



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:40 PM GMT

PDB ID : 4V53
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with gentamicin.
Authors : Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on : 2007-06-16
Resolution : 3.54 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

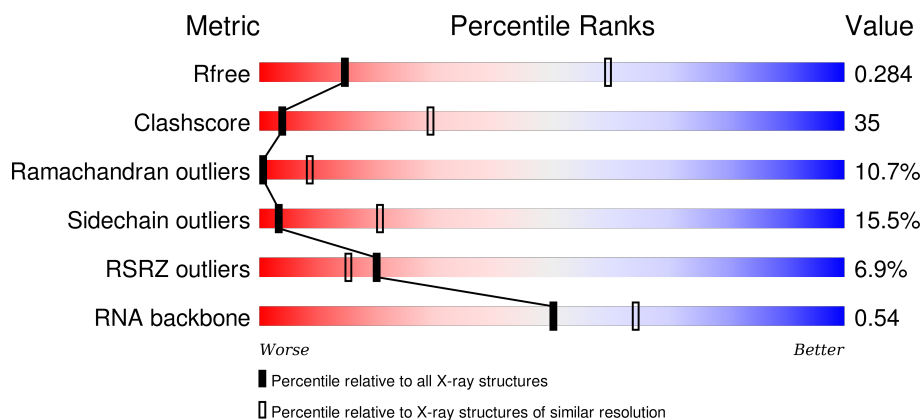
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.54 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	1136 (3.68-3.40)
Clashscore	102246	1248 (3.68-3.40)
Ramachandran outliers	100387	1208 (3.68-3.40)
Sidechain outliers	100360	1208 (3.68-3.40)
RSRZ outliers	91569	1143 (3.68-3.40)
RNA backbone	2183	1052 (4.26-2.80)

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>25%</div> <div>60%</div> <div>13%</div> <div>..</div> </div>
1	CA	1542	<div> <div>24%</div> <div>63%</div> <div>12%</div> <div>.</div> </div>
2	AC	232	<div> <div>2%</div> <div>30%</div> <div>47%</div> <div>11%</div> <div>11%</div> </div>
2	CC	232	<div> <div>6%</div> <div>31%</div> <div>48%</div> <div>10%</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	

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
53	MG	AA	2051	-	-	-	X
53	MG	BB	3087	-	-	-	X
53	MG	CA	2038	-	-	-	X
53	MG	DB	3030	-	-	-	X
53	MG	DB	3059	-	-	-	X
53	MG	DB	3088	-	-	-	X
53	MG	DB	3089	-	-	-	X
54	LLL	AA	2062	-	-	-	X
54	LLL	AA	2063	-	-	-	X
54	LLL	BB	3111	-	-	-	X
54	LLL	CA	2063	-	-	-	X
54	LLL	DB	3112	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 284252 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	DN	120	Total	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			

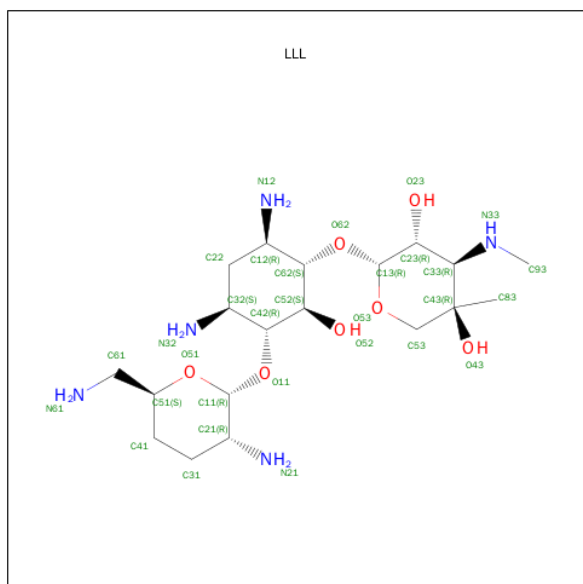
- Molecule 52 is a protein called 50S ribosomal protein L27.

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

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

- Molecule 54 is (2R,3R,4R,5R)-2-((1S,2S,3R,4S,6R)-4,6-DIAMINO-3-((2R,3R,6S)-3-AMINO-O-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
54	AA	1	Total	C	N	O	0	0
			31	19	5	7		
54	AA	1	Total	C	N	O	0	0
			31	19	5	7		
54	AA	1	Total	C	N	O	0	0
			31	19	5	7		
54	BB	1	Total	C	N	O	0	0
			31	19	5	7		
54	CA	1	Total	C	N	O	0	0
			31	19	5	7		

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

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 56 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	292	Total	O	0	0
			292	292		
56	AE	1	Total	O	0	0
			1	1		
56	AK	1	Total	O	0	0
			1	1		
56	AL	2	Total	O	0	0
			2	2		
56	AN	2	Total	O	0	0
			2	2		
56	AT	2	Total	O	0	0
			2	2		
56	BB	492	Total	O	0	0
			492	492		
56	BC	7	Total	O	0	0
			7	7		
56	BE	3	Total	O	0	0
			3	3		
56	B2	1	Total	O	0	0
			1	1		
56	BL	3	Total	O	0	0
			3	3		
56	BH	1	Total	O	0	0
			1	1		

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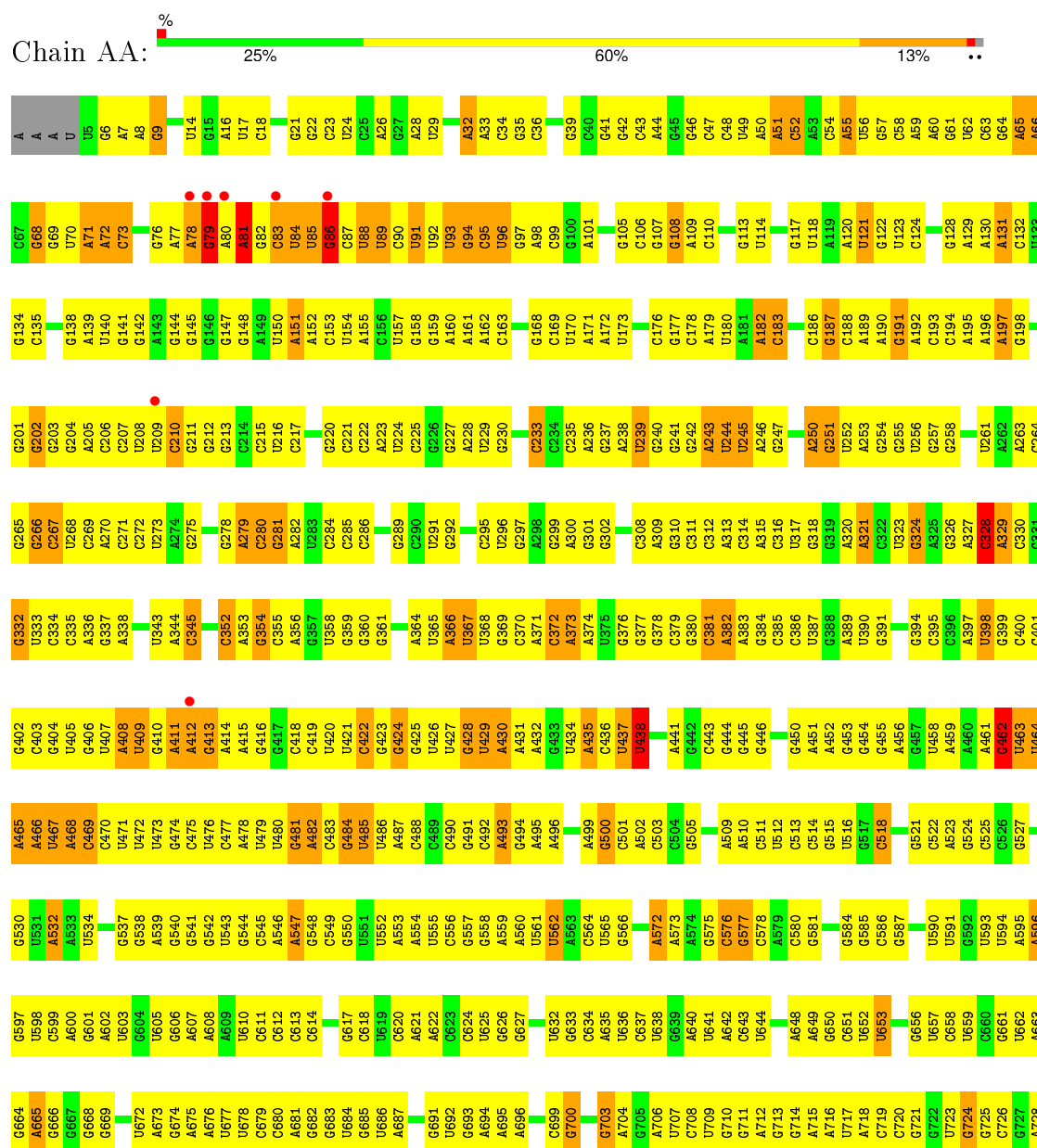
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	CA	297	Total 297	O 297	0	0
56	CE	2	Total 2	O 2	0	0
56	CK	1	Total 1	O 1	0	0
56	CL	2	Total 2	O 2	0	0
56	CN	4	Total 4	O 4	0	0
56	CT	2	Total 2	O 2	0	0
56	DB	502	Total 502	O 502	0	0
56	DC	4	Total 4	O 4	0	0
56	DE	2	Total 2	O 2	0	0
56	DL	4	Total 4	O 4	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 ($\text{RSRZ} > 2$). 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



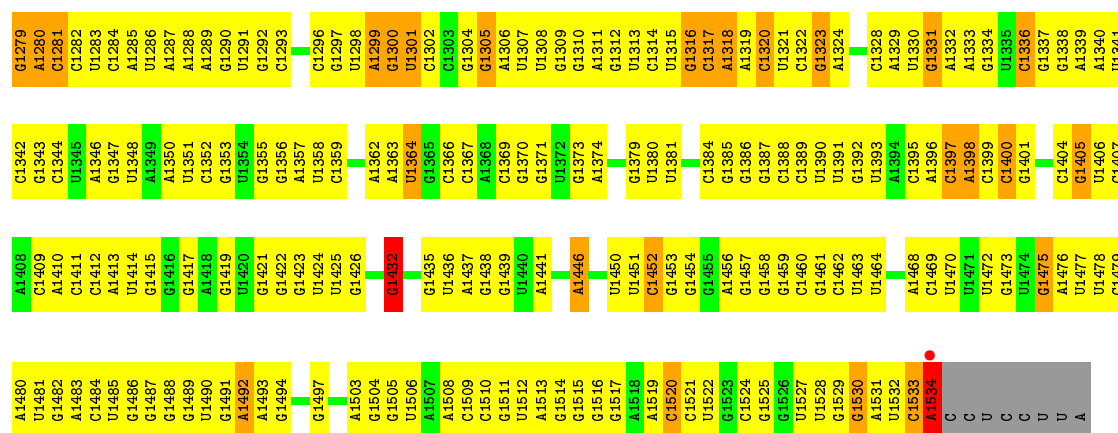
A729	C809	G885	U960	A1021	G1084	A1152	A1219	C1284	G1347	U1424	G1497
G730	C810	G886	U961	A1022	U1085	G1153	G1220	A1285	U1348	U1425	C1501
C732	C811	A889	G962	U1023	U1086	C1158	G1221	U1286	A1349	G1426	A1502
G733	G812	G890	G963	G1024	U1090	U1159	G1222	A1350	A1350	U1427	A1503
G734	U813	G895	G964	U1025	U1091	U1160	C1223	A1288	U1351	G1432	A1504
C735	A814	G895	U965	G1026	A1092	C1161	C1224	A1289	C1352	G1435	G1505
C736	A815	C896	G966	C1027	A1093	C1162	A1225	G1290	G1353	U1436	A1506
C737	A816	C897	G967	C1028	A1094	A1163	C1226	U1291	U1354	U1437	A1507
C738	G818	C897	A968	U1029	U1095	G1164	C1227	C1292	G1356	G1438	C1508
C739	A819	A900	A969	U1030	C1096	U1165	C1228	C1293	A1357	U1439	A1509
U740	U820	A900	G972	C1031	C1097	U1166	A1229	C1294	C1359	U1440	C1510
G741	G821	G903	G973	G1032	C1098	A1167	G1231	G1297	C1362	A1441	G1511
A747	U822	U904	A974	G1033	G1099	U1168	C1234	U1298	A1362	A1446	U1512
G748	C823	U905	A975	A1035	C1100	U1169	U1235	A1299	U1363	U1447	A1513
U751	A825	A907	G976	A1036	A1101	A1170	U1236	G1300	U1364	G1450	G1514
U751	A826	A908	A977	C1037	A1102	A1171	A1236	U1301	G1365	U1451	G1515
G755	C826	A909	A978	C1038	A1103	C1172	C1237	C1302	C1366	U1452	G1516
G755	U827	A909	C979	G1039	A1105	U1173	A1238	C1303	C1367	G1453	G1517
G755	U828	G910	G980	U1040	G1106	G1174	A1239	G1304	U1368	G1454	A1518
G763	G829	A914	U981	G1041	C1107	U1175	U1240	G1305	A1369	U1455	A1519
C764	G833	A917	U982	A1042	G1108	A1176	G1241	A1306	U1370	G1456	C1520
G765	U834	A918	A983	G1043	C1109	G1177	A1242	U1307	G1371	U1457	G1521
A766	U835	A918	U984	A1044	A1110	A1178	C1243	U1308	U1372	G1458	U1522
A767	U836	A919	C985	A1045	A1111	A1179	G1244	G1309	G1373	G1459	G1523
A768	C839	U920	U986	A1046	C1112	A1180	G1245	G1310	A1374	C1460	C1524
G769	C840	U921	U987	G1047	U1118	G1182	A1246	A1311	U1381	G1461	G1525
C770	C841	A923	U989	U1049	C1119	A1183	U1247	U1312	C1382	U1462	G1526
G771	C842	A924	G990	G1050	C1120	G1184	C1248	U1313	C1383	U1463	U1527
A777	U843	C924	U991	G1053	U1121	G1185	U1250	U1314	G1386	U1464	U1528
G778	G844	G925	U992	C1054	U1122	G1186	A1251	U1315	U1387	U1465	G1529
C779	A845	G926	G993	A1055	U1123	G1187	A1252	G1316	C1388	A1468	G1530
A780	G846	G927	A994	U1056	G1124	G1190	G1253	C1317	C1389	U1469	A1531
A781	G847	G928	C995	G1057	U1125	A1191	A1254	A1318	U1390	U1470	U1532
A782	C848	U933	A996	G1058	U1126	C1192	G1255	A1319	U1391	U1471	C1533
C783	G849	C934	U997	C1059	G1127	A1196	A1256	U1320	G1392	U1472	A1534
A784	C857	C936	C998	U1060	A1130	A1197	A1257	U1321	U1393	U1473	C
G785	G858	U936	C999	G1061	G1131	G1198	G1258	C1322	U1394	U1474	C
G786	G859	C940	A1000	C1062	C1132	U1199	C1259	G1323	C1397	U1475	U
A787	U860	G941	C1001	C1063	G1133	U1200	A1261	A1324	A1398	U1476	U
G791	G861	G941	G1002	G1064	U1134	A1201	C1262	U1330	C1399	A1480	U
A792	C861	G941	A1004	U1065	U1135	U1202	C1263	G1331	G1401	U1481	A
U793	A864	G945	A1005	C1066	C1136	C1203	A1269	U1332	C1397	U1477	
A794	A865	A946	U1006	A1067	C1137	A1204	G1270	A1332	C1404	U1478	
C795	G868	G947	U1007	G1068	G1138	U1205	A1271	A1333	U1405	U1479	
C796	U869	C948	U1008	C1069	G1139	G1206	G1272	G1334	U1406	C1479	
C797	U870	A949	U1009	U1070	C1140	G1207	C1273	U1335	U1406	U1485	
U798	C874	U950	U1010	G1071	C1141	C1208	C1274	G1336	C1409	G1486	
A802	U875	U951	C1011	G1072	G1142	C1209	A1275	G1337	A1410	G1487	
G803	A878	G953	A1012	U1073	G1143	U1211	A1276	G1338	U1411	U1488	
U804	G882	U955	G1013	G1074	A1144	U1212	G1277	A1339	C1412	U1489	
C806	C883	U957	G1014	U1077	A1145	A1146	G1278	U1341	A1413	G1491	
A807	U884	U958	G1015	G1078	C1147	C1214	U1279	C1342	U1418	A1492	
C808			A1016	G1079	U148	G1215	A1280	G1343		A1493	
			U1017	G1079	U148	G1216	C1281	U1344		U1494	
			G1018	A1081	A150	C1217	C1282	U1345		U1495	
			A1019		A151	C1218	U1283	A1346		C1496	

• Molecule 1: 16S rRNA

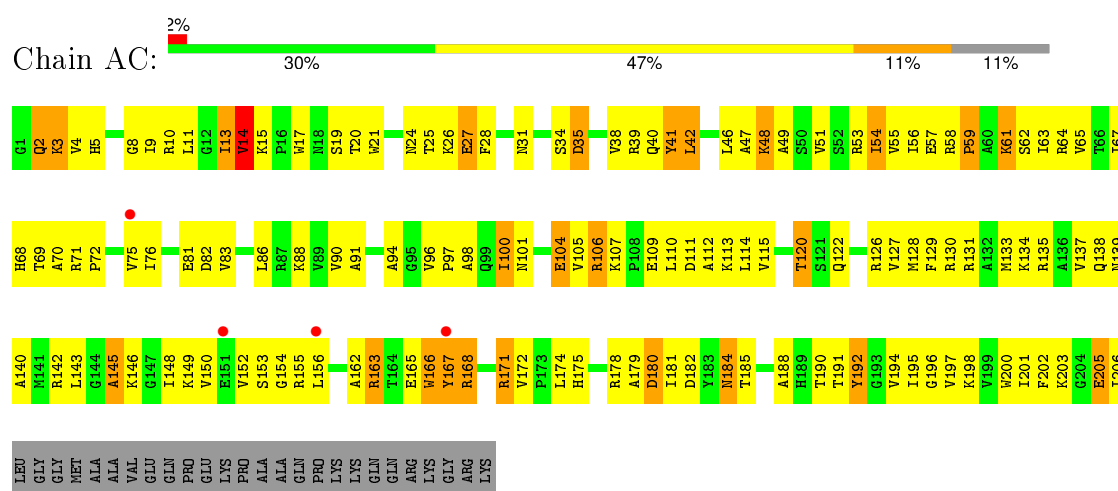
Chain CA:  24% 63% 12%

G138	A139	U140	G141	G142	A143	G144	G145	G146	G147	G148	A149	A150	A151	A152	C153	U154	A155	C156	G157	G158	G159	A160	A161	A162	C163	A167	G168	C169	U170	A171	A172	U173	C176	G177	C178	A179	U180	A181	A182	C183	C186	G187	C188	A189	A190	G191	A192	C193	C194	A195	A196	A197	G198	A199	G200	G201			
G69	U70	A71	A72	C73	A74	G75	G76	A77	A78	G79	A80	A81	G82	C83	U84	U85	G86	C87	U88	U89	C90	U91	U92	U93	U96	G97	A98	C99	G105	C106	G107	G108	A109	C110	G113	U114	G115	A116	G117	U118	A119	A120	U121	G122	U123	C124	G128	C129	A130	A131	C132	U133	A134	G135	C136	C137	C138		
A	A	A	U	U5	G6	A7	A8	G9	U14	G15	A16	U17	C18	A19	U20	G21	C22	C23	U24	C25	A26	A27	A28	A29	A32	A33	C34	G35	C36	G39	C40	G41	G42	C43	A44	G45	G46	C47	C48	U49	A50	A51	C52	A53	C54	A55	U56	G57	C58	A59	A60	G61	U62	C63	G64	A65	A66	C67	G68

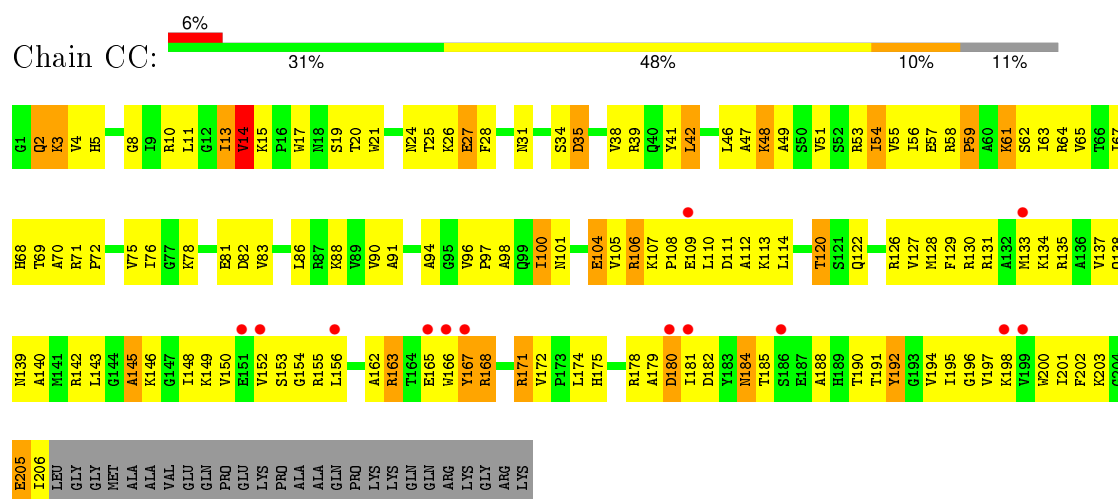




• Molecule 2: 30S ribosomal protein S3

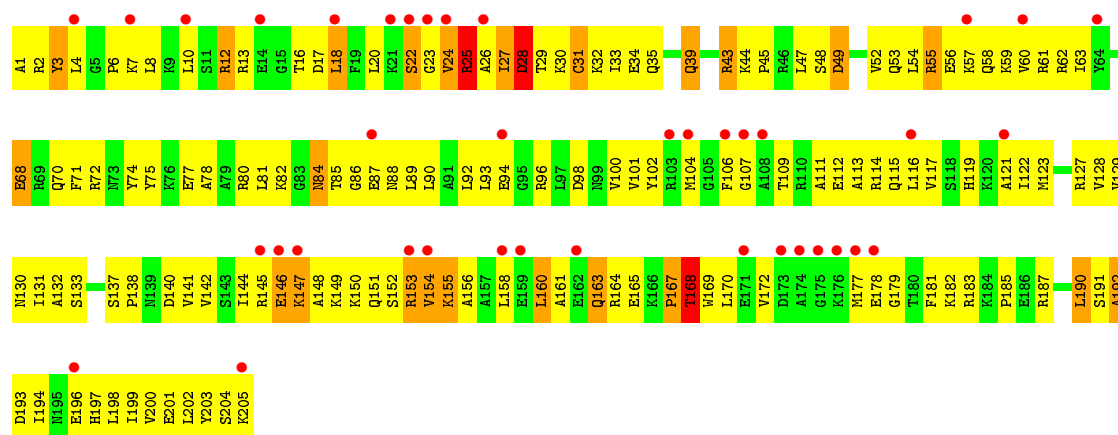


• Molecule 2: 30S ribosomal protein S3

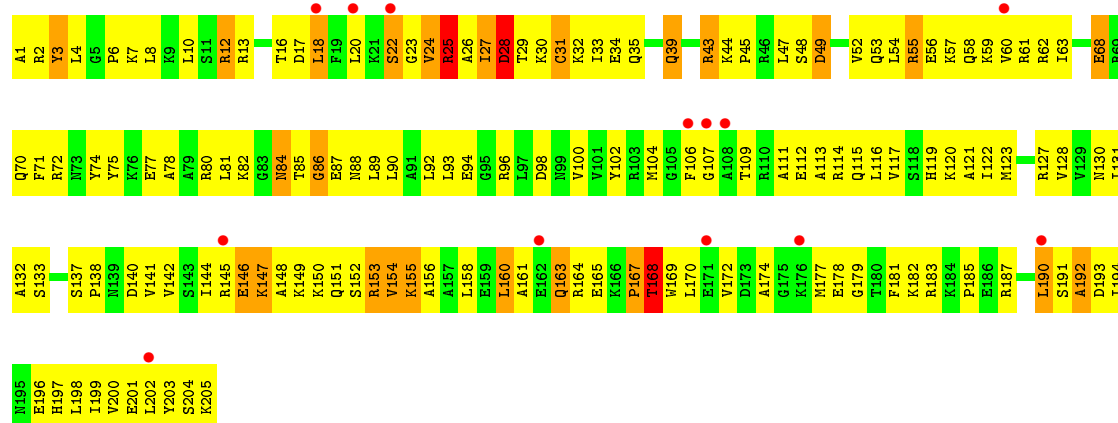


• Molecule 3: 30S ribosomal protein S4

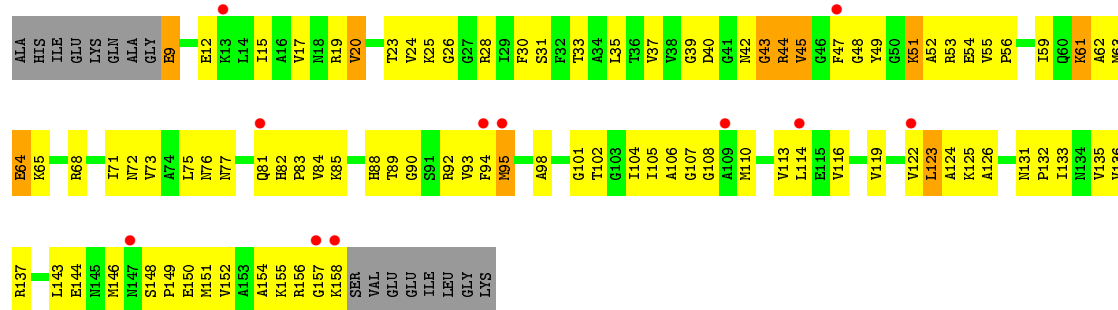




• Molecule 3: 30S ribosomal protein S4

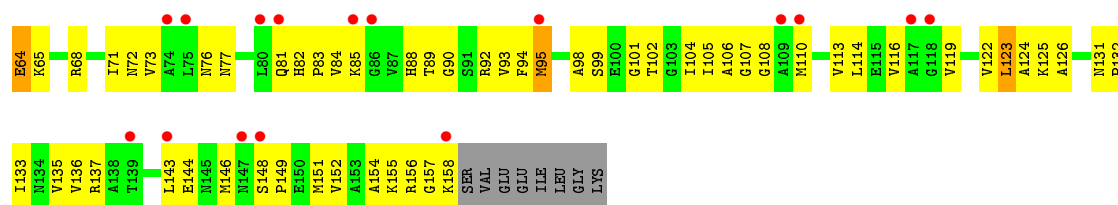


• Molecule 4: 30S ribosomal protein S5

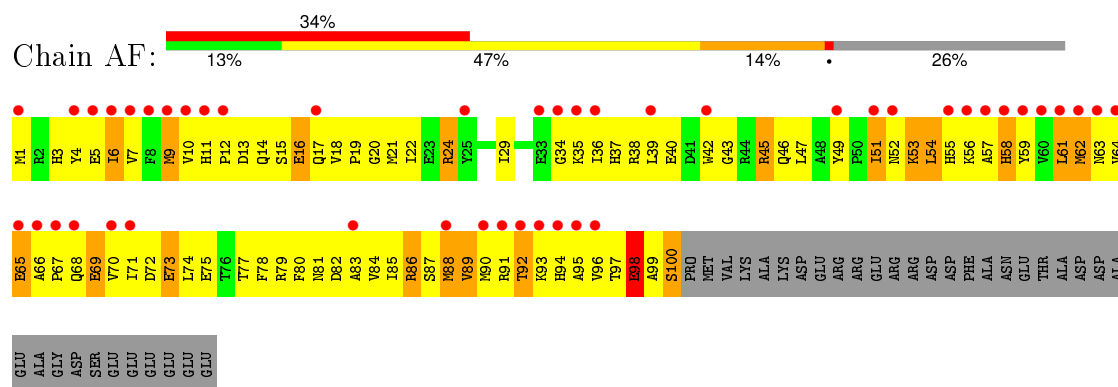


• Molecule 4: 30S ribosomal protein S5

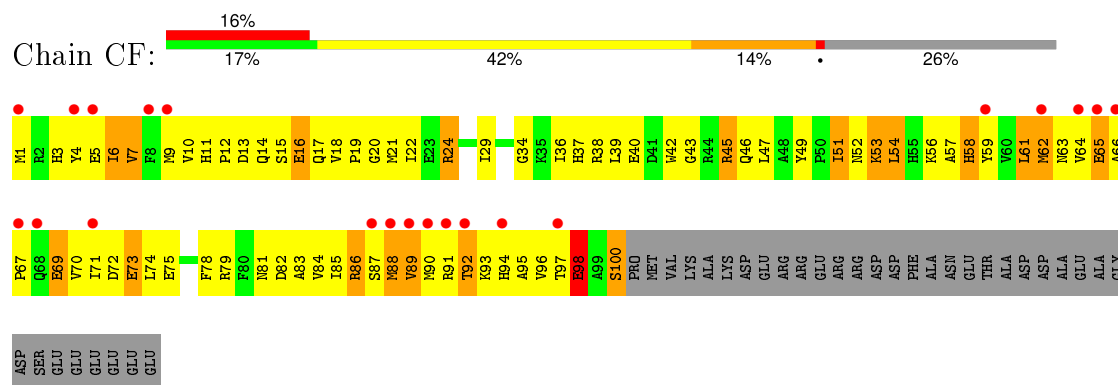




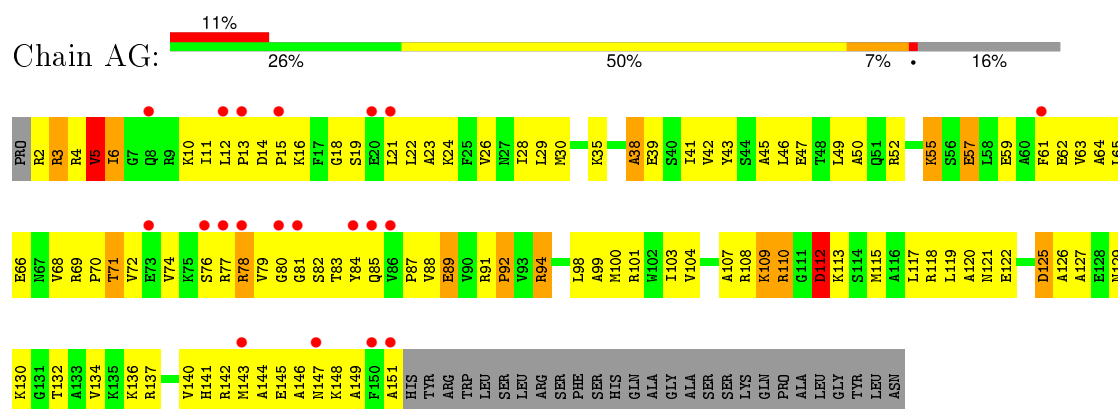
• Molecule 5: 30S ribosomal protein S6



• Molecule 5: 30S ribosomal protein S6

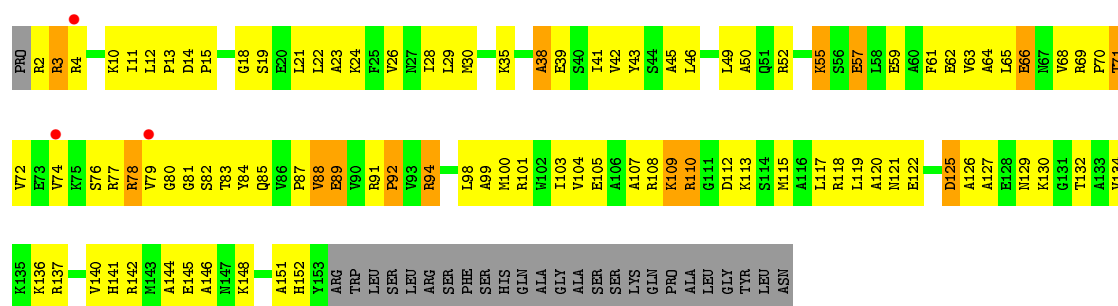


• Molecule 6: 30S ribosomal protein S7

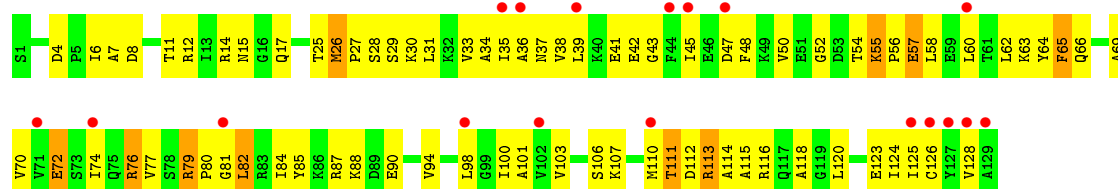
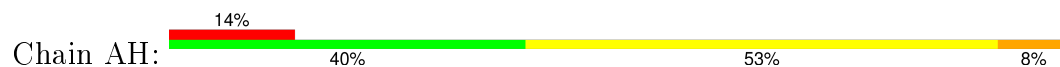


• Molecule 6: 30S ribosomal protein S7

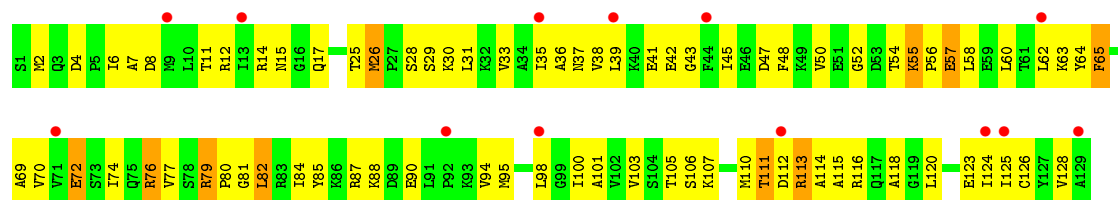




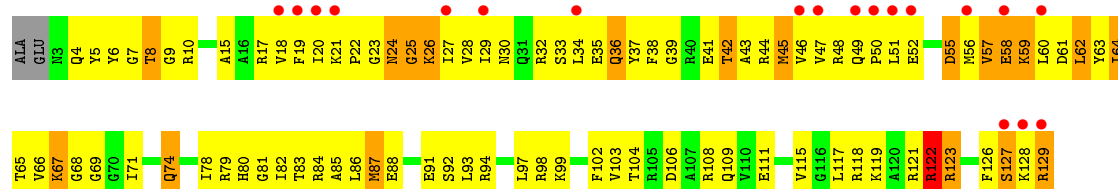
• Molecule 7: 30S ribosomal protein S8



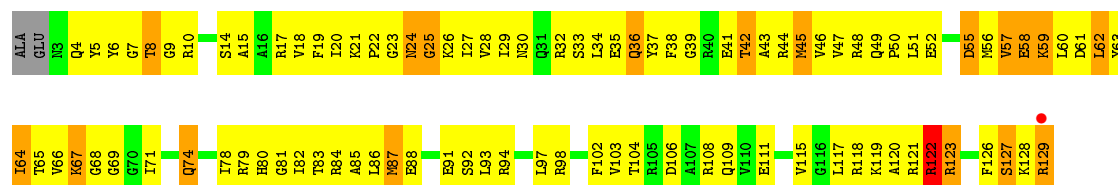
• Molecule 7: 30S ribosomal protein S8



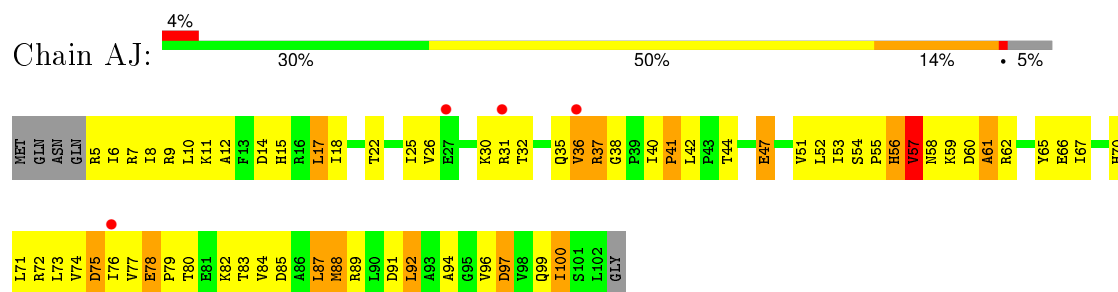
• Molecule 8: 30S ribosomal protein S9



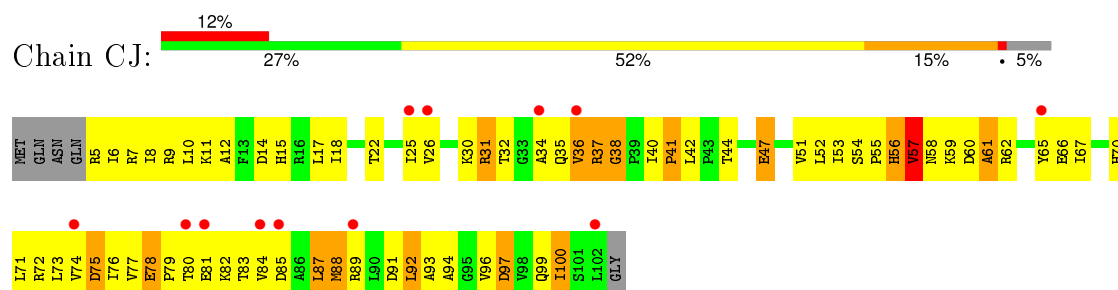
• Molecule 8: 30S ribosomal protein S9



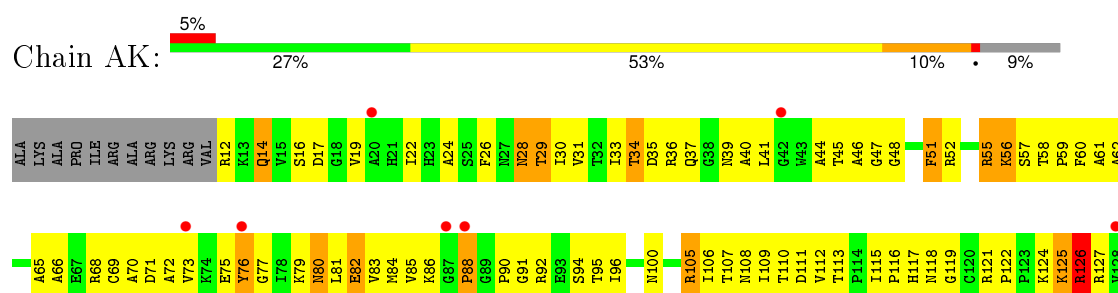
- Molecule 9: 30S ribosomal protein S10



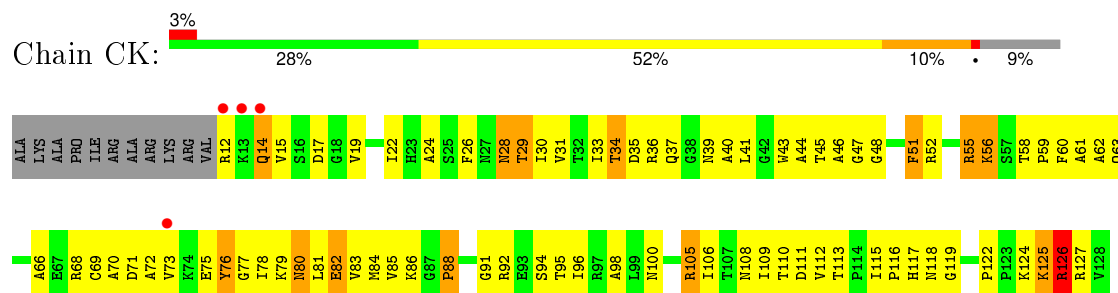
- Molecule 9: 30S ribosomal protein S10



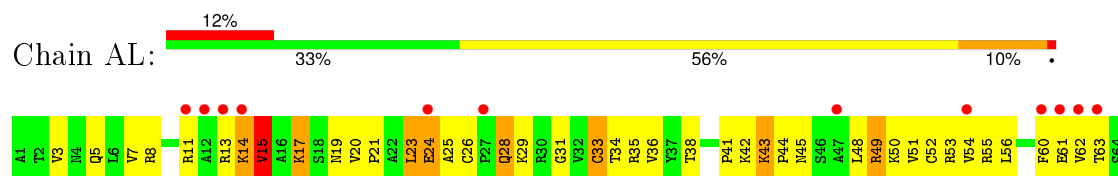
- Molecule 10: 30S ribosomal protein S11

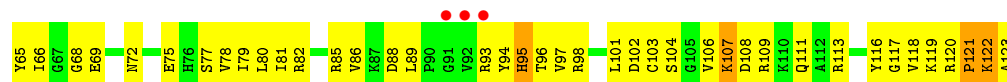


- Molecule 10: 30S ribosomal protein S11

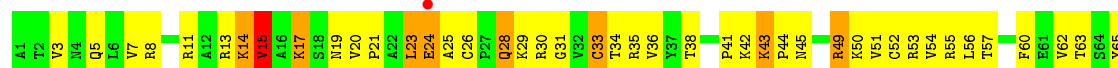


- Molecule 11: 30S ribosomal protein S12





- Molecule 11: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S13



- Molecule 12: 30S ribosomal protein S13

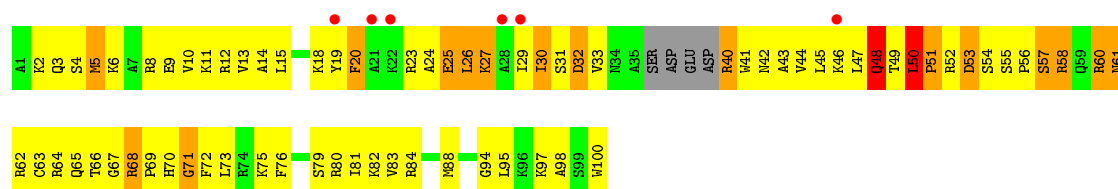


- Molecule 13: 30S ribosomal protein S14

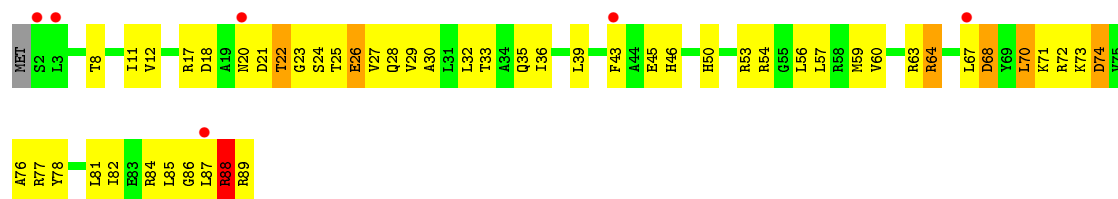
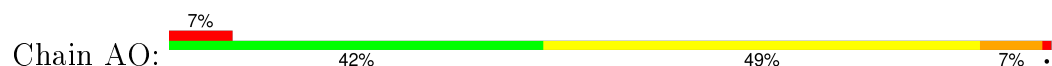


- Molecule 13: 30S ribosomal protein S14

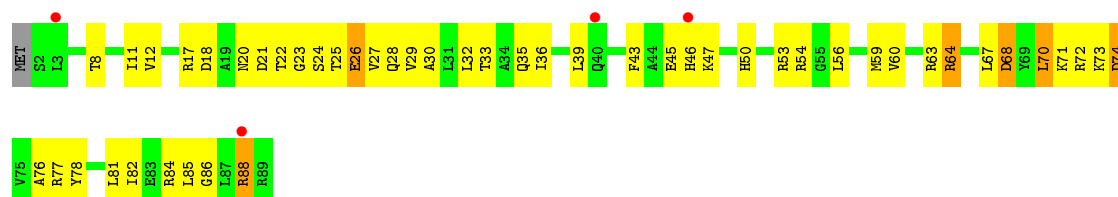




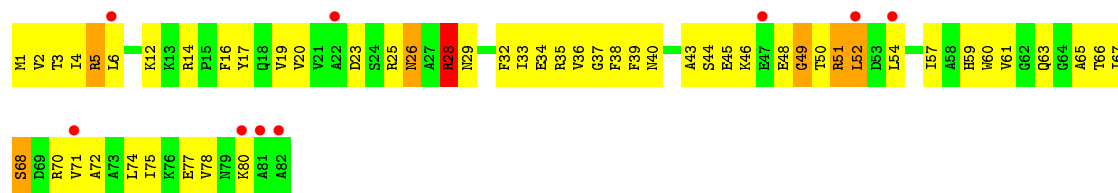
• Molecule 14: 30S ribosomal protein S15



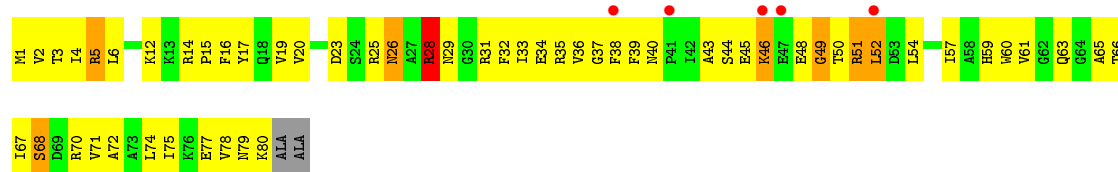
• Molecule 14: 30S ribosomal protein S15



• Molecule 15: 30S ribosomal protein S16



• Molecule 15: 30S ribosomal protein S16



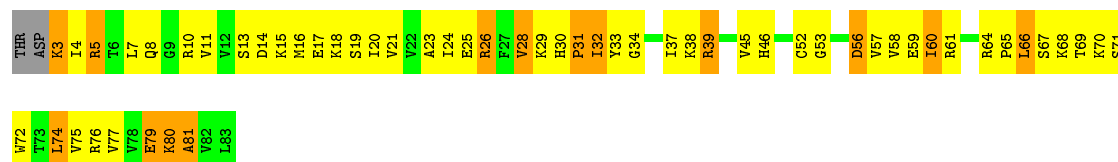
• Molecule 16: 30S ribosomal protein S17





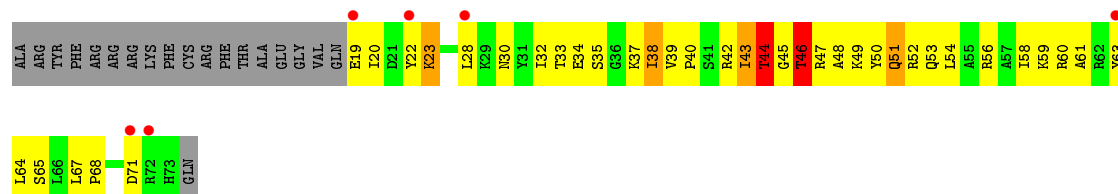
- Molecule 16: 30S ribosomal protein S17

Chain CQ: 30% 51% 17% •



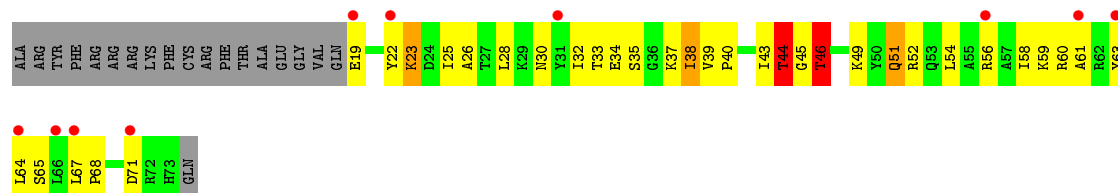
- Molecule 17: 30S ribosomal protein S18

Chain AR: 8% 23% 43% 5% 26% •



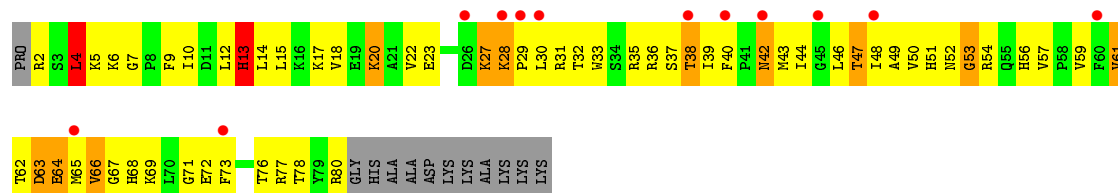
- Molecule 17: 30S ribosomal protein S18

Chain CR: 14% 28% 39% 26% • •



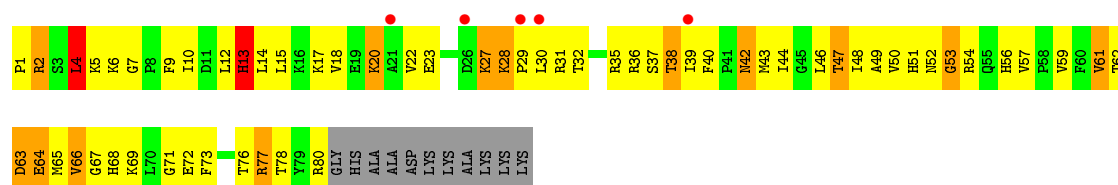
- Molecule 18: 30S ribosomal protein S19

Chain AS: 13% 21% 52% 12% 13% •

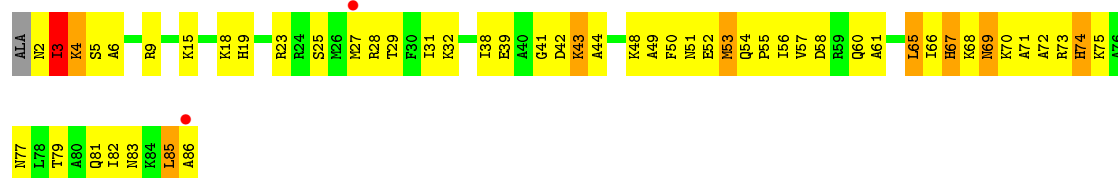


- Molecule 18: 30S ribosomal protein S19

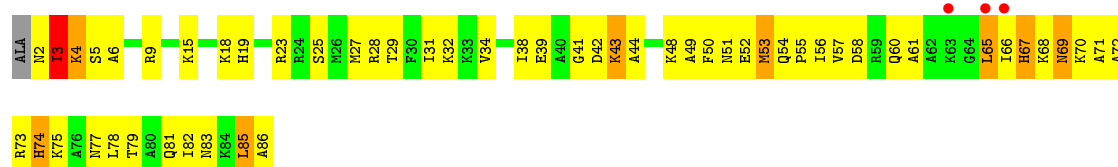
Chain CS: 5% 22% 49% 14% 12% •



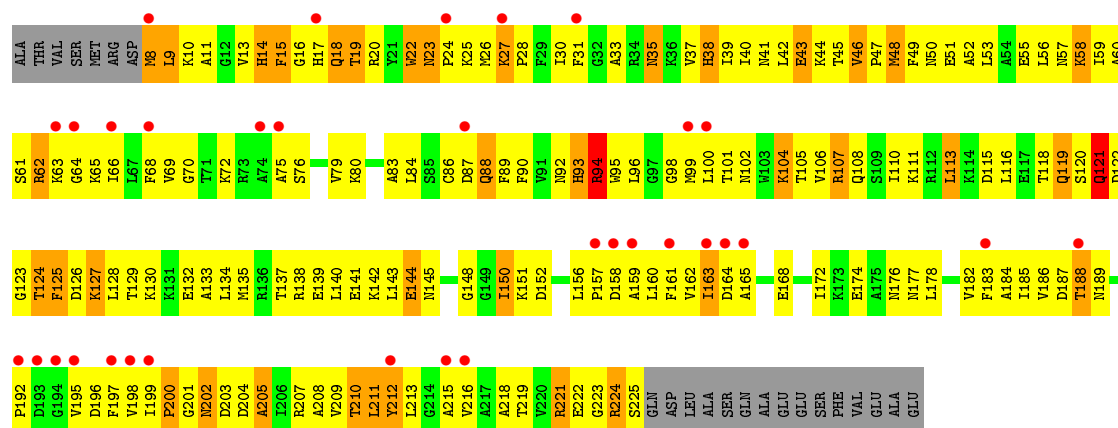
• Molecule 19: 30S ribosomal protein S20



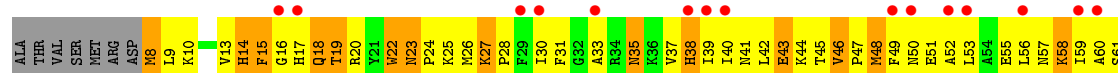
• Molecule 19: 30S ribosomal protein S20

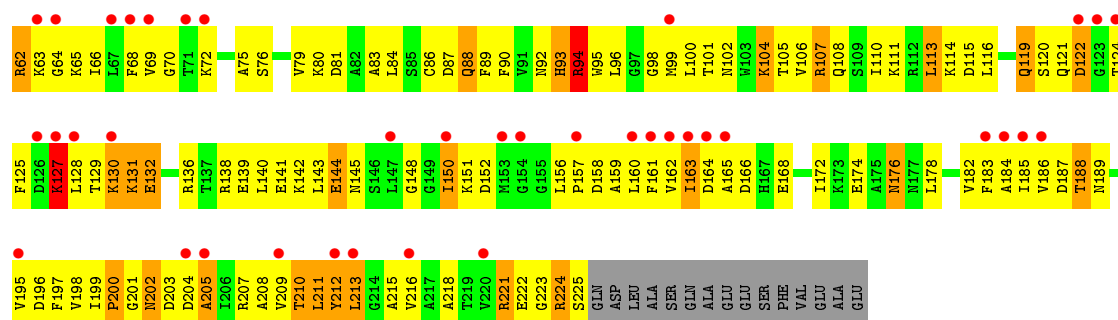


• Molecule 20: 30S ribosomal protein S2

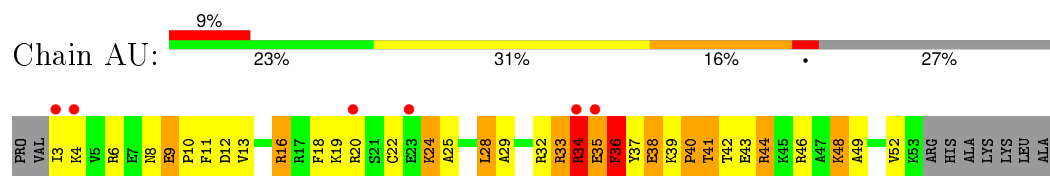


• Molecule 20: 30S ribosomal protein S2

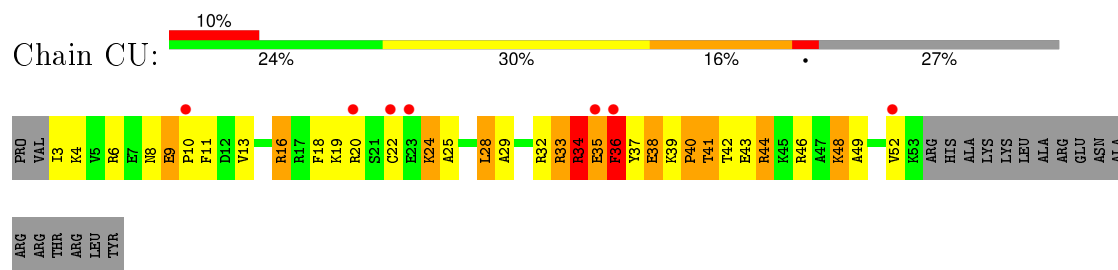




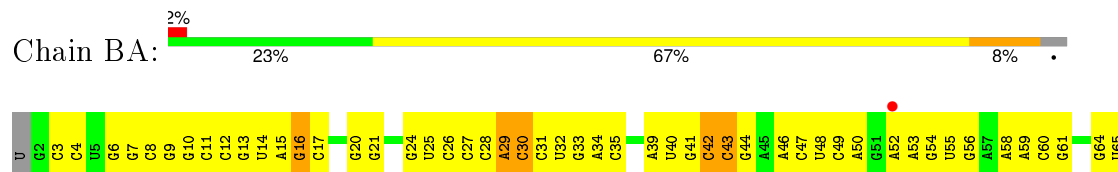
- Molecule 21: 30S ribosomal protein S21



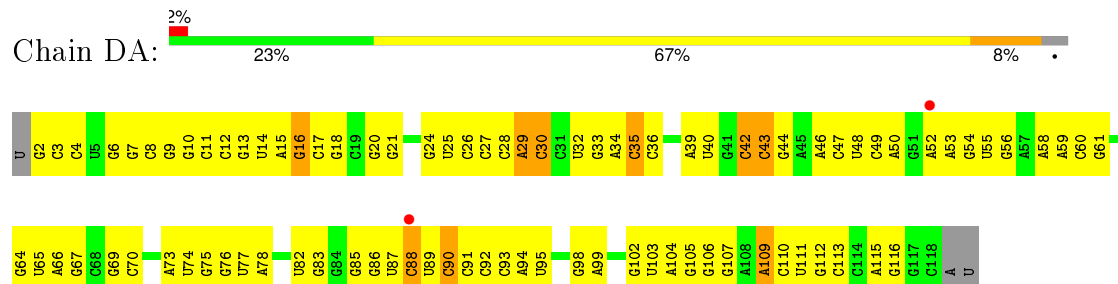
- Molecule 21: 30S ribosomal protein S21



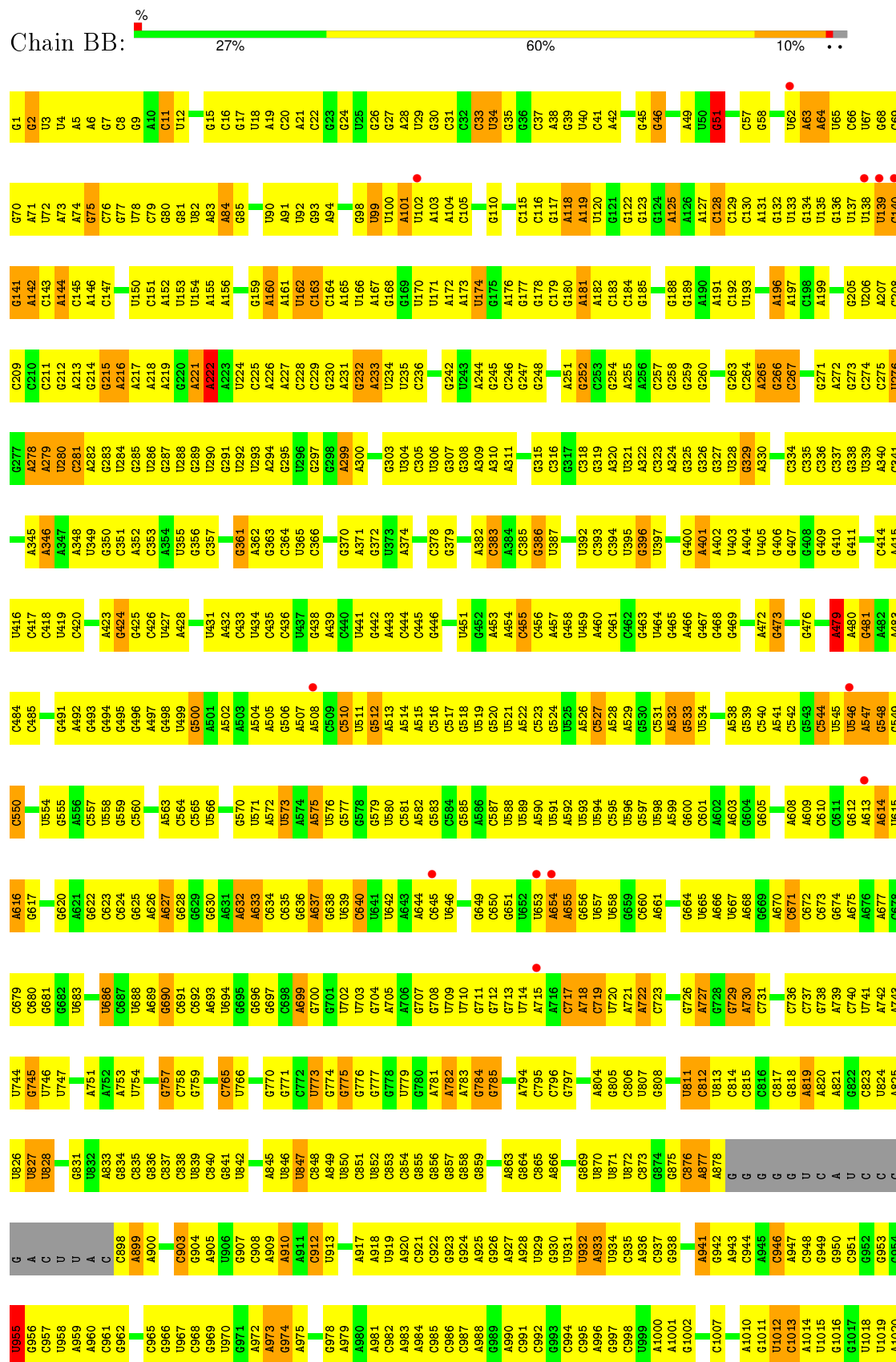
- Molecule 22: 5S rRNA



- Molecule 22: 5S rRNA



● Molecule 23: 23S rRNA

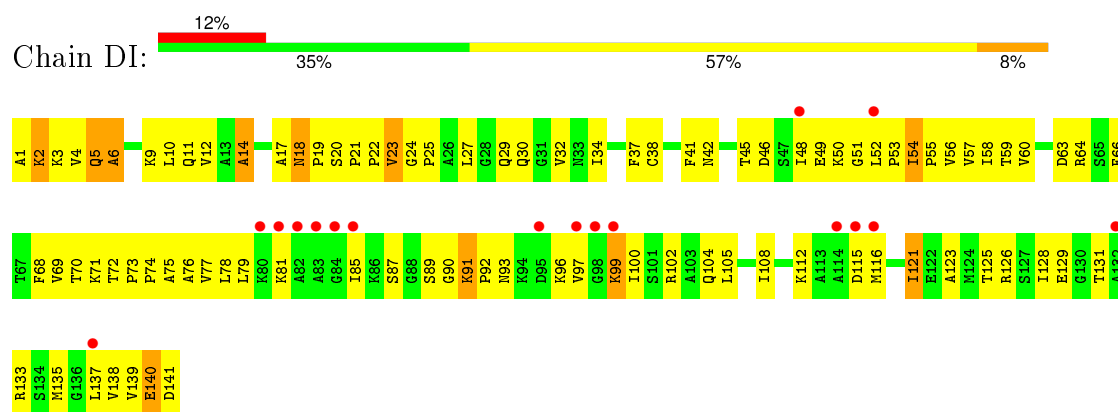


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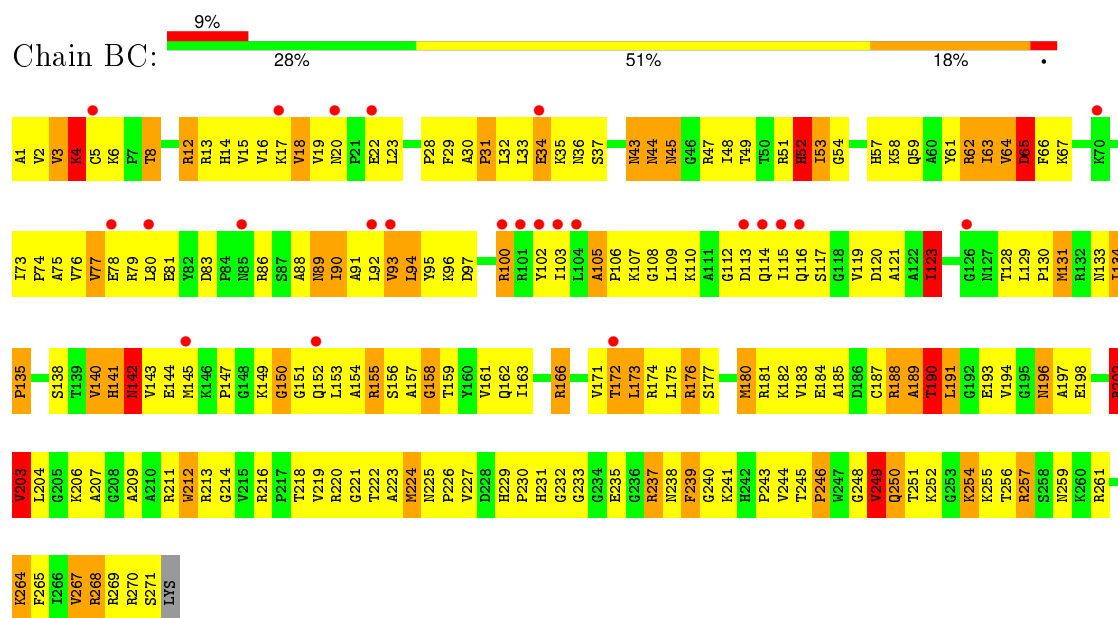




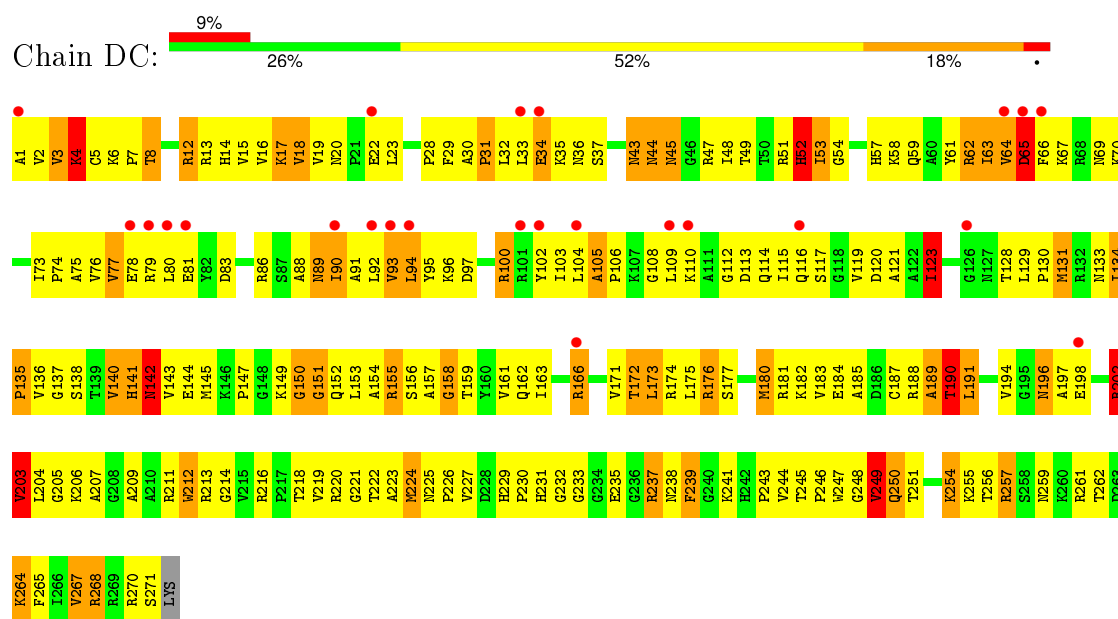
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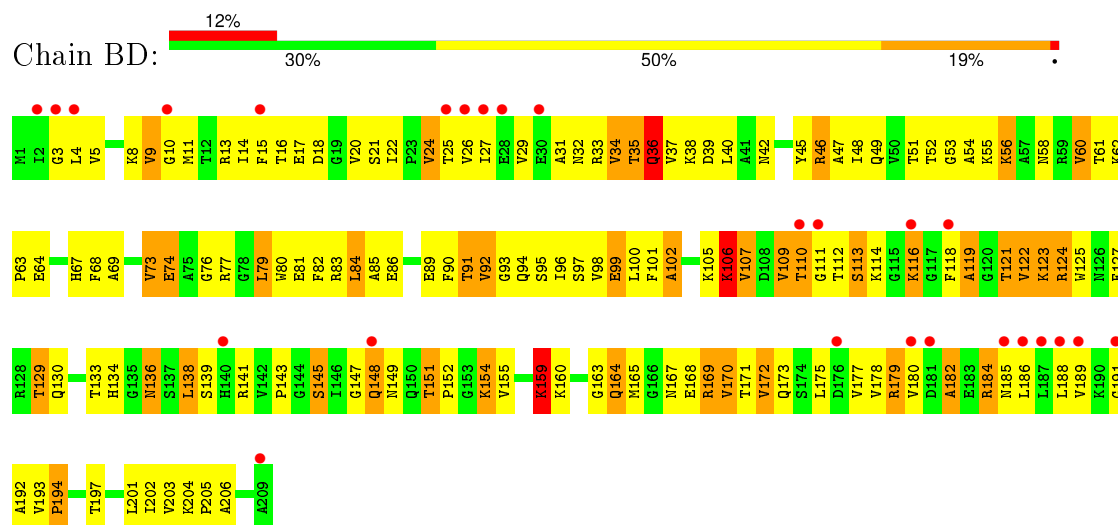
• Molecule 25: 50S ribosomal protein L2



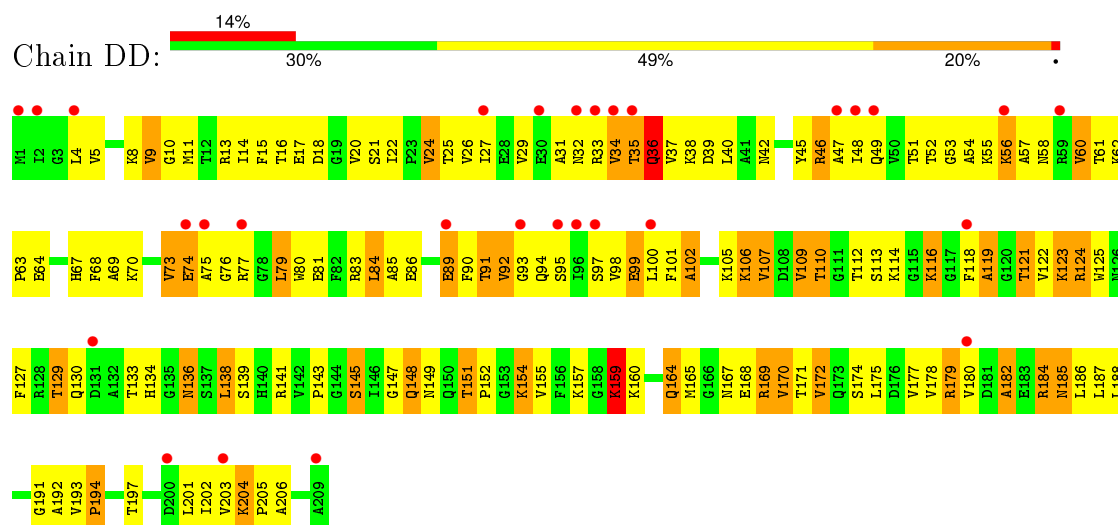
• Molecule 25: 50S ribosomal protein L2



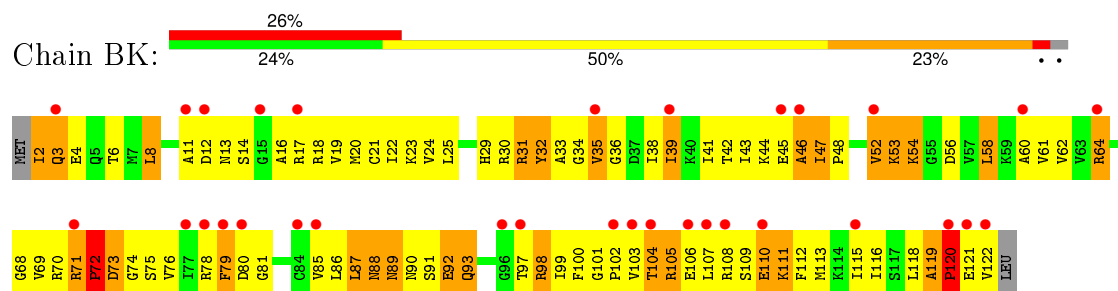
• Molecule 26: 50S ribosomal protein L3



• Molecule 26: 50S ribosomal protein L3

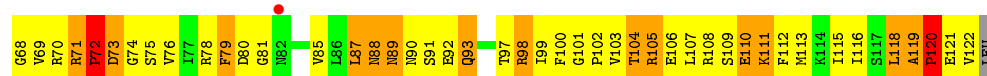
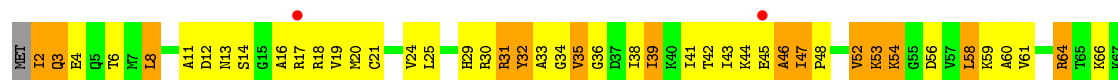


• Molecule 27: 50S ribosomal protein L14

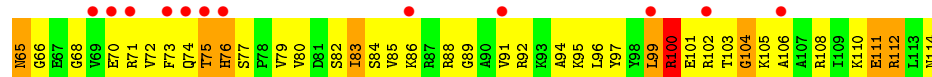
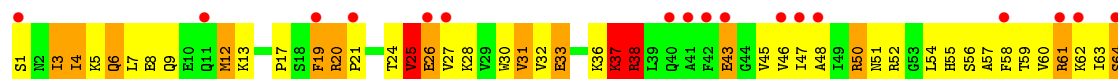


• Molecule 27: 50S ribosomal protein L14

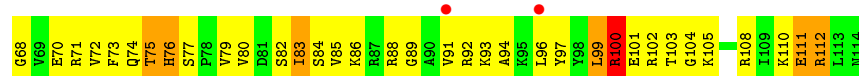
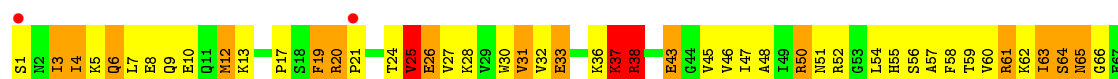




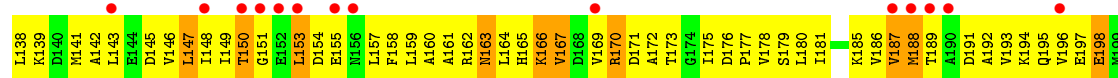
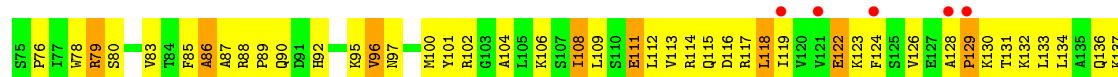
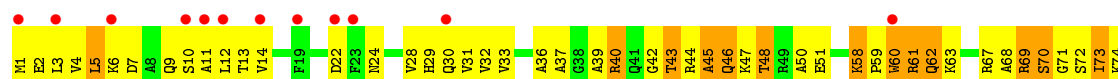
• Molecule 28: 50S ribosomal protein L19



• Molecule 28: 50S ribosomal protein L19

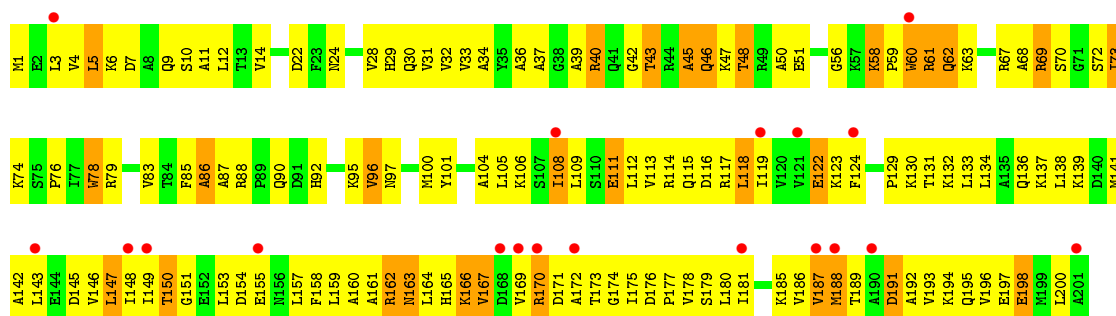


• Molecule 29: 50S ribosomal protein L4

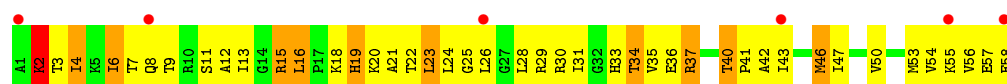


• Molecule 29: 50S ribosomal protein L4





- Molecule 30: 50S ribosomal protein L30



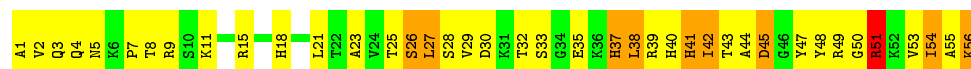
- Molecule 30: 50S ribosomal protein L30



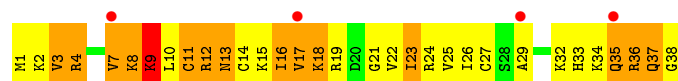
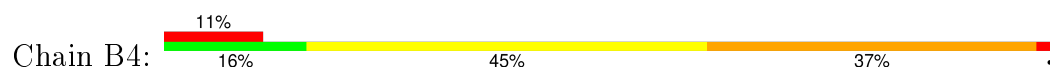
- Molecule 31: 50S ribosomal protein L32



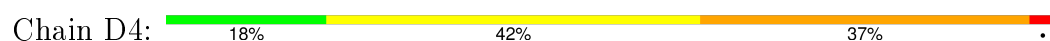
- Molecule 31: 50S ribosomal protein L32

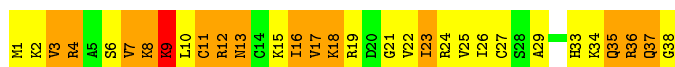


- Molecule 32: 50S ribosomal protein L36

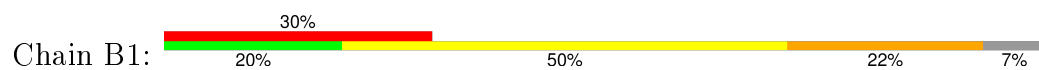


- Molecule 32: 50S ribosomal protein L36





- Molecule 33: 50S ribosomal protein L33



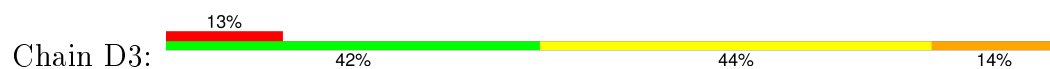
- Molecule 33: 50S ribosomal protein L33



- Molecule 34: 50S ribosomal protein L35



- Molecule 34: 50S ribosomal protein L35

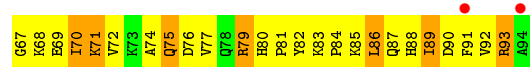


- Molecule 35: 50S ribosomal protein L25



- Molecule 35: 50S ribosomal protein L25





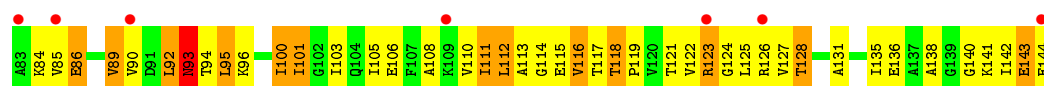
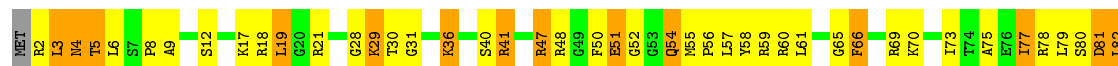
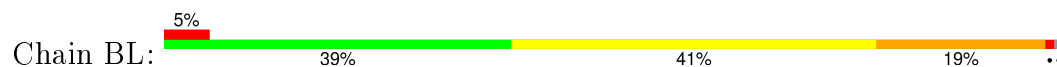
- Molecule 36: 50S ribosomal protein L34



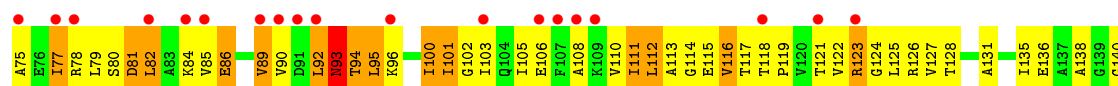
- Molecule 36: 50S ribosomal protein L34



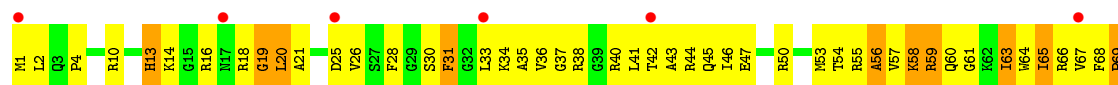
- Molecule 37: 50S ribosomal protein L15

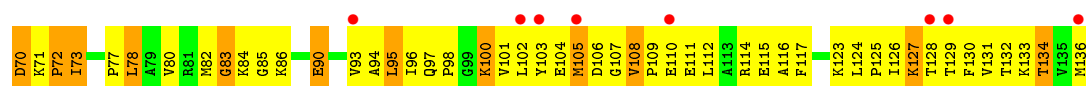


- Molecule 37: 50S ribosomal protein L15

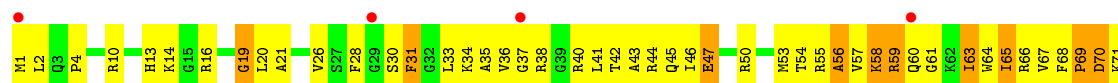


- Molecule 38: 50S ribosomal protein L16





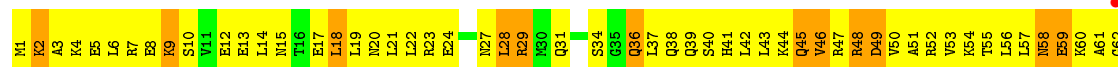
• Molecule 38: 50S ribosomal protein L16



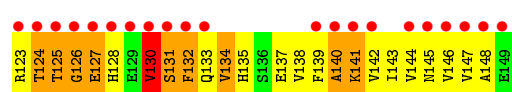
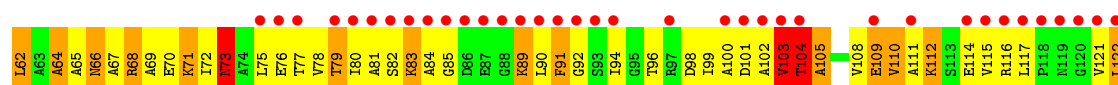
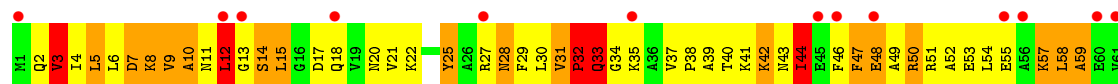
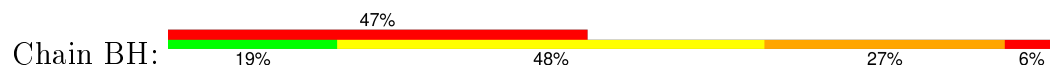
• Molecule 39: 50S ribosomal protein L29



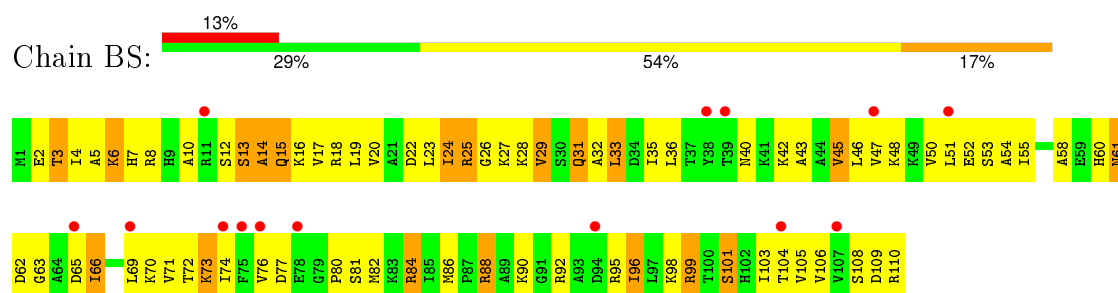
• Molecule 39: 50S ribosomal protein L29



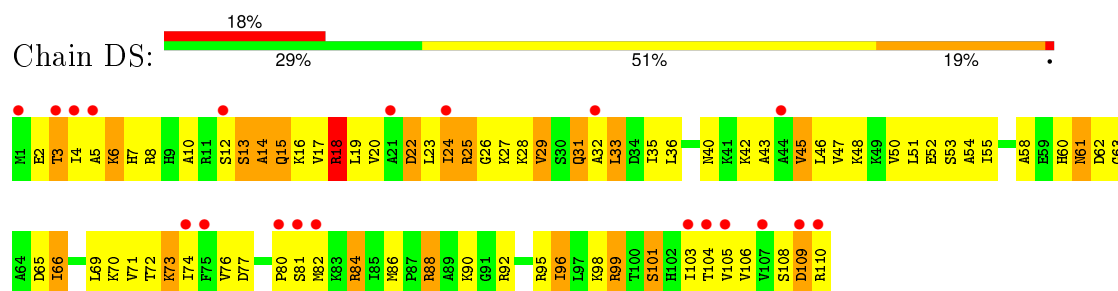
• Molecule 40: 50S ribosomal protein L9



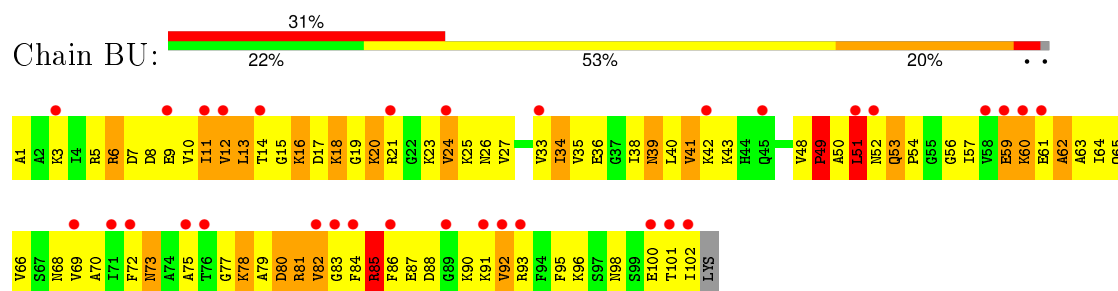
• Molecule 40: 50S ribosomal protein L9



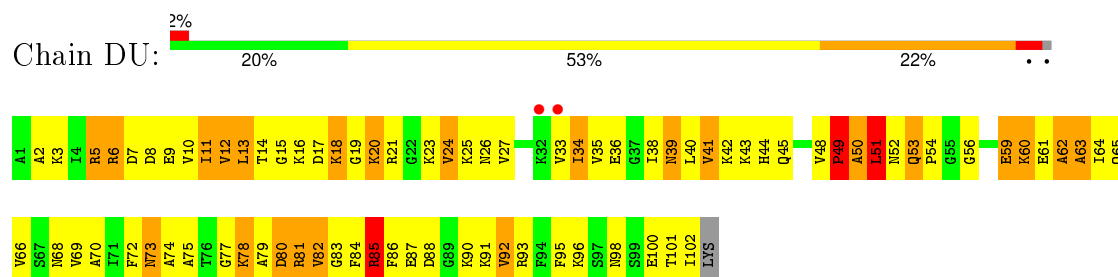
• Molecule 45: 50S ribosomal protein L22



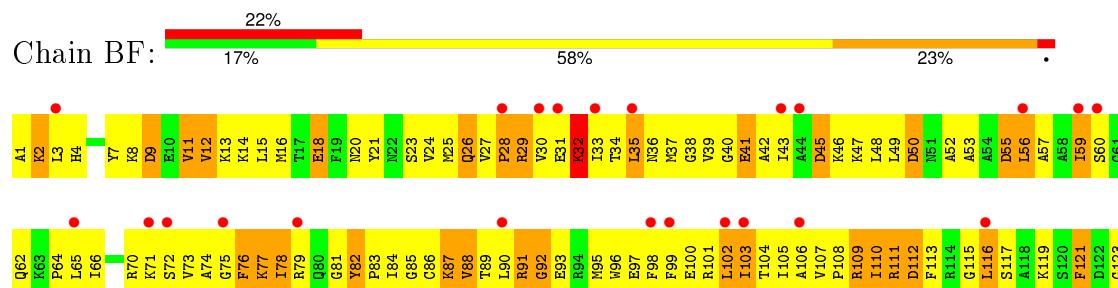
• Molecule 46: 50S ribosomal protein L24

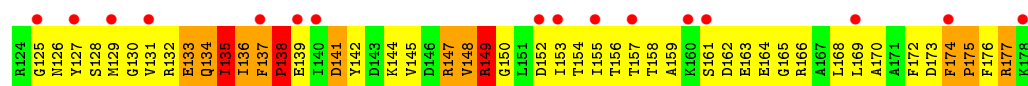


• Molecule 46: 50S ribosomal protein L24

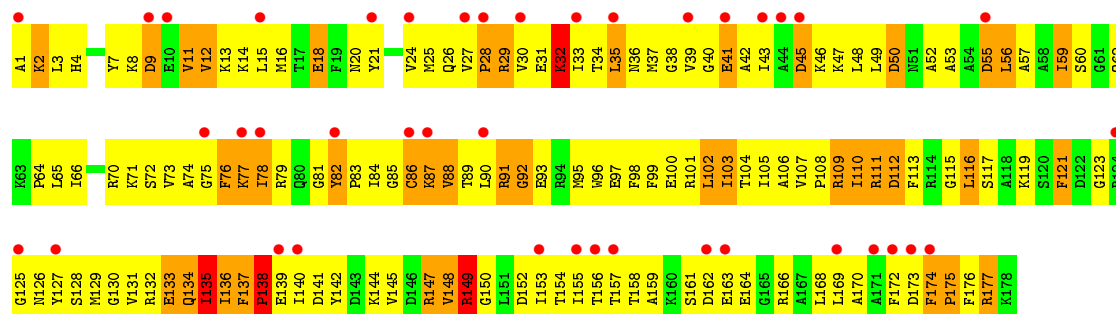


• Molecule 47: 50S ribosomal protein L5

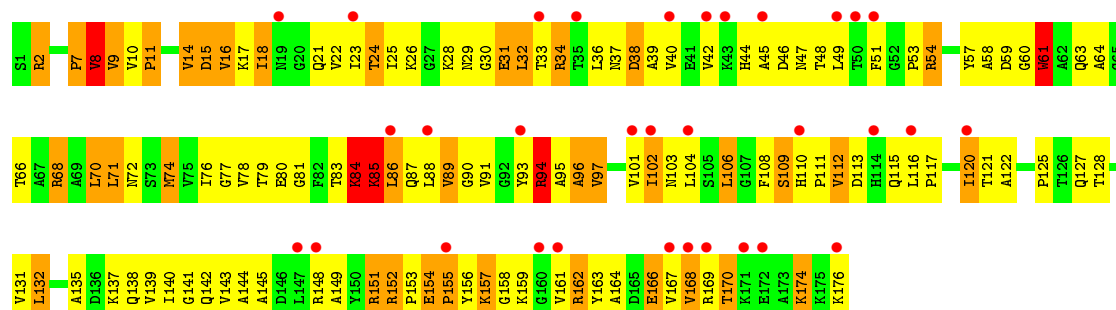




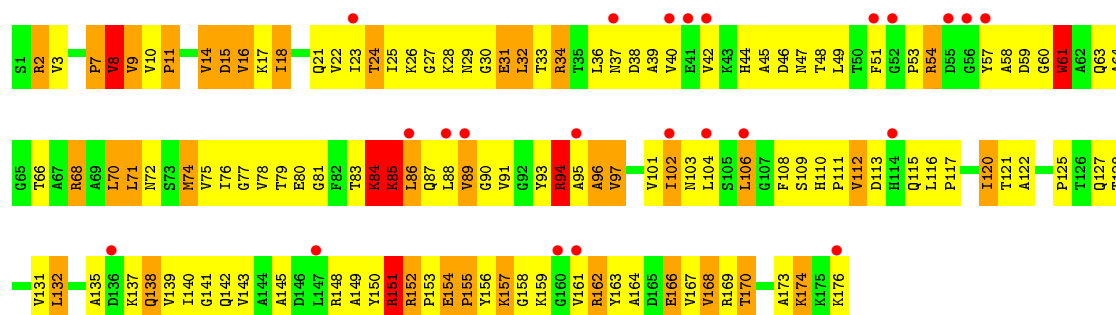
• Molecule 47: 50S ribosomal protein L5



• Molecule 48: 50S ribosomal protein L6

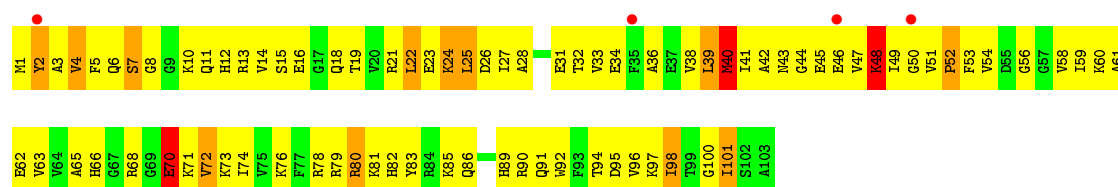


• Molecule 48: 50S ribosomal protein L6

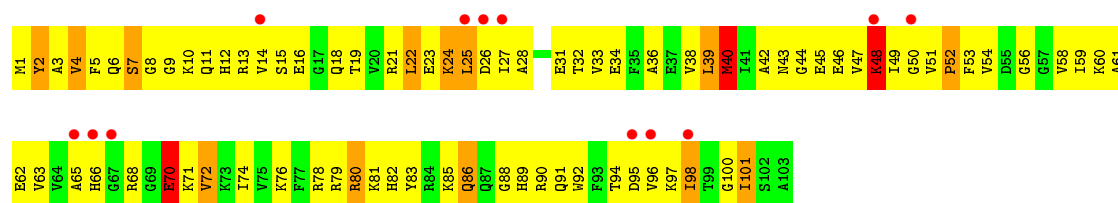


• Molecule 49: 50S ribosomal protein L21

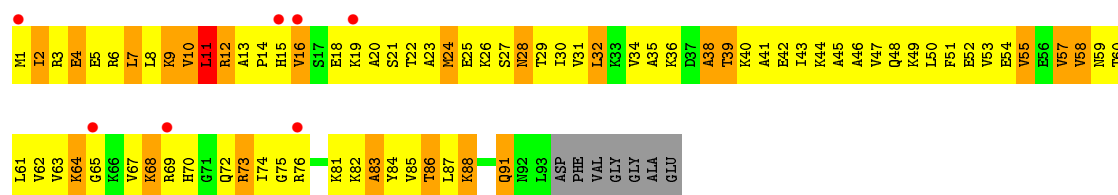
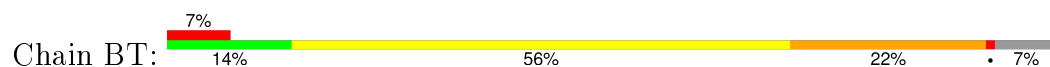




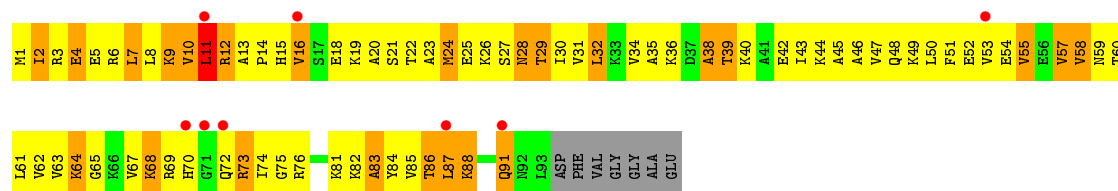
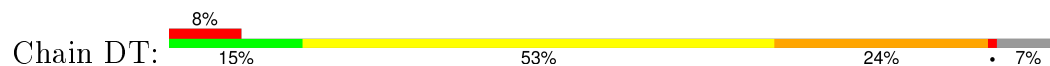
• Molecule 49: 50S ribosomal protein L21



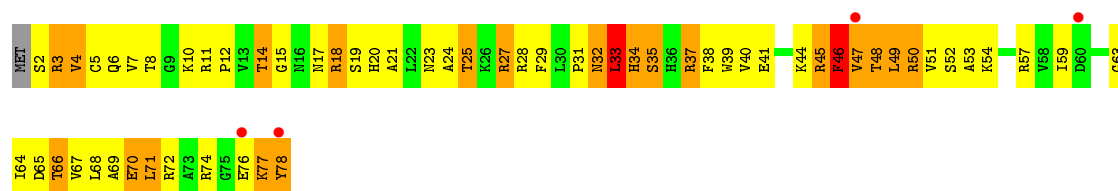
• Molecule 50: 50S ribosomal protein L23



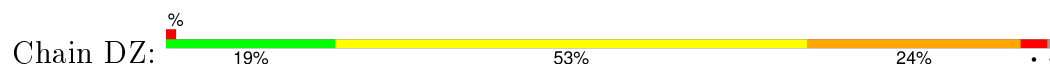
• Molecule 50: 50S ribosomal protein L23

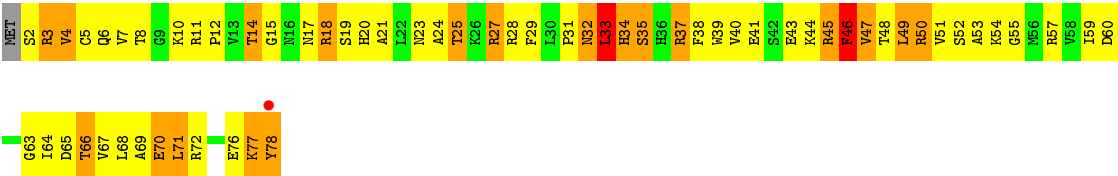


• Molecule 51: 50S ribosomal protein L28

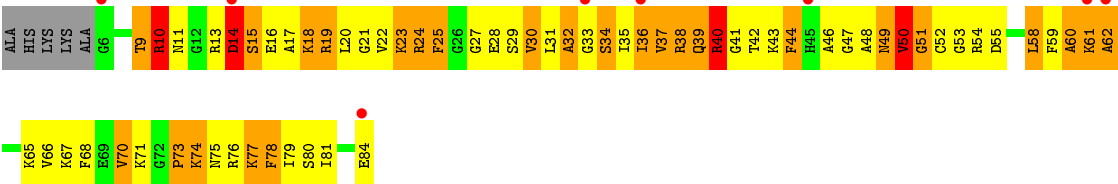
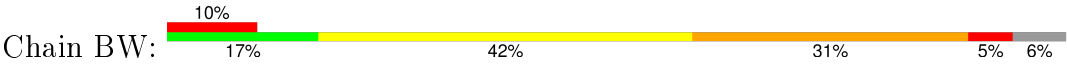


• Molecule 51: 50S ribosomal protein L28

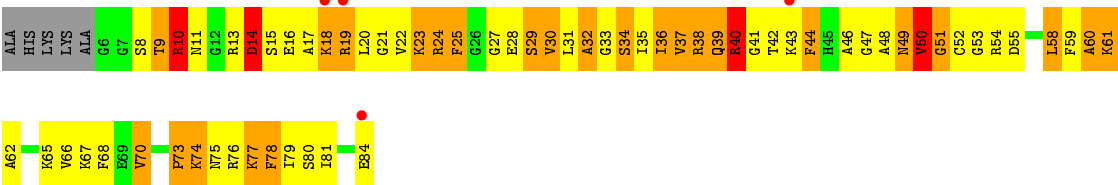
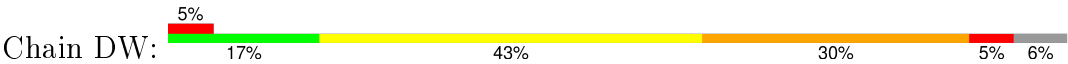




• Molecule 52: 50S ribosomal protein L27



• Molecule 52: 50S ribosomal protein L27



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.85Å 379.20Å 739.28Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.54 138.41 – 3.55	Depositor EDS
% Data completeness (in resolution range)	88.8 (70.00-3.54) 89.9 (138.41-3.55)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.69 (at 3.58Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.281 , 0.320 0.251 , 0.284	Depositor DCC
R_{free} test set	30214 reflections (5.06%)	DCC
Wilson B-factor (Å ²)	125.1	Xtriage
Anisotropy	0.234	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 61.7	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtriage
Outliers	1 of 627888 reflections (0.000%)	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	284252	wwPDB-VP
Average B, all atoms (Å ²)	66.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.39% 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	0.26	2/36762 (0.0%)	0.76	22/57350 (0.0%)
1	CA	0.26	3/36762 (0.0%)	0.76	23/57350 (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	0.45	0/1504
4	CE	0.23	0/1118	0.45	0/1504
5	AF	0.24	0/835	0.44	0/1128
5	CF	0.24	0/835	0.45	0/1128
6	AG	0.23	0/1187	0.45	0/1591
6	CG	0.23	0/1211	0.45	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	0/1034	0.46	0/1375
9	AJ	0.22	0/796	0.48	0/1077
9	CJ	0.22	0/796	0.47	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	0.48	0/1300
11	CL	0.22	0/969	0.48	0/1300
12	AM	0.21	0/892	0.46	0/1193
12	CM	0.21	0/884	0.45	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	0.22	0/722	0.47	0/964
15	AP	0.25	0/659	0.46	0/884
15	CP	0.25	0/648	0.46	0/870
16	AQ	0.24	0/657	0.46	0/881
16	CQ	0.24	0/666	0.46	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	0.46	0/877
18	CS	0.25	0/660	0.48	0/888
19	AT	0.24	0/671	0.39	0/888
19	CT	0.24	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	0.47	0/570
21	CU	0.26	0/430	0.47	0/570
22	BA	0.23	0/2803	0.74	0/4371
22	DA	0.23	0/2803	0.74	0/4371
23	BB	0.29	10/68314 (0.0%)	0.77	47/106569 (0.0%)
23	DB	0.28	9/68314 (0.0%)	0.78	58/106569 (0.1%)
24	BI	0.24	0/1046	0.46	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	0.48	0/2134
26	DD	0.24	0/1586	0.48	0/2134
27	BK	0.24	0/939	0.53	0/1258
27	DK	0.24	0/939	0.53	0/1258
28	BP	0.24	0/929	0.50	0/1242
28	DP	0.24	0/929	0.50	0/1242
29	BE	0.24	0/1571	0.50	0/2113
29	DE	0.24	0/1571	0.50	0/2113
30	BY	0.23	0/453	0.48	0/605
30	DY	0.23	0/453	0.48	0/605
31	B0	0.22	0/450	0.53	0/599
31	D0	0.22	0/450	0.53	0/599
32	B4	0.23	0/303	0.46	0/397
32	D4	0.23	0/303	0.46	0/397
33	B1	0.27	0/416	0.48	0/554
33	D1	0.27	0/416	0.48	0/554
34	B3	0.24	0/513	0.47	0/676
34	D3	0.24	0/513	0.47	0/676
35	BV	0.25	0/766	0.42	0/1025
35	DV	0.25	0/766	0.42	0/1025
36	B2	0.25	0/380	0.45	0/498
36	D2	0.25	0/380	0.45	0/498
37	BL	0.23	0/1054	0.47	0/1403
37	DL	0.24	0/1054	0.47	0/1403
38	BM	0.25	0/1093	0.47	0/1460

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DM	0.25	0/1093	0.47	0/1460
39	BX	0.24	0/510	0.52	0/677
39	DX	0.24	0/510	0.52	0/677
40	BH	0.25	0/1122	0.47	0/1515
40	DH	0.25	0/1122	0.47	0/1515
41	BJ	0.23	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	0.48	0/1209
43	DO	0.23	0/902	0.48	0/1209
44	BQ	0.25	0/960	0.47	0/1278
44	DQ	0.25	0/960	0.47	0/1278
45	BS	0.22	0/864	0.51	0/1156
45	DS	0.22	0/864	0.51	0/1156
46	BU	0.25	0/787	0.46	0/1051
46	DU	0.26	0/787	0.46	0/1051
47	BF	0.26	0/1444	0.50	0/1937
47	DF	0.26	0/1444	0.50	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	0.48	0/1107
49	DR	0.25	0/829	0.48	0/1107
50	BT	0.22	0/744	0.53	0/994
50	DT	0.22	0/744	0.54	0/994
51	BZ	0.25	0/635	0.50	0/848
51	DZ	0.25	0/635	0.50	0/848
52	BW	0.28	0/603	0.48	0/797
52	DW	0.28	0/603	0.48	0/797
All	All	0.26	24/306360 (0.0%)	0.70	150/457969 (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	15
1	CA	1	15
23	BB	0	41
23	DB	0	40
All	All	1	111

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-16.49	1.26	1.41
23	DB	1086	A	C5-C6	-16.38	1.26	1.41
23	BB	2322	A	O3'-P	14.51	1.78	1.61
23	BB	2318	G	O3'-P	-12.62	1.46	1.61
23	DB	1088	A	C6-N1	-10.61	1.28	1.35
23	BB	1088	A	C6-N1	-10.40	1.28	1.35
1	CA	1213	A	P-OP1	-8.98	1.33	1.49
1	AA	1213	A	P-OP2	-8.66	1.34	1.49
23	DB	1060	U	C2-N3	8.04	1.43	1.37
23	DB	2276	G	O3'-P	-8.01	1.51	1.61
23	BB	1060	U	C2-N3	7.86	1.43	1.37
23	DB	2280	G	O3'-P	7.60	1.70	1.61
23	BB	2276	G	O3'-P	-7.00	1.52	1.61
23	DB	1086	A	N7-C5	-6.66	1.35	1.39
23	BB	1086	A	N3-C4	-6.60	1.30	1.34
23	BB	1086	A	N7-C5	-6.59	1.35	1.39
23	BB	2280	G	O3'-P	6.58	1.69	1.61
23	DB	1086	A	N3-C4	-6.23	1.31	1.34
23	DB	2323	G	O3'-P	6.15	1.68	1.61
1	CA	1128	C	O3'-P	-5.35	1.54	1.61
23	BB	2267	A	C5-C6	-5.18	1.36	1.41
1	CA	495	A	N3-C4	-5.15	1.31	1.34
1	AA	495	A	N3-C4	-5.07	1.31	1.34
23	DB	2267	A	C5-C6	-5.05	1.36	1.41

All (150) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1213	A	O5'-P-OP1	-32.89	71.23	110.70
23	DB	2204	G	O5'-P-OP1	-29.68	75.08	110.70
1	AA	1213	A	O5'-P-OP2	-28.32	76.72	110.70
23	BB	2204	G	O5'-P-OP2	-28.25	76.80	110.70
23	BB	2791	G	O5'-P-OP1	-28.20	76.86	110.70
23	DB	2791	G	O5'-P-OP2	-27.65	77.52	110.70
23	DB	2791	G	O5'-P-OP1	17.94	132.23	110.70
23	DB	2204	G	O5'-P-OP2	17.92	132.20	110.70
23	BB	2791	G	O5'-P-OP2	17.90	132.18	110.70
23	BB	2204	G	O5'-P-OP1	17.77	132.02	110.70
23	DB	2790	U	OP2-P-O3'	14.55	137.22	105.20
23	DB	2203	U	OP1-P-O3'	14.49	137.07	105.20
23	BB	2790	U	OP1-P-O3'	14.44	136.96	105.20
23	BB	2203	U	OP2-P-O3'	14.13	136.29	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1212	U	OP1-P-O3'	-10.85	81.34	105.20
1	AA	1212	U	OP2-P-O3'	-9.32	84.69	105.20
23	BB	1552	A	N9-C1'-C2'	-9.02	102.08	112.00
23	DB	1552	A	N9-C1'-C2'	-9.01	102.09	112.00
1	CA	366	A	C2'-C3'-O3'	8.51	128.21	109.50
1	AA	366	A	C2'-C3'-O3'	8.50	128.21	109.50
23	BB	2272	U	C5-C4-O4	-8.47	120.82	125.90
23	DB	2272	U	C5-C4-O4	-8.46	120.83	125.90
1	CA	1213	A	O5'-P-OP2	8.43	120.82	110.70
23	DB	773	U	C5'-C4'-C3'	-8.41	102.54	116.00
23	DB	1088	A	N1-C6-N6	-8.30	113.62	118.60
1	AA	1213	A	O5'-P-OP1	8.30	120.66	110.70
23	BB	1088	A	N1-C6-N6	-8.29	113.63	118.60
1	CA	1212	U	OP2-P-O3'	8.26	123.38	105.20
1	AA	1212	U	OP1-P-O3'	8.23	123.30	105.20
1	CA	576	C	O5'-P-OP1	-8.05	98.45	105.70
23	BB	773	U	C5'-C4'-C3'	-7.99	103.21	116.00
1	AA	765	G	N9-C1'-C2'	-7.58	103.67	112.00
1	CA	765	G	N9-C1'-C2'	-7.56	103.68	112.00
23	DB	1350	C	C5'-C4'-C3'	-7.43	104.11	116.00
23	DB	1060	U	C5-C4-O4	-7.34	121.50	125.90
23	DB	745	G	C5'-C4'-C3'	-7.30	104.32	116.00
23	BB	1060	U	C5-C4-O4	-7.27	121.54	125.90
23	BB	1350	C	C5'-C4'-C3'	-7.20	104.47	116.00
23	DB	1439	A	N9-C1'-C2'	-7.12	104.16	112.00
23	BB	1439	A	N9-C1'-C2'	-7.07	104.23	112.00
23	BB	1086	A	C4-C5-C6	6.99	120.50	117.00
23	BB	2733	A	N9-C1'-C2'	-6.99	104.31	112.00
23	DB	2733	A	N9-C1'-C2'	-6.97	104.33	112.00
23	DB	126	A	C5'-C4'-C3'	6.96	127.14	116.00
23	DB	1086	A	C4-C5-C6	6.92	120.46	117.00
1	CA	1424	U	C5'-C4'-C3'	-6.78	105.15	116.00
23	DB	690	G	C5'-C4'-C3'	-6.75	105.20	116.00
23	DB	955	U	C5'-C4'-C3'	-6.61	105.43	116.00
23	BB	690	G	C5'-C4'-C3'	-6.57	105.49	116.00
1	AA	1409	C	C5'-C4'-C3'	-6.55	105.52	116.00
23	BB	560	C	C5'-C4'-C3'	-6.41	105.75	116.00
23	DB	1088	A	C5-C6-N6	6.41	128.82	123.70
23	BB	1088	A	C5-C6-N6	6.39	128.81	123.70
23	BB	955	U	C5'-C4'-C3'	-6.36	105.83	116.00
23	DB	2199	A	C5'-C4'-C3'	-6.35	105.84	116.00
23	BB	745	G	C5'-C4'-C3'	-6.33	105.88	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	560	C	C5'-C4'-C3'	-6.31	105.91	116.00
23	BB	1086	A	C6-C5-N7	-6.25	127.93	132.30
23	DB	1086	A	C6-C5-N7	-6.25	127.93	132.30
23	DB	1126	A	C5'-C4'-O4'	6.21	116.55	109.10
1	CA	1212	U	O3'-P-O5'	6.12	115.64	104.00
23	DB	2096	C	C5'-C4'-C3'	-6.08	106.27	116.00
23	DB	1397	U	C5'-C4'-C3'	-6.00	106.41	116.00
23	BB	2790	U	O3'-P-O5'	-5.94	92.72	104.00
23	DB	2790	U	O3'-P-O5'	-5.94	92.72	104.00
1	CA	1250	A	C5'-C4'-C3'	5.93	125.50	116.00
23	DB	2471	A	C5'-C4'-C3'	-5.90	106.56	116.00
23	DB	2203	U	O3'-P-O5'	-5.88	92.83	104.00
1	CA	232	G	C5'-C4'-C3'	-5.83	106.67	116.00
23	BB	2199	A	C5'-C4'-C3'	-5.82	106.69	116.00
23	BB	2283	C	O5'-P-OP2	-5.81	100.47	105.70
23	BB	1060	U	N1-C2-O2	-5.76	118.77	122.80
1	CA	1301	U	N1-C1'-C2'	5.76	121.48	114.00
23	DB	2267	A	C4-N9-C1'	5.74	136.63	126.30
1	AA	1301	U	N1-C1'-C2'	5.74	121.45	114.00
23	BB	401	A	C5'-C4'-C3'	5.74	125.18	116.00
23	BB	2267	A	C4-N9-C1'	5.73	136.62	126.30
23	DB	2619	C	C5'-C4'-C3'	-5.71	106.87	116.00
1	AA	438	U	N1-C1'-C2'	-5.68	105.75	112.00
23	BB	2894	G	N9-C1'-C2'	-5.68	105.76	112.00
23	DB	2894	G	N9-C1'-C2'	-5.67	105.76	112.00
23	BB	1397	U	C5'-C4'-C3'	-5.66	106.94	116.00
23	DB	2267	A	C8-N9-C1'	-5.66	117.51	127.70
23	BB	2267	A	C8-N9-C1'	-5.66	117.52	127.70
1	CA	438	U	N1-C1'-C2'	-5.65	105.78	112.00
1	AA	1250	A	C5'-C4'-C3'	5.64	125.03	116.00
23	DB	1567	G	C5'-C4'-C3'	-5.64	106.97	116.00
23	BB	2471	A	C5'-C4'-C3'	-5.64	106.98	116.00
1	CA	1432	G	N9-C1'-C2'	-5.63	105.81	112.00
23	DB	1060	U	N1-C2-O2	-5.62	118.86	122.80
1	AA	1432	G	N9-C1'-C2'	-5.61	105.83	112.00
23	BB	1869	G	N9-C1'-C2'	-5.58	105.86	112.00
23	DB	2894	G	C5'-C4'-C3'	-5.57	107.08	116.00
23	BB	2267	A	O4'-C1'-N9	-5.57	103.74	108.20
1	AA	576	C	C5'-C4'-C3'	5.57	124.91	116.00
23	BB	2267	A	C5-C6-N6	-5.56	119.25	123.70
1	AA	79	G	C4'-C3'-O3'	5.55	124.11	113.00
23	DB	2267	A	C5-C6-N6	-5.55	119.26	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	2267	A	O4'-C1'-N9	-5.54	103.77	108.20
23	DB	401	A	C5'-C4'-C3'	5.54	124.86	116.00
23	DB	1869	G	N9-C1'-C2'	-5.51	105.94	112.00
1	CA	345	C	C5'-C4'-C3'	-5.51	107.18	116.00
23	BB	2894	G	C5'-C4'-C3'	-5.50	107.20	116.00
23	BB	1086	A	C2-N3-C4	-5.50	107.85	110.60
23	BB	479	A	C4'-C3'-O3'	-5.48	97.89	109.40
1	CA	366	A	C4'-C3'-O3'	5.48	123.96	113.00
23	DB	1086	A	C2-N3-C4	-5.47	107.87	110.60
23	DB	1324	G	C5'-C4'-C3'	-5.47	107.25	116.00
23	DB	973	A	C5'-C4'-C3'	-5.45	107.28	116.00
1	AA	81	A	C1'-O4'-C4'	-5.41	105.57	109.90
23	DB	1634	A	C5'-C4'-C3'	-5.41	107.34	116.00
23	BB	1060	U	N3-C2-O2	5.41	125.99	122.20
1	CA	1534	A	C2'-C3'-O3'	-5.32	97.79	109.50
23	DB	1060	U	N3-C2-O2	5.32	125.92	122.20
23	DB	1318	U	C5'-C4'-C3'	-5.32	107.50	116.00
1	AA	1490	U	C5'-C4'-C3'	-5.30	107.52	116.00
23	BB	1567	G	C5'-C4'-C3'	-5.27	107.56	116.00
23	DB	1663	G	C5'-C4'-C3'	-5.27	107.57	116.00
23	BB	1126	A	C5'-C4'-C3'	-5.26	107.58	116.00
23	DB	1911	U	C4'-C3'-O3'	5.25	123.50	113.00
23	BB	640	C	C5'-C4'-C3'	-5.24	107.61	116.00
23	DB	1600	C	C5'-C4'-C3'	-5.24	107.61	116.00
1	AA	765	G	C4'-C3'-O3'	5.22	123.45	113.00
1	AA	1212	U	O3'-P-O5'	5.21	113.89	104.00
23	DB	1818	U	C4'-C3'-O3'	-5.21	98.47	109.40
23	DB	785	G	C5'-C4'-C3'	-5.20	107.67	116.00
23	BB	2203	U	O3'-P-O5'	-5.19	94.13	104.00
23	BB	2285	C	C5'-C4'-C3'	-5.19	107.69	116.00
1	AA	345	C	C5'-C4'-C3'	-5.16	107.74	116.00
23	DB	2283	C	P-O5'-C5'	5.16	129.15	120.90
1	AA	328	C	C2'-C3'-O3'	5.16	121.95	113.70
23	DB	2272	U	N1-C1'-C2'	-5.16	106.33	112.00
1	CA	328	C	C2'-C3'-O3'	5.15	121.94	113.70
23	DB	479	A	C4'-C3'-O3'	-5.15	98.58	109.40
23	BB	1512	C	C5'-C4'-C3'	-5.15	107.77	116.00
1	CA	845	A	N9-C1'-C2'	-5.14	106.34	112.00
23	DB	2285	C	C5'-C4'-C3'	-5.14	107.77	116.00
1	CA	1432	G	C5'-C4'-C3'	-5.13	107.79	116.00
1	CA	765	G	C4'-C3'-O3'	5.13	123.25	113.00
1	AA	845	A	N9-C1'-C2'	-5.12	106.37	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	1382	G	C5'-C4'-C3'	5.12	124.19	116.00
23	BB	2272	U	N1-C1'-C2'	-5.12	106.37	112.00
1	AA	576	C	C5'-C4'-O4'	5.09	115.21	109.10
23	DB	700	G	C5'-C4'-C3'	-5.09	107.85	116.00
1	AA	101	A	C5'-C4'-C3'	-5.07	107.89	116.00
23	BB	1818	U	C4'-C3'-O3'	-5.07	98.76	109.40
23	DB	386	G	C5'-C4'-C3'	-5.04	107.93	116.00
1	CA	40	C	C5'-C4'-C3'	-5.02	107.96	116.00
1	CA	814	A	C5'-C4'-C3'	5.02	124.03	116.00
23	DB	1552	A	C4'-C3'-O3'	5.02	123.03	113.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	CA	366	A	C3'

All (111) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1331	G	Sidechain
1	AA	1432	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	324	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	450	G	Sidechain
1	AA	462	G	Sidechain
1	AA	481	G	Sidechain
1	AA	496	A	Sidechain
1	AA	666	G	Sidechain
1	AA	703	G	Sidechain
1	AA	86	G	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	1377	G	Sidechain
23	BB	1432	G	Sidechain
23	BB	1439	A	Sidechain
23	BB	1533	C	Sidechain
23	BB	1546	G	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	1572	A	Sidechain
23	BB	1734	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	1869	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	2135	A	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2267	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	2279	G	Sidechain
23	BB	232	G	Sidechain
23	BB	2454	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2503	A	Sidechain
23	BB	2508	G	Sidechain
23	BB	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2770	G	Sidechain
23	BB	2834	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2857	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	2883	A	Sidechain
23	BB	299	A	Sidechain
23	BB	361	G	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	630	G	Sidechain
23	BB	633	A	Sidechain
23	BB	727	A	Sidechain
23	BB	729	G	Sidechain
23	BB	757	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

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Mol	Chain	Res	Type	Group
1	CA	450	G	Sidechain
1	CA	462	G	Sidechain
1	CA	481	G	Sidechain
1	CA	496	A	Sidechain
1	CA	666	G	Sidechain
1	CA	703	G	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1377	G	Sidechain
23	DB	1432	G	Sidechain
23	DB	1439	A	Sidechain
23	DB	1533	C	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1734	G	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	1869	G	Sidechain
23	DB	2062	A	Sidechain
23	DB	221	A	Sidechain
23	DB	222	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	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

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Mol	Chain	Res	Type	Group
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	1241	0
1	CA	32831	0	16521	1247	0
2	AC	1624	0	1699	150	0
2	CC	1624	0	1699	150	0
3	AD	1643	0	1710	174	0
3	CD	1643	0	1710	174	0
4	AE	1105	0	1148	94	0
4	CE	1105	0	1148	93	0
5	AF	817	0	808	99	0
5	CF	817	0	808	93	0
6	AG	1174	0	1230	105	0
6	CG	1196	0	1246	98	0
7	AH	979	0	1034	82	0
7	CH	979	0	1034	79	0
8	AI	1022	0	1070	133	0
8	CI	1022	0	1070	132	0
9	AJ	786	0	828	81	0
9	CJ	786	0	828	87	0
10	AK	877	0	887	106	0
10	CK	877	0	887	104	0
11	AL	955	0	1019	95	0
11	CL	955	0	1019	95	0
12	AM	883	0	944	107	0
12	CM	876	0	937	111	0
13	AN	774	0	827	108	0
13	CN	774	0	827	110	0
14	AO	714	0	734	47	0
14	CO	714	0	734	41	0
15	AP	649	0	666	65	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	CP	638	0	656	66	0
16	AQ	648	0	691	76	0
16	CQ	657	0	702	67	0
17	AR	455	0	478	48	0
17	CR	455	0	478	44	0
18	AS	637	0	665	87	0
18	CS	644	0	675	93	0
19	AT	665	0	714	56	0
19	CT	665	0	714	55	0
20	AB	1704	0	1732	218	0
20	CB	1704	0	1732	205	0
21	AU	425	0	449	75	0
21	CU	425	0	449	69	0
22	BA	2507	0	1270	101	0
22	DA	2507	0	1270	96	0
23	BB	60995	0	30678	2199	0
23	DB	60995	0	30677	2300	0
24	BI	1032	0	1088	106	0
24	DI	1032	0	1088	176	0
25	BC	2082	0	2157	243	0
25	DC	2082	0	2157	245	0
26	BD	1565	0	1616	196	0
26	DD	1565	0	1616	186	0
27	BK	930	0	1000	110	0
27	DK	930	0	1000	108	0
28	BP	917	0	965	111	0
28	DP	917	0	965	109	0
29	BE	1552	0	1619	165	0
29	DE	1552	0	1619	153	0
30	BY	449	0	491	54	0
30	DY	449	0	491	59	0
31	B0	444	0	461	41	0
31	D0	444	0	461	45	0
32	B4	302	0	340	40	0
32	D4	302	0	340	42	0
33	B1	409	0	440	52	0
33	D1	409	0	440	47	0
34	B3	504	0	574	53	0
34	D3	504	0	574	45	0
35	BV	753	0	780	89	0
35	DV	753	0	780	97	0
36	B2	377	0	418	31	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	D2	377	0	418	34	0
37	BL	1045	0	1117	132	0
37	DL	1045	0	1117	153	0
38	BM	1074	0	1157	117	0
38	DM	1074	0	1157	119	0
39	BX	509	0	543	71	0
39	DX	509	0	543	72	0
40	BH	1111	0	1148	197	0
40	DH	1111	0	1148	150	0
41	BJ	1129	0	1162	143	0
41	DJ	1129	0	1162	144	0
42	BN	960	0	1000	118	0
42	DN	960	0	1000	118	0
43	BO	892	0	923	88	0
43	DO	892	0	923	103	0
44	BQ	947	0	1022	144	0
44	DQ	947	0	1022	141	0
45	BS	857	0	922	83	0
45	DS	857	0	922	87	0
46	BU	779	0	834	113	0
46	DU	779	0	834	114	0
47	BF	1420	0	1460	225	0
47	DF	1420	0	1460	228	0
48	BG	1323	0	1374	189	0
48	DG	1323	0	1374	191	0
49	BR	816	0	839	109	0
49	DR	816	0	839	112	0
50	BT	738	0	807	124	0
50	DT	738	0	807	128	0
51	BZ	625	0	652	80	0
51	DZ	625	0	652	77	0
52	BW	596	0	610	128	0
52	DW	596	0	610	131	0
53	AA	60	0	0	0	0
53	BB	110	0	0	0	0
53	CA	61	0	0	0	0
53	CN	1	0	0	0	0
53	DB	111	0	0	0	0
54	AA	93	0	117	6	0
54	BB	31	0	39	1	0
54	CA	93	0	117	5	0
54	DB	31	0	39	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	AA	292	0	0	1	0
56	AE	1	0	0	0	0
56	AK	1	0	0	0	0
56	AL	2	0	0	0	0
56	AN	2	0	0	0	0
56	AT	2	0	0	0	0
56	B2	1	0	0	0	0
56	BB	492	0	0	7	0
56	BC	7	0	0	0	0
56	BE	3	0	0	0	0
56	BH	1	0	0	0	0
56	BL	3	0	0	0	0
56	CA	297	0	0	2	0
56	CE	2	0	0	0	0
56	CK	1	0	0	0	0
56	CL	2	0	0	0	0
56	CN	4	0	0	0	0
56	CT	2	0	0	0	0
56	DB	502	0	0	8	0
56	DC	4	0	0	0	0
56	DE	2	0	0	0	0
56	DL	4	0	0	0	0
All	All	284252	0	190973	16353	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 35.

All (16353) 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	1.42	1.17
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.12	1.14
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.13	1.11
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.13	1.09
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.18	1.08
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.30	1.08
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.10	1.08
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.84	1.07
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.17	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:63:CYS:HB3	13:AN:67:GLY:H	1.16	1.06
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.31	1.05
20:AB:33:ALA:HA	20:AB:38:HIS:HA	1.38	1.05
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.39	1.05
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.18	1.04
20:CB:33:ALA:HA	20:CB:38:HIS:HA	1.37	1.04
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.35	1.04
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.20	1.04
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.40	1.04
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.89	1.04
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.20	1.03
23:DB:1099:G:C8	24:DI:3:LYS:N	2.27	1.03
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.35	1.02
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.41	1.02
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.38	1.02
21:AU:16:ARG:HA	21:AU:16:ARG:HE	1.21	1.02
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.39	1.02
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.41	1.02
39:DX:28:LEU:HD13	39:DX:37:LEU:HD11	1.41	1.02
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.37	1.02
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.41	1.02
12:CM:71:GLU:HA	12:CM:74:MET:HG2	1.41	1.02
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.21	1.02
40:BH:130:VAL:HG23	40:BH:142:VAL:HB	1.42	1.01
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.42	1.01
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.41	1.01
48:BG:15:ASP:HB3	48:BG:26:LYS:H	1.22	1.01
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB2	1.41	1.01
23:DB:45:G:H5''	23:DB:46:G:H5'	1.42	1.01
21:CU:16:ARG:HE	21:CU:16:ARG:HA	1.22	1.00
23:DB:1024:G:H3'	23:DB:1025:G:H5''	1.43	1.00
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.27	1.00
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.44	1.00
39:BX:28:LEU:HD13	39:BX:37:LEU:HD11	1.44	1.00
20:AB:119:GLN:HA	20:AB:124:THR:HB	1.40	0.99
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.43	0.99
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.44	0.99
12:AM:71:GLU:HA	12:AM:74:MET:HG2	1.42	0.99
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.25	0.99
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.40	0.99
48:DG:15:ASP:HB3	48:DG:26:LYS:H	1.26	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:664:G:H22	1:AA:741:G:H1	1.07	0.99
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.45	0.98
50:BT:67:VAL:HB	50:BT:76:ARG:HG3	1.43	0.98
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.44	0.98
48:DG:8:VAL:HG11	48:DG:49:LEU:H	1.26	0.98
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.46	0.98
23:DB:2579:C:H1'	26:DD:130:GLN:HE22	1.23	0.98
3:CD:185:PRO:HB2	3:CD:190:LEU:HB2	1.46	0.98
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.29	0.97
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.43	0.97
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.28	0.97
44:DQ:63:ARG:HH22	44:DQ:96:ASP:HA	1.27	0.97
48:BG:8:VAL:HG11	48:BG:49:LEU:H	1.27	0.97
44:BQ:111:LYS:HB2	49:BR:48:LYS:HZ2	1.25	0.97
18:AS:30:LEU:H	18:AS:48:ILE:HA	1.30	0.97
40:DH:62:LEU:HG	40:DH:66:ASN:HD21	1.29	0.97
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.47	0.97
8:CI:51:LEU:HB3	8:CI:56:MET:HG2	1.43	0.97
23:BB:45:G:H5''	23:BB:46:G:H5'	1.47	0.97
1:AA:1086:U:H3	1:AA:1099:G:H22	1.02	0.97
40:DH:2:GLN:HA	40:DH:20:ASN:HA	1.46	0.97
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.47	0.97
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.28	0.97
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.47	0.96
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.48	0.96
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.44	0.96
3:AD:185:PRO:HB2	3:AD:190:LEU:HB2	1.47	0.96
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.26	0.96
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.47	0.96
44:BQ:63:ARG:HH22	44:BQ:96:ASP:HA	1.29	0.96
23:BB:2579:C:H1'	26:BD:130:GLN:HE22	1.29	0.96
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.28	0.96
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.64	0.96
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.45	0.96
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.44	0.96
20:CB:198:VAL:HG12	20:CB:200:PRO:HD3	1.48	0.95
18:CS:30:LEU:H	18:CS:48:ILE:HA	1.29	0.95
23:BB:1812:U:H1'	25:BC:43:ASN:HD21	1.26	0.95
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.26	0.95
40:DH:31:VAL:HB	40:DH:32:PRO:CD	1.96	0.95
23:BB:495:G:H21	45:BS:61:ASN:HD21	1.08	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:86:ASP:HB2	40:DH:89:LYS:HD3	1.48	0.95
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.49	0.95
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.49	0.95
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.49	0.95
23:BB:1024:G:H3'	23:BB:1025:G:H5''	1.48	0.95
40:DH:90:LEU:HB2	40:DH:123:ARG:HA	1.48	0.95
40:BH:2:GLN:HA	40:BH:20:ASN:HA	1.48	0.95
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB2	1.44	0.95
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.65	0.95
1:CA:664:G:H22	1:CA:741:G:H1	1.05	0.94
27:BK:71:ARG:HE	27:BK:71:ARG:HA	1.32	0.94
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.32	0.94
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.50	0.94
40:BH:31:VAL:HB	40:BH:32:PRO:CD	1.96	0.94
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.47	0.94
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.16	0.94
2:CC:76:ILE:HA	2:CC:83:VAL:HG23	1.47	0.94
3:AD:84:ASN:HD22	4:AE:101:GLY:HA2	1.33	0.94
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.49	0.93
50:DT:67:VAL:HB	50:DT:76:ARG:HG3	1.47	0.93
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.50	0.93
23:DB:1099:G:H8	24:DI:3:LYS:H	1.10	0.93
23:BB:877:A:H2'	23:BB:899:A:N1	1.84	0.93
20:AB:202:ASN:HD22	20:AB:204:ASP:H	1.16	0.93
8:AI:25:GLY:HA3	8:AI:57:VAL:HA	1.48	0.93
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.34	0.93
1:AA:532:A:H62	2:AC:191:THR:HB	1.31	0.93
23:BB:136:G:H2'	23:BB:137:U:C6	2.04	0.93
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.49	0.93
19:CT:43:LYS:HE2	19:CT:44:ALA:H	1.34	0.93
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.48	0.93
23:BB:858:G:N3	23:BB:2268:A:H2'	1.83	0.92
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.51	0.92
1:AA:79:G:H2'	1:AA:80:A:H8	1.34	0.92
44:DQ:4:LYS:HE2	44:DQ:7:VAL:HG22	1.52	0.92
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.50	0.92
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.34	0.92
23:DB:858:G:N3	23:DB:2268:A:H2'	1.84	0.92
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.84	0.92
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.50	0.92
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.47	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.35	0.92
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.52	0.92
1:CA:1532:U:H2'	1:CA:1533:C:H5''	1.50	0.91
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.16	0.91
44:DQ:111:LYS:HB2	49:DR:48:LYS:HZ2	1.32	0.91
23:BB:704:G:H2'	23:BB:726:G:H22	1.36	0.91
23:BB:2502:G:H5'	23:BB:2503:A:H5''	1.51	0.91
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.49	0.91
50:BT:29:THR:HA	50:BT:86:THR:HA	1.52	0.91
1:CA:243:A:H4'	1:CA:244:U:H5'	1.52	0.91
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.50	0.91
23:DB:2266:A:H4'	23:DB:2267:A:N7	1.85	0.91
23:BB:2266:A:H4'	23:BB:2267:A:N7	1.84	0.91
23:DB:27:G:H22	23:DB:512:G:H2'	1.34	0.91
27:DK:71:ARG:HA	27:DK:71:ARG:HE	1.33	0.91
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.16	0.91
23:DB:2366:A:H4'	52:DW:61:LYS:HE2	1.53	0.91
23:DB:79:C:HO2'	23:DB:346:A:H8	1.19	0.91
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.52	0.91
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.36	0.91
1:CA:1086:U:H3	1:CA:1099:G:H22	0.99	0.90
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.35	0.90
26:BD:106:LYS:HB3	26:BD:206:ALA:N	1.85	0.90
44:BQ:4:LYS:HE2	44:BQ:7:VAL:HG22	1.51	0.90
23:DB:704:G:H2'	23:DB:726:G:H22	1.35	0.90
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.35	0.90
50:BT:11:LEU:HD22	50:BT:11:LEU:H	1.35	0.90
50:DT:11:LEU:H	50:DT:11:LEU:HD22	1.36	0.90
9:CJ:53:ILE:HG22	9:CJ:61:ALA:HB1	1.53	0.90
23:DB:1175:A:H3'	23:DB:1176:U:H5'	1.53	0.90
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.53	0.90
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.36	0.90
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.34	0.90
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.53	0.90
23:BB:322:A:H2'	29:BE:163:ASN:HD21	1.37	0.90
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.37	0.90
3:CD:160:LEU:H	3:CD:160:LEU:HD13	1.37	0.90
42:BN:83:LEU:HA	42:BN:86:ARG:HG3	1.51	0.89
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.53	0.89
25:BC:180:MET:HB3	25:BC:267:VAL:HG23	1.55	0.89
16:CQ:3:LYS:HZ3	16:CQ:4:ILE:H	1.20	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:2:ARG:HG2	42:BN:5:LYS:HB2	1.54	0.89
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.53	0.89
25:DC:64:VAL:O	25:DC:65:ASP:HB3	1.72	0.89
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.37	0.89
26:DD:106:LYS:HB3	26:DD:206:ALA:N	1.85	0.89
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.38	0.89
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.53	0.89
23:DB:1060:U:N3	23:DB:1088:A:N7	2.21	0.89
47:BF:135:ILE:HD11	47:BF:137:PHE:HB3	1.55	0.89
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.37	0.89
25:BC:64:VAL:O	25:BC:65:ASP:HB3	1.70	0.89
3:CD:84:ASN:HD22	4:CE:101:GLY:HA2	1.36	0.89
23:DB:1244:A:H5''	37:DL:8:PRO:HD3	1.54	0.89
39:DX:37:LEU:HD23	39:DX:39:GLN:H	1.37	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
37:BL:82:LEU:HD23	37:BL:90:VAL:HG21	1.55	0.89
42:DN:83:LEU:HA	42:DN:86:ARG:HG3	1.53	0.89
26:DD:5:VAL:H	26:DD:32:ASN:HD21	0.93	0.88
23:BB:27:G:H22	23:BB:512:G:H2'	1.34	0.88
39:DX:12:GLU:HA	39:DX:15:ASN:HD21	1.38	0.88
23:DB:281:C:H2'	23:DB:282:A:C8	2.08	0.88
5:AF:62:MET:HG3	5:AF:64:VAL:HG23	1.55	0.88
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.35	0.88
26:BD:5:VAL:H	26:BD:32:ASN:HD21	0.90	0.88
23:DB:2502:G:H5'	23:DB:2503:A:H5''	1.55	0.88
39:BX:12:GLU:HA	39:BX:15:ASN:HD21	1.38	0.88
19:AT:43:LYS:HE2	19:AT:44:ALA:H	1.37	0.88
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.55	0.88
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.56	0.88
23:BB:2653:U:H3'	23:BB:2654:A:H2'	1.54	0.88
23:DB:495:G:H21	45:DS:61:ASN:HD21	1.14	0.88
1:AA:79:G:H2'	1:AA:80:A:C8	2.08	0.88
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.56	0.88
49:DR:8:GLY:HA3	49:DR:23:GLU:HB2	1.56	0.88
48:DG:8:VAL:HG21	48:DG:49:LEU:HB2	1.56	0.88
50:DT:29:THR:HA	50:DT:86:THR:HA	1.55	0.88
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.56	0.88
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.38	0.88
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.56	0.88
45:BS:73:LYS:HE3	45:BS:74:ILE:H	1.39	0.88
47:DF:135:ILE:HD11	47:DF:137:PHE:HB3	1.52	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:37:LEU:HD23	39:BX:39:GLN:H	1.37	0.88
28:DP:26:GLU:HG3	28:DP:43:GLU:HG2	1.55	0.88
25:DC:180:MET:HB3	25:DC:267:VAL:HG23	1.56	0.87
1:AA:68:G:H5'	1:AA:171:A:H1'	1.54	0.87
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.90	0.87
45:DS:73:LYS:HE3	45:DS:74:ILE:H	1.39	0.87
23:DB:1099:G:H5''	24:DI:3:LYS:N	1.90	0.87
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.55	0.87
40:DH:46:PHE:HA	40:DH:50:ARG:HH21	1.37	0.87
23:DB:547:A:H5'	23:DB:548:G:H21	1.40	0.87
52:DW:39:GLN:HE21	52:DW:42:THR:HB	1.39	0.87
18:AS:18:VAL:HG21	18:AS:43:MET:HG2	1.55	0.87
2:CC:128:MET:HB2	2:CC:131:ARG:HB2	1.57	0.87
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.54	0.87
23:BB:495:G:N2	45:BS:61:ASN:HD21	1.71	0.87
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.72	0.87
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.38	0.87
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	1.57	0.87
18:CS:18:VAL:HG21	18:CS:43:MET:HG2	1.57	0.87
23:DB:1099:G:P	24:DI:3:LYS:HA	2.15	0.87
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.53	0.87
37:DL:82:LEU:HD23	37:DL:90:VAL:HG21	1.57	0.86
49:BR:7:SER:HB2	49:BR:22:LEU:HB3	1.57	0.86
51:BZ:38:PHE:HE2	51:BZ:51:VAL:HG21	1.38	0.86
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.86
1:CA:120:A:H2'	1:CA:121:U:H5''	1.57	0.86
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.36	0.86
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.58	0.86
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.39	0.86
18:CS:51:HIS:HA	18:CS:56:HIS:HA	1.56	0.86
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.58	0.86
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.21	0.86
18:AS:51:HIS:HA	18:AS:56:HIS:HA	1.57	0.86
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	1.58	0.86
49:DR:2:TYR:HB2	49:DR:42:ALA:HB2	1.57	0.86
3:CD:60:VAL:HB	3:CD:194:ILE:HD11	1.58	0.86
1:AA:243:A:H4'	1:AA:244:U:H5'	1.54	0.86
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.56	0.86
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.74	0.86
23:DB:742:A:H2'	23:DB:743:A:H8	1.40	0.86
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.58	0.86
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.57	0.86
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.55	0.86
23:DB:2653:U:H3'	23:DB:2654:A:H2'	1.58	0.86
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.76	0.86
40:BH:116:ARG:H	40:BH:130:VAL:HG12	1.41	0.86
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.21	0.86
8:CI:55:ASP:HB2	8:CI:59:LYS:HE3	1.57	0.86
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	1.58	0.85
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.57	0.85
49:DR:7:SER:HB2	49:DR:22:LEU:HB3	1.59	0.85
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.37	0.85
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.57	0.85
3:AD:60:VAL:HB	3:AD:194:ILE:HD11	1.58	0.85
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.57	0.85
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.58	0.85
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.42	0.85
1:CA:1250:A:H4'	8:CI:69:GLY:H	1.40	0.85
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.58	0.85
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.74	0.85
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.40	0.85
51:DZ:38:PHE:HE2	51:DZ:51:VAL:HG21	1.41	0.85
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.56	0.85
19:CT:60:GLN:HB3	19:CT:65:LEU:HD23	1.57	0.85
37:DL:29:LYS:HG3	37:DL:30:THR:HG23	1.58	0.85
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.58	0.85
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.75	0.85
40:BH:5:LEU:HD12	40:BH:17:ASP:HB2	1.56	0.85
2:AC:128:MET:HB2	2:AC:131:ARG:HB2	1.56	0.85
50:DT:15:HIS:H	50:DT:32:LEU:HA	1.40	0.85
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	1.58	0.85
21:CU:43:GLU:HG3	21:CU:44:ARG:HH21	1.42	0.85
28:BP:26:GLU:HG3	28:BP:43:GLU:HG2	1.59	0.85
48:BG:8:VAL:HG21	48:BG:49:LEU:HB2	1.56	0.85
6:CG:130:LYS:H	6:CG:134:VAL:HG21	1.40	0.85
40:DH:5:LEU:HD12	40:DH:17:ASP:HB2	1.59	0.85
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.91	0.85
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.58	0.85
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.59	0.85
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.74	0.85
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:75:THR:HG23	28:DP:76:HIS:H	1.42	0.84
23:DB:1911:U:H2'	23:DB:1918:A:N1	1.92	0.84
23:BB:1060:U:OP2	24:BI:74:PRO:HA	1.77	0.84
23:DB:2720:U:H5''	28:DP:52:ARG:NH2	1.92	0.84
19:AT:60:GLN:HB3	19:AT:65:LEU:HD23	1.59	0.84
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.59	0.84
10:CK:14:GLN:HA	10:CK:77:GLY:HA3	1.57	0.84
23:DB:855:G:N2	52:DW:23:LYS:HG2	1.91	0.84
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.75	0.84
28:BP:75:THR:HG23	28:BP:76:HIS:H	1.42	0.84
10:CK:92:ARG:HH11	21:CU:20:ARG:HH21	1.26	0.84
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.59	0.84
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.41	0.84
37:BL:29:LYS:HG3	37:BL:30:THR:HG23	1.59	0.84
10:AK:110:THR:HG22	21:AU:4:LYS:HA	1.58	0.84
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.42	0.84
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.58	0.84
42:DN:2:ARG:HG2	42:DN:5:LYS:HB2	1.59	0.84
1:AA:1250:A:H4'	8:AI:69:GLY:H	1.43	0.84
10:AK:14:GLN:HA	10:AK:77:GLY:HA3	1.59	0.84
52:DW:50:VAL:HG23	52:DW:61:LYS:HD3	1.60	0.84
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.77	0.84
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.78	0.84
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.58	0.84
5:CF:62:MET:HG3	5:CF:64:VAL:HG23	1.60	0.84
23:DB:2179:C:H2'	23:DB:2179:C:O2	1.78	0.84
50:BT:15:HIS:H	50:BT:32:LEU:HA	1.41	0.84
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.59	0.84
44:DQ:65:ASN:HD21	44:DQ:69:ARG:HH11	1.22	0.84
8:AI:55:ASP:HB2	8:AI:59:LYS:HE3	1.60	0.84
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.60	0.84
35:DV:14:LYS:HE2	35:DV:18:ARG:HH21	1.41	0.84
23:DB:90:U:H3'	23:DB:91:A:H5''	1.59	0.84
24:DI:27:LEU:HD23	24:DI:27:LEU:H	1.43	0.83
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.60	0.83
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.40	0.83
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.41	0.83
16:AQ:3:LYS:HZ3	16:AQ:4:ILE:H	1.26	0.83
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.43	0.83
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.60	0.83
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.14	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.60	0.83
6:AG:104:VAL:HG12	6:AG:108:ARG:HD2	1.60	0.83
44:BQ:65:ASN:HD21	44:BQ:69:ARG:HH11	1.26	0.83
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.43	0.83
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.58	0.83
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.13	0.83
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	1.60	0.83
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.58	0.83
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.44	0.83
27:BK:41:ILE:HG13	27:BK:42:THR:N	1.93	0.83
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.59	0.83
5:AF:90:MET:HG2	17:AR:60:ARG:HH21	1.44	0.83
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.60	0.83
5:CF:90:MET:HG2	17:CR:60:ARG:HH21	1.44	0.83
51:BZ:35:SER:HB3	51:BZ:50:ARG:HG3	1.57	0.83
23:DB:675:A:H4'	29:DE:62:GLN:HE22	1.44	0.83
22:BA:32:U:H4'	22:BA:52:A:H62	1.43	0.83
23:DB:161:A:H3'	23:DB:162:U:H5''	1.61	0.83
1:AA:120:A:H2'	1:AA:121:U:H5''	1.59	0.83
9:AJ:17:LEU:HD22	9:AJ:96:VAL:HG13	1.58	0.83
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.44	0.83
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.60	0.83
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	1.61	0.83
1:CA:60:A:H4'	1:CA:61:G:H5'	1.58	0.83
13:CN:30:ILE:HG21	13:CN:44:VAL:HG21	1.61	0.83
23:DB:1099:G:P	24:DI:4:VAL:H	2.01	0.83
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.83
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.43	0.83
23:BB:2144:G:N2	23:BB:2147:A:H4'	1.93	0.83
36:D2:21:ARG:HD3	36:D2:43:THR:HG21	1.61	0.83
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.61	0.83
23:DB:404:A:H4'	23:DB:405:U:H5'	1.61	0.83
15:AP:28:ARG:HD2	15:AP:29:ASN:H	1.43	0.83
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.43	0.82
6:AG:130:LYS:H	6:AG:134:VAL:HG21	1.42	0.82
23:BB:1244:A:H5''	37:BL:8:PRO:HD3	1.59	0.82
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.60	0.82
1:CA:981:U:H4'	13:CN:60:ARG:HD2	1.59	0.82
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.61	0.82
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.61	0.82
51:BZ:33:LEU:HA	51:BZ:52:SER:HA	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:14:LYS:HE2	35:BV:18:ARG:HH21	1.43	0.82
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.13	0.82
23:DB:2073:C:H5''	25:DC:227:VAL:HG12	1.59	0.82
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.61	0.82
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.60	0.82
29:DE:145:ASP:HA	29:DE:166:LYS:HB3	1.61	0.82
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.44	0.82
17:CR:51:GLN:HA	17:CR:51:GLN:HE21	1.42	0.82
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.61	0.82
32:B4:17:VAL:HG12	32:B4:18:LYS:H	1.44	0.82
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	1.93	0.82
23:BB:28:A:H61	23:BB:512:G:H1'	1.44	0.82
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.59	0.82
23:DB:28:A:H61	23:DB:512:G:H1'	1.43	0.82
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.82
23:DB:142:A:H2'	23:DB:143:C:C6	2.15	0.82
36:B2:21:ARG:HD3	36:B2:43:THR:HG21	1.60	0.82
23:BB:404:A:H4'	23:BB:405:U:H5'	1.61	0.82
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.62	0.82
51:BZ:64:ILE:H	51:BZ:64:ILE:HD12	1.44	0.82
13:CN:26:LEU:HD23	13:CN:27:LYS:H	1.45	0.82
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.62	0.82
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.60	0.82
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.60	0.82
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.44	0.82
23:BB:1338:G:H4'	50:BT:18:GLU:HG3	1.61	0.82
51:DZ:35:SER:HB3	51:DZ:50:ARG:HG3	1.58	0.82
30:BY:16:LEU:H	30:BY:16:LEU:HD22	1.45	0.82
1:CA:974:A:H4'	1:CA:975:A:H5'	1.61	0.82
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.45	0.82
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.45	0.82
10:CK:52:ARG:HH12	10:CK:56:LYS:HE3	1.45	0.82
46:BU:49:PRO:HA	46:BU:53:GLN:HG3	1.61	0.82
32:D4:17:VAL:HG12	32:D4:18:LYS:H	1.44	0.82
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.59	0.82
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.60	0.82
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.45	0.82
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.45	0.82
15:CP:28:ARG:HD2	15:CP:29:ASN:H	1.43	0.82
21:CU:40:PRO:HA	21:CU:44:ARG:HD2	1.62	0.81
47:BF:30:VAL:HG21	47:BF:96:TRP:HE1	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:41:ILE:HG13	27:DK:42:THR:N	1.93	0.81
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.60	0.81
23:BB:2073:C:H5''	25:BC:227:VAL:HG12	1.62	0.81
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.45	0.81
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.93	0.81
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.61	0.81
38:DM:134:THR:HG22	38:DM:136:MET:H	1.45	0.81
50:DT:11:LEU:HA	50:DT:34:VAL:HG12	1.62	0.81
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.43	0.81
52:BW:50:VAL:HG23	52:BW:61:LYS:HD3	1.62	0.81
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.60	0.81
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.45	0.81
23:DB:495:G:N2	45:DS:61:ASN:HD21	1.77	0.81
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.62	0.81
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.43	0.81
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.43	0.81
6:AG:115:MET:HA	6:AG:118:ARG:HD2	1.62	0.81
51:DZ:64:ILE:HD12	51:DZ:64:ILE:H	1.43	0.81
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.45	0.81
1:AA:1399:C:H4'	1:AA:1400:C:H5''	1.62	0.81
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.16	0.81
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.62	0.81
37:BL:80:SER:HA	37:BL:115:GLU:HB2	1.63	0.81
51:DZ:33:LEU:HA	51:DZ:52:SER:HA	1.61	0.81
23:BB:742:A:H2'	23:BB:743:A:H8	1.45	0.81
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.79	0.81
52:BW:39:GLN:HE21	52:BW:42:THR:HB	1.44	0.81
46:BU:85:ARG:HD3	46:BU:86:PHE:N	1.95	0.81
23:DB:359:G:H2'	23:DB:360:U:H5'	1.62	0.81
22:DA:32:U:H4'	22:DA:52:A:H62	1.44	0.81
23:BB:90:U:H3'	23:BB:91:A:H5''	1.59	0.81
40:BH:79:THR:HB	40:BH:145:ASN:HB2	1.63	0.81
2:AC:190:THR:HG22	2:AC:191:THR:H	1.45	0.81
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.63	0.81
23:BB:280:U:H2'	23:BB:281:C:C6	2.15	0.81
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	1.94	0.81
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.44	0.81
46:BU:14:THR:HB	46:BU:68:ASN:HB3	1.63	0.81
10:AK:92:ARG:HH11	21:AU:20:ARG:HH21	1.29	0.81
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.63	0.81
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.81	0.81
47:DF:128:SER:HB3	47:DF:154:THR:HG23	1.60	0.81
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.80	0.81
23:BB:287:G:H2'	23:BB:288:U:C6	2.16	0.81
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.62	0.81
46:DU:85:ARG:HD3	46:DU:86:PHE:N	1.95	0.81
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.63	0.81
1:CA:932:C:H5''	6:CG:3:ARG:HG2	1.61	0.81
40:BH:82:SER:H	40:BH:146:VAL:HG22	1.45	0.81
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.60	0.81
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.46	0.81
17:AR:51:GLN:HA	17:AR:51:GLN:HE21	1.44	0.81
23:BB:2720:U:H5''	28:BP:52:ARG:NH2	1.96	0.81
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	1.95	0.80
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.63	0.80
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.62	0.80
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.46	0.80
18:AS:31:ARG:HA	18:AS:49:ALA:HB3	1.61	0.80
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.80	0.80
40:BH:49:ALA:HA	40:BH:52:ALA:HB3	1.62	0.80
2:CC:70:ALA:HA	2:CC:105:VAL:HG21	1.62	0.80
10:AK:83:VAL:HB	10:AK:109:ILE:HA	1.62	0.80
18:CS:31:ARG:HA	18:CS:49:ALA:HB3	1.60	0.80
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.62	0.80
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.61	0.80
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.44	0.80
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.64	0.80
40:BH:147:VAL:HG12	40:BH:148:ALA:H	1.46	0.80
21:AU:43:GLU:HG3	21:AU:44:ARG:HH21	1.44	0.80
38:BM:134:THR:HG22	38:BM:136:MET:H	1.46	0.80
26:DD:184:ARG:HG3	26:DD:186:LEU:HB2	1.63	0.80
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.64	0.80
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.64	0.80
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.62	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
23:BB:2355:G:H4'	52:BW:20:LEU:HD13	1.64	0.80
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.44	0.80
13:AN:55:SER:HB2	13:AN:58:ARG:HD2	1.62	0.80
23:DB:138:U:O3'	23:DB:139:U:H3'	1.81	0.80
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.64	0.80
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.82	0.80
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.44	0.80
23:DB:1099:G:H5''	24:DI:2:LYS:C	2.01	0.80
45:DS:66:ILE:H	45:DS:66:ILE:HD13	1.45	0.80
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.47	0.80
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.64	0.80
30:DY:16:LEU:H	30:DY:16:LEU:HD22	1.46	0.79
30:BY:6:ILE:HG21	30:BY:47:ILE:HD12	1.64	0.79
20:AB:61:SER:HB2	20:AB:62:ARG:HH11	1.48	0.79
33:B1:49:LYS:HG3	33:B1:50:GLU:H	1.46	0.79
1:AA:93:U:H5''	1:AA:94:G:OP2	1.82	0.79
20:CB:156:LEU:HD12	20:CB:156:LEU:H	1.46	0.79
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	1.62	0.79
26:BD:105:LYS:HD2	26:BD:177:VAL:HG22	1.64	0.79
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.64	0.79
47:DF:30:VAL:HG21	47:DF:96:TRP:HE1	1.48	0.79
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.30	0.79
15:AP:54:LEU:HD22	15:AP:80:LYS:HE2	1.64	0.79
44:DQ:91:ARG:HH12	49:DR:10:LYS:HB3	1.47	0.79
23:DB:742:A:H2'	23:DB:743:A:C8	2.16	0.79
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.44	0.79
4:CE:81:GLN:HG2	4:CE:148:SER:HA	1.63	0.79
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.62	0.79
20:AB:156:LEU:HD12	20:AB:156:LEU:H	1.46	0.79
23:BB:2269:G:H4'	52:BW:19:ARG:HH12	1.47	0.79
23:BB:1082:U:C4	23:BB:1086:A:C2	2.70	0.79
16:AQ:56:ASP:HA	16:AQ:81:ALA:HB2	1.62	0.79
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.64	0.79
23:BB:27:G:N2	23:BB:512:G:H2'	1.98	0.79
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.46	0.79
1:CA:17:U:H2'	1:CA:18:C:C6	2.16	0.79
13:AN:26:LEU:HD23	13:AN:27:LYS:H	1.46	0.79
23:BB:2366:A:H4'	52:BW:61:LYS:HE2	1.63	0.79
10:CK:83:VAL:HB	10:CK:109:ILE:HA	1.62	0.79
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.63	0.79
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.64	0.79
18:CS:10:ILE:HG22	18:CS:38:THR:H	1.48	0.79
23:BB:161:A:H3'	23:BB:162:U:H5''	1.62	0.79
46:DU:14:THR:HB	46:DU:68:ASN:HB3	1.63	0.79
30:DY:6:ILE:HG21	30:DY:47:ILE:HD12	1.63	0.79
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:4:ILE:HB	33:D1:27:ARG:HG3	1.65	0.79
23:DB:1098:A:H2'	24:DI:4:VAL:N	1.98	0.79
13:AN:30:ILE:HG21	13:AN:44:VAL:HG21	1.63	0.79
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.65	0.79
13:CN:55:SER:HB2	13:CN:58:ARG:HD2	1.63	0.79
35:DV:42:LEU:H	35:DV:42:LEU:HD23	1.47	0.79
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.63	0.79
23:DB:1082:U:C4	23:DB:1086:A:C2	2.71	0.79
13:AN:63:CYS:HB3	13:AN:67:GLY:N	1.97	0.79
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.62	0.79
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.63	0.79
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.47	0.79
37:DL:80:SER:HA	37:DL:115:GLU:HB2	1.63	0.79
33:B1:4:ILE:HB	33:B1:27:ARG:HG3	1.65	0.79
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.63	0.79
13:CN:68:ARG:HH11	13:CN:68:ARG:HB3	1.47	0.79
19:AT:4:LYS:HD2	19:AT:5:SER:H	1.48	0.79
23:BB:278:A:H3'	23:BB:278:A:OP2	1.82	0.79
37:BL:6:LEU:H	37:BL:6:LEU:HD23	1.47	0.78
40:BH:90:LEU:HB3	40:BH:123:ARG:HD2	1.65	0.78
47:BF:163:GLU:HA	47:BF:166:ARG:HD2	1.65	0.78
23:DB:28:A:N6	23:DB:512:G:HI'	1.98	0.78
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.64	0.78
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.65	0.78
23:BB:2318:G:C6	23:BB:2319:G:N1	2.51	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
45:BS:36:LEU:H	45:BS:36:LEU:HD22	1.48	0.78
21:AU:10:PRO:HB2	2:CC:71:ARG:HH11	1.47	0.78
23:BB:742:A:H2'	23:BB:743:A:C8	2.18	0.78
20:CB:61:SER:HB2	20:CB:62:ARG:HH11	1.47	0.78
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.64	0.78
23:BB:98:G:H22	46:BU:6:ARG:NH1	1.81	0.78
40:DH:135:HIS:HB3	40:DH:138:VAL:HB	1.62	0.78
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.62	0.78
1:AA:974:A:H4'	1:AA:975:A:H5'	1.63	0.78
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.17	0.78
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.66	0.78
1:CA:1328:C:H5''	12:CM:27:THR:HG21	1.63	0.78
3:CD:10:LEU:HB3	3:CD:62:ARG:HD3	1.64	0.78
50:BT:11:LEU:HA	50:BT:34:VAL:HG12	1.64	0.78
5:AF:42:TRP:HE1	5:AF:61:LEU:HD23	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.82	0.78
21:AU:40:PRO:HA	21:AU:44:ARG:HD2	1.63	0.78
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.64	0.78
7:CH:87:ARG:H	7:CH:90:GLU:HB2	1.49	0.78
23:DB:2143:C:H3'	23:DB:2144:G:H8	1.48	0.78
18:AS:10:ILE:HG22	18:AS:38:THR:H	1.48	0.78
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.49	0.78
23:BB:1324:G:H1'	23:BB:1616:A:N6	1.99	0.78
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.49	0.78
26:BD:184:ARG:HG3	26:BD:186:LEU:HB2	1.64	0.78
45:DS:36:LEU:H	45:DS:36:LEU:HD22	1.46	0.78
18:CS:43:MET:HB2	18:CS:61:VAL:HG11	1.66	0.78
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.64	0.78
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.18	0.78
50:DT:29:THR:H	50:DT:91:GLN:HE22	1.30	0.78
20:CB:61:SER:HB2	20:CB:62:ARG:NH1	1.99	0.78
3:AD:10:LEU:HB3	3:AD:62:ARG:HD3	1.64	0.78
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.19	0.78
48:BG:24:THR:HA	48:BG:34:ARG:HA	1.65	0.78
8:CI:34:LEU:HD21	8:CI:48:ARG:HE	1.46	0.78
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.66	0.78
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.65	0.78
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.65	0.78
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.65	0.78
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.78
46:DU:49:PRO:HA	46:DU:53:GLN:HG3	1.63	0.78
37:DL:143:GLU:HG2	37:DL:144:GLU:N	1.97	0.78
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.82	0.78
8:AI:34:LEU:HD21	8:AI:48:ARG:HE	1.47	0.78
48:DG:24:THR:HA	48:DG:34:ARG:HA	1.64	0.78
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.64	0.78
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.65	0.78
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.63	0.78
27:BK:54:LYS:H	27:BK:54:LYS:HD2	1.48	0.78
40:DH:65:ALA:HB1	40:DH:138:VAL:HG21	1.65	0.78
1:AA:373:A:H1'	1:AA:481:G:N3	1.99	0.78
1:CA:817:C:H1'	1:CA:819:A:H5'	1.64	0.78
23:BB:181:A:H2'	23:BB:182:A:C8	2.18	0.77
23:DB:1324:G:H1'	23:DB:1616:A:N6	1.98	0.77
46:BU:25:LYS:HE3	46:BU:36:GLU:HG3	1.66	0.77
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.82	0.77
23:DB:2148:G:H1'	23:DB:2149:U:C5	2.18	0.77
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.66	0.77
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.64	0.77
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.48	0.77
50:BT:29:THR:H	50:BT:91:GLN:HE22	1.30	0.77
23:DB:27:G:N2	23:DB:512:G:H2'	2.00	0.77
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.67	0.77
51:DZ:6:GLN:HE22	51:DZ:50:ARG:H	1.33	0.77
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.31	0.77
10:AK:88:PRO:HD3	21:AU:28:LEU:HD11	1.66	0.77
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.83	0.77
10:AK:52:ARG:HH12	10:AK:56:LYS:HE3	1.49	0.77
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.65	0.77
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.20	0.77
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.66	0.77
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.82	0.77
23:DB:1454:C:H1'	42:DN:60:VAL:HG13	1.67	0.77
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.66	0.77
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.82	0.77
10:CK:80:ASN:HD22	10:CK:80:ASN:N	1.82	0.77
1:AA:17:U:H2'	1:AA:18:C:C6	2.19	0.77
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.66	0.77
41:BJ:63:ALA:HA	41:BJ:69:ARG:HH12	1.48	0.77
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.67	0.77
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.82	0.77
18:AS:10:ILE:HB	18:AS:14:LEU:HD11	1.67	0.77
10:AK:80:ASN:HD22	10:AK:80:ASN:N	1.82	0.77
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.32	0.77
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.85	0.77
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.65	0.77
47:DF:163:GLU:HA	47:DF:166:ARG:HD2	1.66	0.77
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.65	0.77
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.65	0.77
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.20	0.77
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.50	0.77
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.66	0.77
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.65	0.77
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.49	0.77
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	2.00	0.77
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.50	0.77
12:AM:79:LEU:HD13	12:AM:86:ARG:HB3	1.65	0.77
1:AA:600:A:H5''	7:AH:88:LYS:HD2	1.66	0.77
5:CF:91:ARG:HG3	5:CF:93:LYS:HE3	1.66	0.77
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.67	0.77
23:BB:28:A:N6	23:BB:512:G:H1'	1.99	0.77
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.50	0.77
46:DU:81:ARG:HH21	46:DU:81:ARG:H	1.33	0.77
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.49	0.77
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.67	0.77
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.65	0.76
23:BB:364:C:H2'	23:BB:365:U:C6	2.20	0.76
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.49	0.76
1:CA:524:G:H2'	1:CA:525:C:C6	2.20	0.76
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.33	0.76
23:DB:1913:A:H4'	23:DB:1914:C:H5''	1.67	0.76
33:D1:6:GLU:HB2	33:D1:52:LYS:HZ1	1.48	0.76
1:AA:817:C:H1'	1:AA:819:A:H5'	1.67	0.76
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.49	0.76
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.66	0.76
42:DN:24:MET:HG2	42:DN:44:LEU:HD22	1.67	0.76
1:AA:781:A:H2'	1:AA:782:A:H5'	1.67	0.76
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.66	0.76
1:CA:373:A:H1'	1:CA:481:G:N3	2.01	0.76
39:BX:21:LEU:HD21	39:BX:50:VAL:HG11	1.65	0.76
15:AP:61:VAL:HA	15:AP:65:ALA:HB3	1.66	0.76
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.50	0.76
46:DU:80:ASP:HB2	46:DU:96:LYS:N	2.01	0.76
46:BU:70:ALA:HB1	46:BU:79:ALA:HB3	1.67	0.76
42:BN:24:MET:HG2	42:BN:44:LEU:HD22	1.66	0.76
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.68	0.76
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.68	0.76
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	1.66	0.76
5:CF:88:MET:HG3	5:CF:89:VAL:H	1.50	0.76
2:CC:190:THR:HG22	2:CC:191:THR:H	1.49	0.76
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.49	0.76
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.50	0.76
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.21	0.76
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.84	0.76
26:DD:105:LYS:HD2	26:DD:177:VAL:HG22	1.68	0.76
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.51	0.76
30:BY:2:LYS:HE2	30:BY:4:ILE:HD11	1.67	0.76
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.67	0.76
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.51	0.76
23:DB:2336:A:H61	52:DW:40:ARG:HG3	1.51	0.76
18:AS:43:MET:HB2	18:AS:61:VAL:HG11	1.67	0.76
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.66	0.76
1:CA:518:C:H2'	1:CA:530:G:C8	2.21	0.76
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.68	0.76
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.51	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.66	0.76
39:DX:31:GLN:HG2	39:DX:37:LEU:HB2	1.67	0.76
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.65	0.76
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.66	0.76
43:DO:27:VAL:HG21	43:DO:40:ILE:HD12	1.68	0.76
43:BO:27:VAL:HG21	43:BO:40:ILE:HD12	1.68	0.76
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.51	0.76
46:DU:70:ALA:HB1	46:DU:79:ALA:HB3	1.66	0.76
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.49	0.76
30:DY:2:LYS:HD3	30:DY:2:LYS:H	1.51	0.76
36:B2:22:MET:HA	36:B2:28:ARG:HG2	1.66	0.76
40:BH:90:LEU:HD21	40:BH:146:VAL:HG11	1.67	0.76
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.67	0.76
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.00	0.76
23:BB:38:A:O2'	29:BE:43:THR:HA	1.85	0.76
1:AA:269:C:H2'	1:AA:270:A:C8	2.20	0.76
23:BB:773:U:H5'	23:BB:774:G:OP2	1.86	0.76
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.68	0.76
23:DB:1172:C:H2'	23:DB:1173:U:O4'	1.86	0.76
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.67	0.76
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.16	0.76
1:AA:204:G:H21	1:AA:466:A:N6	1.84	0.76
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.68	0.76
40:BH:58:LEU:HG	40:BH:62:LEU:HD23	1.66	0.76
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.68	0.76
46:BU:80:ASP:HB2	46:BU:96:LYS:N	2.00	0.76
12:CM:70:ARG:HH21	47:DF:136:ILE:HB	1.50	0.75
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.50	0.75
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.50	0.75
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	1.86	0.75
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.21	0.75
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	2.01	0.75
40:BH:81:ALA:HB1	40:BH:147:VAL:H	1.50	0.75
35:DV:77:VAL:HG23	35:DV:89:ILE:HG23	1.67	0.75
18:CS:10:ILE:HB	18:CS:14:LEU:HD11	1.66	0.75
26:BD:148:GLN:HG3	26:BD:152:PRO:HB3	1.67	0.75
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.50	0.75
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.52	0.75
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.50	0.75
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.86	0.75
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.68	0.75
29:BE:131:THR:HG22	29:BE:160:ALA:HA	1.66	0.75
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.66	0.75
23:DB:162:U:H4'	23:DB:163:C:OP1	1.84	0.75
20:AB:61:SER:HB2	20:AB:62:ARG:NH1	2.01	0.75
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.67	0.75
7:AH:87:ARG:H	7:AH:90:GLU:HB2	1.51	0.75
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	2.01	0.75
18:AS:17:LYS:HB3	18:AS:30:LEU:HD22	1.68	0.75
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.67	0.75
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.01	0.75
23:DB:2144:G:O2'	23:DB:2145:C:H5'	1.86	0.75
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.67	0.75
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.68	0.75
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.67	0.75
29:DE:131:THR:HG22	29:DE:160:ALA:HA	1.67	0.75
23:DB:181:A:H2'	23:DB:182:A:C8	2.22	0.75
20:AB:128:LEU:HD12	20:AB:132:GLU:HB2	1.68	0.75
19:CT:4:LYS:HD2	19:CT:5:SER:H	1.50	0.75
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.86	0.75
1:AA:518:C:H2'	1:AA:530:G:C8	2.21	0.75
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.69	0.75
23:BB:2314:A:H1'	47:BF:154:THR:HG21	1.69	0.75
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.22	0.75
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.67	0.75
47:DF:33:ILE:HB	47:DF:90:LEU:HB2	1.69	0.75
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.02	0.75
40:DH:56:ALA:O	40:DH:60:GLU:HB2	1.86	0.75
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.68	0.75
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.24	0.75
37:DL:124:GLY:N	37:DL:143:GLU:HG3	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:33:ILE:HD13	47:DF:98:PHE:HD2	1.49	0.75
1:AA:524:G:H2'	1:AA:525:C:C6	2.22	0.75
26:BD:113:SER:CB	26:BD:168:GLU:H	1.99	0.75
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.51	0.75
48:BG:17:LYS:HA	48:BG:17:LYS:HZ2	1.51	0.75
23:DB:1287:A:N7	42:DN:105:GLY:HA3	2.01	0.75
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.68	0.75
1:AA:1315:U:H5	18:AS:5:LYS:HZ1	1.33	0.75
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.67	0.75
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.87	0.75
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.66	0.75
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.68	0.75
1:CA:662:U:O2'	1:CA:836:G:H5''	1.86	0.75
23:DB:743:A:O2'	23:DB:744:U:H5'	1.87	0.75
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.68	0.75
12:AM:44:ILE:HD12	12:AM:44:ILE:H	1.50	0.75
44:BQ:111:LYS:HB2	49:BR:48:LYS:NZ	2.01	0.75
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.51	0.75
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.69	0.75
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.22	0.75
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.69	0.75
47:BF:33:ILE:HB	47:BF:90:LEU:HB2	1.69	0.74
28:BP:56:SER:HB2	28:BP:75:THR:HG21	1.68	0.74
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.69	0.74
23:DB:361:G:H2'	23:DB:362:A:H8	1.52	0.74
30:DY:2:LYS:HE2	30:DY:4:ILE:HD11	1.69	0.74
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.22	0.74
26:DD:114:LYS:HD2	26:DD:116:LYS:NZ	2.02	0.74
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HB	1.68	0.74
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.87	0.74
1:AA:1328:C:H5''	12:AM:27:THR:HG21	1.67	0.74
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.51	0.74
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.86	0.74
37:BL:143:GLU:HG2	37:BL:144:GLU:N	1.98	0.74
13:CN:63:CYS:HB3	13:CN:67:GLY:N	2.00	0.74
40:BH:131:SER:HB3	40:BH:139:PHE:HB3	1.69	0.74
49:BR:4:VAL:O	49:BR:38:VAL:HA	1.87	0.74
44:DQ:4:LYS:HZ1	44:DQ:7:VAL:H	1.35	0.74
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.68	0.74
44:BQ:79:ILE:HA	44:BQ:82:LEU:HD12	1.69	0.74
23:BB:363:G:H2'	23:BB:364:C:C6	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.69	0.74
1:CA:1078:U:H4'	4:CE:137:ARG:HH12	1.52	0.74
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.51	0.74
28:DP:91:VAL:HG21	28:DP:96:LEU:HD21	1.70	0.74
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.67	0.74
1:AA:239:U:H4'	1:AA:239:U:OP1	1.87	0.74
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.87	0.74
40:BH:90:LEU:HB2	40:BH:123:ARG:HB3	1.69	0.74
47:BF:33:ILE:HD13	47:BF:98:PHE:HD2	1.51	0.74
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.53	0.74
6:AG:149:ALA:HB2	10:AK:55:ARG:NH1	2.01	0.74
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.67	0.74
40:DH:83:LYS:HB3	40:DH:149:GLU:HG2	1.69	0.74
23:BB:664:G:H2'	23:BB:665:U:C6	2.22	0.74
33:D1:9:LYS:H	33:D1:9:LYS:HD3	1.53	0.74
33:B1:9:LYS:H	33:B1:9:LYS:HD3	1.52	0.74
23:DB:631:A:HO2'	37:DL:66:PHE:HD2	1.34	0.74
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.70	0.74
18:CS:17:LYS:HB3	18:CS:30:LEU:HD22	1.69	0.74
40:DH:119:ASN:OD1	40:DH:121:VAL:HG13	1.88	0.74
43:DO:12:THR:HG23	43:DO:16:ARG:HH11	1.52	0.74
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.68	0.74
23:BB:2531:A:H5''	48:BG:156:TYR:CZ	2.22	0.74
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.86	0.74
1:AA:662:U:O2'	1:AA:836:G:H5''	1.87	0.74
50:BT:74:ILE:HG13	50:BT:75:GLY:H	1.52	0.74
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.69	0.74
10:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.68	0.74
26:DD:148:GLN:HG3	26:DD:152:PRO:HB3	1.69	0.74
30:DY:26:LEU:HB2	30:DY:28:LEU:HG	1.70	0.74
38:DM:127:LYS:HD2	38:DM:127:LYS:H	1.52	0.74
23:BB:1171:G:H3'	23:BB:1172:C:H4'	1.68	0.74
23:BB:171:U:H2'	23:BB:172:A:C8	2.23	0.74
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.87	0.74
12:CM:79:LEU:HD13	12:CM:86:ARG:HB3	1.67	0.74
23:DB:773:U:H5'	23:DB:774:G:OP2	1.87	0.74
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.69	0.74
50:DT:29:THR:N	50:DT:91:GLN:HE22	1.83	0.74
23:DB:1173:U:H2'	23:DB:1174:U:O4'	1.87	0.74
5:AF:88:MET:HG3	5:AF:89:VAL:N	2.03	0.74
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	1.67	0.74
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.70	0.74
48:DG:101:VAL:HG12	48:DG:115:GLN:HB3	1.70	0.74
23:DB:171:U:H2'	23:DB:172:A:C8	2.22	0.74
43:BO:3:LYS:H	43:BO:3:LYS:HD3	1.53	0.74
43:DO:3:LYS:HD3	43:DO:3:LYS:H	1.53	0.74
23:BB:2800:A:H2'	23:BB:2801:G:O4'	1.86	0.74
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.70	0.74
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.68	0.74
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.50	0.74
32:B4:2:LYS:HD3	32:B4:4:ARG:HE	1.52	0.74
32:D4:2:LYS:HD3	32:D4:4:ARG:HE	1.53	0.74
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.69	0.74
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HB	1.68	0.74
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.23	0.74
13:AN:68:ARG:HH11	13:AN:68:ARG:HB3	1.52	0.74
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	2.01	0.74
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.52	0.74
47:BF:116:LEU:HD23	47:BF:176:PHE:H	1.53	0.74
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	1.69	0.74
23:BB:162:U:H4'	23:BB:163:C:OP1	1.87	0.74
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.70	0.74
11:AL:35:ARG:NH1	11:AL:36:VAL:HG22	2.03	0.74
28:DP:56:SER:HB2	28:DP:75:THR:HG21	1.68	0.74
6:CG:115:MET:HA	6:CG:118:ARG:HD2	1.67	0.74
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.35	0.74
5:CF:88:MET:HG3	5:CF:89:VAL:N	2.02	0.74
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.53	0.74
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.23	0.74
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.02	0.74
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.22	0.74
23:DB:570:G:H2'	23:DB:2030:A:N7	2.02	0.74
3:CD:24:VAL:HG23	3:CD:25:ARG:HD2	1.70	0.74
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.02	0.74
41:DJ:63:ALA:HA	41:DJ:69:ARG:HH12	1.51	0.74
20:CB:128:LEU:HD12	20:CB:129:THR:H	1.51	0.74
23:DB:2800:A:H2'	23:DB:2801:G:O4'	1.87	0.74
49:DR:4:VAL:O	49:DR:38:VAL:HA	1.87	0.73
50:DT:74:ILE:HG13	50:DT:75:GLY:H	1.53	0.73
45:DS:27:LYS:O	45:DS:32:ALA:HB2	1.88	0.73
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:505:G:H5'	1:CA:534:U:H2'	1.68	0.73
1:CA:600:A:H5''	7:CH:88:LYS:HD2	1.68	0.73
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HA	1.53	0.73
12:AM:28:ARG:HH12	12:AM:59:VAL:HA	1.53	0.73
10:CK:92:ARG:NH1	21:CU:20:ARG:HH21	1.85	0.73
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.70	0.73
1:AA:1278:G:H4'	1:AA:1279:G:H5'	1.70	0.73
11:CL:56:LEU:HD12	11:CL:60:PHE:HB2	1.69	0.73
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.23	0.73
36:D2:22:MET:HA	36:D2:28:ARG:HG2	1.70	0.73
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.69	0.73
1:CA:1160:G:H4'	20:CB:130:LYS:HB2	1.69	0.73
49:DR:4:VAL:HG23	49:DR:39:LEU:H	1.52	0.73
23:BB:137:U:H2'	23:BB:138:U:O4'	1.88	0.73
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.35	0.73
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	1.69	0.73
23:DB:637:A:H5''	37:DL:112:LEU:HD22	1.68	0.73
1:AA:1081:A:OP2	4:AE:51:LYS:HE2	1.88	0.73
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.68	0.73
36:D2:33:ARG:HB2	36:D2:33:ARG:HH21	1.53	0.73
20:AB:186:VAL:O	20:AB:200:PRO:HA	1.88	0.73
49:BR:22:LEU:HD12	49:BR:25:LEU:HD21	1.71	0.73
23:BB:2756:U:H1'	23:BB:2757:A:H5''	1.70	0.73
23:BB:664:G:H2'	23:BB:665:U:H6	1.53	0.73
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.53	0.73
1:AA:328:C:H4'	1:AA:329:A:H5''	1.69	0.73
26:DD:113:SER:CB	26:DD:168:GLU:H	2.01	0.73
47:BF:134:GLN:HE21	47:BF:149:ARG:HB2	1.54	0.73
16:CQ:56:ASP:HA	16:CQ:81:ALA:HB2	1.68	0.73
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.71	0.73
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.23	0.73
35:DV:40:ILE:HD13	35:DV:40:ILE:H	1.54	0.73
35:BV:40:ILE:H	35:BV:40:ILE:HD13	1.53	0.73
37:BL:124:GLY:N	37:BL:143:GLU:HG3	2.03	0.73
29:DE:122:GLU:H	29:DE:122:GLU:CD	1.92	0.73
47:DF:149:ARG:HH11	47:DF:149:ARG:HA	1.53	0.73
25:BC:134:ILE:HD11	25:BC:163:ILE:HG13	1.71	0.73
40:DH:18:GLN:HE21	40:DH:39:ALA:HB1	1.52	0.73
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.88	0.73
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.69	0.73
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.51	0.73
1:CA:204:G:H21	1:CA:466:A:N6	1.85	0.73
1:CA:859:G:H2'	1:CA:860:A:C8	2.24	0.73
46:DU:25:LYS:HE3	46:DU:36:GLU:HG3	1.68	0.73
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.71	0.73
19:CT:68:LYS:HA	19:CT:68:LYS:HE2	1.69	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.69	0.73
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.69	0.73
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	1.89	0.73
23:BB:570:G:H2'	23:BB:2030:A:N7	2.02	0.73
23:DB:289:G:H2'	23:DB:290:U:C6	2.24	0.73
44:BQ:91:ARG:HE	44:BQ:94:LEU:HD23	1.54	0.73
23:DB:2314:A:H1'	47:DF:154:THR:HG21	1.70	0.73
44:DQ:79:ILE:HA	44:DQ:82:LEU:HD12	1.71	0.73
20:CB:218:ALA:HA	20:CB:221:ARG:HG2	1.69	0.73
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.51	0.73
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.24	0.73
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	2.04	0.73
23:BB:2322:A:N6	23:BB:2333:A:N6	2.37	0.73
23:DB:483:A:H1'	46:DU:56:GLY:HA2	1.71	0.73
23:DB:858:G:H21	23:DB:2268:A:H3'	1.52	0.73
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.71	0.73
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.04	0.73
47:DF:116:LEU:HD23	47:DF:176:PHE:H	1.54	0.73
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.23	0.73
22:DA:32:U:H4'	22:DA:52:A:N6	2.03	0.73
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.24	0.73
23:BB:616:A:H3'	23:BB:617:G:H8	1.53	0.73
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.23	0.73
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.51	0.73
23:DB:616:A:H3'	23:DB:617:G:H8	1.53	0.73
36:B2:33:ARG:HH21	36:B2:33:ARG:HB2	1.54	0.73
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.70	0.73
20:AB:187:ASP:OD1	20:AB:203:ASP:HB3	1.88	0.73
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.70	0.73
47:DF:125:GLY:HA2	47:DF:162:ASP:HA	1.70	0.73
1:AA:376:G:H5''	15:AP:5:ARG:HB2	1.71	0.73
4:AE:156:ARG:HA	4:AE:158:LYS:HZ3	1.54	0.73
1:CA:238:A:H2'	1:CA:239:U:H5''	1.71	0.73
49:BR:4:VAL:HG23	49:BR:39:LEU:H	1.53	0.73
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:28:ARG:HH12	12:CM:59:VAL:HA	1.53	0.73
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.52	0.73
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.71	0.73
3:AD:24:VAL:HG23	3:AD:25:ARG:HD2	1.70	0.73
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.04	0.73
1:CA:451:A:H5'	15:CP:70:ARG:HH22	1.54	0.73
38:DM:131:VAL:HG12	38:DM:132:THR:H	1.54	0.73
20:AB:79:VAL:HG12	20:AB:90:PHE:HB2	1.70	0.73
1:AA:1343:G:H1'	8:AI:122:ARG:HH12	1.54	0.73
44:DQ:111:LYS:HB2	49:DR:48:LYS:NZ	2.04	0.72
1:CA:1315:U:H5	18:CS:5:LYS:HZ1	1.37	0.72
39:DX:21:LEU:HD21	39:DX:50:VAL:HG11	1.70	0.72
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.71	0.72
2:AC:48:LYS:H	2:AC:48:LYS:HD3	1.53	0.72
23:DB:3:U:H2'	23:DB:4:U:C6	2.23	0.72
47:DF:134:GLN:HE21	47:DF:149:ARG:HB2	1.53	0.72
25:BC:128:THR:HA	25:BC:190:THR:HA	1.71	0.72
35:BV:77:VAL:HG23	35:BV:89:ILE:HG23	1.71	0.72
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.71	0.72
45:DS:6:LYS:HB2	45:DS:103:ILE:O	1.89	0.72
40:DH:141:LYS:N	40:DH:141:LYS:HD2	2.05	0.72
12:CM:44:ILE:H	12:CM:44:ILE:HD12	1.54	0.72
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.69	0.72
42:BN:96:ARG:HH11	42:BN:116:VAL:HG23	1.53	0.72
23:BB:131:A:H2'	23:BB:132:G:H8	1.54	0.72
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.71	0.72
20:CB:186:VAL:O	20:CB:200:PRO:HA	1.88	0.72
47:BF:149:ARG:HA	47:BF:149:ARG:HH11	1.53	0.72
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.69	0.72
23:BB:321:U:H5''	29:BE:131:THR:HG23	1.69	0.72
23:BB:743:A:O2'	23:BB:744:U:H5'	1.89	0.72
33:D1:6:GLU:HB2	33:D1:52:LYS:NZ	2.04	0.72
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	1.89	0.72
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.24	0.72
3:CD:28:ASP:HA	3:CD:33:ILE:HG21	1.72	0.72
23:BB:254:G:H22	34:B3:7:ARG:HH21	1.36	0.72
1:AA:505:G:H5'	1:AA:534:U:H2'	1.70	0.72
23:BB:972:A:H3'	23:BB:973:A:H5''	1.71	0.72
50:BT:29:THR:N	50:BT:91:GLN:HE22	1.85	0.72
5:AF:42:TRP:NE1	5:AF:61:LEU:HD23	2.03	0.72
45:BS:6:LYS:HB2	45:BS:103:ILE:O	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:42:TRP:HE1	5:CF:61:LEU:HD23	1.52	0.72
11:CL:120:ARG:HG2	11:CL:121:PRO:HD2	1.71	0.72
23:DB:972:A:H3'	23:DB:973:A:H5''	1.70	0.72
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.72	0.72
41:BJ:72:LYS:HB2	41:BJ:89:PHE:HB2	1.71	0.72
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.55	0.72
28:DP:50:ARG:HB2	28:DP:56:SER:HB3	1.72	0.72
1:AA:484:G:H4'	1:AA:485:U:O5'	1.88	0.72
46:BU:81:ARG:HH21	46:BU:81:ARG:H	1.35	0.72
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.71	0.72
35:DV:62:THR:HG22	35:DV:71:LYS:HG2	1.71	0.72
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.72	0.72
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.03	0.72
23:DB:479:A:O2'	23:DB:481:G:H5'	1.90	0.72
35:BV:62:THR:HG22	35:BV:71:LYS:HG2	1.70	0.72
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.04	0.72
28:DP:4:ILE:C	28:DP:6:GLN:H	1.93	0.72
22:BA:32:U:H4'	22:BA:52:A:N6	2.03	0.72
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.90	0.72
1:CA:484:G:H4'	1:CA:485:U:O5'	1.87	0.72
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.54	0.72
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.89	0.72
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.05	0.72
17:CR:22:TYR:HB2	17:CR:61:ALA:HB2	1.70	0.72
23:DB:664:G:H2'	23:DB:665:U:H6	1.54	0.72
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.72	0.72
23:DB:2143:C:H3'	23:DB:2144:G:C8	2.24	0.72
23:DB:664:G:H2'	23:DB:665:U:C6	2.24	0.72
1:CA:781:A:H2'	1:CA:782:A:H5'	1.70	0.72
38:BM:131:VAL:HG12	38:BM:132:THR:H	1.53	0.72
17:AR:22:TYR:HB2	17:AR:61:ALA:HB2	1.70	0.72
33:B1:7:LYS:HD2	34:B3:33:THR:HG21	1.69	0.72
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.55	0.72
28:DP:61:ARG:HH21	28:DP:61:ARG:HB3	1.55	0.72
1:CA:474:G:H2'	1:CA:475:C:C6	2.24	0.72
23:DB:455:C:N3	23:DB:472:A:H2'	2.05	0.72
40:BH:84:ALA:HB2	40:BH:146:VAL:HG12	1.69	0.72
40:DH:41:LYS:O	40:DH:44:ILE:HG12	1.90	0.72
35:BV:63:ILE:HD13	35:BV:72:VAL:HG22	1.72	0.72
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.70	0.72
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:993:G:H2'	1:CA:995:C:H41	1.54	0.72
23:DB:1050:A:H2'	23:DB:1051:G:O4'	1.90	0.72
49:DR:58:VAL:HG22	49:DR:59:ILE:H	1.54	0.72
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.53	0.72
44:DQ:91:ARG:HE	44:DQ:94:LEU:HD23	1.55	0.72
40:BH:18:GLN:HE21	40:BH:39:ALA:HB1	1.55	0.72
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.20	0.72
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.71	0.72
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.72	0.72
23:DB:172:A:H2'	23:DB:173:A:C8	2.25	0.72
23:DB:1301:A:O2'	23:DB:1302:A:H2'	1.90	0.72
1:CA:269:C:H2'	1:CA:270:A:C8	2.24	0.72
49:BR:58:VAL:HG22	49:BR:59:ILE:H	1.54	0.72
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.72	0.72
1:CA:636:U:H2'	1:CA:637:C:C6	2.25	0.72
45:DS:20:VAL:O	45:DS:23:LEU:HB2	1.90	0.72
1:CA:376:G:H5''	15:CP:5:ARG:HB2	1.72	0.72
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.70	0.72
23:DB:192:C:H2'	23:DB:193:U:H5'	1.72	0.72
1:AA:636:U:H2'	1:AA:637:C:C6	2.25	0.72
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.20	0.72
23:DB:547:A:H5'	23:DB:548:G:N2	2.04	0.72
5:CF:36:ILE:HG13	5:CF:64:VAL:HG22	1.71	0.72
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.24	0.72
23:BB:33:C:H2'	23:BB:446:G:N2	2.05	0.72
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.53	0.72
43:BO:12:THR:HG23	43:BO:16:ARG:HH11	1.55	0.72
11:AL:120:ARG:HG2	11:AL:121:PRO:HD2	1.72	0.72
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	1.71	0.71
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.71
23:DB:280:U:H2'	23:DB:281:C:C6	2.25	0.71
5:AF:88:MET:HG3	5:AF:89:VAL:H	1.51	0.71
1:CA:17:U:H2'	1:CA:18:C:H6	1.55	0.71
22:BA:29:A:H3'	22:BA:30:C:H6	1.55	0.71
1:AA:474:G:H2'	1:AA:475:C:C6	2.25	0.71
33:B1:6:GLU:HB2	33:B1:52:LYS:NZ	2.04	0.71
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	1.71	0.71
25:DC:128:THR:HA	25:DC:190:THR:HA	1.72	0.71
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.55	0.71
35:DV:63:ILE:HD13	35:DV:72:VAL:HG22	1.72	0.71
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.70	0.71
1:CA:523:A:H61	11:CL:88:ASP:HB2	1.55	0.71
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.24	0.71
1:AA:473:U:H2'	1:AA:474:G:C8	2.25	0.71
48:BG:101:VAL:HG12	48:BG:115:GLN:HB3	1.72	0.71
23:DB:383:C:H5'	23:DB:385:C:OP2	1.90	0.71
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.71	0.71
23:BB:172:A:H2'	23:BB:173:A:C8	2.26	0.71
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.71	0.71
1:AA:264:C:H4'	16:AQ:64:ARG:HD2	1.70	0.71
23:BB:479:A:O2'	23:BB:481:G:H5'	1.91	0.71
47:DF:40:GLY:HA2	47:DF:84:ILE:HG23	1.72	0.71
23:BB:858:G:H21	23:BB:2268:A:H3'	1.54	0.71
5:AF:91:ARG:HG3	5:AF:93:LYS:HE3	1.72	0.71
40:BH:89:LYS:HA	40:BH:89:LYS:NZ	2.05	0.71
42:BN:78:LYS:HG3	42:BN:83:LEU:HG	1.72	0.71
25:DC:80:LEU:HD11	25:DC:109:LEU:O	1.90	0.71
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.04	0.71
23:DB:18:U:H2'	23:DB:19:A:H8	1.54	0.71
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.73	0.71
40:DH:46:PHE:HA	40:DH:50:ARG:NH2	2.05	0.71
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.06	0.71
19:AT:68:LYS:HE2	19:AT:68:LYS:HA	1.71	0.71
23:BB:287:G:H2'	23:BB:288:U:H6	1.55	0.71
23:DB:3:U:H2'	23:DB:4:U:H6	1.56	0.71
1:AA:451:A:H5'	15:AP:70:ARG:HH22	1.56	0.71
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.90	0.71
47:BF:125:GLY:HA2	47:BF:162:ASP:HA	1.70	0.71
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.54	0.71
23:DB:33:C:H2'	23:DB:446:G:N2	2.05	0.71
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.71	0.71
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.73	0.71
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.20	0.71
49:DR:22:LEU:HD12	49:DR:25:LEU:HD21	1.72	0.71
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.72	0.71
10:AK:105:ARG:HH21	21:AU:10:PRO:HB3	1.55	0.71
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.71	0.71
1:AA:1314:C:H3'	18:AS:5:LYS:HZ2	1.55	0.71
40:DH:115:VAL:HB	40:DH:132:PHE:CD1	2.26	0.71
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.55	0.71
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.35	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:57:HIS:CG	25:BC:58:LYS:H	2.09	0.71
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.71
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.54	0.71
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.31	0.71
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.73	0.71
1:CA:1314:C:H3'	18:CS:5:LYS:HZ2	1.55	0.71
28:BP:61:ARG:HH21	28:BP:61:ARG:HB3	1.56	0.71
9:CJ:37:ARG:NE	9:CJ:37:ARG:HA	2.06	0.71
43:DO:88:LYS:HE2	43:DO:116:GLN:HB2	1.71	0.71
41:BJ:99:ARG:O	41:BJ:103:ILE:HG13	1.90	0.71
2:CC:48:LYS:HD3	2:CC:48:LYS:H	1.55	0.71
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HA	1.54	0.71
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.71	0.71
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.54	0.71
42:DN:78:LYS:HG3	42:DN:83:LEU:HG	1.73	0.71
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	2.05	0.71
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.73	0.71
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.70	0.71
20:AB:128:LEU:HD13	20:AB:129:THR:N	2.05	0.71
33:B1:6:GLU:HB2	33:B1:52:LYS:HZ1	1.54	0.71
32:D4:10:LEU:HD12	32:D4:33:HIS:HA	1.72	0.71
1:CA:328:C:H4'	1:CA:329:A:H5''	1.71	0.71
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.53	0.71
28:BP:7:LEU:HD12	28:BP:7:LEU:H	1.54	0.71
50:DT:69:ARG:HE	50:DT:70:HIS:H	1.39	0.71
51:BZ:35:SER:HA	51:BZ:50:ARG:HA	1.73	0.71
30:BY:26:LEU:HB2	30:BY:28:LEU:HG	1.70	0.71
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.70	0.71
39:DX:17:GLU:HB3	39:DX:53:VAL:HG11	1.73	0.71
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.72	0.71
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.56	0.71
11:AL:56:LEU:HD12	11:AL:60:PHE:HB2	1.73	0.71
4:AE:28:ARG:HH12	4:AE:30:PHE:HB3	1.55	0.71
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.73	0.71
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.05	0.71
29:BE:122:GLU:H	29:BE:122:GLU:CD	1.94	0.71
23:BB:495:G:H21	45:BS:61:ASN:ND2	1.87	0.71
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.20	0.71
28:BP:4:ILE:C	28:BP:6:GLN:H	1.94	0.71
1:AA:523:A:H61	11:AL:88:ASP:HB2	1.55	0.71
1:AA:238:A:H2'	1:AA:239:U:H5''	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:18:ARG:HB2	27:BK:45:GLU:HG3	1.73	0.71
43:BO:88:LYS:HE2	43:BO:116:GLN:HB2	1.73	0.71
41:DJ:99:ARG:O	41:DJ:103:ILE:HG13	1.90	0.71
25:DC:233:GLY:H	25:DC:241:LYS:NZ	1.89	0.71
23:BB:845:A:C2	23:BB:847:U:H1'	2.26	0.71
28:DP:7:LEU:H	28:DP:7:LEU:HD12	1.56	0.70
23:DB:117:G:H5'	23:DB:126:A:H8	1.55	0.70
20:AB:218:ALA:HA	20:AB:221:ARG:HG2	1.71	0.70
40:BH:53:GLU:HA	40:BH:57:LYS:HG2	1.72	0.70
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.05	0.70
23:BB:2322:A:N6	23:BB:2333:A:H62	1.89	0.70
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.56	0.70
47:BF:40:GLY:HA2	47:BF:84:ILE:HG23	1.73	0.70
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.25	0.70
23:DB:2756:U:H1'	23:DB:2757:A:H5''	1.73	0.70
23:BB:62:U:H3'	23:BB:63:A:C8	2.26	0.70
6:AG:23:ALA:O	6:AG:26:VAL:HG22	1.91	0.70
34:D3:18:LYS:HD2	34:D3:20:GLY:H	1.56	0.70
41:DJ:72:LYS:HB2	41:DJ:89:PHE:HB2	1.71	0.70
1:AA:237:G:H2'	1:AA:238:A:H8	1.56	0.70
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.05	0.70
1:AA:999:C:H2'	1:AA:1000:A:C8	2.27	0.70
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.31	0.70
23:DB:370:G:O2'	23:DB:423:A:H3'	1.91	0.70
4:CE:156:ARG:HA	4:CE:158:LYS:HZ3	1.55	0.70
20:CB:45:THR:HA	20:CB:48:MET:HG3	1.73	0.70
8:AI:41:GLU:H	8:AI:44:ARG:NH1	1.88	0.70
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.56	0.70
3:AD:153:ARG:HG3	3:AD:154:VAL:H	1.57	0.70
23:BB:1060:U:C4	23:BB:1088:A:N6	2.59	0.70
5:AF:36:ILE:HG13	5:AF:64:VAL:HG22	1.73	0.70
6:AG:110:ARG:HD2	6:AG:122:GLU:HB2	1.73	0.70
1:CA:239:U:OP1	1:CA:239:U:H4'	1.90	0.70
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.74	0.70
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.27	0.70
23:BB:75:G:H4'	39:BX:48:ARG:HH22	1.57	0.70
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	1.90	0.70
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	1.72	0.70
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.72	0.70
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.73	0.70
51:BZ:5:CYS:HB2	51:BZ:10:LYS:HB2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:64:TRP:HB2	38:BM:104:GLU:HB2	1.73	0.70
28:BP:91:VAL:HG21	28:BP:96:LEU:HD21	1.71	0.70
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.56	0.70
4:CE:158:LYS:HZ1	7:CH:63:LYS:HD3	1.55	0.70
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.27	0.70
23:BB:547:A:H2'	23:BB:547:A:N3	2.05	0.70
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.54	0.70
21:CU:24:LYS:HD2	21:CU:25:ALA:H	1.56	0.70
41:BJ:37:ARG:NH2	41:BJ:110:PRO:HG3	2.06	0.70
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.72	0.70
11:CL:35:ARG:NH1	11:CL:36:VAL:HG22	2.06	0.70
23:BB:918:A:H2'	23:BB:919:U:H5'	1.72	0.70
21:AU:40:PRO:O	21:AU:44:ARG:HB2	1.92	0.70
28:DP:50:ARG:CB	28:DP:56:SER:HB3	2.21	0.70
51:DZ:35:SER:HA	51:DZ:50:ARG:HA	1.73	0.70
30:DY:6:ILE:O	30:DY:34:THR:HA	1.92	0.70
3:CD:71:PHE:HE1	3:CD:89:LEU:HD21	1.57	0.70
23:BB:383:C:H5''	23:BB:385:C:OP2	1.91	0.70
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.72	0.70
23:BB:274:C:H2'	23:BB:275:C:O4'	1.90	0.70
1:CA:182:A:O2'	1:CA:183:C:H3'	1.91	0.70
25:DC:20:ASN:HD22	25:DC:23:LEU:HD13	1.56	0.70
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.55	0.70
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.54	0.70
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.22	0.70
23:BB:2267:A:H5''	23:BB:2268:A:H5'	1.71	0.70
42:DN:38:LEU:O	42:DN:42:LYS:HG3	1.91	0.70
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.56	0.70
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	1.72	0.70
45:BS:29:VAL:HA	45:BS:32:ALA:HB3	1.73	0.70
51:DZ:5:CYS:HB2	51:DZ:10:LYS:HB2	1.71	0.70
6:CG:130:LYS:N	6:CG:134:VAL:HG21	2.06	0.70
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.56	0.70
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.22	0.70
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.56	0.70
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.74	0.70
12:CM:106:ARG:HD3	12:CM:111:PRO:HA	1.73	0.70
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.72	0.70
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.72	0.70
23:DB:1024:G:C3'	23:DB:1025:G:H5''	2.19	0.70
47:BF:29:ARG:HH11	47:BF:29:ARG:HB2	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1024:G:C3'	23:BB:1025:G:H5''	2.21	0.70
13:CN:45:LEU:HD21	18:CS:9:PHE:HB2	1.72	0.70
23:BB:1082:U:N3	23:BB:1086:A:C2	2.59	0.70
10:AK:92:ARG:NH1	21:AU:20:ARG:HH21	1.90	0.70
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.07	0.70
45:BS:20:VAL:O	45:BS:23:LEU:HB2	1.91	0.70
9:AJ:37:ARG:NE	9:AJ:37:ARG:HA	2.06	0.70
41:DJ:37:ARG:NH2	41:DJ:110:PRO:HG3	2.07	0.70
1:CA:842:U:H2'	1:CA:843:U:O3'	1.91	0.70
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.73	0.70
2:AC:2:GLN:H	2:AC:2:GLN:NE2	1.90	0.70
23:DB:918:A:H2'	23:DB:919:U:H5'	1.72	0.70
23:BB:2266:A:C4'	23:BB:2267:A:N7	2.55	0.70
26:DD:55:LYS:HB3	26:DD:60:VAL:HG22	1.73	0.70
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.72	0.70
23:BB:1454:C:H1'	42:BN:60:VAL:HG13	1.72	0.70
6:CG:110:ARG:HD2	6:CG:122:GLU:HB2	1.74	0.70
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	1.90	0.70
23:DB:1856:U:H2'	23:DB:1857:G:H5'	1.74	0.70
23:BB:455:C:N3	23:BB:472:A:H2'	2.07	0.70
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.56	0.70
1:AA:859:G:H2'	1:AA:860:A:C8	2.26	0.70
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.72	0.70
20:CB:79:VAL:HG12	20:CB:90:PHE:HB2	1.71	0.70
23:DB:285:G:H2'	23:DB:286:U:O4'	1.92	0.70
25:DC:57:HIS:CG	25:DC:58:LYS:H	2.09	0.70
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.26	0.70
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.22	0.70
32:B4:10:LEU:HD12	32:B4:33:HIS:HA	1.71	0.70
37:BL:103:ILE:HD12	37:BL:103:ILE:H	1.56	0.70
23:DB:845:A:C2	23:DB:847:U:H1'	2.27	0.70
23:BB:370:G:O2'	23:BB:423:A:H3'	1.91	0.70
23:DB:919:U:H2'	23:DB:920:A:C8	2.27	0.70
22:DA:98:G:N1	35:DV:14:LYS:HB2	2.07	0.70
23:DB:2144:G:O2'	23:DB:2146:C:H5''	1.92	0.70
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.74	0.70
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.57	0.70
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.57	0.70
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.73	0.70
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.27	0.70
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:13:ARG:HG3	52:BW:14:ASP:H	1.56	0.70
23:DB:2269:G:H4'	52:DW:19:ARG:HH12	1.57	0.69
23:DB:2353:G:H21	52:DW:30:VAL:HG22	1.57	0.69
44:BQ:91:ARG:NH1	49:BR:11:GLN:H	1.90	0.69
23:DB:544:C:H2'	23:DB:545:U:C5	2.27	0.69
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.72	0.69
38:BM:127:LYS:H	38:BM:127:LYS:HD2	1.56	0.69
23:DB:19:A:H2'	23:DB:20:C:C6	2.27	0.69
1:CA:337:G:H2'	1:CA:338:A:C8	2.26	0.69
1:CA:658:C:H2'	1:CA:659:U:H6	1.57	0.69
23:DB:2498:C:O2'	23:DB:2499:C:H5'	1.92	0.69
1:AA:1202:U:H1'	13:AN:68:ARG:HD2	1.74	0.69
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.74	0.69
28:BP:50:ARG:HB2	28:BP:56:SER:HB3	1.74	0.69
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.73	0.69
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.91	0.69
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.07	0.69
1:AA:473:U:H2'	1:AA:474:G:H8	1.57	0.69
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.74	0.69
1:AA:993:G:H2'	1:AA:995:C:H41	1.55	0.69
23:DB:62:U:H3'	23:DB:63:A:C8	2.26	0.69
23:BB:919:U:H2'	23:BB:920:A:C8	2.27	0.69
51:BZ:6:GLN:HE22	51:BZ:50:ARG:H	1.38	0.69
23:DB:1082:U:N3	23:DB:1086:A:C2	2.60	0.69
23:BB:580:U:H2'	23:BB:581:C:C6	2.27	0.69
4:AE:89:THR:HG22	4:AE:90:GLY:H	1.56	0.69
2:CC:61:LYS:NZ	2:CC:96:VAL:HG11	2.08	0.69
1:AA:154:U:H2'	1:AA:155:A:C8	2.28	0.69
23:BB:594:U:H2'	23:BB:595:C:C6	2.27	0.69
52:DW:13:ARG:HG3	52:DW:14:ASP:H	1.56	0.69
20:CB:122:ASP:OD1	20:CB:124:THR:HG22	1.93	0.69
23:DB:2266:A:C4'	23:DB:2267:A:N7	2.55	0.69
8:AI:27:ILE:HB	8:AI:34:LEU:HB2	1.72	0.69
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.73	0.69
26:BD:53:GLY:HA3	26:BD:77:ARG:HG3	1.74	0.69
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.74	0.69
1:CA:465:A:H2'	1:CA:467:U:OP2	1.93	0.69
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.57	0.69
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.28	0.69
7:AH:113:ARG:NH2	7:AH:114:ALA:HA	2.07	0.69
23:BB:1639:C:H2'	23:BB:1640:A:H5''	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1490:U:H5'	1:AA:1491:G:OP2	1.92	0.69
1:CA:999:C:H2'	1:CA:1000:A:C8	2.27	0.69
4:CE:28:ARG:HH12	4:CE:30:PHE:HB3	1.57	0.69
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.74	0.69
37:DL:75:ALA:HB2	37:DL:105:ILE:HG21	1.75	0.69
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.57	0.69
1:AA:1086:U:H3	1:AA:1099:G:N2	1.86	0.69
28:BP:50:ARG:CB	28:BP:56:SER:HB3	2.22	0.69
50:BT:44:LYS:O	50:BT:48:GLN:HG2	1.90	0.69
47:DF:102:LEU:O	47:DF:103:ILE:HB	1.93	0.69
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.13	0.69
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.07	0.69
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.75	0.69
1:CA:473:U:H2'	1:CA:474:G:C8	2.27	0.69
1:CA:1343:G:H1'	8:CI:122:ARG:HH12	1.57	0.69
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.27	0.69
1:AA:842:U:H2'	1:AA:843:U:O3'	1.92	0.69
26:BD:14:ILE:HG23	26:BD:22:ILE:HB	1.74	0.69
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.74	0.69
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.27	0.69
34:B3:18:LYS:HD2	34:B3:20:GLY:H	1.58	0.69
23:BB:1856:U:H2'	23:BB:1857:G:H5'	1.75	0.69
38:BM:19:GLY:N	38:BM:38:ARG:HH22	1.91	0.69
26:BD:27:ILE:HG23	26:BD:201:LEU:HD12	1.74	0.69
13:CN:46:LYS:HZ2	18:CS:10:ILE:H	1.39	0.69
40:DH:115:VAL:HG22	40:DH:117:LEU:H	1.58	0.69
40:DH:141:LYS:H	40:DH:141:LYS:HD2	1.58	0.69
3:CD:25:ARG:NH1	3:CD:30:LYS:HE3	2.07	0.69
4:AE:158:LYS:HZ1	7:AH:63:LYS:HD3	1.57	0.69
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.73	0.69
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.91	0.69
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.73	0.69
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.27	0.69
1:CA:909:A:H2'	1:CA:910:C:O4'	1.93	0.69
37:BL:75:ALA:HB2	37:BL:105:ILE:HG21	1.75	0.69
8:AI:48:ARG:HA	8:AI:51:LEU:HD12	1.74	0.69
42:BN:38:LEU:O	42:BN:42:LYS:HG3	1.93	0.69
20:AB:120:SER:HA	20:AB:125:PHE:CD1	2.27	0.69
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.33	0.69
19:CT:43:LYS:HE2	19:CT:44:ALA:N	2.08	0.69
36:D2:19:ARG:HB3	36:D2:19:ARG:HH21	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:6:ILE:O	30:BY:34:THR:HA	1.92	0.69
46:DU:81:ARG:HH21	46:DU:81:ARG:N	1.90	0.69
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.57	0.69
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.75	0.69
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.08	0.69
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.57	0.69
23:DB:1346:G:O2'	23:DB:1347:A:H5'	1.93	0.69
23:BB:2134:A:H2'	23:BB:2135:A:H8	1.57	0.69
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.28	0.69
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	1.74	0.69
20:AB:45:THR:HA	20:AB:48:MET:HG3	1.73	0.69
21:CU:40:PRO:O	21:CU:44:ARG:HB2	1.93	0.69
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.08	0.69
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.75	0.69
38:DM:4:PRO:HG2	38:DM:70:ASP:HA	1.75	0.69
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.28	0.69
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.07	0.69
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.08	0.69
1:CA:1250:A:H4'	8:CI:69:GLY:N	2.08	0.69
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.75	0.69
6:AG:130:LYS:N	6:AG:134:VAL:HG21	2.06	0.69
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.74	0.69
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.28	0.69
1:AA:518:C:H2'	1:AA:530:G:H8	1.58	0.69
23:DB:580:U:H2'	23:DB:581:C:C6	2.28	0.69
23:BB:254:G:N2	34:B3:7:ARG:HH21	1.90	0.69
23:DB:286:U:H2'	23:DB:287:G:C8	2.27	0.69
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.75	0.69
1:AA:182:A:O2'	1:AA:183:C:H3'	1.92	0.69
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.32	0.69
2:AC:61:LYS:HZ2	2:AC:96:VAL:HG11	1.57	0.69
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.28	0.69
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.28	0.69
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.28	0.69
51:DZ:27:ARG:HD3	51:DZ:28:ARG:H	1.57	0.69
20:CB:172:ILE:HG22	20:CB:176:ASN:HD21	1.57	0.69
4:AE:61:LYS:O	4:AE:65:LYS:HG2	1.92	0.69
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.93	0.69
16:CQ:45:VAL:HG12	16:CQ:46:HIS:H	1.58	0.69
23:DB:2336:A:H61	52:DW:40:ARG:CG	2.06	0.69
2:AC:190:THR:HG22	2:AC:191:THR:N	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:704:G:H1'	23:BB:727:A:H61	1.58	0.69
50:BT:69:ARG:HE	50:BT:70:HIS:H	1.40	0.69
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.22	0.69
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.74	0.69
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.08	0.69
1:CA:1302:C:OP2	12:CM:16:ILE:HD11	1.93	0.69
23:DB:2723:C:H5''	42:DN:1:MET:HE2	1.75	0.69
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.28	0.69
23:DB:165:A:H2'	23:DB:166:U:H6	1.58	0.69
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.73	0.69
1:CA:764:C:H2'	1:CA:765:G:H5'	1.75	0.69
23:BB:2872:A:O2'	23:BB:2873:A:H5''	1.93	0.69
23:BB:1060:U:O2	23:BB:1088:A:N7	2.26	0.69
47:DF:29:ARG:HB2	47:DF:29:ARG:HH11	1.58	0.69
19:CT:56:ILE:O	19:CT:60:GLN:HG2	1.93	0.69
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.73	0.69
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.08	0.69
23:DB:2867:G:N3	23:DB:2867:G:H2'	2.07	0.69
23:BB:460:A:P	36:B2:41:ARG:HH12	2.16	0.69
22:DA:29:A:H3'	22:DA:30:C:H6	1.57	0.69
12:AM:106:ARG:HD3	12:AM:111:PRO:HA	1.75	0.69
13:CN:14:ALA:HB1	13:CN:18:LYS:HE3	1.75	0.69
52:BW:74:LYS:HE2	52:BW:74:LYS:HA	1.73	0.69
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.73	0.69
23:BB:2356:U:H5''	52:BW:16:GLU:HG3	1.74	0.69
46:DU:87:GLU:OE2	46:DU:88:ASP:HB2	1.92	0.68
50:DT:10:VAL:HG21	50:DT:42:GLU:HG3	1.76	0.68
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.73	0.68
30:DY:4:ILE:HD13	30:DY:58:GLU:HA	1.75	0.68
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.74	0.68
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.29	0.68
3:CD:153:ARG:HG3	3:CD:154:VAL:H	1.57	0.68
27:DK:97:THR:C	27:DK:98:ARG:HE	1.96	0.68
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.73	0.68
3:CD:94:GLU:HG2	3:CD:190:LEU:HG	1.75	0.68
23:DB:704:G:H1'	23:DB:727:A:N6	2.09	0.68
25:BC:180:MET:HB2	25:BC:268:ARG:HB2	1.74	0.68
5:CF:42:TRP:NE1	5:CF:61:LEU:HD23	2.07	0.68
38:BM:4:PRO:HG2	38:BM:70:ASP:HA	1.75	0.68
23:BB:131:A:H2'	23:BB:132:G:C8	2.28	0.68
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:10:ARG:HA	44:DQ:13:HIS:HB2	1.75	0.68
1:AA:865:A:H5'	1:AA:1078:U:O4	1.93	0.68
23:BB:590:A:H2'	23:BB:591:U:C6	2.29	0.68
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.75	0.68
1:CA:673:A:H2'	1:CA:674:G:C8	2.29	0.68
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.57	0.68
23:BB:1812:U:H1'	25:BC:43:ASN:ND2	2.06	0.68
10:CK:105:ARG:HH21	21:CU:10:PRO:HB3	1.59	0.68
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.58	0.68
13:AN:30:ILE:H	13:AN:30:ILE:HD12	1.58	0.68
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.08	0.68
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.58	0.68
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.29	0.68
23:DB:594:U:H2'	23:DB:595:C:C6	2.27	0.68
29:BE:102:ARG:HD3	29:BE:201:ALA:H	1.57	0.68
23:BB:345:A:H1'	23:BB:346:A:H2	1.57	0.68
23:DB:1693:U:H1'	25:DC:13:ARG:HH21	1.57	0.68
22:DA:104:A:H2'	22:DA:105:G:O4'	1.93	0.68
27:DK:18:ARG:HB2	27:DK:45:GLU:HG3	1.74	0.68
2:CC:59:PRO:HG2	2:CC:62:SER:OG	1.92	0.68
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.73	0.68
41:DJ:32:LEU:O	41:DJ:36:LEU:HD22	1.93	0.68
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.24	0.68
42:BN:72:ASP:HB3	42:BN:75:ILE:HG12	1.75	0.68
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.29	0.68
23:DB:141:G:N3	23:DB:141:G:H3'	2.07	0.68
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.73	0.68
44:BQ:10:ARG:HA	44:BQ:13:HIS:HB2	1.73	0.68
23:DB:30:G:H2'	23:DB:31:C:C6	2.28	0.68
38:DM:19:GLY:N	38:DM:38:ARG:HH22	1.91	0.68
23:BB:2571:U:H4'	26:BD:151:THR:HG21	1.74	0.68
23:BB:2885:G:H2'	23:BB:2886:A:O4'	1.94	0.68
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.06	0.68
39:BX:56:LEU:O	39:BX:57:LEU:HB2	1.94	0.68
25:DC:233:GLY:H	25:DC:241:LYS:HZ1	1.41	0.68
25:BC:80:LEU:HD11	25:BC:109:LEU:O	1.92	0.68
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.74	0.68
23:BB:150:U:H2'	23:BB:151:C:C6	2.28	0.68
1:CA:719:C:H1'	17:CR:37:LYS:HB2	1.75	0.68
3:AD:28:ASP:HA	3:AD:33:ILE:HG21	1.73	0.68
22:BA:104:A:H2'	22:BA:105:G:O4'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:279:A:H5''	1:CA:280:C:H3'	1.75	0.68
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.28	0.68
23:DB:1639:C:H2'	23:DB:1640:A:H5''	1.74	0.68
4:AE:95:MET:HA	4:AE:124:ALA:HB2	1.75	0.68
52:BW:65:LYS:HD2	52:BW:84:GLU:HB3	1.74	0.68
25:DC:134:ILE:HD11	25:DC:163:ILE:HG13	1.76	0.68
49:DR:38:VAL:O	49:DR:53:PHE:HB3	1.94	0.68
41:BJ:12:LYS:HD2	41:BJ:41:LYS:HD3	1.74	0.68
20:AB:202:ASN:HD22	20:AB:204:ASP:N	1.90	0.68
23:DB:27:G:HO2'	23:DB:28:A:H8	1.41	0.68
9:CJ:65:TYR:OH	13:CN:84:ARG:HG3	1.94	0.68
42:BN:72:ASP:O	42:BN:75:ILE:HG13	1.94	0.68
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.75	0.68
23:DB:543:G:H21	23:DB:545:U:H5'	1.58	0.68
26:BD:34:VAL:CG1	26:BD:94:GLN:H	2.06	0.68
1:CA:518:C:H2'	1:CA:530:G:H8	1.58	0.68
27:BK:97:THR:C	27:BK:98:ARG:HE	1.96	0.68
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.58	0.68
1:CA:764:C:C2'	1:CA:765:G:H5'	2.24	0.68
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.28	0.68
1:AA:384:G:H2'	1:AA:385:C:C6	2.28	0.68
49:DR:76:LYS:HB2	49:DR:85:LYS:HB2	1.76	0.68
43:DO:67:ASN:H	43:DO:70:ALA:HB3	1.58	0.68
29:DE:136:GLN:HE22	29:DE:139:LYS:HD3	1.59	0.68
1:AA:312:C:H2'	1:AA:313:A:H8	1.59	0.68
23:BB:419:U:H2'	23:BB:420:C:C6	2.29	0.68
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.09	0.68
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.04	0.68
47:BF:62:GLN:HE21	47:BF:91:ARG:NH1	1.92	0.68
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.58	0.68
23:BB:141:G:H5''	23:BB:142:A:C5	2.29	0.68
23:DB:704:G:H1'	23:DB:727:A:H61	1.58	0.68
50:DT:44:LYS:O	50:DT:48:GLN:HG2	1.94	0.68
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.75	0.68
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.28	0.68
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.58	0.68
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.29	0.68
52:DW:65:LYS:HD2	52:DW:84:GLU:HB3	1.74	0.68
23:DB:27:G:H1'	23:DB:513:A:N6	2.09	0.68
23:BB:320:A:H2'	29:BE:131:THR:OG1	1.93	0.68
47:DF:34:THR:HA	47:DF:89:THR:HG22	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.59	0.68
26:BD:62:LYS:HD2	26:BD:62:LYS:H	1.58	0.68
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.29	0.68
25:BC:20:ASN:HD22	25:BC:23:LEU:HD13	1.59	0.68
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.59	0.68
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.59	0.68
38:BM:33:LEU:HD22	38:BM:128:THR:HB	1.75	0.68
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.75	0.68
51:BZ:27:ARG:HD3	51:BZ:28:ARG:H	1.57	0.68
23:DB:2267:A:H5''	23:DB:2268:A:H5'	1.74	0.68
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.76	0.68
8:CI:27:ILE:HB	8:CI:34:LEU:HB2	1.74	0.68
23:DB:1812:U:H1'	25:DC:43:ASN:ND2	2.07	0.68
1:AA:1250:A:H4'	8:AI:69:GLY:N	2.09	0.68
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.27	0.68
46:BU:81:ARG:N	46:BU:81:ARG:HH21	1.91	0.68
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.58	0.68
1:AA:560:A:H4'	1:AA:561:U:H5''	1.76	0.68
52:DW:74:LYS:HE2	52:DW:74:LYS:HA	1.76	0.68
35:BV:66:ASP:HB3	35:BV:68:LYS:HE2	1.76	0.68
23:BB:233:A:H61	23:BB:428:A:N6	1.92	0.68
21:AU:34:ARG:HH21	21:AU:36:PHE:HE2	1.42	0.68
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.57	0.68
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.06	0.68
23:BB:2748:A:H1'	48:BG:66:THR:HB	1.76	0.68
5:CF:90:MET:HG2	17:CR:60:ARG:NH2	2.09	0.68
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.59	0.68
23:DB:137:U:H2'	23:DB:138:U:O4'	1.94	0.68
23:DB:982:C:O2	23:DB:982:C:H5'	1.94	0.68
23:DB:2741:A:H2'	23:DB:2742:G:O4'	1.94	0.68
1:AA:337:G:H2'	1:AA:338:A:C8	2.29	0.68
23:BB:718:A:H3'	23:BB:719:C:H6	1.59	0.68
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.58	0.68
7:CH:113:ARG:NH2	7:CH:114:ALA:HA	2.09	0.68
29:DE:3:LEU:HB2	29:DE:12:LEU:HB2	1.76	0.68
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.59	0.68
23:BB:1301:A:O2'	23:BB:1302:A:H2'	1.93	0.68
1:AA:90:C:H2'	1:AA:91:U:C5	2.29	0.68
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.09	0.68
1:CA:499:A:H4'	1:CA:500:G:OP1	1.93	0.68
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:144:GLU:HG3	25:DC:151:GLY:N	2.09	0.67
47:BF:34:THR:HA	47:BF:89:THR:HG22	1.75	0.67
26:BD:55:LYS:HB3	26:BD:60:VAL:HG22	1.74	0.67
26:BD:8:LYS:HG2	26:BD:197:THR:H	1.59	0.67
35:BV:4:ILE:HB	35:BV:63:ILE:HG13	1.75	0.67
44:BQ:4:LYS:HZ1	44:BQ:7:VAL:H	1.42	0.67
26:DD:27:ILE:HG23	26:DD:201:LEU:HD12	1.76	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.34	0.67
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.59	0.67
21:AU:10:PRO:HB2	2:CC:71:ARG:HD3	1.77	0.67
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.29	0.67
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.06	0.67
2:CC:190:THR:HG22	2:CC:191:THR:N	2.09	0.67
23:DB:423:A:H5'	23:DB:424:G:H5''	1.76	0.67
2:CC:61:LYS:HZ2	2:CC:96:VAL:HG11	1.57	0.67
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.58	0.67
1:AA:279:A:H5''	1:AA:280:C:H3'	1.76	0.67
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.75	0.67
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.29	0.67
22:DA:2:G:H2'	22:DA:3:C:C6	2.29	0.67
10:AK:75:GLU:H	10:AK:75:GLU:CD	1.95	0.67
1:AA:160:A:H2'	1:AA:161:A:O4'	1.94	0.67
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.59	0.67
46:BU:87:GLU:OE2	46:BU:88:ASP:HB2	1.94	0.67
42:BN:34:ILE:HB	42:BN:113:ILE:HG22	1.74	0.67
23:DB:165:A:H2'	23:DB:166:U:C6	2.30	0.67
1:AA:1092:A:H5''	6:AG:3:ARG:HH12	1.58	0.67
4:CE:89:THR:HG22	4:CE:90:GLY:H	1.59	0.67
13:AN:14:ALA:HB1	13:AN:18:LYS:HE3	1.75	0.67
1:AA:590:U:H2'	1:AA:591:U:C6	2.29	0.67
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.30	0.67
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.93	0.67
23:DB:2331:G:O2'	52:DW:40:ARG:HB2	1.95	0.67
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.75	0.67
25:DC:180:MET:HB2	25:DC:268:ARG:HB2	1.76	0.67
23:DB:140:C:H4'	23:DB:141:G:C6	2.29	0.67
20:AB:221:ARG:HH11	20:AB:221:ARG:HB3	1.59	0.67
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.94	0.67
27:DK:118:LEU:O	27:DK:120:PRO:HD2	1.94	0.67
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:49:ASP:O	39:DX:53:VAL:HG23	1.95	0.67
49:BR:14:VAL:HG21	49:BR:98:ILE:HG12	1.74	0.67
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.59	0.67
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.29	0.67
10:CK:75:GLU:H	10:CK:75:GLU:CD	1.95	0.67
42:DN:96:ARG:HH11	42:DN:116:VAL:HG23	1.60	0.67
23:BB:855:G:H21	52:BW:23:LYS:CG	1.99	0.67
25:BC:166:ARG:HB3	25:BC:171:VAL:HG22	1.76	0.67
50:BT:10:VAL:HG21	50:BT:42:GLU:HG3	1.77	0.67
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.59	0.67
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	1.77	0.67
9:CJ:6:ILE:HB	9:CJ:76:ILE:HD11	1.76	0.67
30:BY:4:ILE:HD13	30:BY:58:GLU:HA	1.76	0.67
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.09	0.67
1:AA:269:C:H2'	1:AA:270:A:H8	1.58	0.67
49:DR:14:VAL:HG21	49:DR:98:ILE:HG12	1.75	0.67
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.30	0.67
23:DB:423:A:H5'	23:DB:424:G:C5'	2.24	0.67
1:CA:763:G:H2'	1:CA:764:C:H6	1.59	0.67
2:CC:31:ASN:HD22	2:CC:58:ARG:HE	1.41	0.67
1:AA:658:C:H2'	1:AA:659:U:H6	1.57	0.67
1:AA:56:U:H2'	1:AA:57:G:H8	1.58	0.67
2:AC:31:ASN:HD22	2:AC:58:ARG:HE	1.40	0.67
6:CG:64:ALA:HA	6:CG:127:ALA:HA	1.76	0.67
43:BO:24:THR:HG23	43:BO:90:VAL:HG12	1.75	0.67
48:BG:10:VAL:HG21	48:BG:47:ASN:O	1.95	0.67
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.29	0.67
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.09	0.67
23:DB:857:G:O2'	23:DB:858:G:H5'	1.95	0.67
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.77	0.67
40:BH:69:ALA:HB2	40:BH:138:VAL:HB	1.76	0.67
22:BA:75:G:H1	22:BA:102:G:N2	1.93	0.67
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.76	0.67
5:CF:7:VAL:HG13	5:CF:88:MET:HB3	1.77	0.67
4:AE:33:THR:HG22	4:AE:51:LYS:HB3	1.76	0.67
38:DM:64:TRP:HB2	38:DM:104:GLU:HB2	1.76	0.67
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.27	0.67
23:BB:18:U:H2'	23:BB:19:A:H8	1.60	0.67
16:CQ:8:GLN:HA	16:CQ:59:GLU:HA	1.76	0.67
23:DB:720:U:H2'	23:DB:721:A:C8	2.29	0.67
13:CN:12:ARG:HA	13:CN:15:LEU:HD12	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:69:ASN:H	19:AT:69:ASN:ND2	1.92	0.67
1:CA:312:C:H2'	1:CA:313:A:C8	2.30	0.67
15:AP:3:THR:HG22	15:AP:66:THR:HB	1.77	0.67
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.24	0.67
8:CI:41:GLU:H	8:CI:44:ARG:NH1	1.91	0.67
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.08	0.67
47:DF:62:GLN:HE21	47:DF:91:ARG:NH1	1.92	0.67
19:AT:56:ILE:O	19:AT:60:GLN:HG2	1.93	0.67
36:D2:31:LEU:HD22	36:D2:42:LEU:HD12	1.76	0.67
23:BB:1287:A:N7	42:BN:105:GLY:HA3	2.09	0.67
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.77	0.67
1:AA:973:G:H3'	1:AA:974:A:H5''	1.77	0.67
48:BG:93:TYR:O	48:BG:94:ARG:HG3	1.95	0.67
23:BB:1175:A:H2'	23:BB:1176:U:H5'	1.75	0.67
1:CA:237:G:H2'	1:CA:238:A:H8	1.59	0.67
1:CA:473:U:H2'	1:CA:474:G:H8	1.59	0.67
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.41	0.67
1:CA:160:A:H2'	1:CA:161:A:O4'	1.94	0.67
1:AA:157:U:O2'	1:AA:158:G:H5'	1.94	0.67
3:AD:22:SER:H	3:AD:109:THR:HG22	1.60	0.67
23:DB:992:C:H4'	49:DR:74:ILE:HD13	1.76	0.67
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.29	0.67
1:CA:384:G:H2'	1:CA:385:C:C6	2.30	0.67
11:AL:17:LYS:N	11:AL:17:LYS:HE3	2.09	0.67
23:BB:1507:C:H2'	23:BB:1508:A:H4'	1.76	0.67
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.29	0.67
29:DE:5:LEU:HD22	29:DE:122:GLU:HG3	1.77	0.67
48:DG:25:ILE:HG22	48:DG:78:VAL:HG11	1.77	0.67
48:DG:84:LYS:CB	48:DG:132:LEU:H	2.08	0.67
37:BL:79:LEU:HB2	37:BL:113:ALA:HB3	1.76	0.67
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.60	0.67
42:DN:34:ILE:HB	42:DN:113:ILE:HG22	1.76	0.67
39:DX:56:LEU:O	39:DX:57:LEU:HB2	1.93	0.67
1:CA:632:U:H5''	1:CA:633:G:C8	2.29	0.67
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.77	0.67
1:CA:312:C:H2'	1:CA:313:A:H8	1.58	0.67
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	1.77	0.67
23:DB:2213:U:O2	23:DB:2213:U:H2'	1.95	0.67
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.60	0.67
23:DB:460:A:H2'	23:DB:461:C:O4'	1.94	0.67
2:CC:2:GLN:H	2:CC:2:GLN:NE2	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.30	0.67
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.15	0.67
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	1.77	0.67
41:DJ:12:LYS:HD2	41:DJ:41:LYS:HD3	1.77	0.67
3:AD:94:GLU:HG2	3:AD:190:LEU:HG	1.76	0.67
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.23	0.67
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.67
42:DN:72:ASP:O	42:DN:75:ILE:HG13	1.95	0.67
13:AN:45:LEU:HD21	18:AS:9:PHE:HB2	1.75	0.67
23:BB:2144:G:H5'	23:BB:2145:C:H5''	1.76	0.67
15:AP:43:ALA:HA	15:AP:46:LYS:HE3	1.76	0.67
1:CA:371:A:O2'	1:CA:372:C:H5'	1.95	0.67
3:AD:71:PHE:HE1	3:AD:89:LEU:HD21	1.59	0.67
16:AQ:75:VAL:HG23	16:AQ:76:ARG:H	1.58	0.67
45:DS:20:VAL:HG23	45:DS:23:LEU:HD12	1.77	0.67
16:CQ:75:VAL:HG23	16:CQ:76:ARG:H	1.59	0.67
3:CD:145:ARG:HB3	3:CD:147:LYS:HD2	1.77	0.67
1:CA:8:A:H5'	4:CE:105:ILE:HG22	1.76	0.67
1:CA:154:U:H2'	1:CA:155:A:C8	2.29	0.67
13:AN:12:ARG:HA	13:AN:15:LEU:HD12	1.77	0.67
23:DB:609:A:H2'	23:DB:610:C:O4'	1.95	0.67
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.30	0.67
1:CA:882:C:O2'	1:CA:883:C:H5'	1.95	0.67
52:BW:48:ALA:HB3	52:BW:81:ILE:HG13	1.77	0.67
23:BB:704:G:H1'	23:BB:727:A:N6	2.10	0.67
19:AT:43:LYS:HE2	19:AT:44:ALA:N	2.10	0.67
12:AM:33:LEU:HB3	12:AM:38:ILE:O	1.95	0.67
20:AB:86:CYS:HB3	20:AB:88:GLN:CD	2.14	0.67
49:DR:31:GLU:H	49:DR:63:VAL:HG22	1.58	0.67
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.59	0.67
23:BB:713:G:H21	23:BB:718:A:H2	1.43	0.67
23:DB:796:C:H2'	23:DB:797:G:H8	1.60	0.67
36:B2:19:ARG:HH21	36:B2:19:ARG:HB3	1.58	0.67
23:BB:654:A:H2'	23:BB:655:A:H5''	1.77	0.67
52:DW:48:ALA:HB3	52:DW:81:ILE:HG13	1.77	0.67
1:CA:1202:U:H1'	13:CN:68:ARG:HD2	1.76	0.67
45:BS:6:LYS:HB3	45:BS:104:THR:HG23	1.77	0.67
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	1.77	0.67
38:BM:43:ALA:O	38:BM:46:ILE:HG12	1.94	0.67
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.77	0.67
23:BB:2723:C:H5''	42:BN:1:MET:HE2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.60	0.67
1:AA:190:A:H2'	1:AA:191:G:O4'	1.95	0.67
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.77	0.67
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.25	0.66
8:AI:64:ILE:HD12	8:AI:64:ILE:H	1.60	0.66
12:CM:71:GLU:CA	12:CM:74:MET:HG2	2.24	0.66
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.06	0.66
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.58	0.66
38:DM:43:ALA:O	38:DM:46:ILE:HG12	1.95	0.66
23:BB:2746:U:H5''	48:BG:137:LYS:HG2	1.76	0.66
12:AM:18:LEU:HD23	12:AM:24:VAL:HG21	1.77	0.66
1:CA:18:C:H4'	1:CA:1078:U:O2	1.95	0.66
23:DB:2146:C:H4'	23:DB:2148:G:N7	2.10	0.66
12:CM:10:ASP:HB2	12:CM:11:HIS:ND1	2.10	0.66
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.77	0.66
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.30	0.66
27:DK:70:ARG:HB3	27:DK:76:VAL:HG13	1.76	0.66
23:BB:592:A:H2'	23:BB:593:U:C6	2.30	0.66
3:AD:25:ARG:NH1	3:AD:30:LYS:HE3	2.10	0.66
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.94	0.66
23:DB:718:A:H3'	23:DB:719:C:H6	1.61	0.66
25:BC:233:GLY:H	25:BC:241:LYS:NZ	1.92	0.66
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.60	0.66
1:CA:1309:G:H1'	12:CM:72:ILE:HD11	1.77	0.66
1:CA:35:G:H2'	1:CA:36:C:C6	2.31	0.66
1:CA:590:U:H2'	1:CA:591:U:C6	2.30	0.66
23:DB:2872:A:O2'	23:DB:2873:A:H5''	1.95	0.66
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.77	0.66
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.30	0.66
20:CB:22:TRP:HB3	20:CB:38:HIS:NE2	2.10	0.66
8:AI:50:PRO:HD3	8:AI:79:ARG:HG3	1.77	0.66
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.76	0.66
35:DV:35:GLU:HG3	35:DV:93:ARG:CZ	2.25	0.66
5:AF:90:MET:HG2	17:AR:60:ARG:NH2	2.09	0.66
47:DF:90:LEU:HB3	47:DF:95:MET:HA	1.77	0.66
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.35	0.66
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.58	0.66
1:CA:973:G:H3'	1:CA:974:A:H5''	1.76	0.66
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.10	0.66
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.08	0.66
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.23	0.66
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.94	0.66
11:CL:82:ARG:HH11	11:CL:82:ARG:HG2	1.59	0.66
1:AA:539:A:H2'	1:AA:540:G:C8	2.30	0.66
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.60	0.66
29:BE:189:THR:O	29:BE:193:VAL:HG23	1.95	0.66
6:AG:64:ALA:HA	6:AG:127:ALA:HA	1.74	0.66
23:DB:2265:U:H3'	23:DB:2266:A:H5''	1.76	0.66
47:BF:102:LEU:O	47:BF:103:ILE:HB	1.95	0.66
42:BN:80:PHE:O	42:BN:85:PRO:HD3	1.96	0.66
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	2.10	0.66
45:BS:66:ILE:HA	45:BS:69:LEU:HD22	1.76	0.66
23:BB:2305:U:H5''	47:BF:130:GLY:HA3	1.76	0.66
5:CF:9:MET:HB3	5:CF:59:TYR:CD2	2.31	0.66
36:D2:35:ARG:HG3	36:D2:42:LEU:HD21	1.75	0.66
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	1.76	0.66
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.96	0.66
23:DB:2142:A:H2'	23:DB:2143:C:O4'	1.96	0.66
23:DB:2149:U:H2'	23:DB:2150:C:C6	2.30	0.66
23:BB:181:A:H2'	23:BB:182:A:H8	1.58	0.66
12:AM:10:ASP:HB2	12:AM:11:HIS:ND1	2.10	0.66
1:CA:859:G:H2'	1:CA:860:A:H8	1.61	0.66
16:AQ:8:GLN:HA	16:AQ:59:GLU:HA	1.77	0.66
23:BB:2186:G:H2'	23:BB:2187:U:O4'	1.95	0.66
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.76	0.66
23:BB:1843:C:H5''	25:BC:250:GLN:HE21	1.60	0.66
23:BB:460:A:H2'	23:BB:461:C:O4'	1.95	0.66
23:DB:1693:U:H1'	25:DC:13:ARG:NH2	2.11	0.66
1:CA:1168:U:H4'	1:CA:1169:A:OP2	1.96	0.66
23:BB:192:C:H2'	23:BB:193:U:H5'	1.77	0.66
1:CA:56:U:H2'	1:CA:57:G:H8	1.59	0.66
1:CA:1018:G:H2'	1:CA:1019:A:H8	1.59	0.66
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	1.76	0.66
1:AA:764:C:C2'	1:AA:765:G:H5'	2.26	0.66
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.76	0.66
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.16	0.66
49:BR:38:VAL:O	49:BR:53:PHE:HB3	1.96	0.66
8:CI:48:ARG:O	8:CI:52:GLU:HG2	1.95	0.66
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.78	0.66
47:DF:76:PHE:HD2	47:DF:78:ILE:HD13	1.59	0.66
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.16	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:71:LEU:HD12	51:BZ:76:GLU:HG2	1.78	0.66
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	1.76	0.66
1:AA:465:A:H2'	1:AA:467:U:OP2	1.94	0.66
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.76	0.66
23:BB:581:C:H2'	23:BB:582:A:C8	2.31	0.66
49:BR:31:GLU:H	49:BR:63:VAL:HG22	1.60	0.66
2:AC:61:LYS:NZ	2:AC:96:VAL:HG11	2.10	0.66
1:AA:764:C:H2'	1:AA:765:G:H5'	1.77	0.66
1:AA:673:A:H2'	1:AA:674:G:C8	2.30	0.66
2:CC:13:ILE:H	2:CC:13:ILE:HD13	1.59	0.66
1:CA:285:C:H2'	1:CA:286:C:H6	1.60	0.66
46:BU:40:LEU:HA	46:BU:60:LYS:O	1.95	0.66
43:DO:24:THR:HG23	43:DO:90:VAL:HG12	1.77	0.66
50:DT:73:ARG:HH21	50:DT:73:ARG:HB3	1.58	0.66
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.10	0.66
40:BH:90:LEU:HD23	40:BH:92:GLY:O	1.95	0.66
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.59	0.66
10:AK:91:GLY:O	10:AK:95:THR:HG22	1.96	0.66
26:DD:29:VAL:O	26:DD:185:ASN:HB3	1.95	0.66
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.76	0.66
35:DV:30:ILE:HA	35:DV:91:PHE:O	1.96	0.66
23:BB:322:A:C2'	29:BE:163:ASN:HD21	2.08	0.66
47:DF:101:ARG:CZ	47:DF:138:PRO:HB2	2.26	0.66
10:CK:80:ASN:H	10:CK:80:ASN:HD22	1.43	0.66
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.30	0.66
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.77	0.66
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.77	0.66
42:BN:25:ALA:HB1	42:BN:48:VAL:HG13	1.76	0.66
46:DU:20:LYS:HB2	46:DU:20:LYS:HZ3	1.59	0.66
23:DB:581:C:H2'	23:DB:582:A:C8	2.30	0.66
38:BM:57:VAL:HG13	38:BM:108:VAL:HG21	1.78	0.66
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.29	0.66
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.31	0.66
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.31	0.66
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.60	0.66
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.30	0.66
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.95	0.66
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.60	0.66
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.30	0.66
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.08	0.66
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.26	0.66
35:DV:4:ILE:HB	35:DV:63:ILE:HG13	1.78	0.66
26:DD:8:LYS:HG2	26:DD:197:THR:H	1.60	0.66
42:DN:80:PHE:O	42:DN:85:PRO:HD3	1.96	0.66
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.59	0.66
38:BM:67:VAL:HG11	38:BM:102:LEU:HD13	1.76	0.66
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.31	0.66
23:BB:423:A:H5'	23:BB:424:G:C5'	2.26	0.66
1:AA:920:U:H2'	1:AA:921:U:C6	2.31	0.66
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.31	0.66
23:DB:2360:G:H4'	37:DL:61:LEU:HD11	1.76	0.66
1:AA:140:U:H2'	1:AA:141:G:H8	1.60	0.66
23:BB:1515:A:H2'	23:BB:1516:G:O4'	1.95	0.66
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.75	0.66
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.76	0.66
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.61	0.66
29:DE:29:HIS:HA	29:DE:32:VAL:HG22	1.78	0.66
1:AA:68:G:H5'	1:AA:171:A:C1'	2.24	0.66
23:BB:1244:A:H5''	37:BL:8:PRO:CD	2.26	0.66
24:DI:126:ARG:HB3	24:DI:126:ARG:HH11	1.60	0.66
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.31	0.66
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.59	0.66
3:CD:81:LEU:HB2	3:CD:88:ASN:ND2	2.10	0.66
45:BS:20:VAL:HG23	45:BS:23:LEU:HD12	1.76	0.66
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.11	0.66
8:AI:71:ILE:HD12	8:AI:71:ILE:H	1.59	0.66
21:AU:24:LYS:HD2	21:AU:25:ALA:H	1.60	0.66
1:AA:382:A:H2'	1:AA:383:A:C8	2.31	0.66
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.60	0.66
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.60	0.66
1:AA:678:U:H2'	1:AA:679:C:C6	2.31	0.66
2:CC:134:LYS:HA	2:CC:167:TYR:HE2	1.60	0.66
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.95	0.66
50:BT:73:ARG:HH21	50:BT:73:ARG:HB3	1.60	0.66
37:BL:65:GLY:O	37:BL:66:PHE:HB2	1.96	0.66
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.31	0.66
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.26	0.66
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.76	0.66
20:AB:22:TRP:HB3	20:AB:38:HIS:NE2	2.09	0.66
8:CI:56:MET:C	8:CI:58:GLU:H	2.00	0.66
40:DH:31:VAL:O	40:DH:33:GLN:N	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:29:VAL:O	26:BD:185:ASN:HB3	1.96	0.66
20:CB:202:ASN:HD22	20:CB:204:ASP:N	1.90	0.66
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.95	0.66
23:DB:2885:G:H2'	23:DB:2886:A:O4'	1.95	0.66
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.09	0.66
12:CM:33:LEU:HB3	12:CM:38:ILE:O	1.95	0.66
51:DZ:71:LEU:HD12	51:DZ:76:GLU:HG2	1.77	0.66
48:DG:93:TYR:O	48:DG:94:ARG:HG3	1.96	0.66
39:BX:49:ASP:O	39:BX:53:VAL:HG23	1.95	0.66
31:D0:43:THR:HG23	31:D0:47:TYR:O	1.96	0.66
11:AL:35:ARG:HH12	11:AL:36:VAL:HG22	1.59	0.66
1:AA:922:G:H2'	1:AA:923:A:C8	2.30	0.66
23:DB:2893:A:H5''	23:DB:2894:G:H5'	1.76	0.66
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.76	0.66
1:AA:478:A:H2'	1:AA:479:U:O4'	1.96	0.66
23:DB:365:U:H2'	23:DB:366:C:C6	2.31	0.66
23:BB:1939:U:H6	23:BB:1939:U:H5'	1.61	0.66
46:DU:40:LEU:HA	46:DU:60:LYS:O	1.96	0.66
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.31	0.66
1:CA:501:C:H2'	1:CA:502:A:H8	1.60	0.66
40:BH:90:LEU:HD21	40:BH:146:VAL:HG21	1.78	0.66
23:BB:2303:G:H4'	47:BF:121:PHE:O	1.95	0.66
19:CT:79:THR:O	19:CT:82:ILE:HG13	1.96	0.66
35:BV:35:GLU:HG3	35:BV:93:ARG:CZ	2.26	0.66
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.30	0.66
37:DL:65:GLY:O	37:DL:66:PHE:HB2	1.95	0.66
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.31	0.66
26:BD:114:LYS:HD2	26:BD:116:LYS:NZ	2.11	0.66
23:BB:717:C:H3'	23:BB:718:A:H5''	1.78	0.66
1:AA:763:G:H2'	1:AA:764:C:H6	1.59	0.66
29:DE:194:LYS:O	29:DE:197:GLU:HB3	1.96	0.66
23:DB:233:A:H61	23:DB:428:A:N6	1.92	0.66
1:CA:492:C:H2'	1:CA:493:A:N3	2.09	0.66
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.76	0.66
49:BR:76:LYS:HB2	49:BR:85:LYS:HB2	1.77	0.66
49:BR:78:ARG:HB3	49:BR:83:TYR:HB3	1.78	0.66
1:AA:699:C:H2'	1:AA:700:G:H5''	1.76	0.66
23:DB:2137:U:H2'	23:DB:2138:G:O4'	1.96	0.66
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.61	0.66
1:CA:982:U:H5''	13:CN:5:MET:HE3	1.77	0.66
21:CU:34:ARG:HH21	21:CU:36:PHE:HE2	1.42	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:42:THR:O	21:CU:46:ARG:HG3	1.95	0.66
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.76	0.66
21:AU:42:THR:O	21:AU:46:ARG:HG3	1.95	0.66
3:AD:160:LEU:HD22	3:AD:161:ALA:N	2.11	0.66
25:DC:81:GLU:HB2	25:DC:90:ILE:HG22	1.78	0.66
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.77	0.66
45:DS:66:ILE:HA	45:DS:69:LEU:HD22	1.77	0.66
1:CA:1144:G:N2	1:CA:1146:A:H62	1.94	0.66
29:DE:88:ARG:O	29:DE:90:GLN:HG3	1.96	0.66
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.78	0.66
36:D2:26:ASN:O	36:D2:30:VAL:HG23	1.95	0.66
23:DB:18:U:H2'	23:DB:19:A:C8	2.30	0.66
23:DB:713:G:H21	23:DB:718:A:H2	1.43	0.66
23:BB:2213:U:O2	23:BB:2213:U:H2'	1.96	0.66
29:BE:3:LEU:HB2	29:BE:12:LEU:HB2	1.78	0.66
1:AA:957:U:H4'	18:AS:78:THR:HB	1.77	0.66
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.78	0.66
1:CA:957:U:H4'	18:CS:78:THR:HB	1.78	0.66
25:DC:173:LEU:H	25:DC:173:LEU:HD13	1.60	0.66
1:CA:190:A:H2'	1:CA:191:G:O4'	1.95	0.66
20:AB:10:LYS:HB3	20:AB:211:LEU:HD21	1.78	0.66
47:BF:90:LEU:HB3	47:BF:95:MET:HA	1.78	0.65
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.11	0.65
23:DB:351:C:H2'	23:DB:352:A:C8	2.32	0.65
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.61	0.65
23:BB:2144:G:H21	23:BB:2147:A:H4'	1.57	0.65
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.11	0.65
30:BY:28:LEU:HA	30:BY:33:HIS:HD2	1.61	0.65
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	1.96	0.65
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.60	0.65
23:BB:528:A:C2	23:BB:2042:A:H2'	2.31	0.65
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.30	0.65
23:BB:1372:U:H4'	23:BB:2213:U:O2	1.96	0.65
1:AA:35:G:H2'	1:AA:36:C:C6	2.31	0.65
23:BB:609:A:H2'	23:BB:610:C:O4'	1.96	0.65
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.60	0.65
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.31	0.65
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.61	0.65
1:AA:950:U:H2'	1:AA:951:G:H8	1.61	0.65
4:CE:61:LYS:O	4:CE:65:LYS:HG2	1.94	0.65
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:18:LYS:HE3	52:DW:18:LYS:HA	1.77	0.65
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.79	0.65
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.28	0.65
42:DN:72:ASP:HB3	42:DN:75:ILE:HG12	1.78	0.65
23:BB:27:G:H1'	23:BB:513:A:N6	2.11	0.65
45:DS:74:ILE:HD13	45:DS:105:VAL:HG22	1.78	0.65
13:CN:27:LYS:HA	13:CN:31:SER:HB2	1.77	0.65
1:CA:922:G:H2'	1:CA:923:A:C8	2.30	0.65
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.31	0.65
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.26	0.65
46:DU:39:ASN:HB3	46:DU:62:ALA:HB3	1.79	0.65
7:CH:45:ILE:HG21	7:CH:60:LEU:HD21	1.77	0.65
23:DB:825:A:H1'	37:DL:54:GLN:NE2	2.12	0.65
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.78	0.65
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.78	0.65
7:AH:37:ASN:O	7:AH:41:GLU:HG2	1.96	0.65
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.97	0.65
52:BW:18:LYS:HA	52:BW:18:LYS:HE3	1.78	0.65
41:BJ:16:TYR:O	41:BJ:55:ILE:HG12	1.95	0.65
23:BB:30:G:H2'	23:BB:31:C:C6	2.32	0.65
41:DJ:57:LEU:HD21	41:DJ:128:ASN:HA	1.77	0.65
12:CM:78:ARG:O	12:CM:82:LEU:HB2	1.97	0.65
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.59	0.65
36:B2:31:LEU:HD22	36:B2:42:LEU:HD12	1.77	0.65
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.62	0.65
40:BH:49:ALA:HB3	40:BH:50:ARG:NH2	2.12	0.65
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.26	0.65
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.61	0.65
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.62	0.65
20:AB:187:ASP:HB3	20:AB:201:GLY:O	1.96	0.65
1:AA:312:C:H2'	1:AA:313:A:C8	2.31	0.65
39:BX:29:ARG:HH12	50:BT:12:ARG:HA	1.61	0.65
35:DV:66:ASP:HB3	35:DV:68:LYS:HE2	1.79	0.65
23:BB:1354:A:H2'	23:BB:1355:G:O4'	1.96	0.65
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.32	0.65
48:DG:10:VAL:HG21	48:DG:47:ASN:O	1.97	0.65
45:DS:17:VAL:C	45:DS:19:LEU:H	1.98	0.65
23:DB:1354:A:H2'	23:DB:1355:G:O4'	1.97	0.65
1:AA:719:C:H1'	17:AR:37:LYS:HB2	1.77	0.65
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.77	0.65
44:BQ:104:ALA:HA	49:BR:46:GLU:OE2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:18:LEU:HD23	12:CM:24:VAL:HG21	1.78	0.65
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.61	0.65
4:AE:143:LEU:O	4:AE:146:MET:HG2	1.97	0.65
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.11	0.65
37:DL:79:LEU:HB2	37:DL:113:ALA:HB3	1.77	0.65
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	1.96	0.65
33:D1:7:LYS:HD2	34:D3:33:THR:HG21	1.78	0.65
1:CA:452:A:H2'	1:CA:453:G:O4'	1.96	0.65
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.32	0.65
23:DB:1843:C:H5''	25:DC:250:GLN:HE21	1.61	0.65
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.59	0.65
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.61	0.65
23:BB:721:A:H2'	23:BB:722:A:C8	2.31	0.65
23:DB:2892:G:H5''	23:DB:2894:G:N2	2.11	0.65
23:BB:2741:A:H2'	23:BB:2742:G:O4'	1.96	0.65
23:DB:419:U:H2'	23:DB:420:C:C6	2.31	0.65
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.62	0.65
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.11	0.65
26:DD:14:ILE:HG23	26:DD:22:ILE:HB	1.76	0.65
15:CP:3:THR:HB	15:CP:66:THR:O	1.95	0.65
42:BN:37:THR:HB	42:BN:40:LYS:HG3	1.77	0.65
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.16	0.65
48:DG:17:LYS:HA	48:DG:17:LYS:HZ2	1.60	0.65
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	1.97	0.65
23:DB:1174:U:H4'	23:DB:1176:U:H1'	1.77	0.65
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.27	0.65
13:AN:46:LYS:HZ2	18:AS:10:ILE:H	1.43	0.65
23:DB:138:U:H2'	23:DB:140:C:N1	2.12	0.65
41:BJ:57:LEU:HD21	41:BJ:128:ASN:HA	1.78	0.65
23:DB:2143:C:H2'	23:DB:2144:G:O4'	1.97	0.65
1:CA:1399:C:H4'	1:CA:1400:C:C5'	2.26	0.65
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.77	0.65
1:CA:552:U:H2'	1:CA:553:A:C8	2.31	0.65
23:DB:1788:C:O2'	23:DB:1789:A:H5'	1.96	0.65
23:DB:254:G:H22	34:D3:7:ARG:HH21	1.44	0.65
2:AC:65:VAL:HG21	2:AC:90:VAL:HG11	1.79	0.65
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.10	0.65
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.31	0.65
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.32	0.65
23:DB:589:U:H2'	23:DB:590:A:C8	2.31	0.65
37:BL:143:GLU:CG	37:BL:144:GLU:H	1.99	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:79:SER:HG	13:AN:82:LYS:HG2	1.61	0.65
8:CI:83:THR:HA	8:CI:86:LEU:HD22	1.77	0.65
48:BG:84:LYS:CB	48:BG:132:LEU:H	2.10	0.65
13:CN:40:ARG:HH11	18:CS:6:LYS:HB2	1.62	0.65
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.30	0.65
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.32	0.65
1:AA:1144:G:N2	1:AA:1146:A:H62	1.95	0.65
20:CB:187:ASP:HB3	20:CB:201:GLY:O	1.96	0.65
1:AA:632:U:H5''	1:AA:633:G:C8	2.31	0.65
41:DJ:98:GLU:CD	41:DJ:98:GLU:H	2.00	0.65
3:CD:155:LYS:HA	3:CD:158:LEU:HD13	1.79	0.65
23:BB:19:A:H2'	23:BB:20:C:C6	2.31	0.65
23:BB:2751:G:N3	23:BB:2751:G:H2'	2.10	0.65
1:AA:499:A:H4'	1:AA:500:G:OP1	1.95	0.65
33:D1:43:ARG:HH21	33:D1:43:ARG:HB3	1.61	0.65
3:AD:81:LEU:HB2	3:AD:88:ASN:ND2	2.11	0.65
20:CB:10:LYS:HB3	20:CB:211:LEU:HD21	1.79	0.65
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.15	0.65
26:DD:53:GLY:HA3	26:DD:77:ARG:HG3	1.77	0.65
28:BP:56:SER:HB2	28:BP:75:THR:CG2	2.26	0.65
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.79	0.65
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.09	0.65
29:BE:29:HIS:HA	29:BE:32:VAL:HG22	1.79	0.65
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.27	0.65
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.12	0.65
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.79	0.65
33:D1:36:LYS:HG2	33:D1:47:ILE:HG13	1.79	0.65
23:BB:417:C:H2'	23:BB:418:C:C6	2.32	0.65
1:CA:285:C:H2'	1:CA:286:C:C6	2.31	0.65
1:CA:1226:C:H4'	1:CA:1227:A:OP1	1.96	0.65
1:AA:41:G:H2'	1:AA:42:G:C8	2.32	0.65
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.32	0.65
16:CQ:80:LYS:N	16:CQ:80:LYS:HE3	2.12	0.65
28:DP:46:VAL:HA	28:DP:60:VAL:HG12	1.79	0.65
23:DB:654:A:H2'	23:DB:655:A:H5''	1.77	0.65
37:BL:70:LYS:O	37:BL:73:ILE:HG12	1.97	0.65
23:DB:947:A:HO2'	23:DB:984:A:H2	1.45	0.65
40:BH:80:ILE:HB	40:BH:144:VAL:HG13	1.79	0.65
40:BH:96:THR:HA	40:BH:99:ILE:HG12	1.79	0.65
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HA	2.11	0.65
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.07	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:140:ILE:HA	48:DG:143:VAL:HG22	1.79	0.65
23:DB:495:G:H21	45:DS:61:ASN:ND2	1.92	0.65
20:CB:101:THR:HA	20:CB:178:LEU:HD11	1.77	0.65
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.79	0.65
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.79	0.65
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.26	0.65
23:DB:2646:C:OP2	23:DB:2732:G:H2'	1.97	0.65
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.32	0.65
46:DU:11:ILE:HG22	46:DU:70:ALA:HB3	1.79	0.65
42:DN:114:GLU:HG2	42:DN:115:LEU:N	2.12	0.65
1:AA:1144:G:H21	1:AA:1146:A:H62	1.43	0.65
1:AA:129:A:H1'	1:AA:130:A:C8	2.31	0.65
23:BB:423:A:H5'	23:BB:424:G:H5''	1.79	0.65
23:DB:1786:A:H1'	23:DB:1938:A:N6	2.12	0.65
4:AE:64:GLU:O	4:AE:68:ARG:HG2	1.97	0.65
35:BV:44:HIS:CE1	35:BV:86:LEU:H	2.15	0.65
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.31	0.65
1:CA:678:U:H2'	1:CA:679:C:C6	2.31	0.65
23:BB:165:A:H2'	23:BB:166:U:C6	2.32	0.65
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.32	0.65
22:BA:49:C:H2'	22:BA:50:A:H8	1.61	0.65
23:DB:2109:U:H2'	23:DB:2180:U:H3	1.62	0.65
46:BU:3:LYS:HB3	46:BU:82:VAL:HG21	1.78	0.65
23:DB:38:A:O2'	29:DE:43:THR:HA	1.97	0.65
1:CA:1038:C:H2'	1:CA:1039:G:C8	2.31	0.65
46:BU:39:ASN:HB3	46:BU:62:ALA:HB3	1.78	0.65
15:AP:59:HIS:O	15:AP:63:GLN:HG3	1.97	0.65
27:BK:70:ARG:HB3	27:BK:76:VAL:HG13	1.78	0.65
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.07	0.65
44:BQ:86:SER:HB3	49:BR:51:VAL:HA	1.79	0.65
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.77	0.65
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.79	0.65
10:AK:80:ASN:HD22	10:AK:80:ASN:H	1.45	0.65
20:AB:101:THR:HA	20:AB:178:LEU:HD11	1.77	0.65
23:BB:2144:G:H2'	23:BB:2146:C:OP2	1.96	0.65
2:CC:113:LYS:HB2	2:CC:184:ASN:OD1	1.97	0.65
12:AM:48:SER:HB2	12:AM:51:GLN:HG3	1.79	0.65
23:BB:1176:U:H3'	23:BB:1177:G:H8	1.60	0.65
41:BJ:98:GLU:CD	41:BJ:98:GLU:H	2.00	0.65
1:CA:946:A:H2'	1:CA:947:G:C8	2.32	0.65
22:BA:49:C:H2'	22:BA:50:A:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.32	0.65
5:AF:97:THR:O	5:AF:98:GLU:HB3	1.95	0.65
23:DB:1515:A:H2'	23:DB:1516:G:O4'	1.97	0.65
23:DB:150:U:H2'	23:DB:151:C:C6	2.32	0.65
1:AA:97:G:H2'	1:AA:98:A:O4'	1.97	0.65
33:B1:43:ARG:HB3	33:B1:43:ARG:HH21	1.61	0.65
1:CA:784:A:H2'	1:CA:785:G:H8	1.62	0.65
12:AM:92:ARG:HE	12:AM:92:ARG:HA	1.61	0.65
10:AK:124:LYS:O	21:AU:33:ARG:NE	2.27	0.65
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.12	0.65
49:DR:39:LEU:HB3	49:DR:53:PHE:HA	1.78	0.65
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	2.09	0.65
35:DV:77:VAL:HG12	38:DM:136:MET:HG2	1.79	0.65
5:AF:9:MET:HB3	5:AF:59:TYR:CD2	2.31	0.65
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.77	0.65
23:BB:1639:C:C2'	23:BB:1640:A:H5''	2.27	0.65
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.32	0.65
23:DB:721:A:H2'	23:DB:722:A:C8	2.32	0.65
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.80	0.65
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.26	0.65
15:CP:3:THR:HG22	15:CP:66:THR:HB	1.78	0.65
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.32	0.65
23:BB:1346:G:O2'	23:BB:1347:A:H5'	1.96	0.65
23:DB:96:C:H4'	39:DX:41:HIS:ND1	2.12	0.65
23:DB:1507:C:H2'	23:DB:1508:A:H4'	1.79	0.65
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.32	0.65
25:BC:264:LYS:HG3	25:BC:265:PHE:HD2	1.62	0.65
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.79	0.65
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.32	0.65
1:CA:382:A:H2'	1:CA:383:A:C8	2.31	0.65
15:AP:38:PHE:HE2	15:AP:51:ARG:HH11	1.45	0.65
6:AG:52:ARG:HH22	6:AG:121:ASN:ND2	1.95	0.65
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.31	0.65
8:AI:56:MET:C	8:AI:58:GLU:H	2.00	0.64
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE2	1.78	0.64
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HA	2.12	0.64
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.98	0.64
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.11	0.64
35:BV:30:ILE:HA	35:BV:91:PHE:O	1.97	0.64
10:CK:91:GLY:O	10:CK:95:THR:HG22	1.95	0.64
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.78	0.64
45:BS:74:ILE:HD13	45:BS:105:VAL:HG22	1.77	0.64
45:DS:6:LYS:HB3	45:DS:104:THR:HG23	1.79	0.64
5:CF:29:ILE:HD13	5:CF:64:VAL:HG21	1.78	0.64
23:BB:783:A:H2'	23:BB:784:G:O5'	1.97	0.64
1:CA:372:C:H4'	1:CA:373:A:H5'	1.79	0.64
29:DE:189:THR:O	29:DE:193:VAL:HG23	1.97	0.64
23:BB:580:U:H2'	23:BB:581:C:H6	1.61	0.64
23:DB:2799:A:H4'	23:DB:2800:A:O4'	1.97	0.64
23:DB:2798:U:H1'	23:DB:2800:A:N6	2.11	0.64
23:DB:528:A:C2	23:DB:2042:A:H2'	2.32	0.64
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.79	0.64
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	1.97	0.64
23:DB:717:C:H3'	23:DB:718:A:H5''	1.77	0.64
39:BX:10:SER:H	39:BX:60:LYS:HE2	1.62	0.64
1:CA:1186:G:H21	13:CN:100:TRP:C	2.00	0.64
43:DO:56:LYS:O	43:DO:60:GLU:HG2	1.97	0.64
6:CG:88:VAL:HA	6:CG:152:HIS:HB2	1.79	0.64
23:DB:1268:A:H2'	23:DB:1269:A:O4'	1.97	0.64
23:DB:275:C:H2'	23:DB:276:U:O4'	1.97	0.64
23:BB:2892:G:H5''	23:BB:2894:G:N2	2.12	0.64
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.13	0.64
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.60	0.64
40:BH:128:HIS:HB3	40:BH:144:VAL:HB	1.78	0.64
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	1.96	0.64
8:CI:44:ARG:O	8:CI:47:VAL:HG22	1.97	0.64
3:AD:145:ARG:HB3	3:AD:147:LYS:HD2	1.78	0.64
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.12	0.64
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.12	0.64
3:CD:25:ARG:HD3	3:CD:26:ALA:H	1.62	0.64
1:CA:268:U:H2'	1:CA:269:C:C6	2.32	0.64
23:BB:545:U:H3	23:BB:548:G:P	2.20	0.64
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.32	0.64
23:DB:974:G:OP2	49:DR:78:ARG:HD3	1.97	0.64
35:BV:79:ARG:HA	35:BV:86:LEU:HA	1.79	0.64
1:CA:157:U:O2'	1:CA:158:G:H5'	1.96	0.64
29:BE:136:GLN:HE22	29:BE:139:LYS:HD3	1.62	0.64
2:AC:120:THR:HG22	2:AC:188:ALA:HB2	1.79	0.64
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.27	0.64
25:BC:123:ILE:HD13	25:BC:135:PRO:HG2	1.78	0.64
1:AA:909:A:H2'	1:AA:910:C:O4'	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:37:THR:HB	42:DN:40:LYS:HG3	1.80	0.64
23:DB:2579:C:H1'	26:DD:130:GLN:NE2	2.05	0.64
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.30	0.64
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.97	0.64
12:AM:78:ARG:O	12:AM:82:LEU:HB2	1.97	0.64
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.78	0.64
1:CA:920:U:H2'	1:CA:921:U:C6	2.33	0.64
13:AN:27:LYS:HA	13:AN:31:SER:HB2	1.78	0.64
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.62	0.64
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.62	0.64
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.61	0.64
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.33	0.64
23:BB:720:U:H2'	23:BB:721:A:C8	2.31	0.64
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.32	0.64
23:DB:222:A:N6	23:DB:232:G:H1'	2.13	0.64
23:DB:417:C:H2'	23:DB:418:C:C6	2.33	0.64
23:BB:1038:G:H2'	23:BB:1039:A:H8	1.62	0.64
15:CP:59:HIS:O	15:CP:63:GLN:HG3	1.97	0.64
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	1.79	0.64
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.13	0.64
48:BG:25:ILE:HG22	48:BG:78:VAL:HG11	1.78	0.64
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.78	0.64
51:BZ:39:TRP:NE1	51:BZ:41:GLU:HG2	2.12	0.64
35:DV:79:ARG:HA	35:DV:86:LEU:HA	1.78	0.64
23:DB:78:U:H2'	23:DB:79:C:C6	2.33	0.64
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.79	0.64
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.80	0.64
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	2.12	0.64
23:DB:1439:A:C6	23:DB:1552:A:N7	2.65	0.64
22:BA:32:U:C4'	22:BA:52:A:H62	2.11	0.64
23:DB:126:A:H5'	36:D2:19:ARG:CG	2.28	0.64
23:BB:784:G:O2'	23:BB:785:G:H5''	1.98	0.64
31:B0:43:THR:HG23	31:B0:47:TYR:O	1.97	0.64
30:DY:28:LEU:HA	30:DY:33:HIS:HD2	1.62	0.64
12:AM:47:LEU:HD22	12:AM:51:GLN:HB3	1.79	0.64
1:AA:237:G:H2'	1:AA:238:A:C8	2.32	0.64
23:DB:592:A:H2'	23:DB:593:U:C6	2.32	0.64
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.33	0.64
47:DF:41:GLU:O	47:DF:43:ILE:HG22	1.97	0.64
1:CA:266:G:O2'	1:CA:267:C:H3'	1.98	0.64
23:DB:460:A:P	36:D2:41:ARG:HH12	2.20	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.96	0.64
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.32	0.64
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.78	0.64
28:BP:46:VAL:HA	28:BP:60:VAL:HG12	1.78	0.64
20:CB:107:ARG:HH21	20:CB:111:LYS:HB2	1.63	0.64
3:CD:22:SER:H	3:CD:109:THR:HG22	1.62	0.64
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.31	0.64
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.32	0.64
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.62	0.64
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.27	0.64
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.80	0.64
5:AF:7:VAL:HG13	5:AF:88:MET:HB3	1.80	0.64
23:DB:564:C:O2'	23:DB:565:C:H5'	1.98	0.64
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.64
26:DD:62:LYS:H	26:DD:62:LYS:HD2	1.61	0.64
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.63	0.64
49:DR:78:ARG:HB3	49:DR:83:TYR:HB3	1.79	0.64
25:DC:159:THR:O	25:DC:194:VAL:HG12	1.97	0.64
23:BB:2743:U:H2'	23:BB:2744:G:O4'	1.98	0.64
45:BS:17:VAL:C	45:BS:19:LEU:H	2.01	0.64
51:DZ:39:TRP:NE1	51:DZ:41:GLU:HG2	2.12	0.64
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.96	0.64
23:DB:1916:A:H2'	23:DB:1917:U:O4'	1.98	0.64
1:CA:1137:C:H1'	1:CA:1138:G:N1	2.13	0.64
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.13	0.64
23:BB:2646:C:OP2	23:BB:2732:G:H2'	1.98	0.64
23:BB:784:G:H5''	25:BC:225:ASN:OD1	1.98	0.64
23:BB:355:U:H2'	23:BB:356:G:H8	1.61	0.64
1:AA:270:A:H2'	1:AA:271:C:C6	2.32	0.64
4:AE:156:ARG:HA	4:AE:158:LYS:NZ	2.13	0.64
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.62	0.64
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.13	0.64
23:BB:2893:A:H5''	23:BB:2894:G:H5'	1.79	0.64
19:AT:49:ALA:HA	19:AT:52:GLU:OE2	1.97	0.64
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.61	0.64
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.33	0.64
47:DF:177:ARG:HA	47:DF:177:ARG:CZ	2.28	0.64
1:CA:950:U:H2'	1:CA:951:G:H8	1.62	0.64
20:AB:94:ARG:N	20:AB:94:ARG:HE	1.96	0.64
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.33	0.64
1:CA:961:U:H3	1:CA:983:A:N6	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:10:SER:H	39:DX:60:LYS:HE2	1.60	0.64
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.62	0.64
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	1.80	0.64
3:AD:155:LYS:HA	3:AD:158:LEU:HD13	1.78	0.64
47:DF:105:ILE:C	47:DF:108:PRO:HD2	2.18	0.64
23:BB:2443:C:O2'	23:BB:2444:G:H5'	1.98	0.64
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.13	0.64
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.80	0.64
23:DB:784:G:H5''	25:DC:225:ASN:OD1	1.97	0.64
23:DB:278:A:N3	23:DB:278:A:H2'	2.12	0.64
41:DJ:16:TYR:O	41:DJ:55:ILE:HG12	1.97	0.64
20:AB:63:LYS:HG2	20:AB:224:ARG:HH22	1.62	0.64
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.12	0.64
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.18	0.64
47:BF:41:GLU:O	47:BF:43:ILE:HG22	1.97	0.64
1:AA:859:G:H2'	1:AA:860:A:H8	1.62	0.64
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.33	0.64
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.12	0.64
23:DB:590:A:H2'	23:DB:591:U:C6	2.32	0.64
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.33	0.64
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.32	0.64
29:BE:88:ARG:O	29:BE:90:GLN:HG3	1.97	0.64
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.63	0.64
2:CC:120:THR:HG22	2:CC:188:ALA:HB2	1.80	0.64
19:CT:69:ASN:H	19:CT:69:ASN:ND2	1.94	0.64
5:CF:97:THR:O	5:CF:98:GLU:HB3	1.96	0.64
20:AB:125:PHE:HD2	20:AB:125:PHE:H	1.46	0.64
47:BF:62:GLN:HE22	47:BF:90:LEU:HD13	1.63	0.64
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.46	0.64
47:DF:31:GLU:O	47:DF:32:LYS:HD3	1.98	0.64
23:DB:2330:G:H21	52:DW:38:ARG:HA	1.61	0.64
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.18	0.64
51:DZ:76:GLU:HG3	51:DZ:77:LYS:N	2.13	0.64
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.33	0.64
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.32	0.64
1:AA:17:U:H2'	1:AA:18:C:H6	1.60	0.64
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.79	0.64
23:DB:1372:U:H4'	23:DB:2213:U:O2	1.98	0.64
14:CO:28:GLN:O	14:CO:32:LEU:HD23	1.98	0.64
43:BO:56:LYS:O	43:BO:60:GLU:HG2	1.98	0.64
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:66:GLU:HB3	13:AN:98:ALA:HB2	1.78	0.64
1:AA:501:C:H2'	1:AA:502:A:H8	1.62	0.64
1:AA:961:U:H3	1:AA:983:A:N6	1.95	0.64
23:DB:315:G:H2'	23:DB:316:C:C6	2.33	0.64
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.77	0.64
47:BF:141:ASP:O	47:BF:145:VAL:HG13	1.98	0.64
23:DB:634:C:H2'	23:DB:635:C:H6	1.63	0.64
29:BE:181:ILE:HG13	37:BL:2:ARG:HB3	1.79	0.64
20:AB:172:ILE:HG22	20:AB:176:ASN:HD21	1.61	0.64
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.80	0.64
44:BQ:107:ALA:HB1	49:BR:48:LYS:HE2	1.80	0.64
8:CI:50:PRO:HD3	8:CI:79:ARG:HG3	1.77	0.64
35:DV:44:HIS:CE1	35:DV:86:LEU:H	2.15	0.64
50:BT:55:VAL:HG13	50:BT:85:VAL:HG12	1.80	0.64
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.11	0.64
47:BF:72:SER:HA	47:BF:78:ILE:HG22	1.80	0.64
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.28	0.64
6:AG:108:ARG:HG2	6:AG:115:MET:HE3	1.79	0.64
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.62	0.64
1:CA:1144:G:H21	1:CA:1146:A:H62	1.44	0.64
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.62	0.64
1:AA:1343:G:H4'	8:AI:123:ARG:O	1.97	0.64
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.78	0.64
23:DB:2312:U:O2	47:DF:38:GLY:HA3	1.98	0.64
25:BC:81:GLU:HB2	25:BC:90:ILE:HG22	1.78	0.64
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.63	0.64
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.13	0.64
8:CI:32:ARG:HH11	8:CI:37:TYR:HD1	1.46	0.64
25:DC:264:LYS:HG3	25:DC:265:PHE:HD2	1.63	0.64
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.12	0.64
1:CA:1158:C:O2'	20:CB:131:LYS:HB2	1.98	0.64
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.26	0.64
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	1.80	0.64
10:CK:124:LYS:O	21:CU:33:ARG:NE	2.29	0.64
40:BH:31:VAL:O	40:BH:33:GLN:N	2.30	0.64
47:DF:72:SER:HA	47:DF:78:ILE:HG22	1.79	0.64
25:DC:80:LEU:HD21	25:DC:109:LEU:HB2	1.80	0.64
23:DB:2529:G:H5''	48:DG:174:LYS:HB2	1.79	0.64
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.63	0.64
12:CM:48:SER:HB2	12:CM:51:GLN:HG3	1.78	0.64
1:AA:268:U:H2'	1:AA:269:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:181:A:H2'	23:DB:182:A:H8	1.62	0.64
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.33	0.64
25:DC:14:HIS:O	25:DC:203:VAL:HG11	1.97	0.64
27:DK:85:VAL:O	27:DK:87:LEU:HD23	1.98	0.64
7:CH:37:ASN:O	7:CH:41:GLU:HG2	1.97	0.64
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.31	0.64
23:DB:898:C:C2'	23:DB:899:A:H5''	2.28	0.64
15:CP:68:SER:OG	15:CP:71:VAL:HG12	1.98	0.64
18:AS:35:ARG:NH2	18:AS:52:ASN:HA	2.13	0.64
2:AC:39:ARG:NH1	2:AC:56:ILE:HD12	2.13	0.64
23:DB:857:G:C2'	23:DB:858:G:H5'	2.28	0.63
40:BH:68:ARG:HG3	40:BH:134:VAL:HG21	1.80	0.63
40:BH:99:ILE:HB	40:BH:112:LYS:HA	1.79	0.63
47:BF:105:ILE:C	47:BF:108:PRO:HD2	2.18	0.63
8:CI:64:ILE:H	8:CI:64:ILE:HD12	1.61	0.63
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	1.79	0.63
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.12	0.63
23:DB:281:C:H2'	23:DB:282:A:H8	1.63	0.63
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.98	0.63
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.63	0.63
51:BZ:76:GLU:HG3	51:BZ:77:LYS:N	2.13	0.63
1:AA:982:U:H5''	13:AN:5:MET:HE2	1.80	0.63
36:B2:35:ARG:HG3	36:B2:42:LEU:HD21	1.78	0.63
46:BU:64:ILE:HG13	46:BU:65:GLN:N	2.13	0.63
46:BU:11:ILE:HG22	46:BU:70:ALA:HB3	1.79	0.63
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	1.79	0.63
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.80	0.63
1:CA:1343:G:H4'	8:CI:123:ARG:O	1.98	0.63
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.33	0.63
23:DB:899:A:H2'	23:DB:900:A:O4'	1.98	0.63
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.33	0.63
23:DB:307:G:N2	23:DB:309:A:H3'	2.14	0.63
25:BC:4:LYS:HE2	25:BC:5:CYS:H	1.63	0.63
2:CC:142:ARG:HH21	2:CC:143:LEU:HD11	1.63	0.63
18:CS:35:ARG:NH2	18:CS:52:ASN:HA	2.13	0.63
32:D4:15:LYS:O	32:D4:16:ILE:HB	1.99	0.63
37:DL:55:MET:HE2	37:DL:56:PRO:HD2	1.79	0.63
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.79	0.63
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	1.98	0.63
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.80	0.63
37:BL:93:ASN:ND2	37:BL:93:ASN:H	1.96	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:5:LEU:HB2	29:BE:10:SER:H	1.61	0.63
22:BA:43:C:O2'	47:BF:91:ARG:HD2	1.98	0.63
48:BG:24:THR:HG22	48:BG:34:ARG:HB3	1.81	0.63
40:DH:31:VAL:O	40:DH:32:PRO:C	2.36	0.63
23:DB:1176:U:H2'	23:DB:1177:G:C8	2.34	0.63
13:AN:46:LYS:NZ	18:AS:10:ILE:H	1.95	0.63
48:BG:140:ILE:HA	48:BG:143:VAL:HG22	1.80	0.63
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.97	0.63
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.97	0.63
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	1.80	0.63
1:CA:454:G:H2'	1:CA:455:G:H8	1.62	0.63
1:AA:946:A:H2'	1:AA:947:G:C8	2.33	0.63
23:BB:18:U:H2'	23:BB:19:A:C8	2.33	0.63
23:DB:876:C:H3'	23:DB:877:A:C8	2.33	0.63
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.33	0.63
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.34	0.63
1:CA:478:A:H2'	1:CA:479:U:O4'	1.97	0.63
23:BB:967:U:H2'	23:BB:968:C:C6	2.33	0.63
48:BG:37:ASN:ND2	48:BG:38:ASP:H	1.97	0.63
28:BP:58:PHE:CE2	28:BP:75:THR:HB	2.34	0.63
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.61	0.63
42:BN:79:LEU:HA	42:BN:83:LEU:HD12	1.81	0.63
42:DN:79:LEU:HA	42:DN:83:LEU:HD12	1.80	0.63
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.33	0.63
12:AM:53:ASP:HA	12:AM:56:ARG:NH1	2.13	0.63
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.63	0.63
23:BB:355:U:H2'	23:BB:356:G:C8	2.33	0.63
2:CC:152:VAL:HB	2:CC:156:LEU:HD21	1.80	0.63
33:B1:36:LYS:HG2	33:B1:47:ILE:HG13	1.81	0.63
1:CA:269:C:H2'	1:CA:270:A:H8	1.63	0.63
1:AA:453:G:H2'	1:AA:454:G:C8	2.33	0.63
2:AC:13:ILE:O	2:AC:14:VAL:HG22	1.98	0.63
1:CA:434:U:H3'	1:CA:435:A:H8	1.63	0.63
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.13	0.63
25:DC:123:ILE:HD13	25:DC:135:PRO:HG2	1.80	0.63
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.34	0.63
6:CG:52:ARG:HH22	6:CG:121:ASN:HD21	1.44	0.63
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.62	0.63
1:CA:560:A:H4'	1:CA:561:U:H5''	1.80	0.63
1:AA:882:C:O2'	1:AA:883:C:H5'	1.97	0.63
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:1:MET:HA	39:BX:4:LYS:HE2	1.81	0.63
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.33	0.63
48:BG:36:LEU:H	48:BG:36:LEU:HD22	1.63	0.63
51:BZ:39:TRP:HE1	51:BZ:41:GLU:HG2	1.62	0.63
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.80	0.63
23:DB:2052:A:OP1	26:DD:145:SER:HA	1.98	0.63
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.18	0.63
46:BU:81:ARG:H	46:BU:81:ARG:NH2	1.95	0.63
23:BB:666:A:H4'	37:BL:48:ARG:HD3	1.80	0.63
23:BB:33:C:H2'	23:BB:446:G:H22	1.63	0.63
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.33	0.63
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.80	0.63
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.63	0.63
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.14	0.63
1:CA:56:U:H2'	1:CA:57:G:C8	2.34	0.63
23:DB:947:A:H2'	23:DB:948:C:C6	2.34	0.63
37:DL:70:LYS:O	37:DL:73:ILE:HG12	1.98	0.63
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.80	0.63
23:BB:1268:A:H2'	23:BB:1269:A:O4'	1.98	0.63
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.43	0.63
20:AB:107:ARG:HH21	20:AB:111:LYS:HB2	1.63	0.63
1:CA:41:G:H2'	1:CA:42:G:C8	2.32	0.63
6:CG:2:ARG:HB3	6:CG:2:ARG:NH1	2.13	0.63
19:CT:49:ALA:HA	19:CT:52:GLU:OE2	1.99	0.63
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.63	0.63
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.13	0.63
47:DF:141:ASP:O	47:DF:145:VAL:HG13	1.99	0.63
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.33	0.63
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.81	0.63
8:AI:48:ARG:O	8:AI:52:GLU:HG2	1.98	0.63
5:AF:29:ILE:HD13	5:AF:64:VAL:HG21	1.81	0.63
23:BB:1082:U:N3	23:BB:1086:A:C6	2.67	0.63
10:CK:80:ASN:ND2	10:CK:80:ASN:N	2.46	0.63
23:DB:2443:C:O2'	23:DB:2444:G:H5'	1.97	0.63
24:DI:121:ILE:N	24:DI:121:ILE:HD13	2.13	0.63
23:BB:90:U:H3'	23:BB:91:A:C5'	2.27	0.63
46:DU:81:ARG:H	46:DU:81:ARG:NH2	1.95	0.63
46:BU:78:LYS:HE3	46:BU:79:ALA:N	2.13	0.63
23:DB:580:U:H2'	23:DB:581:C:H6	1.62	0.63
1:CA:129:A:H1'	1:CA:130:A:C8	2.33	0.63
1:AA:454:G:H2'	1:AA:455:G:H8	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:156:ARG:HA	4:CE:158:LYS:NZ	2.13	0.63
6:CG:52:ARG:HH22	6:CG:121:ASN:ND2	1.96	0.63
1:CA:1134:G:C2	1:CA:1135:U:H1'	2.34	0.63
2:AC:134:LYS:HA	2:AC:167:TYR:HE2	1.63	0.63
23:DB:967:U:H2'	23:DB:968:C:C6	2.33	0.63
23:DB:394:C:O2'	23:DB:395:U:H5'	1.99	0.63
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.33	0.63
1:AA:1170:A:H2'	1:AA:1171:A:O4'	1.99	0.63
20:AB:160:LEU:HD23	20:AB:182:VAL:HG22	1.80	0.63
1:CA:140:U:H2'	1:CA:141:G:H8	1.63	0.63
23:BB:921:C:H2'	23:BB:922:C:H6	1.61	0.63
44:DQ:60:TRP:O	44:DQ:63:ARG:HG3	1.99	0.63
1:AA:1060:U:H5''	9:AJ:53:ILE:HG12	1.80	0.63
40:DH:9:VAL:HB	40:DH:13:GLY:HA3	1.80	0.63
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.79	0.63
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.13	0.63
46:DU:65:GLN:HB2	46:DU:68:ASN:ND2	2.13	0.63
42:DN:25:ALA:HB1	42:DN:48:VAL:HG13	1.79	0.63
46:BU:35:VAL:HB	46:BU:38:ILE:HB	1.79	0.63
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.80	0.63
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.79	0.63
23:DB:33:C:H2'	23:DB:446:G:H22	1.64	0.63
11:CL:35:ARG:HH12	11:CL:36:VAL:HG22	1.63	0.63
23:DB:1639:C:C2'	23:DB:1640:A:H5''	2.28	0.63
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.14	0.63
23:BB:823:C:O2'	23:BB:824:U:H5'	1.99	0.63
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.34	0.63
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.64	0.63
4:CE:53:ARG:HE	4:CE:54:GLU:HG2	1.63	0.63
48:BG:15:ASP:HB3	48:BG:26:LYS:N	2.05	0.63
1:AA:662:U:H2'	1:AA:663:A:C8	2.32	0.63
48:DG:24:THR:HG22	48:DG:34:ARG:HB3	1.81	0.63
13:CN:46:LYS:NZ	18:CS:10:ILE:H	1.97	0.63
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.98	0.63
1:CA:1314:C:H3'	18:CS:5:LYS:NZ	2.13	0.63
23:BB:1551:A:H3'	23:BB:1552:A:H5''	1.81	0.63
23:DB:141:G:C6	50:DT:2:ILE:HG21	2.34	0.63
23:BB:2658:C:P	48:BG:159:LYS:HZ2	2.22	0.63
3:CD:89:LEU:HD13	3:CD:199:ILE:HD11	1.81	0.63
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.33	0.63
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:528:A:N1	23:BB:2042:A:H2'	2.14	0.63
23:BB:460:A:H4'	50:BT:72:GLN:HB3	1.79	0.63
1:AA:590:U:H2'	1:AA:591:U:H6	1.62	0.63
1:CA:590:U:H2'	1:CA:591:U:H6	1.63	0.63
25:BC:159:THR:O	25:BC:194:VAL:HG12	1.99	0.63
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.34	0.63
1:CA:1227:A:H5''	12:CM:113:LYS:NZ	2.14	0.63
23:BB:2751:G:H5'	48:BG:2:ARG:HD3	1.79	0.63
1:AA:552:U:H2'	1:AA:553:A:C8	2.33	0.63
25:BC:13:ARG:HG3	25:BC:14:HIS:ND1	2.14	0.63
1:CA:179:A:H2'	1:CA:180:U:O4'	1.98	0.63
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.34	0.63
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.14	0.63
23:DB:2595:G:H1	25:DC:238:ASN:ND2	1.97	0.63
32:B4:15:LYS:O	32:B4:16:ILE:HB	1.99	0.63
23:DB:2100:G:H2'	23:DB:2101:A:C8	2.34	0.63
1:AA:8:A:H5'	4:AE:105:ILE:HG22	1.80	0.63
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.34	0.63
44:BQ:83:LYS:NZ	44:BQ:87:VAL:HA	2.14	0.63
23:BB:138:U:C4	23:BB:140:C:H1'	2.33	0.63
23:BB:141:G:H1	50:BT:2:ILE:HD12	1.62	0.63
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.81	0.63
19:AT:79:THR:O	19:AT:82:ILE:HG13	1.98	0.63
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.28	0.63
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	1.97	0.63
2:AC:113:LYS:HB2	2:AC:184:ASN:OD1	1.97	0.63
1:CA:237:G:H2'	1:CA:238:A:C8	2.33	0.63
23:BB:275:C:H2'	23:BB:276:U:O4'	1.98	0.63
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.63	0.63
1:CA:33:A:H2'	1:CA:34:C:H6	1.64	0.63
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.78	0.63
25:BC:181:ARG:HH22	25:BC:265:PHE:HB3	1.64	0.63
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.33	0.63
28:BP:99:LEU:HA	28:BP:102:ARG:HG3	1.80	0.63
4:CE:125:LYS:HD2	4:CE:126:ALA:H	1.64	0.63
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.80	0.63
1:AA:1309:G:H1'	12:AM:72:ILE:HD11	1.79	0.63
25:BC:66:PHE:HB2	25:BC:150:GLY:O	1.98	0.63
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.13	0.63
8:CI:38:PHE:HZ	8:CI:74:GLN:HB3	1.64	0.63
1:AA:1186:G:H21	13:AN:100:TRP:C	2.02	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:9:GLY:HA2	8:CI:80:HIS:HD2	1.63	0.63
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.34	0.63
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.75	0.63
28:DP:56:SER:HB2	28:DP:75:THR:CG2	2.28	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.32	0.63
47:DF:102:LEU:HD13	47:DF:103:ILE:HG13	1.80	0.63
47:DF:62:GLN:HE22	47:DF:90:LEU:HD13	1.64	0.63
11:CL:49:ARG:HH12	11:CL:88:ASP:CB	2.10	0.63
3:CD:28:ASP:HA	3:CD:33:ILE:CG2	2.29	0.63
1:AA:452:A:H2'	1:AA:453:G:O4'	1.98	0.63
23:BB:548:G:H4'	23:BB:549:G:C2	2.33	0.63
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.14	0.63
23:BB:589:U:H2'	23:BB:590:A:C8	2.34	0.63
23:DB:721:A:H2'	23:DB:722:A:H8	1.64	0.63
1:CA:501:C:H2'	1:CA:502:A:C8	2.33	0.63
16:CQ:79:GLU:HG3	16:CQ:80:LYS:NZ	2.14	0.63
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.99	0.63
23:BB:2193:G:H2'	23:BB:2194:U:H6	1.64	0.63
29:BE:194:LYS:O	29:BE:197:GLU:HB3	1.98	0.63
50:DT:50:LEU:HD22	50:DT:50:LEU:H	1.64	0.63
23:BB:2395:C:H2'	23:BB:2396:G:O4'	1.99	0.63
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.81	0.63
23:BB:1788:C:O2'	23:BB:1789:A:H5'	1.99	0.63
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.34	0.63
23:DB:2579:C:O2'	26:DD:136:ASN:HA	1.98	0.62
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.07	0.62
1:AA:68:G:H2'	1:AA:69:G:O4'	1.98	0.62
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.13	0.62
23:BB:98:G:H22	46:BU:6:ARG:HH12	1.47	0.62
46:BU:10:VAL:O	46:BU:21:ARG:HA	1.99	0.62
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.80	0.62
23:BB:79:C:O2'	23:BB:346:A:H1'	1.99	0.62
1:CA:1170:A:H2'	1:CA:1171:A:O4'	1.99	0.62
1:CA:1226:C:H5''	12:CM:101:THR:HB	1.80	0.62
1:AA:33:A:H2'	1:AA:34:C:H6	1.63	0.62
4:CE:64:GLU:O	4:CE:68:ARG:HG2	1.98	0.62
1:CA:1320:C:H5''	18:CS:2:ARG:NE	2.14	0.62
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.34	0.62
23:DB:305:C:H2'	23:DB:306:U:C6	2.34	0.62
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.81	0.62
22:DA:49:C:H2'	22:DA:50:A:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2104:C:H6	23:BB:2104:C:H3'	1.63	0.62
1:CA:176:C:H2'	1:CA:177:G:N3	2.14	0.62
22:BA:90:C:OP1	38:BM:16:ARG:HB2	1.99	0.62
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.81	0.62
40:DH:48:GLU:HA	40:DH:51:ARG:HE	1.64	0.62
14:AO:36:ILE:HD11	14:AO:59:MET:HB2	1.80	0.62
41:BJ:77:HIS:CD2	41:BJ:84:ILE:H	2.17	0.62
1:AA:176:C:H2'	1:AA:177:G:N3	2.14	0.62
8:AI:44:ARG:O	8:AI:47:VAL:HG22	1.98	0.62
39:DX:34:SER:HB2	39:DX:36:GLN:OE1	1.98	0.62
40:BH:139:PHE:O	40:BH:140:ALA:HB2	1.97	0.62
47:BF:101:ARG:CZ	47:BF:138:PRO:HB2	2.30	0.62
44:DQ:91:ARG:NH1	49:DR:11:GLN:H	1.97	0.62
27:BK:105:ARG:HD3	27:BK:105:ARG:H	1.63	0.62
23:DB:543:G:C6	23:DB:544:C:H1'	2.33	0.62
4:CE:143:LEU:O	4:CE:146:MET:HG2	1.99	0.62
40:DH:133:GLN:HA	40:DH:138:VAL:O	1.99	0.62
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.62	0.62
23:BB:2152:G:H2'	23:BB:2152:G:N3	2.14	0.62
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.81	0.62
6:AG:52:ARG:HH22	6:AG:121:ASN:HD21	1.44	0.62
1:AA:1168:U:H4'	1:AA:1169:A:OP2	1.99	0.62
23:DB:441:U:H2'	23:DB:442:G:H8	1.63	0.62
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	1.99	0.62
4:AE:53:ARG:HE	4:AE:54:GLU:HG2	1.62	0.62
23:BB:796:C:H2'	23:BB:797:G:H8	1.63	0.62
23:BB:857:G:O2'	23:BB:858:G:H5'	1.99	0.62
40:BH:90:LEU:CB	40:BH:123:ARG:HD2	2.29	0.62
40:BH:31:VAL:O	40:BH:32:PRO:C	2.36	0.62
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.62
13:CN:23:ARG:O	13:CN:26:LEU:HD22	2.00	0.62
23:DB:784:G:O2'	23:DB:785:G:H5''	2.00	0.62
13:AN:40:ARG:HH11	18:AS:6:LYS:HB2	1.62	0.62
1:CA:524:G:H2'	1:CA:525:C:H6	1.65	0.62
3:AD:25:ARG:HD3	3:AD:26:ALA:H	1.64	0.62
23:DB:191:A:H2'	23:DB:192:C:C6	2.34	0.62
4:AE:28:ARG:NH1	4:AE:30:PHE:HB3	2.14	0.62
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.64	0.62
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.34	0.62
23:BB:1717:A:H2'	23:BB:1718:G:O4'	1.99	0.62
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.80	0.62
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.63	0.62
15:CP:38:PHE:HE2	15:CP:51:ARG:HH11	1.47	0.62
23:DB:155:A:H2'	23:DB:156:A:C8	2.34	0.62
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.34	0.62
23:BB:289:G:H2'	23:BB:290:U:O4'	1.98	0.62
50:BT:50:LEU:HD22	50:BT:50:LEU:H	1.64	0.62
6:AG:19:SER:OG	6:AG:22:LEU:HB2	1.99	0.62
8:AI:32:ARG:HH11	8:AI:37:TYR:HD1	1.47	0.62
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.81	0.62
29:BE:5:LEU:HD22	29:BE:122:GLU:HG3	1.81	0.62
21:AU:36:PHE:O	21:AU:39:LYS:HD2	1.98	0.62
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.14	0.62
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.80	0.62
47:BF:109:ARG:HB3	47:BF:135:ILE:HD12	1.81	0.62
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.35	0.62
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	2.00	0.62
1:CA:1086:U:H3	1:CA:1099:G:N2	1.84	0.62
50:DT:87:LEU:HD12	50:DT:91:GLN:HG2	1.82	0.62
23:BB:2653:U:O2'	48:BG:109:SER:HB2	1.98	0.62
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.34	0.62
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.20	0.62
23:DB:1082:U:N3	23:DB:1086:A:C6	2.67	0.62
20:CB:86:CYS:HB2	20:CB:221:ARG:NH1	2.14	0.62
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.00	0.62
40:BH:57:LYS:NZ	40:BH:58:LEU:HB2	2.14	0.62
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.80	0.62
23:BB:2799:A:H4'	23:BB:2800:A:O4'	1.98	0.62
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.00	0.62
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.80	0.62
1:AA:636:U:H2'	1:AA:637:C:H6	1.62	0.62
23:BB:78:U:H2'	23:BB:79:C:C6	2.33	0.62
23:BB:222:A:N6	23:BB:232:G:H1'	2.14	0.62
1:AA:56:U:H2'	1:AA:57:G:C8	2.34	0.62
22:DA:49:C:H2'	22:DA:50:A:H8	1.64	0.62
1:AA:179:A:H2'	1:AA:180:U:O4'	1.99	0.62
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	1.81	0.62
40:BH:101:ASP:HA	40:BH:104:THR:HG22	1.81	0.62
1:CA:539:A:H2'	1:CA:540:G:C8	2.35	0.62
23:BB:458:G:N2	23:BB:469:G:H2'	2.14	0.62
1:AA:492:C:H2'	1:AA:493:A:N3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1137:C:H1'	1:AA:1138:G:N1	2.15	0.62
1:AA:784:A:H2'	1:AA:785:G:H8	1.63	0.62
26:DD:154:LYS:H	26:DD:154:LYS:HD3	1.63	0.62
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.81	0.62
23:BB:1501:G:O2'	23:BB:1502:A:H5'	1.99	0.62
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.64	0.62
23:BB:794:A:H2'	23:BB:795:C:C6	2.34	0.62
52:DW:18:LYS:HE3	52:DW:36:ILE:HG12	1.81	0.62
52:DW:49:ASN:HA	52:DW:61:LYS:H	1.64	0.62
40:BH:90:LEU:CD2	40:BH:146:VAL:HG11	2.29	0.62
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.64	0.62
48:BG:17:LYS:HZ1	48:BG:18:ILE:H	1.48	0.62
49:BR:39:LEU:HB3	49:BR:53:PHE:HA	1.80	0.62
10:AK:22:ILE:HD12	10:AK:85:VAL:HG22	1.80	0.62
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.82	0.62
19:CT:38:ILE:HD11	19:CT:82:ILE:HA	1.81	0.62
1:CA:244:U:O4	1:CA:906:A:H1'	2.00	0.62
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.99	0.62
24:BI:20:SER:O	24:BI:25:PRO:HD2	2.00	0.62
48:DG:115:GLN:H	48:DG:115:GLN:CD	2.02	0.62
23:BB:982:C:H5'	23:BB:982:C:O2	1.98	0.62
25:DC:250:GLN:NE2	25:DC:254:LYS:HE3	2.15	0.62
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.30	0.62
1:AA:1226:C:H5''	12:AM:101:THR:HB	1.81	0.62
1:AA:33:A:H2'	1:AA:34:C:C6	2.35	0.62
23:BB:165:A:H2'	23:BB:166:U:H6	1.62	0.62
23:BB:634:C:H2'	23:BB:635:C:H6	1.64	0.62
12:CM:92:ARG:HE	12:CM:92:ARG:HA	1.63	0.62
38:DM:33:LEU:HD22	38:DM:128:THR:HB	1.80	0.62
3:CD:13:ARG:HG3	3:CD:55:ARG:HH12	1.64	0.62
1:AA:796:C:H4'	10:AK:126:ARG:HH21	1.63	0.62
23:DB:458:G:N2	23:DB:469:G:H2'	2.15	0.62
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.64	0.62
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.14	0.62
37:DL:93:ASN:H	37:DL:93:ASN:ND2	1.96	0.62
20:AB:14:HIS:HB2	20:AB:208:ALA:HB2	1.81	0.62
23:BB:135:U:H2'	23:BB:136:G:C8	2.35	0.62
47:DF:91:ARG:HD3	47:DF:91:ARG:N	2.14	0.62
12:AM:15:VAL:HG22	12:AM:33:LEU:HD11	1.81	0.62
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.82	0.62
13:AN:23:ARG:O	13:AN:26:LEU:HD22	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.80	0.62
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.32	0.62
23:DB:1913:A:H4'	23:DB:1914:C:C5'	2.29	0.62
33:B1:26:LYS:HD2	33:B1:30:PRO:HA	1.82	0.62
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.34	0.62
16:CQ:79:GLU:HG3	16:CQ:80:LYS:HZ2	1.62	0.62
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.14	0.62
23:BB:2353:G:H1'	52:BW:30:VAL:HG13	1.81	0.62
25:BC:14:HIS:O	25:BC:203:VAL:HG11	2.00	0.62
1:AA:109:A:H4'	1:AA:110:C:OP2	1.99	0.62
23:BB:2901:C:H2'	23:BB:2902:C:H5'	1.82	0.62
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.82	0.62
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.64	0.62
23:BB:1203:U:H3'	23:BB:1204:A:H5''	1.81	0.62
8:AI:25:GLY:HA3	8:AI:57:VAL:CA	2.28	0.62
17:CR:34:GLU:HB2	21:CU:18:PHE:HZ	1.64	0.62
12:AM:71:GLU:CA	12:AM:74:MET:HG2	2.24	0.62
47:BF:102:LEU:HD13	47:BF:103:ILE:HG13	1.81	0.62
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.64	0.62
41:BJ:32:LEU:O	41:BJ:36:LEU:HD22	1.99	0.62
23:BB:2579:C:H1'	26:BD:130:GLN:NE2	2.09	0.62
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.14	0.62
25:DC:166:ARG:HB3	25:DC:171:VAL:HG22	1.81	0.62
50:BT:29:THR:HB	50:BT:86:THR:HG22	1.81	0.62
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.12	0.62
23:DB:90:U:H3'	23:DB:91:A:C5'	2.27	0.62
23:DB:163:C:H2'	23:DB:164:C:O4'	1.99	0.62
20:AB:16:GLY:H	20:AB:39:ILE:HG23	1.65	0.62
23:BB:1870:C:H3'	23:BB:1871:A:C8	2.35	0.62
23:BB:2798:U:H1'	23:BB:2800:A:N6	2.14	0.62
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.13	0.62
23:DB:594:U:H2'	23:DB:595:C:H6	1.62	0.62
23:BB:479:A:N3	23:BB:481:G:H5''	2.14	0.62
23:BB:594:U:H2'	23:BB:595:C:H6	1.63	0.62
23:BB:721:A:H2'	23:BB:722:A:H8	1.64	0.62
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.45	0.62
1:AA:285:C:H2'	1:AA:286:C:H6	1.65	0.62
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.82	0.62
3:AD:13:ARG:HG3	3:AD:55:ARG:HH12	1.64	0.62
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.48	0.62
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.62
23:BB:208:C:H2'	23:BB:209:C:C6	2.35	0.62
23:BB:315:G:H2'	23:BB:316:C:C6	2.34	0.62
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.64	0.62
22:DA:74:U:H2'	22:DA:75:G:C8	2.34	0.62
43:BO:6:ALA:HB3	43:BO:10:ARG:HH11	1.64	0.62
40:BH:133:GLN:HA	40:BH:138:VAL:O	2.00	0.62
40:BH:128:HIS:CB	40:BH:144:VAL:HB	2.30	0.62
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.34	0.62
48:BG:23:ILE:HD11	48:BG:42:VAL:HG11	1.82	0.62
3:CD:160:LEU:HD22	3:CD:161:ALA:N	2.14	0.62
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.35	0.62
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.81	0.62
45:BS:25:ARG:HE	45:BS:74:ILE:HG23	1.64	0.62
23:DB:1553:A:O2'	23:DB:1554:U:H2'	1.99	0.62
46:BU:51:LEU:H	46:BU:53:GLN:NE2	1.97	0.62
20:AB:218:ALA:O	20:AB:222:GLU:HG2	2.00	0.62
1:AA:371:A:O2'	1:AA:372:C:H5'	1.99	0.62
46:DU:35:VAL:HB	46:DU:38:ILE:HB	1.80	0.62
16:AQ:66:LEU:HD12	16:AQ:66:LEU:H	1.64	0.62
1:CA:376:G:H2'	1:CA:377:G:H8	1.65	0.62
51:DZ:39:TRP:HE1	51:DZ:41:GLU:HG2	1.63	0.62
1:AA:285:C:H2'	1:AA:286:C:C6	2.35	0.62
8:CI:94:ARG:HA	8:CI:97:LEU:HG	1.82	0.62
5:CF:53:LYS:NZ	5:CF:53:LYS:H	1.97	0.62
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.81	0.62
23:DB:903:C:H2'	23:DB:904:G:H8	1.65	0.62
1:AA:806:C:H2'	1:AA:807:A:H8	1.64	0.62
1:AA:1450:U:H2'	1:AA:1452:C:C4	2.35	0.62
23:DB:921:C:H2'	23:DB:922:C:H6	1.64	0.62
44:DQ:83:LYS:NZ	44:DQ:87:VAL:HA	2.15	0.62
23:BB:138:U:H3'	23:BB:140:C:O2	2.00	0.62
48:DG:102:ILE:HG13	48:DG:116:LEU:HD11	1.81	0.62
23:DB:2314:A:H4'	47:DF:34:THR:HG21	1.81	0.62
23:BB:2756:U:C1'	23:BB:2757:A:H5''	2.30	0.62
40:DH:14:SER:HB3	40:DH:17:ASP:CG	2.20	0.62
22:DA:32:U:C4'	22:DA:52:A:H62	2.12	0.62
40:DH:65:ALA:CB	40:DH:138:VAL:HG21	2.30	0.62
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.34	0.62
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	2.15	0.62
39:DX:46:VAL:O	39:DX:50:VAL:HG23	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:6:ILE:HB	9:AJ:76:ILE:HD11	1.81	0.62
23:BB:191:A:H2'	23:BB:192:C:C6	2.34	0.62
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.64	0.62
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.34	0.62
23:DB:402:A:H2'	23:DB:403:U:O4'	2.00	0.62
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.79	0.62
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.00	0.62
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.82	0.62
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.35	0.62
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.82	0.62
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.63	0.62
23:DB:2108:A:N3	23:DB:2108:A:H2'	2.14	0.62
23:BB:2438:U:O2'	23:BB:2439:A:H5''	2.00	0.62
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.80	0.62
23:DB:115:C:O2'	23:DB:116:C:H5'	1.99	0.62
23:BB:966:G:HO2'	23:BB:2267:A:H2	1.47	0.62
29:DE:5:LEU:HB2	29:DE:10:SER:H	1.63	0.62
27:DK:105:ARG:H	27:DK:105:ARG:HD3	1.65	0.62
19:AT:38:ILE:HD11	19:AT:82:ILE:HA	1.82	0.62
40:DH:25:TYR:CD1	40:DH:30:LEU:HG	2.35	0.62
24:DI:27:LEU:CD2	24:DI:27:LEU:H	2.12	0.62
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.30	0.62
23:BB:1439:A:C6	23:BB:1552:A:N7	2.68	0.62
46:BU:65:GLN:HB2	46:BU:68:ASN:ND2	2.14	0.62
20:CB:63:LYS:HG2	20:CB:224:ARG:HH22	1.64	0.62
20:CB:16:GLY:H	20:CB:39:ILE:HG23	1.65	0.62
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.15	0.62
1:AA:266:G:O2'	1:AA:267:C:H3'	1.99	0.62
6:AG:26:VAL:HG12	6:AG:42:VAL:HG11	1.82	0.62
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.63	0.62
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.35	0.62
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.35	0.62
28:DP:24:THR:O	28:DP:25:VAL:HG22	1.99	0.62
1:CA:699:C:H2'	1:CA:700:G:H5''	1.82	0.62
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	2.00	0.62
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.65	0.62
46:BU:23:LYS:HD2	46:BU:23:LYS:N	2.14	0.62
20:CB:94:ARG:N	20:CB:94:ARG:HE	1.98	0.62
23:DB:2267:A:N6	23:DB:2272:U:C4	2.67	0.61
47:BF:32:LYS:HB2	47:BF:90:LEU:O	1.99	0.61
48:BG:36:LEU:N	48:BG:36:LEU:HD22	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.35	0.61
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.80	0.61
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.64	0.61
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	1.82	0.61
1:CA:453:G:H2'	1:CA:454:G:C8	2.35	0.61
6:CG:26:VAL:HG12	6:CG:42:VAL:HG11	1.81	0.61
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.48	0.61
2:CC:31:ASN:ND2	2:CC:58:ARG:HE	1.97	0.61
23:BB:125:A:H5'	36:B2:19:ARG:HD3	1.81	0.61
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.63	0.61
1:AA:1134:G:C2	1:AA:1135:U:H1'	2.35	0.61
14:AO:60:VAL:HG11	23:BB:715:A:O4'	2.00	0.61
1:CA:1081:A:H5'	4:CE:22:LYS:HD2	1.82	0.61
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	1.82	0.61
26:DD:159:LYS:HZ3	26:DD:159:LYS:HA	1.63	0.61
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.15	0.61
2:AC:154:GLY:HA3	2:AC:162:ALA:HB1	1.82	0.61
52:BW:49:ASN:HA	52:BW:61:LYS:H	1.65	0.61
47:BF:31:GLU:O	47:BF:32:LYS:HD3	2.00	0.61
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.82	0.61
28:DP:56:SER:O	28:DP:75:THR:HG22	2.01	0.61
26:BD:8:LYS:HB2	26:BD:201:LEU:HD21	1.81	0.61
20:CB:14:HIS:HB2	20:CB:208:ALA:HB2	1.82	0.61
18:AS:44:ILE:HA	18:AS:61:VAL:HB	1.82	0.61
48:BG:140:ILE:HD12	48:BG:141:GLY:N	2.15	0.61
40:BH:9:VAL:HB	40:BH:13:GLY:HA3	1.81	0.61
23:BB:639:U:H2'	23:BB:640:C:C6	2.35	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
46:DU:3:LYS:HB3	46:DU:82:VAL:HG21	1.82	0.61
23:BB:1870:C:H3'	23:BB:1871:A:H8	1.64	0.61
27:BK:120:PRO:HA	28:BP:65:ASN:ND2	2.14	0.61
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.00	0.61
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.00	0.61
31:D0:21:LEU:HD12	45:DS:19:LEU:O	2.00	0.61
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.65	0.61
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.34	0.61
15:CP:52:LEU:HD21	15:CP:75:ILE:HG23	1.81	0.61
23:BB:1729:U:H3'	23:BB:1730:C:H4'	1.82	0.61
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.35	0.61
23:DB:2294:G:P	43:DO:94:ARG:HH11	2.23	0.61
23:BB:118:A:H5'	23:BB:119:A:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:125:LYS:HD2	4:AE:126:ALA:H	1.63	0.61
23:DB:921:C:H2'	23:DB:922:C:C6	2.36	0.61
37:BL:121:THR:HG22	37:BL:141:LYS:HB3	1.82	0.61
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.14	0.61
20:CB:53:LEU:HD11	20:CB:216:VAL:HG12	1.80	0.61
40:BH:130:VAL:CG2	40:BH:142:VAL:HB	2.26	0.61
26:BD:109:VAL:HG11	26:BD:193:VAL:HB	1.81	0.61
35:BV:31:TYR:HA	35:BV:93:ARG:NH2	2.14	0.61
20:CB:205:ALA:HB3	20:CB:208:ALA:HB3	1.83	0.61
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.83	0.61
25:BC:233:GLY:H	25:BC:241:LYS:HZ1	1.47	0.61
1:CA:193:C:H2'	1:CA:194:C:C6	2.34	0.61
23:BB:155:A:H2'	23:BB:156:A:C8	2.35	0.61
26:BD:154:LYS:H	26:BD:154:LYS:HD3	1.64	0.61
1:AA:82:G:H1'	1:AA:89:U:O4'	2.00	0.61
23:DB:823:C:O2'	23:DB:824:U:H5'	2.01	0.61
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.35	0.61
23:BB:305:C:H2'	23:BB:306:U:C6	2.35	0.61
40:DH:147:VAL:HG12	40:DH:148:ALA:H	1.65	0.61
1:CA:89:U:H2'	1:CA:90:C:O4'	2.01	0.61
12:CM:22:TYR:HB3	12:CM:69:ARG:CZ	2.31	0.61
23:BB:854:C:O2'	23:BB:855:G:H5'	2.01	0.61
23:BB:921:C:H2'	23:BB:922:C:C6	2.35	0.61
8:AI:38:PHE:HZ	8:AI:74:GLN:HB3	1.65	0.61
40:BH:81:ALA:CA	40:BH:146:VAL:HA	2.23	0.61
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.12	0.61
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.15	0.61
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.01	0.61
1:CA:1060:U:H5''	9:CJ:53:ILE:HG12	1.82	0.61
47:DF:32:LYS:HB2	47:DF:90:LEU:O	2.00	0.61
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.30	0.61
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.83	0.61
42:BN:114:GLU:HG2	42:BN:115:LEU:N	2.16	0.61
23:BB:163:C:H2'	23:BB:164:C:O4'	2.00	0.61
20:CB:218:ALA:O	20:CB:222:GLU:HG2	2.01	0.61
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.66	0.61
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.65	0.61
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.16	0.61
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	2.00	0.61
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.36	0.61
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.34	0.61
1:AA:430:A:OP1	3:AD:8:LEU:HB2	2.01	0.61
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.83	0.61
48:DG:37:ASN:ND2	48:DG:38:ASP:H	1.97	0.61
1:CA:211:G:H2'	1:CA:212:G:O4'	2.00	0.61
1:CA:109:A:H4'	1:CA:110:C:OP2	2.00	0.61
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.65	0.61
1:AA:21:G:H2'	1:AA:22:G:C8	2.35	0.61
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.15	0.61
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.80	0.61
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.83	0.61
21:AU:16:ARG:NH1	21:AU:19:LYS:HE2	2.15	0.61
23:BB:2579:C:O2'	26:BD:136:ASN:HA	2.00	0.61
50:BT:2:ILE:N	50:BT:2:ILE:HD13	2.14	0.61
35:BV:72:VAL:HB	35:BV:92:VAL:O	2.01	0.61
48:DG:84:LYS:HB3	48:DG:132:LEU:O	2.01	0.61
1:AA:131:A:H2'	1:AA:132:C:C6	2.36	0.61
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.32	0.61
48:BG:157:LYS:HB3	48:BG:159:LYS:HG3	1.83	0.61
48:BG:86:LEU:HD22	48:BG:161:VAL:HG12	1.81	0.61
46:DU:51:LEU:H	46:DU:53:GLN:NE2	1.98	0.61
1:AA:204:G:H21	1:AA:466:A:H62	1.48	0.61
23:BB:1171:G:C5	23:BB:1172:C:H1'	2.36	0.61
26:BD:114:LYS:HD2	26:BD:116:LYS:HZ2	1.66	0.61
23:BB:17:G:H2'	23:BB:18:U:C6	2.36	0.61
15:AP:3:THR:HB	15:AP:66:THR:O	1.99	0.61
23:DB:37:C:O2'	29:DE:45:ALA:HA	2.01	0.61
23:BB:587:C:O2'	37:BL:19:LEU:HD13	2.00	0.61
1:CA:1450:U:H2'	1:CA:1452:C:C4	2.36	0.61
23:DB:702:U:H2'	23:DB:703:U:C6	2.36	0.61
23:BB:394:C:O2'	23:BB:395:U:H5'	2.00	0.61
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.31	0.61
48:DG:23:ILE:HD11	48:DG:42:VAL:HG11	1.83	0.61
18:CS:29:PRO:HA	18:CS:47:THR:HB	1.82	0.61
28:DP:58:PHE:CE2	28:DP:75:THR:HB	2.34	0.61
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.16	0.61
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.21	0.61
23:BB:2571:U:O2'	26:BD:152:PRO:HG3	2.00	0.61
23:DB:2675:A:H4'	27:DK:29:HIS:HB2	1.81	0.61
20:CB:60:ALA:O	20:CB:224:ARG:HD2	2.00	0.61
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1171:G:C3'	23:BB:1172:C:H4'	2.30	0.61
1:CA:270:A:H2'	1:CA:271:C:C6	2.35	0.61
1:CA:636:U:H2'	1:CA:637:C:H6	1.64	0.61
25:DC:13:ARG:HG3	25:DC:14:HIS:ND1	2.16	0.61
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.00	0.61
14:CO:36:ILE:HD11	14:CO:59:MET:HB2	1.83	0.61
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.35	0.61
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.35	0.61
14:CO:12:VAL:HG11	14:CO:22:THR:HG22	1.83	0.61
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.35	0.61
20:CB:160:LEU:HD23	20:CB:182:VAL:HG22	1.82	0.61
1:CA:813:U:H5''	1:CA:816:A:N6	2.15	0.61
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.82	0.61
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.15	0.61
6:AG:21:LEU:H	6:AG:21:LEU:HD23	1.65	0.61
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.36	0.61
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.15	0.61
48:BG:17:LYS:HB3	48:BG:24:THR:H	1.65	0.61
23:BB:2758:A:H2'	23:BB:2759:G:O4'	2.01	0.61
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.81	0.61
38:BM:100:LYS:HD3	38:BM:101:VAL:H	1.65	0.61
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.01	0.61
1:CA:204:G:H21	1:CA:466:A:H62	1.47	0.61
1:AA:1491:G:H5''	1:AA:1492:A:OP2	2.00	0.61
3:AD:28:ASP:HA	3:AD:33:ILE:CG2	2.30	0.61
1:CA:493:A:H5'	1:CA:494:G:OP2	2.01	0.61
23:BB:968:C:H2'	23:BB:969:G:H8	1.65	0.61
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.35	0.61
1:CA:1301:U:H2'	1:CA:1301:U:O2	1.99	0.61
1:AA:1301:U:O2	1:AA:1301:U:H2'	1.99	0.61
14:AO:8:THR:O	14:AO:12:VAL:HG23	2.00	0.61
23:BB:483:A:H1'	46:BU:56:GLY:HA2	1.83	0.61
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.82	0.61
20:AB:53:LEU:HD11	20:AB:216:VAL:HG12	1.83	0.61
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.47	0.61
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.81	0.61
44:DQ:104:ALA:HA	49:DR:46:GLU:OE2	2.01	0.61
44:BQ:94:LEU:HD12	49:BR:13:ARG:HB2	1.82	0.61
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.82	0.61
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.15	0.61
26:BD:148:GLN:HG3	26:BD:152:PRO:CB	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:53:ASP:HA	12:CM:56:ARG:NH1	2.15	0.61
1:CA:131:A:H2'	1:CA:132:C:C6	2.36	0.61
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.36	0.61
41:DJ:55:ILE:HG13	41:DJ:55:ILE:O	2.01	0.61
20:AB:86:CYS:HB2	20:AB:221:ARG:NH1	2.14	0.61
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.82	0.61
23:BB:172:A:H2'	23:BB:173:A:H8	1.64	0.61
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.82	0.61
48:BG:115:GLN:H	48:BG:115:GLN:CD	2.03	0.61
39:BX:52:ARG:O	39:BX:55:THR:HB	2.00	0.61
7:AH:113:ARG:HA	7:AH:116:ARG:NH1	2.16	0.61
1:AA:918:A:H2'	1:AA:919:A:C8	2.36	0.61
25:DC:16:VAL:H	25:DC:203:VAL:HG12	1.64	0.61
6:AG:46:LEU:O	6:AG:57:GLU:HB3	2.01	0.61
1:AA:501:C:H2'	1:AA:502:A:C8	2.35	0.61
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.36	0.61
1:AA:796:C:H4'	10:AK:126:ARG:NH2	2.16	0.61
5:CF:53:LYS:H	5:CF:53:LYS:HZ3	1.48	0.61
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.00	0.61
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.65	0.61
38:BM:31:PHE:HD1	38:BM:105:MET:HB3	1.66	0.61
23:BB:850:U:H5''	30:BY:18:LYS:HD3	1.82	0.61
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.00	0.61
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.65	0.61
23:BB:2267:A:N6	23:BB:2272:U:C4	2.69	0.61
48:DG:36:LEU:H	48:DG:36:LEU:HD22	1.65	0.61
26:DD:136:ASN:HD21	26:DD:139:SER:C	2.04	0.61
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.83	0.61
46:DU:35:VAL:HB	46:DU:38:ILE:CB	2.31	0.61
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.48	0.61
23:DB:441:U:H2'	23:DB:442:G:C8	2.36	0.61
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.65	0.61
1:AA:1367:C:H5'	9:AJ:62:ARG:NH1	2.16	0.61
1:AA:272:C:H2'	1:AA:273:U:H6	1.66	0.61
34:D3:6:VAL:HB	34:D3:60:CYS:HB3	1.83	0.61
46:BU:26:ASN:HB3	46:BU:34:ILE:HD12	1.83	0.61
1:AA:211:G:H2'	1:AA:212:G:O4'	2.00	0.61
1:CA:736:C:H2'	1:CA:737:C:C6	2.36	0.61
1:AA:1032:G:N3	1:AA:1032:G:H5''	2.14	0.61
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.65	0.61
40:BH:2:GLN:O	40:BH:3:VAL:HG22	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:3:LYS:HE2	16:CQ:3:LYS:HA	1.82	0.61
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.00	0.61
51:DZ:31:PRO:HB2	51:DZ:33:LEU:CD1	2.31	0.61
26:DD:148:GLN:HG3	26:DD:152:PRO:CB	2.30	0.61
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.16	0.61
30:BY:26:LEU:HD21	30:BY:46:MET:HB3	1.83	0.61
19:AT:4:LYS:HD2	19:AT:5:SER:N	2.15	0.61
12:CM:13:HIS:HB2	12:CM:16:ILE:HG22	1.82	0.61
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	2.00	0.61
1:CA:235:C:H2'	1:CA:236:A:C8	2.36	0.61
3:AD:29:THR:HB	3:AD:30:LYS:HD3	1.83	0.61
1:CA:182:A:HO2'	1:CA:183:C:H3'	1.66	0.61
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.01	0.61
23:DB:639:U:H2'	23:DB:640:C:C6	2.36	0.61
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.15	0.61
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	1.82	0.61
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.81	0.61
16:AQ:79:GLU:HG3	16:AQ:80:LYS:HZ2	1.66	0.61
23:BB:2309:A:H61	47:BF:75:GLY:HA3	1.65	0.61
10:AK:108:ASN:HD21	21:AU:6:ARG:HD2	1.66	0.61
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.36	0.61
41:DJ:30:THR:HG23	41:DJ:31:GLU:N	2.16	0.61
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.65	0.61
23:DB:2105:U:H2'	23:DB:2106:U:O4'	2.01	0.61
16:AQ:5:ARG:HE	16:AQ:5:ARG:HA	1.66	0.61
1:CA:98:A:H2'	1:CA:99:C:O4'	1.99	0.61
8:AI:15:ALA:O	8:AI:66:VAL:HG23	2.01	0.60
47:DF:126:ASN:HD22	47:DF:156:THR:HA	1.66	0.60
11:CL:85:ARG:HG3	11:CL:86:VAL:N	2.16	0.60
52:BW:35:ILE:HG12	52:BW:35:ILE:O	2.00	0.60
40:BH:8:LYS:O	40:BH:13:GLY:HA3	2.01	0.60
48:DG:86:LEU:HD22	48:DG:161:VAL:HG12	1.82	0.60
33:D1:26:LYS:HD2	33:D1:30:PRO:HA	1.81	0.60
31:D0:41:HIS:HB3	42:DN:99:LYS:HB2	1.82	0.60
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.31	0.60
23:DB:171:U:H2'	23:DB:172:A:H8	1.64	0.60
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.40	0.60
23:BB:233:A:N6	23:BB:428:A:H61	1.99	0.60
1:AA:335:C:H2'	1:AA:336:A:H8	1.65	0.60
25:BC:181:ARG:NH2	25:BC:265:PHE:HB3	2.16	0.60
22:DA:50:A:OP1	43:DO:68:LYS:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.81	0.60
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.04	0.60
23:BB:2500:U:H5'	23:BB:2501:C:OP2	2.01	0.60
23:BB:2081:U:OP1	51:BZ:19:SER:HB3	2.01	0.60
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.41	0.60
15:CP:25:ARG:HD3	15:CP:25:ARG:H	1.66	0.60
52:DW:24:ARG:HD3	52:DW:65:LYS:NZ	2.16	0.60
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.30	0.60
8:AI:23:GLY:O	8:AI:61:ASP:HB3	2.01	0.60
8:AI:27:ILE:HG21	8:AI:34:LEU:HD13	1.82	0.60
40:BH:83:LYS:O	40:BH:90:LEU:HG	2.01	0.60
3:CD:185:PRO:HB2	3:CD:190:LEU:CB	2.26	0.60
40:DH:32:PRO:O	40:DH:33:GLN:HB2	2.01	0.60
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.16	0.60
52:DW:37:VAL:HG13	52:DW:55:ASP:O	2.02	0.60
40:DH:8:LYS:O	40:DH:13:GLY:HA3	2.01	0.60
37:BL:79:LEU:HB3	37:BL:115:GLU:O	2.01	0.60
13:AN:53:ASP:HA	13:AN:58:ARG:HD3	1.83	0.60
1:CA:320:A:H2'	1:CA:321:A:C8	2.36	0.60
23:BB:2425:A:H5''	23:BB:2426:A:H3'	1.83	0.60
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.35	0.60
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.66	0.60
39:DX:52:ARG:O	39:DX:55:THR:HB	2.01	0.60
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.36	0.60
1:AA:958:A:H61	18:AS:53:GLY:HA3	1.67	0.60
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.01	0.60
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.66	0.60
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.36	0.60
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.65	0.60
7:AH:45:ILE:HG21	7:AH:60:LEU:HD21	1.84	0.60
10:AK:26:PHE:CE2	21:AU:32:ARG:HD3	2.36	0.60
1:AA:736:C:H2'	1:AA:737:C:C6	2.36	0.60
1:CA:806:C:H2'	1:CA:807:A:H8	1.66	0.60
23:BB:1818:U:N3	25:BC:152:GLN:HB3	2.17	0.60
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.66	0.60
1:CA:1032:G:H5''	1:CA:1032:G:N3	2.16	0.60
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.36	0.60
26:BD:159:LYS:HZ2	26:BD:160:LYS:N	1.99	0.60
46:DU:86:PHE:HB3	46:DU:90:LYS:O	2.00	0.60
26:BD:10:GLY:HA3	26:BD:26:VAL:N	2.08	0.60
39:BX:34:SER:HB2	39:BX:36:GLN:OE1	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:36:LEU:N	48:DG:36:LEU:HD22	2.16	0.60
44:DQ:83:LYS:HZ3	44:DQ:87:VAL:HA	1.66	0.60
9:AJ:65:TYR:OH	13:AN:84:ARG:HG3	2.00	0.60
23:DB:1175:A:H2'	23:DB:1175:A:N3	2.14	0.60
42:BN:29:VAL:HG13	42:BN:83:LEU:HD21	1.83	0.60
1:AA:241:G:O2'	1:AA:242:G:H5'	2.02	0.60
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.66	0.60
1:AA:1008:U:H2'	1:AA:1009:U:H5''	1.82	0.60
38:DM:57:VAL:HG13	38:DM:108:VAL:HG21	1.83	0.60
23:BB:417:C:H2'	23:BB:418:C:H6	1.66	0.60
23:BB:2598:A:OP1	25:BC:233:GLY:HA2	2.01	0.60
23:DB:233:A:N6	23:DB:428:A:H61	1.98	0.60
1:AA:41:G:H2'	1:AA:42:G:H8	1.66	0.60
25:DC:181:ARG:HH22	25:DC:265:PHE:HB3	1.66	0.60
1:CA:431:A:H2'	1:CA:432:A:O4'	2.01	0.60
14:AO:12:VAL:HG11	14:AO:22:THR:HG22	1.82	0.60
16:AQ:80:LYS:N	16:AQ:80:LYS:HE3	2.16	0.60
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.35	0.60
1:CA:607:A:H2'	1:CA:608:A:C8	2.37	0.60
23:BB:2312:U:O2	47:BF:38:GLY:HA3	2.00	0.60
12:AM:22:TYR:HB3	12:AM:69:ARG:CZ	2.30	0.60
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.83	0.60
1:AA:620:C:N1	3:AD:131:ILE:HD13	2.16	0.60
23:DB:2500:U:H5'	23:DB:2501:C:OP2	2.01	0.60
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.64	0.60
18:AS:29:PRO:HA	18:AS:47:THR:HB	1.81	0.60
25:BC:43:ASN:HB3	25:BC:45:ASN:HD22	1.65	0.60
35:DV:31:TYR:HA	35:DV:93:ARG:NH2	2.17	0.60
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.83	0.60
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.14	0.60
48:BG:102:ILE:HG13	48:BG:116:LEU:HD11	1.82	0.60
19:AT:66:ILE:HG13	19:AT:70:LYS:HE3	1.83	0.60
6:AG:110:ARG:CD	6:AG:122:GLU:HB2	2.31	0.60
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.67	0.60
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.67	0.60
12:AM:13:HIS:HB2	12:AM:16:ILE:HG22	1.83	0.60
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.81	0.60
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.83	0.60
48:DG:115:GLN:NE2	48:DG:115:GLN:H	1.99	0.60
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.01	0.60
22:DA:2:G:H2'	22:DA:3:C:H6	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1786:A:H1'	23:BB:1938:A:N6	2.17	0.60
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.02	0.60
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.66	0.60
1:CA:430:A:OP1	3:CD:8:LEU:HB2	2.00	0.60
23:BB:828:U:H4'	23:BB:831:G:N1	2.16	0.60
15:AP:68:SER:OG	15:AP:71:VAL:HG12	2.00	0.60
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.65	0.60
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.83	0.60
20:AB:134:LEU:HA	20:AB:137:THR:OG1	2.01	0.60
23:DB:1729:U:H3'	23:DB:1730:C:H4'	1.82	0.60
23:DB:659:G:H21	29:DE:30:GLN:NE2	2.00	0.60
1:CA:723:U:O4'	21:CU:48:LYS:HD3	2.00	0.60
6:CG:21:LEU:H	6:CG:21:LEU:HD23	1.66	0.60
23:BB:956:G:N2	23:BB:959:A:H3'	2.16	0.60
23:DB:841:G:O2'	23:DB:842:U:H5'	2.02	0.60
8:CI:27:ILE:HG21	8:CI:34:LEU:HD13	1.84	0.60
40:BH:32:PRO:O	40:BH:33:GLN:HB2	2.00	0.60
10:CK:22:ILE:HG12	10:CK:31:VAL:HG12	1.83	0.60
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.31	0.60
23:BB:673:C:H5''	29:BE:76:PRO:HD2	1.82	0.60
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.02	0.60
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.83	0.60
23:DB:783:A:H2'	23:DB:784:G:O5'	2.01	0.60
15:AP:52:LEU:HD21	15:AP:75:ILE:HG23	1.83	0.60
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.81	0.60
4:CE:104:ILE:HD11	4:CE:114:LEU:HB2	1.84	0.60
1:AA:999:C:H2'	1:AA:1000:A:H8	1.63	0.60
23:BB:546:U:H5'	23:BB:548:G:O6	2.01	0.60
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.83	0.60
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.16	0.60
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.66	0.60
23:BB:184:C:H2'	23:BB:185:G:H8	1.66	0.60
20:AB:118:THR:O	20:AB:121:GLN:HB3	2.01	0.60
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.01	0.60
23:BB:1783:A:H5'	23:BB:2608:G:H4'	1.82	0.60
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.16	0.60
1:AA:607:A:H2'	1:AA:608:A:C8	2.36	0.60
52:BW:24:ARG:HD3	52:BW:65:LYS:NZ	2.17	0.60
47:BF:127:TYR:OH	47:BF:166:ARG:HG3	2.02	0.60
1:AA:664:G:N2	1:AA:741:G:H1	1.89	0.60
49:DR:7:SER:HB2	49:DR:22:LEU:CB	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.02	0.60
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	1.83	0.60
26:DD:182:ALA:O	26:DD:184:ARG:HG2	2.00	0.60
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.13	0.60
1:AA:244:U:O4	1:AA:906:A:H1'	2.00	0.60
48:BG:85:LYS:HB2	48:BG:164:ALA:HB3	1.84	0.60
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.15	0.60
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.66	0.60
51:DZ:76:GLU:HG3	51:DZ:77:LYS:H	1.67	0.60
46:DU:11:ILE:HD13	46:DU:20:LYS:H	1.67	0.60
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.84	0.60
23:DB:1870:C:H3'	23:DB:1871:A:H8	1.66	0.60
36:D2:27:GLY:O	36:D2:30:VAL:HB	2.02	0.60
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.66	0.60
1:CA:472:U:H2'	1:CA:473:U:C6	2.36	0.60
23:BB:233:A:H61	23:BB:428:A:H61	1.48	0.60
23:BB:608:A:H2'	23:BB:609:A:C8	2.36	0.60
23:BB:988:A:P	30:BY:11:SER:HB3	2.42	0.60
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.66	0.60
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.37	0.60
1:AA:1330:U:H2'	1:AA:1331:G:H5'	1.83	0.60
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.00	0.60
22:DA:116:G:H4'	43:DO:54:VAL:HG22	1.83	0.60
9:CJ:35:GLN:HG2	9:CJ:77:VAL:HB	1.83	0.60
23:BB:841:G:O2'	23:BB:842:U:H5'	2.02	0.60
1:CA:966:G:H21	8:CI:129:ARG:HD3	1.66	0.60
23:BB:2602:A:H3'	23:BB:2602:A:OP1	2.02	0.60
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.67	0.60
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HD2	1.82	0.60
2:AC:142:ARG:HH21	2:AC:143:LEU:HD11	1.66	0.60
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.01	0.60
1:CA:662:U:H2'	1:CA:663:A:C8	2.36	0.60
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.01	0.60
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.84	0.60
13:CN:41:TRP:HD1	13:CN:44:VAL:HG23	1.66	0.60
23:BB:2143:C:H2'	23:BB:2144:G:O4'	2.02	0.60
30:DY:26:LEU:HD21	30:DY:46:MET:HB3	1.82	0.60
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.83	0.60
3:CD:71:PHE:CE1	3:CD:89:LEU:HD21	2.37	0.60
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	1.83	0.60
23:DB:172:A:H2'	23:DB:173:A:H8	1.63	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.17	0.60
1:CA:763:G:H2'	1:CA:764:C:C6	2.36	0.60
23:DB:796:C:H2'	23:DB:797:G:C8	2.35	0.60
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.20	0.60
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.36	0.60
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.37	0.60
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.83	0.60
1:AA:723:U:O4'	21:AU:48:LYS:HD3	2.02	0.60
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.66	0.60
25:DC:54:GLY:O	25:DC:214:GLY:HA2	2.01	0.60
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.17	0.60
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	2.02	0.60
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.01	0.60
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.66	0.60
51:BZ:31:PRO:HB2	51:BZ:33:LEU:CD1	2.32	0.60
51:BZ:76:GLU:HG3	51:BZ:77:LYS:H	1.66	0.60
12:CM:15:VAL:HG22	12:CM:33:LEU:HD11	1.83	0.60
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.82	0.60
1:CA:390:U:H2'	1:CA:391:G:C8	2.36	0.60
1:AA:372:C:H4'	1:AA:373:A:H5'	1.83	0.60
41:DJ:103:ILE:HD12	41:DJ:104:ALA:N	2.16	0.60
4:CE:28:ARG:NH1	4:CE:30:PHE:HB3	2.16	0.60
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.19	0.60
1:AA:763:G:H2'	1:AA:764:C:C6	2.37	0.60
43:DO:35:ILE:HD11	43:DO:102:ARG:HE	1.67	0.60
31:B0:21:LEU:HD12	45:BS:19:LEU:O	2.02	0.60
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.36	0.60
1:CA:1330:U:H2'	1:CA:1331:G:H5'	1.83	0.60
1:AA:607:A:H2'	1:AA:608:A:H8	1.66	0.60
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.02	0.60
23:DB:2081:U:OP1	51:DZ:19:SER:HB3	2.01	0.60
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	2.02	0.60
18:AS:66:VAL:HG23	18:AS:67:GLY:H	1.67	0.60
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.84	0.60
29:BE:150:THR:HG21	29:BE:153:LEU:HA	1.83	0.60
23:DB:813:U:H2'	23:DB:814:C:C6	2.37	0.60
48:DG:157:LYS:HB3	48:DG:159:LYS:HG3	1.82	0.60
17:CR:34:GLU:HB2	21:CU:18:PHE:CZ	2.37	0.60
49:DR:6:GLN:HE22	49:DR:10:LYS:N	1.98	0.60
49:BR:60:LYS:N	49:BR:100:GLY:HA3	2.09	0.60
23:BB:704:G:C2'	23:BB:726:G:H22	2.11	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:241:G:O2'	1:CA:242:G:H5'	2.02	0.60
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.02	0.60
47:DF:127:TYR:OH	47:DF:166:ARG:HG3	2.01	0.60
49:DR:2:TYR:HB2	49:DR:42:ALA:CB	2.29	0.60
28:BP:52:ARG:HH11	28:BP:52:ARG:HG2	1.67	0.60
37:DL:79:LEU:HB3	37:DL:115:GLU:O	2.01	0.60
40:DH:133:GLN:HA	40:DH:139:PHE:HB3	1.84	0.60
19:CT:4:LYS:HD2	19:CT:5:SER:N	2.16	0.60
9:AJ:26:VAL:HG13	9:AJ:36:VAL:HG11	1.83	0.60
47:BF:42:ALA:O	47:BF:46:LYS:HG3	2.01	0.60
23:DB:2425:A:H5''	23:DB:2426:A:H3'	1.83	0.60
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.36	0.60
1:CA:33:A:H2'	1:CA:34:C:C6	2.36	0.60
1:AA:677:U:H2'	1:AA:678:U:C6	2.37	0.60
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.50	0.60
25:DC:264:LYS:HG3	25:DC:265:PHE:CD2	2.36	0.60
23:DB:903:C:H2'	23:DB:904:G:C8	2.36	0.60
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.37	0.60
41:DJ:77:HIS:CD2	41:DJ:84:ILE:H	2.20	0.60
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.37	0.60
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.84	0.60
28:DP:99:LEU:HA	28:DP:102:ARG:HG3	1.82	0.60
23:DB:2395:C:H2'	23:DB:2396:G:O4'	2.01	0.60
23:BB:2346:A:H3'	23:BB:2347:C:H5''	1.82	0.60
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.83	0.60
23:BB:307:G:N2	23:BB:309:A:H3'	2.17	0.60
52:DW:39:GLN:HE21	52:DW:42:THR:CB	2.14	0.60
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.02	0.60
21:CU:36:PHE:O	21:CU:39:LYS:HD2	2.01	0.60
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.82	0.60
48:DG:17:LYS:HB3	48:DG:24:THR:H	1.67	0.60
44:DQ:63:ARG:CZ	44:DQ:96:ASP:HA	2.32	0.60
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.75	0.60
20:AB:205:ALA:HB3	20:AB:208:ALA:HB3	1.84	0.60
23:BB:135:U:H2'	23:BB:136:G:H8	1.65	0.60
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.83	0.60
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.02	0.60
45:DS:31:GLN:O	45:DS:35:ILE:HG12	2.02	0.60
10:AK:80:ASN:ND2	10:AK:80:ASN:N	2.46	0.60
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.63	0.60
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.67	0.60
23:DB:1870:C:H3'	23:DB:1871:A:C8	2.36	0.60
23:DB:479:A:N3	23:DB:481:G:H5''	2.16	0.60
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.16	0.60
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.65	0.60
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.16	0.60
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.16	0.60
16:CQ:66:LEU:HD12	16:CQ:66:LEU:H	1.65	0.60
2:AC:31:ASN:ND2	2:AC:58:ARG:HE	1.99	0.60
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.83	0.60
23:BB:2415:G:H4'	37:BL:65:GLY:O	2.00	0.60
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.15	0.60
23:DB:828:U:H4'	23:DB:831:G:N1	2.16	0.60
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.02	0.60
40:BH:104:THR:HA	40:BH:109:GLU:OE2	2.01	0.60
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.84	0.60
23:DB:1376:C:H3'	56:DB:3279:HOH:O	2.02	0.60
23:BB:903:C:H2'	23:BB:904:G:C8	2.37	0.60
1:AA:390:U:H2'	1:AA:391:G:C8	2.37	0.60
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.37	0.60
31:B0:54:ILE:H	42:BN:118:ARG:HH12	1.50	0.60
1:AA:966:G:H21	8:AI:129:ARG:HD3	1.67	0.60
38:DM:31:PHE:HD1	38:DM:105:MET:HB3	1.66	0.60
23:DB:934:U:H2'	23:DB:935:C:C6	2.36	0.60
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.17	0.60
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.37	0.59
23:DB:854:C:O2'	23:DB:855:G:H5'	2.01	0.59
37:DL:143:GLU:CG	37:DL:144:GLU:H	1.99	0.59
17:CR:34:GLU:H	17:CR:34:GLU:CD	2.05	0.59
47:BF:155:ILE:HG21	47:BF:169:LEU:HD21	1.83	0.59
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.15	0.59
50:DT:54:GLU:CB	50:DT:88:LYS:HB2	2.31	0.59
48:BG:84:LYS:HB3	48:BG:132:LEU:O	2.02	0.59
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.37	0.59
23:DB:138:U:H4'	23:DB:139:U:H2'	1.84	0.59
13:AN:41:TRP:HD1	13:AN:44:VAL:HG23	1.66	0.59
48:BG:152:ARG:NH2	48:BG:162:ARG:HA	2.16	0.59
3:CD:93:LEU:O	3:CD:96:ARG:HB2	2.02	0.59
23:DB:19:A:H2'	23:DB:20:C:H6	1.66	0.59
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.66	0.59
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.84	0.59
29:BE:108:ILE:O	29:BE:108:ILE:HD13	2.01	0.59
23:DB:898:C:H2'	23:DB:898:C:O2	2.02	0.59
1:CA:1311:A:N7	18:CS:1:PRO:HG3	2.17	0.59
1:CA:958:A:H61	18:CS:53:GLY:HA3	1.66	0.59
1:CA:812:G:H2'	1:CA:812:G:N3	2.17	0.59
1:CA:602:A:O2'	1:CA:603:U:H5'	2.02	0.59
23:BB:265:A:O2'	23:BB:266:G:H4'	2.03	0.59
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.01	0.59
1:CA:21:G:H2'	1:CA:22:G:C8	2.36	0.59
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.01	0.59
48:BG:174:LYS:NZ	48:BG:176:LYS:HG2	2.17	0.59
1:CA:825:A:H2'	1:CA:826:C:H6	1.67	0.59
11:CL:5:GLN:HA	11:CL:8:ARG:HH21	1.67	0.59
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.67	0.59
11:CL:43:LYS:HE2	11:CL:44:PRO:HD3	1.82	0.59
25:BC:54:GLY:O	25:BC:214:GLY:HA2	2.02	0.59
52:DW:48:ALA:O	52:DW:61:LYS:HB2	2.02	0.59
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.10	0.59
41:DJ:11:VAL:HG11	41:DJ:13:ARG:HE	1.67	0.59
44:DQ:73:ILE:HD11	44:DQ:77:LYS:HB2	1.84	0.59
49:DR:3:ALA:O	49:DR:13:ARG:HA	2.02	0.59
49:DR:4:VAL:HA	49:DR:12:HIS:O	2.03	0.59
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.01	0.59
8:CI:25:GLY:HA3	8:CI:57:VAL:CA	2.28	0.59
3:AD:185:PRO:HB2	3:AD:190:LEU:CB	2.27	0.59
22:BA:75:G:N1	22:BA:102:G:N2	2.50	0.59
23:DB:2746:U:H5''	48:DG:137:LYS:HG2	1.82	0.59
52:DW:37:VAL:HG12	52:DW:38:ARG:HD3	1.83	0.59
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	1.84	0.59
46:BU:72:PHE:HA	46:BU:78:LYS:O	2.01	0.59
3:CD:77:GLU:OE1	3:CD:80:ARG:HD3	2.02	0.59
23:DB:528:A:N1	23:DB:2042:A:H2'	2.17	0.59
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	2.02	0.59
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.64	0.59
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.14	0.59
23:DB:1335:C:H2'	23:DB:1336:A:C8	2.37	0.59
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.67	0.59
1:AA:812:G:H2'	1:AA:812:G:N3	2.17	0.59
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.02	0.59
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:254:G:N2	34:D3:7:ARG:HH21	2.00	0.59
1:AA:1186:G:H4'	8:AI:111:GLU:OE1	2.02	0.59
46:BU:23:LYS:HD2	46:BU:23:LYS:H	1.65	0.59
23:DB:102:U:C6	39:DX:2:LYS:HE3	2.37	0.59
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.04	0.59
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.37	0.59
27:BK:85:VAL:O	27:BK:87:LEU:HD23	2.02	0.59
14:AO:35:GLN:O	14:AO:39:LEU:HB2	2.02	0.59
23:DB:184:C:H2'	23:DB:185:G:H8	1.67	0.59
25:BC:173:LEU:H	25:BC:173:LEU:HD13	1.67	0.59
23:BB:235:U:H2'	23:BB:236:C:C6	2.37	0.59
23:DB:2366:A:H2'	23:DB:2367:G:O4'	2.02	0.59
37:DL:121:THR:HG22	37:DL:141:LYS:HB3	1.83	0.59
25:DC:138:SER:O	25:DC:140:VAL:HG23	2.02	0.59
13:CN:68:ARG:HB3	13:CN:68:ARG:NH1	2.17	0.59
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.49	0.59
8:AI:23:GLY:O	8:AI:25:GLY:N	2.35	0.59
28:BP:59:THR:OG1	28:BP:72:VAL:HG12	2.02	0.59
44:BQ:60:TRP:O	44:BQ:63:ARG:HG3	2.01	0.59
23:DB:1812:U:C1'	25:DC:43:ASN:HD21	2.11	0.59
10:AK:22:ILE:HG12	10:AK:31:VAL:HG12	1.85	0.59
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.66	0.59
23:DB:30:G:H2'	23:DB:31:C:H6	1.68	0.59
35:DV:72:VAL:HB	35:DV:92:VAL:O	2.02	0.59
50:DT:29:THR:HB	50:DT:86:THR:HG22	1.84	0.59
49:BR:2:TYR:HB2	49:BR:42:ALA:CB	2.29	0.59
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.36	0.59
30:DY:15:ARG:O	30:DY:20:LYS:HE3	2.01	0.59
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.02	0.59
23:DB:2144:G:H2'	23:DB:2145:C:O3'	2.03	0.59
23:DB:2148:G:OP2	23:DB:2148:G:H3'	2.03	0.59
36:B2:27:GLY:O	36:B2:30:VAL:HB	2.01	0.59
3:CD:78:ALA:O	3:CD:85:THR:HA	2.03	0.59
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.84	0.59
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.38	0.59
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.18	0.59
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.67	0.59
1:CA:676:A:H1'	10:CK:116:PRO:HB3	1.84	0.59
23:DB:2393:U:H5''	37:DL:62:PRO:HG3	1.84	0.59
18:CS:69:LYS:O	18:CS:72:GLU:HG2	2.02	0.59
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1030:U:H4'	1:AA:1031:C:C4	2.37	0.59
23:DB:265:A:O2'	23:DB:266:G:H4'	2.02	0.59
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.42	0.59
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.37	0.59
46:DU:23:LYS:H	46:DU:23:LYS:HD2	1.67	0.59
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.01	0.59
23:DB:2331:G:H4'	52:DW:39:GLN:HA	1.83	0.59
52:BW:39:GLN:NE2	52:BW:42:THR:HB	2.16	0.59
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.01	0.59
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.83	0.59
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.32	0.59
50:DT:38:ALA:O	50:DT:39:THR:HB	2.02	0.59
47:DF:11:VAL:HG21	47:DF:172:PHE:HE1	1.66	0.59
6:CG:110:ARG:CD	6:CG:122:GLU:HB2	2.32	0.59
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.02	0.59
40:DH:21:VAL:HG11	40:DH:30:LEU:HD12	1.84	0.59
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.02	0.59
1:AA:16:A:O2'	1:AA:17:U:H5'	2.02	0.59
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.17	0.59
39:BX:48:ARG:O	39:BX:51:ALA:HB3	2.02	0.59
23:BB:2860:A:O5'	23:BB:2860:A:H8	1.85	0.59
23:DB:608:A:H2'	23:DB:609:A:C8	2.36	0.59
1:CA:950:U:H2'	1:CA:951:G:C8	2.38	0.59
18:AS:69:LYS:O	18:AS:72:GLU:HG2	2.03	0.59
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.38	0.59
14:CO:8:THR:O	14:CO:12:VAL:HG23	2.03	0.59
20:AB:133:ALA:O	20:AB:137:THR:HG23	2.02	0.59
7:AH:28:SER:OG	7:AH:56:PRO:HB2	2.02	0.59
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.67	0.59
43:DO:74:VAL:O	43:DO:78:VAL:HG22	2.02	0.59
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.68	0.59
25:BC:229:HIS:ND1	25:BC:230:PRO:HD2	2.18	0.59
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG22	2.37	0.59
27:BK:8:LEU:N	27:BK:8:LEU:HD12	2.18	0.59
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.37	0.59
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	2.01	0.59
28:DP:62:LYS:HE3	28:DP:64:SER:OG	2.01	0.59
23:BB:139:U:H5	50:BT:1:MET:HA	1.68	0.59
10:CK:22:ILE:HD12	10:CK:85:VAL:HG22	1.83	0.59
18:AS:62:THR:HG22	18:AS:63:ASP:H	1.68	0.59
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:60:ALA:O	20:AB:224:ARG:HD2	2.02	0.59
23:DB:2150:C:H2'	23:DB:2151:U:H6	1.66	0.59
46:BU:11:ILE:HD13	46:BU:20:LYS:H	1.67	0.59
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	1.85	0.59
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.85	0.59
3:AD:146:GLU:HB3	3:AD:149:LYS:HE3	1.85	0.59
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.50	0.59
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.67	0.59
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	1.85	0.59
5:AF:80:PHE:HE1	25:BC:123:ILE:HD13	1.66	0.59
9:AJ:51:VAL:HG23	13:AN:80:ARG:HB2	1.84	0.59
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.67	0.59
1:AA:806:C:H2'	1:AA:807:A:C8	2.37	0.59
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.67	0.59
20:CB:142:LYS:HA	20:CB:145:ASN:OD1	2.03	0.59
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.38	0.59
18:AS:39:ILE:HB	18:AS:66:VAL:O	2.02	0.59
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.18	0.59
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.02	0.59
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.66	0.59
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.02	0.59
23:BB:588:U:H1'	29:BE:85:PHE:CD1	2.37	0.59
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.01	0.59
37:DL:89:VAL:HG23	37:DL:123:ARG:HB2	1.85	0.59
1:CA:358:U:H2'	1:CA:359:G:C8	2.38	0.59
39:BX:31:GLN:HG2	39:BX:37:LEU:H	1.68	0.59
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.05	0.59
8:CI:79:ARG:NH2	8:CI:102:PHE:HA	2.17	0.59
28:BP:50:ARG:HB3	28:BP:57:ALA:H	1.67	0.59
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.66	0.59
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.68	0.59
16:AQ:3:LYS:HA	16:AQ:3:LYS:HE2	1.83	0.59
6:AG:107:ALA:O	6:AG:118:ARG:HB3	2.02	0.59
23:BB:2147:A:H61	1:CA:1034:G:P	2.25	0.59
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.37	0.59
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.68	0.59
23:DB:277:G:H4'	23:DB:278:A:N7	2.17	0.59
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	1.84	0.59
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.85	0.59
39:BX:46:VAL:O	39:BX:50:VAL:HG23	2.02	0.59
23:BB:171:U:H2'	23:BB:172:A:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:64:ARG:HG2	16:AQ:65:PRO:HD2	1.85	0.59
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.17	0.59
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.18	0.59
4:CE:64:GLU:HG3	4:CE:65:LYS:N	2.17	0.59
25:BC:264:LYS:HG3	25:BC:265:PHE:CD2	2.37	0.59
20:AB:168:GLU:O	20:AB:172:ILE:HD12	2.03	0.59
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.03	0.59
1:AA:1272:G:H2'	1:AA:1273:C:C6	2.38	0.59
39:DX:29:ARG:HH12	50:DT:12:ARG:HA	1.68	0.59
10:CK:26:PHE:CE2	21:CU:32:ARG:HD3	2.37	0.59
1:CA:1030:U:H4'	1:CA:1031:C:C4	2.37	0.59
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.02	0.59
40:DH:64:ALA:O	40:DH:68:ARG:HG2	2.02	0.59
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.18	0.59
1:AA:443:C:H2'	1:AA:444:G:C8	2.37	0.59
1:AA:358:U:H2'	1:AA:359:G:C8	2.37	0.59
52:BW:18:LYS:HE3	52:BW:36:ILE:HG12	1.84	0.59
52:BW:59:PHE:CD2	52:BW:61:LYS:HD2	2.37	0.59
40:BH:111:ALA:H	40:BH:132:PHE:HZ	1.51	0.59
1:AA:797:C:OP1	10:AK:125:LYS:HG2	2.02	0.59
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.18	0.59
47:BF:11:VAL:HG21	47:BF:172:PHE:HE1	1.65	0.59
49:BR:6:GLN:HE22	49:BR:10:LYS:N	2.01	0.59
38:BM:19:GLY:H	38:BM:38:ARG:NH1	1.94	0.59
22:BA:74:U:H2'	22:BA:75:G:O4'	2.03	0.59
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	1.83	0.59
45:BS:55:ILE:O	45:BS:58:ALA:HB3	2.02	0.59
18:CS:44:ILE:HA	18:CS:61:VAL:HB	1.84	0.59
31:B0:28:SER:HB2	31:B0:39:ARG:HG2	1.85	0.59
23:DB:2530:A:H5'	48:DG:174:LYS:HD2	1.85	0.59
44:BQ:78:PHE:CZ	44:BQ:82:LEU:HD11	2.36	0.59
6:AG:134:VAL:HB	6:AG:137:ARG:HH21	1.68	0.59
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HD2	1.84	0.59
1:AA:93:U:H3'	1:AA:94:G:H5''	1.83	0.59
1:AA:1314:C:H3'	18:AS:5:LYS:NZ	2.18	0.59
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.03	0.59
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.03	0.59
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.03	0.59
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.83	0.59
48:BG:115:GLN:H	48:BG:115:GLN:NE2	2.00	0.59
25:DC:239:PHE:O	25:DC:241:LYS:HG3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:720:U:H2'	23:DB:721:A:H8	1.65	0.59
6:AG:52:ARG:HH12	6:AG:121:ASN:HD22	1.51	0.59
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.68	0.59
12:CM:2:ARG:HB3	12:CM:6:ILE:HA	1.84	0.59
1:AA:82:G:C6	1:AA:88:U:O2	2.56	0.59
23:DB:1771:C:O2'	23:DB:1772:A:H5'	2.02	0.59
43:BO:74:VAL:O	43:BO:78:VAL:HG22	2.03	0.59
35:BV:53:LYS:HD3	35:BV:55:GLU:H	1.66	0.59
23:BB:813:U:H2'	23:BB:814:C:C6	2.37	0.59
23:DB:674:G:H4'	29:DE:69:ARG:HB3	1.85	0.59
1:AA:602:A:O2'	1:AA:603:U:H5'	2.02	0.59
23:DB:2186:G:H2'	23:DB:2187:U:O4'	2.03	0.59
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.85	0.59
9:AJ:85:ASP:HA	9:AJ:88:MET:SD	2.42	0.59
29:DE:150:THR:HG21	29:DE:153:LEU:HA	1.83	0.59
1:CA:86:G:H1'	1:CA:87:C:O4'	2.03	0.59
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.02	0.59
23:DB:1117:C:O2'	23:DB:1118:C:H5'	2.02	0.59
23:DB:208:C:H2'	23:DB:209:C:C6	2.37	0.59
23:DB:2354:C:H4'	52:DW:31:LEU:HD23	1.84	0.59
20:AB:27:LYS:HA	20:AB:30:ILE:HD12	1.84	0.59
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.17	0.59
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.68	0.59
19:CT:79:THR:HG22	19:CT:83:ASN:HD21	1.68	0.59
50:BT:29:THR:CA	50:BT:86:THR:HA	2.30	0.59
23:DB:704:G:C2'	23:DB:726:G:H22	2.10	0.59
50:DT:25:GLU:HA	50:DT:28:ASN:O	2.02	0.59
47:DF:155:ILE:HG21	47:DF:169:LEU:HD21	1.84	0.59
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.59
52:BW:37:VAL:HG12	52:BW:38:ARG:HD3	1.85	0.59
40:BH:14:SER:HB3	40:BH:17:ASP:CG	2.22	0.59
40:BH:21:VAL:HG11	40:BH:30:LEU:HD12	1.83	0.59
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	1.85	0.59
23:BB:2144:G:C2'	23:BB:2146:C:H5'	2.32	0.59
1:CA:1034:G:N3	1:CA:1034:G:H2'	2.17	0.59
1:CA:923:A:H2'	1:CA:924:C:C6	2.38	0.59
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	1.83	0.59
1:AA:472:U:H2'	1:AA:473:U:C6	2.38	0.59
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	2.02	0.59
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.68	0.59
51:DZ:27:ARG:HD3	51:DZ:28:ARG:N	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.83	0.59
1:AA:193:C:H2'	1:AA:194:C:C6	2.38	0.59
9:CJ:51:VAL:HG23	13:CN:80:ARG:HB2	1.84	0.59
1:AA:272:C:H2'	1:AA:273:U:C6	2.37	0.59
18:CS:39:ILE:HB	18:CS:66:VAL:O	2.03	0.59
43:DO:6:ALA:HB3	43:DO:10:ARG:HH11	1.67	0.59
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.83	0.59
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.85	0.59
22:DA:10:G:H2'	22:DA:11:C:O4'	2.03	0.59
46:DU:26:ASN:HB3	46:DU:34:ILE:HD12	1.85	0.59
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.02	0.59
1:CA:96:U:H2'	1:CA:97:G:C8	2.38	0.59
23:BB:2265:U:H3'	23:BB:2266:A:H5''	1.84	0.59
20:CB:42:LEU:O	20:CB:46:VAL:HG12	2.02	0.59
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.18	0.59
45:DS:25:ARG:HE	45:DS:74:ILE:HG23	1.67	0.59
23:DB:2571:U:O2'	26:DD:152:PRO:HG3	2.03	0.59
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.37	0.59
27:DK:54:LYS:N	27:DK:54:LYS:HD2	2.16	0.59
12:CM:47:LEU:HD22	12:CM:51:GLN:HB3	1.85	0.59
29:DE:188:MET:HG2	29:DE:193:VAL:CG2	2.32	0.59
11:CL:60:PHE:HB3	11:CL:62:VAL:HG13	1.85	0.59
1:AA:320:A:H2'	1:AA:321:A:C8	2.38	0.59
35:BV:3:THR:HA	35:BV:62:THR:HG1	1.68	0.59
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.86	0.59
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.68	0.59
17:CR:38:ILE:HG22	17:CR:58:ILE:HG21	1.85	0.59
43:BO:35:ILE:HD11	43:BO:102:ARG:HE	1.67	0.59
23:DB:1827:U:C2'	23:DB:1828:G:H5'	2.32	0.59
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.65	0.59
1:CA:806:C:H2'	1:CA:807:A:C8	2.38	0.59
22:BA:39:A:O2'	22:BA:40:U:H5'	2.03	0.59
1:CA:625:U:H4'	15:CP:16:PHE:CZ	2.38	0.59
23:DB:235:U:H2'	23:DB:236:C:C6	2.38	0.59
22:BA:116:G:H4'	43:BO:54:VAL:HG22	1.84	0.59
1:AA:235:C:H2'	1:AA:236:A:C8	2.38	0.59
22:DA:59:A:H2'	22:DA:60:C:O4'	2.03	0.59
23:BB:875:G:H2'	23:BB:876:C:N3	2.17	0.59
20:CB:195:VAL:HG12	20:CB:197:PHE:H	1.68	0.59
41:BJ:45:THR:HG23	41:BJ:45:THR:O	2.03	0.59
20:AB:14:HIS:HD2	20:AB:202:ASN:H	1.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:75:THR:HG23	28:DP:76:HIS:N	2.16	0.59
50:BT:54:GLU:CB	50:BT:88:LYS:HB2	2.32	0.59
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.84	0.59
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.67	0.59
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.84	0.59
23:DB:2386:A:C2	52:DW:38:ARG:HB3	2.38	0.59
18:CS:62:THR:HG22	18:CS:63:ASP:H	1.67	0.59
24:BI:27:LEU:CD2	24:BI:27:LEU:H	2.15	0.59
12:CM:52:ILE:HG13	12:CM:56:ARG:HH11	1.68	0.59
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.85	0.59
20:CB:65:LYS:HD3	20:CB:89:PHE:CZ	2.38	0.59
50:BT:18:GLU:C	50:BT:20:ALA:H	2.06	0.59
13:CN:20:PHE:CD1	13:CN:24:ALA:HB2	2.38	0.59
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.32	0.59
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.67	0.59
23:DB:1820:U:OP1	25:DC:176:ARG:HD2	2.03	0.59
1:AA:950:U:H2'	1:AA:951:G:C8	2.38	0.59
39:BX:29:ARG:HH12	50:BT:12:ARG:HG2	1.67	0.59
1:CA:1221:G:H4'	18:CS:52:ASN:O	2.03	0.59
1:CA:41:G:H2'	1:CA:42:G:H8	1.66	0.59
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.18	0.59
1:CA:736:C:H2'	1:CA:737:C:H6	1.67	0.59
16:AQ:79:GLU:HG3	16:AQ:80:LYS:NZ	2.16	0.59
29:DE:195:GLN:O	29:DE:198:GLU:HG2	2.03	0.59
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.38	0.59
11:AL:43:LYS:HE2	11:AL:44:PRO:HD3	1.84	0.59
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.67	0.59
1:AA:434:U:H3'	1:AA:435:A:H8	1.65	0.59
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.02	0.59
39:BX:39:GLN:O	39:BX:42:LEU:HB2	2.03	0.58
10:AK:95:THR:HG23	10:AK:96:ILE:H	1.68	0.58
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.03	0.58
31:D0:28:SER:HB2	31:D0:39:ARG:HG2	1.84	0.58
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.03	0.58
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.03	0.58
23:DB:1082:U:C2	23:DB:1086:A:C6	2.90	0.58
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.85	0.58
1:CA:918:A:H2'	1:CA:919:A:C8	2.37	0.58
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.33	0.58
27:DK:64:ARG:HD2	27:DK:102:PRO:O	2.02	0.58
27:DK:120:PRO:HA	28:DP:65:ASN:ND2	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.33	0.58
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.37	0.58
3:CD:149:LYS:HD3	3:CD:177:MET:HG3	1.84	0.58
11:AL:60:PHE:HB3	11:AL:62:VAL:HG13	1.85	0.58
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.84	0.58
23:DB:62:U:H3'	23:DB:63:A:H8	1.66	0.58
1:CA:436:C:O2'	1:CA:437:U:H5'	2.03	0.58
6:CG:46:LEU:O	6:CG:57:GLU:HB3	2.02	0.58
1:AA:677:U:H2'	1:AA:678:U:H6	1.67	0.58
23:DB:634:C:H2'	23:DB:635:C:C6	2.37	0.58
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.67	0.58
1:AA:429:U:H1'	1:AA:430:A:H5''	1.85	0.58
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.23	0.58
23:DB:2106:U:H2'	23:DB:2107:G:H8	1.67	0.58
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.38	0.58
1:CA:605:U:H2'	1:CA:606:G:H8	1.68	0.58
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.03	0.58
23:BB:871:U:H2'	23:BB:872:U:H6	1.68	0.58
1:CA:148:G:N3	1:CA:1446:A:H2	2.00	0.58
13:CN:5:MET:O	13:CN:8:ARG:HB2	2.03	0.58
12:CM:70:ARG:NE	47:DF:136:ILE:HG21	2.18	0.58
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.67	0.58
25:BC:144:GLU:HG3	25:BC:151:GLY:N	2.17	0.58
41:DJ:11:VAL:HG11	41:DJ:13:ARG:NE	2.17	0.58
41:BJ:11:VAL:HG11	41:BJ:13:ARG:HE	1.66	0.58
49:BR:4:VAL:HA	49:BR:12:HIS:O	2.02	0.58
27:BK:71:ARG:NE	27:BK:71:ARG:HA	2.11	0.58
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.03	0.58
48:DG:140:ILE:HD12	48:DG:141:GLY:N	2.18	0.58
45:BS:33:LEU:HG	45:BS:51:LEU:HD23	1.84	0.58
40:BH:12:LEU:HD11	40:BH:30:LEU:HD11	1.85	0.58
11:AL:85:ARG:HG3	11:AL:86:VAL:N	2.18	0.58
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.39	0.58
44:BQ:75:TYR:O	44:BQ:79:ILE:HG22	2.03	0.58
15:AP:28:ARG:CD	15:AP:29:ASN:H	2.14	0.58
15:CP:28:ARG:CD	15:CP:29:ASN:H	2.14	0.58
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.68	0.58
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	1.85	0.58
25:BC:80:LEU:HD21	25:BC:109:LEU:HB2	1.85	0.58
51:BZ:27:ARG:HD3	51:BZ:28:ARG:N	2.19	0.58
39:DX:48:ARG:O	39:DX:51:ALA:HB3	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.37	0.58
18:AS:35:ARG:HB2	18:AS:71:GLY:HA2	1.86	0.58
1:CA:409:U:H2'	1:CA:410:G:C8	2.37	0.58
1:CA:607:A:H2'	1:CA:608:A:H8	1.66	0.58
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.85	0.58
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HB	1.85	0.58
1:CA:207:C:H3'	1:CA:208:U:C6	2.38	0.58
23:BB:402:A:H2'	23:BB:403:U:O4'	2.03	0.58
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.38	0.58
1:AA:148:G:N3	1:AA:1446:A:H2	2.01	0.58
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.03	0.58
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.38	0.58
20:AB:42:LEU:O	20:AB:46:VAL:HG12	2.02	0.58
47:BF:126:ASN:HD22	47:BF:156:THR:HA	1.68	0.58
47:BF:169:LEU:O	47:BF:174:PHE:HB2	2.03	0.58
49:DR:60:LYS:N	49:DR:100:GLY:HA3	2.08	0.58
49:BR:7:SER:HB2	49:BR:22:LEU:CB	2.31	0.58
8:CI:23:GLY:O	8:CI:25:GLY:N	2.36	0.58
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.18	0.58
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.03	0.58
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.16	0.58
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.69	0.58
23:BB:322:A:H5'	23:BB:340:A:H1'	1.86	0.58
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.12	0.58
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.33	0.58
47:DF:16:MET:O	47:DF:20:ASN:HA	2.02	0.58
1:AA:981:U:H2'	1:AA:982:U:C5	2.38	0.58
4:CE:148:SER:HB2	4:CE:149:PRO:HD2	1.84	0.58
23:BB:2318:G:C6	23:BB:2319:G:C6	2.91	0.58
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.65	0.58
42:DN:24:MET:HE2	42:DN:44:LEU:HB2	1.83	0.58
40:BH:57:LYS:HG3	40:BH:58:LEU:N	2.18	0.58
2:AC:152:VAL:HB	2:AC:156:LEU:HD21	1.83	0.58
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.33	0.58
10:AK:19:VAL:HG12	10:AK:82:GLU:HB2	1.85	0.58
1:CA:999:C:H2'	1:CA:1000:A:H8	1.64	0.58
20:CB:168:GLU:O	20:CB:172:ILE:HD12	2.03	0.58
4:CE:89:THR:HG22	4:CE:90:GLY:N	2.18	0.58
23:DB:654:A:C2'	23:DB:655:A:H5''	2.33	0.58
8:AI:94:ARG:HA	8:AI:97:LEU:HG	1.85	0.58
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.18	0.58
23:DB:2346:A:H3'	23:DB:2347:C:H5''	1.84	0.58
10:AK:45:THR:HG23	10:AK:48:GLY:HA3	1.85	0.58
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.17	0.58
36:D2:3:ARG:NE	36:D2:3:ARG:HA	2.18	0.58
1:AA:1034:G:H2'	1:AA:1034:G:N3	2.19	0.58
23:BB:564:C:O2'	23:BB:565:C:H5'	2.03	0.58
22:BA:60:C:H2'	22:BA:61:G:H8	1.68	0.58
23:BB:1494:A:H2'	23:BB:1495:A:C8	2.39	0.58
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.19	0.58
23:BB:1046:A:C3'	23:BB:1047:G:H5''	2.32	0.58
23:BB:2366:A:H2'	23:BB:2367:G:O4'	2.03	0.58
37:DL:110:VAL:HG23	37:DL:126:ARG:O	2.03	0.58
8:AI:25:GLY:HA2	8:AI:60:LEU:O	2.04	0.58
47:BF:107:VAL:O	47:BF:110:ILE:HG22	2.03	0.58
40:DH:62:LEU:CG	40:DH:66:ASN:HD21	2.11	0.58
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.69	0.58
29:BE:119:ILE:HD11	29:BE:185:LYS:NZ	2.18	0.58
42:BN:73:ASN:O	42:BN:76:VAL:HG22	2.03	0.58
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	2.02	0.58
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.86	0.58
47:DF:107:VAL:O	47:DF:110:ILE:HG22	2.04	0.58
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.85	0.58
20:AB:65:LYS:HD3	20:AB:89:PHE:CZ	2.38	0.58
4:AE:148:SER:HB2	4:AE:149:PRO:HD2	1.85	0.58
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.34	0.58
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.19	0.58
44:BQ:27:ARG:HA	44:BQ:33:VAL:HG23	1.85	0.58
3:CD:29:THR:HB	3:CD:30:LYS:HD3	1.84	0.58
16:AQ:16:MET:HB3	16:AQ:19:SER:HB2	1.83	0.58
23:BB:654:A:C2'	23:BB:655:A:H5''	2.33	0.58
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.38	0.58
1:AA:736:C:H2'	1:AA:737:C:H6	1.69	0.58
36:D2:3:ARG:CZ	36:D2:3:ARG:HA	2.33	0.58
41:BJ:23:LYS:NZ	41:BJ:142:ILE:HG12	2.18	0.58
41:DJ:23:LYS:NZ	41:DJ:142:ILE:HG12	2.19	0.58
16:AQ:30:HIS:CE1	16:AQ:32:ILE:HG22	2.38	0.58
1:AA:207:C:H2'	1:AA:208:U:O4'	2.04	0.58
5:CF:81:ASN:HB3	5:CF:84:VAL:HG12	1.84	0.58
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.38	0.58
45:DS:72:THR:HG21	45:DS:108:SER:HB3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.85	0.58
23:BB:934:U:H2'	23:BB:935:C:C6	2.38	0.58
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.38	0.58
52:DW:59:PHE:CD2	52:DW:61:LYS:HD2	2.39	0.58
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.34	0.58
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.84	0.58
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.85	0.58
49:BR:1:MET:HG3	49:BR:101:ILE:HG21	1.84	0.58
40:DH:82:SER:OG	40:DH:94:ILE:HD13	2.03	0.58
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.67	0.58
48:DG:85:LYS:HB2	48:DG:164:ALA:HB3	1.86	0.58
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.39	0.58
40:BH:13:GLY:O	40:BH:14:SER:HB2	2.02	0.58
10:AK:80:ASN:ND2	10:AK:80:ASN:H	2.01	0.58
23:DB:2571:U:H4'	26:DD:151:THR:HG21	1.84	0.58
23:DB:1082:U:O4	23:DB:1086:A:C2	2.56	0.58
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.68	0.58
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.04	0.58
23:BB:2800:A:H2'	23:BB:2801:G:C1'	2.33	0.58
1:AA:412:A:H4'	1:AA:413:G:OP1	2.04	0.58
23:DB:192:C:C2'	23:DB:193:U:H5'	2.33	0.58
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.67	0.58
1:CA:57:G:H2'	1:CA:58:C:C6	2.39	0.58
1:AA:140:U:H2'	1:AA:141:G:C8	2.39	0.58
23:BB:974:G:OP2	49:BR:78:ARG:HD3	2.03	0.58
23:DB:825:A:H1'	37:DL:54:GLN:HE21	1.68	0.58
23:DB:946:C:H2'	23:DB:947:A:H8	1.68	0.58
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.69	0.58
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.67	0.58
23:DB:2438:U:O2'	23:DB:2439:A:H5''	2.03	0.58
1:CA:443:C:H2'	1:CA:444:G:C8	2.38	0.58
1:AA:1028:C:H2'	1:AA:1029:U:O4'	2.04	0.58
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.68	0.58
52:DW:39:GLN:NE2	52:DW:42:THR:HB	2.13	0.58
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.23	0.58
49:DR:66:HIS:ND1	49:DR:94:THR:HG22	2.18	0.58
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.04	0.58
8:CI:57:VAL:HB	8:CI:58:GLU:OE2	2.04	0.58
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	1.86	0.58
19:AT:79:THR:HG22	19:AT:83:ASN:HD21	1.68	0.58
18:CS:43:MET:O	18:CS:46:LEU:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1082:U:O4	23:BB:1086:A:C2	2.56	0.58
23:DB:139:U:N3	50:DT:1:MET:HB3	2.18	0.58
40:DH:132:PHE:HD2	40:DH:134:VAL:HG22	1.69	0.58
29:DE:119:ILE:HD11	29:DE:185:LYS:NZ	2.19	0.58
27:BK:102:PRO:HD3	28:BP:65:ASN:HB2	1.85	0.58
16:AQ:60:ILE:HG12	16:AQ:72:TRP:HE3	1.68	0.58
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.86	0.58
29:BE:195:GLN:O	29:BE:198:GLU:HG2	2.03	0.58
1:AA:57:G:H2'	1:AA:58:C:C6	2.38	0.58
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.39	0.58
1:CA:502:A:H2'	1:CA:503:C:H6	1.68	0.58
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.38	0.58
23:BB:2103:C:H3'	23:BB:2104:C:C2	2.39	0.58
23:BB:903:C:H2'	23:BB:904:G:H8	1.67	0.58
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.38	0.58
23:DB:1783:A:H5'	23:DB:2608:G:H4'	1.85	0.58
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.04	0.58
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.37	0.58
23:DB:794:A:H2'	23:DB:795:C:C6	2.37	0.58
49:BR:54:VAL:HG22	49:BR:56:GLY:H	1.69	0.58
23:BB:2847:U:H5''	28:BP:94:ALA:CB	2.34	0.58
39:BX:59:GLU:CD	39:BX:59:GLU:N	2.57	0.58
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.18	0.58
37:BL:89:VAL:HG23	37:BL:123:ARG:HB2	1.84	0.58
23:BB:1203:U:C4'	37:BL:3:LEU:HD12	2.33	0.58
40:BH:64:ALA:H	40:BH:66:ASN:ND2	2.01	0.58
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.83	0.58
45:DS:55:ILE:O	45:DS:58:ALA:HB3	2.04	0.58
12:AM:1:ALA:O	12:AM:3:ILE:HG13	2.04	0.58
12:AM:52:ILE:HG13	12:AM:56:ARG:HH11	1.68	0.58
51:DZ:59:ILE:HG22	51:DZ:64:ILE:HG13	1.85	0.58
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.19	0.58
40:BH:47:PHE:HA	40:BH:50:ARG:HH21	1.68	0.58
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.18	0.58
33:B1:4:ILE:HD11	33:B1:25:ASN:HD21	1.69	0.58
46:DU:9:GLU:OE2	46:DU:21:ARG:HD2	2.04	0.58
3:AD:196:GLU:O	3:AD:199:ILE:HG12	2.04	0.58
1:CA:843:U:H5'	1:CA:844:G:N7	2.19	0.58
23:BB:2820:A:OP1	42:BN:4:ARG:HA	2.03	0.58
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.67	0.58
23:DB:233:A:H61	23:DB:428:A:H61	1.48	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:417:C:H2'	23:DB:418:C:H6	1.69	0.58
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.04	0.58
23:BB:1693:U:H1'	25:BC:13:ARG:HH21	1.69	0.58
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.04	0.58
41:BJ:30:THR:HG23	41:BJ:31:GLU:N	2.18	0.58
1:CA:620:C:N1	3:CD:131:ILE:HD13	2.18	0.58
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.39	0.58
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.69	0.58
6:CG:72:VAL:HA	6:CG:89:GLU:HA	1.86	0.58
23:DB:321:U:OP2	29:DE:130:LYS:HD3	2.04	0.58
1:CA:398:U:H2'	1:CA:399:G:H8	1.68	0.58
1:CA:796:C:H4'	10:CK:126:ARG:HH21	1.69	0.58
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.82	0.58
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.34	0.58
52:BW:51:GLY:HA3	52:BW:59:PHE:HB3	1.85	0.58
40:BH:64:ALA:H	40:BH:66:ASN:HD21	1.50	0.58
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.34	0.58
23:BB:877:A:H2	23:BB:900:A:N7	2.00	0.58
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.86	0.58
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.03	0.58
23:BB:279:A:N6	23:BB:361:G:H1'	2.18	0.58
33:B1:34:GLU:HB3	33:B1:49:LYS:HD3	1.86	0.58
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.33	0.58
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.69	0.58
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.39	0.58
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.39	0.58
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.04	0.58
23:BB:796:C:H2'	23:BB:797:G:C8	2.38	0.58
23:BB:962:G:N2	23:BB:2250:G:H1	2.02	0.58
23:DB:264:C:O2'	23:DB:265:A:H5''	2.04	0.58
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.67	0.58
23:DB:1866:A:H2'	23:DB:1867:G:O4'	2.04	0.58
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.39	0.58
7:CH:54:THR:HG23	7:CH:55:LYS:HG2	1.85	0.58
45:BS:72:THR:HG21	45:BS:108:SER:HB3	1.85	0.58
16:CQ:5:ARG:HE	16:CQ:5:ARG:HA	1.69	0.58
14:AO:29:VAL:HG11	14:AO:67:LEU:HD21	1.85	0.58
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	2.03	0.58
39:DX:39:GLN:O	39:DX:42:LEU:HB2	2.04	0.58
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.03	0.58
48:BG:9:VAL:O	48:BG:11:PRO:HD3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:135:U:O2'	23:BB:136:G:H5'	2.03	0.58
25:DC:171:VAL:HB	25:DC:183:VAL:HG12	1.86	0.58
45:BS:31:GLN:C	45:BS:33:LEU:H	2.07	0.58
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.86	0.58
44:DQ:75:TYR:O	44:DQ:79:ILE:HG22	2.04	0.58
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.03	0.58
23:DB:1551:A:H3'	23:DB:1552:A:H5''	1.84	0.58
1:CA:1317:C:H2'	1:CA:1318:A:O4'	2.02	0.58
23:DB:170:U:H2'	23:DB:171:U:C6	2.39	0.58
1:CA:632:U:H5''	1:CA:633:G:H8	1.68	0.58
9:AJ:42:LEU:HD11	9:AJ:73:LEU:HB2	1.86	0.58
23:BB:1937:A:N7	23:BB:1939:U:H2'	2.18	0.58
14:CO:35:GLN:O	14:CO:39:LEU:HB2	2.03	0.58
25:DC:181:ARG:NH2	25:DC:265:PHE:HB3	2.18	0.58
23:DB:899:A:C2	23:DB:900:A:H1'	2.39	0.58
50:DT:49:LYS:HB2	50:DT:50:LEU:HD22	1.86	0.58
1:AA:493:A:H5'	1:AA:494:G:OP2	2.03	0.58
1:AA:207:C:H3'	1:AA:208:U:C6	2.39	0.58
1:CA:797:C:OP1	10:CK:125:LYS:HG2	2.03	0.58
1:CA:796:C:OP1	10:CK:127:ARG:HB3	2.04	0.58
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.69	0.58
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.39	0.58
25:DC:32:LEU:O	25:DC:63:ILE:HG12	2.03	0.58
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.84	0.58
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.04	0.58
23:DB:431:U:O2'	23:DB:432:A:H5'	2.04	0.58
22:DA:24:G:O2'	22:DA:25:U:H5''	2.04	0.58
1:AA:715:A:H2'	1:AA:716:A:C8	2.38	0.58
34:B3:41:ARG:HG3	34:B3:44:ARG:HH22	1.67	0.58
8:AI:34:LEU:HD21	8:AI:48:ARG:NE	2.18	0.58
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.85	0.58
10:CK:95:THR:HG23	10:CK:96:ILE:H	1.68	0.58
50:BT:11:LEU:HD22	50:BT:11:LEU:N	2.14	0.58
45:DS:33:LEU:HG	45:DS:51:LEU:HD23	1.85	0.58
48:DG:174:LYS:NZ	48:DG:176:LYS:HG2	2.18	0.58
23:BB:2675:A:H4'	27:BK:29:HIS:HB2	1.86	0.58
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.18	0.58
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.04	0.58
39:DX:3:ALA:O	39:DX:6:LEU:HB2	2.04	0.58
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.86	0.58
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:98:ASP:HB3	3:AD:132:ALA:HB1	1.86	0.58
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.34	0.58
16:CQ:16:MET:HB2	16:CQ:19:SER:HB2	1.84	0.58
16:CQ:8:GLN:HB3	16:CQ:59:GLU:HB2	1.85	0.58
23:DB:968:C:H2'	23:DB:969:G:H8	1.67	0.58
15:CP:50:THR:HG22	15:CP:51:ARG:N	2.19	0.58
23:BB:634:C:H2'	23:BB:635:C:C6	2.38	0.58
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.04	0.58
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.04	0.58
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.38	0.58
22:BA:10:G:H2'	22:BA:11:C:O4'	2.04	0.58
22:DA:90:C:OP1	38:DM:16:ARG:HB2	2.04	0.58
1:AA:398:U:H2'	1:AA:399:G:H8	1.67	0.58
22:BA:94:A:H2'	22:BA:95:U:O4'	2.04	0.58
1:AA:596:A:H2'	1:AA:597:G:H8	1.69	0.58
44:DQ:103:VAL:O	44:DQ:106:THR:HB	2.03	0.58
2:AC:91:ALA:HB2	2:AC:98:ALA:H	1.69	0.58
52:BW:48:ALA:O	52:BW:61:LYS:HB2	2.04	0.57
44:DQ:94:LEU:CD1	49:DR:13:ARG:HB2	2.34	0.57
1:AA:1085:U:H3'	1:AA:1086:U:C5	2.39	0.57
26:BD:9:VAL:O	28:BP:4:ILE:HD11	2.03	0.57
29:BE:145:ASP:OD1	29:BE:166:LYS:HD2	2.04	0.57
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.86	0.57
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.49	0.57
23:BB:674:G:H5''	29:BE:71:GLY:N	2.18	0.57
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.38	0.57
24:DI:121:ILE:CD1	24:DI:121:ILE:H	2.14	0.57
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.39	0.57
50:DT:18:GLU:C	50:DT:20:ALA:H	2.07	0.57
23:BB:2720:U:H5''	28:BP:52:ARG:HH22	1.68	0.57
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.68	0.57
23:DB:173:A:H2'	23:DB:174:U:C6	2.39	0.57
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.69	0.57
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	2.19	0.57
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.67	0.57
39:DX:51:ALA:O	39:DX:55:THR:N	2.37	0.57
1:AA:1319:A:H3'	18:AS:2:ARG:HA	1.84	0.57
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.38	0.57
6:CG:52:ARG:HH12	6:CG:121:ASN:HD22	1.49	0.57
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.38	0.57
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.69	0.57
22:DA:60:C:H2'	22:DA:61:G:H8	1.69	0.57
23:DB:956:G:N2	23:DB:959:A:H3'	2.19	0.57
22:BA:24:G:O2'	22:BA:25:U:H5''	2.04	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.19	0.57
25:DC:229:HIS:ND1	25:DC:230:PRO:HD2	2.19	0.57
23:BB:49:A:H5''	23:BB:51:G:O4'	2.04	0.57
23:BB:5:A:H2'	23:BB:6:A:C8	2.39	0.57
42:DN:17:ARG:C	42:DN:19:ALA:H	2.06	0.57
39:DX:59:GLU:N	39:DX:59:GLU:CD	2.57	0.57
42:DN:71:ARG:HG2	42:DN:71:ARG:HH21	1.68	0.57
16:AQ:25:GLU:HB3	16:AQ:38:LYS:HD3	1.86	0.57
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.04	0.57
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.03	0.57
37:DL:125:LEU:H	37:DL:143:GLU:HG3	1.70	0.57
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.21	0.57
39:BX:28:LEU:HB3	39:BX:43:LEU:HD21	1.86	0.57
44:BQ:77:LYS:O	44:BQ:80:ASN:HB3	2.04	0.57
23:BB:496:G:H1'	45:BS:61:ASN:ND2	2.19	0.57
28:BP:75:THR:O	28:BP:80:VAL:HG11	2.04	0.57
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.17	0.57
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.39	0.57
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.19	0.57
47:DF:109:ARG:HB3	47:DF:135:ILE:HD12	1.85	0.57
47:DF:169:LEU:O	47:DF:174:PHE:HB2	2.05	0.57
23:DB:2720:U:H5''	28:DP:52:ARG:HH22	1.68	0.57
20:CB:65:LYS:HB2	20:CB:158:ASP:N	2.18	0.57
38:DM:100:LYS:HD3	38:DM:101:VAL:H	1.67	0.57
46:BU:80:ASP:OD1	46:BU:95:PHE:HB3	2.04	0.57
3:AD:71:PHE:CE1	3:AD:89:LEU:HD21	2.38	0.57
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.03	0.57
1:AA:376:G:H2'	1:AA:377:G:H8	1.68	0.57
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.44	0.57
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.85	0.57
1:AA:923:A:H2'	1:AA:924:C:C6	2.39	0.57
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.68	0.57
1:AA:384:G:H2'	1:AA:385:C:H6	1.68	0.57
1:AA:135:C:O2	15:AP:1:MET:HB2	2.03	0.57
1:CA:135:C:O2	15:CP:1:MET:HB2	2.03	0.57
23:DB:152:A:H2'	23:DB:153:U:C6	2.39	0.57
1:CA:1186:G:H4'	8:CI:111:GLU:OE1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1272:G:H2'	1:CA:1273:C:C6	2.39	0.57
34:D3:41:ARG:HG3	34:D3:44:ARG:HH22	1.69	0.57
23:DB:962:G:N2	23:DB:2250:G:H1	2.02	0.57
23:BB:441:U:H2'	23:BB:442:G:H8	1.68	0.57
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.39	0.57
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.37	0.57
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.03	0.57
19:CT:29:THR:HA	19:CT:32:LYS:HE3	1.86	0.57
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.39	0.57
23:DB:1132:U:H5'	23:DB:1132:U:H6	1.69	0.57
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.86	0.57
1:AA:708:C:H2'	1:AA:709:U:C6	2.39	0.57
52:DW:23:LYS:HZ2	52:DW:24:ARG:HG3	1.68	0.57
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.87	0.57
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.03	0.57
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CA	2.16	0.57
41:BJ:55:ILE:O	41:BJ:55:ILE:HG13	2.03	0.57
23:BB:140:C:H4'	23:BB:141:G:H21	1.69	0.57
50:BT:25:GLU:HA	50:BT:28:ASN:O	2.04	0.57
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.40	0.57
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.16	0.57
45:BS:31:GLN:O	45:BS:35:ILE:HG12	2.05	0.57
18:CS:14:LEU:H	18:CS:14:LEU:HD23	1.69	0.57
19:AT:70:LYS:HA	19:AT:73:ARG:NH1	2.19	0.57
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.39	0.57
22:DA:7:G:H1'	43:DO:38:GLN:HE22	1.68	0.57
23:DB:1085:A:H1'	23:DB:1105:U:H1'	1.85	0.57
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.05	0.57
2:CC:156:LEU:HD11	2:CC:165:GLU:HB2	1.86	0.57
38:DM:108:VAL:HG22	38:DM:109:PRO:HD2	1.86	0.57
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.40	0.57
2:CC:57:GLU:O	2:CC:63:ILE:HA	2.05	0.57
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.39	0.57
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.04	0.57
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.40	0.57
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.68	0.57
23:DB:2595:G:H1	25:DC:238:ASN:HD21	1.53	0.57
23:BB:208:C:H2'	23:BB:209:C:H6	1.69	0.57
43:BO:6:ALA:O	43:BO:9:ARG:HG3	2.03	0.57
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.69	0.57
1:CA:715:A:H2'	1:CA:716:A:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.39	0.57
49:DR:54:VAL:HG22	49:DR:56:GLY:H	1.68	0.57
34:B3:6:VAL:HB	34:B3:60:CYS:HB3	1.86	0.57
19:AT:15:LYS:HA	19:AT:18:LYS:HE3	1.86	0.57
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.87	0.57
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.04	0.57
44:BQ:63:ARG:CZ	44:BQ:96:ASP:HA	2.34	0.57
20:CB:14:HIS:HD2	20:CB:202:ASN:H	1.50	0.57
3:AD:153:ARG:HG3	3:AD:154:VAL:N	2.18	0.57
5:AF:40:GLU:OE1	5:AF:100:SER:HB2	2.04	0.57
5:AF:88:MET:HE1	17:AR:60:ARG:HB3	1.86	0.57
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.86	0.57
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.39	0.57
23:DB:278:A:H61	23:DB:362:A:N6	2.02	0.57
4:AE:43:GLY:C	4:AE:44:ARG:HD3	2.24	0.57
1:CA:16:A:O2'	1:CA:17:U:H5'	2.04	0.57
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.19	0.57
39:BX:7:ARG:NE	39:BX:7:ARG:HA	2.20	0.57
1:CA:1008:U:H2'	1:CA:1009:U:H5''	1.87	0.57
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.39	0.57
4:AE:104:ILE:HD11	4:AE:114:LEU:HB2	1.86	0.57
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.85	0.57
33:D1:36:LYS:HG2	33:D1:47:ILE:HA	1.86	0.57
3:AD:78:ALA:O	3:AD:85:THR:HA	2.04	0.57
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.68	0.57
20:AB:172:ILE:HG22	20:AB:176:ASN:ND2	2.19	0.57
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.18	0.57
23:BB:2193:G:H2'	23:BB:2194:U:C6	2.38	0.57
23:BB:633:A:O5'	23:BB:633:A:H8	1.87	0.57
1:CA:1081:A:OP1	4:CE:22:LYS:HB2	2.04	0.57
12:CM:22:TYR:HB2	12:CM:65:GLU:HA	1.86	0.57
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.39	0.57
22:BA:59:A:H2'	22:BA:60:C:O4'	2.03	0.57
37:BL:110:VAL:HG23	37:BL:126:ARG:O	2.04	0.57
1:CA:420:U:H2'	1:CA:422:C:C5	2.39	0.57
16:CQ:25:GLU:HB3	16:CQ:38:LYS:HD3	1.85	0.57
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.03	0.57
23:DB:871:U:H2'	23:DB:872:U:H6	1.69	0.57
10:AK:37:GLN:HB2	10:AK:39:ASN:HD22	1.69	0.57
1:CA:708:C:H2'	1:CA:709:U:C6	2.39	0.57
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:38:THR:HG22	11:CL:50:LYS:HG2	1.85	0.57
23:DB:554:U:H2'	23:DB:555:G:O4'	2.04	0.57
23:DB:5:A:H2'	23:DB:6:A:C8	2.39	0.57
6:CG:19:SER:OG	6:CG:22:LEU:HB2	2.04	0.57
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.39	0.57
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.04	0.57
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.19	0.57
47:BF:106:ALA:O	47:BF:135:ILE:HD13	2.05	0.57
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.70	0.57
47:BF:16:MET:O	47:BF:20:ASN:HA	2.04	0.57
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.87	0.57
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.85	0.57
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.40	0.57
13:AN:20:PHE:CD1	13:AN:24:ALA:HB2	2.39	0.57
1:AA:93:U:C3'	1:AA:94:G:H4'	2.34	0.57
23:BB:83:A:H5''	46:BU:1:ALA:N	2.19	0.57
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.18	0.57
9:CJ:26:VAL:HG13	9:CJ:36:VAL:HG11	1.85	0.57
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.87	0.57
23:BB:1387:A:C4'	23:BB:1469:A:H1'	2.35	0.57
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.34	0.57
2:AC:42:LEU:O	2:AC:46:LEU:HB2	2.04	0.57
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.69	0.57
23:DB:718:A:H2'	23:DB:719:C:H5'	1.85	0.57
39:BX:29:ARG:NH1	50:BT:12:ARG:HG2	2.19	0.57
16:CQ:80:LYS:H	16:CQ:80:LYS:HE3	1.68	0.57
1:CA:429:U:H1'	1:CA:430:A:H5''	1.85	0.57
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.85	0.57
23:DB:2602:A:H3'	23:DB:2602:A:OP1	2.05	0.57
23:DB:1877:A:H2'	23:DB:1878:G:C8	2.39	0.57
23:DB:322:A:H5'	23:DB:340:A:H1'	1.86	0.57
26:BD:101:PHE:O	26:BD:180:VAL:HG11	2.03	0.57
23:BB:1946:U:H2'	23:BB:1947:C:H6	1.70	0.57
1:AA:793:U:O2	1:AA:1516:G:H4'	2.04	0.57
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.37	0.57
1:CA:275:G:H5'	16:CQ:15:LYS:HD3	1.86	0.57
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.20	0.57
40:BH:134:VAL:HG12	40:BH:138:VAL:CG2	2.34	0.57
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.19	0.57
41:DJ:45:THR:HG23	41:DJ:45:THR:O	2.04	0.57
49:DR:49:ILE:HD13	49:DR:51:VAL:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:23:GLY:O	8:CI:61:ASP:HB3	2.05	0.57
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.69	0.57
42:DN:29:VAL:HG13	42:DN:83:LEU:HD21	1.87	0.57
38:DM:40:ARG:HB3	38:DM:95:LEU:HD12	1.87	0.57
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.39	0.57
52:BW:37:VAL:HG13	52:BW:55:ASP:O	2.03	0.57
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.07	0.57
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.05	0.57
15:CP:46:LYS:C	15:CP:48:GLU:H	2.08	0.57
51:DZ:3:ARG:HA	51:DZ:50:ARG:NH1	2.20	0.57
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.20	0.57
37:DL:4:ASN:HD22	37:DL:4:ASN:N	2.02	0.57
23:DB:277:G:H2'	23:DB:277:G:N3	2.19	0.57
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.03	0.57
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	2.05	0.57
9:CJ:42:LEU:HD11	9:CJ:73:LEU:HB2	1.85	0.57
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.04	0.57
42:DN:98:LEU:O	42:DN:112:TYR:HB2	2.04	0.57
44:BQ:30:VAL:O	44:BQ:33:VAL:HG22	2.04	0.57
16:CQ:64:ARG:HG2	16:CQ:65:PRO:HD2	1.85	0.57
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.86	0.57
3:CD:137:SER:HB3	3:CD:138:PRO:HD2	1.86	0.57
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.04	0.57
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.40	0.57
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.05	0.57
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.05	0.57
43:DO:6:ALA:O	43:DO:9:ARG:HG3	2.03	0.57
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.04	0.57
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.57
22:DA:94:A:H2'	22:DA:95:U:O4'	2.04	0.57
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.86	0.57
25:DC:226:PRO:HA	25:DC:232:GLY:HA3	1.85	0.57
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.03	0.57
42:BN:17:ARG:C	42:BN:19:ALA:H	2.07	0.57
12:AM:2:ARG:HB3	12:AM:6:ILE:HA	1.85	0.57
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.86	0.57
40:BH:122:LEU:HD12	40:BH:122:LEU:H	1.70	0.57
23:DB:106:C:H2'	23:DB:107:G:H8	1.68	0.57
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.87	0.57
52:BW:58:LEU:HG	52:BW:79:ILE:HD12	1.87	0.57
37:DL:108:ALA:HB3	37:DL:125:LEU:HD21	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:34:GLU:H	17:AR:34:GLU:CD	2.08	0.57
40:BH:117:LEU:HG	40:BH:130:VAL:HG13	1.85	0.57
40:BH:66:ASN:HD22	40:BH:67:ALA:N	2.03	0.57
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.87	0.57
50:BT:38:ALA:O	50:BT:39:THR:HB	2.05	0.57
42:DN:72:ASP:HB3	42:DN:75:ILE:CG1	2.35	0.57
23:BB:2745:C:H41	23:BB:2755:C:H4'	1.67	0.57
23:DB:360:U:H2'	23:DB:361:G:C8	2.40	0.57
23:DB:1055:G:HO2'	23:DB:1085:A:H2	1.53	0.57
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.85	0.57
3:CD:58:GLN:O	3:CD:62:ARG:HG2	2.05	0.57
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.86	0.57
27:BK:64:ARG:HD2	27:BK:102:PRO:O	2.05	0.57
1:AA:524:G:H2'	1:AA:525:C:H6	1.68	0.57
3:AD:89:LEU:HD13	3:AD:199:ILE:HD11	1.85	0.57
49:DR:61:ALA:HB2	49:DR:98:ILE:HA	1.86	0.57
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.22	0.57
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.69	0.57
1:AA:32:A:H2'	1:AA:33:A:C8	2.40	0.57
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.40	0.57
1:AA:431:A:H2'	1:AA:432:A:O4'	2.04	0.57
29:DE:181:ILE:HG13	37:DL:2:ARG:HB3	1.86	0.57
42:BN:49:GLU:OE2	42:BN:95:THR:HG22	2.05	0.57
19:AT:29:THR:HA	19:AT:32:LYS:HE3	1.86	0.57
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.20	0.57
23:DB:438:G:H2'	23:DB:439:A:H8	1.70	0.57
23:DB:833:A:H2'	23:DB:834:G:C8	2.40	0.57
23:DB:1373:A:H2'	23:DB:1374:G:O4'	2.05	0.57
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.40	0.57
23:DB:699:A:H2'	23:DB:700:G:O4'	2.04	0.57
1:CA:1028:C:H2'	1:CA:1029:U:O4'	2.04	0.57
43:BO:52:SER:O	43:BO:58:ILE:HD12	2.04	0.57
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.05	0.57
40:BH:111:ALA:HB3	40:BH:114:GLU:HG2	1.87	0.57
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.05	0.57
44:DQ:77:LYS:O	44:DQ:80:ASN:HB3	2.04	0.57
49:BR:49:ILE:HD12	49:BR:49:ILE:O	2.05	0.57
8:CI:5:TYR:O	8:CI:19:PHE:HA	2.05	0.57
26:DD:109:VAL:HG11	26:DD:193:VAL:HB	1.87	0.57
18:CS:29:PRO:HA	18:CS:47:THR:O	2.04	0.57
25:DC:102:TYR:O	25:DC:103:ILE:HG13	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.32	0.57
51:BZ:59:ILE:HG22	51:BZ:64:ILE:HG13	1.87	0.57
6:CG:108:ARG:HG2	6:CG:115:MET:HE3	1.85	0.57
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.87	0.57
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.64	0.57
20:AB:104:LYS:HG3	20:AB:105:THR:N	2.20	0.57
15:CP:48:GLU:HG3	15:CP:49:GLY:H	1.70	0.57
1:AA:93:U:O5'	1:AA:93:U:H6	1.86	0.57
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.04	0.57
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.04	0.57
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.04	0.57
40:DH:72:ILE:HG22	40:DH:142:VAL:HG21	1.86	0.57
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.04	0.57
46:DU:80:ASP:OD1	46:DU:95:PHE:HB3	2.05	0.57
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.87	0.57
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.68	0.57
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.87	0.57
1:CA:437:U:H2'	1:CA:438:U:O4'	2.05	0.57
1:CA:1172:C:O2'	1:CA:1173:U:H5'	2.04	0.57
1:AA:813:U:H5''	1:AA:816:A:N6	2.19	0.57
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.19	0.57
1:CA:677:U:H2'	1:CA:678:U:C6	2.39	0.57
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	1.86	0.57
18:CS:2:ARG:H	18:CS:2:ARG:CZ	2.17	0.57
23:BB:441:U:H2'	23:BB:442:G:C8	2.40	0.57
48:BG:108:PHE:H	48:BG:108:PHE:HD1	1.52	0.57
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.40	0.57
18:AS:50:VAL:O	18:AS:57:VAL:HG22	2.04	0.57
23:DB:324:A:H2'	23:DB:325:G:O4'	2.04	0.57
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.19	0.57
9:AJ:5:ARG:HG2	9:AJ:79:PRO:HD3	1.85	0.57
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.04	0.57
1:AA:605:U:H2'	1:AA:606:G:H8	1.69	0.57
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.05	0.57
23:DB:1494:A:H2'	23:DB:1495:A:C8	2.39	0.57
17:AR:34:GLU:HB2	21:AU:18:PHE:CZ	2.40	0.57
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.85	0.57
21:CU:16:ARG:NH1	21:CU:19:LYS:HE2	2.20	0.57
48:DG:49:LEU:N	48:DG:49:LEU:HD12	2.20	0.57
41:BJ:11:VAL:HG11	41:BJ:13:ARG:NE	2.20	0.57
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:136:ASN:HD21	26:BD:139:SER:C	2.06	0.57
2:AC:126:ARG:NH2	2:AC:190:THR:HG23	2.17	0.57
50:BT:69:ARG:NE	50:BT:69:ARG:HA	2.20	0.57
50:DT:69:ARG:HA	50:DT:69:ARG:NE	2.20	0.57
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.87	0.57
12:CM:78:ARG:NH2	18:CS:64:GLU:HB2	2.20	0.57
23:DB:1203:U:H3'	23:DB:1204:A:H5''	1.85	0.57
23:DB:141:G:O6	50:DT:2:ILE:HD12	2.04	0.57
42:BN:98:LEU:O	42:BN:112:TYR:HB2	2.05	0.57
28:DP:59:THR:OG1	28:DP:72:VAL:HG12	2.05	0.57
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.04	0.57
3:CD:146:GLU:HB3	3:CD:149:LYS:HE3	1.85	0.57
1:AA:633:G:H2'	1:AA:634:C:C6	2.39	0.57
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.19	0.57
41:BJ:103:ILE:HD12	41:BJ:104:ALA:N	2.20	0.57
1:CA:1162:C:H2'	1:CA:1163:A:H8	1.70	0.57
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.34	0.57
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.40	0.57
18:CS:35:ARG:HB2	18:CS:71:GLY:HA2	1.85	0.57
14:AO:28:GLN:O	14:AO:32:LEU:HD23	2.04	0.57
1:AA:441:A:H61	1:AA:493:A:N6	2.02	0.57
23:BB:1046:A:H3'	23:BB:1047:G:H5''	1.86	0.57
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.05	0.57
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.85	0.57
14:CO:29:VAL:HG11	14:CO:67:LEU:HD21	1.86	0.57
1:CA:1212:U:H5'	1:CA:1213:A:OP1	2.05	0.57
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.87	0.57
5:AF:53:LYS:H	5:AF:53:LYS:HZ3	1.53	0.57
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.19	0.57
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.19	0.57
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.04	0.57
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.40	0.57
25:DC:4:LYS:HE2	25:DC:5:CYS:H	1.68	0.57
7:AH:25:THR:O	7:AH:26:MET:HB3	2.05	0.57
23:BB:857:G:C2'	23:BB:858:G:H5'	2.35	0.57
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.70	0.57
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.26	0.57
17:AR:34:GLU:HB2	21:AU:18:PHE:HZ	1.68	0.57
25:BC:138:SER:O	25:BC:140:VAL:HG23	2.05	0.57
48:BG:49:LEU:HD12	48:BG:49:LEU:N	2.20	0.57
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:138:U:C5	23:BB:140:C:H1'	2.40	0.57
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.35	0.57
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.05	0.57
42:DN:73:ASN:O	42:DN:76:VAL:HG22	2.05	0.57
40:BH:27:ARG:HE	51:BZ:64:ILE:HD11	1.69	0.57
40:DH:12:LEU:HD11	40:DH:30:LEU:HD11	1.87	0.57
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.05	0.57
22:BA:52:A:OP1	22:BA:52:A:H4'	2.05	0.57
23:DB:143:C:H2'	23:DB:144:A:C8	2.40	0.57
23:BB:364:C:H2'	23:BB:365:U:H6	1.67	0.57
50:DT:2:ILE:N	50:DT:2:ILE:HD13	2.20	0.57
38:DM:36:VAL:HB	38:DM:127:LYS:O	2.04	0.57
1:CA:455:G:H2'	1:CA:456:A:C8	2.40	0.57
39:DX:53:VAL:O	39:DX:57:LEU:HD23	2.05	0.57
16:AQ:8:GLN:HB3	16:AQ:59:GLU:HB2	1.87	0.57
1:CA:633:G:H2'	1:CA:634:C:C6	2.40	0.57
47:DF:42:ALA:O	47:DF:46:LYS:HG3	2.04	0.57
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.04	0.57
1:AA:335:C:H2'	1:AA:336:A:C8	2.40	0.57
1:AA:188:C:H2'	1:AA:189:A:O4'	2.05	0.57
2:AC:63:ILE:HD11	2:AC:94:ALA:CB	2.35	0.57
1:CA:1221:G:O3'	18:CS:76:THR:HG21	2.05	0.57
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.05	0.57
12:CM:6:ILE:HD12	47:DF:144:LYS:HE3	1.86	0.57
23:DB:969:G:H2'	23:DB:970:U:C6	2.39	0.57
50:BT:49:LYS:HB2	50:BT:50:LEU:HD22	1.87	0.57
1:AA:409:U:H2'	1:AA:410:G:C8	2.39	0.57
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.86	0.57
23:DB:962:G:H21	23:DB:2250:G:H1	1.53	0.57
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.39	0.57
23:DB:300:A:H2'	23:DB:334:C:H1'	1.87	0.57
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.40	0.57
23:BB:709:U:H2'	23:BB:710:U:C6	2.40	0.57
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.40	0.57
1:AA:301:G:H2'	1:AA:302:G:H8	1.70	0.57
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.70	0.57
23:DB:176:A:O2'	23:DB:177:G:H5'	2.05	0.57
27:BK:79:PHE:HZ	27:BK:104:THR:HG23	1.70	0.57
19:CT:2:ASN:ND2	19:CT:3:ILE:HG13	2.20	0.57
1:CA:83:C:O2'	1:CA:84:U:H2'	2.04	0.57
48:DG:154:GLU:HG2	48:DG:156:TYR:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.20	0.57
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.70	0.57
23:BB:2266:A:H4'	23:BB:2267:A:C8	2.40	0.56
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.70	0.56
25:DC:144:GLU:OE2	25:DC:188:ARG:HG3	2.05	0.56
47:BF:30:VAL:HG21	47:BF:96:TRP:NE1	2.18	0.56
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.05	0.56
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.87	0.56
23:BB:557:C:H2'	23:BB:558:U:C6	2.40	0.56
25:BC:171:VAL:HB	25:BC:183:VAL:HG12	1.87	0.56
23:BB:322:A:H2'	29:BE:163:ASN:ND2	2.13	0.56
23:DB:279:A:H2'	23:DB:280:U:H5'	1.86	0.56
29:BE:58:LYS:O	29:BE:60:TRP:N	2.38	0.56
29:DE:58:LYS:O	29:DE:60:TRP:N	2.37	0.56
23:DB:161:A:C3'	23:DB:162:U:H5''	2.33	0.56
51:DZ:6:GLN:HE22	51:DZ:50:ARG:N	2.03	0.56
30:BY:7:THR:O	30:BY:54:VAL:HA	2.05	0.56
1:CA:919:A:N3	1:CA:1080:A:H2	2.03	0.56
26:DD:114:LYS:HD2	26:DD:116:LYS:HZ2	1.68	0.56
11:AL:113:ARG:NH2	11:AL:120:ARG:HA	2.20	0.56
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.85	0.56
35:DV:80:HIS:HD2	35:DV:83:LYS:H	1.52	0.56
1:CA:1149:C:H2'	1:CA:1150:A:C8	2.40	0.56
8:CI:10:ARG:HB3	8:CI:15:ALA:HA	1.86	0.56
8:AI:28:VAL:HA	8:AI:32:ARG:O	2.05	0.56
1:CA:1053:G:HO2'	1:CA:1199:U:H5	1.53	0.56
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.20	0.56
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.40	0.56
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.40	0.56
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	1.85	0.56
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.69	0.56
49:DR:27:ILE:HG13	49:DR:33:VAL:HG11	1.87	0.56
23:BB:2595:G:H1	25:BC:238:ASN:ND2	2.03	0.56
23:DB:710:U:H2'	23:DB:711:G:H8	1.70	0.56
23:DB:1535:A:H3'	23:DB:1536:C:C6	2.40	0.56
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.19	0.56
26:DD:79:LEU:HD22	26:DD:79:LEU:N	2.20	0.56
2:CC:202:PHE:HZ	2:CC:205:GLU:HG2	1.69	0.56
1:AA:625:U:H4'	15:AP:16:PHE:CZ	2.40	0.56
14:AO:73:LYS:O	14:AO:74:ASP:HB2	2.05	0.56
52:DW:39:GLN:HG2	52:DW:40:ARG:N	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:5:TYR:HD1	8:AI:20:ILE:HG22	1.69	0.56
47:DF:134:GLN:C	47:DF:136:ILE:H	2.09	0.56
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.39	0.56
12:CM:78:ARG:HH12	18:CS:64:GLU:HG2	1.70	0.56
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.20	0.56
40:BH:25:TYR:CD1	40:BH:30:LEU:HG	2.40	0.56
16:AQ:11:VAL:HG23	16:AQ:56:ASP:O	2.05	0.56
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.40	0.56
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.20	0.56
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.34	0.56
42:DN:47:VAL:C	42:DN:50:PRO:HD2	2.25	0.56
1:AA:204:G:H2'	1:AA:205:A:C8	2.39	0.56
23:BB:173:A:H2'	23:BB:174:U:C6	2.40	0.56
33:B1:36:LYS:HG2	33:B1:47:ILE:HA	1.87	0.56
3:AD:31:CYS:O	3:AD:32:LYS:HB2	2.05	0.56
39:DX:7:ARG:HA	39:DX:7:ARG:NE	2.20	0.56
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.68	0.56
23:BB:62:U:H3'	23:BB:63:A:H8	1.66	0.56
4:AE:64:GLU:HG3	4:AE:65:LYS:N	2.18	0.56
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.68	0.56
25:DC:181:ARG:HG2	25:DC:181:ARG:HH21	1.68	0.56
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.05	0.56
23:BB:2309:A:N6	47:BF:75:GLY:HA3	2.20	0.56
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.41	0.56
7:CH:25:THR:O	7:CH:26:MET:HB3	2.05	0.56
23:DB:1947:C:O2'	23:DB:1948:G:H5'	2.05	0.56
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.05	0.56
4:CE:45:VAL:HG23	4:CE:71:ILE:CG2	2.35	0.56
23:DB:414:C:H2'	23:DB:415:A:C8	2.40	0.56
19:CT:19:HIS:O	19:CT:23:ARG:HG2	2.05	0.56
20:AB:8:MET:HA	20:AB:11:ALA:HB3	1.86	0.56
19:AT:2:ASN:ND2	19:AT:3:ILE:HG13	2.20	0.56
51:DZ:45:ARG:O	51:DZ:46:PHE:HB2	2.04	0.56
2:AC:202:PHE:HZ	2:AC:205:GLU:HG2	1.70	0.56
45:BS:96:ILE:HG23	45:BS:96:ILE:O	2.05	0.56
23:BB:947:A:H2'	23:BB:948:C:C6	2.39	0.56
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.04	0.56
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.05	0.56
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.38	0.56
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.70	0.56
20:AB:22:TRP:HZ3	20:AB:27:LYS:HB2	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:57:VAL:HB	8:AI:58:GLU:OE2	2.06	0.56
40:BH:89:LYS:O	40:BH:90:LEU:HD12	2.05	0.56
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.07	0.56
49:BR:24:LYS:HA	49:BR:94:THR:CG2	2.35	0.56
41:BJ:3:THR:HB	41:BJ:44:TYR:CE1	2.40	0.56
25:DC:43:ASN:HB3	25:DC:45:ASN:HD22	1.70	0.56
23:BB:139:U:H3'	23:BB:140:C:H5''	1.86	0.56
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.70	0.56
23:DB:27:G:H1'	23:DB:513:A:H61	1.69	0.56
50:DT:29:THR:CA	50:DT:86:THR:HA	2.32	0.56
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.05	0.56
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	1.87	0.56
47:DF:7:TYR:O	47:DF:12:VAL:HG23	2.05	0.56
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.05	0.56
40:DH:7:ASP:CG	40:DH:8:LYS:H	2.07	0.56
20:CB:102:ASN:O	20:CB:106:VAL:HG23	2.05	0.56
19:AT:50:PHE:O	19:AT:53:MET:HG3	2.05	0.56
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.19	0.56
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.21	0.56
38:BM:42:THR:O	38:BM:44:ARG:N	2.38	0.56
23:BB:2143:C:H2'	23:BB:2144:G:C4'	2.35	0.56
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.87	0.56
13:AN:58:ARG:HH11	13:AN:58:ARG:HB3	1.70	0.56
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.20	0.56
40:DH:135:HIS:CG	40:DH:136:SER:H	2.23	0.56
23:DB:582:A:H2'	23:DB:583:G:H8	1.69	0.56
44:DQ:24:TYR:O	44:DQ:27:ARG:HB2	2.05	0.56
23:DB:2021:C:OP1	31:D0:8:THR:HG21	2.05	0.56
1:AA:237:G:H5''	16:AQ:26:ARG:NH2	2.21	0.56
2:CC:149:LYS:HG3	2:CC:168:ARG:HB2	1.87	0.56
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.69	0.56
1:CA:235:C:H2'	1:CA:236:A:H8	1.70	0.56
39:BX:51:ALA:O	39:BX:55:THR:N	2.38	0.56
20:CB:172:ILE:HG22	20:CB:176:ASN:ND2	2.19	0.56
3:CD:153:ARG:HG3	3:CD:154:VAL:N	2.19	0.56
23:BB:720:U:H2'	23:BB:721:A:H8	1.70	0.56
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.40	0.56
3:AD:102:TYR:HE1	3:AD:109:THR:HA	1.70	0.56
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.40	0.56
2:CC:14:VAL:HG11	2:CC:178:ARG:HA	1.87	0.56
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:678:U:H2'	1:AA:679:C:H6	1.70	0.56
23:DB:416:U:H2'	23:DB:417:C:C6	2.40	0.56
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.05	0.56
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.86	0.56
23:BB:969:G:H2'	23:BB:970:U:C6	2.41	0.56
23:BB:794:A:H2'	23:BB:795:C:H6	1.70	0.56
23:BB:1335:C:H2'	23:BB:1336:A:C8	2.40	0.56
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.40	0.56
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.21	0.56
38:DM:105:MET:HB2	38:DM:117:PHE:CE2	2.41	0.56
36:B2:3:ARG:HA	36:B2:3:ARG:CZ	2.35	0.56
1:CA:625:U:H4'	15:CP:16:PHE:CE2	2.39	0.56
1:CA:208:U:H2'	1:CA:210:C:C4	2.40	0.56
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.70	0.56
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.69	0.56
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.34	0.56
1:AA:398:U:H2'	1:AA:399:G:C8	2.41	0.56
23:BB:947:A:HO2'	23:BB:984:A:H2	1.54	0.56
38:DM:50:ARG:O	38:DM:53:MET:HB3	2.06	0.56
23:DB:770:G:O2'	23:DB:771:G:H5'	2.05	0.56
1:AA:825:A:H2'	1:AA:826:C:H6	1.69	0.56
5:AF:86:ARG:NH1	17:AR:64:LEU:HD12	2.20	0.56
43:BO:81:ARG:O	43:BO:84:GLU:HB3	2.06	0.56
23:DB:1818:U:N3	25:DC:152:GLN:HB3	2.19	0.56
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.70	0.56
6:CG:77:ARG:HG3	6:CG:79:VAL:HG23	1.87	0.56
23:BB:833:A:H2'	23:BB:834:G:C8	2.40	0.56
1:CA:833:G:H2'	1:CA:834:U:C6	2.40	0.56
6:AG:24:LYS:O	6:AG:28:ILE:HG12	2.05	0.56
1:CA:63:C:H5'	1:CA:64:G:OP2	2.05	0.56
39:DX:20:ASN:HA	39:DX:24:GLU:OE1	2.04	0.56
1:AA:275:G:H5'	16:AQ:15:LYS:HD3	1.87	0.56
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.40	0.56
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.04	0.56
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.05	0.56
21:AU:8:ASN:O	21:AU:9:GLU:HB2	2.06	0.56
2:CC:179:ALA:HB3	2:CC:181:ILE:HD11	1.87	0.56
22:DA:39:A:O2'	22:DA:40:U:H5'	2.05	0.56
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.25	0.56
52:DW:58:LEU:HG	52:DW:79:ILE:HD12	1.87	0.56
21:CU:33:ARG:CZ	21:CU:34:ARG:HG2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:79:ARG:NH2	8:AI:102:PHE:HA	2.21	0.56
40:BH:82:SER:N	40:BH:146:VAL:HG13	2.20	0.56
47:BF:116:LEU:HD23	47:BF:176:PHE:N	2.19	0.56
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.35	0.56
47:DF:32:LYS:NZ	47:DF:156:THR:HG21	2.20	0.56
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.34	0.56
6:CG:107:ALA:O	6:CG:118:ARG:HB3	2.05	0.56
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.20	0.56
20:CB:104:LYS:HG3	20:CB:105:THR:N	2.21	0.56
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.87	0.56
15:AP:46:LYS:C	15:AP:48:GLU:H	2.08	0.56
29:DE:145:ASP:OD1	29:DE:166:LYS:HD2	2.06	0.56
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.41	0.56
52:BW:10:ARG:O	52:BW:11:ASN:HB2	2.06	0.56
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.05	0.56
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.41	0.56
23:DB:483:A:H2'	23:DB:484:C:O4'	2.05	0.56
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.40	0.56
49:BR:19:THR:HG22	49:BR:97:LYS:HA	1.87	0.56
1:AA:455:G:H2'	1:AA:456:A:H8	1.71	0.56
1:AA:182:A:HO2'	1:AA:183:C:H3'	1.68	0.56
1:CA:1171:A:H2'	1:CA:1172:C:H6	1.71	0.56
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.06	0.56
12:CM:2:ARG:HD3	12:CM:2:ARG:H	1.70	0.56
1:AA:1171:A:H2'	1:AA:1172:C:H6	1.70	0.56
1:AA:552:U:H4'	11:AL:82:ARG:HG2	1.87	0.56
3:AD:53:GLN:HB3	3:AD:202:LEU:HB2	1.88	0.56
23:BB:264:C:O2'	23:BB:265:A:H5''	2.04	0.56
51:BZ:45:ARG:O	51:BZ:46:PHE:HB2	2.05	0.56
23:BB:699:A:H2'	23:BB:700:G:O4'	2.06	0.56
1:CA:301:G:H2'	1:CA:302:G:H8	1.69	0.56
23:BB:554:U:H2'	23:BB:555:G:O4'	2.05	0.56
48:DG:108:PHE:HD1	48:DG:108:PHE:H	1.52	0.56
3:AD:2:ARG:HB3	3:AD:114:ARG:NH2	2.21	0.56
42:BN:71:ARG:HG2	42:BN:71:ARG:HH21	1.70	0.56
9:AJ:10:LEU:O	9:AJ:71:LEU:HA	2.05	0.56
23:DB:966:G:H4'	23:DB:2272:U:O2	2.05	0.56
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.06	0.56
40:BH:68:ARG:NH2	40:BH:71:LYS:HB3	2.21	0.56
47:BF:33:ILE:HD11	47:BF:99:PHE:HB2	1.87	0.56
26:BD:53:GLY:C	26:BD:76:GLY:HA2	2.26	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:31:VAL:HB	40:BH:32:PRO:HD3	1.84	0.56
35:DV:28:ALA:HB2	35:DV:89:ILE:HD12	1.88	0.56
27:DK:71:ARG:HA	27:DK:71:ARG:NE	2.12	0.56
47:DF:33:ILE:HD11	47:DF:99:PHE:HB2	1.86	0.56
18:AS:14:LEU:HD23	18:AS:14:LEU:H	1.69	0.56
32:D4:19:ARG:C	32:D4:21:GLY:H	2.09	0.56
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.34	0.56
23:BB:2318:G:N1	23:BB:2319:G:C2	2.74	0.56
48:BG:94:ARG:HB2	48:BG:127:GLN:HG2	1.87	0.56
48:BG:88:LEU:O	48:BG:88:LEU:HD12	2.06	0.56
48:DG:152:ARG:NH2	48:DG:162:ARG:HA	2.20	0.56
42:BN:24:MET:HE2	42:BN:44:LEU:HB2	1.87	0.56
1:CA:412:A:H4'	1:CA:413:G:OP1	2.04	0.56
23:DB:981:A:H2'	23:DB:982:C:H5''	1.88	0.56
23:BB:979:A:H2'	23:BB:982:C:N4	2.21	0.56
25:BC:156:SER:HB3	25:BC:159:THR:HG21	1.88	0.56
23:DB:222:A:H61	23:DB:232:G:H1'	1.70	0.56
1:CA:678:U:H2'	1:CA:679:C:H6	1.69	0.56
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.41	0.56
23:DB:102:U:H2'	39:DX:2:LYS:HE3	1.87	0.56
51:DZ:40:VAL:HG13	51:DZ:47:VAL:HG22	1.88	0.56
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.70	0.56
40:BH:41:LYS:C	40:BH:43:ASN:H	2.08	0.56
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.40	0.56
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.41	0.56
1:CA:596:A:H2'	1:CA:597:G:H8	1.71	0.56
1:CA:408:A:OP1	3:CD:111:ALA:HB3	2.04	0.56
1:CA:981:U:H2'	1:CA:982:U:C5	2.41	0.56
39:DX:31:GLN:HG2	39:DX:37:LEU:H	1.69	0.56
25:BC:128:THR:HA	25:BC:190:THR:CA	2.35	0.56
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.20	0.56
49:BR:3:ALA:O	49:BR:13:ARG:HA	2.04	0.56
49:BR:49:ILE:HD13	49:BR:51:VAL:O	2.06	0.56
8:CI:82:ILE:O	8:CI:86:LEU:HD13	2.05	0.56
26:BD:55:LYS:HG3	26:BD:60:VAL:HG13	1.86	0.56
1:CA:1060:U:H2'	1:CA:1061:G:H8	1.70	0.56
52:DW:17:ALA:CA	52:DW:35:ILE:HG23	2.33	0.56
3:AD:18:LEU:HB3	3:AD:63:ILE:HG12	1.87	0.56
5:CF:29:ILE:HG23	5:CF:66:ALA:HB2	1.88	0.56
22:BA:32:U:H1'	22:BA:52:A:N7	2.21	0.56
23:BB:2145:C:H3'	23:BB:2146:C:C5'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:138:U:H5'	50:DT:1:MET:N	2.21	0.56
20:AB:61:SER:HA	20:AB:223:GLY:O	2.05	0.56
40:DH:72:ILE:CG1	40:DH:108:VAL:HG11	2.35	0.56
7:CH:87:ARG:N	7:CH:90:GLU:HB2	2.20	0.56
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.86	0.56
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.05	0.56
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.69	0.56
23:BB:170:U:H2'	23:BB:171:U:C6	2.40	0.56
49:DR:19:THR:HG22	49:DR:97:LYS:HA	1.87	0.56
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.41	0.56
23:DB:17:G:H2'	23:DB:18:U:C6	2.40	0.56
4:CE:156:ARG:HD2	7:CH:42:GLU:O	2.06	0.56
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.41	0.56
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.39	0.56
21:AU:24:LYS:HZ3	21:AU:25:ALA:H	1.54	0.56
35:DV:6:ALA:HB3	35:DV:65:VAL:HG12	1.87	0.56
25:BC:181:ARG:HH21	25:BC:181:ARG:HG2	1.70	0.56
15:AP:50:THR:HG22	15:AP:51:ARG:N	2.21	0.56
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.40	0.56
9:AJ:55:PRO:HA	13:AN:80:ARG:HH21	1.69	0.56
47:DF:141:ASP:HB2	47:DF:144:LYS:HB2	1.88	0.56
1:CA:107:G:O6	19:CT:9:ARG:HD3	2.06	0.56
14:CO:8:THR:O	14:CO:11:ILE:HG22	2.06	0.56
23:BB:1827:U:O2'	23:BB:1828:G:H5'	2.06	0.56
23:DB:102:U:H6	39:DX:2:LYS:HE3	1.70	0.56
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.69	0.56
51:BZ:40:VAL:HG13	51:BZ:47:VAL:HG22	1.88	0.56
23:BB:702:U:H2'	23:BB:703:U:C6	2.40	0.56
10:CK:45:THR:HG23	10:CK:48:GLY:HA3	1.86	0.56
6:CG:99:ALA:O	6:CG:103:ILE:HG13	2.06	0.56
1:AA:1231:G:H5'	8:AI:128:LYS:HE2	1.87	0.56
23:BB:39:G:H2'	23:BB:40:U:C6	2.41	0.56
1:CA:640:A:O2'	1:CA:641:U:H5'	2.06	0.56
23:BB:1573:G:H2'	23:BB:1574:C:H5'	1.88	0.56
11:CL:107:LYS:NZ	11:CL:107:LYS:H	2.04	0.56
23:DB:2266:A:H4'	23:DB:2267:A:C8	2.41	0.56
23:BB:2314:A:H4'	47:BF:34:THR:HG21	1.88	0.56
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.20	0.56
40:DH:90:LEU:CB	40:DH:123:ARG:HA	2.30	0.56
1:CA:664:G:N2	1:CA:741:G:H1	1.89	0.56
42:BN:72:ASP:HB3	42:BN:75:ILE:CG1	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:35:LEU:HD23	47:DF:153:ILE:HG23	1.87	0.56
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.41	0.56
51:DZ:4:VAL:HG12	51:DZ:11:ARG:HG2	1.88	0.56
13:AN:50:LEU:HG	13:AN:51:PRO:HD3	1.87	0.56
30:DY:7:THR:O	30:DY:54:VAL:HA	2.05	0.56
23:BB:278:A:H2'	23:BB:278:A:N3	2.20	0.56
23:BB:2810:A:H2'	23:BB:2811:G:O4'	2.06	0.56
1:AA:770:C:O2'	1:AA:771:G:H5'	2.06	0.56
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.41	0.56
48:BG:154:GLU:HG2	48:BG:156:TYR:H	1.71	0.56
11:CL:113:ARG:NH2	11:CL:120:ARG:HA	2.21	0.56
25:DC:20:ASN:ND2	25:DC:23:LEU:HD13	2.21	0.56
3:AD:149:LYS:HD3	3:AD:177:MET:HG3	1.88	0.56
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.34	0.56
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.21	0.56
23:DB:633:A:H8	23:DB:633:A:O5'	1.88	0.56
42:BN:47:VAL:C	42:BN:50:PRO:HD2	2.25	0.56
42:DN:9:GLN:HA	42:DN:17:ARG:NE	2.21	0.56
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.40	0.56
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.06	0.56
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.87	0.56
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.06	0.56
23:DB:297:G:OP1	46:DU:91:LYS:HD3	2.05	0.56
8:AI:5:TYR:O	8:AI:19:PHE:HA	2.05	0.56
3:CD:123:MET:HB2	3:CD:128:VAL:HA	1.87	0.56
10:CK:111:ASP:CB	21:CU:19:LYS:HE3	2.35	0.56
48:DG:8:VAL:HG11	48:DG:49:LEU:N	2.10	0.56
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.18	0.56
8:CI:25:GLY:HA2	8:CI:60:LEU:O	2.06	0.56
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.87	0.56
23:BB:300:A:H2'	23:BB:334:C:H1'	1.87	0.56
23:BB:26:G:H1'	23:BB:514:A:N6	2.21	0.56
5:AF:46:GLN:HG3	5:AF:47:LEU:H	1.71	0.56
23:DB:543:G:N2	23:DB:545:U:H5'	2.21	0.56
18:AS:14:LEU:O	18:AS:18:VAL:HG12	2.05	0.56
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.24	0.56
10:CK:80:ASN:H	10:CK:80:ASN:ND2	2.00	0.56
33:D1:34:GLU:HB3	33:D1:49:LYS:HD3	1.87	0.56
23:DB:2142:A:H2'	23:DB:2143:C:C1'	2.36	0.56
27:DK:102:PRO:HD3	28:DP:65:ASN:HB2	1.88	0.56
23:BB:1173:U:N3	23:BB:1174:U:H1'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:61:ALA:HB2	49:BR:98:ILE:HA	1.88	0.56
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.68	0.56
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.69	0.56
23:BB:222:A:H61	23:BB:232:G:H1'	1.71	0.56
7:CH:113:ARG:HA	7:CH:116:ARG:NH1	2.20	0.56
35:BV:80:HIS:HD2	35:BV:83:LYS:H	1.53	0.56
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.70	0.56
1:CA:677:U:H2'	1:CA:678:U:H6	1.70	0.56
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.69	0.56
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.06	0.56
23:DB:1033:U:C5	32:D4:15:LYS:HE3	2.40	0.56
1:CA:140:U:H2'	1:CA:141:G:C8	2.41	0.56
40:BH:103:VAL:HB	40:BH:108:VAL:O	2.05	0.56
1:CA:1329:A:O2'	1:CA:1330:U:H5'	2.05	0.56
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.41	0.56
23:BB:2024:G:O2'	23:BB:2025:C:H5'	2.06	0.56
1:AA:408:A:OP1	3:AD:111:ALA:HB3	2.06	0.56
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.41	0.56
1:CA:1367:C:H5'	9:CJ:62:ARG:NH1	2.21	0.56
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.87	0.56
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.06	0.56
23:DB:1098:A:C3'	24:DI:3:LYS:HA	2.24	0.56
52:DW:36:ILE:O	52:DW:39:GLN:HB3	2.06	0.56
37:BL:125:LEU:H	37:BL:143:GLU:HG3	1.70	0.56
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.06	0.56
52:BW:21:GLY:N	52:BW:33:GLY:HA2	2.20	0.56
13:AN:71:GLY:O	13:AN:79:SER:HA	2.06	0.56
20:CB:27:LYS:HA	20:CB:30:ILE:HD12	1.87	0.56
47:BF:109:ARG:HB3	47:BF:135:ILE:CD1	2.36	0.56
47:BF:1:ALA:HB1	47:BF:4:HIS:HB3	1.87	0.56
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.06	0.56
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.05	0.56
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.35	0.56
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.36	0.56
28:DP:50:ARG:HB3	28:DP:57:ALA:H	1.71	0.56
50:BT:87:LEU:HD12	50:BT:91:GLN:HG2	1.86	0.56
1:AA:436:C:O2'	1:AA:437:U:H5'	2.06	0.56
47:DF:24:VAL:O	47:DF:27:VAL:HG22	2.05	0.56
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.05	0.56
5:CF:29:ILE:HG22	5:CF:34:GLY:HA3	1.85	0.56
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.88	0.56
1:CA:923:A:H2'	1:CA:924:C:H6	1.71	0.56
33:D1:3:GLY:O	33:D1:4:ILE:HG12	2.06	0.56
40:DH:135:HIS:CG	40:DH:136:SER:N	2.73	0.56
10:CK:19:VAL:HG12	10:CK:82:GLU:HB2	1.88	0.56
23:DB:666:A:H4'	37:DL:48:ARG:HD3	1.86	0.56
23:BB:528:A:C2	23:BB:2043:C:H4'	2.41	0.56
23:DB:2756:U:C1'	23:DB:2757:A:H5''	2.35	0.56
1:CA:337:G:H2'	1:CA:338:A:H8	1.69	0.56
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.06	0.56
1:CA:188:C:H2'	1:CA:189:A:O4'	2.05	0.56
23:DB:224:U:O4	23:DB:420:C:H5'	2.05	0.56
1:CA:783:C:O2'	1:CA:784:A:H5'	2.06	0.56
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.71	0.56
11:AL:82:ARG:HG2	11:AL:82:ARG:HH11	1.69	0.56
23:BB:814:C:H2'	23:BB:815:C:H6	1.71	0.56
7:AH:110:MET:HG3	7:AH:115:ALA:HB2	1.88	0.56
4:CE:43:GLY:C	4:CE:44:ARG:HD3	2.27	0.56
35:DV:1:MET:CE	35:DV:2:PHE:H	2.19	0.56
1:CA:686:U:O4	1:CA:703:G:H1'	2.06	0.56
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.41	0.56
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.21	0.56
48:DG:66:THR:O	48:DG:70:LEU:HB2	2.06	0.56
43:DO:81:ARG:O	43:DO:84:GLU:HB3	2.06	0.56
1:AA:545:C:H5''	3:AD:68:GLU:HG2	1.88	0.56
23:DB:2693:G:O2'	23:DB:2694:G:H5'	2.06	0.56
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.20	0.56
52:BW:39:GLN:HG2	52:BW:40:ARG:N	2.21	0.56
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.06	0.56
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.19	0.56
47:BF:24:VAL:O	47:BF:27:VAL:HG22	2.06	0.56
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.21	0.56
44:BQ:91:ARG:HH12	49:BR:10:LYS:CB	2.17	0.56
28:DP:75:THR:O	28:DP:80:VAL:HG11	2.05	0.56
45:DS:73:LYS:CE	45:DS:74:ILE:H	2.16	0.56
18:AS:43:MET:O	18:AS:46:LEU:HB2	2.05	0.56
5:CF:88:MET:HE1	17:CR:60:ARG:HB3	1.87	0.56
13:AN:9:GLU:OE2	13:AN:60:ARG:HG2	2.06	0.56
1:CA:60:A:H4'	1:CA:61:G:OP1	2.05	0.56
23:DB:138:U:H2'	23:DB:140:C:C6	2.41	0.56
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:61:SER:HA	20:CB:223:GLY:O	2.06	0.56
39:BX:20:ASN:O	39:BX:24:GLU:HB3	2.06	0.56
1:CA:839:C:H2'	1:CA:840:C:O4'	2.06	0.56
1:CA:195:A:H1'	1:CA:222:C:O2'	2.06	0.56
17:AR:38:ILE:HG22	17:AR:58:ILE:HG21	1.87	0.56
1:CA:784:A:H2'	1:CA:785:G:C8	2.41	0.56
1:CA:1321:U:H2'	1:CA:1322:C:C5	2.41	0.56
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.41	0.56
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.06	0.56
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.40	0.56
16:CQ:31:PRO:O	16:CQ:32:ILE:HB	2.06	0.56
43:BO:79:ALA:HA	43:BO:115:LEU:HD23	1.88	0.56
1:CA:207:C:H2'	1:CA:208:U:O4'	2.05	0.56
1:CA:709:U:H2'	1:CA:710:G:C8	2.41	0.56
42:BN:9:GLN:HA	42:BN:17:ARG:NE	2.21	0.56
23:DB:699:A:H4'	23:DB:1634:A:N7	2.21	0.56
5:AF:53:LYS:NZ	5:AF:53:LYS:H	2.03	0.56
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.41	0.56
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.20	0.56
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.21	0.56
23:BB:2660:A:H2'	23:BB:2661:G:O4'	2.06	0.56
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.41	0.56
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.69	0.55
13:CN:68:ARG:HH12	13:CN:70:HIS:HB2	1.71	0.55
8:AI:43:ALA:O	8:AI:46:VAL:HG22	2.06	0.55
8:AI:51:LEU:CB	8:AI:56:MET:HG2	2.26	0.55
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.06	0.55
10:AK:110:THR:HA	21:AU:19:LYS:NZ	2.22	0.55
40:BH:116:ARG:N	40:BH:130:VAL:HG12	2.17	0.55
47:BF:147:ARG:HD2	47:BF:148:VAL:HG22	1.87	0.55
49:DR:3:ALA:O	49:DR:4:VAL:HG13	2.06	0.55
8:CI:18:VAL:HG13	8:CI:64:ILE:HG13	1.88	0.55
1:AA:1206:G:C4'	2:AC:192:TYR:HA	2.35	0.55
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.71	0.55
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.36	0.55
52:DW:37:VAL:HG13	52:DW:55:ASP:C	2.26	0.55
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.40	0.55
52:BW:37:VAL:HG13	52:BW:55:ASP:C	2.26	0.55
30:BY:15:ARG:O	30:BY:20:LYS:HE3	2.06	0.55
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.40	0.55
22:BA:7:G:H1'	43:BO:38:GLN:HE22	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.06	0.55
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.88	0.55
9:CJ:5:ARG:HG2	9:CJ:79:PRO:HD3	1.88	0.55
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.21	0.55
4:AE:156:ARG:HD2	7:AH:42:GLU:O	2.06	0.55
1:CA:455:G:H2'	1:CA:456:A:H8	1.70	0.55
1:AA:843:U:H5'	1:AA:844:G:N7	2.20	0.55
12:AM:106:ARG:HH11	12:AM:106:ARG:HA	1.71	0.55
1:AA:923:A:H2'	1:AA:924:C:H6	1.72	0.55
1:AA:280:C:O2	16:AQ:39:ARG:HG3	2.05	0.55
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.40	0.55
2:AC:57:GLU:O	2:AC:63:ILE:HA	2.05	0.55
3:CD:102:TYR:HE1	3:CD:109:THR:HA	1.71	0.55
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.88	0.55
23:BB:962:G:H21	23:BB:2250:G:H1	1.55	0.55
23:BB:1877:A:H2'	23:BB:1878:G:C8	2.40	0.55
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.71	0.55
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.41	0.55
23:DB:2751:G:OP2	48:DG:2:ARG:HD2	2.06	0.55
7:CH:28:SER:HB3	7:CH:57:GLU:O	2.06	0.55
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.42	0.55
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.41	0.55
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.20	0.55
11:AL:5:GLN:HA	11:AL:8:ARG:HH21	1.70	0.55
11:AL:107:LYS:HD2	11:AL:107:LYS:O	2.06	0.55
23:DB:118:A:OP2	23:DB:119:A:H5''	2.05	0.55
23:BB:324:A:H2'	23:BB:325:G:O4'	2.05	0.55
52:DW:51:GLY:HA3	52:DW:59:PHE:HB3	1.87	0.55
26:BD:105:LYS:H	26:BD:106:LYS:HZ3	1.54	0.55
21:AU:16:ARG:HE	21:AU:16:ARG:CA	2.04	0.55
18:AS:29:PRO:HA	18:AS:47:THR:O	2.06	0.55
40:DH:94:ILE:O	40:DH:122:LEU:HD23	2.05	0.55
28:BP:77:SER:OG	28:BP:79:VAL:HG22	2.06	0.55
23:DB:347:A:H2'	23:DB:348:A:H8	1.71	0.55
50:BT:68:LYS:O	50:BT:69:ARG:HB2	2.06	0.55
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.15	0.55
50:DT:15:HIS:O	50:DT:16:VAL:C	2.45	0.55
4:CE:85:LYS:HE3	4:CE:94:PHE:HB2	1.89	0.55
26:BD:149:ASN:H	26:BD:152:PRO:HG2	1.71	0.55
3:CD:18:LEU:HB3	3:CD:63:ILE:HG12	1.88	0.55
5:CF:36:ILE:HD12	5:CF:36:ILE:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:5:MET:O	13:AN:8:ARG:HB2	2.05	0.55
51:BZ:3:ARG:HA	51:BZ:50:ARG:NH1	2.21	0.55
46:DU:14:THR:O	46:DU:18:LYS:HG2	2.06	0.55
23:DB:850:U:H2'	23:DB:851:C:C6	2.41	0.55
25:DC:93:VAL:HG21	25:DC:115:ILE:HD11	1.89	0.55
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.36	0.55
23:DB:2800:A:H2'	23:DB:2801:G:C1'	2.36	0.55
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.21	0.55
34:B3:14:LYS:O	34:B3:14:LYS:HD2	2.06	0.55
1:AA:455:G:H2'	1:AA:456:A:C8	2.41	0.55
7:AH:113:ARG:HA	7:AH:116:ARG:HH12	1.71	0.55
23:BB:345:A:H1'	23:BB:346:A:C2	2.40	0.55
44:BQ:10:ARG:NH1	44:BQ:10:ARG:HB2	2.21	0.55
23:BB:150:U:H2'	23:BB:151:C:H6	1.68	0.55
3:AD:27:ILE:O	3:AD:28:ASP:HB3	2.07	0.55
25:BC:20:ASN:ND2	25:BC:23:LEU:HD13	2.21	0.55
24:BI:10:LEU:HD12	24:BI:10:LEU:O	2.06	0.55
23:BB:718:A:H2'	23:BB:719:C:H5'	1.87	0.55
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.88	0.55
23:BB:2564:A:OP1	23:BB:2648:G:H4'	2.06	0.55
8:AI:94:ARG:NH1	8:AI:94:ARG:HB3	2.21	0.55
1:AA:212:G:H2'	1:AA:213:G:H8	1.71	0.55
16:AQ:80:LYS:H	16:AQ:80:LYS:HE3	1.70	0.55
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.86	0.55
23:DB:102:U:H2'	39:DX:2:LYS:NZ	2.22	0.55
7:CH:110:MET:HG3	7:CH:115:ALA:HB2	1.87	0.55
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.34	0.55
4:CE:44:ARG:HA	4:CE:71:ILE:O	2.07	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.55
1:CA:272:C:H2'	1:CA:273:U:C6	2.41	0.55
29:DE:72:SER:C	29:DE:74:LYS:H	2.08	0.55
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.41	0.55
22:BA:54:G:H21	47:BF:25:MET:CE	2.20	0.55
1:CA:201:G:O2'	1:CA:202:G:H5'	2.06	0.55
1:CA:1069:C:H4'	1:CA:1192:C:O2	2.07	0.55
47:DF:130:GLY:HA2	47:DF:152:ASP:HA	1.88	0.55
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.06	0.55
5:CF:16:GLU:H	5:CF:16:GLU:CD	2.08	0.55
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.21	0.55
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.06	0.55
52:BW:36:ILE:O	52:BW:39:GLN:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:49:ASN:CB	52:BW:60:ALA:HA	2.28	0.55
13:CN:71:GLY:O	13:CN:79:SER:HA	2.05	0.55
46:BU:85:ARG:HA	46:BU:85:ARG:NE	2.21	0.55
10:AK:124:LYS:HA	21:AU:34:ARG:CB	2.31	0.55
25:BC:144:GLU:OE2	25:BC:188:ARG:HG3	2.06	0.55
47:BF:7:TYR:O	47:BF:12:VAL:HG23	2.06	0.55
48:DG:71:LEU:HD22	48:DG:74:MET:HE1	1.88	0.55
49:DR:1:MET:HG3	49:DR:101:ILE:HG21	1.88	0.55
50:DT:11:LEU:N	50:DT:11:LEU:HD22	2.15	0.55
23:BB:27:G:H1'	23:BB:513:A:H61	1.70	0.55
12:CM:15:VAL:O	12:CM:19:THR:HG23	2.07	0.55
38:BM:63:ILE:HD12	38:BM:63:ILE:H	1.71	0.55
39:BX:20:ASN:HA	39:BX:24:GLU:OE1	2.07	0.55
23:DB:2810:A:H2'	23:DB:2811:G:O4'	2.05	0.55
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.41	0.55
41:BJ:104:ALA:O	41:BJ:108:MET:HG2	2.06	0.55
6:CG:55:LYS:HB2	6:CG:59:GLU:OE1	2.07	0.55
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.39	0.55
1:CA:1173:U:H2'	1:CA:1174:G:C8	2.41	0.55
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.71	0.55
14:AO:32:LEU:O	14:AO:36:ILE:HG12	2.05	0.55
21:CU:49:ALA:O	21:CU:52:VAL:HG12	2.06	0.55
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.41	0.55
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.72	0.55
23:DB:1240:U:O2'	23:DB:1241:A:H5''	2.06	0.55
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.70	0.55
1:AA:625:U:H4'	15:AP:16:PHE:CE2	2.40	0.55
39:DX:18:LEU:O	39:DX:22:LEU:HB3	2.06	0.55
23:DB:2707:U:H2'	23:DB:2708:G:C8	2.41	0.55
23:BB:688:U:O2'	23:BB:689:A:H5'	2.07	0.55
41:BJ:59:ALA:O	41:BJ:62:VAL:HG12	2.07	0.55
6:CG:76:SER:HA	6:CG:84:TYR:O	2.06	0.55
40:DH:67:ALA:O	40:DH:70:GLU:HG3	2.06	0.55
23:BB:1309:G:OP1	36:B2:9:VAL:HG12	2.06	0.55
37:BL:108:ALA:HB3	37:BL:125:LEU:HD21	1.89	0.55
10:CK:110:THR:HA	21:CU:19:LYS:NZ	2.21	0.55
48:DG:7:PRO:O	48:DG:8:VAL:HG23	2.06	0.55
23:DB:559:G:H21	44:DQ:51:GLN:NE2	2.05	0.55
41:DJ:3:THR:HB	41:DJ:44:TYR:CE1	2.41	0.55
35:BV:32:GLY:O	35:BV:93:ARG:HD2	2.06	0.55
50:DT:7:LEU:O	50:DT:7:LEU:HD13	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.06	0.55
45:DS:31:GLN:C	45:DS:33:LEU:H	2.10	0.55
51:BZ:67:VAL:O	51:BZ:71:LEU:HD23	2.06	0.55
23:BB:91:A:H1'	23:BB:92:U:C6	2.40	0.55
48:DG:166:GLU:CG	48:DG:168:VAL:HG23	2.35	0.55
48:DG:88:LEU:O	48:DG:88:LEU:HD12	2.06	0.55
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.07	0.55
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.41	0.55
12:AM:44:ILE:H	12:AM:44:ILE:CD1	2.13	0.55
44:BQ:24:TYR:O	44:BQ:27:ARG:HB2	2.07	0.55
23:DB:2849:U:N3	23:DB:2867:G:C8	2.74	0.55
23:BB:2471:A:HO2'	23:BB:2472:G:H8	1.48	0.55
34:D3:14:LYS:O	34:D3:14:LYS:HD2	2.05	0.55
25:BC:250:GLN:NE2	25:BC:254:LYS:HE3	2.20	0.55
44:DQ:10:ARG:HB2	44:DQ:10:ARG:CZ	2.36	0.55
23:BB:591:U:H1'	34:B3:1:PRO:N	2.20	0.55
42:DN:96:ARG:HG2	42:DN:96:ARG:HH21	1.71	0.55
6:CG:59:GLU:O	6:CG:63:VAL:HG23	2.06	0.55
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.41	0.55
23:DB:364:C:H2'	23:DB:365:U:C6	2.41	0.55
22:BA:50:A:OP1	43:BO:68:LYS:HG3	2.07	0.55
1:AA:107:G:O6	19:AT:9:ARG:HD3	2.07	0.55
23:BB:2352:A:C6	52:BW:30:VAL:HG11	2.41	0.55
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.42	0.55
23:DB:340:A:H2'	23:DB:341:C:O4'	2.06	0.55
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.88	0.55
1:CA:405:U:O4	3:CD:1:ALA:HA	2.07	0.55
23:BB:1957:C:H2'	23:BB:1958:C:C6	2.42	0.55
23:DB:1779:U:H5	23:DB:1784:A:N7	2.05	0.55
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.41	0.55
43:DO:52:SER:O	43:DO:58:ILE:HD12	2.07	0.55
23:BB:1824:G:O2'	25:BC:251:THR:HG21	2.06	0.55
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.06	0.55
18:AS:65:MET:HG3	18:AS:73:PHE:CZ	2.42	0.55
22:BA:13:G:H1	22:BA:69:G:HO2'	1.53	0.55
3:CD:43:ARG:HD2	3:CD:44:LYS:H	1.70	0.55
1:CA:1005:A:H2'	1:CA:1006:G:O4'	2.07	0.55
23:DB:2497:A:H5''	56:DB:3698:HOH:O	2.06	0.55
23:DB:1192:G:O2'	23:DB:1193:G:H5'	2.07	0.55
23:DB:2409:G:H2'	23:DB:2410:G:O4'	2.06	0.55
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.27	0.55
37:DL:77:ILE:HD11	37:DL:95:LEU:HD13	1.88	0.55
40:BH:83:LYS:HB3	40:BH:91:PHE:CD1	2.40	0.55
21:AU:33:ARG:CZ	21:AU:34:ARG:HG2	2.37	0.55
49:BR:3:ALA:O	49:BR:4:VAL:HG13	2.07	0.55
23:BB:138:U:O2'	23:BB:139:U:H2'	2.06	0.55
50:DT:68:LYS:O	50:DT:69:ARG:HB2	2.06	0.55
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.70	0.55
23:BB:674:G:HO2'	29:BE:60:TRP:HH2	1.54	0.55
23:BB:2364:C:H4'	52:BW:55:ASP:OD1	2.06	0.55
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.37	0.55
23:BB:285:G:O2'	23:BB:286:U:H5'	2.06	0.55
46:DU:64:ILE:HG13	46:DU:65:GLN:N	2.20	0.55
23:DB:851:C:H2'	23:DB:852:U:H6	1.71	0.55
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.37	0.55
25:BC:93:VAL:HG21	25:BC:115:ILE:HD11	1.88	0.55
39:BX:18:LEU:O	39:BX:22:LEU:HB3	2.07	0.55
2:AC:148:ILE:O	2:AC:168:ARG:HG2	2.06	0.55
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.07	0.55
23:BB:582:A:H2'	23:BB:583:G:H8	1.72	0.55
23:DB:528:A:C2	23:DB:2043:C:H4'	2.41	0.55
47:DF:39:VAL:HG11	47:DF:49:LEU:HA	1.87	0.55
9:AJ:76:ILE:O	9:AJ:76:ILE:HD12	2.07	0.55
25:DC:231:HIS:HA	25:DC:241:LYS:HE3	1.88	0.55
12:CM:106:ARG:HA	12:CM:106:ARG:HH11	1.72	0.55
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.41	0.55
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.69	0.55
51:BZ:27:ARG:HD2	51:BZ:29:PHE:CE1	2.41	0.55
23:BB:19:A:H2'	23:BB:20:C:H6	1.71	0.55
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.42	0.55
5:AF:80:PHE:CE1	25:BC:123:ILE:HD13	2.40	0.55
23:DB:2564:A:OP1	23:DB:2648:G:H4'	2.07	0.55
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.41	0.55
14:AO:81:LEU:HD23	14:AO:85:LEU:HD13	1.87	0.55
23:DB:2188:U:H2'	23:DB:2189:U:O4'	2.06	0.55
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.88	0.55
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.07	0.55
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.06	0.55
5:CF:40:GLU:OE1	5:CF:100:SER:HB2	2.06	0.55
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.70	0.55
29:BE:137:LYS:HE2	29:BE:141:MET:SD	2.46	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:14:U:H4'	22:DA:70:C:O2	2.06	0.55
47:BF:39:VAL:HG11	47:BF:49:LEU:HA	1.87	0.55
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.41	0.55
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.06	0.55
23:DB:2356:U:H5''	52:DW:16:GLU:HG3	1.89	0.55
39:BX:45:GLN:O	39:BX:47:ARG:N	2.39	0.55
20:AB:69:VAL:HB	20:AB:162:VAL:HG23	1.89	0.55
47:BF:32:LYS:NZ	47:BF:156:THR:HG21	2.20	0.55
44:DQ:91:ARG:CZ	49:DR:11:GLN:H	2.20	0.55
49:DR:39:LEU:CB	49:DR:53:PHE:HA	2.37	0.55
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CA	2.18	0.55
28:BP:75:THR:HG23	28:BP:76:HIS:N	2.16	0.55
50:BT:7:LEU:O	50:BT:7:LEU:HD13	2.07	0.55
47:DF:116:LEU:HD23	47:DF:176:PHE:N	2.19	0.55
24:BI:58:ILE:N	24:BI:58:ILE:HD12	2.21	0.55
1:AA:132:C:H5''	19:AT:68:LYS:NZ	2.21	0.55
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.87	0.55
20:AB:65:LYS:HB2	20:AB:158:ASP:N	2.19	0.55
23:DB:1203:U:H4'	37:DL:3:LEU:HD12	1.88	0.55
23:DB:135:U:H2'	23:DB:136:G:O4'	2.07	0.55
23:DB:136:G:H2'	23:DB:137:U:C6	2.42	0.55
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.89	0.55
38:BM:36:VAL:HB	38:BM:127:LYS:O	2.06	0.55
44:DQ:30:VAL:O	44:DQ:33:VAL:HG22	2.06	0.55
23:DB:532:A:N3	23:DB:532:A:H2'	2.22	0.55
42:DN:34:ILE:O	42:DN:112:TYR:HA	2.06	0.55
1:AA:412:A:H61	3:AD:29:THR:CG2	2.20	0.55
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.41	0.55
3:CD:98:ASP:HB3	3:CD:132:ALA:HB1	1.89	0.55
43:BO:4:LYS:O	43:BO:8:ILE:HG13	2.06	0.55
25:BC:102:TYR:O	25:BC:103:ILE:HG13	2.06	0.55
1:AA:922:G:N3	1:AA:1398:A:H2	2.05	0.55
2:CC:134:LYS:HA	2:CC:167:TYR:CE2	2.42	0.55
23:DB:151:C:H2'	23:DB:152:A:H8	1.72	0.55
26:DD:154:LYS:HG2	26:DD:155:VAL:N	2.21	0.55
1:AA:1053:G:HO2'	1:AA:1199:U:H5	1.55	0.55
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.71	0.55
11:CL:43:LYS:CE	11:CL:44:PRO:HD3	2.37	0.55
1:CA:709:U:H2'	1:CA:710:G:H8	1.70	0.55
23:DB:2496:C:O2'	23:DB:2497:A:H5'	2.07	0.55
29:BE:72:SER:C	29:BE:74:LYS:H	2.10	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:37:ARG:HA	51:BZ:48:THR:HB	1.89	0.55
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.21	0.55
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.06	0.55
23:DB:26:G:H1'	23:DB:514:A:N6	2.21	0.55
26:DD:36:GLN:O	26:DD:36:GLN:HG3	2.07	0.55
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.72	0.55
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.40	0.55
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.72	0.55
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.41	0.55
1:AA:939:G:H5''	6:AG:101:ARG:NH2	2.22	0.55
23:DB:1098:A:O5'	24:DI:3:LYS:HG2	2.06	0.55
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.41	0.55
8:AI:10:ARG:HB3	8:AI:15:ALA:HA	1.88	0.55
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.06	0.55
40:BH:100:ALA:HB2	40:BH:111:ALA:C	2.27	0.55
21:CU:16:ARG:NE	21:CU:16:ARG:HA	2.05	0.55
48:DG:17:LYS:HZ2	48:DG:18:ILE:H	1.54	0.55
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.30	0.55
44:BQ:103:VAL:O	44:BQ:106:THR:HB	2.06	0.55
8:CI:23:GLY:H	8:CI:61:ASP:H	1.55	0.55
10:AK:31:VAL:HG23	10:AK:44:ALA:HB3	1.89	0.55
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.71	0.55
50:BT:2:ILE:H	50:BT:2:ILE:HD13	1.71	0.55
19:CT:38:ILE:HD11	19:CT:82:ILE:HG22	1.87	0.55
1:AA:80:A:C5	1:AA:81:A:H1'	2.41	0.55
50:BT:87:LEU:HB2	50:BT:91:GLN:HG2	1.88	0.55
23:DB:705:A:N6	23:DB:726:G:H1'	2.22	0.55
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	1.88	0.55
5:AF:29:ILE:HG23	5:AF:66:ALA:HB2	1.88	0.55
12:AM:78:ARG:NH2	18:AS:64:GLU:HB2	2.22	0.55
38:BM:41:LEU:O	38:BM:94:ALA:N	2.40	0.55
15:AP:48:GLU:HG3	15:AP:49:GLY:H	1.71	0.55
23:BB:1139:G:O2'	23:BB:1140:C:H5'	2.06	0.55
23:BB:279:A:C2	23:BB:362:A:H4'	2.41	0.55
24:DI:126:ARG:HB3	24:DI:126:ARG:NH1	2.21	0.55
52:DW:10:ARG:O	52:DW:11:ASN:HB2	2.07	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.06	0.55
48:DG:94:ARG:HB2	48:DG:127:GLN:HG2	1.88	0.55
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.72	0.55
1:AA:270:A:H2'	1:AA:271:C:H6	1.72	0.55
23:DB:582:A:H2'	23:DB:583:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:68:LYS:C	16:CQ:70:LYS:H	2.10	0.55
23:BB:152:A:H2'	23:BB:153:U:C6	2.41	0.55
25:DC:173:LEU:N	25:DC:173:LEU:HD13	2.20	0.55
23:DB:37:C:O2'	23:DB:38:A:H5'	2.07	0.55
23:DB:96:C:H4'	39:DX:41:HIS:CG	2.41	0.55
3:CD:22:SER:CB	3:CD:109:THR:HG22	2.37	0.55
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.06	0.55
8:CI:94:ARG:NH1	8:CI:94:ARG:HB3	2.20	0.55
14:AO:53:ARG:NH1	23:BB:715:A:N1	2.55	0.55
11:AL:43:LYS:CE	11:AL:44:PRO:HD3	2.37	0.55
1:AA:300:A:H2'	1:AA:301:G:O4'	2.07	0.55
5:CF:79:ARG:HH21	5:CF:87:SER:HB3	1.71	0.55
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.72	0.55
19:CT:15:LYS:HA	19:CT:18:LYS:HE3	1.87	0.55
1:CA:1254:A:H2'	1:CA:1255:G:C8	2.41	0.55
11:AL:31:GLY:HA3	11:AL:54:VAL:CG1	2.37	0.55
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.40	0.55
18:CS:50:VAL:O	18:CS:57:VAL:HG22	2.06	0.55
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.42	0.55
1:AA:420:U:H2'	1:AA:422:C:C5	2.42	0.55
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.89	0.55
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.46	0.55
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.72	0.55
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.20	0.55
20:CB:22:TRP:HZ3	20:CB:27:LYS:HB2	1.71	0.55
47:BF:134:GLN:OE1	47:BF:136:ILE:HA	2.07	0.55
3:AD:123:MET:HB2	3:AD:128:VAL:HA	1.88	0.55
23:DB:557:C:H2'	23:DB:558:U:C6	2.41	0.55
44:DQ:91:ARG:NH1	49:DR:10:LYS:HB3	2.20	0.55
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.19	0.55
23:BB:340:A:H2'	23:BB:341:C:O4'	2.07	0.55
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.22	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.37	0.55
47:DF:128:SER:HA	47:DF:154:THR:HA	1.88	0.55
3:CD:194:ILE:O	3:CD:194:ILE:HG23	2.06	0.55
47:BF:130:GLY:HA2	47:BF:152:ASP:HA	1.88	0.55
23:DB:1140:C:H2'	23:DB:1141:U:H5'	1.89	0.55
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.55	0.55
1:CA:922:G:N3	1:CA:1398:A:H2	2.05	0.55
23:DB:850:U:H5''	30:DY:18:LYS:HD3	1.89	0.55
12:CM:44:ILE:H	12:CM:44:ILE:CD1	2.16	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1870:C:H5'	23:BB:1871:A:C8	2.42	0.55
23:BB:1172:C:H2'	23:BB:1173:U:O4'	2.06	0.55
11:CL:56:LEU:HD21	11:CL:81:ILE:HG13	1.89	0.55
47:DF:41:GLU:HB2	47:DF:48:LEU:HD11	1.88	0.55
23:BB:545:U:H2'	23:BB:547:A:OP2	2.06	0.55
1:CA:335:C:H2'	1:CA:336:A:H8	1.72	0.55
1:AA:840:C:H3'	1:AA:842:U:OP2	2.06	0.55
1:AA:839:C:H2'	1:AA:840:C:O4'	2.06	0.55
1:AA:864:A:H2'	1:AA:865:A:C8	2.41	0.55
35:BV:6:ALA:HB3	35:BV:65:VAL:HG12	1.88	0.55
1:AA:195:A:H1'	1:AA:222:C:O2'	2.07	0.55
2:CC:63:ILE:HD11	2:CC:94:ALA:CB	2.36	0.55
43:DO:35:ILE:HG13	43:DO:71:ALA:CB	2.37	0.55
2:AC:14:VAL:HG11	2:AC:178:ARG:HA	1.88	0.55
15:CP:4:ILE:O	15:CP:71:VAL:HG11	2.07	0.55
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.42	0.55
1:AA:784:A:H2'	1:AA:785:G:C8	2.42	0.55
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.06	0.55
23:BB:184:C:H2'	23:BB:185:G:C8	2.42	0.55
23:DB:2393:U:O2'	23:DB:2394:C:H5'	2.07	0.55
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.72	0.55
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.88	0.55
1:AA:833:G:H2'	1:AA:834:U:C6	2.41	0.55
23:DB:11:C:H2'	23:DB:12:U:H5'	1.89	0.55
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.89	0.55
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.07	0.55
17:CR:44:THR:HB	17:CR:46:THR:HG22	1.89	0.55
23:BB:100:U:O2	23:BB:100:U:C2'	2.55	0.55
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.06	0.55
44:BQ:85:ALA:HB1	44:BQ:111:LYS:HG3	1.88	0.55
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.47	0.55
28:BP:56:SER:O	28:BP:75:THR:HG22	2.06	0.55
50:DT:55:VAL:HA	50:DT:87:LEU:HA	1.89	0.55
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.07	0.55
52:DW:37:VAL:O	52:DW:38:ARG:HG2	2.07	0.55
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.72	0.55
40:BH:12:LEU:HD21	40:BH:25:TYR:HE2	1.72	0.55
23:BB:1021:A:H61	23:BB:1142:A:N6	2.05	0.55
22:DA:52:A:H4'	22:DA:52:A:OP1	2.06	0.55
46:BU:14:THR:O	46:BU:18:LYS:HG2	2.07	0.55
1:AA:975:A:H4'	1:AA:976:G:O5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:167:VAL:HG21	48:DG:169:ARG:HH12	1.72	0.55
1:CA:415:A:H3'	1:CA:416:G:H8	1.71	0.55
1:CA:237:G:H5''	16:CQ:26:ARG:NH2	2.22	0.55
3:AD:93:LEU:O	3:AD:96:ARG:HB2	2.07	0.55
1:CA:1308:U:H3'	12:CM:97:ARG:HH11	1.72	0.55
12:AM:92:ARG:HA	12:AM:92:ARG:NE	2.22	0.55
14:CO:32:LEU:O	14:CO:36:ILE:HG12	2.07	0.55
43:BO:6:ALA:CB	43:BO:10:ARG:HH11	2.20	0.55
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.42	0.55
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.41	0.55
43:BO:51:ALA:HB1	43:BO:77:ALA:HB3	1.87	0.55
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.88	0.55
1:CA:398:U:H2'	1:CA:399:G:C8	2.42	0.55
42:DN:17:ARG:HH21	42:DN:17:ARG:HB2	1.71	0.55
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.72	0.55
2:CC:91:ALA:HB2	2:CC:98:ALA:H	1.71	0.55
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.21	0.55
8:CI:98:ARG:NE	8:CI:103:VAL:HG21	2.22	0.55
1:AA:201:G:O2'	1:AA:202:G:H5'	2.07	0.55
23:DB:997:G:O2'	23:DB:998:C:H5'	2.06	0.55
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.21	0.55
1:CA:730:G:O2'	1:CA:766:A:H5'	2.07	0.55
23:DB:2754:U:O5'	23:DB:2754:U:H6	1.90	0.55
52:DW:21:GLY:N	52:DW:33:GLY:HA2	2.21	0.55
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.05	0.55
37:BL:4:ASN:N	37:BL:4:ASN:HD22	2.03	0.55
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.21	0.55
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.41	0.55
22:BA:75:G:H1'	35:BV:29:ILE:HG12	1.89	0.55
35:BV:42:LEU:CD1	35:BV:47:VAL:HG21	2.32	0.55
1:AA:437:U:H2'	1:AA:438:U:O4'	2.06	0.55
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.71	0.55
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.88	0.55
38:BM:40:ARG:HB3	38:BM:95:LEU:HD12	1.88	0.55
1:AA:1080:A:OP1	4:AE:49:TYR:HE2	1.90	0.55
1:CA:1239:A:H4'	1:CA:1240:U:C5'	2.37	0.55
23:BB:592:A:H2'	23:BB:593:U:H6	1.72	0.55
16:CQ:11:VAL:HG23	16:CQ:56:ASP:O	2.08	0.55
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.72	0.55
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.37	0.55
1:CA:1206:G:C4'	2:CC:192:TYR:HA	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:243:PRO:O	25:BC:250:GLN:HA	2.07	0.55
50:BT:50:LEU:C	50:BT:52:GLU:H	2.09	0.55
1:CA:737:C:H2'	1:CA:738:C:H6	1.71	0.55
7:AH:28:SER:HB3	7:AH:57:GLU:O	2.07	0.55
23:BB:1240:U:O2'	23:BB:1241:A:H5''	2.07	0.55
23:BB:710:U:H2'	23:BB:711:G:H8	1.72	0.55
49:BR:27:ILE:HG13	49:BR:33:VAL:HG11	1.88	0.55
27:DK:104:THR:HB	27:DK:106:GLU:OE1	2.07	0.55
23:DB:95:A:H1'	39:DX:40:SER:OG	2.06	0.55
14:CO:73:LYS:O	14:CO:74:ASP:HB2	2.07	0.55
23:BB:2760:C:O2'	23:BB:2761:A:H5'	2.07	0.55
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.07	0.55
25:DC:15:VAL:HG22	25:DC:204:LEU:O	2.07	0.55
1:AA:323:U:H2'	1:AA:324:G:O4'	2.06	0.55
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.07	0.55
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.07	0.55
47:DF:161:SER:OG	47:DF:164:GLU:HG3	2.07	0.55
25:BC:226:PRO:HA	25:BC:232:GLY:HA3	1.89	0.55
52:BW:67:LYS:O	52:BW:68:PHE:HB2	2.07	0.55
46:DU:85:ARG:NE	46:DU:85:ARG:HA	2.21	0.54
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.98	0.54
44:DQ:85:ALA:HB1	44:DQ:111:LYS:HG3	1.89	0.54
48:BG:34:ARG:N	48:BG:34:ARG:HH11	1.98	0.54
44:BQ:108:LEU:HA	49:BR:48:LYS:HD3	1.88	0.54
23:BB:142:A:H2'	23:BB:143:C:C6	2.42	0.54
23:DB:283:G:H3'	23:DB:284:U:H5''	1.88	0.54
47:DF:138:PRO:HA	47:DF:142:TYR:CE2	2.42	0.54
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	1.88	0.54
9:CJ:17:LEU:HD22	9:CJ:96:VAL:CG1	2.35	0.54
30:BY:9:THR:HB	30:BY:53:MET:O	2.07	0.54
32:B4:19:ARG:C	32:B4:21:GLY:H	2.10	0.54
43:DO:4:LYS:O	43:DO:8:ILE:HG13	2.07	0.54
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.89	0.54
23:BB:545:U:H6	23:BB:545:U:O5'	1.90	0.54
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.72	0.54
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.42	0.54
23:BB:1373:A:H2'	23:BB:1374:G:O4'	2.06	0.54
39:BX:29:ARG:HH21	39:BX:29:ARG:HB2	1.72	0.54
23:DB:2492:U:O2'	23:DB:2493:U:H5'	2.07	0.54
37:BL:55:MET:HE2	37:BL:56:PRO:HD2	1.89	0.54
1:CA:1288:A:N1	1:CA:1371:G:HI'	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.88	0.54
41:DJ:21:THR:O	41:DJ:62:VAL:HA	2.08	0.54
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.42	0.54
12:AM:2:ARG:H	12:AM:2:ARG:HD3	1.71	0.54
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.42	0.54
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.72	0.54
17:AR:44:THR:HB	17:AR:46:THR:HG22	1.89	0.54
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.88	0.54
23:DB:80:G:HO2'	23:DB:294:A:H2	1.55	0.54
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.07	0.54
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.87	0.54
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.05	0.54
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.72	0.54
21:CU:8:ASN:O	21:CU:9:GLU:HB2	2.06	0.54
23:DB:2265:U:H3'	23:DB:2266:A:C5'	2.37	0.54
52:BW:39:GLN:HE21	52:BW:42:THR:CB	2.16	0.54
37:DL:89:VAL:HA	37:DL:121:THR:O	2.08	0.54
40:BH:80:ILE:O	40:BH:144:VAL:HG13	2.07	0.54
40:DH:94:ILE:HG22	40:DH:122:LEU:CB	2.37	0.54
26:BD:13:ARG:HH12	28:BP:74:GLN:NE2	2.04	0.54
12:AM:78:ARG:HH12	18:AS:64:GLU:HG2	1.71	0.54
12:AM:15:VAL:O	12:AM:19:THR:HG23	2.07	0.54
23:BB:741:U:H2'	23:BB:742:A:C8	2.43	0.54
23:BB:1138:G:H2'	23:BB:1139:G:O4'	2.08	0.54
31:B0:41:HIS:HB2	42:BN:99:LYS:C	2.27	0.54
23:DB:328:U:O3'	46:DU:65:GLN:HG3	2.07	0.54
1:AA:373:A:H2'	1:AA:374:A:H8	1.72	0.54
25:BC:90:ILE:CD1	25:BC:102:TYR:HB3	2.36	0.54
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.43	0.54
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.71	0.54
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.06	0.54
46:BU:93:ARG:O	46:BU:102:ILE:HG22	2.07	0.54
8:AI:7:GLY:HA3	8:AI:81:GLY:O	2.08	0.54
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.43	0.54
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.07	0.54
26:DD:35:THR:O	26:DD:36:GLN:HB3	2.06	0.54
35:DV:53:LYS:HD3	35:DV:55:GLU:H	1.71	0.54
6:AG:77:ARG:HG3	6:AG:79:VAL:HG23	1.88	0.54
23:DB:374:A:N6	23:DB:400:G:H1'	2.22	0.54
37:DL:119:PRO:HG3	37:DL:138:ALA:O	2.07	0.54
23:DB:522:A:H2'	23:DB:523:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1494:G:N7	54:CA:2062:LLL:N32	2.55	0.54
25:DC:51:ARG:NH2	25:DC:246:PRO:HG2	2.22	0.54
23:BB:396:G:C6	23:BB:397:U:C4	2.95	0.54
28:DP:77:SER:OG	28:DP:79:VAL:HG22	2.07	0.54
23:DB:730:A:H5'	56:DB:3610:HOH:O	2.06	0.54
1:CA:1231:G:H5'	8:CI:128:LYS:HE2	1.88	0.54
20:CB:207:ARG:HH11	20:CB:207:ARG:HA	1.73	0.54
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.07	0.54
23:BB:693:A:H2'	23:BB:694:U:C6	2.42	0.54
20:AB:148:GLY:O	20:AB:151:LYS:HG2	2.07	0.54
5:AF:79:ARG:HH21	5:AF:87:SER:HB3	1.72	0.54
13:CN:60:ARG:HG3	13:CN:62:ARG:HG3	1.88	0.54
47:BF:138:PRO:HA	47:BF:142:TYR:CE2	2.41	0.54
49:DR:24:LYS:HA	49:DR:94:THR:CG2	2.36	0.54
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.42	0.54
40:DH:89:LYS:HA	40:DH:123:ARG:O	2.07	0.54
2:CC:72:PRO:O	2:CC:76:ILE:HG12	2.07	0.54
28:BP:4:ILE:HA	28:BP:7:LEU:HD13	1.89	0.54
23:DB:2306:C:C3'	23:DB:2307:G:H5'	2.32	0.54
25:DC:90:ILE:CD1	25:DC:102:TYR:HB3	2.38	0.54
18:CS:10:ILE:HG22	18:CS:38:THR:N	2.20	0.54
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.71	0.54
12:AM:24:VAL:HG12	12:AM:28:ARG:HD2	1.89	0.54
23:DB:2179:C:C2'	23:DB:2179:C:O2	2.50	0.54
1:AA:1101:A:N6	20:AB:174:GLU:OE2	2.40	0.54
30:BY:40:THR:O	30:BY:43:ILE:HG22	2.07	0.54
33:D1:4:ILE:HD11	33:D1:25:ASN:HD21	1.71	0.54
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.72	0.54
25:BC:94:LEU:HA	25:BC:100:ARG:HB3	1.90	0.54
26:DD:118:PHE:CE1	26:DD:123:LYS:HD2	2.42	0.54
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.88	0.54
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.39	0.54
11:CL:31:GLY:HA3	11:CL:54:VAL:CG1	2.37	0.54
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	2.07	0.54
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.73	0.54
1:CA:254:G:O2'	1:CA:255:G:H5'	2.07	0.54
1:CA:441:A:H61	1:CA:493:A:N6	2.05	0.54
20:AB:207:ARG:HH11	20:AB:207:ARG:HA	1.72	0.54
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.06	0.54
8:CI:28:VAL:HA	8:CI:32:ARG:O	2.07	0.54
25:BC:4:LYS:HE2	25:BC:5:CYS:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:H61	3:AD:53:GLN:HE22	1.55	0.54
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.06	0.54
23:DB:2231:U:O2'	23:DB:2232:C:H5'	2.07	0.54
43:DO:75:GLY:O	43:DO:78:VAL:HG23	2.08	0.54
1:CA:708:C:H2'	1:CA:709:U:H6	1.72	0.54
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.42	0.54
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.08	0.54
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.07	0.54
23:BB:997:G:O2'	23:BB:998:C:H5'	2.07	0.54
23:BB:1816:C:H3'	25:BC:61:TYR:CE2	2.41	0.54
1:CA:77:A:H2'	1:CA:78:A:C8	2.43	0.54
1:AA:65:A:C2	1:AA:381:C:H2'	2.43	0.54
23:DB:988:A:P	30:DY:11:SER:HB3	2.48	0.54
23:BB:1459:G:H4'	23:BB:1461:C:N4	2.21	0.54
40:DH:53:GLU:O	40:DH:57:LYS:HB3	2.07	0.54
49:BR:79:ARG:C	49:BR:81:LYS:H	2.10	0.54
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.22	0.54
23:BB:2409:G:H2'	23:BB:2410:G:O4'	2.07	0.54
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.72	0.54
23:BB:950:G:H2'	23:BB:951:C:C6	2.42	0.54
20:AB:51:GLU:O	20:AB:55:GLU:HG2	2.08	0.54
40:BH:131:SER:HA	40:BH:140:ALA:O	2.08	0.54
40:BH:79:THR:HA	40:BH:144:VAL:HA	1.90	0.54
48:DG:15:ASP:HB3	48:DG:26:LYS:N	2.09	0.54
2:AC:72:PRO:O	2:AC:76:ILE:HG12	2.08	0.54
20:AB:204:ASP:O	20:AB:209:VAL:HG13	2.07	0.54
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.08	0.54
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.36	0.54
28:DP:4:ILE:O	28:DP:6:GLN:N	2.40	0.54
5:AF:29:ILE:HG22	5:AF:34:GLY:HA3	1.88	0.54
47:DF:109:ARG:HB3	47:DF:135:ILE:CD1	2.37	0.54
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.07	0.54
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.72	0.54
48:DG:174:LYS:HZ2	48:DG:176:LYS:HG2	1.72	0.54
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	2.06	0.54
23:BB:2755:C:H2'	32:B4:19:ARG:HG2	1.90	0.54
21:AU:28:LEU:HD23	21:AU:29:ALA:N	2.22	0.54
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.87	0.54
23:DB:851:C:O2	30:DY:42:ALA:HB1	2.08	0.54
19:AT:4:LYS:HE3	19:AT:6:ALA:H	1.73	0.54
40:DH:115:VAL:HG23	40:DH:132:PHE:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.42	0.54
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.36	0.54
23:DB:2808:G:HO2'	23:DB:2809:A:H8	1.55	0.54
39:BX:3:ALA:O	39:BX:6:LEU:HB2	2.07	0.54
16:AQ:68:LYS:C	16:AQ:70:LYS:H	2.11	0.54
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.42	0.54
32:D4:36:ARG:HG2	32:D4:37:GLN:H	1.73	0.54
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.07	0.54
7:CH:58:LEU:CD2	7:CH:60:LEU:HB2	2.37	0.54
48:DG:14:VAL:O	48:DG:16:VAL:HG23	2.07	0.54
23:DB:591:U:H1'	34:D3:1:PRO:N	2.22	0.54
1:AA:1321:U:H2'	1:AA:1322:C:C5	2.42	0.54
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.89	0.54
14:CO:81:LEU:HD23	14:CO:85:LEU:HD13	1.89	0.54
7:AH:58:LEU:CD2	7:AH:60:LEU:HB2	2.38	0.54
21:AU:49:ALA:O	21:AU:52:VAL:HG12	2.08	0.54
14:AO:43:PHE:CE1	14:AO:56:LEU:HD22	2.42	0.54
23:DB:208:C:H2'	23:DB:209:C:H6	1.71	0.54
11:CL:107:LYS:HD2	11:CL:107:LYS:O	2.08	0.54
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.72	0.54
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.71	0.54
4:AE:154:ALA:HB1	7:AH:65:PHE:CZ	2.43	0.54
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.42	0.54
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.37	0.54
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.22	0.54
23:DB:1460:U:H3'	23:DB:1461:C:H5'	1.89	0.54
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.07	0.54
26:BD:110:THR:HG23	26:BD:171:THR:HB	1.88	0.54
52:DW:39:GLN:CG	52:DW:42:THR:HB	2.37	0.54
26:BD:105:LYS:H	26:BD:106:LYS:NZ	2.05	0.54
52:BW:39:GLN:CG	52:BW:42:THR:HB	2.36	0.54
20:AB:49:PHE:HA	20:AB:212:TYR:OH	2.08	0.54
46:DU:86:PHE:CG	46:DU:87:GLU:N	2.76	0.54
40:BH:117:LEU:HD13	40:BH:121:VAL:HG23	1.90	0.54
48:DG:34:ARG:HD3	48:DG:34:ARG:N	2.23	0.54
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.30	0.54
48:BG:7:PRO:O	48:BG:8:VAL:HG23	2.08	0.54
40:DH:18:GLN:NE2	40:DH:39:ALA:HB1	2.23	0.54
20:CB:204:ASP:O	20:CB:209:VAL:HG13	2.07	0.54
3:AD:155:LYS:H	3:AD:155:LYS:HD2	1.72	0.54
47:DF:106:ALA:O	47:DF:135:ILE:HD13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:67:HIS:CE1	19:CT:68:LYS:HE3	2.42	0.54
40:DH:13:GLY:O	40:DH:14:SER:HB2	2.07	0.54
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.07	0.54
1:CA:975:A:H4'	1:CA:976:G:O5'	2.07	0.54
4:AE:45:VAL:HG23	4:AE:71:ILE:CG2	2.37	0.54
48:DG:145:ALA:HA	48:DG:148:ARG:HG3	1.89	0.54
49:DR:71:LYS:HG3	49:DR:72:VAL:N	2.22	0.54
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.42	0.54
35:DV:9:ARG:HH21	35:DV:12:GLN:HA	1.70	0.54
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.22	0.54
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.89	0.54
23:DB:581:C:H2'	23:DB:582:A:H8	1.70	0.54
1:AA:189:A:H2'	1:AA:190:A:C8	2.43	0.54
23:DB:364:C:H2'	23:DB:365:U:H6	1.72	0.54
23:BB:2751:G:H5'	48:BG:2:ARG:CD	2.38	0.54
23:BB:129:C:H2'	23:BB:130:C:H6	1.71	0.54
1:CA:1262:C:N4	1:CA:1273:C:H42	2.05	0.54
14:AO:8:THR:O	14:AO:11:ILE:HG22	2.07	0.54
1:AA:208:U:H2'	1:AA:210:C:C4	2.42	0.54
6:CG:71:THR:HG22	6:CG:141:HIS:CE1	2.42	0.54
51:BZ:4:VAL:HG12	51:BZ:11:ARG:HG2	1.89	0.54
23:DB:1190:G:O5'	37:DL:32:GLY:HA2	2.08	0.54
1:CA:272:C:H2'	1:CA:273:U:H6	1.71	0.54
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.07	0.54
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.38	0.54
23:BB:1914:C:O2	23:BB:1914:C:O4'	2.23	0.54
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.23	0.54
23:DB:836:G:H2'	23:DB:837:C:C6	2.42	0.54
2:CC:39:ARG:NH1	2:CC:56:ILE:HD12	2.23	0.54
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.07	0.54
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.08	0.54
23:BB:2074:U:H2'	23:BB:2075:U:C6	2.43	0.54
9:CJ:85:ASP:HA	9:CJ:88:MET:SD	2.47	0.54
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.07	0.54
37:BL:89:VAL:HA	37:BL:121:THR:O	2.07	0.54
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.08	0.54
23:BB:966:G:H4'	23:BB:2272:U:O2	2.07	0.54
25:DC:117:SER:CB	25:DC:128:THR:HB	2.38	0.54
47:BF:128:SER:HA	47:BF:154:THR:HA	1.90	0.54
41:BJ:36:LEU:HD21	41:BJ:122:LEU:HB2	1.90	0.54
1:CA:1148:U:H5'	8:CI:6:TYR:OH	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.72	0.54
50:BT:15:HIS:O	50:BT:16:VAL:C	2.45	0.54
28:DP:4:ILE:HA	28:DP:7:LEU:HD13	1.88	0.54
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.42	0.54
52:BW:37:VAL:O	52:BW:38:ARG:HG2	2.07	0.54
5:CF:46:GLN:HG3	5:CF:47:LEU:H	1.72	0.54
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.38	0.54
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.41	0.54
46:DU:14:THR:HG23	46:DU:15:GLY:N	2.23	0.54
40:DH:115:VAL:HG22	40:DH:117:LEU:N	2.22	0.54
48:BG:166:GLU:CG	48:BG:168:VAL:HG23	2.35	0.54
9:CJ:76:ILE:HD12	9:CJ:76:ILE:O	2.08	0.54
1:CA:467:U:O2	1:CA:467:U:H2'	2.08	0.54
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.08	0.54
1:CA:770:C:O2'	1:CA:771:G:H5'	2.07	0.54
21:CU:24:LYS:CD	21:CU:25:ALA:H	2.21	0.54
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.23	0.54
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.54
1:CA:32:A:H2'	1:CA:33:A:C8	2.43	0.54
1:CA:1226:C:H5''	12:CM:101:THR:CB	2.37	0.54
45:DS:16:LYS:O	45:DS:19:LEU:HB3	2.08	0.54
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.43	0.54
43:DO:56:LYS:HE3	43:DO:60:GLU:OE2	2.08	0.54
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.08	0.54
1:AA:1221:G:H4'	18:AS:52:ASN:O	2.07	0.54
23:DB:970:U:H1'	23:DB:985:C:P	2.48	0.54
22:DA:49:C:O3'	43:DO:68:LYS:HE3	2.07	0.54
1:CA:1201:A:H8	1:CA:1201:A:H5''	1.73	0.54
9:CJ:55:PRO:HA	13:CN:80:ARG:HH21	1.73	0.54
23:BB:850:U:H2'	23:BB:851:C:C6	2.43	0.54
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.90	0.54
51:BZ:18:ARG:NH1	51:BZ:24:ALA:HB2	2.21	0.54
43:DO:51:ALA:HB1	43:DO:77:ALA:HB3	1.88	0.54
22:BA:41:G:H21	23:BB:2340:A:H5'	1.71	0.54
1:AA:709:U:H2'	1:AA:710:G:H8	1.71	0.54
1:AA:709:U:H2'	1:AA:710:G:C8	2.42	0.54
23:DB:870:U:O2'	23:DB:871:U:H5'	2.08	0.54
1:CA:1028:C:H3'	1:CA:1029:U:H6	1.72	0.54
1:CA:201:G:O2'	1:CA:469:C:H4'	2.07	0.54
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.07	0.54
35:DV:53:LYS:HD3	35:DV:55:GLU:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:8:ASP:OD1	7:AH:12:ARG:HD2	2.06	0.54
1:AA:1458:G:H5''	19:AT:25:SER:HB2	1.89	0.54
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.08	0.54
40:DH:27:ARG:HH21	40:DH:27:ARG:HG2	1.73	0.54
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.23	0.54
25:BC:32:LEU:O	25:BC:63:ILE:HG12	2.07	0.54
23:DB:2196:C:O2'	23:DB:2197:U:H5'	2.07	0.54
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.90	0.54
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.08	0.54
5:AF:16:GLU:CD	5:AF:16:GLU:H	2.11	0.54
23:DB:2309:A:N6	47:DF:75:GLY:HA3	2.23	0.54
23:BB:414:C:H2'	23:BB:415:A:C8	2.42	0.54
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.08	0.54
38:BM:50:ARG:O	38:BM:53:MET:HB3	2.07	0.54
25:DC:189:ALA:C	25:DC:190:THR:HG23	2.26	0.54
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.73	0.54
35:BV:28:ALA:HB2	35:BV:89:ILE:HD12	1.89	0.54
23:DB:1173:U:H6	23:DB:1173:U:O5'	1.91	0.54
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.89	0.54
23:DB:496:G:H1'	45:DS:61:ASN:ND2	2.21	0.54
47:DF:30:VAL:HG21	47:DF:96:TRP:NE1	2.20	0.54
23:BB:673:C:C5'	29:BE:76:PRO:HD2	2.38	0.54
3:AD:194:ILE:O	3:AD:194:ILE:HG23	2.08	0.54
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.07	0.54
30:DY:9:THR:HB	30:DY:53:MET:O	2.07	0.54
37:DL:3:LEU:O	37:DL:5:THR:N	2.41	0.54
42:BN:34:ILE:O	42:BN:112:TYR:HA	2.07	0.54
33:B1:37:LYS:H	33:B1:48:TYR:HD2	1.55	0.54
1:AA:93:U:H3'	1:AA:94:G:C5'	2.38	0.54
40:DH:131:SER:HB2	40:DH:141:LYS:HG3	1.90	0.54
1:AA:482:A:H2'	1:AA:483:C:O4'	2.08	0.54
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.04	0.54
38:DM:37:GLY:HA3	38:DM:127:LYS:NZ	2.22	0.54
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.42	0.54
23:BB:592:A:C2	34:B3:3:ILE:HD11	2.43	0.54
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.22	0.54
23:BB:2882:A:H3'	23:BB:2883:A:H5''	1.90	0.54
35:DV:62:THR:HG22	35:DV:71:LYS:NZ	2.22	0.54
7:CH:76:ARG:HG3	7:CH:77:VAL:H	1.72	0.54
23:DB:65:U:H2'	23:DB:66:C:H6	1.72	0.54
1:AA:57:G:H2'	1:AA:58:C:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:50:SER:C	34:D3:52:GLY:H	2.11	0.54
35:BV:26:PHE:CE2	35:BV:44:HIS:HA	2.43	0.54
23:BB:2066:C:O2'	23:BB:2067:G:H5'	2.08	0.54
1:CA:190:A:O5'	1:CA:190:A:H8	1.91	0.54
1:AA:502:A:H2'	1:AA:503:C:H6	1.72	0.54
1:AA:430:A:P	3:AD:6:PRO:HA	2.47	0.54
22:DA:13:G:H1	22:DA:69:G:HO2'	1.56	0.54
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.90	0.54
1:CA:793:U:O2	1:CA:1516:G:H4'	2.07	0.54
23:DB:950:G:H2'	23:DB:951:C:C6	2.43	0.54
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.42	0.54
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.08	0.54
39:DX:1:MET:HA	39:DX:4:LYS:HE2	1.89	0.54
23:DB:2450:A:O2'	23:DB:2451:A:H5'	2.07	0.54
1:CA:545:C:H5''	3:CD:68:GLU:HG2	1.89	0.54
10:AK:70:ALA:C	10:AK:72:ALA:H	2.11	0.54
23:BB:1126:A:H8	23:BB:1126:A:OP1	1.91	0.54
2:CC:106:ARG:HD2	2:CC:106:ARG:H	1.72	0.54
28:BP:110:LYS:HD2	28:BP:110:LYS:N	2.23	0.54
49:DR:79:ARG:C	49:DR:81:LYS:H	2.11	0.54
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.08	0.54
24:DI:2:LYS:NZ	24:DI:2:LYS:HB3	2.23	0.54
8:AI:21:LYS:HG2	8:AI:22:PRO:HD2	1.90	0.54
42:DN:38:LEU:HG	42:DN:42:LYS:HD2	1.89	0.54
10:CK:110:THR:HA	21:CU:19:LYS:HZ2	1.73	0.54
28:BP:47:ILE:HD11	28:BP:59:THR:HG22	1.90	0.54
48:DG:9:VAL:O	48:DG:11:PRO:HD3	2.07	0.54
40:DH:90:LEU:HD21	40:DH:94:ILE:HB	1.89	0.54
28:BP:54:LEU:HA	28:BP:76:HIS:HD2	1.72	0.54
23:BB:705:A:N6	23:BB:726:G:H1'	2.23	0.54
45:BS:66:ILE:CD1	45:BS:66:ILE:H	2.18	0.54
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.71	0.54
47:DF:168:LEU:O	47:DF:170:ALA:N	2.41	0.54
47:DF:3:LEU:HD11	47:DF:172:PHE:CD1	2.43	0.54
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	1.89	0.54
48:BG:66:THR:O	48:BG:70:LEU:HB2	2.07	0.54
1:CA:1250:A:O3'	8:CI:68:GLY:HA2	2.08	0.54
19:CT:66:ILE:HG13	19:CT:70:LYS:HE3	1.89	0.54
5:CF:67:PRO:O	5:CF:70:VAL:HG22	2.07	0.54
48:BG:145:ALA:HA	48:BG:148:ARG:HG3	1.89	0.54
1:AA:369:G:O2'	1:AA:370:C:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.21	0.54
20:AB:128:LEU:HD12	20:AB:132:GLU:CB	2.37	0.54
1:AA:415:A:H3'	1:AA:416:G:H8	1.71	0.54
23:DB:2598:A:OP1	25:DC:233:GLY:HA2	2.08	0.54
23:BB:65:U:H2'	23:BB:66:C:H6	1.73	0.54
29:BE:170:ARG:HH22	29:BE:176:ASP:CB	2.21	0.54
11:CL:54:VAL:CG2	11:CL:79:ILE:HD11	2.38	0.54
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.43	0.54
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.07	0.54
12:CM:87:GLY:HA2	12:CM:90:HIS:HD2	1.72	0.54
1:CA:189:A:H2'	1:CA:190:A:C8	2.43	0.54
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.38	0.54
12:CM:92:ARG:HA	12:CM:92:ARG:NE	2.23	0.54
1:CA:1054:C:H1'	1:CA:1196:A:C5	2.42	0.54
23:DB:937:C:H2'	23:DB:938:G:C8	2.43	0.54
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	1.89	0.54
23:DB:1273:U:H4'	23:DB:1275:A:OP2	2.08	0.54
23:BB:1947:C:O2'	23:BB:1948:G:H5'	2.08	0.54
42:BN:17:ARG:HB2	42:BN:17:ARG:HH21	1.72	0.54
39:DX:20:ASN:O	39:DX:24:GLU:HB3	2.08	0.54
11:AL:107:LYS:H	11:AL:107:LYS:NZ	2.05	0.54
27:DK:79:PHE:HZ	27:DK:104:THR:HG23	1.73	0.54
23:BB:159:G:O2'	23:BB:160:A:H5''	2.08	0.54
25:BC:202:ARG:NH1	25:BC:213:ARG:HE	2.05	0.54
6:CG:45:ALA:O	6:CG:49:LEU:HD23	2.07	0.54
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.43	0.54
1:CA:939:G:H5''	6:CG:101:ARG:NH1	2.23	0.54
10:CK:12:ARG:N	10:CK:76:TYR:HA	2.23	0.54
23:DB:511:U:H5'	23:DB:1236:G:OP1	2.07	0.54
23:DB:657:U:H2'	23:DB:658:U:C6	2.43	0.54
23:DB:1126:A:H8	23:DB:1126:A:OP1	1.91	0.54
25:BC:216:ARG:HH11	25:BC:216:ARG:HG3	1.72	0.54
32:D4:27:CYS:SG	32:D4:29:ALA:HB3	2.48	0.54
23:BB:511:U:H5'	23:BB:1236:G:OP1	2.07	0.54
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.43	0.54
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.08	0.54
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.89	0.54
8:CI:43:ALA:O	8:CI:46:VAL:HG22	2.07	0.54
26:DD:53:GLY:C	26:DD:76:GLY:HA2	2.28	0.54
35:DV:69:GLU:C	35:DV:70:ILE:HD13	2.27	0.54
35:DV:32:GLY:O	35:DV:93:ARG:HD2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:42:THR:O	38:DM:44:ARG:N	2.38	0.54
45:BS:29:VAL:CA	45:BS:32:ALA:HB3	2.38	0.54
47:DF:60:SER:HB3	47:DF:62:GLN:OE1	2.07	0.54
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.35	0.54
1:CA:522:C:H2'	1:CA:523:A:O4'	2.08	0.54
10:AK:79:LYS:HB2	10:AK:80:ASN:HD22	1.73	0.54
23:DB:1104:C:H2'	23:DB:1105:U:C6	2.43	0.54
20:CB:62:ARG:H	20:CB:62:ARG:HD2	1.71	0.54
1:AA:484:G:O4'	1:AA:486:U:H5'	2.08	0.54
48:DG:88:LEU:HB3	48:DG:161:VAL:HG13	1.90	0.54
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.90	0.54
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.43	0.54
2:CC:148:ILE:O	2:CC:168:ARG:HG2	2.08	0.54
42:DN:28:LEU:HD22	42:DN:28:LEU:O	2.08	0.54
11:AL:36:VAL:HA	11:AL:52:CYS:HA	1.89	0.54
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.42	0.54
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.72	0.54
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.28	0.54
25:DC:239:PHE:HD1	25:DC:241:LYS:H	1.56	0.54
1:AA:1477:U:H2'	1:AA:1478:U:H6	1.72	0.54
1:CA:182:A:H1'	1:CA:183:C:C5	2.43	0.54
1:CA:335:C:H2'	1:CA:336:A:C8	2.43	0.54
1:AA:91:U:H2'	1:AA:92:U:O4'	2.07	0.54
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.43	0.54
1:AA:36:C:H4'	11:AL:118:VAL:O	2.08	0.54
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.08	0.54
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.90	0.54
23:BB:1693:U:H1'	25:BC:13:ARG:NH2	2.22	0.54
1:AA:1054:C:H1'	1:AA:1196:A:C5	2.43	0.54
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.89	0.54
40:DH:80:ILE:HG12	40:DH:147:VAL:H	1.73	0.54
1:AA:737:C:H2'	1:AA:738:C:H6	1.72	0.54
43:DO:79:ALA:HA	43:DO:115:LEU:HD23	1.88	0.54
43:BO:75:GLY:O	43:BO:78:VAL:HG23	2.08	0.54
16:AQ:31:PRO:O	16:AQ:32:ILE:HB	2.08	0.54
23:DB:1957:C:H2'	23:DB:1958:C:C6	2.43	0.54
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.28	0.54
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.43	0.54
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.72	0.54
23:BB:438:G:H2'	23:BB:439:A:H8	1.73	0.54
23:DB:228:C:H4'	23:DB:229:C:H5''	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.43	0.54
1:AA:85:U:H4'	1:AA:86:G:H4'	1.90	0.54
10:CK:70:ALA:C	10:CK:72:ALA:H	2.11	0.54
17:AR:33:THR:HG22	17:AR:39:VAL:HG12	1.89	0.54
23:DB:39:G:H2'	23:DB:40:U:C6	2.43	0.54
25:BC:73:ILE:HG21	25:BC:97:ASP:HB2	1.89	0.54
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.89	0.54
40:BH:68:ARG:HG3	40:BH:134:VAL:HG11	1.89	0.54
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.07	0.54
46:BU:86:PHE:CG	46:BU:87:GLU:N	2.76	0.54
49:DR:25:LEU:H	49:DR:94:THR:HG21	1.73	0.54
8:CI:34:LEU:HD21	8:CI:48:ARG:NE	2.18	0.54
1:AA:242:G:H2'	1:AA:243:A:H5''	1.88	0.54
6:CG:125:ASP:OD2	6:CG:130:LYS:HD2	2.08	0.54
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.89	0.54
21:CU:28:LEU:HD23	21:CU:29:ALA:N	2.23	0.54
13:AN:60:ARG:HG3	13:AN:62:ARG:HG3	1.90	0.54
13:AN:50:LEU:H	13:AN:51:PRO:CD	2.21	0.54
1:CA:1152:A:H2'	1:CA:1153:G:C8	2.42	0.54
46:DU:11:ILE:O	46:DU:11:ILE:HD13	2.07	0.54
23:BB:37:C:O2'	23:BB:38:A:H5'	2.08	0.54
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	1.88	0.54
49:BR:19:THR:HG22	49:BR:97:LYS:HG3	1.90	0.54
25:DC:243:PRO:O	25:DC:250:GLN:HA	2.08	0.54
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.90	0.54
23:BB:416:U:H2'	23:BB:417:C:C6	2.43	0.54
1:CA:813:U:H5''	1:CA:816:A:H62	1.74	0.54
23:BB:483:A:H2'	23:BB:484:C:O4'	2.07	0.54
23:BB:2080:A:OP1	51:BZ:20:HIS:HB3	2.08	0.54
23:DB:2774:C:OP1	26:DD:169:ARG:HG3	2.08	0.54
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.08	0.54
23:DB:1459:G:H4'	23:DB:1461:C:N4	2.23	0.54
1:CA:512:U:H2'	1:CA:513:C:C6	2.43	0.54
23:DB:1215:G:O2'	23:DB:1216:G:H5'	2.08	0.54
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.08	0.54
6:AG:45:ALA:O	6:AG:49:LEU:HD23	2.07	0.54
28:BP:62:LYS:HE3	28:BP:64:SER:OG	2.08	0.54
1:AA:159:G:H1	1:AA:163:C:N4	2.06	0.54
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.73	0.54
1:AA:868:C:H2'	1:AA:869:G:O4'	2.08	0.54
23:BB:836:G:H2'	23:BB:837:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:686:U:O4	1:AA:703:G:H1'	2.07	0.54
1:CA:470:C:H2'	1:CA:471:U:C6	2.42	0.54
23:BB:1114:C:H2'	23:BB:1115:G:C8	2.43	0.54
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.42	0.54
23:BB:1132:U:H5'	23:BB:1132:U:H6	1.73	0.54
12:CM:5:GLY:C	12:CM:7:ASN:H	2.11	0.54
1:CA:323:U:H2'	1:CA:324:G:O4'	2.08	0.54
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.22	0.54
37:BL:124:GLY:O	37:BL:125:LEU:HG	2.09	0.53
20:CB:44:LYS:O	20:CB:47:PRO:HD2	2.08	0.53
25:BC:117:SER:CB	25:BC:128:THR:HB	2.38	0.53
47:BF:3:LEU:HB2	47:BF:100:GLU:OE2	2.08	0.53
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.08	0.53
49:BR:10:LYS:HD2	49:BR:10:LYS:N	2.23	0.53
23:BB:141:G:H1	50:BT:2:ILE:CD1	2.21	0.53
19:AT:38:ILE:HD11	19:AT:82:ILE:HG22	1.89	0.53
41:DJ:19:ASP:OD2	41:DJ:58:ASN:HB2	2.08	0.53
18:CS:14:LEU:O	18:CS:18:VAL:HG12	2.07	0.53
18:CS:62:THR:HB	18:CS:64:GLU:OE1	2.08	0.53
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.25	0.53
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.71	0.53
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.89	0.53
23:DB:850:U:O3'	30:DY:22:THR:HG22	2.07	0.53
40:DH:96:THR:HG23	40:DH:97:ARG:N	2.22	0.53
3:CD:25:ARG:HH12	3:CD:30:LYS:HE3	1.73	0.53
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.73	0.53
1:CA:465:A:O2'	1:CA:466:A:H3'	2.08	0.53
23:DB:636:G:O5'	37:DL:128:THR:HG22	2.07	0.53
11:CL:36:VAL:HA	11:CL:52:CYS:HA	1.89	0.53
1:CA:840:C:H3'	1:CA:842:U:OP2	2.09	0.53
23:BB:1804:C:OP1	25:BC:256:THR:HB	2.08	0.53
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.23	0.53
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.43	0.53
35:BV:80:HIS:CD2	35:BV:82:TYR:H	2.24	0.53
23:BB:1509:A:C3'	23:BB:1510:G:H5'	2.38	0.53
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	1.90	0.53
23:DB:709:U:H2'	23:DB:710:U:C6	2.43	0.53
23:BB:946:C:H2'	23:BB:947:A:H8	1.72	0.53
1:CA:300:A:H2'	1:CA:301:G:O4'	2.07	0.53
1:AA:939:G:H5''	6:AG:101:ARG:HH22	1.72	0.53
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.23	0.53
1:CA:939:G:H5''	6:CG:101:ARG:HH12	1.73	0.53
41:DJ:88:THR:HG22	41:DJ:91:GLU:HG3	1.90	0.53
35:BV:1:MET:CE	35:BV:2:PHE:H	2.20	0.53
52:DW:67:LYS:O	52:DW:68:PHE:HB2	2.07	0.53
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.08	0.53
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.88	0.53
11:AL:38:THR:HG22	11:AL:50:LYS:HG2	1.90	0.53
48:DG:79:THR:HG22	48:DG:80:GLU:HG2	1.90	0.53
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.23	0.53
2:AC:171:ARG:NH1	2:AC:171:ARG:HB2	2.23	0.53
25:DC:6:LYS:O	25:DC:8:THR:HG23	2.08	0.53
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.38	0.53
37:BL:93:ASN:O	37:BL:95:LEU:N	2.41	0.53
25:DC:143:VAL:HG12	25:DC:144:GLU:H	1.72	0.53
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.24	0.53
44:DQ:59:LEU:HD13	44:DQ:60:TRP:N	2.23	0.53
44:BQ:59:LEU:HD13	44:BQ:60:TRP:N	2.23	0.53
44:BQ:94:LEU:CD1	49:BR:13:ARG:HB2	2.38	0.53
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.29	0.53
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.08	0.53
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.23	0.53
3:AD:152:SER:HA	3:AD:155:LYS:HD3	1.90	0.53
50:DT:55:VAL:HG22	50:DT:87:LEU:HD23	1.90	0.53
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.07	0.53
42:BN:83:LEU:HA	42:BN:86:ARG:CG	2.34	0.53
52:DW:37:VAL:CG1	52:DW:38:ARG:H	2.18	0.53
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.08	0.53
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.23	0.53
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.43	0.53
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.09	0.53
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.18	0.53
13:AN:26:LEU:CD2	13:AN:27:LYS:H	2.19	0.53
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.08	0.53
3:CD:196:GLU:O	3:CD:199:ILE:HG12	2.08	0.53
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.71	0.53
29:DE:119:ILE:HD11	29:DE:185:LYS:HZ1	1.73	0.53
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.08	0.53
23:BB:242:G:N7	34:B3:4:LYS:HG2	2.23	0.53
23:BB:582:A:H2'	23:BB:583:G:C8	2.43	0.53
38:BM:108:VAL:HG22	38:BM:109:PRO:HD2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:412:A:H1'	1:AA:413:G:C8	2.44	0.53
23:DB:64:A:H2'	23:DB:65:U:C6	2.43	0.53
20:CB:119:GLN:HA	20:CB:122:ASP:HB3	1.89	0.53
3:CD:155:LYS:HG2	3:CD:156:ALA:N	2.23	0.53
23:BB:79:C:HO2'	23:BB:346:A:H1'	1.72	0.53
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.42	0.53
1:CA:8:A:H61	3:CD:53:GLN:HE22	1.56	0.53
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.73	0.53
43:BO:35:ILE:HG13	43:BO:71:ALA:CB	2.38	0.53
28:DP:112:ARG:HB2	28:DP:112:ARG:HH11	1.74	0.53
8:CI:7:GLY:HA3	8:CI:81:GLY:O	2.07	0.53
50:DT:50:LEU:C	50:DT:52:GLU:H	2.10	0.53
23:DB:458:G:O2'	36:D2:39:ARG:HD2	2.08	0.53
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.44	0.53
20:CB:13:VAL:HG11	20:CB:207:ARG:HG2	1.91	0.53
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.43	0.53
45:BS:12:SER:O	45:BS:13:SER:HB3	2.08	0.53
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.09	0.53
23:BB:770:G:H1'	23:BB:1379:U:C4	2.43	0.53
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.90	0.53
45:DS:12:SER:O	45:DS:13:SER:HB3	2.08	0.53
26:BD:35:THR:O	26:BD:36:GLN:HB3	2.08	0.53
25:DC:1:ALA:HB3	25:DC:19:VAL:HG23	1.90	0.53
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.44	0.53
1:CA:418:C:H2'	1:CA:419:C:H6	1.72	0.53
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.08	0.53
52:DW:50:VAL:HG23	52:DW:61:LYS:CD	2.35	0.53
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.74	0.53
37:DL:95:LEU:O	37:DL:100:ILE:HG22	2.08	0.53
1:AA:797:C:O2'	1:AA:798:U:H5'	2.09	0.53
25:BC:143:VAL:HG12	25:BC:144:GLU:H	1.72	0.53
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.89	0.53
47:BF:134:GLN:C	47:BF:136:ILE:H	2.10	0.53
47:BF:147:ARG:HB3	47:BF:147:ARG:CZ	2.38	0.53
47:BF:168:LEU:O	47:BF:170:ALA:N	2.41	0.53
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.08	0.53
8:CI:62:LEU:HD23	8:CI:64:ILE:HD11	1.91	0.53
23:BB:773:U:H4'	25:BC:45:ASN:O	2.07	0.53
50:BT:55:VAL:HA	50:BT:87:LEU:HA	1.89	0.53
23:DB:78:U:H2'	23:DB:79:C:H6	1.72	0.53
1:AA:437:U:H5''	3:AD:151:GLN:NE2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:14:PRO:HA	50:DT:32:LEU:CB	2.38	0.53
50:DT:43:ILE:O	50:DT:46:ALA:HB3	2.08	0.53
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.19	0.53
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.71	0.53
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.23	0.53
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.90	0.53
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.08	0.53
51:DZ:67:VAL:O	51:DZ:71:LEU:HD23	2.08	0.53
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.74	0.53
1:CA:412:A:H61	3:CD:29:THR:CG2	2.21	0.53
1:CA:204:G:H2'	1:CA:205:A:C8	2.43	0.53
16:AQ:16:MET:HB2	16:AQ:19:SER:HB2	1.90	0.53
7:CH:6:ILE:HD11	7:CH:31:LEU:HD23	1.91	0.53
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.88	0.53
23:BB:979:A:H2'	23:BB:982:C:H42	1.73	0.53
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.90	0.53
48:BG:10:VAL:HG23	48:BG:48:THR:HA	1.89	0.53
23:BB:1509:A:H3'	23:BB:1510:G:H5'	1.89	0.53
3:CD:53:GLN:HB3	3:CD:202:LEU:HB2	1.89	0.53
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.09	0.53
12:CM:96:VAL:C	12:CM:98:GLY:H	2.12	0.53
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.23	0.53
23:DB:303:G:H2'	23:DB:304:U:C6	2.43	0.53
26:BD:154:LYS:HG2	26:BD:155:VAL:N	2.24	0.53
23:BB:851:C:H2'	23:BB:852:U:H6	1.73	0.53
23:DB:184:C:H2'	23:DB:185:G:C8	2.43	0.53
50:DT:12:ARG:NH1	50:DT:12:ARG:HB3	2.23	0.53
23:DB:235:U:H2'	23:DB:236:C:H6	1.73	0.53
1:AA:1028:C:H3'	1:AA:1029:U:H6	1.73	0.53
23:DB:2024:G:O2'	23:DB:2025:C:H5'	2.08	0.53
22:BA:14:U:H4'	22:BA:70:C:O2	2.08	0.53
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.72	0.53
23:DB:2309:A:H61	47:DF:75:GLY:HA3	1.73	0.53
23:BB:1771:C:H2'	23:BB:1772:A:C8	2.43	0.53
1:CA:987:G:O2'	1:CA:988:G:H5'	2.08	0.53
6:AG:76:SER:HA	6:AG:84:TYR:O	2.07	0.53
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.24	0.53
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.07	0.53
51:DZ:37:ARG:HA	51:DZ:48:THR:HB	1.89	0.53
48:DG:59:ASP:O	48:DG:63:GLN:HB2	2.08	0.53
23:DB:2660:A:H2'	23:DB:2661:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1450:G:H21	23:DB:1452:G:H1	1.56	0.53
23:BB:116:C:H2'	23:BB:117:G:C8	2.43	0.53
10:CK:36:ARG:HG3	10:CK:36:ARG:HH11	1.74	0.53
28:DP:110:LYS:HD2	28:DP:110:LYS:N	2.23	0.53
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.07	0.53
37:DL:77:ILE:HD11	37:DL:95:LEU:HD22	1.91	0.53
13:AN:68:ARG:NH1	13:AN:68:ARG:HB3	2.21	0.53
20:AB:46:VAL:HA	20:AB:49:PHE:HD2	1.74	0.53
1:AA:1127:G:H5'	1:AA:1280:A:O2'	2.08	0.53
8:AI:41:GLU:C	8:AI:43:ALA:H	2.12	0.53
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.27	0.53
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.71	0.53
49:DR:49:ILE:HD13	49:DR:53:PHE:N	2.23	0.53
40:BH:4:ILE:HA	40:BH:18:GLN:HA	1.91	0.53
26:DD:13:ARG:HH12	28:DP:74:GLN:NE2	2.05	0.53
27:DK:71:ARG:CG	27:DK:105:ARG:HH21	2.21	0.53
38:DM:19:GLY:N	38:DM:38:ARG:HH12	1.98	0.53
23:DB:347:A:H2'	23:DB:348:A:C8	2.43	0.53
18:AS:62:THR:HB	18:AS:64:GLU:OE1	2.08	0.53
23:BB:374:A:N6	23:BB:400:G:H1'	2.23	0.53
23:BB:2060:A:H3'	29:BE:63:LYS:HZ1	1.72	0.53
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.90	0.53
47:BF:78:ILE:HA	47:BF:82:TYR:CD1	2.44	0.53
23:DB:91:A:H1'	23:DB:92:U:C6	2.43	0.53
20:AB:62:ARG:H	20:AB:62:ARG:HD2	1.72	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
25:DC:94:LEU:HA	25:DC:100:ARG:HB3	1.90	0.53
38:BM:37:GLY:HA3	38:BM:127:LYS:NZ	2.22	0.53
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.22	0.53
30:BY:2:LYS:HG2	30:BY:3:THR:H	1.72	0.53
46:DU:12:VAL:HA	46:DU:69:VAL:HA	1.89	0.53
23:BB:1176:U:H2'	23:BB:1177:G:O4'	2.09	0.53
35:BV:62:THR:HG22	35:BV:71:LYS:NZ	2.23	0.53
1:AA:632:U:H5''	1:AA:633:G:H8	1.72	0.53
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.73	0.53
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.89	0.53
1:CA:840:C:C2	1:CA:842:U:H4'	2.43	0.53
1:AA:560:A:H5'	1:AA:566:G:N2	2.23	0.53
1:AA:1020:G:N3	1:AA:1020:G:H2'	2.22	0.53
1:CA:1476:A:H2'	1:CA:1477:U:O4'	2.08	0.53
48:BG:47:ASN:OD1	48:BG:48:THR:HG23	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.08	0.53
23:DB:878:A:H5'	23:DB:900:A:H61	1.73	0.53
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.43	0.53
1:CA:430:A:P	3:CD:6:PRO:HA	2.49	0.53
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.43	0.53
35:BV:53:LYS:HD3	35:BV:55:GLU:HB2	1.89	0.53
1:CA:796:C:H4'	10:CK:126:ARG:NH2	2.23	0.53
23:BB:1131:G:N2	23:BB:2024:G:H21	2.07	0.53
23:DB:49:A:H5''	23:DB:51:G:O4'	2.08	0.53
1:CA:512:U:O2'	1:CA:513:C:H5'	2.09	0.53
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.43	0.53
26:DD:110:THR:HG23	26:DD:171:THR:HB	1.89	0.53
23:BB:2704:C:H2'	23:BB:2705:A:O4'	2.08	0.53
25:BC:53:ILE:O	25:BC:53:ILE:HG23	2.08	0.53
32:B4:27:CYS:SG	32:B4:29:ALA:HB3	2.49	0.53
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.89	0.53
23:DB:2332:C:H5'	52:DW:40:ARG:HB3	1.90	0.53
37:BL:92:LEU:HD21	37:BL:123:ARG:NH2	2.23	0.53
13:CN:9:GLU:OE2	13:CN:60:ARG:HG2	2.08	0.53
47:BF:137:PHE:O	47:BF:139:GLU:N	2.41	0.53
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.37	0.53
49:DR:49:ILE:HD12	49:DR:49:ILE:O	2.08	0.53
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.43	0.53
48:BG:9:VAL:C	48:BG:11:PRO:HD3	2.29	0.53
44:BQ:56:PHE:HA	44:BQ:59:LEU:HB3	1.90	0.53
49:BR:25:LEU:H	49:BR:94:THR:HG21	1.72	0.53
8:CI:5:TYR:HD1	8:CI:20:ILE:HG22	1.72	0.53
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.24	0.53
23:BB:1060:U:O2	23:BB:1088:A:C8	2.62	0.53
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.26	0.53
19:AT:67:HIS:CE1	19:AT:68:LYS:HE3	2.44	0.53
30:BY:9:THR:OG1	30:BY:55:LYS:HB2	2.08	0.53
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.24	0.53
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.91	0.53
43:BO:18:LEU:HD23	43:BO:25:ARG:HD2	1.90	0.53
13:CN:50:LEU:HG	13:CN:51:PRO:HD3	1.89	0.53
46:BU:11:ILE:O	46:BU:11:ILE:HD13	2.08	0.53
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.73	0.53
2:AC:149:LYS:HG3	2:AC:168:ARG:HB2	1.90	0.53
18:CS:65:MET:HG3	18:CS:73:PHE:CZ	2.44	0.53
11:CL:81:ILE:CG2	11:CL:94:TYR:HB3	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:72:LYS:CB	41:BJ:89:PHE:HB2	2.39	0.53
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.42	0.53
9:AJ:26:VAL:O	9:AJ:30:LYS:HG3	2.09	0.53
23:BB:246:C:H2'	23:BB:247:G:H5'	1.91	0.53
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.72	0.53
23:BB:2356:U:H4'	52:BW:16:GLU:OE1	2.07	0.53
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.90	0.53
1:AA:658:C:H2'	1:AA:659:U:C6	2.42	0.53
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.42	0.53
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.73	0.53
1:AA:1226:C:H5''	12:AM:101:THR:CB	2.37	0.53
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	2.08	0.53
43:BO:6:ALA:O	43:BO:10:ARG:HG3	2.07	0.53
1:CA:212:G:H2'	1:CA:213:G:H8	1.72	0.53
39:DX:29:ARG:HB2	39:DX:29:ARG:HH21	1.73	0.53
6:AG:71:THR:HG22	6:AG:141:HIS:CE1	2.43	0.53
1:AA:939:G:H5''	6:AG:101:ARG:NH1	2.24	0.53
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	1.89	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
26:DD:101:PHE:O	26:DD:180:VAL:HG11	2.09	0.53
17:AR:52:ARG:HB3	17:AR:56:ARG:NH2	2.24	0.53
6:AG:113:LYS:HB2	6:AG:117:LEU:HD12	1.91	0.53
1:CA:458:U:H2'	1:CA:459:A:H8	1.74	0.53
23:BB:909:A:H2'	23:BB:912:C:H5	1.74	0.53
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.90	0.53
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.44	0.53
23:BB:2776:A:H4'	23:BB:2777:G:H5''	1.89	0.53
17:CR:52:ARG:HB3	17:CR:56:ARG:NH2	2.24	0.53
23:DB:1909:C:O2'	23:DB:1910:G:H5'	2.08	0.53
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.08	0.53
1:AA:512:U:H2'	1:AA:513:C:C6	2.43	0.53
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.09	0.53
50:DT:62:VAL:HG12	50:DT:63:VAL:H	1.73	0.53
50:DT:64:LYS:H	50:DT:64:LYS:HD2	1.74	0.53
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.91	0.53
20:CB:49:PHE:HA	20:CB:212:TYR:OH	2.08	0.53
46:BU:85:ARG:NH1	46:BU:86:PHE:H	2.07	0.53
48:DG:17:LYS:HZ2	48:DG:18:ILE:N	2.07	0.53
41:BJ:3:THR:HG21	44:BQ:60:TRP:NE1	2.23	0.53
44:BQ:93:ILE:O	44:BQ:96:ASP:HB3	2.08	0.53
1:AA:80:A:C4	1:AA:81:A:H1'	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.24	0.53
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.17	0.53
23:DB:350:G:H2'	23:DB:351:C:C6	2.44	0.53
40:DH:12:LEU:HD21	40:DH:25:TYR:HE2	1.73	0.53
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.38	0.53
30:DY:9:THR:OG1	30:DY:55:LYS:HB2	2.09	0.53
23:BB:286:U:H2'	23:BB:287:G:H8	1.73	0.53
1:AA:1313:U:OP2	18:AS:5:LYS:HA	2.09	0.53
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	1.90	0.53
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.73	0.53
27:BK:99:ILE:N	27:BK:118:LEU:HD22	2.23	0.53
6:AG:145:GLU:CD	6:AG:148:LYS:HD2	2.29	0.53
1:AA:412:A:H1'	1:AA:413:G:H8	1.72	0.53
23:BB:132:G:O2'	23:BB:133:U:H5'	2.09	0.53
3:CD:27:ILE:O	3:CD:28:ASP:HB3	2.08	0.53
35:DV:56:PHE:O	35:DV:61:LEU:HD21	2.09	0.53
23:DB:979:A:H2'	23:DB:982:C:N4	2.23	0.53
23:BB:981:A:H2'	23:BB:982:C:H5''	1.90	0.53
41:DJ:104:ALA:O	41:DJ:108:MET:HG2	2.08	0.53
41:DJ:72:LYS:CB	41:DJ:89:PHE:HB2	2.39	0.53
23:BB:548:G:H2'	23:BB:548:G:N3	2.23	0.53
1:AA:182:A:H1'	1:AA:183:C:C5	2.43	0.53
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.09	0.53
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.74	0.53
23:BB:224:U:O4	23:BB:420:C:H5'	2.08	0.53
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.44	0.53
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.72	0.53
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.43	0.53
1:CA:1138:G:H3'	1:CA:1138:G:N3	2.24	0.53
48:DG:40:VAL:HG22	48:DG:64:ALA:HA	1.91	0.53
1:CA:737:C:H2'	1:CA:738:C:C6	2.44	0.53
26:BD:159:LYS:HA	26:BD:159:LYS:HZ3	1.74	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.37	0.53
23:BB:870:U:O2'	23:BB:871:U:H5'	2.08	0.53
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.43	0.53
23:DB:526:A:N6	23:DB:2626:C:H4'	2.23	0.53
8:CI:98:ARG:HA	8:CI:103:VAL:HG22	1.90	0.53
23:BB:1771:C:O2'	23:BB:1772:A:H5'	2.08	0.53
23:DB:2074:U:H2'	23:DB:2075:U:C6	2.44	0.53
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.44	0.53
1:AA:216:U:H2'	1:AA:217:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:215:C:H2'	1:CA:216:U:C6	2.44	0.53
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.91	0.53
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.74	0.53
23:BB:657:U:H2'	23:BB:658:U:C6	2.44	0.53
52:DW:49:ASN:CB	52:DW:60:ALA:HA	2.28	0.53
44:DQ:105:PHE:HA	44:DQ:108:LEU:CD1	2.36	0.53
44:DQ:93:ILE:O	44:DQ:96:ASP:HB3	2.09	0.53
44:BQ:73:ILE:HG21	44:BQ:109:VAL:HG13	1.91	0.53
44:BQ:91:ARG:NE	49:BR:11:GLN:HB2	2.23	0.53
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.27	0.53
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.09	0.53
35:DV:26:PHE:CE2	35:DV:44:HIS:HA	2.43	0.53
50:BT:55:VAL:HG22	50:BT:87:LEU:HD23	1.90	0.53
23:DB:704:G:H2'	23:DB:726:G:N2	2.15	0.53
23:DB:1244:A:H5''	37:DL:8:PRO:CD	2.32	0.53
23:BB:2306:C:C3'	23:BB:2307:G:H5'	2.34	0.53
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.90	0.53
6:AG:125:ASP:HB3	6:AG:130:LYS:HB3	1.91	0.53
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.09	0.53
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.44	0.53
40:BH:49:ALA:HB3	40:BH:50:ARG:HH22	1.72	0.53
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.90	0.53
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.09	0.53
34:B3:3:ILE:HG23	37:BL:48:ARG:HH12	1.72	0.53
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.72	0.53
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.90	0.53
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.26	0.53
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.24	0.53
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.90	0.53
1:CA:270:A:H2'	1:CA:271:C:H6	1.74	0.53
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.90	0.53
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.38	0.53
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.09	0.53
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.38	0.53
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.90	0.53
3:CD:152:SER:HA	3:CD:155:LYS:HD3	1.91	0.53
48:DG:47:ASN:OD1	48:DG:48:THR:HG23	2.08	0.53
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.72	0.53
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.39	0.53
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.43	0.53
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:36:GLN:O	26:BD:36:GLN:HG3	2.08	0.53
39:DX:45:GLN:O	39:DX:47:ARG:N	2.41	0.53
48:BG:79:THR:HG22	48:BG:80:GLU:HG2	1.90	0.53
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.43	0.53
1:AA:407:U:O2'	3:AD:112:GLU:HG3	2.08	0.53
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	1.91	0.53
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.39	0.53
35:DV:46:LYS:HD2	35:DV:46:LYS:N	2.24	0.53
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.08	0.53
23:BB:11:C:H2'	23:BB:12:U:H5'	1.90	0.53
23:BB:2348:U:OP1	34:B3:37:THR:HG21	2.08	0.53
23:BB:1030:C:O2'	23:BB:1031:G:H5'	2.08	0.53
37:BL:77:ILE:HD11	37:BL:95:LEU:HD13	1.91	0.53
23:BB:2365:G:H4'	52:BW:59:PHE:CD1	2.44	0.53
20:CB:45:THR:HG23	20:CB:200:PRO:HG2	1.91	0.53
42:BN:38:LEU:HG	42:BN:42:LYS:HD2	1.91	0.53
49:DR:10:LYS:N	49:DR:10:LYS:HD2	2.24	0.53
8:CI:41:GLU:C	8:CI:43:ALA:H	2.11	0.53
26:BD:61:THR:O	26:BD:64:GLU:HB2	2.09	0.53
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.27	0.53
25:BC:166:ARG:CB	25:BC:171:VAL:HG22	2.39	0.53
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.08	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.90	0.53
23:DB:443:A:C8	29:DE:40:ARG:HD3	2.44	0.53
3:CD:59:LYS:HE3	3:CD:194:ILE:HD12	1.90	0.53
23:DB:852:U:H2'	23:DB:853:C:C6	2.44	0.53
1:CA:978:A:H5'	1:CA:1362:A:N6	2.24	0.53
48:BG:167:VAL:HG21	48:BG:169:ARG:HH12	1.74	0.53
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.21	0.53
1:CA:484:G:H4'	1:CA:485:U:C5'	2.39	0.53
39:BX:53:VAL:O	39:BX:57:LEU:HD23	2.07	0.53
46:DU:78:LYS:HZ2	46:DU:78:LYS:HA	1.73	0.53
1:AA:413:G:O6	3:AD:32:LYS:HG3	2.09	0.53
1:CA:1020:G:N3	1:CA:1020:G:H2'	2.24	0.53
1:AA:674:G:H2'	1:AA:675:A:H8	1.73	0.53
1:CA:502:A:H2'	1:CA:503:C:C6	2.43	0.53
23:DB:233:A:N6	23:DB:428:A:N6	2.57	0.53
23:DB:96:C:H4'	39:DX:41:HIS:CE1	2.43	0.53
23:DB:673:C:H5''	29:DE:76:PRO:HD2	1.90	0.53
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.43	0.53
23:DB:438:G:H2'	23:DB:439:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:766:A:H2	1:CA:1525:G:N3	2.06	0.53
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.44	0.53
23:BB:1192:G:O2'	23:BB:1193:G:H5'	2.09	0.53
12:AM:43:LYS:O	12:AM:46:GLU:HG3	2.09	0.53
12:AM:5:GLY:C	12:AM:7:ASN:H	2.12	0.53
29:DE:137:LYS:O	29:DE:141:MET:HG3	2.08	0.53
37:BL:95:LEU:O	37:BL:100:ILE:HG22	2.09	0.53
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.91	0.53
8:AI:18:VAL:HG13	8:AI:64:ILE:HG13	1.89	0.53
27:DK:35:VAL:HG12	27:DK:69:VAL:CG2	2.38	0.53
44:DQ:56:PHE:HA	44:DQ:59:LEU:HB3	1.90	0.53
48:BG:25:ILE:HD13	48:BG:74:MET:HE2	1.91	0.53
44:BQ:111:LYS:HD2	49:BR:50:GLY:HA3	1.89	0.53
3:AD:147:LYS:HD3	3:AD:148:ALA:N	2.24	0.53
50:BT:11:LEU:HD11	50:BT:46:ALA:HB3	1.90	0.53
28:DP:4:ILE:C	28:DP:6:GLN:N	2.61	0.53
3:CD:160:LEU:CD1	3:CD:160:LEU:H	2.17	0.53
19:AT:38:ILE:HD13	19:AT:85:LEU:HD13	1.91	0.53
23:BB:2052:A:OP1	26:BD:145:SER:HA	2.09	0.53
5:CF:38:ARG:NH2	5:CF:63:ASN:HD21	2.07	0.53
20:CB:148:GLY:O	20:CB:151:LYS:HG2	2.09	0.53
42:BN:28:LEU:O	42:BN:28:LEU:HD22	2.09	0.53
30:BY:6:ILE:HD13	30:BY:6:ILE:N	2.23	0.53
48:BG:86:LEU:HD21	48:BG:148:ARG:HB3	1.91	0.53
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.29	0.53
23:DB:580:U:O3'	44:DQ:30:VAL:HG13	2.08	0.53
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.09	0.53
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.74	0.53
23:DB:592:A:H2'	23:DB:593:U:H6	1.74	0.53
43:DO:88:LYS:HG2	43:DO:89:ASP:H	1.73	0.53
11:CL:54:VAL:HG22	11:CL:79:ILE:HD11	1.91	0.53
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.56	0.53
23:BB:2231:U:O2'	23:BB:2232:C:H5'	2.09	0.53
25:DC:156:SER:HB3	25:DC:159:THR:HG21	1.91	0.53
23:BB:1411:U:H2'	23:BB:1412:U:C6	2.44	0.53
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.24	0.53
23:DB:639:U:H2'	23:DB:640:C:H6	1.73	0.53
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.74	0.53
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.44	0.53
5:AF:86:ARG:HD2	17:AR:63:TYR:O	2.09	0.53
9:CJ:52:LEU:H	9:CJ:52:LEU:HD12	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2322:A:N6	23:DB:2333:A:N6	2.57	0.53
8:AI:98:ARG:NE	8:AI:103:VAL:HG21	2.24	0.53
23:BB:532:A:N3	23:BB:532:A:H2'	2.24	0.53
23:BB:176:A:O2'	23:BB:177:G:H5'	2.08	0.53
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.73	0.53
31:B0:32:THR:OG1	31:B0:50:GLY:HA2	2.08	0.53
1:CA:928:G:H2'	1:CA:929:G:H8	1.73	0.53
1:CA:575:G:H4'	1:CA:576:C:O5'	2.08	0.53
23:BB:1766:G:O2'	23:BB:1767:G:H5'	2.09	0.53
28:BP:83:ILE:HD13	28:BP:83:ILE:O	2.09	0.53
2:AC:106:ARG:HD2	2:AC:106:ARG:H	1.73	0.53
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.44	0.53
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.37	0.53
8:CI:51:LEU:CB	8:CI:56:MET:HG2	2.28	0.53
26:DD:55:LYS:H	26:DD:76:GLY:H	1.57	0.53
10:CK:31:VAL:HG23	10:CK:44:ALA:HB3	1.91	0.53
48:DG:97:VAL:HA	48:DG:102:ILE:HA	1.91	0.53
45:DS:29:VAL:CA	45:DS:32:ALA:HB3	2.37	0.53
3:AD:59:LYS:HE3	3:AD:194:ILE:HD12	1.91	0.53
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.90	0.53
5:CF:42:TRP:HE3	5:CF:45:ARG:HH12	1.57	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.39	0.53
23:BB:1438:U:H2'	23:BB:1439:A:O4'	2.09	0.53
23:DB:361:G:O2'	23:DB:362:A:H5'	2.09	0.53
13:AN:50:LEU:N	13:AN:51:PRO:CD	2.71	0.53
1:CA:16:A:O2'	1:CA:1080:A:H4'	2.08	0.53
40:DH:135:HIS:HB3	40:DH:138:VAL:CB	2.37	0.53
23:BB:2849:U:N3	23:BB:2867:G:C8	2.75	0.53
23:BB:2867:G:N7	28:BP:20:ARG:NH1	2.57	0.53
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.90	0.53
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.74	0.53
1:AA:239:U:C5'	1:AA:239:U:H6	2.22	0.53
1:CA:238:A:C2'	1:CA:239:U:H5''	2.38	0.53
7:AH:6:ILE:HD11	7:AH:31:LEU:HD23	1.89	0.53
47:BF:41:GLU:HB2	47:BF:48:LEU:HD11	1.91	0.53
23:BB:544:C:H2'	23:BB:545:U:C6	2.44	0.53
11:CL:36:VAL:HG12	11:CL:52:CYS:HB2	1.91	0.53
1:CA:250:A:H1'	1:CA:252:U:C5	2.44	0.53
1:CA:437:U:H1'	3:CD:115:GLN:NE2	2.24	0.53
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.44	0.53
47:BF:141:ASP:HB2	47:BF:144:LYS:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.74	0.53
1:AA:1308:U:OP2	12:AM:97:ARG:HB2	2.09	0.53
23:DB:1736:U:H2'	23:DB:1737:G:O4'	2.09	0.53
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.73	0.53
20:AB:121:GLN:NE2	20:AB:122:ASP:H	2.07	0.53
23:DB:937:C:H2'	23:DB:938:G:H8	1.73	0.53
25:BC:51:ARG:NH2	25:BC:246:PRO:HG2	2.24	0.53
23:DB:1771:C:H2'	23:DB:1772:A:C8	2.43	0.53
23:DB:318:C:H2'	23:DB:319:G:H8	1.74	0.53
3:CD:43:ARG:NH2	3:CD:45:PRO:HA	2.24	0.53
1:CA:939:G:H5''	6:CG:101:ARG:NH2	2.24	0.53
1:AA:720:C:H5''	17:AR:40:PRO:HA	1.91	0.53
48:BG:59:ASP:O	48:BG:63:GLN:HB2	2.09	0.53
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.44	0.53
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.09	0.53
23:DB:2445:G:O2'	23:DB:2446:G:H5'	2.09	0.53
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.24	0.53
23:BB:2489:U:O2'	23:BB:2490:G:H5'	2.09	0.53
6:CG:74:VAL:HA	6:CG:87:PRO:HA	1.89	0.53
23:DB:2776:A:H4'	23:DB:2777:G:H5''	1.91	0.53
23:DB:354:A:H2'	23:DB:355:U:C6	2.44	0.53
1:AA:229:U:H2'	1:AA:230:G:C8	2.44	0.53
50:BT:62:VAL:HG12	50:BT:63:VAL:H	1.74	0.53
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.08	0.53
23:DB:1106:G:H2'	23:DB:1107:G:H8	1.74	0.53
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.08	0.52
8:AI:23:GLY:H	8:AI:61:ASP:H	1.55	0.52
48:BG:15:ASP:HB2	48:BG:26:LYS:HB3	1.90	0.52
26:BD:11:MET:H	26:BD:25:THR:HA	1.74	0.52
20:AB:119:GLN:C	20:AB:125:PHE:HB3	2.29	0.52
47:BF:3:LEU:HD11	47:BF:172:PHE:CD1	2.44	0.52
26:DD:51:THR:HG22	26:DD:52:THR:H	1.74	0.52
35:BV:42:LEU:HD11	35:BV:89:ILE:HD11	1.90	0.52
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.39	0.52
25:DC:83:ASP:HB2	25:DC:90:ILE:HB	1.91	0.52
45:DS:46:LEU:O	45:DS:50:VAL:HG23	2.09	0.52
45:BS:24:ILE:CG2	45:BS:71:VAL:HG11	2.36	0.52
47:DF:137:PHE:O	47:DF:139:GLU:N	2.42	0.52
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.91	0.52
19:CT:66:ILE:HG21	19:CT:71:ALA:HB2	1.90	0.52
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:42:LEU:O	2:CC:46:LEU:HB2	2.09	0.52
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	2.09	0.52
4:AE:81:GLN:NE2	4:AE:149:PRO:HD3	2.24	0.52
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.70	0.52
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.24	0.52
42:DN:47:VAL:O	42:DN:51:LEU:HD13	2.10	0.52
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.91	0.52
23:DB:170:U:H2'	23:DB:171:U:H6	1.74	0.52
23:BB:581:C:H2'	23:BB:582:A:H8	1.72	0.52
1:CA:413:G:O6	3:CD:32:LYS:HG3	2.09	0.52
23:BB:2803:G:H2'	23:BB:2804:U:C6	2.44	0.52
1:AA:860:A:H2'	1:AA:861:G:O4'	2.09	0.52
25:DC:57:HIS:CG	25:DC:58:LYS:N	2.76	0.52
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.74	0.52
1:CA:8:A:C5	3:CD:205:LYS:HA	2.43	0.52
22:BA:49:C:O3'	43:BO:68:LYS:HE3	2.08	0.52
23:BB:1736:U:H2'	23:BB:1737:G:O4'	2.10	0.52
23:DB:2065:C:H2'	23:DB:2066:C:C6	2.44	0.52
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.24	0.52
23:BB:849:A:H2'	23:BB:850:U:C6	2.44	0.52
23:BB:937:C:H2'	23:BB:938:G:C8	2.44	0.52
2:AC:91:ALA:CB	2:AC:98:ALA:H	2.23	0.52
1:AA:708:C:H2'	1:AA:709:U:H6	1.72	0.52
27:BK:104:THR:HB	27:BK:106:GLU:OE1	2.09	0.52
1:AA:824:G:O2'	1:AA:825:A:H5'	2.09	0.52
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	1.91	0.52
40:DH:77:THR:HA	40:DH:143:ILE:O	2.08	0.52
1:AA:470:C:H2'	1:AA:471:U:C6	2.44	0.52
23:BB:226:A:H2'	23:BB:227:A:C8	2.43	0.52
35:BV:1:MET:HE2	35:BV:2:PHE:H	1.74	0.52
26:BD:38:LYS:HD2	26:BD:81:GLU:OE1	2.10	0.52
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	1.91	0.52
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.09	0.52
7:AH:54:THR:HG23	7:AH:55:LYS:HG2	1.90	0.52
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.09	0.52
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.44	0.52
52:DW:47:GLY:HA3	52:DW:80:SER:HB2	1.90	0.52
23:DB:2389:G:H5''	23:DB:2390:U:H5'	1.91	0.52
23:BB:2889:C:O2'	23:BB:2890:G:H5'	2.09	0.52
43:BO:28:VAL:HG21	43:BO:106:LEU:HD21	1.90	0.52
15:AP:36:VAL:HG13	15:AP:36:VAL:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.09	0.52
38:BM:90:GLU:HA	38:BM:90:GLU:OE1	2.09	0.52
47:DF:14:LYS:O	47:DF:18:GLU:HB2	2.10	0.52
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.74	0.52
20:AB:20:ARG:HD2	20:AB:37:VAL:HA	1.91	0.52
42:DN:8:ARG:HH21	42:DN:39:PRO:HB3	1.72	0.52
3:CD:122:ILE:O	3:CD:128:VAL:HG23	2.09	0.52
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.90	0.52
44:DQ:94:LEU:C	44:DQ:96:ASP:H	2.13	0.52
26:BD:55:LYS:H	26:BD:76:GLY:H	1.56	0.52
50:DT:30:ILE:O	50:DT:85:VAL:HG23	2.09	0.52
47:DF:78:ILE:N	47:DF:78:ILE:HD12	2.25	0.52
16:CQ:3:LYS:NZ	16:CQ:4:ILE:H	2.00	0.52
23:BB:513:A:O5'	23:BB:513:A:H8	1.92	0.52
38:DM:41:LEU:O	38:DM:94:ALA:N	2.41	0.52
45:BS:71:VAL:HG22	45:BS:71:VAL:O	2.10	0.52
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.91	0.52
23:BB:2675:A:N1	23:BB:2732:G:O6	2.42	0.52
23:BB:2144:G:H3'	23:BB:2146:C:H5'	1.91	0.52
23:DB:1138:G:H2'	23:DB:1139:G:O4'	2.10	0.52
23:DB:849:A:H2'	23:DB:850:U:C6	2.44	0.52
13:CN:50:LEU:N	13:CN:51:PRO:CD	2.71	0.52
23:DB:2675:A:N1	23:DB:2732:G:O6	2.42	0.52
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.90	0.52
46:BU:12:VAL:HG21	46:BU:38:ILE:HG12	1.91	0.52
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.44	0.52
30:BY:2:LYS:HE2	30:BY:4:ILE:CD1	2.37	0.52
42:DN:32:GLU:O	42:DN:114:GLU:HA	2.09	0.52
48:BG:154:GLU:HG2	48:BG:154:GLU:O	2.10	0.52
23:BB:580:U:O2'	23:BB:581:C:H5'	2.09	0.52
23:DB:1387:A:C4'	23:DB:1469:A:H1'	2.39	0.52
1:CA:412:A:H1'	1:CA:413:G:C8	2.44	0.52
1:CA:598:U:H2'	1:CA:599:C:C6	2.44	0.52
34:B3:51:LYS:HD2	34:B3:54:LEU:HD22	1.91	0.52
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.45	0.52
23:BB:547:A:H2	23:BB:549:G:N2	2.06	0.52
29:BE:195:GLN:HA	29:BE:198:GLU:OE1	2.09	0.52
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.44	0.52
23:DB:898:C:H2'	23:DB:899:A:H5''	1.91	0.52
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.38	0.52
1:CA:208:U:H2'	1:CA:210:C:N3	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:147:G:H2'	1:AA:148:G:C8	2.43	0.52
10:AK:30:ILE:HG22	10:AK:45:THR:HA	1.91	0.52
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.09	0.52
23:DB:794:A:H2'	23:DB:795:C:H6	1.74	0.52
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.44	0.52
1:AA:201:G:O2'	1:AA:469:C:H4'	2.09	0.52
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.24	0.52
25:DC:28:PRO:HG2	25:DC:33:LEU:HD11	1.90	0.52
23:DB:686:U:O2	36:D2:8:SER:HB3	2.09	0.52
23:DB:693:A:H2'	23:DB:694:U:C6	2.44	0.52
23:BB:820:A:H2'	23:BB:821:A:O4'	2.09	0.52
5:CF:86:ARG:HD2	17:CR:63:TYR:O	2.08	0.52
47:BF:14:LYS:O	47:BF:18:GLU:HB2	2.09	0.52
2:CC:171:ARG:NH1	2:CC:171:ARG:HB2	2.24	0.52
23:DB:753:A:O2'	23:DB:754:U:H5'	2.09	0.52
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.45	0.52
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.10	0.52
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.09	0.52
23:BB:2336:A:H1'	23:BB:2337:G:OP1	2.09	0.52
37:DL:95:LEU:HB3	37:DL:100:ILE:CG2	2.40	0.52
20:AB:45:THR:HG23	20:AB:200:PRO:HG2	1.91	0.52
40:BH:134:VAL:HG12	40:BH:138:VAL:HG21	1.92	0.52
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.09	0.52
41:DJ:3:THR:HB	41:DJ:44:TYR:HE1	1.75	0.52
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.91	0.52
23:BB:138:U:O3'	23:BB:139:U:H2'	2.09	0.52
35:DV:42:LEU:CD1	35:DV:47:VAL:HG21	2.33	0.52
50:DT:87:LEU:HB2	50:DT:91:GLN:HG2	1.90	0.52
42:BN:29:VAL:HG13	42:BN:78:LYS:HG2	1.91	0.52
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.44	0.52
10:CK:79:LYS:HB2	10:CK:80:ASN:HD22	1.74	0.52
2:CC:71:ARG:O	2:CC:75:VAL:HG23	2.08	0.52
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.44	0.52
23:BB:1140:C:H2'	23:BB:1141:U:H5'	1.91	0.52
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.09	0.52
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.74	0.52
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.44	0.52
46:DU:20:LYS:HB2	46:DU:20:LYS:NZ	2.23	0.52
46:DU:72:PHE:HA	46:DU:78:LYS:O	2.10	0.52
23:DB:2679:A:O2'	23:DB:2680:U:H5'	2.09	0.52
1:CA:412:A:H1'	1:CA:413:G:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:239:U:C5'	1:CA:239:U:H6	2.22	0.52
8:AI:117:LEU:HD22	8:AI:123:ARG:HG2	1.90	0.52
22:BA:29:A:OP2	43:BO:32:PRO:HD2	2.08	0.52
23:BB:847:U:H3	23:BB:933:A:H62	1.57	0.52
25:DC:255:LYS:C	25:DC:257:ARG:H	2.12	0.52
23:DB:1030:C:O2'	23:DB:1031:G:H5'	2.09	0.52
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.44	0.52
23:DB:1640:A:H8	23:DB:1640:A:H5'	1.74	0.52
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.44	0.52
1:CA:384:G:H2'	1:CA:385:C:H6	1.72	0.52
46:BU:60:LYS:HA	46:BU:60:LYS:HE2	1.91	0.52
48:DG:10:VAL:HG23	48:DG:48:THR:HA	1.91	0.52
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.74	0.52
23:DB:1509:A:C3'	23:DB:1510:G:H5'	2.40	0.52
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.24	0.52
45:BS:16:LYS:O	45:BS:19:LEU:HB3	2.10	0.52
40:BH:104:THR:O	40:BH:105:ALA:HB2	2.09	0.52
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.24	0.52
23:DB:814:C:H2'	23:DB:815:C:H6	1.74	0.52
23:BB:2529:G:H4'	48:BG:174:LYS:HG3	1.90	0.52
1:CA:824:G:O2'	1:CA:825:A:H5'	2.09	0.52
14:AO:39:LEU:HD23	14:AO:56:LEU:HD13	1.91	0.52
1:CA:624:C:H2'	1:CA:625:U:C6	2.44	0.52
42:BN:9:GLN:O	42:BN:11:ASN:N	2.42	0.52
23:DB:1674:G:N2	23:DB:1677:A:N1	2.54	0.52
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.45	0.52
1:AA:1405:G:H1'	1:AA:1518:A:O2'	2.09	0.52
23:DB:1322:A:H2'	23:DB:1323:C:H5'	1.92	0.52
1:AA:766:A:H2	1:AA:1525:G:N3	2.07	0.52
1:AA:458:U:H2'	1:AA:459:A:H8	1.75	0.52
23:DB:1041:G:H2'	23:DB:1042:G:H8	1.73	0.52
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.44	0.52
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.08	0.52
7:CH:8:ASP:OD1	7:CH:12:ARG:HD2	2.09	0.52
10:CK:37:GLN:HB2	10:CK:39:ASN:HD22	1.75	0.52
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.10	0.52
23:DB:912:C:O2'	23:DB:913:U:H5'	2.10	0.52
37:DL:47:ARG:HG3	37:DL:50:PHE:HB2	1.91	0.52
23:BB:2273:A:H2'	23:BB:2274:A:C8	2.45	0.52
20:CB:20:ARG:HD2	20:CB:37:VAL:HA	1.91	0.52
48:DG:17:LYS:NZ	48:DG:18:ILE:H	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:4:VAL:HG21	49:DR:40:MET:HB2	1.92	0.52
23:BB:557:C:H2'	23:BB:558:U:H6	1.74	0.52
23:BB:559:G:H21	44:BQ:51:GLN:NE2	2.07	0.52
44:BQ:73:ILE:HD11	44:BQ:77:LYS:HB2	1.91	0.52
44:BQ:94:LEU:C	44:BQ:96:ASP:H	2.13	0.52
49:BR:4:VAL:HG21	49:BR:40:MET:HB2	1.91	0.52
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.09	0.52
50:BT:1:MET:HE3	50:BT:4:GLU:OE2	2.09	0.52
38:DM:19:GLY:H	38:DM:38:ARG:NH1	1.95	0.52
50:DT:11:LEU:HD11	50:DT:46:ALA:HB3	1.92	0.52
47:DF:78:ILE:HA	47:DF:82:TYR:CD1	2.45	0.52
29:BE:130:LYS:C	29:BE:132:LYS:H	2.13	0.52
29:BE:117:ARG:HA	29:BE:185:LYS:NZ	2.23	0.52
23:DB:1201:U:H2'	23:DB:1202:G:C8	2.45	0.52
5:AF:67:PRO:O	5:AF:70:VAL:HG22	2.09	0.52
19:CT:70:LYS:HA	19:CT:73:ARG:NH1	2.24	0.52
1:AA:522:C:H2'	1:AA:523:A:O4'	2.09	0.52
22:BA:32:U:H2'	22:BA:33:G:O4'	2.10	0.52
22:DA:32:U:H1'	22:DA:52:A:N7	2.24	0.52
1:CA:919:A:O2'	1:CA:920:U:H5'	2.09	0.52
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.72	0.52
46:DU:51:LEU:N	46:DU:53:GLN:NE2	2.58	0.52
1:CA:482:A:H2'	1:CA:483:C:O4'	2.10	0.52
46:BU:9:GLU:OE2	46:BU:21:ARG:HD2	2.09	0.52
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.25	0.52
49:BR:71:LYS:HG3	49:BR:72:VAL:N	2.23	0.52
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.73	0.52
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.92	0.52
23:BB:981:A:H4'	23:BB:2037:A:H5'	1.90	0.52
23:DB:286:U:H2'	23:DB:287:G:H8	1.71	0.52
25:BC:255:LYS:C	25:BC:257:ARG:H	2.12	0.52
23:BB:1507:C:C2'	23:BB:1508:A:H4'	2.39	0.52
1:AA:190:A:O5'	1:AA:190:A:H8	1.92	0.52
23:BB:192:C:C2'	23:BB:193:U:H5'	2.38	0.52
1:AA:141:G:H2'	1:AA:142:G:O4'	2.09	0.52
10:AK:126:ARG:HA	10:AK:126:ARG:HE	1.73	0.52
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.30	0.52
1:CA:624:C:H2'	1:CA:625:U:H6	1.75	0.52
10:CK:126:ARG:HE	10:CK:126:ARG:HA	1.73	0.52
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.72	0.52
1:AA:624:C:H2'	1:AA:625:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:79:ILE:HD12	11:AL:96:THR:HG22	1.91	0.52
1:AA:215:C:H2'	1:AA:216:U:C6	2.44	0.52
25:DC:33:LEU:HD23	25:DC:62:ARG:HA	1.91	0.52
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.43	0.52
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.44	0.52
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.10	0.52
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.09	0.52
23:BB:1779:U:H5	23:BB:1784:A:N7	2.06	0.52
23:DB:159:G:O2'	23:DB:160:A:H5''	2.09	0.52
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.75	0.52
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.44	0.52
23:BB:228:C:H4'	23:BB:229:C:H5''	1.90	0.52
2:CC:67:ILE:HD12	2:CC:100:ILE:HD11	1.91	0.52
23:DB:1573:G:H2'	23:DB:1574:C:H5'	1.91	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.25	0.52
1:AA:1148:U:H5'	8:AI:6:TYR:OH	2.08	0.52
40:BH:116:ARG:HG2	40:BH:131:SER:HB2	1.91	0.52
40:BH:116:ARG:HB3	40:BH:130:VAL:HA	1.90	0.52
40:BH:139:PHE:O	40:BH:140:ALA:CB	2.57	0.52
40:BH:128:HIS:CG	40:BH:144:VAL:HB	2.44	0.52
21:AU:42:THR:HB	21:AU:46:ARG:HH21	1.74	0.52
47:BF:102:LEU:HD22	47:BF:103:ILE:H	1.74	0.52
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.10	0.52
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.40	0.52
40:DH:4:ILE:HA	40:DH:18:GLN:HA	1.91	0.52
40:DH:31:VAL:HB	40:DH:32:PRO:HD3	1.84	0.52
23:BB:137:U:H3'	23:BB:138:U:C6	2.45	0.52
9:AJ:65:TYR:HB3	13:AN:95:LEU:HD11	1.91	0.52
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.08	0.52
23:DB:547:A:H4'	23:DB:547:A:OP2	2.09	0.52
23:DB:741:U:H2'	23:DB:742:A:C8	2.45	0.52
23:DB:743:A:C2'	23:DB:744:U:H5'	2.40	0.52
23:DB:1439:A:C5	23:DB:1552:A:N6	2.77	0.52
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.24	0.52
23:DB:1021:A:H61	23:DB:1142:A:N6	2.07	0.52
42:DN:92:GLY:HA2	42:DN:94:TYR:CZ	2.45	0.52
46:DU:10:VAL:HG21	46:DU:35:VAL:HG22	1.91	0.52
29:DE:117:ARG:HA	29:DE:185:LYS:NZ	2.24	0.52
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.44	0.52
23:DB:664:G:H4'	23:DB:941:A:OP1	2.09	0.52
4:AE:37:VAL:HA	4:AE:47:PHE:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.23	0.52
43:BO:88:LYS:HE3	43:BO:114:GLY:O	2.09	0.52
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.09	0.52
34:D3:21:PHE:CE1	34:D3:58:ILE:HG12	2.44	0.52
2:CC:61:LYS:O	2:CC:96:VAL:HB	2.09	0.52
1:AA:920:U:H2'	1:AA:921:U:H6	1.73	0.52
1:AA:337:G:H2'	1:AA:338:A:H8	1.73	0.52
12:CM:73:SER:O	12:CM:77:LYS:HB2	2.09	0.52
6:AG:55:LYS:HB2	6:AG:59:GLU:OE1	2.10	0.52
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.08	0.52
35:BV:26:PHE:HE2	35:BV:44:HIS:HA	1.75	0.52
23:DB:947:A:H2'	23:DB:948:C:H6	1.72	0.52
1:AA:1221:G:O3'	18:AS:76:THR:HG21	2.10	0.52
23:BB:970:U:H1'	23:BB:985:C:P	2.49	0.52
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.74	0.52
50:BT:50:LEU:N	50:BT:50:LEU:HD22	2.24	0.52
23:BB:207:A:H2'	23:BB:208:C:O4'	2.10	0.52
23:BB:852:U:H2'	23:BB:853:C:C6	2.44	0.52
41:DJ:64:VAL:O	41:DJ:68:LYS:HD2	2.10	0.52
1:CA:22:G:H2'	1:CA:23:C:C6	2.44	0.52
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.45	0.52
23:BB:1241:A:N3	23:BB:1241:A:H5'	2.25	0.52
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.24	0.52
23:DB:2748:A:H1'	48:DG:66:THR:HB	1.90	0.52
29:DE:111:GLU:HG2	29:DE:114:ARG:NH2	2.24	0.52
1:CA:542:G:O2'	1:CA:543:U:H5'	2.09	0.52
37:BL:119:PRO:HG3	37:BL:138:ALA:O	2.10	0.52
23:BB:2512:C:H2'	23:BB:2513:A:O4'	2.09	0.52
25:BC:86:ARG:NH1	25:BC:86:ARG:HB3	2.25	0.52
1:CA:229:U:H2'	1:CA:230:G:C8	2.45	0.52
37:BL:95:LEU:HB3	37:BL:100:ILE:CG2	2.40	0.52
8:AI:56:MET:SD	8:AI:57:VAL:N	2.82	0.52
40:BH:72:ILE:O	40:BH:72:ILE:HG23	2.10	0.52
21:AU:40:PRO:HG2	21:AU:41:THR:H	1.75	0.52
20:AB:115:ASP:O	20:AB:119:GLN:HG2	2.09	0.52
47:BF:135:ILE:CD1	47:BF:137:PHE:HB3	2.35	0.52
3:AD:122:ILE:O	3:AD:128:VAL:HG23	2.09	0.52
48:DG:25:ILE:HD13	48:DG:74:MET:HE2	1.89	0.52
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.29	0.52
18:AS:29:PRO:CA	18:AS:47:THR:HB	2.40	0.52
8:CI:56:MET:SD	8:CI:57:VAL:N	2.82	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:43:ASN:HB2	25:BC:49:THR:HG23	1.92	0.52
32:D4:2:LYS:HD3	32:D4:4:ARG:HG3	1.90	0.52
45:DS:66:ILE:CD1	45:DS:66:ILE:H	2.17	0.52
41:BJ:19:ASP:OD2	41:BJ:58:ASN:HB2	2.10	0.52
1:AA:171:A:H2'	1:AA:172:A:C8	2.44	0.52
23:BB:161:A:C3'	23:BB:162:U:H5''	2.34	0.52
37:DL:112:LEU:O	37:DL:112:LEU:HD23	2.09	0.52
12:AM:13:HIS:HB2	12:AM:16:ILE:CG2	2.39	0.52
48:DG:94:ARG:NH2	48:DG:104:LEU:HA	2.23	0.52
1:AA:203:G:N2	1:AA:205:A:H61	2.08	0.52
2:AC:130:ARG:HA	2:AC:133:MET:HE2	1.90	0.52
23:BB:2591:C:OP1	25:BC:237:ARG:HG3	2.09	0.52
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.09	0.52
23:BB:973:A:OP1	23:BB:973:A:H8	1.92	0.52
7:CH:125:ILE:HG22	7:CH:126:CYS:SG	2.50	0.52
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.74	0.52
23:BB:2356:U:C5'	52:BW:16:GLU:HG3	2.39	0.52
3:CD:158:LEU:H	3:CD:158:LEU:HD12	1.75	0.52
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.73	0.52
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.45	0.52
20:AB:13:VAL:CG1	20:AB:207:ARG:HG2	2.40	0.52
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.44	0.52
1:CA:1320:C:H41	18:CS:36:ARG:HB3	1.72	0.52
23:BB:1418:G:H1'	23:BB:1580:A:H61	1.75	0.52
1:AA:22:G:H2'	1:AA:23:C:C6	2.44	0.52
38:BM:105:MET:HB2	38:BM:117:PHE:CE2	2.45	0.52
41:DJ:59:ALA:C	41:DJ:61:LYS:H	2.13	0.52
1:AA:718:A:H5'	10:AK:118:ASN:CG	2.29	0.52
23:DB:812:C:H5'	37:DL:21:ARG:O	2.09	0.52
23:BB:100:U:O2	23:BB:100:U:H2'	2.09	0.52
23:BB:1459:G:O2'	23:BB:1460:U:H5'	2.10	0.52
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.44	0.52
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.09	0.52
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.10	0.52
1:AA:6:G:HO2'	1:AA:7:A:H8	1.57	0.52
23:BB:2107:G:H2'	23:BB:2107:G:N3	2.25	0.52
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.74	0.52
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.74	0.52
10:AK:12:ARG:N	10:AK:76:TYR:HA	2.24	0.52
27:DK:109:SER:C	27:DK:111:LYS:H	2.13	0.52
23:DB:765:C:H2'	23:DB:766:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:81:ASP:CG	37:BL:100:ILE:HD11	2.30	0.52
25:DC:117:SER:HB3	25:DC:128:THR:HB	1.92	0.52
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.19	0.52
40:BH:68:ARG:HD3	40:BH:132:PHE:HE2	1.75	0.52
40:BH:78:VAL:O	40:BH:79:THR:HG23	2.10	0.52
3:CD:123:MET:HG3	3:CD:127:ARG:N	2.25	0.52
47:DF:147:ARG:HB3	47:DF:147:ARG:CZ	2.39	0.52
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.10	0.52
44:DQ:97:ILE:HG13	44:DQ:105:PHE:HB2	1.91	0.52
44:BQ:97:ILE:HG13	44:BQ:105:PHE:HB2	1.90	0.52
49:BR:66:HIS:ND1	49:BR:94:THR:HG22	2.24	0.52
26:DD:175:LEU:HD11	26:DD:193:VAL:HG12	1.91	0.52
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.37	0.52
5:AF:36:ILE:H	5:AF:36:ILE:HD12	1.73	0.52
38:DM:41:LEU:HD22	38:DM:124:LEU:HD22	1.92	0.52
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.34	0.52
23:BB:1056:G:H1'	23:BB:1103:A:N6	2.25	0.52
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CD1	2.45	0.52
26:BD:92:VAL:O	26:BD:94:GLN:N	2.43	0.52
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.75	0.52
23:DB:357:C:H2'	23:DB:358:U:C6	2.44	0.52
23:BB:284:U:H2'	23:BB:285:G:C8	2.45	0.52
1:CA:922:G:H2'	1:CA:923:A:H8	1.75	0.52
23:DB:326:G:O2'	23:DB:327:G:H5'	2.09	0.52
23:BB:2318:G:C5	23:BB:2319:G:C6	2.97	0.52
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.44	0.52
30:DY:2:LYS:HG2	30:DY:3:THR:H	1.73	0.52
26:DD:118:PHE:O	26:DD:119:ALA:HB3	2.10	0.52
1:AA:238:A:C2'	1:AA:239:U:H5''	2.40	0.52
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.75	0.52
29:DE:170:ARG:HH22	29:DE:176:ASP:CB	2.23	0.52
23:BB:2322:A:C6	23:BB:2333:A:N6	2.78	0.52
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.09	0.52
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.25	0.52
20:CB:79:VAL:O	20:CB:83:ALA:HB3	2.10	0.52
20:CB:115:ASP:O	20:CB:119:GLN:HG2	2.09	0.52
3:CD:147:LYS:HD3	3:CD:148:ALA:N	2.25	0.52
17:CR:33:THR:HG22	17:CR:39:VAL:HG12	1.90	0.52
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.10	0.52
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.74	0.52
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2213:U:O2'	23:BB:2214:C:H5'	2.10	0.52
50:BT:12:ARG:NH1	50:BT:12:ARG:HB3	2.24	0.52
23:BB:129:C:H2'	23:BB:130:C:C6	2.44	0.52
23:DB:1509:A:H3'	23:DB:1510:G:H5'	1.91	0.52
35:DV:80:HIS:CD2	35:DV:82:TYR:H	2.26	0.52
23:DB:2106:U:H2'	23:DB:2107:G:C8	2.45	0.52
15:AP:4:ILE:O	15:AP:71:VAL:HG11	2.09	0.52
23:DB:813:U:H2'	23:DB:814:C:H6	1.72	0.52
1:CA:833:G:H2'	1:CA:834:U:H6	1.73	0.52
23:DB:1557:C:H3'	23:DB:1558:C:H5''	1.91	0.52
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.40	0.52
26:BD:46:ARG:NH1	26:BD:85:ALA:HA	2.25	0.52
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.45	0.52
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.10	0.52
2:AC:185:THR:HG22	2:AC:198:LYS:HA	1.92	0.52
23:BB:1450:G:H21	23:BB:1452:G:H1	1.55	0.52
23:BB:2496:C:O2'	23:BB:2497:A:H5'	2.10	0.52
1:AA:1210:C:H1'	1:AA:1214:C:O2'	2.10	0.52
23:DB:738:G:H1'	23:DB:759:G:N2	2.24	0.52
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.75	0.52
22:BA:76:G:H1	22:BA:101:A:H61	1.57	0.52
23:DB:2489:U:O2'	23:DB:2490:G:H5'	2.09	0.52
1:AA:935:A:N6	6:AG:2:ARG:HD2	2.24	0.52
25:BC:74:PRO:HG2	25:BC:96:LYS:HG2	1.92	0.52
42:BN:8:ARG:HH21	42:BN:39:PRO:HB3	1.75	0.52
44:DQ:52:ARG:C	44:DQ:54:ARG:H	2.13	0.52
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.90	0.52
40:DH:18:GLN:HE21	40:DH:39:ALA:CB	2.20	0.52
26:DD:11:MET:HE2	26:DD:192:ALA:H	1.73	0.52
40:DH:88:GLY:O	40:DH:124:THR:HA	2.10	0.52
28:DP:54:LEU:HA	28:DP:76:HIS:HD2	1.74	0.52
25:BC:6:LYS:O	25:BC:8:THR:HG23	2.09	0.52
23:DB:2061:G:H5''	23:DB:2503:A:C2	2.45	0.52
38:DM:4:PRO:CG	38:DM:70:ASP:HA	2.39	0.52
12:AM:3:ILE:HA	12:AM:56:ARG:HG2	1.91	0.52
2:CC:49:ALA:O	2:CC:71:ARG:HB2	2.10	0.52
15:AP:28:ARG:HD3	15:AP:29:ASN:HD22	1.75	0.52
1:CA:390:U:H2'	1:CA:391:G:H8	1.75	0.52
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.52
13:CN:58:ARG:HH11	13:CN:58:ARG:HB3	1.74	0.52
40:DH:72:ILE:HG12	40:DH:108:VAL:HG11	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:484:G:H4'	1:AA:485:U:C5'	2.38	0.52
46:BU:10:VAL:HG21	46:BU:35:VAL:HG22	1.91	0.52
11:CL:20:VAL:O	11:CL:20:VAL:HG23	2.10	0.52
23:BB:418:C:H2'	23:BB:419:U:H6	1.75	0.52
23:BB:1727:C:H2'	23:BB:1728:C:H6	1.75	0.52
1:AA:719:C:H2'	17:AR:38:ILE:CD1	2.40	0.52
23:BB:2353:G:H21	52:BW:30:VAL:HG22	1.75	0.52
23:BB:2104:C:C3'	23:BB:2104:C:C6	2.93	0.52
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.09	0.52
37:BL:55:MET:HE3	37:BL:55:MET:HA	1.90	0.52
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.25	0.52
15:CP:54:LEU:HD21	15:CP:75:ILE:HG23	1.92	0.52
1:AA:235:C:H2'	1:AA:236:A:H8	1.74	0.52
1:AA:1028:C:H3'	1:AA:1029:U:C6	2.45	0.52
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.10	0.52
1:CA:718:A:H5'	10:CK:118:ASN:CG	2.30	0.52
1:CA:420:U:H2'	1:CA:422:C:C4	2.44	0.52
23:DB:414:C:H2'	23:DB:415:A:H8	1.74	0.52
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.09	0.52
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.75	0.52
8:AI:98:ARG:HA	8:AI:103:VAL:HG22	1.92	0.52
23:BB:431:U:O2'	23:BB:432:A:H5'	2.10	0.52
23:BB:2597:G:OP1	25:BC:240:GLY:HA3	2.10	0.52
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.75	0.52
25:DC:216:ARG:HH11	25:DC:216:ARG:HG3	1.75	0.52
28:DP:31:VAL:O	28:DP:32:VAL:HB	2.10	0.52
23:DB:516:C:O2'	23:DB:517:C:H5'	2.09	0.52
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.09	0.52
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.10	0.52
50:BT:5:GLU:HA	50:BT:8:LEU:HD12	1.91	0.52
1:CA:105:G:H2'	1:CA:106:C:C6	2.45	0.52
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.09	0.52
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.26	0.52
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.45	0.52
1:CA:692:U:O2	1:CA:694:A:H5''	2.10	0.52
1:AA:26:A:H61	1:AA:558:G:H1'	1.75	0.52
23:DB:2336:A:H1'	23:DB:2337:G:OP1	2.09	0.52
37:DL:93:ASN:O	37:DL:95:LEU:N	2.42	0.52
20:AB:55:GLU:HG3	20:AB:197:PHE:CZ	2.45	0.52
41:BJ:3:THR:HB	41:BJ:44:TYR:HE1	1.74	0.52
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:55:LYS:HG3	26:DD:60:VAL:HG13	1.90	0.52
28:BP:50:ARG:HB2	28:BP:56:SER:CB	2.39	0.52
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.75	0.52
5:AF:100:SER:HA	17:AR:23:LYS:HD3	1.91	0.52
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.09	0.52
1:AA:1250:A:O3'	8:AI:68:GLY:HA2	2.09	0.52
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.91	0.52
6:AG:125:ASP:OD2	6:AG:130:LYS:HD2	2.10	0.52
23:DB:126:A:H5'	36:D2:19:ARG:HD2	1.92	0.52
46:BU:14:THR:HG23	46:BU:15:GLY:N	2.24	0.52
30:BY:47:ILE:HG23	30:BY:54:VAL:HG21	1.92	0.52
20:AB:86:CYS:HB2	20:AB:221:ARG:HH12	1.74	0.52
23:DB:851:C:H2'	23:DB:852:U:C6	2.45	0.52
33:D1:24:LYS:HD3	33:D1:52:LYS:HB2	1.90	0.52
46:DU:12:VAL:HG21	46:DU:38:ILE:HG12	1.91	0.52
1:AA:465:A:O2'	1:AA:466:A:H3'	2.09	0.52
1:AA:467:U:H2'	1:AA:467:U:O2	2.09	0.52
34:D3:31:ILE:HD11	34:D3:34:LYS:CD	2.37	0.52
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.91	0.52
1:CA:464:U:H2'	1:CA:466:A:OP2	2.10	0.52
1:AA:413:G:C6	3:AD:32:LYS:HE2	2.45	0.52
20:AB:79:VAL:O	20:AB:83:ALA:HB3	2.10	0.52
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.10	0.52
1:AA:586:C:O2'	1:AA:878:A:H4'	2.10	0.52
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.08	0.52
1:CA:328:C:H4'	1:CA:329:A:C5'	2.39	0.52
23:BB:64:A:H2'	23:BB:65:U:C6	2.44	0.52
1:CA:674:G:H2'	1:CA:675:A:H8	1.75	0.52
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.75	0.52
23:DB:1163:G:H4'	49:DR:92:TRP:CD1	2.45	0.52
23:DB:825:A:O2'	37:DL:54:GLN:HB3	2.10	0.52
1:CA:141:G:H2'	1:CA:142:G:O4'	2.10	0.52
10:CK:51:PHE:HZ	10:CK:61:ALA:HA	1.75	0.52
1:CA:965:U:OP1	1:CA:1198:G:H5''	2.10	0.52
1:CA:89:U:H2'	1:CA:90:C:C6	2.45	0.52
20:AB:142:LYS:HA	20:AB:145:ASN:OD1	2.09	0.52
38:DM:111:GLU:HA	38:DM:114:ARG:HH22	1.73	0.52
23:BB:235:U:H2'	23:BB:236:C:H6	1.73	0.52
23:DB:2189:U:C2'	23:DB:2190:G:H5'	2.39	0.52
23:BB:937:C:H2'	23:BB:938:G:H8	1.75	0.52
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.44	0.52
2:CC:91:ALA:CB	2:CC:98:ALA:H	2.23	0.52
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.74	0.52
23:BB:438:G:H2'	23:BB:439:A:C8	2.45	0.52
1:AA:1297:G:H1'	1:AA:1298:U:H5	1.75	0.52
1:CA:216:U:H2'	1:CA:217:C:C6	2.45	0.52
52:BW:70:VAL:HG23	52:BW:75:ASN:ND2	2.25	0.52
20:CB:138:ARG:HG3	20:CB:141:GLU:OE1	2.10	0.52
1:CA:1014:A:H4'	18:CS:13:HIS:CD2	2.45	0.52
12:AM:73:SER:O	12:AM:77:LYS:HB2	2.10	0.52
40:DH:42:LYS:O	40:DH:45:GLU:HB2	2.10	0.52
25:BC:33:LEU:HD23	25:BC:62:ARG:HA	1.92	0.52
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.09	0.52
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.75	0.52
1:AA:1409:C:H4'	23:BB:1915:U:O4	2.10	0.52
23:BB:2693:G:O2'	23:BB:2694:G:H5'	2.10	0.52
40:DH:87:GLU:N	40:DH:87:GLU:CD	2.63	0.52
1:AA:95:C:H2'	1:AA:95:C:O2	2.09	0.52
49:BR:70:GLU:O	49:BR:90:ARG:HA	2.10	0.52
26:DD:46:ARG:NH1	26:DD:85:ALA:HA	2.24	0.52
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.45	0.52
23:BB:2365:G:OP1	52:BW:54:ARG:HG3	2.10	0.52
40:BH:114:GLU:HG3	40:BH:134:VAL:HG23	1.91	0.52
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.24	0.52
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.24	0.52
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.45	0.52
19:CT:38:ILE:HD13	19:CT:85:LEU:HD13	1.90	0.52
35:DV:63:ILE:N	35:DV:63:ILE:HD12	2.25	0.52
26:BD:8:LYS:HG2	26:BD:197:THR:N	2.25	0.52
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.40	0.52
23:DB:1060:U:O2	23:DB:1088:A:C8	2.63	0.52
26:DD:149:ASN:H	26:DD:152:PRO:HG2	1.75	0.52
20:AB:95:TRP:HZ2	20:AB:100:LEU:HD13	1.75	0.52
18:CS:5:LYS:O	18:CS:6:LYS:HD2	2.10	0.52
23:DB:125:A:H4'	23:DB:126:A:OP2	2.10	0.52
32:D4:17:VAL:HG12	32:D4:18:LYS:N	2.21	0.52
13:CN:52:ARG:NH1	13:CN:58:ARG:HH21	2.08	0.52
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.69	0.52
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.09	0.52
1:CA:373:A:H2'	1:CA:374:A:H8	1.73	0.52
39:BX:14:LEU:O	39:BX:18:LEU:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:13:HIS:HB2	12:CM:16:ILE:CG2	2.39	0.52
4:CE:37:VAL:HA	4:CE:47:PHE:HA	1.92	0.52
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.92	0.52
35:BV:9:ARG:HH21	35:BV:12:GLN:HA	1.73	0.52
35:DV:62:THR:HA	35:DV:71:LYS:HA	1.92	0.52
25:BC:57:HIS:CG	25:BC:58:LYS:N	2.77	0.52
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.10	0.52
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.46	0.52
23:DB:151:C:H2'	23:DB:152:A:C8	2.44	0.52
2:AC:134:LYS:HA	2:AC:167:TYR:CE2	2.43	0.52
28:BP:112:ARG:HB2	28:BP:112:ARG:HH11	1.73	0.52
27:BK:12:ASP:OD2	27:BK:85:VAL:HG13	2.10	0.52
22:BA:60:C:H2'	22:BA:61:G:C8	2.45	0.52
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.45	0.52
23:BB:1012:U:O4	41:BJ:30:THR:HG21	2.10	0.52
22:BA:91:C:OP2	38:BM:18:ARG:NE	2.43	0.52
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.25	0.52
23:DB:2210:U:N3	23:DB:2212:A:N7	2.58	0.52
1:AA:546:A:P	3:AD:68:GLU:HB3	2.50	0.52
1:CA:1491:G:C5	54:CA:2062:LLL:H21	2.44	0.52
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.10	0.52
1:AA:656:G:O2'	1:AA:657:U:H5'	2.09	0.52
1:AA:394:G:H2'	1:AA:395:C:H6	1.75	0.52
1:CA:1458:G:H5''	19:CT:25:SER:HB2	1.92	0.52
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.09	0.52
41:BJ:88:THR:HG22	41:BJ:91:GLU:HG3	1.92	0.52
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.10	0.52
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.45	0.52
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.09	0.52
4:CE:9:GLU:O	4:CE:40:ASP:HA	2.10	0.52
23:BB:1979:U:O2'	23:BB:1980:G:H5'	2.10	0.52
29:BE:111:GLU:HG2	29:BE:114:ARG:HH22	1.75	0.52
29:BE:118:LEU:HA	29:BE:186:VAL:HG13	1.92	0.52
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.10	0.52
23:DB:2336:A:O2'	23:DB:2337:G:P	2.69	0.51
20:AB:18:GLN:HB2	20:AB:188:THR:OG1	2.11	0.51
22:BA:43:C:H1'	47:BF:91:ARG:HD2	1.92	0.51
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.10	0.51
2:CC:76:ILE:HA	2:CC:83:VAL:CG2	2.31	0.51
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.75	0.51
4:AE:85:LYS:HE3	4:AE:94:PHE:HB2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.16	0.51
37:DL:29:LYS:O	37:DL:31:GLY:N	2.40	0.51
27:DK:43:ILE:HG22	27:DK:54:LYS:HA	1.92	0.51
33:B1:3:GLY:C	33:B1:5:ARG:H	2.12	0.51
2:AC:110:LEU:HD22	2:AC:145:ALA:HB2	1.92	0.51
2:AC:137:VAL:HA	2:AC:148:ILE:CD1	2.39	0.51
2:CC:130:ARG:HA	2:CC:133:MET:HE2	1.91	0.51
49:DR:19:THR:HG22	49:DR:97:LYS:HG3	1.92	0.51
1:CA:203:G:N2	1:CA:205:A:H61	2.08	0.51
1:CA:204:G:N2	1:CA:466:A:N6	2.56	0.51
23:DB:483:A:H4'	46:DU:45:GLN:O	2.10	0.51
1:AA:413:G:N1	3:AD:32:LYS:HE2	2.26	0.51
3:AD:25:ARG:HH12	3:AD:30:LYS:HE3	1.75	0.51
23:DB:455:C:N3	23:DB:473:G:H5'	2.25	0.51
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.76	0.51
1:AA:840:C:C2	1:AA:842:U:H4'	2.44	0.51
25:BC:239:PHE:O	25:BC:241:LYS:HG3	2.10	0.51
1:AA:956:U:O2'	1:AA:957:U:H5'	2.11	0.51
23:BB:1580:A:H2'	23:BB:1581:G:O4'	2.10	0.51
23:DB:2100:G:H2'	23:DB:2101:A:H8	1.74	0.51
1:AA:965:U:OP1	1:AA:1198:G:H5''	2.10	0.51
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.10	0.51
38:DM:105:MET:HA	38:DM:105:MET:HE3	1.91	0.51
27:BK:11:ALA:HB3	27:BK:85:VAL:HG23	1.92	0.51
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	1.92	0.51
23:BB:1557:C:H3'	23:BB:1558:C:H5''	1.93	0.51
1:AA:939:G:H5''	6:AG:101:ARG:HH12	1.74	0.51
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.74	0.51
29:DE:137:LYS:HE2	29:DE:141:MET:SD	2.49	0.51
23:BB:532:A:H4'	23:BB:533:G:C8	2.46	0.51
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.74	0.51
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.10	0.51
1:AA:640:A:O2'	1:AA:641:U:H5'	2.10	0.51
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	1.92	0.51
29:DE:4:VAL:C	29:DE:6:LYS:H	2.14	0.51
23:DB:696:G:O2'	23:DB:697:G:H5'	2.10	0.51
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.10	0.51
37:DL:135:ILE:HG12	37:DL:140:GLY:HA3	1.92	0.51
47:BF:161:SER:OG	47:BF:164:GLU:HG3	2.10	0.51
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.10	0.51
10:CK:108:ASN:HD21	21:CU:6:ARG:HD2	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.10	0.51
23:BB:2639:A:H2'	23:BB:2640:G:O4'	2.09	0.51
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.31	0.51
10:AK:111:ASP:CB	21:AU:19:LYS:HE3	2.38	0.51
40:BH:117:LEU:HG	40:BH:130:VAL:CG1	2.40	0.51
48:BG:17:LYS:NZ	48:BG:18:ILE:H	2.06	0.51
10:CK:22:ILE:HD13	10:CK:95:THR:HG21	1.93	0.51
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.10	0.51
48:DG:83:THR:HA	48:DG:84:LYS:HZ3	1.74	0.51
45:DS:36:LEU:H	45:DS:36:LEU:CD2	2.22	0.51
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.45	0.51
23:BB:1244:A:C5'	37:BL:8:PRO:HD3	2.37	0.51
33:D1:37:LYS:H	33:D1:48:TYR:HD2	1.57	0.51
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.10	0.51
30:DY:40:THR:HG22	30:DY:41:PRO:HD2	1.92	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	0.51
43:BO:49:VAL:HG21	43:BO:82:ALA:HB2	1.91	0.51
9:CJ:26:VAL:O	9:CJ:30:LYS:HG3	2.10	0.51
46:BU:20:LYS:NZ	46:BU:20:LYS:HB2	2.25	0.51
26:BD:69:ALA:N	26:BD:73:VAL:HB	2.25	0.51
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.10	0.51
28:DP:91:VAL:CG2	28:DP:96:LEU:HD21	2.38	0.51
23:BB:170:U:H2'	23:BB:171:U:H6	1.75	0.51
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.09	0.51
1:AA:328:C:H4'	1:AA:329:A:C5'	2.40	0.51
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.93	0.51
25:DC:245:THR:OG1	25:DC:249:VAL:HG23	2.11	0.51
23:BB:78:U:H2'	23:BB:79:C:H6	1.74	0.51
1:CA:720:C:H5''	17:CR:40:PRO:HA	1.92	0.51
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.10	0.51
23:DB:878:A:C1'	23:DB:899:A:H62	2.23	0.51
1:AA:1308:U:H3'	12:AM:97:ARG:HH11	1.76	0.51
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.11	0.51
1:CA:69:G:N2	1:CA:71:A:H62	2.09	0.51
20:AB:121:GLN:HE21	20:AB:122:ASP:H	1.58	0.51
23:BB:813:U:H2'	23:BB:814:C:H6	1.75	0.51
42:BN:92:GLY:HA2	42:BN:94:TYR:CZ	2.45	0.51
41:DJ:20:ALA:HA	41:DJ:23:LYS:HG3	1.92	0.51
23:BB:5:A:H2'	23:BB:6:A:H8	1.74	0.51
23:DB:320:A:H4'	23:DB:322:A:N7	2.25	0.51
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1028:C:H3'	1:CA:1029:U:C6	2.44	0.51
1:CA:301:G:H2'	1:CA:302:G:C8	2.45	0.51
1:AA:405:U:O4	3:AD:1:ALA:HA	2.09	0.51
5:CF:100:SER:HA	17:CR:23:LYS:CE	2.40	0.51
29:BE:111:GLU:HG2	29:BE:114:ARG:NH2	2.25	0.51
1:AA:1181:G:H1'	1:AA:1182:G:C5	2.45	0.51
1:CA:407:U:O2'	3:CD:112:GLU:HG3	2.11	0.51
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.51
23:DB:132:G:H2'	23:DB:133:U:C6	2.45	0.51
23:BB:1799:G:OP2	25:BC:269:ARG:NH2	2.40	0.51
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.74	0.51
3:AD:43:ARG:NH2	3:AD:45:PRO:HA	2.25	0.51
23:BB:57:C:H2'	23:BB:58:G:H8	1.74	0.51
7:AH:17:GLN:HE21	7:AH:62:LEU:HD23	1.74	0.51
1:CA:586:C:O2'	1:CA:878:A:H4'	2.10	0.51
28:BP:31:VAL:O	28:BP:32:VAL:HB	2.10	0.51
23:DB:396:G:C6	23:DB:397:U:C4	2.98	0.51
7:CH:17:GLN:HE21	7:CH:62:LEU:HD23	1.74	0.51
23:DB:1098:A:C4	24:DI:3:LYS:O	2.64	0.51
37:BL:81:ASP:HA	37:BL:84:LYS:HE3	1.93	0.51
26:BD:178:VAL:HG12	26:BD:179:ARG:HG3	1.92	0.51
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.29	0.51
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.45	0.51
49:BR:39:LEU:CB	49:BR:53:PHE:HA	2.40	0.51
28:BP:4:ILE:C	28:BP:6:GLN:N	2.62	0.51
35:BV:31:TYR:HA	35:BV:93:ARG:CZ	2.40	0.51
35:BV:69:GLU:C	35:BV:70:ILE:HD13	2.30	0.51
50:BT:30:ILE:O	50:BT:85:VAL:HG23	2.10	0.51
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.25	0.51
22:DA:78:A:OP2	35:DV:14:LYS:HE3	2.11	0.51
23:BB:1060:U:O4	24:BI:131:THR:HG22	2.10	0.51
5:AF:6:ILE:HD12	5:AF:7:VAL:N	2.24	0.51
45:DS:74:ILE:HD12	45:DS:104:THR:O	2.10	0.51
12:CM:24:VAL:HG12	12:CM:28:ARG:HD2	1.92	0.51
35:BV:14:LYS:O	35:BV:18:ARG:HB2	2.11	0.51
27:DK:19:VAL:HB	27:DK:41:ILE:HD11	1.92	0.51
41:DJ:123:LYS:O	41:DJ:124:VAL:HG13	2.09	0.51
33:D1:3:GLY:C	33:D1:5:ARG:H	2.13	0.51
46:BU:10:VAL:HA	46:BU:70:ALA:O	2.10	0.51
29:DE:118:LEU:HA	29:DE:186:VAL:HG13	1.93	0.51
6:AG:149:ALA:H	10:AK:55:ARG:NH2	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:113:SER:HB2	26:DD:168:GLU:O	2.11	0.51
11:AL:56:LEU:HD21	11:AL:81:ILE:HG13	1.93	0.51
23:DB:2757:A:N3	23:DB:2757:A:H2'	2.24	0.51
1:CA:947:G:H2'	1:CA:948:C:C6	2.45	0.51
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.44	0.51
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.75	0.51
46:DU:60:LYS:HA	46:DU:60:LYS:HE2	1.92	0.51
12:AM:96:VAL:C	12:AM:98:GLY:H	2.13	0.51
2:CC:142:ARG:NH2	2:CC:143:LEU:HD21	2.25	0.51
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.25	0.51
3:CD:104:MET:SD	3:CD:142:VAL:HB	2.50	0.51
25:BC:173:LEU:N	25:BC:173:LEU:HD13	2.25	0.51
23:DB:1771:C:H2'	23:DB:1772:A:H8	1.76	0.51
1:AA:1034:G:H2'	1:AA:1035:A:H5'	1.93	0.51
7:CH:55:LYS:HA	7:CH:55:LYS:HZ2	1.75	0.51
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.45	0.51
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.91	0.51
1:CA:939:G:H5''	6:CG:101:ARG:HH22	1.75	0.51
23:BB:1771:C:H2'	23:BB:1772:A:H8	1.75	0.51
26:BD:47:ALA:HB2	26:BD:83:ARG:HD2	1.93	0.51
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.10	0.51
23:DB:776:G:H4'	23:DB:777:G:O5'	2.11	0.51
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.45	0.51
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.11	0.51
23:BB:753:A:H2'	23:BB:754:U:C6	2.45	0.51
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.24	0.51
1:AA:1014:A:H4'	18:AS:13:HIS:CD2	2.45	0.51
25:DC:53:ILE:HG23	25:DC:53:ILE:O	2.10	0.51
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.76	0.51
23:DB:1099:G:H3'	24:DI:2:LYS:HA	1.91	0.51
20:CB:26:MET:HE1	20:CB:186:VAL:HG23	1.92	0.51
27:BK:70:ARG:CB	27:BK:76:VAL:HG22	2.37	0.51
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.45	0.51
27:BK:35:VAL:HG12	27:BK:69:VAL:CG2	2.40	0.51
50:BT:23:ALA:C	50:BT:25:GLU:H	2.14	0.51
42:BN:72:ASP:O	42:BN:76:VAL:HG13	2.11	0.51
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.10	0.51
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.76	0.51
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.40	0.51
12:CM:78:ARG:HH22	18:CS:64:GLU:HB2	1.76	0.51
23:BB:2052:A:O4'	26:BD:147:GLY:HA3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:97:VAL:HA	48:BG:102:ILE:HA	1.93	0.51
5:CF:61:LEU:HD12	5:CF:63:ASN:OD1	2.10	0.51
23:DB:1439:A:N7	23:DB:1440:U:C2	2.79	0.51
23:BB:743:A:C2'	23:BB:744:U:H5'	2.39	0.51
13:AN:47:LEU:C	13:AN:49:THR:H	2.14	0.51
1:AA:598:U:H2'	1:AA:599:C:C6	2.46	0.51
39:BX:7:ARG:HH21	39:BX:9:LYS:HD2	1.76	0.51
26:BD:68:PHE:C	26:BD:73:VAL:HB	2.31	0.51
23:DB:1870:C:H5'	23:DB:1871:A:C8	2.45	0.51
6:CG:26:VAL:HA	6:CG:42:VAL:HG21	1.93	0.51
43:BO:88:LYS:HG2	43:BO:89:ASP:H	1.75	0.51
1:CA:658:C:H2'	1:CA:659:U:C6	2.41	0.51
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.75	0.51
29:DE:3:LEU:O	29:DE:11:ALA:HA	2.11	0.51
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.45	0.51
35:BV:80:HIS:HA	35:BV:87:GLN:OE1	2.09	0.51
3:AD:22:SER:CB	3:AD:109:THR:HG22	2.40	0.51
1:AA:191:G:H2'	1:AA:192:A:C8	2.45	0.51
20:AB:13:VAL:HG11	20:AB:207:ARG:HG2	1.92	0.51
39:DX:10:SER:N	39:DX:60:LYS:HE2	2.25	0.51
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.45	0.51
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.25	0.51
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.11	0.51
23:BB:1197:G:H2'	23:BB:1198:U:C6	2.44	0.51
10:CK:127:ARG:HH11	10:CK:127:ARG:HG3	1.75	0.51
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.25	0.51
42:DN:9:GLN:O	42:DN:11:ASN:N	2.43	0.51
23:DB:1241:A:N3	23:DB:1241:A:H5'	2.26	0.51
1:AA:301:G:H2'	1:AA:302:G:C8	2.46	0.51
1:AA:656:G:HO2'	1:AA:657:U:H5'	1.76	0.51
1:CA:896:C:O2'	1:CA:897:C:H5'	2.11	0.51
1:CA:74:A:H2'	1:CA:75:G:H8	1.75	0.51
1:AA:487:A:H3'	1:AA:488:C:H6	1.75	0.51
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.10	0.51
1:CA:728:A:H2'	1:CA:729:A:C8	2.45	0.51
7:CH:74:ILE:HG13	7:CH:128:VAL:HG22	1.92	0.51
35:BV:46:LYS:HD2	35:BV:46:LYS:N	2.25	0.51
20:CB:46:VAL:CG1	20:CB:47:PRO:HD3	2.30	0.51
40:BH:131:SER:O	40:BH:133:GLN:N	2.44	0.51
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.25	0.51
28:BP:54:LEU:HA	28:BP:76:HIS:CD2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:4:ILE:O	28:BP:6:GLN:N	2.43	0.51
44:BQ:4:LYS:O	44:BQ:5:ARG:HB2	2.10	0.51
23:DB:2306:C:C5	23:DB:2307:G:H2'	2.46	0.51
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.50	0.51
29:DE:40:ARG:NH2	29:DE:92:HIS:HE2	2.08	0.51
45:DS:58:ALA:HB1	45:DS:69:LEU:HD21	1.92	0.51
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.45	0.51
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.30	0.51
51:BZ:64:ILE:O	51:BZ:68:LEU:HG	2.11	0.51
23:BB:2032:G:N2	26:BD:151:THR:H	2.08	0.51
48:BG:96:ALA:O	48:BG:97:VAL:HB	2.10	0.51
21:AU:10:PRO:CB	2:CC:71:ARG:HD3	2.41	0.51
38:BM:4:PRO:CG	38:BM:70:ASP:HA	2.40	0.51
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	2.09	0.51
37:DL:4:ASN:ND2	37:DL:4:ASN:N	2.58	0.51
23:BB:1439:A:C5	23:BB:1552:A:N6	2.78	0.51
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.92	0.51
1:CA:864:A:H2'	1:CA:865:A:C8	2.46	0.51
13:CN:47:LEU:C	13:CN:49:THR:H	2.12	0.51
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.41	0.51
7:AH:87:ARG:N	7:AH:90:GLU:HB2	2.22	0.51
2:AC:129:PHE:CE2	2:AC:156:LEU:HD13	2.46	0.51
26:BD:113:SER:HB2	26:BD:168:GLU:O	2.10	0.51
20:CB:130:LYS:HA	20:CB:130:LYS:NZ	2.25	0.51
23:DB:1804:C:OP1	25:DC:256:THR:HB	2.11	0.51
23:DB:847:U:H3	23:DB:933:A:H62	1.59	0.51
8:CI:117:LEU:HD22	8:CI:123:ARG:HG2	1.92	0.51
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.46	0.51
1:CA:253:A:H2'	1:CA:254:G:H8	1.76	0.51
3:CD:145:ARG:HB3	3:CD:147:LYS:CD	2.40	0.51
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.10	0.51
23:DB:2892:G:H5''	23:DB:2894:G:H22	1.76	0.51
26:DD:124:ARG:HA	26:DD:165:MET:HE3	1.92	0.51
16:CQ:30:HIS:ND1	16:CQ:32:ILE:HG22	2.26	0.51
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.10	0.51
1:AA:624:C:H2'	1:AA:625:U:C6	2.45	0.51
23:DB:374:A:H61	23:DB:400:G:H1'	1.74	0.51
23:DB:523:C:O2'	23:DB:524:G:H5'	2.10	0.51
20:CB:13:VAL:CG1	20:CB:207:ARG:HG2	2.40	0.51
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.10	0.51
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:909:A:H2'	23:DB:912:C:H5	1.76	0.51
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.45	0.51
43:DO:36:TYR:N	43:DO:36:TYR:CD2	2.78	0.51
43:DO:105:ALA:C	43:DO:107:ALA:H	2.13	0.51
23:DB:1997:C:OP2	26:DD:129:THR:HB	2.10	0.51
23:DB:1248:G:C2	44:DQ:2:ARG:HD2	2.46	0.51
22:BA:112:G:O2'	22:BA:113:C:H5'	2.10	0.51
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.46	0.51
27:BK:109:SER:C	27:BK:111:LYS:H	2.13	0.51
4:CE:144:GLU:HG2	4:CE:144:GLU:O	2.11	0.51
23:BB:1403:A:H2'	23:BB:1404:C:C6	2.46	0.51
31:D0:32:THR:OG1	31:D0:50:GLY:HA2	2.10	0.51
23:DB:2889:C:O2'	23:DB:2890:G:H5'	2.10	0.51
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.10	0.51
40:BH:79:THR:CB	40:BH:145:ASN:HB2	2.38	0.51
26:BD:11:MET:HE2	26:BD:192:ALA:H	1.74	0.51
3:AD:123:MET:HG3	3:AD:127:ARG:N	2.25	0.51
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD13	1.76	0.51
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.93	0.51
35:BV:77:VAL:HG11	38:BM:136:MET:O	2.11	0.51
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.92	0.51
23:DB:79:C:O2'	23:DB:346:A:H1'	2.10	0.51
3:AD:158:LEU:H	3:AD:158:LEU:HD12	1.75	0.51
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	1.92	0.51
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.40	0.51
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.25	0.51
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.10	0.51
19:AT:43:LYS:HA	19:AT:85:LEU:HD11	1.93	0.51
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.91	0.51
48:BG:116:LEU:HD23	48:BG:120:ILE:CD1	2.40	0.51
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	1.93	0.51
51:BZ:6:GLN:HE22	51:BZ:50:ARG:N	2.07	0.51
23:DB:356:G:H2'	23:DB:357:C:C6	2.46	0.51
23:BB:286:U:H2'	23:BB:287:G:C8	2.46	0.51
30:DY:47:ILE:HG23	30:DY:54:VAL:HG21	1.91	0.51
20:CB:221:ARG:HG3	20:CB:222:GLU:OE1	2.10	0.51
20:CB:16:GLY:HA3	20:CB:39:ILE:HA	1.93	0.51
48:DG:86:LEU:HD21	48:DG:148:ARG:HB3	1.91	0.51
11:AL:81:ILE:CG2	11:AL:94:TYR:HB3	2.40	0.51
43:BO:89:ASP:HA	43:BO:116:GLN:O	2.11	0.51
34:D3:51:LYS:HD2	34:D3:54:LEU:HD22	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.11	0.51
1:CA:280:C:O2	16:CQ:39:ARG:HG3	2.09	0.51
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.46	0.51
23:BB:1409:U:H2'	23:BB:1410:G:C8	2.46	0.51
23:DB:418:C:H2'	23:DB:419:U:C6	2.46	0.51
19:AT:49:ALA:O	19:AT:52:GLU:HG2	2.11	0.51
9:AJ:56:HIS:H	13:AN:80:ARG:HH22	1.59	0.51
39:BX:1:MET:O	39:BX:5:GLU:HG2	2.11	0.51
1:AA:1262:C:N4	1:AA:1273:C:H42	2.09	0.51
23:BB:2359:C:H2'	23:BB:2360:G:C8	2.46	0.51
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.11	0.51
1:CA:91:U:H2'	1:CA:92:U:H6	1.75	0.51
38:BM:111:GLU:HA	38:BM:114:ARG:HH22	1.75	0.51
29:DE:195:GLN:HA	29:DE:198:GLU:OE1	2.09	0.51
23:BB:1878:G:H2'	23:BB:1879:C:H6	1.76	0.51
23:BB:7:G:H4'	41:BJ:15:TRP:CZ2	2.46	0.51
23:DB:1275:A:N6	23:DB:1296:G:H4'	2.26	0.51
23:DB:962:G:H21	23:DB:2250:G:H22	1.57	0.51
23:DB:299:A:H2'	23:DB:300:A:C8	2.46	0.51
41:BJ:21:THR:O	41:BJ:62:VAL:HA	2.10	0.51
23:BB:912:C:O2'	23:BB:913:U:H5'	2.10	0.51
1:AA:652:U:H1'	1:AA:653:U:C5	2.45	0.51
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.45	0.51
23:BB:2054:A:H2'	31:B0:4:GLN:OE1	2.10	0.51
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD13	1.75	0.51
23:BB:2825:G:N3	23:BB:2825:G:H5''	2.25	0.51
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.46	0.51
1:CA:394:G:H2'	1:CA:395:C:H6	1.76	0.51
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.46	0.51
23:BB:1564:C:O2'	23:BB:1565:C:H5'	2.10	0.51
23:BB:1668:A:N3	23:BB:1670:C:C4	2.78	0.51
1:CA:1417:G:N2	1:CA:1482:G:H2'	2.25	0.51
34:B3:9:ALA:HA	37:BL:58:TYR:HB2	1.93	0.51
23:BB:497:A:H2'	23:BB:498:G:O4'	2.10	0.51
20:AB:138:ARG:HG3	20:AB:141:GLU:OE1	2.10	0.51
23:BB:2257:U:O2'	23:BB:2258:C:H5'	2.11	0.51
22:DA:54:G:H21	47:DF:25:MET:CE	2.23	0.51
29:BE:4:VAL:C	29:BE:6:LYS:H	2.14	0.51
23:DB:2365:G:H4'	52:DW:59:PHE:HD1	1.73	0.51
25:DC:128:THR:HA	25:DC:190:THR:CA	2.39	0.51
20:CB:46:VAL:HA	20:CB:49:PHE:HD2	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:40:PRO:HG2	21:CU:41:THR:H	1.74	0.51
8:AI:62:LEU:HD23	8:AI:64:ILE:HD11	1.92	0.51
40:BH:66:ASN:N	40:BH:66:ASN:HD22	2.08	0.51
48:DG:34:ARG:H	48:DG:34:ARG:CD	2.24	0.51
41:DJ:24:THR:OG1	41:DJ:27:ARG:HD2	2.11	0.51
41:BJ:45:THR:OG1	41:BJ:48:VAL:HB	2.10	0.51
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.11	0.51
26:DD:61:THR:O	26:DD:64:GLU:HB2	2.11	0.51
44:DQ:4:LYS:O	44:DQ:5:ARG:HB2	2.11	0.51
23:BB:704:G:H2'	23:BB:726:G:N2	2.16	0.51
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.40	0.51
23:BB:27:G:HO2'	23:BB:28:A:H8	1.53	0.51
23:BB:512:G:OP2	23:BB:1235:G:H5'	2.11	0.51
23:DB:2303:G:H4'	47:DF:121:PHE:O	2.10	0.51
6:CG:125:ASP:HB3	6:CG:130:LYS:HB3	1.92	0.51
5:CF:38:ARG:HB3	5:CF:63:ASN:HB2	1.91	0.51
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.09	0.51
27:BK:54:LYS:H	27:BK:54:LYS:CD	2.22	0.51
23:BB:2147:A:H5'	23:BB:2148:G:H1'	1.92	0.51
37:BL:80:SER:HB3	37:BL:115:GLU:CD	2.31	0.51
23:BB:1287:A:H3'	23:BB:1288:G:H21	1.74	0.51
23:DB:2144:G:C2	23:DB:2146:C:H5'	2.45	0.51
23:BB:1870:C:OP2	23:BB:1870:C:H4'	2.10	0.51
12:AM:44:ILE:N	12:AM:44:ILE:HD12	2.21	0.51
6:AG:145:GLU:OE2	6:AG:148:LYS:HD2	2.11	0.51
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.45	0.51
36:B2:26:ASN:HA	36:B2:29:GLN:HB3	1.93	0.51
39:DX:50:VAL:HG12	39:DX:54:LYS:HD2	1.92	0.51
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.75	0.51
23:DB:981:A:H4'	23:DB:2037:A:H5'	1.93	0.51
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.93	0.51
1:AA:1248:A:H2	8:AI:71:ILE:HD11	1.76	0.51
8:CI:32:ARG:NH1	8:CI:37:TYR:HA	2.25	0.51
1:AA:8:A:C5	3:AD:205:LYS:HA	2.45	0.51
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.76	0.51
1:AA:1272:G:H2'	1:AA:1273:C:H6	1.74	0.51
3:CD:13:ARG:CG	3:CD:55:ARG:HH12	2.23	0.51
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.46	0.51
23:DB:2394:C:O2'	23:DB:2395:C:H5'	2.11	0.51
1:CA:22:G:H4'	1:CA:885:G:C8	2.45	0.51
37:BL:135:ILE:HG12	37:BL:140:GLY:HA3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1463:C:H2'	23:BB:1464:G:H8	1.75	0.51
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.93	0.51
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.13	0.51
11:AL:54:VAL:HG22	11:AL:79:ILE:HD11	1.92	0.51
1:CA:418:C:H2'	1:CA:419:C:C6	2.45	0.51
44:BQ:57:ARG:HH12	44:BQ:61:ILE:HD11	1.76	0.51
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.45	0.51
7:AH:55:LYS:HZ2	7:AH:55:LYS:HA	1.75	0.51
29:DE:111:GLU:HG2	29:DE:114:ARG:HH22	1.74	0.51
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.46	0.51
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.75	0.51
3:AD:43:ARG:HD2	3:AD:44:LYS:H	1.75	0.51
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.11	0.51
25:DC:202:ARG:NH1	25:DC:213:ARG:HE	2.08	0.51
23:BB:2624:G:H1'	31:B0:18:HIS:HE1	1.76	0.51
23:DB:2624:G:H1'	31:D0:18:HIS:CE1	2.46	0.51
23:BB:2707:U:H2'	23:BB:2708:G:C8	2.45	0.51
38:DM:63:ILE:HD12	38:DM:63:ILE:H	1.75	0.51
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.46	0.51
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	1.93	0.51
1:AA:332:G:O2'	1:AA:333:U:H5'	2.11	0.51
52:DW:39:GLN:CG	52:DW:40:ARG:N	2.74	0.51
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.45	0.51
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.46	0.51
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.11	0.51
25:BC:189:ALA:C	25:BC:190:THR:HG23	2.30	0.51
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.11	0.51
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.09	0.51
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.93	0.51
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.26	0.51
3:AD:155:LYS:HG2	3:AD:156:ALA:N	2.25	0.51
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.11	0.51
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.10	0.51
23:DB:280:U:H2'	23:DB:281:C:C5	2.46	0.51
22:DA:43:C:H4'	47:DF:91:ARG:NE	2.26	0.51
13:AN:9:GLU:O	13:AN:13:VAL:HG23	2.11	0.51
20:AB:102:ASN:OD1	20:AB:105:THR:HB	2.11	0.51
15:CP:28:ARG:HD3	15:CP:29:ASN:HD22	1.76	0.51
2:CC:185:THR:HG22	2:CC:198:LYS:HA	1.93	0.51
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.11	0.51
4:CE:136:VAL:HG13	4:CE:137:ARG:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:118:PHE:HE2	42:DN:1:MET:SD	2.34	0.51
1:CA:1124:G:H3'	9:CJ:37:ARG:HH12	1.75	0.51
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.10	0.51
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.45	0.51
1:CA:956:U:O2'	1:CA:957:U:H5'	2.11	0.51
23:DB:1381:G:H1'	23:DB:1571:A:N1	2.26	0.51
23:DB:2241:A:H2'	23:DB:2242:G:H8	1.76	0.51
18:AS:35:ARG:HB2	18:AS:71:GLY:CA	2.41	0.51
1:AA:1320:C:H41	18:AS:36:ARG:HB3	1.76	0.51
23:BB:264:C:C2'	23:BB:265:A:H5''	2.41	0.51
23:BB:2774:C:H2'	23:BB:2775:G:O4'	2.11	0.51
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.74	0.51
41:BJ:20:ALA:HA	41:BJ:23:LYS:HG3	1.92	0.51
39:DX:14:LEU:O	39:DX:18:LEU:HB2	2.11	0.51
7:CH:28:SER:OG	7:CH:56:PRO:HB2	2.10	0.51
23:BB:1460:U:H3'	23:BB:1461:C:H5'	1.91	0.51
23:BB:1459:G:H4'	23:BB:1461:C:H42	1.75	0.51
44:DQ:57:ARG:HG2	44:DQ:57:ARG:HH11	1.76	0.51
15:AP:20:VAL:HG23	15:AP:34:GLU:O	2.11	0.51
23:BB:770:G:OP2	36:B2:11:LYS:HE2	2.11	0.51
26:DD:47:ALA:HB2	26:DD:83:ARG:HD2	1.92	0.51
23:DB:132:G:O2'	23:DB:133:U:H5'	2.11	0.51
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.46	0.51
23:DB:1038:G:O2'	23:DB:1039:A:H5'	2.10	0.51
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.93	0.51
23:BB:2553:G:H2'	23:BB:2554:U:O4'	2.11	0.51
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.51	0.51
43:BO:36:TYR:CD2	43:BO:36:TYR:N	2.79	0.51
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.45	0.51
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.25	0.51
23:DB:942:G:H2'	23:DB:943:A:H8	1.76	0.51
23:DB:492:A:H2'	23:DB:493:G:O4'	2.11	0.51
29:BE:5:LEU:HD13	29:BE:122:GLU:HG3	1.93	0.51
47:BF:60:SER:HB3	47:BF:62:GLN:OE1	2.11	0.51
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.11	0.51
41:BJ:24:THR:OG1	41:BJ:27:ARG:HD2	2.11	0.51
44:BQ:91:ARG:NH1	49:BR:10:LYS:HB3	2.21	0.51
26:BD:32:ASN:HA	26:BD:51:THR:O	2.11	0.51
26:BD:20:VAL:HG13	27:BK:72:PRO:HB3	1.93	0.51
35:DV:30:ILE:O	35:DV:37:PRO:HA	2.10	0.51
28:BP:1:SER:H1	28:BP:4:ILE:HD12	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:8:LYS:HG2	26:DD:197:THR:N	2.24	0.51
45:DS:51:LEU:C	45:DS:53:SER:H	2.14	0.51
40:DH:9:VAL:HG12	40:DH:12:LEU:HG	1.93	0.51
23:DB:2529:G:O3'	48:DG:174:LYS:HE2	2.11	0.51
23:BB:2543:G:H2'	23:BB:2544:G:H8	1.76	0.51
26:DD:92:VAL:O	26:DD:94:GLN:N	2.44	0.51
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	1.93	0.51
28:BP:19:PHE:CE2	28:BP:25:VAL:HG11	2.46	0.51
1:CA:860:A:H2'	1:CA:861:G:O4'	2.10	0.51
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.74	0.51
1:AA:1343:G:C1'	8:AI:122:ARG:HH12	2.23	0.51
23:DB:506:G:H1'	23:DB:507:A:C8	2.46	0.51
7:AH:76:ARG:HG3	7:AH:77:VAL:H	1.72	0.51
51:DZ:27:ARG:HD2	51:DZ:29:PHE:CE1	2.46	0.51
49:DR:78:ARG:HH21	49:DR:78:ARG:HG3	1.76	0.51
23:DB:2882:A:H3'	23:DB:2883:A:H5''	1.92	0.51
23:DB:718:A:H3'	23:DB:719:C:C6	2.44	0.51
1:CA:159:G:H1	1:CA:163:C:N4	2.09	0.51
23:DB:1430:G:H2'	23:DB:1431:A:H8	1.75	0.51
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.46	0.51
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.46	0.51
1:AA:35:G:H2'	1:AA:36:C:H6	1.76	0.51
35:DV:6:ALA:HB3	35:DV:65:VAL:CG1	2.40	0.51
1:CA:958:A:N6	18:CS:53:GLY:HA3	2.26	0.51
23:BB:2394:C:O2'	23:BB:2395:C:H5'	2.11	0.51
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.76	0.51
23:BB:962:G:H21	23:BB:2250:G:H22	1.57	0.51
23:DB:102:U:H2'	39:DX:2:LYS:CE	2.41	0.51
23:BB:401:A:H2'	23:BB:402:A:C8	2.46	0.51
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.75	0.51
23:DB:1459:G:O2'	23:DB:1460:U:H5'	2.11	0.51
52:BW:47:GLY:HA3	52:BW:80:SER:HB2	1.92	0.51
23:BB:2389:G:H5''	23:BB:2390:U:H5'	1.93	0.51
1:CA:642:A:H2'	1:CA:643:C:H6	1.76	0.51
27:BK:53:LYS:HD3	27:BK:56:ASP:OD2	2.11	0.51
1:CA:54:C:H2'	1:CA:352:C:H41	1.74	0.51
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.46	0.51
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.11	0.51
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.11	0.51
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.45	0.51
20:CB:55:GLU:HG3	20:CB:197:PHE:CZ	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:89:LYS:HA	40:BH:89:LYS:HZ3	1.71	0.51
23:DB:994:C:O2	49:DR:10:LYS:HE3	2.11	0.51
41:DJ:45:THR:OG1	41:DJ:48:VAL:HB	2.11	0.51
8:CI:20:ILE:HA	8:CI:62:LEU:HB3	1.93	0.51
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.46	0.51
27:BK:71:ARG:CG	27:BK:105:ARG:HH21	2.23	0.51
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.11	0.51
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.11	0.51
26:DD:9:VAL:O	28:DP:4:ILE:HD11	2.11	0.51
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.10	0.51
18:AS:44:ILE:HD12	18:AS:63:ASP:HA	1.93	0.51
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.24	0.51
16:AQ:3:LYS:NZ	16:AQ:4:ILE:H	2.02	0.51
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.76	0.51
46:BU:51:LEU:N	46:BU:53:GLN:NE2	2.58	0.51
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.40	0.51
20:AB:63:LYS:HG2	20:AB:224:ARG:NH2	2.25	0.51
20:AB:16:GLY:HA3	20:AB:39:ILE:HA	1.93	0.51
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.31	0.51
20:CB:86:CYS:HB2	20:CB:221:ARG:HH12	1.75	0.51
1:AA:978:A:H5'	1:AA:1362:A:N6	2.26	0.51
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.11	0.51
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.11	0.51
47:BF:64:PRO:HA	47:BF:88:VAL:HG21	1.93	0.51
23:DB:533:G:H2'	23:DB:534:U:C6	2.46	0.51
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.30	0.51
23:BB:1176:U:H3'	23:BB:1177:G:C8	2.44	0.51
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.26	0.51
36:D2:26:ASN:HA	36:D2:29:GLN:HB3	1.93	0.51
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE2	1.92	0.51
26:BD:118:PHE:O	26:BD:119:ALA:HB3	2.10	0.51
22:BA:106:G:H2'	22:BA:107:G:C8	2.46	0.51
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.46	0.51
23:DB:1418:G:H1'	23:DB:1580:A:H61	1.75	0.51
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.11	0.51
23:BB:2892:G:H5''	23:BB:2894:G:H22	1.75	0.51
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.46	0.51
18:CS:35:ARG:HB2	18:CS:71:GLY:CA	2.40	0.51
1:CA:958:A:P	18:CS:54:ARG:HH22	2.34	0.51
1:AA:737:C:H2'	1:AA:738:C:C6	2.45	0.51
23:DB:2189:U:H2'	23:DB:2190:G:H5'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.46	0.51
29:DE:130:LYS:C	29:DE:132:LYS:H	2.14	0.51
23:DB:1877:A:H2'	23:DB:1878:G:H8	1.75	0.51
1:CA:986:U:H2'	1:CA:987:G:O4'	2.11	0.51
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.26	0.51
23:BB:2098:U:H2'	23:BB:2099:U:O4'	2.10	0.51
25:BC:74:PRO:HG2	25:BC:96:LYS:CG	2.41	0.51
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.46	0.51
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.76	0.51
23:BB:1997:C:OP2	26:BD:129:THR:HB	2.10	0.51
23:DB:536:G:H21	41:DJ:47:HIS:CG	2.29	0.51
6:CG:113:LYS:HB2	6:CG:117:LEU:HD12	1.91	0.51
23:BB:492:A:H2'	23:BB:493:G:O4'	2.10	0.51
23:DB:98:G:H22	46:DU:6:ARG:NH1	2.09	0.51
38:DM:90:GLU:HA	38:DM:90:GLU:OE1	2.11	0.51
28:DP:83:ILE:O	28:DP:83:ILE:HD13	2.11	0.51
22:DA:111:U:H2'	22:DA:112:G:C8	2.46	0.51
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.11	0.51
25:DC:270:ARG:HG2	25:DC:271:SER:N	2.25	0.51
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.29	0.50
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.94	0.50
1:CA:981:U:H4'	13:CN:60:ARG:CD	2.37	0.50
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	2.25	0.50
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.10	0.50
49:DR:16:GLU:HG2	49:DR:101:ILE:HG13	1.93	0.50
44:DQ:111:LYS:HD2	49:DR:50:GLY:HA3	1.92	0.50
23:BB:320:A:H4'	23:BB:322:A:N7	2.25	0.50
32:B4:2:LYS:HD3	32:B4:4:ARG:HG3	1.93	0.50
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.11	0.50
48:DG:84:LYS:HB3	48:DG:132:LEU:HG	1.93	0.50
52:DW:37:VAL:CG1	52:DW:38:ARG:HD3	2.42	0.50
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.19	0.50
23:DB:2719:G:O2'	23:DB:2720:U:H5'	2.11	0.50
19:AT:66:ILE:HG21	19:AT:71:ALA:HB2	1.93	0.50
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.46	0.50
23:DB:1439:A:N7	23:DB:1440:U:N1	2.59	0.50
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.76	0.50
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.47	0.50
1:CA:1033:G:C2	1:CA:1034:G:H1'	2.46	0.50
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.45	0.50
23:DB:143:C:H2'	23:DB:144:A:H8	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:32:GLU:O	42:BN:114:GLU:HA	2.10	0.50
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.28	0.50
1:CA:979:C:H1'	1:CA:1317:C:H41	1.76	0.50
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.10	0.50
1:CA:370:C:H2'	1:CA:371:A:H8	1.74	0.50
46:DU:9:GLU:O	46:DU:72:PHE:N	2.44	0.50
23:DB:2334:U:O3'	43:DO:13:ARG:HD3	2.12	0.50
23:DB:2312:U:H5'	47:DF:84:ILE:HD12	1.93	0.50
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.76	0.50
1:CA:279:A:C5'	1:CA:280:C:H3'	2.41	0.50
1:CA:34:C:H2'	1:CA:35:G:C8	2.46	0.50
23:BB:1517:G:O2'	23:BB:1518:C:H5'	2.11	0.50
22:BA:48:U:H2'	22:BA:49:C:C6	2.47	0.50
23:BB:1418:G:H1'	23:BB:1580:A:N6	2.26	0.50
1:CA:751:U:H4'	14:CO:24:SER:HA	1.93	0.50
41:DJ:64:VAL:HG13	41:DJ:68:LYS:HB2	1.93	0.50
23:DB:2774:C:H2'	23:DB:2775:G:O4'	2.11	0.50
22:DA:60:C:H2'	22:DA:61:G:C8	2.46	0.50
23:BB:1946:U:H2'	23:BB:1947:C:C6	2.45	0.50
23:DB:1001:A:H2'	23:DB:1002:G:O4'	2.11	0.50
25:BC:211:ARG:C	25:BC:213:ARG:H	2.13	0.50
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.76	0.50
23:BB:2825:G:H2'	23:BB:2826:A:H5'	1.93	0.50
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.46	0.50
23:DB:2470:G:P	38:DM:55:ARG:HH11	2.34	0.50
48:BG:39:ALA:HB1	48:BG:57:TYR:CD1	2.46	0.50
40:BH:48:GLU:HA	40:BH:51:ARG:HH21	1.77	0.50
23:DB:2262:U:O2'	23:DB:2263:C:H5'	2.11	0.50
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.51	0.50
23:BB:1187:G:HO2'	23:BB:1188:U:H6	1.57	0.50
23:DB:2099:U:O2	23:DB:2099:U:H2'	2.10	0.50
23:BB:1911:U:O4	23:BB:1918:A:H2'	2.12	0.50
52:DW:70:VAL:HG23	52:DW:75:ASN:ND2	2.25	0.50
48:DG:53:PRO:HG3	48:DG:61:TRP:CD2	2.46	0.50
19:CT:27:MET:O	19:CT:31:ILE:HG13	2.11	0.50
11:AL:72:ASN:ND2	11:AL:104:SER:HB3	2.26	0.50
23:BB:576:U:H2'	23:BB:577:G:C8	2.46	0.50
1:CA:487:A:H3'	1:CA:488:C:H6	1.75	0.50
1:CA:1409:C:H4'	23:DB:1915:U:O4	2.11	0.50
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.11	0.50
9:CJ:92:LEU:H	9:CJ:92:LEU:HD22	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1111:A:H4'	23:DB:1112:G:H4'	1.93	0.50
23:DB:660:C:H2'	23:DB:661:A:H8	1.76	0.50
1:AA:728:A:H2'	1:AA:729:A:C8	2.46	0.50
20:CB:26:MET:O	20:CB:30:ILE:HG13	2.10	0.50
21:CU:3:ILE:CG2	21:CU:19:LYS:HD2	2.41	0.50
2:AC:76:ILE:HD13	2:AC:83:VAL:HG21	1.92	0.50
44:DQ:107:ALA:HA	44:DQ:110:GLU:OE1	2.09	0.50
41:BJ:123:LYS:O	41:BJ:124:VAL:HG13	2.11	0.50
23:BB:318:C:H2'	23:BB:319:G:H8	1.75	0.50
24:DI:54:ILE:C	24:DI:54:ILE:HD13	2.30	0.50
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.11	0.50
47:DF:102:LEU:HD22	47:DF:103:ILE:H	1.76	0.50
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.26	0.50
47:DF:135:ILE:CD1	47:DF:137:PHE:HB3	2.33	0.50
12:CM:52:ILE:HG13	12:CM:56:ARG:NH1	2.25	0.50
23:DB:1287:A:H3'	23:DB:1288:G:H21	1.75	0.50
12:AM:52:ILE:HG13	12:AM:56:ARG:NH1	2.25	0.50
23:DB:1552:A:H2'	23:DB:1553:A:C5'	2.40	0.50
29:DE:58:LYS:HD3	29:DE:58:LYS:N	2.26	0.50
23:DB:1285:A:H2'	23:DB:1286:A:H5''	1.92	0.50
37:DL:3:LEU:HA	37:DL:6:LEU:HD21	1.94	0.50
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.46	0.50
22:DA:32:U:H2'	22:DA:33:G:O4'	2.11	0.50
30:DY:40:THR:O	30:DY:43:ILE:HG22	2.11	0.50
13:CN:50:LEU:H	13:CN:51:PRO:CD	2.22	0.50
39:BX:13:GLU:HB3	39:BX:57:LEU:HD21	1.93	0.50
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.11	0.50
10:AK:51:PHE:HZ	10:AK:61:ALA:HA	1.73	0.50
26:DD:69:ALA:N	26:DD:73:VAL:HB	2.26	0.50
23:DB:667:U:H2'	23:DB:668:A:O4'	2.11	0.50
1:CA:769:G:O2'	1:CA:770:C:H5'	2.12	0.50
23:DB:2038:G:H2'	23:DB:2039:U:O4'	2.12	0.50
11:AL:20:VAL:HG23	11:AL:20:VAL:O	2.12	0.50
26:BD:118:PHE:CE1	26:BD:123:LYS:HD2	2.46	0.50
23:DB:393:C:O2'	23:DB:394:C:H5'	2.11	0.50
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.46	0.50
23:BB:303:G:H2'	23:BB:304:U:C6	2.46	0.50
23:BB:1196:C:H2'	23:BB:1197:G:H8	1.75	0.50
23:DB:817:C:O2'	23:DB:839:U:H5''	2.11	0.50
23:BB:817:C:O2'	23:BB:839:U:H5''	2.12	0.50
26:DD:169:ARG:O	26:DD:170:VAL:HG22	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.42	0.50
1:CA:147:G:H2'	1:CA:148:G:C8	2.46	0.50
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.46	0.50
48:DG:154:GLU:HG2	48:DG:154:GLU:O	2.10	0.50
23:DB:1460:U:H5''	23:DB:1461:C:O4'	2.11	0.50
1:CA:1515:G:O2'	1:CA:1516:G:H5'	2.12	0.50
1:CA:546:A:P	3:CD:68:GLU:HB3	2.51	0.50
5:CF:86:ARG:NH1	17:CR:64:LEU:HD12	2.26	0.50
43:DO:28:VAL:HG21	43:DO:106:LEU:HD21	1.93	0.50
25:DC:202:ARG:HH21	25:DC:202:ARG:CB	2.23	0.50
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.12	0.50
23:BB:1868:C:H2'	23:BB:1869:G:O4'	2.11	0.50
29:DE:106:LYS:HE3	29:DE:200:LEU:HB3	1.92	0.50
23:DB:2376:A:N1	43:DO:92:PHE:HD2	2.10	0.50
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.46	0.50
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.11	0.50
31:D0:25:THR:O	31:D0:26:SER:HB3	2.11	0.50
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.46	0.50
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.46	0.50
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.74	0.50
12:AM:23:GLY:HA3	12:AM:64:VAL:HG12	1.93	0.50
23:DB:1642:G:O2'	23:DB:1643:G:H5'	2.11	0.50
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.26	0.50
34:B3:50:SER:C	34:B3:52:GLY:H	2.12	0.50
15:CP:19:VAL:HB	15:CP:37:GLY:O	2.11	0.50
1:CA:317:U:H2'	1:CA:318:G:H8	1.76	0.50
23:DB:2411:A:H2'	23:DB:2412:A:C8	2.46	0.50
23:DB:497:A:H2'	23:DB:498:G:O4'	2.11	0.50
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.91	0.50
37:DL:124:GLY:O	37:DL:125:LEU:HG	2.12	0.50
48:DG:17:LYS:CA	48:DG:17:LYS:HZ2	2.24	0.50
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.26	0.50
26:DD:178:VAL:HG12	26:DD:179:ARG:HG3	1.92	0.50
23:BB:144:A:H2'	23:BB:145:C:C6	2.47	0.50
3:AD:145:ARG:HB3	3:AD:147:LYS:CD	2.40	0.50
3:AD:160:LEU:HA	3:AD:163:GLN:HG3	1.94	0.50
23:BB:319:G:H2'	23:BB:320:A:O4'	2.12	0.50
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.47	0.50
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.94	0.50
12:CM:3:ILE:HA	12:CM:56:ARG:HG2	1.92	0.50
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:29:GLN:HA	24:BI:29:GLN:HE21	1.75	0.50
48:BG:153:PRO:CG	48:BG:162:ARG:HB3	2.40	0.50
23:BB:2151:U:H2'	23:BB:2152:G:C8	2.39	0.50
26:DD:68:PHE:C	26:DD:73:VAL:HB	2.31	0.50
22:BA:29:A:H3'	22:BA:30:C:C6	2.42	0.50
1:AA:1124:G:H3'	9:AJ:37:ARG:HH12	1.76	0.50
1:CA:336:A:O2'	1:CA:337:G:H5'	2.10	0.50
1:AA:279:A:H5'	1:AA:281:G:O4'	2.11	0.50
1:CA:35:G:H2'	1:CA:36:C:H6	1.75	0.50
1:CA:36:C:H4'	11:CL:118:VAL:O	2.10	0.50
1:CA:1017:U:H2'	1:CA:1018:G:C8	2.46	0.50
1:AA:714:G:N2	1:AA:777:A:H1'	2.26	0.50
23:DB:947:A:O2'	23:DB:984:A:H2	1.94	0.50
23:DB:1411:U:H2'	23:DB:1412:U:C6	2.46	0.50
23:DB:1507:C:C2'	23:DB:1508:A:H4'	2.41	0.50
23:BB:851:C:H2'	23:BB:852:U:C6	2.47	0.50
1:AA:621:A:H2'	1:AA:622:A:C8	2.46	0.50
1:CA:403:C:O2'	1:CA:404:G:H5'	2.11	0.50
23:BB:2291:U:O2'	23:BB:2374:C:H1'	2.11	0.50
23:BB:1491:G:H5'	25:BC:97:ASP:OD1	2.11	0.50
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.41	0.50
43:BO:105:ALA:C	43:BO:107:ALA:H	2.13	0.50
1:CA:74:A:H2'	1:CA:75:G:C8	2.45	0.50
23:DB:864:G:O2'	23:DB:865:C:H5'	2.11	0.50
1:CA:343:U:O2'	1:CA:344:A:H2'	2.10	0.50
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.47	0.50
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.10	0.50
23:BB:1396:U:O4'	23:BB:1396:U:O2	2.29	0.50
11:CL:72:ASN:ND2	11:CL:104:SER:HB3	2.27	0.50
1:CA:426:U:H4'	3:CD:39:GLN:HA	1.93	0.50
27:DK:3:GLN:HG2	27:DK:4:GLU:N	2.27	0.50
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	1.93	0.50
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.74	0.50
52:BW:50:VAL:HG23	52:BW:61:LYS:CD	2.39	0.50
37:DL:92:LEU:HD21	37:DL:123:ARG:NH2	2.25	0.50
40:BH:66:ASN:N	40:BH:66:ASN:ND2	2.59	0.50
26:BD:175:LEU:HD11	26:BD:193:VAL:HG12	1.94	0.50
19:CT:43:LYS:HA	19:CT:85:LEU:HD11	1.94	0.50
35:DV:77:VAL:HG11	38:DM:136:MET:HB3	1.93	0.50
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.12	0.50
50:BT:74:ILE:HG13	50:BT:75:GLY:N	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:5:LYS:O	28:DP:9:GLN:HG2	2.10	0.50
48:DG:116:LEU:HD23	48:DG:120:ILE:CD1	2.40	0.50
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.11	0.50
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.26	0.50
42:DN:83:LEU:HA	42:DN:86:ARG:CG	2.35	0.50
5:AF:62:MET:HG3	5:AF:64:VAL:CG2	2.36	0.50
5:AF:100:SER:HA	17:AR:23:LYS:CE	2.41	0.50
52:DW:37:VAL:C	52:DW:38:ARG:HG2	2.31	0.50
52:BW:37:VAL:CG1	52:BW:38:ARG:H	2.19	0.50
23:DB:2720:U:H5''	28:DP:52:ARG:HH21	1.74	0.50
6:AG:107:ALA:HA	6:AG:110:ARG:HD2	1.93	0.50
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD13	2.46	0.50
36:D2:42:LEU:O	36:D2:43:THR:HG23	2.11	0.50
51:DZ:7:VAL:HG21	51:DZ:59:ILE:CD1	2.39	0.50
2:CC:126:ARG:NH2	2:CC:190:THR:HG23	2.19	0.50
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.46	0.50
49:DR:63:VAL:HA	49:DR:95:ASP:O	2.12	0.50
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.76	0.50
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.40	0.50
35:BV:56:PHE:O	35:BV:61:LEU:HD21	2.11	0.50
23:DB:246:C:H2'	23:DB:247:G:H5'	1.94	0.50
1:AA:1123:U:O2'	1:AA:1124:G:H5'	2.11	0.50
26:BD:118:PHE:HE2	42:BN:1:MET:SD	2.34	0.50
1:AA:993:G:C2'	1:AA:995:C:H41	2.24	0.50
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.77	0.50
8:CI:119:LYS:C	8:CI:121:ARG:H	2.15	0.50
11:CL:26:CYS:SG	11:CL:29:LYS:HE2	2.51	0.50
51:DZ:15:GLY:O	51:DZ:27:ARG:HG3	2.10	0.50
22:DA:29:A:H3'	22:DA:30:C:C6	2.44	0.50
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.30	0.50
35:BV:6:ALA:HB3	35:BV:65:VAL:CG1	2.42	0.50
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.11	0.50
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.47	0.50
1:CA:678:U:H4'	1:CA:778:G:OP1	2.12	0.50
1:AA:502:A:H2'	1:AA:503:C:C6	2.46	0.50
23:DB:632:A:H2'	23:DB:633:A:C8	2.46	0.50
1:CA:560:A:H5'	1:CA:566:G:N2	2.25	0.50
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.92	0.50
23:BB:2393:U:O2'	23:BB:2394:C:H5'	2.11	0.50
22:DA:48:U:H2'	22:DA:49:C:C6	2.47	0.50
23:DB:1828:G:O6	25:DC:220:ARG:HD2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:56:PRO:O	37:BL:59:ARG:HB2	2.11	0.50
23:BB:2360:G:H4'	37:BL:61:LEU:HD11	1.92	0.50
1:CA:92:U:H2'	1:CA:93:U:C6	2.46	0.50
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.40	0.50
1:CA:208:U:H2'	1:CA:210:C:C2	2.46	0.50
23:DB:1275:A:N3	23:DB:1275:A:H2'	2.26	0.50
1:CA:834:U:H2'	1:CA:835:U:C6	2.46	0.50
23:BB:1403:A:H2'	23:BB:1404:C:H6	1.76	0.50
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.75	0.50
1:AA:827:U:H2'	1:AA:870:U:O4	2.11	0.50
1:AA:1289:A:H3'	1:AA:1290:G:H8	1.76	0.50
25:DC:73:ILE:HG21	25:DC:97:ASP:HB2	1.92	0.50
29:DE:1:MET:HB3	29:DE:14:VAL:O	2.12	0.50
48:BG:103:ASN:HA	48:BG:113:ASP:HA	1.94	0.50
1:AA:72:A:H2'	1:AA:73:C:C6	2.46	0.50
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.10	0.50
1:CA:1483:A:H2'	1:CA:1484:C:O4'	2.11	0.50
1:CA:858:G:O6	1:CA:869:G:H3'	2.12	0.50
21:AU:13:VAL:O	21:AU:13:VAL:HG13	2.12	0.50
23:BB:620:G:N3	23:BB:620:G:H5'	2.26	0.50
21:CU:13:VAL:O	21:CU:13:VAL:HG13	2.12	0.50
27:DK:53:LYS:HD3	27:DK:56:ASP:OD2	2.12	0.50
23:DB:572:A:H5''	49:DR:80:ARG:NH2	2.26	0.50
18:AS:20:LYS:O	18:AS:23:GLU:HG3	2.12	0.50
29:DE:5:LEU:HD13	29:DE:122:GLU:HG3	1.94	0.50
48:BG:34:ARG:H	48:BG:34:ARG:CD	2.23	0.50
8:CI:21:LYS:HG2	8:CI:22:PRO:HD2	1.92	0.50
1:CA:242:G:H2'	1:CA:243:A:H5''	1.93	0.50
47:DF:72:SER:OG	47:DF:79:ARG:HA	2.11	0.50
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.94	0.50
5:AF:71:ILE:HG13	5:AF:72:ASP:N	2.24	0.50
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.14	0.50
11:CL:85:ARG:HD2	11:CL:93:ARG:HG3	1.92	0.50
23:DB:1911:U:O2'	23:DB:1912:A:H5'	2.12	0.50
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.45	0.50
1:CA:386:C:C2'	1:CA:387:U:H5'	2.42	0.50
1:CA:1033:G:N3	1:CA:1034:G:H1'	2.27	0.50
23:BB:1439:A:N7	23:BB:1440:U:N1	2.60	0.50
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.11	0.50
23:DB:137:U:H2'	23:DB:138:U:C6	2.46	0.50
15:AP:54:LEU:HD21	15:AP:75:ILE:HG23	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:50:VAL:O	30:DY:54:VAL:HG22	2.12	0.50
25:DC:78:GLU:OE1	25:DC:94:LEU:HD22	2.11	0.50
1:AA:815:A:H4'	1:AA:817:C:C4	2.46	0.50
40:BH:57:LYS:HZ2	40:BH:58:LEU:HB2	1.75	0.50
10:AK:55:ARG:NH1	10:AK:60:PHE:HD1	2.10	0.50
23:DB:2415:G:H4'	37:DL:65:GLY:O	2.12	0.50
11:AL:35:ARG:NH1	11:AL:36:VAL:H	2.09	0.50
38:BM:59:ARG:HE	38:BM:60:GLN:HB3	1.76	0.50
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	1.92	0.50
1:AA:586:C:H5''	7:AH:81:GLY:HA2	1.93	0.50
43:DO:88:LYS:HE3	43:DO:114:GLY:O	2.12	0.50
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.26	0.50
23:BB:548:G:C2'	23:BB:548:G:N3	2.75	0.50
1:CA:908:A:O2'	1:CA:909:A:H5'	2.12	0.50
1:AA:923:A:OP1	4:AE:25:LYS:HB3	2.10	0.50
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.26	0.50
22:DA:102:G:O2'	22:DA:103:U:H5'	2.12	0.50
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.46	0.50
23:DB:418:C:H2'	23:DB:419:U:H6	1.76	0.50
23:DB:1510:G:H2'	23:DB:1511:G:O4'	2.11	0.50
14:CO:43:PHE:CE1	14:CO:56:LEU:HD22	2.46	0.50
1:AA:963:G:H21	9:AJ:56:HIS:CE1	2.30	0.50
23:DB:1033:U:H5	32:D4:15:LYS:HE3	1.76	0.50
23:BB:2104:C:C6	23:BB:2104:C:H3'	2.45	0.50
6:AG:14:ASP:HB3	6:AG:18:GLY:N	2.27	0.50
1:CA:1272:G:H2'	1:CA:1273:C:H6	1.77	0.50
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.11	0.50
11:AL:54:VAL:CG2	11:AL:79:ILE:HD11	2.41	0.50
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.75	0.50
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.11	0.50
1:CA:1297:G:H1'	1:CA:1298:U:H5	1.76	0.50
23:BB:2092:U:H4'	23:BB:2093:G:H5''	1.91	0.50
23:BB:1159:U:O2'	23:BB:1160:G:H5'	2.11	0.50
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.47	0.50
23:BB:612:G:H2'	23:BB:614:A:H5''	1.93	0.50
27:DK:58:LEU:N	27:DK:58:LEU:HD23	2.26	0.50
25:DC:74:PRO:HG2	25:DC:96:LYS:CG	2.41	0.50
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.47	0.50
23:DB:2257:U:O2'	23:DB:2258:C:H5'	2.12	0.50
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.32	0.50
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:103:ASN:HA	48:DG:113:ASP:HA	1.93	0.50
1:CA:295:C:H2'	1:CA:296:U:C6	2.46	0.50
20:CB:127:LYS:HD2	20:CB:127:LYS:C	2.32	0.50
4:AE:144:GLU:HG2	4:AE:144:GLU:O	2.11	0.50
1:AA:343:U:O2'	1:AA:344:A:H2'	2.11	0.50
23:BB:1215:G:O2'	23:BB:1216:G:H5'	2.12	0.50
23:DB:1099:G:H5''	24:DI:2:LYS:HB2	1.94	0.50
23:DB:2273:A:H2'	23:DB:2274:A:C8	2.46	0.50
20:CB:165:ALA:HB3	20:CB:186:VAL:HG12	1.93	0.50
21:AU:42:THR:CB	21:AU:46:ARG:HH21	2.25	0.50
28:BP:47:ILE:HG13	28:BP:48:ALA:N	2.27	0.50
23:DB:557:C:H2'	23:DB:558:U:H6	1.77	0.50
44:DQ:55:GLN:O	44:DQ:59:LEU:HB2	2.11	0.50
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.47	0.50
47:DF:3:LEU:HB2	47:DF:100:GLU:OE2	2.11	0.50
23:DB:544:C:O5'	23:DB:545:U:OP1	2.30	0.50
23:BB:374:A:H61	23:BB:400:G:H1'	1.75	0.50
51:DZ:5:CYS:CB	51:DZ:10:LYS:H	2.22	0.50
20:CB:65:LYS:HA	20:CB:89:PHE:HE1	1.77	0.50
23:DB:117:G:H5'	23:DB:126:A:C8	2.41	0.50
37:BL:112:LEU:HD23	37:BL:112:LEU:O	2.11	0.50
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.44	0.50
1:AA:979:C:H1'	1:AA:1317:C:H41	1.76	0.50
46:DU:93:ARG:O	46:DU:102:ILE:HG22	2.11	0.50
33:D1:28:THR:O	33:D1:29:LYS:HD2	2.11	0.50
42:DN:25:ALA:HA	42:DN:44:LEU:HD11	1.94	0.50
42:BN:25:ALA:HA	42:BN:44:LEU:HD11	1.92	0.50
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.46	0.50
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.27	0.50
1:CA:465:A:H2'	1:CA:466:A:H3'	1.94	0.50
2:AC:19:SER:HB3	2:AC:21:TRP:NE1	2.25	0.50
25:BC:83:ASP:HB2	25:BC:90:ILE:HB	1.92	0.50
34:D3:14:LYS:O	34:D3:21:PHE:O	2.29	0.50
1:CA:438:U:H4'	3:CD:119:HIS:HD2	1.76	0.50
1:CA:719:C:H2'	17:CR:38:ILE:CD1	2.42	0.50
38:BM:33:LEU:HD22	38:BM:128:THR:CB	2.42	0.50
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.46	0.50
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.77	0.50
1:AA:813:U:H5''	1:AA:816:A:H62	1.75	0.50
1:CA:1336:C:H4'	1:CA:1337:G:O5'	2.12	0.50
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:108:ILE:HD11	29:BE:181:ILE:HB	1.91	0.50
23:DB:1734:G:O2'	23:DB:1735:A:H5'	2.12	0.50
1:AA:22:G:H4'	1:AA:885:G:C8	2.46	0.50
1:AA:833:G:H2'	1:AA:834:U:H6	1.76	0.50
23:BB:1475:G:H1'	23:BB:1476:U:H5	1.76	0.50
1:AA:858:G:O6	1:AA:869:G:H3'	2.12	0.50
1:AA:653:U:C4	7:AH:55:LYS:HE2	2.47	0.50
1:AA:394:G:H2'	1:AA:395:C:C6	2.46	0.50
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD13	2.46	0.50
52:BW:47:GLY:HA3	52:BW:80:SER:CB	2.41	0.50
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.12	0.50
1:CA:747:A:H2'	1:CA:748:G:O4'	2.12	0.50
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.77	0.50
1:AA:610:U:O2	1:AA:610:U:O4'	2.30	0.50
24:BI:2:LYS:NZ	24:BI:2:LYS:HB3	2.26	0.50
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.27	0.50
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.46	0.50
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.79	0.50
20:CB:51:GLU:O	20:CB:55:GLU:HG2	2.11	0.50
39:DX:28:LEU:HD11	39:DX:42:LEU:HD23	1.94	0.50
40:BH:82:SER:OG	40:BH:94:ILE:HD13	2.12	0.50
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.42	0.50
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.11	0.50
25:DC:43:ASN:HB2	25:DC:49:THR:HG23	1.93	0.50
26:DD:11:MET:H	26:DD:25:THR:HA	1.75	0.50
23:BB:1812:U:C1'	25:BC:43:ASN:HD21	2.13	0.50
23:BB:141:G:N1	50:BT:2:ILE:HD12	2.26	0.50
35:BV:30:ILE:O	35:BV:37:PRO:HA	2.11	0.50
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.26	0.50
23:BB:30:G:H2'	23:BB:31:C:H6	1.73	0.50
25:BC:166:ARG:NH2	25:BC:166:ARG:HB2	2.27	0.50
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.12	0.50
23:DB:2384:U:H5''	23:DB:2386:A:OP1	2.12	0.50
52:DW:35:ILE:O	52:DW:37:VAL:N	2.45	0.50
29:BE:61:ARG:O	29:BE:62:GLN:C	2.50	0.50
52:BW:37:VAL:C	52:BW:38:ARG:HG2	2.32	0.50
23:BB:2306:C:C5	23:BB:2307:G:H2'	2.46	0.50
1:AA:131:A:H2'	1:AA:132:C:H6	1.75	0.50
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.75	0.50
1:CA:1313:U:OP2	18:CS:5:LYS:HA	2.11	0.50
6:AG:134:VAL:HB	6:AG:137:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B4:17:VAL:HG12	32:B4:18:LYS:N	2.21	0.50
20:AB:65:LYS:HA	20:AB:89:PHE:HE1	1.76	0.50
41:BJ:64:VAL:HG13	41:BJ:68:LYS:HB2	1.94	0.50
42:BN:97:ILE:HD13	42:BN:99:LYS:HG3	1.92	0.50
30:BY:40:THR:HG22	30:BY:41:PRO:HD2	1.92	0.50
20:AB:221:ARG:HG3	20:AB:222:GLU:OE1	2.12	0.50
20:AB:86:CYS:HB3	20:AB:88:GLN:NE2	2.26	0.50
30:DY:6:ILE:HG22	30:DY:56:VAL:HA	1.92	0.50
40:DH:132:PHE:CD2	40:DH:134:VAL:HG22	2.46	0.50
1:AA:1080:A:O3'	4:AE:20:VAL:HG11	2.12	0.50
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.12	0.50
29:DE:48:THR:H	29:DE:51:GLU:HG3	1.77	0.50
1:AA:253:A:H2'	1:AA:254:G:H8	1.76	0.50
23:DB:2213:U:O2'	23:DB:2214:C:H5'	2.11	0.50
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.10	0.50
34:D3:7:ARG:O	34:D3:11:LYS:HG3	2.12	0.50
23:BB:1734:G:O2'	23:BB:1735:A:H5'	2.12	0.50
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.93	0.50
26:DD:154:LYS:HD3	26:DD:154:LYS:N	2.26	0.50
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.77	0.50
42:BN:47:VAL:O	42:BN:51:LEU:HD13	2.11	0.50
41:DJ:20:ALA:HA	41:DJ:23:LYS:CG	2.42	0.50
23:DB:5:A:H2'	23:DB:6:A:H8	1.75	0.50
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.45	0.50
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.77	0.50
43:DO:36:TYR:HD2	43:DO:36:TYR:N	2.09	0.50
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.76	0.50
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.47	0.50
1:CA:515:G:H2'	1:CA:516:U:C6	2.47	0.50
23:BB:864:G:O2'	23:BB:865:C:H5'	2.11	0.50
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.46	0.50
6:CG:85:GLN:OE1	6:CG:85:GLN:HA	2.11	0.50
23:DB:758:C:O2	23:DB:1981:A:H2	1.94	0.50
23:BB:1054:A:H2'	23:BB:1055:G:C8	2.46	0.50
23:DB:1098:A:H3'	24:DI:3:LYS:HB3	1.93	0.50
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.11	0.50
23:BB:2267:A:C8	23:BB:2267:A:O5'	2.65	0.50
25:DC:140:VAL:O	25:DC:141:HIS:HB2	2.12	0.50
20:CB:163:ILE:CG2	20:CB:164:ASP:H	2.15	0.50
21:CU:42:THR:CB	21:CU:46:ARG:HH21	2.25	0.50
21:CU:42:THR:HB	21:CU:46:ARG:HH21	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:85:ARG:HH11	46:BU:86:PHE:N	2.10	0.50
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.93	0.50
44:DQ:91:ARG:HE	44:DQ:94:LEU:CD2	2.23	0.50
49:BR:16:GLU:HG2	49:BR:101:ILE:HG13	1.94	0.50
47:DF:110:ILE:HA	47:DF:111:ARG:NH1	2.26	0.50
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.11	0.50
13:CN:46:LYS:HZ3	18:CS:9:PHE:HA	1.77	0.50
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.11	0.50
19:AT:67:HIS:ND1	19:AT:68:LYS:HG2	2.26	0.50
47:BF:78:ILE:HA	47:BF:82:TYR:CG	2.46	0.50
23:BB:2147:A:H5'	23:BB:2148:G:C1'	2.42	0.50
37:BL:111:ILE:HG22	37:BL:112:LEU:N	2.27	0.50
1:AA:1271:A:H5'	1:AA:1314:C:H5''	1.94	0.50
20:CB:63:LYS:HG2	20:CB:224:ARG:NH2	2.26	0.50
25:BC:78:GLU:OE1	25:BC:94:LEU:HD22	2.11	0.50
1:CA:369:G:O2'	1:CA:370:C:H5'	2.11	0.50
28:DP:47:ILE:HD11	28:DP:59:THR:HG22	1.94	0.50
23:BB:666:A:O2'	23:BB:667:U:H5'	2.11	0.50
33:B1:9:LYS:N	33:B1:9:LYS:HD3	2.25	0.50
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.77	0.50
23:BB:1640:A:H8	23:BB:1640:A:H5'	1.75	0.50
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.47	0.50
3:CD:155:LYS:H	3:CD:155:LYS:HD2	1.77	0.50
23:BB:233:A:N6	23:BB:428:A:N6	2.57	0.50
1:AA:91:U:H6	1:AA:91:U:O5'	1.94	0.50
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.47	0.50
1:AA:958:A:N6	18:AS:53:GLY:HA3	2.27	0.50
37:DL:55:MET:HA	37:DL:55:MET:HE3	1.94	0.50
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.27	0.50
26:DD:159:LYS:HZ2	26:DD:160:LYS:N	2.09	0.50
1:AA:620:C:C2	3:AD:131:ILE:HD13	2.47	0.50
11:AL:98:ARG:HD2	11:AL:103:CYS:SG	2.52	0.50
16:AQ:30:HIS:ND1	16:AQ:32:ILE:HG22	2.26	0.50
23:DB:1373:A:H4'	23:DB:2212:A:N3	2.26	0.50
1:AA:1464:U:P	28:BP:108:ARG:HH22	2.35	0.50
1:CA:1493:A:H5''	1:CA:1494:G:OP2	2.11	0.50
23:BB:1458:U:H5''	23:BB:1459:G:OP1	2.11	0.50
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.11	0.50
23:DB:765:C:H2'	23:DB:766:U:H6	1.76	0.50
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.47	0.50
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:394:G:H2'	1:CA:395:C:C6	2.47	0.50
23:DB:2092:U:H4'	23:DB:2093:G:H5''	1.93	0.50
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.46	0.50
23:DB:1858:A:C2	23:DB:1859:U:H1'	2.47	0.50
23:DB:1224:U:H4'	49:DR:88:GLY:O	2.10	0.50
48:BG:53:PRO:HG3	48:BG:61:TRP:CD2	2.47	0.50
2:AC:25:THR:HG23	13:AN:75:LYS:HE2	1.94	0.50
23:BB:538:A:H2'	23:BB:539:G:O4'	2.10	0.50
31:B0:25:THR:O	31:B0:26:SER:HB3	2.10	0.50
7:AH:74:ILE:HG13	7:AH:128:VAL:HG22	1.93	0.50
23:BB:2398:U:H2'	23:BB:2399:G:H8	1.76	0.50
1:AA:572:A:N3	1:AA:917:G:H1'	2.26	0.50
27:BK:31:ARG:HB3	27:BK:32:TYR:CE1	2.47	0.50
23:DB:425:G:O2'	23:DB:426:C:H5'	2.12	0.50
23:DB:612:G:H2'	23:DB:614:A:H5''	1.94	0.50
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.47	0.50
27:BK:3:GLN:HG2	27:BK:4:GLU:N	2.26	0.50
25:DC:259:ASN:C	25:DC:261:ARG:H	2.15	0.50
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.76	0.50
23:DB:1396:U:O2	23:DB:1396:U:O4'	2.28	0.50
18:AS:42:ASN:N	18:AS:42:ASN:HD22	2.10	0.50
1:AA:643:C:H2'	1:AA:644:U:H6	1.76	0.50
20:AB:165:ALA:HB3	20:AB:186:VAL:HG12	1.93	0.50
20:AB:119:GLN:NE2	20:AB:124:THR:HG22	2.27	0.50
47:BF:107:VAL:HA	47:BF:111:ARG:HH12	1.76	0.50
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.46	0.50
44:BQ:83:LYS:HZ3	44:BQ:87:VAL:HA	1.76	0.50
23:BB:1454:C:C1'	42:BN:60:VAL:HG13	2.42	0.50
42:DN:29:VAL:HG13	42:DN:78:LYS:HG2	1.92	0.50
42:DN:72:ASP:O	42:DN:76:VAL:HG13	2.11	0.50
5:AF:42:TRP:HE3	5:AF:45:ARG:HH12	1.59	0.50
45:DS:71:VAL:O	45:DS:71:VAL:HG22	2.11	0.50
23:DB:2314:A:C1'	47:DF:154:THR:HG21	2.39	0.50
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.75	0.50
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.75	0.50
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.94	0.50
23:DB:126:A:H5'	36:D2:19:ARG:CD	2.42	0.50
36:B2:42:LEU:O	36:B2:43:THR:HG23	2.12	0.50
23:BB:639:U:H2'	23:BB:640:C:H6	1.74	0.50
23:BB:365:U:H2'	23:BB:366:C:C6	2.46	0.50
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.52	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:51:PRO:CB	13:CN:54:SER:HB3	2.40	0.50
40:DH:109:GLU:OE2	40:DH:111:ALA:HB2	2.11	0.50
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.47	0.50
23:BB:1170:C:H2'	23:BB:1171:G:C8	2.46	0.50
38:DM:59:ARG:HE	38:DM:60:GLN:HB3	1.77	0.50
48:DG:89:VAL:HG12	48:DG:90:GLY:N	2.24	0.50
39:DX:46:VAL:O	39:DX:49:ASP:HB2	2.12	0.50
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.47	0.50
35:BV:62:THR:HA	35:BV:71:LYS:HA	1.94	0.50
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.12	0.50
23:BB:2872:A:H1'	23:BB:2873:A:C8	2.47	0.50
22:DA:28:C:OP1	43:DO:31:THR:HG21	2.12	0.50
51:BZ:15:GLY:O	51:BZ:27:ARG:HG3	2.12	0.50
35:BV:66:ASP:OD1	35:BV:68:LYS:HD3	2.11	0.50
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.11	0.50
1:CA:552:U:H4'	11:CL:82:ARG:HG2	1.94	0.50
23:DB:2109:U:N3	23:DB:2180:U:H2'	2.26	0.50
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.46	0.50
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.12	0.50
14:AO:11:ILE:HD11	14:AO:30:ALA:HB1	1.94	0.50
9:AJ:52:LEU:H	9:AJ:52:LEU:HD12	1.76	0.50
51:BZ:18:ARG:HA	51:BZ:23:ASN:O	2.12	0.50
1:AA:665:A:H4'	54:AA:2063:LLL:H531	1.94	0.50
1:AA:1424:U:H2'	1:AA:1425:U:C6	2.47	0.50
23:BB:2457:U:H2'	23:BB:2458:G:H5'	1.93	0.50
1:CA:825:A:H2'	1:CA:826:C:C6	2.47	0.50
23:DB:264:C:C2'	23:DB:265:A:H5''	2.42	0.50
18:CS:27:LYS:HB3	18:CS:27:LYS:HZ2	1.76	0.50
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.27	0.50
23:BB:708:G:H2'	23:BB:709:U:C6	2.47	0.50
23:DB:1434:A:H62	23:DB:1558:C:H42	1.60	0.50
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.46	0.50
44:DQ:57:ARG:HH12	44:DQ:61:ILE:HD11	1.77	0.50
23:DB:39:G:H2'	23:DB:40:U:H6	1.77	0.50
1:CA:510:A:N3	1:CA:543:U:H1'	2.26	0.50
1:AA:26:A:N6	1:AA:558:G:H1'	2.26	0.50
26:DD:38:LYS:HD2	26:DD:81:GLU:OE1	2.12	0.50
23:DB:132:G:H2'	23:DB:133:U:H6	1.76	0.50
1:CA:868:C:H2'	1:CA:869:G:O4'	2.12	0.50
22:DA:85:G:H2'	22:DA:86:G:H8	1.77	0.50
48:DG:39:ALA:HB1	48:DG:57:TYR:CD1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:295:C:H2'	1:AA:296:U:C6	2.47	0.50
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.11	0.50
1:CA:827:U:H2'	1:CA:870:U:O4	2.12	0.50
20:AB:116:LEU:HB3	20:AB:140:LEU:HD11	1.92	0.50
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.12	0.50
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.12	0.50
46:DU:13:LEU:H	46:DU:13:LEU:HD12	1.77	0.50
23:DB:1647:U:H3'	23:DB:1647:U:P	2.52	0.50
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.47	0.50
52:DW:50:VAL:CG2	52:DW:61:LYS:HD3	2.35	0.49
20:AB:20:ARG:HA	20:AB:20:ARG:NE	2.27	0.49
25:DC:130:PRO:HA	25:DC:188:ARG:HA	1.94	0.49
1:CA:1049:U:H2'	13:CN:2:LYS:HD3	1.93	0.49
20:CB:20:ARG:HB3	20:CB:20:ARG:CZ	2.41	0.49
40:BH:90:LEU:CG	40:BH:146:VAL:HG11	2.42	0.49
40:BH:65:ALA:HA	40:BH:68:ARG:HG2	1.94	0.49
47:BF:32:LYS:H	47:BF:95:MET:HE1	1.76	0.49
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.27	0.49
26:DD:25:THR:HG21	26:DD:193:VAL:CG2	2.42	0.49
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.42	0.49
25:DC:80:LEU:HD23	25:DC:91:ALA:HB2	1.93	0.49
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.47	0.49
5:AF:61:LEU:HD12	5:AF:62:MET:H	1.77	0.49
52:DW:37:VAL:HG11	52:DW:38:ARG:HH11	1.76	0.49
51:BZ:59:ILE:HG23	51:BZ:67:VAL:HG21	1.94	0.49
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.60	0.49
1:AA:1049:U:H2'	13:AN:2:LYS:HD3	1.92	0.49
27:DK:43:ILE:CD1	27:DK:52:VAL:HB	2.42	0.49
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.76	0.49
48:DG:153:PRO:CG	48:DG:162:ARG:HB3	2.42	0.49
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	1.94	0.49
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.32	0.49
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.60	0.49
6:AG:146:ALA:C	10:AK:55:ARG:HH21	2.15	0.49
23:DB:616:A:H3'	23:DB:617:G:C8	2.42	0.49
23:DB:592:A:C2	34:D3:3:ILE:HD11	2.46	0.49
23:DB:979:A:H2'	23:DB:982:C:H42	1.76	0.49
33:B1:24:LYS:HD3	33:B1:52:LYS:HB2	1.94	0.49
23:BB:418:C:H2'	23:BB:419:U:C6	2.46	0.49
48:BG:14:VAL:O	48:BG:16:VAL:HG23	2.12	0.49
1:AA:221:C:O2'	1:AA:222:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:191:G:H2'	1:CA:192:A:C8	2.47	0.49
1:CA:194:C:O2'	1:CA:195:A:H5'	2.12	0.49
23:DB:1409:U:H2'	23:DB:1410:G:C8	2.46	0.49
1:AA:908:A:O2'	1:AA:909:A:H5'	2.12	0.49
1:CA:1131:G:O2'	1:CA:1132:C:H5'	2.12	0.49
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.76	0.49
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.12	0.49
10:AK:108:ASN:ND2	21:AU:6:ARG:HD2	2.27	0.49
1:AA:669:G:O6	54:AA:2063:LLL:H312	2.12	0.49
1:AA:1033:G:C2	1:AA:1034:G:H1'	2.46	0.49
49:BR:54:VAL:HG13	49:BR:56:GLY:O	2.12	0.49
23:DB:871:U:H2'	23:DB:872:U:C6	2.47	0.49
25:DC:4:LYS:HE2	25:DC:5:CYS:N	2.27	0.49
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.47	0.49
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.12	0.49
25:BC:202:ARG:HH21	25:BC:202:ARG:CB	2.25	0.49
23:BB:770:G:O2'	23:BB:771:G:H5'	2.12	0.49
23:DB:753:A:H2'	23:DB:754:U:C6	2.47	0.49
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.47	0.49
25:DC:74:PRO:HG2	25:DC:96:LYS:HG2	1.94	0.49
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.46	0.49
1:CA:333:U:H2'	1:CA:334:C:C6	2.46	0.49
23:BB:1657:U:O2'	23:BB:1658:C:H5'	2.12	0.49
23:BB:1035:U:H2'	23:BB:1036:G:H8	1.76	0.49
23:DB:2825:G:H5'	23:DB:2825:G:N3	2.26	0.49
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.47	0.49
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.76	0.49
23:BB:598:U:H2'	23:BB:599:A:H8	1.77	0.49
23:DB:858:G:H21	23:DB:2268:A:C3'	2.24	0.49
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.76	0.49
37:BL:92:LEU:CD2	37:BL:124:GLY:HA3	2.41	0.49
37:DL:95:LEU:HB3	37:DL:100:ILE:HG23	1.93	0.49
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.47	0.49
20:CB:69:VAL:HB	20:CB:162:VAL:HG23	1.94	0.49
25:BC:141:HIS:CG	25:BC:142:ASN:N	2.80	0.49
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.27	0.49
47:BF:35:LEU:HD23	47:BF:153:ILE:HG23	1.93	0.49
48:DG:9:VAL:C	48:DG:11:PRO:HD3	2.31	0.49
48:DG:24:THR:HB	48:DG:34:ARG:HD3	1.93	0.49
49:BR:4:VAL:CG2	49:BR:39:LEU:HG	2.42	0.49
8:CI:49:GLN:C	8:CI:51:LEU:H	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:205:ALA:O	20:CB:209:VAL:HG22	2.11	0.49
48:DG:96:ALA:O	48:DG:97:VAL:HB	2.12	0.49
23:DB:1245:G:H4'	29:DE:33:VAL:HG13	1.94	0.49
5:AF:36:ILE:N	5:AF:36:ILE:HD12	2.28	0.49
45:BS:73:LYS:CE	45:BS:74:ILE:H	2.16	0.49
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.47	0.49
47:DF:62:GLN:HE21	47:DF:91:ARG:CZ	2.25	0.49
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.12	0.49
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.77	0.49
52:BW:37:VAL:CG1	52:BW:38:ARG:HD3	2.42	0.49
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	1.93	0.49
11:AL:49:ARG:HH12	11:AL:88:ASP:HB3	1.76	0.49
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	1.94	0.49
44:BQ:79:ILE:HD13	44:BQ:79:ILE:O	2.12	0.49
23:DB:677:A:O2'	23:DB:2071:A:H5'	2.11	0.49
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.12	0.49
13:AN:31:SER:HA	13:AN:40:ARG:HA	1.93	0.49
46:BU:9:GLU:O	46:BU:72:PHE:N	2.45	0.49
1:AA:204:G:N2	1:AA:466:A:N6	2.56	0.49
29:DE:138:LEU:O	29:DE:142:ALA:N	2.45	0.49
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.94	0.49
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.46	0.49
1:CA:204:G:H8	1:CA:204:G:O5'	1.96	0.49
39:DX:7:ARG:HH21	39:DX:9:LYS:HD2	1.76	0.49
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.94	0.49
27:BK:68:GLY:HA3	27:BK:78:ARG:HB3	1.94	0.49
43:DO:89:ASP:HA	43:DO:116:GLN:O	2.11	0.49
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.27	0.49
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.27	0.49
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.93	0.49
2:AC:49:ALA:O	2:AC:71:ARG:HB2	2.12	0.49
22:DA:29:A:OP2	43:DO:32:PRO:HD2	2.12	0.49
23:BB:151:C:H2'	23:BB:152:A:C8	2.47	0.49
23:BB:419:U:H2'	23:BB:420:C:H6	1.76	0.49
42:DN:87:PHE:HE1	42:DN:116:VAL:HG12	1.77	0.49
1:AA:812:G:O2'	1:AA:813:U:H6	1.94	0.49
23:DB:1418:G:H1'	23:DB:1580:A:N6	2.27	0.49
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.77	0.49
23:DB:416:U:H2'	23:DB:417:C:H6	1.75	0.49
16:CQ:57:VAL:HB	16:CQ:79:GLU:HB3	1.95	0.49
1:CA:714:G:N2	1:CA:777:A:H1'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2241:A:H2'	23:BB:2242:G:H8	1.74	0.49
2:AC:188:ALA:HB3	2:AC:195:ILE:HB	1.94	0.49
23:DB:401:A:H2'	23:DB:402:A:C8	2.48	0.49
1:CA:91:U:H2'	1:CA:92:U:C6	2.47	0.49
23:BB:2458:G:H8	23:BB:2459:A:H62	1.60	0.49
23:BB:960:A:H61	38:BM:82:MET:CE	2.25	0.49
43:DO:6:ALA:CB	43:DO:10:ARG:HH11	2.24	0.49
23:DB:207:A:H2'	23:DB:208:C:O4'	2.12	0.49
23:BB:1877:A:H2'	23:BB:1878:G:H8	1.77	0.49
10:AK:30:ILE:HG22	10:AK:45:THR:CB	2.43	0.49
6:CG:71:THR:HG23	6:CG:72:VAL:HG22	1.95	0.49
23:DB:319:G:H2'	23:DB:320:A:O4'	2.12	0.49
14:AO:74:ASP:OD1	14:AO:76:ALA:HB3	2.12	0.49
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.60	0.49
42:BN:106:ASP:C	42:BN:108:ALA:H	2.15	0.49
23:DB:1779:U:C5	23:DB:1784:A:N7	2.80	0.49
30:DY:11:SER:OG	30:DY:13:ILE:HG13	2.12	0.49
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.77	0.49
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.46	0.49
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.12	0.49
23:BB:527:C:H5'	56:BB:3418:HOH:O	2.11	0.49
1:AA:987:G:O2'	1:AA:988:G:H5'	2.12	0.49
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG13	1.93	0.49
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.94	0.49
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.94	0.49
23:BB:696:G:O2'	23:BB:697:G:H5'	2.12	0.49
20:CB:76:SER:HA	20:CB:92:ASN:HB2	1.94	0.49
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.11	0.49
25:BC:221:GLY:C	25:BC:223:ALA:H	2.15	0.49
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.33	0.49
5:AF:3:HIS:N	5:AF:3:HIS:CD2	2.79	0.49
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.11	0.49
41:DJ:36:LEU:O	41:DJ:51:GLY:HA3	2.13	0.49
29:BE:158:PHE:HA	29:BE:169:VAL:HG21	1.95	0.49
26:DD:32:ASN:HA	26:DD:51:THR:O	2.12	0.49
1:CA:836:G:OP2	17:CR:49:LYS:HE2	2.11	0.49
38:BM:38:ARG:CA	38:BM:98:PRO:HD3	2.42	0.49
35:BV:63:ILE:HD12	35:BV:63:ILE:H	1.77	0.49
47:DF:107:VAL:HA	47:DF:111:ARG:HH12	1.76	0.49
23:BB:2752:C:H2'	23:BB:2752:C:O2	2.12	0.49
1:CA:1101:A:H61	20:CB:101:THR:HG21	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:61:ARG:O	29:DE:62:GLN:C	2.50	0.49
6:AG:134:VAL:CB	6:AG:137:ARG:HH21	2.25	0.49
23:DB:359:G:H2'	23:DB:360:U:C5'	2.38	0.49
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.49
23:DB:141:G:O6	50:DT:2:ILE:HG21	2.12	0.49
39:BX:23:ARG:O	39:BX:27:ASN:HB2	2.12	0.49
23:DB:2728:U:H5'	27:DK:70:ARG:NH2	2.28	0.49
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.12	0.49
19:CT:4:LYS:HE3	19:CT:6:ALA:H	1.76	0.49
11:CL:20:VAL:HB	11:CL:94:TYR:CE1	2.47	0.49
23:DB:819:A:H5'	23:DB:973:A:N1	2.26	0.49
27:DK:68:GLY:HA3	27:DK:78:ARG:HB3	1.93	0.49
23:BB:2038:G:H2'	23:BB:2039:U:O4'	2.12	0.49
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.46	0.49
25:BC:106:PRO:O	25:BC:109:LEU:HB3	2.12	0.49
2:AC:46:LEU:HD12	2:AC:75:VAL:HG22	1.94	0.49
1:AA:921:U:H2'	1:AA:922:G:C8	2.48	0.49
6:CG:63:VAL:HG12	6:CG:127:ALA:HB1	1.94	0.49
23:BB:1409:U:H2'	23:BB:1410:G:H8	1.77	0.49
1:AA:34:C:H2'	1:AA:35:G:C8	2.47	0.49
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.12	0.49
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.47	0.49
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.41	0.49
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	1.94	0.49
15:AP:23:ASP:O	15:AP:26:ASN:HB2	2.12	0.49
18:CS:27:LYS:HG3	18:CS:28:LYS:HD3	1.94	0.49
1:CA:1064:G:OP1	1:CA:1386:G:H4'	2.13	0.49
4:CE:44:ARG:HD2	4:CE:72:ASN:ND2	2.26	0.49
23:BB:39:G:H2'	23:BB:40:U:H6	1.75	0.49
42:DN:106:ASP:C	42:DN:108:ALA:H	2.16	0.49
1:CA:77:A:H2'	1:CA:78:A:H8	1.76	0.49
23:BB:1275:A:N3	23:BB:1275:A:H2'	2.27	0.49
23:BB:1779:U:C5	23:BB:1784:A:N7	2.81	0.49
25:BC:28:PRO:HG2	25:BC:33:LEU:HD11	1.93	0.49
23:BB:2624:G:H1'	31:B0:18:HIS:CE1	2.46	0.49
23:DB:494:G:OP1	45:DS:8:ARG:HD3	2.12	0.49
1:AA:642:A:H2'	1:AA:643:C:H6	1.77	0.49
23:DB:2825:G:H2'	23:DB:2826:A:H5'	1.92	0.49
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.47	0.49
23:DB:599:A:O2'	23:DB:600:G:H5'	2.12	0.49
1:AA:747:A:H2'	1:AA:748:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.77	0.49
5:CF:69:GLU:O	5:CF:73:GLU:HG2	2.12	0.49
1:CA:802:A:H2'	1:CA:803:G:O4'	2.12	0.49
1:CA:355:C:O2'	1:CA:356:A:H5'	2.12	0.49
40:BH:124:THR:HG22	40:BH:125:THR:H	1.77	0.49
1:CA:555:U:H2'	1:CA:556:C:H6	1.77	0.49
1:CA:26:A:N6	1:CA:558:G:H1'	2.27	0.49
8:CI:30:ASN:ND2	8:CI:65:THR:HA	2.27	0.49
1:AA:317:U:H2'	1:AA:318:G:H8	1.76	0.49
1:AA:1363:A:H2'	1:AA:1363:A:N3	2.27	0.49
25:DC:153:LEU:HD13	25:DC:175:LEU:HD21	1.94	0.49
39:DX:28:LEU:HB3	39:DX:43:LEU:HD21	1.95	0.49
40:BH:128:HIS:CE1	40:BH:130:VAL:HG22	2.48	0.49
21:AU:44:ARG:HG3	21:AU:44:ARG:HH11	1.77	0.49
26:BD:25:THR:HG21	26:BD:193:VAL:CG2	2.43	0.49
25:BC:130:PRO:HA	25:BC:188:ARG:HA	1.94	0.49
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.47	0.49
44:DQ:73:ILE:HG21	44:DQ:109:VAL:HG13	1.93	0.49
48:BG:17:LYS:HG2	48:BG:24:THR:HG23	1.95	0.49
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.12	0.49
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.38	0.49
47:DF:78:ILE:HA	47:DF:82:TYR:CG	2.46	0.49
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.93	0.49
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.94	0.49
56:DB:3322:HOH:O	29:DE:63:LYS:HE2	2.12	0.49
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.47	0.49
23:BB:1549:A:H2'	23:BB:1550:C:H6	1.75	0.49
23:DB:1141:U:H4'	23:DB:1142:A:C1'	2.42	0.49
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.95	0.49
48:BG:88:LEU:HB3	48:BG:161:VAL:HG13	1.93	0.49
1:AA:373:A:C1'	1:AA:481:G:H1'	2.42	0.49
1:AA:482:A:C2	1:AA:483:C:H1'	2.47	0.49
1:CA:815:A:H4'	1:CA:817:C:C4	2.47	0.49
48:BG:89:VAL:HG12	48:BG:90:GLY:N	2.24	0.49
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.42	0.49
46:DU:21:ARG:HG3	46:DU:21:ARG:HH11	1.77	0.49
1:AA:464:U:H3'	1:AA:466:A:OP1	2.13	0.49
23:DB:182:A:H2'	23:DB:183:C:C6	2.47	0.49
1:AA:376:G:OP1	15:AP:5:ARG:HB2	2.11	0.49
42:BN:96:ARG:HG2	42:BN:96:ARG:HH21	1.77	0.49
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:548:G:H5'	23:BB:549:G:N3	2.28	0.49
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.95	0.49
20:CB:83:ALA:HB3	20:CB:90:PHE:HB3	1.94	0.49
23:DB:1785:A:O2'	23:DB:1786:A:H2'	2.13	0.49
1:AA:947:G:H2'	1:AA:948:C:C6	2.47	0.49
23:BB:2065:C:H2'	23:BB:2066:C:C6	2.46	0.49
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.28	0.49
37:DL:56:PRO:O	37:DL:59:ARG:HB2	2.12	0.49
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.94	0.49
1:AA:1201:A:H5'	1:AA:1201:A:H8	1.77	0.49
1:CA:963:G:H21	9:CJ:56:HIS:CE1	2.30	0.49
1:AA:1005:A:N6	1:AA:1024:G:H1'	2.27	0.49
23:BB:947:A:O2'	23:BB:984:A:H2	1.95	0.49
11:AL:79:ILE:C	11:AL:101:LEU:HD12	2.33	0.49
23:DB:526:A:N6	23:DB:2626:C:C4'	2.75	0.49
23:BB:533:G:H2'	23:BB:534:U:C6	2.46	0.49
12:AM:76:ILE:O	12:AM:80:MET:HG3	2.12	0.49
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.47	0.49
1:CA:26:A:H61	1:CA:558:G:H1'	1.76	0.49
23:DB:1403:A:H2'	23:DB:1404:C:C6	2.46	0.49
1:CA:169:C:O2'	1:CA:170:U:H5'	2.12	0.49
44:BQ:52:ARG:C	44:BQ:54:ARG:H	2.16	0.49
23:BB:776:G:H4'	23:BB:777:G:O5'	2.12	0.49
48:BG:72:ASN:O	48:BG:76:ILE:HG12	2.12	0.49
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.47	0.49
23:BB:942:G:H2'	23:BB:943:A:H8	1.77	0.49
1:AA:418:C:H2'	1:AA:419:C:H6	1.76	0.49
40:DH:99:ILE:O	40:DH:103:VAL:HG12	2.13	0.49
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.12	0.49
1:AA:1269:A:H2	1:AA:1312:G:N3	2.10	0.49
23:BB:1513:U:H2'	23:BB:1514:G:C8	2.47	0.49
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.32	0.49
26:DD:105:LYS:H	26:DD:106:LYS:NZ	2.10	0.49
37:DL:75:ALA:HB3	37:DL:108:ALA:HB2	1.94	0.49
37:DL:93:ASN:HA	37:DL:96:LYS:HD3	1.94	0.49
20:AB:44:LYS:O	20:AB:47:PRO:HD2	2.13	0.49
37:BL:3:LEU:O	37:BL:5:THR:N	2.44	0.49
10:CK:106:ILE:HD11	10:CK:109:ILE:CG1	2.43	0.49
41:DJ:3:THR:HG21	44:DQ:60:TRP:NE1	2.28	0.49
49:BR:49:ILE:HD13	49:BR:53:PHE:N	2.27	0.49
8:CI:4:GLN:HE21	8:CI:21:LYS:NZ	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:51:THR:HG22	26:DD:52:THR:N	2.28	0.49
29:BE:138:LEU:O	29:BE:142:ALA:N	2.44	0.49
50:DT:74:ILE:HG13	50:DT:75:GLY:N	2.24	0.49
45:DS:58:ALA:CB	45:DS:69:LEU:HD21	2.43	0.49
38:DM:41:LEU:HD13	38:DM:46:ILE:HG22	1.95	0.49
45:BS:51:LEU:C	45:BS:53:SER:H	2.14	0.49
12:AM:33:LEU:HD22	12:AM:38:ILE:HB	1.93	0.49
23:BB:1141:U:H4'	23:BB:1142:A:C1'	2.42	0.49
38:BM:26:VAL:CG2	38:BM:133:LYS:HA	2.43	0.49
30:DY:2:LYS:HE2	30:DY:4:ILE:CD1	2.39	0.49
1:AA:204:G:H8	1:AA:204:G:O5'	1.95	0.49
35:DV:9:ARG:HA	35:DV:41:GLU:OE2	2.13	0.49
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.48	0.49
23:DB:288:U:H2'	23:DB:289:G:C8	2.48	0.49
23:DB:1299:G:H5''	23:DB:1300:G:OP1	2.13	0.49
23:BB:506:G:H1'	23:BB:507:A:C8	2.47	0.49
23:DB:1031:G:H4'	32:D4:6:SER:HB3	1.94	0.49
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.94	0.49
35:BV:5:ASN:HA	35:BV:64:VAL:O	2.11	0.49
1:CA:162:A:H2'	1:CA:163:C:O4'	2.13	0.49
6:AG:50:ALA:HA	6:AG:55:LYS:O	2.12	0.49
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.27	0.49
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.26	0.49
2:CC:188:ALA:HB3	2:CC:195:ILE:HB	1.94	0.49
23:DB:309:A:N3	23:DB:329:G:O2'	2.45	0.49
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.12	0.49
14:AO:57:LEU:HD11	23:BB:715:A:N6	2.27	0.49
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.47	0.49
23:DB:702:U:H2'	23:DB:703:U:H6	1.76	0.49
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.45	0.49
1:AA:1033:G:N3	1:AA:1034:G:H1'	2.27	0.49
41:BJ:23:LYS:HZ1	41:BJ:142:ILE:HG12	1.76	0.49
1:CA:621:A:H2'	1:CA:622:A:C8	2.48	0.49
1:CA:653:U:C4	7:CH:55:LYS:HE2	2.48	0.49
49:DR:54:VAL:HG13	49:DR:56:GLY:O	2.13	0.49
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.12	0.49
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.12	0.49
1:AA:162:A:H2'	1:AA:163:C:O4'	2.12	0.49
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	2.12	0.49
1:CA:643:C:H2'	1:CA:644:U:H6	1.76	0.49
37:DL:9:ALA:HB3	37:DL:12:SER:OG	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1868:C:H2'	23:DB:1869:G:O4'	2.12	0.49
23:BB:522:A:H2'	23:BB:523:C:C6	2.46	0.49
1:AA:555:U:H2'	1:AA:556:C:C6	2.48	0.49
23:BB:167:A:H2'	23:BB:168:G:O4'	2.11	0.49
23:DB:690:G:H2'	23:DB:691:C:O4'	2.12	0.49
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.47	0.49
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.78	0.49
3:AD:56:GLU:HG2	3:AD:198:LEU:HB3	1.94	0.49
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.77	0.49
20:AB:76:SER:HA	20:AB:92:ASN:HB2	1.93	0.49
1:AA:197:A:H4'	1:AA:198:G:O5'	2.13	0.49
6:AG:65:LEU:O	6:AG:69:ARG:HG3	2.13	0.49
52:BW:24:ARG:HB2	52:BW:65:LYS:HB3	1.95	0.49
20:CB:19:THR:O	20:CB:37:VAL:HA	2.13	0.49
8:AI:20:ILE:HA	8:AI:62:LEU:HB3	1.93	0.49
21:AU:34:ARG:HD3	21:AU:39:LYS:HZ3	1.76	0.49
48:DG:15:ASP:HB2	48:DG:26:LYS:HB3	1.94	0.49
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.48	0.49
44:DQ:93:ILE:HG23	44:DQ:94:LEU:H	1.76	0.49
25:DC:45:ASN:HB2	25:DC:47:ARG:HG2	1.94	0.49
26:DD:24:VAL:HA	26:DD:191:GLY:N	2.27	0.49
38:BM:19:GLY:N	38:BM:38:ARG:HH12	1.97	0.49
28:BP:74:GLN:O	28:BP:76:HIS:N	2.46	0.49
35:DV:79:ARG:NH1	38:DM:134:THR:HG21	2.28	0.49
35:DV:26:PHE:HE2	35:DV:44:HIS:HA	1.76	0.49
35:BV:72:VAL:HG21	35:BV:91:PHE:HB3	1.95	0.49
23:DB:350:G:H2'	23:DB:351:C:O4'	2.13	0.49
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.13	0.49
47:DF:163:GLU:HA	47:DF:166:ARG:NH1	2.27	0.49
1:CA:1103:C:H5''	20:CB:96:LEU:HD12	1.95	0.49
23:DB:1551:A:H2'	23:DB:1552:A:O4'	2.13	0.49
23:BB:1438:U:O2'	23:BB:1439:A:H5'	2.11	0.49
13:AN:52:ARG:NH1	13:AN:58:ARG:HH21	2.10	0.49
40:DH:132:PHE:O	40:DH:139:PHE:HA	2.11	0.49
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	1.93	0.49
23:BB:2658:C:H5'	48:BG:159:LYS:HZ3	1.77	0.49
23:BB:182:A:H1'	23:BB:434:U:H5'	1.95	0.49
23:DB:2418:A:H2'	23:DB:2419:U:O4'	2.12	0.49
10:CK:19:VAL:HG23	10:CK:34:THR:HG23	1.93	0.49
27:DK:99:ILE:N	27:DK:118:LEU:HD22	2.26	0.49
33:B1:22:THR:OG1	33:B1:23:THR:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.12	0.49
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.94	0.49
23:BB:847:U:H2'	23:BB:848:C:C6	2.48	0.49
11:CL:35:ARG:NH1	11:CL:36:VAL:H	2.09	0.49
34:D3:49:VAL:O	34:D3:51:LYS:N	2.46	0.49
29:BE:200:LEU:O	29:BE:201:ALA:HB3	2.12	0.49
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.77	0.49
1:CA:1308:U:OP2	12:CM:97:ARG:HB2	2.12	0.49
23:BB:1373:A:H4'	23:BB:2212:A:N3	2.28	0.49
1:CA:221:C:O2'	1:CA:222:C:H5'	2.12	0.49
23:DB:1515:A:H4'	23:DB:1556:C:O2'	2.13	0.49
20:CB:131:LYS:HG3	20:CB:132:GLU:N	2.27	0.49
32:B4:16:ILE:HG12	32:B4:25:VAL:HG22	1.95	0.49
23:BB:632:A:H2'	23:BB:633:A:C8	2.47	0.49
23:BB:393:C:O2'	23:BB:394:C:H5'	2.13	0.49
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.12	0.49
41:BJ:20:ALA:HA	41:BJ:23:LYS:CG	2.43	0.49
23:DB:699:A:H4'	23:DB:1634:A:C5	2.48	0.49
48:DG:154:GLU:C	48:DG:156:TYR:H	2.16	0.49
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.47	0.49
39:DX:23:ARG:O	39:DX:27:ASN:N	2.46	0.49
23:DB:95:A:H4'	39:DX:38:GLN:O	2.12	0.49
23:DB:1657:U:O2'	23:DB:1658:C:H5'	2.11	0.49
23:BB:2063:C:O2	23:BB:2450:A:N1	2.46	0.49
1:CA:215:C:H2'	1:CA:216:U:H6	1.78	0.49
31:B0:50:GLY:C	31:B0:51:ARG:HG2	2.33	0.49
44:BQ:57:ARG:HH11	44:BQ:57:ARG:HG2	1.77	0.49
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.42	0.49
23:DB:1036:G:H2'	23:DB:1037:G:H8	1.77	0.49
23:DB:2098:U:H2'	23:DB:2099:U:C1'	2.42	0.49
23:DB:1564:C:O2'	23:DB:1565:C:H5'	2.13	0.49
22:BA:20:G:H2'	22:BA:21:G:H8	1.77	0.49
33:D1:38:PHE:HB2	33:D1:45:HIS:CE1	2.48	0.49
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.12	0.49
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.94	0.49
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.12	0.49
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.47	0.49
50:BT:64:LYS:H	50:BT:64:LYS:HD2	1.77	0.49
41:DJ:109:LEU:CD1	41:DJ:119:PHE:HB2	2.43	0.49
23:BB:2271:G:H2'	23:BB:2272:U:O4'	2.13	0.49
37:DL:124:GLY:N	37:DL:143:GLU:CG	2.74	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:836:G:OP2	17:AR:49:LYS:HE2	2.12	0.49
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HB2	1.95	0.49
44:BQ:108:LEU:CA	49:BR:48:LYS:HD3	2.43	0.49
2:AC:190:THR:CG2	2:AC:191:THR:H	2.20	0.49
26:BD:9:VAL:HG22	26:BD:9:VAL:O	2.13	0.49
44:BQ:4:LYS:CE	44:BQ:7:VAL:HG22	2.33	0.49
23:DB:2875:C:H4'	28:DP:1:SER:OG	2.12	0.49
50:DT:69:ARG:HB3	50:DT:74:ILE:HD12	1.94	0.49
47:DF:100:GLU:C	47:DF:102:LEU:H	2.16	0.49
18:AS:10:ILE:HG22	18:AS:38:THR:N	2.20	0.49
11:CL:49:ARG:HH12	11:CL:88:ASP:HB3	1.75	0.49
1:CA:132:C:H5''	19:CT:68:LYS:NZ	2.28	0.49
9:CJ:15:HIS:O	9:CJ:18:ILE:HG22	2.12	0.49
13:AN:6:LYS:O	13:AN:10:VAL:HG23	2.13	0.49
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.47	0.49
1:CA:1036:A:H2'	1:CA:1037:C:O4'	2.13	0.49
30:BY:16:LEU:H	30:BY:16:LEU:CD2	2.22	0.49
22:DA:8:C:O2'	43:DO:40:ILE:HD13	2.12	0.49
43:DO:49:VAL:HG21	43:DO:82:ALA:HB2	1.95	0.49
13:CN:52:ARG:HH11	13:CN:58:ARG:HH21	1.60	0.49
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.27	0.49
2:CC:110:LEU:HD22	2:CC:145:ALA:HB2	1.93	0.49
23:BB:667:U:H2'	23:BB:668:A:O4'	2.13	0.49
41:BJ:74:TYR:HB2	41:BJ:87:ALA:O	2.13	0.49
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.13	0.49
7:CH:123:GLU:HG2	7:CH:124:ILE:O	2.12	0.49
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.78	0.49
11:CL:23:LEU:O	11:CL:25:ALA:N	2.46	0.49
1:AA:336:A:O2'	1:AA:337:G:H5'	2.13	0.49
23:DB:719:C:O2'	23:DB:720:U:H5'	2.12	0.49
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.48	0.49
1:CA:961:U:H3	1:CA:983:A:H62	1.60	0.49
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.42	0.49
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.28	0.49
8:AI:32:ARG:NH1	8:AI:37:TYR:HA	2.28	0.49
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.27	0.49
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	1.94	0.49
1:CA:1330:U:C2'	1:CA:1331:G:H5'	2.42	0.49
1:CA:99:C:H2'	56:CA:2345:HOH:O	2.12	0.49
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.45	0.49
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:22:G:H2'	1:CA:23:C:H6	1.78	0.49
23:DB:322:A:H2'	29:DE:163:ASN:HD21	1.77	0.49
14:CO:74:ASP:OD1	14:CO:76:ALA:HB3	2.12	0.49
49:BR:79:ARG:O	49:BR:81:LYS:HG2	2.13	0.49
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.93	0.49
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.12	0.49
23:DB:2063:C:O2	23:DB:2450:A:N1	2.46	0.49
45:DS:13:SER:OG	45:DS:14:ALA:N	2.46	0.49
23:DB:1475:G:H1'	23:DB:1476:U:H5	1.77	0.49
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.78	0.49
23:BB:2691:C:O2'	23:BB:2692:G:H5'	2.13	0.49
23:BB:1341:G:H2'	23:BB:1397:U:O2'	2.12	0.49
1:AA:555:U:H2'	1:AA:556:C:H6	1.77	0.49
6:AG:61:PHE:O	6:AG:65:LEU:HD13	2.12	0.49
1:CA:1203:C:H4'	13:CN:66:THR:HG22	1.95	0.49
23:BB:992:C:H4'	49:BR:74:ILE:HD13	1.95	0.49
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.13	0.49
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.13	0.49
1:CA:572:A:N3	1:CA:917:G:H1'	2.28	0.49
1:CA:1210:C:H1'	1:CA:1214:C:O2'	2.12	0.49
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.48	0.49
23:DB:2047:C:O2'	23:DB:2048:G:H5'	2.11	0.49
37:DL:81:ASP:CG	37:DL:100:ILE:HD11	2.33	0.49
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.27	0.49
26:BD:175:LEU:HD21	26:BD:191:GLY:O	2.12	0.49
44:BQ:108:LEU:N	49:BR:48:LYS:HD3	2.28	0.49
26:BD:51:THR:HG22	26:BD:52:THR:H	1.77	0.49
18:CS:29:PRO:CA	18:CS:47:THR:HB	2.41	0.49
35:DV:31:TYR:HA	35:DV:93:ARG:CZ	2.43	0.49
35:DV:14:LYS:O	35:DV:18:ARG:HB2	2.12	0.49
5:AF:100:SER:HA	17:AR:23:LYS:CD	2.43	0.49
23:DB:545:U:H2'	23:DB:546:U:H4'	1.95	0.49
23:BB:2886:A:N7	31:B0:39:ARG:NH2	2.56	0.49
42:DN:101:GLY:O	42:DN:102:PHE:HB2	2.12	0.49
5:CF:47:LEU:HD21	5:CF:57:ALA:HB3	1.94	0.49
23:BB:2144:G:C3'	23:BB:2146:C:H5'	2.42	0.49
1:AA:370:C:H2'	1:AA:371:A:H8	1.78	0.49
3:CD:47:LEU:HD23	3:CD:52:VAL:HA	1.93	0.49
38:BM:96:ILE:HD11	38:BM:126:ILE:CD1	2.42	0.49
39:BX:46:VAL:O	39:BX:49:ASP:HB2	2.12	0.49
38:DM:96:ILE:HD11	38:DM:126:ILE:CD1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:113:VAL:HG23	4:CE:114:LEU:N	2.27	0.49
49:DR:58:VAL:HG22	49:DR:59:ILE:N	2.26	0.49
11:AL:20:VAL:HB	11:AL:94:TYR:CE1	2.48	0.49
23:BB:2819:G:O2'	23:BB:2820:A:H5''	2.13	0.49
20:CB:172:ILE:H	20:CB:172:ILE:HD12	1.77	0.49
1:AA:1336:C:H4'	1:AA:1337:G:O5'	2.12	0.49
1:CA:220:G:O2'	1:CA:221:C:H5'	2.12	0.49
43:DO:35:ILE:O	43:DO:53:THR:HG23	2.13	0.49
20:CB:107:ARG:HG3	20:CB:108:GLN:N	2.28	0.49
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.13	0.49
9:AJ:56:HIS:H	13:AN:80:ARG:NH2	2.10	0.49
1:CA:560:A:N1	1:CA:566:G:H5'	2.27	0.49
28:DP:89:GLY:N	28:DP:112:ARG:NH1	2.61	0.49
40:BH:101:ASP:HA	40:BH:104:THR:CG2	2.43	0.49
1:AA:1200:C:C3'	1:AA:1201:A:H5'	2.43	0.49
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.13	0.49
23:BB:840:C:H2'	23:BB:841:G:H8	1.77	0.49
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.48	0.49
1:CA:207:C:H3'	1:CA:208:U:C5	2.47	0.49
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.28	0.49
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.48	0.49
25:BC:270:ARG:HG2	25:BC:271:SER:N	2.27	0.49
23:DB:960:A:H61	38:DM:82:MET:CE	2.25	0.49
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.48	0.49
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.76	0.49
25:DC:172:THR:HA	25:DC:182:LYS:HA	1.95	0.49
23:DB:1043:C:H2'	23:DB:1044:C:O4'	2.12	0.49
23:BB:467:G:O2'	23:BB:468:G:H5'	2.12	0.49
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.76	0.49
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	1.94	0.49
22:BA:85:G:H2'	22:BA:86:G:H8	1.78	0.49
9:CJ:80:THR:HG22	9:CJ:82:LYS:HG2	1.94	0.49
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.78	0.49
2:CC:111:ASP:OD2	2:CC:114:LEU:HG	2.12	0.49
15:CP:20:VAL:HG23	15:CP:34:GLU:O	2.13	0.49
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.76	0.49
20:CB:20:ARG:NE	20:CB:20:ARG:HA	2.27	0.49
37:BL:4:ASN:ND2	37:BL:4:ASN:N	2.60	0.49
8:CI:6:TYR:HB2	8:CI:19:PHE:CE1	2.48	0.49
26:BD:77:ARG:HB2	26:BD:80:TRP:HH2	1.78	0.49
23:DB:349:U:C2'	23:DB:350:G:H5'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:23:ALA:C	50:DT:25:GLU:H	2.15	0.49
23:BB:321:U:OP2	29:BE:130:LYS:HD3	2.13	0.49
45:BS:58:ALA:HB1	45:BS:69:LEU:HD21	1.94	0.49
45:BS:25:ARG:HE	45:BS:74:ILE:CG2	2.26	0.49
23:BB:675:A:P	29:BE:60:TRP:HZ2	2.36	0.49
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.43	0.49
47:BF:74:ALA:C	47:BF:76:PHE:H	2.15	0.49
44:BQ:65:ASN:HD21	44:BQ:69:ARG:NH1	2.05	0.49
51:BZ:35:SER:CA	51:BZ:50:ARG:HA	2.41	0.49
1:CA:1271:A:H5'	1:CA:1314:C:H5''	1.95	0.49
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.13	0.49
13:CN:48:GLN:O	13:CN:51:PRO:HD2	2.13	0.49
37:DL:80:SER:HB3	37:DL:115:GLU:CD	2.33	0.49
48:BG:86:LEU:HG	48:BG:163:TYR:HD1	1.77	0.49
12:CM:44:ILE:HD12	12:CM:44:ILE:N	2.25	0.49
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.13	0.49
23:DB:182:A:H1'	23:DB:434:U:H5'	1.94	0.49
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.12	0.49
49:DR:31:GLU:O	49:DR:62:GLU:HA	2.13	0.49
35:BV:9:ARG:HA	35:BV:41:GLU:OE2	2.12	0.49
49:BR:31:GLU:O	49:BR:62:GLU:HA	2.13	0.49
23:BB:550:C:H2'	23:BB:550:C:O2	2.12	0.49
23:BB:2679:A:O2'	23:BB:2680:U:H5'	2.12	0.49
1:CA:252:U:H2'	1:CA:253:A:C8	2.48	0.49
23:BB:151:C:H2'	23:BB:152:A:H8	1.76	0.49
23:BB:1515:A:H4'	23:BB:1556:C:O2'	2.13	0.49
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.48	0.49
35:DV:5:ASN:HA	35:DV:64:VAL:O	2.13	0.49
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.13	0.49
15:AP:74:LEU:O	15:AP:78:VAL:HG12	2.13	0.49
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.28	0.49
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.13	0.49
23:BB:1828:G:O6	25:BC:220:ARG:HD2	2.13	0.49
41:DJ:30:THR:HG23	41:DJ:31:GLU:H	1.78	0.49
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.77	0.49
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.77	0.49
23:DB:1668:A:N3	23:DB:1670:C:C4	2.81	0.49
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.94	0.49
23:BB:1767:G:O2'	23:BB:1768:C:H5'	2.13	0.49
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.48	0.49
23:BB:2384:U:H5''	23:BB:2386:A:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:113:VAL:HG22	29:BE:118:LEU:HD12	1.94	0.49
1:CA:1298:U:H2'	6:CG:113:LYS:HZ1	1.77	0.49
23:BB:523:C:O2'	23:BB:524:G:H5'	2.13	0.49
1:AA:556:C:O2'	1:AA:557:G:H5'	2.12	0.49
4:AE:98:ALA:HB2	4:AE:123:LEU:HG	1.94	0.49
23:DB:146:A:H2'	23:DB:147:C:C6	2.48	0.49
43:DO:112:GLU:HG2	43:DO:112:GLU:O	2.13	0.49
27:DK:39:ILE:HD13	27:DK:60:ALA:O	2.13	0.49
23:DB:820:A:H2'	23:DB:821:A:O4'	2.13	0.49
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.13	0.49
25:DC:86:ARG:NH1	25:DC:86:ARG:HB3	2.28	0.49
23:DB:57:C:H2'	23:DB:58:G:H8	1.77	0.49
1:AA:712:A:O2'	1:AA:713:G:H5'	2.13	0.49
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.34	0.49
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.95	0.49
37:BL:75:ALA:HB3	37:BL:108:ALA:HB2	1.93	0.49
37:DL:124:GLY:CA	37:DL:143:GLU:HG3	2.43	0.49
13:CN:6:LYS:O	13:CN:10:VAL:HG23	2.13	0.49
21:CU:44:ARG:HH11	21:CU:44:ARG:HG3	1.78	0.49
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.28	0.49
2:CC:76:ILE:HD13	2:CC:83:VAL:HG21	1.95	0.49
1:AA:875:U:O2'	7:AH:14:ARG:HD2	2.13	0.49
23:BB:138:U:H2'	23:BB:140:C:O4'	2.13	0.49
35:DV:63:ILE:H	35:DV:63:ILE:HD12	1.77	0.49
35:DV:42:LEU:HD11	35:DV:89:ILE:HD11	1.95	0.49
26:DD:20:VAL:HG13	27:DK:72:PRO:HB3	1.95	0.49
42:BN:79:LEU:HA	42:BN:83:LEU:CD1	2.43	0.49
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.95	0.49
48:BG:84:LYS:HB3	48:BG:132:LEU:HG	1.95	0.49
52:BW:17:ALA:CA	52:BW:35:ILE:HG23	2.35	0.49
13:AN:60:ARG:NE	13:AN:69:PRO:HB3	2.28	0.49
13:CN:31:SER:HA	13:CN:40:ARG:HA	1.94	0.49
23:BB:2144:G:H3'	23:BB:2145:C:H3'	1.94	0.49
23:DB:2543:G:H2'	23:DB:2544:G:H8	1.78	0.49
49:DR:72:VAL:CG2	49:DR:89:HIS:HB3	2.39	0.49
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.13	0.49
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.26	0.49
1:AA:204:G:C2	1:AA:465:A:H1'	2.48	0.49
23:DB:1870:C:H4'	23:DB:1870:C:OP2	2.11	0.49
23:DB:1803:A:H4'	25:DC:256:THR:OG1	2.13	0.49
1:CA:1343:G:C1'	8:CI:122:ARG:HH12	2.24	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1844:C:O3'	25:BC:255:LYS:HE2	2.13	0.49
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE2	1.95	0.49
7:CH:113:ARG:HH21	7:CH:114:ALA:HA	1.78	0.49
1:AA:194:C:O2'	1:AA:195:A:H5'	2.13	0.49
43:BO:30:ARG:HG2	43:BO:102:ARG:HH11	1.78	0.49
35:DV:65:VAL:C	35:DV:67:GLY:H	2.16	0.49
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.77	0.49
1:CA:1149:C:OP2	8:CI:10:ARG:NH1	2.46	0.49
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.48	0.49
1:AA:178:C:O2'	1:AA:179:A:H5'	2.12	0.49
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.13	0.49
11:CL:68:GLY:HA3	11:CL:106:VAL:CG2	2.43	0.49
23:BB:263:G:H2'	23:BB:264:C:O4'	2.13	0.49
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.33	0.49
1:CA:379:C:O2'	1:CA:380:G:H5'	2.13	0.49
39:DX:23:ARG:O	39:DX:27:ASN:HB2	2.13	0.49
17:CR:44:THR:C	17:CR:46:THR:H	2.16	0.49
23:DB:2449:U:H4'	23:DB:2450:A:OP1	2.13	0.49
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.43	0.49
23:BB:2450:A:O2'	23:BB:2451:A:H5'	2.12	0.49
26:BD:46:ARG:HB3	26:BD:84:LEU:HD12	1.95	0.49
23:BB:1260:A:O2'	23:BB:1261:C:H5'	2.13	0.49
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.77	0.49
25:BC:270:ARG:HB3	25:BC:270:ARG:NH1	2.28	0.49
23:BB:753:A:O2'	23:BB:754:U:H5'	2.13	0.49
25:DC:211:ARG:C	25:DC:213:ARG:H	2.16	0.49
1:AA:418:C:H2'	1:AA:419:C:C6	2.47	0.49
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.47	0.49
1:AA:562:U:H1'	11:AL:11:ARG:HB3	1.93	0.49
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.27	0.49
25:BC:1:ALA:HB3	25:BC:19:VAL:HG23	1.95	0.49
1:AA:896:C:O2'	1:AA:897:C:H5'	2.12	0.49
27:BK:25:LEU:HD12	27:BK:38:ILE:HG22	1.94	0.49
22:DA:12:C:N3	52:DW:73:PRO:HG3	2.28	0.49
23:DB:929:U:O2'	23:DB:930:G:H5'	2.13	0.49
1:AA:1203:C:H4'	13:AN:66:THR:HG22	1.95	0.49
23:BB:660:C:H2'	23:BB:661:A:H8	1.77	0.49
1:CA:65:A:H8	1:CA:200:G:H4'	1.77	0.49
23:BB:1647:U:H3'	23:BB:1647:U:P	2.53	0.49
32:B4:13:ASN:HD22	32:B4:13:ASN:N	2.11	0.49
1:AA:614:C:OP1	3:AD:82:LYS:HE2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:917:A:H2'	23:DB:918:A:O4'	2.13	0.48
13:CN:9:GLU:O	13:CN:13:VAL:HG23	2.13	0.48
46:DU:85:ARG:NH1	46:DU:86:PHE:H	2.10	0.48
26:BD:179:ARG:CB	26:BD:179:ARG:HH11	2.26	0.48
47:BF:100:GLU:C	47:BF:102:LEU:N	2.65	0.48
47:BF:111:ARG:O	47:BF:112:ASP:HB2	2.13	0.48
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.94	0.48
44:BQ:55:GLN:O	44:BQ:59:LEU:HB2	2.12	0.48
28:DP:54:LEU:HA	28:DP:76:HIS:CD2	2.47	0.48
28:DP:74:GLN:O	28:DP:76:HIS:N	2.46	0.48
35:DV:57:TYR:HE2	38:DM:136:MET:HE2	1.78	0.48
35:DV:72:VAL:HG21	35:DV:91:PHE:HB3	1.94	0.48
23:DB:513:A:O5'	23:DB:513:A:H8	1.95	0.48
38:DM:19:GLY:CA	38:DM:97:GLN:HB2	2.38	0.48
42:DN:79:LEU:HA	42:DN:83:LEU:CD1	2.43	0.48
47:DF:137:PHE:CD2	47:DF:137:PHE:N	2.79	0.48
22:DA:43:C:H1'	47:DF:91:ARG:HD2	1.95	0.48
45:DS:25:ARG:HE	45:DS:74:ILE:CG2	2.25	0.48
3:CD:7:LYS:O	3:CD:20:LEU:HD12	2.13	0.48
3:AD:7:LYS:O	3:AD:20:LEU:HD12	2.12	0.48
1:CA:131:A:H2'	1:CA:132:C:H6	1.76	0.48
5:CF:61:LEU:HD12	5:CF:62:MET:H	1.78	0.48
16:AQ:3:LYS:NZ	16:AQ:4:ILE:HD12	2.28	0.48
22:BA:83:G:OP1	30:BY:16:LEU:HD21	2.13	0.48
27:DK:54:LYS:H	27:DK:54:LYS:CD	2.22	0.48
23:BB:281:C:H2'	23:BB:282:A:H8	1.77	0.48
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.94	0.48
23:DB:138:U:H5'	50:DT:1:MET:H1	1.76	0.48
20:AB:59:ILE:HD12	20:AB:60:ALA:N	2.28	0.48
46:DU:80:ASP:HB2	46:DU:96:LYS:H	1.78	0.48
39:BX:22:LEU:CD1	39:BX:23:ARG:HG2	2.43	0.48
46:DU:10:VAL:HA	46:DU:70:ALA:O	2.13	0.48
23:DB:2420:C:OP1	34:D3:33:THR:HB	2.13	0.48
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.76	0.48
11:AL:35:ARG:O	11:AL:53:ARG:N	2.46	0.48
35:DV:61:LEU:O	35:DV:71:LYS:HA	2.13	0.48
4:AE:113:VAL:HG23	4:AE:114:LEU:N	2.28	0.48
1:CA:279:A:H5'	1:CA:281:G:O4'	2.12	0.48
29:BE:3:LEU:O	29:BE:11:ALA:HA	2.12	0.48
45:DS:17:VAL:C	45:DS:19:LEU:N	2.65	0.48
1:AA:719:C:O2'	17:AR:37:LYS:HB2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:961:U:H3	1:AA:983:A:H62	1.61	0.48
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.12	0.48
23:DB:392:U:O2'	23:DB:393:C:H5'	2.13	0.48
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.78	0.48
28:BP:89:GLY:N	28:BP:112:ARG:NH1	2.61	0.48
1:CA:1200:C:C3'	1:CA:1201:A:H5'	2.43	0.48
26:BD:154:LYS:HD3	26:BD:154:LYS:N	2.27	0.48
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.94	0.48
1:AA:751:U:H4'	14:AO:24:SER:HA	1.94	0.48
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.48	0.48
1:AA:1298:U:H4'	1:AA:1299:A:C4	2.48	0.48
23:DB:753:A:H2'	23:DB:754:U:H6	1.78	0.48
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.95	0.48
1:CA:1299:A:OP2	1:CA:1299:A:H3'	2.13	0.48
23:BB:575:A:O2'	23:BB:576:U:H5'	2.13	0.48
1:AA:547:A:H4'	1:AA:548:G:O5'	2.13	0.48
43:BO:111:ARG:HB2	43:BO:117:PHE:CZ	2.48	0.48
1:AA:105:G:H2'	1:AA:106:C:C6	2.47	0.48
23:BB:2852:G:H2'	23:BB:2853:C:O4'	2.13	0.48
23:BB:1642:G:O2'	23:BB:1643:G:H5'	2.13	0.48
6:CG:68:VAL:CG2	6:CG:126:ALA:HB1	2.43	0.48
23:DB:538:A:H2'	23:DB:539:G:O4'	2.12	0.48
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.48	0.48
9:CJ:87:LEU:HD22	9:CJ:87:LEU:H	1.78	0.48
24:DI:10:LEU:O	24:DI:10:LEU:HD12	2.12	0.48
23:BB:2262:U:O2'	23:BB:2263:C:H5'	2.13	0.48
12:CM:23:GLY:HA3	12:CM:64:VAL:HG12	1.94	0.48
47:BF:163:GLU:HA	47:BF:166:ARG:NH1	2.26	0.48
48:BG:36:LEU:H	48:BG:36:LEU:CD2	2.26	0.48
26:BD:9:VAL:HG13	26:BD:9:VAL:O	2.13	0.48
3:AD:151:GLN:HB2	3:AD:154:VAL:HG23	1.94	0.48
47:DF:74:ALA:C	47:DF:76:PHE:H	2.16	0.48
48:DG:120:ILE:HD11	48:DG:132:LEU:CB	2.43	0.48
47:DF:96:TRP:HA	47:DF:99:PHE:HB3	1.94	0.48
12:AM:78:ARG:HB3	12:AM:78:ARG:CZ	2.43	0.48
13:CN:42:ASN:O	13:CN:46:LYS:HG2	2.14	0.48
18:CS:44:ILE:HD12	18:CS:63:ASP:HA	1.95	0.48
12:AM:33:LEU:CD2	12:AM:38:ILE:HB	2.43	0.48
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.77	0.48
13:CN:26:LEU:CD2	13:CN:27:LYS:H	2.19	0.48
23:BB:2144:G:H1'	23:BB:2148:G:C2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:44:ARG:HD2	4:AE:72:ASN:ND2	2.27	0.48
1:CA:1077:G:N2	1:CA:1079:G:H3'	2.28	0.48
40:DH:111:ALA:O	40:DH:112:LYS:C	2.50	0.48
48:BG:148:ARG:HD3	48:BG:152:ARG:CZ	2.43	0.48
48:DG:148:ARG:HD3	48:DG:152:ARG:NH2	2.28	0.48
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HD12	1.94	0.48
39:BX:23:ARG:O	39:BX:27:ASN:N	2.46	0.48
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.13	0.48
23:BB:38:A:N3	29:BE:43:THR:HB	2.27	0.48
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.48	0.48
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CB	2.42	0.48
23:BB:819:A:H5'	23:BB:973:A:N1	2.27	0.48
1:AA:250:A:H1'	1:AA:252:U:C5	2.48	0.48
34:D3:3:ILE:HG23	37:DL:48:ARG:HH12	1.78	0.48
49:DR:36:ALA:HA	49:DR:58:VAL:HG23	1.95	0.48
23:DB:246:C:O2'	23:DB:385:C:H4'	2.14	0.48
1:CA:846:G:H2'	1:CA:847:G:C8	2.48	0.48
23:BB:454:A:H4'	23:BB:455:C:OP2	2.13	0.48
23:BB:1655:A:C2	23:BB:2049:G:H4'	2.49	0.48
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.48	0.48
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.12	0.48
23:BB:1798:U:H5''	25:BC:257:ARG:HB2	1.95	0.48
1:AA:947:G:H4'	12:AM:107:THR:OG1	2.14	0.48
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.26	0.48
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.76	0.48
23:DB:1163:G:H4'	49:DR:92:TRP:HD1	1.76	0.48
1:AA:90:C:H2'	1:AA:91:U:C6	2.47	0.48
6:AG:63:VAL:HG12	6:AG:127:ALA:HB1	1.95	0.48
23:BB:975:A:H1'	23:BB:990:A:C2	2.48	0.48
46:BU:3:LYS:CB	46:BU:82:VAL:HG21	2.43	0.48
1:AA:98:A:O2'	1:AA:99:C:H5'	2.13	0.48
1:AA:958:A:P	18:AS:54:ARG:HH22	2.35	0.48
3:AD:13:ARG:CG	3:AD:55:ARG:HH12	2.24	0.48
23:BB:392:U:O2'	23:BB:393:C:H5'	2.12	0.48
1:AA:390:U:H2'	1:AA:391:G:H8	1.76	0.48
20:AB:93:HIS:HD2	20:AB:145:ASN:HB3	1.77	0.48
1:AA:208:U:H2'	1:AA:210:C:C2	2.48	0.48
1:AA:208:U:H2'	1:AA:210:C:N3	2.27	0.48
23:DB:1315:C:O2'	23:DB:1316:U:H5'	2.13	0.48
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.48	0.48
1:AA:834:U:H2'	1:AA:835:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:692:U:C2	1:CA:694:A:H5''	2.48	0.48
43:BO:36:TYR:HD2	43:BO:36:TYR:N	2.11	0.48
29:DE:196:VAL:O	29:DE:200:LEU:HD23	2.12	0.48
29:DE:97:ASN:HD22	29:DE:100:MET:HG3	1.78	0.48
23:BB:955:U:H5'	38:BM:86:LYS:HE2	1.95	0.48
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.28	0.48
44:BQ:40:LYS:HA	44:BQ:43:GLN:OE1	2.13	0.48
23:DB:688:U:O2'	23:DB:689:A:H5'	2.12	0.48
23:BB:627:A:H4'	23:BB:628:G:H5'	1.95	0.48
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.77	0.48
27:DK:25:LEU:HD12	27:DK:38:ILE:HG22	1.94	0.48
23:DB:550:C:H2'	23:DB:551:G:C8	2.48	0.48
6:AG:85:GLN:HA	6:AG:85:GLN:OE1	2.12	0.48
46:BU:13:LEU:HD12	46:BU:13:LEU:H	1.78	0.48
23:DB:575:A:O2'	23:DB:576:U:H5'	2.13	0.48
37:DL:81:ASP:HA	37:DL:84:LYS:HE3	1.95	0.48
37:DL:81:ASP:HA	37:DL:84:LYS:CE	2.43	0.48
20:AB:26:MET:HE1	20:AB:186:VAL:HG23	1.94	0.48
40:BH:84:ALA:HA	40:BH:90:LEU:HD12	1.95	0.48
26:BD:109:VAL:HG11	26:BD:193:VAL:CB	2.43	0.48
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.12	0.48
44:DQ:91:ARG:NE	49:DR:11:GLN:HB2	2.28	0.48
49:DR:39:LEU:HB2	49:DR:49:ILE:HD11	1.96	0.48
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.96	0.48
35:DV:63:ILE:O	35:DV:70:ILE:HG12	2.13	0.48
50:BT:25:GLU:HG3	50:BT:29:THR:O	2.13	0.48
38:DM:40:ARG:HH22	38:DM:73:ILE:HD12	1.78	0.48
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CD1	2.49	0.48
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.21	0.48
51:DZ:2:SER:O	51:DZ:3:ARG:C	2.51	0.48
23:DB:139:U:H3'	23:DB:139:U:P	2.53	0.48
1:AA:93:U:P	1:AA:94:G:H5''	2.54	0.48
13:AN:26:LEU:O	13:AN:30:ILE:N	2.47	0.48
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.45	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
23:BB:182:A:H2'	23:BB:183:C:C6	2.48	0.48
1:CA:373:A:H1'	1:CA:481:G:H1'	1.95	0.48
26:BD:68:PHE:HB3	26:BD:73:VAL:CG2	2.41	0.48
28:BP:91:VAL:CG2	28:BP:96:LEU:HD21	2.40	0.48
2:AC:156:LEU:CD1	2:AC:165:GLU:HB2	2.43	0.48
29:DE:48:THR:C	29:DE:50:ALA:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:113:VAL:HG22	29:DE:118:LEU:HD12	1.95	0.48
23:DB:2819:G:O2'	23:DB:2820:A:H5''	2.13	0.48
2:CC:156:LEU:CD1	2:CC:165:GLU:HB2	2.42	0.48
49:DR:19:THR:HB	49:DR:96:VAL:O	2.13	0.48
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.94	0.48
1:CA:599:C:O2'	1:CA:600:A:H5'	2.13	0.48
23:BB:2418:A:H2'	23:BB:2419:U:O4'	2.13	0.48
28:DP:61:ARG:HD3	28:DP:70:GLU:OE1	2.12	0.48
7:AH:123:GLU:HG2	7:AH:124:ILE:O	2.13	0.48
23:DB:21:A:H2'	23:DB:22:C:C6	2.49	0.48
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.13	0.48
23:DB:2756:U:H4'	23:DB:2757:A:OP1	2.13	0.48
23:DB:847:U:H2'	23:DB:848:C:C6	2.47	0.48
23:BB:2184:A:H2'	23:BB:2185:U:C6	2.49	0.48
23:BB:2189:U:O2'	23:BB:2190:G:H5'	2.12	0.48
1:CA:252:U:H2'	1:CA:253:A:H8	1.78	0.48
1:CA:552:U:H2'	1:CA:553:A:H8	1.76	0.48
1:CA:490:C:H2'	1:CA:491:G:C8	2.47	0.48
1:CA:955:U:H1'	1:CA:1227:A:H62	1.78	0.48
14:CO:39:LEU:HD23	14:CO:56:LEU:HD13	1.95	0.48
1:AA:1319:A:H4'	1:AA:1320:C:OP1	2.13	0.48
1:CA:1319:A:OP2	18:CS:4:LEU:HD21	2.13	0.48
35:DV:80:HIS:HA	35:DV:87:GLN:OE1	2.13	0.48
5:AF:81:ASN:O	5:AF:84:VAL:HG12	2.13	0.48
1:AA:783:C:O2'	1:AA:784:A:H5'	2.11	0.48
23:BB:1730:C:O2'	23:BB:1731:G:N2	2.46	0.48
14:CO:11:ILE:HD11	14:CO:30:ALA:HB1	1.95	0.48
16:AQ:57:VAL:HB	16:AQ:79:GLU:HB3	1.95	0.48
20:AB:130:LYS:N	20:AB:130:LYS:HD2	2.28	0.48
23:DB:2190:G:O2'	23:DB:2191:A:H5'	2.13	0.48
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.13	0.48
22:DA:87:U:H2'	22:DA:88:C:O5'	2.13	0.48
23:BB:6:A:H1'	41:BJ:135:GLN:HE22	1.78	0.48
26:BD:102:ALA:HA	26:BD:180:VAL:HG21	1.94	0.48
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.78	0.48
23:DB:106:C:H2'	23:DB:107:G:C8	2.48	0.48
8:AI:126:PHE:O	8:AI:128:LYS:N	2.47	0.48
1:CA:702:A:C8	23:DB:1848:A:H1'	2.48	0.48
23:DB:2786:U:H5'	26:DD:70:LYS:HG3	1.95	0.48
23:DB:2624:G:H1'	31:D0:18:HIS:HE1	1.78	0.48
23:BB:494:G:OP1	45:BS:8:ARG:HD3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.13	0.48
1:CA:618:C:H1'	15:CP:14:ARG:NH1	2.28	0.48
23:DB:167:A:H2'	23:DB:168:G:O4'	2.14	0.48
41:BJ:109:LEU:CD1	41:BJ:119:PHE:HB2	2.43	0.48
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.77	0.48
1:AA:977:A:N6	1:AA:1224:U:O5'	2.46	0.48
2:AC:67:ILE:HD12	2:AC:100:ILE:HD11	1.95	0.48
1:CA:972:C:P	9:CJ:59:LYS:HD3	2.54	0.48
6:AG:109:LYS:HA	6:AG:109:LYS:HE2	1.96	0.48
51:BZ:49:LEU:HD12	51:BZ:49:LEU:H	1.78	0.48
9:AJ:87:LEU:HD22	9:AJ:87:LEU:H	1.77	0.48
23:DB:2222:C:O2'	23:DB:2223:G:H5'	2.14	0.48
23:BB:2265:U:H3'	23:BB:2266:A:C5'	2.42	0.48
23:BB:917:A:H2'	23:BB:918:A:O4'	2.13	0.48
20:AB:46:VAL:CG1	20:AB:47:PRO:HD3	2.32	0.48
25:DC:141:HIS:CG	25:DC:142:ASN:N	2.81	0.48
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.48	0.48
44:BQ:93:ILE:HG23	44:BQ:94:LEU:H	1.78	0.48
23:DB:773:U:H4'	25:DC:45:ASN:O	2.13	0.48
25:BC:45:ASN:HB2	25:BC:47:ARG:HG2	1.96	0.48
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.29	0.48
27:DK:71:ARG:HG2	27:DK:105:ARG:HH21	1.79	0.48
47:DF:32:LYS:H	47:DF:95:MET:HE1	1.78	0.48
12:CM:33:LEU:HD22	12:CM:38:ILE:HB	1.95	0.48
23:DB:2032:G:N2	26:DD:151:THR:H	2.11	0.48
13:CN:26:LEU:O	13:CN:30:ILE:N	2.47	0.48
38:BM:28:PHE:HB3	38:BM:64:TRP:CE2	2.48	0.48
2:AC:133:MET:O	2:AC:137:VAL:HG23	2.13	0.48
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.48	0.48
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.77	0.48
47:DF:64:PRO:HA	47:DF:88:VAL:HG21	1.93	0.48
36:D2:33:ARG:HH21	36:D2:33:ARG:CB	2.24	0.48
23:DB:1856:U:H2'	23:DB:1857:G:C5'	2.42	0.48
26:BD:114:LYS:HE3	26:BD:116:LYS:HG2	1.94	0.48
1:AA:279:A:C5'	1:AA:280:C:H3'	2.43	0.48
23:DB:1580:A:H2'	23:DB:1581:G:O4'	2.13	0.48
23:DB:827:U:H5'	23:DB:828:U:O5'	2.13	0.48
45:DS:15:GLN:O	45:DS:19:LEU:HB2	2.14	0.48
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.75	0.48
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.47	0.48
23:BB:2751:G:N3	23:BB:2751:G:C2'	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.13	0.48
1:AA:1319:A:OP2	18:AS:4:LEU:HD21	2.14	0.48
18:CS:1:PRO:O	18:CS:2:ARG:HB2	2.14	0.48
1:CA:435:A:H2'	1:CA:435:A:N3	2.29	0.48
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.48	0.48
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.79	0.48
28:BP:89:GLY:HA2	28:BP:111:GLU:C	2.34	0.48
23:BB:2901:C:H2'	23:BB:2901:C:O2	2.13	0.48
23:BB:1827:U:C2'	23:BB:1828:G:H5'	2.43	0.48
23:DB:263:G:H2'	23:DB:264:C:O4'	2.13	0.48
3:AD:104:MET:SD	3:AD:142:VAL:HB	2.53	0.48
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.13	0.48
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.78	0.48
1:AA:420:U:H2'	1:AA:422:C:C4	2.49	0.48
23:BB:1913:A:H4'	23:BB:1914:C:O5'	2.12	0.48
15:AP:20:VAL:HG21	15:AP:32:PHE:CD2	2.49	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.29	0.48
1:AA:651:C:H2'	1:AA:652:U:C6	2.49	0.48
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.49	0.48
1:AA:986:U:H2'	1:AA:987:G:O4'	2.12	0.48
1:CA:555:U:H2'	1:CA:556:C:C6	2.49	0.48
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.48	0.48
29:BE:40:ARG:NH2	29:BE:92:HIS:HE2	2.11	0.48
1:AA:682:G:O2'	1:AA:683:G:H5'	2.14	0.48
23:BB:104:A:H2'	23:BB:105:C:H6	1.79	0.48
23:DB:2847:U:H5''	28:DP:94:ALA:CB	2.43	0.48
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.77	0.48
1:AA:510:A:N3	1:AA:543:U:H1'	2.28	0.48
32:D4:13:ASN:HD22	32:D4:13:ASN:N	2.10	0.48
44:BQ:70:GLN:NE2	44:BQ:70:GLN:HA	2.29	0.48
23:BB:626:A:H2'	37:BL:78:ARG:NH1	2.28	0.48
23:BB:2718:G:H5''	28:BP:97:TYR:HD1	1.78	0.48
5:AF:69:GLU:O	5:AF:73:GLU:HG2	2.13	0.48
47:DF:21:TYR:CE2	47:DF:28:PRO:HD3	2.48	0.48
52:BW:19:ARG:HD3	52:BW:36:ILE:HD11	1.95	0.48
40:BH:114:GLU:HB3	40:BH:133:GLN:C	2.34	0.48
40:BH:145:ASN:O	40:BH:147:VAL:HG23	2.13	0.48
47:BF:110:ILE:HA	47:BF:111:ARG:NH1	2.28	0.48
47:BF:62:GLN:CG	47:BF:91:ARG:HH11	2.19	0.48
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.29	0.48
18:AS:48:ILE:HB	18:AS:59:VAL:CG2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:45:ASN:H	25:BC:45:ASN:ND2	2.12	0.48
1:AA:532:A:H62	2:AC:191:THR:CB	2.15	0.48
10:CK:86:LYS:HB2	10:CK:113:THR:HA	1.95	0.48
3:AD:147:LYS:HZ3	3:AD:147:LYS:HB2	1.79	0.48
39:DX:12:GLU:HA	39:DX:15:ASN:ND2	2.19	0.48
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	1.94	0.48
45:BS:74:ILE:HD12	45:BS:104:THR:O	2.13	0.48
13:AN:46:LYS:HZ2	18:AS:10:ILE:N	2.11	0.48
1:AA:906:A:C2'	1:AA:907:A:H5''	2.44	0.48
19:CT:67:HIS:ND1	19:CT:68:LYS:HG2	2.27	0.48
40:BH:9:VAL:HG12	40:BH:12:LEU:HG	1.95	0.48
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.48	0.48
13:CN:30:ILE:HD12	13:CN:30:ILE:N	2.28	0.48
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.27	0.48
13:AN:51:PRO:CB	13:AN:54:SER:HB3	2.39	0.48
50:DT:2:ILE:H	50:DT:2:ILE:HD13	1.78	0.48
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.24	0.48
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.13	0.48
23:BB:163:C:O2	23:BB:163:C:O4'	2.31	0.48
52:DW:10:ARG:HD3	52:DW:10:ARG:N	2.29	0.48
23:BB:83:A:N6	23:BB:101:A:H5'	2.28	0.48
1:CA:818:G:C3'	1:CA:819:A:H5''	2.43	0.48
1:AA:599:C:O2'	1:AA:600:A:H5'	2.13	0.48
1:CA:370:C:O2'	1:CA:371:A:H5'	2.14	0.48
23:DB:182:A:O2'	23:DB:183:C:H5'	2.13	0.48
27:DK:119:ALA:O	27:DK:120:PRO:O	2.32	0.48
2:CC:130:ARG:HD2	2:CC:133:MET:HE3	1.94	0.48
2:CC:137:VAL:HA	2:CC:148:ILE:CD1	2.42	0.48
1:CA:464:U:H3'	1:CA:466:A:OP1	2.13	0.48
23:DB:288:U:H2'	23:DB:289:G:H8	1.78	0.48
23:DB:973:A:OP1	23:DB:973:A:H8	1.95	0.48
34:B3:14:LYS:O	34:B3:21:PHE:O	2.30	0.48
49:BR:19:THR:HB	49:BR:96:VAL:O	2.13	0.48
7:CH:6:ILE:HD12	7:CH:35:ILE:CD1	2.43	0.48
1:CA:376:G:OP1	15:CP:5:ARG:HB2	2.13	0.48
23:BB:546:U:H4'	23:BB:546:U:OP2	2.14	0.48
11:CL:35:ARG:O	11:CL:53:ARG:N	2.46	0.48
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.49	0.48
23:BB:2678:C:H2'	23:BB:2679:A:H8	1.79	0.48
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.96	0.48
23:BB:718:A:H3'	23:BB:719:C:C6	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:50:ALA:HA	6:CG:55:LYS:O	2.13	0.48
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	2.12	0.48
1:CA:57:G:H2'	1:CA:58:C:H6	1.76	0.48
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.48	0.48
23:DB:948:C:H2'	23:DB:949:G:H8	1.79	0.48
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.48	0.48
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.79	0.48
6:CG:2:ARG:CB	6:CG:2:ARG:NH1	2.76	0.48
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.44	0.48
1:AA:22:G:H2'	1:AA:23:C:H6	1.78	0.48
20:CB:93:HIS:HD2	20:CB:145:ASN:HB3	1.77	0.48
23:BB:840:C:H2'	23:BB:841:G:C8	2.49	0.48
37:BL:131:ALA:O	37:BL:135:ILE:HG22	2.14	0.48
23:DB:2751:G:H4'	48:DG:3:VAL:CG1	2.44	0.48
29:BE:137:LYS:O	29:BE:141:MET:HG3	2.13	0.48
25:BC:34:GLU:O	25:BC:34:GLU:HG3	2.14	0.48
28:BP:31:VAL:HG12	28:BP:38:ARG:O	2.14	0.48
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.78	0.48
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	2.13	0.48
23:BB:599:A:O2'	23:BB:600:G:H5'	2.13	0.48
29:BE:97:ASN:HD22	29:BE:100:MET:HG3	1.79	0.48
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.14	0.48
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.13	0.48
6:AG:68:VAL:CG2	6:AG:126:ALA:HB1	2.43	0.48
14:CO:68:ASP:O	14:CO:72:ARG:HG3	2.14	0.48
23:BB:1539:U:H3'	23:BB:1540:G:H8	1.78	0.48
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.28	0.48
23:BB:3:U:H2'	23:BB:4:U:C6	2.48	0.48
23:DB:649:G:H2'	23:DB:650:C:C6	2.48	0.48
1:AA:791:G:C6	1:AA:792:A:N7	2.82	0.48
23:BB:196:A:H2'	23:BB:196:A:N3	2.27	0.48
1:CA:977:A:N6	1:CA:1224:U:O5'	2.46	0.48
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.13	0.48
23:BB:516:C:O2'	23:BB:517:C:H5'	2.14	0.48
23:BB:425:G:O2'	23:BB:426:C:H5'	2.13	0.48
20:CB:19:THR:HG23	20:CB:20:ARG:N	2.23	0.48
10:AK:106:ILE:HD11	10:AK:109:ILE:CG1	2.43	0.48
40:BH:96:THR:HB	40:BH:112:LYS:HE3	1.95	0.48
1:CA:49:U:O2'	1:CA:50:A:H2'	2.13	0.48
47:BF:62:GLN:HE21	47:BF:91:ARG:CZ	2.25	0.48
1:AA:663:A:H5''	17:AR:49:LYS:HD2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:17:LYS:HG2	48:DG:24:THR:HG23	1.96	0.48
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.44	0.48
41:BJ:36:LEU:O	41:BJ:51:GLY:HA3	2.14	0.48
44:BQ:51:GLN:O	44:BQ:55:GLN:HG3	2.13	0.48
23:DB:773:U:H6	23:DB:773:U:H5''	1.78	0.48
23:DB:512:G:OP2	23:DB:1235:G:H5'	2.13	0.48
23:DB:346:A:H2'	23:DB:347:A:C5'	2.44	0.48
28:DP:1:SER:H1	28:DP:4:ILE:HD12	1.79	0.48
28:DP:3:ILE:HD13	28:DP:7:LEU:HD11	1.96	0.48
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.95	0.48
47:DF:127:TYR:CB	47:DF:155:ILE:HD13	2.43	0.48
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.43	0.48
23:DB:2444:G:OP2	29:DE:63:LYS:HD2	2.12	0.48
23:DB:1054:A:H2'	23:DB:1055:G:C8	2.48	0.48
18:AS:5:LYS:O	18:AS:6:LYS:HD2	2.13	0.48
38:BM:26:VAL:HA	38:BM:66:ARG:HH21	1.78	0.48
28:DP:91:VAL:HG11	28:DP:96:LEU:CD1	2.41	0.48
33:D1:9:LYS:HD3	33:D1:9:LYS:N	2.26	0.48
1:CA:465:A:C2'	1:CA:466:A:H3'	2.43	0.48
3:CD:33:ILE:HG13	3:CD:34:GLU:N	2.28	0.48
16:AQ:66:LEU:HD13	16:AQ:70:LYS:HG2	1.95	0.48
49:BR:15:SER:H	49:BR:18:GLN:CD	2.17	0.48
23:DB:20:C:H2'	23:DB:21:A:H8	1.79	0.48
47:BF:47:LYS:HA	47:BF:50:ASP:OD1	2.14	0.48
11:CL:79:ILE:C	11:CL:101:LEU:HD12	2.33	0.48
23:DB:1124:G:O2'	32:D4:37:GLN:HG2	2.13	0.48
1:AA:846:G:H2'	1:AA:847:G:C8	2.49	0.48
27:DK:13:ASN:N	27:DK:100:PHE:HE1	2.12	0.48
25:BC:20:ASN:OD1	25:BC:22:GLU:HG2	2.12	0.48
23:BB:719:C:O2'	23:BB:720:U:H5'	2.12	0.48
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.12	0.48
2:CC:2:GLN:H	2:CC:2:GLN:HE21	1.61	0.48
23:DB:222:A:N1	23:DB:233:A:H5''	2.28	0.48
23:DB:150:U:H2'	23:DB:151:C:H6	1.76	0.48
43:BO:56:LYS:HE3	43:BO:60:GLU:OE2	2.14	0.48
1:AA:552:U:H5'	11:AL:82:ARG:HH11	1.79	0.48
1:CA:812:G:O2'	1:CA:813:U:H6	1.97	0.48
23:DB:2840:C:O2'	23:DB:2841:C:H5'	2.13	0.48
23:BB:871:U:H2'	23:BB:872:U:C6	2.47	0.48
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.77	0.48
23:DB:1878:G:H2'	23:DB:1879:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2479:U:OP1	23:DB:2537:U:H1'	2.13	0.48
23:DB:1459:G:H4'	23:DB:1461:C:H42	1.79	0.48
23:DB:1458:U:H5''	23:DB:1459:G:OP1	2.12	0.48
1:AA:513:C:H2'	1:AA:514:C:H6	1.78	0.48
22:BA:76:G:H1	22:BA:101:A:N6	2.12	0.48
26:DD:46:ARG:HH12	26:DD:86:GLU:N	2.12	0.48
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.48	0.48
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.49	0.48
23:DB:2261:C:O2'	23:DB:2262:U:H5'	2.14	0.48
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.13	0.48
1:CA:1181:G:H1'	1:CA:1182:G:C5	2.48	0.48
23:BB:1998:A:OP2	26:BD:141:ARG:NH2	2.46	0.48
1:CA:547:A:H4'	1:CA:548:G:O5'	2.13	0.48
1:CA:364:A:H2'	1:CA:365:U:O2	2.13	0.48
23:DB:2000:C:O2'	23:DB:2001:C:H5'	2.13	0.48
22:BA:109:A:H2'	22:BA:110:C:C6	2.48	0.48
41:DJ:114:LEU:O	41:DJ:118:MET:HG3	2.13	0.48
23:BB:1322:A:C2'	23:BB:1323:C:H5'	2.43	0.48
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.48	0.48
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.77	0.48
23:DB:2271:G:H2'	23:DB:2272:U:O4'	2.12	0.48
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.12	0.48
20:AB:184:ALA:H	20:AB:195:VAL:HG11	1.77	0.48
20:AB:26:MET:O	20:AB:30:ILE:HG13	2.14	0.48
20:CB:18:GLN:HB2	20:CB:188:THR:OG1	2.13	0.48
10:AK:83:VAL:HG21	10:AK:109:ILE:HG12	1.95	0.48
26:DD:179:ARG:CB	26:DD:179:ARG:HH11	2.27	0.48
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.34	0.48
1:AA:437:U:H1'	3:AD:115:GLN:NE2	2.29	0.48
26:DD:9:VAL:O	26:DD:9:VAL:HG13	2.12	0.48
47:DF:113:PHE:CZ	47:DF:175:PRO:HB2	2.48	0.48
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.14	0.48
37:BL:29:LYS:O	37:BL:31:GLY:N	2.41	0.48
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	1.96	0.48
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.44	0.48
51:BZ:2:SER:O	51:BZ:3:ARG:C	2.52	0.48
23:BB:2147:A:H5'	23:BB:2148:G:O2'	2.14	0.48
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.34	0.48
1:CA:923:A:OP1	4:CE:25:LYS:HB3	2.14	0.48
33:B1:3:GLY:O	33:B1:5:ARG:N	2.47	0.48
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:373:A:H1'	1:AA:481:G:H1'	1.95	0.48
38:BM:35:ALA:O	38:BM:36:VAL:HB	2.14	0.48
1:CA:481:G:O2'	1:CA:482:A:H8	1.97	0.48
15:AP:61:VAL:CA	15:AP:65:ALA:HB3	2.42	0.48
46:BU:73:ASN:HB3	46:BU:95:PHE:CE2	2.49	0.48
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.13	0.48
1:CA:1240:U:O4	6:CG:29:LEU:HG	2.13	0.48
42:BN:87:PHE:HE1	42:BN:116:VAL:HG12	1.79	0.48
35:BV:61:LEU:O	35:BV:71:LYS:HA	2.14	0.48
23:DB:1843:C:H2'	23:DB:1844:C:C6	2.48	0.48
23:BB:1007:C:H4'	41:BJ:110:PRO:HB3	1.95	0.48
6:CG:144:ALA:C	6:CG:146:ALA:H	2.17	0.48
23:BB:1076:C:H4'	24:BI:94:LYS:NZ	2.28	0.48
23:BB:1510:G:H2'	23:BB:1511:G:O4'	2.12	0.48
1:AA:220:G:O2'	1:AA:221:C:H5'	2.13	0.48
1:CA:58:C:O2'	1:CA:59:A:H5'	2.13	0.48
35:BV:44:HIS:HE1	35:BV:86:LEU:N	2.09	0.48
48:DG:10:VAL:HG12	48:DG:10:VAL:O	2.14	0.48
39:BX:10:SER:N	39:BX:60:LYS:HE2	2.28	0.48
23:BB:782:A:N3	25:BC:224:MET:HB3	2.28	0.48
1:CA:1149:C:H2'	1:CA:1150:A:H8	1.77	0.48
38:DM:33:LEU:HD22	38:DM:128:THR:CB	2.43	0.48
1:AA:693:G:OP1	10:AK:126:ARG:NH1	2.47	0.48
1:AA:735:C:OP2	54:AA:2063:LLL:H832	2.13	0.48
23:BB:2458:G:H1'	23:BB:2460:U:O4	2.13	0.48
23:BB:956:G:H1'	38:BM:82:MET:HE1	1.96	0.48
48:BG:174:LYS:HZ2	48:BG:176:LYS:HG2	1.77	0.48
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.78	0.48
23:BB:1957:C:H2'	23:BB:1958:C:H6	1.77	0.48
23:DB:1153:C:H2'	23:DB:1154:G:O4'	2.14	0.48
23:BB:12:U:O2	23:BB:2626:C:H4'	2.14	0.48
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.48	0.48
1:CA:586:C:C2'	1:CA:587:G:H5'	2.44	0.48
23:DB:2458:G:H8	23:DB:2459:A:H62	1.61	0.48
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.77	0.48
23:DB:2199:A:H5'	23:DB:2200:C:OP2	2.13	0.48
23:DB:1043:C:H2'	23:DB:1044:C:C6	2.48	0.48
15:CP:20:VAL:HG23	15:CP:35:ARG:HA	1.95	0.48
23:BB:426:C:O2'	23:BB:427:U:H5'	2.13	0.48
23:DB:1304:A:O2'	23:DB:1305:C:H5'	2.14	0.48
1:CA:1246:A:H2'	1:CA:1247:U:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:162:GLN:NE2	25:BC:174:ARG:HE	2.11	0.48
23:DB:2361:G:OP1	34:D3:25:HIS:HA	2.14	0.48
1:AA:224:U:H2'	1:AA:225:C:C6	2.48	0.48
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.78	0.48
23:BB:69:C:O2'	23:BB:70:G:H5'	2.13	0.48
1:CA:113:G:H2'	1:CA:114:U:H6	1.79	0.48
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.78	0.48
12:CM:43:LYS:O	12:CM:46:GLU:HG3	2.13	0.48
1:AA:169:C:O2'	1:AA:170:U:H5'	2.13	0.48
20:AB:20:ARG:HB3	20:AB:20:ARG:CZ	2.43	0.48
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.13	0.48
20:CB:17:HIS:CG	20:CB:18:GLN:H	2.31	0.48
20:CB:18:GLN:O	20:CB:37:VAL:HG23	2.13	0.48
1:AA:1149:C:H2'	1:AA:1150:A:H8	1.78	0.48
25:BC:140:VAL:CG1	25:BC:141:HIS:H	2.19	0.48
47:BF:119:LYS:HA	47:BF:121:PHE:CZ	2.49	0.48
47:BF:113:PHE:CZ	47:BF:175:PRO:HB2	2.48	0.48
47:BF:29:ARG:HH11	47:BF:29:ARG:CB	2.24	0.48
27:DK:34:GLY:O	27:DK:36:GLY:N	2.46	0.48
40:DH:4:ILE:HD13	40:DH:44:ILE:HG22	1.94	0.48
35:DV:77:VAL:HG11	38:DM:136:MET:O	2.13	0.48
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.49	0.48
48:DG:116:LEU:HD12	48:DG:116:LEU:N	2.28	0.48
41:BJ:58:ASN:CA	41:BJ:127:GLY:HA2	2.35	0.48
47:DF:102:LEU:HD22	47:DF:107:VAL:HG23	1.95	0.48
12:AM:78:ARG:HH22	18:AS:64:GLU:HB2	1.77	0.48
1:AA:890:G:O2'	1:AA:906:A:N6	2.46	0.48
48:BG:120:ILE:HD11	48:BG:132:LEU:CB	2.40	0.48
52:BW:35:ILE:O	52:BW:37:VAL:N	2.47	0.48
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.74	0.48
1:CA:1092:A:H5''	6:CG:3:ARG:NH1	2.29	0.48
20:CB:221:ARG:CB	20:CB:221:ARG:HH11	2.26	0.48
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.13	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
38:DM:26:VAL:CG2	38:DM:133:LYS:HA	2.43	0.48
23:DB:2811:G:OP1	26:DD:62:LYS:HD2	2.13	0.48
46:BU:80:ASP:HB2	46:BU:96:LYS:H	1.79	0.48
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.96	0.48
20:AB:128:LEU:HB3	20:AB:132:GLU:HB3	1.95	0.48
1:CA:598:U:H2'	1:CA:599:C:H6	1.79	0.48
20:AB:83:ALA:HB3	20:AB:90:PHE:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:7:ARG:NH1	34:B3:7:ARG:HG3	2.28	0.48
1:AA:252:U:H2'	1:AA:253:A:C8	2.49	0.48
1:CA:635:A:H2'	1:CA:636:U:C6	2.49	0.48
33:B1:29:LYS:HA	33:B1:31:GLU:OE1	2.14	0.48
23:DB:1844:C:O3'	25:DC:255:LYS:HE2	2.13	0.48
23:BB:1858:A:C2	23:BB:1859:U:H1'	2.49	0.48
51:DZ:27:ARG:O	51:DZ:28:ARG:HB3	2.13	0.48
1:AA:865:A:H2	1:AA:918:A:H4'	1.79	0.48
25:BC:231:HIS:HA	25:BC:241:LYS:HE3	1.96	0.48
27:DK:61:VAL:HG13	27:DK:87:LEU:HD21	1.96	0.48
23:DB:969:G:H2'	23:DB:970:U:H6	1.79	0.48
32:B4:16:ILE:HG12	32:B4:25:VAL:CG2	2.43	0.48
22:BA:87:U:H2'	22:BA:88:C:O5'	2.13	0.48
1:AA:490:C:H2'	1:AA:491:G:C8	2.49	0.48
45:BS:81:SER:CB	45:BS:99:ARG:HA	2.43	0.48
23:DB:2394:C:H5''	37:DL:63:LYS:HD3	1.95	0.48
26:BD:170:VAL:O	26:BD:170:VAL:HG23	2.13	0.48
41:BJ:23:LYS:NZ	41:BJ:142:ILE:HG23	2.29	0.48
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.49	0.48
1:CA:620:C:C2	3:CD:131:ILE:HD13	2.49	0.48
1:CA:652:U:H1'	1:CA:653:U:C5	2.48	0.48
22:BA:93:C:O2'	22:BA:94:A:H5'	2.14	0.48
23:DB:1683:U:H2'	23:DB:1684:G:H8	1.77	0.48
23:DB:1946:U:H2'	23:DB:1947:C:H6	1.78	0.48
39:DX:22:LEU:CD1	39:DX:23:ARG:HG2	2.44	0.48
1:AA:1299:A:OP2	1:AA:1299:A:H3'	2.14	0.48
23:BB:2385:C:H3'	56:BB:3563:HOH:O	2.13	0.48
23:DB:493:G:H2'	23:DB:494:G:O4'	2.14	0.48
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.78	0.48
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.77	0.48
3:AD:47:LEU:HD23	3:AD:52:VAL:HA	1.96	0.48
15:CP:20:VAL:HG21	15:CP:32:PHE:CG	2.48	0.48
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.14	0.48
27:DK:103:VAL:HG23	27:DK:122:VAL:O	2.13	0.48
8:AI:30:ASN:ND2	8:AI:65:THR:HA	2.28	0.48
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.49	0.48
25:DC:221:GLY:C	25:DC:223:ALA:H	2.16	0.48
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.78	0.48
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.82	0.48
1:CA:656:G:O2'	1:CA:657:U:H5'	2.14	0.48
1:CA:934:C:H5''	56:CA:2148:HOH:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.48	0.48
23:DB:2398:U:H2'	23:DB:2399:G:H8	1.78	0.48
47:BF:21:TYR:CE2	47:BF:28:PRO:HD3	2.49	0.48
23:DB:642:U:O2	23:DB:644:A:H3'	2.14	0.48
33:D1:18:HIS:NE2	33:D1:40:PRO:HD2	2.28	0.48
23:DB:69:C:O2'	23:DB:70:G:H5'	2.13	0.48
23:DB:1849:G:H2'	23:DB:1850:G:H8	1.79	0.48
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.79	0.48
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.48	0.48
20:CB:20:ARG:HE	20:CB:38:HIS:CD2	2.31	0.48
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	1.95	0.48
42:DN:8:ARG:NH2	42:DN:39:PRO:HB3	2.29	0.48
47:BF:100:GLU:C	47:BF:102:LEU:H	2.15	0.48
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.49	0.48
44:DQ:51:GLN:O	44:DQ:55:GLN:HG3	2.14	0.48
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.79	0.48
10:AK:86:LYS:HB2	10:AK:113:THR:HA	1.95	0.48
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG13	2.28	0.48
35:DV:24:ASN:O	35:DV:44:HIS:HB2	2.14	0.48
25:DC:166:ARG:CB	25:DC:171:VAL:HG22	2.43	0.48
50:DT:25:GLU:HG3	50:DT:29:THR:O	2.14	0.48
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.48	0.48
45:BS:58:ALA:CB	45:BS:69:LEU:HD21	2.44	0.48
12:AM:53:ASP:HA	12:AM:56:ARG:CZ	2.42	0.48
5:CF:36:ILE:N	5:CF:36:ILE:HD12	2.28	0.48
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.79	0.48
17:CR:51:GLN:CA	17:CR:51:GLN:HE21	2.19	0.48
23:DB:357:C:H2'	23:DB:358:U:C5	2.49	0.48
23:BB:2719:G:O2'	23:BB:2720:U:H5'	2.14	0.48
40:DH:110:VAL:O	40:DH:110:VAL:HG22	2.14	0.48
1:AA:1080:A:OP1	4:AE:51:LYS:HD3	2.13	0.48
1:CA:482:A:C2	1:CA:483:C:H1'	2.49	0.48
2:AC:148:ILE:HG12	2:AC:149:LYS:N	2.29	0.48
29:DE:161:ALA:HB1	29:DE:167:VAL:HG22	1.96	0.48
29:DE:146:VAL:HG11	29:DE:187:VAL:HG23	1.95	0.48
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.13	0.48
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.13	0.48
34:B3:7:ARG:O	34:B3:11:LYS:HG3	2.13	0.48
9:AJ:6:ILE:O	9:AJ:75:ASP:HA	2.14	0.48
41:DJ:72:LYS:O	41:DJ:73:VAL:HG13	2.13	0.48
1:AA:993:G:N3	1:AA:993:G:H2'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.49	0.48
4:AE:61:LYS:HB2	4:AE:65:LYS:HZ1	1.77	0.48
22:DA:30:C:H1'	22:DA:58:A:N1	2.28	0.48
3:CD:151:GLN:HB2	3:CD:154:VAL:HG23	1.95	0.48
3:AD:34:GLU:O	3:AD:34:GLU:HG3	2.14	0.48
33:D1:43:ARG:HB3	33:D1:43:ARG:NH2	2.28	0.48
43:DO:30:ARG:HG2	43:DO:102:ARG:HH11	1.77	0.48
45:BS:15:GLN:O	45:BS:19:LEU:HB2	2.13	0.48
1:AA:491:G:O2'	1:AA:492:C:H5'	2.14	0.48
23:BB:2438:U:O3'	23:BB:2439:A:H3'	2.13	0.48
45:DS:81:SER:CB	45:DS:99:ARG:HA	2.42	0.48
2:AC:142:ARG:NH2	2:AC:143:LEU:HD21	2.28	0.48
26:BD:169:ARG:O	26:BD:170:VAL:HG22	2.12	0.48
23:DB:673:C:C2'	23:DB:674:G:H5'	2.43	0.48
10:CK:30:ILE:HG22	10:CK:45:THR:HA	1.96	0.48
1:AA:215:C:H2'	1:AA:216:U:H6	1.79	0.48
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.14	0.48
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.49	0.48
23:BB:2692:G:O2'	23:BB:2693:G:H5'	2.14	0.48
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.79	0.48
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.48	0.48
1:AA:333:U:H2'	1:AA:334:C:C6	2.48	0.48
29:DE:106:LYS:CE	29:DE:200:LEU:HB3	2.44	0.48
23:DB:598:U:H2'	23:DB:599:A:H8	1.79	0.48
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.13	0.48
1:AA:54:C:H2'	1:AA:352:C:H41	1.78	0.48
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.95	0.48
23:BB:806:C:O2'	23:BB:807:U:H5'	2.14	0.48
23:BB:1105:U:H2'	23:BB:1106:G:C8	2.48	0.48
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.14	0.48
48:DG:72:ASN:O	48:DG:76:ILE:HG12	2.13	0.48
23:DB:188:G:OP1	51:DZ:14:THR:HG22	2.12	0.48
26:DD:202:ILE:HG22	26:DD:202:ILE:O	2.13	0.48
13:CN:97:LYS:NZ	13:CN:97:LYS:HB3	2.29	0.48
46:DU:48:VAL:HG13	46:DU:48:VAL:O	2.14	0.48
11:CL:66:ILE:N	11:CL:66:ILE:HD12	2.29	0.48
23:BB:146:A:H2'	23:BB:147:C:C6	2.49	0.48
1:AA:426:U:H4'	3:AD:39:GLN:HA	1.96	0.48
23:DB:965:C:O2'	23:DB:966:G:H5'	2.13	0.48
52:DW:36:ILE:HB	52:DW:39:GLN:NE2	2.28	0.48
52:BW:50:VAL:CG2	52:BW:61:LYS:HD3	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:17:HIS:CG	20:AB:18:GLN:H	2.31	0.48
20:AB:19:THR:HG23	20:AB:20:ARG:N	2.27	0.48
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.14	0.48
8:AI:56:MET:HG3	8:AI:57:VAL:HG23	1.96	0.48
47:DF:134:GLN:OE1	47:DF:136:ILE:HA	2.13	0.48
48:DG:24:THR:CG2	48:DG:34:ARG:HB3	2.44	0.48
44:BQ:91:ARG:HE	44:BQ:94:LEU:CD2	2.23	0.48
29:BE:155:GLU:HB3	29:BE:159:LEU:HD13	1.95	0.48
26:BD:51:THR:HG22	26:BD:52:THR:N	2.28	0.48
23:BB:899:A:H8	23:BB:899:A:OP2	1.96	0.48
23:BB:138:U:HO2'	23:BB:139:U:H6	1.60	0.48
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.48	0.48
1:CA:890:G:O2'	1:CA:906:A:N6	2.47	0.48
50:BT:43:ILE:O	50:BT:46:ALA:HB3	2.14	0.48
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.44	0.48
23:DB:282:A:H2'	23:DB:283:G:O4'	2.14	0.48
5:AF:46:GLN:HG3	5:AF:47:LEU:N	2.29	0.48
45:DS:66:ILE:N	45:DS:66:ILE:HD13	2.23	0.48
38:DM:42:THR:OG1	38:DM:45:GLN:HG3	2.14	0.48
51:BZ:63:GLY:O	51:BZ:67:VAL:HG23	2.13	0.48
26:DD:90:PHE:HD2	26:DD:94:GLN:HG3	1.78	0.48
23:DB:163:C:O4'	23:DB:163:C:O2	2.32	0.48
1:CA:1034:G:H2'	1:CA:1035:A:H5'	1.95	0.48
23:BB:1551:A:C3'	23:BB:1552:A:H5''	2.44	0.48
23:BB:1551:A:H2'	23:BB:1552:A:O4'	2.13	0.48
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.14	0.48
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.13	0.48
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.14	0.48
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.29	0.48
38:DM:35:ALA:O	38:DM:36:VAL:HB	2.13	0.48
40:BH:59:ALA:HA	40:BH:62:LEU:HD21	1.95	0.48
23:BB:2149:U:O2'	23:BB:2150:C:H5'	2.14	0.48
41:BJ:72:LYS:CB	41:BJ:89:PHE:H	2.26	0.48
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.29	0.48
6:AG:26:VAL:HA	6:AG:42:VAL:HG21	1.95	0.48
2:AC:2:GLN:H	2:AC:2:GLN:HE21	1.59	0.48
2:CC:19:SER:HB3	2:CC:21:TRP:NE1	2.27	0.48
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.49	0.48
3:AD:12:ARG:HA	3:AD:33:ILE:HD12	1.96	0.48
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.49	0.48
6:CG:88:VAL:HA	6:CG:152:HIS:CB	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:74:LEU:O	15:CP:78:VAL:HG12	2.14	0.48
23:DB:1729:U:H5''	23:DB:1730:C:H4'	1.95	0.48
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.49	0.48
23:DB:1922:G:H2'	23:DB:1923:U:O4'	2.13	0.48
26:BD:4:LEU:HD21	26:BD:100:LEU:CB	2.44	0.48
23:DB:1190:G:H5''	37:DL:32:GLY:C	2.34	0.48
5:CF:100:SER:HA	17:CR:23:LYS:HD3	1.95	0.48
20:AB:151:LYS:HG3	20:AB:152:ASP:N	2.29	0.48
23:BB:414:C:H2'	23:BB:415:A:H8	1.77	0.48
39:DX:1:MET:O	39:DX:5:GLU:HG2	2.13	0.48
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.47	0.48
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.48	0.48
1:CA:556:C:O2'	1:CA:557:G:H5'	2.13	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.49	0.48
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.14	0.48
34:D3:35:LYS:HB2	34:D3:40:LYS:HD3	1.95	0.48
31:B0:35:GLU:OE1	31:B0:44:ALA:HB3	2.14	0.48
25:BC:259:ASN:C	25:BC:261:ARG:H	2.15	0.48
1:AA:1108:G:H5'	2:AC:175:HIS:ND1	2.28	0.48
23:BB:929:U:O2'	23:BB:930:G:H5'	2.14	0.48
23:BB:1936:A:H2	23:BB:1943:U:O4	1.97	0.48
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.13	0.48
19:AT:77:ASN:O	19:AT:81:GLN:HG3	2.14	0.48
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.13	0.48
23:BB:671:C:O2'	23:BB:672:C:H5'	2.14	0.48
23:DB:2760:C:H2'	23:DB:2760:C:O2	2.13	0.48
23:BB:686:U:O2	36:B2:8:SER:HB3	2.13	0.48
14:AO:68:ASP:O	14:AO:72:ARG:HG3	2.14	0.48
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.43	0.47
37:DL:100:ILE:O	37:DL:100:ILE:HG12	2.14	0.47
37:DL:92:LEU:CD2	37:DL:124:GLY:HA3	2.44	0.47
21:AU:43:GLU:HA	21:AU:46:ARG:HD2	1.96	0.47
3:CD:169:TRP:HB2	3:CD:183:ARG:O	2.14	0.47
49:DR:6:GLN:C	49:DR:6:GLN:HE21	2.17	0.47
40:DH:122:LEU:HD22	40:DH:122:LEU:N	2.29	0.47
40:DH:89:LYS:HD2	40:DH:89:LYS:H	1.79	0.47
35:DV:89:ILE:HD12	35:DV:89:ILE:H	1.79	0.47
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.14	0.47
48:DG:84:LYS:HG3	48:DG:131:VAL:CA	2.43	0.47
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.62	0.47
5:AF:47:LEU:HD21	5:AF:57:ALA:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:544:C:H4'	23:DB:545:U:OP1	2.13	0.47
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.79	0.47
29:BE:60:TRP:O	29:BE:61:ARG:CB	2.60	0.47
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.13	0.47
40:DH:21:VAL:HG22	40:DH:22:LYS:H	1.79	0.47
11:AL:85:ARG:HD2	11:AL:93:ARG:HG3	1.96	0.47
2:CC:46:LEU:HD12	2:CC:75:VAL:HG22	1.96	0.47
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.95	0.47
16:AQ:3:LYS:HZ3	16:AQ:4:ILE:HD12	1.79	0.47
38:BM:42:THR:OG1	38:BM:45:GLN:HG3	2.14	0.47
20:AB:96:LEU:HB2	20:AB:99:MET:CE	2.44	0.47
30:BY:16:LEU:O	30:BY:19:HIS:HB2	2.14	0.47
46:BU:15:GLY:O	46:BU:17:ASP:N	2.47	0.47
30:BY:23:LEU:CD1	30:BY:28:LEU:HB2	2.44	0.47
46:DU:15:GLY:O	46:DU:17:ASP:N	2.46	0.47
3:CD:56:GLU:HG2	3:CD:198:LEU:HB3	1.95	0.47
33:D1:22:THR:OG1	33:D1:23:THR:N	2.47	0.47
11:AL:36:VAL:HG12	11:AL:52:CYS:HB2	1.95	0.47
8:AI:119:LYS:C	8:AI:121:ARG:H	2.16	0.47
41:BJ:74:TYR:CD1	41:BJ:92:MET:HG3	2.49	0.47
22:BA:30:C:H1'	22:BA:58:A:N1	2.29	0.47
23:DB:1798:U:H5''	25:DC:257:ARG:HB2	1.95	0.47
29:BE:48:THR:H	29:BE:51:GLU:HG3	1.77	0.47
11:CL:21:PRO:C	11:CL:23:LEU:H	2.17	0.47
1:CA:255:G:H2'	1:CA:256:U:C6	2.49	0.47
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.78	0.47
1:AA:560:A:N1	1:AA:566:G:H5'	2.29	0.47
3:AD:22:SER:N	3:AD:109:THR:HG22	2.29	0.47
8:AI:71:ILE:N	8:AI:71:ILE:HD12	2.28	0.47
23:DB:2893:A:H4'	23:DB:2894:G:O5'	2.13	0.47
35:DV:66:ASP:OD1	35:DV:68:LYS:HD3	2.14	0.47
23:DB:38:A:N3	29:DE:43:THR:HB	2.29	0.47
9:CJ:56:HIS:H	13:CN:80:ARG:NH2	2.11	0.47
15:CP:23:ASP:O	15:CP:26:ASN:HB2	2.15	0.47
23:DB:1463:C:H2'	23:DB:1464:G:H8	1.78	0.47
6:AG:71:THR:HG23	6:AG:72:VAL:HG22	1.96	0.47
23:DB:2438:U:O3'	23:DB:2439:A:H3'	2.14	0.47
23:DB:2291:U:O2'	23:DB:2374:C:H1'	2.14	0.47
17:AR:44:THR:C	17:AR:46:THR:H	2.17	0.47
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.49	0.47
23:BB:526:A:N6	23:BB:2626:C:H4'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:35:LYS:HB2	34:B3:40:LYS:HD3	1.96	0.47
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.49	0.47
11:AL:66:ILE:N	11:AL:66:ILE:HD12	2.29	0.47
1:AA:66:A:H5'	1:AA:173:U:O4	2.14	0.47
23:DB:1513:U:H2'	23:DB:1514:G:C8	2.49	0.47
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.14	0.47
23:DB:576:U:H2'	23:DB:577:G:C8	2.48	0.47
8:AI:42:THR:HA	8:AI:45:MET:SD	2.53	0.47
44:DQ:18:LYS:C	44:DQ:20:ALA:H	2.18	0.47
23:DB:1979:U:O2'	23:DB:1980:G:H5'	2.13	0.47
23:DB:798:G:OP2	29:DE:56:GLY:HA3	2.14	0.47
1:AA:1418:A:N6	1:AA:1482:G:H1'	2.29	0.47
23:DB:1560:G:H2'	23:DB:1561:C:H6	1.77	0.47
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.96	0.47
23:BB:2710:C:H2'	23:BB:2711:A:H8	1.79	0.47
23:BB:857:G:O2'	52:BW:19:ARG:HD2	2.14	0.47
20:AB:18:GLN:O	20:AB:37:VAL:HG23	2.14	0.47
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	1.94	0.47
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.78	0.47
25:BC:117:SER:HB3	25:BC:128:THR:HB	1.96	0.47
48:BG:71:LEU:HD22	48:BG:74:MET:HE1	1.95	0.47
41:BJ:44:TYR:C	41:BJ:44:TYR:CD2	2.88	0.47
27:BK:34:GLY:O	27:BK:36:GLY:N	2.46	0.47
18:CS:48:ILE:HB	18:CS:59:VAL:HG21	1.96	0.47
23:BB:138:U:H2'	23:BB:140:C:C4'	2.44	0.47
26:BD:13:ARG:HG3	26:BD:15:PHE:CE1	2.49	0.47
50:BT:22:THR:O	50:BT:26:LYS:HG2	2.14	0.47
1:AA:438:U:H4'	3:AD:119:HIS:HD2	1.79	0.47
25:BC:147:PRO:HD3	25:BC:184:GLU:HB2	1.96	0.47
50:BT:38:ALA:HB3	50:BT:81:LYS:NZ	2.28	0.47
3:CD:160:LEU:HA	3:CD:163:GLN:HG3	1.96	0.47
25:DC:106:PRO:O	25:DC:109:LEU:HB3	2.14	0.47
39:BX:12:GLU:HA	39:BX:15:ASN:ND2	2.18	0.47
47:DF:92:GLY:HA2	47:DF:95:MET:HE3	1.95	0.47
12:CM:78:ARG:CZ	12:CM:78:ARG:HB3	2.44	0.47
12:CM:33:LEU:HD13	12:CM:39:ALA:O	2.14	0.47
12:CM:52:ILE:HA	12:CM:55:LEU:HG	1.96	0.47
19:CT:61:ALA:HA	19:CT:67:HIS:N	2.24	0.47
23:DB:566:U:OP1	37:DL:29:LYS:HD3	2.13	0.47
40:DH:14:SER:HB3	40:DH:17:ASP:OD1	2.14	0.47
20:AB:96:LEU:HB2	20:AB:99:MET:HE2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:64:ILE:O	51:DZ:68:LEU:HG	2.14	0.47
23:BB:1553:A:HO2'	23:BB:1554:U:H2'	1.79	0.47
13:AN:41:TRP:CD1	13:AN:43:ALA:HB3	2.49	0.47
46:DU:3:LYS:CB	46:DU:82:VAL:HG21	2.44	0.47
38:DM:26:VAL:HA	38:DM:66:ARG:HH21	1.79	0.47
1:AA:464:U:H2'	1:AA:466:A:OP2	2.13	0.47
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.79	0.47
2:CC:148:ILE:HG12	2:CC:149:LYS:N	2.29	0.47
42:DN:97:ILE:HD13	42:DN:99:LYS:HG3	1.95	0.47
26:DD:33:ARG:HE	26:DD:74:GLU:HB3	1.79	0.47
20:AB:187:ASP:O	20:AB:189:ASN:N	2.48	0.47
3:CD:12:ARG:HA	3:CD:33:ILE:HD12	1.94	0.47
23:BB:972:A:C3'	23:BB:973:A:H5''	2.42	0.47
41:BJ:72:LYS:O	41:BJ:73:VAL:HG13	2.14	0.47
23:DB:666:A:O2'	23:DB:667:U:H5'	2.13	0.47
33:B1:7:LYS:HD3	33:B1:23:THR:HG22	1.95	0.47
22:BA:30:C:H2'	22:BA:30:C:O2	2.14	0.47
10:AK:19:VAL:HG23	10:AK:34:THR:HG23	1.94	0.47
47:DF:45:ASP:O	47:DF:46:LYS:HB2	2.14	0.47
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.96	0.47
1:AA:58:C:O2'	1:AA:59:A:H5'	2.13	0.47
1:AA:955:U:H2'	1:AA:956:U:O4'	2.14	0.47
48:DG:10:VAL:CG2	48:DG:48:THR:HA	2.44	0.47
27:DK:11:ALA:HB3	27:DK:85:VAL:HG23	1.95	0.47
25:BC:15:VAL:HG22	25:BC:204:LEU:O	2.13	0.47
23:BB:968:C:H2'	23:BB:969:G:C8	2.47	0.47
1:AA:1249:C:H4'	8:AI:37:TYR:OH	2.14	0.47
1:AA:389:A:H2'	1:AA:389:A:N3	2.29	0.47
23:DB:7:G:H4'	41:DJ:15:TRP:CZ2	2.48	0.47
22:DA:94:A:O2'	22:DA:95:U:H5'	2.14	0.47
1:CA:731:G:O2'	1:CA:732:C:H5'	2.13	0.47
26:DD:102:ALA:HA	26:DD:180:VAL:HG21	1.95	0.47
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.49	0.47
22:DA:112:G:O2'	22:DA:113:C:H5'	2.13	0.47
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.14	0.47
23:BB:1201:U:H2'	23:BB:1202:G:C8	2.49	0.47
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.96	0.47
23:DB:218:A:O2'	23:DB:219:A:H5'	2.14	0.47
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.13	0.47
1:CA:952:U:H2'	1:CA:953:G:C8	2.49	0.47
23:BB:758:C:O2	23:BB:1981:A:H2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:36:ARG:HG3	10:AK:36:ARG:HH11	1.79	0.47
19:CT:77:ASN:O	19:CT:81:GLN:HG3	2.14	0.47
50:DT:60:THR:HA	50:DT:82:LYS:O	2.15	0.47
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.13	0.47
23:BB:2272:U:H5''	23:BB:2273:A:OP1	2.13	0.47
8:AI:6:TYR:HB2	8:AI:19:PHE:CE1	2.49	0.47
47:DF:55:ASP:OD2	47:DF:149:ARG:HG3	2.14	0.47
47:BF:102:LEU:HD22	47:BF:107:VAL:HG23	1.95	0.47
48:BG:8:VAL:HG11	48:BG:49:LEU:N	2.11	0.47
25:BC:43:ASN:HB3	25:BC:45:ASN:ND2	2.28	0.47
23:DB:1175:A:H3'	23:DB:1176:U:C5'	2.33	0.47
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.48	0.47
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.13	0.47
40:DH:46:PHE:O	40:DH:50:ARG:HB2	2.14	0.47
23:BB:2572:A:OP2	26:BD:151:THR:HB	2.13	0.47
6:CG:107:ALA:HA	6:CG:110:ARG:HD2	1.96	0.47
3:CD:18:LEU:HD22	3:CD:18:LEU:H	1.79	0.47
48:BG:102:ILE:CD1	48:BG:116:LEU:HD11	2.45	0.47
52:BW:37:VAL:HG11	52:BW:38:ARG:HH11	1.80	0.47
20:CB:102:ASN:OD1	20:CB:105:THR:HB	2.15	0.47
47:BF:72:SER:OG	47:BF:79:ARG:HA	2.14	0.47
23:BB:1439:A:N7	23:BB:1440:U:C2	2.81	0.47
23:BB:1285:A:H2'	23:BB:1286:A:H5''	1.94	0.47
30:BY:50:VAL:O	30:BY:54:VAL:HG22	2.14	0.47
6:CG:78:ARG:HA	6:CG:83:THR:HA	1.97	0.47
48:BG:148:ARG:HD3	48:BG:152:ARG:HD3	1.96	0.47
1:AA:203:G:H1'	1:AA:465:A:N6	2.29	0.47
26:DD:114:LYS:HE3	26:DD:116:LYS:HG2	1.95	0.47
26:DD:121:THR:C	26:DD:123:LYS:H	2.18	0.47
1:AA:412:A:H61	3:AD:29:THR:HG22	1.80	0.47
3:CD:34:GLU:O	3:CD:34:GLU:HG3	2.15	0.47
20:CB:185:ILE:HG12	20:CB:199:ILE:HG21	1.97	0.47
1:AA:254:G:O2'	1:AA:255:G:H5'	2.14	0.47
47:DF:41:GLU:O	47:DF:43:ILE:N	2.45	0.47
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.50	0.47
22:DA:106:G:H2'	22:DA:107:G:C8	2.50	0.47
49:DR:70:GLU:O	49:DR:90:ARG:HA	2.13	0.47
7:CH:113:ARG:HA	7:CH:116:ARG:HH12	1.77	0.47
1:CA:1248:A:H2	8:CI:71:ILE:HD11	1.79	0.47
23:DB:2213:U:O2	23:DB:2213:U:C2'	2.62	0.47
1:CA:955:U:H2'	1:CA:956:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:43:ARG:HB3	33:B1:43:ARG:NH2	2.27	0.47
23:BB:2893:A:H4'	23:BB:2894:G:O5'	2.14	0.47
45:BS:17:VAL:C	45:BS:19:LEU:N	2.67	0.47
18:CS:2:ARG:H	18:CS:2:ARG:NH1	2.12	0.47
1:AA:1262:C:H2'	1:AA:1263:C:O4'	2.14	0.47
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	2.14	0.47
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.13	0.47
23:BB:1198:U:H2'	23:BB:1199:U:H6	1.80	0.47
23:DB:2773:C:O2'	23:DB:2774:C:H5'	2.13	0.47
38:DM:105:MET:HB2	38:DM:117:PHE:CZ	2.49	0.47
23:DB:265:A:O2'	23:DB:266:G:C4'	2.61	0.47
25:BC:229:HIS:NE2	25:BC:246:PRO:HG3	2.29	0.47
1:AA:1033:G:H2'	1:AA:1034:G:O4'	2.14	0.47
1:CA:715:A:H2'	1:CA:716:A:H8	1.79	0.47
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.14	0.47
23:BB:1674:G:N2	23:BB:1677:A:N1	2.59	0.47
1:CA:1180:A:OP1	8:CI:104:THR:HG22	2.14	0.47
1:CA:1180:A:P	8:CI:98:ARG:HH22	2.37	0.47
23:DB:2309:A:H2'	23:DB:2310:C:C6	2.49	0.47
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.79	0.47
1:AA:653:U:C5	7:AH:55:LYS:HE2	2.49	0.47
27:DK:109:SER:OG	27:DK:111:LYS:HG2	2.14	0.47
23:BB:2617:U:C2'	23:BB:2618:G:H5'	2.45	0.47
23:BB:57:C:H2'	23:BB:58:G:C8	2.49	0.47
23:BB:753:A:H2'	23:BB:754:U:H6	1.77	0.47
22:DA:55:U:H2'	22:DA:56:G:H8	1.78	0.47
23:DB:2247:A:H2'	23:DB:2248:C:H6	1.79	0.47
23:DB:2046:G:H5'	31:D0:15:ARG:HG3	1.95	0.47
27:DK:53:LYS:H	27:DK:53:LYS:HD3	1.79	0.47
23:DB:426:C:O2'	23:DB:427:U:H5'	2.13	0.47
1:AA:425:G:O2'	1:AA:426:U:H5'	2.15	0.47
23:BB:1339:G:H21	23:BB:1603:A:H1'	1.79	0.47
41:DJ:134:ALA:HB3	41:DJ:135:GLN:NE2	2.29	0.47
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.97	0.47
18:CS:20:LYS:O	18:CS:23:GLU:HG3	2.13	0.47
44:DQ:40:LYS:HA	44:DQ:43:GLN:OE1	2.14	0.47
25:BC:172:THR:HA	25:BC:182:LYS:HA	1.96	0.47
23:BB:1649:G:O2'	23:BB:1650:A:H5'	2.15	0.47
23:DB:189:G:H2'	23:DB:205:G:N2	2.30	0.47
23:DB:189:G:H2'	23:DB:205:G:H22	1.80	0.47
23:DB:2852:G:H2'	23:DB:2853:C:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:52:ASN:O	5:AF:52:ASN:CG	2.52	0.47
23:DB:620:G:N3	23:DB:620:G:H5'	2.29	0.47
23:DB:2778:A:O2'	23:DB:2781:A:H5'	2.14	0.47
23:DB:1936:A:H2	23:DB:1943:U:O4	1.98	0.47
28:BP:36:LYS:C	28:BP:37:LYS:HD3	2.35	0.47
23:BB:326:G:O2'	23:BB:327:G:H5'	2.14	0.47
1:AA:355:C:O2'	1:AA:356:A:H5'	2.14	0.47
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.49	0.47
23:DB:919:U:H2'	23:DB:920:A:H8	1.77	0.47
37:BL:95:LEU:HB3	37:BL:100:ILE:HG23	1.95	0.47
13:CN:60:ARG:NE	13:CN:69:PRO:HB3	2.29	0.47
39:BX:31:GLN:HA	39:BX:36:GLN:OE1	2.15	0.47
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.49	0.47
49:BR:5:PHE:O	49:BR:11:GLN:HA	2.14	0.47
8:CI:48:ARG:HB3	8:CI:52:GLU:OE1	2.13	0.47
25:DC:185:ALA:C	25:DC:187:CYS:H	2.17	0.47
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.79	0.47
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.35	0.47
38:DM:38:ARG:CA	38:DM:98:PRO:HD3	2.44	0.47
50:DT:21:SER:HB3	50:DT:31:VAL:HG22	1.96	0.47
23:BB:322:A:H5'	23:BB:340:A:C1'	2.44	0.47
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.14	0.47
42:BN:75:ILE:HD12	42:BN:79:LEU:HD12	1.95	0.47
48:DG:84:LYS:HG3	48:DG:131:VAL:CB	2.44	0.47
5:AF:29:ILE:HG21	5:AF:64:VAL:CG1	2.45	0.47
38:DM:71:LYS:HE3	38:DM:73:ILE:CD1	2.37	0.47
47:DF:2:LYS:CD	47:DF:100:GLU:HG2	2.44	0.47
23:BB:2571:U:O3'	26:BD:151:THR:HB	2.15	0.47
48:BG:84:LYS:HG3	48:BG:131:VAL:CB	2.45	0.47
23:DB:2531:A:P	48:DG:174:LYS:HB3	2.54	0.47
20:AB:104:LYS:HG3	20:AB:105:THR:H	1.79	0.47
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.78	0.47
23:BB:2755:C:C5	32:B4:19:ARG:NH1	2.82	0.47
23:DB:1103:A:H3'	23:DB:1104:C:H6	1.79	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
13:AN:40:ARG:NH1	18:AS:6:LYS:HB2	2.28	0.47
30:DY:6:ILE:N	30:DY:6:ILE:HD13	2.29	0.47
20:CB:86:CYS:SG	20:CB:87:ASP:N	2.88	0.47
28:BP:20:ARG:HH21	28:BP:20:ARG:HG2	1.79	0.47
48:DG:86:LEU:HG	48:DG:163:TYR:HD1	1.79	0.47
28:DP:47:ILE:HG13	28:DP:48:ALA:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:66:VAL:O	46:DU:69:VAL:HG22	2.15	0.47
23:DB:2591:C:OP1	25:DC:237:ARG:HG3	2.13	0.47
29:DE:47:LYS:HA	29:DE:51:GLU:HG3	1.96	0.47
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.80	0.47
48:BG:154:GLU:C	48:BG:156:TYR:H	2.16	0.47
3:CD:96:ARG:NH1	3:CD:133:SER:HA	2.29	0.47
49:BR:36:ALA:HA	49:BR:58:VAL:HG23	1.94	0.47
33:B1:28:THR:O	33:B1:29:LYS:HD2	2.13	0.47
43:BO:88:LYS:HG2	43:BO:116:GLN:HB2	1.97	0.47
4:CE:157:GLY:O	4:CE:158:LYS:HB2	2.14	0.47
1:CA:947:G:H2'	1:CA:948:C:H6	1.80	0.47
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.14	0.47
16:CQ:66:LEU:O	16:CQ:67:SER:HB2	2.15	0.47
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.49	0.47
51:BZ:27:ARG:O	51:BZ:28:ARG:HB3	2.13	0.47
23:BB:222:A:N1	23:BB:233:A:H5''	2.28	0.47
23:BB:1430:G:H2'	23:BB:1431:A:H8	1.79	0.47
48:BG:10:VAL:CG2	48:BG:48:THR:HA	2.44	0.47
23:BB:1507:C:C3'	23:BB:1508:A:H4'	2.44	0.47
23:DB:655:A:H4'	23:DB:656:G:H5'	1.96	0.47
23:DB:1409:U:H2'	23:DB:1410:G:H8	1.78	0.47
15:AP:38:PHE:CE2	15:AP:51:ARG:HD3	2.50	0.47
20:AB:172:ILE:HD12	20:AB:172:ILE:H	1.79	0.47
23:DB:877:A:C2'	23:DB:900:A:H61	2.28	0.47
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.45	0.47
48:DG:37:ASN:HD21	48:DG:40:VAL:N	2.12	0.47
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.48	0.47
23:DB:2187:U:H2'	23:DB:2188:U:C5	2.49	0.47
23:DB:1130:U:C2	23:DB:2025:C:H5''	2.49	0.47
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.50	0.47
1:AA:605:U:H2'	1:AA:606:G:C8	2.49	0.47
23:BB:1315:C:O2'	23:BB:1316:U:H5'	2.15	0.47
1:AA:1462:C:H2'	1:AA:1463:U:C6	2.49	0.47
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.14	0.47
50:DT:62:VAL:HG12	50:DT:63:VAL:N	2.30	0.47
26:BD:46:ARG:HH12	26:BD:86:GLU:N	2.12	0.47
23:BB:1259:G:H2'	23:BB:1260:A:H8	1.78	0.47
28:DP:31:VAL:HG12	28:DP:38:ARG:O	2.13	0.47
1:CA:105:G:H2'	1:CA:106:C:H6	1.79	0.47
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.14	0.47
1:CA:643:C:OP1	7:CH:30:LYS:HD2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1824:G:O2'	25:DC:251:THR:HG21	2.15	0.47
1:CA:333:U:H2'	1:CA:334:C:H6	1.78	0.47
5:CF:73:GLU:H	5:CF:73:GLU:HG2	1.51	0.47
23:DB:1403:A:H2'	23:DB:1404:C:H6	1.78	0.47
15:CP:20:VAL:HG21	15:CP:32:PHE:CD2	2.50	0.47
45:DS:88:ARG:N	45:DS:92:ARG:O	2.47	0.47
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.80	0.47
23:BB:765:C:H2'	23:BB:766:U:C6	2.49	0.47
35:DV:10:LYS:HG2	35:DV:11:GLU:HG3	1.96	0.47
13:AN:97:LYS:HB3	13:AN:97:LYS:NZ	2.29	0.47
18:CS:42:ASN:N	18:CS:42:ASN:HD22	2.11	0.47
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.14	0.47
20:CB:116:LEU:HB3	20:CB:140:LEU:HD11	1.95	0.47
44:DQ:70:GLN:HA	44:DQ:70:GLN:NE2	2.29	0.47
51:BZ:17:ASN:HB2	51:BZ:25:THR:HB	1.96	0.47
1:AA:802:A:H2'	1:AA:803:G:O4'	2.14	0.47
38:BM:78:LEU:O	38:BM:80:VAL:HG12	2.15	0.47
23:BB:2630:G:O2'	23:BB:2631:G:H5'	2.14	0.47
23:DB:2267:A:C8	23:DB:2267:A:O5'	2.67	0.47
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.50	0.47
37:DL:93:ASN:HB2	37:DL:94:THR:H	1.49	0.47
20:AB:212:TYR:O	20:AB:216:VAL:HG22	2.14	0.47
8:AI:49:GLN:C	8:AI:51:LEU:H	2.16	0.47
40:BH:115:VAL:HB	40:BH:130:VAL:HG12	1.94	0.47
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.44	0.47
29:DE:158:PHE:HA	29:DE:169:VAL:HG21	1.96	0.47
44:DQ:91:ARG:NE	44:DQ:94:LEU:HD23	2.26	0.47
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.14	0.47
43:DO:20:GLU:OE2	43:DO:21:LEU:HG	2.15	0.47
18:CS:48:ILE:HB	18:CS:59:VAL:CG2	2.44	0.47
26:DD:77:ARG:HB2	26:DD:80:TRP:HH2	1.79	0.47
23:DB:283:G:H2'	23:DB:284:U:O4'	2.14	0.47
23:DB:2313:C:H2'	23:DB:2314:A:H8	1.78	0.47
47:DF:100:GLU:C	47:DF:102:LEU:N	2.65	0.47
1:AA:69:G:H2'	1:AA:70:U:C6	2.49	0.47
12:CM:53:ASP:HA	12:CM:56:ARG:CZ	2.44	0.47
48:BG:116:LEU:N	48:BG:116:LEU:HD12	2.29	0.47
1:AA:981:U:H4'	13:AN:60:ARG:CD	2.36	0.47
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.15	0.47
23:BB:784:G:O6	25:BC:227:VAL:HG11	2.14	0.47
28:BP:51:ASN:O	28:BP:52:ARG:HD3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:29:ARG:H	30:DY:33:HIS:CD2	2.32	0.47
28:DP:20:ARG:HH21	28:DP:20:ARG:HG2	1.79	0.47
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.14	0.47
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.48	0.47
1:CA:484:G:O4'	1:CA:486:U:H5'	2.13	0.47
38:DM:126:ILE:N	38:DM:126:ILE:HD12	2.22	0.47
23:DB:2809:A:N6	23:DB:2891:U:H4'	2.29	0.47
43:DO:88:LYS:HG2	43:DO:116:GLN:HB2	1.95	0.47
52:DW:44:PHE:HB3	52:DW:78:PHE:CD1	2.50	0.47
29:DE:136:GLN:NE2	29:DE:139:LYS:HD3	2.29	0.47
23:DB:2872:A:H1'	23:DB:2873:A:C8	2.50	0.47
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.14	0.47
23:DB:825:A:H2'	23:DB:826:U:O4'	2.15	0.47
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.14	0.47
32:D4:16:ILE:HG12	32:D4:25:VAL:HG22	1.97	0.47
23:BB:827:U:H5'	23:BB:828:U:O5'	2.14	0.47
23:BB:2360:G:O4'	37:BL:60:ARG:NH2	2.47	0.47
38:BM:105:MET:HE3	38:BM:105:MET:HA	1.96	0.47
23:BB:265:A:O2'	23:BB:266:G:C4'	2.62	0.47
1:AA:715:A:H2'	1:AA:716:A:H8	1.77	0.47
1:AA:1373:G:H5''	6:AG:35:LYS:HB2	1.97	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
5:CF:100:SER:HA	17:CR:23:LYS:CD	2.45	0.47
23:DB:2054:A:H2'	31:D0:4:GLN:OE1	2.14	0.47
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.30	0.47
23:DB:549:G:H2'	41:DJ:2:LYS:HE3	1.96	0.47
50:BT:62:VAL:HG12	50:BT:63:VAL:N	2.29	0.47
23:DB:1309:G:OP1	36:D2:9:VAL:HG12	2.15	0.47
25:DC:33:LEU:CD2	25:DC:62:ARG:HG3	2.44	0.47
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.49	0.47
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.15	0.47
48:BG:61:TRP:CE3	48:BG:61:TRP:HA	2.48	0.47
23:BB:661:A:H1'	37:BL:12:SER:O	2.14	0.47
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.15	0.47
5:AF:49:TYR:CE1	17:AR:65:SER:HA	2.50	0.47
1:CA:1269:A:H2	1:CA:1312:G:N3	2.12	0.47
1:AA:60:A:H4'	1:AA:61:G:O5'	2.15	0.47
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.15	0.47
1:CA:562:U:H1'	11:CL:11:ARG:HB3	1.97	0.47
1:AA:1045:C:H2'	1:AA:1046:A:O4'	2.15	0.47
1:AA:692:U:O2	1:AA:694:A:H5''	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:31:ARG:HB3	27:DK:32:TYR:CE1	2.49	0.47
9:CJ:67:ILE:HA	13:CN:94:GLY:O	2.15	0.47
23:BB:500:G:N2	23:BB:502:A:H3'	2.29	0.47
1:CA:610:U:O4'	1:CA:610:U:O2	2.31	0.47
44:BQ:18:LYS:C	44:BQ:20:ALA:H	2.17	0.47
23:DB:1930:G:N2	23:DB:1968:G:H2'	2.30	0.47
1:AA:1532:U:N3	1:AA:1534:A:H5''	2.29	0.47
32:B4:36:ARG:HG2	32:B4:37:GLN:H	1.80	0.47
23:BB:2331:G:H4'	52:BW:39:GLN:HA	1.97	0.47
5:AF:3:HIS:ND1	5:AF:95:ALA:HB2	2.30	0.47
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.34	0.47
8:AI:22:PRO:HA	8:AI:60:LEU:HB2	1.96	0.47
8:AI:62:LEU:HD22	8:AI:62:LEU:N	2.30	0.47
22:BA:43:C:H4'	47:BF:91:ARG:NE	2.29	0.47
49:DR:5:PHE:O	49:DR:11:GLN:HA	2.15	0.47
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.44	0.47
44:BQ:107:ALA:HA	44:BQ:110:GLU:OE1	2.14	0.47
18:AS:48:ILE:HB	18:AS:59:VAL:HG21	1.96	0.47
23:BB:898:C:H2'	23:BB:899:A:N9	2.30	0.47
23:BB:138:U:H4'	23:BB:139:U:C5	2.49	0.47
28:BP:3:ILE:HD13	28:BP:3:ILE:C	2.35	0.47
25:BC:185:ALA:C	25:BC:187:CYS:H	2.17	0.47
28:DP:3:ILE:C	28:DP:3:ILE:HD13	2.35	0.47
23:DB:2466:C:OP1	32:D4:4:ARG:HD2	2.13	0.47
48:DG:120:ILE:HD13	48:DG:121:THR:N	2.29	0.47
47:DF:29:ARG:HH11	47:DF:29:ARG:CB	2.26	0.47
3:AD:60:VAL:HA	3:AD:63:ILE:HD12	1.97	0.47
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.95	0.47
37:DL:79:LEU:H	37:DL:113:ALA:CB	2.27	0.47
40:DH:112:LYS:O	40:DH:112:LYS:HG3	2.15	0.47
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.14	0.47
48:BG:95:ALA:HA	48:BG:104:LEU:HD23	1.97	0.47
48:DG:148:ARG:HD3	48:DG:152:ARG:HD3	1.95	0.47
48:DG:153:PRO:HB3	48:DG:158:GLY:HA2	1.97	0.47
7:AH:87:ARG:HG3	7:AH:90:GLU:OE2	2.15	0.47
1:CA:130:A:C8	16:CQ:64:ARG:HG3	2.49	0.47
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.15	0.47
23:DB:1187:G:HO2'	23:DB:1188:U:H6	1.58	0.47
17:AR:61:ALA:HB3	17:AR:67:LEU:HD12	1.97	0.47
1:AA:635:A:H2'	1:AA:636:U:C6	2.48	0.47
23:BB:2040:G:H2'	23:BB:2041:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:110:PRO:O	41:BJ:115:GLY:HA3	2.15	0.47
1:AA:154:U:H2'	1:AA:155:A:H8	1.78	0.47
1:AA:847:G:H2'	1:AA:848:C:H6	1.79	0.47
23:BB:2135:A:H3'	23:BB:2136:G:C8	2.49	0.47
23:BB:346:A:H5'	23:BB:346:A:N3	2.29	0.47
23:BB:1785:A:O2'	23:BB:1786:A:H2'	2.13	0.47
23:BB:974:G:H1'	23:BB:975:A:C8	2.49	0.47
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.75	0.47
23:BB:2104:C:C3'	23:BB:2104:C:H6	2.27	0.47
5:CF:53:LYS:N	5:CF:53:LYS:NZ	2.63	0.47
38:BM:114:ARG:HG3	38:BM:130:PHE:CD2	2.50	0.47
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.79	0.47
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.29	0.47
23:DB:2394:C:O5'	23:DB:2394:C:H6	1.98	0.47
16:AQ:30:HIS:HD2	16:AQ:37:ILE:HD11	1.80	0.47
23:DB:1131:G:N2	23:DB:2024:G:H21	2.11	0.47
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.49	0.47
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.48	0.47
25:DC:51:ARG:HH21	25:DC:246:PRO:HG2	1.78	0.47
2:CC:39:ARG:HE	2:CC:54:ILE:HG23	1.80	0.47
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.15	0.47
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.14	0.47
1:AA:512:U:O2'	1:AA:513:C:H5'	2.15	0.47
37:DL:47:ARG:CG	37:DL:50:PHE:HB2	2.44	0.47
1:AA:1409:C:N4	1:AA:1410:A:H62	2.12	0.47
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.13	0.47
1:CA:642:A:C5	7:CH:106:SER:HA	2.50	0.47
48:DG:61:TRP:CE3	48:DG:61:TRP:HA	2.48	0.47
25:DC:86:ARG:CZ	25:DC:86:ARG:HB3	2.45	0.47
23:DB:1559:U:H4'	23:DB:1560:G:OP2	2.14	0.47
1:AA:927:G:O2'	1:AA:928:G:H5'	2.14	0.47
43:DO:45:SER:HB2	43:DO:46:GLU:OE1	2.14	0.47
9:AJ:67:ILE:HA	13:AN:94:GLY:O	2.15	0.47
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.95	0.47
23:BB:2778:A:O2'	23:BB:2781:A:H5'	2.15	0.47
23:DB:1539:U:H3'	23:DB:1540:G:H8	1.78	0.47
37:BL:47:ARG:HG3	37:BL:50:PHE:HB2	1.96	0.47
29:BE:1:MET:HB3	29:BE:14:VAL:O	2.15	0.47
6:AG:4:ARG:HE	6:AG:6:ILE:HG23	1.80	0.47
52:DW:24:ARG:HB2	52:DW:65:LYS:HB3	1.96	0.47
23:DB:2331:G:C4'	52:DW:39:GLN:HA	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2352:A:C2	52:DW:29:SER:HB3	2.50	0.47
52:BW:33:GLY:O	52:BW:34:SER:HB2	2.15	0.47
52:BW:28:GLU:HB2	52:BW:31:LEU:HD21	1.96	0.47
8:AI:38:PHE:HE1	8:AI:78:ILE:HD12	1.80	0.47
21:AU:3:ILE:HG23	21:AU:18:PHE:CE2	2.49	0.47
40:BH:121:VAL:HG21	40:BH:128:HIS:CD2	2.48	0.47
47:DF:147:ARG:HB3	47:DF:147:ARG:NH1	2.29	0.47
46:BU:85:ARG:NH1	46:BU:86:PHE:N	2.63	0.47
47:BF:121:PHE:HA	47:BF:127:TYR:HA	1.97	0.47
48:DG:34:ARG:HD3	48:DG:34:ARG:H	1.80	0.47
48:BG:24:THR:HB	48:BG:34:ARG:HD3	1.95	0.47
49:BR:39:LEU:HB2	49:BR:49:ILE:HD11	1.97	0.47
8:CI:20:ILE:HG23	8:CI:60:LEU:HD12	1.97	0.47
23:BB:1813:G:H1'	25:BC:49:THR:OG1	2.15	0.47
40:DH:119:ASN:O	40:DH:121:VAL:HG22	2.14	0.47
40:DH:121:VAL:HG12	40:DH:123:ARG:CZ	2.45	0.47
40:BH:4:ILE:HG13	40:BH:18:GLN:HB2	1.97	0.47
21:AU:12:ASP:HB2	2:CC:72:PRO:HG2	1.96	0.47
2:AC:126:ARG:HH22	2:AC:190:THR:CG2	2.21	0.47
28:DP:50:ARG:CD	28:DP:56:SER:HB3	2.45	0.47
28:BP:5:LYS:O	28:BP:9:GLN:HG2	2.14	0.47
35:BV:76:ASP:HA	38:BM:136:MET:HE3	1.95	0.47
35:BV:29:ILE:HD13	35:BV:31:TYR:HE2	1.80	0.47
29:BE:161:ALA:HB1	29:BE:167:VAL:HG22	1.97	0.47
29:BE:146:VAL:HG11	29:BE:187:VAL:HG23	1.96	0.47
16:CQ:3:LYS:NZ	16:CQ:4:ILE:HD12	2.29	0.47
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.79	0.47
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.14	0.47
51:BZ:71:LEU:CD1	51:BZ:76:GLU:HG2	2.45	0.47
23:BB:2032:G:H21	26:BD:151:THR:N	2.12	0.47
12:AM:52:ILE:HA	12:AM:55:LEU:HG	1.95	0.47
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.15	0.47
5:CF:71:ILE:HG13	5:CF:72:ASP:N	2.23	0.47
26:DD:91:THR:HG23	26:DD:92:VAL:N	2.22	0.47
23:BB:2144:G:H2'	23:BB:2146:C:H5'	1.96	0.47
50:BT:18:GLU:O	50:BT:20:ALA:N	2.46	0.47
50:DT:18:GLU:O	50:DT:20:ALA:N	2.47	0.47
50:DT:1:MET:HE3	50:DT:4:GLU:OE2	2.15	0.47
23:BB:2355:G:H4'	52:BW:20:LEU:CD1	2.41	0.47
31:B0:41:HIS:O	31:B0:42:ILE:O	2.33	0.47
20:AB:86:CYS:O	20:AB:88:GLN:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:156:LEU:H	20:CB:156:LEU:CD1	2.23	0.47
10:AK:28:ASN:HD21	10:AK:47:GLY:N	2.07	0.47
48:BG:88:LEU:HD13	48:BG:93:TYR:HB3	1.96	0.47
48:BG:148:ARG:HD3	48:BG:152:ARG:NH2	2.29	0.47
48:BG:88:LEU:HD11	48:BG:94:ARG:CA	2.45	0.47
3:CD:71:PHE:O	3:CD:74:TYR:HB2	2.15	0.47
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HG22	1.97	0.47
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.15	0.47
1:CA:203:G:H21	1:CA:205:A:H61	1.63	0.47
39:DX:13:GLU:HB3	39:DX:57:LEU:HD21	1.96	0.47
39:DX:9:LYS:O	39:DX:13:GLU:HG2	2.15	0.47
35:DV:3:THR:HA	35:DV:62:THR:HG1	1.79	0.47
16:AQ:17:GLU:O	16:AQ:18:LYS:HB2	2.15	0.47
1:AA:130:A:C8	16:AQ:64:ARG:HG3	2.50	0.47
11:AL:21:PRO:C	11:AL:23:LEU:H	2.17	0.47
11:CL:34:THR:O	11:CL:35:ARG:HB2	2.15	0.47
41:BJ:37:ARG:HH22	41:BJ:110:PRO:HG3	1.79	0.47
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.15	0.47
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.42	0.47
23:BB:1708:C:O2'	23:BB:1709:U:H5'	2.15	0.47
23:BB:459:U:O2'	23:BB:460:A:H5'	2.15	0.47
22:DA:30:C:O2	22:DA:30:C:H2'	2.14	0.47
1:CA:437:U:H5''	3:CD:151:GLN:NE2	2.29	0.47
2:CC:35:ASP:OD1	2:CC:58:ARG:HD2	2.14	0.47
23:DB:974:G:H1'	23:DB:975:A:C8	2.49	0.47
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.79	0.47
23:DB:459:U:O2'	23:DB:460:A:H5'	2.15	0.47
23:BB:655:A:H4'	23:BB:656:G:H5'	1.97	0.47
25:BC:157:ALA:C	25:BC:159:THR:H	2.18	0.47
1:AA:539:A:H2'	1:AA:540:G:H8	1.79	0.47
21:AU:24:LYS:CD	21:AU:25:ALA:H	2.24	0.47
4:CE:61:LYS:HB2	4:CE:65:LYS:HZ1	1.80	0.47
1:AA:499:A:H1'	1:AA:500:G:C8	2.48	0.47
1:CA:777:A:H2'	1:CA:778:G:C8	2.48	0.47
43:DO:30:ARG:CG	43:DO:102:ARG:HH11	2.28	0.47
32:D4:25:VAL:O	32:D4:26:ILE:HD13	2.14	0.47
48:BG:37:ASN:HD21	48:BG:40:VAL:N	2.12	0.47
23:DB:968:C:H2'	23:DB:969:G:C8	2.49	0.47
15:CP:38:PHE:CE2	15:CP:51:ARG:HD3	2.50	0.47
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.97	0.47
26:BD:125:TRP:CE2	26:BD:160:LYS:HB3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:839:U:H2'	23:DB:840:C:C6	2.48	0.47
23:BB:904:G:H2'	23:BB:905:A:H8	1.78	0.47
22:BA:115:A:O2'	22:BA:116:G:H5'	2.15	0.47
1:AA:207:C:H3'	1:AA:208:U:C5	2.49	0.47
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.13	0.47
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.95	0.47
1:AA:399:G:H2'	1:AA:400:C:C6	2.50	0.47
23:DB:2349:G:OP2	34:D3:41:ARG:HD3	2.14	0.47
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.79	0.47
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.14	0.47
23:BB:948:C:H2'	23:BB:949:G:H8	1.79	0.47
39:DX:22:LEU:O	39:DX:24:GLU:N	2.47	0.47
10:CK:30:ILE:HG22	10:CK:45:THR:CB	2.45	0.47
22:BA:55:U:H2'	22:BA:56:G:H8	1.80	0.47
1:CA:1005:A:N6	1:CA:1024:G:H1'	2.29	0.47
1:CA:1283:U:H2'	1:CA:1284:C:H6	1.80	0.47
1:CA:1494:G:OP2	54:CA:2062:LLL:N32	2.48	0.47
23:BB:1460:U:H5''	23:BB:1461:C:O4'	2.14	0.47
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.80	0.47
49:DR:79:ARG:O	49:DR:81:LYS:HG2	2.15	0.47
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	1.95	0.47
1:AA:766:A:H2'	1:AA:767:A:O4'	2.15	0.47
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.38	0.47
1:AA:720:C:O5'	1:AA:720:C:H6	1.96	0.47
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.82	0.47
20:CB:138:ARG:HA	20:CB:141:GLU:HG3	1.97	0.47
7:CH:17:GLN:CD	7:CH:69:ALA:HB1	2.35	0.47
1:CA:895:G:H2'	1:CA:896:C:C6	2.50	0.47
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.80	0.47
22:DA:54:G:H21	47:DF:25:MET:HE3	1.79	0.47
40:BH:44:ILE:O	40:BH:48:GLU:N	2.48	0.47
23:DB:2094:A:H2'	23:DB:2095:A:H8	1.79	0.47
23:DB:2096:C:H2'	23:DB:2097:A:H8	1.80	0.47
9:CJ:92:LEU:HD22	9:CJ:92:LEU:N	2.29	0.47
1:AA:642:A:C5	7:AH:106:SER:HA	2.50	0.47
1:CA:332:G:O2'	1:CA:333:U:H5'	2.14	0.47
1:CA:356:A:H1'	1:CA:368:U:O2'	2.14	0.47
23:DB:2223:G:H2'	23:DB:2224:G:H5'	1.97	0.47
9:AJ:92:LEU:N	9:AJ:92:LEU:HD22	2.30	0.47
25:BC:161:VAL:HG12	25:BC:162:GLN:N	2.30	0.47
1:CA:113:G:H2'	1:CA:114:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:56:LYS:HG3	26:BD:58:ASN:HB2	1.96	0.47
23:BB:1299:G:H5''	23:BB:1300:G:OP1	2.15	0.47
6:CG:61:PHE:O	6:CG:65:LEU:HD13	2.15	0.47
23:DB:518:G:H2'	23:DB:519:U:C6	2.50	0.47
24:BI:72:THR:HG21	24:BI:111:THR:O	2.15	0.47
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.14	0.47
5:CF:52:ASN:O	5:CF:52:ASN:CG	2.52	0.47
1:AA:515:G:H2'	1:AA:516:U:C6	2.50	0.47
42:DN:41:ALA:C	42:DN:43:GLU:N	2.67	0.47
1:CA:614:C:OP1	3:CD:82:LYS:HE2	2.14	0.47
42:BN:41:ALA:C	42:BN:43:GLU:N	2.68	0.47
31:D0:54:ILE:H	42:DN:118:ARG:HH12	1.63	0.47
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.80	0.47
9:AJ:80:THR:O	9:AJ:84:VAL:HG23	2.15	0.47
41:BJ:114:LEU:O	41:BJ:118:MET:HG3	2.14	0.47
23:DB:196:A:N3	23:DB:196:A:H2'	2.30	0.47
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.15	0.47
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.50	0.47
23:BB:2336:A:HO2'	23:BB:2337:G:P	2.38	0.47
38:BM:13:HIS:HB3	38:BM:14:LYS:H	1.61	0.47
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.96	0.47
20:AB:185:ILE:HG12	20:AB:199:ILE:HG21	1.97	0.47
20:AB:20:ARG:HE	20:AB:38:HIS:CD2	2.32	0.47
40:BH:116:ARG:HH12	40:BH:139:PHE:HB3	1.80	0.47
10:CK:83:VAL:HG21	10:CK:109:ILE:HG12	1.96	0.47
23:BB:2314:A:C1'	47:BF:154:THR:HG21	2.42	0.47
3:CD:170:LEU:N	3:CD:170:LEU:HD23	2.29	0.47
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.67	0.47
1:AA:78:A:O5'	1:AA:78:A:H8	1.98	0.47
35:DV:48:MET:SD	35:DV:85:LYS:HA	2.54	0.47
50:BT:60:THR:HA	50:BT:82:LYS:O	2.15	0.47
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.96	0.47
42:DN:63:ARG:O	42:DN:66:ALA:HB3	2.14	0.47
23:BB:674:G:H2'	23:BB:804:A:H61	1.80	0.47
23:DB:744:U:H2'	23:DB:745:G:O4'	2.15	0.47
38:BM:71:LYS:HE3	38:BM:73:ILE:CD1	2.42	0.47
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.15	0.47
20:CB:151:LYS:HG3	20:CB:152:ASP:N	2.30	0.47
23:DB:125:A:O2'	36:D2:13:ASN:HB3	2.14	0.47
51:DZ:35:SER:CA	51:DZ:50:ARG:HA	2.41	0.47
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.49	0.47
1:AA:93:U:OP2	1:AA:94:G:H5'	2.14	0.47
23:DB:2769:U:O2'	23:DB:2770:G:H5'	2.14	0.47
20:CB:223:GLY:C	20:CB:225:SER:H	2.18	0.47
1:AA:481:G:O2'	1:AA:482:A:H8	1.98	0.47
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.75	0.47
24:BI:62:ALA:C	24:BI:64:ARG:H	2.17	0.47
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.40	0.47
1:CA:373:A:C1'	1:CA:481:G:H1'	2.44	0.47
46:DU:9:GLU:HG3	46:DU:21:ARG:HD2	1.96	0.47
38:DM:96:ILE:HD11	38:DM:126:ILE:HD13	1.96	0.47
2:AC:182:ASP:HB3	2:AC:201:ILE:HB	1.97	0.47
46:BU:81:ARG:HB2	46:BU:96:LYS:HG3	1.97	0.47
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.50	0.47
44:DQ:27:ARG:HH11	44:DQ:27:ARG:HG3	1.79	0.47
20:CB:187:ASP:O	20:CB:189:ASN:N	2.48	0.47
1:CA:993:G:H2'	1:CA:993:G:N3	2.30	0.47
23:DB:2040:G:H2'	23:DB:2041:U:O4'	2.14	0.47
47:DF:45:ASP:C	47:DF:47:LYS:H	2.18	0.47
7:AH:77:VAL:HG12	7:AH:84:ILE:HD12	1.96	0.47
47:BF:45:ASP:O	47:BF:46:LYS:HB2	2.14	0.47
1:CA:947:G:H4'	12:CM:107:THR:OG1	2.15	0.47
20:CB:119:GLN:HG3	20:CB:136:ARG:NH1	2.29	0.47
17:CR:32:ILE:HG22	17:CR:33:THR:O	2.14	0.47
23:DB:1372:U:H1'	23:DB:2214:C:C4	2.49	0.47
35:BV:24:ASN:O	35:BV:44:HIS:HB2	2.15	0.47
1:AA:1248:A:C2	8:AI:71:ILE:HD11	2.50	0.47
45:DS:17:VAL:HG13	45:DS:43:ALA:HB1	1.97	0.47
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.15	0.47
2:AC:194:VAL:HG12	2:AC:195:ILE:N	2.30	0.47
2:CC:194:VAL:HG12	2:CC:195:ILE:N	2.30	0.47
20:CB:93:HIS:HB2	20:CB:145:ASN:O	2.15	0.47
23:BB:2773:C:O2'	23:BB:2774:C:H5'	2.15	0.47
23:DB:299:A:N6	23:DB:322:A:O2'	2.47	0.47
23:DB:522:A:H2'	23:DB:523:C:H6	1.79	0.47
45:DS:95:ARG:O	45:DS:96:ILE:HG22	2.15	0.47
23:DB:510:C:O2'	23:DB:1236:G:H5'	2.15	0.47
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.79	0.47
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.30	0.47
23:DB:381:G:OP1	51:DZ:18:ARG:HD2	2.14	0.47
1:AA:1484:C:H2'	1:AA:1485:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:12:GLU:HB3	4:AE:63:MET:CE	2.44	0.47
23:DB:1831:G:H2'	23:DB:1832:C:C6	2.50	0.47
2:CC:172:VAL:O	2:CC:174:LEU:HD12	2.15	0.47
41:DJ:34:ARG:HG2	41:DJ:39:LYS:HB3	1.97	0.47
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.97	0.47
23:BB:1849:G:H2'	23:BB:1850:G:H8	1.80	0.47
23:DB:671:C:O2'	23:DB:672:C:H5'	2.15	0.47
13:CN:10:VAL:O	13:CN:13:VAL:HB	2.15	0.47
1:CA:982:U:C5'	13:CN:5:MET:HE3	2.45	0.47
46:DU:85:ARG:HH11	46:DU:86:PHE:N	2.12	0.47
40:BH:130:VAL:O	40:BH:131:SER:C	2.53	0.47
23:BB:297:G:OP1	46:BU:91:LYS:HD3	2.14	0.47
47:BF:96:TRP:HA	47:BF:99:PHE:HB3	1.96	0.47
23:DB:350:G:H2'	23:DB:351:C:H6	1.80	0.47
50:BT:7:LEU:HD22	50:BT:9:LYS:HE3	1.97	0.47
1:CA:522:C:O2'	1:CA:523:A:H5'	2.15	0.47
38:BM:41:LEU:HD22	38:BM:124:LEU:HD22	1.95	0.47
23:BB:2144:G:H22	23:BB:2147:A:H4'	1.77	0.47
1:CA:389:A:H2'	1:CA:389:A:N3	2.30	0.47
27:DK:19:VAL:CB	27:DK:41:ILE:HD11	2.45	0.47
43:DO:18:LEU:HD23	43:DO:25:ARG:HD2	1.95	0.47
37:BL:80:SER:HB3	37:BL:115:GLU:OE2	2.14	0.47
23:BB:744:U:H2'	23:BB:745:G:O4'	2.15	0.47
22:DA:33:G:O2'	22:DA:34:A:H5'	2.15	0.47
13:AN:48:GLN:O	13:AN:51:PRO:HD2	2.14	0.47
37:DL:111:ILE:HG22	37:DL:112:LEU:N	2.29	0.47
40:DH:69:ALA:HA	40:DH:140:ALA:HB2	1.96	0.47
1:AA:370:C:O2'	1:AA:371:A:H5'	2.15	0.47
1:CA:1010:U:O2'	1:CA:1011:C:H5'	2.15	0.47
27:BK:119:ALA:O	27:BK:120:PRO:O	2.33	0.47
47:BF:57:ALA:HB2	47:BF:64:PRO:CD	2.45	0.47
2:CC:148:ILE:HA	2:CC:200:TRP:O	2.14	0.47
12:CM:79:LEU:HB3	12:CM:84:CYS:SG	2.55	0.47
1:AA:253:A:H2'	1:AA:254:G:C8	2.49	0.47
1:AA:634:C:H2'	1:AA:635:A:C8	2.50	0.47
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HD12	1.97	0.47
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.96	0.47
23:BB:2680:U:P	26:BD:114:LYS:HB3	2.54	0.47
1:CA:1342:C:H5'	8:CI:127:SER:HA	1.97	0.47
1:AA:843:U:OP2	1:AA:843:U:H4'	2.13	0.47
23:BB:1856:U:C2'	23:BB:1857:G:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.15	0.47
3:AD:33:ILE:HG13	3:AD:34:GLU:N	2.30	0.47
49:DR:83:TYR:HE2	49:DR:85:LYS:HE3	1.80	0.47
23:DB:992:C:O2'	23:DB:993:G:H5'	2.15	0.47
23:DB:416:U:O2'	23:DB:417:C:H5'	2.15	0.47
3:AD:88:ASN:O	3:AD:92:LEU:HD23	2.15	0.47
1:AA:1320:C:P	18:AS:69:LYS:HZ2	2.38	0.47
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.15	0.47
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.30	0.47
37:BL:57:LEU:C	37:BL:59:ARG:H	2.18	0.47
14:AO:50:HIS:O	14:AO:53:ARG:HB3	2.15	0.47
23:BB:154:U:H2'	23:BB:155:A:C8	2.50	0.47
27:BK:11:ALA:HB3	27:BK:85:VAL:CG2	2.45	0.47
1:CA:96:U:H2'	1:CA:97:G:H8	1.78	0.47
23:BB:2349:G:OP2	34:B3:41:ARG:HD3	2.14	0.47
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.30	0.47
6:CG:14:ASP:H	6:CG:19:SER:H	1.63	0.47
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.80	0.47
1:AA:825:A:H2'	1:AA:826:C:C6	2.48	0.47
23:BB:41:C:H2'	23:BB:42:A:O4'	2.15	0.47
17:CR:45:GLY:O	17:CR:46:THR:C	2.54	0.47
23:BB:510:C:O2'	23:BB:1236:G:H5'	2.15	0.47
25:BC:33:LEU:O	25:BC:34:GLU:HB3	2.15	0.47
1:CA:586:C:H5''	7:CH:81:GLY:HA2	1.97	0.47
22:DA:55:U:H2'	22:DA:56:G:C8	2.50	0.47
25:DC:202:ARG:HH21	25:DC:202:ARG:HB2	1.79	0.47
23:DB:757:G:H2'	23:DB:758:C:H5'	1.96	0.47
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.14	0.47
9:AJ:80:THR:HG22	9:AJ:82:LYS:HG2	1.97	0.47
1:AA:364:A:H2'	1:AA:365:U:O2	2.15	0.47
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.96	0.47
23:DB:466:A:N3	23:DB:683:U:H1'	2.30	0.47
42:BN:82:GLU:C	42:BN:84:GLY:H	2.18	0.47
23:DB:225:C:O2'	23:DB:226:A:H5'	2.15	0.47
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.15	0.47
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.97	0.47
1:AA:593:U:H2'	1:AA:594:U:C6	2.50	0.47
33:B1:18:HIS:NE2	33:B1:40:PRO:HD2	2.29	0.47
48:BG:155:PRO:HA	48:BG:170:THR:HG22	1.96	0.47
12:CM:29:SER:O	12:CM:32:ILE:HG22	2.15	0.47
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:76:G:H5''	35:DV:17:SER:OG	2.15	0.47
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.80	0.47
1:AA:810:C:O2'	1:AA:811:C:H5'	2.15	0.47
23:BB:518:G:H2'	23:BB:519:U:C6	2.50	0.47
52:DW:49:ASN:O	52:DW:50:VAL:HG13	2.15	0.47
37:BL:3:LEU:HA	37:BL:6:LEU:HD21	1.96	0.47
23:BB:2728:U:H5'	27:BK:70:ARG:NH2	2.30	0.47
25:BC:153:LEU:HD13	25:BC:175:LEU:HD21	1.96	0.47
23:BB:2313:C:H2'	23:BB:2314:A:H8	1.79	0.47
47:BF:7:TYR:O	47:BF:11:VAL:HB	2.15	0.47
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.97	0.47
3:AD:182:LYS:HB3	3:AD:182:LYS:NZ	2.30	0.47
3:AD:169:TRP:HB2	3:AD:183:ARG:O	2.15	0.47
20:AB:14:HIS:CB	20:AB:208:ALA:HB2	2.45	0.47
28:BP:50:ARG:CD	28:BP:56:SER:HB3	2.45	0.47
23:BB:338:G:N2	23:BB:339:U:H1'	2.30	0.47
25:DC:102:TYR:C	25:DC:103:ILE:HG13	2.36	0.47
5:AF:45:ARG:O	5:AF:56:LYS:HA	2.15	0.47
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.78	0.47
3:CD:59:LYS:HE3	3:CD:194:ILE:CD1	2.45	0.47
20:CB:104:LYS:HG3	20:CB:105:THR:H	1.80	0.47
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.14	0.47
38:BM:41:LEU:HD13	38:BM:46:ILE:HG22	1.97	0.47
38:BM:42:THR:HA	38:BM:93:VAL:HA	1.97	0.47
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.15	0.47
51:DZ:71:LEU:CD1	51:DZ:76:GLU:HG2	2.45	0.47
22:DA:6:G:H2'	22:DA:7:G:C8	2.50	0.47
2:CC:126:ARG:HH22	2:CC:190:THR:CG2	2.22	0.47
4:AE:81:GLN:H	4:AE:146:MET:HE1	1.80	0.47
20:AB:223:GLY:C	20:AB:225:SER:H	2.17	0.47
13:AN:26:LEU:HD12	13:AN:44:VAL:HG13	1.96	0.47
23:DB:2645:G:H4'	23:DB:2732:G:H2'	1.97	0.47
20:CB:86:CYS:HB3	20:CB:88:GLN:NE2	2.29	0.47
23:BB:83:A:H61	23:BB:101:A:H5'	1.80	0.47
1:AA:818:G:C3'	1:AA:819:A:H5''	2.45	0.47
26:BD:33:ARG:HE	26:BD:74:GLU:HB3	1.80	0.47
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.97	0.47
1:AA:1240:U:O4	6:AG:29:LEU:HG	2.14	0.47
27:DK:70:ARG:CB	27:DK:76:VAL:HG22	2.41	0.47
1:AA:465:A:H2'	1:AA:466:A:H3'	1.96	0.47
27:BK:13:ASN:N	27:BK:100:PHE:HE1	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2417:C:O2'	23:DB:2418:A:H5'	2.14	0.47
23:DB:532:A:H4'	23:DB:533:G:C8	2.49	0.47
49:DR:15:SER:H	49:DR:18:GLN:CD	2.18	0.47
1:AA:327:A:H1'	1:AA:329:A:O4'	2.15	0.47
38:BM:108:VAL:HG13	38:BM:112:LEU:HB3	1.97	0.47
36:B2:33:ARG:HH21	36:B2:33:ARG:CB	2.26	0.47
35:BV:3:THR:HA	35:BV:62:THR:OG1	2.15	0.47
16:AQ:66:LEU:O	16:AQ:67:SER:HB2	2.15	0.47
49:BR:58:VAL:HG22	49:BR:59:ILE:N	2.27	0.47
20:CB:124:THR:HG23	20:CB:124:THR:O	2.14	0.47
1:AA:1491:G:C5	54:AA:2061:LLL:H21	2.50	0.47
29:BE:106:LYS:NZ	29:BE:201:ALA:HB2	2.30	0.47
23:DB:975:A:H1'	23:DB:990:A:C2	2.50	0.47
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.50	0.47
2:AC:35:ASP:OD1	2:AC:58:ARG:HD2	2.15	0.47
23:DB:717:C:C3'	23:DB:718:A:H5''	2.44	0.47
1:AA:191:G:H2'	1:AA:192:A:H8	1.79	0.47
12:CM:76:ILE:O	12:CM:80:MET:HG3	2.14	0.47
21:AU:24:LYS:NZ	21:AU:24:LYS:HB3	2.31	0.47
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.30	0.47
18:CS:2:ARG:HA	18:CS:2:ARG:NE	2.30	0.47
48:BG:40:VAL:HG22	48:BG:64:ALA:HA	1.97	0.47
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.79	0.47
41:BJ:77:HIS:HD2	41:BJ:84:ILE:H	1.60	0.47
5:AF:14:GLN:NE2	5:AF:83:ALA:HB2	2.30	0.47
10:AK:127:ARG:HG3	10:AK:127:ARG:HH11	1.79	0.47
1:CA:1262:C:H2'	1:CA:1263:C:O4'	2.15	0.47
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.15	0.47
15:CP:23:ASP:CG	15:CP:25:ARG:HE	2.18	0.47
29:DE:30:GLN:HG2	29:DE:30:GLN:O	2.15	0.47
26:DD:170:VAL:O	26:DD:170:VAL:HG23	2.14	0.47
22:DA:24:G:O2'	22:DA:27:C:N4	2.48	0.47
23:DB:322:A:H5'	23:DB:340:A:C1'	2.45	0.47
1:CA:1373:G:H5''	6:CG:35:LYS:HB2	1.96	0.47
25:DC:33:LEU:O	25:DC:34:GLU:HB3	2.14	0.47
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.96	0.47
23:BB:1222:U:P	49:BR:90:ARG:HH12	2.38	0.47
22:BA:111:U:H2'	22:BA:112:G:C8	2.49	0.47
23:DB:2098:U:H2'	23:DB:2099:U:H1'	1.97	0.47
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.13	0.47
23:DB:1860:G:H2'	23:DB:1861:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:59:LYS:HG3	9:CJ:60:ASP:N	2.30	0.47
23:DB:2223:G:C2'	23:DB:2224:G:H5'	2.44	0.47
1:CA:656:G:HO2'	1:CA:657:U:H5'	1.80	0.47
23:BB:2710:C:H2'	23:BB:2711:A:C8	2.50	0.47
1:AA:692:U:C2	1:AA:694:A:H5''	2.50	0.47
23:BB:2376:A:H2'	23:BB:2377:A:O4'	2.15	0.47
1:CA:171:A:H2'	1:CA:172:A:C8	2.49	0.47
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.15	0.47
1:CA:1453:G:H2'	1:CA:1454:G:O4'	2.15	0.47
1:CA:186:C:H2'	1:CA:187:G:O4'	2.15	0.47
1:CA:822:U:H2'	1:CA:823:C:H6	1.79	0.47
1:CA:821:G:O2'	1:CA:822:U:H5'	2.15	0.47
23:DB:259:G:O2'	23:DB:260:G:H5'	2.15	0.47
23:BB:572:A:OP2	49:BR:80:ARG:NH2	2.48	0.47
2:AC:111:ASP:OD2	2:AC:114:LEU:HG	2.15	0.47
3:AD:170:LEU:N	3:AD:170:LEU:HD23	2.30	0.47
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.15	0.47
1:CA:1489:G:H2'	1:CA:1490:U:C6	2.50	0.47
45:DS:70:LYS:HD3	45:DS:110:ARG:OXT	2.15	0.47
23:DB:2332:C:H1'	23:DB:2336:A:N7	2.30	0.46
37:BL:124:GLY:CA	37:BL:143:GLU:HG3	2.44	0.46
37:BL:93:ASN:HA	37:BL:96:LYS:HD3	1.97	0.46
44:DQ:85:ALA:O	44:DQ:86:SER:C	2.54	0.46
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.69	0.46
48:BG:34:ARG:HD3	48:BG:34:ARG:H	1.78	0.46
44:BQ:59:LEU:C	44:BQ:59:LEU:HD13	2.36	0.46
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD13	1.80	0.46
1:AA:1098:C:H2'	1:AA:1099:G:H8	1.79	0.46
40:DH:4:ILE:HD12	40:DH:4:ILE:N	2.31	0.46
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.55	0.46
40:BH:18:GLN:HE21	40:BH:39:ALA:CB	2.24	0.46
35:DV:44:HIS:HE1	35:DV:86:LEU:N	2.09	0.46
35:DV:51:GLN:NE2	35:DV:79:ARG:HH22	2.12	0.46
50:DT:44:LYS:HG3	50:DT:55:VAL:HG11	1.95	0.46
23:BB:299:A:N6	23:BB:322:A:O2'	2.48	0.46
29:BE:134:LEU:HD21	29:BE:161:ALA:HB2	1.97	0.46
29:BE:161:ALA:HA	29:BE:164:LEU:HD12	1.97	0.46
23:DB:1454:C:H5'	42:DN:63:ARG:CZ	2.46	0.46
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.44	0.46
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.79	0.46
44:DQ:79:ILE:O	44:DQ:79:ILE:HD13	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:121:U:H3'	1:AA:121:U:OP1	2.14	0.46
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.50	0.46
51:DZ:59:ILE:CG2	51:DZ:64:ILE:HG13	2.44	0.46
23:DB:138:U:H6	23:DB:138:U:O5'	1.98	0.46
46:BU:21:ARG:HG3	46:BU:21:ARG:HH11	1.80	0.46
40:BH:54:LEU:O	40:BH:58:LEU:HB3	2.16	0.46
23:DB:182:A:H2'	23:DB:183:C:H6	1.79	0.46
31:D0:41:HIS:O	31:D0:42:ILE:O	2.33	0.46
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.16	0.46
11:AL:34:THR:HG23	11:AL:55:ARG:HB2	1.97	0.46
49:BR:15:SER:H	49:BR:18:GLN:CG	2.28	0.46
32:D4:11:CYS:SG	32:D4:12:ARG:N	2.89	0.46
1:CA:947:G:H5''	12:CM:106:ARG:HB2	1.97	0.46
34:D3:54:LEU:HG	34:D3:58:ILE:HD11	1.97	0.46
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.29	0.46
22:DA:28:C:H5'	22:DA:29:A:OP2	2.14	0.46
2:CC:122:GLN:O	2:CC:127:VAL:HG22	2.15	0.46
43:DO:67:ASN:O	43:DO:69:ASP:N	2.48	0.46
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.16	0.46
43:DO:30:ARG:NH2	43:DO:103:VAL:HG23	2.31	0.46
3:AD:137:SER:HB2	3:AD:140:ASP:OD2	2.15	0.46
5:AF:12:PRO:C	5:AF:14:GLN:H	2.18	0.46
1:CA:410:G:H2'	1:CA:429:U:C5	2.50	0.46
1:AA:807:A:H2'	1:AA:808:C:C6	2.50	0.46
1:CA:812:G:H4'	1:CA:812:G:OP1	2.15	0.46
1:CA:735:C:O2'	1:CA:736:C:H5'	2.16	0.46
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.15	0.46
23:DB:1730:C:O2'	23:DB:1731:G:N2	2.48	0.46
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.29	0.46
1:CA:834:U:H2'	1:CA:835:U:H6	1.80	0.46
1:CA:1347:G:H8	8:CI:108:ARG:HB3	1.80	0.46
40:DH:128:HIS:C	40:DH:143:ILE:HG23	2.36	0.46
2:AC:10:ARG:CZ	2:AC:181:ILE:HD13	2.45	0.46
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.81	0.46
31:D0:50:GLY:C	31:D0:51:ARG:HG2	2.35	0.46
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.29	0.46
23:BB:1743:G:O5'	23:BB:1743:G:H8	1.99	0.46
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.78	0.46
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.50	0.46
23:BB:1322:A:H2'	23:BB:1323:C:H5'	1.97	0.46
1:AA:224:U:H2'	1:AA:225:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:103:VAL:HG23	27:BK:122:VAL:O	2.14	0.46
4:CE:12:GLU:HB3	4:CE:63:MET:CE	2.45	0.46
14:CO:50:HIS:O	14:CO:53:ARG:HB3	2.15	0.46
1:AA:113:G:H2'	1:AA:114:U:C6	2.50	0.46
1:CA:648:A:H2'	1:CA:649:A:C8	2.50	0.46
1:CA:1281:C:H5'	1:CA:1282:C:H5	1.79	0.46
23:BB:2864:G:H2'	23:BB:2865:U:C6	2.50	0.46
42:DN:82:GLU:C	42:DN:84:GLY:H	2.18	0.46
1:AA:952:U:H2'	1:AA:953:G:C8	2.51	0.46
1:CA:308:C:H2'	1:CA:309:A:H8	1.79	0.46
23:DB:2822:G:H5''	26:DD:164:GLN:OE1	2.15	0.46
24:DI:69:VAL:HG23	24:DI:69:VAL:O	2.14	0.46
40:DH:15:LEU:HD13	40:DH:15:LEU:C	2.35	0.46
16:AQ:82:VAL:O	16:AQ:82:VAL:HG13	2.15	0.46
29:BE:2:GLU:OE1	29:BE:13:THR:N	2.45	0.46
22:DA:109:A:H2'	22:DA:110:C:C6	2.50	0.46
23:BB:2445:G:O2'	23:BB:2446:G:H5'	2.15	0.46
37:BL:100:ILE:O	37:BL:100:ILE:HG12	2.15	0.46
25:BC:116:GLN:HG2	25:BC:117:SER:N	2.30	0.46
47:BF:147:ARG:NH1	47:BF:147:ARG:HB3	2.29	0.46
47:BF:62:GLN:HE21	47:BF:91:ARG:HH11	1.63	0.46
47:BF:89:THR:O	47:BF:91:ARG:CZ	2.64	0.46
48:DG:42:VAL:HA	48:DG:51:PHE:HA	1.98	0.46
3:CD:182:LYS:HB3	3:CD:182:LYS:NZ	2.29	0.46
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.15	0.46
18:AS:29:PRO:HB3	18:AS:47:THR:HG22	1.96	0.46
1:CA:663:A:H5''	17:CR:49:LYS:HD2	1.96	0.46
23:DB:2683:C:H5''	28:DP:55:HIS:HB3	1.97	0.46
23:DB:77:G:O2'	23:DB:78:U:H5'	2.15	0.46
50:BT:69:ARG:HB3	50:BT:74:ILE:HD12	1.95	0.46
50:DT:22:THR:O	50:DT:26:LYS:HG2	2.16	0.46
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.14	0.46
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.16	0.46
48:BG:121:THR:O	48:BG:132:LEU:HA	2.15	0.46
10:CK:77:GLY:O	10:CK:79:LYS:HE3	2.16	0.46
5:CF:45:ARG:O	5:CF:56:LYS:HA	2.15	0.46
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.35	0.46
23:BB:279:A:H2'	23:BB:280:U:H5'	1.97	0.46
48:BG:145:ALA:O	48:BG:149:ALA:N	2.47	0.46
10:AK:55:ARG:HH12	10:AK:60:PHE:HD1	1.61	0.46
23:BB:664:G:H4'	23:BB:941:A:OP1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1010:U:O2'	1:AA:1011:C:H5'	2.15	0.46
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.31	0.46
1:AA:265:G:H5'	16:AQ:65:PRO:O	2.15	0.46
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.15	0.46
47:BF:41:GLU:O	47:BF:43:ILE:N	2.45	0.46
21:CU:24:LYS:HZ3	21:CU:25:ALA:H	1.63	0.46
6:CG:145:GLU:CD	6:CG:148:LYS:HD2	2.35	0.46
23:DB:1348:C:H2'	23:DB:1349:C:H5'	1.98	0.46
1:CA:253:A:H2'	1:CA:254:G:C8	2.49	0.46
23:DB:1773:A:N7	23:DB:1829:A:H1'	2.29	0.46
7:CH:113:ARG:C	7:CH:113:ARG:HE	2.18	0.46
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.50	0.46
2:AC:58:ARG:HA	2:AC:62:SER:O	2.15	0.46
15:AP:1:MET:HG3	15:AP:3:THR:CG2	2.46	0.46
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.50	0.46
5:AF:37:HIS:O	5:AF:97:THR:HG23	2.16	0.46
2:CC:194:VAL:HG12	2:CC:195:ILE:H	1.80	0.46
32:B4:25:VAL:O	32:B4:26:ILE:HD13	2.15	0.46
28:DP:89:GLY:HA2	28:DP:111:GLU:C	2.36	0.46
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.44	0.46
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.50	0.46
14:CO:82:ILE:O	14:CO:86:GLY:N	2.48	0.46
23:BB:118:A:OP2	23:BB:119:A:H2'	2.16	0.46
1:AA:429:U:H4'	1:AA:430:A:O5'	2.15	0.46
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	1.97	0.46
38:BM:82:MET:O	38:BM:84:LYS:HG2	2.15	0.46
41:DJ:64:VAL:HG22	41:DJ:68:LYS:CD	2.45	0.46
29:BE:150:THR:OG1	29:BE:151:GLY:N	2.48	0.46
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.50	0.46
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.46	0.46
22:BA:24:G:O2'	22:BA:27:C:N4	2.48	0.46
23:DB:1317:G:H2'	23:DB:1318:U:H6	1.80	0.46
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.82	0.46
22:DA:13:G:H2'	22:DA:14:U:H5''	1.97	0.46
23:BB:1153:C:H2'	23:BB:1154:G:O4'	2.15	0.46
1:CA:586:C:H2'	1:CA:587:G:H5'	1.96	0.46
23:DB:2457:U:H2'	23:DB:2458:G:H5'	1.97	0.46
26:DD:141:ARG:O	26:DD:141:ARG:HG3	2.16	0.46
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.81	0.46
23:BB:600:G:O4'	29:BE:100:MET:HE3	2.15	0.46
23:DB:929:U:H1'	30:DY:25:GLY:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:12:C:N3	52:BW:73:PRO:HG3	2.30	0.46
23:BB:348:A:H2'	23:BB:349:U:O4'	2.15	0.46
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.15	0.46
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.14	0.46
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.81	0.46
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.15	0.46
43:BO:20:GLU:OE2	43:BO:21:LEU:HG	2.15	0.46
28:DP:28:LYS:HD2	28:DP:82:SER:OG	2.15	0.46
23:BB:72:U:O2'	23:BB:73:A:H5'	2.16	0.46
1:AA:997:U:H2'	1:AA:998:C:C6	2.50	0.46
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.18	0.46
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.15	0.46
37:BL:124:GLY:N	37:BL:143:GLU:CG	2.76	0.46
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.31	0.46
47:BF:92:GLY:O	47:BF:95:MET:HB3	2.15	0.46
48:BG:25:ILE:CG2	48:BG:78:VAL:HG21	2.45	0.46
44:BQ:91:ARG:NE	44:BQ:94:LEU:HD23	2.26	0.46
23:DB:2683:C:O2'	23:DB:2684:U:H5'	2.15	0.46
23:BB:2061:G:H5''	23:BB:2503:A:C2	2.51	0.46
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.30	0.46
23:DB:1161:C:H4'	49:DR:8:GLY:O	2.14	0.46
52:DW:35:ILE:O	52:DW:37:VAL:HG23	2.16	0.46
51:BZ:5:CYS:CB	51:BZ:10:LYS:H	2.25	0.46
40:BH:27:ARG:HH11	51:BZ:64:ILE:HD11	1.81	0.46
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.50	0.46
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.50	0.46
51:DZ:33:LEU:CA	51:DZ:52:SER:HA	2.37	0.46
47:BF:131:VAL:O	47:BF:132:ARG:HB2	2.15	0.46
19:CT:65:LEU:HG	19:CT:66:ILE:HD13	1.98	0.46
40:BH:9:VAL:HB	40:BH:13:GLY:CA	2.44	0.46
23:BB:2769:U:O2'	23:BB:2770:G:H5'	2.16	0.46
29:BE:28:VAL:O	29:BE:32:VAL:HG13	2.14	0.46
29:BE:32:VAL:HG23	29:BE:33:VAL:N	2.29	0.46
24:DI:126:ARG:NH1	24:DI:126:ARG:CB	2.79	0.46
30:DY:16:LEU:O	30:DY:19:HIS:HB2	2.14	0.46
20:AB:224:ARG:HB3	20:AB:224:ARG:NH1	2.30	0.46
20:AB:86:CYS:SG	20:AB:87:ASP:N	2.89	0.46
4:CE:81:GLN:NE2	4:CE:149:PRO:HD3	2.31	0.46
1:CA:920:U:H2'	1:CA:921:U:H6	1.77	0.46
43:DO:26:LEU:HD13	43:DO:39:VAL:CG2	2.46	0.46
40:DH:97:ARG:CA	40:DH:112:LYS:HD3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:56:GLU:HB2	3:CD:198:LEU:HD23	1.97	0.46
23:BB:2808:G:HO2'	23:BB:2809:A:H8	1.63	0.46
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.15	0.46
38:BM:96:ILE:HD11	38:BM:126:ILE:HD13	1.98	0.46
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.80	0.46
1:CA:413:G:C6	3:CD:32:LYS:HE2	2.51	0.46
1:CA:413:G:N1	3:CD:32:LYS:HE2	2.30	0.46
1:AA:252:U:H2'	1:AA:253:A:H8	1.79	0.46
1:CA:1122:U:H2'	1:CA:1123:U:C6	2.50	0.46
47:BF:45:ASP:C	47:BF:47:LYS:H	2.18	0.46
41:DJ:72:LYS:CB	41:DJ:89:PHE:H	2.28	0.46
23:BB:272:A:H2'	23:BB:273:G:O4'	2.16	0.46
23:BB:1883:U:H2'	23:BB:1884:G:C1'	2.45	0.46
1:CA:255:G:H1'	16:CQ:17:GLU:OE2	2.15	0.46
35:BV:65:VAL:O	35:BV:68:LYS:HG2	2.16	0.46
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.83	0.46
23:BB:2213:U:C2'	23:BB:2213:U:O2	2.63	0.46
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.31	0.46
1:CA:479:U:O2'	1:CA:480:U:H5'	2.15	0.46
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.79	0.46
20:AB:107:ARG:HG3	20:AB:108:GLN:N	2.29	0.46
23:DB:304:U:H2'	23:DB:305:C:C6	2.50	0.46
23:BB:2428:G:H5''	23:BB:2429:G:OP1	2.15	0.46
1:CA:735:C:H5'	17:CR:59:LYS:HD3	1.97	0.46
51:BZ:65:ASP:O	51:BZ:69:ALA:N	2.48	0.46
23:DB:2190:G:H2'	23:DB:2191:A:H8	1.80	0.46
41:DJ:23:LYS:NZ	41:DJ:142:ILE:HG23	2.30	0.46
1:AA:1005:A:C2	1:AA:1006:G:H1'	2.49	0.46
22:BA:91:C:H2'	22:BA:92:C:C6	2.51	0.46
36:D2:10:LEU:O	36:D2:14:ARG:HG2	2.16	0.46
23:BB:41:C:O2'	23:BB:42:A:H5'	2.15	0.46
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.79	0.46
23:DB:41:C:O2'	23:DB:42:A:H5'	2.16	0.46
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.50	0.46
29:BE:147:LEU:HB3	29:BE:186:VAL:HG23	1.98	0.46
20:AB:116:LEU:HB3	20:AB:140:LEU:CD1	2.46	0.46
1:AA:356:A:H1'	1:AA:368:U:O2'	2.16	0.46
1:AA:1456:A:H2'	1:AA:1457:G:O4'	2.15	0.46
3:CD:75:TYR:CG	3:CD:203:TYR:HD1	2.34	0.46
23:DB:93:G:H2'	23:DB:94:A:O4'	2.15	0.46
5:CF:49:TYR:CE1	17:CR:65:SER:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:91:ARG:CB	6:CG:92:PRO:HD2	2.45	0.46
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.96	0.46
52:BW:39:GLN:NE2	52:BW:43:LYS:HB2	2.30	0.46
27:BK:76:VAL:N	28:BP:72:VAL:HG23	2.26	0.46
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.15	0.46
29:DE:155:GLU:HB3	29:DE:159:LEU:HD13	1.98	0.46
48:DG:25:ILE:CG2	48:DG:78:VAL:HG21	2.46	0.46
41:BJ:38:GLY:O	41:BJ:43:GLU:HB2	2.15	0.46
8:CI:22:PRO:HA	8:CI:60:LEU:HB2	1.97	0.46
23:BB:877:A:H2'	23:BB:899:A:C2	2.49	0.46
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.15	0.46
1:CA:875:U:O2'	7:CH:14:ARG:HD2	2.15	0.46
50:DT:14:PRO:HA	50:DT:32:LEU:HB3	1.97	0.46
42:BN:61:ALA:C	42:BN:63:ARG:N	2.68	0.46
48:BG:120:ILE:HD13	48:BG:121:THR:N	2.30	0.46
23:DB:2528:U:O2'	23:DB:2529:G:H3'	2.15	0.46
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.46
23:DB:2052:A:H4'	26:DD:148:GLN:N	2.31	0.46
46:BU:53:GLN:N	46:BU:54:PRO:CD	2.78	0.46
41:DJ:55:ILE:HB	41:DJ:123:LYS:HB2	1.96	0.46
30:BY:6:ILE:HG22	30:BY:56:VAL:HA	1.96	0.46
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.98	0.46
15:AP:54:LEU:HD11	15:AP:80:LYS:HA	1.97	0.46
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.39	0.46
48:DG:145:ALA:O	48:DG:149:ALA:N	2.47	0.46
46:DU:73:ASN:HB3	46:DU:95:PHE:CE2	2.49	0.46
2:AC:112:ALA:CB	2:AC:184:ASN:HB2	2.45	0.46
29:DE:146:VAL:HB	29:DE:148:ILE:HD11	1.97	0.46
1:CA:204:G:C2	1:CA:465:A:H1'	2.51	0.46
1:AA:411:A:C4	1:AA:413:G:H1'	2.50	0.46
35:DV:3:THR:HA	35:DV:62:THR:OG1	2.16	0.46
1:AA:255:G:H2'	1:AA:256:U:C6	2.51	0.46
23:DB:665:U:O2'	23:DB:666:A:H5'	2.15	0.46
22:BA:28:C:OP1	43:BO:31:THR:HG21	2.15	0.46
1:AA:878:A:H5''	7:AH:80:PRO:HG2	1.96	0.46
23:BB:2472:G:O6	23:BB:2476:A:H4'	2.15	0.46
9:AJ:73:LEU:HD13	9:AJ:75:ASP:HB2	1.97	0.46
23:BB:275:C:C2'	23:BB:276:U:H5'	2.46	0.46
29:BE:48:THR:C	29:BE:50:ALA:H	2.19	0.46
23:DB:1857:G:N2	23:DB:1884:G:H2'	2.31	0.46
1:AA:849:G:N7	54:AA:2062:LLL:N61	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:947:G:H5''	12:AM:106:ARG:HB2	1.97	0.46
48:BG:10:VAL:HG12	48:BG:10:VAL:O	2.15	0.46
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.80	0.46
1:AA:812:G:H4'	1:AA:812:G:OP1	2.15	0.46
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.50	0.46
1:AA:679:C:H2'	1:AA:680:C:C6	2.50	0.46
23:BB:2210:U:N3	23:BB:2212:A:N7	2.62	0.46
1:AA:499:A:H4'	1:AA:500:G:H5'	1.96	0.46
23:DB:1507:C:C3'	23:DB:1508:A:H4'	2.46	0.46
23:DB:1196:C:H2'	23:DB:1197:G:H8	1.77	0.46
25:BC:16:VAL:N	25:BC:203:VAL:HG12	2.29	0.46
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.15	0.46
9:CJ:77:VAL:HG12	9:CJ:78:GLU:HG3	1.97	0.46
1:AA:435:A:N3	1:AA:435:A:H2'	2.29	0.46
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.50	0.46
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.38	0.46
10:CK:30:ILE:HG13	10:CK:30:ILE:O	2.15	0.46
23:BB:225:C:O2'	23:BB:226:A:H5'	2.14	0.46
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.16	0.46
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.50	0.46
23:DB:549:G:H3'	41:DJ:2:LYS:HE3	1.97	0.46
1:CA:928:G:H2'	1:CA:929:G:C8	2.50	0.46
1:AA:1409:C:H3'	1:AA:1410:A:H8	1.80	0.46
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.30	0.46
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.44	0.46
1:AA:643:C:H2'	1:AA:644:U:C6	2.50	0.46
23:BB:1212:G:HO2'	23:BB:1213:A:P	2.38	0.46
1:AA:811:C:H4'	1:AA:900:A:N6	2.30	0.46
1:AA:113:G:O4'	1:AA:354:G:H4'	2.15	0.46
43:BO:112:GLU:HG2	43:BO:112:GLU:O	2.14	0.46
1:CA:712:A:O2'	1:CA:713:G:H5'	2.15	0.46
23:BB:907:G:C2'	23:BB:908:C:H5'	2.44	0.46
38:BM:55:ARG:HG3	38:BM:55:ARG:HH21	1.81	0.46
26:BD:202:ILE:HG22	26:BD:202:ILE:O	2.15	0.46
27:BK:88:ASN:ND2	27:BK:89:ASN:N	2.64	0.46
23:BB:690:G:H2'	23:BB:691:C:O4'	2.15	0.46
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.16	0.46
23:DB:2233:U:H2'	23:DB:2234:G:C8	2.50	0.46
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.51	0.46
20:CB:212:TYR:O	20:CB:216:VAL:HG22	2.15	0.46
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.20	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:34:THR:O	47:BF:89:THR:HA	2.15	0.46
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.88	0.46
49:DR:6:GLN:HE21	49:DR:7:SER:N	2.13	0.46
44:BQ:85:ALA:O	44:BQ:86:SER:C	2.54	0.46
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.80	0.46
1:AA:1422:G:H5'	27:BK:48:PRO:HB3	1.98	0.46
23:DB:348:A:H2'	23:DB:349:U:O4'	2.16	0.46
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.51	0.46
23:BB:336:C:O2'	23:BB:337:C:H5'	2.15	0.46
42:BN:63:ARG:O	42:BN:66:ALA:HB3	2.16	0.46
5:AF:38:ARG:NH2	5:AF:63:ASN:HD21	2.13	0.46
47:DF:119:LYS:HA	47:DF:121:PHE:CZ	2.50	0.46
47:DF:121:PHE:HA	47:DF:127:TYR:HA	1.98	0.46
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.15	0.46
51:DZ:53:ALA:O	51:DZ:55:GLY:N	2.44	0.46
21:AU:10:PRO:CG	2:CC:71:ARG:HD3	2.46	0.46
5:CF:46:GLN:HG3	5:CF:47:LEU:N	2.30	0.46
5:CF:70:VAL:HG23	5:CF:71:ILE:N	2.31	0.46
1:CA:1270:G:H4'	1:CA:1313:U:O2'	2.15	0.46
23:BB:2688:G:H1'	23:BB:2721:A:N6	2.31	0.46
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.30	0.46
1:CA:865:A:H2	1:CA:918:A:H4'	1.80	0.46
40:DH:131:SER:HA	40:DH:140:ALA:O	2.16	0.46
38:BM:101:VAL:HG13	38:BM:101:VAL:O	2.16	0.46
38:DM:28:PHE:HB3	38:DM:64:TRP:CE2	2.49	0.46
47:BF:57:ALA:HB2	47:BF:64:PRO:HD3	1.98	0.46
1:AA:321:A:H5''	1:AA:328:C:N4	2.31	0.46
49:BR:97:LYS:O	49:BR:98:ILE:HB	2.16	0.46
28:DP:61:ARG:NH1	28:DP:100:ARG:HA	2.31	0.46
23:DB:2598:A:H5''	25:DC:233:GLY:O	2.16	0.46
11:CL:34:THR:HG23	11:CL:55:ARG:HB2	1.97	0.46
1:CA:843:U:OP2	1:CA:843:U:H4'	2.15	0.46
8:CI:118:ARG:HB3	8:CI:122:ARG:HG2	1.97	0.46
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.78	0.46
43:BO:71:ALA:CB	43:BO:102:ARG:HB3	2.45	0.46
35:DV:64:VAL:HG13	35:DV:68:LYS:O	2.15	0.46
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.16	0.46
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.16	0.46
23:BB:2793:C:H2'	23:BB:2794:C:C6	2.51	0.46
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.51	0.46
23:DB:308:G:H2'	23:DB:309:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:49:ALA:O	19:CT:52:GLU:HG2	2.15	0.46
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.16	0.46
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.30	0.46
23:DB:155:A:H2'	23:DB:156:A:H8	1.79	0.46
6:AG:14:ASP:H	6:AG:19:SER:H	1.63	0.46
14:CO:26:GLU:HA	14:CO:81:LEU:HD11	1.97	0.46
15:AP:23:ASP:CG	15:AP:25:ARG:HE	2.19	0.46
27:BK:61:VAL:HG13	27:BK:87:LEU:HD21	1.98	0.46
16:CQ:30:HIS:HD2	16:CQ:37:ILE:HD11	1.81	0.46
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.44	0.46
1:CA:605:U:H2'	1:CA:606:G:C8	2.48	0.46
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.55	0.46
26:BD:4:LEU:HD21	26:BD:100:LEU:HB3	1.97	0.46
1:CA:640:A:O2'	7:CH:107:LYS:HE3	2.14	0.46
22:BA:13:G:H2'	22:BA:14:U:H5''	1.97	0.46
1:AA:834:U:H2'	1:AA:835:U:H6	1.81	0.46
1:AA:83:C:H1'	1:AA:84:U:C6	2.50	0.46
47:BF:37:MET:SD	47:BF:56:LEU:HD23	2.55	0.46
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.16	0.46
1:AA:173:U:H6	1:AA:198:G:HO2'	1.64	0.46
23:BB:3:U:H2'	23:BB:4:U:H6	1.81	0.46
23:DB:129:C:H2'	23:DB:130:C:C6	2.50	0.46
1:CA:997:U:H2'	1:CA:998:C:C6	2.50	0.46
23:BB:1263:U:O2'	31:B0:7:PRO:HD2	2.15	0.46
47:DF:8:LYS:HD3	47:DF:9:ASP:N	2.30	0.46
23:BB:189:G:H2'	23:BB:205:G:N2	2.31	0.46
23:DB:2218:G:O2'	23:DB:2219:U:H5'	2.16	0.46
23:BB:649:G:H2'	23:BB:650:C:C6	2.50	0.46
22:BA:3:C:H2'	22:BA:4:C:O4'	2.16	0.46
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.98	0.46
23:BB:1559:U:H3'	23:BB:1560:G:H5'	1.97	0.46
23:DB:1649:G:O2'	23:DB:1650:A:H5'	2.16	0.46
3:CD:172:VAL:HG23	3:CD:178:GLU:O	2.16	0.46
23:BB:2323:G:C2'	23:BB:2324:U:H5'	2.45	0.46
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.16	0.46
10:CK:115:ILE:HD12	10:CK:115:ILE:O	2.16	0.46
24:DI:2:LYS:N	24:DI:2:LYS:HD2	2.31	0.46
23:DB:2272:U:H5''	23:DB:2273:A:OP1	2.16	0.46
23:DB:922:C:O2'	52:DW:25:PHE:HZ	1.99	0.46
52:BW:23:LYS:HD2	52:BW:24:ARG:HB3	1.98	0.46
40:BH:116:ARG:NH1	40:BH:131:SER:HB2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:66:ASN:HD22	40:BH:67:ALA:H	1.63	0.46
40:BH:82:SER:HB3	40:BH:92:GLY:O	2.16	0.46
21:AU:40:PRO:O	21:AU:42:THR:N	2.49	0.46
39:BX:28:LEU:HD11	39:BX:42:LEU:HD23	1.97	0.46
47:BF:116:LEU:HD12	47:BF:117:SER:N	2.30	0.46
48:DG:29:ASN:ND2	48:DG:77:GLY:O	2.48	0.46
27:DK:35:VAL:CG2	27:DK:36:GLY:H	2.12	0.46
48:BG:28:LYS:O	48:BG:30:GLY:N	2.49	0.46
40:DH:3:VAL:HB	40:DH:37:VAL:O	2.15	0.46
23:DB:1813:G:H1'	25:DC:49:THR:OG1	2.16	0.46
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.98	0.46
50:BT:2:ILE:O	50:BT:3:ARG:HD3	2.16	0.46
25:DC:147:PRO:HD3	25:DC:184:GLU:HB2	1.97	0.46
50:BT:44:LYS:HG3	50:BT:55:VAL:HG11	1.97	0.46
27:DK:72:PRO:O	27:DK:74:GLY:N	2.48	0.46
23:DB:1177:G:H2'	23:DB:1178:C:H6	1.78	0.46
23:DB:1060:U:OP2	24:DI:74:PRO:HA	2.15	0.46
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.46	0.46
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.98	0.46
45:DS:29:VAL:O	45:DS:33:LEU:HB2	2.16	0.46
45:BS:66:ILE:HD13	45:BS:66:ILE:N	2.24	0.46
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.31	0.46
48:BG:83:THR:HA	48:BG:84:LYS:HZ3	1.77	0.46
49:BR:2:TYR:CB	49:BR:42:ALA:HB2	2.38	0.46
20:CB:104:LYS:NZ	20:CB:104:LYS:HB2	2.31	0.46
5:CF:29:ILE:HG21	5:CF:64:VAL:CG1	2.45	0.46
51:DZ:59:ILE:HG23	51:DZ:67:VAL:HG21	1.98	0.46
23:DB:358:U:O5'	23:DB:358:U:H6	1.98	0.46
23:DB:360:U:H2'	23:DB:361:G:N9	2.31	0.46
6:AG:78:ARG:HA	6:AG:83:THR:HA	1.97	0.46
23:BB:99:U:O4'	23:BB:99:U:O2	2.33	0.46
46:DU:53:GLN:N	46:DU:54:PRO:CD	2.78	0.46
23:DB:289:G:H2'	23:DB:290:U:H6	1.77	0.46
38:DM:108:VAL:HG13	38:DM:112:LEU:HB3	1.97	0.46
43:BO:31:THR:HG23	43:BO:34:HIS:O	2.16	0.46
47:DF:47:LYS:HA	47:DF:50:ASP:OD1	2.15	0.46
40:DH:127:GLU:H	40:DH:127:GLU:CD	2.19	0.46
25:DC:248:GLY:C	25:DC:249:VAL:HG22	2.36	0.46
25:DC:255:LYS:C	25:DC:256:THR:HG23	2.35	0.46
23:BB:273:G:O2'	23:BB:274:C:H5'	2.15	0.46
26:BD:121:THR:C	26:BD:123:LYS:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:847:G:H2'	1:AA:848:C:C6	2.51	0.46
17:CR:38:ILE:CG2	17:CR:58:ILE:HG21	2.45	0.46
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.50	0.46
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.16	0.46
35:BV:65:VAL:C	35:BV:67:GLY:H	2.18	0.46
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.16	0.46
1:CA:491:G:O2'	1:CA:492:C:H5'	2.15	0.46
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.49	0.46
3:CD:22:SER:N	3:CD:109:THR:HG22	2.29	0.46
1:AA:883:C:O2'	1:AA:884:U:H5'	2.15	0.46
23:DB:904:G:H2'	23:DB:905:A:H8	1.81	0.46
8:AI:9:GLY:CA	8:AI:80:HIS:HB3	2.46	0.46
23:BB:304:U:O2'	23:BB:305:C:H5'	2.15	0.46
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	1.96	0.46
23:BB:2309:A:H2'	23:BB:2310:C:C6	2.51	0.46
1:CA:20:U:O2'	1:CA:21:G:H5'	2.16	0.46
1:AA:564:C:H1'	16:AQ:32:ILE:O	2.15	0.46
23:BB:1946:U:C2	23:BB:1947:C:C5	3.04	0.46
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.79	0.46
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.15	0.46
23:BB:1434:A:H62	23:BB:1558:C:H42	1.64	0.46
1:AA:1460:C:H2'	1:AA:1461:G:C8	2.51	0.46
22:BA:55:U:H2'	22:BA:56:G:C8	2.50	0.46
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.69	0.46
23:DB:12:U:O2	23:DB:2626:C:H4'	2.15	0.46
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.15	0.46
23:DB:1557:C:H3'	23:DB:1558:C:C5'	2.46	0.46
26:BD:171:THR:OG1	26:BD:172:VAL:N	2.48	0.46
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.16	0.46
2:CC:171:ARG:HB2	2:CC:171:ARG:HH11	1.79	0.46
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.16	0.46
12:AM:77:LYS:HG2	12:AM:81:ASP:OD1	2.16	0.46
23:DB:2098:U:H2'	23:DB:2099:U:O4'	2.16	0.46
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.16	0.46
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.50	0.46
23:DB:1559:U:H3'	23:DB:1560:G:H5'	1.98	0.46
23:BB:757:G:H2'	23:BB:758:C:H5'	1.96	0.46
23:DB:205:G:HO2'	23:DB:206:U:P	2.38	0.46
23:BB:572:A:H5''	49:BR:80:ARG:NH2	2.31	0.46
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.16	0.46
23:DB:2249:U:H4'	23:DB:2275:C:C5	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:78:LEU:O	38:DM:80:VAL:HG12	2.15	0.46
23:DB:1607:C:N4	23:DB:1622:G:OP2	2.48	0.46
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.97	0.46
23:BB:1930:G:N2	23:BB:1968:G:H2'	2.31	0.46
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.15	0.46
23:BB:679:C:H2'	23:BB:680:C:H6	1.81	0.46
23:DB:378:C:O2'	23:DB:379:G:H5'	2.16	0.46
1:CA:1045:C:H2'	1:CA:1046:A:O4'	2.16	0.46
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.14	0.46
23:BB:2362:C:OP1	34:B3:39:ARG:NE	2.45	0.46
52:DW:19:ARG:HD3	52:DW:36:ILE:HD11	1.98	0.46
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.69	0.46
23:BB:917:A:C2	23:BB:918:A:H1'	2.51	0.46
52:BW:36:ILE:HB	52:BW:39:GLN:NE2	2.30	0.46
21:CU:34:ARG:HD3	21:CU:39:LYS:HZ3	1.79	0.46
40:BH:84:ALA:HA	40:BH:90:LEU:CD1	2.46	0.46
10:CK:106:ILE:HD11	10:CK:109:ILE:HD11	1.98	0.46
3:CD:190:LEU:O	3:CD:190:LEU:HD13	2.14	0.46
23:DB:558:U:O3'	41:DJ:111:LYS:HE2	2.16	0.46
49:DR:40:MET:HG2	49:DR:48:LYS:HA	1.98	0.46
48:BG:24:THR:CG2	48:BG:34:ARG:HB3	2.45	0.46
40:BH:18:GLN:NE2	40:BH:39:ALA:HB1	2.26	0.46
22:DA:98:G:H1	35:DV:14:LYS:CB	2.18	0.46
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.16	0.46
47:DF:131:VAL:C	47:DF:133:GLU:H	2.19	0.46
47:DF:131:VAL:O	47:DF:132:ARG:HB2	2.16	0.46
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.31	0.46
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.50	0.46
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.38	0.46
51:DZ:53:ALA:O	51:DZ:54:LYS:HB3	2.15	0.46
13:CN:26:LEU:HD12	13:CN:44:VAL:HG13	1.97	0.46
23:DB:360:U:H2'	23:DB:361:G:C1'	2.46	0.46
2:CC:190:THR:CG2	2:CC:191:THR:H	2.23	0.46
2:CC:190:THR:CG2	2:CC:191:THR:N	2.79	0.46
4:AE:81:GLN:CD	4:AE:149:PRO:HD3	2.36	0.46
43:BO:18:LEU:HD23	43:BO:25:ARG:CD	2.45	0.46
13:AN:30:ILE:HG21	13:AN:44:VAL:CG2	2.40	0.46
33:D1:3:GLY:O	33:D1:5:ARG:N	2.49	0.46
23:DB:625:G:H2'	23:DB:626:A:C8	2.51	0.46
6:CG:80:GLY:C	6:CG:82:SER:H	2.19	0.46
1:AA:769:G:O2'	1:AA:770:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:370:C:H2'	1:CA:371:A:C8	2.50	0.46
1:AA:465:A:C2'	1:AA:466:A:H3'	2.46	0.46
26:DD:118:PHE:HZ	26:DD:123:LYS:NZ	2.14	0.46
49:DR:15:SER:H	49:DR:18:GLN:CG	2.28	0.46
12:CM:84:CYS:HB3	18:CS:73:PHE:CE2	2.51	0.46
1:CA:451:A:H4'	1:CA:452:A:O4'	2.16	0.46
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.16	0.46
41:DJ:74:TYR:HB2	41:DJ:87:ALA:O	2.15	0.46
23:BB:246:C:O2'	23:BB:385:C:H4'	2.15	0.46
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.15	0.46
32:D4:36:ARG:CG	32:D4:37:GLN:H	2.28	0.46
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.16	0.46
29:BE:106:LYS:HE3	29:BE:200:LEU:HB3	1.97	0.46
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.15	0.46
22:DA:105:G:O2'	22:DA:106:G:H5'	2.16	0.46
3:AD:22:SER:H	3:AD:109:THR:CG2	2.28	0.46
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.16	0.46
35:BV:51:GLN:NE2	35:BV:79:ARG:HH22	2.13	0.46
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.96	0.46
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.46	0.46
20:AB:122:ASP:HB3	20:AB:123:GLY:H	1.61	0.46
27:BK:87:LEU:HB2	27:BK:93:GLN:O	2.16	0.46
1:AA:1036:A:H2'	1:AA:1037:C:O4'	2.16	0.46
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.81	0.46
22:DA:89:U:O2	23:DB:958:U:H2'	2.16	0.46
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.80	0.46
23:DB:2602:A:H4'	23:DB:2603:G:C5'	2.45	0.46
48:BG:106:LEU:N	48:BG:106:LEU:HD23	2.31	0.46
11:CL:107:LYS:C	11:CL:109:ARG:H	2.19	0.46
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.98	0.46
7:AH:17:GLN:NE2	7:AH:62:LEU:HB3	2.29	0.46
7:CH:17:GLN:NE2	7:CH:62:LEU:HB3	2.31	0.46
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.30	0.46
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.50	0.46
45:DS:88:ARG:HG3	45:DS:88:ARG:HH21	1.80	0.46
23:BB:2540:C:H2'	23:BB:2541:A:C8	2.51	0.46
22:BA:16:G:O2'	22:BA:17:C:H5'	2.15	0.46
22:DA:16:G:O2'	22:DA:17:C:H5'	2.15	0.46
1:AA:1111:A:O2'	1:AA:1112:C:H5'	2.15	0.46
23:BB:378:C:O2'	23:BB:379:G:H5'	2.16	0.46
23:DB:104:A:H2'	23:DB:105:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:125:LEU:H	37:DL:143:GLU:CG	2.29	0.46
20:AB:19:THR:O	20:AB:37:VAL:HA	2.15	0.46
41:DJ:38:GLY:O	41:DJ:43:GLU:HB2	2.16	0.46
41:DJ:42:ALA:O	41:DJ:44:TYR:N	2.49	0.46
44:BQ:108:LEU:CD2	49:BR:48:LYS:HB2	2.45	0.46
44:BQ:60:TRP:HB3	44:BQ:92:LYS:O	2.16	0.46
49:BR:6:GLN:HE21	49:BR:6:GLN:C	2.18	0.46
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.30	0.46
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.15	0.46
23:BB:134:G:H2'	23:BB:135:U:O4'	2.16	0.46
35:BV:63:ILE:O	35:BV:70:ILE:HG12	2.16	0.46
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG13	2.30	0.46
50:DT:7:LEU:HD22	50:DT:9:LYS:HE3	1.98	0.46
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.55	0.46
47:DF:89:THR:O	47:DF:91:ARG:CZ	2.64	0.46
42:BN:101:GLY:O	42:BN:102:PHE:HB2	2.16	0.46
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.30	0.46
52:DW:37:VAL:HG22	52:DW:55:ASP:O	2.16	0.46
40:BH:5:LEU:HD21	40:BH:12:LEU:O	2.16	0.46
26:DD:90:PHE:N	26:DD:94:GLN:OE1	2.47	0.46
43:DO:93:ASP:C	43:DO:95:SER:H	2.18	0.46
23:DB:358:U:H2'	23:DB:359:G:C8	2.50	0.46
6:AG:80:GLY:C	6:AG:82:SER:H	2.19	0.46
42:BN:28:LEU:O	42:BN:32:GLU:HA	2.16	0.46
30:DY:16:LEU:HD23	30:DY:19:HIS:CD2	2.51	0.46
30:DY:18:LYS:O	30:DY:22:THR:HG23	2.16	0.46
20:CB:59:ILE:HD12	20:CB:60:ALA:N	2.31	0.46
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.51	0.46
27:DK:119:ALA:HB3	27:DK:120:PRO:CD	2.46	0.46
1:CA:238:A:C3'	1:CA:239:U:H5''	2.46	0.46
22:BA:28:C:H5'	22:BA:29:A:OP2	2.15	0.46
4:AE:37:VAL:HG12	4:AE:47:PHE:CB	2.46	0.46
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.97	0.46
29:BE:47:LYS:HA	29:BE:51:GLU:HG3	1.96	0.46
23:BB:2680:U:H5'	26:BD:194:PRO:HA	1.97	0.46
1:CA:251:G:H4'	1:CA:252:U:H5'	1.98	0.46
16:CQ:7:LEU:O	16:CQ:60:ILE:HD13	2.15	0.46
1:CA:719:C:O2'	17:CR:37:LYS:HB2	2.15	0.46
43:BO:30:ARG:CG	43:BO:102:ARG:HH11	2.28	0.46
2:CC:13:ILE:C	2:CC:15:LYS:H	2.19	0.46
23:DB:826:U:H2'	23:DB:828:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:275:C:O2	23:DB:276:U:H1'	2.16	0.46
23:DB:156:A:O2'	23:DB:157:C:H5'	2.16	0.46
14:AO:82:ILE:O	14:AO:86:GLY:N	2.49	0.46
1:CA:23:C:O2'	1:CA:24:U:H5'	2.16	0.46
25:BC:229:HIS:HE2	25:BC:246:PRO:HG3	1.80	0.46
23:DB:673:C:H2'	23:DB:674:G:H5'	1.98	0.46
23:DB:337:C:H2'	23:DB:338:G:O4'	2.16	0.46
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.16	0.46
23:DB:1958:C:O2'	23:DB:1959:G:H5'	2.14	0.46
23:BB:947:A:H2'	23:BB:948:C:H6	1.79	0.46
23:DB:1190:G:OP1	37:DL:33:ARG:N	2.48	0.46
37:DL:19:LEU:O	37:DL:21:ARG:HG2	2.15	0.46
23:BB:950:G:H2'	23:BB:951:C:H6	1.80	0.46
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.81	0.46
1:AA:333:U:H2'	1:AA:334:C:H6	1.80	0.46
23:BB:598:U:H2'	23:BB:599:A:C8	2.51	0.46
40:BH:124:THR:HG22	40:BH:125:THR:N	2.31	0.46
51:DZ:18:ARG:HA	51:DZ:23:ASN:O	2.15	0.46
28:DP:36:LYS:C	28:DP:37:LYS:HD3	2.36	0.46
23:DB:500:G:N2	23:DB:502:A:H3'	2.30	0.46
1:AA:972:C:P	9:AJ:59:LYS:HD3	2.56	0.46
1:AA:1110:A:H3'	56:AA:2300:HOH:O	2.16	0.46
23:DB:467:G:O2'	23:DB:468:G:H5'	2.16	0.46
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.51	0.46
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.30	0.46
45:BS:70:LYS:HD3	45:BS:110:ARG:OXT	2.15	0.46
25:DC:161:VAL:HG12	25:DC:162:GLN:N	2.31	0.46
1:AA:403:C:O2'	1:AA:404:G:H5'	2.16	0.46
38:DM:65:ILE:HD12	38:DM:65:ILE:N	2.30	0.46
29:BE:30:GLN:O	29:BE:30:GLN:HG2	2.15	0.46
23:DB:1099:G:O4'	24:DI:3:LYS:O	2.33	0.46
1:AA:1149:C:OP2	8:AI:10:ARG:NH1	2.49	0.46
40:BH:111:ALA:HB3	40:BH:114:GLU:CG	2.46	0.46
40:BH:67:ALA:O	40:BH:71:LYS:HB2	2.15	0.46
26:BD:24:VAL:HA	26:BD:191:GLY:N	2.31	0.46
48:DG:18:ILE:HA	48:DG:22:VAL:O	2.16	0.46
40:BH:3:VAL:HB	40:BH:37:VAL:O	2.16	0.46
47:DF:32:LYS:HZ2	47:DF:156:THR:HG21	1.81	0.46
12:CM:33:LEU:CD2	12:CM:38:ILE:HB	2.46	0.46
23:DB:2654:A:N1	23:DB:2665:A:H5''	2.30	0.46
1:CA:1251:A:O2'	1:CA:1252:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2306:C:H3'	23:BB:2307:G:C5'	2.37	0.46
40:DH:21:VAL:HG22	40:DH:22:LYS:N	2.31	0.46
28:DP:51:ASN:O	28:DP:52:ARG:HD3	2.16	0.46
5:CF:47:LEU:HD21	5:CF:57:ALA:CB	2.45	0.46
27:BK:19:VAL:HB	27:BK:41:ILE:HD11	1.98	0.46
51:DZ:2:SER:O	51:DZ:4:VAL:HG22	2.16	0.46
23:DB:1203:U:C4'	37:DL:3:LEU:HD12	2.44	0.46
2:CC:180:ASP:OD1	2:CC:203:LYS:HB2	2.16	0.46
22:BA:6:G:H2'	22:BA:7:G:C8	2.50	0.46
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.80	0.46
4:CE:88:HIS:CE1	4:CE:137:ARG:HH11	2.34	0.46
1:CA:1143:G:O2'	1:CA:1144:G:H5'	2.15	0.46
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HB3	1.97	0.46
42:DN:28:LEU:O	42:DN:32:GLU:HA	2.15	0.46
49:DR:15:SER:OG	49:DR:18:GLN:HG2	2.16	0.46
1:AA:411:A:N9	1:AA:413:G:H1'	2.31	0.46
1:AA:1348:U:O3'	8:AI:121:ARG:HG3	2.15	0.46
1:AA:251:G:H4'	1:AA:252:U:H5'	1.98	0.46
23:DB:454:A:H4'	23:DB:455:C:OP2	2.16	0.46
33:B1:51:ALA:O	33:B1:52:LYS:C	2.54	0.46
41:DJ:97:PRO:HD2	41:DJ:98:GLU:OE2	2.16	0.46
23:DB:1047:G:H1'	23:DB:1110:G:C2	2.51	0.46
23:DB:370:G:HO2'	23:DB:423:A:H3'	1.78	0.46
23:BB:245:G:H2'	23:BB:246:C:H6	1.81	0.46
1:CA:847:G:H2'	1:CA:848:C:H6	1.81	0.46
1:AA:865:A:C2	1:AA:918:A:H4'	2.51	0.46
23:BB:416:U:H2'	23:BB:417:C:H6	1.78	0.46
23:DB:1820:U:H3	25:DC:197:ALA:HA	1.81	0.46
43:BO:53:THR:O	43:BO:59:ALA:HB2	2.16	0.46
23:DB:2103:C:H5''	23:DB:2104:C:OP2	2.16	0.46
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.30	0.46
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.44	0.46
23:DB:1827:U:H2'	23:DB:1828:G:H5'	1.97	0.46
23:BB:1729:U:H5''	23:BB:1730:C:H4'	1.96	0.46
6:AG:21:LEU:N	6:AG:21:LEU:HD23	2.31	0.46
38:BM:105:MET:HB2	38:BM:117:PHE:CZ	2.50	0.46
22:DA:116:G:H4'	43:DO:54:VAL:CG2	2.46	0.46
41:DJ:23:LYS:HZ1	41:DJ:142:ILE:HG12	1.81	0.46
6:CG:14:ASP:CB	6:CG:19:SER:H	2.29	0.46
1:CA:202:G:H1'	1:CA:468:A:H8	1.81	0.46
43:DO:58:ILE:O	43:DO:62:LEU:HD23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2880:C:H1'	42:BN:93:GLY:H	1.81	0.46
23:DB:2446:G:H2'	23:DB:2447:G:H5''	1.97	0.46
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.31	0.46
23:DB:2637:U:OP1	26:DD:83:ARG:HD3	2.15	0.46
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.31	0.46
5:CF:18:VAL:HG21	5:CF:58:HIS:CD2	2.51	0.46
43:BO:29:HIS:HB3	43:BO:36:TYR:HB2	1.98	0.46
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.81	0.46
23:BB:493:G:H2'	23:BB:494:G:O4'	2.15	0.46
25:DC:270:ARG:HB3	25:DC:270:ARG:NH1	2.31	0.46
23:BB:775:G:H4'	23:BB:776:G:H5'	1.97	0.46
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.81	0.46
1:CA:1159:U:O4'	1:CA:1182:G:N2	2.49	0.46
8:AI:42:THR:O	8:AI:45:MET:HG2	2.15	0.46
23:BB:1210:G:OP1	23:BB:1212:G:H5'	2.16	0.46
1:CA:648:A:O2'	1:CA:649:A:H5'	2.16	0.46
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.51	0.46
23:BB:1560:G:H2'	23:BB:1561:C:H6	1.79	0.46
23:DB:72:U:O2'	23:DB:73:A:H5'	2.16	0.46
23:BB:218:A:O2'	23:BB:219:A:H5'	2.16	0.46
1:AA:822:U:H2'	1:AA:823:C:H6	1.81	0.46
6:AG:91:ARG:CB	6:AG:92:PRO:HD2	2.46	0.46
23:DB:2864:G:H2'	23:DB:2865:U:C6	2.51	0.46
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.16	0.46
1:CA:1190:G:OP1	2:CC:3:LYS:HA	2.16	0.46
45:BS:10:ALA:HB3	45:BS:101:SER:HB2	1.98	0.46
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.97	0.46
23:BB:2222:C:O2'	23:BB:2223:G:H5'	2.16	0.46
23:DB:178:G:O2'	23:DB:179:C:H5'	2.16	0.46
1:CA:668:G:O2'	1:CA:669:G:H5'	2.16	0.46
28:BP:33:GLU:OE1	28:BP:33:GLU:HA	2.16	0.46
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.15	0.46
31:D0:56:LYS:O	31:D0:56:LYS:HD3	2.15	0.46
23:DB:1099:G:N7	24:DI:3:LYS:HD3	2.30	0.46
23:BB:2332:C:H1'	23:BB:2336:A:N7	2.31	0.46
20:AB:47:PRO:O	20:AB:51:GLU:HB2	2.16	0.46
46:DU:86:PHE:HB2	46:DU:92:VAL:HB	1.98	0.46
8:AI:20:ILE:HG23	8:AI:60:LEU:HD12	1.97	0.46
48:DG:8:VAL:HG21	48:DG:49:LEU:CB	2.38	0.46
49:DR:66:HIS:CG	49:DR:94:THR:HG22	2.51	0.46
49:BR:47:VAL:O	49:BR:49:ILE:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:4:LYS:CE	44:DQ:7:VAL:HG22	2.33	0.46
25:DC:166:ARG:HB2	25:DC:166:ARG:NH2	2.31	0.46
50:BT:14:PRO:HA	50:BT:32:LEU:HB3	1.97	0.46
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.97	0.46
47:DF:127:TYR:HB3	47:DF:155:ILE:HD13	1.98	0.46
23:BB:674:G:H4'	29:BE:69:ARG:HB3	1.98	0.46
23:DB:1439:A:N7	23:DB:1440:U:C6	2.85	0.46
26:BD:90:PHE:HD2	26:BD:94:GLN:HG3	1.80	0.46
26:BD:90:PHE:N	26:BD:94:GLN:OE1	2.48	0.46
1:CA:1397:C:H4'	1:CA:1398:A:OP2	2.15	0.46
1:CA:921:U:H2'	1:CA:922:G:C8	2.50	0.46
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.30	0.46
13:AN:26:LEU:HA	13:AN:30:ILE:HD13	1.98	0.46
38:DM:101:VAL:HG13	38:DM:101:VAL:O	2.15	0.46
33:D1:7:LYS:HD3	33:D1:23:THR:HG22	1.97	0.46
2:CC:140:ALA:CB	2:CC:148:ILE:HD12	2.44	0.46
2:AC:48:LYS:N	2:AC:48:LYS:HD3	2.26	0.46
23:DB:819:A:OP2	23:DB:1187:G:N2	2.47	0.46
34:B3:49:VAL:O	34:B3:51:LYS:N	2.49	0.46
1:AA:586:C:C2'	1:AA:587:G:H5'	2.46	0.46
29:BE:106:LYS:CE	29:BE:200:LEU:HB3	2.46	0.46
1:AA:719:C:H2'	17:AR:38:ILE:HD13	1.97	0.46
43:DO:30:ARG:HG2	43:DO:102:ARG:NH1	2.31	0.46
3:CD:22:SER:H	3:CD:109:THR:CG2	2.29	0.46
1:AA:668:G:O2'	1:AA:669:G:H5'	2.15	0.46
1:AA:620:C:H2'	1:AA:621:A:C8	2.51	0.46
23:DB:840:C:H2'	23:DB:841:G:C8	2.50	0.46
23:DB:2299:U:H2'	23:DB:2300:C:C6	2.51	0.46
23:DB:935:C:H2'	23:DB:936:A:H8	1.81	0.46
11:CL:3:VAL:CG1	16:CQ:33:TYR:HB3	2.46	0.46
41:DJ:23:LYS:HZ2	41:DJ:142:ILE:HG23	1.81	0.46
40:BH:122:LEU:HD12	40:BH:122:LEU:N	2.31	0.46
45:BS:95:ARG:O	45:BS:96:ILE:HG22	2.15	0.46
23:BB:699:A:H4'	23:BB:1634:A:N7	2.31	0.46
1:AA:1292:G:H2'	1:AA:1293:C:H6	1.81	0.46
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.32	0.46
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.51	0.46
1:CA:766:A:H61	1:CA:1511:G:H1'	1.80	0.46
40:DH:57:LYS:HG3	40:DH:58:LEU:N	2.31	0.46
17:AR:32:ILE:HG22	17:AR:33:THR:O	2.16	0.46
26:DD:46:ARG:HB3	26:DD:84:LEU:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:367:U:OP1	1:CA:395:C:H1'	2.16	0.46
23:DB:57:C:H2'	23:DB:58:G:C8	2.51	0.46
1:AA:711:G:O2'	1:AA:712:A:H5'	2.16	0.46
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.16	0.46
1:CA:711:G:O2'	1:CA:712:A:H5'	2.16	0.46
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.46	0.46
1:AA:1190:G:OP1	2:AC:3:LYS:HA	2.16	0.46
1:AA:984:C:O2'	1:AA:985:C:H5'	2.16	0.46
6:AG:94:ARG:NE	6:AG:98:LEU:HD11	2.31	0.46
23:BB:2016:U:H2'	23:BB:2017:U:C6	2.51	0.46
23:BB:2155:U:H2'	23:BB:2156:G:O4'	2.16	0.46
23:DB:464:U:H2'	23:DB:465:G:O4'	2.16	0.46
23:BB:213:A:O2'	23:BB:214:G:H5'	2.15	0.46
23:DB:2266:A:N3	23:DB:2272:U:H5	2.14	0.45
21:CU:40:PRO:O	21:CU:42:THR:N	2.49	0.45
8:AI:24:ASN:CG	8:AI:25:GLY:N	2.69	0.45
47:BF:127:TYR:CB	47:BF:155:ILE:HD13	2.47	0.45
3:CD:169:TRP:C	3:CD:182:LYS:HB2	2.36	0.45
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.97	0.45
50:BT:38:ALA:HB3	50:BT:81:LYS:HD3	1.99	0.45
32:D4:35:GLN:HB2	32:D4:35:GLN:HE21	1.56	0.45
42:DN:61:ALA:C	42:DN:63:ARG:N	2.68	0.45
51:BZ:59:ILE:CG2	51:BZ:64:ILE:HG13	2.46	0.45
3:AD:18:LEU:HD22	3:AD:18:LEU:H	1.79	0.45
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.46	0.45
10:AK:17:ASP:HB3	10:AK:80:ASN:CG	2.37	0.45
13:AN:60:ARG:CZ	13:AN:62:ARG:CZ	2.95	0.45
23:DB:1551:A:C3'	23:DB:1552:A:H5''	2.46	0.45
22:BA:33:G:O2'	22:BA:34:A:H5'	2.15	0.45
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.81	0.45
50:DT:20:ALA:O	50:DT:24:MET:HB2	2.15	0.45
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.16	0.45
39:BX:9:LYS:O	39:BX:13:GLU:HG2	2.15	0.45
46:BU:9:GLU:HG3	46:BU:21:ARG:HD2	1.97	0.45
1:AA:203:G:H21	1:AA:205:A:H61	1.63	0.45
29:DE:160:ALA:C	29:DE:162:ARG:H	2.20	0.45
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.84	0.45
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.84	0.45
26:DD:68:PHE:HB3	26:DD:73:VAL:CG2	2.42	0.45
7:CH:77:VAL:HG12	7:CH:84:ILE:HD12	1.98	0.45
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:6:ILE:HD12	7:AH:35:ILE:HD12	1.98	0.45
1:AA:451:A:C5'	15:AP:70:ARG:HH22	2.28	0.45
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.33	0.45
11:AL:26:CYS:SG	11:AL:29:LYS:HE2	2.56	0.45
23:DB:845:A:N1	23:DB:847:U:H1'	2.31	0.45
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.80	0.45
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.15	0.45
1:AA:922:G:H2'	1:AA:923:A:H8	1.76	0.45
1:CA:154:U:H2'	1:CA:155:A:H8	1.81	0.45
43:BO:35:ILE:HG13	43:BO:71:ALA:HB1	1.98	0.45
37:DL:57:LEU:C	37:DL:59:ARG:H	2.18	0.45
1:AA:552:U:H2'	1:AA:553:A:H8	1.79	0.45
22:BA:89:U:O2	23:BB:958:U:H2'	2.16	0.45
1:CA:1201:A:H5''	1:CA:1201:A:C8	2.51	0.45
1:AA:1200:C:H3'	1:AA:1201:A:H5'	1.98	0.45
11:CL:98:ARG:HD2	11:CL:103:CYS:SG	2.56	0.45
23:DB:263:G:H2'	23:DB:264:C:C6	2.51	0.45
23:DB:2400:G:C2'	23:DB:2401:U:H5'	2.46	0.45
23:DB:2026:U:C2	23:DB:2027:G:C8	3.05	0.45
23:BB:2299:U:H2'	23:BB:2300:C:C6	2.51	0.45
23:BB:1744:A:H2'	23:BB:1745:A:C8	2.51	0.45
48:DG:106:LEU:N	48:DG:106:LEU:HD23	2.31	0.45
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.50	0.45
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.15	0.45
1:CA:1255:G:O2'	1:CA:1258:G:N3	2.42	0.45
11:AL:31:GLY:O	11:AL:78:VAL:HA	2.16	0.45
1:CA:766:A:H2'	1:CA:767:A:O4'	2.16	0.45
6:CG:39:GLU:HB3	6:CG:43:TYR:CE2	2.51	0.45
17:AR:45:GLY:O	17:AR:46:THR:C	2.54	0.45
23:BB:1478:G:O2'	23:BB:1479:G:H5'	2.16	0.45
6:CG:49:LEU:HD21	6:CG:120:ALA:O	2.16	0.45
23:DB:624:C:O2'	23:DB:657:U:H5''	2.16	0.45
26:DD:4:LEU:HD21	26:DD:100:LEU:CB	2.45	0.45
23:DB:1106:G:H2'	23:DB:1107:G:C8	2.50	0.45
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.49	0.45
25:BC:33:LEU:CD2	25:BC:62:ARG:HG3	2.45	0.45
38:DM:82:MET:O	38:DM:84:LYS:HG2	2.17	0.45
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	2.16	0.45
23:BB:2389:G:H5''	23:BB:2390:U:O4'	2.16	0.45
1:CA:426:U:H2'	1:CA:427:U:C6	2.51	0.45
23:DB:1743:G:O5'	23:DB:1743:G:H8	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1532:U:C2	1:AA:1534:A:H5''	2.51	0.45
1:CA:171:A:O2'	1:CA:172:A:H5'	2.16	0.45
23:BB:680:C:H2'	23:BB:681:G:C8	2.50	0.45
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.51	0.45
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.80	0.45
1:AA:49:U:O2'	1:AA:50:A:H2'	2.17	0.45
23:BB:2577:A:H5''	23:BB:2578:G:H5'	1.98	0.45
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.51	0.45
1:AA:1216:A:H5''	13:AN:4:SER:CB	2.46	0.45
1:AA:308:C:H2'	1:AA:309:A:H8	1.80	0.45
23:BB:8:C:O2'	23:BB:9:G:H5'	2.16	0.45
23:BB:2047:C:O2'	23:BB:2048:G:H5'	2.16	0.45
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.28	0.45
46:BU:43:LYS:C	46:BU:43:LYS:HD3	2.37	0.45
23:BB:1040:A:H2'	23:BB:1041:G:H8	1.80	0.45
1:CA:224:U:H2'	1:CA:225:C:C6	2.51	0.45
23:BB:93:G:H2'	23:BB:94:A:O4'	2.15	0.45
1:CA:791:G:C6	1:CA:792:A:N7	2.84	0.45
46:BU:84:PHE:O	46:BU:85:ARG:CB	2.61	0.45
47:BF:3:LEU:HD13	47:BF:3:LEU:O	2.16	0.45
47:BF:92:GLY:HA2	47:BF:95:MET:HE3	1.97	0.45
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.98	0.45
19:CT:85:LEU:HD23	19:CT:86:ALA:N	2.30	0.45
35:DV:51:GLN:HB2	35:DV:57:TYR:OH	2.17	0.45
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.31	0.45
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.35	0.45
23:BB:26:G:H1'	23:BB:514:A:H61	1.81	0.45
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.16	0.45
47:DF:110:ILE:HA	47:DF:111:ARG:NE	2.31	0.45
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.99	0.45
47:DF:62:GLN:HE21	47:DF:91:ARG:HH11	1.64	0.45
18:CS:62:THR:HG22	18:CS:63:ASP:N	2.30	0.45
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.39	0.45
11:AL:88:ASP:C	11:AL:89:LEU:HD22	2.36	0.45
23:DB:675:A:OP1	29:DE:60:TRP:CZ2	2.69	0.45
50:BT:20:ALA:O	50:BT:24:MET:HB2	2.16	0.45
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	2.07	0.45
23:DB:1081:U:C5'	24:DI:126:ARG:NH1	2.76	0.45
38:BM:63:ILE:N	38:BM:63:ILE:HD12	2.31	0.45
1:AA:781:A:H2'	1:AA:782:A:C5'	2.43	0.45
12:CM:12:LYS:HB3	12:CM:13:HIS:H	1.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.17	0.45
3:CD:29:THR:HG22	3:CD:30:LYS:N	2.31	0.45
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.31	0.45
21:CU:24:LYS:HB3	21:CU:24:LYS:NZ	2.32	0.45
23:BB:247:G:H4'	23:BB:386:G:C5	2.51	0.45
23:BB:1856:U:H2'	23:BB:1857:G:C5'	2.43	0.45
2:CC:58:ARG:HA	2:CC:62:SER:O	2.16	0.45
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.78	0.45
49:BR:78:ARG:HG3	49:BR:78:ARG:HH21	1.81	0.45
34:D3:7:ARG:HG3	34:D3:7:ARG:HH11	1.82	0.45
1:CA:679:C:H2'	1:CA:680:C:C6	2.51	0.45
1:AA:1173:U:H2'	1:AA:1174:G:H8	1.79	0.45
9:CJ:56:HIS:H	13:CN:80:ARG:HH22	1.63	0.45
23:BB:2774:C:OP1	26:BD:169:ARG:HG3	2.15	0.45
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.48	0.45
9:AJ:77:VAL:HG12	9:AJ:78:GLU:HG3	1.99	0.45
1:CA:206:C:H2'	1:CA:207:C:C6	2.51	0.45
1:CA:399:G:H2'	1:CA:400:C:C6	2.51	0.45
1:CA:201:G:H2'	1:CA:202:G:C8	2.51	0.45
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.16	0.45
23:DB:950:G:H2'	23:DB:951:C:H6	1.81	0.45
25:BC:202:ARG:HB2	25:BC:202:ARG:HH21	1.80	0.45
28:BP:62:LYS:HE3	28:BP:64:SER:HG	1.80	0.45
50:DT:61:LEU:HD12	50:DT:62:VAL:O	2.17	0.45
27:BK:53:LYS:H	27:BK:53:LYS:HD3	1.79	0.45
1:CA:1504:G:H4'	1:CA:1505:G:C4	2.51	0.45
41:DJ:114:LEU:O	41:DJ:118:MET:HE2	2.15	0.45
23:DB:1774:C:H2'	23:DB:1774:C:O2	2.16	0.45
1:CA:308:C:H2'	1:CA:309:A:C8	2.51	0.45
23:BB:122:G:O2'	23:BB:123:G:H5'	2.16	0.45
1:AA:150:U:H2'	1:AA:151:A:H8	1.82	0.45
23:BB:2218:G:O2'	23:BB:2219:U:H5'	2.15	0.45
1:CA:197:A:H4'	1:CA:198:G:O5'	2.14	0.45
23:BB:1482:G:H2'	23:BB:1483:G:H8	1.82	0.45
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.51	0.45
34:D3:28:LEU:HG	34:D3:28:LEU:O	2.16	0.45
31:B0:27:LEU:HD12	31:B0:27:LEU:H	1.81	0.45
6:AG:142:ARG:HH11	6:AG:142:ARG:HG3	1.81	0.45
50:BT:6:ARG:NH1	50:BT:6:ARG:HB3	2.31	0.45
47:BF:8:LYS:HD3	47:BF:9:ASP:N	2.31	0.45
26:DD:105:LYS:H	26:DD:106:LYS:HZ3	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:43:LYS:CD	52:BW:79:ILE:HD11	2.41	0.45
13:CN:2:LYS:HB3	13:CN:5:MET:HB2	1.99	0.45
20:CB:184:ALA:H	20:CB:195:VAL:HG11	1.80	0.45
20:CB:45:THR:CA	20:CB:48:MET:HG3	2.45	0.45
8:AI:56:MET:C	8:AI:58:GLU:N	2.69	0.45
21:AU:3:ILE:CG2	21:AU:19:LYS:HD2	2.47	0.45
25:BC:128:THR:CG2	25:BC:190:THR:HG22	2.45	0.45
48:DG:36:LEU:CD2	48:DG:36:LEU:H	2.28	0.45
48:DG:8:VAL:CG1	48:DG:49:LEU:H	2.13	0.45
23:DB:558:U:H5'	41:DJ:111:LYS:HD3	1.98	0.45
26:BD:60:VAL:HA	26:BD:64:GLU:OE2	2.15	0.45
23:BB:139:U:O2	23:BB:139:U:O4'	2.35	0.45
23:DB:351:C:H2'	23:DB:352:A:H8	1.81	0.45
3:AD:148:ALA:O	3:AD:154:VAL:HG21	2.16	0.45
25:BC:171:VAL:HG23	25:BC:185:ALA:HB2	1.97	0.45
50:BT:11:LEU:HD11	50:BT:46:ALA:CB	2.45	0.45
29:BE:119:ILE:HD11	29:BE:185:LYS:HZ1	1.81	0.45
32:D4:8:LYS:HG2	32:D4:9:LYS:HD3	1.99	0.45
23:DB:1161:C:H1'	49:DR:9:GLY:HA3	1.97	0.45
45:BS:29:VAL:O	45:BS:33:LEU:HB2	2.16	0.45
6:CG:134:VAL:CB	6:CG:137:ARG:HH21	2.29	0.45
20:CB:96:LEU:HB2	20:CB:99:MET:CE	2.46	0.45
10:CK:77:GLY:C	10:CK:79:LYS:HE3	2.36	0.45
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.97	0.45
6:AG:41:ILE:HG21	6:AG:115:MET:HG3	1.99	0.45
27:BK:43:ILE:CD1	27:BK:52:VAL:HB	2.46	0.45
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.17	0.45
13:CN:30:ILE:H	13:CN:30:ILE:CD1	2.28	0.45
23:BB:1338:G:O2'	23:BB:1393:A:N1	2.46	0.45
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.81	0.45
41:BJ:64:VAL:HG22	41:BJ:68:LYS:CD	2.45	0.45
2:CC:126:ARG:HH12	2:CC:190:THR:CG2	2.29	0.45
41:DJ:16:TYR:CD2	41:DJ:140:LEU:HD12	2.50	0.45
41:BJ:80:HIS:O	41:BJ:81:ILE:C	2.54	0.45
23:DB:139:U:C2	50:DT:1:MET:HB3	2.52	0.45
30:DY:16:LEU:CD2	30:DY:16:LEU:H	2.23	0.45
23:DB:851:C:O4'	30:DY:46:MET:HG3	2.17	0.45
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.98	0.45
40:DH:110:VAL:HG13	40:DH:110:VAL:O	2.17	0.45
48:DG:95:ALA:HA	48:DG:104:LEU:HD23	1.98	0.45
1:CA:483:C:H2'	1:CA:484:G:N7	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:2:LYS:CG	30:BY:3:THR:H	2.28	0.45
27:DK:75:SER:HB2	28:DP:73:PHE:HA	1.98	0.45
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.16	0.45
23:BB:665:U:O2'	23:BB:666:A:H5'	2.16	0.45
23:BB:2798:U:H4'	23:BB:2800:A:C2	2.52	0.45
38:DM:108:VAL:HG21	38:DM:112:LEU:HD12	1.97	0.45
23:DB:972:A:C3'	23:DB:973:A:H5''	2.42	0.45
16:AQ:7:LEU:O	16:AQ:60:ILE:HD13	2.16	0.45
33:B1:6:GLU:HB2	33:B1:52:LYS:CE	2.46	0.45
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.52	0.45
1:AA:1151:A:O4'	9:AJ:41:PRO:HB2	2.17	0.45
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.80	0.45
23:BB:64:A:H2'	23:BB:65:U:H6	1.81	0.45
23:BB:246:C:C2'	23:BB:247:G:H5'	2.46	0.45
1:CA:847:G:H2'	1:CA:848:C:C6	2.51	0.45
7:AH:113:ARG:HE	7:AH:113:ARG:C	2.19	0.45
23:BB:651:G:OP1	34:B3:18:LYS:HG3	2.16	0.45
23:DB:1693:U:O2'	25:DC:13:ARG:NH2	2.46	0.45
23:BB:717:C:C3'	23:BB:718:A:H5''	2.45	0.45
1:CA:499:A:H4'	1:CA:500:G:H5'	1.98	0.45
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.51	0.45
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.80	0.45
23:DB:2873:A:O4'	42:DN:6:SER:HB3	2.17	0.45
23:BB:1372:U:O2'	23:BB:1373:A:H5'	2.17	0.45
39:BX:29:ARG:NH1	50:BT:12:ARG:NE	2.65	0.45
8:CI:38:PHE:HE1	8:CI:78:ILE:HD12	1.81	0.45
15:CP:74:LEU:HA	15:CP:77:GLU:OE2	2.17	0.45
23:BB:826:U:H2'	23:BB:828:U:O4'	2.17	0.45
14:CO:71:LYS:HB2	14:CO:78:TYR:CG	2.52	0.45
11:CL:68:GLY:HA3	11:CL:106:VAL:HG22	1.98	0.45
5:CF:12:PRO:C	5:CF:14:GLN:H	2.20	0.45
45:DS:108:SER:OG	45:DS:109:ASP:N	2.49	0.45
1:CA:620:C:H2'	1:CA:621:A:C8	2.51	0.45
2:CC:10:ARG:CZ	2:CC:181:ILE:HD13	2.46	0.45
11:AL:107:LYS:C	11:AL:109:ARG:H	2.20	0.45
23:DB:1152:C:O2'	23:DB:1153:C:H5'	2.15	0.45
1:AA:202:G:H1'	1:AA:468:A:H8	1.81	0.45
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.16	0.45
26:BD:124:ARG:HA	26:BD:165:MET:HE3	1.97	0.45
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.81	0.45
1:AA:685:G:O2'	1:AA:686:U:H5'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:730:G:O2'	1:AA:766:A:H5'	2.15	0.45
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.51	0.45
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.64	0.45
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.52	0.45
1:CA:113:G:O4'	1:CA:354:G:H4'	2.16	0.45
1:CA:1095:U:H5''	1:CA:1109:C:O2	2.16	0.45
1:AA:426:U:H2'	1:AA:427:U:C6	2.52	0.45
4:CE:59:ILE:O	4:CE:63:MET:HG2	2.16	0.45
23:BB:1559:U:H4'	23:BB:1560:G:OP2	2.16	0.45
9:AJ:59:LYS:HG3	9:AJ:60:ASP:N	2.31	0.45
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.16	0.45
48:BG:58:ALA:C	48:BG:60:GLY:H	2.19	0.45
1:AA:152:A:H3'	1:AA:153:C:H6	1.80	0.45
1:AA:386:C:C2'	1:AA:387:U:H5'	2.47	0.45
23:BB:179:C:H2'	23:BB:180:G:O4'	2.17	0.45
34:B3:28:LEU:O	34:B3:28:LEU:HG	2.17	0.45
23:DB:1099:G:O5'	24:DI:3:LYS:CA	2.64	0.45
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.96	0.45
13:CN:60:ARG:CZ	13:CN:62:ARG:CZ	2.94	0.45
10:AK:110:THR:HA	21:AU:19:LYS:HZ1	1.80	0.45
42:BN:8:ARG:NH2	42:BN:39:PRO:HB3	2.30	0.45
1:AA:663:A:H2'	1:AA:664:G:C8	2.50	0.45
41:BJ:42:ALA:O	41:BJ:44:TYR:N	2.50	0.45
40:DH:4:ILE:HG13	40:DH:18:GLN:HB2	1.98	0.45
23:BB:139:U:H3'	23:BB:140:C:C5'	2.45	0.45
20:CB:14:HIS:CB	20:CB:208:ALA:HB2	2.46	0.45
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.80	0.45
23:DB:1454:C:C1'	42:DN:60:VAL:HG13	2.42	0.45
45:DS:28:LYS:HD3	45:DS:69:LEU:O	2.16	0.45
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.17	0.45
47:DF:116:LEU:HD12	47:DF:117:SER:N	2.32	0.45
23:BB:2305:U:C1'	47:BF:132:ARG:HA	2.47	0.45
40:BH:9:VAL:CG1	40:BH:12:LEU:HG	2.46	0.45
40:BH:14:SER:HB3	40:BH:17:ASP:OD1	2.17	0.45
10:CK:17:ASP:HB3	10:CK:80:ASN:CG	2.37	0.45
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.19	0.45
10:AK:77:GLY:C	10:AK:79:LYS:HE3	2.36	0.45
9:AJ:17:LEU:HD22	9:AJ:96:VAL:CG1	2.37	0.45
13:CN:26:LEU:HA	13:CN:30:ILE:HD13	1.98	0.45
22:DA:6:G:H2'	22:DA:7:G:H8	1.81	0.45
23:DB:1103:A:H3'	23:DB:1104:C:C6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:81:GLN:H	4:CE:146:MET:CE	2.30	0.45
46:DU:73:ASN:C	46:DU:75:ALA:H	2.20	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	0.45
27:BK:113:MET:HE1	27:BK:116:ILE:HD11	1.99	0.45
12:AM:44:ILE:O	12:AM:47:LEU:HB2	2.16	0.45
1:CA:203:G:H1'	1:CA:465:A:N6	2.31	0.45
1:AA:377:G:H2'	1:AA:378:G:H8	1.82	0.45
1:CA:452:A:H1'	15:CP:70:ARG:NH1	2.31	0.45
1:CA:265:G:H5'	16:CQ:65:PRO:O	2.16	0.45
23:BB:132:G:H2'	23:BB:133:U:C6	2.52	0.45
23:BB:845:A:N1	23:BB:847:U:H1'	2.31	0.45
11:CL:55:ARG:HG3	11:CL:55:ARG:HH11	1.82	0.45
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.81	0.45
23:BB:454:A:H3'	23:BB:455:C:H5'	1.98	0.45
23:BB:2185:U:H2'	23:BB:2186:G:H8	1.81	0.45
23:BB:1841:U:H2'	23:BB:1842:G:H8	1.82	0.45
1:CA:1249:C:H4'	8:CI:37:TYR:OH	2.16	0.45
32:D4:16:ILE:HG12	32:D4:25:VAL:CG2	2.46	0.45
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.78	0.45
4:CE:125:LYS:HD2	4:CE:126:ALA:N	2.30	0.45
45:BS:81:SER:CA	45:BS:99:ARG:HA	2.46	0.45
1:CA:1200:C:H3'	1:CA:1201:A:H5'	1.99	0.45
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.52	0.45
23:BB:1818:U:H2'	25:BC:152:GLN:O	2.16	0.45
23:BB:308:G:H2'	23:BB:309:A:O4'	2.15	0.45
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.52	0.45
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.16	0.45
22:BA:91:C:H2'	22:BA:92:C:H6	1.81	0.45
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.17	0.45
2:CC:181:ILE:HD12	2:CC:181:ILE:N	2.31	0.45
23:BB:1557:C:H3'	23:BB:1558:C:C5'	2.47	0.45
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.82	0.45
3:CD:43:ARG:HH21	3:CD:45:PRO:HA	1.80	0.45
1:AA:1509:C:O2'	1:AA:1510:C:H5'	2.16	0.45
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.47	0.45
47:DF:37:MET:SD	47:DF:56:LEU:HD23	2.56	0.45
1:CA:168:G:O2'	1:CA:169:C:H5'	2.16	0.45
23:DB:2540:C:H2'	23:DB:2541:A:C8	2.52	0.45
23:DB:103:A:H3'	23:DB:104:A:H8	1.82	0.45
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.17	0.45
23:BB:1909:C:O2'	23:BB:1910:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:75:TYR:CG	3:AD:203:TYR:HD1	2.35	0.45
44:DQ:34:ALA:O	44:DQ:38:VAL:HG23	2.16	0.45
20:AB:52:ALA:O	20:AB:56:LEU:HD13	2.15	0.45
1:AA:580:C:H2'	1:AA:581:G:O4'	2.17	0.45
41:BJ:95:ARG:HD3	41:BJ:95:ARG:O	2.17	0.45
20:CB:113:LEU:HD11	20:CB:144:GLU:HG3	1.98	0.45
7:AH:72:GLU:H	7:AH:72:GLU:CD	2.19	0.45
51:DZ:49:LEU:H	51:DZ:49:LEU:HD12	1.81	0.45
23:DB:2747:G:O5'	23:DB:2747:G:H8	2.00	0.45
6:AG:30:MET:HA	6:AG:38:ALA:HB2	1.98	0.45
1:AA:618:C:H1'	15:AP:14:ARG:NH1	2.31	0.45
23:BB:1048:A:H2'	23:BB:1049:C:C6	2.52	0.45
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.43	0.45
39:DX:39:GLN:CB	39:DX:42:LEU:HD22	2.47	0.45
40:BH:67:ALA:HA	40:BH:70:GLU:OE2	2.16	0.45
47:DF:134:GLN:O	47:DF:136:ILE:N	2.48	0.45
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.16	0.45
40:DH:90:LEU:HD22	40:DH:122:LEU:O	2.16	0.45
50:DT:11:LEU:HD11	50:DT:46:ALA:CB	2.46	0.45
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.36	0.45
47:DF:91:ARG:C	47:DF:95:MET:HB2	2.37	0.45
13:AN:10:VAL:O	13:AN:13:VAL:HB	2.16	0.45
20:AB:104:LYS:NZ	20:AB:104:LYS:HB2	2.32	0.45
32:D4:19:ARG:C	32:D4:21:GLY:N	2.70	0.45
37:BL:79:LEU:H	37:BL:113:ALA:CB	2.29	0.45
23:DB:138:U:H1'	50:DT:2:ILE:HG23	1.97	0.45
1:CA:1080:A:H5''	4:CE:20:VAL:HG11	1.97	0.45
23:DB:637:A:C5'	37:DL:112:LEU:HD22	2.44	0.45
37:DL:79:LEU:HD12	37:DL:114:GLY:H	1.81	0.45
48:BG:153:PRO:HB3	48:BG:158:GLY:HA2	1.97	0.45
23:BB:2809:A:N6	23:BB:2891:U:H4'	2.31	0.45
39:BX:50:VAL:HG12	39:BX:54:LYS:HD2	1.98	0.45
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.29	0.45
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.98	0.45
39:BX:2:LYS:HB2	39:BX:3:ALA:H	1.50	0.45
26:BD:113:SER:HB3	26:BD:167:ASN:HA	1.97	0.45
23:DB:580:U:O2'	23:DB:581:C:H5'	2.17	0.45
1:CA:412:A:H61	3:CD:29:THR:HG22	1.82	0.45
38:DM:57:VAL:O	38:DM:59:ARG:N	2.49	0.45
3:CD:88:ASN:O	3:CD:92:LEU:HD23	2.16	0.45
23:DB:528:A:H2	23:DB:2043:C:H4'	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:63:THR:O	11:AL:94:TYR:HB2	2.16	0.45
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.81	0.45
16:CQ:66:LEU:HD13	16:CQ:70:LYS:HG2	1.97	0.45
1:AA:1389:C:H2'	1:AA:1390:U:H6	1.81	0.45
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.50	0.45
23:DB:2109:U:C4	23:DB:2180:U:H2'	2.52	0.45
51:DZ:41:GLU:O	51:DZ:44:LYS:HD2	2.17	0.45
32:D4:15:LYS:O	32:D4:16:ILE:CB	2.65	0.45
23:DB:154:U:H2'	23:DB:155:A:C8	2.52	0.45
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.45	0.45
14:AO:60:VAL:CG1	23:BB:715:A:O4'	2.65	0.45
14:AO:25:THR:CG2	14:AO:70:LEU:HD23	2.47	0.45
23:DB:2299:U:H2'	23:DB:2300:C:H6	1.82	0.45
23:BB:308:G:H2'	23:BB:309:A:C8	2.52	0.45
23:DB:234:U:H2'	23:DB:235:U:H6	1.81	0.45
11:AL:3:VAL:CG1	16:AQ:33:TYR:HB3	2.46	0.45
1:AA:716:A:H2'	1:AA:717:U:H6	1.81	0.45
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.17	0.45
23:BB:1317:G:H2'	23:BB:1318:U:H6	1.81	0.45
23:DB:707:G:O2'	23:DB:708:G:H5'	2.17	0.45
23:DB:770:G:H1'	23:DB:1379:U:C4	2.52	0.45
7:CH:107:LYS:HD3	7:CH:107:LYS:HA	1.83	0.45
37:DL:131:ALA:O	37:DL:135:ILE:HG22	2.16	0.45
1:CA:643:C:H2'	1:CA:644:U:C6	2.51	0.45
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.52	0.45
3:AD:52:VAL:HG12	3:AD:198:LEU:HD21	1.99	0.45
22:DA:82:U:O2'	22:DA:83:G:H5'	2.16	0.45
23:BB:1339:G:N2	23:BB:1603:A:H1'	2.32	0.45
27:BK:88:ASN:HD22	27:BK:89:ASN:N	2.14	0.45
23:DB:179:C:H2'	23:DB:180:G:O4'	2.16	0.45
23:BB:123:G:H4'	23:BB:1376:C:O5'	2.17	0.45
23:BB:1908:C:O2'	23:BB:1909:C:H5'	2.17	0.45
23:DB:215:G:H4'	23:DB:216:A:OP1	2.15	0.45
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.16	0.45
23:BB:466:A:N3	23:BB:683:U:H1'	2.31	0.45
23:DB:1052:C:H2'	23:DB:1053:C:C6	2.52	0.45
23:BB:34:U:H4'	23:BB:35:G:OP2	2.16	0.45
23:BB:642:U:O2	23:BB:644:A:H3'	2.16	0.45
48:DG:58:ALA:C	48:DG:60:GLY:H	2.19	0.45
23:BB:919:U:H2'	23:BB:920:A:H8	1.78	0.45
40:BH:116:ARG:HB3	40:BH:131:SER:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:131:SER:HA	40:BH:140:ALA:C	2.37	0.45
40:DH:94:ILE:HG13	40:DH:98:ASP:HB3	1.99	0.45
27:BK:71:ARG:HG2	27:BK:105:ARG:HH21	1.81	0.45
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.30	0.45
50:DT:16:VAL:HG12	50:DT:22:THR:HG22	1.99	0.45
23:BB:299:A:H2'	23:BB:300:A:C8	2.51	0.45
32:B4:8:LYS:HG2	32:B4:9:LYS:HD3	1.99	0.45
42:DN:75:ILE:HD12	42:DN:79:LEU:HD12	1.98	0.45
22:DA:43:C:H2'	22:DA:44:G:H5''	1.97	0.45
47:DF:1:ALA:O	47:DF:4:HIS:HB3	2.16	0.45
47:DF:62:GLN:CG	47:DF:91:ARG:HH11	2.21	0.45
51:BZ:7:VAL:HG21	51:BZ:59:ILE:CD1	2.42	0.45
48:BG:84:LYS:CG	48:BG:85:LYS:H	2.16	0.45
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.31	0.45
40:DH:9:VAL:CG1	40:DH:12:LEU:HG	2.46	0.45
12:AM:24:VAL:HB	12:AM:28:ARG:HB3	1.99	0.45
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.81	0.45
20:AB:98:GLY:O	20:AB:102:ASN:N	2.47	0.45
37:DL:3:LEU:O	37:DL:5:THR:HG23	2.16	0.45
30:BY:28:LEU:CD1	30:BY:54:VAL:HG12	2.47	0.45
40:DH:73:ASN:OD1	40:DH:142:VAL:HA	2.16	0.45
48:BG:152:ARG:HA	48:BG:152:ARG:HD2	1.84	0.45
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.29	0.45
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.16	0.45
9:CJ:8:ILE:HD12	9:CJ:75:ASP:HA	1.99	0.45
46:BU:78:LYS:HZ2	46:BU:78:LYS:HA	1.82	0.45
38:DM:35:ALA:HB3	38:DM:100:LYS:H	1.82	0.45
46:BU:81:ARG:HB2	46:BU:96:LYS:CG	2.46	0.45
34:B3:49:VAL:CG2	34:B3:54:LEU:HD13	2.47	0.45
49:BR:15:SER:OG	49:BR:18:GLN:HG2	2.17	0.45
7:AH:6:ILE:HD12	7:AH:35:ILE:CD1	2.47	0.45
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.17	0.45
41:DJ:96:ARG:CZ	41:DJ:99:ARG:HD2	2.47	0.45
11:AL:23:LEU:O	11:AL:25:ALA:N	2.50	0.45
25:BC:79:ARG:HD2	25:BC:81:GLU:CG	2.46	0.45
23:BB:2821:A:OP2	42:BN:3:HIS:NE2	2.49	0.45
1:AA:948:C:O2'	1:AA:949:A:H5'	2.16	0.45
3:AD:146:GLU:HA	3:AD:149:LYS:CG	2.45	0.45
23:DB:712:G:H2'	23:DB:713:G:O4'	2.17	0.45
1:CA:1227:A:H5''	12:CM:113:LYS:HZ3	1.81	0.45
1:CA:191:G:H2'	1:CA:192:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:56:LYS:HG2	43:DO:60:GLU:OE1	2.15	0.45
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.81	0.45
51:DZ:65:ASP:O	51:DZ:69:ALA:N	2.49	0.45
23:BB:794:A:C4	23:BB:795:C:C5	3.05	0.45
23:BB:825:A:H2'	23:BB:826:U:O4'	2.17	0.45
23:BB:2458:G:H2'	23:BB:2458:G:N3	2.31	0.45
11:AL:68:GLY:HA3	11:AL:106:VAL:CG2	2.47	0.45
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.70	0.45
41:DJ:59:ALA:C	41:DJ:61:LYS:N	2.69	0.45
23:BB:1109:C:H3'	23:BB:1110:G:C8	2.51	0.45
39:DX:23:ARG:HB3	39:DX:27:ASN:OD1	2.17	0.45
1:CA:1460:C:H2'	1:CA:1461:G:C8	2.51	0.45
3:CD:61:ARG:NH2	3:CD:68:GLU:H	2.15	0.45
1:CA:513:C:H2'	1:CA:514:C:H6	1.82	0.45
45:BS:13:SER:OG	45:BS:14:ALA:N	2.47	0.45
1:AA:731:G:O2'	1:AA:732:C:H5'	2.16	0.45
25:BC:86:ARG:HB3	25:BC:86:ARG:CZ	2.46	0.45
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.81	0.45
1:AA:367:U:OP1	1:AA:395:C:H1'	2.16	0.45
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.51	0.45
23:DB:2405:G:H1'	23:DB:2412:A:H61	1.82	0.45
23:DB:863:A:H2'	23:DB:864:G:C8	2.51	0.45
1:CA:425:G:O2'	1:CA:426:U:H5'	2.16	0.45
23:DB:1491:G:H5'	25:DC:97:ASP:OD1	2.17	0.45
23:BB:540:C:O2'	23:BB:541:A:H5'	2.16	0.45
26:BD:141:ARG:HG3	26:BD:141:ARG:O	2.16	0.45
42:DN:41:ALA:C	42:DN:43:GLU:H	2.20	0.45
51:DZ:18:ARG:NH1	51:DZ:24:ALA:HB2	2.31	0.45
23:DB:129:C:H2'	23:DB:130:C:H6	1.82	0.45
23:BB:215:G:H4'	23:BB:216:A:OP1	2.17	0.45
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.51	0.45
1:AA:152:A:H2'	1:AA:153:C:O4'	2.16	0.45
1:AA:186:C:H2'	1:AA:187:G:O4'	2.17	0.45
1:AA:926:G:N2	1:AA:1505:G:H2'	2.31	0.45
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.20	0.45
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.16	0.45
41:BJ:7:LYS:C	41:BJ:9:GLU:H	2.20	0.45
5:AF:20:GLY:O	5:AF:24:ARG:HD3	2.16	0.45
23:DB:1365:A:N3	23:DB:1365:A:H2'	2.32	0.45
23:DB:2614:A:O4'	31:D0:1:ALA:HB3	2.17	0.45
14:CO:33:THR:HG23	14:CO:63:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:945:G:H21	1:AA:1334:G:H4'	1.81	0.45
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.17	0.45
46:DU:85:ARG:NH1	46:DU:86:PHE:N	2.65	0.45
39:DX:31:GLN:HA	39:DX:36:GLN:OE1	2.17	0.45
42:BN:38:LEU:HB3	42:BN:39:PRO:CD	2.38	0.45
47:BF:100:GLU:O	47:BF:104:THR:HB	2.17	0.45
47:BF:91:ARG:CD	47:BF:91:ARG:N	2.79	0.45
41:BJ:16:TYR:CD2	41:BJ:140:LEU:HD12	2.52	0.45
8:CI:24:ASN:CG	8:CI:25:GLY:N	2.70	0.45
25:BC:43:ASN:ND2	25:BC:44:ASN:H	2.15	0.45
50:BT:21:SER:HB3	50:BT:31:VAL:HG22	1.99	0.45
50:BT:48:GLN:NE2	50:BT:48:GLN:HA	2.32	0.45
50:DT:29:THR:H	50:DT:91:GLN:NE2	2.07	0.45
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.16	0.45
29:DE:28:VAL:O	29:DE:32:VAL:HG13	2.16	0.45
19:AT:85:LEU:HD23	19:AT:86:ALA:N	2.31	0.45
47:DF:111:ARG:NH2	47:DF:113:PHE:HB2	2.32	0.45
40:BH:27:ARG:HH11	51:BZ:64:ILE:CD1	2.30	0.45
19:CT:71:ALA:O	19:CT:74:HIS:HB2	2.16	0.45
23:BB:2645:G:H4'	23:BB:2732:G:H2'	1.98	0.45
38:BM:2:LEU:HD11	38:BM:68:PHE:CE1	2.52	0.45
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.82	0.45
9:AJ:12:ALA:N	9:AJ:18:ILE:HD12	2.32	0.45
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.30	0.45
37:DL:6:LEU:N	37:DL:6:LEU:HD23	2.24	0.45
37:BL:79:LEU:HD12	37:BL:114:GLY:H	1.82	0.45
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	2.17	0.45
22:DA:52:A:H2'	22:DA:53:A:H5'	1.99	0.45
33:D1:12:SER:HB2	33:D1:48:TYR:CE1	2.52	0.45
31:B0:42:ILE:HG12	42:BN:99:LYS:O	2.16	0.45
42:BN:97:ILE:HD12	42:BN:98:LEU:H	1.82	0.45
1:AA:1313:U:H2'	1:AA:1314:C:C6	2.52	0.45
23:DB:850:U:O2'	30:DY:22:THR:HG22	2.17	0.45
23:BB:83:A:H2'	23:BB:84:A:C8	2.51	0.45
23:DB:1616:A:H4'	23:DB:1617:C:OP2	2.17	0.45
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.49	0.45
40:DH:126:GLY:N	40:DH:146:VAL:HB	2.31	0.45
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.99	0.45
27:DK:113:MET:HE1	27:DK:116:ILE:HD11	1.98	0.45
11:CL:20:VAL:HB	11:CL:94:TYR:HE1	1.81	0.45
34:B3:54:LEU:O	34:B3:58:ILE:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:61:ARG:NH1	28:BP:100:ARG:HA	2.31	0.45
1:CA:1124:G:H3'	9:CJ:37:ARG:NH1	2.31	0.45
23:DB:1045:C:O2	23:DB:1047:G:N2	2.49	0.45
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.51	0.45
23:DB:1856:U:C2'	23:DB:1857:G:H5'	2.43	0.45
34:D3:49:VAL:CG2	34:D3:54:LEU:HD13	2.46	0.45
23:DB:64:A:H2'	23:DB:65:U:H6	1.81	0.45
1:AA:844:G:C6	1:AA:846:G:H1'	2.52	0.45
23:BB:1857:G:N2	23:BB:1884:G:H2'	2.31	0.45
23:BB:590:A:H2'	23:BB:591:U:H6	1.79	0.45
22:BA:105:G:O2'	22:BA:106:G:H5'	2.17	0.45
1:CA:499:A:H1'	1:CA:500:G:C8	2.52	0.45
1:CA:313:A:O2'	1:CA:314:C:H5'	2.17	0.45
1:CA:502:A:H2'	1:CA:503:C:O4'	2.17	0.45
43:DO:35:ILE:HG13	43:DO:71:ALA:HB1	1.98	0.45
14:CO:26:GLU:HG3	14:CO:81:LEU:HD12	1.98	0.45
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.32	0.45
23:DB:840:C:H2'	23:DB:841:G:H8	1.81	0.45
43:DO:74:VAL:O	43:DO:77:ALA:HB3	2.17	0.45
23:BB:1494:A:H2'	23:BB:1495:A:H8	1.81	0.45
23:DB:320:A:C2	29:DE:163:ASN:HB3	2.52	0.45
22:DA:13:G:C2'	22:DA:14:U:H5''	2.47	0.45
23:DB:26:G:H1'	23:DB:514:A:H61	1.81	0.45
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.16	0.45
6:CG:45:ALA:HB3	6:CG:119:LEU:HD23	1.99	0.45
1:AA:766:A:H61	1:AA:1511:G:H1'	1.81	0.45
1:AA:1180:A:OP1	8:AI:104:THR:HG22	2.17	0.45
26:BD:46:ARG:HH12	26:BD:85:ALA:HA	1.81	0.45
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.16	0.45
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.52	0.45
1:AA:168:G:O2'	1:AA:169:C:H5'	2.17	0.45
20:CB:116:LEU:HB3	20:CB:140:LEU:HG	1.99	0.45
38:DM:54:THR:O	38:DM:56:ALA:N	2.48	0.45
1:CA:1355:G:O2'	1:CA:1356:G:H5'	2.17	0.45
23:BB:2485:G:H5''	38:BM:125:PRO:HG3	1.99	0.45
1:CA:549:C:H2'	1:CA:550:G:C8	2.51	0.45
23:DB:807:U:H2'	23:DB:808:G:H8	1.82	0.45
46:BU:41:VAL:C	46:BU:42:LYS:HD2	2.36	0.45
4:CE:15:ILE:HB	4:CE:35:LEU:O	2.17	0.45
23:BB:1052:C:H2'	23:BB:1053:C:C6	2.51	0.45
32:D4:1:MET:HE1	32:D4:24:ARG:NH2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.99	0.45
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.85	0.45
23:DB:2354:C:H4'	52:DW:31:LEU:CD2	2.45	0.45
37:BL:77:ILE:HD11	37:BL:95:LEU:HD22	1.98	0.45
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.17	0.45
46:DU:85:ARG:CD	46:DU:86:PHE:H	2.08	0.45
40:BH:114:GLU:OE2	40:BH:134:VAL:HA	2.17	0.45
22:BA:43:C:H2'	22:BA:44:G:H5''	1.98	0.45
12:AM:70:ARG:HH22	47:BF:112:ASP:HB3	1.82	0.45
1:AA:663:A:H2'	1:AA:664:G:H8	1.82	0.45
23:DB:558:U:O2'	23:DB:559:G:H5'	2.17	0.45
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.37	0.45
40:DH:90:LEU:HD13	40:DH:122:LEU:O	2.15	0.45
1:AA:874:G:O2'	1:AA:875:U:H5'	2.16	0.45
35:BV:31:TYR:O	35:BV:92:VAL:HG13	2.17	0.45
42:BN:70:THR:C	42:BN:72:ASP:H	2.21	0.45
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	1.99	0.45
47:DF:127:TYR:HB2	47:DF:155:ILE:HB	1.98	0.45
47:DF:7:TYR:HA	47:DF:11:VAL:HG23	1.99	0.45
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.17	0.45
12:AM:14:ALA:HB1	12:AM:33:LEU:HD21	1.98	0.45
30:BY:12:ALA:HB2	30:BY:53:MET:CE	2.47	0.45
1:AA:1251:A:O2'	1:AA:1252:A:H5'	2.17	0.45
13:CN:29:ILE:HB	13:CN:30:ILE:HD12	1.99	0.45
23:DB:1338:G:C4'	50:DT:18:GLU:HG3	2.42	0.45
4:AE:81:GLN:H	4:AE:146:MET:CE	2.29	0.45
1:CA:865:A:C2	1:CA:918:A:H4'	2.52	0.45
13:CN:49:THR:O	13:CN:50:LEU:HB3	2.17	0.45
23:DB:2143:C:H2'	23:DB:2144:G:C4'	2.46	0.45
48:DG:148:ARG:HD3	48:DG:152:ARG:CZ	2.46	0.45
25:BC:94:LEU:O	25:BC:94:LEU:HG	2.15	0.45
22:DA:42:C:C6	47:DF:65:LEU:HD22	2.52	0.45
23:BB:2800:A:C2'	23:BB:2801:G:O4'	2.61	0.45
1:CA:411:A:C4	1:CA:413:G:H1'	2.52	0.45
7:CH:6:ILE:HD12	7:CH:35:ILE:HD12	1.97	0.45
33:B1:7:LYS:CD	34:B3:33:THR:HG21	2.43	0.45
1:CA:993:G:C2'	1:CA:995:C:H41	2.23	0.45
21:CU:24:LYS:HB3	21:CU:24:LYS:HZ2	1.81	0.45
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.17	0.45
8:CI:118:ARG:HG2	8:CI:118:ARG:O	2.17	0.45
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:947:G:H2'	1:AA:948:C:H6	1.82	0.45
12:AM:111:PRO:HG2	12:AM:112:ARG:H	1.82	0.45
1:CA:719:C:H3'	1:CA:720:C:C6	2.51	0.45
16:CQ:39:ARG:HG2	16:CQ:39:ARG:HH11	1.81	0.45
4:CE:89:THR:CG2	4:CE:90:GLY:H	2.24	0.45
25:DC:157:ALA:HB1	25:DC:196:ASN:HB3	1.99	0.45
6:CG:50:ALA:HB2	6:CG:57:GLU:N	2.31	0.45
23:DB:2360:G:P	34:D3:50:SER:HB3	2.57	0.45
1:CA:714:G:H21	1:CA:777:A:H1'	1.82	0.45
29:BE:136:GLN:NE2	29:BE:139:LYS:HD3	2.31	0.45
1:CA:961:U:N3	1:CA:983:A:N6	2.65	0.45
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.52	0.45
9:AJ:55:PRO:O	9:AJ:56:HIS:HB3	2.16	0.45
23:DB:898:C:O2'	23:DB:899:A:H5''	2.17	0.45
2:AC:55:VAL:HG23	2:AC:68:HIS:NE2	2.32	0.45
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.52	0.45
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.77	0.45
1:CA:429:U:H4'	1:CA:430:A:O5'	2.16	0.45
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.31	0.45
26:DD:125:TRP:CE2	26:DD:160:LYS:HB3	2.51	0.45
23:BB:154:U:H2'	23:BB:155:A:H8	1.82	0.45
29:DE:150:THR:OG1	29:DE:151:GLY:N	2.48	0.45
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.17	0.45
45:BS:108:SER:OG	45:BS:109:ASP:N	2.49	0.45
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.51	0.45
23:DB:1317:G:H2'	23:DB:1318:U:C6	2.52	0.45
1:CA:707:U:H2'	1:CA:708:C:C6	2.51	0.45
23:DB:336:C:O2'	23:DB:337:C:H5'	2.17	0.45
1:AA:299:G:H2'	1:AA:300:A:C8	2.52	0.45
48:DG:154:GLU:O	48:DG:156:TYR:N	2.47	0.45
23:BB:1573:G:C2'	23:BB:1574:C:H5'	2.46	0.45
7:CH:50:VAL:HG23	7:CH:57:GLU:O	2.16	0.45
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.16	0.45
23:BB:2479:U:OP1	23:BB:2537:U:H1'	2.16	0.45
26:DD:4:LEU:HD21	26:DD:100:LEU:HB3	1.99	0.45
23:BB:2106:U:H2'	23:BB:2107:G:H8	1.81	0.45
26:DD:46:ARG:HH12	26:DD:85:ALA:HA	1.82	0.45
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.82	0.45
6:AG:39:GLU:HB3	6:AG:43:TYR:CE2	2.51	0.45
23:BB:2718:G:H5''	28:BP:97:TYR:CD1	2.51	0.45
1:CA:1056:U:O2'	1:CA:1057:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:47:ARG:CG	37:BL:50:PHE:HB2	2.47	0.45
1:CA:1489:G:H2'	1:CA:1490:U:H6	1.82	0.45
1:AA:996:A:H2'	1:AA:997:U:C6	2.52	0.45
23:BB:1987:A:H2'	23:BB:1988:G:H8	1.81	0.45
1:CA:1425:U:O2'	1:CA:1426:G:H5'	2.17	0.45
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.47	0.45
1:CA:984:C:O2'	1:CA:985:C:H5'	2.16	0.45
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.17	0.45
23:BB:2018:G:H2'	23:BB:2019:A:C8	2.52	0.45
23:DB:1339:G:H21	23:DB:1603:A:H1'	1.81	0.45
4:AE:15:ILE:HB	4:AE:35:LEU:O	2.17	0.45
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.17	0.45
4:AE:9:GLU:O	4:AE:40:ASP:HA	2.16	0.45
1:CA:682:G:O2'	1:CA:683:G:H5'	2.17	0.45
6:CG:142:ARG:HG3	6:CG:142:ARG:HH11	1.82	0.45
23:BB:406:G:O2'	23:BB:407:G:H5'	2.17	0.45
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.17	0.45
44:BQ:34:ALA:O	44:BQ:38:VAL:HG23	2.17	0.45
23:BB:2454:G:H1'	56:BB:3368:HOH:O	2.17	0.45
37:BL:125:LEU:N	37:BL:143:GLU:HG3	2.32	0.45
52:BW:19:ARG:HA	52:BW:34:SER:HA	1.99	0.45
52:BW:59:PHE:CE2	52:BW:61:LYS:HD2	2.51	0.45
10:CK:109:ILE:HG22	21:CU:16:ARG:HH12	1.82	0.45
48:DG:42:VAL:HB	48:DG:51:PHE:CD1	2.52	0.45
48:BG:42:VAL:HA	48:BG:51:PHE:HA	1.99	0.45
41:BJ:43:GLU:O	41:BJ:45:THR:HG22	2.17	0.45
2:AC:126:ARG:HH12	2:AC:190:THR:CG2	2.30	0.45
22:BA:102:G:O2'	22:BA:103:U:H5'	2.16	0.45
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.51	0.45
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.32	0.45
45:BS:73:LYS:HE3	45:BS:74:ILE:N	2.20	0.45
47:DF:7:TYR:O	47:DF:11:VAL:HB	2.15	0.45
3:AD:59:LYS:HE3	3:AD:194:ILE:CD1	2.46	0.45
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.99	0.45
13:AN:9:GLU:HB2	13:AN:62:ARG:CZ	2.46	0.45
23:BB:1439:A:N7	23:BB:1440:U:C6	2.84	0.45
23:BB:281:C:H2'	23:BB:282:A:C8	2.52	0.45
13:AN:30:ILE:O	13:AN:40:ARG:HA	2.17	0.45
28:BP:19:PHE:O	28:BP:20:ARG:HB2	2.16	0.45
38:BM:35:ALA:HB3	38:BM:100:LYS:H	1.81	0.45
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:66:VAL:O	46:BU:69:VAL:HG22	2.16	0.45
29:DE:149:ILE:O	29:DE:188:MET:HA	2.17	0.45
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.15	0.45
6:AG:144:ALA:C	6:AG:146:ALA:H	2.19	0.45
1:CA:598:U:H4'	7:CH:85:TYR:CD2	2.52	0.45
25:BC:90:ILE:HD13	25:BC:90:ILE:HA	1.85	0.45
34:D3:54:LEU:O	34:D3:58:ILE:HG13	2.17	0.45
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.52	0.45
1:CA:251:G:N2	1:CA:266:G:H1	2.14	0.45
16:CQ:68:LYS:O	16:CQ:70:LYS:N	2.50	0.45
1:CA:1248:A:C2	8:CI:71:ILE:HD11	2.51	0.45
3:CD:202:LEU:O	3:CD:202:LEU:HD12	2.16	0.45
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.31	0.45
1:AA:955:U:H1'	1:AA:1227:A:H62	1.80	0.45
23:BB:1726:C:H2'	23:BB:1727:C:H6	1.81	0.45
17:AR:38:ILE:H	17:AR:38:ILE:HD13	1.82	0.45
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.52	0.45
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.32	0.45
1:CA:734:G:H2'	1:CA:735:C:C6	2.52	0.45
1:CA:738:C:H2'	1:CA:739:C:H6	1.82	0.45
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.52	0.45
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.47	0.45
23:DB:1946:U:H2'	23:DB:1947:C:C6	2.51	0.45
4:CE:45:VAL:HG23	4:CE:71:ILE:HG22	1.98	0.45
23:DB:2691:C:O2'	23:DB:2692:G:H5'	2.16	0.45
1:CA:1254:A:OP1	9:CJ:47:GLU:HG3	2.17	0.45
23:DB:523:C:H4'	23:DB:540:C:O2	2.17	0.45
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.16	0.45
23:BB:115:C:O2'	23:BB:116:C:H5'	2.16	0.45
23:DB:1260:A:O2'	23:DB:1261:C:H5'	2.16	0.45
27:BK:109:SER:OG	27:BK:111:LYS:HG2	2.16	0.45
23:DB:2096:C:H2'	23:DB:2097:A:C8	2.52	0.45
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.52	0.45
1:AA:1095:U:H5''	1:AA:1109:C:O2	2.17	0.45
5:AF:18:VAL:HG21	5:AF:58:HIS:CD2	2.51	0.45
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.17	0.45
4:AE:59:ILE:O	4:AE:63:MET:HG2	2.16	0.45
27:BK:121:GLU:O	27:BK:122:VAL:C	2.55	0.45
1:AA:113:G:H2'	1:AA:114:U:H6	1.81	0.45
1:CA:224:U:H2'	1:CA:225:C:H6	1.82	0.45
23:DB:807:U:H2'	23:DB:808:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2095:A:H2'	23:BB:2096:C:C6	2.52	0.45
23:DB:1210:G:N3	23:DB:1212:G:N2	2.65	0.45
3:AD:167:PRO:O	3:AD:168:THR:HG23	2.17	0.45
20:AB:113:LEU:HD11	20:AB:144:GLU:HG3	1.98	0.45
8:CI:42:THR:O	8:CI:45:MET:HG2	2.17	0.45
23:BB:2686:G:H2'	23:BB:2687:U:C6	2.51	0.45
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.17	0.45
24:DI:70:THR:O	24:DI:70:THR:HG23	2.16	0.45
41:DJ:95:ARG:O	41:DJ:95:ARG:HD3	2.17	0.45
23:BB:1365:A:N3	23:BB:1365:A:H2'	2.32	0.45
23:DB:1482:G:H2'	23:DB:1483:G:H8	1.82	0.45
23:DB:922:C:H2'	23:DB:923:G:H8	1.82	0.45
37:BL:105:ILE:HG22	37:BL:106:GLU:N	2.31	0.45
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.36	0.45
40:BH:99:ILE:HG13	40:BH:115:VAL:CG1	2.47	0.45
40:BH:79:THR:HB	40:BH:145:ASN:N	2.32	0.45
40:BH:82:SER:C	40:BH:146:VAL:HG13	2.37	0.45
46:BU:86:PHE:HB2	46:BU:92:VAL:HB	1.98	0.45
27:BK:70:ARG:HB3	27:BK:76:VAL:CG2	2.41	0.45
44:BQ:83:LYS:HZ1	44:BQ:87:VAL:HA	1.81	0.45
8:CI:56:MET:C	8:CI:58:GLU:N	2.68	0.45
27:BK:73:ASP:O	28:BP:74:GLN:HG3	2.17	0.45
47:DF:79:ARG:CZ	47:DF:82:TYR:HE2	2.30	0.45
29:DE:40:ARG:HH21	29:DE:92:HIS:HE2	1.64	0.45
23:DB:283:G:H3'	23:DB:284:U:C5'	2.46	0.45
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.64	0.45
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.81	0.45
2:CC:131:ARG:HG3	2:CC:135:ARG:CZ	2.47	0.45
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.16	0.45
12:CM:14:ALA:O	12:CM:18:LEU:HB2	2.17	0.45
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.36	0.45
40:DH:9:VAL:HB	40:DH:13:GLY:CA	2.45	0.45
19:AT:65:LEU:HG	19:AT:66:ILE:HD13	1.99	0.45
23:DB:675:A:OP1	29:DE:60:TRP:HZ2	2.00	0.45
29:DE:60:TRP:O	29:DE:61:ARG:CB	2.59	0.45
20:CB:65:LYS:HB3	20:CB:157:PRO:HA	2.00	0.45
51:DZ:7:VAL:HG13	51:DZ:8:THR:CG2	2.41	0.45
22:BA:82:U:O2'	22:BA:83:G:H5'	2.16	0.45
52:BW:10:ARG:HD3	52:BW:10:ARG:N	2.31	0.45
31:B0:42:ILE:HD11	42:BN:98:LEU:HB3	1.99	0.45
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:6:GLU:HB2	33:D1:52:LYS:CE	2.47	0.45
6:AG:147:ASN:CA	10:AK:55:ARG:HH21	2.30	0.45
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.98	0.45
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.81	0.45
8:AI:118:ARG:HG2	8:AI:118:ARG:O	2.16	0.45
1:AA:1342:C:H5'	8:AI:127:SER:HA	1.99	0.45
27:DK:78:ARG:HH12	28:DP:70:GLU:CD	2.21	0.45
22:BA:28:C:H2'	22:BA:29:A:O4'	2.17	0.45
27:BK:78:ARG:HH12	28:BP:70:GLU:CD	2.19	0.45
43:BO:88:LYS:HG2	43:BO:89:ASP:N	2.32	0.45
52:BW:14:ASP:HB3	52:BW:15:SER:H	1.65	0.45
25:BC:156:SER:HB3	25:BC:159:THR:CG2	2.47	0.45
11:CL:82:ARG:CG	11:CL:82:ARG:HH11	2.30	0.45
1:AA:537:G:H2'	1:AA:538:G:C8	2.52	0.45
6:AG:50:ALA:HB2	6:AG:57:GLU:N	2.31	0.45
23:BB:1411:U:H2'	23:BB:1412:U:H6	1.82	0.45
23:BB:1372:U:H1'	23:BB:2214:C:C4	2.52	0.45
43:BO:67:ASN:O	43:BO:69:ASP:N	2.50	0.45
1:CA:134:G:H2'	1:CA:135:C:O4'	2.17	0.45
15:CP:1:MET:HG3	15:CP:3:THR:CG2	2.47	0.45
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.17	0.45
43:DO:66:GLY:HA3	43:DO:102:ARG:NH2	2.32	0.45
15:AP:74:LEU:HA	15:AP:77:GLU:OE2	2.16	0.45
14:CO:56:LEU:HD12	14:CO:59:MET:HE3	1.99	0.45
23:BB:458:G:O2'	36:B2:39:ARG:HD2	2.16	0.45
23:BB:633:A:H2'	23:BB:634:C:O4'	2.17	0.45
1:AA:109:A:H2'	1:AA:326:G:N2	2.32	0.45
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.17	0.45
23:BB:1198:U:O2'	44:BQ:3:VAL:HG13	2.16	0.45
7:CH:118:ALA:HB3	7:CH:120:LEU:CD2	2.46	0.45
23:BB:1047:G:O2'	23:BB:1110:G:N1	2.47	0.45
41:BJ:31:GLU:OE2	41:BJ:31:GLU:HA	2.17	0.45
10:AK:35:ASP:OD2	10:AK:39:ASN:HB2	2.17	0.45
23:DB:299:A:N6	23:DB:322:A:H1'	2.32	0.45
23:DB:1633:G:O2'	23:DB:1634:A:H5''	2.17	0.45
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.81	0.45
23:DB:708:G:H2'	23:DB:709:U:C6	2.51	0.45
23:DB:770:G:H5''	36:D2:10:LEU:HD13	1.98	0.45
23:DB:2626:C:O2'	23:DB:2627:G:H5'	2.17	0.45
2:AC:181:ILE:N	2:AC:181:ILE:HD12	2.31	0.45
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:126:PHE:O	8:CI:128:LYS:N	2.50	0.45
2:AC:185:THR:HA	2:AC:197:VAL:O	2.17	0.45
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.16	0.45
23:DB:98:G:C3'	23:DB:99:U:H5''	2.47	0.45
1:AA:642:A:H2'	1:AA:643:C:C6	2.52	0.45
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.47	0.45
44:DQ:15:LYS:O	44:DQ:18:LYS:HB3	2.17	0.45
23:BB:1210:G:H5''	23:BB:1211:C:H3'	1.99	0.45
43:BO:109:ALA:HA	43:BO:112:GLU:OE2	2.17	0.45
11:CL:122:LYS:HG3	11:CL:123:ALA:H	1.82	0.45
1:CA:152:A:H2'	1:CA:153:C:O4'	2.17	0.45
38:BM:54:THR:O	38:BM:56:ALA:N	2.49	0.45
40:BH:40:THR:O	40:BH:42:LYS:N	2.43	0.45
23:BB:738:G:H1'	23:BB:759:G:N2	2.32	0.45
23:DB:1805:A:H5''	25:DC:247:TRP:CE2	2.51	0.45
47:BF:157:THR:C	47:BF:159:ALA:H	2.20	0.45
14:AO:21:ASP:C	14:AO:23:GLY:H	2.20	0.45
20:AB:139:GLU:HG2	20:AB:143:LEU:CD1	2.47	0.45
10:CK:68:ARG:HH11	10:CK:68:ARG:HG3	1.82	0.45
22:DA:64:G:O2'	22:DA:65:U:H5'	2.17	0.45
23:DB:1754:A:OP1	28:DP:93:LYS:HD3	2.17	0.45
23:DB:2791:G:H2'	23:DB:2792:A:O4'	2.17	0.45
52:DW:28:GLU:HB2	52:DW:31:LEU:HD21	1.98	0.44
52:DW:33:GLY:O	52:DW:34:SER:HB2	2.17	0.44
46:BU:85:ARG:CD	46:BU:86:PHE:H	2.09	0.44
25:BC:117:SER:HB2	25:BC:128:THR:HB	1.98	0.44
47:BF:98:PHE:C	47:BF:100:GLU:N	2.70	0.44
41:DJ:6:ALA:CB	41:DJ:45:THR:HG21	2.47	0.44
41:BJ:55:ILE:HB	41:BJ:123:LYS:HB2	1.99	0.44
3:AD:169:TRP:C	3:AD:182:LYS:HB2	2.37	0.44
40:BH:4:ILE:HD12	40:BH:4:ILE:N	2.31	0.44
19:CT:43:LYS:HD3	19:CT:43:LYS:H	1.82	0.44
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.51	0.44
18:CS:18:VAL:O	18:CS:22:VAL:HG23	2.18	0.44
18:CS:10:ILE:CG2	18:CS:37:SER:HB3	2.43	0.44
1:CA:521:G:O2'	1:CA:522:C:H5'	2.17	0.44
20:CB:98:GLY:O	20:CB:102:ASN:N	2.47	0.44
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.32	0.44
36:D2:21:ARG:HH21	36:D2:43:THR:HG22	1.83	0.44
46:BU:51:LEU:HD22	46:BU:52:ASN:OD1	2.16	0.44
2:CC:126:ARG:HH12	2:CC:190:THR:HG23	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.15	0.44
43:BO:93:ASP:C	43:BO:95:SER:H	2.21	0.44
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.82	0.44
30:DY:28:LEU:CD1	30:DY:54:VAL:HG12	2.47	0.44
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.31	0.44
7:CH:87:ARG:HG3	7:CH:90:GLU:OE2	2.16	0.44
46:DU:81:ARG:HB2	46:DU:96:LYS:HG3	2.00	0.44
9:CJ:73:LEU:HD13	9:CJ:75:ASP:HB2	1.98	0.44
9:CJ:6:ILE:HB	9:CJ:76:ILE:CD1	2.43	0.44
33:D1:8:ILE:HG13	33:D1:51:ALA:HA	1.98	0.44
1:AA:818:G:O2'	1:AA:819:A:H5''	2.17	0.44
46:BU:73:ASN:C	46:BU:75:ALA:H	2.20	0.44
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.99	0.44
4:CE:37:VAL:HG12	4:CE:47:PHE:CB	2.46	0.44
23:BB:1170:C:H2'	23:BB:1171:G:H8	1.82	0.44
1:CA:598:U:H4'	7:CH:85:TYR:CG	2.52	0.44
49:BR:71:LYS:HE3	49:BR:73:LYS:NZ	2.32	0.44
35:DV:62:THR:CG2	35:DV:71:LYS:HG2	2.45	0.44
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.98	0.44
1:CA:634:C:H2'	1:CA:635:A:C8	2.52	0.44
2:AC:2:GLN:CA	2:AC:2:GLN:HE21	2.30	0.44
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.65	0.44
1:CA:255:G:H2'	1:CA:256:U:H6	1.82	0.44
3:CD:115:GLN:HG3	3:CD:119:HIS:ND1	2.32	0.44
4:AE:95:MET:HA	4:AE:124:ALA:CB	2.44	0.44
1:AA:90:C:H2'	1:AA:91:U:H5	1.82	0.44
25:DC:196:ASN:O	25:DC:197:ALA:HB3	2.17	0.44
23:BB:20:C:H2'	23:BB:21:A:H8	1.81	0.44
1:AA:134:G:H2'	1:AA:135:C:O4'	2.17	0.44
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.82	0.44
43:BO:30:ARG:HG2	43:BO:102:ARG:NH1	2.31	0.44
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.82	0.44
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.53	0.44
2:AC:194:VAL:HG12	2:AC:195:ILE:H	1.81	0.44
27:DK:87:LEU:HB2	27:DK:93:GLN:O	2.16	0.44
47:BF:115:GLY:CA	47:BF:177:ARG:HB2	2.47	0.44
14:CO:26:GLU:HG3	14:CO:81:LEU:CD1	2.47	0.44
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.80	0.44
20:AB:93:HIS:HB2	20:AB:145:ASN:O	2.17	0.44
23:DB:1744:A:H2'	23:DB:1745:A:C8	2.52	0.44
1:AA:358:U:H2'	1:AA:359:G:H8	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:88:C:H2'	22:DA:89:U:C5	2.53	0.44
10:CK:117:HIS:O	10:CK:118:ASN:HB2	2.17	0.44
23:DB:834:G:O2'	23:DB:835:C:H5'	2.17	0.44
23:BB:1633:G:O2'	23:BB:1634:A:H5''	2.17	0.44
23:BB:2536:G:H2'	23:BB:2537:U:C6	2.53	0.44
27:DK:79:PHE:O	27:DK:81:GLY:N	2.50	0.44
23:BB:692:C:H2'	23:BB:693:A:H8	1.82	0.44
23:DB:605:G:H1'	23:DB:657:U:H1'	1.99	0.44
23:BB:657:U:H2'	23:BB:658:U:H6	1.82	0.44
23:BB:1181:U:O2'	23:BB:1182:G:H5'	2.17	0.44
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.17	0.44
1:AA:72:A:H2'	1:AA:73:C:H6	1.82	0.44
23:BB:2234:G:O2'	23:BB:2235:G:H5'	2.17	0.44
23:DB:598:U:H2'	23:DB:599:A:C8	2.52	0.44
23:BB:942:G:O2'	23:BB:943:A:H5'	2.17	0.44
23:BB:104:A:H2'	23:BB:105:C:C6	2.52	0.44
23:BB:686:U:O2'	36:B2:5:PHE:HA	2.17	0.44
22:DA:76:G:O2'	22:DA:77:U:H5'	2.16	0.44
23:BB:579:G:H4'	23:BB:2017:U:H2'	1.99	0.44
23:DB:1210:G:OP1	23:DB:1212:G:H5'	2.17	0.44
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.53	0.44
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.17	0.44
23:BB:1712:U:H2'	23:BB:1713:A:N7	2.32	0.44
23:BB:2294:G:H2'	23:BB:2295:C:H6	1.82	0.44
23:BB:779:U:OP1	25:BC:48:ILE:HG13	2.16	0.44
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.17	0.44
23:BB:596:U:H2'	23:BB:597:G:C8	2.52	0.44
36:B2:13:ASN:O	36:B2:17:GLY:HA3	2.16	0.44
28:BP:84:SER:OG	28:BP:85:VAL:N	2.49	0.44
23:BB:751:A:H5'	45:BS:90:LYS:HA	1.99	0.44
23:DB:2018:G:H2'	23:DB:2019:A:C8	2.52	0.44
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.52	0.44
3:AD:72:ARG:HG2	3:AD:72:ARG:HH11	1.81	0.44
22:DA:73:A:H2'	22:DA:73:A:N3	2.31	0.44
3:CD:48:SER:O	3:CD:49:ASP:C	2.54	0.44
1:CA:81:A:H2'	1:CA:82:G:H8	1.82	0.44
52:BW:23:LYS:HZ3	52:BW:24:ARG:HG3	1.82	0.44
8:AI:18:VAL:HG11	8:AI:82:ILE:HG12	2.00	0.44
8:AI:48:ARG:HB3	8:AI:52:GLU:OE1	2.17	0.44
47:DF:134:GLN:NE2	47:DF:149:ARG:HB2	2.28	0.44
47:BF:127:TYR:HB2	47:BF:155:ILE:HB	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:12:LYS:O	41:BJ:13:ARG:HB2	2.17	0.44
26:DD:20:VAL:HG22	27:DK:72:PRO:HB3	2.00	0.44
50:BT:9:LYS:O	50:BT:10:VAL:C	2.56	0.44
23:DB:1181:U:O2'	23:DB:1182:G:H5'	2.17	0.44
42:BN:70:THR:OG1	42:BN:75:ILE:HD11	2.17	0.44
47:DF:12:VAL:HG13	47:DF:27:VAL:HG11	1.99	0.44
47:DF:3:LEU:O	47:DF:3:LEU:HD13	2.16	0.44
40:DH:49:ALA:HB3	40:DH:50:ARG:CZ	2.46	0.44
18:AS:10:ILE:CG2	18:AS:38:THR:H	2.23	0.44
47:BF:131:VAL:C	47:BF:133:GLU:H	2.21	0.44
2:AC:131:ARG:HG3	2:AC:135:ARG:CZ	2.48	0.44
12:AM:3:ILE:HD12	12:AM:9:PRO:HD2	1.98	0.44
23:DB:144:A:H2'	23:DB:145:C:C6	2.51	0.44
43:DO:15:ARG:NH2	43:DO:95:SER:HB3	2.22	0.44
23:DB:359:G:H2'	23:DB:359:G:N3	2.31	0.44
23:BB:279:A:H2'	23:BB:280:U:C5'	2.47	0.44
23:DB:141:G:N1	50:DT:2:ILE:HG21	2.32	0.44
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.32	0.44
23:BB:2284:A:P	33:B1:5:ARG:HG3	2.57	0.44
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.50	0.44
33:D1:8:ILE:HG12	33:D1:52:LYS:HG3	1.99	0.44
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.84	0.44
20:CB:185:ILE:HG23	20:CB:199:ILE:O	2.17	0.44
48:BG:101:VAL:O	48:BG:101:VAL:HG23	2.16	0.44
1:AA:586:C:H2'	1:AA:587:G:H5'	1.99	0.44
25:BC:80:LEU:HD23	25:BC:91:ALA:HB2	1.99	0.44
1:CA:658:C:O2'	1:CA:659:U:H5'	2.17	0.44
20:CB:119:GLN:HB3	20:CB:125:PHE:HB2	2.00	0.44
23:BB:2134:A:H2'	23:BB:2135:A:C8	2.46	0.44
25:DC:203:VAL:O	25:DC:205:GLY:N	2.50	0.44
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.82	0.44
23:DB:825:A:O2'	37:DL:54:GLN:NE2	2.50	0.44
1:CA:1038:C:H2'	1:CA:1039:G:H8	1.77	0.44
5:CF:37:HIS:O	5:CF:97:THR:HG23	2.16	0.44
13:AN:80:ARG:HG3	13:AN:81:ILE:N	2.32	0.44
10:CK:55:ARG:NH1	10:CK:60:PHE:HD1	2.14	0.44
43:DO:94:ARG:HH21	43:DO:94:ARG:HG2	1.82	0.44
1:CA:89:U:H2'	1:CA:90:C:H6	1.82	0.44
9:CJ:57:VAL:O	9:CJ:58:ASN:HB2	2.18	0.44
13:CN:80:ARG:HG3	13:CN:81:ILE:N	2.32	0.44
45:DS:81:SER:CA	45:DS:99:ARG:HA	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:48:LYS:HG3	21:CU:49:ALA:N	2.33	0.44
23:BB:308:G:O2'	46:BU:16:LYS:HE3	2.18	0.44
23:BB:309:A:N3	23:BB:329:G:O2'	2.46	0.44
1:AA:601:G:H2'	1:AA:602:A:C8	2.52	0.44
22:BA:116:G:H4'	43:BO:54:VAL:CG2	2.46	0.44
22:BA:94:A:O2'	22:BA:95:U:H5'	2.17	0.44
23:BB:7:G:H4'	41:BJ:15:TRP:HZ2	1.82	0.44
42:DN:11:ASN:O	42:DN:12:ARG:HB2	2.16	0.44
23:DB:6:A:H2'	23:DB:7:G:H8	1.83	0.44
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.52	0.44
18:AS:27:LYS:HG3	18:AS:28:LYS:HD3	1.99	0.44
1:CA:1283:U:O2'	1:CA:1284:C:H5'	2.18	0.44
23:DB:526:A:H62	23:DB:2626:C:H4'	1.82	0.44
23:BB:227:A:C2	23:BB:2407:A:H1'	2.51	0.44
23:BB:2075:U:H2'	23:BB:2077:A:OP1	2.17	0.44
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.52	0.44
1:AA:1409:C:N4	1:AA:1410:A:N6	2.66	0.44
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.18	0.44
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.31	0.44
1:AA:643:C:OP1	7:AH:30:LYS:HD2	2.17	0.44
44:BQ:15:LYS:O	44:BQ:18:LYS:HB3	2.16	0.44
1:AA:821:G:O2'	1:AA:822:U:H5'	2.18	0.44
23:DB:806:C:O2'	23:DB:807:U:H5'	2.17	0.44
23:BB:925:A:O2'	23:BB:926:G:H5'	2.17	0.44
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	2.00	0.44
23:DB:579:G:H4'	23:DB:2017:U:H2'	1.99	0.44
23:DB:907:G:C2'	23:DB:908:C:H5'	2.47	0.44
23:DB:34:U:H4'	23:DB:35:G:OP2	2.16	0.44
4:AE:76:ASN:O	4:AE:77:ASN:HB3	2.17	0.44
9:CJ:11:LYS:HB2	9:CJ:97:ASP:OD1	2.17	0.44
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.17	0.44
52:DW:23:LYS:HD2	52:DW:24:ARG:HB3	1.99	0.44
37:BL:81:ASP:O	37:BL:82:LEU:HB2	2.18	0.44
25:DC:116:GLN:HG2	25:DC:117:SER:N	2.32	0.44
1:AA:1147:C:H4'	8:AI:6:TYR:CE1	2.52	0.44
40:BH:116:ARG:CB	40:BH:131:SER:N	2.81	0.44
47:BF:12:VAL:HG13	47:BF:27:VAL:HG11	1.99	0.44
3:CD:169:TRP:O	3:CD:182:LYS:HB2	2.18	0.44
48:BG:18:ILE:HA	48:BG:22:VAL:O	2.17	0.44
41:BJ:41:LYS:O	44:BQ:66:ALA:HB1	2.18	0.44
49:BR:40:MET:O	49:BR:41:ILE:HD13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:94:ILE:HG22	40:DH:122:LEU:HB2	1.99	0.44
35:DV:28:ALA:HB1	35:DV:89:ILE:O	2.17	0.44
25:DC:79:ARG:HD2	25:DC:81:GLU:CG	2.47	0.44
29:DE:29:HIS:CA	29:DE:32:VAL:HG22	2.47	0.44
29:DE:32:VAL:HG23	29:DE:33:VAL:N	2.32	0.44
45:DS:28:LYS:CD	45:DS:29:VAL:H	2.31	0.44
47:DF:98:PHE:C	47:DF:100:GLU:N	2.71	0.44
12:AM:75:SER:O	12:AM:78:ARG:HB2	2.18	0.44
1:CA:121:U:H3'	1:CA:121:U:OP1	2.16	0.44
26:BD:151:THR:N	26:BD:152:PRO:CD	2.80	0.44
23:BB:2444:G:P	29:BE:63:LYS:HD2	2.56	0.44
6:CG:41:ILE:HG21	6:CG:115:MET:HG3	1.98	0.44
23:BB:2747:G:O6	23:BB:2754:U:H2'	2.17	0.44
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.17	0.44
9:CJ:12:ALA:N	9:CJ:18:ILE:HD12	2.32	0.44
23:DB:2720:U:OP1	28:DP:52:ARG:NH2	2.51	0.44
5:CF:9:MET:HB3	5:CF:59:TYR:CE2	2.53	0.44
5:CF:62:MET:HG3	5:CF:64:VAL:CG2	2.39	0.44
41:DJ:80:HIS:O	41:DJ:81:ILE:C	2.55	0.44
32:B4:19:ARG:C	32:B4:21:GLY:N	2.70	0.44
23:BB:2745:C:H41	23:BB:2755:C:C4'	2.30	0.44
30:BY:16:LEU:HD23	30:BY:19:HIS:CD2	2.53	0.44
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.43	0.44
20:AB:87:ASP:CB	20:AB:224:ARG:HE	2.30	0.44
30:DY:47:ILE:HG21	30:DY:56:VAL:HG22	1.99	0.44
33:D1:3:GLY:C	33:D1:5:ARG:N	2.71	0.44
23:DB:627:A:H4'	23:DB:628:G:H5'	1.98	0.44
37:DL:80:SER:HB3	37:DL:115:GLU:OE2	2.18	0.44
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	2.00	0.44
40:DH:97:ARG:HB3	40:DH:112:LYS:HD3	1.98	0.44
48:DG:88:LEU:HD13	48:DG:93:TYR:HB3	1.99	0.44
40:DH:126:GLY:O	40:DH:146:VAL:HG23	2.17	0.44
33:D1:51:ALA:O	33:D1:52:LYS:C	2.55	0.44
39:BX:22:LEU:HD12	39:BX:23:ARG:HG2	2.00	0.44
39:BX:22:LEU:O	39:BX:24:GLU:N	2.48	0.44
39:BX:23:ARG:HB3	39:BX:27:ASN:OD1	2.17	0.44
27:DK:76:VAL:N	28:DP:72:VAL:HG23	2.26	0.44
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.31	0.44
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.85	0.44
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.32	0.44
23:BB:1171:G:H3'	23:BB:1172:C:C4'	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:15:SER:HB3	49:BR:18:GLN:HE21	1.81	0.44
23:BB:2417:C:O2'	23:BB:2418:A:H5'	2.17	0.44
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.53	0.44
33:B1:8:ILE:HG13	33:B1:51:ALA:HA	2.00	0.44
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.80	0.44
25:DC:20:ASN:OD1	25:DC:22:GLU:HG2	2.18	0.44
22:DA:2:G:H3'	22:DA:2:G:OP2	2.17	0.44
25:DC:157:ALA:C	25:DC:159:THR:H	2.20	0.44
2:AC:59:PRO:HB3	9:AJ:94:ALA:HB2	1.98	0.44
23:BB:20:C:O2'	23:BB:21:A:H5'	2.18	0.44
1:AA:1237:C:H3'	1:AA:1238:A:H5'	2.00	0.44
20:CB:10:LYS:CB	20:CB:211:LEU:HD21	2.46	0.44
23:DB:2109:U:H3	23:DB:2180:U:H2'	1.82	0.44
43:DO:53:THR:O	43:DO:59:ALA:HB2	2.17	0.44
23:DB:878:A:H1'	23:DB:899:A:H62	1.82	0.44
25:BC:66:PHE:N	25:BC:66:PHE:CD1	2.86	0.44
12:CM:91:ARG:CZ	12:CM:91:ARG:HB2	2.47	0.44
1:CA:1305:G:H2'	1:CA:1331:G:N2	2.32	0.44
30:BY:18:LYS:O	30:BY:22:THR:HG23	2.17	0.44
23:BB:2080:A:H4'	51:BZ:19:SER:OG	2.17	0.44
29:DE:95:LYS:O	29:DE:96:VAL:HB	2.17	0.44
23:BB:2528:U:O2'	23:BB:2529:G:H3'	2.17	0.44
23:DB:263:G:H2'	23:DB:264:C:H6	1.82	0.44
43:DO:110:ALA:HA	43:DO:113:ALA:HB3	1.98	0.44
42:BN:11:ASN:O	42:BN:12:ARG:HB2	2.17	0.44
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.79	0.44
23:BB:978:G:O4'	23:BB:1001:A:H2	2.01	0.44
23:DB:52:A:C5	23:DB:118:A:C2	3.05	0.44
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.18	0.44
5:CF:100:SER:HA	17:CR:23:LYS:HE2	1.99	0.44
11:AL:33:CYS:HA	11:AL:54:VAL:HA	2.00	0.44
23:DB:41:C:H2'	23:DB:42:A:O4'	2.16	0.44
23:BB:526:A:N6	23:BB:2626:C:C4'	2.81	0.44
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.17	0.44
43:BO:106:LEU:HG	43:BO:107:ALA:N	2.33	0.44
7:AH:17:GLN:CD	7:AH:69:ALA:HB1	2.37	0.44
23:DB:1998:A:OP2	26:DD:141:ARG:NH2	2.48	0.44
1:CA:642:A:H2'	1:CA:643:C:C6	2.52	0.44
23:DB:660:C:H2'	23:DB:661:A:C8	2.52	0.44
23:DB:600:G:O4'	29:DE:100:MET:HE3	2.18	0.44
1:AA:542:G:O2'	1:AA:543:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:562:U:H1'	11:CL:11:ARG:HD2	1.99	0.44
23:DB:683:U:O5'	23:DB:683:U:H6	2.00	0.44
23:BB:2446:G:H2'	23:BB:2447:G:H5''	2.00	0.44
23:DB:2018:G:H2'	23:DB:2019:A:H8	1.82	0.44
26:DD:56:LYS:HG3	26:DD:58:ASN:HB2	1.99	0.44
45:BS:88:ARG:N	45:BS:92:ARG:O	2.47	0.44
23:BB:251:A:H2'	23:BB:252:G:O4'	2.17	0.44
23:BB:15:G:O2'	23:BB:16:C:H5'	2.17	0.44
1:CA:903:G:H2'	1:CA:904:U:C6	2.52	0.44
1:AA:117:G:H2'	1:AA:118:U:O4'	2.18	0.44
23:DB:1838:C:N4	23:DB:1898:U:H2'	2.32	0.44
20:AB:80:LYS:O	20:AB:84:LEU:HB3	2.17	0.44
1:CA:577:G:O2'	1:CA:578:C:H5'	2.17	0.44
44:BQ:49:ARG:HG2	44:BQ:49:ARG:HH11	1.81	0.44
24:DI:59:THR:O	24:DI:59:THR:HG23	2.18	0.44
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.18	0.44
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	2.00	0.44
1:CA:1047:G:H21	1:CA:1215:G:C4'	2.30	0.44
23:BB:211:C:O2'	23:BB:212:G:H5'	2.18	0.44
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.18	0.44
23:DB:917:A:C2	23:DB:918:A:H1'	2.52	0.44
23:DB:918:A:C2'	23:DB:919:U:H5'	2.46	0.44
5:CF:3:HIS:ND1	5:CF:95:ALA:HB2	2.31	0.44
23:BB:965:C:O2'	23:BB:966:G:H5'	2.18	0.44
40:BH:80:ILE:HD11	40:BH:102:ALA:HB2	1.98	0.44
40:BH:147:VAL:HG12	40:BH:148:ALA:N	2.23	0.44
47:BF:55:ASP:OD2	47:BF:149:ARG:HG3	2.16	0.44
48:DG:29:ASN:HD21	48:DG:81:GLY:HA2	1.81	0.44
44:DQ:91:ARG:HH12	49:DR:10:LYS:CB	2.23	0.44
8:CI:85:ALA:HA	8:CI:88:GLU:OE2	2.17	0.44
1:CA:663:A:H2'	1:CA:664:G:C8	2.52	0.44
38:DM:38:ARG:HB3	38:DM:98:PRO:HD3	1.99	0.44
25:BC:131:MET:CE	25:BC:187:CYS:HB2	2.48	0.44
50:DT:29:THR:CG2	50:DT:86:THR:HG22	2.47	0.44
50:DT:45:ALA:HA	50:DT:48:GLN:CG	2.47	0.44
42:BN:61:ALA:C	42:BN:63:ARG:H	2.21	0.44
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.17	0.44
42:DN:70:THR:C	42:DN:72:ASP:H	2.21	0.44
45:DS:24:ILE:HG23	45:DS:32:ALA:HB1	2.00	0.44
19:AT:38:ILE:HG22	19:AT:39:GLU:N	2.32	0.44
4:CE:93:VAL:HG11	4:CE:110:MET:SD	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:18:VAL:O	18:AS:22:VAL:HG23	2.17	0.44
23:BB:2758:A:C2	23:BB:2759:G:H1'	2.53	0.44
10:AK:77:GLY:O	10:AK:79:LYS:HE3	2.17	0.44
20:AB:95:TRP:HZ2	20:AB:100:LEU:HD22	1.83	0.44
36:B2:34:ARG:HG2	36:B2:34:ARG:HH11	1.82	0.44
51:DZ:6:GLN:NE2	51:DZ:50:ARG:N	2.65	0.44
40:BH:47:PHE:CA	40:BH:50:ARG:HH21	2.30	0.44
4:AE:73:VAL:HG11	4:AE:143:LEU:HB3	2.00	0.44
13:AN:52:ARG:HH11	13:AN:58:ARG:HH21	1.62	0.44
4:CE:81:GLN:CD	4:CE:149:PRO:HD3	2.38	0.44
13:AN:30:ILE:N	13:AN:30:ILE:HD12	2.29	0.44
33:B1:3:GLY:C	33:B1:5:ARG:N	2.70	0.44
20:CB:63:LYS:HA	20:CB:224:ARG:CZ	2.47	0.44
2:AC:130:ARG:HD2	2:AC:133:MET:HE3	2.00	0.44
4:CE:37:VAL:HG12	4:CE:47:PHE:HB3	2.00	0.44
23:DB:1655:A:H2	23:DB:2049:G:O3'	2.01	0.44
44:BQ:27:ARG:HH11	44:BQ:27:ARG:HG3	1.83	0.44
20:CB:130:LYS:HZ3	20:CB:130:LYS:HA	1.82	0.44
26:DD:113:SER:HB3	26:DD:167:ASN:HA	2.00	0.44
7:AH:63:LYS:CD	7:AH:70:VAL:HG21	2.47	0.44
23:DB:481:G:H1'	23:DB:506:G:N2	2.33	0.44
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	1.98	0.44
4:AE:37:VAL:HG12	4:AE:47:PHE:HB3	1.99	0.44
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.17	0.44
25:BC:102:TYR:C	25:BC:103:ILE:HG13	2.36	0.44
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.82	0.44
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.44
35:BV:64:VAL:HG13	35:BV:68:LYS:O	2.16	0.44
6:AG:64:ALA:HA	6:AG:127:ALA:CA	2.45	0.44
1:CA:190:A:C4	1:CA:191:G:H1'	2.52	0.44
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.17	0.44
23:DB:589:U:H2'	23:DB:590:A:H8	1.79	0.44
29:BE:108:ILE:HG12	37:BL:2:ARG:NH2	2.33	0.44
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.33	0.44
1:CA:178:C:O2'	1:CA:179:A:H5'	2.17	0.44
15:CP:50:THR:CG2	15:CP:51:ARG:N	2.80	0.44
6:AG:14:ASP:CB	6:AG:19:SER:H	2.31	0.44
23:BB:304:U:H2'	23:BB:305:C:C6	2.52	0.44
1:AA:430:A:OP2	3:AD:6:PRO:HA	2.17	0.44
20:AB:121:GLN:HB3	20:AB:121:GLN:HE21	1.55	0.44
1:CA:564:C:H1'	16:CQ:32:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1921:G:H2'	23:DB:1922:G:H8	1.83	0.44
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.82	0.44
26:BD:4:LEU:HD23	26:BD:101:PHE:CE1	2.53	0.44
23:BB:948:C:H2'	23:BB:949:G:C8	2.53	0.44
39:DX:20:ASN:N	39:DX:20:ASN:HD22	2.14	0.44
22:BA:55:U:H1'	47:BF:25:MET:HE3	1.99	0.44
1:AA:201:G:H2'	1:AA:202:G:C8	2.52	0.44
1:CA:814:A:C5'	1:CA:1511:G:H4'	2.47	0.44
23:DB:2182:U:O2'	23:DB:2183:A:H5'	2.17	0.44
23:DB:657:U:H2'	23:DB:658:U:H6	1.82	0.44
1:AA:640:A:O2'	7:AH:107:LYS:HE3	2.17	0.44
1:CA:878:A:H5''	7:CH:80:PRO:HG2	1.98	0.44
23:DB:572:A:OP2	49:DR:80:ARG:NH2	2.50	0.44
18:AS:20:LYS:HD2	18:AS:20:LYS:O	2.18	0.44
23:BB:863:A:H2'	23:BB:864:G:C8	2.53	0.44
20:AB:116:LEU:HB3	20:AB:140:LEU:HG	2.00	0.44
23:DB:2199:A:H3'	23:DB:2200:C:C6	2.52	0.44
1:AA:105:G:H2'	1:AA:106:C:H6	1.83	0.44
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.17	0.44
47:DF:15:LEU:HD13	47:DF:28:PRO:HD2	1.99	0.44
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.81	0.44
23:BB:351:C:H2'	23:BB:352:A:H8	1.82	0.44
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.17	0.44
1:CA:152:A:H3'	1:CA:153:C:H6	1.82	0.44
45:DS:2:GLU:O	45:DS:3:THR:O	2.36	0.44
7:CH:29:SER:O	7:CH:33:VAL:HG23	2.16	0.44
20:AB:25:LYS:O	20:AB:28:PRO:HD2	2.18	0.44
20:CB:139:GLU:HG2	20:CB:143:LEU:CD1	2.46	0.44
1:AA:649:A:H2'	1:AA:650:G:O4'	2.18	0.44
23:DB:1310:G:C2'	23:DB:1311:G:H5'	2.48	0.44
23:BB:259:G:O2'	23:BB:260:G:H5'	2.18	0.44
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.17	0.44
23:BB:730:A:O2'	23:BB:731:C:H5'	2.16	0.44
24:BI:63:ASP:C	24:BI:65:SER:H	2.20	0.44
23:DB:925:A:O2'	23:DB:926:G:H5'	2.18	0.44
1:CA:62:U:H4'	1:CA:378:G:N2	2.33	0.44
23:DB:2434:A:H8	23:DB:2434:A:H2'	1.68	0.44
29:DE:7:ASP:OD2	29:DE:7:ASP:N	2.50	0.44
23:BB:2336:A:O2'	23:BB:2337:G:P	2.74	0.44
37:DL:105:ILE:HG22	37:DL:106:GLU:N	2.32	0.44
37:DL:108:ALA:HB3	37:DL:125:LEU:CD2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:31:GLU:O	47:BF:32:LYS:O	2.36	0.44
23:DB:529:A:OP2	41:DJ:113:PRO:HD3	2.18	0.44
49:DR:47:VAL:O	49:DR:49:ILE:N	2.50	0.44
44:BQ:83:LYS:HZ2	44:BQ:83:LYS:HA	1.83	0.44
40:BH:2:GLN:O	40:BH:3:VAL:O	2.36	0.44
1:CA:906:A:C2'	1:CA:907:A:H5''	2.48	0.44
23:DB:345:A:N3	23:DB:346:A:N1	2.66	0.44
44:BQ:4:LYS:HB3	44:BQ:4:LYS:HE3	1.78	0.44
50:DT:38:ALA:HB3	50:DT:81:LYS:NZ	2.33	0.44
45:BS:28:LYS:HD3	45:BS:69:LEU:O	2.17	0.44
47:DF:34:THR:O	47:DF:89:THR:HA	2.17	0.44
25:DC:180:MET:HB2	25:DC:268:ARG:CB	2.44	0.44
23:BB:2060:A:C3'	29:BE:63:LYS:HZ1	2.30	0.44
12:CM:14:ALA:HB1	12:CM:33:LEU:HD21	2.00	0.44
23:DB:2665:A:H2'	23:DB:2666:C:O2	2.18	0.44
23:BB:2756:U:C5	23:BB:2759:G:O6	2.70	0.44
52:BW:35:ILE:O	52:BW:37:VAL:HG23	2.18	0.44
23:DB:2688:G:H1'	23:DB:2721:A:N6	2.32	0.44
23:DB:2531:A:OP2	48:DG:174:LYS:HB3	2.18	0.44
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.80	0.44
51:DZ:63:GLY:O	51:DZ:67:VAL:HG23	2.18	0.44
27:DK:20:MET:C	27:DK:41:ILE:HD12	2.38	0.44
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.45	0.44
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.32	0.44
2:CC:112:ALA:HB2	2:CC:182:ASP:O	2.17	0.44
50:DT:2:ILE:O	50:DT:3:ARG:HD3	2.18	0.44
20:AB:63:LYS:HA	20:AB:224:ARG:CZ	2.47	0.44
22:BA:6:G:H2'	22:BA:7:G:H8	1.81	0.44
23:BB:2657:A:O3'	48:BG:159:LYS:NZ	2.48	0.44
48:BG:88:LEU:HD11	48:BG:94:ARG:N	2.31	0.44
25:BC:94:LEU:HA	25:BC:100:ARG:HA	2.00	0.44
46:BU:19:GLY:C	46:BU:20:LYS:HZ2	2.20	0.44
38:DM:37:GLY:HA3	38:DM:127:LYS:HZ3	1.81	0.44
27:BK:119:ALA:HB3	27:BK:120:PRO:CD	2.47	0.44
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.18	0.44
41:BJ:97:PRO:HD2	41:BJ:98:GLU:OE2	2.18	0.44
1:CA:321:A:H5''	1:CA:328:C:N4	2.32	0.44
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.18	0.44
23:BB:423:A:H5'	23:BB:424:G:H5'	1.99	0.44
23:BB:1843:C:H2'	23:BB:1844:C:C6	2.52	0.44
25:BC:255:LYS:C	25:BC:256:THR:HG23	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2228:G:H2'	23:BB:2229:U:H6	1.83	0.44
3:CD:137:SER:HB2	3:CD:140:ASP:OD2	2.18	0.44
50:DT:73:ARG:CB	50:DT:73:ARG:HH21	2.26	0.44
23:DB:2793:C:H2'	23:DB:2794:C:C6	2.52	0.44
16:CQ:57:VAL:HB	16:CQ:79:GLU:CB	2.47	0.44
32:B4:15:LYS:O	32:B4:16:ILE:CB	2.65	0.44
9:CJ:55:PRO:O	9:CJ:56:HIS:HB3	2.17	0.44
23:BB:2602:A:H4'	23:BB:2603:G:C5'	2.47	0.44
1:CA:651:C:H2'	1:CA:652:U:C6	2.53	0.44
25:DC:29:PHE:CE2	25:DC:31:PRO:HG2	2.53	0.44
41:BJ:134:ALA:HB3	41:BJ:135:GLN:NE2	2.31	0.44
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.18	0.44
14:AO:17:ARG:HG2	14:AO:24:SER:HB2	1.99	0.44
5:AF:86:ARG:CZ	17:AR:63:TYR:HB3	2.48	0.44
23:DB:1190:G:P	37:DL:32:GLY:HA2	2.57	0.44
23:DB:540:C:O2'	23:DB:541:A:H5'	2.18	0.44
23:BB:693:A:H2'	23:BB:694:U:H6	1.81	0.44
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.17	0.44
23:DB:40:U:H2'	23:DB:41:C:C6	2.52	0.44
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.80	0.44
4:AE:136:VAL:HG13	4:AE:137:ARG:H	1.81	0.44
10:CK:108:ASN:ND2	21:CU:6:ARG:HB2	2.33	0.44
23:DB:863:A:O2'	23:DB:864:G:H5'	2.17	0.44
3:AD:56:GLU:HB2	3:AD:198:LEU:HD23	1.99	0.44
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.53	0.44
1:CA:46:G:O2'	1:CA:365:U:H1'	2.18	0.44
1:CA:945:G:H21	1:CA:1334:G:H4'	1.82	0.44
9:AJ:44:THR:HG23	9:AJ:70:HIS:HA	2.00	0.44
4:AE:151:MET:O	4:AE:155:LYS:HG3	2.17	0.44
23:BB:910:A:H2	23:BB:2264:C:O2	2.00	0.44
1:CA:44:A:O2'	1:CA:45:G:H5'	2.17	0.44
2:CC:25:THR:HG23	13:CN:75:LYS:HE2	1.98	0.44
31:D0:35:GLU:OE1	31:D0:44:ALA:HB3	2.18	0.44
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.18	0.44
40:BH:15:LEU:C	40:BH:15:LEU:HD13	2.38	0.44
19:CT:72:ALA:HA	19:CT:75:LYS:HD3	1.99	0.44
1:CA:138:G:O2'	1:CA:139:A:H5'	2.17	0.44
52:DW:31:LEU:O	52:DW:32:ALA:HB2	2.17	0.44
37:DL:89:VAL:HG13	37:DL:89:VAL:O	2.18	0.44
40:BH:133:GLN:HE21	40:BH:135:HIS:C	2.21	0.44
20:AB:119:GLN:HE22	20:AB:124:THR:HG22	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:70:ARG:HG3	12:AM:74:MET:CE	2.48	0.44
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.81	0.44
41:DJ:36:LEU:HD11	41:DJ:122:LEU:HB2	1.98	0.44
44:DQ:108:LEU:HA	49:DR:48:LYS:HD3	2.00	0.44
49:DR:4:VAL:O	49:DR:5:PHE:HB3	2.18	0.44
40:DH:3:VAL:HG12	40:DH:38:PRO:HA	1.99	0.44
1:AA:1060:U:C5'	9:AJ:53:ILE:HG12	2.46	0.44
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.33	0.44
35:DV:76:ASP:C	38:DM:136:MET:HE3	2.38	0.44
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.52	0.44
23:BB:705:A:O2'	25:BC:6:LYS:HG3	2.18	0.44
23:DB:76:C:O2'	23:DB:77:G:H5'	2.17	0.44
25:BC:131:MET:HE2	25:BC:187:CYS:O	2.17	0.44
42:DN:70:THR:OG1	42:DN:75:ILE:HD11	2.17	0.44
45:DS:24:ILE:CG2	45:DS:32:ALA:HB1	2.48	0.44
47:DF:1:ALA:HB1	47:DF:4:HIS:HB3	2.00	0.44
23:DB:2386:A:N3	52:DW:38:ARG:HD2	2.33	0.44
23:BB:675:A:H4'	29:BE:62:GLN:NE2	2.21	0.44
37:BL:29:LYS:C	37:BL:30:THR:HG23	2.38	0.44
38:BM:1:MET:HG2	38:BM:2:LEU:N	2.33	0.44
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.22	0.44
26:BD:91:THR:HG23	26:BD:92:VAL:N	2.24	0.44
23:BB:783:A:C2'	23:BB:784:G:O5'	2.63	0.44
42:BN:28:LEU:HD23	42:BN:113:ILE:HG23	1.98	0.44
1:AA:16:A:O2'	4:AE:20:VAL:HG13	2.18	0.44
1:CA:1151:A:O4'	9:CJ:41:PRO:HB2	2.17	0.44
46:BU:21:ARG:HD3	46:BU:72:PHE:CG	2.52	0.44
38:DM:102:LEU:HB3	38:DM:103:TYR:CD1	2.53	0.44
30:DY:2:LYS:CG	30:DY:3:THR:H	2.29	0.44
49:DR:32:THR:HA	49:DR:61:ALA:O	2.17	0.44
49:DR:97:LYS:O	49:DR:98:ILE:HB	2.18	0.44
29:DE:170:ARG:HH22	29:DE:176:ASP:HB3	1.83	0.44
23:BB:580:U:O3'	44:BQ:30:VAL:HG13	2.17	0.44
23:DB:20:C:O2'	23:DB:21:A:H5'	2.17	0.44
23:DB:21:A:O2'	23:DB:22:C:H5'	2.18	0.44
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.53	0.44
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.83	0.44
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.17	0.44
2:AC:2:GLN:N	2:AC:2:GLN:NE2	2.63	0.44
23:DB:1883:U:H2'	23:DB:1884:G:C1'	2.47	0.44
1:CA:1348:U:O3'	8:CI:121:ARG:HG3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.17	0.44
1:AA:314:C:O2'	1:AA:315:A:H5'	2.17	0.44
23:BB:416:U:O2'	23:BB:417:C:H5'	2.17	0.44
10:CK:75:GLU:N	10:CK:75:GLU:CD	2.68	0.44
25:BC:196:ASN:O	25:BC:197:ALA:HB3	2.17	0.44
23:DB:230:G:H2'	23:DB:231:A:H8	1.82	0.44
49:BR:83:TYR:HE2	49:BR:85:LYS:HE3	1.83	0.44
1:CA:192:A:O2'	1:CA:193:C:H5'	2.18	0.44
4:CE:64:GLU:CD	4:CE:68:ARG:HE	2.20	0.44
23:DB:946:C:H2'	23:DB:947:A:C8	2.50	0.44
47:DF:115:GLY:CA	47:DF:177:ARG:HB2	2.48	0.44
1:AA:961:U:N3	1:AA:983:A:N6	2.65	0.44
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.45	0.44
23:BB:2432:A:N1	51:BZ:21:ALA:HA	2.33	0.44
15:CP:26:ASN:HD22	15:CP:26:ASN:HA	1.64	0.44
23:DB:185:G:H2'	23:DB:186:G:H8	1.82	0.44
3:AD:100:VAL:HG11	3:AD:142:VAL:HG21	2.00	0.44
7:AH:50:VAL:HG23	7:AH:57:GLU:O	2.18	0.44
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.83	0.44
1:CA:693:G:P	10:CK:126:ARG:HH12	2.40	0.44
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.99	0.44
23:DB:1422:G:H1'	23:DB:1495:A:H61	1.82	0.44
1:AA:1283:U:H2'	1:AA:1284:C:H6	1.80	0.44
23:DB:51:G:H1'	23:DB:118:A:N6	2.33	0.44
2:CC:53:ARG:HG2	2:CC:54:ILE:H	1.82	0.44
40:DH:27:ARG:HG3	51:DZ:60:ASP:OD1	2.18	0.44
26:DD:4:LEU:HD23	26:DD:101:PHE:CE1	2.52	0.44
23:BB:605:G:H1'	23:BB:657:U:H1'	1.99	0.44
50:BT:61:LEU:HD12	50:BT:62:VAL:O	2.17	0.44
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.99	0.44
43:DO:109:ALA:HA	43:DO:112:GLU:OE2	2.18	0.44
23:BB:625:G:H2'	23:BB:626:A:C8	2.52	0.44
5:AF:73:GLU:H	5:AF:73:GLU:HG2	1.51	0.44
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.99	0.44
42:BN:41:ALA:C	42:BN:43:GLU:H	2.19	0.44
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.82	0.44
1:CA:822:U:H2'	1:CA:823:C:C6	2.53	0.44
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.16	0.44
38:BM:55:ARG:NH2	38:BM:55:ARG:HG3	2.32	0.44
25:DC:162:GLN:NE2	25:DC:174:ARG:HE	2.15	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.83	0.44
31:D0:29:VAL:HA	31:D0:35:GLU:O	2.17	0.44
10:AK:16:SER:OG	1:CA:423:G:H5'	2.17	0.44
23:BB:257:C:H2'	23:BB:258:G:O4'	2.17	0.44
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.98	0.44
1:CA:810:C:O2'	1:CA:811:C:H5'	2.17	0.44
1:AA:1494:G:N2	23:BB:1912:A:N3	2.63	0.44
23:BB:1011:G:H5''	44:BQ:76:SER:OG	2.17	0.44
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.53	0.44
1:AA:123:U:H2'	1:AA:124:C:C6	2.53	0.44
31:B0:56:LYS:O	31:B0:56:LYS:HD3	2.18	0.44
10:AK:115:ILE:O	10:AK:115:ILE:HD12	2.16	0.44
1:CA:593:U:H2'	1:CA:594:U:C6	2.53	0.44
2:AC:5:HIS:ND1	13:AN:88:MET:HB3	2.33	0.44
23:DB:1099:G:O5'	24:DI:3:LYS:C	2.53	0.44
23:DB:2353:G:N3	52:DW:30:VAL:CG1	2.80	0.44
23:DB:923:G:O2'	23:DB:924:G:H5'	2.18	0.44
23:BB:2266:A:N3	23:BB:2272:U:H5	2.15	0.44
52:BW:44:PHE:HB3	52:BW:78:PHE:CD1	2.52	0.44
37:DL:81:ASP:O	37:DL:82:LEU:HB2	2.18	0.44
13:CN:60:ARG:CZ	13:CN:69:PRO:HB3	2.48	0.44
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.17	0.44
8:AI:35:GLU:O	8:AI:39:GLY:HA3	2.18	0.44
8:AI:66:VAL:HG22	8:AI:67:LYS:N	2.33	0.44
39:DX:31:GLN:CG	39:DX:37:LEU:HB2	2.42	0.44
47:BF:7:TYR:HA	47:BF:11:VAL:HG23	2.00	0.44
44:DQ:108:LEU:N	49:DR:48:LYS:HD3	2.32	0.44
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	2.00	0.44
1:CA:1147:C:H4'	8:CI:6:TYR:CE1	2.52	0.44
8:CI:35:GLU:O	8:CI:39:GLY:HA3	2.18	0.44
26:DD:187:LEU:O	26:DD:188:LEU:HD23	2.18	0.44
3:AD:151:GLN:N	3:AD:155:LYS:NZ	2.66	0.44
50:BT:39:THR:HG23	50:BT:42:GLU:H	1.83	0.44
50:DT:9:LYS:O	50:DT:10:VAL:C	2.56	0.44
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.18	0.44
38:DM:72:PRO:O	38:DM:73:ILE:HB	2.17	0.44
23:BB:1082:U:C2	23:BB:1086:A:N1	2.86	0.44
11:CL:88:ASP:C	11:CL:89:LEU:HD22	2.37	0.44
40:DH:5:LEU:HD21	40:DH:12:LEU:O	2.17	0.44
13:AN:2:LYS:HB3	13:AN:5:MET:HB2	1.99	0.44
28:DP:27:VAL:HG21	28:DP:73:PHE:CE2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.82	0.44
2:AC:133:MET:HG2	2:AC:150:VAL:CG1	2.48	0.44
1:AA:238:A:C3'	1:AA:239:U:H5''	2.48	0.44
23:BB:242:G:H5''	34:B3:63:TYR:CE2	2.53	0.44
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.48	0.44
41:DJ:74:TYR:CD1	41:DJ:92:MET:HG3	2.52	0.44
41:DJ:110:PRO:O	41:DJ:115:GLY:HA3	2.18	0.44
1:CA:1350:A:OP2	8:CI:119:LYS:HE3	2.17	0.44
25:BC:248:GLY:C	25:BC:249:VAL:HG22	2.38	0.44
1:AA:313:A:O2'	1:AA:314:C:H5'	2.18	0.44
1:AA:560:A:H4'	1:AA:561:U:C5'	2.46	0.44
23:BB:230:G:H2'	23:BB:231:A:H8	1.82	0.44
23:BB:21:A:H2'	23:BB:22:C:C6	2.53	0.44
35:BV:48:MET:SD	35:BV:85:LYS:HA	2.57	0.44
23:DB:2463:C:O2'	23:DB:2464:G:H5'	2.18	0.44
1:CA:958:A:N6	1:CA:959:A:N1	2.66	0.44
23:BB:967:U:H2'	23:BB:968:C:H6	1.81	0.44
1:CA:179:A:O2'	1:CA:180:U:H5'	2.17	0.44
37:BL:51:GLU:CD	37:BL:60:ARG:HH11	2.21	0.44
23:BB:851:C:O2'	30:BY:42:ALA:HA	2.18	0.44
16:AQ:57:VAL:HB	16:AQ:79:GLU:CB	2.47	0.44
25:BC:152:GLN:HA	25:BC:155:ARG:CD	2.48	0.44
23:DB:814:C:H2'	23:DB:815:C:C6	2.53	0.44
23:BB:904:G:H2'	23:BB:905:A:C8	2.52	0.44
10:AK:30:ILE:HG13	10:AK:30:ILE:O	2.17	0.44
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.33	0.44
23:BB:6:A:H2'	23:BB:7:G:C8	2.53	0.44
1:CA:1291:U:H2'	1:CA:1292:G:H8	1.83	0.44
23:BB:708:G:H2'	23:BB:709:U:H6	1.82	0.44
26:DD:171:THR:OG1	26:DD:172:VAL:N	2.48	0.44
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.32	0.44
23:DB:693:A:H2'	23:DB:694:U:H6	1.82	0.44
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.38	0.44
4:AE:88:HIS:CE1	4:AE:137:ARG:HH11	2.35	0.44
1:AA:541:G:O2'	3:AD:39:GLN:HB3	2.17	0.44
23:BB:1987:A:H2'	23:BB:1988:G:C8	2.52	0.44
45:BS:88:ARG:HH21	45:BS:88:ARG:HG3	1.82	0.44
1:CA:423:G:H2'	1:CA:424:G:O4'	2.18	0.44
23:DB:680:C:H2'	23:DB:681:G:C8	2.52	0.44
3:AD:164:ARG:HG3	3:AD:165:GLU:N	2.33	0.44
4:CE:76:ASN:O	4:CE:77:ASN:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:584:G:O2'	1:CA:585:G:H5'	2.17	0.44
31:B0:30:ASP:HB3	31:B0:33:SER:O	2.17	0.44
35:BV:10:LYS:HG2	35:BV:11:GLU:HG3	1.99	0.44
1:CA:51:A:H4'	1:CA:52:C:OP2	2.18	0.44
38:BM:65:ILE:N	38:BM:65:ILE:HD12	2.32	0.44
3:CD:72:ARG:HG2	3:CD:72:ARG:HH11	1.81	0.44
37:DL:51:GLU:CD	37:DL:60:ARG:HH11	2.21	0.44
29:DE:37:ALA:O	29:DE:39:ALA:N	2.43	0.44
23:BB:2179:C:H2'	23:BB:2180:U:C6	2.53	0.44
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.81	0.44
37:BL:77:ILE:CD1	37:BL:101:ILE:HD11	2.48	0.44
13:AN:68:ARG:HB2	13:AN:79:SER:HB3	2.00	0.44
20:AB:199:ILE:HD13	20:AB:212:TYR:HE2	1.83	0.44
20:CB:69:VAL:O	20:CB:163:ILE:HG22	2.18	0.44
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.81	0.44
8:AI:18:VAL:HG22	8:AI:64:ILE:HG23	1.98	0.44
8:AI:66:VAL:CG1	8:AI:74:GLN:HG3	2.48	0.44
49:DR:49:ILE:HD13	49:DR:53:PHE:H	1.83	0.44
48:BG:29:ASN:HD21	48:BG:81:GLY:HA2	1.82	0.44
41:BJ:28:LEU:HD23	41:BJ:29:ALA:N	2.33	0.44
1:CA:661:G:H2'	1:CA:662:U:C6	2.53	0.44
27:BK:72:PRO:O	27:BK:74:GLY:N	2.50	0.44
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.33	0.44
35:BV:28:ALA:HB1	35:BV:89:ILE:O	2.18	0.44
50:BT:16:VAL:HG12	50:BT:22:THR:HG22	1.98	0.44
48:DG:85:LYS:O	48:DG:85:LYS:HG2	2.17	0.44
42:DN:86:ARG:NE	42:DN:117:ASP:OD1	2.49	0.44
18:CS:40:PHE:O	18:CS:43:MET:HG3	2.17	0.44
23:BB:674:G:O3'	29:BE:60:TRP:CZ2	2.71	0.44
23:DB:2846:G:OP1	28:DP:52:ARG:NH1	2.50	0.44
5:CF:5:GLU:HG3	5:CF:63:ASN:OD1	2.18	0.44
29:DE:62:GLN:HE21	29:DE:62:GLN:HB2	1.56	0.44
13:CN:41:TRP:CD1	13:CN:43:ALA:HB3	2.53	0.44
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.99	0.44
15:AP:40:ASN:OD1	15:AP:43:ALA:N	2.51	0.44
36:B2:43:THR:O	36:B2:44:VAL:C	2.55	0.44
30:BY:47:ILE:HG21	30:BY:56:VAL:HG22	2.00	0.44
20:AB:59:ILE:O	20:AB:62:ARG:HD2	2.18	0.44
23:DB:2733:A:H3'	23:DB:2733:A:C8	2.53	0.44
25:DC:76:VAL:O	25:DC:78:GLU:N	2.51	0.44
48:BG:153:PRO:HA	48:BG:159:LYS:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:11:ILE:CG2	46:DU:70:ALA:HB3	2.48	0.44
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.17	0.44
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.86	0.44
11:CL:63:THR:O	11:CL:94:TYR:HB2	2.18	0.44
4:AE:157:GLY:O	4:AE:158:LYS:HB2	2.17	0.44
8:AI:118:ARG:HB3	8:AI:122:ARG:HG2	2.00	0.44
7:CH:76:ARG:HG2	7:CH:79:ARG:HB3	1.99	0.44
23:BB:1387:A:C5'	23:BB:1469:A:H1'	2.48	0.44
23:BB:455:C:N3	23:BB:473:G:H5'	2.31	0.44
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.18	0.44
17:CR:38:ILE:H	17:CR:38:ILE:HD13	1.83	0.44
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.17	0.44
1:AA:479:U:O2'	1:AA:480:U:H5'	2.17	0.44
43:DO:30:ARG:HA	43:DO:35:ILE:HD13	1.99	0.44
25:BC:123:ILE:HA	25:BC:191:LEU:HD13	2.00	0.44
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	2.18	0.44
23:BB:969:G:H2'	23:BB:970:U:H6	1.81	0.44
1:CA:1133:G:H2'	1:CA:1134:G:O4'	2.18	0.44
8:AI:115:VAL:HG21	9:AJ:62:ARG:HB2	2.00	0.44
1:CA:208:U:H6	1:CA:208:U:O5'	2.01	0.44
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.17	0.44
1:AA:206:C:H2'	1:AA:207:C:C6	2.53	0.44
22:DA:87:U:C2'	22:DA:88:C:O5'	2.66	0.44
39:DX:59:GLU:N	39:DX:59:GLU:OE2	2.50	0.44
23:DB:6:A:H2'	23:DB:7:G:C8	2.53	0.44
23:DB:338:G:N2	23:DB:339:U:H1'	2.32	0.44
25:DC:4:LYS:HB3	25:DC:5:CYS:H	1.59	0.44
20:AB:8:MET:HG3	20:AB:9:LEU:N	2.33	0.44
1:CA:63:C:O2'	1:CA:380:G:H4'	2.18	0.44
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.18	0.44
1:CA:685:G:O2'	1:CA:686:U:H5'	2.18	0.44
23:DB:782:A:N3	25:DC:224:MET:HB3	2.33	0.44
22:BA:54:G:H21	47:BF:25:MET:HE3	1.83	0.44
1:CA:768:A:H5'	1:CA:1524:C:H1'	2.00	0.44
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.52	0.44
1:AA:85:U:H4'	1:AA:86:G:C4'	2.47	0.44
23:DB:738:G:O2'	23:DB:739:A:H5'	2.18	0.44
7:CH:80:PRO:C	7:CH:82:LEU:H	2.20	0.44
23:DB:2552:U:H2'	23:DB:2554:U:OP2	2.18	0.44
23:DB:930:G:H1'	30:DY:24:LEU:HD11	2.00	0.44
23:DB:642:U:O2'	23:DB:644:A:N7	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:18:HIS:CD2	33:D1:40:PRO:HD2	2.53	0.44
6:AG:4:ARG:HG3	6:AG:5:VAL:N	2.33	0.44
1:AA:114:U:O4'	1:AA:353:A:H1'	2.18	0.44
23:BB:189:G:H2'	23:BB:205:G:H22	1.82	0.44
1:AA:308:C:H2'	1:AA:309:A:C8	2.53	0.44
23:BB:1711:A:O2'	23:BB:1712:U:H5'	2.17	0.44
51:DZ:17:ASN:HB2	51:DZ:25:THR:HB	2.00	0.44
23:BB:464:U:H2'	23:BB:465:G:O4'	2.17	0.44
29:BE:173:THR:C	29:BE:175:ILE:H	2.22	0.44
28:DP:84:SER:OG	28:DP:85:VAL:N	2.50	0.44
18:CS:77:ARG:HG2	18:CS:77:ARG:H	1.52	0.44
47:DF:157:THR:C	47:DF:159:ALA:H	2.20	0.44
1:AA:611:C:H2'	1:AA:612:C:H6	1.83	0.44
2:CC:55:VAL:HG23	2:CC:68:HIS:NE2	2.33	0.44
30:BY:35:VAL:HG22	30:BY:36:GLU:N	2.32	0.44
23:BB:1607:C:N4	23:BB:1622:G:OP2	2.51	0.44
23:BB:918:A:C2'	23:BB:919:U:H5'	2.46	0.44
20:CB:47:PRO:O	20:CB:51:GLU:HB2	2.18	0.44
20:AB:119:GLN:CA	20:AB:124:THR:HB	2.29	0.44
1:AA:663:A:C5'	17:AR:49:LYS:HD2	2.48	0.44
23:DB:2379:G:H4'	43:DO:21:LEU:CD1	2.32	0.44
23:BB:141:G:H3'	23:BB:142:A:C8	2.52	0.44
26:DD:13:ARG:HB2	26:DD:21:SER:OG	2.18	0.44
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.52	0.44
50:BT:58:VAL:O	50:BT:58:VAL:HG13	2.18	0.44
50:DT:58:VAL:O	50:DT:58:VAL:HG13	2.17	0.44
28:DP:9:GLN:HA	28:DP:12:MET:HB2	2.00	0.44
5:AF:9:MET:HB3	5:AF:59:TYR:CE2	2.52	0.44
18:CS:14:LEU:HG	18:CS:15:LEU:N	2.33	0.44
36:D2:43:THR:O	36:D2:44:VAL:C	2.56	0.44
23:BB:1022:G:N7	41:BJ:68:LYS:HE2	2.33	0.44
43:BO:15:ARG:NH2	43:BO:95:SER:HB3	2.22	0.44
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.18	0.44
6:CG:78:ARG:NH1	6:CG:82:SER:N	2.66	0.44
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.38	0.44
12:AM:79:LEU:CD2	12:AM:86:ARG:HE	2.30	0.44
2:AC:140:ALA:CB	2:AC:148:ILE:HD12	2.45	0.44
29:DE:147:LEU:HB3	29:DE:186:VAL:HG23	1.99	0.44
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.48	0.44
26:DD:116:LYS:HG3	26:DD:123:LYS:HE2	2.00	0.44
2:CC:133:MET:HG2	2:CC:150:VAL:CG1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:83:LYS:HB3	40:DH:83:LYS:HZ2	1.82	0.44
48:DG:101:VAL:O	48:DG:101:VAL:HG23	2.18	0.44
16:AQ:68:LYS:O	16:AQ:70:LYS:N	2.51	0.44
49:BR:32:THR:HA	49:BR:61:ALA:O	2.17	0.44
43:DO:88:LYS:CE	43:DO:116:GLN:HB2	2.45	0.44
1:CA:327:A:H1'	1:CA:329:A:O4'	2.18	0.44
29:BE:170:ARG:HH22	29:BE:176:ASP:HB3	1.82	0.44
23:BB:1860:G:H2'	23:BB:1861:G:H8	1.82	0.44
2:CC:59:PRO:HB3	9:CJ:94:ALA:HB2	2.00	0.44
23:BB:1718:G:H2'	23:BB:1719:G:H8	1.82	0.44
2:CC:2:GLN:HE21	2:CC:2:GLN:CA	2.31	0.44
2:CC:64:ARG:HA	2:CC:64:ARG:HD3	1.87	0.44
43:BO:35:ILE:O	43:BO:53:THR:HG23	2.17	0.44
12:CM:93:GLY:O	12:CM:108:ARG:HG3	2.17	0.44
1:CA:828:U:H2'	1:CA:829:G:O5'	2.18	0.44
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.18	0.44
17:AR:38:ILE:CG2	17:AR:58:ILE:HG21	2.48	0.44
26:DD:14:ILE:O	26:DD:14:ILE:HG12	2.18	0.44
15:AP:38:PHE:CD1	15:AP:39:PHE:N	2.85	0.44
1:CA:1406:U:C2'	1:CA:1407:C:H5'	2.47	0.44
47:DF:115:GLY:CA	47:DF:177:ARG:HD2	2.48	0.44
2:AC:39:ARG:CZ	2:AC:56:ILE:HD12	2.48	0.44
25:BC:4:LYS:HB3	25:BC:5:CYS:H	1.60	0.44
1:CA:538:G:H2'	1:CA:539:A:C8	2.52	0.44
48:DG:21:GLN:HB3	48:DG:37:ASN:HB3	2.00	0.44
23:DB:2215:C:O2'	23:DB:2216:G:H5'	2.18	0.44
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	2.17	0.44
23:BB:1241:A:O4'	23:BB:1241:A:N3	2.51	0.44
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.81	0.44
1:AA:596:A:H2'	1:AA:597:G:C8	2.53	0.44
23:BB:2595:G:H1	25:BC:238:ASN:HD21	1.63	0.44
23:DB:1957:C:H2'	23:DB:1958:C:H6	1.79	0.44
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.50	0.44
1:CA:299:G:H2'	1:CA:300:A:C8	2.53	0.44
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.18	0.44
23:DB:2197:U:O2'	23:DB:2198:A:H2'	2.17	0.44
6:AG:49:LEU:HD21	6:AG:120:ALA:O	2.17	0.44
23:BB:2637:U:OP1	26:BD:83:ARG:HD3	2.18	0.44
1:CA:894:G:H2'	1:CA:895:G:H8	1.82	0.44
22:BA:20:G:H2'	22:BA:21:G:C8	2.53	0.44
29:BE:40:ARG:HH21	29:BE:92:HIS:HE2	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:162:GLN:CD	25:BC:174:ARG:HH21	2.21	0.44
42:DN:118:ARG:HE	42:DN:118:ARG:HB3	1.48	0.44
51:DZ:20:HIS:O	51:DZ:21:ALA:HB3	2.18	0.44
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.17	0.44
1:CA:996:A:H2'	1:CA:997:U:C6	2.52	0.44
44:DQ:38:VAL:O	44:DQ:39:ILE:C	2.57	0.44
23:BB:1043:C:O2'	23:BB:1048:A:H4'	2.17	0.44
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.53	0.44
1:AA:1281:C:H5'	1:AA:1282:C:H5	1.83	0.44
1:AA:245:U:H2'	1:AA:246:A:H5'	2.00	0.44
16:AQ:52:CYS:HB2	16:AQ:58:VAL:HG11	1.98	0.44
23:BB:1369:G:O2'	23:BB:1370:C:H5'	2.17	0.44
23:DB:251:A:H2'	23:DB:252:G:O4'	2.17	0.44
22:BA:65:U:C2'	22:BA:66:A:H5'	2.48	0.44
23:DB:2759:G:H21	48:DG:138:GLN:HG3	1.82	0.44
31:D0:30:ASP:HB3	31:D0:33:SER:O	2.18	0.44
23:BB:1774:C:H2'	23:BB:1774:C:O2	2.18	0.44
48:DG:155:PRO:HA	48:DG:170:THR:HG22	2.00	0.44
1:AA:903:G:H2'	1:AA:904:U:C6	2.53	0.44
52:DW:19:ARG:NE	52:DW:19:ARG:H	2.16	0.43
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.17	0.43
20:CB:162:VAL:CG1	20:CB:184:ALA:HB2	2.48	0.43
8:AI:4:GLN:HE21	8:AI:21:LYS:NZ	2.16	0.43
8:AI:6:TYR:HE2	8:AI:17:ARG:HB3	1.84	0.43
12:CM:70:ARG:HE	47:DF:136:ILE:HG21	1.82	0.43
25:BC:142:ASN:O	25:BC:142:ASN:CG	2.56	0.43
47:BF:110:ILE:HA	47:BF:111:ARG:NE	2.32	0.43
49:DR:3:ALA:HB2	49:DR:101:ILE:HD11	2.00	0.43
44:BQ:94:LEU:O	44:BQ:97:ILE:HG23	2.18	0.43
1:AA:78:A:H2'	1:AA:79:G:C8	2.53	0.43
28:BP:9:GLN:HA	28:BP:12:MET:HB2	2.00	0.43
35:BV:89:ILE:HD12	35:BV:89:ILE:H	1.81	0.43
1:CA:1098:C:H2'	1:CA:1099:G:H8	1.83	0.43
5:AF:68:GLN:HA	5:AF:71:ILE:HG12	2.00	0.43
38:DM:69:PRO:C	38:DM:71:LYS:H	2.21	0.43
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.18	0.43
41:DJ:18:VAL:HG22	41:DJ:19:ASP:N	2.33	0.43
18:CS:10:ILE:CG2	18:CS:38:THR:H	2.23	0.43
29:BE:58:LYS:H	29:BE:58:LYS:HD3	1.83	0.43
12:AM:14:ALA:O	12:AM:18:LEU:HB2	2.18	0.43
12:AM:56:ARG:O	12:AM:59:VAL:HG12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2144:G:O2'	23:BB:2146:C:H4'	2.18	0.43
23:DB:2072:C:C2'	23:DB:2073:C:H5'	2.48	0.43
2:CC:182:ASP:HB3	2:CC:201:ILE:HB	2.00	0.43
13:AN:49:THR:O	13:AN:50:LEU:HB3	2.18	0.43
13:AN:50:LEU:CD2	13:AN:51:PRO:HD3	2.48	0.43
37:DL:116:VAL:HG22	37:DL:117:THR:N	2.33	0.43
46:DU:18:LYS:HB3	46:DU:19:GLY:H	1.61	0.43
23:DB:851:C:O2'	30:DY:42:ALA:HA	2.17	0.43
23:DB:927:A:H2'	23:DB:928:A:C8	2.53	0.43
23:BB:84:A:H4'	23:BB:85:G:O5'	2.18	0.43
13:CN:56:PRO:HG2	13:CN:57:SER:H	1.83	0.43
46:DU:53:GLN:HG2	46:DU:53:GLN:O	2.18	0.43
23:BB:182:A:H2'	23:BB:183:C:H6	1.82	0.43
23:BB:182:A:O2'	23:BB:183:C:H5'	2.18	0.43
48:DG:152:ARG:HA	48:DG:152:ARG:HD2	1.84	0.43
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.53	0.43
33:D1:24:LYS:HE3	33:D1:29:LYS:O	2.18	0.43
15:CP:61:VAL:CA	15:CP:65:ALA:HB3	2.42	0.43
39:BX:17:GLU:HB3	39:BX:53:VAL:CG1	2.42	0.43
2:CC:133:MET:O	2:CC:137:VAL:HG23	2.17	0.43
23:BB:581:C:P	44:BQ:32:ARG:HD2	2.58	0.43
20:CB:185:ILE:HG12	20:CB:199:ILE:CG2	2.48	0.43
28:BP:61:ARG:HD3	28:BP:70:GLU:OE1	2.18	0.43
29:BE:47:LYS:CB	29:BE:51:GLU:HB2	2.47	0.43
1:CA:844:G:C6	1:CA:846:G:H1'	2.53	0.43
34:D3:21:PHE:HE1	34:D3:58:ILE:HG12	1.83	0.43
23:DB:1829:A:HO2'	25:DC:14:HIS:CD2	2.35	0.43
23:BB:712:G:H2'	23:BB:713:G:O4'	2.18	0.43
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.18	0.43
43:BO:30:ARG:NH2	43:BO:103:VAL:HG23	2.33	0.43
3:AD:78:ALA:HA	3:AD:88:ASN:HB3	1.99	0.43
1:CA:1319:A:OP1	18:CS:4:LEU:HD11	2.18	0.43
23:DB:154:U:H2'	23:DB:155:A:H8	1.83	0.43
20:AB:121:GLN:NE2	20:AB:122:ASP:HB2	2.33	0.43
1:AA:389:A:H3'	1:AA:390:U:H6	1.83	0.43
1:CA:601:G:H2'	1:CA:602:A:C8	2.52	0.43
23:BB:2400:G:C2'	23:BB:2401:U:H5'	2.47	0.43
43:BO:110:ALA:HA	43:BO:113:ALA:HB3	1.99	0.43
43:BO:51:ALA:HB3	43:BO:78:VAL:HG13	2.00	0.43
3:CD:113:ALA:O	3:CD:117:VAL:HG23	2.18	0.43
41:BJ:30:THR:HG23	41:BJ:31:GLU:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:20:MET:HG3	42:DN:21:PHE:N	2.33	0.43
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.53	0.43
2:CC:10:ARG:NH2	2:CC:181:ILE:HD13	2.32	0.43
8:CI:115:VAL:HG21	9:CJ:62:ARG:HB2	2.00	0.43
1:CA:1005:A:C2	1:CA:1006:G:H1'	2.53	0.43
6:AG:49:LEU:HD21	6:AG:120:ALA:HA	1.99	0.43
23:DB:1450:G:C6	23:DB:1451:C:N4	2.86	0.43
23:DB:1451:C:H4'	23:DB:1452:G:H5'	2.00	0.43
1:AA:768:A:H5'	1:AA:1524:C:H1'	1.99	0.43
23:DB:765:C:O2'	23:DB:766:U:H5'	2.18	0.43
22:BA:76:G:O2'	22:BA:77:U:H5'	2.17	0.43
7:AH:107:LYS:HD3	7:AH:107:LYS:HA	1.83	0.43
10:CK:108:ASN:ND2	21:CU:6:ARG:HD2	2.33	0.43
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.53	0.43
11:AL:72:ASN:CG	11:AL:104:SER:HB3	2.38	0.43
23:DB:2376:A:H2'	23:DB:2377:A:O4'	2.18	0.43
1:CA:317:U:H2'	1:CA:318:G:C8	2.53	0.43
23:DB:1221:C:O2'	23:DB:1222:U:H5'	2.17	0.43
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.17	0.43
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.53	0.43
23:BB:1657:U:H4'	26:BD:138:LEU:HB3	2.00	0.43
23:BB:600:G:H2'	23:BB:601:C:C6	2.53	0.43
23:DB:2868:A:H2'	23:DB:2869:G:H8	1.83	0.43
9:CJ:80:THR:O	9:CJ:84:VAL:HG23	2.18	0.43
23:DB:1560:G:H2'	23:DB:1561:C:C6	2.52	0.43
32:B4:1:MET:HE2	32:B4:36:ARG:HG3	2.00	0.43
41:BJ:114:LEU:O	41:BJ:118:MET:HE2	2.17	0.43
15:AP:12:LYS:C	15:AP:14:ARG:H	2.21	0.43
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.51	0.43
7:AH:29:SER:O	7:AH:33:VAL:HG23	2.18	0.43
17:AR:20:ILE:HG22	17:AR:53:GLN:NE2	2.33	0.43
2:AC:172:VAL:O	2:AC:174:LEU:HD12	2.18	0.43
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.17	0.43
23:DB:1239:G:H5''	56:DB:3619:HOH:O	2.16	0.43
39:DX:58:ASN:O	39:DX:61:ALA:N	2.51	0.43
15:CP:33:ILE:HG21	15:CP:60:TRP:CZ2	2.53	0.43
19:AT:48:LYS:HA	19:AT:51:ASN:HD21	1.83	0.43
45:DS:10:ALA:HB3	45:DS:101:SER:HB2	1.99	0.43
43:DO:111:ARG:HB2	43:DO:117:PHE:CZ	2.53	0.43
23:DB:2577:A:H5''	23:DB:2578:G:H5'	2.00	0.43
22:DA:46:A:H2'	22:DA:47:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:7:ASP:N	29:BE:7:ASP:OD2	2.51	0.43
49:DR:86:GLN:HB2	49:DR:86:GLN:HE21	1.53	0.43
23:BB:858:G:H21	23:BB:2268:A:C3'	2.26	0.43
20:AB:45:THR:CA	20:AB:48:MET:HG3	2.45	0.43
25:BC:128:THR:HG22	25:BC:129:LEU:N	2.33	0.43
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.18	0.43
49:BR:40:MET:HG2	49:BR:48:LYS:HA	2.00	0.43
27:BK:35:VAL:CG2	27:BK:36:GLY:H	2.12	0.43
38:BM:38:ARG:HB3	38:BM:98:PRO:HD3	1.99	0.43
44:DQ:4:LYS:HB3	44:DQ:4:LYS:HE3	1.76	0.43
50:BT:16:VAL:HA	50:BT:21:SER:HB3	1.99	0.43
29:BE:160:ALA:C	29:BE:162:ARG:H	2.21	0.43
47:DF:111:ARG:O	47:DF:112:ASP:HB2	2.18	0.43
47:DF:31:GLU:O	47:DF:32:LYS:O	2.37	0.43
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.18	0.43
51:BZ:33:LEU:CA	51:BZ:52:SER:HA	2.38	0.43
29:BE:69:ARG:O	29:BE:70:SER:OG	2.35	0.43
51:DZ:10:LYS:O	51:DZ:31:PRO:HG2	2.18	0.43
37:DL:29:LYS:C	37:DL:30:THR:HG23	2.37	0.43
40:BH:21:VAL:HG22	40:BH:22:LYS:H	1.82	0.43
40:BH:21:VAL:HG22	40:BH:22:LYS:N	2.32	0.43
23:BB:1439:A:N3	23:BB:1553:A:C5	2.86	0.43
13:AN:20:PHE:CZ	13:AN:51:PRO:HG3	2.53	0.43
20:AB:159:ALA:HB1	20:AB:183:PHE:HE1	1.83	0.43
13:CN:50:LEU:CD2	13:CN:51:PRO:HD3	2.48	0.43
23:DB:2544:G:H1'	23:DB:2646:C:H5'	2.00	0.43
37:DL:79:LEU:H	37:DL:113:ALA:HB2	1.84	0.43
20:CB:86:CYS:O	20:CB:88:GLN:N	2.50	0.43
48:DG:88:LEU:HD11	48:DG:94:ARG:CA	2.48	0.43
3:CD:197:HIS:ND1	3:CD:198:LEU:N	2.66	0.43
46:DU:81:ARG:HB2	46:DU:96:LYS:CG	2.47	0.43
23:DB:2821:A:OP1	26:DD:114:LYS:O	2.36	0.43
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.33	0.43
35:DV:40:ILE:N	35:DV:40:ILE:HD13	2.30	0.43
38:BM:57:VAL:O	38:BM:59:ARG:N	2.52	0.43
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.27	0.43
17:AR:61:ALA:CB	17:AR:67:LEU:HD12	2.48	0.43
1:AA:633:G:H2'	1:AA:634:C:H6	1.83	0.43
1:AA:637:C:O2'	1:AA:638:U:H5'	2.18	0.43
47:DF:40:GLY:O	47:DF:41:GLU:C	2.56	0.43
7:AH:76:ARG:HG2	7:AH:79:ARG:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:451:A:H4'	1:AA:452:A:O4'	2.18	0.43
23:BB:546:U:H3'	23:BB:548:G:N7	2.33	0.43
1:CA:1000:A:H2'	1:CA:1001:C:H6	1.83	0.43
25:BC:257:ARG:HG3	25:BC:257:ARG:HH11	1.83	0.43
27:DK:98:ARG:HE	27:DK:98:ARG:N	2.16	0.43
1:CA:313:A:H2'	1:CA:314:C:C6	2.53	0.43
1:AA:192:A:O2'	1:AA:193:C:H5'	2.18	0.43
1:CA:34:C:H2'	1:CA:35:G:H8	1.81	0.43
43:BO:30:ARG:HA	43:BO:35:ILE:HD13	1.99	0.43
35:BV:51:GLN:HB2	35:BV:57:TYR:OH	2.17	0.43
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.53	0.43
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.53	0.43
43:DO:71:ALA:CB	43:DO:102:ARG:HB3	2.48	0.43
27:DK:12:ASP:OD2	27:DK:85:VAL:HG13	2.18	0.43
23:DB:877:A:H2'	23:DB:900:A:H61	1.83	0.43
3:AD:202:LEU:HD12	3:AD:202:LEU:O	2.18	0.43
1:CA:734:G:H2'	1:CA:735:C:H6	1.82	0.43
14:AO:26:GLU:HG3	14:AO:81:LEU:HD12	2.00	0.43
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.18	0.43
23:BB:588:U:H1'	29:BE:85:PHE:CG	2.52	0.43
43:BO:74:VAL:O	43:BO:77:ALA:HB3	2.18	0.43
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.54	0.43
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.18	0.43
23:DB:2439:A:H4'	23:DB:2440:C:O5'	2.18	0.43
1:CA:693:G:OP1	10:CK:126:ARG:NH1	2.50	0.43
39:DX:22:LEU:HD12	39:DX:23:ARG:HG2	2.00	0.43
1:CA:301:G:O2'	1:CA:302:G:H5'	2.18	0.43
1:AA:939:G:H5''	6:AG:101:ARG:CZ	2.49	0.43
6:CG:49:LEU:HD21	6:CG:120:ALA:HA	1.99	0.43
23:DB:1126:A:OP1	23:DB:1126:A:C8	2.71	0.43
1:CA:988:G:H2'	1:CA:989:U:O4'	2.18	0.43
23:DB:1312:U:O4	50:DT:64:LYS:HG2	2.18	0.43
23:DB:2389:G:H5''	23:DB:2390:U:O4'	2.18	0.43
23:DB:692:C:H2'	23:DB:693:A:H8	1.82	0.43
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.18	0.43
23:BB:1221:C:O2'	23:BB:1222:U:H5'	2.17	0.43
27:BK:107:LEU:HD12	27:BK:107:LEU:H	1.83	0.43
23:BB:2247:A:H2'	23:BB:2248:C:H6	1.83	0.43
23:DB:599:A:N3	29:DE:100:MET:HE1	2.33	0.43
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.53	0.43
9:CJ:82:LYS:HG3	9:CJ:83:THR:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:929:U:H1'	30:BY:25:GLY:O	2.18	0.43
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.82	0.43
33:B1:18:HIS:CD2	33:B1:40:PRO:HD2	2.53	0.43
23:DB:1478:G:O2'	23:DB:1479:G:H5'	2.18	0.43
23:DB:1766:G:O2'	23:DB:1767:G:H5'	2.17	0.43
23:BB:2223:G:H2'	23:BB:2224:G:H5'	1.99	0.43
23:BB:738:G:O2'	23:BB:739:A:H5'	2.18	0.43
23:DB:679:C:H2'	23:DB:680:C:H6	1.83	0.43
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.48	0.43
41:DJ:7:LYS:C	41:DJ:9:GLU:H	2.22	0.43
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.52	0.43
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.52	0.43
19:CT:48:LYS:HA	19:CT:51:ASN:HD21	1.82	0.43
24:BI:4:VAL:HG13	24:BI:4:VAL:O	2.17	0.43
40:BH:73:ASN:N	40:BH:73:ASN:ND2	2.66	0.43
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.33	0.43
14:CO:21:ASP:C	14:CO:23:GLY:H	2.21	0.43
26:DD:49:GLN:HE22	26:DD:67:HIS:CE1	2.35	0.43
37:BL:108:ALA:HB3	37:BL:125:LEU:CD2	2.48	0.43
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.83	0.43
20:AB:163:ILE:CG2	20:AB:164:ASP:H	2.13	0.43
21:CU:43:GLU:HA	21:CU:46:ARG:HD2	2.00	0.43
1:CA:358:U:H2'	1:CA:359:G:H8	1.81	0.43
12:CM:70:ARG:HG3	12:CM:74:MET:CE	2.48	0.43
21:CU:3:ILE:HG23	21:CU:18:PHE:CE2	2.54	0.43
26:BD:109:VAL:HG11	26:BD:193:VAL:CG1	2.48	0.43
23:DB:1156:A:P	44:DQ:54:ARG:HH21	2.41	0.43
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD11	2.53	0.43
41:DJ:44:TYR:CZ	44:DQ:59:LEU:HD11	2.53	0.43
44:BQ:93:ILE:HG23	44:BQ:94:LEU:N	2.33	0.43
49:BR:3:ALA:HB2	49:BR:101:ILE:HD11	2.00	0.43
49:BR:4:VAL:HG21	49:BR:39:LEU:HG	2.01	0.43
28:DP:64:SER:O	28:DP:66:GLY:N	2.51	0.43
13:AN:76:PHE:CE2	13:AN:95:LEU:HD22	2.54	0.43
10:CK:85:VAL:O	10:CK:112:VAL:N	2.51	0.43
50:DT:53:VAL:HG12	50:DT:54:GLU:H	1.82	0.43
23:BB:337:C:H2'	23:BB:338:G:O4'	2.17	0.43
29:BE:146:VAL:HB	29:BE:148:ILE:HD11	2.00	0.43
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.43
45:BS:28:LYS:CD	45:BS:29:VAL:H	2.31	0.43
47:DF:33:ILE:HD12	47:DF:95:MET:HG2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:33:LEU:O	51:BZ:34:HIS:CG	2.71	0.43
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.52	0.43
1:CA:521:G:OP1	11:CL:69:GLU:HA	2.16	0.43
11:CL:85:ARG:HG3	11:CL:86:VAL:H	1.83	0.43
47:BF:79:ARG:CZ	47:BF:82:TYR:HE2	2.30	0.43
23:BB:2544:G:H1'	23:BB:2646:C:H5'	2.00	0.43
23:BB:2733:A:H3'	23:BB:2733:A:C8	2.52	0.43
23:DB:1082:U:C2	23:DB:1086:A:N1	2.86	0.43
13:AN:50:LEU:CG	13:AN:51:PRO:HD3	2.48	0.43
20:CB:64:GLY:O	20:CB:66:ILE:HG12	2.17	0.43
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.41	0.43
25:DC:94:LEU:HA	25:DC:100:ARG:HA	2.00	0.43
1:CA:815:A:H4'	1:CA:817:C:C5	2.53	0.43
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.33	0.43
28:BP:91:VAL:HG11	28:BP:96:LEU:CD1	2.42	0.43
47:DF:57:ALA:HB2	47:DF:64:PRO:CD	2.48	0.43
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.53	0.43
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.17	0.43
23:BB:616:A:H3'	23:BB:617:G:C8	2.43	0.43
33:B1:8:ILE:HG12	33:B1:52:LYS:HG3	2.01	0.43
32:D4:11:CYS:HB3	32:D4:33:HIS:CE1	2.53	0.43
25:DC:250:GLN:HG2	25:DC:254:LYS:HG2	1.99	0.43
3:CD:147:LYS:HB2	3:CD:147:LYS:HZ3	1.83	0.43
1:CA:674:G:O2'	1:CA:675:A:H5'	2.18	0.43
1:CA:719:C:H2'	17:CR:38:ILE:HD13	2.00	0.43
1:AA:313:A:H2'	1:AA:314:C:C6	2.53	0.43
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.83	0.43
6:CG:63:VAL:HA	6:CG:66:GLU:OE2	2.18	0.43
23:BB:1511:G:H2'	23:BB:1512:C:C6	2.53	0.43
1:AA:812:G:O2'	1:AA:813:U:C6	2.70	0.43
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.53	0.43
46:DU:41:VAL:C	46:DU:42:LYS:HD2	2.38	0.43
23:BB:2794:C:O2'	23:BB:2795:C:H5'	2.18	0.43
23:DB:633:A:H2'	23:DB:634:C:O4'	2.18	0.43
12:CM:2:ARG:O	12:CM:4:ALA:N	2.52	0.43
1:AA:1309:G:H2'	1:AA:1310:G:H8	1.84	0.43
8:CI:9:GLY:CA	8:CI:80:HIS:HB3	2.48	0.43
23:BB:2394:C:O5'	23:BB:2394:C:H6	2.01	0.43
3:CD:100:VAL:HG11	3:CD:142:VAL:HG21	2.00	0.43
1:AA:402:G:H5'	1:AA:621:A:H1'	2.00	0.43
1:AA:208:U:O5'	1:AA:208:U:H6	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:833:A:H1'	37:DL:52:GLY:N	2.33	0.43
23:BB:1317:G:H2'	23:BB:1318:U:C6	2.53	0.43
23:BB:710:U:H2'	23:BB:711:G:C8	2.53	0.43
1:AA:297:G:N2	1:AA:299:G:H3'	2.34	0.43
23:DB:2692:G:O2'	23:DB:2693:G:H5'	2.18	0.43
11:AL:78:VAL:O	11:AL:102:ASP:HB2	2.19	0.43
23:BB:1461:C:H2'	23:BB:1462:C:H6	1.83	0.43
28:BP:64:SER:O	28:BP:66:GLY:N	2.51	0.43
1:AA:731:G:OP1	1:AA:766:A:H1'	2.18	0.43
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.17	0.43
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.82	0.43
23:BB:1979:U:C2'	23:BB:1980:G:H5'	2.48	0.43
23:DB:957:C:N4	23:DB:2459:A:C8	2.87	0.43
22:DA:54:G:O2'	22:DA:55:U:H5'	2.18	0.43
23:BB:1911:U:H2'	23:BB:1918:A:C2	2.53	0.43
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.53	0.43
20:CB:116:LEU:HB3	20:CB:140:LEU:CD1	2.48	0.43
23:BB:499:U:H2'	23:BB:500:G:O4'	2.18	0.43
6:CG:65:LEU:O	6:CG:69:ARG:HG3	2.17	0.43
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.84	0.43
1:AA:648:A:H2'	1:AA:649:A:C8	2.54	0.43
1:AA:278:G:O4'	1:AA:282:A:H1'	2.19	0.43
8:CI:87:MET:O	8:CI:91:GLU:HG2	2.18	0.43
1:AA:575:G:O2'	1:AA:820:U:H5''	2.18	0.43
12:AM:29:SER:O	12:AM:32:ILE:HG22	2.18	0.43
22:DA:20:G:H2'	22:DA:21:G:H8	1.82	0.43
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.18	0.43
2:AC:109:GLU:OE1	2:AC:139:ASN:HB3	2.19	0.43
23:DB:368:A:O2'	23:DB:369:U:H5'	2.18	0.43
1:AA:144:G:H2'	1:AA:145:G:O4'	2.18	0.43
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.18	0.43
47:DF:59:ILE:HG13	47:DF:59:ILE:H	1.39	0.43
43:BO:45:SER:HB2	43:BO:46:GLU:OE1	2.17	0.43
1:CA:144:G:H2'	1:CA:145:G:O4'	2.18	0.43
23:BB:922:C:H2'	23:BB:923:G:H8	1.82	0.43
52:BW:40:ARG:CZ	52:BW:44:PHE:HE1	2.32	0.43
37:DL:125:LEU:N	37:DL:143:GLU:HG3	2.31	0.43
25:DC:142:ASN:CG	25:DC:142:ASN:O	2.55	0.43
40:BH:117:LEU:HD21	40:BH:128:HIS:CE1	2.54	0.43
40:BH:128:HIS:O	40:BH:143:ILE:HA	2.19	0.43
10:CK:111:ASP:N	21:CU:19:LYS:HE3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:134:GLN:O	47:BF:136:ILE:N	2.51	0.43
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.39	0.43
44:DQ:63:ARG:NH2	44:DQ:95:ALA:O	2.51	0.43
44:DQ:93:ILE:HG23	44:DQ:94:LEU:N	2.33	0.43
41:BJ:43:GLU:O	41:BJ:44:TYR:C	2.56	0.43
44:BQ:63:ARG:HA	44:BQ:66:ALA:HB3	2.00	0.43
44:BQ:89:ILE:O	44:BQ:90:ASP:HB2	2.18	0.43
49:BR:6:GLN:HE21	49:BR:7:SER:N	2.15	0.43
3:AD:169:TRP:HB2	3:AD:183:ARG:HD2	2.01	0.43
45:BS:60:HIS:ND1	45:BS:61:ASN:N	2.66	0.43
7:AH:4:ASP:OD1	7:AH:7:ALA:HB2	2.19	0.43
26:BD:13:ARG:HB2	26:BD:21:SER:OG	2.18	0.43
50:BT:22:THR:O	50:BT:25:GLU:HB3	2.18	0.43
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG13	1.83	0.43
1:CA:1060:U:C5'	9:CJ:53:ILE:HG12	2.47	0.43
45:DS:60:HIS:ND1	45:DS:61:ASN:N	2.66	0.43
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.99	0.43
23:BB:2032:G:H21	26:BD:151:THR:H	1.65	0.43
23:BB:2757:A:H2'	23:BB:2758:A:H5'	2.00	0.43
19:AT:71:ALA:O	19:AT:74:HIS:HB2	2.19	0.43
23:DB:2032:G:H21	26:DD:151:THR:N	2.15	0.43
26:DD:151:THR:N	26:DD:152:PRO:CD	2.81	0.43
23:BB:2144:G:H3'	23:BB:2145:C:C3'	2.48	0.43
51:DZ:59:ILE:CD1	51:DZ:67:VAL:HG21	2.49	0.43
36:B2:34:ARG:NE	36:B2:42:LEU:O	2.48	0.43
22:DA:7:G:O2'	22:DA:8:C:H5'	2.19	0.43
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.49	0.43
16:AQ:56:ASP:CA	16:AQ:81:ALA:HB2	2.41	0.43
4:CE:132:PRO:HG2	4:CE:133:ILE:H	1.84	0.43
23:DB:850:U:O2'	30:DY:22:THR:HA	2.18	0.43
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	2.00	0.43
48:BG:94:ARG:HA	48:BG:128:THR:HG22	2.00	0.43
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.31	0.43
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.86	0.43
28:DP:91:VAL:HG11	28:DP:96:LEU:HD21	1.99	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.19	0.43
37:DL:103:ILE:H	37:DL:103:ILE:CD1	2.27	0.43
23:BB:78:U:O2'	23:BB:79:C:H5'	2.17	0.43
22:DA:3:C:H2'	22:DA:4:C:O4'	2.17	0.43
23:BB:1820:U:H3	25:BC:197:ALA:HA	1.84	0.43
50:BT:73:ARG:HH21	50:BT:73:ARG:CB	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B4:22:VAL:HB	32:B4:24:ARG:HE	1.84	0.43
23:DB:419:U:H2'	23:DB:420:C:H6	1.80	0.43
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.18	0.43
23:DB:948:C:H2'	23:DB:949:G:C8	2.53	0.43
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	2.01	0.43
14:CO:56:LEU:O	14:CO:60:VAL:HG23	2.19	0.43
2:AC:13:ILE:C	2:AC:15:LYS:H	2.22	0.43
23:BB:2750:A:H2	32:B4:15:LYS:HZ1	1.64	0.43
23:BB:958:U:N3	38:BM:16:ARG:HB3	2.32	0.43
1:AA:179:A:O2'	1:AA:180:U:H5'	2.18	0.43
14:AO:71:LYS:HB2	14:AO:78:TYR:CG	2.53	0.43
23:BB:1249:U:O4'	44:BQ:3:VAL:HG21	2.19	0.43
23:DB:934:U:H2'	23:DB:935:C:H6	1.80	0.43
23:BB:234:U:H2'	23:BB:235:U:H6	1.83	0.43
23:BB:814:C:H2'	23:BB:815:C:C6	2.51	0.43
39:BX:59:GLU:OE2	39:BX:59:GLU:N	2.50	0.43
23:DB:958:U:N3	38:DM:16:ARG:HB3	2.33	0.43
38:BM:18:ARG:HD2	38:BM:18:ARG:HA	1.89	0.43
26:BD:3:GLY:C	26:BD:4:LEU:HD22	2.39	0.43
1:AA:1260:G:O5'	1:AA:1284:C:H4'	2.18	0.43
40:DH:129:GLU:HB3	40:DH:143:ILE:HG12	1.99	0.43
23:BB:2405:G:H1'	23:BB:2412:A:H61	1.82	0.43
23:BB:1182:G:H2'	23:BB:1183:U:O4'	2.18	0.43
27:BK:107:LEU:C	27:BK:109:SER:H	2.21	0.43
38:DM:63:ILE:N	38:DM:63:ILE:HD12	2.34	0.43
23:DB:2315:G:H2'	23:DB:2316:G:C8	2.53	0.43
23:BB:660:C:H2'	23:BB:661:A:C8	2.52	0.43
1:AA:1484:C:H2'	1:AA:1485:U:H6	1.83	0.43
26:BD:202:ILE:HD12	26:BD:202:ILE:N	2.33	0.43
23:BB:2323:G:O2'	23:BB:2324:U:H5'	2.18	0.43
23:BB:217:A:H2'	23:BB:218:A:O4'	2.19	0.43
1:AA:822:U:H2'	1:AA:823:C:C6	2.53	0.43
23:DB:679:C:H2'	23:DB:680:C:C6	2.54	0.43
23:BB:2478:A:OP1	32:B4:32:LYS:HD3	2.18	0.43
1:AA:291:U:H2'	1:AA:292:G:H8	1.82	0.43
29:BE:95:LYS:O	29:BE:96:VAL:HB	2.18	0.43
23:DB:2630:G:O2'	23:DB:2631:G:H5'	2.18	0.43
22:BA:46:A:H2'	22:BA:47:C:O4'	2.17	0.43
2:AC:54:ILE:HG23	2:AC:54:ILE:O	2.18	0.43
3:AD:48:SER:O	3:AD:49:ASP:C	2.56	0.43
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1108:G:H5'	2:CC:175:HIS:ND1	2.33	0.43
23:BB:636:G:H3'	37:BL:128:THR:HG21	2.00	0.43
23:DB:2367:G:O2'	23:DB:2368:C:H5'	2.18	0.43
52:DW:32:ALA:C	52:DW:34:SER:H	2.21	0.43
20:CB:22:TRP:HB3	20:CB:38:HIS:CE1	2.53	0.43
46:DU:84:PHE:HD2	46:DU:91:LYS:HG2	1.84	0.43
40:BH:80:ILE:HB	40:BH:144:VAL:CG1	2.45	0.43
27:BK:75:SER:HA	28:BP:72:VAL:O	2.18	0.43
39:BX:36:GLN:HB2	39:BX:37:LEU:H	1.61	0.43
47:BF:111:ARG:N	47:BF:111:ARG:CD	2.82	0.43
1:AA:661:G:H2'	1:AA:662:U:C6	2.53	0.43
44:DQ:86:SER:O	49:DR:52:PRO:HD3	2.19	0.43
8:CI:18:VAL:HG22	8:CI:64:ILE:HG23	2.00	0.43
3:AD:169:TRP:O	3:AD:182:LYS:HB2	2.19	0.43
50:BT:29:THR:H	50:BT:91:GLN:NE2	2.07	0.43
50:DT:40:LYS:O	50:DT:43:ILE:HB	2.19	0.43
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.33	0.43
23:DB:282:A:C2'	23:DB:283:G:H5'	2.48	0.43
45:DS:24:ILE:CG2	45:DS:71:VAL:HG11	2.36	0.43
45:BS:24:ILE:CG2	45:BS:32:ALA:HB1	2.48	0.43
47:DF:175:PRO:O	47:DF:176:PHE:HB2	2.17	0.43
13:CN:46:LYS:HZ2	18:CS:10:ILE:N	2.10	0.43
40:BH:27:ARG:NE	51:BZ:64:ILE:HD11	2.32	0.43
12:CM:3:ILE:HD12	12:CM:9:PRO:HD2	2.00	0.43
38:BM:69:PRO:C	38:BM:71:LYS:H	2.22	0.43
26:DD:90:PHE:O	26:DD:91:THR:C	2.57	0.43
27:BK:19:VAL:C	27:BK:41:ILE:HD11	2.38	0.43
22:DA:8:C:OP1	43:DO:15:ARG:NH2	2.51	0.43
23:BB:364:C:H2'	23:BB:365:U:C5	2.53	0.43
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.22	0.43
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	2.00	0.43
20:AB:68:PHE:CE1	20:AB:88:GLN:HB3	2.54	0.43
20:AB:87:ASP:CG	20:AB:224:ARG:HH21	2.21	0.43
23:BB:83:A:H5''	46:BU:1:ALA:H1	1.80	0.43
43:BO:26:LEU:HD13	43:BO:39:VAL:CG2	2.48	0.43
1:AA:370:C:H2'	1:AA:371:A:C8	2.53	0.43
3:CD:52:VAL:HG12	3:CD:198:LEU:HD21	2.00	0.43
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.83	0.43
27:DK:70:ARG:HB3	27:DK:76:VAL:CG2	2.44	0.43
2:AC:180:ASP:OD1	2:AC:203:LYS:HB2	2.19	0.43
2:CC:156:LEU:HG	2:CC:163:ARG:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:176:ASP:O	29:DE:180:LEU:HG	2.18	0.43
23:BB:571:U:H1'	23:BB:573:U:C6	2.54	0.43
1:CA:454:G:O2'	1:CA:455:G:H5'	2.18	0.43
3:CD:12:ARG:HG2	3:CD:33:ILE:HD12	2.01	0.43
3:CD:78:ALA:HA	3:CD:88:ASN:HB3	1.99	0.43
1:AA:128:G:H2'	1:AA:129:A:C8	2.53	0.43
7:AH:80:PRO:C	7:AH:82:LEU:H	2.21	0.43
9:AJ:76:ILE:H	9:AJ:76:ILE:HG13	1.62	0.43
41:DJ:96:ARG:NE	41:DJ:99:ARG:HD2	2.32	0.43
23:BB:589:U:H2'	23:BB:590:A:H8	1.81	0.43
1:CA:720:C:O5'	1:CA:720:C:H6	2.00	0.43
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.28	0.43
23:DB:722:A:H2'	23:DB:723:C:C6	2.54	0.43
29:BE:149:ILE:O	29:BE:188:MET:HA	2.18	0.43
23:DB:2137:U:O2'	23:DB:2138:G:H5'	2.18	0.43
35:DV:65:VAL:O	35:DV:68:LYS:HG2	2.17	0.43
43:DO:35:ILE:HG13	43:DO:71:ALA:HB2	2.00	0.43
47:BF:177:ARG:HA	47:BF:177:ARG:NE	2.34	0.43
23:DB:458:G:H22	23:DB:469:G:H2'	1.83	0.43
1:CA:430:A:OP2	3:CD:6:PRO:HA	2.18	0.43
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	2.01	0.43
23:DB:904:G:H2'	23:DB:905:A:C8	2.54	0.43
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.53	0.43
1:AA:211:G:H5''	1:AA:211:G:N3	2.34	0.43
1:CA:824:G:H2'	1:CA:825:A:H8	1.84	0.43
29:DE:153:LEU:HG	29:DE:154:ASP:N	2.34	0.43
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.19	0.43
23:BB:6:A:H2'	23:BB:7:G:H8	1.83	0.43
42:DN:71:ARG:CG	42:DN:71:ARG:HH21	2.31	0.43
42:BN:20:MET:HG3	42:BN:21:PHE:N	2.32	0.43
43:BO:58:ILE:O	43:BO:62:LEU:HD23	2.19	0.43
1:AA:1254:A:OP1	9:AJ:47:GLU:HG3	2.18	0.43
3:AD:2:ARG:O	3:AD:3:TYR:HB3	2.19	0.43
1:CA:1410:A:C6	1:CA:1491:G:C6	3.07	0.43
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	1.99	0.43
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.18	0.43
23:DB:2322:A:N6	23:DB:2333:A:H62	2.16	0.43
1:AA:1178:G:H2'	1:AA:1180:A:OP2	2.19	0.43
23:BB:2098:U:O2'	23:BB:2099:U:H5'	2.18	0.43
23:DB:1027:A:N3	23:DB:2488:G:H5''	2.34	0.43
20:AB:138:ARG:HA	20:AB:141:GLU:HG3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:863:A:H2'	23:DB:864:G:H8	1.84	0.43
1:CA:541:G:O2'	3:CD:39:GLN:HB3	2.18	0.43
1:CA:295:C:H2'	1:CA:296:U:H6	1.83	0.43
16:CQ:52:CYS:HB2	16:CQ:58:VAL:HG11	2.00	0.43
15:CP:20:VAL:CG2	15:CP:32:PHE:HB2	2.49	0.43
25:BC:154:ALA:HB2	25:BC:161:VAL:HG23	2.00	0.43
1:CA:952:U:H2'	1:CA:953:G:H8	1.84	0.43
1:CA:822:U:O2'	1:CA:823:C:H5'	2.17	0.43
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.18	0.43
23:DB:83:A:H2'	23:DB:84:A:C8	2.53	0.43
16:AQ:29:LYS:HG3	16:AQ:34:GLY:HA2	1.99	0.43
23:BB:811:U:C4	37:BL:21:ARG:NH2	2.86	0.43
1:AA:1406:U:O4	1:AA:1495:U:N3	2.52	0.43
23:BB:197:A:N6	23:BB:2430:A:H2'	2.33	0.43
23:DB:15:G:O2'	23:DB:16:C:H5'	2.18	0.43
1:AA:687:A:C2	1:AA:704:A:C5	3.05	0.43
23:BB:2791:G:H2'	23:BB:2792:A:O4'	2.18	0.43
20:CB:52:ALA:O	20:CB:56:LEU:HD13	2.17	0.43
6:CG:11:ILE:HD12	6:CG:11:ILE:H	1.84	0.43
14:CO:47:LYS:HE3	14:CO:47:LYS:HB2	1.80	0.43
23:DB:527:C:O2	23:DB:527:C:O4'	2.37	0.43
1:CA:580:C:H2'	1:CA:581:G:O4'	2.19	0.43
44:BQ:35:PHE:C	44:BQ:37:ALA:H	2.19	0.43
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.67	0.43
23:BB:922:C:HO2'	52:BW:25:PHE:HZ	1.63	0.43
52:BW:49:ASN:O	52:BW:50:VAL:HG13	2.17	0.43
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	2.01	0.43
40:BH:114:GLU:CD	40:BH:134:VAL:HA	2.38	0.43
40:BH:68:ARG:O	40:BH:72:ILE:HG22	2.18	0.43
12:AM:70:ARG:HH22	47:BF:112:ASP:CB	2.32	0.43
47:BF:2:LYS:CD	47:BF:100:GLU:HG2	2.48	0.43
47:BF:34:THR:O	47:BF:35:LEU:HB2	2.19	0.43
1:AA:1085:U:H3'	1:AA:1086:U:C6	2.52	0.43
26:DD:175:LEU:HD21	26:DD:191:GLY:O	2.19	0.43
29:BE:157:LEU:HG	29:BE:169:VAL:HG11	1.99	0.43
23:BB:1025:G:H8	23:BB:1025:G:OP1	2.02	0.43
28:BP:50:ARG:HD3	28:BP:56:SER:HB3	1.99	0.43
26:DD:13:ARG:HD2	28:DP:55:HIS:ND1	2.34	0.43
1:AA:80:A:H2'	1:AA:81:A:H4'	2.01	0.43
25:DC:171:VAL:HG23	25:DC:185:ALA:CB	2.48	0.43
32:B4:7:VAL:CG1	32:B4:8:LYS:H	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2465:C:O2'	23:BB:2466:C:H5'	2.18	0.43
25:DC:89:ASN:HA	25:DC:89:ASN:HD22	1.54	0.43
48:DG:84:LYS:HG3	48:DG:132:LEU:N	2.33	0.43
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.34	0.43
19:AT:43:LYS:H	19:AT:43:LYS:HD3	1.84	0.43
45:DS:73:LYS:HE3	45:DS:74:ILE:N	2.21	0.43
31:D0:39:ARG:HG3	31:D0:39:ARG:HH11	1.83	0.43
41:DJ:58:ASN:O	41:DJ:60:ASP:N	2.44	0.43
3:AD:18:LEU:HB2	3:AD:20:LEU:HD21	2.00	0.43
40:DH:10:ALA:C	40:DH:12:LEU:H	2.22	0.43
1:AA:521:G:OP1	11:AL:69:GLU:HA	2.18	0.43
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	2.00	0.43
23:BB:2145:C:H3'	23:BB:2146:C:H5'	1.99	0.43
30:DY:12:ALA:HB2	30:DY:53:MET:CE	2.48	0.43
23:BB:1022:G:N2	23:BB:1142:A:C2	2.84	0.43
23:BB:282:A:H2'	23:BB:283:G:C8	2.53	0.43
23:DB:141:G:N3	23:DB:141:G:C3'	2.78	0.43
13:AN:30:ILE:C	13:AN:32:ASP:H	2.21	0.43
30:DY:7:THR:HA	30:DY:34:THR:HA	2.00	0.43
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.49	0.43
20:CB:159:ALA:HB1	20:CB:183:PHE:HE1	1.84	0.43
1:AA:818:G:C2'	1:AA:819:A:H5''	2.49	0.43
39:BX:20:ASN:HD22	39:BX:20:ASN:N	2.16	0.43
29:DE:117:ARG:HA	29:DE:185:LYS:HZ2	1.82	0.43
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.48	0.43
47:DF:53:ALA:O	47:DF:64:PRO:HG2	2.19	0.43
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CB	2.42	0.43
47:DF:40:GLY:N	47:DF:84:ILE:O	2.50	0.43
11:CL:31:GLY:O	11:CL:78:VAL:HA	2.18	0.43
1:CA:948:C:O2'	1:CA:949:A:H5'	2.18	0.43
1:AA:1124:G:H3'	9:AJ:37:ARG:NH1	2.32	0.43
6:CG:145:GLU:OE2	6:CG:148:LYS:HD2	2.19	0.43
23:DB:1881:C:H2'	23:DB:1882:U:O4'	2.19	0.43
34:D3:22:LYS:HA	34:D3:47:ALA:O	2.19	0.43
32:B4:11:CYS:SG	32:B4:33:HIS:CE1	3.11	0.43
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.83	0.43
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.34	0.43
1:AA:777:A:H2'	1:AA:778:G:C8	2.53	0.43
46:DU:40:LEU:H	46:DU:40:LEU:HD12	1.84	0.43
1:AA:34:C:H2'	1:AA:35:G:H8	1.83	0.43
1:CA:828:U:O2'	20:CB:24:PRO:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1353:A:H2'	23:DB:1354:A:H8	1.82	0.43
46:BU:93:ARG:HB2	46:BU:102:ILE:HG21	2.00	0.43
12:AM:91:ARG:HG3	12:AM:92:ARG:N	2.34	0.43
1:AA:108:G:O4'	1:AA:108:G:N3	2.52	0.43
1:AA:502:A:H2'	1:AA:503:C:O4'	2.18	0.43
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	2.01	0.43
1:CA:108:G:N3	1:CA:108:G:O4'	2.52	0.43
23:DB:304:U:O2'	23:DB:305:C:H5'	2.18	0.43
14:AO:32:LEU:HD12	14:AO:59:MET:HB3	2.01	0.43
1:CA:537:G:H2'	1:CA:538:G:C8	2.53	0.43
4:AE:125:LYS:HD2	4:AE:126:ALA:N	2.31	0.43
1:AA:735:C:H2'	1:AA:736:C:H6	1.83	0.43
23:DB:659:G:N2	29:DE:30:GLN:NE2	2.65	0.43
22:DA:115:A:O2'	22:DA:116:G:H5'	2.18	0.43
23:DB:1465:G:H2'	23:DB:1466:U:C6	2.54	0.43
21:AU:48:LYS:HG3	21:AU:49:ALA:N	2.32	0.43
11:AL:68:GLY:HA3	11:AL:106:VAL:HG22	2.01	0.43
16:AQ:28:VAL:HG12	16:AQ:37:ILE:O	2.19	0.43
23:BB:2737:G:H2'	23:BB:2738:A:H8	1.84	0.43
23:DB:323:C:H2'	29:DE:163:ASN:OD1	2.19	0.43
12:AM:4:ALA:C	12:AM:6:ILE:H	2.22	0.43
2:AC:146:LYS:HB2	2:AC:202:PHE:CD2	2.53	0.43
11:AL:107:LYS:H	11:AL:107:LYS:HZ2	1.67	0.43
27:DK:66:LYS:HZ1	27:DK:81:GLY:HA2	1.84	0.43
19:AT:27:MET:CE	19:AT:28:ARG:HG2	2.48	0.43
23:DB:622:G:O2'	23:DB:623:C:H5'	2.19	0.43
6:AG:112:ASP:HB3	6:AG:113:LYS:H	1.67	0.43
23:DB:1933:G:O2'	23:DB:1974:C:H4'	2.18	0.43
23:DB:661:A:H1'	37:DL:12:SER:O	2.18	0.43
23:BB:3:U:O5'	23:BB:3:U:H6	2.01	0.43
23:DB:68:G:H2'	23:DB:69:C:C6	2.53	0.43
23:DB:1607:C:H4'	23:DB:1608:A:O5'	2.19	0.43
1:AA:822:U:O2'	1:AA:823:C:H5'	2.18	0.43
23:DB:1063:G:O2'	23:DB:1064:C:H5'	2.18	0.43
2:AC:54:ILE:O	2:AC:54:ILE:HG12	2.19	0.43
23:BB:812:C:H5'	37:BL:21:ARG:O	2.17	0.43
23:DB:213:A:O2'	23:DB:214:G:H5'	2.19	0.43
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.19	0.43
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.19	0.43
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.53	0.43
1:CA:725:G:O2'	1:CA:726:C:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:35:C:H2'	22:DA:36:C:H5'	2.01	0.43
1:CA:291:U:H2'	1:CA:292:G:H8	1.83	0.43
1:CA:935:A:O2'	1:CA:936:C:H5'	2.19	0.43
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.18	0.43
50:BT:36:LYS:O	50:BT:36:LYS:HD3	2.19	0.43
23:DB:2015:A:C2	31:D0:2:VAL:HG22	2.53	0.43
23:DB:24:G:H1'	45:DS:77:ASP:HB3	1.99	0.43
23:DB:1851:U:O2'	23:DB:1852:U:H5'	2.19	0.43
52:DW:19:ARG:HA	52:DW:34:SER:HA	2.00	0.43
52:DW:43:LYS:CD	52:DW:79:ILE:HD11	2.45	0.43
52:BW:19:ARG:H	52:BW:19:ARG:NE	2.17	0.43
10:CK:124:LYS:CA	21:CU:34:ARG:HB3	2.36	0.43
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.84	0.43
40:BH:90:LEU:HD21	40:BH:146:VAL:CG1	2.44	0.43
39:BX:39:GLN:CB	39:BX:42:LEU:HD22	2.48	0.43
47:BF:104:THR:C	47:BF:105:ILE:HG13	2.39	0.43
48:DG:24:THR:HB	48:DG:34:ARG:CD	2.48	0.43
44:DQ:51:GLN:O	44:DQ:54:ARG:HB2	2.18	0.43
44:BQ:83:LYS:NZ	44:BQ:83:LYS:HA	2.34	0.43
40:DH:41:LYS:HA	40:DH:44:ILE:CD1	2.49	0.43
23:BB:143:C:H1'	50:BT:3:ARG:NH1	2.33	0.43
50:BT:29:THR:CB	50:BT:86:THR:HG22	2.49	0.43
23:DB:78:U:O2'	23:DB:79:C:H5'	2.19	0.43
3:AD:160:LEU:N	3:AD:160:LEU:HD13	2.18	0.43
50:BT:40:LYS:O	50:BT:43:ILE:HB	2.18	0.43
50:DT:38:ALA:HB3	50:DT:81:LYS:HD3	2.00	0.43
23:DB:1182:G:H2'	23:DB:1183:U:O4'	2.18	0.43
13:CN:46:LYS:NZ	18:CS:9:PHE:HA	2.33	0.43
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.49	0.43
48:BG:85:LYS:O	48:BG:85:LYS:HG2	2.18	0.43
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.53	0.43
6:AG:110:ARG:NE	6:AG:122:GLU:HB2	2.34	0.43
4:CE:73:VAL:HG11	4:CE:143:LEU:HB3	2.01	0.43
13:AN:29:ILE:HB	13:AN:30:ILE:HD12	2.00	0.43
30:DY:43:ILE:O	30:DY:47:ILE:HG12	2.18	0.43
25:DC:76:VAL:HA	25:DC:113:ASP:O	2.18	0.43
38:DM:26:VAL:HB	38:DM:104:GLU:OE2	2.18	0.43
23:BB:335:C:OP2	46:BU:81:ARG:NH1	2.51	0.43
23:DB:181:A:H1'	23:DB:435:C:H5'	2.01	0.43
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.19	0.43
4:CE:113:VAL:CG2	4:CE:114:LEU:N	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:34:ILE:HB	42:DN:113:ILE:CG2	2.47	0.43
23:BB:2531:A:H5''	48:BG:156:TYR:CE2	2.52	0.43
49:DR:21:ARG:HB3	49:DR:95:ASP:OD1	2.19	0.43
1:CA:411:A:N9	1:CA:413:G:H1'	2.34	0.43
36:B2:30:VAL:HA	36:B2:33:ARG:HH21	1.83	0.43
33:B1:24:LYS:HE3	33:B1:29:LYS:O	2.18	0.43
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.48	0.43
1:AA:848:C:N4	54:AA:2062:LLL:H612	2.33	0.43
22:DA:28:C:H2'	22:DA:29:A:O4'	2.18	0.43
1:AA:337:G:O2'	1:AA:338:A:H5'	2.19	0.43
16:AQ:39:ARG:HH11	16:AQ:39:ARG:HG2	1.83	0.43
23:DB:1795:C:O2'	23:DB:1796:U:H5'	2.19	0.43
12:CM:94:LEU:HB3	12:CM:95:PRO:HD2	2.00	0.43
2:CC:155:ARG:H	2:CC:162:ALA:CA	2.31	0.43
23:BB:1729:U:C5'	23:BB:1730:C:H4'	2.49	0.43
41:DJ:30:THR:CG2	41:DJ:31:GLU:N	2.81	0.43
1:AA:735:C:H5'	17:AR:59:LYS:HD3	2.01	0.43
6:CG:21:LEU:N	6:CG:21:LEU:HD23	2.32	0.43
23:BB:962:G:N2	38:BM:82:MET:HE2	2.34	0.43
10:AK:117:HIS:O	10:AK:118:ASN:HB2	2.19	0.43
22:DA:93:C:O2'	22:DA:94:A:H5'	2.18	0.43
23:DB:1241:A:O4'	23:DB:1241:A:N3	2.51	0.43
1:AA:824:G:H2'	1:AA:825:A:H8	1.83	0.43
1:AA:1260:G:OP1	1:AA:1284:C:H4'	2.19	0.43
12:AM:84:CYS:HB3	18:AS:73:PHE:CE2	2.53	0.43
2:AC:9:ILE:HG23	2:AC:10:ARG:HG3	2.01	0.43
23:BB:2405:G:H2'	23:BB:2411:A:N6	2.33	0.43
26:DD:101:PHE:O	26:DD:102:ALA:HB2	2.18	0.43
23:BB:866:A:H61	23:BB:913:U:C4'	2.31	0.43
37:BL:118:THR:HA	37:BL:119:PRO:HD3	1.88	0.43
1:CA:586:C:O2'	1:CA:587:G:H5'	2.19	0.43
23:BB:1933:G:O2'	23:BB:1974:C:H4'	2.19	0.43
23:DB:2458:G:N3	23:DB:2458:G:H2'	2.33	0.43
25:DC:211:ARG:HA	25:DC:211:ARG:HD2	1.86	0.43
27:DK:121:GLU:O	27:DK:122:VAL:C	2.56	0.43
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.83	0.43
1:AA:46:G:O2'	1:AA:365:U:H1'	2.18	0.43
22:DA:65:U:C2'	22:DA:66:A:H5'	2.49	0.43
24:BI:63:ASP:O	24:BI:65:SER:N	2.51	0.43
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.19	0.43
1:AA:379:C:O2'	1:AA:380:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:34:ARG:HG2	41:BJ:39:LYS:HB3	2.00	0.43
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.19	0.43
23:DB:2519:U:C6	23:DB:2542:A:N6	2.87	0.43
23:DB:1700:A:H2'	23:DB:1701:A:H5'	2.01	0.43
23:BB:2683:C:O2'	23:BB:2684:U:H5'	2.19	0.43
1:AA:138:G:O2'	1:AA:139:A:H5'	2.19	0.43
1:CA:705:G:N2	10:CK:43:TRP:CE3	2.86	0.43
25:BC:120:ASP:OD2	25:BC:120:ASP:N	2.51	0.43
48:DG:54:ARG:HD3	48:DG:54:ARG:C	2.39	0.43
11:CL:45:ASN:HD22	11:CL:45:ASN:N	2.17	0.43
46:DU:43:LYS:HD3	46:DU:43:LYS:C	2.38	0.43
16:CQ:13:SER:HB3	16:CQ:21:VAL:CG2	2.48	0.43
23:DB:920:A:H2'	23:DB:921:C:C6	2.53	0.43
23:DB:922:C:H2'	23:DB:923:G:C8	2.54	0.43
37:BL:125:LEU:H	37:BL:143:GLU:CG	2.30	0.43
20:AB:22:TRP:HB3	20:AB:38:HIS:CE1	2.54	0.43
40:BH:94:ILE:HD11	40:BH:146:VAL:CG2	2.49	0.43
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.19	0.43
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.19	0.43
47:BF:172:PHE:C	47:BF:174:PHE:H	2.22	0.43
47:BF:175:PRO:O	47:BF:176:PHE:HB2	2.18	0.43
48:DG:22:VAL:HG13	48:DG:36:LEU:HD13	1.99	0.43
41:BJ:52:ASP:HB3	41:BJ:53:TYR:H	1.58	0.43
49:BR:66:HIS:CG	49:BR:94:THR:HG22	2.53	0.43
40:DH:89:LYS:HD2	40:DH:89:LYS:N	2.33	0.43
38:BM:38:ARG:HA	38:BM:98:PRO:HD3	2.00	0.43
28:BP:56:SER:O	28:BP:74:GLN:HA	2.18	0.43
50:BT:53:VAL:HG12	50:BT:54:GLU:H	1.82	0.43
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.33	0.43
48:DG:102:ILE:HG13	48:DG:116:LEU:CD1	2.49	0.43
45:DS:33:LEU:CD2	45:DS:48:LYS:HE3	2.49	0.43
23:BB:2654:A:N1	23:BB:2665:A:H5''	2.33	0.43
38:DM:42:THR:HA	38:DM:93:VAL:HA	2.00	0.43
47:DF:172:PHE:C	47:DF:174:PHE:H	2.22	0.43
23:BB:2060:A:H1'	56:BB:3545:HOH:O	2.19	0.43
23:DB:372:G:N7	51:DZ:57:ARG:HB3	2.33	0.43
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.79	0.43
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.83	0.43
13:CN:30:ILE:C	13:CN:32:ASP:H	2.22	0.43
36:B2:21:ARG:HH21	36:B2:43:THR:HG22	1.84	0.43
10:CK:28:ASN:HD21	10:CK:47:GLY:N	2.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:390:U:OP1	15:CP:28:ARG:NH2	2.52	0.43
2:CC:185:THR:HA	2:CC:197:VAL:O	2.18	0.43
23:DB:138:U:H2'	23:DB:140:C:C1'	2.49	0.43
23:DB:626:A:H2'	37:DL:78:ARG:NH1	2.33	0.43
40:DH:110:VAL:HG23	40:DH:132:PHE:CD2	2.54	0.43
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.34	0.43
48:BG:162:ARG:HG3	48:BG:166:GLU:HG3	2.00	0.43
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.38	0.43
23:BB:2811:G:OP1	26:BD:62:LYS:HD2	2.19	0.43
38:BM:102:LEU:HB3	38:BM:103:TYR:CD1	2.54	0.43
33:D1:29:LYS:HA	33:D1:31:GLU:OE1	2.18	0.43
30:BY:2:LYS:H	30:BY:2:LYS:CD	2.27	0.43
30:DY:35:VAL:HG22	30:DY:36:GLU:N	2.33	0.43
23:DB:1871:A:H2'	23:DB:1872:A:C8	2.54	0.43
23:DB:1655:A:C2	23:DB:2049:G:H4'	2.54	0.43
42:DN:28:LEU:HD23	42:DN:113:ILE:HG23	2.01	0.43
31:D0:42:ILE:HG12	42:DN:99:LYS:O	2.18	0.43
1:AA:251:G:N2	1:AA:266:G:H1	2.16	0.43
1:AA:255:G:H5'	16:AQ:17:GLU:O	2.19	0.43
1:CA:992:U:H1'	1:CA:993:G:C2	2.54	0.43
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HB3	2.00	0.43
23:BB:63:A:H8	23:BB:63:A:OP2	2.02	0.43
1:AA:1120:C:H2'	1:AA:1121:U:C6	2.54	0.43
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.84	0.43
4:AE:89:THR:CG2	4:AE:90:GLY:H	2.22	0.43
43:DO:31:THR:HG23	43:DO:34:HIS:O	2.19	0.43
49:DR:78:ARG:NH2	49:DR:78:ARG:HG3	2.33	0.43
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.19	0.43
51:BZ:29:PHE:N	51:BZ:29:PHE:CD1	2.86	0.43
42:DN:96:ARG:NH2	42:DN:96:ARG:HG2	2.34	0.43
23:BB:1511:G:H2'	23:BB:1512:C:H6	1.81	0.43
1:CA:883:C:O2'	1:CA:884:U:H5'	2.18	0.43
23:DB:1718:G:H2'	23:DB:1719:G:H8	1.82	0.43
1:AA:714:G:H21	1:AA:777:A:H1'	1.83	0.43
15:AP:50:THR:CG2	15:AP:51:ARG:N	2.82	0.43
43:DO:56:LYS:HG2	43:DO:60:GLU:CD	2.39	0.43
18:AS:68:HIS:HB3	18:AS:72:GLU:CD	2.39	0.43
1:CA:1380:U:O4	6:CG:2:ARG:HB2	2.18	0.43
12:CM:4:ALA:C	12:CM:6:ILE:H	2.22	0.43
28:BP:102:ARG:O	28:BP:106:ALA:HB3	2.18	0.43
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:104:THR:HA	40:BH:109:GLU:CD	2.39	0.43
23:DB:116:C:H1'	23:DB:127:A:N3	2.33	0.43
23:BB:394:C:C2'	23:BB:395:U:H5'	2.48	0.43
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.83	0.43
23:DB:1729:U:C5'	23:DB:1730:C:H4'	2.48	0.43
41:DJ:64:VAL:CG1	41:DJ:68:LYS:HB2	2.48	0.43
23:BB:936:A:H2'	23:BB:937:C:C6	2.54	0.43
23:BB:2847:U:H5''	28:BP:94:ALA:HB3	2.01	0.43
23:BB:2840:C:H5''	42:BN:53:THR:CG2	2.49	0.43
1:CA:653:U:C5	7:CH:55:LYS:HE2	2.53	0.43
27:BK:79:PHE:O	27:BK:81:GLY:N	2.51	0.43
23:BB:2659:G:N2	23:BB:2661:G:H5''	2.33	0.43
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.19	0.43
1:CA:1491:G:H5''	1:CA:1492:A:OP2	2.19	0.43
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.34	0.43
23:DB:775:G:H4'	23:DB:776:G:H5'	2.00	0.43
9:CJ:91:ASP:C	9:CJ:92:LEU:HD13	2.39	0.43
27:DK:88:ASN:ND2	27:DK:89:ASN:N	2.67	0.43
1:CA:649:A:H2'	1:CA:650:G:O4'	2.19	0.43
23:DB:2863:C:H2'	23:DB:2864:G:H8	1.84	0.43
1:CA:173:U:H5'	1:CA:197:A:O4'	2.19	0.43
16:CQ:29:LYS:HG3	16:CQ:34:GLY:HA2	2.01	0.43
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.51	0.43
44:DQ:35:PHE:C	44:DQ:37:ALA:H	2.22	0.43
36:B2:10:LEU:O	36:B2:14:ARG:HG2	2.19	0.43
1:AA:1517:G:H1'	23:BB:1919:A:O3'	2.19	0.43
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.19	0.43
25:DC:120:ASP:N	25:DC:120:ASP:OD2	2.51	0.43
28:BP:114:ASN:HA	28:BP:114:ASN:HD22	1.63	0.43
23:DB:291:G:O2'	23:DB:292:U:H5'	2.18	0.43
23:BB:1304:A:O2'	23:BB:1305:C:H5'	2.19	0.43
23:BB:923:G:O2'	23:BB:924:G:H5'	2.18	0.43
20:AB:69:VAL:O	20:AB:163:ILE:HG22	2.19	0.43
20:AB:185:ILE:HG23	20:AB:199:ILE:O	2.19	0.43
25:DC:128:THR:HG22	25:DC:129:LEU:N	2.34	0.43
13:CN:60:ARG:NH2	13:CN:69:PRO:HB3	2.33	0.43
13:CN:68:ARG:HB2	13:CN:79:SER:HB3	2.01	0.43
13:CN:5:MET:SD	13:CN:8:ARG:HD2	2.58	0.43
46:DU:86:PHE:CZ	46:DU:87:GLU:HG3	2.54	0.43
1:AA:663:A:O2'	1:AA:664:G:H5'	2.19	0.43
48:DG:28:LYS:O	48:DG:30:GLY:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:83:LYS:HA	44:DQ:83:LYS:NZ	2.34	0.43
44:DQ:89:ILE:O	44:DQ:90:ASP:HB2	2.19	0.43
48:BG:24:THR:HB	48:BG:34:ARG:CD	2.49	0.43
1:AA:1098:C:H2'	1:AA:1099:G:C8	2.53	0.43
25:DC:45:ASN:H	25:DC:45:ASN:ND2	2.17	0.43
23:DB:704:G:O2'	23:DB:727:A:N6	2.52	0.43
50:DT:22:THR:O	50:DT:25:GLU:HB3	2.18	0.43
42:DN:62:ASN:O	42:DN:66:ALA:HB2	2.19	0.43
5:AF:5:GLU:HG3	5:AF:63:ASN:OD1	2.19	0.43
38:DM:123:LYS:O	38:DM:124:LEU:C	2.57	0.43
23:BB:1079:C:O2'	24:BI:133:ARG:NH2	2.52	0.43
12:CM:52:ILE:HA	12:CM:55:LEU:CD1	2.49	0.43
12:AM:15:VAL:HG22	12:AM:33:LEU:CD1	2.48	0.43
12:AM:53:ASP:HA	12:AM:56:ARG:HH12	1.82	0.43
10:CK:92:ARG:HH11	10:CK:92:ARG:HG2	1.84	0.43
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.34	0.43
36:B2:34:ARG:HG2	36:B2:34:ARG:NH1	2.34	0.43
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.83	0.43
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.18	0.43
1:AA:93:U:H3'	1:AA:94:G:H4'	2.01	0.43
30:DY:23:LEU:CD1	30:DY:28:LEU:HB2	2.47	0.43
20:CB:224:ARG:HG2	20:CB:224:ARG:H	1.67	0.43
1:AA:1358:U:H3'	1:AA:1359:C:C6	2.53	0.43
3:AD:54:LEU:O	3:AD:58:GLN:HB2	2.18	0.43
1:CA:1130:A:H61	1:CA:1144:G:H1'	1.84	0.43
26:DD:62:LYS:N	26:DD:63:PRO:CD	2.82	0.43
11:AL:34:THR:O	11:AL:35:ARG:HB2	2.18	0.43
1:AA:1008:U:C2'	1:AA:1009:U:H5''	2.49	0.43
23:DB:2798:U:H4'	23:DB:2800:A:C2	2.53	0.43
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.83	0.43
1:CA:637:C:O2'	1:CA:638:U:H5'	2.19	0.43
11:AL:20:VAL:HB	11:AL:94:TYR:HE1	1.83	0.43
23:DB:1841:U:H2'	23:DB:1842:G:H8	1.82	0.43
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.49	0.43
2:CC:61:LYS:HA	2:CC:61:LYS:NZ	2.34	0.43
23:BB:77:G:O2'	23:BB:78:U:H5'	2.18	0.43
23:DB:459:U:C2'	23:DB:460:A:H5'	2.49	0.43
1:AA:676:A:H2'	1:AA:677:U:C6	2.54	0.43
20:AB:10:LYS:CB	20:AB:211:LEU:HD21	2.48	0.43
12:AM:93:GLY:O	12:AM:108:ARG:HG3	2.18	0.43
20:CB:107:ARG:HA	20:CB:110:ILE:HD12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:677:A:O2'	23:BB:2071:A:H5'	2.18	0.43
43:BO:56:LYS:HG2	43:BO:60:GLU:OE1	2.19	0.43
1:AA:693:G:P	10:AK:126:ARG:HH12	2.41	0.43
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.54	0.43
42:BN:118:ARG:HE	42:BN:118:ARG:HB3	1.47	0.43
23:DB:266:G:H3'	23:DB:267:C:H5''	2.01	0.43
23:BB:1045:C:H4'	23:BB:1047:G:O4'	2.18	0.43
5:CF:14:GLN:NE2	5:CF:83:ALA:HB2	2.34	0.43
1:AA:716:A:N3	10:AK:118:ASN:O	2.51	0.43
1:CA:716:A:N3	10:CK:118:ASN:O	2.52	0.43
1:CA:83:C:H1'	1:CA:84:U:C6	2.53	0.43
23:DB:2536:G:H2'	23:DB:2537:U:C6	2.53	0.43
2:AC:10:ARG:NH2	2:AC:181:ILE:HD13	2.34	0.43
23:DB:987:C:H2'	23:DB:988:A:O4'	2.19	0.43
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.18	0.43
23:BB:2315:G:H2'	23:BB:2316:G:C8	2.53	0.43
23:BB:765:C:H2'	23:BB:766:U:H6	1.83	0.43
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.19	0.43
23:DB:1339:G:N2	23:DB:1603:A:H1'	2.34	0.43
23:DB:1210:G:H5''	23:DB:1211:C:H3'	1.99	0.43
1:CA:1421:G:O2'	1:CA:1422:G:H5'	2.19	0.43
39:BX:58:ASN:O	39:BX:61:ALA:N	2.52	0.43
23:DB:81:G:H2'	23:DB:82:U:O4'	2.18	0.43
23:BB:1357:C:H2'	23:BB:1358:G:C8	2.54	0.43
10:AK:68:ARG:HG3	10:AK:68:ARG:HH11	1.83	0.43
3:CD:164:ARG:HG3	3:CD:165:GLU:N	2.34	0.43
6:CG:94:ARG:NE	6:CG:98:LEU:HD11	2.33	0.43
20:AB:35:ASN:HD22	20:AB:35:ASN:HA	1.63	0.43
40:BH:141:LYS:HD3	40:BH:141:LYS:N	2.34	0.43
48:BG:44:HIS:O	48:BG:46:ASP:N	2.52	0.43
5:AF:74:LEU:HG	5:AF:78:PHE:CE1	2.54	0.43
23:DB:1098:A:O5'	24:DI:3:LYS:CG	2.66	0.43
23:BB:917:A:H5''	23:BB:2268:A:N6	2.33	0.43
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.19	0.43
37:DL:77:ILE:CD1	37:DL:95:LEU:HD22	2.49	0.43
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.49	0.43
39:DX:39:GLN:HG3	39:DX:42:LEU:HD22	2.01	0.43
40:BH:71:LYS:HZ2	40:BH:71:LYS:HB2	1.84	0.43
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.81	0.43
47:BF:126:ASN:HD22	47:BF:156:THR:HG23	1.84	0.43
48:DG:25:ILE:HD11	48:DG:71:LEU:HD11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:25:LEU:C	41:DJ:25:LEU:HD13	2.39	0.43
41:DJ:26:GLY:HA2	41:DJ:29:ALA:HB3	2.01	0.43
41:DJ:28:LEU:HD23	41:DJ:29:ALA:N	2.34	0.43
49:BR:4:VAL:O	49:BR:5:PHE:HB3	2.19	0.43
25:DC:43:ASN:HB3	25:DC:45:ASN:ND2	2.32	0.43
40:DH:118:PRO:O	40:DH:119:ASN:HB3	2.19	0.43
23:BB:143:C:H2'	23:BB:144:A:C8	2.54	0.43
35:DV:31:TYR:O	35:DV:92:VAL:HG13	2.19	0.43
50:DT:28:ASN:ND2	50:DT:29:THR:HG23	2.34	0.43
47:DF:71:LYS:HG2	47:DF:71:LYS:O	2.18	0.43
42:BN:55:ALA:HA	42:BN:80:PHE:CD1	2.54	0.43
24:DI:128:ILE:HA	24:DI:131:THR:HG23	2.00	0.43
48:DG:121:THR:O	48:DG:132:LEU:HA	2.19	0.43
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.40	0.43
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	2.01	0.43
3:CD:60:VAL:HA	3:CD:63:ILE:HD12	2.00	0.43
12:CM:38:ILE:HG13	12:CM:55:LEU:CD2	2.48	0.43
12:AM:3:ILE:HG12	12:AM:52:ILE:HD11	2.01	0.43
27:BK:20:MET:C	27:BK:41:ILE:HD12	2.40	0.43
36:D2:13:ASN:O	36:D2:17:GLY:HA3	2.18	0.43
1:CA:389:A:H3'	1:CA:390:U:H6	1.83	0.43
20:AB:59:ILE:H	20:AB:59:ILE:HG13	1.61	0.43
20:AB:64:GLY:O	20:AB:66:ILE:HG12	2.19	0.43
33:B1:37:LYS:N	33:B1:48:TYR:HD2	2.17	0.43
43:DO:26:LEU:HD13	43:DO:39:VAL:HG23	2.00	0.43
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.17	0.43
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.18	0.43
38:BM:37:GLY:HA3	38:BM:127:LYS:HZ2	1.84	0.43
29:DE:48:THR:N	29:DE:51:GLU:HG3	2.34	0.43
44:DQ:27:ARG:NH1	44:DQ:27:ARG:HG3	2.34	0.43
33:B1:47:ILE:H	33:B1:47:ILE:HD12	1.83	0.43
35:BV:62:THR:CG2	35:BV:71:LYS:HG2	2.44	0.43
47:DF:49:LEU:HD13	47:DF:50:ASP:N	2.34	0.43
23:BB:528:A:H2	23:BB:2043:C:H4'	1.82	0.43
2:CC:48:LYS:HD3	2:CC:48:LYS:N	2.28	0.43
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.48	0.43
1:AA:1122:U:H2'	1:AA:1123:U:C6	2.54	0.43
3:CD:151:GLN:N	3:CD:155:LYS:NZ	2.67	0.43
8:AI:71:ILE:CD1	8:AI:71:ILE:H	2.30	0.43
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.80	0.43
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:777:A:H2'	1:CA:778:G:H8	1.84	0.43
23:DB:2109:U:H2'	23:DB:2180:U:N3	2.31	0.43
12:AM:91:ARG:HB2	12:AM:91:ARG:CZ	2.47	0.43
37:BL:2:ARG:HG2	37:BL:2:ARG:O	2.19	0.43
23:DB:878:A:H1'	23:DB:899:A:N7	2.34	0.43
1:AA:958:A:N1	18:AS:53:GLY:C	2.73	0.43
2:AC:155:ARG:H	2:AC:162:ALA:CA	2.32	0.43
1:AA:1424:U:H2'	1:AA:1425:U:H6	1.84	0.43
15:AP:26:ASN:HA	15:AP:26:ASN:HD22	1.65	0.43
23:BB:934:U:H2'	23:BB:935:C:H6	1.84	0.43
1:CA:797:C:O2'	1:CA:798:U:H5'	2.18	0.43
1:CA:83:C:H6	1:CA:83:C:OP2	2.02	0.43
48:DG:106:LEU:O	48:DG:108:PHE:N	2.52	0.43
1:CA:1461:G:H2'	1:CA:1462:C:O4'	2.19	0.43
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.82	0.43
1:AA:1461:G:H2'	1:AA:1462:C:O4'	2.18	0.43
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.19	0.43
22:BA:13:G:C2'	22:BA:14:U:H5''	2.48	0.43
1:CA:1284:C:H2'	1:CA:1285:A:C8	2.54	0.43
20:AB:41:ASN:ND2	20:AB:43:GLU:HG3	2.33	0.43
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.53	0.43
23:BB:1913:A:H4'	23:BB:1914:C:C5'	2.49	0.43
23:BB:1275:A:N6	23:BB:1296:G:H4'	2.33	0.43
1:AA:229:U:H2'	1:AA:230:G:H8	1.84	0.43
1:CA:543:U:O2'	1:CA:544:G:H5'	2.19	0.43
27:DK:107:LEU:HD12	27:DK:107:LEU:H	1.84	0.43
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.19	0.43
23:DB:2604:U:O2'	23:DB:2605:U:H5'	2.19	0.43
23:DB:2514:U:H2'	23:DB:2515:C:H6	1.83	0.43
1:AA:988:G:H2'	1:AA:989:U:O4'	2.19	0.43
23:BB:523:C:H4'	23:BB:540:C:O2	2.19	0.43
1:CA:1118:U:H2'	1:CA:1119:C:C6	2.54	0.43
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.54	0.43
23:BB:2780:G:H4'	23:BB:2781:A:OP2	2.18	0.43
23:DB:1210:G:P	23:DB:1212:G:H5'	2.59	0.43
23:DB:907:G:O2'	23:DB:908:C:H5'	2.19	0.43
24:BI:63:ASP:C	24:BI:65:SER:N	2.72	0.43
23:BB:1064:C:O4'	24:BI:90:GLY:HA2	2.19	0.43
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.54	0.43
1:CA:1216:A:H5''	13:CN:4:SER:CB	2.49	0.43
17:AR:42:ARG:HG3	17:AR:43:ILE:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1475:G:OP1	23:DB:1689:A:H1'	2.19	0.43
33:D1:39:ASP:OD1	33:D1:41:VAL:HB	2.19	0.43
1:AA:577:G:O2'	1:AA:578:C:H5'	2.19	0.43
23:DB:1987:A:H2'	23:DB:1988:G:H8	1.84	0.43
23:BB:927:A:H2'	23:BB:928:A:C8	2.54	0.43
3:CD:167:PRO:O	3:CD:168:THR:HG23	2.19	0.43
1:CA:397:A:H3'	1:CA:397:A:N3	2.34	0.43
26:BD:49:GLN:HE22	26:BD:67:HIS:CE1	2.36	0.43
23:DB:922:C:HO2'	52:DW:25:PHE:HZ	1.64	0.42
25:DC:117:SER:HB2	25:DC:128:THR:HB	2.01	0.42
8:AI:34:LEU:HD23	8:AI:35:GLU:OE1	2.18	0.42
40:BH:85:GLY:O	40:BH:89:LYS:N	2.48	0.42
23:BB:2729:G:H1'	26:BD:192:ALA:HB3	2.00	0.42
48:BG:42:VAL:HB	48:BG:51:PHE:CD1	2.54	0.42
48:BG:77:GLY:HA3	48:BG:135:ALA:O	2.18	0.42
18:CS:29:PRO:HB3	18:CS:47:THR:HG22	2.00	0.42
40:BH:3:VAL:HG12	40:BH:38:PRO:HA	2.00	0.42
26:DD:13:ARG:HG3	26:DD:15:PHE:CE1	2.54	0.42
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.54	0.42
25:DC:131:MET:HE2	25:DC:187:CYS:O	2.19	0.42
7:CH:7:ALA:O	7:CH:11:THR:HG23	2.18	0.42
50:DT:39:THR:HG23	50:DT:42:GLU:H	1.83	0.42
50:DT:47:VAL:HB	50:DT:55:VAL:HG21	2.00	0.42
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.48	0.42
25:DC:80:LEU:HD22	25:DC:109:LEU:HD12	2.01	0.42
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.19	0.42
23:DB:1455:G:H5'	42:DN:60:VAL:HG21	2.01	0.42
45:BS:47:VAL:HG12	45:BS:103:ILE:HD13	1.99	0.42
13:AN:42:ASN:O	13:AN:46:LYS:HG2	2.18	0.42
18:AS:40:PHE:O	18:AS:43:MET:HG3	2.19	0.42
23:DB:2654:A:N6	23:DB:2666:C:OP2	2.50	0.42
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.19	0.42
19:AT:61:ALA:HA	19:AT:67:HIS:N	2.26	0.42
47:BF:71:LYS:HG2	47:BF:71:LYS:O	2.18	0.42
15:AP:28:ARG:HD3	15:AP:29:ASN:ND2	2.34	0.42
26:BD:90:PHE:O	26:BD:91:THR:C	2.56	0.42
10:AK:88:PRO:HA	10:AK:92:ARG:HD2	1.99	0.42
2:CC:112:ALA:CB	2:CC:184:ASN:HB2	2.49	0.42
30:DY:7:THR:HG23	30:DY:34:THR:OG1	2.18	0.42
37:DL:78:ARG:HB3	37:DL:113:ALA:HB2	2.00	0.42
23:BB:2318:G:C6	23:BB:2319:G:C2	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.99	0.42
48:DG:94:ARG:HA	48:DG:128:THR:HG22	2.01	0.42
1:AA:598:U:H2'	1:AA:599:C:H6	1.82	0.42
38:BM:64:TRP:O	38:BM:103:TYR:HA	2.19	0.42
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.53	0.42
39:BX:53:VAL:O	39:BX:56:LEU:HB2	2.19	0.42
38:DM:126:ILE:HG22	38:DM:127:LYS:N	2.34	0.42
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.19	0.42
29:DE:160:ALA:O	29:DE:161:ALA:HB3	2.19	0.42
27:BK:98:ARG:C	27:BK:99:ILE:HD12	2.39	0.42
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.82	0.42
34:B3:31:ILE:HD11	34:B3:34:LYS:CE	2.49	0.42
35:BV:62:THR:HG22	35:BV:71:LYS:HZ2	1.84	0.42
1:CA:782:A:H4'	1:CA:1514:G:O2'	2.18	0.42
1:CA:475:C:O2'	1:CA:476:U:H5'	2.18	0.42
7:AH:125:ILE:HG22	7:AH:126:CYS:SG	2.59	0.42
1:AA:452:A:H1'	15:AP:70:ARG:NH1	2.32	0.42
32:D4:10:LEU:HD12	32:D4:33:HIS:CA	2.46	0.42
7:CH:63:LYS:HG2	7:CH:64:TYR:N	2.34	0.42
23:BB:548:G:H4'	23:BB:549:G:N3	2.33	0.42
23:BB:1803:A:H4'	25:BC:256:THR:OG1	2.19	0.42
25:DC:156:SER:HB3	25:DC:159:THR:CG2	2.49	0.42
1:CA:314:C:O2'	1:CA:315:A:H5'	2.18	0.42
46:BU:40:LEU:H	46:BU:40:LEU:HD12	1.84	0.42
1:CA:1225:A:H5''	12:CM:101:THR:OG1	2.19	0.42
15:CP:4:ILE:HB	15:CP:67:ILE:HD12	2.01	0.42
8:CI:66:VAL:CG1	8:CI:74:GLN:HG3	2.48	0.42
14:AO:36:ILE:HD13	14:AO:59:MET:HE3	2.01	0.42
12:CM:91:ARG:HG3	12:CM:92:ARG:N	2.33	0.42
38:DM:31:PHE:HB3	38:DM:130:PHE:CZ	2.54	0.42
23:BB:263:G:H2'	23:BB:264:C:C6	2.53	0.42
43:DO:83:LEU:HD11	43:DO:115:LEU:HD22	2.01	0.42
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.34	0.42
1:CA:402:G:H5'	1:CA:621:A:H1'	2.01	0.42
1:CA:707:U:H2'	1:CA:708:C:H6	1.83	0.42
12:AM:2:ARG:O	12:AM:4:ALA:N	2.52	0.42
25:DC:152:GLN:HA	25:DC:155:ARG:CD	2.49	0.42
23:DB:1818:U:H2'	25:DC:152:GLN:O	2.19	0.42
22:BA:13:G:H2'	22:BA:70:C:O2'	2.18	0.42
25:DC:6:LYS:HA	25:DC:7:PRO:HD3	1.91	0.42
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD22	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.34	0.42
23:BB:1917:U:H2'	23:BB:1918:A:H8	1.84	0.42
3:AD:187:ARG:HG3	3:AD:187:ARG:HH11	1.84	0.42
23:BB:863:A:O2'	23:BB:864:G:H5'	2.19	0.42
9:CJ:82:LYS:HG3	9:CJ:83:THR:H	1.83	0.42
18:CS:20:LYS:HD2	18:CS:20:LYS:O	2.19	0.42
23:BB:679:C:H2'	23:BB:680:C:C6	2.54	0.42
1:AA:51:A:H4'	1:AA:52:C:OP2	2.19	0.42
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.18	0.42
23:BB:2219:U:O2'	23:BB:2220:U:H5'	2.19	0.42
8:CI:42:THR:HA	8:CI:45:MET:SD	2.59	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.33	0.42
37:BL:21:ARG:HA	37:BL:21:ARG:HD3	1.84	0.42
23:DB:596:U:H2'	23:DB:597:G:C8	2.54	0.42
29:BE:79:ARG:HG2	29:BE:80:SER:H	1.83	0.42
17:AR:19:GLU:HG3	17:AR:54:LEU:HD12	2.00	0.42
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.34	0.42
23:BB:81:G:H2'	23:BB:82:U:O4'	2.18	0.42
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.48	0.42
23:BB:1207:C:H2'	23:BB:1208:C:H6	1.83	0.42
12:CM:100:ARG:O	12:CM:100:ARG:HG3	2.19	0.42
22:BA:73:A:H2'	22:BA:73:A:N3	2.33	0.42
11:AL:80:LEU:HB3	11:AL:97:VAL:CG2	2.49	0.42
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.53	0.42
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.33	0.42
23:DB:965:C:C2'	23:DB:966:G:H5'	2.49	0.42
52:BW:81:ILE:O	52:BW:81:ILE:HG13	2.19	0.42
40:BH:134:VAL:HG12	40:BH:138:VAL:HG23	2.01	0.42
41:DJ:43:GLU:O	41:DJ:44:TYR:C	2.57	0.42
48:BG:42:VAL:HG23	48:BG:49:LEU:HB3	2.02	0.42
44:BQ:91:ARG:HD3	49:BR:11:GLN:OE1	2.19	0.42
2:AC:126:ARG:HH12	2:AC:190:THR:HG23	1.84	0.42
19:CT:38:ILE:HG22	19:CT:39:GLU:N	2.33	0.42
28:DP:50:ARG:HD3	28:DP:56:SER:HB3	1.99	0.42
44:BQ:7:VAL:CG2	44:BQ:8:ILE:N	2.82	0.42
23:BB:322:A:H1'	23:BB:339:U:O2	2.19	0.42
48:DG:122:ALA:HA	48:DG:131:VAL:O	2.19	0.42
23:DB:1454:C:C5	42:DN:64:ARG:HG2	2.54	0.42
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.19	0.42
45:BS:33:LEU:HA	45:BS:36:LEU:HD23	2.01	0.42
23:BB:400:G:N7	51:BZ:57:ARG:NH1	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:60:ARG:CZ	13:AN:69:PRO:HB3	2.50	0.42
23:DB:2032:G:H21	26:DD:151:THR:H	1.66	0.42
23:DB:1439:A:N3	23:DB:1553:A:C5	2.87	0.42
1:CA:61:G:H4'	1:CA:386:C:O2'	2.18	0.42
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.81	0.42
41:DJ:55:ILE:CG2	41:DJ:123:LYS:HB2	2.48	0.42
20:AB:161:PHE:HD2	20:AB:183:PHE:HB2	1.84	0.42
13:AN:32:ASP:OD2	13:AN:33:VAL:N	2.52	0.42
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.40	0.42
23:BB:85:G:OP1	46:BU:6:ARG:N	2.52	0.42
23:DB:335:C:OP2	46:DU:81:ARG:NH1	2.51	0.42
46:DU:10:VAL:HB	46:DU:69:VAL:HB	2.00	0.42
30:DY:3:THR:HB	30:DY:36:GLU:CG	2.49	0.42
2:AC:156:LEU:HG	2:AC:163:ARG:O	2.18	0.42
27:BK:98:ARG:N	27:BK:98:ARG:HE	2.16	0.42
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.84	0.42
23:DB:2334:U:H5'	43:DO:12:THR:HB	2.01	0.42
48:DG:115:GLN:CD	48:DG:115:GLN:N	2.72	0.42
38:BM:108:VAL:HG21	38:BM:112:LEU:HD12	2.01	0.42
16:AQ:60:ILE:HA	16:AQ:75:VAL:HG22	2.01	0.42
1:CA:476:U:H2'	1:CA:477:C:O4'	2.19	0.42
23:DB:246:C:C2'	23:DB:247:G:H5'	2.49	0.42
1:AA:1000:A:H2'	1:AA:1001:C:H6	1.84	0.42
32:B4:11:CYS:HB3	32:B4:33:HIS:CE1	2.54	0.42
1:CA:1001:C:H2'	1:CA:1002:G:O4'	2.19	0.42
1:AA:845:A:N7	1:AA:846:G:O4'	2.52	0.42
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.18	0.42
25:BC:159:THR:N	25:BC:194:VAL:CG1	2.82	0.42
1:AA:812:G:HO2'	1:AA:813:U:H6	1.67	0.42
1:AA:1319:A:OP1	18:AS:4:LEU:HD11	2.19	0.42
20:AB:107:ARG:HA	20:AB:110:ILE:HD12	2.00	0.42
4:CE:53:ARG:HH21	4:CE:54:GLU:CG	2.32	0.42
22:BA:87:U:C2'	22:BA:88:C:O5'	2.67	0.42
1:AA:177:G:N3	1:AA:177:G:O4'	2.51	0.42
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.19	0.42
46:BU:8:ASP:O	46:BU:23:LYS:HA	2.18	0.42
1:CA:1330:U:H5''	12:CM:22:TYR:O	2.19	0.42
1:AA:23:C:O2'	1:AA:24:U:H5'	2.20	0.42
1:CA:807:A:H2'	1:CA:808:C:C6	2.55	0.42
23:DB:2393:U:H5''	37:DL:62:PRO:CG	2.49	0.42
23:DB:936:A:H2'	23:DB:937:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.19	0.42
23:DB:2601:C:O2'	23:DB:2602:A:H5''	2.18	0.42
22:DA:92:C:O2'	22:DA:93:C:H5'	2.19	0.42
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.19	0.42
27:BK:79:PHE:CD1	27:BK:79:PHE:N	2.86	0.42
5:AF:86:ARG:HH11	17:AR:64:LEU:HD12	1.83	0.42
48:DG:108:PHE:C	48:DG:110:HIS:H	2.22	0.42
23:DB:588:U:H1'	29:DE:85:PHE:CD1	2.54	0.42
23:DB:728:G:O2'	23:DB:730:A:H8	2.01	0.42
1:CA:1468:A:O2'	1:CA:1469:C:H5'	2.17	0.42
23:DB:2877:G:O2'	23:DB:2878:U:H5'	2.20	0.42
23:DB:692:C:H2'	23:DB:693:A:C8	2.54	0.42
23:DB:909:A:H2'	23:DB:912:C:C5	2.54	0.42
28:DP:31:VAL:HG13	28:DP:32:VAL:N	2.34	0.42
23:DB:960:A:C4'	23:DB:2457:U:H4'	2.49	0.42
5:CF:43:GLY:HA2	5:CF:58:HIS:CE1	2.54	0.42
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.84	0.42
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.19	0.42
2:AC:53:ARG:HG2	2:AC:54:ILE:H	1.83	0.42
1:CA:724:G:O2'	1:CA:725:G:H5'	2.19	0.42
23:BB:1706:C:O2'	23:BB:1757:A:H5'	2.19	0.42
14:AO:89:ARG:NH2	23:BB:714:U:C5	2.87	0.42
23:BB:1537:G:H2'	23:BB:1538:G:O4'	2.18	0.42
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.84	0.42
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.73	0.42
23:DB:2619:C:H5'	26:DD:157:LYS:HG2	2.02	0.42
25:BC:108:GLY:C	25:BC:110:LYS:H	2.22	0.42
36:D2:34:ARG:HH11	36:D2:34:ARG:HG2	1.83	0.42
36:D2:34:ARG:NH1	36:D2:34:ARG:HG2	2.34	0.42
11:AL:45:ASN:N	11:AL:45:ASN:HD22	2.17	0.42
23:BB:1306:C:H2'	23:BB:1307:A:H8	1.84	0.42
1:AA:1503:A:H8	1:AA:1531:A:H1'	1.84	0.42
52:BW:32:ALA:C	52:BW:34:SER:H	2.23	0.42
52:BW:50:VAL:O	52:BW:52:CYS:N	2.51	0.42
37:DL:77:ILE:CD1	37:DL:101:ILE:HD11	2.50	0.42
40:BH:132:PHE:HB3	40:BH:140:ALA:HB3	2.00	0.42
47:DF:149:ARG:HA	47:DF:149:ARG:NH1	2.27	0.42
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.87	0.42
48:BG:8:VAL:HG12	48:BG:9:VAL:N	2.34	0.42
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.39	0.42
23:BB:2579:C:O5'	23:BB:2579:C:H6	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:663:A:O2'	1:CA:664:G:H5'	2.19	0.42
9:AJ:53:ILE:HG13	13:AN:84:ARG:NE	2.34	0.42
35:DV:70:ILE:HD13	35:DV:70:ILE:N	2.35	0.42
38:DM:38:ARG:HA	38:DM:98:PRO:HD3	2.01	0.42
38:DM:38:ARG:HB3	38:DM:38:ARG:NH1	2.34	0.42
1:CA:874:G:O2'	1:CA:875:U:H5'	2.19	0.42
50:DT:42:GLU:O	50:DT:46:ALA:HB2	2.18	0.42
29:BE:166:LYS:O	29:BE:167:VAL:HB	2.19	0.42
45:DS:33:LEU:HA	45:DS:36:LEU:HD23	2.01	0.42
38:DM:2:LEU:HD11	38:DM:68:PHE:CE1	2.53	0.42
13:AN:46:LYS:NZ	18:AS:9:PHE:HA	2.34	0.42
12:CM:3:ILE:HG12	12:CM:52:ILE:HD11	2.00	0.42
48:BG:84:LYS:O	48:BG:85:LYS:O	2.37	0.42
1:CA:263:A:OP1	19:CT:73:ARG:NH1	2.53	0.42
21:AU:10:PRO:HB2	2:CC:71:ARG:CD	2.47	0.42
13:AN:9:GLU:HB2	13:AN:62:ARG:NE	2.34	0.42
23:DB:1438:U:N3	23:DB:1552:A:N6	2.67	0.42
46:BU:53:GLN:O	46:BU:53:GLN:HG2	2.18	0.42
32:D4:17:VAL:HG11	32:D4:19:ARG:HE	1.84	0.42
23:BB:1438:U:N3	23:BB:1552:A:N6	2.68	0.42
41:DJ:53:TYR:O	41:DJ:55:ILE:HG23	2.18	0.42
30:BY:7:THR:HA	30:BY:34:THR:HA	2.01	0.42
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.41	0.42
22:BA:8:C:OP1	43:BO:15:ARG:NH2	2.53	0.42
40:DH:140:ALA:O	40:DH:142:VAL:HG23	2.19	0.42
4:AE:33:THR:HG22	4:AE:51:LYS:CB	2.45	0.42
46:BU:20:LYS:HB2	46:BU:20:LYS:HZ3	1.83	0.42
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.55	0.42
29:DE:119:ILE:O	29:DE:187:VAL:HA	2.20	0.42
26:DD:114:LYS:HD2	26:DD:116:LYS:HZ1	1.81	0.42
47:DF:57:ALA:HB2	47:DF:64:PRO:HD3	2.01	0.42
23:DB:483:A:O2'	46:DU:56:GLY:N	2.52	0.42
11:CL:120:ARG:HH11	11:CL:120:ARG:HG2	1.83	0.42
23:DB:476:G:N2	23:DB:479:A:O4'	2.47	0.42
49:BR:15:SER:CB	49:BR:18:GLN:HE21	2.33	0.42
9:AJ:8:ILE:HD12	9:AJ:75:ASP:HA	2.00	0.42
25:DC:249:VAL:O	25:DC:250:GLN:C	2.57	0.42
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.34	0.42
8:CI:119:LYS:HB3	8:CI:122:ARG:HB3	2.02	0.42
29:DE:11:ALA:C	29:DE:12:LEU:HD22	2.39	0.42
1:AA:92:U:OP2	1:AA:92:U:H6	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:17:G:H2'	23:BB:18:U:H6	1.84	0.42
23:BB:1119:U:O2'	23:BB:1120:G:H5'	2.19	0.42
12:CM:77:LYS:HG2	12:CM:81:ASP:OD1	2.18	0.42
1:AA:674:G:O2'	1:AA:675:A:H5'	2.19	0.42
23:DB:2138:G:H2'	23:DB:2139:U:C6	2.54	0.42
46:BU:93:ARG:HB2	46:BU:102:ILE:CG2	2.49	0.42
23:DB:1505:A:H2'	23:DB:1506:U:H6	1.83	0.42
23:BB:1571:A:H2'	23:BB:1572:A:H8	1.83	0.42
27:DK:11:ALA:HB3	27:DK:85:VAL:CG2	2.49	0.42
15:CP:52:LEU:HD22	15:CP:75:ILE:HA	2.01	0.42
23:DB:2294:G:H2'	23:DB:2295:C:H6	1.83	0.42
1:CA:812:G:O2'	1:CA:813:U:C6	2.72	0.42
25:DC:66:PHE:CD1	25:DC:66:PHE:N	2.86	0.42
23:DB:1586:A:H8	23:DB:1586:A:O5'	2.02	0.42
1:AA:212:G:H2'	1:AA:213:G:C8	2.51	0.42
14:AO:26:GLU:OE2	14:AO:77:ARG:HD2	2.18	0.42
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.70	0.42
23:BB:839:U:H2'	23:BB:840:C:C6	2.54	0.42
29:BE:153:LEU:HG	29:BE:154:ASP:N	2.34	0.42
41:DJ:77:HIS:HD2	41:DJ:84:ILE:H	1.65	0.42
26:BD:169:ARG:O	26:BD:170:VAL:O	2.37	0.42
23:BB:2299:U:H2'	23:BB:2300:C:H6	1.85	0.42
24:DI:140:GLU:CD	24:DI:140:GLU:H	2.22	0.42
23:BB:2023:C:O2'	23:BB:2024:G:H5'	2.18	0.42
40:BH:41:LYS:C	40:BH:43:ASN:N	2.72	0.42
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.99	0.42
23:BB:1027:A:N3	23:BB:2488:G:H5''	2.34	0.42
23:BB:1526:C:O2'	23:BB:1527:G:H5'	2.19	0.42
1:AA:935:A:O2'	1:AA:936:C:H5'	2.20	0.42
43:DO:29:HIS:HB3	43:DO:36:TYR:HB2	2.01	0.42
46:DU:6:ARG:O	46:DU:24:VAL:HB	2.19	0.42
1:AA:987:G:H2'	1:AA:988:G:H8	1.84	0.42
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.49	0.42
47:BF:15:LEU:HD13	47:BF:28:PRO:HD2	2.00	0.42
23:DB:1831:G:H2'	23:DB:1832:C:H6	1.85	0.42
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.19	0.42
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.84	0.42
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.19	0.42
32:D4:22:VAL:HB	32:D4:24:ARG:HE	1.85	0.42
1:AA:648:A:O2'	1:AA:649:A:H5'	2.20	0.42
16:CQ:23:ALA:C	16:CQ:24:ILE:HD12	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:108:GLY:C	25:DC:110:LYS:H	2.22	0.42
25:DC:69:ASN:HB3	25:DC:70:LYS:H	1.62	0.42
4:CE:151:MET:O	4:CE:155:LYS:HG3	2.19	0.42
23:DB:818:G:H4'	23:DB:838:C:O3'	2.19	0.42
23:BB:1279:G:H4'	42:BN:31:HIS:CD2	2.55	0.42
28:DP:33:GLU:OE1	28:DP:33:GLU:HA	2.18	0.42
11:CL:28:GLN:HB3	11:CL:28:GLN:HE21	1.56	0.42
23:DB:2324:U:H3'	23:DB:2325:G:C5'	2.50	0.42
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.40	0.42
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.19	0.42
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.19	0.42
44:BQ:85:ALA:CB	44:BQ:111:LYS:HG3	2.50	0.42
49:BR:41:ILE:O	49:BR:46:GLU:HA	2.19	0.42
8:CI:34:LEU:C	8:CI:36:GLN:H	2.23	0.42
1:CA:663:A:C5'	17:CR:49:LYS:HD2	2.50	0.42
28:BP:3:ILE:HG23	28:BP:4:ILE:HG13	2.02	0.42
50:DT:16:VAL:HA	50:DT:21:SER:HB3	2.01	0.42
23:DB:1176:U:O5'	23:DB:1176:U:H6	2.02	0.42
28:DP:4:ILE:CG2	28:DP:5:LYS:H	2.17	0.42
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.49	0.42
23:BB:1454:C:H5'	42:BN:63:ARG:NE	2.35	0.42
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	2.20	0.42
38:DM:71:LYS:HB3	38:DM:93:VAL:O	2.19	0.42
47:DF:104:THR:C	47:DF:105:ILE:HG13	2.40	0.42
47:DF:91:ARG:O	47:DF:92:GLY:C	2.58	0.42
42:BN:102:PHE:N	42:BN:109:PRO:HA	2.24	0.42
12:CM:75:SER:O	12:CM:78:ARG:HB2	2.20	0.42
51:BZ:59:ILE:CD1	51:BZ:67:VAL:HG21	2.49	0.42
56:BB:3550:HOH:O	29:BE:63:LYS:HE2	2.18	0.42
51:DZ:33:LEU:HA	51:DZ:51:VAL:O	2.19	0.42
23:DB:1252:G:H5''	56:DB:3463:HOH:O	2.19	0.42
23:DB:2720:U:H2'	23:DB:2721:A:H8	1.85	0.42
51:BZ:6:GLN:NE2	51:BZ:50:ARG:N	2.67	0.42
1:CA:1313:U:H2'	1:CA:1314:C:C6	2.54	0.42
13:CN:30:ILE:HG21	13:CN:44:VAL:CG2	2.39	0.42
20:CB:150:ILE:O	20:CB:150:ILE:HG12	2.19	0.42
2:AC:104:GLU:O	2:AC:105:VAL:HG13	2.19	0.42
1:AA:1315:U:H5	18:AS:5:LYS:NZ	2.11	0.42
20:CB:68:PHE:CE1	20:CB:88:GLN:HB3	2.54	0.42
46:DU:51:LEU:HD22	46:DU:52:ASN:OD1	2.19	0.42
25:BC:78:GLU:HG3	25:BC:94:LEU:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1130:A:H61	1:AA:1144:G:H1'	1.84	0.42
1:CA:771:G:H2'	1:CA:772:U:C6	2.55	0.42
23:DB:247:G:H4'	23:DB:386:G:C5	2.55	0.42
11:CL:79:ILE:HD12	11:CL:96:THR:CG2	2.49	0.42
1:CA:1343:G:H1'	8:CI:122:ARG:NH1	2.29	0.42
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.19	0.42
4:CE:61:LYS:HB3	4:CE:61:LYS:NZ	2.34	0.42
23:BB:1348:C:H2'	23:BB:1349:C:H5'	2.01	0.42
25:DC:123:ILE:HA	25:DC:191:LEU:HD13	2.00	0.42
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.83	0.42
23:DB:394:C:C2'	23:DB:395:U:H5'	2.49	0.42
1:CA:177:G:N3	1:CA:177:G:O4'	2.51	0.42
14:AO:12:VAL:CG1	14:AO:22:THR:HG22	2.48	0.42
37:DL:2:ARG:O	37:DL:2:ARG:HG2	2.20	0.42
23:BB:263:G:H2'	23:BB:264:C:H6	1.84	0.42
42:DN:17:ARG:O	42:DN:21:PHE:HB2	2.19	0.42
22:DA:94:A:OP1	35:DV:19:ARG:HD3	2.18	0.42
48:BG:108:PHE:C	48:BG:110:HIS:H	2.23	0.42
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.82	0.42
23:DB:175:G:H2'	23:DB:176:A:C8	2.54	0.42
23:DB:1799:G:H4'	23:DB:1800:C:O5'	2.20	0.42
49:BR:79:ARG:O	49:BR:81:LYS:N	2.52	0.42
40:DH:27:ARG:O	40:DH:28:ASN:ND2	2.52	0.42
25:BC:30:ALA:C	25:BC:32:LEU:H	2.23	0.42
1:CA:939:G:H5''	6:CG:101:ARG:CZ	2.49	0.42
23:BB:909:A:H2'	23:BB:912:C:C5	2.52	0.42
23:DB:2488:G:O2'	23:DB:2489:U:H5'	2.20	0.42
23:DB:960:A:H61	38:DM:82:MET:HE1	1.85	0.42
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.19	0.42
1:AA:681:A:H2'	1:AA:682:G:C8	2.54	0.42
23:BB:1210:G:N3	23:BB:1212:G:N2	2.68	0.42
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.19	0.42
23:BB:739:A:H1'	23:BB:740:C:H5	1.84	0.42
31:B0:55:ALA:C	31:B0:56:LYS:HG3	2.40	0.42
16:AQ:27:PHE:HB3	16:AQ:36:PHE:HB3	2.01	0.42
17:AR:47:ARG:HD3	17:AR:50:TYR:CZ	2.54	0.42
9:CJ:44:THR:HG23	9:CJ:70:HIS:HA	2.01	0.42
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.54	0.42
26:BD:16:THR:HB	26:BD:18:ASP:OD1	2.19	0.42
23:DB:1706:C:O2'	23:DB:1757:A:H5'	2.20	0.42
4:AE:48:GLY:O	4:AE:62:ALA:HB1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:28:LYS:HD2	28:BP:82:SER:OG	2.19	0.42
1:CA:841:C:O2	1:CA:841:C:H2'	2.18	0.42
50:DT:36:LYS:O	50:DT:36:LYS:HD3	2.20	0.42
23:BB:1310:G:C2'	23:BB:1311:G:H5'	2.49	0.42
23:DB:8:C:O2'	23:DB:9:G:H5'	2.19	0.42
52:DW:28:GLU:H	52:DW:31:LEU:HD11	1.85	0.42
52:DW:36:ILE:HG21	52:DW:42:THR:HG21	2.02	0.42
52:DW:81:ILE:O	52:DW:81:ILE:HG13	2.19	0.42
13:CN:61:ASN:O	13:CN:62:ARG:HB2	2.20	0.42
42:DN:38:LEU:HB3	42:DN:39:PRO:CD	2.40	0.42
46:BU:86:PHE:CZ	46:BU:87:GLU:HG3	2.55	0.42
21:AU:36:PHE:HD2	21:AU:36:PHE:HA	1.73	0.42
47:BF:32:LYS:HZ3	47:BF:156:THR:HG21	1.82	0.42
47:BF:33:ILE:HD12	47:BF:95:MET:HG2	2.01	0.42
29:DE:157:LEU:HG	29:DE:169:VAL:HG11	2.01	0.42
48:DG:77:GLY:HA3	48:DG:135:ALA:O	2.20	0.42
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.28	0.42
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.48	0.42
44:DQ:94:LEU:O	44:DQ:97:ILE:HG23	2.20	0.42
49:DR:4:VAL:HG21	49:DR:39:LEU:HG	2.01	0.42
48:BG:17:LYS:HG3	48:BG:18:ILE:N	2.35	0.42
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.87	0.42
40:DH:2:GLN:O	40:DH:3:VAL:O	2.38	0.42
26:DD:57:ALA:HA	26:DD:60:VAL:HG21	2.01	0.42
51:BZ:41:GLU:O	51:BZ:44:LYS:HD2	2.19	0.42
23:BB:141:G:H5''	23:BB:142:A:N7	2.35	0.42
35:DV:29:ILE:HD13	35:DV:31:TYR:HE2	1.84	0.42
50:BT:28:ASN:ND2	50:BT:29:THR:HG23	2.35	0.42
1:AA:437:U:H4'	3:AD:153:ARG:NH1	2.35	0.42
3:AD:115:GLN:HG3	3:AD:119:HIS:ND1	2.35	0.42
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.52	0.42
47:DF:100:GLU:O	47:DF:104:THR:HB	2.19	0.42
45:DS:18:ARG:O	45:DS:22:ASP:OD1	2.37	0.42
51:BZ:33:LEU:HA	51:BZ:51:VAL:O	2.19	0.42
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.50	0.42
48:BG:84:LYS:HG3	48:BG:132:LEU:N	2.34	0.42
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.84	0.42
52:BW:37:VAL:HG22	52:BW:55:ASP:O	2.19	0.42
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.54	0.42
29:DE:61:ARG:HG3	29:DE:61:ARG:HH21	1.85	0.42
22:BA:52:A:H3'	22:BA:53:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:144:A:H2'	23:DB:145:C:H6	1.84	0.42
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.82	0.42
23:BB:1438:U:C4	23:BB:1552:A:N6	2.88	0.42
41:BJ:64:VAL:CG1	41:BJ:68:LYS:HB2	2.49	0.42
13:AN:50:LEU:HG	13:AN:51:PRO:CD	2.48	0.42
43:BO:25:ARG:HD2	43:BO:93:ASP:HB2	2.01	0.42
23:DB:327:G:H2'	23:DB:328:U:C6	2.54	0.42
13:CN:50:LEU:CG	13:CN:51:PRO:HD3	2.49	0.42
1:AA:975:A:O2'	1:AA:1358:U:H1'	2.19	0.42
48:DG:94:ARG:HE	48:DG:94:ARG:C	2.22	0.42
1:CA:483:C:H2'	1:CA:484:G:C8	2.55	0.42
46:BU:73:ASN:HD22	46:BU:73:ASN:H	1.68	0.42
23:BB:1871:A:H2'	23:BB:1872:A:C8	2.54	0.42
37:DL:65:GLY:O	37:DL:66:PHE:CB	2.65	0.42
11:AL:55:ARG:HH11	11:AL:55:ARG:HG3	1.84	0.42
26:DD:113:SER:HB3	26:DD:167:ASN:CA	2.49	0.42
1:CA:238:A:H3'	1:CA:239:U:H5''	2.02	0.42
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.50	0.42
3:CD:146:GLU:HA	3:CD:149:LYS:CG	2.44	0.42
23:BB:481:G:H1'	23:BB:506:G:N2	2.34	0.42
23:BB:2873:A:O4'	42:BN:6:SER:HB3	2.19	0.42
1:AA:190:A:C4	1:AA:191:G:H1'	2.53	0.42
23:BB:2598:A:H5''	25:BC:233:GLY:O	2.20	0.42
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.34	0.42
1:CA:676:A:H2'	1:CA:677:U:C6	2.55	0.42
50:DT:50:LEU:O	50:DT:52:GLU:N	2.52	0.42
23:DB:154:U:O2'	23:DB:155:A:H5'	2.20	0.42
50:BT:50:LEU:O	50:BT:52:GLU:N	2.52	0.42
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.47	0.42
1:AA:410:G:H2'	1:AA:429:U:C5	2.54	0.42
34:D3:61:LEU:N	34:D3:62:PRO:HD3	2.34	0.42
14:AO:26:GLU:HG3	14:AO:81:LEU:CD1	2.50	0.42
3:CD:141:VAL:HA	3:CD:179:GLY:O	2.19	0.42
41:DJ:84:ILE:HG23	41:DJ:84:ILE:O	2.19	0.42
18:CS:68:HIS:HB3	18:CS:72:GLU:CD	2.40	0.42
1:AA:443:C:H2'	1:AA:444:G:H8	1.81	0.42
41:BJ:30:THR:CG2	41:BJ:31:GLU:N	2.83	0.42
1:CA:796:C:O2'	1:CA:797:C:H5'	2.20	0.42
21:AU:9:GLU:HG2	2:CC:108:PRO:HG2	2.01	0.42
23:BB:699:A:H4'	23:BB:1634:A:C5	2.54	0.42
1:AA:857:C:H2'	1:AA:858:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:513:C:H2'	1:AA:514:C:C6	2.53	0.42
1:CA:229:U:H2'	1:CA:230:G:H8	1.83	0.42
23:DB:99:U:O2	23:DB:99:U:O4'	2.34	0.42
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.42
23:BB:2519:U:C6	23:BB:2542:A:N6	2.87	0.42
1:AA:295:C:H2'	1:AA:296:U:H6	1.84	0.42
25:DC:172:THR:HB	25:DC:182:LYS:HG2	2.01	0.42
1:AA:683:G:O2'	1:AA:684:U:H5'	2.18	0.42
1:AA:594:U:H2'	1:AA:595:A:C8	2.54	0.42
1:CA:579:A:H2'	1:CA:580:C:C6	2.55	0.42
23:BB:1838:C:N4	23:BB:1898:U:H2'	2.34	0.42
1:CA:1264:U:H2'	1:CA:1265:C:O4'	2.20	0.42
23:BB:2206:C:O2'	23:BB:2207:C:H5'	2.20	0.42
23:DB:1076:C:O2'	23:DB:1077:A:H5'	2.20	0.42
1:AA:1125:U:O2'	1:AA:1126:U:H2'	2.19	0.42
23:DB:1711:A:O2'	23:DB:1712:U:H5'	2.19	0.42
24:DI:46:ASP:HA	24:DI:50:LYS:HE2	2.01	0.42
23:DB:1541:C:O2'	23:DB:1542:U:H5'	2.19	0.42
14:AO:45:GLU:O	14:AO:46:HIS:HB2	2.20	0.42
44:DQ:49:ARG:HG2	44:DQ:49:ARG:HH11	1.85	0.42
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.35	0.42
1:AA:626:G:H2'	1:AA:627:G:H8	1.85	0.42
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.40	0.42
26:BD:106:LYS:HG3	26:BD:206:ALA:HB3	2.02	0.42
23:BB:856:G:H2'	23:BB:857:G:C8	2.55	0.42
23:BB:922:C:H1'	52:BW:22:VAL:CG2	2.46	0.42
20:AB:185:ILE:HG12	20:AB:199:ILE:CG2	2.49	0.42
25:DC:141:HIS:HB3	25:DC:190:THR:HG1	1.85	0.42
10:AK:125:LYS:O	21:AU:33:ARG:NE	2.53	0.42
10:AK:122:PRO:HD2	21:AU:35:GLU:HG2	2.01	0.42
39:BX:31:GLN:CG	39:BX:37:LEU:HB2	2.43	0.42
22:BA:43:C:C2'	22:BA:44:G:H5''	2.50	0.42
47:BF:149:ARG:HA	47:BF:149:ARG:NH1	2.27	0.42
41:DJ:112:GLY:N	41:DJ:113:PRO:HD2	2.29	0.42
44:DQ:63:ARG:HA	44:DQ:66:ALA:HB3	2.01	0.42
48:BG:29:ASN:ND2	48:BG:77:GLY:O	2.52	0.42
48:BG:8:VAL:HG21	48:BG:49:LEU:CB	2.38	0.42
8:CI:44:ARG:HG2	8:CI:44:ARG:HH11	1.84	0.42
1:CA:663:A:H2'	1:CA:664:G:H8	1.83	0.42
28:BP:3:ILE:HD13	28:BP:7:LEU:HD11	2.02	0.42
23:BB:705:A:N6	23:BB:726:G:O2'	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:41:ALA:C	50:BT:43:ILE:H	2.23	0.42
50:DT:57:VAL:CG2	50:DT:58:VAL:H	2.19	0.42
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.54	0.42
32:B4:2:LYS:O	32:B4:35:GLN:HA	2.19	0.42
48:DG:102:ILE:CD1	48:DG:116:LEU:HD11	2.49	0.42
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.50	0.42
5:AF:100:SER:HA	17:AR:23:LYS:HE2	2.01	0.42
38:DM:41:LEU:HB3	38:DM:46:ILE:CG2	2.50	0.42
13:AN:46:LYS:HZ3	18:AS:9:PHE:HA	1.83	0.42
51:BZ:68:LEU:HD13	51:BZ:78:TYR:CE1	2.54	0.42
48:BG:102:ILE:CG1	48:BG:116:LEU:HD11	2.49	0.42
42:DN:102:PHE:N	42:DN:109:PRO:HA	2.25	0.42
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	2.01	0.42
10:CK:28:ASN:ND2	10:CK:56:LYS:HD2	2.35	0.42
37:BL:79:LEU:H	37:BL:113:ALA:HB2	1.85	0.42
6:AG:78:ARG:NH1	6:AG:82:SER:N	2.68	0.42
46:BU:6:ARG:O	46:BU:24:VAL:HB	2.20	0.42
26:BD:62:LYS:N	26:BD:63:PRO:CD	2.83	0.42
46:DU:82:VAL:HG12	46:DU:83:GLY:O	2.19	0.42
1:AA:782:A:H4'	1:AA:1514:G:O2'	2.19	0.42
15:AP:2:VAL:O	15:AP:65:ALA:HA	2.19	0.42
23:BB:2150:C:O2'	23:BB:2151:U:H5'	2.20	0.42
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.20	0.42
12:CM:79:LEU:CD2	12:CM:86:ARG:HE	2.33	0.42
1:CA:238:A:H2'	1:CA:239:U:C5'	2.47	0.42
1:AA:413:G:H2'	1:AA:428:G:H21	1.84	0.42
1:CA:474:G:H2'	1:CA:475:C:H6	1.82	0.42
41:BJ:96:ARG:NE	41:BJ:99:ARG:HD2	2.34	0.42
52:DW:77:LYS:O	52:DW:78:PHE:HB2	2.18	0.42
23:DB:1841:U:C2	23:DB:1842:G:C8	3.07	0.42
1:AA:554:A:H5'	11:AL:25:ALA:HB1	2.02	0.42
1:CA:337:G:O2'	1:CA:338:A:H5'	2.19	0.42
1:CA:255:G:H5'	16:CQ:17:GLU:O	2.19	0.42
12:CM:77:LYS:O	12:CM:80:MET:HB2	2.20	0.42
25:BC:157:ALA:HB1	25:BC:196:ASN:HB3	2.01	0.42
39:BX:29:ARG:NH1	50:BT:12:ARG:HE	2.18	0.42
45:BS:17:VAL:HG13	45:BS:43:ALA:HB1	2.01	0.42
18:AS:35:ARG:O	18:AS:71:GLY:N	2.53	0.42
47:BF:115:GLY:CA	47:BF:177:ARG:HD2	2.50	0.42
8:CI:66:VAL:HG22	8:CI:67:LYS:N	2.33	0.42
1:AA:284:C:O2'	1:AA:285:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:430:A:O2'	1:CA:431:A:H5'	2.20	0.42
23:BB:2428:G:N2	37:BL:54:GLN:OE1	2.52	0.42
38:BM:31:PHE:HB3	38:BM:130:PHE:CZ	2.55	0.42
1:AA:734:G:H2'	1:AA:735:C:H6	1.85	0.42
1:AA:734:G:H2'	1:AA:735:C:C6	2.55	0.42
23:BB:2007:U:O2'	23:BB:2008:C:H5'	2.19	0.42
23:DB:2394:C:H2'	23:DB:2395:C:C6	2.54	0.42
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	2.19	0.42
23:DB:2025:C:H2'	23:DB:2026:U:H6	1.83	0.42
1:AA:1347:G:H8	8:AI:108:ARG:HB3	1.84	0.42
26:BD:101:PHE:O	26:BD:102:ALA:HB2	2.20	0.42
19:AT:2:ASN:ND2	19:AT:3:ILE:H	2.18	0.42
23:DB:780:G:H2'	23:DB:782:A:N7	2.35	0.42
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.34	0.42
1:AA:84:U:O2'	1:AA:86:G:N2	2.52	0.42
23:BB:2405:G:H1'	23:BB:2412:A:N6	2.35	0.42
23:DB:1573:G:C2'	23:DB:1574:C:H5'	2.49	0.42
23:BB:1799:G:H4'	23:BB:1800:C:O5'	2.19	0.42
25:DC:52:HIS:NE2	25:DC:218:THR:HG23	2.35	0.42
23:BB:2877:G:O2'	23:BB:2878:U:H5'	2.19	0.42
23:BB:2397:G:O2'	23:BB:2398:U:H5'	2.19	0.42
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.20	0.42
1:AA:1222:G:H2'	1:AA:1223:C:H5'	2.02	0.42
9:AJ:80:THR:HB	9:AJ:83:THR:CB	2.50	0.42
9:AJ:82:LYS:HG3	9:AJ:83:THR:N	2.34	0.42
23:BB:1210:G:P	23:BB:1212:G:H5'	2.60	0.42
23:DB:1009:A:OP1	41:DJ:39:LYS:NZ	2.53	0.42
27:BK:88:ASN:ND2	27:BK:88:ASN:C	2.71	0.42
23:BB:214:G:N2	23:BB:216:A:N3	2.66	0.42
4:AE:40:ASP:OD2	4:AE:42:ASN:HB3	2.19	0.42
23:BB:596:U:H2'	23:BB:597:G:H8	1.83	0.42
10:AK:65:ALA:O	10:AK:68:ARG:HB3	2.20	0.42
1:CA:150:U:H2'	1:CA:151:A:H8	1.83	0.42
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.84	0.42
1:CA:1358:U:H3'	1:CA:1359:C:C6	2.55	0.42
23:DB:1357:C:H2'	23:DB:1358:G:C8	2.55	0.42
27:BK:39:ILE:HD13	27:BK:39:ILE:H	1.84	0.42
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.54	0.42
9:AJ:11:LYS:HB2	9:AJ:97:ASP:OD1	2.19	0.42
23:DB:910:A:H2	23:DB:2264:C:O2	2.02	0.42
23:DB:2251:G:H8	23:DB:2251:G:OP2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:968:A:H3'	1:CA:969:A:C5'	2.49	0.42
23:DB:919:U:H6	23:DB:919:U:O5'	2.02	0.42
52:DW:39:GLN:NE2	52:DW:43:LYS:HB2	2.35	0.42
37:BL:90:VAL:CB	37:BL:122:VAL:HG12	2.47	0.42
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.19	0.42
20:AB:46:VAL:O	20:AB:49:PHE:HB2	2.19	0.42
13:CN:9:GLU:HB2	13:CN:62:ARG:CZ	2.50	0.42
46:DU:90:LYS:O	46:DU:92:VAL:HG23	2.20	0.42
10:CK:122:PRO:HB2	21:CU:33:ARG:O	2.20	0.42
37:BL:6:LEU:N	37:BL:6:LEU:HD23	2.25	0.42
40:BH:72:ILE:HD11	40:BH:75:LEU:HD21	2.00	0.42
21:AU:36:PHE:CD2	21:AU:39:LYS:HD3	2.55	0.42
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.50	0.42
23:BB:994:C:O2	49:BR:10:LYS:HE3	2.20	0.42
41:BJ:25:LEU:HD13	41:BJ:25:LEU:C	2.39	0.42
41:BJ:6:ALA:CB	41:BJ:45:THR:HG21	2.50	0.42
41:BJ:53:TYR:O	41:BJ:55:ILE:HG23	2.19	0.42
26:DD:109:VAL:HG11	26:DD:193:VAL:CB	2.49	0.42
25:DC:131:MET:CE	25:DC:187:CYS:HB2	2.49	0.42
50:DT:14:PRO:HA	50:DT:32:LEU:HB2	2.01	0.42
13:CN:76:PHE:CE2	13:CN:95:LEU:HD22	2.55	0.42
25:DC:64:VAL:HA	25:DC:102:TYR:HB3	2.02	0.42
32:D4:2:LYS:CD	32:D4:4:ARG:HG3	2.50	0.42
23:BB:513:A:O2'	23:BB:514:A:H5'	2.19	0.42
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.50	0.42
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.55	0.42
44:DQ:65:ASN:HD21	44:DQ:69:ARG:NH1	2.02	0.42
29:DE:58:LYS:HB2	29:DE:60:TRP:CD1	2.54	0.42
15:CP:28:ARG:HD3	15:CP:29:ASN:ND2	2.34	0.42
20:AB:65:LYS:HB3	20:AB:157:PRO:HA	2.01	0.42
23:BB:280:U:H2'	23:BB:281:C:H6	1.79	0.42
30:BY:43:ILE:O	30:BY:47:ILE:HG12	2.19	0.42
23:DB:627:A:P	37:DL:78:ARG:HH11	2.42	0.42
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.55	0.42
28:BP:91:VAL:HG11	28:BP:96:LEU:HD21	2.02	0.42
29:DE:51:GLU:H	29:DE:51:GLU:HG2	1.68	0.42
47:BF:87:LYS:CG	47:BF:88:VAL:H	2.29	0.42
23:DB:581:C:OP2	44:DQ:32:ARG:HD2	2.19	0.42
23:DB:581:C:P	44:DQ:32:ARG:HD2	2.59	0.42
38:BM:108:VAL:HG11	38:BM:112:LEU:HD12	2.02	0.42
1:CA:128:G:H2'	1:CA:129:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:255:G:H2'	1:AA:256:U:H6	1.84	0.42
17:CR:67:LEU:HD23	17:CR:68:PRO:HD2	2.01	0.42
23:BB:2420:C:OP1	34:B3:33:THR:HB	2.18	0.42
23:DB:193:U:O3'	23:DB:803:U:H4'	2.20	0.42
25:DC:257:ARG:HG3	25:DC:257:ARG:HH11	1.84	0.42
23:BB:1655:A:H2	23:BB:2049:G:O3'	2.02	0.42
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.54	0.42
23:BB:1076:C:H4'	24:BI:94:LYS:HZ2	1.83	0.42
3:CD:155:LYS:HE3	3:CD:155:LYS:HB3	1.91	0.42
1:CA:720:C:C5'	17:CR:40:PRO:HA	2.49	0.42
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.20	0.42
23:DB:654:A:H2'	23:DB:655:A:C5'	2.49	0.42
23:DB:1411:U:H2'	23:DB:1412:U:H6	1.84	0.42
23:DB:315:G:H2'	23:DB:316:C:H6	1.80	0.42
18:CS:52:ASN:HD22	18:CS:76:THR:HA	1.85	0.42
23:BB:986:C:O2'	23:BB:987:C:H5'	2.20	0.42
15:CP:38:PHE:CD1	15:CP:39:PHE:N	2.88	0.42
23:BB:155:A:H2'	23:BB:156:A:H8	1.81	0.42
1:CA:213:G:C8	1:CA:214:C:C5	3.08	0.42
14:AO:84:ARG:C	14:AO:85:LEU:HD12	2.40	0.42
23:BB:2601:C:O2'	23:BB:2602:A:H5''	2.20	0.42
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.20	0.42
23:DB:2185:U:H2'	23:DB:2186:G:O4'	2.20	0.42
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.20	0.42
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.20	0.42
42:BN:17:ARG:O	42:BN:21:PHE:HB2	2.18	0.42
23:BB:2024:G:H2'	23:BB:2025:C:O4'	2.20	0.42
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.84	0.42
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.42
23:DB:730:A:O2'	23:DB:731:C:H5'	2.20	0.42
1:AA:1298:U:H2'	6:AG:113:LYS:HZ1	1.85	0.42
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	2.20	0.42
29:DE:111:GLU:HA	29:DE:114:ARG:CZ	2.50	0.42
4:AE:131:ASN:ND2	4:AE:133:ILE:HB	2.35	0.42
23:DB:1266:G:OP1	31:D0:15:ARG:NE	2.49	0.42
1:AA:317:U:H2'	1:AA:318:G:C8	2.53	0.42
23:BB:443:A:C8	29:BE:40:ARG:HD3	2.55	0.42
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.54	0.42
23:DB:2397:G:O2'	23:DB:2398:U:H5'	2.20	0.42
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.20	0.42
23:DB:226:A:H2'	23:DB:227:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:499:U:H2'	23:DB:500:G:O4'	2.18	0.42
16:AQ:58:VAL:HG12	16:AQ:77:VAL:HG13	2.00	0.42
23:DB:84:A:H4'	23:DB:85:G:O5'	2.20	0.42
10:AK:24:ALA:HA	10:AK:29:THR:CG2	2.50	0.42
23:DB:406:G:O2'	23:DB:407:G:H5'	2.19	0.42
17:CR:28:LEU:C	17:CR:30:ASN:H	2.22	0.42
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.19	0.42
45:BS:2:GLU:O	45:BS:3:THR:O	2.38	0.42
25:BC:107:LYS:N	25:BC:193:GLU:O	2.46	0.42
24:DI:68:PHE:CD1	24:DI:68:PHE:N	2.88	0.42
23:BB:585:G:H2'	23:BB:1251:C:H42	1.85	0.42
20:CB:8:MET:SD	20:CB:8:MET:N	2.93	0.42
23:DB:1666:G:O2'	23:DB:1667:G:H5'	2.19	0.42
23:DB:2508:G:H2'	23:DB:2509:G:H8	1.84	0.42
40:BH:34:GLY:O	40:BH:35:LYS:HG2	2.20	0.42
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.19	0.42
1:CA:359:G:O2'	1:CA:360:G:H5'	2.20	0.42
48:DG:17:LYS:HG3	48:DG:18:ILE:N	2.34	0.42
48:DG:28:LYS:O	48:DG:29:ASN:HB3	2.19	0.42
41:DJ:41:LYS:O	44:DQ:66:ALA:HB1	2.20	0.42
41:BJ:44:TYR:C	41:BJ:44:TYR:HD2	2.22	0.42
41:BJ:38:GLY:CA	41:BJ:51:GLY:HA2	2.50	0.42
18:AS:47:THR:C	18:AS:48:ILE:HG13	2.39	0.42
1:AA:77:A:H2'	1:AA:78:A:C8	2.54	0.42
50:BT:55:VAL:HG22	50:BT:87:LEU:CD2	2.50	0.42
9:CJ:53:ILE:HG13	13:CN:84:ARG:NE	2.34	0.42
28:DP:3:ILE:CD1	28:DP:7:LEU:HD11	2.50	0.42
48:DG:84:LYS:O	48:DG:85:LYS:O	2.38	0.42
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.54	0.42
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	2.01	0.42
45:BS:31:GLN:C	45:BS:33:LEU:N	2.72	0.42
45:DS:18:ARG:NH2	45:DS:76:VAL:O	2.53	0.42
23:DB:544:C:H2'	23:DB:545:U:C6	2.54	0.42
23:BB:1102:C:O2'	23:BB:1103:A:H5'	2.20	0.42
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.20	0.42
40:BH:10:ALA:O	40:BH:12:LEU:N	2.50	0.42
12:AM:52:ILE:CD1	12:AM:55:LEU:HD12	2.47	0.42
5:CF:6:ILE:HG13	5:CF:62:MET:HB2	2.01	0.42
27:DK:42:THR:O	27:DK:44:LYS:HG2	2.20	0.42
23:DB:1338:G:O2'	23:DB:1393:A:N1	2.47	0.42
23:DB:1140:C:C2'	23:DB:1141:U:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B0:37:HIS:HB3	31:B0:43:THR:HG22	2.02	0.42
31:B0:38:LEU:O	31:B0:41:HIS:HD2	2.02	0.42
33:B1:12:SER:HB2	33:B1:48:TYR:CE1	2.55	0.42
4:CE:131:ASN:ND2	4:CE:133:ILE:HB	2.35	0.42
20:CB:161:PHE:HD2	20:CB:183:PHE:HB2	1.85	0.42
23:DB:2144:G:N2	23:DB:2146:C:O4'	2.52	0.42
48:BG:87:GLN:HG3	48:BG:128:THR:O	2.19	0.42
1:AA:483:C:H2'	1:AA:484:G:N7	2.34	0.42
23:BB:433:C:H2'	23:BB:434:U:C6	2.55	0.42
48:DG:94:ARG:CB	48:DG:127:GLN:HG2	2.49	0.42
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	2.01	0.42
46:DU:95:PHE:HZ	46:DU:102:ILE:HD13	1.85	0.42
38:DM:21:ALA:HB1	38:DM:100:LYS:HG2	2.01	0.42
23:BB:335:C:H5''	46:BU:81:ARG:NH1	2.35	0.42
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.50	0.42
23:BB:242:G:C8	34:B3:4:LYS:HG2	2.55	0.42
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.19	0.42
23:DB:484:C:H2'	23:DB:485:C:H6	1.84	0.42
23:DB:485:C:H2'	23:DB:486:C:H6	1.85	0.42
1:AA:475:C:O2'	1:AA:476:U:H5'	2.19	0.42
1:AA:1001:C:H2'	1:AA:1002:G:O4'	2.19	0.42
32:B4:11:CYS:SG	32:B4:12:ARG:N	2.92	0.42
16:CQ:68:LYS:C	16:CQ:70:LYS:N	2.73	0.42
23:BB:231:A:H3'	23:BB:232:G:H8	1.85	0.42
23:BB:1508:A:H5'	23:BB:1509:A:N7	2.35	0.42
23:DB:2893:A:H4'	23:DB:2894:G:C5'	2.50	0.42
23:DB:231:A:H3'	23:DB:232:G:H8	1.84	0.42
7:CH:36:ALA:O	7:CH:45:ILE:HD11	2.19	0.42
27:DK:61:VAL:HG23	27:DK:61:VAL:O	2.20	0.42
1:AA:958:A:N6	1:AA:959:A:N1	2.67	0.42
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.35	0.42
18:CS:2:ARG:NE	18:CS:2:ARG:CA	2.83	0.42
1:CA:958:A:N1	18:CS:53:GLY:C	2.73	0.42
18:CS:52:ASN:CG	18:CS:53:GLY:N	2.73	0.42
48:BG:21:GLN:HB3	48:BG:37:ASN:HB3	2.01	0.42
41:BJ:84:ILE:HG23	41:BJ:84:ILE:O	2.19	0.42
4:AE:53:ARG:HH21	4:AE:54:GLU:CG	2.33	0.42
1:AA:1201:A:C8	1:AA:1201:A:H5''	2.54	0.42
14:CO:26:GLU:OE2	14:CO:77:ARG:HD2	2.19	0.42
1:CA:211:G:N3	1:CA:211:G:H5''	2.35	0.42
23:DB:839:U:H2'	23:DB:840:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:99:LEU:HD13	28:DP:102:ARG:HG3	2.02	0.42
46:BU:16:LYS:HD3	46:BU:16:LYS:HA	1.90	0.42
43:DO:51:ALA:HB3	43:DO:78:VAL:HG13	2.01	0.42
42:DN:17:ARG:C	42:DN:19:ALA:N	2.72	0.42
42:BN:12:ARG:HE	42:BN:13:ASN:H	1.68	0.42
23:BB:709:U:H2'	23:BB:710:U:H6	1.82	0.42
23:BB:834:G:O2'	23:BB:835:C:H5'	2.20	0.42
1:AA:1291:U:H2'	1:AA:1292:G:H8	1.84	0.42
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.84	0.42
23:DB:2407:A:H2'	23:DB:2408:U:C6	2.53	0.42
1:CA:731:G:OP1	1:CA:766:A:H1'	2.20	0.42
23:DB:730:A:C2	23:DB:731:C:C6	3.07	0.42
1:CA:513:C:H2'	1:CA:514:C:C6	2.55	0.42
23:DB:2077:A:C5	23:DB:2435:A:C5	3.08	0.42
23:BB:2874:C:H2'	23:BB:2875:C:C6	2.55	0.42
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.84	0.42
23:BB:2022:U:O2'	23:BB:2617:U:H5'	2.19	0.42
23:DB:2405:G:H2'	23:DB:2411:A:N6	2.34	0.42
23:BB:2233:U:H2'	23:BB:2234:G:H8	1.84	0.42
37:BL:9:ALA:HB3	37:BL:12:SER:OG	2.19	0.42
15:CP:12:LYS:C	15:CP:14:ARG:H	2.21	0.42
23:DB:2617:U:C2'	23:DB:2618:G:H5'	2.49	0.42
8:AI:45:MET:SD	8:AI:45:MET:N	2.93	0.42
28:DP:28:LYS:HD2	28:DP:82:SER:CB	2.50	0.42
23:DB:2219:U:O2'	23:DB:2220:U:H5'	2.19	0.42
25:DC:154:ALA:HB2	25:DC:161:VAL:HG23	2.00	0.42
1:AA:152:A:H3'	1:AA:153:C:C6	2.55	0.42
1:CA:681:A:H2'	1:CA:682:G:C8	2.55	0.42
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.84	0.42
1:CA:594:U:H2'	1:CA:595:A:C8	2.53	0.42
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.55	0.42
8:CI:84:ARG:O	8:CI:87:MET:HB3	2.19	0.42
23:DB:1987:A:H2'	23:DB:1988:G:C8	2.55	0.42
23:DB:1541:C:H2'	23:DB:1542:U:H6	1.85	0.42
1:AA:626:G:H2'	1:AA:627:G:C8	2.55	0.42
41:DJ:78:THR:HG21	41:DJ:85:LYS:HE2	2.02	0.42
6:CG:30:MET:HA	6:CG:38:ALA:HB2	2.01	0.42
2:CC:109:GLU:OE1	2:CC:139:ASN:HB3	2.20	0.42
23:DB:409:G:H2'	23:DB:410:G:C8	2.55	0.42
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.55	0.42
48:DG:44:HIS:O	48:DG:46:ASP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:911:U:O2'	1:CA:912:C:H5'	2.19	0.42
1:CA:287:U:O2'	1:CA:288:A:H5'	2.20	0.42
1:AA:310:G:O2'	1:AA:311:C:H5'	2.20	0.42
15:AP:33:ILE:HG21	15:AP:60:TRP:CZ2	2.55	0.42
14:AO:33:THR:HG23	14:AO:63:ARG:NH1	2.35	0.42
6:AG:11:ILE:N	6:AG:11:ILE:HD12	2.34	0.42
20:CB:80:LYS:O	20:CB:84:LEU:HB3	2.18	0.42
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.54	0.42
52:BW:31:LEU:O	52:BW:32:ALA:HB2	2.18	0.42
20:CB:213:LEU:O	20:CB:216:VAL:HG22	2.20	0.42
10:AK:111:ASP:N	21:AU:19:LYS:HE3	2.35	0.42
40:BH:68:ARG:HB2	40:BH:134:VAL:HG11	2.02	0.42
28:BP:59:THR:HA	28:BP:71:ARG:O	2.20	0.42
3:AD:117:VAL:HA	3:AD:122:ILE:HG12	2.01	0.42
44:DQ:84:LYS:O	44:DQ:86:SER:N	2.53	0.42
44:DQ:89:ILE:HB	44:DQ:90:ASP:H	1.72	0.42
48:BG:31:GLU:O	48:BG:32:LEU:HB2	2.20	0.42
44:BQ:93:ILE:HG23	44:BQ:94:LEU:CD2	2.49	0.42
50:DT:57:VAL:O	50:DT:85:VAL:O	2.37	0.42
23:BB:2466:C:OP1	32:B4:4:ARG:HD2	2.19	0.42
32:D4:2:LYS:O	32:D4:35:GLN:HA	2.19	0.42
48:DG:120:ILE:C	48:DG:120:ILE:HD13	2.40	0.42
23:BB:1058:U:O2'	23:BB:1059:G:H5'	2.20	0.42
45:BS:48:LYS:HE2	45:BS:52:GLU:OE1	2.20	0.42
23:BB:2746:U:O2'	23:BB:2747:G:H5'	2.20	0.42
51:DZ:33:LEU:O	51:DZ:34:HIS:CG	2.73	0.42
12:AM:52:ILE:HA	12:AM:55:LEU:CD1	2.49	0.42
22:BA:52:A:H3'	22:BA:53:A:C8	2.54	0.42
46:BU:64:ILE:CG1	46:BU:65:GLN:N	2.82	0.42
37:DL:80:SER:H	37:DL:113:ALA:HB3	1.84	0.42
37:DL:79:LEU:CB	37:DL:113:ALA:H	2.31	0.42
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.55	0.42
9:CJ:41:PRO:HG2	9:CJ:42:LEU:H	1.85	0.42
1:AA:815:A:H4'	1:AA:817:C:C5	2.55	0.42
46:DU:35:VAL:O	46:DU:38:ILE:HG22	2.20	0.42
23:DB:433:C:H2'	23:DB:434:U:C6	2.54	0.42
34:D3:31:ILE:HD11	34:D3:34:LYS:CE	2.50	0.42
47:BF:53:ALA:O	47:BF:64:PRO:HG2	2.20	0.42
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.85	0.42
1:CA:1278:G:OP1	1:CA:1279:G:H5'	2.19	0.42
33:B1:46:VAL:HG22	33:B1:47:ILE:N	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:63:LYS:HG2	7:AH:64:TYR:N	2.34	0.42
23:DB:245:G:H2'	23:DB:246:C:H6	1.85	0.42
25:BC:80:LEU:HD22	25:BC:109:LEU:HD12	2.02	0.42
6:CG:144:ALA:O	6:CG:146:ALA:N	2.48	0.42
23:DB:2742:G:OP1	32:D4:36:ARG:HD2	2.19	0.42
25:BC:249:VAL:O	25:BC:250:GLN:C	2.58	0.42
23:BB:591:U:H1'	34:B3:1:PRO:H3	1.83	0.42
6:CG:63:VAL:CG1	6:CG:127:ALA:HB1	2.50	0.42
23:BB:654:A:H2'	23:BB:655:A:C5'	2.48	0.42
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.85	0.42
18:CS:2:ARG:N	18:CS:2:ARG:CZ	2.82	0.42
2:AC:166:TRP:HB3	2:AC:167:TYR:H	1.62	0.42
1:CA:432:A:H2'	1:CA:433:G:H5'	2.02	0.42
1:CA:90:C:H2'	1:CA:91:U:C6	2.55	0.42
38:DM:114:ARG:HG3	38:DM:130:PHE:CD2	2.54	0.42
11:CL:7:VAL:HG22	16:CQ:33:TYR:CD1	2.55	0.42
29:DE:192:ALA:HA	29:DE:195:GLN:NE2	2.35	0.42
22:BA:11:C:OP1	52:BW:71:LYS:HG2	2.19	0.42
39:DX:59:GLU:CD	39:DX:59:GLU:H	2.23	0.42
34:B3:61:LEU:N	34:B3:62:PRO:HD3	2.35	0.42
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.19	0.42
20:CB:43:GLU:H	20:CB:43:GLU:HG2	1.31	0.42
23:DB:587:C:H4'	23:DB:588:U:C6	2.55	0.42
3:CD:1:ALA:O	3:CD:2:ARG:HG2	2.20	0.42
22:BA:54:G:O2'	22:BA:55:U:H5'	2.19	0.42
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.55	0.42
25:BC:251:THR:O	25:BC:252:LYS:HD2	2.19	0.42
23:BB:1901:A:OP2	25:BC:252:LYS:HE2	2.19	0.42
4:CE:40:ASP:OD2	4:CE:42:ASN:HB3	2.20	0.42
3:AD:43:ARG:HH21	3:AD:45:PRO:HA	1.84	0.42
28:BP:31:VAL:HG13	28:BP:32:VAL:N	2.35	0.42
2:AC:11:LEU:HD11	13:AN:87:ALA:O	2.20	0.42
7:AH:39:LEU:HD21	7:AH:128:VAL:HG21	2.02	0.42
27:BK:31:ARG:HG3	27:BK:31:ARG:HH11	1.85	0.42
23:DB:600:G:H2'	23:DB:601:C:C6	2.55	0.42
23:BB:1560:G:H2'	23:BB:1561:C:C6	2.54	0.42
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.20	0.42
46:BU:48:VAL:O	46:BU:48:VAL:HG22	2.20	0.42
1:AA:50:A:H1'	1:AA:52:C:C6	2.55	0.42
20:AB:139:GLU:HG2	20:AB:143:LEU:HD12	2.02	0.42
44:BQ:35:PHE:C	44:BQ:37:ALA:N	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:722:G:H2'	1:CA:724:G:C8	2.54	0.42
23:BB:1831:G:H2'	23:BB:1832:C:C6	2.54	0.42
23:DB:198:C:H2'	23:DB:199:A:H5''	2.01	0.42
23:DB:2523:G:O2'	23:DB:2524:G:H5'	2.20	0.42
1:CA:611:C:H2'	1:CA:612:C:H6	1.83	0.42
3:AD:172:VAL:HG23	3:AD:178:GLU:O	2.19	0.42
10:CK:15:VAL:HB	10:CK:78:ILE:CD1	2.50	0.42
23:BB:292:U:H2'	23:BB:293:U:O4'	2.19	0.42
23:DB:1653:G:O6	42:DN:10:LEU:O	2.37	0.42
1:CA:940:C:H2'	1:CA:941:G:C8	2.55	0.42
10:CK:81:LEU:HD23	10:CK:81:LEU:N	2.35	0.42
23:DB:571:U:H1'	23:DB:573:U:C6	2.55	0.42
37:DL:122:VAL:HG23	37:DL:143:GLU:OE1	2.20	0.42
21:CU:33:ARG:HH12	21:CU:34:ARG:NH1	2.18	0.42
46:BU:84:PHE:HD2	46:BU:91:LYS:HG2	1.85	0.42
21:AU:40:PRO:C	21:AU:42:THR:N	2.73	0.42
21:CU:3:ILE:HG21	21:CU:19:LYS:HD2	2.01	0.42
39:BX:39:GLN:HG3	39:BX:42:LEU:HD22	2.01	0.42
3:CD:169:TRP:HB2	3:CD:183:ARG:HD2	2.02	0.42
41:DJ:38:GLY:CA	41:DJ:51:GLY:HA2	2.50	0.42
44:DQ:73:ILE:HD11	44:DQ:77:LYS:CB	2.48	0.42
23:DB:996:A:H4'	44:DQ:91:ARG:CD	2.49	0.42
26:BD:20:VAL:HG22	27:BK:72:PRO:HB3	2.01	0.42
35:BV:28:ALA:CB	35:BV:89:ILE:HD12	2.49	0.42
50:BT:45:ALA:HA	50:BT:48:GLN:CG	2.49	0.42
50:BT:38:ALA:HB1	50:BT:43:ILE:HD11	2.01	0.42
23:DB:1179:G:O2'	23:DB:1180:U:H5'	2.20	0.42
22:DA:43:C:C2'	22:DA:44:G:H5''	2.50	0.42
18:CS:64:GLU:N	18:CS:64:GLU:OE1	2.53	0.42
29:BE:63:LYS:HB3	29:BE:63:LYS:HE3	1.94	0.42
12:CM:56:ARG:O	12:CM:59:VAL:HG12	2.19	0.42
23:DB:1287:A:P	42:DN:104:ALA:HB3	2.58	0.42
48:BG:102:ILE:HG13	48:BG:116:LEU:CD1	2.49	0.42
48:BG:122:ALA:HA	48:BG:131:VAL:O	2.19	0.42
23:BB:2330:G:H21	52:BW:38:ARG:HA	1.85	0.42
5:CF:4:TYR:CD2	5:CF:71:ILE:HG21	2.54	0.42
23:BB:2733:A:H8	23:BB:2733:A:O5'	2.03	0.42
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.19	0.42
27:BK:19:VAL:CB	27:BK:41:ILE:HD11	2.50	0.42
43:DO:18:LEU:HD23	43:DO:25:ARG:CD	2.50	0.42
43:DO:25:ARG:HD2	43:DO:93:ASP:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:65:LYS:HD3	20:AB:89:PHE:CE1	2.54	0.42
37:BL:80:SER:H	37:BL:113:ALA:HB3	1.85	0.42
4:AE:149:PRO:HA	7:AH:98:LEU:HD22	2.02	0.42
13:CN:20:PHE:CZ	13:CN:51:PRO:HG3	2.55	0.42
40:DH:112:LYS:HA	40:DH:132:PHE:HE1	1.84	0.42
1:AA:373:A:OP2	1:AA:373:A:H3'	2.19	0.42
48:DG:104:LEU:O	48:DG:112:VAL:N	2.53	0.42
48:DG:167:VAL:HG23	48:DG:168:VAL:N	2.32	0.42
3:CD:90:LEU:HD21	3:CD:196:GLU:CB	2.50	0.42
23:BB:2811:G:O2'	23:BB:2812:G:H5'	2.20	0.42
25:BC:76:VAL:O	25:BC:78:GLU:N	2.53	0.42
25:BC:77:VAL:HA	25:BC:93:VAL:HA	2.01	0.42
38:DM:66:ARG:NE	38:DM:101:VAL:HG11	2.35	0.42
1:AA:203:G:N2	1:AA:205:A:N6	2.68	0.42
34:D3:33:THR:HG23	34:D3:34:LYS:N	2.34	0.42
47:BF:65:LEU:O	47:BF:86:CYS:HA	2.20	0.42
44:DQ:28:SER:C	44:DQ:29:ARG:HG3	2.41	0.42
24:BI:107:GLU:HA	24:BI:110:GLN:OE1	2.20	0.42
27:DK:110:GLU:HA	27:DK:113:MET:CG	2.50	0.42
23:DB:631:A:O2'	37:DL:66:PHE:HD2	1.96	0.42
23:DB:2801:G:H3'	23:DB:2802:G:H8	1.83	0.42
23:BB:1175:A:H3'	23:BB:1176:U:H6	1.84	0.42
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.20	0.42
29:BE:170:ARG:HH22	29:BE:176:ASP:HB2	1.84	0.42
11:CL:33:CYS:HA	11:CL:54:VAL:HA	2.02	0.42
41:DJ:37:ARG:HH22	41:DJ:110:PRO:HG3	1.82	0.42
16:CQ:60:ILE:HA	16:CQ:75:VAL:HG22	2.01	0.42
1:AA:828:U:H2'	1:AA:829:G:O5'	2.20	0.42
3:AD:12:ARG:HG2	3:AD:33:ILE:HD12	2.02	0.42
25:BC:196:ASN:C	25:BC:198:GLU:H	2.23	0.42
1:CA:1166:G:N1	1:CA:1169:A:OP2	2.53	0.42
1:CA:1237:C:H3'	1:CA:1238:A:H5'	2.00	0.42
1:AA:1226:C:N4	12:AM:102:LYS:HG3	2.35	0.42
1:AA:549:C:H2'	1:AA:550:G:C8	2.55	0.42
23:BB:987:C:H2'	23:BB:988:A:O4'	2.20	0.42
15:CP:39:PHE:CE1	15:CP:74:LEU:HD21	2.55	0.42
23:BB:2358:A:H2'	23:BB:2359:C:O4'	2.20	0.42
14:CO:84:ARG:C	14:CO:85:LEU:HD12	2.40	0.42
2:CC:154:GLY:O	2:CC:155:ARG:HB2	2.18	0.42
23:BB:393:C:H2'	23:BB:394:C:H6	1.85	0.42
41:DJ:31:GLU:OE2	41:DJ:31:GLU:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:23:ASP:OD1	15:CP:25:ARG:HB2	2.20	0.42
3:AD:141:VAL:HA	3:AD:179:GLY:O	2.20	0.42
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.20	0.42
16:CQ:28:VAL:HG12	16:CQ:37:ILE:O	2.20	0.42
23:BB:1422:G:H1'	23:BB:1495:A:H61	1.84	0.42
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.20	0.42
23:DB:978:G:O4'	23:DB:1001:A:H2	2.02	0.42
1:CA:1260:G:O5'	1:CA:1284:C:H4'	2.20	0.42
23:BB:396:G:C5	23:BB:397:U:C5	3.08	0.42
23:BB:409:G:H2'	23:BB:410:G:C8	2.55	0.42
23:DB:623:C:H2'	23:DB:624:C:H6	1.85	0.42
10:CK:35:ASP:OD2	10:CK:39:ASN:HB2	2.19	0.42
23:DB:131:A:H2'	23:DB:132:G:C8	2.54	0.42
23:BB:522:A:H2'	23:BB:523:C:H6	1.84	0.42
5:AF:43:GLY:HA2	5:AF:58:HIS:CE1	2.55	0.42
27:DK:25:LEU:CD1	27:DK:38:ILE:HG22	2.50	0.42
1:AA:1067:A:N1	1:AA:1108:G:O2'	2.51	0.42
23:BB:350:G:O2'	23:BB:351:C:H5'	2.19	0.42
23:BB:907:G:O2'	23:BB:908:C:H5'	2.20	0.42
23:DB:104:A:H2'	23:DB:105:C:C6	2.55	0.42
45:DS:3:THR:O	45:DS:3:THR:HG23	2.20	0.42
23:DB:2651:C:H2'	23:DB:2652:C:H6	1.84	0.42
23:BB:2207:C:H2'	23:BB:2208:C:C6	2.55	0.42
23:DB:1596:A:O2'	23:DB:1597:A:H5'	2.20	0.42
23:DB:2613:U:H5''	56:DB:3596:HOH:O	2.20	0.42
1:CA:1340:A:O2'	1:CA:1341:U:H5'	2.20	0.42
23:DB:1326:U:H2'	23:DB:1327:A:H8	1.83	0.42
5:CF:74:LEU:HG	5:CF:78:PHE:CE1	2.55	0.42
41:BJ:78:THR:HG21	41:BJ:85:LYS:HE2	2.02	0.42
5:AF:55:HIS:ND1	5:AF:55:HIS:N	2.68	0.42
47:BF:59:ILE:HG13	47:BF:59:ILE:H	1.40	0.42
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.35	0.42
17:AR:28:LEU:C	17:AR:30:ASN:H	2.23	0.42
16:CQ:14:ASP:OD1	16:CQ:53:GLY:HA2	2.20	0.42
23:DB:923:G:H1'	52:DW:23:LYS:HZ1	1.84	0.41
52:BW:54:ARG:H	52:BW:54:ARG:HG3	1.61	0.41
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.40	0.41
8:AI:41:GLU:N	8:AI:44:ARG:NH1	2.63	0.41
40:BH:80:ILE:HD13	40:BH:98:ASP:HB2	2.02	0.41
21:AU:43:GLU:HA	21:AU:46:ARG:CD	2.50	0.41
9:CJ:9:ARG:HE	9:CJ:99:GLN:NE2	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:127:TYR:HB3	47:BF:155:ILE:HD13	2.02	0.41
47:BF:127:TYR:HE1	47:BF:165:GLY:HA3	1.84	0.41
48:BG:25:ILE:HD11	48:BG:71:LEU:HD11	2.01	0.41
44:BQ:104:ALA:C	44:BQ:106:THR:H	2.24	0.41
49:BR:4:VAL:CG2	49:BR:40:MET:HB2	2.50	0.41
40:DH:3:VAL:CG1	40:DH:38:PRO:HA	2.50	0.41
25:DC:43:ASN:ND2	25:DC:44:ASN:H	2.18	0.41
40:DH:122:LEU:C	40:DH:124:THR:H	2.23	0.41
40:DH:94:ILE:HD12	40:DH:94:ILE:HA	1.84	0.41
28:DP:75:THR:CG2	28:DP:76:HIS:H	2.24	0.41
44:DQ:7:VAL:CG2	44:DQ:8:ILE:N	2.82	0.41
42:BN:62:ASN:N	42:BN:62:ASN:HD22	2.18	0.41
42:BN:62:ASN:O	42:BN:66:ALA:HB2	2.20	0.41
48:DG:120:ILE:HG13	48:DG:140:ILE:HG22	2.02	0.41
42:DN:63:ARG:HA	42:DN:80:PHE:CE2	2.55	0.41
42:DN:55:ALA:HA	42:DN:80:PHE:CD1	2.55	0.41
45:DS:48:LYS:HE2	45:DS:52:GLU:OE1	2.20	0.41
18:AS:14:LEU:HG	18:AS:15:LEU:N	2.34	0.41
29:BE:62:GLN:HB2	29:BE:62:GLN:HE21	1.57	0.41
23:BB:675:A:C4'	29:BE:62:GLN:HE22	2.21	0.41
12:CM:52:ILE:CD1	12:CM:55:LEU:HD12	2.48	0.41
51:DZ:32:ASN:HB3	51:DZ:53:ALA:H	1.85	0.41
19:CT:57:VAL:HG23	19:CT:58:ASP:N	2.35	0.41
20:CB:101:THR:HG22	20:CB:174:GLU:CD	2.41	0.41
19:AT:57:VAL:HG23	19:AT:58:ASP:N	2.34	0.41
38:BM:72:PRO:O	38:BM:73:ILE:HB	2.20	0.41
30:BY:7:THR:HG22	30:BY:8:GLN:N	2.35	0.41
1:CA:921:U:O2	4:CE:23:THR:HG23	2.20	0.41
13:CN:50:LEU:HG	13:CN:51:PRO:CD	2.50	0.41
20:CB:87:ASP:CB	20:CB:224:ARG:HE	2.33	0.41
40:DH:97:ARG:HA	40:DH:112:LYS:HD3	2.02	0.41
3:CD:54:LEU:O	3:CD:58:GLN:HB2	2.20	0.41
12:AM:12:LYS:HB3	12:AM:13:HIS:H	1.49	0.41
25:DC:94:LEU:HG	25:DC:94:LEU:O	2.19	0.41
46:BU:10:VAL:HB	46:BU:69:VAL:HB	2.00	0.41
46:BU:72:PHE:CZ	46:BU:77:GLY:HA2	2.55	0.41
23:DB:435:C:H2'	23:DB:436:C:H5'	2.02	0.41
23:BB:667:U:C4	23:BB:668:A:N7	2.87	0.41
20:AB:79:VAL:CG1	20:AB:90:PHE:HB2	2.46	0.41
23:BB:131:A:O2'	23:BB:132:G:H5'	2.19	0.41
34:B3:54:LEU:HG	34:B3:58:ILE:HD11	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:50:MET:O	35:BV:56:PHE:HB2	2.20	0.41
23:BB:2419:U:H2'	23:BB:2420:C:C6	2.54	0.41
28:DP:97:TYR:O	28:DP:100:ARG:HD3	2.20	0.41
23:BB:65:U:H2'	23:BB:66:C:C6	2.53	0.41
23:BB:547:A:H3'	23:BB:548:G:O4'	2.19	0.41
2:AC:2:GLN:N	2:AC:2:GLN:HE21	2.17	0.41
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.54	0.41
23:DB:1348:C:C3'	23:DB:1349:C:H5'	2.50	0.41
16:CQ:17:GLU:C	16:CQ:19:SER:H	2.23	0.41
23:BB:345:A:N3	23:BB:346:A:N1	2.67	0.41
1:CA:159:G:N2	1:CA:161:A:H3'	2.35	0.41
1:AA:222:C:H2'	1:AA:223:A:H8	1.85	0.41
1:AA:538:G:H2'	1:AA:539:A:C8	2.55	0.41
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.20	0.41
23:BB:2742:G:P	32:B4:24:ARG:HH12	2.42	0.41
23:DB:1508:A:H5'	23:DB:1509:A:N7	2.35	0.41
23:DB:1511:G:H2'	23:DB:1512:C:C6	2.55	0.41
2:AC:34:SER:O	2:AC:38:VAL:HG22	2.20	0.41
26:DD:124:ARG:HG3	26:DD:124:ARG:O	2.19	0.41
23:BB:154:U:O2'	23:BB:155:A:H5'	2.20	0.41
23:BB:484:C:H2'	23:BB:485:C:H6	1.84	0.41
1:AA:401:C:H2'	1:AA:402:G:H8	1.84	0.41
23:BB:957:C:N4	23:BB:2459:A:C8	2.88	0.41
42:BN:49:GLU:HA	42:BN:94:TYR:HD2	1.85	0.41
23:DB:2024:G:H2'	23:DB:2025:C:O4'	2.20	0.41
23:BB:2840:C:H5''	42:BN:53:THR:HG21	2.02	0.41
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.41
3:CD:2:ARG:O	3:CD:3:TYR:HB3	2.20	0.41
1:CA:1347:G:C8	8:CI:108:ARG:HB3	2.55	0.41
1:CA:1493:A:OP1	54:CA:2062:LLL:N32	2.47	0.41
20:AB:148:GLY:C	20:AB:150:ILE:H	2.23	0.41
19:CT:27:MET:CE	19:CT:28:ARG:HG2	2.49	0.41
9:CJ:92:LEU:HB2	9:CJ:93:ALA:H	1.59	0.41
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.20	0.41
23:BB:2398:U:H2'	23:BB:2399:G:C8	2.55	0.41
1:AA:543:U:O2'	1:AA:544:G:H5'	2.20	0.41
23:BB:517:C:OP2	31:B0:9:ARG:NH2	2.53	0.41
48:DG:72:ASN:O	48:DG:75:VAL:HB	2.20	0.41
23:DB:2348:U:OP1	34:D3:37:THR:HG21	2.19	0.41
23:DB:2780:G:H4'	23:DB:2781:A:OP2	2.19	0.41
23:BB:327:G:H2'	23:BB:328:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1268:G:H2'	1:CA:1269:A:C8	2.55	0.41
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.54	0.41
41:BJ:7:LYS:O	41:BJ:9:GLU:N	2.52	0.41
23:BB:2018:G:H2'	23:BB:2019:A:H8	1.85	0.41
23:DB:1712:U:H2'	23:DB:1713:A:N7	2.35	0.41
16:AQ:23:ALA:C	16:AQ:24:ILE:HD12	2.41	0.41
23:DB:2428:G:H5''	23:DB:2429:G:OP1	2.20	0.41
23:DB:120:U:H5''	23:DB:122:G:OP2	2.19	0.41
23:BB:127:A:H5''	23:BB:128:C:C6	2.55	0.41
29:BE:44:ARG:H	29:BE:89:PRO:HG3	1.85	0.41
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.85	0.41
15:AP:19:VAL:HB	15:AP:37:GLY:O	2.19	0.41
24:DI:91:LYS:HD2	24:DI:91:LYS:N	2.34	0.41
7:CH:72:GLU:CD	7:CH:72:GLU:H	2.23	0.41
23:BB:188:G:OP1	51:BZ:14:THR:HG22	2.20	0.41
23:DB:1097:U:C2	23:DB:1098:A:H1'	2.56	0.41
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.20	0.41
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.20	0.41
20:CB:42:LEU:HA	20:CB:45:THR:HB	2.02	0.41
20:CB:46:VAL:O	20:CB:49:PHE:HB2	2.20	0.41
21:CU:40:PRO:C	21:CU:42:THR:N	2.73	0.41
40:BH:128:HIS:HB3	40:BH:144:VAL:H	1.85	0.41
27:BK:75:SER:HB2	28:BP:73:PHE:HA	2.01	0.41
48:DG:26:LYS:HG2	48:DG:27:GLY:N	2.35	0.41
48:DG:42:VAL:HG23	48:DG:49:LEU:HB3	2.02	0.41
48:DG:74:MET:O	48:DG:78:VAL:HG22	2.20	0.41
49:BR:49:ILE:HD13	49:BR:53:PHE:H	1.85	0.41
10:CK:33:ILE:CB	10:CK:73:VAL:HG11	2.34	0.41
8:CI:56:MET:HA	8:CI:59:LYS:HB2	2.01	0.41
8:CI:18:VAL:HG12	8:CI:62:LEU:HB2	2.02	0.41
40:DH:88:GLY:C	40:DH:124:THR:HA	2.40	0.41
40:BH:32:PRO:HA	51:BZ:39:TRP:CD1	2.55	0.41
35:DV:28:ALA:CB	35:DV:89:ILE:HD12	2.48	0.41
23:BB:704:G:O2'	23:BB:727:A:N6	2.53	0.41
25:BC:184:GLU:O	25:BC:185:ALA:HB3	2.20	0.41
48:DG:84:LYS:CG	48:DG:85:LYS:H	2.16	0.41
4:CE:93:VAL:HG12	4:CE:94:PHE:N	2.35	0.41
38:DM:124:LEU:HA	38:DM:125:PRO:HD3	1.88	0.41
47:DF:96:TRP:O	47:DF:100:GLU:N	2.53	0.41
29:BE:60:TRP:CE3	29:BE:60:TRP:HA	2.55	0.41
11:AL:48:LEU:O	11:AL:49:ARG:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:85:ARG:HG3	11:AL:86:VAL:H	1.83	0.41
47:BF:77:LYS:HG3	47:BF:78:ILE:N	2.35	0.41
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	2.21	0.41
13:AN:61:ASN:O	13:AN:62:ARG:HB2	2.20	0.41
6:AG:110:ARG:HH11	6:AG:110:ARG:HB3	1.85	0.41
20:CB:65:LYS:CB	20:CB:157:PRO:HA	2.50	0.41
23:BB:1338:G:C4'	50:BT:18:GLU:HG3	2.43	0.41
23:DB:362:A:H2'	23:DB:363:G:O4'	2.20	0.41
23:BB:310:A:OP1	46:BU:15:GLY:HA2	2.20	0.41
21:AU:20:ARG:HD2	21:AU:20:ARG:N	2.35	0.41
23:DB:1021:A:H61	23:DB:1142:A:H61	1.68	0.41
20:CB:224:ARG:HB3	20:CB:224:ARG:NH1	2.34	0.41
25:DC:78:GLU:HG3	25:DC:94:LEU:HB3	2.02	0.41
23:BB:2787:C:C1'	26:BD:63:PRO:HG3	2.42	0.41
3:AD:90:LEU:HD21	3:AD:196:GLU:CB	2.49	0.41
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.19	0.41
1:AA:1008:U:H2'	1:AA:1009:U:C5'	2.48	0.41
23:DB:2799:A:H4'	23:DB:2800:A:C1'	2.49	0.41
1:CA:203:G:N2	1:CA:205:A:N6	2.68	0.41
23:BB:2320:U:O2'	23:BB:2322:A:N7	2.48	0.41
1:AA:415:A:N1	1:AA:428:G:O6	2.53	0.41
35:DV:62:THR:HG22	35:DV:71:LYS:HZ3	1.85	0.41
23:DB:478:A:H5''	23:DB:479:A:OP2	2.20	0.41
16:AQ:17:GLU:C	16:AQ:19:SER:H	2.23	0.41
1:AA:476:U:H2'	1:AA:477:C:O4'	2.20	0.41
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.19	0.41
7:CH:63:LYS:CD	7:CH:70:VAL:HG21	2.50	0.41
23:BB:549:G:H4'	23:BB:550:C:C6	2.54	0.41
11:CL:78:VAL:O	11:CL:102:ASP:HB2	2.20	0.41
1:CA:840:C:N3	1:CA:842:U:H4'	2.36	0.41
34:D3:21:PHE:O	34:D3:22:LYS:HB3	2.20	0.41
23:DB:62:U:H2'	23:DB:63:A:O4'	2.20	0.41
2:AC:61:LYS:HA	2:AC:61:LYS:NZ	2.35	0.41
3:CD:148:ALA:O	3:CD:154:VAL:HG21	2.20	0.41
23:BB:1407:G:H2'	23:BB:1408:G:C8	2.54	0.41
1:CA:36:C:O3'	11:CL:119:LYS:HA	2.19	0.41
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.19	0.41
25:BC:204:LEU:HB3	25:BC:209:ALA:HB3	2.02	0.41
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.20	0.41
37:BL:57:LEU:HD12	37:BL:61:LEU:HD13	2.02	0.41
5:CF:54:LEU:HD22	5:CF:54:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:25:THR:CG2	14:CO:70:LEU:HD23	2.50	0.41
1:AA:430:A:O2'	1:AA:431:A:H5'	2.20	0.41
43:DO:54:VAL:HG13	43:DO:55:GLU:N	2.35	0.41
37:BL:127:VAL:HG23	37:BL:131:ALA:HB3	2.02	0.41
23:BB:40:U:H2'	23:BB:41:C:C6	2.55	0.41
37:DL:21:ARG:HD3	37:DL:21:ARG:HA	1.83	0.41
1:CA:1492:A:O2'	1:CA:1493:A:H5'	2.20	0.41
23:DB:2776:A:H4'	23:DB:2777:G:O5'	2.21	0.41
23:DB:739:A:H1'	23:DB:740:C:H5	1.83	0.41
1:CA:692:U:H2'	1:CA:694:A:OP2	2.20	0.41
29:BE:111:GLU:HA	29:BE:114:ARG:CZ	2.50	0.41
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.56	0.41
1:CA:487:A:H2'	1:CA:488:C:O4'	2.21	0.41
23:DB:629:G:OP1	23:DB:650:C:O2'	2.37	0.41
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.55	0.41
1:CA:114:U:O4'	1:CA:353:A:H1'	2.20	0.41
46:DU:48:VAL:O	46:DU:50:ALA:N	2.53	0.41
31:B0:29:VAL:HA	31:B0:35:GLU:O	2.19	0.41
23:DB:217:A:H2'	23:DB:218:A:O4'	2.20	0.41
23:BB:520:G:O2'	23:BB:521:U:H5'	2.20	0.41
1:CA:1058:G:H2'	1:CA:1059:C:H6	1.84	0.41
23:DB:1649:G:HO2'	23:DB:1650:A:H5'	1.85	0.41
20:CB:113:LEU:HD23	20:CB:114:LYS:N	2.35	0.41
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.35	0.41
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.54	0.41
7:AH:34:ALA:O	7:AH:38:VAL:HG23	2.20	0.41
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.56	0.41
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.19	0.41
23:DB:1068:G:C6	23:DB:1069:A:N6	2.88	0.41
5:AF:10:VAL:HG12	5:AF:11:HIS:N	2.35	0.41
23:DB:1249:U:O4'	44:DQ:3:VAL:HG21	2.19	0.41
11:CL:30:ARG:HB3	11:CL:57:THR:CG2	2.50	0.41
11:AL:122:LYS:HG3	11:AL:123:ALA:H	1.85	0.41
23:DB:695:G:OP1	23:DB:1380:G:H4'	2.20	0.41
37:DL:41:ARG:HG2	37:DL:41:ARG:HH21	1.85	0.41
20:CB:35:ASN:HD22	20:CB:35:ASN:HA	1.62	0.41
1:CA:687:A:C2	1:CA:704:A:C5	3.08	0.41
29:DE:171:ASP:CG	29:DE:172:ALA:N	2.73	0.41
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.55	0.41
23:DB:1207:C:H2'	23:DB:1208:C:H6	1.84	0.41
23:DB:920:A:H2'	23:DB:921:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:84:LYS:C	37:BL:86:GLU:H	2.24	0.41
23:BB:920:A:H2'	23:BB:921:C:C6	2.56	0.41
23:BB:2336:A:H61	52:BW:40:ARG:HG3	1.86	0.41
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.68	0.41
20:AB:213:LEU:O	20:AB:216:VAL:HG22	2.19	0.41
13:CN:68:ARG:HA	13:CN:69:PRO:HD2	1.94	0.41
21:CU:44:ARG:NH1	21:CU:44:ARG:HG3	2.36	0.41
21:AU:42:THR:HB	21:AU:46:ARG:HE	1.86	0.41
47:BF:137:PHE:O	47:BF:138:PRO:C	2.59	0.41
47:BF:91:ARG:O	47:BF:92:GLY:C	2.58	0.41
7:AH:7:ALA:O	7:AH:11:THR:HG23	2.21	0.41
3:AD:160:LEU:HD22	3:AD:161:ALA:H	1.83	0.41
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.20	0.41
24:DI:131:THR:O	24:DI:135:MET:HG3	2.19	0.41
5:AF:6:ILE:HG13	5:AF:62:MET:HB2	2.02	0.41
49:DR:8:GLY:CA	49:DR:23:GLU:HB2	2.37	0.41
23:DB:1252:G:H1	44:DQ:36:GLN:CD	2.23	0.41
23:BB:2886:A:N6	31:B0:39:ARG:CZ	2.81	0.41
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.35	0.41
1:AA:1072:G:N2	20:AB:105:THR:HG21	2.35	0.41
29:BE:29:HIS:O	29:BE:32:VAL:HG22	2.21	0.41
17:AR:51:GLN:NE2	17:AR:51:GLN:HA	2.24	0.41
23:BB:2688:G:H1'	23:BB:2721:A:H61	1.84	0.41
4:AE:73:VAL:O	4:AE:75:LEU:HG	2.19	0.41
33:D1:20:TYR:CD2	33:D1:37:LYS:HD3	2.56	0.41
20:AB:221:ARG:CB	20:AB:221:ARG:HH11	2.28	0.41
46:DU:65:GLN:HB2	46:DU:68:ASN:HD22	1.86	0.41
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.35	0.41
23:DB:2733:A:O5'	23:DB:2733:A:H8	2.03	0.41
23:BB:2318:G:C2	23:BB:2319:G:C2	3.08	0.41
1:AA:598:U:H4'	7:AH:85:TYR:CD2	2.55	0.41
42:DN:49:GLU:HA	42:DN:94:TYR:HD2	1.85	0.41
30:BY:2:LYS:HG2	30:BY:3:THR:N	2.35	0.41
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.54	0.41
40:BH:54:LEU:HB2	40:BH:55:GLU:H	1.54	0.41
27:BK:99:ILE:H	27:BK:118:LEU:HD22	1.84	0.41
6:AG:145:GLU:C	6:AG:147:ASN:N	2.74	0.41
1:AA:1278:G:OP1	1:AA:1279:G:H5'	2.20	0.41
34:B3:22:LYS:CA	34:B3:48:MET:HA	2.47	0.41
16:AQ:68:LYS:C	16:AQ:70:LYS:N	2.74	0.41
49:BR:21:ARG:HB3	49:BR:95:ASP:OD1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:79:ARG:NH1	7:AH:82:LEU:HB3	2.35	0.41
25:BC:90:ILE:HD13	25:BC:103:ILE:O	2.20	0.41
26:BD:116:LYS:HB3	26:BD:118:PHE:CE2	2.55	0.41
23:DB:1346:G:HO2'	23:DB:1347:A:H5'	1.84	0.41
1:CA:437:U:H4'	3:CD:153:ARG:NH1	2.35	0.41
23:DB:992:C:H2'	23:DB:993:G:H8	1.86	0.41
11:AL:17:LYS:H	11:AL:17:LYS:HE3	1.84	0.41
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.35	0.41
23:BB:129:C:H4'	23:BB:1348:C:O2'	2.19	0.41
19:AT:49:ALA:HA	19:AT:52:GLU:CD	2.40	0.41
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.85	0.41
18:AS:52:ASN:CG	18:AS:53:GLY:N	2.73	0.41
18:CS:35:ARG:O	18:CS:71:GLY:N	2.53	0.41
23:BB:2394:C:H2'	23:BB:2395:C:C6	2.55	0.41
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.20	0.41
23:BB:1795:C:O2'	23:BB:1796:U:H5'	2.20	0.41
1:AA:1133:G:H2'	1:AA:1134:G:O4'	2.19	0.41
26:DD:169:ARG:O	26:DD:170:VAL:O	2.37	0.41
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.21	0.41
23:BB:935:C:H2'	23:BB:936:A:H8	1.85	0.41
25:DC:30:ALA:C	25:DC:32:LEU:H	2.23	0.41
48:BG:106:LEU:O	48:BG:108:PHE:N	2.52	0.41
23:DB:1494:A:H2'	23:DB:1495:A:H8	1.83	0.41
2:CC:146:LYS:HB2	2:CC:202:PHE:CD2	2.55	0.41
23:BB:1130:U:C2	23:BB:2025:C:H5''	2.55	0.41
24:DI:5:GLN:O	24:DI:6:ALA:CB	2.68	0.41
23:BB:410:G:C2	23:BB:2407:A:C5	3.08	0.41
23:BB:2698:U:H2'	23:BB:2699:C:H6	1.83	0.41
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.21	0.41
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.55	0.41
27:BK:25:LEU:CD1	27:BK:38:ILE:HG22	2.50	0.41
23:BB:67:U:H2'	23:BB:68:G:O4'	2.20	0.41
23:BB:807:U:H2'	23:BB:808:G:H8	1.86	0.41
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.55	0.41
1:AA:1222:G:C2'	1:AA:1223:C:H5'	2.49	0.41
23:BB:679:C:O2'	23:BB:680:C:H5'	2.20	0.41
25:DC:162:GLN:CD	25:DC:174:ARG:HH21	2.23	0.41
31:D0:55:ALA:C	31:D0:56:LYS:HG3	2.41	0.41
23:BB:178:G:O2'	23:BB:179:C:H5'	2.20	0.41
23:BB:683:U:O5'	23:BB:683:U:H6	2.04	0.41
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:62:U:H2'	1:AA:63:C:C6	2.56	0.41
1:AA:940:C:H2'	1:AA:941:G:C8	2.55	0.41
20:CB:25:LYS:O	20:CB:28:PRO:HD2	2.20	0.41
23:BB:1922:G:N7	54:BB:3111:LLL:H221	2.34	0.41
23:DB:1628:G:O2'	23:DB:1629:U:H5'	2.19	0.41
23:DB:1651:G:H2'	23:DB:1652:A:O4'	2.20	0.41
20:AB:126:ASP:C	20:AB:127:LYS:HD2	2.40	0.41
23:BB:1886:U:H6	23:BB:1886:U:O5'	2.03	0.41
48:BG:54:ARG:C	48:BG:54:ARG:HD3	2.41	0.41
1:AA:724:G:O2'	1:AA:725:G:H5'	2.20	0.41
23:BB:922:C:H2'	23:BB:923:G:C8	2.54	0.41
23:BB:923:G:H1'	52:BW:23:LYS:HZ1	1.86	0.41
52:BW:28:GLU:H	52:BW:31:LEU:HD11	1.85	0.41
21:AU:33:ARG:HH12	21:AU:34:ARG:NH1	2.19	0.41
26:BD:189:VAL:HG23	26:BD:191:GLY:H	1.86	0.41
47:BF:136:ILE:O	47:BF:142:TYR:HD2	2.02	0.41
41:BJ:32:LEU:HD23	41:BJ:54:ILE:HG12	2.01	0.41
8:CI:18:VAL:HG11	8:CI:82:ILE:HG12	2.01	0.41
8:CI:24:ASN:ND2	8:CI:25:GLY:N	2.68	0.41
23:DB:1812:U:O2'	25:DC:43:ASN:ND2	2.53	0.41
23:BB:773:U:H6	23:BB:773:U:H5''	1.85	0.41
28:DP:3:ILE:HG23	28:DP:4:ILE:HG13	2.02	0.41
42:BN:54:LEU:HD11	42:BN:62:ASN:HB3	2.02	0.41
25:DC:109:LEU:H	25:DC:109:LEU:HD23	1.84	0.41
32:D4:8:LYS:HE2	32:D4:8:LYS:HB3	1.91	0.41
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.55	0.41
45:DS:50:VAL:HA	45:DS:53:SER:HB2	2.03	0.41
47:DF:27:VAL:O	47:DF:27:VAL:HG23	2.21	0.41
31:D0:27:LEU:HB2	31:D0:28:SER:H	1.61	0.41
23:BB:2572:A:P	26:BD:152:PRO:HD3	2.60	0.41
3:CD:18:LEU:HB2	3:CD:20:LEU:HD21	2.02	0.41
1:AA:521:G:O2'	1:AA:522:C:H5'	2.20	0.41
1:AA:522:C:O2'	1:AA:523:A:H5'	2.19	0.41
16:AQ:3:LYS:HG3	16:AQ:4:ILE:N	2.35	0.41
27:BK:42:THR:O	27:BK:44:LYS:HG2	2.21	0.41
23:DB:675:A:P	29:DE:60:TRP:HZ2	2.43	0.41
20:CB:148:GLY:C	20:CB:150:ILE:H	2.22	0.41
26:BD:48:ILE:HG23	26:BD:82:PHE:HB2	2.02	0.41
23:DB:2378:A:N3	43:DO:18:LEU:HD13	2.34	0.41
20:AB:68:PHE:CD1	20:AB:68:PHE:N	2.89	0.41
13:AN:29:ILE:O	13:AN:32:ASP:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:131:SER:OG	40:DH:132:PHE:N	2.51	0.41
48:DG:87:GLN:HG3	48:DG:128:THR:O	2.21	0.41
26:BD:73:VAL:O	26:BD:74:GLU:HB2	2.20	0.41
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.56	0.41
27:BK:110:GLU:HA	27:BK:113:MET:CG	2.49	0.41
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.20	0.41
27:DK:99:ILE:H	27:DK:118:LEU:HD22	1.85	0.41
49:DR:15:SER:HB3	49:DR:18:GLN:HE21	1.85	0.41
38:DM:57:VAL:HG12	38:DM:60:GLN:O	2.20	0.41
1:AA:376:G:H5''	15:AP:5:ARG:CB	2.47	0.41
1:CA:130:A:N1	1:CA:233:C:H1'	2.36	0.41
4:AE:113:VAL:CG2	4:AE:114:LEU:N	2.83	0.41
48:BG:115:GLN:CD	48:BG:115:GLN:N	2.73	0.41
23:DB:244:A:H2'	23:DB:245:G:O4'	2.21	0.41
47:DF:45:ASP:OD1	47:DF:47:LYS:HB2	2.21	0.41
1:AA:586:C:C5'	7:AH:81:GLY:HA2	2.50	0.41
23:BB:244:A:H2'	23:BB:245:G:O4'	2.20	0.41
29:BE:46:GLN:HB2	29:BE:87:ALA:O	2.20	0.41
1:AA:845:A:H5''	1:AA:846:G:C8	2.56	0.41
11:CL:23:LEU:HG	11:CL:24:GLU:N	2.35	0.41
23:BB:722:A:H2'	23:BB:723:C:C6	2.55	0.41
10:AK:75:GLU:N	10:AK:75:GLU:CD	2.69	0.41
1:CA:1476:A:O2'	1:CA:1477:U:H5'	2.20	0.41
1:CA:1479:C:H2'	1:CA:1480:A:H8	1.84	0.41
28:BP:45:VAL:H	28:BP:60:VAL:HB	1.85	0.41
23:DB:876:C:H2'	23:DB:877:A:O4'	2.20	0.41
23:DB:967:U:H2'	23:DB:968:C:H6	1.83	0.41
5:CF:53:LYS:HB2	5:CF:54:LEU:HD22	2.02	0.41
1:CA:1081:A:OP1	4:CE:21:SER:O	2.38	0.41
1:AA:1300:G:H1'	1:AA:1301:U:C5	2.55	0.41
23:BB:266:G:H3'	23:BB:267:C:H5''	2.02	0.41
18:CS:68:HIS:HB3	18:CS:72:GLU:OE2	2.20	0.41
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.56	0.41
23:BB:932:U:H1'	23:BB:934:U:C4	2.56	0.41
39:BX:59:GLU:CD	39:BX:59:GLU:H	2.23	0.41
23:DB:1668:A:O2'	23:DB:1674:G:N7	2.44	0.41
5:AF:54:LEU:N	5:AF:54:LEU:HD22	2.35	0.41
18:AS:27:LYS:HZ3	18:AS:27:LYS:HB3	1.85	0.41
1:CA:302:G:O2'	1:CA:303:A:H5'	2.20	0.41
3:AD:1:ALA:O	3:AD:2:ARG:HG2	2.20	0.41
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1291:U:H2'	1:AA:1292:G:C8	2.56	0.41
23:DB:2309:A:H61	47:DF:75:GLY:CA	2.34	0.41
27:DK:109:SER:O	27:DK:111:LYS:N	2.53	0.41
23:DB:1526:C:O2'	23:DB:1527:G:H5'	2.21	0.41
12:AM:77:LYS:O	12:AM:80:MET:HB2	2.21	0.41
4:AE:132:PRO:HG2	4:AE:133:ILE:H	1.84	0.41
9:AJ:91:ASP:C	9:AJ:92:LEU:HD13	2.41	0.41
1:AA:55:A:OP2	1:AA:352:C:N4	2.53	0.41
23:BB:807:U:OP2	37:BL:36:LYS:HD3	2.20	0.41
45:DS:70:LYS:HD3	45:DS:110:ARG:C	2.40	0.41
23:BB:680:C:H2'	23:BB:681:G:H8	1.86	0.41
1:AA:612:C:H2'	1:AA:613:C:C6	2.55	0.41
6:CG:11:ILE:HD12	6:CG:11:ILE:N	2.34	0.41
16:CQ:24:ILE:HD12	16:CQ:24:ILE:N	2.34	0.41
23:DB:977:G:H4'	23:DB:1155:A:H5'	2.02	0.41
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.55	0.41
23:BB:818:G:H4'	23:BB:838:C:O3'	2.20	0.41
33:B1:39:ASP:OD1	33:B1:41:VAL:HB	2.20	0.41
2:CC:5:HIS:ND1	13:CN:88:MET:HB3	2.35	0.41
1:CA:123:U:H2'	1:CA:124:C:C6	2.56	0.41
23:DB:560:C:H2'	23:DB:561:G:O4'	2.20	0.41
23:BB:944:C:H2'	56:BB:3321:HOH:O	2.19	0.41
29:BE:37:ALA:C	29:BE:39:ALA:H	2.20	0.41
22:BA:79:G:O2'	22:BA:80:U:H5'	2.21	0.41
1:CA:117:G:H2'	1:CA:118:U:O4'	2.20	0.41
38:BM:58:LYS:HD2	38:BM:58:LYS:N	2.35	0.41
50:DT:6:ARG:HB3	50:DT:6:ARG:NH1	2.36	0.41
52:DW:54:ARG:HH11	52:DW:54:ARG:HB2	1.86	0.41
11:AL:28:GLN:HB3	11:AL:28:GLN:HE21	1.57	0.41
23:DB:991:C:H5'	23:DB:991:C:H6	1.85	0.41
29:DE:173:THR:C	29:DE:175:ILE:H	2.22	0.41
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.85	0.41
4:CE:48:GLY:O	4:CE:62:ALA:HB1	2.20	0.41
37:BL:122:VAL:HG23	37:BL:142:ILE:HA	2.03	0.41
8:AI:27:ILE:HD13	8:AI:34:LEU:HD22	2.03	0.41
8:AI:26:LYS:H	8:AI:61:ASP:CB	2.34	0.41
40:BH:91:PHE:N	40:BH:91:PHE:CD1	2.89	0.41
28:BP:27:VAL:HG21	28:BP:73:PHE:CE2	2.55	0.41
47:BF:109:ARG:HD2	47:BF:135:ILE:O	2.21	0.41
47:BF:95:MET:O	47:BF:98:PHE:HB3	2.20	0.41
3:AD:122:ILE:HG22	3:AD:123:MET:H	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:97:ILE:HD11	44:DQ:108:LEU:CD1	2.51	0.41
48:BG:34:ARG:N	48:BG:34:ARG:CD	2.82	0.41
8:CI:6:TYR:HE2	8:CI:17:ARG:HB3	1.85	0.41
1:CA:889:A:H61	1:CA:907:A:H3'	1.85	0.41
4:AE:93:VAL:HG11	4:AE:110:MET:SD	2.61	0.41
25:DC:91:ALA:N	25:DC:103:ILE:O	2.53	0.41
50:DT:69:ARG:NE	50:DT:70:HIS:H	2.13	0.41
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.02	0.41
23:BB:1062:G:H2'	23:BB:1063:G:H8	1.85	0.41
23:BB:28:A:O2'	23:BB:29:U:H5'	2.20	0.41
23:DB:279:A:N6	23:DB:280:U:O2	2.53	0.41
47:DF:34:THR:O	47:DF:35:LEU:HB2	2.20	0.41
47:DF:95:MET:O	47:DF:98:PHE:HB3	2.20	0.41
42:BN:102:PHE:N	42:BN:102:PHE:CD1	2.89	0.41
51:BZ:10:LYS:O	51:BZ:31:PRO:HG2	2.21	0.41
40:BH:10:ALA:C	40:BH:12:LEU:H	2.22	0.41
12:AM:33:LEU:HD13	12:AM:39:ALA:O	2.20	0.41
47:BF:74:ALA:C	47:BF:76:PHE:N	2.73	0.41
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.21	0.41
26:DD:48:ILE:HD12	26:DD:89:GLU:HG2	2.02	0.41
1:AA:1073:U:O2	20:AB:102:ASN:ND2	2.52	0.41
15:CP:40:ASN:OD1	15:CP:43:ALA:N	2.53	0.41
27:DK:43:ILE:CG2	27:DK:54:LYS:HA	2.50	0.41
23:DB:135:U:H2'	23:DB:136:G:C8	2.55	0.41
20:AB:57:ASN:OD1	20:AB:58:LYS:N	2.53	0.41
30:DY:7:THR:HG22	30:DY:8:GLN:N	2.35	0.41
13:CN:50:LEU:HD23	13:CN:51:PRO:HD3	2.03	0.41
13:CN:52:ARG:HB3	13:CN:53:ASP:H	1.70	0.41
1:CA:818:G:C2'	1:CA:819:A:H5''	2.51	0.41
42:DN:48:VAL:O	42:DN:51:LEU:N	2.53	0.41
24:DI:129:GLU:O	24:DI:133:ARG:HG3	2.20	0.41
46:BU:73:ASN:HD22	46:BU:73:ASN:N	2.19	0.41
47:DF:87:LYS:C	47:DF:88:VAL:HG23	2.41	0.41
2:CC:165:GLU:OE2	2:CC:165:GLU:HA	2.20	0.41
23:BB:2801:G:H3'	23:BB:2802:G:H8	1.86	0.41
34:B3:21:PHE:O	34:B3:22:LYS:HB3	2.20	0.41
16:AQ:18:LYS:HG2	16:AQ:48:GLU:O	2.21	0.41
23:DB:593:U:H2'	23:DB:594:U:C6	2.55	0.41
28:DP:61:ARG:CB	28:DP:61:ARG:HH21	2.29	0.41
1:AA:586:C:O2'	1:AA:587:G:H5'	2.21	0.41
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:250:GLN:CG	25:DC:254:LYS:HG2	2.50	0.41
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.36	0.41
25:BC:91:ALA:N	25:BC:103:ILE:O	2.53	0.41
26:BD:118:PHE:HZ	26:BD:123:LYS:NZ	2.19	0.41
1:CA:554:A:H5'	11:CL:25:ALA:HB1	2.02	0.41
4:AE:61:LYS:HB2	4:AE:65:LYS:NZ	2.36	0.41
4:AE:61:LYS:NZ	4:AE:61:LYS:HB3	2.35	0.41
29:BE:192:ALA:HA	29:BE:195:GLN:NE2	2.35	0.41
1:CA:246:A:N6	1:CA:281:G:H1'	2.36	0.41
1:AA:195:A:H1'	1:AA:222:C:HO2'	1.85	0.41
23:BB:2209:G:H2'	23:BB:2210:U:C5	2.55	0.41
15:AP:39:PHE:CE1	15:AP:74:LEU:HD21	2.56	0.41
1:CA:961:U:O2	1:CA:983:A:N7	2.53	0.41
23:DB:2815:C:H2'	23:DB:2816:G:C8	2.56	0.41
40:BH:101:ASP:C	40:BH:103:VAL:H	2.23	0.41
8:CI:94:ARG:HG2	8:CI:97:LEU:HD12	2.01	0.41
43:DO:94:ARG:O	43:DO:97:PHE:HB2	2.21	0.41
1:AA:885:G:C2	1:AA:886:G:C8	3.07	0.41
37:BL:17:LYS:CD	37:BL:19:LEU:HD11	2.49	0.41
38:BM:82:MET:O	38:BM:83:GLY:C	2.59	0.41
43:BO:54:VAL:HG13	43:BO:55:GLU:N	2.35	0.41
22:BA:92:C:O2'	22:BA:93:C:H5'	2.21	0.41
1:CA:1291:U:H2'	1:CA:1292:G:C8	2.56	0.41
1:CA:716:A:H2'	1:CA:717:U:H6	1.85	0.41
1:CA:1212:U:C5'	1:CA:1213:A:OP1	2.69	0.41
20:CB:31:PHE:HB2	20:CB:41:ASN:CA	2.50	0.41
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.20	0.41
23:BB:624:C:O2'	23:BB:657:U:H5''	2.20	0.41
23:BB:533:G:H5'	44:BQ:23:TYR:CD2	2.55	0.41
27:DK:107:LEU:C	27:DK:109:SER:H	2.22	0.41
23:DB:1997:C:O2'	23:DB:1998:A:H5'	2.21	0.41
23:BB:2248:C:H2'	23:BB:2249:U:O4'	2.21	0.41
23:DB:572:A:C2	23:DB:2033:A:C2	3.09	0.41
23:BB:463:G:N1	23:BB:467:G:C6	2.89	0.41
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.21	0.41
23:BB:1389:G:O2'	23:BB:1390:U:H5'	2.20	0.41
44:BQ:16:ILE:C	44:BQ:18:LYS:H	2.23	0.41
9:AJ:82:LYS:HG3	9:AJ:83:THR:H	1.85	0.41
23:DB:464:U:C2	23:DB:788:A:C6	3.09	0.41
23:DB:2016:U:H2'	23:DB:2017:U:C6	2.56	0.41
31:D0:35:GLU:HG3	31:D0:45:ASP:OD1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:155:PRO:HA	48:DG:170:THR:HA	2.02	0.41
23:DB:596:U:H2'	23:DB:597:G:H8	1.85	0.41
27:BK:39:ILE:HD13	27:BK:60:ALA:O	2.20	0.41
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.21	0.41
23:DB:2283:C:H2'	23:DB:2284:A:H5'	2.03	0.41
24:BI:35:MET:C	24:BI:35:MET:SD	2.98	0.41
26:BD:96:ILE:HD12	26:BD:96:ILE:N	2.35	0.41
29:DE:105:LEU:HD23	29:DE:105:LEU:HA	1.90	0.41
38:BM:20:LEU:N	38:BM:20:LEU:HD22	2.35	0.41
48:DG:139:VAL:O	48:DG:142:GLN:HB3	2.21	0.41
24:BI:15:GLY:O	24:BI:16:MET:HB2	2.20	0.41
52:DW:30:VAL:HG21	52:DW:59:PHE:CE1	2.56	0.41
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.19	0.41
37:BL:82:LEU:C	37:BL:84:LYS:H	2.23	0.41
23:BB:2265:U:H4'	38:BM:13:HIS:HE1	1.85	0.41
20:AB:162:VAL:CG1	20:AB:184:ALA:HB2	2.47	0.41
25:DC:67:LYS:O	25:DC:188:ARG:HD3	2.20	0.41
8:AI:74:GLN:N	8:AI:74:GLN:HE21	2.18	0.41
40:BH:84:ALA:CB	40:BH:146:VAL:HG12	2.47	0.41
40:BH:68:ARG:HH12	40:BH:72:ILE:HB	1.85	0.41
47:BF:91:ARG:C	47:BF:95:MET:HB2	2.40	0.41
41:DJ:44:TYR:O	41:DJ:45:THR:CB	2.67	0.41
44:DQ:87:VAL:HG12	44:DQ:89:ILE:HD13	2.02	0.41
27:BK:36:GLY:HA2	27:BK:62:VAL:O	2.20	0.41
40:DH:95:GLY:N	40:DH:98:ASP:OD2	2.53	0.41
38:BM:38:ARG:NH1	38:BM:38:ARG:HB3	2.36	0.41
38:DM:19:GLY:CA	38:DM:38:ARG:HH22	2.33	0.41
32:B4:2:LYS:HD3	32:B4:4:ARG:NE	2.29	0.41
32:B4:2:LYS:CD	32:B4:4:ARG:HG3	2.50	0.41
4:AE:93:VAL:HG12	4:AE:94:PHE:N	2.35	0.41
23:BB:514:A:N6	23:BB:515:A:N6	2.68	0.41
38:DM:1:MET:HG2	38:DM:2:LEU:N	2.35	0.41
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.41
48:BG:120:ILE:HG13	48:BG:140:ILE:HG22	2.02	0.41
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.56	0.41
27:DK:19:VAL:HG23	27:DK:41:ILE:HD11	2.02	0.41
37:BL:79:LEU:HB3	37:BL:115:GLU:H	1.86	0.41
23:DB:1082:U:H2'	23:DB:1083:U:O4'	2.21	0.41
23:DB:1022:G:N2	23:DB:1142:A:C2	2.84	0.41
30:BY:37:ARG:HG2	30:BY:43:ILE:CD1	2.50	0.41
23:DB:2733:A:C3'	23:DB:2733:A:C8	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:627:A:H4'	23:DB:628:G:OP1	2.20	0.41
20:CB:15:PHE:O	20:CB:40:ILE:HD12	2.21	0.41
1:CA:1323:G:O2'	1:CA:1362:A:O4'	2.39	0.41
48:DG:88:LEU:HD11	48:DG:94:ARG:N	2.35	0.41
38:BM:126:ILE:HG22	38:BM:127:LYS:N	2.35	0.41
23:DB:2811:G:O2'	23:DB:2812:G:H5'	2.21	0.41
29:DE:51:GLU:OE2	29:DE:88:ARG:NH1	2.53	0.41
23:DB:2723:C:O3'	42:DN:1:MET:HE1	2.20	0.41
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	2.20	0.41
11:CL:110:LYS:O	11:CL:113:ARG:HG3	2.20	0.41
22:BA:30:C:H2'	22:BA:31:C:H5'	2.03	0.41
1:CA:321:A:O2'	1:CA:322:C:H5'	2.19	0.41
23:BB:382:A:H2'	23:BB:383:C:O4'	2.21	0.41
29:BE:48:THR:N	29:BE:51:GLU:HG3	2.34	0.41
1:CA:946:A:H2'	1:CA:947:G:H8	1.85	0.41
23:BB:1858:A:H2'	23:BB:1859:U:O4'	2.21	0.41
23:DB:1785:A:H2'	23:DB:1787:A:C8	2.54	0.41
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.86	0.41
25:DC:196:ASN:C	25:DC:198:GLU:H	2.23	0.41
1:AA:195:A:H2'	1:AA:196:A:C8	2.55	0.41
25:BC:233:GLY:N	25:BC:241:LYS:HZ1	2.16	0.41
1:AA:674:G:H2'	1:AA:675:A:C8	2.55	0.41
23:DB:1726:C:H2'	23:DB:1727:C:H6	1.80	0.41
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.55	0.41
39:DX:44:LYS:HZ3	39:DX:48:ARG:CZ	2.33	0.41
12:AM:95:PRO:HB2	12:AM:99:GLN:OE1	2.21	0.41
47:DF:177:ARG:HA	47:DF:177:ARG:NE	2.34	0.41
1:AA:501:C:H1'	1:AA:549:C:H1'	2.02	0.41
23:DB:635:C:O2'	23:DB:639:U:OP1	2.37	0.41
23:DB:878:A:H5'	23:DB:900:A:N6	2.33	0.41
22:BA:88:C:H2'	22:BA:89:U:C5	2.55	0.41
23:DB:114:U:H2'	23:DB:115:C:C6	2.55	0.41
15:CP:54:LEU:CD1	15:CP:80:LYS:HG2	2.50	0.41
23:BB:2079:U:C2	23:BB:2080:A:C8	3.08	0.41
20:AB:130:LYS:O	20:AB:134:LEU:HG	2.20	0.41
43:DO:83:LEU:CD1	43:DO:115:LEU:HD22	2.51	0.41
9:AJ:35:GLN:HG2	9:AJ:78:GLU:OE1	2.21	0.41
20:CB:41:ASN:ND2	20:CB:43:GLU:HG3	2.35	0.41
5:AF:53:LYS:NZ	5:AF:53:LYS:N	2.68	0.41
51:DZ:45:ARG:HE	51:DZ:47:VAL:CG1	2.34	0.41
1:AA:545:C:O2'	1:AA:546:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:720:C:C5'	17:AR:40:PRO:HA	2.51	0.41
23:BB:2488:G:O2'	23:BB:2489:U:H5'	2.20	0.41
23:DB:866:A:H61	23:DB:913:U:C1'	2.32	0.41
1:CA:894:G:O2'	1:CA:895:G:H5'	2.20	0.41
1:AA:487:A:H3'	1:AA:488:C:C6	2.54	0.41
23:BB:2552:U:H2'	23:BB:2554:U:OP2	2.20	0.41
1:CA:343:U:O3'	1:CA:344:A:H8	2.03	0.41
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.35	0.41
23:DB:2568:U:H2'	23:DB:2569:G:O4'	2.21	0.41
51:DZ:21:ALA:HB3	51:DZ:23:ASN:ND2	2.36	0.41
23:BB:349:U:H2'	23:BB:350:G:C8	2.55	0.41
11:CL:80:LEU:O	11:CL:97:VAL:HG23	2.20	0.41
44:BQ:31:TYR:HA	44:BQ:34:ALA:HB3	2.03	0.41
29:DE:37:ALA:C	29:DE:39:ALA:H	2.22	0.41
23:BB:1607:C:H4'	23:BB:1608:A:O5'	2.21	0.41
1:CA:291:U:H2'	1:CA:292:G:C8	2.56	0.41
23:DB:2323:G:C2'	23:DB:2324:U:H5'	2.51	0.41
6:AG:11:ILE:HD12	6:AG:11:ILE:H	1.85	0.41
20:CB:80:LYS:HG3	20:CB:81:ASP:OD2	2.21	0.41
1:AA:725:G:O2'	1:AA:726:C:H5'	2.21	0.41
23:BB:1068:G:C6	23:BB:1069:A:N6	2.88	0.41
23:DB:1306:C:H2'	23:DB:1307:A:H8	1.85	0.41
25:DC:136:VAL:HG12	25:DC:137:GLY:N	2.36	0.41
40:BH:126:GLY:O	40:BH:127:GLU:C	2.59	0.41
8:AI:84:ARG:O	8:AI:87:MET:HB3	2.21	0.41
23:DB:1669:A:N3	23:DB:1669:A:H2'	2.35	0.41
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.20	0.41
23:DB:2336:A:O2'	23:DB:2337:G:O5'	2.39	0.41
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.21	0.41
23:BB:2365:G:O2'	52:BW:59:PHE:CE1	2.73	0.41
37:DL:90:VAL:CB	37:DL:122:VAL:HG12	2.47	0.41
10:CK:122:PRO:HD2	21:CU:35:GLU:HG2	2.01	0.41
21:CU:36:PHE:CD2	21:CU:39:LYS:HD3	2.55	0.41
8:AI:66:VAL:HG11	8:AI:74:GLN:HG3	2.03	0.41
8:AI:85:ALA:HA	8:AI:88:GLU:OE2	2.21	0.41
47:BF:27:VAL:O	47:BF:27:VAL:HG23	2.20	0.41
10:AK:62:ALA:CB	10:AK:91:GLY:HA3	2.51	0.41
28:BP:7:LEU:HD12	28:BP:7:LEU:N	2.30	0.41
50:BT:29:THR:CG2	50:BT:86:THR:HG22	2.50	0.41
1:CA:1098:C:O2'	1:CA:1099:G:H5'	2.21	0.41
50:DT:25:GLU:OE1	50:DT:30:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:21:SER:HB3	50:DT:31:VAL:CG2	2.51	0.41
29:BE:128:ALA:HA	29:BE:129:PRO:HD3	1.96	0.41
29:BE:119:ILE:O	29:BE:187:VAL:HA	2.20	0.41
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.47	0.41
47:DF:111:ARG:CD	47:DF:111:ARG:N	2.84	0.41
47:DF:137:PHE:O	47:DF:138:PRO:C	2.59	0.41
47:DF:31:GLU:O	47:DF:31:GLU:HG3	2.21	0.41
40:BH:27:ARG:CG	40:BH:27:ARG:HH21	2.34	0.41
23:BB:673:C:C2'	23:BB:674:G:H5'	2.51	0.41
8:CI:14:SER:HA	8:CI:68:GLY:O	2.20	0.41
19:CT:65:LEU:HG	19:CT:66:ILE:CD1	2.50	0.41
40:DH:10:ALA:O	40:DH:12:LEU:N	2.50	0.41
13:AN:60:ARG:O	13:AN:62:ARG:N	2.54	0.41
23:BB:2733:A:C3'	23:BB:2733:A:C8	3.04	0.41
20:CB:65:LYS:HD3	20:CB:89:PHE:CE1	2.55	0.41
23:DB:2071:A:H2'	23:DB:2072:C:H6	1.82	0.41
32:B4:17:VAL:HG11	32:B4:19:ARG:HE	1.86	0.41
15:AP:52:LEU:HD23	15:AP:54:LEU:HG	2.02	0.41
37:DL:79:LEU:HB3	37:DL:115:GLU:H	1.85	0.41
52:DW:8:SER:N	52:DW:10:ARG:HH12	2.17	0.41
40:DH:116:ARG:HB2	40:DH:133:GLN:HE22	1.86	0.41
23:BB:2656:U:H2'	23:BB:2657:A:H8	1.84	0.41
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.55	0.41
1:AA:1323:G:O2'	1:AA:1362:A:O4'	2.39	0.41
25:BC:76:VAL:HA	25:BC:113:ASP:O	2.21	0.41
27:DK:75:SER:HA	28:DP:72:VAL:O	2.20	0.41
23:DB:873:C:H2'	23:DB:874:G:O4'	2.21	0.41
23:DB:2680:U:H5'	26:DD:194:PRO:HA	2.03	0.41
44:DQ:26:ALA:HA	44:DQ:29:ARG:HD2	2.03	0.41
47:DF:65:LEU:O	47:DF:86:CYS:HA	2.21	0.41
1:AA:238:A:H3'	1:AA:239:U:H5''	2.02	0.41
6:AG:149:ALA:HB2	10:AK:55:ARG:CZ	2.48	0.41
2:CC:110:LEU:CD2	2:CC:145:ALA:HB2	2.50	0.41
29:DE:170:ARG:HG2	29:DE:174:GLY:O	2.21	0.41
1:CA:413:G:H2'	1:CA:428:G:H21	1.85	0.41
23:BB:571:U:C4	23:BB:2030:A:N1	2.89	0.41
23:BB:476:G:N2	23:BB:479:A:O4'	2.49	0.41
1:AA:585:G:H2'	1:AA:586:C:H6	1.85	0.41
1:CA:1124:G:H5''	9:CJ:37:ARG:O	2.20	0.41
23:BB:2819:G:C6	23:BB:2828:G:C6	3.09	0.41
23:DB:63:A:H5''	23:DB:64:A:OP1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1881:C:H2'	23:BB:1882:U:O4'	2.20	0.41
23:BB:1882:U:O2'	23:BB:1883:U:H5'	2.20	0.41
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.20	0.41
1:CA:672:U:H2'	1:CA:673:A:C8	2.56	0.41
1:AA:956:U:C2'	1:AA:957:U:H5'	2.51	0.41
3:AD:78:ALA:C	3:AD:85:THR:HG23	2.41	0.41
1:CA:778:G:H2'	1:CA:779:C:C6	2.56	0.41
23:BB:1734:G:C2'	23:BB:1735:A:H5'	2.50	0.41
18:AS:52:ASN:HD22	18:AS:76:THR:HA	1.84	0.41
1:CA:1320:C:H5'	18:CS:2:ARG:HE	1.83	0.41
23:BB:988:A:C8	30:BY:13:ILE:HD12	2.56	0.41
35:DV:80:HIS:CD2	35:DV:81:PRO:HD2	2.55	0.41
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.56	0.41
14:AO:77:ARG:O	14:AO:81:LEU:HB2	2.21	0.41
23:BB:1197:G:O2'	23:BB:1198:U:H5'	2.21	0.41
51:BZ:65:ASP:O	51:BZ:69:ALA:HB2	2.21	0.41
29:DE:68:ALA:O	29:DE:69:ARG:C	2.59	0.41
7:AH:115:ALA:O	7:AH:120:LEU:HD23	2.20	0.41
42:DN:12:ARG:HG2	42:DN:16:HIS:ND1	2.36	0.41
26:BD:100:LEU:HD12	26:BD:101:PHE:CE2	2.56	0.41
23:BB:707:G:O2'	23:BB:708:G:H5'	2.21	0.41
23:DB:1683:U:O2'	23:DB:1684:G:H5'	2.21	0.41
9:CJ:52:LEU:HA	9:CJ:62:ARG:H	1.86	0.41
1:CA:404:G:OP1	3:CD:114:ARG:HD3	2.20	0.41
11:AL:107:LYS:O	11:AL:108:ASP:HB2	2.21	0.41
11:AL:33:CYS:O	11:AL:75:GLU:O	2.38	0.41
1:AA:64:G:H4'	1:AA:65:A:H3'	2.02	0.41
23:DB:2075:U:H2'	23:DB:2077:A:OP1	2.21	0.41
1:CA:1481:U:O2'	1:CA:1482:G:H5'	2.21	0.41
1:CA:487:A:H3'	1:CA:488:C:C6	2.55	0.41
23:DB:572:A:C5'	49:DR:80:ARG:HH22	2.33	0.41
27:DK:88:ASN:ND2	27:DK:88:ASN:C	2.73	0.41
23:DB:1389:G:O2'	23:DB:1390:U:H5'	2.21	0.41
23:BB:1156:A:P	44:BQ:54:ARG:HH21	2.43	0.41
1:AA:173:U:H5'	1:AA:197:A:O4'	2.20	0.41
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.21	0.41
11:CL:65:TYR:C	11:CL:66:ILE:HD12	2.41	0.41
22:DA:17:C:O2'	22:DA:18:G:H5'	2.20	0.41
9:AJ:59:LYS:HE3	9:AJ:60:ASP:OD1	2.20	0.41
1:AA:1058:G:H2'	1:AA:1059:C:H6	1.85	0.41
1:AA:1256:A:H4'	1:AA:1258:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:139:GLU:HG2	20:CB:143:LEU:HD12	2.02	0.41
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.86	0.41
1:AA:291:U:H2'	1:AA:292:G:C8	2.56	0.41
1:CA:397:A:H5''	1:CA:397:A:N3	2.36	0.41
23:DB:121:G:H2'	23:DB:122:G:C8	2.56	0.41
23:BB:2586:U:H2'	23:BB:2587:A:H8	1.86	0.41
23:BB:1157:G:H2'	23:BB:1158:C:H6	1.86	0.41
17:CR:19:GLU:HG3	17:CR:54:LEU:HD12	2.02	0.41
1:AA:462:G:H2'	1:AA:463:U:C6	2.55	0.41
23:BB:622:G:O2'	23:BB:623:C:H5'	2.21	0.41
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.85	0.41
1:AA:423:G:H2'	1:AA:424:G:O4'	2.19	0.41
52:DW:50:VAL:O	52:DW:52:CYS:N	2.53	0.41
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.61	0.41
21:CU:35:GLU:HB3	21:CU:36:PHE:H	1.62	0.41
8:AI:48:ARG:O	8:AI:51:LEU:HB2	2.20	0.41
8:AI:6:TYR:OH	8:AI:8:THR:HG22	2.21	0.41
42:DN:38:LEU:CB	42:DN:39:PRO:HD3	2.40	0.41
23:BB:2729:G:H1'	26:BD:192:ALA:CB	2.51	0.41
48:DG:34:ARG:HG2	48:DG:34:ARG:NH1	2.35	0.41
3:CD:169:TRP:CD1	3:CD:170:LEU:HD22	2.55	0.41
41:DJ:43:GLU:O	41:DJ:45:THR:HG22	2.20	0.41
48:BG:34:ARG:NH1	48:BG:34:ARG:HG2	2.36	0.41
41:BJ:44:TYR:CZ	44:BQ:59:LEU:HD11	2.56	0.41
8:CI:41:GLU:O	8:CI:43:ALA:N	2.54	0.41
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.56	0.41
23:BB:138:U:C6	23:BB:140:C:H1'	2.56	0.41
10:CK:62:ALA:CB	10:CK:91:GLY:HA3	2.50	0.41
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.51	0.41
23:DB:28:A:O2'	23:DB:29:U:H5'	2.21	0.41
50:BT:69:ARG:NE	50:BT:70:HIS:H	2.13	0.41
50:DT:38:ALA:HB1	50:DT:43:ILE:HD11	2.02	0.41
29:BE:160:ALA:O	29:BE:161:ALA:HB3	2.20	0.41
23:DB:2305:U:C1'	47:DF:132:ARG:HA	2.50	0.41
1:AA:171:A:O2'	1:AA:172:A:H5'	2.21	0.41
31:D0:27:LEU:H	31:D0:27:LEU:HD12	1.85	0.41
29:BE:68:ALA:O	29:BE:69:ARG:C	2.58	0.41
1:AA:132:C:H5''	19:AT:68:LYS:HZ3	1.84	0.41
15:CP:28:ARG:HG3	15:CP:28:ARG:H	1.63	0.41
23:BB:2719:G:H4'	23:BB:2846:G:O3'	2.21	0.41
4:AE:43:GLY:HA2	4:AE:75:LEU:CD1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:94:ARG:CB	48:BG:127:GLN:HG2	2.48	0.41
2:CC:26:LYS:HB2	2:CC:26:LYS:HE3	1.95	0.41
1:CA:818:G:H3'	1:CA:819:A:H5''	2.02	0.41
4:AE:19:ARG:HG3	4:AE:31:SER:O	2.20	0.41
12:CM:44:ILE:O	12:CM:47:LEU:HB2	2.20	0.41
46:DU:73:ASN:H	46:DU:73:ASN:HD22	1.69	0.41
38:BM:21:ALA:HB1	38:BM:100:LYS:HG2	2.03	0.41
9:CJ:36:VAL:HG12	9:CJ:38:GLY:H	1.86	0.41
1:CA:449:G:H2'	1:CA:450:G:C8	2.56	0.41
1:AA:237:G:H5''	16:AQ:26:ARG:HH21	1.83	0.41
34:B3:4:LYS:O	37:BL:48:ARG:NH2	2.53	0.41
1:CA:861:G:O2'	1:CA:862:C:H5'	2.20	0.41
3:AD:29:THR:CB	3:AD:30:LYS:HD3	2.48	0.41
11:AL:113:ARG:HH21	11:AL:120:ARG:HA	1.86	0.41
47:DF:41:GLU:CB	47:DF:48:LEU:HD11	2.51	0.41
1:AA:584:G:H2'	1:AA:585:G:H8	1.86	0.41
23:BB:528:A:H3'	23:BB:528:A:H8	1.85	0.41
9:CJ:37:ARG:CZ	9:CJ:37:ARG:HA	2.50	0.41
27:BK:18:ARG:HD3	27:BK:45:GLU:OE2	2.20	0.41
23:BB:62:U:H2'	23:BB:63:A:O4'	2.20	0.41
39:BX:44:LYS:HZ3	39:BX:48:ARG:CZ	2.33	0.41
33:D1:36:LYS:NZ	33:D1:47:ILE:HG13	2.34	0.41
23:DB:1031:G:N3	32:D4:38:GLY:O	2.53	0.41
23:BB:453:A:H4'	23:BB:472:A:N6	2.36	0.41
23:DB:847:U:H2'	23:DB:848:C:H6	1.85	0.41
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.55	0.41
23:BB:2855:C:O2'	23:BB:2856:A:H5'	2.21	0.41
11:CL:23:LEU:C	11:CL:25:ALA:N	2.75	0.41
4:AE:24:VAL:HG23	4:AE:26:GLY:H	1.86	0.41
23:DB:231:A:H3'	23:DB:232:G:C8	2.55	0.41
23:DB:1410:G:O2'	23:DB:1411:U:H5'	2.21	0.41
3:CD:22:SER:OG	3:CD:109:THR:HG22	2.20	0.41
52:BW:30:VAL:O	52:BW:30:VAL:HG22	2.20	0.41
1:CA:1320:C:H2'	1:CA:1321:U:O4'	2.20	0.41
48:BG:37:ASN:HD21	48:BG:40:VAL:HG23	1.85	0.41
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.53	0.41
8:CI:74:GLN:HE21	8:CI:74:GLN:N	2.18	0.41
1:CA:212:G:H2'	1:CA:213:G:C8	2.52	0.41
1:AA:621:A:H2'	1:AA:622:A:H8	1.84	0.41
23:BB:1783:A:C5'	23:BB:2608:G:H4'	2.47	0.41
23:DB:2185:U:H2'	23:DB:2186:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1117:C:H2'	23:DB:1118:C:H6	1.85	0.41
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.36	0.41
34:B3:60:CYS:C	34:B3:61:LEU:HD23	2.41	0.41
23:DB:340:A:H2'	23:DB:341:C:C5'	2.51	0.41
23:BB:1746:A:H2'	23:BB:1747:U:C6	2.56	0.41
1:CA:1028:C:N3	1:CA:1029:U:H1'	2.36	0.41
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	2.03	0.41
17:AR:63:TYR:HD2	17:AR:63:TYR:N	2.18	0.41
23:BB:2407:A:H2'	23:BB:2408:U:C6	2.56	0.41
1:CA:545:C:P	3:CD:61:ARG:HH12	2.44	0.41
1:AA:512:U:H2'	1:AA:513:C:H6	1.85	0.41
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.21	0.41
23:BB:1629:U:O2	23:BB:2698:U:H5''	2.21	0.41
23:BB:1449:G:O2'	23:BB:1450:G:H5'	2.21	0.41
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.50	0.41
23:BB:2247:A:O2'	23:BB:2248:C:H5'	2.21	0.41
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.85	0.41
23:DB:2405:G:H1'	23:DB:2412:A:N6	2.36	0.41
3:AD:187:ARG:O	3:AD:191:SER:HB3	2.21	0.41
27:DK:58:LEU:HB2	27:DK:59:LYS:H	1.63	0.41
1:AA:1473:G:H2'	1:AA:1474:U:C6	2.55	0.41
23:BB:1998:A:H2'	23:BB:1999:C:C6	2.56	0.41
23:BB:2047:C:O2'	23:BB:2823:A:N1	2.47	0.41
2:AC:4:VAL:HG22	2:AC:5:HIS:N	2.36	0.41
5:AF:74:LEU:HD12	5:AF:77:THR:OG1	2.21	0.41
20:CB:8:MET:HB2	20:CB:9:LEU:H	1.59	0.41
23:BB:622:G:H2'	23:BB:623:C:C6	2.56	0.41
14:CO:45:GLU:O	14:CO:46:HIS:HB2	2.21	0.41
23:DB:1686:C:H2'	23:DB:1687:G:O4'	2.20	0.41
23:DB:1688:U:H2'	23:DB:1698:A:N6	2.36	0.41
1:CA:526:C:H2'	1:CA:527:G:H4'	2.02	0.41
23:BB:1810:A:H2'	23:BB:1811:G:O4'	2.20	0.41
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.55	0.41
23:DB:257:C:H2'	23:DB:258:G:O4'	2.21	0.41
23:BB:1750:G:O2'	23:BB:1751:U:H5'	2.21	0.41
23:BB:1666:G:O2'	23:BB:1667:G:H5'	2.19	0.41
16:AQ:14:ASP:OD1	16:AQ:53:GLY:HA2	2.20	0.41
26:DD:16:THR:HB	26:DD:18:ASP:OD1	2.20	0.41
23:BB:2434:A:H2'	23:BB:2434:A:H8	1.68	0.41
14:CO:64:ARG:NE	14:CO:64:ARG:HA	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:4:ARG:HB2	6:CG:4:ARG:HH11	1.86	0.41
9:CJ:31:ARG:H	9:CJ:31:ARG:HG3	1.53	0.41
10:AK:81:LEU:HD23	10:AK:81:LEU:N	2.36	0.41
5:CF:20:GLY:O	5:CF:24:ARG:HD3	2.20	0.41
23:DB:1758:U:O4	23:DB:2695:U:H4'	2.21	0.41
46:DU:2:ALA:O	46:DU:5:ARG:NH2	2.51	0.41
23:DB:2368:C:O2'	23:DB:2369:A:H5'	2.21	0.41
52:DW:48:ALA:HB3	52:DW:81:ILE:O	2.21	0.41
26:DD:106:LYS:HG3	26:DD:206:ALA:HB3	2.02	0.41
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.20	0.41
52:BW:46:ALA:O	52:BW:49:ASN:O	2.39	0.41
23:BB:2331:G:N2	23:BB:2336:A:C8	2.89	0.41
37:DL:85:VAL:HG22	37:DL:94:THR:CG2	2.50	0.41
21:CU:42:THR:HB	21:CU:46:ARG:HE	1.86	0.41
8:AI:24:ASN:O	8:AI:60:LEU:N	2.53	0.41
10:AK:106:ILE:HD11	10:AK:109:ILE:HD11	2.02	0.41
10:AK:106:ILE:HG12	10:AK:107:THR:N	2.36	0.41
40:BH:91:PHE:HB3	1:CA:361:G:OP1	2.21	0.41
3:CD:122:ILE:HG22	3:CD:123:MET:H	1.86	0.41
26:BD:25:THR:HG21	26:BD:193:VAL:HG21	2.03	0.41
25:BC:67:LYS:O	25:BC:188:ARG:HD3	2.20	0.41
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.20	0.41
48:DG:8:VAL:HG12	48:DG:9:VAL:N	2.35	0.41
48:BG:28:LYS:O	48:BG:29:ASN:HB3	2.20	0.41
48:BG:22:VAL:HG13	48:BG:36:LEU:HD13	2.01	0.41
23:BB:558:U:O2'	23:BB:559:G:H5'	2.21	0.41
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD11	2.55	0.41
44:BQ:94:LEU:C	44:BQ:96:ASP:N	2.75	0.41
41:BJ:36:LEU:HD11	41:BJ:122:LEU:HB2	2.01	0.41
44:BQ:86:SER:O	49:BR:52:PRO:HD3	2.21	0.41
8:CI:34:LEU:HD23	8:CI:35:GLU:OE1	2.20	0.41
8:CI:35:GLU:CD	8:CI:35:GLU:H	2.23	0.41
1:AA:1085:U:H3'	1:AA:1086:U:H5	1.82	0.41
40:DH:3:VAL:HA	40:DH:39:ALA:HB2	2.03	0.41
10:AK:85:VAL:O	10:AK:112:VAL:N	2.54	0.41
18:CS:47:THR:C	18:CS:48:ILE:HG13	2.41	0.41
40:BH:3:VAL:CG1	40:BH:38:PRO:HA	2.51	0.41
28:BP:75:THR:C	28:BP:77:SER:H	2.24	0.41
19:CT:43:LYS:HB3	19:CT:85:LEU:HD21	2.03	0.41
28:BP:56:SER:CB	28:BP:75:THR:HG21	2.46	0.41
28:BP:6:GLN:C	28:BP:8:GLU:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:184:GLU:O	25:DC:185:ALA:HB3	2.20	0.41
9:CJ:53:ILE:HG23	9:CJ:54:SER:N	2.34	0.41
47:DF:74:ALA:C	47:DF:76:PHE:N	2.74	0.41
47:DF:77:LYS:HG3	47:DF:78:ILE:N	2.35	0.41
23:DB:443:A:H2	23:DB:1245:G:N3	2.19	0.41
42:DN:61:ALA:C	42:DN:63:ARG:H	2.22	0.41
5:AF:4:TYR:CD2	5:AF:71:ILE:HG21	2.56	0.41
45:DS:31:GLN:C	45:DS:33:LEU:N	2.74	0.41
38:DM:72:PRO:O	38:DM:91:TYR:O	2.38	0.41
38:DM:46:ILE:HG13	38:DM:47:GLU:N	2.36	0.41
47:DF:33:ILE:HD13	47:DF:98:PHE:CD2	2.41	0.41
45:DS:47:VAL:HG12	45:DS:103:ILE:HD13	2.03	0.41
23:DB:543:G:N2	23:DB:545:U:C5'	2.83	0.41
18:AS:10:ILE:CG2	18:AS:37:SER:HB3	2.43	0.41
18:AS:64:GLU:OE1	18:AS:64:GLU:N	2.53	0.41
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.36	0.41
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.56	0.41
23:BB:2753:A:H2'	23:BB:2754:U:C6	2.56	0.41
23:BB:2752:C:H2'	23:BB:2753:A:H5'	2.02	0.41
51:DZ:54:LYS:HA	51:DZ:57:ARG:CD	2.41	0.41
10:CK:88:PRO:HA	10:CK:92:ARG:HD2	2.03	0.41
2:CC:42:LEU:O	2:CC:46:LEU:HD23	2.21	0.41
23:DB:2531:A:H5'	48:DG:173:ALA:HB1	2.03	0.41
5:CF:67:PRO:O	5:CF:71:ILE:HG23	2.21	0.41
23:DB:675:A:N3	23:DB:2443:C:O2'	2.48	0.41
20:CB:89:PHE:HE2	20:CB:152:ASP:O	2.03	0.41
36:D2:21:ARG:C	36:D2:23:ALA:H	2.24	0.41
1:CA:389:A:C6	1:CA:390:U:H1'	2.56	0.41
23:BB:1021:A:H61	23:BB:1142:A:H61	1.67	0.41
23:BB:362:A:H3'	23:BB:363:G:H8	1.86	0.41
23:BB:285:G:C6	23:BB:356:G:C6	3.09	0.41
23:DB:1338:G:H4'	50:DT:18:GLU:CG	2.44	0.41
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.41	0.41
15:AP:52:LEU:HD22	15:AP:75:ILE:HA	2.03	0.41
7:CH:95:MET:SD	7:CH:98:LEU:HB2	2.61	0.41
22:BA:7:G:O2'	22:BA:8:C:H5'	2.20	0.41
23:DB:928:A:H2	30:DY:46:MET:HE3	1.86	0.41
43:DO:82:ALA:HB1	43:DO:87:ILE:HB	2.02	0.41
23:DB:637:A:H4'	23:DB:638:G:O5'	2.20	0.41
20:CB:87:ASP:CG	20:CB:224:ARG:HH21	2.24	0.41
20:CB:59:ILE:O	20:CB:62:ARG:HD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:98:G:C3'	23:BB:99:U:H5''	2.51	0.41
40:DH:72:ILE:HD13	40:DH:110:VAL:HB	2.02	0.41
25:DC:77:VAL:HA	25:DC:93:VAL:HA	2.02	0.41
1:CA:817:C:H1'	1:CA:819:A:C5'	2.45	0.41
48:DG:162:ARG:HG3	48:DG:166:GLU:HG3	2.02	0.41
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.85	0.41
13:AN:56:PRO:HG2	13:AN:57:SER:H	1.85	0.41
46:DU:93:ARG:HB2	46:DU:102:ILE:HG21	2.03	0.41
38:BM:63:ILE:HA	38:BM:104:GLU:O	2.21	0.41
39:BX:17:GLU:O	39:BX:20:ASN:HB2	2.21	0.41
1:CA:1008:U:H2'	1:CA:1009:U:C5'	2.50	0.41
30:BY:58:GLU:H	30:BY:58:GLU:CD	2.22	0.41
2:AC:112:ALA:HB2	2:AC:182:ASP:O	2.21	0.41
2:AC:112:ALA:HB3	2:AC:184:ASN:HB2	2.02	0.41
12:AM:48:SER:CB	12:AM:51:GLN:HG3	2.50	0.41
23:BB:242:G:C6	34:B3:4:LYS:HE2	2.56	0.41
23:BB:2531:A:H5''	48:BG:156:TYR:CE1	2.56	0.41
11:AL:53:ARG:HG2	11:AL:61:GLU:OE1	2.21	0.41
23:DB:2798:U:H1'	23:DB:2800:A:H61	1.85	0.41
26:DD:73:VAL:O	26:DD:74:GLU:HB2	2.20	0.41
33:B1:36:LYS:NZ	33:B1:47:ILE:HG13	2.36	0.41
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.20	0.41
3:CD:81:LEU:HB2	3:CD:88:ASN:HD22	1.81	0.41
16:AQ:45:VAL:HG11	16:AQ:60:ILE:CG2	2.49	0.41
1:AA:255:G:H1'	16:AQ:17:GLU:OE2	2.20	0.41
28:DP:61:ARG:HD3	28:DP:70:GLU:HG3	2.03	0.41
1:CA:1120:C:H2'	1:CA:1121:U:C6	2.56	0.41
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.55	0.41
47:BF:45:ASP:OD1	47:BF:47:LYS:HB2	2.20	0.41
47:BF:40:GLY:O	47:BF:41:GLU:C	2.58	0.41
25:DC:254:LYS:O	25:DC:255:LYS:HD2	2.20	0.41
23:BB:545:U:H2'	23:BB:548:G:C6	2.56	0.41
23:BB:273:G:H2'	23:BB:274:C:C6	2.56	0.41
1:CA:182:A:N3	1:CA:182:A:H5''	2.36	0.41
1:CA:845:A:N7	1:CA:846:G:O4'	2.53	0.41
32:D4:36:ARG:HG2	32:D4:37:GLN:N	2.36	0.41
26:BD:121:THR:O	26:BD:122:VAL:HB	2.21	0.41
23:DB:65:U:H2'	23:DB:66:C:C6	2.53	0.41
23:BB:2856:A:H2'	23:BB:2857:G:C8	2.56	0.41
51:DZ:29:PHE:CD1	51:DZ:29:PHE:N	2.89	0.41
23:BB:1841:U:C2	23:BB:1842:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:828:U:O2'	20:AB:24:PRO:HB3	2.20	0.41
49:DR:68:ARG:HD3	49:DR:92:TRP:CE2	2.56	0.41
49:DR:68:ARG:NH2	49:DR:90:ARG:HB2	2.36	0.41
1:AA:565:U:H3'	1:AA:566:G:H2'	2.03	0.41
23:BB:231:A:H3'	23:BB:232:G:C8	2.56	0.41
23:DB:2882:A:OP1	42:DN:96:ARG:HD2	2.21	0.41
35:BV:80:HIS:CD2	35:BV:81:PRO:HD2	2.56	0.41
2:CC:2:GLN:N	2:CC:2:GLN:HE21	2.19	0.41
1:AA:191:G:H8	1:AA:191:G:OP2	2.03	0.41
6:AG:63:VAL:CG1	6:AG:127:ALA:HB1	2.51	0.41
6:AG:63:VAL:HA	6:AG:66:GLU:OE2	2.20	0.41
1:AA:672:U:H2'	1:AA:673:A:C8	2.56	0.41
2:CC:13:ILE:HG12	2:CC:14:VAL:HG13	2.02	0.41
46:BU:40:LEU:HD23	46:BU:59:GLU:HG2	2.01	0.41
46:DU:41:VAL:O	46:DU:59:GLU:HG3	2.21	0.41
23:DB:2793:C:H2'	23:DB:2794:C:H6	1.86	0.41
1:AA:71:A:H61	1:AA:99:C:H1'	1.86	0.41
2:AC:13:ILE:HG12	2:AC:14:VAL:HG13	2.03	0.41
1:AA:961:U:O2	1:AA:983:A:N7	2.53	0.41
25:DC:262:THR:C	25:DC:264:LYS:H	2.25	0.41
1:AA:1320:C:H2'	1:AA:1321:U:O4'	2.21	0.41
23:DB:329:G:O4'	23:DB:477:A:H1'	2.21	0.41
1:CA:560:A:H4'	1:CA:561:U:C5'	2.50	0.41
23:BB:1829:A:HO2'	25:BC:14:HIS:CD2	2.38	0.41
23:BB:2815:C:H2'	23:BB:2816:G:C8	2.56	0.41
23:BB:2103:C:H4'	23:BB:2103:C:OP1	2.21	0.41
23:BB:2087:G:O2'	23:BB:2088:A:H5'	2.20	0.41
1:CA:431:A:O2'	1:CA:432:A:H5'	2.21	0.41
26:DD:124:ARG:HG3	26:DD:125:TRP:CD1	2.56	0.41
23:DB:2294:G:P	43:DO:94:ARG:NH1	2.92	0.41
1:CA:1306:A:H8	1:CA:1306:A:O5'	2.04	0.41
37:BL:17:LYS:O	37:BL:18:ARG:HG2	2.21	0.41
14:CO:17:ARG:HG2	14:CO:24:SER:HB2	2.02	0.41
23:BB:960:A:C4'	23:BB:2457:U:H4'	2.51	0.41
43:BO:75:GLY:O	43:BO:110:ALA:HB2	2.21	0.41
23:BB:565:C:H2'	23:BB:566:U:O4'	2.19	0.41
23:DB:1613:G:O4'	36:D2:3:ARG:HG3	2.21	0.41
23:DB:2152:G:H2'	23:DB:2153:C:O4'	2.21	0.41
25:DC:31:PRO:O	25:DC:32:LEU:HD23	2.21	0.41
23:DB:322:A:H1'	23:DB:339:U:O2	2.21	0.41
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1465:G:H2'	23:BB:1466:U:C6	2.56	0.41
23:DB:709:U:H2'	23:DB:710:U:H6	1.86	0.41
23:DB:1948:G:C6	23:DB:1959:G:C6	3.09	0.41
39:DX:20:ASN:N	39:DX:20:ASN:ND2	2.69	0.41
51:BZ:45:ARG:HE	51:BZ:47:VAL:CG1	2.34	0.41
11:CL:107:LYS:O	11:CL:108:ASP:HB2	2.21	0.41
40:DH:67:ALA:O	40:DH:71:LYS:HG3	2.21	0.41
1:CA:1005:A:N6	1:CA:1024:G:O2'	2.54	0.41
1:CA:1260:G:OP1	1:CA:1284:C:H4'	2.21	0.41
18:CS:50:VAL:O	18:CS:57:VAL:N	2.54	0.41
1:CA:1256:A:H4'	1:CA:1258:G:C8	2.56	0.41
1:AA:834:U:OP1	17:AR:48:ALA:HB2	2.20	0.41
1:CA:1493:A:H8	1:CA:1493:A:O5'	2.04	0.41
1:CA:78:A:H2'	1:CA:79:G:O4'	2.21	0.41
1:CA:77:A:O2'	1:CA:78:A:H5'	2.20	0.41
23:DB:1461:C:H2'	23:DB:1462:C:H6	1.86	0.41
24:BI:52:LEU:O	24:BI:54:ILE:HG13	2.21	0.41
23:BB:2411:A:H2'	23:BB:2412:A:H8	1.86	0.41
26:DD:110:THR:HG23	26:DD:171:THR:CB	2.50	0.41
23:BB:866:A:H61	23:BB:913:U:C1'	2.33	0.41
23:DB:866:A:H61	23:DB:913:U:C4'	2.34	0.41
6:AG:140:VAL:O	6:AG:143:MET:HB3	2.21	0.41
1:CA:55:A:OP2	1:CA:352:C:N4	2.52	0.41
23:DB:1858:A:H2'	23:DB:1859:U:O4'	2.20	0.41
23:BB:2517:C:C2	23:BB:2542:A:N6	2.89	0.41
20:AB:116:LEU:HB3	20:AB:140:LEU:CG	2.51	0.41
1:CA:169:C:C2'	1:CA:170:U:H5'	2.51	0.41
20:AB:76:SER:HA	20:AB:92:ASN:CB	2.51	0.41
23:BB:1290:C:O2'	23:BB:1291:C:H5'	2.21	0.41
23:BB:1312:U:O4	50:BT:64:LYS:HG2	2.21	0.41
23:BB:627:A:H4'	23:BB:628:G:OP1	2.19	0.41
46:DU:48:VAL:O	46:DU:48:VAL:HG22	2.20	0.41
32:B4:36:ARG:CG	32:B4:37:GLN:H	2.32	0.41
6:AG:6:ILE:HG13	6:AG:6:ILE:H	1.58	0.41
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.55	0.41
23:DB:93:G:H2'	23:DB:94:A:C8	2.56	0.41
27:BK:88:ASN:HB3	27:BK:92:GLU:O	2.21	0.41
23:BB:2324:U:H3'	23:BB:2325:G:C5'	2.51	0.41
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.86	0.41
1:CA:1356:G:N2	1:CA:1357:A:C2	2.89	0.41
1:AA:611:C:H2'	1:AA:612:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:64:G:O2'	22:BA:65:U:H5'	2.21	0.41
1:CA:228:A:O2'	15:CP:60:TRP:HZ3	2.03	0.41
23:BB:2683:C:H5''	28:BP:55:HIS:HB3	2.02	0.41
1:CA:1264:U:O5'	1:CA:1264:U:H6	2.03	0.41
45:BS:3:THR:O	45:BS:3:THR:HG23	2.19	0.41
1:AA:227:G:H2'	1:AA:228:A:C8	2.56	0.41
1:CA:612:C:H2'	1:CA:613:C:C6	2.56	0.41
1:CA:611:C:H2'	1:CA:612:C:C6	2.56	0.41
50:DT:6:ARG:HB3	50:DT:6:ARG:CZ	2.51	0.41
7:CH:38:VAL:CG1	7:CH:111:THR:HG22	2.51	0.41
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.56	0.41
23:DB:2838:G:H2'	23:DB:2839:G:H8	1.86	0.41
23:DB:1263:U:O2'	31:D0:7:PRO:HD2	2.20	0.41
41:BJ:117:ALA:HA	41:BJ:120:ARG:HD2	2.02	0.41
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.55	0.41
25:DC:17:LYS:HG3	25:DC:17:LYS:H	1.64	0.41
34:D3:26:ALA:O	34:D3:27:ASN:C	2.59	0.41
19:CT:34:VAL:HG11	19:CT:78:LEU:HD13	2.03	0.41
23:BB:1326:U:H2'	23:BB:1327:A:H8	1.84	0.41
1:AA:28:A:H2'	1:AA:29:U:O4'	2.21	0.41
23:BB:435:C:H2'	23:BB:436:C:H5'	2.03	0.41
1:CA:6:G:O6	4:CE:99:SER:HB2	2.21	0.41
48:BG:139:VAL:O	48:BG:142:GLN:HB3	2.21	0.41
23:BB:80:G:N3	23:BB:294:A:H2	2.19	0.41
1:AA:968:A:H3'	1:AA:969:A:C5'	2.51	0.41
23:DB:1361:G:H2'	23:DB:1362:C:C6	2.56	0.41
23:BB:2523:G:O2'	23:BB:2524:G:H5'	2.21	0.41
42:DN:69:ARG:H	42:DN:69:ARG:HD3	1.85	0.41
23:DB:2236:U:O2'	23:DB:2237:G:H5'	2.21	0.41
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.51	0.41
23:DB:858:G:N2	23:DB:2269:G:OP2	2.54	0.41
37:DL:85:VAL:O	37:DL:86:GLU:HB3	2.21	0.41
21:CU:36:PHE:HD2	21:CU:36:PHE:HA	1.73	0.41
8:AI:38:PHE:O	8:AI:44:ARG:HD3	2.20	0.41
8:AI:21:LYS:O	8:AI:60:LEU:HB2	2.21	0.41
40:BH:128:HIS:HB3	40:BH:144:VAL:N	2.36	0.41
1:CA:50:A:N6	1:CA:361:G:H4'	2.36	0.41
21:AU:35:GLU:HB3	21:AU:36:PHE:H	1.64	0.41
21:AU:44:ARG:HG3	21:AU:44:ARG:NH1	2.35	0.41
48:DG:31:GLU:O	48:DG:32:LEU:HB2	2.21	0.41
44:BQ:87:VAL:HG12	44:BQ:89:ILE:HD13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:62:LYS:O	28:DP:63:ILE:HB	2.21	0.41
26:DD:25:THR:HG21	26:DD:193:VAL:HG21	2.03	0.41
1:AA:532:A:C8	2:AC:192:TYR:HD2	2.39	0.41
23:BB:138:U:O2	50:BT:2:ILE:HG22	2.21	0.41
7:CH:14:ARG:HG3	7:CH:15:ASN:N	2.35	0.41
3:AD:150:LYS:HA	3:AD:155:LYS:HZ1	1.86	0.41
42:BN:60:VAL:O	42:BN:60:VAL:HG12	2.21	0.41
42:BN:63:ARG:HA	42:BN:80:PHE:CE2	2.56	0.41
25:BC:180:MET:HB2	25:BC:268:ARG:CB	2.44	0.41
25:DC:109:LEU:H	25:DC:109:LEU:CD2	2.34	0.41
5:AF:9:MET:HB2	5:AF:57:ALA:HB1	2.03	0.41
19:AT:43:LYS:CA	19:AT:85:LEU:HD11	2.51	0.41
29:BE:61:ARG:O	29:BE:63:LYS:N	2.54	0.41
21:AU:10:PRO:HG2	2:CC:71:ARG:HD3	2.03	0.41
20:AB:95:TRP:HZ3	20:AB:174:GLU:OE2	2.05	0.41
13:CN:29:ILE:O	13:CN:32:ASP:HB3	2.21	0.41
29:BE:29:HIS:HA	29:BE:32:VAL:CG2	2.50	0.41
51:DZ:68:LEU:HD13	51:DZ:78:TYR:CE1	2.55	0.41
2:CC:184:ASN:HD22	2:CC:185:THR:H	1.69	0.41
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.24	0.41
30:BY:37:ARG:HG2	30:BY:43:ILE:HD11	2.02	0.41
43:BO:93:ASP:C	43:BO:95:SER:N	2.74	0.41
4:CE:19:ARG:HG3	4:CE:31:SER:O	2.20	0.41
46:DU:73:ASN:HD22	46:DU:74:ALA:N	2.19	0.41
38:BM:26:VAL:HB	38:BM:104:GLU:OE2	2.20	0.41
40:DH:126:GLY:H	40:DH:146:VAL:HB	1.85	0.41
33:D1:8:ILE:CD1	33:D1:51:ALA:HA	2.51	0.41
46:DU:72:PHE:CZ	46:DU:77:GLY:HA2	2.56	0.41
30:DY:58:GLU:H	30:DY:58:GLU:CD	2.23	0.41
29:DE:187:VAL:HG12	29:DE:188:MET:N	2.36	0.41
1:AA:238:A:H2'	1:AA:239:U:C5'	2.48	0.41
1:CA:236:A:H2'	1:CA:237:G:H8	1.86	0.41
1:AA:411:A:O2'	1:AA:412:A:O4'	2.37	0.41
2:AC:48:LYS:CD	2:AC:48:LYS:H	2.29	0.41
9:AJ:41:PRO:HG2	9:AJ:42:LEU:H	1.85	0.41
15:CP:15:PRO:HB2	15:CP:17:TYR:CE1	2.56	0.41
12:CM:111:PRO:HG2	12:CM:112:ARG:H	1.84	0.41
23:DB:1882:U:O2'	23:DB:1883:U:H5'	2.21	0.41
1:CA:674:G:H2'	1:CA:675:A:C8	2.55	0.41
3:AD:34:GLU:O	3:AD:34:GLU:CG	2.67	0.41
48:BG:10:VAL:HG11	48:BG:16:VAL:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:460:A:H4'	50:DT:72:GLN:HB3	2.03	0.41
1:CA:1309:G:C5'	12:CM:76:ILE:HG12	2.50	0.41
34:D3:7:ARG:NH1	34:D3:7:ARG:HG3	2.36	0.41
23:DB:590:A:H2'	23:DB:591:U:H6	1.86	0.41
25:DC:181:ARG:HG2	25:DC:181:ARG:NH2	2.35	0.41
23:BB:985:C:O2'	23:BB:986:C:H5'	2.21	0.41
10:CK:63:GLN:HG3	10:CK:98:ALA:HB2	2.03	0.41
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.56	0.41
23:BB:1818:U:HO2'	23:BB:1819:A:P	2.43	0.41
43:BO:110:ALA:O	43:BO:115:LEU:HB2	2.21	0.41
10:AK:30:ILE:HG22	10:AK:45:THR:CA	2.51	0.41
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.20	0.41
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.56	0.41
20:AB:8:MET:O	20:AB:9:LEU:C	2.59	0.41
23:BB:946:C:H2'	23:BB:947:A:C8	2.53	0.41
11:AL:107:LYS:HD2	11:AL:107:LYS:C	2.41	0.41
7:AH:65:PHE:CD2	7:AH:66:GLN:HG3	2.56	0.41
6:CG:101:ARG:O	6:CG:105:GLU:HG3	2.21	0.41
1:AA:83:C:H1'	1:AA:84:U:H6	1.86	0.41
23:DB:1449:G:O2'	23:DB:1450:G:H5'	2.21	0.41
1:CA:75:G:H2'	1:CA:76:G:H8	1.86	0.41
23:DB:942:G:O2'	23:DB:943:A:H5'	2.21	0.41
34:B3:50:SER:C	34:B3:52:GLY:N	2.75	0.41
11:AL:65:TYR:HB3	11:AL:95:HIS:NE2	2.36	0.41
23:BB:519:U:O2'	23:BB:520:G:H5'	2.21	0.41
23:BB:205:G:O2'	23:BB:206:U:OP2	2.39	0.41
1:CA:903:G:H2'	1:CA:904:U:O4'	2.21	0.41
2:CC:78:LYS:HE3	2:CC:81:GLU:HG2	2.03	0.41
23:DB:121:G:H4'	23:DB:149:A:H5'	2.03	0.41
7:AH:38:VAL:CG1	7:AH:111:THR:HG22	2.51	0.41
52:DW:54:ARG:H	52:DW:54:ARG:HG3	1.60	0.41
14:AO:87:LEU:O	14:AO:88:ARG:C	2.59	0.41
17:CR:25:ILE:HG13	17:CR:26:ALA:N	2.36	0.41
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.21	0.41
23:BB:736:C:H2'	23:BB:737:C:C6	2.56	0.41
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.21	0.41
1:CA:743:A:H2'	1:CA:744:C:H6	1.86	0.41
23:BB:2046:G:H5'	31:B0:15:ARG:HG3	2.03	0.41
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.20	0.41
1:CA:1395:C:O2'	1:CA:1396:A:H5'	2.21	0.41
43:BO:80:GLU:HG2	43:BO:80:GLU:H	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:841:C:H2'	1:AA:841:C:O2	2.19	0.41
5:AF:35:LYS:HB2	5:AF:35:LYS:HE3	1.91	0.41
23:DB:755:U:H2'	23:DB:756:A:C8	2.55	0.41
23:DB:1759:A:H4'	23:DB:2715:C:O4'	2.21	0.41
1:CA:691:G:H1'	1:CA:696:A:N6	2.35	0.41
52:DW:59:PHE:CE2	52:DW:61:LYS:HD2	2.55	0.40
23:BB:919:U:H6	23:BB:919:U:O5'	2.04	0.40
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.56	0.40
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.36	0.40
8:AI:56:MET:O	8:AI:57:VAL:HB	2.21	0.40
40:BH:96:THR:O	40:BH:99:ILE:HG12	2.20	0.40
47:BF:35:LEU:CD2	47:BF:153:ILE:HG12	2.51	0.40
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	2.02	0.40
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.37	0.40
44:BQ:84:LYS:O	44:BQ:86:SER:N	2.53	0.40
40:DH:3:VAL:HA	40:DH:39:ALA:N	2.36	0.40
7:AH:14:ARG:HG3	7:AH:15:ASN:N	2.36	0.40
35:DV:93:ARG:H	35:DV:93:ARG:HG3	1.61	0.40
23:DB:705:A:N6	23:DB:726:G:O2'	2.54	0.40
50:BT:40:LYS:HG2	50:BT:60:THR:HG23	2.03	0.40
29:BE:128:ALA:O	29:BE:130:LYS:N	2.54	0.40
45:BS:33:LEU:CD2	45:BS:48:LYS:HE3	2.51	0.40
45:BS:6:LYS:CB	45:BS:104:THR:HA	2.51	0.40
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	2.03	0.40
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.21	0.40
23:BB:1079:C:C2	23:BB:1080:A:C8	3.09	0.40
23:DB:565:C:H2'	23:DB:566:U:O4'	2.20	0.40
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	2.03	0.40
37:BL:116:VAL:HG22	37:BL:117:THR:N	2.36	0.40
13:AN:60:ARG:NH2	13:AN:69:PRO:HB3	2.36	0.40
23:DB:1439:A:C8	23:DB:1440:U:C6	3.09	0.40
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.86	0.40
20:AB:65:LYS:CB	20:AB:157:PRO:HA	2.51	0.40
23:BB:1140:C:C2'	23:BB:1141:U:H5'	2.50	0.40
23:DB:362:A:H2'	23:DB:363:G:H8	1.85	0.40
2:AC:26:LYS:HB2	2:AC:26:LYS:HE3	1.96	0.40
4:AE:148:SER:OG	4:AE:150:GLU:HG2	2.21	0.40
43:BO:18:LEU:HA	43:BO:18:LEU:HD12	1.82	0.40
2:AC:104:GLU:HB3	2:AC:105:VAL:H	1.72	0.40
40:DH:125:THR:CA	40:DH:146:VAL:HB	2.46	0.40
9:CJ:5:ARG:NH1	9:CJ:5:ARG:HB2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:5:ARG:N	9:CJ:76:ILE:O	2.54	0.40
27:DK:73:ASP:OD2	27:DK:75:SER:HB3	2.22	0.40
38:DM:64:TRP:O	38:DM:103:TYR:HA	2.21	0.40
2:AC:110:LEU:HD21	2:AC:140:ALA:O	2.21	0.40
29:DE:47:LYS:CB	29:DE:51:GLU:HB2	2.44	0.40
27:BK:98:ARG:HA	27:BK:118:LEU:CD2	2.51	0.40
23:DB:2419:U:H2'	23:DB:2420:C:C6	2.56	0.40
23:DB:532:A:HO2'	23:DB:2021:C:H5	1.63	0.40
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.56	0.40
39:DX:53:VAL:O	39:DX:56:LEU:HB2	2.21	0.40
3:CD:80:ARG:HH12	3:CD:81:LEU:HD23	1.86	0.40
17:AR:67:LEU:HD23	17:AR:68:PRO:HD2	2.03	0.40
23:BB:847:U:H2'	23:BB:848:C:H6	1.86	0.40
11:AL:23:LEU:HG	11:AL:24:GLU:N	2.36	0.40
20:CB:119:GLN:HG3	20:CB:136:ARG:HH11	1.85	0.40
23:DB:2425:A:H4'	23:DB:2426:A:OP2	2.21	0.40
25:BC:254:LYS:O	25:BC:255:LYS:HD2	2.21	0.40
1:AA:1390:U:O2'	1:AA:1391:U:H5'	2.20	0.40
22:DA:103:U:O2'	22:DA:104:A:H5'	2.20	0.40
1:AA:658:C:O2'	1:AA:659:U:H5'	2.21	0.40
2:CC:2:GLN:N	2:CC:2:GLN:NE2	2.65	0.40
1:CA:591:U:O2'	1:CA:592:G:H5'	2.21	0.40
11:CL:82:ARG:HG2	11:CL:82:ARG:NH1	2.29	0.40
23:BB:2498:C:H3'	56:BB:3585:HOH:O	2.21	0.40
46:DU:40:LEU:HD23	46:DU:59:GLU:HG2	2.03	0.40
1:AA:955:U:H2'	1:AA:956:U:H6	1.86	0.40
22:BA:48:U:H2'	22:BA:49:C:H6	1.85	0.40
25:BC:181:ARG:NH2	25:BC:181:ARG:HG2	2.36	0.40
18:AS:68:HIS:HB3	18:AS:72:GLU:OE2	2.21	0.40
28:BP:104:GLY:O	28:BP:106:ALA:N	2.48	0.40
1:AA:1309:G:H2'	1:AA:1310:G:C8	2.56	0.40
2:AC:154:GLY:O	2:AC:155:ARG:HB2	2.20	0.40
23:DB:2295:C:O2'	23:DB:2296:U:H5'	2.20	0.40
14:CO:12:VAL:CG1	14:CO:22:THR:HG22	2.49	0.40
1:CA:1300:G:H1'	1:CA:1301:U:C5	2.55	0.40
23:BB:484:C:H2'	23:BB:485:C:C6	2.56	0.40
7:AH:36:ALA:O	7:AH:45:ILE:HD11	2.21	0.40
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.86	0.40
15:AP:4:ILE:HB	15:AP:67:ILE:HD12	2.03	0.40
29:DE:34:ALA:CB	29:DE:96:VAL:HG21	2.50	0.40
23:DB:2345:G:H4'	23:DB:2346:A:O5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.56	0.40
23:DB:2209:G:H2'	23:DB:2210:U:C5	2.56	0.40
35:DV:2:PHE:HD2	35:DV:59:GLU:OE1	2.04	0.40
23:BB:692:C:H2'	23:BB:693:A:C8	2.56	0.40
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.20	0.40
23:DB:622:G:H2'	23:DB:623:C:C6	2.56	0.40
23:BB:116:C:H2'	23:BB:117:G:H8	1.85	0.40
1:AA:814:A:C5'	1:AA:1511:G:H4'	2.51	0.40
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.20	0.40
23:DB:353:C:N4	23:DB:354:A:N6	2.69	0.40
27:BK:109:SER:O	27:BK:111:LYS:N	2.54	0.40
23:BB:2836:U:H2'	23:BB:2837:A:H8	1.85	0.40
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.21	0.40
1:CA:926:G:N2	1:CA:1505:G:H2'	2.36	0.40
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.86	0.40
27:DK:59:LYS:HD2	27:DK:89:ASN:HA	2.03	0.40
1:CA:557:G:H2'	1:CA:558:G:O4'	2.21	0.40
1:AA:562:U:H1'	11:AL:11:ARG:HD2	2.03	0.40
29:BE:92:HIS:N	29:BE:92:HIS:ND1	2.68	0.40
23:BB:68:G:H2'	23:BB:69:C:C6	2.56	0.40
23:DB:68:G:H2'	23:DB:69:C:H6	1.85	0.40
23:DB:2651:C:H2'	23:DB:2652:C:C6	2.56	0.40
23:DB:1357:C:O2'	23:DB:1358:G:H5'	2.21	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
1:AA:228:A:O2'	15:AP:60:TRP:HZ3	2.03	0.40
2:CC:4:VAL:HG22	2:CC:5:HIS:N	2.35	0.40
1:AA:360:G:O2'	1:AA:361:G:H5'	2.21	0.40
2:AC:82:ASP:O	2:AC:86:LEU:HG	2.20	0.40
13:CN:72:PHE:O	13:CN:73:LEU:HD23	2.20	0.40
49:BR:68:ARG:HD3	49:BR:92:TRP:CE2	2.56	0.40
1:CA:278:G:O4'	1:CA:282:A:H1'	2.21	0.40
8:AI:99:LYS:NZ	9:CJ:81:GLU:N	2.69	0.40
37:BL:40:SER:C	37:BL:41:ARG:HG3	2.42	0.40
37:DL:14:LYS:O	37:DL:15:ALA:C	2.59	0.40
14:AO:64:ARG:HA	14:AO:64:ARG:NE	2.36	0.40
40:BH:28:ASN:HA	40:BH:28:ASN:HD22	1.59	0.40
1:CA:754:C:H3'	1:CA:754:C:O2	2.20	0.40
1:AA:445:G:H2'	1:AA:446:G:O4'	2.21	0.40
23:BB:917:A:H5''	23:BB:2268:A:H61	1.87	0.40
52:BW:36:ILE:HG21	52:BW:42:THR:HG21	2.03	0.40
20:CB:186:VAL:CG2	20:CB:198:VAL:HG13	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:109:ILE:HG22	21:AU:16:ARG:HH12	1.85	0.40
39:BX:39:GLN:HB2	39:BX:42:LEU:HB2	2.02	0.40
47:BF:33:ILE:CD1	47:BF:95:MET:HG2	2.51	0.40
23:DB:2579:C:O5'	23:DB:2579:C:H6	2.05	0.40
48:BG:7:PRO:O	48:BG:8:VAL:CB	2.69	0.40
48:BG:7:PRO:HB2	48:BG:8:VAL:H	1.67	0.40
41:BJ:124:VAL:O	41:BJ:125:TYR:CB	2.68	0.40
41:BJ:26:GLY:HA2	41:BJ:29:ALA:HB3	2.03	0.40
44:BQ:63:ARG:NH2	44:BQ:95:ALA:O	2.55	0.40
8:CI:44:ARG:O	8:CI:48:ARG:HG3	2.22	0.40
40:BH:3:VAL:HA	40:BH:39:ALA:N	2.35	0.40
38:BM:19:GLY:CA	38:BM:38:ARG:HH22	2.34	0.40
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.21	0.40
7:CH:4:ASP:OD1	7:CH:7:ALA:HB2	2.20	0.40
3:AD:158:LEU:HA	3:AD:161:ALA:HB3	2.03	0.40
28:DP:6:GLN:C	28:DP:8:GLU:N	2.74	0.40
25:DC:89:ASN:O	25:DC:104:LEU:O	2.39	0.40
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.51	0.40
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	2.22	0.40
23:BB:1081:U:O2'	23:BB:1082:U:H5'	2.22	0.40
23:BB:2052:A:H4'	26:BD:148:GLN:N	2.36	0.40
1:AA:889:A:H61	1:AA:907:A:H3'	1.85	0.40
11:AL:41:PRO:HB3	11:AL:49:ARG:HH11	1.86	0.40
19:AT:67:HIS:CG	19:AT:68:LYS:N	2.89	0.40
20:AB:174:GLU:O	20:AB:177:ASN:HB3	2.22	0.40
1:CA:386:C:H2'	1:CA:387:U:H5'	2.03	0.40
23:BB:638:G:H2'	23:BB:639:U:C6	2.56	0.40
37:BL:115:GLU:OE1	37:BL:115:GLU:N	2.55	0.40
41:BJ:65:THR:HG23	41:BJ:66:GLY:N	2.36	0.40
20:AB:86:CYS:N	20:AB:88:GLN:NE2	2.69	0.40
30:DY:37:ARG:HG2	30:DY:43:ILE:CD1	2.51	0.40
43:DO:39:VAL:HG12	43:DO:48:LEU:HD12	2.03	0.40
40:DH:113:SER:HB2	40:DH:132:PHE:CZ	2.56	0.40
48:BG:148:ARG:HB2	48:BG:161:VAL:O	2.21	0.40
48:BG:94:ARG:HE	48:BG:94:ARG:C	2.23	0.40
15:CP:2:VAL:O	15:CP:65:ALA:HA	2.22	0.40
39:BX:23:ARG:HD2	39:BX:27:ASN:OD1	2.21	0.40
28:DP:59:THR:HA	28:DP:71:ARG:O	2.20	0.40
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.45	0.40
46:BU:81:ARG:HH21	46:BU:81:ARG:CA	2.34	0.40
23:BB:242:G:H5''	34:B3:63:TYR:CZ	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:236:A:H2'	1:CA:237:G:C8	2.56	0.40
8:AI:119:LYS:HB3	8:AI:122:ARG:HB3	2.02	0.40
27:DK:78:ARG:HG3	27:DK:78:ARG:HH11	1.86	0.40
9:AJ:6:ILE:HB	9:AJ:76:ILE:CD1	2.49	0.40
32:B4:11:CYS:N	32:B4:14:CYS:SG	2.95	0.40
37:BL:103:ILE:CD1	37:BL:103:ILE:H	2.30	0.40
26:BD:116:LYS:HG3	26:BD:123:LYS:HE2	2.02	0.40
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.34	0.40
3:CD:150:LYS:HA	3:CD:155:LYS:HZ1	1.86	0.40
6:CG:64:ALA:HA	6:CG:127:ALA:CA	2.46	0.40
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.21	0.40
1:AA:678:U:H4'	1:AA:778:G:OP1	2.21	0.40
1:CA:440:C:O2'	1:CA:441:A:H5'	2.21	0.40
1:CA:1226:C:N4	12:CM:102:LYS:HG3	2.37	0.40
28:DP:45:VAL:H	28:DP:60:VAL:HB	1.86	0.40
1:AA:429:U:C1'	1:AA:430:A:H5''	2.50	0.40
1:AA:1305:G:H2'	1:AA:1331:G:N2	2.36	0.40
23:BB:2347:C:H4'	23:BB:2347:C:OP1	2.21	0.40
46:DU:8:ASP:O	46:DU:23:LYS:HA	2.21	0.40
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	2.03	0.40
1:AA:716:A:H2'	1:AA:717:U:C6	2.55	0.40
23:DB:1275:A:C4	42:DN:16:HIS:CD2	3.08	0.40
22:DA:91:C:H2'	22:DA:92:C:C6	2.56	0.40
23:DB:2210:U:C4	23:DB:2212:A:N6	2.89	0.40
1:CA:833:G:O2'	1:CA:834:U:H5'	2.21	0.40
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.56	0.40
23:DB:2751:G:N3	23:DB:2751:G:H2'	2.36	0.40
1:CA:202:G:H4'	1:CA:469:C:H5'	2.03	0.40
15:AP:20:VAL:CG2	15:AP:32:PHE:HB2	2.51	0.40
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.40
1:AA:768:A:H4'	1:AA:1523:G:N2	2.35	0.40
43:BO:28:VAL:CG1	43:BO:94:ARG:HA	2.51	0.40
23:DB:517:C:OP2	31:D0:9:ARG:NH2	2.55	0.40
1:CA:75:G:H2'	1:CA:76:G:C8	2.56	0.40
38:DM:82:MET:O	38:DM:83:GLY:C	2.60	0.40
23:DB:2247:A:O2'	23:DB:2248:C:H5'	2.21	0.40
1:CA:1298:U:H2'	6:CG:113:LYS:NZ	2.36	0.40
27:DK:89:ASN:HD22	27:DK:89:ASN:C	2.25	0.40
23:BB:863:A:H2'	23:BB:864:G:H8	1.86	0.40
23:BB:2514:U:H2'	23:BB:2515:C:H6	1.86	0.40
24:DI:10:LEU:C	24:DI:10:LEU:HD12	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:134:ALA:HB3	41:DJ:135:GLN:HE22	1.86	0.40
56:DB:3695:HOH:O	41:DJ:39:LYS:HE3	2.22	0.40
16:AQ:82:VAL:O	16:AQ:82:VAL:HG22	2.21	0.40
23:BB:15:G:H2'	23:BB:16:C:H6	1.86	0.40
16:AQ:34:GLY:O	16:AQ:35:LYS:C	2.60	0.40
1:AA:1503:A:C8	1:AA:1531:A:N3	2.90	0.40
27:BK:22:ILE:O	27:BK:23:LYS:HB2	2.21	0.40
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.40
23:DB:1237:A:HO2'	23:DB:1238:G:C4'	2.34	0.40
23:BB:1456:G:O2'	23:BB:1457:U:H5'	2.21	0.40
23:DB:1891:G:H2'	23:DB:1892:C:C6	2.57	0.40
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.36	0.40
10:CK:24:ALA:HA	10:CK:29:THR:CG2	2.51	0.40
23:BB:1:G:C2	23:BB:2:G:N7	2.88	0.40
23:BB:2236:U:O2'	23:BB:2237:G:H5'	2.21	0.40
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.22	0.40
18:AS:33:TRP:CE3	18:AS:33:TRP:N	2.89	0.40
48:DG:150:TYR:O	48:DG:151:ARG:HD2	2.22	0.40
52:DW:19:ARG:HE	52:DW:19:ARG:HB2	1.65	0.40
23:BB:2367:G:O2'	23:BB:2368:C:H5'	2.21	0.40
23:BB:923:G:N2	52:BW:23:LYS:HE3	2.36	0.40
37:DL:77:ILE:O	37:DL:110:VAL:O	2.40	0.40
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.53	0.40
8:AI:56:MET:HA	8:AI:59:LYS:HB2	2.02	0.40
8:AI:5:TYR:HB3	8:AI:88:GLU:CD	2.41	0.40
39:DX:39:GLN:HB2	39:DX:42:LEU:HB2	2.03	0.40
40:BH:135:HIS:HB2	40:BH:138:VAL:HG22	2.03	0.40
21:CU:16:ARG:CA	21:CU:16:ARG:HE	2.04	0.40
47:BF:98:PHE:C	47:BF:100:GLU:H	2.23	0.40
47:BF:96:TRP:O	47:BF:100:GLU:N	2.54	0.40
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.21	0.40
41:BJ:3:THR:HB	41:BJ:44:TYR:OH	2.21	0.40
8:CI:6:TYR:OH	8:CI:8:THR:HG22	2.21	0.40
1:CA:1532:U:C2'	1:CA:1533:C:H5''	2.37	0.40
50:DT:53:VAL:CG1	50:DT:87:LEU:HD22	2.52	0.40
23:BB:299:A:N6	23:BB:322:A:H1'	2.36	0.40
29:BE:126:VAL:CG2	29:BE:133:LEU:HB2	2.51	0.40
41:BJ:58:ASN:O	41:BJ:60:ASP:N	2.43	0.40
47:DF:126:ASN:HD22	47:DF:156:THR:HG23	1.86	0.40
45:DS:6:LYS:CB	45:DS:104:THR:HA	2.51	0.40
23:DB:546:U:H4'	23:DB:548:G:OP2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:18:VAL:HG13	41:DJ:56:VAL:HA	2.03	0.40
48:BG:116:LEU:HD23	48:BG:120:ILE:HD13	2.03	0.40
40:DH:5:LEU:HD13	40:DH:14:SER:N	2.36	0.40
47:BF:76:PHE:HB2	47:BF:77:LYS:H	1.73	0.40
38:BM:123:LYS:O	38:BM:124:LEU:C	2.59	0.40
23:DB:2572:A:OP2	26:DD:151:THR:HB	2.21	0.40
23:DB:783:A:H8	23:DB:784:G:H4'	1.85	0.40
23:BB:637:A:H4'	23:BB:638:G:O5'	2.22	0.40
23:DB:1142:A:C4	23:DB:1144:A:C8	3.10	0.40
48:BG:104:LEU:O	48:BG:112:VAL:N	2.54	0.40
12:CM:10:ASP:HB2	12:CM:11:HIS:CE1	2.57	0.40
38:BM:66:ARG:NE	38:BM:101:VAL:HG11	2.36	0.40
31:D0:37:HIS:CG	31:D0:43:THR:HG22	2.56	0.40
38:DM:108:VAL:HG11	38:DM:112:LEU:HD12	2.03	0.40
3:AD:25:ARG:HH12	3:AD:30:LYS:HG2	1.86	0.40
33:B1:29:LYS:C	33:B1:31:GLU:H	2.25	0.40
23:DB:382:A:H2'	23:DB:383:C:O4'	2.21	0.40
1:AA:130:A:N1	1:AA:233:C:H1'	2.36	0.40
25:DC:233:GLY:N	25:DC:241:LYS:HZ1	2.15	0.40
23:BB:1785:A:H2'	23:BB:1787:A:C8	2.55	0.40
23:BB:1505:A:H2'	23:BB:1506:U:O4'	2.22	0.40
23:BB:1508:A:H5'	23:BB:1509:A:C5	2.57	0.40
3:CD:138:PRO:C	3:CD:140:ASP:H	2.24	0.40
43:BO:35:ILE:HD11	43:BO:102:ARG:NE	2.35	0.40
1:AA:778:G:O2'	1:AA:779:C:H5'	2.21	0.40
2:AC:64:ARG:O	2:AC:65:VAL:C	2.59	0.40
23:BB:2463:C:O2'	23:BB:2464:G:H5'	2.20	0.40
23:DB:2492:U:C2'	23:DB:2493:U:H5'	2.51	0.40
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.21	0.40
8:CI:66:VAL:CG2	8:CI:67:LYS:N	2.84	0.40
3:AD:101:VAL:HG13	3:AD:106:PHE:HB2	2.01	0.40
23:BB:826:U:H5''	23:BB:2428:G:O3'	2.21	0.40
12:CM:85:TYR:CA	12:CM:88:LEU:HD12	2.51	0.40
1:CA:1450:U:H2'	1:CA:1452:C:C5	2.56	0.40
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.48	0.40
1:AA:738:C:H2'	1:AA:739:C:H6	1.85	0.40
15:AP:67:ILE:HG23	15:AP:67:ILE:O	2.21	0.40
43:DO:75:GLY:O	43:DO:110:ALA:HB2	2.22	0.40
25:BC:229:HIS:CE1	25:BC:230:PRO:HD2	2.57	0.40
7:CH:115:ALA:O	7:CH:120:LEU:HD23	2.22	0.40
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.86	0.40
23:DB:2607:G:H2'	23:DB:2608:G:O4'	2.21	0.40
23:BB:1723:G:H3'	23:BB:1724:G:H8	1.86	0.40
1:AA:707:U:H2'	1:AA:708:C:C6	2.56	0.40
11:CL:107:LYS:HD2	11:CL:107:LYS:C	2.42	0.40
23:DB:1250:G:OP2	37:DL:21:ARG:NH2	2.55	0.40
23:BB:1476:U:O2'	23:BB:1477:A:P	2.80	0.40
23:BB:534:U:H1'	44:BQ:44:TYR:HB3	2.02	0.40
23:BB:1450:G:C6	23:BB:1451:C:N4	2.90	0.40
43:DO:106:LEU:HG	43:DO:107:ALA:N	2.34	0.40
23:DB:1037:G:O2'	23:DB:1038:G:H5'	2.21	0.40
23:DB:1111:A:OP2	23:DB:1111:A:H3'	2.20	0.40
1:AA:728:A:O2'	1:AA:729:A:H5'	2.21	0.40
11:AL:65:TYR:C	11:AL:66:ILE:HD12	2.42	0.40
27:DK:88:ASN:HD22	27:DK:89:ASN:N	2.20	0.40
1:CA:167:A:O2'	1:CA:168:G:H5'	2.22	0.40
27:DK:39:ILE:H	27:DK:39:ILE:HD13	1.86	0.40
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.57	0.40
1:AA:113:G:H1'	1:AA:354:G:H5'	2.03	0.40
23:BB:1614:A:H61	45:BS:88:ARG:H	1.69	0.40
1:AA:903:G:H2'	1:AA:904:U:O4'	2.21	0.40
28:BP:28:LYS:HD2	28:BP:82:SER:CB	2.52	0.40
1:AA:1015:G:H2'	1:AA:1016:A:C8	2.56	0.40
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.22	0.40
29:BE:37:ALA:O	29:BE:39:ALA:N	2.43	0.40
8:AI:87:MET:O	8:AI:91:GLU:HG2	2.21	0.40
23:BB:736:C:H2'	23:BB:737:C:H6	1.86	0.40
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.36	0.40
23:DB:955:U:H5'	38:DM:86:LYS:HE2	2.03	0.40
23:DB:779:U:OP1	25:DC:48:ILE:HG13	2.21	0.40
23:BB:1651:G:H2'	23:BB:1652:A:O4'	2.21	0.40
47:BF:23:SER:O	47:BF:26:GLN:HB2	2.21	0.40
23:DB:2586:U:H2'	23:DB:2587:A:C8	2.55	0.40
23:DB:1370:C:H2'	23:DB:1371:G:O4'	2.21	0.40
42:BN:69:ARG:HD3	42:BN:69:ARG:H	1.87	0.40
38:DM:58:LYS:HD2	38:DM:58:LYS:N	2.36	0.40
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.38	0.40
1:AA:261:U:H2'	1:AA:263:A:OP2	2.21	0.40
23:DB:1098:A:C8	24:DI:3:LYS:CB	3.04	0.40
23:DB:857:G:O2'	52:DW:19:ARG:HD2	2.21	0.40
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:164:ASP:OD2	20:CB:166:ASP:HB2	2.21	0.40
8:AI:34:LEU:C	8:AI:36:GLN:H	2.23	0.40
40:BH:110:VAL:HB	40:BH:111:ALA:H	1.62	0.40
3:CD:120:LYS:HB3	3:CD:128:VAL:HG21	2.04	0.40
47:DF:134:GLN:HE21	47:DF:134:GLN:HB3	1.62	0.40
48:DG:17:LYS:HG3	48:DG:18:ILE:H	1.86	0.40
23:BB:529:A:OP2	41:BJ:113:PRO:HD3	2.22	0.40
41:BJ:6:ALA:HB3	41:BJ:45:THR:CB	2.51	0.40
8:CI:24:ASN:O	8:CI:60:LEU:N	2.55	0.40
8:CI:56:MET:O	8:CI:57:VAL:HB	2.22	0.40
3:AD:190:LEU:O	3:AD:190:LEU:HD13	2.20	0.40
26:DD:60:VAL:HA	26:DD:64:GLU:OE2	2.21	0.40
28:BP:3:ILE:HG23	28:BP:4:ILE:H	1.86	0.40
50:BT:57:VAL:O	50:BT:85:VAL:O	2.39	0.40
50:DT:29:THR:CB	50:DT:86:THR:HG22	2.50	0.40
25:DC:90:ILE:HA	25:DC:90:ILE:HD13	1.85	0.40
32:D4:2:LYS:HD3	32:D4:4:ARG:NE	2.30	0.40
29:DE:29:HIS:O	29:DE:32:VAL:HG22	2.21	0.40
29:DE:92:HIS:ND1	29:DE:92:HIS:N	2.70	0.40
51:BZ:32:ASN:HB3	51:BZ:53:ALA:H	1.86	0.40
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.61	0.40
24:BI:56:VAL:HG13	24:BI:58:ILE:HD11	2.03	0.40
26:BD:149:ASN:O	26:BD:152:PRO:HD2	2.21	0.40
40:DH:5:LEU:CD1	40:DH:13:GLY:HA2	2.51	0.40
21:CU:20:ARG:N	21:CU:20:ARG:HD2	2.37	0.40
27:BK:19:VAL:HG23	27:BK:41:ILE:HD11	2.04	0.40
41:DJ:80:HIS:O	41:DJ:82:GLY:N	2.54	0.40
13:CN:23:ARG:C	13:CN:25:GLU:H	2.25	0.40
15:CP:46:LYS:C	15:CP:48:GLU:N	2.75	0.40
10:CK:28:ASN:HA	10:CK:28:ASN:HD22	1.66	0.40
23:BB:637:A:H5''	37:BL:112:LEU:HD22	2.03	0.40
42:BN:33:ILE:CG2	42:BN:114:GLU:HB2	2.47	0.40
4:CE:149:PRO:HA	7:CH:98:LEU:HD22	2.03	0.40
23:BB:2317:A:H2'	23:BB:2318:G:O4'	2.20	0.40
40:DH:133:GLN:CA	40:DH:139:PHE:HB3	2.49	0.40
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.47	0.40
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.57	0.40
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.37	0.40
6:AG:148:LYS:HE2	6:AG:151:ALA:CB	2.50	0.40
2:CC:110:LEU:HD21	2:CC:140:ALA:O	2.22	0.40
31:D0:41:HIS:HB2	42:DN:99:LYS:C	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2800:A:C2'	23:DB:2801:G:O4'	2.63	0.40
16:AQ:74:LEU:HD13	16:AQ:74:LEU:O	2.22	0.40
16:AQ:59:GLU:HG2	16:AQ:75:VAL:CG2	2.51	0.40
1:CA:633:G:H2'	1:CA:634:C:H6	1.85	0.40
23:BB:63:A:H5''	23:BB:64:A:OP1	2.22	0.40
23:DB:63:A:OP2	23:DB:63:A:H8	2.04	0.40
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.31	0.40
23:BB:459:U:C2'	23:BB:460:A:H5'	2.52	0.40
23:BB:345:A:C1'	23:BB:346:A:H2	2.29	0.40
23:DB:1228:G:O2'	23:DB:1229:C:H5'	2.20	0.40
1:AA:1092:A:H5''	6:AG:3:ARG:NH1	2.30	0.40
23:DB:2883:A:OP1	31:D0:48:TYR:CE1	2.75	0.40
1:AA:96:U:H2'	1:AA:97:G:H8	1.87	0.40
23:DB:2461:A:H1'	23:DB:2492:U:C2	2.56	0.40
23:BB:2893:A:H4'	23:BB:2894:G:C5'	2.51	0.40
8:CI:66:VAL:HG11	8:CI:74:GLN:HG3	2.03	0.40
41:BJ:77:HIS:HD2	41:BJ:84:ILE:N	2.19	0.40
1:AA:784:A:N6	1:AA:799:G:C6	2.90	0.40
23:DB:2108:A:N3	23:DB:2108:A:C2'	2.84	0.40
1:CA:109:A:H2'	1:CA:326:G:N2	2.37	0.40
51:BZ:21:ALA:HB3	51:BZ:23:ASN:ND2	2.36	0.40
1:AA:735:C:O2'	1:AA:736:C:H5'	2.22	0.40
1:AA:1330:U:H5''	12:AM:22:TYR:O	2.21	0.40
23:DB:674:G:H1'	29:DE:69:ARG:HE	1.86	0.40
1:AA:1028:C:N3	1:AA:1029:U:H1'	2.37	0.40
23:BB:1948:G:C6	23:BB:1959:G:C6	3.09	0.40
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.35	0.40
23:DB:175:G:O2'	23:DB:176:A:H5'	2.22	0.40
1:AA:545:C:P	3:AD:61:ARG:HH12	2.45	0.40
1:AA:1260:G:P	1:AA:1284:C:H4'	2.61	0.40
1:CA:201:G:HO2'	1:CA:469:C:H4'	1.86	0.40
23:BB:1476:U:HO2'	23:BB:1477:A:H8	1.62	0.40
1:CA:1493:A:OP1	54:CA:2062:LLL:H51	2.21	0.40
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.86	0.40
23:BB:1854:A:H2'	23:BB:1855:U:O4'	2.20	0.40
43:BO:105:ALA:C	43:BO:107:ALA:N	2.75	0.40
1:AA:933:G:N7	6:AG:2:ARG:NH1	2.69	0.40
27:BK:107:LEU:HD12	27:BK:107:LEU:N	2.36	0.40
23:DB:1983:G:H4'	23:DB:2606:C:H4'	2.04	0.40
23:BB:2092:U:H5	23:BB:2226:C:OP2	2.05	0.40
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.56	0.40
23:BB:1741:C:H2'	23:BB:1742:U:C6	2.56	0.40
23:DB:1715:G:HO2'	23:DB:1743:G:H1	1.68	0.40
9:CJ:59:LYS:HE3	9:CJ:60:ASP:OD1	2.22	0.40
23:BB:1999:C:O2'	23:BB:2000:C:H5'	2.22	0.40
23:DB:1774:C:H4'	23:DB:1979:U:O2	2.21	0.40
1:AA:803:G:H2'	1:AA:804:U:C6	2.57	0.40
1:AA:60:A:H8	1:AA:60:A:P	2.44	0.40
50:BT:6:ARG:CZ	50:BT:6:ARG:HB3	2.50	0.40
23:DB:1064:C:O2'	23:DB:1065:U:H5'	2.20	0.40
22:DA:20:G:H2'	22:DA:21:G:C8	2.56	0.40
23:BB:2651:C:H2'	23:BB:2652:C:H6	1.86	0.40
46:DU:43:LYS:HD3	46:DU:44:HIS:N	2.37	0.40
33:B1:39:ASP:OD1	33:B1:42:VAL:HG23	2.21	0.40
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.22	0.40
1:AA:43:C:H2'	1:AA:44:A:O4'	2.21	0.40
23:BB:1124:G:H1'	32:B4:38:GLY:OXT	2.21	0.40
23:DB:1985:C:O2'	23:DB:1986:C:H5'	2.22	0.40
23:DB:1533:C:O2'	23:DB:1534:U:H5'	2.22	0.40
23:BB:24:G:H1'	45:BS:77:ASP:HB3	2.02	0.40
23:BB:2508:G:H2'	23:BB:2509:G:H8	1.86	0.40
23:DB:1456:G:O2'	23:DB:1457:U:H5'	2.22	0.40
23:DB:736:C:H2'	23:DB:737:C:C6	2.57	0.40
12:AM:113:LYS:N	12:AM:114:PRO:CD	2.84	0.40
23:BB:2076:U:O4'	23:BB:2076:U:O2	2.37	0.40
23:DB:1696:G:OP2	23:DB:1696:G:H8	2.04	0.40
13:CN:11:LYS:HD3	13:CN:11:LYS:HA	1.83	0.40
47:DF:140:ILE:H	47:DF:140:ILE:HG13	1.73	0.40
1:CA:116:A:O5'	1:CA:116:A:H8	2.04	0.40
10:AK:57:SER:O	10:AK:90:PRO:HG3	2.21	0.40
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.21	0.40
23:DB:917:A:H5''	23:DB:2268:A:N6	2.35	0.40
26:DD:107:VAL:O	26:DD:174:SER:O	2.39	0.40
37:DL:141:LYS:NZ	37:DL:143:GLU:HA	2.36	0.40
20:AB:42:LEU:HA	20:AB:45:THR:HB	2.02	0.40
8:AI:24:ASN:ND2	8:AI:25:GLY:N	2.70	0.40
8:AI:35:GLU:CD	8:AI:35:GLU:H	2.25	0.40
1:CA:360:G:O2'	1:CA:361:G:H5'	2.22	0.40
29:DE:155:GLU:O	29:DE:159:LEU:HD13	2.21	0.40
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.37	0.40
44:DQ:91:ARG:HD3	49:DR:11:GLN:CG	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.21	0.40
48:BG:36:LEU:N	48:BG:36:LEU:CD2	2.84	0.40
48:BG:74:MET:O	48:BG:78:VAL:HG22	2.22	0.40
18:AS:30:LEU:N	18:AS:48:ILE:HA	2.14	0.40
1:CA:1148:U:H5'	8:CI:6:TYR:HH	1.87	0.40
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.21	0.40
29:BE:155:GLU:O	29:BE:159:LEU:HB2	2.22	0.40
10:AK:33:ILE:CB	10:AK:73:VAL:HG11	2.36	0.40
40:BH:32:PRO:HG3	51:BZ:39:TRP:HB3	2.04	0.40
23:DB:1176:U:C6	23:DB:1176:U:P	3.14	0.40
23:DB:2874:C:H2'	23:DB:2875:C:C6	2.57	0.40
28:DP:6:GLN:O	28:DP:10:GLU:HB3	2.21	0.40
29:BE:145:ASP:CA	29:BE:166:LYS:HB3	2.42	0.40
3:CD:84:ASN:ND2	3:CD:86:GLY:H	2.18	0.40
24:BI:73:PRO:HA	24:BI:74:PRO:HD3	2.00	0.40
5:AF:40:GLU:HB2	5:AF:61:LEU:HB2	2.04	0.40
12:CM:53:ASP:HA	12:CM:56:ARG:HH12	1.84	0.40
5:CF:9:MET:HB2	5:CF:57:ALA:HB1	2.03	0.40
23:DB:1438:U:C4	23:DB:1552:A:N6	2.90	0.40
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.36	0.40
15:AP:46:LYS:C	15:AP:48:GLU:N	2.74	0.40
29:DE:145:ASP:CA	29:DE:166:LYS:HB3	2.41	0.40
23:BB:1287:A:P	42:BN:104:ALA:HB3	2.60	0.40
2:CC:104:GLU:O	2:CC:105:VAL:HG13	2.21	0.40
20:AB:57:ASN:HB3	20:AB:219:THR:O	2.22	0.40
20:AB:15:PHE:CD1	20:AB:16:GLY:N	2.90	0.40
13:AN:23:ARG:C	13:AN:25:GLU:H	2.25	0.40
13:AN:25:GLU:HG2	13:AN:25:GLU:H	1.63	0.40
30:DY:37:ARG:HG2	30:DY:43:ILE:HD11	2.03	0.40
23:DB:2732:G:O4'	23:DB:2732:G:N3	2.55	0.40
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.54	0.40
20:CB:57:ASN:OD1	20:CB:58:LYS:N	2.54	0.40
48:BG:144:ALA:HB1	48:BG:163:TYR:HE1	1.87	0.40
46:DU:93:ARG:HB2	46:DU:102:ILE:CG2	2.51	0.40
46:DU:73:ASN:ND2	46:DU:74:ALA:N	2.70	0.40
36:B2:18:PHE:CE1	36:B2:22:MET:HG3	2.57	0.40
23:DB:533:G:H5'	44:DQ:23:TYR:CD2	2.57	0.40
44:BQ:26:ALA:HA	44:BQ:29:ARG:HD2	2.03	0.40
1:CA:415:A:N1	1:CA:428:G:O6	2.54	0.40
36:D2:18:PHE:CE1	36:D2:22:MET:HG3	2.57	0.40
3:CD:78:ALA:C	3:CD:85:THR:HG23	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:445:C:O2'	23:BB:446:G:H5'	2.21	0.40
1:AA:454:G:O2'	1:AA:455:G:H5'	2.21	0.40
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.21	0.40
29:BE:51:GLU:H	29:BE:51:GLU:HG2	1.67	0.40
1:AA:840:C:N3	1:AA:842:U:H4'	2.36	0.40
26:BD:14:ILE:O	26:BD:14:ILE:HG12	2.21	0.40
2:AC:46:LEU:O	2:AC:49:ALA:HB3	2.22	0.40
29:BE:192:ALA:O	29:BE:196:VAL:HG23	2.22	0.40
23:BB:76:C:O2'	23:BB:77:G:H5'	2.21	0.40
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.21	0.40
1:CA:719:C:O2	17:CR:37:LYS:HA	2.21	0.40
17:CR:33:THR:HG23	17:CR:37:LYS:O	2.22	0.40
6:AG:47:GLU:OE1	6:AG:57:GLU:HG2	2.21	0.40
1:AA:778:G:H2'	1:AA:779:C:C6	2.57	0.40
29:DE:191:ASP:O	29:DE:194:LYS:HB3	2.20	0.40
1:AA:36:C:O3'	11:AL:119:LYS:HA	2.22	0.40
48:DG:10:VAL:HG11	48:DG:16:VAL:HG21	2.04	0.40
46:BU:82:VAL:HG12	46:BU:83:GLY:O	2.21	0.40
23:DB:876:C:H2'	23:DB:877:A:C1'	2.52	0.40
23:DB:878:A:H5'	23:DB:900:A:N1	2.37	0.40
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.51	0.40
23:DB:1197:G:C4	23:DB:1198:U:C5	3.09	0.40
10:CK:60:PHE:O	10:CK:63:GLN:HB3	2.22	0.40
23:DB:303:G:H2'	23:DB:304:U:H6	1.87	0.40
14:AO:53:ARG:HD2	23:BB:715:A:N6	2.37	0.40
15:CP:52:LEU:HD23	15:CP:54:LEU:HG	2.02	0.40
1:CA:735:C:H2'	1:CA:736:C:H6	1.86	0.40
1:CA:71:A:O2'	1:CA:72:A:H8	2.05	0.40
15:CP:26:ASN:OD1	15:CP:31:ARG:HD3	2.21	0.40
43:BO:79:ALA:HB2	43:BO:110:ALA:HB1	2.03	0.40
23:DB:1921:G:O2'	23:DB:1922:G:H5'	2.21	0.40
23:DB:2347:C:H4'	23:DB:2347:C:OP1	2.22	0.40
1:CA:443:C:H2'	1:CA:444:G:H8	1.82	0.40
23:DB:958:U:P	38:DM:14:LYS:HZ3	2.45	0.40
26:BD:4:LEU:HD22	26:BD:4:LEU:N	2.36	0.40
20:CB:41:ASN:CG	20:CB:43:GLU:HG3	2.42	0.40
5:AF:53:LYS:HB2	5:AF:54:LEU:HD22	2.02	0.40
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.82	0.40
1:CA:596:A:H2'	1:CA:597:G:C8	2.54	0.40
7:CH:105:THR:C	7:CH:107:LYS:H	2.25	0.40
1:AA:469:C:O2'	1:AA:470:C:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:110:THR:HG23	26:BD:171:THR:CB	2.50	0.40
26:BD:172:VAL:O	26:BD:173:GLN:HB2	2.22	0.40
49:DR:79:ARG:O	49:DR:81:LYS:N	2.55	0.40
1:AA:159:G:N1	1:AA:163:C:N4	2.69	0.40
25:BC:52:HIS:NE2	25:BC:218:THR:HG23	2.37	0.40
1:AA:407:U:O3'	3:AD:112:GLU:HB2	2.22	0.40
43:DO:105:ALA:C	43:DO:107:ALA:N	2.75	0.40
6:AG:16:LYS:HB3	6:AG:43:TYR:CE1	2.56	0.40
1:CA:1484:C:O2'	1:CA:1485:U:H5'	2.22	0.40
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.86	0.40
23:BB:2718:G:H4'	28:BP:95:LYS:HB2	2.03	0.40
9:AJ:80:THR:HB	9:AJ:83:THR:HB	2.02	0.40
1:CA:173:U:H6	1:CA:198:G:HO2'	1.70	0.40
46:BU:42:LYS:C	46:BU:57:ILE:HG23	2.41	0.40
8:CI:45:MET:SD	8:CI:45:MET:N	2.93	0.40
33:D1:39:ASP:OD1	33:D1:42:VAL:HG23	2.21	0.40
1:AA:1530:G:H2'	1:AA:1531:A:C8	2.56	0.40
1:AA:841:C:O2	1:AA:841:C:C2'	2.70	0.40
1:AA:1275:A:H2'	1:AA:1276:G:O4'	2.21	0.40
23:BB:1361:G:H2'	23:BB:1362:C:C6	2.55	0.40
26:BD:163:GLY:O	26:BD:164:GLN:C	2.60	0.40
1:AA:691:G:H1'	1:AA:696:A:N6	2.35	0.40
23:DB:747:U:OP2	45:DS:90:LYS:NZ	2.54	0.40
16:AQ:13:SER:HB3	16:AQ:21:VAL:CG2	2.51	0.40
12:AM:100:ARG:HG3	12:AM:100:ARG:O	2.21	0.40
1:AA:1340:A:O2'	1:AA:1341:U:H5'	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%)	157 (77%)	34 (17%)	13 (6%)	2	21
2	CC	204/232 (88%)	156 (76%)	35 (17%)	13 (6%)	2	21
3	AD	203/205 (99%)	144 (71%)	45 (22%)	14 (7%)	1	18
3	CD	203/205 (99%)	143 (70%)	45 (22%)	15 (7%)	1	16
4	AE	148/166 (89%)	114 (77%)	30 (20%)	4 (3%)	6	44
4	CE	148/166 (89%)	115 (78%)	29 (20%)	4 (3%)	6	44
5	AF	98/135 (73%)	71 (72%)	17 (17%)	10 (10%)	1	9
5	CF	98/135 (73%)	70 (71%)	19 (19%)	9 (9%)	1	11
6	AG	148/178 (83%)	117 (79%)	22 (15%)	9 (6%)	2	22
6	CG	150/178 (84%)	121 (81%)	18 (12%)	11 (7%)	1	16
7	AH	127/129 (98%)	99 (78%)	24 (19%)	4 (3%)	5	41
7	CH	127/129 (98%)	99 (78%)	23 (18%)	5 (4%)	4	34
8	AI	125/129 (97%)	88 (70%)	28 (22%)	9 (7%)	1	17
8	CI	125/129 (97%)	86 (69%)	29 (23%)	10 (8%)	1	14
9	AJ	96/103 (93%)	71 (74%)	15 (16%)	10 (10%)	1	9
9	CJ	96/103 (93%)	70 (73%)	15 (16%)	11 (12%)	0	7
10	AK	115/128 (90%)	83 (72%)	26 (23%)	6 (5%)	2	25
10	CK	115/128 (90%)	84 (73%)	25 (22%)	6 (5%)	2	25
11	AL	121/123 (98%)	79 (65%)	34 (28%)	8 (7%)	1	19
11	CL	121/123 (98%)	79 (65%)	34 (28%)	8 (7%)	1	19
12	AM	112/117 (96%)	76 (68%)	28 (25%)	8 (7%)	1	17
12	CM	111/117 (95%)	77 (69%)	26 (23%)	8 (7%)	1	17
13	AN	92/100 (92%)	61 (66%)	21 (23%)	10 (11%)	0	8
13	CN	92/100 (92%)	58 (63%)	24 (26%)	10 (11%)	0	8
14	AO	86/89 (97%)	63 (73%)	19 (22%)	4 (5%)	3	29
14	CO	86/89 (97%)	64 (74%)	19 (22%)	3 (4%)	4	38
15	AP	80/82 (98%)	57 (71%)	19 (24%)	4 (5%)	3	27
15	CP	78/82 (95%)	55 (70%)	18 (23%)	5 (6%)	2	21
16	AQ	78/83 (94%)	56 (72%)	16 (20%)	6 (8%)	1	14
16	CQ	79/83 (95%)	56 (71%)	17 (22%)	6 (8%)	1	15
17	AR	53/74 (72%)	39 (74%)	11 (21%)	3 (6%)	2	24
17	CR	53/74 (72%)	40 (76%)	10 (19%)	3 (6%)	2	24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	AS	77/91 (85%)	60 (78%)	11 (14%)	6 (8%)	1	14
18	CS	78/91 (86%)	61 (78%)	11 (14%)	6 (8%)	1	14
19	AT	83/86 (96%)	63 (76%)	15 (18%)	5 (6%)	2	22
19	CT	83/86 (96%)	64 (77%)	14 (17%)	5 (6%)	2	22
20	AB	216/240 (90%)	149 (69%)	52 (24%)	15 (7%)	1	18
20	CB	216/240 (90%)	149 (69%)	51 (24%)	16 (7%)	1	16
21	AU	49/70 (70%)	28 (57%)	14 (29%)	7 (14%)	0	4
21	CU	49/70 (70%)	27 (55%)	15 (31%)	7 (14%)	0	4
24	BI	139/141 (99%)	119 (86%)	15 (11%)	5 (4%)	4	37
24	DI	139/141 (99%)	115 (83%)	19 (14%)	5 (4%)	4	37
25	BC	269/272 (99%)	168 (62%)	58 (22%)	43 (16%)	0	3
25	DC	269/272 (99%)	167 (62%)	59 (22%)	43 (16%)	0	3
26	BD	207/209 (99%)	119 (58%)	59 (28%)	29 (14%)	0	4
26	DD	207/209 (99%)	119 (58%)	59 (28%)	29 (14%)	0	4
27	BK	119/123 (97%)	79 (66%)	22 (18%)	18 (15%)	0	4
27	DK	119/123 (97%)	78 (66%)	23 (19%)	18 (15%)	0	4
28	BP	112/114 (98%)	61 (54%)	36 (32%)	15 (13%)	0	5
28	DP	112/114 (98%)	60 (54%)	37 (33%)	15 (13%)	0	5
29	BE	199/201 (99%)	126 (63%)	48 (24%)	25 (13%)	0	6
29	DE	199/201 (99%)	127 (64%)	46 (23%)	26 (13%)	0	5
30	BY	56/58 (97%)	40 (71%)	13 (23%)	3 (5%)	2	25
30	DY	56/58 (97%)	40 (71%)	13 (23%)	3 (5%)	2	25
31	B0	54/56 (96%)	43 (80%)	6 (11%)	5 (9%)	1	11
31	D0	54/56 (96%)	42 (78%)	7 (13%)	5 (9%)	1	11
32	B4	36/38 (95%)	18 (50%)	7 (19%)	11 (31%)	0	0
32	D4	36/38 (95%)	18 (50%)	7 (19%)	11 (31%)	0	0
33	B1	48/54 (89%)	31 (65%)	12 (25%)	5 (10%)	1	9
33	D1	48/54 (89%)	33 (69%)	10 (21%)	5 (10%)	1	9
34	B3	62/64 (97%)	41 (66%)	16 (26%)	5 (8%)	1	13
34	D3	62/64 (97%)	41 (66%)	16 (26%)	5 (8%)	1	13
35	BV	92/94 (98%)	67 (73%)	20 (22%)	5 (5%)	2	25

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	DV	92/94 (98%)	67 (73%)	21 (23%)	4 (4%)	3	31
36	B2	44/46 (96%)	37 (84%)	4 (9%)	3 (7%)	1	19
36	D2	44/46 (96%)	37 (84%)	4 (9%)	3 (7%)	1	19
37	BL	141/144 (98%)	90 (64%)	29 (21%)	22 (16%)	0	3
37	DL	141/144 (98%)	90 (64%)	27 (19%)	24 (17%)	0	3
38	BM	134/136 (98%)	80 (60%)	40 (30%)	14 (10%)	1	9
38	DM	134/136 (98%)	81 (60%)	39 (29%)	14 (10%)	1	9
39	BX	61/63 (97%)	38 (62%)	16 (26%)	7 (12%)	0	7
39	DX	61/63 (97%)	37 (61%)	17 (28%)	7 (12%)	0	7
40	BH	147/149 (99%)	83 (56%)	27 (18%)	37 (25%)	0	1
40	DH	147/149 (99%)	89 (60%)	30 (20%)	28 (19%)	0	2
41	BJ	140/142 (99%)	86 (61%)	36 (26%)	18 (13%)	0	6
41	DJ	140/142 (99%)	85 (61%)	36 (26%)	19 (14%)	0	5
42	BN	118/127 (93%)	77 (65%)	30 (25%)	11 (9%)	1	11
42	DN	118/127 (93%)	76 (64%)	30 (25%)	12 (10%)	1	9
43	BO	114/117 (97%)	79 (69%)	24 (21%)	11 (10%)	1	11
43	DO	114/117 (97%)	80 (70%)	23 (20%)	11 (10%)	1	11
44	BQ	115/117 (98%)	75 (65%)	33 (29%)	7 (6%)	2	22
44	DQ	115/117 (98%)	77 (67%)	30 (26%)	8 (7%)	1	17
45	BS	108/110 (98%)	67 (62%)	29 (27%)	12 (11%)	0	8
45	DS	108/110 (98%)	66 (61%)	29 (27%)	13 (12%)	0	7
46	BU	100/103 (97%)	58 (58%)	25 (25%)	17 (17%)	0	3
46	DU	100/103 (97%)	59 (59%)	23 (23%)	18 (18%)	0	2
47	BF	176/178 (99%)	101 (57%)	49 (28%)	26 (15%)	0	4
47	DF	176/178 (99%)	102 (58%)	49 (28%)	25 (14%)	0	4
48	BG	174/176 (99%)	95 (55%)	48 (28%)	31 (18%)	0	2
48	DG	174/176 (99%)	94 (54%)	50 (29%)	30 (17%)	0	2
49	BR	101/103 (98%)	62 (61%)	26 (26%)	13 (13%)	0	6
49	DR	101/103 (98%)	62 (61%)	26 (26%)	13 (13%)	0	6
50	BT	91/100 (91%)	52 (57%)	23 (25%)	16 (18%)	0	2
50	DT	91/100 (91%)	51 (56%)	23 (25%)	17 (19%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	BZ	75/78 (96%)	51 (68%)	14 (19%)	10 (13%)	0	5
51	DZ	75/78 (96%)	50 (67%)	15 (20%)	10 (13%)	0	5
52	BW	77/84 (92%)	32 (42%)	22 (29%)	23 (30%)	0	0
52	DW	77/84 (92%)	30 (39%)	24 (31%)	23 (30%)	0	0
All	All	11241/11914 (94%)	7497 (67%)	2537 (23%)	1207 (11%)	0	8

All (1207) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	14	VAL
2	AC	54	ILE
2	AC	205	GLU
3	AD	24	VAL
3	AD	192	ALA
4	AE	102	THR
5	AF	92	THR
6	AG	6	ILE
6	AG	71	THR
8	AI	8	THR
8	AI	24	ASN
8	AI	127	SER
9	AJ	57	VAL
9	AJ	61	ALA
10	AK	126	ARG
11	AL	13	ARG
11	AL	121	PRO
11	AL	122	LYS
12	AM	6	ILE
12	AM	111	PRO
13	AN	50	LEU
14	AO	74	ASP
15	AP	28	ARG
16	AQ	32	ILE
19	AT	3	ILE
20	AB	9	LEU
20	AB	19	THR
20	AB	22	TRP
20	AB	94	ARG
20	AB	188	THR
24	BI	18	ASN
25	BC	4	LYS

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Mol	Chain	Res	Type
25	BC	53	ILE
25	BC	77	VAL
25	BC	135	PRO
25	BC	141	HIS
25	BC	239	PHE
26	BD	9	VAL
26	BD	74	GLU
26	BD	91	THR
26	BD	107	VAL
26	BD	122	VAL
26	BD	169	ARG
26	BD	184	ARG
26	BD	194	PRO
27	BK	31	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	119	ALA
27	BK	120	PRO
28	BP	25	VAL
28	BP	50	ARG
28	BP	64	SER
28	BP	75	THR
29	BE	45	ALA
29	BE	62	GLN
29	BE	79	ARG
29	BE	165	HIS
29	BE	167	VAL
31	B0	23	ALA
31	B0	42	ILE
31	B0	51	ARG
34	B3	31	ILE
37	BL	66	PHE
37	BL	89	VAL
37	BL	100	ILE
37	BL	111	ILE
37	BL	116	VAL
38	BM	78	LEU
39	BX	2	LYS
40	BH	8	LYS
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	105	ALA
40	BH	125	THR
40	BH	132	PHE
40	BH	140	ALA
41	BJ	4	PHE
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	52	ASP
41	BJ	73	VAL
41	BJ	81	ILE
41	BJ	111	LYS
41	BJ	124	VAL
42	BN	11	ASN
42	BN	82	GLU
45	BS	3	THR
45	BS	13	SER
46	BU	6	ARG
46	BU	18	LYS
46	BU	49	PRO
46	BU	50	ALA
47	BF	32	LYS
47	BF	87	LYS
47	BF	110	ILE
47	BF	112	ASP
47	BF	138	PRO
47	BF	149	ARG
48	BG	7	PRO
48	BG	8	VAL
48	BG	11	PRO
48	BG	85	LYS
48	BG	91	VAL
48	BG	94	ARG
48	BG	117	PRO
49	BR	7	SER
50	BT	16	VAL
50	BT	39	THR
50	BT	58	VAL
50	BT	88	LYS
51	BZ	33	LEU
51	BZ	45	ARG

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Mol	Chain	Res	Type
51	BZ	46	PHE
51	BZ	77	LYS
52	BW	9	THR
52	BW	14	ASP
52	BW	30	VAL
52	BW	50	VAL
52	BW	70	VAL
2	CC	14	VAL
2	CC	54	ILE
2	CC	205	GLU
3	CD	24	VAL
4	CE	102	THR
5	CF	92	THR
6	CG	3	ARG
6	CG	71	THR
8	CI	8	THR
8	CI	127	SER
9	CJ	57	VAL
9	CJ	61	ALA
10	CK	126	ARG
11	CL	13	ARG
11	CL	24	GLU
11	CL	121	PRO
11	CL	122	LYS
12	CM	6	ILE
12	CM	111	PRO
13	CN	50	LEU
14	CO	74	ASP
15	CP	28	ARG
15	CP	44	SER
16	CQ	32	ILE
20	CB	19	THR
20	CB	22	TRP
20	CB	94	ARG
20	CB	188	THR
24	DI	5	GLN
24	DI	18	ASN
25	DC	4	LYS
25	DC	53	ILE
25	DC	77	VAL
25	DC	135	PRO
25	DC	141	HIS

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Mol	Chain	Res	Type
26	DD	9	VAL
26	DD	74	GLU
26	DD	91	THR
26	DD	107	VAL
26	DD	112	THR
26	DD	122	VAL
26	DD	169	ARG
26	DD	184	ARG
26	DD	194	PRO
27	DK	31	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	119	ALA
27	DK	120	PRO
28	DP	25	VAL
28	DP	50	ARG
28	DP	64	SER
28	DP	75	THR
29	DE	45	ALA
29	DE	61	ARG
29	DE	62	GLN
29	DE	79	ARG
29	DE	165	HIS
29	DE	167	VAL
31	D0	23	ALA
31	D0	42	ILE
31	D0	51	ARG
34	D3	31	ILE
37	DL	66	PHE
37	DL	89	VAL
37	DL	100	ILE
37	DL	111	ILE
37	DL	116	VAL
38	DM	78	LEU
39	DX	2	LYS
40	DH	10	ALA
40	DH	14	SER
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	89	LYS
40	DH	93	SER

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Mol	Chain	Res	Type
41	DJ	4	PHE
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	52	ASP
41	DJ	73	VAL
41	DJ	81	ILE
41	DJ	111	LYS
41	DJ	124	VAL
42	DN	11	ASN
42	DN	82	GLU
45	DS	3	THR
45	DS	13	SER
46	DU	6	ARG
46	DU	18	LYS
46	DU	49	PRO
46	DU	50	ALA
47	DF	32	LYS
47	DF	87	LYS
47	DF	110	ILE
47	DF	112	ASP
47	DF	138	PRO
47	DF	149	ARG
48	DG	7	PRO
48	DG	8	VAL
48	DG	11	PRO
48	DG	85	LYS
48	DG	91	VAL
48	DG	94	ARG
48	DG	117	PRO
49	DR	7	SER
50	DT	16	VAL
50	DT	39	THR
50	DT	58	VAL
50	DT	88	LYS
51	DZ	33	LEU
51	DZ	45	ARG
51	DZ	46	PHE
51	DZ	77	LYS
52	DW	9	THR
52	DW	14	ASP
52	DW	30	VAL
52	DW	50	VAL

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Mol	Chain	Res	Type
52	DW	70	VAL
2	AC	104	GLU
2	AC	153	SER
2	AC	180	ASP
3	AD	154	VAL
3	AD	168	THR
4	AE	20	VAL
4	AE	108	GLY
5	AF	54	LEU
5	AF	85	ILE
5	AF	98	GLU
6	AG	88	VAL
8	AI	42	THR
8	AI	57	VAL
8	AI	106	ASP
9	AJ	36	VAL
9	AJ	38	GLY
9	AJ	74	VAL
9	AJ	100	ILE
10	AK	88	PRO
11	AL	24	GLU
11	AL	117	GLY
12	AM	15	VAL
12	AM	22	TYR
13	AN	33	VAL
13	AN	61	ASN
13	AN	71	GLY
15	AP	44	SER
15	AP	52	LEU
17	AR	44	THR
20	AB	14	HIS
20	AB	15	PHE
20	AB	150	ILE
20	AB	163	ILE
21	AU	34	ARG
21	AU	36	PHE
24	BI	14	ALA
24	BI	64	ARG
25	BC	17	LYS
25	BC	34	GLU
25	BC	35	LYS
25	BC	36	ASN

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Mol	Chain	Res	Type
25	BC	37	SER
25	BC	52	HIS
25	BC	59	GLN
25	BC	64	VAL
25	BC	65	ASP
25	BC	93	VAL
25	BC	94	LEU
25	BC	140	VAL
25	BC	142	ASN
25	BC	145	MET
26	BD	31	ALA
26	BD	93	GLY
26	BD	95	SER
26	BD	102	ALA
26	BD	106	LYS
26	BD	112	THR
26	BD	121	THR
26	BD	145	SER
26	BD	159	LYS
26	BD	170	VAL
26	BD	182	ALA
27	BK	16	ALA
27	BK	17	ARG
27	BK	73	ASP
27	BK	80	ASP
27	BK	92	GLU
27	BK	110	GLU
28	BP	31	VAL
28	BP	37	LYS
28	BP	38	ARG
29	BE	42	GLY
29	BE	61	ARG
29	BE	69	ARG
29	BE	150	THR
29	BE	166	LYS
30	BY	4	ILE
32	B4	7	VAL
32	B4	8	LYS
32	B4	9	LYS
32	B4	23	ILE
32	B4	34	LYS
33	B1	4	ILE

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Mol	Chain	Res	Type
34	B3	50	SER
35	BV	75	GLN
36	B2	44	VAL
36	B2	45	SER
37	BL	51	GLU
37	BL	143	GLU
38	BM	13	HIS
38	BM	19	GLY
38	BM	56	ALA
38	BM	58	LYS
38	BM	69	PRO
38	BM	83	GLY
38	BM	106	ASP
38	BM	116	ALA
39	BX	9	LYS
39	BX	58	ASN
40	BH	3	VAL
40	BH	6	LEU
40	BH	9	VAL
40	BH	11	ASN
40	BH	44	ILE
40	BH	59	ALA
40	BH	64	ALA
40	BH	73	ASN
40	BH	77	THR
40	BH	83	LYS
40	BH	103	VAL
40	BH	104	THR
40	BH	137	GLU
41	BJ	43	GLU
41	BJ	83	GLY
42	BN	10	LEU
42	BN	101	GLY
43	BO	68	LYS
44	BQ	4	LYS
44	BQ	10	ARG
44	BQ	85	ALA
44	BQ	86	SER
44	BQ	87	VAL
45	BS	14	ALA
45	BS	40	ASN
45	BS	65	ASP

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Mol	Chain	Res	Type
45	BS	96	ILE
46	BU	16	LYS
46	BU	61	GLU
46	BU	85	ARG
46	BU	92	VAL
47	BF	9	ASP
47	BF	11	VAL
47	BF	78	ILE
47	BF	92	GLY
47	BF	135	ILE
47	BF	148	VAL
48	BG	84	LYS
48	BG	102	ILE
48	BG	111	PRO
48	BG	125	PRO
48	BG	170	THR
48	BG	174	LYS
49	BR	48	LYS
50	BT	10	VAL
50	BT	11	LEU
50	BT	19	LYS
50	BT	35	ALA
50	BT	38	ALA
50	BT	91	GLN
51	BZ	35	SER
51	BZ	70	GLU
51	BZ	71	LEU
52	BW	32	ALA
52	BW	58	LEU
52	BW	61	LYS
2	CC	104	GLU
2	CC	153	SER
2	CC	180	ASP
3	CD	154	VAL
3	CD	168	THR
3	CD	192	ALA
4	CE	20	VAL
4	CE	108	GLY
5	CF	54	LEU
5	CF	85	ILE
5	CF	98	GLU
6	CG	88	VAL

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Mol	Chain	Res	Type
8	CI	24	ASN
8	CI	42	THR
8	CI	57	VAL
8	CI	106	ASP
9	CJ	36	VAL
9	CJ	74	VAL
9	CJ	100	ILE
10	CK	88	PRO
11	CL	117	GLY
12	CM	15	VAL
12	CM	22	TYR
13	CN	33	VAL
13	CN	61	ASN
13	CN	71	GLY
14	CO	88	ARG
15	CP	52	LEU
17	CR	44	THR
18	CS	4	LEU
19	CT	3	ILE
20	CB	14	HIS
20	CB	15	PHE
20	CB	150	ILE
20	CB	163	ILE
21	CU	34	ARG
21	CU	35	GLU
21	CU	36	PHE
25	DC	17	LYS
25	DC	34	GLU
25	DC	35	LYS
25	DC	36	ASN
25	DC	37	SER
25	DC	52	HIS
25	DC	59	GLN
25	DC	63	ILE
25	DC	64	VAL
25	DC	93	VAL
25	DC	94	LEU
25	DC	140	VAL
25	DC	142	ASN
25	DC	145	MET
25	DC	239	PHE
26	DD	31	ALA

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Mol	Chain	Res	Type
26	DD	93	GLY
26	DD	95	SER
26	DD	102	ALA
26	DD	106	LYS
26	DD	121	THR
26	DD	145	SER
26	DD	170	VAL
26	DD	182	ALA
27	DK	16	ALA
27	DK	17	ARG
27	DK	73	ASP
27	DK	80	ASP
27	DK	92	GLU
27	DK	101	GLY
27	DK	110	GLU
28	DP	31	VAL
28	DP	37	LYS
29	DE	42	GLY
29	DE	69	ARG
29	DE	150	THR
29	DE	166	LYS
30	DY	4	ILE
32	D4	7	VAL
32	D4	8	LYS
32	D4	9	LYS
32	D4	23	ILE
32	D4	34	LYS
33	D1	4	ILE
34	D3	50	SER
35	DV	75	GLN
36	D2	44	VAL
36	D2	45	SER
37	DL	51	GLU
37	DL	143	GLU
38	DM	13	HIS
38	DM	19	GLY
38	DM	56	ALA
38	DM	58	LYS
38	DM	69	PRO
38	DM	83	GLY
38	DM	106	ASP
38	DM	116	ALA

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Mol	Chain	Res	Type
38	DM	134	THR
39	DX	9	LYS
39	DX	58	ASN
40	DH	3	VAL
40	DH	6	LEU
40	DH	8	LYS
40	DH	11	ASN
40	DH	86	ASP
40	DH	91	PHE
40	DH	107	GLY
40	DH	148	ALA
41	DJ	2	LYS
41	DJ	43	GLU
41	DJ	83	GLY
42	DN	10	LEU
42	DN	101	GLY
43	DO	68	LYS
44	DQ	4	LYS
44	DQ	10	ARG
44	DQ	85	ALA
44	DQ	86	SER
44	DQ	87	VAL
45	DS	14	ALA
45	DS	40	ASN
45	DS	63	GLY
45	DS	65	ASP
45	DS	96	ILE
46	DU	16	LYS
46	DU	61	GLU
46	DU	85	ARG
46	DU	92	VAL
47	DF	9	ASP
47	DF	11	VAL
47	DF	78	ILE
47	DF	92	GLY
47	DF	135	ILE
47	DF	148	VAL
48	DG	84	LYS
48	DG	102	ILE
48	DG	111	PRO
48	DG	125	PRO
48	DG	170	THR

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Mol	Chain	Res	Type
48	DG	174	LYS
49	DR	70	GLU
50	DT	10	VAL
50	DT	11	LEU
50	DT	19	LYS
50	DT	38	ALA
51	DZ	35	SER
51	DZ	70	GLU
51	DZ	71	LEU
52	DW	32	ALA
52	DW	58	LEU
52	DW	61	LYS
2	AC	3	LYS
2	AC	47	ALA
2	AC	59	PRO
3	AD	31	CYS
3	AD	167	PRO
4	AE	43	GLY
6	AG	70	PRO
6	AG	92	PRO
6	AG	112	ASP
8	AI	122	ARG
9	AJ	32	THR
9	AJ	56	HIS
10	AK	14	GLN
10	AK	125	LYS
12	AM	3	ILE
12	AM	49	GLU
12	AM	97	ARG
13	AN	20	PHE
13	AN	48	GLN
14	AO	88	ARG
17	AR	43	ILE
17	AR	46	THR
18	AS	4	LEU
18	AS	7	GLY
18	AS	53	GLY
18	AS	63	ASP
20	AB	18	GLN
20	AB	121	GLN
20	AB	205	ALA
21	AU	35	GLU

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Mol	Chain	Res	Type
21	AU	41	THR
24	BI	23	VAL
25	BC	3	VAL
25	BC	63	ILE
25	BC	88	ALA
25	BC	190	THR
25	BC	202	ARG
25	BC	237	ARG
25	BC	250	GLN
25	BC	254	LYS
26	BD	136	ASN
26	BD	164	GLN
27	BK	6	THR
27	BK	14	SER
27	BK	46	ALA
27	BK	90	ASN
27	BK	101	GLY
28	BP	30	TRP
28	BP	65	ASN
28	BP	86	LYS
29	BE	46	GLN
29	BE	70	SER
29	BE	188	MET
30	BY	2	LYS
30	BY	34	THR
31	B0	54	ILE
32	B4	4	ARG
32	B4	18	LYS
32	B4	37	GLN
33	B1	50	GLU
36	B2	5	PHE
37	BL	28	GLY
37	BL	54	GLN
37	BL	93	ASN
38	BM	20	LEU
38	BM	72	PRO
38	BM	134	THR
39	BX	36	GLN
40	BH	5	LEU
40	BH	12	LEU
40	BH	42	LYS
40	BH	131	SER

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Mol	Chain	Res	Type
41	BJ	2	LYS
41	BJ	129	GLU
42	BN	68	ALA
42	BN	100	CYS
43	BO	22	GLY
43	BO	79	ALA
43	BO	99	TYR
43	BO	100	HIS
44	BQ	88	GLU
45	BS	63	GLY
46	BU	59	GLU
47	BF	41	GLU
47	BF	175	PRO
48	BG	2	ARG
48	BG	45	ALA
48	BG	89	VAL
48	BG	157	LYS
49	BR	24	LYS
49	BR	40	MET
49	BR	65	ALA
49	BR	70	GLU
49	BR	80	ARG
50	BT	28	ASN
50	BT	65	GLY
51	BZ	3	ARG
52	BW	15	SER
52	BW	34	SER
52	BW	62	ALA
2	CC	3	LYS
2	CC	59	PRO
3	CD	31	CYS
3	CD	167	PRO
4	CE	43	GLY
5	CF	89	VAL
6	CG	70	PRO
6	CG	92	PRO
6	CG	112	ASP
8	CI	122	ARG
9	CJ	32	THR
9	CJ	38	GLY
9	CJ	56	HIS
10	CK	125	LYS

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Mol	Chain	Res	Type
11	CL	42	LYS
12	CM	3	ILE
12	CM	49	GLU
12	CM	97	ARG
13	CN	20	PHE
13	CN	48	GLN
16	CQ	81	ALA
17	CR	43	ILE
17	CR	46	THR
18	CS	7	GLY
18	CS	53	GLY
18	CS	63	ASP
20	CB	18	GLN
20	CB	127	LYS
20	CB	131	LYS
20	CB	205	ALA
21	CU	41	THR
24	DI	23	VAL
25	DC	3	VAL
25	DC	65	ASP
25	DC	202	ARG
25	DC	203	VAL
25	DC	237	ARG
25	DC	250	GLN
25	DC	254	LYS
26	DD	136	ASN
26	DD	159	LYS
26	DD	164	GLN
27	DK	6	THR
27	DK	14	SER
27	DK	46	ALA
27	DK	90	ASN
28	DP	30	TRP
28	DP	38	ARG
28	DP	65	ASN
28	DP	86	LYS
29	DE	46	GLN
29	DE	70	SER
30	DY	2	LYS
30	DY	34	THR
31	D0	54	ILE
32	D4	4	ARG

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Mol	Chain	Res	Type
32	D4	18	LYS
32	D4	37	GLN
36	D2	5	PHE
37	DL	3	LEU
37	DL	4	ASN
37	DL	41	ARG
37	DL	54	GLN
37	DL	93	ASN
37	DL	94	THR
38	DM	20	LEU
38	DM	72	PRO
39	DX	36	GLN
40	DH	9	VAL
40	DH	12	LEU
40	DH	56	ALA
40	DH	92	GLY
40	DH	96	THR
41	DJ	129	GLU
42	DN	68	ALA
42	DN	100	CYS
43	DO	22	GLY
43	DO	79	ALA
43	DO	99	TYR
43	DO	100	HIS
44	DQ	88	GLU
46	DU	59	GLU
47	DF	41	GLU
47	DF	175	PRO
48	DG	2	ARG
48	DG	45	ALA
48	DG	89	VAL
48	DG	157	LYS
49	DR	24	LYS
49	DR	40	MET
49	DR	44	GLY
49	DR	48	LYS
49	DR	65	ALA
50	DT	28	ASN
50	DT	35	ALA
50	DT	65	GLY
50	DT	91	GLN
51	DZ	3	ARG

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Mol	Chain	Res	Type
52	DW	15	SER
52	DW	34	SER
52	DW	36	ILE
52	DW	62	ALA
2	AC	107	LYS
2	AC	145	ALA
3	AD	27	ILE
3	AD	28	ASP
3	AD	68	GLU
5	AF	58	HIS
5	AF	62	MET
5	AF	89	VAL
7	AH	52	GLY
7	AH	65	PHE
7	AH	82	LEU
8	AI	55	ASP
9	AJ	75	ASP
10	AK	71	ASP
11	AL	15	VAL
11	AL	23	LEU
11	AL	42	LYS
13	AN	30	ILE
15	AP	49	GLY
16	AQ	28	VAL
18	AS	13	HIS
19	AT	65	LEU
19	AT	67	HIS
21	AU	9	GLU
25	BC	18	VAL
25	BC	92	LEU
25	BC	105	ALA
25	BC	121	ALA
25	BC	131	MET
25	BC	150	GLY
25	BC	189	ALA
25	BC	196	ASN
25	BC	203	VAL
25	BC	222	THR
26	BD	36	GLN
26	BD	119	ALA
27	BK	3	GLN
28	BP	4	ILE

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Mol	Chain	Res	Type
28	BP	76	HIS
28	BP	100	ARG
29	BE	5	LEU
29	BE	73	ILE
29	BE	86	ALA
32	B4	11	CYS
32	B4	16	ILE
33	B1	36	LYS
33	B1	51	ALA
34	B3	58	ILE
35	BV	71	LYS
37	BL	4	ASN
37	BL	19	LEU
37	BL	29	LYS
37	BL	36	LYS
37	BL	41	ARG
37	BL	86	GLU
37	BL	94	THR
39	BX	45	GLN
39	BX	62	GLY
40	BH	15	LEU
40	BH	29	PHE
40	BH	122	LEU
40	BH	124	THR
41	BJ	13	ARG
41	BJ	72	LYS
41	BJ	84	ILE
42	BN	83	LEU
43	BO	57	ALA
43	BO	98	GLN
44	BQ	89	ILE
45	BS	25	ARG
45	BS	61	ASN
46	BU	62	ALA
46	BU	101	THR
47	BF	81	GLY
47	BF	93	GLU
48	BG	32	LEU
48	BG	61	TRP
48	BG	96	ALA
48	BG	97	VAL
49	BR	44	GLY

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Mol	Chain	Res	Type
49	BR	91	GLN
50	BT	86	THR
52	BW	10	ARG
52	BW	27	GLY
52	BW	29	SER
52	BW	36	ILE
52	BW	40	ARG
52	BW	60	ALA
52	BW	76	ARG
52	BW	78	PHE
2	CC	47	ALA
2	CC	107	LYS
2	CC	145	ALA
3	CD	22	SER
3	CD	27	ILE
3	CD	28	ASP
3	CD	68	GLU
5	CF	58	HIS
5	CF	62	MET
7	CH	52	GLY
7	CH	65	PHE
7	CH	82	LEU
8	CI	55	ASP
9	CJ	75	ASP
10	CK	14	GLN
10	CK	71	ASP
11	CL	15	VAL
11	CL	23	LEU
15	CP	49	GLY
16	CQ	26	ARG
16	CQ	28	VAL
16	CQ	69	THR
18	CS	13	HIS
19	CT	42	ASP
19	CT	65	LEU
19	CT	67	HIS
20	CB	120	SER
21	CU	9	GLU
25	DC	18	VAL
25	DC	92	LEU
25	DC	105	ALA
25	DC	189	ALA

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Mol	Chain	Res	Type
25	DC	190	THR
25	DC	196	ASN
25	DC	222	THR
26	DD	36	GLN
26	DD	75	ALA
26	DD	119	ALA
28	DP	4	ILE
29	DE	5	LEU
29	DE	43	THR
29	DE	73	ILE
29	DE	162	ARG
29	DE	188	MET
32	D4	11	CYS
32	D4	16	ILE
33	D1	36	LYS
33	D1	50	GLU
33	D1	51	ALA
34	D3	6	VAL
35	DV	71	LYS
37	DL	5	THR
37	DL	28	GLY
37	DL	29	LYS
37	DL	36	LYS
37	DL	81	ASP
38	DM	77	PRO
39	DX	45	GLN
40	DH	5	LEU
40	DH	7	ASP
40	DH	15	LEU
40	DH	29	PHE
40	DH	113	SER
41	DJ	13	ARG
41	DJ	84	ILE
42	DN	83	LEU
42	DN	98	LEU
43	DO	13	ARG
43	DO	57	ALA
43	DO	98	GLN
44	DQ	89	ILE
45	DS	25	ARG
45	DS	61	ASN
46	DU	5	ARG

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Mol	Chain	Res	Type
46	DU	62	ALA
47	DF	77	LYS
47	DF	81	GLY
48	DG	18	ILE
48	DG	32	LEU
48	DG	61	TRP
48	DG	96	ALA
48	DG	97	VAL
48	DG	109	SER
49	DR	80	ARG
49	DR	91	GLN
50	DT	86	THR
52	DW	10	ARG
52	DW	29	SER
52	DW	40	ARG
52	DW	60	ALA
52	DW	76	ARG
52	DW	78	PHE
3	AD	3	TYR
3	AD	22	SER
3	AD	25	ARG
5	AF	99	ALA
6	AG	5	VAL
6	AG	38	ALA
13	AN	19	TYR
14	AO	18	ASP
14	AO	22	THR
16	AQ	26	ARG
16	AQ	69	THR
19	AT	42	ASP
20	AB	58	LYS
21	AU	37	TYR
21	AU	40	PRO
24	BI	49	GLU
26	BD	109	VAL
26	BD	113	SER
29	BE	43	THR
29	BE	123	LYS
31	B0	26	SER
34	B3	6	VAL
37	BL	5	THR
37	BL	81	ASP

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Mol	Chain	Res	Type
38	BM	77	PRO
40	BH	7	ASP
40	BH	110	VAL
41	BJ	14	ASP
42	BN	81	ASN
42	BN	98	LEU
43	BO	13	ARG
45	BS	80	PRO
46	BU	12	VAL
46	BU	24	VAL
46	BU	82	VAL
47	BF	35	LEU
47	BF	77	LYS
47	BF	103	ILE
47	BF	141	ASP
47	BF	158	THR
48	BG	9	VAL
48	BG	18	ILE
48	BG	38	ASP
48	BG	109	SER
48	BG	151	ARG
48	BG	152	ARG
49	BR	43	ASN
49	BR	52	PRO
49	BR	98	ILE
49	BR	101	ILE
50	BT	83	ALA
51	BZ	34	HIS
52	BW	51	GLY
3	CD	3	TYR
3	CD	25	ARG
3	CD	174	ALA
5	CF	82	ASP
6	CG	66	GLU
6	CG	129	ASN
7	CH	2	MET
9	CJ	34	ALA
12	CM	66	GLY
13	CN	30	ILE
14	CO	18	ASP
15	CP	46	LYS
21	CU	37	TYR

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Mol	Chain	Res	Type
21	CU	40	PRO
24	DI	6	ALA
24	DI	14	ALA
25	DC	88	ALA
25	DC	121	ALA
25	DC	123	ILE
25	DC	131	MET
25	DC	150	GLY
25	DC	249	VAL
26	DD	109	VAL
28	DP	76	HIS
28	DP	100	ARG
29	DE	86	ALA
31	D0	26	SER
34	D3	58	ILE
37	DL	9	ALA
37	DL	19	LEU
37	DL	86	GLU
39	DX	62	GLY
40	DH	112	LYS
41	DJ	14	ASP
41	DJ	72	LYS
42	DN	18	GLN
42	DN	81	ASN
43	DO	8	ILE
43	DO	51	ALA
45	DS	80	PRO
46	DU	12	VAL
46	DU	51	LEU
46	DU	101	THR
47	DF	35	LEU
47	DF	93	GLU
47	DF	103	ILE
47	DF	158	THR
48	DG	9	VAL
48	DG	151	ARG
48	DG	152	ARG
49	DR	43	ASN
49	DR	52	PRO
49	DR	98	ILE
49	DR	101	ILE
51	DZ	34	HIS

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Mol	Chain	Res	Type
52	DW	27	GLY
52	DW	37	VAL
2	AC	167	TYR
3	AD	86	GLY
5	AF	51	ILE
5	AF	82	ASP
13	AN	2	LYS
16	AQ	81	ALA
19	AT	41	GLY
20	AB	200	PRO
25	BC	123	ILE
25	BC	158	GLY
25	BC	249	VAL
26	BD	172	VAL
29	BE	59	PRO
29	BE	83	VAL
29	BE	96	VAL
29	BE	153	LEU
35	BV	45	ASP
35	BV	84	PRO
37	BL	3	LEU
38	BM	73	ILE
40	BH	76	GLU
40	BH	127	GLU
41	BJ	8	PRO
41	BJ	112	GLY
42	BN	18	GLN
42	BN	60	VAL
43	BO	8	ILE
43	BO	51	ALA
46	BU	5	ARG
46	BU	51	LEU
47	BF	88	VAL
50	BT	55	VAL
52	BW	37	VAL
52	BW	73	PRO
2	CC	167	TYR
3	CD	86	GLY
5	CF	51	ILE
6	CG	38	ALA
6	CG	151	ALA
8	CI	25	GLY

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Mol	Chain	Res	Type
8	CI	120	ALA
13	CN	19	TYR
13	CN	57	SER
19	CT	41	GLY
20	CB	58	LYS
20	CB	200	PRO
26	DD	172	VAL
27	DK	3	GLN
29	DE	59	PRO
29	DE	78	TRP
29	DE	83	VAL
29	DE	96	VAL
29	DE	123	LYS
35	DV	84	PRO
37	DL	15	ALA
38	DM	73	ILE
40	DH	119	ASN
41	DJ	112	GLY
42	DN	60	VAL
42	DN	104	ALA
45	DS	18	ARG
46	DU	24	VAL
46	DU	63	ALA
46	DU	82	VAL
47	DF	88	VAL
50	DT	29	THR
50	DT	55	VAL
50	DT	83	ALA
52	DW	51	GLY
52	DW	73	PRO
2	AC	100	ILE
8	AI	25	GLY
9	AJ	41	PRO
12	AM	66	GLY
13	AN	51	PRO
27	BK	93	GLN
28	BP	17	PRO
29	BE	129	PRO
29	BE	177	PRO
35	BV	37	PRO
39	BX	46	VAL
40	BH	126	GLY

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Mol	Chain	Res	Type
43	BO	27	VAL
47	BF	28	PRO
47	BF	123	GLY
47	BF	136	ILE
48	BG	112	VAL
48	BG	155	PRO
3	CD	107	GLY
9	CJ	41	PRO
13	CN	51	PRO
25	DC	151	GLY
27	DK	93	GLN
29	DE	129	PRO
32	D4	17	VAL
35	DV	37	PRO
43	DO	27	VAL
47	DF	28	PRO
47	DF	123	GLY
47	DF	136	ILE
48	DG	112	VAL
48	DG	155	PRO
10	AK	119	GLY
32	B4	17	VAL
45	BS	24	ILE
48	BG	16	VAL
48	BG	168	VAL
50	BT	57	VAL
51	BZ	47	VAL
10	CK	119	GLY
28	DP	17	PRO
39	DX	46	VAL
41	DJ	8	PRO
41	DJ	54	ILE
45	DS	24	ILE
48	DG	16	VAL
48	DG	168	VAL
3	AD	107	GLY
20	AB	70	GLY
25	BC	31	PRO
26	BD	143	PRO
33	B1	30	PRO
34	B3	20	GLY
37	BL	52	GLY

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Mol	Chain	Res	Type
37	BL	101	ILE
47	BF	12	VAL
7	CH	26	MET
20	CB	70	GLY
25	DC	31	PRO
25	DC	158	GLY
26	DD	143	PRO
29	DE	187	VAL
33	D1	30	PRO
34	D3	20	GLY
37	DL	101	ILE
40	DH	121	VAL
44	DQ	39	ILE
47	DF	12	VAL
50	DT	57	VAL
51	DZ	47	VAL
52	DW	53	GLY
6	AG	81	GLY
7	AH	26	MET
16	AQ	31	PRO
25	BC	246	PRO
26	BD	73	VAL
26	BD	92	VAL
28	BP	104	GLY
29	BE	187	VAL
40	BH	130	VAL
46	BU	41	VAL
52	BW	53	GLY
2	CC	100	ILE
6	CG	81	GLY
16	CQ	31	PRO
37	DL	52	GLY
46	DU	41	VAL
18	AS	61	VAL
45	BS	29	VAL
18	CS	61	VAL
26	DD	73	VAL
26	DD	92	VAL
28	DP	63	ILE
29	DE	177	PRO
45	DS	29	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%)	145 (85%)	25 (15%)	4	23
2	CC	170/189 (90%)	145 (85%)	25 (15%)	4	23
3	AD	172/172 (100%)	148 (86%)	24 (14%)	4	25
3	CD	172/172 (100%)	148 (86%)	24 (14%)	4	25
4	AE	113/125 (90%)	102 (90%)	11 (10%)	10	43
4	CE	113/125 (90%)	102 (90%)	11 (10%)	10	43
5	AF	87/116 (75%)	70 (80%)	17 (20%)	2	10
5	CF	87/116 (75%)	70 (80%)	17 (20%)	2	10
6	AG	123/146 (84%)	109 (89%)	14 (11%)	7	34
6	CG	125/146 (86%)	114 (91%)	11 (9%)	12	48
7	AH	104/104 (100%)	97 (93%)	7 (7%)	20	61
7	CH	104/104 (100%)	97 (93%)	7 (7%)	20	61
8	AI	105/106 (99%)	89 (85%)	16 (15%)	3	21
8	CI	105/106 (99%)	89 (85%)	16 (15%)	3	21
9	AJ	86/90 (96%)	74 (86%)	12 (14%)	4	25
9	CJ	86/90 (96%)	75 (87%)	11 (13%)	5	28
10	AK	90/98 (92%)	76 (84%)	14 (16%)	3	20
10	CK	90/98 (92%)	77 (86%)	13 (14%)	4	23
11	AL	103/103 (100%)	92 (89%)	11 (11%)	8	38
11	CL	103/103 (100%)	92 (89%)	11 (11%)	8	38
12	AM	92/95 (97%)	79 (86%)	13 (14%)	4	25
12	CM	91/95 (96%)	79 (87%)	12 (13%)	5	27
13	AN	79/83 (95%)	64 (81%)	15 (19%)	2	11
13	CN	79/83 (95%)	64 (81%)	15 (19%)	2	11
14	AO	76/77 (99%)	69 (91%)	7 (9%)	11	46
14	CO	76/77 (99%)	69 (91%)	7 (9%)	11	46

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AP	65/65 (100%)	59 (91%)	6 (9%)	11	46
15	CP	65/65 (100%)	58 (89%)	7 (11%)	8	38
16	AQ	74/77 (96%)	59 (80%)	15 (20%)	1	9
16	CQ	75/77 (97%)	62 (83%)	13 (17%)	2	15
17	AR	48/64 (75%)	41 (85%)	7 (15%)	4	23
17	CR	48/64 (75%)	41 (85%)	7 (15%)	4	23
18	AS	70/78 (90%)	56 (80%)	14 (20%)	1	10
18	CS	71/78 (91%)	56 (79%)	15 (21%)	1	9
19	AT	65/65 (100%)	58 (89%)	7 (11%)	8	38
19	CT	65/65 (100%)	58 (89%)	7 (11%)	8	38
20	AB	180/198 (91%)	149 (83%)	31 (17%)	2	16
20	CB	180/198 (91%)	147 (82%)	33 (18%)	2	12
21	AU	44/60 (73%)	33 (75%)	11 (25%)	1	5
21	CU	44/60 (73%)	33 (75%)	11 (25%)	1	5
24	BI	109/109 (100%)	107 (98%)	2 (2%)	66	88
24	DI	109/109 (100%)	103 (94%)	6 (6%)	27	67
25	BC	216/217 (100%)	182 (84%)	34 (16%)	3	20
25	DC	216/217 (100%)	183 (85%)	33 (15%)	3	21
26	BD	164/164 (100%)	139 (85%)	25 (15%)	3	21
26	DD	164/164 (100%)	138 (84%)	26 (16%)	3	19
27	BK	102/104 (98%)	77 (76%)	25 (24%)	1	5
27	DK	102/104 (98%)	77 (76%)	25 (24%)	1	5
28	BP	99/99 (100%)	81 (82%)	18 (18%)	2	13
28	DP	99/99 (100%)	81 (82%)	18 (18%)	2	13
29	BE	165/165 (100%)	144 (87%)	21 (13%)	5	29
29	DE	165/165 (100%)	144 (87%)	21 (13%)	5	29
30	BY	48/48 (100%)	37 (77%)	11 (23%)	1	6
30	DY	48/48 (100%)	37 (77%)	11 (23%)	1	6
31	B0	47/47 (100%)	38 (81%)	9 (19%)	2	11
31	D0	47/47 (100%)	38 (81%)	9 (19%)	2	11
32	B4	34/34 (100%)	28 (82%)	6 (18%)	2	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	D4	34/34 (100%)	28 (82%)	6 (18%)	2	14
33	B1	45/48 (94%)	36 (80%)	9 (20%)	1	10
33	D1	45/48 (94%)	37 (82%)	8 (18%)	2	14
34	B3	51/51 (100%)	46 (90%)	5 (10%)	10	42
34	D3	51/51 (100%)	46 (90%)	5 (10%)	10	42
35	BV	78/78 (100%)	63 (81%)	15 (19%)	2	11
35	DV	78/78 (100%)	63 (81%)	15 (19%)	2	11
36	B2	38/38 (100%)	31 (82%)	7 (18%)	2	12
36	D2	38/38 (100%)	31 (82%)	7 (18%)	2	12
37	BL	102/103 (99%)	91 (89%)	11 (11%)	8	38
37	DL	102/103 (99%)	91 (89%)	11 (11%)	8	38
38	BM	109/109 (100%)	92 (84%)	17 (16%)	3	20
38	DM	109/109 (100%)	93 (85%)	16 (15%)	4	23
39	BX	55/55 (100%)	49 (89%)	6 (11%)	8	37
39	DX	55/55 (100%)	49 (89%)	6 (11%)	8	37
40	BH	114/114 (100%)	86 (75%)	28 (25%)	1	5
40	DH	114/114 (100%)	91 (80%)	23 (20%)	1	10
41	BJ	116/116 (100%)	98 (84%)	18 (16%)	3	20
41	DJ	116/116 (100%)	98 (84%)	18 (16%)	3	20
42	BN	100/103 (97%)	85 (85%)	15 (15%)	3	22
42	DN	100/103 (97%)	86 (86%)	14 (14%)	4	25
43	BO	86/87 (99%)	68 (79%)	18 (21%)	1	9
43	DO	86/87 (99%)	68 (79%)	18 (21%)	1	9
44	BQ	89/89 (100%)	81 (91%)	8 (9%)	12	47
44	DQ	89/89 (100%)	80 (90%)	9 (10%)	9	41
45	BS	93/93 (100%)	78 (84%)	15 (16%)	3	19
45	DS	93/93 (100%)	76 (82%)	17 (18%)	2	12
46	BU	83/84 (99%)	68 (82%)	15 (18%)	2	13
46	DU	83/84 (99%)	68 (82%)	15 (18%)	2	13
47	BF	149/149 (100%)	117 (78%)	32 (22%)	1	8
47	DF	149/149 (100%)	116 (78%)	33 (22%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	BG	137/137 (100%)	113 (82%)	24 (18%)	2	15
48	DG	137/137 (100%)	113 (82%)	24 (18%)	2	15
49	BR	84/84 (100%)	71 (84%)	13 (16%)	3	20
49	DR	84/84 (100%)	71 (84%)	13 (16%)	3	20
50	BT	80/84 (95%)	69 (86%)	11 (14%)	4	25
50	DT	80/84 (95%)	68 (85%)	12 (15%)	3	22
51	BZ	67/68 (98%)	53 (79%)	14 (21%)	1	9
51	DZ	67/68 (98%)	54 (81%)	13 (19%)	2	11
52	BW	59/62 (95%)	44 (75%)	15 (25%)	1	5
52	DW	59/62 (95%)	44 (75%)	15 (25%)	1	5
All	All	9333/9700 (96%)	7889 (84%)	1444 (16%)	3	20

All (1444) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	13	ILE
2	AC	14	VAL
2	AC	17	TRP
2	AC	20	THR
2	AC	24	ASN
2	AC	27	GLU
2	AC	28	PHE
2	AC	35	ASP
2	AC	41	TYR
2	AC	42	LEU
2	AC	48	LYS
2	AC	61	LYS
2	AC	88	LYS
2	AC	101	ASN
2	AC	106	ARG
2	AC	120	THR
2	AC	138	GLN
2	AC	163	ARG
2	AC	166	TRP
2	AC	168	ARG
2	AC	171	ARG
2	AC	184	ASN

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Mol	Chain	Res	Type
2	AC	192	TYR
2	AC	206	ILE
3	AD	4	LEU
3	AD	12	ARG
3	AD	18	LEU
3	AD	25	ARG
3	AD	28	ASP
3	AD	35	GLN
3	AD	39	GLN
3	AD	43	ARG
3	AD	49	ASP
3	AD	55	ARG
3	AD	57	LYS
3	AD	70	GLN
3	AD	84	ASN
3	AD	87	GLU
3	AD	146	GLU
3	AD	147	LYS
3	AD	153	ARG
3	AD	155	LYS
3	AD	160	LEU
3	AD	163	GLN
3	AD	168	THR
3	AD	190	LEU
3	AD	193	ASP
3	AD	204	SER
4	AE	9	GLU
4	AE	23	THR
4	AE	44	ARG
4	AE	45	VAL
4	AE	51	LYS
4	AE	61	LYS
4	AE	64	GLU
4	AE	92	ARG
4	AE	95	MET
4	AE	119	VAL
4	AE	123	LEU
5	AF	6	ILE
5	AF	9	MET
5	AF	13	ASP
5	AF	16	GLU
5	AF	24	ARG

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Mol	Chain	Res	Type
5	AF	39	LEU
5	AF	45	ARG
5	AF	53	LYS
5	AF	61	LEU
5	AF	65	GLU
5	AF	69	GLU
5	AF	73	GLU
5	AF	86	ARG
5	AF	88	MET
5	AF	96	VAL
5	AF	98	GLU
5	AF	100	SER
6	AG	3	ARG
6	AG	5	VAL
6	AG	10	LYS
6	AG	55	LYS
6	AG	57	GLU
6	AG	62	GLU
6	AG	78	ARG
6	AG	89	GLU
6	AG	94	ARG
6	AG	109	LYS
6	AG	110	ARG
6	AG	112	ASP
6	AG	125	ASP
6	AG	132	THR
7	AH	55	LYS
7	AH	57	GLU
7	AH	72	GLU
7	AH	76	ARG
7	AH	79	ARG
7	AH	111	THR
7	AH	113	ARG
8	AI	26	LYS
8	AI	36	GLN
8	AI	45	MET
8	AI	58	GLU
8	AI	59	LYS
8	AI	62	LEU
8	AI	64	ILE
8	AI	67	LYS
8	AI	74	GLN

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Mol	Chain	Res	Type
8	AI	87	MET
8	AI	92	SER
8	AI	93	LEU
8	AI	109	GLN
8	AI	122	ARG
8	AI	123	ARG
8	AI	129	ARG
9	AJ	14	ASP
9	AJ	17	LEU
9	AJ	31	ARG
9	AJ	37	ARG
9	AJ	47	GLU
9	AJ	57	VAL
9	AJ	78	GLU
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	56	LYS
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	121	ARG
10	AK	126	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	43	LYS
11	AL	49	ARG
11	AL	77	SER

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Mol	Chain	Res	Type
11	AL	95	HIS
11	AL	107	LYS
12	AM	2	ARG
12	AM	10	ASP
12	AM	28	ARG
12	AM	40	GLU
12	AM	44	ILE
12	AM	46	GLU
12	AM	65	GLU
12	AM	70	ARG
12	AM	79	LEU
12	AM	81	ASP
12	AM	82	LEU
12	AM	91	ARG
12	AM	96	VAL
13	AN	3	GLN
13	AN	5	MET
13	AN	25	GLU
13	AN	26	LEU
13	AN	27	LYS
13	AN	32	ASP
13	AN	40	ARG
13	AN	48	GLN
13	AN	50	LEU
13	AN	53	ASP
13	AN	58	ARG
13	AN	60	ARG
13	AN	64	ARG
13	AN	65	GLN
13	AN	68	ARG
14	AO	20	ASN
14	AO	26	GLU
14	AO	54	ARG
14	AO	64	ARG
14	AO	68	ASP
14	AO	70	LEU
14	AO	88	ARG
15	AP	5	ARG
15	AP	26	ASN
15	AP	28	ARG
15	AP	45	GLU
15	AP	51	ARG

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Mol	Chain	Res	Type
15	AP	68	SER
16	AQ	3	LYS
16	AQ	5	ARG
16	AQ	10	ARG
16	AQ	20	ILE
16	AQ	38	LYS
16	AQ	39	ARG
16	AQ	52	CYS
16	AQ	56	ASP
16	AQ	60	ILE
16	AQ	61	ARG
16	AQ	66	LEU
16	AQ	71	SER
16	AQ	74	LEU
16	AQ	79	GLU
16	AQ	80	LYS
17	AR	23	LYS
17	AR	35	SER
17	AR	38	ILE
17	AR	44	THR
17	AR	46	THR
17	AR	51	GLN
17	AR	71	ASP
18	AS	4	LEU
18	AS	12	LEU
18	AS	13	HIS
18	AS	20	LYS
18	AS	27	LYS
18	AS	28	LYS
18	AS	32	THR
18	AS	38	THR
18	AS	42	ASN
18	AS	47	THR
18	AS	64	GLU
18	AS	66	VAL
18	AS	77	ARG
18	AS	80	ARG
19	AT	3	ILE
19	AT	4	LYS
19	AT	43	LYS
19	AT	53	MET
19	AT	69	ASN

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Mol	Chain	Res	Type
19	AT	74	HIS
19	AT	85	LEU
20	AB	8	MET
20	AB	23	ASN
20	AB	27	LYS
20	AB	35	ASN
20	AB	38	HIS
20	AB	43	GLU
20	AB	46	VAL
20	AB	48	MET
20	AB	50	ASN
20	AB	62	ARG
20	AB	72	LYS
20	AB	88	GLN
20	AB	93	HIS
20	AB	94	ARG
20	AB	104	LYS
20	AB	107	ARG
20	AB	113	LEU
20	AB	119	GLN
20	AB	121	GLN
20	AB	124	THR
20	AB	125	PHE
20	AB	127	LYS
20	AB	135	MET
20	AB	144	GLU
20	AB	196	ASP
20	AB	202	ASN
20	AB	210	THR
20	AB	211	LEU
20	AB	212	TYR
20	AB	221	ARG
20	AB	224	ARG
21	AU	11	PHE
21	AU	16	ARG
21	AU	22	CYS
21	AU	24	LYS
21	AU	28	LEU
21	AU	33	ARG
21	AU	34	ARG
21	AU	36	PHE
21	AU	38	GLU

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Mol	Chain	Res	Type
21	AU	44	ARG
21	AU	48	LYS
24	BI	63	ASP
24	BI	96	LYS
25	BC	4	LYS
25	BC	8	THR
25	BC	12	ARG
25	BC	43	ASN
25	BC	44	ASN
25	BC	45	ASN
25	BC	52	HIS
25	BC	62	ARG
25	BC	65	ASP
25	BC	89	ASN
25	BC	90	ILE
25	BC	100	ARG
25	BC	123	ILE
25	BC	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	188	ARG
25	BC	190	THR
25	BC	191	LEU
25	BC	202	ARG
25	BC	203	VAL
25	BC	212	TRP
25	BC	224	MET
25	BC	235	GLU
25	BC	249	VAL
25	BC	257	ARG
25	BC	264	LYS
25	BC	267	VAL
25	BC	268	ARG
26	BD	17	GLU
26	BD	24	VAL
26	BD	34	VAL
26	BD	35	THR

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Mol	Chain	Res	Type
26	BD	36	GLN
26	BD	40	LEU
26	BD	46	ARG
26	BD	56	LYS
26	BD	60	VAL
26	BD	79	LEU
26	BD	84	LEU
26	BD	89	GLU
26	BD	99	GLU
26	BD	106	LYS
26	BD	110	THR
26	BD	116	LYS
26	BD	123	LYS
26	BD	124	ARG
26	BD	129	THR
26	BD	138	LEU
26	BD	148	GLN
26	BD	151	THR
26	BD	154	LYS
26	BD	159	LYS
26	BD	179	ARG
27	BK	2	ILE
27	BK	8	LEU
27	BK	21	CYS
27	BK	32	TYR
27	BK	39	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	71	ARG
27	BK	72	PRO
27	BK	79	PHE
27	BK	86	LEU
27	BK	87	LEU
27	BK	88	ASN
27	BK	89	ASN
27	BK	91	SER
27	BK	98	ARG
27	BK	104	THR

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Mol	Chain	Res	Type
27	BK	105	ARG
27	BK	108	ARG
27	BK	111	LYS
27	BK	120	PRO
28	BP	3	ILE
28	BP	6	GLN
28	BP	12	MET
28	BP	19	PHE
28	BP	20	ARG
28	BP	25	VAL
28	BP	26	GLU
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
29	BE	9	GLN
29	BE	22	ASP
29	BE	24	ASN
29	BE	40	ARG
29	BE	48	THR
29	BE	58	LYS
29	BE	60	TRP
29	BE	67	ARG
29	BE	78	TRP
29	BE	108	ILE
29	BE	111	GLU
29	BE	115	GLN
29	BE	116	ASP
29	BE	118	LEU
29	BE	122	GLU
29	BE	124	PHE
29	BE	147	LEU
29	BE	163	ASN
29	BE	170	ARG
29	BE	191	ASP

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Mol	Chain	Res	Type
29	BE	198	GLU
30	BY	2	LYS
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	40	THR
30	BY	46	MET
30	BY	57	GLU
31	B0	5	ASN
31	B0	27	LEU
31	B0	37	HIS
31	B0	38	LEU
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	9	LYS
32	B4	12	ARG
32	B4	13	ASN
32	B4	35	GLN
32	B4	36	ARG
33	B1	6	GLU
33	B1	8	ILE
33	B1	9	LYS
33	B1	22	THR
33	B1	31	GLU
33	B1	34	GLU
33	B1	35	LEU
33	B1	43	ARG
33	B1	44	GLN
34	B3	7	ARG
34	B3	14	LYS
34	B3	18	LYS
34	B3	27	ASN
34	B3	42	HIS
35	BV	18	ARG

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Mol	Chain	Res	Type
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	79	ARG
35	BV	86	LEU
35	BV	89	ILE
35	BV	90	ASP
35	BV	93	ARG
36	B2	10	LEU
36	B2	19	ARG
36	B2	21	ARG
36	B2	24	THR
36	B2	33	ARG
36	B2	39	ARG
36	B2	42	LEU
37	BL	47	ARG
37	BL	69	ARG
37	BL	77	ILE
37	BL	82	LEU
37	BL	92	LEU
37	BL	93	ASN
37	BL	95	LEU
37	BL	112	LEU
37	BL	118	THR
37	BL	123	ARG
37	BL	128	THR
38	BM	10	ARG
38	BM	25	ASP
38	BM	30	SER
38	BM	31	PHE
38	BM	47	GLU
38	BM	59	ARG
38	BM	63	ILE
38	BM	65	ILE
38	BM	70	ASP
38	BM	90	GLU

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Mol	Chain	Res	Type
38	BM	95	LEU
38	BM	100	LYS
38	BM	105	MET
38	BM	108	VAL
38	BM	110	GLU
38	BM	115	GLU
38	BM	127	LYS
39	BX	18	LEU
39	BX	28	LEU
39	BX	29	ARG
39	BX	48	ARG
39	BX	49	ASP
39	BX	59	GLU
40	BH	3	VAL
40	BH	12	LEU
40	BH	25	TYR
40	BH	28	ASN
40	BH	32	PRO
40	BH	33	GLN
40	BH	44	ILE
40	BH	46	PHE
40	BH	47	PHE
40	BH	48	GLU
40	BH	50	ARG
40	BH	57	LYS
40	BH	58	LEU
40	BH	62	LEU
40	BH	66	ASN
40	BH	68	ARG
40	BH	71	LYS
40	BH	73	ASN
40	BH	79	THR
40	BH	89	LYS
40	BH	91	PHE
40	BH	103	VAL
40	BH	104	THR
40	BH	109	GLU
40	BH	112	LYS
40	BH	130	VAL
40	BH	134	VAL
40	BH	141	LYS
41	BJ	3	THR

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Mol	Chain	Res	Type
41	BJ	5	THR
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	35	ARG
41	BJ	36	LEU
41	BJ	43	GLU
41	BJ	44	TYR
41	BJ	65	THR
41	BJ	69	ARG
41	BJ	71	ASP
41	BJ	73	VAL
41	BJ	76	HIS
41	BJ	95	ARG
41	BJ	111	LYS
41	BJ	122	LEU
41	BJ	124	VAL
41	BJ	129	GLU
42	BN	1	MET
42	BN	11	ASN
42	BN	17	ARG
42	BN	18	GLN
42	BN	20	MET
42	BN	35	LYS
42	BN	48	VAL
42	BN	59	SER
42	BN	69	ARG
42	BN	71	ARG
42	BN	82	GLU
42	BN	98	LEU
42	BN	112	TYR
42	BN	114	GLU
42	BN	118	ARG
43	BO	3	LYS
43	BO	9	ARG
43	BO	18	LEU
43	BO	20	GLU
43	BO	31	THR
43	BO	36	TYR
43	BO	58	ILE
43	BO	62	LEU
43	BO	67	ASN
43	BO	74	VAL

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Mol	Chain	Res	Type
43	BO	78	VAL
43	BO	91	SER
43	BO	98	GLN
43	BO	100	HIS
43	BO	104	GLN
43	BO	106	LEU
43	BO	112	GLU
43	BO	115	LEU
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	63	ARG
44	BQ	79	ILE
44	BQ	83	LYS
44	BQ	90	ASP
44	BQ	96	ASP
44	BQ	105	PHE
45	BS	6	LYS
45	BS	7	HIS
45	BS	15	GLN
45	BS	22	ASP
45	BS	31	GLN
45	BS	33	LEU
45	BS	45	VAL
45	BS	62	ASP
45	BS	66	ILE
45	BS	73	LYS
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	99	ARG
45	BS	101	SER
46	BU	7	ASP
46	BU	11	ILE
46	BU	13	LEU
46	BU	20	LYS
46	BU	34	ILE
46	BU	39	ASN
46	BU	49	PRO
46	BU	51	LEU
46	BU	53	GLN
46	BU	60	LYS
46	BU	73	ASN

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Mol	Chain	Res	Type
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	18	GLU
47	BF	26	GLN
47	BF	29	ARG
47	BF	32	LYS
47	BF	45	ASP
47	BF	50	ASP
47	BF	55	ASP
47	BF	56	LEU
47	BF	59	ILE
47	BF	70	ARG
47	BF	76	PHE
47	BF	82	TYR
47	BF	91	ARG
47	BF	97	GLU
47	BF	102	LEU
47	BF	109	ARG
47	BF	111	ARG
47	BF	116	LEU
47	BF	121	PHE
47	BF	129	MET
47	BF	133	GLU
47	BF	134	GLN
47	BF	135	ILE
47	BF	137	PHE
47	BF	138	PRO
47	BF	147	ARG
47	BF	149	ARG
47	BF	173	ASP
47	BF	174	PHE
47	BF	177	ARG
48	BG	8	VAL
48	BG	14	VAL
48	BG	15	ASP
48	BG	24	THR
48	BG	31	GLU
48	BG	34	ARG

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Mol	Chain	Res	Type
48	BG	54	ARG
48	BG	61	TRP
48	BG	68	ARG
48	BG	70	LEU
48	BG	71	LEU
48	BG	74	MET
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	151	ARG
48	BG	154	GLU
48	BG	162	ARG
48	BG	166	GLU
49	BR	2	TYR
49	BR	4	VAL
49	BR	22	LEU
49	BR	25	LEU
49	BR	26	ASP
49	BR	39	LEU
49	BR	40	MET
49	BR	45	GLU
49	BR	48	LYS
49	BR	70	GLU
49	BR	72	VAL
49	BR	82	HIS
49	BR	86	GLN
50	BT	2	ILE
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	73	ARG

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Mol	Chain	Res	Type
51	BZ	4	VAL
51	BZ	14	THR
51	BZ	18	ARG
51	BZ	25	THR
51	BZ	27	ARG
51	BZ	32	ASN
51	BZ	33	LEU
51	BZ	37	ARG
51	BZ	46	PHE
51	BZ	48	THR
51	BZ	49	LEU
51	BZ	50	ARG
51	BZ	66	THR
51	BZ	78	TYR
52	BW	10	ARG
52	BW	14	ASP
52	BW	18	LYS
52	BW	19	ARG
52	BW	23	LYS
52	BW	24	ARG
52	BW	25	PHE
52	BW	38	ARG
52	BW	39	GLN
52	BW	40	ARG
52	BW	44	PHE
52	BW	49	ASN
52	BW	50	VAL
52	BW	74	LYS
52	BW	77	LYS
2	CC	2	GLN
2	CC	13	ILE
2	CC	14	VAL
2	CC	17	TRP
2	CC	20	THR
2	CC	24	ASN
2	CC	27	GLU
2	CC	28	PHE
2	CC	35	ASP
2	CC	41	TYR
2	CC	42	LEU
2	CC	48	LYS
2	CC	61	LYS

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Mol	Chain	Res	Type
2	CC	88	LYS
2	CC	101	ASN
2	CC	106	ARG
2	CC	120	THR
2	CC	138	GLN
2	CC	163	ARG
2	CC	166	TRP
2	CC	168	ARG
2	CC	171	ARG
2	CC	184	ASN
2	CC	192	TYR
2	CC	206	ILE
3	CD	4	LEU
3	CD	12	ARG
3	CD	18	LEU
3	CD	25	ARG
3	CD	28	ASP
3	CD	35	GLN
3	CD	39	GLN
3	CD	43	ARG
3	CD	49	ASP
3	CD	55	ARG
3	CD	57	LYS
3	CD	70	GLN
3	CD	84	ASN
3	CD	87	GLU
3	CD	146	GLU
3	CD	147	LYS
3	CD	153	ARG
3	CD	155	LYS
3	CD	160	LEU
3	CD	163	GLN
3	CD	168	THR
3	CD	190	LEU
3	CD	193	ASP
3	CD	204	SER
4	CE	9	GLU
4	CE	23	THR
4	CE	44	ARG
4	CE	45	VAL
4	CE	51	LYS
4	CE	61	LYS

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Mol	Chain	Res	Type
4	CE	64	GLU
4	CE	92	ARG
4	CE	95	MET
4	CE	119	VAL
4	CE	123	LEU
5	CF	6	ILE
5	CF	7	VAL
5	CF	13	ASP
5	CF	16	GLU
5	CF	24	ARG
5	CF	39	LEU
5	CF	45	ARG
5	CF	53	LYS
5	CF	61	LEU
5	CF	65	GLU
5	CF	69	GLU
5	CF	73	GLU
5	CF	86	ARG
5	CF	88	MET
5	CF	96	VAL
5	CF	98	GLU
5	CF	100	SER
6	CG	10	LYS
6	CG	55	LYS
6	CG	57	GLU
6	CG	62	GLU
6	CG	78	ARG
6	CG	89	GLU
6	CG	94	ARG
6	CG	109	LYS
6	CG	110	ARG
6	CG	125	ASP
6	CG	132	THR
7	CH	55	LYS
7	CH	57	GLU
7	CH	72	GLU
7	CH	76	ARG
7	CH	79	ARG
7	CH	111	THR
7	CH	113	ARG
8	CI	26	LYS
8	CI	36	GLN

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Mol	Chain	Res	Type
8	CI	45	MET
8	CI	58	GLU
8	CI	59	LYS
8	CI	62	LEU
8	CI	64	ILE
8	CI	67	LYS
8	CI	74	GLN
8	CI	87	MET
8	CI	92	SER
8	CI	93	LEU
8	CI	109	GLN
8	CI	122	ARG
8	CI	123	ARG
8	CI	129	ARG
9	CJ	14	ASP
9	CJ	31	ARG
9	CJ	37	ARG
9	CJ	47	GLU
9	CJ	57	VAL
9	CJ	78	GLU
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	56	LYS
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	126	ARG
11	CL	14	LYS
11	CL	15	VAL
11	CL	17	LYS
11	CL	19	ASN

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Mol	Chain	Res	Type
11	CL	28	GLN
11	CL	33	CYS
11	CL	43	LYS
11	CL	49	ARG
11	CL	77	SER
11	CL	95	HIS
11	CL	107	LYS
12	CM	2	ARG
12	CM	10	ASP
12	CM	28	ARG
12	CM	40	GLU
12	CM	44	ILE
12	CM	46	GLU
12	CM	65	GLU
12	CM	70	ARG
12	CM	79	LEU
12	CM	81	ASP
12	CM	82	LEU
12	CM	91	ARG
13	CN	3	GLN
13	CN	5	MET
13	CN	25	GLU
13	CN	26	LEU
13	CN	27	LYS
13	CN	32	ASP
13	CN	40	ARG
13	CN	48	GLN
13	CN	50	LEU
13	CN	53	ASP
13	CN	58	ARG
13	CN	60	ARG
13	CN	64	ARG
13	CN	65	GLN
13	CN	68	ARG
14	CO	20	ASN
14	CO	26	GLU
14	CO	54	ARG
14	CO	64	ARG
14	CO	68	ASP
14	CO	70	LEU
14	CO	88	ARG
15	CP	5	ARG

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Mol	Chain	Res	Type
15	CP	26	ASN
15	CP	28	ARG
15	CP	45	GLU
15	CP	51	ARG
15	CP	68	SER
15	CP	79	ASN
16	CQ	3	LYS
16	CQ	5	ARG
16	CQ	10	ARG
16	CQ	20	ILE
16	CQ	39	ARG
16	CQ	56	ASP
16	CQ	60	ILE
16	CQ	61	ARG
16	CQ	66	LEU
16	CQ	71	SER
16	CQ	74	LEU
16	CQ	79	GLU
16	CQ	80	LYS
17	CR	23	LYS
17	CR	35	SER
17	CR	38	ILE
17	CR	44	THR
17	CR	46	THR
17	CR	51	GLN
17	CR	71	ASP
18	CS	2	ARG
18	CS	4	LEU
18	CS	12	LEU
18	CS	13	HIS
18	CS	20	LYS
18	CS	27	LYS
18	CS	28	LYS
18	CS	32	THR
18	CS	38	THR
18	CS	42	ASN
18	CS	47	THR
18	CS	64	GLU
18	CS	66	VAL
18	CS	77	ARG
18	CS	80	ARG
19	CT	3	ILE

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Mol	Chain	Res	Type
19	CT	4	LYS
19	CT	43	LYS
19	CT	53	MET
19	CT	69	ASN
19	CT	74	HIS
19	CT	85	LEU
20	CB	8	MET
20	CB	23	ASN
20	CB	27	LYS
20	CB	35	ASN
20	CB	38	HIS
20	CB	43	GLU
20	CB	46	VAL
20	CB	48	MET
20	CB	50	ASN
20	CB	62	ARG
20	CB	72	LYS
20	CB	88	GLN
20	CB	93	HIS
20	CB	94	ARG
20	CB	104	LYS
20	CB	107	ARG
20	CB	113	LEU
20	CB	119	GLN
20	CB	121	GLN
20	CB	122	ASP
20	CB	127	LYS
20	CB	130	LYS
20	CB	132	GLU
20	CB	144	GLU
20	CB	176	ASN
20	CB	196	ASP
20	CB	202	ASN
20	CB	210	THR
20	CB	211	LEU
20	CB	212	TYR
20	CB	213	LEU
20	CB	221	ARG
20	CB	224	ARG
21	CU	11	PHE
21	CU	16	ARG
21	CU	22	CYS

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Mol	Chain	Res	Type
21	CU	24	LYS
21	CU	28	LEU
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	8	THR
25	DC	12	ARG
25	DC	43	ASN
25	DC	44	ASN
25	DC	45	ASN
25	DC	52	HIS
25	DC	62	ARG
25	DC	65	ASP
25	DC	89	ASN
25	DC	90	ILE
25	DC	100	ARG
25	DC	123	ILE
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
25	DC	190	THR
25	DC	191	LEU
25	DC	202	ARG
25	DC	203	VAL
25	DC	212	TRP
25	DC	224	MET
25	DC	235	GLU

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Mol	Chain	Res	Type
25	DC	249	VAL
25	DC	257	ARG
25	DC	264	LYS
25	DC	267	VAL
25	DC	268	ARG
26	DD	17	GLU
26	DD	24	VAL
26	DD	34	VAL
26	DD	35	THR
26	DD	36	GLN
26	DD	40	LEU
26	DD	46	ARG
26	DD	56	LYS
26	DD	60	VAL
26	DD	79	LEU
26	DD	84	LEU
26	DD	89	GLU
26	DD	99	GLU
26	DD	110	THR
26	DD	116	LYS
26	DD	123	LYS
26	DD	124	ARG
26	DD	129	THR
26	DD	138	LEU
26	DD	148	GLN
26	DD	151	THR
26	DD	154	LYS
26	DD	159	LYS
26	DD	179	ARG
26	DD	185	ASN
26	DD	204	LYS
27	DK	2	ILE
27	DK	8	LEU
27	DK	21	CYS
27	DK	32	TYR
27	DK	39	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

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Mol	Chain	Res	Type
27	DK	71	ARG
27	DK	72	PRO
27	DK	79	PHE
27	DK	87	LEU
27	DK	88	ASN
27	DK	89	ASN
27	DK	91	SER
27	DK	98	ARG
27	DK	104	THR
27	DK	105	ARG
27	DK	108	ARG
27	DK	111	LYS
27	DK	118	LEU
27	DK	120	PRO
28	DP	3	ILE
28	DP	6	GLN
28	DP	12	MET
28	DP	19	PHE
28	DP	20	ARG
28	DP	25	VAL
28	DP	26	GLU
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
29	DE	9	GLN
29	DE	22	ASP
29	DE	24	ASN
29	DE	40	ARG
29	DE	48	THR
29	DE	58	LYS
29	DE	60	TRP
29	DE	67	ARG
29	DE	78	TRP
29	DE	108	ILE

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Mol	Chain	Res	Type
29	DE	111	GLU
29	DE	115	GLN
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU
29	DE	124	PHE
29	DE	147	LEU
29	DE	163	ASN
29	DE	170	ARG
29	DE	191	ASP
29	DE	198	GLU
30	DY	2	LYS
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	40	THR
30	DY	46	MET
30	DY	57	GLU
31	D0	5	ASN
31	D0	27	LEU
31	D0	37	HIS
31	D0	38	LEU
31	D0	41	HIS
31	D0	45	ASP
31	D0	51	ARG
31	D0	53	VAL
31	D0	56	LYS
32	D4	3	VAL
32	D4	9	LYS
32	D4	12	ARG
32	D4	13	ASN
32	D4	35	GLN
32	D4	36	ARG
33	D1	6	GLU
33	D1	8	ILE
33	D1	9	LYS
33	D1	22	THR
33	D1	34	GLU

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Mol	Chain	Res	Type
33	D1	35	LEU
33	D1	43	ARG
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	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	79	ARG
35	DV	86	LEU
35	DV	89	ILE
35	DV	90	ASP
35	DV	93	ARG
36	D2	10	LEU
36	D2	19	ARG
36	D2	21	ARG
36	D2	24	THR
36	D2	33	ARG
36	D2	39	ARG
36	D2	42	LEU
37	DL	47	ARG
37	DL	55	MET
37	DL	69	ARG
37	DL	77	ILE
37	DL	82	LEU
37	DL	92	LEU
37	DL	93	ASN
37	DL	95	LEU
37	DL	112	LEU
37	DL	118	THR
37	DL	123	ARG
38	DM	10	ARG

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Mol	Chain	Res	Type
38	DM	30	SER
38	DM	31	PHE
38	DM	47	GLU
38	DM	59	ARG
38	DM	63	ILE
38	DM	65	ILE
38	DM	70	ASP
38	DM	90	GLU
38	DM	95	LEU
38	DM	100	LYS
38	DM	105	MET
38	DM	108	VAL
38	DM	110	GLU
38	DM	115	GLU
38	DM	127	LYS
39	DX	18	LEU
39	DX	28	LEU
39	DX	29	ARG
39	DX	48	ARG
39	DX	49	ASP
39	DX	59	GLU
40	DH	1	MET
40	DH	3	VAL
40	DH	12	LEU
40	DH	25	TYR
40	DH	28	ASN
40	DH	32	PRO
40	DH	33	GLN
40	DH	40	THR
40	DH	45	GLU
40	DH	70	GLU
40	DH	75	LEU
40	DH	83	LYS
40	DH	89	LYS
40	DH	114	GLU
40	DH	119	ASN
40	DH	121	VAL
40	DH	124	THR
40	DH	125	THR
40	DH	127	GLU
40	DH	129	GLU
40	DH	134	VAL

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Mol	Chain	Res	Type
40	DH	137	GLU
40	DH	139	PHE
41	DJ	3	THR
41	DJ	5	THR
41	DJ	12	LYS
41	DJ	28	LEU
41	DJ	35	ARG
41	DJ	36	LEU
41	DJ	43	GLU
41	DJ	44	TYR
41	DJ	53	TYR
41	DJ	65	THR
41	DJ	69	ARG
41	DJ	73	VAL
41	DJ	76	HIS
41	DJ	95	ARG
41	DJ	111	LYS
41	DJ	122	LEU
41	DJ	124	VAL
41	DJ	129	GLU
42	DN	1	MET
42	DN	11	ASN
42	DN	17	ARG
42	DN	18	GLN
42	DN	20	MET
42	DN	35	LYS
42	DN	48	VAL
42	DN	69	ARG
42	DN	71	ARG
42	DN	82	GLU
42	DN	98	LEU
42	DN	112	TYR
42	DN	114	GLU
42	DN	118	ARG
43	DO	3	LYS
43	DO	9	ARG
43	DO	18	LEU
43	DO	20	GLU
43	DO	31	THR
43	DO	36	TYR
43	DO	58	ILE
43	DO	62	LEU

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Mol	Chain	Res	Type
43	DO	67	ASN
43	DO	74	VAL
43	DO	78	VAL
43	DO	91	SER
43	DO	98	GLN
43	DO	100	HIS
43	DO	104	GLN
43	DO	106	LEU
43	DO	112	GLU
43	DO	115	LEU
44	DQ	5	ARG
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	63	ARG
44	DQ	79	ILE
44	DQ	83	LYS
44	DQ	90	ASP
44	DQ	96	ASP
44	DQ	105	PHE
45	DS	6	LYS
45	DS	7	HIS
45	DS	15	GLN
45	DS	18	ARG
45	DS	22	ASP
45	DS	31	GLN
45	DS	33	LEU
45	DS	45	VAL
45	DS	62	ASP
45	DS	66	ILE
45	DS	73	LYS
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG
45	DS	99	ARG
45	DS	101	SER
45	DS	109	ASP
46	DU	7	ASP
46	DU	11	ILE
46	DU	13	LEU
46	DU	20	LYS
46	DU	34	ILE
46	DU	39	ASN

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Mol	Chain	Res	Type
46	DU	49	PRO
46	DU	51	LEU
46	DU	53	GLN
46	DU	60	LYS
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	18	GLU
47	DF	26	GLN
47	DF	29	ARG
47	DF	32	LYS
47	DF	45	ASP
47	DF	50	ASP
47	DF	55	ASP
47	DF	56	LEU
47	DF	59	ILE
47	DF	70	ARG
47	DF	76	PHE
47	DF	82	TYR
47	DF	86	CYS
47	DF	91	ARG
47	DF	97	GLU
47	DF	102	LEU
47	DF	109	ARG
47	DF	111	ARG
47	DF	116	LEU
47	DF	121	PHE
47	DF	129	MET
47	DF	133	GLU
47	DF	134	GLN
47	DF	135	ILE
47	DF	137	PHE
47	DF	138	PRO
47	DF	147	ARG
47	DF	149	ARG
47	DF	173	ASP
47	DF	174	PHE
47	DF	177	ARG

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Mol	Chain	Res	Type
48	DG	8	VAL
48	DG	14	VAL
48	DG	15	ASP
48	DG	24	THR
48	DG	31	GLU
48	DG	34	ARG
48	DG	54	ARG
48	DG	61	TRP
48	DG	68	ARG
48	DG	70	LEU
48	DG	71	LEU
48	DG	74	MET
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	151	ARG
48	DG	154	GLU
48	DG	162	ARG
48	DG	166	GLU
49	DR	2	TYR
49	DR	4	VAL
49	DR	22	LEU
49	DR	25	LEU
49	DR	26	ASP
49	DR	39	LEU
49	DR	40	MET
49	DR	45	GLU
49	DR	48	LYS
49	DR	70	GLU
49	DR	72	VAL
49	DR	82	HIS
49	DR	86	GLN
50	DT	2	ILE
50	DT	4	GLU
50	DT	7	LEU
50	DT	9	LYS
50	DT	11	LEU

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Mol	Chain	Res	Type
50	DT	12	ARG
50	DT	24	MET
50	DT	32	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	73	ARG
50	DT	87	LEU
51	DZ	4	VAL
51	DZ	14	THR
51	DZ	18	ARG
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	32	ASN
51	DZ	33	LEU
51	DZ	37	ARG
51	DZ	46	PHE
51	DZ	49	LEU
51	DZ	50	ARG
51	DZ	66	THR
51	DZ	78	TYR
52	DW	10	ARG
52	DW	14	ASP
52	DW	18	LYS
52	DW	19	ARG
52	DW	23	LYS
52	DW	24	ARG
52	DW	25	PHE
52	DW	38	ARG
52	DW	39	GLN
52	DW	40	ARG
52	DW	44	PHE
52	DW	49	ASN
52	DW	50	VAL
52	DW	74	LYS
52	DW	77	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (326) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	31	ASN
2	AC	139	ASN

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Mol	Chain	Res	Type
3	AD	35	GLN
3	AD	39	GLN
3	AD	53	GLN
3	AD	70	GLN
3	AD	84	ASN
3	AD	135	GLN
3	AD	151	GLN
3	AD	163	GLN
4	AE	42	ASN
4	AE	131	ASN
5	AF	46	GLN
5	AF	68	GLN
6	AG	67	ASN
6	AG	121	ASN
7	AH	3	GLN
7	AH	37	ASN
7	AH	117	GLN
8	AI	4	GLN
8	AI	30	ASN
8	AI	36	GLN
8	AI	49	GLN
8	AI	80	HIS
9	AJ	20	GLN
9	AJ	56	HIS
9	AJ	99	GLN
10	AK	21	HIS
10	AK	28	ASN
10	AK	39	ASN
10	AK	80	ASN
10	AK	100	ASN
10	AK	118	ASN
11	AL	19	ASN
11	AL	28	GLN
11	AL	45	ASN
11	AL	111	GLN
12	AM	7	ASN
12	AM	90	HIS
14	AO	28	GLN
14	AO	40	GLN
14	AO	62	GLN
15	AP	9	HIS
15	AP	29	ASN

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Mol	Chain	Res	Type
15	AP	63	GLN
17	AR	51	GLN
17	AR	53	GLN
18	AS	42	ASN
18	AS	52	ASN
18	AS	55	GLN
19	AT	2	ASN
19	AT	20	ASN
19	AT	69	ASN
19	AT	83	ASN
20	AB	14	HIS
20	AB	23	ASN
20	AB	35	ASN
20	AB	88	GLN
20	AB	119	GLN
20	AB	121	GLN
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	45	ASN
25	BC	59	GLN
25	BC	85	ASN
25	BC	89	ASN
25	BC	114	GLN
25	BC	133	ASN
25	BC	152	GLN
25	BC	238	ASN
26	BD	32	ASN
26	BD	36	GLN
26	BD	49	GLN
26	BD	67	HIS
26	BD	126	ASN
26	BD	130	GLN
26	BD	136	ASN
26	BD	148	GLN
27	BK	13	ASN
27	BK	89	ASN
28	BP	6	GLN

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Mol	Chain	Res	Type
28	BP	40	GLN
28	BP	114	ASN
29	BE	24	ASN
29	BE	30	GLN
29	BE	41	GLN
29	BE	62	GLN
29	BE	97	ASN
29	BE	136	GLN
29	BE	163	ASN
29	BE	195	GLN
30	BY	33	HIS
30	BY	48	ASN
31	B0	3	GLN
32	B4	13	ASN
32	B4	35	GLN
33	B1	25	ASN
34	B3	25	HIS
34	B3	42	HIS
35	BV	49	ASN
35	BV	51	GLN
35	BV	80	HIS
35	BV	88	HIS
36	B2	16	HIS
37	BL	4	ASN
37	BL	54	GLN
37	BL	93	ASN
37	BL	104	GLN
38	BM	3	GLN
38	BM	13	HIS
38	BM	17	ASN
39	BX	15	ASN
39	BX	20	ASN
39	BX	25	GLN
39	BX	31	GLN
39	BX	41	HIS
40	BH	18	GLN
40	BH	28	ASN
40	BH	43	ASN
40	BH	66	ASN
40	BH	73	ASN
41	BJ	40	HIS
41	BJ	138	GLN

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Mol	Chain	Res	Type
42	BN	11	ASN
42	BN	62	ASN
42	BN	107	ASN
43	BO	19	GLN
43	BO	38	GLN
43	BO	61	GLN
43	BO	67	ASN
44	BQ	51	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	26	GLN
47	BF	51	ASN
47	BF	126	ASN
47	BF	134	GLN
48	BG	29	ASN
48	BG	37	ASN
48	BG	63	GLN
48	BG	115	GLN
49	BR	6	GLN
49	BR	18	GLN
49	BR	86	GLN
50	BT	48	GLN
50	BT	91	GLN
50	BT	92	ASN
51	BZ	23	ASN
51	BZ	36	HIS
52	BW	39	GLN
52	BW	56	HIS
52	BW	75	ASN
2	CC	2	GLN
2	CC	31	ASN
2	CC	101	ASN
2	CC	139	ASN
3	CD	35	GLN
3	CD	39	GLN
3	CD	53	GLN

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Mol	Chain	Res	Type
3	CD	84	ASN
3	CD	135	GLN
3	CD	151	GLN
3	CD	163	GLN
4	CE	42	ASN
4	CE	131	ASN
5	CF	46	GLN
5	CF	68	GLN
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	4	GLN
8	CI	30	ASN
8	CI	36	GLN
8	CI	49	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	56	HIS
9	CJ	99	GLN
10	CK	21	HIS
10	CK	28	ASN
10	CK	39	ASN
10	CK	80	ASN
10	CK	100	ASN
10	CK	118	ASN
11	CL	19	ASN
11	CL	28	GLN
11	CL	45	ASN
11	CL	111	GLN
12	CM	7	ASN
12	CM	90	HIS
14	CO	28	GLN
14	CO	40	GLN
14	CO	62	GLN
15	CP	9	HIS
15	CP	29	ASN
15	CP	63	GLN
17	CR	51	GLN
17	CR	53	GLN

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Mol	Chain	Res	Type
18	CS	42	ASN
18	CS	52	ASN
18	CS	55	GLN
19	CT	2	ASN
19	CT	20	ASN
19	CT	69	ASN
19	CT	83	ASN
20	CB	14	HIS
20	CB	23	ASN
20	CB	35	ASN
20	CB	88	GLN
20	CB	119	GLN
20	CB	121	GLN
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	45	ASN
25	DC	59	GLN
25	DC	85	ASN
25	DC	89	ASN
25	DC	114	GLN
25	DC	133	ASN
25	DC	152	GLN
25	DC	238	ASN
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	148	GLN
27	DK	13	ASN
27	DK	89	ASN
28	DP	6	GLN
28	DP	40	GLN
28	DP	114	ASN
29	DE	24	ASN

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Mol	Chain	Res	Type
29	DE	30	GLN
29	DE	41	GLN
29	DE	62	GLN
29	DE	97	ASN
29	DE	136	GLN
29	DE	195	GLN
30	DY	33	HIS
30	DY	48	ASN
31	D0	3	GLN
32	D4	13	ASN
32	D4	35	GLN
33	D1	25	ASN
34	D3	42	HIS
35	DV	44	HIS
35	DV	49	ASN
35	DV	51	GLN
35	DV	80	HIS
36	D2	16	HIS
37	DL	4	ASN
37	DL	54	GLN
37	DL	93	ASN
37	DL	104	GLN
38	DM	3	GLN
38	DM	13	HIS
38	DM	17	ASN
39	DX	15	ASN
39	DX	20	ASN
39	DX	25	GLN
39	DX	31	GLN
39	DX	41	HIS
40	DH	18	GLN
40	DH	28	ASN
40	DH	66	ASN
40	DH	145	ASN
41	DJ	40	HIS
41	DJ	138	GLN
42	DN	11	ASN
42	DN	107	ASN
43	DO	19	GLN
43	DO	38	GLN
43	DO	61	GLN
43	DO	67	ASN

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Mol	Chain	Res	Type
44	DQ	51	GLN
44	DQ	70	GLN
44	DQ	80	ASN
45	DS	15	GLN
45	DS	40	ASN
45	DS	57	ASN
45	DS	61	ASN
46	DU	39	ASN
46	DU	65	GLN
46	DU	68	ASN
46	DU	73	ASN
47	DF	26	GLN
47	DF	51	ASN
47	DF	126	ASN
47	DF	134	GLN
48	DG	29	ASN
48	DG	37	ASN
48	DG	115	GLN
49	DR	6	GLN
49	DR	18	GLN
49	DR	86	GLN
50	DT	48	GLN
50	DT	91	GLN
50	DT	92	ASN
51	DZ	23	ASN
51	DZ	36	HIS
52	DW	39	GLN
52	DW	56	HIS
52	DW	75	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	246 (16%)	21 (1%)
1	CA	1529/1542 (99%)	231 (15%)	19 (1%)
22	BA	116/120 (96%)	16 (13%)	0
22	DA	116/120 (96%)	14 (12%)	0
23	BB	2837/2904 (97%)	424 (14%)	20 (0%)
23	DB	2837/2904 (97%)	424 (14%)	21 (0%)
All	All	8964/9132 (98%)	1355 (15%)	81 (0%)

All (1355) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	14	U
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	65	A
1	AA	66	A
1	AA	68	G
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	76	G
1	AA	78	A
1	AA	79	G
1	AA	81	A
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	91	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	96	U
1	AA	108	G
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	202	G
1	AA	209	U
1	AA	210	C

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Mol	Chain	Res	Type
1	AA	233	C
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
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	352	C
1	AA	354	G
1	AA	367	U
1	AA	373	A
1	AA	381	C
1	AA	382	A
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	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	469	C
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	493	A
1	AA	500	G
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	532	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	596	A
1	AA	653	U
1	AA	665	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	777	A
1	AA	781	A

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Mol	Chain	Res	Type
1	AA	782	A
1	AA	787	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	813	U
1	AA	815	A
1	AA	817	C
1	AA	818	G
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	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	969	A
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	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	1026	G

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Mol	Chain	Res	Type
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1034	G
1	AA	1035	A
1	AA	1050	G
1	AA	1053	G
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	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1158	C
1	AA	1159	U
1	AA	1168	U
1	AA	1169	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	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	1261	A
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A

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Mol	Chain	Res	Type
1	AA	1281	C
1	AA	1286	U
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1336	C
1	AA	1364	U
1	AA	1381	U
1	AA	1398	A
1	AA	1400	C
1	AA	1401	G
1	AA	1410	A
1	AA	1432	G
1	AA	1446	A
1	AA	1452	C
1	AA	1491	G
1	AA	1492	A
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
22	BA	9	G
22	BA	15	A
22	BA	16	G
22	BA	26	C
22	BA	29	A
22	BA	30	C
22	BA	35	C

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Mol	Chain	Res	Type
22	BA	42	C
22	BA	43	C
22	BA	66	A
22	BA	67	G
22	BA	74	U
22	BA	88	C
22	BA	90	C
22	BA	99	A
22	BA	109	A
23	BB	2	G
23	BB	11	C
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	84	A
23	BB	99	U
23	BB	101	A
23	BB	102	U
23	BB	103	A
23	BB	110	G
23	BB	118	A
23	BB	119	A
23	BB	120	U
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	144	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	174	U
23	BB	181	A
23	BB	196	A

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Mol	Chain	Res	Type
23	BB	199	A
23	BB	215	G
23	BB	216	A
23	BB	221	A
23	BB	222	A
23	BB	233	A
23	BB	248	G
23	BB	252	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	267	C
23	BB	271	G
23	BB	276	U
23	BB	278	A
23	BB	279	A
23	BB	280	U
23	BB	281	C
23	BB	291	G
23	BB	295	G
23	BB	311	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	346	A
23	BB	353	C
23	BB	357	C
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	424	G
23	BB	444	C
23	BB	451	U
23	BB	455	C
23	BB	456	C
23	BB	457	A
23	BB	473	G
23	BB	479	A

Continued on next page...

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Mol	Chain	Res	Type
23	BB	480	A
23	BB	481	G
23	BB	491	G
23	BB	504	A
23	BB	505	A
23	BB	508	A
23	BB	510	C
23	BB	512	G
23	BB	527	C
23	BB	531	C
23	BB	532	A
23	BB	533	G
23	BB	542	C
23	BB	544	C
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	550	C
23	BB	563	A
23	BB	573	U
23	BB	575	A
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	632	A
23	BB	637	A
23	BB	645	C
23	BB	646	U
23	BB	653	U
23	BB	654	A
23	BB	655	A
23	BB	671	C
23	BB	686	U
23	BB	699	A
23	BB	717	C
23	BB	718	A
23	BB	719	C
23	BB	722	A
23	BB	730	A

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Mol	Chain	Res	Type
23	BB	746	U
23	BB	747	U
23	BB	765	C
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	805	G
23	BB	811	U
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	876	C
23	BB	877	A
23	BB	878	A
23	BB	899	A
23	BB	903	C
23	BB	910	A
23	BB	912	C
23	BB	931	U
23	BB	932	U
23	BB	933	A
23	BB	941	A
23	BB	946	C
23	BB	953	G
23	BB	955	U
23	BB	961	C
23	BB	973	A
23	BB	974	G
23	BB	983	A
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1025	G

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Mol	Chain	Res	Type
23	BB	1033	U
23	BB	1046	A
23	BB	1047	G
23	BB	1062	G
23	BB	1070	A
23	BB	1088	A
23	BB	1090	A
23	BB	1106	G
23	BB	1110	G
23	BB	1112	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	1142	A
23	BB	1172	C
23	BB	1174	U
23	BB	1176	U
23	BB	1195	G
23	BB	1204	A
23	BB	1205	A
23	BB	1206	G
23	BB	1211	C
23	BB	1212	G
23	BB	1237	A
23	BB	1238	G
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

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Mol	Chain	Res	Type
23	BB	1302	A
23	BB	1325	U
23	BB	1337	G
23	BB	1341	G
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	1427	A
23	BB	1428	C
23	BB	1434	A
23	BB	1451	C
23	BB	1453	A
23	BB	1454	C
23	BB	1459	G
23	BB	1460	U
23	BB	1461	C
23	BB	1470	A
23	BB	1476	U
23	BB	1477	A
23	BB	1482	G
23	BB	1493	C
23	BB	1504	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1510	G
23	BB	1512	C
23	BB	1524	G
23	BB	1531	C
23	BB	1536	C
23	BB	1540	G
23	BB	1552	A
23	BB	1558	C
23	BB	1559	U
23	BB	1567	G

Continued on next page...

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Mol	Chain	Res	Type
23	BB	1569	A
23	BB	1578	U
23	BB	1583	A
23	BB	1584	U
23	BB	1585	C
23	BB	1600	C
23	BB	1603	A
23	BB	1608	A
23	BB	1610	A
23	BB	1634	A
23	BB	1635	A
23	BB	1640	A
23	BB	1647	U
23	BB	1648	U
23	BB	1674	G
23	BB	1700	A
23	BB	1713	A
23	BB	1715	G
23	BB	1716	U
23	BB	1730	C
23	BB	1731	G
23	BB	1733	G
23	BB	1738	G
23	BB	1756	G
23	BB	1764	C
23	BB	1772	A
23	BB	1773	A
23	BB	1800	C
23	BB	1816	C
23	BB	1829	A
23	BB	1870	C
23	BB	1872	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

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Mol	Chain	Res	Type
23	BB	1955	U
23	BB	1967	C
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U
23	BB	1993	U
23	BB	1997	C
23	BB	2020	A
23	BB	2022	U
23	BB	2023	C
23	BB	2031	A
23	BB	2033	A
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2076	U
23	BB	2093	G
23	BB	2101	A
23	BB	2102	G
23	BB	2103	C
23	BB	2108	A
23	BB	2109	U
23	BB	2110	G
23	BB	2134	A
23	BB	2136	G
23	BB	2137	U
23	BB	2138	G
23	BB	2140	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	2154	A
23	BB	2156	G

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Mol	Chain	Res	Type
23	BB	2157	G
23	BB	2180	U
23	BB	2184	A
23	BB	2187	U
23	BB	2188	U
23	BB	2192	U
23	BB	2198	A
23	BB	2203	U
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2225	A
23	BB	2238	G
23	BB	2239	G
23	BB	2268	A
23	BB	2283	C
23	BB	2287	A
23	BB	2288	A
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G
23	BB	2311	A
23	BB	2320	U
23	BB	2321	U
23	BB	2322	A
23	BB	2325	G
23	BB	2333	A
23	BB	2335	A
23	BB	2336	A
23	BB	2337	G
23	BB	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	2424	C
23	BB	2426	A

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Mol	Chain	Res	Type
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	2554	U
23	BB	2566	A
23	BB	2567	G
23	BB	2573	C
23	BB	2586	U
23	BB	2602	A
23	BB	2609	U
23	BB	2613	U
23	BB	2629	U
23	BB	2634	A
23	BB	2654	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2726	A
23	BB	2744	G
23	BB	2751	G
23	BB	2752	C
23	BB	2757	A
23	BB	2778	A
23	BB	2791	G
23	BB	2796	U
23	BB	2797	U
23	BB	2799	A
23	BB	2800	A
23	BB	2801	G
23	BB	2802	G
23	BB	2808	G

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Mol	Chain	Res	Type
23	BB	2820	A
23	BB	2821	A
23	BB	2836	U
23	BB	2850	A
23	BB	2866	U
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2894	G
23	BB	2901	C
23	BB	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	67	C
1	CA	68	G
1	CA	71	A
1	CA	72	A
1	CA	83	C
1	CA	84	U
1	CA	87	C
1	CA	97	G
1	CA	108	G
1	CA	121	U
1	CA	122	G
1	CA	130	A
1	CA	131	A
1	CA	151	A
1	CA	182	A
1	CA	183	C
1	CA	197	A
1	CA	202	G
1	CA	209	U

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Mol	Chain	Res	Type
1	CA	210	C
1	CA	233	C
1	CA	239	U
1	CA	240	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
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	352	C
1	CA	354	G
1	CA	367	U
1	CA	373	A
1	CA	381	C
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	429	U

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Mol	Chain	Res	Type
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	460	A
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	493	A
1	CA	500	G
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	532	A
1	CA	547	A
1	CA	559	A
1	CA	562	U
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	596	A
1	CA	653	U
1	CA	665	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

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Mol	Chain	Res	Type
1	CA	777	A
1	CA	781	A
1	CA	782	A
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	812	G
1	CA	813	U
1	CA	815	A
1	CA	817	C
1	CA	818	G
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

Continued on next page...

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Mol	Chain	Res	Type
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1034	G
1	CA	1035	A
1	CA	1050	G
1	CA	1053	G
1	CA	1065	U
1	CA	1066	C
1	CA	1085	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1158	C
1	CA	1159	U
1	CA	1168	U
1	CA	1169	A
1	CA	1181	G
1	CA	1183	U
1	CA	1184	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	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	1261	A
1	CA	1278	G

Continued on next page...

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Mol	Chain	Res	Type
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1286	U
1	CA	1299	A
1	CA	1300	G
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1318	A
1	CA	1320	C
1	CA	1323	G
1	CA	1336	C
1	CA	1364	U
1	CA	1381	U
1	CA	1398	A
1	CA	1400	C
1	CA	1401	G
1	CA	1419	G
1	CA	1432	G
1	CA	1446	A
1	CA	1452	C
1	CA	1475	G
1	CA	1492	A
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1534	A
22	DA	9	G
22	DA	15	A
22	DA	16	G
22	DA	26	C
22	DA	29	A
22	DA	30	C
22	DA	35	C
22	DA	42	C

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Mol	Chain	Res	Type
22	DA	43	C
22	DA	67	G
22	DA	88	C
22	DA	90	C
22	DA	99	A
22	DA	109	A
23	DB	11	C
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	84	A
23	DB	99	U
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	103	A
23	DB	119	A
23	DB	120	U
23	DB	125	A
23	DB	126	A
23	DB	139	U
23	DB	140	C
23	DB	141	G
23	DB	142	A
23	DB	143	C
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	174	U
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

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Mol	Chain	Res	Type
23	DB	233	A
23	DB	248	G
23	DB	252	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	267	C
23	DB	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	287	G
23	DB	288	U
23	DB	289	G
23	DB	295	G
23	DB	311	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	347	A
23	DB	349	U
23	DB	350	G
23	DB	352	A
23	DB	354	A
23	DB	356	G
23	DB	357	C
23	DB	358	U
23	DB	363	G
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	423	A
23	DB	424	G
23	DB	444	C
23	DB	451	U

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Mol	Chain	Res	Type
23	DB	455	C
23	DB	456	C
23	DB	457	A
23	DB	473	G
23	DB	479	A
23	DB	480	A
23	DB	481	G
23	DB	491	G
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	509	C
23	DB	510	C
23	DB	512	G
23	DB	527	C
23	DB	531	C
23	DB	532	A
23	DB	533	G
23	DB	542	C
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	563	A
23	DB	573	U
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	632	A
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	653	U
23	DB	654	A
23	DB	655	A

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Mol	Chain	Res	Type
23	DB	671	C
23	DB	686	U
23	DB	699	A
23	DB	717	C
23	DB	718	A
23	DB	719	C
23	DB	722	A
23	DB	730	A
23	DB	747	U
23	DB	765	C
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	805	G
23	DB	811	U
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	876	C
23	DB	899	A
23	DB	903	C
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	991	C
23	DB	995	C

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Mol	Chain	Res	Type
23	DB	996	A
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1025	G
23	DB	1033	U
23	DB	1042	G
23	DB	1046	A
23	DB	1047	G
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	1126	A
23	DB	1127	A
23	DB	1132	U
23	DB	1133	A
23	DB	1134	A
23	DB	1135	C
23	DB	1136	G
23	DB	1142	A
23	DB	1143	A
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	1241	A
23	DB	1242	U
23	DB	1247	A
23	DB	1248	G
23	DB	1253	A
23	DB	1256	G
23	DB	1266	G
23	DB	1271	G
23	DB	1272	A

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Mol	Chain	Res	Type
23	DB	1273	U
23	DB	1275	A
23	DB	1276	A
23	DB	1301	A
23	DB	1302	A
23	DB	1325	U
23	DB	1337	G
23	DB	1341	G
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	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	1460	U
23	DB	1461	C
23	DB	1470	A
23	DB	1476	U
23	DB	1477	A
23	DB	1482	G
23	DB	1493	C
23	DB	1504	A
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1510	G
23	DB	1512	C
23	DB	1524	G
23	DB	1531	C
23	DB	1536	C
23	DB	1540	G

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Mol	Chain	Res	Type
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	1600	C
23	DB	1603	A
23	DB	1608	A
23	DB	1610	A
23	DB	1634	A
23	DB	1635	A
23	DB	1640	A
23	DB	1647	U
23	DB	1648	U
23	DB	1674	G
23	DB	1700	A
23	DB	1703	G
23	DB	1713	A
23	DB	1715	G
23	DB	1716	U
23	DB	1730	C
23	DB	1731	G
23	DB	1733	G
23	DB	1738	G
23	DB	1756	G
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	1884	G
23	DB	1906	G
23	DB	1912	A
23	DB	1913	A
23	DB	1914	C

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Mol	Chain	Res	Type
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1955	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	2076	U
23	DB	2093	G
23	DB	2096	C
23	DB	2099	U
23	DB	2107	G
23	DB	2108	A
23	DB	2109	U
23	DB	2110	G
23	DB	2135	A
23	DB	2138	G
23	DB	2145	C
23	DB	2147	A
23	DB	2148	G
23	DB	2156	G
23	DB	2157	G
23	DB	2180	U

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Mol	Chain	Res	Type
23	DB	2188	U
23	DB	2190	G
23	DB	2193	G
23	DB	2198	A
23	DB	2203	U
23	DB	2204	G
23	DB	2211	A
23	DB	2212	A
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
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	2333	A
23	DB	2335	A
23	DB	2336	A
23	DB	2337	G
23	DB	2345	G
23	DB	2347	C
23	DB	2361	G
23	DB	2379	G
23	DB	2383	G
23	DB	2385	C
23	DB	2388	A
23	DB	2396	G
23	DB	2402	U
23	DB	2406	A
23	DB	2423	U
23	DB	2424	C
23	DB	2426	A
23	DB	2429	G

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Mol	Chain	Res	Type
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	2602	A
23	DB	2609	U
23	DB	2613	U
23	DB	2629	U
23	DB	2634	A
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2726	A
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	2797	U
23	DB	2799	A
23	DB	2800	A
23	DB	2801	G
23	DB	2802	G
23	DB	2808	G
23	DB	2820	A

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Mol	Chain	Res	Type
23	DB	2821	A
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	2894	G
23	DB	2903	U

All (81) 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	266	G
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	576	C
1	AA	975	A
1	AA	1049	U
1	AA	1065	U
1	AA	1168	U
1	AA	1201	A
1	AA	1226	C
1	AA	1397	C
1	AA	1451	U
23	BB	63	A
23	BB	102	U
23	BB	162	U
23	BB	508	A
23	BB	670	A
23	BB	1205	A
23	BB	1210	G

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Mol	Chain	Res	Type
23	BB	1301	A
23	BB	1419	A
23	BB	2062	A
23	BB	2282	G
23	BB	2324	U
23	BB	2336	A
23	BB	2425	A
23	BB	2434	A
23	BB	2756	U
23	BB	2798	U
23	BB	2873	A
23	BB	2894	G
23	BB	2902	C
1	CA	51	A
1	CA	239	U
1	CA	243	A
1	CA	266	G
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	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	162	U
23	DB	508	A
23	DB	544	C
23	DB	670	A
23	DB	1126	A
23	DB	1205	A
23	DB	1210	G
23	DB	1301	A

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Mol	Chain	Res	Type
23	DB	1419	A
23	DB	1911	U
23	DB	2282	G
23	DB	2324	U
23	DB	2336	A
23	DB	2425	A
23	DB	2434	A
23	DB	2756	U
23	DB	2798	U
23	DB	2873	A
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 353 ligands modelled in this entry, 345 are monoatomic - leaving 8 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	$\# Z > 2$
54	LLL	AA	2061	-	30,33,33	2.20	10 (33%)	37,49,49	1.44	6 (16%)
54	LLL	AA	2062	-	30,33,33	2.28	12 (40%)	37,49,49	1.44	5 (13%)
54	LLL	AA	2063	-	30,33,33	2.25	11 (36%)	37,49,49	1.56	5 (13%)
54	LLL	BB	3111	-	30,33,33	2.24	10 (33%)	37,49,49	1.39	4 (10%)
54	LLL	CA	2062	-	30,33,33	2.21	9 (30%)	37,49,49	1.40	4 (10%)
54	LLL	CA	2063	-	30,33,33	2.29	12 (40%)	37,49,49	1.42	4 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
54	LLL	CA	2064	-	30,33,33	2.16	10 (33%)	37,49,49	1.35	3 (8%)
54	LLL	DB	3112	-	30,33,33	2.24	10 (33%)	37,49,49	1.36	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
54	LLL	AA	2061	-	-	0/11/65/65	0/3/3/3
54	LLL	AA	2062	-	-	0/11/65/65	0/3/3/3
54	LLL	AA	2063	-	-	0/11/65/65	0/3/3/3
54	LLL	BB	3111	-	-	0/11/65/65	0/3/3/3
54	LLL	CA	2062	-	-	0/11/65/65	0/3/3/3
54	LLL	CA	2063	-	-	0/11/65/65	0/3/3/3
54	LLL	CA	2064	-	-	0/11/65/65	0/3/3/3
54	LLL	DB	3112	-	-	0/11/65/65	0/3/3/3

All (84) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	AA	2062	LLL	O43-C43	-2.05	1.40	1.44
54	CA	2064	LLL	O11-C42	-2.01	1.38	1.43
54	CA	2063	LLL	C41-C31	2.04	1.58	1.52
54	AA	2063	LLL	C31-C21	2.10	1.58	1.53
54	AA	2063	LLL	O62-C13	2.10	1.47	1.41
54	AA	2061	LLL	C52-C62	2.13	1.58	1.52
54	AA	2063	LLL	C52-C62	2.13	1.58	1.52
54	AA	2061	LLL	C31-C21	2.13	1.58	1.53
54	CA	2063	LLL	O62-C13	2.16	1.47	1.41
54	CA	2064	LLL	C31-C21	2.17	1.58	1.53
54	AA	2062	LLL	O62-C13	2.21	1.47	1.41
54	DB	3112	LLL	C52-C62	2.22	1.58	1.52
54	CA	2064	LLL	C52-C42	2.23	1.58	1.52
54	CA	2063	LLL	C52-C62	2.23	1.58	1.52
54	BB	3111	LLL	C52-C62	2.23	1.58	1.52
54	CA	2063	LLL	C31-C21	2.26	1.59	1.53
54	CA	2062	LLL	C31-C21	2.27	1.59	1.53
54	CA	2062	LLL	C22-C32	2.30	1.59	1.53
54	AA	2062	LLL	C31-C21	2.30	1.59	1.53
54	AA	2062	LLL	C52-C62	2.31	1.58	1.52
54	DB	3112	LLL	C31-C21	2.31	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	BB	3111	LLL	C31-C21	2.31	1.59	1.53
54	CA	2064	LLL	C22-C32	2.32	1.59	1.53
54	BB	3111	LLL	C22-C32	2.32	1.59	1.53
54	DB	3112	LLL	C22-C32	2.35	1.59	1.53
54	CA	2063	LLL	C22-C32	2.37	1.59	1.53
54	AA	2062	LLL	C22-C32	2.41	1.59	1.53
54	AA	2063	LLL	C52-C42	2.42	1.59	1.52
54	CA	2062	LLL	C52-C42	2.46	1.59	1.52
54	AA	2062	LLL	C52-C42	2.52	1.59	1.52
54	AA	2063	LLL	C22-C32	2.52	1.59	1.53
54	AA	2061	LLL	C42-C32	2.55	1.59	1.53
54	BB	3111	LLL	C52-C42	2.57	1.59	1.52
54	AA	2061	LLL	C52-C42	2.58	1.59	1.52
54	AA	2061	LLL	C22-C32	2.59	1.59	1.53
54	CA	2062	LLL	C42-C32	2.69	1.59	1.53
54	DB	3112	LLL	C52-C42	2.72	1.60	1.52
54	BB	3111	LLL	C42-C32	2.73	1.59	1.53
54	AA	2062	LLL	C42-C32	2.76	1.59	1.53
54	DB	3112	LLL	C42-C32	2.80	1.59	1.53
54	CA	2064	LLL	C23-C33	2.81	1.59	1.53
54	CA	2063	LLL	C42-C32	2.82	1.59	1.53
54	CA	2064	LLL	C42-C32	2.82	1.59	1.53
54	CA	2063	LLL	C52-C42	2.83	1.60	1.52
54	AA	2063	LLL	C42-C32	2.86	1.60	1.53
54	AA	2061	LLL	C23-C33	3.01	1.60	1.53
54	DB	3112	LLL	C23-C33	3.06	1.60	1.53
54	BB	3111	LLL	C23-C33	3.06	1.60	1.53
54	CA	2062	LLL	C23-C33	3.08	1.60	1.53
54	CA	2063	LLL	C23-C33	3.09	1.60	1.53
54	AA	2061	LLL	O51-C11	3.16	1.49	1.41
54	AA	2062	LLL	C23-C33	3.17	1.60	1.53
54	AA	2063	LLL	C23-C33	3.36	1.60	1.53
54	CA	2064	LLL	O51-C11	3.42	1.50	1.41
54	DB	3112	LLL	C41-C51	3.56	1.60	1.51
54	CA	2063	LLL	C41-C51	3.56	1.60	1.51
54	CA	2064	LLL	C41-C51	3.56	1.60	1.51
54	AA	2063	LLL	O51-C11	3.58	1.51	1.41
54	AA	2063	LLL	C41-C51	3.58	1.60	1.51
54	AA	2062	LLL	O51-C11	3.58	1.51	1.41
54	AA	2062	LLL	C41-C51	3.59	1.60	1.51
54	CA	2062	LLL	O51-C11	3.61	1.51	1.41
54	BB	3111	LLL	C41-C51	3.61	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	CA	2062	LLL	C41-C51	3.63	1.60	1.51
54	CA	2063	LLL	O51-C11	3.68	1.51	1.41
54	BB	3111	LLL	O51-C11	3.69	1.51	1.41
54	DB	3112	LLL	O51-C11	3.70	1.51	1.41
54	AA	2061	LLL	C41-C51	3.76	1.60	1.51
54	AA	2061	LLL	O53-C13	4.37	1.51	1.41
54	DB	3112	LLL	O53-C13	4.38	1.51	1.41
54	BB	3111	LLL	O53-C13	4.43	1.51	1.41
54	CA	2064	LLL	O53-C13	4.44	1.51	1.41
54	AA	2062	LLL	O53-C13	4.51	1.51	1.41
54	CA	2062	LLL	O53-C13	4.54	1.51	1.41
54	CA	2063	LLL	O53-C13	4.59	1.52	1.41
54	AA	2063	LLL	O53-C13	4.65	1.52	1.41
54	CA	2064	LLL	O53-C53	5.65	1.51	1.43
54	AA	2063	LLL	O53-C53	5.69	1.51	1.43
54	CA	2062	LLL	O53-C53	5.73	1.52	1.43
54	AA	2061	LLL	O53-C53	5.74	1.52	1.43
54	BB	3111	LLL	O53-C53	5.79	1.52	1.43
54	DB	3112	LLL	O53-C53	5.80	1.52	1.43
54	AA	2062	LLL	O53-C53	5.83	1.52	1.43
54	CA	2063	LLL	O53-C53	5.94	1.52	1.43

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	AA	2062	LLL	O43-C43-C83	-2.75	102.07	108.11
54	CA	2064	LLL	O43-C43-C83	-2.62	102.36	108.11
54	AA	2061	LLL	O43-C43-C83	-2.62	102.36	108.11
54	CA	2063	LLL	O43-C43-C83	-2.61	102.38	108.11
54	BB	3111	LLL	O43-C43-C83	-2.55	102.51	108.11
54	DB	3112	LLL	O43-C43-C83	-2.55	102.51	108.11
54	AA	2063	LLL	O43-C43-C83	-2.50	102.61	108.11
54	CA	2062	LLL	O43-C43-C83	-2.47	102.68	108.11
54	AA	2061	LLL	C31-C41-C51	-2.01	107.75	110.90
54	CA	2063	LLL	C13-O62-C62	2.00	123.24	118.01
54	AA	2062	LLL	C11-O51-C51	2.02	115.19	113.15
54	DB	3112	LLL	C11-O51-C51	2.07	115.23	113.15
54	AA	2061	LLL	C11-O51-C51	2.15	115.31	113.15
54	AA	2063	LLL	C11-O51-C51	2.15	115.31	113.15
54	CA	2062	LLL	C13-O62-C62	2.20	123.76	118.01
54	BB	3111	LLL	C11-O51-C51	2.28	115.45	113.15
54	AA	2062	LLL	C13-O62-C62	2.45	124.42	118.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	AA	2063	LLL	C13-O62-C62	2.64	124.91	118.01
54	CA	2064	LLL	C83-C43-C33	2.67	116.20	112.34
54	AA	2061	LLL	C13-O62-C62	2.69	125.03	118.01
54	DB	3112	LLL	C83-C43-C33	3.00	116.68	112.34
54	BB	3111	LLL	C83-C43-C33	3.05	116.75	112.34
54	CA	2063	LLL	C83-C43-C33	3.10	116.82	112.34
54	AA	2061	LLL	C83-C43-C33	3.10	116.83	112.34
54	CA	2062	LLL	C83-C43-C33	3.14	116.88	112.34
54	AA	2062	LLL	C83-C43-C33	3.35	117.19	112.34
54	AA	2063	LLL	C83-C43-C33	3.81	117.85	112.34
54	AA	2061	LLL	C53-O53-C13	4.69	117.42	111.11
54	CA	2064	LLL	C53-O53-C13	4.73	117.48	111.11
54	DB	3112	LLL	C53-O53-C13	4.84	117.63	111.11
54	BB	3111	LLL	C53-O53-C13	4.94	117.76	111.11
54	CA	2062	LLL	C53-O53-C13	5.01	117.85	111.11
54	AA	2062	LLL	C53-O53-C13	5.04	117.90	111.11
54	CA	2063	LLL	C53-O53-C13	5.16	118.06	111.11
54	AA	2063	LLL	C53-O53-C13	5.50	118.52	111.11

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	AA	2061	LLL	1	0
54	AA	2062	LLL	2	0
54	AA	2063	LLL	3	0
54	BB	3111	LLL	1	0
54	CA	2062	LLL	5	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%)	-0.53	8 (0%)	91 88	22, 85, 131, 156	0
1	CA	1530/1542 (99%)	-0.54	3 (0%)	95 93	5, 60, 120, 167	0
2	AC	206/232 (88%)	0.05	4 (1%)	70 61	14, 72, 111, 136	0
2	CC	206/232 (88%)	0.16	13 (6%)	23 17	5, 74, 103, 160	0
3	AD	205/205 (100%)	0.98	39 (19%)	2 2	21, 87, 115, 135	0
3	CD	205/205 (100%)	0.33	13 (6%)	23 17	8, 65, 107, 121	0
4	AE	150/166 (90%)	0.37	11 (7%)	18 14	6, 74, 105, 134	0
4	CE	150/166 (90%)	0.87	24 (16%)	3 3	5, 59, 96, 125	0
5	AF	100/135 (74%)	1.72	46 (46%)	0 0	22, 72, 115, 148	0
5	CF	100/135 (74%)	1.16	21 (21%)	1 1	12, 72, 109, 123	0
6	AG	150/178 (84%)	0.30	20 (13%)	4 5	47, 89, 116, 152	0
6	CG	152/178 (85%)	-0.11	3 (1%)	68 59	29, 80, 115, 134	0
7	AH	129/129 (100%)	0.52	18 (13%)	4 4	31, 80, 112, 136	0
7	CH	129/129 (100%)	0.45	13 (10%)	9 8	5, 56, 91, 112	0
8	AI	127/129 (98%)	0.51	19 (14%)	3 3	31, 83, 118, 143	0
8	CI	127/129 (98%)	0.03	1 (0%)	87 80	35, 84, 118, 157	0
9	AJ	98/103 (95%)	0.45	4 (4%)	41 32	22, 87, 121, 135	0
9	CJ	98/103 (95%)	0.42	12 (12%)	5 6	33, 84, 110, 125	0
10	AK	117/128 (91%)	0.49	7 (5%)	25 19	5, 67, 102, 117	0
10	CK	117/128 (91%)	-0.03	4 (3%)	49 39	5, 56, 101, 119	0
11	AL	123/123 (100%)	0.54	15 (12%)	5 6	22, 75, 110, 146	0
11	CL	123/123 (100%)	0.33	4 (3%)	50 40	5, 47, 103, 123	0
12	AM	114/117 (97%)	0.17	3 (2%)	59 49	58, 96, 124, 147	0
12	CM	113/117 (96%)	0.24	8 (7%)	19 14	48, 89, 116, 135	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AN	96/100 (96%)	0.08	1 (1%) 84 76	27, 85, 121, 154	0
13	CN	96/100 (96%)	0.11	6 (6%) 23 17	40, 87, 114, 142	0
14	AO	88/89 (98%)	0.54	6 (6%) 20 15	38, 80, 109, 133	0
14	CO	88/89 (98%)	0.34	4 (4%) 37 29	5, 56, 107, 128	0
15	AP	82/82 (100%)	0.77	9 (10%) 7 7	48, 88, 121, 135	0
15	CP	80/82 (97%)	0.20	5 (6%) 23 17	11, 59, 109, 147	0
16	AQ	80/83 (96%)	0.74	11 (13%) 4 4	31, 87, 117, 124	0
16	CQ	81/83 (97%)	0.10	0 100 100	9, 58, 99, 121	0
17	AR	55/74 (74%)	0.81	6 (10%) 7 7	19, 76, 118, 138	0
17	CR	55/74 (74%)	0.93	10 (18%) 2 2	19, 68, 119, 131	0
18	AS	79/91 (86%)	0.84	12 (15%) 3 3	68, 100, 124, 136	0
18	CS	80/91 (87%)	0.17	5 (6%) 23 17	48, 94, 127, 153	0
19	AT	85/86 (98%)	0.22	2 (2%) 62 52	39, 92, 123, 144	0
19	CT	85/86 (98%)	0.06	3 (3%) 48 37	19, 61, 106, 125	0
20	AB	218/240 (90%)	0.81	33 (15%) 3 3	20, 87, 113, 132	0
20	CB	218/240 (90%)	1.18	53 (24%) 1 1	29, 89, 118, 144	0
21	AU	51/70 (72%)	0.76	6 (11%) 6 6	36, 89, 126, 134	0
21	CU	51/70 (72%)	0.35	7 (13%) 4 4	46, 78, 116, 132	0
22	BA	117/120 (97%)	-0.58	2 (1%) 73 64	47, 78, 117, 140	0
22	DA	117/120 (97%)	-0.50	2 (1%) 73 64	30, 80, 115, 155	0
23	BB	2841/2904 (97%)	-0.25	34 (1%) 81 73	9, 58, 127, 165	0
23	DB	2841/2904 (97%)	-0.25	14 (0%) 91 88	5, 45, 124, 163	0
24	BI	141/141 (100%)	2.37	74 (52%) 0 0	59, 117, 149, 158	0
24	DI	141/141 (100%)	0.91	17 (12%) 6 6	70, 117, 148, 160	0
25	BC	271/272 (99%)	0.75	24 (8%) 12 10	5, 47, 88, 105	0
25	DC	271/272 (99%)	0.71	24 (8%) 12 10	5, 32, 80, 112	0
26	BD	209/209 (100%)	0.66	26 (12%) 5 6	12, 71, 107, 141	0
26	DD	209/209 (100%)	0.59	29 (13%) 4 4	5, 49, 98, 135	0
27	BK	121/123 (98%)	1.38	32 (26%) 1 1	16, 67, 106, 134	0
27	DK	121/123 (98%)	0.55	3 (2%) 61 50	5, 37, 90, 130	0
28	BP	114/114 (100%)	1.21	29 (25%) 1 1	25, 81, 113, 131	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DP	114/114 (100%)	0.35	4 (3%) 48 37	7, 49, 94, 112	0
29	BE	201/201 (100%)	0.80	32 (15%) 3 3	5, 65, 104, 147	0
29	DE	201/201 (100%)	0.44	19 (9%) 10 9	5, 62, 107, 138	0
30	BY	58/58 (100%)	0.60	6 (10%) 9 8	26, 69, 107, 137	0
30	DY	58/58 (100%)	0.14	3 (5%) 31 24	6, 64, 110, 117	0
31	B0	56/56 (100%)	0.59	7 (12%) 5 6	5, 71, 113, 136	0
31	D0	56/56 (100%)	0.08	0 100 100	10, 43, 99, 104	0
32	B4	38/38 (100%)	0.73	4 (10%) 8 7	33, 76, 108, 125	0
32	D4	38/38 (100%)	-0.23	0 100 100	15, 65, 94, 105	0
33	B1	50/54 (92%)	1.85	16 (32%) 1 0	50, 75, 102, 115	0
33	D1	50/54 (92%)	1.26	9 (18%) 2 2	27, 74, 105, 118	0
34	B3	64/64 (100%)	0.57	6 (9%) 11 9	9, 55, 82, 106	0
34	D3	64/64 (100%)	0.59	8 (12%) 5 6	5, 39, 84, 101	0
35	BV	94/94 (100%)	0.22	7 (7%) 17 14	31, 86, 115, 129	0
35	DV	94/94 (100%)	0.45	8 (8%) 13 11	8, 79, 108, 125	0
36	B2	46/46 (100%)	0.40	3 (6%) 22 16	8, 40, 81, 113	0
36	D2	46/46 (100%)	0.14	2 (4%) 39 30	5, 28, 69, 113	0
37	BL	143/144 (99%)	0.40	7 (4%) 33 25	9, 63, 99, 134	0
37	DL	143/144 (99%)	0.83	27 (18%) 2 2	5, 55, 95, 123	0
38	BM	136/136 (100%)	0.77	14 (10%) 9 8	5, 65, 100, 131	0
38	DM	136/136 (100%)	0.42	7 (5%) 32 24	5, 55, 94, 134	0
39	BX	63/63 (100%)	1.05	13 (20%) 1 1	18, 76, 110, 123	0
39	DX	63/63 (100%)	0.12	2 (3%) 51 41	36, 82, 107, 142	0
40	BH	149/149 (100%)	2.55	70 (46%) 0 0	25, 98, 122, 146	0
40	DH	149/149 (100%)	1.02	24 (16%) 3 3	18, 88, 112, 141	0
41	BJ	142/142 (100%)	0.32	8 (5%) 28 22	16, 70, 106, 118	0
41	DJ	142/142 (100%)	0.30	5 (3%) 48 37	5, 60, 101, 131	0
42	BN	120/127 (94%)	0.48	11 (9%) 11 10	14, 65, 101, 145	0
42	DN	120/127 (94%)	0.11	2 (1%) 73 64	5, 42, 75, 118	0
43	BO	116/117 (99%)	0.75	21 (18%) 2 2	40, 78, 104, 128	0
43	DO	116/117 (99%)	-0.01	4 (3%) 49 39	5, 73, 106, 157	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BQ	117/117 (100%)	-0.21	2 (1%) 73 64	5, 60, 95, 109	0
44	DQ	117/117 (100%)	0.45	8 (6%) 20 15	5, 50, 92, 120	0
45	BS	110/110 (100%)	0.83	14 (12%) 5 5	6, 56, 98, 118	0
45	DS	110/110 (100%)	1.15	20 (18%) 2 2	5, 48, 95, 128	0
46	BU	102/103 (99%)	1.46	32 (31%) 1 1	9, 71, 105, 123	0
46	DU	102/103 (99%)	0.27	2 (1%) 68 59	34, 80, 112, 130	0
47	BF	178/178 (100%)	1.12	39 (21%) 1 1	40, 95, 125, 140	0
47	DF	178/178 (100%)	1.26	40 (22%) 1 1	38, 85, 125, 138	0
48	BG	176/176 (100%)	0.93	32 (18%) 2 2	37, 88, 114, 146	0
48	DG	176/176 (100%)	0.57	23 (13%) 5 5	17, 82, 110, 133	0
49	BR	103/103 (100%)	0.07	4 (3%) 43 34	13, 78, 112, 120	0
49	DR	103/103 (100%)	0.54	12 (11%) 6 6	15, 72, 111, 128	0
50	BT	93/100 (93%)	0.45	7 (7%) 17 13	14, 70, 112, 124	0
50	DT	93/100 (93%)	0.49	8 (8%) 13 11	8, 66, 108, 120	0
51	BZ	77/78 (98%)	0.58	4 (5%) 31 24	5, 54, 93, 115	0
51	DZ	77/78 (98%)	0.11	1 (1%) 79 70	5, 43, 87, 114	0
52	BW	79/84 (94%)	0.67	8 (10%) 9 8	8, 75, 111, 136	0
52	DW	79/84 (94%)	0.09	4 (5%) 32 24	12, 65, 103, 122	0
All	All	20417/21046 (97%)	0.19	1411 (6%) 20 15	5, 68, 120, 167	0

All (1411) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
40	BH	86	ASP	10.0
40	BH	45	GLU	9.5
40	BH	93	SER	9.4
40	BH	85	GLY	8.9
40	BH	142	VAL	8.8
40	BH	130	VAL	8.5
40	BH	80	ILE	8.2
33	B1	52	LYS	8.1
23	BB	139	U	8.1
33	D1	52	LYS	7.9
8	CI	129	ARG	7.4
40	BH	84	ALA	7.3
40	BH	115	VAL	7.2

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Mol	Chain	Res	Type	RSRZ
24	BI	58	ILE	7.2
15	AP	81	ALA	7.0
4	AE	158	LYS	6.9
23	BB	140	C	6.8
24	BI	29	GLN	6.8
47	DF	173	ASP	6.8
17	CR	19	GLU	6.7
46	BU	14	THR	6.7
22	DA	88	C	6.6
24	BI	14	ALA	6.5
40	BH	124	THR	6.5
11	CL	123	ALA	6.5
15	AP	80	LYS	6.5
8	AI	129	ARG	6.5
40	BH	132	PHE	6.4
23	BB	1067	A	6.3
24	BI	51	GLY	6.1
40	BH	145	ASN	6.1
40	BH	128	HIS	6.1
24	BI	54	ILE	6.1
24	BI	59	THR	6.0
40	BH	131	SER	6.0
3	AD	177	MET	6.0
40	DH	149	GLU	6.0
17	AR	19	GLU	6.0
24	BI	17	ALA	6.0
40	BH	91	PHE	6.0
39	DX	63	ALA	5.9
23	BB	546	U	5.9
44	DQ	90	ASP	5.8
40	BH	147	VAL	5.8
24	BI	13	ALA	5.8
3	AD	22	SER	5.8
40	BH	94	ILE	5.8
24	BI	48	ILE	5.7
17	CR	71	ASP	5.7
24	BI	18	ASN	5.7
5	AF	1	MET	5.6
40	BH	92	GLY	5.6
48	BG	42	VAL	5.6
26	BD	186	LEU	5.6
24	BI	11	GLN	5.5

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Mol	Chain	Res	Type	RSRZ
5	AF	66	ALA	5.5
24	BI	47	SER	5.5
33	B1	51	ALA	5.4
49	DR	50	GLY	5.4
40	BH	144	VAL	5.3
27	BK	104	THR	5.3
52	BW	84	GLU	5.3
24	BI	28	GLY	5.3
24	DI	84	GLY	5.2
47	DF	30	VAL	5.2
51	DZ	78	TYR	5.2
40	BH	118	PRO	5.2
23	BB	613	A	5.2
40	BH	141	LYS	5.2
15	AP	82	ALA	5.1
24	BI	49	GLU	5.1
40	BH	61	VAL	5.1
29	BE	11	ALA	5.1
40	BH	102	ALA	5.1
38	BM	103	TYR	5.1
18	CS	26	ASP	5.1
24	BI	52	LEU	5.0
23	BB	654	A	5.0
23	BB	715	A	5.0
40	DH	110	VAL	5.0
5	AF	9	MET	5.0
40	BH	116	ARG	5.0
27	BK	121	GLU	5.0
5	AF	94	HIS	5.0
29	BE	143	LEU	5.0
24	BI	6	ALA	4.9
22	BA	88	C	4.9
3	AD	159	GLU	4.9
24	BI	21	PRO	4.9
5	CF	90	MET	4.9
33	B1	16	THR	4.9
47	DF	174	PHE	4.9
9	AJ	36	VAL	4.9
9	CJ	84	VAL	4.9
20	AB	87	ASP	4.9
26	BD	111	GLY	4.9
40	BH	133	GLN	4.9

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Mol	Chain	Res	Type	RSRZ
24	BI	15	GLY	4.9
27	BK	84	CYS	4.9
47	DF	157	THR	4.9
15	CP	52	LEU	4.8
40	DH	12	LEU	4.8
40	BH	148	ALA	4.8
24	BI	19	PRO	4.8
3	AD	178	GLU	4.8
23	BB	1095	A	4.8
24	BI	70	THR	4.8
20	AB	192	PRO	4.8
25	BC	114	GLN	4.8
24	BI	12	VAL	4.7
26	BD	27	ILE	4.7
15	CP	47	GLU	4.7
40	BH	146	VAL	4.7
3	AD	154	VAL	4.7
24	BI	16	MET	4.7
5	AF	8	PHE	4.7
40	BH	46	PHE	4.7
41	DJ	44	TYR	4.7
40	BH	114	GLU	4.6
3	AD	106	PHE	4.6
2	CC	167	TYR	4.6
27	BK	110	GLU	4.6
29	BE	155	GLU	4.6
52	BW	45	HIS	4.6
29	BE	124	PHE	4.6
31	B0	55	ALA	4.6
6	AG	150	PHE	4.5
43	BO	106	LEU	4.5
4	CE	81	GLN	4.5
7	AH	129	ALA	4.5
11	AL	63	THR	4.5
24	DI	83	ALA	4.5
20	AB	212	TYR	4.5
26	BD	3	GLY	4.5
24	BI	97	VAL	4.5
24	DI	99	LYS	4.5
27	BK	103	VAL	4.5
40	DH	72	ILE	4.5
24	BI	3	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
51	BZ	78	TYR	4.5
3	AD	107	GLY	4.4
29	DE	172	ALA	4.4
26	BD	209	ALA	4.4
40	BH	117	LEU	4.4
20	CB	212	TYR	4.4
24	BI	1	ALA	4.4
26	BD	15	PHE	4.4
20	CB	165	ALA	4.4
40	DH	82	SER	4.4
4	CE	158	LYS	4.3
12	CM	44	ILE	4.3
40	BH	125	THR	4.3
47	DF	24	VAL	4.3
33	D1	6	GLU	4.3
40	BH	121	VAL	4.3
26	BD	25	THR	4.3
26	BD	26	VAL	4.3
26	BD	28	GLU	4.3
8	AI	50	PRO	4.3
40	DH	122	LEU	4.3
48	BG	171	LYS	4.3
1	AA	79	G	4.3
24	DI	85	ILE	4.3
2	CC	165	GLU	4.3
20	AB	188	THR	4.3
37	DL	90	VAL	4.2
52	BW	14	ASP	4.2
40	DH	18	GLN	4.2
20	CB	68	PHE	4.2
29	DE	124	PHE	4.2
9	CJ	81	GLU	4.2
3	AD	145	ARG	4.2
40	BH	90	LEU	4.2
4	CE	117	ALA	4.2
26	DD	32	ASN	4.2
45	BS	74	ILE	4.2
20	CB	124	THR	4.2
38	BM	129	THR	4.2
24	DI	98	GLY	4.2
20	AB	195	VAL	4.2
3	AD	104	MET	4.2

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Mol	Chain	Res	Type	RSRZ
47	BF	75	GLY	4.2
5	AF	88	MET	4.2
20	CB	17	HIS	4.1
20	CB	49	PHE	4.1
29	BE	150	THR	4.1
40	BH	12	LEU	4.1
40	BH	122	LEU	4.1
3	AD	173	ASP	4.1
7	CH	129	ALA	4.1
28	BP	42	PHE	4.1
40	BH	123	ARG	4.1
40	BH	82	SER	4.1
20	AB	159	ALA	4.1
39	BX	63	ALA	4.1
40	DH	116	ARG	4.1
38	BM	136	MET	4.1
20	CB	60	ALA	4.1
25	BC	5	CYS	4.1
24	BI	60	VAL	4.1
4	CE	86	GLY	4.1
40	BH	119	ASN	4.1
24	BI	53	PRO	4.1
30	DY	58	GLU	4.1
21	AU	3	ILE	4.0
38	BM	33	LEU	4.0
25	BC	126	GLY	4.0
29	DE	169	VAL	4.0
33	B1	49	LYS	4.0
9	CJ	34	ALA	4.0
4	AE	157	GLY	4.0
40	BH	60	GLU	4.0
20	CB	126	ASP	4.0
40	BH	101	ASP	4.0
47	BF	131	VAL	4.0
33	B1	34	GLU	4.0
51	BZ	76	GLU	4.0
20	CB	163	ILE	3.9
47	DF	75	GLY	3.9
20	CB	52	ALA	3.9
28	BP	71	ARG	3.9
40	DH	73	ASN	3.9
30	BY	58	GLU	3.9

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Mol	Chain	Res	Type	RSRZ
5	AF	57	ALA	3.9
6	AG	78	ARG	3.9
5	CF	4	TYR	3.9
47	DF	55	ASP	3.9
18	AS	30	LEU	3.9
5	AF	5	GLU	3.9
18	AS	29	PRO	3.9
40	BH	127	GLU	3.9
6	AG	76	SER	3.9
48	BG	161	VAL	3.9
1	AA	78	A	3.9
5	CF	91	ARG	3.9
23	DB	1459	G	3.9
47	DF	169	LEU	3.9
3	AD	121	ALA	3.9
48	BG	167	VAL	3.9
29	BE	119	ILE	3.8
43	BO	26	LEU	3.8
15	CP	38	PHE	3.8
20	CB	30	ILE	3.8
24	BI	68	PHE	3.8
49	DR	67	GLY	3.8
40	BH	129	GLU	3.8
3	AD	108	ALA	3.8
7	CH	62	LEU	3.8
31	B0	54	ILE	3.8
37	DL	106	GLU	3.8
45	DS	110	ARG	3.8
24	BI	20	SER	3.8
5	AF	93	LYS	3.8
5	AF	67	PRO	3.8
41	DJ	45	THR	3.8
25	DC	109	LEU	3.8
12	CM	42	VAL	3.8
48	BG	102	ILE	3.8
33	D1	26	LYS	3.8
3	AD	26	ALA	3.8
4	CE	12	GLU	3.8
20	AB	100	LEU	3.8
37	DL	144	GLU	3.8
47	DF	41	GLU	3.8
45	BS	75	PHE	3.8

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Mol	Chain	Res	Type	RSRZ
25	DC	126	GLY	3.8
47	BF	35	LEU	3.7
3	AD	174	ALA	3.7
47	DF	82	TYR	3.7
24	BI	2	LYS	3.7
33	D1	51	ALA	3.7
28	BP	73	PHE	3.7
43	DO	2	ASP	3.7
28	BP	21	PRO	3.7
8	AI	20	ILE	3.7
24	BI	25	PRO	3.7
20	CB	38	HIS	3.7
20	AB	64	GLY	3.7
46	BU	59	GLU	3.7
24	BI	45	THR	3.7
48	DG	88	LEU	3.7
45	DS	105	VAL	3.7
37	DL	91	ASP	3.7
48	BG	120	ILE	3.7
26	DD	77	ARG	3.7
37	DL	123	ARG	3.7
24	BI	5	GLN	3.7
38	BM	67	VAL	3.7
20	CB	64	GLY	3.7
33	B1	10	LEU	3.7
39	BX	5	GLU	3.7
23	BB	62	U	3.7
20	AB	68	PHE	3.7
24	BI	22	PRO	3.7
4	AE	109	ALA	3.7
28	BP	75	THR	3.7
20	AB	158	ASP	3.7
24	BI	56	VAL	3.7
24	BI	34	ILE	3.6
29	BE	12	LEU	3.6
40	BH	83	LYS	3.6
32	B4	7	VAL	3.6
5	CF	62	MET	3.6
46	BU	12	VAL	3.6
28	BP	99	LEU	3.6
20	CB	56	LEU	3.6
37	DL	108	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
5	CF	67	PRO	3.6
52	BW	62	ALA	3.6
9	AJ	76	ILE	3.6
26	BD	187	LEU	3.6
1	AA	412	A	3.6
33	D1	27	ARG	3.6
10	AK	128	VAL	3.6
10	CK	13	LYS	3.6
47	DF	124	ARG	3.6
16	AQ	58	VAL	3.6
47	BF	155	ILE	3.6
10	AK	87	GLY	3.6
50	DT	70	HIS	3.6
6	CG	4	ARG	3.6
38	BM	1	MET	3.6
3	AD	21	LYS	3.5
46	BU	52	ASN	3.5
40	BH	81	ALA	3.5
20	CB	186	VAL	3.5
24	BI	86	LYS	3.5
40	BH	89	LYS	3.5
5	CF	92	THR	3.5
52	DW	84	GLU	3.5
5	AF	10	VAL	3.5
26	DD	1	MET	3.5
29	BE	190	ALA	3.5
48	DG	40	VAL	3.5
4	CE	44	ARG	3.5
20	CB	161	PHE	3.5
16	AQ	80	LYS	3.5
20	CB	160	LEU	3.5
38	BM	105	MET	3.5
10	CK	14	GLN	3.5
12	CM	47	LEU	3.5
40	BH	100	ALA	3.5
46	BU	84	PHE	3.5
48	DG	41	GLU	3.5
40	BH	48	GLU	3.5
38	BM	93	VAL	3.5
6	AG	85	GLN	3.5
43	BO	51	ALA	3.5
37	DL	85	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
20	AB	66	ILE	3.5
20	CB	150	ILE	3.5
27	BK	122	VAL	3.4
5	CF	88	MET	3.4
25	BC	70	LYS	3.4
28	BP	47	ILE	3.4
25	BC	20	ASN	3.4
28	BP	76	HIS	3.4
40	BH	103	VAL	3.4
20	CB	123	GLY	3.4
47	DF	27	VAL	3.4
45	DS	12	SER	3.4
5	AF	63	ASN	3.4
24	BI	37	PHE	3.4
21	AU	20	ARG	3.4
22	DA	52	A	3.4
41	BJ	54	ILE	3.4
20	CB	220	VAL	3.4
48	BG	176	LYS	3.4
40	BH	120	GLY	3.4
20	CB	29	PHE	3.4
5	AF	4	TYR	3.4
38	DM	1	MET	3.4
30	BY	1	ALA	3.4
28	BP	91	VAL	3.4
29	DE	188	MET	3.3
14	CO	46	HIS	3.3
3	AD	162	GLU	3.3
3	AD	175	GLY	3.3
24	BI	27	LEU	3.3
47	BF	139	GLU	3.3
10	CK	12	ARG	3.3
23	BB	645	C	3.3
26	BD	10	GLY	3.3
26	DD	59	ARG	3.3
8	AI	47	VAL	3.3
20	CB	153	MET	3.3
8	AI	29	ILE	3.3
4	CE	47	PHE	3.3
40	BH	87	GLU	3.3
47	BF	153	ILE	3.3
47	BF	30	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
40	DH	133	GLN	3.3
18	AS	65	MET	3.3
25	DC	79	ARG	3.3
29	DE	148	ILE	3.3
20	AB	99	MET	3.3
23	DB	100	U	3.3
49	DR	96	VAL	3.3
43	BO	37	ALA	3.3
9	CJ	102	LEU	3.3
5	AF	6	ILE	3.3
37	DL	142	ILE	3.3
47	BF	127	TYR	3.3
24	DI	115	ASP	3.3
48	BG	172	GLU	3.3
23	DB	613	A	3.3
29	DE	119	ILE	3.3
47	DF	44	ALA	3.3
1	AA	86	G	3.3
4	CE	13	LYS	3.3
48	BG	43	LYS	3.3
6	AG	21	LEU	3.3
29	BE	156	ASN	3.3
33	B1	35	LEU	3.3
47	BF	44	ALA	3.3
47	BF	116	LEU	3.3
3	AD	153	ARG	3.3
24	BI	79	LEU	3.3
25	DC	80	LEU	3.3
5	CF	5	GLU	3.2
23	BB	1066	U	3.2
37	BL	144	GLU	3.2
20	CB	162	VAL	3.2
26	DD	96	ILE	3.2
23	BB	1730	C	3.2
15	AP	52	LEU	3.2
26	BD	4	LEU	3.2
3	CD	171	GLU	3.2
48	BG	40	VAL	3.2
20	AB	193	ASP	3.2
20	CB	164	ASP	3.2
23	BB	1727	C	3.2
23	BB	2145	C	3.2

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Mol	Chain	Res	Type	RSRZ
7	CH	98	LEU	3.2
7	AH	102	VAL	3.2
5	AF	62	MET	3.2
7	AH	110	MET	3.2
20	CB	69	VAL	3.2
3	AD	14	GLU	3.2
37	DL	143	GLU	3.2
45	BS	51	LEU	3.2
40	DH	142	VAL	3.2
33	B1	22	THR	3.2
40	DH	94	ILE	3.2
43	BO	113	ALA	3.2
20	AB	183	PHE	3.2
25	BC	102	TYR	3.2
4	CE	85	LYS	3.2
7	CH	44	PHE	3.2
23	DB	548	G	3.2
16	AQ	78	VAL	3.2
20	AB	17	HIS	3.2
5	CF	87	SER	3.2
20	AB	216	VAL	3.2
31	B0	56	LYS	3.2
44	DQ	97	ILE	3.2
17	AR	28	LEU	3.2
24	BI	33	ASN	3.2
46	BU	33	VAL	3.2
48	DG	106	LEU	3.1
5	AF	35	LYS	3.1
35	DV	65	VAL	3.1
26	DD	2	ILE	3.1
28	BP	58	PHE	3.1
48	BG	160	GLY	3.1
3	CD	190	LEU	3.1
5	AF	83	ALA	3.1
6	AG	8	GLN	3.1
43	DO	37	ALA	3.1
27	DK	17	ARG	3.1
40	BH	140	ALA	3.1
37	DL	58	TYR	3.1
23	DB	645	C	3.1
5	AF	56	LYS	3.1
37	DL	141	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
20	CB	209	VAL	3.1
47	BF	106	ALA	3.1
4	AE	147	ASN	3.1
20	CB	50	ASN	3.1
23	DB	549	G	3.1
28	BP	70	GLU	3.1
46	BU	100	GLU	3.1
5	AF	61	LEU	3.1
20	CB	147	LEU	3.1
36	B2	46	LYS	3.1
46	DU	32	LYS	3.1
6	AG	143	MET	3.1
20	CB	99	MET	3.1
33	D1	4	ILE	3.1
7	AH	126	CYS	3.1
48	BG	148	ARG	3.1
49	BR	35	PHE	3.1
25	DC	1	ALA	3.1
29	BE	10	SER	3.1
52	DW	18	LYS	3.1
28	BP	1	SER	3.1
47	BF	59	ILE	3.1
44	DQ	55	GLN	3.1
47	DF	39	VAL	3.1
26	DD	48	ILE	3.1
46	BU	102	ILE	3.1
46	BU	61	GLU	3.1
50	BT	16	VAL	3.1
37	BL	126	ARG	3.1
6	AG	73	GLU	3.1
43	DO	3	LYS	3.1
24	DI	81	LYS	3.1
20	CB	40	ILE	3.0
5	AF	34	GLY	3.0
40	BH	79	THR	3.0
34	B3	13	PHE	3.0
6	AG	80	GLY	3.0
47	DF	33	ILE	3.0
45	BS	94	ASP	3.0
6	AG	12	LEU	3.0
18	AS	42	ASN	3.0
40	BH	126	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
20	CB	71	THR	3.0
35	DV	94	ALA	3.0
43	BO	110	ALA	3.0
47	BF	157	THR	3.0
3	CD	22	SER	3.0
24	BI	95	ASP	3.0
29	DE	143	LEU	3.0
47	BF	160	LYS	3.0
47	DF	156	THR	3.0
26	DD	4	LEU	3.0
26	BD	185	ASN	3.0
25	DC	93	VAL	3.0
26	DD	118	PHE	3.0
40	DH	13	GLY	3.0
25	DC	78	GLU	3.0
50	DT	72	GLN	3.0
23	BB	1093	G	3.0
20	AB	63	LYS	3.0
15	AP	22	ALA	3.0
24	BI	26	ALA	3.0
46	BU	93	ARG	3.0
29	BE	1	MET	3.0
13	CN	28	ALA	3.0
26	BD	188	LEU	3.0
29	BE	187	VAL	3.0
14	CO	40	GLN	2.9
20	AB	161	PHE	2.9
23	DB	653	U	2.9
45	DS	4	ILE	2.9
45	BS	65	ASP	2.9
6	AG	84	TYR	2.9
40	DH	140	ALA	2.9
48	DG	147	LEU	2.9
11	AL	11	ARG	2.9
41	DJ	20	ALA	2.9
26	DD	74	GLU	2.9
45	DS	75	PHE	2.9
5	AF	68	GLN	2.9
49	DR	65	ALA	2.9
28	BP	61	ARG	2.9
7	AH	128	VAL	2.9
24	BI	108	ILE	2.9

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Mol	Chain	Res	Type	RSRZ
3	AD	94	GLU	2.9
20	CB	67	LEU	2.9
46	BU	69	VAL	2.9
48	DG	161	VAL	2.9
14	AO	87	LEU	2.9
21	AU	23	GLU	2.9
34	B3	14	LYS	2.9
40	DH	35	LYS	2.9
17	AR	22	TYR	2.9
18	AS	48	ILE	2.9
25	BC	93	VAL	2.9
20	AB	199	ILE	2.9
26	DD	97	SER	2.9
24	BI	31	GLY	2.9
24	BI	66	PHE	2.9
11	AL	24	GLU	2.9
25	BC	34	GLU	2.9
37	DL	77	ILE	2.9
45	DS	74	ILE	2.9
20	AB	194	GLY	2.9
23	BB	653	U	2.9
3	CD	106	PHE	2.9
25	DC	81	GLU	2.9
39	BX	1	MET	2.9
50	BT	19	LYS	2.9
44	BQ	90	ASP	2.9
3	CD	18	LEU	2.9
24	BI	32	VAL	2.9
24	DI	97	VAL	2.9
47	BF	90	LEU	2.9
29	DE	149	ILE	2.9
35	DV	63	ILE	2.9
40	DH	1	MET	2.9
5	CF	59	TYR	2.9
12	CM	5	GLY	2.9
25	BC	100	ARG	2.9
24	BI	50	LYS	2.9
47	BF	161	SER	2.9
41	BJ	64	VAL	2.9
5	AF	52	ASN	2.9
23	BB	1175	A	2.9
23	BB	1726	C	2.9

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Mol	Chain	Res	Type	RSRZ
27	DK	45	GLU	2.9
50	DT	91	GLN	2.9
29	BE	23	PHE	2.9
17	CR	66	LEU	2.9
25	DC	64	VAL	2.9
23	DB	139	U	2.9
25	BC	113	ASP	2.9
20	CB	53	LEU	2.8
37	DL	89	VAL	2.8
39	BX	37	LEU	2.8
24	BI	87	SER	2.8
23	BB	1074	G	2.8
2	CC	109	GLU	2.8
26	BD	148	GLN	2.8
2	AC	156	LEU	2.8
24	BI	8	VAL	2.8
47	DF	78	ILE	2.8
34	D3	13	PHE	2.8
24	DI	52	LEU	2.8
25	DC	102	TYR	2.8
20	CB	195	VAL	2.8
23	BB	2157	G	2.8
8	AI	19	PHE	2.8
28	BP	74	GLN	2.8
46	BU	45	GLN	2.8
47	DF	172	PHE	2.8
23	BB	2146	C	2.8
9	CJ	74	VAL	2.8
13	CN	46	LYS	2.8
17	AR	63	TYR	2.8
27	BK	52	VAL	2.8
40	DH	81	ALA	2.8
2	CC	151	GLU	2.8
14	AO	3	LEU	2.8
24	BI	125	THR	2.8
29	BE	196	VAL	2.8
12	CM	1	ALA	2.8
2	AC	75	VAL	2.8
43	BO	114	GLY	2.8
47	DF	90	LEU	2.8
24	BI	7	TYR	2.8
25	DC	22	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
35	BV	83	LYS	2.8
47	DF	87	LYS	2.8
27	BK	107	LEU	2.8
30	BY	26	LEU	2.8
38	BM	102	LEU	2.8
48	BG	116	LEU	2.8
47	DF	162	ASP	2.8
48	BG	114	HIS	2.8
12	CM	3	ILE	2.8
45	DS	32	ALA	2.8
44	DQ	4	LYS	2.8
47	BF	174	PHE	2.8
2	CC	133	MET	2.8
5	AF	7	VAL	2.8
2	AC	167	TYR	2.8
20	AB	197	PHE	2.8
48	DG	37	ASN	2.8
4	AE	81	GLN	2.8
5	CF	68	GLN	2.8
20	AB	215	ALA	2.8
31	B0	51	ARG	2.8
42	BN	82	GLU	2.8
20	CB	183	PHE	2.8
26	BD	118	PHE	2.8
26	DD	35	THR	2.8
27	BK	102	PRO	2.8
4	CE	75	LEU	2.8
42	DN	83	LEU	2.8
25	BC	85	ASN	2.8
9	AJ	27	GLU	2.8
28	BP	86	LYS	2.8
39	BX	24	GLU	2.8
49	DR	48	LYS	2.8
25	DC	166	ARG	2.8
26	BD	30	GLU	2.8
3	AD	4	LEU	2.8
23	BB	1176	U	2.8
42	BN	17	ARG	2.8
5	CF	66	ALA	2.7
15	AP	47	GLU	2.7
21	CU	52	VAL	2.7
29	DE	187	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
37	DL	75	ALA	2.7
39	DX	62	GLY	2.7
24	BI	67	THR	2.7
47	BF	103	ILE	2.7
30	DY	1	ALA	2.7
39	BX	10	SER	2.7
26	DD	56	LYS	2.7
5	CF	1	MET	2.7
18	AS	60	PHE	2.7
27	BK	77	ILE	2.7
47	DF	86	CYS	2.7
5	AF	70	VAL	2.7
7	CH	71	VAL	2.7
25	BC	116	GLN	2.7
42	BN	70	THR	2.7
6	AG	81	GLY	2.7
48	DG	114	HIS	2.7
8	AI	34	LEU	2.7
37	DL	92	LEU	2.7
50	BT	1	MET	2.7
41	BJ	63	ALA	2.7
52	DW	19	ARG	2.7
48	BG	23	ILE	2.7
48	DG	176	LYS	2.7
52	BW	61	LYS	2.7
40	BH	55	GLU	2.7
48	DG	95	ALA	2.7
1	CA	1534	A	2.7
43	BO	92	PHE	2.7
3	AD	176	LYS	2.7
5	AF	90	MET	2.7
19	CT	63	LYS	2.7
29	BE	188	MET	2.7
20	CB	204	ASP	2.7
25	DC	34	GLU	2.7
47	DF	10	GLU	2.7
34	B3	19	GLY	2.7
47	BF	178	LYS	2.7
27	BK	12	ASP	2.7
42	BN	86	ARG	2.7
18	AS	26	ASP	2.7
24	DI	95	ASP	2.7

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Mol	Chain	Res	Type	RSRZ
34	D3	27	ASN	2.7
24	BI	141	ASP	2.7
27	BK	78	ARG	2.7
48	BG	169	ARG	2.7
19	CT	65	LEU	2.7
17	CR	61	ALA	2.7
5	AF	51	ILE	2.7
29	BE	189	THR	2.7
27	BK	80	ASP	2.7
48	BG	168	VAL	2.7
11	AL	62	VAL	2.7
18	CS	30	LEU	2.7
39	BX	39	GLN	2.7
7	AH	44	PHE	2.7
28	BP	48	ALA	2.7
35	DV	42	LEU	2.7
37	BL	90	VAL	2.7
47	DF	35	LEU	2.7
5	AF	92	THR	2.7
17	CR	22	TYR	2.7
47	BF	60	SER	2.7
20	CB	157	PRO	2.7
45	DS	109	ASP	2.7
47	DF	77	LYS	2.7
4	CE	109	ALA	2.6
16	AQ	7	LEU	2.6
34	B3	20	GLY	2.6
41	DJ	64	VAL	2.6
43	BO	78	VAL	2.6
47	BF	99	PHE	2.6
40	BH	13	GLY	2.6
47	DF	139	GLU	2.6
8	AI	49	GLN	2.6
45	BS	11	ARG	2.6
28	BP	41	ALA	2.6
43	BO	35	ILE	2.6
47	DF	155	ILE	2.6
7	AH	98	LEU	2.6
50	DT	87	LEU	2.6
9	CJ	65	TYR	2.6
5	AF	60	VAL	2.6
52	BW	36	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
27	BK	17	ARG	2.6
24	DI	82	ALA	2.6
52	DW	43	LYS	2.6
50	BT	15	HIS	2.6
26	DD	93	GLY	2.6
14	AO	43	PHE	2.6
23	BB	1068	G	2.6
46	BU	11	ILE	2.6
6	AG	15	PRO	2.6
23	BB	1065	U	2.6
27	BK	71	ARG	2.6
18	CS	29	PRO	2.6
11	AL	60	PHE	2.6
21	CU	23	GLU	2.6
34	D3	19	GLY	2.6
40	BH	109	GLU	2.6
8	AI	56	MET	2.6
29	BE	14	VAL	2.6
45	DS	3	THR	2.6
24	BI	10	LEU	2.6
27	BK	60	ALA	2.6
29	BE	151	GLY	2.6
29	DE	201	ALA	2.6
34	D3	53	ASP	2.6
7	AH	127	TYR	2.6
8	AI	21	LYS	2.6
12	AM	38	ILE	2.6
1	CA	412	A	2.6
14	AO	67	LEU	2.6
33	B1	12	SER	2.6
46	DU	33	VAL	2.6
49	DR	14	VAL	2.6
4	CE	118	GLY	2.6
24	BI	109	ALA	2.6
37	DL	118	THR	2.6
4	AE	94	PHE	2.6
11	CL	122	LYS	2.6
18	AS	28	LYS	2.6
24	BI	30	GLN	2.6
7	AH	60	LEU	2.6
5	AF	96	VAL	2.6
25	DC	33	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
37	BL	85	VAL	2.6
40	DH	75	LEU	2.6
46	BU	58	VAL	2.6
26	BD	110	THR	2.6
40	BH	111	ALA	2.6
11	AL	13	ARG	2.6
18	CS	39	ILE	2.6
25	BC	80	LEU	2.6
33	B1	33	LEU	2.6
24	BI	46	ASP	2.6
27	BK	79	PHE	2.6
35	BV	91	PHE	2.6
47	BF	71	LYS	2.6
47	DF	163	GLU	2.6
7	CH	92	PRO	2.6
35	DV	91	PHE	2.6
29	BE	60	TRP	2.5
39	BX	62	GLY	2.6
48	BG	45	ALA	2.6
37	DL	121	THR	2.5
49	BR	46	GLU	2.5
20	AB	157	PRO	2.5
3	AD	60	VAL	2.5
2	CC	181	ILE	2.5
20	AB	163	ILE	2.5
39	BX	13	GLU	2.5
45	BS	39	THR	2.5
46	BU	76	THR	2.5
37	DL	107	PHE	2.5
47	DF	125	GLY	2.5
46	BU	51	LEU	2.5
5	AF	17	GLN	2.5
28	BP	102	ARG	2.5
40	BH	18	GLN	2.5
43	BO	107	ALA	2.5
45	BS	76	VAL	2.5
50	BT	69	ARG	2.5
1	AA	209	U	2.5
9	CJ	25	ILE	2.5
18	AS	73	PHE	2.5
9	AJ	31	ARG	2.5
46	BU	82	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
26	DD	75	ALA	2.5
46	BU	83	GLY	2.5
35	DV	4	ILE	2.5
48	BG	147	LEU	2.5
5	AF	42	TRP	2.5
4	AE	47	PHE	2.5
27	BK	106	GLU	2.5
38	DM	104	GLU	2.5
25	BC	101	ARG	2.5
4	CE	43	GLY	2.5
24	BI	24	GLY	2.5
43	BO	24	THR	2.5
45	DS	81	SER	2.5
45	DS	103	ILE	2.5
50	DT	11	LEU	2.5
30	BY	8	GLN	2.5
5	AF	58	HIS	2.5
48	BG	35	THR	2.5
23	BB	1076	C	2.5
7	AH	39	LEU	2.5
8	AI	51	LEU	2.5
35	DV	51	GLN	2.5
10	AK	73	VAL	2.5
4	CE	46	GLY	2.5
24	DI	137	LEU	2.5
7	AH	36	ALA	2.5
7	AH	45	ILE	2.5
48	DG	160	GLY	2.5
20	CB	33	ALA	2.5
23	BB	1728	C	2.5
29	DE	121	VAL	2.5
26	BD	2	ILE	2.5
40	DH	4	ILE	2.5
11	AL	91	GLY	2.5
47	BF	33	ILE	2.5
5	AF	95	ALA	2.5
26	DD	33	ARG	2.5
39	BX	20	ASN	2.5
3	CD	162	GLU	2.5
25	DC	94	LEU	2.5
47	BF	43	ILE	2.5
11	AL	47	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
27	BK	11	ALA	2.5
32	B4	29	ALA	2.5
23	BB	1870	C	2.5
47	DF	15	LEU	2.5
3	AD	7	LYS	2.5
20	AB	31	PHE	2.5
42	BN	87	PHE	2.5
5	AF	25	TYR	2.5
7	AH	71	VAL	2.5
24	BI	38	CYS	2.5
25	BC	92	LEU	2.5
27	BK	120	PRO	2.5
46	BU	9	GLU	2.5
37	DL	96	LYS	2.5
46	BU	89	GLY	2.5
20	CB	184	ALA	2.5
1	AA	83	C	2.5
33	D1	20	TYR	2.5
26	DD	49	GLN	2.5
21	CU	20	ARG	2.5
20	CB	63	LYS	2.5
25	DC	110	LYS	2.5
29	DE	108	ILE	2.5
40	BH	56	ALA	2.5
47	DF	171	ALA	2.5
47	BF	102	LEU	2.4
48	DG	57	TYR	2.4
3	AD	146	GLU	2.4
34	B3	22	LYS	2.4
47	BF	98	PHE	2.4
3	AD	24	VAL	2.4
33	D1	35	LEU	2.4
47	DF	140	ILE	2.4
3	CD	108	ALA	2.4
24	BI	69	VAL	2.4
17	CR	67	LEU	2.4
24	BI	35	MET	2.4
24	BI	41	PHE	2.4
33	B1	6	GLU	2.4
1	CA	1032	G	2.4
6	AG	151	ALA	2.4
48	BG	101	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
26	BD	176	ASP	2.4
49	DR	95	ASP	2.4
31	B0	42	ILE	2.4
25	BC	78	GLU	2.4
26	DD	34	VAL	2.4
10	AK	20	ALA	2.4
25	DC	101	ARG	2.4
20	CB	154	GLY	2.4
40	BH	88	GLY	2.4
20	AB	165	ALA	2.4
27	BK	108	ARG	2.4
37	BL	123	ARG	2.4
47	BF	129	MET	2.4
3	AD	171	GLU	2.4
23	DB	1175	A	2.4
48	DG	51	PHE	2.4
35	DV	47	VAL	2.4
4	CE	28	ARG	2.4
3	CD	20	LEU	2.4
29	DE	3	LEU	2.4
7	CH	9	MET	2.4
17	CR	63	TYR	2.4
5	AF	64	VAL	2.4
16	AQ	75	VAL	2.4
45	DS	107	VAL	2.4
46	BU	24	VAL	2.4
50	DT	71	GLY	2.4
47	DF	45	ASP	2.4
6	AG	61	PHE	2.4
20	CB	39	ILE	2.4
10	CK	73	VAL	2.4
11	AL	61	GLU	2.4
38	DM	37	GLY	2.4
16	AQ	56	ASP	2.4
28	BP	19	PHE	2.4
39	BX	7	ARG	2.4
45	DS	1	MET	2.4
3	AD	87	GLU	2.4
48	BG	88	LEU	2.4
15	CP	41	PRO	2.4
25	BC	152	GLN	2.4
24	BI	57	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
29	BE	22	ASP	2.4
27	BK	45	GLU	2.4
42	BN	83	LEU	2.4
20	AB	75	ALA	2.4
26	DD	27	ILE	2.4
42	BN	25	ALA	2.4
5	AF	55	HIS	2.4
16	AQ	79	GLU	2.4
29	BE	152	GLU	2.4
5	AF	59	TYR	2.4
12	AM	59	VAL	2.4
29	BE	129	PRO	2.4
36	D2	1	MET	2.4
26	DD	100	LEU	2.4
20	AB	27	LYS	2.4
25	DC	90	ILE	2.4
38	DM	103	TYR	2.4
3	AD	147	LYS	2.4
46	BU	72	PHE	2.4
10	AK	76	TYR	2.4
5	AF	12	PRO	2.3
20	AB	8	MET	2.3
20	CB	128	LEU	2.3
35	BV	84	PRO	2.3
20	CB	130	LYS	2.3
43	BO	88	LYS	2.3
5	CF	64	VAL	2.3
5	CF	97	THR	2.3
27	BK	35	VAL	2.3
27	BK	3	GLN	2.3
27	BK	96	GLY	2.3
44	BQ	108	LEU	2.3
3	AD	57	LYS	2.3
25	BC	17	LYS	2.3
29	BE	6	LYS	2.3
6	AG	20	GLU	2.3
40	BH	149	GLU	2.3
46	BU	71	ILE	2.3
2	CC	156	LEU	2.3
15	AP	54	LEU	2.3
45	DS	104	THR	2.3
47	BF	65	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
48	DG	86	LEU	2.3
5	AF	36	ILE	2.3
20	CB	59	ILE	2.3
25	BC	22	GLU	2.3
5	AF	11	HIS	2.3
18	AS	40	PHE	2.3
2	CC	198	LYS	2.3
17	CR	64	LEU	2.3
19	CT	66	ILE	2.3
5	AF	65	GLU	2.3
29	DE	155	GLU	2.3
33	B1	11	VAL	2.3
13	CN	19	TYR	2.3
30	BY	55	LYS	2.3
46	BU	91	LYS	2.3
48	BG	93	TYR	2.3
27	BK	64	ARG	2.3
11	AL	92	VAL	2.3
20	CB	185	ILE	2.3
25	BC	103	ILE	2.3
24	BI	140	GLU	2.3
6	AG	147	ASN	2.3
1	AA	1441	A	2.3
24	BI	139	VAL	2.3
26	DD	203	VAL	2.3
9	CJ	85	ASP	2.3
40	BH	27	ARG	2.3
41	BJ	20	ALA	2.3
23	BB	1094	U	2.3
48	BG	19	ASN	2.3
48	DG	23	ILE	2.3
48	BG	155	PRO	2.3
38	BM	128	THR	2.3
49	BR	2	TYR	2.3
29	BE	19	PHE	2.3
6	AG	86	VAL	2.3
7	CH	124	ILE	2.3
21	AU	4	LYS	2.3
24	BI	81	LYS	2.3
32	B4	17	VAL	2.3
6	AG	77	ARG	2.3
20	AB	24	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
20	CB	213	LEU	2.3
37	DL	2	ARG	2.3
37	DL	57	LEU	2.3
45	DS	82	MET	2.3
48	DG	55	ASP	2.3
28	BP	69	VAL	2.3
42	BN	78	LYS	2.3
21	AU	34	ARG	2.3
28	BP	64	SER	2.3
43	BO	29	HIS	2.3
44	DQ	117	ALA	2.3
49	DR	26	ASP	2.3
51	BZ	60	ASP	2.3
42	BN	10	LEU	2.3
11	CL	24	GLU	2.3
26	DD	89	GLU	2.3
29	DE	190	ALA	2.3
47	BF	31	GLU	2.3
47	BF	28	PRO	2.3
3	AD	23	GLY	2.3
7	AH	74	ILE	2.3
24	BI	80	LYS	2.3
17	AR	71	ASP	2.3
45	BS	104	THR	2.3
35	BV	82	TYR	2.3
5	CF	89	VAL	2.3
9	CJ	26	VAL	2.3
12	CM	52	ILE	2.3
14	AO	2	SER	2.3
37	DL	45	GLY	2.3
3	AD	205	LYS	2.3
45	BS	78	GLU	2.3
28	BP	27	VAL	2.3
29	BE	169	VAL	2.3
43	DO	28	VAL	2.3
49	DR	66	HIS	2.3
13	AN	65	GLN	2.3
29	BE	3	LEU	2.3
48	BG	49	LEU	2.3
29	DE	168	ASP	2.3
35	BV	57	TYR	2.3
37	DL	84	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
43	BO	117	PHE	2.3
15	AP	71	VAL	2.3
26	BD	189	VAL	2.3
47	BF	79	ARG	2.3
49	BR	50	GLY	2.3
36	B2	31	LEU	2.2
47	BF	56	LEU	2.2
11	AL	14	LYS	2.2
19	AT	86	ALA	2.2
40	BH	76	GLU	2.2
3	CD	107	GLY	2.2
7	CH	35	ILE	2.2
46	BU	75	ALA	2.2
49	DR	27	ILE	2.2
48	BG	110	HIS	2.2
29	DE	60	TRP	2.2
6	CG	79	VAL	2.2
9	CJ	89	ARG	2.2
18	AS	45	GLY	2.2
47	DF	43	ILE	2.2
23	BB	138	U	2.2
23	BB	1731	G	2.2
26	BD	140	HIS	2.2
43	BO	81	ARG	2.2
45	BS	107	VAL	2.2
5	AF	33	GLU	2.2
24	BI	121	ILE	2.2
45	DS	24	ILE	2.2
45	DS	44	ALA	2.2
18	AS	38	THR	2.2
10	AK	88	PRO	2.2
36	D2	46	LYS	2.2
4	AE	122	VAL	2.2
11	AL	12	ALA	2.2
11	CL	68	GLY	2.2
14	AO	20	ASN	2.2
16	AQ	20	ILE	2.2
25	BC	115	ILE	2.2
39	BX	17	GLU	2.2
47	BF	140	ILE	2.2
28	DP	96	LEU	2.2
52	BW	6	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
16	AQ	8	GLN	2.2
23	BB	1075	C	2.2
20	AB	198	VAL	2.2
43	BO	27	VAL	2.2
3	AD	116	LEU	2.2
28	BP	26	GLU	2.2
29	BE	128	ALA	2.2
4	AE	13	LYS	2.2
4	CE	147	ASN	2.2
29	BE	153	LEU	2.2
50	BT	65	GLY	2.2
38	BM	42	THR	2.2
7	AH	47	ASP	2.2
27	BK	85	VAL	2.2
4	CE	74	ALA	2.2
13	CN	21	ALA	2.2
25	BC	104	LEU	2.2
27	BK	46	ALA	2.2
48	DG	52	GLY	2.2
40	DH	47	PHE	2.2
11	AL	54	VAL	2.2
12	AM	79	LEU	2.2
13	CN	22	LYS	2.2
20	CB	16	GLY	2.2
23	DB	546	U	2.2
38	DM	102	LEU	2.2
41	BJ	122	LEU	2.2
8	AI	127	SER	2.2
23	DB	2311	A	2.2
25	DC	66	PHE	2.2
46	BU	86	PHE	2.2
26	BD	191	GLY	2.2
47	BF	137	PHE	2.2
24	BI	4	VAL	2.2
27	BK	39	ILE	2.2
18	CS	21	ALA	2.2
23	BB	508	A	2.2
25	BC	172	THR	2.2
40	BH	77	THR	2.2
26	BD	181	ASP	2.2
41	DJ	1	MET	2.2
33	D1	37	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
7	AH	35	ILE	2.2
30	BY	43	ILE	2.2
40	BH	75	LEU	2.2
24	DI	132	ALA	2.2
5	CF	8	PHE	2.2
9	CJ	80	THR	2.2
48	DG	56	GLY	2.2
20	AB	164	ASP	2.2
26	DD	180	VAL	2.2
23	DB	2602	A	2.2
48	DG	104	LEU	2.2
12	CM	14	ALA	2.2
9	CJ	36	VAL	2.2
48	DG	42	VAL	2.2
50	DT	53	VAL	2.2
25	DC	65	ASP	2.2
5	AF	39	LEU	2.2
47	DF	127	TYR	2.2
3	CD	60	VAL	2.2
24	BI	44	LYS	2.2
32	B4	35	GLN	2.2
38	BM	110	GLU	2.2
51	BZ	47	VAL	2.2
3	AD	18	LEU	2.2
37	DL	82	LEU	2.2
49	DR	25	LEU	2.2
49	DR	98	ILE	2.2
3	CD	145	ARG	2.2
38	BM	25	ASP	2.2
46	BU	3	LYS	2.2
4	CE	80	LEU	2.2
40	BH	104	THR	2.2
42	DN	70	THR	2.2
2	CC	166	TRP	2.2
37	BL	83	ALA	2.2
47	BF	152	ASP	2.2
5	CF	65	GLU	2.2
45	DS	80	PRO	2.2
14	CO	88	ARG	2.1
23	DB	1730	C	2.1
3	AD	64	TYR	2.1
24	BI	98	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
26	DD	209	ALA	2.1
4	AE	95	MET	2.1
3	AD	158	LEU	2.1
7	CH	13	ILE	2.1
34	D3	28	LEU	2.1
20	CB	216	VAL	2.1
27	BK	15	GLY	2.1
28	BP	46	VAL	2.1
43	BO	28	VAL	2.1
8	AI	52	GLU	2.1
20	CB	122	ASP	2.1
25	DC	198	GLU	2.1
4	CE	143	LEU	2.1
11	AL	27	PRO	2.1
26	DD	95	SER	2.1
48	BG	104	LEU	2.1
24	DI	80	LYS	2.1
40	DH	141	LYS	2.1
5	AF	49	TYR	2.1
28	DP	91	VAL	2.1
13	CN	29	ILE	2.1
21	AU	35	GLU	2.1
26	DD	131	ASP	2.1
34	D3	3	ILE	2.1
48	BG	86	LEU	2.1
28	BP	11	GLN	2.1
28	BP	106	ALA	2.1
37	DL	78	ARG	2.1
47	DF	1	ALA	2.1
4	CE	139	THR	2.1
15	AP	6	LEU	2.1
24	DI	48	ILE	2.1
25	DC	92	LEU	2.1
27	DK	82	ASN	2.1
4	CE	148	SER	2.1
8	AI	18	VAL	2.1
21	CU	36	PHE	2.1
17	CR	31	TYR	2.1
47	BF	72	SER	2.1
38	DM	29	GLY	2.1
20	CB	205	ALA	2.1
35	BV	74	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
20	CB	127	LYS	2.1
28	BP	43	GLU	2.1
37	DL	103	ILE	2.1
41	BJ	72	LYS	2.1
42	BN	98	LEU	2.1
45	BS	69	LEU	2.1
6	AG	13	PRO	2.1
20	AB	74	ALA	2.1
40	DH	30	LEU	2.1
46	BU	42	LYS	2.1
8	AI	128	LYS	2.1
24	BI	65	SER	2.1
24	DI	114	ALA	2.1
29	BE	201	ALA	2.1
30	DY	4	ILE	2.1
46	BU	60	LYS	2.1
21	CU	35	GLU	2.1
34	D3	21	PHE	2.1
40	DH	139	PHE	2.1
24	BI	55	PRO	2.1
28	DP	21	PRO	2.1
33	B1	17	GLY	2.1
7	CH	39	LEU	2.1
22	BA	52	A	2.1
33	B1	14	ALA	2.1
8	AI	58	GLU	2.1
38	DM	60	GLN	2.1
40	BH	35	LYS	2.1
26	DD	47	ALA	2.1
40	BH	139	PHE	2.1
47	DF	9	ASP	2.1
23	DB	846	U	2.1
47	BF	125	GLY	2.1
27	BK	97	THR	2.1
29	BE	30	GLN	2.1
40	BH	1	MET	2.1
2	CC	186	SER	2.1
3	AD	196	GLU	2.1
29	BE	121	VAL	2.1
28	BP	62	LYS	2.1
3	AD	10	LEU	2.1
21	CU	10	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
31	B0	34	GLY	2.1
39	BX	57	LEU	2.1
4	CE	11	GLN	2.1
24	DI	116	MET	2.1
46	BU	92	VAL	2.1
7	CH	112	ASP	2.1
4	AE	114	LEU	2.1
52	BW	33	GLY	2.1
48	DG	102	ILE	2.1
3	AD	103	ARG	2.1
17	CR	56	ARG	2.1
33	B1	21	THR	2.1
34	B3	21	PHE	2.1
48	BG	51	PHE	2.1
2	AC	151	GLU	2.1
20	CB	72	LYS	2.1
33	B1	37	LYS	2.1
5	CF	94	HIS	2.1
16	AQ	43	LEU	2.1
7	CH	125	ILE	2.1
11	AL	93	ARG	2.1
25	DC	116	GLN	2.1
40	DH	19	VAL	2.1
48	DG	89	VAL	2.1
46	BU	101	THR	2.1
48	BG	50	THR	2.1
47	BF	169	LEU	2.1
5	AF	71	ILE	2.1
7	AH	125	ILE	2.1
29	DE	181	ILE	2.1
47	DF	21	TYR	2.1
25	BC	145	MET	2.1
44	DQ	111	LYS	2.1
10	AK	42	GLY	2.0
25	DC	104	LEU	2.0
5	AF	91	ARG	2.0
2	CC	152	VAL	2.0
28	DP	1	SER	2.0
37	DL	109	LYS	2.0
2	CC	180	ASP	2.0
27	BK	115	ILE	2.0
50	DT	16	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
3	CD	202	LEU	2.0
23	BB	2147	A	2.0
28	BP	40	GLN	2.0
38	BM	17	ASN	2.0
17	AR	72	ARG	2.0
40	BH	97	ARG	2.0
8	AI	46	VAL	2.0
26	BD	180	VAL	2.0
41	BJ	56	VAL	2.0
48	BG	33	THR	2.0
4	CE	110	MET	2.0
26	DD	200	ASP	2.0
29	DE	170	ARG	2.0
43	BO	115	LEU	2.0
37	BL	109	LYS	2.0
44	DQ	88	GLU	2.0
5	CF	71	ILE	2.0
6	CG	74	VAL	2.0
45	BS	47	VAL	2.0
3	CD	176	LYS	2.0
14	CO	3	LEU	2.0
43	BO	25	ARG	2.0
47	BF	3	LEU	2.0
7	AH	81	GLY	2.0
43	BO	99	TYR	2.0
44	DQ	58	GLN	2.0
47	DF	153	ILE	2.0
5	CF	9	MET	2.0
8	AI	60	LEU	2.0
19	AT	27	MET	2.0
21	CU	22	CYS	2.0
41	BJ	123	LYS	2.0
29	BE	148	ILE	2.0
47	DF	28	PRO	2.0
1	AA	80	A	2.0
2	CC	199	VAL	2.0
16	AQ	33	TYR	2.0
48	DG	136	ASP	2.0
4	CE	95	MET	2.0
45	DS	5	ALA	2.0
15	CP	46	LYS	2.0
46	BU	21	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
23	BB	102	U	2.0
26	DD	30	GLU	2.0
35	BV	32	GLY	2.0
45	BS	38	TYR	2.0
26	BD	116	LYS	2.0
31	B0	23	ALA	2.0
34	D3	64	ALA	2.0
45	DS	21	ALA	2.0
36	B2	16	HIS	2.0
50	BT	76	ARG	2.0
8	AI	27	ILE	2.0
42	BN	21	PHE	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

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
54	LLL	AA	2063	31/31	0.80	0.39	11.61	62,62,62,62	31
54	LLL	AA	2062	31/31	0.79	0.37	9.91	73,73,73,73	31
54	LLL	DB	3112	31/31	0.87	0.36	8.89	54,54,54,54	0
53	MG	DB	3089	1/1	0.97	0.29	7.98	52,52,52,52	0
53	MG	AA	2051	1/1	0.90	0.23	7.34	66,66,66,66	0
54	LLL	CA	2063	31/31	0.88	0.24	5.45	70,70,70,70	0
53	MG	DB	3059	1/1	0.44	0.47	4.59	100,100,100,100	0
54	LLL	BB	3111	31/31	0.86	0.33	3.56	67,67,67,67	31
53	MG	BB	3087	1/1	0.96	0.24	2.98	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	CA	2038	1/1	0.93	0.17	2.82	77,77,77,77	0
53	MG	DB	3030	1/1	0.80	0.28	2.62	26,26,26,26	0
53	MG	DB	3088	1/1	0.99	0.27	2.56	18,18,18,18	0
53	MG	DB	3090	1/1	0.94	0.18	1.71	57,57,57,57	0
54	LLL	AA	2061	31/31	0.94	0.29	1.41	20,20,20,20	0
53	MG	CA	2045	1/1	0.99	0.16	1.18	77,77,77,77	0
53	MG	DB	3087	1/1	0.92	0.23	1.14	63,63,63,63	0
53	MG	BB	3040	1/1	0.97	0.20	0.56	40,40,40,40	0
53	MG	CA	2033	1/1	0.99	0.17	0.46	57,57,57,57	0
54	LLL	CA	2064	31/31	0.88	0.28	0.41	41,41,41,41	31
53	MG	BB	3081	1/1	0.77	0.23	0.38	40,40,40,40	0
54	LLL	CA	2062	31/31	0.95	0.21	0.29	9,9,9,9	0
53	MG	BB	3011	1/1	0.97	0.23	0.28	21,21,21,21	0
53	MG	BB	3110	1/1	0.93	0.14	0.20	74,74,74,74	0
53	MG	DB	3111	1/1	0.87	0.20	-0.08	43,43,43,43	0
53	MG	AA	2053	1/1	0.89	0.16	-0.23	58,58,58,58	0
53	MG	DB	3110	1/1	0.93	0.18	-0.26	29,29,29,29	0
53	MG	BB	3098	1/1	0.94	0.18	-0.39	43,43,43,43	0
53	MG	BB	3085	1/1	0.93	0.19	-0.41	59,59,59,59	0
53	MG	DB	3096	1/1	0.98	0.17	-0.49	5,5,5,5	0
53	MG	CA	2053	1/1	0.93	0.09	-0.50	51,51,51,51	0
53	MG	CA	2032	1/1	0.98	0.15	-0.50	22,22,22,22	0
53	MG	DB	3051	1/1	0.96	0.18	-0.64	57,57,57,57	0
53	MG	BB	3062	1/1	0.92	0.18	-0.68	29,29,29,29	0
53	MG	DB	3055	1/1	0.92	0.18	-0.69	11,11,11,11	0
53	MG	CA	2039	1/1	0.98	0.14	-0.70	19,19,19,19	0
53	MG	DB	3099	1/1	0.92	0.18	-0.72	5,5,5,5	0
53	MG	BB	3092	1/1	0.98	0.10	-0.77	40,40,40,40	0
53	MG	BB	3016	1/1	0.98	0.18	-0.80	43,43,43,43	0
53	MG	AA	2035	1/1	0.40	0.08	-0.85	71,71,71,71	0
53	MG	BB	3086	1/1	0.99	0.19	-0.98	5,5,5,5	0
53	MG	CA	2036	1/1	0.80	0.06	-1.09	74,74,74,74	0
55	ZN	D4	101	1/1	0.95	0.08	-1.11	45,45,45,45	0
53	MG	BB	3021	1/1	0.95	0.12	-1.24	22,22,22,22	0
53	MG	CA	2014	1/1	0.89	0.05	-1.25	72,72,72,72	0
53	MG	BB	3083	1/1	0.98	0.18	-1.27	33,33,33,33	0
53	MG	CN	201	1/1	0.95	0.07	-1.28	50,50,50,50	0
53	MG	DB	3014	1/1	0.98	0.08	-1.30	13,13,13,13	0
53	MG	AA	2009	1/1	0.98	0.14	-1.38	27,27,27,27	0
53	MG	BB	3005	1/1	0.94	0.15	-1.41	5,5,5,5	0
53	MG	DB	3084	1/1	0.94	0.18	-1.48	25,25,25,25	0
53	MG	AA	2007	1/1	0.90	0.09	-1.58	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3047	1/1	0.99	0.20	-1.58	5,5,5,5	0
55	ZN	B4	101	1/1	0.90	0.09	-1.59	82,82,82,82	0
53	MG	AA	2013	1/1	0.89	0.04	-1.64	70,70,70,70	0
53	MG	AA	2036	1/1	0.88	0.06	-1.72	62,62,62,62	0
53	MG	DB	3007	1/1	0.98	0.16	-1.76	18,18,18,18	0
53	MG	CA	2016	1/1	0.97	0.12	-1.80	10,10,10,10	0
53	MG	BB	3023	1/1	0.85	0.13	-1.92	11,11,11,11	0
53	MG	DB	3074	1/1	0.94	0.11	-1.93	5,5,5,5	0
53	MG	DB	3092	1/1	0.87	0.14	-2.01	76,76,76,76	0
53	MG	CA	2012	1/1	0.99	0.08	-2.13	49,49,49,49	0
53	MG	DB	3078	1/1	0.97	0.09	-2.15	48,48,48,48	0
53	MG	BB	3065	1/1	0.94	0.11	-2.19	44,44,44,44	0
53	MG	BB	3013	1/1	0.93	0.12	-2.27	41,41,41,41	0
53	MG	AA	2038	1/1	0.97	0.08	-2.29	45,45,45,45	0
53	MG	BB	3037	1/1	0.95	0.10	-2.29	29,29,29,29	0
53	MG	BB	3082	1/1	0.93	0.16	-2.35	5,5,5,5	0
53	MG	BB	3088	1/1	0.92	0.08	-2.53	26,26,26,26	0
53	MG	BB	3090	1/1	0.96	0.09	-2.57	60,60,60,60	0
53	MG	DB	3003	1/1	0.95	0.12	-2.57	17,17,17,17	0
53	MG	CA	2005	1/1	0.99	0.10	-2.67	10,10,10,10	0
53	MG	AA	2001	1/1	0.96	0.08	-3.02	27,27,27,27	0
53	MG	BB	3079	1/1	0.90	0.14	-3.02	52,52,52,52	0
53	MG	DB	3036	1/1	0.94	0.09	-3.05	26,26,26,26	0
53	MG	AA	2030	1/1	0.74	0.07	-3.19	88,88,88,88	0
53	MG	BB	3012	1/1	0.98	0.06	-3.20	31,31,31,31	0
53	MG	AA	2010	1/1	0.98	0.06	-3.32	45,45,45,45	0
53	MG	DB	3085	1/1	0.96	0.13	-3.32	5,5,5,5	0
53	MG	DB	3006	1/1	0.94	0.10	-3.56	5,5,5,5	0
53	MG	AA	2003	1/1	0.95	0.13	-3.59	29,29,29,29	0
53	MG	DB	3079	1/1	0.98	0.14	-3.64	43,43,43,43	0
53	MG	DB	3069	1/1	0.98	0.19	-3.78	21,21,21,21	0
53	MG	CA	2056	1/1	0.91	0.09	-3.78	32,32,32,32	0
53	MG	BB	3103	1/1	0.98	0.11	-3.84	5,5,5,5	0
53	MG	DB	3108	1/1	0.95	0.08	-3.85	5,5,5,5	0
53	MG	DB	3076	1/1	0.99	0.12	-3.96	43,43,43,43	0
53	MG	CA	2043	1/1	0.83	0.07	-4.05	31,31,31,31	0
53	MG	CA	2017	1/1	0.97	0.04	-4.17	5,5,5,5	0
53	MG	AA	2043	1/1	0.98	0.09	-4.17	44,44,44,44	0
53	MG	DB	3080	1/1	0.96	0.09	-4.24	5,5,5,5	0
53	MG	DB	3035	1/1	0.94	0.08	-4.43	54,54,54,54	0
53	MG	DB	3056	1/1	0.97	0.11	-4.49	5,5,5,5	0
53	MG	BB	3066	1/1	0.95	0.10	-4.65	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3002	1/1	0.99	0.14	-4.71	12,12,12,12	0
53	MG	CA	2055	1/1	0.98	0.09	-4.71	31,31,31,31	0
53	MG	DB	3010	1/1	0.94	0.10	-4.81	14,14,14,14	0
53	MG	BB	3048	1/1	0.99	0.04	-4.93	22,22,22,22	0
53	MG	BB	3002	1/1	0.98	0.07	-5.06	5,5,5,5	0
53	MG	BB	3108	1/1	0.96	0.09	-5.06	12,12,12,12	0
53	MG	BB	3052	1/1	0.90	0.08	-5.13	26,26,26,26	0
53	MG	BB	3029	1/1	0.95	0.07	-5.22	5,5,5,5	0
53	MG	BB	3019	1/1	0.95	0.08	-5.55	49,49,49,49	0
53	MG	BB	3069	1/1	0.97	0.07	-5.57	5,5,5,5	0
53	MG	DB	3103	1/1	0.99	0.08	-5.84	7,7,7,7	0
53	MG	BB	3094	1/1	0.89	0.12	-5.88	69,69,69,69	0
53	MG	DB	3070	1/1	0.97	0.09	-5.94	43,43,43,43	0
53	MG	BB	3026	1/1	0.93	0.10	-6.00	24,24,24,24	0
53	MG	CA	2001	1/1	0.98	0.05	-6.01	5,5,5,5	0
53	MG	CA	2040	1/1	0.98	0.08	-6.11	12,12,12,12	0
53	MG	BB	3056	1/1	0.97	0.07	-6.64	22,22,22,22	0
53	MG	DB	3044	1/1	0.98	0.06	-6.81	18,18,18,18	0
53	MG	BB	3061	1/1	0.90	0.06	-6.92	45,45,45,45	0
53	MG	DB	3009	1/1	0.90	0.08	-6.95	5,5,5,5	0
53	MG	BB	3049	1/1	0.95	0.10	-7.21	20,20,20,20	0
53	MG	AA	2054	1/1	0.94	0.06	-7.64	66,66,66,66	0
53	MG	BB	3001	1/1	0.97	0.07	-7.74	8,8,8,8	0
53	MG	DB	3019	1/1	0.97	0.05	-8.74	6,6,6,6	0
53	MG	AA	2044	1/1	0.97	0.05	-10.17	48,48,48,48	0
53	MG	DB	3072	1/1	0.93	0.07	-10.26	25,25,25,25	0
53	MG	CA	2004	1/1	0.99	0.05	-10.56	13,13,13,13	0
53	MG	DB	3001	1/1	0.99	0.12	-11.76	5,5,5,5	0
53	MG	BB	3035	1/1	0.94	0.08	-13.87	35,35,35,35	0
53	MG	CA	2020	1/1	0.92	0.52	-	85,85,85,85	0
53	MG	DB	3031	1/1	0.97	0.17	-	8,8,8,8	0
53	MG	BB	3020	1/1	0.96	0.12	-	13,13,13,13	0
53	MG	AA	2059	1/1	0.74	0.32	-	102,102,102,102	0
53	MG	AA	2012	1/1	0.80	0.07	-	70,70,70,70	0
53	MG	BB	3089	1/1	0.95	0.17	-	63,63,63,63	0
53	MG	CA	2015	1/1	0.90	0.06	-	108,108,108,108	0
53	MG	DB	3049	1/1	0.98	0.08	-	5,5,5,5	0
53	MG	CA	2007	1/1	0.96	0.12	-	47,47,47,47	0
53	MG	BB	3077	1/1	0.86	0.10	-	44,44,44,44	0
53	MG	BB	3068	1/1	0.95	0.07	-	37,37,37,37	0
53	MG	BB	3024	1/1	0.89	0.04	-	21,21,21,21	0
53	MG	DB	3098	1/1	0.99	0.22	-	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3062	1/1	0.96	0.08	-	43,43,43,43	0
53	MG	AA	2056	1/1	0.55	0.23	-	103,103,103,103	0
53	MG	CA	2027	1/1	0.74	0.15	-	55,55,55,55	1
53	MG	AA	2029	1/1	0.98	0.14	-	50,50,50,50	0
53	MG	AA	2002	1/1	0.89	0.32	-	100,100,100,100	0
53	MG	CA	2003	1/1	0.99	0.08	-	44,44,44,44	0
53	MG	DB	3052	1/1	0.91	0.17	-	62,62,62,62	0
53	MG	AA	2022	1/1	0.69	0.31	-	100,100,100,100	0
53	MG	CA	2008	1/1	0.87	0.07	-	86,86,86,86	0
53	MG	BB	3032	1/1	0.93	0.14	-	36,36,36,36	0
53	MG	CA	2060	1/1	0.93	0.05	-	55,55,55,55	0
53	MG	DB	3027	1/1	0.95	0.13	-	12,12,12,12	0
53	MG	DB	3039	1/1	0.94	0.06	-	36,36,36,36	0
53	MG	CA	2047	1/1	0.93	0.11	-	74,74,74,74	0
53	MG	AA	2019	1/1	0.82	0.15	-	87,87,87,87	0
53	MG	DB	3081	1/1	0.98	0.12	-	5,5,5,5	0
53	MG	AA	2026	1/1	0.92	0.13	-	51,51,51,51	1
53	MG	CA	2061	1/1	0.96	0.06	-	25,25,25,25	0
53	MG	DB	3086	1/1	0.97	0.19	-	24,24,24,24	0
53	MG	BB	3054	1/1	0.93	0.06	-	39,39,39,39	0
53	MG	CA	2011	1/1	0.92	0.08	-	82,82,82,82	0
53	MG	DB	3075	1/1	0.99	0.08	-	41,41,41,41	0
53	MG	DB	3083	1/1	0.96	0.17	-	56,56,56,56	0
53	MG	AA	2014	1/1	0.79	0.07	-	72,72,72,72	0
53	MG	DB	3094	1/1	0.98	0.04	-	14,14,14,14	0
53	MG	DB	3017	1/1	0.97	0.15	-	5,5,5,5	0
53	MG	BB	3046	1/1	0.96	0.13	-	50,50,50,50	0
53	MG	AA	2006	1/1	0.97	0.05	-	57,57,57,57	0
53	MG	DB	3095	1/1	0.70	0.12	-	96,96,96,96	0
53	MG	DB	3105	1/1	0.95	0.11	-	30,30,30,30	0
53	MG	AA	2039	1/1	0.47	0.35	-	92,92,92,92	0
53	MG	DB	3013	1/1	0.79	0.18	-	37,37,37,37	0
53	MG	AA	2028	1/1	0.98	0.08	-	53,53,53,53	0
53	MG	DB	3054	1/1	0.97	0.08	-	13,13,13,13	0
53	MG	AA	2023	1/1	0.62	0.51	-	44,44,44,44	1
53	MG	BB	3051	1/1	0.93	0.12	-	43,43,43,43	0
53	MG	CA	2019	1/1	0.94	0.10	-	63,63,63,63	0
53	MG	BB	3003	1/1	0.95	0.09	-	17,17,17,17	0
53	MG	CA	2051	1/1	0.98	0.07	-	38,38,38,38	0
53	MG	CA	2050	1/1	0.98	0.16	-	5,5,5,5	0
53	MG	CA	2031	1/1	0.97	0.10	-	37,37,37,37	0
53	MG	CA	2002	1/1	0.99	0.12	-	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	CA	2021	1/1	0.95	0.11	-	70,70,70,70	0
53	MG	BB	3091	1/1	0.95	0.15	-	34,34,34,34	0
53	MG	DB	3037	1/1	0.94	0.21	-	5,5,5,5	0
53	MG	AA	2031	1/1	0.89	0.13	-	49,49,49,49	0
53	MG	CA	2041	1/1	0.96	0.09	-	69,69,69,69	0
53	MG	DB	3012	1/1	0.98	0.17	-	14,14,14,14	0
53	MG	DB	3042	1/1	0.93	0.13	-	22,22,22,22	0
53	MG	DB	3004	1/1	0.92	0.20	-	21,21,21,21	0
53	MG	BB	3078	1/1	0.86	0.30	-	67,67,67,67	0
53	MG	BB	3028	1/1	0.99	0.15	-	16,16,16,16	0
53	MG	CA	2044	1/1	0.97	0.07	-	67,67,67,67	0
53	MG	BB	3008	1/1	0.94	0.07	-	80,80,80,80	0
53	MG	BB	3006	1/1	0.97	0.09	-	19,19,19,19	0
53	MG	BB	3043	1/1	0.76	0.20	-	86,86,86,86	0
53	MG	CA	2048	1/1	0.95	0.23	-	65,65,65,65	0
53	MG	BB	3059	1/1	0.98	0.09	-	39,39,39,39	0
53	MG	BB	3004	1/1	0.90	0.05	-	43,43,43,43	0
53	MG	AA	2005	1/1	0.61	0.10	-	72,72,72,72	0
53	MG	CA	2049	1/1	0.95	0.16	-	63,63,63,63	0
53	MG	BB	3093	1/1	0.88	0.30	-	80,80,80,80	0
53	MG	DB	3082	1/1	0.97	0.07	-	42,42,42,42	0
53	MG	DB	3040	1/1	0.98	0.13	-	5,5,5,5	0
53	MG	CA	2010	1/1	0.97	0.07	-	59,59,59,59	0
53	MG	BB	3025	1/1	0.99	0.09	-	51,51,51,51	0
53	MG	DB	3026	1/1	0.96	0.10	-	33,33,33,33	0
53	MG	DB	3048	1/1	0.96	0.07	-	36,36,36,36	0
53	MG	AA	2034	1/1	0.89	0.06	-	42,42,42,42	0
53	MG	BB	3034	1/1	0.93	0.09	-	52,52,52,52	0
53	MG	AA	2041	1/1	0.95	0.10	-	57,57,57,57	0
53	MG	BB	3045	1/1	0.99	0.07	-	19,19,19,19	0
53	MG	AA	2052	1/1	0.97	0.10	-	69,69,69,69	0
53	MG	BB	3084	1/1	0.98	0.30	-	67,67,67,67	0
53	MG	BB	3022	1/1	0.92	0.19	-	44,44,44,44	0
53	MG	BB	3015	1/1	1.00	0.06	-	5,5,5,5	0
53	MG	DB	3028	1/1	0.95	0.09	-	37,37,37,37	0
53	MG	DB	3106	1/1	0.98	0.17	-	37,37,37,37	0
53	MG	CA	2058	1/1	0.95	0.21	-	63,63,63,63	0
53	MG	BB	3017	1/1	0.97	0.06	-	16,16,16,16	0
53	MG	DB	3025	1/1	0.98	0.13	-	5,5,5,5	0
53	MG	AA	2024	1/1	0.88	0.13	-	73,73,73,73	0
53	MG	AA	2004	1/1	0.98	0.15	-	35,35,35,35	0
53	MG	AA	2027	1/1	0.95	0.18	-	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3077	1/1	0.97	0.15	-	50,50,50,50	0
53	MG	DB	3066	1/1	0.91	0.31	-	100,100,100,100	0
53	MG	BB	3070	1/1	0.96	0.15	-	24,24,24,24	0
53	MG	BB	3047	1/1	0.95	0.08	-	77,77,77,77	0
53	MG	DB	3046	1/1	0.98	0.10	-	5,5,5,5	0
53	MG	BB	3010	1/1	0.84	0.11	-	73,73,73,73	0
53	MG	DB	3015	1/1	0.91	0.10	-	50,50,50,50	0
53	MG	DB	3064	1/1	0.96	0.04	-	11,11,11,11	0
53	MG	AA	2008	1/1	0.94	0.13	-	81,81,81,81	0
53	MG	AA	2047	1/1	0.86	0.46	-	73,73,73,73	0
53	MG	DB	3024	1/1	0.96	0.17	-	53,53,53,53	0
53	MG	BB	3057	1/1	0.50	0.31	-	72,72,72,72	0
53	MG	CA	2009	1/1	0.90	0.05	-	84,84,84,84	0
53	MG	BB	3007	1/1	0.99	0.06	-	60,60,60,60	0
53	MG	BB	3067	1/1	0.96	0.07	-	40,40,40,40	0
53	MG	DB	3041	1/1	0.98	0.15	-	41,41,41,41	0
53	MG	BB	3064	1/1	0.95	0.07	-	37,37,37,37	0
53	MG	BB	3027	1/1	0.89	0.10	-	24,24,24,24	0
53	MG	BB	3100	1/1	0.49	0.20	-	105,105,105,105	0
53	MG	CA	2026	1/1	0.74	0.38	-	40,40,40,40	1
53	MG	DB	3109	1/1	0.99	0.10	-	28,28,28,28	0
53	MG	BB	3106	1/1	0.98	0.08	-	31,31,31,31	0
53	MG	DB	3034	1/1	0.89	0.19	-	74,74,74,74	0
53	MG	BB	3033	1/1	0.88	0.55	-	90,90,90,90	0
53	MG	BB	3109	1/1	0.98	0.12	-	37,37,37,37	0
53	MG	BB	3042	1/1	0.66	0.08	-	96,96,96,96	0
53	MG	DB	3032	1/1	0.90	0.10	-	45,45,45,45	0
53	MG	BB	3095	1/1	0.86	0.14	-	59,59,59,59	0
53	MG	BB	3009	1/1	0.96	0.07	-	70,70,70,70	0
53	MG	DB	3008	1/1	0.98	0.12	-	8,8,8,8	0
53	MG	DB	3045	1/1	0.91	0.08	-	66,66,66,66	0
53	MG	CA	2025	1/1	0.95	0.12	-	72,72,72,72	0
53	MG	CA	2029	1/1	0.93	0.17	-	57,57,57,57	1
53	MG	BB	3031	1/1	0.97	0.06	-	32,32,32,32	0
53	MG	DB	3033	1/1	0.93	0.11	-	18,18,18,18	0
53	MG	AA	2021	1/1	0.94	0.10	-	23,23,23,23	0
53	MG	AA	2049	1/1	0.80	0.07	-	93,93,93,93	0
53	MG	DB	3101	1/1	0.96	0.26	-	26,26,26,26	0
53	MG	BB	3039	1/1	0.97	0.14	-	35,35,35,35	0
53	MG	DB	3093	1/1	0.98	0.19	-	7,7,7,7	0
53	MG	AA	2045	1/1	0.95	0.10	-	48,48,48,48	0
53	MG	BB	3058	1/1	0.96	0.10	-	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3050	1/1	0.95	0.07	-	73,73,73,73	0
53	MG	BB	3080	1/1	0.93	0.21	-	56,56,56,56	0
53	MG	DB	3023	1/1	0.89	0.06	-	13,13,13,13	0
53	MG	DB	3091	1/1	0.98	0.26	-	45,45,45,45	0
53	MG	AA	2032	1/1	0.87	0.12	-	67,67,67,67	0
53	MG	BB	3071	1/1	0.96	0.09	-	63,63,63,63	0
53	MG	DB	3005	1/1	0.96	0.17	-	6,6,6,6	0
53	MG	CA	2042	1/1	0.90	0.09	-	66,66,66,66	0
53	MG	CA	2013	1/1	0.98	0.13	-	48,48,48,48	0
53	MG	CA	2023	1/1	0.93	0.06	-	54,54,54,54	0
53	MG	DB	3073	1/1	0.98	0.10	-	33,33,33,33	0
53	MG	AA	2046	1/1	0.89	0.11	-	95,95,95,95	0
53	MG	DB	3029	1/1	0.94	0.06	-	66,66,66,66	0
53	MG	BB	3107	1/1	0.91	0.12	-	41,41,41,41	0
53	MG	BB	3073	1/1	0.96	0.21	-	33,33,33,33	0
53	MG	AA	2042	1/1	0.88	0.08	-	28,28,28,28	0
53	MG	DB	3102	1/1	0.96	0.15	-	16,16,16,16	0
53	MG	BB	3096	1/1	0.95	0.12	-	44,44,44,44	0
53	MG	AA	2058	1/1	0.90	0.07	-	94,94,94,94	0
53	MG	CA	2034	1/1	0.95	0.13	-	15,15,15,15	0
53	MG	AA	2015	1/1	0.86	0.20	-	78,78,78,78	0
53	MG	CA	2006	1/1	0.98	0.15	-	73,73,73,73	0
53	MG	DB	3104	1/1	0.97	0.17	-	55,55,55,55	0
53	MG	DB	3100	1/1	0.98	0.09	-	5,5,5,5	0
53	MG	AA	2025	1/1	0.66	0.26	-	50,50,50,50	1
53	MG	BB	3041	1/1	0.98	0.12	-	18,18,18,18	0
53	MG	CA	2037	1/1	0.91	0.08	-	69,69,69,69	0
53	MG	BB	3104	1/1	0.95	0.15	-	18,18,18,18	0
53	MG	AA	2016	1/1	0.96	0.10	-	36,36,36,36	0
53	MG	DB	3063	1/1	0.97	0.09	-	21,21,21,21	0
53	MG	DB	3020	1/1	0.96	0.20	-	5,5,5,5	0
53	MG	DB	3097	1/1	0.90	0.19	-	42,42,42,42	0
53	MG	DB	3071	1/1	0.96	0.10	-	34,34,34,34	0
53	MG	AA	2050	1/1	0.90	0.05	-	103,103,103,103	0
53	MG	DB	3065	1/1	0.98	0.16	-	16,16,16,16	0
53	MG	CA	2057	1/1	0.91	0.05	-	61,61,61,61	0
53	MG	BB	3060	1/1	0.99	0.19	-	59,59,59,59	0
53	MG	BB	3030	1/1	0.91	0.05	-	53,53,53,53	0
53	MG	CA	2028	1/1	0.95	0.05	-	77,77,77,77	0
53	MG	AA	2018	1/1	0.93	0.10	-	76,76,76,76	0
53	MG	CA	2059	1/1	0.94	0.17	-	51,51,51,51	0
53	MG	BB	3055	1/1	0.93	0.17	-	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	BB	3105	1/1	0.97	0.12	-	34,34,34,34	0
53	MG	DB	3053	1/1	0.95	0.06	-	66,66,66,66	0
53	MG	BB	3097	1/1	0.84	0.12	-	56,56,56,56	0
53	MG	DB	3011	1/1	0.98	0.21	-	35,35,35,35	0
53	MG	AA	2017	1/1	0.87	0.07	-	76,76,76,76	0
53	MG	CA	2054	1/1	0.95	0.08	-	91,91,91,91	0
53	MG	AA	2040	1/1	0.98	0.15	-	65,65,65,65	0
53	MG	AA	2020	1/1	0.95	0.04	-	91,91,91,91	0
53	MG	CA	2024	1/1	0.97	0.07	-	23,23,23,23	0
53	MG	BB	3044	1/1	0.96	0.14	-	55,55,55,55	0
53	MG	BB	3076	1/1	0.98	0.09	-	23,23,23,23	0
53	MG	DB	3058	1/1	0.87	0.79	-	96,96,96,96	0
53	MG	BB	3050	1/1	0.96	0.08	-	18,18,18,18	0
53	MG	DB	3043	1/1	0.95	0.12	-	5,5,5,5	0
53	MG	BB	3014	1/1	0.97	0.06	-	39,39,39,39	0
53	MG	BB	3101	1/1	0.95	0.09	-	11,11,11,11	0
53	MG	DB	3018	1/1	0.95	0.14	-	48,48,48,48	0
53	MG	CA	2046	1/1	0.98	0.07	-	70,70,70,70	0
53	MG	CA	2030	1/1	0.95	0.08	-	31,31,31,31	0
53	MG	DB	3021	1/1	0.96	0.16	-	5,5,5,5	0
53	MG	BB	3038	1/1	0.86	0.12	-	77,77,77,77	0
53	MG	BB	3053	1/1	0.94	0.05	-	59,59,59,59	0
53	MG	DB	3061	1/1	0.93	0.14	-	58,58,58,58	0
53	MG	BB	3099	1/1	0.90	0.11	-	56,56,56,56	0
53	MG	CA	2022	1/1	0.85	0.05	-	105,105,105,105	0
53	MG	DB	3038	1/1	0.97	0.14	-	17,17,17,17	0
53	MG	AA	2037	1/1	0.78	0.55	-	87,87,87,87	0
53	MG	CA	2052	1/1	0.87	0.10	-	66,66,66,66	0
53	MG	BB	3072	1/1	0.95	0.14	-	57,57,57,57	0
53	MG	AA	2011	1/1	0.90	0.08	-	41,41,41,41	0
53	MG	DB	3068	1/1	0.96	0.14	-	5,5,5,5	0
53	MG	BB	3074	1/1	0.95	0.09	-	9,9,9,9	0
53	MG	BB	3018	1/1	0.98	0.23	-	54,54,54,54	0
53	MG	AA	2048	1/1	0.95	0.11	-	48,48,48,48	0
53	MG	DB	3057	1/1	0.85	0.08	-	53,53,53,53	0
53	MG	BB	3102	1/1	0.93	0.10	-	16,16,16,16	0
53	MG	DB	3016	1/1	0.96	0.07	-	17,17,17,17	0
53	MG	BB	3063	1/1	0.92	0.18	-	51,51,51,51	0
53	MG	CA	2035	1/1	0.83	0.08	-	85,85,85,85	0
53	MG	DB	3107	1/1	0.92	0.08	-	15,15,15,15	0
53	MG	BB	3036	1/1	0.92	0.14	-	57,57,57,57	0
53	MG	BB	3075	1/1	0.97	0.19	-	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3067	1/1	0.99	0.11	-	5,5,5,5	0
53	MG	AA	2060	1/1	0.93	0.11	-	46,46,46,46	0
53	MG	AA	2057	1/1	0.71	0.23	-	80,80,80,80	0
53	MG	DB	3060	1/1	0.80	0.10	-	79,79,79,79	0
53	MG	CA	2018	1/1	0.77	0.15	-	60,60,60,60	0
53	MG	DB	3022	1/1	0.91	0.07	-	23,23,23,23	0
53	MG	AA	2033	1/1	0.98	0.04	-	69,69,69,69	0
53	MG	AA	2055	1/1	0.81	0.06	-	57,57,57,57	0

6.5 Other polymers [i](#)

There are no such residues in this entry.