



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:38 PM GMT

PDB ID : 4V55
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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

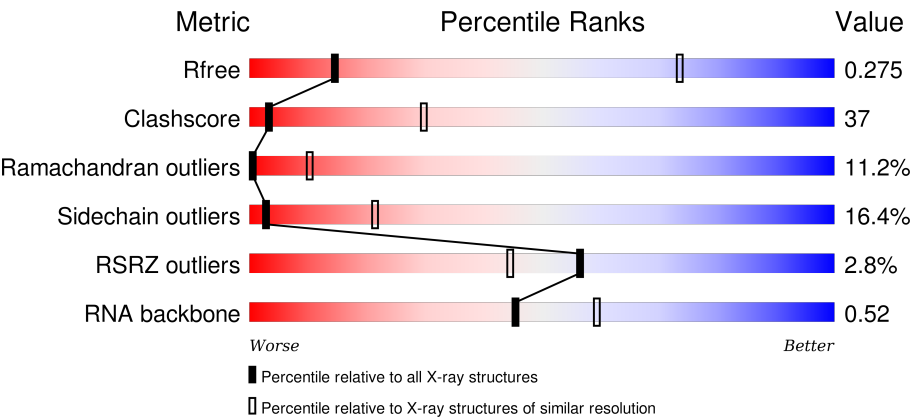
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 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}	91344	1010 (4.42-3.56)
Clashscore	102246	1052 (4.40-3.60)
Ramachandran outliers	100387	1005 (4.40-3.60)
Sidechain outliers	100360	1013 (4.42-3.58)
RSRZ outliers	91569	1013 (4.42-3.56)
RNA backbone	2183	1079 (5.04-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	<div><div>%</div><div><div></div><div>24%</div><div>62%</div><div>12%</div><div>..</div></div></div>
1	CA	1542	<div><div></div><div>22%</div><div>65%</div><div>12%</div><div>..</div></div>
2	AC	232	<div><div>%</div><div><div></div><div>29%</div><div>48%</div><div>11%</div><div>11%</div></div></div>
2	CC	232	<div><div></div><div>28%</div><div>49%</div><div>12%</div><div>11%</div></div>

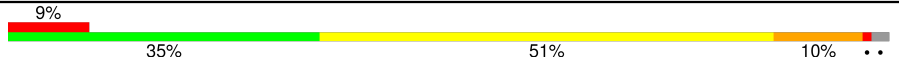
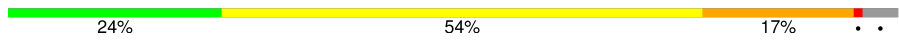

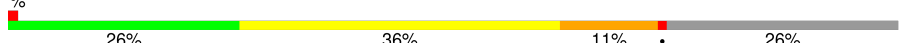
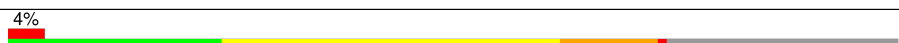
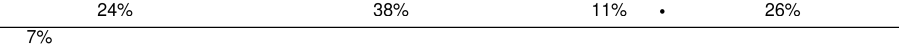
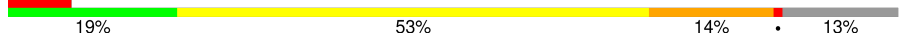
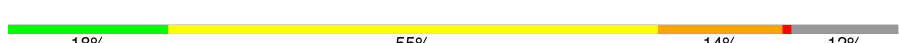
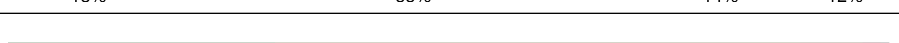

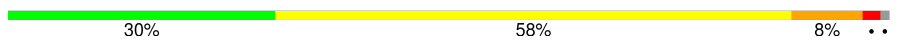
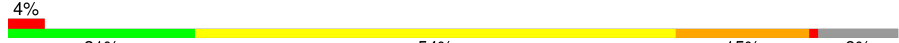
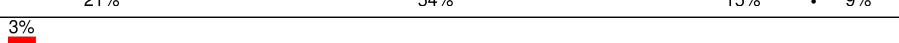
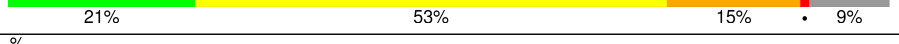

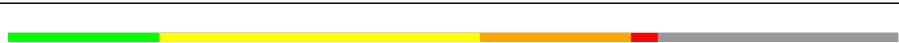
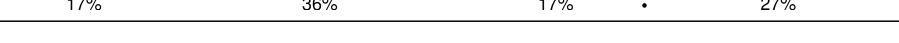
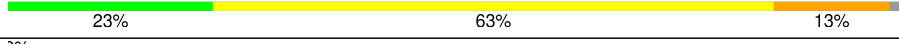
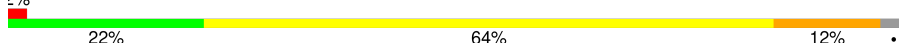
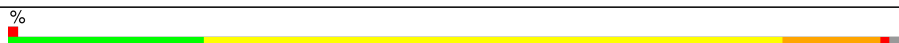
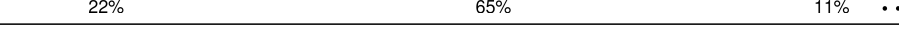


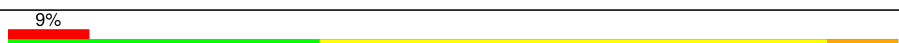

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Mol	Chain	Length	Quality of chain
3	AD	205	
3	CD	205	
4	AE	166	
4	CE	166	
5	AF	135	
5	CF	135	
6	AG	178	
6	CG	178	
7	AH	129	
7	CH	129	
8	AI	129	
8	CI	129	
9	AJ	103	
9	CJ	103	
10	AK	128	
10	CK	128	
11	AL	123	
11	CL	123	
12	AM	117	
12	CM	117	
13	AN	100	
13	CN	100	
14	AO	89	
14	CO	89	
15	AP	82	

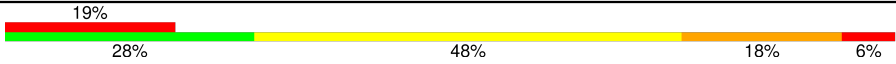
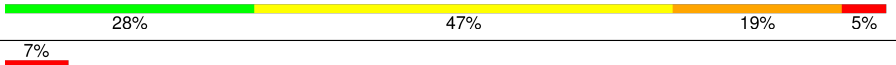
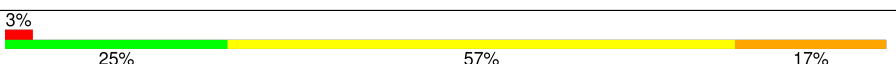
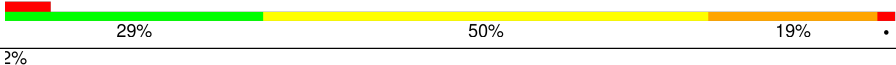
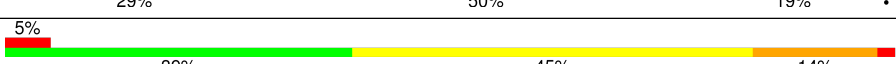
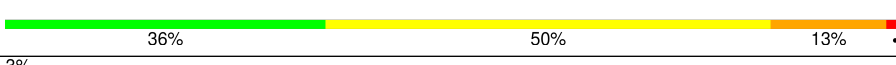
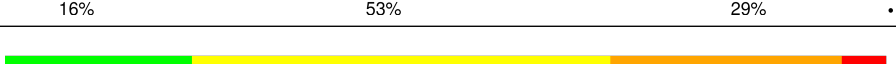
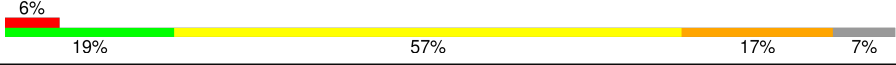
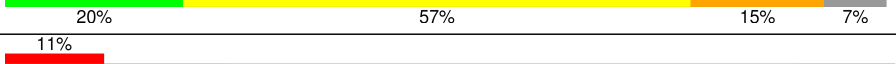
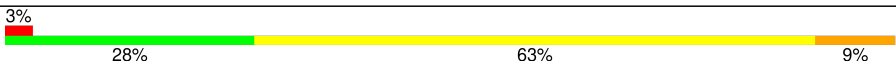

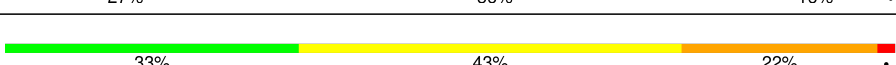
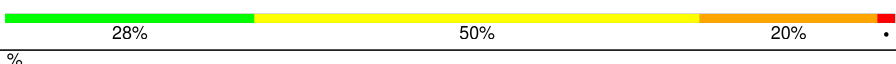
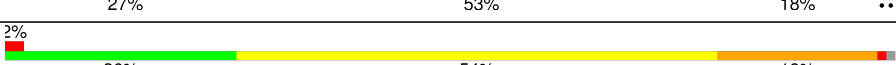
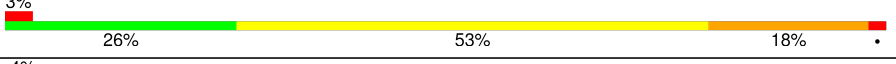
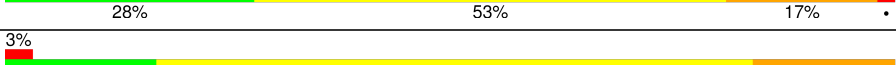
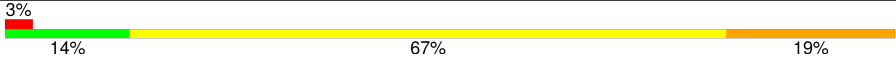



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Mol	Chain	Length	Quality of chain
15	CP	82	
16	AQ	83	
16	CQ	83	
17	AR	74	
17	CR	74	
18	AS	91	
18	CS	91	
19	AT	86	
19	CT	86	
20	AB	240	
20	CB	240	
21	AU	70	
21	CU	70	
22	BA	120	
22	DA	120	
23	BB	2904	
23	DB	2904	
24	BI	141	
24	DI	141	
25	BC	272	
25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

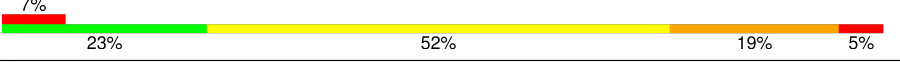
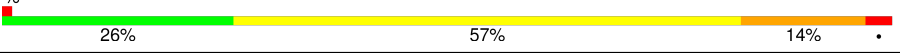
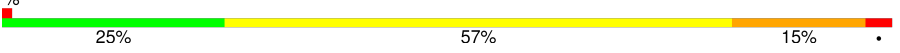
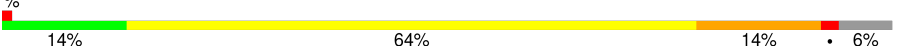
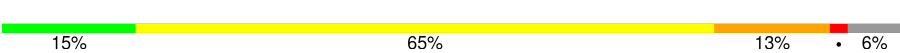
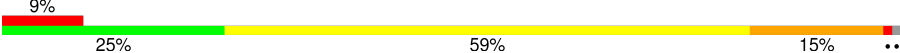
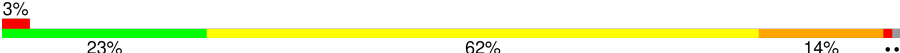
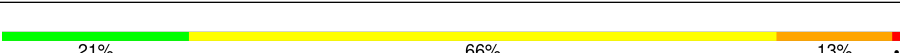
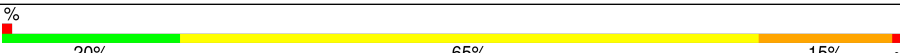
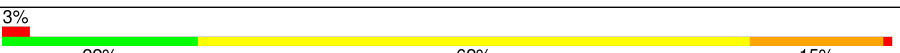
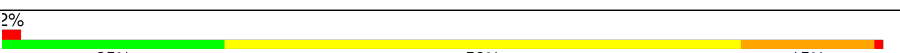
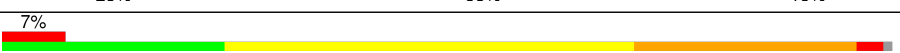
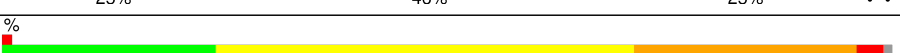
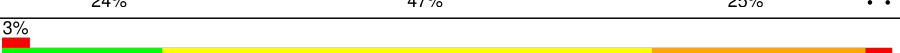
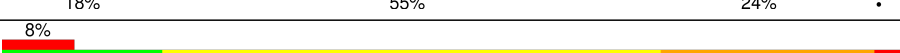
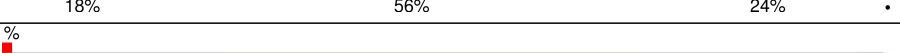
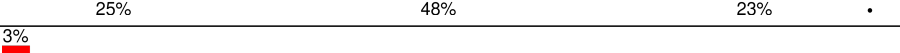
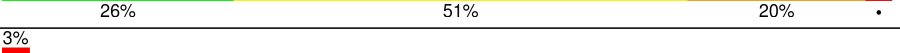
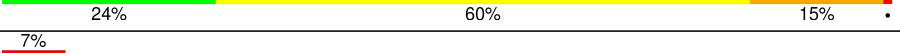
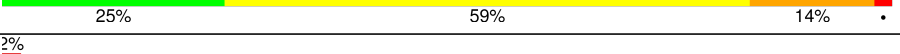


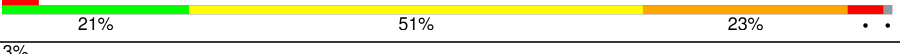
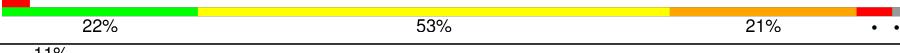

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Mol	Chain	Length	Quality of chain
28	BP	114	
28	DP	114	
29	BE	201	
29	DE	201	
30	BY	58	
30	DY	58	
31	B0	56	
31	D0	56	
32	B4	38	
32	D4	38	
33	B1	54	
33	D1	54	
34	B3	64	
34	D3	64	
35	BV	94	
35	DV	94	
36	B2	46	
36	D2	46	
37	BL	144	
37	DL	144	
38	BM	136	
38	DM	136	
39	BX	63	
39	DX	63	
40	BH	149	

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Mol	Chain	Length	Quality of chain
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	
52	DW	84	

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Mol	Chain	Length	Quality of chain
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	DB	3059	-	-	-	X
55	LLL	BB	3111	-	-	-	X
55	LLL	DB	3112	-	-	-	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			

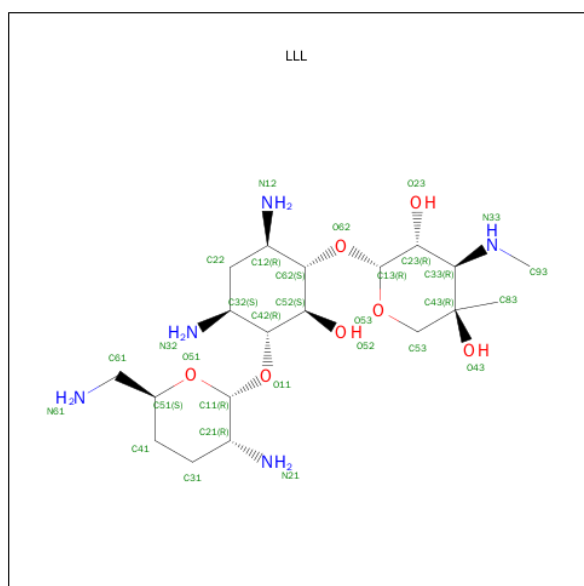
- Molecule 53 is a protein called 50S ribosomal protein RRF.

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 (three-letter code: MG) (formula: Mg).

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

- 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 (three-letter code: 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 (three-letter code: 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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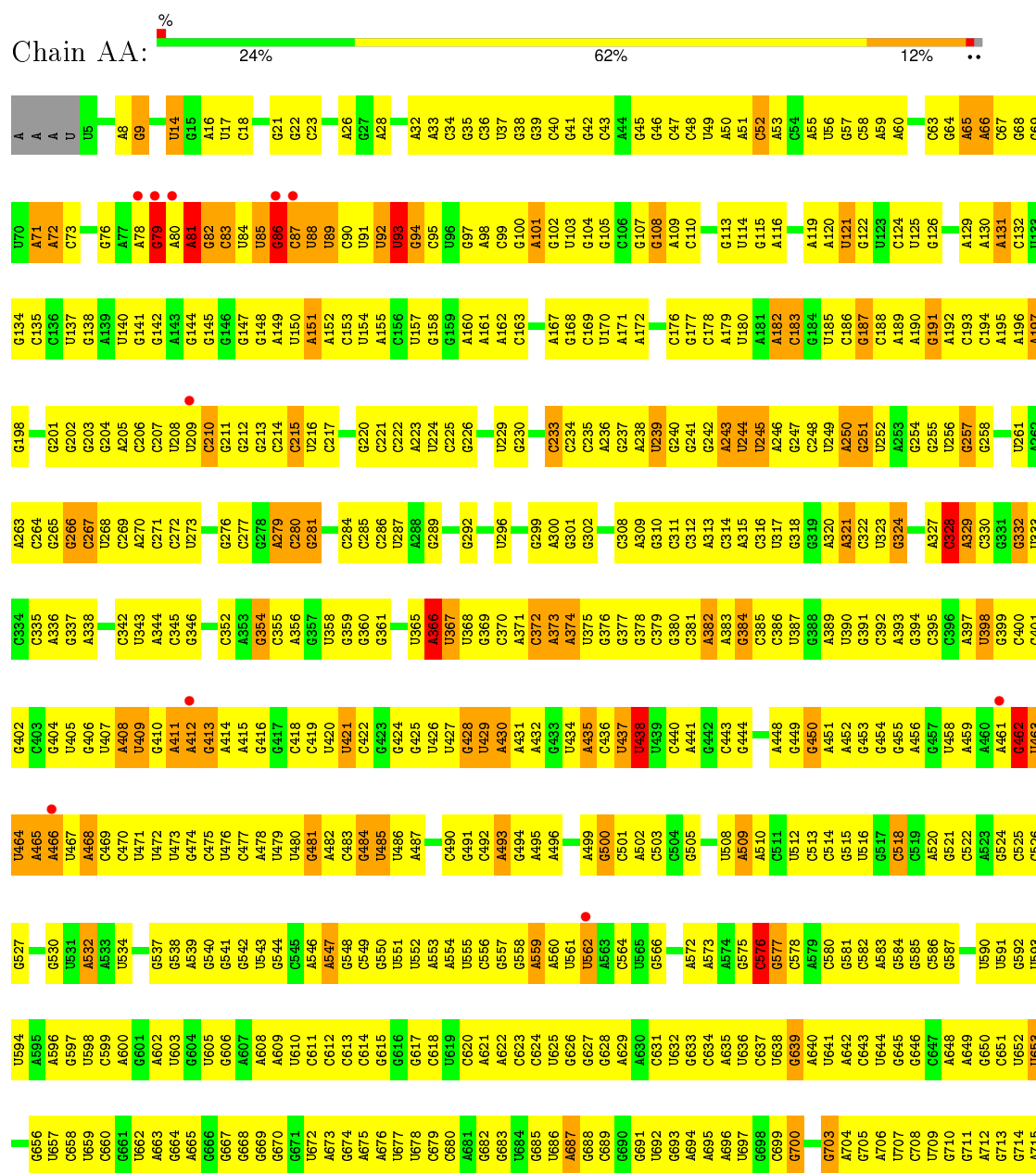
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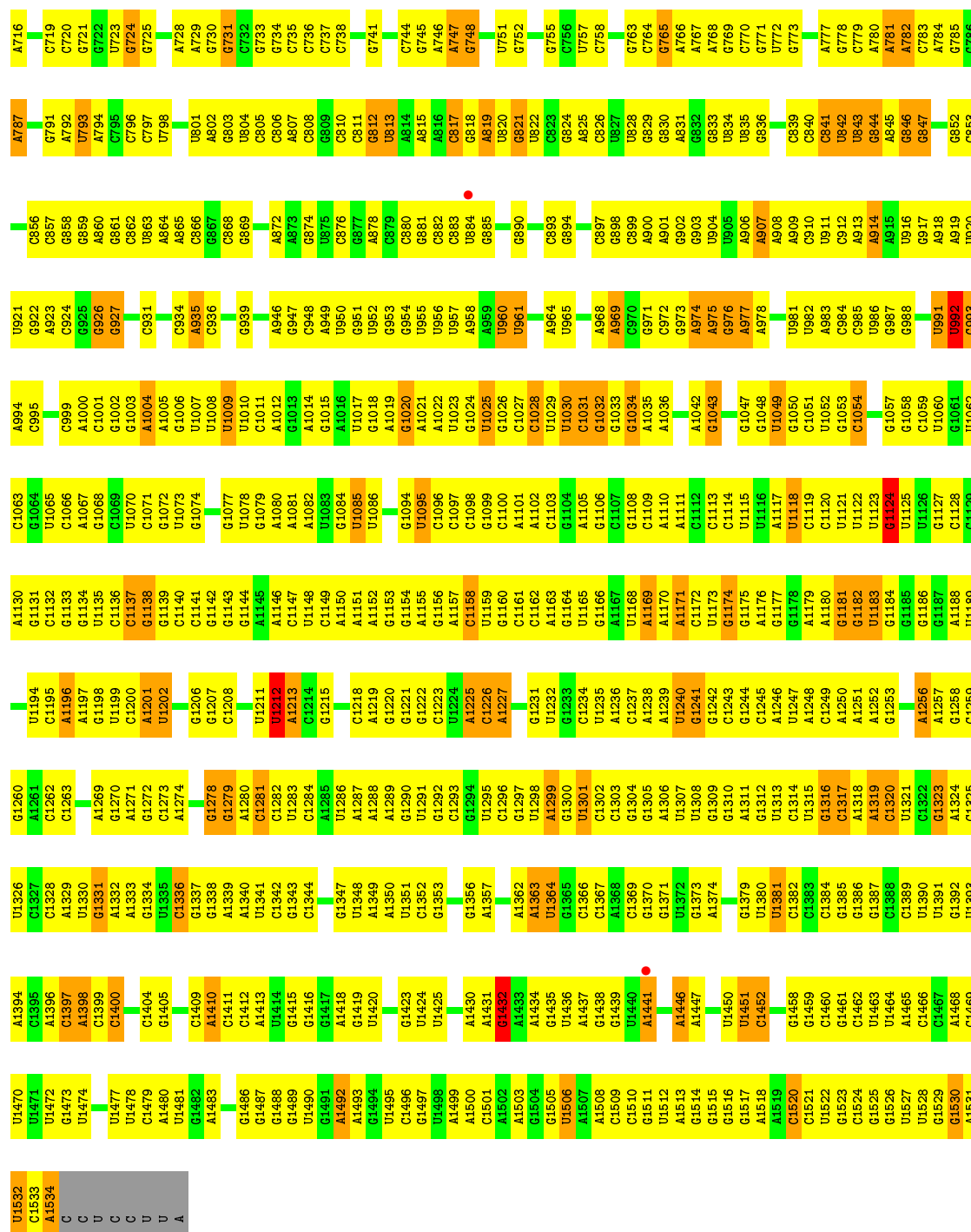
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57	CE	3	Total 3	O 3	0	0
57	CK	1	Total 1	O 1	0	0
57	CL	3	Total 3	O 3	0	0
57	CN	4	Total 4	O 4	0	0
57	CT	2	Total 2	O 2	0	0
57	DB	500	Total 500	O 500	0	0
57	DC	6	Total 6	O 6	0	0
57	DE	2	Total 2	O 2	0	0
57	DL	2	Total 2	O 2	0	0
57	DR	1	Total 1	O 1	0	0
57	DT	1	Total 1	O 1	0	0

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

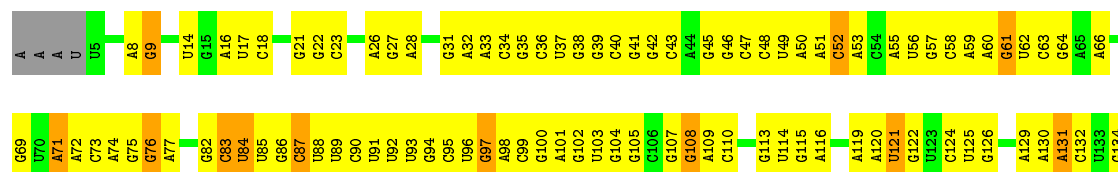
• Molecule 1: 16S rRNA



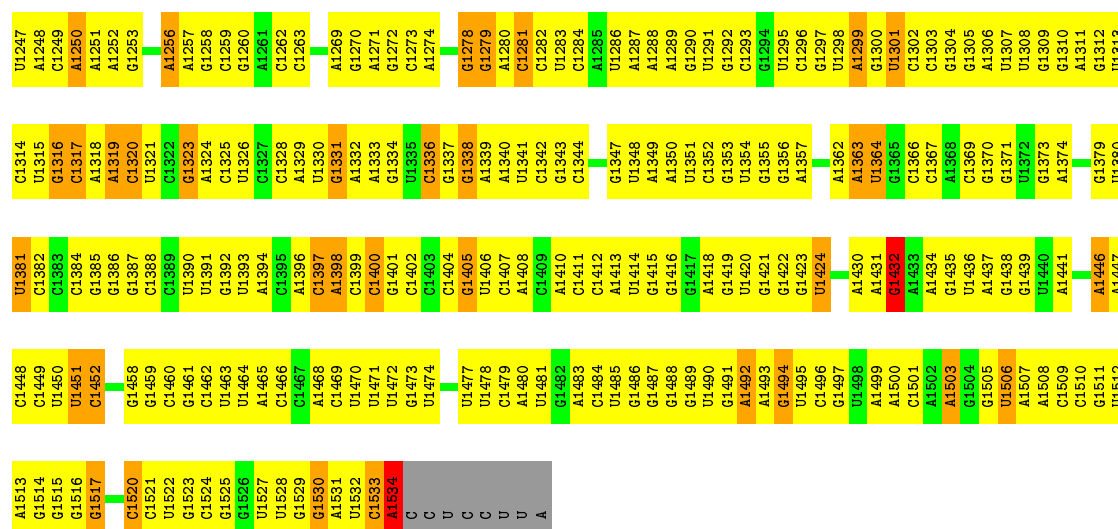


• Molecule 1: 16S rRNA

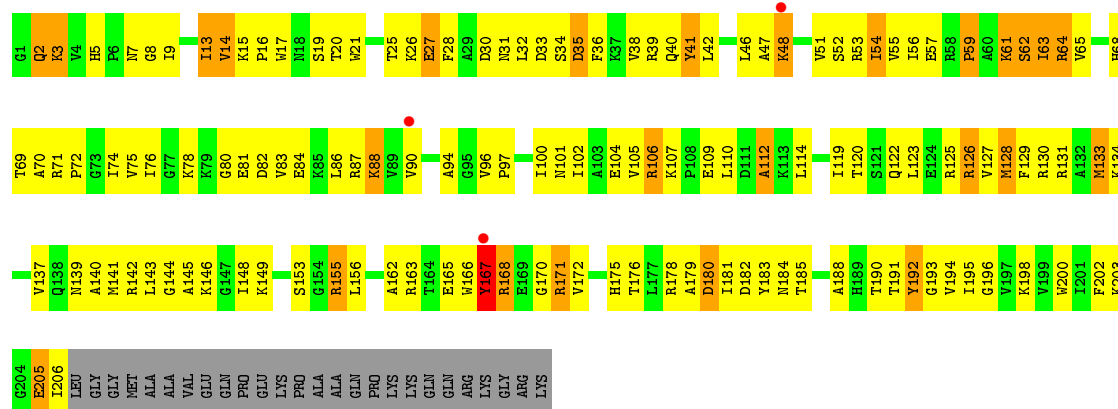
Chain CA: 22% 65% 12% ..



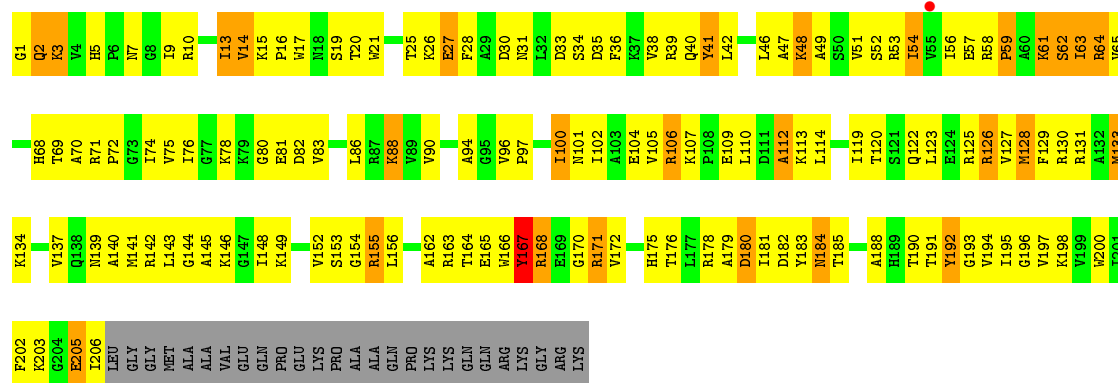
A1179	C1119	G1048	U981	A914	G852	A782	G711	A649	A523	A459	A397	A329	U261	A196	C136
A1180	C1120	U1049	U982	A915	C853	C783	G712	G650	G524	A460	U398	C330	A262	A197	C136
G1181	U1121	G1050	A983	U916	G784	A784	A712	C651	C525	A461	G399	G331	C263	G198	C137
U1122	C1051	G917	C984	G917	G785	G785	G713	U652	C526	G462	C400	G332	C264	G138	C138
U1123	C985	G1052	C985	A918	C856	G786	G714	U653	C527	U463	C401	U333	G265	G201	A139
G1184	U1053	G1053	C986	A919	C857	G787	A715	U654	C528	U464	C402	U334	G266	G202	U140
G1185	C1054	C1054	C987	U920	G858	U793	A716	U655	G529	A465	C403	C335	C267	G203	G141
U1125	U987	G987	C988	U921	G859	U794	G719	U656	G530	A466	C404	C336	C268	G204	G142
G1127	G1057	G1057	U922	G922	G860	A794	C719	U657	U531	U467	U405	G337	U268	A205	A143
U991	G1058	G1058	U991	A923	G861	C795	C720	C658	U532	U468	U406	G338	C271	C206	G144
U1188	C1059	C1059	U992	C924	C862	C796	G721	U659	A533	A469	C407	U339	C272	C207	G145
U1189	C924	C924	C863	C924	U863	C797	G722	U660	U534	C470	U408	U342	U273	U208	G146
G993	G925	G925	U864	G925	U864	C797	U723	U661	G601	U471	U409	U343	U274	U209	G147
A984	U961	U961	A864	G926	A865	U798	G724	U662	A602	U472	G410	U344	C210	G210	G148
C995	U1062	U1062	A865	G927	A866	U798	G725	U663	U603	U473	A411	U345	C211	G211	A149
A996	C1063	C1063	C866	G927	C867	A802	A728	U664	G538	U474	A412	G346	C212	G212	U150
U997	G1064	G1064	C867	C930	C868	A803	A729	A665	G539	U475	G413	G347	C213	G213	A151
C1133	U1065	U1065	C868	C931	C869	G803	A730	G666	G540	C476	G414	G348	C214	C214	A152
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G1153	U1085	U1085	C889	G953	C889	U822	G749	U685	G559	U495	G433	C373	A303	G236	U173
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C1162	U1025	U1025	C897	U962	C898	G830	C763	U693	G568	U504	C442	C382	U246	U246	A182
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C1167	U1030	U1030	G902	U968	C904	U836	A769	U699	G574	U510	G448	C388	G252	G252	C188
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C1172	C1111	C1111	G908	G974	A908	U843	A777	U705	G580	U519	G454	C394	G258	G258	C194
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G1176	U1176	U1176	C912	A978	C912	A846	A780	C708	G584	G522	U458	C398	G262	G262	
C1244	G1177	G1177	G846	A978	G846	G847	A781	U709	G585			C399	G263	G263	
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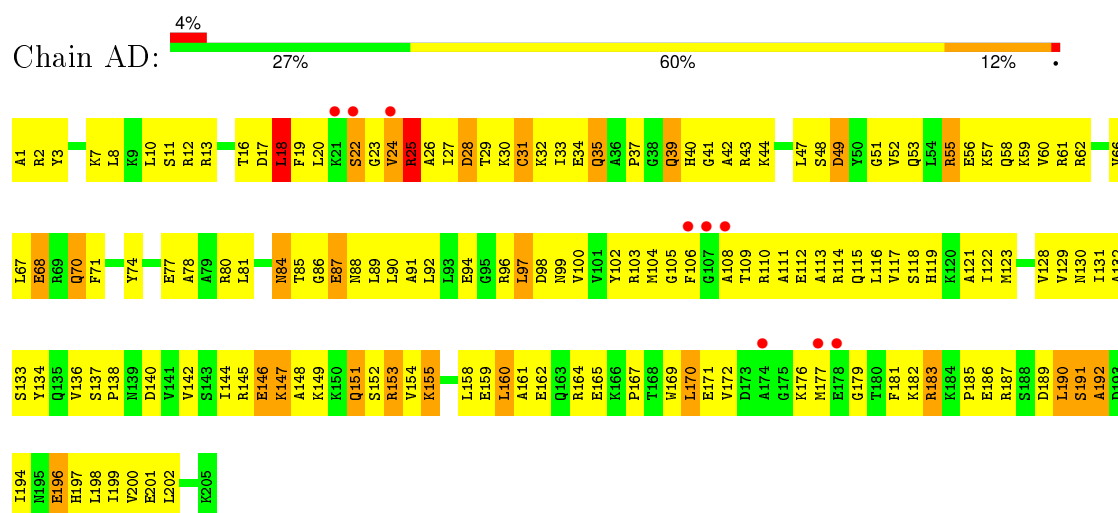
• Molecule 2: 30S ribosomal protein S3



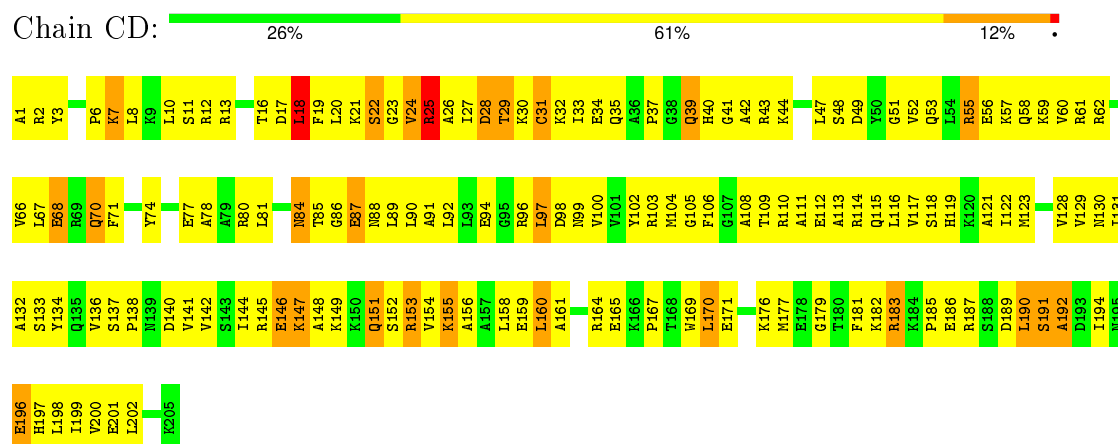
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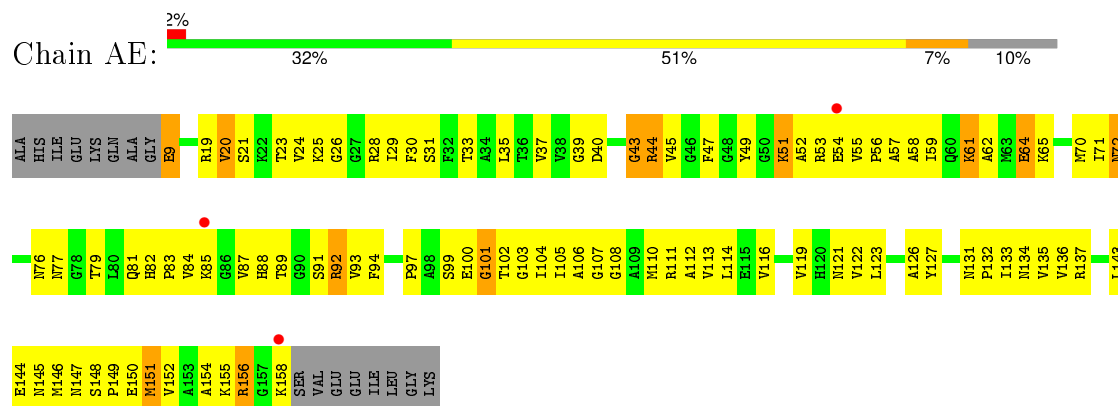
• Molecule 3: 30S ribosomal protein S4



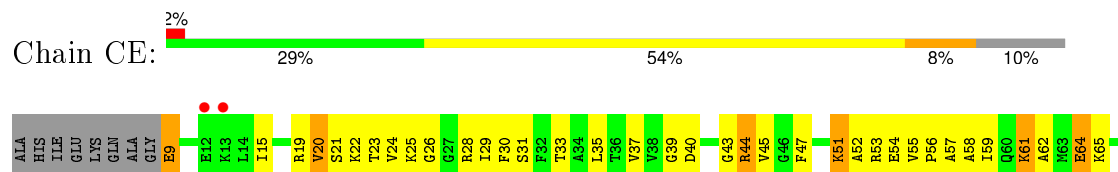
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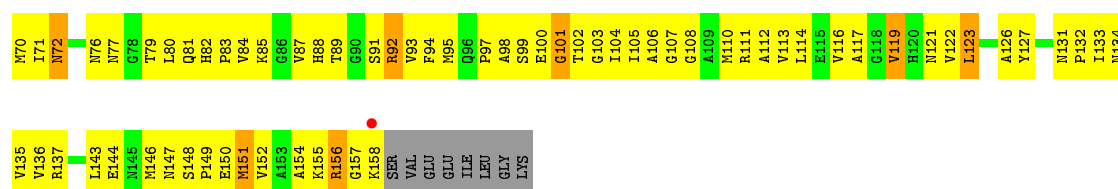


• Molecule 4: 30S ribosomal protein S5

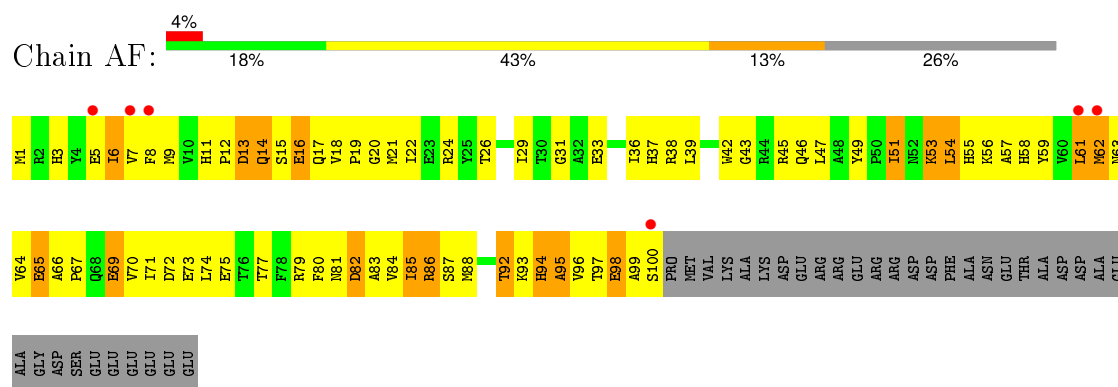


• Molecule 4: 30S ribosomal protein S5

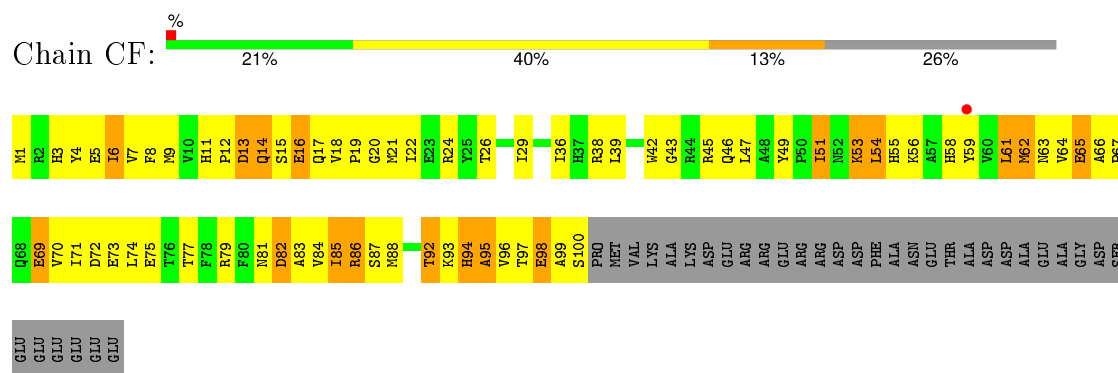




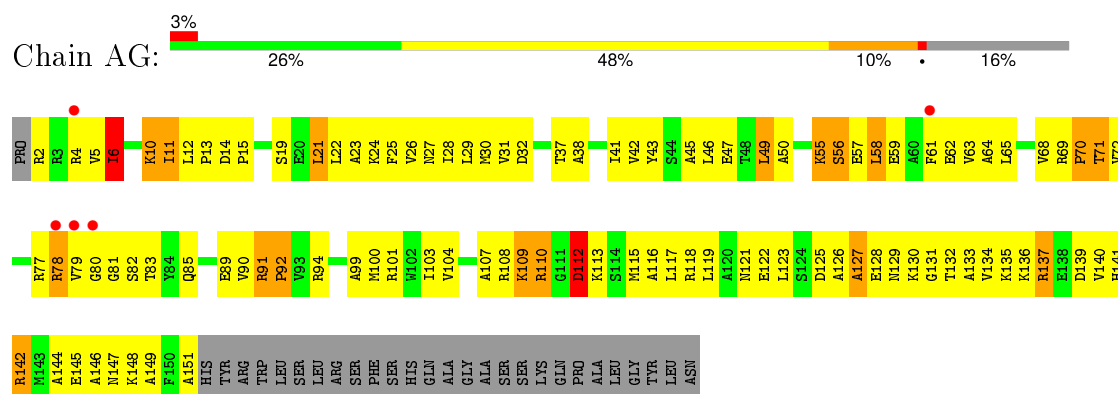
• Molecule 5: 30S ribosomal protein S6



• Molecule 5: 30S ribosomal protein S6



• Molecule 6: 30S ribosomal protein S7



• Molecule 6: 30S ribosomal protein S7

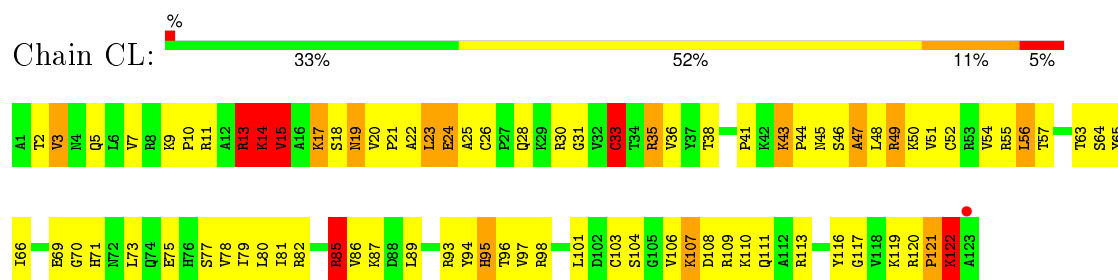




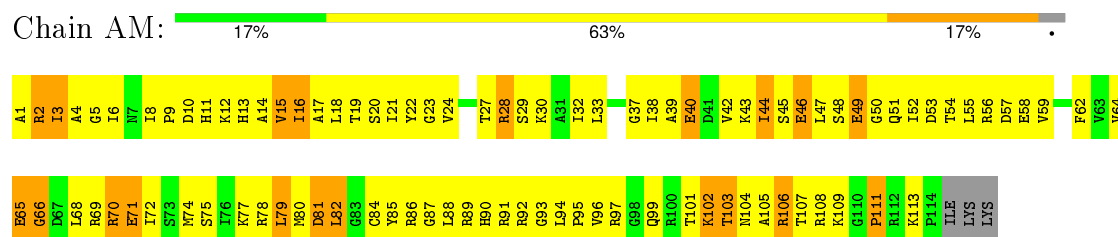
- Chain A.J:



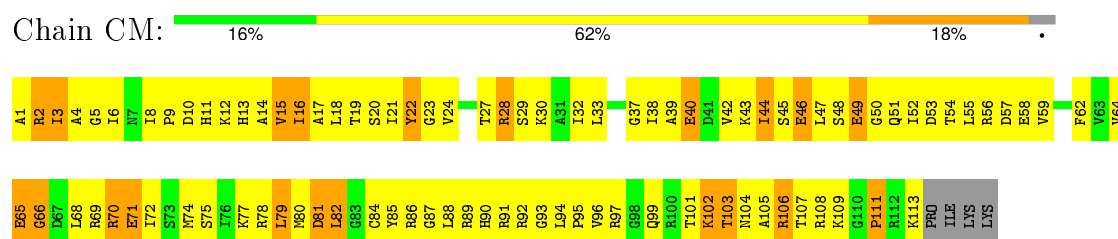
- Molecule 11: 30S ribosomal protein S12



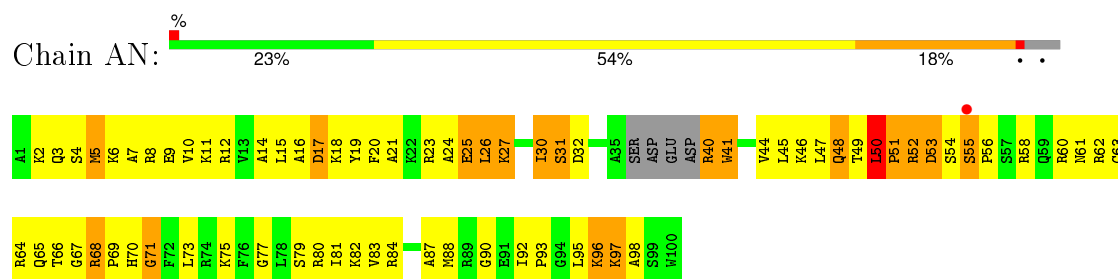
- Molecule 12: 30S ribosomal protein S13



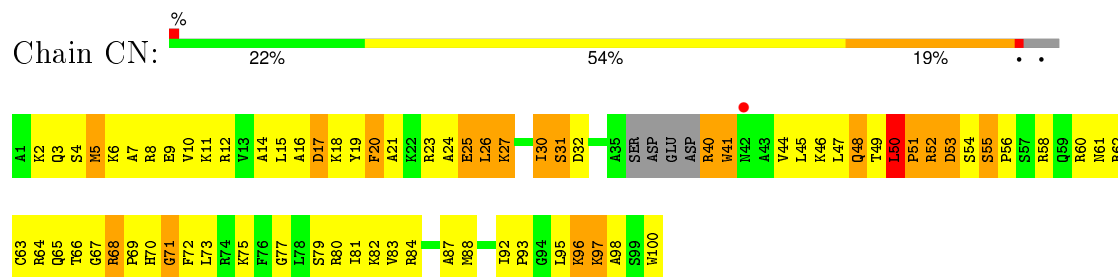
- Molecule 12: 30S ribosomal protein S13



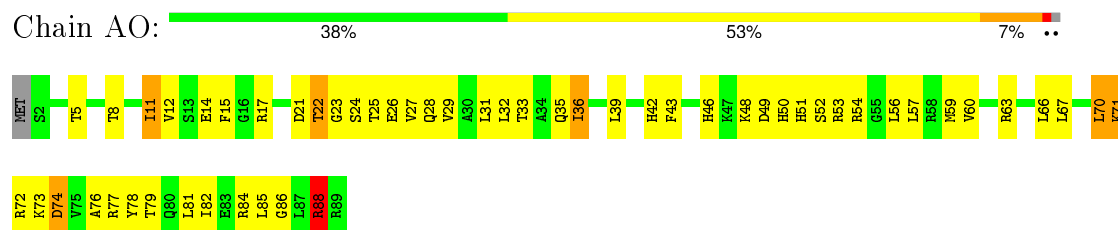
- Molecule 13: 30S ribosomal protein S14



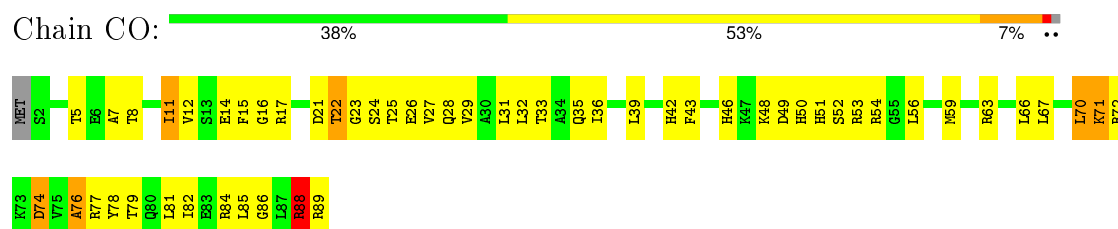
- Molecule 13: 30S ribosomal protein S14



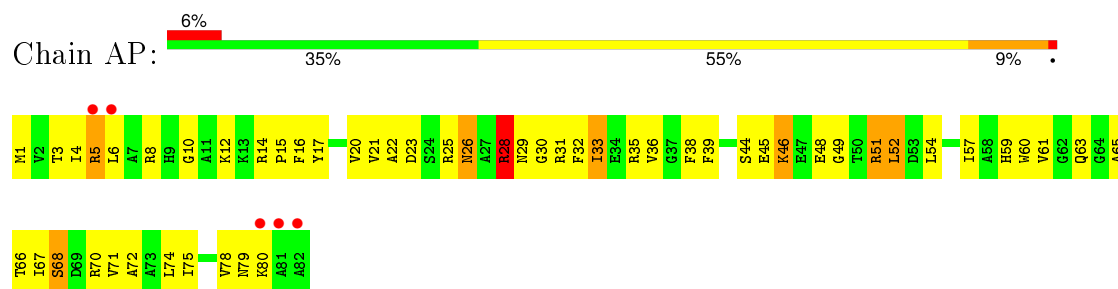
- Molecule 14: 30S ribosomal protein S15



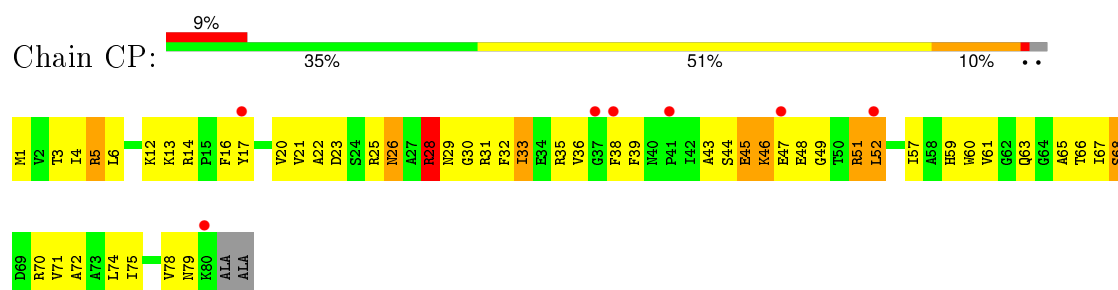
- Molecule 14: 30S ribosomal protein S15



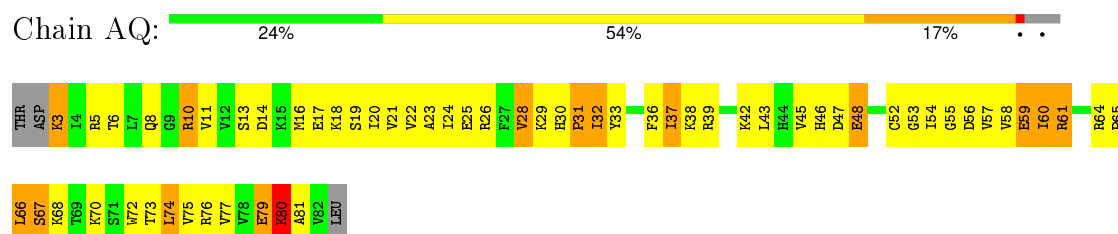
- Molecule 15: 30S ribosomal protein S16



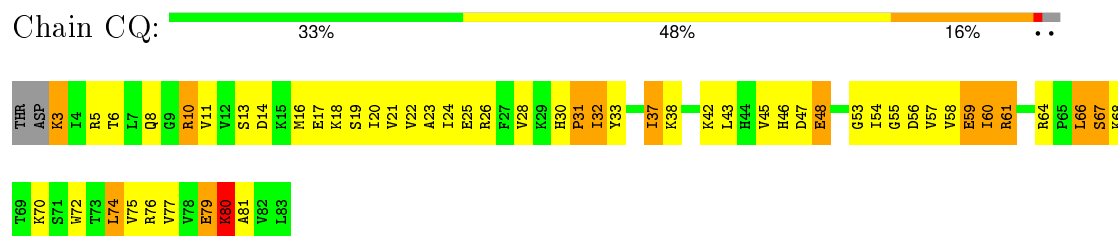
- Molecule 15: 30S ribosomal protein S16



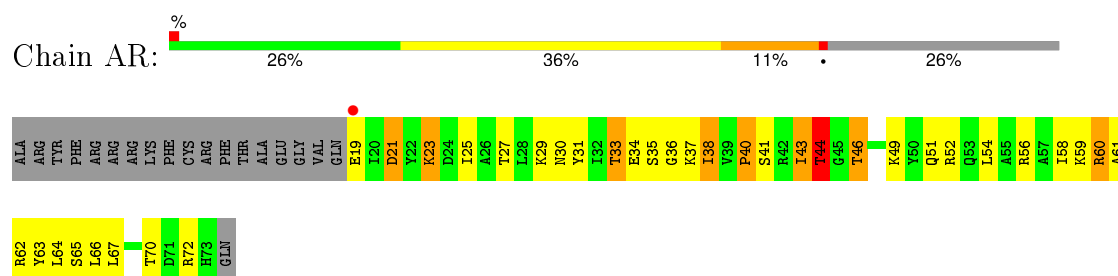
- Molecule 16: 30S ribosomal protein S17



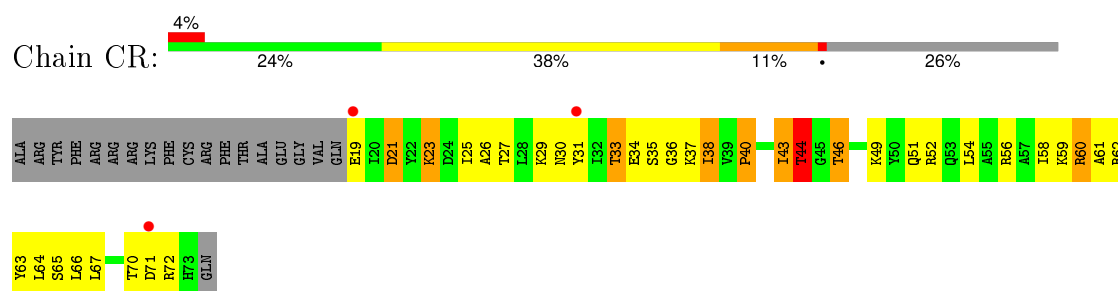
- Molecule 16: 30S ribosomal protein S17



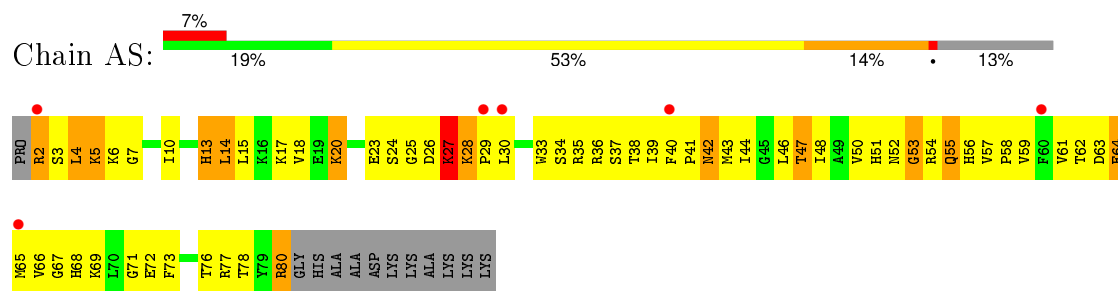
- Molecule 17: 30S ribosomal protein S18



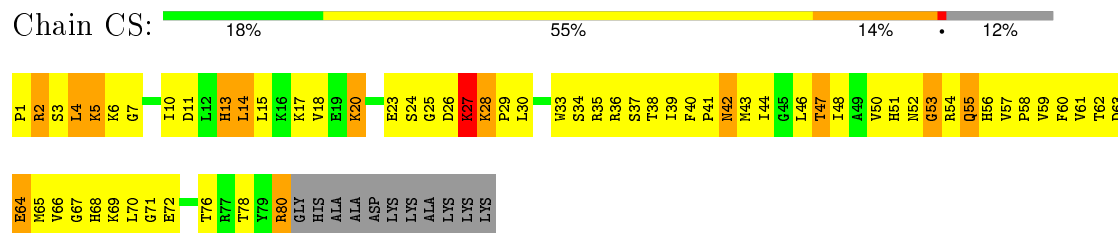
- Molecule 17: 30S ribosomal protein S18



- Molecule 18: 30S ribosomal protein S19

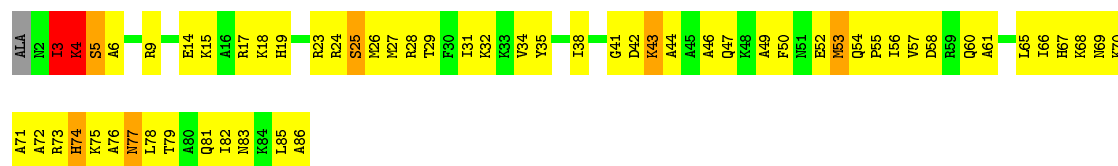


- Molecule 18: 30S ribosomal protein S19



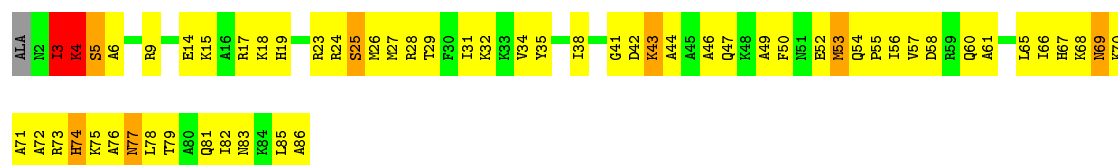
- Molecule 19: 30S ribosomal protein S20

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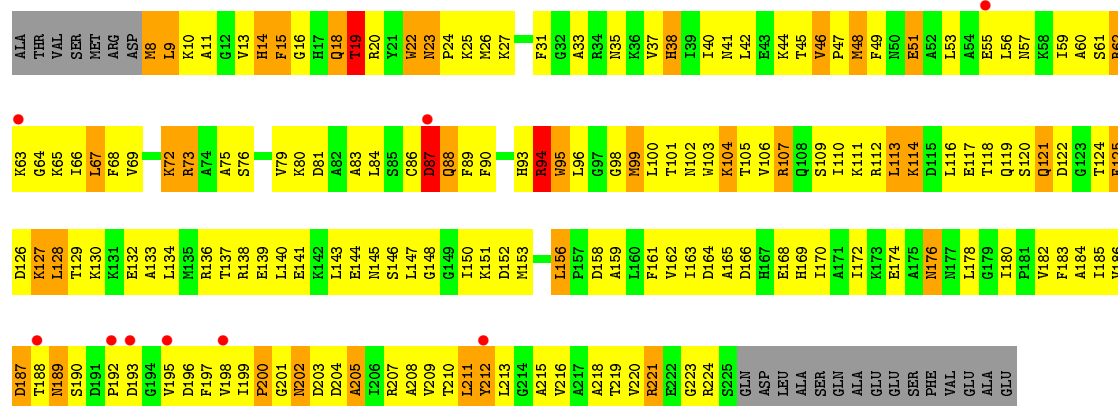
- Molecule 19: 30S ribosomal protein S20

Chain CT: 



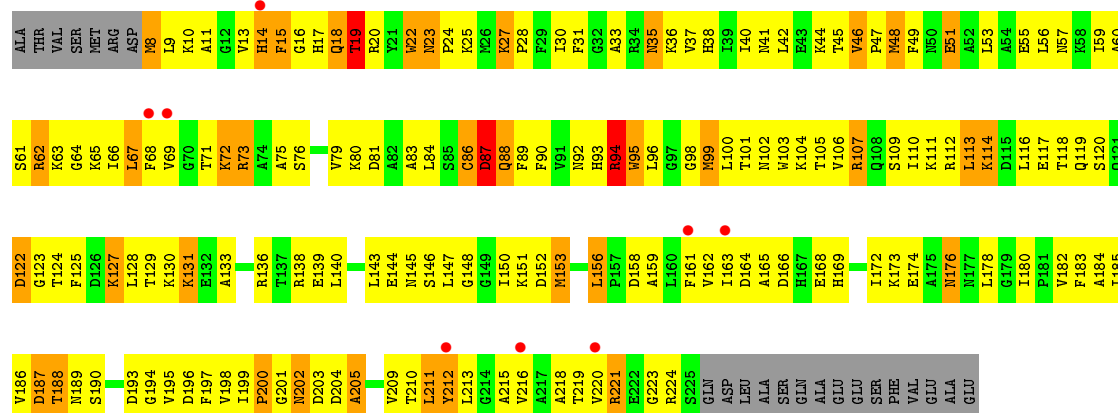
- Molecule 20: 30S ribosomal protein S2

Chain AB: 

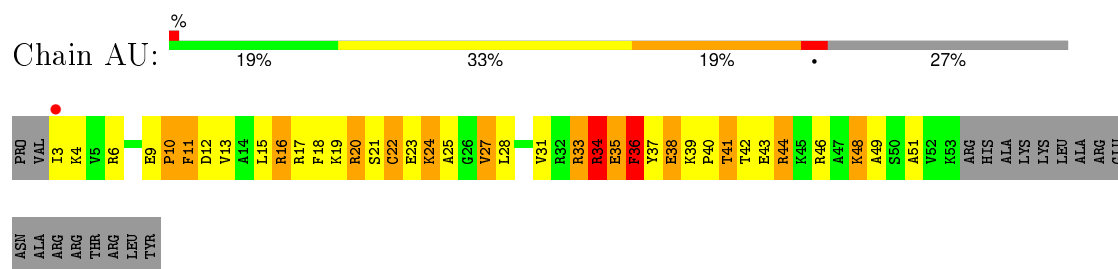


- Molecule 20: 30S ribosomal protein S2

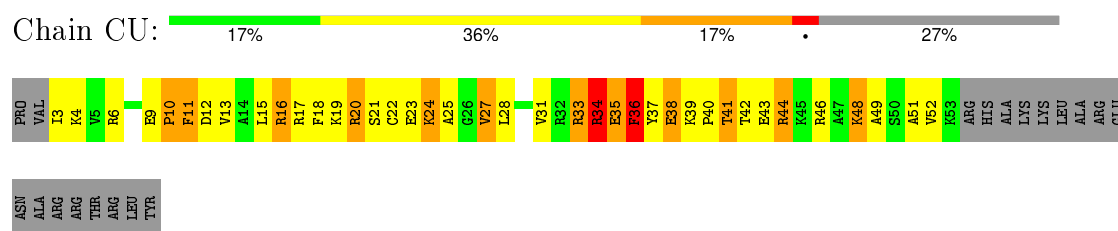
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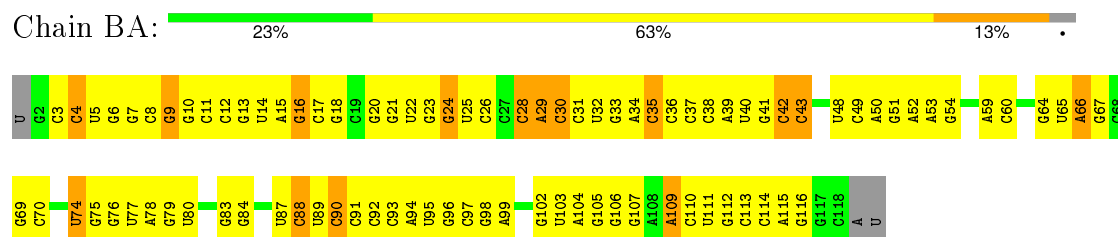
- Molecule 21: 30S ribosomal protein S21



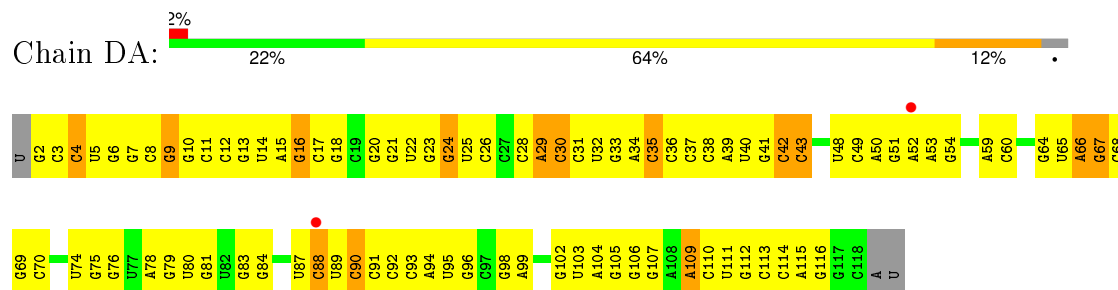
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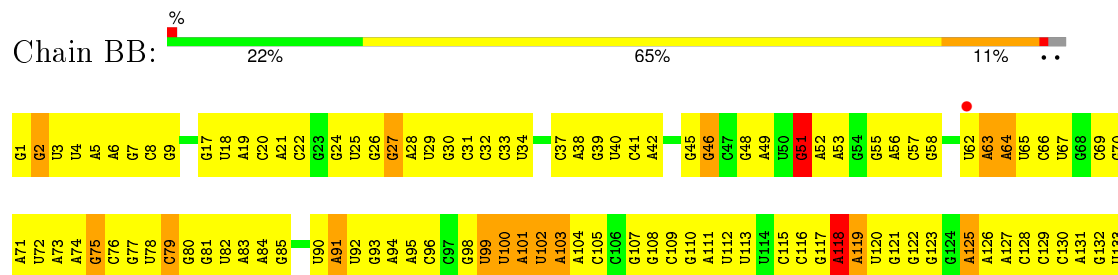
- Molecule 22: 5S rRNA



- Molecule 22: 5S rRNA

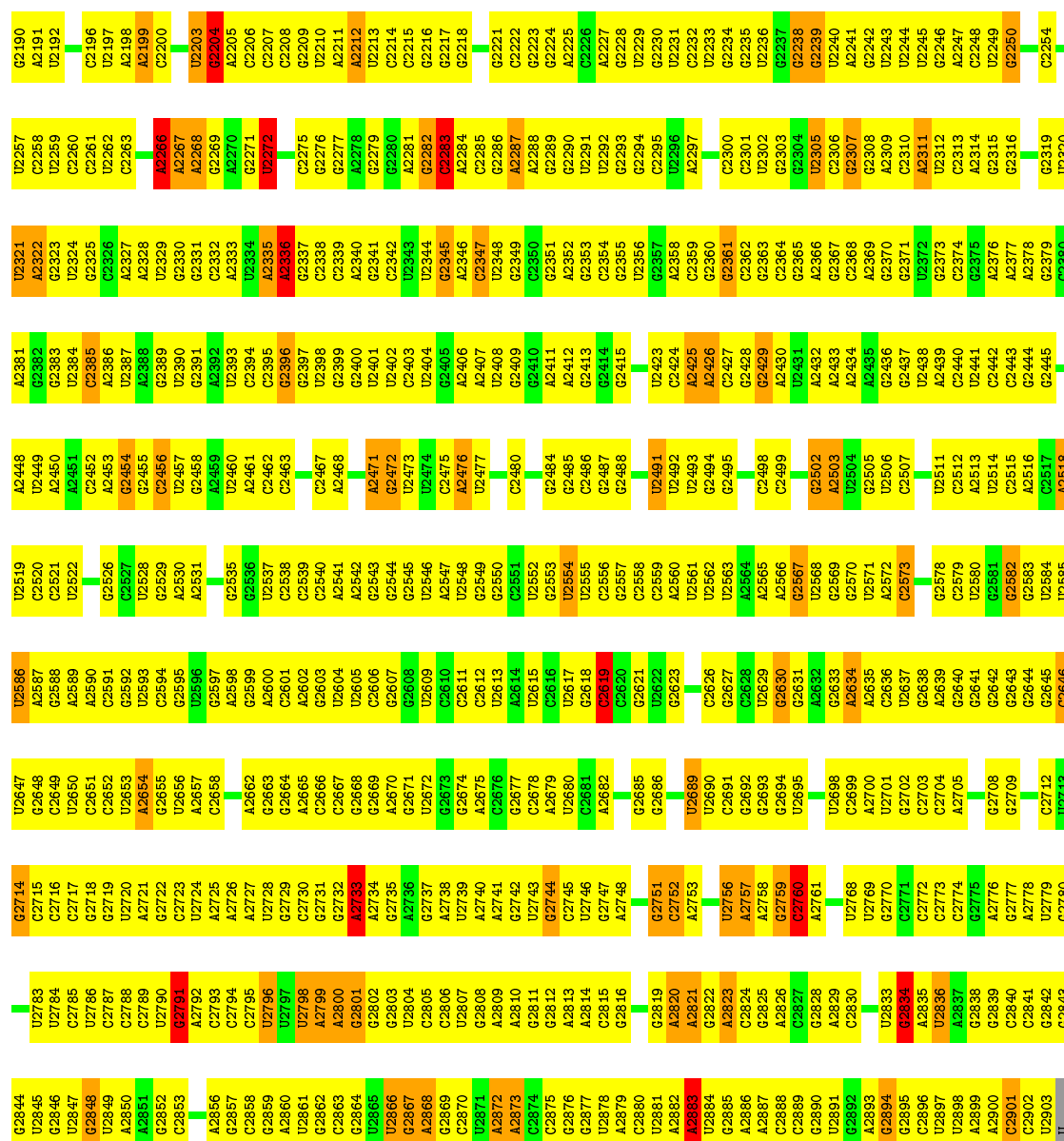


- Molecule 23: 23S rRNA

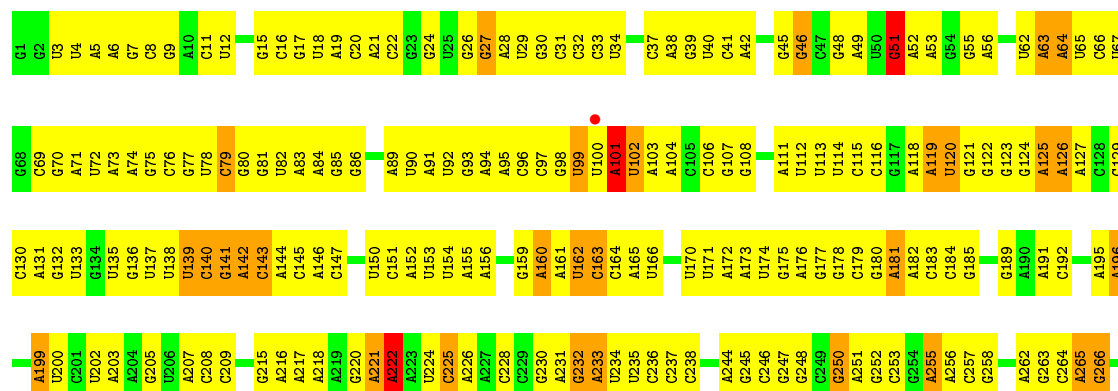


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G1139	G1073	G1002	G938	G806	C737	C612	G549	A479	G411	G338	G272	U206	U139
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A1185	A1121	G1056	C851	C719	G785	A655	C595	A532	A462	U393	A322	A256	A191
U1186	C1122	G1057	U852	U720	C786	G656	U596	A533	U464	C394	C323	C257	C192
C1187	U1123	A1058	C853	U721	C787	U657	G597	U534	G465	G395	A324	G258	U193
U1188	G1124	U1059	C854	A722	U722	U658	U598	U534	A466	C396	G325	G259	U194
G1189	C1125	G1059	C855	G725	C791	G659	A599	G535	A467	U403	G329	G260	A195
U1190	A1126	U1060	G856	G726	A794	C660	G600	A538	G468	A401	A330	G263	A196
C1191	U1061	A827	C857	A727	C795	A661	C601	G539	G469	A402	C331	C264	A199
U1192	G1062	A828	G858	A728	C796	G664	A602	G540	G470	G400	G332	A265	
G1193	C1063	U929	G859	G728	C797	U665	A603	C541					
C1194	U1064	G930	U860	G729	C798	U666	G604	A541					
A1195	U1065	U931	A861	A730	G798	A666							

G	C2066	U1995	G1929	A1858	C1790	G1723	G1587	A1525	C1463	G1401	C1335	U1267	G1200
C	G2067	C1996	G1930	U1859	A1791	C1726	G1588	C1526	G1464	U1402	A1336	A1268	U1201
U	G2068	C1997	U1931	G1860	G1792	U1989	A1527	G1527	G1465	A1403	G1337	A1269	G1202
U	G2069		A1932	C1793	C1793	G1662	A1590	A1528	U1466	C1404	G1338	C1270	U1203
	C2001		G1934	G1861	A1794	A1664	C1592	G1529	U1467	U1405	G1339	G1271	A1204
	U2007		G1935	G1862	C1795	A1665	C1593		U1468	U1406	U1340	A1272	A1205
C2072	C2073	C2008	G1936	G1863	U1796	G1666	A1593		A1469	G1407	G1341	U1273	G1206
U2074	U2075	A2009	U1937	U1865	G1797	G1667	U1594		A1470	G1408		A1274	C1207
U2076	U2077	U2010	A1938	G1866	G1799	G1733	C1595		C1345		C1345	A1275	C1208
U2076	U2077	U2011	G1867	G1866	C1800	G1734	A1596		G1346	U1412	G1347	A1276	U1209
		G2012	U1940	G1868	A1801	G1735	A1597		C1348	U1413		C1277	G1210
		G2013	U1941	G1869	A1802	U1736	U1598		G1474		C1349	G1278	G1212
		G2014	C1942	C1870	A1803	G1737	U1599		G1475		C1350	G1280	A1213
		A2015	U1943	A1871	C1804	G1738	G1600		U1476	G1416			
		U2016	U1944	A1872	G1805	A1739	A1603		A1477	C1417		C1351	A1214
		U2017	G1945	G1873	C1806	G1740	G1542		G1478	G1418		U1352	G1215
		G2018	G1946	C1874	G1807	G1741	G1543		A1479	A1419		A1353	G1216
		A2019	G1947	G1875	A1808	G1742	C1605		U1480	A1420		A1354	U1217
		A2020	G1948	A1876	A1809	G1743	G1606		U1481	G1421		G1355	G1218
		C2021	G1949	G1877	A1810	A1744	C1607		G1482	G1422		G1356	U1219
		U2022	G1950	G1878	G1811	A1745	A1608		G1483	G1423		C1357	G1220
		C2023	U1951	C1879	G1812	A1746	A1609		U1484	G1424		G1358	C1221
		G2024	U1952	U1880	G1813		A1610		U1485	G1425		A1359	U1222
		G2025	A1953	G1881	G1814		G1611		U1486	G1426			G1223
		U2026	G1954	U1882	A1815		C1612		U1487	A1427		A1365	
		G2027	U1955	U1883	C1816		G1613		C1488	C1428		A1366	U1224
		U2028	U1956	G1884	G1817		A1616		G1489	G1429		A1367	G1228
		C2029	G1957	A1885	A1818		C1617		A1490	G1430		G1368	C1229
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		A2031	G1959	G1887	A1820		G1619		G1492	G1432		C1370	U1231
		G2032		G1888	U1821		U1629		C1493	A1433		G1371	
		G2035	U1963	G1889	C1822		C1623		A1494	A1434		U1372	G1236
		C2036	G1964	A1890	G1823		U1624		U1495	G1435		A1373	A1237
		A2037	A1966	C1992	G1824		G1628		A1496	G1436		G1374	U1240
		G2038	C1967	C1993	U1825		U1629		U1497	C1437		U1375	A1241
		U2039	G1968	C1994	G1826		G1629			U1438		G1376	U1242
		G2040			U1827		C1638		G1501	A1439		G1377	C1243
		U2041	A1970	A1899	G1828		U1634		A1502	U1440		U1378	
		A2042	U1971	A1900	C1829		A1635		A1503	G1441		U1379	A1244
		C2043	G1972	A1901	G1830		G1636		A1504	U1442		G1380	G1245
			G1973	C1902	C1832		U1637		A1505	U1443		G1381	A1246
			C1974	G1903	C1833		A1638		U1506	G1444		G1382	A1247
				G1904	U1834		C1639		A1507	G1445		A1383	G1248
				C1905			A1640		A1508	C1446		A1384	U1249
				G1906			G1642		U1509	C1447		A1385	G1250
							U1647		G1510	G1448		C1386	G1251
							G1711		G1511	G1449		A1387	G1252
							U1712		C1512	G1450		G1388	A1253
							U1713		U1513	C1451		G1389	A1254
							G1714		G1514	G1452		U1390	U1255
							U1715		A1515	A1453		U1391	G1256
							G1716		G1516	C1454		A1392	C1257
							U1717		G1517	G1455		A1393	U1258
							G1718		A1580	G1456		U1394	G1259
							G1719		G1581	U1457		A1395	A1260
							G1720		G1582	U1458		U1396	G1261
							G1721		A1583	G1459		U1397	A1262
							G1722		U1584	U1460		C1398	U1263
							A1722		A1585	C1461		G1399	
									G1524	G1462		G1334	G1266

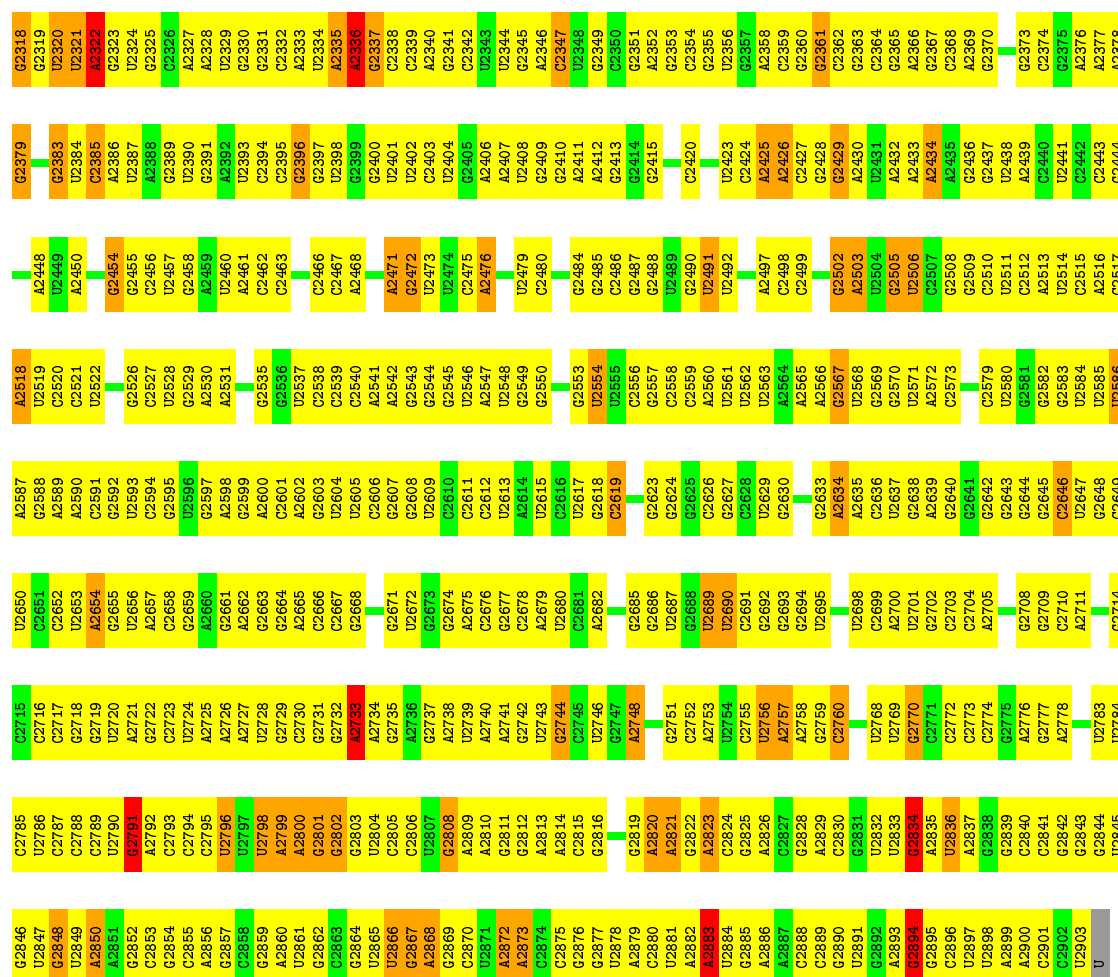


Chain DB: 22% 64% 11% ..

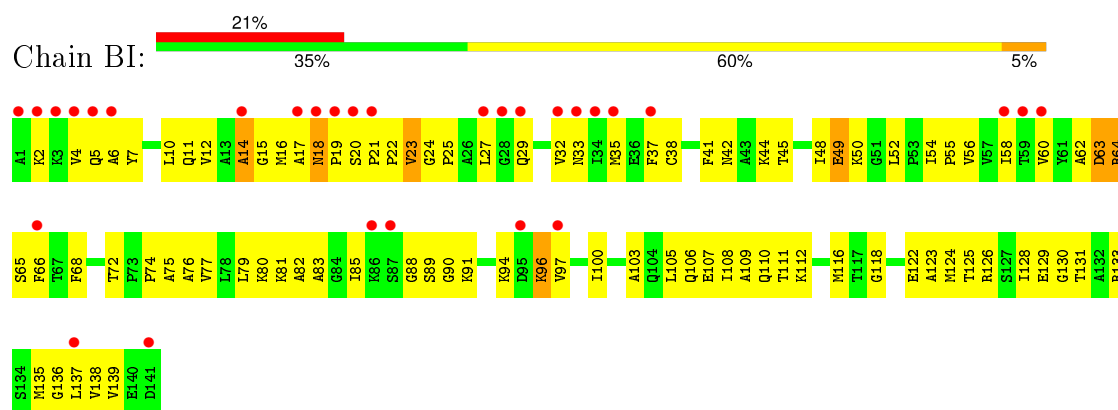




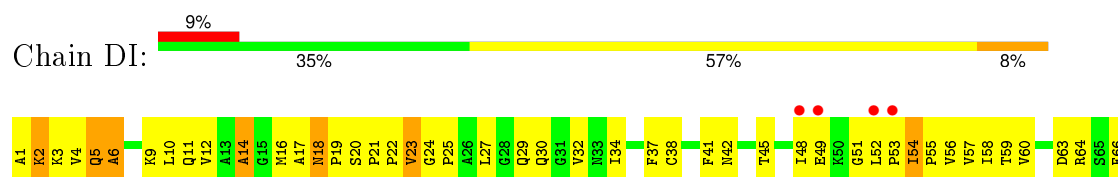


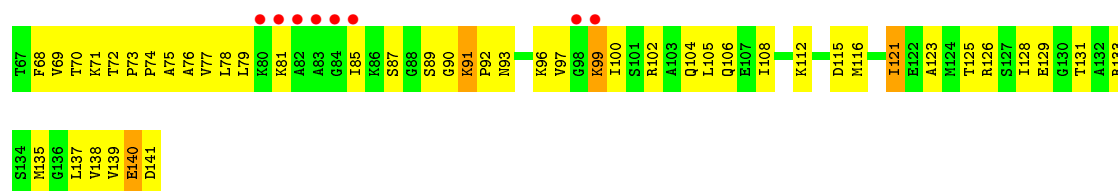


• Molecule 24: 50S ribosomal protein L11

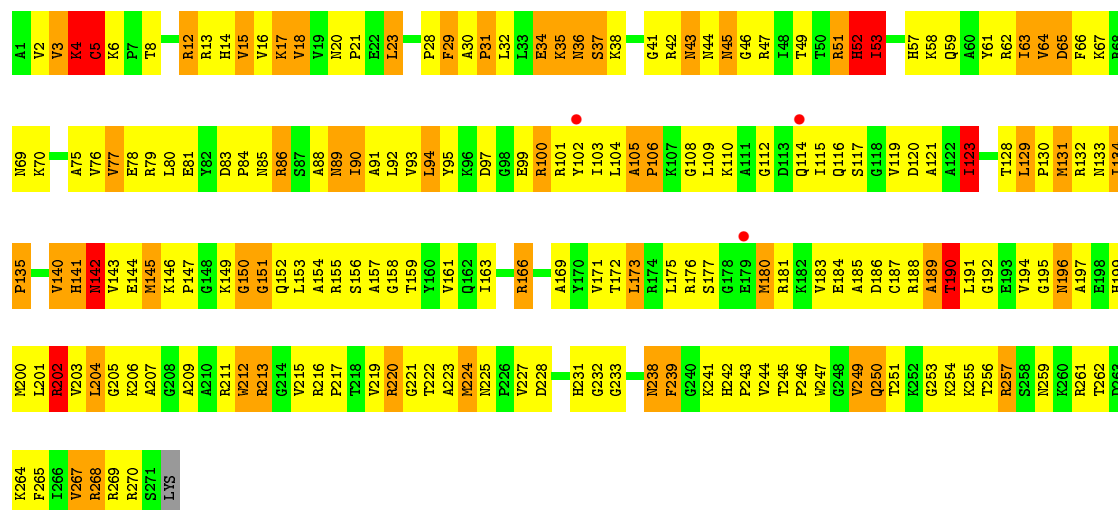


• Molecule 24: 50S ribosomal protein L11

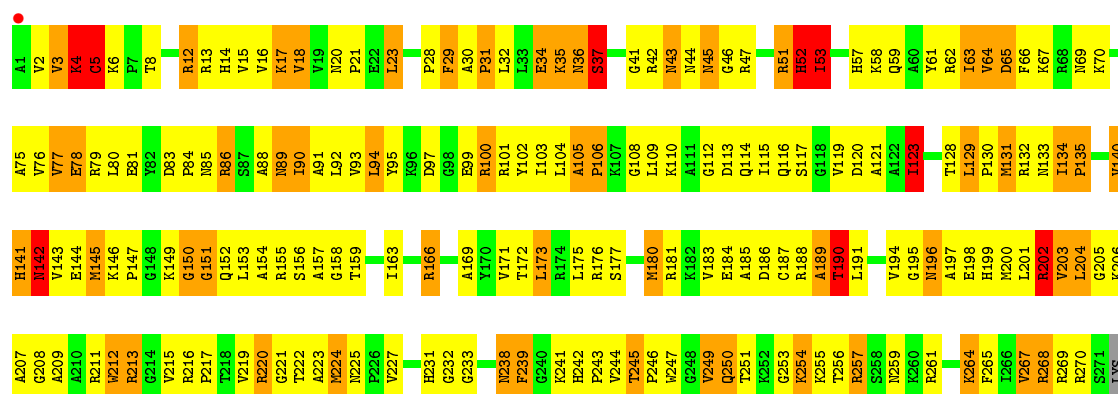




• Molecule 25: 50S ribosomal protein L2

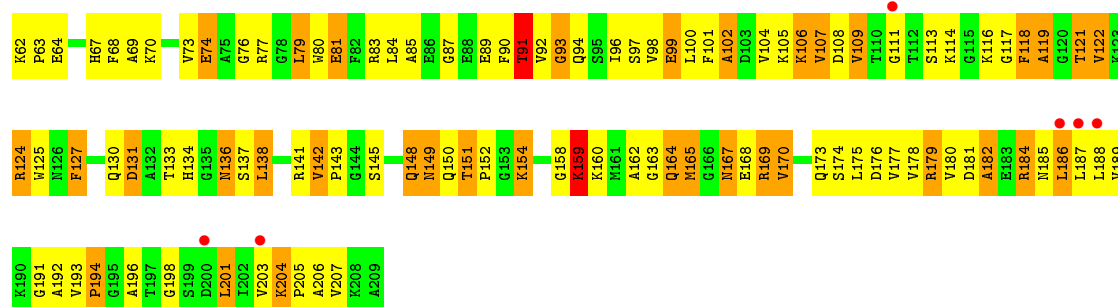


• Molecule 25: 50S ribosomal protein L2



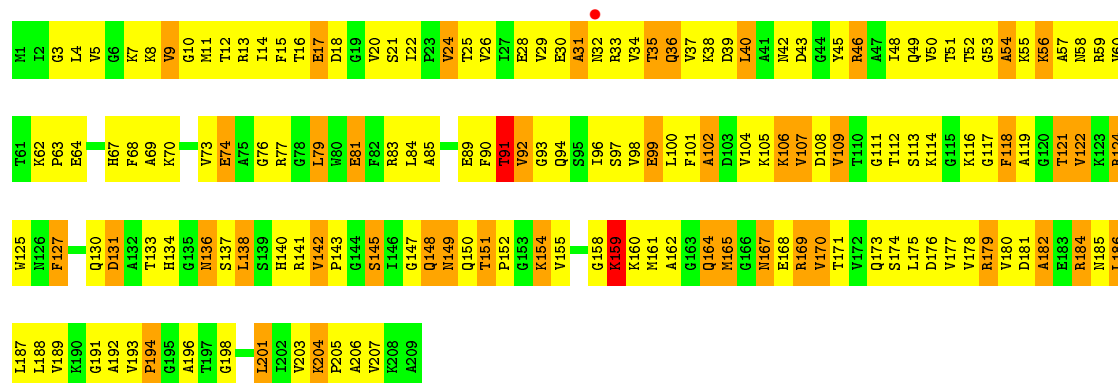
• Molecule 26: 50S ribosomal protein L3





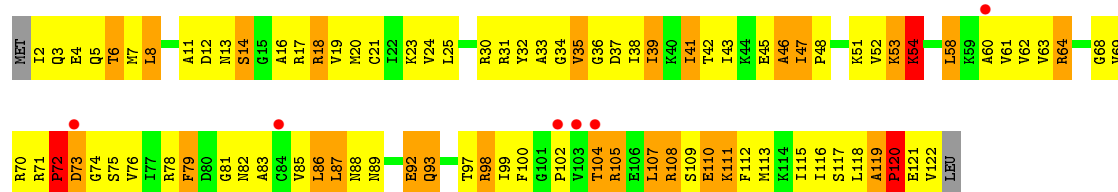
- Molecule 26: 50S ribosomal protein L3

Chain DD: 24% 54% 22%



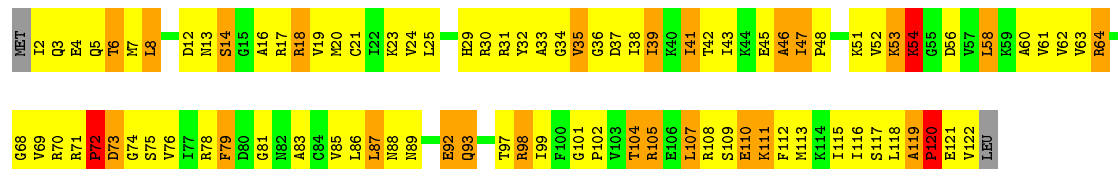
- Molecule 27: 50S ribosomal protein L14

Chain BK: 5% 25% 50% 21%



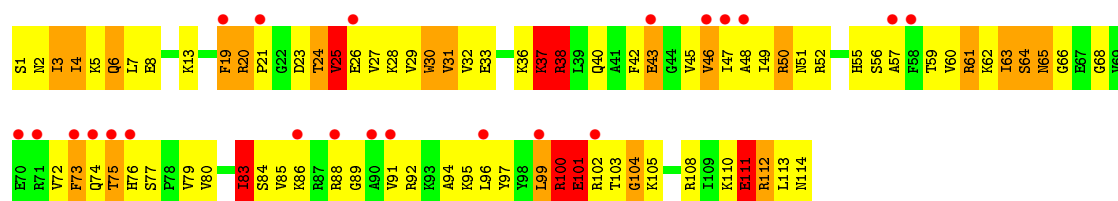
- Molecule 27: 50S ribosomal protein L14

Chain DK: 25% 51% 20%



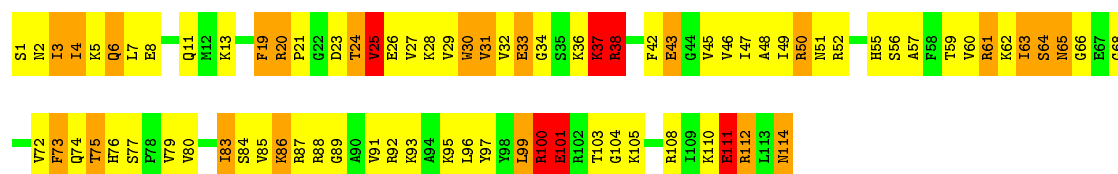
- Molecule 28: 50S ribosomal protein L19

Chain BP: 19% 28% 48% 18% 6%



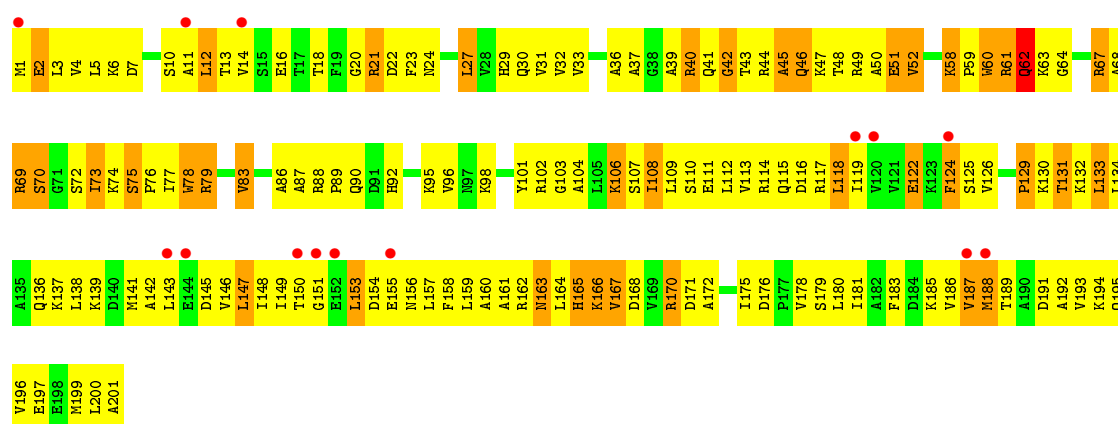
• Molecule 28: 50S ribosomal protein L19

Chain DP: 28% 47% 19% 5%



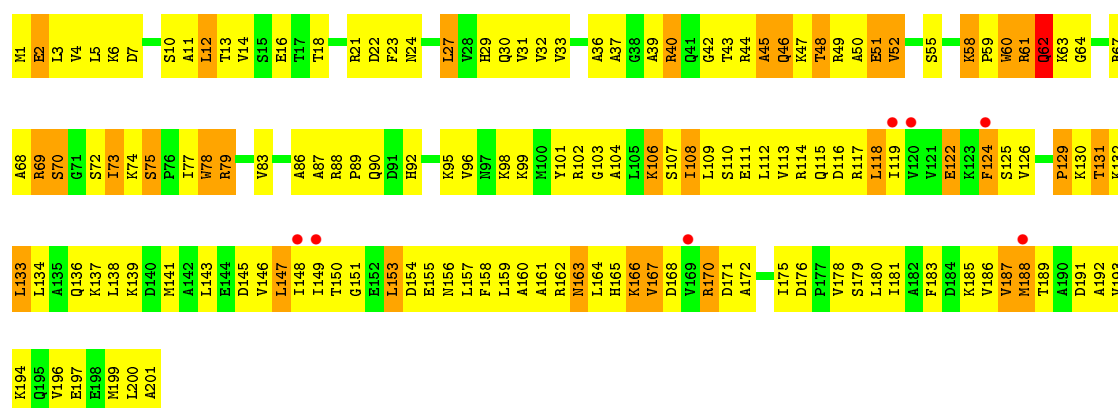
• Molecule 29: 50S ribosomal protein L4

Chain BE: 7% 24% 57% 19%

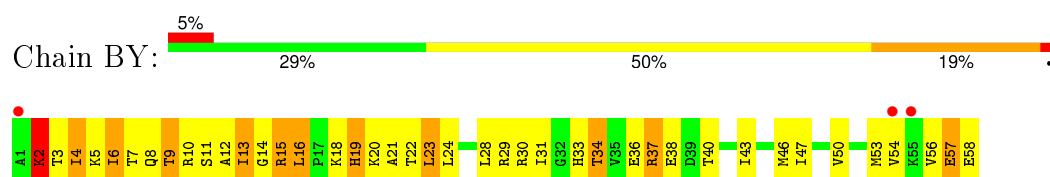


• Molecule 29: 50S ribosomal protein L4

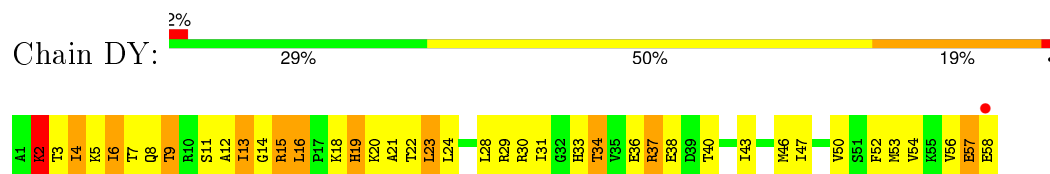
Chain DE: 3% 25% 57% 17%



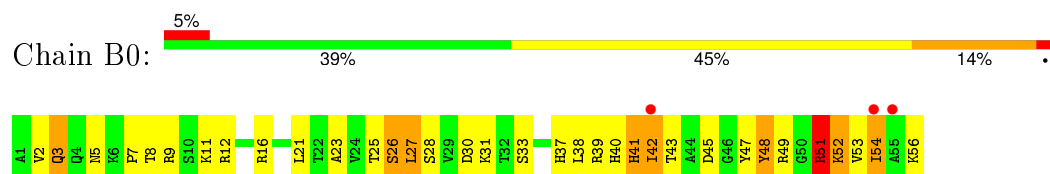
• Molecule 30: 50S ribosomal protein L30



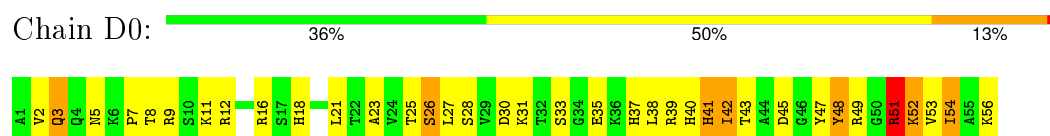
- Molecule 30: 50S ribosomal protein L30



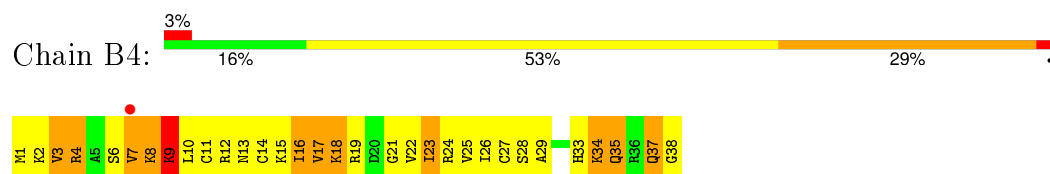
- Molecule 31: 50S ribosomal protein L32



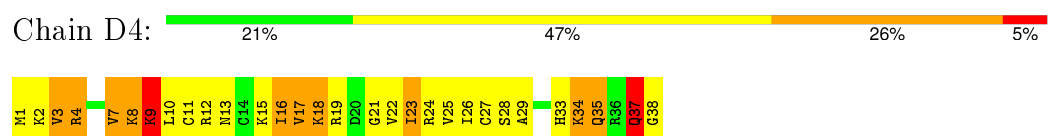
- Molecule 31: 50S ribosomal protein L32



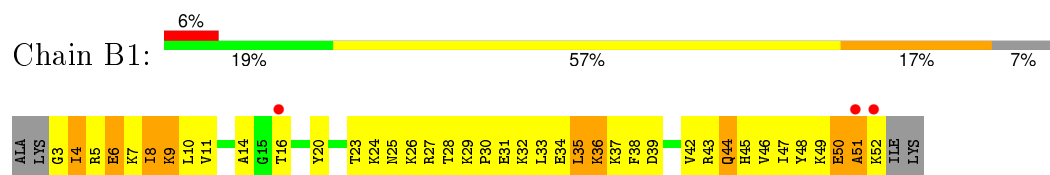
- Molecule 32: 50S ribosomal protein L36



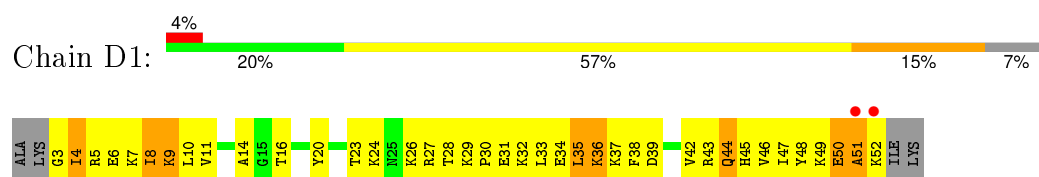
- Molecule 32: 50S ribosomal protein L36



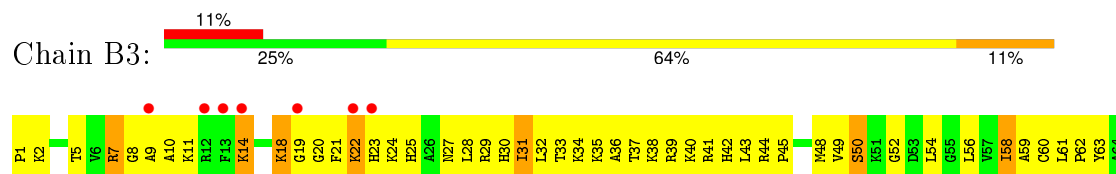
- Molecule 33: 50S ribosomal protein L33



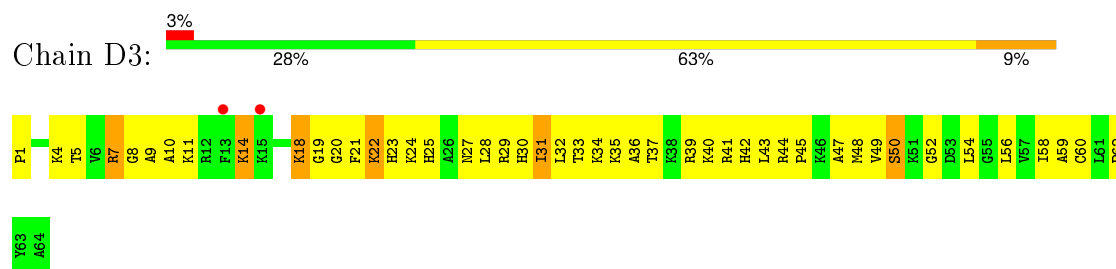
- Molecule 33: 50S ribosomal protein L33



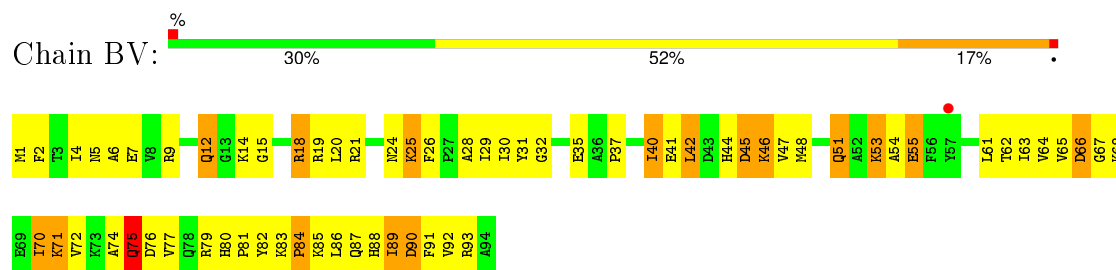
- Molecule 34: 50S ribosomal protein L35



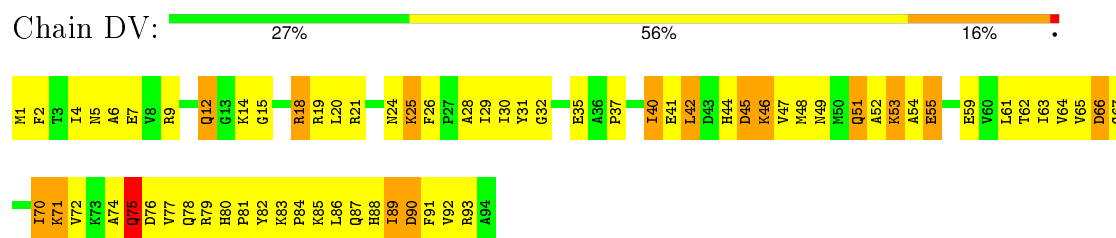
- Molecule 34: 50S ribosomal protein L35



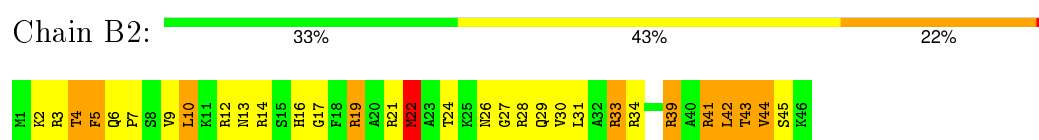
- Molecule 35: 50S ribosomal protein L25



- Molecule 35: 50S ribosomal protein L25

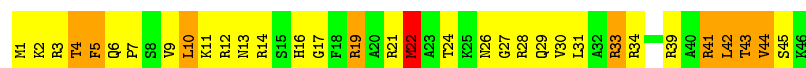


- Molecule 36: 50S ribosomal protein L34



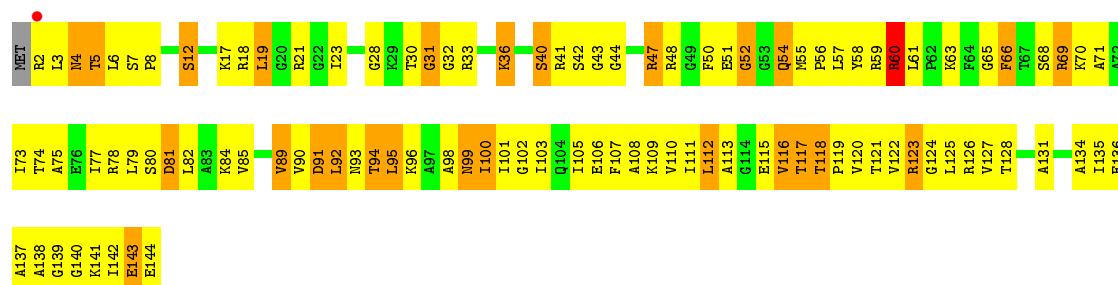
- Molecule 36: 50S ribosomal protein L34

Chain D2:  28% 50% 20%



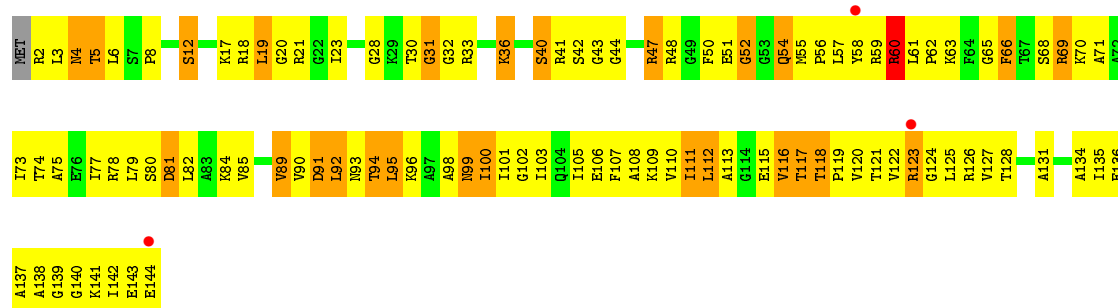
- Molecule 37: 50S ribosomal protein L15

Chain BL: 



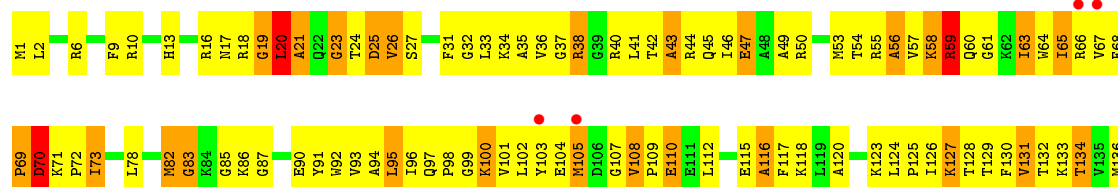
- Molecule 37: 50S ribosomal protein L15

Chain DL: 



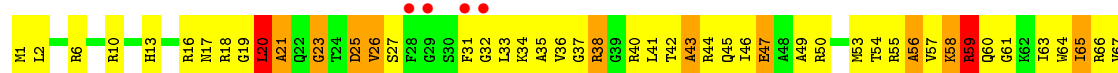
- Molecule 38: 50S ribosomal protein L16

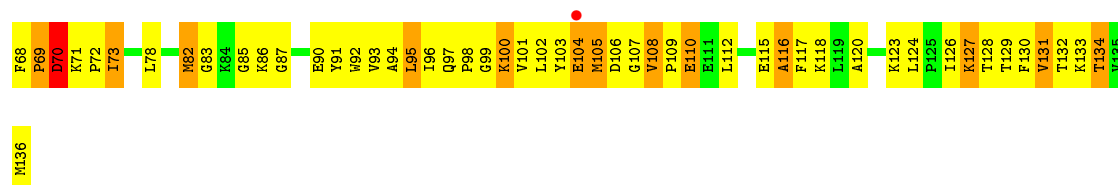
Chain BM: 



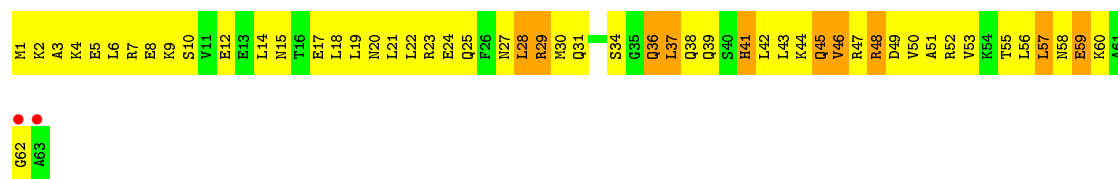
- Molecule 38: 50S ribosomal protein L16

Chain DM: 

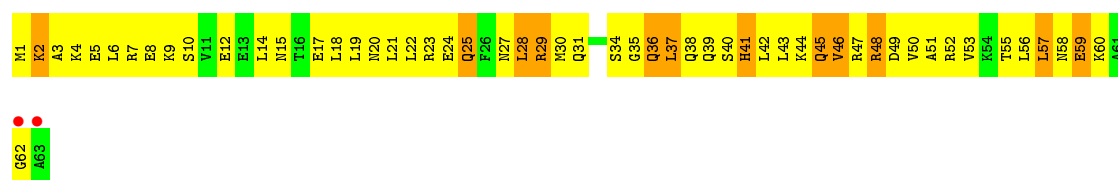




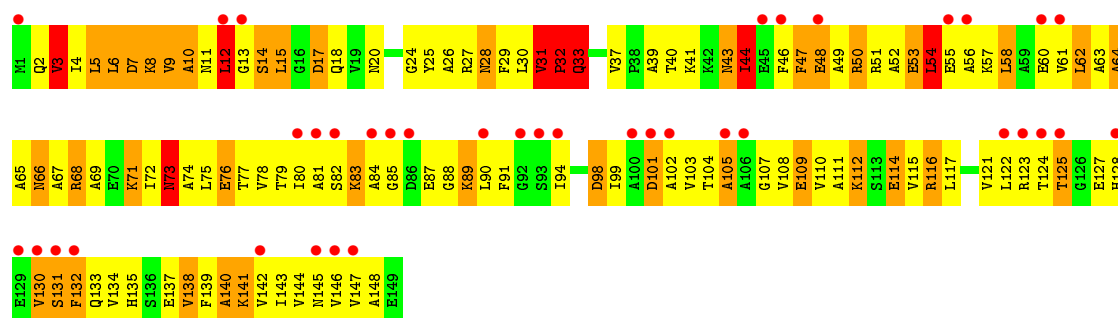
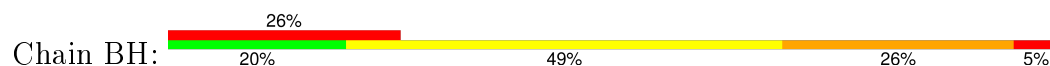
• Molecule 39: 50S ribosomal protein L29



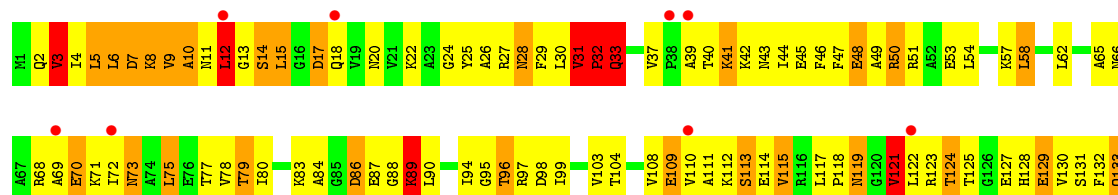
• Molecule 39: 50S ribosomal protein L29



• Molecule 40: 50S ribosomal protein L9

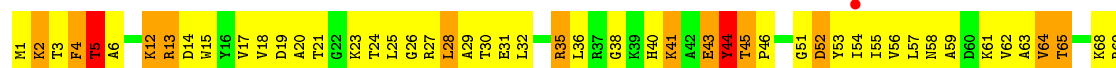


• Molecule 40: 50S ribosomal protein L9

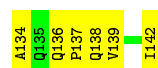
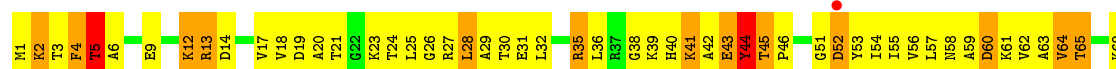




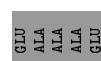
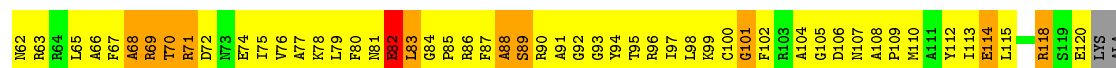
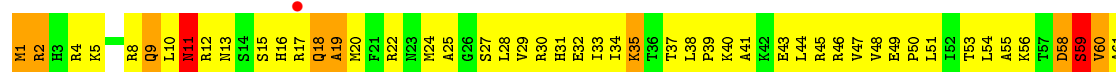
• Molecule 41: 50S ribosomal protein L13



• Molecule 41: 50S ribosomal protein L13



• Molecule 42: 50S ribosomal protein L17

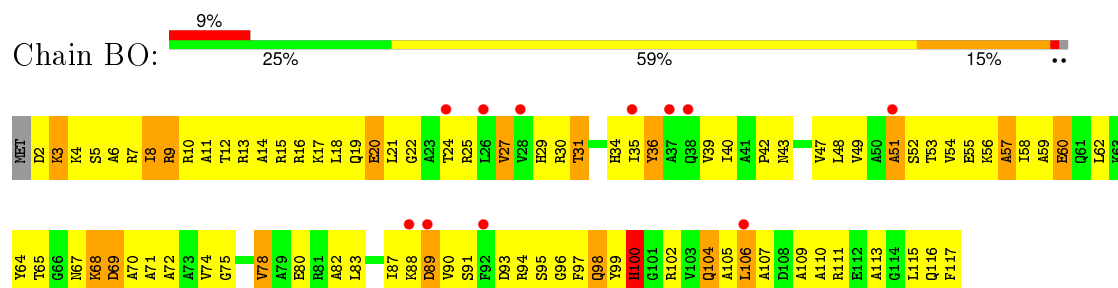


• Molecule 42: 50S ribosomal protein L17

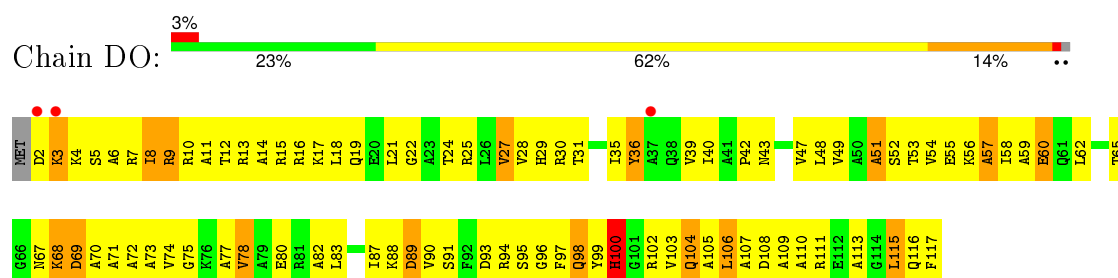




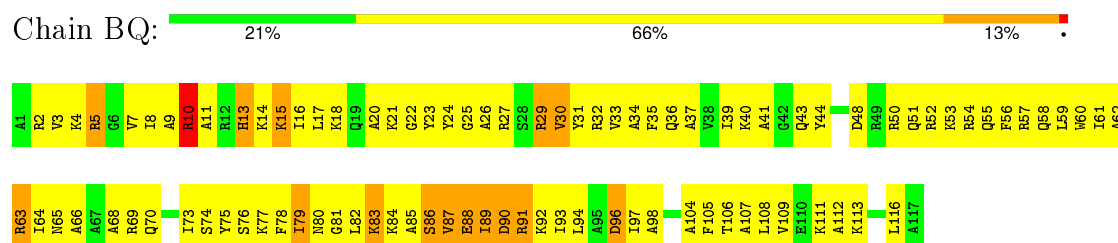
- Molecule 43: 50S ribosomal protein L18



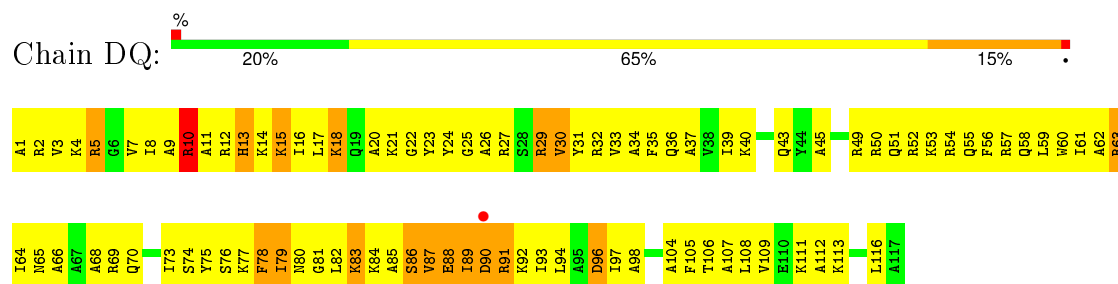
- Molecule 43: 50S ribosomal protein L18



- Molecule 44: 50S ribosomal protein L20

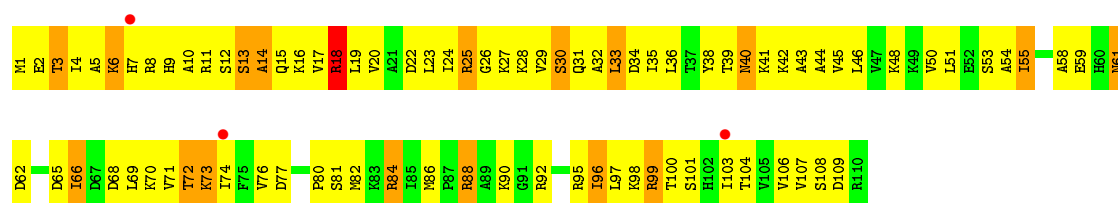


- Molecule 44: 50S ribosomal protein L20

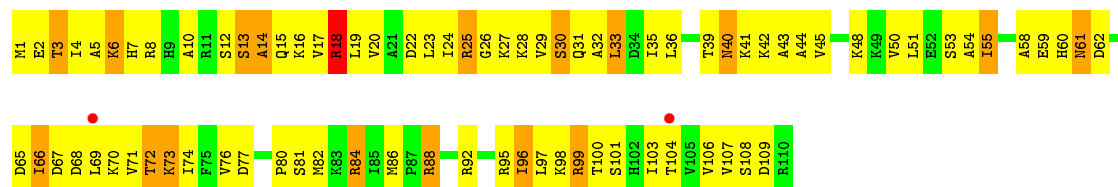


- Molecule 45: 50S ribosomal protein L22

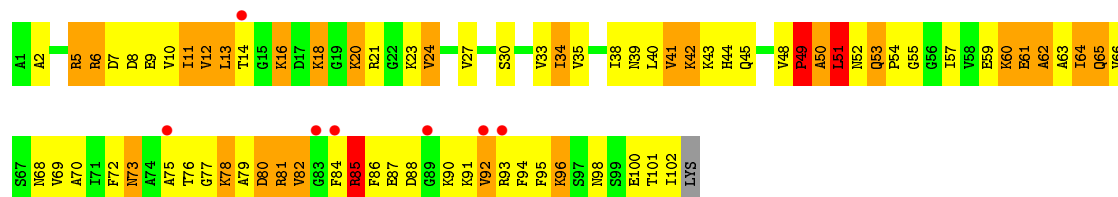




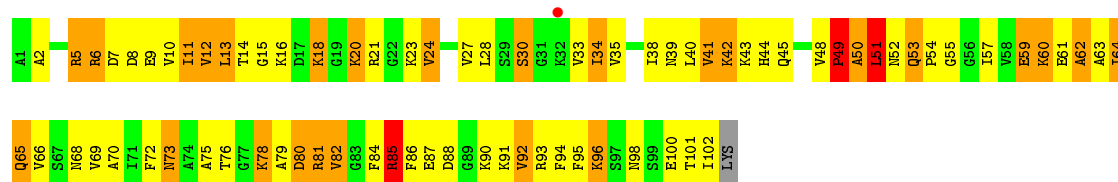
• Molecule 45: 50S ribosomal protein L22



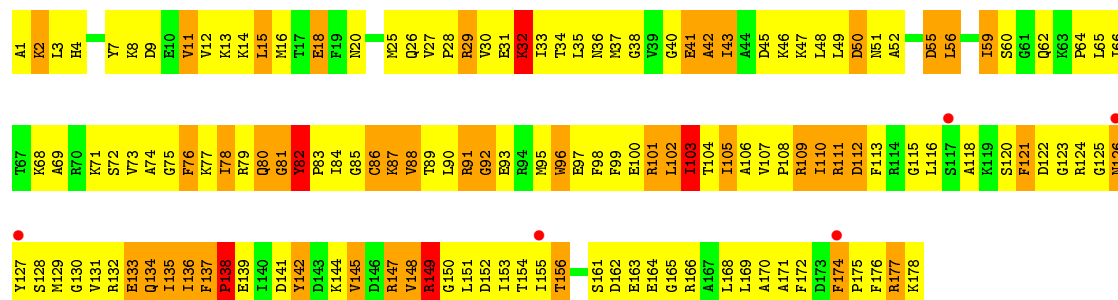
• Molecule 46: 50S ribosomal protein L24



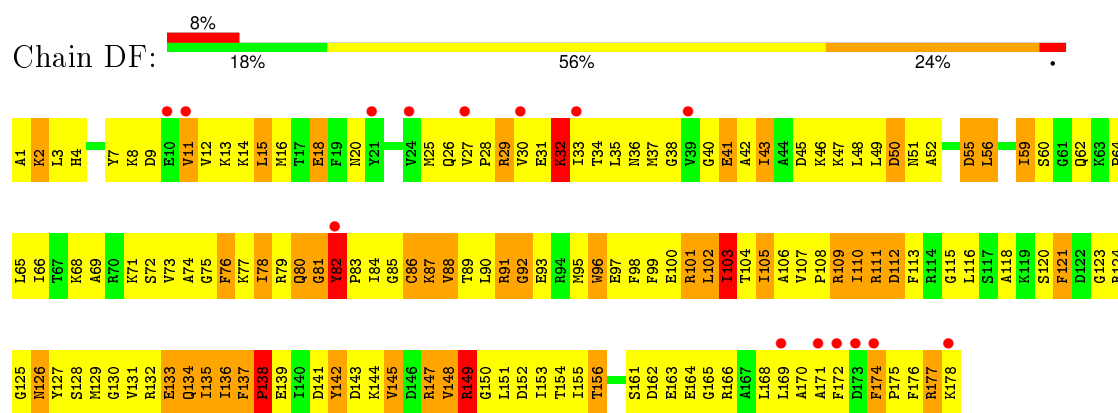
• Molecule 46: 50S ribosomal protein L24



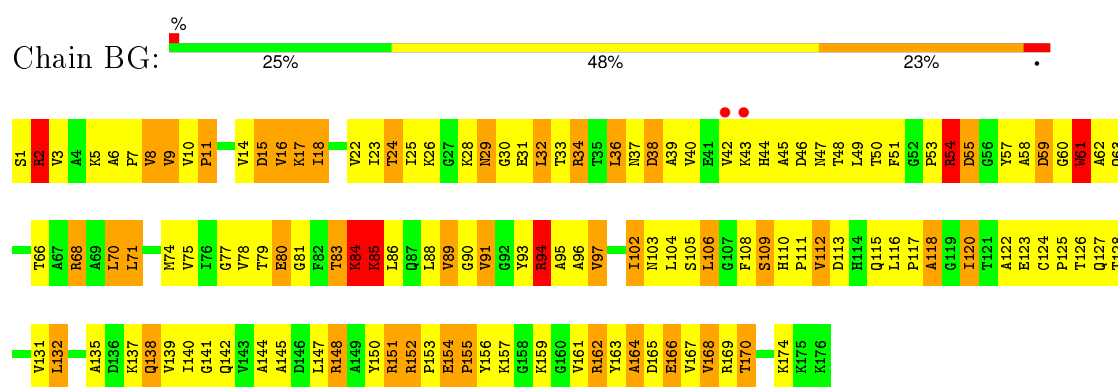
• Molecule 47: 50S ribosomal protein L5



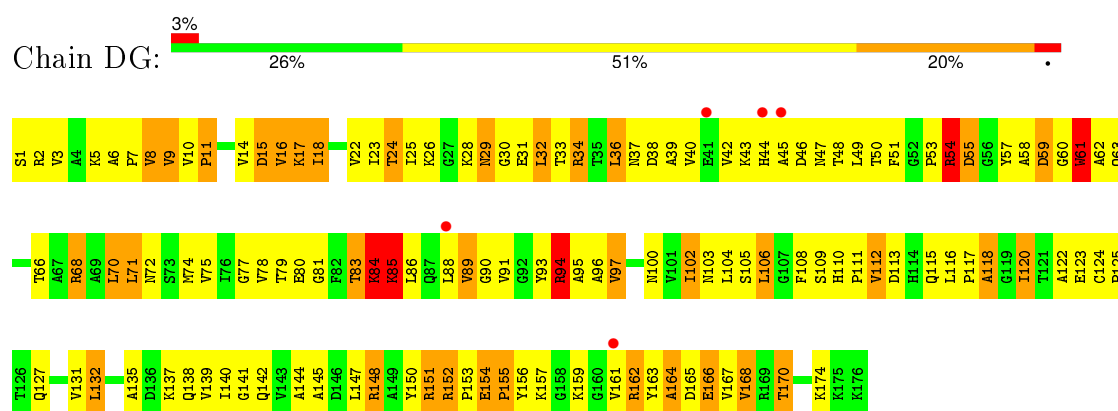
- Molecule 47: 50S ribosomal protein L5



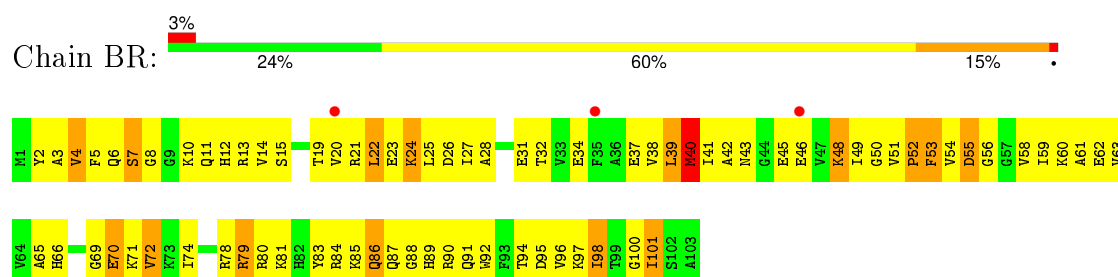
- Molecule 48: 50S ribosomal protein L6



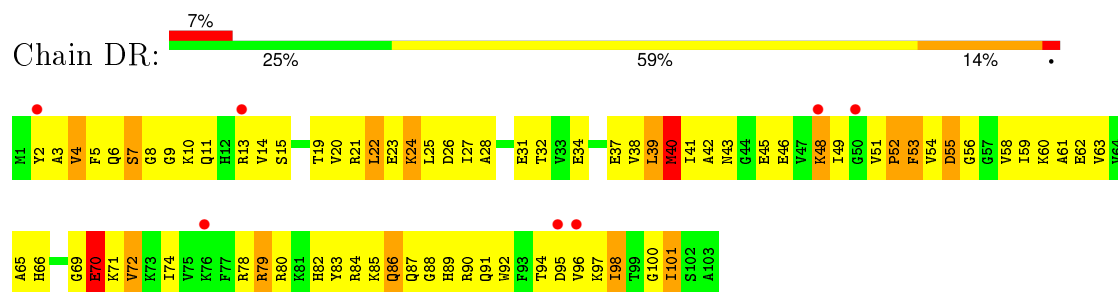
- Molecule 48: 50S ribosomal protein L6



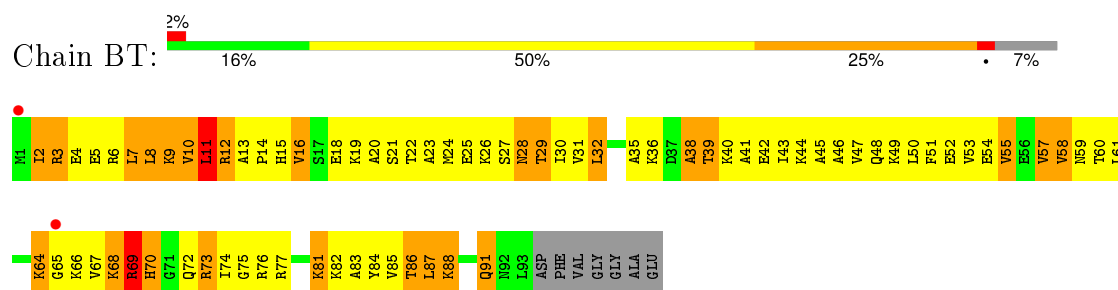
- Molecule 49: 50S ribosomal protein L21



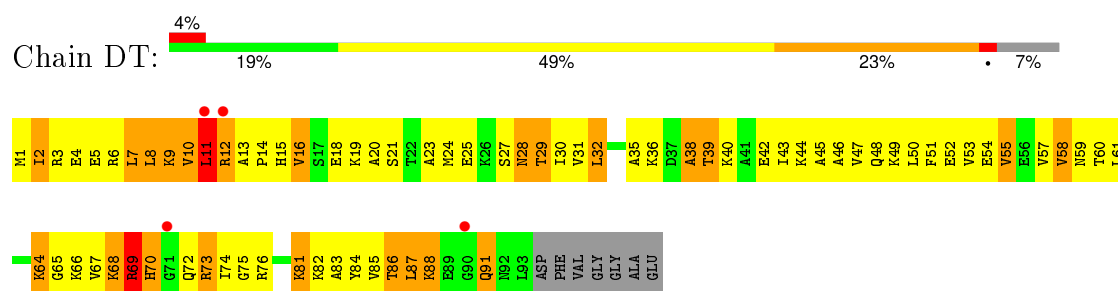
- Molecule 49: 50S ribosomal protein L21



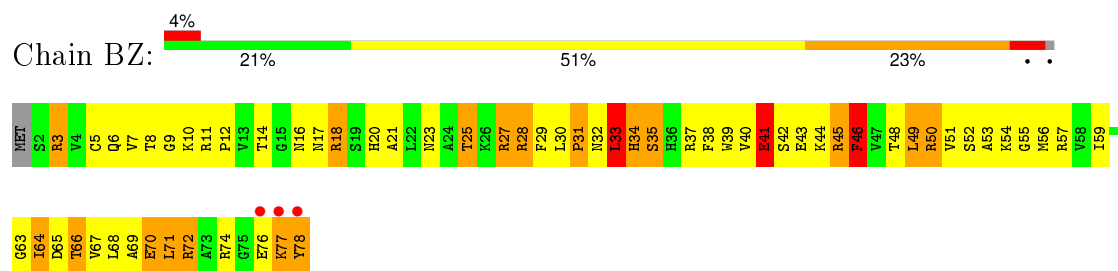
- Molecule 50: 50S ribosomal protein L23



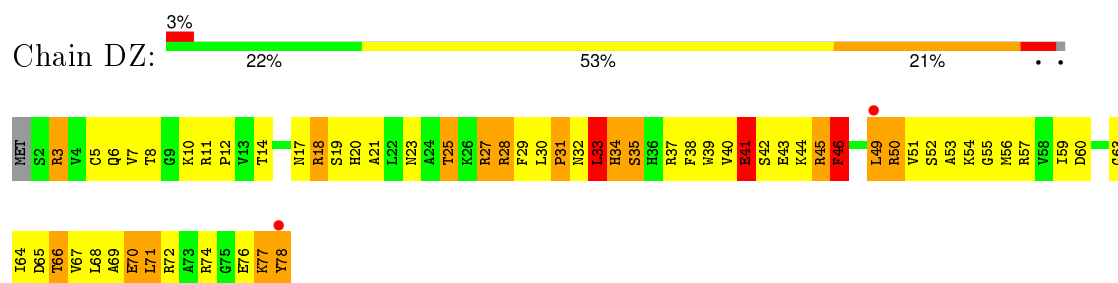
- Molecule 50: 50S ribosomal protein L23



- Molecule 51: 50S ribosomal protein L28

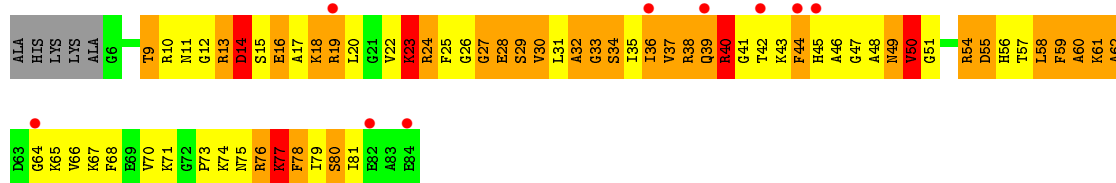


- Molecule 51: 50S ribosomal protein L28




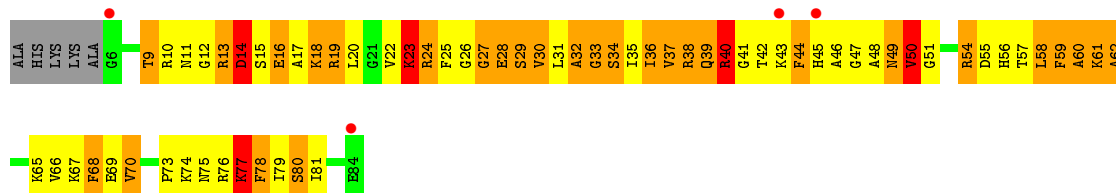
- Molecule 52: 50S ribosomal protein L27

Chain BW: 



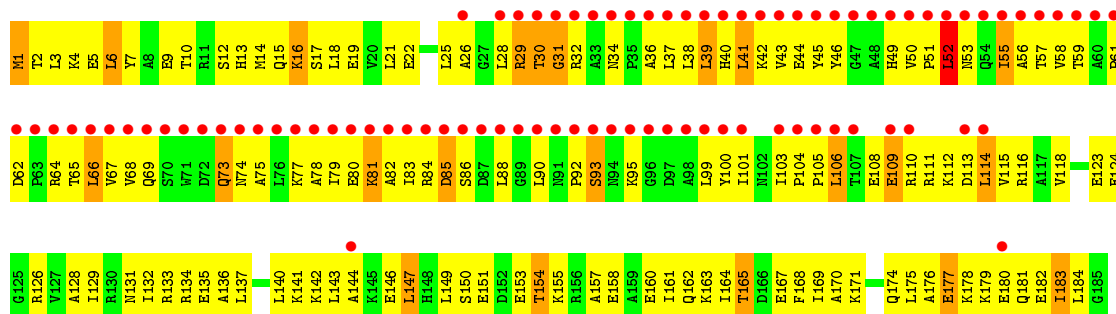
- Molecule 52: 50S ribosomal protein L27

Chain DW: 




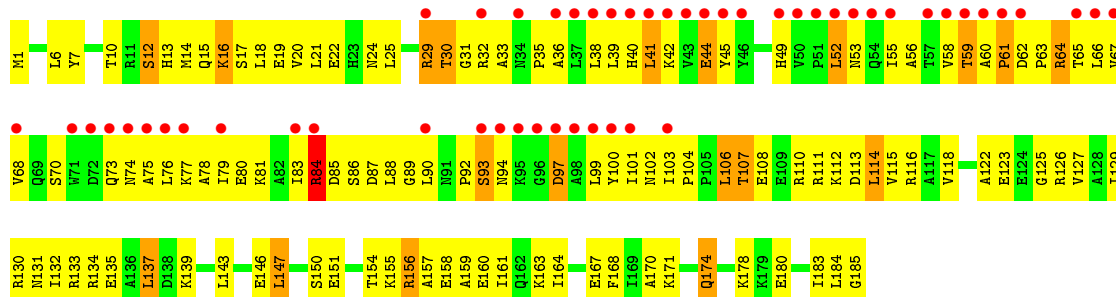
- Molecule 53: 50S ribosomal protein RRF

Chain B6: 



- Molecule 53: 50S ribosomal protein RRF

Chain D6: 



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 – 4.00 138.07 – 4.15	Depositor EDS
% Data completeness (in resolution range)	87.4 (40.00-4.00) 87.4 (138.07-4.15)	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 0.237 , 0.275	Depositor DCC
R_{free} test set	18859 reflections (5.19%)	DCC
Wilson B-factor (Å ²)	133.1	Xtriage
Anisotropy	0.323	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.23 , 74.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 382905 reflections	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, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	3/36762 (0.0%)	0.78	21/57350 (0.0%)
1	CA	0.29	4/36762 (0.0%)	0.78	22/57350 (0.0%)
2	AC	0.23	0/1651	0.44	0/2225
2	CC	0.23	0/1651	0.44	0/2225
3	AD	0.23	0/1665	0.44	0/2227
3	CD	0.23	0/1665	0.44	0/2227
4	AE	0.23	0/1118	0.46	0/1504
4	CE	0.23	0/1118	0.46	0/1504
5	AF	0.24	0/835	0.45	0/1128
5	CF	0.24	0/835	0.45	0/1128
6	AG	0.23	0/1187	0.46	0/1591
6	CG	0.23	0/1211	0.46	0/1624
7	AH	0.23	0/989	0.44	0/1326
7	CH	0.23	0/989	0.44	0/1326
8	AI	0.24	0/1034	0.46	0/1375
8	CI	0.24	0/1033	0.46	0/1375
9	AJ	0.22	0/796	0.48	0/1077
9	CJ	0.22	0/796	0.48	0/1077
10	AK	0.24	0/893	0.46	0/1205
10	CK	0.24	0/893	0.46	0/1205
11	AL	0.22	0/969	0.50	0/1300
11	CL	0.22	0/969	0.50	0/1300
12	AM	0.21	0/892	0.46	0/1193
12	CM	0.21	0/884	0.46	0/1181
13	AN	0.24	0/785	0.45	0/1043
13	CN	0.24	0/785	0.45	0/1043
14	AO	0.23	0/722	0.47	0/964
14	CO	0.23	0/722	0.47	0/964
15	AP	0.25	0/659	0.46	0/884
15	CP	0.25	0/648	0.47	0/870
16	AQ	0.24	0/657	0.47	0/881
16	CQ	0.24	0/666	0.47	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.23	0/462	0.46	0/621
17	CR	0.23	0/462	0.46	0/621
18	AS	0.25	0/652	0.47	0/877
18	CS	0.25	0/660	0.48	0/888
19	AT	0.23	0/671	0.39	0/888
19	CT	0.23	0/671	0.39	0/888
20	AB	0.25	0/1735	0.45	0/2338
20	CB	0.25	0/1735	0.45	0/2338
21	AU	0.26	0/430	0.48	0/570
21	CU	0.26	0/430	0.48	0/570
22	BA	0.28	0/2803	0.76	1/4371 (0.0%)
22	DA	0.28	0/2803	0.76	0/4371
23	BB	0.28	6/68314 (0.0%)	0.78	48/106569 (0.0%)
23	DB	0.30	6/68314 (0.0%)	0.79	48/106569 (0.0%)
24	BI	0.24	0/1046	0.47	0/1410
24	DI	0.25	0/1046	0.48	0/1410
25	BC	0.22	0/2121	0.48	0/2852
25	DC	0.22	0/2121	0.48	0/2852
26	BD	0.24	0/1586	0.49	0/2134
26	DD	0.24	0/1586	0.49	0/2134
27	BK	0.24	0/939	0.55	0/1258
27	DK	0.24	0/939	0.55	0/1258
28	BP	0.24	0/929	0.51	0/1242
28	DP	0.24	0/929	0.51	0/1242
29	BE	0.24	0/1571	0.51	0/2113
29	DE	0.24	0/1571	0.51	0/2113
30	BY	0.23	0/453	0.49	0/605
30	DY	0.23	0/453	0.49	0/605
31	B0	0.22	0/450	0.55	0/599
31	D0	0.23	0/450	0.55	0/599
32	B4	0.23	0/303	0.47	0/397
32	D4	0.23	0/303	0.47	0/397
33	B1	0.27	0/416	0.49	0/554
33	D1	0.27	0/416	0.49	0/554
34	B3	0.24	0/513	0.48	0/676
34	D3	0.24	0/513	0.48	0/676
35	BV	0.25	0/766	0.43	0/1025
35	DV	0.25	0/766	0.43	0/1025
36	B2	0.25	0/380	0.48	0/498
36	D2	0.25	0/380	0.48	0/498
37	BL	0.23	0/1054	0.48	0/1403
37	DL	0.23	0/1054	0.48	0/1403
38	BM	0.25	0/1093	0.48	0/1460

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DM	0.25	0/1093	0.48	0/1460
39	BX	0.24	0/510	0.53	0/677
39	DX	0.24	0/510	0.53	0/677
40	BH	0.25	0/1122	0.48	0/1515
40	DH	0.25	0/1122	0.48	0/1515
41	BJ	0.24	0/1152	0.48	0/1551
41	DJ	0.23	0/1152	0.48	0/1551
42	BN	0.24	0/973	0.51	0/1301
42	DN	0.24	0/973	0.51	0/1301
43	BO	0.23	0/902	0.49	0/1209
43	DO	0.23	0/902	0.49	0/1209
44	BQ	0.25	0/960	0.49	0/1278
44	DQ	0.26	0/960	0.49	0/1278
45	BS	0.22	0/864	0.52	0/1156
45	DS	0.22	0/864	0.52	0/1156
46	BU	0.25	0/787	0.47	0/1051
46	DU	0.25	0/787	0.47	0/1051
47	BF	0.26	0/1444	0.52	0/1937
47	DF	0.26	0/1444	0.52	0/1937
48	BG	0.23	0/1343	0.47	0/1816
48	DG	0.23	0/1343	0.47	0/1816
49	BR	0.25	0/829	0.50	0/1107
49	DR	0.25	0/829	0.50	0/1107
50	BT	0.23	0/744	0.55	0/994
50	DT	0.22	0/744	0.55	0/994
51	BZ	0.25	0/635	0.51	0/848
51	DZ	0.25	0/635	0.52	0/848
52	BW	0.28	0/603	0.51	0/797
52	DW	0.28	0/603	0.51	0/797
53	B6	0.23	0/1497	0.52	1/2017 (0.0%)
53	D6	0.30	0/1497	0.58	1/2017 (0.0%)
All	All	0.28	19/309353 (0.0%)	0.71	142/462003 (0.0%)

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 (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-16.56	1.26	1.41
23	DB	1086	A	C5-C6	-16.53	1.26	1.41
23	DB	1088	A	C6-N1	-10.57	1.28	1.35
23	BB	1088	A	C6-N1	-10.52	1.28	1.35
1	CA	1213	A	P-OP1	-9.61	1.32	1.49
1	AA	1213	A	P-OP2	-9.47	1.32	1.49
23	BB	1060	U	C2-N3	7.84	1.43	1.37
23	DB	1060	U	C2-N3	7.78	1.43	1.37
1	CA	1125	U	P-OP1	-7.16	1.36	1.49
1	AA	93	U	C4'-C3'	-7.06	1.45	1.53
23	DB	1086	A	N7-C5	-6.75	1.35	1.39
23	BB	1086	A	N7-C5	-6.61	1.35	1.39
23	BB	1086	A	N3-C4	-6.44	1.30	1.34
23	DB	2318	G	O3'-P	-6.33	1.53	1.61
23	DB	1086	A	N3-C4	-5.95	1.31	1.34
1	CA	462	G	C4'-C3'	-5.46	1.47	1.52
1	AA	495	A	N3-C4	-5.07	1.31	1.34
1	CA	495	A	N3-C4	-5.06	1.31	1.34
23	BB	2144	G	C4'-C3'	-5.04	1.47	1.52

All (142) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1213	A	O5'-P-OP1	-31.90	72.42	110.70
1	AA	1213	A	O5'-P-OP2	-30.12	74.56	110.70
23	DB	2204	G	O5'-P-OP1	-29.74	75.02	110.70
23	BB	2204	G	O5'-P-OP2	-28.90	76.02	110.70
23	BB	2791	G	O5'-P-OP1	-28.07	77.02	110.70
23	DB	2791	G	O5'-P-OP2	-27.84	77.29	110.70
1	CA	1124	G	OP1-P-O3'	-20.02	61.16	105.20
23	BB	2204	G	O5'-P-OP1	18.05	132.37	110.70
23	BB	2791	G	O5'-P-OP2	17.97	132.26	110.70
23	DB	2791	G	O5'-P-OP1	17.87	132.15	110.70
23	DB	2204	G	O5'-P-OP2	17.66	131.89	110.70
1	CA	1125	U	O5'-P-OP1	-16.83	90.51	110.70
23	BB	2790	U	OP1-P-O3'	14.57	137.26	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	2790	U	OP2-P-O3'	14.53	137.17	105.20
23	DB	2203	U	OP1-P-O3'	14.37	136.82	105.20
23	BB	2203	U	OP2-P-O3'	14.20	136.44	105.20
1	AA	1124	G	OP1-P-O3'	-11.49	79.92	105.20
1	CA	1213	A	O5'-P-OP2	9.80	122.46	110.70
1	CA	1125	U	O5'-P-OP2	9.67	122.31	110.70
1	AA	1213	A	O5'-P-OP1	9.42	122.00	110.70
23	DB	2272	U	C5-C4-O4	-9.11	120.43	125.90
23	BB	1552	A	N9-C1'-C2'	-9.02	102.08	112.00
23	DB	1552	A	N9-C1'-C2'	-8.70	102.43	112.00
1	CA	366	A	C2'-C3'-O3'	8.62	128.47	109.50
1	AA	366	A	C2'-C3'-O3'	8.60	128.41	109.50
23	BB	2272	U	C5-C4-O4	-8.59	120.74	125.90
23	DB	1088	A	N1-C6-N6	-8.31	113.61	118.60
23	BB	1088	A	N1-C6-N6	-8.22	113.67	118.60
1	CA	765	G	N9-C1'-C2'	-7.94	103.26	112.00
1	AA	1124	G	OP2-P-O3'	7.94	122.66	105.20
1	AA	765	G	N9-C1'-C2'	-7.91	103.30	112.00
1	CA	576	C	O5'-P-OP1	-7.83	98.65	105.70
1	CA	1124	G	OP2-P-O3'	7.54	121.78	105.20
1	CA	1212	U	OP2-P-O3'	7.43	121.56	105.20
23	BB	1439	A	N9-C1'-C2'	-7.36	103.90	112.00
1	AA	1212	U	OP1-P-O3'	7.34	121.35	105.20
23	DB	1060	U	C5-C4-O4	-7.32	121.51	125.90
23	DB	1350	C	C5'-C4'-C3'	-7.24	104.42	116.00
23	BB	1060	U	C5-C4-O4	-7.17	121.60	125.90
23	BB	1086	A	C4-C5-C6	7.09	120.54	117.00
23	DB	2733	A	N9-C1'-C2'	-7.02	104.28	112.00
23	DB	1086	A	C4-C5-C6	6.93	120.47	117.00
23	DB	1439	A	N9-C1'-C2'	-6.91	104.39	112.00
23	BB	1126	A	C5'-C4'-C3'	-6.52	105.56	116.00
1	AA	1409	C	C5'-C4'-C3'	-6.52	105.58	116.00
23	BB	2283	C	O5'-P-OP2	-6.43	99.91	105.70
23	BB	2733	A	N9-C1'-C2'	-6.43	104.93	112.00
23	BB	1088	A	C5-C6-N6	6.42	128.84	123.70
23	DB	1088	A	C5-C6-N6	6.41	128.83	123.70
23	BB	1086	A	C6-C5-N7	-6.30	127.89	132.30
1	CA	1424	U	C5'-C4'-C3'	-6.30	105.92	116.00
23	DB	1086	A	C6-C5-N7	-6.30	127.89	132.30
53	D6	29	ARG	NE-CZ-NH2	-6.26	117.17	120.30
1	CA	1124	G	O3'-P-O5'	6.15	115.68	104.00
23	BB	1552	A	C4'-C3'-O3'	6.14	125.29	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2790	U	O3'-P-O5'	-6.11	92.38	104.00
23	DB	1109	C	C5'-C4'-C3'	-6.08	106.28	116.00
23	DB	1126	A	C5'-C4'-O4'	6.04	116.34	109.10
23	DB	2619	C	C5'-C4'-C3'	-6.02	106.36	116.00
23	BB	2480	C	C5'-C4'-C3'	5.99	125.59	116.00
23	DB	1552	A	C4'-C3'-O3'	5.95	124.90	113.00
1	AA	328	C	C2'-C3'-O3'	5.94	123.21	113.70
1	CA	328	C	C2'-C3'-O3'	5.94	123.21	113.70
1	AA	1124	G	O3'-P-O5'	5.94	115.28	104.00
23	DB	2480	C	C5'-C4'-C3'	5.92	125.47	116.00
23	BB	2336	A	C4'-C3'-O3'	-5.88	97.05	109.40
23	DB	2790	U	O3'-P-O5'	-5.85	92.89	104.00
23	DB	2203	U	O3'-P-O5'	-5.84	92.89	104.00
1	AA	79	G	C4'-C3'-O3'	5.84	124.68	113.00
53	B6	31	GLY	N-CA-C	-5.83	98.51	113.10
23	DB	2322	A	OP2-P-O3'	5.83	118.03	105.20
1	CA	1032	G	C5'-C4'-C3'	-5.82	106.69	116.00
1	CA	40	C	C5'-C4'-C3'	-5.79	106.74	116.00
23	BB	690	G	C5'-C4'-C3'	-5.77	106.76	116.00
23	DB	101	A	C4'-C3'-O3'	-5.77	97.28	109.40
1	CA	1432	G	N9-C1'-C2'	-5.74	105.69	112.00
23	DB	1060	U	N1-C2-O2	-5.74	118.78	122.80
1	AA	1301	U	N1-C1'-C2'	5.73	121.45	114.00
1	CA	1301	U	N1-C1'-C2'	5.71	121.43	114.00
1	AA	1432	G	N9-C1'-C2'	-5.71	105.72	112.00
23	DB	2894	G	N9-C1'-C2'	-5.70	105.73	112.00
23	DB	745	G	C5'-C4'-C3'	-5.68	106.91	116.00
23	BB	1060	U	N1-C2-O2	-5.68	118.82	122.80
23	DB	353	C	C5'-C4'-C3'	-5.67	106.93	116.00
1	AA	438	U	N1-C1'-C2'	-5.66	105.77	112.00
1	CA	438	U	N1-C1'-C2'	-5.65	105.78	112.00
23	DB	2267	A	O4'-C1'-N9	-5.62	103.70	108.20
23	DB	461	C	C5'-C4'-C3'	-5.55	107.12	116.00
23	BB	2266	A	C5'-C4'-C3'	5.55	124.88	116.00
23	BB	2267	A	O4'-C1'-N9	-5.53	103.77	108.20
23	DB	2267	A	C5-C6-N6	-5.53	119.28	123.70
23	BB	1350	C	C5'-C4'-C3'	-5.51	107.18	116.00
23	DB	2267	A	C4-N9-C1'	5.50	136.20	126.30
23	DB	2272	U	N1-C1'-C2'	-5.50	105.95	112.00
23	BB	2203	U	O3'-P-O5'	-5.49	93.57	104.00
23	BB	573	U	C4'-C3'-O3'	-5.48	97.89	109.40
1	CA	166	U	C5'-C4'-C3'	-5.48	107.23	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	28	C	C5'-C4'-C3'	-5.46	107.26	116.00
23	DB	1086	A	C2-N3-C4	-5.46	107.87	110.60
23	BB	1086	A	C2-N3-C4	-5.44	107.88	110.60
23	DB	2267	A	C8-N9-C1'	-5.43	117.92	127.70
23	DB	1519	G	C5'-C4'-C3'	-5.41	107.34	116.00
23	DB	690	G	C5'-C4'-C3'	-5.40	107.37	116.00
1	CA	1534	A	C2'-C3'-O3'	-5.39	97.65	109.50
23	BB	560	C	C5'-C4'-C3'	-5.38	107.38	116.00
23	DB	1060	U	N3-C2-O2	5.37	125.96	122.20
23	BB	2894	G	N9-C1'-C2'	-5.36	106.11	112.00
23	BB	1060	U	N3-C2-O2	5.36	125.95	122.20
23	DB	1047	G	C5'-C4'-C3'	-5.34	107.45	116.00
23	BB	2267	A	C4-N9-C1'	5.34	135.91	126.30
1	AA	101	A	C5'-C4'-C3'	-5.33	107.47	116.00
23	BB	2267	A	C8-N9-C1'	-5.30	118.16	127.70
23	BB	2760	C	C5'-C4'-C3'	-5.30	107.52	116.00
23	BB	2585	U	C4'-C3'-O3'	-5.29	98.29	109.40
1	CA	1250	A	C5'-C4'-C3'	5.24	124.39	116.00
23	DB	2096	C	C5'-C4'-C3'	-5.24	107.62	116.00
23	DB	1170	C	C5'-C4'-C3'	-5.22	107.64	116.00
23	DB	1592	C	C5'-C4'-C3'	5.21	124.34	116.00
1	AA	40	C	C5'-C4'-C3'	-5.21	107.66	116.00
23	BB	2272	U	N1-C1'-C2'	-5.21	106.27	112.00
23	DB	2585	U	C4'-C3'-O3'	-5.20	98.48	109.40
23	DB	1397	U	C5'-C4'-C3'	-5.18	107.71	116.00
23	DB	2272	U	N3-C4-O4	-5.16	115.79	119.40
23	BB	1584	U	C4'-C3'-O3'	5.15	123.30	113.00
23	BB	1869	G	N9-C1'-C2'	-5.14	106.35	112.00
1	AA	81	A	C1'-O4'-C4'	-5.12	105.81	109.90
1	AA	576	C	C5'-C4'-O4'	5.11	115.23	109.10
23	BB	1054	A	N9-C1'-C2'	-5.11	106.38	112.00
1	CA	1043	G	N9-C1'-C2'	5.10	120.63	114.00
23	BB	1337	G	C5'-C4'-C3'	-5.10	107.85	116.00
23	DB	1869	G	N9-C1'-C2'	-5.07	106.42	112.00
1	AA	1043	G	N9-C1'-C2'	5.07	120.58	114.00
23	BB	2267	A	C5-C6-N6	-5.06	119.65	123.70
23	BB	479	A	C4'-C3'-O3'	-5.06	98.78	109.40
1	AA	81	A	C5'-C4'-C3'	5.06	124.09	116.00
23	BB	461	C	C5'-C4'-C3'	-5.06	107.91	116.00
1	AA	1032	G	C5'-C4'-C3'	-5.04	107.93	116.00
23	BB	745	G	C5'-C4'-C3'	-5.04	107.93	116.00
23	BB	2619	C	C5'-C4'-C3'	-5.03	107.96	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	1314	C	C5'-C4'-C3'	-5.02	107.96	116.00
23	BB	2456	C	C5'-C4'-C3'	-5.02	107.97	116.00
23	DB	2336	A	C4'-C3'-O3'	-5.01	98.88	109.40

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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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
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	1290	0
1	CA	32831	0	16521	1350	0
2	AC	1624	0	1699	140	0
2	CC	1624	0	1699	146	0
3	AD	1643	0	1710	174	0
3	CD	1643	0	1710	170	0
4	AE	1105	0	1148	95	0
4	CE	1105	0	1148	96	0
5	AF	817	0	808	96	0
5	CF	817	0	808	94	0
6	AG	1174	0	1230	112	0
6	CG	1196	0	1246	106	0
7	AH	979	0	1034	95	0
7	CH	979	0	1034	96	0
8	AI	1022	0	1070	149	0
8	CI	1021	0	1070	149	0
9	AJ	786	0	828	77	0
9	CJ	786	0	828	80	0
10	AK	877	0	887	111	0
10	CK	877	0	887	114	0
11	AL	955	0	1019	92	0
11	CL	955	0	1019	91	0
12	AM	883	0	944	119	0
12	CM	876	0	937	120	0
13	AN	774	0	827	121	0
13	CN	774	0	827	131	0
14	AO	714	0	734	60	0
14	CO	714	0	734	54	0
15	AP	649	0	666	56	0
15	CP	638	0	656	57	0
16	AQ	648	0	691	71	0
16	CQ	657	0	702	67	0
17	AR	455	0	478	51	0
17	CR	455	0	478	56	0
18	AS	637	0	665	85	0
18	CS	644	0	675	87	0
19	AT	665	0	714	68	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CT	665	0	714	70	0
20	AB	1704	0	1732	220	0
20	CB	1704	0	1732	211	0
21	AU	425	0	449	79	0
21	CU	425	0	449	89	0
22	BA	2507	0	1270	106	0
22	DA	2507	0	1270	108	0
23	BB	60995	0	30678	2536	0
23	DB	60995	0	30678	2543	0
24	BI	1032	0	1088	119	0
24	DI	1032	0	1088	181	0
25	BC	2082	0	2157	239	0
25	DC	2082	0	2157	241	0
26	BD	1565	0	1616	206	0
26	DD	1565	0	1616	216	0
27	BK	930	0	1000	122	0
27	DK	930	0	1000	122	0
28	BP	917	0	965	102	0
28	DP	917	0	965	108	0
29	BE	1552	0	1619	194	0
29	DE	1552	0	1619	181	0
30	BY	449	0	491	49	0
30	DY	449	0	491	55	0
31	B0	444	0	461	49	0
31	D0	444	0	461	47	0
32	B4	302	0	340	38	0
32	D4	302	0	340	44	0
33	B1	409	0	440	58	0
33	D1	409	0	440	54	0
34	B3	504	0	574	51	0
34	D3	504	0	574	48	0
35	BV	753	0	780	97	0
35	DV	753	0	780	102	0
36	B2	377	0	418	38	0
36	D2	377	0	418	38	0
37	BL	1045	0	1117	148	0
37	DL	1045	0	1117	153	0
38	BM	1074	0	1157	129	0
38	DM	1074	0	1157	121	0
39	BX	509	0	543	55	0
39	DX	509	0	543	60	0
40	BH	1111	0	1148	186	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DH	1111	0	1148	158	0
41	BJ	1129	0	1162	136	0
41	DJ	1129	0	1162	137	0
42	BN	960	0	1000	130	0
42	DN	960	0	1000	129	0
43	BO	892	0	923	94	0
43	DO	892	0	923	96	0
44	BQ	947	0	1022	171	0
44	DQ	947	0	1022	178	0
45	BS	857	0	922	101	0
45	DS	857	0	922	101	0
46	BU	779	0	834	114	0
46	DU	779	0	834	109	0
47	BF	1420	0	1460	223	0
47	DF	1420	0	1460	216	0
48	BG	1323	0	1374	218	0
48	DG	1323	0	1374	195	0
49	BR	816	0	839	113	0
49	DR	816	0	839	128	0
50	BT	738	0	807	125	0
50	DT	738	0	807	121	0
51	BZ	625	0	652	82	0
51	DZ	625	0	652	82	0
52	BW	596	0	610	120	0
52	DW	596	0	610	126	0
53	B6	1478	0	1526	192	0
53	D6	1478	0	1526	150	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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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
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	17818	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 37.

All (17818) 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
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.23	1.10
23:BB:322:A:H2'	29:BE:163:ASN:HD21	1.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.34	1.05
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.39	1.05
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.86	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:HA	1.36	1.04
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.21	1.04
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	1.40	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
21:CU:16:ARG:HE	21:CU:16:ARG:HA	1.23	1.03
1:AA:1125:U:OP1	9:AJ:37:ARG:NH1	1.92	1.03
23:BB:2305:U:H5''	47:BF:130:GLY:HA3	1.41	1.03
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.40	1.03
5:CF:3:HIS:HB2	5:CF:92:THR:HA	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
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.92	1.02
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.24	1.02
1:CA:1532:U:H2'	1:CA:1533:C:H5''	1.42	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
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
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.26	1.01
1:CA:202:G:HO2'	1:CA:468:A:H8	1.01	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
37:BL:124:GLY:N	37:BL:143:GLU:HG3	1.76	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.40	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
1:AA:202:G:HO2'	1:AA:468:A:H8	1.04	0.98
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.42	0.98
21:AU:16:ARG:HE	21:AU:16:ARG:HA	1.25	0.98
37:DL:124:GLY:N	37:DL:143:GLU:HG3	1.76	0.98
52:DW:39:GLN:HE21	52:DW:42:THR:HB	1.24	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
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.44	0.98
40:BH:31:VAL:HB	40:BH:32:PRO:CD	1.93	0.98
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.28	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
23:DB:45:G:H5''	23:DB:46:G:H5'	1.46	0.97
23:BB:877:A:H2'	23:BB:899:A:N1	1.80	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
1:CA:812:G:HO2'	1:CA:813:U:H6	0.98	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
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.45	0.95
18:AS:51:HIS:HA	18:AS:56:HIS:HA	1.48	0.95
48:DG:8:VAL:HG11	48:DG:49:LEU:HB2	1.47	0.95
46:DU:70:ALA:HB1	46:DU:79:ALA:HB3	1.45	0.95
46:BU:70:ALA:HB1	46:BU:79:ALA:HB3	1.47	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
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.29	0.95
53:B6:32:ARG:HB2	53:B6:103:ILE:HG12	1.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.45	0.95
40:DH:7:ASP:HA	40:DH:15:LEU:HD22	1.49	0.95
23:DB:138:U:H4'	23:DB:139:U:H2'	1.45	0.95
53:B6:29:ARG:HH22	53:B6:110:ARG:HD3	1.32	0.94
45:DS:66:ILE:H	45:DS:66:ILE:HD13	1.32	0.94
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.49	0.94
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
53:B6:30:THR:C	53:B6:32:ARG:H	1.69	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
44:DQ:111:LYS:HB2	49:DR:48:LYS:HZ2	1.33	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
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
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
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.33	0.93
30:BY:16:LEU:H	30:BY:16:LEU:HD22	1.34	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
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
1:AA:1086:U:H3	1:AA:1099:G:H22	1.17	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
47:DF:109:ARG:HB3	47:DF:135:ILE:HD13	1.51	0.92
48:BG:34:ARG:HH11	48:BG:34:ARG:H	1.17	0.92
23:BB:2471:A:HO2'	23:BB:2472:G:H8	0.93	0.92
44:DQ:54:ARG:HB3	44:DQ:58:GLN:HE22	1.34	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
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.52	0.92
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.65	0.92
23:DB:161:A:H3'	23:DB:162:U:H5''	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
23:BB:2751:G:H5'	48:BG:2:ARG:HD3	1.52	0.92
10:AK:34:THR:HB	10:AK:40:ALA:HA	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
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.49	0.91
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.50	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
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:DB:1099:G:H8	24:DI:3:LYS:H	1.04	0.91
23:BB:704:G:H2'	23:BB:726:G:H22	1.33	0.91
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.50	0.91
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.52	0.91
12:AM:3:ILE:HG12	12:AM:52:ILE:HD11	1.51	0.91
3:CD:160:LEU:H	3:CD:160:LEU:HD13	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
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
23:BB:161:A:H3'	23:BB:162:U:H5''	1.51	0.91
19:AT:38:ILE:HD11	19:AT:82:ILE:HG22	1.53	0.91
52:BW:50:VAL:HG23	52:BW:61:LYS:HD3	1.52	0.90
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
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.51	0.90
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.52	0.90
32:D4:2:LYS:HD3	32:D4:4:ARG:HE	1.34	0.90
50:DT:38:ALA:HB1	50:DT:43:ILE:HD11	1.52	0.90
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.51	0.90
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.54	0.90
52:DW:50:VAL:HG23	52:DW:61:LYS:HD3	1.53	0.90
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.37	0.90
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.36	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:972:A:H3'	23:DB:973:A:H5''	1.54	0.90
1:AA:812:G:HO2'	1:AA:813:U:H6	0.98	0.90
1:CA:974:A:H4'	1:CA:975:A:H5'	1.54	0.90
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.54	0.90
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.52	0.90
23:BB:2355:G:H4'	52:BW:20:LEU:HD13	1.50	0.90
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.52	0.90
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.35	0.90
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.50	0.89
1:AA:600:A:H5''	7:AH:88:LYS:HD2	1.54	0.89
48:DG:79:THR:HG22	48:DG:80:GLU:HG2	1.55	0.89
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.37	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
23:BB:423:A:H5'	23:BB:424:G:H5'	1.51	0.89
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.54	0.89
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.55	0.89
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.55	0.89
23:DB:1060:U:N3	23:DB:1088:A:N7	2.21	0.89
11:AL:120:ARG:HG2	11:AL:121:PRO:HD2	1.52	0.89
47:DF:163:GLU:HA	47:DF:166:ARG:HD2	1.50	0.89
23:DB:2798:U:H1'	23:DB:2800:A:N6	1.87	0.89
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.55	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
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
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:DB:1099:G:H8	24:DI:3:LYS:CA	1.86	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
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
23:DB:2109:U:H3	23:DB:2180:U:H2'	1.37	0.88
22:DA:2:G:H2'	22:DA:3:C:C6	2.08	0.88
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	1.73	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)
43:BO:3:LYS:H	43:BO:3:LYS:HD3	1.38	0.88
4:AE:156:ARG:HA	4:AE:158:LYS:HZ3	1.34	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
23:BB:972:A:H3'	23:BB:973:A:H5''	1.55	0.88
1:CA:699:C:H2'	1:CA:700:G:H5''	1.53	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
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.55	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
53:D6:38:LEU:HD12	53:D6:58:VAL:HG11	1.53	0.88
8:AI:27:ILE:HG21	8:AI:34:LEU:HD13	1.55	0.88
1:AA:840:C:H2'	1:AA:842:U:H5''	1.54	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
47:DF:135:ILE:HD11	47:DF:137:PHE:HB3	1.55	0.87
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.54	0.87
23:BB:1244:A:H5''	37:BL:8:PRO:HD3	1.56	0.87
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.73	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
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.37	0.87
1:AA:974:A:H4'	1:AA:975:A:H5'	1.53	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
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
1:AA:1144:G:N2	1:AA:1146:A:H62	1.72	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
53:B6:112:LYS:HB3	53:B6:116:ARG:NH2	1.90	0.87
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.87
23:BB:1024:G:H3'	23:BB:1025:G:H5''	1.56	0.87
23:BB:75:G:H4'	39:BX:48:ARG:HH22	1.40	0.87
53:D6:92:PRO:HA	53:D6:101:ILE:HG12	1.56	0.86
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.57	0.86
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:111:LYS:HB2	49:DR:48:LYS:NZ	1.88	0.86
23:BB:141:G:H1	50:BT:2:ILE:HD12	1.39	0.86
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.39	0.86
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.57	0.86
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.54	0.86
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.40	0.86
50:BT:57:VAL:HG22	50:BT: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
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
44:BQ:63:ARG:HH22	44:BQ:96:ASP:HA	1.38	0.86
9:AJ:52:LEU:H	9:AJ:52:LEU:HD12	1.40	0.86
1:AA:93:U:H5''	1:AA:94:G:OP2	1.76	0.86
1:CA:1493:A:H2'	23:DB:1913:A:N6	1.89	0.86
44:BQ:111:LYS:HB2	49:BR:48:LYS:HZ2	1.40	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
53:B6:78:ALA:HA	53:B6:81:LYS:HD2	1.57	0.86
23:BB:2134:A:H2'	23:BB:2135:A:H8	1.38	0.86
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.56	0.86
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.57	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.91	0.86
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.57	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
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.39	0.86
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.75	0.86
3:CD:60:VAL:HB	3:CD:194:ILE:HD11	1.58	0.86
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.09	0.86
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.57	0.86
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.75	0.86
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.41	0.86
47:BF:135:ILE:HD11	47:BF:137:PHE:HB3	1.57	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.41	0.86
29:DE:119:ILE:HD11	29:DE:185:LYS:HE3	1.56	0.86
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.57	0.86
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.41	0.86
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.23	0.86
50:DT:67:VAL:HB	50:DT:76:ARG:HG3	1.57	0.85
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)
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
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.57	0.85
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.24	0.85
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.58	0.85
23:BB:2266:A:H4'	23:BB:2267:A:N7	1.90	0.85
50:BT:67:VAL:HB	50:BT:76:ARG:HG3	1.55	0.85
14:AO:36:ILE:HD11	14:AO:59:MET:HB2	1.57	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
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.59	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
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.42	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
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
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.39	0.85
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.11	0.85
1:CA:1086:U:H3	1:CA:1099:G:H22	1.19	0.85
36:B2:21:ARG:HD2	36:B2:43:THR:HG21	1.58	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
4:CE:156:ARG:HA	4:CE:158:LYS:HZ2	1.39	0.85
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	1.56	0.85
35:BV:70:ILE:HD13	35:BV:71:LYS:H	1.42	0.85
44:DQ:63:ARG:HH22	44:DQ:96:ASP:HA	1.41	0.85
45:BS:66:ILE:HA	45:BS:69:LEU:HD22	1.59	0.85
51:DZ:76:GLU:HG3	51:DZ:77:LYS:H	1.42	0.85
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.77	0.85
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.57	0.85
16:AQ:75:VAL:HG23	16:AQ:76:ARG:H	1.42	0.85
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.77	0.85
23:BB:962:G:H21	23:BB:2250:G:H22	1.25	0.85
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.57	0.85
8:CI:27:ILE:HG21	8:CI:34:LEU:HD13	1.59	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)
29:DE:110:SER:HB3	29:DE:114:ARG:HH12	1.41	0.84
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.58	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
35:DV:70:ILE:HD13	35:DV:71:LYS:H	1.43	0.84
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.57	0.84
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.60	0.84
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.58	0.84
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.43	0.84
51:DZ:38:PHE:HE2	51:DZ:51:VAL:HG21	1.42	0.84
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.57	0.84
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.42	0.84
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.41	0.84
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.60	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
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.60	0.84
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.75	0.84
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.43	0.84
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.42	0.84
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.24	0.84
36:D2:21:ARG:HD2	36:D2:43:THR:HG21	1.59	0.84
24:DI:27:LEU:HD23	24:DI:27:LEU:H	1.42	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
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.59	0.84
45:DS:66:ILE:HA	45:DS:69:LEU:HD22	1.59	0.84
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.42	0.84
23:DB:2109:U:N3	23:DB:2180:U:H2'	1.93	0.84
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.12	0.84
1:AA:699:C:H2'	1:AA:700:G:H5''	1.58	0.84
29:BE:119:ILE:HD11	29:BE:185:LYS:HE3	1.60	0.83
28:DP:56:SER:HB2	28:DP:75:THR:HG21	1.60	0.83
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	1.93	0.83
40:BH:68:ARG:HB2	40:BH:134:VAL:HG11	1.58	0.83
1:AA:1206:G:H4'	2:AC:192:TYR:HA	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.43	0.83
45:DS:36:LEU:HD22	45:DS:36:LEU:H	1.43	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
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
22:DA:98:G:N1	35:DV:14:LYS:HB2	1.94	0.83
45:BS:36:LEU:H	45:BS:36:LEU:HD22	1.43	0.83
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.43	0.83
19:CT:38:ILE:HD11	19:CT:82:ILE:HG22	1.59	0.83
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.41	0.83
29:BE:110:SER:HB3	29:BE:114:ARG:HH12	1.43	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
48:BG:94:ARG:HB2	48:BG:127:GLN:HG2	1.61	0.83
46:BU:95:PHE:HE1	46:BU:102:ILE:HB	1.44	0.83
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.60	0.83
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.61	0.83
23:BB:189:G:H2'	23:BB:205:G:H22	1.44	0.83
23:DB:181:A:H2'	23:DB:182:A:C8	2.13	0.83
23:BB:2144:G:N2	23:BB:2147:A:H4'	1.94	0.83
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.43	0.83
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.41	0.83
8:CI:38:PHE:HZ	8:CI:74:GLN:HB3	1.43	0.83
28:DP:75:THR:HG23	28:DP:76:HIS:H	1.43	0.83
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.83
23:DB:96:C:H4'	39:DX:41:HIS:ND1	1.91	0.83
40:BH:90:LEU:HD21	40:BH:146:VAL:HG21	1.59	0.83
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.60	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
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.59	0.82
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.61	0.82
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.42	0.82
40:BH:121:VAL:HG21	40:BH:128:HIS:HE2	1.44	0.82
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.58	0.82
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	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
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
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.60	0.82
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.62	0.82
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.79	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
44:DQ:87:VAL:HB	49:DR:52:PRO:HG3	1.61	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:H	24:DI:121:ILE:HD13	1.44	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
32:D4:17:VAL:HG12	32:D4:18:LYS:H	1.42	0.82
1:CA:269:C:H2'	1:CA:270:A:C8	2.15	0.82
1:AA:97:G:H2'	1:AA:98:A:O4'	1.80	0.82
20:AB:94:ARG:N	20:AB:94:ARG:HE	1.77	0.82
47:DF:125:GLY:HA2	47:DF:162:ASP:HA	1.61	0.82
23:BB:2502:G:H5'	23:BB:2503:A:H5''	1.58	0.82
23:DB:1098:A:H2'	24:DI:4:VAL:N	1.95	0.82
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.44	0.82
27:DK:41:ILE:HG13	27:DK:42:THR:N	1.95	0.82
23:DB:1099:G:P	24:DI:3:LYS:HA	2.20	0.81
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
51:DZ:30:LEU:HD23	51:DZ:30:LEU:H	1.44	0.81
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.45	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
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.62	0.81
39:BX:12:GLU:HA	39:BX:15:ASN:HD21	1.44	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
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.62	0.81
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.80	0.81
1:AA:973:G:H3'	1:AA:974:A:H5''	1.62	0.81
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:616:A:H3'	23:BB:617:G:H8	1.43	0.81
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.61	0.81
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.28	0.81
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.62	0.81
20:CB:94:ARG:N	20:CB:94:ARG:HE	1.78	0.81
23:DB:404:A:H4'	23:DB:405:U:H5'	1.63	0.81
23:DB:2179:C:H2'	23:DB:2179:C:O2	1.80	0.81
5:AF:62:MET:HG3	5:AF:64:VAL:HG23	1.62	0.81
52:BW:39:GLN:HG2	52:BW:40:ARG:N	1.95	0.81
40:BH:73:ASN:HD22	40:BH:74:ALA:H	1.25	0.81
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.63	0.81
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.63	0.81
53:B6:58:VAL:HG22	53:B6:68:VAL:HG22	1.63	0.81
40:DH:132:PHE:O	40:DH:139:PHE:HA	1.80	0.81
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	1.61	0.81
42:BN:2:ARG:HG2	42:BN:5:LYS:HB2	1.62	0.81
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.61	0.81
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.45	0.81
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	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
28:BP:56:SER:HB2	28:BP:75:THR:HG21	1.63	0.81
18:AS:30:LEU:H	18:AS:48:ILE:HA	1.45	0.81
23:DB:616:A:H3'	23:DB:617:G:H8	1.45	0.81
53:B6:143:LEU:O	53:B6:147:LEU:HG	1.80	0.81
51:BZ:35:SER:HA	51:BZ:50:ARG:HA	1.63	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
16:CQ:79:GLU:HG3	16:CQ:80:LYS:HZ1	1.46	0.81
1:AA:269:C:H2'	1:AA:270:A:C8	2.15	0.81
1:CA:1170:A:H5'	20:CB:138:ARG:HH12	1.46	0.81
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.21	0.80
1:AA:505:G:H5'	1:AA:534:U:H2'	1.63	0.80
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.62	0.80
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	1.64	0.80
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
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.61	0.80
23:BB:129:C:H2'	23:BB:130:C:C6	2.17	0.80
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.46	0.80
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.63	0.80
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.62	0.80
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.16	0.80
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.12	0.80
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.62	0.80
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.46	0.80
1:AA:764:C:H2'	1:AA:765:G:H5'	1.63	0.80
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.81	0.80
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.64	0.80
43:DO:27:VAL:HG21	43:DO:40:ILE:HD12	1.63	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
33:B1:47:ILE:H	33:B1:47:ILE:HD12	1.45	0.80
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.62	0.80
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.62	0.80
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.63	0.80
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.64	0.80
38:DM:134:THR:HG22	38:DM:136:MET:H	1.45	0.80
40:BH:72:ILE:HD12	40:BH:110:VAL:HG11	1.64	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
42:DN:80:PHE:O	42:DN:85:PRO:HD3	1.81	0.80
48:BG:17:LYS:HZ2	48:BG:18:ILE:H	1.29	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
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.64	0.80
23:DB:2579:C:H1'	26:DD:130:GLN:HE22	1.46	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
45:BS:10:ALA:HB3	45:BS:101:SER:HB2	1.64	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
23:BB:1459:G:H4'	23:BB:1461:C:N4	1.96	0.80
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.13	0.79
8:AI:34:LEU:HD21	8:AI:48:ARG:HE	1.48	0.79
50:BT:11:LEU:HD22	50:BT:11:LEU:H	1.47	0.79
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.79	0.79
42:DN:2:ARG:HG2	42:DN:5:LYS:HB2	1.65	0.79
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:H5''	24:DI:3:LYS:N	1.98	0.79
23:BB:181:A:H2'	23:BB:182:A:H8	1.45	0.79
28:BP:75:THR:HG23	28:BP:76:HIS:H	1.44	0.79
10:AK:24:ALA:HA	10:AK:29:THR:HG22	1.64	0.79
23:BB:287:G:H2'	23:BB:288:U:C6	2.17	0.79
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.64	0.79
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.63	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
23:DB:858:G:N3	23:DB:2268:A:H2'	1.97	0.79
50:BT:15:HIS:H	50:BT:32:LEU:HA	1.46	0.79
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	1.96	0.79
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.48	0.79
3:CD:149:LYS:HD3	3:CD:177:MET:HG3	1.65	0.79
34:B3:18:LYS:HD2	34:B3:20:GLY:H	1.47	0.79
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.46	0.79
1:CA:764:C:H2'	1:CA:765:G:H5'	1.65	0.79
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.63	0.79
51:DZ:35:SER:HA	51:DZ:50:ARG:HA	1.62	0.79
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.65	0.79
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.65	0.79
23:DB:2741:A:H2'	23:DB:2742:G:O4'	1.82	0.79
6:AG:142:ARG:HH11	6:AG:142:ARG:HB2	1.47	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
20:AB:156:LEU:HD12	20:AB:156:LEU:H	1.48	0.79
51:BZ:30:LEU:HD23	51:BZ:30:LEU:H	1.46	0.79
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.22	0.79
22:DA:2:G:H2'	22:DA:3:C:H6	1.47	0.79
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.65	0.79
23:BB:1082:U:C4	23:BB:1086:A:C2	2.71	0.79
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.45	0.79
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.65	0.79
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.18	0.79
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.16	0.79
40:DH:86:ASP:HB2	40:DH:89:LYS:HD3	1.65	0.79
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.62	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
11:CL:48:LEU:HD22	53:D6:84:ARG:HH12	1.47	0.79
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:135:U:H2'	23:BB:136:G:C8	2.18	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
48:BG:157:LYS:HB3	48:BG:159:LYS:HG3	1.63	0.79
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.65	0.79
1:CA:1399:C:H4'	1:CA:1400:C:C5'	2.12	0.79
1:AA:376:G:H5''	15:AP:5:ARG:HB2	1.65	0.79
6:AG:148:LYS:HG3	6:AG:151:ALA:HB3	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:364:C:H2'	23:BB:365:U:C6	2.18	0.78
1:AA:116:A:H61	1:AA:313:A:H1'	1.48	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.63	0.78
35:BV:31:TYR:HB3	35:BV:37:PRO:HG3	1.66	0.78
23:BB:163:C:H2'	23:BB:164:C:O4'	1.83	0.78
51:BZ:76:GLU:HG3	51:BZ:77:LYS:N	1.98	0.78
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.63	0.78
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.65	0.78
17:CR:34:GLU:HB2	21:CU:18:PHE:HZ	1.46	0.78
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.66	0.78
25:DC:41:GLY:HA3	25:DC:53:ILE:HG21	1.66	0.78
35:DV:31:TYR:HB3	35:DV:37:PRO:HG3	1.65	0.78
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.47	0.78
48:DG:84:LYS:HB3	48:DG:132:LEU:O	1.83	0.78
23:DB:2346:A:H3'	23:DB:2347:C:H5''	1.63	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
13:AN:63:CYS:HB3	13:AN:67:GLY:N	1.95	0.78
8:CI:34:LEU:HD21	8:CI:48:ARG:HE	1.47	0.78
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.65	0.78
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.47	0.78
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.48	0.78
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.84	0.78
23:BB:2798:U:H1'	23:BB:2800:A:N6	1.99	0.78
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.63	0.78
47:DF:33:ILE:HD13	47:DF:98:PHE:HD2	1.46	0.78
4:AE:81:GLN:H	4:AE:146:MET:HE3	1.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.81	0.78
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.82	0.78
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.64	0.78
48:BG:36:LEU:H	48:BG:36:LEU:HD22	1.48	0.78
23:DB:163:C:H2'	23:DB:164:C:O4'	1.84	0.78
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.66	0.78
1:AA:781:A:H2'	1:AA:782:A:H5'	1.66	0.78
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.29	0.78
1:CA:946:A:H2'	1:CA:947:G:C8	2.19	0.78
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.66	0.78
23:DB:38:A:O2'	29:DE:43:THR:HA	1.84	0.78
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.66	0.78
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.18	0.78
17:AR:34:GLU:HB2	21:AU:18:PHE:HZ	1.47	0.78
35:DV:72:VAL:HG21	35:DV:91:PHE:HB3	1.66	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
22:BA:66:A:H61	22:BA:107:G:H2'	1.49	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
23:DB:1175:A:H3'	23:DB:1176:U:H5'	1.64	0.78
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.48	0.78
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.66	0.78
35:BV:70:ILE:HG12	35:BV:72:VAL:HG13	1.66	0.78
48:BG:84:LYS:HB3	48:BG:132:LEU:O	1.83	0.78
1:AA:946:A:H2'	1:AA:947:G:C8	2.19	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
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.66	0.78
21:AU:43:GLU:HA	21:AU:46:ARG:HD2	1.64	0.78
52:DW:39:GLN:HG2	52:DW:40:ARG:N	1.99	0.78
18:CS:61:VAL:HA	18:CS:65:MET:SD	2.23	0.78
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.24	0.78
23:DB:281:C:H2'	23:DB:282:A:H8	1.47	0.78
23:BB:129:C:H2'	23:BB:130:C:H6	1.48	0.78
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	1.98	0.78
21:CU:43:GLU:HA	21:CU:46:ARG:HD2	1.66	0.77
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.18	0.77
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.18	0.77
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	1.98	0.77
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:181:A:H2'	23:DB:182:A:H8	1.46	0.77
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.46	0.77
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.31	0.77
27:BK:41:ILE:HG13	27:BK:42:THR:N	1.98	0.77
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.24	0.77
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.66	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
13:CN:63:CYS:HB3	13:CN:67:GLY:N	1.99	0.77
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.65	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
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.48	0.77
1:CA:1534:A:H62	21:CU:44:ARG:HH12	1.29	0.77
33:B1:9:LYS:H	33:B1:9:LYS:HD3	1.48	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:376:G:H5''	15:CP:5:ARG:HB2	1.66	0.77
44:BQ:87:VAL:HB	49:BR:52:PRO:HG3	1.64	0.77
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.64	0.77
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.67	0.77
6:CG:142:ARG:HH11	6:CG:142:ARG:HB2	1.50	0.77
34:D3:18:LYS:HD2	34:D3:20:GLY:H	1.50	0.77
23:DB:142:A:H2'	23:DB:143:C:C6	2.19	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
40:BH:90:LEU:HD11	40:BH:146:VAL:HG11	1.66	0.77
28:DP:26:GLU:HB3	28:DP:84:SER:HB3	1.67	0.77
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.48	0.77
23:BB:942:G:H2'	23:BB:943:A:O4'	1.84	0.77
53:B6:106:LEU:H	53:B6:106:LEU:HD23	1.50	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
3:AD:10:LEU:HB3	3:AD:62:ARG:HD3	1.66	0.77
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.66	0.77
39:DX:12:GLU:HA	39:DX:15:ASN:HD21	1.48	0.77
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.67	0.77
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.64	0.77
3:CD:70:GLN:HE22	3:CD:96:ARG:HH12	1.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:98:G:H22	46:BU:6:ARG:NH1	1.82	0.77
22:BA:104:A:H2'	22:BA:105:G:O4'	1.85	0.77
39:BX:37:LEU:HD23	39:BX:39:GLN:H	1.49	0.77
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.66	0.77
42:DN:107:ASN:HD21	45:DS:40:ASN:HD22	1.32	0.77
23:DB:102:U:H2'	39:DX:2:LYS:HE3	1.66	0.77
23:BB:1551:A:H3'	23:BB:1552:A:H5''	1.67	0.77
23:BB:773:U:H5'	23:BB:774:G:OP2	1.85	0.77
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.85	0.77
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.65	0.77
23:DB:1911:U:H2'	23:DB:1918:A:N1	1.99	0.77
1:AA:993:G:H2'	1:AA:995:C:H41	1.50	0.77
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.00	0.77
23:BB:1203:U:H1'	37:BL:4:ASN:ND2	1.95	0.77
37:BL:6:LEU:HD23	37:BL:6:LEU:H	1.46	0.77
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.66	0.77
23:DB:2800:A:H2'	23:DB:2801:G:O4'	1.85	0.77
9:CJ:52:LEU:HG	9:CJ:62:ARG:HE	1.50	0.77
1:CA:1328:C:H5''	12:CM:27:THR:HG21	1.65	0.77
23:DB:1082:U:C4	23:DB:1086:A:C2	2.73	0.77
23:BB:2720:U:H5''	28:BP:52:ARG:NH2	2.00	0.77
23:DB:1551:A:H3'	23:DB:1552:A:H5''	1.67	0.77
23:DB:547:A:H5'	23:DB:548:G:N2	1.99	0.77
10:CK:55:ARG:HH12	10:CK:60:PHE:HD1	1.32	0.77
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.66	0.77
23:BB:2563:U:H2'	23:BB:2565:A:OP2	1.85	0.77
9:CJ:51:VAL:HG23	13:CN:80:ARG:HB2	1.67	0.77
1:AA:239:U:H4'	1:AA:239:U:OP1	1.83	0.77
37:BL:121:THR:HB	37:BL:141:LYS:HD2	1.66	0.77
48:DG:36:LEU:H	48:DG:36:LEU:HD22	1.50	0.77
28:BP:7:LEU:HD12	28:BP:7:LEU:H	1.49	0.77
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.15	0.77
38:BM:43:ALA:O	38:BM:46:ILE:HG12	1.84	0.77
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.66	0.76
50:DT:29:THR:H	50:DT:91:GLN:HE22	1.32	0.76
40:DH:54:LEU:HD22	40:DH:58:LEU:HD11	1.65	0.76
1:CA:269:C:H2'	1:CA:270:A:H8	1.50	0.76
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.20	0.76
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.65	0.76
1:AA:1458:G:H5''	19:AT:25:SER:HB2	1.67	0.76
42:BN:80:PHE:O	42:BN:85:PRO:HD3	1.83	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.84	0.76
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.84	0.76
1:CA:116:A:H61	1:CA:313:A:H1'	1.49	0.76
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.68	0.76
39:DX:37:LEU:HD23	39:DX:39:GLN:H	1.50	0.76
28:DP:7:LEU:HD12	28:DP:7:LEU:H	1.51	0.76
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.14	0.76
1:AA:1328:C:H5''	12:AM:27:THR:HG21	1.68	0.76
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.85	0.76
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.66	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
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.85	0.76
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	1.66	0.76
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.66	0.76
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.49	0.76
1:CA:1226:C:H4'	1:CA:1227:A:OP1	1.84	0.76
28:BP:26:GLU:HB3	28:BP:84:SER:HB3	1.67	0.76
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.85	0.76
3:AD:149:LYS:HD3	3:AD:177:MET:HG3	1.67	0.76
26:BD:106:LYS:HB3	26:BD:206:ALA:N	2.00	0.76
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.67	0.76
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.68	0.76
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.50	0.76
23:BB:90:U:H3'	23:BB:91:A:H5''	1.67	0.76
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.85	0.76
35:DV:70:ILE:HG12	35:DV:72:VAL:HG13	1.68	0.76
38:BM:134:THR:HG22	38:BM:136:MET:H	1.48	0.76
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.21	0.76
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.00	0.76
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.67	0.76
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.49	0.76
1:CA:674:G:H2'	1:CA:675:A:H8	1.49	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.65	0.76
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.50	0.76
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.68	0.76
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.67	0.76
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.66	0.76
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.00	0.76
53:D6:137:LEU:HD13	53:D6:161:ILE:HG21	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.50	0.76
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.66	0.76
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.21	0.76
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.01	0.76
1:CA:1534:A:N6	21:CU:44:ARG:HH22	1.84	0.76
25:BC:132:ARG:HD3	25:BC:166:ARG:HH12	1.51	0.76
10:AK:55:ARG:HH12	10:AK:60:PHE:HD1	1.31	0.76
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.65	0.76
23:BB:590:A:H2'	23:BB:591:U:C6	2.21	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:674:G:H2'	1:AA:675:A:H8	1.51	0.76
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.51	0.76
1:AA:532:A:N6	2:AC:191:THR:HB	2.01	0.76
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.67	0.76
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.50	0.76
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.66	0.76
53:D6:30:THR:C	53:D6:32:ARG:H	1.86	0.76
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.48	0.76
50:DT:11:LEU:H	50:DT:11:LEU:HD22	1.51	0.76
40:BH:130:VAL:HG23	40:BH:142:VAL:HB	1.67	0.76
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.67	0.76
23:DB:590:A:H2'	23:DB:591:U:C6	2.21	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
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.86	0.76
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.67	0.76
1:CA:1534:A:N6	21:CU:44:ARG:HH12	1.83	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
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.67	0.76
23:BB:274:C:H2'	23:BB:275:C:O4'	1.85	0.76
6:AG:21:LEU:H	6:AG:21:LEU:HD23	1.51	0.76
3:CD:155:LYS:HA	3:CD:158:LEU:HD12	1.66	0.76
4:AE:93:VAL:HG13	4:AE:126:ALA:HB2	1.68	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
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.67	0.75
23:BB:79:C:HO2'	23:BB:346:A:H1'	1.48	0.75
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.51	0.75
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.51	0.75
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.26	0.75
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.68	0.75
23:BB:137:U:H2'	23:BB:138:U:O4'	1.87	0.75
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.15	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
6:AG:23:ALA:O	6:AG:26:VAL:HG22	1.87	0.75
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.68	0.75
1:AA:373:A:H1'	1:AA:481:G:N3	2.01	0.75
23:DB:2305:U:H5''	47:DF:130:GLY:HA3	1.67	0.75
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.67	0.75
23:BB:404:A:H4'	23:BB:405:U:H5'	1.69	0.75
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.24	0.75
21:AU:36:PHE:HB3	21:AU:40:PRO:CD	2.14	0.75
53:D6:61:PRO:HG2	53:D6:67:VAL:HG13	1.65	0.75
52:DW:39:GLN:NE2	52:DW:42:THR:HB	2.00	0.75
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.51	0.75
13:CN:26:LEU:HD23	13:CN:27:LYS:H	1.51	0.75
35:BV:72:VAL:HG12	35:BV:93:ARG:HA	1.69	0.75
48:BG:17:LYS:HA	48:BG:17:LYS:HZ3	1.50	0.75
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.68	0.75
51:DZ:76:GLU:HG3	51:DZ:77:LYS:N	1.99	0.75
23:DB:1597:A:H5''	23:DB:1598:A:H5'	1.67	0.75
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.22	0.75
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.67	0.75
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.68	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
22:BA:49:C:H2'	22:BA:50:A:H8	1.51	0.75
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.52	0.75
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.68	0.75
48:DG:115:GLN:H	48:DG:115:GLN:CD	1.89	0.75
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	1.86	0.75
25:DC:132:ARG:HD3	25:DC:166:ARG:HH12	1.48	0.75
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.68	0.75
26:BD:34:VAL:CG1	26:BD:94:GLN:H	1.99	0.75
23:BB:423:A:H5'	23:BB:424:G:C5'	2.16	0.75
10:AK:22:ILE:HD12	10:AK:85:VAL:HG22	1.69	0.75
3:AD:155:LYS:HA	3:AD:158:LEU:HD12	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.22	0.75
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.02	0.75
42:BN:107:ASN:HD21	45:BS:40:ASN:HD22	1.33	0.75
3:AD:70:GLN:HE22	3:AD:96:ARG:HH12	1.34	0.75
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.17	0.75
1:CA:1534:A:H62	21:CU:44:ARG:HH22	1.35	0.75
47:BF:33:ILE:HD13	47:BF:98:PHE:HD2	1.50	0.75
23:DB:878:A:H1'	23:DB:899:A:H62	1.52	0.75
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.32	0.75
51:BZ:49:LEU:HD12	51:BZ:49:LEU:H	1.51	0.75
53:B6:50:VAL:HG21	53:B6:55:ILE:HD13	1.68	0.75
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.67	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: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
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.69	0.75
35:BV:77:VAL:HG23	35:BV:89:ILE:HG23	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
40:BH:68:ARG:HG3	40:BH:134:VAL:HG21	1.68	0.75
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.17	0.75
9:AJ:51:VAL:HG23	13:AN:80:ARG:HB2	1.68	0.75
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.51	0.75
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.69	0.75
38:DM:108:VAL:HG13	38:DM:112:LEU:HB3	1.69	0.75
48:DG:37:ASN:HD21	48:DG:40:VAL:HB	1.52	0.75
44:DQ:29:ARG:HB3	44:DQ:29:ARG:HH11	1.52	0.75
23:BB:728:G:HO2'	23:BB:730:A:H8	1.33	0.75
1:AA:1032:G:N3	1:AA:1032:G:H5''	2.02	0.75
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.69	0.75
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.22	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
49:DR:4:VAL:O	49:DR:38:VAL:HA	1.87	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
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.67	0.75
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.51	0.75
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.69	0.75
23:BB:79:C:O2'	23:BB:346:A:H1'	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:484:G:H4'	1:AA:485:U:O5'	1.87	0.75
37:DL:82:LEU:HD23	37:DL:90:VAL:HG21	1.69	0.75
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.51	0.75
14:CO:36:ILE:HD13	14:CO:59:MET:HE3	1.67	0.75
23:DB:106:C:H2'	23:DB:107:G:H8	1.52	0.75
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
23:DB:580:U:H2'	23:DB:581:C:C6	2.22	0.74
44:DQ:26:ALA:HA	44:DQ:29:ARG:HG3	1.69	0.74
20:CB:96:LEU:HD21	20:CB:146:SER:HB2	1.66	0.74
43:DO:35:ILE:HG13	43:DO:71:ALA:HB2	1.69	0.74
23:BB:1258:U:H4'	29:BE:79:ARG:HD2	1.69	0.74
20:CB:156:LEU:H	20:CB:156:LEU:HD12	1.51	0.74
38:DM:37:GLY:HA3	38:DM:127:LYS:NZ	2.02	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
17:CR:34:GLU:H	17:CR:34:GLU:CD	1.90	0.74
20:AB:96:LEU:HD21	20:AB:146:SER:HB2	1.68	0.74
37:DL:121:THR:HB	37:DL:141:LYS:HD2	1.70	0.74
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.51	0.74
9:AJ:52:LEU:HG	9:AJ:62:ARG:HE	1.52	0.74
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.68	0.74
23:BB:1729:U:H3'	23:BB:1730:C:H4'	1.69	0.74
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.22	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
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.18	0.74
23:BB:1024:G:C3'	23:BB:1025:G:H5''	2.17	0.74
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.51	0.74
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.68	0.74
53:D6:107:THR:O	53:D6:111:ARG:HB2	1.87	0.74
25:BC:41:GLY:HA3	25:BC:53:ILE:HG21	1.68	0.74
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.87	0.74
12:AM:70:ARG:HH22	47:BF:112:ASP:HB3	1.52	0.74
8:AI:21:LYS:HG2	8:AI:22:PRO:HD2	1.69	0.74
35:DV:77:VAL:HG12	38:DM:136:MET:HG2	1.68	0.74
45:DS:27:LYS:O	45:DS:32:ALA:HB2	1.88	0.74
28:DP:50:ARG:HB2	28:DP:56:SER:HB3	1.67	0.74
40:DH:84:ALA:HA	40:DH:90:LEU:HA	1.69	0.74
1:AA:269:C:H2'	1:AA:270:A:H8	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.88	0.74
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.68	0.74
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.36	0.74
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	1.69	0.74
33:D1:9:LYS:H	33:D1:9:LYS:HD3	1.51	0.74
48:BG:115:GLN:CD	48:BG:115:GLN:H	1.90	0.74
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.52	0.74
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.52	0.74
40:DH:54:LEU:HA	40:DH:58:LEU:HG	1.70	0.74
23:BB:280:U:H2'	23:BB:281:C:C6	2.21	0.74
23:DB:2814:A:H4'	31:D0:25:THR:HG21	1.69	0.74
47:DF:49:LEU:HD11	47:DF:66:ILE:HD12	1.68	0.74
23:DB:721:A:H2'	23:DB:722:A:H8	1.53	0.74
2:AC:48:LYS:H	2:AC:48:LYS:HD3	1.52	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
35:DV:42:LEU:H	35:DV:42:LEU:HD23	1.51	0.74
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.69	0.74
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.53	0.74
1:CA:1080:A:H5''	4:CE:20:VAL:HG11	1.70	0.74
47:BF:41:GLU:HB2	47:BF:48:LEU:HD11	1.69	0.74
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.68	0.74
37:BL:135:ILE:HG12	37:BL:140:GLY:HA3	1.69	0.74
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	1.88	0.74
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	2.03	0.74
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.68	0.74
53:B6:108:GLU:O	53:B6:112:LYS:HG3	1.87	0.74
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.68	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
28:BP:50:ARG:HB2	28:BP:56:SER:HB3	1.69	0.74
36:B2:26:ASN:HA	36:B2:29:GLN:HB3	1.69	0.74
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.23	0.74
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.53	0.74
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.68	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
23:BB:580:U:H2'	23:BB:581:C:C6	2.23	0.74
37:BL:121:THR:HG22	37:BL:141:LYS:HB3	1.70	0.74
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.70	0.74
26:BD:148:GLN:HG3	26:BD:152:PRO:HB3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:138:U:O3'	23:DB:139:U:H3'	1.87	0.74
50:DT:55:VAL:HA	50:DT:87:LEU:HA	1.70	0.74
44:DQ:89:ILE:HB	49:DR:11:GLN:HE22	1.51	0.74
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.21	0.74
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.70	0.74
27:DK:107:LEU:HD12	27:DK:107:LEU:H	1.52	0.74
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.70	0.74
37:DL:79:LEU:HB3	37:DL:115:GLU:O	1.88	0.74
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.27	0.74
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.87	0.74
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.70	0.74
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.01	0.74
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.70	0.74
49:DR:7:SER:HB2	49:DR:22:LEU:HB3	1.69	0.74
40:DH:117:LEU:HD12	40:DH:118:PRO:HD2	1.69	0.74
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.70	0.74
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.70	0.74
46:DU:14:THR:HB	46:DU:68:ASN:HB3	1.70	0.74
23:BB:532:A:H4'	23:BB:533:G:C8	2.22	0.74
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.69	0.74
4:CE:143:LEU:O	4:CE:146:MET:HG2	1.88	0.74
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.23	0.74
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.53	0.74
1:AA:21:G:H2'	1:AA:22:G:C8	2.23	0.74
46:DU:11:ILE:HG22	46:DU:70:ALA:HB3	1.70	0.73
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.68	0.73
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.53	0.73
23:BB:140:C:H4'	23:BB:141:G:H21	1.52	0.73
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.88	0.73
4:AE:143:LEU:O	4:AE:146:MET:HG2	1.88	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
37:DL:135:ILE:HG12	37:DL:140:GLY:HA3	1.68	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
1:AA:91:U:H6	1:AA:91:U:O5'	1.69	0.73
29:BE:108:ILE:HD11	29:BE:181:ILE:HB	1.69	0.73
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.03	0.73
28:DP:75:THR:HG23	28:DP:76:HIS:N	2.02	0.73
23:DB:1024:G:C3'	23:DB:1025:G:H5''	2.18	0.73
1:CA:841:C:H3'	1:CA:843:U:OP2	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.68	0.73
29:DE:148:ILE:HD13	29:DE:187:VAL:HG21	1.70	0.73
48:BG:89:VAL:HB	48:BG:159:LYS:HA	1.70	0.73
23:BB:152:A:H2'	23:BB:153:U:C6	2.23	0.73
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.88	0.73
47:BF:115:GLY:HA2	47:BF:177:ARG:HH11	1.52	0.73
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.70	0.73
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.22	0.73
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.70	0.73
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.53	0.73
6:CG:21:LEU:H	6:CG:21:LEU:HD23	1.51	0.73
6:AG:43:TYR:O	6:AG:47:GLU:HG2	1.88	0.73
23:DB:2471:A:HO2'	23:DB:2472:G:H8	1.35	0.73
1:CA:518:C:H2'	1:CA:530:G:C8	2.24	0.73
22:DA:104:A:H2'	22:DA:105:G:O4'	1.87	0.73
1:CA:21:G:H2'	1:CA:22:G:C8	2.23	0.73
29:BE:148:ILE:HD13	29:BE:187:VAL:HG21	1.70	0.73
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.04	0.73
23:DB:137:U:H2'	23:DB:138:U:O4'	1.89	0.73
22:BA:83:G:OP1	30:BY:16:LEU:HD21	1.88	0.73
13:AN:26:LEU:HD23	13:AN:27:LYS:H	1.53	0.73
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.52	0.73
3:AD:70:GLN:HE22	3:AD:96:ARG:NH1	1.85	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
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.23	0.73
5:AF:88:MET:SD	17:AR:64:LEU:HD11	2.28	0.73
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.69	0.73
23:DB:423:A:H5'	23:DB:424:G:H5'	1.71	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
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.69	0.73
11:AL:17:LYS:N	11:AL:17:LYS:HE3	2.03	0.73
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.03	0.73
40:DH:133:GLN:HA	40:DH:138:VAL:O	1.89	0.73
48:BG:51:PHE:HD2	48:BG:68:ARG:HG2	1.53	0.73
23:DB:359:G:H2'	23:DB:360:U:H5'	1.70	0.73
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.71	0.73
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.52	0.73
40:DH:115:VAL:HB	40:DH:132:PHE:CD1	2.22	0.73
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.69	0.73
3:CD:70:GLN:HE22	3:CD:96:ARG:NH1	1.86	0.73
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.69	0.73
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.23	0.73
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.23	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
43:DO:24:THR:HG22	43:DO:42:PRO:HD3	1.71	0.73
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.09	0.73
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.04	0.73
18:CS:43:MET:O	18:CS:46:LEU:HB2	1.89	0.73
18:AS:43:MET:O	18:AS:46:LEU:HB2	1.88	0.73
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.69	0.73
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.54	0.73
19:AT:43:LYS:HA	19:AT:85:LEU:HD11	1.70	0.73
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.54	0.73
51:DZ:49:LEU:H	51:DZ:49:LEU:HD12	1.53	0.73
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.70	0.73
23:DB:495:G:N2	45:DS:61:ASN:HD21	1.85	0.73
38:BM:108:VAL:HG13	38:BM:112:LEU:HB3	1.68	0.73
35:DV:72:VAL:HG12	35:DV:93:ARG:HA	1.70	0.73
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.23	0.73
10:AK:63:GLN:HG3	10:AK:98:ALA:HB2	1.70	0.73
36:D2:26:ASN:HA	36:D2:29:GLN:HB3	1.71	0.73
23:BB:287:G:H2'	23:BB:288:U:H6	1.51	0.73
23:DB:1172:C:H2'	23:DB:1173:U:O4'	1.88	0.73
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.69	0.73
50:DT:73:ARG:HH21	50:DT:73:ARG:HB3	1.53	0.73
2:CC:72:PRO:O	2:CC:76:ILE:HG12	1.89	0.73
48:DG:89:VAL:HB	48:DG:159:LYS:HA	1.70	0.73
28:BP:75:THR:HG23	28:BP:76:HIS:N	2.02	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.68	0.73
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.24	0.73
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.69	0.73
2:AC:65:VAL:HG21	2:AC:90:VAL:HG11	1.71	0.73
46:BU:14:THR:HB	46:BU:68:ASN:HB3	1.70	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
37:BL:79:LEU:HB3	37:BL:115:GLU:O	1.89	0.73
23:DB:286:U:H2'	23:DB:287:G:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.71	0.73
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.89	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
53:B6:32:ARG:HH22	53:B6:88:LEU:HA	1.54	0.73
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.71	0.73
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.19	0.73
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.70	0.73
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.54	0.73
22:DA:49:C:H2'	22:DA:50:A:H8	1.53	0.73
53:D6:106:LEU:HG	53:D6:111:ARG:HD2	1.68	0.73
21:AU:24:LYS:HZ3	21:AU:25:ALA:H	1.33	0.73
1:AA:560:A:H4'	1:AA:561:U:H5''	1.69	0.73
46:DU:81:ARG:H	46:DU:81:ARG:HH21	1.37	0.73
23:BB:321:U:H5''	29:BE:131:THR:HG23	1.71	0.72
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.71	0.72
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.53	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
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.54	0.72
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.24	0.72
34:D3:5:THR:HG22	34:D3:62:PRO:HD2	1.69	0.72
7:CH:17:GLN:HE21	7:CH:62:LEU:HD23	1.54	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
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.54	0.72
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.55	0.72
25:BC:102:TYR:O	25:BC:103:ILE:HG13	1.90	0.72
14:CO:26:GLU:HG3	14:CO:81:LEU:HD12	1.71	0.72
42:DN:83:LEU:HA	42:DN:86:ARG:HG3	1.70	0.72
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.24	0.72
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.70	0.72
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.71	0.72
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.04	0.72
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.10	0.72
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.53	0.72
23:BB:2147:A:OP1	23:BB:2148:G:H1'	1.90	0.72
23:BB:98:G:H22	46:BU:6:ARG:HH12	1.36	0.72
6:CG:43:TYR:O	6:CG:47:GLU:HG2	1.89	0.72
6:CG:57:GLU:CD	6:CG:57:GLU:H	1.93	0.72
2:CC:190:THR:HG22	2:CC:191:THR:H	1.52	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	1.71	0.72
23:DB:773:U:H5'	23:DB:774:G:OP2	1.88	0.72
1:AA:337:G:H2'	1:AA:338:A:C8	2.25	0.72
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.55	0.72
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.71	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
28:BP:4:ILE:C	28:BP:6:GLN:H	1.92	0.72
23:BB:1597:A:H5''	23:BB:1598:A:H5'	1.69	0.72
8:CI:21:LYS:HG2	8:CI:22:PRO:HD2	1.72	0.72
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.04	0.72
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.22	0.72
23:DB:2105:U:H2'	23:DB:2106:U:O4'	1.89	0.72
23:DB:423:A:H5'	23:DB:424:G:C5'	2.19	0.72
1:CA:337:G:H2'	1:CA:338:A:C8	2.24	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:BB:141:G:H5''	23:BB:142:A:C8	2.23	0.72
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	1.72	0.72
23:DB:455:C:N3	23:DB:472:A:H2'	2.04	0.72
23:BB:988:A:P	30:BY:11:SER:HB3	2.29	0.72
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.04	0.72
23:DB:918:A:H2'	23:DB:919:U:H5'	1.69	0.72
2:AC:190:THR:HG22	2:AC:191:THR:H	1.54	0.72
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.72	0.72
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.70	0.72
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.90	0.72
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.25	0.72
36:B2:30:VAL:HA	36:B2:33:ARG:HH22	1.53	0.72
23:BB:1459:G:H4'	23:BB:1461:C:H42	1.54	0.72
42:BN:107:ASN:HD21	45:BS:40:ASN:ND2	1.88	0.72
38:DM:36:VAL:HB	38:DM:127:LYS:O	1.89	0.72
23:DB:1459:G:H4'	23:DB:1461:C:H42	1.52	0.72
16:CQ:20:ILE:HD13	16:CQ:47:ASP:HB3	1.70	0.72
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.55	0.72
23:BB:709:U:H2'	23:BB:710:U:C6	2.24	0.72
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.70	0.72
48:DG:61:TRP:CE3	48:DG:61:TRP:HA	2.24	0.72
51:BZ:17:ASN:HB2	51:BZ:25:THR:HB	1.72	0.72
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.89	0.72
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
10:AK:105:ARG:HH21	21:AU:10:PRO:HB3	1.55	0.72
35:DV:53:LYS:HD3	35:DV:55:GLU:H	1.53	0.72
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.54	0.72
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.71	0.72
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.24	0.72
4:AE:35:LEU:HD21	4:AE:136:VAL:HG11	1.72	0.72
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.71	0.72
23:DB:2531:A:OP2	48:DG:174:LYS:HB3	1.90	0.72
23:DB:721:A:H2'	23:DB:722:A:C8	2.25	0.72
23:BB:2073:C:H5''	25:BC:227:VAL:HG12	1.70	0.72
23:DB:95:A:H4'	39:DX:38:GLN:O	1.90	0.72
20:AB:121:GLN:HE21	20:AB:122:ASP:H	1.38	0.72
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.03	0.72
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.54	0.72
37:BL:103:ILE:H	37:BL:103:ILE:HD12	1.55	0.72
12:AM:70:ARG:HH22	47:BF:112:ASP:CB	2.03	0.72
47:BF:35:LEU:HD13	47:BF:56:LEU:HD11	1.72	0.72
1:CA:812:G:O2'	1:CA:813:U:H6	1.73	0.72
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.71	0.72
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HE3	1.71	0.72
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.54	0.72
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.20	0.72
20:CB:96:LEU:HB2	20:CB:99:MET:HE3	1.71	0.72
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.55	0.72
9:CJ:35:GLN:HG2	9:CJ:77:VAL:HB	1.70	0.72
23:DB:165:A:H2'	23:DB:166:U:H6	1.55	0.72
1:AA:518:C:H2'	1:AA:530:G:C8	2.23	0.72
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.72	0.72
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.90	0.72
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.55	0.72
23:BB:142:A:H2'	23:BB:143:C:C6	2.25	0.72
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.72	0.72
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.72	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
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.24	0.71
23:DB:140:C:H4'	23:DB:141:G:C6	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.55	0.71
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.04	0.71
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.04	0.71
53:B6:113:ASP:HA	53:B6:116:ARG:HD2	1.72	0.71
3:AD:105:GLY:HA3	3:AD:158:LEU:HD23	1.72	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
46:DU:49:PRO:HA	46:DU:53:GLN:HG3	1.73	0.71
23:BB:320:A:H2'	29:BE:131:THR:OG1	1.91	0.71
27:BK:36:GLY:HA2	27:BK:62:VAL:O	1.90	0.71
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.71	0.71
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.71	0.71
48:DG:51:PHE:HD2	48:DG:68:ARG:HG2	1.56	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
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.73	0.71
23:BB:1942:C:C4'	53:B6:133:ARG:HH12	2.03	0.71
12:AM:106:ARG:HD3	12:AM:111:PRO:HA	1.71	0.71
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	1.89	0.71
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.71	0.71
1:CA:239:U:OP1	1:CA:239:U:H4'	1.88	0.71
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.73	0.71
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.25	0.71
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	1.90	0.71
23:DB:709:U:H2'	23:DB:710:U:C6	2.25	0.71
20:AB:67:LEU:HD11	20:AB:150:ILE:HD12	1.71	0.71
32:D4:15:LYS:O	32:D4:16:ILE:HB	1.88	0.71
1:CA:1532:U:C2'	1:CA:1533:C:H5''	2.18	0.71
29:BE:131:THR:HG22	29:BE:160:ALA:HA	1.72	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
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.71
51:DZ:33:LEU:HA	51:DZ:52:SER:HA	1.72	0.71
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.70	0.71
23:BB:783:A:H8	23:BB:784:G:H4'	1.53	0.71
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.89	0.71
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.37	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.25	0.71
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.72	0.71
37:BL:93:ASN:HD22	37:BL:94:THR:H	1.36	0.71
52:BW:18:LYS:HA	52:BW:18:LYS:HE3	1.72	0.71
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.25	0.71
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	1.70	0.71
23:DB:165:A:H2'	23:DB:166:U:C6	2.25	0.71
23:BB:608:A:H2'	23:BB:609:A:C8	2.25	0.71
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.56	0.71
15:CP:74:LEU:O	15:CP:78:VAL:HG12	1.90	0.71
1:CA:560:A:H4'	1:CA:561:U:H5''	1.73	0.71
16:AQ:20:ILE:HD13	16:AQ:47:ASP:HB3	1.73	0.71
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.71	0.71
37:BL:82:LEU:HD23	37:BL:90:VAL:HG21	1.71	0.71
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.89	0.71
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.55	0.71
19:AT:4:LYS:HD2	19:AT:5:SER:N	2.04	0.71
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.04	0.71
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.91	0.71
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.72	0.71
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.25	0.71
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.70	0.71
42:BN:83:LEU:HA	42:BN:86:ARG:HG3	1.73	0.71
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.71	0.71
44:DQ:30:VAL:CG1	44:DQ:33:VAL:HG22	2.21	0.71
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.72	0.71
35:BV:53:LYS:HD3	35:BV:55:GLU:H	1.54	0.71
23:BB:721:A:H2'	23:BB:722:A:H8	1.55	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
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.71
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.05	0.71
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.72	0.71
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.06	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
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.71	0.71
23:DB:608:A:H2'	23:DB:609:A:C8	2.26	0.71
53:B6:123:GLU:HA	53:B6:126:ARG:HH11	1.56	0.71
29:DE:150:THR:HG21	29:DE:153:LEU:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2548:U:H1'	27:BK:23:LYS:NZ	2.04	0.71
52:BW:39:GLN:NE2	52:BW:42:THR:HB	2.03	0.71
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.06	0.71
17:AR:34:GLU:H	17:AR:34:GLU:CD	1.94	0.71
22:BA:49:C:H2'	22:BA:50:A:C8	2.25	0.71
48:BG:61:TRP:CE3	48:BG:61:TRP:HA	2.25	0.71
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.72	0.71
23:DB:1729:U:H3'	23:DB:1730:C:H4'	1.72	0.71
23:DB:289:G:H2'	23:DB:290:U:C6	2.25	0.71
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.56	0.71
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.55	0.71
47:DF:35:LEU:HD13	47:DF:56:LEU:HD11	1.71	0.71
53:D6:81:LYS:C	53:D6:84:ARG:HH21	1.94	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
10:AK:52:ARG:HH12	10:AK:56:LYS:HE3	1.56	0.71
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.26	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
37:DL:93:ASN:HD22	37:DL:94:THR:H	1.36	0.71
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.91	0.71
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.04	0.71
2:CC:59:PRO:HG2	2:CC:62:SER:OG	1.91	0.71
19:CT:68:LYS:HA	19:CT:68:LYS:HE2	1.71	0.71
22:DA:49:C:H2'	22:DA:50:A:C8	2.26	0.71
15:AP:74:LEU:O	15:AP:78:VAL:HG12	1.90	0.71
40:BH:53:GLU:HA	40:BH:57:LYS:HG2	1.73	0.71
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
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.72	0.70
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.71	0.70
1:AA:1313:U:OP2	18:AS:5:LYS:HA	1.91	0.70
23:BB:2814:A:H4'	31:B0:25:THR:HG21	1.73	0.70
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.73	0.70
23:BB:17:G:H2'	23:BB:18:U:C6	2.25	0.70
17:AR:52:ARG:HB3	17:AR:56:ARG:HH21	1.56	0.70
23:BB:743:A:O2'	23:BB:744:U:H5'	1.90	0.70
1:CA:664:G:H22	1:CA:741:G:H1	1.38	0.70
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.25	0.70
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:42:TRP:NE1	5:AF:61:LEU:HD23	2.06	0.70
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.73	0.70
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.70	0.70
8:CI:94:ARG:HA	8:CI:97:LEU:HG	1.72	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:DB:30:G:H2'	23:DB:31:C:C6	2.25	0.70
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.25	0.70
51:DZ:18:ARG:HA	51:DZ:23:ASN:O	1.91	0.70
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.56	0.70
23:BB:2356:U:H5''	52:BW:16:GLU:HG3	1.72	0.70
3:AD:84:ASN:HD22	4:AE:101:GLY:CA	2.04	0.70
3:CD:43:ARG:NH1	3:CD:44:LYS:H	1.86	0.70
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.56	0.70
13:CN:27:LYS:HA	13:CN:31:SER:HB2	1.73	0.70
28:DP:56:SER:HB2	28:DP:75:THR:CG2	2.20	0.70
14:AO:35:GLN:O	14:AO:39:LEU:HB2	1.90	0.70
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.73	0.70
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.06	0.70
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HB	1.72	0.70
53:D6:25:LEU:HD21	53:D6:118:VAL:HG13	1.72	0.70
1:CA:1032:G:H5''	1:CA:1032:G:N3	2.05	0.70
26:BD:53:GLY:HA3	26:BD:77:ARG:HG3	1.70	0.70
23:DB:1099:G:H5''	24:DI:2:LYS:C	2.11	0.70
1:CA:1534:A:H62	21:CU:44:ARG:NH1	1.87	0.70
23:BB:919:U:H2'	23:BB:920:A:C8	2.27	0.70
28:DP:4:ILE:C	28:DP:6:GLN:H	1.93	0.70
19:CT:4:LYS:HD2	19:CT:5:SER:N	2.05	0.70
21:CU:24:LYS:HZ3	21:CU:25:ALA:H	1.39	0.70
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.37	0.70
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.25	0.70
25:DC:144:GLU:HG3	25:DC:151:GLY:N	2.07	0.70
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.73	0.70
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.05	0.70
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.55	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
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.26	0.70
36:D2:30:VAL:HA	36:D2:33:ARG:HH22	1.53	0.70
19:AT:68:LYS:HE2	19:AT:68:LYS:HA	1.73	0.70
39:DX:1:MET:O	39:DX:5:GLU:HG2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.27	0.70
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.56	0.70
23:DB:626:A:H2'	37:DL:78:ARG:NH1	2.05	0.70
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.57	0.70
1:CA:927:G:H4'	1:CA:1503:A:N7	2.06	0.70
23:BB:329:G:H1	46:BU:16:LYS:HG2	1.56	0.70
13:CN:5:MET:O	13:CN:8:ARG:HB2	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
39:BX:1:MET:O	39:BX:5:GLU:HG2	1.91	0.70
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.73	0.70
9:CJ:53:ILE:HG22	9:CJ:61:ALA:HB1	1.74	0.70
1:AA:179:A:H2'	1:AA:180:U:O4'	1.91	0.70
30:BY:6:ILE:HG22	30:BY:56:VAL:HA	1.71	0.70
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.06	0.70
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.92	0.70
20:CB:61:SER:HA	20:CB:224:ARG:HA	1.74	0.70
23:BB:118:A:H5'	23:BB:119:A:H8	1.57	0.70
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.72	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
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
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.57	0.70
33:D1:7:LYS:HD2	34:D3:33:THR:HG21	1.74	0.70
21:CU:36:PHE:HB3	21:CU:40:PRO:CD	2.14	0.70
21:CU:34:ARG:HD3	21:CU:39:LYS:HZ2	1.57	0.70
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.07	0.70
26:DD:105:LYS:HE3	26:DD:176:ASP:HB3	1.72	0.70
48:BG:152:ARG:NH2	48:BG:162:ARG:HA	2.06	0.70
42:DN:107:ASN:HD21	45:DS:40:ASN:ND2	1.89	0.70
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.27	0.70
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.73	0.70
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.73	0.70
1:CA:562:U:H1'	11:CL:11:ARG:HB3	1.74	0.70
20:AB:61:SER:HA	20:AB:224:ARG:HA	1.74	0.70
23:BB:626:A:H2'	37:BL:78:ARG:NH1	2.06	0.70
23:BB:62:U:H3'	23:BB:63:A:C8	2.27	0.70
23:DB:278:A:N3	23:DB:278:A:H2'	2.06	0.70
23:DB:1583:A:H4'	23:DB:1585:C:C4	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.74	0.70
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.74	0.70
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.22	0.70
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.73	0.70
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.73	0.70
40:BH:14:SER:HB3	40:BH:17:ASP:HB2	1.73	0.70
12:AM:21:ILE:HG22	12:AM:23:GLY:H	1.55	0.70
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.73	0.70
23:BB:581:C:H2'	23:BB:582:A:C8	2.26	0.70
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.72	0.70
23:DB:2867:G:N3	23:DB:2867:G:H2'	2.07	0.70
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	1.91	0.70
23:DB:458:G:N2	23:DB:469:G:H2'	2.06	0.70
53:D6:131:ASN:O	53:D6:135:GLU:HG3	1.92	0.70
14:CO:35:GLN:O	14:CO:39:LEU:HB2	1.91	0.70
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.73	0.70
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.74	0.70
23:DB:2266:A:C4'	23:DB:2267:A:N7	2.55	0.70
52:DW:18:LYS:HE2	52:DW:19:ARG:NH2	2.06	0.70
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.07	0.70
23:DB:162:U:H4'	23:DB:163:C:OP1	1.92	0.70
23:BB:2134:A:H2'	23:BB:2135:A:C8	2.24	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
3:CD:11:SER:HA	3:CD:18:LEU:HD22	1.74	0.70
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.07	0.70
29:DE:153:LEU:HG	29:DE:154:ASP:N	2.05	0.70
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.73	0.70
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	1.92	0.70
23:BB:1843:C:H4'	25:BC:253:GLY:HA3	1.74	0.70
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.26	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
37:BL:70:LYS:O	37:BL:73:ILE:HG12	1.92	0.70
23:DB:855:G:N2	52:DW:23:LYS:HG2	2.04	0.69
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.57	0.69
4:CE:35:LEU:HD21	4:CE:136:VAL:HG11	1.74	0.69
16:AQ:66:LEU:HD12	16:AQ:66:LEU:H	1.57	0.69
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	1.92	0.69
28:BP:56:SER:HB2	28:BP:75:THR:CG2	2.22	0.69
27:BK:107:LEU:HD12	27:BK:107:LEU:H	1.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:112:ARG:HB2	28:BP:112:ARG:HH11	1.57	0.69
6:AG:57:GLU:CD	6:AG:57:GLU:H	1.94	0.69
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.27	0.69
23:DB:1416:G:HO2'	23:DB:1417:C:H6	1.40	0.69
1:CA:932:C:H5''	6:CG:3:ARG:HG2	1.73	0.69
35:DV:40:ILE:HD13	35:DV:40:ILE:H	1.57	0.69
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.27	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
1:AA:780:A:O2'	1:AA:781:A:H5''	1.91	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
16:AQ:79:GLU:HG3	16:AQ:80:LYS:HZ1	1.55	0.69
23:DB:27:G:H22	23:DB:512:G:H2'	1.55	0.69
40:BH:122:LEU:HD12	40:BH:122:LEU:H	1.57	0.69
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.26	0.69
1:AA:715:A:H2'	1:AA:716:A:H8	1.56	0.69
23:DB:2354:C:H4'	52:DW:31:LEU:HD22	1.73	0.69
17:CR:37:LYS:HZ3	21:CU:22:CYS:HB2	1.57	0.69
35:BV:4:ILE:HB	35:BV:63:ILE:HG13	1.74	0.69
8:CI:21:LYS:O	8:CI:60:LEU:HB2	1.92	0.69
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.07	0.69
23:BB:1082:U:N3	23:BB:1086:A:C2	2.60	0.69
16:CQ:8:GLN:HA	16:CQ:59:GLU:HA	1.74	0.69
11:CL:54:VAL:HG12	11:CL:55:ARG:H	1.57	0.69
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	1.74	0.69
23:BB:2867:G:N3	23:BB:2867:G:H2'	2.07	0.69
25:BC:209:ALA:O	25:BC:213:ARG:HB2	1.92	0.69
4:CE:93:VAL:HG13	4:CE:126:ALA:HB2	1.72	0.69
12:AM:48:SER:HB2	12:AM:51:GLN:HG3	1.74	0.69
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.56	0.69
16:CQ:3:LYS:HE2	16:CQ:3:LYS:HA	1.74	0.69
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.56	0.69
23:BB:918:A:H2'	23:BB:919:U:H5'	1.73	0.69
1:CA:1313:U:OP2	18:CS:5:LYS:HA	1.92	0.69
23:DB:877:A:H2'	23:DB:900:A:H61	1.58	0.69
48:DG:17:LYS:HA	48:DG:17:LYS:HZ2	1.58	0.69
23:DB:360:U:H2'	23:DB:361:G:C8	2.28	0.69
23:BB:162:U:H4'	23:BB:163:C:OP1	1.93	0.69
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.07	0.69
42:DN:34:ILE:O	42:DN:112:TYR:HA	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	1.91	0.69
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.74	0.69
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.56	0.69
34:B3:5:THR:HG22	34:B3:62:PRO:HD2	1.74	0.69
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.74	0.69
15:CP:25:ARG:H	15:CP:25:ARG:HD3	1.57	0.69
37:DL:93:ASN:O	37:DL:95:LEU:HD12	1.92	0.69
52:BW:33:GLY:O	52:BW:34:SER:HB2	1.92	0.69
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.74	0.69
8:AI:26:LYS:H	8:AI:61:ASP:CB	2.06	0.69
1:CA:763:G:H2'	1:CA:764:C:H6	1.57	0.69
25:BC:81:GLU:HB2	25:BC:90:ILE:HG22	1.75	0.69
25:DC:102:TYR:O	25:DC:103:ILE:HG13	1.93	0.69
32:B4:10:LEU:HD12	32:B4:33:HIS:HA	1.74	0.69
51:BZ:18:ARG:HA	51:BZ:23:ASN:O	1.93	0.69
23:BB:1657:U:H4'	26:BD:138:LEU:HB3	1.74	0.69
29:BE:150:THR:HG21	29:BE:153:LEU:HA	1.72	0.69
1:AA:35:G:H2'	1:AA:36:C:C6	2.28	0.69
23:DB:729:G:C8	25:DC:206:LYS:HE3	2.28	0.69
1:CA:179:A:H2'	1:CA:180:U:O4'	1.93	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
50:BT:73:ARG:HH21	50:BT:73:ARG:HB3	1.56	0.69
47:DF:115:GLY:HA2	47:DF:177:ARG:HH11	1.56	0.69
13:AN:53:ASP:HA	13:AN:58:ARG:HD3	1.74	0.69
1:CA:764:C:C2'	1:CA:765:G:H5'	2.22	0.69
48:DG:17:LYS:HZ2	48:DG:18:ILE:H	1.38	0.69
23:BB:2746:U:H5'	48:BG:138:GLN:HA	1.73	0.69
23:DB:2109:U:H2'	23:DB:2180:U:H3	1.58	0.69
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.28	0.69
23:DB:2108:A:N3	23:DB:2108:A:H2'	2.07	0.69
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.08	0.69
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.57	0.69
23:BB:721:A:H2'	23:BB:722:A:C8	2.26	0.69
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.28	0.69
22:BA:35:C:H2'	22:BA:36:C:H5'	1.75	0.69
23:DB:2073:C:H5''	25:DC:227:VAL:HG12	1.73	0.69
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.74	0.69
23:BB:642:U:O2	23:BB:644:A:H3'	1.92	0.69
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.28	0.69
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.72	0.69
23:BB:2366:A:H2'	23:BB:2367:G:O4'	1.93	0.69
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.92	0.69
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.55	0.69
20:AB:65:LYS:HA	20:AB:89:PHE:HE1	1.58	0.69
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.27	0.69
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.74	0.69
42:BN:34:ILE:O	42:BN:112:TYR:HA	1.92	0.69
49:BR:31:GLU:H	49:BR:63:VAL:HG22	1.57	0.69
23:DB:79:C:HO2'	23:DB:346:A:H1'	1.57	0.69
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.74	0.69
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.57	0.69
3:AD:43:ARG:NH1	3:AD:44:LYS:H	1.89	0.69
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.58	0.69
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.75	0.69
47:DF:161:SER:OG	47:DF:164:GLU:HG3	1.92	0.69
48:BG:10:VAL:CG2	48:BG:48:THR:HA	2.22	0.69
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.74	0.69
17:AR:21:ASP:OD1	17:AR:23:LYS:HG3	1.93	0.69
53:D6:86:SER:HB3	53:D6:88:LEU:HD13	1.74	0.69
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.91	0.69
53:D6:93:SER:HB3	53:D6:100:TYR:O	1.92	0.69
23:DB:878:A:C1'	23:DB:899:A:H62	2.06	0.69
35:DV:4:ILE:HB	35:DV:63:ILE:HG13	1.73	0.69
53:B6:30:THR:HG22	53:B6:183:ILE:HG12	1.73	0.69
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.92	0.69
8:CI:25:GLY:HA3	8:CI:57:VAL:CA	2.23	0.69
40:DH:68:ARG:HH12	40:DH:134:VAL:HG11	1.57	0.69
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.75	0.69
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.74	0.69
51:BZ:64:ILE:H	51:BZ:64:ILE:HD12	1.58	0.69
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.73	0.69
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.75	0.69
1:CA:1399:C:H4'	1:CA:1400:C:H5'	1.73	0.69
12:CM:106:ARG:HD3	12:CM:111:PRO:HA	1.74	0.69
23:DB:543:G:C6	23:DB:544:C:H1'	2.27	0.69
11:AL:35:ARG:HA	11:AL:35:ARG:NH1	2.08	0.69
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	1.92	0.69
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.75	0.69
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.28	0.69
1:CA:135:C:O2	15:CP:1:MET:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:571:U:H3'	49:DR:80:ARG:HH12	1.56	0.69
3:AD:97:LEU:HB2	3:AD:134:TYR:HB3	1.74	0.69
20:CB:119:GLN:HG3	20:CB:136:ARG:HH11	1.58	0.69
25:DC:209:ALA:O	25:DC:213:ARG:HB2	1.93	0.69
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.08	0.69
18:CS:35:ARG:NH2	18:CS:52:ASN:HA	2.07	0.69
8:CI:42:THR:O	8:CI:45:MET:HG2	1.93	0.69
23:BB:2309:A:H61	47:BF:75:GLY:HA3	1.58	0.69
1:CA:1483:A:H2'	1:CA:1484:C:O4'	1.93	0.69
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.28	0.69
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.74	0.69
53:B6:177:GLU:OE2	53:B6:178:LYS:HG2	1.91	0.69
1:AA:764:C:C2'	1:AA:765:G:H5'	2.22	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
43:BO:35:ILE:HG13	43:BO:71:ALA:HB2	1.75	0.69
12:AM:44:ILE:HA	12:AM:47:LEU:HG	1.74	0.69
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	1.74	0.69
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.93	0.69
40:BH:66:ASN:N	40:BH:66:ASN:HD22	1.90	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:2653:U:H3'	23:DB:2654:A:H2'	1.75	0.69
5:CF:42:TRP:NE1	5:CF:61:LEU:HD23	2.08	0.69
45:DS:73:LYS:HB3	45:DS:106:VAL:HB	1.73	0.69
40:DH:41:LYS:O	40:DH:44:ILE:HG12	1.92	0.69
23:DB:858:G:H21	23:DB:2268:A:H3'	1.58	0.69
52:DW:18:LYS:HE3	52:DW:18:LYS:HA	1.74	0.69
40:BH:73:ASN:HD22	40:BH:74:ALA:N	1.90	0.69
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.73	0.69
1:AA:93:U:O5'	1:AA:93:U:H6	1.75	0.69
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.56	0.69
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.91	0.69
40:DH:49:ALA:HB3	40:DH:50:ARG:NH2	2.06	0.69
29:DE:131:THR:HG22	29:DE:160:ALA:HA	1.73	0.69
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.08	0.69
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.73	0.69
42:BN:114:GLU:HG2	42:BN:115:LEU:N	2.07	0.69
23:BB:345:A:H1'	23:BB:346:A:H2	1.57	0.69
11:AL:17:LYS:H	11:AL:17:LYS:HE3	1.58	0.69
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:495:G:N2	45:BS:61:ASN:HD21	1.90	0.69
53:B6:29:ARG:NH2	53:B6:110:ARG:HH11	1.91	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
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
48:DG:10:VAL:CG2	48:DG:48:THR:HA	2.22	0.68
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.09	0.68
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.27	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
20:AB:202:ASN:HD22	20:AB:204:ASP:N	1.90	0.68
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	1.76	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
32:D4:10:LEU:HD12	32:D4:33:HIS:HA	1.74	0.68
23:DB:580:U:H2'	23:DB:581:C:H6	1.58	0.68
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.28	0.68
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.28	0.68
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.29	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
23:DB:532:A:H4'	23:DB:533:G:C8	2.28	0.68
23:DB:171:U:H2'	23:DB:172:A:C8	2.28	0.68
23:BB:102:U:H4'	23:BB:103:A:OP2	1.91	0.68
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.94	0.68
23:BB:2751:G:N3	23:BB:2751:G:H2'	2.08	0.68
50:DT:29:THR:H	50:DT:91:GLN:NE2	1.89	0.68
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.28	0.68
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.75	0.68
42:BN:34:ILE:HB	42:BN:113:ILE:HG22	1.74	0.68
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.09	0.68
23:BB:90:U:H3'	23:BB:91:A:C5'	2.21	0.68
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.58	0.68
23:DB:784:G:O2'	23:DB:785:G:H5''	1.94	0.68
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.09	0.68
23:DB:833:A:H2'	23:DB:834:G:C8	2.28	0.68
1:CA:1458:G:H5''	19:CT:25:SER:HB2	1.74	0.68
30:BY:40:THR:O	30:BY:43:ILE:HG22	1.94	0.68
53:B6:32:ARG:NH2	53:B6:88:LEU:HA	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:102:ILE:HG13	48:DG:116:LEU:HD11	1.75	0.68
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.59	0.68
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.57	0.68
23:BB:2799:A:H4'	23:BB:2800:A:O4'	1.94	0.68
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.74	0.68
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.56	0.68
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.24	0.68
23:DB:742:A:H2'	23:DB:743:A:C8	2.28	0.68
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.29	0.68
15:CP:3:THR:HG22	15:CP:66:THR:HB	1.76	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
43:BO:47:VAL:HG12	43:BO:48:LEU:H	1.59	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
1:CA:1534:A:H62	21:CU:44:ARG:NH2	1.91	0.68
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.74	0.68
23:DB:2384:U:H5''	23:DB:2386:A:OP1	1.93	0.68
48:BG:84:LYS:CB	48:BG:132:LEU:H	2.06	0.68
18:AS:61:VAL:HA	18:AS:65:MET:SD	2.33	0.68
25:DC:81:GLU:HB2	25:DC:90:ILE:HG22	1.75	0.68
26:BD:105:LYS:HE3	26:BD:176:ASP:HB3	1.76	0.68
23:BB:2143:C:H2'	23:BB:2144:G:O4'	1.92	0.68
40:BH:90:LEU:HB2	40:BH:123:ARG:HB3	1.76	0.68
42:DN:34:ILE:HB	42:DN:113:ILE:HG22	1.76	0.68
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.76	0.68
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.57	0.68
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.74	0.68
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.75	0.68
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.28	0.68
20:CB:130:LYS:HA	20:CB:133:ALA:HB3	1.75	0.68
44:BQ:26:ALA:HA	44:BQ:29:ARG:HG3	1.76	0.68
23:BB:2728:U:H5'	27:BK:70:ARG:NH2	2.09	0.68
51:DZ:17:ASN:HB2	51:DZ:25:THR:HB	1.73	0.68
49:BR:19:THR:HG22	49:BR:97:LYS:HG3	1.75	0.68
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.75	0.68
12:AM:2:ARG:HD3	12:AM:2:ARG:H	1.58	0.68
23:BB:782:A:N3	25:BC:224:MET:HB3	2.08	0.68
37:BL:93:ASN:O	37:BL:95:LEU:HD12	1.93	0.68
23:BB:2384:U:H5''	23:BB:2386:A:OP1	1.94	0.68
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	2.08	0.68
26:DD:148:GLN:HG3	26:DD:152:PRO:HB3	1.74	0.68
53:B6:114:LEU:HB3	53:B6:183:ILE:HG21	1.76	0.68
23:BB:2748:A:H4'	48:BG:3:VAL:HG21	1.76	0.68
23:DB:141:G:N3	23:DB:141:G:H3'	2.09	0.68
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.08	0.68
23:BB:364:C:H2'	23:BB:365:U:H6	1.56	0.68
1:AA:1399:C:H4'	1:AA:1400:C:H5''	1.74	0.68
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.33	0.68
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.29	0.68
20:AB:139:GLU:HG2	20:AB:143:LEU:HD11	1.75	0.68
30:BY:6:ILE:HG21	30:BY:47:ILE:HD12	1.75	0.68
53:B6:14:MET:HE2	53:B6:165:THR:HG23	1.76	0.68
15:CP:4:ILE:HG12	15:CP:21:VAL:HG22	1.76	0.68
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.59	0.68
23:DB:189:G:H2'	23:DB:205:G:H22	1.58	0.68
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.28	0.68
1:AA:539:A:H2'	1:AA:540:G:C8	2.28	0.68
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.09	0.68
53:D6:52:LEU:HD21	53:D6:58:VAL:HG23	1.74	0.68
27:DK:36:GLY:HA2	27:DK:62:VAL:O	1.93	0.68
13:CN:48:GLN:O	13:CN:51:PRO:HD2	1.94	0.68
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.14	0.68
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.76	0.68
38:BM:36:VAL:HB	38:BM:127:LYS:O	1.93	0.68
48:BG:10:VAL:HG23	48:BG:48:THR:HA	1.75	0.68
45:BS:17:VAL:C	45:BS:19:LEU:H	1.97	0.68
1:CA:715:A:H2'	1:CA:716:A:H8	1.57	0.68
23:BB:592:A:H2'	23:BB:593:U:C6	2.28	0.68
1:CA:35:G:H2'	1:CA:36:C:C6	2.29	0.68
23:BB:833:A:H2'	23:BB:834:G:C8	2.28	0.68
16:AQ:3:LYS:HE2	16:AQ:3:LYS:HA	1.75	0.68
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.09	0.68
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.59	0.68
47:BF:31:GLU:O	47:BF:32:LYS:HD3	1.94	0.68
22:BA:75:G:H1'	35:BV:29:ILE:HG12	1.75	0.68
20:CB:67:LEU:HD11	20:CB:150:ILE:HD12	1.75	0.68
28:DP:112:ARG:HH11	28:DP:112:ARG:HB2	1.58	0.68
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	2.07	0.68
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	1.93	0.68
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1176:U:H2'	23:BB:1177:G:O4'	1.94	0.68
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.93	0.68
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.59	0.68
23:BB:1515:A:H2'	23:BB:1516:G:O4'	1.94	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
53:B6:111:ARG:O	53:B6:115:VAL:HG23	1.94	0.68
40:BH:80:ILE:HB	40:BH:144:VAL:HG13	1.76	0.68
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.76	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
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.08	0.68
23:DB:90:U:H3'	23:DB:91:A:C5'	2.24	0.68
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.94	0.68
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	2.08	0.68
23:DB:571:U:H3'	49:DR:80:ARG:NH1	2.08	0.68
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.59	0.68
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	1.76	0.68
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.74	0.68
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.29	0.68
46:BU:49:PRO:HA	46:BU:53:GLN:HG3	1.74	0.68
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.29	0.68
17:CR:21:ASP:OD1	17:CR:23:LYS:HG3	1.94	0.68
17:AR:37:LYS:HZ3	21:AU:22:CYS:HB2	1.58	0.68
45:DS:6:LYS:HB2	45:DS:103:ILE:O	1.94	0.68
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.08	0.68
47:DF:16:MET:O	47:DF:20:ASN:HA	1.94	0.68
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.59	0.68
27:BK:54:LYS:H	27:BK:54:LYS:HD2	1.59	0.68
48:DG:10:VAL:HG23	48:DG:48:THR:HA	1.74	0.68
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.29	0.68
23:DB:224:U:O4	23:DB:420:C:H5'	1.94	0.68
1:CA:817:C:H1'	1:CA:819:A:H5'	1.75	0.68
45:DS:17:VAL:C	45:DS:19:LEU:H	1.97	0.68
1:CA:215:C:H2'	1:CA:216:U:C6	2.29	0.68
1:AA:120:A:H2'	1:AA:121:U:H5''	1.75	0.68
53:B6:95:LYS:HB3	53:B6:100:TYR:CE2	2.29	0.68
21:CU:42:THR:HB	21:CU:46:ARG:CZ	2.24	0.67
29:BE:118:LEU:HA	29:BE:186:VAL:HG13	1.76	0.67
8:AI:56:MET:C	8:AI:58:GLU:H	1.97	0.67
8:AI:55:ASP:HB2	8:AI:59:LYS:HE3	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:148:GLN:HB2	26:BD:152:PRO:CG	2.23	0.67
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	1.76	0.67
40:DH:68:ARG:NH1	40:DH:134:VAL:HG11	2.08	0.67
26:DD:8:LYS:HB2	26:DD:201:LEU:HD11	1.77	0.67
23:DB:1913:A:H4'	23:DB:1914:C:H5''	1.77	0.67
20:CB:122:ASP:OD1	20:CB:124:THR:HG22	1.95	0.67
23:BB:2657:A:H4'	48:BG:91:VAL:HG21	1.76	0.67
14:CO:26:GLU:OE2	14:CO:77:ARG:HD2	1.93	0.67
14:AO:26:GLU:OE2	14:AO:77:ARG:HD2	1.94	0.67
1:CA:780:A:O2'	1:CA:781:A:H5''	1.93	0.67
23:BB:28:A:H61	23:BB:512:G:H1'	1.59	0.67
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.09	0.67
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG13	1.76	0.67
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.75	0.67
6:AG:4:ARG:HE	6:AG:6:ILE:HG23	1.57	0.67
23:BB:224:U:O4	23:BB:420:C:H5'	1.94	0.67
26:DD:124:ARG:HA	26:DD:165:MET:SD	2.34	0.67
4:CE:37:VAL:HA	4:CE:47:PHE:HA	1.76	0.67
16:AQ:8:GLN:HA	16:AQ:59:GLU:HA	1.76	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
23:DB:286:U:H2'	23:DB:287:G:H8	1.57	0.67
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.29	0.67
23:BB:917:A:H5''	23:BB:2268:A:H61	1.58	0.67
23:DB:848:C:H2'	23:DB:849:A:H8	1.58	0.67
23:BB:139:U:H3'	23:BB:140:C:H5''	1.75	0.67
14:AO:26:GLU:HG3	14:AO:81:LEU:HD12	1.75	0.67
1:AA:270:A:H2'	1:AA:271:C:C6	2.28	0.67
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.57	0.67
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.76	0.67
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.58	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
23:DB:2213:U:O2	23:DB:2213:U:H2'	1.93	0.67
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.76	0.67
25:DC:239:PHE:O	25:DC:241:LYS:HG3	1.93	0.67
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.29	0.67
22:DA:111:U:H2'	22:DA:112:G:C8	2.30	0.67
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.24	0.67
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.10	0.67
8:AI:20:ILE:HA	8:AI:62:LEU:HB3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:14:ALA:HB3	12:AM:40:GLU:HA	1.76	0.67
1:AA:812:G:O2'	1:AA:813:U:H6	1.74	0.67
16:CQ:66:LEU:H	16:CQ:66:LEU:HD12	1.59	0.67
53:B6:42:LYS:HA	53:B6:51:PRO:HA	1.76	0.67
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	1.75	0.67
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.30	0.67
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.59	0.67
30:DY:40:THR:O	30:DY:43:ILE:HG22	1.94	0.67
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	1.94	0.67
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.58	0.67
20:CB:22:TRP:HB3	20:CB:38:HIS:CE1	2.30	0.67
29:BE:21:ARG:HH11	29:BE:106:LYS:HD2	1.60	0.67
47:BF:107:VAL:HG11	47:BF:175:PRO:HG3	1.76	0.67
52:DW:33:GLY:O	52:DW:34:SER:HB2	1.92	0.67
53:B6:30:THR:C	53:B6:32:ARG:N	2.40	0.67
48:DG:84:LYS:CB	48:DG:132:LEU:H	2.06	0.67
47:DF:41:GLU:O	47:DF:43:ILE:HG22	1.94	0.67
20:CB:65:LYS:HA	20:CB:89:PHE:HE1	1.58	0.67
29:BE:58:LYS:H	29:BE:58:LYS:HD3	1.59	0.67
23:BB:528:A:C2	23:BB:2042:A:H2'	2.30	0.67
11:AL:20:VAL:HG12	11:AL:93:ARG:HB3	1.76	0.67
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.75	0.67
23:DB:1535:A:H3'	23:DB:1536:C:C6	2.29	0.67
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.74	0.67
23:BB:717:C:H3'	23:BB:718:A:H5''	1.76	0.67
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.08	0.67
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.58	0.67
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.29	0.67
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.76	0.67
47:BF:49:LEU:HD11	47:BF:66:ILE:HD12	1.75	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
45:BS:73:LYS:HB3	45:BS:106:VAL:HB	1.75	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	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
23:BB:580:U:H2'	23:BB:581:C:H6	1.60	0.67
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.30	0.67
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.58	0.67
1:CA:235:C:H2'	1:CA:236:A:H8	1.59	0.67
23:DB:150:U:H2'	23:DB:151:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:836:G:OP2	17:AR:49:LYS:HE2	1.95	0.67
19:AT:56:ILE:O	19:AT:60:GLN:HG2	1.94	0.67
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.30	0.67
18:CS:42:ASN:N	18:CS:42:ASN:HD22	1.93	0.67
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.06	0.67
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.10	0.67
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.10	0.67
53:B6:38:LEU:HD13	53:B6:83:ILE:HD12	1.76	0.67
40:BH:139:PHE:O	40:BH:140:ALA:HB2	1.95	0.67
49:BR:66:HIS:ND1	49:BR:94:THR:HG22	2.10	0.67
23:BB:189:G:H2'	23:BB:205:G:N2	2.10	0.67
1:AA:484:G:H4'	1:AA:485:U:C5'	2.24	0.67
23:DB:2306:C:C5	23:DB:2307:G:H2'	2.30	0.67
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.30	0.67
23:DB:718:A:H3'	23:DB:719:C:H6	1.58	0.67
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.30	0.67
1:CA:1343:G:H1'	8:CI:122:ARG:HH12	1.59	0.67
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.09	0.67
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.30	0.67
48:DG:17:LYS:NZ	48:DG:18:ILE:H	1.92	0.67
48:BG:17:LYS:NZ	48:BG:18:ILE:H	1.93	0.67
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.30	0.67
40:BH:73:ASN:HB3	40:BH:141:LYS:NZ	2.09	0.67
2:AC:126:ARG:HH21	2:AC:191:THR:HG23	1.60	0.67
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	1.95	0.67
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.10	0.67
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.77	0.67
23:BB:78:U:H2'	23:BB:79:C:C6	2.29	0.67
30:DY:6:ILE:O	30:DY:34:THR:HA	1.95	0.67
23:BB:718:A:H3'	23:BB:719:C:H6	1.59	0.67
23:BB:27:G:H1'	23:BB:513:A:N6	2.10	0.67
25:DC:204:LEU:HD22	25:DC:209:ALA:HB1	1.76	0.67
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.10	0.67
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.75	0.67
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.75	0.67
39:DX:10:SER:H	39:DX:60:LYS:HE2	1.60	0.67
23:BB:2266:A:C4'	23:BB:2267:A:N7	2.57	0.67
1:AA:719:C:H1'	17:AR:37:LYS:HB2	1.77	0.67
53:B6:30:THR:HG22	53:B6:179:LYS:HD3	1.77	0.67
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	1.95	0.67
49:DR:34:GLU:HA	49:DR:59:ILE:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:3:ALA:O	49:BR:13:ARG:HA	1.95	0.67
23:BB:2529:G:H4'	48:BG:174:LYS:HG3	1.76	0.67
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.10	0.67
12:CM:33:LEU:HD13	12:CM:39:ALA:O	1.95	0.67
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.76	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
23:DB:1125:G:H5'	32:D4:37:GLN:HE21	1.59	0.67
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.24	0.67
14:AO:29:VAL:HG11	14:AO:67:LEU:HD21	1.77	0.67
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.10	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:DB:120:U:H4'	23:DB:121:G:H5''	1.76	0.67
23:DB:2485:G:O2'	23:DB:2486:C:H5'	1.95	0.67
39:DX:48:ARG:O	39:DX:51:ALA:HB3	1.95	0.67
44:BQ:78:PHE:CZ	44:BQ:82:LEU:HD11	2.30	0.67
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.30	0.67
23:DB:62:U:H3'	23:DB:63:A:C8	2.29	0.67
23:BB:950:G:H2'	23:BB:951:C:C6	2.30	0.67
20:AB:18:GLN:O	20:AB:37:VAL:HG23	1.95	0.67
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.75	0.67
23:DB:2366:A:H2'	23:DB:2367:G:O4'	1.94	0.67
23:DB:704:G:H1'	23:DB:727:A:H61	1.60	0.67
41:BJ:36:LEU:HD21	41:BJ:122:LEU:HB2	1.76	0.67
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.60	0.67
1:CA:975:A:H4'	1:CA:976:G:O5'	1.95	0.67
1:AA:1144:G:H21	1:AA:1146:A:H62	1.41	0.67
13:AN:20:PHE:HD1	13:AN:24:ALA:HB2	1.59	0.67
1:AA:1081:A:OP2	4:AE:51:LYS:HE2	1.94	0.67
23:DB:1082:U:N3	23:DB:1086:A:C2	2.63	0.67
11:AL:54:VAL:HG12	11:AL:55:ARG:H	1.60	0.67
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.30	0.67
23:DB:28:A:N6	23:DB:512:G:H1'	2.10	0.67
23:BB:849:A:H2'	23:BB:850:U:C6	2.29	0.67
1:CA:154:U:H2'	1:CA:155:A:C8	2.30	0.67
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.75	0.67
23:DB:19:A:H2'	23:DB:20:C:C6	2.30	0.67
22:DA:35:C:H2'	22:DA:36:C:H5'	1.75	0.67
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.30	0.67
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:95:A:H4'	39:BX:38:GLN:O	1.95	0.67
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.76	0.67
15:CP:20:VAL:HG23	15:CP:35:ARG:HA	1.76	0.67
21:AU:34:ARG:HD3	21:AU:39:LYS:HZ2	1.59	0.66
5:AF:100:SER:HA	17:AR:23:LYS:CE	2.25	0.66
13:CN:20:PHE:HD1	13:CN:24:ALA:HB2	1.59	0.66
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.75	0.66
13:AN:27:LYS:HA	13:AN:31:SER:HB2	1.76	0.66
23:BB:2144:G:H5''	23:BB:2146:C:OP2	1.96	0.66
40:DH:69:ALA:HA	40:DH:140:ALA:HB2	1.78	0.66
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.10	0.66
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.60	0.66
1:CA:836:G:OP2	17:CR:49:LYS:HE2	1.95	0.66
1:AA:664:G:H22	1:AA:741:G:H1	1.40	0.66
23:DB:173:A:H2'	23:DB:174:U:C6	2.30	0.66
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.28	0.66
20:CB:18:GLN:O	20:CB:37:VAL:HG23	1.94	0.66
43:DO:47:VAL:HG12	43:DO:48:LEU:H	1.58	0.66
23:DB:479:A:N3	23:DB:481:G:H5''	2.09	0.66
1:CA:454:G:H2'	1:CA:455:G:H8	1.61	0.66
1:AA:215:C:H2'	1:AA:216:U:C6	2.30	0.66
11:CL:35:ARG:NH1	11:CL:35:ARG:HA	2.10	0.66
45:BS:6:LYS:HB2	45:BS:103:ILE:O	1.95	0.66
18:AS:28:LYS:HD2	18:AS:28:LYS:H	1.60	0.66
47:DF:107:VAL:HG11	47:DF:175:PRO:HG3	1.75	0.66
29:DE:18:THR:HG22	29:DE:106:LYS:NZ	2.10	0.66
23:BB:2144:G:H3'	23:BB:2145:C:H3'	1.78	0.66
10:CK:22:ILE:HD12	10:CK:85:VAL:HG22	1.78	0.66
53:B6:42:LYS:HB3	53:B6:49:HIS:O	1.93	0.66
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.60	0.66
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.29	0.66
30:DY:6:ILE:HG21	30:DY:47:ILE:HD12	1.77	0.66
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.77	0.66
29:DE:58:LYS:HD3	29:DE:58:LYS:H	1.60	0.66
23:DB:172:A:H2'	23:DB:173:A:C8	2.30	0.66
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.77	0.66
1:AA:978:A:H5'	1:AA:1362:A:N6	2.10	0.66
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.28	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
9:AJ:10:LEU:HB2	9:AJ:72:ARG:HB2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.76	0.66
23:BB:2639:A:H2'	23:BB:2640:G:O4'	1.95	0.66
11:CL:20:VAL:HG12	11:CL:93:ARG:HB3	1.76	0.66
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.95	0.66
48:DG:152:ARG:NH2	48:DG:162:ARG:HA	2.11	0.66
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.76	0.66
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.94	0.66
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.10	0.66
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.31	0.66
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.10	0.66
23:BB:458:G:N2	23:BB:469:G:H2'	2.10	0.66
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.78	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
12:CM:48:SER:HB2	12:CM:51:GLN:HG3	1.75	0.66
1:AA:1278:G:H4'	1:AA:1279:G:H5'	1.77	0.66
1:CA:147:G:H2'	1:CA:148:G:C8	2.30	0.66
1:AA:454:G:H2'	1:AA:455:G:H8	1.61	0.66
26:DD:148:GLN:HB2	26:DD:152:PRO:CG	2.22	0.66
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.16	0.66
26:BD:20:VAL:HA	27:BK:72:PRO:HB3	1.76	0.66
49:DR:3:ALA:O	49:DR:13:ARG:HA	1.95	0.66
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.59	0.66
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.10	0.66
1:CA:920:U:H2'	1:CA:921:U:C6	2.31	0.66
47:BF:16:MET:O	47:BF:20:ASN:HA	1.96	0.66
23:BB:2720:U:H5''	28:BP:52:ARG:HH22	1.61	0.66
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.66
3:AD:18:LEU:HB2	3:AD:20:LEU:HG	1.76	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
23:BB:594:U:H2'	23:BB:595:C:C6	2.30	0.66
23:DB:593:U:H2'	23:DB:594:U:C6	2.30	0.66
1:AA:56:U:H2'	1:AA:57:G:H8	1.60	0.66
47:BF:30:VAL:HG21	47:BF:96:TRP:HE1	1.61	0.66
23:BB:2286:G:H3'	33:B1:29:LYS:HZ1	1.60	0.66
23:BB:2286:G:H3'	33:B1:29:LYS:NZ	2.11	0.66
40:BH:83:LYS:HB3	40:BH:91:PHE:HB2	1.75	0.66
23:DB:365:U:H2'	23:DB:366:C:C6	2.29	0.66
23:DB:2331:G:H4'	52:DW:39:GLN:HA	1.76	0.66
23:DB:704:G:H1'	23:DB:727:A:N6	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:91:ARG:NH1	49:DR:11:GLN:H	1.92	0.66
12:CM:15:VAL:HG23	12:CM:40:GLU:HB3	1.77	0.66
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	1.77	0.66
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.24	0.66
1:CA:17:U:H2'	1:CA:18:C:H6	1.61	0.66
4:AE:25:LYS:HG3	4:AE:26:GLY:H	1.61	0.66
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.76	0.66
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.28	0.66
23:DB:743:A:O2'	23:DB:744:U:H5'	1.96	0.66
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.31	0.66
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.30	0.66
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.10	0.66
10:CK:115:ILE:HD11	17:CR:72:ARG:NH1	2.11	0.66
4:CE:25:LYS:HG3	4:CE:26:GLY:H	1.61	0.66
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.76	0.66
1:AA:817:C:H1'	1:AA:819:A:H5'	1.78	0.66
23:DB:850:U:O2'	30:DY:22:THR:HG22	1.96	0.66
23:DB:135:U:H2'	23:DB:136:G:C8	2.31	0.66
1:AA:981:U:H4'	13:AN:60:ARG:CD	2.25	0.66
38:DM:96:ILE:HD11	38:DM:126:ILE:HD13	1.78	0.66
1:CA:33:A:H2'	1:CA:34:C:H6	1.59	0.66
23:BB:2653:U:O2'	48:BG:109:SER:HB2	1.95	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
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.96	0.66
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.30	0.66
23:BB:2213:U:O2	23:BB:2213:U:H2'	1.94	0.66
47:BF:161:SER:OG	47:BF:164:GLU:HG3	1.96	0.66
22:BA:14:U:H4'	22:BA:70:C:O2	1.96	0.66
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.59	0.66
1:CA:394:G:H2'	1:CA:395:C:H6	1.61	0.66
18:AS:42:ASN:N	18:AS:42:ASN:HD22	1.92	0.66
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.30	0.66
21:AU:40:PRO:HA	21:AU:44:ARG:HD2	1.78	0.66
48:BG:7:PRO:O	48:BG:8:VAL:HB	1.96	0.66
13:AN:5:MET:O	13:AN:8:ARG:HB2	1.95	0.66
1:AA:841:C:H3'	1:AA:843:U:OP2	1.95	0.66
23:BB:2144:G:C2'	23:BB:2146:C:H5'	2.24	0.66
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.95	0.66
42:DN:114:GLU:HG2	42:DN:115:LEU:N	2.08	0.66
23:DB:581:C:H2'	23:DB:582:A:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:69:LYS:O	18:AS:72:GLU:HG2	1.96	0.66
53:D6:42:LYS:HB3	53:D6:49:HIS:HB3	1.78	0.66
23:BB:477:A:H2'	23:BB:478:A:C8	2.31	0.66
23:DB:1192:G:O2'	23:DB:1193:G:H5'	1.95	0.66
1:CA:978:A:H5'	1:CA:1362:A:N6	2.11	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
50:DT:38:ALA:O	50:DT:39:THR:HB	1.95	0.66
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.08	0.66
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.59	0.66
40:BH:8:LYS:O	40:BH:13:GLY:HA3	1.96	0.66
1:CA:17:U:H2'	1:CA:18:C:C6	2.31	0.66
39:BX:48:ARG:O	39:BX:51:ALA:HB3	1.95	0.66
47:BF:41:GLU:O	47:BF:43:ILE:HG22	1.95	0.66
36:D2:26:ASN:O	36:D2:30:VAL:HG23	1.96	0.66
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.77	0.66
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.95	0.66
23:BB:1258:U:C4'	29:BE:79:ARG:HD2	2.25	0.66
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.60	0.66
1:CA:238:A:H2'	1:CA:239:U:H5''	1.77	0.66
23:BB:655:A:H4'	23:BB:656:G:H5'	1.78	0.66
23:BB:28:A:N6	23:BB:512:G:H1'	2.11	0.66
23:DB:27:G:HO2'	23:DB:28:A:H8	1.44	0.66
10:AK:115:ILE:HD11	17:AR:72:ARG:HH12	1.61	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
20:AB:20:ARG:HA	20:AB:38:HIS:CE1	2.31	0.66
1:AA:154:U:H2'	1:AA:155:A:C8	2.31	0.66
9:CJ:10:LEU:HB2	9:CJ:72:ARG:HB2	1.76	0.66
23:DB:2639:A:H2'	23:DB:2640:G:O4'	1.96	0.66
25:BC:57:HIS:CG	25:BC:58:LYS:H	2.14	0.66
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.30	0.66
23:DB:2267:A:H5''	23:DB:2268:A:H5'	1.78	0.66
18:AS:10:ILE:HB	18:AS:14:LEU:HD11	1.78	0.66
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	1.96	0.66
50:BT:38:ALA:O	50:BT:39:THR:HB	1.95	0.66
8:CI:27:ILE:HB	8:CI:34:LEU:HB2	1.76	0.66
28:DP:50:ARG:CB	28:DP:56:SER:HB3	2.25	0.66
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.26	0.66
42:DN:79:LEU:HA	42:DN:83:LEU:HD12	1.77	0.66
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.93	0.66
38:BM:17:ASN:HD21	38:BM:95:LEU:HG	1.58	0.66
23:DB:2646:C:H2'	23:DB:2647:U:O4'	1.95	0.66
20:AB:98:GLY:HA2	20:AB:101:THR:HG22	1.78	0.66
1:AA:662:U:H2'	1:AA:663:A:C8	2.31	0.66
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.78	0.66
23:DB:2333:A:H5'	23:DB:2335:A:H1'	1.77	0.66
1:CA:539:A:H2'	1:CA:540:G:C8	2.31	0.66
1:CA:279:A:H5''	1:CA:280:C:H3'	1.78	0.66
47:DF:31:GLU:O	47:DF:32:LYS:HD3	1.96	0.66
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.36	0.66
8:CI:20:ILE:HA	8:CI:62:LEU:HB3	1.77	0.66
13:AN:11:LYS:O	13:AN:15:LEU:HG	1.95	0.66
12:CM:14:ALA:HB3	12:CM:40:GLU:HA	1.76	0.66
50:BT:69:ARG:CZ	50:BT:69:ARG:HA	2.26	0.66
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.11	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
1:AA:22:G:H2'	1:AA:23:C:H6	1.60	0.66
23:DB:2728:U:H5'	27:DK:70:ARG:HH21	1.61	0.66
22:DA:90:C:OP1	38:DM:16:ARG:HB2	1.96	0.66
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.78	0.66
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.75	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
2:CC:14:VAL:HG11	2:CC:178:ARG:HA	1.76	0.66
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.31	0.66
47:DF:72:SER:HB2	47:DF:80:GLN:H	1.60	0.66
41:DJ:117:ALA:HA	41:DJ:120:ARG:HD2	1.78	0.66
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
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.60	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
49:DR:66:HIS:CG	49:DR:94:THR:HG22	2.31	0.65
4:AE:37:VAL:HA	4:AE:47:PHE:HA	1.77	0.65
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.77	0.65
29:DE:110:SER:HB3	29:DE:114:ARG:NH1	2.10	0.65
15:AP:54:LEU:HD22	15:AP:80:LYS:HE2	1.77	0.65
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.10	0.65
1:AA:72:A:H2'	1:AA:73:C:C6	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.31	0.65
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.96	0.65
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.10	0.65
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.77	0.65
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.11	0.65
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.30	0.65
23:DB:702:U:H2'	23:DB:703:U:C6	2.31	0.65
23:BB:572:A:OP2	49:BR:80:ARG:NH2	2.30	0.65
23:BB:72:U:O2'	23:BB:73:A:H5'	1.96	0.65
5:AF:53:LYS:HB2	5:AF:54:LEU:HD22	1.78	0.65
21:CU:3:ILE:HG21	21:CU:19:LYS:HD2	1.78	0.65
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.11	0.65
47:DF:32:LYS:HB2	47:DF:90:LEU:O	1.96	0.65
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.97	0.65
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.78	0.65
8:CI:26:LYS:H	8:CI:61:ASP:CB	2.08	0.65
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.07	0.65
20:CB:151:LYS:HG3	20:CB:152:ASP:N	2.12	0.65
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.10	0.65
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.11	0.65
1:CA:484:G:H4'	1:CA:485:U:C5'	2.26	0.65
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.32	0.65
8:AI:42:THR:O	8:AI:45:MET:HG2	1.95	0.65
49:DR:19:THR:HG22	49:DR:97:LYS:HG3	1.77	0.65
23:DB:2637:U:OP1	26:DD:83:ARG:HD3	1.97	0.65
1:AA:950:U:H2'	1:AA:951:G:H8	1.61	0.65
26:BD:124:ARG:HA	26:BD:165:MET:SD	2.36	0.65
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.61	0.65
23:DB:947:A:H2'	23:DB:948:C:C6	2.31	0.65
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	1.78	0.65
53:D6:67:VAL:HG12	53:D6:100:TYR:CE1	2.31	0.65
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.76	0.65
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.95	0.65
12:AM:15:VAL:HG23	12:AM:40:GLU:HB3	1.78	0.65
3:AD:160:LEU:HD22	3:AD:161:ALA:N	2.11	0.65
25:BC:128:THR:HA	25:BC:190:THR:HA	1.78	0.65
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	1.78	0.65
23:DB:1012:U:O4	41:DJ:30:THR:HG21	1.97	0.65
1:CA:1144:G:H21	1:CA:1146:A:H62	1.44	0.65
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.61	0.65
1:CA:371:A:O2'	1:CA:372:C:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.31	0.65
1:CA:235:C:H2'	1:CA:236:A:C8	2.31	0.65
20:AB:63:LYS:HA	20:AB:224:ARG:HH11	1.62	0.65
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.31	0.65
2:AC:14:VAL:HG11	2:AC:178:ARG:HA	1.77	0.65
1:AA:473:U:H2'	1:AA:474:G:H8	1.61	0.65
1:AA:382:A:H2'	1:AA:383:A:C8	2.31	0.65
23:BB:171:U:H2'	23:BB:172:A:C8	2.31	0.65
23:BB:1870:C:H3'	23:BB:1871:A:C8	2.31	0.65
1:CA:89:U:H2'	1:CA:90:C:O4'	1.95	0.65
23:DB:1117:C:O2'	23:DB:1118:C:H5'	1.96	0.65
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.10	0.65
39:BX:29:ARG:HH12	50:BT:12:ARG:HG2	1.62	0.65
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.11	0.65
12:AM:33:LEU:HD13	12:AM:39:ALA:O	1.96	0.65
38:DM:19:GLY:N	38:DM:38:ARG:HH12	1.93	0.65
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.10	0.65
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.79	0.65
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.60	0.65
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.78	0.65
38:BM:37:GLY:HA3	38:BM:127:LYS:HZ2	1.59	0.65
29:BE:46:GLN:HB2	29:BE:87:ALA:O	1.96	0.65
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.62	0.65
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.30	0.65
23:BB:27:G:H22	23:BB:512:G:H2'	1.62	0.65
23:DB:28:A:H61	23:DB:512:G:H1'	1.60	0.65
23:DB:1515:A:H2'	23:DB:1516:G:O4'	1.96	0.65
2:CC:179:ALA:HB3	2:CC:181:ILE:HD11	1.79	0.65
1:AA:135:C:O2	15:AP:1:MET:HB2	1.97	0.65
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.62	0.65
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.59	0.65
37:DL:70:LYS:O	37:DL:73:ILE:HG12	1.96	0.65
47:DF:101:ARG:CZ	47:DF:138:PRO:HB2	2.27	0.65
40:BH:134:VAL:HG13	40:BH:135:HIS:H	1.61	0.65
9:AJ:56:HIS:H	13:AN:80:ARG:NH2	1.94	0.65
10:CK:24:ALA:HA	10:CK:29:THR:CG2	2.26	0.65
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.26	0.65
46:BU:65:GLN:HB2	46:BU:68:ASN:ND2	2.11	0.65
20:AB:151:LYS:HG3	20:AB:152:ASP:N	2.12	0.65
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.60	0.65
22:BA:5:U:H2'	22:BA:6:G:H8	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:10:ARG:HA	44:BQ:13:HIS:HB2	1.76	0.65
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.11	0.65
47:DF:30:VAL:HG21	47:DF:96:TRP:HE1	1.62	0.65
5:CF:20:GLY:O	5:CF:24:ARG:HD3	1.96	0.65
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.10	0.65
21:CU:40:PRO:HA	21:CU:44:ARG:HD2	1.79	0.65
1:CA:719:C:H1'	17:CR:37:LYS:HB2	1.78	0.65
53:D6:58:VAL:HG22	53:D6:68:VAL:HG13	1.79	0.65
1:AA:736:C:H2'	1:AA:737:C:C6	2.32	0.65
8:CI:56:MET:C	8:CI:58:GLU:H	1.98	0.65
23:BB:704:G:H1'	23:BB:727:A:H61	1.61	0.65
26:BD:28:GLU:HG3	26:BD:185:ASN:O	1.96	0.65
23:BB:873:C:H2'	23:BB:874:G:C8	2.32	0.65
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.78	0.65
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.11	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
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.78	0.65
1:AA:22:G:H2'	1:AA:23:C:C6	2.32	0.65
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.61	0.65
23:DB:78:U:H2'	23:DB:79:C:C6	2.32	0.65
23:BB:571:U:H3'	49:BR:80:ARG:NH1	2.12	0.65
12:CM:78:ARG:O	12:CM:82:LEU:HB2	1.97	0.65
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.77	0.65
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.96	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:1131:G:H1'	23:BB:1133:A:H62	1.60	0.65
1:AA:1343:G:H1'	8:AI:122:ARG:HH12	1.60	0.65
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.78	0.65
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.75	0.65
23:BB:855:G:H21	52:BW:23:LYS:CG	2.04	0.65
23:DB:849:A:H2'	23:DB:850:U:C6	2.32	0.65
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.62	0.65
8:AI:20:ILE:HG13	8:AI:62:LEU:HD12	1.78	0.65
48:DG:43:LYS:HB2	48:DG:50:THR:HB	1.77	0.65
20:AB:80:LYS:HG3	20:AB:81:ASP:H	1.62	0.65
4:AE:156:ARG:HA	4:AE:158:LYS:NZ	2.11	0.65
38:BM:19:GLY:N	38:BM:38:ARG:HH12	1.92	0.65
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE2	1.79	0.65
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
23:DB:532:A:N3	23:DB:532:A:H2'	2.11	0.65
20:CB:20:ARG:HA	20:CB:38:HIS:CE1	2.32	0.65
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	1.79	0.65
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.79	0.65
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.96	0.65
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.79	0.65
1:AA:401:C:H2'	1:AA:402:G:H8	1.60	0.65
1:CA:56:U:H2'	1:CA:57:G:H8	1.61	0.65
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.32	0.65
26:DD:182:ALA:O	26:DD:184:ARG:HG2	1.97	0.65
23:BB:324:A:H2'	23:BB:325:G:O4'	1.96	0.65
1:CA:736:C:H2'	1:CA:737:C:C6	2.32	0.65
23:DB:919:U:H2'	23:DB:920:A:C8	2.31	0.65
48:DG:7:PRO:O	48:DG:8:VAL:HB	1.95	0.65
40:BH:78:VAL:HG12	40:BH:143:ILE:O	1.97	0.65
23:DB:280:U:H2'	23:DB:281:C:C6	2.31	0.65
1:AA:763:G:H2'	1:AA:764:C:H6	1.61	0.65
3:CD:148:ALA:O	3:CD:151:GLN:HB2	1.95	0.65
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.77	0.65
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.61	0.65
23:BB:150:U:H2'	23:BB:151:C:C6	2.32	0.65
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.32	0.65
23:DB:458:G:H22	23:DB:469:G:H2'	1.61	0.65
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.61	0.65
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.26	0.65
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.12	0.65
23:DB:968:C:H2'	23:DB:969:G:H8	1.61	0.65
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.78	0.65
23:BB:1268:A:H2'	23:BB:1269:A:O4'	1.96	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
22:BA:111:U:H2'	22:BA:112:G:C8	2.31	0.65
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.79	0.65
23:BB:2391:G:H1'	23:BB:2424:C:N4	2.12	0.65
23:BB:1580:A:H2'	23:BB:1581:G:O4'	1.96	0.65
10:CK:19:VAL:HG12	10:CK:82:GLU:HB2	1.79	0.65
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.79	0.65
21:CU:16:ARG:NE	21:CU:16:ARG:HA	2.05	0.65
13:AN:63:CYS:CB	13:AN:67:GLY:H	2.03	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.78	0.65
48:BG:122:ALA:HB2	48:BG:132:LEU:HB3	1.79	0.65
29:DE:21:ARG:HH11	29:DE:106:LYS:HD2	1.62	0.65
28:BP:50:ARG:CB	28:BP:56:SER:HB3	2.26	0.65
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.32	0.65
39:DX:1:MET:HG2	39:DX:4:LYS:NZ	2.11	0.65
1:CA:677:U:H1'	10:CK:120:CYS:SG	2.36	0.65
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.79	0.65
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.62	0.65
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.27	0.65
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.27	0.65
30:BY:6:ILE:O	30:BY:34:THR:HA	1.97	0.65
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.59	0.65
23:DB:170:U:H2'	23:DB:171:U:C6	2.32	0.65
5:CF:53:LYS:NZ	5:CF:53:LYS:H	1.94	0.65
23:BB:176:A:H3'	23:BB:177:G:N2	2.12	0.65
47:BF:141:ASP:O	47:BF:145:VAL:HG13	1.96	0.65
19:CT:27:MET:O	19:CT:31:ILE:HG13	1.97	0.65
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	1.97	0.65
47:DF:141:ASP:O	47:DF:145:VAL:HG13	1.97	0.65
7:AH:37:ASN:O	7:AH:41:GLU:HG2	1.97	0.65
37:BL:95:LEU:HA	37:BL:98:ALA:HB3	1.78	0.65
53:D6:92:PRO:CA	53:D6:101:ILE:HG12	2.27	0.65
23:BB:1092:C:OP1	23:BB:2475:C:H4'	1.97	0.65
40:BH:80:ILE:HD11	40:BH:102:ALA:HB2	1.77	0.65
23:BB:162:U:H2'	23:BB:162:U:O2	1.96	0.65
20:AB:86:CYS:HB2	20:AB:221:ARG:NH1	2.12	0.65
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.31	0.65
1:CA:17:U:O2'	1:CA:18:C:H5'	1.95	0.65
47:BF:7:TYR:O	47:BF:11:VAL:HB	1.97	0.65
47:DF:7:TYR:O	47:DF:11:VAL:HB	1.97	0.65
23:DB:2548:U:H1'	27:DK:23:LYS:HZ1	1.62	0.65
16:CQ:79:GLU:HG3	16:CQ:80:LYS:NZ	2.11	0.65
42:DN:83:LEU:HA	42:DN:86:ARG:HB2	1.79	0.65
1:CA:673:A:H2'	1:CA:674:G:C8	2.32	0.65
23:BB:532:A:H2'	23:BB:532:A:N3	2.12	0.65
20:CB:119:GLN:HG3	20:CB:136:ARG:NH1	2.12	0.65
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.27	0.65
7:CH:37:ASN:O	7:CH:41:GLU:HG2	1.97	0.65
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.31	0.65
43:DO:89:ASP:HA	43:DO:116:GLN:O	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:176:A:O2'	23:DB:177:G:H5'	1.97	0.65
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.11	0.65
6:AG:109:LYS:HA	6:AG:109:LYS:HE2	1.79	0.65
1:CA:87:C:H2'	1:CA:88:U:C6	2.32	0.65
37:DL:93:ASN:ND2	37:DL:94:THR:H	1.94	0.64
40:DH:31:VAL:O	40:DH:32:PRO:C	2.34	0.64
1:CA:719:C:H2'	17:CR:38:ILE:CD1	2.26	0.64
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.97	0.64
25:BC:144:GLU:HG3	25:BC:151:GLY:N	2.12	0.64
40:DH:8:LYS:O	40:DH:13:GLY:HA3	1.96	0.64
3:CD:160:LEU:HD22	3:CD:161:ALA:N	2.12	0.64
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.31	0.64
1:AA:845:A:N3	1:AA:845:A:H2'	2.10	0.64
50:DT:69:ARG:CZ	50:DT:69:ARG:HA	2.26	0.64
1:AA:268:U:H2'	1:AA:269:C:C6	2.32	0.64
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
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.64
23:DB:2108:A:H4'	23:DB:2150:C:H4'	1.79	0.64
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	1.79	0.64
2:CC:48:LYS:HD3	2:CC:48:LYS:N	2.13	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:AA:1432:G:H1'	1:AA:1468:A:H61	1.62	0.64
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.61	0.64
3:AD:28:ASP:HA	3:AD:33:ILE:HG21	1.79	0.64
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.79	0.64
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.78	0.64
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.73	0.64
25:DC:131:MET:HA	25:DC:134:ILE:HG23	1.79	0.64
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.78	0.64
52:BW:24:ARG:HB2	52:BW:65:LYS:HB3	1.78	0.64
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.12	0.64
23:BB:2331:G:H4'	52:BW:39:GLN:HA	1.80	0.64
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.08	0.64
39:BX:29:ARG:NH1	50:BT:12:ARG:HG2	2.12	0.64
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.79	0.64
23:BB:704:G:H1'	23:BB:727:A:N6	2.12	0.64
23:BB:136:G:H2'	23:BB:137:U:C6	2.32	0.64
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.79	0.64
23:DB:544:C:H2'	23:DB:545:U:C5	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:238:A:H2'	1:AA:239:U:H5''	1.79	0.64
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.80	0.64
12:CM:2:ARG:HG3	12:CM:6:ILE:HA	1.79	0.64
7:AH:45:ILE:HG21	7:AH:60:LEU:HD21	1.78	0.64
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.32	0.64
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.79	0.64
23:DB:1350:C:H5'	23:DB:1351:C:OP2	1.97	0.64
23:BB:64:A:H2'	23:BB:65:U:C6	2.32	0.64
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.63	0.64
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.63	0.64
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.79	0.64
53:D6:93:SER:OG	53:D6:100:TYR:HB2	1.97	0.64
43:BO:67:ASN:N	43:BO:70:ALA:HB3	2.06	0.64
8:CI:20:ILE:HG13	8:CI:62:LEU:HD12	1.78	0.64
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.18	0.64
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.10	0.64
49:BR:34:GLU:HA	49:BR:59:ILE:O	1.97	0.64
4:AE:156:ARG:HD2	7:AH:42:GLU:O	1.98	0.64
23:BB:1012:U:O4	41:BJ:30:THR:HG21	1.96	0.64
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.28	0.64
29:DE:130:LYS:C	29:DE:132:LYS:H	2.01	0.64
20:CB:148:GLY:O	20:CB:151:LYS:HG2	1.98	0.64
23:DB:1458:U:H5''	23:DB:1459:G:OP1	1.97	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
5:CF:53:LYS:HB2	5:CF:54:LEU:HD22	1.78	0.64
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.97	0.64
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.45	0.64
23:DB:680:C:H2'	23:DB:681:G:H8	1.62	0.64
2:CC:25:THR:HG23	13:CN:75:LYS:HD3	1.80	0.64
25:BC:239:PHE:O	25:BC:241:LYS:HG3	1.98	0.64
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.12	0.64
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.32	0.64
1:CA:382:A:H2'	1:CA:383:A:C8	2.32	0.64
23:BB:664:G:H2'	23:BB:665:U:C6	2.33	0.64
1:CA:389:A:H3'	1:CA:390:U:H6	1.61	0.64
23:DB:659:G:H21	29:DE:30:GLN:NE2	1.95	0.64
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.79	0.64
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.33	0.64
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.97	0.64
27:BK:71:ARG:NE	27:BK:71:ARG:HA	2.11	0.64
18:CS:10:ILE:HB	18:CS:14:LEU:HD11	1.79	0.64
53:B6:29:ARG:NH2	53:B6:110:ARG:HD3	2.07	0.64
13:AN:46:LYS:HZ2	18:AS:10:ILE:H	1.44	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
10:CK:80:ASN:H	10:CK:80:ASN:HD22	1.46	0.64
23:DB:2103:C:H5''	23:DB:2104:C:OP2	1.98	0.64
27:DK:99:ILE:HD13	27:DK:118:LEU:HD22	1.79	0.64
1:AA:370:C:O2'	1:AA:371:A:H5'	1.98	0.64
23:BB:609:A:H2'	23:BB:610:C:O4'	1.97	0.64
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.80	0.64
25:BC:43:ASN:ND2	25:BC:44:ASN:H	1.95	0.64
15:AP:61:VAL:HA	15:AP:65:ALA:HB3	1.78	0.64
11:CL:17:LYS:HE3	11:CL:17:LYS:H	1.62	0.64
23:BB:417:C:H2'	23:BB:418:C:C6	2.32	0.64
23:BB:904:G:H2'	23:BB:905:A:H8	1.61	0.64
23:BB:729:G:C8	25:BC:206:LYS:HE3	2.33	0.64
23:DB:155:A:H2'	23:DB:156:A:C8	2.32	0.64
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.33	0.64
6:CG:71:THR:HG23	6:CG:72:VAL:HG22	1.78	0.64
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.62	0.64
5:AF:20:GLY:O	5:AF:24:ARG:HD3	1.96	0.64
3:CD:22:SER:HB2	3:CD:109:THR:HG22	1.80	0.64
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.63	0.64
2:CC:52:SER:HB3	2:CC:114:LEU:HG	1.78	0.64
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.32	0.64
13:CN:46:LYS:HZ2	18:CS:10:ILE:H	1.43	0.64
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.10	0.64
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.78	0.64
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.78	0.64
25:DC:128:THR:HA	25:DC:190:THR:HA	1.79	0.64
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.13	0.64
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.13	0.64
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.78	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
20:CB:98:GLY:HA2	20:CB:101:THR:HG22	1.77	0.64
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.61	0.64
10:AK:92:ARG:HG2	10:AK:92:ARG:HH11	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.80	0.64
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.62	0.64
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.32	0.64
15:CP:3:THR:HB	15:CP:66:THR:O	1.98	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
22:BA:90:C:OP1	38:BM:16:ARG:HB2	1.98	0.64
1:AA:441:A:H61	1:AA:493:A:N6	1.96	0.64
5:CF:88:MET:SD	17:CR:64:LEU:HD11	2.38	0.64
23:DB:1523:U:H5''	23:DB:1524:G:C8	2.33	0.64
1:AA:224:U:H2'	1:AA:225:C:C6	2.32	0.64
25:BC:86:ARG:NH1	25:BC:86:ARG:HB3	2.13	0.64
23:DB:904:G:H2'	23:DB:905:A:H8	1.62	0.64
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.80	0.64
40:BH:31:VAL:O	40:BH:32:PRO:C	2.34	0.64
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.28	0.64
53:D6:93:SER:O	53:D6:99:LEU:HA	1.98	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
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.12	0.64
40:BH:103:VAL:HG21	40:BH:110:VAL:HG22	1.78	0.64
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.80	0.64
23:DB:528:A:C2	23:DB:2042:A:H2'	2.32	0.64
47:DF:7:TYR:O	47:DF:12:VAL:HG23	1.98	0.64
23:BB:1657:U:O2'	23:BB:1658:C:H5'	1.97	0.64
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.33	0.64
7:CH:113:ARG:HH21	7:CH:114:ALA:HA	1.62	0.64
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.28	0.64
23:DB:464:U:H2'	23:DB:465:G:O4'	1.98	0.64
1:AA:33:A:H2'	1:AA:34:C:H6	1.62	0.64
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	1.80	0.64
23:BB:1432:G:H2'	23:BB:1433:A:C8	2.33	0.64
23:BB:2400:G:O2'	23:BB:2401:U:H5'	1.97	0.64
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.32	0.64
5:CF:16:GLU:H	5:CF:16:GLU:CD	1.98	0.64
23:DB:934:U:H2'	23:DB:935:C:C6	2.33	0.64
23:BB:917:A:H5''	23:BB:2268:A:N6	2.13	0.64
47:DF:31:GLU:HB3	47:DF:156:THR:O	1.97	0.64
1:CA:520:A:O2'	11:CL:69:GLU:HG2	1.97	0.64
8:AI:44:ARG:O	8:AI:47:VAL:HG22	1.98	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)
23:DB:279:A:H2'	23:DB:280:U:H5'	1.79	0.64
29:DE:189:THR:O	29:DE:193:VAL:HG23	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
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.27	0.64
1:CA:678:U:H2'	1:CA:679:C:C6	2.32	0.64
23:BB:730:A:H3'	57:BB:3595:HOH:O	1.96	0.64
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.63	0.64
23:DB:19:A:H2'	23:DB:20:C:H6	1.62	0.64
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.33	0.64
1:AA:224:U:H2'	1:AA:225:C:H6	1.63	0.64
23:DB:72:U:O2'	23:DB:73:A:H5'	1.98	0.64
23:DB:1301:A:O2'	23:DB:1302:A:H2'	1.97	0.64
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.12	0.64
1:AA:390:U:H2'	1:AA:391:G:H8	1.63	0.64
35:BV:15:GLY:O	35:BV:19:ARG:HG3	1.98	0.64
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.63	0.64
23:DB:942:G:H2'	23:DB:943:A:O4'	1.98	0.64
21:AU:42:THR:HB	21:AU:46:ARG:CZ	2.27	0.64
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.13	0.64
47:DF:62:GLN:HE22	47:DF:90:LEU:HD13	1.61	0.64
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.78	0.64
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.62	0.64
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.63	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:845:A:N3	1:CA:845:A:H2'	2.11	0.64
51:DZ:5:CYS:HB3	51:DZ:10:LYS:N	2.12	0.64
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.61	0.64
14:AO:81:LEU:HD23	14:AO:85:LEU:HD13	1.78	0.64
23:BB:1438:U:H2'	23:BB:1439:A:O4'	1.98	0.64
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.63	0.64
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.63	0.64
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	1.78	0.64
23:BB:2675:A:N1	23:BB:2732:G:O6	2.31	0.64
23:BB:784:G:O2'	23:BB:785:G:H5''	1.98	0.64
23:DB:95:A:H1'	39:DX:40:SER:OG	1.98	0.64
23:BB:19:A:H2'	23:BB:20:C:C6	2.32	0.64
47:DF:177:ARG:HA	47:DF:177:ARG:CZ	2.27	0.64
15:CP:1:MET:HA	15:CP:1:MET:HE3	1.78	0.64
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2485:G:O2'	23:BB:2486:C:H5'	1.98	0.64
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.13	0.64
23:BB:479:A:N3	23:BB:481:G:H5''	2.12	0.64
13:CN:11:LYS:O	13:CN:15:LEU:HG	1.97	0.64
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	1.79	0.64
16:AQ:25:GLU:HB3	16:AQ:38:LYS:HD3	1.79	0.64
25:DC:57:HIS:CG	25:DC:58:LYS:H	2.15	0.64
1:CA:320:A:H2'	1:CA:321:A:C8	2.33	0.64
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.13	0.64
47:BF:111:ARG:HH11	47:BF:135:ILE:HG21	1.63	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
51:DZ:64:ILE:HD12	51:DZ:64:ILE:H	1.61	0.64
50:BT:68:LYS:O	50:BT:69:ARG:HB2	1.98	0.64
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.98	0.64
23:BB:1139:G:O2'	23:BB:1140:C:H5'	1.97	0.64
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.63	0.64
23:DB:1082:U:N3	23:DB:1086:A:C6	2.65	0.64
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.79	0.64
27:BK:99:ILE:HD13	27:BK:118:LEU:HD22	1.78	0.64
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.80	0.64
2:CC:126:ARG:HH21	2:CC:191:THR:HG23	1.63	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:BB:2537:U:H2'	23:BB:2538:C:H6	1.63	0.64
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.32	0.64
44:DQ:10:ARG:HA	44:DQ:13:HIS:HB2	1.78	0.64
1:CA:441:A:H61	1:CA:493:A:N6	1.96	0.64
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.80	0.64
23:DB:2776:A:H4'	23:DB:2777:G:H5''	1.79	0.64
23:BB:2282:G:OP1	23:BB:2283:C:H1'	1.98	0.64
1:CA:859:G:H2'	1:CA:860:A:C8	2.33	0.64
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.33	0.64
23:DB:69:C:O2'	23:DB:70:G:H5'	1.98	0.64
40:DH:4:ILE:HG13	40:DH:18:GLN:HB2	1.80	0.64
50:BT:55:VAL:HG13	50:BT:85:VAL:HG12	1.80	0.64
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HB2	1.80	0.64
44:BQ:54:ARG:HB3	44:BQ:58:GLN:NE2	2.10	0.64
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.79	0.64
23:BB:143:C:H2'	23:BB:144:A:C8	2.33	0.64
49:BR:66:HIS:CG	49:BR:94:THR:HG22	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	1.99	0.64
11:CL:23:LEU:HG	11:CL:24:GLU:HG3	1.80	0.64
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.79	0.64
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	1.98	0.64
26:BD:113:SER:CB	26:BD:168:GLU:H	2.10	0.64
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.63	0.64
23:BB:852:U:H2'	23:BB:853:C:C6	2.33	0.64
23:BB:64:A:H2'	23:BB:65:U:H6	1.62	0.64
25:BC:66:PHE:HB2	25:BC:150:GLY:O	1.98	0.64
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.12	0.64
7:CH:48:PHE:HA	7:CH:59:GLU:O	1.97	0.64
23:DB:2563:U:H2'	23:DB:2565:A:OP2	1.98	0.64
1:CA:473:U:H2'	1:CA:474:G:H8	1.63	0.64
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.80	0.64
23:DB:2010:G:H5''	45:DS:42:LYS:HB2	1.80	0.64
23:DB:125:A:O2'	36:D2:13:ASN:HB3	1.97	0.64
23:BB:2366:A:H4'	52:BW:61:LYS:HE2	1.80	0.63
46:DU:70:ALA:HB1	46:DU:79:ALA:CB	2.25	0.63
53:B6:90:LEU:HB3	53:B6:101:ILE:CG2	2.29	0.63
20:CB:187:ASP:HB3	20:CB:201:GLY:O	1.98	0.63
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.13	0.63
8:CI:43:ALA:O	8:CI:46:VAL:HG22	1.98	0.63
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.34	0.63
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.62	0.63
11:AL:23:LEU:HG	11:AL:24:GLU:HG3	1.80	0.63
3:CD:137:SER:HB3	3:CD:138:PRO:HD2	1.80	0.63
23:BB:1240:U:O2'	23:BB:1241:A:H5''	1.98	0.63
1:CA:22:G:H2'	1:CA:23:C:H6	1.62	0.63
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.33	0.63
48:BG:10:VAL:HG12	48:BG:10:VAL:O	1.98	0.63
37:DL:110:VAL:HG23	37:DL:126:ARG:O	1.98	0.63
1:AA:389:A:H3'	1:AA:390:U:H6	1.63	0.63
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.12	0.63
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.12	0.63
23:DB:1224:U:H4'	49:DR:88:GLY:O	1.98	0.63
15:CP:48:GLU:HG3	15:CP:49:GLY:H	1.63	0.63
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.13	0.63
25:BC:180:MET:O	25:BC:267:VAL:HG23	1.98	0.63
23:BB:2303:G:H4'	47:BF:121:PHE:O	1.98	0.63
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.13	0.63
23:BB:1932:A:H2'	23:BB:1933:G:O4'	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1475:G:H1'	23:DB:1476:U:H5	1.62	0.63
3:CD:28:ASP:HA	3:CD:33:ILE:HG21	1.80	0.63
5:AF:16:GLU:H	5:AF:16:GLU:CD	2.01	0.63
27:BK:8:LEU:N	27:BK:8:LEU:HD12	2.13	0.63
26:DD:36:GLN:O	26:DD:36:GLN:HG3	1.98	0.63
1:CA:1054:C:H1'	1:CA:1196:A:C5	2.33	0.63
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.80	0.63
1:CA:699:C:C2'	1:CA:700:G:H5''	2.26	0.63
42:BN:37:THR:HB	42:BN:40:LYS:HG3	1.80	0.63
46:BU:85:ARG:HA	46:BU:85:ARG:NE	2.14	0.63
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.79	0.63
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.80	0.63
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.78	0.63
28:BP:52:ARG:HH11	28:BP:52:ARG:HG2	1.63	0.63
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.80	0.63
1:AA:235:C:H2'	1:AA:236:A:H8	1.62	0.63
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.81	0.63
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.32	0.63
37:BL:110:VAL:HG23	37:BL:126:ARG:O	1.98	0.63
23:DB:969:G:H2'	23:DB:970:U:C6	2.33	0.63
23:BB:155:A:H2'	23:BB:156:A:C8	2.33	0.63
53:D6:10:THR:O	53:D6:14:MET:HG3	1.96	0.63
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.34	0.63
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.81	0.63
1:CA:301:G:H2'	1:CA:302:G:H8	1.62	0.63
23:BB:1192:G:O2'	23:BB:1193:G:H5'	1.98	0.63
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.34	0.63
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.63	0.63
23:DB:730:A:H3'	57:DB:3609:HOH:O	1.98	0.63
25:BC:123:ILE:HD13	25:BC:135:PRO:HG2	1.80	0.63
37:BL:93:ASN:ND2	37:BL:94:THR:H	1.96	0.63
53:D6:61:PRO:HG2	53:D6:67:VAL:CG1	2.29	0.63
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.34	0.63
1:AA:920:U:H2'	1:AA:921:U:C6	2.33	0.63
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.79	0.63
51:DZ:64:ILE:O	51:DZ:68:LEU:HG	1.99	0.63
50:DT:68:LYS:O	50:DT:69:ARG:CB	2.46	0.63
4:CE:156:ARG:HA	4:CE:158:LYS:NZ	2.11	0.63
23:BB:1082:U:N3	23:BB:1086:A:C6	2.67	0.63
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.80	0.63
10:AK:80:ASN:CB	10:AK:105:ARG:HB3	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:678:U:H2'	1:AA:679:C:C6	2.33	0.63
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.33	0.63
23:DB:609:A:H2'	23:DB:610:C:O4'	1.98	0.63
23:BB:742:A:H2'	23:BB:743:A:H8	1.63	0.63
23:DB:655:A:H4'	23:DB:656:G:H5'	1.79	0.63
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.33	0.63
20:AB:22:TRP:HB3	20:AB:38:HIS:CE1	2.33	0.63
38:BM:96:ILE:HD11	38:BM:126:ILE:HD13	1.79	0.63
23:DB:2359:C:O3'	34:D3:50:SER:HB3	1.98	0.63
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.81	0.63
1:CA:950:U:H2'	1:CA:951:G:H8	1.63	0.63
1:AA:301:G:H2'	1:AA:302:G:H8	1.63	0.63
23:BB:81:G:H2'	23:BB:82:U:O4'	1.98	0.63
2:AC:52:SER:HB3	2:AC:114:LEU:HG	1.80	0.63
40:DH:70:GLU:OE1	40:DH:71:LYS:HG3	1.98	0.63
1:AA:437:U:H2'	1:AA:438:U:O4'	1.98	0.63
23:BB:968:C:H2'	23:BB:969:G:H8	1.63	0.63
4:CE:21:SER:HB2	4:CE:28:ARG:HE	1.64	0.63
37:DL:95:LEU:HA	37:DL:98:ALA:HB3	1.78	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
48:BG:15:ASP:HB2	48:BG:26:LYS:HB3	1.79	0.63
25:BC:70:LYS:NZ	25:BC:99:GLU:HB3	2.13	0.63
1:AA:918:A:H2'	1:AA:919:A:C8	2.33	0.63
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.98	0.63
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE2	1.80	0.63
1:CA:268:U:H2'	1:CA:269:C:C6	2.34	0.63
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.80	0.63
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.81	0.63
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	1.99	0.63
23:DB:969:G:H2'	23:DB:970:U:H6	1.63	0.63
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	1.99	0.63
20:AB:172:ILE:HD12	20:AB:172:ILE:H	1.64	0.63
19:AT:27:MET:O	19:AT:31:ILE:HG13	1.99	0.63
27:BK:7:MET:SD	27:BK:20:MET:HB2	2.38	0.63
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.34	0.63
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.33	0.63
1:CA:865:A:H2'	1:CA:866:C:C6	2.34	0.63
2:CC:70:ALA:HA	2:CC:105:VAL:HG21	1.80	0.63
1:CA:193:C:H2'	1:CA:194:C:C6	2.34	0.63
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:42:TRP:HE1	5:AF:61:LEU:HD23	1.63	0.63
1:AA:719:C:H2'	17:AR:38:ILE:CD1	2.28	0.63
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.12	0.63
52:DW:59:PHE:CE2	52:DW:61:LYS:HD2	2.34	0.63
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.79	0.63
23:BB:557:C:H2'	23:BB:558:U:C6	2.34	0.63
48:DG:122:ALA:HB2	48:DG:132:LEU:HB3	1.80	0.63
23:DB:357:C:H2'	23:DB:358:U:C6	2.33	0.63
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.13	0.63
50:BT:68:LYS:O	50:BT:69:ARG:CB	2.46	0.63
41:BJ:19:ASP:HA	41:BJ:57:LEU:HB3	1.81	0.63
1:CA:270:A:H2'	1:CA:271:C:C6	2.32	0.63
40:DH:94:ILE:HG22	40:DH:122:LEU:CB	2.29	0.63
23:DB:1273:U:H4'	23:DB:1275:A:OP2	1.98	0.63
38:DM:42:THR:O	38:DM:44:ARG:N	2.32	0.63
23:BB:2886:A:H62	31:B0:39:ARG:CD	2.11	0.63
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.33	0.63
12:AM:2:ARG:HG3	12:AM:6:ILE:HA	1.79	0.63
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.33	0.63
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.13	0.63
12:CM:2:ARG:HD3	12:CM:2:ARG:H	1.62	0.63
23:DB:2786:U:H5'	26:DD:70:LYS:HG3	1.80	0.63
10:CK:92:ARG:HH11	10:CK:92:ARG:HG2	1.64	0.63
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.32	0.63
23:DB:1268:A:H2'	23:DB:1269:A:O4'	1.98	0.63
1:AA:320:A:H2'	1:AA:321:A:C8	2.33	0.63
26:BD:36:GLN:O	26:BD:36:GLN:HG3	1.98	0.63
3:AD:53:GLN:HB3	3:AD:202:LEU:HB2	1.81	0.63
1:CA:411:A:C4	1:CA:413:G:H1'	2.33	0.63
46:BU:42:LYS:HG3	46:BU:57:ILE:HG21	1.80	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
15:AP:3:THR:HG22	15:AP:66:THR:HB	1.81	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
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.80	0.63
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.18	0.63
1:CA:577:G:O2'	1:CA:578:C:H5'	1.99	0.63
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.62	0.63
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.81	0.63
40:BH:67:ALA:O	40:BH:71:LYS:HB2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:32:LEU:HD22	25:DC:63:ILE:HG13	1.80	0.63
1:CA:918:A:H2'	1:CA:919:A:C8	2.34	0.63
1:AA:975:A:H4'	1:AA:976:G:O5'	1.97	0.63
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.81	0.63
4:CE:52:ALA:H	4:CE:58:ALA:HB2	1.64	0.63
24:BI:20:SER:O	24:BI:25:PRO:HD2	1.99	0.63
10:CK:105:ARG:HH21	21:CU:10:PRO:HB3	1.64	0.63
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.80	0.63
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.98	0.63
1:CA:678:U:H2'	1:CA:679:C:H6	1.63	0.63
1:AA:678:U:H2'	1:AA:679:C:H6	1.63	0.63
23:DB:495:G:H21	45:DS:61:ASN:HD21	1.45	0.63
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.80	0.63
20:CB:33:ALA:HA	20:CB:38:HIS:HA	1.80	0.63
4:CE:21:SER:CB	4:CE:28:ARG:HE	2.10	0.63
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.33	0.63
19:AT:29:THR:HA	19:AT:32:LYS:HE3	1.79	0.63
23:BB:2376:A:H2'	23:BB:2377:A:O4'	1.98	0.63
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	1.98	0.63
23:DB:2377:A:H2'	23:DB:2378:A:C8	2.33	0.63
1:CA:41:G:H2'	1:CA:42:G:H8	1.64	0.63
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.34	0.63
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.34	0.63
1:AA:411:A:C4	1:AA:413:G:H1'	2.33	0.63
1:AA:1301:U:O2	1:AA:1301:U:H2'	1.97	0.63
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.62	0.63
8:AI:18:VAL:HG21	8:AI:82:ILE:N	2.14	0.63
48:BG:102:ILE:HG13	48:BG:116:LEU:HD11	1.79	0.63
49:DR:3:ALA:HB2	49:DR:101:ILE:HD11	1.80	0.63
28:DP:3:ILE:HD13	28:DP:7:LEU:HD11	1.79	0.63
1:AA:577:G:O2'	1:AA:578:C:H5'	1.99	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.32	0.63
1:CA:1099:G:OP1	20:CB:94:ARG:HD3	1.98	0.63
22:DA:8:C:O2'	43:DO:40:ILE:HD13	1.99	0.63
23:DB:2142:A:H2'	23:DB:2143:C:O4'	1.99	0.63
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.28	0.63
23:BB:680:C:H2'	23:BB:681:G:C8	2.34	0.63
23:DB:79:C:O2'	23:DB:346:A:H1'	1.98	0.63
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.34	0.63
25:DC:180:MET:O	25:DC:267:VAL:HG23	1.98	0.63
17:AR:19:GLU:HG3	17:AR:54:LEU:HD12	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1480:A:H2'	1:AA:1481:U:O4'	1.99	0.63
1:AA:499:A:H4'	1:AA:500:G:H5'	1.79	0.63
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.81	0.63
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.81	0.63
23:DB:642:U:O2	23:DB:644:A:H3'	1.99	0.63
23:DB:5:A:H2'	23:DB:6:A:C8	2.34	0.63
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.13	0.63
47:DF:111:ARG:HH11	47:DF:135:ILE:HG21	1.63	0.63
10:AK:106:ILE:HD11	10:AK:109:ILE:HD11	1.80	0.63
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.29	0.63
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.64	0.63
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.79	0.63
53:B6:29:ARG:HH22	53:B6:110:ARG:CD	2.08	0.63
45:DS:31:GLN:O	45:DS:35:ILE:HG12	1.99	0.63
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.11	0.63
51:BZ:71:LEU:HD12	51:BZ:78:TYR:HD2	1.64	0.63
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.64	0.63
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.98	0.63
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.64	0.63
32:D4:22:VAL:HB	32:D4:24:ARG:HE	1.64	0.63
3:AD:84:ASN:HD22	4:AE:101:GLY:HA3	1.64	0.63
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.64	0.63
22:BA:10:G:H2'	22:BA:11:C:O4'	1.98	0.63
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	1.99	0.63
23:BB:2553:G:H2'	23:BB:2554:U:H4'	1.81	0.63
45:BS:20:VAL:O	45:BS:23:LEU:HB2	1.99	0.63
47:BF:72:SER:HA	47:BF:78:ILE:HG22	1.81	0.63
43:BO:89:ASP:HA	43:BO:116:GLN:O	1.98	0.63
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.80	0.63
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	1.79	0.63
10:AK:19:VAL:HG12	10:AK:82:GLU:HB2	1.79	0.63
27:DK:71:ARG:CB	27:DK:72:PRO:HD2	2.23	0.63
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.81	0.63
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.80	0.63
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.80	0.63
23:BB:139:U:H3'	23:BB:140:C:C5'	2.28	0.63
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.81	0.63
47:BF:7:TYR:O	47:BF:12:VAL:HG23	1.99	0.63
24:DI:121:ILE:N	24:DI:121:ILE:HD13	2.13	0.63
3:CD:169:TRP:HB2	3:CD:183:ARG:HD2	1.79	0.63
1:AA:235:C:H2'	1:AA:236:A:C8	2.33	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
30:DY:50:VAL:O	30:DY:54:VAL:HG22	1.99	0.63
44:BQ:30:VAL:HG22	44:BQ:31:TYR:H	1.63	0.63
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.81	0.63
15:CP:22:ALA:HA	15:CP:33:ILE:HG13	1.80	0.63
23:BB:2023:C:O2'	23:BB:2024:G:H5'	1.99	0.63
15:AP:3:THR:HB	15:AP:66:THR:O	1.99	0.63
1:AA:285:C:H2'	1:AA:286:C:H6	1.63	0.63
1:CA:431:A:H2'	1:CA:432:A:O4'	1.98	0.63
1:AA:999:C:H2'	1:AA:1000:A:C8	2.34	0.63
44:DQ:18:LYS:C	44:DQ:20:ALA:H	2.02	0.63
12:AM:78:ARG:O	12:AM:82:LEU:HB2	1.98	0.63
23:BB:1914:C:H2'	23:BB:1915:U:O4'	1.98	0.63
23:DB:64:A:H2'	23:DB:65:U:H6	1.63	0.63
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.18	0.62
5:CF:100:SER:HA	17:CR:23:LYS:CE	2.28	0.62
21:AU:16:ARG:CZ	21:AU:19:LYS:HE2	2.29	0.62
21:AU:3:ILE:HG21	21:AU:19:LYS:HD2	1.81	0.62
47:BF:31:GLU:HB3	47:BF:156:THR:O	1.98	0.62
46:BU:10:VAL:O	46:BU:21:ARG:HA	1.99	0.62
23:DB:559:G:H21	44:DQ:51:GLN:NE2	1.96	0.62
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.80	0.62
19:CT:56:ILE:O	19:CT:60:GLN:HG2	1.99	0.62
23:BB:2658:C:H5'	48:BG:159:LYS:NZ	2.13	0.62
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.14	0.62
23:BB:365:U:H2'	23:BB:366:C:C6	2.34	0.62
9:CJ:56:HIS:H	13:CN:80:ARG:NH2	1.97	0.62
42:BN:79:LEU:HA	42:BN:83:LEU:HD12	1.79	0.62
1:AA:430:A:OP1	3:AD:8:LEU:HB2	1.98	0.62
1:AA:90:C:H2'	1:AA:91:U:C5	2.34	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:DB:1266:G:H22	23:DB:2012:G:H2'	1.64	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
23:DB:62:U:H2'	23:DB:63:A:O4'	1.99	0.62
47:DF:72:SER:HA	47:DF:78:ILE:HG22	1.80	0.62
23:BB:173:A:H2'	23:BB:174:U:C6	2.34	0.62
1:AA:390:U:H2'	1:AA:391:G:C8	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:285:C:H2'	1:AA:286:C:C6	2.34	0.62
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.33	0.62
23:DB:1501:G:O2'	23:DB:1502:A:H5'	1.99	0.62
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.33	0.62
33:D1:3:GLY:O	33:D1:4:ILE:HG12	1.98	0.62
1:CA:285:C:H2'	1:CA:286:C:C6	2.34	0.62
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.62	0.62
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.80	0.62
23:BB:1939:U:H6	23:BB:1939:U:H5'	1.64	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
22:BA:39:A:O2'	22:BA:40:U:H5'	1.99	0.62
27:DK:71:ARG:HA	27:DK:71:ARG:NE	2.13	0.62
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.80	0.62
49:DR:38:VAL:O	49:DR:53:PHE:HB3	1.99	0.62
13:AN:10:VAL:HB	13:AN:11:LYS:NZ	2.15	0.62
23:BB:705:A:N6	23:BB:726:G:O2'	2.32	0.62
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.80	0.62
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	1.80	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
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
23:DB:717:C:H3'	23:DB:718:A:H5''	1.79	0.62
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.34	0.62
20:AB:148:GLY:O	20:AB:151:LYS:HG2	2.00	0.62
15:AP:26:ASN:ND2	15:AP:31:ARG:HB3	2.14	0.62
25:DC:43:ASN:ND2	25:DC:44:ASN:H	1.96	0.62
18:CS:69:LYS:O	18:CS:72:GLU:HG2	1.98	0.62
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.34	0.62
1:AA:216:U:H2'	1:AA:217:C:C6	2.34	0.62
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.13	0.62
1:CA:390:U:H2'	1:CA:391:G:C8	2.34	0.62
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.13	0.62
1:CA:285:C:H2'	1:CA:286:C:H6	1.65	0.62
23:BB:979:A:H2'	23:BB:982:C:N4	2.14	0.62
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.14	0.62
20:CB:139:GLU:HG2	20:CB:143:LEU:HD11	1.79	0.62
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.39	0.62
23:DB:2439:A:N7	23:DB:2586:U:H4'	2.14	0.62
1:AA:41:G:H2'	1:AA:42:G:H8	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.81	0.62
6:CG:58:LEU:H	6:CG:58:LEU:HD23	1.63	0.62
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.34	0.62
26:BD:154:LYS:H	26:BD:154:LYS:HD3	1.64	0.62
19:AT:19:HIS:O	19:AT:23:ARG:HG2	1.99	0.62
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.62	0.62
35:DV:61:LEU:O	35:DV:71:LYS:HA	1.99	0.62
28:DP:56:SER:O	28:DP:75:THR:HG22	1.99	0.62
4:AE:35:LEU:HD22	4:AE:133:ILE:HA	1.80	0.62
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.80	0.62
40:BH:89:LYS:O	40:BH:90:LEU:HD12	2.00	0.62
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.28	0.62
23:BB:2880:C:H1'	42:BN:93:GLY:H	1.63	0.62
23:DB:1179:G:H2'	23:DB:1180:U:O4'	1.99	0.62
12:AM:43:LYS:O	12:AM:46:GLU:HG3	1.99	0.62
20:CB:55:GLU:HG3	20:CB:197:PHE:CZ	2.34	0.62
7:CH:113:ARG:NH2	7:CH:114:ALA:HA	2.14	0.62
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.79	0.62
23:DB:27:G:N2	23:DB:512:G:H2'	2.14	0.62
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.63	0.62
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.34	0.62
7:AH:48:PHE:HA	7:AH:59:GLU:O	1.98	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
25:DC:86:ARG:NH1	25:DC:86:ARG:HB3	2.14	0.62
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.80	0.62
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.33	0.62
23:BB:464:U:H2'	23:BB:465:G:O4'	1.98	0.62
37:DL:23:ILE:HD12	49:DR:84:ARG:HE	1.65	0.62
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.81	0.62
1:AA:358:U:H2'	1:AA:359:G:C8	2.34	0.62
29:BE:200:LEU:O	29:BE:201:ALA:HB3	1.97	0.62
48:DG:102:ILE:HD12	48:DG:147:LEU:HD21	1.80	0.62
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.62
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.00	0.62
24:DI:27:LEU:CD2	24:DI:27:LEU:H	2.11	0.62
41:DJ:57:LEU:HD21	41:DJ:128:ASN:HA	1.80	0.62
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.15	0.62
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.80	0.62
20:AB:102:ASN:OD1	20:AB:105:THR:HB	1.99	0.62
20:AB:55:GLU:HG3	20:AB:197:PHE:CZ	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1423:G:H2'	1:AA:1424:U:H6	1.62	0.62
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.28	0.62
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.63	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
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
23:DB:947:A:H2'	23:DB:948:C:H6	1.63	0.62
23:BB:1871:A:H2'	23:BB:1872:A:C8	2.35	0.62
52:BW:74:LYS:HE2	52:BW:74:LYS:HA	1.81	0.62
18:CS:20:LYS:O	18:CS:23:GLU:HG3	1.99	0.62
23:BB:647:G:H2'	23:BB:648:G:C8	2.35	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
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.34	0.62
45:BS:66:ILE:CD1	45:BS:66:ILE:H	2.10	0.62
20:AB:187:ASP:HB3	20:AB:201:GLY:O	1.99	0.62
51:BZ:69:ALA:HA	51:BZ:72:ARG:HH12	1.65	0.62
1:CA:62:U:H4'	1:CA:378:G:N2	2.14	0.62
51:DZ:71:LEU:HD12	51:DZ:78:TYR:HD2	1.65	0.62
46:DU:86:PHE:HB3	46:DU:90:LYS:O	1.98	0.62
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.00	0.62
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.17	0.62
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.79	0.62
23:DB:1174:U:H4'	23:DB:1176:U:H1'	1.80	0.62
1:AA:520:A:O2'	11:AL:69:GLU:HG2	2.00	0.62
1:AA:371:A:O2'	1:AA:372:C:H5'	1.99	0.62
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.34	0.62
1:CA:216:U:H2'	1:CA:217:C:C6	2.34	0.62
23:DB:1373:A:H2'	23:DB:1374:G:O4'	2.00	0.62
1:CA:394:G:H2'	1:CA:395:C:C6	2.34	0.62
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.33	0.62
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.81	0.62
7:AH:28:SER:OG	7:AH:56:PRO:HB2	2.00	0.62
23:DB:863:A:H2'	23:DB:864:G:C8	2.34	0.62
23:DB:81:G:H2'	23:DB:82:U:O4'	1.99	0.62
1:CA:434:U:H3'	1:CA:435:A:H8	1.63	0.62
53:B6:2:THR:OG1	53:B6:5:GLU:HG3	1.98	0.62
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	1.82	0.62
13:AN:14:ALA:HB1	13:AN:18:LYS:HE3	1.81	0.62
23:DB:836:G:H2'	23:DB:837:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:441:U:H2'	23:DB:442:G:H8	1.65	0.62
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.35	0.62
40:BH:32:PRO:HG3	51:BZ:39:TRP:HB3	1.82	0.62
21:CU:42:THR:HB	21:CU:46:ARG:NE	2.14	0.62
17:CR:37:LYS:NZ	21:CU:22:CYS:HB2	2.15	0.62
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.29	0.62
23:BB:2306:C:C5	23:BB:2307:G:H2'	2.34	0.62
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.15	0.62
53:B6:32:ARG:HH22	53:B6:88:LEU:CA	2.12	0.62
23:BB:2746:U:OP1	48:BG:141:GLY:HA3	1.99	0.62
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.80	0.62
23:DB:1913:A:H4'	23:DB:1914:C:C5'	2.30	0.62
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.34	0.62
39:BX:1:MET:HG2	39:BX:4:LYS:NZ	2.15	0.62
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.14	0.62
38:DM:42:THR:OG1	38:DM:45:GLN:HG3	2.00	0.62
1:CA:1404:C:H2'	1:CA:1405:G:H8	1.61	0.62
23:BB:1788:C:O2'	23:BB:1789:A:H5'	1.98	0.62
1:CA:22:G:H2'	1:CA:23:C:C6	2.34	0.62
48:DG:61:TRP:HA	48:DG:61:TRP:HE3	1.64	0.62
23:BB:62:U:H2'	23:BB:63:A:O4'	2.00	0.62
23:BB:2291:U:O2'	23:BB:2374:C:H1'	1.99	0.62
1:CA:859:G:H2'	1:CA:860:A:H8	1.62	0.62
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.64	0.62
23:BB:863:A:H2'	23:BB:864:G:C8	2.35	0.62
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.34	0.62
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.00	0.62
22:DA:10:G:H2'	22:DA:11:C:O4'	1.99	0.62
43:DO:94:ARG:HD2	43:DO:97:PHE:O	1.98	0.62
45:DS:20:VAL:O	45:DS:23:LEU:HB2	1.99	0.62
19:CT:29:THR:HA	19:CT:32:LYS:HE3	1.81	0.62
27:DK:58:LEU:N	27:DK:58:LEU:HD23	2.15	0.62
23:BB:315:G:H2'	23:BB:316:C:C6	2.34	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
23:BB:2267:A:H5''	23:BB:2268:A:H5'	1.80	0.62
47:DF:33:ILE:HD13	47:DF:98:PHE:CD2	2.34	0.62
11:CL:85:ARG:HG3	11:CL:86:VAL:N	2.15	0.62
53:D6:33:ALA:CB	53:D6:63:PRO:HA	2.29	0.62
23:DB:851:C:O4'	30:DY:46:MET:HG2	2.00	0.62
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
40:BH:117:LEU:HD21	40:BH:128:HIS:CE1	2.34	0.62
1:AA:1314:C:H41	18:AS:3:SER:HB3	1.65	0.62
50:BT:2:ILE:N	50:BT:2:ILE:HD13	2.15	0.62
1:AA:17:U:H2'	1:AA:18:C:C6	2.35	0.62
51:DZ:35:SER:HB3	51:DZ:50:ARG:HG3	1.80	0.62
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.29	0.62
38:BM:42:THR:O	38:BM:44:ARG:N	2.33	0.62
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.65	0.62
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.65	0.62
23:BB:1535:A:O2'	23:BB:1536:C:H5'	2.00	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
31:D0:21:LEU:HD12	45:DS:19:LEU:O	1.99	0.62
10:CK:115:ILE:HD11	17:CR:72:ARG:HH12	1.65	0.62
26:BD:114:LYS:HD2	26:BD:116:LYS:NZ	2.15	0.62
23:BB:176:A:O2'	23:BB:177:G:H5'	1.99	0.62
47:BF:155:ILE:H	47:BF:155:ILE:HD12	1.65	0.62
23:DB:2376:A:H2'	23:DB:2377:A:O4'	2.00	0.62
23:DB:64:A:H2'	23:DB:65:U:C6	2.35	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
23:BB:455:C:N3	23:BB:472:A:H2'	2.15	0.62
23:DB:257:C:H2'	23:DB:258:G:O4'	2.00	0.62
17:AR:27:THR:HG22	17:AR:31:TYR:HE1	1.65	0.62
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	1.82	0.62
13:CN:5:MET:HG2	13:CN:8:ARG:HH11	1.64	0.62
13:AN:40:ARG:NH1	18:AS:6:LYS:HB2	2.15	0.62
49:BR:49:ILE:HD13	49:BR:51:VAL:O	2.00	0.62
26:BD:68:PHE:C	26:BD:73:VAL:HB	2.20	0.62
23:BB:2732:G:H5'	23:BB:2733:A:O4'	1.99	0.62
1:AA:673:A:H2'	1:AA:674:G:C8	2.34	0.62
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.65	0.62
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.00	0.62
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	1.99	0.62
3:CD:53:GLN:HB3	3:CD:202:LEU:HB2	1.79	0.62
1:AA:193:C:H2'	1:AA:194:C:C6	2.34	0.62
7:AH:87:ARG:H	7:AH:90:GLU:HB2	1.65	0.62
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.81	0.62
20:CB:172:ILE:H	20:CB:172:ILE:HD12	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:859:G:H2'	1:AA:860:A:H8	1.65	0.62
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.00	0.62
35:DV:15:GLY:O	35:DV:19:ARG:HG3	1.99	0.62
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.80	0.62
1:AA:524:G:H2'	1:AA:525:C:C6	2.35	0.62
23:BB:2439:A:N7	23:BB:2586:U:H4'	2.14	0.62
23:DB:394:C:O2'	23:DB:395:U:H5'	2.00	0.62
1:CA:880:C:H2'	1:CA:881:G:H8	1.65	0.62
1:AA:634:C:H2'	1:AA:635:A:H8	1.65	0.62
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.35	0.62
29:BE:130:LYS:C	29:BE:132:LYS:H	2.03	0.62
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.30	0.62
47:DF:60:SER:HB2	47:DF:62:GLN:OE1	2.00	0.62
23:DB:921:C:H2'	23:DB:922:C:H6	1.65	0.62
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.35	0.62
20:CB:40:ILE:HD13	20:CB:201:GLY:HA2	1.80	0.62
13:AN:5:MET:HG2	13:AN:8:ARG:HH11	1.65	0.62
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.64	0.62
53:B6:77:LYS:O	53:B6:81:LYS:HG3	2.00	0.62
36:D2:33:ARG:HB2	36:D2:33:ARG:HH21	1.65	0.62
4:AE:81:GLN:N	4:AE:146:MET:HE3	2.15	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
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.65	0.62
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.35	0.62
23:DB:1258:U:H4'	29:DE:79:ARG:HD2	1.82	0.62
23:DB:364:C:H2'	23:DB:365:U:C6	2.35	0.62
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.81	0.62
18:CS:29:PRO:HA	18:CS:47:THR:O	2.00	0.62
23:DB:347:A:H2'	23:DB:348:A:H8	1.64	0.62
1:AA:868:C:H2'	1:AA:869:G:O4'	2.00	0.62
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.62
23:DB:624:C:O2'	23:DB:657:U:H5''	2.00	0.62
28:BP:31:VAL:HG12	28:BP:38:ARG:O	2.00	0.62
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.14	0.62
53:D6:52:LEU:HD23	53:D6:53:ASN:N	2.15	0.62
48:DG:15:ASP:HB2	48:DG:26:LYS:HB3	1.81	0.62
28:BP:3:ILE:HD13	28:BP:7:LEU:HD11	1.82	0.62
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.15	0.62
20:CB:80:LYS:HG3	20:CB:81:ASP:H	1.64	0.62
2:AC:149:LYS:HA	2:AC:168:ARG:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	1.99	0.62
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.30	0.62
32:B4:22:VAL:HB	32:B4:24:ARG:HE	1.65	0.62
23:DB:171:U:H2'	23:DB:172:A:H8	1.65	0.62
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.35	0.62
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.34	0.62
1:AA:636:U:H2'	1:AA:637:C:C6	2.34	0.62
53:D6:19:GLU:HA	53:D6:22:GLU:CD	2.20	0.62
23:DB:324:A:H2'	23:DB:325:G:O4'	2.00	0.62
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.15	0.62
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.34	0.62
1:CA:1301:U:H2'	1:CA:1301:U:O2	1.97	0.62
44:BQ:18:LYS:C	44:BQ:20:ALA:H	2.02	0.62
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.15	0.62
23:BB:321:U:H1'	29:BE:162:ARG:HH11	1.64	0.61
47:DF:103:ILE:HD11	47:DF:174:PHE:HA	1.82	0.61
47:BF:32:LYS:HB2	47:BF:90:LEU:O	1.99	0.61
48:BG:102:ILE:HD12	48:BG:147:LEU:HD21	1.81	0.61
44:DQ:63:ARG:HH21	44:DQ:64:ILE:CD1	2.12	0.61
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.33	0.61
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.82	0.61
40:BH:134:VAL:HG13	40:BH:135:HIS:N	2.14	0.61
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.81	0.61
23:BB:140:C:H4'	23:BB:141:G:N2	2.14	0.61
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.00	0.61
29:BE:110:SER:HB3	29:BE:114:ARG:NH1	2.11	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:DB:2841:C:H2'	23:DB:2842:G:C8	2.34	0.61
3:AD:169:TRP:HB2	3:AD:183:ARG:HD2	1.81	0.61
20:AB:128:LEU:HG	20:AB:132:GLU:HG2	1.82	0.61
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.82	0.61
23:BB:2728:U:H5'	27:BK:70:ARG:HH21	1.63	0.61
1:AA:958:A:H61	18:AS:53:GLY:HA3	1.65	0.61
25:BC:204:LEU:HD22	25:BC:209:ALA:HB1	1.81	0.61
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.62	0.61
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.64	0.61
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.15	0.61
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.35	0.61
1:CA:436:C:O2'	1:CA:437:U:H5'	2.00	0.61
23:BB:165:A:H2'	23:BB:166:U:H6	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:32:LEU:HD22	25:BC:63:ILE:HG13	1.82	0.61
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.65	0.61
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.34	0.61
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.34	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
52:DW:74:LYS:HE2	52:DW:74:LYS:HA	1.82	0.61
1:AA:431:A:H2'	1:AA:432:A:O4'	2.00	0.61
10:CK:106:ILE:HD11	10:CK:109:ILE:HD11	1.80	0.61
26:DD:29:VAL:O	26:DD:185:ASN:HB3	1.99	0.61
27:BK:71:ARG:CB	27:BK:72:PRO:HD2	2.25	0.61
40:DH:135:HIS:H	40:DH:138:VAL:HB	1.64	0.61
45:DS:66:ILE:CD1	45:DS:66:ILE:H	2.10	0.61
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.30	0.61
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.13	0.61
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	1.81	0.61
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD13	1.66	0.61
4:AE:33:THR:HG22	4:AE:51:LYS:HB3	1.81	0.61
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.82	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
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
6:CG:50:ALA:HB2	6:CG:57:GLU:HG3	1.82	0.61
50:DT:18:GLU:C	50:DT:20:ALA:H	2.04	0.61
38:DM:127:LYS:HD2	38:DM:127:LYS:H	1.64	0.61
23:DB:1169:A:H2'	23:DB:1170:C:H6	1.64	0.61
1:AA:1319:A:H3'	18:AS:2:ARG:HA	1.81	0.61
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.65	0.61
10:CK:108:ASN:HD21	21:CU:6:ARG:HD2	1.65	0.61
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.30	0.61
1:CA:194:C:O2'	1:CA:195:A:H5'	2.00	0.61
1:CA:41:G:H2'	1:CA:42:G:C8	2.34	0.61
1:AA:859:G:H2'	1:AA:860:A:C8	2.35	0.61
1:AA:279:A:H5''	1:AA:280:C:H3'	1.82	0.61
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.82	0.61
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.99	0.61
1:AA:1054:C:H1'	1:AA:1196:A:C5	2.35	0.61
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.65	0.61
23:BB:111:A:H2'	23:BB:112:U:O4'	1.99	0.61
22:DA:39:A:O2'	22:DA:40:U:H5'	2.00	0.61
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.47	0.61
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.21	0.61
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.82	0.61
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.01	0.61
20:CB:49:PHE:O	20:CB:53:LEU:HD13	1.99	0.61
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.14	0.61
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.13	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
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.81	0.61
23:DB:2800:A:H2'	23:DB:2801:G:C1'	2.30	0.61
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.29	0.61
14:AO:39:LEU:HD22	14:AO:59:MET:HE1	1.83	0.61
24:DI:126:ARG:HB3	24:DI:126:ARG:HH11	1.65	0.61
14:CO:81:LEU:HD23	14:CO:85:LEU:HD13	1.81	0.61
23:DB:1551:A:C3'	23:DB:1552:A:H5''	2.30	0.61
23:DB:2144:G:O2'	23:DB:2145:C:H5'	2.00	0.61
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.33	0.61
27:DK:60:ALA:HA	27:DK:87:LEU:HD23	1.82	0.61
2:AC:48:LYS:N	2:AC:48:LYS:HD3	2.14	0.61
50:BT:18:GLU:C	50:BT:20:ALA:H	2.04	0.61
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.15	0.61
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.36	0.61
23:BB:171:U:H2'	23:BB:172:A:H8	1.66	0.61
11:AL:107:LYS:H	11:AL:107:LYS:NZ	1.97	0.61
18:CS:28:LYS:H	18:CS:28:LYS:HD2	1.64	0.61
1:CA:950:U:H2'	1:CA:951:G:C8	2.35	0.61
23:BB:165:A:H2'	23:BB:166:U:C6	2.35	0.61
23:BB:257:C:H2'	23:BB:258:G:O4'	2.00	0.61
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.36	0.61
23:BB:220:G:H1	23:BB:427:U:H2'	1.65	0.61
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.35	0.61
23:BB:184:C:H2'	23:BB:185:G:H8	1.64	0.61
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.34	0.61
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.66	0.61
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.16	0.61
23:BB:934:U:H2'	23:BB:935:C:C6	2.35	0.61
4:AE:89:THR:HG21	4:AE:134:ASN:ND2	2.15	0.61
8:AI:48:ARG:O	8:AI:52:GLU:HG2	2.00	0.61
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.16	0.61
44:DQ:54:ARG:HB3	44:DQ:58:GLN:NE2	2.12	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
23:BB:2800:A:H2'	23:BB:2801:G:C1'	2.30	0.61
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.99	0.61
23:DB:582:A:H2'	23:DB:583:G:H8	1.65	0.61
1:AA:1074:G:C4'	20:AB:102:ASN:HB2	2.30	0.61
23:BB:742:A:H2'	23:BB:743:A:C8	2.35	0.61
45:DS:17:VAL:HG13	45:DS:43:ALA:HB1	1.82	0.61
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.64	0.61
25:DC:221:GLY:C	25:DC:223:ALA:H	2.04	0.61
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HD2	1.83	0.61
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.00	0.61
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.34	0.61
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.15	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
9:CJ:85:ASP:HA	9:CJ:88:MET:SD	2.40	0.61
23:DB:2137:U:O2'	23:DB:2138:G:H5'	2.00	0.61
20:CB:128:LEU:HD12	20:CB:129:THR:H	1.65	0.61
53:D6:52:LEU:O	53:D6:55:ILE:HG22	2.00	0.61
26:DD:28:GLU:HG3	26:DD:185:ASN:O	2.00	0.61
27:BK:72:PRO:O	27:BK:74:GLY:N	2.34	0.61
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.35	0.61
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.63	0.61
53:B6:29:ARG:HH22	53:B6:110:ARG:HH11	1.48	0.61
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.83	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
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.01	0.61
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.83	0.61
19:CT:78:LEU:O	19:CT:82:ILE:HG23	2.01	0.61
23:DB:323:C:H2'	29:DE:163:ASN:OD1	2.01	0.61
23:DB:126:A:H5'	36:D2:19:ARG:CG	2.29	0.61
40:DH:115:VAL:HG22	40:DH:117:LEU:H	1.64	0.61
36:B2:33:ARG:HH21	36:B2:33:ARG:HB2	1.65	0.61
6:AG:110:ARG:HD2	6:AG:122:GLU:HB2	1.83	0.61
23:DB:543:G:H21	23:DB:545:U:H5'	1.66	0.61
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.35	0.61
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.65	0.61
44:DQ:30:VAL:HG22	44:DQ:31:TYR:H	1.64	0.61
23:DB:79:C:HO2'	23:DB:346:A:C1'	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:14:MET:SD	53:B6:129:ILE:HG23	2.41	0.61
23:DB:592:A:H2'	23:DB:593:U:C6	2.35	0.61
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.36	0.61
1:AA:33:A:H2'	1:AA:34:C:C6	2.35	0.61
11:CL:107:LYS:H	11:CL:107:LYS:NZ	1.97	0.61
1:CA:1347:G:C8	8:CI:108:ARG:HB3	2.35	0.61
44:DQ:83:LYS:HA	44:DQ:83:LYS:NZ	2.16	0.61
39:BX:10:SER:H	39:BX:60:LYS:HE2	1.64	0.61
23:DB:1222:U:P	49:DR:90:ARG:HH22	2.23	0.61
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.36	0.61
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.35	0.61
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.14	0.61
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.65	0.61
53:D6:70:SER:HB3	53:D6:76:LEU:HD12	1.81	0.61
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.01	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
23:BB:599:A:O2'	23:BB:600:G:H5'	2.00	0.61
25:BC:131:MET:HA	25:BC:134:ILE:HG23	1.82	0.61
13:AN:12:ARG:HD3	13:AN:58:ARG:HB3	1.82	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
40:BH:5:LEU:HD12	40:BH:17:ASP:HB2	1.83	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
26:DD:68:PHE:C	26:DD:73:VAL:HB	2.19	0.61
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.83	0.61
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.15	0.61
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.21	0.61
23:DB:1175:A:H2'	23:DB:1175:A:N3	2.13	0.61
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.16	0.61
23:DB:873:C:H2'	23:DB:874:G:C8	2.36	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
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:DB:1400:U:H2'	23:DB:1401:G:C8	2.35	0.61
43:BO:94:ARG:HD2	43:BO:97:PHE:O	1.99	0.61
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.82	0.61
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.35	0.61
9:CJ:44:THR:HG23	9:CJ:69:THR:O	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.82	0.61
1:AA:541:G:O2'	3:AD:39:GLN:HB3	2.00	0.61
53:D6:156:ARG:O	53:D6:159:ALA:HB3	2.00	0.61
40:DH:24:GLY:O	40:DH:28:ASN:HB2	2.01	0.61
29:BE:18:THR:HG22	29:BE:106:LYS:NZ	2.15	0.61
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.35	0.61
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.82	0.61
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.64	0.61
1:CA:1134:G:C2	1:CA:1135:U:H1'	2.35	0.61
40:BH:75:LEU:HB3	40:BH:78:VAL:CG2	2.30	0.61
1:AA:919:A:O2'	1:AA:920:U:H5'	2.00	0.61
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.66	0.61
4:CE:156:ARG:HD2	7:CH:42:GLU:O	2.01	0.61
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.82	0.61
3:AD:187:ARG:O	3:AD:191:SER:HB3	1.99	0.61
23:BB:116:C:H2'	23:BB:117:G:O4'	2.00	0.61
29:DE:46:GLN:HB2	29:DE:87:ALA:O	1.99	0.61
23:BB:2840:C:OP1	42:BN:50:PRO:HA	2.01	0.61
1:AA:1399:C:H4'	1:AA:1400:C:H5'	1.81	0.61
23:BB:2646:C:H2'	23:BB:2647:U:O4'	1.99	0.61
23:DB:2149:U:H2'	23:DB:2150:C:C6	2.36	0.61
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.14	0.61
1:CA:370:C:O2'	1:CA:371:A:H5'	2.00	0.61
23:DB:2810:A:H2'	23:DB:2811:G:O4'	1.99	0.61
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.66	0.61
1:CA:662:U:O2'	1:CA:836:G:H5''	2.01	0.61
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.65	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
15:CP:26:ASN:ND2	15:CP:31:ARG:HB3	2.15	0.61
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.82	0.61
23:BB:2212:A:H1'	23:BB:2213:U:H3	1.65	0.61
23:BB:571:U:H3'	49:BR:80:ARG:HH12	1.66	0.61
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.36	0.61
1:AA:41:G:H2'	1:AA:42:G:C8	2.35	0.61
23:BB:2095:A:H2'	23:BB:2096:C:C6	2.35	0.61
1:CA:634:C:H2'	1:CA:635:A:H8	1.64	0.61
4:AE:21:SER:CB	4:AE:28:ARG:HE	2.13	0.61
23:BB:2704:C:H2'	23:BB:2705:A:O4'	1.99	0.61
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.30	0.61
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2257:U:O2'	23:BB:2258:C:H5'	2.01	0.61
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.35	0.61
21:AU:42:THR:HB	21:AU:46:ARG:NE	2.15	0.61
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	1.82	0.61
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.16	0.61
29:DE:102:ARG:HD3	29:DE:201:ALA:H	1.66	0.61
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.35	0.61
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.01	0.61
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.36	0.61
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.16	0.61
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.65	0.61
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	1.99	0.61
1:CA:493:A:H5'	1:CA:494:G:OP2	2.00	0.61
1:CA:474:G:H2'	1:CA:475:C:C6	2.35	0.61
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.36	0.61
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.81	0.61
23:BB:806:C:O2'	23:BB:807:U:H5'	2.00	0.61
23:DB:144:A:H2'	23:DB:145:C:C6	2.35	0.61
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.41	0.61
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.00	0.61
53:D6:7:TYR:CZ	53:D6:160:GLU:HG2	2.36	0.61
41:BJ:72:LYS:HG3	41:BJ:89:PHE:HB2	1.83	0.61
23:DB:570:G:H2'	23:DB:2030:A:N7	2.16	0.61
1:AA:243:A:H4'	1:AA:244:U:H5'	1.82	0.61
52:BW:59:PHE:CE2	52:BW:61:LYS:HD2	2.34	0.61
27:DK:71:ARG:HB3	27:DK:72:PRO:CD	2.26	0.61
53:B6:90:LEU:HB3	53:B6:101:ILE:HG21	1.83	0.61
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.82	0.61
50:BT:40:LYS:HG2	50:BT:60:THR:HG23	1.83	0.61
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.36	0.61
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.66	0.61
42:DN:37:THR:HB	42:DN:40:LYS:HG3	1.82	0.61
28:BP:50:ARG:HB2	28:BP:56:SER:CB	2.30	0.61
49:DR:31:GLU:H	49:DR:63:VAL:CG2	2.12	0.61
10:AK:80:ASN:HD22	10:AK:80:ASN:H	1.49	0.61
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.16	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:BB:593:U:H2'	23:BB:594:U:C6	2.35	0.61
47:BF:72:SER:HB2	47:BF:80:GLN:H	1.65	0.61
1:CA:266:G:O2'	1:CA:267:C:H3'	2.01	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
42:BN:9:GLN:O	42:BN:17:ARG:HD3	2.00	0.61
1:CA:999:C:H2'	1:CA:1000:A:C8	2.35	0.61
26:DD:154:LYS:H	26:DD:154:LYS:HD3	1.65	0.61
23:BB:1046:A:H4'	23:BB:1047:G:H5''	1.83	0.61
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.66	0.61
38:DM:58:LYS:HD2	38:DM:58:LYS:N	2.16	0.61
7:CH:8:ASP:O	7:CH:12:ARG:HB2	2.01	0.61
15:AP:59:HIS:O	15:AP:63:GLN:HG3	2.01	0.61
53:D6:30:THR:C	53:D6:32:ARG:N	2.54	0.61
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.31	0.61
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.21	0.61
13:CN:12:ARG:HD3	13:CN:58:ARG:HB3	1.82	0.61
23:DB:878:A:H5'	23:DB:900:A:H61	1.65	0.61
18:CS:14:LEU:HD22	18:CS:34:SER:OG	2.01	0.61
48:DG:15:ASP:HB3	48:DG:26:LYS:N	2.13	0.61
35:BV:70:ILE:HD13	35:BV:71:LYS:N	2.15	0.61
23:DB:139:U:C2	50:DT:1:MET:HB3	2.36	0.61
49:DR:49:ILE:HD13	49:DR:51:VAL:O	2.01	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
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.33	0.61
23:BB:873:C:H2'	23:BB:874:G:H8	1.66	0.61
19:CT:79:THR:O	19:CT:82:ILE:HG13	2.01	0.61
50:DT:25:GLU:OE1	50:DT:30:ILE:HA	2.01	0.61
27:BK:99:ILE:H	27:BK:118:LEU:HD23	1.66	0.61
1:CA:672:U:H2'	1:CA:673:A:C8	2.36	0.61
23:BB:581:C:H2'	23:BB:582:A:H8	1.64	0.61
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.36	0.61
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.35	0.61
16:AQ:79:GLU:HG3	16:AQ:80:LYS:NZ	2.15	0.61
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.31	0.61
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.36	0.61
23:BB:458:G:H22	23:BB:469:G:H2'	1.65	0.61
23:BB:967:U:H2'	23:BB:968:C:C6	2.36	0.61
1:AA:272:C:H2'	1:AA:273:U:H6	1.66	0.61
1:CA:524:G:H2'	1:CA:525:C:C6	2.36	0.61
23:BB:836:G:H2'	23:BB:837:C:C6	2.35	0.61
23:DB:184:C:H2'	23:DB:185:G:H8	1.66	0.61
23:BB:947:A:H2'	23:BB:948:C:C6	2.35	0.61
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.36	0.61
1:AA:434:U:H3'	1:AA:435:A:H8	1.66	0.61
2:AC:25:THR:HG23	13:AN:75:LYS:HD3	1.83	0.61
22:DA:5:U:H2'	22:DA:6:G:H8	1.66	0.61
40:BH:24:GLY:O	40:BH:28:ASN:HB2	2.01	0.60
1:CA:719:C:H2'	17:CR:38:ILE:HD11	1.83	0.60
40:BH:4:ILE:HG13	40:BH:18:GLN:HB2	1.82	0.60
12:CM:43:LYS:O	12:CM:46:GLU:HG3	2.01	0.60
23:DB:1125:G:C5'	32:D4:37:GLN:HE21	2.14	0.60
1:AA:17:U:O2'	1:AA:18:C:H5'	2.01	0.60
50:DT:68:LYS:O	50:DT:69:ARG:HB2	1.98	0.60
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.36	0.60
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.65	0.60
14:CO:77:ARG:O	14:CO:81:LEU:HB2	2.01	0.60
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.36	0.60
23:BB:131:A:H2'	23:BB:132:G:H8	1.66	0.60
34:D3:49:VAL:CG2	34:D3:54:LEU:HD13	2.31	0.60
12:AM:22:TYR:HB3	12:AM:69:ARG:CZ	2.31	0.60
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.15	0.60
10:CK:80:ASN:CB	10:CK:105:ARG:HB3	2.30	0.60
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.81	0.60
23:DB:1657:U:H4'	26:DD:138:LEU:HB3	1.83	0.60
26:DD:113:SER:CB	26:DD:168:GLU:H	2.13	0.60
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.66	0.60
53:B6:93:SER:OG	53:B6:100:TYR:HB2	2.01	0.60
23:DB:506:G:H1'	23:DB:507:A:C8	2.36	0.60
23:BB:1131:G:N2	23:BB:2024:G:H21	1.99	0.60
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.66	0.60
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.83	0.60
37:BL:56:PRO:O	37:BL:59:ARG:HB2	2.01	0.60
41:DJ:72:LYS:HG3	41:DJ:89:PHE:HB2	1.83	0.60
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.66	0.60
23:BB:1523:U:H5''	23:BB:1524:G:C8	2.36	0.60
26:DD:79:LEU:HD22	26:DD:79:LEU:N	2.16	0.60
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.34	0.60
2:AC:40:GLN:HG3	2:AC:41:TYR:H	1.66	0.60
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.16	0.60
29:BE:37:ALA:C	29:BE:39:ALA:H	2.04	0.60
23:DB:828:U:H4'	23:DB:831:G:N1	2.16	0.60
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.36	0.60
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:871:U:H2'	23:BB:872:U:H6	1.66	0.60
1:AA:1460:C:H2'	1:AA:1461:G:C8	2.36	0.60
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.65	0.60
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.31	0.60
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.41	0.60
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.16	0.60
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.16	0.60
35:DV:1:MET:CE	35:DV:2:PHE:H	2.13	0.60
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.34	0.60
1:CA:919:A:O2'	1:CA:920:U:H5'	2.01	0.60
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HD2	1.82	0.60
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.01	0.60
12:CM:22:TYR:HB3	12:CM:69:ARG:NH2	2.16	0.60
53:B6:57:THR:N	53:B6:69:GLN:O	2.34	0.60
23:BB:670:A:H5''	37:BL:42:SER:HB2	1.82	0.60
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.35	0.60
42:DN:72:ASP:O	42:DN:75:ILE:HG13	2.01	0.60
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.15	0.60
53:B6:131:ASN:O	53:B6:135:GLU:HG3	2.00	0.60
27:BK:113:MET:HE1	27:BK:116:ILE:HD11	1.84	0.60
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.66	0.60
38:DM:37:GLY:HA3	38:DM:127:LYS:HZ2	1.63	0.60
53:D6:134:ARG:HH22	53:D6:135:GLU:HG2	1.66	0.60
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.31	0.60
15:CP:60:TRP:HB3	15:CP:65:ALA:HB2	1.83	0.60
23:BB:664:G:H2'	23:BB:665:U:H6	1.66	0.60
6:CG:77:ARG:HG3	6:CG:79:VAL:HG23	1.82	0.60
1:CA:243:A:H4'	1:CA:244:U:H5'	1.82	0.60
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.83	0.60
1:CA:462:G:H2'	1:CA:463:U:C6	2.36	0.60
27:DK:7:MET:SD	27:DK:20:MET:HB2	2.40	0.60
23:DB:477:A:H2'	23:DB:478:A:C8	2.36	0.60
46:DU:60:LYS:HA	46:DU:60:LYS:HE2	1.83	0.60
53:B6:28:LEU:O	53:B6:37:LEU:HD13	2.01	0.60
25:BC:221:GLY:C	25:BC:223:ALA:H	2.03	0.60
47:BF:62:GLN:HE22	47:BF:90:LEU:HD13	1.66	0.60
27:DK:72:PRO:O	27:DK:74:GLY:N	2.34	0.60
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.00	0.60
8:AI:26:LYS:N	8:AI:61:ASP:HB2	2.15	0.60
26:BD:10:GLY:HA2	28:BP:4:ILE:HD11	1.83	0.60
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:147:ASN:CA	10:AK:55:ARG:HH21	2.12	0.60
1:AA:16:A:O2'	1:AA:17:U:H5'	2.00	0.60
23:BB:962:G:N2	23:BB:2250:G:H22	1.99	0.60
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.37	0.60
27:DK:118:LEU:O	27:DK:120:PRO:HD2	2.00	0.60
23:BB:2787:C:C1'	26:BD:63:PRO:HG3	2.31	0.60
23:BB:654:A:H2'	23:BB:655:A:H5''	1.83	0.60
23:BB:172:A:H2'	23:BB:173:A:H8	1.66	0.60
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.01	0.60
1:CA:390:U:H2'	1:CA:391:G:H8	1.65	0.60
1:AA:493:A:H5'	1:AA:494:G:OP2	2.01	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
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.83	0.60
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.01	0.60
3:CD:171:GLU:O	3:CD:179:GLY:HA2	2.01	0.60
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.01	0.60
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.83	0.60
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.36	0.60
39:DX:24:GLU:O	39:DX:28:LEU:HG	2.01	0.60
1:CA:1313:U:OP1	18:CS:6:LYS:HD3	2.01	0.60
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.36	0.60
44:DQ:108:LEU:HA	49:DR:48:LYS:HD3	1.82	0.60
8:CI:48:ARG:O	8:CI:52:GLU:HG2	2.01	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
13:AN:60:ARG:O	13:AN:62:ARG:N	2.35	0.60
23:DB:30:G:H4'	23:DB:1215:G:H5'	1.84	0.60
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.37	0.60
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.36	0.60
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	1.82	0.60
23:BB:374:A:N6	23:BB:400:G:H1'	2.16	0.60
6:CG:110:ARG:HD2	6:CG:122:GLU:HB2	1.82	0.60
30:BY:37:ARG:HE	30:BY:37:ARG:HA	1.66	0.60
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.16	0.60
23:DB:968:C:H2'	23:DB:969:G:C8	2.36	0.60
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.32	0.60
23:DB:1866:A:H2'	23:DB:1867:G:O4'	2.01	0.60
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.36	0.60
19:CT:19:HIS:O	19:CT:23:ARG:HG2	1.99	0.60
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.15	0.60
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.00	0.60
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.01	0.60
25:DC:245:THR:O	25:DC:247:TRP:N	2.35	0.60
16:CQ:31:PRO:O	16:CQ:32:ILE:HB	2.01	0.60
23:BB:2415:G:H4'	37:BL:66:PHE:HB2	1.83	0.60
53:D6:73:GLN:HG3	53:D6:74:ASN:H	1.67	0.60
29:BE:30:GLN:O	29:BE:30:GLN:HG2	2.01	0.60
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.16	0.60
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.01	0.60
53:D6:35:PRO:HB2	53:D6:58:VAL:O	2.01	0.60
23:DB:2386:A:C2	52:DW:38:ARG:HB3	2.35	0.60
18:CS:10:ILE:HG22	18:CS:38:THR:H	1.65	0.60
26:DD:31:ALA:HA	26:DD:97:SER:HA	1.83	0.60
44:DQ:91:ARG:CZ	49:DR:11:GLN:H	2.15	0.60
44:BQ:91:ARG:HB2	49:BR:11:GLN:OE1	2.01	0.60
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	2.01	0.60
23:BB:1076:C:H4'	24:BI:94:LYS:NZ	2.17	0.60
51:BZ:64:ILE:O	51:BZ:68:LEU:HG	2.02	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
23:BB:141:G:N1	50:BT:2:ILE:HD12	2.13	0.60
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.66	0.60
36:D2:22:MET:SD	36:D2:28:ARG:HG2	2.42	0.60
23:BB:673:C:H5''	29:BE:76:PRO:HD2	1.84	0.60
19:AT:67:HIS:ND1	19:AT:68:LYS:HG2	2.16	0.60
27:DK:99:ILE:H	27:DK:118:LEU:HD23	1.65	0.60
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.16	0.60
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.36	0.60
1:CA:662:U:H2'	1:CA:663:A:C8	2.36	0.60
1:CA:1530:G:HO2'	1:CA:1531:A:H8	1.49	0.60
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.65	0.60
31:B0:21:LEU:HD12	45:BS:19:LEU:O	2.01	0.60
1:AA:412:A:H1'	1:AA:413:G:H8	1.67	0.60
12:AM:78:ARG:CZ	12:AM:78:ARG:HB3	2.31	0.60
23:BB:184:C:H2'	23:BB:185:G:C8	2.36	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
1:CA:806:C:H2'	1:CA:807:A:C8	2.36	0.60
14:AO:8:THR:O	14:AO:12:VAL:HG23	2.01	0.60
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:45:TYR:CZ	53:D6:75:ALA:HB2	2.36	0.60
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.02	0.60
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.02	0.60
23:DB:2253:G:H22	53:D6:151:GLU:CD	2.03	0.60
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.84	0.60
53:B6:38:LEU:O	53:B6:41:LEU:HB2	2.01	0.60
49:DR:58:VAL:HG22	49:DR:59:ILE:H	1.67	0.60
23:DB:558:U:O3'	41:DJ:111:LYS:HE2	2.01	0.60
48:DG:84:LYS:HG3	48:DG:132:LEU:N	2.16	0.60
1:CA:1302:C:OP2	12:CM:16:ILE:HD11	2.00	0.60
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.66	0.60
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.22	0.60
29:DE:149:ILE:HG23	29:DE:188:MET:HA	1.83	0.60
23:BB:2147:A:H5'	23:BB:2148:G:H4'	1.82	0.60
12:CM:22:TYR:HB3	12:CM:69:ARG:CZ	2.31	0.60
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.01	0.60
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.01	0.60
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.84	0.60
1:CA:833:G:H2'	1:CA:834:U:C6	2.36	0.60
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.65	0.60
23:BB:170:U:H2'	23:BB:171:U:C6	2.36	0.60
1:AA:401:C:H2'	1:AA:402:G:C8	2.35	0.60
11:AL:98:ARG:HH21	11:AL:104:SER:C	2.04	0.60
1:AA:1347:G:C8	8:AI:108:ARG:HB3	2.36	0.60
23:DB:2283:C:H5''	23:DB:2389:G:O2'	2.02	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
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.36	0.60
1:AA:1464:U:P	28:BP:108:ARG:HH22	2.24	0.60
36:D2:3:ARG:NE	36:D2:3:ARG:HA	2.15	0.60
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.82	0.60
25:BC:245:THR:O	25:BC:247:TRP:N	2.35	0.60
23:BB:776:G:H4'	23:BB:777:G:O5'	2.02	0.60
23:BB:441:U:H2'	23:BB:442:G:H8	1.65	0.60
53:B6:15:GLN:HB3	53:B6:16:LYS:NZ	2.16	0.60
44:BQ:83:LYS:NZ	44:BQ:83:LYS:HA	2.17	0.60
41:BJ:63:ALA:HA	41:BJ:69:ARG:HH12	1.67	0.60
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.65	0.60
1:AA:404:G:OP1	3:AD:114:ARG:HD3	2.01	0.60
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.66	0.60
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.16	0.60
21:CU:3:ILE:CD1	21:CU:19:LYS:HA	2.31	0.60
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.02	0.60
5:AF:86:ARG:CZ	17:AR:63:TYR:HB3	2.31	0.60
23:DB:878:A:H1'	23:DB:899:A:N6	2.17	0.60
1:CA:763:G:H2'	1:CA:764:C:C6	2.37	0.60
22:DA:75:G:H1'	35:DV:29:ILE:HG12	1.83	0.60
45:DS:33:LEU:HG	45:DS:51:LEU:HD23	1.83	0.60
20:AB:40:ILE:HD13	20:AB:201:GLY:HA2	1.84	0.60
1:AA:844:G:C2'	1:AA:845:A:H8	2.14	0.60
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.32	0.60
3:CD:77:GLU:HG3	3:CD:81:LEU:HG	1.84	0.60
1:CA:313:A:H2'	1:CA:314:C:C6	2.37	0.60
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.17	0.60
9:CJ:6:ILE:HB	9:CJ:76:ILE:HD11	1.83	0.60
48:BG:61:TRP:HE3	48:BG:61:TRP:HA	1.67	0.60
23:BB:27:G:H1'	23:BB:513:A:H61	1.66	0.60
48:DG:10:VAL:HG12	48:DG:10:VAL:O	2.00	0.60
53:B6:167:GLU:O	53:B6:170:ALA:HB3	2.01	0.60
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.16	0.60
1:AA:190:A:H2'	1:AA:191:G:O4'	2.02	0.60
23:BB:845:A:C2	23:BB:847:U:H1'	2.37	0.60
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.20	0.60
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.37	0.60
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.30	0.60
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.84	0.60
23:BB:855:G:O2'	52:BW:23:LYS:HD3	2.02	0.60
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.82	0.60
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.37	0.60
23:DB:141:G:O6	50:DT:2:ILE:HD12	2.01	0.60
8:CI:26:LYS:N	8:CI:61:ASP:HB2	2.17	0.60
23:BB:2528:U:HO2'	23:BB:2529:G:H3'	1.66	0.60
33:D1:8:ILE:CD1	33:D1:51:ALA:HA	2.31	0.60
13:AN:26:LEU:O	13:AN:30:ILE:N	2.34	0.60
20:CB:124:THR:HG23	20:CB:124:THR:O	2.00	0.60
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.31	0.60
39:DX:3:ALA:O	39:DX:6:LEU:HB2	2.02	0.60
34:B3:49:VAL:CG2	34:B3:54:LEU:HD13	2.31	0.60
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.36	0.60
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.83	0.60
3:CD:89:LEU:CD2	3:CD:199:ILE:HD11	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.37	0.60
23:BB:594:U:H2'	23:BB:595:C:H6	1.66	0.60
23:BB:2066:C:O2'	23:BB:2067:G:H5'	2.01	0.60
46:BU:60:LYS:HA	46:BU:60:LYS:HE2	1.84	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
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.36	0.60
46:DU:41:VAL:HG22	46:DU:60:LYS:O	2.02	0.60
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.17	0.60
25:BC:16:VAL:N	25:BC:203:VAL:HG12	2.17	0.60
25:DC:123:ILE:HD13	25:DC:135:PRO:HG2	1.83	0.60
3:AD:22:SER:H	3:AD:109:THR:HG22	1.67	0.60
22:BA:91:C:H2'	22:BA:92:C:H6	1.66	0.60
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.66	0.60
7:CH:87:ARG:H	7:CH:90:GLU:HB2	1.65	0.60
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.66	0.60
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.16	0.60
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.41	0.60
23:BB:2269:G:H4'	52:BW:19:ARG:HH12	1.67	0.60
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.31	0.60
47:BF:109:ARG:HB3	47:BF:135:ILE:CD1	2.30	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
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.37	0.60
4:AE:156:ARG:CA	4:AE:158:LYS:HZ3	2.09	0.60
1:AA:17:U:H2'	1:AA:18:C:H6	1.66	0.60
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.67	0.60
23:BB:2060:A:H3'	29:BE:63:LYS:HZ1	1.67	0.60
12:AM:22:TYR:HB3	12:AM:69:ARG:NH2	2.17	0.60
41:DJ:19:ASP:HA	41:DJ:57:LEU:HB3	1.82	0.60
41:DJ:59:ALA:C	41:DJ:61:LYS:H	2.05	0.60
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.37	0.60
38:DM:17:ASN:HD21	38:DM:95:LEU:HG	1.65	0.60
46:BU:65:GLN:HB2	46:BU:68:ASN:HD22	1.67	0.60
31:D0:43:THR:HG23	31:D0:47:TYR:O	2.01	0.60
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.02	0.60
23:DB:967:U:H2'	23:DB:968:C:C6	2.37	0.60
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.05	0.60
23:DB:1505:A:H2'	23:DB:1506:U:H6	1.67	0.60
3:AD:171:GLU:O	3:AD:179:GLY:HA2	2.02	0.60
53:D6:154:THR:O	53:D6:157:ALA:HB3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2332:C:H1'	23:DB:2336:A:N7	2.16	0.60
23:BB:1922:G:N7	55:BB:3111:LLL:H221	2.16	0.60
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.36	0.60
1:CA:272:C:H2'	1:CA:273:U:H6	1.67	0.60
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.81	0.60
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.16	0.60
1:AA:880:C:H2'	1:AA:881:G:H8	1.65	0.60
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.67	0.60
17:CR:27:THR:HG22	17:CR:31:TYR:HE1	1.67	0.60
45:DS:72:THR:HG21	45:DS:108:SER:HB3	1.84	0.60
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	2.01	0.60
40:DH:113:SER:H	40:DH:132:PHE:HE1	1.48	0.60
14:AO:77:ARG:O	14:AO:81:LEU:HB2	2.01	0.60
23:DB:37:C:O2'	29:DE:45:ALA:HA	2.02	0.60
38:BM:37:GLY:HA3	38:BM:127:LYS:HZ3	1.66	0.60
38:DM:50:ARG:O	38:DM:53:MET:HB3	2.01	0.60
1:CA:410:G:P	3:CD:25:ARG:HE	2.24	0.60
3:CD:25:ARG:HH11	3:CD:26:ALA:H	1.50	0.60
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.02	0.60
43:DO:68:LYS:H	43:DO:102:ARG:HD2	1.67	0.60
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HB3	1.84	0.60
15:AP:60:TRP:HB3	15:AP:65:ALA:HB2	1.84	0.60
1:CA:215:C:H2'	1:CA:216:U:H6	1.67	0.60
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.82	0.60
44:BQ:79:ILE:HA	44:BQ:82:LEU:HD12	1.84	0.60
23:BB:2637:U:OP1	26:BD:83:ARG:HD3	2.00	0.60
37:DL:56:PRO:O	37:DL:59:ARG:HB2	2.01	0.60
23:DB:144:A:H2'	23:DB:145:C:H6	1.67	0.60
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.37	0.60
53:B6:15:GLN:HB3	53:B6:16:LYS:HZ2	1.66	0.60
1:CA:73:C:H2'	1:CA:74:A:H8	1.67	0.60
23:BB:1270:C:H5''	23:BB:1271:G:H5'	1.84	0.60
7:CH:23:ALA:CB	7:CH:61:THR:HA	2.32	0.60
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.66	0.60
17:CR:19:GLU:HG3	17:CR:54:LEU:HD12	1.82	0.59
23:DB:854:C:O2'	23:DB:855:G:H5'	2.01	0.59
8:AI:5:TYR:CD2	8:AI:88:GLU:HB2	2.37	0.59
20:CB:213:LEU:O	20:CB:216:VAL:HG22	2.02	0.59
44:DQ:57:ARG:HH22	44:DQ:92:LYS:HE2	1.67	0.59
2:AC:126:ARG:HH11	2:AC:126:ARG:HA	1.67	0.59
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.22	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:17:ASP:HA	10:CK:80:ASN:O	2.02	0.59
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.37	0.59
30:DY:6:ILE:N	30:DY:6:ILE:HD13	2.17	0.59
2:CC:126:ARG:HH11	2:CC:126:ARG:HA	1.67	0.59
48:BG:10:VAL:HG21	48:BG:47:ASN:O	2.02	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
23:BB:572:A:P	49:BR:80:ARG:HH22	2.24	0.59
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.36	0.59
25:BC:64:VAL:O	25:BC:65:ASP:HB3	2.01	0.59
23:DB:1788:C:O2'	23:DB:1789:A:H5'	2.02	0.59
7:AH:8:ASP:O	7:AH:12:ARG:HB2	2.02	0.59
53:B6:45:TYR:O	53:B6:46:TYR:HB2	2.01	0.59
23:DB:526:A:N6	23:DB:2626:C:H4'	2.17	0.59
7:AH:102:VAL:HG12	7:AH:125:ILE:HD12	1.84	0.59
23:BB:278:A:H2'	23:BB:278:A:N3	2.17	0.59
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.67	0.59
1:CA:1030:U:H5'	1:CA:1031:C:N3	2.17	0.59
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.84	0.59
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.67	0.59
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.02	0.59
21:CU:36:PHE:CD2	21:CU:39:LYS:HB2	2.37	0.59
47:BF:103:ILE:HD11	47:BF:174:PHE:HA	1.83	0.59
1:CA:1314:C:H41	18:CS:3:SER:HB3	1.67	0.59
53:B6:32:ARG:HD3	53:B6:103:ILE:HG23	1.84	0.59
35:BV:61:LEU:O	35:BV:71:LYS:HA	2.01	0.59
48:BG:24:THR:HG22	48:BG:34:ARG:HB3	1.83	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
32:D4:19:ARG:C	32:D4:21:GLY:H	2.06	0.59
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.02	0.59
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.16	0.59
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.05	0.59
28:DP:89:GLY:HA2	28:DP:111:GLU:C	2.23	0.59
32:D4:25:VAL:O	32:D4:26:ILE:HD13	2.02	0.59
27:BK:60:ALA:HA	27:BK:87:LEU:HD23	1.82	0.59
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.02	0.59
23:DB:496:G:H1'	45:DS:61:ASN:ND2	2.17	0.59
23:DB:285:G:H2'	23:DB:286:U:O4'	2.03	0.59
53:B6:177:GLU:O	53:B6:181:GLN:HG3	2.01	0.59
23:BB:495:G:H21	45:BS:61:ASN:HD21	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
40:BH:83:LYS:HD2	40:BH:91:PHE:CD1	2.37	0.59
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.38	0.59
1:CA:224:U:H2'	1:CA:225:C:H6	1.66	0.59
23:BB:2377:A:H2'	23:BB:2378:A:C8	2.37	0.59
23:DB:2292:U:H2'	23:DB:2293:G:H8	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
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.37	0.59
23:BB:441:U:H2'	23:BB:442:G:C8	2.37	0.59
3:CD:113:ALA:O	3:CD:117:VAL:HG23	2.02	0.59
34:D3:24:LYS:NZ	34:D3:28:LEU:HB3	2.17	0.59
53:D6:18:LEU:O	53:D6:21:LEU:HB3	2.01	0.59
23:BB:1652:A:OP1	42:BN:8:ARG:HD3	2.02	0.59
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.84	0.59
21:CU:11:PHE:O	21:CU:11:PHE:HD1	1.85	0.59
23:BB:2776:A:H4'	23:BB:2777:G:H5''	1.84	0.59
23:BB:5:A:H2'	23:BB:6:A:C8	2.37	0.59
23:DB:664:G:H2'	23:DB:665:U:H6	1.67	0.59
4:CE:53:ARG:HH21	4:CE:54:GLU:HG3	1.67	0.59
40:DH:18:GLN:HE21	40:DH:39:ALA:HB1	1.67	0.59
18:AS:14:LEU:HD22	18:AS:34:SER:OG	2.02	0.59
8:CI:82:ILE:O	8:CI:86:LEU:HD13	2.02	0.59
50:DT:81:LYS:HG3	50:DT:82:LYS:H	1.67	0.59
44:BQ:63:ARG:HH21	44:BQ:64:ILE:CD1	2.15	0.59
12:CM:44:ILE:O	12:CM:47:LEU:HB2	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
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.33	0.59
3:AD:77:GLU:HG3	3:AD:81:LEU:HG	1.84	0.59
23:BB:1441:G:H4'	23:BB:1628:G:OP1	2.03	0.59
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.01	0.59
12:AM:44:ILE:O	12:AM:47:LEU:HB2	2.02	0.59
23:BB:374:A:H61	23:BB:400:G:H1'	1.67	0.59
30:DY:6:ILE:HD13	30:DY:6:ILE:H	1.66	0.59
53:D6:134:ARG:NH2	53:D6:135:GLU:HG2	2.16	0.59
20:CB:120:SER:HA	20:CB:125:PHE:CD2	2.37	0.59
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.37	0.59
23:BB:1518:C:H2'	23:BB:1519:G:H8	1.66	0.59
3:CD:84:ASN:HD22	4:CE:101:GLY:HA3	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2653:U:H3'	23:BB:2654:A:H2'	1.83	0.59
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
25:DC:64:VAL:O	25:DC:65:ASP:HB3	2.02	0.59
53:D6:126:ARG:O	53:D6:130:ARG:HG3	2.02	0.59
36:D2:3:ARG:CZ	36:D2:3:ARG:HA	2.32	0.59
8:AI:71:ILE:HD12	8:AI:71:ILE:H	1.67	0.59
26:BD:31:ALA:HA	26:BD:97:SER:HA	1.85	0.59
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.67	0.59
31:D0:12:ARG:HD2	31:D0:16:ARG:NH1	2.17	0.59
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.84	0.59
23:BB:69:C:O2'	23:BB:70:G:H5'	2.03	0.59
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.01	0.59
1:CA:541:G:O2'	3:CD:39:GLN:HB3	2.02	0.59
1:AA:939:G:H5''	6:AG:101:ARG:NH1	2.16	0.59
46:DU:42:LYS:HG3	46:DU:57:ILE:HG21	1.82	0.59
23:BB:921:C:H2'	23:BB:922:C:H6	1.67	0.59
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.38	0.59
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.37	0.59
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.65	0.59
53:B6:88:LEU:HD23	53:B6:90:LEU:HD12	1.85	0.59
35:BV:1:MET:CE	35:BV:2:PHE:H	2.15	0.59
50:BT:50:LEU:HD22	50:BT:50:LEU:H	1.67	0.59
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.30	0.59
25:DC:70:LYS:NZ	25:DC:99:GLU:HB3	2.18	0.59
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.03	0.59
20:CB:94:ARG:H	20:CB:94:ARG:HE	1.50	0.59
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.83	0.59
23:DB:1082:U:O4	23:DB:1086:A:C2	2.56	0.59
40:DH:118:PRO:O	40:DH:119:ASN:HB3	2.02	0.59
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.02	0.59
4:AE:52:ALA:H	4:AE:58:ALA:HB2	1.66	0.59
19:CT:67:HIS:ND1	19:CT:68:LYS:HG2	2.17	0.59
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.38	0.59
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.66	0.59
23:BB:19:A:H2'	23:BB:20:C:H6	1.65	0.59
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.66	0.59
23:BB:419:U:H2'	23:BB:420:C:C6	2.37	0.59
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.37	0.59
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.37	0.59
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:550:C:OP1	41:BJ:2:LYS:HE3	2.03	0.59
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.06	0.59
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.68	0.59
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.43	0.59
26:BD:46:ARG:NH1	26:BD:85:ALA:HA	2.17	0.59
7:CH:28:SER:OG	7:CH:56:PRO:HB2	2.02	0.59
23:BB:350:G:H2'	23:BB:351:C:O4'	2.02	0.59
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.01	0.59
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.36	0.59
1:CA:205:A:H2'	1:CA:206:C:C6	2.37	0.59
23:DB:1758:U:O4	23:DB:2695:U:H4'	2.02	0.59
23:BB:2718:G:H4'	28:BP:95:LYS:HB2	1.83	0.59
23:BB:2032:G:N2	26:BD:150:GLN:HB3	2.17	0.59
17:CR:33:THR:HG23	17:CR:37:LYS:O	2.02	0.59
52:BW:59:PHE:CD2	52:BW:61:LYS:HD2	2.38	0.59
47:DF:92:GLY:HA2	47:DF:95:MET:HE3	1.83	0.59
23:DB:141:G:C6	50:DT:2:ILE:HG21	2.38	0.59
20:CB:86:CYS:HB2	20:CB:221:ARG:NH1	2.17	0.59
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.34	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
49:BR:58:VAL:HG22	49:BR:59:ILE:H	1.66	0.59
49:BR:5:PHE:O	49:BR:11:GLN:HA	2.01	0.59
23:DB:559:G:H21	44:DQ:51:GLN:HE22	1.49	0.59
2:AC:126:ARG:NH2	2:AC:191:THR:HG23	2.16	0.59
24:BI:27:LEU:CD2	24:BI:27:LEU:H	2.14	0.59
41:BJ:57:LEU:CG	41:BJ:128:ASN:H	2.16	0.59
23:DB:2179:C:C2'	23:DB:2179:C:O2	2.51	0.59
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.18	0.59
23:BB:275:C:H2'	23:BB:276:U:O4'	2.02	0.59
23:DB:370:G:O2'	23:DB:423:A:H3'	2.03	0.59
23:BB:27:G:N2	23:BB:512:G:H2'	2.17	0.59
15:CP:23:ASP:O	15:CP:26:ASN:HB2	2.03	0.59
29:DE:30:GLN:HG2	29:DE:30:GLN:O	2.02	0.59
23:BB:1387:A:C4'	23:BB:1469:A:H1'	2.32	0.59
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
21:AU:11:PHE:HD1	21:AU:11:PHE:O	1.86	0.59
1:AA:462:G:H2'	1:AA:463:U:C6	2.37	0.59
23:DB:401:A:H2'	23:DB:402:A:C8	2.37	0.59
23:DB:1718:G:H2'	23:DB:1719:G:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.37	0.59
46:BU:2:ALA:HB3	46:BU:5:ARG:NH2	2.17	0.59
15:AP:48:GLU:HG3	15:AP:49:GLY:H	1.66	0.59
23:BB:2810:A:H2'	23:BB:2811:G:O4'	2.03	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:47:GLY:HA3	52:DW:80:SER:HB3	1.84	0.59
8:AI:6:TYR:HA	8:AI:18:VAL:O	2.03	0.59
48:BG:84:LYS:HG3	48:BG:132:LEU:N	2.18	0.59
8:CI:6:TYR:HA	8:CI:18:VAL:O	2.03	0.59
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.03	0.59
1:CA:844:G:C2'	1:CA:845:A:H8	2.15	0.59
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.83	0.59
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.38	0.59
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.03	0.59
38:BM:127:LYS:H	38:BM:127:LYS:HD2	1.67	0.59
23:BB:2881:U:O3'	42:BN:96:ARG:HD3	2.03	0.59
28:BP:89:GLY:HA2	28:BP:111:GLU:C	2.22	0.59
48:DG:38:ASP:CG	48:DG:39:ALA:H	2.06	0.59
3:CD:52:VAL:HG12	3:CD:198:LEU:HD21	1.85	0.59
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.03	0.59
23:DB:189:G:H2'	23:DB:205:G:N2	2.16	0.59
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.16	0.59
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.38	0.59
3:AD:148:ALA:O	3:AD:151:GLN:HB2	2.02	0.59
1:CA:191:G:H2'	1:CA:192:A:H8	1.66	0.59
23:DB:6:A:H2'	23:DB:7:G:H8	1.68	0.59
23:DB:863:A:H2'	23:DB:864:G:H8	1.67	0.59
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.37	0.59
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.01	0.59
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.02	0.59
16:AQ:6:THR:HG22	16:AQ:61:ARG:HB3	1.84	0.59
1:AA:833:G:H2'	1:AA:834:U:C6	2.36	0.59
2:AC:180:ASP:OD1	2:AC:203:LYS:HB2	2.02	0.59
1:AA:104:G:O2'	1:AA:105:G:H5'	2.01	0.59
4:CE:89:THR:HG21	4:CE:134:ASN:ND2	2.18	0.59
23:DB:1339:G:N2	23:DB:1603:A:H1'	2.17	0.59
26:BD:16:THR:HB	26:BD:18:ASP:OD1	2.03	0.59
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.84	0.59
53:B6:18:LEU:O	53:B6:21:LEU:HB3	2.03	0.59
23:DB:639:U:H2'	23:DB:640:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:207:C:H3'	1:CA:208:U:C6	2.38	0.59
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.37	0.59
21:AU:36:PHE:HD2	21:AU:39:LYS:HD2	1.68	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
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.03	0.59
48:DG:6:ALA:HB3	48:DG:68:ARG:HG3	1.85	0.59
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	2.01	0.59
40:BH:75:LEU:HB3	40:BH:78:VAL:HG21	1.84	0.59
30:DY:16:LEU:CD2	30:DY:16:LEU:H	2.12	0.59
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.02	0.59
1:CA:840:C:C2	1:CA:842:U:H4'	2.37	0.59
49:BR:40:MET:O	49:BR:41:ILE:HD13	2.03	0.59
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.38	0.59
1:AA:72:A:H2'	1:AA:73:C:H6	1.68	0.59
40:DH:119:ASN:OD1	40:DH:121:VAL:HG13	2.03	0.59
23:BB:675:A:H4'	29:BE:60:TRP:CZ2	2.38	0.59
51:BZ:35:SER:CA	51:BZ:50:ARG:HA	2.32	0.59
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.33	0.59
23:BB:2881:U:H2'	23:BB:2882:A:O4'	2.03	0.59
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	2.03	0.59
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.17	0.59
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.43	0.59
23:DB:581:C:H2'	23:DB:582:A:H8	1.67	0.59
2:CC:126:ARG:NH2	2:CC:191:THR:HG23	2.18	0.59
20:AB:63:LYS:HG2	20:AB:224:ARG:NH1	2.18	0.59
23:DB:1043:C:H2'	23:DB:1044:C:O4'	2.02	0.59
23:BB:2309:A:N6	47:BF:75:GLY:HA3	2.17	0.59
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.18	0.59
23:DB:1387:A:C4'	23:DB:1469:A:H1'	2.33	0.59
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.37	0.59
23:DB:928:A:O2'	30:DY:37:ARG:HD3	2.03	0.59
23:DB:904:G:H2'	23:DB:905:A:C8	2.37	0.59
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.83	0.59
23:BB:969:G:H2'	23:BB:970:U:H6	1.67	0.59
18:AS:62:THR:HB	18:AS:64:GLU:OE1	2.02	0.59
1:AA:251:G:N3	1:AA:266:G:O6	2.36	0.59
28:DP:31:VAL:O	28:DP:32:VAL:HB	2.02	0.59
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.17	0.59
23:BB:823:C:H2'	23:BB:824:U:C6	2.38	0.59
23:BB:1475:G:H1'	23:BB:1476:U:H5	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1769:U:O2'	23:BB:1770:G:H5'	2.03	0.59
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.66	0.59
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.02	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
53:B6:25:LEU:HD22	53:B6:179:LYS:HG2	1.85	0.59
8:CI:56:MET:SD	8:CI:57:VAL:N	2.76	0.59
50:DT:50:LEU:HD22	50:DT:50:LEU:H	1.68	0.59
1:CA:376:G:H2'	1:CA:377:G:H8	1.68	0.59
1:AA:93:U:C3'	1:AA:94:G:H4'	2.33	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
51:BZ:35:SER:HB3	51:BZ:50:ARG:HG3	1.84	0.59
23:DB:30:G:H2'	23:DB:31:C:H6	1.67	0.59
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.68	0.59
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HB	1.84	0.59
1:AA:1074:G:H4'	20:AB:102:ASN:HB2	1.85	0.59
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.84	0.59
2:CC:86:LEU:O	2:CC:90:VAL:HG23	2.02	0.59
23:BB:848:C:H2'	23:BB:849:A:C8	2.37	0.59
1:CA:713:G:H2'	1:CA:714:G:C8	2.38	0.59
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.38	0.59
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.37	0.59
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.02	0.59
23:DB:950:G:H2'	23:DB:951:C:C6	2.38	0.59
23:BB:661:A:H1'	37:BL:12:SER:O	2.01	0.59
23:BB:394:C:O2'	23:BB:395:U:H5'	2.03	0.59
1:CA:939:G:H5''	6:CG:101:ARG:NH1	2.17	0.59
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.15	0.59
1:CA:401:C:H2'	1:CA:402:G:H8	1.67	0.59
23:BB:121:G:H2'	23:BB:122:G:H8	1.67	0.59
44:BQ:35:PHE:C	44:BQ:37:ALA:H	2.06	0.59
23:BB:321:U:H4'	29:BE:159:LEU:O	2.03	0.59
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.03	0.59
25:BC:149:LYS:HG2	25:BC:152:GLN:NE2	2.18	0.59
10:CK:75:GLU:H	10:CK:75:GLU:CD	2.06	0.59
13:CN:23:ARG:O	13:CN:26:LEU:HD22	2.02	0.59
48:BG:6:ALA:HB3	48:BG:68:ARG:HG3	1.85	0.59
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.02	0.59
20:AB:57:ASN:HB2	20:AB:223:GLY:HA3	1.85	0.59
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.84	0.59
13:AN:23:ARG:O	13:AN:26:LEU:HD22	2.02	0.59
23:DB:575:A:O2'	23:DB:576:U:H5'	2.02	0.59
46:DU:85:ARG:NE	46:DU:85:ARG:HA	2.16	0.59
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.59
16:CQ:8:GLN:HB3	16:CQ:59:GLU:HB2	1.84	0.59
23:BB:2657:A:O2'	48:BG:159:LYS:NZ	2.36	0.59
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.32	0.59
23:DB:321:U:H1'	29:DE:162:ARG:NH1	2.18	0.59
53:B6:43:VAL:O	53:B6:49:HIS:HA	2.03	0.59
23:DB:2019:A:H2	23:DB:2035:G:H22	1.48	0.59
23:BB:780:G:H21	23:BB:783:A:H62	1.49	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
20:CB:63:LYS:HG2	20:CB:224:ARG:HH12	1.67	0.59
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.66	0.59
23:BB:950:G:H2'	23:BB:951:C:H6	1.67	0.59
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.37	0.59
18:CS:27:LYS:HG3	18:CS:28:LYS:HD2	1.84	0.59
1:CA:191:G:H2'	1:CA:192:A:C8	2.38	0.59
23:DB:2016:U:H1'	31:D0:2:VAL:HG11	1.85	0.59
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.67	0.59
28:DP:31:VAL:HG12	28:DP:38:ARG:O	2.02	0.59
23:DB:315:G:H2'	23:DB:316:C:C6	2.38	0.59
23:BB:2010:G:H5"	45:BS:42:LYS:HB2	1.85	0.59
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.83	0.59
25:DC:173:LEU:HD13	25:DC:173:LEU:H	1.67	0.59
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.85	0.59
1:CA:549:C:H2'	1:CA:550:G:C8	2.37	0.59
37:DL:93:ASN:O	37:DL:95:LEU:N	2.36	0.59
23:BB:322:A:OP1	29:BE:162:ARG:HB3	2.02	0.59
47:DF:102:LEU:C	47:DF:102:LEU:HD13	2.23	0.59
47:BF:102:LEU:HD13	47:BF:102:LEU:C	2.23	0.59
1:CA:706:A:C4'	10:CK:30:ILE:HD11	2.33	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
41:DJ:30:THR:HG23	41:DJ:31:GLU:H	1.68	0.59
1:AA:865:A:H2'	1:AA:866:C:C6	2.38	0.59
41:DJ:64:VAL:O	41:DJ:68:LYS:HD2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:BE:108:ILE:O	29:BE:108:ILE:HD13	2.03	0.59
44:BQ:30:VAL:HG12	44:BQ:33:VAL:HG22	1.84	0.59
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.38	0.59
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.18	0.59
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.06	0.59
23:DB:1871:A:H2'	23:DB:1872:A:C8	2.38	0.59
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.68	0.59
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.37	0.59
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.03	0.59
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.85	0.59
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.01	0.59
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.38	0.59
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.38	0.59
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.68	0.59
42:BN:12:ARG:HG2	42:BN:16:HIS:ND1	2.18	0.59
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.37	0.59
23:DB:599:A:O2'	23:DB:600:G:H5'	2.03	0.59
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.50	0.59
40:BH:31:VAL:O	40:BH:33:GLN:N	2.36	0.58
21:CU:16:ARG:CZ	21:CU:19:LYS:HE2	2.33	0.58
13:CN:71:GLY:O	13:CN:79:SER:HA	2.04	0.58
11:CL:86:VAL:HB	11:CL:89:LEU:HB2	1.85	0.58
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.24	0.58
13:CN:52:ARG:HH11	13:CN:58:ARG:HH21	1.51	0.58
50:DT:2:ILE:N	50:DT:2:ILE:HD13	2.18	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
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.67	0.58
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.68	0.58
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.38	0.58
39:BX:52:ARG:O	39:BX:55:THR:HB	2.02	0.58
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.37	0.58
38:DM:19:GLY:N	38:DM:38:ARG:HH22	2.01	0.58
40:BH:125:THR:HB	40:BH:146:VAL:HB	1.84	0.58
15:AP:75:ILE:HG22	15:AP:80:LYS:HG3	1.84	0.58
10:AK:24:ALA:HA	10:AK:29:THR:CG2	2.31	0.58
23:DB:2144:G:C2	23:DB:2146:C:H5'	2.38	0.58
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.03	0.58
1:AA:410:G:P	3:AD:25:ARG:HE	2.26	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.03	0.58
23:DB:783:A:H8	23:DB:784:G:H4'	1.67	0.58
23:BB:494:G:OP1	45:BS:8:ARG:HD3	2.03	0.58
48:DG:10:VAL:HG21	48:DG:47:ASN:O	2.03	0.58
23:DB:419:U:H2'	23:DB:420:C:C6	2.38	0.58
29:DE:175:ILE:HD11	29:DE:180:LEU:HD11	1.85	0.58
18:CS:62:THR:HB	18:CS:64:GLU:OE1	2.03	0.58
1:CA:437:U:H1'	3:CD:115:GLN:NE2	2.17	0.58
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.67	0.58
28:BP:31:VAL:O	28:BP:32:VAL:HB	2.03	0.58
1:CA:709:U:H2'	1:CA:710:G:H8	1.68	0.58
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.85	0.58
28:DP:24:THR:O	28:DP:25:VAL:HG22	2.03	0.58
26:DD:141:ARG:HG3	26:DD:141:ARG:O	2.03	0.58
23:BB:3:U:H2'	23:BB:4:U:C6	2.38	0.58
23:BB:1930:G:H22	23:BB:1969:A:P	2.26	0.58
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.03	0.58
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.67	0.58
23:BB:93:G:H2'	23:BB:94:A:O4'	2.01	0.58
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.03	0.58
23:DB:1491:G:H5'	25:DC:97:ASP:OD1	2.03	0.58
23:BB:921:C:H2'	23:BB:922:C:C6	2.38	0.58
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.33	0.58
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.67	0.58
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.39	0.58
23:DB:2572:A:OP2	26:DD:151:THR:HB	2.03	0.58
23:DB:848:C:H2'	23:DB:849:A:C8	2.37	0.58
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.18	0.58
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.03	0.58
23:DB:135:U:H2'	23:DB:136:G:H8	1.65	0.58
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.68	0.58
50:BT:15:HIS:O	50:BT:16:VAL:C	2.42	0.58
50:BT:81:LYS:HG3	50:BT:82:LYS:H	1.67	0.58
25:DC:94:LEU:HD13	25:DC:100:ARG:HD2	1.85	0.58
16:CQ:80:LYS:CE	16:CQ:80:LYS:H	2.14	0.58
49:DR:63:VAL:HA	49:DR:95:ASP:O	2.03	0.58
1:CA:236:A:H2'	1:CA:237:G:H8	1.68	0.58
23:DB:2881:U:H2'	23:DB:2882:A:O4'	2.02	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:452:A:H2'	1:CA:453:G:O4'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:78:ARG:HH22	18:CS:64:GLU:HB2	1.67	0.58
44:DQ:10:ARG:HB2	44:DQ:10:ARG:CZ	2.31	0.58
1:AA:194:C:O2'	1:AA:195:A:H5'	2.03	0.58
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.03	0.58
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.66	0.58
16:CQ:25:GLU:HB3	16:CQ:38:LYS:HD3	1.83	0.58
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.03	0.58
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.37	0.58
23:BB:2007:U:O2'	23:BB:2008:C:H5'	2.03	0.58
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.68	0.58
23:DB:2187:U:H2'	23:DB:2188:U:C5	2.39	0.58
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.02	0.58
43:BO:58:ILE:O	43:BO:62:LEU:HD23	2.03	0.58
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.02	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
5:CF:42:TRP:HE1	5:CF:61:LEU:HD23	1.66	0.58
10:AK:45:THR:HG23	10:AK:48:GLY:HA3	1.84	0.58
1:CA:812:G:N3	1:CA:812:G:H2'	2.18	0.58
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.38	0.58
23:BB:2528:U:O2'	23:BB:2529:G:H3'	2.03	0.58
40:BH:116:ARG:CG	40:BH:131:SER:HB2	2.30	0.58
12:AM:30:LYS:HG3	12:AM:40:GLU:OE2	2.04	0.58
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.84	0.58
1:CA:18:C:H4'	1:CA:1078:U:O2	2.03	0.58
49:BR:4:VAL:HG23	49:BR:39:LEU:H	1.68	0.58
38:BM:19:GLY:N	38:BM:38:ARG:HH22	2.02	0.58
23:BB:182:A:O2'	23:BB:183:C:H5'	2.03	0.58
19:CT:43:LYS:HD3	19:CT:43:LYS:N	2.19	0.58
27:DK:19:VAL:HB	27:DK:41:ILE:HD11	1.85	0.58
23:BB:131:A:H2'	23:BB:132:G:C8	2.38	0.58
32:B4:25:VAL:O	32:B4:26:ILE:HD13	2.03	0.58
11:AL:35:ARG:HH11	11:AL:35:ARG:HA	1.69	0.58
46:DU:65:GLN:HB2	46:DU:68:ASN:HD22	1.68	0.58
1:CA:236:A:H2'	1:CA:237:G:C8	2.38	0.58
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.33	0.58
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.85	0.58
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.38	0.58
26:BD:25:THR:HG21	26:BD:193:VAL:CG2	2.34	0.58
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.32	0.58
23:DB:5:A:H2'	23:DB:6:A:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1354:A:H2'	23:BB:1355:G:O4'	2.03	0.58
3:AD:22:SER:HB2	3:AD:109:THR:HG22	1.86	0.58
1:CA:73:C:H2'	1:CA:74:A:C8	2.38	0.58
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.37	0.58
1:CA:501:C:H2'	1:CA:502:A:H8	1.66	0.58
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.38	0.58
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.83	0.58
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.85	0.58
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.03	0.58
23:DB:632:A:H2'	23:DB:633:A:C8	2.38	0.58
26:BD:141:ARG:O	26:BD:142:VAL:HG13	2.04	0.58
23:DB:987:C:H2'	23:DB:988:A:O4'	2.04	0.58
53:D6:110:ARG:O	53:D6:114:LEU:HD13	2.04	0.58
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.17	0.58
24:DI:2:LYS:NZ	24:DI:2:LYS:HB3	2.19	0.58
21:CU:16:ARG:NH1	21:CU:19:LYS:HE2	2.18	0.58
23:BB:966:G:HO2'	23:BB:2267:A:H2	1.52	0.58
23:DB:857:G:O2'	23:DB:858:G:H5'	2.03	0.58
1:AA:1250:A:H2'	1:AA:1251:A:H8	1.65	0.58
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.03	0.58
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.37	0.58
23:DB:161:A:C3'	23:DB:162:U:H5''	2.29	0.58
12:AM:3:ILE:HA	12:AM:56:ARG:HH11	1.68	0.58
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.13	0.58
13:AN:20:PHE:CD1	13:AN:24:ALA:HB2	2.38	0.58
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.02	0.58
23:BB:297:G:OP1	46:BU:91:LYS:HD3	2.02	0.58
4:CE:52:ALA:N	4:CE:58:ALA:HB2	2.17	0.58
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	1.85	0.58
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.39	0.58
31:B0:43:THR:HG23	31:B0:47:TYR:O	2.03	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: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
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.37	0.58
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.68	0.58
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.68	0.58
53:D6:44:GLU:HG2	53:D6:49:HIS:CE1	2.38	0.58
38:BM:58:LYS:HD2	38:BM:58:LYS:N	2.17	0.58
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:8:THR:O	14:CO:12:VAL:HG23	2.03	0.58
23:DB:693:A:H2'	23:DB:694:U:C6	2.38	0.58
53:D6:115:VAL:HG13	53:D6:180:GLU:HG2	1.84	0.58
23:DB:1001:A:H2'	23:DB:1002:G:O4'	2.04	0.58
26:BD:175:LEU:HD21	26:BD:191:GLY:O	2.03	0.58
4:AE:53:ARG:HH21	4:AE:54:GLU:HG3	1.66	0.58
23:DB:2602:A:OP1	23:DB:2602:A:H3'	2.03	0.58
23:BB:1210:G:H5'	23:BB:1212:G:H5'	1.85	0.58
23:DB:2872:A:O2'	23:DB:2873:A:H5''	2.03	0.58
40:DH:27:ARG:H	40:DH:31:VAL:CG2	2.16	0.58
29:BE:126:VAL:HG22	29:BE:133:LEU:HD12	1.84	0.58
17:AR:37:LYS:NZ	21:AU:22:CYS:HB2	2.18	0.58
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.37	0.58
13:CN:60:ARG:O	13:CN:62:ARG:N	2.37	0.58
23:BB:460:A:H4'	50:BT:72:GLN:CB	2.31	0.58
48:DG:120:ILE:HG13	48:DG:140:ILE:HG22	1.85	0.58
20:AB:221:ARG:HB3	20:AB:221:ARG:HH11	1.68	0.58
20:AB:47:PRO:O	20:AB:51:GLU:HB2	2.03	0.58
1:CA:16:A:O2'	1:CA:17:U:H5'	2.04	0.58
44:BQ:107:ALA:HB1	49:BR:48:LYS:HE2	1.85	0.58
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.06	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
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.85	0.58
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.03	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
48:BG:38:ASP:CG	48:BG:39:ALA:H	2.07	0.58
32:D4:15:LYS:O	32:D4:16:ILE:CB	2.50	0.58
17:AR:52:ARG:HB3	17:AR:56:ARG:NH2	2.18	0.58
23:BB:179:C:H2'	23:BB:180:G:O4'	2.03	0.58
23:BB:624:C:O2'	23:BB:657:U:H5''	2.03	0.58
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.39	0.58
44:DQ:79:ILE:O	44:DQ:79:ILE:HD13	2.03	0.58
41:BJ:98:GLU:CD	41:BJ:98:GLU:H	2.06	0.58
12:CM:78:ARG:HB3	12:CM:78:ARG:CZ	2.33	0.58
1:CA:358:U:H2'	1:CA:359:G:H8	1.68	0.58
23:BB:506:G:H5''	23:BB:509:C:O2'	2.04	0.58
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	2.04	0.58
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.68	0.58
1:CA:412:A:H1'	1:CA:413:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:14:GLU:HB3	14:CO:84:ARG:HH22	1.68	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
53:B6:4:LYS:O	53:B6:7:TYR:HB2	2.03	0.58
25:BC:173:LEU:H	25:BC:173:LEU:HD13	1.68	0.58
37:BL:93:ASN:O	37:BL:95:LEU:N	2.36	0.58
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.03	0.58
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.85	0.58
53:D6:60:ALA:HA	53:D6:66:LEU:HD12	1.85	0.58
23:DB:704:G:H2'	23:DB:726:G:N2	2.12	0.58
44:BQ:91:ARG:HH22	49:BR:10:LYS:HB3	1.68	0.58
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.69	0.58
25:BC:94:LEU:HA	25:BC:100:ARG:HA	1.86	0.58
40:BH:130:VAL:O	40:BH:131:SER:C	2.42	0.58
1:AA:599:C:O2'	1:AA:600:A:H5'	2.02	0.58
1:CA:920:U:H2'	1:CA:921:U:H6	1.68	0.58
1:AA:923:A:H2'	1:AA:924:C:C6	2.37	0.58
49:BR:38:VAL:O	49:BR:53:PHE:HB3	2.03	0.58
23:DB:1082:U:C2	23:DB:1086:A:C6	2.91	0.58
40:DH:124:THR:HG23	40:DH:128:HIS:CE1	2.39	0.58
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.38	0.58
40:DH:96:THR:HG23	40:DH:97:ARG:N	2.18	0.58
27:DK:116:ILE:HD12	27:DK:117:SER:N	2.18	0.58
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.69	0.58
32:B4:15:LYS:O	32:B4:16:ILE:CB	2.51	0.58
53:B6:123:GLU:HA	53:B6:126:ARG:NH1	2.17	0.58
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.38	0.58
44:DQ:79:ILE:HA	44:DQ:82:LEU:HD12	1.84	0.58
1:CA:714:G:H2'	1:CA:715:A:C8	2.39	0.58
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.02	0.58
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.87	0.58
23:DB:2283:C:H2'	23:DB:2284:A:H5'	1.85	0.58
23:DB:145:C:H2'	23:DB:146:A:H8	1.68	0.58
1:CA:251:G:N3	1:CA:266:G:O6	2.36	0.58
53:D6:73:GLN:HG3	53:D6:74:ASN:N	2.18	0.58
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.69	0.58
1:AA:602:A:O2'	1:AA:603:U:H5'	2.04	0.58
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.85	0.58
23:BB:251:A:H2'	23:BB:252:G:O4'	2.04	0.58
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2531:A:H5''	48:BG:156:TYR:CZ	2.38	0.58
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.03	0.58
23:DB:383:C:H5''	23:DB:385:C:OP2	2.03	0.58
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.86	0.58
1:AA:355:C:O2'	1:AA:356:A:H5'	2.03	0.58
40:DH:31:VAL:O	40:DH:33:GLN:N	2.36	0.58
17:CR:38:ILE:HG22	17:CR:58:ILE:HG21	1.86	0.58
23:BB:922:C:H1'	52:BW:22:VAL:CG2	2.33	0.58
17:AR:38:ILE:HG22	17:AR:58:ILE:HG21	1.86	0.58
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.18	0.58
1:AA:470:C:H2'	1:AA:471:U:C6	2.39	0.58
52:DW:28:GLU:HG3	52:DW:29:SER:H	1.69	0.58
1:CA:1314:C:H3'	18:CS:5:LYS:NZ	2.18	0.58
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	2.16	0.58
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.85	0.58
1:CA:922:G:H2'	1:CA:923:A:C8	2.38	0.58
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.03	0.58
51:DZ:71:LEU:O	51:DZ:74:ARG:HG2	2.03	0.58
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.03	0.58
40:DH:77:THR:HA	40:DH:143:ILE:O	2.03	0.58
1:AA:376:G:OP1	15:AP:5:ARG:HB2	2.04	0.58
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.18	0.58
1:AA:672:U:H2'	1:AA:673:A:C8	2.38	0.58
43:BO:68:LYS:H	43:BO:102:ARG:HD2	1.67	0.58
48:DG:37:ASN:HD21	48:DG:40:VAL:CB	2.16	0.58
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.69	0.58
23:DB:958:U:N3	38:DM:16:ARG:HB3	2.17	0.58
25:BC:18:VAL:HG11	25:BC:202:ARG:HD2	1.84	0.58
48:DG:46:ASP:CG	48:DG:47:ASN:H	2.07	0.58
1:CA:715:A:H2'	1:CA:716:A:C8	2.38	0.58
23:BB:633:A:O5'	23:BB:633:A:H8	1.87	0.58
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.18	0.58
23:DB:594:U:H2'	23:DB:595:C:H6	1.68	0.58
23:BB:477:A:H2'	23:BB:478:A:H8	1.66	0.58
23:BB:2680:U:OP2	26:BD:114:LYS:HD3	2.03	0.58
23:BB:904:G:H2'	23:BB:905:A:C8	2.38	0.58
25:DC:104:LEU:HD12	25:DC:104:LEU:H	1.68	0.58
42:DN:12:ARG:HG2	42:DN:16:HIS:ND1	2.19	0.58
1:AA:1382:C:H4'	6:AG:78:ARG:HH21	1.68	0.58
1:AA:272:C:H2'	1:AA:273:U:C6	2.38	0.58
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:793:U:O2	1:AA:1516:G:H4'	2.04	0.58
34:D3:41:ARG:HG3	34:D3:44:ARG:HH22	1.68	0.58
1:CA:425:G:H2'	1:CA:426:U:C6	2.38	0.58
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.19	0.58
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.69	0.58
2:AC:139:ASN:O	2:AC:143:LEU:HD23	2.04	0.58
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.04	0.58
23:BB:2354:C:H4'	52:BW:31:LEU:HD22	1.85	0.58
44:BQ:15:LYS:HD2	44:BQ:16:ILE:HD12	1.84	0.58
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.38	0.58
53:D6:143:LEU:O	53:D6:147:LEU:HG	2.04	0.58
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.84	0.58
34:B3:41:ARG:HG3	34:B3:44:ARG:HH22	1.68	0.58
21:AU:36:PHE:CD2	21:AU:39:LYS:HB2	2.38	0.58
47:DF:109:ARG:HB3	47:DF:135:ILE:CD1	2.30	0.58
53:D6:32:ARG:HB2	53:D6:103:ILE:CG2	2.33	0.58
27:BK:37:ASP:O	27:BK:62:VAL:HG23	2.04	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
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.38	0.58
23:DB:705:A:N6	23:DB:726:G:H1'	2.19	0.58
46:DU:11:ILE:O	46:DU:11:ILE:HD13	2.04	0.58
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.07	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.39	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
13:AN:60:ARG:HG3	13:AN:62:ARG:HG3	1.86	0.58
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.39	0.58
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.68	0.58
11:AL:85:ARG:HG3	11:AL:86:VAL:N	2.17	0.58
49:BR:31:GLU:H	49:BR:63:VAL:CG2	2.16	0.58
23:BB:273:G:O2'	23:BB:274:C:H5'	2.04	0.58
3:AD:25:ARG:HH11	3:AD:26:ALA:H	1.52	0.58
23:BB:1339:G:N2	23:BB:1603:A:H1'	2.19	0.58
2:CC:190:THR:HG22	2:CC:191:THR:N	2.18	0.58
1:CA:1008:U:H2'	1:CA:1009:U:H5''	1.86	0.58
53:D6:25:LEU:CD2	53:D6:118:VAL:HG13	2.33	0.58
1:AA:35:G:H2'	1:AA:36:C:H6	1.67	0.58
15:CP:68:SER:OG	15:CP:71:VAL:HG12	2.03	0.58
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.39	0.58
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.37	0.58
11:CL:98:ARG:HH21	11:CL:104:SER:C	2.07	0.58
23:DB:864:G:O2'	23:DB:865:C:H5'	2.04	0.58
2:AC:181:ILE:N	2:AC:181:ILE:HD12	2.19	0.58
4:AE:28:ARG:CZ	4:AE:30:PHE:HB3	2.33	0.58
1:CA:512:U:O2'	1:CA:513:C:H5'	2.04	0.58
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.86	0.58
23:DB:374:A:N6	23:DB:400:G:H1'	2.17	0.58
23:DB:2825:G:H2'	23:DB:2826:A:H5'	1.86	0.58
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.84	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:AA:806:C:H2'	1:AA:807:A:C8	2.39	0.58
1:CA:328:C:H4'	1:CA:329:A:H5''	1.85	0.58
32:D4:13:ASN:O	32:D4:27:CYS:HA	2.04	0.58
1:CA:520:A:OP1	11:CL:48:LEU:HD12	2.04	0.58
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.33	0.58
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	2.03	0.58
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.18	0.58
44:BQ:91:ARG:HG2	44:BQ:93:ILE:HG22	1.85	0.58
30:BY:16:LEU:H	30:BY:16:LEU:CD2	2.12	0.58
40:BH:103:VAL:HG11	40:BH:110:VAL:HG22	1.86	0.58
33:B1:6:GLU:HB2	33:B1:52:LYS:NZ	2.18	0.58
33:D1:6:GLU:HB2	33:D1:52:LYS:NZ	2.19	0.58
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.04	0.58
46:BU:80:ASP:HB2	46:BU:96:LYS:N	2.19	0.58
40:BH:84:ALA:HB2	40:BH:146:VAL:HG12	1.86	0.58
20:CB:57:ASN:HB2	20:CB:223:GLY:HA3	1.84	0.58
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.04	0.58
4:AE:52:ALA:N	4:AE:58:ALA:HB2	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
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.04	0.58
1:AA:714:G:H2'	1:AA:715:A:C8	2.39	0.58
20:CB:120:SER:HA	20:CB:125:PHE:CE2	2.38	0.58
1:AA:452:A:H2'	1:AA:453:G:O4'	2.04	0.58
15:AP:1:MET:HA	15:AP:1:MET:HE3	1.84	0.58
2:CC:180:ASP:OD1	2:CC:203:LYS:HB2	2.03	0.58
23:DB:1508:A:H3'	23:DB:1509:A:C4	2.38	0.58
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.34	0.58
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.39	0.58
23:BB:1172:C:H2'	23:BB:1173:U:O4'	2.03	0.58
1:AA:953:G:H2'	1:AA:954:G:O4'	2.03	0.58
48:DG:58:ALA:C	48:DG:60:GLY:H	2.07	0.58
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.39	0.58
23:DB:1365:A:OP2	51:DZ:3:ARG:HB2	2.03	0.58
2:CC:40:GLN:HG3	2:CC:41:TYR:H	1.67	0.58
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.04	0.58
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.04	0.58
1:CA:734:G:O2'	17:CR:59:LYS:HD3	2.04	0.58
22:BA:43:C:O2'	47:BF:91:ARG:HD2	2.03	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
19:AT:43:LYS:N	19:AT:43:LYS:HD3	2.18	0.58
26:DD:108:ASP:OD2	26:DD:173:GLN:HA	2.04	0.58
20:AB:65:LYS:H	20:AB:158:ASP:CG	2.07	0.58
23:BB:1082:U:O4	23:BB:1086:A:C2	2.56	0.58
23:BB:115:C:H2'	23:BB:116:C:H6	1.68	0.58
23:BB:1458:U:H5''	23:BB:1459:G:OP1	2.01	0.58
23:DB:547:A:N1	23:DB:548:G:H1'	2.19	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
10:AK:105:ARG:NH2	21:AU:10:PRO:HB3	2.18	0.58
1:CA:448:A:H2'	1:CA:449:G:C8	2.38	0.58
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.67	0.58
23:BB:987:C:H2'	23:BB:988:A:O4'	2.04	0.58
5:AF:53:LYS:NZ	5:AF:53:LYS:H	2.02	0.58
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.85	0.58
1:CA:1081:A:OP1	4:CE:22:LYS:HB2	2.03	0.58
49:DR:69:GLY:O	49:DR:90:ARG:HG2	2.03	0.58
1:CA:906:A:O2'	1:CA:907:A:H5''	2.04	0.58
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.39	0.58
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.68	0.58
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.03	0.58
23:DB:245:G:H2'	23:DB:246:C:H6	1.68	0.58
23:BB:1577:C:H2'	23:BB:1578:U:O4'	2.04	0.58
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.03	0.58
23:BB:944:C:H2'	57:BB:3321:HOH:O	2.04	0.58
52:DW:13:ARG:HG3	52:DW:14:ASP:H	1.69	0.58
49:BR:69:GLY:O	49:BR:90:ARG:HG2	2.04	0.58
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.24	0.57
47:DF:101:ARG:NH2	47:DF:138:PRO:HB2	2.18	0.57
53:D6:90:LEU:HB3	53:D6:101:ILE:HG21	1.85	0.57
23:DB:921:C:H2'	23:DB:922:C:C6	2.39	0.57
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.34	0.57
44:DQ:86:SER:CB	49:DR:51:VAL:HA	2.34	0.57
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.04	0.57
45:BS:72:THR:HG21	45:BS:108:SER:HB3	1.86	0.57
3:CD:160:LEU:CD1	3:CD:160:LEU:H	2.12	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
23:DB:1915:U:H2'	23:DB:1916:A:C8	2.39	0.57
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.23	0.57
23:BB:2144:G:H1'	23:BB:2148:G:C2	2.39	0.57
23:DB:2579:C:H1'	26:DD:130:GLN:NE2	2.18	0.57
3:CD:151:GLN:HE21	3:CD:153:ARG:HD2	1.69	0.57
23:DB:716:A:H2'	23:DB:717:C:H5''	1.86	0.57
23:DB:494:G:OP1	45:DS:8:ARG:HD3	2.04	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:1812:U:H4'	25:BC:44:ASN:OD1	2.03	0.57
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.67	0.57
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.17	0.57
1:CA:793:U:O2	1:CA:1516:G:H4'	2.04	0.57
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.39	0.57
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.67	0.57
23:DB:2190:G:H2'	23:DB:2191:A:O4'	2.04	0.57
23:BB:1171:G:C3'	23:BB:1172:C:H4'	2.34	0.57
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.04	0.57
41:DJ:88:THR:HG22	41:DJ:91:GLU:HG3	1.86	0.57
7:AH:23:ALA:CB	7:AH:61:THR:HA	2.33	0.57
22:BA:29:A:H3'	22:BA:30:C:H6	1.69	0.57
23:DB:2257:U:O2'	23:DB:2258:C:H5'	2.04	0.57
1:AA:49:U:O2'	1:AA:50:A:H2'	2.04	0.57
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.04	0.57
16:AQ:31:PRO:O	16:AQ:32:ILE:HB	2.04	0.57
37:DL:131:ALA:HA	37:DL:134:ALA:HB3	1.85	0.57
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.04	0.57
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.39	0.57
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.04	0.57
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.03	0.57
8:AI:28:VAL:HA	8:AI:32:ARG:O	2.04	0.57
19:AT:15:LYS:HA	19:AT:18:LYS:CE	2.33	0.57
9:CJ:12:ALA:N	9:CJ:18:ILE:HD12	2.20	0.57
53:D6:38:LEU:HD11	53:D6:66:LEU:HD23	1.85	0.57
29:DE:5:LEU:HG	29:DE:12:LEU:HD22	1.86	0.57
23:DB:877:A:H2'	23:DB:900:A:N6	2.20	0.57
35:DV:1:MET:HE3	35:DV:2:PHE:H	1.68	0.57
35:DV:63:ILE:O	35:DV:70:ILE:HD12	2.03	0.57
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.04	0.57
19:AT:82:ILE:C	19:AT:85:LEU:HD22	2.24	0.57
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.68	0.57
25:DC:159:THR:O	25:DC:194:VAL:HG12	2.04	0.57
51:BZ:5:CYS:HB3	51:BZ:10:LYS:N	2.18	0.57
16:AQ:8:GLN:HB3	16:AQ:59:GLU:HB2	1.85	0.57
24:DI:121:ILE:CD1	24:DI:121:ILE:H	2.14	0.57
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.68	0.57
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.69	0.57
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.67	0.57
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.18	0.57
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.04	0.57
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.67	0.57
48:BG:37:ASN:HD21	48:BG:40:VAL:CB	2.15	0.57
23:DB:277:G:H4'	23:DB:278:A:N7	2.19	0.57
22:BA:35:C:C2'	22:BA:36:C:H5'	2.34	0.57
23:DB:172:A:H2'	23:DB:173:A:H8	1.67	0.57
20:CB:19:THR:O	20:CB:37:VAL:HA	2.04	0.57
1:AA:1410:A:H2'	1:AA:1411:C:H6	1.69	0.57
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.04	0.57
1:CA:56:U:H2'	1:CA:57:G:C8	2.39	0.57
46:BU:41:VAL:HG22	46:BU:60:LYS:O	2.03	0.57
37:DL:23:ILE:HD12	49:DR:84:ARG:NE	2.19	0.57
1:AA:358:U:H2'	1:AA:359:G:H8	1.69	0.57
1:AA:191:G:H2'	1:AA:192:A:C8	2.38	0.57
1:AA:939:G:H5''	6:AG:101:ARG:CZ	2.34	0.57
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.04	0.57
30:BY:4:ILE:CD1	30:BY:58:GLU:HG3	2.34	0.57
37:DL:119:PRO:HA	37:DL:138:ALA:O	2.04	0.57
23:DB:2491:U:H5''	23:DB:2570:G:H5''	1.87	0.57
23:BB:693:A:H2'	23:BB:694:U:C6	2.39	0.57
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:797:C:O2'	1:AA:798:U:H5'	2.04	0.57
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.32	0.57
21:AU:3:ILE:CD1	21:AU:19:LYS:HA	2.33	0.57
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.67	0.57
2:CC:76:ILE:HG22	2:CC:80:GLY:HA2	1.86	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
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.19	0.57
1:AA:532:A:C8	2:AC:192:TYR:HD2	2.21	0.57
25:DC:94:LEU:HA	25:DC:100:ARG:HA	1.86	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
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.19	0.57
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.35	0.57
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	1.86	0.57
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.05	0.57
23:BB:125:A:H5'	36:B2:19:ARG:HD3	1.85	0.57
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.04	0.57
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.33	0.57
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.84	0.57
23:BB:716:A:H2'	23:BB:717:C:H5''	1.85	0.57
17:CR:52:ARG:HB3	17:CR:56:ARG:NH2	2.18	0.57
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.05	0.57
23:BB:118:A:N3	23:BB:178:G:H1'	2.20	0.57
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.39	0.57
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.69	0.57
23:DB:364:C:H2'	23:DB:365:U:H6	1.69	0.57
1:AA:436:C:O2'	1:AA:437:U:H5'	2.05	0.57
1:AA:632:U:H5''	1:AA:633:G:C8	2.39	0.57
1:CA:404:G:OP1	3:CD:114:ARG:HD3	2.03	0.57
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.69	0.57
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.70	0.57
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.04	0.57
1:CA:502:A:H2'	1:CA:503:C:H6	1.68	0.57
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.68	0.57
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.39	0.57
1:CA:953:G:H2'	1:CA:954:G:O4'	2.04	0.57
23:DB:1354:A:H2'	23:DB:1355:G:O4'	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
13:AN:71:GLY:O	13:AN:79:SER:HA	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:470:C:H2'	1:CA:471:U:C6	2.40	0.57
46:DU:11:ILE:CG2	46:DU:70:ALA:HB3	2.33	0.57
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
39:BX:39:GLN:O	39:BX:42:LEU:HB2	2.04	0.57
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.07	0.57
28:DP:77:SER:OG	28:DP:79:VAL:HG22	2.04	0.57
40:BH:103:VAL:HG21	40:BH:110:VAL:H	1.69	0.57
23:BB:702:U:H2'	23:BB:703:U:C6	2.39	0.57
13:AN:41:TRP:HD1	13:AN:44:VAL:HG23	1.69	0.57
4:CE:156:ARG:CA	4:CE:158:LYS:HZ2	2.13	0.57
14:AO:14:GLU:HB3	14:AO:84:ARG:HH22	1.69	0.57
5:AF:71:ILE:HG13	5:AF:72:ASP:N	2.18	0.57
10:CK:80:ASN:HD22	10:CK:80:ASN:N	2.01	0.57
23:DB:106:C:H2'	23:DB:107:G:C8	2.37	0.57
23:BB:151:C:H2'	23:BB:152:A:H8	1.69	0.57
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.39	0.57
1:CA:237:G:H2'	1:CA:238:A:H8	1.69	0.57
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.70	0.57
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.34	0.57
23:DB:2680:U:OP2	26:DD:114:LYS:HD3	2.04	0.57
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.04	0.57
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.04	0.57
49:DR:19:THR:HB	49:DR:96:VAL:O	2.05	0.57
12:CM:80:MET:C	12:CM:82:LEU:H	2.06	0.57
26:BD:33:ARG:HE	26:BD:74:GLU:HB3	1.69	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
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.86	0.57
23:BB:1758:U:O4	23:BB:2695:U:H4'	2.04	0.57
26:DD:141:ARG:O	26:DD:142:VAL:HG13	2.03	0.57
38:BM:131:VAL:HG12	38:BM:132:THR:H	1.70	0.57
1:CA:355:C:O2'	1:CA:356:A:H5'	2.04	0.57
1:AA:586:C:H5''	7:AH:81:GLY:HA2	1.84	0.57
23:DB:982:C:O2	23:DB:982:C:H5'	2.03	0.57
17:CR:44:THR:HB	17:CR:46:THR:HG22	1.87	0.57
1:CA:1298:U:H2'	6:CG:113:LYS:NZ	2.20	0.57
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.69	0.57
6:AG:24:LYS:O	6:AG:28:ILE:HG12	2.04	0.57
2:CC:185:THR:HG22	2:CC:198:LYS:HA	1.85	0.57
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:8:ASP:O	46:DU:23:LYS:HA	2.05	0.57
29:DE:37:ALA:C	29:DE:39:ALA:H	2.07	0.57
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.25	0.57
1:AA:734:G:O2'	17:AR:59:LYS:HD3	2.03	0.57
48:DG:24:THR:HG22	48:DG:34:ARG:HB3	1.87	0.57
46:DU:9:GLU:HG3	46:DU:21:ARG:HD2	1.86	0.57
46:BU:9:GLU:HG3	46:BU:21:ARG:HD2	1.85	0.57
20:CB:45:THR:HA	20:CB:48:MET:HG3	1.86	0.57
6:AG:149:ALA:HB2	10:AK:55:ARG:CZ	2.35	0.57
1:AA:922:G:H2'	1:AA:923:A:C8	2.39	0.57
29:DE:194:LYS:O	29:DE:197:GLU:HB3	2.03	0.57
51:DZ:35:SER:CA	51:DZ:50:ARG:HA	2.32	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
40:DH:119:ASN:HD21	40:DH:121:VAL:CG1	2.18	0.57
50:DT:15:HIS:O	50:DT:16:VAL:C	2.42	0.57
23:DB:1278:C:O3'	42:DN:34:ILE:HG23	2.05	0.57
23:BB:582:A:H2'	23:BB:583:G:H8	1.69	0.57
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.39	0.57
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.39	0.57
1:AA:906:A:O2'	1:AA:907:A:H5''	2.03	0.57
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.69	0.57
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.05	0.57
23:BB:2312:U:O2	47:BF:38:GLY:HA3	2.03	0.57
2:AC:120:THR:HG22	2:AC:188:ALA:HB2	1.85	0.57
2:AC:34:SER:O	2:AC:38:VAL:HG22	2.04	0.57
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.04	0.57
1:CA:104:G:O2'	1:CA:105:G:H5'	2.04	0.57
46:BU:8:ASP:O	46:BU:23:LYS:HA	2.04	0.57
23:BB:585:G:H2'	23:BB:1251:C:H42	1.69	0.57
23:BB:2602:A:H3'	23:BB:2602:A:OP1	2.04	0.57
41:DJ:63:ALA:HA	41:DJ:69:ARG:HH12	1.70	0.57
47:BF:105:ILE:C	47:BF:108:PRO:HD2	2.25	0.57
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.04	0.57
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.25	0.57
1:AA:1134:G:C2	1:AA:1135:U:H1'	2.39	0.57
13:CN:26:LEU:O	13:CN:30:ILE:N	2.37	0.57
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.20	0.57
45:DS:36:LEU:H	45:DS:36:LEU:CD2	2.15	0.57
39:BX:24:GLU:O	39:BX:28:LEU:HG	2.05	0.57
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.04	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:BB:1076:C:H5''	24:BI:94:LYS:HZ1	1.70	0.57
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.20	0.57
39:BX:51:ALA:O	39:BX:55:THR:N	2.38	0.57
16:AQ:75:VAL:HG23	16:AQ:76:ARG:N	2.16	0.57
40:BH:90:LEU:CD1	40:BH:146:VAL:HG11	2.34	0.57
20:AB:94:ARG:HE	20:AB:94:ARG:H	1.51	0.57
23:BB:674:G:H4'	29:BE:69:ARG:HB3	1.84	0.57
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.04	0.57
9:CJ:55:PRO:HA	13:CN:80:ARG:HH21	1.69	0.57
42:BN:54:LEU:HD11	42:BN:62:ASN:HB3	1.86	0.57
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.04	0.57
33:B1:7:LYS:HD3	33:B1:23:THR:HG22	1.87	0.57
23:DB:2081:U:OP1	51:DZ:19:SER:HB3	2.05	0.57
23:DB:27:G:H1'	23:DB:513:A:H61	1.69	0.57
1:AA:715:A:H2'	1:AA:716:A:C8	2.37	0.57
40:BH:66:ASN:H	40:BH:66:ASN:HD22	1.51	0.57
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.69	0.57
23:DB:2212:A:H1'	23:DB:2213:U:H3	1.69	0.57
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.69	0.57
23:DB:124:G:O2'	23:DB:125:A:H5''	2.04	0.57
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	2.04	0.57
23:DB:1946:U:H5'	53:D6:123:GLU:OE1	2.04	0.57
23:DB:1843:C:H4'	25:DC:253:GLY:HA3	1.85	0.57
1:CA:272:C:H2'	1:CA:273:U:C6	2.39	0.57
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.04	0.57
23:BB:1171:G:H3'	23:BB:1172:C:H4'	1.87	0.57
53:D6:36:ALA:HA	53:D6:39:LEU:HD23	1.87	0.57
23:BB:753:A:H2'	23:BB:754:U:C6	2.39	0.57
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.04	0.57
23:DB:647:G:H2'	23:DB:648:G:C8	2.39	0.57
12:AM:92:ARG:HA	12:AM:92:ARG:NE	2.20	0.57
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.04	0.57
1:CA:1534:A:H62	21:CU:44:ARG:CZ	2.17	0.57
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.18	0.57
52:BW:35:ILE:HG12	52:BW:35:ILE:O	2.04	0.57
1:AA:719:C:H2'	17:AR:38:ILE:HD11	1.85	0.57
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.34	0.57
47:BF:92:GLY:HA2	47:BF:95:MET:HE3	1.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:135:HIS:CG	40:DH:136:SER:H	2.22	0.57
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.85	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
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
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.05	0.57
23:BB:587:C:O2'	37:BL:19:LEU:HD13	2.03	0.57
23:BB:138:U:H2'	23:BB:140:C:H4'	1.86	0.57
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.32	0.57
29:DE:29:HIS:HA	29:DE:32:VAL:HG22	1.87	0.57
1:AA:699:C:C2'	1:AA:700:G:H5''	2.31	0.57
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.40	0.57
23:DB:2720:U:H5''	28:DP:52:ARG:HH22	1.65	0.57
53:B6:42:LYS:HA	53:B6:50:VAL:O	2.05	0.57
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.04	0.57
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.40	0.57
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.69	0.57
27:BK:116:ILE:HD12	27:BK:117:SER:N	2.19	0.57
27:BK:87:LEU:HB2	27:BK:93:GLN:O	2.04	0.57
5:CF:71:ILE:HG13	5:CF:72:ASP:N	2.20	0.57
35:DV:53:LYS:NZ	35:DV:54:ALA:HB3	2.18	0.57
23:DB:2849:U:N3	23:DB:2867:G:C8	2.73	0.57
23:BB:1655:A:H2'	23:BB:1656:C:O4'	2.05	0.57
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.68	0.57
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.69	0.57
1:AA:713:G:H2'	1:AA:714:G:C8	2.40	0.57
23:DB:170:U:H2'	23:DB:171:U:H6	1.69	0.57
1:CA:1460:C:H2'	1:CA:1461:G:C8	2.38	0.57
23:DB:1870:C:H3'	23:DB:1871:A:C8	2.38	0.57
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.05	0.57
23:BB:2283:C:H2'	23:BB:2284:A:H5'	1.85	0.57
23:DB:657:U:H2'	23:DB:658:U:C6	2.39	0.57
46:DU:35:VAL:HB	46:DU:38:ILE:HB	1.85	0.57
23:BB:947:A:H2'	23:BB:948:C:H6	1.70	0.57
23:BB:8:C:O2'	23:BB:9:G:H5'	2.04	0.57
53:B6:157:ALA:O	53:B6:161:ILE:HG12	2.05	0.57
1:AA:641:U:H4'	7:AH:106:SER:O	2.05	0.57
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.40	0.57
23:BB:1636:U:H2'	23:BB:1637:A:H8	1.69	0.57
10:CK:16:SER:HA	10:CK:79:LYS:HE3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:251:A:H2'	23:DB:252:G:O4'	2.05	0.57
1:CA:49:U:O2'	1:CA:50:A:H2'	2.04	0.57
23:BB:104:A:H2'	23:BB:105:C:O4'	2.04	0.57
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.23	0.57
23:BB:425:G:O2'	23:BB:426:C:H5'	2.05	0.57
21:CU:36:PHE:HD2	21:CU:39:LYS:HD2	1.69	0.57
23:BB:854:C:O2'	23:BB:855:G:H5'	2.05	0.57
47:DF:134:GLN:C	47:DF:136:ILE:H	2.06	0.57
47:BF:34:THR:O	47:BF:89:THR:HA	2.03	0.57
1:AA:706:A:C4'	10:AK:30:ILE:HD11	2.35	0.57
35:DV:29:ILE:HD13	35:DV:31:TYR:HE2	1.70	0.57
53:B6:114:LEU:O	53:B6:118:VAL:HG23	2.05	0.57
48:BG:15:ASP:HB3	48:BG:26:LYS:N	2.11	0.57
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.25	0.57
48:BG:58:ALA:C	48:BG:60:GLY:H	2.07	0.57
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.69	0.57
20:CB:49:PHE:HA	20:CB:212:TYR:OH	2.05	0.57
44:DQ:91:ARG:HB2	49:DR:11:GLN:OE1	2.05	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
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.17	0.57
12:CM:11:HIS:H	12:CM:45:SER:HB3	1.69	0.57
33:B1:8:ILE:CD1	33:B1:51:ALA:HA	2.35	0.57
1:AA:1313:U:OP1	18:AS:6:LYS:HD3	2.05	0.57
49:BR:2:TYR:CB	49:BR:42:ALA:HB2	2.33	0.57
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.68	0.57
26:BD:12:THR:HG22	26:BD:13:ARG:H	1.70	0.57
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.34	0.57
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.04	0.57
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.85	0.57
1:CA:312:C:H2'	1:CA:313:A:C8	2.40	0.57
4:CE:81:GLN:HG2	4:CE:148:SER:HA	1.87	0.57
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.40	0.57
48:BG:53:PRO:HG3	48:BG:61:TRP:CD2	2.40	0.57
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.40	0.57
1:CA:1352:C:H2'	1:CA:1353:G:H8	1.69	0.57
23:BB:417:C:H2'	23:BB:418:C:H6	1.69	0.57
39:DX:52:ARG:O	39:DX:55:THR:HB	2.05	0.57
23:BB:639:U:H2'	23:BB:640:C:C6	2.40	0.57
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.67	0.57
23:BB:2652:C:O2'	23:BB:2653:U:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.39	0.57
13:CN:10:VAL:HB	13:CN:11:LYS:NZ	2.20	0.57
37:BL:57:LEU:HD13	37:BL:60:ARG:NH1	2.20	0.57
1:CA:707:U:H2'	1:CA:708:C:C6	2.40	0.57
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.05	0.57
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.04	0.57
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.40	0.57
53:B6:151:GLU:O	53:B6:155:LYS:HG2	2.05	0.57
26:DD:46:ARG:NH1	26:DD:85:ALA:HA	2.18	0.57
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.04	0.57
23:DB:265:A:O2'	23:DB:266:G:H4'	2.05	0.57
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.04	0.57
23:BB:2254:C:O2	53:B6:150:SER:HB2	2.04	0.57
23:BB:688:U:O2'	23:BB:689:A:H5'	2.05	0.57
36:D2:31:LEU:HD22	36:D2:42:LEU:HD12	1.86	0.57
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.40	0.57
53:D6:67:VAL:HG12	53:D6:100:TYR:HE1	1.70	0.57
21:AU:16:ARG:NH1	21:AU:19:LYS:HE2	2.19	0.57
47:BF:134:GLN:C	47:BF:136:ILE:H	2.08	0.57
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.39	0.57
45:BS:73:LYS:HE3	45:BS:74:ILE:N	2.10	0.57
13:CN:20:PHE:CD1	13:CN:24:ALA:HB2	2.38	0.57
13:AN:52:ARG:HH11	13:AN:58:ARG:HH21	1.53	0.57
48:BG:36:LEU:N	48:BG:36:LEU:HD22	2.19	0.57
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.20	0.57
23:DB:996:A:H4'	44:DQ:91:ARG:CD	2.35	0.57
20:AB:213:LEU:O	20:AB:216:VAL:HG22	2.04	0.57
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.05	0.57
1:AA:1080:A:OP1	4:AE:51:LYS:HD2	2.05	0.57
29:DE:141:MET:O	29:DE:143:LEU:HG	2.05	0.57
48:BG:153:PRO:HA	48:BG:159:LYS:O	2.05	0.57
32:B4:19:ARG:C	32:B4:21:GLY:H	2.07	0.57
23:DB:616:A:H3'	23:DB:617:G:C8	2.35	0.57
1:AA:376:G:H2'	1:AA:377:G:H8	1.70	0.57
42:BN:97:ILE:HD12	42:BN:98:LEU:H	1.69	0.57
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.04	0.57
23:DB:582:A:H2'	23:DB:583:G:C8	2.39	0.57
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.39	0.57
23:BB:654:A:C2'	23:BB:655:A:H5''	2.34	0.57
53:B6:14:MET:HB3	53:B6:168:PHE:CD2	2.40	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)
23:BB:170:U:H2'	23:BB:171:U:H6	1.69	0.57
15:AP:68:SER:OG	15:AP:71:VAL:HG12	2.05	0.57
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.19	0.57
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.85	0.57
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.69	0.57
22:DA:5:U:H2'	22:DA:6:G:C8	2.39	0.57
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.69	0.57
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.57
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.03	0.57
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.04	0.57
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.05	0.57
47:DF:155:ILE:HD12	47:DF:155:ILE:H	1.70	0.57
23:DB:813:U:H2'	23:DB:814:C:C6	2.39	0.57
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.86	0.57
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.87	0.57
23:BB:96:C:H4'	39:BX:41:HIS:ND1	2.20	0.57
1:CA:882:C:O2'	1:CA:883:C:H5'	2.05	0.57
1:CA:796:C:OP1	10:CK:127:ARG:HB3	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
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.40	0.57
1:CA:1149:C:H2'	1:CA:1150:A:H8	1.68	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:812:G:H2'	1:AA:812:G:N3	2.19	0.57
20:AB:45:THR:HA	20:AB:48:MET:HG3	1.86	0.57
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.69	0.57
1:CA:60:A:H4'	1:CA:61:G:OP1	2.05	0.57
1:CA:1492:A:H2'	1:CA:1493:A:C8	2.40	0.57
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.24	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
23:BB:2820:A:OP1	42:BN:4:ARG:HA	2.05	0.57
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.35	0.57
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.87	0.57
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.40	0.57
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.44	0.57
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.70	0.57
20:AB:126:ASP:C	20:AB:127:LYS:HD2	2.26	0.57
23:BB:17:G:H2'	23:BB:18:U:H6	1.69	0.57
23:DB:654:A:H2'	23:DB:655:A:H5''	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:550:C:H2'	23:DB:551:G:H8	1.70	0.57
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.05	0.57
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.20	0.57
23:BB:1872:A:O5'	23:BB:1872:A:H8	1.87	0.57
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.04	0.57
23:BB:154:U:H2'	23:BB:155:A:C8	2.40	0.57
23:DB:730:A:O2'	23:DB:731:C:H5'	2.05	0.57
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.68	0.57
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.40	0.57
23:BB:1507:C:H2'	23:BB:1508:A:H4'	1.86	0.57
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.05	0.57
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.70	0.57
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.05	0.57
23:BB:526:A:N6	23:BB:2626:C:H4'	2.20	0.57
22:BA:22:U:H2'	22:BA:23:G:C8	2.40	0.57
23:DB:871:U:H2'	23:DB:872:U:H6	1.70	0.57
23:BB:1533:C:H2'	23:BB:1534:U: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
20:CB:10:LYS:HB3	20:CB:211:LEU:HD21	1.87	0.57
23:BB:736:C:H2'	23:BB:737:C:C6	2.40	0.57
1:CA:552:U:H2'	1:CA:553:A:C8	2.40	0.57
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.18	0.57
23:BB:107:G:O2'	23:BB:108:G:H5'	2.05	0.57
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.40	0.57
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.04	0.57
1:CA:1029:U:H6	1:CA:1029:U:O5'	1.88	0.57
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.04	0.57
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.20	0.57
37:BL:131:ALA:HA	37:BL:134:ALA:HB3	1.85	0.57
1:AA:1450:U:H2'	1:AA:1452:C:C4	2.40	0.57
47:BF:134:GLN:NE2	47:BF:136:ILE:HD13	2.20	0.56
8:AI:5:TYR:HD2	8:AI:88:GLU:HB2	1.68	0.56
46:DU:66:VAL:O	46:DU:69:VAL:HG22	2.05	0.56
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.85	0.56
8:CI:5:TYR:HD2	8:CI:88:GLU:HB2	1.70	0.56
29:BE:29:HIS:HA	29:BE:32:VAL:HG22	1.87	0.56
1:AA:93:U:OP1	1:AA:94:G:H5''	2.05	0.56
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.19	0.56
36:B2:22:MET:SD	36:B2:28:ARG:HG2	2.44	0.56
1:AA:313:A:H2'	1:AA:314:C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:81:ARG:N	46:BU:81:ARG:HH21	2.00	0.56
32:B4:7:VAL:HG23	32:B4:35:GLN:CB	2.33	0.56
23:DB:591:U:H1'	34:D3:1:PRO:N	2.20	0.56
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.05	0.56
27:DK:70:ARG:HB3	27:DK:76:VAL:HG13	1.87	0.56
23:DB:2900:A:O2'	23:DB:2901:C:H5'	2.05	0.56
3:AD:84:ASN:HD22	4:AE:101:GLY:HA2	1.68	0.56
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.04	0.56
18:AS:35:ARG:HH21	18:AS:52:ASN:HA	1.69	0.56
1:CA:1020:G:N3	1:CA:1020:G:H2'	2.19	0.56
18:CS:35:ARG:HH21	18:CS:52:ASN:HA	1.68	0.56
23:BB:418:C:H2'	23:BB:419:U:C6	2.40	0.56
22:DA:35:C:C2'	22:DA:36:C:H5'	2.35	0.56
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.40	0.56
22:DA:12:C:H4'	22:DA:13:G:OP1	2.05	0.56
25:BC:104:LEU:H	25:BC:104:LEU:HD12	1.70	0.56
23:DB:636:G:O5'	37:DL:128:THR:HG22	2.05	0.56
1:CA:441:A:H61	1:CA:493:A:H61	1.53	0.56
53:D6:14:MET:SD	53:D6:164:ILE:HG22	2.45	0.56
1:AA:636:U:H2'	1:AA:637:C:H6	1.70	0.56
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.40	0.56
11:AL:81:ILE:CG2	11:AL:94:TYR:HB3	2.35	0.56
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.39	0.56
28:BP:61:ARG:NH1	28:BP:100:ARG:HA	2.20	0.56
1:AA:575:G:H4'	1:AA:576:C:O5'	2.05	0.56
1:CA:1450:U:H2'	1:CA:1452:C:C4	2.40	0.56
38:DM:131:VAL:HG12	38:DM:132:THR:H	1.69	0.56
23:BB:383:C:H5''	23:BB:385:C:OP2	2.05	0.56
23:DB:2598:A:OP1	25:DC:233:GLY:HA2	2.03	0.56
23:BB:1345:C:H5'	23:BB:1396:U:H5	1.70	0.56
23:DB:670:A:H5''	37:DL:42:SER:HB2	1.88	0.56
23:BB:510:C:H2'	23:BB:511:U:O4'	2.04	0.56
47:BF:107:VAL:O	47:BF:110:ILE:HG22	2.04	0.56
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.39	0.56
48:DG:17:LYS:HB3	48:DG:24:THR:H	1.69	0.56
50:BT:5:GLU:HA	50:BT:8:LEU:HD12	1.87	0.56
20:AB:86:CYS:HB3	20:AB:88:GLN:NE2	2.19	0.56
51:DZ:69:ALA:HA	51:DZ:72:ARG:HH12	1.71	0.56
46:DU:80:ASP:HB2	46:DU:96:LYS:N	2.19	0.56
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.16	0.56
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.04	0.56
27:BK:120:PRO:HA	28:BP:65:ASN:ND2	2.19	0.56
10:AK:17:ASP:HB3	10:AK:80:ASN:HD21	1.67	0.56
23:DB:2529:G:H5''	48:DG:174:LYS:HB2	1.87	0.56
1:CA:1018:G:H2'	1:CA:1019:A:H8	1.70	0.56
23:DB:414:C:H2'	23:DB:415:A:C8	2.40	0.56
22:BA:12:C:H4'	22:BA:13:G:OP1	2.06	0.56
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.40	0.56
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.05	0.56
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.40	0.56
23:DB:441:U:H2'	23:DB:442:G:C8	2.39	0.56
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.40	0.56
23:DB:1843:C:H5''	25:DC:250:GLN:HE21	1.71	0.56
23:DB:2391:G:H1'	23:DB:2424:C:N4	2.20	0.56
1:CA:509:A:O2'	1:CA:510:A:H5'	2.06	0.56
23:DB:234:U:H2'	23:DB:235:U:H6	1.71	0.56
23:DB:611:C:H2'	23:DB:612:G:O4'	2.04	0.56
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.04	0.56
23:DB:992:C:H4'	49:DR:74:ILE:HD13	1.87	0.56
48:DG:66:THR:O	48:DG:70:LEU:HB2	2.06	0.56
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.39	0.56
46:DU:2:ALA:HB3	46:DU:5:ARG:NH2	2.20	0.56
23:DB:1098:A:C4	24:DI:3:LYS:O	2.59	0.56
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.87	0.56
43:DO:70:ALA:O	43:DO:74:VAL:HG23	2.04	0.56
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.21	0.56
23:DB:850:U:H2'	23:DB:851:C:C6	2.40	0.56
39:DX:39:GLN:O	39:DX:42:LEU:HB2	2.05	0.56
35:DV:70:ILE:HD13	35:DV:71:LYS:N	2.16	0.56
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.05	0.56
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.87	0.56
44:BQ:93:ILE:O	44:BQ:96:ASP:HB3	2.05	0.56
23:DB:557:C:H2'	23:DB:558:U:C6	2.40	0.56
26:DD:12:THR:HG22	26:DD:13:ARG:H	1.70	0.56
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.12	0.56
12:CM:10:ASP:HB3	12:CM:45:SER:HB3	1.88	0.56
1:AA:763:G:H2'	1:AA:764:C:C6	2.40	0.56
20:AB:45:THR:HG23	20:AB:200:PRO:HG2	1.87	0.56
23:DB:1161:C:H1'	49:DR:9:GLY:HA3	1.86	0.56
16:AQ:68:LYS:C	16:AQ:70:LYS:H	2.09	0.56
23:BB:1141:U:H5''	41:BJ:27:ARG:HH21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.71	0.56
23:BB:1056:G:O5'	23:BB:1056:G:H8	1.88	0.56
19:CT:79:THR:HA	19:CT:82:ILE:HG12	1.87	0.56
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.31	0.56
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.35	0.56
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.06	0.56
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.68	0.56
43:DO:82:ALA:O	43:DO:87:ILE:HB	2.05	0.56
43:BO:82:ALA:O	43:BO:87:ILE:HB	2.04	0.56
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.05	0.56
23:DB:91:A:H1'	23:DB:92:U:C6	2.41	0.56
42:BN:58:ASP:O	42:BN:59:SER:HB3	2.05	0.56
12:CM:94:LEU:HB3	12:CM:95:PRO:HD2	1.86	0.56
20:CB:96:LEU:CD2	20:CB:146:SER:HB2	2.36	0.56
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CG1	2.35	0.56
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.05	0.56
23:DB:873:C:H2'	23:DB:874:G:H8	1.68	0.56
20:AB:124:THR:HA	20:AB:127:LYS:NZ	2.20	0.56
1:CA:1010:U:O2'	1:CA:1011:C:H5'	2.05	0.56
15:AP:23:ASP:O	15:AP:26:ASN:HB2	2.05	0.56
30:BY:6:ILE:HD13	30:BY:6:ILE:N	2.21	0.56
23:BB:27:G:HO2'	23:BB:28:A:H8	1.50	0.56
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.05	0.56
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.05	0.56
20:CB:119:GLN:HB3	20:CB:125:PHE:HB2	1.87	0.56
1:CA:958:A:H61	18:CS:53:GLY:HA3	1.69	0.56
23:DB:76:C:O2'	23:DB:77:G:H5'	2.05	0.56
1:AA:56:U:H2'	1:AA:57:G:C8	2.38	0.56
23:BB:2212:A:H1'	23:BB:2213:U:N3	2.19	0.56
5:AF:47:LEU:HD12	5:AF:54:LEU:O	2.04	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
23:DB:680:C:H2'	23:DB:681:G:C8	2.39	0.56
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.05	0.56
26:BD:38:LYS:HE2	26:BD:43:ASP:OD2	2.05	0.56
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.05	0.56
37:DL:57:LEU:C	37:DL:59:ARG:H	2.07	0.56
23:BB:828:U:H2'	23:BB:829:A:C8	2.40	0.56
23:DB:184:C:H2'	23:DB:185:G:C8	2.40	0.56
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.40	0.56
11:CL:81:ILE:CG2	11:CL:94:TYR:HB3	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.41	0.56
23:BB:392:U:O2'	23:BB:393:C:H5'	2.06	0.56
1:CA:401:C:H2'	1:CA:402:G:C8	2.40	0.56
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.04	0.56
23:DB:374:A:H61	23:DB:400:G:H1'	1.71	0.56
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.05	0.56
1:AA:549:C:H2'	1:AA:550:G:C8	2.40	0.56
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.28	0.56
23:DB:776:G:H4'	23:DB:777:G:O5'	2.05	0.56
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.06	0.56
23:DB:666:A:H4'	37:DL:48:ARG:HD3	1.87	0.56
1:CA:1212:U:H5'	1:CA:1213:A:OP1	2.06	0.56
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.05	0.56
40:DH:40:THR:O	40:DH:42:LYS:N	2.38	0.56
30:DY:4:ILE:CD1	30:DY:58:GLU:HG3	2.35	0.56
23:DB:538:A:H2'	23:DB:539:G:O4'	2.04	0.56
2:AC:2:GLN:HE22	2:AC:3:LYS:NZ	2.04	0.56
23:BB:564:C:H1'	44:BQ:36:GLN:OE1	2.06	0.56
23:DB:823:C:H2'	23:DB:824:U:C6	2.40	0.56
1:AA:512:U:O2'	1:AA:513:C:H5'	2.06	0.56
23:DB:2318:G:C6	23:DB:2319:G:N1	2.73	0.56
12:CM:102:LYS:HG3	12:CM:103:THR:OG1	2.06	0.56
1:CA:415:A:H3'	1:CA:416:G:H8	1.69	0.56
1:AA:502:A:H2'	1:AA:503:C:H6	1.69	0.56
1:CA:991:U:H2'	1:CA:1212:U:C2	2.40	0.56
6:CG:30:MET:HA	6:CG:38:ALA:HB2	1.87	0.56
40:BH:41:LYS:HA	40:BH:44:ILE:HG13	1.87	0.56
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.40	0.56
31:B0:12:ARG:HD2	31:B0:16:ARG:NH1	2.21	0.56
23:DB:1131:G:N2	23:DB:2024:G:H21	2.03	0.56
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.40	0.56
31:B0:54:ILE:H	42:BN:118:ARG:HH12	1.52	0.56
50:BT:7:LEU:HA	50:BT:9:LYS:HE3	1.86	0.56
23:BB:485:C:O2'	23:BB:486:C:H5'	2.05	0.56
23:DB:2757:A:N3	23:DB:2757:A:H2'	2.19	0.56
1:CA:868:C:H2'	1:CA:869:G:O4'	2.06	0.56
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.06	0.56
1:AA:736:C:H2'	1:AA:737:C:H6	1.70	0.56
10:AK:43:TRP:HA	10:AK:69:CYS:SG	2.45	0.56
35:DV:30:ILE:HA	35:DV:91:PHE:O	2.05	0.56
48:BG:85:LYS:HB2	48:BG:164:ALA:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:12:THR:HG22	26:DD:13:ARG:N	2.20	0.56
23:BB:2250:G:O5'	23:BB:2250:G:H8	1.89	0.56
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.04	0.56
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.41	0.56
40:DH:57:LYS:HG3	40:DH:58:LEU:HD23	1.86	0.56
23:BB:667:U:H2'	23:BB:668:A:O4'	2.06	0.56
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.20	0.56
23:DB:1439:A:C6	23:DB:1552:A:N7	2.74	0.56
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.06	0.56
42:DN:58:ASP:O	42:DN:59:SER:HB3	2.04	0.56
11:CL:80:LEU:HD13	11:CL:101:LEU:HD11	1.87	0.56
41:DJ:23:LYS:HZ2	41:DJ:142:ILE:HG12	1.70	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
3:AD:98:ASP:HB3	3:AD:132:ALA:HB1	1.88	0.56
38:DM:37:GLY:HA3	38:DM:127:LYS:HZ3	1.71	0.56
23:BB:2019:A:H4'	44:BQ:33:VAL:HG11	1.87	0.56
23:DB:285:G:H2'	23:DB:286:U:C6	2.41	0.56
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.40	0.56
29:DE:61:ARG:NH1	29:DE:64:GLY:HA3	2.20	0.56
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.70	0.56
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.71	0.56
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.04	0.56
23:BB:493:G:H2'	23:BB:494:G:O4'	2.05	0.56
49:BR:19:THR:HB	49:BR:96:VAL:O	2.05	0.56
20:AB:19:THR:O	20:AB:37:VAL:HA	2.05	0.56
1:AA:709:U:H2'	1:AA:710:G:H8	1.70	0.56
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.70	0.56
22:BA:91:C:H2'	22:BA:92:C:C6	2.41	0.56
23:DB:639:U:H2'	23:DB:640:C:H6	1.71	0.56
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.39	0.56
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.71	0.56
10:CK:77:GLY:O	10:CK:79:LYS:HE3	2.05	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:BB:2828:G:O2'	23:BB:2829:A:H5'	2.05	0.56
26:DD:4:LEU:HD21	26:DD:100:LEU:HB3	1.87	0.56
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.05	0.56
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.40	0.56
26:DD:122:VAL:H	26:DD:127:PHE:HB2	1.70	0.56
11:AL:43:LYS:HE3	11:AL:44:PRO:HD3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:88:THR:HG22	41:BJ:91:GLU:HG3	1.87	0.56
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.71	0.56
20:AB:10:LYS:HB3	20:AB:211:LEU:HD21	1.88	0.56
23:DB:115:C:O2'	23:DB:116:C:H5'	2.06	0.56
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.40	0.56
40:BH:27:ARG:H	40:BH:31:VAL:CG2	2.19	0.56
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.05	0.56
10:AK:75:GLU:H	10:AK:75:GLU:CD	2.08	0.56
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
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.34	0.56
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.17	0.56
44:DQ:93:ILE:O	44:DQ:96:ASP:HB3	2.06	0.56
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.06	0.56
12:CM:3:ILE:HA	12:CM:56:ARG:HH11	1.69	0.56
23:DB:283:G:H3'	23:DB:284:U:H5''	1.87	0.56
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.15	0.56
1:AA:920:U:H2'	1:AA:921:U:H6	1.70	0.56
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.88	0.56
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.16	0.56
16:AQ:66:LEU:HD13	16:AQ:70:LYS:HG2	1.87	0.56
23:BB:2147:A:H5'	23:BB:2148:G:C4'	2.36	0.56
42:DN:54:LEU:HD11	42:DN:62:ASN:HB3	1.87	0.56
23:DB:2144:G:H2'	23:DB:2145:C:O3'	2.05	0.56
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.35	0.56
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.88	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
1:CA:237:G:H5''	16:CQ:26:ARG:NH2	2.21	0.56
23:DB:178:G:O2'	23:DB:179:C:H5'	2.06	0.56
1:AA:178:C:O2'	1:AA:179:A:H5'	2.06	0.56
23:BB:118:A:OP2	23:BB:119:A:H2'	2.06	0.56
53:D6:135:GLU:O	53:D6:139:LYS:HG3	2.06	0.56
1:AA:714:G:N2	1:AA:777:A:H1'	2.20	0.56
25:BC:202:ARG:NH1	25:BC:213:ARG:HE	2.03	0.56
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.40	0.56
24:BI:10:LEU:HD12	24:BI:10:LEU:O	2.05	0.56
23:DB:2876:G:H5''	28:DP:2:ASN:HB2	1.87	0.56
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.39	0.56
30:DY:15:ARG:O	30:DY:20:LYS:HE3	2.05	0.56
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2189:U:H2'	23:DB:2190:G:H5'	1.86	0.56
23:BB:252:G:O2'	23:BB:253:C:H5'	2.05	0.56
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.71	0.56
23:DB:521:U:H2'	23:DB:522:A:C8	2.41	0.56
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.87	0.56
23:BB:611:C:H2'	23:BB:612:G:O4'	2.05	0.56
23:BB:1454:C:H1'	42:BN:60:VAL:HG13	1.87	0.56
22:BA:32:U:H1'	22:BA:52:A:N7	2.21	0.56
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.88	0.56
1:CA:658:C:O2'	1:CA:659:U:H5'	2.06	0.56
23:BB:1675:C:H2'	23:BB:1676:A:O4'	2.06	0.56
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.06	0.56
3:CD:47:LEU:HD23	3:CD:51:GLY:C	2.25	0.56
21:CU:3:ILE:HD13	21:CU:19:LYS:HA	1.87	0.56
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.85	0.56
8:AI:62:LEU:HD22	8:AI:62:LEU:H	1.70	0.56
8:AI:94:ARG:CB	8:AI:94:ARG:HH11	2.16	0.56
23:BB:2491:U:H5''	23:BB:2570:G:H5''	1.88	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
8:CI:44:ARG:O	8:CI:47:VAL:HG22	2.05	0.56
41:BJ:44:TYR:C	41:BJ:44:TYR:CD2	2.79	0.56
20:CB:205:ALA:O	20:CB:209:VAL:HG22	2.05	0.56
50:BT:69:ARG:HB3	50:BT:74:ILE:HD12	1.87	0.56
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.21	0.56
19:CT:82:ILE:C	19:CT:85:LEU:HD22	2.26	0.56
28:BP:77:SER:OG	28:BP:79:VAL:HG22	2.04	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
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.41	0.56
23:DB:479:A:O2'	23:DB:481:G:H5'	2.05	0.56
6:CG:56:SER:OG	6:CG:58:LEU:HG	2.06	0.56
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.41	0.56
1:CA:634:C:H2'	1:CA:635:A:C8	2.41	0.56
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.41	0.56
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.71	0.56
1:AA:1149:C:H2'	1:AA:1150:A:H8	1.70	0.56
2:CC:39:ARG:NH1	2:CC:56:ILE:HD12	2.21	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:CA:1062:U:H2'	1:CA:1063:C:C6	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:134:VAL:HB	6:AG:137:ARG:NH2	2.20	0.56
2:AC:185:THR:HG22	2:AC:198:LYS:HA	1.87	0.56
8:CI:28:VAL:HA	8:CI:32:ARG:O	2.05	0.56
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.21	0.56
23:BB:1373:A:H2'	23:BB:1374:G:O4'	2.06	0.56
1:AA:129:A:H1'	1:AA:130:A:C8	2.40	0.56
37:BL:119:PRO:HA	37:BL:138:ALA:O	2.05	0.56
37:BL:89:VAL:HA	37:BL:121:THR:O	2.05	0.56
13:AN:73:LEU:HD12	13:AN:83:VAL:HG21	1.86	0.56
13:CN:63:CYS:CB	13:CN:67:GLY:H	2.06	0.56
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.04	0.56
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.88	0.56
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.85	0.56
8:AI:56:MET:HG3	8:AI:57:VAL:HG23	1.87	0.56
40:DH:5:LEU:HD12	40:DH:17:ASP:HB2	1.88	0.56
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.15	0.56
20:CB:202:ASN:HD22	20:CB:204:ASP:N	1.94	0.56
1:AA:1086:U:H3	1:AA:1099:G:N2	1.95	0.56
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.06	0.56
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.26	0.56
19:CT:3:ILE:O	19:CT:4:LYS:HB2	2.05	0.56
44:BQ:108:LEU:HA	49:BR:48:LYS:HD3	1.86	0.56
41:BJ:30:THR:HG23	41:BJ:31:GLU:H	1.70	0.56
46:BU:73:ASN:HD21	46:BU:76:THR:H	1.53	0.56
14:CO:79:THR:HA	14:CO:82:ILE:HD12	1.87	0.56
10:CK:95:THR:HG23	10:CK:96:ILE:H	1.71	0.56
10:CK:17:ASP:HB3	10:CK:80:ASN:HD21	1.67	0.56
46:BU:81:ARG:H	46:BU:81:ARG:NH2	2.04	0.56
12:AM:11:HIS:H	12:AM:45:SER:HB3	1.69	0.56
1:CA:373:A:OP2	1:CA:373:A:H3'	2.05	0.56
23:BB:2019:A:H2	23:BB:2035:G:H22	1.54	0.56
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.38	0.56
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.71	0.56
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.05	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
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.41	0.56
49:DR:19:THR:HG22	49:DR:97:LYS:HA	1.88	0.56
12:CM:78:ARG:NH2	18:CS:64:GLU:HB2	2.21	0.56
23:BB:569:U:H2'	23:BB:570:G:O4'	2.05	0.56
23:BB:2391:G:H1'	23:BB:2424:C:H41	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:53:LYS:HZ2	5:CF:53:LYS:H	1.53	0.56
5:CF:47:LEU:HD12	5:CF:54:LEU:O	2.05	0.56
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.40	0.56
23:DB:154:U:H2'	23:DB:155:A:C8	2.40	0.56
1:CA:413:G:N1	3:CD:32:LYS:HE2	2.20	0.56
23:DB:2389:G:H5''	23:DB:2390:U:H5'	1.87	0.56
23:DB:347:A:H2'	23:DB:348:A:C8	2.40	0.56
23:BB:1946:U:O2'	23:BB:1947:C:H5'	2.06	0.56
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.21	0.56
23:DB:822:G:O2'	23:DB:823:C:H5'	2.05	0.56
17:AR:44:THR:HB	17:AR:46:THR:HG22	1.88	0.56
1:CA:1014:A:H4'	18:CS:13:HIS:CD2	2.40	0.56
23:BB:538:A:H2'	23:BB:539:G:O4'	2.05	0.56
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.70	0.56
23:BB:1649:G:O2'	23:BB:1650:A:H5'	2.05	0.56
2:CC:19:SER:O	13:CN:93:PRO:HB3	2.06	0.56
1:CA:478:A:H2'	1:CA:479:U:O4'	2.05	0.56
1:AA:621:A:H2'	1:AA:622:A:C8	2.40	0.56
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.53	0.56
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.26	0.56
52:BW:28:GLU:HG3	52:BW:29:SER:H	1.71	0.56
47:DF:105:ILE:C	47:DF:108:PRO:HD2	2.26	0.56
47:DF:34:THR:O	47:DF:89:THR:HA	2.06	0.56
29:BE:5:LEU:CD1	29:BE:10:SER:HB2	2.25	0.56
10:CK:12:ARG:N	10:CK:76:TYR:HA	2.21	0.56
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.20	0.56
28:BP:4:ILE:HA	28:BP:7:LEU:HD13	1.88	0.56
23:DB:141:G:H2'	23:DB:142:A:O4'	2.06	0.56
26:DD:9:VAL:O	28:DP:4:ILE:HD11	2.06	0.56
20:AB:186:VAL:O	20:AB:200:PRO:HA	2.06	0.56
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.41	0.56
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.87	0.56
1:AA:1314:C:H3'	18:AS:5:LYS:NZ	2.21	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
1:AA:270:A:H2'	1:AA:271:C:H6	1.70	0.56
42:DN:78:LYS:HG3	42:DN:83:LEU:HG	1.88	0.56
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.36	0.56
1:CA:672:U:H2'	1:CA:673:A:H8	1.69	0.56
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.88	0.56
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:10:ASP:HB3	12:AM:45:SER:HB3	1.86	0.56
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HB	1.88	0.56
1:AA:662:U:O2'	1:AA:836:G:H5''	2.05	0.56
23:DB:2210:U:N3	23:DB:2212:A:N7	2.54	0.56
29:BE:175:ILE:HD11	29:BE:180:LEU:HD11	1.86	0.56
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.06	0.56
10:CK:92:ARG:NH1	21:CU:20:ARG:HH21	2.02	0.56
1:AA:413:G:N1	3:AD:32:LYS:HE2	2.21	0.56
10:AK:108:ASN:HD21	21:AU:6:ARG:HD2	1.70	0.56
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.04	0.56
5:AF:43:GLY:HA2	5:AF:58:HIS:CE1	2.41	0.56
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.41	0.56
1:CA:635:A:H2'	1:CA:636:U:C6	2.41	0.56
6:AG:56:SER:OG	6:AG:58:LEU:HG	2.05	0.56
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.70	0.56
23:BB:687:C:H2'	23:BB:688:U:O4'	2.06	0.56
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.36	0.56
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.70	0.56
23:DB:2393:U:H5''	37:DL:62:PRO:HG3	1.87	0.56
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	1.86	0.56
16:CQ:6:THR:HG22	16:CQ:61:ARG:HB3	1.88	0.56
23:DB:2001:C:H4'	23:DB:2689:U:O2'	2.06	0.56
1:AA:85:U:H4'	1:AA:86:G:H4'	1.88	0.56
14:AO:60:VAL:HG11	23:BB:715:A:O4'	2.05	0.56
13:CN:14:ALA:HB1	13:CN:18:LYS:HE3	1.87	0.56
1:CA:69:G:N2	1:CA:71:A:H62	2.04	0.56
26:BD:4:LEU:HD21	26:BD:100:LEU:HB3	1.87	0.56
47:DF:107:VAL:O	47:DF:110:ILE:HG22	2.05	0.56
46:DU:72:PHE:HA	46:DU:78:LYS:O	2.06	0.56
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.06	0.56
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	1.88	0.56
49:DR:5:PHE:O	49:DR:11:GLN:HA	2.06	0.56
1:CA:599:C:O2'	1:CA:600:A:H5'	2.05	0.56
20:AB:49:PHE:HA	20:AB:212:TYR:OH	2.05	0.56
1:CA:376:G:OP1	15:CP:5:ARG:HB2	2.05	0.56
50:BT:74:ILE:HG13	50:BT:75:GLY:H	1.70	0.56
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.36	0.56
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.19	0.56
31:B0:38:LEU:HD22	31:B0:41:HIS:NE2	2.21	0.56
1:CA:783:C:O2'	1:CA:784:A:H5'	2.06	0.56
1:AA:236:A:H2'	1:AA:237:G:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.21	0.56
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.39	0.56
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.71	0.56
2:AC:82:ASP:O	2:AC:86:LEU:HG	2.04	0.56
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.06	0.56
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.41	0.56
23:DB:654:A:O2'	23:DB:655:A:H5''	2.06	0.56
23:BB:657:U:H2'	23:BB:658:U:C6	2.41	0.56
1:AA:1137:C:O2'	1:AA:1138:G:H5''	2.06	0.56
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.06	0.56
1:AA:394:G:O2'	1:AA:395:C:H5'	2.06	0.56
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.69	0.56
1:AA:861:G:O2'	1:AA:862:C:H5'	2.05	0.56
46:BU:24:VAL:HA	46:BU:35:VAL:HA	1.86	0.56
23:BB:2822:G:H2'	23:BB:2823:A:H5''	1.88	0.56
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.88	0.56
23:BB:1263:U:O2'	31:B0:7:PRO:HD2	2.05	0.56
43:DO:58:ILE:O	43:DO:62:LEU:HD23	2.06	0.56
44:DQ:35:PHE:C	44:DQ:37:ALA:H	2.07	0.56
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.40	0.56
23:BB:697:G:H2'	23:BB:698:C:C6	2.41	0.56
1:AA:71:A:H61	1:AA:99:C:H1'	1.70	0.56
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.06	0.56
1:AA:328:C:H4'	1:AA:329:A:H5''	1.88	0.56
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.06	0.56
23:BB:234:U:H2'	23:BB:235:U:H6	1.71	0.56
1:CA:797:C:O2'	1:CA:798:U:H5'	2.06	0.56
25:DC:149:LYS:HG2	25:DC:152:GLN:NE2	2.22	0.56
37:DL:89:VAL:HA	37:DL:121:THR:O	2.06	0.56
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.06	0.56
2:CC:30:ASP:HA	13:CN:64:ARG:HH12	1.70	0.56
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.06	0.56
5:CF:38:ARG:HD3	5:CF:97:THR:HA	1.87	0.56
23:DB:966:G:HO2'	23:DB:2267:A:H2	1.54	0.56
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.36	0.56
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.35	0.56
40:BH:139:PHE:O	40:BH:140:ALA:CB	2.54	0.56
47:DF:163:GLU:HA	47:DF:166:ARG:CD	2.30	0.56
1:CA:1491:G:C5	55:CA:1662:LLL:H21	2.41	0.56
26:DD:69:ALA:N	26:DD:73:VAL:HB	2.21	0.56
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.15	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.71	0.56
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.06	0.56
23:BB:125:A:H3'	23:BB:126:A:H5'	1.88	0.56
23:DB:38:A:N3	29:DE:43:THR:HB	2.20	0.56
23:BB:282:A:H2'	23:BB:283:G:C8	2.41	0.56
41:DJ:55:ILE:HG13	41:DJ:55:ILE:O	2.05	0.56
23:BB:79:C:HO2'	23:BB:346:A:C1'	2.19	0.56
1:AA:373:A:OP2	1:AA:373:A:H3'	2.06	0.56
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.41	0.56
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.70	0.56
23:DB:2652:C:O2'	23:DB:2653:U:H5'	2.06	0.56
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.05	0.56
45:BS:7:HIS:HB3	45:BS:103:ILE:HB	1.88	0.56
1:CA:861:G:O2'	1:CA:862:C:H5'	2.05	0.56
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.71	0.56
46:BU:40:LEU:HA	46:BU:60:LYS:O	2.06	0.56
12:AM:80:MET:C	12:AM:82:LEU:H	2.06	0.56
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.36	0.56
23:BB:864:G:O2'	23:BB:865:C:H5'	2.06	0.56
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.41	0.56
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.71	0.56
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.36	0.56
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.40	0.56
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.41	0.56
1:CA:939:G:H5''	6:CG:101:ARG:CZ	2.36	0.56
16:CQ:56:ASP:N	16:CQ:81:ALA:HB2	2.21	0.56
23:DB:1559:U:H3'	23:DB:1560:G:H5'	1.88	0.56
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.40	0.56
1:AA:415:A:H3'	1:AA:416:G:H8	1.70	0.56
37:BL:74:THR:HA	37:BL:107:PHE:O	2.06	0.56
6:CG:121:ASN:HD22	6:CG:121:ASN:N	2.03	0.56
2:CC:139:ASN:O	2:CC:143:LEU:HD23	2.06	0.56
29:BE:155:GLU:O	29:BE:159:LEU:HB2	2.06	0.55
1:CA:737:C:H2'	1:CA:738:C:H6	1.71	0.55
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.87	0.55
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	2.03	0.55
10:CK:45:THR:HG23	10:CK:48:GLY:HA3	1.87	0.55
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.41	0.55
23:DB:2386:A:N3	52:DW:38:ARG:HD2	2.21	0.55
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.06	0.55
18:CS:6:LYS:HD2	18:CS:6:LYS:N	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	1.88	0.55
35:DV:63:ILE:N	35:DV:63:ILE:HD12	2.21	0.55
46:BU:70:ALA:HB1	46:BU:79:ALA:CB	2.28	0.55
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.79	0.55
48:DG:84:LYS:HG3	48:DG:131:VAL:CA	2.36	0.55
28:DP:4:ILE:HA	28:DP:7:LEU:HD13	1.88	0.55
2:AC:190:THR:HG22	2:AC:191:THR:N	2.20	0.55
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.31	0.55
43:BO:49:VAL:HG11	43:BO:82:ALA:CA	2.36	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
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.20	0.55
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.70	0.55
22:BA:106:G:H2'	22:BA:107:G:C8	2.41	0.55
1:CA:676:A:H2'	1:CA:677:U:C6	2.41	0.55
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.41	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
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.88	0.55
1:AA:1008:U:H2'	1:AA:1009:U:H5''	1.87	0.55
1:AA:336:A:O2'	1:AA:337:G:H5'	2.06	0.55
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.41	0.55
23:DB:1580:A:H2'	23:DB:1581:G:O4'	2.05	0.55
48:BG:46:ASP:CG	48:BG:47:ASN:H	2.10	0.55
39:DX:51:ALA:O	39:DX:55:THR:N	2.36	0.55
23:BB:518:G:H4'	45:BS:18:ARG:NH2	2.21	0.55
23:BB:5:A:H2'	23:BB:6:A:H8	1.70	0.55
44:BQ:34:ALA:O	44:BQ:37:ALA:HB3	2.06	0.55
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.06	0.55
5:CF:43:GLY:HA2	5:CF:58:HIS:CE1	2.41	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
22:DA:91:C:H2'	22:DA:92:C:H6	1.71	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.55
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.06	0.55
1:AA:66:A:O2'	1:AA:67:C:H5'	2.06	0.55
23:DB:425:G:O2'	23:DB:426:C:H5'	2.07	0.55
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.41	0.55
44:BQ:68:ALA:HB1	44:BQ:73:ILE:HG23	1.88	0.55
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.06	0.55
22:DA:22:U:H2'	22:DA:23:G:C8	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.71	0.55
1:AA:211:G:H2'	1:AA:212:G:O4'	2.06	0.55
1:CA:476:U:H2'	1:CA:477:C:C6	2.41	0.55
1:AA:407:U:O2'	3:AD:112:GLU:HG3	2.06	0.55
23:BB:575:A:O2'	23:BB:576:U:H5'	2.06	0.55
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.07	0.55
23:DB:2498:C:O2'	23:DB:2499:C:H5'	2.05	0.55
1:CA:586:C:H5''	7:CH:81:GLY:HA2	1.88	0.55
23:DB:674:G:H4'	29:DE:69:ARG:HB3	1.88	0.55
51:DZ:40:VAL:O	51:DZ:42:SER:N	2.39	0.55
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.88	0.55
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.05	0.55
25:BC:121:ALA:HB3	25:BC:129:LEU:HD11	1.88	0.55
40:BH:18:GLN:HE21	40:BH:39:ALA:HB1	1.71	0.55
26:DD:148:GLN:O	26:DD:149:ASN:HB2	2.05	0.55
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.06	0.55
35:DV:31:TYR:CB	35:DV:37:PRO:HG3	2.36	0.55
48:DG:17:LYS:HZ2	48:DG:18:ILE:N	2.03	0.55
23:BB:559:G:H1'	44:BQ:55:GLN:HE21	1.71	0.55
12:CM:15:VAL:HG22	12:CM:33:LEU:HD12	1.88	0.55
25:BC:90:ILE:CD1	25:BC:102:TYR:HB3	2.37	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.36	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
19:CT:79:THR:HA	19:CT:82:ILE:CG1	2.36	0.55
53:B6:39:LEU:HG	53:B6:40:HIS:H	1.70	0.55
1:CA:1173:U:H2'	1:CA:1174:G:C8	2.41	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
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.89	0.55
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.41	0.55
10:AK:80:ASN:HD22	10:AK:80:ASN:N	2.04	0.55
1:CA:821:G:O2'	1:CA:822:U:H5'	2.06	0.55
23:DB:1534:U:H2'	23:DB:1536:C:C5	2.40	0.55
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CG1	2.36	0.55
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	2.07	0.55
46:BU:64:ILE:HG13	46:BU:65:GLN:H	1.71	0.55
48:DG:53:PRO:HG3	48:DG:61:TRP:CD2	2.40	0.55
23:DB:2680:U:H5'	26:DD:194:PRO:HA	1.88	0.55
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.05	0.55
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:59:ARG:C	37:BL:61:LEU:H	2.09	0.55
37:BL:57:LEU:HA	37:BL:60:ARG:NE	2.21	0.55
1:CA:633:G:H2'	1:CA:634:C:C6	2.42	0.55
26:BD:141:ARG:HG3	26:BD:141:ARG:O	2.06	0.55
26:DD:16:THR:HB	26:DD:18:ASP:OD1	2.07	0.55
1:AA:478:A:H2'	1:AA:479:U:O4'	2.06	0.55
23:BB:1372:U:H1'	23:BB:2214:C:C4	2.41	0.55
23:DB:1649:G:O2'	23:DB:1650:A:H5'	2.06	0.55
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.22	0.55
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.40	0.55
1:AA:323:U:H2'	1:AA:324:G:O4'	2.06	0.55
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.06	0.55
10:CK:36:ARG:HG3	10:CK:36:ARG:HH11	1.70	0.55
18:AS:29:PRO:HA	18:AS:47:THR:O	2.06	0.55
40:DH:27:ARG:H	40:DH:31:VAL:HG23	1.70	0.55
47:DF:104:THR:C	47:DF:105:ILE:HG13	2.27	0.55
5:CF:6:ILE:HD11	5:CF:8:PHE:HD2	1.72	0.55
12:AM:71:GLU:HA	12:AM:74:MET:HG2	1.89	0.55
45:DS:73:LYS:HE3	45:DS:74:ILE:N	2.09	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
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.22	0.55
1:CA:61:G:H4'	1:CA:386:C:O2'	2.06	0.55
1:CA:1493:A:H2'	23:DB:1913:A:H61	1.71	0.55
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.88	0.55
2:CC:57:GLU:O	2:CC:63:ILE:HA	2.06	0.55
42:DN:87:PHE:C	42:DN:89:SER:H	2.10	0.55
43:BO:25:ARG:HG3	43:BO:27:VAL:HG23	1.89	0.55
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.36	0.55
39:DX:1:MET:HB3	39:DX:5:GLU:OE1	2.05	0.55
23:DB:2675:A:N1	23:DB:2732:G:O6	2.39	0.55
20:AB:95:TRP:HZ2	20:AB:100:LEU:HD22	1.71	0.55
23:DB:637:A:H5''	37:DL:112:LEU:HD22	1.89	0.55
23:BB:151:C:H2'	23:BB:152:A:C8	2.41	0.55
1:CA:336:A:O2'	1:CA:337:G:H5'	2.06	0.55
23:BB:2743:U:H2'	23:BB:2744:G:O4'	2.05	0.55
23:DB:2893:A:H5''	23:DB:2894:G:H5'	1.88	0.55
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.21	0.55
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.41	0.55
23:BB:1434:A:H62	23:BB:1558:C:H42	1.55	0.55
1:CA:1200:C:C3'	1:CA:1201:A:H5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:40:LEU:HD12	46:BU:40:LEU:H	1.70	0.55
23:BB:2860:A:O5'	23:BB:2860:A:H8	1.89	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
23:DB:145:C:H2'	23:DB:146:A:C8	2.40	0.55
23:BB:870:U:O2'	23:BB:871:U:H5'	2.06	0.55
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.70	0.55
23:BB:2745:C:H1'	48:BG:142:GLN:OE1	2.06	0.55
23:DB:1522:A:H8	23:DB:1522:A:OP1	1.90	0.55
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.07	0.55
53:B6:141:LYS:HE3	53:B6:142:LYS:CE	2.36	0.55
6:AG:30:MET:HA	6:AG:38:ALA:HB2	1.87	0.55
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.41	0.55
25:DC:185:ALA:C	25:DC:187:CYS:H	2.10	0.55
47:DF:87:LYS:C	47:DF:88:VAL:HG23	2.26	0.55
53:D6:33:ALA:HB2	53:D6:63:PRO:HA	1.87	0.55
13:AN:16:ALA:HA	13:AN:54:SER:O	2.07	0.55
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.26	0.55
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.40	0.55
53:B6:30:THR:CG2	53:B6:179:LYS:HD3	2.36	0.55
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.06	0.55
44:DQ:91:ARG:HG2	44:DQ:93:ILE:HG22	1.87	0.55
3:CD:56:GLU:O	3:CD:60:VAL:HG12	2.06	0.55
2:AC:133:MET:O	2:AC:137:VAL:HG23	2.06	0.55
14:AO:79:THR:HA	14:AO:82:ILE:HD12	1.88	0.55
50:DT:30:ILE:HG12	50:DT:31:VAL:N	2.20	0.55
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.89	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
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.87	0.55
29:BE:48:THR:HG23	29:BE:88:ARG:HH12	1.71	0.55
38:BM:17:ASN:ND2	38:BM:95:LEU:HG	2.20	0.55
1:CA:674:G:H2'	1:CA:675:A:C8	2.38	0.55
41:BJ:55:ILE:HG13	41:BJ:55:ILE:O	2.06	0.55
1:AA:1226:C:H5''	12:AM:101:THR:HB	1.88	0.55
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HB3	1.88	0.55
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.42	0.55
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.41	0.55
35:DV:53:LYS:HZ3	35:DV:54:ALA:HB3	1.71	0.55
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.07	0.55
11:CL:35:ARG:HH11	11:CL:35:ARG:HA	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:114:LYS:HD2	26:BD:116:LYS:HZ1	1.70	0.55
1:AA:634:C:H2'	1:AA:635:A:C8	2.41	0.55
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.41	0.55
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.55
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.41	0.55
26:DD:33:ARG:HE	26:DD:74:GLU:HB3	1.71	0.55
30:BY:28:LEU:HA	30:BY:33:HIS:HD2	1.71	0.55
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.41	0.55
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.88	0.55
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.89	0.55
23:BB:994:C:H3'	44:BQ:53:LYS:NZ	2.21	0.55
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.41	0.55
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.89	0.55
1:AA:883:C:O2'	1:AA:884:U:H5'	2.06	0.55
1:CA:95:C:O2	1:CA:95:C:H2'	2.05	0.55
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.06	0.55
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.05	0.55
1:CA:692:U:C2	1:CA:694:A:H5''	2.41	0.55
21:CU:40:PRO:C	21:CU:42:THR:H	2.10	0.55
37:DL:81:ASP:HA	37:DL:84:LYS:HE3	1.89	0.55
53:D6:33:ALA:HB2	53:D6:63:PRO:O	2.06	0.55
23:DB:917:A:H5''	23:DB:2268:A:N6	2.22	0.55
52:DW:39:GLN:CG	52:DW:40:ARG:N	2.69	0.55
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.88	0.55
13:CN:60:ARG:NH2	13:CN:69:PRO:HB3	2.21	0.55
12:AM:15:VAL:HG22	12:AM:33:LEU:HD12	1.87	0.55
40:BH:9:VAL:HG12	40:BH:12:LEU:HG	1.87	0.55
1:CA:845:A:H5''	1:CA:846:G:C8	2.42	0.55
23:DB:1203:U:H4'	37:DL:3:LEU:HD12	1.87	0.55
48:BG:153:PRO:CG	48:BG:162:ARG:HB3	2.35	0.55
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.06	0.55
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.07	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
23:DB:718:A:H2'	23:DB:719:C:H5'	1.88	0.55
23:BB:1779:U:C5	23:BB:1784:A:N7	2.75	0.55
23:BB:785:G:H2'	23:BB:786:C:C6	2.41	0.55
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.41	0.55
40:BH:54:LEU:HD12	40:BH:55:GLU:H	1.71	0.55
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.72	0.55
1:CA:35:G:H2'	1:CA:36:C:H6	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.69	0.55
12:CM:77:LYS:HG2	12:CM:81:ASP:OD1	2.06	0.55
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.06	0.55
1:AA:441:A:H61	1:AA:493:A:H61	1.53	0.55
4:CE:28:ARG:CZ	4:CE:30:PHE:HB3	2.37	0.55
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.42	0.55
1:AA:1014:A:H4'	18:AS:13:HIS:CD2	2.42	0.55
37:BL:57:LEU:C	37:BL:59:ARG:H	2.07	0.55
23:BB:863:A:H2'	23:BB:864:G:H8	1.71	0.55
23:BB:454:A:H3'	23:BB:455:C:H5'	1.89	0.55
1:CA:880:C:O2'	1:CA:881:G:H5'	2.07	0.55
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.37	0.55
53:B6:12:SER:O	53:B6:16:LYS:HD2	2.06	0.55
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.06	0.55
1:CA:501:C:H2'	1:CA:502:A:C8	2.41	0.55
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.06	0.55
1:CA:986:U:H2'	1:CA:987:G:O4'	2.06	0.55
1:CA:1260:G:H4'	1:CA:1283:U:O2'	2.07	0.55
53:B6:84:ARG:HG3	53:B6:85:ASP:OD1	2.07	0.55
1:CA:1179:A:H4'	8:CI:104:THR:HA	1.87	0.55
23:DB:354:A:H2'	23:DB:355:U:C6	2.42	0.55
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.71	0.55
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.87	0.55
42:BN:65:LEU:O	42:BN:68:ALA:HB3	2.06	0.55
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.41	0.55
1:CA:140:U:H2'	1:CA:141:G:H8	1.71	0.55
47:DF:34:THR:HA	47:DF:89:THR:HA	1.88	0.55
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	1.89	0.55
52:DW:37:VAL:HG13	52:DW:55:ASP:O	2.06	0.55
40:DH:7:ASP:CG	40:DH:8:LYS:H	2.08	0.55
19:AT:78:LEU:O	19:AT:82:ILE:HG23	2.06	0.55
18:AS:6:LYS:N	18:AS:6:LYS:HD2	2.22	0.55
26:BD:69:ALA:N	26:BD:73:VAL:HB	2.21	0.55
1:AA:81:A:O2'	1:AA:82:G:N7	2.40	0.55
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.06	0.55
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.42	0.55
40:BH:57:LYS:NZ	40:BH:58:LEU:HB2	2.21	0.55
30:BY:50:VAL:O	30:BY:54:VAL:HG22	2.07	0.55
23:DB:1138:G:H21	41:DJ:108:MET:CE	2.18	0.55
23:BB:850:U:H2'	23:BB:851:C:C6	2.41	0.55
1:CA:1137:C:H1'	1:CA:1138:G:N1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2098:U:H2'	23:DB:2099:U:H1'	1.89	0.55
23:DB:934:U:H2'	23:DB:935:C:H6	1.69	0.55
10:CK:92:ARG:HH11	21:CU:20:ARG:HH21	1.53	0.55
37:DL:59:ARG:C	37:DL:61:LEU:H	2.09	0.55
1:AA:860:A:H2'	1:AA:861:G:O4'	2.06	0.55
23:BB:2438:U:O2'	23:BB:2439:A:H5''	2.06	0.55
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.70	0.55
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.72	0.55
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.71	0.55
10:CK:16:SER:HA	10:CK:79:LYS:HG2	1.88	0.55
22:BA:32:U:H2'	22:BA:33:G:O4'	2.07	0.55
1:AA:1179:A:H4'	8:AI:104:THR:HA	1.88	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
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.88	0.55
23:DB:807:U:H2'	23:DB:808:G:H8	1.71	0.55
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.21	0.55
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.22	0.55
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.21	0.55
23:BB:320:A:H4'	23:BB:322:A:N7	2.22	0.55
23:BB:1203:U:H3'	23:BB:1204:A:H5''	1.89	0.55
23:DB:857:G:C2'	23:DB:858:G:H5'	2.36	0.55
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.06	0.55
23:DB:705:A:N6	23:DB:726:G:O2'	2.40	0.55
35:BV:31:TYR:CB	35:BV:37:PRO:HG3	2.36	0.55
45:DS:50:VAL:HA	45:DS:53:SER:HB2	1.87	0.55
20:CB:186:VAL:O	20:CB:200:PRO:HA	2.07	0.55
23:DB:2511:U:H2'	23:DB:2512:C:C6	2.42	0.55
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.07	0.55
50:DT:69:ARG:HB3	50:DT:74:ILE:HD12	1.89	0.55
23:BB:38:A:N3	29:BE:43:THR:HB	2.22	0.55
23:DB:340:A:H2'	23:DB:341:C:O4'	2.06	0.55
20:CB:57:ASN:HB3	20:CB:219:THR:O	2.07	0.55
43:DO:25:ARG:HG3	43:DO:27:VAL:HG23	1.88	0.55
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.22	0.55
23:BB:528:A:N1	23:BB:2042:A:H2'	2.22	0.55
23:BB:281:C:H2'	23:BB:282:A:H8	1.70	0.55
27:BK:64:ARG:HB2	27:BK:83:ALA:HB3	1.88	0.55
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.71	0.55
10:AK:17:ASP:HA	10:AK:80:ASN:O	2.06	0.55
23:DB:719:C:O2'	23:DB:720:U:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:38:LEU:HD22	31:D0:41:HIS:NE2	2.22	0.55
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.07	0.55
23:BB:632:A:H2'	23:BB:633:A:C8	2.42	0.55
23:DB:506:G:H5''	23:DB:509:C:O2'	2.07	0.55
1:CA:190:A:H2'	1:CA:191:G:O4'	2.07	0.55
1:CA:636:U:H2'	1:CA:637:C:H6	1.71	0.55
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.37	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.55
1:CA:1030:U:H4'	1:CA:1031:C:C4	2.42	0.55
35:BV:14:LYS:HE2	35:BV:18:ARG:HH21	1.72	0.55
23:BB:350:G:H2'	23:BB:351:C:C6	2.41	0.55
1:CA:502:A:H2'	1:CA:503:C:C6	2.42	0.55
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.71	0.55
42:DN:65:LEU:O	42:DN:68:ALA:HB3	2.06	0.55
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.89	0.55
25:BC:20:ASN:HD22	25:BC:23:LEU:HD13	1.72	0.55
1:AA:1030:U:H4'	1:AA:1031:C:C4	2.41	0.55
23:DB:2758:A:O2'	23:DB:2759:G:H5'	2.07	0.55
12:AM:102:LYS:HG3	12:AM:103:THR:OG1	2.07	0.55
44:BQ:50:ARG:HD2	44:BQ:50:ARG:N	2.22	0.55
1:AA:991:U:H2'	1:AA:1212:U:C2	2.42	0.55
39:BX:45:GLN:O	39:BX:47:ARG:N	2.40	0.55
1:AA:261:U:H2'	1:AA:263:A:OP2	2.06	0.55
34:B3:39:ARG:O	34:B3:43:LEU:HG	2.07	0.55
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.41	0.55
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.72	0.55
23:DB:2365:G:H4'	52:DW:59:PHE:HD1	1.70	0.55
23:DB:852:U:H2'	23:DB:853:C:H6	1.71	0.55
53:B6:106:LEU:N	53:B6:106:LEU:HD23	2.22	0.55
26:BD:148:GLN:O	26:BD:149:ASN:HB2	2.07	0.55
45:DS:58:ALA:HB1	45:DS:69:LEU:HD21	1.88	0.55
44:DQ:91:ARG:HD3	49:DR:11:GLN:OE1	2.07	0.55
23:BB:559:G:H21	44:BQ:51:GLN:NE2	2.04	0.55
44:BQ:91:ARG:HD3	49:BR:11:GLN:OE1	2.07	0.55
48:DG:83:THR:HA	48:DG:84:LYS:HZ3	1.71	0.55
40:BH:72:ILE:O	40:BH:72:ILE:HG23	2.07	0.55
4:AE:156:ARG:HB3	7:AH:43:GLY:HA3	1.89	0.55
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.07	0.55
48:DG:153:PRO:HA	48:DG:159:LYS:O	2.07	0.55
48:DG:94:ARG:C	48:DG:94:ARG:HE	2.10	0.55
23:BB:1086:A:H4'	23:BB:1103:A:N1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2144:G:H22	23:BB:2147:A:H4'	1.71	0.55
3:AD:81:LEU:HB2	3:AD:88:ASN:ND2	2.22	0.55
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.89	0.55
27:BK:102:PRO:HD3	28:BP:65:ASN:HB2	1.89	0.55
23:DB:1535:A:O2'	23:DB:1536:C:H5'	2.07	0.55
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.71	0.55
7:CH:17:GLN:NE2	7:CH:62:LEU:HB3	2.22	0.55
23:DB:709:U:H2'	23:DB:710:U:H6	1.70	0.55
23:DB:150:U:H2'	23:DB:151:C:H6	1.68	0.55
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.06	0.55
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.06	0.55
23:DB:176:A:H3'	23:DB:177:G:N2	2.20	0.55
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.36	0.55
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.36	0.55
7:CH:40:LYS:HD2	7:CH:47:ASP:HA	1.88	0.55
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.41	0.55
23:DB:256:A:O2'	23:DB:257:C:H5'	2.07	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
23:BB:3:U:H2'	23:BB:4:U:H6	1.71	0.55
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.41	0.55
23:BB:584:C:OP1	44:BQ:5:ARG:HB3	2.07	0.55
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.06	0.55
25:BC:20:ASN:ND2	25:BC:23:LEU:HD13	2.21	0.55
1:AA:986:U:H2'	1:AA:987:G:O4'	2.07	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
17:AR:61:ALA:HB3	17:AR:67:LEU:HD12	1.89	0.55
47:BF:131:VAL:HG22	47:BF:151:LEU:O	2.06	0.55
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.07	0.55
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.07	0.55
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.72	0.55
1:CA:590:U:H2'	1:CA:591:U:C6	2.42	0.55
23:DB:2135:A:H2'	23:DB:2135:A:N3	2.21	0.55
38:DM:105:MET:HB2	38:DM:117:PHE:CZ	2.42	0.55
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.06	0.55
10:CK:111:ASP:CB	21:CU:19:LYS:HE3	2.23	0.55
53:D6:55:ILE:CG2	53:D6:56:ALA:N	2.69	0.55
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.71	0.55
8:AI:49:GLN:NE2	8:AI:79:ARG:HH11	2.04	0.55
46:BU:11:ILE:O	46:BU:11:ILE:HD13	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:29:ILE:HD13	35:BV:31:TYR:HE2	1.70	0.55
49:DR:40:MET:O	49:DR:41:ILE:HD13	2.06	0.55
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.89	0.55
25:DC:78:GLU:OE1	25:DC:94:LEU:HD22	2.07	0.55
1:CA:923:A:H2'	1:CA:924:C:H6	1.72	0.55
46:BU:85:ARG:NH1	46:BU:86:PHE:H	2.05	0.55
23:BB:2460:U:H2'	23:BB:2461:A:H8	1.71	0.55
40:DH:49:ALA:HB3	40:DH:50:ARG:CZ	2.37	0.55
3:CD:77:GLU:OE1	3:CD:80:ARG:HD3	2.07	0.55
23:DB:460:A:P	36:D2:41:ARG:HH12	2.29	0.55
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	2.06	0.55
23:BB:363:G:H2'	23:BB:364:C:C6	2.41	0.55
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.22	0.55
11:AL:54:VAL:HG21	11:AL:79:ILE:HD11	1.89	0.55
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.42	0.55
6:AG:22:LEU:O	6:AG:26:VAL:HG13	2.06	0.55
1:AA:369:G:O2'	1:AA:370:C:H5'	2.07	0.55
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.06	0.55
30:DY:7:THR:HG23	30:DY:34:THR:OG1	2.07	0.55
23:BB:152:A:H2'	23:BB:153:U:H6	1.71	0.55
23:DB:2458:G:HO2'	23:DB:2490:G:H1	1.54	0.55
25:BC:18:VAL:CG1	25:BC:202:ARG:HD2	2.37	0.55
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.22	0.55
23:DB:2098:U:H2'	23:DB:2099:U:O4'	2.07	0.55
2:CC:13:ILE:C	2:CC:15:LYS:H	2.10	0.55
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.06	0.55
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.07	0.55
23:BB:982:C:H5'	23:BB:982:C:O2	2.06	0.55
23:BB:647:G:H2'	23:BB:648:G:H8	1.71	0.55
23:BB:807:U:H2'	23:BB:808:G:H8	1.72	0.55
46:DU:40:LEU:HA	46:DU:60:LYS:O	2.06	0.55
1:AA:880:C:O2'	1:AA:881:G:H5'	2.07	0.55
34:D3:24:LYS:HZ3	34:D3:28:LEU:HB3	1.70	0.55
23:DB:950:G:H2'	23:DB:951:C:H6	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
30:DY:4:ILE:HD13	30:DY:58:GLU:HG3	1.89	0.55
16:AQ:22:VAL:HG12	16:AQ:23:ALA:N	2.21	0.55
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.07	0.55
1:AA:1110:A:H2'	1:AA:1111:A:H8	1.72	0.55
1:AA:1029:U:O5'	1:AA:1029:U:H6	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1396:U:O2	23:DB:1396:U:O4'	2.22	0.55
52:BW:13:ARG:HG3	52:BW:14:ASP:H	1.71	0.55
42:DN:92:GLY:HA2	42:DN:94:TYR:CZ	2.42	0.55
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.06	0.55
23:BB:1583:A:H4'	23:BB:1585:C:C4	2.42	0.55
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.72	0.55
23:DB:1109:C:H6	23:DB:1109:C:O5'	1.90	0.55
51:BZ:27:ARG:HD2	51:BZ:29:PHE:CE1	2.41	0.55
23:BB:1252:G:N2	44:BQ:32:ARG:HB3	2.20	0.55
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.06	0.55
1:CA:736:C:H2'	1:CA:737:C:H6	1.69	0.55
52:BW:50:VAL:HG23	52:BW:61:LYS:CD	2.32	0.55
52:BW:37:VAL:HG13	52:BW:55:ASP:C	2.27	0.55
1:AA:737:C:H2'	1:AA:738:C:H6	1.72	0.55
47:BF:87:LYS:C	47:BF:88:VAL:HG23	2.27	0.55
35:BV:63:ILE:O	35:BV:70:ILE:HD12	2.07	0.55
48:BG:66:THR:O	48:BG:70:LEU:HB2	2.07	0.55
48:BG:25:ILE:HG22	48:BG:78:VAL:HG11	1.88	0.55
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.27	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:DG:97:VAL:CG2	48:DG:124:CYS:HB2	2.36	0.55
40:BH:80:ILE:HD13	40:BH:98:ASP:HB2	1.87	0.55
29:BE:27:LEU:O	29:BE:31:VAL:HG23	2.06	0.55
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.41	0.55
51:DZ:6:GLN:HE22	51:DZ:50:ARG:H	1.55	0.55
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.22	0.55
48:BG:108:PHE:HE1	48:BG:151:ARG:HD3	1.72	0.55
48:BG:94:ARG:CB	48:BG:127:GLN:HG2	2.35	0.55
2:AC:57:GLU:O	2:AC:63:ILE:HA	2.07	0.55
36:D2:27:GLY:O	36:D2:30:VAL:HB	2.06	0.55
40:DH:94:ILE:HG22	40:DH:122:LEU:HB2	1.88	0.55
53:B6:134:ARG:CZ	53:B6:135:GLU:HG2	2.37	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.07	0.55
1:AA:521:G:O2'	1:AA:522:C:H5'	2.07	0.55
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.07	0.55
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.71	0.55
1:CA:575:G:O2'	1:CA:821:G:H5'	2.07	0.55
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.89	0.55
20:CB:102:ASN:OD1	20:CB:105:THR:HB	2.06	0.55
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:103:U:O2'	22:DA:104:A:H5'	2.07	0.55
20:AB:125:PHE:HD2	20:AB:125:PHE:H	1.55	0.55
22:BA:113:C:H2'	22:BA:114:C:H6	1.72	0.55
44:BQ:79:ILE:HD13	44:BQ:79:ILE:O	2.07	0.55
37:DL:74:THR:HA	37:DL:107:PHE:O	2.06	0.55
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.37	0.55
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.72	0.55
41:DJ:98:GLU:CD	41:DJ:98:GLU:H	2.10	0.55
5:AF:80:PHE:CE1	25:BC:123:ILE:HD13	2.42	0.55
1:AA:437:U:H1'	3:AD:115:GLN:NE2	2.22	0.55
20:AB:172:ILE:HG22	20:AB:176:ASN:HD21	1.72	0.55
23:BB:1848:A:H2'	23:BB:1849:G:H8	1.72	0.55
1:CA:190:A:O5'	1:CA:190:A:H8	1.90	0.55
1:CA:1382:C:H4'	6:CG:78:ARG:HH21	1.72	0.55
23:DB:2282:G:H5''	23:DB:2283:C:O4'	2.06	0.55
23:DB:1958:C:O2'	23:DB:1959:G:H5'	2.07	0.55
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.22	0.55
23:BB:1829:A:HO2'	25:BC:14:HIS:CD2	2.25	0.55
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.72	0.55
1:CA:502:A:H4'	1:CA:550:G:H4'	1.89	0.55
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.42	0.55
42:BN:87:PHE:C	42:BN:89:SER:H	2.10	0.55
10:AK:35:ASP:OD1	10:AK:37:GLN:HB2	2.07	0.55
1:AA:580:C:H2'	1:AA:581:G:O4'	2.07	0.55
23:DB:351:C:H2'	23:DB:352:A:C8	2.41	0.55
23:BB:2872:A:O2'	23:BB:2873:A:H5''	2.06	0.55
23:BB:755:U:H2'	23:BB:756:A:H8	1.72	0.55
47:DF:131:VAL:HG22	47:DF:151:LEU:O	2.07	0.55
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.75	0.55
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.88	0.55
25:DC:132:ARG:HD3	25:DC:166:ARG:NH1	2.21	0.54
47:DF:134:GLN:O	47:DF:136:ILE:N	2.40	0.54
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.22	0.54
47:BF:104:THR:C	47:BF:105:ILE:HG13	2.27	0.54
23:DB:899:A:OP1	23:DB:899:A:H4'	2.05	0.54
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.22	0.54
35:BV:30:ILE:HA	35:BV:91:PHE:O	2.07	0.54
20:CB:16:GLY:HA2	20:CB:40:ILE:CD1	2.37	0.54
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.37	0.54
1:AA:961:U:H3	1:AA:983:A:N6	2.06	0.54
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:3:ILE:O	19:AT:4:LYS:HB2	2.08	0.54
23:BB:972:A:C3'	23:BB:973:A:H5''	2.33	0.54
37:BL:19:LEU:O	37:BL:21:ARG:HG2	2.07	0.54
1:CA:384:G:H2'	1:CA:385:C:C6	2.42	0.54
1:AA:923:A:H2'	1:AA:924:C:H6	1.72	0.54
50:BT:67:VAL:HG23	50:BT:75:GLY:O	2.07	0.54
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.07	0.54
48:DG:94:ARG:CB	48:DG:127:GLN:HG2	2.35	0.54
40:BH:89:LYS:HA	40:BH:89:LYS:HZ3	1.72	0.54
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.07	0.54
40:DH:69:ALA:O	40:DH:73:ASN:HB2	2.07	0.54
23:DB:37:C:O2'	23:DB:38:A:H5'	2.06	0.54
23:DB:2579:C:O2'	26:DD:136:ASN:HA	2.06	0.54
1:AA:783:C:O2'	1:AA:784:A:H5'	2.07	0.54
11:AL:79:ILE:HD12	11:AL:96:THR:HG22	1.90	0.54
42:BN:62:ASN:N	42:BN:62:ASN:HD22	2.05	0.54
1:CA:1226:C:H5''	12:CM:101:THR:HB	1.89	0.54
22:DA:64:G:O2'	22:DA:65:U:H5'	2.07	0.54
1:AA:676:A:H2'	1:AA:677:U:C6	2.42	0.54
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.22	0.54
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.71	0.54
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.06	0.54
23:DB:2882:A:H3'	23:DB:2883:A:H5''	1.88	0.54
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.43	0.54
53:D6:134:ARG:HB3	53:D6:134:ARG:NH1	2.21	0.54
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.21	0.54
23:DB:573:U:O2'	23:DB:574:A:H3'	2.07	0.54
25:DC:202:ARG:NH1	25:DC:213:ARG:HE	2.05	0.54
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.71	0.54
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.07	0.54
1:AA:490:C:H2'	1:AA:491:G:C8	2.42	0.54
1:CA:472:U:H2'	1:CA:473:U:C6	2.43	0.54
26:DD:36:GLN:OE1	26:DD:38:LYS:HE3	2.08	0.54
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.41	0.54
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.37	0.54
12:AM:77:LYS:HG2	12:AM:81:ASP:OD1	2.08	0.54
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.69	0.54
23:BB:277:G:H1'	23:BB:361:G:O6	2.06	0.54
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.08	0.54
37:DL:134:ALA:O	37:DL:137:ALA:HB3	2.06	0.54
23:DB:870:U:O2'	23:DB:871:U:H5'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.70	0.54
1:AA:882:C:O2'	1:AA:883:C:H5'	2.06	0.54
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.42	0.54
23:DB:1693:U:H1'	25:DC:13:ARG:HH21	1.72	0.54
1:CA:168:G:O2'	1:CA:169:C:H5'	2.06	0.54
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.06	0.54
19:CT:15:LYS:HA	19:CT:18:LYS:CE	2.37	0.54
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.36	0.54
23:BB:1639:C:H2'	23:BB:1640:A:H5'	1.89	0.54
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.07	0.54
23:BB:49:A:H5''	23:BB:51:G:O4'	2.07	0.54
2:CC:120:THR:HG22	2:CC:188:ALA:HB2	1.87	0.54
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.07	0.54
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.05	0.54
33:D1:14:ALA:HB3	33:D1:16:THR:HG22	1.89	0.54
23:DB:1667:G:OP1	27:DK:6:THR:HA	2.07	0.54
3:CD:61:ARG:HH21	3:CD:67:LEU:HD23	1.71	0.54
37:DL:75:ALA:HB2	37:DL:105:ILE:HG21	1.89	0.54
23:BB:2266:A:C4	23:BB:2272:U:H5	2.24	0.54
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.37	0.54
47:DF:110:ILE:HG21	47:DF:113:PHE:HB3	1.89	0.54
21:AU:3:ILE:HD13	21:AU:19:LYS:HA	1.89	0.54
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.37	0.54
8:AI:21:LYS:CG	8:AI:22:PRO:HD2	2.37	0.54
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.07	0.54
35:DV:28:ALA:HB2	35:DV:89:ILE:HD12	1.88	0.54
48:DG:25:ILE:HG22	48:DG:78:VAL:HG11	1.90	0.54
45:DS:28:LYS:HD2	45:DS:29:VAL:H	1.73	0.54
1:CA:1249:C:H4'	8:CI:37:TYR:OH	2.07	0.54
1:CA:598:U:H2'	1:CA:599:C:C6	2.42	0.54
12:AM:1:ALA:C	12:AM:8:ILE:HG22	2.28	0.54
23:DB:2514:U:H2'	23:DB:2515:C:H6	1.72	0.54
20:AB:42:LEU:HA	20:AB:45:THR:OG1	2.08	0.54
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.10	0.54
1:CA:62:U:H2'	1:CA:63:C:C6	2.42	0.54
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.08	0.54
47:BF:11:VAL:HG21	47:BF:172:PHE:HE1	1.72	0.54
46:DU:73:ASN:HD21	46:DU:76:THR:H	1.54	0.54
16:CQ:68:LYS:C	16:CQ:70:LYS:H	2.10	0.54
48:BG:162:ARG:NH2	48:BG:168:VAL:HG21	2.22	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:BB:2846:G:H2'	23:BB:2847:U:C6	2.42	0.54
11:AL:86:VAL:HB	11:AL:89:LEU:HB2	1.87	0.54
32:B4:13:ASN:O	32:B4:27:CYS:HA	2.07	0.54
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.41	0.54
23:BB:2849:U:N3	23:BB:2867:G:C8	2.76	0.54
43:BO:71:ALA:O	43:BO:106:LEU:HB3	2.06	0.54
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.21	0.54
1:AA:335:C:H2'	1:AA:336:A:C8	2.42	0.54
27:BK:70:ARG:HB3	27:BK:76:VAL:HG13	1.89	0.54
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.20	0.54
23:DB:2881:U:O3'	42:DN:96:ARG:HD3	2.07	0.54
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.42	0.54
33:D1:7:LYS:HD3	33:D1:23:THR:HG22	1.90	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
11:CL:35:ARG:NH2	11:CL:36:VAL:HG22	2.23	0.54
1:CA:367:U:OP1	1:CA:395:C:H1'	2.07	0.54
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.07	0.54
24:BI:58:ILE:N	24:BI:58:ILE:HD12	2.22	0.54
23:DB:634:C:H2'	23:DB:635:C:H6	1.72	0.54
1:CA:965:U:OP1	1:CA:1198:G:H5''	2.08	0.54
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.38	0.54
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.42	0.54
23:BB:968:C:H2'	23:BB:969:G:C8	2.41	0.54
1:AA:8:A:H61	3:AD:53:GLN:HE22	1.55	0.54
42:DN:11:ASN:O	42:DN:12:ARG:HB2	2.07	0.54
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.89	0.54
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.07	0.54
23:DB:2868:A:H2'	23:DB:2869:G:H8	1.72	0.54
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.42	0.54
1:AA:575:G:O2'	1:AA:821:G:H5'	2.07	0.54
6:AG:134:VAL:HB	6:AG:137:ARG:HH21	1.72	0.54
1:CA:76:G:H2'	1:CA:77:A:C8	2.42	0.54
23:DB:99:U:H5	46:DU:6:ARG:HH22	1.53	0.54
26:DD:175:LEU:HD21	26:DD:191:GLY:O	2.07	0.54
22:DA:29:A:H3'	22:DA:30:C:H6	1.72	0.54
26:DD:169:ARG:O	26:DD:170:VAL:HG22	2.07	0.54
44:DQ:68:ALA:HB1	44:DQ:73:ILE:HG23	1.88	0.54
12:CM:92:ARG:HA	12:CM:92:ARG:NE	2.21	0.54
23:DB:1098:A:C3'	24:DI:3:LYS:HA	2.26	0.54
23:BB:2271:G:H2'	23:BB:2272:U:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:6:ILE:HD11	5:AF:8:PHE:HD2	1.73	0.54
23:DB:2572:A:OP2	26:DD:152:PRO:HD3	2.08	0.54
23:DB:2271:G:H2'	23:DB:2272:U:O4'	2.06	0.54
27:BK:71:ARG:HB3	27:BK:72:PRO:CD	2.28	0.54
8:AI:5:TYR:CD1	8:AI:20:ILE:HG22	2.42	0.54
1:CA:764:C:H2'	1:CA:765:G:C5'	2.37	0.54
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.89	0.54
45:BS:55:ILE:O	45:BS:58:ALA:HB3	2.08	0.54
20:AB:57:ASN:HB3	20:AB:219:THR:O	2.07	0.54
26:BD:108:ASP:OD2	26:BD:173:GLN:HA	2.07	0.54
29:DE:27:LEU:O	29:DE:31:VAL:HG23	2.08	0.54
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.38	0.54
23:DB:460:A:H2'	23:DB:461:C:O4'	2.07	0.54
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.07	0.54
23:BB:1439:A:C6	23:BB:1552:A:N7	2.75	0.54
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.71	0.54
35:BV:24:ASN:HB3	35:BV:44:HIS:HB3	1.89	0.54
23:DB:547:A:C6	23:DB:548:G:H1'	2.42	0.54
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD13	2.41	0.54
1:CA:335:C:H2'	1:CA:336:A:C8	2.42	0.54
20:AB:118:THR:O	20:AB:121:GLN:HB3	2.08	0.54
48:BG:5:LYS:HE3	48:BG:61:TRP:CZ2	2.41	0.54
1:AA:1320:C:O2'	1:AA:1321:U:H5'	2.07	0.54
23:BB:26:G:H1'	23:BB:514:A:N6	2.22	0.54
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.07	0.54
3:AD:151:GLN:HE21	3:AD:153:ARG:HD2	1.72	0.54
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.41	0.54
1:CA:709:U:H2'	1:CA:710:G:C8	2.41	0.54
36:B2:3:ARG:HA	36:B2:3:ARG:CZ	2.37	0.54
1:CA:211:G:H2'	1:CA:212:G:O4'	2.07	0.54
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.42	0.54
23:BB:2312:U:H5'	47:BF:84:ILE:HD12	1.89	0.54
47:DF:120:SER:HG	47:DF:127:TYR:HD2	1.54	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
1:CA:160:A:H2'	1:CA:161:A:O4'	2.07	0.54
23:DB:1987:A:H2'	23:DB:1988:G:C8	2.42	0.54
1:AA:723:U:O4'	21:AU:48:LYS:HD3	2.08	0.54
33:B1:14:ALA:HB3	33:B1:16:THR:HG22	1.89	0.54
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.89	0.54
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:909:A:H2'	23:DB:912:C:H5	1.70	0.54
39:BX:20:ASN:HD22	39:BX:20:ASN:N	2.06	0.54
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.07	0.54
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.72	0.54
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.07	0.54
41:DJ:84:ILE:HG23	41:DJ:84:ILE:O	2.07	0.54
5:CF:99:ALA:O	5:CF:100:SER:HB2	2.07	0.54
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.42	0.54
49:DR:49:ILE:HD12	49:DR:49:ILE:O	2.08	0.54
4:CE:113:VAL:CG1	4:CE:136:VAL:HG23	2.37	0.54
23:BB:141:G:C2	50:BT:2:ILE:HG21	2.41	0.54
46:BU:84:PHE:HD2	46:BU:91:LYS:HG2	1.72	0.54
20:CB:94:ARG:NE	20:CB:94:ARG:N	2.53	0.54
36:B2:16:HIS:HB3	36:B2:21:ARG:NH1	2.23	0.54
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.72	0.54
11:CL:54:VAL:HG21	11:CL:79:ILE:HD11	1.90	0.54
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.72	0.54
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.71	0.54
1:CA:676:A:H2'	1:CA:677:U:H6	1.72	0.54
1:AA:672:U:H2'	1:AA:673:A:H8	1.73	0.54
46:DU:81:ARG:N	46:DU:81:ARG:HH21	2.04	0.54
48:DG:5:LYS:HE3	48:DG:61:TRP:CZ2	2.42	0.54
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.73	0.54
46:DU:54:PRO:HG2	46:DU:55:GLY:H	1.72	0.54
10:AK:52:ARG:HH12	10:AK:56:LYS:CE	2.19	0.54
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.73	0.54
1:CA:714:G:N2	1:CA:777:A:H1'	2.22	0.54
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.07	0.54
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.07	0.54
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.38	0.54
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.55	0.54
1:AA:107:G:O6	19:AT:9:ARG:HD3	2.08	0.54
53:B6:140:LEU:HD21	53:B6:157:ALA:HB3	1.88	0.54
1:AA:502:A:H2'	1:AA:503:C:C6	2.42	0.54
44:DQ:34:ALA:O	44:DQ:37:ALA:HB3	2.07	0.54
1:AA:208:U:H2'	1:AA:210:C:C4	2.43	0.54
2:AC:19:SER:O	13:AN:93:PRO:HB3	2.08	0.54
1:AA:1030:U:H5'	1:AA:1031:C:N3	2.22	0.54
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD22	1.72	0.54
1:CA:157:U:O2'	1:CA:158:G:H5'	2.06	0.54
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1718:G:H2'	23:BB:1719:G:H8	1.72	0.54
23:BB:285:G:H2'	23:BB:286:U:C6	2.43	0.54
38:BM:105:MET:HB2	38:BM:117:PHE:CZ	2.43	0.54
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.08	0.54
25:DC:264:LYS:HG3	25:DC:265:PHE:CD2	2.43	0.54
20:CB:117:GLU:HA	20:CB:140:LEU:HD21	1.89	0.54
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.06	0.54
39:BX:56:LEU:O	39:BX:57:LEU:HB2	2.08	0.54
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.07	0.54
21:CU:36:PHE:O	21:CU:39:LYS:HG3	2.06	0.54
37:DL:92:LEU:CD2	37:DL:124:GLY:HA3	2.38	0.54
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.23	0.54
53:D6:80:GLU:CD	53:D6:92:PRO:HB2	2.26	0.54
1:CA:1314:C:OP2	18:CS:5:LYS:HG2	2.08	0.54
23:DB:877:A:C2'	23:DB:900:A:H61	2.18	0.54
35:DV:2:PHE:O	35:DV:4:ILE:HG13	2.07	0.54
1:CA:961:U:H3	1:CA:983:A:N6	2.05	0.54
23:DB:2746:U:O3'	48:DG:137:LYS:HD3	2.08	0.54
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.21	0.54
49:BR:39:LEU:HB3	49:BR:53:PHE:HA	1.89	0.54
23:BB:2144:G:H21	23:BB:2147:A:H4'	1.66	0.54
23:DB:320:A:H4'	23:DB:322:A:N7	2.23	0.54
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.08	0.54
20:CB:65:LYS:H	20:CB:158:ASP:CG	2.11	0.54
29:BE:61:ARG:NH1	29:BE:64:GLY:HA3	2.22	0.54
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.55	0.54
43:DO:5:SER:HA	43:DO:8:ILE:CD1	2.35	0.54
13:CN:80:ARG:HG3	13:CN:81:ILE:N	2.23	0.54
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.42	0.54
23:BB:91:A:H1'	23:BB:92:U:C6	2.43	0.54
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.37	0.54
23:BB:1936:A:H2	23:BB:1943:U:O4	1.90	0.54
37:DL:57:LEU:HA	37:DL:60:ARG:NE	2.23	0.54
1:AA:1200:C:C3'	1:AA:1201:A:H5'	2.38	0.54
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.38	0.54
53:D6:122:ALA:O	53:D6:126:ARG:HG3	2.08	0.54
41:DJ:72:LYS:CB	41:DJ:89:PHE:H	2.21	0.54
23:BB:121:G:H2'	23:BB:122:G:C8	2.43	0.54
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.43	0.54
26:BD:169:ARG:O	26:BD:170:VAL:HG22	2.08	0.54
1:CA:668:G:O2'	1:CA:669:G:H5'	2.08	0.54
11:CL:43:LYS:HE3	11:CL:44:PRO:HD3	1.89	0.54
46:BU:13:LEU:H	46:BU:13:LEU:HD12	1.73	0.54
25:DC:121:ALA:HB3	25:DC:129:LEU:HD11	1.90	0.54
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.07	0.54
23:DB:855:G:O2'	52:DW:23:LYS:HD3	2.06	0.54
30:DY:18:LYS:O	30:DY:22:THR:HG23	2.08	0.54
13:CN:41:TRP:HD1	13:CN:44:VAL:HG23	1.72	0.54
35:DV:63:ILE:H	35:DV:70:ILE:HD11	1.71	0.54
48:DG:7:PRO:O	48:DG:8:VAL:CB	2.56	0.54
35:BV:4:ILE:CD1	35:BV:61:LEU:HB3	2.37	0.54
48:BG:15:ASP:CB	48:BG:26:LYS:HB3	2.38	0.54
20:CB:45:THR:HG23	20:CB:200:PRO:HG2	1.88	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
20:AB:86:CYS:HB3	20:AB:88:GLN:CD	2.28	0.54
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.07	0.54
14:CO:71:LYS:HB2	14:CO:78:TYR:CD2	2.43	0.54
40:DH:88:GLY:O	40:DH:90:LEU:HD12	2.08	0.54
29:DE:47:LYS:HA	29:DE:51:GLU:HG3	1.90	0.54
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.07	0.54
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.38	0.54
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.22	0.54
23:BB:405:U:H4'	23:BB:405:U:OP2	2.08	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
30:BY:6:ILE:HD13	30:BY:6:ILE:H	1.72	0.54
23:BB:1566:A:H5'	25:BC:213:ARG:NH1	2.22	0.54
1:CA:148:G:N3	1:CA:1446:A:H2	2.05	0.54
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.43	0.54
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.07	0.54
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.07	0.54
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.70	0.54
23:BB:107:G:H2'	23:BB:108:G:H8	1.73	0.54
1:AA:620:C:N1	3:AD:131:ILE:HD13	2.23	0.54
53:B6:84:ARG:O	53:B6:85:ASP:C	2.45	0.54
19:CT:15:LYS:HD3	19:CT:18:LYS:HE3	1.89	0.54
23:DB:335:C:O2'	23:DB:336:C:H5'	2.07	0.54
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.42	0.54
23:DB:1376:C:H3'	57:DB:3278:HOH:O	2.07	0.54
16:AQ:24:ILE:N	16:AQ:24:ILE:HD12	2.23	0.54
21:AU:31:VAL:O	21:AU:31:VAL:HG12	2.08	0.54
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.72	0.54
16:CQ:10:ARG:NH2	16:CQ:55:GLY:HA2	2.23	0.54
23:BB:340:A:H2'	23:BB:341:C:O4'	2.08	0.54
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.72	0.54
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.89	0.54
52:DW:23:LYS:HZ2	52:DW:24:ARG:HG3	1.72	0.54
52:DW:37:VAL:HG13	52:DW:55:ASP:C	2.27	0.54
48:BG:34:ARG:N	48:BG:34:ARG:HH11	1.97	0.54
44:DQ:86:SER:HB3	49:DR:52:PRO:HD3	1.89	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
44:BQ:90:ASP:O	44:BQ:94:LEU:HB2	2.08	0.54
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.38	0.54
19:AT:81:GLN:C	19:AT:83:ASN:H	2.10	0.54
25:DC:90:ILE:CD1	25:DC:102:TYR:HB3	2.37	0.54
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.07	0.54
23:BB:809:G:H2'	23:BB:810:U:C6	2.43	0.54
13:AN:80:ARG:HG3	13:AN:81:ILE:N	2.22	0.54
23:BB:142:A:H2'	23:BB:143:C:C5	2.42	0.54
19:CT:81:GLN:C	19:CT:83:ASN:H	2.09	0.54
47:DF:1:ALA:O	47:DF:4:HIS:HB3	2.07	0.54
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.07	0.54
23:DB:102:U:H2'	39:DX:2:LYS:CE	2.36	0.54
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.73	0.54
38:BM:41:LEU:HD13	38:BM:46:ILE:HG22	1.89	0.54
43:DO:71:ALA:O	43:DO:106:LEU:HB3	2.07	0.54
23:DB:1179:G:O2'	23:DB:1180:U:H5'	2.08	0.54
35:DV:9:ARG:HA	35:DV:41:GLU:OE2	2.08	0.54
23:BB:2020:A:O2'	23:BB:2021:C:H5'	2.07	0.54
33:D1:7:LYS:HA	33:D1:23:THR:HG22	1.89	0.54
23:BB:496:G:H1'	45:BS:61:ASN:ND2	2.22	0.54
23:BB:418:C:H2'	23:BB:419:U:H6	1.73	0.54
23:BB:630:G:H4'	23:BB:640:C:O2'	2.08	0.54
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.90	0.54
1:AA:472:U:H2'	1:AA:473:U:C6	2.43	0.54
23:BB:2285:C:OP1	33:B1:25:ASN:ND2	2.40	0.54
1:AA:301:G:H2'	1:AA:302:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1222:U:O2'	23:DB:1223:G:H5'	2.07	0.54
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.07	0.54
23:BB:7:G:H2'	23:BB:8:C:C6	2.43	0.54
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.08	0.54
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.43	0.54
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.07	0.54
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.43	0.54
23:BB:2103:C:H4'	23:BB:2103:C:OP1	2.07	0.54
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.23	0.54
23:DB:26:G:H1'	23:DB:514:A:N6	2.21	0.54
23:DB:2822:G:H2'	23:DB:2823:A:H5''	1.89	0.54
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.23	0.54
3:AD:90:LEU:HD22	3:AD:90:LEU:H	1.72	0.54
1:AA:590:U:H2'	1:AA:591:U:C6	2.43	0.54
34:B3:24:LYS:NZ	34:B3:28:LEU:HB3	2.23	0.54
46:DU:13:LEU:H	46:DU:13:LEU:HD12	1.72	0.54
23:DB:974:G:OP2	49:DR:78:ARG:HD3	2.07	0.54
14:CO:21:ASP:C	14:CO:23:GLY:H	2.11	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
1:AA:692:U:C2	1:AA:694:A:H5''	2.42	0.54
43:DO:69:ASP:O	43:DO:72:ALA:HB3	2.08	0.54
22:BA:40:U:H1'	22:BA:43:C:C5	2.43	0.54
1:AA:1249:C:H4'	8:AI:37:TYR:OH	2.07	0.54
13:CN:16:ALA:HA	13:CN:54:SER:O	2.07	0.54
48:DG:15:ASP:CB	48:DG:26:LYS:HB3	2.38	0.54
53:B6:30:THR:HA	53:B6:183:ILE:HG12	1.89	0.54
39:BX:34:SER:HB2	39:BX:36:GLN:OE1	2.08	0.54
49:DR:39:LEU:HB3	49:DR:53:PHE:HA	1.90	0.54
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.37	0.54
48:DG:123:GLU:HG2	48:DG:124:CYS:H	1.71	0.54
20:AB:68:PHE:O	20:AB:90:PHE:HA	2.07	0.54
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CD1	2.42	0.54
29:DE:149:ILE:HG23	29:DE:188:MET:CA	2.38	0.54
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.23	0.54
40:DH:124:THR:HG23	40:DH:128:HIS:HE1	1.72	0.54
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.08	0.54
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.73	0.54
41:DJ:57:LEU:CG	41:DJ:128:ASN:H	2.17	0.54
23:DB:2142:A:H2'	23:DB:2143:C:C1'	2.38	0.54
6:CG:22:LEU:O	6:CG:26:VAL:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:83:LEU:HA	42:BN:86:ARG:CG	2.38	0.54
1:CA:312:C:H2'	1:CA:313:A:H8	1.70	0.54
23:DB:2149:U:H2'	23:DB:2150:C:H6	1.73	0.54
2:CC:26:LYS:HE2	2:CC:27:GLU:HG3	1.88	0.54
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.08	0.54
23:BB:150:U:H2'	23:BB:151:C:H6	1.71	0.54
20:CB:130:LYS:HA	20:CB:130:LYS:HE2	1.88	0.54
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.08	0.54
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.38	0.54
23:BB:719:C:O2'	23:BB:720:U:H5'	2.08	0.54
48:BG:16:VAL:HG11	48:BG:44:HIS:CE1	2.43	0.54
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.08	0.54
43:DO:89:ASP:HA	43:DO:116:GLN:HB3	1.90	0.54
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.07	0.54
23:BB:350:G:H2'	23:BB:351:C:H6	1.73	0.54
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.42	0.54
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.20	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
23:BB:1465:G:H2'	23:BB:1466:U:O4'	2.08	0.54
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.08	0.54
22:DA:32:U:H2'	22:DA:33:G:O4'	2.07	0.54
6:CG:99:ALA:O	6:CG:103:ILE:HG13	2.08	0.54
1:CA:1110:A:H2'	1:CA:1111:A:H8	1.73	0.54
6:AG:121:ASN:N	6:AG:121:ASN:HD22	2.04	0.54
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.23	0.54
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.08	0.54
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.08	0.54
1:AA:425:G:H2'	1:AA:426:U:C6	2.43	0.54
25:DC:145:MET:SD	25:DC:153:LEU:HD21	2.48	0.54
29:BE:149:ILE:HG23	29:BE:188:MET:CA	2.38	0.54
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.28	0.54
12:CM:71:GLU:HA	12:CM:74:MET:HG2	1.90	0.54
5:AF:99:ALA:O	5:AF:100:SER:HB2	2.08	0.54
53:D6:90:LEU:HB3	53:D6:101:ILE:CG2	2.38	0.54
23:DB:2364:C:O2'	23:DB:2365:G:H5'	2.08	0.54
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.72	0.54
35:DV:63:ILE:HB	35:DV:70:ILE:HD11	1.90	0.54
35:BV:63:ILE:HB	35:BV:70:ILE:HD11	1.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CE1	2.43	0.54
44:BQ:57:ARG:HH12	44:BQ:61:ILE:HD11	1.72	0.54
1:AA:532:A:H62	2:AC:191:THR:CB	2.15	0.54
23:DB:283:G:H2'	23:DB:284:U:O4'	2.07	0.54
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.08	0.54
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.89	0.54
50:DT:74:ILE:HG13	50:DT:75:GLY:H	1.73	0.54
23:DB:297:G:OP1	46:DU:91:LYS:HD3	2.07	0.54
4:CE:156:ARG:HB3	7:CH:43:GLY:HA3	1.90	0.54
48:DG:153:PRO:CG	48:DG:162:ARG:HB3	2.38	0.54
23:DB:1054:A:H2'	23:DB:1055:G:O4'	2.08	0.54
20:AB:93:HIS:HB2	20:AB:145:ASN:O	2.08	0.54
23:DB:320:A:C2	29:DE:163:ASN:HB3	2.43	0.54
39:BX:1:MET:HB3	39:BX:5:GLU:OE1	2.07	0.54
53:B6:39:LEU:HG	53:B6:40:HIS:N	2.23	0.54
28:BP:75:THR:CG2	28:BP:76:HIS:H	2.18	0.54
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.90	0.54
34:B3:20:GLY:HA3	34:B3:48:MET:HE1	1.89	0.54
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.43	0.54
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.42	0.54
18:CS:48:ILE:HB	18:CS:59:VAL:HG23	1.90	0.54
23:BB:591:U:H1'	34:B3:1:PRO:N	2.23	0.54
23:DB:2306:C:C3'	23:DB:2307:G:H5'	2.38	0.54
43:DO:30:ARG:HG3	43:DO:30:ARG:HH11	1.71	0.54
1:CA:484:G:H4'	1:CA:485:U:H5'	1.89	0.54
29:BE:108:ILE:HG12	37:BL:2:ARG:HH22	1.72	0.54
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.23	0.54
20:CB:69:VAL:HB	20:CB:162:VAL:HB	1.90	0.54
48:BG:37:ASN:ND2	48:BG:38:ASP:H	2.05	0.54
40:BH:54:LEU:O	40:BH:58:LEU:N	2.34	0.54
23:BB:1841:U:H2'	23:BB:1842:G:H8	1.71	0.54
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.72	0.54
22:BA:113:C:H2'	22:BA:114:C:C6	2.43	0.54
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.23	0.54
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.08	0.54
1:AA:215:C:H2'	1:AA:216:U:H6	1.70	0.54
47:DF:78:ILE:C	47:DF:79:ARG:HG3	2.27	0.54
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.23	0.54
3:CD:22:SER:N	3:CD:109:THR:HG22	2.22	0.54
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.71	0.54
1:CA:107:G:O6	19:CT:9:ARG:HD3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.43	0.54
1:CA:999:C:H2'	1:CA:1000:A:H8	1.72	0.54
53:D6:123:GLU:HA	53:D6:126:ARG:NH1	2.22	0.54
1:CA:806:C:H2'	1:CA:807:A:H8	1.73	0.54
23:DB:633:A:O5'	23:DB:633:A:H8	1.90	0.54
1:AA:586:C:O2'	1:AA:587:G:H5'	2.07	0.54
23:BB:1396:U:O2	23:BB:1396:U:O4'	2.23	0.54
50:DT:45:ALA:HA	50:DT:48:GLN:CG	2.38	0.54
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.08	0.54
23:DB:2100:G:H2'	23:DB:2101:A:O4'	2.08	0.54
26:BD:60:VAL:HA	26:BD:64:GLU:OE2	2.08	0.54
1:CA:317:U:H2'	1:CA:318:G:H8	1.71	0.54
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	2.07	0.54
23:BB:338:G:N2	23:BB:339:U:H1'	2.23	0.54
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.42	0.54
52:BW:18:LYS:O	52:BW:34:SER:HA	2.08	0.54
12:CM:70:ARG:NE	47:DF:136:ILE:HG21	2.23	0.54
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.72	0.54
23:DB:850:U:H5''	30:DY:18:LYS:HD3	1.90	0.54
8:CI:22:PRO:HA	8:CI:60:LEU:HB2	1.90	0.54
44:DQ:91:ARG:HH22	49:DR:10:LYS:HB3	1.73	0.54
41:BJ:36:LEU:O	41:BJ:51:GLY:HA3	2.08	0.54
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.22	0.54
40:BH:69:ALA:HA	40:BH:140:ALA:HB2	1.90	0.54
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.07	0.54
50:DT:67:VAL:HG23	50:DT:75:GLY:O	2.08	0.54
41:BJ:59:ALA:O	41:BJ:62:VAL:HG12	2.08	0.54
23:DB:1203:U:H3'	23:DB:1204:A:H5''	1.89	0.54
40:DH:94:ILE:O	40:DH:122:LEU:HD23	2.07	0.54
50:DT:14:PRO:HA	50:DT:32:LEU:HB3	1.90	0.54
26:BD:12:THR:HG22	26:BD:13:ARG:N	2.22	0.54
3:CD:147:LYS:HD3	3:CD:148:ALA:N	2.22	0.54
39:BX:3:ALA:O	39:BX:6:LEU:HB2	2.08	0.54
23:DB:590:A:H2'	23:DB:591:U:H6	1.71	0.54
1:AA:448:A:H2'	1:AA:449:G:C8	2.43	0.54
43:DO:68:LYS:H	43:DO:102:ARG:CD	2.21	0.54
20:AB:96:LEU:CD2	20:AB:146:SER:HB2	2.37	0.54
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.23	0.54
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.08	0.54
23:DB:956:G:N2	23:DB:959:A:H3'	2.23	0.54
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.42	0.54
48:BG:16:VAL:HG11	48:BG:44:HIS:NE2	2.23	0.54
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.08	0.54
23:DB:418:C:H2'	23:DB:419:U:C6	2.42	0.54
20:AB:22:TRP:CZ3	20:AB:24:PRO:HA	2.43	0.54
20:CB:31:PHE:N	20:CB:41:ASN:HB2	2.23	0.54
13:AN:14:ALA:HA	13:AN:17:ASP:OD2	2.08	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
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.08	0.54
1:AA:1260:G:H4'	1:AA:1283:U:O2'	2.07	0.54
52:DW:77:LYS:O	52:DW:78:PHE:HB2	2.07	0.54
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.90	0.54
23:DB:217:A:H2'	23:DB:218:A:O4'	2.08	0.54
53:B6:6:LEU:O	53:B6:9:GLU:HB3	2.07	0.54
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.23	0.54
1:CA:628:G:O2'	1:CA:629:A:H5'	2.08	0.54
23:DB:2093:G:H5'	40:DH:22:LYS:HD2	1.90	0.54
1:CA:1180:A:P	8:CI:98:ARG:HH22	2.31	0.54
53:B6:73:GLN:HG3	53:B6:74:ASN:H	1.73	0.54
1:CA:720:C:H5''	17:CR:40:PRO:HA	1.90	0.54
2:CC:2:GLN:HE22	2:CC:3:LYS:NZ	2.05	0.54
6:CG:45:ALA:HB3	6:CG:119:LEU:HD23	1.89	0.54
1:CA:934:C:H5''	57:CA:1748:HOH:O	2.08	0.54
23:BB:202:U:H2'	23:BB:203:A:C8	2.43	0.54
26:BD:7:LYS:HE2	26:BD:198:GLY:HA2	1.89	0.54
1:CA:113:G:H2'	1:CA:114:U:C6	2.43	0.54
23:DB:3:U:H2'	23:DB:4:U:C6	2.42	0.54
38:BM:65:ILE:HG23	38:BM:103:TYR:CE2	2.43	0.54
47:BF:60:SER:HB2	47:BF:62:GLN:OE1	2.08	0.53
23:BB:2262:U:H1'	23:BB:2328:A:H1'	1.90	0.53
52:DW:50:VAL:O	52:DW:59:PHE:HB3	2.08	0.53
8:AI:5:TYR:HD1	8:AI:20:ILE:HG22	1.72	0.53
18:CS:10:ILE:HG22	18:CS:38:THR:N	2.23	0.53
46:BU:9:GLU:O	46:BU:72:PHE:N	2.41	0.53
53:B6:83:ILE:HG22	53:B6:90:LEU:HB2	1.89	0.53
35:BV:30:ILE:O	35:BV:37:PRO:HA	2.09	0.53
23:DB:136:G:H2'	23:DB:137:U:C6	2.43	0.53
18:AS:10:ILE:HG22	18:AS:38:THR:N	2.23	0.53
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.72	0.53
8:CI:50:PRO:HD3	8:CI:79:ARG:HG3	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
44:DQ:57:ARG:HH12	44:DQ:61:ILE:HD11	1.70	0.53
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.76	0.53
23:DB:2746:U:H5''	48:DG:137:LYS:HG2	1.89	0.53
25:BC:78:GLU:OE1	25:BC:94:LEU:HD22	2.09	0.53
12:CM:38:ILE:HG13	12:CM:55:LEU:CD2	2.37	0.53
41:DJ:30:THR:HG23	41:DJ:31:GLU:N	2.23	0.53
26:DD:68:PHE:HB3	26:DD:73:VAL:CG2	2.33	0.53
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.90	0.53
46:DU:73:ASN:C	46:DU:75:ALA:H	2.11	0.53
33:D1:36:LYS:HG2	33:D1:47:ILE:HG13	1.90	0.53
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.08	0.53
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.08	0.53
3:CD:146:GLU:HB3	3:CD:149:LYS:HE3	1.88	0.53
23:BB:362:A:H3'	23:BB:363:G:H8	1.72	0.53
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.38	0.53
10:CK:105:ARG:NH2	21:CU:10:PRO:HB3	2.23	0.53
11:AL:35:ARG:NH2	11:AL:36:VAL:HG22	2.23	0.53
22:DA:48:U:H2'	22:DA:49:C:C6	2.43	0.53
20:AB:96:LEU:HB2	20:AB:99:MET:HE3	1.89	0.53
23:BB:534:U:H5'	44:BQ:41:ALA:HB1	1.91	0.53
20:AB:112:ARG:HE	20:AB:116:LEU:HD11	1.72	0.53
7:AH:17:GLN:NE2	7:AH:62:LEU:HB3	2.23	0.53
16:AQ:80:LYS:CE	16:AQ:80:LYS:H	2.21	0.53
1:CA:1221:G:O3'	18:CS:76:THR:HG21	2.08	0.53
23:DB:1258:U:C4'	29:DE:79:ARG:HD2	2.37	0.53
3:AD:123:MET:HB2	3:AD:128:VAL:HA	1.90	0.53
23:BB:1130:U:C2	23:BB:2025:C:H5''	2.43	0.53
23:BB:175:G:O2'	23:BB:176:A:H5'	2.08	0.53
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.08	0.53
1:AA:190:A:O5'	1:AA:190:A:H8	1.91	0.53
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.08	0.53
1:CA:499:A:H4'	1:CA:500:G:OP1	2.08	0.53
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.08	0.53
1:AA:1298:U:H2'	6:AG:113:LYS:HZ2	1.72	0.53
23:BB:909:A:H2'	23:BB:912:C:C5	2.43	0.53
23:BB:1878:G:H2'	23:BB:1879:C:H6	1.72	0.53
1:CA:590:U:H2'	1:CA:591:U:H6	1.73	0.53
1:AA:590:U:H2'	1:AA:591:U:H6	1.72	0.53
23:BB:1248:G:O2'	44:BQ:2:ARG:HA	2.08	0.53
45:BS:13:SER:OG	45:BS:14:ALA:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1669:A:O3'	23:BB:2549:G:H5'	2.08	0.53
22:DA:94:A:H2'	22:DA:95:U:O4'	2.08	0.53
1:CA:724:G:O2'	1:CA:725:G:H5'	2.07	0.53
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.29	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
1:CA:1005:A:H2'	1:CA:1006:G:O4'	2.08	0.53
1:CA:1396:A:H4'	1:CA:1397:C:H5''	1.90	0.53
30:DY:2:LYS:H	30:DY:2:LYS:HD3	1.73	0.53
23:BB:145:C:H2'	23:BB:146:A:H8	1.73	0.53
21:CU:42:THR:O	21:CU:46:ARG:HG3	2.09	0.53
5:AF:38:ARG:HD3	5:AF:97:THR:HA	1.89	0.53
5:AF:3:HIS:NE2	5:AF:65:GLU:HG3	2.23	0.53
25:BC:166:ARG:HB3	25:BC:171:VAL:HG22	1.90	0.53
53:D6:64:ARG:N	53:D6:64:ARG:HD2	2.24	0.53
29:BE:5:LEU:HG	29:BE:12:LEU:HD22	1.90	0.53
47:BF:101:ARG:NH2	47:BF:138:PRO:HB2	2.22	0.53
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.39	0.53
50:BT:29:THR:HA	50:BT:86:THR:HA	1.89	0.53
39:BX:29:ARG:HH21	39:BX:29:ARG:CB	2.21	0.53
44:DQ:91:ARG:HB2	44:DQ:94:LEU:HD23	1.89	0.53
41:BJ:45:THR:HG23	41:BJ:45:THR:O	2.08	0.53
44:BQ:91:ARG:HB2	44:BQ:94:LEU:HD23	1.89	0.53
45:BS:36:LEU:N	45:BS:36:LEU:HD22	2.19	0.53
44:DQ:52:ARG:C	44:DQ:54:ARG:H	2.10	0.53
40:BH:73:ASN:N	40:BH:73:ASN:HD22	2.06	0.53
23:DB:973:A:H1'	23:DB:1188:U:C5	2.43	0.53
4:AE:113:VAL:CG1	4:AE:136:VAL:HG23	2.38	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
23:BB:962:G:H2'	23:BB:963:U:C6	2.43	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.38	0.53
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.73	0.53
46:BU:80:ASP:OD1	46:BU:95:PHE:HB3	2.08	0.53
47:DF:3:LEU:HD21	47:DF:172:PHE:HB3	1.90	0.53
40:BH:124:THR:HG22	40:BH:125:THR:N	2.23	0.53
12:CM:21:ILE:HG23	12:CM:65:GLU:OE2	2.09	0.53
23:BB:674:G:HO2'	29:BE:60:TRP:HH2	1.56	0.53
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.48	0.53
42:BN:32:GLU:HB3	42:BN:115:LEU:HG	1.90	0.53
1:CA:955:U:H1'	1:CA:1227:A:H62	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:146:GLU:HB3	3:AD:149:LYS:HE3	1.90	0.53
23:BB:76:C:O2'	23:BB:77:G:H5'	2.08	0.53
23:DB:2528:U:O2'	23:DB:2529:G:H3'	2.08	0.53
48:DG:37:ASN:ND2	48:DG:38:ASP:H	2.05	0.53
1:CA:369:G:O2'	1:CA:370:C:H5'	2.08	0.53
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.90	0.53
28:DP:59:THR:OG1	28:DP:72:VAL:HG12	2.08	0.53
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.89	0.53
23:BB:547:A:C3'	23:BB:548:G:H5'	2.38	0.53
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.73	0.53
23:DB:2282:G:OP1	23:DB:2283:C:H1'	2.07	0.53
1:CA:707:U:H2'	1:CA:708:C:H6	1.73	0.53
1:CA:632:U:H5''	1:CA:633:G:C8	2.43	0.53
3:AD:2:ARG:HB3	3:AD:114:ARG:NH2	2.24	0.53
23:DB:691:C:O2'	23:DB:692:C:H5'	2.08	0.53
23:BB:2530:A:H3'	48:BG:156:TYR:OH	2.08	0.53
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.70	0.53
22:DA:87:U:H2'	22:DA:88:C:O5'	2.09	0.53
26:DD:102:ALA:HA	26:DD:180:VAL:HG21	1.89	0.53
1:AA:378:G:O2'	1:AA:379:C:H5'	2.07	0.53
36:B2:31:LEU:HD22	36:B2:42:LEU:HD12	1.90	0.53
23:DB:1899:A:O2'	23:DB:1900:A:H5''	2.07	0.53
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.08	0.53
42:BN:71:ARG:HG2	42:BN:71:ARG:HH21	1.73	0.53
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.43	0.53
47:BF:124:ARG:HB3	47:BF:126:ASN:OD1	2.08	0.53
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.73	0.53
23:DB:2330:G:H1'	52:DW:38:ARG:HB2	1.90	0.53
8:AI:26:LYS:H	8:AI:61:ASP:HB2	1.72	0.53
53:B6:80:GLU:C	53:B6:82:ALA:H	2.11	0.53
23:BB:2572:A:OP2	26:BD:152:PRO:HD3	2.08	0.53
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.90	0.53
8:CI:41:GLU:C	8:CI:43:ALA:H	2.12	0.53
40:DH:68:ARG:O	40:DH:72:ILE:HG13	2.08	0.53
1:AA:1206:G:C4'	2:AC:192:TYR:HA	2.36	0.53
37:BL:19:LEU:HD23	37:BL:31:GLY:HA3	1.89	0.53
49:BR:4:VAL:CG2	49:BR:39:LEU:HG	2.37	0.53
48:DG:108:PHE:HD1	48:DG:108:PHE:H	1.56	0.53
46:BU:95:PHE:CE1	46:BU:102:ILE:HB	2.34	0.53
43:BO:25:ARG:O	43:BO:39:VAL:HA	2.08	0.53
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:52:ARG:HH12	10:CK:56:LYS:CE	2.21	0.53
23:BB:2543:G:H8	23:BB:2543:G:H5'	1.74	0.53
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.43	0.53
1:AA:678:U:O2'	1:AA:679:C:H5'	2.08	0.53
23:DB:2259:U:H2'	23:DB:2260:C:H6	1.73	0.53
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
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	1.91	0.53
23:DB:2438:U:O2'	23:DB:2439:A:H5''	2.08	0.53
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.08	0.53
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.24	0.53
23:DB:1712:U:H2'	23:DB:1713:A:N7	2.23	0.53
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.90	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
13:CN:14:ALA:HA	13:CN:17:ASP:OD2	2.07	0.53
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.43	0.53
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.73	0.53
23:BB:217:A:H2'	23:BB:218:A:O4'	2.09	0.53
27:DK:105:ARG:HB3	27:DK:122:VAL:HG12	1.91	0.53
23:DB:222:A:N6	23:DB:232:G:H1'	2.24	0.53
51:DZ:27:ARG:HD2	51:DZ:29:PHE:CE1	2.43	0.53
23:BB:2109:U:H2'	23:BB:2110:G:C8	2.44	0.53
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.41	0.53
1:AA:668:G:O2'	1:AA:669:G:H5'	2.08	0.53
23:DB:1423:G:H2'	23:DB:1424:G:H8	1.72	0.53
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.38	0.53
1:CA:641:U:H4'	7:CH:106:SER:O	2.07	0.53
3:AD:55:ARG:HG3	3:AD:55:ARG:HH11	1.72	0.53
23:BB:857:G:C2'	23:BB:858:G:H5'	2.38	0.53
48:DG:36:LEU:N	48:DG:36:LEU:HD22	2.21	0.53
46:DU:9:GLU:O	46:DU:72:PHE:N	2.42	0.53
28:BP:4:ILE:C	28:BP:6:GLN:N	2.61	0.53
35:BV:31:TYR:HA	35:BV:93:ARG:NH2	2.24	0.53
45:DS:36:LEU:HD22	45:DS:36:LEU:N	2.19	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
8:CI:51:LEU:HB3	8:CI:56:MET:CG	2.31	0.53
45:BS:58:ALA:HB1	45:BS:69:LEU:HD21	1.89	0.53
48:DG:132:LEU:HD23	48:DG:132:LEU:N	2.24	0.53
20:AB:83:ALA:O	20:AB:88:GLN:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:845:A:H5''	1:AA:846:G:C8	2.44	0.53
1:AA:16:A:O2'	4:AE:20:VAL:HG13	2.08	0.53
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.73	0.53
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.18	0.53
48:DG:155:PRO:HA	48:DG:170:THR:HA	1.90	0.53
23:DB:322:A:C2'	29:DE:163:ASN:HD21	2.20	0.53
1:CA:1170:A:C5'	20:CB:138:ARG:HH12	2.20	0.53
23:BB:116:C:H1'	23:BB:127:A:N3	2.23	0.53
53:B6:133:ARG:O	53:B6:134:ARG:C	2.47	0.53
1:AA:676:A:H2'	1:AA:677:U:H6	1.73	0.53
20:AB:162:VAL:CG1	20:AB:184:ALA:HB2	2.38	0.53
23:BB:2579:C:O2'	26:BD:136:ASN:HA	2.08	0.53
23:DB:179:C:H2'	23:DB:180:G:O4'	2.07	0.53
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.24	0.53
40:BH:64:ALA:H	40:BH:66:ASN:ND2	2.07	0.53
23:DB:228:C:O2	23:DB:418:C:H4'	2.09	0.53
23:DB:417:C:H2'	23:DB:418:C:H6	1.72	0.53
23:DB:2212:A:H1'	23:DB:2213:U:N3	2.24	0.53
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.71	0.53
30:BY:15:ARG:O	30:BY:20:LYS:HE3	2.09	0.53
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.23	0.53
23:BB:934:U:H2'	23:BB:935:C:H6	1.73	0.53
1:AA:244:U:O4	1:AA:906:A:H1'	2.08	0.53
42:BN:11:ASN:O	42:BN:12:ARG:HB2	2.08	0.53
1:CA:890:G:O2'	1:CA:906:A:N6	2.42	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.37	0.53
53:D6:150:SER:O	53:D6:154:THR:HG22	2.08	0.53
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.43	0.53
1:AA:1297:G:H1'	1:AA:1298:U:H5	1.73	0.53
53:B6:4:LYS:HA	53:B6:7:TYR:CD2	2.43	0.53
23:BB:1712:U:H2'	23:BB:1713:A:N7	2.23	0.53
23:DB:981:A:H2'	23:DB:982:C:H5''	1.90	0.53
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.43	0.53
23:BB:813:U:H2'	23:BB:814:C:H6	1.72	0.53
1:CA:586:C:O2'	1:CA:587:G:H5'	2.08	0.53
1:AA:552:U:H2'	1:AA:553:A:C8	2.43	0.53
43:BO:111:ARG:HB2	43:BO:117:PHE:CZ	2.43	0.53
42:BN:92:GLY:HA2	42:BN:94:TYR:CZ	2.43	0.53
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.09	0.53
50:BT:44:LYS:O	50:BT:48:GLN:HG2	2.08	0.53
23:BB:839:U:H1'	23:BB:1191:G:H1'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:106:ARG:HD2	2:CC:106:ARG:H	1.74	0.53
23:BB:1883:U:H2'	23:BB:1884:G:H1'	1.90	0.53
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.09	0.53
1:AA:724:G:H2'	1:AA:725:G:H8	1.74	0.53
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.09	0.53
23:BB:2267:A:N6	23:BB:2272:U:C4	2.76	0.53
26:DD:37:VAL:CG2	26:DD:91:THR:HA	2.37	0.53
35:BV:77:VAL:HG12	38:BM:136:MET:HG2	1.90	0.53
23:DB:138:U:H2'	23:DB:140:C:N1	2.24	0.53
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.09	0.53
23:BB:460:A:P	36:B2:41:ARG:HH12	2.31	0.53
26:BD:37:VAL:CG2	26:BD:91:THR:HA	2.39	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:819:A:N6	23:BB:1189:A:H1'	2.24	0.53
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.09	0.53
51:DZ:71:LEU:HD12	51:DZ:78:TYR:CD2	2.43	0.53
41:BJ:23:LYS:HZ2	41:BJ:142:ILE:HG12	1.72	0.53
41:BJ:30:THR:HG23	41:BJ:31:GLU:N	2.23	0.53
2:CC:148:ILE:HA	2:CC:200:TRP:O	2.09	0.53
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.07	0.53
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.72	0.53
23:BB:126:A:O2'	23:BB:127:A:H5'	2.08	0.53
23:BB:1460:U:H5''	23:BB:1461:C:O4'	2.08	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.43	0.53
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.29	0.53
6:AG:19:SER:HB2	6:AG:21:LEU:HD21	1.91	0.53
43:BO:106:LEU:CA	43:BO:109:ALA:HB3	2.38	0.53
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.38	0.53
43:DO:35:ILE:HG13	43:DO:71:ALA:CB	2.36	0.53
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.73	0.53
9:CJ:53:ILE:HG23	9:CJ:54:SER:N	2.24	0.53
1:CA:1310:G:O2'	1:CA:1311:A:H5'	2.09	0.53
10:AK:92:ARG:NH1	21:AU:20:ARG:HH21	2.07	0.53
23:DB:2458:G:N3	23:DB:2458:G:H2'	2.24	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
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.71	0.53
30:BY:18:LYS:O	30:BY:22:THR:HG23	2.08	0.53
1:AA:539:A:H2'	1:AA:540:G:H8	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.89	0.53
23:DB:18:U:H2'	23:DB:19:A:C8	2.43	0.53
23:DB:20:C:O2'	23:DB:21:A:H5'	2.07	0.53
1:CA:860:A:H2'	1:CA:861:G:O4'	2.08	0.53
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.72	0.53
23:DB:2293:G:H2'	23:DB:2294:G:H8	1.72	0.53
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.72	0.53
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.08	0.53
1:CA:724:G:H2'	1:CA:725:G:H8	1.72	0.53
1:AA:182:A:O2'	1:AA:183:C:H3'	2.08	0.53
1:CA:686:U:O4	1:CA:703:G:H1'	2.09	0.53
23:DB:1930:G:H2'	23:DB:1968:G:C6	2.43	0.53
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.43	0.53
45:DS:13:SER:OG	45:DS:14:ALA:N	2.41	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
19:CT:42:ASP:OD1	19:CT:44:ALA:HB3	2.08	0.53
9:AJ:91:ASP:C	9:AJ:92:LEU:HD13	2.29	0.53
5:CF:51:ILE:O	5:CF:51:ILE:HG23	2.08	0.53
23:BB:1695:G:H2'	23:BB:1696:G:O4'	2.08	0.53
23:DB:1577:C:H2'	23:DB:1578:U:O4'	2.09	0.53
9:CJ:92:LEU:H	9:CJ:92:LEU:HD22	1.73	0.53
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.29	0.53
10:AK:124:LYS:O	21:AU:33:ARG:NE	2.29	0.53
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.89	0.53
23:BB:321:U:H1'	29:BE:162:ARG:NH1	2.24	0.53
52:BW:37:VAL:HG13	52:BW:55:ASP:O	2.07	0.53
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.43	0.53
53:D6:35:PRO:HA	53:D6:66:LEU:HD21	1.91	0.53
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.91	0.53
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.44	0.53
48:DG:23:ILE:HG21	48:DG:71:LEU:HD11	1.90	0.53
35:BV:28:ALA:HB2	35:BV:89:ILE:HD12	1.89	0.53
23:BB:2511:U:H2'	23:BB:2512:C:C6	2.44	0.53
48:BG:97:VAL:CG2	48:BG:124:CYS:HB2	2.39	0.53
13:CN:60:ARG:HG3	13:CN:62:ARG:HG3	1.91	0.53
41:BJ:44:TYR:C	41:BJ:44:TYR:HD2	2.12	0.53
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.09	0.53
25:BC:94:LEU:HD13	25:BC:100:ARG:HD2	1.91	0.53
23:BB:1060:U:O2	23:BB:1088:A:C8	2.62	0.53
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.49	0.53
1:CA:386:C:C2'	1:CA:387:U:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.09	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
18:AS:48:ILE:HB	18:AS:59:VAL:HG23	1.90	0.53
41:DJ:23:LYS:NZ	41:DJ:142:ILE:HG12	2.23	0.53
38:BM:41:LEU:O	38:BM:94:ALA:N	2.42	0.53
49:BR:6:GLN:HE21	49:BR:7:SER:C	2.12	0.53
1:AA:955:U:H1'	1:AA:1227:A:H62	1.74	0.53
12:AM:10:ASP:HB2	12:AM:11:HIS:ND1	2.24	0.53
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.39	0.53
9:CJ:53:ILE:HG23	9:CJ:54:SER:H	1.74	0.53
37:BL:136:GLU:HA	37:BL:140:GLY:H	1.74	0.53
46:DU:64:ILE:HG13	46:DU:65:GLN:H	1.72	0.53
37:DL:136:GLU:HA	37:DL:140:GLY:H	1.74	0.53
1:AA:335:C:H2'	1:AA:336:A:H8	1.74	0.53
23:DB:277:G:H2'	23:DB:277:G:N3	2.24	0.53
18:AS:68:HIS:HB3	18:AS:72:GLU:CD	2.28	0.53
23:BB:513:A:O5'	23:BB:513:A:H8	1.91	0.53
48:DG:16:VAL:HG11	48:DG:44:HIS:CE1	2.44	0.53
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.08	0.53
1:AA:148:G:N3	1:AA:1446:A:H2	2.06	0.53
23:DB:1571:A:H2'	23:DB:1572:A:H8	1.73	0.53
42:DN:13:ASN:C	42:DN:15:SER:H	2.10	0.53
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.90	0.53
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.09	0.53
25:DC:245:THR:C	25:DC:247:TRP:H	2.12	0.53
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.73	0.53
1:CA:74:A:H2'	1:CA:75:G:C8	2.43	0.53
22:DA:91:C:H2'	22:DA:92:C:C6	2.43	0.53
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.24	0.53
1:CA:1108:G:H2'	1:CA:1109:C:H5'	1.90	0.53
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.07	0.53
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.74	0.53
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.44	0.53
53:D6:15:GLN:HA	53:D6:168:PHE:HE2	1.74	0.53
44:DQ:15:LYS:HD2	44:DQ:16:ILE:HD12	1.90	0.53
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.39	0.53
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.09	0.53
40:BH:82:SER:HB2	40:BH:94:ILE:HG12	1.90	0.53
1:AA:686:U:O4	1:AA:703:G:H1'	2.08	0.53
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.89	0.53
39:DX:20:ASN:HD22	39:DX:20:ASN:N	2.06	0.53
44:DQ:50:ARG:N	44:DQ:50:ARG:HD2	2.24	0.53
1:CA:580:C:H2'	1:CA:581:G:O4'	2.09	0.53
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.08	0.53
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.09	0.53
11:CL:20:VAL:O	11:CL:20:VAL:HG23	2.08	0.53
5:CF:3:HIS:NE2	5:CF:65:GLU:HG3	2.23	0.53
45:DS:6:LYS:HB3	45:DS:104:THR:HG23	1.90	0.53
35:DV:14:LYS:HE2	35:DV:18:ARG:HH21	1.74	0.53
22:BA:74:U:H2'	22:BA:75:G:O4'	2.08	0.53
48:BG:7:PRO:O	48:BG:8:VAL:CB	2.57	0.53
8:CI:26:LYS:N	8:CI:61:ASP:CB	2.71	0.53
47:BF:163:GLU:HA	47:BF:166:ARG:CD	2.32	0.53
44:DQ:51:GLN:HA	44:DQ:54:ARG:HD2	1.91	0.53
1:AA:764:C:N4	1:AA:812:G:H1	2.06	0.53
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.91	0.53
1:CA:839:C:H2'	1:CA:840:C:O4'	2.09	0.53
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.09	0.53
46:DU:95:PHE:CE1	46:DU:102:ILE:HB	2.33	0.53
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.12	0.53
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.23	0.53
11:AL:54:VAL:HG12	11:AL:55:ARG:N	2.22	0.53
23:BB:582:A:H2'	23:BB:583:G:C8	2.44	0.53
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.09	0.53
9:AJ:53:ILE:HG23	9:AJ:54:SER:H	1.73	0.53
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.43	0.53
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.90	0.53
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.43	0.53
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.08	0.53
2:AC:13:ILE:C	2:AC:15:LYS:H	2.12	0.53
1:CA:188:C:H2'	1:CA:189:A:O4'	2.09	0.53
47:BF:69:ALA:HB2	47:BF:82:TYR:HB3	1.91	0.53
53:D6:154:THR:HG23	53:D6:155:LYS:N	2.23	0.53
1:AA:939:G:H5''	6:AG:101:ARG:NH2	2.24	0.53
37:DL:19:LEU:O	37:DL:21:ARG:HG2	2.07	0.53
23:DB:2391:G:H1'	23:DB:2424:C:H41	1.74	0.53
23:BB:1987:A:H2'	23:BB:1988:G:H8	1.73	0.53
23:BB:2361:G:O2'	23:BB:2362:C:H5'	2.09	0.53
23:DB:1878:G:H2'	23:DB:1879:C:H6	1.73	0.53
3:AD:47:LEU:HD23	3:AD:51:GLY:C	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:245:G:H2'	23:BB:246:C:H6	1.72	0.53
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.09	0.53
1:CA:711:G:O2'	1:CA:712:A:H5'	2.07	0.53
29:DE:124:PHE:HD1	29:DE:125:SER:N	2.07	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
27:DK:3:GLN:HG2	27:DK:4:GLU:N	2.24	0.53
23:DB:755:U:H2'	23:DB:756:A:H8	1.74	0.53
1:CA:229:U:H2'	1:CA:230:G:H8	1.74	0.53
10:AK:16:SER:HA	10:AK:79:LYS:HE3	1.91	0.53
40:BH:27:ARG:H	40:BH:31:VAL:HG23	1.74	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
23:DB:965:C:O2'	23:DB:966:G:H5'	2.09	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
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.89	0.53
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.09	0.53
26:DD:15:PHE:HD1	26:DD:15:PHE:H	1.56	0.53
20:AB:40:ILE:HG21	20:AB:200:PRO:O	2.09	0.53
23:DB:2109:U:H2'	23:DB:2180:U:N3	2.22	0.53
51:BZ:33:LEU:HA	51:BZ:51:VAL:O	2.08	0.53
49:BR:49:ILE:HD12	49:BR:49:ILE:O	2.09	0.53
23:BB:2144:G:H5'	23:BB:2145:C:H5''	1.90	0.53
1:CA:270:A:H2'	1:CA:271:C:H6	1.74	0.53
27:BK:73:ASP:O	28:BP:74:GLN:HG3	2.09	0.53
23:DB:547:A:H2'	23:DB:547:A:N3	2.24	0.53
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.39	0.53
3:CD:98:ASP:HB3	3:CD:132:ALA:HB1	1.89	0.53
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.44	0.53
23:BB:560:C:H2'	23:BB:561:G:O4'	2.09	0.53
1:CA:337:G:H2'	1:CA:338:A:H8	1.73	0.53
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.09	0.53
1:CA:1320:C:O2'	1:CA:1321:U:H5'	2.09	0.53
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.43	0.53
1:CA:818:G:C3'	1:CA:819:A:H5''	2.39	0.53
18:AS:27:LYS:HG3	18:AS:28:LYS:HD2	1.90	0.53
1:CA:394:G:O2'	1:CA:395:C:H5'	2.09	0.53
23:DB:634:C:H2'	23:DB:635:C:C6	2.44	0.53
23:DB:6:A:H2'	23:DB:7:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:47:ASP:CG	7:AH:48:PHE:N	2.62	0.53
23:DB:1774:C:O2	23:DB:1774:C:H2'	2.09	0.53
1:CA:244:U:O4	1:CA:906:A:H1'	2.08	0.53
23:DB:2189:U:C2'	23:DB:2190:G:H5'	2.39	0.53
2:CC:40:GLN:HG3	2:CC:41:TYR:N	2.23	0.53
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.23	0.53
9:CJ:91:ASP:C	9:CJ:92:LEU:HD13	2.29	0.53
23:DB:771:G:O2'	23:DB:772:C:H5'	2.08	0.53
53:D6:167:GLU:O	53:D6:170:ALA:HB3	2.09	0.53
40:BH:48:GLU:HA	40:BH:51:ARG:NH2	2.23	0.53
1:AA:476:U:H2'	1:AA:477:C:C6	2.44	0.53
23:BB:817:C:H2'	23:BB:818:G:O4'	2.08	0.53
26:BD:125:TRP:CG	26:BD:160:LYS:HB3	2.44	0.53
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.74	0.53
1:CA:930:C:H2'	1:CA:931:C:H6	1.74	0.53
1:AA:142:G:N3	1:AA:196:A:H2	2.07	0.53
20:AB:133:ALA:O	20:AB:137:THR:HG23	2.09	0.53
6:AG:10:LYS:NZ	6:AG:10:LYS:HB2	2.24	0.53
21:CU:31:VAL:HG12	21:CU:31:VAL:O	2.09	0.53
23:DB:1647:U:H3'	23:DB:1647:U:P	2.49	0.53
23:DB:660:C:H2'	23:DB:661:A:H8	1.74	0.53
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.48	0.53
23:DB:2267:A:N6	23:DB:2272:U:C4	2.76	0.53
35:DV:77:VAL:HG11	38:DM:136:MET:O	2.09	0.53
40:DH:9:VAL:HG12	40:DH:12:LEU:HG	1.90	0.53
48:BG:123:GLU:HG2	48:BG:124:CYS:H	1.73	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
49:BR:58:VAL:HG22	49:BR:59:ILE:N	2.23	0.53
19:AT:43:LYS:H	19:AT:43:LYS:HD3	1.74	0.53
33:B1:9:LYS:N	33:B1:9:LYS:HD3	2.21	0.53
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.48	0.53
49:DR:6:GLN:HE21	49:DR:7:SER:C	2.11	0.53
23:BB:1244:A:H5''	37:BL:8:PRO:CD	2.35	0.53
23:BB:962:G:N2	38:BM:82:MET:HE2	2.24	0.53
2:CC:133:MET:O	2:CC:137:VAL:HG23	2.08	0.53
1:AA:82:G:H8	1:AA:82:G:O5'	1.92	0.53
40:BH:90:LEU:HD21	40:BH:146:VAL:CG2	2.34	0.53
23:BB:616:A:H3'	23:BB:617:G:C8	2.34	0.53
53:B6:61:PRO:HD3	53:B6:67:VAL:HG22	1.91	0.53
20:CB:64:GLY:O	20:CB:66:ILE:HG12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.91	0.53
23:BB:1445:G:H2'	23:BB:1446:C:C6	2.44	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
9:AJ:76:ILE:O	9:AJ:76:ILE:HD12	2.09	0.53
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.74	0.53
23:DB:2530:A:H5'	48:DG:174:LYS:HD2	1.90	0.53
23:BB:730:A:O2'	23:BB:731:C:H5'	2.08	0.53
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.08	0.53
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.73	0.53
35:BV:53:LYS:NZ	35:BV:54:ALA:HB3	2.24	0.53
40:BH:47:PHE:HA	40:BH:50:ARG:HH21	1.73	0.53
36:B2:10:LEU:HD21	36:B2:14:ARG:HH11	1.73	0.53
4:CE:25:LYS:HG3	4:CE:26:GLY:N	2.24	0.53
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.44	0.53
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.72	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
25:BC:86:ARG:HB3	25:BC:86:ARG:CZ	2.38	0.53
23:DB:466:A:N3	23:DB:683:U:H1'	2.24	0.53
22:BA:11:C:OP1	52:BW:71:LYS:HG2	2.09	0.53
45:BS:20:VAL:HG23	45:BS:23:LEU:HD12	1.90	0.53
53:B6:2:THR:HG23	53:B6:5:GLU:OE1	2.09	0.53
23:DB:393:C:O2'	23:DB:394:C:H5'	2.08	0.53
23:BB:264:C:O2'	23:BB:265:A:H5''	2.09	0.53
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.39	0.53
1:CA:212:G:H2'	1:CA:213:G:H8	1.74	0.53
37:DL:19:LEU:HD23	37:DL:31:GLY:HA3	1.90	0.53
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.44	0.53
1:CA:96:U:H2'	1:CA:97:G:C8	2.43	0.53
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.43	0.53
20:CB:159:ALA:HB1	20:CB:183:PHE:HE1	1.74	0.53
23:BB:41:C:H2'	23:BB:42:A:O4'	2.09	0.53
23:BB:2595:G:O6	25:BC:238:ASN:ND2	2.42	0.53
1:AA:229:U:H2'	1:AA:230:G:C8	2.43	0.53
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.44	0.53
1:CA:770:C:O2'	1:CA:771:G:H5'	2.08	0.53
14:AO:33:THR:HG23	14:AO:63:ARG:NH1	2.24	0.53
53:B6:64:ARG:HD2	53:B6:64:ARG:N	2.23	0.53
50:DT:7:LEU:HA	50:DT:9:LYS:HE3	1.89	0.53
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.92	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.09	0.53
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.28	0.53
53:D6:84:ARG:HB2	53:D6:84:ARG:CZ	2.39	0.53
27:BK:71:ARG:HE	27:BK:71:ARG:HA	1.73	0.53
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.91	0.53
1:CA:764:C:N4	1:CA:812:G:H1	2.07	0.53
35:DV:4:ILE:CD1	35:DV:61:LEU:HB3	2.39	0.53
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.24	0.53
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.08	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
23:DB:361:G:O2'	23:DB:362:A:H5'	2.09	0.53
25:BC:128:THR:HA	25:BC:190:THR:CA	2.38	0.53
49:BR:39:LEU:HA	49:BR:53:PHE:HA	1.91	0.53
16:AQ:60:ILE:HG12	16:AQ:72:TRP:HE3	1.73	0.53
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.24	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
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.09	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
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.91	0.53
23:BB:2543:G:H2'	23:BB:2544:G:O4'	2.08	0.53
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.09	0.53
31:D0:47:TYR:CZ	31:D0:52:LYS:HG3	2.44	0.53
23:BB:63:A:H8	23:BB:63:A:OP2	1.92	0.53
26:DD:125:TRP:CG	26:DD:160:LYS:HB3	2.44	0.53
1:CA:1342:C:H5'	8:CI:127:SER:HA	1.91	0.53
1:AA:366:A:H2	1:AA:394:G:H1	1.57	0.53
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.24	0.53
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.23	0.53
23:DB:679:C:H2'	23:DB:680:C:H6	1.74	0.53
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.09	0.53
3:AD:147:LYS:HD3	3:AD:148:ALA:N	2.24	0.53
43:DO:111:ARG:HB2	43:DO:117:PHE:CZ	2.44	0.53
23:DB:6:A:O2'	23:DB:7:G:H5'	2.09	0.53
7:AH:40:LYS:HD2	7:AH:47:ASP:HA	1.90	0.53
23:BB:1046:A:C4'	23:BB:1047:G:H5''	2.39	0.53
23:DB:252:G:O2'	23:DB:253:C:H5'	2.09	0.53
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.91	0.53
47:DF:121:PHE:HB3	47:DF:127:TYR:CE1	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.44	0.53
16:CQ:22:VAL:HG12	16:CQ:23:ALA:N	2.24	0.53
22:DA:54:G:H21	47:DF:25:MET:HE3	1.74	0.53
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.09	0.53
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.43	0.53
1:CA:1374:A:H4'	6:CG:27:ASN:OD1	2.10	0.53
48:DG:59:ASP:O	48:DG:63:GLN:HB2	2.09	0.53
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.08	0.53
23:BB:2332:C:H1'	23:BB:2336:A:N7	2.23	0.53
1:CA:1398:A:H8	1:CA:1398:A:H5'	1.74	0.53
34:B3:50:SER:C	34:B3:52:GLY:H	2.12	0.53
23:BB:2248:C:H2'	23:BB:2249:U:O4'	2.09	0.53
23:DB:483:A:H2'	23:DB:484:C:O4'	2.09	0.53
1:AA:696:A:H2'	1:AA:697:U:C6	2.44	0.52
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	2.08	0.52
23:DB:2266:A:C4	23:DB:2272:U:H5	2.26	0.52
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.30	0.52
35:DV:79:ARG:NH1	38:DM:134:THR:HG21	2.24	0.52
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.10	0.52
48:DG:25:ILE:HD13	48:DG:74:MET:HE2	1.90	0.52
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.96	0.52
45:DS:28:LYS:HD3	45:DS:69:LEU:O	2.09	0.52
49:DR:49:ILE:HG21	49:DR:54:VAL:CA	2.39	0.52
44:DQ:90:ASP:O	44:DQ:94:LEU:HB2	2.08	0.52
45:BS:31:GLN:C	45:BS:33:LEU:H	2.13	0.52
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.91	0.52
40:BH:73:ASN:ND2	40:BH:73:ASN:N	2.56	0.52
2:AC:126:ARG:HH22	2:AC:190:THR:CG2	2.21	0.52
19:AT:79:THR:HA	19:AT:82:ILE:CG1	2.39	0.52
23:BB:138:U:H2'	23:BB:140:C:C4'	2.39	0.52
29:DE:18:THR:HG22	29:DE:106:LYS:HZ1	1.74	0.52
23:DB:1204:A:H1'	23:DB:1206:G:N7	2.24	0.52
48:BG:155:PRO:HA	48:BG:170:THR:HA	1.90	0.52
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.09	0.52
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.91	0.52
10:AK:95:THR:HG23	10:AK:96:ILE:H	1.73	0.52
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.91	0.52
27:BK:19:VAL:HB	27:BK:41:ILE:HD11	1.92	0.52
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.74	0.52
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.09	0.52
42:BN:78:LYS:HG3	42:BN:83:LEU:HG	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.71	0.52
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.39	0.52
23:BB:738:G:H2'	23:BB:739:A:C8	2.44	0.52
1:CA:1310:G:H2'	1:CA:1311:A:O4'	2.09	0.52
1:AA:1060:U:H5''	9:AJ:53:ILE:HG12	1.90	0.52
35:BV:9:ARG:HA	35:BV:41:GLU:OE2	2.09	0.52
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.73	0.52
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.44	0.52
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.44	0.52
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.09	0.52
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.09	0.52
20:CB:22:TRP:CZ3	20:CB:24:PRO:HA	2.43	0.52
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.90	0.52
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.08	0.52
23:BB:83:A:N1	23:BB:101:A:H5'	2.24	0.52
23:BB:1341:G:H3'	23:BB:1397:U:O2	2.09	0.52
47:BF:78:ILE:C	47:BF:79:ARG:HG3	2.28	0.52
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.74	0.52
23:DB:2284:A:OP2	33:D1:5:ARG:HG3	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:DB:1401:G:H2'	23:DB:1402:U:C6	2.44	0.52
1:CA:74:A:H2'	1:CA:75:G:H8	1.74	0.52
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.08	0.52
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.44	0.52
2:AC:39:ARG:NH1	2:AC:56:ILE:HD12	2.23	0.52
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.09	0.52
23:BB:2830:C:H1'	23:BB:2836:U:O4'	2.08	0.52
18:AS:54:ARG:HB3	18:AS:55:GLN:HE21	1.74	0.52
1:CA:1356:G:O2'	1:CA:1357:A:H5'	2.09	0.52
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.90	0.52
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.90	0.52
3:CD:90:LEU:H	3:CD:90:LEU:HD22	1.74	0.52
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.44	0.52
1:AA:1049:U:H2'	13:AN:2:LYS:HD3	1.91	0.52
18:AS:80:ARG:HA	18:AS:80:ARG:HE	1.74	0.52
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.09	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.74	0.52
37:BL:81:ASP:HA	37:BL:84:LYS:HE3	1.89	0.52
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.74	0.52
25:BC:132:ARG:HD3	25:BC:166:ARG:NH1	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:155:GLU:O	29:DE:159:LEU:HB2	2.08	0.52
47:BF:32:LYS:H	47:BF:95:MET:HE1	1.74	0.52
45:BS:25:ARG:HE	45:BS:74:ILE:HG23	1.74	0.52
10:CK:43:TRP:HA	10:CK:69:CYS:SG	2.49	0.52
8:AI:93:LEU:HD13	8:AI:97:LEU:HD11	1.91	0.52
23:DB:899:A:H2'	23:DB:900:A:O4'	2.09	0.52
22:DA:74:U:H2'	22:DA:75:G:C8	2.44	0.52
35:BV:2:PHE:O	35:BV:4:ILE:HG13	2.09	0.52
45:DS:55:ILE:O	45:DS:58:ALA:HB3	2.09	0.52
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.44	0.52
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.08	0.52
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.09	0.52
4:AE:25:LYS:HG3	4:AE:26:GLY:N	2.24	0.52
16:CQ:45:VAL:HG12	16:CQ:46:HIS:H	1.74	0.52
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.75	0.52
23:BB:2060:A:C3'	29:BE:63:LYS:HZ1	2.23	0.52
33:B1:36:LYS:HG2	33:B1:47:ILE:HG13	1.91	0.52
42:DN:62:ASN:O	42:DN:66:ALA:HB2	2.08	0.52
11:AL:80:LEU:HB3	11:AL:97:VAL:CG2	2.39	0.52
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.39	0.52
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.45	0.52
22:DA:106:G:H2'	22:DA:107:G:C8	2.43	0.52
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.22	0.52
37:BL:79:LEU:HB2	37:BL:113:ALA:HB3	1.91	0.52
20:CB:162:VAL:CG1	20:CB:184:ALA:HB2	2.39	0.52
23:BB:1654:A:H61	23:BB:2049:G:P	2.32	0.52
1:AA:1404:C:H2'	1:AA:1405:G:H8	1.73	0.52
23:BB:1841:U:H2'	23:BB:1842:G:C8	2.43	0.52
25:DC:15:VAL:HG22	25:DC:205:GLY:HA3	1.91	0.52
1:CA:1458:G:H5'	19:CT:26:MET:HB2	1.91	0.52
46:BU:54:PRO:HG2	46:BU:55:GLY:H	1.73	0.52
2:CC:13:ILE:O	2:CC:15:LYS:N	2.42	0.52
1:CA:90:C:H2'	1:CA:91:U:C6	2.44	0.52
22:BA:94:A:H2'	22:BA:95:U:O4'	2.09	0.52
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.09	0.52
23:BB:1930:G:H2'	23:BB:1968:G:C6	2.44	0.52
22:BA:116:G:H4'	43:BO:54:VAL:HG22	1.91	0.52
1:CA:327:A:O2'	1:CA:328:C:O4'	2.25	0.52
1:AA:501:C:H2'	1:AA:502:A:C8	2.44	0.52
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.23	0.52
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD13	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:231:A:H3'	23:DB:232:G:H8	1.75	0.52
23:DB:1930:G:H22	23:DB:1969:A:P	2.32	0.52
23:DB:1930:G:H2'	23:DB:1968:G:O6	2.08	0.52
1:CA:229:U:H2'	1:CA:230:G:C8	2.45	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.24	0.52
1:AA:1367:C:H5''	8:AI:115:VAL:HG23	1.91	0.52
23:DB:1779:U:C5	23:DB:1784:A:N7	2.78	0.52
23:DB:93:G:H2'	23:DB:94:A:O4'	2.09	0.52
23:DB:431:U:O2'	23:DB:432:A:H5'	2.09	0.52
1:CA:142:G:N3	1:CA:196:A:H2	2.07	0.52
27:BK:3:GLN:HG2	27:BK:4:GLU:N	2.23	0.52
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.10	0.52
23:DB:2667:C:H2'	23:DB:2668:G:O4'	2.09	0.52
1:AA:140:U:H2'	1:AA:141:G:H8	1.74	0.52
23:DB:2852:G:O2'	23:DB:2853:C:H5'	2.10	0.52
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.72	0.52
23:BB:401:A:H2'	23:BB:402:A:C8	2.43	0.52
23:BB:1965:C:H5''	23:BB:1966:A:H2'	1.91	0.52
1:AA:343:U:O2'	1:AA:344:A:H2'	2.08	0.52
23:DB:2309:A:H61	47:DF:75:GLY:HA3	1.75	0.52
23:BB:242:G:H5''	34:B3:63:TYR:CE2	2.44	0.52
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.39	0.52
37:BL:92:LEU:CD2	37:BL:124:GLY:HA3	2.39	0.52
25:BC:185:ALA:C	25:BC:187:CYS:H	2.12	0.52
53:D6:80:GLU:HB2	53:D6:99:LEU:CD1	2.40	0.52
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.73	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
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.09	0.52
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	1.91	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
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HA	1.75	0.52
28:DP:75:THR:CG2	28:DP:76:HIS:H	2.17	0.52
40:BH:112:LYS:C	40:BH:114:GLU:H	2.13	0.52
25:DC:28:PRO:HB3	25:DC:81:GLU:OE1	2.09	0.52
23:DB:2250:G:H8	23:DB:2250:G:O5'	1.93	0.52
9:AJ:52:LEU:HG	9:AJ:62:ARG:NE	2.24	0.52
29:DE:200:LEU:O	29:DE:201:ALA:HB3	2.09	0.52
51:DZ:33:LEU:HA	51:DZ:51:VAL:O	2.10	0.52
41:BJ:58:ASN:CA	41:BJ:127:GLY:HA2	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.91	0.52
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	2.08	0.52
1:AA:81:A:H2'	1:AA:83:C:C5	2.44	0.52
24:DI:126:ARG:HB3	24:DI:126:ARG:NH1	2.24	0.52
40:DH:119:ASN:HD21	40:DH:121:VAL:HG13	1.74	0.52
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.91	0.52
42:DN:83:LEU:HA	42:DN:86:ARG:CG	2.36	0.52
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.45	0.52
38:DM:41:LEU:HD13	38:DM:46:ILE:HG22	1.91	0.52
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.24	0.52
43:DO:106:LEU:CA	43:DO:109:ALA:HB3	2.39	0.52
29:BE:108:ILE:HG12	37:BL:2:ARG:NH2	2.24	0.52
23:BB:1657:U:C2'	23:BB:1658:C:H5'	2.40	0.52
20:AB:139:GLU:HG2	20:AB:143:LEU:CD1	2.39	0.52
23:DB:1033:U:C5	32:D4:15:LYS:HE3	2.45	0.52
23:BB:2730:C:H2'	23:BB:2731:G:C8	2.45	0.52
30:BY:7:THR:HG23	30:BY:34:THR:OG1	2.09	0.52
43:BO:47:VAL:O	43:BO:48:LEU:HD23	2.09	0.52
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.09	0.52
23:DB:2679:A:H2'	23:DB:2680:U:C6	2.45	0.52
1:CA:299:G:H2'	1:CA:300:A:C8	2.44	0.52
12:AM:78:ARG:HH22	18:AS:64:GLU:HB2	1.73	0.52
1:CA:208:U:H2'	1:CA:210:C:C4	2.44	0.52
11:AL:3:VAL:CG1	16:AQ:33:TYR:HB3	2.39	0.52
1:CA:98:A:H2'	1:CA:99:C:C6	2.44	0.52
23:DB:338:G:N2	23:DB:339:U:H1'	2.23	0.52
22:DA:32:U:H1'	22:DA:52:A:N7	2.23	0.52
23:DB:738:G:H1'	23:DB:759:G:N2	2.24	0.52
27:BK:105:ARG:HB3	27:BK:122:VAL:HG12	1.91	0.52
23:BB:2757:A:H2	48:BG:63:GLN:HE22	1.56	0.52
38:DM:65:ILE:HG23	38:DM:103:TYR:CE2	2.45	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
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.09	0.52
14:AO:21:ASP:C	14:AO:23:GLY:H	2.12	0.52
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	1.89	0.52
23:BB:765:C:O2'	23:BB:766:U:H5'	2.10	0.52
23:DB:101:A:OP1	23:DB:101:A:O4'	2.26	0.52
21:AU:36:PHE:O	21:AU:39:LYS:HG3	2.08	0.52
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.09	0.52
47:DF:137:PHE:O	47:DF:139:GLU:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.77	0.52
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.25	0.52
20:CB:40:ILE:HG21	20:CB:200:PRO:O	2.09	0.52
49:DR:40:MET:HG3	49:DR:48:LYS:HA	1.92	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
23:DB:995:C:O4'	44:DQ:56:PHE:HD1	1.93	0.52
28:DP:4:ILE:C	28:DP:6:GLN:N	2.61	0.52
27:DK:73:ASP:O	28:DP:74:GLN:HG3	2.09	0.52
13:AN:9:GLU:OE2	13:AN:60:ARG:HG2	2.10	0.52
20:AB:65:LYS:HB2	20:AB:158:ASP:OD2	2.09	0.52
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.10	0.52
47:BF:125:GLY:HA2	47:BF:162:ASP:CA	2.36	0.52
51:DZ:32:ASN:C	51:DZ:33:LEU:HD12	2.30	0.52
36:D2:16:HIS:HB3	36:D2:21:ARG:NH1	2.24	0.52
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.70	0.52
43:DO:83:LEU:HD12	43:DO:87:ILE:O	2.09	0.52
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.45	0.52
23:BB:279:A:N1	23:BB:362:A:H4'	2.25	0.52
11:AL:49:ARG:HD2	11:AL:49:ARG:H	1.75	0.52
23:DB:2880:C:C1'	42:DN:91:ALA:HB3	2.39	0.52
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.30	0.52
1:AA:1226:C:H5''	12:AM:101:THR:CB	2.40	0.52
23:DB:1228:G:O2'	23:DB:1229:C:H5'	2.10	0.52
23:BB:2243:U:H2'	23:BB:2244:U:H6	1.71	0.52
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.24	0.52
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	2.09	0.52
23:DB:2594:C:O2'	23:DB:2595:G:H5'	2.10	0.52
23:DB:289:G:H2'	23:DB:290:U:H6	1.71	0.52
1:CA:818:G:C2'	1:CA:819:A:H5''	2.39	0.52
19:AT:60:GLN:HB3	19:AT:65:LEU:HD23	1.91	0.52
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.09	0.52
23:BB:1827:U:O2'	23:BB:1828:G:H5'	2.09	0.52
23:BB:2286:G:C8	23:BB:2286:G:H5'	2.44	0.52
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.24	0.52
1:CA:473:U:H2'	1:CA:474:G:C8	2.44	0.52
23:DB:2360:G:P	34:D3:50:SER:HB3	2.49	0.52
1:AA:1480:A:O2'	1:AA:1481:U:H5'	2.10	0.52
1:AA:499:A:H4'	1:AA:500:G:OP1	2.09	0.52
41:BJ:72:LYS:CB	41:BJ:89:PHE:H	2.22	0.52
1:AA:707:U:H2'	1:AA:708:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:709:U:H2'	1:AA:710:G:C8	2.43	0.52
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.44	0.52
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.10	0.52
23:BB:1831:G:O2'	23:BB:1832:C:H5'	2.08	0.52
21:CU:11:PHE:O	21:CU:13:VAL:N	2.42	0.52
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.44	0.52
1:CA:98:A:H2'	1:CA:99:C:H6	1.75	0.52
30:DY:28:LEU:HA	30:DY:33:HIS:HD2	1.74	0.52
23:BB:2757:A:H2	48:BG:63:GLN:NE2	2.07	0.52
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.52
26:BD:101:PHE:O	26:BD:180:VAL:HG11	2.09	0.52
53:D6:102:ASN:O	53:D6:104:PRO:HD3	2.09	0.52
23:DB:1640:A:H5'	23:DB:1640:A:H8	1.74	0.52
3:AD:34:GLU:O	3:AD:34:GLU:HG3	2.09	0.52
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.45	0.52
47:DF:102:LEU:O	47:DF:102:LEU:HD13	2.10	0.52
9:AJ:37:ARG:NE	9:AJ:37:ARG:HA	2.25	0.52
5:CF:61:LEU:HD12	5:CF:63:ASN:OD1	2.10	0.52
43:BO:69:ASP:O	43:BO:72:ALA:HB3	2.09	0.52
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.90	0.52
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.10	0.52
26:BD:9:VAL:O	28:BP:4:ILE:HD11	2.10	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
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.91	0.52
33:B1:6:GLU:HB2	33:B1:52:LYS:HZ3	1.73	0.52
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.10	0.52
23:DB:1031:G:N3	32:D4:38:GLY:O	2.43	0.52
1:CA:16:A:O2'	4:CE:20:VAL:HG13	2.10	0.52
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.25	0.52
19:CT:38:ILE:HD11	19:CT:82:ILE:CG2	2.36	0.52
48:BG:94:ARG:HE	48:BG:94:ARG:C	2.13	0.52
53:B6:58:VAL:HA	53:B6:67:VAL:O	2.09	0.52
12:AM:28:ARG:NH1	12:AM:32:ILE:HD12	2.24	0.52
42:DN:62:ASN:HD22	42:DN:62:ASN:N	2.07	0.52
11:AL:20:VAL:HG23	11:AL:20:VAL:O	2.09	0.52
6:CG:50:ALA:CB	6:CG:57:GLU:HG3	2.39	0.52
1:AA:236:A:H2'	1:AA:237:G:H8	1.73	0.52
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.09	0.52
33:B1:7:LYS:HA	33:B1:23:THR:HG22	1.91	0.52
18:CS:68:HIS:HB3	18:CS:72:GLU:CD	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1266:G:H22	23:BB:2012:G:H2'	1.73	0.52
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.74	0.52
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.74	0.52
7:AH:77:VAL:HG21	7:AH:127:TYR:CE1	2.45	0.52
23:BB:1563:U:H2'	23:BB:1564:C:C6	2.44	0.52
23:BB:110:G:O2'	23:BB:111:A:H5'	2.10	0.52
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.44	0.52
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.09	0.52
5:CF:81:ASN:O	5:CF:83:ALA:N	2.43	0.52
25:BC:245:THR:C	25:BC:247:TRP:H	2.13	0.52
23:BB:6:A:H2'	23:BB:7:G:H8	1.75	0.52
1:CA:1240:U:O4	6:CG:29:LEU:HG	2.09	0.52
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.10	0.52
1:CA:991:U:H2'	1:CA:1212:U:O2	2.09	0.52
40:BH:41:LYS:C	40:BH:43:ASN:H	2.11	0.52
23:BB:483:A:H2'	23:BB:484:C:O4'	2.09	0.52
3:CD:55:ARG:HH11	3:CD:55:ARG:HG3	1.75	0.52
26:BD:122:VAL:H	26:BD:127:PHE:HB2	1.74	0.52
38:DM:31:PHE:HD1	38:DM:105:MET:HB3	1.75	0.52
23:BB:755:U:H2'	23:BB:756:A:C8	2.44	0.52
33:B1:39:ASP:OD1	33:B1:42:VAL:HG23	2.10	0.52
26:DD:101:PHE:O	26:DD:102:ALA:HB2	2.10	0.52
23:BB:2594:C:O2'	23:BB:2595:G:H5'	2.09	0.52
1:AA:229:U:H2'	1:AA:230:G:H8	1.73	0.52
16:AQ:10:ARG:NH2	16:AQ:55:GLY:HA2	2.25	0.52
29:BE:49:ARG:O	29:BE:74:LYS:HD3	2.09	0.52
7:AH:55:LYS:HA	7:AH:55:LYS:HE3	1.90	0.52
1:CA:1269:A:H2	1:CA:1312:G:N3	2.07	0.52
23:DB:925:A:O2'	23:DB:926:G:H5'	2.09	0.52
18:CS:50:VAL:O	18:CS:57:VAL:HG22	2.09	0.52
1:CA:972:C:P	9:CJ:59:LYS:HD3	2.50	0.52
23:DB:2487:G:H2'	23:DB:2488:G:C8	2.44	0.52
34:B3:32:LEU:HA	34:B3:35:LYS:HD2	1.92	0.52
23:DB:1941:C:O2	53:D6:133:ARG:NH2	2.42	0.52
29:BE:188:MET:HG3	29:BE:192:ALA:HB3	1.92	0.52
9:CJ:9:ARG:CB	9:CJ:99:GLN:HB2	2.18	0.52
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.77	0.52
23:BB:2364:C:O2'	23:BB:2365:G:H5'	2.10	0.52
53:D6:80:GLU:HB2	53:D6:99:LEU:HD13	1.92	0.52
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.77	0.52
23:BB:2259:U:H2'	23:BB:2260:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:899:A:H2'	23:DB:900:A:C8	2.44	0.52
35:DV:28:ALA:CB	35:DV:89:ILE:HD12	2.40	0.52
20:CB:42:LEU:HA	20:CB:45:THR:OG1	2.09	0.52
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.18	0.52
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.44	0.52
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.39	0.52
11:AL:113:ARG:NH2	11:AL:120:ARG:HA	2.24	0.52
9:CJ:52:LEU:HG	9:CJ:62:ARG:NE	2.21	0.52
13:AN:24:ALA:O	13:AN:27:LYS:HD2	2.09	0.52
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.09	0.52
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.09	0.52
49:BR:49:ILE:HG21	49:BR:54:VAL:CA	2.39	0.52
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.37	0.52
23:DB:1411:U:H2'	23:DB:1412:U:C6	2.44	0.52
19:CT:34:VAL:HG11	19:CT:78:LEU:HD13	1.92	0.52
32:B4:17:VAL:HG11	32:B4:19:ARG:HE	1.74	0.52
1:CA:1172:C:O2'	1:CA:1173:U:H5'	2.10	0.52
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.45	0.52
52:BW:10:ARG:O	52:BW:11:ASN:HB2	2.09	0.52
2:CC:71:ARG:O	2:CC:75:VAL:HG23	2.10	0.52
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.09	0.52
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.10	0.52
23:DB:493:G:H2'	23:DB:494:G:O4'	2.09	0.52
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.24	0.52
25:BC:116:GLN:HG2	25:BC:117:SER:N	2.25	0.52
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.74	0.52
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.24	0.52
23:BB:850:U:H5"	30:BY:18:LYS:HD3	1.91	0.52
12:AM:2:ARG:HD3	12:AM:2:ARG:N	2.24	0.52
1:AA:453:G:H2'	1:AA:454:G:C8	2.44	0.52
1:AA:367:U:OP1	1:AA:395:C:H1'	2.10	0.52
23:DB:1473:G:O2'	23:DB:1474:U:H5'	2.10	0.52
1:CA:301:G:H2'	1:CA:302:G:C8	2.43	0.52
23:DB:2377:A:H2'	23:DB:2378:A:H8	1.73	0.52
1:AA:109:A:H4'	1:AA:110:C:OP2	2.09	0.52
23:DB:1958:C:H2'	23:DB:1959:G:H8	1.74	0.52
1:AA:807:A:H2'	1:AA:808:C:C6	2.44	0.52
23:BB:912:C:H2'	23:BB:913:U:C6	2.45	0.52
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.74	0.52
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.73	0.52
23:DB:1987:A:H2'	23:DB:1988:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.75	0.52
53:B6:73:GLN:HG3	53:B6:74:ASN:N	2.25	0.52
50:BT:45:ALA:HA	50:BT:48:GLN:CG	2.39	0.52
1:AA:720:C:H5''	17:AR:40:PRO:HA	1.92	0.52
22:BA:20:G:H2'	22:BA:21:G:H8	1.75	0.52
1:CA:490:C:H2'	1:CA:491:G:C8	2.44	0.52
39:DX:56:LEU:O	39:DX:57:LEU:HB2	2.09	0.52
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.45	0.52
1:AA:113:G:H2'	1:AA:114:U:C6	2.45	0.52
1:AA:770:C:O2'	1:AA:771:G:H5'	2.09	0.52
6:CG:91:ARG:CB	6:CG:92:PRO:HD2	2.40	0.52
9:CJ:37:ARG:NE	9:CJ:37:ARG:HA	2.25	0.52
1:AA:160:A:H2'	1:AA:161:A:O4'	2.08	0.52
1:CA:323:U:H2'	1:CA:324:G:O4'	2.09	0.52
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.25	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
21:CU:36:PHE:HD2	21:CU:39:LYS:HB2	1.75	0.52
29:BE:141:MET:O	29:BE:143:LEU:HG	2.09	0.52
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.10	0.52
43:DO:70:ALA:C	43:DO:72:ALA:H	2.13	0.52
47:BF:134:GLN:OE1	47:BF:136:ILE:HA	2.09	0.52
40:DH:44:ILE:O	40:DH:48:GLU:HB2	2.10	0.52
48:DG:34:ARG:HD3	48:DG:34:ARG:N	2.24	0.52
26:DD:90:PHE:HD2	26:DD:94:GLN:HG3	1.75	0.52
53:B6:30:THR:HB	53:B6:183:ILE:N	2.24	0.52
48:BG:23:ILE:HD11	48:BG:42:VAL:HG11	1.92	0.52
41:DJ:45:THR:HG23	41:DJ:45:THR:O	2.09	0.52
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.40	0.52
45:BS:28:LYS:HD3	45:BS:69:LEU:O	2.10	0.52
25:BC:28:PRO:HB3	25:BC:81:GLU:OE1	2.09	0.52
23:BB:370:G:O2'	23:BB:423:A:H3'	2.09	0.52
49:BR:54:VAL:HG13	49:BR:56:GLY:O	2.09	0.52
3:CD:60:VAL:CB	3:CD:194:ILE:HD11	2.35	0.52
1:CA:1329:A:OP1	12:CM:28:ARG:HB2	2.08	0.52
50:DT:25:GLU:HA	50:DT:28:ASN:O	2.10	0.52
29:DE:48:THR:HG23	29:DE:88:ARG:HH12	1.74	0.52
42:DN:81:ASN:O	42:DN:85:PRO:HD2	2.09	0.52
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.37	0.52
38:DM:41:LEU:O	38:DM:94:ALA:N	2.42	0.52
35:BV:79:ARG:HA	35:BV:86:LEU:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.45	0.52
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.24	0.52
27:DK:64:ARG:HB2	27:DK:83:ALA:HB3	1.92	0.52
1:AA:483:C:H2'	1:AA:484:G:C8	2.45	0.52
20:CB:96:LEU:HB2	20:CB:99:MET:CE	2.39	0.52
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.73	0.52
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.09	0.52
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.24	0.52
1:CA:178:C:O2'	1:CA:179:A:H5'	2.10	0.52
7:CH:63:LYS:HD2	7:CH:70:VAL:HG21	1.90	0.52
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.91	0.52
22:BA:13:G:H2'	22:BA:14:U:H5''	1.92	0.52
23:BB:2680:U:P	26:BD:114:LYS:HB3	2.50	0.52
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.25	0.52
5:CF:45:ARG:HG2	5:CF:46:GLN:N	2.25	0.52
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.92	0.52
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.45	0.52
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.45	0.52
1:AA:412:A:H1'	1:AA:413:G:C8	2.45	0.52
1:AA:999:C:H2'	1:AA:1000:A:H8	1.72	0.52
1:CA:109:A:H4'	1:CA:110:C:OP2	2.10	0.52
23:DB:1339:G:H21	23:DB:1603:A:H1'	1.75	0.52
23:BB:1376:C:H3'	57:BB:3500:HOH:O	2.09	0.52
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.25	0.52
20:CB:10:LYS:HD3	20:CB:211:LEU:HD21	1.91	0.52
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.09	0.52
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.74	0.52
34:B3:24:LYS:HZ2	34:B3:28:LEU:HB3	1.74	0.52
48:BG:59:ASP:O	48:BG:63:GLN:HB2	2.09	0.52
23:DB:1965:C:H5''	23:DB:1966:A:H2'	1.91	0.52
39:DX:45:GLN:O	39:DX:47:ARG:N	2.42	0.52
19:AT:42:ASP:OD1	19:AT:44:ALA:HB3	2.10	0.52
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.74	0.52
23:BB:84:A:H4'	23:BB:85:G:O5'	2.10	0.52
23:DB:2013:A:N3	45:DS:88:ARG:NH1	2.58	0.52
23:BB:2322:A:H3'	23:BB:2323:G:H8	1.74	0.52
25:DC:20:ASN:ND2	25:DC:23:LEU:HD13	2.25	0.52
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.45	0.52
23:DB:944:C:H2'	57:DB:3331:HOH:O	2.09	0.52
29:BE:115:GLN:O	29:BE:117:ARG:HG3	2.09	0.52
23:BB:2353:G:H1'	52:BW:30:VAL:HG13	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:50:VAL:O	52:BW:59:PHE:HB3	2.09	0.52
47:BF:137:PHE:O	47:BF:139:GLU:N	2.42	0.52
27:DK:71:ARG:HA	27:DK:71:ARG:HE	1.75	0.52
13:CN:24:ALA:O	13:CN:27:LYS:HD2	2.09	0.52
48:DG:17:LYS:CA	48:DG:17:LYS:HZ2	2.22	0.52
26:BD:178:VAL:HB	26:BD:188:LEU:CB	2.36	0.52
53:B6:38:LEU:HD22	53:B6:83:ILE:HD12	1.92	0.52
22:BA:103:U:O2'	22:BA:104:A:H5'	2.09	0.52
35:BV:4:ILE:HD11	35:BV:61:LEU:HB3	1.92	0.52
13:AN:46:LYS:NZ	18:AS:10:ILE:H	2.06	0.52
1:CA:960:U:H4'	1:CA:961:U:C5'	2.39	0.52
13:CN:9:GLU:OE2	13:CN:60:ARG:HG2	2.09	0.52
44:DQ:94:LEU:CD1	49:DR:13:ARG:HB2	2.40	0.52
25:BC:93:VAL:HG21	25:BC:115:ILE:HD11	1.92	0.52
10:AK:55:ARG:NH1	10:AK:60:PHE:HD1	2.05	0.52
19:AT:79:THR:HA	19:AT:82:ILE:HG12	1.91	0.52
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	1.92	0.52
23:DB:1060:U:O2	23:DB:1088:A:C8	2.63	0.52
1:CA:378:G:O2'	1:CA:379:C:H5'	2.09	0.52
29:DE:18:THR:HG22	29:DE:106:LYS:CE	2.40	0.52
29:DE:188:MET:HG2	29:DE:193:VAL:CG2	2.36	0.52
12:CM:19:THR:HG22	12:CM:29:SER:CB	2.40	0.52
40:DH:131:SER:HB2	40:DH:141:LYS:CA	2.40	0.52
12:AM:29:SER:O	12:AM:32:ILE:HG22	2.10	0.52
43:BO:110:ALA:O	43:BO:115:LEU:HB2	2.10	0.52
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.45	0.52
32:D4:7:VAL:HG23	32:D4:35:GLN:CB	2.38	0.52
6:CG:21:LEU:HG	6:CG:22:LEU:H	1.75	0.52
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.10	0.52
27:DK:39:ILE:HD13	27:DK:39:ILE:H	1.75	0.52
26:BD:113:SER:HB3	26:BD:167:ASN:HA	1.92	0.52
23:DB:454:A:H3'	23:DB:455:C:H5'	1.92	0.52
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.45	0.52
23:BB:1176:U:O5'	23:BB:1176:U:H6	1.93	0.52
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.45	0.52
1:AA:1137:C:H1'	1:AA:1138:G:N1	2.24	0.52
1:AA:1316:G:H5'	1:AA:1317:C:OP2	2.09	0.52
3:CD:84:ASN:HD22	4:CE:101:GLY:HA2	1.73	0.52
7:AH:79:ARG:NH1	7:AH:82:LEU:HB3	2.25	0.52
23:BB:1418:G:H1'	23:BB:1580:A:H61	1.75	0.52
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:548:G:H5'	23:BB:549:G:C4	2.44	0.52
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.74	0.52
44:DQ:77:LYS:O	44:DQ:80:ASN:HB3	2.09	0.52
20:CB:172:ILE:HG22	20:CB:176:ASN:HD21	1.74	0.52
23:BB:263:G:H2'	23:BB:264:C:O4'	2.10	0.52
23:DB:1509:A:H5'	23:DB:1510:G:H5'	1.91	0.52
23:DB:1829:A:H2'	23:DB:1830:C:H5'	1.92	0.52
53:D6:76:LEU:HD11	53:D6:97:ASP:C	2.30	0.52
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.10	0.52
30:BY:4:ILE:HD13	30:BY:58:GLU:HG3	1.90	0.52
23:BB:2311:A:O2'	47:BF:84:ILE:HG21	2.10	0.52
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.10	0.52
7:CH:102:VAL:HG12	7:CH:125:ILE:HD12	1.92	0.52
1:AA:1110:A:H2'	1:AA:1111:A:C8	2.45	0.52
6:CG:130:LYS:N	6:CG:134:VAL:HG21	2.25	0.52
38:BM:31:PHE:HD1	38:BM:105:MET:HB3	1.74	0.52
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.23	0.52
10:AK:16:SER:HA	10:AK:79:LYS:HG2	1.91	0.52
20:AB:130:LYS:O	20:AB:134:LEU:HG	2.09	0.52
1:CA:620:C:N1	3:CD:131:ILE:HD13	2.24	0.52
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.57	0.52
23:BB:433:C:H2'	23:BB:434:U:C6	2.45	0.52
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.44	0.52
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.09	0.52
38:DM:33:LEU:HD22	38:DM:128:THR:HB	1.92	0.52
23:DB:603:A:H4'	23:DB:604:G:O5'	2.10	0.52
25:BC:264:LYS:HG3	25:BC:265:PHE:CD2	2.45	0.52
37:BL:23:ILE:HD12	49:BR:84:ARG:HE	1.74	0.52
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.09	0.52
50:DT:64:LYS:H	50:DT:64:LYS:HD2	1.75	0.52
23:DB:936:A:H2'	23:DB:937:C:C6	2.45	0.52
23:BB:2712:C:H2'	23:BB:2714:G:O3'	2.10	0.52
1:AA:1269:A:H2	1:AA:1312:G:N3	2.08	0.52
9:AJ:9:ARG:CB	9:AJ:99:GLN:HB2	2.20	0.52
22:DA:40:U:H1'	22:DA:43:C:C5	2.44	0.52
13:CN:63:CYS:HB3	13:CN:68:ARG:H	1.75	0.52
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.73	0.52
13:CN:26:LEU:HD12	13:CN:44:VAL:HG13	1.92	0.52
35:DV:31:TYR:HA	35:DV:93:ARG:NH2	2.25	0.52
35:BV:63:ILE:HD12	35:BV:63:ILE:H	1.75	0.52
23:DB:138:U:H6	23:DB:138:U:O5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:83:ALA:O	20:CB:88:GLN:HB2	2.09	0.52
48:BG:84:LYS:H	48:BG:85:LYS:HD2	1.74	0.52
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.27	0.52
44:DQ:51:GLN:O	44:DQ:54:ARG:HB2	2.10	0.52
40:BH:131:SER:O	40:BH:133:GLN:N	2.41	0.52
40:BH:73:ASN:ND2	40:BH:74:ALA:H	2.03	0.52
46:DU:85:ARG:NH1	46:DU:86:PHE:H	2.07	0.52
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.09	0.52
48:DG:162:ARG:NH2	48:DG:168:VAL:HG21	2.24	0.52
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.91	0.52
19:CT:85:LEU:HD23	19:CT:86:ALA:N	2.22	0.52
48:BG:88:LEU:HD11	48:BG:94:ARG:N	2.25	0.52
12:CM:28:ARG:HH12	12:CM:59:VAL:HA	1.75	0.52
32:D4:17:VAL:HG11	32:D4:19:ARG:HE	1.75	0.52
3:CD:81:LEU:HB2	3:CD:88:ASN:ND2	2.24	0.52
53:B6:36:ALA:O	53:B6:39:LEU:HD23	2.10	0.52
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.44	0.52
41:DJ:58:ASN:HD22	41:DJ:61:LYS:HD2	1.74	0.52
22:BA:64:G:O2'	22:BA:65:U:H5'	2.10	0.52
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.25	0.52
47:BF:115:GLY:CA	47:BF:177:ARG:HH11	2.21	0.52
20:AB:69:VAL:HB	20:AB:162:VAL:HB	1.91	0.52
23:BB:21:A:H2'	23:BB:22:C:C6	2.45	0.52
1:CA:1250:A:H4'	8:CI:69:GLY:O	2.10	0.52
30:BY:56:VAL:HG12	30:BY:57:GLU:N	2.25	0.52
23:BB:1843:C:H5''	25:BC:250:GLN:HE21	1.73	0.52
25:DC:18:VAL:CG1	25:DC:202:ARG:HD2	2.40	0.52
1:CA:1320:C:H1'	18:CS:72:GLU:N	2.25	0.52
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.10	0.52
23:BB:639:U:H2'	23:BB:640:C:H6	1.74	0.52
47:DF:78:ILE:HA	47:DF:82:TYR:CD1	2.45	0.52
7:CH:47:ASP:CG	7:CH:48:PHE:N	2.63	0.52
3:AD:151:GLN:HB3	3:AD:154:VAL:HG23	1.92	0.52
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.75	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
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.45	0.52
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.45	0.52
17:CR:44:THR:C	17:CR:46:THR:H	2.12	0.52
1:CA:97:G:H5'	1:CA:98:A:OP2	2.10	0.52
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:155:ARG:H	2:CC:162:ALA:CB	2.23	0.52
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.74	0.52
23:DB:1256:G:H21	29:DE:77:ILE:CG2	2.23	0.52
48:DG:54:ARG:HD3	48:DG:54:ARG:C	2.31	0.52
1:AA:956:U:O2'	1:AA:957:U:H5'	2.09	0.52
23:DB:445:C:O2'	23:DB:446:G:H5'	2.09	0.52
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.10	0.52
1:CA:723:U:O4'	21:CU:48:LYS:HD3	2.10	0.52
48:DG:144:ALA:HB1	48:DG:163:TYR:HE1	1.75	0.52
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.75	0.52
25:DC:6:LYS:O	25:DC:8:THR:HG23	2.10	0.52
51:BZ:39:TRP:HA	51:BZ:46:PHE:CD2	2.45	0.52
21:CU:40:PRO:O	21:CU:42:THR:N	2.43	0.52
23:BB:337:C:H2'	23:BB:338:G:O4'	2.10	0.52
13:CN:70:HIS:O	13:CN:71:GLY:C	2.48	0.52
53:D6:78:ALA:HA	53:D6:81:LYS:HD2	1.91	0.52
47:BF:34:THR:HA	47:BF:89:THR:HA	1.91	0.52
52:DW:49:ASN:HA	52:DW:61:LYS:H	1.75	0.52
13:AN:50:LEU:HG	13:AN:51:PRO:HD3	1.91	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
48:BG:25:ILE:HD13	48:BG:74:MET:HE2	1.92	0.52
41:DJ:6:ALA:CB	41:DJ:45:THR:HG21	2.39	0.52
44:BQ:60:TRP:HB3	44:BQ:92:LYS:O	2.10	0.52
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.28	0.52
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.09	0.52
30:DY:16:LEU:O	30:DY:19:HIS:HB2	2.10	0.52
23:BB:587:C:N3	37:BL:33:ARG:NH2	2.57	0.52
23:BB:141:G:H3'	23:BB:142:A:O4'	2.10	0.52
50:BT:2:ILE:H	50:BT:2:ILE:HD13	1.75	0.52
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.25	0.52
48:BG:106:LEU:O	48:BG:108:PHE:HD1	1.92	0.52
14:CO:71:LYS:NZ	14:CO:72:ARG:HA	2.25	0.52
23:BB:2719:G:O2'	23:BB:2720:U:H5'	2.11	0.52
36:B2:27:GLY:O	36:B2:30:VAL:HB	2.10	0.52
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.10	0.52
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.09	0.52
5:AF:1:MET:HG2	5:AF:67:PRO:HB3	1.92	0.52
23:BB:773:U:H4'	25:BC:45:ASN:O	2.09	0.52
1:AA:993:G:C2'	1:AA:995:C:H41	2.22	0.52
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:72:ASP:C	42:BN:74:GLU:H	2.13	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
23:BB:1789:A:P	25:BC:220:ARG:HD3	2.50	0.52
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.39	0.52
1:AA:1389:C:H2'	1:AA:1390:U:H6	1.75	0.52
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.24	0.52
27:BK:75:SER:HA	28:BP:72:VAL:O	2.09	0.52
23:BB:62:U:O2'	23:BB:63:A:H5'	2.10	0.52
23:BB:30:G:H4'	23:BB:1215:G:H5'	1.92	0.52
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.25	0.52
25:DC:18:VAL:HG11	25:DC:202:ARG:HD2	1.92	0.52
7:AH:63:LYS:HD2	7:AH:70:VAL:HG21	1.92	0.52
1:AA:635:A:H2'	1:AA:636:U:C6	2.44	0.52
44:BQ:20:ALA:HA	44:BQ:23:TYR:CE1	2.45	0.52
23:BB:945:A:H3'	23:BB:946:C:H5'	1.92	0.52
23:DB:2635:A:C5'	26:DD:79:LEU:HB2	2.40	0.52
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.72	0.52
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.45	0.52
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.75	0.52
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.45	0.52
2:CC:183:TYR:HE1	2:CC:198:LYS:HB3	1.75	0.52
38:DM:35:ALA:HB3	38:DM:99:GLY:H	1.73	0.52
1:AA:821:G:O2'	1:AA:822:U:H5'	2.09	0.52
22:BA:32:U:H4'	22:BA:52:A:H62	1.75	0.52
1:AA:987:G:H2'	1:AA:988:G:H8	1.74	0.52
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.74	0.52
20:AB:166:ASP:OD2	20:AB:190:SER:HA	2.10	0.52
1:AA:64:G:H4'	1:AA:65:A:H3'	1.91	0.52
4:CE:149:PRO:HG2	4:CE:150:GLU:OE1	2.10	0.52
23:BB:1667:G:OP1	27:BK:6:THR:HA	2.09	0.52
45:DS:41:LYS:NZ	45:DS:41:LYS:HB3	2.25	0.52
29:DE:129:PRO:HD3	29:DE:156:ASN:OD1	2.10	0.52
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.10	0.52
1:CA:1047:G:H21	1:CA:1215:G:C4'	2.22	0.52
21:AU:40:PRO:C	21:AU:42:THR:H	2.12	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
53:D6:65:THR:CA	53:D6:103:ILE:HD12	2.40	0.51
52:DW:18:LYS:O	52:DW:34:SER:HA	2.10	0.51
35:DV:63:ILE:H	35:DV:63:ILE:HD12	1.76	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
49:DR:4:VAL:HG21	49:DR:40:MET:HB2	1.92	0.51
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.10	0.51
23:BB:704:G:H2'	23:BB:726:G:N2	2.13	0.51
19:AT:38:ILE:HD11	19:AT:82:ILE:CG2	2.31	0.51
1:AA:900:A:O2'	1:AA:901:A:H5'	2.11	0.51
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.10	0.51
23:BB:956:G:N2	23:BB:959:A:H3'	2.25	0.51
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.51
37:BL:42:SER:C	37:BL:44:GLY:H	2.12	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
1:AA:613:C:P	3:AD:80:ARG:HH21	2.33	0.51
11:AL:49:ARG:HD2	11:AL:49:ARG:N	2.24	0.51
23:DB:2529:G:O3'	48:DG:174:LYS:HE2	2.09	0.51
6:CG:115:MET:HA	6:CG:118:ARG:HD2	1.92	0.51
1:AA:560:A:H5'	1:AA:566:G:N2	2.25	0.51
1:AA:337:G:H2'	1:AA:338:A:H8	1.75	0.51
23:DB:2460:U:H2'	23:DB:2461:A:H8	1.75	0.51
34:D3:30:HIS:HD2	34:D3:31:ILE:N	2.08	0.51
18:AS:66:VAL:HG23	18:AS:67:GLY:H	1.73	0.51
18:CS:54:ARG:HB3	18:CS:55:GLN:HE21	1.75	0.51
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.11	0.51
12:AM:2:ARG:HA	12:AM:6:ILE:O	2.09	0.51
15:CP:22:ALA:HB2	15:CP:32:PHE:HA	1.92	0.51
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.92	0.51
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	1.93	0.51
47:BF:78:ILE:HA	47:BF:82:TYR:CD1	2.44	0.51
43:BO:89:ASP:HA	43:BO:116:GLN:HB3	1.92	0.51
23:BB:466:A:N3	23:BB:683:U:H1'	2.25	0.51
13:AN:17:ASP:HA	13:AN:21:ALA:CB	2.40	0.51
1:CA:8:A:H61	3:CD:53:GLN:HE22	1.58	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:CD1	2.39	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:CG	2.40	0.51
1:CA:805:C:O2'	1:CA:806:C:H5'	2.10	0.51
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.40	0.51
25:DC:173:LEU:N	25:DC:173:LEU:HD13	2.25	0.51
23:DB:809:G:H2'	23:DB:810:U:C6	2.45	0.51
23:BB:195:A:H1'	23:BB:250:G:N2	2.26	0.51
20:AB:10:LYS:HD3	20:AB:211:LEU:HD21	1.92	0.51
23:DB:2823:A:O2'	23:DB:2824:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:584:C:OP1	44:DQ:5:ARG:HB3	2.10	0.51
1:CA:1110:A:H2'	1:CA:1111:A:C8	2.45	0.51
23:BB:2109:U:O2'	23:BB:2110:G:H5'	2.10	0.51
34:B3:7:ARG:HG3	34:B3:7:ARG:HH11	1.75	0.51
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.45	0.51
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.10	0.51
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.45	0.51
1:CA:420:U:O2'	1:CA:421:U:H5''	2.10	0.51
1:AA:1374:A:H4'	6:AG:27:ASN:OD1	2.10	0.51
23:BB:445:C:O2'	23:BB:446:G:H5'	2.10	0.51
10:CK:15:VAL:HB	10:CK:78:ILE:CD1	2.39	0.51
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.45	0.51
1:AA:1396:A:H4'	1:AA:1397:C:H5''	1.93	0.51
1:CA:182:A:O2'	1:CA:183:C:H3'	2.10	0.51
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.45	0.51
1:CA:1118:U:H5''	8:CI:105:ARG:HG3	1.91	0.51
10:AK:15:VAL:HB	10:AK:78:ILE:CD1	2.40	0.51
25:DC:255:LYS:C	25:DC:257:ARG:H	2.14	0.51
23:DB:820:A:H2'	23:DB:821:A:O4'	2.10	0.51
41:BJ:84:ILE:HG23	41:BJ:84:ILE:O	2.09	0.51
16:CQ:24:ILE:N	16:CQ:24:ILE:HD12	2.24	0.51
7:AH:72:GLU:H	7:AH:72:GLU:CD	2.13	0.51
42:DN:71:ARG:HG2	42:DN:71:ARG:HH21	1.75	0.51
1:AA:628:G:O2'	1:AA:629:A:H5'	2.10	0.51
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	1.91	0.51
47:DF:65:LEU:O	47:DF:86:CYS:HA	2.10	0.51
5:AF:3:HIS:N	5:AF:3:HIS:CD2	2.78	0.51
25:BC:145:MET:SD	25:BC:153:LEU:HD21	2.50	0.51
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.10	0.51
27:DK:37:ASP:O	27:DK:62:VAL:HG23	2.09	0.51
23:DB:850:U:O2'	30:DY:22:THR:HA	2.10	0.51
1:AA:1250:A:H4'	8:AI:69:GLY:O	2.10	0.51
48:DG:71:LEU:HD13	48:DG:74:MET:SD	2.50	0.51
26:BD:10:GLY:HA3	26:BD:26:VAL:N	2.19	0.51
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.25	0.51
45:BS:28:LYS:HD2	45:BS:29:VAL:H	1.75	0.51
23:BB:143:C:H5'	50:BT:3:ARG:NH1	2.26	0.51
1:CA:1494:G:N7	55:CA:1662:LLL:N32	2.58	0.51
50:BT:68:LYS:HD3	50:BT:68:LYS:N	2.25	0.51
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.10	0.51
2:AC:165:GLU:HA	2:AC:165:GLU:OE2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:83:LEU:HD12	43:BO:87:ILE:O	2.09	0.51
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.75	0.51
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.43	0.51
23:BB:279:A:H2'	23:BB:280:U:H5'	1.93	0.51
28:DP:23:ASP:HA	28:DP:88:ARG:HA	1.92	0.51
38:DM:17:ASN:ND2	38:DM:95:LEU:HG	2.25	0.51
3:CD:94:GLU:CD	3:CD:99:ASN:HD21	2.14	0.51
38:BM:40:ARG:HB3	38:BM:95:LEU:HD12	1.92	0.51
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.70	0.51
20:AB:122:ASP:C	20:AB:124:THR:H	2.14	0.51
23:BB:2679:A:H2'	23:BB:2680:U:C6	2.46	0.51
1:CA:58:C:O2'	1:CA:59:A:H5'	2.10	0.51
23:DB:970:U:H1'	23:DB:985:C:P	2.50	0.51
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.57	0.51
1:AA:965:U:OP1	1:AA:1198:G:H5''	2.10	0.51
23:BB:265:A:O2'	23:BB:266:G:H4'	2.10	0.51
23:DB:144:A:O2'	23:DB:145:C:H5'	2.11	0.51
1:AA:1460:C:H2'	1:AA:1461:G:H8	1.75	0.51
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.75	0.51
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.44	0.51
53:B6:7:TYR:OH	53:B6:157:ALA:HA	2.10	0.51
23:DB:264:C:O2'	23:DB:265:A:H5''	2.09	0.51
53:B6:150:SER:O	53:B6:154:THR:HG22	2.09	0.51
41:BJ:87:ALA:HA	41:BJ:91:GLU:OE1	2.10	0.51
13:CN:17:ASP:HA	13:CN:21:ALA:HB2	1.92	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
23:BB:841:G:O2'	23:BB:842:U:H5'	2.11	0.51
27:BK:14:SER:HB2	27:BK:51:LYS:H	1.75	0.51
22:BA:54:G:H21	47:BF:25:MET:CE	2.24	0.51
37:BL:40:SER:OG	37:BL:41:ARG:HG3	2.10	0.51
39:DX:23:ARG:O	39:DX:27:ASN:HB2	2.10	0.51
37:BL:99:ASN:O	37:BL:100:ILE:HB	2.10	0.51
10:AK:111:ASP:CB	21:AU:19:LYS:HE3	2.28	0.51
47:BF:134:GLN:O	47:BF:136:ILE:N	2.43	0.51
47:BF:65:LEU:O	47:BF:86:CYS:HA	2.09	0.51
10:CK:70:ALA:C	10:CK:72:ALA:H	2.13	0.51
23:DB:898:C:H2'	23:DB:898:C:O2	2.10	0.51
44:DQ:104:ALA:O	44:DQ:106:THR:N	2.40	0.51
48:DG:84:LYS:H	48:DG:85:LYS:HD2	1.75	0.51
28:DP:74:GLN:O	28:DP:76:HIS:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:60:ARG:NH2	13:AN:69:PRO:HB3	2.25	0.51
33:D1:6:GLU:HB2	33:D1:52:LYS:HZ3	1.75	0.51
20:AB:218:ALA:HA	20:AB:221:ARG:HG2	1.92	0.51
23:DB:1141:U:H4'	23:DB:1142:A:C1'	2.41	0.51
16:CQ:68:LYS:O	16:CQ:70:LYS:N	2.44	0.51
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.26	0.51
31:B0:47:TYR:CZ	31:B0:52:LYS:HG3	2.45	0.51
1:CA:1308:U:H3'	12:CM:97:ARG:HH11	1.76	0.51
43:BO:68:LYS:H	43:BO:102:ARG:CD	2.22	0.51
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.75	0.51
27:DK:75:SER:HA	28:DP:72:VAL:O	2.11	0.51
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.31	0.51
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.31	0.51
23:DB:2457:U:O2'	23:DB:2458:G:H5'	2.11	0.51
29:DE:58:LYS:O	29:DE:60:TRP:N	2.44	0.51
23:BB:18:U:H2'	23:BB:19:A:H8	1.76	0.51
1:CA:1017:U:H2'	1:CA:1018:G:C8	2.45	0.51
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.25	0.51
25:DC:239:PHE:HD1	25:DC:241:LYS:H	1.58	0.51
23:DB:154:U:H2'	23:DB:155:A:H8	1.75	0.51
23:BB:1559:U:H3'	23:BB:1560:G:H5'	1.91	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
26:DD:38:LYS:HE2	26:DD:43:ASP:OD2	2.10	0.51
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.10	0.51
25:DC:86:ARG:HB3	25:DC:86:ARG:CZ	2.40	0.51
23:DB:2291:U:O2'	23:DB:2374:C:H1'	2.09	0.51
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.10	0.51
53:D6:7:TYR:CE2	53:D6:160:GLU:HG2	2.44	0.51
53:D6:123:GLU:HA	53:D6:126:ARG:HH11	1.74	0.51
23:BB:1722:A:N6	23:BB:1738:G:H1'	2.26	0.51
23:DB:1718:G:H2'	23:DB:1719:G:C8	2.46	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
1:CA:1034:G:H2'	1:CA:1035:A:H5'	1.93	0.51
23:BB:576:U:H2'	23:BB:577:G:C8	2.45	0.51
1:CA:984:C:O2'	1:CA:985:C:H5'	2.11	0.51
28:DP:61:ARG:NH1	28:DP:100:ARG:HA	2.25	0.51
23:BB:1301:A:O2'	23:BB:1302:A:H2'	2.10	0.51
45:DS:97:LEU:N	45:DS:97:LEU:HD22	2.25	0.51
53:D6:12:SER:O	53:D6:16:LYS:HD2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:72:GLU:CD	7:CH:72:GLU:H	2.12	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
1:CA:696:A:H2'	1:CA:697:U:C6	2.44	0.51
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.92	0.51
13:AN:70:HIS:O	13:AN:71:GLY:C	2.49	0.51
5:AF:92:THR:O	5:AF:93:LYS:HB2	2.09	0.51
1:AA:1118:U:H5''	8:AI:105:ARG:HG3	1.92	0.51
13:CN:50:LEU:HG	13:CN:51:PRO:HD3	1.92	0.51
49:DR:54:VAL:HG13	49:DR:56:GLY:O	2.11	0.51
50:BT:55:VAL:CA	50:BT:87:LEU:HA	2.39	0.51
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.92	0.51
8:CI:5:TYR:CD1	8:CI:20:ILE:HG22	2.46	0.51
23:BB:2472:G:H2'	23:BB:2529:G:N2	2.25	0.51
23:DB:558:U:O2'	23:DB:559:G:H5'	2.11	0.51
40:BH:111:ALA:N	40:BH:132:PHE:HZ	2.08	0.51
1:AA:960:U:H4'	1:AA:961:U:C5'	2.40	0.51
20:AB:80:LYS:O	20:AB:84:LEU:HB2	2.11	0.51
51:BZ:68:LEU:HD13	51:BZ:78:TYR:CE1	2.46	0.51
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.10	0.51
41:BJ:23:LYS:NZ	41:BJ:142:ILE:HG12	2.25	0.51
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.45	0.51
29:DE:29:HIS:C	29:DE:31:VAL:H	2.14	0.51
16:AQ:68:LYS:O	16:AQ:70:LYS:N	2.42	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
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.75	0.51
12:CM:106:ARG:HH12	12:CM:109:LYS:HE3	1.74	0.51
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.10	0.51
23:DB:2529:G:H4'	48:DG:174:LYS:HE2	1.92	0.51
5:CF:67:PRO:O	5:CF:70:VAL:HG22	2.09	0.51
23:BB:2074:U:O2'	23:BB:2075:U:H5'	2.09	0.51
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.46	0.51
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.26	0.51
48:DG:10:VAL:HG13	48:DG:14:VAL:HG21	1.92	0.51
22:BA:111:U:H2'	22:BA:112:G:H8	1.75	0.51
12:CM:2:ARG:HA	12:CM:6:ILE:O	2.11	0.51
1:AA:964:A:H2'	1:AA:965:U:H5''	1.91	0.51
23:DB:1862:G:O2'	23:DB:1863:G:H5'	2.10	0.51
23:BB:1042:G:H2'	23:BB:1043:C:C6	2.46	0.51
23:DB:2349:G:OP2	34:D3:41:ARG:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.45	0.51
21:AU:11:PHE:O	21:AU:13:VAL:N	2.43	0.51
23:DB:814:C:O2'	23:DB:815:C:H5'	2.09	0.51
46:DU:6:ARG:HG2	46:DU:6:ARG:HH21	1.76	0.51
23:DB:26:G:H1'	23:DB:514:A:H61	1.76	0.51
22:DA:33:G:O2'	22:DA:34:A:H5'	2.11	0.51
23:DB:2487:G:H2'	23:DB:2488:G:H8	1.75	0.51
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.10	0.51
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.11	0.51
14:CO:49:ASP:CG	14:CO:52:SER:HB2	2.30	0.51
1:CA:956:U:O2'	1:CA:957:U:H5'	2.10	0.51
1:AA:1221:G:O3'	18:AS:76:THR:HG21	2.09	0.51
39:BX:23:ARG:O	39:BX:27:ASN:HB2	2.10	0.51
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.09	0.51
52:BW:37:VAL:CG1	52:BW:38:ARG:H	2.18	0.51
5:AF:100:SER:HA	17:AR:23:LYS:NZ	2.26	0.51
40:BH:4:ILE:HA	40:BH:18:GLN:HA	1.93	0.51
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.45	0.51
35:BV:28:ALA:CB	35:BV:89:ILE:HD12	2.40	0.51
40:DH:5:LEU:HD22	40:DH:9:VAL:HG21	1.93	0.51
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.39	0.51
41:DJ:44:TYR:HD2	41:DJ:44:TYR:C	2.13	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
1:CA:974:A:C4'	1:CA:975:A:H5'	2.34	0.51
20:AB:86:CYS:O	20:AB:88:GLN:N	2.41	0.51
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.74	0.51
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.38	0.51
49:BR:4:VAL:HG21	49:BR:40:MET:HB2	1.92	0.51
1:AA:256:U:H3'	1:AA:257:G:H8	1.74	0.51
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	2.11	0.51
40:BH:81:ALA:CB	40:BH:147:VAL:H	2.24	0.51
20:CB:65:LYS:HA	20:CB:89:PHE:CE1	2.43	0.51
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.11	0.51
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.10	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
43:DO:14:ALA:O	43:DO:18:LEU:HB2	2.09	0.51
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.51	0.51
42:BN:49:GLU:OE2	42:BN:95:THR:HG22	2.10	0.51
27:DK:102:PRO:HD3	28:DP:65:ASN:HB2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.10	0.51
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.93	0.51
40:BH:63:ALA:O	40:BH:64:ALA:HB2	2.10	0.51
23:DB:18:U:H2'	23:DB:19:A:H8	1.76	0.51
43:DO:47:VAL:O	43:DO:48:LEU:HD23	2.09	0.51
45:BS:6:LYS:HB3	45:BS:104:THR:HG23	1.91	0.51
3:AD:116:LEU:O	3:AD:122:ILE:HG12	2.11	0.51
7:AH:76:ARG:HG2	7:AH:79:ARG:HB3	1.93	0.51
44:DQ:20:ALA:HA	44:DQ:23:TYR:CE1	2.45	0.51
23:DB:2289:G:O2'	23:DB:2290:G:H5'	2.11	0.51
23:BB:2358:A:H2'	23:BB:2359:C:O4'	2.11	0.51
41:DJ:87:ALA:HA	41:DJ:91:GLU:OE1	2.10	0.51
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.09	0.51
1:AA:207:C:H3'	1:AA:208:U:C6	2.45	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:CA:1509:C:O2'	1:CA:1510:C:H5'	2.11	0.51
23:DB:661:A:H1'	37:DL:12:SER:O	2.10	0.51
23:BB:159:G:O2'	23:BB:160:A:H5''	2.11	0.51
23:DB:1041:G:H2'	23:DB:1042:G:H8	1.75	0.51
6:AG:91:ARG:CB	6:AG:92:PRO:HD2	2.40	0.51
23:DB:736:C:H2'	23:DB:737:C:C6	2.46	0.51
21:AU:42:THR:O	21:AU:46:ARG:HG3	2.10	0.51
23:BB:2351:G:H2'	23:BB:2365:G:H22	1.75	0.51
5:AF:64:VAL:HG12	5:AF:65:GLU:N	2.26	0.51
40:DH:3:VAL:HA	40:DH:39:ALA:HB2	1.92	0.51
8:AI:41:GLU:C	8:AI:43:ALA:H	2.14	0.51
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.25	0.51
35:DV:30:ILE:O	35:DV:37:PRO:HA	2.10	0.51
35:BV:4:ILE:O	35:BV:63:ILE:HG23	2.10	0.51
48:BG:23:ILE:HG21	48:BG:71:LEU:HD11	1.92	0.51
20:CB:218:ALA:HA	20:CB:221:ARG:HG2	1.92	0.51
18:AS:43:MET:O	18:AS:61:VAL:HB	2.10	0.51
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.45	0.51
23:BB:996:A:H4'	44:BQ:91:ARG:CD	2.41	0.51
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.93	0.51
26:BD:90:PHE:CD2	26:BD:94:GLN:HG3	2.46	0.51
26:DD:178:VAL:HB	26:DD:188:LEU:CB	2.35	0.51
40:BH:68:ARG:NH2	40:BH:71:LYS:HB3	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:85:LEU:HD23	19:AT:86:ALA:N	2.24	0.51
33:D1:24:LYS:NZ	33:D1:33:LEU:HB2	2.25	0.51
23:DB:962:G:H2'	23:DB:963:U:H6	1.75	0.51
23:BB:143:C:O5'	23:BB:143:C:H6	1.94	0.51
1:CA:1415:G:O2'	1:CA:1416:G:H5'	2.10	0.51
46:DU:80:ASP:OD1	46:DU:95:PHE:HB3	2.09	0.51
23:BB:1103:A:H3'	23:BB:1104:C:H6	1.76	0.51
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.91	0.51
40:BH:124:THR:HG22	40:BH:125:THR:H	1.76	0.51
40:DH:90:LEU:HB2	40:DH:123:ARG:HA	1.93	0.51
3:AD:80:ARG:NH1	3:AD:81:LEU:HD23	2.26	0.51
3:CD:151:GLN:HB3	3:CD:154:VAL:HG23	1.93	0.51
5:AF:71:ILE:O	5:AF:75:GLU:HG3	2.10	0.51
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.10	0.51
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.10	0.51
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.45	0.51
29:BE:47:LYS:HA	29:BE:51:GLU:HG3	1.93	0.51
27:BK:63:VAL:HG21	27:BK:85:VAL:HG23	1.92	0.51
1:CA:678:U:O2'	1:CA:679:C:H5'	2.10	0.51
38:DM:127:LYS:CD	38:DM:127:LYS:H	2.18	0.51
1:AA:1073:U:H4'	20:AB:104:LYS:HE3	1.91	0.51
23:BB:2190:G:H2'	23:BB:2191:A:H8	1.75	0.51
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.10	0.51
23:BB:986:C:O2'	23:BB:987:C:H5'	2.10	0.51
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.44	0.51
29:BE:150:THR:OG1	29:BE:151:GLY:N	2.44	0.51
27:BK:97:THR:C	27:BK:98:ARG:HE	2.14	0.51
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.46	0.51
15:CP:26:ASN:OD1	15:CP:31:ARG:HD3	2.10	0.51
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.09	0.51
14:AO:22:THR:HA	14:AO:27:VAL:HG11	1.92	0.51
1:CA:1316:G:H5'	1:CA:1317:C:OP2	2.09	0.51
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.25	0.51
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.76	0.51
23:BB:1395:A:H4'	23:BB:1397:U:H5	1.74	0.51
15:AP:38:PHE:CD2	15:AP:51:ARG:HB2	2.45	0.51
23:BB:870:U:C2'	23:BB:871:U:H5'	2.41	0.51
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.46	0.51
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.11	0.51
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.75	0.51
23:BB:1930:G:H2'	23:BB:1968:G:O6	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:52:SER:O	43:BO:58:ILE:HD12	2.10	0.51
12:AM:84:CYS:SG	12:AM:86:ARG:HB2	2.51	0.51
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.10	0.51
1:CA:883:C:O2'	1:CA:884:U:H5'	2.10	0.51
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.10	0.51
23:BB:145:C:H2'	23:BB:146:A:C8	2.46	0.51
23:BB:2323:G:O2'	23:BB:2324:U:H5'	2.11	0.51
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.10	0.51
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.11	0.51
10:CK:65:ALA:O	10:CK:68:ARG:HB3	2.10	0.51
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.10	0.51
23:BB:377:G:O2'	23:BB:378:C:H5'	2.11	0.51
8:AI:84:ARG:O	8:AI:87:MET:HB3	2.10	0.51
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.24	0.51
20:AB:117:GLU:HA	20:AB:140:LEU:HD21	1.91	0.51
1:AA:317:U:H2'	1:AA:318:G:H8	1.75	0.51
23:BB:939:G:O2'	23:BB:940:G:H5'	2.10	0.51
53:B6:144:ALA:HA	53:B6:149:LEU:HG	1.92	0.51
39:DX:7:ARG:HA	39:DX:7:ARG:NE	2.25	0.51
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.10	0.51
23:BB:857:G:O2'	23:BB:858:G:H5'	2.11	0.51
9:CJ:12:ALA:CB	9:CJ:96:VAL:HG12	2.35	0.51
5:CF:92:THR:O	5:CF:93:LYS:HB2	2.11	0.51
9:AJ:12:ALA:N	9:AJ:18:ILE:HD12	2.25	0.51
47:BF:99:PHE:HA	47:BF:102:LEU:HD12	1.93	0.51
8:AI:23:GLY:HA3	8:AI:61:ASP:OD1	2.10	0.51
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.11	0.51
1:CA:598:U:H2'	1:CA:599:C:H6	1.76	0.51
12:CM:16:ILE:HG23	12:CM:17:ALA:N	2.26	0.51
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.25	0.51
49:DR:24:LYS:HA	49:DR:94:THR:CG2	2.40	0.51
23:BB:809:G:H2'	23:BB:810:U:H6	1.75	0.51
29:BE:29:HIS:C	29:BE:31:VAL:H	2.14	0.51
43:BO:53:THR:O	43:BO:59:ALA:HB2	2.11	0.51
23:BB:37:C:O2'	23:BB:38:A:H5'	2.11	0.51
23:BB:2458:G:N3	23:BB:2458:G:H2'	2.25	0.51
2:CC:165:GLU:OE2	2:CC:165:GLU:HA	2.10	0.51
3:AD:56:GLU:O	3:AD:60:VAL:HG12	2.11	0.51
47:DF:3:LEU:HD11	47:DF:172:PHE:CD1	2.45	0.51
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.11	0.51
23:DB:1287:A:N7	42:DN:105:GLY:HA3	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:67:PRO:O	5:AF:70:VAL:HG22	2.11	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	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
23:DB:2732:G:C3'	23:DB:2733:A:H5'	2.39	0.51
49:BR:7:SER:HB2	49:BR:22:LEU:HD22	1.93	0.51
27:DK:88:ASN:ND2	27:DK:89:ASN:N	2.59	0.51
23:DB:2472:G:H2'	23:DB:2529:G:N2	2.26	0.51
1:AA:1010:U:O2'	1:AA:1011:C:H5'	2.10	0.51
1:CA:335:C:H2'	1:CA:336:A:H8	1.75	0.51
25:DC:116:GLN:HG2	25:DC:117:SER:N	2.24	0.51
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.10	0.51
23:BB:712:G:H2'	23:BB:713:G:O4'	2.11	0.51
23:DB:151:C:H2'	23:DB:152:A:H8	1.76	0.51
1:AA:714:G:C2	1:AA:777:A:H1'	2.46	0.51
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.45	0.51
4:CE:99:SER:C	4:CE:101:GLY:H	2.14	0.51
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.10	0.51
1:AA:454:G:O2'	1:AA:455:G:H5'	2.11	0.51
1:AA:818:G:C2'	1:AA:819:A:H5''	2.41	0.51
1:AA:151:A:H2'	1:AA:152:A:H5'	1.93	0.51
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.45	0.51
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.94	0.51
22:BA:95:U:H2'	22:BA:96:G:C8	2.46	0.51
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.41	0.51
1:CA:1200:C:H3'	1:CA:1201:A:H5'	1.92	0.51
1:CA:637:C:O2'	1:CA:638:U:H5'	2.11	0.51
23:BB:2415:G:C4'	37:BL:66:PHE:HB2	2.40	0.51
26:BD:49:GLN:HE21	26:BD:79:LEU:HD12	1.75	0.51
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.92	0.51
23:DB:988:A:P	30:DY:11:SER:HB3	2.50	0.51
26:BD:174:SER:O	26:BD:175:LEU:HB2	2.11	0.51
38:DM:21:ALA:HB1	38:DM:100:LYS:HG2	1.93	0.51
1:AA:45:G:H2'	1:AA:46:G:C8	2.46	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
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.46	0.51
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.11	0.51
23:DB:225:C:O2'	23:DB:226:A:H5'	2.10	0.51
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.45	0.51
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2588:G:H2'	23:BB:2589:A:O4'	2.10	0.51
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.11	0.51
49:BR:74:ILE:HB	49:BR:87:GLN:O	2.11	0.51
45:BS:97:LEU:N	45:BS:97:LEU:HD22	2.25	0.51
26:DD:179:ARG:HH11	26:DD:179:ARG:CB	2.24	0.51
22:DA:59:A:H2'	22:DA:60:C:O4'	2.11	0.51
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.10	0.51
27:DK:14:SER:HB2	27:DK:51:LYS:H	1.76	0.51
28:BP:36:LYS:C	28:BP:37:LYS:HD3	2.30	0.51
23:BB:1050:A:H2'	23:BB:1051:G:C8	2.46	0.51
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.94	0.51
11:CL:49:ARG:N	11:CL:49:ARG:HD2	2.25	0.51
47:BF:168:LEU:O	47:BF:170:ALA:N	2.43	0.51
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.10	0.51
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.92	0.51
39:DX:34:SER:HB2	39:DX:36:GLN:OE1	2.11	0.51
13:CN:50:LEU:HD23	13:CN:51:PRO:HD3	1.92	0.51
48:DG:23:ILE:HD11	48:DG:42:VAL:HG11	1.91	0.51
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.91	0.51
39:BX:28:LEU:HB3	39:BX:43:LEU:HD21	1.93	0.51
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE2	1.93	0.51
23:DB:994:C:H3'	44:DQ:53:LYS:NZ	2.26	0.51
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.41	0.51
42:BN:108:ALA:O	42:BN:110:MET:HE3	2.10	0.51
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.24	0.51
1:CA:61:G:O2'	1:CA:62:U:H5'	2.10	0.51
1:AA:1314:C:OP2	18:AS:5:LYS:HG2	2.11	0.51
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CD1	2.45	0.51
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.51	0.51
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.45	0.51
11:CL:23:LEU:HG	11:CL:24:GLU:N	2.25	0.51
51:BZ:30:LEU:CD2	51:BZ:30:LEU:H	2.21	0.51
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.11	0.51
23:BB:2884:U:O2	31:B0:49:ARG:HG2	2.11	0.51
10:CK:80:ASN:H	10:CK:80:ASN:ND2	2.09	0.51
11:AL:23:LEU:HG	11:AL:24:GLU:N	2.25	0.51
42:BN:83:LEU:HA	42:BN:86:ARG:CB	2.40	0.51
2:AC:26:LYS:HE2	2:AC:27:GLU:HG3	1.91	0.51
23:DB:720:U:H2'	23:DB:721:A:C8	2.45	0.51
3:AD:94:GLU:CD	3:AD:99:ASN:HD21	2.14	0.51
23:BB:2188:U:H2'	23:BB:2189:U:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:52:ARG:HG3	17:AR:52:ARG:HH11	1.76	0.51
20:CB:63:LYS:HG2	20:CB:224:ARG:NH1	2.25	0.51
23:DB:2354:C:H4'	52:DW:31:LEU:CD2	2.40	0.51
23:DB:418:C:H2'	23:DB:419:U:H6	1.76	0.51
33:B1:3:GLY:C	33:B1:5:ARG:H	2.14	0.51
23:BB:2282:G:H5''	23:BB:2283:C:O4'	2.11	0.51
23:DB:2359:C:O2'	23:DB:2360:G:H5'	2.10	0.51
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.74	0.51
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.45	0.51
23:BB:1653:G:O6	42:BN:11:ASN:ND2	2.44	0.51
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.26	0.51
1:CA:939:G:H5''	6:CG:101:ARG:NH2	2.26	0.51
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.44	0.51
14:CO:5:THR:O	14:CO:8:THR:HB	2.10	0.51
22:DA:116:G:H4'	43:DO:54:VAL:HG22	1.92	0.51
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.11	0.51
43:DO:7:ARG:HA	43:DO:10:ARG:CD	2.41	0.51
23:BB:2618:G:H2'	23:BB:2619:C:H6	1.76	0.51
1:AA:552:U:H4'	11:AL:82:ARG:HG2	1.93	0.51
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.45	0.51
1:CA:343:U:O2'	1:CA:344:A:H2'	2.10	0.51
13:AN:92:ILE:HG21	13:AN:95:LEU:HD22	1.93	0.51
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.76	0.51
26:DD:60:VAL:HA	26:DD:64:GLU:OE2	2.11	0.51
23:DB:237:C:O2'	23:DB:238:C:H5'	2.11	0.51
16:AQ:11:VAL:HG23	16:AQ:56:ASP:O	2.10	0.51
1:AA:1492:A:H2'	1:AA:1493:A:O4'	2.11	0.51
1:CA:649:A:H2'	1:CA:650:G:O4'	2.11	0.51
7:CH:83:ARG:C	7:CH:84:ILE:HG13	2.31	0.51
23:DB:2403:C:O2'	23:DB:2404:U:H5'	2.10	0.51
1:AA:1530:G:HO2'	1:AA:1531:A:H8	1.56	0.51
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.10	0.51
51:DZ:39:TRP:HE1	51:DZ:41:GLU:HG2	1.76	0.51
51:DZ:39:TRP:HA	51:DZ:46:PHE:CD2	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
10:AK:12:ARG:N	10:AK:76:TYR:HA	2.26	0.51
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	1.92	0.51
8:CI:94:ARG:HA	8:CI:97:LEU:CG	2.40	0.51
45:BS:33:LEU:HA	45:BS:36:LEU:HD23	1.92	0.51
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:11:MET:HA	26:DD:24:VAL:O	2.11	0.51
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.10	0.51
1:AA:764:C:H2'	1:AA:765:G:C5'	2.37	0.51
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.11	0.51
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.75	0.51
44:BQ:104:ALA:O	44:BQ:106:THR:N	2.41	0.51
3:AD:60:VAL:CB	3:AD:194:ILE:HD11	2.37	0.51
47:DF:11:VAL:HG21	47:DF:172:PHE:HE1	1.74	0.51
12:CM:29:SER:O	12:CM:32:ILE:HG22	2.11	0.51
36:D2:19:ARG:O	36:D2:22:MET:HB2	2.11	0.51
40:DH:121:VAL:HA	40:DH:123:ARG:HD3	1.93	0.51
20:CB:65:LYS:HB2	20:CB:158:ASP:OD2	2.10	0.51
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.46	0.51
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.45	0.51
40:DH:87:GLU:CD	40:DH:87:GLU:N	2.64	0.51
22:BA:48:U:H2'	22:BA:49:C:C6	2.46	0.51
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.46	0.51
23:DB:718:A:H5'	23:DB:719:C:C5	2.45	0.51
40:BH:49:ALA:HB3	40:BH:50:ARG:NH2	2.25	0.51
18:CS:68:HIS:HB3	18:CS:72:GLU:OE2	2.11	0.51
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.76	0.51
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.74	0.51
40:BH:83:LYS:O	40:BH:91:PHE:HD1	1.93	0.51
1:AA:473:U:H2'	1:AA:474:G:C8	2.42	0.51
23:DB:175:G:O2'	23:DB:176:A:H5'	2.11	0.51
23:BB:2786:U:H5'	26:BD:70:LYS:HG3	1.92	0.51
23:BB:256:A:O2'	23:BB:257:C:H5'	2.11	0.51
23:DB:2138:G:H2'	23:DB:2139:U:C6	2.46	0.51
42:BN:9:GLN:O	42:BN:11:ASN:N	2.43	0.51
23:DB:1432:G:H2'	23:DB:1433:A:C8	2.45	0.51
7:CH:87:ARG:N	7:CH:90:GLU:HB2	2.26	0.51
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.45	0.51
1:AA:1147:C:O2'	8:AI:17:ARG:HD2	2.11	0.51
1:CA:549:C:H2'	1:CA:550:G:H8	1.74	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
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.75	0.51
1:AA:212:G:H2'	1:AA:213:G:H8	1.76	0.51
23:DB:753:A:H2'	23:DB:754:U:C6	2.45	0.51
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.76	0.51
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:437:U:H2'	23:DB:438:G:C8	2.45	0.51
3:AD:110:ARG:HH11	3:AD:110:ARG:HG3	1.76	0.51
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.11	0.51
2:AC:106:ARG:HD2	2:AC:106:ARG:H	1.75	0.51
43:BO:6:ALA:O	43:BO:10:ARG:HG3	2.11	0.51
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.91	0.51
25:DC:171:VAL:HG23	25:DC:185:ALA:CB	2.41	0.51
23:BB:858:G:H21	23:BB:2268:A:C3'	2.19	0.51
23:BB:1204:A:H1'	23:BB:1206:G:N7	2.26	0.51
25:BC:144:GLU:HB3	25:BC:187:CYS:HB3	1.92	0.51
1:CA:521:G:O2'	1:CA:522:C:H5'	2.10	0.51
1:CA:465:A:H2'	1:CA:466:A:H3'	1.92	0.51
8:AI:37:TYR:HE2	8:AI:74:GLN:HG2	1.76	0.51
1:CA:577:G:C6	1:CA:812:G:N2	2.79	0.51
26:DD:90:PHE:CD2	26:DD:94:GLN:HG3	2.46	0.51
50:BT:50:LEU:C	50:BT:52:GLU:H	2.14	0.51
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.41	0.51
50:DT:29:THR:HA	50:DT:86:THR:HA	1.92	0.51
50:DT:50:LEU:C	50:DT:52:GLU:H	2.14	0.51
44:BQ:57:ARG:HH11	44:BQ:57:ARG:HG2	1.76	0.51
12:CM:15:VAL:CG2	12:CM:40:GLU:HB3	2.41	0.51
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.11	0.51
41:BJ:58:ASN:HD22	41:BJ:61:LYS:HD2	1.76	0.51
47:BF:3:LEU:HD21	47:BF:172:PHE:HB3	1.92	0.51
48:DG:155:PRO:CA	48:DG:170:THR:HA	2.41	0.51
40:BH:125:THR:CB	40:BH:146:VAL:HB	2.40	0.51
1:CA:612:C:H2'	1:CA:613:C:C6	2.45	0.51
28:BP:74:GLN:O	28:BP:76:HIS:N	2.44	0.51
23:BB:2847:U:H5''	28:BP:94:ALA:CB	2.41	0.51
23:BB:1445:G:H2'	23:BB:1446:C:H6	1.76	0.51
28:DP:20:ARG:HG2	28:DP:20:ARG:HH21	1.76	0.51
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.29	0.51
34:D3:20:GLY:HA3	34:D3:48:MET:HE1	1.92	0.51
1:CA:1226:C:H5''	12:CM:101:THR:CB	2.41	0.51
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.11	0.51
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.39	0.51
23:DB:1044:C:O3'	23:DB:1047:G:H5'	2.11	0.51
23:DB:834:G:O2'	23:DB:835:C:H5'	2.11	0.51
49:BR:19:THR:HG22	49:BR:97:LYS:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:927:A:H2'	23:DB:928:A:C8	2.46	0.51
1:AA:58:C:O2'	1:AA:59:A:H5'	2.10	0.51
47:DF:78:ILE:HA	47:DF:82:TYR:CG	2.46	0.51
1:CA:57:G:H2'	1:CA:58:C:C6	2.46	0.51
23:BB:2289:G:O2'	23:BB:2290:G:H5'	2.11	0.51
23:BB:154:U:H2'	23:BB:155:A:H8	1.76	0.51
3:AD:147:LYS:C	3:AD:147:LYS:HZ2	2.13	0.51
18:AS:20:LYS:HD2	18:AS:20:LYS:O	2.11	0.51
37:DL:57:LEU:HD13	37:DL:60:ARG:NH1	2.26	0.51
42:BN:13:ASN:C	42:BN:15:SER:H	2.13	0.51
23:BB:1387:A:H4'	23:BB:1469:A:H1'	1.93	0.51
23:BB:2321:U:O2	23:BB:2321:U:H3'	2.10	0.51
1:CA:1297:G:H1'	1:CA:1298:U:H5	1.74	0.51
23:BB:584:C:H2'	23:BB:585:G:C8	2.45	0.51
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.46	0.51
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.26	0.51
19:AT:54:GLN:HG3	19:AT:75:LYS:HE3	1.93	0.51
38:DM:117:PHE:HA	38:DM:120:ALA:HB3	1.93	0.51
22:DA:95:U:H2'	22:DA:96:G:C8	2.46	0.51
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.46	0.51
1:AA:342:C:O2'	1:AA:343:U:H5'	2.11	0.51
1:AA:113:G:O4'	1:AA:354:G:H4'	2.11	0.51
22:BA:54:G:H21	47:BF:25:MET:HE3	1.75	0.51
3:AD:103:ARG:NH2	3:AD:110:ARG:HH21	2.09	0.51
43:BO:6:ALA:CB	43:BO:10:ARG:HH11	2.24	0.51
1:CA:602:A:O2'	1:CA:603:U:H5'	2.11	0.51
26:DD:7:LYS:HE2	26:DD:198:GLY:HA2	1.92	0.51
1:CA:1154:G:O2'	1:CA:1155:A:H5'	2.11	0.51
23:DB:1248:G:OP1	29:DE:44:ARG:NH1	2.44	0.51
1:CA:1186:G:H4'	8:CI:111:GLU:OE1	2.11	0.51
23:DB:1357:C:O2'	23:DB:1358:G:H5'	2.11	0.51
23:BB:936:A:H2'	23:BB:937:C:C6	2.46	0.51
23:BB:1765:U:H2'	23:BB:1766:G:H8	1.76	0.51
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.75	0.51
1:AA:420:U:O2'	1:AA:421:U:H5''	2.11	0.51
1:CA:697:U:O2	1:CA:798:U:H1'	2.11	0.50
12:CM:70:ARG:HH21	47:DF:136:ILE:CB	2.13	0.50
23:BB:2425:A:H5''	23:BB:2426:A:H3'	1.93	0.50
52:DW:24:ARG:HA	52:DW:66:VAL:N	2.26	0.50
13:CN:40:ARG:NH1	18:CS:6:LYS:O	2.44	0.50
48:DG:18:ILE:HA	48:DG:22:VAL:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:132:LEU:HD23	48:BG:132:LEU:N	2.26	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
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.11	0.50
1:CA:921:U:H2'	1:CA:922:G:C8	2.45	0.50
29:BE:29:HIS:O	29:BE:32:VAL:HG22	2.11	0.50
1:CA:1410:A:C6	1:CA:1491:G:C6	2.99	0.50
41:BJ:28:LEU:HD23	41:BJ:29:ALA:N	2.25	0.50
49:BR:24:LYS:HA	49:BR:94:THR:CG2	2.40	0.50
29:DE:191:ASP:O	29:DE:194:LYS:HB3	2.11	0.50
48:BG:108:PHE:H	48:BG:108:PHE:HD1	1.57	0.50
48:BG:155:PRO:CA	48:BG:170:THR:HA	2.41	0.50
46:BU:73:ASN:C	46:BU:75:ALA:H	2.14	0.50
32:D4:17:VAL:HG12	32:D4:18:LYS:N	2.20	0.50
53:B6:133:ARG:NH1	53:B6:162:GLN:OE1	2.42	0.50
23:BB:1942:C:C1'	53:B6:133:ARG:NH1	2.73	0.50
44:DQ:4:LYS:HZ3	44:DQ:7:VAL:HG22	1.74	0.50
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.77	0.50
46:BU:27:VAL:CG2	46:BU:33:VAL:HG12	2.39	0.50
18:CS:48:ILE:HB	18:CS:59:VAL:CG2	2.41	0.50
1:AA:429:U:H4'	1:AA:430:A:O5'	2.11	0.50
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.76	0.50
20:AB:96:LEU:HB2	20:AB:99:MET:CE	2.41	0.50
23:BB:779:U:O2'	23:BB:780:G:H5'	2.10	0.50
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.11	0.50
23:DB:152:A:H2'	23:DB:153:U:H6	1.73	0.50
25:BC:255:LYS:C	25:BC:257:ARG:H	2.13	0.50
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.76	0.50
23:BB:1515:A:H4'	23:BB:1556:C:O2'	2.10	0.50
23:DB:414:C:H2'	23:DB:415:A:H8	1.76	0.50
1:CA:1343:G:H1'	8:CI:122:ARG:NH1	2.24	0.50
1:CA:151:A:H2'	1:CA:152:A:H5'	1.93	0.50
23:BB:1218:G:H2'	23:BB:1219:U:O4'	2.10	0.50
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.75	0.50
47:BF:79:ARG:O	47:BF:82:TYR:HB2	2.11	0.50
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.12	0.50
1:AA:188:C:H2'	1:AA:189:A:O4'	2.11	0.50
23:BB:1277:G:H2'	23:BB:1278:C:O4'	2.11	0.50
23:BB:1829:A:N6	23:BB:1977:A:N6	2.59	0.50
37:DL:42:SER:C	37:DL:44:GLY:H	2.14	0.50
34:D3:4:LYS:O	37:DL:48:ARG:NH2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:513:C:H2'	1:AA:514:C:H6	1.76	0.50
1:AA:213:G:H5''	1:AA:214:C:H5	1.76	0.50
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.46	0.50
23:BB:244:A:H1'	23:BB:255:A:N6	2.27	0.50
23:DB:755:U:H2'	23:DB:756:A:C8	2.47	0.50
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.26	0.50
53:D6:12:SER:OG	53:D6:13:HIS:N	2.44	0.50
1:AA:332:G:O2'	1:AA:333:U:H5'	2.11	0.50
3:CD:110:ARG:HG3	3:CD:110:ARG:HH11	1.76	0.50
23:BB:431:U:O2'	23:BB:432:A:H5'	2.12	0.50
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.10	0.50
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.46	0.50
39:BX:7:ARG:NE	39:BX:7:ARG:HA	2.25	0.50
8:CI:118:ARG:HG2	8:CI:118:ARG:O	2.12	0.50
4:CE:44:ARG:HD2	4:CE:72:ASN:ND2	2.26	0.50
25:DC:132:ARG:HA	25:DC:166:ARG:NH1	2.27	0.50
29:BE:191:ASP:O	29:BE:194:LYS:HB3	2.11	0.50
10:AK:109:ILE:CG2	21:AU:16:ARG:HH12	2.24	0.50
47:BF:102:LEU:HD13	47:BF:102:LEU:O	2.11	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
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
13:CN:50:LEU:CD2	13:CN:51:PRO:HD3	2.41	0.50
48:BG:25:ILE:CG2	48:BG:78:VAL:HG21	2.42	0.50
8:CI:22:PRO:HA	8:CI:60:LEU:CB	2.41	0.50
44:DQ:57:ARG:NH2	44:DQ:92:LYS:HE2	2.26	0.50
12:CM:10:ASP:HB2	12:CM:11:HIS:ND1	2.25	0.50
23:DB:359:G:H2'	23:DB:360:U:C5'	2.39	0.50
3:AD:164:ARG:HG3	3:AD:165:GLU:N	2.27	0.50
23:DB:1188:U:O2'	23:DB:1189:A:H5'	2.11	0.50
51:BZ:71:LEU:HD12	51:BZ:78:TYR:CD2	2.44	0.50
13:AN:26:LEU:HD12	13:AN:44:VAL:HG13	1.92	0.50
29:DE:196:VAL:O	29:DE:200:LEU:HD23	2.10	0.50
23:DB:1021:A:H61	23:DB:1142:A:H61	1.59	0.50
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.20	0.50
1:CA:256:U:H3'	1:CA:257:G:H8	1.76	0.50
14:CO:71:LYS:HD3	14:CO:72:ARG:N	2.26	0.50
40:DH:115:VAL:HB	40:DH:132:PHE:HD1	1.76	0.50
42:DN:72:ASP:HB3	42:DN:75:ILE:CG1	2.41	0.50
23:DB:2580:U:H5'	26:DD:136:ASN:H	1.75	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
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.43	0.50
6:CG:26:VAL:HG12	6:CG:42:VAL:HG11	1.94	0.50
1:CA:429:U:H4'	1:CA:430:A:O5'	2.10	0.50
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.11	0.50
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	1.94	0.50
23:DB:1534:U:H6	23:DB:1534:U:O5'	1.94	0.50
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.75	0.50
1:AA:1034:G:H2'	1:AA:1035:A:H5'	1.92	0.50
5:CF:1:MET:HG2	5:CF:67:PRO:HB3	1.93	0.50
30:DY:56:VAL:HG12	30:DY:57:GLU:N	2.25	0.50
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.76	0.50
23:DB:1418:G:H1'	23:DB:1580:A:H61	1.76	0.50
3:CD:116:LEU:O	3:CD:122:ILE:HG12	2.11	0.50
3:AD:100:VAL:HG21	3:AD:136:VAL:HG21	1.93	0.50
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.26	0.50
23:DB:2074:U:O2'	23:DB:2075:U:H5'	2.11	0.50
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.11	0.50
23:DB:679:C:H2'	23:DB:680:C:C6	2.46	0.50
23:BB:506:G:H4'	23:BB:509:C:O2	2.11	0.50
1:CA:864:A:H2'	1:CA:865:A:C8	2.47	0.50
1:CA:412:A:H1'	1:CA:413:G:C8	2.46	0.50
25:DC:180:MET:HB3	25:DC:267:VAL:HG23	1.93	0.50
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.76	0.50
9:CJ:44:THR:HG23	9:CJ:69:THR:C	2.32	0.50
23:DB:1946:U:O2'	23:DB:1947:C:H5'	2.11	0.50
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.11	0.50
23:DB:1938:A:O2'	23:DB:1939:U:H5''	2.11	0.50
23:DB:2598:A:H5''	25:DC:233:GLY:HA2	1.93	0.50
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.76	0.50
23:BB:285:G:H2'	23:BB:286:U:H6	1.76	0.50
23:DB:337:C:H2'	23:DB:338:G:O4'	2.12	0.50
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.46	0.50
25:BC:181:ARG:NH2	25:BC:265:PHE:HB3	2.26	0.50
41:BJ:41:LYS:O	44:BQ:66:ALA:HB1	2.10	0.50
14:AO:49:ASP:CG	14:AO:52:SER:HB2	2.31	0.50
28:DP:36:LYS:C	28:DP:37:LYS:HD3	2.32	0.50
23:DB:1883:U:H2'	23:DB:1884:G:C1'	2.41	0.50
29:DE:115:GLN:O	29:DE:117:ARG:HG3	2.11	0.50
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.76	0.50
34:B3:9:ALA:C	34:B3:11:LYS:H	2.13	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:65:ALA:O	10:AK:68:ARG:HB3	2.11	0.50
1:CA:46:G:O2'	1:CA:365:U:H1'	2.12	0.50
22:BA:59:A:H2'	22:BA:60:C:O4'	2.11	0.50
35:DV:20:LEU:HB3	35:DV:25:LYS:O	2.11	0.50
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.11	0.50
25:BC:6:LYS:O	25:BC:8:THR:HG23	2.10	0.50
41:DJ:41:LYS:O	44:DQ:66:ALA:HB1	2.11	0.50
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.47	0.50
23:DB:24:G:H1'	45:DS:77:ASP:HB3	1.92	0.50
23:DB:2298:A:N1	23:DB:2321:U:C5	2.79	0.50
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.93	0.50
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.92	0.50
52:BW:49:ASN:C	52:BW:50:VAL:HG22	2.32	0.50
47:BF:59:ILE:HG12	47:BF:137:PHE:CE2	2.46	0.50
40:DH:4:ILE:HA	40:DH:18:GLN:HA	1.92	0.50
23:DB:2351:G:H2'	23:DB:2365:G:H22	1.76	0.50
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	1.93	0.50
26:DD:34:VAL:HA	26:DD:50:VAL:HG12	1.92	0.50
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.27	0.50
53:B6:31:GLY:HA2	53:B6:106:LEU:HD21	1.94	0.50
8:CI:5:TYR:HD1	8:CI:20:ILE:HG22	1.76	0.50
28:DP:29:VAL:HG12	28:DP:80:VAL:HA	1.93	0.50
12:CM:12:LYS:O	12:CM:43:LYS:HA	2.12	0.50
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.12	0.50
20:AB:64:GLY:O	20:AB:66:ILE:HG12	2.10	0.50
4:AE:155:LYS:HA	7:AH:65:PHE:CG	2.46	0.50
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.93	0.50
29:DE:193:VAL:O	29:DE:197:GLU:HB2	2.11	0.50
38:DM:19:GLY:C	38:DM:20:LEU:HD22	2.32	0.50
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.93	0.50
19:CT:60:GLN:HB3	19:CT:65:LEU:HD23	1.93	0.50
23:DB:528:A:N1	23:DB:2042:A:H2'	2.26	0.50
14:AO:71:LYS:NZ	14:AO:72:ARG:HA	2.26	0.50
23:BB:2840:C:H5''	42:BN:53:THR:HG21	1.93	0.50
42:BN:81:ASN:O	42:BN:85:PRO:HD2	2.11	0.50
1:CA:1333:A:H3'	1:CA:1334:G:H8	1.75	0.50
22:DA:48:U:H2'	22:DA:49:C:H6	1.77	0.50
33:D1:9:LYS:HD3	33:D1:9:LYS:N	2.24	0.50
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.93	0.50
25:BC:4:LYS:HE2	25:BC:5:CYS:H	1.76	0.50
23:DB:531:C:H5''	23:DB:532:A:C5	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:114:C:H1'	43:BO:47:VAL:HG21	1.94	0.50
15:CP:4:ILE:O	15:CP:71:VAL:HG11	2.10	0.50
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.47	0.50
1:CA:454:G:O2'	1:CA:455:G:H5'	2.11	0.50
1:CA:1303:C:H2'	1:CA:1304:G:O4'	2.12	0.50
26:BD:114:LYS:HD2	26:BD:116:LYS:HE3	1.92	0.50
1:AA:1343:G:C1'	8:AI:122:ARG:HH12	2.25	0.50
22:DA:13:G:H2'	22:DA:14:U:H5''	1.92	0.50
23:DB:1848:A:H2'	23:DB:1849:G:H8	1.76	0.50
1:AA:171:A:H2'	1:AA:172:A:C8	2.46	0.50
23:DB:1720:U:C2'	23:DB:1721:G:H5'	2.41	0.50
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.46	0.50
23:BB:2626:C:H2'	23:BB:2627:G:C8	2.47	0.50
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.47	0.50
1:AA:991:U:H2'	1:AA:1212:U:O2	2.11	0.50
22:DA:52:A:C2'	22:DA:53:A:H5'	2.41	0.50
23:BB:1248:G:OP1	29:BE:44:ARG:NH1	2.44	0.50
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.77	0.50
25:DC:20:ASN:HD22	25:DC:23:LEU:HD13	1.76	0.50
5:CF:13:ASP:O	5:CF:14:GLN:HG2	2.12	0.50
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.93	0.50
13:CN:92:ILE:HG21	13:CN:95:LEU:HD22	1.94	0.50
23:BB:2760:C:C2'	23:BB:2761:A:H5'	2.42	0.50
1:AA:1023:U:O2'	1:AA:1024:G:H5'	2.12	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
1:AA:682:G:O2'	1:AA:683:G:H5'	2.11	0.50
1:AA:418:C:H2'	1:AA:419:C:H6	1.75	0.50
10:AK:36:ARG:HG3	10:AK:36:ARG:HH11	1.75	0.50
8:AI:118:ARG:HG2	8:AI:118:ARG:O	2.10	0.50
1:CA:144:G:H2'	1:CA:145:G:O4'	2.12	0.50
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.10	0.50
23:DB:622:G:OP1	37:DL:103:ILE:HD13	2.12	0.50
23:BB:920:A:H2'	23:BB:921:C:O4'	2.11	0.50
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.93	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
10:CK:43:TRP:HZ3	10:CK:45:THR:HG22	1.75	0.50
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.77	0.50
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	2.11	0.50
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:30:ILE:HG21	13:CN:44:VAL:CG2	2.34	0.50
35:DV:76:ASP:C	38:DM:136:MET:HE3	2.31	0.50
35:DV:79:ARG:HA	35:DV:86:LEU:HA	1.91	0.50
46:BU:11:ILE:HD13	46:BU:20:LYS:H	1.76	0.50
53:B6:32:ARG:HH22	53:B6:88:LEU:C	2.14	0.50
50:BT:81:LYS:HG3	50:BT:82:LYS:N	2.26	0.50
12:CM:49:GLU:HG3	12:CM:53:ASP:OD1	2.11	0.50
33:B1:8:ILE:HG13	33:B1:51:ALA:HA	1.94	0.50
33:D1:8:ILE:HG13	33:D1:51:ALA:HA	1.93	0.50
20:AB:159:ALA:HB1	20:AB:183:PHE:HE1	1.76	0.50
1:AA:95:C:H2'	1:AA:95:C:O2	2.11	0.50
23:BB:2135:A:N6	23:BB:2156:G:O2'	2.39	0.50
42:DN:101:GLY:O	42:DN:102:PHE:HB2	2.11	0.50
23:DB:2041:U:H2'	23:DB:2042:A:H8	1.76	0.50
12:CM:28:ARG:NH1	12:CM:32:ILE:HD12	2.27	0.50
12:AM:21:ILE:HG23	12:AM:65:GLU:OE2	2.11	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
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.93	0.50
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.76	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
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.46	0.50
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.47	0.50
23:BB:988:A:O5'	30:BY:11:SER:HB3	2.11	0.50
20:AB:120:SER:HA	20:AB:125:PHE:CD1	2.46	0.50
23:BB:608:A:H2'	23:BB:609:A:H8	1.76	0.50
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.11	0.50
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.93	0.50
43:BO:5:SER:HA	43:BO:8:ILE:CD1	2.41	0.50
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.25	0.50
23:BB:634:C:H2'	23:BB:635:C:C6	2.46	0.50
15:AP:22:ALA:HB2	15:AP:32:PHE:HA	1.94	0.50
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.50
47:DF:78:ILE:N	47:DF:78:ILE:HD12	2.26	0.50
26:BD:114:LYS:HE3	26:BD:116:LYS:HG2	1.93	0.50
1:AA:284:C:O2'	1:AA:285:C:H5'	2.12	0.50
25:DC:64:VAL:HG11	25:DC:66:PHE:CE2	2.47	0.50
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.75	0.50
1:AA:169:C:O2'	1:AA:170:U:H5'	2.11	0.50
25:BC:221:GLY:O	25:BC:223:ALA:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:5:THR:O	14:AO:8:THR:HB	2.11	0.50
23:BB:1829:A:H2'	23:BB:1830:C:H5'	1.93	0.50
23:BB:6:A:O2'	23:BB:7:G:H5'	2.11	0.50
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.12	0.50
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.46	0.50
1:AA:806:C:H2'	1:AA:807:A:H8	1.76	0.50
1:CA:415:A:N1	1:CA:428:G:O6	2.44	0.50
13:CN:17:ASP:HA	13:CN:21:ALA:CB	2.41	0.50
1:CA:169:C:O2'	1:CA:170:U:H5'	2.11	0.50
22:DA:88:C:H2'	22:DA:89:U:C6	2.46	0.50
34:B3:7:ARG:NH1	34:B3:7:ARG:HG3	2.25	0.50
1:AA:651:C:H2'	1:AA:652:U:C6	2.46	0.50
3:CD:71:PHE:O	3:CD:74:TYR:HB2	2.11	0.50
23:DB:687:C:H2'	23:DB:688:U:O4'	2.11	0.50
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.93	0.50
23:DB:1257:C:H5'	29:DE:78:TRP:CZ3	2.46	0.50
2:CC:53:ARG:HG2	2:CC:54:ILE:H	1.76	0.50
1:AA:1202:U:O2	13:AN:66:THR:HG21	2.10	0.50
23:BB:225:C:O2'	23:BB:226:A:H5'	2.11	0.50
1:AA:711:G:O2'	1:AA:712:A:H5'	2.12	0.50
29:BE:106:LYS:HE2	29:BE:200:LEU:HB3	1.94	0.50
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.92	0.50
23:BB:2306:C:C3'	23:BB:2307:G:H5'	2.38	0.50
5:CF:64:VAL:HG12	5:CF:65:GLU:N	2.26	0.50
5:CF:3:HIS:CE1	5:CF:65:GLU:HG3	2.46	0.50
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.77	0.50
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.39	0.50
48:DG:140:ILE:HD12	48:DG:141:GLY:N	2.27	0.50
26:DD:10:GLY:HA2	28:DP:4:ILE:HD11	1.94	0.50
25:DC:93:VAL:HG21	25:DC:115:ILE:HD11	1.92	0.50
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.12	0.50
1:AA:598:U:H2'	1:AA:599:C:C6	2.47	0.50
25:DC:90:ILE:HD13	25:DC:103:ILE:O	2.11	0.50
23:DB:962:G:H2'	23:DB:963:U:C6	2.46	0.50
13:AN:30:ILE:O	13:AN:40:ARG:HA	2.12	0.50
29:DE:29:HIS:O	29:DE:32:VAL:HG22	2.11	0.50
48:DG:108:PHE:HE1	48:DG:151:ARG:HD3	1.75	0.50
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	1.92	0.50
23:DB:2720:U:H5''	28:DP:52:ARG:HH21	1.73	0.50
40:DH:131:SER:OG	40:DH:132:PHE:N	2.45	0.50
43:DO:16:ARG:HD3	43:DO:19:GLN:NE2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:14:ALA:O	43:BO:18:LEU:HB2	2.12	0.50
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.12	0.50
6:CG:19:SER:HB2	6:CG:21:LEU:HD21	1.94	0.50
23:DB:2106:U:H2'	23:DB:2107:G:H8	1.76	0.50
23:BB:784:G:H5''	25:BC:225:ASN:OD1	2.11	0.50
20:AB:128:LEU:CD1	20:AB:129:THR:H	2.23	0.50
4:AE:99:SER:C	4:AE:101:GLY:H	2.15	0.50
15:CP:23:ASP:CG	15:CP:25:ARG:HE	2.14	0.50
23:DB:1047:G:H1'	23:DB:1111:A:N6	2.26	0.50
23:BB:1813:G:H1'	25:BC:49:THR:OG1	2.12	0.50
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.26	0.50
25:BC:64:VAL:HG11	25:BC:66:PHE:CE2	2.47	0.50
38:BM:49:ALA:HA	38:BM:123:LYS:HG3	1.94	0.50
3:CD:12:ARG:HG2	3:CD:33:ILE:HA	1.93	0.50
26:BD:40:LEU:HA	26:BD:45:TYR:H	1.77	0.50
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.77	0.50
7:AH:87:ARG:N	7:AH:90:GLU:HB2	2.26	0.50
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.75	0.50
1:CA:767:A:H2'	1:CA:768:A:H8	1.77	0.50
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.75	0.50
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.11	0.50
22:BA:28:C:H5'	22:BA:29:A:OP2	2.11	0.50
19:AT:15:LYS:HD3	19:AT:18:LYS:HE3	1.94	0.50
1:AA:575:G:HO2'	1:AA:821:G:H5'	1.77	0.50
43:DO:52:SER:OG	43:DO:54:VAL:HG12	2.10	0.50
1:CA:140:U:H2'	1:CA:141:G:C8	2.45	0.50
43:DO:6:ALA:HB3	43:DO:10:ARG:HH11	1.76	0.50
23:DB:1495:A:H2'	23:DB:1496:A:H8	1.77	0.50
26:BD:102:ALA:HA	26:BD:180:VAL:HG21	1.93	0.50
45:BS:96:ILE:HG23	45:BS:96:ILE:O	2.11	0.50
23:DB:41:C:H2'	23:DB:42:A:O4'	2.10	0.50
23:BB:1900:A:N1	23:BB:1970:A:C6	2.80	0.50
23:DB:817:C:H2'	23:DB:818:G:O4'	2.11	0.50
23:DB:2497:A:H5''	57:DB:3696:HOH:O	2.10	0.50
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.76	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
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.11	0.50
23:DB:765:C:O2'	23:DB:766:U:H5'	2.11	0.50
49:DR:32:THR:HA	49:DR:61:ALA:O	2.11	0.50
25:DC:166:ARG:HB3	25:DC:171:VAL:HG22	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:622:G:H2'	23:DB:623:C:H6	1.77	0.50
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.93	0.50
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.46	0.50
10:AK:70:ALA:C	10:AK:72:ALA:H	2.15	0.50
52:DW:37:VAL:CG1	52:DW:38:ARG:H	2.21	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
44:BQ:57:ARG:NH2	44:BQ:92:LYS:HE2	2.25	0.50
23:DB:159:G:O2'	23:DB:160:A:H5''	2.12	0.50
23:BB:181:A:H1'	23:BB:435:C:H5'	1.92	0.50
47:BF:3:LEU:HD11	47:BF:172:PHE:CD1	2.47	0.50
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.11	0.50
29:DE:126:VAL:CG2	29:DE:133:LEU:HB2	2.42	0.50
12:AM:19:THR:HG22	12:AM:29:SER:CB	2.42	0.50
24:BI:29:GLN:HA	24:BI:29:GLN:HE21	1.76	0.50
17:CR:34:GLU:N	17:CR:34:GLU:CD	2.63	0.50
38:DM:40:ARG:HB3	38:DM:95:LEU:HD12	1.93	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
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.12	0.50
12:AM:12:LYS:O	12:AM:43:LYS:HA	2.11	0.50
47:BF:177:ARG:HA	47:BF:177:ARG:NE	2.26	0.50
1:AA:559:A:H4'	1:AA:560:A:H3'	1.93	0.50
15:AP:23:ASP:CG	15:AP:25:ARG:HE	2.15	0.50
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.27	0.50
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.11	0.50
41:BJ:98:GLU:HB3	41:BJ:124:VAL:HG21	1.93	0.50
14:CO:22:THR:HA	14:CO:27:VAL:HG11	1.94	0.50
1:CA:279:A:H5'	1:CA:281:G:C5'	2.41	0.50
8:AI:122:ARG:NH1	8:AI:122:ARG:HG3	2.26	0.50
15:AP:4:ILE:O	15:AP:71:VAL:HG11	2.11	0.50
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.93	0.50
34:D3:50:SER:C	34:D3:52:GLY:H	2.14	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
12:AM:79:LEU:HB3	12:AM:84:CYS:SG	2.51	0.50
1:AA:502:A:H4'	1:AA:550:G:H4'	1.93	0.50
23:BB:523:C:H4'	23:BB:540:C:O2	2.11	0.50
1:CA:987:G:H2'	1:CA:988:G:H8	1.76	0.50
47:BF:131:VAL:HG23	47:BF:133:GLU:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:146:A:H2'	23:BB:147:C:C6	2.46	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
1:CA:1367:C:H5''	8:CI:115:VAL:HG23	1.93	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
1:AA:649:A:H2'	1:AA:650:G:O4'	2.12	0.50
37:BL:77:ILE:HB	37:BL:109:LYS:O	2.11	0.50
18:CS:80:ARG:HA	18:CS:80:ARG:HE	1.74	0.50
23:BB:2518:A:H2'	23:BB:2518:A:N3	2.27	0.50
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.12	0.50
14:CO:33:THR:HG23	14:CO:63:ARG:NH1	2.27	0.50
21:CU:42:THR:HB	21:CU:46:ARG:NH2	2.26	0.50
37:BL:89:VAL:HG23	37:BL:123:ARG:HB2	1.94	0.50
52:BW:24:ARG:HA	52:BW:66:VAL:N	2.27	0.50
53:D6:80:GLU:HG3	53:D6:92:PRO:HG2	1.92	0.50
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.93	0.50
10:AK:33:ILE:CB	10:AK:73:VAL:HG11	2.30	0.50
40:BH:3:VAL:HA	40:BH:39:ALA:HB2	1.94	0.50
52:DW:51:GLY:HA3	52:DW:59:PHE:HB3	1.93	0.50
23:DB:141:G:O6	50:DT:2:ILE:HG21	2.10	0.50
41:BJ:3:THR:HB	41:BJ:44:TYR:OH	2.12	0.50
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.65	0.50
28:DP:4:ILE:O	28:DP:6:GLN:N	2.44	0.50
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.42	0.50
1:AA:977:A:H1'	1:AA:982:U:O4	2.12	0.50
13:AN:7:ALA:O	13:AN:11:LYS:HG2	2.11	0.50
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.22	0.50
20:AB:65:LYS:HA	20:AB:89:PHE:CE1	2.43	0.50
9:CJ:52:LEU:CD1	9:CJ:52:LEU:H	2.17	0.50
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.12	0.50
23:DB:1915:U:H2'	23:DB:1916:A:H8	1.74	0.50
23:DB:576:U:H2'	23:DB:577:G:C8	2.46	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
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.45	0.50
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.93	0.50
19:CT:43:LYS:HD3	19:CT:43:LYS:H	1.76	0.50
20:AB:94:ARG:N	20:AB:94:ARG:NE	2.54	0.50
23:DB:1551:A:H5''	23:DB:1552:A:OP2	2.12	0.50
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.31	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:72:ASP:C	42:DN:74:GLU:H	2.14	0.50
6:AG:115:MET:HA	6:AG:118:ARG:HD2	1.94	0.50
4:AE:82:HIS:CD2	7:AH:95:MET:HG3	2.47	0.50
23:DB:1330:C:O2'	23:DB:1331:G:H5'	2.12	0.50
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.11	0.50
27:BK:47:ILE:HG23	27:BK:48:PRO:HD2	1.94	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:BK:107:LEU:C	27:BK:109:SER:H	2.15	0.50
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.47	0.50
43:DO:105:ALA:C	43:DO:107:ALA:H	2.14	0.50
12:AM:12:LYS:H	12:AM:44:ILE:CD1	2.25	0.50
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.47	0.50
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.74	0.50
23:BB:18:U:H2'	23:BB:19:A:C8	2.45	0.50
23:BB:63:A:H2'	23:BB:63:A:OP2	2.12	0.50
1:CA:1423:G:H2'	1:CA:1424:U:C6	2.46	0.50
26:DD:114:LYS:HD2	26:DD:116:LYS:HZ1	1.76	0.50
19:AT:57:VAL:HG23	19:AT:58:ASP:H	1.76	0.50
1:CA:453:G:H2'	1:CA:454:G:C8	2.47	0.50
1:AA:1325:C:O2'	1:AA:1326:U:H5'	2.12	0.50
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.11	0.50
1:CA:91:U:O5'	1:CA:91:U:H6	1.95	0.50
22:DA:16:G:O2'	22:DA:17:C:H5'	2.11	0.50
3:AD:12:ARG:HG2	3:AD:33:ILE:HA	1.93	0.50
23:DB:679:C:O2'	23:DB:680:C:H5'	2.11	0.50
23:BB:958:U:N3	38:BM:16:ARG:HB3	2.27	0.50
23:BB:549:G:H4'	23:BB:550:C:C6	2.47	0.50
47:BF:69:ALA:HB3	47:BF:80:GLN:O	2.11	0.50
12:AM:78:ARG:NH2	18:AS:64:GLU:HB2	2.26	0.50
23:BB:871:U:H2'	23:BB:872:U:C6	2.45	0.50
1:AA:1240:U:O4	6:AG:29:LEU:HG	2.12	0.50
23:DB:522:A:H2'	23:DB:523:C:C6	2.47	0.50
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.12	0.50
1:CA:640:A:O2'	1:CA:641:U:H5'	2.12	0.50
23:DB:2361:G:OP1	34:D3:25:HIS:HA	2.12	0.50
29:BE:75:SER:O	29:BE:78:TRP:N	2.45	0.50
23:DB:408:G:O2'	23:DB:409:G:H5'	2.12	0.50
29:DE:23:PHE:HA	29:DE:107:SER:OG	2.11	0.50
6:CG:68:VAL:HG13	6:CG:133:ALA:HB1	1.94	0.50
23:BB:80:G:N3	23:BB:294:A:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1113:U:H2'	23:BB:1114:C:C6	2.47	0.50
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.27	0.50
33:B1:44:GLN:OE1	33:B1:44:GLN:HA	2.12	0.50
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.75	0.50
47:DF:99:PHE:HA	47:DF:102:LEU:HD12	1.93	0.50
47:BF:110:ILE:HG21	47:BF:113:PHE:HB3	1.93	0.50
13:CN:12:ARG:HE	13:CN:58:ARG:NH1	2.10	0.50
46:DU:11:ILE:HD13	46:DU:20:LYS:H	1.75	0.50
48:BG:18:ILE:HA	48:BG:22:VAL:O	2.12	0.50
26:BD:148:GLN:HG3	26:BD:152:PRO:CB	2.39	0.50
20:CB:80:LYS:O	20:CB:84:LEU:HB2	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
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
30:BY:16:LEU:O	30:BY:19:HIS:HB2	2.11	0.50
23:BB:2529:G:H4'	48:BG:174:LYS:CG	2.39	0.50
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	1.94	0.50
40:BH:128:HIS:HB3	40:BH:144:VAL:HB	1.92	0.50
12:AM:1:ALA:CA	12:AM:8:ILE:HG22	2.42	0.50
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.27	0.50
23:BB:1060:U:O4	24:BI:131:THR:HG22	2.12	0.50
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.27	0.50
41:DJ:26:GLY:O	41:DJ:30:THR:HG22	2.12	0.50
53:B6:113:ASP:HA	53:B6:116:ARG:CD	2.39	0.50
1:CA:1489:G:H2'	1:CA:1490:U:C6	2.46	0.50
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.26	0.50
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.11	0.50
48:DG:106:LEU:O	48:DG:108:PHE:HD1	1.95	0.50
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.11	0.50
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.12	0.50
40:DH:131:SER:HA	40:DH:140:ALA:O	2.12	0.50
50:DT:32:LEU:O	50:DT:83:ALA:HB2	2.12	0.50
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.94	0.50
27:DK:47:ILE:HG23	27:DK:48:PRO:HD2	1.94	0.50
23:BB:1461:C:H2'	23:BB:1462:C:H6	1.77	0.50
24:DI:54:ILE:C	24:DI:54:ILE:HD13	2.31	0.50
23:BB:1439:A:N7	23:BB:1440:U:C2	2.79	0.50
23:BB:2732:G:C3'	23:BB:2733:A:H5'	2.39	0.50
43:BO:35:ILE:HG13	43:BO:71:ALA:CB	2.41	0.50
1:CA:448:A:H2'	1:CA:449:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1793:C:H2'	23:BB:1794:A:C8	2.47	0.50
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.12	0.50
25:BC:15:VAL:HG22	25:BC:205:GLY:HA3	1.93	0.50
40:BH:64:ALA:H	40:BH:66:ASN:HD21	1.58	0.50
23:BB:852:U:H2'	23:BB:853:C:H6	1.75	0.50
23:DB:1372:U:H1'	23:DB:2214:C:C4	2.47	0.50
1:AA:818:G:C3'	1:AA:819:A:H5''	2.42	0.50
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.77	0.50
23:BB:572:A:H3'	23:BB:573:U:O4'	2.11	0.50
1:CA:440:C:O2'	1:CA:441:A:H5'	2.12	0.50
26:DD:40:LEU:HA	26:DD:45:TYR:H	1.76	0.50
42:DN:9:GLN:O	42:DN:11:ASN:N	2.45	0.50
23:DB:348:A:H2'	23:DB:349:U:O4'	2.11	0.50
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.27	0.50
23:DB:521:U:H2'	23:DB:522:A:H8	1.75	0.50
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.12	0.50
50:DT:44:LYS:O	50:DT:48:GLN:HG2	2.12	0.50
23:BB:2247:A:H3'	57:BB:3266:HOH:O	2.11	0.50
9:CJ:59:LYS:HG3	9:CJ:60:ASP:N	2.27	0.50
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.94	0.50
16:AQ:56:ASP:N	16:AQ:81:ALA:HB2	2.26	0.50
22:DA:20:G:H2'	22:DA:21:G:H8	1.77	0.50
2:CC:128:MET:H	2:CC:128:MET:CE	2.25	0.50
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.27	0.50
23:BB:1692:U:H2'	23:BB:1694:C:C4	2.47	0.50
23:DB:377:G:O2'	23:DB:378:C:H5'	2.12	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
13:CN:47:LEU:C	13:CN:49:THR:H	2.15	0.50
25:DC:145:MET:HB2	25:DC:152:GLN:NE2	2.27	0.50
39:DX:42:LEU:O	39:DX:46:VAL:HG23	2.12	0.50
8:AI:41:GLU:H	8:AI:44:ARG:NH1	2.10	0.50
8:AI:15:ALA:O	8:AI:66:VAL:HG23	2.12	0.50
8:AI:93:LEU:HD12	8:AI:94:ARG:N	2.26	0.50
23:DB:704:G:C2'	23:DB:726:G:H22	2.15	0.50
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.92	0.50
46:DU:21:ARG:HG3	46:DU:21:ARG:HH11	1.77	0.50
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.46	0.50
44:DQ:85:ALA:O	44:DQ:86:SER:C	2.50	0.50
1:CA:1132:C:O2'	1:CA:1133:G:H5'	2.12	0.50
44:BQ:52:ARG:C	44:BQ:54:ARG:H	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:460:A:H2'	23:BB:461:C:O4'	2.12	0.50
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.26	0.50
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.12	0.50
44:BQ:108:LEU:HD23	49:BR:48:LYS:HD3	1.94	0.50
23:DB:296:U:H2'	23:DB:297:G:H8	1.77	0.50
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.12	0.50
16:AQ:17:GLU:O	16:AQ:18:LYS:HB2	2.11	0.50
48:DG:88:LEU:HD11	48:DG:94:ARG:N	2.27	0.50
53:B6:59:THR:O	53:B6:61:PRO:HD3	2.11	0.50
29:BE:58:LYS:O	29:BE:60:TRP:N	2.45	0.50
18:AS:48:ILE:HB	18:AS:59:VAL:CG2	2.41	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
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.50
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.93	0.50
25:DC:41:GLY:CA	25:DC:53:ILE:HG21	2.40	0.50
1:AA:948:C:O2'	1:AA:949:A:H5'	2.12	0.50
1:CA:483:C:H2'	1:CA:484:G:C8	2.47	0.50
37:DL:79:LEU:HB2	37:DL:113:ALA:HB3	1.92	0.50
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.12	0.50
20:AB:121:GLN:HE21	20:AB:122:ASP:N	2.07	0.50
1:CA:925:G:O2'	1:CA:926:G:H5''	2.11	0.50
30:BY:7:THR:HG22	30:BY:8:GLN:N	2.27	0.50
23:BB:514:A:N6	23:BB:515:A:N6	2.59	0.50
48:BG:10:VAL:HG13	48:BG:14:VAL:HG21	1.93	0.50
1:CA:1137:C:O2'	1:CA:1138:G:H5''	2.11	0.50
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.76	0.50
22:BA:16:G:O2'	22:BA:17:C:H5'	2.12	0.50
23:DB:945:A:H3'	23:DB:946:C:H5''	1.93	0.50
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.12	0.50
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.75	0.50
23:BB:2302:U:O2'	23:BB:2303:G:H5'	2.11	0.50
23:DB:1854:A:H2	23:DB:2087:G:N3	2.10	0.50
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.12	0.50
7:CH:23:ALA:HB1	7:CH:61:THR:HA	1.94	0.50
23:DB:1936:A:H2	23:DB:1943:U:O4	1.95	0.50
17:AR:44:THR:C	17:AR:46:THR:H	2.15	0.50
43:DO:6:ALA:CB	43:DO:10:ARG:HH11	2.25	0.50
22:DA:54:G:H21	47:DF:25:MET:CE	2.25	0.50
23:DB:2309:A:H2'	23:DB:2310:C:C6	2.47	0.50
29:DE:129:PRO:HG3	29:DE:156:ASN:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1049:U:H2'	13:CN:2:LYS:HD3	1.93	0.50
36:D2:4:THR:O	36:D2:5:PHE:HB2	2.12	0.50
29:BE:124:PHE:HD1	29:BE:125:SER:N	2.09	0.50
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.76	0.50
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.11	0.50
1:AA:392:C:H2'	1:AA:393:A:H8	1.77	0.50
1:CA:1123:U:H4'	9:CJ:39:PRO:HD2	1.93	0.50
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.11	0.50
23:DB:991:C:H5''	23:DB:1185:G:H2'	1.94	0.50
6:CG:2:ARG:HH11	6:CG:2:ARG:HB2	1.77	0.50
9:AJ:28:THR:HG21	9:AJ:90:LEU:HD22	1.93	0.50
22:BA:87:U:H2'	22:BA:88:C:O5'	2.12	0.50
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.11	0.50
1:CA:418:C:H2'	1:CA:419:C:H6	1.76	0.50
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.75	0.49
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.42	0.49
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.42	0.49
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.40	0.49
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.93	0.49
53:D6:65:THR:N	53:D6:103:ILE:HD12	2.26	0.49
29:DE:5:LEU:CD1	29:DE:10:SER:HB2	2.30	0.49
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.42	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
6:AG:149:ALA:H	10:AK:55:ARG:NH2	2.10	0.49
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.27	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
23:DB:1141:U:OP2	41:DJ:65:THR:HG21	2.12	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
23:BB:2144:G:H2'	23:BB:2146:C:C5'	2.39	0.49
40:DH:117:LEU:HD13	40:DH:130:VAL:HG13	1.94	0.49
50:DT:23:ALA:C	50:DT:25:GLU:H	2.15	0.49
23:DB:1275:A:N3	23:DB:1275:A:H2'	2.27	0.49
42:DN:83:LEU:HA	42:DN:86:ARG:CB	2.41	0.49
23:DB:1793:C:H2'	23:DB:1794:A:H8	1.77	0.49
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.27	0.49
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.12	0.49
27:BK:88:ASN:HD22	27:BK:89:ASN:N	2.09	0.49
43:BO:106:LEU:HA	43:BO:109:ALA:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.27	0.49
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.30	0.49
22:DA:50:A:OP1	43:DO:68:LYS:HB2	2.12	0.49
1:AA:91:U:C6	1:AA:91:U:O5'	2.59	0.49
26:BD:53:GLY:C	26:BD:76:GLY:HA2	2.32	0.49
1:CA:1423:G:H2'	1:CA:1424:U:H6	1.78	0.49
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.12	0.49
18:AS:68:HIS:HB3	18:AS:72:GLU:OE2	2.11	0.49
7:CH:14:ARG:HG3	7:CH:15:ASN:N	2.27	0.49
1:CA:1484:C:O2'	1:CA:1485:U:H5'	2.13	0.49
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.41	0.49
26:BD:114:LYS:HD2	26:BD:116:LYS:CE	2.42	0.49
47:BF:121:PHE:HB3	47:BF:127:TYR:CE1	2.47	0.49
47:BF:78:ILE:HA	47:BF:82:TYR:CG	2.46	0.49
23:DB:1562:U:H2'	23:DB:1563:U:H6	1.74	0.49
4:AE:28:ARG:NH1	4:AE:30:PHE:HB3	2.27	0.49
1:AA:890:G:O2'	1:AA:906:A:N6	2.45	0.49
23:BB:2311:A:O2'	47:BF:84:ILE:HD13	2.12	0.49
2:AC:183:TYR:HE1	2:AC:198:LYS:HB3	1.76	0.49
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
16:AQ:11:VAL:O	16:AQ:54:ILE:HG13	2.12	0.49
29:BE:136:GLN:HE22	29:BE:139:LYS:HD3	1.77	0.49
49:BR:32:THR:HA	49:BR:61:ALA:O	2.11	0.49
2:AC:134:LYS:HG3	2:AC:167:TYR:HE2	1.77	0.49
41:BJ:110:PRO:O	41:BJ:115:GLY:HA3	2.12	0.49
23:DB:606:U:OP2	29:DE:99:LYS:HD2	2.11	0.49
2:AC:110:LEU:HD22	2:AC:145:ALA:HB2	1.94	0.49
23:BB:208:C:H2'	23:BB:209:C:H6	1.76	0.49
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.47	0.49
23:BB:516:C:O2'	23:BB:517:C:H5'	2.12	0.49
23:BB:622:G:H2'	23:BB:623:C:C6	2.47	0.49
53:D6:58:VAL:HG12	53:D6:66:LEU:HG	1.94	0.49
43:BO:70:ALA:C	43:BO:72:ALA:H	2.15	0.49
1:AA:465:A:H2'	1:AA:466:A:H3'	1.94	0.49
52:DW:32:ALA:C	52:DW:34:SER:H	2.15	0.49
13:CN:50:LEU:H	13:CN:51:PRO:CD	2.25	0.49
23:DB:878:A:H5'	23:DB:900:A:N1	2.27	0.49
18:CS:43:MET:O	18:CS:61:VAL:HB	2.12	0.49
26:BD:9:VAL:HG22	26:BD:9:VAL:O	2.12	0.49
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:113:ARG:NH2	11:CL:120:ARG:HA	2.27	0.49
26:BD:90:PHE:HD2	26:BD:94:GLN:HG3	1.77	0.49
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.22	0.49
32:D4:2:LYS:CD	32:D4:4:ARG:HE	2.15	0.49
42:BN:102:PHE:HD1	42:BN:102:PHE:N	2.11	0.49
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.12	0.49
1:AA:974:A:C4'	1:AA:975:A:H5'	2.34	0.49
20:CB:93:HIS:HB2	20:CB:145:ASN:O	2.12	0.49
20:CB:93:HIS:O	20:CB:94:ARG:C	2.51	0.49
26:BD:68:PHE:HB3	26:BD:73:VAL:CG2	2.34	0.49
40:BH:84:ALA:HA	40:BH:90:LEU:HD12	1.94	0.49
40:DH:113:SER:N	40:DH:132:PHE:HE1	2.09	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
1:CA:946:A:H2'	1:CA:947:G:H8	1.73	0.49
52:DW:10:ARG:O	52:DW:11:ASN:HB2	2.11	0.49
29:BE:47:LYS:HA	29:BE:88:ARG:HH11	1.77	0.49
29:BE:48:THR:C	29:BE:50:ALA:H	2.15	0.49
42:BN:72:ASP:HB3	42:BN:75:ILE:HG13	1.94	0.49
27:BK:39:ILE:N	27:BK:39:ILE:HD13	2.27	0.49
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.42	0.49
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.27	0.49
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.13	0.49
23:DB:1033:U:H5	32:D4:15:LYS:HE3	1.76	0.49
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.47	0.49
17:CR:52:ARG:HG3	17:CR:52:ARG:HH11	1.77	0.49
23:DB:118:A:N3	23:DB:178:G:H1'	2.28	0.49
25:BC:202:ARG:HH11	25:BC:213:ARG:HH21	1.60	0.49
48:DG:16:VAL:HG11	48:DG:44:HIS:NE2	2.27	0.49
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.11	0.49
14:AO:24:SER:HB3	14:AO:27:VAL:CG2	2.41	0.49
1:CA:1350:A:OP2	8:CI:119:LYS:HE3	2.12	0.49
23:BB:414:C:H2'	23:BB:415:A:C8	2.47	0.49
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.26	0.49
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.76	0.49
23:DB:1165:A:H2'	23:DB:1166:G:H8	1.77	0.49
2:AC:13:ILE:O	2:AC:15:LYS:N	2.44	0.49
13:CN:7:ALA:O	13:CN:11:LYS:HG2	2.12	0.49
1:CA:1202:U:O2	13:CN:66:THR:HG21	2.12	0.49
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.12	0.49
44:BQ:23:TYR:N	44:BQ:23:TYR:CD2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:638:U:H2'	1:CA:639:G:O4'	2.12	0.49
23:DB:146:A:H2'	23:DB:147:C:C6	2.47	0.49
53:B6:16:LYS:HA	53:B6:19:GLU:OE2	2.11	0.49
23:BB:277:G:H5'	23:BB:278:A:N7	2.28	0.49
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.93	0.49
14:CO:14:GLU:HB3	14:CO:84:ARG:NH2	2.26	0.49
23:DB:981:A:H2'	23:DB:982:C:C5'	2.42	0.49
37:BL:134:ALA:O	37:BL:137:ALA:HB3	2.12	0.49
14:AO:53:ARG:HD2	23:BB:715:A:N6	2.27	0.49
23:BB:2362:C:OP1	34:B3:39:ARG:NE	2.42	0.49
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.11	0.49
38:BM:35:ALA:HB3	38:BM:99:GLY:H	1.77	0.49
1:AA:724:G:O2'	1:AA:725:G:H5'	2.12	0.49
50:DT:7:LEU:C	50:DT:9:LYS:H	2.16	0.49
23:DB:1640:A:O2'	23:DB:1641:A:H5'	2.13	0.49
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.11	0.49
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.77	0.49
42:BN:24:MET:O	42:BN:27:SER:HB3	2.13	0.49
23:DB:1994:C:O2'	23:DB:1995:U:H5'	2.13	0.49
48:DG:139:VAL:O	48:DG:142:GLN:HB3	2.12	0.49
40:DH:75:LEU:N	40:DH:75:LEU:HD23	2.27	0.49
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.49
1:AA:1356:G:O2'	1:AA:1357:A:H5'	2.11	0.49
21:AU:36:PHE:HD2	21:AU:39:LYS:HB2	1.78	0.49
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.40	0.49
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.94	0.49
52:DW:39:GLN:CG	52:DW:42:THR:HB	2.42	0.49
28:BP:3:ILE:HD13	28:BP:3:ILE:C	2.32	0.49
53:B6:110:ARG:O	53:B6:114:LEU:HD13	2.12	0.49
35:BV:63:ILE:H	35:BV:70:ILE:HD11	1.76	0.49
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.93	0.49
23:BB:2514:U:H2'	23:BB:2515:C:H6	1.77	0.49
13:CN:9:GLU:HB2	13:CN:62:ARG:CZ	2.41	0.49
8:CI:93:LEU:HD13	8:CI:97:LEU:HD11	1.94	0.49
50:DT:40:LYS:O	50:DT:43:ILE:HB	2.13	0.49
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.31	0.49
11:AL:113:ARG:HH21	11:AL:120:ARG:HA	1.77	0.49
25:DC:128:THR:HA	25:DC:190:THR:CA	2.40	0.49
1:CA:379:C:O2'	1:CA:380:G:H5'	2.12	0.49
1:AA:839:C:H2'	1:AA:840:C:O4'	2.11	0.49
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.12	0.49
48:BG:104:LEU:HD22	48:BG:106:LEU:HD22	1.93	0.49
14:AO:85:LEU:N	14:AO:85:LEU:HD12	2.27	0.49
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.48	0.49
36:B2:19:ARG:O	36:B2:22:MET:HB2	2.11	0.49
29:DE:47:LYS:HA	29:DE:88:ARG:HH11	1.76	0.49
12:AM:28:ARG:HH12	12:AM:59:VAL:HA	1.76	0.49
23:DB:1442:U:O2'	23:DB:1443:U:H5'	2.12	0.49
1:CA:409:U:H2'	1:CA:410:G:C8	2.46	0.49
1:AA:1458:G:H5'	19:AT:26:MET:HB2	1.94	0.49
1:AA:674:G:H2'	1:AA:675:A:C8	2.40	0.49
1:AA:450:G:N7	1:AA:481:G:O6	2.46	0.49
23:BB:2812:G:H2'	23:BB:2813:A:C8	2.47	0.49
26:DD:118:PHE:HE2	42:DN:1:MET:HB3	1.78	0.49
23:DB:958:U:O4	38:DM:16:ARG:HA	2.13	0.49
40:BH:54:LEU:HA	40:BH:57:LYS:NZ	2.27	0.49
51:DZ:17:ASN:O	51:DZ:18:ARG:C	2.51	0.49
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.11	0.49
23:BB:593:U:H2'	23:BB:594:U:C5	2.47	0.49
53:B6:95:LYS:HB3	53:B6:100:TYR:HE2	1.76	0.49
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.12	0.49
1:CA:153:C:O2'	1:CA:154:U:H5'	2.12	0.49
1:CA:455:G:H2'	1:CA:456:A:C8	2.47	0.49
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.12	0.49
23:BB:665:U:H2'	23:BB:666:A:H8	1.77	0.49
1:CA:862:C:O2'	1:CA:863:U:H5'	2.12	0.49
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.42	0.49
1:CA:964:A:H2'	1:CA:965:U:H5''	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
23:BB:1523:U:H5''	23:BB:1524:G:H8	1.78	0.49
23:BB:870:U:H5''	38:BM:6:ARG:O	2.12	0.49
11:AL:21:PRO:HG2	11:AL:94:TYR:OH	2.12	0.49
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.76	0.49
1:AA:833:G:H2'	1:AA:834:U:H6	1.77	0.49
1:CA:1298:U:H2'	6:CG:113:LYS:HZ2	1.76	0.49
1:CA:551:U:H2'	1:CA:552:U:C6	2.47	0.49
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.76	0.49
23:DB:912:C:H2'	23:DB:913:U:C6	2.47	0.49
26:BD:169:ARG:O	26:BD:170:VAL:O	2.30	0.49
23:DB:584:C:P	44:DQ:5:ARG:HD3	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:32:U:H4'	22:DA:52:A:H62	1.76	0.49
26:DD:101:PHE:O	26:DD:180:VAL:HG11	2.11	0.49
53:D6:15:GLN:HA	53:D6:168:PHE:CE2	2.47	0.49
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.77	0.49
23:DB:485:C:O2'	23:DB:486:C:H5'	2.12	0.49
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.47	0.49
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.46	0.49
23:BB:2716:C:O2'	23:BB:2717:C:H5'	2.12	0.49
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.48	0.49
1:CA:45:G:H2'	1:CA:46:G:H8	1.76	0.49
37:DL:41:ARG:HG2	37:DL:41:ARG:HH21	1.78	0.49
2:AC:155:ARG:H	2:AC:162:ALA:CB	2.25	0.49
42:DN:24:MET:O	42:DN:27:SER:HB3	2.12	0.49
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.11	0.49
23:BB:707:G:O2'	23:BB:708:G:H5'	2.11	0.49
43:DO:29:HIS:HB3	43:DO:36:TYR:HB2	1.95	0.49
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.47	0.49
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.48	0.49
34:D3:9:ALA:C	34:D3:11:LYS:H	2.15	0.49
23:BB:2856:A:H2'	23:BB:2857:G:C8	2.48	0.49
10:AK:113:THR:HG21	21:AU:28:LEU:HD11	1.94	0.49
23:DB:2588:G:H2'	23:DB:2589:A:O4'	2.12	0.49
14:CO:28:GLN:O	14:CO:32:LEU:HD23	2.12	0.49
32:B4:1:MET:HG3	32:B4:34:LYS:HG2	1.95	0.49
23:DB:2791:G:H2'	23:DB:2792:A:O4'	2.12	0.49
34:D3:32:LEU:HA	34:D3:35:LYS:HD2	1.94	0.49
49:BR:20:VAL:HG12	49:BR:21:ARG:N	2.27	0.49
25:DC:144:GLU:HB3	25:DC:187:CYS:HB3	1.94	0.49
9:AJ:12:ALA:CB	9:AJ:96:VAL:HG12	2.37	0.49
10:CK:33:ILE:CB	10:CK:73:VAL:HG11	2.30	0.49
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.77	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
1:AA:981:U:OP1	13:AN:5:MET:HE1	2.12	0.49
23:DB:2466:C:OP1	32:D4:4:ARG:HD2	2.12	0.49
25:DC:189:ALA:C	25:DC:190:THR:HG23	2.32	0.49
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.12	0.49
51:DZ:7:VAL:HG11	51:DZ:51:VAL:HG13	1.93	0.49
23:DB:1021:A:H61	23:DB:1142:A:N6	2.10	0.49
48:DG:104:LEU:HD22	48:DG:106:LEU:HD22	1.94	0.49
40:DH:113:SER:N	40:DH:132:PHE:CE1	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	1.93	0.49
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.75	0.49
23:BB:2886:A:N6	31:B0:39:ARG:CZ	2.75	0.49
23:DB:2148:G:O3'	23:DB:2149:U:H6	1.95	0.49
1:CA:820:U:H4'	1:CA:821:G:OP2	2.13	0.49
28:BP:20:ARG:HH21	28:BP:20:ARG:HG2	1.76	0.49
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.46	0.49
10:AK:90:PRO:C	10:AK:92:ARG:H	2.14	0.49
10:AK:92:ARG:HH11	21:AU:20:ARG:HH21	1.59	0.49
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.61	0.49
29:DE:150:THR:OG1	29:DE:151:GLY:N	2.45	0.49
40:BH:57:LYS:HZ2	40:BH:58:LEU:HB2	1.76	0.49
1:CA:1421:G:O2'	1:CA:1422:G:H5'	2.13	0.49
23:DB:513:A:O5'	23:DB:513:A:H8	1.95	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
1:CA:1460:C:H2'	1:CA:1461:G:H8	1.78	0.49
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.48	0.49
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.27	0.49
23:DB:1518:C:H2'	23:DB:1519:G:H8	1.78	0.49
41:DJ:98:GLU:HB3	41:DJ:124:VAL:HG21	1.93	0.49
37:DL:77:ILE:HB	37:DL:109:LYS:O	2.13	0.49
22:BA:93:C:O2'	22:BA:94:A:H5'	2.12	0.49
1:CA:302:G:O2'	1:CA:303:A:H5'	2.12	0.49
23:DB:1789:A:P	25:DC:220:ARG:HD3	2.52	0.49
1:CA:284:C:O2'	1:CA:285:C:H5'	2.12	0.49
44:DQ:77:LYS:HE2	44:DQ:116:LEU:HD13	1.93	0.49
53:B6:7:TYR:CE1	53:B6:160:GLU:HG2	2.47	0.49
47:DF:127:TYR:HB2	47:DF:155:ILE:HD13	1.94	0.49
6:AG:130:LYS:N	6:AG:134:VAL:HG21	2.27	0.49
48:BG:139:VAL:O	48:BG:142:GLN:HB3	2.12	0.49
23:DB:2134:A:H5'	23:DB:2135:A:OP2	2.13	0.49
23:DB:207:A:H2'	23:DB:208:C:O4'	2.12	0.49
23:DB:1526:C:O2'	23:DB:1527:G:H5'	2.11	0.49
23:BB:246:C:H2'	23:BB:247:G:H5'	1.94	0.49
6:CG:68:VAL:CG1	6:CG:133:ALA:HB1	2.43	0.49
2:AC:53:ARG:HG2	2:AC:54:ILE:H	1.77	0.49
1:AA:1154:G:O2'	1:AA:1155:A:H5'	2.11	0.49
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.13	0.49
4:CE:155:LYS:HA	7:CH:65:PHE:CG	2.48	0.49
23:BB:1858:A:H2'	23:BB:1859:U:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:110:LYS:HD2	28:BP:110:LYS:N	2.27	0.49
3:CD:100:VAL:HG21	3:CD:136:VAL:HG21	1.93	0.49
37:BL:75:ALA:HB2	37:BL:105:ILE:HG21	1.94	0.49
10:AK:30:ILE:HG22	10:AK:45:THR:CB	2.42	0.49
2:CC:76:ILE:CG2	2:CC:80:GLY:HA2	2.43	0.49
52:DW:49:ASN:C	52:DW:50:VAL:HG22	2.32	0.49
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.95	0.49
53:B6:30:THR:CG2	53:B6:183:ILE:HG12	2.42	0.49
23:BB:2751:G:OP1	23:BB:2751:G:H2'	2.12	0.49
50:BT:40:LYS:O	50:BT:43:ILE:HB	2.12	0.49
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.27	0.49
40:BH:65:ALA:HB1	40:BH:134:VAL:HG21	1.94	0.49
33:B1:24:LYS:NZ	33:B1:33:LEU:HB2	2.26	0.49
42:BN:106:ASP:C	42:BN:108:ALA:H	2.16	0.49
23:BB:1059:G:N2	24:BI:130:GLY:HA3	2.28	0.49
51:BZ:7:VAL:HG11	51:BZ:51:VAL:HG13	1.95	0.49
44:BQ:85:ALA:O	44:BQ:86:SER:C	2.50	0.49
50:DT:68:LYS:HD3	50:DT:68:LYS:N	2.27	0.49
46:DU:87:GLU:OE2	46:DU:88:ASP:HB2	2.12	0.49
46:BU:87:GLU:OE2	46:BU:88:ASP:HB2	2.12	0.49
48:DG:93:TYR:O	48:DG:94:ARG:HG3	2.13	0.49
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.13	0.49
48:BG:93:TYR:O	48:BG:94:ARG:HG3	2.12	0.49
23:DB:96:C:H4'	39:DX:41:HIS:CG	2.46	0.49
32:B4:17:VAL:HG12	32:B4:18:LYS:N	2.22	0.49
14:CO:82:ILE:O	14:CO:86:GLY:N	2.45	0.49
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.42	0.49
50:DT:21:SER:HB3	50:DT:31:VAL:CG2	2.43	0.49
26:BD:15:PHE:N	26:BD:15:PHE:CD1	2.80	0.49
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.12	0.49
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.78	0.49
42:BN:72:ASP:HB3	42:BN:75:ILE:CG1	2.42	0.49
1:CA:313:A:H2'	1:CA:314:C:H6	1.77	0.49
1:AA:1308:U:H3'	12:AM:97:ARG:HH11	1.78	0.49
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	1.94	0.49
6:AG:46:LEU:HG	6:AG:57:GLU:HB3	1.94	0.49
1:AA:430:A:OP1	3:AD:8:LEU:HD23	2.12	0.49
3:AD:26:ALA:HA	3:AD:30:LYS:CE	2.42	0.49
9:CJ:76:ILE:HD12	9:CJ:76:ILE:O	2.13	0.49
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.77	0.49
15:AP:78:VAL:O	15:AP:79:ASN:C	2.49	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:41:GLY:C	3:CD:43:ARG:H	2.15	0.49
25:DC:43:ASN:HD22	25:DC:44:ASN:H	1.61	0.49
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.46	0.49
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.32	0.49
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.43	0.49
9:AJ:10:LEU:O	9:AJ:71:LEU:HA	2.12	0.49
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.11	0.49
23:BB:571:U:O2'	23:BB:573:U:O5'	2.30	0.49
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.77	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
1:AA:862:C:O2'	1:AA:863:U:H5'	2.11	0.49
23:DB:477:A:H2'	23:DB:478:A:H8	1.78	0.49
23:DB:2626:C:H2'	23:DB:2627:G:C8	2.48	0.49
2:AC:109:GLU:OE2	2:AC:143:LEU:HG	2.13	0.49
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.47	0.49
23:DB:2491:U:H5''	23:DB:2570:G:C5'	2.41	0.49
36:B2:4:THR:O	36:B2:5:PHE:HB2	2.11	0.49
1:AA:140:U:H2'	1:AA:141:G:C8	2.47	0.49
1:AA:957:U:H4'	18:AS:78:THR:HB	1.94	0.49
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.13	0.49
1:AA:642:A:H2'	1:AA:643:C:H6	1.77	0.49
1:AA:264:C:H4'	16:AQ:64:ARG:HD2	1.93	0.49
23:DB:2718:G:H4'	28:DP:95:LYS:HB2	1.94	0.49
42:BN:47:VAL:O	42:BN:51:LEU:HD13	2.12	0.49
20:AB:8:MET:HA	20:AB:11:ALA:HB3	1.94	0.49
29:BE:129:PRO:HG3	29:BE:156:ASN:HA	1.95	0.49
23:DB:707:G:O2'	23:DB:708:G:H5'	2.12	0.49
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.95	0.49
1:AA:509:A:O2'	1:AA:510:A:H5'	2.12	0.49
1:CA:682:G:O2'	1:CA:683:G:H5'	2.12	0.49
1:AA:1363:A:H2'	1:AA:1363:A:N3	2.27	0.49
35:BV:5:ASN:HA	35:BV:64:VAL:O	2.12	0.49
23:DB:2505:G:O2'	23:DB:2506:U:H5'	2.12	0.49
10:CK:109:ILE:CG2	21:CU:16:ARG:HH12	2.26	0.49
52:BW:30:VAL:HG21	52:BW:59:PHE:CE1	2.47	0.49
47:BF:37:MET:HG2	47:BF:52:ALA:HB1	1.95	0.49
13:CN:19:TYR:HA	13:CN:23:ARG:HG3	1.94	0.49
48:DG:25:ILE:CG2	48:DG:78:VAL:HG21	2.43	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)
8:CI:56:MET:C	8:CI:58:GLU:N	2.66	0.49
8:CI:93:LEU:HD12	8:CI:94:ARG:N	2.28	0.49
44:DQ:91:ARG:HH12	49:DR:10:LYS:CB	2.24	0.49
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.48	0.49
49:DR:20:VAL:HG12	49:DR:21:ARG:N	2.28	0.49
13:AN:41:TRP:CD1	13:AN:44:VAL:HG23	2.47	0.49
49:BR:40:MET:HG3	49:BR:48:LYS:HA	1.95	0.49
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.81	0.49
38:DM:19:GLY:CA	38:DM:97:GLN:HB2	2.39	0.49
48:DG:94:ARG:NH2	48:DG:104:LEU:HA	2.27	0.49
40:DH:131:SER:HB2	40:DH:141:LYS:HG3	1.95	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:DB:1822:C:O2'	23:DB:1823:G:H5'	2.12	0.49
23:DB:1824:G:OP1	25:DC:51:ARG:HD3	2.12	0.49
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.12	0.49
35:BV:80:HIS:CD2	35:BV:81:PRO:HD2	2.48	0.49
3:CD:26:ALA:HA	3:CD:30:LYS:CE	2.42	0.49
10:CK:64:VAL:O	10:CK:67:GLU:HG2	2.13	0.49
6:AG:21:LEU:HG	6:AG:22:LEU:H	1.76	0.49
9:AJ:6:ILE:HB	9:AJ:76:ILE:HD11	1.94	0.49
43:BO:105:ALA:C	43:BO:107:ALA:H	2.15	0.49
23:BB:1404:C:O2'	23:BB:1405:U:H5'	2.12	0.49
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.47	0.49
2:CC:126:ARG:HH22	2:CC:190:THR:CG2	2.24	0.49
23:BB:2893:A:H5''	23:BB:2894:G:H5'	1.94	0.49
34:B3:30:HIS:HD2	34:B3:31:ILE:N	2.10	0.49
23:BB:2580:U:H5'	26:BD:136:ASN:H	1.77	0.49
23:BB:741:U:H2'	23:BB:742:A:C8	2.47	0.49
26:DD:53:GLY:C	26:DD:76:GLY:HA2	2.32	0.49
1:AA:153:C:O2'	1:AA:154:U:H5'	2.13	0.49
47:DF:69:ALA:HB3	47:DF:80:GLN:O	2.13	0.49
25:DC:221:GLY:O	25:DC:223:ALA:N	2.45	0.49
23:DB:659:G:N2	29:DE:30:GLN:NE2	2.60	0.49
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.13	0.49
11:CL:107:LYS:H	11:CL:107:LYS:HZ2	1.61	0.49
23:BB:2015:A:H2'	23:BB:2016:U:O4'	2.11	0.49
23:BB:1562:U:H2'	23:BB:1563:U:H6	1.77	0.49
20:CB:139:GLU:HG2	20:CB:143:LEU:CD1	2.42	0.49
1:AA:192:A:O2'	1:AA:193:C:H5'	2.13	0.49
44:DQ:65:ASN:HD21	44:DQ:69:ARG:HH11	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.12	0.49
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.13	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
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.13	0.49
2:CC:38:VAL:O	2:CC:42:LEU:HD23	2.12	0.49
7:AH:23:ALA:HB1	7:AH:61:THR:HA	1.94	0.49
23:BB:1251:C:H2'	44:BQ:5:ARG:HH12	1.77	0.49
40:BH:44:ILE:C	40:BH:46:PHE:H	2.16	0.49
23:BB:521:U:H2'	23:BB:522:A:C8	2.47	0.49
22:DA:115:A:O2'	22:DA:116:G:H5'	2.12	0.49
1:AA:984:C:O2'	1:AA:985:C:H5'	2.12	0.49
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.47	0.49
26:BD:101:PHE:O	26:BD:102:ALA:HB2	2.13	0.49
23:DB:1942:C:C4'	53:D6:133:ARG:HH12	2.24	0.49
41:BJ:40:HIS:ND1	41:BJ:41:LYS:HG3	2.28	0.49
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.27	0.49
1:AA:1483:A:H2	23:BB:1959:G:HO2'	1.60	0.49
2:AC:54:ILE:O	2:AC:54:ILE:HG12	2.12	0.49
23:DB:49:A:H5''	23:DB:51:G:O4'	2.13	0.49
29:BE:23:PHE:HA	29:BE:107:SER:OG	2.12	0.49
15:AP:28:ARG:CD	15:AP:29:ASN:H	2.25	0.49
23:BB:607:U:O4	23:BB:619:G:H2'	2.12	0.49
21:AU:40:PRO:O	21:AU:42:THR:N	2.46	0.49
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.42	0.49
52:BW:32:ALA:C	52:BW:34:SER:H	2.16	0.49
13:CN:64:ARG:HB2	13:CN:77:GLY:O	2.12	0.49
53:D6:29:ARG:NH2	53:D6:87:ASP:O	2.46	0.49
53:D6:67:VAL:HG23	53:D6:67:VAL:O	2.12	0.49
27:DK:35:VAL:HG12	27:DK:69:VAL:CG2	2.42	0.49
52:BW:39:GLN:CG	52:BW:42:THR:HB	2.43	0.49
1:AA:1119:C:O2'	1:AA:1120:C:H5'	2.12	0.49
28:BP:4:ILE:O	28:BP:6:GLN:N	2.44	0.49
48:BG:71:LEU:HD13	48:BG:74:MET:SD	2.52	0.49
23:DB:138:U:H2'	23:DB:140:C:C1'	2.42	0.49
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	1.94	0.49
23:DB:994:C:O2	49:DR:10:LYS:HE3	2.13	0.49
44:DQ:57:ARG:HH11	44:DQ:57:ARG:HG2	1.77	0.49
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.28	0.49
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.43	0.49
1:AA:1314:C:N4	18:AS:3:SER:HB3	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1023:U:H2'	23:BB:1024:G:C5'	2.42	0.49
1:CA:1493:A:OP1	55:CA:1662:LLL:H51	2.13	0.49
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.12	0.49
20:CB:59:ILE:HD12	20:CB:60:ALA:N	2.28	0.49
1:CA:1170:A:P	20:CB:138:ARG:HH12	2.35	0.49
4:AE:82:HIS:HE1	4:AE:146:MET:HA	1.78	0.49
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.77	0.49
32:B4:11:CYS:HB3	32:B4:33:HIS:CE1	2.47	0.49
29:BE:88:ARG:O	29:BE:90:GLN:HG3	2.13	0.49
27:BK:110:GLU:HA	27:BK:113:MET:CG	2.42	0.49
1:AA:677:U:H2'	1:AA:678:U:H6	1.77	0.49
1:AA:1226:C:H5'	12:AM:94:LEU:HD13	1.93	0.49
27:DK:39:ILE:HD13	27:DK:60:ALA:O	2.13	0.49
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.27	0.49
22:DA:102:G:O2'	22:DA:103:U:H5'	2.13	0.49
1:AA:1008:U:H2'	1:AA:1009:U:C5'	2.42	0.49
23:BB:26:G:H1'	23:BB:514:A:H61	1.77	0.49
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.47	0.49
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.13	0.49
23:BB:518:G:H4'	45:BS:18:ARG:CZ	2.43	0.49
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.27	0.49
44:BQ:65:ASN:HD21	44:BQ:69:ARG:HH11	1.61	0.49
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.95	0.49
46:BU:82:VAL:CG1	46:BU:93:ARG:HB3	2.43	0.49
10:AK:82:GLU:HG2	10:AK:108:ASN:HB2	1.95	0.49
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.95	0.49
1:CA:708:C:O2'	1:CA:709:U:H5'	2.12	0.49
23:BB:600:G:H2'	23:BB:601:C:C6	2.48	0.49
23:BB:2454:G:H1'	57:BB:3366:HOH:O	2.13	0.49
37:DL:30:THR:O	37:DL:32:GLY:N	2.46	0.49
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.12	0.49
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.77	0.49
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.13	0.49
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.13	0.49
14:AO:53:ARG:HD2	23:BB:715:A:H61	1.77	0.49
1:CA:592:G:O2'	1:CA:593:U:H5'	2.12	0.49
23:BB:2830:C:O4'	23:BB:2836:U:H5'	2.13	0.49
23:DB:1256:G:H21	29:DE:77:ILE:HG22	1.76	0.49
1:CA:957:U:H4'	18:CS:78:THR:HB	1.94	0.49
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.11	0.49
23:DB:305:C:O2'	23:DB:306:U:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.95	0.49
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.13	0.49
1:CA:729:A:H2'	1:CA:730:G:H8	1.78	0.49
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.78	0.49
33:D1:44:GLN:OE1	33:D1:44:GLN:HA	2.12	0.49
23:BB:1647:U:H3'	23:BB:1647:U:P	2.52	0.49
6:AG:11:ILE:HD12	6:AG:11:ILE:H	1.77	0.49
23:BB:100:U:OP1	23:BB:100:U:H2'	2.13	0.49
1:AA:608:A:H2'	1:AA:609:A:O4'	2.13	0.49
25:DC:153:LEU:HD13	25:DC:175:LEU:CD2	2.43	0.49
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.77	0.49
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.12	0.49
5:AF:62:MET:HG3	5:AF:64:VAL:CG2	2.39	0.49
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.93	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
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
50:BT:23:ALA:C	50:BT:25:GLU:H	2.15	0.49
50:BT:47:VAL:HG13	50:BT:51:PHE:CD1	2.48	0.49
1:CA:1130:A:H2'	1:CA:1131:G:C8	2.48	0.49
40:BH:73:ASN:HB3	40:BH:141:LYS:HZ1	1.75	0.49
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.43	0.49
25:BC:159:THR:N	25:BC:194:VAL:CG1	2.75	0.49
37:BL:30:THR:O	37:BL:31:GLY:C	2.51	0.49
1:CA:920:U:O2'	1:CA:921:U:H5'	2.11	0.49
1:CA:844:G:OP2	1:CA:844:G:H8	1.96	0.49
1:CA:1490:U:C2'	1:CA:1491:G:H5'	2.42	0.49
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.12	0.49
23:BB:2136:G:H2'	23:BB:2137:U:C6	2.47	0.49
29:DE:172:ALA:O	29:DE:199:MET:HE3	2.13	0.49
38:BM:38:ARG:HB3	38:BM:98:PRO:HD3	1.95	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
23:BB:2457:U:H2'	23:BB:2458:G:H5'	1.93	0.49
2:AC:148:ILE:O	2:AC:168:ARG:HG2	2.13	0.49
27:DK:19:VAL:CB	27:DK:41:ILE:HD11	2.43	0.49
23:BB:1411:U:H2'	23:BB:1412:U:C6	2.48	0.49
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.27	0.49
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.77	0.49
27:DK:39:ILE:N	27:DK:39:ILE:HD13	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.42	0.49
23:BB:2244:U:H2'	23:BB:2245:U:C6	2.48	0.49
20:CB:182:VAL:O	20:CB:195:VAL:HG13	2.13	0.49
23:DB:960:A:H61	38:DM:82:MET:CE	2.25	0.49
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.12	0.49
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.76	0.49
23:DB:533:G:H2'	23:DB:534:U:C6	2.48	0.49
53:B6:129:ILE:O	53:B6:132:ILE:HB	2.12	0.49
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.48	0.49
22:DA:113:C:H2'	22:DA:114:C:C6	2.47	0.49
47:DF:79:ARG:O	47:DF:82:TYR:HB2	2.13	0.49
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	2.13	0.49
23:BB:666:A:H4'	37:BL:48:ARG:HD3	1.94	0.49
23:BB:2015:A:N3	31:B0:2:VAL:HG22	2.27	0.49
26:BD:36:GLN:OE1	26:BD:38:LYS:HE3	2.13	0.49
23:DB:2439:A:C8	23:DB:2586:U:H4'	2.48	0.49
23:DB:1829:A:HO2'	25:DC:14:HIS:CD2	2.31	0.49
11:CL:3:VAL:CG1	16:CQ:33:TYR:HB3	2.43	0.49
23:BB:2149:U:H2'	23:BB:2150:C:C6	2.47	0.49
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.28	0.49
23:DB:600:G:H2'	23:DB:601:C:C6	2.48	0.49
14:CO:8:THR:O	14:CO:11:ILE:HG22	2.13	0.49
23:DB:2825:G:H5''	23:DB:2825:G:N3	2.27	0.49
6:CG:149:ALA:HB1	10:CK:59:PRO:HB2	1.94	0.49
23:DB:667:U:H2'	23:DB:668:A:O4'	2.13	0.49
52:DW:77:LYS:HZ3	52:DW:77:LYS:HB2	1.78	0.49
6:AG:125:ASP:HB3	6:AG:130:LYS:HB3	1.94	0.49
1:AA:415:A:N1	1:AA:428:G:O6	2.46	0.49
42:DN:65:LEU:HD11	42:DN:69:ARG:CZ	2.43	0.49
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.13	0.49
22:DA:52:A:H2'	22:DA:53:A:H5'	1.94	0.49
23:DB:2361:G:O2'	23:DB:2362:C:H5'	2.13	0.49
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.27	0.49
13:CN:2:LYS:O	13:CN:6:LYS:HG3	2.13	0.49
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.95	0.49
1:AA:241:G:O2'	1:AA:242:G:H5'	2.13	0.49
48:BG:54:ARG:O	48:BG:57:TYR:HD1	1.96	0.49
1:CA:248:C:O2'	1:CA:249:U:H5'	2.12	0.49
23:BB:1806:C:C2'	23:BB:1807:G:H5'	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:170:GLY:O	2:CC:172:VAL:HG23	2.13	0.49
23:DB:2830:C:H1'	23:DB:2836:U:O4'	2.13	0.49
1:AA:624:C:H2'	1:AA:625:U:H6	1.77	0.49
23:BB:2519:U:C6	23:BB:2542:A:N6	2.81	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:AA:697:U:O2	1:AA:798:U:H1'	2.12	0.49
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.12	0.49
23:BB:919:U:H6	23:BB:919:U:O5'	1.95	0.49
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.12	0.49
25:BC:171:VAL:HG23	25:BC:185:ALA:HB2	1.95	0.49
47:BF:102:LEU:C	47:BF:104:THR:H	2.15	0.49
47:BF:64:PRO:HB3	47:BF:88:VAL:HG21	1.95	0.49
27:BK:34:GLY:O	27:BK:36:GLY:N	2.46	0.49
8:AI:56:MET:C	8:AI:58:GLU:N	2.66	0.49
23:DB:878:A:H5'	23:DB:900:A:N6	2.26	0.49
39:DX:29:ARG:NH1	50:DT:12:ARG:HG2	2.28	0.49
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.66	0.49
44:BQ:56:PHE:HA	44:BQ:59:LEU:HB3	1.95	0.49
19:AT:34:VAL:HG11	19:AT:78:LEU:HD13	1.94	0.49
20:AB:42:LEU:O	20:AB:46:VAL:HG12	2.13	0.49
23:DB:1161:C:C1'	49:DR:9:GLY:HA3	2.43	0.49
38:BM:97:GLN:N	38:BM:97:GLN:OE1	2.46	0.49
23:BB:296:U:H2'	23:BB:297:G:C8	2.47	0.49
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.13	0.49
37:DL:116:VAL:HG22	37:DL:117:THR:N	2.28	0.49
1:AA:82:G:C6	1:AA:88:U:O2	2.65	0.49
3:CD:80:ARG:NH1	3:CD:81:LEU:HD23	2.28	0.49
51:DZ:30:LEU:CD2	51:DZ:30:LEU:H	2.19	0.49
23:BB:2442:C:O2'	23:BB:2443:C:H5'	2.13	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
17:CR:34:GLU:HB2	21:CU:18:PHE:CZ	2.38	0.49
23:BB:2886:A:H3'	23:BB:2887:A:H8	1.78	0.49
1:AA:1303:C:H2'	1:AA:1304:G:O4'	2.12	0.49
23:DB:2107:G:H2'	23:DB:2108:A:C8	2.48	0.49
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.12	0.49
20:AB:116:LEU:HA	20:AB:119:GLN:HG2	1.95	0.49
48:BG:38:ASP:CG	48:BG:39:ALA:N	2.66	0.49
29:DE:61:ARG:O	29:DE:62:GLN:C	2.50	0.49
7:CH:112:ASP:CG	7:CH:113:ARG:H	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:109:SER:O	20:CB:112:ARG:HB3	2.13	0.49
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.13	0.49
23:BB:416:U:H2'	23:BB:417:C:C6	2.48	0.49
8:CI:122:ARG:NH1	8:CI:122:ARG:HG3	2.28	0.49
18:AS:42:ASN:N	18:AS:42:ASN:ND2	2.61	0.49
23:BB:1901:A:H2'	23:BB:1902:C:C6	2.48	0.49
3:CD:28:ASP:HA	3:CD:33:ILE:CG2	2.43	0.49
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.94	0.49
33:D1:3:GLY:C	33:D1:5:ARG:H	2.14	0.49
20:AB:31:PHE:N	20:AB:41:ASN:HB2	2.28	0.49
1:AA:638:U:H2'	1:AA:639:G:O4'	2.13	0.49
1:AA:1499:A:H1'	1:AA:1520:C:H5'	1.94	0.49
44:BQ:35:PHE:O	44:BQ:39:ILE:HG12	2.13	0.49
23:DB:2025:C:H2'	23:DB:2026:U:H6	1.78	0.49
30:DY:13:ILE:HG22	30:DY:14:GLY:N	2.28	0.49
9:AJ:44:THR:HG23	9:AJ:69:THR:C	2.33	0.49
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.43	0.49
19:AT:15:LYS:HA	19:AT:18:LYS:HE3	1.95	0.49
1:AA:584:G:O2'	1:AA:585:G:H5'	2.12	0.49
1:AA:386:C:C2'	1:AA:387:U:H5'	2.43	0.49
23:DB:351:C:H2'	23:DB:352:A:H8	1.78	0.49
1:CA:167:A:O2'	1:CA:168:G:H5'	2.12	0.49
22:DA:87:U:C2'	22:DA:88:C:O5'	2.61	0.49
23:BB:840:C:H2'	23:BB:841:G:H8	1.78	0.49
23:BB:246:C:N4	34:B3:7:ARG:HG2	2.27	0.49
16:AQ:10:ARG:HH21	16:AQ:55:GLY:H	1.60	0.49
1:CA:1430:A:H2'	1:CA:1431:A:O4'	2.12	0.49
1:AA:248:C:O2'	1:AA:249:U:H5'	2.13	0.49
23:BB:2397:G:H2'	23:BB:2398:U:H6	1.78	0.49
23:BB:992:C:H2'	23:BB:993:G:H8	1.78	0.49
23:DB:433:C:H2'	23:DB:434:U:C6	2.48	0.49
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.78	0.49
23:BB:2598:A:OP1	25:BC:233:GLY:HA2	2.12	0.49
6:CG:80:GLY:C	6:CG:82:SER:H	2.15	0.49
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.77	0.49
38:DM:55:ARG:HG3	38:DM:55:ARG:NH2	2.27	0.49
24:BI:2:LYS:NZ	24:BI:2:LYS:HB3	2.27	0.49
1:AA:692:U:O2	1:AA:694:A:H5''	2.13	0.49
23:DB:622:G:H2'	23:DB:623:C:C6	2.48	0.49
23:BB:299:A:N6	23:BB:322:A:O2'	2.45	0.49
9:CJ:12:ALA:H	9:CJ:18:ILE:HD12	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:93:SER:N	53:D6:100:TYR:O	2.45	0.49
35:DV:4:ILE:HD11	35:DV:61:LEU:HB3	1.95	0.49
53:B6:106:LEU:HD12	53:B6:111:ARG:HD2	1.93	0.49
23:BB:2751:G:H5''	48:BG:3:VAL:HG13	1.95	0.49
49:DR:40:MET:CG	49:DR:48:LYS:HA	2.43	0.49
45:BS:24:ILE:CG2	45:BS:71:VAL:HG11	2.34	0.49
28:DP:3:ILE:C	28:DP:3:ILE:HD13	2.33	0.49
23:BB:705:A:N6	23:BB:726:G:H1'	2.27	0.49
23:BB:162:U:C2'	23:BB:162:U:O2	2.61	0.49
20:AB:216:VAL:O	20:AB:220:VAL:HG23	2.13	0.49
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.95	0.49
1:CA:100:G:H2'	1:CA:101:A:O4'	2.13	0.49
41:DJ:28:LEU:HD23	41:DJ:29:ALA:N	2.28	0.49
4:AE:131:ASN:ND2	4:AE:133:ILE:HB	2.28	0.49
51:DZ:49:LEU:HD13	51:DZ:51:VAL:CG2	2.43	0.49
23:BB:2658:C:H5'	48:BG:159:LYS:HZ1	1.76	0.49
1:AA:72:A:H61	1:AA:98:A:H2	1.59	0.49
39:DX:1:MET:HG2	39:DX:4:LYS:HZ3	1.77	0.49
1:CA:430:A:OP1	3:CD:8:LEU:HD23	2.13	0.49
21:AU:10:PRO:HB2	2:CC:71:ARG:CD	2.43	0.49
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.13	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:2548:U:H1'	27:BK:23:LYS:HZ1	1.74	0.49
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.13	0.49
47:BF:55:ASP:OD2	47:BF:149:ARG:HG3	2.13	0.49
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.13	0.49
23:DB:782:A:C2	25:DC:224:MET:HB3	2.48	0.49
41:DJ:114:LEU:O	41:DJ:117:ALA:HB3	2.13	0.49
23:BB:572:A:H5''	23:BB:573:U:OP2	2.13	0.49
6:CG:71:THR:HG22	6:CG:141:HIS:CE1	2.47	0.49
25:BC:180:MET:HB3	25:BC:267:VAL:HG23	1.95	0.49
23:DB:7:G:H2'	23:DB:8:C:C6	2.48	0.49
23:BB:1937:A:N7	23:BB:1939:U:H2'	2.28	0.49
23:BB:981:A:H2'	23:BB:982:C:C5'	2.43	0.49
23:DB:2015:A:H2'	23:DB:2016:U:O4'	2.13	0.49
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.78	0.49
23:BB:807:U:H2'	23:BB:808:G:C8	2.48	0.49
46:DU:24:VAL:HG22	46:DU:35:VAL:HG22	1.95	0.49
53:D6:151:GLU:HA	53:D6:154:THR:HG22	1.95	0.49
23:DB:565:C:O2'	23:DB:566:U:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.77	0.49
23:BB:692:C:H5'	25:BC:38:LYS:HB2	1.95	0.49
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	1.93	0.49
38:DM:32:GLY:HA3	38:DM:103:TYR:O	2.13	0.49
41:BJ:77:HIS:CD2	41:BJ:84:ILE:H	2.30	0.49
53:B6:3:LEU:HD11	53:B6:149:LEU:HD11	1.95	0.49
23:BB:207:A:H2'	23:BB:208:C:O4'	2.13	0.49
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.12	0.49
23:DB:84:A:H4'	23:DB:85:G:O5'	2.13	0.49
1:AA:745:G:H2'	1:AA:746:A:C8	2.48	0.49
1:CA:443:C:H2'	1:CA:444:G:C8	2.48	0.49
23:DB:1845:G:O2'	23:DB:1846:G:H5'	2.12	0.49
20:AB:103:TRP:CZ3	20:AB:107:ARG:HD2	2.47	0.49
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.48	0.49
1:CA:745:G:H2'	1:CA:746:A:C8	2.47	0.49
23:DB:191:A:H2'	23:DB:192:C:C6	2.48	0.49
25:DC:4:LYS:HE2	25:DC:5:CYS:H	1.77	0.49
21:CU:3:ILE:HD11	21:CU:22:CYS:SG	2.53	0.48
52:BW:49:ASN:HA	52:BW:61:LYS:H	1.78	0.48
53:D6:59:THR:O	53:D6:61:PRO:HD3	2.12	0.48
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.13	0.48
22:DA:75:G:H2'	22:DA:76:G:C8	2.48	0.48
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.27	0.48
20:CB:42:LEU:HA	20:CB:45:THR:CB	2.43	0.48
44:DQ:108:LEU:CA	49:DR:48:LYS:HD3	2.43	0.48
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.13	0.48
44:DQ:86:SER:HB2	49:DR:51:VAL:HA	1.93	0.48
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.43	0.48
3:CD:164:ARG:HG3	3:CD:165:GLU:N	2.28	0.48
25:BC:79:ARG:HD2	25:BC:81:GLU:CG	2.44	0.48
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.94	0.48
1:CA:1143:G:O2'	1:CA:1144:G:H5'	2.13	0.48
42:DN:102:PHE:N	42:DN:102:PHE:CD1	2.80	0.48
41:BJ:23:LYS:HZ1	41:BJ:142:ILE:HA	1.79	0.48
23:DB:299:A:N6	23:DB:322:A:O2'	2.44	0.48
14:CO:85:LEU:HD12	14:CO:85:LEU:N	2.28	0.48
14:AO:71:LYS:HB2	14:AO:78:TYR:CD2	2.48	0.48
23:DB:451:U:OP1	29:DE:47:LYS:HD2	2.14	0.48
29:DE:88:ARG:O	29:DE:90:GLN:HG3	2.13	0.48
23:DB:1439:A:N7	23:DB:1440:U:N1	2.61	0.48
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.27	0.48
3:CD:145:ARG:HB3	3:CD:147:LYS:HD2	1.95	0.48
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.28	0.48
23:DB:545:U:C5	23:DB:546:U:H1'	2.48	0.48
3:CD:169:TRP:C	3:CD:182:LYS:HB2	2.33	0.48
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.13	0.48
27:DK:107:LEU:C	27:DK:109:SER:H	2.17	0.48
28:BP:23:ASP:HA	28:BP:88:ARG:HA	1.95	0.48
46:DU:27:VAL:CG2	46:DU:33:VAL:HG12	2.40	0.48
1:AA:409:U:H2'	1:AA:410:G:C8	2.48	0.48
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.54	0.48
23:BB:1730:C:O2'	23:BB:1731:G:N2	2.45	0.48
4:CE:81:GLN:N	4:CE:146:MET:HE3	2.25	0.48
30:DY:5:LYS:O	30:DY:57:GLU:HB2	2.12	0.48
1:CA:833:G:H2'	1:CA:834:U:H6	1.77	0.48
23:DB:1812:U:H4'	25:DC:44:ASN:OD1	2.12	0.48
25:BC:243:PRO:O	25:BC:250:GLN:HA	2.12	0.48
25:DC:15:VAL:HG13	25:DC:204:LEU:O	2.13	0.48
7:AH:112:ASP:CG	7:AH:113:ARG:H	2.17	0.48
23:DB:2213:U:O2	23:DB:2213:U:C2'	2.59	0.48
38:DM:49:ALA:HA	38:DM:123:LYS:HG3	1.95	0.48
23:BB:635:C:H2'	23:BB:636:G:C8	2.47	0.48
23:BB:573:U:O2'	23:BB:574:A:H3'	2.13	0.48
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.48	0.48
49:DR:14:VAL:HG22	49:DR:15:SER:H	1.76	0.48
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.27	0.48
23:BB:946:C:H2'	23:BB:947:A:H8	1.78	0.48
1:CA:767:A:H2'	1:CA:768:A:C8	2.47	0.48
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.43	0.48
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.47	0.48
23:BB:753:A:O2'	23:BB:754:U:H5'	2.13	0.48
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.26	0.48
22:DA:23:G:H2'	22:DA:24:G:C8	2.48	0.48
7:CH:123:GLU:HG2	7:CH:124:ILE:O	2.13	0.48
38:DM:31:PHE:HB3	38:DM:130:PHE:CZ	2.47	0.48
23:BB:1640:A:O2'	23:BB:1641:A:H5'	2.12	0.48
23:DB:909:A:H2'	23:DB:912:C:C5	2.48	0.48
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.48	0.48
22:DA:88:C:H2'	22:DA:89:U:C5	2.48	0.48
22:BA:53:A:C2'	22:BA:54:G:H5'	2.43	0.48
1:CA:642:A:H2'	1:CA:643:C:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:307:G:N2	23:DB:309:A:H3'	2.28	0.48
1:AA:643:C:H5'	7:AH:31:LEU:HD13	1.95	0.48
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.28	0.48
48:BG:112:VAL:HG12	48:BG:113:ASP:N	2.28	0.48
1:CA:171:A:H2'	1:CA:172:A:C8	2.48	0.48
45:BS:41:LYS:HB3	45:BS:41:LYS:NZ	2.28	0.48
23:DB:2276:G:OP2	38:DM:85:GLY:N	2.46	0.48
1:CA:911:U:H2'	1:CA:912:C:C6	2.48	0.48
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.77	0.48
46:BU:43:LYS:HD3	46:BU:44:HIS:N	2.28	0.48
23:DB:271:G:HO2'	23:DB:272:A:H8	1.61	0.48
11:CL:73:LEU:HD21	11:CL:103:CYS:SG	2.53	0.48
23:DB:2047:C:H2'	23:DB:2048:G:H8	1.77	0.48
1:CA:968:A:H4'	1:CA:969:A:OP2	2.13	0.48
23:BB:796:C:H2'	23:BB:797:G:C8	2.47	0.48
23:DB:2323:G:O2'	23:DB:2324:U:H5'	2.13	0.48
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.76	0.48
21:CU:40:PRO:C	21:CU:42:THR:N	2.66	0.48
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.13	0.48
29:BE:193:VAL:O	29:BE:197:GLU:HB2	2.12	0.48
23:BB:2367:G:O2'	23:BB:2368:C:H5'	2.13	0.48
52:BW:65:LYS:O	52:BW:81:ILE:HA	2.14	0.48
47:DF:33:ILE:HB	47:DF:90:LEU:HB2	1.95	0.48
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	1.94	0.48
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	1.95	0.48
40:DH:47:PHE:O	40:DH:51:ARG:N	2.45	0.48
1:CA:903:G:O2'	1:CA:904:U:H5'	2.13	0.48
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.94	0.48
35:BV:28:ALA:HA	35:BV:88:HIS:CE1	2.48	0.48
45:DS:31:GLN:C	45:DS:33:LEU:H	2.15	0.48
20:CB:216:VAL:O	20:CB:220:VAL:HG23	2.13	0.48
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HB	2.47	0.48
20:AB:59:ILE:HD12	20:AB:60:ALA:N	2.29	0.48
47:DF:163:GLU:CA	47:DF:166:ARG:HD2	2.35	0.48
51:BZ:63:GLY:O	51:BZ:66:THR:N	2.46	0.48
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.45	0.48
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.13	0.48
1:CA:613:C:P	3:CD:80:ARG:HH21	2.36	0.48
23:BB:672:C:H2'	23:BB:673:C:C6	2.48	0.48
29:BE:61:ARG:O	29:BE:62:GLN:C	2.50	0.48
23:BB:2060:A:C2'	29:BE:63:LYS:HZ1	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:106:ARG:HH12	12:CM:109:LYS:CE	2.26	0.48
23:BB:820:A:H2'	23:BB:821:A:O4'	2.12	0.48
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.13	0.48
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.95	0.48
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	1.95	0.48
23:BB:561:G:O2'	44:BQ:44:TYR:OH	2.30	0.48
20:AB:69:VAL:HB	20:AB:162:VAL:CB	2.43	0.48
34:B3:30:HIS:HD2	34:B3:31:ILE:H	1.61	0.48
46:DU:48:VAL:H	46:DU:53:GLN:HB2	1.78	0.48
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.43	0.48
23:DB:608:A:H2'	23:DB:609:A:H8	1.76	0.48
23:DB:2886:A:H62	31:D0:39:ARG:CD	2.26	0.48
23:BB:178:G:O2'	23:BB:179:C:H5'	2.13	0.48
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.13	0.48
41:BJ:114:LEU:O	41:BJ:117:ALA:HB3	2.14	0.48
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.74	0.48
1:AA:440:C:O2'	1:AA:441:A:H5'	2.13	0.48
23:BB:1165:A:H2'	23:BB:1166:G:H8	1.78	0.48
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.27	0.48
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.43	0.48
25:BC:173:LEU:N	25:BC:173:LEU:HD13	2.27	0.48
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.76	0.48
49:DR:74:ILE:HB	49:DR:87:GLN:O	2.12	0.48
23:BB:2560:A:H2'	23:BB:2561:U:H6	1.77	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.28	0.48
23:BB:2323:G:C2'	23:BB:2324:U:H5'	2.42	0.48
53:D6:16:LYS:O	53:D6:20:VAL:HG23	2.13	0.48
38:DM:55:ARG:HH21	38:DM:55:ARG:HG3	1.77	0.48
23:DB:1050:A:H2'	23:DB:1051:G:H8	1.79	0.48
1:CA:176:C:H2'	1:CA:177:G:N3	2.28	0.48
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.13	0.48
1:CA:810:C:O2'	1:CA:811:C:H5'	2.13	0.48
1:AA:399:G:H2'	1:AA:400:C:C6	2.48	0.48
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.78	0.48
4:AE:44:ARG:HD2	4:AE:72:ASN:ND2	2.28	0.48
1:CA:233:C:H2'	1:CA:234:C:H6	1.78	0.48
23:BB:603:A:H4'	23:BB:604:G:O5'	2.13	0.48
47:DF:102:LEU:C	47:DF:104:THR:H	2.16	0.48
5:AF:3:HIS:CE1	5:AF:95:ALA:HB2	2.49	0.48
23:DB:917:A:H5''	23:DB:2268:A:H61	1.78	0.48
23:DB:138:U:H2'	23:DB:140:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:23:GLY:HA3	8:CI:61:ASP:OD1	2.13	0.48
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HA	1.77	0.48
44:DQ:60:TRP:HB3	44:DQ:92:LYS:O	2.13	0.48
44:BQ:94:LEU:HD12	49:BR:13:ARG:HB2	1.94	0.48
1:AA:960:U:O3'	1:AA:1223:C:H4'	2.13	0.48
49:DR:7:SER:HB2	49:DR:22:LEU:HD22	1.93	0.48
43:BO:3:LYS:N	43:BO:3:LYS:HD3	2.18	0.48
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.48	0.48
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.12	0.48
1:CA:254:G:O2'	1:CA:255:G:H5'	2.13	0.48
19:CT:71:ALA:O	19:CT:74:HIS:HB2	2.13	0.48
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.48	0.48
14:AO:14:GLU:HB3	14:AO:84:ARG:NH2	2.27	0.48
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.12	0.48
42:DN:59:SER:C	42:DN:61:ALA:H	2.17	0.48
53:B6:134:ARG:HH22	53:B6:135:GLU:HG2	1.75	0.48
23:BB:1439:A:N7	23:BB:1440:U:N1	2.62	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.24	0.48
42:BN:63:ARG:HD2	42:BN:80:PHE:CD2	2.48	0.48
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.48	0.48
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.94	0.48
23:DB:2814:A:C4'	31:D0:25:THR:HG21	2.41	0.48
1:AA:1227:A:O2'	12:AM:113:LYS:HE2	2.13	0.48
27:DK:63:VAL:HG21	27:DK:85:VAL:HG23	1.94	0.48
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.13	0.48
4:CE:82:HIS:CD2	7:CH:95:MET:HG3	2.48	0.48
9:CJ:73:LEU:CD1	9:CJ:75:ASP:HB2	2.43	0.48
20:CB:69:VAL:HB	20:CB:162:VAL:CB	2.44	0.48
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.95	0.48
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.33	0.48
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.25	0.48
23:DB:62:U:H3'	23:DB:63:A:H8	1.77	0.48
23:DB:1515:A:H4'	23:DB:1556:C:O2'	2.12	0.48
6:AG:71:THR:HG22	6:AG:141:HIS:CE1	2.48	0.48
1:AA:1342:C:H5'	8:AI:127:SER:HA	1.94	0.48
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.13	0.48
1:CA:389:A:H3'	1:CA:390:U:C6	2.46	0.48
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.95	0.48
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.44	0.48
15:CP:38:PHE:CD2	15:CP:51:ARG:HB2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:20:LYS:HD2	18:CS:20:LYS:O	2.14	0.48
23:BB:1353:A:O2'	23:BB:1354:A:H5'	2.13	0.48
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.43	0.48
46:BU:38:ILE:HG23	46:BU:39:ASN:N	2.29	0.48
46:DU:38:ILE:HG23	46:DU:39:ASN:N	2.27	0.48
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.79	0.48
25:DC:243:PRO:O	25:DC:250:GLN:HA	2.12	0.48
23:DB:839:U:H2'	23:DB:840:C:C6	2.48	0.48
37:DL:30:THR:O	37:DL:31:GLY:C	2.51	0.48
53:D6:36:ALA:CA	53:D6:39:LEU:HD23	2.43	0.48
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.95	0.48
23:BB:522:A:H2'	23:BB:523:C:C6	2.47	0.48
44:DQ:35:PHE:O	44:DQ:39:ILE:HG12	2.13	0.48
53:B6:85:ASP:O	53:B6:86:SER:HB2	2.12	0.48
1:CA:76:G:H2'	1:CA:77:A:H8	1.78	0.48
16:CQ:10:ARG:HH21	16:CQ:55:GLY:H	1.61	0.48
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.47	0.48
23:DB:2309:A:N6	47:DF:75:GLY:HA3	2.29	0.48
23:DB:1335:C:H2'	23:DB:1336:A:C8	2.49	0.48
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.48	0.48
43:BO:6:ALA:HB3	43:BO:10:ARG:HH11	1.78	0.48
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.14	0.48
48:DG:29:ASN:HD21	48:DG:81:GLY:HA2	1.77	0.48
35:DV:5:ASN:HA	35:DV:64:VAL:O	2.12	0.48
23:BB:2667:C:H2'	23:BB:2668:G:O4'	2.13	0.48
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.95	0.48
1:AA:233:C:H2'	1:AA:234:C:H6	1.79	0.48
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.12	0.48
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.12	0.48
1:CA:131:A:H2'	1:CA:132:C:C6	2.48	0.48
7:CH:9:MET:O	7:CH:13:ILE:HG13	2.13	0.48
37:BL:143:GLU:CG	37:BL:144:GLU:H	1.98	0.48
29:BE:126:VAL:CG2	29:BE:133:LEU:HB2	2.43	0.48
1:CA:737:C:H2'	1:CA:738:C:C6	2.48	0.48
47:DF:34:THR:O	47:DF:35:LEU:HB2	2.13	0.48
47:DF:32:LYS:H	47:DF:95:MET:HE1	1.77	0.48
53:D6:41:LEU:HD23	53:D6:83:ILE:HD13	1.94	0.48
27:BK:35:VAL:HG12	27:BK:69:VAL:CG2	2.43	0.48
23:DB:2352:A:H8	23:DB:2352:A:O5'	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:29:VAL:CA	45:DS:32:ALA:HB3	2.43	0.48
48:BG:83:THR:HA	48:BG:84:LYS:HZ3	1.76	0.48
8:CI:70:GLY:O	8:CI:74:GLN:HB2	2.14	0.48
23:BB:559:G:H21	44:BQ:51:GLN:HE22	1.60	0.48
44:BQ:91:ARG:CB	44:BQ:94:LEU:HD23	2.44	0.48
12:CM:1:ALA:C	12:CM:8:ILE:HG22	2.33	0.48
23:DB:357:C:H2'	23:DB:358:U:C5	2.48	0.48
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.48	0.48
47:DF:11:VAL:O	47:DF:12:VAL:HB	2.12	0.48
40:BH:89:LYS:HZ1	40:BH:123:ARG:CB	2.27	0.48
20:AB:93:HIS:O	20:AB:94:ARG:C	2.51	0.48
20:CB:57:ASN:HB2	20:CB:223:GLY:CA	2.43	0.48
23:BB:2795:C:O5'	23:BB:2795:C:H6	1.96	0.48
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.27	0.48
43:BO:30:ARG:HG3	43:BO:30:ARG:HH11	1.78	0.48
3:AD:25:ARG:C	3:AD:25:ARG:HD3	2.33	0.48
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.47	0.48
24:BI:62:ALA:C	24:BI:64:ARG:H	2.16	0.48
23:BB:1339:G:H21	23:BB:1603:A:H1'	1.78	0.48
20:AB:109:SER:O	20:AB:112:ARG:HB3	2.13	0.48
27:DK:97:THR:C	27:DK:98:ARG:HE	2.15	0.48
23:BB:1708:C:O2'	23:BB:1709:U:H5'	2.14	0.48
20:CB:112:ARG:HE	20:CB:116:LEU:HD11	1.77	0.48
1:CA:1349:A:P	8:CI:119:LYS:HD2	2.53	0.48
23:DB:1372:U:O2'	23:DB:1373:A:H5'	2.12	0.48
5:CF:53:LYS:N	5:CF:53:LYS:NZ	2.61	0.48
1:AA:33:A:O2'	1:AA:34:C:H5'	2.13	0.48
23:BB:1672:A:O4'	23:BB:2553:G:H4'	2.13	0.48
12:AM:78:ARG:NH2	12:AM:82:LEU:HD11	2.28	0.48
23:BB:1983:G:H4'	23:BB:2606:C:H4'	1.95	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
53:D6:18:LEU:HD21	53:D6:171:LYS:HB3	1.95	0.48
8:AI:71:ILE:N	8:AI:71:ILE:HD12	2.28	0.48
23:DB:2020:A:O2'	23:DB:2021:C:H5'	2.13	0.48
1:AA:658:C:H2'	1:AA:659:U:H6	1.78	0.48
23:DB:2700:A:O2'	23:DB:2701:U:H5'	2.13	0.48
23:BB:1172:C:H2'	23:BB:1173:U:C1'	2.43	0.48
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.29	0.48
23:BB:584:C:OP2	44:BQ:5:ARG:HD3	2.14	0.48
47:DF:121:PHE:HB3	47:DF:127:TYR:CZ	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:551:U:H2'	1:CA:552:U:H6	1.77	0.48
23:BB:1785:A:O2'	23:BB:1786:A:H2'	2.12	0.48
23:DB:2092:U:H4'	23:DB:2093:G:O5'	2.14	0.48
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.48	0.48
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.13	0.48
1:AA:1182:G:H4'	1:AA:1183:U:C5'	2.44	0.48
20:AB:25:LYS:HD3	20:AB:193:ASP:OD2	2.14	0.48
1:CA:897:C:C2'	1:CA:898:G:H5'	2.43	0.48
18:AS:50:VAL:O	18:AS:57:VAL:HG22	2.13	0.48
1:AA:972:C:P	9:AJ:59:LYS:HD3	2.53	0.48
1:AA:1186:G:H4'	8:AI:111:GLU:OE1	2.12	0.48
23:BB:1456:G:O2'	23:BB:1457:U:H5'	2.13	0.48
7:AH:83:ARG:C	7:AH:84:ILE:HG13	2.32	0.48
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.48	0.48
1:CA:83:C:H1'	1:CA:84:U:C6	2.48	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
43:BO:56:LYS:O	43:BO:60:GLU:HG2	2.13	0.48
1:CA:735:C:O2'	1:CA:736:C:H5'	2.12	0.48
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.14	0.48
25:BC:153:LEU:HD13	25:BC:175:LEU:CD2	2.43	0.48
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.13	0.48
52:DW:30:VAL:HG21	52:DW:59:PHE:CE1	2.48	0.48
8:AI:26:LYS:N	8:AI:61:ASP:CB	2.70	0.48
13:AN:50:LEU:HD23	13:AN:51:PRO:HD3	1.95	0.48
35:DV:65:VAL:C	35:DV:67:GLY:H	2.17	0.48
35:DV:70:ILE:CD1	35:DV:71:LYS:H	2.22	0.48
26:BD:151:THR:N	26:BD:152:PRO:CD	2.77	0.48
50:BT:32:LEU:O	50:BT:83:ALA:HB2	2.13	0.48
1:CA:1133:G:H2'	1:CA:1134:G:O4'	2.13	0.48
45:BS:59:GLU:OE2	45:BS:66:ILE:HG23	2.13	0.48
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.95	0.48
23:BB:1076:C:C5'	24:BI:94:LYS:NZ	2.76	0.48
49:DR:2:TYR:HB2	49:DR:42:ALA:CB	2.37	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
23:BB:1286:A:H1'	23:BB:1288:G:OP2	2.13	0.48
15:CP:52:LEU:CD2	15:CP:75:ILE:HA	2.43	0.48
38:DM:18:ARG:HA	38:DM:18:ARG:HD2	1.66	0.48
23:DB:1439:A:N7	23:DB:1440:U:C6	2.82	0.48
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:612:C:H2'	1:AA:613:C:C6	2.47	0.48
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.43	0.48
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.48	0.48
42:BN:59:SER:C	42:BN:61:ALA:H	2.17	0.48
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.12	0.48
1:AA:677:U:H2'	1:AA:678:U:C6	2.48	0.48
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.95	0.48
46:DU:14:THR:O	46:DU:18:LYS:HG2	2.12	0.48
17:AR:60:ARG:O	17:AR:64:LEU:HD13	2.13	0.48
30:BY:13:ILE:HG22	30:BY:14:GLY:N	2.28	0.48
29:DE:58:LYS:HB2	29:DE:60:TRP:CD1	2.48	0.48
1:CA:1008:U:H2'	1:CA:1009:U:C5'	2.42	0.48
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.94	0.48
53:B6:129:ILE:HA	53:B6:132:ILE:HD12	1.94	0.48
4:CE:99:SER:HB3	4:CE:102:THR:OG1	2.14	0.48
7:CH:77:VAL:HG21	7:CH:127:TYR:CE1	2.47	0.48
1:CA:539:A:H2'	1:CA:540:G:H8	1.74	0.48
9:AJ:88:MET:SD	9:AJ:88:MET:N	2.87	0.48
1:CA:492:C:H2'	1:CA:493:A:N3	2.29	0.48
1:CA:859:G:O2'	1:CA:860:A:H5'	2.13	0.48
23:BB:2015:A:C2	31:B0:2:VAL:HG13	2.47	0.48
1:CA:1246:A:H2'	1:CA:1247:U:O4'	2.14	0.48
23:BB:2359:C:O2'	23:BB:2360:G:H5'	2.13	0.48
1:AA:906:A:C2'	1:AA:907:A:H5''	2.44	0.48
23:BB:836:G:H2'	23:BB:837:C:H6	1.78	0.48
23:DB:1252:G:N2	44:DQ:32:ARG:HB3	2.28	0.48
23:BB:1865:U:HO2'	23:BB:1866:A:H8	1.61	0.48
23:BB:393:C:O2'	23:BB:394:C:H5'	2.13	0.48
2:AC:38:VAL:O	2:AC:42:LEU:HD23	2.13	0.48
2:AC:2:GLN:HE22	2:AC:3:LYS:HZ2	1.60	0.48
12:CM:84:CYS:SG	12:CM:86:ARG:HB2	2.53	0.48
6:CG:125:ASP:HB3	6:CG:130:LYS:HB3	1.96	0.48
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.13	0.48
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.48	0.48
39:BX:23:ARG:O	39:BX:27:ASN:N	2.46	0.48
29:DE:75:SER:O	29:DE:78:TRP:N	2.47	0.48
23:BB:1693:U:H4'	23:BB:1694:C:OP2	2.14	0.48
1:AA:398:U:H2'	1:AA:399:G:H8	1.78	0.48
23:BB:1984:G:O2'	23:BB:1985:C:H5'	2.13	0.48
8:CI:84:ARG:O	8:CI:87:MET:HB3	2.13	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:BB:1365:A:OP2	51:BZ:3:ARG:HB2	2.13	0.48
40:BH:99:ILE:HG13	40:BH:115:VAL:HG12	1.95	0.48
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.13	0.48
23:BB:191:A:H2'	23:BB:192:C:C6	2.48	0.48
35:BV:20:LEU:HB3	35:BV:25:LYS:O	2.13	0.48
1:AA:610:U:O2	1:AA:610:U:O4'	2.31	0.48
2:CC:102:ILE:HD12	2:CC:102:ILE:N	2.29	0.48
15:AP:12:LYS:C	15:AP:14:ARG:H	2.16	0.48
23:BB:391:A:H1'	23:BB:411:G:O4'	2.13	0.48
23:BB:1951:U:H2'	23:BB:1953:A:OP2	2.14	0.48
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.33	0.48
23:BB:322:A:P	29:BE:163:ASN:HD22	2.36	0.48
29:BE:103:GLY:O	29:BE:106:LYS:HB2	2.13	0.48
29:BE:118:LEU:HD23	29:BE:186:VAL:HG13	1.95	0.48
47:DF:169:LEU:O	47:DF:174:PHE:HB2	2.14	0.48
23:DB:2330:G:O2'	23:DB:2331:G:H5'	2.14	0.48
52:DW:48:ALA:O	52:DW:61:LYS:HB2	2.13	0.48
8:AI:20:ILE:HG12	8:AI:86:LEU:HD12	1.95	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
48:DG:75:VAL:O	48:DG:78:VAL:HG22	2.14	0.48
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.34	0.48
40:BH:132:PHE:HB2	40:BH:142:VAL:CG2	2.43	0.48
33:B1:51:ALA:O	33:B1:52:LYS:C	2.51	0.48
42:BN:101:GLY:O	42:BN:102:PHE:HB2	2.14	0.48
40:BH:5:LEU:HD22	40:BH:9:VAL:HG21	1.96	0.48
1:AA:844:G:H8	1:AA:844:G:OP2	1.97	0.48
23:BB:1287:A:N7	42:BN:105:GLY:HA3	2.28	0.48
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.14	0.48
23:DB:318:C:O2'	23:DB:319:G:H5'	2.14	0.48
40:DH:125:THR:HA	40:DH:146:VAL:CG1	2.44	0.48
51:BZ:6:GLN:HE22	51:BZ:50:ARG:H	1.61	0.48
36:B2:28:ARG:C	36:B2:30:VAL:H	2.16	0.48
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.47	0.48
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.48	0.48
3:CD:25:ARG:NH1	3:CD:30:LYS:HE3	2.29	0.48
1:CA:993:G:C2'	1:CA:995:C:H41	2.22	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
9:AJ:73:LEU:CD1	9:AJ:75:ASP:HB2	2.43	0.48
22:BA:50:A:OP1	43:BO:68:LYS:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.95	0.48
6:CG:110:ARG:HH11	6:CG:110:ARG:HB3	1.79	0.48
23:DB:1460:U:H5''	23:DB:1461:C:O4'	2.13	0.48
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.76	0.48
1:CA:932:C:OP1	6:CG:3:ARG:HD3	2.14	0.48
18:AS:39:ILE:HB	18:AS:66:VAL:HA	1.94	0.48
23:DB:419:U:H2'	23:DB:420:C:H6	1.77	0.48
26:DD:114:LYS:HE3	26:DD:116:LYS:HG2	1.96	0.48
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.79	0.48
7:AH:6:ILE:O	7:AH:10:LEU:HG	2.13	0.48
23:BB:176:A:H3'	23:BB:177:G:H21	1.78	0.48
7:AH:40:LYS:HE3	7:AH:47:ASP:OD1	2.12	0.48
1:AA:1200:C:H3'	1:AA:1201:A:H5'	1.95	0.48
53:D6:114:LEU:HB3	53:D6:183:ILE:HG21	1.95	0.48
50:BT:7:LEU:C	50:BT:9:LYS:H	2.17	0.48
23:DB:514:A:N6	23:DB:515:A:N6	2.61	0.48
34:B3:50:SER:O	34:B3:52:GLY:N	2.46	0.48
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.49	0.48
39:DX:23:ARG:HA	39:DX:27:ASN:H	1.78	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
22:BA:88:C:H2'	22:BA:89:U:C6	2.48	0.48
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.48	0.48
1:CA:82:G:H2'	1:CA:83:C:C6	2.49	0.48
1:CA:332:G:O2'	1:CA:333:U:H5'	2.13	0.48
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.49	0.48
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.13	0.48
1:CA:261:U:H2'	1:CA:263:A:OP2	2.13	0.48
23:BB:2752:C:H3'	23:BB:2753:A:H8	1.77	0.48
1:AA:100:G:H2'	1:AA:101:A:O4'	2.13	0.48
1:CA:652:U:H1'	1:CA:653:U:C5	2.48	0.48
38:BM:33:LEU:HD22	38:BM:128:THR:HB	1.96	0.48
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.14	0.48
36:D2:10:LEU:HD22	36:D2:14:ARG:NE	2.28	0.48
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.13	0.48
37:BL:68:SER:HB2	37:BL:71:ALA:H	1.78	0.48
23:DB:1099:G:H5''	24:DI:2:LYS:HB2	1.96	0.48
23:BB:621:A:H2'	23:BB:622:G:O4'	2.13	0.48
37:BL:101:ILE:HG22	37:BL:105:ILE:HG13	1.96	0.48
29:BE:196:VAL:HA	29:BE:199:MET:HB3	1.96	0.48
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.60	0.48
11:CL:49:ARG:HD2	11:CL:49:ARG:H	1.77	0.48
1:AA:737:C:H2'	1:AA:738:C:C6	2.49	0.48
23:BB:2314:A:H4'	47:BF:34:THR:HG21	1.94	0.48
52:DW:65:LYS:O	52:DW:81:ILE:HA	2.14	0.48
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.14	0.48
13:CN:46:LYS:NZ	18:CS:10:ILE:H	2.10	0.48
45:DS:24:ILE:CG2	45:DS:71:VAL:HG11	2.34	0.48
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.43	0.48
33:B1:10:LEU:HD23	33:B1:35:LEU:HD21	1.96	0.48
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.28	0.48
53:B6:109:GLU:HA	53:B6:112:LYS:HD2	1.95	0.48
44:BQ:108:LEU:CA	49:BR:48:LYS:HD3	2.44	0.48
38:BM:18:ARG:HD2	38:BM:18:ARG:HA	1.66	0.48
14:AO:56:LEU:HD12	14:AO:59:MET:HE2	1.94	0.48
47:DF:41:GLU:CB	47:DF:48:LEU:HD11	2.40	0.48
48:BG:94:ARG:NH2	48:BG:105:SER:N	2.62	0.48
40:BH:90:LEU:CG	40:BH:146:VAL:HG11	2.43	0.48
40:DH:49:ALA:O	40:DH:53:GLU:HB2	2.13	0.48
14:CO:71:LYS:HB2	14:CO:78:TYR:CG	2.49	0.48
23:DB:1455:G:H5'	42:DN:60:VAL:HG21	1.95	0.48
43:BO:14:ALA:C	43:BO:16:ARG:H	2.17	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:BB:98:G:H2'	23:BB:99:U:H5'	1.95	0.48
42:BN:63:ARG:O	42:BN:66:ALA:HB3	2.14	0.48
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.96	0.48
48:DG:115:GLN:CD	48:DG:115:GLN:N	2.65	0.48
51:BZ:17:ASN:O	51:BZ:18:ARG:C	2.51	0.48
33:B1:7:LYS:CD	34:B3:33:THR:HG21	2.42	0.48
47:DF:115:GLY:CA	47:DF:177:ARG:HH11	2.26	0.48
23:BB:2215:C:H2'	23:BB:2216:G:H8	1.78	0.48
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.14	0.48
26:DD:125:TRP:CE3	26:DD:160:LYS:HD3	2.49	0.48
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.12	0.48
1:AA:1278:G:H4'	1:AA:1279:G:O5'	2.14	0.48
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.49	0.48
1:CA:189:A:H2'	1:CA:190:A:C8	2.49	0.48
23:DB:2290:G:H2'	23:DB:2291:U:C6	2.49	0.48
3:CD:2:ARG:NH1	3:CD:114:ARG:HG3	2.28	0.48
1:CA:807:A:H2'	1:CA:808:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.14	0.48
2:AC:39:ARG:CZ	2:AC:56:ILE:HD12	2.44	0.48
23:BB:685:A:H1'	23:BB:688:U:O4	2.13	0.48
42:DN:69:ARG:H	42:DN:69:ARG:HD3	1.79	0.48
47:DF:131:VAL:HG23	47:DF:133:GLU:H	1.79	0.48
25:DC:264:LYS:HG3	25:DC:265:PHE:HD2	1.79	0.48
22:DA:53:A:C2'	22:DA:54:G:H5'	2.43	0.48
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.29	0.48
9:CJ:92:LEU:HD13	9:CJ:92:LEU:N	2.28	0.48
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.94	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
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.79	0.48
10:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.96	0.48
23:DB:191:A:O2'	23:DB:192:C:H5'	2.14	0.48
9:AJ:59:LYS:HG3	9:AJ:60:ASP:N	2.28	0.48
26:DD:30:GLU:HB2	26:DD:52:THR:CG2	2.44	0.48
1:AA:830:G:H2'	1:AA:831:A:H8	1.79	0.48
20:CB:103:TRP:CZ3	20:CB:107:ARG:HD2	2.49	0.48
40:BH:108:VAL:HG12	40:BH:109:GLU:N	2.28	0.48
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.14	0.48
10:AK:64:VAL:O	10:AK:67:GLU:HG2	2.12	0.48
23:BB:1833:C:O2'	23:BB:1834:U:H5'	2.13	0.48
23:DB:712:G:H2'	23:DB:713:G:O4'	2.14	0.48
1:CA:747:A:H2'	1:CA:748:G:O4'	2.13	0.48
36:D2:34:ARG:NH1	36:D2:34:ARG:HG2	2.28	0.48
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	1.95	0.48
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.46	0.48
23:DB:930:G:H1'	30:DY:24:LEU:HD11	1.96	0.48
2:CC:110:LEU:HD22	2:CC:145:ALA:HB2	1.96	0.48
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.14	0.48
1:CA:797:C:OP1	10:CK:125:LYS:HG2	2.13	0.48
23:BB:965:C:C2'	23:BB:966:G:H5'	2.43	0.48
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.94	0.48
23:BB:2387:U:H1'	52:BW:38:ARG:CZ	2.44	0.48
23:BB:2365:G:H4'	52:BW:59:PHE:CD1	2.49	0.48
52:BW:49:ASN:CB	52:BW:81:ILE:HG12	2.41	0.48
47:DF:111:ARG:HH11	47:DF:135:ILE:CG2	2.27	0.48
47:DF:135:ILE:C	47:DF:136:ILE:HG12	2.34	0.48
5:CF:6:ILE:HD11	5:CF:8:PHE:CD2	2.49	0.48
23:DB:2265:U:H3'	23:DB:2266:A:H5''	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:37:VAL:C	52:DW:38:ARG:HG2	2.34	0.48
53:B6:110:ARG:O	53:B6:114:LEU:HD22	2.12	0.48
23:BB:2751:G:OP2	48:BG:2:ARG:HD2	2.13	0.48
45:DS:33:LEU:HA	45:DS:36:LEU:HD23	1.96	0.48
30:BY:16:LEU:HD23	30:BY:19:HIS:CD2	2.48	0.48
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.31	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
42:BN:102:PHE:N	42:BN:102:PHE:CD1	2.81	0.48
25:BC:189:ALA:C	25:BC:190:THR:HG23	2.33	0.48
25:BC:128:THR:CG2	25:BC:190:THR:HG22	2.43	0.48
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.34	0.48
42:DN:106:ASP:C	42:DN:108:ALA:H	2.16	0.48
23:BB:435:C:H2'	23:BB:436:C:H5'	1.96	0.48
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.14	0.48
47:BF:15:LEU:HD12	47:BF:27:VAL:HB	1.95	0.48
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.95	0.48
37:BL:116:VAL:HG22	37:BL:117:THR:N	2.29	0.48
19:CT:43:LYS:CA	19:CT:85:LEU:HD11	2.41	0.48
2:CC:59:PRO:HG3	2:CC:64:ARG:HH21	1.78	0.48
39:BX:5:GLU:O	39:BX:8:GLU:HB2	2.13	0.48
42:DN:63:ARG:HD2	42:DN:80:PHE:CD2	2.48	0.48
1:AA:314:C:O2'	1:AA:315:A:H5'	2.14	0.48
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.82	0.48
23:DB:1173:U:H6	23:DB:1173:U:O5'	1.97	0.48
1:AA:131:A:H2'	1:AA:132:C:C6	2.49	0.48
29:BE:51:GLU:O	29:BE:52:VAL:C	2.52	0.48
3:AD:25:ARG:HB2	3:AD:25:ARG:HH11	1.79	0.48
23:BB:780:G:H1	25:BC:228:ASP:CG	2.17	0.48
3:AD:94:GLU:HB2	3:AD:190:LEU:HD11	1.96	0.48
23:DB:285:G:H2'	23:DB:286:U:H6	1.78	0.48
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.49	0.48
23:BB:713:G:H21	23:BB:718:A:H2	1.62	0.48
41:DJ:74:TYR:HE2	41:DJ:103:ILE:HD11	1.78	0.48
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.13	0.48
23:DB:550:C:H2'	23:DB:551:G:C8	2.49	0.48
23:BB:1535:A:H5''	23:BB:1536:C:H5	1.79	0.48
23:BB:31:C:O2'	23:BB:32:C:H5'	2.14	0.48
23:DB:785:G:H2'	23:DB:786:C:C6	2.49	0.48
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.14	0.48
1:CA:33:A:O2'	1:CA:34:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2243:U:O2'	23:DB:2244:U:H5'	2.14	0.48
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.14	0.48
23:DB:465:G:N2	23:DB:684:G:H1'	2.29	0.48
23:DB:1563:U:H2'	23:DB:1564:C:C6	2.48	0.48
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.48	0.48
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.13	0.48
23:BB:2635:A:C5'	26:BD:79:LEU:HB2	2.43	0.48
23:BB:349:U:H2'	23:BB:350:G:C8	2.48	0.48
23:DB:2188:U:H2'	23:DB:2189:U:O4'	2.14	0.48
1:AA:549:C:H2'	1:AA:550:G:H8	1.76	0.48
30:DY:9:THR:HB	30:DY:53:MET:O	2.14	0.48
23:BB:48:G:O3'	23:BB:51:G:H5'	2.12	0.48
22:DA:28:C:H2'	22:DA:29:A:O4'	2.14	0.48
41:DJ:77:HIS:CD2	41:DJ:84:ILE:H	2.32	0.48
38:BM:32:GLY:HA3	38:BM:103:TYR:O	2.14	0.48
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.79	0.48
1:AA:182:A:H1'	1:AA:183:C:C5	2.49	0.48
3:CD:196:GLU:H	3:CD:196:GLU:CD	2.16	0.48
1:CA:622:A:H2'	1:CA:623:C:H5'	1.95	0.48
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.43	0.48
1:CA:182:A:H1'	1:CA:183:C:C5	2.48	0.48
39:DX:23:ARG:O	39:DX:27:ASN:N	2.47	0.48
1:AA:624:C:H2'	1:AA:625:U:C6	2.48	0.48
36:D2:34:ARG:HH11	36:D2:34:ARG:HG2	1.78	0.48
23:DB:1783:A:H5'	23:DB:2608:G:H4'	1.95	0.48
1:CA:543:U:O2'	1:CA:544:G:H5'	2.14	0.48
23:BB:2207:C:H2'	23:BB:2208:C:C6	2.48	0.48
43:BO:29:HIS:HB3	43:BO:36:TYR:HB2	1.95	0.48
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.14	0.48
22:DA:37:C:H2'	22:DA:38:C:O4'	2.14	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
16:CQ:14:ASP:OD1	16:CQ:53:GLY:HA2	2.13	0.48
23:DB:1858:A:H2'	23:DB:1859:U:O4'	2.13	0.48
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.47	0.48
29:BE:18:THR:HG22	29:BE:106:LYS:CE	2.44	0.48
23:BB:2330:G:O2'	23:BB:2331:G:H5'	2.13	0.48
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.14	0.48
23:DB:2331:G:C4'	52:DW:39:GLN:HA	2.43	0.48
13:CN:53:ASP:HA	13:CN:58:ARG:CD	2.42	0.48
23:DB:877:A:N6	23:DB:898:C:N3	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:53:ASP:HA	13:AN:58:ARG:CD	2.42	0.48
53:B6:32:ARG:CD	53:B6:103:ILE:HG23	2.44	0.48
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.14	0.48
1:CA:961:U:H3	1:CA:983:A:H62	1.62	0.48
50:BT:55:VAL:HG22	50:BT:87:LEU:CD2	2.44	0.48
6:CG:145:GLU:CA	6:CG:148:LYS:HB2	2.33	0.48
40:BH:10:ALA:O	40:BH:12:LEU:N	2.43	0.48
40:BH:5:LEU:O	40:BH:6:LEU:HB2	2.12	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
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.79	0.48
41:BJ:20:ALA:HA	41:BJ:23:LYS:HG3	1.96	0.48
1:CA:1098:C:O2'	1:CA:1099:G:H5'	2.14	0.48
41:BJ:26:GLY:O	41:BJ:30:THR:HG22	2.13	0.48
47:BF:45:ASP:O	47:BF:46:LYS:HB2	2.13	0.48
23:DB:1104:C:H2'	23:DB:1105:U:H6	1.75	0.48
53:B6:56:ALA:HB1	53:B6:68:VAL:CG1	2.44	0.48
20:CB:110:ILE:HA	20:CB:147:LEU:HD13	1.96	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
23:BB:279:A:C2	23:BB:362:A:H4'	2.48	0.48
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.13	0.48
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.79	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.42	0.48
23:DB:1404:C:O2'	23:DB:1405:U:H5'	2.14	0.48
9:AJ:8:ILE:HD12	9:AJ:75:ASP:HA	1.96	0.48
20:AB:128:LEU:HD12	20:AB:132:GLU:HB2	1.96	0.48
23:DB:2259:U:H2'	23:DB:2260:C:C6	2.49	0.48
20:AB:162:VAL:O	20:AB:184:ALA:HA	2.13	0.48
23:BB:1403:A:O2'	23:BB:1404:C:H5'	2.14	0.48
43:DO:24:THR:O	43:DO:90:VAL:HB	2.13	0.48
1:CA:559:A:H4'	1:CA:560:A:H3'	1.96	0.48
23:DB:151:C:O2'	23:DB:152:A:H5'	2.14	0.48
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.14	0.48
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.48	0.48
46:BU:48:VAL:O	46:BU:48:VAL:HG22	2.12	0.48
23:DB:121:G:H2'	23:DB:122:G:C8	2.48	0.48
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.78	0.48
47:DF:69:ALA:HB2	47:DF:82:TYR:HB3	1.94	0.48
23:BB:2621:G:OP1	26:BD:124:ARG:NH2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:8:C:O2'	23:DB:9:G:H5'	2.14	0.48
45:DS:20:VAL:HG23	45:DS:23:LEU:HD12	1.96	0.48
46:BU:35:VAL:O	46:BU:38:ILE:HG22	2.14	0.48
23:BB:1508:A:H3'	23:BB:1509:A:C4	2.49	0.48
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.53	0.48
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.49	0.48
23:DB:986:C:O2'	23:DB:987:C:H5'	2.14	0.48
36:D2:31:LEU:HD22	36:D2:42:LEU:CD1	2.43	0.48
23:DB:2301:C:O2'	23:DB:2302:U:H5'	2.14	0.48
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.47	0.48
14:AO:50:HIS:O	14:AO:53:ARG:HB3	2.14	0.48
26:DD:18:ASP:O	28:DP:30:TRP:HZ3	1.96	0.48
47:DF:151:LEU:HD12	47:DF:152:ASP:N	2.29	0.48
23:DB:98:G:H22	46:DU:6:ARG:NH1	2.12	0.48
1:CA:685:G:O2'	1:CA:686:U:H5'	2.13	0.48
1:AA:652:U:H1'	1:AA:653:U:C5	2.49	0.48
23:BB:1899:A:O2'	23:BB:1900:A:H5''	2.14	0.48
48:BG:54:ARG:C	48:BG:54:ARG:HD3	2.34	0.48
7:CH:55:LYS:HE3	7:CH:55:LYS:HA	1.95	0.48
2:AC:170:GLY:O	2:AC:172:VAL:HG23	2.14	0.48
19:AT:49:ALA:O	19:AT:52:GLU:HG2	2.13	0.48
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.48	0.48
20:CB:166:ASP:OD2	20:CB:190:SER:HA	2.13	0.48
23:BB:1064:C:C1'	24:BI:90:GLY:HA2	2.44	0.48
23:DB:2855:C:O2'	23:DB:2856:A:H5'	2.13	0.48
50:BT:64:LYS:H	50:BT:64:LYS:HD2	1.78	0.48
23:BB:318:C:O2'	23:BB:319:G:H5'	2.14	0.48
37:DL:89:VAL:HG23	37:DL:123:ARG:HB2	1.95	0.48
47:DF:102:LEU:HB2	47:DF:106:ALA:HB3	1.95	0.48
5:CF:38:ARG:NH2	5:CF:63:ASN:HD21	2.09	0.48
47:BF:102:LEU:O	47:BF:103:ILE:HG22	2.13	0.48
27:DK:34:GLY:O	27:DK:36:GLY:N	2.47	0.48
13:AN:50:LEU:H	13:AN:51:PRO:CD	2.24	0.48
28:BP:5:LYS:H	28:BP:8:GLU:HG3	1.79	0.48
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.16	0.48
40:DH:10:ALA:O	40:DH:12:LEU:N	2.44	0.48
50:BT:53:VAL:HG12	50:BT:54:GLU:N	2.28	0.48
50:DT:53:VAL:HG12	50:DT:54:GLU:N	2.28	0.48
23:BB:2529:G:H5''	48:BG:174:LYS:HB2	1.96	0.48
26:DD:15:PHE:N	26:DD:15:PHE:CD1	2.81	0.48
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:BC:94:LEU:HA	25:BC:100:ARG:HB3	1.96	0.48
13:AN:60:ARG:HG3	13:AN:62:ARG:CG	2.43	0.48
12:AM:16:ILE:HG23	12:AM:17:ALA:N	2.27	0.48
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.14	0.48
25:BC:83:ASP:HB2	25:BC:90:ILE:HB	1.96	0.48
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.79	0.48
29:DE:137:LYS:O	29:DE:141:MET:HG3	2.13	0.48
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.95	0.48
43:DO:53:THR:O	43:DO:59:ALA:HB2	2.14	0.48
2:AC:59:PRO:HG3	2:AC:64:ARG:HH21	1.79	0.48
23:BB:670:A:H4'	23:BB:671:C:H5'	1.96	0.48
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.96	0.48
23:DB:37:C:H4'	23:DB:451:U:OP1	2.13	0.48
23:BB:281:C:H2'	23:BB:282:A:C8	2.48	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:2150:C:H2'	23:DB:2151:U:H6	1.77	0.48
48:DG:38:ASP:CG	48:DG:39:ALA:N	2.67	0.48
23:BB:1793:C:H2'	23:BB:1794:A:H8	1.79	0.48
1:CA:556:C:O2'	1:CA:557:G:H5'	2.13	0.48
23:DB:1730:C:O2'	23:DB:1731:G:N2	2.46	0.48
23:DB:79:C:HO2'	23:DB:346:A:H8	1.56	0.48
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.48	0.48
1:CA:714:G:C2	1:CA:777:A:H1'	2.49	0.48
22:DA:113:C:H2'	22:DA:114:C:H6	1.78	0.48
7:CH:40:LYS:HE3	7:CH:47:ASP:OD1	2.13	0.48
1:CA:412:A:H4'	1:CA:413:G:OP1	2.14	0.48
23:BB:1509:A:H5'	23:BB:1510:G:H5'	1.95	0.48
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.79	0.48
42:BN:8:ARG:HB3	42:BN:43:GLU:OE2	2.13	0.48
1:CA:207:C:H3'	1:CA:208:U:C5	2.49	0.48
12:AM:84:CYS:O	12:AM:88:LEU:HG	2.14	0.48
1:AA:805:C:O2'	1:AA:806:C:H5'	2.14	0.48
43:DO:52:SER:O	43:DO:58:ILE:HD12	2.14	0.48
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.79	0.48
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.14	0.48
19:CT:15:LYS:HA	19:CT:18:LYS:HE3	1.96	0.48
1:AA:685:G:O2'	1:AA:686:U:H5'	2.14	0.48
23:BB:1300:G:H4'	23:BB:1301:A:O5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.13	0.48
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.48	0.48
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.49	0.48
1:AA:233:C:O2'	1:AA:234:C:H5'	2.14	0.48
33:D1:37:LYS:O	33:D1:45:HIS:HA	2.14	0.48
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.13	0.48
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.49	0.48
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.78	0.48
23:DB:1456:G:O2'	23:DB:1457:U:H5'	2.14	0.48
23:BB:2603:G:O2'	23:BB:2604:U:H5'	2.13	0.48
36:B2:34:ARG:HG2	36:B2:34:ARG:HH11	1.78	0.48
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.13	0.48
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.14	0.48
1:AA:28:A:N3	1:AA:296:U:H4'	2.29	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
21:AU:40:PRO:C	21:AU:42:THR:N	2.68	0.47
29:BE:192:ALA:O	29:BE:196:VAL:HG23	2.13	0.47
17:CR:59:LYS:O	17:CR:62:ARG:HB2	2.13	0.47
52:BW:51:GLY:HA3	52:BW:59:PHE:HB3	1.94	0.47
12:CM:70:ARG:O	12:CM:74:MET:HE3	2.14	0.47
47:DF:102:LEU:O	47:DF:103:ILE:HG22	2.13	0.47
47:DF:168:LEU:O	47:DF:170:ALA:N	2.45	0.47
5:AF:6:ILE:HD11	5:AF:8:PHE:CD2	2.49	0.47
53:D6:78:ALA:HA	53:D6:81:LYS:HB2	1.96	0.47
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.79	0.47
10:AK:30:ILE:HG22	10:AK:45:THR:OG1	2.14	0.47
13:AN:50:LEU:CD2	13:AN:51:PRO:HD3	2.43	0.47
23:DB:725:G:H2'	23:DB:726:G:O4'	2.14	0.47
53:B6:38:LEU:HB3	53:B6:41:LEU:HD22	1.95	0.47
45:DS:59:GLU:OE2	45:DS:66:ILE:HG23	2.15	0.47
18:AS:10:ILE:HG13	18:AS:10:ILE:O	2.13	0.47
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.14	0.47
28:DP:5:LYS:H	28:DP:8:GLU:HG3	1.79	0.47
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.35	0.47
13:AN:60:ARG:CZ	13:AN:69:PRO:HB3	2.44	0.47
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.49	0.47
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.14	0.47
20:AB:57:ASN:HB2	20:AB:223:GLY:CA	2.44	0.47
23:BB:1060:U:H5	24:BI:131:THR:HG22	1.74	0.47
13:AN:19:TYR:HA	13:AN:23:ARG:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:40:ARG:NH1	18:AS:6:LYS:O	2.47	0.47
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.77	0.47
23:DB:296:U:H2'	23:DB:297:G:C8	2.49	0.47
46:DU:92:VAL:HG11	46:DU:101:THR:HG23	1.95	0.47
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.82	0.47
47:BF:27:VAL:O	47:BF:29:ARG:HD2	2.14	0.47
1:AA:82:G:N2	1:AA:88:U:O3'	2.47	0.47
47:DF:15:LEU:HD12	47:DF:27:VAL:HB	1.94	0.47
32:D4:19:ARG:C	32:D4:21:GLY:N	2.67	0.47
53:B6:42:LYS:HA	53:B6:51:PRO:CA	2.43	0.47
28:BP:52:ARG:HB2	28:BP:55:HIS:O	2.14	0.47
16:CQ:80:LYS:H	16:CQ:80:LYS:HE3	1.79	0.47
29:DE:47:LYS:CA	29:DE:51:GLU:HG3	2.44	0.47
23:BB:1571:A:H2'	23:BB:1572:A:H8	1.77	0.47
34:B3:18:LYS:HD2	34:B3:19:GLY:N	2.29	0.47
23:DB:2144:G:C3'	23:DB:2145:C:H5'	2.44	0.47
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.41	0.47
39:DX:5:GLU:O	39:DX:8:GLU:HB2	2.15	0.47
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.96	0.47
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.79	0.47
1:AA:373:A:C1'	1:AA:481:G:H1'	2.44	0.47
43:DO:35:ILE:CG1	43:DO:102:ARG:HE	2.27	0.47
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.96	0.47
1:CA:1060:U:H5''	9:CJ:53:ILE:HG12	1.95	0.47
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.08	0.47
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.49	0.47
23:DB:710:U:H2'	23:DB:711:G:H8	1.78	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:2896:C:H2'	23:BB:2897:U:H6	1.78	0.47
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.29	0.47
20:CB:127:LYS:HD2	20:CB:127:LYS:C	2.33	0.47
7:CH:76:ARG:HG2	7:CH:79:ARG:HB3	1.95	0.47
45:DS:99:ARG:HG2	45:DS:99:ARG:H	1.45	0.47
23:DB:1349:C:H2'	23:DB:1350:C:C6	2.49	0.47
11:AL:107:LYS:C	11:AL:109:ARG:H	2.17	0.47
1:CA:192:A:O2'	1:CA:193:C:H5'	2.13	0.47
23:BB:454:A:H3'	23:BB:455:C:C5'	2.44	0.47
1:CA:906:A:C2'	1:CA:907:A:H5''	2.44	0.47
22:BA:33:G:O2'	22:BA:34:A:H5'	2.14	0.47
12:CM:79:LEU:HB3	12:CM:84:CYS:SG	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:327:A:H1'	1:AA:329:A:O4'	2.13	0.47
33:D1:39:ASP:OD1	33:D1:42:VAL:HG23	2.14	0.47
23:BB:1720:U:C2'	23:BB:1721:G:H5'	2.44	0.47
23:DB:1877:A:H2'	23:DB:1878:G:C8	2.49	0.47
14:CO:21:ASP:O	14:CO:23:GLY:N	2.45	0.47
1:AA:379:C:O2'	1:AA:380:G:H5'	2.14	0.47
1:AA:669:G:O2'	1:AA:670:G:H5'	2.13	0.47
7:AH:36:ALA:HA	7:AH:39:LEU:HD12	1.96	0.47
23:DB:270:A:OP1	23:DB:271:G:H5'	2.13	0.47
33:D1:10:LEU:HB2	33:D1:20:TYR:HB2	1.95	0.47
23:DB:303:G:H2'	23:DB:304:U:C6	2.49	0.47
40:BH:52:ALA:HA	40:BH:56:ALA:HB3	1.96	0.47
1:AA:897:C:C2'	1:AA:898:G:H5'	2.44	0.47
48:BG:29:ASN:HD21	48:BG:81:GLY:HA2	1.79	0.47
23:DB:1669:A:O3'	23:DB:2549:G:H5'	2.13	0.47
1:CA:830:G:H2'	1:CA:831:A:H8	1.79	0.47
23:DB:1263:U:O2'	31:D0:7:PRO:HD2	2.14	0.47
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.14	0.47
10:CK:88:PRO:HD3	21:CU:28:LEU:HD13	1.96	0.47
1:CA:1228:C:OP1	12:CM:113:LYS:HB2	2.14	0.47
1:AA:443:C:H2'	1:AA:444:G:C8	2.48	0.47
23:DB:767:U:O2'	23:DB:768:G:H5'	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
37:DL:89:VAL:HG13	37:DL:89:VAL:O	2.14	0.47
23:BB:855:G:N3	52:BW:23:LYS:HG2	2.28	0.47
13:CN:41:TRP:CD1	13:CN:44:VAL:HG23	2.49	0.47
40:DH:135:HIS:HB3	40:DH:138:VAL:HG23	1.96	0.47
35:BV:65:VAL:C	35:BV:67:GLY:H	2.18	0.47
20:CB:86:CYS:HB3	20:CB:88:GLN:NE2	2.29	0.47
50:BT:50:LEU:N	50:BT:50:LEU:HD22	2.28	0.47
50:DT:61:LEU:O	50:DT:81:LYS:HA	2.13	0.47
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HA	2.29	0.47
26:BD:34:VAL:HA	26:BD:50:VAL:HG12	1.95	0.47
23:DB:1187:G:H5''	49:DR:83:TYR:CZ	2.48	0.47
1:AA:810:C:O2'	1:AA:811:C:H5'	2.13	0.47
51:BZ:69:ALA:HA	51:BZ:72:ARG:NH1	2.29	0.47
37:BL:30:THR:O	37:BL:32:GLY:N	2.47	0.47
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.43	0.47
1:AA:864:A:H2'	1:AA:865:A:C8	2.50	0.47
49:BR:53:PHE:CD1	49:BR:53:PHE:N	2.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:181:A:H1'	23:DB:435:C:H5'	1.97	0.47
14:AO:82:ILE:O	14:AO:86:GLY:N	2.47	0.47
1:CA:1406:U:H2'	1:CA:1407:C:O4'	2.14	0.47
1:CA:1226:C:H5'	12:CM:94:LEU:HD13	1.95	0.47
27:DK:88:ASN:HD22	27:DK:89:ASN:N	2.11	0.47
43:DO:106:LEU:HA	43:DO:109:ALA:HB3	1.94	0.47
43:DO:30:ARG:NH1	43:DO:102:ARG:HB2	2.28	0.47
37:DL:135:ILE:HG12	37:DL:140:GLY:CA	2.40	0.47
23:DB:2722:G:O2'	23:DB:2723:C:H5'	2.14	0.47
1:CA:238:A:C2'	1:CA:239:U:H5''	2.42	0.47
31:D0:41:HIS:HB3	42:DN:99:LYS:HB2	1.96	0.47
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.13	0.47
23:BB:309:A:H1'	23:BB:329:G:N3	2.29	0.47
30:BY:5:LYS:O	30:BY:57:GLU:HB2	2.13	0.47
3:CD:197:HIS:ND1	3:CD:198:LEU:N	2.62	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
23:BB:782:A:C2	25:BC:224:MET:HB3	2.48	0.47
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.14	0.47
3:AD:28:ASP:HA	3:AD:33:ILE:CG2	2.43	0.47
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.44	0.47
37:BL:57:LEU:HA	37:BL:60:ARG:HE	1.79	0.47
26:DD:49:GLN:HE21	26:DD:79:LEU:HD12	1.79	0.47
53:D6:151:GLU:O	53:D6:154:THR:HG22	2.14	0.47
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.78	0.47
53:B6:137:LEU:CD1	53:B6:161:ILE:HG21	2.43	0.47
23:BB:2354:C:H4'	52:BW:31:LEU:CD2	2.43	0.47
1:CA:327:A:H1'	1:CA:329:A:O4'	2.14	0.47
23:DB:2248:C:H2'	23:DB:2249:U:O4'	2.14	0.47
43:DO:6:ALA:O	43:DO:9:ARG:HG3	2.14	0.47
23:DB:584:C:OP2	44:DQ:5:ARG:HD3	2.14	0.47
3:AD:55:ARG:HG3	3:AD:55:ARG:NH1	2.27	0.47
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.14	0.47
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.49	0.47
23:BB:796:C:H2'	23:BB:797:G:H8	1.79	0.47
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.14	0.47
49:BR:26:ASP:O	49:BR:27:ILE:HD13	2.14	0.47
1:AA:911:U:H2'	1:AA:912:C:C6	2.49	0.47
6:AG:80:GLY:C	6:AG:82:SER:H	2.17	0.47
1:AA:747:A:H2'	1:AA:748:G:O4'	2.14	0.47
25:DC:35:LYS:O	25:DC:36:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.13	0.47
14:CO:89:ARG:HH22	23:DB:715:A:H5''	1.79	0.47
1:CA:1281:C:H5'	1:CA:1282:C:H5	1.78	0.47
19:CT:49:ALA:O	19:CT:52:GLU:HG2	2.13	0.47
13:AN:47:LEU:C	13:AN:49:THR:H	2.16	0.47
50:DT:6:ARG:HB3	50:DT:6:ARG:NH1	2.28	0.47
28:DP:110:LYS:HD2	28:DP:110:LYS:N	2.29	0.47
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.14	0.47
1:CA:308:C:H2'	1:CA:309:A:H8	1.79	0.47
52:BW:67:LYS:O	52:BW:68:PHE:HB2	2.13	0.47
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.49	0.47
10:AK:125:LYS:O	21:AU:33:ARG:NH2	2.47	0.47
37:DL:81:ASP:HA	37:DL:84:LYS:CE	2.45	0.47
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.44	0.47
29:BE:171:ASP:CG	29:BE:172:ALA:H	2.17	0.47
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.96	0.47
47:BF:169:LEU:O	47:BF:174:PHE:HB2	2.14	0.47
2:AC:76:ILE:CG2	2:AC:80:GLY:HA2	2.43	0.47
29:DE:11:ALA:O	29:DE:12:LEU:HD22	2.14	0.47
23:DB:920:A:H2'	23:DB:921:C:O4'	2.14	0.47
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.94	0.47
1:AA:1117:A:H5''	8:AI:105:ARG:NH2	2.29	0.47
35:DV:48:MET:SD	35:DV:85:LYS:HA	2.54	0.47
35:DV:31:TYR:O	35:DV:92:VAL:HG13	2.15	0.47
53:B6:52:LEU:HD11	53:B6:83:ILE:HD11	1.95	0.47
35:BV:63:ILE:HB	35:BV:70:ILE:CD1	2.44	0.47
23:BB:2571:U:H4'	26:BD:151:THR:HG21	1.96	0.47
20:CB:165:ALA:HB3	20:CB:186:VAL:HG12	1.96	0.47
49:DR:53:PHE:CD1	49:DR:53:PHE:N	2.81	0.47
44:DQ:56:PHE:HA	44:DQ:59:LEU:HB3	1.95	0.47
33:D1:51:ALA:O	33:D1:52:LYS:C	2.53	0.47
25:BC:141:HIS:NE2	25:BC:194:VAL:HA	2.29	0.47
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.29	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
38:BM:19:GLY:C	38:BM:20:LEU:HD22	2.34	0.47
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.95	0.47
19:CT:72:ALA:HA	19:CT:75:LYS:HD3	1.95	0.47
23:BB:2145:C:H3'	23:BB:2146:C:C5'	2.44	0.47
1:CA:1166:G:N1	1:CA:1169:A:OP2	2.47	0.47
43:DO:83:LEU:HD13	43:DO:115:LEU:HD22	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:28:LEU:HD23	42:DN:113:ILE:HG23	1.95	0.47
3:CD:146:GLU:HA	3:CD:149:LYS:CG	2.40	0.47
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.13	0.47
3:AD:18:LEU:HD11	3:AD:59:LYS:HG3	1.96	0.47
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.80	0.47
20:AB:132:GLU:CD	20:AB:136:ARG:HE	2.18	0.47
20:AB:121:GLN:NE2	20:AB:122:ASP:HB2	2.30	0.47
23:DB:2787:C:C1'	26:DD:63:PRO:HG3	2.42	0.47
35:BV:53:LYS:HZ3	35:BV:54:ALA:HB3	1.78	0.47
53:B6:126:ARG:HG2	53:B6:169:ILE:HD12	1.96	0.47
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.82	0.47
30:BY:47:ILE:HG23	30:BY:54:VAL:HG21	1.95	0.47
23:DB:1416:G:O2'	23:DB:1417:C:H6	1.95	0.47
27:DK:54:LYS:HD2	27:DK:54:LYS:N	2.27	0.47
1:AA:1287:A:H2'	1:AA:1288:A:H8	1.80	0.47
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.96	0.47
45:BS:17:VAL:C	45:BS:19:LEU:N	2.66	0.47
1:CA:1343:G:C1'	8:CI:122:ARG:HH12	2.24	0.47
47:DF:55:ASP:OD2	47:DF:149:ARG:HG3	2.14	0.47
1:CA:366:A:H2	1:CA:394:G:H1	1.57	0.47
1:CA:279:A:C5'	1:CA:280:C:H3'	2.43	0.47
1:CA:1256:A:H4'	1:CA:1258:G:C8	2.49	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.30	0.47
1:CA:222:C:H2'	1:CA:223:A:H8	1.78	0.47
23:BB:465:G:N2	23:BB:684:G:H1'	2.29	0.47
15:AP:38:PHE:CD1	15:AP:39:PHE:N	2.82	0.47
1:AA:708:C:O2'	1:AA:709:U:H5'	2.14	0.47
1:CA:1499:A:H1'	1:CA:1520:C:H5'	1.95	0.47
11:CL:21:PRO:HG2	11:CL:94:TYR:OH	2.13	0.47
23:DB:1841:U:H2'	23:DB:1842:G:H8	1.79	0.47
23:DB:1218:G:H2'	23:DB:1219:U:O4'	2.14	0.47
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.50	0.47
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.79	0.47
23:DB:2303:G:H4'	47:DF:121:PHE:O	2.14	0.47
53:B6:141:LYS:HE3	53:B6:142:LYS:HE3	1.96	0.47
22:DA:95:U:H2'	22:DA:96:G:H8	1.79	0.47
25:BC:264:LYS:HG3	25:BC:265:PHE:HD2	1.79	0.47
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.48	0.47
1:CA:1291:U:O2'	1:CA:1292:G:H5'	2.14	0.47
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.14	0.47
36:B2:34:ARG:NH1	36:B2:34:ARG:HG2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.14	0.47
14:CO:50:HIS:O	14:CO:53:ARG:HB3	2.14	0.47
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.14	0.47
23:BB:271:G:HO2'	23:BB:272:A:H8	1.62	0.47
23:DB:516:C:O2'	23:DB:517:C:H5'	2.14	0.47
38:BM:26:VAL:CG2	38:BM:133:LYS:HA	2.45	0.47
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.14	0.47
1:CA:1023:U:O2'	1:CA:1024:G:H5'	2.15	0.47
50:BT:6:ARG:NH1	50:BT:6:ARG:HB3	2.30	0.47
46:DU:43:LYS:HD3	46:DU:44:HIS:N	2.29	0.47
23:BB:923:G:N2	52:BW:23:LYS:HE3	2.29	0.47
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.15	0.47
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.29	0.47
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	1.97	0.47
52:DW:30:VAL:O	52:DW:30:VAL:HG13	2.14	0.47
52:DW:50:VAL:HB	52:DW:51:GLY:H	1.52	0.47
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.33	0.47
1:CA:1314:C:H3'	18:CS:5:LYS:HZ3	1.78	0.47
46:BU:9:GLU:OE2	46:BU:21:ARG:HD2	2.15	0.47
28:BP:6:GLN:HE22	28:BP:7:LEU:HG	1.80	0.47
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.34	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
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.14	0.47
6:AG:148:LYS:HG3	6:AG:151:ALA:CB	2.40	0.47
1:CA:922:G:H2'	1:CA:923:A:H8	1.78	0.47
4:CE:131:ASN:ND2	4:CE:133:ILE:HB	2.29	0.47
29:DE:192:ALA:O	29:DE:196:VAL:HG23	2.14	0.47
50:BT:69:ARG:NE	50:BT:70:HIS:H	2.12	0.47
46:BU:92:VAL:HG11	46:BU:101:THR:HG23	1.95	0.47
48:BG:95:ALA:HA	48:BG:104:LEU:HD23	1.97	0.47
23:DB:1055:G:HO2'	23:DB:1085:A:H2	1.62	0.47
42:DN:75:ILE:HD12	42:DN:76:VAL:N	2.29	0.47
43:BO:83:LEU:HD13	43:BO:115:LEU:HD22	1.96	0.47
34:B3:14:LYS:O	34:B3:21:PHE:O	2.32	0.47
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.15	0.47
23:BB:2840:C:H5''	42:BN:53:THR:CG2	2.44	0.47
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.14	0.47
11:AL:80:LEU:HD13	11:AL:101:LEU:HD11	1.95	0.47
6:CG:46:LEU:HG	6:CG:57:GLU:HB3	1.96	0.47
23:DB:2148:G:OP2	23:DB:2148:G:H3'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:36:ALA:O	34:B3:40:LYS:HG3	2.15	0.47
23:DB:1655:A:H2'	23:DB:1656:C:O4'	2.14	0.47
23:BB:580:U:O2'	23:BB:581:C:H5'	2.15	0.47
44:BQ:27:ARG:HH11	44:BQ:27:ARG:HG3	1.80	0.47
23:DB:773:U:H4'	25:DC:45:ASN:O	2.14	0.47
20:CB:162:VAL:O	20:CB:184:ALA:HA	2.15	0.47
20:AB:125:PHE:HD2	20:AB:126:ASP:N	2.13	0.47
23:BB:2390:U:O5'	34:B3:34:LYS:NZ	2.46	0.47
23:DB:958:U:H3	38:DM:16:ARG:CB	2.27	0.47
1:CA:663:A:H5'	1:CA:836:G:OP1	2.14	0.47
23:BB:679:C:O2'	23:BB:680:C:H5'	2.14	0.47
23:DB:1872:A:H8	23:DB:1872:A:O5'	1.96	0.47
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.79	0.47
10:CK:90:PRO:C	10:CK:92:ARG:H	2.18	0.47
1:CA:1330:U:C2'	1:CA:1331:G:H5'	2.45	0.47
23:DB:1841:U:H2'	23:DB:1842:G:C8	2.50	0.47
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.29	0.47
25:BC:245:THR:HG23	25:BC:249:VAL:O	2.14	0.47
23:BB:1862:G:O2'	23:BB:1863:G:H5'	2.13	0.47
1:AA:1298:U:H4'	1:AA:1299:A:C4	2.50	0.47
23:BB:2349:G:OP2	34:B3:41:ARG:HD3	2.15	0.47
23:BB:1171:G:H3'	23:BB:1172:C:C4'	2.44	0.47
34:D3:7:ARG:HG3	34:D3:7:ARG:NH1	2.29	0.47
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.29	0.47
23:BB:1222:U:P	49:BR:90:ARG:HH22	2.37	0.47
23:BB:2663:G:H2'	23:BB:2664:G:H8	1.79	0.47
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.13	0.47
9:CJ:92:LEU:HD22	9:CJ:92:LEU:N	2.29	0.47
23:DB:770:G:O2'	23:DB:771:G:H5'	2.13	0.47
37:BL:41:ARG:HH21	37:BL:41:ARG:HG2	1.78	0.47
23:DB:2618:G:H2'	23:DB:2619:C:H6	1.79	0.47
23:DB:688:U:O2'	23:DB:689:A:H5'	2.14	0.47
23:BB:991:C:H5'	23:BB:1185:G:H2'	1.97	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
23:DB:2724:U:H2'	23:DB:2725:A:C8	2.50	0.47
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.14	0.47
25:BC:35:LYS:HD2	25:BC:37:SER:OG	2.14	0.47
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.49	0.47
9:AJ:80:THR:O	9:AJ:84:VAL:HG23	2.14	0.47
23:BB:2901:C:H2'	23:BB:2901:C:O2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:83:ILE:HD13	28:BP:83:ILE:O	2.14	0.47
23:BB:231:A:H3'	23:BB:232:G:H8	1.79	0.47
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.14	0.47
13:AN:63:CYS:HB3	13:AN:68:ARG:H	1.80	0.47
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.30	0.47
1:CA:201:G:H2'	1:CA:202:G:C8	2.49	0.47
50:BT:25:GLU:HA	50:BT:28:ASN:O	2.14	0.47
50:DT:50:LEU:O	50:DT:52:GLU:N	2.42	0.47
49:DR:60:LYS:N	49:DR:100:GLY:HA3	2.22	0.47
44:BQ:59:LEU:C	44:BQ:59:LEU:HD13	2.35	0.47
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.14	0.47
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.80	0.47
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.29	0.47
23:DB:2801:G:H3'	23:DB:2802:G:H8	1.80	0.47
52:BW:43:LYS:HB2	52:BW:58:LEU:HD21	1.96	0.47
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.49	0.47
4:AE:154:ALA:HB1	7:AH:65:PHE:CZ	2.49	0.47
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.44	0.47
23:BB:1021:A:H61	23:BB:1142:A:N6	2.12	0.47
47:DF:45:ASP:O	47:DF:46:LYS:HB2	2.15	0.47
23:DB:2719:G:O2'	23:DB:2720:U:H5'	2.14	0.47
40:DH:141:LYS:N	40:DH:141:LYS:HD2	2.30	0.47
23:BB:2040:G:H2'	23:BB:2041:U:O4'	2.15	0.47
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.49	0.47
3:CD:94:GLU:HB2	3:CD:190:LEU:HD11	1.95	0.47
46:BU:6:ARG:HG2	46:BU:6:ARG:HH21	1.80	0.47
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.30	0.47
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.97	0.47
1:AA:1308:U:OP1	12:AM:95:PRO:HA	2.13	0.47
23:DB:1181:U:O2'	23:DB:1182:G:H5'	2.15	0.47
1:CA:373:A:H2'	1:CA:374:A:H8	1.80	0.47
30:DY:5:LYS:HG2	30:DY:36:GLU:HB2	1.96	0.47
23:DB:2425:A:H5''	23:DB:2426:A:H3'	1.96	0.47
23:BB:2187:U:H2'	23:BB:2188:U:H6	1.76	0.47
9:CJ:8:ILE:HD12	9:CJ:75:ASP:HA	1.96	0.47
23:BB:2050:C:H2'	23:BB:2051:A:O4'	2.14	0.47
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.41	0.47
1:AA:1320:C:H1'	18:AS:72:GLU:N	2.30	0.47
53:B6:10:THR:HG23	53:B6:14:MET:HE3	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:17:G:H2'	23:DB:18:U:H6	1.79	0.47
22:BA:13:G:O2'	22:BA:15:A:H5'	2.13	0.47
23:DB:1014:A:O2'	23:DB:1015:U:H5'	2.13	0.47
22:BA:6:G:H2'	22:BA:7:G:C8	2.50	0.47
11:CL:107:LYS:C	11:CL:109:ARG:H	2.17	0.47
23:BB:2300:C:O2'	23:BB:2301:C:H5'	2.15	0.47
1:AA:300:A:H2'	1:AA:301:G:O4'	2.15	0.47
6:CG:78:ARG:HH12	6:CG:79:VAL:C	2.18	0.47
47:BF:77:LYS:HD2	47:BF:79:ARG:HE	1.79	0.47
1:AA:631:C:H5''	1:AA:632:U:O4'	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
25:BC:245:THR:HG23	25:BC:249:VAL:HB	1.95	0.47
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.49	0.47
23:BB:392:U:H2'	23:BB:393:C:H6	1.79	0.47
22:BA:28:C:H2'	22:BA:29:A:O4'	2.15	0.47
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.15	0.47
23:BB:484:C:H2'	23:BB:485:C:H6	1.79	0.47
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.14	0.47
1:AA:46:G:O2'	1:AA:365:U:H1'	2.15	0.47
1:AA:591:U:H2'	1:AA:592:G:H8	1.78	0.47
23:DB:3:U:H2'	23:DB:4:U:H6	1.80	0.47
22:DA:93:C:O2'	22:DA:94:A:H5'	2.15	0.47
1:CA:930:C:H2'	1:CA:931:C:C6	2.49	0.47
39:BX:23:ARG:HA	39:BX:27:ASN:H	1.79	0.47
6:CG:68:VAL:CG2	6:CG:126:ALA:HB1	2.44	0.47
1:CA:608:A:H2'	1:CA:609:A:O4'	2.14	0.47
1:CA:276:G:O2'	1:CA:277:C:H5'	2.15	0.47
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.15	0.47
23:BB:199:A:O2'	23:BB:200:U:H5'	2.15	0.47
7:CH:110:MET:HG3	7:CH:115:ALA:HB2	1.96	0.47
23:BB:24:G:H2'	23:BB:25:U:O4'	2.14	0.47
39:BX:59:GLU:OE2	39:BX:59:GLU:N	2.47	0.47
39:DX:59:GLU:N	39:DX:59:GLU:OE2	2.47	0.47
1:AA:797:C:OP1	10:AK:125:LYS:HG2	2.15	0.47
23:BB:622:G:H2'	23:BB:623:C:H6	1.79	0.47
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.14	0.47
23:BB:2515:C:P	41:BJ:81:ILE:HD11	2.55	0.47
8:CI:83:THR:OG1	8:CI:97:LEU:HD13	2.14	0.47
39:DX:29:ARG:HH12	50:DT:12:ARG:HG2	1.79	0.47
45:BS:66:ILE:N	45:BS:66:ILE:HD13	2.16	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:79:THR:CB	40:BH:145:ASN:HB2	2.44	0.47
12:AM:15:VAL:CG2	12:AM:40:GLU:HB3	2.43	0.47
33:B1:11:VAL:HG23	33:B1:50:GLU:HB3	1.97	0.47
33:D1:11:VAL:HG23	33:D1:50:GLU:HB3	1.95	0.47
23:DB:819:A:N6	23:DB:1189:A:H1'	2.30	0.47
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.96	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
46:BU:94:PHE:HB3	46:BU:101:THR:HA	1.97	0.47
23:BB:1138:G:H21	41:BJ:108:MET:CE	2.27	0.47
10:CK:85:VAL:HG21	10:CK:96:ILE:HD11	1.96	0.47
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.46	0.47
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.30	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.15	0.47
17:AR:34:GLU:N	17:AR:34:GLU:CD	2.65	0.47
1:CA:429:U:H1'	1:CA:430:A:H5''	1.95	0.47
3:CD:25:ARG:HD3	3:CD:25:ARG:C	2.34	0.47
38:DM:108:VAL:HG21	38:DM:112:LEU:HD12	1.97	0.47
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.80	0.47
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.60	0.47
23:BB:1241:A:H2'	23:BB:1242:U:C5'	2.43	0.47
20:CB:195:VAL:HG12	20:CB:197:PHE:N	2.28	0.47
46:DU:48:VAL:O	46:DU:48:VAL:HG22	2.13	0.47
1:CA:237:G:O2'	1:CA:238:A:H5'	2.15	0.47
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.78	0.47
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.62	0.47
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.29	0.47
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.79	0.47
23:DB:2680:U:P	26:DD:114:LYS:HB3	2.54	0.47
23:DB:948:C:H2'	23:DB:949:G:C8	2.50	0.47
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.29	0.47
12:CM:78:ARG:NH2	12:CM:82:LEU:HD11	2.29	0.47
23:BB:2028:U:H2'	23:BB:2029:G:O4'	2.15	0.47
1:AA:1272:G:H2'	1:AA:1273:C:C6	2.50	0.47
22:BA:95:U:H2'	22:BA:96:G:H8	1.79	0.47
47:BF:121:PHE:HB3	47:BF:127:TYR:CZ	2.50	0.47
23:DB:1475:G:H1'	23:DB:1476:U:C5	2.47	0.47
1:CA:300:A:H2'	1:CA:301:G:O4'	2.14	0.47
40:DH:70:GLU:HG3	40:DH:70:GLU:H	1.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:222:C:H2'	1:CA:223:A:C8	2.49	0.47
47:BF:74:ALA:CB	47:BF:78:ILE:HD13	2.44	0.47
1:AA:279:A:C5'	1:AA:280:C:H3'	2.43	0.47
23:DB:1223:G:OP2	49:DR:90:ARG:NH1	2.47	0.47
23:BB:1275:A:N3	23:BB:1275:A:H2'	2.30	0.47
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.15	0.47
23:BB:349:U:H2'	23:BB:350:G:H8	1.79	0.47
1:AA:1148:U:O4'	8:AI:17:ARG:HD3	2.13	0.47
43:BO:52:SER:OG	43:BO:54:VAL:HG12	2.15	0.47
37:DL:68:SER:HB2	37:DL:71:ALA:H	1.79	0.47
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.79	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
47:BF:40:GLY:HA2	47:BF:84:ILE:HG23	1.96	0.47
23:DB:870:U:C2'	23:DB:871:U:H5'	2.45	0.47
38:DM:66:ARG:CZ	38:DM:101:VAL:HG11	2.44	0.47
1:CA:584:G:O2'	1:CA:585:G:H5'	2.14	0.47
1:CA:591:U:H2'	1:CA:592:G:H8	1.79	0.47
23:DB:1345:C:H5'	23:DB:1396:U:H5	1.80	0.47
26:DD:169:ARG:O	26:DD:170:VAL:O	2.31	0.47
23:BB:2103:C:H3'	23:BB:2104:C:C2	2.50	0.47
51:DZ:27:ARG:HD3	51:DZ:28:ARG:H	1.80	0.47
23:DB:2193:G:H2'	23:DB:2194:U:C6	2.49	0.47
1:AA:618:C:H1'	15:AP:14:ARG:NH1	2.30	0.47
1:CA:542:G:O2'	1:CA:543:U:H5'	2.14	0.47
15:CP:12:LYS:C	15:CP:14:ARG:H	2.18	0.47
5:AF:13:ASP:O	5:AF:14:GLN:HG2	2.15	0.47
10:CK:35:ASP:OD1	10:CK:37:GLN:HB2	2.13	0.47
1:CA:610:U:O4'	1:CA:610:U:O2	2.31	0.47
23:BB:2473:U:H2'	23:BB:2473:U:O2	2.15	0.47
26:BD:179:ARG:CB	26:BD:179:ARG:HH11	2.28	0.47
23:DB:2235:G:H2'	23:DB:2236:U:C6	2.50	0.47
23:BB:1334:G:O2'	23:BB:1335:C:H5'	2.15	0.47
21:CU:33:ARG:CZ	21:CU:34:ARG:HG2	2.44	0.47
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.96	0.47
25:BC:171:VAL:HG23	25:BC:185:ALA:CB	2.44	0.47
53:D6:63:PRO:HD2	53:D6:64:ARG:NH1	2.30	0.47
53:D6:38:LEU:HB3	53:D6:41:LEU:HD22	1.96	0.47
5:CF:62:MET:HG3	5:CF:64:VAL:CG2	2.39	0.47
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.30	0.47
47:BF:102:LEU:HB2	47:BF:106:ALA:HB3	1.95	0.47
47:BF:135:ILE:C	47:BF:136:ILE:HG12	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2313:C:H4'	47:BF:87:LYS:HB3	1.96	0.47
47:BF:33:ILE:HB	47:BF:90:LEU:HB2	1.97	0.47
1:CA:469:C:H2'	1:CA:470:C:O4'	2.15	0.47
1:CA:203:G:H1'	1:CA:465:A:N6	2.30	0.47
29:DE:122:GLU:N	29:DE:122:GLU:OE1	2.46	0.47
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.96	0.47
10:CK:30:ILE:HG22	10:CK:45:THR:CB	2.44	0.47
52:DW:43:LYS:HB2	52:DW:58:LEU:HD21	1.96	0.47
52:DW:37:VAL:O	52:DW:38:ARG:HG2	2.14	0.47
8:AI:94:ARG:HA	8:AI:97:LEU:CG	2.41	0.47
48:BG:75:VAL:O	48:BG:78:VAL:HG22	2.15	0.47
23:BB:2572:A:OP2	26:BD:151:THR:HB	2.13	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
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.29	0.47
1:AA:1085:U:H3'	1:AA:1086:U:C6	2.49	0.47
23:DB:360:U:H2'	23:DB:361:G:N9	2.29	0.47
20:AB:42:LEU:HA	20:AB:45:THR:CB	2.44	0.47
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.35	0.47
20:AB:84:LEU:C	20:AB:86:CYS:H	2.18	0.47
25:BC:106:PRO:O	25:BC:109:LEU:HB3	2.15	0.47
26:BD:106:LYS:N	26:BD:106:LYS:HD3	2.29	0.47
40:BH:5:LEU:HD12	40:BH:17:ASP:CB	2.43	0.47
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.32	0.47
23:BB:819:A:OP2	23:BB:1187:G:N2	2.47	0.47
1:CA:385:C:O2'	1:CA:386:C:H5'	2.15	0.47
1:AA:1314:C:H3'	18:AS:5:LYS:HZ1	1.80	0.47
29:DE:196:VAL:HA	29:DE:199:MET:HB3	1.96	0.47
51:DZ:7:VAL:HG21	51:DZ:59:ILE:CD1	2.42	0.47
29:DE:171:ASP:CG	29:DE:172:ALA:H	2.18	0.47
23:BB:1021:A:H61	23:BB:1142:A:H61	1.61	0.47
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.95	0.47
1:AA:78:A:O5'	1:AA:78:A:H8	1.97	0.47
28:DP:52:ARG:HB2	28:DP:55:HIS:O	2.14	0.47
50:DT:21:SER:HB3	50:DT:31:VAL:HG22	1.96	0.47
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.96	0.47
1:AA:614:C:O2'	1:AA:615:G:H5'	2.15	0.47
3:CD:149:LYS:HD3	3:CD:177:MET:CG	2.42	0.47
23:BB:1942:C:C1'	53:B6:133:ARG:HH22	2.28	0.47
40:DH:89:LYS:HD2	40:DH:89:LYS:N	2.30	0.47
1:AA:376:G:H5"	15:AP:5:ARG:CB	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.39	0.47
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.79	0.47
34:D3:18:LYS:HD2	34:D3:19:GLY:N	2.30	0.47
32:B4:11:CYS:HB3	32:B4:33:HIS:HE1	1.79	0.47
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.95	0.47
42:DN:93:GLY:C	42:DN:95:THR:H	2.18	0.47
1:CA:576:C:OP2	1:CA:576:C:H3'	2.14	0.47
23:DB:1533:C:H2'	23:DB:1534:U:C6	2.49	0.47
23:BB:1790:C:O2'	25:BC:207:ALA:CB	2.61	0.47
1:CA:449:G:H2'	1:CA:450:G:C8	2.50	0.47
1:CA:482:A:H2'	1:CA:483:C:O4'	2.15	0.47
46:DU:14:THR:O	46:DU:18:LYS:HA	2.14	0.47
23:BB:534:U:H1'	44:BQ:44:TYR:HB3	1.95	0.47
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.44	0.47
20:AB:162:VAL:HG13	20:AB:184:ALA:CB	2.43	0.47
4:AE:99:SER:HB3	4:AE:102:THR:OG1	2.14	0.47
1:CA:925:G:C2	1:CA:927:G:C8	3.02	0.47
23:DB:2805:C:H2'	23:DB:2806:C:H6	1.79	0.47
23:DB:1868:C:H2'	23:DB:1869:G:O4'	2.14	0.47
45:DS:17:VAL:C	45:DS:19:LEU:N	2.66	0.47
30:DY:37:ARG:HG3	30:DY:38:GLU:OE2	2.14	0.47
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.97	0.47
1:AA:1258:G:C6	1:AA:1278:G:N1	2.82	0.47
23:DB:1826:G:P	25:DC:221:GLY:H	2.38	0.47
18:CS:27:LYS:HB3	18:CS:27:LYS:HZ3	1.79	0.47
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.13	0.47
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.14	0.47
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.80	0.47
6:CG:58:LEU:N	6:CG:58:LEU:HD23	2.30	0.47
25:DC:64:VAL:HG21	25:DC:86:ARG:CZ	2.45	0.47
42:DN:12:ARG:HG2	42:DN:16:HIS:CG	2.50	0.47
1:AA:279:A:H5'	1:AA:281:G:C5'	2.44	0.47
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.14	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
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.79	0.47
42:BN:12:ARG:HG2	42:BN:16:HIS:CG	2.49	0.47
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.76	0.47
23:DB:1844:C:OP1	25:DC:254:LYS:HA	2.15	0.47
1:AA:1514:G:H2'	1:AA:1515:G:H8	1.79	0.47
23:DB:526:A:N6	23:DB:2626:C:C4'	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:566:U:H2'	23:DB:567:U:O4'	2.15	0.47
1:CA:213:G:H5''	1:CA:214:C:H5	1.80	0.47
23:BB:1376:C:O2'	23:BB:1377:G:H5'	2.15	0.47
22:BA:115:A:O2'	22:BA:116:G:H5'	2.14	0.47
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.79	0.47
3:CD:16:THR:HG22	3:CD:17:ASP:H	1.78	0.47
23:BB:1150:C:O2'	23:BB:1151:A:H5'	2.15	0.47
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.50	0.47
1:CA:658:C:H2'	1:CA:659:U:H6	1.79	0.47
3:CD:55:ARG:NH1	3:CD:55:ARG:HG3	2.29	0.47
12:CM:84:CYS:O	12:CM:88:LEU:HG	2.15	0.47
1:AA:327:A:O2'	1:AA:328:C:O4'	2.28	0.47
42:BN:67:PHE:O	42:BN:68:ALA:C	2.52	0.47
42:BN:65:LEU:HD11	42:BN:69:ARG:CZ	2.44	0.47
23:BB:2663:G:H2'	23:BB:2664:G:C8	2.49	0.47
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.50	0.47
23:DB:2774:C:OP1	26:DD:169:ARG:HG3	2.15	0.47
21:AU:48:LYS:HG3	21:AU:49:ALA:N	2.30	0.47
23:DB:2540:C:H2'	23:DB:2541:A:C8	2.50	0.47
53:B6:9:GLU:HG3	53:B6:13:HIS:NE2	2.30	0.47
1:CA:1182:G:H4'	1:CA:1183:U:H5'	1.96	0.47
9:AJ:92:LEU:N	9:AJ:92:LEU:HD22	2.30	0.47
23:BB:244:A:H2'	23:BB:245:G:O4'	2.15	0.47
13:AN:64:ARG:HB2	13:AN:77:GLY:O	2.14	0.47
3:AD:57:LYS:HD3	3:AD:57:LYS:C	2.35	0.47
23:BB:1754:A:H2'	23:BB:1755:A:O4'	2.13	0.47
1:CA:643:C:H5'	7:CH:31:LEU:HD13	1.96	0.47
23:DB:2708:G:H2'	23:DB:2709:G:H8	1.79	0.47
29:BE:75:SER:O	29:BE:78:TRP:HB2	2.15	0.47
47:DF:2:LYS:H	47:DF:2:LYS:HG2	1.52	0.47
1:CA:618:C:H1'	15:CP:14:ARG:NH1	2.29	0.47
1:AA:245:U:H2'	1:AA:246:A:H5'	1.97	0.47
30:BY:9:THR:HB	30:BY:53:MET:O	2.14	0.47
38:DM:26:VAL:CG2	38:DM:133:LYS:HA	2.44	0.47
25:BC:157:ALA:HB1	25:BC:196:ASN:HB3	1.97	0.47
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.97	0.47
23:DB:1052:C:H2'	23:DB:1053:C:C6	2.50	0.47
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.14	0.47
53:D6:113:ASP:HA	53:D6:116:ARG:HD2	1.95	0.47
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.96	0.47
1:AA:276:G:O2'	1:AA:277:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.62	0.47
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.49	0.47
31:DO:54:ILE:H	42:DN:118:ARG:HH12	1.62	0.47
1:CA:825:A:H2'	1:CA:826:C:H6	1.80	0.47
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.29	0.47
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.15	0.47
2:CC:202:PHE:HZ	2:CC:205:GLU:HG2	1.79	0.47
23:DB:1279:G:H2'	23:DB:1280:G:O4'	2.13	0.47
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.97	0.47
23:DB:1100:C:C5	24:DI:1:ALA:O	2.68	0.47
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.36	0.47
40:BH:27:ARG:O	40:BH:28:ASN:ND2	2.47	0.47
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.80	0.47
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.80	0.47
52:DW:35:ILE:O	52:DW:37:VAL:N	2.48	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
13:AN:55:SER:HB2	13:AN:58:ARG:HD2	1.97	0.47
35:DV:30:ILE:HG12	35:DV:91:PHE:HB2	1.97	0.47
40:DH:135:HIS:CD2	40:DH:136:SER:H	2.32	0.47
35:BV:93:ARG:HG3	35:BV:93:ARG:H	1.51	0.47
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.80	0.47
20:CB:187:ASP:O	20:CB:189:ASN:N	2.48	0.47
23:BB:1599:U:OP1	50:BT:40:LYS:HG3	2.15	0.47
1:CA:1148:U:O4'	8:CI:17:ARG:HD3	2.15	0.47
50:DT:51:PHE:HB3	50:DT:53:VAL:HG23	1.96	0.47
26:BD:90:PHE:N	26:BD:94:GLN:OE1	2.44	0.47
23:DB:283:G:H3'	23:DB:284:U:C5'	2.45	0.47
33:B1:34:GLU:HG2	33:B1:49:LYS:HD3	1.97	0.47
1:AA:812:G:OP2	1:AA:902:G:N2	2.46	0.47
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.49	0.47
51:BZ:63:GLY:O	51:BZ:67:VAL:N	2.41	0.47
9:AJ:55:PRO:O	9:AJ:56:HIS:HB3	2.15	0.47
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.47
29:DE:48:THR:C	29:DE:50:ALA:H	2.16	0.47
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.96	0.47
10:AK:85:VAL:HG21	10:AK:96:ILE:HD11	1.96	0.47
1:AA:946:A:H2'	1:AA:947:G:H8	1.73	0.47
12:AM:106:ARG:HH12	12:AM:109:LYS:HE3	1.80	0.47
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.97	0.47
32:D4:35:GLN:HB2	32:D4:35:GLN:HE21	1.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:22:LYS:CA	34:D3:48:MET:HA	2.42	0.47
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.96	0.47
23:DB:1535:A:H5''	23:DB:1536:C:C5	2.44	0.47
22:BA:48:U:H2'	22:BA:49:C:H6	1.80	0.47
3:AD:96:ARG:HH12	3:AD:133:SER:HB3	1.80	0.47
3:AD:169:TRP:C	3:AD:182:LYS:HB2	2.35	0.47
43:BO:24:THR:O	43:BO:90:VAL:HB	2.15	0.47
23:DB:2811:G:OP1	26:DD:62:LYS:HD2	2.15	0.47
32:D4:22:VAL:HB	32:D4:24:ARG:NE	2.28	0.47
40:BH:62:LEU:N	40:BH:62:LEU:HD12	2.29	0.47
23:BB:329:G:H1	46:BU:16:LYS:CG	2.24	0.47
23:DB:1726:C:O5'	23:DB:1726:C:H6	1.97	0.47
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.80	0.47
25:BC:57:HIS:CG	25:BC:58:LYS:N	2.81	0.47
2:CC:13:ILE:H	2:CC:13:ILE:HD13	1.79	0.47
13:AN:17:ASP:O	13:AN:21:ALA:HB3	2.15	0.47
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.67	0.47
1:CA:1242:G:H2'	1:CA:1243:C:C6	2.50	0.47
26:BD:31:ALA:HA	26:BD:96:ILE:O	2.15	0.47
52:BW:44:PHE:HE2	52:BW:76:ARG:CZ	2.27	0.47
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.13	0.47
23:DB:812:C:H4'	44:DQ:12:ARG:HH22	1.79	0.47
23:BB:540:C:O2'	23:BB:541:A:H5'	2.15	0.47
26:BD:3:GLY:O	26:BD:4:LEU:HD13	2.15	0.47
44:DQ:73:ILE:HG13	44:DQ:74:SER:N	2.30	0.47
3:AD:196:GLU:CD	3:AD:196:GLU:H	2.18	0.47
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.50	0.47
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.97	0.47
23:BB:1468:U:H2'	23:BB:1522:A:H61	1.80	0.47
23:DB:305:C:H2'	23:DB:306:U:C6	2.50	0.47
23:DB:861:A:H2'	23:DB:862:G:O4'	2.15	0.47
23:BB:438:G:O2'	23:BB:439:A:H5'	2.14	0.47
1:CA:250:A:H1'	1:CA:252:U:C5	2.49	0.47
47:DF:40:GLY:HA2	47:DF:84:ILE:HG23	1.96	0.47
53:D6:174:GLN:O	53:D6:178:LYS:HG3	2.14	0.47
51:DZ:20:HIS:O	51:DZ:21:ALA:HB3	2.15	0.47
23:DB:2060:A:H3'	29:DE:63:LYS:HZ1	1.80	0.47
1:AA:801:U:H2'	1:AA:802:A:C8	2.49	0.47
49:DR:91:GLN:HG3	49:DR:92:TRP:H	1.80	0.47
37:DL:91:ASP:HA	37:DL:123:ARG:HB3	1.97	0.47
23:BB:322:A:C2	23:BB:340:A:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.30	0.47
5:AF:38:ARG:NH1	5:AF:96:VAL:HG12	2.30	0.47
13:CN:63:CYS:HB2	13:CN:79:SER:CB	2.44	0.47
11:CL:47:ALA:O	11:CL:48:LEU:HD23	2.15	0.47
1:CA:521:G:OP1	11:CL:50:LYS:HE2	2.15	0.47
9:AJ:12:ALA:H	9:AJ:18:ILE:HD12	1.80	0.47
1:AA:719:C:H2'	17:AR:38:ILE:HD13	1.97	0.47
47:BF:101:ARG:O	47:BF:105:ILE:HB	2.14	0.47
29:DE:1:MET:HB2	29:DE:16:GLU:CA	2.45	0.47
23:DB:2266:A:H4'	23:DB:2267:A:C8	2.49	0.47
13:CN:55:SER:HB2	13:CN:58:ARG:HD2	1.97	0.47
13:CN:45:LEU:HD23	13:CN:46:LYS:HD3	1.97	0.47
53:B6:32:ARG:CB	53:B6:103:ILE:HG12	2.32	0.47
22:BA:102:G:O2'	22:BA:103:U:H5'	2.14	0.47
23:BB:2747:G:O5'	23:BB:2747:G:H8	1.98	0.47
13:CN:60:ARG:CZ	13:CN:69:PRO:HB3	2.45	0.47
40:BH:132:PHE:HB3	40:BH:140:ALA:HB3	1.97	0.47
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.96	0.47
25:BC:90:ILE:HD13	25:BC:103:ILE:O	2.14	0.47
9:AJ:56:HIS:H	13:AN:80:ARG:HH22	1.62	0.47
44:BQ:108:LEU:CD2	49:BR:48:LYS:HB2	2.45	0.47
23:BB:962:G:H2'	23:BB:963:U:H6	1.78	0.47
2:CC:133:MET:CE	2:CC:165:GLU:HG2	2.45	0.47
47:BF:45:ASP:O	47:BF:47:LYS:HD3	2.15	0.47
48:DG:104:LEU:HD22	48:DG:106:LEU:CD2	2.45	0.47
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.96	0.47
20:CB:151:LYS:HG3	20:CB:152:ASP:H	1.79	0.47
23:BB:2060:A:H1'	57:BB:3545:HOH:O	2.15	0.47
23:BB:668:A:H2'	23:BB:670:A:H62	1.78	0.47
28:BP:75:THR:O	28:BP:80:VAL:HG11	2.14	0.47
42:DN:59:SER:O	42:DN:61:ALA:N	2.38	0.47
28:DP:20:ARG:HD3	28:DP:112:ARG:NH2	2.30	0.47
23:BB:2882:A:H3'	23:BB:2883:A:H5"	1.97	0.47
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.50	0.47
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.25	0.47
6:CG:26:VAL:HA	6:CG:42:VAL:HG21	1.97	0.47
1:AA:429:U:H1'	1:AA:430:A:H5"	1.97	0.47
23:DB:2529:G:H4'	48:DG:174:LYS:CG	2.45	0.47
37:BL:135:ILE:HG12	37:BL:140:GLY:CA	2.40	0.47
1:CA:449:G:H2'	1:CA:450:G:H8	1.78	0.47
37:DL:79:LEU:CG	37:DL:113:ALA:H	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:7:THR:HG22	30:DY:8:GLN:N	2.30	0.47
20:AB:182:VAL:O	20:AB:195:VAL:HG13	2.14	0.47
38:BM:108:VAL:HG21	38:BM:112:LEU:HD12	1.96	0.47
23:DB:151:C:H2'	23:DB:152:A:C8	2.50	0.47
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.30	0.47
23:BB:1215:G:H2'	23:BB:1216:G:H8	1.80	0.47
4:CE:93:VAL:HG12	4:CE:94:PHE:N	2.30	0.47
26:DD:114:LYS:HD2	26:DD:116:LYS:HE3	1.96	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
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
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.15	0.47
1:CA:92:U:H2'	1:CA:93:U:C6	2.49	0.47
8:AI:122:ARG:HG3	8:AI:122:ARG:HH11	1.80	0.47
23:DB:635:C:H2'	23:DB:636:G:C8	2.50	0.47
25:DC:57:HIS:CG	25:DC:58:LYS:N	2.82	0.47
23:BB:1845:G:O2'	23:BB:1846:G:H5'	2.14	0.47
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.15	0.47
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.68	0.47
23:BB:979:A:H3'	23:BB:980:A:C5'	2.45	0.47
37:BL:60:ARG:C	37:BL:61:LEU:HD12	2.35	0.47
23:DB:836:G:H2'	23:DB:837:C:H6	1.78	0.47
1:AA:637:C:O2'	1:AA:638:U:H5'	2.15	0.47
1:AA:108:G:H5'	1:AA:109:A:H5''	1.97	0.47
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.15	0.47
1:CA:632:U:O2	1:CA:632:U:H3'	2.15	0.47
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.14	0.47
53:B6:18:LEU:HD11	53:B6:175:LEU:HD22	1.96	0.47
23:DB:1936:A:OP1	23:DB:1937:A:H5'	2.15	0.47
23:BB:692:C:H2'	23:BB:693:A:H8	1.80	0.47
23:BB:564:C:OP2	49:BR:79:ARG:NH2	2.48	0.47
11:AL:43:LYS:CE	11:AL:44:PRO:HD3	2.45	0.47
23:BB:1201:U:H2'	23:BB:1202:G:C8	2.49	0.47
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.14	0.47
38:DM:31:PHE:CE2	38:DM:110:GLU:HA	2.50	0.47
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.82	0.47
1:CA:113:G:H2'	1:CA:114:U:H6	1.79	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:NE	2.29	0.47
23:BB:226:A:H2'	23:BB:227:A:C8	2.49	0.47
6:CG:2:ARG:CB	6:CG:2:ARG:NH1	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:113:THR:HG21	21:CU:28:LEU:HD11	1.95	0.47
1:CA:309:A:H2'	1:CA:310:G:H8	1.79	0.47
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.80	0.47
42:DN:82:GLU:C	42:DN:84:GLY:H	2.18	0.47
1:AA:968:A:H4'	1:AA:969:A:OP2	2.13	0.47
1:CA:102:G:H2'	1:CA:103:U:H6	1.79	0.47
35:DV:46:LYS:HD2	35:DV:46:LYS:N	2.30	0.47
1:AA:626:G:O2'	1:AA:627:G:H5'	2.15	0.47
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.14	0.47
51:BZ:39:TRP:HE1	51:BZ:41:GLU:HG2	1.80	0.47
1:CA:1533:C:C2'	1:CA:1534:A:H3'	2.36	0.47
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.45	0.47
40:DH:27:ARG:O	40:DH:28:ASN:ND2	2.47	0.47
47:DF:138:PRO:HA	47:DF:142:TYR:CE2	2.50	0.47
5:CF:100:SER:HA	17:CR:23:LYS:NZ	2.30	0.47
23:DB:2052:A:O3'	26:DD:149:ASN:HA	2.15	0.47
23:DB:2052:A:OP1	26:DD:145:SER:HA	2.15	0.47
26:DD:151:THR:N	26:DD:152:PRO:CD	2.78	0.47
13:CN:52:ARG:C	13:CN:54:SER:H	2.18	0.47
46:DU:9:GLU:OE2	46:DU:21:ARG:HD2	2.14	0.47
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.15	0.47
45:DS:2:GLU:O	45:DS:3:THR:O	2.33	0.47
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HA	2.30	0.47
25:DC:141:HIS:NE2	25:DC:194:VAL:HA	2.29	0.47
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.98	0.47
1:AA:93:U:P	1:AA:94:G:H5''	2.55	0.47
38:BM:20:LEU:HD13	38:BM:20:LEU:N	2.30	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
19:CT:38:ILE:HD13	19:CT:85:LEU:HD13	1.96	0.47
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.35	0.47
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.15	0.47
32:B4:19:ARG:C	32:B4:21:GLY:N	2.68	0.47
4:CE:52:ALA:HB3	4:CE:58:ALA:N	2.30	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
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.49	0.47
23:BB:2041:U:H2'	23:BB:2042:A:H8	1.79	0.47
35:BV:48:MET:SD	35:BV:85:LYS:HA	2.55	0.47
42:BN:93:GLY:C	42:BN:95:THR:H	2.18	0.47
10:AK:92:ARG:CG	10:AK:92:ARG:HH11	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:17:GLN:HG2	7:CH:62:LEU:HD23	1.96	0.47
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.80	0.47
23:DB:956:G:H1'	38:DM:82:MET:HE1	1.97	0.47
41:DJ:13:ARG:HB3	41:DJ:53:TYR:HD2	1.80	0.47
14:CO:39:LEU:HD23	14:CO:43:PHE:HE1	1.80	0.47
23:BB:1710:G:H4'	23:BB:2858:C:O2	2.15	0.47
7:AH:14:ARG:HG3	7:AH:15:ASN:N	2.30	0.47
41:BJ:74:TYR:HE2	41:BJ:103:ILE:HD11	1.80	0.47
1:AA:451:A:H5'	15:AP:70:ARG:HH22	1.78	0.47
23:DB:702:U:H2'	23:DB:703:U:H6	1.79	0.47
1:AA:951:G:O2'	1:AA:952:U:H5'	2.15	0.47
23:DB:947:A:HO2'	23:DB:984:A:H2	1.58	0.47
18:CS:64:GLU:N	18:CS:64:GLU:OE1	2.48	0.47
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.50	0.47
22:DA:13:G:O2'	22:DA:15:A:H5'	2.14	0.47
23:BB:2540:C:H2'	23:BB:2541:A:C8	2.50	0.47
23:BB:547:A:C2'	23:BB:548:G:H5'	2.45	0.47
15:CP:38:PHE:CD1	15:CP:39:PHE:N	2.83	0.47
1:AA:195:A:H1'	1:AA:222:C:O2'	2.15	0.47
1:AA:869:G:H4'	1:AA:872:A:C8	2.50	0.47
1:AA:167:A:O2'	1:AA:168:G:H5'	2.15	0.47
23:DB:1864:U:O2'	23:DB:1865:U:H5'	2.14	0.47
44:BQ:35:PHE:C	44:BQ:37:ALA:N	2.68	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
22:BA:52:A:OP1	22:BA:52:A:H4'	2.14	0.47
1:CA:1033:G:H5''	1:CA:1034:G:OP2	2.15	0.47
22:DA:28:C:H5'	22:DA:29:A:OP2	2.15	0.47
6:CG:130:LYS:H	6:CG:134:VAL:HG21	1.80	0.47
23:DB:2663:G:H2'	23:DB:2664:G:H8	1.80	0.47
1:CA:1436:U:H2'	1:CA:1437:A:C8	2.50	0.47
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.50	0.47
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.80	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:CD	2.45	0.47
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.48	0.47
23:BB:1522:A:H8	23:BB:1522:A:OP1	1.98	0.47
1:AA:418:C:H2'	1:AA:419:C:C6	2.50	0.47
23:DB:796:C:H2'	23:DB:797:G:C8	2.50	0.47
45:BS:41:LYS:O	45:BS:44:ALA:HB3	2.15	0.47
23:BB:24:G:H1'	45:BS:77:ASP:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:556:C:O2'	1:AA:557:G:H5'	2.15	0.47
1:CA:645:G:O2'	1:CA:646:G:H5'	2.15	0.47
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.50	0.47
1:AA:144:G:H2'	1:AA:145:G:O4'	2.14	0.47
14:AO:46:HIS:O	14:AO:48:LYS:N	2.46	0.47
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	1.97	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
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.66	0.46
13:CN:30:ILE:HG22	13:CN:31:SER:N	2.30	0.46
23:DB:705:A:H2'	23:DB:706:A:H8	1.80	0.46
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.15	0.46
20:CB:42:LEU:HA	20:CB:45:THR:HB	1.97	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
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
41:BJ:6:ALA:HB3	41:BJ:45:THR:CG2	2.44	0.46
25:BC:76:VAL:HG12	25:BC:114:GLN:CG	2.34	0.46
13:AN:9:GLU:HB2	13:AN:62:ARG:CZ	2.45	0.46
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.15	0.46
41:DJ:80:HIS:O	41:DJ:81:ILE:C	2.53	0.46
11:AL:121:PRO:O	11:AL:122:LYS:HB3	2.15	0.46
40:BH:12:LEU:HD21	40:BH:25:TYR:HE2	1.79	0.46
23:BB:1025:G:H8	23:BB:1025:G:OP1	1.98	0.46
23:BB:135:U:H2'	23:BB:136:G:H8	1.77	0.46
1:AA:1080:A:O3'	4:AE:20:VAL:HG11	2.15	0.46
47:BF:11:VAL:HG13	47:BF:171:ALA:HB1	1.97	0.46
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.20	0.46
40:DH:115:VAL:HG22	40:DH:117:LEU:N	2.28	0.46
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.31	0.46
33:B1:36:LYS:HG2	33:B1:47:ILE:HA	1.97	0.46
23:DB:2103:C:H3'	23:DB:2104:C:O2	2.14	0.46
10:AK:80:ASN:ND2	10:AK:80:ASN:H	2.12	0.46
23:DB:718:A:H3'	23:DB:719:C:C6	2.44	0.46
46:BU:14:THR:O	46:BU:18:LYS:HG2	2.15	0.46
23:BB:654:A:O2'	23:BB:655:A:H5''	2.15	0.46
23:DB:1566:A:H5'	25:DC:213:ARG:NH1	2.30	0.46
23:DB:1309:G:H4'	36:D2:7:PRO:CB	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2243:U:H2'	23:DB:2244:U:H6	1.80	0.46
26:DD:114:LYS:HD2	26:DD:116:LYS:CE	2.44	0.46
22:DA:111:U:H2'	22:DA:112:G:H8	1.74	0.46
23:BB:2680:U:H5'	26:BD:194:PRO:HA	1.97	0.46
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.97	0.46
23:BB:2805:C:H2'	23:BB:2806:C:C6	2.51	0.46
49:DR:14:VAL:CG2	49:DR:15:SER:N	2.78	0.46
23:DB:65:U:H2'	23:DB:66:C:H6	1.79	0.46
23:BB:682:G:O2'	23:BB:683:U:H5'	2.15	0.46
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.80	0.46
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.79	0.46
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.97	0.46
23:DB:1434:A:H62	23:DB:1558:C:H42	1.61	0.46
44:BQ:77:LYS:O	44:BQ:80:ASN:HB3	2.15	0.46
3:AD:2:ARG:NH1	3:AD:114:ARG:HG3	2.30	0.46
1:CA:213:G:H3'	1:CA:214:C:H6	1.80	0.46
23:DB:1190:G:O5'	37:DL:32:GLY:HA2	2.15	0.46
23:DB:633:A:OP1	37:DL:71:ALA:HB2	2.15	0.46
23:DB:244:A:H2'	23:DB:245:G:O4'	2.15	0.46
16:AQ:37:ILE:HG13	16:AQ:37:ILE:H	1.41	0.46
23:DB:235:U:H2'	23:DB:236:C:C6	2.50	0.46
23:DB:992:C:H2'	23:DB:993:G:H8	1.81	0.46
23:BB:564:C:O2'	23:BB:565:C:H5'	2.15	0.46
47:DF:131:VAL:C	47:DF:133:GLU:H	2.19	0.46
47:DF:132:ARG:O	47:DF:133:GLU:HB2	2.15	0.46
1:CA:162:A:H2'	1:CA:163:C:O4'	2.15	0.46
23:DB:584:C:H2'	23:DB:585:G:C8	2.49	0.46
1:CA:113:G:O4'	1:CA:354:G:H4'	2.14	0.46
21:CU:49:ALA:O	21:CU:52:VAL:HG12	2.15	0.46
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.80	0.46
23:BB:2623:G:H4'	23:BB:2825:G:C8	2.51	0.46
49:DR:61:ALA:HB2	49:DR:98:ILE:HA	1.96	0.46
6:CG:126:ALA:C	6:CG:128:GLU:H	2.18	0.46
23:BB:190:A:N6	23:BB:207:A:H1'	2.30	0.46
48:BG:54:ARG:O	48:BG:55:ASP:C	2.54	0.46
1:AA:398:U:H2'	1:AA:399:G:C8	2.50	0.46
4:AE:144:GLU:HG2	4:AE:144:GLU:O	2.15	0.46
4:AE:44:ARG:HD2	4:AE:72:ASN:HD22	1.79	0.46
1:CA:653:U:C4	7:CH:55:LYS:HE2	2.50	0.46
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.50	0.46
18:AS:40:PHE:HB3	18:AS:41:PRO:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:67:LYS:O	52:DW:68:PHE:HB2	2.14	0.46
23:BB:1279:G:H2'	23:BB:1280:G:O4'	2.15	0.46
1:CA:546:A:P	3:CD:68:GLU:HB3	2.55	0.46
2:CC:171:ARG:HB2	2:CC:171:ARG:HH11	1.80	0.46
23:DB:1098:A:H3'	24:DI:3:LYS:HB3	1.96	0.46
51:BZ:45:ARG:O	51:BZ:46:PHE:HB2	2.15	0.46
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.80	0.46
23:BB:2266:A:H1'	23:BB:2272:U:O4	2.15	0.46
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.43	0.46
29:BE:1:MET:HB2	29:BE:16:GLU:CA	2.45	0.46
5:CF:38:ARG:NH2	5:CF:63:ASN:ND2	2.64	0.46
47:BF:116:LEU:HD21	47:BF:174:PHE:HE2	1.81	0.46
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.97	0.46
23:BB:2327:A:H2'	23:BB:2328:A:C8	2.50	0.46
23:DB:851:C:O2'	23:DB:852:U:H5'	2.15	0.46
8:AI:38:PHE:CZ	8:AI:74:GLN:HB3	2.38	0.46
35:DV:80:HIS:HD2	35:DV:83:LYS:H	1.63	0.46
13:CN:46:LYS:HE3	18:CS:15:LEU:HD12	1.96	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
20:CB:161:PHE:CE2	20:CB:216:VAL:HG11	2.50	0.46
23:DB:558:U:P	41:DJ:113:PRO:HG2	2.55	0.46
40:BH:68:ARG:HB2	40:BH:134:VAL:CG1	2.38	0.46
48:DG:79:THR:CG2	48:DG:80:GLU:HG2	2.37	0.46
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.15	0.46
23:DB:2228:G:H2'	23:DB:2229:U:H6	1.79	0.46
46:BU:86:PHE:CE1	46:BU:88:ASP:HB3	2.50	0.46
16:AQ:45:VAL:HG21	16:AQ:60:ILE:HG21	1.97	0.46
38:DM:38:ARG:HB3	38:DM:98:PRO:HD3	1.97	0.46
48:BG:93:TYR:CD1	48:BG:106:LEU:HB2	2.50	0.46
23:DB:1085:A:C1'	23:DB:1105:U:H1'	2.44	0.46
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.15	0.46
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.97	0.46
23:BB:2883:A:OP1	31:B0:48:TYR:HE1	1.98	0.46
23:DB:1174:U:H4'	23:DB:1176:U:C1'	2.44	0.46
23:DB:2880:C:O4'	42:DN:91:ALA:HB3	2.14	0.46
1:CA:677:U:H2'	1:CA:678:U:H6	1.81	0.46
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.97	0.46
6:AG:26:VAL:HG12	6:AG:42:VAL:HG11	1.96	0.46
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.51	0.46
23:DB:2730:C:H2'	23:DB:2731:G:C8	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:494:G:O2'	23:DB:495:G:H5'	2.15	0.46
1:CA:26:A:H61	1:CA:558:G:H1'	1.80	0.46
32:B4:16:ILE:HA	32:B4:24:ARG:O	2.14	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
1:AA:26:A:N6	1:AA:558:G:H1'	2.30	0.46
47:DF:77:LYS:HD2	47:DF:79:ARG:HE	1.80	0.46
3:AD:12:ARG:HA	3:AD:33:ILE:HD12	1.98	0.46
23:DB:1523:U:H5''	23:DB:1524:G:H8	1.76	0.46
3:CD:12:ARG:HA	3:CD:33:ILE:HD12	1.98	0.46
23:DB:2294:G:P	43:DO:94:ARG:HH11	2.38	0.46
53:D6:70:SER:HB3	53:D6:76:LEU:HG	1.98	0.46
1:AA:707:U:H2'	1:AA:708:C:H6	1.80	0.46
53:B6:16:LYS:HE3	53:B6:16:LYS:N	2.31	0.46
23:BB:1925:C:H42	55:BB:3111:LLL:H412	1.79	0.46
53:B6:150:SER:OG	53:B6:153:GLU:HG3	2.15	0.46
23:DB:668:A:H2'	23:DB:670:A:H62	1.80	0.46
43:DO:58:ILE:HG22	43:DO:62:LEU:CD2	2.45	0.46
23:BB:1883:U:H2'	23:BB:1884:G:C1'	2.45	0.46
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.79	0.46
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.50	0.46
45:BS:95:ARG:HA	45:BS:95:ARG:NE	2.31	0.46
36:D2:10:LEU:HD21	36:D2:14:ARG:HH11	1.78	0.46
25:DC:35:LYS:HD2	25:DC:37:SER:OG	2.16	0.46
25:BC:35:LYS:O	25:BC:36:ASN:HB2	2.15	0.46
42:BN:82:GLU:C	42:BN:84:GLY:H	2.18	0.46
53:B6:104:PRO:O	53:B6:105:PRO:C	2.52	0.46
5:AF:49:TYR:CE1	17:AR:65:SER:HA	2.49	0.46
23:BB:1473:G:O2'	23:BB:1474:U:H5'	2.15	0.46
38:BM:55:ARG:NH2	38:BM:55:ARG:HG3	2.30	0.46
23:BB:1539:U:O2	23:BB:1539:U:H2'	2.15	0.46
25:DC:157:ALA:HB1	25:DC:196:ASN:HB3	1.96	0.46
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.15	0.46
23:DB:1102:C:O2'	23:DB:1103:A:H5'	2.16	0.46
23:DB:939:G:O2'	23:DB:940:G:H5'	2.15	0.46
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.31	0.46
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.16	0.46
29:BE:137:LYS:O	29:BE:141:MET:HG3	2.16	0.46
21:CU:3:ILE:CG2	21:CU:19:LYS:HD2	2.45	0.46
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.20	0.46
47:DF:101:ARG:O	47:DF:105:ILE:HB	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.45	0.46
47:DF:134:GLN:OE1	47:DF:136:ILE:HA	2.14	0.46
40:DH:3:VAL:HA	40:DH:39:ALA:N	2.31	0.46
8:AI:78:ILE:O	8:AI:82:ILE:HG13	2.16	0.46
13:CN:30:ILE:C	13:CN:32:ASP:H	2.18	0.46
35:DV:32:GLY:O	35:DV:93:ARG:HD2	2.15	0.46
18:CS:10:ILE:HG13	18:CS:10:ILE:O	2.15	0.46
48:DG:22:VAL:HG22	48:DG:36:LEU:HD12	1.97	0.46
26:BD:11:MET:HA	26:BD:24:VAL:O	2.15	0.46
20:CB:84:LEU:C	20:CB:86:CYS:H	2.18	0.46
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.14	0.46
44:DQ:55:GLN:O	44:DQ:59:LEU:HB2	2.15	0.46
13:AN:10:VAL:HB	13:AN:11:LYS:HZ3	1.81	0.46
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.51	0.46
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.45	0.46
25:DC:83:ASP:HB2	25:DC:90:ILE:HB	1.97	0.46
23:DB:962:G:H21	23:DB:2250:G:N2	2.02	0.46
13:AN:30:ILE:HG22	13:AN:31:SER:N	2.29	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
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.14	0.46
42:DN:63:ARG:HA	42:DN:80:PHE:CE2	2.50	0.46
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.80	0.46
1:AA:311:C:O2'	1:AA:312:C:H5'	2.15	0.46
4:AE:149:PRO:HG2	4:AE:150:GLU:OE1	2.16	0.46
1:AA:521:G:OP1	11:AL:50:LYS:HE2	2.15	0.46
6:CG:46:LEU:HG	6:CG:57:GLU:CB	2.45	0.46
23:DB:2149:U:O2'	23:DB:2150:C:H5'	2.15	0.46
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.79	0.46
23:BB:345:A:H1'	23:BB:346:A:C2	2.43	0.46
34:D3:36:ALA:O	34:D3:40:LYS:HG3	2.15	0.46
1:AA:482:A:H2'	1:AA:483:C:O4'	2.16	0.46
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.79	0.46
20:CB:102:ASN:O	20:CB:106:VAL:HG23	2.15	0.46
25:BC:211:ARG:C	25:BC:213:ARG:H	2.18	0.46
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.15	0.46
23:DB:572:A:H5''	23:DB:573:U:OP2	2.15	0.46
30:BY:37:ARG:HG3	30:BY:38:GLU:OE2	2.15	0.46
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.51	0.46
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.77	0.46
23:DB:1117:C:C2'	23:DB:1118:C:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:2:ARG:HD3	12:CM:2:ARG:N	2.28	0.46
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.16	0.46
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.29	0.46
15:CP:17:TYR:HB2	15:CP:39:PHE:HD2	1.81	0.46
23:DB:2376:A:H1'	43:DO:111:ARG:HH12	1.81	0.46
12:AM:75:SER:O	12:AM:78:ARG:HB2	2.15	0.46
15:AP:38:PHE:CE2	15:AP:51:ARG:HD3	2.50	0.46
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.28	0.46
1:CA:108:G:H5'	1:CA:109:A:H5''	1.97	0.46
23:BB:1485:U:O2'	23:BB:1486:U:H5'	2.15	0.46
1:CA:635:A:H2'	1:CA:636:U:H6	1.80	0.46
23:DB:2635:A:H5'	26:DD:79:LEU:HB2	1.97	0.46
23:BB:1270:C:H5''	23:BB:1271:G:C5'	2.45	0.46
23:BB:660:C:H2'	23:BB:661:A:H8	1.79	0.46
23:DB:2021:C:OP1	31:D0:8:THR:HG21	2.15	0.46
23:DB:979:A:H2'	23:DB:982:C:N4	2.30	0.46
1:AA:1451:U:H5''	1:AA:1452:C:OP2	2.16	0.46
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.79	0.46
7:CH:1:SER:O	7:CH:3:GLN:HG3	2.14	0.46
38:DM:31:PHE:CD1	38:DM:105:MET:HB3	2.50	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: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:937:C:H2'	23:DB:938:G:H8	1.80	0.46
23:BB:225:C:H2'	23:BB:226:A:O4'	2.15	0.46
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.49	0.46
29:BE:129:PRO:HD3	29:BE:156:ASN:OD1	2.15	0.46
33:D1:10:LEU:HD23	33:D1:35:LEU:HD21	1.98	0.46
1:CA:292:G:O2'	1:CA:609:A:N6	2.48	0.46
23:DB:510:C:H2'	23:DB:511:U:O4'	2.15	0.46
1:CA:360:G:O2'	1:CA:361:G:H5'	2.15	0.46
1:AA:1489:G:H2'	1:AA:1490:U:C6	2.51	0.46
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.50	0.46
2:AC:202:PHE:HZ	2:AC:205:GLU:HG2	1.79	0.46
2:AC:146:LYS:HB2	2:AC:202:PHE:O	2.15	0.46
23:BB:760:G:H2'	23:BB:761:A:O4'	2.14	0.46
11:CL:19:ASN:HA	11:CL:19:ASN:HD22	1.52	0.46
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.14	0.46
19:AT:14:GLU:O	19:AT:17:ARG:HB3	2.15	0.46
21:AU:34:ARG:NH1	21:AU:39:LYS:HZ2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:98:GLU:CG	5:AF:99:ALA:N	2.78	0.46
22:BA:40:U:O2'	22:BA:41:G:H5'	2.16	0.46
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.16	0.46
1:AA:469:C:H2'	1:AA:470:C:O4'	2.16	0.46
53:B6:32:ARG:HB2	53:B6:103:ILE:CG2	2.46	0.46
41:BJ:80:HIS:O	41:BJ:81:ILE:C	2.53	0.46
40:DH:5:LEU:HD11	40:DH:12:LEU:O	2.15	0.46
44:DQ:108:LEU:CD2	49:DR:48:LYS:HB2	2.45	0.46
50:BT:10:VAL:HG21	50:BT:42:GLU:HG3	1.96	0.46
1:CA:1130:A:H5'	8:CI:19:PHE:CE2	2.50	0.46
8:CI:44:ARG:HG2	8:CI:44:ARG:HH11	1.79	0.46
50:DT:55:VAL:HG22	50:DT:87:LEU:CD2	2.45	0.46
1:AA:961:U:H3	1:AA:983:A:H62	1.63	0.46
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.16	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
1:CA:840:C:N3	1:CA:842:U:H4'	2.31	0.46
53:B6:78:ALA:HA	53:B6:81:LYS:CD	2.38	0.46
19:CT:57:VAL:HG23	19:CT:58:ASP:N	2.30	0.46
19:CT:54:GLN:HG3	19:CT:75:LYS:HE3	1.97	0.46
47:DF:11:VAL:HG13	47:DF:171:ALA:HB1	1.96	0.46
23:BB:2756:U:OP2	32:B4:19:ARG:HG2	2.15	0.46
14:AO:25:THR:CG2	14:AO:70:LEU:HD23	2.45	0.46
11:CL:23:LEU:O	11:CL:25:ALA:N	2.49	0.46
23:DB:31:C:O2'	23:DB:32:C:H5'	2.16	0.46
28:DP:112:ARG:HB2	28:DP:112:ARG:NH1	2.27	0.46
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.98	0.46
11:AL:49:ARG:H	11:AL:49:ARG:CD	2.29	0.46
23:BB:2563:U:O2	23:BB:2565:A:H8	1.99	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
37:BL:79:LEU:CG	37:BL:113:ALA:H	2.29	0.46
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.45	0.46
9:CJ:6:ILE:HA	9:CJ:102:LEU:O	2.15	0.46
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.26	0.46
23:DB:2420:C:OP1	34:D3:33:THR:HB	2.15	0.46
23:BB:29:U:H2'	23:BB:30:G:C8	2.50	0.46
48:BG:10:VAL:H	48:BG:48:THR:HG22	1.80	0.46
1:AA:147:G:H2'	1:AA:148:G:H8	1.78	0.46
23:BB:1517:G:O2'	23:BB:1518:C:H5'	2.16	0.46
23:DB:1685:C:H2'	23:DB:1686:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:17:ARG:HG2	14:AO:24:SER:HB2	1.98	0.46
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.15	0.46
39:DX:10:SER:N	39:DX:60:LYS:HE2	2.27	0.46
15:CP:20:VAL:CG2	15:CP:32:PHE:HB2	2.46	0.46
1:AA:455:G:H2'	1:AA:456:A:C8	2.51	0.46
23:BB:65:U:H2'	23:BB:66:C:H6	1.80	0.46
23:DB:2784:U:H4'	26:DD:42:ASN:O	2.15	0.46
23:DB:1742:U:H2'	23:DB:1743:G:H8	1.80	0.46
23:BB:481:G:C2	23:BB:507:A:C4	3.03	0.46
1:AA:301:G:O2'	1:AA:302:G:H5'	2.16	0.46
23:BB:82:U:H2'	23:BB:83:A:C8	2.51	0.46
18:AS:64:GLU:OE1	18:AS:64:GLU:N	2.48	0.46
14:AO:8:THR:O	14:AO:11:ILE:HG22	2.15	0.46
1:AA:640:A:O2'	1:AA:641:U:H5'	2.15	0.46
23:DB:870:U:H5''	38:DM:6:ARG:O	2.16	0.46
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.31	0.46
50:DT:45:ALA:HA	50:DT:48:GLN:HB2	1.97	0.46
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.15	0.46
53:D6:113:ASP:HA	53:D6:116:ARG:HG2	1.98	0.46
23:DB:794:A:H2'	23:DB:795:C:C6	2.50	0.46
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.98	0.46
23:BB:927:A:H2'	23:BB:928:A:C8	2.51	0.46
23:BB:2407:A:H2'	23:BB:2408:U:C6	2.51	0.46
40:DH:78:VAL:HG12	40:DH:79:THR:N	2.31	0.46
24:DI:69:VAL:O	24:DI:69:VAL:HG23	2.14	0.46
2:AC:128:MET:H	2:AC:128:MET:CE	2.28	0.46
27:BK:68:GLY:HA3	27:BK:78:ARG:HB3	1.97	0.46
23:DB:1099:G:O4'	24:DI:3:LYS:O	2.33	0.46
17:CR:38:ILE:HG23	17:CR:62:ARG:NH2	2.30	0.46
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.15	0.46
1:AA:1117:A:H4'	8:AI:105:ARG:NH1	2.30	0.46
8:AI:56:MET:O	8:AI:58:GLU:HG2	2.16	0.46
8:AI:55:ASP:O	8:AI:59:LYS:HE3	2.16	0.46
8:AI:74:GLN:O	8:AI:78:ILE:HG13	2.16	0.46
13:CN:20:PHE:HD2	13:CN:54:SER:O	1.99	0.46
13:AN:12:ARG:HE	13:AN:58:ARG:NH1	2.13	0.46
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.30	0.46
26:DD:94:GLN:HG2	26:DD:94:GLN:O	2.15	0.46
35:BV:65:VAL:O	35:BV:66:ASP:HB3	2.16	0.46
45:DS:51:LEU:C	45:DS:53:SER:H	2.19	0.46
49:DR:39:LEU:HB2	49:DR:49:ILE:HD11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.16	0.46
50:DT:60:THR:HB	50:DT:81:LYS:HD2	1.98	0.46
44:DQ:91:ARG:CB	44:DQ:94:LEU:HD23	2.44	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
40:BH:68:ARG:O	40:BH:72:ILE:HG22	2.15	0.46
19:AT:77:ASN:O	19:AT:81:GLN:HG3	2.15	0.46
33:D1:32:LYS:NZ	33:D1:52:LYS:HA	2.31	0.46
51:BZ:33:LEU:O	51:BZ:34:HIS:CG	2.69	0.46
23:DB:1914:C:H2'	23:DB:1915:U:H5'	1.98	0.46
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.45	0.46
50:DT:69:ARG:NE	50:DT:70:HIS:H	2.13	0.46
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.78	0.46
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.80	0.46
40:BH:89:LYS:HA	40:BH:89:LYS:NZ	2.31	0.46
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.80	0.46
42:BN:2:ARG:HG2	42:BN:5:LYS:CB	2.40	0.46
23:BB:671:C:O2'	23:BB:672:C:H5'	2.15	0.46
29:BE:60:TRP:HB3	29:BE:61:ARG:H	1.33	0.46
23:BB:2844:G:H2'	23:BB:2845:U:O4'	2.16	0.46
29:DE:88:ARG:HB3	29:DE:89:PRO:HD2	1.98	0.46
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.31	0.46
11:AL:23:LEU:O	11:AL:25:ALA:N	2.48	0.46
42:BN:75:ILE:HD12	42:BN:76:VAL:N	2.30	0.46
2:CC:46:LEU:HD12	2:CC:75:VAL:HG22	1.97	0.46
12:AM:95:PRO:HB2	12:AM:99:GLN:OE1	2.16	0.46
23:BB:532:A:O2'	23:BB:2021:C:H5	1.97	0.46
1:AA:90:C:H2'	1:AA:91:U:C6	2.50	0.46
23:DB:742:A:O2'	23:DB:743:A:H5'	2.15	0.46
23:DB:960:A:C4'	23:DB:2457:U:H4'	2.46	0.46
20:AB:147:LEU:O	20:AB:151:LYS:N	2.47	0.46
7:CH:91:LEU:HD12	7:CH:116:ARG:HB2	1.97	0.46
41:BJ:13:ARG:HB3	41:BJ:53:TYR:CD2	2.50	0.46
25:DC:204:LEU:CD2	25:DC:209:ALA:HB1	2.45	0.46
1:CA:1320:C:H1'	18:CS:72:GLU:CA	2.45	0.46
7:CH:45:ILE:HG21	7:CH:60:LEU:CD2	2.44	0.46
23:DB:833:A:H2'	23:DB:834:G:H8	1.78	0.46
45:DS:15:GLN:O	45:DS:19:LEU:HB2	2.15	0.46
23:BB:419:U:H2'	23:BB:420:C:H6	1.78	0.46
23:DB:121:G:H2'	23:DB:122:G:H8	1.80	0.46
7:CH:6:ILE:O	7:CH:10:LEU:HG	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:17:C:O2'	22:DA:18:G:H5'	2.16	0.46
25:BC:64:VAL:HG21	25:BC:86:ARG:CZ	2.45	0.46
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.16	0.46
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.79	0.46
1:AA:286:C:H2'	1:AA:287:U:C6	2.50	0.46
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.30	0.46
3:AD:2:ARG:O	3:AD:3:TYR:HB3	2.15	0.46
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.98	0.46
53:D6:183:ILE:C	53:D6:185:GLY:H	2.19	0.46
23:DB:979:A:H3'	23:DB:980:A:C5'	2.45	0.46
16:CQ:11:VAL:O	16:CQ:54:ILE:HG13	2.15	0.46
1:AA:66:A:C2'	1:AA:67:C:H5'	2.44	0.46
7:AH:29:SER:O	7:AH:30:LYS:C	2.54	0.46
1:CA:317:U:H2'	1:CA:318:G:C8	2.50	0.46
23:DB:2560:A:H2'	23:DB:2561:U:H6	1.79	0.46
3:AD:55:ARG:NE	3:AD:55:ARG:HA	2.30	0.46
1:AA:551:U:H2'	1:AA:552:U:C6	2.50	0.46
42:DN:24:MET:CE	42:DN:44:LEU:HB2	2.45	0.46
1:AA:292:G:O2'	1:AA:609:A:N6	2.49	0.46
1:CA:651:C:H2'	1:CA:652:U:C6	2.50	0.46
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.15	0.46
23:DB:794:A:H2'	23:DB:795:C:H6	1.80	0.46
7:AH:110:MET:HG3	7:AH:115:ALA:HB2	1.97	0.46
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.79	0.46
23:BB:699:A:H4'	23:BB:1634:A:C5	2.50	0.46
43:DO:56:LYS:HG2	43:DO:60:GLU:OE1	2.15	0.46
18:CS:41:PRO:O	18:CS:44:ILE:HG22	2.16	0.46
2:CC:5:HIS:HD2	2:CC:7:ASN:H	1.62	0.46
41:BJ:70:THR:HG22	41:BJ:90:GLU:OE2	2.16	0.46
7:AH:9:MET:O	7:AH:13:ILE:HG13	2.15	0.46
22:BA:78:A:H2'	22:BA:79:G:O4'	2.16	0.46
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.15	0.46
23:BB:2352:A:N1	52:BW:30:VAL:HG11	2.31	0.46
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.49	0.46
47:BF:118:ALA:HA	47:BF:176:PHE:CE2	2.51	0.46
10:AK:43:TRP:HZ3	10:AK:45:THR:HG22	1.79	0.46
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.16	0.46
23:DB:965:C:C2'	23:DB:966:G:H5'	2.46	0.46
53:B6:30:THR:HB	53:B6:182:GLU:C	2.36	0.46
23:BB:2491:U:H5''	23:BB:2570:G:C5'	2.45	0.46
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:61:LEU:O	50:BT:81:LYS:HA	2.16	0.46
8:CI:20:ILE:HG12	8:CI:86:LEU:HD12	1.96	0.46
50:DT:10:VAL:HG21	50:DT:42:GLU:HG3	1.98	0.46
40:DH:68:ARG:HG3	40:DH:68:ARG:NH1	2.29	0.46
41:DJ:110:PRO:O	41:DJ:115:GLY:HA3	2.15	0.46
40:BH:114:GLU:HB3	40:BH:133:GLN:C	2.36	0.46
12:CM:16:ILE:HG23	12:CM:17:ALA:H	1.81	0.46
25:DC:106:PRO:O	25:DC:109:LEU:HB3	2.15	0.46
25:DC:79:ARG:HD2	25:DC:81:GLU:CG	2.45	0.46
13:AN:23:ARG:C	13:AN:25:GLU:H	2.18	0.46
1:AA:922:G:H2'	1:AA:923:A:H8	1.80	0.46
29:DE:106:LYS:CE	29:DE:200:LEU:HB3	2.46	0.46
51:DZ:63:GLY:O	51:DZ:67:VAL:HG23	2.15	0.46
38:DM:97:GLN:N	38:DM:97:GLN:OE1	2.48	0.46
48:DG:148:ARG:HB2	48:DG:161:VAL:O	2.16	0.46
48:DG:152:ARG:HA	48:DG:152:ARG:HD2	1.68	0.46
40:DH:53:GLU:OE1	40:DH:54:LEU:HD23	2.15	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
14:AO:71:LYS:HD3	14:AO:72:ARG:N	2.31	0.46
42:BN:31:HIS:O	42:BN:33:ILE:HG13	2.16	0.46
23:DB:1804:C:P	25:DC:256:THR:HB	2.56	0.46
4:AE:52:ALA:HB3	4:AE:58:ALA:N	2.30	0.46
1:AA:132:C:H5''	19:AT:68:LYS:NZ	2.29	0.46
1:AA:239:U:C5'	1:AA:239:U:H6	2.28	0.46
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.98	0.46
42:BN:72:ASP:C	42:BN:74:GLU:N	2.68	0.46
23:DB:2152:G:H2'	23:DB:2153:C:O4'	2.15	0.46
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.51	0.46
23:DB:1403:A:O2'	23:DB:1404:C:H5'	2.15	0.46
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.51	0.46
20:AB:98:GLY:O	20:AB:102:ASN:N	2.48	0.46
26:DD:117:GLY:O	26:DD:118:PHE:C	2.54	0.46
5:CF:70:VAL:HG23	5:CF:71:ILE:N	2.30	0.46
3:AD:185:PRO:HB2	3:AD:190:LEU:HG	1.98	0.46
1:AA:617:G:C4'	15:AP:46:LYS:HE2	2.42	0.46
1:CA:26:A:N6	1:CA:558:G:H1'	2.30	0.46
26:BD:55:LYS:C	26:BD:57:ALA:H	2.19	0.46
41:DJ:13:ARG:HB3	41:DJ:53:TYR:CD2	2.51	0.46
1:AA:36:C:OP1	11:AL:119:LYS:HD2	2.16	0.46
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.16	0.46
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.98	0.46
23:BB:414:C:H2'	23:BB:415:A:H8	1.80	0.46
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.81	0.46
23:BB:2555:U:H2'	23:BB:2556:C:O4'	2.15	0.46
20:CB:33:ALA:CA	20:CB:38:HIS:HA	2.44	0.46
15:CP:22:ALA:CB	15:CP:32:PHE:HA	2.45	0.46
1:AA:26:A:H61	1:AA:558:G:H1'	1.80	0.46
23:BB:1418:G:H1'	23:BB:1580:A:N6	2.30	0.46
23:BB:548:G:H5'	23:BB:549:G:N3	2.31	0.46
47:BF:79:ARG:O	47:BF:80:GLN:C	2.54	0.46
48:BG:9:VAL:O	48:BG:11:PRO:HD3	2.16	0.46
25:DC:245:THR:HG23	25:DC:249:VAL:O	2.16	0.46
44:BQ:77:LYS:HE2	44:BQ:116:LEU:HD13	1.95	0.46
23:BB:822:G:O2'	23:BB:823:C:H5'	2.16	0.46
23:DB:839:U:H1'	23:DB:1191:G:H1'	1.97	0.46
1:CA:513:C:H2'	1:CA:514:C:H6	1.80	0.46
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.51	0.46
23:BB:584:C:H2'	23:BB:585:G:H8	1.79	0.46
23:DB:647:G:H2'	23:DB:648:G:H8	1.81	0.46
28:BP:19:PHE:CE2	28:BP:25:VAL:HG11	2.51	0.46
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.80	0.46
23:BB:814:C:O2'	23:BB:815:C:H5'	2.16	0.46
38:DM:35:ALA:HB2	38:DM:100:LYS:H	1.79	0.46
23:DB:523:C:H4'	23:DB:540:C:O2	2.16	0.46
1:AA:512:U:H2'	1:AA:513:C:C6	2.51	0.46
3:CD:55:ARG:NE	3:CD:55:ARG:HA	2.30	0.46
23:BB:698:C:H4'	23:BB:734:A:H61	1.80	0.46
1:AA:213:G:H3'	1:AA:214:C:H6	1.79	0.46
23:DB:671:C:O2'	23:DB:672:C:H5'	2.16	0.46
1:AA:884:U:H4'	1:AA:885:G:H5''	1.96	0.46
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.98	0.46
11:CL:43:LYS:CE	11:CL:44:PRO:HD3	2.45	0.46
1:AA:593:U:H2'	1:AA:594:U:C6	2.51	0.46
23:DB:755:U:O2'	23:DB:756:A:H5'	2.16	0.46
53:D6:163:LYS:HE3	53:D6:167:GLU:OE1	2.15	0.46
23:BB:2712:C:H3'	23:BB:2714:G:H5''	1.98	0.46
2:CC:155:ARG:H	2:CC:162:ALA:HB1	1.81	0.46
45:DS:41:LYS:O	45:DS:44:ALA:HB3	2.16	0.46
1:CA:45:G:H2'	1:CA:46:G:C8	2.50	0.46
23:BB:1689:A:H2'	23:BB:1690:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.80	0.46
38:BM:55:ARG:HG3	38:BM:55:ARG:HH21	1.81	0.46
1:AA:824:G:O2'	1:AA:825:A:H5'	2.15	0.46
1:CA:626:G:O2'	1:CA:627:G:H5'	2.15	0.46
9:CJ:28:THR:HG21	9:CJ:90:LEU:HD22	1.97	0.46
1:AA:486:U:H2'	1:AA:487:A:H8	1.80	0.46
36:B2:13:ASN:O	36:B2:17:GLY:HA3	2.16	0.46
10:CK:20:ALA:HB2	10:CK:81:LEU:HD12	1.97	0.46
23:DB:998:C:H3'	57:DB:3273:HOH:O	2.15	0.46
23:BB:470:A:H2'	23:BB:471:A:C8	2.51	0.46
1:CA:1289:A:H2'	1:CA:1290:G:H5'	1.97	0.46
23:DB:2397:G:H2'	23:DB:2398:U:H6	1.81	0.46
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.98	0.46
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.80	0.46
23:DB:2204:G:O2'	23:DB:2205:A:H5'	2.15	0.46
6:CG:11:ILE:HD12	6:CG:11:ILE:H	1.79	0.46
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.32	0.46
23:DB:2223:G:C2'	23:DB:2224:G:H5'	2.46	0.46
23:BB:2352:A:C6	52:BW:30:VAL:HG11	2.50	0.46
23:BB:856:G:H2'	23:BB:857:G:C8	2.51	0.46
52:BW:37:VAL:HG22	52:BW:55:ASP:O	2.16	0.46
5:AF:38:ARG:HH21	5:AF:63:ASN:ND2	2.14	0.46
53:D6:41:LEU:CD2	53:D6:83:ILE:HD13	2.45	0.46
47:BF:138:PRO:HA	47:BF:142:TYR:CE2	2.50	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
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.44	0.46
26:DD:90:PHE:N	26:DD:94:GLN:OE1	2.49	0.46
40:DH:80:ILE:HD11	40:DH:147:VAL:N	2.14	0.46
35:BV:30:ILE:HG12	35:BV:91:PHE:HB2	1.98	0.46
48:BG:118:ALA:C	48:BG:120:ILE:H	2.19	0.46
50:BT:51:PHE:HB3	50:BT:53:VAL:HG23	1.97	0.46
8:CI:20:ILE:HG23	8:CI:60:LEU:HD12	1.98	0.46
50:DT:29:THR:CB	50:DT:86:THR:HA	2.46	0.46
11:CL:121:PRO:O	11:CL:122:LYS:HB3	2.16	0.46
33:B1:37:LYS:O	33:B1:45:HIS:HA	2.15	0.46
20:AB:165:ALA:HB3	20:AB:186:VAL:HG12	1.97	0.46
25:BC:158:GLY:H	25:BC:194:VAL:HG13	1.80	0.46
4:AE:47:PHE:HZ	4:AE:137:ARG:HH21	1.62	0.46
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.16	0.46
29:DE:118:LEU:HD21	29:DE:188:MET:CE	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:255:G:H1'	16:CQ:17:GLU:OE2	2.16	0.46
2:AC:64:ARG:HD3	2:AC:64:ARG:HA	1.70	0.46
1:AA:72:A:N6	1:AA:98:A:H2	2.13	0.46
1:CA:614:C:O2'	1:CA:615:G:H5'	2.15	0.46
53:B6:43:VAL:O	53:B6:50:VAL:N	2.48	0.46
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.97	0.46
40:DH:144:VAL:HG23	40:DH:144:VAL:O	2.16	0.46
23:BB:670:A:H3'	37:BL:43:GLY:H	1.81	0.46
23:DB:1795:C:O2'	23:DB:1796:U:H5'	2.15	0.46
42:BN:28:LEU:HD23	42:BN:113:ILE:HG23	1.96	0.46
41:DJ:21:THR:O	41:DJ:62:VAL:HA	2.15	0.46
1:CA:947:G:H2'	1:CA:948:C:C6	2.50	0.46
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.97	0.46
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.50	0.46
30:DY:7:THR:HA	30:DY:34:THR:HA	1.97	0.46
46:BU:14:THR:O	46:BU:18:LYS:HA	2.16	0.46
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.80	0.46
34:B3:33:THR:HG23	34:B3:34:LYS:N	2.31	0.46
20:AB:110:ILE:HA	20:AB:147:LEU:HD13	1.97	0.46
26:DD:113:SER:HB3	26:DD:167:ASN:HA	1.97	0.46
23:BB:118:A:H5'	23:BB:119:A:C8	2.44	0.46
23:DB:571:U:O2'	23:DB:573:U:O5'	2.34	0.46
48:DG:10:VAL:CG1	48:DG:14:VAL:HG21	2.46	0.46
53:B6:128:ALA:O	53:B6:132:ILE:HG13	2.15	0.46
45:BS:15:GLN:O	45:BS:19:LEU:HB2	2.16	0.46
23:DB:457:A:N1	23:DB:470:A:H5''	2.31	0.46
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.15	0.46
47:DF:79:ARG:O	47:DF:80:GLN:C	2.54	0.46
23:DB:465:G:H2'	23:DB:466:A:C8	2.51	0.46
46:BU:40:LEU:HD12	46:BU:40:LEU:N	2.31	0.46
23:BB:2377:A:H2'	23:BB:2378:A:H8	1.76	0.46
23:DB:642:U:H2'	23:DB:644:A:OP2	2.15	0.46
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.31	0.46
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.31	0.46
26:BD:85:ALA:C	26:BD:87:GLY:H	2.19	0.46
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.78	0.46
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.96	0.46
23:DB:264:C:C2'	23:DB:265:A:H5''	2.46	0.46
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.31	0.46
50:DT:45:ALA:O	50:DT:48:GLN:HB2	2.16	0.46
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1900:A:N1	23:DB:1970:A:C6	2.84	0.46
23:BB:242:G:OP2	34:B3:2:LYS:NZ	2.38	0.46
1:CA:1119:C:O2'	1:CA:1120:C:H5'	2.15	0.46
15:CP:28:ARG:C	15:CP:30:GLY:H	2.19	0.46
1:CA:241:G:O2'	1:CA:242:G:H5'	2.14	0.46
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.15	0.46
23:BB:1161:C:H2'	23:BB:1162:G:H8	1.80	0.46
1:CA:624:C:H2'	1:CA:625:U:C6	2.51	0.46
1:CA:28:A:N3	1:CA:296:U:H4'	2.31	0.46
26:BD:14:ILE:HG23	26:BD:22:ILE:HB	1.96	0.46
1:AA:309:A:H2'	1:AA:310:G:H8	1.80	0.46
3:CD:48:SER:O	3:CD:49:ASP:C	2.54	0.46
1:AA:162:A:H2'	1:AA:163:C:O4'	2.16	0.46
26:BD:30:GLU:HB2	26:BD:52:THR:CG2	2.46	0.46
23:BB:1956:U:H2'	23:BB:1957:C:H5'	1.97	0.46
1:AA:546:A:P	3:AD:68:GLU:HB3	2.56	0.46
51:DZ:45:ARG:O	51:DZ:46:PHE:HB2	2.15	0.46
23:BB:320:A:OP1	29:BE:130:LYS:HE3	2.16	0.46
29:BE:147:LEU:O	29:BE:168:ASP:O	2.34	0.46
25:BC:169:ALA:O	25:BC:185:ALA:HB3	2.16	0.46
47:BF:134:GLN:HE21	47:BF:134:GLN:HB3	1.53	0.46
47:BF:31:GLU:O	47:BF:32:LYS:O	2.34	0.46
23:DB:920:A:H2'	23:DB:921:C:C6	2.50	0.46
52:DW:49:ASN:O	52:DW:50:VAL:HG13	2.16	0.46
23:DB:876:C:H3'	23:DB:877:A:C8	2.50	0.46
18:AS:65:MET:HG3	18:AS:73:PHE:CZ	2.51	0.46
44:DQ:86:SER:HB2	49:DR:51:VAL:HG12	1.97	0.46
50:BT:55:VAL:HG22	50:BT:87:LEU:HD23	1.98	0.46
50:DT:11:LEU:N	50:DT:11:LEU:HD22	2.26	0.46
51:BZ:49:LEU:HD13	51:BZ:51:VAL:CG2	2.46	0.46
23:BB:971:G:H2'	23:BB:972:A:O4'	2.15	0.46
48:BG:79:THR:CG2	48:BG:80:GLU:HG2	2.38	0.46
23:BB:960:A:C4'	23:BB:2457:U:H4'	2.46	0.46
23:BB:1804:C:P	25:BC:256:THR:HB	2.56	0.46
47:BF:47:LYS:HA	47:BF:50:ASP:OD1	2.16	0.46
1:AA:78:A:H2'	1:AA:79:G:C8	2.51	0.46
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.21	0.46
16:CQ:66:LEU:O	16:CQ:67:SER:HB2	2.16	0.46
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.51	0.46
14:AO:74:ASP:OD1	14:AO:77:ARG:HG3	2.16	0.46
23:BB:1438:U:O2'	23:BB:1439:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1442:U:O2'	23:BB:1443:U:H5'	2.16	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
12:AM:106:ARG:HH12	12:AM:109:LYS:CE	2.29	0.46
42:BN:56:LYS:HD2	42:BN:88:ALA:HA	1.98	0.46
23:DB:2104:C:HO2'	23:DB:2105:U:H5	1.64	0.46
23:DB:2543:G:H2'	23:DB:2544:G:O4'	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
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.31	0.46
6:AG:47:GLU:OE1	6:AG:57:GLU:HG2	2.16	0.46
1:AA:449:G:H2'	1:AA:450:G:H8	1.80	0.46
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD22	2.50	0.46
37:BL:79:LEU:CG	37:BL:112:LEU:HA	2.43	0.46
4:CE:82:HIS:HE1	4:CE:146:MET:HA	1.79	0.46
26:BD:117:GLY:O	26:BD:118:PHE:C	2.54	0.46
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.16	0.46
23:DB:2073:C:C5'	25:DC:227:VAL:HG12	2.42	0.46
3:AD:41:GLY:C	3:AD:43:ARG:H	2.17	0.46
23:BB:834:G:O2'	23:BB:835:C:H5'	2.15	0.46
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.31	0.46
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.31	0.46
23:DB:21:A:H2'	23:DB:22:C:C6	2.50	0.46
1:CA:1258:G:C6	1:CA:1278:G:N1	2.83	0.46
47:DF:74:ALA:CB	47:DF:78:ILE:HD13	2.45	0.46
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.16	0.46
23:BB:1854:A:H2	23:BB:2087:G:N3	2.14	0.46
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.98	0.46
10:CK:92:ARG:HH11	10:CK:92:ARG:CG	2.28	0.46
23:DB:2293:G:H2'	23:DB:2294:G:C8	2.49	0.46
37:DL:60:ARG:C	37:DL:61:LEU:HD12	2.36	0.46
1:CA:8:A:H5'	4:CE:105:ILE:HG22	1.98	0.46
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.50	0.46
23:DB:570:G:N7	23:DB:2030:A:N6	2.63	0.46
21:AU:11:PHE:O	21:AU:11:PHE:CD1	2.69	0.46
2:AC:112:ALA:HB2	2:AC:182:ASP:O	2.16	0.46
53:D6:180:GLU:O	53:D6:184:LEU:HG	2.16	0.46
23:DB:246:C:H2'	23:DB:247:G:H5'	1.98	0.46
23:BB:2320:U:H4'	23:BB:2321:U:C2	2.51	0.46
23:BB:866:A:H61	23:BB:913:U:C1'	2.29	0.46
38:DM:66:ARG:HB2	38:DM:101:VAL:HG13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1014:A:H5'	18:CS:13:HIS:HB3	1.98	0.46
1:CA:878:A:H1'	7:CH:3:GLN:OE1	2.15	0.46
26:BD:122:VAL:HG12	26:BD:122:VAL:O	2.16	0.46
23:DB:231:A:H3'	23:DB:232:G:C8	2.51	0.46
23:BB:402:A:H2'	23:BB:403:U:O4'	2.15	0.46
23:DB:438:G:O2'	23:DB:439:A:H5'	2.16	0.46
42:DN:24:MET:HG2	42:DN:44:LEU:HD13	1.97	0.46
23:BB:2206:C:O2'	23:BB:2207:C:H5'	2.16	0.46
9:AJ:80:THR:HG21	9:AJ:82:LYS:HE2	1.98	0.46
23:BB:222:A:N6	23:BB:232:G:H1'	2.30	0.46
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.50	0.46
1:CA:149:A:O2'	1:CA:150:U:H5'	2.16	0.46
23:BB:2487:G:H2'	23:BB:2488:G:C8	2.51	0.46
28:DP:45:VAL:O	28:DP:47:ILE:HG23	2.16	0.46
1:CA:458:U:H2'	1:CA:459:A:H8	1.81	0.46
24:BI:63:ASP:C	24:BI:65:SER:H	2.19	0.46
23:BB:1428:C:H2'	23:BB:1569:A:OP2	2.16	0.46
52:BW:26:GLY:O	52:BW:27:GLY:C	2.54	0.46
2:CC:33:ASP:O	2:CC:36:PHE:HB3	2.16	0.46
31:D0:30:ASP:HB3	31:D0:33:SER:O	2.16	0.46
23:BB:2791:G:H2'	23:BB:2792:A:O4'	2.15	0.46
2:CC:88:LYS:HD2	2:CC:88:LYS:C	2.36	0.46
2:AC:102:ILE:HD12	2:AC:102:ILE:N	2.31	0.46
52:DW:26:GLY:O	52:DW:27:GLY:C	2.54	0.46
1:AA:176:C:H2'	1:AA:177:G:N3	2.31	0.46
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.51	0.46
23:BB:2453:A:H4'	23:BB:2573:C:OP2	2.16	0.46
29:BE:148:ILE:HA	29:BE:187:VAL:CB	2.43	0.46
52:BW:48:ALA:O	52:BW:61:LYS:HB2	2.16	0.46
22:DA:40:U:O2'	22:DA:41:G:H5'	2.16	0.46
17:AR:63:TYR:N	17:AR:63:TYR:HD2	2.14	0.46
40:DH:48:GLU:HA	40:DH:51:ARG:CZ	2.46	0.46
39:DX:28:LEU:HB3	39:DX:43:LEU:HD21	1.98	0.46
46:BU:20:LYS:HB2	46:BU:20:LYS:HZ3	1.81	0.46
22:BA:104:A:H5'	35:BV:75:GLN:HE21	1.81	0.46
20:CB:86:CYS:SG	20:CB:87:ASP:N	2.89	0.46
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.16	0.46
13:AN:60:ARG:CG	13:AN:62:ARG:HE	2.29	0.46
33:B1:10:LEU:HB2	33:B1:20:TYR:HB2	1.97	0.46
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.94	0.46
1:AA:254:G:O2'	1:AA:255:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:111:GLU:HG2	29:BE:114:ARG:HH21	1.81	0.46
23:DB:435:C:H2'	23:DB:436:C:H5'	1.98	0.46
23:DB:96:C:H4'	39:DX:41:HIS:HD1	1.78	0.46
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.15	0.46
23:DB:1552:A:H2'	23:DB:1553:A:C5'	2.44	0.46
42:DN:63:ARG:O	42:DN:66:ALA:HB3	2.16	0.46
42:DN:72:ASP:C	42:DN:74:GLU:N	2.69	0.46
53:B6:133:ARG:O	53:B6:136:ALA:N	2.49	0.46
23:DB:544:C:H2'	23:DB:545:U:C6	2.50	0.46
1:AA:237:G:H2'	1:AA:238:A:C8	2.48	0.46
27:DK:115:ILE:HG23	27:DK:116:ILE:H	1.81	0.46
27:DK:12:ASP:HB3	27:DK:85:VAL:HG13	1.98	0.46
6:AG:26:VAL:HA	6:AG:42:VAL:HG21	1.98	0.46
23:DB:580:U:O2'	23:DB:581:C:H5'	2.15	0.46
1:CA:560:A:H5'	1:CA:566:G:N2	2.29	0.46
23:BB:2876:G:H2'	23:BB:2877:G:O4'	2.16	0.46
1:CA:876:C:H1'	7:CH:11:THR:HG21	1.98	0.46
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.15	0.46
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.31	0.46
20:CB:116:LEU:HA	20:CB:119:GLN:HG2	1.96	0.46
25:BC:43:ASN:HD22	25:BC:44:ASN:N	2.13	0.46
23:BB:2213:U:C2'	23:BB:2213:U:O2	2.61	0.46
1:CA:1278:G:H4'	1:CA:1279:G:O5'	2.14	0.46
6:AG:71:THR:C	6:AG:90:VAL:HG22	2.37	0.46
23:BB:2025:C:H2'	23:BB:2026:U:H6	1.80	0.46
26:DD:70:LYS:C	26:DD:70:LYS:HD3	2.35	0.46
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.16	0.46
2:CC:112:ALA:HB2	2:CC:182:ASP:O	2.16	0.46
1:AA:859:G:O2'	1:AA:860:A:H5'	2.16	0.46
39:BX:10:SER:N	39:BX:60:LYS:HE2	2.31	0.46
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.78	0.46
1:CA:631:C:H5''	1:CA:632:U:O4'	2.16	0.46
23:BB:2150:C:H2'	23:BB:2151:U:O4'	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
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.50	0.46
2:AC:142:ARG:NH2	2:AC:143:LEU:HD21	2.31	0.46
1:CA:884:U:H4'	1:CA:885:G:H5''	1.98	0.46
23:DB:1210:G:C5'	23:DB:1212:G:H5'	2.46	0.46
26:DD:4:LEU:N	26:DD:4:LEU:HD22	2.31	0.46
6:AG:137:ARG:HB3	6:AG:137:ARG:HE	1.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:58:ILE:HG13	43:DO:58:ILE:H	1.61	0.46
2:CC:142:ARG:NH2	2:CC:143:LEU:HD21	2.31	0.46
42:BN:69:ARG:HD3	42:BN:69:ARG:H	1.81	0.46
1:CA:593:U:H2'	1:CA:594:U:C6	2.51	0.46
25:DC:181:ARG:NH2	25:DC:265:PHE:HB3	2.31	0.46
1:AA:551:U:H2'	1:AA:552:U:H6	1.81	0.46
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.15	0.46
38:DM:33:LEU:HD22	38:DM:128:THR:CB	2.46	0.46
48:DG:54:ARG:O	48:DG:55:ASP:C	2.54	0.46
4:CE:87:VAL:HG23	4:CE:92:ARG:HA	1.98	0.46
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.51	0.46
22:BA:88:C:H2'	22:BA:89:U:C5	2.51	0.46
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.15	0.46
23:DB:302:C:H2'	23:DB:303:G:H8	1.81	0.46
26:DD:56:LYS:HD3	26:DD:58:ASN:HB3	1.97	0.46
23:BB:649:G:H2'	23:BB:650:C:C6	2.50	0.46
28:BP:99:LEU:HD22	28:BP:99:LEU:HA	1.81	0.46
23:BB:289:G:H2'	23:BB:290:U:O4'	2.15	0.46
48:DG:112:VAL:HG12	48:DG:113:ASP:N	2.29	0.46
23:DB:699:A:H4'	23:DB:1634:A:N7	2.31	0.46
14:AO:28:GLN:O	14:AO:32:LEU:HD23	2.16	0.46
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.51	0.46
3:CD:57:LYS:C	3:CD:57:LYS:HD3	2.35	0.46
23:BB:408:G:O2'	23:BB:409:G:H5'	2.16	0.46
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.15	0.46
51:BZ:39:TRP:CE2	51:BZ:41:GLU:HA	2.51	0.46
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.37	0.46
51:DZ:43:GLU:C	51:DZ:45:ARG:H	2.19	0.46
29:BE:106:LYS:CE	29:BE:200:LEU:HB3	2.46	0.46
52:BW:35:ILE:O	52:BW:37:VAL:N	2.49	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
5:CF:3:HIS:CE1	5:CF:95:ALA:HB2	2.51	0.46
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.46	0.46
40:BH:3:VAL:HA	40:BH:39:ALA:N	2.30	0.46
23:DB:2571:U:H4'	26:DD:151:THR:HG21	1.97	0.46
27:BK:71:ARG:O	27:BK:72:PRO:C	2.55	0.46
1:AA:1133:G:H2'	1:AA:1134:G:O4'	2.15	0.46
8:AI:5:TYR:O	8:AI:20:ILE:N	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:22:VAL:HG22	48:BG:36:LEU:HD12	1.97	0.46
44:DQ:86:SER:CB	49:DR:51:VAL:HG12	2.46	0.46
23:BB:1597:A:C5'	23:BB:1598:A:H5'	2.43	0.46
23:BB:559:G:H1'	44:BQ:55:GLN:NE2	2.30	0.46
44:BQ:94:LEU:CD2	49:BR:11:GLN:HB2	2.46	0.46
11:CL:113:ARG:HH21	11:CL:120:ARG:HA	1.80	0.46
12:AM:3:ILE:HA	12:AM:56:ARG:NH1	2.31	0.46
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
52:BW:43:LYS:O	52:BW:58:LEU:HD11	2.15	0.46
1:CA:1076:U:O2'	1:CA:1077:G:H5'	2.16	0.46
23:BB:1244:A:C5'	37:BL:7:SER:HA	2.45	0.46
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.51	0.46
1:CA:1490:U:H2'	1:CA:1491:G:H5'	1.97	0.46
47:BF:41:GLU:CB	47:BF:48:LEU:HD11	2.43	0.46
16:CQ:46:HIS:CE1	16:CQ:48:GLU:HG2	2.50	0.46
23:BB:2658:C:H5'	48:BG:159:LYS:HZ2	1.78	0.46
23:BB:2147:A:C5'	23:BB:2148:G:H4'	2.46	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
23:BB:2886:A:N6	31:B0:39:ARG:NE	2.58	0.46
1:CA:947:G:H5''	12:CM:106:ARG:HB2	1.98	0.46
10:CK:80:ASN:ND2	10:CK:80:ASN:N	2.64	0.46
1:AA:993:G:N3	1:AA:993:G:H2'	2.31	0.46
27:BK:25:LEU:HD12	27:BK:39:ILE:HA	1.98	0.46
1:CA:677:U:H2'	1:CA:678:U:C6	2.51	0.46
3:CD:18:LEU:HD11	3:CD:59:LYS:HG3	1.97	0.46
11:CL:52:CYS:SG	11:CL:66:ILE:HD11	2.56	0.46
3:AD:106:PHE:CD1	3:AD:158:LEU:HD21	2.51	0.46
23:BB:1228:G:O2'	23:BB:1229:C:H5'	2.16	0.46
23:DB:1179:G:C2'	23:DB:1180:U:H5'	2.46	0.46
23:BB:533:G:H2'	23:BB:534:U:C6	2.50	0.46
20:AB:124:THR:HA	20:AB:127:LYS:HZ3	1.80	0.46
23:BB:19:A:OP1	44:BQ:22:GLY:N	2.49	0.46
1:AA:663:A:H5'	1:AA:836:G:OP1	2.16	0.46
1:AA:1320:C:H41	18:AS:36:ARG:HB3	1.81	0.46
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.15	0.46
23:DB:1387:A:H4'	23:DB:1469:A:H1'	1.98	0.46
11:CL:36:VAL:O	11:CL:36:VAL:HG23	2.16	0.46
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.29	0.46
23:BB:170:U:O2'	23:BB:171:U:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:82:GLU:HG2	10:CK:108:ASN:HB2	1.98	0.46
33:B1:4:ILE:HB	33:B1:27:ARG:HG3	1.98	0.46
33:B1:3:GLY:O	33:B1:5:ARG:N	2.49	0.46
27:BK:5:GLN:HA	27:BK:20:MET:SD	2.57	0.46
1:AA:411:A:H62	1:AA:413:G:H21	1.64	0.46
9:CJ:88:MET:SD	9:CJ:88:MET:N	2.89	0.46
23:DB:2137:U:C2'	23:DB:2138:G:H5'	2.46	0.46
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.16	0.46
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.51	0.46
34:D3:23:HIS:ND1	34:D3:24:LYS:N	2.64	0.46
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.46	0.46
23:BB:1864:U:O2'	23:BB:1865:U:H5'	2.16	0.46
28:DP:25:VAL:HA	28:DP:85:VAL:C	2.36	0.46
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.46	0.46
23:DB:246:C:N4	34:D3:7:ARG:HG2	2.31	0.46
2:CC:142:ARG:C	2:CC:144:GLY:H	2.19	0.46
1:AA:210:C:H1'	1:AA:211:G:N1	2.30	0.46
7:CH:1:SER:O	7:CH:3:GLN:N	2.49	0.46
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.51	0.46
39:DX:20:ASN:N	39:DX:20:ASN:ND2	2.64	0.46
23:DB:738:G:H2'	23:DB:739:A:C8	2.51	0.46
23:BB:2322:A:H2'	23:BB:2323:G:O4'	2.16	0.46
43:BO:6:ALA:O	43:BO:9:ARG:HG3	2.15	0.46
1:CA:398:U:H2'	1:CA:399:G:H8	1.80	0.46
48:BG:77:GLY:HA3	48:BG:135:ALA:O	2.16	0.46
1:AA:149:A:O2'	1:AA:150:U:H5'	2.16	0.46
1:CA:1448:C:H2'	1:CA:1449:C:H6	1.81	0.46
12:AM:64:VAL:HA	12:AM:68:LEU:CD1	2.46	0.46
23:BB:732:C:H2'	23:BB:733:G:O4'	2.16	0.46
23:BB:39:G:O2'	23:BB:40:U:H5'	2.16	0.46
27:BK:18:ARG:O	27:BK:45:GLU:HB2	2.16	0.46
23:DB:1806:C:C2'	23:DB:1807:G:H5'	2.46	0.46
23:DB:838:C:C2	23:DB:941:A:C6	3.04	0.46
40:DH:109:GLU:OE2	40:DH:111:ALA:HB2	2.16	0.46
5:CF:49:TYR:CE1	17:CR:65:SER:HA	2.51	0.46
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.51	0.46
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.15	0.46
21:AU:36:PHE:CD2	21:AU:39:LYS:HD2	2.51	0.45
37:BL:96:LYS:HE2	37:BL:103:ILE:HA	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:116:LEU:HD21	47:DF:174:PHE:HE2	1.81	0.45
47:DF:99:PHE:HA	47:DF:102:LEU:CD1	2.45	0.45
11:CL:46:SER:O	11:CL:47:ALA:HB2	2.16	0.45
23:DB:518:G:H4'	45:DS:18:ARG:CZ	2.47	0.45
13:CN:23:ARG:C	13:CN:25:GLU:H	2.18	0.45
53:B6:32:ARG:NH2	53:B6:88:LEU:O	2.45	0.45
45:DS:107:VAL:HG22	45:DS:108:SER:N	2.31	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
44:DQ:87:VAL:CB	49:DR:52:PRO:HG3	2.40	0.45
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.37	0.45
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.16	0.45
26:BD:94:GLN:O	26:BD:94:GLN:HG2	2.15	0.45
40:BH:110:VAL:HB	40:BH:132:PHE:CZ	2.51	0.45
40:BH:65:ALA:HB3	40:BH:135:HIS:HE1	1.81	0.45
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.51	0.45
23:DB:1161:C:H2'	23:DB:1162:G:H8	1.81	0.45
51:BZ:38:PHE:CE2	51:BZ:51:VAL:HG21	2.33	0.45
51:BZ:71:LEU:HD11	51:BZ:78:TYR:HB3	1.98	0.45
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.97	0.45
53:B6:112:LYS:O	53:B6:116:ARG:HG2	2.16	0.45
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.97	0.45
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.81	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
14:AO:39:LEU:HD23	14:AO:43:PHE:HE1	1.79	0.45
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.98	0.45
2:AC:133:MET:HB2	2:AC:133:MET:HE2	1.76	0.45
19:CT:43:LYS:CB	19:CT:85:LEU:HD21	2.46	0.45
23:DB:2691:C:O2'	23:DB:2692:G:H5'	2.16	0.45
23:BB:674:G:O2'	29:BE:60:TRP:HH2	1.98	0.45
23:BB:1439:A:N7	23:BB:1440:U:C6	2.84	0.45
32:D4:25:VAL:HG11	32:D4:35:GLN:NE2	2.31	0.45
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.81	0.45
20:AB:178:LEU:HB2	20:AB:180:ILE:HG12	1.98	0.45
23:DB:2461:A:H1'	23:DB:2492:U:C2	2.51	0.45
23:DB:655:A:H4'	23:DB:656:G:OP1	2.16	0.45
34:D3:33:THR:HG23	34:D3:34:LYS:N	2.30	0.45
23:BB:2215:C:O2'	23:BB:2216:G:H5'	2.16	0.45
23:DB:78:U:H2'	23:DB:79:C:H6	1.76	0.45
23:BB:1812:U:C4'	25:BC:44:ASN:HD21	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.30	0.45
36:B2:10:LEU:HD21	36:B2:14:ARG:NH1	2.30	0.45
36:B2:2:LYS:HD2	36:B2:6:GLN:NE2	2.31	0.45
1:AA:876:C:H1'	7:AH:11:THR:HG21	1.98	0.45
23:DB:2215:C:O2'	23:DB:2216:G:H5'	2.16	0.45
15:AP:22:ALA:CB	15:AP:32:PHE:HA	2.46	0.45
1:AA:451:A:H4'	1:AA:452:A:O4'	2.15	0.45
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.51	0.45
23:DB:946:C:H2'	23:DB:947:A:H8	1.81	0.45
10:CK:108:ASN:ND2	21:CU:6:ARG:HD2	2.30	0.45
23:BB:2428:G:N2	37:BL:54:GLN:OE1	2.49	0.45
1:CA:564:C:C5	16:CQ:32:ILE:HD11	2.51	0.45
23:DB:402:A:H2'	23:DB:403:U:O4'	2.16	0.45
53:B6:18:LEU:HD21	53:B6:171:LYS:HD2	1.97	0.45
8:AI:29:ILE:HG12	8:AI:64:ILE:HB	1.98	0.45
43:BO:58:ILE:HG22	43:BO:62:LEU:CD2	2.46	0.45
23:BB:1210:G:H5'	23:BB:1212:G:C5'	2.45	0.45
20:CB:10:LYS:O	20:CB:13:VAL:HG23	2.16	0.45
23:DB:522:A:H2'	23:DB:523:C:H6	1.80	0.45
50:BT:9:LYS:HG2	50:BT:9:LYS:O	2.15	0.45
26:DD:122:VAL:HG12	26:DD:122:VAL:O	2.16	0.45
42:DN:67:PHE:O	42:DN:68:ALA:C	2.55	0.45
23:BB:2872:A:H1'	23:BB:2873:A:C8	2.51	0.45
34:B3:23:HIS:ND1	34:B3:24:LYS:N	2.64	0.45
1:CA:1004:A:H2'	1:CA:1005:A:O4'	2.16	0.45
23:BB:2691:C:O2'	23:BB:2692:G:H5'	2.16	0.45
43:DO:56:LYS:O	43:DO:60:GLU:HG2	2.16	0.45
23:DB:2223:G:H2'	23:DB:2224:G:H5'	1.99	0.45
23:DB:1956:U:H2'	23:DB:1957:C:H5'	1.97	0.45
28:BP:45:VAL:O	28:BP:47:ILE:HG23	2.16	0.45
23:DB:1695:G:H2'	23:DB:1696:G:O4'	2.15	0.45
6:CG:64:ALA:HA	6:CG:127:ALA:HA	1.98	0.45
11:AL:31:GLY:HA2	11:AL:56:LEU:HA	1.97	0.45
1:AA:667:G:H4'	14:AO:51:HIS:ND1	2.31	0.45
23:BB:1208:C:O2'	23:BB:1209:U:H5'	2.16	0.45
24:DI:70:THR:O	24:DI:70:THR:HG23	2.15	0.45
49:DR:55:ASP:OD2	49:DR:55:ASP:N	2.50	0.45
1:AA:605:U:H2'	1:AA:606:G:C8	2.51	0.45
48:DG:154:GLU:O	48:DG:156:TYR:N	2.42	0.45
23:BB:1124:G:H1'	32:B4:38:GLY:OXT	2.15	0.45
23:DB:1765:U:H2'	23:DB:1766:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:126:ALA:C	6:AG:128:GLU:H	2.19	0.45
37:BL:119:PRO:HB3	37:BL:139:GLY:O	2.16	0.45
53:D6:58:VAL:HG22	53:D6:68:VAL:HG22	1.97	0.45
53:D6:65:THR:C	53:D6:103:ILE:HD12	2.37	0.45
17:AR:62:ARG:C	17:AR:63:TYR:HD2	2.19	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
1:AA:688:G:O2'	1:AA:689:C:H5'	2.16	0.45
23:DB:519:U:O2'	23:DB:520:G:H5'	2.17	0.45
10:CK:13:LYS:HD2	10:CK:76:TYR:CE2	2.50	0.45
23:DB:2364:C:C2'	23:DB:2365:G:H5'	2.46	0.45
52:DW:43:LYS:O	52:DW:58:LEU:HD11	2.16	0.45
23:DB:899:A:H2'	23:DB:900:A:H8	1.81	0.45
26:BD:24:VAL:HG23	26:BD:189:VAL:O	2.17	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
50:DT:39:THR:HG22	50:DT:42:GLU:H	1.81	0.45
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.29	0.45
45:BS:36:LEU:HB3	45:BS:48:LYS:HB2	1.98	0.45
28:DP:4:ILE:HA	28:DP:7:LEU:CD1	2.46	0.45
25:BC:69:ASN:O	25:BC:70:LYS:C	2.55	0.45
6:AG:145:GLU:CA	6:AG:148:LYS:HB2	2.34	0.45
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.80	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
20:AB:164:ASP:OD1	20:AB:203:ASP:HB2	2.17	0.45
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.16	0.45
50:DT:69:ARG:HA	50:DT:69:ARG:NE	2.31	0.45
1:CA:1086:U:H3	1:CA:1099:G:N2	1.99	0.45
38:DM:20:LEU:N	38:DM:20:LEU:HD13	2.32	0.45
23:DB:182:A:O2'	23:DB:183:C:H5'	2.16	0.45
23:BB:2144:G:H5'	23:BB:2145:C:O3'	2.15	0.45
15:AP:52:LEU:HD23	15:AP:54:LEU:HG	1.98	0.45
1:CA:947:G:H2'	1:CA:948:C:H6	1.81	0.45
10:CK:17:ASP:HB3	10:CK:80:ASN:CG	2.36	0.45
1:CA:407:U:O2'	3:CD:112:GLU:HG3	2.16	0.45
21:AU:10:PRO:HB2	2:CC:71:ARG:HD3	1.97	0.45
27:DK:110:GLU:HA	27:DK:113:MET:CG	2.46	0.45
3:CD:106:PHE:CD1	3:CD:158:LEU:HD21	2.51	0.45
1:CA:237:G:H2'	1:CA:238:A:C8	2.48	0.45
26:BD:118:PHE:O	26:BD:119:ALA:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:57:GLU:OE1	30:BY:57:GLU:HA	2.16	0.45
25:DC:211:ARG:C	25:DC:213:ARG:H	2.19	0.45
20:CB:33:ALA:CB	20:CB:38:HIS:HA	2.46	0.45
23:DB:16:C:O2'	23:DB:17:G:H5'	2.16	0.45
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.32	0.45
23:BB:572:A:H5''	49:BR:80:ARG:NH2	2.31	0.45
12:CM:75:SER:O	12:CM:78:ARG:HB2	2.16	0.45
14:CO:25:THR:O	14:CO:29:VAL:HG23	2.16	0.45
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.50	0.45
23:DB:677:A:O2'	23:DB:2071:A:H5'	2.16	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
23:BB:981:A:H2'	23:BB:982:C:H5''	1.98	0.45
53:B6:1:MET:N	53:B6:5:GLU:OE2	2.48	0.45
23:DB:826:U:H2'	23:DB:828:U:O4'	2.15	0.45
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.98	0.45
23:BB:1774:C:H2'	23:BB:1774:C:O2	2.16	0.45
23:DB:811:U:H2'	37:DL:21:ARG:HA	1.99	0.45
23:DB:1998:A:OP2	26:DD:141:ARG:NH2	2.48	0.45
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.32	0.45
7:AH:1:SER:O	7:AH:3:GLN:HG3	2.16	0.45
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.17	0.45
40:DH:40:THR:OG1	40:DH:43:ASN:ND2	2.49	0.45
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.17	0.45
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.16	0.45
23:DB:1520:U:H2'	23:DB:1521:G:O4'	2.17	0.45
1:AA:766:A:H2'	1:AA:767:A:O4'	2.16	0.45
23:DB:866:A:H61	23:DB:913:U:CI'	2.29	0.45
38:BM:31:PHE:CD1	38:BM:105:MET:HB3	2.51	0.45
23:DB:2663:G:H2'	23:DB:2664:G:C8	2.51	0.45
49:DR:78:ARG:HH21	49:DR:78:ARG:HG3	1.81	0.45
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.16	0.45
20:AB:8:MET:O	20:AB:9:LEU:O	2.33	0.45
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	1.98	0.45
1:AA:486:U:H2'	1:AA:487:A:C8	2.51	0.45
16:CQ:42:LYS:O	16:CQ:43:LEU:HD12	2.16	0.45
1:AA:582:C:O2'	1:AA:583:A:H5'	2.16	0.45
7:AH:91:LEU:HD12	7:AH:116:ARG:HB2	1.98	0.45
3:AD:48:SER:O	3:AD:49:ASP:C	2.55	0.45
12:AM:9:PRO:HB3	12:AM:20:SER:CB	2.46	0.45
25:BC:34:GLU:O	25:BC:34:GLU:HG3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:78:A:H2'	22:DA:79:G:O4'	2.16	0.45
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.47	0.45
21:CU:40:PRO:HG2	21:CU:41:THR:H	1.81	0.45
25:DC:183:VAL:HG22	25:DC:184:GLU:H	1.80	0.45
37:BL:92:LEU:HD23	37:BL:124:GLY:HA3	1.98	0.45
47:DF:174:PHE:HB3	47:DF:176:PHE:CD1	2.51	0.45
53:D6:84:ARG:C	53:D6:86:SER:N	2.68	0.45
29:BE:5:LEU:HD22	29:BE:122:GLU:HG3	1.98	0.45
50:BT:21:SER:HB3	50:BT:31:VAL:CG2	2.46	0.45
50:BT:50:LEU:O	50:BT:52:GLU:N	2.43	0.45
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD11	2.52	0.45
44:DQ:60:TRP:CZ2	44:DQ:93:ILE:HB	2.52	0.45
45:BS:107:VAL:HG22	45:BS:108:SER:N	2.31	0.45
40:DH:68:ARG:HH11	40:DH:68:ARG:HG3	1.80	0.45
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.98	0.45
12:CM:1:ALA:CA	12:CM:8:ILE:HG22	2.47	0.45
20:AB:161:PHE:CE2	20:AB:216:VAL:HG11	2.50	0.45
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.51	0.45
53:B6:109:GLU:HA	53:B6:112:LYS:CD	2.47	0.45
51:DZ:63:GLY:HA3	51:DZ:66:THR:OG1	2.17	0.45
46:BU:86:PHE:HE1	46:BU:88:ASP:HB3	1.79	0.45
23:BB:1287:A:O2'	23:BB:1288:G:H5'	2.15	0.45
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.98	0.45
16:CQ:16:MET:HB2	16:CQ:19:SER:O	2.16	0.45
48:BG:94:ARG:HB2	48:BG:127:GLN:O	2.17	0.45
23:BB:2143:C:N3	23:BB:2148:G:O6	2.49	0.45
29:DE:130:LYS:C	29:DE:132:LYS:N	2.69	0.45
39:BX:5:GLU:HA	39:BX:5:GLU:OE2	2.16	0.45
36:D2:28:ARG:C	36:D2:30:VAL:H	2.18	0.45
53:B6:56:ALA:HB2	53:B6:79:ILE:HD13	1.97	0.45
23:BB:675:A:O2'	29:BE:62:GLN:NE2	2.49	0.45
1:CA:1206:G:C4'	2:CC:192:TYR:HA	2.37	0.45
1:AA:611:C:H2'	1:AA:612:C:H6	1.81	0.45
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.97	0.45
1:CA:801:U:H2'	1:CA:802:A:C8	2.50	0.45
35:BV:24:ASN:O	35:BV:26:PHE:N	2.49	0.45
10:CK:60:PHE:O	10:CK:63:GLN:HB3	2.15	0.45
1:AA:238:A:C2'	1:AA:239:U:H5''	2.45	0.45
22:DA:106:G:H2'	22:DA:107:G:O4'	2.15	0.45
27:DK:88:ASN:HD22	27:DK:89:ASN:H	1.65	0.45
23:DB:1993:U:H4'	26:DD:133:THR:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:49:C:O2'	22:BA:50:A:H5'	2.17	0.45
38:DM:108:VAL:HG22	38:DM:109:PRO:HD2	1.99	0.45
44:BQ:30:VAL:CG1	44:BQ:31:TYR:N	2.78	0.45
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.17	0.45
23:BB:720:U:H2'	23:BB:721:A:H8	1.80	0.45
1:CA:617:G:C4'	15:CP:46:LYS:HE2	2.45	0.45
1:CA:1479:C:H2'	1:CA:1480:A:H8	1.80	0.45
1:AA:714:G:H21	1:AA:777:A:H1'	1.81	0.45
47:DF:177:ARG:HA	47:DF:177:ARG:NE	2.31	0.45
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.31	0.45
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.52	0.45
18:CS:39:ILE:HG13	18:CS:68:HIS:O	2.15	0.45
23:DB:1136:G:H2'	23:DB:1137:G:H8	1.81	0.45
3:AD:197:HIS:ND1	3:AD:198:LEU:N	2.63	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
1:CA:1317:C:H2'	1:CA:1318:A:O4'	2.16	0.45
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.99	0.45
47:DF:141:ASP:HB3	47:DF:144:LYS:HB2	1.98	0.45
23:BB:548:G:H3'	23:BB:548:G:N3	2.31	0.45
47:BF:120:SER:HG	47:BF:127:TYR:HD2	1.63	0.45
23:BB:155:A:H2'	23:BB:156:A:H8	1.77	0.45
1:CA:1064:G:OP1	1:CA:1386:G:H4'	2.16	0.45
23:DB:728:G:O2'	23:DB:730:A:H8	1.99	0.45
1:CA:865:A:H2'	1:CA:866:C:H6	1.76	0.45
1:CA:193:C:H2'	1:CA:194:C:C5	2.52	0.45
26:BD:38:LYS:HD2	26:BD:81:GLU:OE1	2.17	0.45
23:BB:979:A:H2'	23:BB:982:C:H42	1.79	0.45
23:BB:2693:G:H2'	23:BB:2694:G:C8	2.47	0.45
23:DB:245:G:H2'	23:DB:246:C:C6	2.49	0.45
44:DQ:35:PHE:C	44:DQ:37:ALA:N	2.70	0.45
26:DD:16:THR:HG22	26:DD:17:GLU:H	1.81	0.45
8:AI:103:VAL:HG23	8:AI:104:THR:N	2.30	0.45
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD22	2.52	0.45
1:CA:114:U:H2'	1:CA:115:G:C8	2.51	0.45
50:DT:9:LYS:O	50:DT:9:LYS:HG2	2.16	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:2362:C:OP2	34:D3:43:LEU:HD21	2.16	0.45
29:DE:75:SER:O	29:DE:78:TRP:HB2	2.16	0.45
1:CA:418:C:H2'	1:CA:419:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1526:C:O2'	23:BB:1527:G:H5'	2.15	0.45
25:BC:146:LYS:HG2	25:BC:147:PRO:HD2	1.97	0.45
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.16	0.45
23:DB:129:C:H2'	23:DB:130:C:C6	2.52	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
1:CA:935:A:O2'	1:CA:936:C:H5'	2.17	0.45
23:DB:2356:U:H5''	52:DW:16:GLU:HG3	1.97	0.45
41:DJ:95:ARG:O	41:DJ:95:ARG:HD3	2.17	0.45
50:BT:36:LYS:O	50:BT:36:LYS:HD3	2.16	0.45
1:AA:696:A:H2'	1:AA:697:U:H6	1.80	0.45
17:CR:27:THR:O	17:CR:30:ASN:HB2	2.17	0.45
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.98	0.45
40:BH:3:VAL:HB	40:BH:37:VAL:O	2.17	0.45
52:DW:40:ARG:HE	52:DW:45:HIS:HE1	1.64	0.45
35:BV:31:TYR:O	35:BV:92:VAL:HG13	2.16	0.45
45:DS:28:LYS:O	45:DS:71:VAL:HG12	2.17	0.45
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.31	0.45
48:BG:84:LYS:HG3	48:BG:131:VAL:CB	2.46	0.45
50:DT:8:LEU:HD22	50:DT:46:ALA:HA	1.98	0.45
44:DQ:94:LEU:HD21	49:DR:11:GLN:HB2	1.97	0.45
6:AG:147:ASN:N	10:AK:55:ARG:HH21	2.14	0.45
6:CG:144:ALA:O	6:CG:146:ALA:N	2.41	0.45
1:AA:577:G:C6	1:AA:812:G:N2	2.85	0.45
1:AA:903:G:H2'	1:AA:904:U:C6	2.51	0.45
23:DB:1023:U:H2'	23:DB:1024:G:C5'	2.46	0.45
23:BB:973:A:H1'	23:BB:1188:U:C5	2.52	0.45
13:AN:30:ILE:C	13:AN:32:ASP:H	2.18	0.45
1:CA:843:U:H5'	1:CA:844:G:N7	2.31	0.45
44:BQ:86:SER:HB3	49:BR:52:PRO:HD3	1.97	0.45
41:BJ:127:GLY:O	41:BJ:128:ASN:HB2	2.16	0.45
46:DU:73:ASN:HB3	46:DU:95:PHE:CE2	2.52	0.45
48:BG:152:ARG:HA	48:BG:152:ARG:HD2	1.68	0.45
23:BB:130:C:O2'	23:BB:131:A:H5'	2.17	0.45
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.52	0.45
42:DN:2:ARG:HG2	42:DN:5:LYS:CB	2.42	0.45
40:DH:86:ASP:HB3	40:DH:87:GLU:OE2	2.16	0.45
31:B0:42:ILE:HD11	42:BN:98:LEU:HD12	1.97	0.45
29:BE:51:GLU:H	29:BE:51:GLU:HG2	1.54	0.45
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.46	0.45
1:CA:993:G:H2'	1:CA:993:G:N3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:46:LEU:HD11	2:AC:75:VAL:HG13	1.98	0.45
23:BB:2849:U:H5'	23:BB:2868:A:N1	2.31	0.45
1:AA:449:G:H2'	1:AA:450:G:C8	2.52	0.45
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CB	2.46	0.45
1:AA:1060:U:OP1	9:AJ:53:ILE:HD11	2.17	0.45
23:DB:2081:U:C5'	51:DZ:25:THR:HG21	2.46	0.45
41:BJ:13:ARG:HB3	41:BJ:53:TYR:HD2	1.80	0.45
23:DB:1418:G:H1'	23:DB:1580:A:N6	2.31	0.45
23:DB:729:G:N3	23:DB:729:G:H2'	2.30	0.45
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.80	0.45
1:CA:1483:A:H3'	1:CA:1484:C:H6	1.81	0.45
48:DG:10:VAL:H	48:DG:48:THR:HG22	1.81	0.45
23:BB:832:U:H2'	23:BB:833:A:C8	2.51	0.45
1:AA:151:A:C2'	1:AA:152:A:H5'	2.47	0.45
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.17	0.45
1:CA:57:G:H2'	1:CA:58:C:H6	1.81	0.45
23:BB:2373:G:H2'	23:BB:2374:C:C6	2.51	0.45
1:AA:1347:G:H8	8:AI:108:ARG:HB3	1.80	0.45
23:BB:2282:G:H5'	23:BB:2389:G:H1'	1.98	0.45
1:CA:221:C:O2'	1:CA:222:C:H5'	2.17	0.45
1:CA:435:A:H2'	1:CA:435:A:N3	2.32	0.45
23:BB:315:G:H2'	23:BB:316:C:H6	1.82	0.45
1:CA:405:U:O4	3:CD:1:ALA:HA	2.16	0.45
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.47	0.45
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.51	0.45
23:DB:1865:U:HO2'	23:DB:1866:A:H8	1.63	0.45
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.31	0.45
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.52	0.45
31:B0:5:ASN:O	31:B0:7:PRO:HD3	2.16	0.45
16:CQ:11:VAL:HG23	16:CQ:56:ASP:O	2.16	0.45
51:BZ:27:ARG:HD3	51:BZ:28:ARG:H	1.81	0.45
50:BT:45:ALA:HA	50:BT:48:GLN:HB2	1.99	0.45
22:BA:87:U:C2'	22:BA:88:C:O5'	2.64	0.45
15:AP:28:ARG:C	15:AP:30:GLY:H	2.19	0.45
23:DB:1050:A:H2'	23:DB:1051:G:C8	2.51	0.45
23:BB:2601:C:C2	23:BB:2603:G:N7	2.85	0.45
1:CA:824:G:O2'	1:CA:825:A:H5'	2.15	0.45
1:AA:645:G:O2'	1:AA:646:G:H5'	2.16	0.45
23:DB:2432:A:O2'	23:DB:2433:A:H5'	2.16	0.45
7:CH:29:SER:O	7:CH:30:LYS:C	2.55	0.45
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1270:C:H5''	23:DB:1271:G:H5'	1.98	0.45
24:DI:59:THR:O	24:DI:59:THR:HG23	2.17	0.45
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.15	0.45
37:DL:81:ASP:O	37:DL:82:LEU:HB2	2.17	0.45
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.17	0.45
52:BW:37:VAL:C	52:BW:38:ARG:HG2	2.37	0.45
47:DF:101:ARG:HH12	47:DF:138:PRO:HB2	1.82	0.45
47:DF:98:PHE:O	47:DF:102:LEU:HD12	2.17	0.45
11:CL:49:ARG:CD	11:CL:49:ARG:H	2.29	0.45
1:AA:735:C:O2'	1:AA:736:C:H5'	2.16	0.45
10:AK:73:VAL:O	10:AK:76:TYR:HB2	2.16	0.45
23:DB:518:G:H4'	45:DS:18:ARG:NH2	2.31	0.45
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.16	0.45
23:BB:2751:G:N3	23:BB:2751:G:C2'	2.77	0.45
48:BG:36:LEU:H	48:BG:36:LEU:CD2	2.24	0.45
48:BG:58:ALA:C	48:BG:60:GLY:N	2.70	0.45
48:BG:60:GLY:O	48:BG:62:ALA:N	2.50	0.45
18:AS:65:MET:HG3	18:AS:73:PHE:CE2	2.51	0.45
44:DQ:108:LEU:HD23	49:DR:48:LYS:HB2	1.98	0.45
8:CI:21:LYS:N	8:CI:61:ASP:O	2.48	0.45
45:BS:2:GLU:O	45:BS:3:THR:O	2.34	0.45
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.16	0.45
6:AG:145:GLU:C	6:AG:147:ASN:H	2.18	0.45
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.97	0.45
12:CM:52:ILE:CD1	12:CM:55:LEU:HD12	2.41	0.45
19:AT:79:THR:HG22	19:AT:83:ASN:HD21	1.82	0.45
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.98	0.45
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.16	0.45
1:AA:843:U:H5'	1:AA:844:G:N7	2.32	0.45
16:AQ:60:ILE:HB	16:AQ:73:THR:O	2.16	0.45
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.37	0.45
3:CD:77:GLU:CA	3:CD:80:ARG:HG2	2.41	0.45
14:CO:26:GLU:HG3	14:CO:81:LEU:CD1	2.43	0.45
40:DH:117:LEU:HD12	40:DH:118:PRO:CD	2.40	0.45
23:BB:1460:U:H3'	23:BB:1461:C:H5'	1.98	0.45
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	1.99	0.45
23:BB:2883:A:OP1	31:B0:48:TYR:CE1	2.70	0.45
1:CA:802:A:H2'	1:CA:803:G:O4'	2.16	0.45
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.52	0.45
9:CJ:55:PRO:O	9:CJ:56:HIS:HB3	2.17	0.45
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:111:LYS:HD3	27:DK:111:LYS:N	2.32	0.45
23:BB:2814:A:O2'	23:BB:2815:C:H5'	2.17	0.45
20:AB:98:GLY:HA2	20:AB:101:THR:CG2	2.45	0.45
12:AM:10:ASP:CA	12:AM:44:ILE:HD13	2.42	0.45
1:CA:372:C:H4'	1:CA:373:A:H5'	1.99	0.45
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.49	0.45
27:DK:75:SER:HB2	28:DP:73:PHE:HA	1.99	0.45
20:CB:184:ALA:O	20:CB:199:ILE:HB	2.17	0.45
40:BH:62:LEU:HD12	40:BH:62:LEU:H	1.82	0.45
23:BB:329:G:O6	46:BU:16:LYS:HB2	2.16	0.45
7:AH:68:LYS:HG3	7:AH:69:ALA:H	1.80	0.45
25:DC:15:VAL:HG22	25:DC:204:LEU:O	2.16	0.45
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.51	0.45
23:DB:506:G:H4'	23:DB:509:C:O2	2.17	0.45
23:BB:1870:C:OP2	23:BB:1870:C:H4'	2.16	0.45
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.78	0.45
37:BL:57:LEU:O	37:BL:61:LEU:HD13	2.16	0.45
1:CA:502:A:H2'	1:CA:503:C:O4'	2.17	0.45
1:AA:585:G:O2'	1:AA:586:C:H5'	2.17	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
23:BB:539:G:H2'	23:BB:540:C:C6	2.52	0.45
23:DB:2758:A:C2	23:DB:2759:G:H1'	2.51	0.45
47:BF:151:LEU:HD12	47:BF:152:ASP:N	2.32	0.45
23:BB:755:U:O2'	23:BB:756:A:H5'	2.16	0.45
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.17	0.45
1:AA:592:G:O2'	1:AA:593:U:H5'	2.16	0.45
9:CJ:92:LEU:HB2	9:CJ:93:ALA:H	1.55	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:DB:225:C:H2'	23:DB:226:A:O4'	2.15	0.45
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.16	0.45
48:BG:112:VAL:HG13	48:BG:150:TYR:CE2	2.52	0.45
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.31	0.45
23:BB:699:A:H4'	23:BB:1634:A:N7	2.32	0.45
17:AR:51:GLN:HA	17:AR:51:GLN:HE21	1.82	0.45
1:CA:526:C:OP2	11:CL:87:LYS:HE3	2.16	0.45
1:AA:52:C:H2'	1:AA:53:A:C8	2.51	0.45
2:AC:33:ASP:O	2:AC:36:PHE:HB3	2.17	0.45
2:CC:194:VAL:HG12	2:CC:195:ILE:N	2.31	0.45
12:CM:9:PRO:HB3	12:CM:20:SER:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:237:C:O2'	23:BB:238:C:H5'	2.17	0.45
21:AU:42:THR:HB	21:AU:46:ARG:NH2	2.30	0.45
37:DL:96:LYS:HE2	37:DL:103:ILE:HA	1.99	0.45
23:BB:336:C:O2'	23:BB:337:C:H5'	2.17	0.45
29:BE:113:VAL:HG22	29:BE:118:LEU:HD12	1.98	0.45
5:CF:86:ARG:NH2	17:CR:63:TYR:HB3	2.31	0.45
23:BB:965:C:O2'	23:BB:966:G:H5'	2.16	0.45
47:DF:165:GLY:O	47:DF:169:LEU:HD12	2.17	0.45
25:BC:145:MET:HB2	25:BC:152:GLN:NE2	2.31	0.45
23:DB:851:C:H2'	23:DB:852:U:H6	1.81	0.45
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.17	0.45
40:DH:7:ASP:CG	40:DH:8:LYS:N	2.70	0.45
39:BX:21:LEU:HD21	39:BX:50:VAL:HG11	1.98	0.45
44:DQ:111:LYS:HE3	49:DR:48:LYS:HZ1	1.82	0.45
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.37	0.45
23:BB:558:U:O2'	23:BB:559:G:H5'	2.17	0.45
23:DB:160:A:H2'	23:DB:161:A:C8	2.51	0.45
40:BH:13:GLY:O	40:BH:14:SER:HB2	2.17	0.45
23:BB:2227:A:H2'	23:BB:2228:G:O4'	2.16	0.45
1:CA:60:A:O2'	19:CT:4:LYS:HD3	2.17	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
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.51	0.45
23:BB:2250:G:C6	38:BM:83:GLY:HA3	2.52	0.45
48:DG:95:ALA:HA	48:DG:104:LEU:HD23	1.98	0.45
23:BB:670:A:H4'	23:BB:671:C:C5'	2.46	0.45
23:BB:52:A:H2'	23:BB:53:A:C8	2.51	0.45
42:DN:31:HIS:O	42:DN:33:ILE:HG13	2.17	0.45
42:DN:29:VAL:HG13	42:DN:83:LEU:HD21	1.98	0.45
44:DQ:7:VAL:O	44:DQ:11:ALA:HB2	2.17	0.45
41:DJ:128:ASN:O	41:DJ:129:GLU:HG3	2.17	0.45
10:CK:55:ARG:NH1	10:CK:60:PHE:HD1	2.05	0.45
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.51	0.45
27:BK:88:ASN:HD22	27:BK:89:ASN:H	1.64	0.45
23:DB:2106:U:H2'	23:DB:2107:G:C8	2.51	0.45
1:CA:1308:U:OP1	12:CM:95:PRO:HA	2.16	0.45
27:DK:38:ILE:HD11	27:DK:112:PHE:HZ	1.82	0.45
4:AE:93:VAL:HG12	4:AE:94:PHE:N	2.32	0.45
23:DB:720:U:H2'	23:DB:721:A:H8	1.80	0.45
23:BB:786:C:H5''	23:BB:1780:A:N7	2.31	0.45
23:BB:531:C:H5''	23:BB:532:A:C5	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:47:ILE:HG23	30:DY:54:VAL:HG21	1.99	0.45
46:DU:81:ARG:H	46:DU:81:ARG:NH2	2.09	0.45
23:DB:675:A:H4'	29:DE:62:GLN:HE22	1.81	0.45
23:DB:1582:C:H2'	23:DB:1583:A:O4'	2.17	0.45
8:AI:119:LYS:C	8:AI:121:ARG:H	2.20	0.45
23:DB:1045:C:P	23:DB:1047:G:H5'	2.57	0.45
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.80	0.45
23:DB:2209:G:H2'	23:DB:2210:U:C5	2.51	0.45
20:AB:33:ALA:CB	20:AB:38:HIS:HA	2.47	0.45
22:DA:114:C:H1'	43:DO:47:VAL:HG21	1.98	0.45
1:AA:1152:A:OP1	9:AJ:70:HIS:ND1	2.49	0.45
6:CG:72:VAL:HA	6:CG:89:GLU:HA	1.99	0.45
1:CA:301:G:O2'	1:CA:302:G:H5'	2.16	0.45
44:DQ:23:TYR:CD2	44:DQ:23:TYR:N	2.82	0.45
15:AP:17:TYR:HB2	15:AP:39:PHE:HD2	1.81	0.45
23:DB:349:U:O2'	23:DB:350:G:H5'	2.17	0.45
46:DU:35:VAL:O	46:DU:38:ILE:HG22	2.17	0.45
23:BB:1297:C:H2'	23:BB:1298:C:H6	1.81	0.45
7:AH:123:GLU:HG2	7:AH:124:ILE:O	2.15	0.45
1:CA:425:G:H2'	1:CA:426:U:H6	1.81	0.45
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.51	0.45
23:DB:979:A:H2'	23:DB:982:C:H42	1.82	0.45
23:DB:1210:G:H1'	23:DB:1212:G:C2	2.52	0.45
23:DB:1210:G:H5'	23:DB:1212:G:C5'	2.45	0.45
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.52	0.45
13:CN:17:ASP:O	13:CN:21:ALA:HB3	2.17	0.45
47:BF:132:ARG:O	47:BF:133:GLU:HB2	2.16	0.45
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.82	0.45
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.30	0.45
23:BB:2103:C:H5'	23:BB:2104:C:OP2	2.17	0.45
6:CG:69:ARG:HA	6:CG:99:ALA:HB2	1.98	0.45
23:DB:937:C:H2'	23:DB:938:G:C8	2.52	0.45
21:CU:48:LYS:HG3	21:CU:49:ALA:N	2.32	0.45
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.98	0.45
2:AC:166:TRP:O	2:AC:167:TYR:CB	2.65	0.45
7:AH:35:ILE:O	7:AH:39:LEU:HG	2.16	0.45
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.16	0.45
23:DB:2549:G:O2'	23:DB:2550:G:H5'	2.17	0.45
23:BB:438:G:H2'	23:BB:439:A:H8	1.80	0.45
1:AA:803:G:H2'	1:AA:804:U:O4'	2.16	0.45
18:AS:41:PRO:O	18:AS:44:ILE:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:5:HIS:ND1	13:CN:88:MET:HB3	2.32	0.45
23:DB:2356:U:C5'	52:DW:16:GLU:HG3	2.47	0.45
1:CA:245:U:H2'	1:CA:246:A:H5'	1.98	0.45
27:DK:18:ARG:O	27:DK:45:GLU:HB2	2.17	0.45
23:DB:1048:A:H2'	23:DB:1049:C:C6	2.51	0.45
1:AA:1385:G:H2'	1:AA:1386:G:H8	1.81	0.45
23:DB:428:A:O2'	23:DB:429:A:H5'	2.15	0.45
23:BB:2204:G:O2'	23:BB:2205:A:H5'	2.16	0.45
23:BB:2582:G:O2'	23:BB:2583:G:H5'	2.16	0.45
1:AA:857:C:H2'	1:AA:858:G:O4'	2.16	0.45
20:CB:178:LEU:HB2	20:CB:180:ILE:HG12	1.99	0.45
25:BC:67:LYS:O	25:BC:188:ARG:HD3	2.16	0.45
12:AM:50:GLY:O	12:AM:54:THR:HG23	2.17	0.45
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.16	0.45
10:AK:20:ALA:HB2	10:AK:81:LEU:HD12	1.99	0.45
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.16	0.45
4:CE:29:ILE:HG22	4:CE:29:ILE:O	2.17	0.45
20:CB:62:ARG:H	20:CB:62:ARG:HD2	1.82	0.45
47:DF:14:LYS:O	47:DF:18:GLU:HB2	2.16	0.45
10:AK:126:ARG:HB2	21:AU:33:ARG:CD	2.44	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
47:DF:31:GLU:O	47:DF:32:LYS:O	2.34	0.45
1:AA:201:G:H2'	1:AA:202:G:C8	2.51	0.45
48:DG:8:VAL:HG22	48:DG:51:PHE:HE2	1.82	0.45
35:BV:75:GLN:HB2	35:BV:90:ASP:O	2.17	0.45
50:BT:11:LEU:HD22	50:BT:11:LEU:N	2.23	0.45
50:BT:47:VAL:HG12	50:BT:47:VAL:O	2.17	0.45
50:DT:49:LYS:HB2	50:DT:50:LEU:HD22	1.99	0.45
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.45
23:BB:460:A:C4'	50:BT:72:GLN:HB2	2.36	0.45
12:CM:12:LYS:O	12:CM:43:LYS:HG3	2.17	0.45
6:CG:145:GLU:C	6:CG:147:ASN:H	2.19	0.45
23:DB:361:G:HO2'	23:DB:362:A:C4'	2.30	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
33:B1:35:LEU:CD2	33:B1:35:LEU:N	2.80	0.45
33:D1:26:LYS:HB3	33:D1:52:LYS:HZ2	1.81	0.45
20:AB:187:ASP:O	20:AB:189:ASN:N	2.50	0.45
20:AB:46:VAL:O	20:AB:49:PHE:HB2	2.17	0.45
25:BC:90:ILE:HD11	25:BC:102:TYR:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1189:A:H2'	23:BB:1190:G:O4'	2.16	0.45
38:BM:19:GLY:H	38:BM:38:ARG:NH1	2.04	0.45
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.64	0.45
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.79	0.45
19:CT:53:MET:HA	19:CT:56:ILE:CD1	2.45	0.45
53:B6:59:THR:O	53:B6:67:VAL:HG22	2.16	0.45
14:AO:78:TYR:CE1	14:AO:82:ILE:HD11	2.52	0.45
16:CQ:80:LYS:N	16:CQ:80:LYS:NZ	2.64	0.45
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.98	0.45
29:DE:51:GLU:O	29:DE:52:VAL:C	2.53	0.45
23:DB:1439:A:N3	23:DB:1553:A:C6	2.85	0.45
43:DO:14:ALA:C	43:DO:16:ARG:H	2.20	0.45
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.29	0.45
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.32	0.45
42:BN:61:ALA:C	42:BN:63:ARG:N	2.70	0.45
27:BK:113:MET:HE1	27:BK:116:ILE:CD1	2.46	0.45
23:BB:2793:C:H2'	23:BB:2794:C:C6	2.51	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	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
43:BO:35:ILE:CG1	43:BO:102:ARG:HE	2.29	0.45
20:CB:98:GLY:HA2	20:CB:101:THR:CG2	2.44	0.45
37:BL:80:SER:HA	37:BL:115:GLU:HB2	1.98	0.45
37:DL:79:LEU:CG	37:DL:112:LEU:HA	2.43	0.45
23:BB:1241:A:O4'	23:BB:1241:A:N3	2.50	0.45
30:DY:57:GLU:OE1	30:DY:57:GLU:HA	2.16	0.45
46:BU:64:ILE:HG13	46:BU:65:GLN:N	2.32	0.45
23:DB:626:A:OP1	23:DB:654:A:N6	2.49	0.45
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.17	0.45
1:CA:932:C:H5''	6:CG:3:ARG:CG	2.43	0.45
4:CE:85:LYS:HG3	4:CE:93:VAL:O	2.16	0.45
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.98	0.45
1:AA:1446:A:H2'	1:AA:1447:A:H8	1.82	0.45
3:AD:122:ILE:O	3:AD:128:VAL:HG23	2.17	0.45
5:AF:54:LEU:C	5:AF:56:LYS:H	2.20	0.45
5:CF:16:GLU:CD	5:CF:16:GLU:N	2.68	0.45
36:D2:13:ASN:O	36:D2:17:GLY:HA3	2.17	0.45
1:AA:193:C:H2'	1:AA:194:C:C5	2.51	0.45
23:DB:394:C:C2'	23:DB:395:U:H5'	2.46	0.45
25:DC:245:THR:HG23	25:DC:249:VAL:HB	1.98	0.45
1:AA:404:G:O2'	1:AA:405:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1241:G:H2'	1:AA:1242:G:C8	2.50	0.45
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.99	0.45
46:BU:23:LYS:HD2	46:BU:23:LYS:N	2.31	0.45
23:DB:263:G:H2'	23:DB:264:C:O4'	2.16	0.45
23:DB:814:C:H2'	23:DB:815:C:H6	1.82	0.45
23:BB:2626:C:H2'	23:BB:2627:G:H8	1.82	0.45
23:DB:540:C:O2'	23:DB:541:A:H5'	2.16	0.45
40:BH:44:ILE:C	40:BH:46:PHE:N	2.70	0.45
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.37	0.45
23:DB:1144:A:O2'	23:DB:1145:C:H5'	2.16	0.45
26:BD:125:TRP:CE3	26:BD:160:LYS:HD3	2.52	0.45
48:DG:54:ARG:HD2	48:DG:57:TYR:CE1	2.51	0.45
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.16	0.45
49:BR:61:ALA:HB2	49:BR:98:ILE:HA	1.98	0.45
6:CG:80:GLY:O	6:CG:82:SER:N	2.50	0.45
1:CA:308:C:H2'	1:CA:309:A:C8	2.52	0.45
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.82	0.45
25:BC:199:HIS:C	25:BC:201:LEU:H	2.20	0.45
6:AG:68:VAL:HG13	6:AG:133:ALA:HB1	1.98	0.45
25:DC:216:ARG:HE	25:DC:217:PRO:HD2	1.82	0.45
23:BB:1357:C:O2'	23:BB:1358:G:H5'	2.17	0.45
23:BB:553:G:H2'	23:BB:554:U:O4'	2.15	0.45
2:AC:5:HIS:HD2	2:AC:7:ASN:H	1.63	0.45
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.17	0.45
11:CL:31:GLY:HA2	11:CL:56:LEU:HA	1.97	0.45
2:CC:78:LYS:O	2:CC:78:LYS:HG3	2.16	0.45
50:DT:36:LYS:O	50:DT:36:LYS:HD3	2.17	0.45
1:CA:886:G:O2'	1:CA:887:G:H5'	2.17	0.45
2:CC:119:ILE:O	2:CC:123:LEU:HG	2.17	0.45
37:BL:123:ARG:HD2	37:BL:124:GLY:N	2.31	0.45
1:CA:719:C:H2'	17:CR:38:ILE:HD13	1.97	0.45
17:CR:62:ARG:C	17:CR:63:TYR:HD2	2.20	0.45
23:BB:920:A:H2'	23:BB:921:C:C6	2.52	0.45
53:D6:65:THR:HG23	53:D6:101:ILE:O	2.17	0.45
1:AA:688:G:H5'	10:AK:48:GLY:HA2	1.99	0.45
10:AK:75:GLU:N	10:AK:75:GLU:CD	2.70	0.45
27:DK:35:VAL:CG2	27:DK:36:GLY:H	2.06	0.45
1:AA:202:G:O2'	1:AA:468:A:H8	1.83	0.45
10:CK:75:GLU:N	10:CK:75:GLU:CD	2.69	0.45
52:DW:59:PHE:HE2	52:DW:61:LYS:HA	1.81	0.45
1:CA:960:U:O3'	1:CA:1223:C:H4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:106:THR:O	44:DQ:109:VAL:HB	2.16	0.45
41:DJ:44:TYR:O	41:DJ:45:THR:CB	2.65	0.45
44:BQ:60:TRP:CE2	44:BQ:93:ILE:HB	2.52	0.45
44:BQ:91:ARG:HH12	49:BR:10:LYS:HA	1.81	0.45
25:DC:159:THR:N	25:DC:194:VAL:CG1	2.80	0.45
40:BH:7:ASP:CA	40:BH:15:LEU:HD22	2.36	0.45
49:BR:40:MET:CG	49:BR:48:LYS:HA	2.47	0.45
51:DZ:69:ALA:HA	51:DZ:72:ARG:NH1	2.32	0.45
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.70	0.45
1:AA:255:G:H2'	1:AA:256:U:C6	2.52	0.45
2:CC:156:LEU:HG	2:CC:163:ARG:O	2.17	0.45
2:AC:149:LYS:HE2	2:AC:200:TRP:CZ3	2.52	0.45
23:BB:674:G:C4'	29:BE:69:ARG:HB3	2.45	0.45
26:BD:13:ARG:HH12	28:BP:74:GLN:NE2	2.14	0.45
23:BB:1350:C:N4	23:BB:1382:G:O6	2.49	0.45
23:DB:1439:A:C5	23:DB:1552:A:N6	2.84	0.45
23:DB:1797:G:C6	23:DB:1823:G:C6	3.05	0.45
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.16	0.45
23:DB:1176:U:O5'	23:DB:1176:U:H6	2.00	0.45
23:BB:1119:U:H2'	23:BB:1120:G:H8	1.82	0.45
27:BK:19:VAL:CB	27:BK:41:ILE:HD11	2.46	0.45
6:CG:50:ALA:HB2	6:CG:57:GLU:CA	2.47	0.45
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.17	0.45
23:BB:2849:U:H4'	23:BB:2850:A:O5'	2.17	0.45
3:AD:29:THR:HB	3:AD:30:LYS:HD3	1.97	0.45
46:DU:64:ILE:HG13	46:DU:65:GLN:N	2.32	0.45
23:BB:1338:G:O2'	23:BB:1339:G:H5'	2.17	0.45
7:CH:17:GLN:HE21	7:CH:62:LEU:HB3	1.81	0.45
23:BB:2238:G:H4'	23:BB:2239:G:OP1	2.17	0.45
23:DB:2789:C:H2'	23:DB:2893:A:N7	2.32	0.45
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.33	0.45
23:DB:1811:G:O2'	23:DB:1812:U:H5'	2.16	0.45
25:DC:43:ASN:HD22	25:DC:44:ASN:N	2.15	0.45
34:D3:30:HIS:CD2	34:D3:31:ILE:N	2.85	0.45
23:BB:62:U:H3'	23:BB:63:A:H8	1.76	0.45
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.52	0.45
1:CA:1340:A:O2'	1:CA:1341:U:H5'	2.16	0.45
26:DD:55:LYS:C	26:DD:57:ALA:H	2.20	0.45
12:AM:5:GLY:O	12:AM:6:ILE:HB	2.16	0.45
8:CI:119:LYS:C	8:CI:121:ARG:H	2.20	0.45
23:BB:636:G:H3'	37:BL:128:THR:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:78:ARG:HA	12:CM:81:ASP:OD2	2.17	0.45
23:BB:2293:G:H2'	23:BB:2294:G:H8	1.81	0.45
37:DL:127:VAL:HG22	37:DL:128:THR:N	2.31	0.45
47:BF:127:TYR:HB2	47:BF:155:ILE:HD13	1.99	0.45
1:CA:42:G:H2'	1:CA:43:C:C6	2.52	0.45
1:AA:286:C:H2'	1:AA:287:U:H6	1.82	0.45
1:AA:222:C:H2'	1:AA:223:A:H8	1.81	0.45
23:DB:325:G:O2'	23:DB:326:G:H5'	2.15	0.45
3:CD:2:ARG:O	3:CD:3:TYR:HB3	2.17	0.45
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.16	0.45
29:BE:37:ALA:C	29:BE:39:ALA:N	2.69	0.45
23:DB:1434:A:OP1	23:DB:1434:A:H4'	2.17	0.45
23:BB:6:A:H2'	23:BB:7:G:C8	2.52	0.45
43:DO:93:ASP:C	43:DO:95:SER:H	2.21	0.45
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.17	0.45
30:DY:11:SER:OG	30:DY:13:ILE:HG13	2.16	0.45
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.16	0.45
48:DG:58:ALA:C	48:DG:60:GLY:N	2.70	0.45
1:AA:1283:U:H2'	1:AA:1284:C:H6	1.81	0.45
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.16	0.45
38:DM:35:ALA:HB3	38:DM:100:LYS:H	1.82	0.45
23:BB:539:G:H2'	23:BB:540:C:H6	1.82	0.45
23:DB:1649:G:HO2'	23:DB:1650:A:H5'	1.80	0.45
38:BM:66:ARG:HB2	38:BM:101:VAL:HG13	1.97	0.45
39:BX:20:ASN:ND2	39:BX:20:ASN:N	2.65	0.45
23:BB:1463:C:H2'	23:BB:1464:G:H8	1.81	0.45
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.51	0.45
5:AF:79:ARG:HH21	5:AF:87:SER:HB3	1.81	0.45
1:CA:602:A:H2'	1:CA:603:U:C6	2.51	0.45
23:BB:1765:U:H2'	23:BB:1766:G:C8	2.52	0.45
23:BB:1495:A:H2'	23:BB:1496:A:H8	1.81	0.45
23:DB:309:A:H1'	23:DB:329:G:N3	2.31	0.45
13:CN:92:ILE:N	13:CN:92:ILE:HD12	2.32	0.45
1:CA:398:U:H2'	1:CA:399:G:C8	2.52	0.45
1:CA:624:C:H2'	1:CA:625:U:H6	1.80	0.45
6:AG:68:VAL:CG2	6:AG:126:ALA:HB1	2.47	0.45
23:DB:1048:A:H8	23:DB:1048:A:P	2.40	0.45
27:BK:11:ALA:O	27:BK:100:PHE:N	2.47	0.45
23:DB:131:A:H2'	23:DB:132:G:H8	1.81	0.45
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.99	0.45
23:BB:1449:G:O2'	23:BB:1450:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:72:THR:HG21	24:BI:111:THR:O	2.17	0.45
11:CL:2:THR:O	11:CL:5:GLN:HB2	2.17	0.45
49:BR:83:TYR:HE2	49:BR:85:LYS:HE3	1.81	0.45
41:BJ:95:ARG:HD3	41:BJ:95:ARG:O	2.17	0.45
28:BP:101:GLU:OE2	28:BP:101:GLU:N	2.50	0.45
27:BK:53:LYS:HD3	27:BK:53:LYS:H	1.82	0.45
1:AA:265:G:H5'	16:AQ:65:PRO:O	2.17	0.45
23:DB:112:U:H2'	23:DB:113:U:H5'	1.99	0.45
23:BB:1423:G:H2'	23:BB:1424:G:H8	1.82	0.45
23:BB:215:G:H4'	23:BB:216:A:OP1	2.16	0.45
37:BL:91:ASP:HA	37:BL:123:ARG:HB3	1.97	0.45
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.79	0.45
5:AF:3:HIS:CE1	5:AF:65:GLU:HG3	2.52	0.45
29:BE:1:MET:HB3	29:BE:14:VAL:HG23	1.99	0.45
45:DS:74:ILE:HD12	45:DS:104:THR:O	2.16	0.45
40:DH:4:ILE:CD1	40:DH:44:ILE:HG22	2.47	0.45
1:AA:468:A:H3'	1:AA:469:C:C6	2.52	0.45
10:CK:13:LYS:HD2	10:CK:76:TYR:HE2	1.81	0.45
23:DB:850:U:O3'	30:DY:22:THR:HG22	2.17	0.45
13:CN:52:ARG:C	13:CN:54:SER:N	2.70	0.45
35:DV:51:GLN:NE2	35:DV:79:ARG:HH22	2.14	0.45
48:DG:43:LYS:O	48:DG:50:THR:N	2.49	0.45
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.16	0.45
8:CI:24:ASN:CG	8:CI:25:GLY:N	2.69	0.45
8:CI:41:GLU:C	8:CI:43:ALA:N	2.70	0.45
50:DT:55:VAL:HG22	50:DT:87:LEU:HD23	1.99	0.45
6:AG:146:ALA:C	10:AK:55:ARG:HH21	2.20	0.45
23:DB:2515:C:P	41:DJ:81:ILE:HD11	2.57	0.45
23:BB:161:A:C3'	23:BB:162:U:H5''	2.35	0.45
25:DC:94:LEU:HA	25:DC:100:ARG:HB3	1.98	0.45
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.47	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
23:DB:320:A:OP1	29:DE:130:LYS:HE3	2.17	0.45
11:CL:54:VAL:CG2	11:CL:79:ILE:HD11	2.47	0.45
41:DJ:59:ALA:C	41:DJ:61:LYS:N	2.70	0.45
10:CK:28:ASN:ND2	10:CK:56:LYS:HD2	2.32	0.45
32:B4:25:VAL:HG11	32:B4:35:GLN:NE2	2.32	0.45
3:CD:29:THR:HB	3:CD:30:LYS:HD3	1.98	0.45
27:BK:39:ILE:HD13	27:BK:60:ALA:O	2.16	0.45
23:DB:2019:A:H4'	44:DQ:33:VAL:HG11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:18:GLU:O	50:DT:20:ALA:N	2.48	0.45
43:DO:30:ARG:HG3	43:DO:30:ARG:NH1	2.32	0.45
1:AA:1073:U:O2'	20:AB:102:ASN:OD1	2.33	0.45
23:BB:780:G:N2	23:BB:783:A:H62	2.15	0.45
1:AA:1060:U:C5'	9:AJ:53:ILE:HG12	2.47	0.45
2:CC:125:ARG:O	2:CC:126:ARG:HB2	2.17	0.45
23:DB:1731:G:O2'	23:DB:1732:C:H5''	2.17	0.45
30:BY:56:VAL:HG12	30:BY:57:GLU:H	1.82	0.45
7:AH:17:GLN:HG2	7:AH:62:LEU:HD23	1.99	0.45
48:BG:44:HIS:O	48:BG:46:ASP:N	2.49	0.45
25:BC:43:ASN:HD22	25:BC:44:ASN:H	1.60	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:215:C:O2'	1:CA:216:U:H5'	2.17	0.45
23:DB:928:A:H2'	23:DB:929:U:C6	2.51	0.45
23:BB:1680:U:O2	23:BB:1763:G:H3'	2.16	0.45
49:DR:72:VAL:CG2	49:DR:89:HIS:HB3	2.46	0.45
23:BB:664:G:O2'	23:BB:665:U:H5'	2.17	0.45
1:CA:389:A:H2'	1:CA:389:A:N3	2.32	0.45
1:CA:1054:C:H1'	1:CA:1196:A:C4	2.51	0.45
23:BB:1915:U:H3'	23:BB:1916:A:C8	2.52	0.45
37:DL:57:LEU:HA	37:DL:60:ARG:HE	1.82	0.45
1:AA:221:C:O2'	1:AA:222:C:H5'	2.17	0.45
23:BB:2586:U:H2'	23:BB:2587:A:H8	1.82	0.45
23:BB:806:C:O2'	23:BB:2445:G:H4'	2.16	0.45
1:AA:1463:U:OP1	28:BP:108:ARG:HD2	2.16	0.45
27:DK:5:GLN:HA	27:DK:20:MET:SD	2.57	0.45
23:DB:1201:U:H2'	23:DB:1202:G:C8	2.52	0.45
48:BG:154:GLU:CG	48:BG:156:TYR:HB2	2.47	0.45
23:BB:693:A:O2'	23:BB:694:U:H5'	2.16	0.45
1:AA:502:A:H2'	1:AA:503:C:O4'	2.16	0.45
1:AA:1473:G:H2'	1:AA:1474:U:C6	2.51	0.45
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.97	0.45
26:DD:16:THR:HG22	26:DD:17:GLU:N	2.32	0.45
23:DB:1468:U:H2'	23:DB:1522:A:H61	1.81	0.45
1:AA:384:G:H2'	1:AA:385:C:H6	1.82	0.45
47:BF:131:VAL:C	47:BF:133:GLU:H	2.19	0.45
38:BM:23:GLY:O	38:BM:101:VAL:HG12	2.17	0.45
1:CA:669:G:O2'	1:CA:670:G:H5'	2.17	0.45
23:DB:2846:G:OP1	28:DP:51:ASN:HB2	2.17	0.45
23:DB:208:C:H2'	23:DB:209:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:159:LYS:HZ2	26:BD:160:LYS:N	2.14	0.45
13:AN:2:LYS:O	13:AN:6:LYS:HG3	2.17	0.45
14:AO:21:ASP:O	14:AO:23:GLY:N	2.47	0.45
9:AJ:41:PRO:HG2	9:AJ:42:LEU:H	1.81	0.45
23:DB:1257:C:H5'	29:DE:78:TRP:CH2	2.51	0.45
42:BN:24:MET:CE	42:BN:44:LEU:HB2	2.47	0.45
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.50	0.45
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.51	0.45
1:CA:82:G:O2'	1:CA:83:C:H5'	2.16	0.45
49:DR:91:GLN:HG3	49:DR:92:TRP:N	2.32	0.45
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.81	0.45
23:DB:2428:G:H5''	23:DB:2429:G:OP1	2.17	0.45
23:DB:2702:G:H2'	23:DB:2703:C:H6	1.81	0.45
23:DB:1281:G:O2'	23:DB:1282:U:H5'	2.17	0.45
23:BB:2702:G:H2'	23:BB:2703:C:H6	1.82	0.45
23:DB:468:G:H5''	29:DE:55:SER:HB2	1.98	0.45
23:BB:838:C:C2	23:BB:941:A:C6	3.05	0.45
23:BB:1491:G:H5'	25:BC:97:ASP:OD1	2.17	0.45
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.32	0.45
11:AL:19:ASN:HA	11:AL:19:ASN:HD22	1.52	0.45
1:CA:1408:A:H5'	23:DB:1912:A:N6	2.32	0.45
23:DB:1098:A:O5'	24:DI:3:LYS:CG	2.64	0.45
5:AF:97:THR:O	5:AF:98:GLU:CD	2.55	0.45
5:CF:3:HIS:CD2	5:CF:92:THR:HG23	2.52	0.45
1:AA:737:C:O2'	1:AA:738:C:H5'	2.17	0.45
17:AR:59:LYS:O	17:AR:62:ARG:HB2	2.16	0.45
12:AM:70:ARG:HH12	47:BF:112:ASP:CG	2.21	0.45
47:BF:59:ILE:HG13	47:BF:59:ILE:H	1.51	0.45
1:AA:203:G:H1'	1:AA:465:A:N6	2.31	0.45
8:AI:24:ASN:CG	8:AI:25:GLY:N	2.70	0.45
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.52	0.45
35:BV:42:LEU:HD11	35:BV:89:ILE:HD11	1.99	0.45
20:CB:40:ILE:HD13	20:CB:201:GLY:CA	2.46	0.45
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	1.97	0.45
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.25	0.45
44:BQ:63:ARG:CZ	44:BQ:96:ASP:HA	2.47	0.45
6:CG:145:GLU:C	6:CG:148:LYS:H	2.20	0.45
23:DB:282:A:H2'	23:DB:283:G:O4'	2.17	0.45
19:AT:38:ILE:HD13	19:AT:85:LEU:HD13	1.99	0.45
23:DB:972:A:C3'	23:DB:973:A:H5''	2.36	0.45
20:AB:48:MET:H	20:AB:48:MET:HG2	1.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:25:TYR:CD2	40:BH:30:LEU:HD11	2.52	0.45
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.46	0.45
16:AQ:45:VAL:HA	16:AQ:72:TRP:O	2.17	0.45
37:DL:3:LEU:O	37:DL:5:THR:HG23	2.17	0.45
46:BU:73:ASN:HB3	46:BU:95:PHE:CE2	2.52	0.45
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.98	0.45
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.51	0.45
18:AS:58:PRO:O	18:AS:59:VAL:HG13	2.17	0.45
22:BA:9:G:OP1	43:BO:25:ARG:NH1	2.50	0.45
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.82	0.45
23:BB:651:G:OP1	34:B3:18:LYS:HG3	2.16	0.45
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.99	0.45
4:AE:57:ALA:O	4:AE:61:LYS:HG2	2.17	0.45
1:AA:947:G:H2'	1:AA:948:C:C6	2.52	0.45
1:CA:784:A:H2'	1:CA:785:G:H8	1.82	0.45
27:BK:87:LEU:HD12	27:BK:92:GLU:HA	1.99	0.45
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.52	0.45
23:BB:90:U:H2'	23:BB:91:A:C2	2.52	0.45
27:DK:112:PHE:O	27:DK:113:MET:C	2.55	0.45
3:AD:29:THR:CG2	3:AD:30:LYS:HD3	2.48	0.45
30:DY:56:VAL:HG12	30:DY:57:GLU:H	1.81	0.45
29:BE:150:THR:HG21	29:BE:153:LEU:CA	2.44	0.45
40:BH:50:ARG:O	40:BH:54:LEU:HD21	2.17	0.45
40:BH:49:ALA:O	40:BH:53:GLU:HB2	2.17	0.45
52:BW:16:GLU:N	52:BW:16:GLU:CD	2.70	0.45
21:CU:24:LYS:HE2	21:CU:25:ALA:HB2	1.99	0.45
1:AA:958:A:N6	18:AS:53:GLY:HA3	2.29	0.45
25:BC:15:VAL:HG22	25:BC:204:LEU:O	2.16	0.45
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.51	0.45
23:DB:1111:A:OP2	23:DB:1111:A:H3'	2.17	0.45
23:DB:173:A:H2'	23:DB:174:U:H6	1.82	0.45
23:BB:833:A:H1'	37:BL:52:GLY:N	2.31	0.45
23:DB:416:U:H2'	23:DB:417:C:C6	2.52	0.45
30:DY:37:ARG:HG2	30:DY:43:ILE:HD11	1.97	0.45
47:DF:147:ARG:HB3	47:DF:147:ARG:CZ	2.46	0.45
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.16	0.45
23:DB:931:U:C4	23:DB:1167:C:H1'	2.52	0.45
38:BM:57:VAL:O	38:BM:59:ARG:N	2.45	0.45
23:BB:2399:G:H2'	23:BB:2400:G:H8	1.82	0.45
23:DB:1568:G:H4'	25:DC:58:LYS:CB	2.47	0.45
5:AF:80:PHE:HE1	25:BC:123:ILE:HD13	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:970:U:H1'	23:BB:985:C:P	2.57	0.45
23:BB:264:C:C2'	23:BB:265:A:H5''	2.47	0.45
1:AA:1441:A:C2	28:BP:113:LEU:HD22	2.51	0.45
5:CF:81:ASN:O	5:CF:82:ASP:C	2.55	0.45
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.16	0.45
23:DB:2693:G:H2'	23:DB:2694:G:C8	2.50	0.45
42:DN:8:ARG:HB3	42:DN:43:GLU:OE2	2.17	0.45
21:AU:13:VAL:O	21:AU:13:VAL:HG13	2.17	0.45
1:CA:213:G:C8	1:CA:214:C:C5	3.05	0.45
1:AA:1242:G:H2'	1:AA:1243:C:C6	2.53	0.45
23:DB:841:G:O2'	23:DB:842:U:H5'	2.16	0.45
52:BW:75:ASN:O	52:BW:76:ARG:HB2	2.17	0.45
23:BB:250:G:H2'	23:BB:251:A:C8	2.52	0.45
2:AC:142:ARG:C	2:AC:144:GLY:H	2.20	0.45
23:DB:244:A:H1'	23:DB:255:A:N6	2.32	0.45
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.32	0.45
30:BY:23:LEU:CD1	30:BY:28:LEU:HB2	2.47	0.45
23:DB:1210:G:N3	23:DB:1212:G:N2	2.65	0.45
26:BD:4:LEU:HD22	26:BD:4:LEU:N	2.32	0.45
8:CI:103:VAL:HG23	8:CI:104:THR:N	2.32	0.45
47:BF:131:VAL:O	47:BF:132:ARG:HB2	2.17	0.45
42:DN:90:ARG:HB3	42:DN:94:TYR:CE1	2.52	0.45
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.17	0.45
23:DB:1877:A:H2'	23:DB:1878:G:O4'	2.17	0.45
45:BS:13:SER:HB3	45:BS:16:LYS:HE3	1.99	0.45
26:BD:158:GLY:O	26:BD:160:LYS:N	2.50	0.45
1:AA:113:G:H2'	1:AA:114:U:H6	1.81	0.45
8:CI:11:ARG:HA	8:CI:105:ARG:CZ	2.46	0.45
41:DJ:40:HIS:ND1	41:DJ:41:LYS:HG3	2.32	0.45
2:AC:171:ARG:NH1	2:AC:171:ARG:HB2	2.32	0.45
1:AA:508:U:H1'	1:AA:509:A:N7	2.32	0.45
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.52	0.45
1:CA:900:A:O2'	1:CA:901:A:H5'	2.15	0.45
23:DB:713:G:O2'	23:DB:714:U:H5'	2.18	0.45
26:DD:56:LYS:CD	26:DD:58:ASN:HB3	2.47	0.45
23:BB:39:G:H2'	23:BB:40:U:C6	2.52	0.45
23:DB:596:U:H2'	23:DB:597:G:H8	1.82	0.45
23:BB:1249:U:O4'	44:BQ:3:VAL:HG21	2.16	0.45
23:BB:259:G:H2'	23:BB:260:G:H8	1.82	0.45
22:BA:37:C:H2'	22:BA:38:C:O4'	2.17	0.45
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2013:A:N3	45:BS:88:ARG:NH1	2.65	0.45
31:B0:30:ASP:HB3	31:B0:33:SER:O	2.17	0.45
23:DB:220:G:H1	23:DB:427:U:H2'	1.81	0.45
1:CA:186:C:H2'	1:CA:187:G:O4'	2.17	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:DB:274:C:O5'	23:DB:274:C:H6	2.00	0.45
40:DH:99:ILE:O	40:DH:103:VAL:HG12	2.16	0.45
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
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.82	0.44
5:AF:3:HIS:CD2	5:AF:92:THR:HG23	2.52	0.44
53:D6:65:THR:HG22	53:D6:66:LEU:N	2.31	0.44
17:AR:38:ILE:HG23	17:AR:62:ARG:NH2	2.32	0.44
27:DK:71:ARG:O	27:DK:72:PRO:C	2.55	0.44
45:DS:25:ARG:HE	45:DS:74:ILE:HG23	1.82	0.44
23:DB:2330:G:H21	52:DW:38:ARG:HA	1.80	0.44
23:DB:850:U:H2'	23:DB:851:C:H6	1.82	0.44
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.65	0.44
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.99	0.44
35:DV:14:LYS:CE	35:DV:18:ARG:HH21	2.31	0.44
13:CN:60:ARG:CG	13:CN:62:ARG:HE	2.29	0.44
50:BT:49:LYS:HB2	50:BT:50:LEU:HD22	1.98	0.44
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.17	0.44
1:AA:596:A:H2'	1:AA:597:G:H8	1.82	0.44
23:DB:2798:U:H4'	23:DB:2800:A:N1	2.32	0.44
25:DC:80:LEU:HD22	25:DC:109:LEU:HD12	1.98	0.44
23:BB:973:A:OP1	23:BB:973:A:H8	2.00	0.44
49:BR:25:LEU:H	49:BR:94:THR:HG21	1.82	0.44
23:DB:2232:C:O2'	23:DB:2233:U:H5'	2.17	0.44
2:CC:148:ILE:O	2:CC:168:ARG:HG2	2.17	0.44
38:DM:38:ARG:CA	38:DM:98:PRO:HD3	2.47	0.44
23:DB:1083:U:H1'	23:DB:1086:A:H61	1.81	0.44
23:BB:1553:A:HO2'	23:BB:1554:U:H2'	1.81	0.44
1:AA:947:G:H4'	12:AM:107:THR:OG1	2.17	0.44
29:BE:88:ARG:HB3	29:BE:89:PRO:HD2	1.99	0.44
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.17	0.44
23:DB:2545:G:O2'	23:DB:2546:U:H5'	2.17	0.44
3:CD:10:LEU:HD12	3:CD:20:LEU:CD1	2.47	0.44
1:AA:1309:G:H2'	1:AA:1310:G:H8	1.81	0.44
27:DK:85:VAL:HG21	27:DK:115:ILE:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.52	0.44
4:AE:93:VAL:HG22	4:AE:126:ALA:CB	2.47	0.44
23:BB:78:U:H2'	23:BB:79:C:H6	1.79	0.44
23:DB:2899:A:H2'	23:DB:2900:A:H8	1.82	0.44
32:B4:22:VAL:HB	32:B4:24:ARG:NE	2.31	0.44
7:CH:113:ARG:HE	7:CH:113:ARG:C	2.21	0.44
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.52	0.44
23:BB:655:A:H4'	23:BB:656:G:OP1	2.16	0.44
7:AH:17:GLN:HE21	7:AH:62:LEU:HB3	1.82	0.44
23:BB:642:U:H2'	23:BB:644:A:OP2	2.17	0.44
1:CA:1320:C:H41	18:CS:36:ARG:HB3	1.82	0.44
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.50	0.44
46:BU:53:GLN:N	46:BU:54:PRO:CD	2.80	0.44
23:DB:593:U:H2'	23:DB:594:U:H6	1.80	0.44
22:BA:17:C:O2'	22:BA:18:G:H5'	2.17	0.44
10:CK:108:ASN:ND2	21:CU:6:ARG:HB2	2.32	0.44
23:BB:82:U:H2'	23:BB:83:A:O4'	2.17	0.44
1:AA:1014:A:H5''	18:AS:13:HIS:HB3	1.98	0.44
47:BF:74:ALA:HB3	47:BF:78:ILE:HD13	1.99	0.44
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.82	0.44
44:DQ:83:LYS:HZ2	44:DQ:83:LYS:HA	1.82	0.44
1:AA:222:C:H2'	1:AA:223:A:C8	2.52	0.44
23:DB:1713:A:H4'	23:DB:1714:U:OP2	2.17	0.44
23:DB:1507:C:H2'	23:DB:1508:A:H4'	1.99	0.44
23:BB:1510:G:O2'	23:BB:1511:G:H5'	2.18	0.44
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.30	0.44
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.78	0.44
53:D6:45:TYR:CE2	53:D6:75:ALA:HB2	2.52	0.44
22:BA:98:G:N1	35:BV:14:LYS:HB2	2.32	0.44
1:CA:205:A:H2'	1:CA:206:C:H6	1.81	0.44
26:BD:16:THR:HG22	26:BD:17:GLU:H	1.82	0.44
23:DB:951:C:O2'	23:DB:952:G:H5'	2.17	0.44
23:DB:1190:G:O2'	23:DB:1191:G:H5'	2.17	0.44
26:BD:4:LEU:HD21	26:BD:100:LEU:CB	2.47	0.44
1:CA:1034:G:C2'	1:CA:1035:A:H5'	2.47	0.44
23:DB:1722:A:N6	23:DB:1738:G:H1'	2.32	0.44
38:BM:35:ALA:HB3	38:BM:100:LYS:H	1.82	0.44
23:BB:202:U:H2'	23:BB:203:A:O4'	2.16	0.44
23:BB:840:C:H2'	23:BB:841:G:C8	2.52	0.44
23:DB:485:C:HO2'	45:DS:60:HIS:HE2	1.65	0.44
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:65:PHE:CG	7:CH:66:GLN:N	2.85	0.44
23:BB:1689:A:O2'	23:BB:1690:A:H5'	2.18	0.44
40:BH:105:ALA:C	40:BH:107:GLY:H	2.21	0.44
19:CT:49:ALA:HA	19:CT:52:GLU:OE2	2.17	0.44
1:AA:1291:U:O2'	1:AA:1292:G:H5'	2.17	0.44
7:AH:110:MET:SD	7:AH:115:ALA:HB2	2.57	0.44
48:DG:112:VAL:HG13	48:DG:150:TYR:CE2	2.52	0.44
6:AG:68:VAL:CG1	6:AG:133:ALA:HB1	2.47	0.44
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.52	0.44
29:DE:4:VAL:C	29:DE:6:LYS:H	2.20	0.44
23:BB:627:A:H4'	23:BB:628:G:OP1	2.17	0.44
39:DX:49:ASP:O	39:DX:50:VAL:C	2.54	0.44
49:DR:26:ASP:O	49:DR:27:ILE:HD13	2.17	0.44
25:DC:146:LYS:HG2	25:DC:147:PRO:HD2	1.99	0.44
23:BB:1584:U:O5'	23:BB:1584:U:H6	2.00	0.44
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.82	0.44
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.18	0.44
21:AU:33:ARG:CZ	21:AU:34:ARG:HG2	2.47	0.44
37:DL:92:LEU:HD22	37:DL:124:GLY:HA3	1.97	0.44
51:DZ:39:TRP:HA	51:DZ:46:PHE:HD2	1.82	0.44
17:CR:63:TYR:HD2	17:CR:63:TYR:N	2.15	0.44
52:BW:59:PHE:HE2	52:BW:61:LYS:HA	1.81	0.44
23:BB:1203:U:C4'	37:BL:3:LEU:HD12	2.44	0.44
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.29	0.44
29:DE:1:MET:HB2	29:DE:16:GLU:HA	1.99	0.44
53:B6:30:THR:CB	53:B6:183:ILE:HG12	2.47	0.44
45:DS:36:LEU:HB3	45:DS:48:LYS:HB2	1.99	0.44
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.16	0.44
44:DQ:109:VAL:CG1	44:DQ:113:LYS:HE3	2.47	0.44
8:CI:10:ARG:HB3	8:CI:15:ALA:HA	1.99	0.44
48:DG:118:ALA:C	48:DG:120:ILE:H	2.19	0.44
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.37	0.44
30:DY:16:LEU:HD22	30:DY:16:LEU:N	2.16	0.44
23:DB:280:U:H2'	23:DB:281:C:C5	2.52	0.44
33:B1:26:LYS:HB2	33:B1:52:LYS:HD2	1.99	0.44
23:DB:819:A:OP2	23:DB:1187:G:N2	2.47	0.44
25:BC:141:HIS:HB2	25:BC:192:GLY:O	2.17	0.44
26:BD:107:VAL:CG1	26:BD:108:ASP:N	2.80	0.44
26:BD:108:ASP:OD2	26:BD:206:ALA:HA	2.17	0.44
25:DC:90:ILE:HD11	25:DC:102:TYR:HB3	1.99	0.44
23:BB:2135:A:H3'	23:BB:2136:G:C8	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:85:ARG:CD	46:BU:86:PHE:H	2.20	0.44
47:DF:45:ASP:O	47:DF:47:LYS:HD3	2.17	0.44
48:BG:90:GLY:HA2	48:BG:159:LYS:HE2	1.98	0.44
53:B6:39:LEU:O	53:B6:53:ASN:ND2	2.50	0.44
23:BB:672:C:O2'	23:BB:673:C:H5'	2.16	0.44
14:AO:71:LYS:HB2	14:AO:78:TYR:CG	2.52	0.44
23:BB:125:A:H3'	23:BB:126:A:C5'	2.47	0.44
23:BB:1993:U:H4'	26:BD:133:THR:HG22	1.98	0.44
43:BO:93:ASP:C	43:BO:95:SER:H	2.20	0.44
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.82	0.44
12:CM:87:GLY:HA2	12:CM:90:HIS:HD2	1.82	0.44
27:DK:25:LEU:HD12	27:DK:39:ILE:HA	1.99	0.44
1:AA:483:C:H2'	1:AA:484:G:N7	2.32	0.44
23:BB:2812:G:H2'	23:BB:2813:A:O4'	2.17	0.44
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.81	0.44
53:D6:31:GLY:HA2	53:D6:106:LEU:HD22	2.00	0.44
23:BB:151:C:O2'	23:BB:152:A:H5'	2.18	0.44
20:AB:119:GLN:C	20:AB:125:PHE:HB3	2.37	0.44
53:B6:123:GLU:O	53:B6:124:GLU:C	2.54	0.44
23:BB:626:A:OP1	23:BB:654:A:N6	2.49	0.44
23:DB:1241:A:H2'	23:DB:1242:U:C5'	2.44	0.44
23:BB:2217:G:O2'	23:BB:2218:G:H5'	2.16	0.44
48:BG:46:ASP:N	48:BG:46:ASP:OD2	2.50	0.44
25:BC:43:ASN:N	25:BC:47:ARG:O	2.50	0.44
26:DD:116:LYS:HA	26:DD:116:LYS:HD3	1.87	0.44
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.44
29:DE:109:LEU:HD12	29:DE:112:LEU:HD12	1.98	0.44
15:CP:61:VAL:CA	15:CP:65:ALA:HB3	2.47	0.44
1:AA:154:U:H2'	1:AA:155:A:H8	1.80	0.44
9:CJ:22:THR:O	9:CJ:26:VAL:HG23	2.17	0.44
23:BB:2030:A:H4'	23:BB:2031:A:H5'	2.00	0.44
23:DB:2360:G:OP1	34:D3:50:SER:HB3	2.17	0.44
23:BB:2636:C:O5'	26:BD:81:GLU:HB2	2.17	0.44
23:DB:2065:C:H2'	23:DB:2066:C:C6	2.52	0.44
33:D1:4:ILE:HB	33:D1:27:ARG:HG3	1.98	0.44
1:AA:861:G:H2'	1:AA:862:C:H6	1.82	0.44
1:AA:125:U:H2'	1:AA:126:G:C8	2.52	0.44
23:BB:828:U:H4'	23:BB:831:G:H1	1.80	0.44
23:BB:1109:C:H3'	23:BB:1110:G:C8	2.52	0.44
46:DU:41:VAL:N	46:DU:60:LYS:O	2.50	0.44
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2149:U:O2'	23:BB:2150:C:H5'	2.17	0.44
23:DB:1252:G:H1	44:DQ:36:GLN:CD	2.21	0.44
23:BB:1476:U:HO2'	23:BB:1477:A:H8	1.64	0.44
23:DB:2188:U:H3'	23:DB:2189:U:H6	1.83	0.44
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.82	0.44
1:AA:878:A:H1'	7:AH:3:GLN:OE1	2.17	0.44
1:CA:552:U:H4'	11:CL:82:ARG:HG2	1.99	0.44
16:CQ:61:ARG:HG2	16:CQ:61:ARG:HH11	1.82	0.44
23:DB:2286:G:H5'	23:DB:2286:G:C8	2.52	0.44
23:DB:98:G:H22	46:DU:6:ARG:HH12	1.64	0.44
1:CA:1473:G:H2'	1:CA:1474:U:C6	2.52	0.44
23:DB:753:A:H2'	23:DB:754:U:H6	1.81	0.44
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.80	0.44
23:DB:1039:A:H2'	23:DB:1040:A:H8	1.81	0.44
23:BB:2467:C:O2'	23:BB:2468:A:H5'	2.17	0.44
23:BB:270:A:OP1	23:BB:271:G:H5'	2.17	0.44
38:DM:26:VAL:HG22	38:DM:133:LYS:HA	1.99	0.44
1:AA:458:U:H2'	1:AA:459:A:H8	1.82	0.44
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.17	0.44
23:DB:2808:G:O2'	23:DB:2809:A:H8	2.01	0.44
3:AD:78:ALA:O	3:AD:85:THR:HA	2.18	0.44
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.17	0.44
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.16	0.44
47:BF:14:LYS:O	47:BF:18:GLU:HB2	2.17	0.44
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.18	0.44
4:CE:144:GLU:HG2	4:CE:144:GLU:O	2.16	0.44
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.17	0.44
23:BB:975:A:H1'	23:BB:990:A:C2	2.53	0.44
10:AK:125:LYS:O	21:AU:33:ARG:CZ	2.65	0.44
37:DL:103:ILE:H	37:DL:103:ILE:CD1	2.26	0.44
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.17	0.44
5:CF:97:THR:O	5:CF:98:GLU:CD	2.56	0.44
22:BA:42:C:O2'	47:BF:91:ARG:NH1	2.51	0.44
40:DH:3:VAL:HB	40:DH:37:VAL:O	2.16	0.44
52:DW:23:LYS:O	52:DW:24:ARG:C	2.56	0.44
8:CI:27:ILE:HD13	8:CI:34:LEU:HD22	1.99	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
25:DC:70:LYS:HD2	25:DC:101:ARG:NH2	2.32	0.44
33:B1:35:LEU:HD23	33:B1:35:LEU:N	2.32	0.44
20:AB:68:PHE:CE1	20:AB:88:GLN:HB3	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:28:PRO:O	25:BC:30:ALA:N	2.50	0.44
13:AN:26:LEU:HD12	13:AN:44:VAL:CG1	2.48	0.44
23:BB:142:A:O2'	50:BT:3:ARG:NH1	2.51	0.44
50:BT:69:ARG:NE	50:BT:69:ARG:HA	2.31	0.44
46:DU:73:ASN:HB3	46:DU:95:PHE:CD2	2.52	0.44
23:BB:1081:U:C5'	24:BI:126:ARG:HD2	2.47	0.44
20:CB:147:LEU:O	20:CB:151:LYS:N	2.48	0.44
23:DB:1277:G:H2'	23:DB:1278:C:O4'	2.17	0.44
11:CL:33:CYS:O	11:CL:75:GLU:O	2.35	0.44
23:BB:1439:A:N3	23:BB:1553:A:C6	2.86	0.44
23:DB:2144:G:N2	23:DB:2146:C:O4'	2.49	0.44
35:BV:80:HIS:HD2	35:BV:83:LYS:H	1.66	0.44
27:BK:47:ILE:HG23	27:BK:48:PRO:N	2.31	0.44
9:CJ:56:HIS:H	13:CN:80:ARG:HH22	1.66	0.44
1:AA:237:G:O2'	1:AA:238:A:H5'	2.18	0.44
23:BB:2795:C:H2'	23:BB:2796:U:C1'	2.47	0.44
27:DK:113:MET:HE1	27:DK:116:ILE:HD11	1.97	0.44
23:DB:2472:G:H3'	23:DB:2475:C:N4	2.32	0.44
48:DG:37:ASN:ND2	48:DG:40:VAL:HB	2.26	0.44
26:DD:118:PHE:O	26:DD:119:ALA:HB3	2.17	0.44
26:DD:117:GLY:O	26:DD:164:GLN:HA	2.18	0.44
23:BB:532:A:C2'	23:BB:532:A:N3	2.80	0.44
28:BP:62:LYS:O	28:BP:63:ILE:HB	2.18	0.44
20:AB:126:ASP:O	20:AB:127:LYS:HD2	2.17	0.44
23:BB:1795:C:O2'	23:BB:1796:U:H5'	2.18	0.44
1:CA:239:U:H6	1:CA:239:U:C5'	2.30	0.44
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.18	0.44
23:BB:741:U:H2'	23:BB:742:A:H8	1.82	0.44
26:BD:55:LYS:H	26:BD:76:GLY:H	1.65	0.44
30:BY:7:THR:HA	30:BY:34:THR:HA	1.98	0.44
23:DB:550:C:OP1	41:DJ:2:LYS:HE3	2.17	0.44
23:BB:31:C:C2'	23:BB:32:C:H5'	2.47	0.44
1:CA:958:A:N6	18:CS:53:GLY:HA3	2.32	0.44
1:CA:36:C:O2'	1:CA:37:U:H5'	2.17	0.44
23:DB:1870:C:H4'	23:DB:1870:C:OP2	2.16	0.44
23:BB:2210:U:N3	23:BB:2212:A:N7	2.65	0.44
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.52	0.44
23:BB:2803:G:O2'	23:BB:2804:U:H5'	2.17	0.44
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.79	0.44
26:BD:83:ARG:HH21	26:BD:83:ARG:HG3	1.83	0.44
23:DB:1510:G:O2'	23:DB:1511:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.17	0.44
23:BB:1210:G:N3	23:BB:1212:G:N2	2.65	0.44
1:CA:512:U:H2'	1:CA:513:C:C6	2.52	0.44
48:DG:60:GLY:O	48:DG:62:ALA:N	2.50	0.44
6:CG:121:ASN:N	6:CG:121:ASN:ND2	2.64	0.44
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.52	0.44
38:BM:66:ARG:HB2	38:BM:101:VAL:O	2.17	0.44
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.17	0.44
33:B1:39:ASP:O	33:B1:43:ARG:N	2.51	0.44
23:BB:285:G:O2'	23:BB:286:U:H5'	2.17	0.44
38:BM:31:PHE:HB3	38:BM:130:PHE:CZ	2.52	0.44
1:AA:63:C:H2'	1:AA:64:G:H5'	2.00	0.44
2:CC:54:ILE:HG12	2:CC:54:ILE:O	2.17	0.44
23:BB:2856:A:H2'	23:BB:2857:G:H8	1.83	0.44
1:AA:825:A:H2'	1:AA:826:C:H6	1.81	0.44
44:BQ:40:LYS:HA	44:BQ:43:GLN:OE1	2.17	0.44
23:DB:2519:U:C6	23:DB:2542:A:N6	2.86	0.44
23:DB:2032:G:N2	26:DD:150:GLN:HB3	2.32	0.44
23:BB:55:G:H2'	23:BB:56:A:H8	1.82	0.44
1:AA:137:U:H2'	1:AA:138:G:H8	1.82	0.44
1:CA:392:C:H2'	1:CA:393:A:H8	1.82	0.44
41:BJ:12:LYS:H	41:BJ:12:LYS:HG2	1.68	0.44
25:DC:199:HIS:C	25:DC:201:LEU:H	2.20	0.44
23:BB:1885:A:H2'	23:BB:1886:U:O4'	2.18	0.44
21:CU:36:PHE:CD2	21:CU:39:LYS:HD2	2.51	0.44
25:DC:120:ASP:CG	25:DC:121:ALA:H	2.21	0.44
52:BW:49:ASN:O	52:BW:50:VAL:HG13	2.18	0.44
47:DF:31:GLU:O	47:DF:31:GLU:HG3	2.17	0.44
5:AF:64:VAL:CG1	5:AF:65:GLU:N	2.80	0.44
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.33	0.44
47:BF:174:PHE:HB3	47:BF:176:PHE:CD1	2.53	0.44
1:CA:201:G:O2'	1:CA:202:G:H5'	2.18	0.44
13:AN:50:LEU:HG	13:AN:51:PRO:CD	2.48	0.44
13:AN:52:ARG:C	13:AN:54:SER:H	2.21	0.44
1:CA:903:G:H2'	1:CA:904:U:C6	2.52	0.44
35:DV:44:HIS:O	35:DV:45:ASP:C	2.55	0.44
46:BU:20:LYS:NZ	46:BU:20:LYS:HB2	2.32	0.44
48:BG:43:LYS:O	48:BG:50:THR:N	2.51	0.44
39:BX:39:GLN:CB	39:BX:42:LEU:HD22	2.48	0.44
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.99	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)
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
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.83	0.44
23:DB:973:A:OP1	23:DB:973:A:H8	2.01	0.44
1:AA:811:C:H4'	1:AA:900:A:N6	2.32	0.44
23:BB:588:U:OP2	37:BL:17:LYS:HE2	2.16	0.44
13:AN:30:ILE:H	13:AN:30:ILE:HD12	1.83	0.44
41:BJ:28:LEU:HD23	41:BJ:29:ALA:H	1.83	0.44
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.17	0.44
19:CT:79:THR:HG22	19:CT:83:ASN:HD21	1.83	0.44
47:DF:27:VAL:O	47:DF:29:ARG:HD2	2.16	0.44
23:DB:322:A:C2	23:DB:340:A:C6	3.04	0.44
23:BB:2719:G:H4'	23:BB:2846:G:O3'	2.18	0.44
23:DB:1445:G:H2'	23:DB:1446:C:H6	1.83	0.44
42:DN:61:ALA:C	42:DN:63:ARG:N	2.70	0.44
41:DJ:57:LEU:HD11	41:DJ:129:GLU:H	1.83	0.44
32:D4:11:CYS:HB3	32:D4:33:HIS:CE1	2.52	0.44
28:DP:26:GLU:HG3	28:DP:43:GLU:HG2	1.99	0.44
32:B4:11:CYS:N	32:B4:14:CYS:SG	2.91	0.44
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.82	0.44
6:CG:14:ASP:H	6:CG:19:SER:H	1.66	0.44
12:CM:89:ARG:HD3	12:CM:95:PRO:O	2.18	0.44
23:BB:589:U:H2'	23:BB:590:A:C8	2.53	0.44
27:DK:99:ILE:HB	27:DK:118:LEU:HD22	1.99	0.44
19:CT:67:HIS:CE1	19:CT:68:LYS:HE3	2.53	0.44
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.47	0.44
23:BB:532:A:N1	23:BB:2020:A:H1'	2.32	0.44
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.18	0.44
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.82	0.44
1:CA:1250:A:O3'	8:CI:68:GLY:HA2	2.17	0.44
11:AL:119:LYS:H	11:AL:119:LYS:HG2	1.51	0.44
23:BB:2215:C:H2'	23:BB:2216:G:C8	2.53	0.44
25:DC:204:LEU:HB3	25:DC:209:ALA:CB	2.47	0.44
53:B6:174:GLN:CG	53:B6:178:LYS:HE2	2.47	0.44
23:BB:494:G:O2'	23:BB:495:G:H5'	2.16	0.44
23:DB:2805:C:H2'	23:DB:2806:C:C6	2.52	0.44
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.17	0.44
1:CA:1342:C:O2'	8:CI:125:GLN:CB	2.66	0.44
1:CA:154:U:H2'	1:CA:155:A:H8	1.80	0.44
9:AJ:22:THR:O	9:AJ:26:VAL:HG23	2.17	0.44
23:DB:2636:C:O2'	23:DB:2637:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:83:ARG:HH21	26:DD:83:ARG:HG3	1.82	0.44
26:BD:25:THR:HG21	26:BD:193:VAL:HG21	2.00	0.44
6:AG:71:THR:O	6:AG:89:GLU:HA	2.17	0.44
3:CD:102:TYR:HE1	3:CD:109:THR:HA	1.82	0.44
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.52	0.44
1:CA:411:A:H62	1:CA:413:G:H21	1.66	0.44
23:DB:2455:G:O2'	23:DB:2456:C:H5'	2.17	0.44
23:DB:392:U:O2'	23:DB:393:C:H5'	2.18	0.44
23:BB:220:G:N1	23:BB:427:U:H2'	2.29	0.44
11:AL:64:SER:HA	11:AL:94:TYR:O	2.17	0.44
23:BB:394:C:C2'	23:BB:395:U:H5'	2.48	0.44
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.83	0.44
23:BB:584:C:P	44:BQ:5:ARG:HD3	2.57	0.44
1:AA:787:A:C2	1:AA:796:C:N3	2.86	0.44
26:DD:4:LEU:HD21	26:DD:100:LEU:CB	2.47	0.44
23:BB:1454:C:C1'	42:BN:60:VAL:HG13	2.48	0.44
1:AA:208:U:H2'	1:AA:210:C:N3	2.33	0.44
23:DB:1423:G:H2'	23:DB:1424:G:C8	2.53	0.44
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.82	0.44
23:DB:484:C:H2'	23:DB:485:C:H6	1.82	0.44
23:DB:2407:A:H2'	23:DB:2408:U:C6	2.51	0.44
13:CN:47:LEU:O	13:CN:49:THR:N	2.50	0.44
23:BB:2650:U:H2'	23:BB:2651:C:C6	2.52	0.44
1:AA:1155:A:O2'	1:AA:1156:G:H5'	2.18	0.44
23:DB:696:G:O2'	23:DB:697:G:H5'	2.17	0.44
1:CA:899:C:H2'	1:CA:900:A:O4'	2.17	0.44
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.18	0.44
38:DM:26:VAL:HB	38:DM:104:GLU:OE2	2.17	0.44
23:DB:1633:G:O2'	23:DB:1634:A:H5''	2.18	0.44
39:DX:21:LEU:HD21	39:DX:50:VAL:HG11	1.98	0.44
41:DJ:75:TYR:CD1	41:DJ:86:GLN:HB3	2.53	0.44
23:DB:332:A:O2'	23:DB:334:C:OP2	2.35	0.44
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.52	0.44
23:DB:1310:G:H1'	23:DB:1611:C:H5'	1.99	0.44
19:CT:24:ARG:HD3	19:CT:28:ARG:NH2	2.32	0.44
44:DQ:40:LYS:HA	44:DQ:43:GLN:OE1	2.17	0.44
23:BB:2432:A:O2'	23:BB:2433:A:H5'	2.17	0.44
23:DB:275:C:H2'	23:DB:276:U:O4'	2.16	0.44
2:CC:141:MET:HE2	2:CC:141:MET:HA	1.98	0.44
23:DB:291:G:H2'	23:DB:292:U:H6	1.81	0.44
53:B6:34:ASN:O	53:B6:66:LEU:HD21	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:75:ALA:HB3	37:DL:108:ALA:HB2	1.98	0.44
52:BW:23:LYS:O	52:BW:24:ARG:C	2.56	0.44
22:DA:42:C:O2'	47:DF:91:ARG:NH1	2.50	0.44
47:DF:118:ALA:HA	47:DF:176:PHE:CE2	2.53	0.44
11:CL:48:LEU:O	11:CL:49:ARG:C	2.56	0.44
29:BE:122:GLU:N	29:BE:122:GLU:OE1	2.51	0.44
10:AK:72:ALA:O	10:AK:75:GLU:HG2	2.18	0.44
2:CC:76:ILE:HA	2:CC:83:VAL:CG2	2.31	0.44
23:DB:2383:G:H2'	23:DB:2384:U:C6	2.52	0.44
1:AA:1250:A:O3'	8:AI:68:GLY:HA2	2.17	0.44
1:CA:1315:U:H5	18:CS:5:LYS:HE2	1.82	0.44
35:DV:42:LEU:N	35:DV:42:LEU:HD23	2.25	0.44
22:BA:75:G:H1	22:BA:102:G:N2	2.15	0.44
48:BG:30:GLY:H	48:BG:78:VAL:HA	1.82	0.44
13:CN:60:ARG:HG3	13:CN:62:ARG:CG	2.47	0.44
50:BT:21:SER:HB3	50:BT:31:VAL:HG22	1.98	0.44
44:DQ:91:ARG:HE	44:DQ:94:LEU:CD2	2.31	0.44
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD11	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
48:DG:84:LYS:HG3	48:DG:131:VAL:CB	2.48	0.44
10:AK:60:PHE:O	10:AK:63:GLN:HB3	2.18	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
25:DC:69:ASN:O	25:DC:70:LYS:C	2.56	0.44
33:B1:32:LYS:NZ	33:B1:52:LYS:HA	2.33	0.44
26:DD:107:VAL:CG1	26:DD:108:ASP:N	2.80	0.44
20:AB:68:PHE:CD1	20:AB:68:PHE:N	2.85	0.44
19:AT:3:ILE:HG13	19:AT:3:ILE:H	1.31	0.44
23:BB:974:G:OP2	49:BR:78:ARG:HD3	2.18	0.44
53:B6:109:GLU:O	53:B6:112:LYS:HB2	2.17	0.44
23:DB:1914:C:C2'	23:DB:1915:U:H5'	2.48	0.44
49:BR:37:GLU:O	49:BR:39:LEU:HD23	2.17	0.44
23:BB:2461:A:H1'	23:BB:2492:U:C2	2.52	0.44
2:AC:133:MET:CE	2:AC:165:GLU:HG2	2.48	0.44
1:AA:79:G:H8	1:AA:79:G:OP2	2.01	0.44
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.52	0.44
53:B6:67:VAL:HA	53:B6:99:LEU:O	2.18	0.44
23:DB:89:A:O2'	23:DB:90:U:H5'	2.16	0.44
23:DB:1173:U:H2'	23:DB:1174:U:O4'	2.17	0.44
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:47:LYS:CA	29:BE:51:GLU:HG3	2.47	0.44
42:BN:63:ARG:HA	42:BN:80:PHE:CE2	2.53	0.44
27:BK:99:ILE:HB	27:BK:118:LEU:HD22	1.99	0.44
1:CA:575:G:HO2'	1:CA:821:G:H5'	1.82	0.44
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.53	0.44
1:AA:1034:G:C2'	1:AA:1035:A:H5'	2.47	0.44
9:CJ:53:ILE:HG13	13:CN:84:ARG:NE	2.33	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
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.47	0.44
23:DB:2884:U:O2	31:D0:49:ARG:HG2	2.18	0.44
8:CI:14:SER:HB2	8:CI:69:GLY:HA3	1.99	0.44
1:AA:179:A:O2'	1:AA:180:U:H5'	2.18	0.44
3:CD:197:HIS:HA	3:CD:200:VAL:HG13	2.00	0.44
18:AS:33:TRP:CE3	18:AS:33:TRP:N	2.86	0.44
1:AA:958:A:N1	18:AS:53:GLY:C	2.71	0.44
23:BB:2309:A:H2'	23:BB:2310:C:C6	2.53	0.44
1:CA:36:C:OP1	11:CL:119:LYS:HD2	2.18	0.44
23:DB:1869:G:H2'	23:DB:1871:A:N7	2.32	0.44
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.18	0.44
23:DB:19:A:OP1	44:DQ:22:GLY:N	2.50	0.44
25:DC:221:GLY:C	25:DC:223:ALA:N	2.70	0.44
38:DM:60:GLN:HG2	38:DM:60:GLN:H	1.50	0.44
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.80	0.44
23:BB:547:A:H2'	23:BB:548:G:H5'	1.99	0.44
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.53	0.44
1:AA:42:G:H2'	1:AA:43:C:C6	2.53	0.44
17:AR:27:THR:O	17:AR:30:ASN:HB2	2.16	0.44
23:BB:1047:G:O2'	23:BB:1110:G:N2	2.44	0.44
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.83	0.44
25:BC:221:GLY:C	25:BC:223:ALA:N	2.70	0.44
23:BB:1921:G:H2'	23:BB:1922:G:O4'	2.17	0.44
21:CU:13:VAL:O	21:CU:13:VAL:HG13	2.17	0.44
46:BU:5:ARG:HG2	46:BU:5:ARG:HH21	1.82	0.44
26:BD:18:ASP:O	28:BP:30:TRP:HZ3	2.00	0.44
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.80	0.44
2:CC:39:ARG:CZ	2:CC:56:ILE:HD12	2.48	0.44
1:AA:85:U:H4'	1:AA:86:G:C4'	2.48	0.44
1:AA:1110:A:H3'	57:AA:1896:HOH:O	2.16	0.44
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.52	0.44
17:CR:66:LEU:O	17:CR:67:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1958:C:H2'	23:BB:1959:G:H8	1.82	0.44
31:D0:5:ASN:O	31:D0:7:PRO:HD3	2.16	0.44
50:DT:6:ARG:CZ	50:DT:6:ARG:HB3	2.46	0.44
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.52	0.44
7:AH:20:ASN:HA	7:AH:64:TYR:OH	2.17	0.44
1:AA:1108:G:H2'	1:AA:1109:C:H5'	2.00	0.44
23:DB:524:G:O2'	23:DB:525:U:H5'	2.17	0.44
23:BB:767:U:O2'	23:BB:768:G:H5'	2.18	0.44
6:AG:55:LYS:HG2	6:AG:55:LYS:H	1.53	0.44
23:DB:2518:A:N3	23:DB:2518:A:H2'	2.32	0.44
6:CG:4:ARG:HB2	6:CG:4:ARG:HH11	1.82	0.44
14:CO:88:ARG:HB2	14:CO:88:ARG:NH1	2.33	0.44
23:BB:2211:A:H4'	23:BB:2211:A:OP2	2.18	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:305:C:H2'	23:BB:306:U:C6	2.52	0.44
1:AA:729:A:H2'	1:AA:730:G:H8	1.82	0.44
24:DI:2:LYS:N	24:DI:2:LYS:HD2	2.32	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
52:BW:30:VAL:O	52:BW:30:VAL:HG13	2.18	0.44
25:BC:132:ARG:HA	25:BC:166:ARG:NH1	2.32	0.44
5:CF:100:SER:HA	17:CR:23:LYS:HD3	2.00	0.44
21:AU:3:ILE:HD11	21:AU:22:CYS:SG	2.57	0.44
47:BF:33:ILE:HG22	47:BF:34:THR:N	2.32	0.44
26:DD:148:GLN:HG3	26:DD:152:PRO:CB	2.44	0.44
13:CN:50:LEU:CG	13:CN:51:PRO:HD3	2.47	0.44
13:AN:50:LEU:CG	13:AN:51:PRO:HD3	2.48	0.44
48:DG:34:ARG:H	48:DG:34:ARG:CD	2.31	0.44
48:DG:34:ARG:HG2	48:DG:34:ARG:NH1	2.32	0.44
46:DU:10:VAL:HA	46:DU:70:ALA:O	2.17	0.44
53:B6:80:GLU:CD	53:B6:92:PRO:HB2	2.38	0.44
53:B6:80:GLU:HB2	53:B6:92:PRO:HB2	1.99	0.44
48:BG:140:ILE:HD12	48:BG:141:GLY:N	2.33	0.44
39:BX:49:ASP:O	39:BX:50:VAL:C	2.56	0.44
50:BT:29:THR:CB	50:BT:86:THR:HA	2.48	0.44
40:BH:128:HIS:CE1	40:BH:130:VAL:HG22	2.52	0.44
19:AT:4:LYS:HE3	19:AT:6:ALA:H	1.82	0.44
40:BH:7:ASP:CG	40:BH:8:LYS:N	2.71	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:386:C:H2'	1:CA:387:U:H5'	1.99	0.44
13:AN:26:LEU:HD23	13:AN:27:LYS:N	2.28	0.44
49:BR:39:LEU:CB	49:BR:53:PHE:HA	2.47	0.44
42:DN:108:ALA:O	42:DN:110:MET:HE3	2.16	0.44
50:DT:74:ILE:HG13	50:DT:75:GLY:N	2.32	0.44
50:BT:74:ILE:HG13	50:BT:75:GLY:N	2.31	0.44
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.18	0.44
48:DG:94:ARG:NH2	48:DG:105:SER:N	2.66	0.44
1:CA:255:G:H2'	1:CA:256:U:C6	2.53	0.44
33:D1:36:LYS:HG2	33:D1:47:ILE:HA	1.99	0.44
20:CB:150:ILE:O	20:CB:150:ILE:HG12	2.17	0.44
29:BE:58:LYS:HB2	29:BE:60:TRP:CD1	2.52	0.44
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.83	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
34:B3:22:LYS:CA	34:B3:48:MET:HA	2.44	0.44
41:DJ:20:ALA:HA	41:DJ:23:LYS:HG3	1.99	0.44
38:DM:69:PRO:C	38:DM:71:LYS:H	2.21	0.44
23:DB:544:C:O2'	23:DB:545:U:O5'	2.36	0.44
3:AD:10:LEU:HD12	3:AD:20:LEU:CD1	2.48	0.44
27:BK:85:VAL:HG21	27:BK:115:ILE:HD11	2.00	0.44
12:AM:89:ARG:HD3	12:AM:95:PRO:O	2.17	0.44
1:AA:373:A:H2'	1:AA:374:A:H8	1.82	0.44
2:CC:126:ARG:HA	2:CC:126:ARG:NH1	2.32	0.44
46:DU:53:GLN:N	46:DU:54:PRO:CD	2.80	0.44
23:DB:2893:A:H4'	23:DB:2894:G:H5'	2.00	0.44
1:CA:663:A:O3'	17:CR:52:ARG:NH2	2.48	0.44
3:CD:41:GLY:O	3:CD:43:ARG:N	2.51	0.44
25:BC:212:TRP:CD1	25:BC:212:TRP:C	2.91	0.44
25:DC:212:TRP:C	25:DC:212:TRP:CD1	2.90	0.44
23:BB:1518:C:H2'	23:BB:1519:G:C8	2.49	0.44
1:CA:818:G:H3'	1:CA:819:A:H5''	1.99	0.44
1:AA:121:U:H3'	1:AA:121:U:OP1	2.17	0.44
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.82	0.44
1:CA:151:A:C2'	1:CA:152:A:H5'	2.47	0.44
1:CA:375:U:OP1	15:CP:70:ARG:NH1	2.51	0.44
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.52	0.44
5:CF:54:LEU:C	5:CF:56:LYS:H	2.21	0.44
7:AH:58:LEU:HD22	7:AH:60:LEU:HB2	2.00	0.44
1:AA:389:A:H2'	1:AA:389:A:N3	2.32	0.44
23:BB:2485:G:H5''	38:BM:125:PRO:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:24:VAL:HG22	46:BU:35:VAL:HG22	1.99	0.44
1:AA:708:C:H2'	1:AA:709:U:H6	1.83	0.44
22:DA:6:G:H2'	22:DA:7:G:C8	2.52	0.44
1:CA:909:A:H2'	1:CA:910:C:O4'	2.18	0.44
44:BQ:83:LYS:HZ2	44:BQ:83:LYS:HA	1.83	0.44
26:BD:49:GLN:NE2	26:BD:79:LEU:HD12	2.33	0.44
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.80	0.44
22:BA:30:C:H2'	22:BA:31:C:H5'	2.00	0.44
28:BP:25:VAL:HA	28:BP:85:VAL:C	2.37	0.44
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.53	0.44
1:CA:787:A:C2	1:CA:796:C:N3	2.86	0.44
23:BB:526:A:N6	23:BB:2626:C:C4'	2.80	0.44
23:DB:2100:G:H2'	23:DB:2101:A:C8	2.53	0.44
1:AA:114:U:H2'	1:AA:115:G:C8	2.53	0.44
1:AA:317:U:H2'	1:AA:318:G:C8	2.52	0.44
1:CA:233:C:O2'	1:CA:234:C:H5'	2.17	0.44
23:DB:1858:A:C2	23:DB:1859:U:H1'	2.53	0.44
23:BB:928:A:H2'	23:BB:929:U:O4'	2.18	0.44
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.17	0.44
31:D0:33:SER:OG	31:D0:35:GLU:HG2	2.17	0.44
25:DC:61:TYR:HA	25:DC:85:ASN:OD1	2.18	0.44
1:AA:185:U:H2'	1:AA:186:C:C6	2.53	0.44
44:DQ:17:LEU:O	44:DQ:17:LEU:HG	2.18	0.44
23:BB:596:U:H2'	23:BB:597:G:C8	2.53	0.44
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.99	0.44
4:AE:64:GLU:HG3	4:AE:65:LYS:N	2.32	0.44
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.32	0.44
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.17	0.44
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.17	0.44
23:BB:757:G:H2'	23:BB:758:C:H5'	2.00	0.44
23:BB:1668:A:H1'	23:BB:1670:C:C5	2.52	0.44
45:DS:95:ARG:HA	45:DS:95:ARG:NE	2.33	0.44
20:AB:62:ARG:H	20:AB:62:ARG:HD2	1.82	0.44
23:DB:1098:A:C8	24:DI:3:LYS:CB	3.00	0.44
10:CK:125:LYS:O	21:CU:33:ARG:CZ	2.66	0.44
21:AU:40:PRO:HG2	21:AU:41:THR:H	1.82	0.44
37:BL:96:LYS:HE3	37:BL:102:GLY:O	2.17	0.44
23:BB:335:C:O2'	23:BB:336:C:H5'	2.17	0.44
23:BB:2365:G:N7	34:B3:38:LYS:NZ	2.61	0.44
47:DF:137:PHE:CD2	47:DF:137:PHE:N	2.82	0.44
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:11:ALA:O	29:BE:12:LEU:HD22	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
43:BO:75:GLY:O	43:BO:78:VAL:HG23	2.18	0.44
10:AK:70:ALA:C	10:AK:72:ALA:N	2.71	0.44
10:CK:70:ALA:C	10:CK:72:ALA:N	2.70	0.44
23:DB:858:G:N2	23:DB:2269:G:OP2	2.50	0.44
52:DW:29:SER:O	52:DW:30:VAL:HB	2.18	0.44
1:CA:902:G:O2'	1:CA:903:G:H5'	2.18	0.44
35:DV:63:ILE:HG22	35:DV:65:VAL:HG13	2.00	0.44
48:DG:6:ALA:HB3	48:DG:68:ARG:CD	2.48	0.44
45:DS:59:GLU:HA	45:DS:59:GLU:OE1	2.17	0.44
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
1:CA:981:U:OP1	13:CN:5:MET:HE1	2.17	0.44
8:CI:55:ASP:O	8:CI:59:LYS:HE3	2.17	0.44
41:BJ:6:ALA:CB	41:BJ:45:THR:HG21	2.44	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44
26:DD:24:VAL:HG23	26:DD:189:VAL:O	2.17	0.44
28:DP:49:ILE:HG12	28:DP:50:ARG:N	2.33	0.44
23:BB:704:G:O2'	23:BB:727:A:N6	2.51	0.44
25:DC:106:PRO:HB3	25:DC:141:HIS:CE1	2.52	0.44
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.99	0.44
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CE1	2.52	0.44
7:AH:65:PHE:CG	7:AH:66:GLN:N	2.85	0.44
23:BB:811:U:H2'	37:BL:21:ARG:HA	2.00	0.44
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.48	0.44
1:AA:16:A:N1	1:AA:919:A:H2	2.16	0.44
1:CA:846:G:H2'	1:CA:847:G:C8	2.53	0.44
38:BM:38:ARG:CA	38:BM:98:PRO:HD3	2.47	0.44
41:BJ:21:THR:O	41:BJ:62:VAL:HA	2.18	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
23:DB:1054:A:H2'	23:DB:1055:G:C8	2.53	0.44
43:DO:18:LEU:HD11	43:DO:91:SER:HB3	1.99	0.44
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.53	0.44
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.43	0.44
28:DP:62:LYS:O	28:DP:63:ILE:HB	2.17	0.44
31:B0:43:THR:HG23	31:B0:47:TYR:C	2.38	0.44
17:AR:34:GLU:HB2	21:AU:18:PHE:CZ	2.38	0.44
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:42:THR:HA	38:BM:93:VAL:HA	2.00	0.44
41:DJ:55:ILE:HG22	41:DJ:123:LYS:HB2	2.00	0.44
27:DK:61:VAL:HG13	27:DK:87:LEU:CD2	2.47	0.44
38:DM:37:GLY:O	38:DM:126:ILE:HG21	2.18	0.44
1:AA:1074:G:O4'	20:AB:102:ASN:HB2	2.17	0.44
23:BB:400:G:N7	51:BZ:57:ARG:NH1	2.65	0.44
20:AB:69:VAL:HG12	20:AB:168:GLU:HG3	2.00	0.44
7:CH:17:GLN:HG2	7:CH:62:LEU:CD2	2.47	0.44
48:BG:37:ASN:ND2	48:BG:40:VAL:HB	2.26	0.44
40:BH:58:LEU:HG	40:BH:62:LEU:HD23	1.99	0.44
3:CD:197:HIS:CG	3:CD:198:LEU:N	2.86	0.44
25:BC:204:LEU:HB3	25:BC:209:ALA:CB	2.48	0.44
25:BC:4:LYS:HB3	25:BC:5:CYS:H	1.57	0.44
3:CD:122:ILE:O	3:CD:128:VAL:HG23	2.18	0.44
25:DC:202:ARG:HH11	25:DC:213:ARG:HH21	1.66	0.44
20:AB:19:THR:O	20:AB:20:ARG:HD2	2.17	0.44
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	2.00	0.44
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.99	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
1:CA:195:A:H1'	1:CA:222:C:O2'	2.18	0.44
23:BB:1782:U:H2'	23:BB:1783:A:H5'	1.98	0.44
1:AA:635:A:H2'	1:AA:636:U:H6	1.83	0.44
23:BB:265:A:O2'	23:BB:266:G:C4'	2.65	0.44
23:DB:526:A:H62	23:DB:2626:C:H4'	1.82	0.44
1:CA:402:G:O2'	1:CA:403:C:H5'	2.17	0.44
1:AA:1147:C:H2'	1:AA:1148:U:H6	1.83	0.44
1:AA:602:A:H2'	1:AA:603:U:C6	2.53	0.44
23:DB:2623:G:H4'	23:DB:2825:G:C8	2.52	0.44
47:DF:127:TYR:CB	47:DF:155:ILE:HD13	2.48	0.44
23:DB:612:G:H2'	23:DB:614:A:H5''	1.99	0.44
26:DD:122:VAL:N	26:DD:127:PHE:HB2	2.33	0.44
38:BM:100:LYS:HD3	38:BM:101:VAL:H	1.83	0.44
45:BS:13:SER:CB	45:BS:16:LYS:HE3	2.47	0.44
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.82	0.44
23:DB:39:G:O2'	23:DB:40:U:H5'	2.18	0.44
23:BB:2650:U:H2'	23:BB:2651:C:H6	1.81	0.44
23:BB:991:C:H6	23:BB:991:C:H5'	1.83	0.44
23:DB:1904:G:N3	23:DB:1928:A:H2	2.16	0.44
50:BT:6:ARG:CZ	50:BT:6:ARG:HB3	2.47	0.44
1:AA:801:U:H2'	1:AA:802:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.18	0.44
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.18	0.44
24:BI:63:ASP:O	24:BI:65:SER:N	2.50	0.44
1:AA:1436:U:H2'	1:AA:1437:A:H8	1.82	0.44
23:DB:1452:G:C4	23:DB:2702:G:C6	3.06	0.44
20:CB:71:THR:HG23	20:CB:92:ASN:O	2.18	0.44
4:CE:79:THR:OG1	4:CE:97:PRO:HA	2.18	0.44
57:BB:3453:HOH:O	29:BE:98:LYS:HD3	2.17	0.44
29:DE:136:GLN:HE22	29:DE:139:LYS:HD3	1.81	0.44
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.47	0.44
14:CO:15:PHE:N	14:CO:15:PHE:CD1	2.85	0.44
2:AC:78:LYS:HG3	2:AC:78:LYS:O	2.18	0.44
35:BV:46:LYS:HD2	35:BV:46:LYS:N	2.33	0.44
29:BE:4:VAL:C	29:BE:6:LYS:H	2.21	0.44
40:BH:27:ARG:HH21	40:BH:27:ARG:HG2	1.81	0.44
1:CA:691:G:H1'	1:CA:696:A:N6	2.33	0.44
29:BE:149:ILE:HD11	29:BE:172:ALA:HA	1.99	0.44
47:DF:64:PRO:HB3	47:DF:88:VAL:HG21	1.99	0.44
5:AF:36:ILE:HG12	5:AF:64:VAL:HG22	2.00	0.44
53:D6:79:ILE:HG22	53:D6:80:GLU:N	2.32	0.44
23:DB:518:G:H2'	23:DB:519:U:C6	2.53	0.44
52:DW:49:ASN:CB	52:DW:81:ILE:HG12	2.43	0.44
8:AI:78:ILE:HG22	8:AI:82:ILE:HD11	2.00	0.44
23:DB:878:A:N3	23:DB:899:A:N7	2.66	0.44
40:DH:135:HIS:HB3	40:DH:138:VAL:CG2	2.48	0.44
48:DG:34:ARG:HH11	48:DG:34:ARG:HG2	1.82	0.44
53:B6:88:LEU:HD23	53:B6:90:LEU:CD1	2.47	0.44
35:BV:32:GLY:O	35:BV:93:ARG:HD2	2.16	0.44
48:BG:34:ARG:CD	48:BG:34:ARG:H	2.29	0.44
23:DB:139:U:O2'	50:DT:1:MET:HA	2.18	0.44
49:DR:39:LEU:CB	49:DR:53:PHE:HA	2.48	0.44
50:BT:58:VAL:O	50:BT:58:VAL:HG13	2.18	0.44
8:CI:38:PHE:CZ	8:CI:74:GLN:HB3	2.34	0.44
23:DB:994:C:H3'	44:DQ:53:LYS:HZ2	1.82	0.44
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.37	0.44
49:BR:59:ILE:HA	49:BR:101:ILE:H	1.83	0.44
1:AA:1099:G:H2'	1:AA:1100:C:C6	2.52	0.44
40:BH:80:ILE:HD11	40:BH:102:ALA:CB	2.47	0.44
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.17	0.44
25:DC:76:VAL:HG12	25:DC:114:GLN:CG	2.36	0.44
1:AA:764:C:N4	1:AA:812:G:N1	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:79:ILE:HG22	52:BW:80:SER:N	2.33	0.44
23:BB:2230:G:H4'	51:BZ:31:PRO:O	2.18	0.44
23:DB:1823:G:O2'	23:DB:1824:G:H5'	2.18	0.44
38:DM:93:VAL:HG22	38:DM:94:ALA:H	1.82	0.44
32:B4:13:ASN:OD1	32:B4:29:ALA:HB2	2.17	0.44
11:AL:54:VAL:CG2	11:AL:79:ILE:HD11	2.47	0.44
23:BB:99:U:H5	46:BU:6:ARG:HH22	1.63	0.44
23:DB:2839:G:O2'	23:DB:2840:C:H5'	2.18	0.44
13:CN:80:ARG:HH11	13:CN:80:ARG:HG2	1.82	0.44
38:BM:47:GLU:CD	38:BM:50:ARG:HH11	2.20	0.44
23:DB:372:G:HO2'	23:DB:373:U:P	2.40	0.44
23:BB:590:A:H2'	23:BB:591:U:H6	1.75	0.44
1:AA:675:A:H2'	1:AA:676:A:H8	1.83	0.44
27:DK:99:ILE:HD13	27:DK:118:LEU:CD2	2.47	0.44
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.83	0.44
22:BA:49:C:OP1	43:BO:102:ARG:N	2.48	0.44
44:DQ:27:ARG:HH11	44:DQ:27:ARG:HG3	1.83	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
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.83	0.44
12:AM:12:LYS:O	12:AM:43:LYS:HG3	2.18	0.44
23:BB:2244:U:H2'	23:BB:2245:U:O4'	2.18	0.44
38:BM:108:VAL:HG22	38:BM:109:PRO:HD2	1.99	0.44
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.18	0.44
23:DB:2081:U:H4'	51:DZ:25:THR:HG21	1.99	0.44
1:CA:1479:C:O2'	1:CA:1480:A:H5'	2.18	0.44
16:AQ:80:LYS:H	16:AQ:80:LYS:HE3	1.83	0.44
1:AA:714:G:N3	1:AA:777:A:H1'	2.33	0.44
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.48	0.44
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.53	0.44
30:BY:37:ARG:HG2	30:BY:43:ILE:HD11	2.00	0.44
23:BB:851:C:H2'	23:BB:852:U:H6	1.82	0.44
23:DB:453:A:N3	23:DB:457:A:O2'	2.51	0.44
7:CH:79:ARG:NH1	7:CH:82:LEU:HB3	2.32	0.44
47:DF:74:ALA:HB1	47:DF:76:PHE:CD2	2.53	0.44
22:BA:6:G:H2'	22:BA:7:G:H8	1.82	0.44
12:CM:5:GLY:O	12:CM:6:ILE:HB	2.17	0.44
23:DB:155:A:H2'	23:DB:156:A:H8	1.79	0.44
1:CA:1347:G:H8	8:CI:108:ARG:HB3	1.80	0.44
3:AD:145:ARG:HB3	3:AD:147:LYS:HD2	2.00	0.44
1:CA:286:C:H2'	1:CA:287:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:71:ILE:CD1	8:CI:71:ILE:H	2.30	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
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.18	0.44
5:AF:81:ASN:O	5:AF:82:ASP:C	2.56	0.44
53:D6:155:LYS:HA	53:D6:158:GLU:OE2	2.18	0.44
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.31	0.44
23:DB:1395:A:H4'	23:DB:1397:U:H5	1.80	0.44
23:BB:360:U:O2'	23:BB:361:G:H5'	2.18	0.44
23:DB:564:C:O2'	23:DB:565:C:H5'	2.18	0.44
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.17	0.44
23:DB:246:C:C2'	23:DB:247:G:H5'	2.48	0.44
23:BB:1222:U:O2'	23:BB:1223:G:H5'	2.18	0.44
53:D6:39:LEU:HG	53:D6:40:HIS:H	1.81	0.44
1:CA:551:U:O2'	11:CL:82:ARG:HD2	2.18	0.44
23:BB:1318:U:H2'	23:BB:1319:C:C6	2.53	0.44
4:CE:59:ILE:HG13	4:CE:59:ILE:H	1.64	0.44
33:D1:16:THR:HG21	33:D1:39:ASP:OD2	2.18	0.44
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.83	0.44
36:B2:31:LEU:HD22	36:B2:42:LEU:CD1	2.48	0.44
39:DX:27:ASN:HA	39:DX:27:ASN:HD22	1.61	0.44
23:BB:1752:C:H2'	23:BB:1753:G:C8	2.53	0.44
23:DB:438:G:H2'	23:DB:439:A:H8	1.82	0.44
23:BB:2526:G:O2'	32:B4:1:MET:HB2	2.18	0.44
28:BP:110:LYS:HD2	28:BP:110:LYS:H	1.83	0.44
19:AT:49:ALA:HA	19:AT:52:GLU:CD	2.38	0.44
52:DW:16:GLU:N	52:DW:16:GLU:CD	2.71	0.44
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.53	0.44
2:CC:166:TRP:O	2:CC:167:TYR:CB	2.65	0.44
2:AC:119:ILE:O	2:AC:123:LEU:HG	2.18	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:N	2.33	0.44
49:BR:55:ASP:OD2	49:BR:55:ASP:N	2.50	0.44
1:CA:136:C:O2'	1:CA:137:U:H5'	2.18	0.44
23:BB:1419:A:H2'	23:BB:1421:G:C8	2.52	0.44
40:DH:32:PRO:O	40:DH:33:GLN:HB2	2.18	0.44
29:BE:160:ALA:O	29:BE:161:ALA:HB3	2.18	0.44
10:CK:109:ILE:HG22	21:CU:16:ARG:HH12	1.83	0.44
13:AN:63:CYS:HB2	13:AN:79:SER:CB	2.48	0.44
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.82	0.44
39:DX:39:GLN:CB	39:DX:42:LEU:HD22	2.47	0.44
35:DV:75:GLN:HB2	35:DV:90:ASP:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:30:GLY:H	48:DG:78:VAL:HA	1.83	0.44
40:DH:80:ILE:O	40:DH:80:ILE:HD12	2.18	0.44
20:CB:86:CYS:HB2	20:CB:221:ARG:HH11	1.83	0.44
39:BX:42:LEU:O	39:BX:46:VAL:HG23	2.18	0.44
44:DQ:87:VAL:HG12	44:DQ:88:GLU:N	2.33	0.44
40:DH:104:THR:HA	40:DH:108:VAL:O	2.18	0.44
25:BC:76:VAL:O	25:BC:76:VAL:HG23	2.17	0.44
23:DB:361:G:H2'	23:DB:362:A:H8	1.82	0.44
25:DC:99:GLU:HG2	25:DC:100:ARG:N	2.33	0.44
1:AA:598:U:H2'	1:AA:599:C:H6	1.81	0.44
25:BC:80:LEU:HD22	25:BC:109:LEU:HD12	1.99	0.44
23:DB:2109:U:C4	23:DB:2181:U:C5	3.06	0.44
9:CJ:52:LEU:HA	9:CJ:62:ARG:H	1.82	0.44
1:AA:845:A:H3'	1:AA:846:G:H8	1.83	0.44
9:AJ:52:LEU:HA	9:AJ:62:ARG:H	1.83	0.44
44:BQ:86:SER:CB	49:BR:51:VAL:HA	2.48	0.44
29:DE:134:LEU:HD23	29:DE:161:ALA:N	2.32	0.44
46:BU:86:PHE:HB2	46:BU:92:VAL:HB	2.00	0.44
23:DB:1411:U:H2'	23:DB:1412:U:H6	1.82	0.44
23:BB:1141:U:H4'	23:BB:1142:A:C1'	2.47	0.44
16:AQ:74:LEU:HD22	16:AQ:75:VAL:H	1.80	0.44
2:AC:137:VAL:HA	2:AC:148:ILE:CD1	2.40	0.44
23:BB:1082:U:C2	23:BB:1086:A:N1	2.86	0.44
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.48	0.44
23:DB:1082:U:H2'	23:DB:1083:U:O4'	2.18	0.44
23:BB:668:A:C2	23:BB:670:A:C6	3.06	0.44
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.53	0.44
23:DB:1095:A:N6	24:DI:29:GLN:HE22	2.16	0.44
3:AD:77:GLU:CA	3:AD:80:ARG:HG2	2.41	0.44
23:DB:31:C:C2'	23:DB:32:C:H5'	2.47	0.44
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.32	0.44
38:DM:46:ILE:CG1	38:DM:47:GLU:N	2.81	0.44
11:AL:48:LEU:O	11:AL:49:ARG:C	2.56	0.44
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.18	0.44
23:BB:2562:U:H2'	23:BB:2563:U:H5'	1.99	0.44
38:BM:69:PRO:C	38:BM:71:LYS:H	2.21	0.44
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.48	0.44
27:DK:104:THR:OG1	27:DK:107:LEU:HD11	2.17	0.44
28:BP:112:ARG:HB2	28:BP:112:ARG:NH1	2.27	0.44
3:AD:138:PRO:C	3:AD:140:ASP:H	2.22	0.44
4:CE:82:HIS:CE1	4:CE:146:MET:HA	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.18	0.44
23:BB:717:C:C3'	23:BB:718:A:H5''	2.46	0.44
23:DB:1729:U:C5'	23:DB:1730:C:H4'	2.48	0.44
23:DB:2884:U:H4'	31:D0:49:ARG:NH2	2.33	0.44
1:AA:835:U:O2'	1:AA:836:G:H5'	2.17	0.44
48:BG:10:VAL:CG1	48:BG:14:VAL:HG21	2.48	0.44
47:BF:147:ARG:HB3	47:BF:147:ARG:CZ	2.48	0.44
25:BC:43:ASN:ND2	25:BC:44:ASN:N	2.66	0.44
53:B6:14:MET:CE	53:B6:165:THR:HG23	2.47	0.44
1:CA:455:G:H2'	1:CA:456:A:H8	1.82	0.44
41:DJ:120:ARG:HE	41:DJ:120:ARG:HB3	1.50	0.44
23:DB:948:C:H2'	23:DB:949:G:H8	1.83	0.44
1:CA:92:U:O2'	1:CA:93:U:H5'	2.17	0.44
23:DB:635:C:H2'	23:DB:636:G:H8	1.83	0.44
1:AA:412:A:H4'	1:AA:413:G:OP1	2.18	0.44
23:BB:1938:A:O2'	23:BB:1939:U:H5''	2.16	0.44
15:AP:6:LEU:HD23	15:AP:17:TYR:CB	2.48	0.44
1:CA:702:A:C8	23:DB:1848:A:H1'	2.53	0.44
23:DB:1829:A:N6	23:DB:1977:A:N6	2.66	0.44
20:CB:8:MET:HB2	20:CB:9:LEU:H	1.59	0.44
1:CA:1212:U:C5'	1:CA:1213:A:OP1	2.66	0.44
26:DD:3:GLY:O	26:DD:4:LEU:HD13	2.17	0.44
1:CA:586:C:O2'	7:CH:3:GLN:NE2	2.51	0.44
6:AG:121:ASN:N	6:AG:121:ASN:ND2	2.65	0.44
1:CA:720:C:C5'	17:CR:40:PRO:HA	2.48	0.44
23:BB:2549:G:O2'	23:BB:2550:G:H5'	2.17	0.44
1:AA:551:U:O2'	11:AL:82:ARG:HD2	2.17	0.44
42:BN:90:ARG:HB3	42:BN:94:TYR:CE1	2.53	0.44
23:DB:753:A:O2'	23:DB:754:U:H5'	2.17	0.44
23:DB:1639:C:C2'	23:DB:1640:A:H5''	2.48	0.44
23:DB:1942:C:H4'	53:D6:133:ARG:HH12	1.83	0.44
22:BA:20:G:H2'	22:BA:21:G:C8	2.52	0.44
23:DB:1248:G:O2'	44:DQ:2:ARG:HA	2.18	0.44
1:CA:1158:C:O2'	20:CB:131:LYS:HB2	2.18	0.44
40:BH:104:THR:HA	40:BH:109:GLU:OE2	2.18	0.44
38:BM:26:VAL:HG22	38:BM:133:LYS:HA	2.00	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:H	1.81	0.44
1:CA:996:A:H2'	1:CA:997:U:C6	2.52	0.44
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.51	0.44
23:DB:1237:A:HO2'	23:DB:1238:G:C4'	2.30	0.44
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:36:GLY:HA3	17:CR:70:THR:HA	1.99	0.44
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.82	0.44
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.18	0.44
51:DZ:53:ALA:C	51:DZ:55:GLY:H	2.20	0.44
25:BC:42:ARG:HG3	25:BC:46:GLY:O	2.18	0.44
13:CN:97:LYS:NZ	13:CN:97:LYS:HB3	2.31	0.44
23:DB:2751:G:N3	23:DB:2751:G:H2'	2.32	0.44
40:DH:110:VAL:O	40:DH:110:VAL:HG22	2.17	0.44
29:BE:2:GLU:OE1	29:BE:13:THR:N	2.51	0.44
23:BB:1330:C:O2'	23:BB:1331:G:H5'	2.17	0.44
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.48	0.44
26:BD:56:LYS:HD3	26:BD:58:ASN:HB3	1.99	0.44
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.37	0.43
23:DB:1818:U:C4	25:DC:152:GLN:HB3	2.53	0.43
37:DL:105:ILE:HG22	37:DL:106:GLU:N	2.33	0.43
37:DL:93:ASN:ND2	37:DL:94:THR:N	2.65	0.43
37:BL:102:GLY:O	37:BL:105:ILE:HG12	2.18	0.43
37:BL:92:LEU:HD22	37:BL:124:GLY:HA3	2.00	0.43
21:CU:3:ILE:HG22	21:CU:19:LYS:NZ	2.33	0.43
43:DO:75:GLY:O	43:DO:78:VAL:HG23	2.18	0.43
47:BF:165:GLY:O	47:BF:169:LEU:HD12	2.17	0.43
52:DW:37:VAL:HG22	52:DW:55:ASP:O	2.18	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
13:CN:50:LEU:HG	13:CN:51:PRO:CD	2.48	0.43
26:BD:149:ASN:N	26:BD:152:PRO:HG2	2.33	0.43
20:CB:46:VAL:CG1	20:CB:47:PRO:HD3	2.36	0.43
8:CI:5:TYR:HD2	8:CI:88:GLU:CB	2.30	0.43
44:DQ:63:ARG:CZ	44:DQ:96:ASP:HA	2.47	0.43
26:DD:187:LEU:HD12	26:DD:188:LEU:N	2.33	0.43
30:DY:16:LEU:HD23	30:DY:19:HIS:CD2	2.53	0.43
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.17	0.43
6:CG:145:GLU:C	6:CG:147:ASN:N	2.72	0.43
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.78	0.43
51:BZ:59:ILE:HG23	51:BZ:67:VAL:HG21	2.00	0.43
53:B6:112:LYS:HB3	53:B6:116:ARG:HH22	1.77	0.43
1:AA:14:U:O2	1:AA:17:U:H5	2.00	0.43
49:BR:39:LEU:HB2	49:BR:49:ILE:HD11	1.99	0.43
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.53	0.43
23:BB:1021:A:H2	23:BB:1122:G:H4'	1.83	0.43
37:DL:3:LEU:HA	37:DL:6:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.48	0.43
23:BB:1081:U:H5'	24:BI:126:ARG:HD2	1.99	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
46:BU:73:ASN:HB3	46:BU:95:PHE:CD2	2.52	0.43
4:CE:57:ALA:O	4:CE:61:LYS:HG2	2.18	0.43
1:CA:613:C:H2'	1:CA:614:C:C6	2.53	0.43
53:B6:56:ALA:HB1	53:B6:68:VAL:HG12	2.00	0.43
23:BB:2723:C:H5''	42:BN:1:MET:HE2	1.98	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:DB:2145:C:O2	23:DB:2145:C:O4'	2.35	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
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.53	0.43
35:BV:44:HIS:O	35:BV:45:ASP:C	2.56	0.43
11:AL:36:VAL:O	11:AL:36:VAL:HG23	2.16	0.43
3:CD:98:ASP:OD2	3:CD:99:ASN:N	2.49	0.43
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.48	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
1:CA:679:C:O2'	1:CA:680:C:H5'	2.18	0.43
23:BB:1788:C:C2'	23:BB:1789:A:H5'	2.48	0.43
47:BF:115:GLY:HA2	47:BF:177:ARG:NH1	2.25	0.43
1:CA:1160:G:O2'	1:CA:1161:C:H5'	2.17	0.43
9:CJ:36:VAL:HG12	9:CJ:38:GLY:H	1.83	0.43
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.53	0.43
44:BQ:7:VAL:O	44:BQ:11:ALA:HB2	2.18	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
1:CA:1461:G:O2'	1:CA:1462:C:H5'	2.17	0.43
46:BU:48:VAL:H	46:BU:53:GLN:HB2	1.81	0.43
26:DD:158:GLY:O	26:DD:160:LYS:N	2.51	0.43
29:BE:109:LEU:HD12	29:BE:112:LEU:HD12	1.98	0.43
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.83	0.43
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.33	0.43
44:BQ:10:ARG:NH1	44:BQ:10:ARG:HB2	2.33	0.43
1:AA:1342:C:O2'	8:AI:125:GLN:CB	2.66	0.43
1:AA:1272:G:H2'	1:AA:1273:C:H6	1.83	0.43
2:CC:113:LYS:HB2	2:CC:184:ASN:OD1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2428:G:H5''	23:BB:2429:G:OP1	2.18	0.43
23:DB:1509:A:H4'	23:DB:1510:G:O4'	2.18	0.43
23:DB:1400:U:H6	23:DB:1400:U:O5'	2.01	0.43
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.33	0.43
3:CD:39:GLN:HG3	3:CD:40:HIS:N	2.32	0.43
23:DB:690:G:H2'	23:DB:691:C:O4'	2.17	0.43
1:AA:564:C:H1'	16:AQ:32:ILE:O	2.18	0.43
11:CL:82:ARG:HH11	11:CL:82:ARG:HG2	1.83	0.43
1:CA:508:U:H1'	1:CA:509:A:N7	2.33	0.43
23:DB:823:C:H2'	23:DB:824:U:H6	1.83	0.43
23:BB:1262:A:H2'	23:BB:1263:U:O4'	2.17	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
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.31	0.43
23:DB:2309:A:H2'	23:DB:2310:C:H6	1.83	0.43
23:BB:241:A:O2'	34:B3:2:LYS:NZ	2.50	0.43
25:DC:21:PRO:C	25:DC:23:LEU:H	2.22	0.43
22:DA:20:G:H2'	22:DA:21:G:C8	2.52	0.43
20:AB:103:TRP:O	20:AB:107:ARG:HG2	2.17	0.43
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.33	0.43
23:DB:2235:G:H2'	23:DB:2236:U:H6	1.81	0.43
23:DB:1052:C:H2'	23:DB:1053:C:H6	1.83	0.43
43:DO:56:LYS:O	43:DO:57:ALA:C	2.55	0.43
48:DG:154:GLU:CG	48:DG:156:TYR:HB2	2.47	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
1:CA:604:G:H2'	1:CA:605:U:O4'	2.18	0.43
4:CE:64:GLU:HG3	4:CE:65:LYS:N	2.31	0.43
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.52	0.43
28:DP:64:SER:O	28:DP:66:GLY:N	2.45	0.43
3:CD:167:PRO:HB2	3:CD:170:LEU:HD21	2.00	0.43
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.17	0.43
23:BB:1665:A:O2'	23:BB:1666:G:H5'	2.17	0.43
33:D1:31:GLU:H	33:D1:31:GLU:CD	2.21	0.43
1:CA:85:U:O2	1:CA:85:U:O4'	2.33	0.43
8:AI:112:ARG:O	8:AI:112:ARG:HG3	2.17	0.43
23:DB:1106:G:H2'	23:DB:1107:G:C8	2.53	0.43
23:BB:2545:G:O2'	23:BB:2546:U:H5'	2.17	0.43
23:BB:428:A:O2'	23:BB:429:A:H5'	2.18	0.43
1:AA:693:G:P	10:AK:126:ARG:HH12	2.41	0.43
25:DC:132:ARG:HA	25:DC:166:ARG:HH11	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2365:G:O2'	52:BW:59:PHE:CE1	2.70	0.43
29:DE:1:MET:HB3	29:DE:14:VAL:HG23	2.00	0.43
8:AI:5:TYR:HD2	8:AI:88:GLU:CB	2.31	0.43
48:DG:15:ASP:CB	48:DG:26:LYS:H	2.19	0.43
22:BA:75:G:H2'	22:BA:76:G:C8	2.53	0.43
50:DT:1:MET:HG2	50:DT:1:MET:H3	1.70	0.43
45:DS:28:LYS:HD2	45:DS:30:SER:H	1.83	0.43
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.18	0.43
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.32	0.43
12:CM:15:VAL:HG22	12:CM:33:LEU:CD1	2.48	0.43
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.54	0.43
33:D1:32:LYS:HZ2	33:D1:52:LYS:HA	1.83	0.43
20:AB:53:LEU:HA	20:AB:56:LEU:HD13	2.00	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:DB:1025:G:OP1	23:DB:1025:G:H8	2.01	0.43
1:CA:384:G:H2'	1:CA:385:C:H6	1.82	0.43
1:CA:1152:A:H2'	1:CA:1153:G:C8	2.53	0.43
15:AP:52:LEU:CD2	15:AP:75:ILE:HA	2.48	0.43
14:CO:74:ASP:OD1	14:CO:77:ARG:HG3	2.18	0.43
23:DB:405:U:H4'	23:DB:405:U:OP2	2.18	0.43
40:DH:87:GLU:CD	40:DH:87:GLU:H	2.21	0.43
42:BN:34:ILE:HG22	42:BN:35:LYS:N	2.33	0.43
41:DJ:58:ASN:O	41:DJ:60:ASP:N	2.44	0.43
3:CD:29:THR:CG2	3:CD:30:LYS:HD3	2.48	0.43
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.33	0.43
10:AK:80:ASN:ND2	10:AK:80:ASN:N	2.67	0.43
1:AA:1309:G:H2'	1:AA:1310:G:C8	2.54	0.43
6:AG:14:ASP:H	6:AG:19:SER:H	1.64	0.43
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.53	0.43
26:BD:117:GLY:O	26:BD:164:GLN:HA	2.18	0.43
20:AB:151:LYS:HG3	20:AB:152:ASP:H	1.79	0.43
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.46	0.43
1:AA:37:U:H2'	1:AA:38:G:H8	1.83	0.43
1:CA:1459:G:O2'	1:CA:1460:C:H5'	2.17	0.43
12:AM:2:ARG:O	12:AM:4:ALA:N	2.51	0.43
41:BJ:96:ARG:CZ	41:BJ:99:ARG:HD2	2.49	0.43
15:AP:20:VAL:CG2	15:AP:32:PHE:HB2	2.48	0.43
1:AA:57:G:H2'	1:AA:58:C:H6	1.81	0.43
23:BB:1870:C:H5'	23:BB:1871:A:N7	2.33	0.43
15:AP:1:MET:HE3	15:AP:1:MET:CA	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:550:C:H2'	23:BB:550:C:O2	2.18	0.43
23:DB:2010:G:O2'	23:DB:2011:U:H5'	2.19	0.43
1:AA:1014:A:H2'	1:AA:1015:G:C8	2.53	0.43
23:DB:1508:A:H3'	23:DB:1509:A:C5	2.53	0.43
23:BB:1613:G:O2'	36:B2:3:ARG:HD2	2.18	0.43
25:DC:14:HIS:O	25:DC:203:VAL:HG11	2.18	0.43
3:AD:167:PRO:HB2	3:AD:170:LEU:HD21	2.00	0.43
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.18	0.43
23:DB:840:C:H2'	23:DB:841:G:H8	1.82	0.43
23:BB:1210:G:H1'	23:BB:1212:G:C2	2.53	0.43
53:D6:143:LEU:HG	53:D6:147:LEU:HD11	1.99	0.43
1:AA:585:G:H2'	1:AA:586:C:O4'	2.19	0.43
22:BA:23:G:H2'	22:BA:24:G:C8	2.54	0.43
1:CA:1451:U:H5''	1:CA:1452:C:OP2	2.18	0.43
37:DL:42:SER:C	37:DL:44:GLY:N	2.72	0.43
23:DB:539:G:H2'	23:DB:540:C:C6	2.53	0.43
53:B6:84:ARG:O	53:B6:86:SER:N	2.51	0.43
23:BB:1718:G:H2'	23:BB:1719:G:C8	2.51	0.43
23:DB:584:C:H2'	23:DB:585:G:H8	1.83	0.43
1:AA:1003:G:N2	1:AA:1005:A:C5'	2.81	0.43
1:CA:1117:A:H5''	8:CI:105:ARG:NH2	2.33	0.43
23:DB:308:G:H2'	23:DB:309:A:O4'	2.19	0.43
1:CA:728:A:O2'	1:CA:729:A:H5'	2.18	0.43
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.83	0.43
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	2.00	0.43
1:AA:1114:C:H2'	1:AA:1115:U:C6	2.54	0.43
9:CJ:41:PRO:HG2	9:CJ:42:LEU:H	1.83	0.43
33:D1:35:LEU:N	33:D1:35:LEU:HD23	2.33	0.43
1:CA:830:G:H2'	1:CA:831:A:C8	2.53	0.43
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.53	0.43
23:BB:1541:C:H2'	23:BB:1542:U:H6	1.83	0.43
22:BA:79:G:O2'	22:BA:80:U:H5'	2.18	0.43
24:BI:63:ASP:C	24:BI:65:SER:N	2.71	0.43
23:BB:732:C:O2'	23:BB:733:G:H5'	2.18	0.43
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.51	0.43
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.32	0.43
23:DB:2509:G:N2	23:DB:2510:C:H1'	2.33	0.43
19:CT:14:GLU:O	19:CT:17:ARG:HB3	2.18	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:27:VAL:O	28:BP:42:PHE:N	2.51	0.43
23:BB:1332:G:N3	23:BB:1332:G:H5'	2.33	0.43
2:AC:8:GLY:HA3	13:AN:88:MET:SD	2.58	0.43
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.87	0.43
37:BL:101:ILE:CG2	37:BL:105:ILE:HG13	2.48	0.43
29:BE:130:LYS:C	29:BE:132:LYS:N	2.71	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
47:DF:134:GLN:C	47:DF:136:ILE:N	2.71	0.43
22:DA:43:C:H4'	47:DF:91:ARG:NE	2.33	0.43
23:DB:919:U:H6	23:DB:919:U:O5'	2.01	0.43
8:AI:14:SER:HB2	8:AI:69:GLY:HA3	1.99	0.43
26:DD:32:ASN:HB3	26:DD:50:VAL:HG21	2.00	0.43
23:BB:2513:A:H2'	23:BB:2514:U:C6	2.54	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
50:DT:57:VAL:CG2	50:DT:58:VAL:H	2.17	0.43
41:DJ:3:THR:HG21	44:DQ:60:TRP:NE1	2.15	0.43
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CA	2.31	0.43
23:DB:996:A:H4'	44:DQ:91:ARG:NE	2.33	0.43
49:DR:59:ILE:HA	49:DR:101:ILE:H	1.83	0.43
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.53	0.43
28:DP:29:VAL:HB	28:DP:79:VAL:O	2.18	0.43
33:D1:26:LYS:HB2	33:D1:52:LYS:HD2	1.99	0.43
23:DB:1124:G:O2'	32:D4:37:GLN:HG2	2.18	0.43
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.81	0.43
38:DM:19:GLY:N	38:DM:38:ARG:NH1	2.65	0.43
37:DL:4:ASN:O	37:DL:6:LEU:N	2.50	0.43
48:DG:168:VAL:HG12	48:DG:170:THR:HG23	2.00	0.43
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.83	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
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.20	0.43
2:CC:58:ARG:HG2	2:CC:63:ILE:HG23	2.01	0.43
23:DB:341:C:O2'	23:DB:342:A:H5'	2.17	0.43
14:CO:78:TYR:CE1	14:CO:82:ILE:HD11	2.53	0.43
23:BB:671:C:H2'	23:BB:672:C:C6	2.53	0.43
37:BL:42:SER:C	37:BL:44:GLY:N	2.71	0.43
45:BS:10:ALA:C	45:BS:12:SER:H	2.22	0.43
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.43
6:AG:110:ARG:HB2	6:AG:118:ARG:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:19:ASP:OD2	41:DJ:58:ASN:HB2	2.18	0.43
1:AA:313:A:H2'	1:AA:314:C:H6	1.83	0.43
23:DB:544:C:H4'	23:DB:545:U:OP1	2.18	0.43
22:DA:66:A:N6	22:DA:107:G:H2'	2.28	0.43
23:DB:589:U:H2'	23:DB:590:A:C8	2.54	0.43
3:CD:138:PRO:C	3:CD:140:ASP:H	2.21	0.43
44:DQ:30:VAL:CG1	44:DQ:31:TYR:N	2.78	0.43
23:BB:1731:G:O2'	23:BB:1732:C:H5''	2.18	0.43
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.49	0.43
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.18	0.43
1:CA:238:A:C3'	1:CA:239:U:H5''	2.49	0.43
20:AB:150:ILE:O	20:AB:150:ILE:HG12	2.18	0.43
1:CA:555:U:H2'	1:CA:556:C:H6	1.83	0.43
1:CA:9:G:N7	1:CA:558:G:O2'	2.49	0.43
23:BB:307:G:N1	23:BB:310:A:OP2	2.50	0.43
41:DJ:96:ARG:CZ	41:DJ:99:ARG:HD2	2.48	0.43
40:BH:66:ASN:N	40:BH:66:ASN:ND2	2.61	0.43
23:BB:1726:C:H2'	23:BB:1727:C:H6	1.82	0.43
20:AB:20:ARG:HA	20:AB:38:HIS:HE1	1.83	0.43
38:DM:57:VAL:O	38:DM:59:ARG:N	2.46	0.43
22:DA:15:A:O2'	22:DA:16:G:H5'	2.19	0.43
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.48	0.43
1:AA:490:C:H2'	1:AA:491:G:H8	1.83	0.43
23:DB:1790:C:H2'	23:DB:1791:A:N7	2.32	0.43
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.83	0.43
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.53	0.43
1:AA:1463:U:H2'	1:AA:1464:U:H6	1.82	0.43
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.83	0.43
23:DB:2694:G:O2'	23:DB:2695:U:H5'	2.18	0.43
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.19	0.43
23:DB:812:C:O2'	23:DB:813:U:H5'	2.18	0.43
38:DM:23:GLY:O	38:DM:101:VAL:HG12	2.17	0.43
52:DW:44:PHE:HE2	52:DW:76:ARG:CZ	2.30	0.43
52:DW:77:LYS:HA	52:DW:77:LYS:HD3	1.85	0.43
23:BB:2852:G:O2'	23:BB:2853:C:H5'	2.17	0.43
2:CC:109:GLU:OE2	2:CC:143:LEU:HG	2.19	0.43
1:CA:585:G:O2'	1:CA:586:C:H5'	2.18	0.43
23:DB:671:C:H2'	23:DB:672:C:C6	2.53	0.43
23:DB:1108:U:H2'	23:DB:1109:C:H5'	2.00	0.43
6:CG:45:ALA:HB2	6:CG:116:ALA:O	2.18	0.43
23:DB:222:A:H61	23:DB:232:G:HI1'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1799:G:H4'	23:BB:1800:C:O5'	2.18	0.43
1:CA:1473:G:O2'	1:CA:1474:U:H5'	2.19	0.43
20:AB:134:LEU:HA	20:AB:137:THR:OG1	2.17	0.43
1:AA:64:G:O3'	1:AA:65:A:H3'	2.18	0.43
23:DB:309:A:N3	23:DB:329:G:O2'	2.46	0.43
23:BB:2277:G:OP1	38:BM:86:LYS:N	2.51	0.43
2:AC:53:ARG:HB3	2:AC:68:HIS:CD2	2.53	0.43
1:AA:830:G:H2'	1:AA:831:A:C8	2.53	0.43
48:BG:29:ASN:ND2	48:BG:77:GLY:O	2.51	0.43
1:AA:626:G:H2'	1:AA:627:G:C8	2.53	0.43
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.48	0.43
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.53	0.43
31:D0:30:ASP:OD2	31:D0:31:LYS:N	2.50	0.43
23:BB:596:U:H2'	23:BB:597:G:H8	1.83	0.43
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.18	0.43
20:CB:25:LYS:HD3	20:CB:193:ASP:OD2	2.18	0.43
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.99	0.43
1:CA:772:U:O2'	1:CA:773:G:H5'	2.18	0.43
1:CA:667:G:H4'	14:CO:51:HIS:ND1	2.33	0.43
24:BI:4:VAL:HG13	24:BI:4:VAL:O	2.18	0.43
23:DB:1099:G:N7	24:DI:3:LYS:HD3	2.33	0.43
23:DB:622:G:O2'	23:DB:623:C:H5'	2.18	0.43
37:BL:85:VAL:HG22	37:BL:94:THR:HG21	1.99	0.43
29:BE:118:LEU:HD21	29:BE:188:MET:CE	2.48	0.43
23:BB:920:A:H2'	23:BB:921:C:H6	1.83	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
8:AI:21:LYS:O	8:AI:61:ASP:N	2.48	0.43
8:AI:41:GLU:C	8:AI:43:ALA:N	2.72	0.43
8:AI:46:VAL:HG23	8:AI:47:VAL:N	2.32	0.43
40:DH:135:HIS:CG	40:DH:136:SER:N	2.86	0.43
13:AN:46:LYS:HE3	18:AS:15:LEU:HD12	1.99	0.43
44:DQ:52:ARG:C	44:DQ:54:ARG:N	2.72	0.43
26:BD:32:ASN:HB3	26:BD:50:VAL:CG2	2.48	0.43
25:BC:70:LYS:HD2	25:BC:101:ARG:NH2	2.33	0.43
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.99	0.43
40:BH:72:ILE:O	40:BH:141:LYS:NZ	2.52	0.43
12:CM:3:ILE:HA	12:CM:56:ARG:NH1	2.32	0.43
12:AM:15:VAL:HG22	12:AM:33:LEU:CD1	2.49	0.43
33:B1:26:LYS:HB3	33:B1:52:LYS:HZ2	1.84	0.43
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1076:C:H4'	24:BI:94:LYS:HZ2	1.82	0.43
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.84	0.43
44:BQ:108:LEU:HD23	49:BR:48:LYS:HB2	2.00	0.43
51:DZ:68:LEU:HD13	51:DZ:78:TYR:CE1	2.53	0.43
46:DU:73:ASN:ND2	46:DU:76:THR:H	2.15	0.43
20:CB:114:LYS:NZ	20:CB:152:ASP:OD1	2.52	0.43
36:B2:33:ARG:HH21	36:B2:33:ARG:CB	2.31	0.43
23:BB:1351:C:H2'	23:BB:1352:U:C1'	2.48	0.43
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.18	0.43
42:DN:52:ILE:O	42:DN:55:ALA:HB3	2.18	0.43
3:AD:81:LEU:HB2	3:AD:88:ASN:HD22	1.82	0.43
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.18	0.43
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.52	0.43
42:BN:32:GLU:O	42:BN:114:GLU:HA	2.18	0.43
42:BN:28:LEU:O	42:BN:32:GLU:HA	2.19	0.43
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.53	0.43
1:CA:948:C:O2'	1:CA:949:A:H5'	2.17	0.43
49:DR:63:VAL:O	49:DR:63:VAL:HG23	2.18	0.43
2:CC:46:LEU:HD11	2:CC:75:VAL:HG13	1.98	0.43
27:DK:64:ARG:HG2	27:DK:79:PHE:CD2	2.53	0.43
29:BE:145:ASP:OD1	29:BE:183:PHE:HA	2.18	0.43
23:BB:739:A:H5''	23:BB:1784:A:C2	2.54	0.43
23:BB:1822:C:O2'	23:BB:1823:G:H5'	2.19	0.43
40:BH:57:LYS:O	40:BH:61:VAL:HG12	2.18	0.43
23:DB:2834:G:H2'	23:DB:2879:A:H61	1.84	0.43
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.82	0.43
1:CA:926:G:H3'	1:CA:1505:G:H21	1.84	0.43
23:BB:656:G:H2'	23:BB:657:U:O4'	2.18	0.43
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.18	0.43
1:AA:1340:A:O2'	1:AA:1341:U:H5'	2.17	0.43
23:BB:2877:G:O2'	23:BB:2878:U:H5'	2.18	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
7:CH:58:LEU:HD22	7:CH:60:LEU:HB2	2.00	0.43
26:DD:55:LYS:H	26:DD:76:GLY:H	1.67	0.43
1:CA:37:U:H2'	1:CA:38:G:H8	1.84	0.43
3:AD:197:HIS:CG	3:AD:198:LEU:N	2.87	0.43
23:DB:471:A:OP1	29:DE:79:ARG:NH1	2.51	0.43
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.54	0.43
23:BB:2805:C:H2'	23:BB:2806:C:H6	1.81	0.43
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:92:ARG:HH11	21:CU:20:ARG:NH2	2.16	0.43
1:CA:286:C:H2'	1:CA:287:U:H6	1.83	0.43
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.18	0.43
23:BB:598:U:H2'	23:BB:599:A:C8	2.53	0.43
1:CA:636:U:O2'	1:CA:637:C:H5'	2.18	0.43
22:DA:4:C:H2'	22:DA:5:U:C6	2.54	0.43
41:DJ:72:LYS:HB3	41:DJ:89:PHE:H	1.84	0.43
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	2.00	0.43
23:BB:2635:A:H5'	26:BD:79:LEU:HB2	2.00	0.43
23:DB:664:G:O2'	23:DB:665:U:H5'	2.19	0.43
23:BB:123:G:H4'	23:BB:1376:C:O5'	2.19	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
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.83	0.43
6:CG:125:ASP:HB3	6:CG:131:GLY:N	2.34	0.43
23:BB:2774:C:OP1	26:BD:169:ARG:HG3	2.19	0.43
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.82	0.43
1:AA:625:U:H4'	15:AP:16:PHE:CZ	2.53	0.43
23:DB:1845:G:C6	23:DB:1896:G:C6	3.07	0.43
7:CH:110:MET:SD	7:CH:115:ALA:HB2	2.59	0.43
23:BB:39:G:H2'	23:BB:40:U:H6	1.83	0.43
23:DB:596:U:H2'	23:DB:597:G:C8	2.54	0.43
1:AA:186:C:H2'	1:AA:187:G:O4'	2.18	0.43
23:DB:1213:A:N1	23:DB:1237:A:H1'	2.34	0.43
1:AA:935:A:O2'	1:AA:936:C:H5'	2.18	0.43
44:BQ:81:GLY:HA3	44:BQ:112:ALA:HB1	2.00	0.43
2:AC:194:VAL:HG12	2:AC:195:ILE:N	2.34	0.43
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.18	0.43
1:CA:125:U:H2'	1:CA:126:G:C8	2.54	0.43
1:AA:1231:G:O2'	1:AA:1232:U:H5'	2.19	0.43
38:BM:63:ILE:N	38:BM:63:ILE:HD12	2.32	0.43
17:CR:51:GLN:HA	17:CR:51:GLN:HE21	1.82	0.43
49:BR:81:LYS:HD3	49:BR:81:LYS:HA	1.89	0.43
1:AA:250:A:H1'	1:AA:252:U:C5	2.54	0.43
23:BB:794:A:H2'	23:BB:795:C:C6	2.53	0.43
1:AA:543:U:O2'	1:AA:544:G:H5'	2.19	0.43
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.36	0.43
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.42	0.43
23:BB:622:G:O2'	23:BB:623:C:H5'	2.18	0.43
29:BE:146:VAL:CG1	29:BE:187:VAL:HG23	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:100:SER:HA	17:AR:23:LYS:CD	2.48	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
13:CN:68:ARG:HH12	13:CN:70:HIS:CB	2.14	0.43
47:BF:111:ARG:N	47:BF:111:ARG:HD2	2.33	0.43
47:BF:35:LEU:HD13	47:BF:56:LEU:CD1	2.46	0.43
23:DB:2265:U:H3'	23:DB:2266:A:C5'	2.49	0.43
52:DW:37:VAL:HB	52:DW:38:ARG:HD3	2.00	0.43
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.83	0.43
35:DV:35:GLU:HG3	35:DV:93:ARG:CZ	2.48	0.43
53:B6:80:GLU:CG	53:B6:92:PRO:HB2	2.48	0.43
35:BV:72:VAL:HG12	35:BV:93:ARG:CA	2.44	0.43
40:DH:5:LEU:HD12	40:DH:17:ASP:CB	2.47	0.43
45:DS:66:ILE:O	45:DS:69:LEU:HB2	2.19	0.43
20:CB:164:ASP:OD1	20:CB:203:ASP:HB2	2.18	0.43
50:BT:8:LEU:HD22	50:BT:46:ALA:HA	1.99	0.43
41:BJ:44:TYR:O	41:BJ:45:THR:CB	2.66	0.43
23:BB:2472:G:H1	23:BB:2477:U:P	2.42	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
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.53	0.43
12:CM:10:ASP:CA	12:CM:44:ILE:HD13	2.42	0.43
33:B1:24:LYS:HZ2	33:B1:33:LEU:HB2	1.83	0.43
23:DB:819:A:H5'	23:DB:973:A:N1	2.34	0.43
25:DC:89:ASN:HA	25:DC:89:ASN:HD22	1.52	0.43
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.83	0.43
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.18	0.43
51:BZ:56:MET:HA	51:BZ:59:ILE:HG12	1.99	0.43
23:BB:971:G:O2'	23:BB:972:A:H5'	2.19	0.43
51:DZ:71:LEU:HD11	51:DZ:78:TYR:HB3	1.99	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
1:CA:614:C:C2'	1:CA:615:G:H5'	2.49	0.43
53:B6:42:LYS:HA	53:B6:50:VAL:C	2.38	0.43
23:DB:1445:G:O2'	23:DB:1446:C:H5'	2.19	0.43
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.19	0.43
22:BA:106:G:H2'	22:BA:107:G:O4'	2.18	0.43
3:CD:169:TRP:HB2	3:CD:183:ARG:O	2.19	0.43
1:CA:314:C:O2'	1:CA:315:A:H5'	2.19	0.43
22:DA:65:U:C2'	22:DA:66:A:H5'	2.49	0.43
41:DJ:55:ILE:CG2	41:DJ:123:LYS:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:85:LYS:HG3	4:AE:93:VAL:O	2.18	0.43
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.84	0.43
1:CA:450:G:N7	1:CA:481:G:O6	2.51	0.43
20:AB:195:VAL:HG12	20:AB:197:PHE:N	2.30	0.43
23:BB:2019:A:C4'	44:BQ:33:VAL:HG11	2.48	0.43
23:DB:287:G:N3	23:DB:287:G:H2'	2.33	0.43
20:CB:162:VAL:HG13	20:CB:184:ALA:CB	2.44	0.43
23:BB:2081:U:C5'	51:BZ:25:THR:HG21	2.49	0.43
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.47	0.43
23:DB:28:A:O2'	23:DB:29:U:H5'	2.17	0.43
8:CI:45:MET:SD	8:CI:45:MET:N	2.92	0.43
23:DB:1387:A:H5'	23:DB:1469:A:H1'	2.00	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
1:CA:657:U:H1'	14:CO:22:THR:O	2.18	0.43
47:DF:74:ALA:HB3	47:DF:78:ILE:HD13	2.01	0.43
23:DB:1556:C:H2'	23:DB:1557:C:C6	2.54	0.43
23:BB:2282:G:O2'	23:BB:2283:C:OP2	2.28	0.43
26:DD:35:THR:O	26:DD:36:GLN:HB3	2.17	0.43
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.53	0.43
26:BD:70:LYS:HD3	26:BD:70:LYS:C	2.38	0.43
23:DB:1789:A:OP2	25:DC:220:ARG:HD3	2.18	0.43
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.18	0.43
23:DB:2395:C:H2'	23:DB:2396:G:O4'	2.19	0.43
1:AA:999:C:H6	1:AA:999:C:O5'	2.00	0.43
33:D1:3:GLY:O	33:D1:5:ARG:N	2.52	0.43
23:DB:1854:A:H2'	23:DB:1855:U:H5'	2.00	0.43
23:DB:2015:A:N3	31:D0:2:VAL:HG22	2.33	0.43
23:BB:165:A:H2'	23:BB:166:U:O4'	2.18	0.43
1:AA:1054:C:H1'	1:AA:1196:A:C4	2.53	0.43
27:BK:58:LEU:H	27:BK:58:LEU:HD23	1.80	0.43
1:CA:768:A:O2'	1:CA:769:G:H5'	2.19	0.43
26:BD:16:THR:HG22	26:BD:17:GLU:N	2.33	0.43
1:CA:208:U:H2'	1:CA:210:C:N3	2.33	0.43
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.19	0.43
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.34	0.43
23:DB:840:C:H2'	23:DB:841:G:C8	2.53	0.43
23:BB:1173:U:H2'	23:BB:1174:U:C4'	2.47	0.43
23:BB:691:C:O2'	23:BB:692:C:H5'	2.17	0.43
40:BH:41:LYS:C	40:BH:43:ASN:N	2.71	0.43
29:DE:72:SER:C	29:DE:74:LYS:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2774:C:P	26:DD:169:ARG:HG3	2.58	0.43
1:AA:590:U:OP1	7:AH:29:SER:HA	2.18	0.43
23:BB:1464:G:O2'	23:BB:1465:G:H5'	2.18	0.43
29:BE:72:SER:C	29:BE:74:LYS:H	2.21	0.43
23:DB:444:C:O2'	23:DB:445:C:H5'	2.18	0.43
13:CN:87:ALA:CA	13:CN:92:ILE:HD13	2.47	0.43
23:DB:39:G:H2'	23:DB:40:U:C6	2.54	0.43
1:CA:744:C:O2'	1:CA:745:G:H5'	2.18	0.43
43:BO:56:LYS:O	43:BO:57:ALA:C	2.57	0.43
23:DB:1905:C:O2'	23:DB:1929:G:H1'	2.18	0.43
28:DP:45:VAL:H	28:DP:60:VAL:HB	1.83	0.43
23:DB:699:A:H2'	23:DB:700:G:O4'	2.18	0.43
28:BP:45:VAL:H	28:BP:60:VAL:HB	1.83	0.43
1:AA:856:C:O2'	1:AA:857:C:H5'	2.18	0.43
2:CC:134:LYS:HG3	2:CC:167:TYR:HE2	1.83	0.43
40:DH:110:VAL:HG13	40:DH:110:VAL:O	2.18	0.43
8:CI:30:ASN:O	8:CI:31:GLN:HB2	2.19	0.43
1:AA:757:U:O2'	1:AA:758:C:H5'	2.18	0.43
36:B2:12:ARG:HG2	36:B2:44:VAL:HG11	1.99	0.43
1:AA:772:U:O2'	1:AA:773:G:H5'	2.19	0.43
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	2.01	0.43
47:DF:68:LYS:HG3	47:DF:81:GLY:O	2.18	0.43
23:BB:1573:G:H2'	23:BB:1574:C:H5'	2.01	0.43
41:BJ:75:TYR:CD1	41:BJ:86:GLN:HB3	2.52	0.43
1:AA:704:A:C2	1:AA:705:G:H1'	2.53	0.43
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.19	0.43
23:BB:332:A:O2'	23:BB:334:C:OP2	2.36	0.43
23:BB:322:A:H1'	23:BB:339:U:O2	2.18	0.43
23:BB:2269:G:O3'	52:BW:18:LYS:HG2	2.18	0.43
47:DF:59:ILE:HG12	47:DF:137:PHE:CE2	2.53	0.43
13:CN:64:ARG:HA	13:CN:64:ARG:HD3	1.79	0.43
5:AF:86:ARG:HD2	17:AR:63:TYR:O	2.19	0.43
10:CK:30:ILE:HG22	10:CK:45:THR:OG1	2.18	0.43
23:DB:2262:U:H1'	23:DB:2328:A:H1'	2.01	0.43
30:DY:46:MET:HB3	30:DY:46:MET:HE2	1.79	0.43
8:AI:50:PRO:HD3	8:AI:79:ARG:CG	2.47	0.43
46:DU:20:LYS:HB2	46:DU:20:LYS:NZ	2.33	0.43
20:CB:83:ALA:O	20:CB:88:GLN:NE2	2.52	0.43
20:CB:84:LEU:O	20:CB:84:LEU:HD23	2.18	0.43
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.17	0.43
8:CI:50:PRO:HD3	8:CI:79:ARG:CG	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:38:GLY:CA	41:DJ:51:GLY:HA2	2.49	0.43
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.19	0.43
23:BB:557:C:H2'	23:BB:558:U:H6	1.81	0.43
48:DG:100:ASN:O	48:DG:116:LEU:HD13	2.19	0.43
40:BH:137:GLU:HG3	40:BH:138:VAL:N	2.33	0.43
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.19	0.43
6:AG:144:ALA:O	6:AG:146:ALA:N	2.43	0.43
12:CM:53:ASP:HA	12:CM:56:ARG:NH2	2.34	0.43
25:BC:80:LEU:HD21	25:BC:109:LEU:HB2	2.00	0.43
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.19	0.43
29:DE:161:ALA:HB1	29:DE:167:VAL:HG22	2.00	0.43
14:CO:36:ILE:CD1	14:CO:59:MET:HE3	2.43	0.43
46:BU:86:PHE:CG	46:BU:87:GLU:N	2.86	0.43
2:AC:156:LEU:HG	2:AC:163:ARG:O	2.18	0.43
48:BG:148:ARG:HB2	48:BG:152:ARG:HH21	1.84	0.43
47:DF:125:GLY:HA2	47:DF:162:ASP:CA	2.40	0.43
40:DH:131:SER:HB2	40:DH:141:LYS:CG	2.49	0.43
12:AM:18:LEU:HD23	12:AM:21:ILE:HD12	2.00	0.43
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.53	0.43
22:BA:65:U:C2'	22:BA:66:A:H5'	2.48	0.43
38:BM:46:ILE:HG13	38:BM:47:GLU:N	2.32	0.43
49:BR:63:VAL:O	49:BR:63:VAL:HG23	2.18	0.43
3:AD:146:GLU:HA	3:AD:149:LYS:CG	2.43	0.43
40:DH:96:THR:CG2	40:DH:97:ARG:H	2.18	0.43
23:BB:2848:G:N2	23:BB:2867:G:C2	2.85	0.43
4:AE:93:VAL:HG22	4:AE:126:ALA:HB1	2.00	0.43
37:BL:115:GLU:OE1	37:BL:115:GLU:N	2.52	0.43
50:BT:18:GLU:O	50:BT:20:ALA:N	2.48	0.43
23:BB:2190:G:H2'	23:BB:2191:A:C8	2.53	0.43
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CB	2.49	0.43
27:BK:75:SER:HB2	28:BP:73:PHE:HA	1.99	0.43
23:DB:1241:A:O4'	23:DB:1241:A:N3	2.50	0.43
23:BB:1811:G:O2'	23:BB:1812:U:H5'	2.19	0.43
23:DB:832:U:H2'	23:DB:833:A:C8	2.53	0.43
1:CA:714:G:H21	1:CA:777:A:H1'	1.83	0.43
7:AH:113:ARG:HE	7:AH:113:ARG:C	2.22	0.43
41:BJ:73:VAL:O	41:BJ:74:TYR:HB2	2.18	0.43
18:AS:25:GLY:O	18:AS:27:LYS:HE2	2.18	0.43
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.46	0.43
27:DK:24:VAL:CG1	27:DK:33:ALA:HB2	2.47	0.43
12:CM:2:ARG:O	12:CM:4:ALA:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:60:ARG:O	17:CR:64:LEU:HD13	2.17	0.43
46:DU:82:VAL:CG1	46:DU:93:ARG:HB3	2.46	0.43
26:BD:67:HIS:O	26:BD:70:LYS:HB3	2.19	0.43
1:CA:1015:G:N2	1:CA:1218:C:O2	2.51	0.43
23:BB:1846:G:N2	23:BB:1848:A:N6	2.67	0.43
47:BF:79:ARG:H	47:BF:82:TYR:HB2	1.84	0.43
47:DF:37:MET:HG2	47:DF:52:ALA:HB1	2.00	0.43
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.19	0.43
23:BB:1783:A:N1	23:BB:2587:A:H2'	2.34	0.43
23:DB:1563:U:O2'	23:DB:1564:C:H5'	2.19	0.43
22:DA:4:C:H2'	22:DA:5:U:H6	1.84	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
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.18	0.43
48:DG:9:VAL:O	48:DG:11:PRO:HD3	2.18	0.43
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.81	0.43
1:CA:872:A:C4	1:CA:874:G:N7	2.87	0.43
1:AA:85:U:O2	1:AA:85:U:O4'	2.35	0.43
1:CA:476:U:H2'	1:CA:477:C:O4'	2.18	0.43
23:DB:672:C:H2'	23:DB:673:C:C6	2.53	0.43
53:B6:142:LYS:HE2	53:B6:142:LYS:HA	2.00	0.43
6:AG:69:ARG:HA	6:AG:99:ALA:HB2	2.01	0.43
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.47	0.43
1:AA:591:U:H2'	1:AA:592:G:C8	2.53	0.43
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.33	0.43
50:BT:45:ALA:O	50:BT:48:GLN:HB2	2.19	0.43
23:BB:2671:G:H2'	23:BB:2672:U:H6	1.82	0.43
39:DX:22:LEU:HG	39:DX:23:ARG:HG2	2.01	0.43
4:CE:44:ARG:HD2	4:CE:72:ASN:HD22	1.82	0.43
1:CA:1366:C:O2'	1:CA:1367:C:H5'	2.19	0.43
23:DB:2298:A:C2	23:DB:2321:U:C5	3.06	0.43
23:BB:1900:A:N1	23:BB:1970:A:C5	2.86	0.43
42:BN:24:MET:CG	42:BN:44:LEU:HD22	2.49	0.43
48:BG:54:ARG:HD2	48:BG:57:TYR:CE1	2.54	0.43
23:BB:1183:U:O2'	23:BB:1184:U:H5'	2.18	0.43
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.53	0.43
25:DC:4:LYS:HB3	25:DC:5:CYS:H	1.56	0.43
23:DB:233:A:H61	23:DB:428:A:H61	1.65	0.43
45:BS:88:ARG:N	45:BS:92:ARG:O	2.49	0.43
23:BB:758:C:O2	23:BB:1981:A:H2	2.02	0.43
1:CA:605:U:H2'	1:CA:606:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.48	0.43
23:BB:771:G:O2'	23:BB:772:C:H5'	2.19	0.43
17:AR:36:GLY:HA3	17:AR:70:THR:HA	2.00	0.43
43:DO:73:ALA:O	43:DO:77:ALA:N	2.52	0.43
23:DB:620:G:O6	29:DE:98:LYS:HE2	2.18	0.43
16:AQ:14:ASP:OD1	16:AQ:53:GLY:HA2	2.17	0.43
23:BB:1671:U:H2'	23:BB:1673:G:OP2	2.18	0.43
23:DB:2199:A:H5'	23:DB:2200:C:OP2	2.17	0.43
2:AC:88:LYS:C	2:AC:88:LYS:HD2	2.39	0.43
1:CA:596:A:H2'	1:CA:597:G:H8	1.83	0.43
16:AQ:42:LYS:O	16:AQ:43:LEU:HD12	2.19	0.43
25:DC:169:ALA:O	25:DC:185:ALA:HB3	2.18	0.43
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.66	0.43
47:DF:174:PHE:HA	47:DF:175:PRO:HD2	1.87	0.43
47:DF:33:ILE:HG22	47:DF:34:THR:N	2.33	0.43
53:D6:38:LEU:O	53:D6:41:LEU:HB2	2.18	0.43
40:DH:2:GLN:O	40:DH:3:VAL:O	2.37	0.43
52:BW:40:ARG:HE	52:BW:45:HIS:HE1	1.66	0.43
29:DE:3:LEU:O	29:DE:12:LEU:HB2	2.19	0.43
10:CK:70:ALA:HA	10:CK:73:VAL:CG2	2.49	0.43
1:AA:1133:G:O2'	1:AA:1134:G:H5'	2.19	0.43
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.51	0.43
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	2.01	0.43
26:DD:15:PHE:CD2	28:DP:77:SER:HA	2.53	0.43
2:AC:125:ARG:O	2:AC:126:ARG:HB2	2.18	0.43
12:CM:52:ILE:HA	12:CM:55:LEU:HG	2.00	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
1:AA:597:G:H2'	1:AA:598:U:H5'	2.01	0.43
25:DC:90:ILE:HG23	25:DC:91:ALA:N	2.32	0.43
23:BB:1063:G:O2'	24:BI:88:GLY:HA3	2.18	0.43
40:BH:9:VAL:CG1	40:BH:12:LEU:HG	2.48	0.43
24:BI:32:VAL:HG22	24:BI:60:VAL:HG21	2.01	0.43
1:AA:865:A:H2'	1:AA:866:C:H6	1.80	0.43
44:BQ:87:VAL:HG12	44:BQ:88:GLU:N	2.33	0.43
41:BJ:23:LYS:HZ2	41:BJ:142:ILE:HG23	1.84	0.43
47:DF:41:GLU:O	47:DF:43:ILE:N	2.52	0.43
47:DF:45:ASP:C	47:DF:47:LYS:H	2.22	0.43
2:CC:137:VAL:HA	2:CC:148:ILE:CD1	2.39	0.43
48:DG:167:VAL:O	48:DG:168:VAL:HB	2.19	0.43
19:CT:83:ASN:C	19:CT:85:LEU:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:10:ALA:C	45:DS:12:SER:H	2.21	0.43
23:DB:126:A:O2'	23:DB:127:A:H5'	2.18	0.43
26:BD:13:ARG:HG3	26:BD:15:PHE:CE1	2.53	0.43
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.18	0.43
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.18	0.43
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.70	0.43
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.49	0.43
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.34	0.43
23:DB:372:G:N7	51:DZ:57:ARG:HB3	2.33	0.43
23:BB:2348:U:OP1	34:B3:37:THR:HG21	2.19	0.43
23:BB:2189:U:O2'	23:BB:2190:G:H5'	2.18	0.43
6:CG:110:ARG:HB2	6:CG:118:ARG:HB3	2.00	0.43
23:DB:1460:U:H3'	23:DB:1461:C:H5'	2.01	0.43
32:D4:22:VAL:O	32:D4:24:ARG:N	2.52	0.43
42:DN:96:ARG:HG2	42:DN:98:LEU:HD22	2.01	0.43
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.53	0.43
18:AS:39:ILE:HG13	18:AS:68:HIS:O	2.19	0.43
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.33	0.43
23:DB:1387:A:C5'	23:DB:1469:A:H1'	2.48	0.43
1:AA:656:G:O2'	1:AA:657:U:H5'	2.17	0.43
46:BU:49:PRO:O	46:BU:50:ALA:HB2	2.17	0.43
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.19	0.43
23:BB:518:G:H2'	23:BB:519:U:C6	2.54	0.43
1:AA:978:A:H5'	1:AA:1362:A:H61	1.84	0.43
1:AA:1258:G:C4	1:AA:1278:G:N2	2.86	0.43
1:CA:1446:A:H2'	1:CA:1447:A:H8	1.84	0.43
23:BB:2065:C:H2'	23:BB:2066:C:C6	2.53	0.43
23:BB:1685:C:H2'	23:BB:1686:C:H6	1.83	0.43
23:BB:2282:G:O3'	23:BB:2283:C:H4'	2.19	0.43
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.53	0.43
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.53	0.43
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.30	0.43
31:D0:2:VAL:HG12	31:D0:3:GLN:N	2.33	0.43
37:DL:60:ARG:O	37:DL:61:LEU:HD12	2.19	0.43
29:BE:37:ALA:O	29:BE:39:ALA:N	2.50	0.43
53:B6:26:ALA:C	53:B6:28:LEU:H	2.21	0.43
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.84	0.43
25:BC:245:THR:C	25:BC:247:TRP:N	2.72	0.43
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.54	0.43
23:BB:1930:G:C2'	23:BB:1931:U:OP2	2.67	0.43
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1251:C:OP2	44:BQ:5:ARG:NE	2.50	0.43
23:DB:263:G:H2'	23:DB:264:C:C6	2.53	0.43
23:BB:1399:C:H2'	23:BB:1400:U:C6	2.54	0.43
23:DB:670:A:H3'	37:DL:43:GLY:H	1.83	0.43
23:DB:235:U:H2'	23:DB:236:C:H6	1.83	0.43
6:AG:125:ASP:HB3	6:AG:131:GLY:N	2.34	0.43
17:AR:66:LEU:O	17:AR:67:LEU:HG	2.18	0.43
2:CC:122:GLN:O	2:CC:127:VAL:HG22	2.19	0.43
23:BB:2103:C:H3'	23:BB:2104:C:O2	2.19	0.43
26:BD:125:TRP:CD1	26:BD:160:LYS:HB3	2.53	0.43
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.84	0.43
1:CA:177:G:N3	1:CA:177:G:O4'	2.51	0.43
48:DG:77:GLY:HA3	48:DG:135:ALA:O	2.19	0.43
43:BO:56:LYS:HG2	43:BO:60:GLU:OE1	2.19	0.43
25:DC:196:ASN:O	25:DC:197:ALA:HB3	2.18	0.43
4:AE:79:THR:OG1	4:AE:97:PRO:HA	2.19	0.43
23:BB:2641:G:H2'	23:BB:2642:G:H8	1.82	0.43
23:BB:193:U:H4'	23:BB:803:U:H5'	2.01	0.43
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.19	0.43
23:DB:1076:C:O2'	23:DB:1077:A:H5'	2.19	0.43
1:CA:687:A:C2	1:CA:704:A:C5	3.07	0.43
14:CO:31:LEU:HA	14:CO:31:LEU:HD23	1.87	0.43
30:BY:46:MET:HB3	30:BY:46:MET:HE2	1.76	0.43
33:B1:31:GLU:H	33:B1:31:GLU:CD	2.21	0.43
11:CL:108:ASP:O	11:CL:110:LYS:HG2	2.18	0.43
37:DL:124:GLY:CA	37:DL:143:GLU:HG3	2.49	0.43
53:D6:62:ASP:OD1	53:D6:65:THR:HB	2.18	0.43
23:BB:2313:C:H5''	47:BF:87:LYS:CE	2.49	0.43
52:DW:79:ILE:HG22	52:DW:80:SER:N	2.33	0.43
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.50	0.43
48:BG:34:ARG:HG2	48:BG:34:ARG:HH11	1.84	0.43
23:BB:2570:G:H2'	23:BB:2571:U:O4'	2.19	0.43
40:DH:12:LEU:HD21	40:DH:25:TYR:HE2	1.83	0.43
1:CA:982:U:OP2	13:CN:60:ARG:NH1	2.52	0.43
41:DJ:3:THR:CB	41:DJ:44:TYR:OH	2.67	0.43
11:CL:120:ARG:CG	11:CL:121:PRO:HD2	2.36	0.43
45:BS:2:GLU:O	45:BS:3:THR:C	2.57	0.43
40:BH:80:ILE:CD1	40:BH:102:ALA:HB2	2.44	0.43
2:AC:126:ARG:HA	2:AC:126:ARG:NH1	2.32	0.43
12:CM:12:LYS:H	12:CM:44:ILE:CD1	2.31	0.43
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:83:ASN:C	19:AT:85:LEU:H	2.21	0.43
3:AD:160:LEU:HD23	3:AD:164:ARG:HH21	1.83	0.43
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	2.01	0.43
23:DB:1161:C:H2'	23:DB:1162:G:C8	2.54	0.43
49:DR:25:LEU:H	49:DR:94:THR:HG21	1.83	0.43
52:BW:58:LEU:N	52:BW:58:LEU:HD22	2.34	0.43
40:BH:10:ALA:C	40:BH:12:LEU:H	2.22	0.43
51:BZ:49:LEU:HD12	51:BZ:49:LEU:N	2.28	0.43
4:CE:47:PHE:HZ	4:CE:137:ARG:HH21	1.66	0.43
1:AA:921:U:H2'	1:AA:922:G:O4'	2.19	0.43
29:DE:146:VAL:CG1	29:DE:187:VAL:HG23	2.48	0.43
10:CK:23:HIS:O	10:CK:29:THR:HA	2.19	0.43
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.19	0.43
47:BF:45:ASP:C	47:BF:47:LYS:H	2.22	0.43
48:DG:168:VAL:HG12	48:DG:170:THR:CG2	2.48	0.43
23:DB:1287:A:O2'	23:DB:1288:G:H5'	2.18	0.43
23:DB:2547:A:H5''	27:DK:29:HIS:NE2	2.34	0.43
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.49	0.43
40:DH:122:LEU:C	40:DH:124:THR:H	2.21	0.43
1:AA:613:C:H2'	1:AA:614:C:C6	2.53	0.43
23:BB:363:G:H2'	23:BB:364:C:C5	2.53	0.43
31:B0:27:LEU:HB2	31:B0:28:SER:H	1.65	0.43
38:BM:46:ILE:CG1	38:BM:47:GLU:N	2.81	0.43
42:BN:61:ALA:C	42:BN:63:ARG:H	2.22	0.43
27:BK:64:ARG:HD2	27:BK:102:PRO:O	2.19	0.43
27:DK:87:LEU:HD12	27:DK:92:GLU:HA	2.00	0.43
23:DB:1534:U:O2'	23:DB:1535:A:H2'	2.19	0.43
1:CA:1060:U:OP1	9:CJ:53:ILE:HD11	2.18	0.43
23:DB:627:A:N6	37:DL:112:LEU:HD23	2.32	0.43
23:BB:1797:G:C6	23:BB:1823:G:C6	3.07	0.43
48:BG:37:ASN:HD22	48:BG:38:ASP:H	1.67	0.43
23:DB:2787:C:H2'	23:DB:2788:C:C6	2.53	0.43
48:BG:10:VAL:N	48:BG:48:THR:HG22	2.34	0.43
23:DB:1260:A:O2'	23:DB:1261:C:H5'	2.19	0.43
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.18	0.43
1:CA:1342:C:O2'	8:CI:125:GLN:HB2	2.19	0.43
8:CI:122:ARG:HG3	8:CI:122:ARG:HH11	1.82	0.43
23:BB:1680:U:H2'	23:BB:1681:G:O4'	2.18	0.43
29:DE:176:ASP:O	29:DE:180:LEU:HG	2.18	0.43
23:BB:2209:G:H2'	23:BB:2210:U:C5	2.52	0.43
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:492:C:H2'	1:AA:493:A:N3	2.34	0.43
23:DB:682:G:O2'	23:DB:683:U:H5'	2.19	0.43
1:AA:389:A:H3'	1:AA:390:U:C6	2.48	0.43
23:BB:545:U:H2'	23:BB:547:A:OP2	2.19	0.43
1:AA:8:A:H5'	4:AE:105:ILE:HG22	2.01	0.43
1:AA:411:A:O2'	1:AA:412:A:O4'	2.33	0.43
1:CA:431:A:C2	1:CA:432:A:H1'	2.54	0.43
12:AM:78:ARG:HH22	12:AM:82:LEU:HD11	1.83	0.43
23:BB:2606:C:O2'	23:BB:2607:G:H5'	2.18	0.43
1:AA:524:G:H2'	1:AA:525:C:H6	1.82	0.43
23:BB:2439:A:H4'	23:BB:2440:C:O5'	2.19	0.43
1:AA:872:A:C4	1:AA:874:G:N7	2.87	0.43
23:BB:1742:U:H2'	23:BB:1743:G:H8	1.82	0.43
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.18	0.43
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.51	0.43
23:BB:2694:G:H2'	23:BB:2695:U:C6	2.53	0.43
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.17	0.43
6:AG:58:LEU:HD23	6:AG:58:LEU:N	2.32	0.43
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.18	0.43
1:CA:207:C:H2'	1:CA:208:U:O4'	2.19	0.43
23:BB:823:C:H2'	23:BB:824:U:H6	1.79	0.43
1:AA:1297:G:H1'	1:AA:1298:U:C5	2.52	0.43
3:CD:17:ASP:C	3:CD:19:PHE:H	2.22	0.43
23:BB:1294:U:C2'	23:BB:1295:C:H5'	2.48	0.43
23:BB:686:U:O2'	36:B2:5:PHE:HA	2.19	0.43
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.54	0.43
1:CA:985:C:H2'	1:CA:986:U:C6	2.53	0.43
4:AE:55:VAL:O	4:AE:59:ILE:HG13	2.19	0.43
1:AA:385:C:O2'	1:AA:386:C:H5'	2.19	0.43
47:DF:131:VAL:O	47:DF:132:ARG:HB2	2.17	0.43
23:BB:1720:U:H2'	23:BB:1721:G:O4'	2.19	0.43
38:BM:105:MET:HB2	38:BM:117:PHE:HZ	1.84	0.43
1:AA:552:U:H4'	11:AL:82:ARG:CG	2.48	0.43
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.54	0.43
23:BB:2322:A:H3'	23:BB:2323:G:C8	2.52	0.43
23:BB:2098:U:H2'	23:BB:2099:U:C6	2.53	0.43
23:BB:377:G:H2'	23:BB:378:C:H6	1.84	0.43
7:CH:35:ILE:O	7:CH:39:LEU:HG	2.19	0.43
7:AH:25:THR:O	7:AH:26:MET:HB3	2.19	0.43
23:DB:40:U:O2'	23:DB:41:C:H5'	2.19	0.43
43:DO:36:TYR:CD2	43:DO:36:TYR:N	2.87	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:1197:G:O2'	23:BB:1198:U:H5'	2.19	0.43
1:CA:333:U:H2'	1:CA:334:C:C6	2.54	0.43
40:BH:104:THR:O	40:BH:104:THR:HG23	2.19	0.43
23:DB:2809:A:N6	23:DB:2891:U:H4'	2.34	0.43
23:DB:1063:G:O2'	23:DB:1064:C:H5'	2.18	0.43
8:CI:30:ASN:HA	8:CI:30:ASN:HD22	1.67	0.43
23:BB:910:A:H2'	23:BB:911:A:C8	2.53	0.43
6:AG:135:LYS:HD3	6:AG:139:ASP:OD2	2.19	0.43
1:AA:751:U:C2'	1:AA:752:G:H5'	2.48	0.43
23:BB:499:U:H2'	23:BB:500:G:O4'	2.19	0.43
49:DR:86:GLN:HB2	49:DR:86:GLN:HE21	1.55	0.43
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.19	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.43
23:DB:1671:U:N3	23:DB:1674:G:OP2	2.48	0.43
5:AF:74:LEU:HA	5:AF:77:THR:OG1	2.19	0.43
1:AA:692:U:H2'	1:AA:694:A:OP2	2.19	0.43
37:DL:92:LEU:HD23	37:DL:124:GLY:HA3	2.00	0.43
37:BL:118:THR:O	37:BL:120:VAL:HG23	2.19	0.43
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.18	0.43
5:CF:64:VAL:CG1	5:CF:65:GLU:N	2.81	0.43
40:BH:2:GLN:O	40:BH:3:VAL:O	2.37	0.43
23:DB:2269:G:H4'	52:DW:19:ARG:HH12	1.83	0.43
1:AA:1130:A:H5'	8:AI:19:PHE:CE2	2.54	0.43
8:AI:56:MET:O	8:AI:58:GLU:N	2.51	0.43
1:CA:812:G:OP2	1:CA:902:G:N2	2.50	0.43
35:DV:72:VAL:HG12	35:DV:93:ARG:CA	2.46	0.43
18:CS:14:LEU:O	18:CS:18:VAL:HG12	2.18	0.43
53:B6:29:ARG:O	53:B6:30:THR:O	2.37	0.43
53:B6:90:LEU:O	53:B6:92:PRO:HD3	2.19	0.43
45:DS:2:GLU:O	45:DS:107:VAL:O	2.37	0.43
20:CB:48:MET:HG2	20:CB:48:MET:H	1.36	0.43
48:BG:97:VAL:HA	48:BG:102:ILE:HA	2.01	0.43
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.44	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
45:BS:51:LEU:C	45:BS:53:SER:H	2.20	0.43
40:BH:144:VAL:HG12	40:BH:145:ASN:N	2.34	0.43
12:AM:16:ILE:HG23	12:AM:17:ALA:H	1.83	0.43
3:AD:164:ARG:HG3	3:AD:165:GLU:H	1.84	0.43
51:BZ:7:VAL:HG21	51:BZ:59:ILE:CD1	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.39	0.43
1:CA:62:U:H2'	1:CA:63:C:H6	1.80	0.43
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.54	0.43
44:BQ:106:THR:O	44:BQ:109:VAL:HB	2.19	0.43
29:DE:118:LEU:HD23	29:DE:186:VAL:HG13	2.00	0.43
47:BF:29:ARG:H	47:BF:29:ARG:CD	2.31	0.43
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.22	0.43
1:AA:80:A:C5	1:AA:81:A:H1'	2.53	0.43
48:DG:145:ALA:O	48:DG:148:ARG:HD2	2.18	0.43
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.84	0.43
48:BG:162:ARG:CZ	48:BG:168:VAL:HG21	2.49	0.43
1:CA:611:C:H2'	1:CA:612:C:H6	1.82	0.43
14:AO:71:LYS:HZ2	14:AO:72:ARG:HA	1.82	0.43
22:DA:9:G:OP1	43:DO:25:ARG:NH1	2.52	0.43
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.84	0.43
1:CA:1206:G:O4'	2:CC:193:GLY:N	2.52	0.43
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.54	0.43
38:BM:127:LYS:HD2	38:BM:127:LYS:N	2.32	0.43
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.54	0.43
1:CA:803:G:H2'	1:CA:804:U:O4'	2.18	0.43
32:D4:25:VAL:HB	32:D4:35:GLN:HE21	1.84	0.43
34:D3:20:GLY:HA3	34:D3:48:MET:CE	2.49	0.43
32:B4:9:LYS:O	32:B4:10:LEU:HD23	2.19	0.43
6:CG:43:TYR:HA	6:CG:46:LEU:HB3	2.01	0.43
23:BB:275:C:N3	23:BB:276:U:H1'	2.34	0.43
20:AB:118:THR:HA	20:AB:121:GLN:HB3	2.00	0.43
1:CA:560:A:C6	1:CA:566:G:O4'	2.71	0.43
23:BB:2727:A:O3'	27:BK:70:ARG:NH2	2.51	0.43
21:CU:24:LYS:NZ	21:CU:25:ALA:H	2.11	0.43
23:BB:1844:C:O3'	25:BC:255:LYS:HE2	2.18	0.43
1:AA:1320:C:H1'	18:AS:72:GLU:CA	2.49	0.43
23:BB:28:A:O2'	23:BB:29:U:H5'	2.17	0.43
25:BC:15:VAL:HG13	25:BC:204:LEU:O	2.19	0.43
3:AD:97:LEU:HD12	3:AD:136:VAL:HG22	2.01	0.43
18:CS:52:ASN:CG	18:CS:53:GLY:N	2.72	0.43
48:DG:10:VAL:HG13	48:DG:14:VAL:CG2	2.49	0.43
1:CA:1324:A:H2'	1:CA:1325:C:C6	2.54	0.43
20:CB:19:THR:O	20:CB:20:ARG:HD2	2.19	0.43
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.53	0.43
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.45	0.43
7:AH:45:ILE:C	7:AH:63:LYS:HE3	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.49	0.43
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.84	0.43
10:AK:82:GLU:HG3	10:AK:107:THR:OG1	2.19	0.43
3:CD:202:LEU:O	3:CD:202:LEU:HD12	2.19	0.43
16:CQ:30:HIS:HD2	16:CQ:37:ILE:HD11	1.84	0.43
23:DB:2332:C:C1'	23:DB:2336:A:N7	2.82	0.43
23:DB:809:G:H2'	23:DB:810:U:H6	1.82	0.43
1:AA:355:C:C2'	1:AA:356:A:H5'	2.48	0.43
1:CA:1297:G:H1'	1:CA:1298:U:C5	2.53	0.43
23:BB:1455:G:H5'	42:BN:60:VAL:HG21	2.00	0.43
1:AA:622:A:H2'	1:AA:623:C:H5'	1.99	0.43
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.18	0.43
1:CA:159:G:H5'	1:CA:160:A:OP2	2.18	0.43
22:DA:52:A:H4'	22:DA:52:A:OP1	2.18	0.43
23:BB:2109:U:H2'	23:BB:2110:G:O4'	2.19	0.43
2:CC:106:ARG:O	2:CC:106:ARG:HG2	2.19	0.43
23:BB:1144:A:O2'	23:BB:1145:C:H5'	2.19	0.43
23:DB:739:A:H5''	23:DB:1784:A:C2	2.54	0.43
2:AC:106:ARG:HG2	2:AC:106:ARG:O	2.19	0.43
23:BB:1468:U:H2'	23:BB:1522:A:N6	2.34	0.43
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.81	0.43
3:CD:100:VAL:HG11	3:CD:142:VAL:HG21	2.01	0.43
1:AA:643:C:H2'	1:AA:644:U:H6	1.84	0.43
23:BB:2752:C:H2'	23:BB:2752:C:O2	2.18	0.43
33:D1:35:LEU:N	33:D1:35:LEU:CD2	2.82	0.43
6:AG:63:VAL:HG12	6:AG:127:ALA:HB1	2.01	0.43
25:BC:196:ASN:O	25:BC:197:ALA:HB3	2.19	0.43
2:CC:5:HIS:O	2:CC:9:ILE:HG22	2.19	0.43
1:AA:177:G:N3	1:AA:177:G:O4'	2.51	0.43
1:AA:52:C:H2'	1:AA:53:A:H8	1.84	0.43
23:DB:132:G:H2'	23:DB:133:U:C6	2.53	0.43
23:BB:2702:G:H2'	23:BB:2703:C:C6	2.53	0.43
1:CA:704:A:C2	1:CA:705:G:H1'	2.53	0.43
1:AA:1281:C:H5'	1:AA:1282:C:H5	1.84	0.43
28:BP:64:SER:O	28:BP:66:GLY:N	2.47	0.43
23:DB:2864:G:H2'	23:DB:2865:U:C6	2.54	0.43
43:DO:28:VAL:HG21	43:DO:103:VAL:HG13	2.00	0.43
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.19	0.43
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.19	0.43
14:AO:15:PHE:CD1	14:AO:15:PHE:N	2.87	0.43
14:AO:31:LEU:HA	14:AO:31:LEU:HD23	1.89	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:54:ARG:C	52:BW:56:HIS:H	2.22	0.43
23:DB:202:U:H2'	23:DB:203:A:O4'	2.19	0.43
23:DB:760:G:C2'	23:DB:761:A:H5'	2.49	0.43
1:AA:691:G:H1'	1:AA:696:A:N6	2.33	0.43
37:BL:75:ALA:HB3	37:BL:108:ALA:HB2	2.01	0.43
47:DF:135:ILE:O	47:DF:135:ILE:HD12	2.19	0.43
5:CF:38:ARG:NH1	5:CF:96:VAL:HG12	2.34	0.43
43:BO:64:TYR:HD2	43:BO:67:ASN:HB2	1.84	0.43
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.54	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
48:DG:30:GLY:N	48:DG:78:VAL:HA	2.34	0.43
26:BD:187:LEU:HD12	26:BD:188:LEU:N	2.34	0.43
53:B6:41:LEU:CD2	53:B6:83:ILE:HD13	2.49	0.43
48:BG:34:ARG:N	48:BG:34:ARG:CD	2.81	0.43
8:CI:19:PHE:HB2	8:CI:63:TYR:CB	2.45	0.43
44:DQ:63:ARG:HG3	44:DQ:63:ARG:H	1.57	0.43
25:BC:90:ILE:HG23	25:BC:91:ALA:N	2.33	0.43
1:CA:1492:A:H2'	1:CA:1493:A:H8	1.84	0.43
29:DE:148:ILE:HA	29:DE:187:VAL:CB	2.43	0.43
23:DB:2231:U:H2'	23:DB:2232:C:O4'	2.18	0.43
23:BB:960:A:H61	38:BM:82:MET:CE	2.32	0.43
29:DE:111:GLU:HG2	29:DE:114:ARG:HH21	1.84	0.43
38:DM:38:ARG:HA	38:DM:98:PRO:HD3	2.01	0.43
1:AA:88:U:O2'	1:AA:89:U:C6	2.72	0.43
46:DU:73:ASN:OD1	46:DU:75:ALA:HB3	2.17	0.43
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	2.00	0.43
48:BG:106:LEU:N	48:BG:106:LEU:HD23	2.34	0.43
48:BG:91:VAL:O	48:BG:93:TYR:N	2.49	0.43
27:DK:43:ILE:HD12	27:DK:56:ASP:HB2	2.01	0.43
33:D1:36:LYS:HA	33:D1:46:VAL:O	2.19	0.43
23:BB:2444:G:P	29:BE:63:LYS:HD2	2.59	0.43
23:BB:116:C:O2'	23:BB:117:G:H5'	2.19	0.43
23:BB:1350:C:H2'	23:BB:1350:C:O2	2.19	0.43
23:BB:1628:G:O2'	23:BB:1629:U:H5'	2.18	0.43
23:DB:90:U:H2'	23:DB:91:A:C2	2.54	0.43
31:B0:41:HIS:O	31:B0:42:ILE:O	2.37	0.43
1:CA:947:G:H4'	12:CM:107:THR:OG1	2.18	0.43
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.53	0.43
1:AA:947:G:H2'	1:AA:948:C:H6	1.83	0.43
34:D3:22:LYS:HA	34:D3:47:ALA:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:24:VAL:HG23	3:CD:25:ARG:N	2.32	0.43
38:BM:93:VAL:HG22	38:BM:94:ALA:H	1.83	0.43
3:CD:7:LYS:HB3	3:CD:20:LEU:HB3	2.01	0.43
43:BO:106:LEU:HG	43:BO:107:ALA:N	2.34	0.43
1:AA:410:G:H2'	1:AA:429:U:C5	2.54	0.43
42:BN:107:ASN:ND2	45:BS:40:ASN:ND2	2.62	0.43
20:CB:101:THR:HG23	20:CB:102:ASN:H	1.83	0.43
25:BC:41:GLY:CA	25:BC:53:ILE:HG21	2.42	0.43
23:DB:2793:C:H2'	23:DB:2794:C:C6	2.54	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
6:CG:118:ARG:HG3	6:CG:118:ARG:H	1.65	0.43
1:CA:1160:G:H4'	20:CB:130:LYS:HB2	2.01	0.43
9:CJ:8:ILE:N	9:CJ:8:ILE:HD12	2.34	0.43
20:AB:121:GLN:NE2	20:AB:122:ASP:H	2.12	0.43
23:DB:958:U:H5''	23:DB:959:A:O5'	2.18	0.43
18:AS:39:ILE:HB	18:AS:66:VAL:O	2.19	0.43
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.19	0.43
23:DB:63:A:OP2	23:DB:63:A:H8	2.02	0.43
23:BB:1824:G:OP1	25:BC:51:ARG:HD3	2.19	0.43
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.18	0.43
23:BB:2064:C:H1'	23:BB:2450:A:C5	2.54	0.43
1:AA:152:A:H2'	1:AA:153:C:O4'	2.18	0.43
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.19	0.43
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.18	0.43
1:AA:537:G:H5''	11:AL:109:ARG:NH1	2.34	0.43
1:AA:490:C:H2'	1:AA:491:G:O4'	2.19	0.43
33:B1:3:GLY:C	33:B1:5:ARG:N	2.72	0.43
31:B0:2:VAL:HG12	31:B0:3:GLN:H	1.84	0.43
19:AT:24:ARG:HD3	19:AT:28:ARG:NH2	2.34	0.43
1:CA:220:G:O2'	1:CA:221:C:H5'	2.18	0.43
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.53	0.43
12:AM:77:LYS:O	12:AM:80:MET:HB2	2.19	0.43
1:CA:1272:G:H2'	1:CA:1273:C:C6	2.54	0.43
53:D6:123:GLU:O	53:D6:127:VAL:HG23	2.19	0.43
1:CA:766:A:H2'	1:CA:767:A:O4'	2.18	0.43
46:DU:40:LEU:N	46:DU:40:LEU:HD12	2.32	0.43
23:DB:1613:G:O4'	36:D2:3:ARG:HG3	2.18	0.43
1:CA:356:A:H1'	1:CA:368:U:O2'	2.18	0.43
1:AA:587:G:H4'	7:AH:3:GLN:HA	2.01	0.43
22:DA:24:G:O2'	22:DA:25:U:H5''	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:672:C:O2'	23:DB:673:C:H5'	2.18	0.43
23:DB:1467:U:O2'	23:DB:1468:U:H5'	2.19	0.43
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.19	0.43
10:AK:16:SER:N	10:AK:77:GLY:O	2.43	0.43
23:DB:660:C:H2'	23:DB:661:A:C8	2.54	0.43
16:AQ:10:ARG:HG3	16:AQ:10:ARG:O	2.19	0.43
23:BB:2521:C:H2'	23:BB:2522:U:C6	2.54	0.43
3:CD:103:ARG:NH2	3:CD:110:ARG:HH21	2.16	0.43
13:CN:47:LEU:C	13:CN:49:THR:N	2.71	0.43
1:AA:392:C:H2'	1:AA:393:A:C8	2.54	0.43
23:BB:208:C:H2'	23:BB:209:C:C6	2.53	0.43
1:AA:1114:C:H2'	1:AA:1115:U:H6	1.84	0.43
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.19	0.43
23:BB:1064:C:O4'	24:BI:90:GLY:HA2	2.18	0.43
19:CT:49:ALA:HA	19:CT:52:GLU:CD	2.39	0.43
1:AA:555:U:H2'	1:AA:556:C:H6	1.83	0.43
23:DB:2206:C:O2'	23:DB:2207:C:H5'	2.19	0.43
1:CA:137:U:H2'	1:CA:138:G:H8	1.84	0.43
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.54	0.43
23:BB:1994:C:O2'	23:BB:1995:U:H5'	2.18	0.43
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.53	0.43
1:CA:197:A:H1'	1:CA:198:G:C1'	2.49	0.43
23:BB:57:C:H2'	23:BB:58:G:H8	1.84	0.43
23:DB:745:G:O2'	23:DB:748:G:H1'	2.19	0.43
23:BB:2779:U:H5''	23:BB:2780:G:H3'	2.01	0.43
1:CA:52:C:H2'	1:CA:53:A:C8	2.53	0.43
42:BN:70:THR:O	42:BN:70:THR:OG1	2.37	0.43
1:CA:1101:A:H62	20:CB:173:LYS:HE3	1.83	0.43
38:DM:25:ASP:N	38:DM:25:ASP:OD2	2.52	0.43
23:DB:2760:C:H2'	23:DB:2760:C:O2	2.19	0.43
28:DP:83:ILE:HD13	28:DP:83:ILE:O	2.18	0.43
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.54	0.43
37:BL:81:ASP:O	37:BL:82:LEU:HB2	2.19	0.42
51:DZ:39:TRP:NE1	51:DZ:41:GLU:HG2	2.34	0.42
29:BE:161:ALA:HB1	29:BE:167:VAL:HG22	2.01	0.42
1:CA:734:G:H2'	1:CA:735:C:H6	1.84	0.42
52:BW:29:SER:O	52:BW:30:VAL:HB	2.19	0.42
53:D6:38:LEU:CD1	53:D6:66:LEU:HD23	2.47	0.42
9:AJ:14:ASP:OD1	9:AJ:17:LEU:HB2	2.19	0.42
10:AK:109:ILE:HG22	21:AU:16:ARG:HH12	1.84	0.42
21:AU:3:ILE:CG2	21:AU:19:LYS:HD2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	2.34	0.42
10:AK:70:ALA:HA	10:AK:73:VAL:CG2	2.49	0.42
23:DB:2572:A:P	26:DD:152:PRO:HD3	2.59	0.42
23:DB:851:C:H2'	23:DB:852:U:C6	2.54	0.42
1:CA:1314:C:N4	18:CS:3:SER:HB3	2.32	0.42
13:AN:52:ARG:C	13:AN:54:SER:N	2.72	0.42
48:DG:43:LYS:N	48:DG:50:THR:O	2.47	0.42
46:DU:11:ILE:HA	46:DU:20:LYS:O	2.19	0.42
53:B6:30:THR:HG21	53:B6:182:GLU:OE2	2.19	0.42
48:BG:34:ARG:NH1	48:BG:34:ARG:HG2	2.33	0.42
48:BG:8:VAL:HG22	48:BG:51:PHE:HE2	1.84	0.42
41:BJ:45:THR:H	41:BJ:46:PRO:CD	2.25	0.42
48:DG:97:VAL:HA	48:DG:102:ILE:HA	2.01	0.42
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.19	0.42
1:AA:961:U:N3	1:AA:983:A:N6	2.67	0.42
6:AG:145:GLU:C	6:AG:148:LYS:H	2.22	0.42
19:AT:81:GLN:C	19:AT:83:ASN:N	2.72	0.42
33:B1:50:GLU:O	33:B1:51:ALA:HB2	2.19	0.42
25:DC:140:VAL:O	25:DC:141:HIS:HB2	2.19	0.42
51:BZ:63:GLY:O	51:BZ:67:VAL:HG23	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
26:DD:177:VAL:HG23	26:DD:177:VAL:O	2.19	0.42
23:BB:956:G:H1'	38:BM:82:MET:HE1	2.00	0.42
37:DL:3:LEU:O	37:DL:5:THR:N	2.51	0.42
16:CQ:74:LEU:HD13	16:CQ:74:LEU:C	2.40	0.42
48:BG:90:GLY:HA2	48:BG:159:LYS:HB3	2.01	0.42
40:BH:147:VAL:HG12	40:BH:148:ALA:H	1.84	0.42
20:CB:113:LEU:HD23	20:CB:114:LYS:N	2.34	0.42
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.19	0.42
18:AS:17:LYS:HB3	18:AS:30:LEU:HD22	2.00	0.42
1:AA:948:C:H2'	1:AA:949:A:H8	1.85	0.42
18:CS:58:PRO:O	18:CS:59:VAL:HG13	2.18	0.42
23:DB:2151:U:O2'	23:DB:2152:G:H5'	2.19	0.42
2:CC:26:LYS:CG	2:CC:27:GLU:HG3	2.47	0.42
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.32	0.42
23:DB:1168:G:C6	23:DB:1182:G:C6	3.07	0.42
1:CA:1060:U:C5'	9:CJ:53:ILE:HG12	2.49	0.42
1:CA:481:G:O2'	1:CA:482:A:H8	2.02	0.42
23:BB:2020:A:H5'	31:B0:8:THR:HB	2.01	0.42
9:AJ:53:ILE:HG13	13:AN:84:ARG:NE	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:51:GLU:HG2	7:CH:52:GLY:N	2.29	0.42
20:AB:125:PHE:CD2	20:AB:126:ASP:N	2.87	0.42
23:BB:2051:A:H5'	23:BB:2578:G:O4'	2.19	0.42
42:DN:96:ARG:HG2	42:DN:98:LEU:CD2	2.49	0.42
21:CU:25:ALA:C	21:CU:27:VAL:H	2.22	0.42
18:AS:66:VAL:C	18:AS:68:HIS:H	2.22	0.42
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.71	0.42
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.52	0.42
1:AA:36:C:O2'	1:AA:37:U:H5'	2.19	0.42
1:AA:1350:A:OP2	8:AI:119:LYS:HE3	2.19	0.42
25:DC:202:ARG:HH21	25:DC:202:ARG:HB2	1.83	0.42
25:DC:202:ARG:HH21	25:DC:202:ARG:CB	2.31	0.42
12:CM:77:LYS:O	12:CM:80:MET:HB2	2.19	0.42
5:CF:46:GLN:CD	5:CF:47:LEU:H	2.22	0.42
23:BB:2373:G:O2'	23:BB:2374:C:H5'	2.19	0.42
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.18	0.42
26:DD:67:HIS:O	26:DD:70:LYS:HB3	2.19	0.42
23:DB:2479:U:OP1	23:DB:2537:U:H1'	2.18	0.42
23:BB:2485:G:C2'	23:BB:2486:C:H5'	2.48	0.42
23:DB:2359:C:O3'	34:D3:50:SER:CB	2.64	0.42
4:CE:30:PHE:CD2	4:CE:30:PHE:N	2.87	0.42
1:CA:404:G:O2'	1:CA:405:U:H5'	2.19	0.42
1:AA:170:U:O2'	1:AA:171:A:H5'	2.18	0.42
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.53	0.42
25:DC:245:THR:C	25:DC:247:TRP:N	2.71	0.42
42:BN:41:ALA:C	42:BN:43:GLU:N	2.72	0.42
4:AE:53:ARG:NH2	4:AE:54:GLU:HG3	2.33	0.42
23:DB:1486:U:O2'	23:DB:1487:U:H5'	2.19	0.42
16:AQ:30:HIS:HD2	16:AQ:37:ILE:HD11	1.84	0.42
23:DB:265:A:O2'	23:DB:266:G:C4'	2.67	0.42
23:BB:689:A:H2'	23:BB:690:G:H8	1.84	0.42
23:DB:2756:U:C1'	23:DB:2757:A:H5''	2.48	0.42
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.34	0.42
44:BQ:73:ILE:HG13	44:BQ:74:SER:N	2.34	0.42
4:CE:55:VAL:O	4:CE:59:ILE:HG13	2.19	0.42
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.54	0.42
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	2.01	0.42
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.19	0.42
1:CA:230:G:O2'	1:CA:231:U:H5'	2.18	0.42
7:AH:54:THR:HG23	7:AH:55:LYS:N	2.34	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)
28:DP:97:TYR:O	28:DP:100:ARG:HD3	2.20	0.42
13:AN:92:ILE:HD12	13:AN:92:ILE:N	2.34	0.42
1:AA:648:A:O2'	1:AA:649:A:H5'	2.19	0.42
29:BE:136:GLN:NE2	29:BE:139:LYS:HD3	2.34	0.42
23:BB:2526:G:N3	32:B4:1:MET:N	2.62	0.42
7:CH:25:THR:O	7:CH:26:MET:HB3	2.19	0.42
1:AA:747:A:N6	1:AA:748:G:C6	2.87	0.42
23:DB:1754:A:OP1	28:DP:93:LYS:HD3	2.19	0.42
1:AA:802:A:H2'	1:AA:803:G:O4'	2.18	0.42
1:CA:545:C:O2'	1:CA:546:A:H5'	2.19	0.42
1:AA:308:C:H2'	1:AA:309:A:H8	1.84	0.42
23:DB:699:A:H4'	23:DB:1634:A:C5	2.54	0.42
23:BB:305:C:O2'	23:BB:306:U:H5'	2.19	0.42
1:AA:728:A:O2'	1:AA:729:A:H5'	2.19	0.42
1:AA:185:U:H2'	1:AA:186:C:H6	1.84	0.42
23:BB:2223:G:H2'	23:BB:2224:G:H5'	2.01	0.42
47:BF:68:LYS:HG3	47:BF:81:GLY:O	2.19	0.42
1:CA:66:A:H4'	1:CA:173:U:C4	2.54	0.42
23:DB:2752:C:H2'	23:DB:2753:A:O4'	2.19	0.42
23:DB:1392:A:C5	23:DB:1393:A:C6	3.07	0.42
1:AA:1532:U:C2	1:AA:1534:A:H5"	2.54	0.42
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.19	0.42
1:CA:1534:A:N6	21:CU:44:ARG:NH2	2.56	0.42
10:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.49	0.42
25:DC:131:MET:HE2	25:DC:187:CYS:O	2.18	0.42
37:DL:96:LYS:HE3	37:DL:102:GLY:O	2.19	0.42
21:AU:3:ILE:HG22	21:AU:19:LYS:NZ	2.34	0.42
45:BS:25:ARG:NE	45:BS:74:ILE:HG23	2.35	0.42
23:DB:2269:G:O3'	52:DW:18:LYS:HG2	2.19	0.42
35:DV:77:VAL:CG2	35:DV:89:ILE:HG23	2.43	0.42
48:DG:6:ALA:HB3	48:DG:68:ARG:CG	2.49	0.42
46:DU:10:VAL:O	46:DU:21:ARG:HG2	2.18	0.42
46:BU:21:ARG:HG3	46:BU:21:ARG:HH11	1.83	0.42
46:BU:10:VAL:HA	46:BU:70:ALA:O	2.19	0.42
35:BV:35:GLU:HG3	35:BV:93:ARG:CZ	2.49	0.42
48:BG:43:LYS:O	48:BG:49:LEU:HA	2.20	0.42
23:BB:2748:A:H1'	48:BG:66:THR:HB	2.01	0.42
20:CB:16:GLY:O	20:CB:17:HIS:HB2	2.18	0.42
50:BT:43:ILE:O	50:BT:46:ALA:HB3	2.18	0.42
45:BS:28:LYS:HD2	45:BS:30:SER:H	1.85	0.42
26:BD:32:ASN:HB3	26:BD:50:VAL:HG21	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
6:AG:146:ALA:C	10:AK:55:ARG:NH2	2.73	0.42
23:DB:358:U:H2'	23:DB:359:G:O4'	2.19	0.42
23:DB:2109:U:O2'	23:DB:2110:G:H5'	2.18	0.42
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.34	0.42
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.65	0.42
39:DX:2:LYS:HB2	39:DX:3:ALA:H	1.62	0.42
40:DH:128:HIS:C	40:DH:143:ILE:HG23	2.39	0.42
40:DH:125:THR:CA	40:DH:146:VAL:HB	2.48	0.42
23:BB:2845:U:O3'	28:BP:52:ARG:NH1	2.51	0.42
28:BP:52:ARG:HG2	28:BP:52:ARG:NH1	2.32	0.42
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	2.00	0.42
41:DJ:127:GLY:O	41:DJ:128:ASN:HB2	2.19	0.42
31:B0:28:SER:HB2	31:B0:39:ARG:HG2	2.01	0.42
1:CA:801:U:H2'	1:CA:802:A:H8	1.84	0.42
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.19	0.42
32:D4:11:CYS:HB3	32:D4:33:HIS:HE1	1.84	0.42
32:B4:25:VAL:HB	32:B4:35:GLN:HE21	1.84	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
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	2.01	0.42
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.53	0.42
1:AA:676:A:O2'	1:AA:677:U:H5'	2.18	0.42
27:DK:115:ILE:CG2	27:DK:116:ILE:N	2.81	0.42
1:CA:121:U:H3'	1:CA:121:U:OP1	2.18	0.42
41:DJ:35:ARG:HG3	41:DJ:52:ASP:OD1	2.19	0.42
25:BC:204:LEU:CD2	25:BC:209:ALA:HB1	2.49	0.42
48:DG:10:VAL:N	48:DG:48:THR:HG22	2.35	0.42
23:BB:851:C:O2'	23:BB:852:U:H5'	2.18	0.42
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.55	0.42
26:DD:193:VAL:O	26:DD:194:PRO:O	2.37	0.42
26:DD:25:THR:HG21	26:DD:193:VAL:HG21	1.99	0.42
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.19	0.42
23:DB:2215:C:H2'	23:DB:2216:G:H8	1.84	0.42
23:DB:506:G:H1'	23:DB:507:A:H8	1.82	0.42
1:AA:9:G:N7	1:AA:558:G:O2'	2.50	0.42
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	2.01	0.42
47:DF:79:ARG:H	47:DF:82:TYR:HB2	1.84	0.42
1:AA:134:G:H2'	1:AA:135:C:O4'	2.19	0.42
47:BF:141:ASP:HB3	47:BF:144:LYS:HB2	2.01	0.42
25:BC:66:PHE:CD2	25:BC:104:LEU:HD11	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:537:G:H5''	11:CL:109:ARG:NH1	2.34	0.42
23:BB:2301:C:O2'	23:BB:2302:U:H5'	2.18	0.42
1:CA:1347:G:C8	8:CI:108:ARG:HD2	2.54	0.42
5:AF:16:GLU:CD	5:AF:16:GLU:N	2.71	0.42
3:AD:31:CYS:O	3:AD:32:LYS:HB2	2.19	0.42
5:AF:9:MET:HA	5:AF:58:HIS:O	2.19	0.42
1:AA:708:C:H2'	1:AA:709:U:C6	2.54	0.42
1:CA:908:A:H2'	1:CA:909:A:H8	1.84	0.42
46:DU:41:VAL:O	46:DU:59:GLU:HG3	2.18	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
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.19	0.42
1:CA:1030:U:H5'	1:CA:1031:C:C2	2.54	0.42
42:DN:41:ALA:C	42:DN:43:GLU:N	2.72	0.42
23:DB:315:G:H2'	23:DB:316:C:H6	1.84	0.42
23:DB:692:C:H2'	23:DB:693:A:H8	1.84	0.42
23:BB:1713:A:H4'	23:BB:1714:U:OP2	2.19	0.42
23:DB:2756:U:H4'	23:DB:2757:A:O5'	2.18	0.42
30:DY:23:LEU:CD1	30:DY:28:LEU:HB2	2.49	0.42
1:CA:591:U:H2'	1:CA:592:G:C8	2.53	0.42
38:BM:66:ARG:HD2	38:BM:101:VAL:HG11	2.00	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
33:D1:39:ASP:O	33:D1:43:ARG:N	2.51	0.42
38:BM:31:PHE:CE2	38:BM:110:GLU:HA	2.53	0.42
23:DB:26:G:H1'	23:DB:515:A:H61	1.84	0.42
11:CL:13:ARG:O	11:CL:14:LYS:HB3	2.20	0.42
1:CA:1117:A:H4'	8:CI:105:ARG:NH1	2.34	0.42
42:DN:25:ALA:HB1	42:DN:48:VAL:CG1	2.49	0.42
1:AA:642:A:H2'	1:AA:643:C:C6	2.54	0.42
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	2.01	0.42
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.84	0.42
23:BB:699:A:H2'	23:BB:700:G:O4'	2.19	0.42
26:BD:14:ILE:O	26:BD:14:ILE:HG23	2.18	0.42
44:DQ:14:LYS:HA	44:DQ:17:LEU:HB3	2.01	0.42
26:BD:56:LYS:CD	26:BD:58:ASN:HB3	2.49	0.42
1:AA:542:G:O2'	1:AA:543:U:H5'	2.19	0.42
42:BN:22:ARG:HG3	42:BN:70:THR:HA	2.02	0.42
1:AA:916:U:H2'	1:AA:917:G:H8	1.84	0.42
23:BB:527:C:H5'	57:BB:3416:HOH:O	2.19	0.42
23:BB:527:C:O4'	23:BB:527:C:O2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:25:ILE:O	17:CR:29:LYS:HG3	2.19	0.42
1:AA:102:G:H2'	1:AA:103:U:H6	1.84	0.42
23:DB:1833:C:H2'	23:DB:1834:U:H6	1.83	0.42
23:BB:1281:G:O2'	23:BB:1282:U:H5'	2.18	0.42
23:BB:2234:G:O2'	23:BB:2235:G:H5'	2.18	0.42
13:AN:97:LYS:HB3	13:AN:97:LYS:NZ	2.34	0.42
29:DE:7:ASP:OD2	29:DE:7:ASP:N	2.52	0.42
1:AA:1398:A:H8	1:AA:1398:A:H5'	1.83	0.42
4:AE:29:ILE:HG22	4:AE:29:ILE:O	2.17	0.42
44:DQ:70:GLN:HA	44:DQ:70:GLN:NE2	2.34	0.42
1:AA:1434:A:H2'	1:AA:1435:G:C8	2.54	0.42
40:BH:32:PRO:O	40:BH:33:GLN:HB2	2.18	0.42
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.50	0.42
21:CU:34:ARG:HD2	21:CU:35:GLU:N	2.35	0.42
10:AK:122:PRO:HD2	21:AU:35:GLU:HG2	2.00	0.42
29:BE:187:VAL:HG12	29:BE:188:MET:N	2.34	0.42
43:DO:51:ALA:CB	43:DO:78:VAL:HG22	2.45	0.42
47:BF:111:ARG:O	47:BF:112:ASP:HB2	2.19	0.42
1:CA:688:G:H5'	10:CK:48:GLY:HA2	2.01	0.42
52:DW:49:ASN:OD1	52:DW:80:SER:HA	2.19	0.42
8:AI:20:ILE:HG23	8:AI:60:LEU:HD12	2.00	0.42
46:BU:11:ILE:HA	46:BU:20:LYS:O	2.19	0.42
53:B6:38:LEU:HD22	53:B6:83:ILE:CD1	2.49	0.42
35:BV:76:ASP:O	35:BV:89:ILE:HG22	2.19	0.42
48:BG:116:LEU:HD23	48:BG:120:ILE:HD13	2.00	0.42
44:DQ:91:ARG:HH12	49:DR:10:LYS:CA	2.32	0.42
45:BS:66:ILE:O	45:BS:69:LEU:HB2	2.19	0.42
41:DJ:110:PRO:HB2	41:DJ:111:LYS:HE3	2.01	0.42
28:DP:50:ARG:HB3	28:DP:57:ALA:O	2.19	0.42
22:DA:83:G:H4'	30:DY:52:PHE:CE2	2.54	0.42
6:AG:148:LYS:O	6:AG:151:ALA:HB3	2.19	0.42
23:DB:279:A:N6	23:DB:361:G:O2'	2.52	0.42
51:BZ:63:GLY:HA3	51:BZ:66:THR:OG1	2.20	0.42
1:CA:844:G:OP2	1:CA:844:G:H3'	2.20	0.42
53:B6:77:LYS:C	53:B6:81:LYS:HE3	2.40	0.42
48:DG:166:GLU:HG2	48:DG:167:VAL:N	2.34	0.42
48:DG:94:ARG:C	48:DG:94:ARG:NE	2.72	0.42
23:BB:1103:A:H2'	23:BB:1104:C:O4'	2.19	0.42
23:BB:1079:C:O2'	24:BI:133:ARG:NH2	2.52	0.42
23:DB:2040:G:H2'	23:DB:2041:U:O4'	2.19	0.42
40:BH:90:LEU:HD22	40:BH:123:ARG:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:88:ARG:HA	29:DE:88:ARG:HD3	1.93	0.42
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	2.02	0.42
22:BA:66:A:N6	22:BA:107:G:H2'	2.27	0.42
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.35	0.42
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	2.01	0.42
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.18	0.42
49:BR:7:SER:HB3	49:BR:12:HIS:ND1	2.35	0.42
27:DK:79:PHE:HZ	27:DK:104:THR:HG23	1.84	0.42
23:DB:2472:G:C3'	23:DB:2475:C:H42	2.32	0.42
23:DB:580:U:O3'	44:DQ:30:VAL:CG2	2.67	0.42
23:BB:728:G:O2'	23:BB:730:A:H8	1.96	0.42
23:DB:1461:C:H2'	23:DB:1462:C:H6	1.83	0.42
20:AB:118:THR:O	20:AB:124:THR:OG1	2.38	0.42
23:DB:2012:G:OP1	45:DS:98:LYS:HG2	2.18	0.42
25:BC:211:ARG:HD2	25:BC:215:VAL:O	2.19	0.42
23:BB:2875:C:O2'	23:BB:2876:G:H5'	2.19	0.42
23:BB:643:A:C5	23:BB:644:A:N7	2.87	0.42
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.54	0.42
26:DD:111:GLY:H	26:DD:194:PRO:CG	2.32	0.42
1:CA:656:G:O2'	1:CA:657:U:H5'	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
26:BD:193:VAL:O	26:BD:194:PRO:O	2.37	0.42
5:CF:46:GLN:CG	5:CF:47:LEU:N	2.81	0.42
23:DB:1351:C:H2'	23:DB:1352:U:C1'	2.49	0.42
25:BC:231:HIS:HA	25:BC:241:LYS:HE3	2.01	0.42
38:BM:57:VAL:O	38:BM:60:GLN:HG2	2.19	0.42
25:BC:180:MET:HB2	25:BC:268:ARG:CB	2.49	0.42
23:BB:1192:G:C2'	23:BB:1193:G:H5'	2.49	0.42
12:AM:80:MET:C	12:AM:82:LEU:N	2.72	0.42
23:DB:66:C:O2'	23:DB:67:U:H5'	2.19	0.42
23:DB:1887:C:C2'	23:DB:1888:G:H5'	2.48	0.42
1:AA:220:G:O2'	1:AA:221:C:H5'	2.20	0.42
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.49	0.42
41:BJ:72:LYS:HB3	41:BJ:89:PHE:H	1.85	0.42
1:AA:435:A:N3	1:AA:435:A:H2'	2.32	0.42
23:BB:1387:A:H5'	23:BB:1469:A:O2'	2.19	0.42
23:DB:1983:G:H4'	23:DB:2606:C:H4'	1.99	0.42
1:CA:553:A:N6	1:CA:554:A:N6	2.67	0.42
23:DB:2521:C:H2'	23:DB:2522:U:C6	2.54	0.42
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:731:G:OP1	1:AA:766:A:H1'	2.20	0.42
25:BC:21:PRO:C	25:BC:23:LEU:H	2.23	0.42
23:DB:336:C:O2'	23:DB:337:C:H5'	2.19	0.42
22:DA:51:G:H2'	22:DA:52:A:O5'	2.20	0.42
3:AD:61:ARG:HG2	3:AD:66:VAL:O	2.20	0.42
1:CA:620:C:H2'	1:CA:621:A:C8	2.55	0.42
1:CA:490:C:H2'	1:CA:491:G:O4'	2.19	0.42
41:DJ:40:HIS:HE1	41:DJ:41:LYS:HE3	1.84	0.42
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	2.00	0.42
42:BN:24:MET:HG2	42:BN:44:LEU:HD13	2.00	0.42
2:AC:155:ARG:H	2:AC:162:ALA:HB1	1.83	0.42
35:BV:5:ASN:N	35:BV:5:ASN:OD1	2.53	0.42
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.85	0.42
23:DB:433:C:O2'	23:DB:434:U:H5'	2.19	0.42
40:BH:104:THR:O	40:BH:105:ALA:HB2	2.18	0.42
23:BB:2599:G:O2'	23:BB:2600:A:H5'	2.20	0.42
13:AN:47:LEU:C	13:AN:49:THR:N	2.72	0.42
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.19	0.42
12:AM:68:LEU:O	12:AM:72:ILE:HB	2.19	0.42
3:CD:78:ALA:O	3:CD:85:THR:HA	2.19	0.42
38:DM:116:ALA:C	38:DM:118:LYS:N	2.72	0.42
5:CF:69:GLU:O	5:CF:73:GLU:HG2	2.18	0.42
42:DN:70:THR:OG1	42:DN:70:THR:O	2.35	0.42
23:DB:11:C:H2'	23:DB:12:U:H5'	2.01	0.42
11:AL:2:THR:O	11:AL:5:GLN:HB2	2.18	0.42
23:BB:388:G:N7	23:BB:390:U:H2'	2.35	0.42
23:BB:2403:C:O2'	23:BB:2404:U:H5'	2.19	0.42
1:CA:486:U:H2'	1:CA:487:A:H8	1.85	0.42
1:CA:528:C:H41	11:CL:45:ASN:CG	2.22	0.42
23:DB:2434:A:H8	23:DB:2434:A:H2'	1.70	0.42
23:DB:55:G:H2'	23:DB:56:A:H8	1.84	0.42
23:DB:1665:A:O2'	23:DB:1666:G:H5'	2.20	0.42
24:BI:15:GLY:O	24:BI:16:MET:HB2	2.19	0.42
29:BE:67:ARG:NH1	29:BE:70:SER:OG	2.52	0.42
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.58	0.42
1:AA:693:G:H2'	1:AA:694:A:O4'	2.19	0.42
23:DB:621:A:H2'	23:DB:622:G:O4'	2.19	0.42
37:DL:102:GLY:O	37:DL:105:ILE:HG12	2.19	0.42
37:BL:103:ILE:CD1	37:BL:103:ILE:H	2.29	0.42
40:DH:24:GLY:C	40:DH:26:ALA:N	2.72	0.42
37:BL:3:LEU:HA	37:BL:6:LEU:HD21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:111:ARG:HD2	47:DF:111:ARG:N	2.34	0.42
48:DG:72:ASN:O	48:DG:75:VAL:HB	2.18	0.42
22:DA:98:G:O6	35:DV:14:LYS:N	2.41	0.42
53:B6:114:LEU:HB3	53:B6:183:ILE:CG2	2.46	0.42
35:BV:42:LEU:CD2	35:BV:42:LEU:H	2.23	0.42
48:BG:30:GLY:N	48:BG:78:VAL:HA	2.34	0.42
50:BT:41:ALA:C	50:BT:43:ILE:H	2.23	0.42
23:DB:996:A:O2'	44:DQ:91:ARG:HD2	2.19	0.42
47:BF:163:GLU:O	47:BF:166:ARG:HB2	2.19	0.42
40:BH:114:GLU:HB3	40:BH:133:GLN:O	2.20	0.42
1:AA:532:A:C8	2:AC:192:TYR:CD2	3.06	0.42
1:AA:981:U:P	13:AN:5:MET:HE1	2.59	0.42
12:CM:13:HIS:HB2	12:CM:16:ILE:CG2	2.50	0.42
3:CD:160:LEU:HD23	3:CD:164:ARG:HH21	1.84	0.42
33:D1:50:GLU:O	33:D1:51:ALA:HB2	2.19	0.42
26:DD:107:VAL:N	26:DD:206:ALA:H	2.17	0.42
20:AB:40:ILE:HD13	20:AB:201:GLY:CA	2.49	0.42
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.20	0.42
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.54	0.42
1:CA:16:A:N1	1:CA:919:A:H2	2.16	0.42
26:BD:177:VAL:HG23	26:BD:177:VAL:O	2.18	0.42
1:AA:92:U:C2'	1:AA:93:U:O5'	2.67	0.42
44:BQ:111:LYS:HZ3	49:BR:50:GLY:HA2	1.85	0.42
49:BR:2:TYR:HB2	49:BR:42:ALA:CB	2.38	0.42
47:DF:47:LYS:HA	47:DF:50:ASP:OD1	2.19	0.42
2:AC:140:ALA:CB	2:AC:148:ILE:HD12	2.50	0.42
16:CQ:45:VAL:HA	16:CQ:72:TRP:O	2.19	0.42
12:CM:22:TYR:HB2	12:CM:65:GLU:HA	2.00	0.42
23:DB:1082:U:C2	23:DB:1086:A:N1	2.87	0.42
40:DH:127:GLU:HB2	40:DH:143:ILE:CG2	2.49	0.42
40:DH:124:THR:O	40:DH:146:VAL:HG11	2.19	0.42
22:BA:8:C:H2'	22:BA:9:G:O4'	2.20	0.42
23:BB:1547:C:H2'	23:BB:1548:A:H8	1.84	0.42
23:BB:2834:G:H2'	23:BB:2879:A:H61	1.85	0.42
1:AA:784:A:H2'	1:AA:785:G:H8	1.84	0.42
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	2.02	0.42
1:AA:481:G:O2'	1:AA:482:A:H8	2.02	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
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.54	0.42
23:BB:1796:U:O2'	23:BB:1797:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:43:THR:HG23	31:D0:47:TYR:C	2.39	0.42
18:AS:52:ASN:CG	18:AS:53:GLY:N	2.71	0.42
23:BB:2876:G:H5''	28:BP:2:ASN:HB2	2.01	0.42
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.19	0.42
53:B6:10:THR:HG22	53:B6:164:ILE:HG21	2.01	0.42
14:AO:17:ARG:HG2	14:AO:24:SER:CB	2.50	0.42
41:BJ:103:ILE:HG13	41:BJ:104:ALA:N	2.35	0.42
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	2.19	0.42
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.82	0.42
23:BB:1131:G:N2	23:BB:2024:G:N2	2.65	0.42
23:BB:2028:U:O2'	23:BB:2029:G:H5'	2.19	0.42
6:CG:71:THR:O	6:CG:89:GLU:HA	2.19	0.42
15:CP:6:LEU:HD23	15:CP:17:TYR:CB	2.50	0.42
46:BU:41:VAL:N	46:BU:60:LYS:O	2.53	0.42
37:DL:57:LEU:O	37:DL:61:LEU:HD13	2.19	0.42
1:CA:1515:G:O2'	1:CA:1516:G:H5'	2.19	0.42
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.20	0.42
3:AD:17:ASP:C	3:AD:19:PHE:H	2.23	0.42
42:BN:41:ALA:C	42:BN:43:GLU:H	2.23	0.42
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.42
23:BB:735:A:H2'	23:BB:736:C:O4'	2.19	0.42
1:AA:501:C:H1'	1:AA:549:C:H1'	2.00	0.42
23:BB:484:C:H2'	23:BB:485:C:C6	2.54	0.42
23:BB:1877:A:H2'	23:BB:1878:G:O4'	2.20	0.42
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.20	0.42
3:CD:61:ARG:HG2	3:CD:66:VAL:O	2.19	0.42
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.19	0.42
1:CA:1180:A:H5''	1:CA:1181:G:OP2	2.18	0.42
23:DB:1422:G:O2'	23:DB:1423:G:H5'	2.19	0.42
23:BB:839:U:H2'	23:BB:840:C:C6	2.54	0.42
23:BB:2106:U:H2'	23:BB:2107:G:H8	1.85	0.42
23:DB:484:C:H2'	23:DB:485:C:C6	2.54	0.42
27:BK:121:GLU:O	27:BK:122:VAL:C	2.57	0.42
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.83	0.42
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.54	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.34	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
30:BY:9:THR:HB	30:BY:10:ARG:H	1.71	0.42
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.54	0.42
23:BB:387:U:H4'	23:BB:388:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:894:G:O2'	1:CA:895:G:H5'	2.18	0.42
1:CA:582:C:O2'	1:CA:583:A:H5'	2.18	0.42
23:DB:391:A:H1'	23:DB:411:G:O4'	2.20	0.42
9:AJ:65:TYR:HA	13:AN:96:LYS:O	2.20	0.42
11:AL:73:LEU:HD21	11:AL:103:CYS:SG	2.59	0.42
20:AB:72:LYS:O	20:AB:73:ARG:C	2.58	0.42
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.85	0.42
23:BB:1392:A:H2'	23:BB:1393:A:C8	2.54	0.42
23:DB:1361:G:H2'	23:DB:1362:C:C6	2.55	0.42
23:BB:1851:U:H2'	23:BB:1852:U:C6	2.54	0.42
44:BQ:14:LYS:HA	44:BQ:17:LEU:HB3	2.01	0.42
23:DB:2211:A:H4'	23:DB:2211:A:OP2	2.19	0.42
6:CG:10:LYS:NZ	6:CG:10:LYS:HB2	2.35	0.42
23:BB:196:A:H2'	23:BB:196:A:N3	2.35	0.42
23:DB:52:A:H2'	23:DB:53:A:C8	2.54	0.42
17:CR:54:LEU:HD23	17:CR:58:ILE:HD11	2.02	0.42
22:DA:42:C:C6	47:DF:65:LEU:HD22	2.54	0.42
53:D6:64:ARG:C	53:D6:103:ILE:HB	2.39	0.42
23:DB:918:A:C2'	23:DB:919:U:H5'	2.44	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
13:CN:52:ARG:NH1	13:CN:58:ARG:HH21	2.17	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
13:CN:5:MET:HA	13:CN:8:ARG:HD2	2.01	0.42
50:BT:39:THR:O	50:BT:40:LYS:HB2	2.20	0.42
44:BQ:91:ARG:HH12	49:BR:10:LYS:CB	2.32	0.42
20:AB:204:ASP:O	20:AB:205:ALA:HB3	2.19	0.42
25:BC:76:VAL:O	25:BC:93:VAL:O	2.37	0.42
6:AG:145:GLU:C	6:AG:147:ASN:N	2.72	0.42
12:CM:49:GLU:O	12:CM:52:ILE:HG22	2.19	0.42
23:BB:725:G:H2'	23:BB:726:G:O4'	2.19	0.42
25:DC:76:VAL:O	25:DC:78:GLU:N	2.52	0.42
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	2.01	0.42
47:DF:163:GLU:O	47:DF:166:ARG:HB2	2.19	0.42
49:DR:21:ARG:C	49:DR:22:LEU:HD23	2.40	0.42
23:BB:2228:G:N2	51:BZ:34:HIS:CE1	2.87	0.42
19:CT:3:ILE:HG13	19:CT:3:ILE:H	1.30	0.42
38:BM:19:GLY:N	38:BM:38:ARG:NH1	2.64	0.42
46:DU:86:PHE:CG	46:DU:87:GLU:N	2.87	0.42
23:BB:960:A:H4'	23:BB:2457:U:H4'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:960:A:H61	38:BM:82:MET:HE1	1.83	0.42
19:CT:69:ASN:O	19:CT:72:ALA:HB3	2.19	0.42
53:B6:53:ASN:C	53:B6:55:ILE:H	2.21	0.42
40:DH:113:SER:HB2	40:DH:132:PHE:CZ	2.53	0.42
28:BP:29:VAL:O	28:BP:40:GLN:N	2.53	0.42
23:BB:115:C:O2'	23:BB:116:C:H5'	2.20	0.42
42:DN:28:LEU:O	42:DN:32:GLU:HA	2.19	0.42
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.34	0.42
23:DB:2143:C:H3'	23:DB:2144:G:H8	1.84	0.42
23:DB:547:A:C2	23:DB:548:G:H1'	2.54	0.42
1:CA:430:A:OP2	3:CD:6:PRO:HA	2.19	0.42
49:BR:7:SER:CB	49:BR:22:LEU:HD22	2.50	0.42
23:DB:1597:A:C5'	23:DB:1598:A:H5'	2.43	0.42
19:CT:66:ILE:HG13	19:CT:70:LYS:HE3	2.01	0.42
23:BB:1789:A:OP2	25:BC:220:ARG:HD3	2.18	0.42
20:CB:98:GLY:N	20:CB:174:GLU:OE2	2.53	0.42
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.20	0.42
23:BB:1779:U:H5	23:BB:1784:A:N7	2.17	0.42
51:BZ:53:ALA:O	51:BZ:55:GLY:N	2.44	0.42
21:AU:20:ARG:H	21:AU:20:ARG:HD2	1.84	0.42
34:B3:30:HIS:CD2	34:B3:31:ILE:N	2.88	0.42
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.54	0.42
41:DJ:103:ILE:HG13	41:DJ:104:ALA:N	2.35	0.42
23:BB:308:G:H2'	23:BB:309:A:O4'	2.20	0.42
41:DJ:12:LYS:HG2	41:DJ:12:LYS:H	1.66	0.42
23:DB:79:C:O2'	23:DB:346:A:C1'	2.66	0.42
1:AA:1349:A:P	8:AI:119:LYS:HD2	2.59	0.42
1:AA:1160:G:O2'	1:AA:1161:C:H5'	2.20	0.42
48:DG:44:HIS:O	48:DG:46:ASP:N	2.52	0.42
36:B2:6:GLN:HA	36:B2:7:PRO:HD2	1.89	0.42
23:BB:1309:G:H4'	36:B2:7:PRO:CB	2.48	0.42
23:DB:2212:A:O3'	23:DB:2213:U:C4	2.73	0.42
23:DB:481:G:C2	23:DB:507:A:C4	3.08	0.42
23:BB:2654:A:N1	23:BB:2665:A:H5''	2.34	0.42
22:BA:15:A:O2'	22:BA:16:G:H5'	2.20	0.42
15:AP:1:MET:O	15:AP:1:MET:HG3	2.19	0.42
23:BB:1130:U:O2'	23:BB:1131:G:H2'	2.18	0.42
1:CA:87:C:H2'	1:CA:88:U:H6	1.81	0.42
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.35	0.42
23:BB:598:U:H2'	23:BB:599:A:H8	1.84	0.42
49:BR:14:VAL:CG2	49:BR:15:SER:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:253:C:H2'	23:BB:254:G:O4'	2.19	0.42
1:AA:586:C:C5'	7:AH:81:GLY:HA2	2.49	0.42
23:DB:234:U:H2'	23:DB:235:U:O4'	2.19	0.42
27:DK:121:GLU:O	27:DK:122:VAL:C	2.57	0.42
34:B3:7:ARG:O	34:B3:8:GLY:C	2.58	0.42
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	2.01	0.42
39:BX:27:ASN:HD22	39:BX:27:ASN:HA	1.62	0.42
2:AC:16:PRO:HG2	2:AC:53:ARG:NH2	2.35	0.42
48:BG:112:VAL:HG13	48:BG:150:TYR:HE2	1.84	0.42
23:BB:2393:U:H2'	23:BB:2394:C:C6	2.54	0.42
9:CJ:80:THR:O	9:CJ:84:VAL:HG23	2.19	0.42
36:D2:9:VAL:CG1	36:D2:10:LEU:N	2.81	0.42
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.54	0.42
2:CC:146:LYS:HB2	2:CC:202:PHE:O	2.19	0.42
1:CA:625:U:H4'	15:CP:16:PHE:CZ	2.55	0.42
23:DB:300:A:H2'	23:DB:334:C:H1'	2.02	0.42
23:BB:1322:A:C2'	23:BB:1323:C:H5'	2.49	0.42
6:CG:48:THR:O	6:CG:52:ARG:HG3	2.19	0.42
11:AL:46:SER:O	11:AL:47:ALA:HB2	2.20	0.42
28:DP:86:LYS:HB3	28:DP:87:ARG:H	1.58	0.42
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	2.01	0.42
53:B6:176:ALA:O	53:B6:180:GLU:HB2	2.19	0.42
53:D6:125:GLY:O	53:D6:129:ILE:HG13	2.19	0.42
23:BB:2724:U:H2'	23:BB:2725:A:C8	2.54	0.42
23:DB:1099:G:H3'	24:DI:2:LYS:HA	2.01	0.42
21:AU:34:ARG:NH1	21:AU:39:LYS:NZ	2.67	0.42
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.83	0.42
13:CN:72:PHE:CZ	13:CN:77:GLY:HA2	2.54	0.42
27:BK:71:ARG:CZ	27:BK:72:PRO:HD3	2.50	0.42
13:CN:27:LYS:H	13:CN:27:LYS:HG3	1.67	0.42
23:BB:877:A:H2'	23:BB:899:A:C6	2.51	0.42
40:DH:135:HIS:N	40:DH:138:VAL:HB	2.30	0.42
26:DD:31:ALA:HA	26:DD:96:ILE:O	2.19	0.42
35:BV:70:ILE:CD1	35:BV:71:LYS:N	2.82	0.42
45:DS:2:GLU:O	45:DS:3:THR:C	2.58	0.42
49:DR:39:LEU:CA	49:DR:53:PHE:HA	2.49	0.42
50:BT:31:VAL:C	50:BT:32:LEU:HD23	2.40	0.42
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.19	0.42
1:CA:1149:C:OP2	8:CI:10:ARG:NH1	2.52	0.42
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.20	0.42
45:BS:108:SER:OG	45:BS:109:ASP:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:164:ARG:HG3	3:CD:165:GLU:H	1.85	0.42
32:D4:2:LYS:HD3	32:D4:4:ARG:NE	2.18	0.42
20:AB:60:ALA:HB1	20:AB:220:VAL:HG13	2.02	0.42
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.84	0.42
1:AA:1315:U:H5	18:AS:5:LYS:HE2	1.84	0.42
29:DE:171:ASP:CG	29:DE:172:ALA:N	2.73	0.42
38:BM:18:ARG:C	38:BM:38:ARG:HH22	2.23	0.42
1:CA:1099:G:H2'	1:CA:1100:C:C6	2.55	0.42
1:AA:255:G:H1'	16:AQ:17:GLU:OE2	2.20	0.42
48:DG:106:LEU:N	48:DG:106:LEU:HD23	2.35	0.42
19:CT:81:GLN:C	19:CT:83:ASN:N	2.72	0.42
46:BU:73:ASN:ND2	46:BU:76:THR:H	2.16	0.42
40:DH:143:ILE:HG22	40:DH:144:VAL:N	2.35	0.42
29:DE:46:GLN:HB3	29:DE:86:ALA:CA	2.50	0.42
1:AA:614:C:C2'	1:AA:615:G:H5'	2.50	0.42
23:BB:1439:A:C5	23:BB:1552:A:N6	2.86	0.42
23:DB:2840:C:OP1	42:DN:50:PRO:HA	2.20	0.42
42:BN:55:ALA:HB1	42:BN:80:PHE:H	1.83	0.42
27:BK:104:THR:OG1	27:BK:107:LEU:HD11	2.18	0.42
23:DB:2544:G:H2'	23:DB:2545:G:H8	1.84	0.42
27:DK:38:ILE:HD13	27:DK:61:VAL:HG12	2.01	0.42
22:DA:49:C:O2'	22:DA:50:A:H5'	2.19	0.42
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.54	0.42
23:BB:372:G:N7	51:BZ:57:ARG:HB3	2.34	0.42
1:CA:373:A:H1'	1:CA:481:G:H1'	2.02	0.42
37:DL:80:SER:HA	37:DL:115:GLU:HB2	2.02	0.42
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.20	0.42
7:CH:68:LYS:HG3	7:CH:69:ALA:H	1.84	0.42
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	2.01	0.42
1:CA:1421:G:N2	1:CA:1479:C:O2	2.52	0.42
18:AS:66:VAL:HG23	18:AS:67:GLY:N	2.35	0.42
20:CB:123:GLY:O	20:CB:125:PHE:N	2.52	0.42
18:CS:33:TRP:CE3	18:CS:33:TRP:N	2.87	0.42
23:DB:2652:C:C2'	23:DB:2653:U:H5'	2.49	0.42
23:BB:1516:G:H2'	23:BB:1517:G:H8	1.85	0.42
23:BB:415:A:H2'	23:BB:416:U:C6	2.55	0.42
26:DD:125:TRP:CD1	26:DD:160:LYS:HB3	2.54	0.42
25:DC:231:HIS:HA	25:DC:241:LYS:HE3	2.02	0.42
38:DM:123:LYS:O	38:DM:124:LEU:C	2.58	0.42
1:CA:152:A:H2'	1:CA:153:C:O4'	2.19	0.42
37:BL:127:VAL:HG22	37:BL:128:THR:N	2.34	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
22:BA:13:G:C5	22:BA:70:C:H4'	2.54	0.42
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.54	0.42
47:DF:141:ASP:O	47:DF:143:ASP:N	2.53	0.42
6:CG:71:THR:C	6:CG:90:VAL:HG22	2.40	0.42
1:CA:321:A:O2'	1:CA:322:C:H5'	2.20	0.42
23:BB:546:U:H5'	23:BB:548:G:O6	2.20	0.42
47:BF:74:ALA:HB1	47:BF:76:PHE:CD2	2.54	0.42
45:BS:99:ARG:H	45:BS:99:ARG:HG2	1.44	0.42
23:BB:826:U:H5''	23:BB:2428:G:O3'	2.19	0.42
1:AA:880:C:H2'	1:AA:881:G:C8	2.51	0.42
23:BB:2032:G:N7	23:BB:2454:G:H1'	2.33	0.42
42:DN:41:ALA:C	42:DN:43:GLU:H	2.23	0.42
52:BW:44:PHE:HE2	52:BW:76:ARG:NE	2.17	0.42
52:BW:77:LYS:HB2	52:BW:77:LYS:HZ3	1.85	0.42
48:BG:154:GLU:O	48:BG:156:TYR:N	2.42	0.42
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.20	0.42
23:DB:1131:G:H1'	23:DB:1133:A:H62	1.85	0.42
1:CA:856:C:O2'	1:CA:857:C:H5'	2.20	0.42
23:BB:522:A:H2'	23:BB:523:C:H6	1.84	0.42
1:CA:479:U:O2'	1:CA:480:U:H5'	2.19	0.42
1:AA:213:G:N3	1:AA:213:G:H2'	2.35	0.42
23:BB:2745:C:O2'	48:BG:142:GLN:HB2	2.20	0.42
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	2.02	0.42
23:BB:816:C:O2'	23:BB:817:C:H5'	2.19	0.42
25:BC:262:THR:O	25:BC:265:PHE:N	2.49	0.42
23:BB:1734:G:O2'	23:BB:1735:A:H5'	2.20	0.42
28:DP:61:ARG:HH21	28:DP:61:ARG:HB3	1.85	0.42
1:CA:643:C:H5''	7:CH:31:LEU:HD22	2.01	0.42
45:BS:95:ARG:HG3	45:BS:97:LEU:HD21	2.02	0.42
1:CA:728:A:H2'	1:CA:729:A:C8	2.55	0.42
25:BC:216:ARG:HE	25:BC:217:PRO:HD2	1.83	0.42
43:BO:36:TYR:CD2	43:BO:36:TYR:N	2.87	0.42
19:AT:49:ALA:HA	19:AT:52:GLU:OE2	2.18	0.42
23:DB:2601:C:C2	23:DB:2603:G:N7	2.88	0.42
23:BB:1027:A:N3	23:BB:2488:G:H5''	2.34	0.42
23:DB:233:A:N6	23:DB:428:A:H61	2.17	0.42
4:AE:62:ALA:O	4:AE:65:LYS:HB2	2.19	0.42
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.85	0.42
38:BM:63:ILE:H	38:BM:63:ILE:HD12	1.85	0.42
23:BB:1702:G:H2'	23:BB:1703:G:O4'	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
52:DW:69:GLU:HB3	52:DW:70:VAL:H	1.65	0.42
23:DB:1183:U:O2'	23:DB:1184:U:H5'	2.19	0.42
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.19	0.42
3:AD:172:VAL:HG13	3:AD:172:VAL:O	2.20	0.42
23:DB:2473:U:H2'	23:DB:2473:U:O2	2.19	0.42
37:BL:47:ARG:HH21	37:BL:47:ARG:CB	2.32	0.42
20:CB:72:LYS:O	20:CB:73:ARG:C	2.58	0.42
10:CK:126:ARG:HE	10:CK:126:ARG:HA	1.85	0.42
37:DL:101:ILE:HG22	37:DL:105:ILE:HG13	2.02	0.42
40:DH:27:ARG:HH21	40:DH:27:ARG:HG2	1.83	0.42
29:BE:149:ILE:O	29:BE:188:MET:HA	2.20	0.42
53:D6:29:ARG:O	53:D6:30:THR:O	2.37	0.42
5:CF:36:ILE:HG12	5:CF:64:VAL:HG22	2.01	0.42
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.85	0.42
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.35	0.42
45:DS:4:ILE:HG22	45:DS:106:VAL:HA	2.01	0.42
1:CA:764:C:N4	1:CA:812:G:N1	2.67	0.42
22:DA:76:G:H21	35:DV:78:GLN:HE22	1.67	0.42
48:DG:8:VAL:CG1	48:DG:49:LEU:HB2	2.35	0.42
46:BU:72:PHE:CZ	46:BU:77:GLY:HA2	2.55	0.42
35:BV:1:MET:HE2	35:BV:2:PHE:H	1.84	0.42
35:BV:66:ASP:CG	35:BV:68:LYS:HE2	2.40	0.42
49:DR:37:GLU:O	49:DR:39:LEU:HD23	2.20	0.42
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.84	0.42
22:BA:83:G:O2'	22:BA:84:G:H5'	2.20	0.42
40:BH:114:GLU:O	40:BH:132:PHE:HA	2.19	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
25:DC:76:VAL:HG23	25:DC:76:VAL:O	2.20	0.42
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.19	0.42
20:AB:86:CYS:SG	20:AB:87:ASP:N	2.93	0.42
23:DB:2800:A:H2'	23:DB:2801:G:H1'	2.02	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
1:AA:974:A:OP2	13:AN:80:ARG:NH1	2.53	0.42
13:AN:30:ILE:O	13:AN:32:ASP:N	2.45	0.42
23:BB:143:C:H1'	50:BT:2:ILE:O	2.19	0.42
23:BB:2155:U:H3'	23:BB:2156:G:C8	2.55	0.42
48:BG:145:ALA:O	48:BG:148:ARG:HD2	2.20	0.42
48:BG:167:VAL:HG23	48:BG:168:VAL:N	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:166:GLU:HG2	48:BG:167:VAL:N	2.35	0.42
46:BU:73:ASN:OD1	46:BU:75:ALA:HB3	2.20	0.42
12:CM:18:LEU:HD23	12:CM:21:ILE:HD12	2.01	0.42
3:CD:81:LEU:HB2	3:CD:88:ASN:HD22	1.84	0.42
40:DH:119:ASN:ND2	40:DH:121:VAL:HG22	2.35	0.42
20:CB:89:PHE:HE2	20:CB:152:ASP:O	2.03	0.42
23:BB:1348:C:H2'	23:BB:1349:C:H5'	2.00	0.42
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.54	0.42
6:AG:110:ARG:HB3	6:AG:110:ARG:HH11	1.84	0.42
38:DM:43:ALA:C	38:DM:45:GLN:N	2.73	0.42
31:B0:38:LEU:HD23	31:B0:39:ARG:N	2.35	0.42
23:BB:2886:A:N7	31:B0:39:ARG:NE	2.67	0.42
29:DE:145:ASP:OD1	29:DE:183:PHE:HA	2.19	0.42
23:BB:820:A:H1'	23:BB:943:A:O2'	2.19	0.42
27:BK:109:SER:C	27:BK:111:LYS:H	2.23	0.42
1:CA:311:C:O2'	1:CA:312:C:H5'	2.19	0.42
18:CS:17:LYS:HB3	18:CS:30:LEU:HD22	2.00	0.42
23:DB:2812:G:H2'	23:DB:2813:A:O4'	2.20	0.42
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.20	0.42
48:DG:37:ASN:HD22	48:DG:38:ASP:H	1.68	0.42
23:DB:2794:C:H2'	23:DB:2795:C:H6	1.83	0.42
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	2.01	0.42
3:AD:169:TRP:HB2	3:AD:183:ARG:O	2.20	0.42
23:BB:2018:G:O2'	23:BB:2019:A:H5'	2.19	0.42
20:CB:69:VAL:HG12	20:CB:168:GLU:HG3	2.02	0.42
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.20	0.42
20:AB:113:LEU:HD23	20:AB:114:LYS:N	2.34	0.42
23:BB:711:G:O2'	23:BB:712:G:H5'	2.20	0.42
40:BH:49:ALA:O	40:BH:53:GLU:N	2.53	0.42
41:DJ:73:VAL:O	41:DJ:74:TYR:HB2	2.19	0.42
20:AB:63:LYS:HA	20:AB:224:ARG:NH1	2.31	0.42
7:AH:17:GLN:HG2	7:AH:62:LEU:CD2	2.49	0.42
3:AD:100:VAL:HG11	3:AD:142:VAL:HG21	2.00	0.42
25:DC:211:ARG:HD2	25:DC:215:VAL:O	2.20	0.42
18:CS:66:VAL:C	18:CS:68:HIS:H	2.23	0.42
1:AA:1446:A:H2'	1:AA:1447:A:C8	2.55	0.42
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.81	0.42
23:BB:629:G:H2'	23:BB:630:G:C8	2.55	0.42
11:CL:98:ARG:NH2	11:CL:104:SER:OG	2.51	0.42
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.84	0.42
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1847:A:H1'	23:BB:1848:A:N7	2.35	0.42
23:DB:2285:C:OP2	33:D1:5:ARG:HD3	2.19	0.42
23:DB:1434:A:N6	23:DB:1558:C:H42	2.18	0.42
23:BB:1651:G:H2'	23:BB:1652:A:O4'	2.19	0.42
1:CA:212:G:H2'	1:CA:213:G:C8	2.54	0.42
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.42
23:DB:2188:U:H3'	23:DB:2189:U:C6	2.55	0.42
48:BG:154:GLU:C	48:BG:156:TYR:H	2.21	0.42
1:AA:564:C:C5	16:AQ:32:ILE:HD11	2.54	0.42
17:CR:43:ILE:O	17:CR:44:THR:HG23	2.20	0.42
20:AB:207:ARG:O	20:AB:211:LEU:HB2	2.19	0.42
23:BB:1639:C:C2'	23:BB:1640:A:H5'	2.50	0.42
43:DO:7:ARG:HA	43:DO:10:ARG:CZ	2.49	0.42
23:BB:1882:U:O2'	23:BB:1883:U:H5'	2.19	0.42
1:AA:653:U:C4	7:AH:55:LYS:HE2	2.54	0.42
1:AA:720:C:H6	1:AA:720:C:O5'	2.03	0.42
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.55	0.42
23:BB:1521:G:O5'	23:BB:1522:A:H2'	2.20	0.42
42:DN:24:MET:CG	42:DN:44:LEU:HD22	2.50	0.42
23:BB:2001:C:H4'	23:BB:2689:U:O2'	2.20	0.42
48:DG:29:ASN:ND2	48:DG:77:GLY:O	2.52	0.42
23:BB:1833:C:H2'	23:BB:1834:U:H6	1.85	0.42
4:AE:87:VAL:HG22	4:AE:88:HIS:N	2.35	0.42
6:AG:80:GLY:O	6:AG:82:SER:N	2.52	0.42
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.19	0.42
1:AA:687:A:C2	1:AA:704:A:C5	3.08	0.42
44:BQ:17:LEU:HG	44:BQ:17:LEU:O	2.19	0.42
27:DK:68:GLY:HA3	27:DK:78:ARG:HB3	2.01	0.42
1:AA:197:A:H1'	1:AA:198:G:C1'	2.50	0.42
29:DE:2:GLU:OE1	29:DE:13:THR:N	2.53	0.42
34:D3:14:LYS:O	34:D3:21:PHE:O	2.36	0.42
23:DB:1605:C:H1'	23:DB:1610:A:C8	2.55	0.42
1:CA:751:U:C2'	1:CA:752:G:H5'	2.50	0.42
27:DK:53:LYS:H	27:DK:53:LYS:HD3	1.83	0.42
8:CI:112:ARG:HG3	8:CI:112:ARG:O	2.19	0.42
1:CA:1231:G:O2'	1:CA:1232:U:H5'	2.20	0.42
40:BH:28:ASN:HA	40:BH:28:ASN:HD22	1.62	0.42
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.73	0.42
29:BE:20:GLY:O	29:BE:21:ARG:C	2.58	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:68:ARG:HH12	13:AN:70:HIS:CB	2.16	0.42
47:DF:111:ARG:O	47:DF:112:ASP:HB2	2.20	0.42
11:CL:86:VAL:CG1	11:CL:89:LEU:HB2	2.50	0.42
5:CF:61:LEU:HD12	5:CF:62:MET:H	1.85	0.42
47:BF:134:GLN:C	47:BF:136:ILE:N	2.72	0.42
10:CK:72:ALA:O	10:CK:75:GLU:HG2	2.19	0.42
23:DB:917:A:H2'	23:DB:918:A:O4'	2.19	0.42
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.49	0.42
8:AI:24:ASN:ND2	8:AI:57:VAL:O	2.53	0.42
35:DV:26:PHE:CE1	35:DV:89:ILE:HD11	2.55	0.42
46:BU:10:VAL:O	46:BU:21:ARG:HG2	2.20	0.42
26:DD:96:ILE:HD12	26:DD:96:ILE:N	2.34	0.42
26:BD:186:LEU:CD2	28:BP:3:ILE:HD11	2.46	0.42
28:BP:4:ILE:HA	28:BP:7:LEU:CD1	2.48	0.42
35:BV:63:ILE:HG22	35:BV:65:VAL:HG13	2.00	0.42
48:BG:42:VAL:HA	48:BG:50:THR:O	2.20	0.42
23:BB:2511:U:O5'	23:BB:2511:U:H6	2.02	0.42
40:DH:25:TYR:CD2	40:DH:30:LEU:HD11	2.54	0.42
23:DB:141:G:N3	23:DB:141:G:C3'	2.80	0.42
20:CB:53:LEU:N	20:CB:53:LEU:HD12	2.34	0.42
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.20	0.42
1:CA:961:U:N3	1:CA:983:A:N6	2.66	0.42
39:BX:36:GLN:HB2	39:BX:37:LEU:H	1.65	0.42
39:BX:46:VAL:O	39:BX:49:ASP:HB2	2.20	0.42
8:CI:56:MET:O	8:CI:58:GLU:N	2.52	0.42
50:DT:58:VAL:O	50:DT:58:VAL:HG13	2.20	0.42
23:BB:559:G:H22	44:BQ:48:ASP:CG	2.23	0.42
49:BR:60:LYS:N	49:BR:100:GLY:HA3	2.22	0.42
20:AB:204:ASP:O	20:AB:208:ALA:HB3	2.20	0.42
40:BH:134:VAL:CG1	40:BH:135:HIS:H	2.31	0.42
1:AA:1206:G:O4'	2:AC:193:GLY:N	2.53	0.42
33:D1:8:ILE:CG1	33:D1:51:ALA:HA	2.49	0.42
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.19	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
1:CA:376:G:H5''	15:CP:5:ARG:CB	2.43	0.42
1:AA:922:G:H4'	4:AE:24:VAL:HA	2.01	0.42
29:DE:187:VAL:HG12	29:DE:188:MET:N	2.35	0.42
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	2.18	0.42
51:DZ:72:ARG:HB3	51:DZ:78:TYR:HE2	1.84	0.42
1:AA:87:C:N3	1:AA:88:U:H1'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:46:HIS:CB	16:CQ:70:LYS:HE2	2.48	0.42
24:DI:126:ARG:NH1	24:DI:126:ARG:CB	2.83	0.42
48:BG:94:ARG:NE	48:BG:94:ARG:C	2.72	0.42
23:BB:2142:A:H2'	23:BB:2143:C:N1	2.34	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
10:CK:95:THR:CG2	10:CK:96:ILE:N	2.83	0.42
14:AO:73:LYS:O	14:AO:74:ASP:HB2	2.20	0.42
29:DE:47:LYS:HB3	29:DE:51:GLU:CB	2.42	0.42
22:DA:8:C:H2'	22:DA:9:G:O4'	2.20	0.42
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.01	0.42
23:BB:2038:G:H2'	23:BB:2039:U:O4'	2.20	0.42
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.35	0.42
35:BV:83:LYS:HA	35:BV:84:PRO:HD3	1.95	0.42
27:BK:19:VAL:HG23	27:BK:41:ILE:HD11	2.01	0.42
11:AL:74:GLN:HB3	11:AL:75:GLU:H	1.57	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
23:BB:2544:G:H1'	23:BB:2646:C:H5'	2.01	0.42
23:DB:2813:A:O2'	23:DB:2814:A:H5'	2.19	0.42
27:DK:99:ILE:N	27:DK:118:LEU:HD23	2.34	0.42
6:AG:50:ALA:HB2	6:AG:57:GLU:CA	2.50	0.42
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.35	0.42
20:CB:98:GLY:O	20:CB:102:ASN:N	2.52	0.42
38:DM:127:LYS:N	38:DM:127:LYS:HD2	2.31	0.42
20:AB:95:TRP:HZ3	20:AB:174:GLU:OE2	2.03	0.42
29:BE:165:HIS:CD2	29:BE:166:LYS:HG2	2.55	0.42
46:BU:65:GLN:HB3	46:BU:65:GLN:HE21	1.52	0.42
25:DC:43:ASN:ND2	25:DC:44:ASN:N	2.67	0.42
23:DB:458:G:O2'	23:DB:459:U:P	2.78	0.42
47:DF:161:SER:HG	47:DF:164:GLU:HG3	1.81	0.42
18:CS:33:TRP:C	18:CS:35:ARG:H	2.22	0.42
23:DB:1139:G:O2'	23:DB:1143:A:N1	2.47	0.42
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.34	0.42
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.84	0.42
26:DD:109:VAL:HG11	26:DD:193:VAL:HG11	2.02	0.42
20:CB:23:ASN:HD22	20:CB:24:PRO:N	2.18	0.42
1:CA:279:A:OP1	1:CA:281:G:H5'	2.20	0.42
1:CA:1258:G:C4	1:CA:1278:G:N2	2.87	0.42
1:CA:91:U:H2'	1:CA:92:U:H6	1.84	0.42
23:DB:2877:G:O2'	23:DB:2878:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2876:G:H2'	23:DB:2877:G:O4'	2.20	0.42
1:AA:401:C:O2'	1:AA:402:G:H5'	2.19	0.42
23:BB:2293:G:H2'	23:BB:2294:G:C8	2.55	0.42
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.54	0.42
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.85	0.42
3:AD:147:LYS:NZ	3:AD:147:LYS:HB2	2.35	0.42
23:BB:984:A:HO2'	23:BB:985:C:C5'	2.33	0.42
3:AD:104:MET:HG2	3:AD:170:LEU:CD1	2.50	0.42
1:CA:1242:G:H2'	1:CA:1243:C:H6	1.84	0.42
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.34	0.42
23:BB:7:G:H4'	41:BJ:15:TRP:CZ2	2.55	0.42
23:DB:564:C:OP2	49:DR:79:ARG:NH2	2.52	0.42
23:BB:2809:A:N6	23:BB:2891:U:H4'	2.35	0.42
23:DB:2186:G:H2'	23:DB:2187:U:O4'	2.19	0.42
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.20	0.42
11:AL:13:ARG:O	11:AL:14:LYS:HB3	2.20	0.42
23:BB:1714:U:O5'	23:BB:1714:U:H6	2.03	0.42
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.81	0.42
23:DB:2755:C:O2'	23:DB:2756:U:H2'	2.20	0.42
6:AG:130:LYS:H	6:AG:134:VAL:HG21	1.85	0.42
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.53	0.42
1:AA:479:U:O2'	1:AA:480:U:H5'	2.19	0.42
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.19	0.42
1:CA:592:G:H2'	1:CA:593:U:O4'	2.20	0.42
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	2.01	0.42
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	2.00	0.42
23:BB:2677:G:H2'	23:BB:2678:C:H6	1.83	0.42
1:CA:182:A:H1'	1:CA:183:C:H5	1.84	0.42
39:DX:27:ASN:HA	39:DX:30:MET:HG2	2.00	0.42
1:CA:1186:G:H21	13:CN:100:TRP:C	2.23	0.42
1:AA:420:U:C2'	1:AA:421:U:H5''	2.50	0.42
23:DB:2671:G:H2'	23:DB:2672:U:H6	1.84	0.42
23:BB:1541:C:H2'	23:BB:1542:U:O4'	2.20	0.42
25:DC:198:GLU:O	25:DC:201:LEU:HB2	2.19	0.42
23:BB:1668:A:N3	23:BB:1670:C:C4	2.87	0.42
23:BB:1666:G:OP1	27:BK:82:ASN:ND2	2.50	0.42
41:BJ:75:TYR:HD1	41:BJ:86:GLN:HB3	1.85	0.42
1:AA:547:A:H4'	1:AA:548:G:O5'	2.20	0.42
1:AA:360:G:O2'	1:AA:361:G:H5'	2.20	0.42
23:DB:312:G:H5'	23:DB:331:C:O2'	2.20	0.42
3:AD:159:GLU:O	3:AD:162:GLU:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:76:GLU:O	40:BH:77:THR:C	2.57	0.42
23:BB:659:G:H4'	29:BE:95:LYS:HB3	2.01	0.42
23:DB:2655:G:O2'	23:DB:2656:U:P	2.77	0.42
23:DB:1620:G:H4'	36:D2:1:MET:HG2	2.02	0.42
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	2.01	0.42
23:DB:1265:A:H5'	57:DB:3659:HOH:O	2.19	0.42
11:AL:108:ASP:O	11:AL:110:LYS:HG2	2.19	0.42
23:DB:932:U:O2	23:DB:932:U:O4'	2.38	0.42
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.20	0.42
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.88	0.42
37:DL:120:VAL:HG12	37:DL:121:THR:N	2.35	0.42
23:BB:2266:A:H4'	23:BB:2267:A:C8	2.52	0.42
23:BB:922:C:H2'	23:BB:923:G:H8	1.85	0.42
5:AF:100:SER:HA	17:AR:23:LYS:HD3	2.01	0.42
5:AF:38:ARG:NH2	5:AF:63:ASN:HD21	2.18	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
12:AM:70:ARG:O	12:AM:74:MET:HE3	2.20	0.42
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.82	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
26:DD:32:ASN:HB3	26:DD:50:VAL:CG2	2.50	0.42
26:DD:90:PHE:O	26:DD:91:THR:C	2.58	0.42
53:B6:88:LEU:HB3	53:B6:90:LEU:HG	2.01	0.42
22:BA:75:G:N1	22:BA:102:G:N2	2.68	0.42
35:BV:31:TYR:O	35:BV:92:VAL:HA	2.20	0.42
48:BG:28:LYS:O	48:BG:30:GLY:N	2.53	0.42
20:CB:164:ASP:CG	20:CB:203:ASP:HB2	2.40	0.42
23:BB:1598:A:H2'	23:BB:1599:U:O4'	2.19	0.42
8:CI:51:LEU:CB	8:CI:56:MET:HG2	2.34	0.42
40:BH:116:ARG:HB2	40:BH:131:SER:N	2.35	0.42
23:BB:705:A:H2'	23:BB:706:A:H8	1.85	0.42
19:AT:43:LYS:CB	19:AT:85:LEU:HD21	2.49	0.42
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.55	0.42
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	2.01	0.42
23:DB:2466:C:N4	23:DB:2467:C:N4	2.68	0.42
26:DD:108:ASP:N	26:DD:204:LYS:O	2.53	0.42
26:DD:108:ASP:OD2	26:DD:206:ALA:HA	2.20	0.42
20:AB:53:LEU:HD12	20:AB:53:LEU:N	2.35	0.42
1:AA:60:A:O2'	19:AT:4:LYS:HD3	2.20	0.42
51:BZ:59:ILE:HG22	51:BZ:64:ILE:HG13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:810:U:O4	37:BL:30:THR:HG22	2.20	0.42
23:BB:143:C:H2'	23:BB:144:A:H8	1.81	0.42
49:BR:23:GLU:O	49:BR:24:LYS:C	2.58	0.42
29:DE:118:LEU:HD21	29:DE:188:MET:HE2	2.01	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
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.55	0.42
23:BB:1141:U:P	41:BJ:27:ARG:HE	2.42	0.42
23:BB:963:U:O2'	23:BB:964:C:H5'	2.20	0.42
47:BF:2:LYS:HD2	47:BF:100:GLU:HG2	2.01	0.42
48:DG:94:ARG:HB2	48:DG:127:GLN:O	2.20	0.42
16:CQ:75:VAL:CG2	16:CQ:76:ARG:H	2.24	0.42
23:BB:2721:A:H2'	23:BB:2722:G:H8	1.84	0.42
28:BP:49:ILE:HG12	28:BP:50:ARG:N	2.34	0.42
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.54	0.42
42:DN:74:GLU:O	42:DN:77:ALA:HB3	2.20	0.42
1:AA:611:C:H2'	1:AA:612:C:C6	2.55	0.42
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	2.01	0.42
3:CD:146:GLU:CD	3:CD:147:LYS:H	2.22	0.42
6:AG:118:ARG:HG3	6:AG:118:ARG:H	1.66	0.42
23:DB:1324:G:C6	23:DB:1331:G:C6	3.07	0.42
35:BV:79:ARG:HG2	35:BV:79:ARG:H	1.63	0.42
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.19	0.42
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
2:CC:71:ARG:O	2:CC:74:ILE:HG22	2.20	0.42
27:DK:61:VAL:HG23	27:DK:61:VAL:O	2.20	0.42
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.19	0.42
23:DB:2593:U:H2'	23:DB:2594:C:C6	2.55	0.42
46:DU:49:PRO:O	46:DU:50:ALA:HB2	2.20	0.42
26:BD:163:GLY:O	26:BD:164:GLN:C	2.59	0.42
32:D4:16:ILE:HA	32:D4:24:ARG:O	2.20	0.42
29:BE:154:ASP:OD2	29:BE:157:LEU:HB3	2.19	0.42
23:BB:679:C:H2'	23:BB:680:C:H6	1.85	0.42
1:CA:958:A:N1	18:CS:53:GLY:C	2.73	0.42
1:AA:1380:U:O4	6:AG:2:ARG:HA	2.20	0.42
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.85	0.42
23:BB:1726:C:H6	23:BB:1726:C:O5'	2.03	0.42
23:BB:1728:C:O2	23:BB:1728:C:H2'	2.19	0.42
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.40	0.42
1:CA:279:A:H5'	1:CA:281:G:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:80:MET:C	12:CM:82:LEU:N	2.71	0.42
23:DB:1297:C:H2'	23:DB:1298:C:H6	1.85	0.42
22:BA:94:A:O2'	22:BA:95:U:H5'	2.20	0.42
21:CU:20:ARG:HD2	21:CU:20:ARG:H	1.85	0.42
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.83	0.42
52:BW:73:PRO:O	52:BW:74:LYS:HB2	2.20	0.42
37:BL:60:ARG:O	37:BL:61:LEU:HD12	2.20	0.42
1:AA:632:U:O2	1:AA:632:U:H3'	2.18	0.42
1:AA:636:U:O2'	1:AA:637:C:H5'	2.19	0.42
48:BG:9:VAL:C	48:BG:11:PRO:HD3	2.40	0.42
53:D6:7:TYR:CE1	53:D6:160:GLU:HG2	2.54	0.42
1:CA:766:A:H2'	1:CA:767:A:C8	2.55	0.42
1:AA:1462:C:H2'	1:AA:1463:U:C6	2.55	0.42
31:B0:9:ARG:O	31:B0:12:ARG:HB3	2.20	0.42
1:AA:85:U:H4'	1:AA:86:G:H5''	2.02	0.42
1:CA:587:G:H4'	7:CH:3:GLN:HA	2.02	0.42
23:BB:994:C:H3'	44:BQ:53:LYS:HZ2	1.84	0.42
23:DB:808:G:OP2	37:DL:36:LYS:HE2	2.20	0.42
22:DA:30:C:H2'	22:DA:31:C:H5'	2.01	0.42
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.46	0.42
23:BB:840:C:O2'	23:BB:841:G:H5'	2.20	0.42
3:AD:57:LYS:HE2	3:AD:61:ARG:HH11	1.85	0.42
27:BK:3:GLN:CG	27:BK:4:GLU:N	2.83	0.42
1:CA:489:C:O2'	1:CA:490:C:H5'	2.20	0.42
23:BB:1754:A:N1	23:BB:2716:C:O2'	2.53	0.42
4:CE:44:ARG:HA	4:CE:71:ILE:O	2.20	0.42
23:BB:954:G:H5'	23:BB:955:U:OP2	2.19	0.42
2:AC:134:LYS:HG3	2:AC:167:TYR:CE2	2.54	0.42
23:BB:2597:G:C6	23:BB:2598:A:N6	2.87	0.42
22:DA:79:G:O2'	22:DA:80:U:H5'	2.20	0.42
17:AR:41:SER:HA	17:AR:51:GLN:OE1	2.20	0.42
23:BB:2583:G:H2'	23:BB:2584:U:O4'	2.20	0.42
23:BB:2197:U:O4	23:BB:2224:G:H2'	2.20	0.42
26:DD:14:ILE:O	26:DD:14:ILE:HG23	2.20	0.42
23:BB:1366:A:H2'	23:BB:1367:A:O4'	2.20	0.42
5:CF:74:LEU:HA	5:CF:77:THR:OG1	2.20	0.42
7:CH:20:ASN:HA	7:CH:64:TYR:OH	2.19	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
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.54	0.42
35:DV:49:ASN:O	35:DV:52:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:P	24:DI:4:VAL:N	2.83	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
23:BB:917:A:H3'	23:BB:918:A:H8	1.84	0.42
1:AA:1125:U:OP1	9:AJ:37:ARG:HG3	2.19	0.42
35:DV:72:VAL:CG2	35:DV:91:PHE:HB3	2.45	0.42
28:BP:1:SER:H2	28:BP:4:ILE:HG13	1.84	0.42
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.31	0.42
13:CN:5:MET:SD	13:CN:60:ARG:NH1	2.93	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
8:CI:26:LYS:H	8:CI:61:ASP:HB2	1.76	0.42
44:BQ:89:ILE:C	44:BQ:91:ARG:H	2.24	0.42
28:DP:1:SER:H2	28:DP:4:ILE:HG13	1.85	0.42
13:AN:7:ALA:O	13:AN:8:ARG:C	2.59	0.42
23:BB:703:U:H2'	23:BB:704:G:O4'	2.20	0.42
24:DI:131:THR:O	24:DI:135:MET:HG3	2.19	0.42
25:DC:90:ILE:HA	25:DC:90:ILE:HD13	1.89	0.42
40:BH:14:SER:HB3	40:BH:17:ASP:CB	2.48	0.42
51:BZ:65:ASP:O	51:BZ:69:ALA:HB2	2.20	0.42
23:BB:142:A:HO2'	50:BT:3:ARG:NH1	2.17	0.42
50:DT:69:ARG:HE	50:DT:70:HIS:H	1.67	0.42
41:BJ:57:LEU:HD11	41:BJ:129:GLU:H	1.85	0.42
1:CA:1085:U:H3'	1:CA:1086:U:H6	1.84	0.42
16:AQ:74:LEU:HD13	16:AQ:74:LEU:C	2.40	0.42
47:BF:26:GLN:O	47:BF:27:VAL:C	2.57	0.42
46:DU:73:ASN:HD22	46:DU:73:ASN:N	2.17	0.42
48:BG:88:LEU:HD11	48:BG:94:ARG:H	1.83	0.42
46:BU:73:ASN:HD22	46:BU:73:ASN:N	2.17	0.42
23:DB:1286:A:H1'	23:DB:1288:G:OP2	2.20	0.42
29:BE:69:ARG:HH11	29:BE:69:ARG:HG2	1.85	0.42
42:DN:62:ASN:O	42:DN:80:PHE:HZ	2.03	0.42
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.47	0.42
11:CL:79:ILE:C	11:CL:101:LEU:HD12	2.40	0.42
23:DB:1199:U:C5'	44:DQ:4:LYS:HD3	2.50	0.42
23:DB:2143:C:H2'	23:DB:2144:G:O4'	2.20	0.42
23:BB:2834:G:H2'	23:BB:2879:A:N6	2.35	0.42
32:B4:12:ARG:HG3	32:B4:13:ASN:ND2	2.35	0.42
3:CD:29:THR:CB	3:CD:30:LYS:HD3	2.50	0.42
10:CK:61:ALA:O	10:CK:64:VAL:HG12	2.20	0.42
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:12:ASP:HB3	27:BK:85:VAL:HG13	2.01	0.42
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.84	0.42
1:AA:679:C:O2'	1:AA:680:C:H5'	2.19	0.42
6:AG:42:VAL:O	6:AG:46:LEU:HB2	2.20	0.42
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.55	0.42
3:AD:30:LYS:HB2	3:AD:30:LYS:HE2	1.92	0.42
23:BB:2346:A:C3'	23:BB:2347:C:H5''	2.43	0.42
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.47	0.42
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.19	0.42
23:DB:2727:A:O3'	27:DK:70:ARG:NH2	2.49	0.42
10:AK:90:PRO:C	10:AK:92:ARG:N	2.74	0.42
35:DV:53:LYS:HE2	35:DV:53:LYS:HA	2.01	0.42
20:AB:121:GLN:NE2	20:AB:122:ASP:N	2.68	0.42
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG22	1.82	0.42
47:BF:51:ASN:O	47:BF:55:ASP:HB2	2.20	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
41:BJ:102:GLU:O	41:BJ:106:LYS:HB2	2.20	0.42
14:CO:17:ARG:HG2	14:CO:24:SER:CB	2.49	0.42
23:DB:593:U:H2'	23:DB:594:U:C5	2.54	0.42
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	2.19	0.42
2:CC:14:VAL:O	2:CC:15:LYS:HD2	2.20	0.42
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.54	0.42
5:AF:53:LYS:H	5:AF:53:LYS:HZ2	1.67	0.42
22:DA:16:G:C5	22:DA:69:G:C2	3.08	0.42
1:CA:86:G:H1'	1:CA:87:C:O4'	2.19	0.42
23:DB:69:C:H2'	23:DB:70:G:C8	2.55	0.42
46:BU:42:LYS:O	46:BU:57:ILE:HG23	2.20	0.42
23:DB:1565:C:H5''	25:DC:17:LYS:NZ	2.35	0.42
44:BQ:20:ALA:O	44:BQ:21:LYS:C	2.58	0.42
23:BB:807:U:P	37:BL:36:LYS:HD3	2.60	0.42
1:AA:907:A:O2'	1:AA:908:A:H5'	2.20	0.42
23:BB:1045:C:O5'	23:BB:1046:A:H5''	2.19	0.42
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.20	0.42
23:DB:2336:A:O2'	23:DB:2337:G:P	2.78	0.42
21:CU:11:PHE:CD1	21:CU:11:PHE:O	2.67	0.42
23:BB:1476:U:O2'	23:BB:1477:A:P	2.78	0.42
53:D6:183:ILE:C	53:D6:185:GLY:N	2.73	0.42
1:AA:356:A:H1'	1:AA:368:U:O2'	2.20	0.42
22:BA:24:G:O2'	22:BA:25:U:H5''	2.20	0.42
37:BL:131:ALA:HA	37:BL:134:ALA:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:659:U:H2'	1:CA:660:C:C6	2.55	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
23:DB:1468:U:H2'	23:DB:1522:A:N6	2.35	0.42
16:CQ:10:ARG:O	16:CQ:22:VAL:HG13	2.20	0.42
23:DB:2823:A:C2'	23:DB:2824:C:H5'	2.50	0.42
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.73	0.42
23:BB:1818:U:HO2'	23:BB:1819:A:P	2.43	0.42
50:BT:48:GLN:NE2	50:BT:48:GLN:HA	2.35	0.42
23:DB:1146:C:H2'	23:DB:1147:A:C8	2.55	0.42
25:DC:23:LEU:HD12	25:DC:23:LEU:HA	1.86	0.42
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.20	0.42
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	2.00	0.42
1:CA:648:A:O2'	1:CA:649:A:H5'	2.20	0.42
41:DJ:40:HIS:ND1	41:DJ:41:LYS:N	2.68	0.42
9:CJ:65:TYR:HA	13:CN:96:LYS:O	2.20	0.42
33:D1:38:PHE:HB2	33:D1:45:HIS:CE1	2.55	0.42
9:CJ:24:GLU:CD	9:CJ:90:LEU:HD11	2.40	0.42
23:DB:1956:U:C2'	23:DB:1957:C:H5'	2.49	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
16:AQ:29:LYS:HE3	16:AQ:36:PHE:CZ	2.54	0.42
32:D4:1:MET:HG3	32:D4:34:LYS:HG2	2.02	0.42
23:BB:1814:G:H2'	23:BB:1815:A:C8	2.55	0.42
19:AT:47:GLN:O	19:AT:50:PHE:HB3	2.19	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.20	0.42
23:DB:1068:G:C6	23:DB:1069:A:N6	2.88	0.42
23:BB:745:G:O2'	23:BB:748:G:H1'	2.20	0.42
23:BB:562:U:C4	23:BB:2036:C:O4'	2.73	0.42
45:DS:68:ASP:N	45:DS:68:ASP:OD1	2.51	0.42
28:DP:101:GLU:OE2	28:DP:101:GLU:N	2.52	0.42
23:BB:1236:G:H2'	23:BB:1237:A:H8	1.85	0.42
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.54	0.42
37:DL:81:ASP:CG	37:DL:100:ILE:HD11	2.41	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
52:BW:28:GLU:O	52:BW:30:VAL:N	2.53	0.41
5:CF:100:SER:HA	17:CR:23:LYS:CD	2.49	0.41
1:CA:464:U:H2'	1:CA:466:A:OP2	2.20	0.41
45:DS:4:ILE:CG2	45:DS:106:VAL:HG13	2.50	0.41
8:AI:60:LEU:HD23	8:AI:60:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:12:ARG:NE	13:AN:58:ARG:NH1	2.68	0.41
20:CB:68:PHE:N	20:CB:68:PHE:CD1	2.87	0.41
49:DR:49:ILE:HD13	49:DR:53:PHE:N	2.35	0.41
8:CI:46:VAL:CG2	8:CI:47:VAL:N	2.83	0.41
26:DD:13:ARG:HG3	26:DD:15:PHE:CE1	2.54	0.41
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.50	0.41
12:CM:33:LEU:HD22	12:CM:38:ILE:HB	2.02	0.41
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.34	0.41
23:DB:2467:C:O2'	23:DB:2468:A:H5'	2.20	0.41
1:AA:903:G:H2'	1:AA:904:U:H6	1.85	0.41
20:AB:163:ILE:CG2	20:AB:164:ASP:H	2.22	0.41
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	2.02	0.41
23:BB:1058:U:O2'	23:BB:1059:G:H5'	2.20	0.41
1:AA:843:U:OP2	1:AA:843:U:H4'	2.19	0.41
49:BR:39:LEU:CA	49:BR:53:PHE:HA	2.49	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
47:DF:29:ARG:H	47:DF:29:ARG:CD	2.33	0.41
23:BB:673:C:C2'	23:BB:674:G:H5'	2.49	0.41
14:AO:25:THR:O	14:AO:29:VAL:HG23	2.20	0.41
14:AO:84:ARG:C	14:AO:85:LEU:HD12	2.41	0.41
23:BB:1441:G:O2'	23:BB:1442:U:H5'	2.19	0.41
6:CG:47:GLU:OE1	6:CG:57:GLU:HG2	2.19	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
2:AC:71:ARG:O	2:AC:74:ILE:HG22	2.20	0.41
12:AM:93:GLY:O	12:AM:108:ARG:HG3	2.20	0.41
43:BO:109:ALA:O	43:BO:113:ALA:N	2.52	0.41
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.55	0.41
23:BB:1260:A:O2'	23:BB:1261:C:H5'	2.20	0.41
38:BM:108:VAL:CG1	38:BM:112:LEU:HB3	2.45	0.41
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.19	0.41
23:DB:2848:G:H22	23:DB:2867:G:N2	2.16	0.41
31:D0:38:LEU:HD13	31:D0:41:HIS:CE1	2.54	0.41
48:BG:10:VAL:HG13	48:BG:14:VAL:CG2	2.50	0.41
48:DG:46:ASP:N	48:DG:46:ASP:OD2	2.53	0.41
23:DB:470:A:H2'	23:DB:471:A:C8	2.55	0.41
29:DE:170:ARG:HH12	29:DE:176:ASP:CB	2.33	0.41
22:BA:15:A:O4'	22:BA:15:A:N3	2.53	0.41
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.20	0.41
26:BD:109:VAL:HG11	26:BD:193:VAL:HG11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:10:ARG:CZ	2:CC:181:ILE:HD13	2.50	0.41
1:CA:1201:A:O2'	1:CA:1202:U:OP2	2.29	0.41
19:AT:28:ARG:HA	19:AT:31:ILE:HD12	2.02	0.41
1:AA:1201:A:H5''	1:AA:1201:A:H8	1.85	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
3:AD:102:TYR:HE1	3:AD:109:THR:HA	1.85	0.41
23:DB:810:U:O4	37:DL:30:THR:HG22	2.20	0.41
1:CA:1028:C:H3'	1:CA:1029:U:C6	2.54	0.41
28:BP:97:TYR:O	28:BP:100:ARG:HD3	2.20	0.41
1:AA:1180:A:H5''	1:AA:1181:G:OP2	2.19	0.41
40:DH:42:LYS:O	40:DH:45:GLU:HB2	2.20	0.41
40:BH:40:THR:O	40:BH:41:LYS:HB2	2.20	0.41
3:CD:47:LEU:HD21	3:CD:55:ARG:HD2	2.01	0.41
23:BB:1877:A:H2'	23:BB:1878:G:C8	2.55	0.41
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.50	0.41
38:BM:105:MET:HB2	38:BM:117:PHE:CE2	2.56	0.41
1:CA:1108:G:H5'	2:CC:175:HIS:ND1	2.34	0.41
24:BI:48:ILE:O	24:BI:49:GLU:HB3	2.20	0.41
25:DC:6:LYS:O	25:DC:8:THR:N	2.48	0.41
1:CA:643:C:H2'	1:CA:644:U:H6	1.84	0.41
23:DB:307:G:N1	23:DB:310:A:OP2	2.51	0.41
2:AC:53:ARG:HB3	2:AC:68:HIS:HB2	2.02	0.41
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.20	0.41
23:BB:457:A:N1	23:BB:470:A:H5''	2.35	0.41
28:BP:47:ILE:HG13	28:BP:48:ALA:N	2.35	0.41
1:AA:605:U:H2'	1:AA:606:G:H8	1.84	0.41
23:BB:1256:G:H21	29:BE:77:ILE:HG22	1.85	0.41
23:DB:80:G:HO2'	23:DB:294:A:H2	1.60	0.41
23:BB:2863:C:O2'	23:BB:2864:G:H5'	2.19	0.41
42:BN:25:ALA:HB1	42:BN:48:VAL:CG1	2.50	0.41
1:CA:852:G:H2'	1:CA:853:C:H6	1.85	0.41
23:BB:2076:U:O4'	23:BB:2076:U:O2	2.38	0.41
6:AG:85:GLN:HA	6:AG:85:GLN:OE1	2.20	0.41
44:BQ:70:GLN:HA	44:BQ:70:GLN:NE2	2.34	0.41
1:CA:467:U:O2	1:CA:467:U:H2'	2.19	0.41
23:DB:1539:U:O2	23:DB:1539:U:H2'	2.21	0.41
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.20	0.41
23:BB:303:G:H2'	23:BB:304:U:C6	2.55	0.41
41:DJ:70:THR:HG22	41:DJ:90:GLU:OE2	2.19	0.41
23:DB:1769:U:O2'	23:DB:1770:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:24:GLY:C	40:BH:26:ALA:N	2.73	0.41
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.21	0.41
53:D6:61:PRO:HD3	53:D6:67:VAL:HG22	2.02	0.41
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.36	0.41
1:AA:734:G:H2'	1:AA:735:C:H6	1.85	0.41
45:DS:25:ARG:HH21	45:DS:74:ILE:HG23	1.85	0.41
29:DE:3:LEU:HD23	29:DE:14:VAL:CG2	2.50	0.41
23:DB:2262:U:H2'	23:DB:2263:C:H6	1.86	0.41
52:DW:39:GLN:NE2	52:DW:43:LYS:HG2	2.35	0.41
39:DX:36:GLN:HB2	39:DX:37:LEU:H	1.65	0.41
13:CN:30:ILE:O	13:CN:32:ASP:N	2.47	0.41
1:CA:903:G:H2'	1:CA:904:U:H6	1.85	0.41
35:DV:70:ILE:CG1	35:DV:71:LYS:N	2.84	0.41
53:B6:31:GLY:N	53:B6:183:ILE:HA	2.35	0.41
20:CB:53:LEU:H	20:CB:53:LEU:CD1	2.34	0.41
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.40	0.41
20:CB:204:ASP:O	20:CB:205:ALA:HB3	2.20	0.41
23:BB:2472:G:H3'	23:BB:2475:C:N4	2.35	0.41
26:DD:21:SER:HB2	27:DK:73:ASP:HA	2.02	0.41
28:DP:3:ILE:CD1	28:DP:7:LEU:HD11	2.49	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
40:BH:73:ASN:ND2	40:BH:74:ALA:N	2.62	0.41
1:AA:982:U:OP2	13:AN:60:ARG:NH1	2.53	0.41
1:AA:812:G:O2'	1:AA:813:U:C6	2.61	0.41
20:AB:164:ASP:CG	20:AB:203:ASP:HB2	2.40	0.41
20:AB:68:PHE:HD1	20:AB:68:PHE:N	2.18	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
23:DB:2798:U:H1'	23:DB:2800:A:C6	2.53	0.41
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.55	0.41
40:BH:9:VAL:O	40:BH:10:ALA:O	2.38	0.41
4:AE:151:MET:O	4:AE:154:ALA:HB3	2.20	0.41
1:AA:846:G:H2'	1:AA:846:G:N3	2.35	0.41
46:DU:90:LYS:HE2	46:DU:90:LYS:HB3	1.90	0.41
23:BB:2456:C:H2'	23:BB:2457:U:O4'	2.20	0.41
3:AD:194:ILE:O	3:AD:194:ILE:HG23	2.19	0.41
23:BB:1081:U:O2'	24:BI:118:GLY:HA2	2.21	0.41
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.21	0.41
23:BB:2142:A:H2'	23:BB:2143:C:C1'	2.49	0.41
47:DF:26:GLN:O	47:DF:27:VAL:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:3:LEU:O	47:DF:3:LEU:HD13	2.20	0.41
40:BH:124:THR:O	40:BH:125:THR:HB	2.20	0.41
12:CM:65:GLU:O	12:CM:66:GLY:C	2.59	0.41
1:CA:1170:A:H5''	20:CB:138:ARG:HH22	1.84	0.41
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	2.02	0.41
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.50	0.41
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.35	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
1:CA:781:A:C2'	1:CA:782:A:H5'	2.45	0.41
11:AL:23:LEU:HG	11:AL:24:GLU:CG	2.49	0.41
32:B4:7:VAL:O	32:B4:8:LYS:O	2.38	0.41
1:AA:239:U:H5'	1:AA:239:U:H6	1.85	0.41
27:BK:115:ILE:HG23	27:BK:116:ILE:H	1.83	0.41
23:BB:2733:A:O2'	23:BB:2734:A:H5'	2.19	0.41
1:AA:1226:C:H5'	12:AM:94:LEU:CD1	2.49	0.41
50:DT:18:GLU:C	50:DT:20:ALA:N	2.71	0.41
1:CA:370:C:H2'	1:CA:371:A:H8	1.85	0.41
23:BB:1241:A:N3	23:BB:1241:A:H5'	2.35	0.41
23:BB:534:U:H5'	44:BQ:41:ALA:CB	2.50	0.41
23:DB:2727:A:O2'	27:DK:70:ARG:NH2	2.53	0.41
29:DE:108:ILE:HG12	37:DL:2:ARG:NH2	2.35	0.41
23:BB:709:U:H2'	23:BB:710:U:H6	1.77	0.41
20:AB:125:PHE:HD2	20:AB:126:ASP:H	1.66	0.41
1:CA:835:U:O2'	1:CA:836:G:H5'	2.20	0.41
1:CA:1505:G:H5''	1:CA:1506:U:O5'	2.20	0.41
23:DB:1813:G:H4'	25:DC:42:ARG:O	2.20	0.41
1:AA:1505:G:H5''	1:AA:1506:U:O5'	2.20	0.41
23:BB:26:G:H1'	23:BB:515:A:N6	2.35	0.41
1:CA:1019:A:H2'	1:CA:1020:G:H8	1.81	0.41
25:DC:208:GLY:O	25:DC:209:ALA:C	2.58	0.41
7:CH:63:LYS:CD	7:CH:70:VAL:HG21	2.50	0.41
15:CP:67:ILE:HG23	15:CP:67:ILE:O	2.21	0.41
1:AA:657:U:H1'	14:AO:22:THR:O	2.19	0.41
46:BU:51:LEU:N	46:BU:53:GLN:NE2	2.68	0.41
1:AA:215:C:O2'	1:AA:216:U:H5'	2.20	0.41
5:CF:46:GLN:HG3	5:CF:47:LEU:N	2.35	0.41
23:BB:2698:U:H2'	23:BB:2699:C:H6	1.83	0.41
1:CA:411:A:O2'	1:CA:412:A:O4'	2.34	0.41
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.84	0.41
16:AQ:52:CYS:HB2	16:AQ:58:VAL:HG11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:55:MET:HG3	37:DL:59:ARG:CB	2.50	0.41
25:BC:32:LEU:CD2	25:BC:63:ILE:HG13	2.50	0.41
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.55	0.41
1:AA:909:A:H2'	1:AA:910:C:O4'	2.19	0.41
1:CA:768:A:H5'	1:CA:1524:C:H1'	2.01	0.41
3:AD:1:ALA:O	3:AD:2:ARG:HG2	2.19	0.41
10:CK:16:SER:N	10:CK:77:GLY:O	2.45	0.41
23:DB:262:A:H2'	23:DB:263:G:O4'	2.19	0.41
23:DB:2302:U:O2'	23:DB:2303:G:H5'	2.19	0.41
38:DM:66:ARG:CB	38:DM:101:VAL:HG13	2.50	0.41
23:DB:1131:G:N2	23:DB:2024:G:N2	2.67	0.41
1:AA:212:G:H2'	1:AA:213:G:C8	2.55	0.41
53:B6:142:LYS:O	53:B6:146:GLU:HB2	2.20	0.41
1:AA:766:A:H2'	1:AA:767:A:C8	2.55	0.41
25:BC:23:LEU:HA	25:BC:23:LEU:HD12	1.86	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
23:DB:2334:U:H5'	43:DO:12:THR:HB	2.03	0.41
38:BM:31:PHE:CZ	38:BM:110:GLU:HA	2.55	0.41
1:CA:1003:G:H21	1:CA:1005:A:C5'	2.32	0.41
1:AA:182:A:H1'	1:AA:183:C:H5	1.85	0.41
27:DK:3:GLN:CG	27:DK:4:GLU:N	2.83	0.41
39:BX:27:ASN:HA	39:BX:30:MET:HG2	2.02	0.41
23:BB:936:A:H2'	23:BB:937:C:H6	1.84	0.41
23:DB:685:A:H1'	23:DB:688:U:O4	2.20	0.41
1:CA:1380:U:O4	6:CG:2:ARG:HB2	2.20	0.41
1:AA:626:G:H2'	1:AA:627:G:H8	1.85	0.41
1:CA:27:G:H2'	1:CA:28:A:H8	1.85	0.41
2:CC:141:MET:CE	2:CC:141:MET:HA	2.51	0.41
1:AA:728:A:H2'	1:AA:729:A:C8	2.55	0.41
23:DB:199:A:O2'	23:DB:200:U:H5'	2.20	0.41
1:AA:852:G:H2'	1:AA:853:C:H6	1.85	0.41
22:BA:109:A:H2'	22:BA:110:C:O4'	2.20	0.41
36:D2:11:LYS:O	36:D2:12:ARG:C	2.59	0.41
23:DB:2583:G:O2'	23:DB:2584:U:H5'	2.20	0.41
4:AE:111:ARG:HG3	4:AE:112:ALA:N	2.35	0.41
40:DH:83:LYS:HG2	40:DH:149:GLU:CG	2.51	0.41
23:DB:195:A:H1'	23:DB:250:G:N2	2.35	0.41
21:CU:16:ARG:O	21:CU:17:ARG:C	2.58	0.41
29:BE:3:LEU:O	29:BE:12:LEU:HB2	2.20	0.41
9:AJ:17:LEU:HD11	9:AJ:95:GLY:HA3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:31:GLU:HG3	47:BF:31:GLU:O	2.19	0.41
10:AK:13:LYS:HD2	10:AK:76:TYR:CE2	2.56	0.41
40:DH:41:LYS:HA	40:DH:44:ILE:CD1	2.49	0.41
1:AA:464:U:H2'	1:AA:466:A:OP2	2.20	0.41
52:DW:58:LEU:N	52:DW:58:LEU:HD22	2.35	0.41
13:CN:26:LEU:HD23	13:CN:27:LYS:N	2.27	0.41
23:DB:900:A:O2'	23:DB:901:C:H5'	2.21	0.41
1:CA:1147:C:H2'	1:CA:1148:U:C6	2.54	0.41
8:CI:56:MET:CG	8:CI:57:VAL:N	2.83	0.41
44:DQ:94:LEU:CD2	49:DR:11:GLN:HB2	2.50	0.41
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.28	0.41
23:BB:2472:G:C3'	23:BB:2475:C:H42	2.33	0.41
26:DD:12:THR:O	26:DD:24:VAL:HG12	2.19	0.41
40:BH:133:GLN:HA	40:BH:139:PHE:HA	2.01	0.41
1:AA:812:G:H4'	1:AA:812:G:OP1	2.20	0.41
49:DR:7:SER:OG	49:DR:8:GLY:N	2.53	0.41
1:AA:846:G:H2'	1:AA:847:G:C8	2.55	0.41
41:DJ:25:LEU:HA	41:DJ:28:LEU:HD22	2.01	0.41
23:BB:1139:G:H2'	23:BB:1140:C:H6	1.86	0.41
23:BB:2456:C:O5'	23:BB:2456:C:H6	2.03	0.41
47:BF:42:ALA:O	47:BF:43:ILE:C	2.59	0.41
48:DG:93:TYR:CD1	48:DG:106:LEU:HB2	2.55	0.41
28:DP:52:ARG:NH1	28:DP:52:ARG:HG2	2.31	0.41
12:CM:22:TYR:HB3	12:CM:69:ARG:NH1	2.35	0.41
29:DE:160:ALA:C	29:DE:162:ARG:H	2.24	0.41
20:CB:152:ASP:O	20:CB:153:MET:HB2	2.19	0.41
28:BP:50:ARG:HB3	28:BP:57:ALA:O	2.19	0.41
43:BO:25:ARG:HH21	43:BO:25:ARG:HG2	1.84	0.41
6:AG:107:ALA:HA	6:AG:110:ARG:HD2	2.00	0.41
4:AE:148:SER:HB2	4:AE:149:PRO:HD2	2.02	0.41
1:AA:782:A:H2'	1:AA:783:C:O4'	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
38:BM:69:PRO:HB2	38:BM:92:TRP:HB3	2.02	0.41
42:BN:62:ASN:N	42:BN:62:ASN:ND2	2.68	0.41
12:CM:93:GLY:O	12:CM:108:ARG:HG3	2.20	0.41
28:BP:26:GLU:HG3	28:BP:43:GLU:HG2	2.02	0.41
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.44	0.41
23:DB:2526:G:H2'	23:DB:2527:C:H6	1.86	0.41
1:AA:1032:G:H2'	1:AA:1033:G:H5'	2.02	0.41
1:CA:370:C:H2'	1:CA:371:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.20	0.41
23:BB:1404:C:H2'	23:BB:1405:U:H6	1.85	0.41
6:CG:107:ALA:HA	6:CG:110:ARG:HD2	2.02	0.41
23:DB:495:G:H21	45:DS:61:ASN:ND2	2.16	0.41
29:DE:150:THR:HG21	29:DE:153:LEU:CA	2.43	0.41
27:BK:70:ARG:CB	27:BK:76:VAL:HG22	2.45	0.41
23:DB:2883:A:OP1	31:D0:48:TYR:HE1	2.03	0.41
31:D0:51:ARG:O	31:D0:52:LYS:HB2	2.20	0.41
23:BB:308:G:O2'	46:BU:16:LYS:NZ	2.45	0.41
30:BY:7:THR:O	30:BY:54:VAL:HA	2.20	0.41
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.50	0.41
7:CH:11:THR:HG22	7:CH:14:ARG:NH1	2.30	0.41
23:DB:1137:G:O2'	23:DB:1138:G:H5'	2.20	0.41
3:AD:197:HIS:HA	3:AD:200:VAL:HG13	2.03	0.41
23:DB:2677:G:H2'	23:DB:2678:C:H6	1.85	0.41
3:AD:117:VAL:HA	3:AD:122:ILE:HG12	2.01	0.41
23:BB:1220:G:O2'	23:BB:1221:C:H5'	2.21	0.41
47:DF:141:ASP:O	47:DF:144:LYS:N	2.54	0.41
38:BM:123:LYS:O	38:BM:124:LEU:C	2.58	0.41
23:BB:2806:C:H2'	23:BB:2807:U:O4'	2.20	0.41
25:DC:180:MET:HB2	25:DC:268:ARG:CB	2.50	0.41
44:DQ:20:ALA:O	44:DQ:21:LYS:C	2.58	0.41
12:AM:78:ARG:HH11	12:AM:78:ARG:HG2	1.86	0.41
23:BB:465:G:H2'	23:BB:466:A:C8	2.55	0.41
28:BP:31:VAL:HG13	28:BP:32:VAL:N	2.35	0.41
4:AE:30:PHE:N	4:AE:30:PHE:CD2	2.88	0.41
1:CA:1499:A:H2'	1:CA:1500:A:H8	1.84	0.41
25:BC:14:HIS:O	25:BC:203:VAL:HG11	2.20	0.41
23:DB:2026:U:C2	23:DB:2027:G:C8	3.09	0.41
23:DB:2772:C:H4'	26:DD:171:THR:HG22	2.01	0.41
14:CO:7:ALA:O	14:CO:11:ILE:HG22	2.20	0.41
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.20	0.41
16:AQ:30:HIS:CG	16:AQ:33:TYR:HB2	2.55	0.41
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.55	0.41
23:DB:1353:A:C8	23:DB:1378:A:N6	2.88	0.41
46:BU:23:LYS:HD2	46:BU:23:LYS:H	1.85	0.41
23:BB:812:C:O2'	23:BB:813:U:H5'	2.20	0.41
23:DB:2598:A:OP1	25:DC:233:GLY:CA	2.67	0.41
1:AA:85:U:H4'	1:AA:86:G:C5'	2.50	0.41
14:AO:57:LEU:HD11	23:BB:715:A:N6	2.35	0.41
23:BB:1314:C:O2'	23:BB:1315:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1559:U:H3'	23:DB:1560:G:C5'	2.49	0.41
1:AA:768:A:H5'	1:AA:1524:C:H1'	2.03	0.41
1:AA:263:A:OP1	19:AT:73:ARG:NH1	2.53	0.41
1:AA:204:G:H2'	1:AA:205:A:C8	2.55	0.41
1:AA:476:U:H2'	1:AA:477:C:O4'	2.21	0.41
23:BB:1146:C:H2'	23:BB:1147:A:C8	2.56	0.41
23:DB:936:A:H2'	23:DB:937:C:H6	1.83	0.41
2:CC:16:PRO:HG2	2:CC:53:ARG:NH2	2.35	0.41
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.84	0.41
23:BB:1805:A:H2'	23:BB:1806:C:C6	2.55	0.41
20:AB:103:TRP:CH2	20:AB:107:ARG:HD2	2.54	0.41
23:DB:1928:A:H2'	23:DB:1929:G:O4'	2.20	0.41
28:DP:110:LYS:HD2	28:DP:110:LYS:H	1.86	0.41
1:CA:27:G:H2'	1:CA:28:A:C8	2.55	0.41
23:DB:2702:G:H2'	23:DB:2703:C:C6	2.55	0.41
1:CA:1470:U:O2'	1:CA:1471:U:H5'	2.20	0.41
23:DB:2642:G:O2'	23:DB:2643:G:H5'	2.20	0.41
23:BB:911:A:N6	38:BM:9:PHE:HB3	2.35	0.41
23:DB:1036:G:C5	23:DB:1120:G:C6	3.09	0.41
23:DB:1687:G:O2'	23:DB:1688:U:H5'	2.20	0.41
23:DB:2624:G:H1'	31:D0:18:HIS:CE1	2.55	0.41
23:BB:109:C:C5'	23:BB:348:A:H4'	2.50	0.41
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.20	0.41
15:AP:8:ARG:HG2	15:AP:8:ARG:HH11	1.86	0.41
1:AA:526:C:OP2	11:AL:87:LYS:HE3	2.19	0.41
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.20	0.41
51:BZ:43:GLU:C	51:BZ:45:ARG:H	2.22	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
47:DF:134:GLN:HE21	47:DF:134:GLN:HB3	1.54	0.41
13:CN:72:PHE:O	13:CN:73:LEU:HD23	2.19	0.41
29:BE:3:LEU:HD23	29:BE:14:VAL:CG2	2.50	0.41
26:DD:32:ASN:N	26:DD:96:ILE:O	2.52	0.41
45:DS:71:VAL:O	45:DS:71:VAL:HG13	2.21	0.41
13:CN:5:MET:SD	13:CN:8:ARG:HD3	2.60	0.41
41:BJ:43:GLU:O	41:BJ:44:TYR:C	2.57	0.41
44:BQ:91:ARG:HH12	49:BR:10:LYS:CA	2.34	0.41
40:BH:65:ALA:HB3	40:BH:135:HIS:CE1	2.54	0.41
12:CM:12:LYS:HB3	12:CM:13:HIS:H	1.69	0.41
19:AT:82:ILE:O	19:AT:85:LEU:HD22	2.20	0.41
26:BD:108:ASP:N	26:BD:204:LYS:O	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.20	0.41
51:BZ:64:ILE:CD1	51:BZ:64:ILE:H	2.24	0.41
51:BZ:72:ARG:HB3	51:BZ:78:TYR:HE2	1.86	0.41
23:BB:972:A:OP2	23:BB:974:G:H5''	2.20	0.41
47:BF:41:GLU:O	47:BF:43:ILE:N	2.53	0.41
40:BH:124:THR:CG2	40:BH:125:THR:H	2.32	0.41
40:BH:89:LYS:HB3	40:BH:90:LEU:H	1.58	0.41
14:AO:25:THR:HG21	14:AO:70:LEU:HD23	2.03	0.41
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	2.02	0.41
23:DB:1059:G:H4'	24:DI:116:MET:HE2	2.02	0.41
23:DB:2144:G:C2'	23:DB:2145:C:H5'	2.51	0.41
38:DM:46:ILE:HG13	38:DM:47:GLU:N	2.35	0.41
31:B0:41:HIS:N	31:B0:41:HIS:CD2	2.86	0.41
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	2.21	0.41
42:BN:96:ARG:HG2	42:BN:98:LEU:HD22	2.02	0.41
22:BA:64:G:H2'	22:BA:65:U:H6	1.85	0.41
35:BV:83:LYS:O	35:BV:85:LYS:N	2.53	0.41
23:DB:543:G:H2'	23:DB:544:C:H4'	2.02	0.41
11:AL:33:CYS:O	11:AL:75:GLU:O	2.37	0.41
1:CA:410:G:H2'	1:CA:429:U:C5	2.55	0.41
3:CD:25:ARG:HB2	3:CD:25:ARG:HH11	1.84	0.41
23:DB:2880:C:H1'	42:DN:93:GLY:H	1.85	0.41
23:DB:2645:G:H4'	23:DB:2732:G:H2'	2.03	0.41
23:BB:273:G:C2'	23:BB:274:C:H5'	2.50	0.41
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.29	0.41
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.31	0.41
1:CA:1060:U:H5''	9:CJ:53:ILE:CD1	2.50	0.41
30:DY:7:THR:O	30:DY:54:VAL:HA	2.21	0.41
1:AA:663:A:H2'	1:AA:664:G:C8	2.54	0.41
23:BB:307:G:N2	23:BB:309:A:H3'	2.34	0.41
25:DC:43:ASN:N	25:DC:47:ARG:O	2.53	0.41
37:BL:78:ARG:NH2	37:BL:78:ARG:HB3	2.35	0.41
41:BJ:35:ARG:HG3	41:BJ:52:ASP:OD1	2.21	0.41
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.21	0.41
23:DB:2654:A:N1	23:DB:2665:A:H5''	2.36	0.41
23:DB:532:A:N3	23:DB:532:A:C2'	2.82	0.41
23:DB:833:A:H1'	37:DL:52:GLY:N	2.35	0.41
23:BB:851:C:H2'	23:BB:852:U:C6	2.55	0.41
7:AH:11:THR:HG22	7:AH:14:ARG:NH1	2.32	0.41
23:DB:2217:G:H2'	23:DB:2218:G:H8	1.84	0.41
23:DB:76:C:HO2'	39:DX:55:THR:CB	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:638:G:H2'	23:BB:639:U:C6	2.55	0.41
1:AA:978:A:H5'	1:AA:1362:A:H62	1.85	0.41
1:CA:1446:A:H2'	1:CA:1447:A:C8	2.55	0.41
5:AF:46:GLN:CG	5:AF:47:LEU:N	2.83	0.41
26:BD:116:LYS:HB2	26:BD:165:MET:HB3	2.02	0.41
1:AA:1342:C:O2'	8:AI:125:GLN:HB2	2.20	0.41
22:DA:15:A:N3	22:DA:15:A:O4'	2.53	0.41
7:AH:46:GLU:N	7:AH:63:LYS:HB2	2.36	0.41
23:BB:665:U:H2'	23:BB:666:A:C8	2.53	0.41
23:BB:1559:U:H3'	23:BB:1560:G:C5'	2.50	0.41
1:CA:951:G:O2'	1:CA:952:U:H5'	2.20	0.41
23:DB:82:U:H2'	23:DB:83:A:C8	2.55	0.41
1:AA:191:G:H8	1:AA:191:G:OP2	2.03	0.41
1:CA:1057:G:O2'	1:CA:1058:G:H5'	2.19	0.41
1:CA:940:C:H2'	1:CA:941:G:C8	2.56	0.41
23:DB:1250:G:OP2	37:DL:21:ARG:NH2	2.53	0.41
23:BB:1930:G:N2	23:BB:1969:A:O5'	2.53	0.41
1:AA:659:U:H2'	1:AA:660:C:C6	2.54	0.41
53:D6:147:LEU:N	53:D6:147:LEU:HD23	2.34	0.41
7:AH:1:SER:O	7:AH:3:GLN:N	2.53	0.41
23:DB:2300:C:O2'	23:DB:2301:C:H5'	2.19	0.41
38:DM:66:ARG:HB2	38:DM:101:VAL:O	2.20	0.41
23:DB:1289:C:O2'	23:DB:1290:C:H5'	2.20	0.41
1:AA:513:C:H2'	1:AA:514:C:C6	2.55	0.41
22:BA:51:G:H2'	22:BA:52:A:O5'	2.21	0.41
23:DB:2689:U:H4'	23:DB:2690:U:OP2	2.20	0.41
23:DB:2182:U:H2'	23:DB:2183:A:H8	1.84	0.41
26:BD:122:VAL:N	26:BD:127:PHE:HB2	2.35	0.41
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.35	0.41
42:DN:24:MET:HE2	42:DN:44:LEU:HB2	2.02	0.41
23:BB:2395:C:H2'	23:BB:2396:G:O4'	2.21	0.41
33:D1:37:LYS:HB2	33:D1:48:TYR:CD2	2.56	0.41
53:D6:174:GLN:HE21	53:D6:174:GLN:HB3	1.58	0.41
41:DJ:75:TYR:HD1	41:DJ:86:GLN:HB3	1.85	0.41
1:CA:124:C:O2'	1:CA:125:U:H5'	2.20	0.41
21:AU:23:GLU:HA	21:AU:27:VAL:HG21	2.02	0.41
1:CA:1354:U:O2'	1:CA:1355:G:H5'	2.21	0.41
22:DA:109:A:H2'	22:DA:110:C:O4'	2.20	0.41
22:BA:3:C:H2'	22:BA:4:C:O4'	2.20	0.41
23:BB:381:G:H5''	51:BZ:16:ASN:ND2	2.35	0.41
23:BB:323:C:H6	23:BB:1205:A:N1	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:138:ARG:HA	20:AB:141:GLU:OE1	2.21	0.41
23:DB:553:G:H2'	23:DB:554:U:O4'	2.20	0.41
24:BI:35:MET:C	24:BI:35:MET:SD	2.98	0.41
38:BM:25:ASP:OD2	38:BM:25:ASP:N	2.53	0.41
23:BB:1940:U:H5''	23:BB:1940:U:O2	2.20	0.41
41:BJ:133:ALA:C	41:BJ:135:GLN:H	2.23	0.41
5:AF:69:GLU:O	5:AF:73:GLU:HG2	2.20	0.41
37:BL:93:ASN:ND2	37:BL:94:THR:N	2.66	0.41
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	2.01	0.41
29:BE:146:VAL:HG12	29:BE:147:LEU:N	2.35	0.41
21:CU:3:ILE:HD12	21:CU:19:LYS:HA	2.01	0.41
23:BB:2352:A:C2'	23:BB:2353:G:H5'	2.51	0.41
52:BW:64:GLY:C	52:BW:65:LYS:HG3	2.41	0.41
5:AF:86:ARG:NH2	17:AR:63:TYR:HB3	2.35	0.41
27:DK:72:PRO:C	27:DK:74:GLY:N	2.73	0.41
1:CA:468:A:H3'	1:CA:469:C:C6	2.56	0.41
23:BB:2263:C:H4'	23:BB:2329:U:H4'	2.02	0.41
23:DB:2262:U:O2'	23:DB:2263:C:H5'	2.21	0.41
13:CN:12:ARG:CD	13:CN:58:ARG:HB3	2.49	0.41
48:DG:42:VAL:HA	48:DG:50:THR:O	2.20	0.41
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.20	0.41
53:B6:29:ARG:HE	53:B6:32:ARG:NH2	2.18	0.41
22:BA:76:G:O2'	22:BA:77:U:H5'	2.21	0.41
35:BV:1:MET:O	35:BV:62:THR:HG23	2.20	0.41
48:BG:51:PHE:CE2	48:BG:68:ARG:HA	2.55	0.41
40:DH:9:VAL:CG1	40:DH:12:LEU:HG	2.50	0.41
23:DB:137:U:P	23:DB:137:U:H6	2.43	0.41
45:DS:71:VAL:O	45:DS:71:VAL:HG22	2.19	0.41
13:CN:5:MET:HE3	13:CN:60:ARG:NH1	2.36	0.41
50:BT:39:THR:HG22	50:BT:42:GLU:H	1.83	0.41
1:CA:1148:U:H5'	8:CI:6:TYR:OH	2.21	0.41
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.21	0.41
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	2.02	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
1:AA:840:C:N3	1:AA:842:U:H4'	2.35	0.41
28:DP:91:VAL:CG2	28:DP:96:LEU:HD21	2.51	0.41
29:BE:29:HIS:C	29:BE:31:VAL:N	2.74	0.41
23:DB:2230:G:H4'	51:DZ:31:PRO:O	2.19	0.41
1:AA:79:G:OP2	1:AA:79:G:C8	2.73	0.41
23:BB:2144:G:H3'	23:BB:2145:C:C3'	2.48	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
2:CC:58:ARG:HA	2:CC:62:SER:O	2.21	0.41
14:CO:71:LYS:HZ2	14:CO:72:ARG:HA	1.85	0.41
50:DT:21:SER:O	50:DT:25:GLU:HB2	2.20	0.41
28:BP:50:ARG:CD	28:BP:56:SER:HB3	2.51	0.41
16:CQ:57:VAL:HB	16:CQ:79:GLU:CB	2.50	0.41
23:BB:1348:C:C3'	23:BB:1349:C:H5'	2.50	0.41
32:D4:10:LEU:HD12	32:D4:33:HIS:CA	2.48	0.41
1:CA:407:U:H3'	1:CA:408:A:H8	1.86	0.41
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.85	0.41
27:DK:87:LEU:O	27:DK:88:ASN:C	2.59	0.41
23:BB:2848:G:N3	23:BB:2849:U:H5	2.19	0.41
1:CA:1061:G:OP2	2:CC:1:GLY:O	2.38	0.41
5:CF:4:TYR:CD2	5:CF:71:ILE:HD13	2.56	0.41
28:DP:27:VAL:HG21	28:DP:73:PHE:CE2	2.56	0.41
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.21	0.41
1:CA:558:G:H8	1:CA:559:A:H2'	1.86	0.41
29:DE:154:ASP:OD2	29:DE:157:LEU:HB3	2.20	0.41
40:BH:54:LEU:HA	40:BH:57:LYS:HZ2	1.84	0.41
30:BY:5:LYS:HG2	30:BY:36:GLU:HB2	2.03	0.41
23:BB:1535:A:H5''	23:BB:1536:C:C5	2.55	0.41
15:CP:1:MET:CA	15:CP:1:MET:HE3	2.45	0.41
23:BB:1309:G:OP1	36:B2:9:VAL:N	2.48	0.41
6:AG:2:ARG:C	6:AG:4:ARG:N	2.74	0.41
26:DD:124:ARG:HG3	26:DD:125:TRP:CD1	2.55	0.41
20:AB:23:ASN:C	20:AB:23:ASN:ND2	2.72	0.41
23:BB:635:C:H2'	23:BB:636:G:H8	1.86	0.41
1:AA:818:G:H3'	1:AA:819:A:H5''	2.02	0.41
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	2.02	0.41
37:DL:77:ILE:O	37:DL:110:VAL:O	2.37	0.41
23:BB:1434:A:N6	23:BB:1558:C:H42	2.18	0.41
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.86	0.41
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.82	0.41
3:CD:115:GLN:HG3	3:CD:119:HIS:ND1	2.35	0.41
20:CB:169:HIS:HA	20:CB:172:ILE:HD13	2.02	0.41
1:AA:124:C:O2'	1:AA:125:U:H5'	2.21	0.41
1:CA:108:G:N3	1:CA:108:G:O4'	2.53	0.41
3:CD:141:VAL:HA	3:CD:179:GLY:O	2.21	0.41
31:D0:9:ARG:O	31:D0:12:ARG:HB3	2.20	0.41
52:BW:77:LYS:HD3	52:BW:77:LYS:HA	1.88	0.41
34:D3:7:ARG:O	34:D3:8:GLY:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.55	0.41
23:DB:1353:A:O2'	23:DB:1354:A:H5'	2.21	0.41
17:CR:44:THR:CB	17:CR:46:THR:HG22	2.50	0.41
51:BZ:9:GLY:O	51:BZ:11:ARG:HG3	2.19	0.41
46:DU:23:LYS:H	46:DU:23:LYS:HD2	1.86	0.41
1:AA:1260:G:O5'	1:AA:1284:C:H4'	2.21	0.41
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.56	0.41
23:BB:612:G:H2'	23:BB:614:A:H5''	2.02	0.41
1:CA:659:U:O2'	1:CA:660:C:H5'	2.20	0.41
17:AR:43:ILE:O	17:AR:44:THR:HG23	2.20	0.41
23:DB:1376:C:O2'	23:DB:1377:G:H5'	2.21	0.41
3:AD:47:LEU:HD21	3:AD:55:ARG:HD2	2.02	0.41
23:BB:765:C:H2'	23:BB:766:U:H6	1.85	0.41
39:BX:22:LEU:HG	39:BX:23:ARG:HG2	2.03	0.41
23:DB:1689:A:O2'	23:DB:1690:A:H5'	2.20	0.41
49:DR:61:ALA:CB	49:DR:98:ILE:HA	2.51	0.41
4:AE:43:GLY:O	4:AE:72:ASN:HA	2.20	0.41
35:DV:5:ASN:OD1	35:DV:5:ASN:N	2.54	0.41
23:BB:2667:C:O2	48:BG:110:HIS:CE1	2.74	0.41
23:DB:1903:G:H2'	23:DB:1904:G:H8	1.85	0.41
13:AN:47:LEU:O	13:AN:49:THR:N	2.53	0.41
23:DB:2397:G:H2'	23:DB:2398:U:C6	2.56	0.41
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.51	0.41
1:AA:308:C:H2'	1:AA:309:A:C8	2.56	0.41
28:DP:47:ILE:HG13	28:DP:48:ALA:N	2.35	0.41
28:BP:99:LEU:HA	28:BP:102:ARG:HG3	2.03	0.41
1:AA:138:G:C6	1:AA:226:G:C6	3.09	0.41
1:CA:894:G:H2'	1:CA:895:G:H8	1.85	0.41
23:DB:1120:G:O2'	23:DB:1121:C:H5'	2.21	0.41
22:BA:3:C:H6	22:BA:3:C:O5'	2.04	0.41
29:BE:41:GLN:O	29:BE:42:GLY:O	2.39	0.41
23:DB:406:G:O2'	23:DB:407:G:H5'	2.21	0.41
1:CA:1188:A:H2'	1:CA:1189:U:O4'	2.19	0.41
57:DB:3693:HOH:O	41:DJ:39:LYS:HE3	2.21	0.41
23:BB:2055:C:H5'	23:BB:2056:G:O5'	2.20	0.41
29:BE:7:ASP:N	29:BE:7:ASP:OD2	2.54	0.41
23:DB:1940:U:H5''	23:DB:1940:U:O2	2.21	0.41
9:AJ:31:ARG:H	9:AJ:31:ARG:HG3	1.60	0.41
14:AO:88:ARG:HB2	14:AO:88:ARG:NH1	2.36	0.41
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.21	0.41
12:CM:50:GLY:O	12:CM:54:THR:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1097:U:C2	23:DB:1098:A:H1'	2.56	0.41
24:DI:4:VAL:O	24:DI:5:GLN:O	2.39	0.41
1:CA:691:G:H1'	1:CA:696:A:H61	1.85	0.41
29:BE:138:LEU:O	29:BE:142:ALA:N	2.54	0.41
53:D6:38:LEU:O	53:D6:52:LEU:HB3	2.21	0.41
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.33	0.41
35:DV:42:LEU:HD11	35:DV:89:ILE:HD11	2.03	0.41
48:DG:34:ARG:N	48:DG:34:ARG:CD	2.83	0.41
53:B6:111:ARG:NH2	53:B6:184:LEU:HA	2.36	0.41
35:BV:89:ILE:HD13	35:BV:91:PHE:CZ	2.56	0.41
45:DS:66:ILE:HG12	45:DS:67:ASP:N	2.35	0.41
13:CN:9:GLU:HB2	13:CN:62:ARG:NE	2.35	0.41
8:CI:17:ARG:HH21	8:CI:65:THR:HG21	1.85	0.41
48:DG:97:VAL:HG21	48:DG:124:CYS:HB2	2.01	0.41
28:DP:4:ILE:CG2	28:DP:5:LYS:H	2.17	0.41
33:B1:20:TYR:CD2	33:B1:37:LYS:HD3	2.55	0.41
24:BI:91:LYS:O	24:BI:91:LYS:HG3	2.20	0.41
49:DR:23:GLU:O	49:DR:24:LYS:C	2.58	0.41
1:CA:377:G:O2'	1:CA:378:G:H5'	2.20	0.41
1:AA:844:G:H3'	1:AA:844:G:OP2	2.21	0.41
4:CE:157:GLY:O	4:CE:158:LYS:HB2	2.20	0.41
48:DG:108:PHE:C	48:DG:110:HIS:H	2.24	0.41
23:BB:2145:C:H2'	23:BB:2145:C:O2	2.21	0.41
20:CB:111:LYS:O	20:CB:114:LYS:HB2	2.21	0.41
23:BB:675:A:N3	23:BB:2443:C:O2'	2.52	0.41
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.20	0.41
23:DB:2580:U:C5'	26:DD:136:ASN:H	2.33	0.41
38:DM:47:GLU:CD	38:DM:50:ARG:HH11	2.24	0.41
1:CA:780:A:C2	1:CA:803:G:C6	3.09	0.41
11:AL:22:ALA:O	11:AL:23:LEU:O	2.39	0.41
23:DB:545:U:C4	23:DB:548:G:OP1	2.74	0.41
11:AL:35:ARG:HH12	11:AL:75:GLU:HA	1.86	0.41
23:BB:2645:G:H4'	23:BB:2732:G:H2'	2.02	0.41
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.85	0.41
10:AK:17:ASP:HB3	10:AK:80:ASN:CG	2.41	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
28:DP:27:VAL:O	28:DP:42:PHE:N	2.53	0.41
23:DB:2259:U:H1'	23:DB:2427:C:C2	2.55	0.41
20:AB:184:ALA:O	20:AB:199:ILE:HB	2.20	0.41
10:AK:92:ARG:NH1	10:AK:92:ARG:CG	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2893:A:H4'	23:BB:2894:G:H5'	2.02	0.41
23:DB:741:U:H2'	23:DB:742:A:C8	2.55	0.41
23:BB:2080:A:H2'	23:BB:2081:U:C6	2.56	0.41
20:AB:114:LYS:NZ	20:AB:152:ASP:OD1	2.54	0.41
1:CA:555:U:H2'	1:CA:556:C:C6	2.56	0.41
29:BE:151:GLY:CA	29:BE:195:GLN:HE22	2.34	0.41
31:D0:41:HIS:CD2	31:D0:41:HIS:N	2.87	0.41
23:DB:27:G:O2'	23:DB:28:A:H8	2.01	0.41
7:CH:45:ILE:C	7:CH:63:LYS:HE3	2.41	0.41
12:AM:2:ARG:CD	12:AM:2:ARG:H	2.31	0.41
1:CA:817:C:C2	1:CA:819:A:O4'	2.74	0.41
14:CO:16:GLY:HA2	14:CO:27:VAL:CG2	2.50	0.41
23:BB:2212:A:O3'	23:BB:2213:U:C4	2.73	0.41
23:BB:2063:C:O2	23:BB:2450:A:N1	2.54	0.41
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.20	0.41
8:AI:45:MET:SD	8:AI:45:MET:N	2.94	0.41
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.85	0.41
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.36	0.41
7:AH:58:LEU:CD2	7:AH:60:LEU:HB2	2.50	0.41
23:DB:1348:C:C3'	23:DB:1349:C:H5'	2.51	0.41
3:CD:22:SER:H	3:CD:109:THR:CG2	2.33	0.41
23:DB:1274:A:C2	23:DB:1302:A:H2	2.38	0.41
18:CS:25:GLY:O	18:CS:27:LYS:HE2	2.20	0.41
23:BB:2016:U:H1'	31:B0:2:VAL:HG11	2.02	0.41
4:CE:28:ARG:NH1	4:CE:30:PHE:HB3	2.36	0.41
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.20	0.41
46:BU:41:VAL:HG23	46:BU:42:LYS:N	2.36	0.41
25:DC:66:PHE:CD1	25:DC:66:PHE:N	2.88	0.41
37:BL:55:MET:HG3	37:BL:59:ARG:CB	2.51	0.41
23:DB:2373:G:H2'	23:DB:2374:C:C6	2.55	0.41
27:BK:2:ILE:HG13	27:BK:33:ALA:O	2.20	0.41
23:BB:2358:A:N6	37:BL:54:GLN:HE22	2.18	0.41
1:AA:279:A:OP1	1:AA:281:G:H5'	2.19	0.41
1:CA:708:C:H2'	1:CA:709:U:H6	1.84	0.41
53:B6:15:GLN:HG2	53:B6:16:LYS:HZ1	1.85	0.41
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.21	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:692:C:H2'	23:BB:693:A:C8	2.55	0.41
20:CB:11:ALA:C	20:CB:13:VAL:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:382:A:H2'	23:BB:383:C:O4'	2.20	0.41
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.21	0.41
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	2.03	0.41
33:B1:16:THR:HG21	33:B1:39:ASP:OD2	2.21	0.41
23:BB:765:C:H2'	23:BB:766:U:C6	2.56	0.41
7:AH:55:LYS:CE	7:AH:55:LYS:HA	2.50	0.41
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.55	0.41
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.20	0.41
23:DB:2617:U:H2'	23:DB:2618:G:O4'	2.20	0.41
45:BS:95:ARG:O	45:BS:96:ILE:HG22	2.21	0.41
43:BO:7:ARG:HA	43:BO:10:ARG:CZ	2.51	0.41
1:CA:46:G:HO2'	1:CA:365:U:H1'	1.84	0.41
43:BO:55:GLU:O	43:BO:56:LYS:C	2.59	0.41
25:BC:196:ASN:OD1	25:BC:199:HIS:N	2.54	0.41
23:BB:2641:G:H2'	23:BB:2642:G:C8	2.56	0.41
17:CR:26:ALA:HA	17:CR:29:LYS:HE3	2.02	0.41
1:CA:486:U:H2'	1:CA:487:A:C8	2.56	0.41
23:DB:2582:G:O2'	23:DB:2583:G:H5'	2.20	0.41
2:AC:84:GLU:OE2	2:AC:87:ARG:HD3	2.21	0.41
23:BB:1253:A:H4'	23:BB:1254:A:OP2	2.20	0.41
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	2.03	0.41
1:AA:893:C:H2'	1:AA:894:G:C8	2.55	0.41
23:DB:1885:A:H3'	23:DB:1886:U:C6	2.56	0.41
20:CB:27:LYS:HD2	20:CB:28:PRO:HD3	2.02	0.41
23:BB:566:U:H2'	23:BB:567:U:O4'	2.20	0.41
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.20	0.41
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.55	0.41
41:DJ:9:GLU:N	41:DJ:9:GLU:CD	2.74	0.41
39:DX:25:GLN:HB3	39:DX:25:GLN:HE21	1.60	0.41
38:BM:116:ALA:C	38:BM:118:LYS:N	2.74	0.41
23:DB:1573:G:H2'	23:DB:1574:C:H5'	2.01	0.41
23:BB:798:G:O2'	23:BB:799:G:H5'	2.21	0.41
10:CK:126:ARG:NE	10:CK:126:ARG:HA	2.36	0.41
43:BO:51:ALA:CB	43:BO:78:VAL:HG22	2.48	0.41
47:BF:105:ILE:O	47:BF:109:ARG:HB2	2.21	0.41
47:BF:64:PRO:CA	47:BF:88:VAL:HG22	2.48	0.41
35:DV:76:ASP:H	35:DV:90:ASP:HB2	1.86	0.41
28:BP:3:ILE:CD1	28:BP:7:LEU:HD11	2.50	0.41
53:B6:41:LEU:O	53:B6:52:LEU: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:14:LEU:O	18:AS:18:VAL:HG12	2.21	0.41
50:DT:10:VAL:O	50:DT:12:ARG:N	2.54	0.41
26:DD:13:ARG:HH12	28:DP:74:GLN:NE2	2.19	0.41
25:BC:99:GLU:HG2	25:BC:100:ARG:N	2.35	0.41
19:AT:34:VAL:CG1	19:AT:78:LEU:HD22	2.50	0.41
20:AB:44:LYS:O	20:AB:47:PRO:HD2	2.21	0.41
26:BD:104:VAL:HG11	26:BD:205:PRO:HB3	2.02	0.41
25:DC:141:HIS:HB3	25:DC:190:THR:HG1	1.84	0.41
40:BH:9:VAL:HB	40:BH:13:GLY:CA	2.51	0.41
22:DA:2:G:O2'	22:DA:3:C:H5'	2.20	0.41
28:DP:91:VAL:HG21	28:DP:96:LEU:HD21	2.03	0.41
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.21	0.41
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CE1	2.55	0.41
16:AQ:46:HIS:CB	16:AQ:70:LYS:HE2	2.49	0.41
2:CC:133:MET:HB2	2:CC:133:MET:HE2	1.78	0.41
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.22	0.41
23:BB:1056:G:H1'	23:BB:1103:A:H62	1.86	0.41
48:BG:168:VAL:HG12	48:BG:170:THR:CG2	2.49	0.41
23:DB:182:A:H2'	23:DB:183:C:H6	1.85	0.41
36:D2:28:ARG:C	36:D2:30:VAL:N	2.74	0.41
23:BB:2846:G:OP1	28:BP:51:ASN:HB2	2.21	0.41
42:DN:34:ILE:HB	42:DN:113:ILE:CG2	2.48	0.41
42:DN:2:ARG:NE	42:DN:2:ARG:O	2.42	0.41
23:BB:364:C:O2'	23:BB:365:U:H5'	2.21	0.41
1:CA:948:C:H2'	1:CA:949:A:H8	1.85	0.41
35:BV:51:GLN:NE2	35:BV:79:ARG:HH22	2.18	0.41
39:DX:5:GLU:OE2	39:DX:5:GLU:HA	2.21	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
23:BB:2849:U:O4	28:BP:20:ARG:NH1	2.54	0.41
20:AB:101:THR:HA	20:AB:178:LEU:HD11	2.02	0.41
26:DD:117:GLY:O	26:DD:119:ALA:N	2.53	0.41
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.86	0.41
1:AA:21:G:H2'	1:AA:22:G:H8	1.77	0.41
21:AU:20:ARG:HG3	21:AU:24:LYS:HZ2	1.86	0.41
21:AU:24:LYS:HE2	21:AU:25:ALA:HB2	2.02	0.41
1:CA:557:G:H2'	1:CA:558:G:O4'	2.21	0.41
23:BB:329:G:N1	46:BU:16:LYS:HG2	2.30	0.41
20:CB:63:LYS:HA	20:CB:224:ARG:NH1	2.34	0.41
25:DC:42:ARG:HG3	25:DC:46:GLY:O	2.21	0.41
23:DB:1417:C:O2'	23:DB:1418:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:35:ARG:HB2	18:AS:71:GLY:CA	2.50	0.41
23:DB:480:A:H3'	23:DB:481:G:H5''	2.03	0.41
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.85	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
23:DB:1350:C:O2	23:DB:1350:C:H2'	2.20	0.41
2:CC:25:THR:HG23	13:CN:75:LYS:CD	2.50	0.41
23:DB:2394:C:H2'	23:DB:2395:C:C6	2.55	0.41
25:DC:66:PHE:CD2	25:DC:104:LEU:HD11	2.56	0.41
1:AA:125:U:H2'	1:AA:126:G:H8	1.84	0.41
23:DB:657:U:H2'	23:DB:658:U:H6	1.83	0.41
1:CA:708:C:H2'	1:CA:709:U:C6	2.56	0.41
1:CA:499:A:H1'	1:CA:500:G:C8	2.56	0.41
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.36	0.41
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.21	0.41
1:CA:564:C:H1'	16:CQ:32:ILE:O	2.21	0.41
1:CA:1463:U:H2'	1:CA:1464:U:H6	1.82	0.41
23:DB:1652:A:P	42:DN:8:ARG:HD3	2.61	0.41
28:DP:31:VAL:HG13	28:DP:32:VAL:N	2.35	0.41
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.56	0.41
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.54	0.41
24:DI:140:GLU:CD	24:DI:140:GLU:H	2.23	0.41
23:BB:1534:U:H6	23:BB:1534:U:O5'	2.03	0.41
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.55	0.41
18:CS:13:HIS:ND1	18:CS:13:HIS:N	2.69	0.41
5:CF:9:MET:HA	5:CF:58:HIS:O	2.20	0.41
30:DY:23:LEU:HD21	30:DY:53:MET:HE1	2.02	0.41
23:BB:2361:G:H2'	23:BB:2362:C:O4'	2.20	0.41
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.41
16:CQ:10:ARG:HG3	16:CQ:10:ARG:O	2.20	0.41
23:DB:584:C:O2'	23:DB:585:G:H5'	2.20	0.41
23:DB:1526:C:C2'	23:DB:1527:G:H5'	2.51	0.41
40:BH:82:SER:HB2	40:BH:94:ILE:CG1	2.49	0.41
23:DB:485:C:H2'	23:DB:486:C:H6	1.86	0.41
14:AO:21:ASP:CG	14:AO:21:ASP:O	2.59	0.41
23:BB:2394:C:O2'	23:BB:2395:C:H5'	2.20	0.41
38:BM:33:LEU:HD23	38:BM:33:LEU:HA	1.90	0.41
40:BH:101:ASP:HA	40:BH:104:THR:HG22	2.03	0.41
23:DB:649:G:H2'	23:DB:650:C:H6	1.86	0.41
23:DB:2599:G:O2'	23:DB:2600:A:H5'	2.20	0.41
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:146:LYS:HB2	2:AC:202:PHE:CD2	2.56	0.41
2:AC:5:HIS:O	2:AC:9:ILE:HG22	2.20	0.41
1:AA:1102:A:O2'	1:AA:1103:C:H5'	2.20	0.41
5:CF:73:GLU:H	5:CF:73:GLU:HG2	1.69	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
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.18	0.41
36:D2:12:ARG:HG2	36:D2:44:VAL:HG11	2.03	0.41
1:AA:913:A:H4'	1:AA:914:A:OP1	2.20	0.41
3:AD:13:ARG:HA	3:AD:37:PRO:CG	2.51	0.41
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.61	0.41
4:CE:80:LEU:HD11	4:CE:95:MET:HG3	2.03	0.41
1:CA:31:G:H5'	1:CA:306:A:C2	2.56	0.41
1:CA:916:U:H2'	1:CA:917:G:H8	1.86	0.41
25:BC:29:PHE:C	25:BC:31:PRO:HD2	2.41	0.41
25:BC:108:GLY:C	25:BC:110:LYS:H	2.24	0.41
49:DR:70:GLU:N	49:DR:70:GLU:CD	2.74	0.41
23:BB:1224:U:H4'	49:BR:88:GLY:O	2.21	0.41
23:BB:508:A:N6	45:BS:9:HIS:CD2	2.89	0.41
23:DB:1207:C:O2'	23:DB:1208:C:H5'	2.21	0.41
23:BB:622:G:OP1	37:BL:103:ILE:HD13	2.20	0.41
17:CR:31:TYR:CG	17:CR:54:LEU:HD11	2.56	0.41
47:DF:137:PHE:HB2	47:DF:138:PRO:CD	2.46	0.41
47:DF:35:LEU:HD13	47:DF:56:LEU:CD1	2.45	0.41
5:AF:61:LEU:HD12	5:AF:62:MET:H	1.85	0.41
25:BC:130:PRO:O	25:BC:132:ARG:N	2.53	0.41
47:BF:37:MET:SD	47:BF:56:LEU:HD23	2.61	0.41
23:BB:2260:C:H2'	23:BB:2261:C:H6	1.85	0.41
23:DB:920:A:O2'	23:DB:921:C:H5'	2.20	0.41
52:DW:57:THR:O	52:DW:59:PHE:N	2.54	0.41
40:DH:9:VAL:HB	40:DH:13:GLY:CA	2.50	0.41
23:BB:2746:U:C5'	48:BG:138:GLN:HA	2.45	0.41
8:CI:60:LEU:N	8:CI:60:LEU:HD23	2.35	0.41
44:DQ:91:ARG:HH12	49:DR:10:LYS:HA	1.85	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:HD2	2.02	0.41
41:BJ:45:THR:N	41:BJ:46:PRO:CD	2.84	0.41
45:BS:2:GLU:O	45:BS:107:VAL:O	2.38	0.41
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.85	0.41
48:DG:116:LEU:HD23	48:DG:120:ILE:HD13	2.02	0.41
22:DA:83:G:OP1	30:DY:16:LEU:HD21	2.21	0.41
25:DC:69:ASN:HB3	25:DC:70:LYS:H	1.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:973:A:H1'	23:DB:1188:U:C6	2.56	0.41
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.89	0.41
36:D2:21:ARG:HD2	36:D2:43:THR:CG2	2.42	0.41
19:CT:75:LYS:O	19:CT:78:LEU:HB2	2.20	0.41
23:BB:2657:A:H2'	23:BB:2658:C:O4'	2.20	0.41
20:CB:150:ILE:O	20:CB:151:LYS:C	2.59	0.41
50:DT:27:SER:O	50:DT:28:ASN:CB	2.69	0.41
12:AM:22:TYR:HB3	12:AM:69:ARG:NH1	2.35	0.41
43:BO:12:THR:HG23	43:BO:16:ARG:HH11	1.84	0.41
23:BB:2880:C:O2'	42:BN:93:GLY:HA3	2.20	0.41
38:BM:41:LEU:HA	38:BM:45:GLN:OE1	2.21	0.41
27:BK:110:GLU:HA	27:BK:113:MET:HG2	2.02	0.41
6:AG:19:SER:HB2	6:AG:21:LEU:CD2	2.49	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
23:DB:2795:C:O5'	23:DB:2795:C:H6	2.04	0.41
47:DF:38:GLY:HA2	47:DF:85:GLY:HA3	2.03	0.41
23:BB:740:C:OP1	23:BB:1784:A:H2'	2.20	0.41
23:BB:532:A:O2'	23:BB:2021:C:C5	2.74	0.41
32:D4:22:VAL:O	32:D4:24:ARG:HG3	2.20	0.41
1:CA:834:U:H2'	1:CA:835:U:H6	1.85	0.41
23:DB:2883:A:OP1	31:D0:48:TYR:CE1	2.74	0.41
3:CD:41:GLY:C	3:CD:43:ARG:N	2.73	0.41
26:BD:77:ARG:HB2	26:BD:80:TRP:HH2	1.86	0.41
3:AD:43:ARG:NH1	3:AD:43:ARG:HB3	2.35	0.41
29:DE:176:ASP:OD1	29:DE:176:ASP:C	2.59	0.41
23:BB:66:C:O2'	23:BB:67:U:H5'	2.21	0.41
23:DB:2071:A:H2'	23:DB:2072:C:H6	1.83	0.41
25:BC:180:MET:HB2	25:BC:268:ARG:HB2	2.03	0.41
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.21	0.41
31:B0:2:VAL:HG12	31:B0:3:GLN:N	2.36	0.41
1:CA:181:A:N6	1:CA:195:A:OP2	2.54	0.41
23:BB:2437:G:H2'	23:BB:2438:U:C6	2.55	0.41
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.36	0.41
5:CF:22:ILE:O	5:CF:26:THR:HG23	2.21	0.41
23:BB:1273:U:H4'	23:BB:1275:A:P	2.60	0.41
23:DB:569:U:H2'	23:DB:570:G:O4'	2.21	0.41
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.56	0.41
11:AL:63:THR:O	11:AL:94:TYR:HB2	2.20	0.41
53:D6:154:THR:HG23	53:D6:155:LYS:H	1.83	0.41
23:BB:1830:C:H2'	23:BB:1831:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:96:ILE:HD12	26:BD:96:ILE:N	2.36	0.41
53:B6:7:TYR:CD1	53:B6:160:GLU:HG2	2.56	0.41
22:DA:116:G:H4'	43:DO:54:VAL:HG13	2.02	0.41
23:BB:234:U:H2'	23:BB:235:U:O4'	2.20	0.41
1:CA:586:C:C2'	1:CA:587:G:H5'	2.51	0.41
23:DB:673:C:C2'	23:DB:674:G:H5'	2.51	0.41
23:DB:1970:A:H1'	23:DB:1972:G:C8	2.56	0.41
1:AA:553:A:N6	1:AA:554:A:N6	2.69	0.41
11:AL:82:ARG:HH11	11:AL:82:ARG:HG2	1.86	0.41
45:DS:13:SER:CB	45:DS:16:LYS:HE3	2.51	0.41
23:DB:1575:C:O2'	23:DB:1576:U:H5'	2.21	0.41
23:DB:1040:A:O2'	23:DB:1041:G:H5'	2.21	0.41
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.20	0.41
42:DN:25:ALA:HA	42:DN:44:LEU:HD11	2.03	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
23:BB:602:A:H4'	23:BB:604:G:O3'	2.20	0.41
23:BB:1689:A:H2'	23:BB:1690:A:C8	2.56	0.41
20:CB:103:TRP:CH2	20:CB:107:ARG:HD2	2.56	0.41
53:D6:174:GLN:HG2	53:D6:178:LYS:HE2	2.03	0.41
43:DO:55:GLU:O	43:DO:56:LYS:C	2.58	0.41
23:BB:649:G:H2'	23:BB:650:C:H6	1.86	0.41
5:AF:11:HIS:HA	5:AF:85:ILE:HD11	2.02	0.41
1:CA:605:U:O2'	1:CA:606:G:H5'	2.21	0.41
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.21	0.41
42:DN:22:ARG:HG3	42:DN:70:THR:HA	2.02	0.41
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.55	0.41
23:BB:1068:G:C6	23:BB:1069:A:N6	2.88	0.41
38:BM:54:THR:O	38:BM:56:ALA:N	2.54	0.41
4:CE:111:ARG:HG3	4:CE:112:ALA:N	2.36	0.41
50:BT:22:THR:O	50:BT:26:LYS:N	2.36	0.41
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.85	0.41
23:DB:799:G:C6	23:DB:800:A:C6	3.09	0.41
43:BO:31:THR:HG23	43:BO:34:HIS:C	2.41	0.41
23:DB:955:U:H5'	38:DM:86:LYS:HE2	2.02	0.41
23:BB:2494:G:H2'	23:BB:2495:G:H8	1.86	0.41
20:CB:30:ILE:HD11	20:CB:188:THR:HG22	2.03	0.41
1:AA:778:G:H2'	1:AA:779:C:C6	2.56	0.41
23:BB:476:G:O4'	23:BB:505:A:H2	2.03	0.41
2:CC:152:VAL:O	2:CC:164:THR:HG23	2.21	0.41
53:B6:22:GLU:HG3	53:B6:22:GLU:H	1.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:50:VAL:O	7:AH:50:VAL:HG13	2.21	0.41
23:DB:527:C:O2	23:DB:527:C:O4'	2.36	0.41
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
1:CA:693:G:H2'	1:CA:694:A:O4'	2.21	0.41
21:AU:35:GLU:HB3	21:AU:36:PHE:H	1.51	0.41
37:DL:91:ASP:HB2	37:DL:94:THR:OG1	2.21	0.41
37:BL:91:ASP:HB2	37:BL:94:THR:OG1	2.20	0.41
40:DH:32:PRO:HA	51:DZ:39:TRP:CD1	2.56	0.41
23:BB:2266:A:N3	23:BB:2272:U:H5	2.18	0.41
5:AF:37:HIS:ND1	5:AF:95:ALA:HB1	2.36	0.41
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.40	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
47:BF:118:ALA:HA	47:BF:176:PHE:HE2	1.86	0.41
27:BK:35:VAL:CG2	27:BK:36:GLY:H	2.08	0.41
23:BB:2259:U:H1'	23:BB:2427:C:C2	2.56	0.41
45:BS:4:ILE:HG22	45:BS:106:VAL:HA	2.02	0.41
23:DB:2368:C:H2'	23:DB:2369:A:C8	2.55	0.41
8:AI:11:ARG:HA	8:AI:105:ARG:CZ	2.50	0.41
13:CN:40:ARG:HH11	18:CS:6:LYS:HB2	1.86	0.41
13:AN:50:LEU:HG	13:AN:51:PRO:N	2.36	0.41
35:DV:1:MET:HB3	35:DV:59:GLU:OE1	2.21	0.41
48:DG:26:LYS:HA	48:DG:32:LEU:H	1.86	0.41
35:BV:77:VAL:HG11	38:BM:136:MET:O	2.20	0.41
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.55	0.41
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.20	0.41
45:DS:108:SER:OG	45:DS:109:ASP:N	2.54	0.41
39:BX:31:GLN:HG2	39:BX:37:LEU:H	1.86	0.41
39:BX:29:ARG:CZ	50:BT:12:ARG:HE	2.34	0.41
8:CI:21:LYS:O	8:CI:61:ASP:N	2.48	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:CZ	2.51	0.41
45:BS:3:THR:HG21	45:BS:58:ALA:HA	2.02	0.41
45:BS:33:LEU:HG	45:BS:51:LEU:CD2	2.50	0.41
22:BA:83:G:P	30:BY:16:LEU:HD21	2.60	0.41
26:BD:90:PHE:O	26:BD:91:THR:C	2.59	0.41
1:AA:1222:G:C2'	1:AA:1223:C:H5'	2.51	0.41
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.55	0.41
12:AM:15:VAL:O	12:AM:16:ILE:C	2.59	0.41
1:AA:765:G:O6	1:AA:811:C:C5	2.74	0.41
25:BC:80:LEU:HD23	25:BC:91:ALA:HB2	2.02	0.41
25:DC:156:SER:HB3	25:DC:159:THR:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1062:G:H2'	23:BB:1063:G:H8	1.85	0.41
23:BB:974:G:O5'	23:BB:1186:G:N2	2.50	0.41
23:BB:809:G:O2'	23:BB:810:U:H5'	2.21	0.41
23:BB:1244:A:C5'	37:BL:8:PRO:HD3	2.40	0.41
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.41
4:AE:24:VAL:O	4:AE:25:LYS:C	2.59	0.41
44:BQ:111:LYS:HZ2	44:BQ:111:LYS:HB2	1.86	0.41
49:BR:49:ILE:HD13	49:BR:53:PHE:N	2.36	0.41
51:DZ:59:ILE:HG23	51:DZ:67:VAL:HG21	2.02	0.41
29:DE:147:LEU:O	29:DE:168:ASP:O	2.38	0.41
51:DZ:64:ILE:CD1	51:DZ:64:ILE:H	2.27	0.41
41:BJ:21:THR:C	41:BJ:23:LYS:N	2.74	0.41
1:CA:1084:G:H2'	1:CA:1085:U:C6	2.55	0.41
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.51	0.41
41:BJ:30:THR:HA	41:BJ:108:MET:SD	2.60	0.41
2:CC:149:LYS:HE2	2:CC:200:TRP:CZ3	2.54	0.41
38:DM:19:GLY:H	38:DM:38:ARG:NH1	2.05	0.41
47:BF:3:LEU:HD13	47:BF:3:LEU:O	2.21	0.41
48:DG:148:ARG:HB2	48:DG:152:ARG:HH21	1.85	0.41
23:BB:1056:G:H1'	23:BB:1103:A:N6	2.36	0.41
19:CT:47:GLN:O	19:CT:50:PHE:HB3	2.20	0.41
48:BG:148:ARG:HD3	48:BG:152:ARG:HD3	2.03	0.41
23:DB:182:A:H2'	23:DB:183:C:C6	2.56	0.41
23:BB:2145:C:H3'	23:BB:2146:C:H5'	2.02	0.41
23:DB:1082:U:C4	23:DB:1086:A:N1	2.85	0.41
2:AC:63:ILE:HD11	2:AC:94:ALA:CB	2.50	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
20:CB:147:LEU:O	20:CB:148:GLY:C	2.60	0.41
50:DT:14:PRO:HA	50:DT:32:LEU:HB2	2.02	0.41
26:BD:13:ARG:HD2	28:BP:55:HIS:ND1	2.35	0.41
11:CL:22:ALA:O	11:CL:23:LEU:O	2.39	0.41
36:B2:28:ARG:C	36:B2:30:VAL:N	2.73	0.41
23:BB:132:G:O2'	23:BB:133:U:H5'	2.21	0.41
12:AM:65:GLU:O	12:AM:66:GLY:C	2.59	0.41
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.83	0.41
43:BO:18:LEU:HD11	43:BO:91:SER:HB3	2.02	0.41
34:B3:21:PHE:O	34:B3:22:LYS:HB3	2.20	0.41
5:AF:70:VAL:HG23	5:AF:71:ILE:H	1.85	0.41
23:BB:1551:A:H5''	23:BB:1552:A:OP2	2.20	0.41
42:BN:34:ILE:HB	42:BN:113:ILE:CG2	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2800:A:C2'	23:BB:2801:G:O4'	2.65	0.41
31:B0:38:LEU:HD13	31:B0:41:HIS:CE1	2.56	0.41
32:D4:33:HIS:O	32:D4:35:GLN:N	2.54	0.41
32:B4:33:HIS:O	32:B4:35:GLN:N	2.54	0.41
11:AL:79:ILE:C	11:AL:101:LEU:HD12	2.40	0.41
42:DN:107:ASN:ND2	45:DS:40:ASN:ND2	2.64	0.41
6:CG:19:SER:OG	6:CG:22:LEU:HB2	2.21	0.41
27:BK:109:SER:O	27:BK:113:MET:HG2	2.21	0.41
49:DR:31:GLU:O	49:DR:63:VAL:HG22	2.21	0.41
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.51	0.41
12:CM:94:LEU:C	12:CM:108:ARG:HG2	2.41	0.41
27:DK:108:ARG:O	27:DK:113:MET:HE3	2.21	0.41
9:AJ:6:ILE:O	9:AJ:75:ASP:HA	2.21	0.41
3:AD:25:ARG:HB2	3:AD:26:ALA:H	1.65	0.41
43:DO:105:ALA:HA	43:DO:108:ASP:OD2	2.21	0.41
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.56	0.41
1:AA:1073:U:H4'	20:AB:104:LYS:CE	2.51	0.41
26:DD:118:PHE:CE2	42:DN:1:MET:HB3	2.56	0.41
5:CF:4:TYR:CE2	5:CF:71:ILE:HD13	2.55	0.41
3:AD:182:LYS:HB3	3:AD:182:LYS:NZ	2.36	0.41
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.56	0.41
23:DB:960:A:H4'	23:DB:2457:U:H4'	2.02	0.41
23:BB:1657:U:H4'	26:BD:138:LEU:CB	2.49	0.41
26:BD:117:GLY:O	26:BD:119:ALA:N	2.54	0.41
21:CU:23:GLU:HA	21:CU:27:VAL:HG21	2.02	0.41
1:CA:1251:A:O2'	1:CA:1252:A:H5'	2.21	0.41
23:BB:26:G:H2'	23:BB:27:G:O4'	2.21	0.41
23:DB:512:G:OP2	23:DB:1235:G:H5'	2.20	0.41
20:CB:125:PHE:C	20:CB:127:LYS:HE3	2.40	0.41
23:DB:686:U:H1'	36:D2:6:GLN:O	2.21	0.41
7:CH:58:LEU:CD2	7:CH:60:LEU:HB2	2.51	0.41
23:DB:2338:C:O2'	23:DB:2339:C:H5'	2.21	0.41
37:BL:50:PHE:O	37:BL:52:GLY:N	2.54	0.41
1:CA:34:C:H2'	1:CA:35:G:C8	2.56	0.41
20:CB:20:ARG:CZ	20:CB:20:ARG:HB3	2.51	0.41
47:BF:49:LEU:HD13	47:BF:49:LEU:C	2.40	0.41
23:BB:633:A:H2'	23:BB:634:C:O4'	2.20	0.41
15:CP:20:VAL:HG21	15:CP:32:PHE:HB2	2.03	0.41
7:CH:82:LEU:O	7:CH:82:LEU:HD13	2.21	0.41
5:AF:54:LEU:N	5:AF:54:LEU:HD22	2.36	0.41
22:DA:12:C:N3	52:DW:73:PRO:HG3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:13:G:C5	22:DA:70:C:H4'	2.56	0.41
23:BB:2291:U:OP1	23:BB:2381:A:H5'	2.21	0.41
23:DB:1348:C:H2'	23:DB:1349:C:H5'	2.03	0.41
11:AL:98:ARG:NH2	11:AL:104:SER:OG	2.54	0.41
23:BB:665:U:O2'	23:BB:666:A:H5'	2.21	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
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.86	0.41
1:AA:1301:U:O2	1:AA:1301:U:C2'	2.67	0.41
1:CA:1381:U:O2'	1:CA:1382:C:H5'	2.21	0.41
23:DB:2064:C:H1'	23:DB:2450:A:C5	2.56	0.41
33:D1:3:GLY:C	33:D1:5:ARG:N	2.73	0.41
25:DC:64:VAL:HG11	25:DC:66:PHE:CZ	2.56	0.41
27:DK:58:LEU:H	27:DK:58:LEU:HD23	1.83	0.41
18:AS:23:GLU:HG3	18:AS:24:SER:H	1.86	0.41
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.56	0.41
53:D6:22:GLU:H	53:D6:22:GLU:HG3	1.54	0.41
23:BB:1945:G:C4	23:BB:1946:U:C5	3.09	0.41
1:AA:1418:A:H2	23:BB:1948:G:N3	2.19	0.41
23:BB:1508:A:H3'	23:BB:1509:A:C5	2.55	0.41
1:CA:1418:A:O4'	23:DB:1959:G:H4'	2.21	0.41
27:BK:58:LEU:CD1	27:BK:86:LEU:HB3	2.50	0.41
5:CF:81:ASN:HB3	5:CF:84:VAL:HG12	2.02	0.41
34:D3:28:LEU:HD21	34:D3:44:ARG:HA	2.03	0.41
42:BN:8:ARG:HB2	42:BN:8:ARG:HE	1.61	0.41
1:CA:213:G:H3'	1:CA:214:C:C6	2.55	0.41
16:AQ:61:ARG:HG2	16:AQ:61:ARG:HH11	1.85	0.41
23:BB:2010:G:H2'	23:BB:2011:U:H6	1.85	0.41
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.41	0.41
23:BB:1212:G:HO2'	23:BB:1213:A:P	2.43	0.41
47:DF:121:PHE:HD1	47:DF:127:TYR:OH	2.03	0.41
38:DM:100:LYS:HD3	38:DM:101:VAL:H	1.86	0.41
23:DB:776:G:H4'	23:DB:777:G:C5'	2.50	0.41
23:DB:2756:U:H1'	23:DB:2757:A:H5''	2.02	0.41
1:CA:869:G:H4'	1:CA:872:A:C8	2.56	0.41
6:AG:119:LEU:O	6:AG:123:LEU:HG	2.21	0.41
29:DE:69:ARG:O	29:DE:70:SER:OG	2.35	0.41
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.84	0.41
23:BB:2361:G:OP1	34:B3:25:HIS:HA	2.21	0.41
1:AA:987:G:H2'	1:AA:988:G:C8	2.55	0.41
39:BX:56:LEU:O	39:BX:57:LEU:CB	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	2.03	0.41
1:AA:426:U:H2'	1:AA:427:U:C6	2.56	0.41
1:CA:720:C:O5'	1:CA:720:C:H6	2.03	0.41
1:CA:1003:G:N2	1:CA:1005:A:C5'	2.83	0.41
23:DB:1900:A:N1	23:DB:1970:A:C5	2.89	0.41
25:BC:154:ALA:HB2	25:BC:161:VAL:HG23	2.02	0.41
23:DB:2853:C:H2'	23:DB:2854:G:H8	1.86	0.41
18:CS:50:VAL:HG22	18:CS:70:LEU:HD21	2.03	0.41
1:AA:720:C:C5'	17:AR:40:PRO:HA	2.50	0.41
41:BJ:40:HIS:ND1	41:BJ:41:LYS:N	2.68	0.41
23:BB:1733:G:H2'	23:BB:1734:G:H8	1.85	0.41
3:AD:110:ARG:NH1	3:AD:110:ARG:HG3	2.35	0.41
23:DB:1357:C:H2'	23:DB:1358:G:C8	2.56	0.41
7:AH:25:THR:O	7:AH:26:MET:HE2	2.20	0.41
2:CC:53:ARG:HB3	2:CC:68:HIS:CD2	2.55	0.41
23:DB:816:C:O2'	23:DB:817:C:H5'	2.21	0.41
43:DO:36:TYR:HD2	43:DO:36:TYR:N	2.19	0.41
23:DB:2830:C:O4'	23:DB:2836:U:H5'	2.21	0.41
23:BB:991:C:H2'	23:BB:992:C:H6	1.86	0.41
4:AE:87:VAL:HG23	4:AE:92:ARG:HA	2.02	0.41
1:AA:555:U:H2'	1:AA:556:C:C6	2.56	0.41
23:BB:2408:U:H2'	23:BB:2409:G:C8	2.55	0.41
23:BB:928:A:H2'	23:BB:929:U:C6	2.55	0.41
23:BB:1161:C:H2'	23:BB:1162:G:C8	2.56	0.41
23:BB:1956:U:C2'	23:BB:1957:C:H5'	2.51	0.41
5:CF:11:HIS:HA	5:CF:85:ILE:HD11	2.02	0.41
1:AA:1436:U:H2'	1:AA:1437:A:C8	2.55	0.41
7:CH:29:SER:O	7:CH:33:VAL:HG23	2.21	0.41
1:AA:1384:C:O2'	1:AA:1385:G:H5'	2.20	0.41
23:BB:1802:A:C6	23:BB:1817:G:N2	2.89	0.41
24:DI:53:PRO:HG2	24:DI:77:VAL:HG11	2.01	0.41
13:AN:88:MET:C	13:AN:90:GLY:H	2.23	0.41
23:BB:57:C:H2'	23:BB:58:G:C8	2.55	0.41
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.55	0.41
23:BB:1106:G:H2'	23:BB:1107:G:H8	1.85	0.41
1:AA:852:G:H2'	1:AA:853:C:C6	2.56	0.41
2:CC:152:VAL:HA	2:CC:197:VAL:HG22	2.02	0.41
6:CG:151:ALA:HB3	6:CG:153:TYR:CE1	2.56	0.41
38:DM:54:THR:O	38:DM:56:ALA:N	2.53	0.41
4:CE:117:ALA:HB3	4:CE:119:VAL:HG23	2.03	0.41
23:BB:2669:G:O2'	23:BB:2670:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:68:PHE:CD1	24:DI:68:PHE:N	2.89	0.41
1:AA:1419:G:H2'	1:AA:1420:U:C6	2.56	0.41
25:BC:17:LYS:H	25:BC:17:LYS:HG3	1.58	0.41
8:CI:129:ARG:O	8:CI:129:ARG:HD2	2.21	0.41
14:CO:46:HIS:O	14:CO:48:LYS:N	2.47	0.41
1:CA:891:U:O2'	1:CA:892:A:H5'	2.21	0.41
3:CD:87:GLU:OE1	3:CD:91:ALA:HB2	2.20	0.41
25:BC:259:ASN:C	25:BC:261:ARG:H	2.23	0.41
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.41
41:DJ:101:ILE:O	41:DJ:105:VAL:HG22	2.20	0.41
23:BB:747:U:OP2	45:BS:90:LYS:HD2	2.21	0.41
20:CB:35:ASN:ND2	20:CB:36:LYS:HE2	2.36	0.41
5:AF:31:GLY:C	5:AF:33:GLU:H	2.24	0.41
25:DC:259:ASN:C	25:DC:261:ARG:H	2.24	0.41
43:BO:20:GLU:OE2	43:BO:21:LEU:N	2.54	0.41
23:DB:910:A:H2'	23:DB:911:A:C8	2.56	0.41
4:AE:9:GLU:O	4:AE:40:ASP:HA	2.20	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
15:AP:36:VAL:HG13	15:AP:36:VAL:O	2.20	0.41
6:AG:49:LEU:HA	6:AG:49:LEU:HD23	1.86	0.41
2:AC:141:MET:HA	2:AC:141:MET:CE	2.51	0.41
37:DL:111:ILE:N	37:DL:111:ILE:HD13	2.35	0.41
7:AH:74:ILE:O	7:AH:74:ILE:HG23	2.21	0.41
49:BR:86:GLN:HE21	49:BR:86:GLN:HB2	1.54	0.41
23:DB:86:G:O2'	23:DB:104:A:H4'	2.20	0.41
24:DI:5:GLN:O	24:DI:6:ALA:CB	2.69	0.41
23:DB:1819:A:OP1	25:DC:154:ALA:HA	2.21	0.41
29:BE:172:ALA:O	29:BE:199:MET:HE3	2.20	0.41
21:AU:3:ILE:HD12	21:AU:19:LYS:HA	2.01	0.41
10:AK:13:LYS:HD2	10:AK:76:TYR:HE2	1.86	0.41
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.21	0.41
29:DE:5:LEU:HD22	29:DE:122:GLU:HG3	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
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.20	0.41
8:AI:90:ASP:HB3	8:AI:93:LEU:CD2	2.51	0.41
23:BB:2571:U:O3'	26:BD:151:THR:HB	2.20	0.41
45:DS:3:THR:HG21	45:DS:58:ALA:HA	2.02	0.41
50:BT:39:THR:HG23	50:BT:42:GLU:H	1.86	0.41
50:DT:47:VAL:HG12	50:DT:47:VAL:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HB2	2.03	0.41
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.21	0.41
26:BD:91:THR:HG23	26:BD:92:VAL:N	2.28	0.41
25:DC:76:VAL:HA	25:DC:113:ASP:O	2.21	0.41
33:D1:26:LYS:HD2	33:D1:30:PRO:HA	2.02	0.41
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.42	0.41
26:BD:107:VAL:N	26:BD:206:ALA:H	2.19	0.41
40:BH:5:LEU:HD11	40:BH:12:LEU:O	2.21	0.41
51:BZ:77:LYS:O	51:BZ:78:TYR:HB3	2.21	0.41
49:BR:78:ARG:HG3	49:BR:78:ARG:HH21	1.86	0.41
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.39	0.41
1:CA:17:U:H4'	1:CA:1079:G:O2'	2.20	0.41
19:CT:4:LYS:HE3	19:CT:6:ALA:H	1.85	0.41
28:DP:96:LEU:O	28:DP:99:LEU:HB2	2.21	0.41
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.85	0.41
15:CP:52:LEU:HD21	15:CP:75:ILE:HA	2.03	0.41
47:BF:7:TYR:HA	47:BF:11:VAL:HB	2.02	0.41
47:BF:1:ALA:O	47:BF:2:LYS:C	2.59	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
2:CC:63:ILE:HD11	2:CC:94:ALA:CB	2.51	0.41
29:DE:130:LYS:O	29:DE:132:LYS:N	2.53	0.41
23:BB:616:A:H4'	29:BE:101:TYR:CZ	2.56	0.41
40:DH:128:HIS:O	40:DH:144:VAL:HG22	2.21	0.41
40:DH:90:LEU:HD22	40:DH:122:LEU:O	2.20	0.41
23:BB:675:A:P	29:BE:60:TRP:HZ2	2.44	0.41
50:DT:25:GLU:C	50:DT:27:SER:N	2.74	0.41
50:DT:31:VAL:C	50:DT:32:LEU:HD23	2.42	0.41
42:DN:61:ALA:C	42:DN:63:ARG:H	2.22	0.41
23:BB:1411:U:O2'	23:BB:1412:U:H5'	2.21	0.41
23:DB:2743:U:H2'	23:DB:2744:G:H5''	2.03	0.41
6:AG:142:ARG:HH11	6:AG:142:ARG:CB	2.26	0.41
1:AA:947:G:H5''	12:AM:106:ARG:HB2	2.02	0.41
38:BM:17:ASN:HD22	38:BM:17:ASN:HA	1.70	0.41
42:BN:74:GLU:O	42:BN:77:ALA:HB3	2.21	0.41
23:DB:2108:A:OP2	23:DB:2108:A:C8	2.74	0.41
1:CA:1226:C:H5'	12:CM:94:LEU:CD1	2.51	0.41
23:DB:2544:G:H1'	23:DB:2646:C:H5'	2.02	0.41
24:DI:129:GLU:O	24:DI:133:ARG:HG3	2.21	0.41
1:AA:675:A:O2'	1:AA:676:A:H5'	2.21	0.41
23:BB:77:G:H2'	23:BB:78:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:49:LEU:HD13	47:DF:49:LEU:C	2.41	0.41
20:CB:185:ILE:HG12	20:CB:199:ILE:HG21	2.03	0.41
20:AB:124:THR:HA	20:AB:127:LYS:HZ2	1.86	0.41
1:CA:239:U:H6	1:CA:239:U:H5'	1.86	0.41
23:BB:2049:G:C2'	23:BB:2050:C:H5'	2.51	0.41
20:AB:150:ILE:O	20:AB:151:LYS:C	2.60	0.41
23:DB:675:A:OP1	29:DE:60:TRP:CZ2	2.74	0.41
31:D0:38:LEU:HD23	31:D0:39:ARG:N	2.36	0.41
23:DB:2882:A:C3'	23:DB:2883:A:H5''	2.52	0.41
23:BB:2338:C:O2'	23:BB:2339:C:H5'	2.20	0.41
4:CE:93:VAL:HG22	4:CE:126:ALA:CB	2.50	0.41
23:DB:572:A:C2	23:DB:2033:A:C2	3.09	0.41
1:CA:1221:G:OP1	1:CA:1321:U:N3	2.52	0.41
41:BJ:102:GLU:HG3	41:BJ:124:VAL:HG11	2.02	0.41
2:CC:13:ILE:C	2:CC:15:LYS:N	2.75	0.41
45:DS:99:ARG:HE	45:DS:99:ARG:HB3	1.55	0.41
23:BB:729:G:H2'	23:BB:729:G:N3	2.35	0.41
1:AA:321:A:O2'	1:AA:322:C:H5'	2.20	0.41
26:BD:40:LEU:HA	26:BD:45:TYR:N	2.36	0.41
12:AM:78:ARG:HA	12:AM:81:ASP:OD2	2.20	0.41
37:DL:59:ARG:O	37:DL:61:LEU:N	2.54	0.41
1:AA:126:G:H4'	1:AA:634:C:O2	2.21	0.41
1:AA:108:G:O4'	1:AA:108:G:N3	2.53	0.41
1:AA:908:A:H2'	1:AA:909:A:H8	1.85	0.41
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.85	0.41
23:DB:1434:A:H62	23:DB:1558:C:N4	2.18	0.41
1:CA:213:G:H2'	1:CA:213:G:N3	2.35	0.41
28:DP:19:PHE:HE2	28:DP:25:VAL:HG11	1.85	0.41
1:AA:659:U:O2'	1:AA:660:C:H5'	2.21	0.41
39:BX:41:HIS:CD2	39:BX:41:HIS:N	2.89	0.41
23:DB:775:G:H4'	23:DB:776:G:H5'	2.02	0.41
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.56	0.41
23:BB:2823:A:O2'	23:BB:2824:C:H5'	2.21	0.41
2:CC:109:GLU:HG2	2:CC:139:ASN:HB3	2.03	0.41
10:CK:36:ARG:CG	10:CK:36:ARG:HH11	2.34	0.41
1:CA:987:G:H2'	1:CA:988:G:C8	2.56	0.41
23:DB:1419:A:H2'	23:DB:1421:G:C8	2.56	0.41
2:CC:2:GLN:HE22	2:CC:3:LYS:HZ2	1.67	0.41
1:CA:420:U:C2'	1:CA:421:U:H5''	2.51	0.41
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	2.21	0.41
41:BJ:110:PRO:HB2	41:BJ:111:LYS:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:155:ARG:H	2:AC:162:ALA:CA	2.34	0.41
1:CA:729:A:H2'	1:CA:730:G:C8	2.56	0.41
23:BB:2452:C:H2'	23:BB:2453:A:C8	2.56	0.41
6:CG:63:VAL:HG12	6:CG:127:ALA:HB1	2.02	0.41
23:DB:1765:U:H2'	23:DB:1766:G:C8	2.56	0.41
7:AH:93:LYS:HG3	7:AH:116:ARG:NH2	2.36	0.41
23:BB:2507:C:C2	23:BB:2583:G:C2	3.08	0.41
23:BB:794:A:H2'	23:BB:795:C:H6	1.85	0.41
23:DB:620:G:N3	23:DB:620:G:H5'	2.35	0.41
23:DB:1940:U:O4'	23:DB:1940:U:O2	2.38	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
23:DB:2659:G:O2'	23:DB:2661:G:N7	2.45	0.41
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.56	0.41
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.21	0.41
26:DD:159:LYS:HZ3	26:DD:159:LYS:HA	1.86	0.41
26:DD:159:LYS:O	26:DD:161:MET:HG2	2.20	0.41
28:DP:114:ASN:HD22	28:DP:114:ASN:HA	1.53	0.41
7:AH:34:ALA:O	7:AH:38:VAL:HG23	2.21	0.41
23:DB:1856:U:C2'	23:DB:1857:G:H5'	2.51	0.41
17:CR:38:ILE:CG2	17:CR:58:ILE:HG21	2.50	0.40
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.20	0.40
47:DF:33:ILE:HG21	47:DF:98:PHE:CE2	2.55	0.40
53:D6:87:ASP:OD2	53:D6:88:LEU:HD12	2.21	0.40
23:DB:2352:A:C2'	23:DB:2353:G:H5'	2.51	0.40
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.21	0.40
23:DB:877:A:C2	23:DB:901:C:N4	2.89	0.40
13:AN:52:ARG:HB3	13:AN:53:ASP:H	1.73	0.40
18:CS:46:LEU:O	18:CS:60:PHE:HA	2.21	0.40
46:DU:12:VAL:HG22	46:DU:69:VAL:CG1	2.42	0.40
1:CA:981:U:P	13:CN:5:MET:HE1	2.61	0.40
50:BT:21:SER:O	50:BT:25:GLU:HB2	2.21	0.40
8:CI:27:ILE:CB	8:CI:34:LEU:HB2	2.48	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
41:BJ:43:GLU:O	41:BJ:45:THR:HG22	2.21	0.40
44:BQ:93:ILE:HG23	44:BQ:94:LEU:CD2	2.50	0.40
1:AA:1206:G:O2'	1:AA:1207:G:H5'	2.22	0.40
1:AA:902:G:O2'	1:AA:903:G:H5'	2.20	0.40
20:AB:46:VAL:HA	20:AB:49:PHE:HD2	1.84	0.40
23:DB:2798:U:H1'	23:DB:2800:A:H61	1.77	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:30:ALA:O	25:DC:32:LEU:N	2.48	0.40
23:BB:2231:U:H2'	23:BB:2232:C:C6	2.56	0.40
1:CA:16:A:N1	1:CA:919:A:C2	2.89	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
19:CT:82:ILE:O	19:CT:85:LEU:HD22	2.21	0.40
23:DB:319:G:H2'	23:DB:320:A:O4'	2.21	0.40
29:DE:126:VAL:HG21	29:DE:133:LEU:HB2	2.03	0.40
14:CO:70:LEU:HD12	14:CO:78:TYR:CB	2.51	0.40
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	2.02	0.40
50:DT:59:ASN:O	50:DT:83:ALA:O	2.39	0.40
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.21	0.40
42:DN:52:ILE:HD13	42:DN:87:PHE:CE2	2.56	0.40
26:DD:136:ASN:HD21	26:DD:140:HIS:N	2.19	0.40
23:BB:651:G:O2'	23:BB:652:U:H5'	2.21	0.40
23:DB:1215:G:H2'	23:DB:1216:G:H8	1.86	0.40
10:CK:28:ASN:HD22	10:CK:46:ALA:HB3	1.81	0.40
23:DB:545:U:C6	23:DB:546:U:H1'	2.56	0.40
19:AT:67:HIS:CE1	19:AT:68:LYS:HE3	2.55	0.40
32:B4:11:CYS:SG	32:B4:12:ARG:N	2.94	0.40
6:CG:16:LYS:HB3	6:CG:43:TYR:CE1	2.56	0.40
3:CD:25:ARG:O	3:CD:26:ALA:HB3	2.21	0.40
1:AA:238:A:H3'	1:AA:239:U:H5''	2.04	0.40
27:BK:111:LYS:HD3	27:BK:111:LYS:N	2.36	0.40
27:BK:99:ILE:N	27:BK:118:LEU:HD23	2.34	0.40
1:CA:675:A:H2'	1:CA:676:A:H8	1.86	0.40
12:AM:12:LYS:HB3	12:AM:13:HIS:H	1.71	0.40
23:DB:717:C:C3'	23:DB:718:A:H5''	2.48	0.40
23:DB:2595:G:H1	25:DC:238:ASN:ND2	2.19	0.40
23:BB:2579:C:H1'	26:BD:130:GLN:NE2	2.28	0.40
32:B4:22:VAL:O	32:B4:24:ARG:HG3	2.21	0.40
18:AS:33:TRP:C	18:AS:35:ARG:H	2.24	0.40
16:AQ:57:VAL:HB	16:AQ:79:GLU:CB	2.51	0.40
27:DK:54:LYS:H	27:DK:54:LYS:CD	2.31	0.40
15:AP:61:VAL:CA	15:AP:65:ALA:HB3	2.48	0.40
26:DD:116:LYS:HB2	26:DD:165:MET:HB3	2.03	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:BB:2557:G:C6	23:BB:2558:C:N4	2.89	0.40
23:DB:15:G:O2'	23:DB:16:C:H5'	2.21	0.40
23:BB:1825:U:H2'	23:BB:1826:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:16:G:C5	22:BA:69:G:C2	3.09	0.40
1:CA:1112:C:O2	2:CC:178:ARG:HB3	2.20	0.40
37:DL:70:LYS:HE3	37:DL:107:PHE:HE2	1.86	0.40
8:CI:33:SER:CB	8:CI:36:GLN:HB2	2.49	0.40
23:BB:2538:C:O2'	23:BB:2539:C:H5'	2.21	0.40
46:BU:60:LYS:HG3	46:BU:61:GLU:H	1.87	0.40
1:CA:768:A:H4'	1:CA:1523:G:N2	2.37	0.40
23:BB:278:A:C2'	23:BB:278:A:N3	2.83	0.40
22:BA:97:C:H2'	22:BA:98:G:H5'	2.03	0.40
23:BB:70:G:O2'	23:BB:113:U:H4'	2.21	0.40
1:AA:1243:C:O2'	1:AA:1244:G:H5'	2.21	0.40
23:BB:122:G:O2'	23:BB:123:G:H5'	2.21	0.40
1:CA:501:C:H1'	1:CA:549:C:H1'	2.03	0.40
23:BB:1171:G:C4	23:BB:1172:C:H1'	2.55	0.40
23:DB:2597:G:C6	23:DB:2598:A:N6	2.89	0.40
1:AA:207:C:H3'	1:AA:208:U:C5	2.56	0.40
1:AA:213:G:H3'	1:AA:214:C:C6	2.55	0.40
11:CL:13:ARG:H	11:CL:13:ARG:HG2	1.72	0.40
1:AA:592:G:H2'	1:AA:593:U:O4'	2.21	0.40
6:CG:119:LEU:O	6:CG:123:LEU:HG	2.21	0.40
45:DS:14:ALA:C	45:DS:16:LYS:H	2.25	0.40
23:BB:41:C:O2'	23:BB:42:A:H5'	2.21	0.40
3:AD:34:GLU:O	3:AD:34:GLU:CG	2.68	0.40
7:CH:72:GLU:CD	7:CH:72:GLU:N	2.75	0.40
24:DI:10:LEU:C	24:DI:10:LEU:HD12	2.40	0.40
23:BB:2760:C:H2'	23:BB:2761:A:H5'	2.03	0.40
23:DB:48:G:O3'	23:DB:51:G:H5'	2.21	0.40
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.20	0.40
43:BO:36:TYR:HD2	43:BO:36:TYR:N	2.19	0.40
23:DB:1754:A:N1	23:DB:2716:C:O2'	2.55	0.40
40:DH:112:LYS:O	40:DH:112:LYS:HG3	2.21	0.40
12:CM:68:LEU:O	12:CM:72:ILE:HB	2.22	0.40
25:DC:108:GLY:C	25:DC:110:LYS:H	2.24	0.40
23:DB:1249:U:O4'	44:DQ:3:VAL:HG21	2.21	0.40
23:BB:1:G:C2	23:BB:2:G:N7	2.89	0.40
1:CA:665:A:H2'	1:CA:732:C:O2	2.21	0.40
1:AA:791:G:C6	1:AA:792:A:N7	2.89	0.40
23:DB:555:G:HO2'	23:DB:556:A:H8	1.67	0.40
22:DA:67:G:O2'	22:DA:68:C:H5'	2.21	0.40
25:DC:130:PRO:O	25:DC:132:ARG:N	2.54	0.40
37:BL:90:VAL:CB	37:BL:122:VAL:HG12	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:81:ASP:CG	37:BL:100:ILE:HD11	2.41	0.40
5:CF:86:ARG:HD2	17:CR:63:TYR:O	2.21	0.40
23:BB:858:G:N2	23:BB:2269:G:OP2	2.54	0.40
23:BB:2353:G:H1'	52:BW:30:VAL:HG12	2.01	0.40
13:CN:72:PHE:CG	13:CN:73:LEU:N	2.89	0.40
5:CF:100:SER:HA	17:CR:23:LYS:HE2	2.03	0.40
5:CF:97:THR:O	5:CF:98:GLU:HB3	2.20	0.40
43:BO:74:VAL:O	43:BO:78:VAL:HG22	2.21	0.40
1:AA:734:G:H21	17:AR:63:TYR:HE1	1.59	0.40
1:CA:202:G:H2'	1:CA:203:G:H8	1.86	0.40
1:CA:688:G:O2'	1:CA:689:C:H5'	2.21	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
1:CA:812:G:H4'	1:CA:812:G:OP1	2.21	0.40
35:DV:1:MET:O	35:DV:62:THR:HG23	2.21	0.40
18:CS:14:LEU:HD23	18:CS:14:LEU:H	1.86	0.40
46:DU:20:LYS:HB2	46:DU:20:LYS:HZ3	1.85	0.40
50:BT:59:ASN:O	50:BT:83:ALA:O	2.38	0.40
50:DT:43:ILE:O	50:DT:46:ALA:HB3	2.22	0.40
41:BJ:112:GLY:N	41:BJ:113:PRO:HD2	2.23	0.40
41:BJ:38:GLY:CA	41:BJ:51:GLY:HA2	2.51	0.40
44:BQ:91:ARG:HE	44:BQ:94:LEU:CD2	2.34	0.40
2:AC:126:ARG:HH21	2:AC:191:THR:CG2	2.31	0.40
10:AK:51:PHE:O	10:AK:51:PHE:HD1	2.03	0.40
12:CM:12:LYS:H	12:CM:44:ILE:HD12	1.86	0.40
12:CM:15:VAL:O	12:CM:16:ILE:C	2.60	0.40
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.22	0.40
12:AM:52:ILE:HA	12:AM:55:LEU:HG	2.02	0.40
26:DD:104:VAL:HG11	26:DD:205:PRO:HB3	2.03	0.40
23:BB:2231:U:H2'	23:BB:2232:C:O4'	2.21	0.40
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	2.21	0.40
1:AA:1080:A:OP1	4:AE:49:TYR:HE2	2.04	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
23:DB:1916:A:H2'	23:DB:1917:U:C6	2.57	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
1:AA:82:G:H1'	1:AA:89:U:O4'	2.21	0.40
48:DG:88:LEU:CB	48:DG:161:VAL:HG22	2.50	0.40
48:DG:88:LEU:HD12	48:DG:88:LEU:C	2.42	0.40
23:DB:1055:G:C2'	23:DB:1056:G:H5'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1057:A:C8	23:DB:1086:A:C8	3.09	0.40
1:CA:611:C:H2'	1:CA:612:C:C6	2.55	0.40
23:DB:460:A:H4'	50:DT:72:GLN:CB	2.42	0.40
40:DH:94:ILE:HG22	40:DH:122:LEU:HB3	2.00	0.40
20:CB:65:LYS:HG2	20:CB:89:PHE:CE1	2.56	0.40
23:DB:2142:A:H2'	23:DB:2143:C:H1'	2.03	0.40
31:B0:51:ARG:O	31:B0:52:LYS:HB2	2.22	0.40
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.56	0.40
6:CG:14:ASP:CB	6:CG:19:SER:H	2.34	0.40
27:BK:113:MET:O	27:BK:116:ILE:HG13	2.22	0.40
27:DK:79:PHE:O	27:DK:81:GLY:N	2.51	0.40
26:DD:133:THR:HG23	26:DD:134:HIS:CD2	2.56	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
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.22	0.40
23:DB:107:G:C2	23:DB:108:G:C8	3.10	0.40
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.21	0.40
51:BZ:54:LYS:HA	51:BZ:57:ARG:CD	2.46	0.40
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.21	0.40
1:AA:927:G:N1	1:AA:1391:U:C2	2.89	0.40
23:DB:454:A:H3'	23:DB:455:C:C5'	2.50	0.40
26:DD:62:LYS:N	26:DD:63:PRO:CD	2.85	0.40
20:AB:143:LEU:O	20:AB:147:LEU:N	2.53	0.40
1:CA:834:U:O5'	1:CA:834:U:H6	2.03	0.40
31:D0:41:HIS:O	31:D0:42:ILE:O	2.39	0.40
23:DB:2834:G:H2'	23:DB:2879:A:N6	2.36	0.40
1:CA:740:U:O2'	1:CA:741:G:H5'	2.21	0.40
1:CA:1478:U:O2'	1:CA:1479:C:H5'	2.22	0.40
1:AA:36:C:H2'	1:AA:37:U:O4'	2.22	0.40
23:BB:679:C:H2'	23:BB:680:C:C6	2.56	0.40
41:DJ:102:GLU:O	41:DJ:106:LYS:HB2	2.21	0.40
1:AA:1164:G:H2'	1:AA:1165:U:C6	2.56	0.40
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	2.03	0.40
45:DS:17:VAL:O	45:DS:19:LEU:N	2.54	0.40
20:CB:23:ASN:C	20:CB:23:ASN:ND2	2.73	0.40
29:BE:170:ARG:HH22	29:BE:176:ASP:HB3	1.86	0.40
9:AJ:21:ALA:O	9:AJ:25:ILE:HG13	2.22	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
9:CJ:10:LEU:HD12	9:CJ:72:ARG:HB2	2.03	0.40
5:AF:46:GLN:CD	5:AF:47:LEU:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2026:U:C2	23:BB:2027:G:C8	3.09	0.40
38:DM:57:VAL:O	38:DM:60:GLN:HG2	2.21	0.40
27:DK:2:ILE:HG13	27:DK:33:ALA:O	2.21	0.40
25:BC:64:VAL:HG11	25:BC:66:PHE:CZ	2.56	0.40
23:BB:547:A:H2'	23:BB:547:A:N3	2.36	0.40
15:CP:38:PHE:HE2	15:CP:51:ARG:HH11	1.69	0.40
43:BO:88:LYS:HG2	43:BO:89:ASP:N	2.37	0.40
23:DB:2283:C:H2'	23:DB:2284:A:C5'	2.51	0.40
18:CS:23:GLU:HG3	18:CS:24:SER:H	1.87	0.40
5:AF:22:ILE:O	5:AF:26:THR:HG23	2.21	0.40
1:CA:907:A:O2'	1:CA:908:A:H5'	2.22	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
28:DP:31:VAL:O	28:DP:32:VAL:CB	2.69	0.40
1:AA:1242:G:H2'	1:AA:1243:C:H6	1.86	0.40
22:BA:116:G:H4'	43:BO:54:VAL:HG13	2.02	0.40
23:BB:1210:G:C5'	23:BB:1212:G:H5'	2.50	0.40
48:DG:9:VAL:C	48:DG:11:PRO:HD3	2.41	0.40
23:DB:1892:C:O2'	23:DB:1893:C:H5'	2.21	0.40
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.86	0.40
46:DU:5:ARG:HG2	46:DU:5:ARG:HH21	1.85	0.40
23:DB:1521:G:O5'	23:DB:1522:A:H2'	2.21	0.40
1:AA:1028:C:H3'	1:AA:1029:U:C6	2.57	0.40
23:BB:1586:A:H8	23:BB:1586:A:O5'	2.04	0.40
23:DB:1251:C:OP2	44:DQ:5:ARG:NE	2.55	0.40
23:BB:1819:A:OP1	25:BC:154:ALA:HA	2.22	0.40
1:CA:182:A:N3	1:CA:182:A:H5''	2.37	0.40
53:D6:13:HIS:HB3	53:D6:132:ILE:HD13	2.04	0.40
4:CE:151:MET:O	4:CE:154:ALA:HB3	2.21	0.40
7:AH:39:LEU:CD2	7:AH:128:VAL:HG21	2.52	0.40
15:CP:12:LYS:O	15:CP:13:LYS:HB2	2.22	0.40
1:CA:646:G:O2'	1:CA:647:C:H5'	2.21	0.40
23:BB:409:G:H2'	23:BB:410:G:C8	2.56	0.40
28:BP:46:VAL:HA	28:BP:60:VAL:HG12	2.02	0.40
1:CA:751:U:H2'	1:CA:752:G:O4'	2.21	0.40
1:CA:852:G:H2'	1:CA:853:C:C6	2.56	0.40
23:DB:954:G:H5'	23:DB:955:U:OP2	2.21	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
28:DP:33:GLU:HB3	28:DP:34:GLY:H	1.56	0.40
3:CD:156:ALA:O	3:CD:159:GLU:HB3	2.22	0.40
37:BL:69:ARG:HD3	37:BL:69:ARG:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:196:A:H2'	23:DB:196:A:N3	2.36	0.40
7:CH:50:VAL:HG13	7:CH:50:VAL:O	2.21	0.40
45:BS:68:ASP:N	45:BS:68:ASP:OD1	2.53	0.40
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.86	0.40
51:BZ:39:TRP:HA	51:BZ:46:PHE:HD2	1.83	0.40
37:BL:4:ASN:O	37:BL:6:LEU:N	2.54	0.40
47:DF:33:ILE:HG22	47:DF:90:LEU:HD23	2.03	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
11:CL:86:VAL:CB	11:CL:89:LEU:HB2	2.51	0.40
43:DO:67:ASN:O	43:DO:69:ASP:N	2.55	0.40
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	2.02	0.40
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.36	0.40
1:AA:202:G:H2'	1:AA:203:G:H8	1.85	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
1:CA:812:G:O2'	1:CA:813:U:O5'	2.39	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
23:BB:2513:A:C2	26:BD:148:GLN:OE1	2.75	0.40
40:DH:10:ALA:C	40:DH:12:LEU:H	2.23	0.40
13:AN:45:LEU:HD23	13:AN:46:LYS:HD3	2.02	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
8:CI:78:ILE:HG22	8:CI:82:ILE:HD11	2.02	0.40
44:DQ:60:TRP:CE2	44:DQ:93:ILE:HB	2.56	0.40
23:BB:535:G:O4'	44:BQ:48:ASP:HB3	2.21	0.40
41:BJ:3:THR:CB	41:BJ:44:TYR:OH	2.70	0.40
23:BB:2528:U:HO2'	23:BB:2529:G:H8	1.68	0.40
28:DP:49:ILE:HG12	28:DP:50:ARG:H	1.87	0.40
22:DA:83:G:O2'	22:DA:84:G:H5'	2.21	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
4:CE:15:ILE:HB	4:CE:35:LEU:O	2.21	0.40
1:AA:844:G:H2'	1:AA:845:A:H8	1.86	0.40
41:DJ:28:LEU:HD23	41:DJ:29:ALA:H	1.86	0.40
13:AN:40:ARG:HH11	18:AS:6:LYS:HB2	1.85	0.40
1:AA:93:U:C2	1:AA:95:C:C5	3.10	0.40
29:DE:29:HIS:C	29:DE:31:VAL:N	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:46:HIS:NE2	16:AQ:48:GLU:HG2	2.37	0.40
16:AQ:60:ILE:HD13	16:AQ:60:ILE:H	1.86	0.40
23:DB:2691:C:C4	23:DB:2719:G:N2	2.89	0.40
14:AO:70:LEU:HD12	14:AO:78:TYR:CB	2.51	0.40
23:BB:1551:A:H3'	23:BB:1552:A:C5'	2.42	0.40
1:CA:782:A:H2'	1:CA:783:C:O4'	2.20	0.40
19:AT:66:ILE:HG13	19:AT:70:LYS:HE3	2.04	0.40
11:AL:34:THR:HG23	11:AL:55:ARG:HB2	2.03	0.40
42:BN:62:ASN:O	42:BN:80:PHE:HZ	2.04	0.40
27:BK:112:PHE:O	27:BK:113:MET:C	2.59	0.40
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	2.03	0.40
23:DB:1403:A:H2'	23:DB:1404:C:H6	1.85	0.40
23:DB:2471:A:O2'	23:DB:2472:G:P	2.79	0.40
1:CA:482:A:C2	1:CA:483:C:H1'	2.56	0.40
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.21	0.40
1:CA:238:A:H3'	1:CA:239:U:H5''	2.02	0.40
20:AB:111:LYS:O	20:AB:114:LYS:HB2	2.21	0.40
31:D0:28:SER:HB2	31:D0:39:ARG:HG2	2.03	0.40
23:BB:2071:A:H2'	23:BB:2072:C:H6	1.78	0.40
23:DB:572:A:H3'	23:DB:573:U:O4'	2.22	0.40
36:D2:6:GLN:HA	36:D2:7:PRO:HD2	1.89	0.40
1:CA:777:A:H2'	1:CA:778:G:C8	2.55	0.40
1:CA:818:G:O2'	1:CA:819:A:H5''	2.21	0.40
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.36	0.40
23:DB:76:C:O2'	39:DX:55:THR:HG21	2.20	0.40
23:BB:951:C:O2'	23:BB:952:G:H5'	2.22	0.40
1:CA:90:C:H2'	1:CA:91:U:C5	2.55	0.40
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.95	0.40
37:DL:127:VAL:HG22	37:DL:128:THR:O	2.21	0.40
1:CA:413:G:O6	3:CD:32:LYS:HG3	2.20	0.40
1:AA:1015:G:N2	1:AA:1218:C:O2	2.53	0.40
2:CC:112:ALA:O	2:CC:113:LYS:C	2.59	0.40
1:AA:279:A:P	1:AA:281:G:H5'	2.61	0.40
1:CA:767:A:H3'	57:CA:1855:HOH:O	2.20	0.40
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.21	0.40
37:DL:21:ARG:HD3	37:DL:21:ARG:HA	1.99	0.40
23:DB:2028:U:H2'	23:DB:2029:G:O4'	2.21	0.40
23:BB:686:U:H4'	23:BB:687:C:OP2	2.20	0.40
23:BB:1151:A:H2'	23:BB:1152:C:O4'	2.22	0.40
1:AA:620:C:H2'	1:AA:621:A:C8	2.56	0.40
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2362:C:OP2	34:B3:43:LEU:HD21	2.22	0.40
23:DB:98:G:H2'	23:DB:99:U:H5'	2.03	0.40
45:DS:14:ALA:C	45:DS:16:LYS:N	2.74	0.40
39:DX:56:LEU:O	39:DX:57:LEU:CB	2.68	0.40
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.22	0.40
23:DB:2036:C:H2'	23:DB:2037:A:C8	2.57	0.40
3:CD:110:ARG:NH1	3:CD:110:ARG:HG3	2.36	0.40
1:CA:175:C:O2'	1:CA:176:C:H5'	2.21	0.40
1:CA:652:U:H1'	1:CA:653:U:H5	1.86	0.40
38:BM:33:LEU:HD22	38:BM:128:THR:CB	2.51	0.40
33:D1:20:TYR:CD2	33:D1:37:LYS:HD3	2.56	0.40
23:BB:1335:C:H2'	23:BB:1336:A:C8	2.55	0.40
2:CC:146:LYS:HB2	2:CC:202:PHE:CD2	2.56	0.40
40:DH:111:ALA:O	40:DH:112:LYS:C	2.60	0.40
22:DA:80:U:H2'	22:DA:81:G:C8	2.57	0.40
31:B0:30:ASP:OD2	31:B0:31:LYS:N	2.53	0.40
23:DB:2032:G:N7	23:DB:2454:G:H1'	2.37	0.40
23:DB:1064:C:O2'	23:DB:1065:U:H5'	2.20	0.40
29:BE:2:GLU:OE1	29:BE:2:GLU:HA	2.21	0.40
4:CE:62:ALA:O	4:CE:65:LYS:HB2	2.21	0.40
23:DB:1856:U:H2'	23:DB:1857:G:H5'	2.02	0.40
25:DC:29:PHE:C	25:DC:31:PRO:HD2	2.42	0.40
23:BB:2655:G:H1'	23:BB:2656:U:H5	1.86	0.40
23:BB:2655:G:O2'	23:BB:2656:U:P	2.80	0.40
52:DW:54:ARG:C	52:DW:56:HIS:H	2.25	0.40
23:BB:1687:G:O2'	23:BB:1688:U:H5'	2.21	0.40
44:DQ:45:ALA:O	44:DQ:49:ARG:N	2.50	0.40
3:CD:13:ARG:HA	3:CD:37:PRO:CG	2.51	0.40
17:AR:25:ILE:O	17:AR:29:LYS:HG3	2.22	0.40
3:AD:87:GLU:OE1	3:AD:91:ALA:HB2	2.22	0.40
23:BB:1605:C:H1'	23:BB:1610:A:C8	2.57	0.40
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.52	0.40
21:AU:34:ARG:HD2	21:AU:35:GLU:N	2.36	0.40
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.40	0.40
17:CR:31:TYR:CD1	17:CR:54:LEU:HD11	2.57	0.40
23:BB:2386:A:N3	52:BW:38:ARG:HD2	2.37	0.40
52:BW:57:THR:O	52:BW:59:PHE:N	2.55	0.40
25:BC:120:ASP:CG	25:BC:121:ALA:H	2.25	0.40
43:DO:51:ALA:CB	43:DO:78:VAL:HG13	2.52	0.40
47:BF:135:ILE:HD12	47:BF:135:ILE:O	2.21	0.40
45:BS:25:ARG:HE	45:BS:74:ILE:CG2	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.86	0.40
8:AI:10:ARG:O	8:AI:11:ARG:HB3	2.21	0.40
8:AI:27:ILE:CB	8:AI:34:LEU:HB2	2.46	0.40
35:DV:31:TYR:O	35:DV:92:VAL:HA	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
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.42	0.40
44:DQ:97:ILE:HG13	44:DQ:105:PHE:HB2	2.04	0.40
49:DR:46:GLU:HG3	49:DR:46:GLU:O	2.22	0.40
41:BJ:44:TYR:HB2	44:BQ:63:ARG:HD2	2.02	0.40
45:BS:29:VAL:HG23	45:BS:70:LYS:CA	2.50	0.40
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.41	0.40
25:BC:92:LEU:HD12	25:BC:101:ARG:O	2.22	0.40
1:AA:1295:U:H2'	1:AA:1296:C:C6	2.56	0.40
33:B1:9:LYS:O	33:B1:50:GLU:O	2.39	0.40
43:BO:3:LYS:H	43:BO:3:LYS:CD	2.19	0.40
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.86	0.40
23:BB:2135:A:H61	23:BB:2156:G:H1'	1.86	0.40
23:DB:2227:A:H2'	23:DB:2228:G:O4'	2.21	0.40
41:BJ:21:THR:C	41:BJ:23:LYS:H	2.25	0.40
23:DB:577:G:OP1	23:DB:2502:G:H2'	2.22	0.40
16:CQ:46:HIS:NE2	16:CQ:48:GLU:HG2	2.37	0.40
48:BG:93:TYR:CD2	48:BG:93:TYR:N	2.90	0.40
48:BG:94:ARG:HG2	48:BG:127:GLN:NE2	2.36	0.40
53:B6:36:ALA:HB1	53:B6:39:LEU:HD23	2.03	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:125:A:C3'	23:BB:126:A:H5'	2.52	0.40
43:DO:16:ARG:HD3	43:DO:16:ARG:HA	1.94	0.40
42:DN:51:LEU:O	42:DN:55:ALA:N	2.54	0.40
43:BO:14:ALA:C	43:BO:16:ARG:N	2.75	0.40
43:BO:25:ARG:HD2	43:BO:93:ASP:HB2	2.02	0.40
41:DJ:21:THR:C	41:DJ:23:LYS:N	2.75	0.40
23:DB:2345:G:H5'	23:DB:2347:C:O4'	2.22	0.40
24:DI:16:MET:N	24:DI:42:ASN:OD1	2.54	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
3:CD:21:LYS:C	3:CD:23:GLY:H	2.25	0.40
23:DB:372:G:O2'	23:DB:373:U:P	2.78	0.40
23:BB:90:U:OP2	23:BB:91:A:H3'	2.21	0.40
23:DB:2562:U:H4'	27:DK:25:LEU:HD23	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:38:ILE:HD11	27:DK:112:PHE:CZ	2.56	0.40
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.87	0.40
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.57	0.40
23:BB:783:A:H4'	23:BB:1779:U:O2	2.22	0.40
23:BB:783:A:C8	23:BB:784:G:H4'	2.43	0.40
22:DA:102:G:H2'	22:DA:103:U:H6	1.86	0.40
1:CA:21:G:H2'	1:CA:22:G:H8	1.79	0.40
23:BB:2787:C:H2'	23:BB:2788:C:C6	2.56	0.40
29:DE:108:ILE:HG12	37:DL:2:ARG:HH22	1.86	0.40
46:DU:51:LEU:N	46:DU:53:GLN:NE2	2.69	0.40
37:DL:78:ARG:NH2	37:DL:78:ARG:HB3	2.37	0.40
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.22	0.40
23:DB:458:G:HO2'	23:DB:459:U:P	2.44	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
1:AA:1424:U:H2'	1:AA:1425:U:C6	2.57	0.40
4:CE:93:VAL:HG22	4:CE:126:ALA:HB1	2.04	0.40
1:CA:134:G:H2'	1:CA:135:C:O4'	2.20	0.40
18:CS:39:ILE:HB	18:CS:66:VAL:O	2.22	0.40
37:DL:50:PHE:O	37:DL:52:GLY:N	2.54	0.40
1:CA:714:G:N3	1:CA:777:A:H1'	2.37	0.40
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.86	0.40
47:DF:51:ASN:O	47:DF:55:ASP:HB2	2.21	0.40
29:BE:176:ASP:C	29:BE:176:ASP:OD1	2.60	0.40
7:CH:77:VAL:HG12	7:CH:78:SER:N	2.37	0.40
22:DA:13:G:C2'	22:DA:14:U:H5''	2.50	0.40
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.51	0.40
12:CM:6:ILE:CD1	47:DF:144:LYS:HE3	2.51	0.40
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.56	0.40
1:CA:42:G:H2'	1:CA:43:C:H6	1.87	0.40
23:BB:263:G:H2'	23:BB:264:C:C6	2.55	0.40
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.37	0.40
23:DB:568:U:O2'	23:DB:570:G:N7	2.43	0.40
22:DA:6:G:H2'	22:DA:7:G:H8	1.86	0.40
26:DD:49:GLN:NE2	26:DD:79:LEU:HD12	2.36	0.40
49:BR:14:VAL:HG22	49:BR:15:SER:H	1.84	0.40
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.21	0.40
23:BB:2010:G:O2'	23:BB:2011:U:H5'	2.21	0.40
28:DP:25:VAL:HA	28:DP:85:VAL:CA	2.51	0.40
23:BB:2297:A:C2	23:BB:2320:U:H1'	2.56	0.40
1:CA:1105:A:H2'	1:CA:1106:G:C8	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:37:ALA:C	29:DE:39:ALA:N	2.71	0.40
42:BN:118:ARG:HE	42:BN:118:ARG:HB3	1.46	0.40
23:BB:540:C:H2'	23:BB:541:A:H8	1.85	0.40
1:AA:84:U:C3'	1:AA:86:G:H21	2.34	0.40
23:BB:2559:C:O2'	23:BB:2560:A:H5'	2.22	0.40
38:BM:101:VAL:HG13	38:BM:101:VAL:O	2.21	0.40
43:DO:9:ARG:HA	43:DO:12:THR:OG1	2.21	0.40
23:DB:123:G:H4'	23:DB:1376:C:O5'	2.20	0.40
23:DB:26:G:H1'	23:DB:515:A:N6	2.36	0.40
23:DB:1424:G:O2'	23:DB:1425:G:H5'	2.22	0.40
45:DS:88:ARG:N	45:DS:92:ARG:O	2.49	0.40
7:CH:39:LEU:CD2	7:CH:128:VAL:HG21	2.51	0.40
41:DJ:41:LYS:HB3	41:DJ:42:ALA:H	1.64	0.40
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.22	0.40
1:CA:824:G:C6	1:CA:877:G:C6	3.09	0.40
9:CJ:28:THR:O	9:CJ:32:THR:HG22	2.21	0.40
23:DB:2206:C:H2'	23:DB:2207:C:H6	1.87	0.40
25:BC:188:ARG:HG2	25:BC:188:ARG:NH2	2.37	0.40
1:CA:185:U:H2'	1:CA:186:C:C6	2.57	0.40
23:DB:291:G:H2'	23:DB:292:U:C6	2.56	0.40
1:AA:1108:G:H5'	2:AC:175:HIS:ND1	2.37	0.40
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.57	0.40
23:BB:1281:G:H2'	23:BB:1282:U:C6	2.56	0.40
26:DD:161:MET:HG3	26:DD:161:MET:O	2.22	0.40
20:AB:169:HIS:CG	20:AB:170:ILE:N	2.89	0.40
6:AG:31:VAL:HG22	6:AG:32:ASP:N	2.37	0.40
1:AA:1495:U:O2'	1:AA:1496:C:H5'	2.20	0.40
23:BB:2611:C:O2'	23:BB:2612:C:H5'	2.20	0.40
23:DB:2657:A:C2'	23:DB:2658:C:H5'	2.52	0.40
46:DU:28:LEU:C	46:DU:30:SER:N	2.75	0.40
37:DL:47:ARG:CB	37:DL:47:ARG:HH21	2.35	0.40
24:DI:91:LYS:HD2	24:DI:91:LYS:N	2.36	0.40
37:DL:69:ARG:O	37:DL:69:ARG:HD3	2.22	0.40
23:DB:1332:G:N3	23:DB:1332:G:H5'	2.36	0.40
1:CA:966:G:H2'	1:CA:967:C:C6	2.57	0.40
1:AA:515:G:O2'	1:AA:516:U:H5'	2.22	0.40
23:BB:787:C:H3'	23:BB:791:C:H41	1.86	0.40
6:AG:61:PHE:O	6:AG:65:LEU:HD13	2.22	0.40
10:CK:122:PRO:HD2	21:CU:35:GLU:HG2	2.02	0.40
21:CU:34:ARG:NH1	21:CU:39:LYS:NZ	2.70	0.40
23:BB:2364:C:C2'	23:BB:2365:G:H5'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:918:A:C2'	23:BB:919:U:H5'	2.47	0.40
53:D6:86:SER:C	53:D6:88:LEU:N	2.75	0.40
43:BO:67:ASN:O	43:BO:69:ASP:N	2.54	0.40
21:AU:16:ARG:O	21:AU:17:ARG:C	2.59	0.40
47:BF:137:PHE:O	47:BF:138:PRO:C	2.60	0.40
45:DS:25:ARG:NH2	45:DS:74:ILE:HG23	2.37	0.40
23:DB:2263:C:H4'	23:DB:2329:U:H4'	2.03	0.40
23:DB:845:A:N1	23:DB:847:U:H1'	2.36	0.40
52:DW:48:ALA:HB3	52:DW:81:ILE:O	2.21	0.40
39:DX:35:GLY:O	39:DX:37:LEU:N	2.54	0.40
35:DV:70:ILE:CD1	35:DV:71:LYS:N	2.82	0.40
18:CS:11:ASP:N	18:CS:14:LEU:HD21	2.37	0.40
18:AS:51:HIS:HB2	18:AS:56:HIS:CD2	2.57	0.40
22:BA:102:G:H2'	22:BA:103:U:H6	1.86	0.40
48:BG:74:MET:O	48:BG:78:VAL:HG13	2.22	0.40
40:DH:14:SER:HB3	40:DH:17:ASP:CB	2.45	0.40
1:CA:982:U:H4'	1:CA:983:A:O4'	2.22	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
1:CA:1133:G:O2'	1:CA:1134:G:H5'	2.22	0.40
41:DJ:43:GLU:O	41:DJ:44:TYR:C	2.59	0.40
44:DQ:89:ILE:C	44:DQ:91:ARG:H	2.25	0.40
44:DQ:89:ILE:O	44:DQ:90:ASP:HB2	2.22	0.40
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HD12	2.56	0.40
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.21	0.40
26:BD:92:VAL:O	26:BD:93:GLY:C	2.60	0.40
23:DB:162:U:O2	23:DB:162:U:H2'	2.21	0.40
1:AA:982:U:H4'	1:AA:983:A:O4'	2.20	0.40
10:CK:110:THR:HG22	21:CU:4:LYS:CA	2.37	0.40
12:AM:49:GLU:O	12:AM:52:ILE:HG22	2.22	0.40
33:B1:37:LYS:HB2	33:B1:48:TYR:CD2	2.57	0.40
33:B1:8:ILE:CG1	33:B1:51:ALA:HA	2.51	0.40
20:AB:161:PHE:HA	20:AB:183:PHE:O	2.21	0.40
25:BC:91:ALA:HB3	25:BC:105:ALA:HB2	2.00	0.40
25:BC:89:ASN:HD22	25:BC:89:ASN:HA	1.52	0.40
4:AE:155:LYS:O	4:AE:158:LYS:HD2	2.21	0.40
23:BB:1190:G:O5'	37:BL:32:GLY:HA2	2.22	0.40
23:BB:1024:G:P	23:BB:1025:G:H3'	2.62	0.40
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.37	0.40
1:CA:846:G:H3'	1:CA:847:G:H8	1.87	0.40
44:BQ:109:VAL:O	44:BQ:113:LYS:HG3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:49:ILE:HG21	49:BR:54:VAL:HA	2.03	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
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.86	0.40
16:AQ:68:LYS:C	16:AQ:70:LYS:N	2.74	0.40
26:BD:69:ALA:CA	26:BD:73:VAL:HB	2.51	0.40
19:CT:50:PHE:HE2	19:CT:75:LYS:HA	1.86	0.40
19:CT:38:ILE:HD11	19:CT:82:ILE:HA	2.04	0.40
23:DB:96:C:H2'	23:DB:97:C:H6	1.87	0.40
23:BB:2820:A:C8	42:BN:4:ARG:HD3	2.56	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
12:AM:32:ILE:HD11	12:AM:58:GLU:HB3	2.03	0.40
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.57	0.40
23:DB:2143:C:N3	23:DB:2144:G:H1'	2.36	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
1:AA:1237:C:H3'	1:AA:1336:C:N4	2.36	0.40
32:D4:8:LYS:HG3	32:D4:9:LYS:HD3	2.04	0.40
29:BE:83:VAL:HG12	29:BE:86:ALA:HA	2.03	0.40
2:CC:26:LYS:HE2	2:CC:27:GLU:CG	2.52	0.40
1:CA:675:A:O2'	1:CA:676:A:H5'	2.22	0.40
1:AA:1309:G:OP1	12:AM:90:HIS:NE2	2.53	0.40
27:DK:109:SER:C	27:DK:111:LYS:H	2.24	0.40
27:DK:88:ASN:HB3	27:DK:92:GLU:O	2.22	0.40
6:AG:19:SER:OG	6:AG:22:LEU:HB2	2.21	0.40
1:AA:373:A:O4'	1:AA:481:G:H1'	2.22	0.40
38:DM:126:ILE:N	38:DM:126:ILE:HD12	2.37	0.40
23:BB:738:G:H1'	23:BB:759:G:N2	2.37	0.40
23:BB:2789:C:H2'	23:BB:2893:A:N7	2.36	0.40
32:B4:22:VAL:O	32:B4:24:ARG:N	2.54	0.40
7:CH:113:ARG:HA	7:CH:116:ARG:NH1	2.37	0.40
17:AR:49:LYS:HA	17:AR:52:ARG:NH1	2.36	0.40
27:BK:98:ARG:N	27:BK:98:ARG:HE	2.20	0.40
3:AD:41:GLY:C	3:AD:43:ARG:N	2.75	0.40
15:CP:1:MET:O	15:CP:1:MET:HG3	2.21	0.40
18:CS:35:ARG:HB2	18:CS:71:GLY:CA	2.51	0.40
23:DB:415:A:H2'	23:DB:416:U:C6	2.56	0.40
23:DB:2679:A:H2'	23:DB:2680:U:H6	1.85	0.40
23:DB:2485:G:H4'	38:DM:123:LYS:O	2.22	0.40
23:DB:1473:G:C6	23:DB:1519:G:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:491:G:O2'	1:AA:492:C:H5'	2.22	0.40
25:BC:66:PHE:N	25:BC:66:PHE:CD1	2.89	0.40
1:AA:1347:G:C8	8:AI:108:ARG:HD2	2.56	0.40
49:BR:72:VAL:CG2	49:BR:89:HIS:HB3	2.49	0.40
1:CA:191:G:H8	1:CA:191:G:OP2	2.04	0.40
1:CA:1248:A:C2	8:CI:71:ILE:HD11	2.56	0.40
23:DB:392:U:H2'	23:DB:393:C:H6	1.85	0.40
23:BB:265:A:N6	23:BB:427:U:O2'	2.54	0.40
23:BB:2095:A:H2'	23:BB:2096:C:H6	1.83	0.40
23:BB:1507:C:C2'	23:BB:1508:A:H4'	2.51	0.40
26:DD:154:LYS:HG2	26:DD:155:VAL:N	2.36	0.40
23:DB:1948:G:C6	23:DB:1959:G:C6	3.10	0.40
11:CL:63:THR:O	11:CL:94:TYR:HB2	2.22	0.40
53:B6:137:LEU:HD13	53:B6:161:ILE:HG21	2.03	0.40
23:BB:2321:U:O2	23:BB:2321:U:C3'	2.69	0.40
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.21	0.40
25:DC:119:VAL:HA	25:DC:133:ASN:ND2	2.36	0.40
23:DB:265:A:H2'	23:DB:266:G:O4'	2.21	0.40
20:CB:9:LEU:C	20:CB:11:ALA:H	2.25	0.40
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.21	0.40
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.83	0.40
23:BB:538:A:N6	23:BB:555:G:O2'	2.53	0.40
23:BB:235:U:H2'	23:BB:236:C:C6	2.56	0.40
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.21	0.40
23:BB:2618:G:H2'	23:BB:2619:C:C6	2.57	0.40
23:DB:754:U:H2'	23:DB:755:U:C6	2.57	0.40
1:CA:620:C:C6	3:CD:131:ILE:HD13	2.56	0.40
24:DI:102:ARG:O	24:DI:106:GLN:HG3	2.22	0.40
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	2.04	0.40
23:DB:1689:A:H2'	23:DB:1690:A:H8	1.86	0.40
13:AN:87:ALA:CA	13:AN:92:ILE:HD13	2.51	0.40
23:BB:1693:U:H1'	25:BC:13:ARG:HH21	1.87	0.40
49:BR:98:ILE:N	49:BR:98:ILE:HD12	2.36	0.40
23:BB:191:A:O2'	23:BB:192:C:H5'	2.22	0.40
23:BB:457:A:H61	23:BB:470:A:H5''	1.87	0.40
23:DB:2356:U:H4'	52:DW:16:GLU:OE1	2.21	0.40
23:DB:111:A:O2'	23:DB:112:U:H5'	2.21	0.40
1:AA:992:U:C2	1:AA:1043:G:N7	2.90	0.40
23:DB:202:U:H2'	23:DB:203:A:C8	2.57	0.40
23:BB:2235:G:H2'	23:BB:2236:U:C6	2.56	0.40
23:BB:861:A:H2'	23:BB:862:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:34:ASP:O	45:BS:38:TYR:HD1	2.04	0.40
2:AC:32:LEU:O	2:AC:35:ASP:HB2	2.21	0.40
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.86	0.40
48:BG:126:THR:O	48:BG:128:THR:N	2.55	0.40
1:CA:749:A:O2'	1:CA:750:C:H5'	2.22	0.40
23:DB:651:G:O2'	23:DB:652:U:H5'	2.21	0.40
23:BB:467:G:N7	36:B2:39:ARG:NH2	2.69	0.40
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.57	0.40
18:AS:77:ARG:HG2	18:AS:77:ARG:H	1.62	0.40
23:DB:2410:G:H2'	23:DB:2411:A:O4'	2.21	0.40
8:AI:35:GLU:O	8:AI:39:GLY:HA3	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AC	204/232 (88%)	151 (74%)	38 (19%)	15 (7%)	1	21
2	CC	204/232 (88%)	152 (74%)	37 (18%)	15 (7%)	1	21
3	AD	203/205 (99%)	151 (74%)	39 (19%)	13 (6%)	2	26
3	CD	203/205 (99%)	148 (73%)	42 (21%)	13 (6%)	2	26
4	AE	148/166 (89%)	117 (79%)	25 (17%)	6 (4%)	3	37
4	CE	148/166 (89%)	117 (79%)	25 (17%)	6 (4%)	3	37
5	AF	98/135 (73%)	64 (65%)	25 (26%)	9 (9%)	1	16
5	CF	98/135 (73%)	65 (66%)	24 (24%)	9 (9%)	1	16
6	AG	148/178 (83%)	106 (72%)	33 (22%)	9 (6%)	2	27
6	CG	150/178 (84%)	112 (75%)	29 (19%)	9 (6%)	2	27
7	AH	127/129 (98%)	98 (77%)	23 (18%)	6 (5%)	3	33

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	CH	127/129 (98%)	96 (76%)	25 (20%)	6 (5%)	3	33
8	AI	125/129 (97%)	99 (79%)	17 (14%)	9 (7%)	1	23
8	CI	125/129 (97%)	98 (78%)	18 (14%)	9 (7%)	1	23
9	AJ	96/103 (93%)	70 (73%)	13 (14%)	13 (14%)	0	6
9	CJ	96/103 (93%)	71 (74%)	12 (12%)	13 (14%)	0	6
10	AK	115/128 (90%)	87 (76%)	22 (19%)	6 (5%)	2	31
10	CK	115/128 (90%)	87 (76%)	22 (19%)	6 (5%)	2	31
11	AL	121/123 (98%)	73 (60%)	33 (27%)	15 (12%)	0	8
11	CL	121/123 (98%)	75 (62%)	31 (26%)	15 (12%)	0	8
12	AM	112/117 (96%)	79 (70%)	24 (21%)	9 (8%)	1	19
12	CM	111/117 (95%)	76 (68%)	25 (22%)	10 (9%)	1	17
13	AN	92/100 (92%)	59 (64%)	26 (28%)	7 (8%)	1	20
13	CN	92/100 (92%)	60 (65%)	24 (26%)	8 (9%)	1	17
14	AO	86/89 (97%)	59 (69%)	22 (26%)	5 (6%)	2	28
14	CO	86/89 (97%)	60 (70%)	22 (26%)	4 (5%)	3	33
15	AP	80/82 (98%)	59 (74%)	16 (20%)	5 (6%)	2	27
15	CP	78/82 (95%)	56 (72%)	16 (20%)	6 (8%)	1	20
16	AQ	78/83 (94%)	58 (74%)	15 (19%)	5 (6%)	2	26
16	CQ	79/83 (95%)	59 (75%)	15 (19%)	5 (6%)	2	27
17	AR	53/74 (72%)	41 (77%)	9 (17%)	3 (6%)	2	29
17	CR	53/74 (72%)	41 (77%)	9 (17%)	3 (6%)	2	29
18	AS	77/91 (85%)	60 (78%)	12 (16%)	5 (6%)	1	26
18	CS	78/91 (86%)	61 (78%)	11 (14%)	6 (8%)	1	20
19	AT	83/86 (96%)	63 (76%)	15 (18%)	5 (6%)	2	27
19	CT	83/86 (96%)	62 (75%)	16 (19%)	5 (6%)	2	27
20	AB	216/240 (90%)	142 (66%)	57 (26%)	17 (8%)	1	19
20	CB	216/240 (90%)	134 (62%)	65 (30%)	17 (8%)	1	19
21	AU	49/70 (70%)	28 (57%)	11 (22%)	10 (20%)	0	2
21	CU	49/70 (70%)	28 (57%)	12 (24%)	9 (18%)	0	3
24	BI	139/141 (99%)	120 (86%)	14 (10%)	5 (4%)	4	41
24	DI	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	4	41

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
25	BC	269/272 (99%)	155 (58%)	66 (24%)	48 (18%)	0	3
25	DC	269/272 (99%)	155 (58%)	65 (24%)	49 (18%)	0	3
26	BD	207/209 (99%)	122 (59%)	54 (26%)	31 (15%)	0	5
26	DD	207/209 (99%)	124 (60%)	51 (25%)	32 (16%)	0	5
27	BK	119/123 (97%)	78 (66%)	24 (20%)	17 (14%)	0	6
27	DK	119/123 (97%)	78 (66%)	24 (20%)	17 (14%)	0	6
28	BP	112/114 (98%)	61 (54%)	32 (29%)	19 (17%)	0	4
28	DP	112/114 (98%)	61 (54%)	34 (30%)	17 (15%)	0	5
29	BE	199/201 (99%)	125 (63%)	50 (25%)	24 (12%)	0	8
29	DE	199/201 (99%)	125 (63%)	51 (26%)	23 (12%)	0	9
30	BY	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	1	17
30	DY	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	1	17
31	B0	54/56 (96%)	39 (72%)	8 (15%)	7 (13%)	0	7
31	D0	54/56 (96%)	39 (72%)	8 (15%)	7 (13%)	0	7
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%)	1	18
33	D1	48/54 (89%)	36 (75%)	8 (17%)	4 (8%)	1	18
34	B3	62/64 (97%)	35 (56%)	21 (34%)	6 (10%)	1	14
34	D3	62/64 (97%)	34 (55%)	22 (36%)	6 (10%)	1	14
35	BV	92/94 (98%)	64 (70%)	22 (24%)	6 (6%)	1	26
35	DV	92/94 (98%)	62 (67%)	24 (26%)	6 (6%)	1	26
36	B2	44/46 (96%)	30 (68%)	10 (23%)	4 (9%)	1	16
36	D2	44/46 (96%)	30 (68%)	10 (23%)	4 (9%)	1	16
37	BL	141/144 (98%)	89 (63%)	31 (22%)	21 (15%)	0	5
37	DL	141/144 (98%)	89 (63%)	32 (23%)	20 (14%)	0	6
38	BM	134/136 (98%)	84 (63%)	29 (22%)	21 (16%)	0	5
38	DM	134/136 (98%)	83 (62%)	31 (23%)	20 (15%)	0	5
39	BX	61/63 (97%)	36 (59%)	17 (28%)	8 (13%)	0	7
39	DX	61/63 (97%)	36 (59%)	17 (28%)	8 (13%)	0	7
40	BH	147/149 (99%)	76 (52%)	46 (31%)	25 (17%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	DH	147/149 (99%)	91 (62%)	33 (22%)	23 (16%)	0	5
41	BJ	140/142 (99%)	85 (61%)	37 (26%)	18 (13%)	0	7
41	DJ	140/142 (99%)	85 (61%)	36 (26%)	19 (14%)	0	6
42	BN	118/127 (93%)	76 (64%)	29 (25%)	13 (11%)	0	10
42	DN	118/127 (93%)	77 (65%)	28 (24%)	13 (11%)	0	10
43	BO	114/117 (97%)	74 (65%)	29 (25%)	11 (10%)	1	14
43	DO	114/117 (97%)	75 (66%)	27 (24%)	12 (10%)	1	11
44	BQ	115/117 (98%)	75 (65%)	31 (27%)	9 (8%)	1	20
44	DQ	115/117 (98%)	75 (65%)	29 (25%)	11 (10%)	1	14
45	BS	108/110 (98%)	68 (63%)	29 (27%)	11 (10%)	1	13
45	DS	108/110 (98%)	66 (61%)	31 (29%)	11 (10%)	1	13
46	BU	100/103 (97%)	58 (58%)	23 (23%)	19 (19%)	0	3
46	DU	100/103 (97%)	59 (59%)	22 (22%)	19 (19%)	0	3
47	BF	176/178 (99%)	103 (58%)	44 (25%)	29 (16%)	0	4
47	DF	176/178 (99%)	105 (60%)	42 (24%)	29 (16%)	0	4
48	BG	174/176 (99%)	99 (57%)	42 (24%)	33 (19%)	0	3
48	DG	174/176 (99%)	101 (58%)	41 (24%)	32 (18%)	0	3
49	BR	101/103 (98%)	72 (71%)	20 (20%)	9 (9%)	1	17
49	DR	101/103 (98%)	74 (73%)	18 (18%)	9 (9%)	1	17
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	2
51	BZ	75/78 (96%)	50 (67%)	13 (17%)	12 (16%)	0	5
51	DZ	75/78 (96%)	50 (67%)	13 (17%)	12 (16%)	0	5
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%)	6	47
53	D6	183/185 (99%)	152 (83%)	24 (13%)	7 (4%)	4	39
All	All	11607/12284 (94%)	7731 (67%)	2581 (22%)	1295 (11%)	0	10

All (1295) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	14	VAL

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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%)	144 (85%)	26 (15%)	3	24
2	CC	170/189 (90%)	143 (84%)	27 (16%)	3	23
3	AD	172/172 (100%)	146 (85%)	26 (15%)	3	25
3	CD	172/172 (100%)	147 (86%)	25 (14%)	4	27
4	AE	113/125 (90%)	95 (84%)	18 (16%)	3	23
4	CE	113/125 (90%)	96 (85%)	17 (15%)	3	25
5	AF	87/116 (75%)	76 (87%)	11 (13%)	5	31
5	CF	87/116 (75%)	76 (87%)	11 (13%)	5	31
6	AG	123/146 (84%)	105 (85%)	18 (15%)	4	26
6	CG	125/146 (86%)	106 (85%)	19 (15%)	3	25
7	AH	104/104 (100%)	96 (92%)	8 (8%)	16	55
7	CH	104/104 (100%)	97 (93%)	7 (7%)	20	60
8	AI	105/106 (99%)	91 (87%)	14 (13%)	5	30
8	CI	105/106 (99%)	89 (85%)	16 (15%)	3	25
9	AJ	86/90 (96%)	76 (88%)	10 (12%)	7	36
9	CJ	86/90 (96%)	76 (88%)	10 (12%)	7	36
10	AK	90/98 (92%)	77 (86%)	13 (14%)	4	27
10	CK	90/98 (92%)	75 (83%)	15 (17%)	3	21
11	AL	103/103 (100%)	86 (84%)	17 (16%)	3	21
11	CL	103/103 (100%)	85 (82%)	18 (18%)	2	18
12	AM	92/95 (97%)	77 (84%)	15 (16%)	3	22
12	CM	91/95 (96%)	76 (84%)	15 (16%)	3	21
13	AN	79/83 (95%)	62 (78%)	17 (22%)	1	10
13	CN	79/83 (95%)	62 (78%)	17 (22%)	1	10
14	AO	76/77 (99%)	69 (91%)	7 (9%)	11	46
14	CO	76/77 (99%)	69 (91%)	7 (9%)	11	46
15	AP	65/65 (100%)	59 (91%)	6 (9%)	11	46
15	CP	65/65 (100%)	59 (91%)	6 (9%)	11	46
16	AQ	74/77 (96%)	61 (82%)	13 (18%)	2	18
16	CQ	75/77 (97%)	63 (84%)	12 (16%)	3	23
17	AR	48/64 (75%)	40 (83%)	8 (17%)	3	21
17	CR	48/64 (75%)	39 (81%)	9 (19%)	2	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	AS	70/78 (90%)	56 (80%)	14 (20%)	1	13
18	CS	71/78 (91%)	57 (80%)	14 (20%)	1	13
19	AT	65/65 (100%)	55 (85%)	10 (15%)	3	24
19	CT	65/65 (100%)	55 (85%)	10 (15%)	3	24
20	AB	180/198 (91%)	148 (82%)	32 (18%)	2	17
20	CB	180/198 (91%)	150 (83%)	30 (17%)	3	21
21	AU	44/60 (73%)	32 (73%)	12 (27%)	0	5
21	CU	44/60 (73%)	32 (73%)	12 (27%)	0	5
24	BI	109/109 (100%)	107 (98%)	2 (2%)	66	87
24	DI	109/109 (100%)	103 (94%)	6 (6%)	27	66
25	BC	216/217 (100%)	179 (83%)	37 (17%)	2	19
25	DC	216/217 (100%)	176 (82%)	40 (18%)	2	15
26	BD	164/164 (100%)	135 (82%)	29 (18%)	2	18
26	DD	164/164 (100%)	134 (82%)	30 (18%)	2	16
27	BK	102/104 (98%)	80 (78%)	22 (22%)	1	10
27	DK	102/104 (98%)	81 (79%)	21 (21%)	1	12
28	BP	99/99 (100%)	80 (81%)	19 (19%)	2	14
28	DP	99/99 (100%)	80 (81%)	19 (19%)	2	14
29	BE	165/165 (100%)	143 (87%)	22 (13%)	5	30
29	DE	165/165 (100%)	142 (86%)	23 (14%)	4	29
30	BY	48/48 (100%)	38 (79%)	10 (21%)	1	11
30	DY	48/48 (100%)	38 (79%)	10 (21%)	1	11
31	B0	47/47 (100%)	38 (81%)	9 (19%)	2	14
31	D0	47/47 (100%)	38 (81%)	9 (19%)	2	14
32	B4	34/34 (100%)	28 (82%)	6 (18%)	2	18
32	D4	34/34 (100%)	29 (85%)	5 (15%)	4	26
33	B1	45/48 (94%)	40 (89%)	5 (11%)	8	38
33	D1	45/48 (94%)	41 (91%)	4 (9%)	12	48
34	B3	51/51 (100%)	45 (88%)	6 (12%)	6	35
34	D3	51/51 (100%)	46 (90%)	5 (10%)	10	43
35	BV	78/78 (100%)	64 (82%)	14 (18%)	2	17

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	DV	78/78 (100%)	64 (82%)	14 (18%)	2	17
36	B2	38/38 (100%)	28 (74%)	10 (26%)	0	6
36	D2	38/38 (100%)	28 (74%)	10 (26%)	0	6
37	BL	102/103 (99%)	91 (89%)	11 (11%)	8	39
37	DL	102/103 (99%)	91 (89%)	11 (11%)	8	39
38	BM	109/109 (100%)	87 (80%)	22 (20%)	1	12
38	DM	109/109 (100%)	87 (80%)	22 (20%)	1	12
39	BX	55/55 (100%)	46 (84%)	9 (16%)	3	21
39	DX	55/55 (100%)	46 (84%)	9 (16%)	3	21
40	BH	114/114 (100%)	79 (69%)	35 (31%)	0	3
40	DH	114/114 (100%)	89 (78%)	25 (22%)	1	10
41	BJ	116/116 (100%)	100 (86%)	16 (14%)	4	29
41	DJ	116/116 (100%)	100 (86%)	16 (14%)	4	29
42	BN	100/103 (97%)	84 (84%)	16 (16%)	3	23
42	DN	100/103 (97%)	84 (84%)	16 (16%)	3	23
43	BO	86/87 (99%)	71 (83%)	15 (17%)	2	18
43	DO	86/87 (99%)	72 (84%)	14 (16%)	3	22
44	BQ	89/89 (100%)	79 (89%)	10 (11%)	7	37
44	DQ	89/89 (100%)	79 (89%)	10 (11%)	7	37
45	BS	93/93 (100%)	77 (83%)	16 (17%)	2	19
45	DS	93/93 (100%)	77 (83%)	16 (17%)	2	19
46	BU	83/84 (99%)	65 (78%)	18 (22%)	1	10
46	DU	83/84 (99%)	65 (78%)	18 (22%)	1	10
47	BF	149/149 (100%)	117 (78%)	32 (22%)	1	10
47	DF	149/149 (100%)	117 (78%)	32 (22%)	1	10
48	BG	137/137 (100%)	110 (80%)	27 (20%)	1	13
48	DG	137/137 (100%)	112 (82%)	25 (18%)	2	16
49	BR	84/84 (100%)	71 (84%)	13 (16%)	3	24
49	DR	84/84 (100%)	70 (83%)	14 (17%)	3	21
50	BT	80/84 (95%)	64 (80%)	16 (20%)	1	13
50	DT	80/84 (95%)	64 (80%)	16 (20%)	1	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
51	BZ	67/68 (98%)	53 (79%)	14 (21%)	1	11
51	DZ	67/68 (98%)	56 (84%)	11 (16%)	3	21
52	BW	59/62 (95%)	42 (71%)	17 (29%)	0	4
52	DW	59/62 (95%)	42 (71%)	17 (29%)	0	4
53	B6	157/157 (100%)	137 (87%)	20 (13%)	5	31
53	D6	157/157 (100%)	134 (85%)	23 (15%)	4	26
All	All	9647/10014 (96%)	8066 (84%)	1581 (16%)	3	21

All (1581) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	13	ILE
2	AC	17	TRP
2	AC	20	THR
2	AC	27	GLU
2	AC	28	PHE
2	AC	35	ASP
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	88	LYS
2	AC	101	ASN
2	AC	106	ARG
2	AC	126	ARG
2	AC	128	MET
2	AC	131	ARG
2	AC	155	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	7	LYS
3	AD	18	LEU
3	AD	25	ARG

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Mol	Chain	Res	Type
3	AD	28	ASP
3	AD	35	GLN
3	AD	39	GLN
3	AD	49	ASP
3	AD	55	ARG
3	AD	70	GLN
3	AD	84	ASN
3	AD	87	GLU
3	AD	97	LEU
3	AD	118	SER
3	AD	146	GLU
3	AD	147	LYS
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	183	ARG
3	AD	186	GLU
3	AD	189	ASP
3	AD	190	LEU
3	AD	196	GLU
4	AE	9	GLU
4	AE	23	THR
4	AE	31	SER
4	AE	44	ARG
4	AE	45	VAL
4	AE	51	LYS
4	AE	61	LYS
4	AE	64	GLU
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	6	ILE

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Mol	Chain	Res	Type
5	AF	13	ASP
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	86	ARG
5	AF	98	GLU
6	AG	6	ILE
6	AG	10	LYS
6	AG	11	ILE
6	AG	21	LEU
6	AG	49	LEU
6	AG	55	LYS
6	AG	56	SER
6	AG	58	LEU
6	AG	62	GLU
6	AG	78	ARG
6	AG	94	ARG
6	AG	109	LYS
6	AG	110	ARG
6	AG	112	ASP
6	AG	117	LEU
6	AG	132	THR
6	AG	137	ARG
6	AG	142	ARG
7	AH	49	LYS
7	AH	53	ASP
7	AH	55	LYS
7	AH	57	GLU
7	AH	72	GLU
7	AH	76	ARG
7	AH	111	THR
7	AH	113	ARG
8	AI	4	GLN
8	AI	24	ASN
8	AI	36	GLN
8	AI	45	MET
8	AI	58	GLU
8	AI	62	LEU

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Mol	Chain	Res	Type
8	AI	67	LYS
8	AI	74	GLN
8	AI	84	ARG
8	AI	87	MET
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	87	LEU
9	AJ	88	MET
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	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	118	ASN
11	AL	9	LYS
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	33	CYS
11	AL	35	ARG
11	AL	38	THR
11	AL	43	LYS

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Mol	Chain	Res	Type
11	AL	49	ARG
11	AL	77	SER
11	AL	85	ARG
11	AL	95	HIS
11	AL	107	LYS
11	AL	122	LYS
12	AM	2	ARG
12	AM	28	ARG
12	AM	40	GLU
12	AM	44	ILE
12	AM	46	GLU
12	AM	57	ASP
12	AM	65	GLU
12	AM	70	ARG
12	AM	71	GLU
12	AM	79	LEU
12	AM	82	LEU
12	AM	91	ARG
12	AM	102	LYS
12	AM	103	THR
12	AM	106	ARG
13	AN	3	GLN
13	AN	4	SER
13	AN	5	MET
13	AN	17	ASP
13	AN	25	GLU
13	AN	26	LEU
13	AN	27	LYS
13	AN	40	ARG
13	AN	41	TRP
13	AN	50	LEU
13	AN	52	ARG
13	AN	53	ASP
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	42	HIS
14	AO	54	ARG
14	AO	66	LEU

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Mol	Chain	Res	Type
14	AO	70	LEU
14	AO	71	LYS
14	AO	88	ARG
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	5	ARG
16	AQ	10	ARG
16	AQ	37	ILE
16	AQ	39	ARG
16	AQ	48	GLU
16	AQ	59	GLU
16	AQ	60	ILE
16	AQ	61	ARG
16	AQ	66	LEU
16	AQ	74	LEU
16	AQ	79	GLU
16	AQ	80	LYS
17	AR	21	ASP
17	AR	23	LYS
17	AR	33	THR
17	AR	35	SER
17	AR	38	ILE
17	AR	44	THR
17	AR	46	THR
17	AR	60	ARG
18	AS	2	ARG
18	AS	4	LEU
18	AS	5	LYS
18	AS	13	HIS
18	AS	14	LEU
18	AS	20	LYS
18	AS	26	ASP
18	AS	27	LYS
18	AS	28	LYS
18	AS	42	ASN
18	AS	47	THR
18	AS	55	GLN

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Mol	Chain	Res	Type
18	AS	64	GLU
18	AS	80	ARG
19	AT	3	ILE
19	AT	4	LYS
19	AT	5	SER
19	AT	25	SER
19	AT	35	TYR
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	19	THR
20	AB	23	ASN
20	AB	27	LYS
20	AB	35	ASN
20	AB	38	HIS
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	107	ARG
20	AB	113	LEU
20	AB	121	GLN
20	AB	125	PHE
20	AB	127	LYS
20	AB	128	LEU
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

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Mol	Chain	Res	Type
20	AB	212	TYR
20	AB	221	ARG
21	AU	11	PHE
21	AU	15	LEU
21	AU	16	ARG
21	AU	20	ARG
21	AU	24	LYS
21	AU	27	VAL
21	AU	33	ARG
21	AU	34	ARG
21	AU	36	PHE
21	AU	38	GLU
21	AU	44	ARG
21	AU	48	LYS
24	BI	63	ASP
24	BI	96	LYS
25	BC	4	LYS
25	BC	5	CYS
25	BC	12	ARG
25	BC	23	LEU
25	BC	43	ASN
25	BC	45	ASN
25	BC	52	HIS
25	BC	53	ILE
25	BC	62	ARG
25	BC	65	ASP
25	BC	86	ARG
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	176	ARG
25	BC	180	MET
25	BC	190	THR
25	BC	191	LEU

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Mol	Chain	Res	Type
25	BC	202	ARG
25	BC	212	TRP
25	BC	213	ARG
25	BC	224	MET
25	BC	239	PHE
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	17	GLU
26	BD	35	THR
26	BD	36	GLN
26	BD	40	LEU
26	BD	46	ARG
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	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	154	LYS
26	BD	159	LYS
26	BD	165	MET
26	BD	167	ASN
26	BD	179	ARG
26	BD	186	LEU
26	BD	201	LEU
26	BD	204	LYS
26	BD	207	VAL
27	BK	8	LEU
27	BK	21	CYS

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Mol	Chain	Res	Type
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
27	BK	64	ARG
27	BK	72	PRO
27	BK	79	PHE
27	BK	86	LEU
27	BK	87	LEU
27	BK	98	ARG
27	BK	104	THR
27	BK	105	ARG
27	BK	107	LEU
27	BK	108	ARG
27	BK	111	LYS
27	BK	120	PRO
28	BP	3	ILE
28	BP	6	GLN
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	100	ARG
28	BP	101	GLU
28	BP	111	GLU
28	BP	112	ARG
28	BP	114	ASN
29	BE	2	GLU
29	BE	12	LEU
29	BE	22	ASP

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Mol	Chain	Res	Type
29	BE	24	ASN
29	BE	40	ARG
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	78	TRP
29	BE	108	ILE
29	BE	116	ASP
29	BE	118	LEU
29	BE	122	GLU
29	BE	124	PHE
29	BE	133	LEU
29	BE	147	LEU
29	BE	153	LEU
29	BE	163	ASN
29	BE	170	ARG
30	BY	2	LYS
30	BY	3	THR
30	BY	6	ILE
30	BY	15	ARG
30	BY	16	LEU
30	BY	19	HIS
30	BY	23	LEU
30	BY	30	ARG
30	BY	37	ARG
30	BY	57	GLU
31	B0	3	GLN
31	B0	26	SER
31	B0	27	LEU
31	B0	37	HIS
31	B0	41	HIS
31	B0	45	ASP
31	B0	51	ARG
31	B0	53	VAL
31	B0	56	LYS
32	B4	3	VAL
32	B4	6	SER
32	B4	9	LYS
32	B4	28	SER

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Mol	Chain	Res	Type
32	B4	35	GLN
32	B4	37	GLN
33	B1	6	GLU
33	B1	8	ILE
33	B1	9	LYS
33	B1	35	LEU
33	B1	44	GLN
34	B3	7	ARG
34	B3	14	LYS
34	B3	18	LYS
34	B3	27	ASN
34	B3	42	HIS
34	B3	61	LEU
35	BV	7	GLU
35	BV	12	GLN
35	BV	18	ARG
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
35	BV	90	ASP
36	B2	4	THR
36	B2	10	LEU
36	B2	19	ARG
36	B2	22	MET
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

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Mol	Chain	Res	Type
37	BL	91	ASP
37	BL	92	LEU
37	BL	95	LEU
37	BL	112	LEU
37	BL	118	THR
37	BL	123	ARG
38	BM	1	MET
38	BM	10	ARG
38	BM	20	LEU
38	BM	25	ASP
38	BM	38	ARG
38	BM	47	GLU
38	BM	58	LYS
38	BM	59	ARG
38	BM	63	ILE
38	BM	65	ILE
38	BM	70	ASP
38	BM	90	GLU
38	BM	91	TYR
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	14	LEU
39	BX	18	LEU
39	BX	25	GLN
39	BX	28	LEU
39	BX	29	ARG
39	BX	41	HIS
39	BX	48	ARG
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

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Mol	Chain	Res	Type
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	48	GLU
40	BH	50	ARG
40	BH	53	GLU
40	BH	54	LEU
40	BH	58	LEU
40	BH	60	GLU
40	BH	62	LEU
40	BH	66	ASN
40	BH	68	ARG
40	BH	71	LYS
40	BH	73	ASN
40	BH	76	GLU
40	BH	87	GLU
40	BH	89	LYS
40	BH	98	ASP
40	BH	101	ASP
40	BH	109	GLU
40	BH	112	LYS
40	BH	114	GLU
40	BH	116	ARG
40	BH	127	GLU
40	BH	130	VAL
40	BH	138	VAL
40	BH	141	LYS
41	BJ	2	LYS
41	BJ	5	THR
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	35	ARG
41	BJ	44	TYR
41	BJ	65	THR
41	BJ	71	ASP
41	BJ	76	HIS
41	BJ	95	ARG
41	BJ	111	LYS
41	BJ	120	ARG

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Mol	Chain	Res	Type
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
42	BN	11	ASN
42	BN	18	GLN
42	BN	20	MET
42	BN	35	LYS
42	BN	46	ARG
42	BN	59	SER
42	BN	69	ARG
42	BN	71	ARG
42	BN	82	GLU
42	BN	83	LEU
42	BN	114	GLU
42	BN	118	ARG
42	BN	120	GLU
43	BO	3	LYS
43	BO	9	ARG
43	BO	17	LYS
43	BO	20	GLU
43	BO	31	THR
43	BO	36	TYR
43	BO	43	ASN
43	BO	69	ASP
43	BO	78	VAL
43	BO	80	GLU
43	BO	89	ASP
43	BO	98	GLN
43	BO	100	HIS
43	BO	104	GLN
43	BO	106	LEU
44	BQ	5	ARG
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	29	ARG
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	90	ASP
44	BQ	96	ASP
45	BS	1	MET
45	BS	6	LYS
45	BS	18	ARG
45	BS	22	ASP
45	BS	33	LEU
45	BS	39	THR
45	BS	55	ILE
45	BS	62	ASP
45	BS	66	ILE
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	20	LYS
46	BU	30	SER
46	BU	34	ILE
46	BU	49	PRO
46	BU	51	LEU
46	BU	52	ASN
46	BU	53	GLN
46	BU	60	LYS
46	BU	64	ILE
46	BU	65	GLN
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
47	BF	15	LEU
47	BF	18	GLU
47	BF	29	ARG

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Mol	Chain	Res	Type
47	BF	32	LYS
47	BF	50	ASP
47	BF	55	ASP
47	BF	56	LEU
47	BF	59	ILE
47	BF	76	PHE
47	BF	82	TYR
47	BF	86	CYS
47	BF	91	ARG
47	BF	96	TRP
47	BF	97	GLU
47	BF	101	ARG
47	BF	102	LEU
47	BF	103	ILE
47	BF	109	ARG
47	BF	111	ARG
47	BF	121	PHE
47	BF	126	ASN
47	BF	129	MET
47	BF	134	GLN
47	BF	137	PHE
47	BF	138	PRO
47	BF	147	ARG
47	BF	149	ARG
47	BF	174	PHE
47	BF	177	ARG
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
48	BG	36	LEU
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

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Mol	Chain	Res	Type
48	BG	84	LYS
48	BG	85	LYS
48	BG	86	LEU
48	BG	94	ARG
48	BG	106	LEU
48	BG	120	ILE
48	BG	132	LEU
48	BG	138	GLN
48	BG	148	ARG
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	48	LYS
49	BR	53	PHE
49	BR	55	ASP
49	BR	70	GLU
49	BR	71	LYS
49	BR	72	VAL
49	BR	79	ARG
49	BR	86	GLN
50	BT	2	ILE
50	BT	3	ARG
50	BT	4	GLU
50	BT	7	LEU
50	BT	9	LYS
50	BT	11	LEU
50	BT	12	ARG
50	BT	24	MET
50	BT	32	LEU
50	BT	64	LYS
50	BT	68	LYS
50	BT	69	ARG
50	BT	70	HIS
50	BT	73	ARG
50	BT	81	LYS
50	BT	87	LEU
51	BZ	25	THR

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Mol	Chain	Res	Type
51	BZ	27	ARG
51	BZ	28	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	72	ARG
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	40	ARG
52	BW	44	PHE
52	BW	49	ASN
52	BW	50	VAL
52	BW	54	ARG
52	BW	77	LYS
52	BW	80	SER
53	B6	1	MET
53	B6	6	LEU
53	B6	16	LYS
53	B6	17	SER
53	B6	29	ARG
53	B6	39	LEU
53	B6	52	LEU
53	B6	55	ILE
53	B6	62	ASP
53	B6	66	LEU
53	B6	73	GLN
53	B6	93	SER

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Mol	Chain	Res	Type
53	B6	106	LEU
53	B6	109	GLU
53	B6	114	LEU
53	B6	147	LEU
53	B6	154	THR
53	B6	165	THR
53	B6	177	GLU
53	B6	183	ILE
2	CC	2	GLN
2	CC	13	ILE
2	CC	17	TRP
2	CC	20	THR
2	CC	27	GLU
2	CC	28	PHE
2	CC	35	ASP
2	CC	41	TYR
2	CC	48	LYS
2	CC	61	LYS
2	CC	62	SER
2	CC	63	ILE
2	CC	64	ARG
2	CC	88	LYS
2	CC	100	ILE
2	CC	101	ASN
2	CC	106	ARG
2	CC	126	ARG
2	CC	128	MET
2	CC	131	ARG
2	CC	155	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	7	LYS
3	CD	18	LEU
3	CD	25	ARG
3	CD	28	ASP
3	CD	35	GLN
3	CD	39	GLN
3	CD	55	ARG

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Mol	Chain	Res	Type
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	170	LEU
3	CD	176	LYS
3	CD	183	ARG
3	CD	186	GLU
3	CD	189	ASP
3	CD	190	LEU
3	CD	196	GLU
4	CE	9	GLU
4	CE	23	THR
4	CE	31	SER
4	CE	44	ARG
4	CE	45	VAL
4	CE	51	LYS
4	CE	61	LYS
4	CE	64	GLU
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	147	ASN
4	CE	151	MET
4	CE	156	ARG
5	CF	6	ILE
5	CF	13	ASP
5	CF	16	GLU
5	CF	39	LEU
5	CF	53	LYS
5	CF	55	HIS
5	CF	61	LEU

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Mol	Chain	Res	Type
5	CF	65	GLU
5	CF	69	GLU
5	CF	86	ARG
5	CF	98	GLU
6	CG	4	ARG
6	CG	10	LYS
6	CG	11	ILE
6	CG	21	LEU
6	CG	49	LEU
6	CG	55	LYS
6	CG	56	SER
6	CG	58	LEU
6	CG	62	GLU
6	CG	78	ARG
6	CG	94	ARG
6	CG	109	LYS
6	CG	110	ARG
6	CG	112	ASP
6	CG	117	LEU
6	CG	132	THR
6	CG	137	ARG
6	CG	142	ARG
6	CG	153	TYR
7	CH	49	LYS
7	CH	53	ASP
7	CH	55	LYS
7	CH	57	GLU
7	CH	72	GLU
7	CH	111	THR
7	CH	113	ARG
8	CI	4	GLN
8	CI	24	ASN
8	CI	30	ASN
8	CI	36	GLN
8	CI	45	MET
8	CI	58	GLU
8	CI	62	LEU
8	CI	67	LYS
8	CI	74	GLN
8	CI	84	ARG
8	CI	87	MET
8	CI	93	LEU

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Mol	Chain	Res	Type
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	87	LEU
9	CJ	88	MET
9	CJ	89	ARG
9	CJ	92	LEU
9	CJ	97	ASP
10	CK	28	ASN
10	CK	29	THR
10	CK	34	THR
10	CK	51	PHE
10	CK	55	ARG
10	CK	68	ARG
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	118	ASN
11	CL	9	LYS
11	CL	13	ARG
11	CL	14	LYS
11	CL	15	VAL
11	CL	17	LYS
11	CL	18	SER
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	49	ARG

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Mol	Chain	Res	Type
11	CL	77	SER
11	CL	85	ARG
11	CL	95	HIS
11	CL	107	LYS
11	CL	122	LYS
12	CM	2	ARG
12	CM	28	ARG
12	CM	40	GLU
12	CM	44	ILE
12	CM	46	GLU
12	CM	57	ASP
12	CM	65	GLU
12	CM	70	ARG
12	CM	71	GLU
12	CM	79	LEU
12	CM	82	LEU
12	CM	91	ARG
12	CM	102	LYS
12	CM	103	THR
12	CM	106	ARG
13	CN	3	GLN
13	CN	4	SER
13	CN	5	MET
13	CN	17	ASP
13	CN	25	GLU
13	CN	26	LEU
13	CN	27	LYS
13	CN	40	ARG
13	CN	41	TRP
13	CN	50	LEU
13	CN	52	ARG
13	CN	53	ASP
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	42	HIS
14	CO	54	ARG
14	CO	66	LEU
14	CO	70	LEU

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Mol	Chain	Res	Type
14	CO	71	LYS
14	CO	88	ARG
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	5	ARG
16	CQ	10	ARG
16	CQ	37	ILE
16	CQ	48	GLU
16	CQ	59	GLU
16	CQ	60	ILE
16	CQ	61	ARG
16	CQ	66	LEU
16	CQ	74	LEU
16	CQ	79	GLU
16	CQ	80	LYS
17	CR	21	ASP
17	CR	23	LYS
17	CR	33	THR
17	CR	35	SER
17	CR	38	ILE
17	CR	44	THR
17	CR	46	THR
17	CR	60	ARG
17	CR	71	ASP
18	CS	2	ARG
18	CS	4	LEU
18	CS	5	LYS
18	CS	13	HIS
18	CS	14	LEU
18	CS	20	LYS
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

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Mol	Chain	Res	Type
18	CS	80	ARG
19	CT	3	ILE
19	CT	4	LYS
19	CT	5	SER
19	CT	25	SER
19	CT	35	TYR
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	19	THR
20	CB	23	ASN
20	CB	27	LYS
20	CB	35	ASN
20	CB	46	VAL
20	CB	48	MET
20	CB	51	GLU
20	CB	62	ARG
20	CB	67	LEU
20	CB	72	LYS
20	CB	86	CYS
20	CB	87	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	99	MET
20	CB	104	LYS
20	CB	107	ARG
20	CB	113	LEU
20	CB	122	ASP
20	CB	127	LYS
20	CB	144	GLU
20	CB	156	LEU
20	CB	176	ASN
20	CB	187	ASP
20	CB	196	ASP
20	CB	202	ASN
20	CB	211	LEU
20	CB	212	TYR
20	CB	221	ARG
21	CU	11	PHE

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Mol	Chain	Res	Type
21	CU	15	LEU
21	CU	16	ARG
21	CU	20	ARG
21	CU	24	LYS
21	CU	27	VAL
21	CU	33	ARG
21	CU	34	ARG
21	CU	36	PHE
21	CU	38	GLU
21	CU	44	ARG
21	CU	48	LYS
24	DI	2	LYS
24	DI	54	ILE
24	DI	91	LYS
24	DI	99	LYS
24	DI	121	ILE
24	DI	140	GLU
25	DC	4	LYS
25	DC	5	CYS
25	DC	12	ARG
25	DC	23	LEU
25	DC	37	SER
25	DC	43	ASN
25	DC	45	ASN
25	DC	52	HIS
25	DC	53	ILE
25	DC	62	ARG
25	DC	65	ASP
25	DC	86	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	176	ARG
25	DC	180	MET

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Mol	Chain	Res	Type
25	DC	190	THR
25	DC	191	LEU
25	DC	202	ARG
25	DC	212	TRP
25	DC	213	ARG
25	DC	224	MET
25	DC	239	PHE
25	DC	245	THR
25	DC	249	VAL
25	DC	251	THR
25	DC	257	ARG
25	DC	264	LYS
25	DC	267	VAL
25	DC	268	ARG
25	DC	269	ARG
26	DD	17	GLU
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
26	DD	99	GLU
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	154	LYS
26	DD	159	LYS
26	DD	165	MET
26	DD	167	ASN
26	DD	179	ARG
26	DD	186	LEU

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Mol	Chain	Res	Type
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	64	ARG
27	DK	72	PRO
27	DK	79	PHE
27	DK	86	LEU
27	DK	87	LEU
27	DK	98	ARG
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	6	GLN
28	DP	19	PHE
28	DP	20	ARG
28	DP	24	THR
28	DP	25	VAL
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	100	ARG
28	DP	101	GLU
28	DP	111	GLU
28	DP	112	ARG

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Mol	Chain	Res	Type
28	DP	114	ASN
29	DE	2	GLU
29	DE	12	LEU
29	DE	22	ASP
29	DE	24	ASN
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	78	TRP
29	DE	108	ILE
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU
29	DE	124	PHE
29	DE	133	LEU
29	DE	147	LEU
29	DE	153	LEU
29	DE	163	ASN
29	DE	170	ARG
30	DY	2	LYS
30	DY	3	THR
30	DY	6	ILE
30	DY	15	ARG
30	DY	16	LEU
30	DY	19	HIS
30	DY	23	LEU
30	DY	30	ARG
30	DY	37	ARG
30	DY	57	GLU
31	D0	3	GLN
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

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Mol	Chain	Res	Type
31	D0	56	LYS
32	D4	3	VAL
32	D4	9	LYS
32	D4	28	SER
32	D4	35	GLN
32	D4	37	GLN
33	D1	8	ILE
33	D1	9	LYS
33	D1	35	LEU
33	D1	44	GLN
34	D3	7	ARG
34	D3	14	LYS
34	D3	18	LYS
34	D3	27	ASN
34	D3	42	HIS
35	DV	7	GLU
35	DV	12	GLN
35	DV	18	ARG
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
35	DV	89	ILE
35	DV	90	ASP
36	D2	4	THR
36	D2	10	LEU
36	D2	19	ARG
36	D2	22	MET
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

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Mol	Chain	Res	Type
37	DL	60	ARG
37	DL	69	ARG
37	DL	91	ASP
37	DL	92	LEU
37	DL	95	LEU
37	DL	112	LEU
37	DL	118	THR
37	DL	123	ARG
38	DM	1	MET
38	DM	10	ARG
38	DM	20	LEU
38	DM	25	ASP
38	DM	38	ARG
38	DM	47	GLU
38	DM	58	LYS
38	DM	59	ARG
38	DM	63	ILE
38	DM	65	ILE
38	DM	70	ASP
38	DM	90	GLU
38	DM	91	TYR
38	DM	95	LEU
38	DM	100	LYS
38	DM	104	GLU
38	DM	105	MET
38	DM	108	VAL
38	DM	110	GLU
38	DM	115	GLU
38	DM	127	LYS
38	DM	131	VAL
39	DX	14	LEU
39	DX	18	LEU
39	DX	25	GLN
39	DX	28	LEU
39	DX	29	ARG
39	DX	41	HIS
39	DX	48	ARG
39	DX	57	LEU
39	DX	59	GLU
40	DH	3	VAL
40	DH	12	LEU
40	DH	15	LEU

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Mol	Chain	Res	Type
40	DH	17	ASP
40	DH	28	ASN
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	48	GLU
40	DH	50	ARG
40	DH	58	LEU
40	DH	70	GLU
40	DH	73	ASN
40	DH	75	LEU
40	DH	79	THR
40	DH	89	LYS
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	139	PHE
40	DH	145	ASN
41	DJ	2	LYS
41	DJ	5	THR
41	DJ	12	LYS
41	DJ	28	LEU
41	DJ	35	ARG
41	DJ	44	TYR
41	DJ	65	THR
41	DJ	71	ASP
41	DJ	76	HIS
41	DJ	93	ILE
41	DJ	95	ARG
41	DJ	111	LYS
41	DJ	120	ARG
41	DJ	124	VAL
41	DJ	129	GLU
41	DJ	138	GLN
42	DN	1	MET
42	DN	2	ARG
42	DN	9	GLN
42	DN	11	ASN

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Mol	Chain	Res	Type
42	DN	18	GLN
42	DN	20	MET
42	DN	35	LYS
42	DN	46	ARG
42	DN	59	SER
42	DN	69	ARG
42	DN	71	ARG
42	DN	82	GLU
42	DN	83	LEU
42	DN	114	GLU
42	DN	118	ARG
42	DN	120	GLU
43	DO	3	LYS
43	DO	9	ARG
43	DO	17	LYS
43	DO	31	THR
43	DO	36	TYR
43	DO	43	ASN
43	DO	69	ASP
43	DO	78	VAL
43	DO	80	GLU
43	DO	89	ASP
43	DO	98	GLN
43	DO	100	HIS
43	DO	104	GLN
43	DO	106	LEU
44	DQ	5	ARG
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	29	ARG
44	DQ	63	ARG
44	DQ	79	ILE
44	DQ	83	LYS
44	DQ	84	LYS
44	DQ	90	ASP
44	DQ	96	ASP
45	DS	1	MET
45	DS	6	LYS
45	DS	18	ARG
45	DS	22	ASP
45	DS	33	LEU
45	DS	39	THR

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Mol	Chain	Res	Type
45	DS	55	ILE
45	DS	62	ASP
45	DS	66	ILE
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	20	LYS
46	DU	30	SER
46	DU	34	ILE
46	DU	49	PRO
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	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	50	ASP
47	DF	55	ASP
47	DF	56	LEU
47	DF	59	ILE
47	DF	76	PHE
47	DF	82	TYR
47	DF	86	CYS
47	DF	91	ARG

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Mol	Chain	Res	Type
47	DF	96	TRP
47	DF	97	GLU
47	DF	101	ARG
47	DF	102	LEU
47	DF	103	ILE
47	DF	109	ARG
47	DF	111	ARG
47	DF	121	PHE
47	DF	126	ASN
47	DF	129	MET
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO
47	DF	147	ARG
47	DF	149	ARG
47	DF	174	PHE
47	DF	177	ARG
47	DF	178	LYS
48	DG	1	SER
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	84	LYS
48	DG	85	LYS
48	DG	86	LEU
48	DG	94	ARG
48	DG	106	LEU
48	DG	120	ILE
48	DG	132	LEU
48	DG	138	GLN
48	DG	148	ARG
48	DG	154	GLU
48	DG	162	ARG

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Mol	Chain	Res	Type
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	48	LYS
49	DR	53	PHE
49	DR	55	ASP
49	DR	70	GLU
49	DR	71	LYS
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	7	LEU
50	DT	9	LYS
50	DT	11	LEU
50	DT	12	ARG
50	DT	24	MET
50	DT	32	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	69	ARG
50	DT	70	HIS
50	DT	73	ARG
50	DT	81	LYS
50	DT	87	LEU
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	28	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	66	THR
51	DZ	78	TYR

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Mol	Chain	Res	Type
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
52	DW	39	GLN
52	DW	40	ARG
52	DW	44	PHE
52	DW	49	ASN
52	DW	50	VAL
52	DW	54	ARG
52	DW	77	LYS
52	DW	80	SER
53	D6	1	MET
53	D6	6	LEU
53	D6	12	SER
53	D6	16	LYS
53	D6	17	SER
53	D6	24	ASN
53	D6	44	GLU
53	D6	59	THR
53	D6	64	ARG
53	D6	84	ARG
53	D6	85	ASP
53	D6	93	SER
53	D6	94	ASN
53	D6	97	ASP
53	D6	106	LEU
53	D6	107	THR
53	D6	108	GLU
53	D6	114	LEU
53	D6	137	LEU
53	D6	146	GLU
53	D6	147	LEU
53	D6	156	ARG
53	D6	174	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (320) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	31	ASN
2	AC	139	ASN
3	AD	35	GLN
3	AD	53	GLN
3	AD	70	GLN
3	AD	135	GLN
3	AD	151	GLN
3	AD	163	GLN
3	AD	195	ASN
4	AE	72	ASN
4	AE	81	GLN
4	AE	82	HIS
4	AE	131	ASN
5	AF	63	ASN
6	AG	67	ASN
6	AG	121	ASN
7	AH	3	GLN
7	AH	37	ASN
7	AH	117	GLN
8	AI	24	ASN
8	AI	30	ASN
8	AI	36	GLN
8	AI	49	GLN
8	AI	80	HIS
9	AJ	20	GLN
9	AJ	99	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
14	AO	28	GLN
14	AO	37	ASN
14	AO	40	GLN
16	AQ	50	ASN
18	AS	42	ASN
18	AS	55	GLN

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Mol	Chain	Res	Type
19	AT	2	ASN
19	AT	20	ASN
19	AT	83	ASN
20	AB	14	HIS
20	AB	17	HIS
20	AB	18	GLN
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	43	ASN
25	BC	59	GLN
25	BC	89	ASN
25	BC	152	GLN
25	BC	162	GLN
25	BC	225	ASN
26	BD	32	ASN
26	BD	36	GLN
26	BD	49	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
28	BP	114	ASN
29	BE	24	ASN
29	BE	30	GLN
29	BE	62	GLN
29	BE	97	ASN

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Mol	Chain	Res	Type
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
34	B3	30	HIS
35	BV	44	HIS
35	BV	51	GLN
35	BV	75	GLN
35	BV	80	HIS
35	BV	88	HIS
36	B2	13	ASN
36	B2	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	45	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
40	BH	133	GLN
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

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Mol	Chain	Res	Type
43	BO	38	GLN
43	BO	61	GLN
44	BQ	19	GLN
44	BQ	51	GLN
44	BQ	55	GLN
44	BQ	58	GLN
44	BQ	70	GLN
44	BQ	80	ASN
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	29	ASN
48	BG	37	ASN
48	BG	63	GLN
48	BG	110	HIS
48	BG	127	GLN
49	BR	6	GLN
49	BR	86	GLN
49	BR	91	GLN
50	BT	48	GLN
50	BT	91	GLN
50	BT	92	ASN
51	BZ	17	ASN
51	BZ	23	ASN
51	BZ	36	HIS
52	BW	39	GLN
52	BW	56	HIS
52	BW	75	ASN
53	B6	120	GLN
53	B6	131	ASN
2	CC	2	GLN
2	CC	31	ASN
2	CC	139	ASN
3	CD	35	GLN
3	CD	53	GLN
3	CD	70	GLN
3	CD	135	GLN

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Mol	Chain	Res	Type
3	CD	151	GLN
3	CD	163	GLN
3	CD	195	ASN
4	CE	81	GLN
4	CE	82	HIS
4	CE	131	ASN
5	CF	63	ASN
6	CG	8	GLN
6	CG	67	ASN
6	CG	121	ASN
7	CH	3	GLN
7	CH	37	ASN
7	CH	117	GLN
8	CI	24	ASN
8	CI	30	ASN
8	CI	36	GLN
8	CI	49	GLN
8	CI	74	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	99	GLN
10	CK	21	HIS
10	CK	28	ASN
10	CK	80	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
14	CO	28	GLN
14	CO	37	ASN
14	CO	40	GLN
16	CQ	50	ASN
18	CS	42	ASN
18	CS	55	GLN
19	CT	20	ASN
19	CT	83	ASN
20	CB	14	HIS
20	CB	17	HIS
20	CB	18	GLN
20	CB	23	ASN

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Mol	Chain	Res	Type
20	CB	35	ASN
20	CB	41	ASN
20	CB	119	GLN
20	CB	145	ASN
20	CB	202	ASN
24	DI	5	GLN
24	DI	11	GLN
24	DI	29	GLN
24	DI	33	ASN
24	DI	93	ASN
25	DC	20	ASN
25	DC	43	ASN
25	DC	59	GLN
25	DC	89	ASN
25	DC	133	ASN
25	DC	152	GLN
25	DC	162	GLN
26	DD	32	ASN
26	DD	36	GLN
26	DD	49	GLN
26	DD	126	ASN
26	DD	130	GLN
26	DD	136	ASN
26	DD	173	GLN
27	DK	5	GLN
27	DK	13	ASN
27	DK	88	ASN
27	DK	89	ASN
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
31	D0	3	GLN
31	D0	18	HIS
32	D4	35	GLN

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Mol	Chain	Res	Type
32	D4	37	GLN
34	D3	30	HIS
34	D3	42	HIS
35	DV	44	HIS
35	DV	51	GLN
35	DV	80	HIS
36	D2	13	ASN
37	DL	4	ASN
37	DL	54	GLN
37	DL	93	ASN
37	DL	104	GLN
38	DM	17	ASN
38	DM	60	GLN
39	DX	15	ASN
39	DX	20	ASN
39	DX	25	GLN
39	DX	27	ASN
39	DX	31	GLN
39	DX	41	HIS
39	DX	45	GLN
40	DH	18	GLN
40	DH	20	ASN
40	DH	28	ASN
40	DH	43	ASN
40	DH	66	ASN
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	38	GLN
43	DO	61	GLN
44	DQ	19	GLN
44	DQ	51	GLN
44	DQ	58	GLN
44	DQ	70	GLN
44	DQ	80	ASN
45	DS	40	ASN
45	DS	57	ASN
45	DS	61	ASN

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Mol	Chain	Res	Type
46	DU	65	GLN
46	DU	68	ASN
46	DU	73	ASN
47	DF	51	ASN
47	DF	134	GLN
48	DG	29	ASN
48	DG	37	ASN
48	DG	127	GLN
49	DR	6	GLN
49	DR	86	GLN
50	DT	48	GLN
50	DT	91	GLN
50	DT	92	ASN
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	53	ASN
53	D6	102	ASN
53	D6	174	GLN

5.3.3 RNA ⓘ

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%)	457 (16%)	17 (0%)
23	DB	2837/2904 (97%)	435 (15%)	22 (0%)
All	All	8964/9132 (98%)	1404 (15%)	79 (0%)

All (1404) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	484	G
1	CA	485	U
1	CA	493	A
1	CA	500	G
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
23	DB	1122	G
23	DB	1126	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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 carbohydrates 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	AA	1661	-	30,33,33	2.25	11 (36%)	37,49,49	1.42	5 (13%)
55	LLL	BB	3111	-	30,33,33	2.21	11 (36%)	37,49,49	1.36	4 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
55	LLL	CA	1662	-	30,33,33	2.25	11 (36%)	37,49,49	1.41	5 (13%)
55	LLL	DB	3112	-	30,33,33	2.25	11 (36%)	37,49,49	1.38	4 (10%)

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	AA	1661	-	-	0/11/65/65	0/3/3/3
55	LLL	BB	3111	-	-	0/11/65/65	0/3/3/3
55	LLL	CA	1662	-	-	0/11/65/65	0/3/3/3
55	LLL	DB	3112	-	-	0/11/65/65	0/3/3/3

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BB	3111	LLL	O51-C51	2.17	1.48	1.44
55	CA	1662	LLL	C52-C62	2.19	1.58	1.52
55	BB	3111	LLL	C22-C32	2.20	1.58	1.53
55	CA	1662	LLL	O51-C51	2.20	1.48	1.44
55	DB	3112	LLL	O51-C51	2.21	1.48	1.44
55	AA	1661	LLL	O51-C51	2.23	1.48	1.44
55	AA	1661	LLL	C52-C62	2.25	1.58	1.52
55	DB	3112	LLL	C52-C62	2.27	1.58	1.52
55	BB	3111	LLL	C52-C62	2.30	1.58	1.52
55	DB	3112	LLL	C22-C32	2.42	1.59	1.53
55	CA	1662	LLL	C22-C32	2.43	1.59	1.53
55	AA	1661	LLL	C22-C32	2.46	1.59	1.53
55	AA	1661	LLL	C42-C32	2.48	1.59	1.53
55	BB	3111	LLL	C31-C21	2.48	1.59	1.53
55	CA	1662	LLL	C42-C32	2.52	1.59	1.53
55	DB	3112	LLL	C31-C21	2.53	1.59	1.53
55	CA	1662	LLL	C31-C21	2.56	1.59	1.53
55	BB	3111	LLL	C52-C42	2.57	1.59	1.52
55	AA	1661	LLL	C31-C21	2.57	1.59	1.53
55	CA	1662	LLL	C52-C42	2.59	1.59	1.52
55	AA	1661	LLL	C52-C42	2.62	1.59	1.52
55	BB	3111	LLL	C42-C32	2.64	1.59	1.53
55	DB	3112	LLL	C42-C32	2.68	1.59	1.53
55	DB	3112	LLL	C52-C42	2.74	1.60	1.52
55	BB	3111	LLL	C23-C33	2.90	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1662	LLL	C23-C33	3.01	1.60	1.53
55	AA	1661	LLL	C23-C33	3.05	1.60	1.53
55	DB	3112	LLL	C23-C33	3.07	1.60	1.53
55	BB	3111	LLL	O51-C11	3.41	1.50	1.41
55	DB	3112	LLL	O51-C11	3.42	1.50	1.41
55	CA	1662	LLL	O51-C11	3.53	1.50	1.41
55	AA	1661	LLL	O51-C11	3.54	1.50	1.41
55	CA	1662	LLL	C41-C51	3.55	1.60	1.51
55	AA	1661	LLL	C41-C51	3.55	1.60	1.51
55	DB	3112	LLL	C41-C51	3.56	1.60	1.51
55	BB	3111	LLL	C41-C51	3.59	1.60	1.51
55	BB	3111	LLL	O53-C13	4.30	1.51	1.41
55	DB	3112	LLL	O53-C13	4.33	1.51	1.41
55	AA	1661	LLL	O53-C13	4.39	1.51	1.41
55	CA	1662	LLL	O53-C13	4.40	1.51	1.41
55	BB	3111	LLL	O53-C53	5.73	1.52	1.43
55	DB	3112	LLL	O53-C53	5.78	1.52	1.43
55	AA	1661	LLL	O53-C53	5.79	1.52	1.43
55	CA	1662	LLL	O53-C53	5.81	1.52	1.43

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	AA	1661	LLL	O43-C43-C83	-2.57	102.47	108.11
55	DB	3112	LLL	O43-C43-C83	-2.53	102.54	108.11
55	BB	3111	LLL	O43-C43-C83	-2.48	102.66	108.11
55	CA	1662	LLL	O43-C43-C83	-2.45	102.73	108.11
55	CA	1662	LLL	C13-O62-C62	2.33	124.09	118.01
55	AA	1661	LLL	C13-O62-C62	2.48	124.50	118.01
55	DB	3112	LLL	C11-O51-C51	2.61	115.78	113.15
55	BB	3111	LLL	C11-O51-C51	2.62	115.79	113.15
55	CA	1662	LLL	C11-O51-C51	2.64	115.81	113.15
55	AA	1661	LLL	C11-O51-C51	2.67	115.84	113.15
55	BB	3111	LLL	C83-C43-C33	2.87	116.49	112.34
55	DB	3112	LLL	C83-C43-C33	2.88	116.51	112.34
55	CA	1662	LLL	C83-C43-C33	2.96	116.62	112.34
55	AA	1661	LLL	C83-C43-C33	2.98	116.66	112.34
55	BB	3111	LLL	C53-O53-C13	4.71	117.45	111.11
55	AA	1661	LLL	C53-O53-C13	4.71	117.45	111.11
55	DB	3112	LLL	C53-O53-C13	4.81	117.59	111.11
55	CA	1662	LLL	C53-O53-C13	4.84	117.62	111.11

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 5 short contacts:

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

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%)	-0.30	12 (0%) 87 82	13, 75, 157, 180	0
1	CA	1530/1542 (99%)	-0.36	2 (0%) 95 95	8, 52, 139, 180	0
2	AC	206/232 (88%)	-0.15	3 (1%) 76 66	5, 72, 147, 180	0
2	CC	206/232 (88%)	-0.06	1 (0%) 91 88	6, 72, 131, 180	0
3	AD	205/205 (100%)	0.25	9 (4%) 38 28	20, 95, 159, 180	0
3	CD	205/205 (100%)	-0.13	0 100 100	5, 56, 145, 180	0
4	AE	150/166 (90%)	0.21	3 (2%) 68 57	7, 69, 146, 180	0
4	CE	150/166 (90%)	0.22	3 (2%) 68 57	5, 49, 112, 180	0
5	AF	100/135 (74%)	0.30	6 (6%) 25 17	5, 69, 150, 177	0
5	CF	100/135 (74%)	0.04	1 (1%) 84 77	5, 72, 143, 166	0
6	AG	150/178 (84%)	0.06	5 (3%) 50 38	20, 97, 159, 175	0
6	CG	152/178 (85%)	-0.10	1 (0%) 89 84	29, 85, 147, 180	0
7	AH	129/129 (100%)	0.32	11 (8%) 13 10	26, 80, 143, 177	0
7	CH	129/129 (100%)	0.05	0 100 100	6, 49, 117, 174	0
8	AI	127/129 (98%)	0.06	2 (1%) 74 64	18, 89, 171, 180	0
8	CI	127/129 (98%)	-0.01	2 (1%) 74 64	22, 92, 160, 180	0
9	AJ	98/103 (95%)	0.27	2 (2%) 68 57	16, 92, 169, 180	0
9	CJ	98/103 (95%)	0.37	7 (7%) 19 13	26, 87, 153, 180	0
10	AK	117/128 (91%)	-0.12	0 100 100	7, 59, 119, 180	0
10	CK	117/128 (91%)	-0.15	2 (1%) 73 62	5, 52, 120, 180	0
11	AL	123/123 (100%)	0.15	3 (2%) 62 51	14, 78, 152, 180	0
11	CL	123/123 (100%)	-0.01	1 (0%) 87 82	5, 46, 127, 170	0
12	AM	114/117 (97%)	-0.14	0 100 100	40, 114, 180, 180	0
12	CM	113/117 (96%)	-0.19	0 100 100	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%)	0.03	1 (1%) 84 77	8, 86, 158, 180	0
13	CN	96/100 (96%)	0.13	1 (1%) 84 77	14, 87, 147, 178	0
14	AO	88/89 (98%)	-0.32	0 100 100	5, 76, 128, 180	0
14	CO	88/89 (98%)	-0.17	0 100 100	10, 63, 132, 159	0
15	AP	82/82 (100%)	0.75	5 (6%) 25 16	24, 94, 154, 180	0
15	CP	80/82 (97%)	0.50	7 (8%) 12 9	5, 46, 128, 180	0
16	AQ	80/83 (96%)	0.07	0 100 100	36, 96, 168, 180	0
16	CQ	81/83 (97%)	0.06	0 100 100	5, 52, 135, 180	0
17	AR	55/74 (74%)	-0.00	1 (1%) 71 61	14, 70, 148, 180	0
17	CR	55/74 (74%)	0.46	3 (5%) 29 21	12, 64, 136, 180	0
18	AS	79/91 (86%)	0.46	6 (7%) 17 12	44, 120, 176, 180	0
18	CS	80/91 (87%)	-0.14	0 100 100	34, 107, 180, 180	0
19	AT	85/86 (98%)	-0.16	0 100 100	34, 101, 168, 180	0
19	CT	85/86 (98%)	-0.37	0 100 100	5, 62, 140, 180	0
20	AB	218/240 (90%)	0.19	9 (4%) 41 31	18, 97, 160, 180	0
20	CB	218/240 (90%)	0.16	8 (3%) 45 34	16, 93, 160, 180	0
21	AU	51/70 (72%)	0.04	1 (1%) 68 57	27, 89, 171, 180	0
21	CU	51/70 (72%)	-0.08	0 100 100	23, 81, 137, 180	0
22	BA	117/120 (97%)	-0.39	0 100 100	49, 85, 136, 180	0
22	DA	117/120 (97%)	-0.30	2 (1%) 73 62	36, 88, 148, 180	0
23	BB	2841/2904 (97%)	-0.09	21 (0%) 89 84	6, 60, 150, 180	0
23	DB	2841/2904 (97%)	-0.14	12 (0%) 93 90	5, 46, 154, 180	0
24	BI	141/141 (100%)	1.06	30 (21%) 1 2	72, 166, 180, 180	0
24	DI	141/141 (100%)	0.65	12 (8%) 13 10	63, 162, 180, 180	0
25	BC	271/272 (99%)	0.14	3 (1%) 82 75	5, 47, 107, 156	0
25	DC	271/272 (99%)	0.08	1 (0%) 93 90	5, 38, 99, 145	0
26	BD	209/209 (100%)	0.45	16 (7%) 16 11	8, 72, 145, 180	0
26	DD	209/209 (100%)	0.15	1 (0%) 91 88	5, 51, 131, 180	0
27	BK	121/123 (98%)	0.69	6 (4%) 32 24	16, 62, 142, 180	0
27	DK	121/123 (98%)	0.29	0 100 100	5, 42, 103, 180	0
28	BP	114/114 (100%)	1.19	22 (19%) 2 2	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%)	-0.18	0 100 100	5, 52, 119, 161	0
29	BE	201/201 (100%)	0.40	14 (6%) 19 13	5, 76, 143, 180	0
29	DE	201/201 (100%)	0.14	7 (3%) 48 37	5, 66, 138, 180	0
30	BY	58/58 (100%)	0.34	3 (5%) 31 23	22, 84, 137, 180	0
30	DY	58/58 (100%)	-0.00	1 (1%) 73 62	10, 66, 149, 158	0
31	B0	56/56 (100%)	0.21	3 (5%) 29 21	5, 81, 149, 180	0
31	D0	56/56 (100%)	-0.21	0 100 100	9, 54, 119, 180	0
32	B4	38/38 (100%)	0.12	1 (2%) 59 47	5, 71, 153, 168	0
32	D4	38/38 (100%)	0.03	0 100 100	17, 62, 132, 171	0
33	B1	50/54 (92%)	0.46	3 (6%) 25 17	32, 87, 132, 174	0
33	D1	50/54 (92%)	0.21	2 (4%) 42 31	24, 73, 125, 155	0
34	B3	64/64 (100%)	0.66	7 (10%) 7 6	19, 64, 105, 133	0
34	D3	64/64 (100%)	0.19	2 (3%) 52 40	6, 49, 107, 180	0
35	BV	94/94 (100%)	-0.06	1 (1%) 82 75	37, 92, 143, 180	0
35	DV	94/94 (100%)	-0.04	0 100 100	27, 94, 160, 180	0
36	B2	46/46 (100%)	0.05	0 100 100	5, 50, 123, 143	0
36	D2	46/46 (100%)	-0.08	0 100 100	7, 43, 103, 180	0
37	BL	143/144 (99%)	0.30	1 (0%) 89 84	7, 72, 131, 180	0
37	DL	143/144 (99%)	0.18	3 (2%) 67 56	5, 61, 128, 162	0
38	BM	136/136 (100%)	0.13	4 (2%) 55 42	16, 68, 144, 165	0
38	DM	136/136 (100%)	0.28	5 (3%) 45 34	5, 63, 134, 171	0
39	BX	63/63 (100%)	0.32	2 (3%) 51 38	24, 92, 169, 180	0
39	DX	63/63 (100%)	-0.05	2 (3%) 51 38	38, 94, 166, 180	0
40	BH	149/149 (100%)	1.33	38 (25%) 1 1	13, 125, 180, 180	0
40	DH	149/149 (100%)	0.45	10 (6%) 21 14	5, 109, 171, 180	0
41	BJ	142/142 (100%)	0.08	2 (1%) 78 68	13, 77, 132, 166	0
41	DJ	142/142 (100%)	-0.08	1 (0%) 89 84	5, 65, 128, 180	0
42	BN	120/127 (94%)	0.12	1 (0%) 87 82	5, 68, 136, 180	0
42	DN	120/127 (94%)	-0.35	0 100 100	5, 44, 116, 141	0
43	BO	116/117 (99%)	0.46	11 (9%) 10 8	29, 94, 144, 180	0
43	DO	116/117 (99%)	-0.06	3 (2%) 59 47	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%)	-0.34	0 100 100	5, 72, 134, 171	0
44	DQ	117/117 (100%)	0.10	1 (0%) 85 80	5, 50, 131, 156	0
45	BS	110/110 (100%)	0.51	3 (2%) 58 46	5, 67, 129, 180	0
45	DS	110/110 (100%)	0.35	2 (1%) 71 61	5, 50, 120, 157	0
46	BU	102/103 (99%)	0.79	7 (6%) 20 13	13, 88, 148, 177	0
46	DU	102/103 (99%)	0.04	1 (0%) 84 77	26, 93, 154, 180	0
47	BF	178/178 (100%)	0.35	5 (2%) 56 44	39, 115, 174, 180	0
47	DF	178/178 (100%)	0.68	15 (8%) 14 10	22, 106, 175, 180	0
48	BG	176/176 (100%)	0.28	2 (1%) 82 75	8, 102, 172, 180	0
48	DG	176/176 (100%)	0.08	5 (2%) 56 44	32, 104, 164, 180	0
49	BR	103/103 (100%)	0.20	3 (2%) 55 42	18, 99, 151, 173	0
49	DR	103/103 (100%)	0.35	7 (6%) 20 14	5, 85, 144, 180	0
50	BT	93/100 (93%)	0.28	2 (2%) 65 54	13, 83, 160, 180	0
50	DT	93/100 (93%)	0.37	4 (4%) 39 29	15, 79, 167, 180	0
51	BZ	77/78 (98%)	0.35	3 (3%) 43 32	12, 57, 112, 152	0
51	DZ	77/78 (98%)	-0.08	2 (2%) 59 47	5, 56, 101, 131	0
52	BW	79/84 (94%)	0.67	9 (11%) 7 6	19, 88, 139, 180	0
52	DW	79/84 (94%)	0.08	4 (5%) 32 23	5, 79, 143, 180	0
53	B6	185/185 (100%)	2.90	86 (46%) 0 1	23, 123, 180, 180	0
53	D6	185/185 (100%)	1.15	52 (28%) 1 1	5, 104, 180, 180	0
All	All	20787/21416 (97%)	0.06	584 (2%) 56 44	5, 69, 159, 180	0

All (584) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
53	B6	96	GLY	16.1
53	B6	97	ASP	15.6
53	B6	98	ALA	14.3
53	B6	88	LEU	11.4
53	B6	94	ASN	10.3
53	B6	86	SER	10.0
53	B6	95	LYS	9.8
53	B6	53	ASN	9.8
53	B6	68	VAL	9.6
53	B6	99	LEU	9.0

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Mol	Chain	Res	Type	RSRZ
53	B6	85	ASP	8.9
53	B6	87	ASP	8.8
53	B6	90	LEU	8.8
53	B6	52	LEU	8.7
53	B6	51	PRO	8.5
53	B6	89	GLY	8.4
53	B6	70	SER	8.3
53	B6	84	ARG	8.3
53	B6	58	VAL	8.3
53	B6	69	GLN	8.1
53	B6	74	ASN	8.1
53	B6	35	PRO	7.9
53	B6	59	THR	7.9
53	B6	54	GLN	7.6
53	B6	72	ASP	7.5
40	BH	142	VAL	7.5
40	BH	45	GLU	7.4
53	B6	34	ASN	7.3
53	B6	47	GLY	7.1
53	B6	73	GLN	6.9
53	B6	91	ASN	6.8
53	B6	75	ALA	6.8
53	D6	36	ALA	6.7
53	B6	36	ALA	6.7
53	B6	43	VAL	6.6
53	B6	76	LEU	6.3
23	BB	139	U	6.3
24	DI	83	ALA	6.2
53	B6	57	THR	6.2
23	BB	140	C	6.1
53	B6	30	THR	6.0
8	CI	129	ARG	5.9
53	D6	98	ALA	5.9
53	B6	83	ILE	5.9
53	B6	67	VAL	5.8
53	D6	32	ARG	5.8
53	B6	62	ASP	5.8
53	B6	48	ALA	5.8
53	D6	75	ALA	5.8
53	D6	72	ASP	5.7
53	B6	71	TRP	5.7
40	BH	130	VAL	5.7

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Mol	Chain	Res	Type	RSRZ
53	B6	44	GLU	5.6
53	B6	60	ALA	5.6
53	B6	103	ILE	5.6
53	D6	44	GLU	5.5
53	B6	38	LEU	5.5
53	B6	31	GLY	5.5
39	BX	62	GLY	5.5
53	D6	37	LEU	5.4
24	DI	84	GLY	5.4
39	DX	63	ALA	5.4
53	B6	82	ALA	5.3
53	B6	41	LEU	5.3
53	B6	56	ALA	5.2
53	B6	49	HIS	5.2
53	B6	32	ARG	5.2
24	DI	85	ILE	5.1
22	DA	88	C	5.1
53	B6	37	LEU	5.0
53	B6	50	VAL	5.0
47	DF	173	ASP	4.9
53	B6	77	LYS	4.8
53	D6	95	LYS	4.8
24	BI	3	LYS	4.8
53	D6	38	LEU	4.8
53	B6	79	ILE	4.8
24	BI	6	ALA	4.7
53	D6	41	LEU	4.7
53	B6	55	ILE	4.7
26	BD	111	GLY	4.7
53	D6	40	HIS	4.7
24	BI	58	ILE	4.7
1	AA	79	G	4.7
53	B6	78	ALA	4.6
53	B6	29	ARG	4.6
24	DI	81	LYS	4.6
8	AI	129	ARG	4.5
24	BI	60	VAL	4.5
53	B6	104	PRO	4.5
17	CR	19	GLU	4.5
53	B6	46	TYR	4.5
53	D6	66	LEU	4.4
15	CP	80	LYS	4.4

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Mol	Chain	Res	Type	RSRZ
53	D6	43	VAL	4.4
15	AP	80	LYS	4.4
53	B6	80	GLU	4.3
11	AL	11	ARG	4.3
15	AP	81	ALA	4.3
53	D6	76	LEU	4.3
53	B6	45	TYR	4.3
23	BB	2145	C	4.3
53	D6	54	GLN	4.2
40	BH	132	PHE	4.1
47	DF	10	GLU	4.1
29	BE	14	VAL	4.1
53	D6	71	TRP	4.0
51	BZ	78	TYR	4.0
53	B6	65	THR	4.0
53	B6	66	LEU	4.0
53	D6	99	LEU	3.9
40	DH	110	VAL	3.9
7	AH	126	CYS	3.9
24	BI	97	VAL	3.9
53	D6	45	TYR	3.9
53	D6	42	LYS	3.9
23	DB	1175	A	3.9
53	D6	100	TYR	3.9
23	BB	546	U	3.9
26	BD	25	THR	3.9
40	BH	80	ILE	3.9
53	B6	93	SER	3.9
48	BG	42	VAL	3.8
24	DI	99	LYS	3.8
53	D6	29	ARG	3.8
47	DF	169	LEU	3.8
28	BP	47	ILE	3.8
53	B6	61	PRO	3.7
1	AA	86	G	3.7
24	BI	59	THR	3.7
33	D1	52	LYS	3.7
1	AA	78	A	3.7
53	B6	110	ARG	3.7
53	D6	46	TYR	3.7
28	BP	91	VAL	3.7
53	B6	101	ILE	3.6

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Mol	Chain	Res	Type	RSRZ
24	DI	98	GLY	3.6
46	BU	93	ARG	3.6
24	DI	52	LEU	3.6
53	D6	49	HIS	3.6
40	BH	86	ASP	3.6
4	AE	158	LYS	3.6
23	DB	645	C	3.6
53	D6	65	THR	3.6
20	AB	193	ASP	3.5
51	DZ	78	TYR	3.5
51	BZ	77	LYS	3.5
40	BH	147	VAL	3.5
24	BI	5	GLN	3.5
24	DI	82	ALA	3.5
28	BP	75	THR	3.5
23	BB	654	A	3.5
28	BP	90	ALA	3.5
24	BI	34	ILE	3.4
53	B6	42	LYS	3.4
53	B6	109	GLU	3.4
53	D6	55	ILE	3.4
40	BH	55	GLU	3.4
53	B6	113	ASP	3.4
23	BB	1730	C	3.4
43	DO	3	LYS	3.4
20	AB	192	PRO	3.4
30	DY	58	GLU	3.4
53	D6	103	ILE	3.4
28	BP	58	PHE	3.4
23	BB	2147	A	3.3
6	AG	79	VAL	3.3
6	AG	78	ARG	3.3
39	BX	63	ALA	3.3
40	BH	81	ALA	3.3
53	D6	73	GLN	3.3
26	BD	27	ILE	3.3
26	BD	187	LEU	3.3
53	D6	57	THR	3.3
4	CE	158	LYS	3.3
26	BD	186	LEU	3.3
3	AD	22	SER	3.3
26	BD	188	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
24	BI	1	ALA	3.3
31	B0	55	ALA	3.3
29	BE	119	ILE	3.3
23	BB	2146	C	3.2
40	BH	146	VAL	3.2
47	DF	30	VAL	3.2
48	BG	43	LYS	3.2
53	D6	77	LYS	3.2
53	D6	58	VAL	3.2
40	BH	61	VAL	3.2
10	CK	18	GLY	3.2
29	BE	150	THR	3.2
53	B6	100	TYR	3.2
52	DW	84	GLU	3.1
47	DF	174	PHE	3.1
24	BI	18	ASN	3.1
29	BE	188	MET	3.1
40	BH	60	GLU	3.1
26	BD	4	LEU	3.1
15	CP	52	LEU	3.1
28	BP	48	ALA	3.1
38	BM	103	TYR	3.1
18	AS	30	LEU	3.1
1	AA	412	A	3.1
53	D6	39	LEU	3.1
29	DE	119	ILE	3.1
40	DH	72	ILE	3.1
17	AR	19	GLU	3.1
53	D6	34	ASN	3.1
53	D6	79	ILE	3.1
53	D6	59	THR	3.0
3	AD	178	GLU	3.0
40	BH	85	GLY	3.0
53	B6	81	LYS	3.0
40	BH	46	PHE	3.0
53	D6	84	ARG	3.0
53	B6	92	PRO	3.0
53	B6	39	LEU	3.0
9	CJ	89	ARG	3.0
43	BO	88	LYS	3.0
23	DB	2134	A	3.0
53	B6	63	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
23	BB	2157	G	3.0
53	B6	33	ALA	3.0
41	BJ	86	GLN	3.0
26	DD	32	ASN	3.0
46	BU	84	PHE	3.0
40	BH	124	THR	3.0
24	DI	49	GLU	3.0
9	CJ	81	GLU	2.9
26	BD	3	GLY	2.9
26	BD	26	VAL	2.9
53	B6	106	LEU	2.9
45	BS	74	ILE	2.9
53	D6	101	ILE	2.9
23	DB	2133	G	2.9
24	BI	2	LYS	2.9
11	AL	13	ARG	2.9
40	BH	123	ARG	2.9
47	DF	172	PHE	2.9
53	D6	61	PRO	2.9
40	DH	141	LYS	2.9
28	BP	43	GLU	2.9
29	BE	1	MET	2.9
40	DH	140	ALA	2.9
40	BH	90	LEU	2.9
28	BP	71	ARG	2.9
28	BP	73	PHE	2.9
23	BB	62	U	2.9
27	BK	104	THR	2.9
17	CR	31	TYR	2.9
6	CG	4	ARG	2.8
49	BR	20	VAL	2.8
24	BI	19	PRO	2.8
28	BP	46	VAL	2.8
4	AE	54	GLU	2.8
33	D1	51	ALA	2.8
24	BI	4	VAL	2.8
15	CP	47	GLU	2.8
6	AG	4	ARG	2.8
7	AH	128	VAL	2.7
7	AH	102	VAL	2.7
29	DE	169	VAL	2.7
23	DB	613	A	2.7

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Mol	Chain	Res	Type	RSRZ
38	BM	67	VAL	2.7
26	BD	7	LYS	2.7
53	D6	50	VAL	2.7
7	AH	129	ALA	2.7
17	CR	71	ASP	2.7
10	CK	13	LYS	2.7
26	BD	2	ILE	2.7
23	DB	359	G	2.7
49	DR	50	GLY	2.7
53	B6	180	GLU	2.7
18	AS	65	MET	2.7
28	BP	21	PRO	2.7
53	B6	40	HIS	2.7
3	AD	108	ALA	2.7
28	BP	86	LYS	2.7
7	AH	127	TYR	2.7
43	BO	92	PHE	2.7
40	BH	92	GLY	2.7
43	DO	2	ASP	2.7
20	CB	14	HIS	2.7
20	CB	212	TYR	2.7
24	BI	32	VAL	2.7
53	D6	67	VAL	2.7
24	BI	141	ASP	2.7
2	CC	55	VAL	2.7
38	DM	31	PHE	2.7
29	DE	124	PHE	2.7
47	DF	171	ALA	2.6
44	DQ	90	ASP	2.6
53	B6	114	LEU	2.6
24	BI	21	PRO	2.6
53	D6	83	ILE	2.6
32	B4	7	VAL	2.6
42	BN	17	ARG	2.6
23	BB	138	U	2.6
40	BH	101	ASP	2.6
24	DI	80	LYS	2.6
20	CB	216	VAL	2.6
1	CA	1032	G	2.6
23	DB	548	G	2.6
8	CI	40	ARG	2.6
1	AA	209	U	2.6

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Mol	Chain	Res	Type	RSRZ
20	CB	68	PHE	2.6
53	D6	68	VAL	2.6
52	BW	45	HIS	2.6
53	D6	53	ASN	2.6
28	BP	57	ALA	2.6
20	CB	163	ILE	2.6
53	B6	26	ALA	2.6
27	BK	84	CYS	2.6
40	BH	48	GLU	2.6
47	DF	27	VAL	2.6
3	AD	106	PHE	2.6
34	B3	19	GLY	2.6
2	AC	90	VAL	2.5
52	BW	64	GLY	2.5
27	BK	103	VAL	2.5
50	DT	71	GLY	2.5
53	D6	97	ASP	2.5
23	DB	1459	G	2.5
28	BP	96	LEU	2.5
18	AS	2	ARG	2.5
24	DI	48	ILE	2.5
39	DX	62	GLY	2.5
46	BU	83	GLY	2.5
47	DF	178	LYS	2.5
53	D6	94	ASN	2.5
3	AD	174	ALA	2.5
11	AL	47	ALA	2.5
7	AH	110	MET	2.5
29	DE	188	MET	2.5
49	DR	95	ASP	2.5
40	BH	93	SER	2.5
18	AS	40	PHE	2.5
6	AG	61	PHE	2.5
53	D6	96	GLY	2.5
21	AU	3	ILE	2.5
29	BE	124	PHE	2.5
30	BY	55	LYS	2.5
38	DM	29	GLY	2.5
52	BW	42	THR	2.5
34	B3	13	PHE	2.5
15	AP	82	ALA	2.5
29	BE	144	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
53	D6	62	ASP	2.4
53	D6	93	SER	2.4
47	DF	33	ILE	2.4
51	BZ	76	GLU	2.4
22	DA	52	A	2.4
43	BO	28	VAL	2.4
9	AJ	36	VAL	2.4
34	B3	14	LYS	2.4
40	DH	38	PRO	2.4
47	BF	174	PHE	2.4
5	AF	5	GLU	2.4
24	DI	53	PRO	2.4
15	CP	37	GLY	2.4
20	CB	69	VAL	2.4
49	BR	35	PHE	2.4
28	BP	76	HIS	2.4
24	BI	14	ALA	2.4
29	BE	155	GLU	2.4
3	AD	107	GLY	2.4
29	BE	187	VAL	2.4
48	DG	88	LEU	2.4
24	BI	37	PHE	2.4
40	BH	128	HIS	2.4
35	BV	57	TYR	2.4
5	AF	100	SER	2.4
40	BH	131	SER	2.4
43	BO	26	LEU	2.4
29	BE	152	GLU	2.4
7	AH	101	ALA	2.4
43	BO	89	ASP	2.4
47	BF	155	ILE	2.4
34	B3	22	LYS	2.4
31	B0	54	ILE	2.4
23	BB	1175	A	2.4
25	BC	179	GLU	2.4
40	BH	12	LEU	2.4
41	BJ	54	ILE	2.4
26	BD	10	GLY	2.4
38	BM	105	MET	2.4
20	AB	188	THR	2.4
24	BI	29	GLN	2.4
9	CJ	84	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
38	DM	28	PHE	2.4
1	AA	87	C	2.4
5	AF	61	LEU	2.4
24	BI	66	PHE	2.4
38	DM	104	GLU	2.4
47	DF	21	TYR	2.4
20	AB	87	ASP	2.4
40	DH	18	GLN	2.3
53	B6	105	PRO	2.3
53	D6	74	ASN	2.3
33	B1	52	LYS	2.3
28	BP	102	ARG	2.3
1	AA	80	A	2.3
40	BH	100	ALA	2.3
18	AS	60	PHE	2.3
43	BO	24	THR	2.3
47	DF	82	TYR	2.3
9	AJ	76	ILE	2.3
49	DR	76	LYS	2.3
23	BB	653	U	2.3
29	BE	143	LEU	2.3
33	B1	51	ALA	2.3
28	BP	88	ARG	2.3
20	AB	195	VAL	2.3
23	BB	715	A	2.3
1	AA	562	U	2.3
5	CF	59	TYR	2.3
52	DW	6	GLY	2.3
45	BS	7	HIS	2.3
26	BD	200	ASP	2.3
40	BH	125	THR	2.3
9	CJ	88	MET	2.3
7	AH	44	PHE	2.3
23	BB	645	C	2.3
25	BC	114	GLN	2.3
30	BY	1	ALA	2.3
27	BK	73	ASP	2.3
5	AF	8	PHE	2.3
40	BH	145	ASN	2.3
40	BH	1	MET	2.3
46	BU	89	GLY	2.3
4	CE	12	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
29	BE	11	ALA	2.3
49	BR	46	GLU	2.3
23	BB	1731	G	2.3
24	BI	95	ASP	2.3
43	BO	35	ILE	2.3
2	AC	167	TYR	2.2
13	CN	42	ASN	2.2
27	BK	102	PRO	2.2
23	DB	100	U	2.2
24	BI	27	LEU	2.2
46	BU	14	THR	2.2
23	BB	1537	G	2.2
52	BW	36	ILE	2.2
20	AB	212	TYR	2.2
23	BB	1459	G	2.2
50	BT	1	MET	2.2
50	DT	90	GLY	2.2
1	AA	884	U	2.2
26	BD	8	LYS	2.2
26	BD	1	MET	2.2
47	BF	127	TYR	2.2
49	DR	2	TYR	2.2
50	DT	12	ARG	2.2
52	DW	45	HIS	2.2
43	BO	38	GLN	2.2
48	DG	41	GLU	2.2
50	BT	65	GLY	2.2
4	CE	13	LYS	2.2
29	DE	120	VAL	2.2
24	BI	33	ASN	2.2
52	BW	82	GLU	2.2
9	CJ	91	ASP	2.2
18	AS	29	PRO	2.2
24	BI	87	SER	2.2
8	AI	40	ARG	2.2
1	AA	1441	A	2.2
29	BE	151	GLY	2.2
37	BL	2	ARG	2.2
46	BU	92	VAL	2.2
5	AF	7	VAL	2.2
20	AB	198	VAL	2.2
1	CA	1031	C	2.2

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Mol	Chain	Res	Type	RSRZ
20	AB	55	GLU	2.2
33	B1	16	THR	2.2
15	CP	17	TYR	2.2
3	AD	24	VAL	2.2
26	BD	203	VAL	2.2
53	B6	144	ALA	2.2
53	D6	51	PRO	2.2
3	AD	177	MET	2.2
23	BB	137	U	2.2
41	DJ	52	ASP	2.2
43	BO	37	ALA	2.2
47	DF	24	VAL	2.2
15	CP	41	PRO	2.2
7	AH	98	LEU	2.2
40	BH	122	LEU	2.2
40	DH	12	LEU	2.2
46	DU	32	LYS	2.2
40	BH	84	ALA	2.1
48	DG	44	HIS	2.1
7	AH	100	ILE	2.1
29	DE	148	ILE	2.1
5	AF	62	MET	2.1
29	BE	120	VAL	2.1
30	BY	54	VAL	2.1
2	AC	48	LYS	2.1
9	CJ	102	LEU	2.1
11	CL	123	ALA	2.1
28	BP	26	GLU	2.1
28	BP	70	GLU	2.1
15	CP	38	PHE	2.1
34	D3	15	LYS	2.1
23	DB	547	A	2.1
52	BW	84	GLU	2.1
53	D6	90	LEU	2.1
34	D3	13	PHE	2.1
38	BM	66	ARG	2.1
15	AP	5	ARG	2.1
28	BP	99	LEU	2.1
40	BH	105	ALA	2.1
52	BW	44	PHE	2.1
4	AE	85	LYS	2.1
53	D6	60	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
20	AB	63	LYS	2.1
40	DH	122	LEU	2.1
1	AA	461	A	2.1
40	BH	106	ALA	2.1
40	DH	39	ALA	2.1
40	DH	69	ALA	2.1
48	DG	45	ALA	2.1
9	CJ	65	TYR	2.1
20	CB	220	VAL	2.1
23	BB	1728	C	2.1
24	BI	17	ALA	2.1
28	BP	19	PHE	2.1
24	BI	20	SER	2.1
52	BW	19	ARG	2.1
24	BI	86	LYS	2.1
47	BF	117	SER	2.1
53	B6	64	ARG	2.1
25	BC	102	TYR	2.1
40	BH	82	SER	2.1
49	DR	96	VAL	2.1
50	DT	11	LEU	2.1
43	BO	51	ALA	2.1
47	DF	39	VAL	2.1
7	AH	74	ILE	2.1
20	CB	161	PHE	2.1
34	B3	23	HIS	2.1
23	DB	546	U	2.1
23	DB	1730	C	2.1
47	DF	11	VAL	2.1
49	DR	48	LYS	2.1
28	BP	74	GLN	2.1
48	DG	161	VAL	2.1
3	AD	21	LYS	2.1
24	BI	137	LEU	2.1
47	BF	126	ASN	2.1
51	DZ	49	LEU	2.1
24	BI	35	MET	2.1
40	BH	102	ALA	2.1
45	DS	104	THR	2.0
31	B0	42	ILE	2.0
43	BO	106	LEU	2.0
53	B6	28	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
15	AP	6	LEU	2.0
45	BS	103	ILE	2.0
52	DW	43	LYS	2.0
13	AN	55	SER	2.0
34	B3	9	ALA	2.0
40	BH	56	ALA	2.0
29	DE	149	ILE	2.0
38	DM	32	GLY	2.0
45	DS	69	LEU	2.0
34	B3	12	ARG	2.0
6	AG	80	GLY	2.0
53	B6	107	THR	2.0
37	DL	144	GLU	2.0
43	DO	37	ALA	2.0
49	DR	13	ARG	2.0
52	BW	39	GLN	2.0
25	DC	1	ALA	2.0
1	AA	466	A	2.0
37	DL	58	TYR	2.0
37	DL	123	ARG	2.0
40	BH	13	GLY	2.0
46	BU	75	ALA	2.0
40	BH	94	ILE	2.0
24	BI	28	GLY	2.0
27	BK	60	ALA	2.0
23	BB	1176	U	2.0
40	BH	129	GLU	2.0
53	D6	52	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron

density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(Å ²)	Q<0.9
55	LLL	DB	3112	31/31	0.84	0.34	7.10	121,121,121,121	0
55	LLL	BB	3111	31/31	0.87	0.27	3.47	107,107,107,107	0
54	MG	DB	3059	1/1	0.69	0.23	2.64	166,166,166,166	0
55	LLL	CA	1662	31/31	0.94	0.22	1.73	14,14,14,14	0
54	MG	CA	1604	1/1	0.97	0.28	1.61	16,16,16,16	0
54	MG	BB	3013	1/1	0.81	0.18	1.51	92,92,92,92	0
54	MG	BB	3087	1/1	0.98	0.22	1.49	114,114,114,114	0
54	MG	BB	3108	1/1	0.92	0.22	1.17	44,44,44,44	0
54	MG	DB	3089	1/1	0.95	0.19	1.15	61,61,61,61	0
54	MG	AA	1653	1/1	0.97	0.18	0.70	87,87,87,87	0
54	MG	DB	3099	1/1	0.98	0.20	0.55	5,5,5,5	0
54	MG	DB	3092	1/1	0.96	0.15	0.46	56,56,56,56	0
54	MG	DB	3090	1/1	0.96	0.31	0.46	64,64,64,64	0
54	MG	DB	3051	1/1	0.98	0.20	0.22	32,32,32,32	0
55	LLL	AA	1661	31/31	0.95	0.21	0.20	21,21,21,21	0
54	MG	CA	1638	1/1	0.86	0.11	0.08	98,98,98,98	0
54	MG	DB	3035	1/1	0.93	0.19	0.00	75,75,75,75	0
54	MG	AA	1615	1/1	0.92	0.23	-0.11	106,106,106,106	0
54	MG	CA	1614	1/1	0.71	0.16	-0.19	90,90,90,90	0
54	MG	BB	3011	1/1	0.99	0.21	-0.30	29,29,29,29	0
54	MG	BB	3079	1/1	0.79	0.20	-0.31	63,63,63,63	0
54	MG	DB	3110	1/1	0.94	0.17	-0.35	38,38,38,38	0
54	MG	AA	1635	1/1	0.52	0.09	-0.37	103,103,103,103	0
54	MG	BB	3098	1/1	0.98	0.16	-0.45	16,16,16,16	0
54	MG	BB	3032	1/1	0.97	0.20	-0.46	49,49,49,49	0
54	MG	BB	3083	1/1	0.98	0.21	-0.49	28,28,28,28	0
54	MG	DB	3003	1/1	0.93	0.16	-0.57	33,33,33,33	0
54	MG	CA	1616	1/1	0.83	0.14	-0.58	88,88,88,88	0
54	MG	DB	3100	1/1	0.84	0.21	-0.61	46,46,46,46	0
54	MG	CA	1601	1/1	0.98	0.17	-0.62	5,5,5,5	0
54	MG	DB	3014	1/1	0.99	0.12	-0.62	43,43,43,43	0
54	MG	BB	3023	1/1	0.97	0.20	-0.70	11,11,11,11	0
54	MG	DB	3088	1/1	0.98	0.16	-0.78	46,46,46,46	0
54	MG	DB	3069	1/1	0.98	0.20	-0.79	14,14,14,14	0
54	MG	CA	1633	1/1	0.96	0.14	-0.80	50,50,50,50	0
54	MG	AA	1613	1/1	0.81	0.08	-0.82	71,71,71,71	0
54	MG	CA	1618	1/1	0.99	0.12	-0.88	30,30,30,30	0
54	MG	BB	3082	1/1	0.98	0.19	-0.90	5,5,5,5	0
54	MG	DB	3098	1/1	0.99	0.18	-0.92	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DB	3009	1/1	0.98	0.17	-0.94	18,18,18,18	0
54	MG	BB	3005	1/1	0.97	0.19	-1.03	20,20,20,20	0
54	MG	BB	3021	1/1	0.97	0.10	-1.04	51,51,51,51	0
54	MG	AA	1636	1/1	0.95	0.06	-1.05	93,93,93,93	0
54	MG	DB	3026	1/1	0.88	0.18	-1.06	54,54,54,54	0
54	MG	CA	1636	1/1	0.93	0.05	-1.10	92,92,92,92	0
54	MG	BB	3040	1/1	0.99	0.12	-1.15	27,27,27,27	0
54	MG	DB	3096	1/1	0.99	0.16	-1.16	20,20,20,20	0
54	MG	CA	1645	1/1	0.98	0.10	-1.16	66,66,66,66	0
54	MG	BB	3092	1/1	0.89	0.08	-1.18	45,45,45,45	0
54	MG	DB	3087	1/1	0.99	0.15	-1.19	75,75,75,75	0
54	MG	DB	3006	1/1	0.92	0.15	-1.27	15,15,15,15	0
54	MG	DB	3030	1/1	0.86	0.17	-1.28	10,10,10,10	0
54	MG	CA	1605	1/1	0.97	0.12	-1.35	18,18,18,18	0
54	MG	BB	3096	1/1	0.98	0.15	-1.39	67,67,67,67	0
56	ZN	D4	101	1/1	0.94	0.07	-1.51	45,45,45,45	0
54	MG	AA	1607	1/1	0.96	0.07	-1.51	42,42,42,42	0
56	ZN	B4	101	1/1	0.95	0.09	-1.64	64,64,64,64	0
54	MG	AA	1630	1/1	0.92	0.11	-1.65	88,88,88,88	0
54	MG	BB	3086	1/1	0.96	0.17	-1.82	18,18,18,18	0
54	MG	BB	3019	1/1	0.86	0.09	-1.86	40,40,40,40	0
54	MG	AA	1609	1/1	0.99	0.11	-1.87	5,5,5,5	0
54	MG	BB	3037	1/1	0.90	0.11	-1.90	44,44,44,44	0
54	MG	CA	1617	1/1	0.98	0.08	-1.91	5,5,5,5	0
54	MG	AA	1601	1/1	0.91	0.12	-1.93	41,41,41,41	0
54	MG	DB	3068	1/1	0.96	0.17	-1.95	22,22,22,22	0
54	MG	BB	3029	1/1	0.96	0.11	-1.97	17,17,17,17	0
54	MG	DB	3055	1/1	0.88	0.13	-1.98	41,41,41,41	0
54	MG	BB	3048	1/1	0.95	0.10	-2.05	7,7,7,7	0
54	MG	BB	3090	1/1	0.98	0.10	-2.14	91,91,91,91	0
54	MG	DB	3085	1/1	0.96	0.13	-2.26	49,49,49,49	0
54	MG	AA	1610	1/1	0.98	0.06	-2.27	62,62,62,62	0
54	MG	BB	3074	1/1	0.97	0.14	-2.41	13,13,13,13	0
54	MG	BB	3077	1/1	0.96	0.07	-2.48	83,83,83,83	0
54	MG	CA	1612	1/1	0.98	0.07	-2.50	72,72,72,72	0
54	MG	DB	3078	1/1	0.99	0.08	-2.56	32,32,32,32	0
54	MG	BB	3110	1/1	0.95	0.09	-2.59	40,40,40,40	0
54	MG	AA	1638	1/1	0.98	0.07	-2.60	20,20,20,20	0
54	MG	DB	3070	1/1	0.98	0.10	-2.72	38,38,38,38	0
54	MG	BB	3085	1/1	0.99	0.11	-2.88	43,43,43,43	0
54	MG	DB	3007	1/1	0.97	0.11	-2.88	13,13,13,13	0
54	MG	AA	1629	1/1	0.99	0.05	-2.89	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
54	MG	BB	3016	1/1	0.99	0.13	-2.91	91,91,91,91	0
54	MG	DB	3103	1/1	0.98	0.11	-3.01	42,42,42,42	0
54	MG	DB	3072	1/1	0.90	0.09	-3.02	54,54,54,54	0
54	MG	BB	3012	1/1	0.98	0.09	-3.06	53,53,53,53	0
54	MG	BB	3081	1/1	0.88	0.17	-3.12	16,16,16,16	0
54	MG	DB	3074	1/1	0.92	0.09	-3.12	17,17,17,17	0
54	MG	DB	3047	1/1	0.98	0.11	-3.12	19,19,19,19	0
54	MG	BB	3062	1/1	0.98	0.05	-3.15	27,27,27,27	0
54	MG	BB	3001	1/1	0.95	0.07	-3.33	29,29,29,29	0
54	MG	BB	3002	1/1	0.96	0.08	-3.34	30,30,30,30	0
54	MG	BB	3069	1/1	0.98	0.14	-3.64	10,10,10,10	0
54	MG	AA	1603	1/1	0.96	0.10	-3.64	14,14,14,14	0
54	MG	DB	3108	1/1	0.97	0.10	-3.66	5,5,5,5	0
54	MG	AA	1654	1/1	0.95	0.07	-3.72	82,82,82,82	0
54	MG	BB	3035	1/1	0.93	0.13	-3.80	82,82,82,82	0
54	MG	DB	3012	1/1	0.98	0.09	-3.85	12,12,12,12	0
54	MG	BB	3088	1/1	0.92	0.08	-4.18	36,36,36,36	0
54	MG	DB	3001	1/1	0.97	0.09	-4.27	6,6,6,6	0
54	MG	DB	3056	1/1	0.99	0.12	-4.41	12,12,12,12	0
54	MG	BB	3094	1/1	0.98	0.13	-4.43	47,47,47,47	0
54	MG	CA	1632	1/1	0.98	0.08	-4.60	18,18,18,18	0
54	MG	CA	1643	1/1	0.84	0.07	-4.69	32,32,32,32	0
54	MG	DB	3010	1/1	0.98	0.09	-4.75	16,16,16,16	0
54	MG	BB	3103	1/1	0.96	0.09	-4.89	20,20,20,20	0
54	MG	CA	1656	1/1	0.97	0.06	-4.96	11,11,11,11	0
54	MG	DB	3080	1/1	0.93	0.08	-5.03	5,5,5,5	0
54	MG	BB	3065	1/1	0.94	0.06	-5.04	5,5,5,5	0
54	MG	AA	1641	1/1	0.92	0.04	-5.08	69,69,69,69	0
54	MG	BB	3052	1/1	0.97	0.08	-5.16	36,36,36,36	0
54	MG	CA	1640	1/1	0.97	0.08	-5.20	5,5,5,5	0
54	MG	BB	3056	1/1	0.97	0.06	-5.46	31,31,31,31	0
54	MG	CA	1653	1/1	0.98	0.04	-5.52	51,51,51,51	0
54	MG	DB	3002	1/1	0.98	0.08	-6.11	6,6,6,6	0
54	MG	CA	1655	1/1	0.99	0.07	-8.88	25,25,25,25	0
54	MG	AA	1643	1/1	0.97	0.03	-9.25	29,29,29,29	0
54	MG	CA	1651	1/1	0.95	0.11	-	38,38,38,38	0
54	MG	DB	3041	1/1	0.98	0.08	-	34,34,34,34	0
54	MG	AA	1649	1/1	0.91	0.06	-	82,82,82,82	0
54	MG	CA	1630	1/1	0.97	0.29	-	52,52,52,52	0
54	MG	BB	3101	1/1	0.98	0.05	-	5,5,5,5	0
54	MG	BB	3102	1/1	0.98	0.04	-	31,31,31,31	0
54	MG	CA	1658	1/1	0.83	0.34	-	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BB	3063	1/1	0.98	0.14	-	28,28,28,28	0
54	MG	DB	3066	1/1	0.68	0.30	-	158,158,158,158	0
54	MG	CA	1647	1/1	0.97	0.07	-	65,65,65,65	0
54	MG	DB	3022	1/1	0.94	0.08	-	71,71,71,71	0
54	MG	DB	3033	1/1	0.90	0.12	-	43,43,43,43	0
54	MG	DB	3019	1/1	0.98	0.06	-	5,5,5,5	0
54	MG	BB	3105	1/1	0.99	0.05	-	60,60,60,60	0
54	MG	DB	3048	1/1	0.99	0.08	-	34,34,34,34	0
54	MG	BB	3055	1/1	0.98	0.19	-	53,53,53,53	0
54	MG	BB	3042	1/1	0.56	0.12	-	135,135,135,135	0
54	MG	AA	1640	1/1	0.98	0.09	-	56,56,56,56	0
54	MG	DB	3097	1/1	0.94	0.18	-	64,64,64,64	0
54	MG	BB	3066	1/1	0.98	0.14	-	25,25,25,25	0
54	MG	CA	1607	1/1	0.96	0.07	-	83,83,83,83	0
54	MG	CA	1652	1/1	0.94	0.17	-	65,65,65,65	0
54	MG	AA	1650	1/1	0.69	0.14	-	122,122,122,122	0
54	MG	CA	1606	1/1	0.93	0.13	-	138,138,138,138	0
54	MG	BB	3106	1/1	0.98	0.11	-	39,39,39,39	0
54	MG	BB	3009	1/1	0.96	0.14	-	96,96,96,96	0
54	MG	AA	1616	1/1	0.97	0.06	-	42,42,42,42	0
54	MG	DB	3024	1/1	0.95	0.14	-	45,45,45,45	0
54	MG	CA	1609	1/1	0.91	0.04	-	84,84,84,84	0
54	MG	BB	3104	1/1	0.99	0.16	-	28,28,28,28	0
54	MG	AA	1617	1/1	0.97	0.12	-	100,100,100,100	0
54	MG	BB	3044	1/1	0.97	0.08	-	52,52,52,52	0
54	MG	DB	3046	1/1	0.97	0.07	-	11,11,11,11	0
54	MG	CE	201	1/1	0.80	0.22	-	113,113,113,113	0
54	MG	CA	1642	1/1	0.93	0.13	-	108,108,108,108	0
54	MG	CA	1657	1/1	0.92	0.24	-	89,89,89,89	0
54	MG	BB	3022	1/1	0.95	0.29	-	37,37,37,37	0
54	MG	AA	1622	1/1	0.54	0.39	-	163,163,163,163	0
54	MG	DB	3079	1/1	0.98	0.12	-	34,34,34,34	0
54	MG	AA	1606	1/1	0.87	0.08	-	47,47,47,47	0
54	MG	DB	3038	1/1	0.95	0.15	-	37,37,37,37	0
54	MG	DB	3028	1/1	0.98	0.18	-	58,58,58,58	0
54	MG	DB	3101	1/1	0.99	0.25	-	25,25,25,25	0
54	MG	DB	3005	1/1	0.98	0.17	-	45,45,45,45	0
54	MG	DB	3029	1/1	0.88	0.13	-	59,59,59,59	0
54	MG	BB	3050	1/1	0.95	0.10	-	33,33,33,33	0
54	MG	DB	3008	1/1	0.96	0.14	-	17,17,17,17	0
54	MG	BB	3030	1/1	0.98	0.04	-	70,70,70,70	0
54	MG	DB	3077	1/1	0.98	0.08	-	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DB	3043	1/1	0.99	0.08	-	32,32,32,32	0
54	MG	CA	1660	1/1	0.92	0.10	-	63,63,63,63	0
54	MG	DB	3004	1/1	0.99	0.13	-	69,69,69,69	0
54	MG	DB	3044	1/1	0.98	0.07	-	21,21,21,21	0
54	MG	BB	3093	1/1	0.70	0.37	-	131,131,131,131	0
54	MG	AA	1645	1/1	0.89	0.09	-	95,95,95,95	0
54	MG	CA	1641	1/1	0.81	0.17	-	42,42,42,42	0
54	MG	BB	3046	1/1	0.98	0.08	-	64,64,64,64	0
54	MG	AA	1639	1/1	0.59	0.34	-	134,134,134,134	0
54	MG	AA	1659	1/1	0.68	0.45	-	180,180,180,180	0
54	MG	BB	3036	1/1	0.96	0.13	-	62,62,62,62	0
54	MG	AA	1602	1/1	0.73	0.18	-	147,147,147,147	0
54	MG	CA	1650	1/1	0.99	0.07	-	33,33,33,33	0
54	MG	CA	1661	1/1	0.96	0.10	-	48,48,48,48	0
54	MG	DB	3082	1/1	0.98	0.08	-	57,57,57,57	0
54	MG	DB	3013	1/1	0.88	0.14	-	41,41,41,41	0
54	MG	CA	1626	1/1	0.96	0.24	-	41,41,41,41	1
54	MG	BB	3076	1/1	0.99	0.06	-	20,20,20,20	0
54	MG	AA	1620	1/1	0.85	0.06	-	113,113,113,113	0
54	MG	AA	1637	1/1	0.66	2.40	-	151,151,151,151	0
54	MG	CA	1659	1/1	0.92	0.09	-	90,90,90,90	0
54	MG	CA	1654	1/1	0.94	0.10	-	59,59,59,59	0
54	MG	DB	3063	1/1	0.96	0.06	-	19,19,19,19	0
54	MG	AA	1644	1/1	0.94	0.13	-	98,98,98,98	0
54	MG	BB	3018	1/1	0.92	0.18	-	50,50,50,50	0
54	MG	BB	3057	1/1	0.90	0.36	-	65,65,65,65	0
54	MG	BB	3089	1/1	0.98	0.19	-	25,25,25,25	0
54	MG	AA	1625	1/1	0.27	0.87	-	84,84,84,84	1
54	MG	DB	3023	1/1	0.97	0.10	-	17,17,17,17	0
54	MG	BB	3031	1/1	0.95	0.13	-	63,63,63,63	0
54	MG	CA	1625	1/1	0.95	0.17	-	6,6,6,6	0
54	MG	BB	3078	1/1	0.91	0.21	-	101,101,101,101	0
54	MG	BB	3033	1/1	0.47	0.65	-	141,141,141,141	0
54	MG	DB	3021	1/1	0.99	0.08	-	51,51,51,51	0
54	MG	BB	3049	1/1	0.88	0.15	-	35,35,35,35	0
54	MG	AA	1628	1/1	0.97	0.12	-	59,59,59,59	0
54	MG	BB	3043	1/1	0.82	0.08	-	122,122,122,122	0
54	MG	BB	3071	1/1	0.96	0.09	-	89,89,89,89	0
54	MG	DB	3039	1/1	0.97	0.08	-	69,69,69,69	0
54	MG	AA	1658	1/1	0.86	0.09	-	85,85,85,85	0
54	MG	DB	3083	1/1	0.95	0.17	-	83,83,83,83	0
54	MG	BB	3020	1/1	0.95	0.09	-	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1656	1/1	0.71	0.80	-	161,161,161,161	0
54	MG	CA	1634	1/1	0.96	0.11	-	23,23,23,23	0
54	MG	CA	1613	1/1	0.97	0.11	-	40,40,40,40	0
54	MG	DB	3075	1/1	0.98	0.12	-	35,35,35,35	0
54	MG	AA	1632	1/1	0.64	0.26	-	62,62,62,62	0
54	MG	CA	1623	1/1	0.76	0.08	-	173,173,173,173	0
54	MG	BB	3067	1/1	0.95	0.13	-	24,24,24,24	0
54	MG	BB	3061	1/1	0.91	0.10	-	56,56,56,56	0
54	MG	BB	3060	1/1	0.99	0.08	-	22,22,22,22	0
54	MG	DB	3076	1/1	0.98	0.14	-	104,104,104,104	0
54	MG	CA	1603	1/1	0.97	0.09	-	29,29,29,29	0
54	MG	AA	1611	1/1	0.98	0.09	-	77,77,77,77	0
54	MG	BB	3107	1/1	0.96	0.09	-	30,30,30,30	0
54	MG	DB	3036	1/1	0.95	0.08	-	20,20,20,20	0
54	MG	CA	1624	1/1	0.93	0.12	-	56,56,56,56	0
54	MG	AA	1624	1/1	0.93	0.10	-	77,77,77,77	0
54	MG	BB	3025	1/1	0.99	0.06	-	42,42,42,42	0
54	MG	CA	1648	1/1	0.97	0.19	-	14,14,14,14	0
54	MG	CA	1611	1/1	0.97	0.06	-	57,57,57,57	0
54	MG	AA	1626	1/1	0.54	0.18	-	49,49,49,49	1
54	MG	BB	3100	1/1	0.94	0.21	-	151,151,151,151	0
54	MG	DB	3084	1/1	0.98	0.14	-	16,16,16,16	0
54	MG	DB	3016	1/1	0.95	0.07	-	25,25,25,25	0
54	MG	DB	3093	1/1	0.94	0.17	-	10,10,10,10	0
54	MG	DB	3015	1/1	0.89	0.10	-	24,24,24,24	0
54	MG	DB	3027	1/1	0.96	0.17	-	28,28,28,28	0
54	MG	BB	3038	1/1	0.95	0.23	-	152,152,152,152	0
54	MG	BB	3034	1/1	0.96	0.24	-	59,59,59,59	0
54	MG	BB	3095	1/1	0.95	0.11	-	81,81,81,81	0
54	MG	DB	3102	1/1	0.97	0.09	-	22,22,22,22	0
54	MG	BB	3070	1/1	0.98	0.19	-	59,59,59,59	0
54	MG	BB	3028	1/1	0.97	0.15	-	61,61,61,61	0
54	MG	DB	3058	1/1	0.83	0.85	-	162,162,162,162	0
54	MG	CA	1635	1/1	0.83	0.14	-	98,98,98,98	0
54	MG	CA	1627	1/1	0.52	0.32	-	69,69,69,69	1
54	MG	DB	3109	1/1	0.95	0.09	-	83,83,83,83	0
54	MG	BB	3010	1/1	0.84	0.13	-	40,40,40,40	0
54	MG	BB	3045	1/1	0.99	0.04	-	38,38,38,38	0
54	MG	AA	1618	1/1	0.95	0.13	-	93,93,93,93	0
54	MG	CA	1602	1/1	0.99	0.12	-	11,11,11,11	0
54	MG	BB	3058	1/1	0.97	0.09	-	11,11,11,11	0
54	MG	DB	3060	1/1	0.55	0.10	-	104,104,104,104	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BB	3073	1/1	0.99	0.23	-	38,38,38,38	0
54	MG	AA	1621	1/1	0.97	0.17	-	26,26,26,26	0
54	MG	DB	3111	1/1	0.97	0.18	-	32,32,32,32	0
54	MG	AA	1646	1/1	0.73	0.18	-	104,104,104,104	0
54	MG	BB	3051	1/1	0.96	0.18	-	65,65,65,65	0
54	MG	BB	3026	1/1	0.95	0.21	-	43,43,43,43	0
54	MG	DB	3107	1/1	0.98	0.07	-	11,11,11,11	0
54	MG	DB	3061	1/1	0.94	0.09	-	69,69,69,69	0
54	MG	CA	1639	1/1	0.98	0.07	-	7,7,7,7	0
54	MG	DB	3105	1/1	0.97	0.08	-	30,30,30,30	0
54	MG	CA	1629	1/1	0.89	0.12	-	65,65,65,65	1
54	MG	DB	3037	1/1	0.93	0.17	-	54,54,54,54	0
54	MG	AA	1612	1/1	0.96	0.13	-	88,88,88,88	0
54	MG	DB	3095	1/1	0.96	0.12	-	88,88,88,88	0
54	MG	BB	3109	1/1	0.98	0.07	-	59,59,59,59	0
54	MG	BB	3059	1/1	0.99	0.11	-	60,60,60,60	0
54	MG	DB	3034	1/1	0.81	0.20	-	69,69,69,69	0
54	MG	DB	3094	1/1	0.98	0.10	-	55,55,55,55	0
54	MG	BB	3003	1/1	0.92	0.09	-	51,51,51,51	0
54	MG	BB	3027	1/1	0.95	0.13	-	42,42,42,42	0
54	MG	CA	1644	1/1	0.98	0.07	-	68,68,68,68	0
54	MG	BB	3041	1/1	0.96	0.15	-	8,8,8,8	0
54	MG	AA	1633	1/1	0.97	0.03	-	48,48,48,48	0
54	MG	BB	3008	1/1	0.89	0.20	-	75,75,75,75	0
54	MG	DB	3062	1/1	0.97	0.04	-	67,67,67,67	0
54	MG	DB	3073	1/1	0.98	0.21	-	67,67,67,67	0
54	MG	AA	1651	1/1	0.86	0.09	-	112,112,112,112	0
54	MG	DB	3042	1/1	0.94	0.07	-	23,23,23,23	0
54	MG	CA	1649	1/1	0.91	0.14	-	127,127,127,127	0
54	MG	DB	3054	1/1	0.96	0.06	-	29,29,29,29	0
54	MG	DB	3017	1/1	0.96	0.10	-	5,5,5,5	0
54	MG	BB	3097	1/1	0.80	0.07	-	88,88,88,88	0
54	MG	DB	3025	1/1	0.97	0.18	-	42,42,42,42	0
54	MG	DB	3053	1/1	0.92	0.09	-	80,80,80,80	0
54	MG	AA	1619	1/1	0.64	0.25	-	180,180,180,180	0
54	MG	AA	1655	1/1	0.94	0.07	-	54,54,54,54	0
54	MG	BB	3039	1/1	0.97	0.07	-	5,5,5,5	0
54	MG	BB	3064	1/1	0.98	0.08	-	37,37,37,37	0
54	MG	DB	3049	1/1	0.98	0.07	-	9,9,9,9	0
54	MG	CA	1619	1/1	0.70	0.19	-	70,70,70,70	0
54	MG	BB	3075	1/1	0.97	0.16	-	29,29,29,29	0
54	MG	DB	3057	1/1	0.80	0.10	-	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BB	3017	1/1	0.93	0.17	-	73,73,73,73	0
54	MG	DB	3040	1/1	0.98	0.09	-	18,18,18,18	0
54	MG	BB	3007	1/1	0.98	0.07	-	53,53,53,53	0
54	MG	BB	3072	1/1	0.90	0.14	-	79,79,79,79	0
54	MG	AA	1604	1/1	0.98	0.10	-	19,19,19,19	0
54	MG	BB	3015	1/1	0.99	0.08	-	42,42,42,42	0
54	MG	AA	1652	1/1	0.97	0.08	-	90,90,90,90	0
54	MG	AA	1642	1/1	0.97	0.12	-	41,41,41,41	0
54	MG	BB	3053	1/1	0.89	0.07	-	79,79,79,79	0
54	MG	DB	3071	1/1	0.98	0.05	-	37,37,37,37	0
54	MG	DB	3065	1/1	0.97	0.06	-	45,45,45,45	0
54	MG	DB	3020	1/1	0.94	0.20	-	13,13,13,13	0
54	MG	DB	3011	1/1	0.97	0.27	-	33,33,33,33	0
54	MG	AA	1648	1/1	0.95	0.07	-	40,40,40,40	0
54	MG	DB	3086	1/1	0.98	0.20	-	52,52,52,52	0
54	MG	AA	1605	1/1	0.97	0.09	-	47,47,47,47	0
54	MG	CA	1621	1/1	0.91	0.53	-	110,110,110,110	0
54	MG	CA	1608	1/1	0.96	0.09	-	139,139,139,139	0
54	MG	AA	1634	1/1	0.97	0.07	-	67,67,67,67	0
54	MG	BB	3080	1/1	0.79	0.20	-	77,77,77,77	0
54	MG	CA	1646	1/1	0.91	0.08	-	99,99,99,99	0
54	MG	DB	3045	1/1	0.92	0.07	-	68,68,68,68	0
54	MG	CA	1637	1/1	0.98	0.07	-	92,92,92,92	0
54	MG	BB	3054	1/1	0.96	0.14	-	46,46,46,46	0
54	MG	BB	3004	1/1	0.93	0.19	-	73,73,73,73	0
54	MG	AA	1608	1/1	0.49	0.29	-	147,147,147,147	0
54	MG	DB	3104	1/1	0.96	0.19	-	71,71,71,71	0
54	MG	AA	1657	1/1	0.75	0.42	-	124,124,124,124	0
54	MG	AA	1627	1/1	0.79	0.19	-	68,68,68,68	0
54	MG	AA	1660	1/1	0.94	0.08	-	37,37,37,37	0
54	MG	DB	3031	1/1	0.98	0.07	-	24,24,24,24	0
54	MG	BB	3006	1/1	0.99	0.08	-	20,20,20,20	0
54	MG	DB	3064	1/1	0.92	0.10	-	19,19,19,19	0
54	MG	DB	3091	1/1	0.99	0.14	-	5,5,5,5	0
54	MG	DB	3067	1/1	0.97	0.14	-	16,16,16,16	0
54	MG	AA	1631	1/1	0.94	0.12	-	88,88,88,88	0
54	MG	DB	3018	1/1	0.97	0.10	-	22,22,22,22	0
54	MG	DB	3081	1/1	0.95	0.11	-	19,19,19,19	0
54	MG	DB	3106	1/1	0.94	0.18	-	64,64,64,64	0
54	MG	CA	1622	1/1	0.98	0.10	-	18,18,18,18	0
54	MG	CA	1610	1/1	0.96	0.07	-	75,75,75,75	0
54	MG	CA	1620	1/1	0.93	0.14	-	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BB	3024	1/1	0.95	0.06	-	44,44,44,44	0
54	MG	CA	1615	1/1	0.93	0.09	-	180,180,180,180	0
54	MG	BB	3047	1/1	0.96	0.13	-	116,116,116,116	0
54	MG	DB	3050	1/1	0.97	0.14	-	123,123,123,123	0
54	MG	BB	3014	1/1	0.96	0.13	-	58,58,58,58	0
54	MG	BB	3084	1/1	0.98	0.20	-	77,77,77,77	0
54	MG	AA	1623	1/1	0.83	0.65	-	73,73,73,73	1
54	MG	CA	1631	1/1	0.98	0.10	-	40,40,40,40	0
54	MG	AA	1614	1/1	0.71	0.11	-	113,113,113,113	0
54	MG	BB	3091	1/1	0.97	0.10	-	37,37,37,37	0
54	MG	DB	3052	1/1	0.91	0.23	-	113,113,113,113	0
54	MG	AA	1647	1/1	0.55	0.99	-	180,180,180,180	0
54	MG	CA	1628	1/1	0.94	0.07	-	44,44,44,44	0
54	MG	BB	3068	1/1	1.00	0.05	-	61,61,61,61	0
54	MG	DB	3032	1/1	0.96	0.09	-	51,51,51,51	0
54	MG	BB	3099	1/1	0.95	0.16	-	56,56,56,56	0

6.5 Other polymers [i](#)

There are no such residues in this entry.