB	2756	U
23	BB	2798	U
1	CA	51	A
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	484	G
1	CA	960	U
1	CA	975	A
1	CA	1049	U
1	CA	1065	U
1	CA	1168	U
1	CA	1201	A
1	CA	1226	C
1	CA	1397	C
1	CA	1451	U
23	DB	63	A
23	DB	125	A
23	DB	139	U
23	DB	162	U
23	DB	508	A
23	DB	544	C
23	DB	670	A
23	DB	1126	A
23	DB	1205	A
23	DB	1210	G
23	DB	1301	A
23	DB	1419	A
23	DB	1911	U
23	DB	1943	U

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Mol	Chain	Res	Type
23	DB	2148	G
23	DB	2282	G
23	DB	2336	A
23	DB	2425	A
23	DB	2756	U
23	DB	2798	U
23	DB	2832	U
23	DB	2894	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 349 ligands modelled in this entry, 345 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
55	LLL	CA	1662	-	31,33,33	2.58	14 (45%)	33,49,49	1.32	5 (15%)
55	LLL	DB	3112	-	31,33,33	2.59	14 (45%)	33,49,49	1.28	5 (15%)
55	LLL	AA	1661	-	31,33,33	2.58	13 (41%)	33,49,49	1.32	4 (12%)
55	LLL	BB	3111	-	31,33,33	2.54	13 (41%)	33,49,49	1.26	4 (12%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	LLL	CA	1662	-	-	1/11/65/65	0/3/3/3
55	LLL	DB	3112	-	-	1/11/65/65	0/3/3/3
55	LLL	AA	1661	-	-	1/11/65/65	0/3/3/3
55	LLL	BB	3111	-	-	1/11/65/65	0/3/3/3

All (54) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1662	LLL	O53-C53	6.60	1.52	1.43
55	AA	1661	LLL	O53-C53	6.58	1.52	1.43
55	DB	3112	LLL	O53-C53	6.57	1.52	1.43
55	BB	3111	LLL	O53-C53	6.52	1.52	1.43
55	CA	1662	LLL	C53-C43	4.68	1.56	1.52
55	CA	1662	LLL	O53-C13	4.67	1.51	1.41
55	AA	1661	LLL	O53-C13	4.65	1.51	1.41
55	AA	1661	LLL	C53-C43	4.62	1.56	1.52
55	DB	3112	LLL	O53-C13	4.59	1.51	1.41
55	DB	3112	LLL	C53-C43	4.57	1.56	1.52
55	BB	3111	LLL	O53-C13	4.55	1.51	1.41
55	BB	3111	LLL	C53-C43	4.50	1.56	1.52
55	DB	3112	LLL	C33-N33	4.13	1.50	1.45
55	BB	3111	LLL	C33-N33	4.02	1.50	1.45
55	CA	1662	LLL	C33-N33	4.00	1.50	1.45
55	AA	1661	LLL	C33-N33	3.96	1.50	1.45
55	AA	1661	LLL	O51-C11	3.52	1.50	1.41
55	CA	1662	LLL	O51-C11	3.51	1.50	1.41
55	BB	3111	LLL	C41-C51	3.50	1.60	1.51
55	DB	3112	LLL	C41-C51	3.47	1.60	1.51
55	AA	1661	LLL	C41-C51	3.47	1.60	1.51
55	CA	1662	LLL	C41-C51	3.46	1.60	1.51
55	DB	3112	LLL	O51-C11	3.40	1.50	1.41
55	BB	3111	LLL	O51-C11	3.39	1.50	1.41
55	DB	3112	LLL	C23-C33	3.23	1.60	1.53
55	AA	1661	LLL	C23-C33	3.22	1.60	1.53
55	CA	1662	LLL	C23-C33	3.16	1.60	1.53
55	BB	3111	LLL	C23-C33	3.06	1.59	1.53
55	DB	3112	LLL	C42-C32	2.98	1.59	1.53
55	BB	3111	LLL	C42-C32	2.94	1.59	1.53
55	DB	3112	LLL	C52-C42	2.90	1.60	1.52
55	CA	1662	LLL	C42-C32	2.80	1.59	1.53
55	AA	1661	LLL	C52-C42	2.77	1.59	1.52
55	AA	1661	LLL	C42-C32	2.76	1.59	1.53
55	AA	1661	LLL	C22-C32	2.75	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1662	LLL	C52-C42	2.74	1.59	1.52
55	CA	1662	LLL	C22-C32	2.71	1.59	1.53
55	BB	3111	LLL	C52-C42	2.71	1.59	1.52
55	DB	3112	LLL	C22-C32	2.70	1.59	1.53
55	AA	1661	LLL	O51-C51	2.56	1.48	1.44
55	DB	3112	LLL	O51-C51	2.53	1.48	1.44
55	CA	1662	LLL	O51-C51	2.53	1.48	1.44
55	BB	3111	LLL	O51-C51	2.50	1.48	1.44
55	BB	3111	LLL	C22-C32	2.45	1.58	1.53
55	BB	3111	LLL	C52-C62	2.44	1.58	1.52
55	DB	3112	LLL	C52-C62	2.41	1.58	1.52
55	AA	1661	LLL	C31-C21	2.39	1.59	1.53
55	AA	1661	LLL	C52-C62	2.38	1.58	1.52
55	CA	1662	LLL	C31-C21	2.37	1.59	1.53
55	DB	3112	LLL	C31-C21	2.35	1.59	1.53
55	CA	1662	LLL	C52-C62	2.32	1.58	1.52
55	BB	3111	LLL	C31-C21	2.30	1.59	1.53
55	DB	3112	LLL	C22-C12	2.11	1.58	1.53
55	CA	1662	LLL	C22-C12	2.06	1.58	1.53

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1662	LLL	C53-O53-C13	3.96	117.62	111.53
55	DB	3112	LLL	C53-O53-C13	3.93	117.59	111.53
55	AA	1661	LLL	C53-O53-C13	3.85	117.45	111.53
55	BB	3111	LLL	C53-O53-C13	3.85	117.45	111.53
55	AA	1661	LLL	C13-O62-C62	2.75	124.50	117.98
55	AA	1661	LLL	O43-C43-C83	-2.58	102.47	108.08
55	CA	1662	LLL	C13-O62-C62	2.58	124.09	117.98
55	DB	3112	LLL	O43-C43-C83	-2.55	102.54	108.08
55	BB	3111	LLL	O43-C43-C83	-2.50	102.66	108.08
55	CA	1662	LLL	O43-C43-C83	-2.47	102.73	108.08
55	AA	1661	LLL	C11-O51-C51	2.44	115.84	113.13
55	CA	1662	LLL	C11-O51-C51	2.42	115.81	113.13
55	BB	3111	LLL	C11-O51-C51	2.40	115.79	113.13
55	DB	3112	LLL	C11-O51-C51	2.39	115.78	113.13
55	BB	3111	LLL	C93-N33-C33	2.24	117.55	114.47
55	DB	3112	LLL	C93-N33-C33	2.19	117.48	114.47
55	DB	3112	LLL	C13-O62-C62	2.15	123.08	117.98
55	CA	1662	LLL	C93-N33-C33	2.05	117.29	114.47

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	CA	1662	LLL	C23-C33-N33-C93
55	DB	3112	LLL	C23-C33-N33-C93
55	AA	1661	LLL	C23-C33-N33-C93
55	BB	3111	LLL	C23-C33-N33-C93

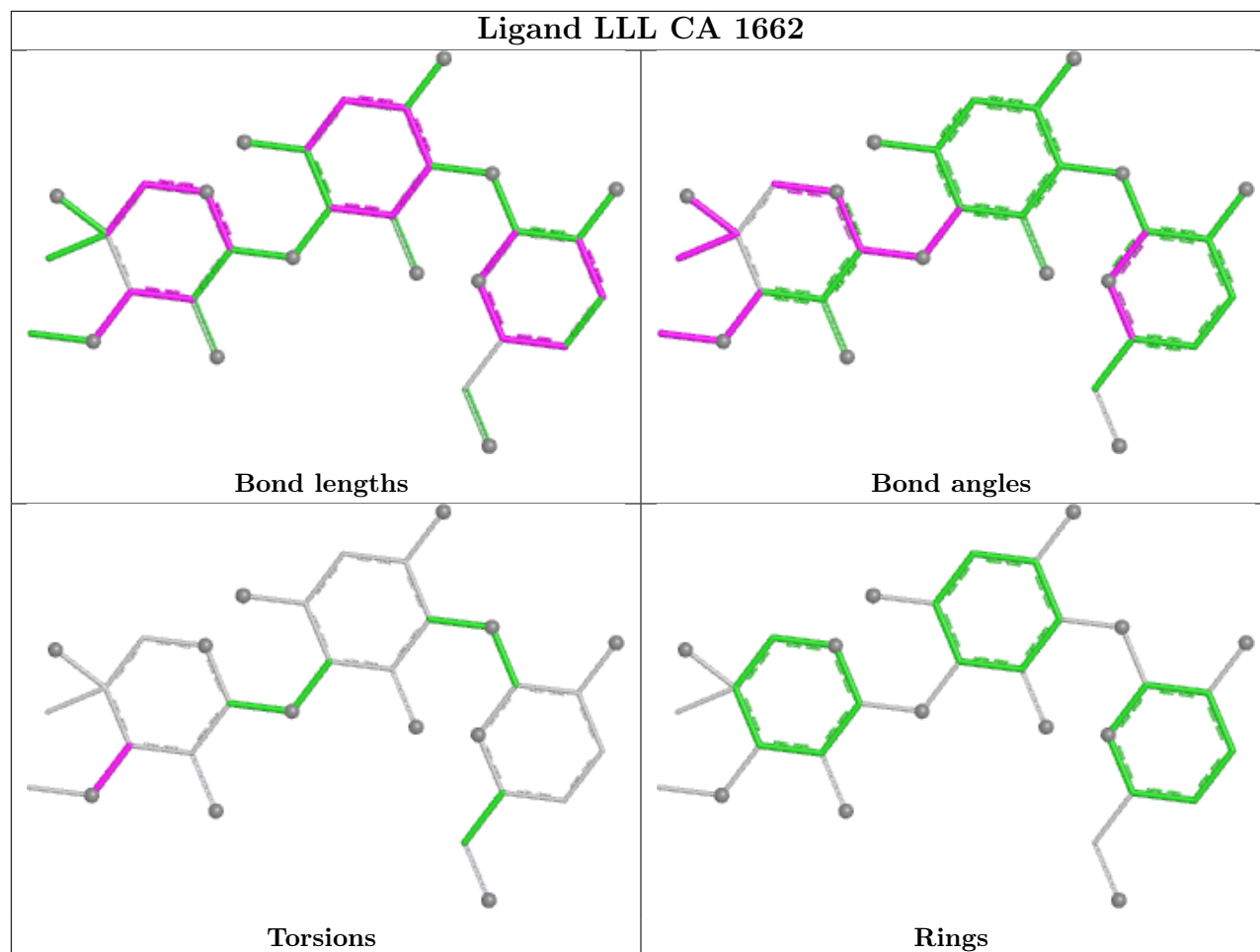
There are no ring outliers.

2 monomers are involved in 5 short contacts:

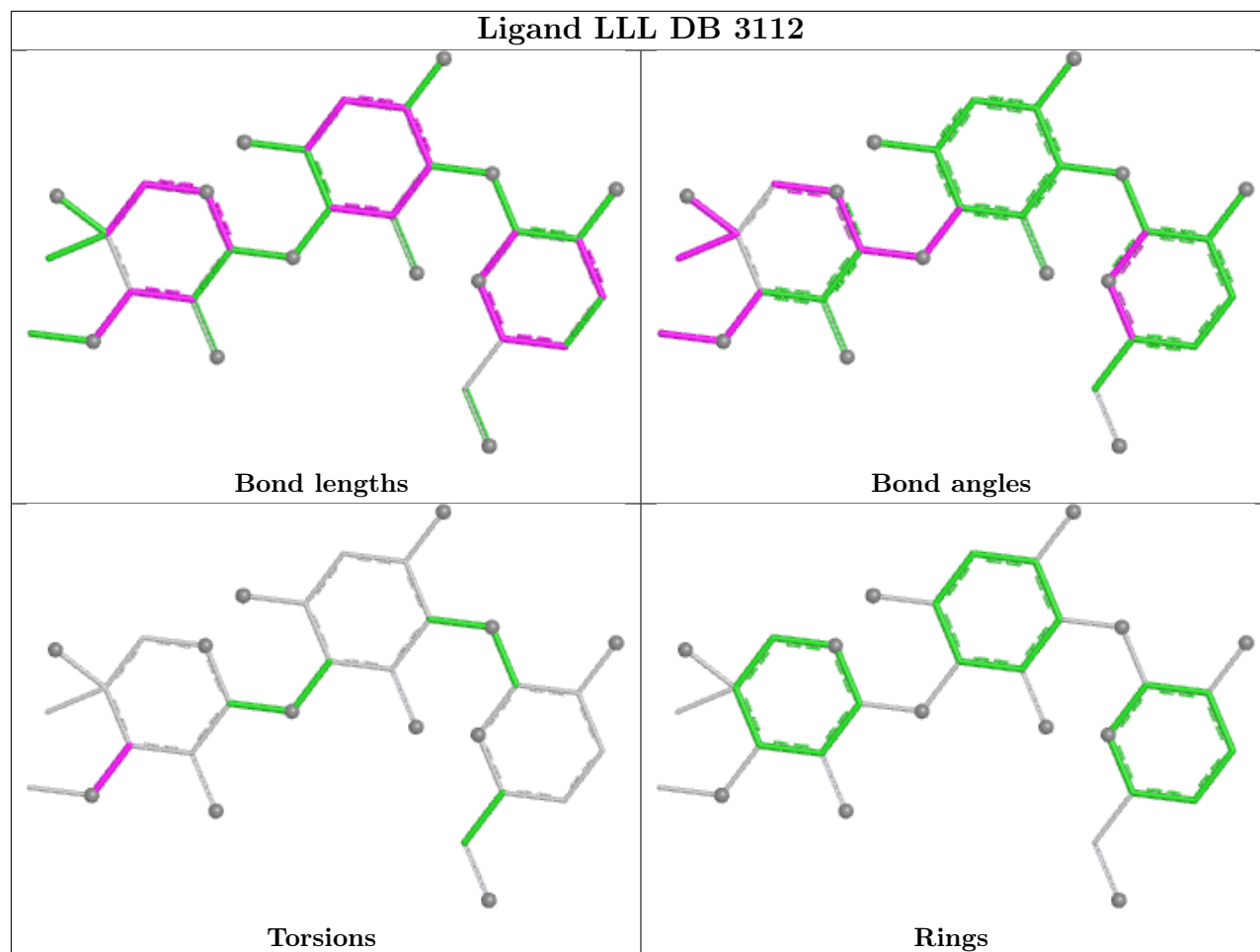
Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	CA	1662	LLL	3	0
55	BB	3111	LLL	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

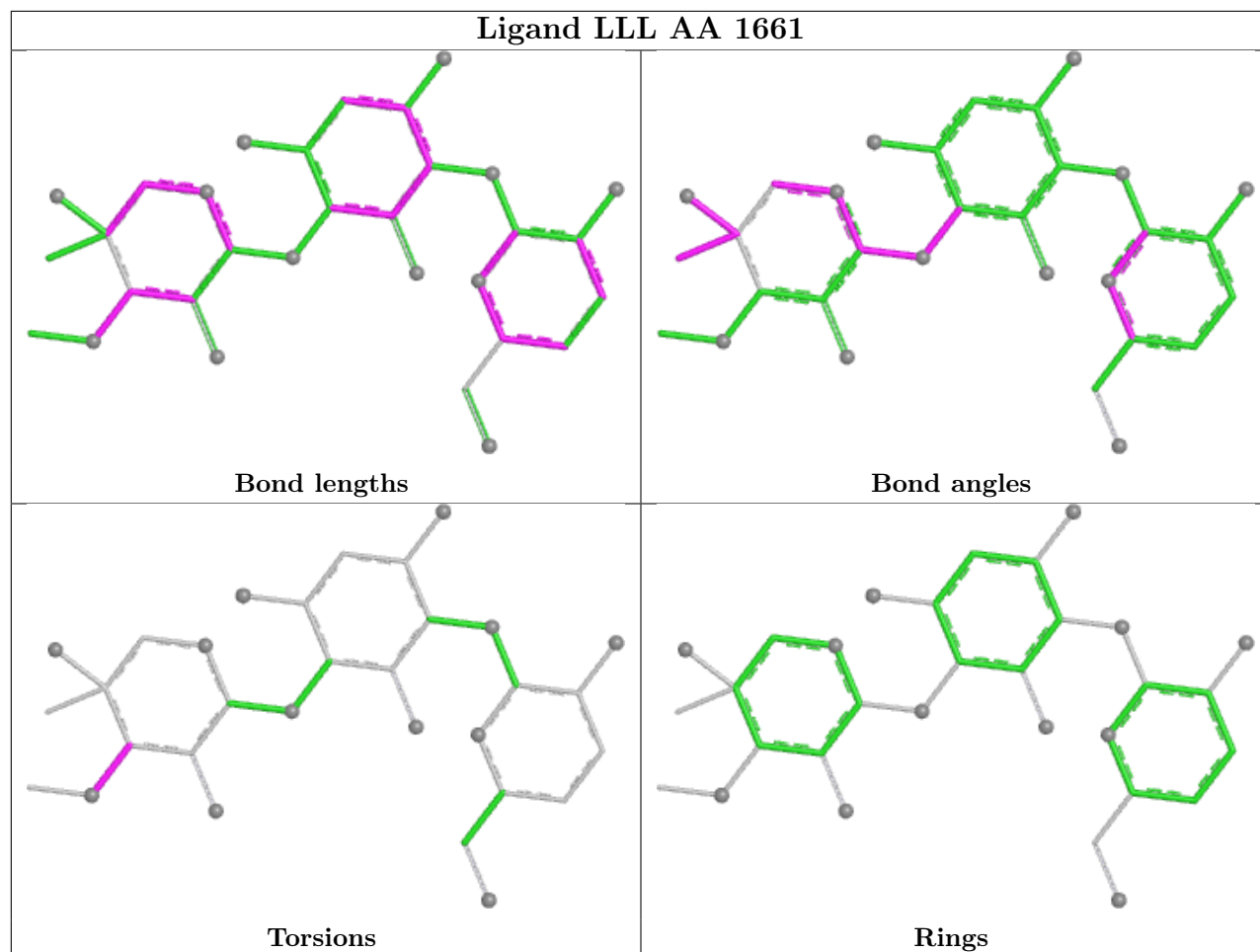
Ligand LLL CA 1662

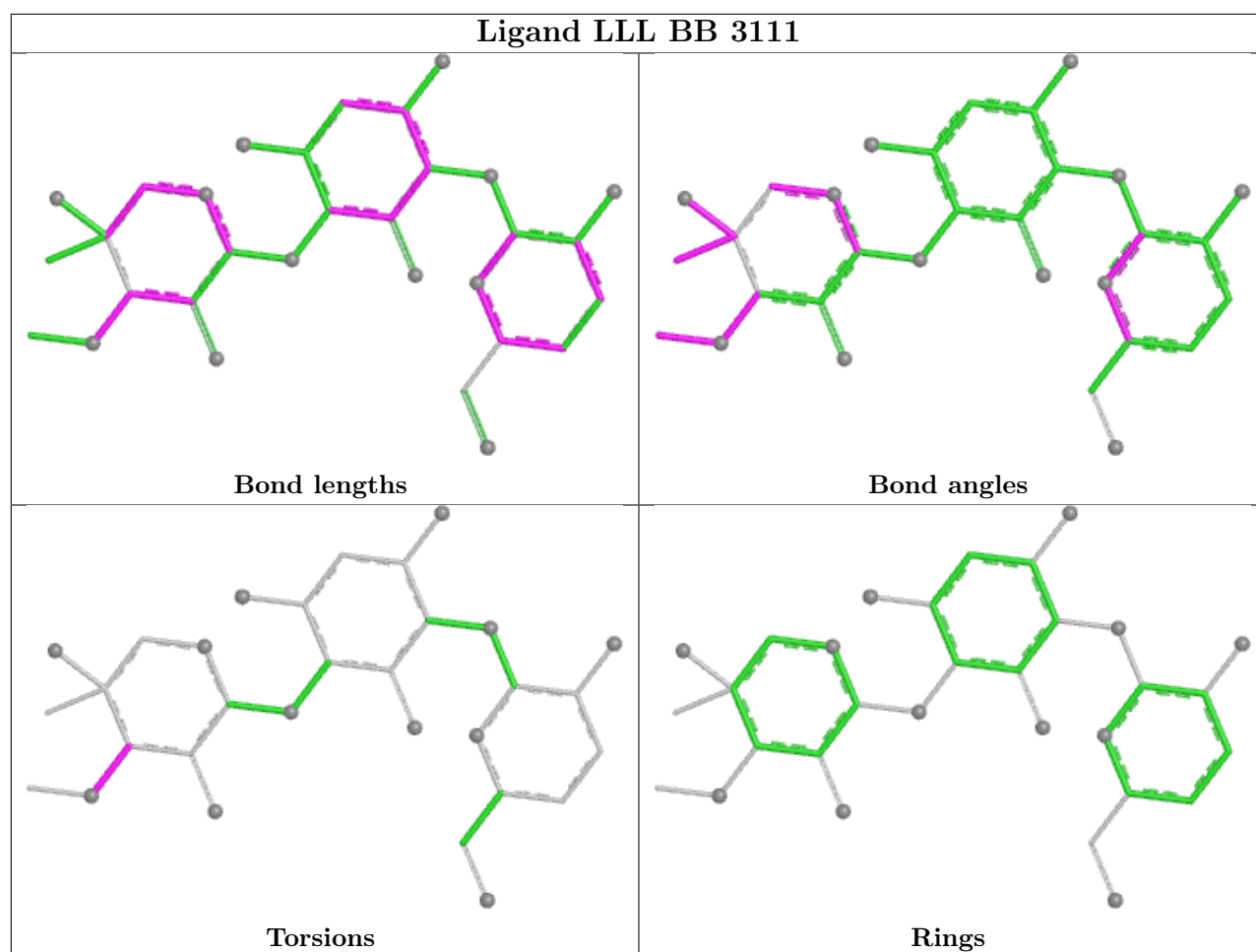


Ligand LLL DB 3112



Ligand LLL AA 1661





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

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, 95th 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%)	-0.37	1 (0%) 92 87	13, 75, 157, 180	0
1	CA	1530/1542 (99%)	-0.45	0 100 100	8, 52, 139, 180	0
2	AC	206/232 (88%)	0.03	4 (1%) 66 49	5, 72, 147, 180	0
2	CC	206/232 (88%)	-0.09	4 (1%) 66 49	6, 72, 131, 180	0
3	AD	205/205 (100%)	0.36	8 (3%) 43 33	20, 95, 159, 180	0
3	CD	205/205 (100%)	0.23	7 (3%) 48 35	5, 56, 145, 180	0
4	AE	150/166 (90%)	0.19	11 (7%) 21 20	7, 69, 146, 180	0
4	CE	150/166 (90%)	0.02	1 (0%) 84 68	5, 49, 112, 180	0
5	AF	100/135 (74%)	0.07	4 (4%) 42 33	5, 69, 150, 177	0
5	CF	100/135 (74%)	0.18	2 (2%) 65 48	5, 72, 143, 166	0
6	AG	150/178 (84%)	0.18	6 (4%) 42 33	20, 97, 159, 175	0
6	CG	152/178 (85%)	0.09	3 (1%) 65 48	29, 85, 147, 180	0
7	AH	129/129 (100%)	0.30	10 (7%) 19 19	26, 80, 143, 177	0
7	CH	129/129 (100%)	0.24	7 (5%) 31 27	6, 49, 117, 174	0
8	AI	127/129 (98%)	0.26	4 (3%) 51 37	18, 89, 171, 180	0
8	CI	127/129 (98%)	0.42	10 (7%) 18 19	22, 92, 160, 180	0
9	AJ	98/103 (95%)	0.34	4 (4%) 41 32	16, 92, 169, 180	0
9	CJ	98/103 (95%)	0.42	5 (5%) 33 27	26, 87, 153, 180	0
10	AK	117/128 (91%)	0.15	5 (4%) 40 31	7, 59, 119, 180	0
10	CK	117/128 (91%)	0.15	4 (3%) 48 35	5, 52, 120, 180	0
11	AL	123/123 (100%)	0.58	11 (8%) 15 17	14, 78, 152, 180	0
11	CL	123/123 (100%)	0.45	6 (4%) 35 29	5, 46, 127, 170	0
12	AM	114/117 (97%)	0.15	2 (1%) 67 50	40, 114, 180, 180	0
12	CM	113/117 (96%)	0.37	5 (4%) 39 31	27, 100, 173, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
13	AN	96/100 (96%)	0.49	8 (8%)	17 18	8, 86, 158, 180	0
13	CN	96/100 (96%)	0.42	4 (4%)	40 31	14, 87, 147, 178	0
14	AO	88/89 (98%)	0.10	1 (1%)	78 60	5, 76, 128, 180	0
14	CO	88/89 (98%)	0.41	6 (6%)	23 22	10, 63, 132, 159	0
15	AP	82/82 (100%)	0.47	6 (7%)	21 20	24, 94, 154, 180	0
15	CP	80/82 (97%)	0.57	9 (11%)	10 13	5, 46, 128, 180	0
16	AQ	80/83 (96%)	0.21	3 (3%)	44 34	36, 96, 168, 180	0
16	CQ	81/83 (97%)	0.04	1 (1%)	76 59	5, 52, 135, 180	0
17	AR	55/74 (74%)	0.38	4 (7%)	21 20	14, 70, 148, 180	0
17	CR	55/74 (74%)	0.75	9 (16%)	4 8	12, 64, 136, 180	0
18	AS	79/91 (86%)	0.36	7 (8%)	15 17	44, 120, 176, 180	0
18	CS	80/91 (87%)	0.22	2 (2%)	58 43	34, 107, 180, 180	0
19	AT	85/86 (98%)	0.41	5 (5%)	28 25	34, 101, 168, 180	0
19	CT	85/86 (98%)	0.69	10 (11%)	9 12	5, 62, 140, 180	0
20	AB	218/240 (90%)	0.28	10 (4%)	37 30	18, 97, 160, 180	0
20	CB	218/240 (90%)	0.22	9 (4%)	41 32	16, 93, 160, 180	0
21	AU	51/70 (72%)	0.78	4 (7%)	19 19	27, 89, 171, 180	0
21	CU	51/70 (72%)	0.79	7 (13%)	6 10	23, 81, 137, 180	0
22	BA	117/120 (97%)	-0.35	0	100 100	49, 85, 136, 180	0
22	DA	117/120 (97%)	-0.23	3 (2%)	57 42	36, 88, 148, 180	0
23	BB	2841/2904 (97%)	-0.39	2 (0%)	92 87	6, 60, 150, 180	0
23	DB	2841/2904 (97%)	-0.39	3 (0%)	92 87	5, 46, 154, 180	0
24	BI	141/141 (100%)	0.79	12 (8%)	16 18	72, 166, 180, 180	0
24	DI	141/141 (100%)	0.75	12 (8%)	16 18	63, 162, 180, 180	0
25	BC	271/272 (99%)	0.30	11 (4%)	41 32	5, 47, 107, 156	0
25	DC	271/272 (99%)	0.38	17 (6%)	26 23	5, 38, 99, 145	0
26	BD	209/209 (100%)	0.47	15 (7%)	21 20	8, 72, 145, 180	0
26	DD	209/209 (100%)	0.39	12 (5%)	29 26	5, 51, 131, 180	0
27	BK	121/123 (98%)	0.25	4 (3%)	49 36	16, 62, 142, 180	0
27	DK	121/123 (98%)	0.15	3 (2%)	58 43	5, 42, 103, 180	0
28	BP	114/114 (100%)	0.41	8 (7%)	22 21	28, 86, 155, 173	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
28	DP	114/114 (100%)	0.26	5 (4%)	39 31	5, 52, 119, 161	0
29	BE	201/201 (100%)	0.30	7 (3%)	47 35	5, 76, 143, 180	0
29	DE	201/201 (100%)	0.32	8 (3%)	42 33	5, 66, 138, 180	0
30	BY	58/58 (100%)	0.34	4 (6%)	23 21	22, 84, 137, 180	0
30	DY	58/58 (100%)	0.29	1 (1%)	69 51	10, 66, 149, 158	0
31	B0	56/56 (100%)	0.12	2 (3%)	46 35	5, 81, 149, 180	0
31	D0	56/56 (100%)	0.15	2 (3%)	46 35	9, 54, 119, 180	0
32	B4	38/38 (100%)	1.12	6 (15%)	5 9	5, 71, 153, 168	0
32	D4	38/38 (100%)	1.03	7 (18%)	3 6	17, 62, 132, 171	0
33	B1	50/54 (92%)	-0.12	0	100 100	32, 87, 132, 174	0
33	D1	50/54 (92%)	-0.04	0	100 100	24, 73, 125, 155	0
34	B3	64/64 (100%)	0.69	6 (9%)	14 16	19, 64, 105, 133	0
34	D3	64/64 (100%)	0.84	7 (10%)	10 13	6, 49, 107, 180	0
35	BV	94/94 (100%)	0.04	0	100 100	37, 92, 143, 180	0
35	DV	94/94 (100%)	0.20	4 (4%)	40 31	27, 94, 160, 180	0
36	B2	46/46 (100%)	0.93	9 (19%)	3 5	5, 50, 123, 143	0
36	D2	46/46 (100%)	0.87	8 (17%)	4 7	7, 43, 103, 180	0
37	BL	143/144 (99%)	0.45	4 (2%)	55 40	7, 72, 131, 180	0
37	DL	143/144 (99%)	0.38	4 (2%)	55 40	5, 61, 128, 162	0
38	BM	136/136 (100%)	0.33	5 (3%)	45 34	16, 68, 144, 165	0
38	DM	136/136 (100%)	0.45	4 (2%)	53 39	5, 63, 134, 171	0
39	BX	63/63 (100%)	0.24	0	100 100	24, 92, 169, 180	0
39	DX	63/63 (100%)	0.11	0	100 100	38, 94, 166, 180	0
40	BH	149/149 (100%)	0.37	5 (3%)	48 35	13, 125, 180, 180	0
40	DH	149/149 (100%)	0.16	1 (0%)	84 68	5, 109, 171, 180	0
41	BJ	142/142 (100%)	0.46	12 (8%)	16 18	13, 77, 132, 166	0
41	DJ	142/142 (100%)	0.45	11 (7%)	19 19	5, 65, 128, 180	0
42	BN	120/127 (94%)	0.42	9 (7%)	20 20	5, 68, 136, 180	0
42	DN	120/127 (94%)	0.26	8 (6%)	24 22	5, 44, 116, 141	0
43	BO	116/117 (99%)	0.36	7 (6%)	27 24	29, 94, 144, 180	0
43	DO	116/117 (99%)	0.48	7 (6%)	27 24	5, 93, 156, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BQ	117/117 (100%)	0.47	9 (7%) 19 19	5, 72, 134, 171	0
44	DQ	117/117 (100%)	0.77	16 (13%) 6 10	5, 50, 131, 156	0
45	BS	110/110 (100%)	0.35	4 (3%) 46 35	5, 67, 129, 180	0
45	DS	110/110 (100%)	0.16	1 (0%) 81 64	5, 50, 120, 157	0
46	BU	102/103 (99%)	0.44	6 (5%) 28 25	13, 88, 148, 177	0
46	DU	102/103 (99%)	0.29	3 (2%) 53 39	26, 93, 154, 180	0
47	BF	178/178 (100%)	0.10	1 (0%) 85 71	39, 115, 174, 180	0
47	DF	178/178 (100%)	0.40	6 (3%) 48 35	22, 106, 175, 180	0
48	BG	176/176 (100%)	0.10	1 (0%) 85 71	8, 102, 172, 180	0
48	DG	176/176 (100%)	0.25	5 (2%) 55 40	32, 104, 164, 180	0
49	BR	103/103 (100%)	0.44	7 (6%) 23 22	18, 99, 151, 173	0
49	DR	103/103 (100%)	0.43	8 (7%) 19 19	5, 85, 144, 180	0
50	BT	93/100 (93%)	0.65	12 (12%) 7 11	13, 83, 160, 180	0
50	DT	93/100 (93%)	0.57	6 (6%) 25 23	15, 79, 167, 180	0
51	BZ	77/78 (98%)	0.22	1 (1%) 75 57	12, 57, 112, 152	0
51	DZ	77/78 (98%)	0.20	2 (2%) 57 42	5, 56, 101, 131	0
52	BW	79/84 (94%)	0.74	15 (18%) 3 6	19, 88, 139, 180	0
52	DW	79/84 (94%)	0.95	15 (18%) 3 6	5, 79, 143, 180	0
53	B6	185/185 (100%)	0.38	8 (4%) 40 31	23, 123, 180, 180	0
53	D6	185/185 (100%)	0.36	5 (2%) 56 41	5, 104, 180, 180	0
All	All	20787/21416 (97%)	0.02	615 (2%) 52 38	5, 69, 159, 180	0

All (615) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
24	DI	83	ALA	8.1
8	CI	129	ARG	7.6
43	DO	2	ASP	7.2
11	AL	111	GLN	6.3
44	DQ	90	ASP	6.1
20	CB	216	VAL	5.9
17	CR	19	GLU	5.6
25	BC	271	SER	5.3
20	AB	192	PRO	5.2
40	BH	142	VAL	5.0

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Mol	Chain	Res	Type	RSRZ
7	AH	126	CYS	4.9
26	DD	118	PHE	4.9
24	DI	53	PRO	4.8
8	CI	67	LYS	4.8
25	DC	11	GLY	4.7
43	DO	3	LYS	4.7
43	DO	33	ARG	4.6
15	CP	41	PRO	4.6
11	CL	24	GLU	4.5
43	DO	97	PHE	4.5
29	DE	81	GLY	4.5
42	BN	6	SER	4.5
13	CN	46	LYS	4.5
38	BM	67	VAL	4.4
46	BU	16	LYS	4.4
3	AD	65	GLY	4.4
28	BP	91	VAL	4.4
20	CB	146	SER	4.4
36	B2	1	MET	4.3
26	BD	131	ASP	4.3
15	CP	28	ARG	4.2
24	BI	58	ILE	4.2
3	CD	3	TYR	4.2
42	DN	98	LEU	4.1
47	DF	169	LEU	4.1
50	BT	9	LYS	4.1
26	BD	118	PHE	4.1
14	CO	62	GLN	4.1
21	CU	36	PHE	4.0
25	BC	233	GLY	4.0
41	BJ	54	ILE	4.0
23	DB	2134	A	4.0
36	B2	46	LYS	3.9
4	AE	55	VAL	3.9
19	CT	66	ILE	3.9
53	D6	152	ASP	3.9
28	BP	99	LEU	3.9
47	DF	87	LYS	3.9
53	B6	89	GLY	3.9
11	AL	11	ARG	3.9
41	BJ	112	GLY	3.9
32	B4	7	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
46	BU	14	THR	3.8
25	DC	228	ASP	3.8
7	AH	39	LEU	3.8
32	B4	35	GLN	3.8
24	DI	84	GLY	3.8
37	BL	47	ARG	3.8
46	DU	28	LEU	3.7
49	DR	86	GLN	3.7
52	BW	15	SER	3.7
52	DW	19	ARG	3.7
23	DB	2133	G	3.7
24	DI	85	ILE	3.7
52	BW	13	ARG	3.7
7	AH	110	MET	3.7
6	CG	4	ARG	3.7
18	CS	2	ARG	3.6
6	AG	3	ARG	3.6
38	BM	12	MET	3.6
32	B4	15	LYS	3.6
6	AG	61	PHE	3.6
26	DD	146	ILE	3.6
7	AH	128	VAL	3.6
10	CK	128	VAL	3.6
38	BM	103	TYR	3.6
53	B6	86	SER	3.5
3	CD	60	VAL	3.5
51	DZ	49	LEU	3.5
24	DI	132	ALA	3.5
41	BJ	37	ARG	3.5
25	DC	234	GLY	3.5
4	AE	53	ARG	3.5
49	BR	73	LYS	3.5
52	DW	40	ARG	3.5
52	BW	36	ILE	3.5
17	CR	71	ASP	3.4
25	DC	250	GLN	3.4
44	DQ	27	ARG	3.4
26	DD	154	LYS	3.4
44	DQ	97	ILE	3.4
34	D3	27	ASN	3.4
43	DO	28	VAL	3.4
52	BW	19	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
13	AN	35	ALA	3.4
29	DE	190	ALA	3.4
41	DJ	80	HIS	3.4
24	DI	51	GLY	3.4
7	CH	39	LEU	3.4
36	D2	46	LYS	3.4
49	DR	73	LYS	3.3
52	DW	43	LYS	3.3
20	AB	164	ASP	3.3
28	BP	47	ILE	3.3
52	BW	75	ASN	3.3
17	AR	73	HIS	3.3
17	CR	73	HIS	3.3
49	DR	77	PHE	3.3
34	D3	28	LEU	3.3
41	DJ	86	GLN	3.3
44	BQ	87	VAL	3.3
22	DA	88	C	3.3
6	AG	4	ARG	3.3
42	BN	71	ARG	3.3
52	BW	40	ARG	3.3
52	DW	17	ALA	3.3
10	AK	128	VAL	3.3
44	DQ	19	GLN	3.2
9	AJ	59	LYS	3.2
15	AP	12	LYS	3.2
48	DG	172	GLU	3.2
8	AI	109	GLN	3.2
38	DM	124	LEU	3.2
48	DG	153	PRO	3.2
19	CT	23	ARG	3.2
15	AP	13	LYS	3.2
35	DV	47	VAL	3.2
26	BD	111	GLY	3.2
20	AB	188	THR	3.2
4	AE	54	GLU	3.2
19	AT	8	LYS	3.2
24	DI	52	LEU	3.2
3	AD	40	HIS	3.2
52	DW	38	ARG	3.2
25	DC	224	MET	3.2
7	CH	35	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
42	BN	21	PHE	3.1
43	BO	2	ASP	3.1
17	CR	63	TYR	3.1
40	BH	132	PHE	3.1
46	BU	89	GLY	3.1
17	AR	19	GLU	3.1
38	DM	99	GLY	3.1
51	DZ	51	VAL	3.1
28	DP	91	VAL	3.1
41	BJ	116	ARG	3.1
32	D4	2	LYS	3.1
41	DJ	44	TYR	3.1
4	AE	21	SER	3.1
19	CT	71	ALA	3.1
28	DP	92	ARG	3.1
6	CG	105	GLU	3.1
9	AJ	76	ILE	3.1
12	CM	52	ILE	3.1
52	DW	36	ILE	3.1
12	CM	44	ILE	3.0
15	AP	6	LEU	3.0
17	CR	66	LEU	3.0
52	DW	14	ASP	3.0
43	BO	26	LEU	3.0
32	D4	20	ASP	3.0
13	CN	60	ARG	3.0
52	DW	13	ARG	3.0
19	AT	63	LYS	3.0
49	BR	50	GLY	3.0
28	DP	93	LYS	3.0
34	B3	10	ALA	3.0
7	CH	91	LEU	3.0
20	AB	212	TYR	3.0
5	AF	6	ILE	2.9
11	AL	13	ARG	3.0
26	BD	148	GLN	3.0
26	BD	27	ILE	2.9
29	DE	49	ARG	3.0
3	AD	4	LEU	2.9
53	B6	88	LEU	2.9
24	BI	59	THR	2.9
21	CU	35	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
34	B3	39	ARG	2.9
41	DJ	111	LYS	2.9
50	BT	65	GLY	2.9
24	BI	1	ALA	2.9
47	BF	22	ASN	2.9
49	DR	8	GLY	2.9
52	DW	6	GLY	2.9
3	AD	106	PHE	2.9
7	AH	71	VAL	2.9
3	CD	203	TYR	2.9
18	AS	30	LEU	2.9
18	AS	36	ARG	2.9
19	CT	67	HIS	2.9
42	BN	18	GLN	2.9
20	AB	100	LEU	2.9
8	CI	118	ARG	2.9
20	CB	186	VAL	2.9
24	BI	138	VAL	2.9
25	DC	93	VAL	2.9
22	DA	52	A	2.9
15	AP	8	ARG	2.9
26	BD	132	ALA	2.9
3	CD	202	LEU	2.9
44	DQ	59	LEU	2.9
48	BG	42	VAL	2.8
32	B4	20	ASP	2.8
52	BW	16	GLU	2.8
37	BL	104	GLN	2.8
36	D2	14	ARG	2.8
13	CN	1	ALA	2.8
50	BT	64	LYS	2.8
20	CB	220	VAL	2.8
30	BY	43	ILE	2.8
2	AC	90	VAL	2.8
52	DW	33	GLY	2.8
18	AS	7	GLY	2.8
42	DN	12	ARG	2.8
30	BY	18	LYS	2.8
2	AC	167	TYR	2.8
24	BI	76	ALA	2.8
44	DQ	26	ALA	2.8
30	DY	23	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
7	AH	102	VAL	2.8
10	AK	125	LYS	2.8
16	AQ	3	LYS	2.8
24	BI	9	LYS	2.8
50	DT	71	GLY	2.8
14	AO	2	SER	2.8
52	BW	17	ALA	2.8
4	CE	30	PHE	2.8
36	B2	14	ARG	2.7
44	DQ	10	ARG	2.7
21	CU	24	LYS	2.7
44	DQ	4	LYS	2.7
19	CT	65	LEU	2.7
44	DQ	116	LEU	2.7
19	CT	3	ILE	2.7
29	DE	32	VAL	2.7
50	BT	3	ARG	2.7
9	CJ	59	LYS	2.7
15	CP	9	HIS	2.7
26	DD	165	MET	2.7
44	BQ	21	LYS	2.7
12	AM	7	ASN	2.7
25	DC	64	VAL	2.7
26	BD	25	THR	2.7
28	BP	75	THR	2.7
2	CC	126	ARG	2.7
11	CL	13	ARG	2.7
11	AL	25	ALA	2.7
34	B3	42	HIS	2.7
24	DI	80	LYS	2.7
42	BN	1	MET	2.7
9	CJ	60	ASP	2.7
44	DQ	72	GLY	2.7
11	CL	25	ALA	2.7
41	BJ	67	ASN	2.7
34	D3	39	ARG	2.7
50	BT	57	VAL	2.7
3	CD	152	SER	2.7
50	BT	79	ASP	2.7
24	BI	7	TYR	2.7
29	DE	181	ILE	2.7
2	CC	55	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
29	BE	47	LYS	2.7
49	BR	46	GLU	2.7
27	BK	73	ASP	2.6
53	B6	87	ASP	2.6
27	BK	103	VAL	2.6
30	BY	30	ARG	2.6
25	BC	234	GLY	2.6
21	CU	23	GLU	2.6
41	BJ	43	GLU	2.6
24	BI	4	VAL	2.6
11	CL	89	LEU	2.6
36	D2	1	MET	2.6
3	AD	162	GLU	2.6
1	AA	1080	A	2.6
44	BQ	88	GLU	2.6
52	DW	51	GLY	2.6
53	D6	83	ILE	2.6
13	AN	40	ARG	2.6
14	CO	58	ARG	2.6
16	AQ	5	ARG	2.6
15	CP	10	GLY	2.6
29	BE	94	GLN	2.6
7	CH	71	VAL	2.6
26	BD	128	ARG	2.6
37	DL	18	ARG	2.6
26	BD	80	TRP	2.6
31	B0	42	ILE	2.6
32	D4	23	ILE	2.6
7	CH	120	LEU	2.6
13	AN	1	ALA	2.6
5	CF	90	MET	2.6
9	CJ	43	PRO	2.6
10	AK	99	LEU	2.5
48	DG	88	LEU	2.5
38	DM	81	ARG	2.5
40	BH	130	VAL	2.5
41	DJ	56	VAL	2.5
44	DQ	32	ARG	2.5
7	AH	1	SER	2.5
20	CB	67	LEU	2.5
40	BH	148	ALA	2.5
41	BJ	117	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
50	BT	37	ASP	2.5
13	CN	42	ASN	2.5
26	DD	159	LYS	2.5
14	CO	67	LEU	2.5
21	AU	15	LEU	2.5
53	D6	30	THR	2.5
2	CC	65	VAL	2.5
37	BL	115	GLU	2.5
3	AD	76	LYS	2.5
8	AI	20	ILE	2.5
43	BO	8	ILE	2.5
40	DH	110	VAL	2.5
5	AF	94	HIS	2.5
51	BZ	18	ARG	2.5
32	D4	32	LYS	2.5
26	DD	151	THR	2.5
42	DN	14	SER	2.5
41	DJ	122	LEU	2.5
45	BS	51	LEU	2.5
19	AT	3	ILE	2.5
6	AG	108	ARG	2.5
26	DD	128	ARG	2.5
49	DR	75	VAL	2.5
25	BC	17	LYS	2.5
34	D3	51	LYS	2.5
13	AN	54	SER	2.5
11	AL	24	GLU	2.5
25	DC	34	GLU	2.5
25	BC	243	PRO	2.5
34	B3	53	ASP	2.5
16	CQ	5	ARG	2.5
24	BI	60	VAL	2.5
4	AE	58	ALA	2.5
4	AE	22	LYS	2.5
49	BR	86	GLN	2.4
41	DJ	46	PRO	2.4
10	CK	126	ARG	2.4
42	BN	46	ARG	2.4
15	CP	52	LEU	2.4
23	DB	359	G	2.4
32	B4	37	GLN	2.4
42	DN	15	SER	2.4

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Mol	Chain	Res	Type	RSRZ
20	CB	69	VAL	2.4
27	DK	35	VAL	2.4
38	BM	66	ARG	2.4
3	CD	107	GLY	2.4
41	BJ	111	LYS	2.4
41	DJ	42	ALA	2.4
43	BO	106	LEU	2.4
20	CB	68	PHE	2.4
19	CT	14	GLU	2.4
20	AB	225	SER	2.4
21	CU	43	GLU	2.4
29	BE	54	GLY	2.4
49	DR	48	LYS	2.4
50	DT	36	LYS	2.4
26	DD	32	ASN	2.4
23	BB	2213	U	2.4
47	DF	27	VAL	2.4
48	DG	161	VAL	2.4
5	AF	62	MET	2.4
8	CI	8	THR	2.4
25	BC	145	MET	2.4
36	D2	43	THR	2.4
36	D2	45	SER	2.4
46	DU	78	LYS	2.4
21	CU	14	ALA	2.4
41	DJ	81	ILE	2.4
21	AU	16	ARG	2.4
5	CF	100	SER	2.4
35	DV	86	LEU	2.4
40	BH	75	LEU	2.4
31	B0	19	ASP	2.4
50	BT	84	TYR	2.4
17	CR	54	LEU	2.4
21	AU	23	GLU	2.4
29	DE	105	LEU	2.4
32	D4	35	GLN	2.4
29	DE	71	GLY	2.4
52	BW	33	GLY	2.4
20	AB	199	ILE	2.4
10	AK	12	ARG	2.4
4	AE	25	LYS	2.4
4	AE	30	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
11	AL	16	ALA	2.3
24	BI	70	THR	2.3
34	D3	37	THR	2.3
47	DF	171	ALA	2.3
11	AL	3	VAL	2.3
27	DK	71	ARG	2.3
37	BL	116	VAL	2.3
42	DN	71	ARG	2.3
13	AN	50	LEU	2.3
25	DC	43	ASN	2.3
25	DC	205	GLY	2.3
43	BO	98	GLN	2.3
44	DQ	25	GLY	2.3
26	DD	91	THR	2.3
36	B2	43	THR	2.3
25	BC	64	VAL	2.3
36	B2	9	VAL	2.3
43	BO	28	VAL	2.3
4	AE	49	TYR	2.3
9	CJ	65	TYR	2.3
25	DC	97	ASP	2.3
17	CR	57	ALA	2.3
8	AI	32	ARG	2.3
20	CB	162	VAL	2.3
44	BQ	84	LYS	2.3
25	DC	204	LEU	2.3
17	CR	31	TYR	2.3
19	AT	67	HIS	2.3
49	DR	35	PHE	2.3
52	BW	14	ASP	2.3
8	CI	107	ALA	2.3
8	CI	17	ARG	2.3
36	B2	35	ARG	2.3
29	BE	53	THR	2.3
53	D6	37	LEU	2.3
9	CJ	84	VAL	2.3
10	CK	125	LYS	2.3
19	CT	63	LYS	2.3
44	DQ	36	GLN	2.3
25	BC	225	ASN	2.3
32	D4	36	ARG	2.3
42	DN	21	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
15	CP	42	ILE	2.3
45	DS	103	ILE	2.3
18	CS	7	GLY	2.3
24	BI	13	ALA	2.3
18	AS	32	THR	2.3
25	DC	33	LEU	2.3
41	BJ	42	ALA	2.3
21	CU	34	ARG	2.3
14	CO	80	GLN	2.3
29	BE	155	GLU	2.2
7	CH	13	ILE	2.2
8	CI	65	THR	2.2
27	BK	104	THR	2.2
44	BQ	97	ILE	2.2
45	BS	103	ILE	2.2
53	B6	55	ILE	2.2
15	CP	15	PRO	2.2
44	BQ	14	LYS	2.2
49	BR	48	LYS	2.2
34	B3	28	LEU	2.2
53	D6	75	ALA	2.2
17	AR	53	GLN	2.2
49	DR	87	GLN	2.2
5	AF	8	PHE	2.2
7	AH	125	ILE	2.2
9	AJ	36	VAL	2.2
13	AN	55	SER	2.2
36	D2	44	VAL	2.2
49	BR	20	VAL	2.2
18	AS	2	ARG	2.2
28	BP	102	ARG	2.2
43	DO	30	ARG	2.2
44	DQ	34	ALA	2.2
3	AD	17	ASP	2.2
23	BB	62	U	2.2
52	BW	18	LYS	2.2
52	DW	18	LYS	2.2
29	BE	14	VAL	2.2
27	BK	77	ILE	2.2
11	CL	37	TYR	2.2
19	CT	4	LYS	2.2
28	BP	96	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
46	DU	33	VAL	2.2
8	AI	129	ARG	2.2
45	BS	7	HIS	2.2
17	CR	20	ILE	2.2
11	CL	14	LYS	2.2
32	D4	15	LYS	2.2
14	CO	87	LEU	2.2
50	DT	11	LEU	2.2
2	AC	75	VAL	2.2
6	AG	140	VAL	2.2
29	BE	196	VAL	2.2
46	BU	12	VAL	2.2
2	AC	73	GLY	2.2
19	AT	69	ASN	2.2
43	BO	12	THR	2.2
7	AH	13	ILE	2.2
16	AQ	36	PHE	2.2
26	DD	113	SER	2.2
30	BY	31	ILE	2.2
26	BD	122	VAL	2.2
32	B4	17	VAL	2.2
11	AL	22	ALA	2.2
10	CK	58	THR	2.2
19	CT	15	LYS	2.2
25	DC	115	ILE	2.2
28	BP	93	LYS	2.2
28	DP	98	TYR	2.2
25	DC	145	MET	2.2
20	AB	193	ASP	2.1
50	DT	90	GLY	2.1
22	DA	25	U	2.1
15	CP	13	LYS	2.1
41	BJ	39	LYS	2.1
41	BJ	81	ILE	2.1
47	DF	174	PHE	2.1
42	DN	70	THR	2.1
43	DO	29	HIS	2.1
12	AM	85	TYR	2.1
15	AP	71	VAL	2.1
50	BT	16	VAL	2.1
52	BW	39	GLN	2.1
11	AL	27	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
41	DJ	113	PRO	2.1
12	CM	21	ILE	2.1
35	DV	42	LEU	2.1
45	BS	96	ILE	2.1
50	BT	82	LYS	2.1
42	BN	11	ASN	2.1
37	DL	67	THR	2.1
52	DW	45	HIS	2.1
3	CD	151	GLN	2.1
8	CI	7	GLY	2.1
20	AB	11	ALA	2.1
24	DI	82	ALA	2.1
25	DC	214	GLY	2.1
52	BW	12	GLY	2.1
18	AS	8	PRO	2.1
3	AD	27	ILE	2.1
24	DI	79	LEU	2.1
24	DI	81	LYS	2.1
28	DP	19	PHE	2.1
36	B2	18	PHE	2.1
50	BT	81	LYS	2.1
29	DE	168	ASP	2.1
6	CG	74	VAL	2.1
8	CI	32	ARG	2.1
11	AL	65	TYR	2.1
42	BN	37	THR	2.1
8	CI	128	LYS	2.1
12	CM	82	LEU	2.1
26	BD	114	LYS	2.1
34	B3	51	LYS	2.1
34	D3	13	PHE	2.1
36	D2	18	PHE	2.1
50	DT	87	LEU	2.1
13	AN	52	ARG	2.1
44	DQ	63	ARG	2.1
17	AR	63	TYR	2.1
10	AK	40	ALA	2.1
38	BM	102	LEU	2.1
41	BJ	86	GLN	2.1
44	BQ	55	GLN	2.1
44	BQ	116	LEU	2.1
46	BU	1	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
50	BT	36	LYS	2.1
50	DT	5	GLU	2.1
20	AB	204	ASP	2.1
26	BD	26	VAL	2.1
15	CP	17	TYR	2.1
31	D0	54	ILE	2.1
36	B2	23	ALA	2.1
36	B2	31	LEU	2.1
53	B6	68	VAL	2.1
13	AN	5	MET	2.1
28	BP	92	ARG	2.1
36	D2	28	ARG	2.1
15	AP	17	TYR	2.1
34	D3	15	LYS	2.1
52	BW	45	HIS	2.1
53	B6	38	LEU	2.1
53	B6	52	LEU	2.1
26	BD	156	PHE	2.1
26	BD	151	THR	2.1
21	AU	35	GLU	2.1
37	DL	51	GLU	2.1
41	DJ	116	ARG	2.0
47	DF	37	MET	2.0
52	DW	74	LYS	2.0
4	AE	34	ALA	2.0
20	CB	167	HIS	2.0
35	DV	56	PHE	2.0
42	BN	102	PHE	2.0
49	BR	74	ILE	2.0
18	AS	75	PRO	2.0
26	DD	121	THR	2.0
24	BI	97	VAL	2.0
25	BC	219	VAL	2.0
38	DM	1	MET	2.0
42	DN	1	MET	2.0
11	AL	9	LYS	2.0
12	CM	18	LEU	2.0
37	DL	36	LYS	2.0
7	AH	35	ILE	2.0
46	BU	86	PHE	2.0
25	DC	210	ALA	2.0
26	BD	147	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
27	DK	29	HIS	2.0
25	BC	250	GLN	2.0
44	DQ	55	GLN	2.0
25	BC	215	VAL	2.0
52	BW	42	THR	2.0
4	AE	92	ARG	2.0
6	AG	109	LYS	2.0
52	DW	8	SER	2.0
48	DG	12	ALA	2.0
7	CH	103	VAL	2.0
24	DI	22	PRO	2.0
44	BQ	3	VAL	2.0
9	AJ	37	ARG	2.0
2	CC	174	LEU	2.0
14	CO	57	LEU	2.0
31	D0	31	LYS	2.0
26	DD	145	SER	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th 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($\text{\AA}^2$)	Q<0.9
54	MG	AA	1626	1/1	-0.00	0.24	49,49,49,49	1
54	MG	AA	1623	1/1	0.07	0.55	73,73,73,73	1
54	MG	AA	1622	1/1	0.26	0.23	163,163,163,163	0
54	MG	AA	1608	1/1	0.45	0.16	147,147,147,147	0
54	MG	AA	1647	1/1	0.53	0.22	180,180,180,180	0
54	MG	AA	1656	1/1	0.54	0.34	161,161,161,161	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1627	1/1	0.57	0.14	69,69,69,69	1
54	MG	DB	3066	1/1	0.64	0.13	158,158,158,158	0
54	MG	CA	1626	1/1	0.67	0.25	41,41,41,41	1
54	MG	BB	3033	1/1	0.71	0.09	141,141,141,141	0
54	MG	AA	1602	1/1	0.72	0.11	147,147,147,147	0
54	MG	AA	1637	1/1	0.72	0.44	151,151,151,151	0
54	MG	AA	1635	1/1	0.73	0.11	103,103,103,103	0
54	MG	AA	1625	1/1	0.73	0.26	84,84,84,84	1
54	MG	CA	1629	1/1	0.78	0.17	65,65,65,65	1
54	MG	AA	1639	1/1	0.78	0.12	134,134,134,134	0
54	MG	BB	3093	1/1	0.79	0.11	131,131,131,131	0
54	MG	CA	1608	1/1	0.80	0.14	139,139,139,139	0
54	MG	AA	1659	1/1	0.82	0.27	180,180,180,180	0
54	MG	BB	3042	1/1	0.83	0.06	135,135,135,135	0
54	MG	CA	1623	1/1	0.84	0.08	173,173,173,173	0
54	MG	DB	3060	1/1	0.85	0.08	104,104,104,104	0
54	MG	AA	1619	1/1	0.85	0.12	180,180,180,180	0
54	MG	DB	3100	1/1	0.85	0.12	46,46,46,46	0
54	MG	AA	1645	1/1	0.86	0.09	95,95,95,95	0
54	MG	BB	3038	1/1	0.86	0.10	152,152,152,152	0
54	MG	CA	1657	1/1	0.87	0.13	89,89,89,89	0
54	MG	CA	1614	1/1	0.87	0.09	90,90,90,90	0
54	MG	CA	1615	1/1	0.88	0.12	180,180,180,180	0
54	MG	AA	1646	1/1	0.88	0.09	104,104,104,104	0
54	MG	DB	3058	1/1	0.88	0.39	162,162,162,162	0
54	MG	CA	1621	1/1	0.89	0.21	110,110,110,110	0
54	MG	BB	3013	1/1	0.89	0.08	92,92,92,92	0
54	MG	AA	1657	1/1	0.89	0.09	124,124,124,124	0
54	MG	AA	1644	1/1	0.89	0.07	98,98,98,98	0
54	MG	BB	3004	1/1	0.89	0.13	73,73,73,73	0
55	LLL	DB	3112	31/31	0.89	0.32	121,121,121,121	0
54	MG	BB	3099	1/1	0.90	0.09	56,56,56,56	0
54	MG	DB	3059	1/1	0.90	0.09	166,166,166,166	0
54	MG	CA	1635	1/1	0.90	0.09	98,98,98,98	0
54	MG	BB	3082	1/1	0.90	0.18	5,5,5,5	0
54	MG	CA	1658	1/1	0.90	0.28	53,53,53,53	0
54	MG	DB	3050	1/1	0.90	0.10	123,123,123,123	0
54	MG	CA	1649	1/1	0.91	0.13	127,127,127,127	0
55	LLL	BB	3111	31/31	0.91	0.18	107,107,107,107	0
54	MG	BB	3080	1/1	0.91	0.07	77,77,77,77	0
54	MG	CA	1638	1/1	0.92	0.11	98,98,98,98	0
54	MG	AA	1651	1/1	0.92	0.06	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BB	3078	1/1	0.92	0.07	101,101,101,101	0
54	MG	AA	1620	1/1	0.92	0.07	113,113,113,113	0
54	MG	DB	3034	1/1	0.93	0.05	69,69,69,69	0
54	MG	CA	1606	1/1	0.93	0.07	138,138,138,138	0
54	MG	AA	1614	1/1	0.93	0.06	113,113,113,113	0
54	MG	AA	1627	1/1	0.94	0.10	68,68,68,68	0
54	MG	BB	3072	1/1	0.94	0.07	79,79,79,79	0
54	MG	BB	3035	1/1	0.94	0.07	82,82,82,82	0
54	MG	DB	3052	1/1	0.94	0.06	113,113,113,113	0
54	MG	DB	3057	1/1	0.94	0.06	77,77,77,77	0
54	MG	BB	3031	1/1	0.94	0.08	63,63,63,63	0
54	MG	BB	3071	1/1	0.95	0.07	89,89,89,89	0
54	MG	DB	3097	1/1	0.95	0.08	64,64,64,64	0
54	MG	AA	1658	1/1	0.95	0.06	85,85,85,85	0
55	LLL	AA	1661	31/31	0.95	0.07	21,21,21,21	0
54	MG	BB	3010	1/1	0.95	0.06	40,40,40,40	0
55	LLL	CA	1662	31/31	0.95	0.09	14,14,14,14	0
54	MG	BB	3043	1/1	0.95	0.05	122,122,122,122	0
54	MG	BB	3012	1/1	0.96	0.06	53,53,53,53	0
54	MG	BB	3100	1/1	0.96	0.05	151,151,151,151	0
54	MG	BB	3108	1/1	0.96	0.09	44,44,44,44	0
54	MG	CA	1659	1/1	0.96	0.07	90,90,90,90	0
54	MG	CA	1660	1/1	0.96	0.18	63,63,63,63	0
54	MG	DB	3011	1/1	0.96	0.09	33,33,33,33	0
54	MG	DB	3033	1/1	0.96	0.06	43,43,43,43	0
54	MG	BB	3047	1/1	0.96	0.06	116,116,116,116	0
54	MG	DB	3037	1/1	0.96	0.11	54,54,54,54	0
54	MG	DB	3045	1/1	0.96	0.05	68,68,68,68	0
54	MG	BB	3061	1/1	0.96	0.09	56,56,56,56	0
54	MG	CA	1609	1/1	0.96	0.03	84,84,84,84	0
54	MG	AA	1601	1/1	0.96	0.07	41,41,41,41	0
54	MG	AA	1630	1/1	0.96	0.05	88,88,88,88	0
54	MG	CA	1616	1/1	0.96	0.06	88,88,88,88	0
54	MG	AA	1650	1/1	0.96	0.07	122,122,122,122	0
54	MG	BB	3079	1/1	0.96	0.06	63,63,63,63	0
54	MG	DB	3071	1/1	0.96	0.06	37,37,37,37	0
54	MG	DB	3076	1/1	0.96	0.08	104,104,104,104	0
54	MG	AA	1632	1/1	0.96	0.21	62,62,62,62	0
54	MG	BB	3009	1/1	0.96	0.08	96,96,96,96	0
54	MG	DB	3106	1/1	0.96	0.07	64,64,64,64	0
54	MG	BB	3087	1/1	0.96	0.07	114,114,114,114	0
54	MG	AA	1615	1/1	0.96	0.07	106,106,106,106	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BB	3097	1/1	0.96	0.05	88,88,88,88	0
54	MG	CA	1642	1/1	0.96	0.05	108,108,108,108	0
54	MG	CA	1646	1/1	0.97	0.10	99,99,99,99	0
54	MG	BB	3051	1/1	0.97	0.06	65,65,65,65	0
54	MG	CA	1654	1/1	0.97	0.07	59,59,59,59	0
54	MG	DB	3053	1/1	0.97	0.05	80,80,80,80	0
54	MG	BB	3026	1/1	0.97	0.08	43,43,43,43	0
54	MG	BB	3063	1/1	0.97	0.07	28,28,28,28	0
54	MG	BB	3070	1/1	0.97	0.05	59,59,59,59	0
54	MG	AA	1652	1/1	0.97	0.07	90,90,90,90	0
54	MG	CE	201	1/1	0.97	0.07	113,113,113,113	0
54	MG	DB	3006	1/1	0.97	0.06	15,15,15,15	0
54	MG	DB	3073	1/1	0.97	0.12	67,67,67,67	0
54	MG	BB	3095	1/1	0.97	0.04	81,81,81,81	0
54	MG	DB	3083	1/1	0.97	0.07	83,83,83,83	0
54	MG	DB	3095	1/1	0.97	0.06	88,88,88,88	0
54	MG	DB	3013	1/1	0.97	0.05	41,41,41,41	0
54	MG	DB	3022	1/1	0.97	0.06	71,71,71,71	0
54	MG	DB	3029	1/1	0.97	0.06	59,59,59,59	0
54	MG	AA	1617	1/1	0.97	0.04	100,100,100,100	0
54	MG	CA	1641	1/1	0.97	0.12	42,42,42,42	0
54	MG	DB	3035	1/1	0.97	0.06	75,75,75,75	0
54	MG	BB	3016	1/1	0.97	0.08	91,91,91,91	0
54	MG	BB	3018	1/1	0.98	0.08	50,50,50,50	0
54	MG	DB	3028	1/1	0.98	0.08	58,58,58,58	0
54	MG	BB	3019	1/1	0.98	0.04	40,40,40,40	0
54	MG	BB	3090	1/1	0.98	0.05	91,91,91,91	0
54	MG	BB	3091	1/1	0.98	0.05	37,37,37,37	0
54	MG	BB	3053	1/1	0.98	0.07	79,79,79,79	0
54	MG	CA	1630	1/1	0.98	0.07	52,52,52,52	0
54	MG	DB	3039	1/1	0.98	0.03	69,69,69,69	0
54	MG	CA	1631	1/1	0.98	0.04	40,40,40,40	0
54	MG	BB	3094	1/1	0.98	0.05	47,47,47,47	0
54	MG	CA	1636	1/1	0.98	0.06	92,92,92,92	0
54	MG	CA	1637	1/1	0.98	0.03	92,92,92,92	0
54	MG	AA	1624	1/1	0.98	0.08	77,77,77,77	0
54	MG	BB	3096	1/1	0.98	0.07	67,67,67,67	0
54	MG	BB	3008	1/1	0.98	0.06	75,75,75,75	0
54	MG	BB	3064	1/1	0.98	0.05	37,37,37,37	0
54	MG	DB	3064	1/1	0.98	0.04	19,19,19,19	0
54	MG	CA	1647	1/1	0.98	0.04	65,65,65,65	0
54	MG	DB	3070	1/1	0.98	0.11	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	AA	1654	1/1	0.98	0.04	82,82,82,82	0
54	MG	CA	1652	1/1	0.98	0.07	65,65,65,65	0
54	MG	BB	3106	1/1	0.98	0.09	39,39,39,39	0
54	MG	DB	3081	1/1	0.98	0.04	19,19,19,19	0
54	MG	AA	1612	1/1	0.98	0.09	88,88,88,88	0
54	MG	DB	3085	1/1	0.98	0.06	49,49,49,49	0
54	MG	DB	3089	1/1	0.98	0.09	61,61,61,61	0
54	MG	DB	3090	1/1	0.98	0.14	64,64,64,64	0
54	MG	DB	3092	1/1	0.98	0.06	56,56,56,56	0
54	MG	AA	1631	1/1	0.98	0.05	88,88,88,88	0
54	MG	BB	3077	1/1	0.98	0.05	83,83,83,83	0
54	MG	AA	1640	1/1	0.98	0.07	56,56,56,56	0
54	MG	AA	1611	1/1	0.98	0.05	77,77,77,77	0
54	MG	DB	3109	1/1	0.98	0.05	83,83,83,83	0
54	MG	DB	3110	1/1	0.98	0.11	38,38,38,38	0
54	MG	BB	3044	1/1	0.98	0.08	52,52,52,52	0
54	MG	BB	3081	1/1	0.98	0.06	16,16,16,16	0
54	MG	CA	1619	1/1	0.98	0.07	70,70,70,70	0
54	MG	DB	3020	1/1	0.98	0.10	13,13,13,13	0
56	ZN	B4	101	1/1	0.98	0.04	64,64,64,64	0
56	ZN	D4	101	1/1	0.98	0.04	45,45,45,45	0
54	MG	BB	3059	1/1	0.99	0.04	60,60,60,60	0
54	MG	AA	1610	1/1	0.99	0.04	62,62,62,62	0
54	MG	BB	3011	1/1	0.99	0.04	29,29,29,29	0
54	MG	AA	1648	1/1	0.99	0.04	40,40,40,40	0
54	MG	BB	3067	1/1	0.99	0.03	24,24,24,24	0
54	MG	CA	1643	1/1	0.99	0.03	32,32,32,32	0
54	MG	CA	1644	1/1	0.99	0.03	68,68,68,68	0
54	MG	CA	1645	1/1	0.99	0.03	66,66,66,66	0
54	MG	AA	1649	1/1	0.99	0.03	82,82,82,82	0
54	MG	BB	3014	1/1	0.99	0.07	58,58,58,58	0
54	MG	BB	3015	1/1	0.99	0.11	42,42,42,42	0
54	MG	CA	1650	1/1	0.99	0.04	33,33,33,33	0
54	MG	CA	1651	1/1	0.99	0.13	38,38,38,38	0
54	MG	BB	3073	1/1	0.99	0.06	38,38,38,38	0
54	MG	CA	1653	1/1	0.99	0.04	51,51,51,51	0
54	MG	BB	3074	1/1	0.99	0.03	13,13,13,13	0
54	MG	AA	1634	1/1	0.99	0.03	67,67,67,67	0
54	MG	BB	3017	1/1	0.99	0.03	73,73,73,73	0
54	MG	AA	1606	1/1	0.99	0.03	47,47,47,47	0
54	MG	AA	1636	1/1	0.99	0.06	93,93,93,93	0
54	MG	CA	1661	1/1	0.99	0.03	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BB	3020	1/1	0.99	0.03	36,36,36,36	0
54	MG	DB	3003	1/1	0.99	0.05	33,33,33,33	0
54	MG	DB	3004	1/1	0.99	0.06	69,69,69,69	0
54	MG	BB	3021	1/1	0.99	0.09	51,51,51,51	0
54	MG	DB	3008	1/1	0.99	0.04	17,17,17,17	0
54	MG	DB	3009	1/1	0.99	0.07	18,18,18,18	0
54	MG	BB	3084	1/1	0.99	0.04	77,77,77,77	0
54	MG	BB	3085	1/1	0.99	0.03	43,43,43,43	0
54	MG	DB	3014	1/1	0.99	0.08	43,43,43,43	0
54	MG	DB	3015	1/1	0.99	0.10	24,24,24,24	0
54	MG	BB	3022	1/1	0.99	0.05	37,37,37,37	0
54	MG	DB	3021	1/1	0.99	0.04	51,51,51,51	0
54	MG	BB	3024	1/1	0.99	0.10	44,44,44,44	0
54	MG	DB	3024	1/1	0.99	0.04	45,45,45,45	0
54	MG	DB	3025	1/1	0.99	0.04	42,42,42,42	0
54	MG	DB	3026	1/1	0.99	0.03	54,54,54,54	0
54	MG	DB	3027	1/1	0.99	0.09	28,28,28,28	0
54	MG	AA	1653	1/1	0.99	0.13	87,87,87,87	0
54	MG	BB	3092	1/1	0.99	0.04	45,45,45,45	0
54	MG	DB	3030	1/1	0.99	0.06	10,10,10,10	0
54	MG	BB	3027	1/1	0.99	0.09	42,42,42,42	0
54	MG	BB	3028	1/1	0.99	0.05	61,61,61,61	0
54	MG	BB	3030	1/1	0.99	0.02	70,70,70,70	0
54	MG	AA	1618	1/1	0.99	0.07	93,93,93,93	0
54	MG	DB	3038	1/1	0.99	0.05	37,37,37,37	0
54	MG	BB	3032	1/1	0.99	0.03	49,49,49,49	0
54	MG	DB	3042	1/1	0.99	0.07	23,23,23,23	0
54	MG	DB	3043	1/1	0.99	0.05	32,32,32,32	0
54	MG	AA	1607	1/1	0.99	0.03	42,42,42,42	0
54	MG	DB	3048	1/1	0.99	0.06	34,34,34,34	0
54	MG	AA	1613	1/1	0.99	0.03	71,71,71,71	0
54	MG	DB	3051	1/1	0.99	0.06	32,32,32,32	0
54	MG	BB	3105	1/1	0.99	0.03	60,60,60,60	0
54	MG	BB	3036	1/1	0.99	0.10	62,62,62,62	0
54	MG	DB	3054	1/1	0.99	0.06	29,29,29,29	0
54	MG	DB	3055	1/1	0.99	0.05	41,41,41,41	0
54	MG	BB	3037	1/1	0.99	0.04	44,44,44,44	0
54	MG	BB	3109	1/1	0.99	0.05	59,59,59,59	0
54	MG	CA	1605	1/1	0.99	0.04	18,18,18,18	0
54	MG	AA	1641	1/1	0.99	0.04	69,69,69,69	0
54	MG	DB	3061	1/1	0.99	0.03	69,69,69,69	0
54	MG	DB	3062	1/1	0.99	0.03	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BB	3041	1/1	0.99	0.05	8,8,8,8	0
54	MG	AA	1642	1/1	0.99	0.03	41,41,41,41	0
54	MG	DB	3068	1/1	0.99	0.07	22,22,22,22	0
54	MG	CA	1610	1/1	0.99	0.05	75,75,75,75	0
54	MG	CA	1611	1/1	0.99	0.05	57,57,57,57	0
54	MG	DB	3072	1/1	0.99	0.05	54,54,54,54	0
54	MG	CA	1612	1/1	0.99	0.04	72,72,72,72	0
54	MG	DB	3074	1/1	0.99	0.03	17,17,17,17	0
54	MG	DB	3075	1/1	0.99	0.05	35,35,35,35	0
54	MG	BB	3003	1/1	0.99	0.06	51,51,51,51	0
54	MG	DB	3078	1/1	0.99	0.04	32,32,32,32	0
54	MG	AA	1628	1/1	0.99	0.04	59,59,59,59	0
54	MG	DB	3082	1/1	0.99	0.03	57,57,57,57	0
54	MG	BB	3046	1/1	0.99	0.03	64,64,64,64	0
54	MG	DB	3084	1/1	0.99	0.04	16,16,16,16	0
54	MG	CA	1618	1/1	0.99	0.09	30,30,30,30	0
54	MG	DB	3086	1/1	0.99	0.09	52,52,52,52	0
54	MG	DB	3088	1/1	0.99	0.04	46,46,46,46	0
54	MG	BB	3007	1/1	0.99	0.04	53,53,53,53	0
54	MG	CA	1620	1/1	0.99	0.04	37,37,37,37	0
54	MG	BB	3049	1/1	0.99	0.04	35,35,35,35	0
54	MG	DB	3094	1/1	0.99	0.04	55,55,55,55	0
54	MG	AA	1621	1/1	0.99	0.16	26,26,26,26	0
54	MG	CA	1624	1/1	0.99	0.09	56,56,56,56	0
54	MG	CA	1625	1/1	0.99	0.12	6,6,6,6	0
54	MG	DB	3101	1/1	0.99	0.08	25,25,25,25	0
54	MG	DB	3104	1/1	0.99	0.09	71,71,71,71	0
54	MG	BB	3052	1/1	0.99	0.05	36,36,36,36	0
54	MG	AA	1605	1/1	0.99	0.05	47,47,47,47	0
54	MG	BB	3054	1/1	0.99	0.06	46,46,46,46	0
54	MG	DB	3111	1/1	0.99	0.07	32,32,32,32	0
54	MG	BB	3055	1/1	0.99	0.07	53,53,53,53	0
54	MG	BB	3056	1/1	0.99	0.06	31,31,31,31	0
54	MG	CA	1632	1/1	0.99	0.04	18,18,18,18	0
54	MG	CA	1633	1/1	0.99	0.08	50,50,50,50	0
54	MG	CA	1634	1/1	0.99	0.03	23,23,23,23	0
54	MG	BB	3057	1/1	0.99	0.09	65,65,65,65	0
54	MG	CA	1617	1/1	1.00	0.03	5,5,5,5	0
54	MG	DB	3023	1/1	1.00	0.02	17,17,17,17	0
54	MG	BB	3025	1/1	1.00	0.05	42,42,42,42	0
54	MG	AA	1609	1/1	1.00	0.00	5,5,5,5	0
54	MG	BB	3048	1/1	1.00	0.09	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	AA	1633	1/1	1.00	0.06	48,48,48,48	0
54	MG	CA	1622	1/1	1.00	0.02	18,18,18,18	0
54	MG	BB	3050	1/1	1.00	0.06	33,33,33,33	0
54	MG	BB	3083	1/1	1.00	0.04	28,28,28,28	0
54	MG	DB	3031	1/1	1.00	0.06	24,24,24,24	0
54	MG	DB	3032	1/1	1.00	0.02	51,51,51,51	0
54	MG	AA	1616	1/1	1.00	0.04	42,42,42,42	0
54	MG	BB	3029	1/1	1.00	0.03	17,17,17,17	0
54	MG	BB	3086	1/1	1.00	0.03	18,18,18,18	0
54	MG	DB	3036	1/1	1.00	0.03	20,20,20,20	0
54	MG	CA	1628	1/1	1.00	0.02	44,44,44,44	0
54	MG	AA	1629	1/1	1.00	0.02	26,26,26,26	0
54	MG	BB	3088	1/1	1.00	0.04	36,36,36,36	0
54	MG	DB	3040	1/1	1.00	0.03	18,18,18,18	0
54	MG	DB	3041	1/1	1.00	0.05	34,34,34,34	0
54	MG	BB	3089	1/1	1.00	0.02	25,25,25,25	0
54	MG	AA	1660	1/1	1.00	0.04	37,37,37,37	0
54	MG	DB	3044	1/1	1.00	0.03	21,21,21,21	0
54	MG	BB	3001	1/1	1.00	0.06	29,29,29,29	0
54	MG	DB	3046	1/1	1.00	0.06	11,11,11,11	0
54	MG	DB	3047	1/1	1.00	0.02	19,19,19,19	0
54	MG	BB	3002	1/1	1.00	0.05	30,30,30,30	0
54	MG	DB	3049	1/1	1.00	0.01	9,9,9,9	0
54	MG	BB	3034	1/1	1.00	0.07	59,59,59,59	0
54	MG	BB	3058	1/1	1.00	0.03	11,11,11,11	0
54	MG	AA	1643	1/1	1.00	0.08	29,29,29,29	0
54	MG	BB	3060	1/1	1.00	0.04	22,22,22,22	0
54	MG	CA	1639	1/1	1.00	0.01	7,7,7,7	0
54	MG	CA	1640	1/1	1.00	0.09	5,5,5,5	0
54	MG	DB	3056	1/1	1.00	0.03	12,12,12,12	0
54	MG	AA	1603	1/1	1.00	0.04	14,14,14,14	0
54	MG	BB	3098	1/1	1.00	0.03	16,16,16,16	0
54	MG	BB	3062	1/1	1.00	0.07	27,27,27,27	0
54	MG	BB	3005	1/1	1.00	0.03	20,20,20,20	0
54	MG	BB	3101	1/1	1.00	0.05	5,5,5,5	0
54	MG	BB	3102	1/1	1.00	0.07	31,31,31,31	0
54	MG	DB	3063	1/1	1.00	0.02	19,19,19,19	0
54	MG	BB	3103	1/1	1.00	0.07	20,20,20,20	0
54	MG	DB	3065	1/1	1.00	0.06	45,45,45,45	0
54	MG	CA	1648	1/1	1.00	0.10	14,14,14,14	0
54	MG	DB	3067	1/1	1.00	0.02	16,16,16,16	0
54	MG	BB	3104	1/1	1.00	0.02	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DB	3069	1/1	1.00	0.09	14,14,14,14	0
54	MG	BB	3006	1/1	1.00	0.05	20,20,20,20	0
54	MG	BB	3065	1/1	1.00	0.06	5,5,5,5	0
54	MG	BB	3107	1/1	1.00	0.03	30,30,30,30	0
54	MG	BB	3066	1/1	1.00	0.03	25,25,25,25	0
54	MG	BB	3039	1/1	1.00	0.07	5,5,5,5	0
54	MG	CA	1655	1/1	1.00	0.04	25,25,25,25	0
54	MG	CA	1656	1/1	1.00	0.05	11,11,11,11	0
54	MG	DB	3077	1/1	1.00	0.06	15,15,15,15	0
54	MG	BB	3110	1/1	1.00	0.02	40,40,40,40	0
54	MG	DB	3079	1/1	1.00	0.02	34,34,34,34	0
54	MG	DB	3080	1/1	1.00	0.04	5,5,5,5	0
54	MG	CA	1601	1/1	1.00	0.03	5,5,5,5	0
54	MG	CA	1602	1/1	1.00	0.01	11,11,11,11	0
54	MG	CA	1603	1/1	1.00	0.03	29,29,29,29	0
54	MG	CA	1604	1/1	1.00	0.04	16,16,16,16	0
54	MG	BB	3068	1/1	1.00	0.08	61,61,61,61	0
54	MG	DB	3001	1/1	1.00	0.04	6,6,6,6	0
54	MG	DB	3087	1/1	1.00	0.04	75,75,75,75	0
54	MG	DB	3002	1/1	1.00	0.09	6,6,6,6	0
54	MG	BB	3069	1/1	1.00	0.02	10,10,10,10	0
54	MG	CA	1607	1/1	1.00	0.02	83,83,83,83	0
54	MG	DB	3091	1/1	1.00	0.04	5,5,5,5	0
54	MG	DB	3005	1/1	1.00	0.03	45,45,45,45	0
54	MG	DB	3093	1/1	1.00	0.03	10,10,10,10	0
54	MG	BB	3040	1/1	1.00	0.03	27,27,27,27	0
54	MG	DB	3007	1/1	1.00	0.02	13,13,13,13	0
54	MG	DB	3096	1/1	1.00	0.03	20,20,20,20	0
54	MG	AA	1604	1/1	1.00	0.02	19,19,19,19	0
54	MG	DB	3098	1/1	1.00	0.02	28,28,28,28	0
54	MG	DB	3099	1/1	1.00	0.06	5,5,5,5	0
54	MG	AA	1638	1/1	1.00	0.09	20,20,20,20	0
54	MG	DB	3010	1/1	1.00	0.03	16,16,16,16	0
54	MG	DB	3102	1/1	1.00	0.03	22,22,22,22	0
54	MG	DB	3103	1/1	1.00	0.03	42,42,42,42	0
54	MG	BB	3023	1/1	1.00	0.03	11,11,11,11	0
54	MG	DB	3105	1/1	1.00	0.05	30,30,30,30	0
54	MG	DB	3012	1/1	1.00	0.05	12,12,12,12	0
54	MG	DB	3107	1/1	1.00	0.01	11,11,11,11	0
54	MG	DB	3108	1/1	1.00	0.05	5,5,5,5	0
54	MG	AA	1655	1/1	1.00	0.02	54,54,54,54	0
54	MG	CA	1613	1/1	1.00	0.02	40,40,40,40	0

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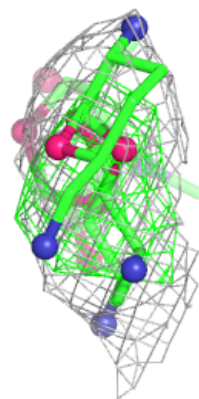
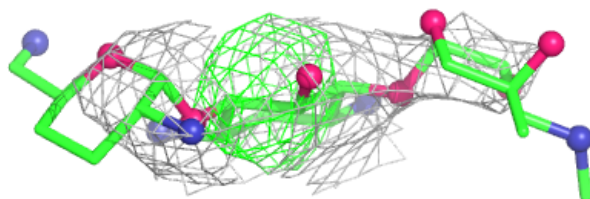
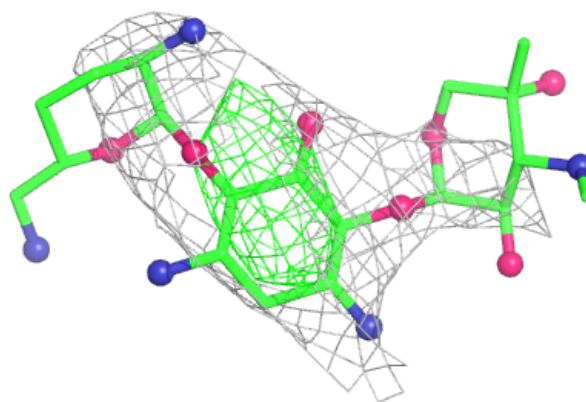
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BB	3075	1/1	1.00	0.04	29,29,29,29	0
54	MG	DB	3016	1/1	1.00	0.01	25,25,25,25	0
54	MG	DB	3017	1/1	1.00	0.01	5,5,5,5	0
54	MG	DB	3018	1/1	1.00	0.04	22,22,22,22	0
54	MG	DB	3019	1/1	1.00	0.04	5,5,5,5	0
54	MG	BB	3076	1/1	1.00	0.07	20,20,20,20	0
54	MG	BB	3045	1/1	1.00	0.03	38,38,38,38	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

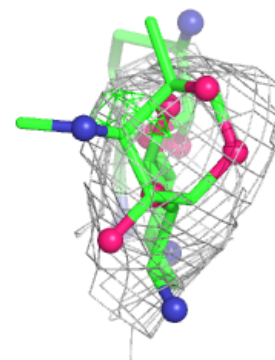
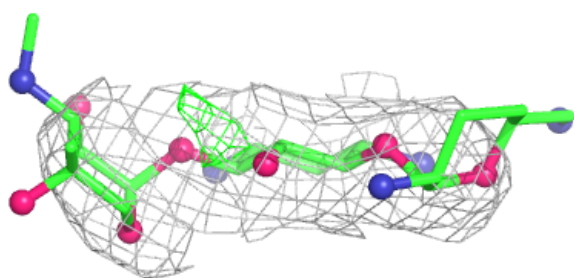
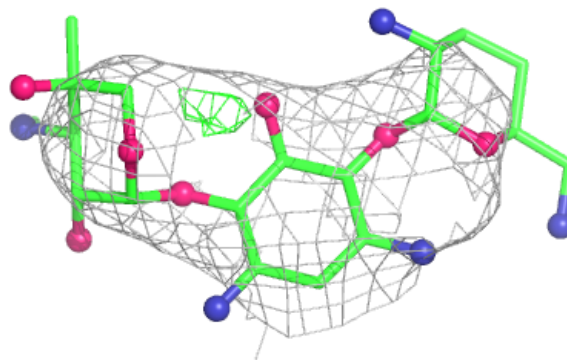
Electron density around LLL DB 3112:

2mF_o-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

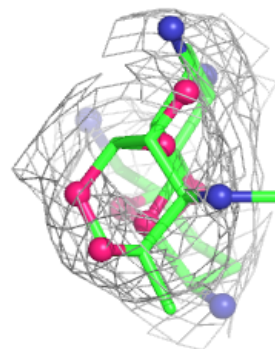
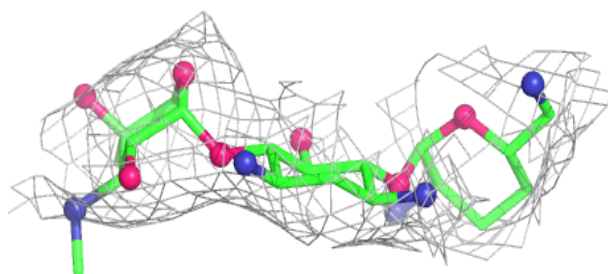
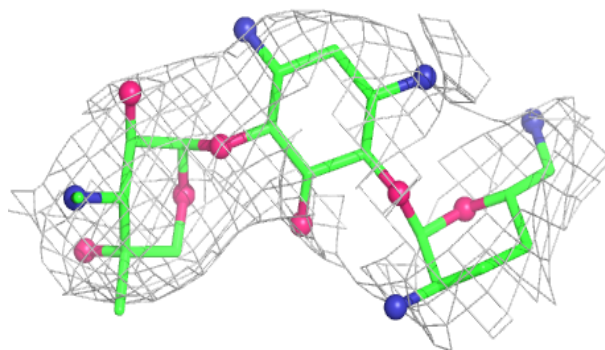


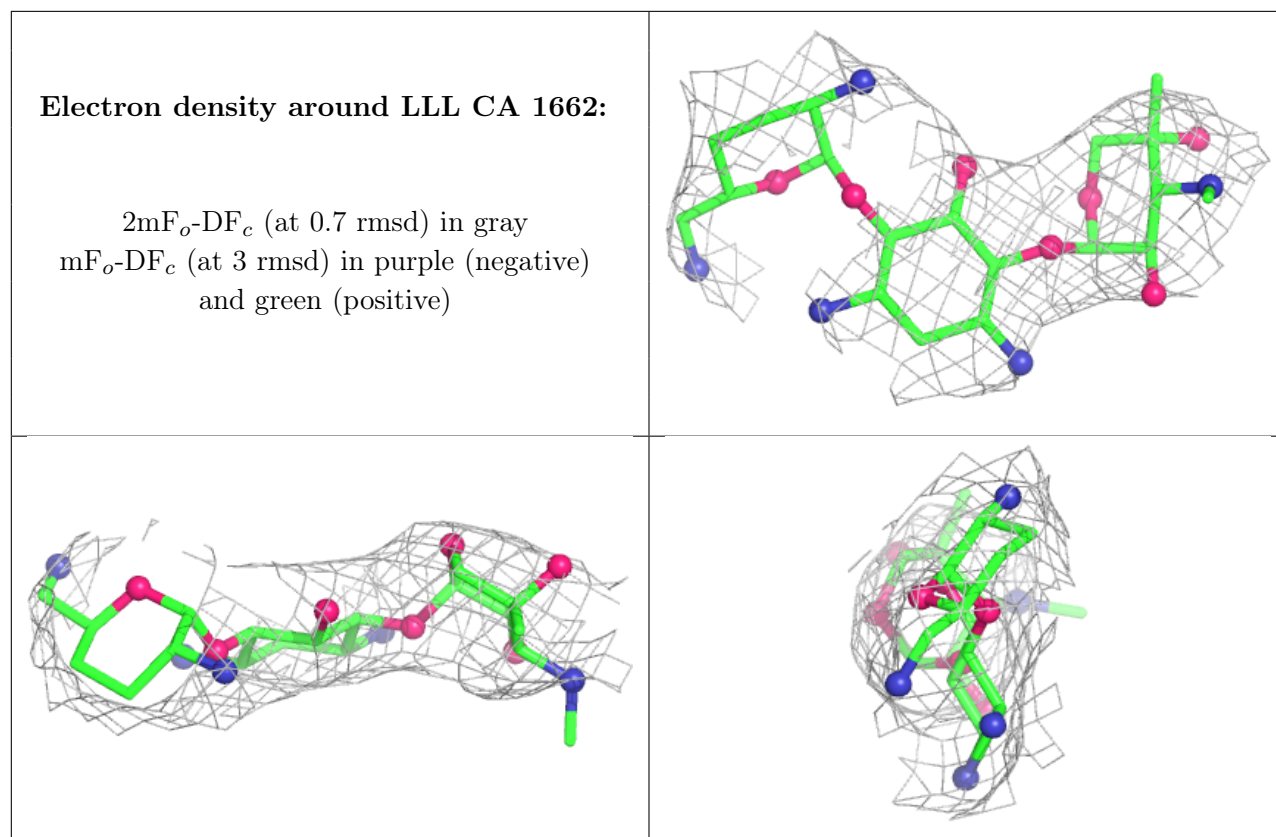
Electron density around LLL BB 3111:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around LLL AA 1661:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.