Full wwPDB X-ray Structure Validation Report ⓘ

Mar 30, 2026 – 01:10 AM UTC

PDB ID	:	4V8H / pdb_00004v8h
Title	:	Crystal structure of HPF bound to the 70S ribosome.
Authors	:	Polikanov, Y.S.; Blaha, G.M.; Steitz, T.A.
Deposited on	:	2011-12-11
Resolution	:	3.10 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

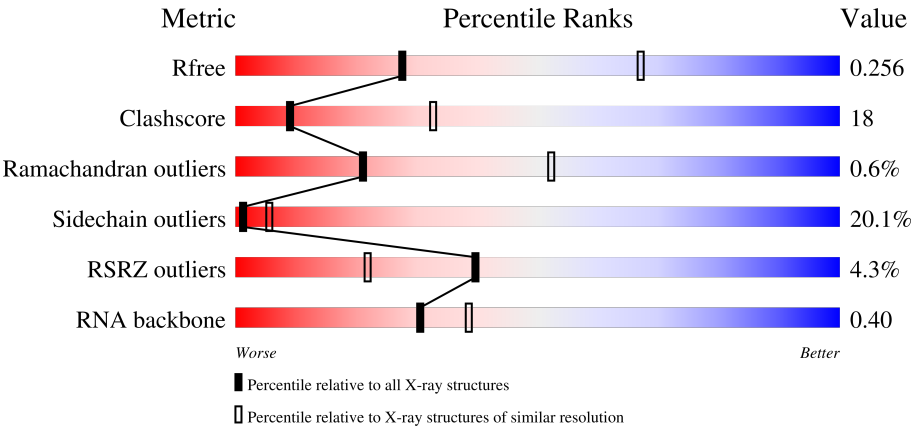
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)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

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1456 (3.10-3.10)
Clashscore	190562	1539 (3.10-3.10)
Ramachandran outliers	187476	1467 (3.10-3.10)
Sidechain outliers	187428	1467 (3.10-3.10)
RSRZ outliers	180081	1456 (3.10-3.10)
RNA backbone	3983	1022 (3.32-2.88)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	2% 30% 50% 18%
1	CA	1522	2% 29% 51% 19%
2	AB	256	5% 34% 42% 14% 10%
2	CB	256	10% 34% 41% 14% 11%

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Mol	Chain	Length	Quality of chain
3	AC	239	6% 39% 38% 9% 14%
3	CC	239	5% 35% 43% 7% 14%
4	AD	209	11% 50% 42% 8%
4	CD	209	10% 48% 42% 8%
5	AE	162	2% 39% 41% 10% 9%
5	CE	162	4% 36% 43% 10% 9%
6	AF	101	% 51% 40% 8%
6	CF	101	% 48% 39% 13%
7	AG	156	33% 36% 48% 13%
7	CG	156	26% 33% 46% 18%
8	AH	138	6% 49% 41% 10%
8	CH	138	3% 51% 41% 8%
9	AI	128	23% 33% 48% 16%
9	CI	128	50% 43% 38% 17%
10	AJ	105	12% 35% 38% 16% 9%
10	CJ	105	34% 34% 39% 17% 9%
11	AK	129	2% 53% 26% 9% 12%
11	CK	129	2% 52% 30% 5% 12%
12	AL	132	5% 51% 31% 10% 8%
12	CL	132	8% 55% 29% 9% 8%
13	AM	126	20% 29% 43% 16% 10%
13	CM	126	24% 38% 36% 15% 10%
14	AN	61	26% 34% 52% 11%
14	CN	61	26% 34% 46% 15%
15	AO	89	48% 40% 9%

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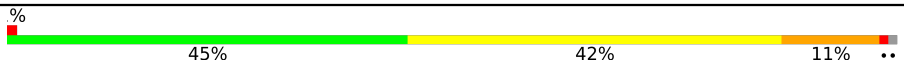
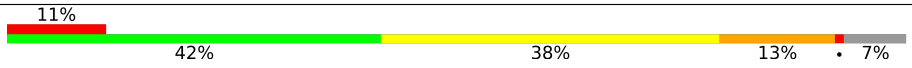
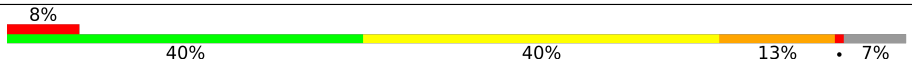
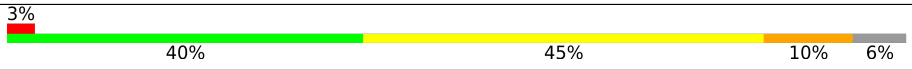
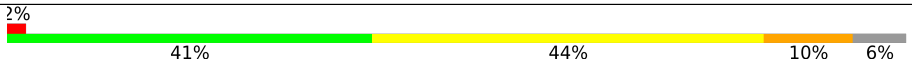
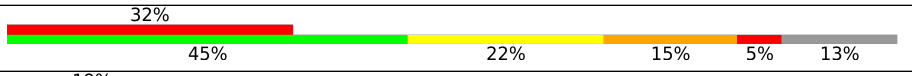
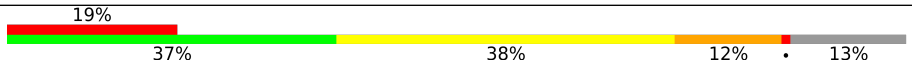
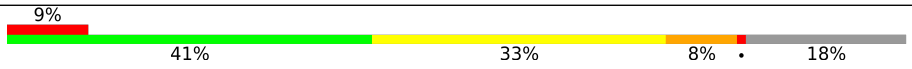
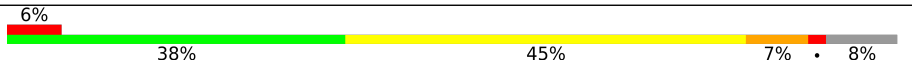
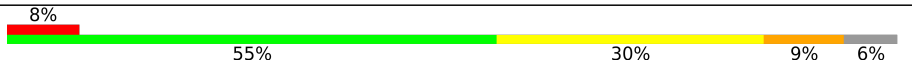
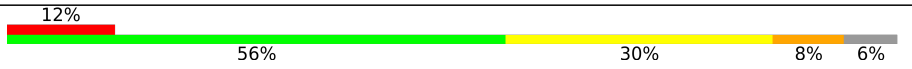
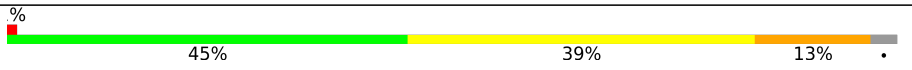
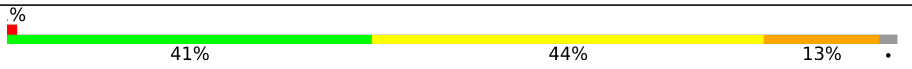
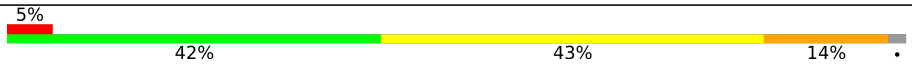
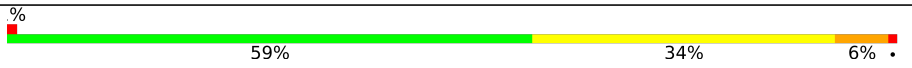
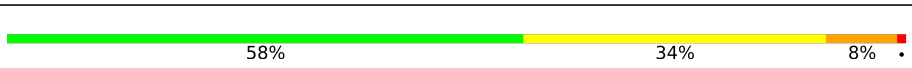
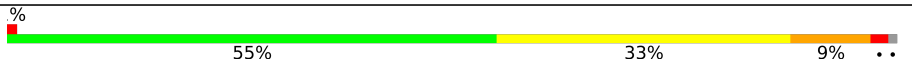
Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AX	101	
22	CX	101	
23	BA	2913	
23	DA	2913	
24	BB	122	
24	DB	122	
25	BD	276	
25	DD	276	
26	BE	206	
26	DE	206	
27	BF	210	
27	DF	210	

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Mol	Chain	Length	Quality of chain
28	BG	182	5% 42% 47% 9%
28	DG	182	16% 42% 49% 8%
29	BH	180	4% 63% 28% 5%
29	DH	180	3% 58% 33%
30	BI	148	3% 43% 41% 15%
30	DI	148	3% 50% 39% 9%
31	BN	140	% 53% 30% 17%
31	DN	140	% 49% 36% 16%
32	BO	122	% 63% 28% 9%
32	DO	122	63% 28% 8%
33	BP	150	% 64% 26% 9%
33	DP	150	% 62% 27% 9%
34	BQ	141	% 50% 40% 9%
34	DQ	141	% 47% 43% 10%
35	BR	118	% 58% 34% 8%
35	DR	118	54% 37% 8%
36	BS	112	2% 46% 44% 7%
36	DS	112	4% 48% 40% 10%
37	BT	146	2% 47% 33% 9% 10%
37	DT	146	2% 47% 34% 8% 10%
38	BU	118	55% 35% 8%
38	DU	118	% 57% 34% 8%
39	BV	101	% 63% 26% 10%
39	DV	101	57% 33% 9%
40	BW	113	62% 31% 6%

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Mol	Chain	Length	Quality of chain
40	DW	113	54% 38% 7%
41	BX	96	63% 33%
41	DX	96	58% 39%
42	BY	110	61% 27% 8%
42	DY	110	58% 29% 9%
43	BZ	206	54% 32% 11%
43	DZ	206	47% 39% 10%
44	B0	85	61% 24% 5% 11%
44	D0	85	65% 21% 11%
45	B1	98	62% 30% 6%
45	D1	98	59% 35%
46	B2	72	61% 31% 6%
46	D2	72	54% 38% 6%
47	B3	60	68% 20% 10%
47	D3	60	60% 28% 10%
48	B4	71	31% 21% 11% 35%
48	D4	71	28% 25% 8% 35%
49	B5	60	65% 25% 7%
49	D5	60	62% 25% 10%
50	B6	54	50% 31% 13%
50	D6	54	48% 37% 11%
51	B7	49	57% 27% 12%
51	D7	49	51% 33% 10%
52	B8	65	49% 40% 8%
52	D8	65	49% 37% 11%

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Mol	Chain	Length	Quality of chain
53	B9	37	59% 35%
53	D9	37	8% 62% 24% 11%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	BA	3301	-	-	-	X
54	MG	DA	3218	-	-	-	X
54	MG	DA	3276	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 286308 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 Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1501	Total	C	N	O	P	0	0	0
			32270	14362	5983	10424	1501			
1	CA	1497	Total	C	N	O	P	0	0	0
			32185	14324	5968	10396	1497			

- Molecule 2 is a protein called 30S Ribosomal Protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	230	Total	C	N	O	S	0	0	0
			1787	1141	319	322	5			
2	CB	229	Total	C	N	O	S	0	0	0
			1775	1132	318	320	5			

- Molecule 3 is a protein called 30S Ribosomal Protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1450	906	279	264	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1450	906	279	264	1			

- Molecule 4 is a protein called 30S Ribosomal Protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1526	963	283	274	6			
4	CD	208	Total	C	N	O	S	0	0	0
			1526	963	283	274	6			

- Molecule 5 is a protein called 30S Ribosomal Protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	148	Total	C	N	O	S	0	0	0
			1105	699	204	198	4			
5	CE	148	Total	C	N	O	S	0	0	0
			1105	699	204	198	4			

- Molecule 6 is a protein called 30S Ribosomal Protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			777	493	137	144	3			
6	CF	100	Total	C	N	O	S	0	0	0
			777	493	137	144	3			

- Molecule 7 is a protein called 30S Ribosomal Protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1164	726	224	208	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1164	726	224	208	6			

- Molecule 8 is a protein called 30S Ribosomal Protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1045	665	188	190	2			
8	CH	138	Total	C	N	O	S	0	0	0
			1045	665	188	190	2			

- Molecule 9 is a protein called 30S Ribosomal Protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	125	Total	C	N	O	0	0	0
			852	533	163	156			
9	CI	125	Total	C	N	O	0	0	0
			852	533	163	156			

- Molecule 10 is a protein called 30S Ribosomal Protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	AJ	96	Total	C	N	O	0	0	0
			663	410	132	121			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	CJ	96	Total	C	N	O	0	0	0
			663	410	132	121			

- Molecule 11 is a protein called 30S Ribosomal Protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	114	Total	C	N	O	S	0	0	0
			828	516	155	154	3			
11	CK	114	Total	C	N	O	S	0	0	0
			828	516	155	154	3			

- Molecule 12 is a protein called 30S Ribosomal Protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	122	Total	C	N	O	S	0	0	0
			905	567	178	159	1			
12	CL	122	Total	C	N	O	S	0	0	0
			905	567	178	159	1			

- Molecule 13 is a protein called 30S Ribosomal Protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			804	497	164	142	1			
13	CM	114	Total	C	N	O	S	0	0	0
			804	497	164	142	1			

- Molecule 14 is a protein called 30S Ribosomal Protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			478	303	99	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			478	303	99	72	4			

- Molecule 15 is a protein called 30S Ribosomal Protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			724	453	143	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			724	453	143	126	2			

- Molecule 16 is a protein called 30S Ribosomal Protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			651	416	123	111	1			
16	CP	82	Total	C	N	O	S	0	0	0
			651	416	123	111	1			

- Molecule 17 is a protein called 30S Ribosomal Protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 18 is a protein called 30S Ribosomal Protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	68	Total	C	N	O	0	0	0
			514	329	98	87			
18	CR	68	Total	C	N	O	0	0	0
			514	329	98	87			

- Molecule 19 is a protein called 30S Ribosomal Protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	81	Total	C	N	O	S	0	0	0
			560	351	108	99	2			
19	CS	81	Total	C	N	O	S	0	0	0
			560	351	108	99	2			

- Molecule 20 is a protein called 30S Ribosomal Protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	87	Total	C	N	O	S	0	0	0
			665	410	142	111	2			
20	CT	97	Total	C	N	O	S	0	0	0
			713	438	152	121	2			

- Molecule 21 is a protein called 30S Ribosomal Protein THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	23	Total 199	C 122	N 48	O 29	0	0	0
21	CU	23	Total 199	C 122	N 48	O 29	0	0	0

- Molecule 22 is a protein called Probable sigma(54) modulation protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AX	95	Total 631	C 396	N 116	O 118	S 1	0	0	0
22	CX	95	Total 601	C 378	N 108	O 114	S 1	0	0	0

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AX	96	HIS	-	expression tag	UNP P0AFX0
AX	97	HIS	-	expression tag	UNP P0AFX0
AX	98	HIS	-	expression tag	UNP P0AFX0
AX	99	HIS	-	expression tag	UNP P0AFX0
AX	100	HIS	-	expression tag	UNP P0AFX0
AX	101	HIS	-	expression tag	UNP P0AFX0
CX	96	HIS	-	expression tag	UNP P0AFX0
CX	97	HIS	-	expression tag	UNP P0AFX0
CX	98	HIS	-	expression tag	UNP P0AFX0
CX	99	HIS	-	expression tag	UNP P0AFX0
CX	100	HIS	-	expression tag	UNP P0AFX0
CX	101	HIS	-	expression tag	UNP P0AFX0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BA	2837	Total 61112	C 27197	N 11440	O 19639	P 2836	0	0	0
23	DA	2814	Total 60621	C 26978	N 11351	O 19479	P 2813	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	?	-	U	deletion	GB AP008226.1
BA	?	-	U	deletion	GB AP008226.1
DA	?	-	U	deletion	GB AP008226.1

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Chain	Residue	Modelled	Actual	Comment	Reference
DA	?	-	U	deletion	GB AP008226.1

- Molecule 24 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			
24	DB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 25 is a protein called 50S Ribosomal Protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	275	Total	C	N	O	S	0	0	0
			2135	1349	422	361	3			
25	DD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			

- Molecule 26 is a protein called 50S Ribosomal Protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	204	Total	C	N	O	S	0	0	0
			1555	982	297	270	6			
26	DE	204	Total	C	N	O	S	0	0	0
			1555	982	297	270	6			

- Molecule 27 is a protein called 50S Ribosomal Protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	203	Total	C	N	O	S	0	0	1
			1580	1007	298	273	2			
27	DF	203	Total	C	N	O	S	0	0	1
			1580	1007	298	273	2			

- Molecule 28 is a protein called 50S Ribosomal Protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	181	Total	C	N	O	S	0	0	0
			1368	879	242	244	3			
28	DG	181	Total	C	N	O	S	0	0	0
			1368	879	242	244	3			

- Molecule 29 is a protein called 50S Ribosomal Protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	174	Total	C	N	O	S	0	0	0
			1317	837	243	236	1			
29	DH	174	Total	C	N	O	S	0	0	0
			1317	837	243	236	1			

- Molecule 30 is a protein called 50S Ribosomal Protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BI	146	Total	C	N	O	S	0	0	0
			1037	666	180	190	1			
30	DI	146	Total	C	N	O	S	0	0	0
			953	608	168	176	1			

- Molecule 31 is a protein called 50S Ribosomal Protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BN	140	Total	C	N	O	S	0	0	0
			1112	717	207	184	4			
31	DN	140	Total	C	N	O	S	0	0	0
			1112	717	207	184	4			

- Molecule 32 is a protein called 50S Ribosomal Protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BO	122	Total	C	N	O	S	0	0	0
			923	583	168	168	4			
32	DO	122	Total	C	N	O	S	0	0	0
			923	583	168	168	4			

- Molecule 33 is a protein called 50S Ribosomal Protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BP	149	Total	C	N	O	S	0	0	0
			1131	703	229	196	3			
33	DP	149	Total	C	N	O	S	0	0	0
			1131	703	229	196	3			

- Molecule 34 is a protein called 50S Ribosomal Protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
34	DQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 35 is a protein called 50S Ribosomal Protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
35	DR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 36 is a protein called 50S Ribosomal Protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BS	110	Total	C	N	O	0	0	0
			865	544	172	149			
36	DS	110	Total	C	N	O	0	0	0
			865	544	172	149			

- Molecule 37 is a protein called 50S Ribosomal Protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BT	131	Total	C	N	O	S	0	0	0
			1063	666	213	183	1			
37	DT	131	Total	C	N	O	S	0	0	0
			1063	666	213	183	1			

- Molecule 38 is a protein called 50S Ribosomal Protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
38	DU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 39 is a protein called 50S Ribosomal Protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	DV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

- Molecule 40 is a protein called 50S Ribosomal Protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BW	112	Total	C	N	O	S	0	0	0
			881	554	172	153	2			
40	DW	112	Total	C	N	O	S	0	0	0
			881	554	172	153	2			

- Molecule 41 is a protein called 50S Ribosomal Protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BX	95	Total	C	N	O	S	0	0	0
			742	483	134	124	1			
41	DX	95	Total	C	N	O	S	0	0	0
			742	483	134	124	1			

- Molecule 42 is a protein called 50S Ribosomal Protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BY	107	Total	C	N	O	S	0	0	0
			785	503	145	131	6			
42	DY	107	Total	C	N	O	S	0	0	0
			785	503	145	131	6			

- Molecule 43 is a protein called 50S Ribosomal Protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BZ	201	Total	C	N	O	S	0	0	0
			1536	980	272	282	2			
43	DZ	198	Total	C	N	O	S	0	0	0
			1522	972	269	279	2			

- Molecule 44 is a protein called 50S Ribosomal Protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	B0	76	Total	C	N	O	S	0	0	0
			594	368	125	100	1			
44	D0	76	Total	C	N	O	S	0	0	0
			594	368	125	100	1			

- Molecule 45 is a protein called 50S Ribosomal Protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	B1	97	Total	C	N	O	S	0	0	0
			745	469	144	131	1			
45	D1	97	Total	C	N	O	S	0	0	0
			745	469	144	131	1			

- Molecule 46 is a protein called 50S Ribosomal Protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	B2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			
46	D2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

- Molecule 47 is a protein called 50S Ribosomal Protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
47	B3	59	Total	C	N	O	0	0	0
			458	293	87	78			
47	D3	59	Total	C	N	O	0	0	0
			458	293	87	78			

- Molecule 48 is a protein called 50S Ribosomal Protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B4	46	Total	C	N	O	S	0	0	0
			349	223	57	64	5			
48	D4	46	Total	C	N	O	S	0	0	0
			349	223	57	64	5			

- Molecule 49 is a protein called 50S Ribosomal Protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B5	59	Total	C	N	O	S	0	0	0
			455	286	90	74	5			
49	D5	59	Total	C	N	O	S	0	0	0
			455	286	90	74	5			

- Molecule 50 is a protein called 50S Ribosomal Protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B6	53	Total	C	N	O	S	0	0	0
			449	278	90	77	4			
50	D6	53	Total	C	N	O	S	0	0	0
			449	278	90	77	4			

- Molecule 51 is a protein called 50S Ribosomal Protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
51	D7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 52 is a protein called 50S Ribosomal Protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B8	64	Total	C	N	O	S	0	0	0
			509	326	99	82	2			
52	D8	64	Total	C	N	O	S	0	0	0
			509	326	99	82	2			

- Molecule 53 is a protein called 50S Ribosomal Protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B9	36	Total	C	N	O	S	0	0	0
			297	182	66	46	3			
53	D9	36	Total	C	N	O	S	0	0	0
			297	182	66	46	3			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	135	Total	Mg	0	0
			135	135		
54	AC	1	Total	Mg	0	0
			1	1		
54	AD	1	Total	Mg	0	0
			1	1		
54	AF	1	Total	Mg	0	0
			1	1		
54	AQ	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	BA	660	Total Mg 660 660	0	0
54	BB	23	Total Mg 23 23	0	0
54	BD	3	Total Mg 3 3	0	0
54	BE	5	Total Mg 5 5	0	0
54	BF	2	Total Mg 2 2	0	0
54	BG	1	Total Mg 1 1	0	0
54	BP	1	Total Mg 1 1	0	0
54	BQ	4	Total Mg 4 4	0	0
54	BR	1	Total Mg 1 1	0	0
54	BS	1	Total Mg 1 1	0	0
54	BT	2	Total Mg 2 2	0	0
54	BV	1	Total Mg 1 1	0	0
54	BW	2	Total Mg 2 2	0	0
54	BZ	1	Total Mg 1 1	0	0
54	B0	3	Total Mg 3 3	0	0
54	B1	1	Total Mg 1 1	0	0
54	B2	1	Total Mg 1 1	0	0
54	B3	1	Total Mg 1 1	0	0
54	B5	2	Total Mg 2 2	0	0
54	B8	2	Total Mg 2 2	0	0
54	B9	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	CA	162	Total Mg 162 162	0	0
54	CE	1	Total Mg 1 1	0	0
54	CQ	1	Total Mg 1 1	0	0
54	DA	598	Total Mg 598 598	0	0
54	DB	8	Total Mg 8 8	0	0
54	DD	2	Total Mg 2 2	0	0
54	DE	4	Total Mg 4 4	0	0
54	DF	1	Total Mg 1 1	0	0
54	DO	2	Total Mg 2 2	0	0
54	DP	1	Total Mg 1 1	0	0
54	DQ	2	Total Mg 2 2	0	0
54	DR	3	Total Mg 3 3	0	0
54	D0	2	Total Mg 2 2	0	0
54	D1	1	Total Mg 1 1	0	0
54	D5	1	Total Mg 1 1	0	0
54	D8	2	Total Mg 2 2	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	AD	1	Total Zn 1 1	0	0
55	AN	1	Total Zn 1 1	0	0
55	BY	1	Total Zn 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	B4	1	Total Zn 1 1	0	0
55	B5	1	Total Zn 1 1	0	0
55	B6	1	Total Zn 1 1	0	0
55	B9	1	Total Zn 1 1	0	0
55	CD	1	Total Zn 1 1	0	0
55	CN	1	Total Zn 1 1	0	0
55	DY	1	Total Zn 1 1	0	0
55	D4	1	Total Zn 1 1	0	0
55	D5	1	Total Zn 1 1	0	0
55	D6	1	Total Zn 1 1	0	0
55	D9	1	Total Zn 1 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AA	268	Total O 268 268	0	0
56	AE	1	Total O 1 1	0	0
56	AL	1	Total O 1 1	0	0
56	AO	1	Total O 1 1	0	0
56	AP	1	Total O 1 1	0	0
56	AT	1	Total O 1 1	0	0
56	AX	1	Total O 1 1	0	0
56	BA	1694	Total O 1694 1694	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	BB	57	Total O 57 57	0	0
56	BD	20	Total O 20 20	0	0
56	BE	11	Total O 11 11	0	0
56	BF	6	Total O 6 6	0	0
56	BH	1	Total O 1 1	0	0
56	BN	2	Total O 2 2	0	0
56	BO	2	Total O 2 2	0	0
56	BP	11	Total O 11 11	0	0
56	BQ	5	Total O 5 5	0	0
56	BR	6	Total O 6 6	0	0
56	BT	1	Total O 1 1	0	0
56	BU	3	Total O 3 3	0	0
56	BV	3	Total O 3 3	0	0
56	BW	3	Total O 3 3	0	0
56	BX	2	Total O 2 2	0	0
56	BY	4	Total O 4 4	0	0
56	B0	8	Total O 8 8	0	0
56	B1	2	Total O 2 2	0	0
56	B3	1	Total O 1 1	0	0
56	B5	3	Total O 3 3	0	0
56	B6	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	B7	5	Total O 5 5	0	0
56	B8	10	Total O 10 10	0	0
56	B9	1	Total O 1 1	0	0
56	CA	265	Total O 265 265	0	0
56	CC	1	Total O 1 1	0	0
56	CD	1	Total O 1 1	0	0
56	CE	2	Total O 2 2	0	0
56	CK	1	Total O 1 1	0	0
56	CL	2	Total O 2 2	0	0
56	CN	1	Total O 1 1	0	0
56	CP	1	Total O 1 1	0	0
56	CQ	1	Total O 1 1	0	0
56	CT	1	Total O 1 1	0	0
56	CX	1	Total O 1 1	0	0
56	DA	1174	Total O 1174 1174	0	0
56	DB	17	Total O 17 17	0	0
56	DD	8	Total O 8 8	0	0
56	DE	11	Total O 11 11	0	0
56	DF	7	Total O 7 7	0	0
56	DN	1	Total O 1 1	0	0
56	DO	5	Total O 5 5	0	0

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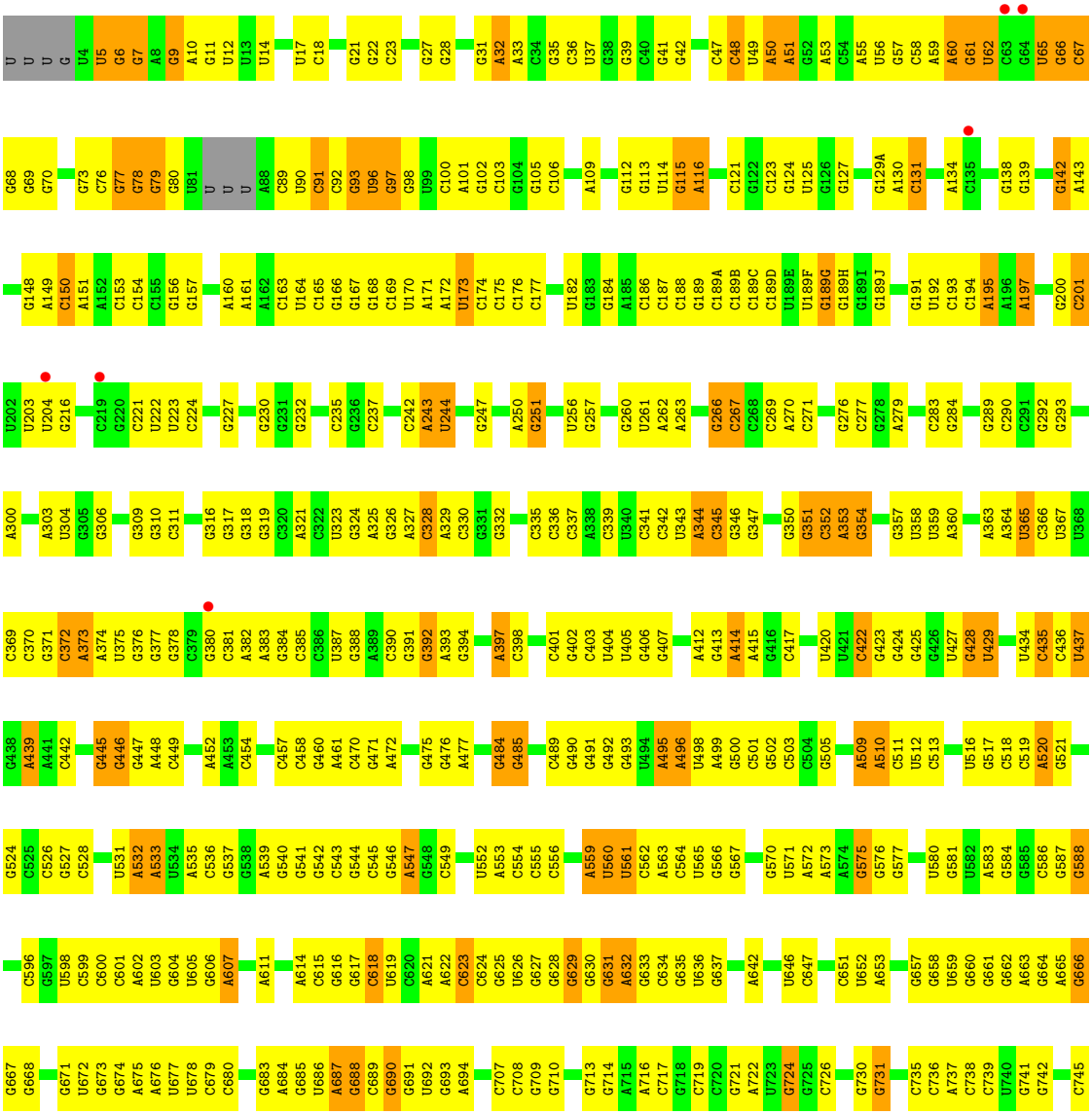
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DP	10	Total O 10 10	0	0
56	DQ	3	Total O 3 3	0	0
56	DR	2	Total O 2 2	0	0
56	DT	2	Total O 2 2	0	0
56	DU	5	Total O 5 5	0	0
56	DV	2	Total O 2 2	0	0
56	DW	2	Total O 2 2	0	0
56	DX	1	Total O 1 1	0	0
56	DY	2	Total O 2 2	0	0
56	D0	1	Total O 1 1	0	0
56	D1	5	Total O 5 5	0	0
56	D3	1	Total O 1 1	0	0
56	D4	1	Total O 1 1	0	0
56	D7	3	Total O 3 3	0	0
56	D8	1	Total O 1 1	0	0

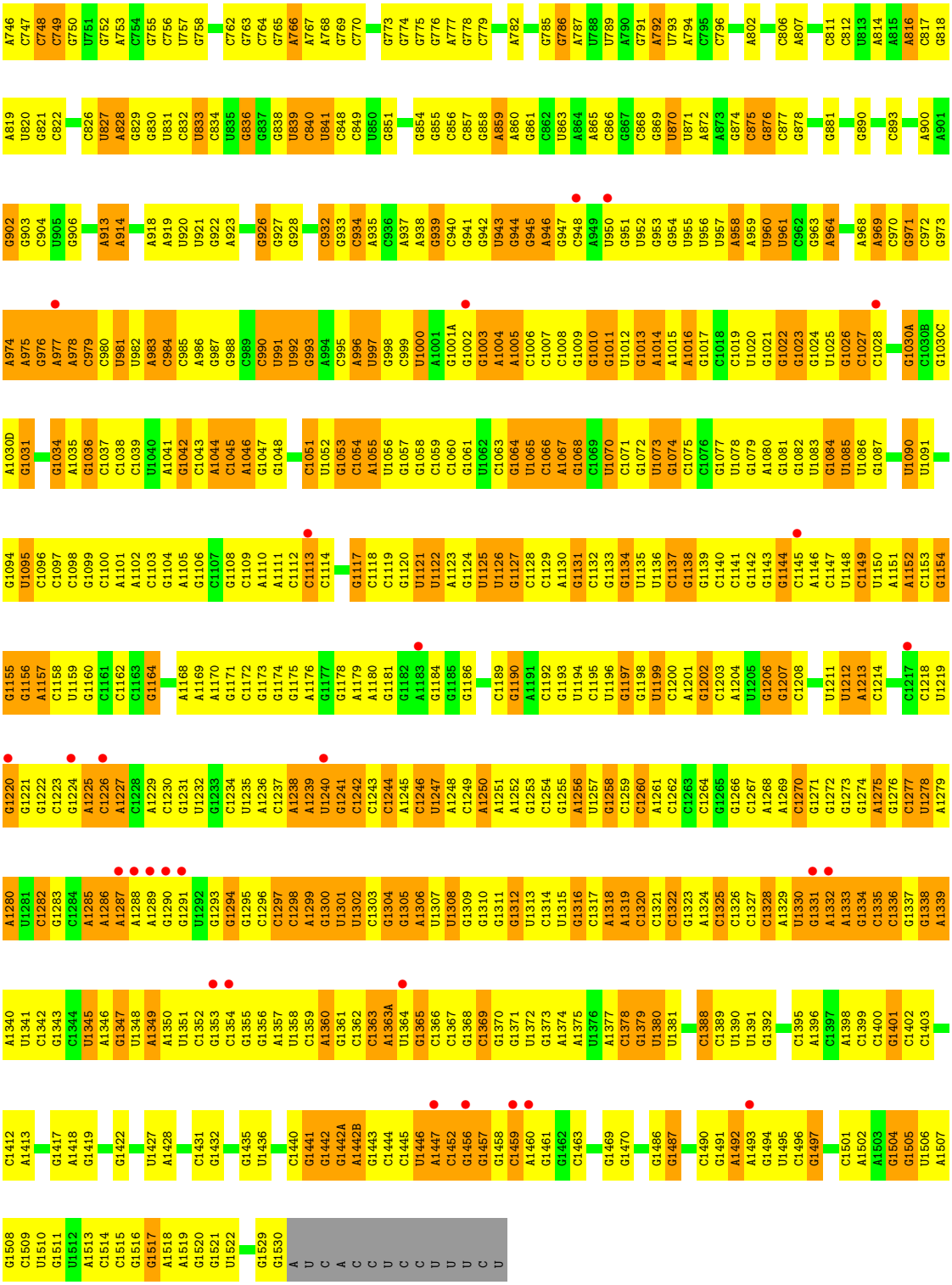
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S Ribosomal RNA

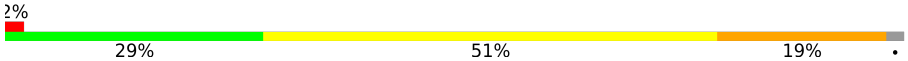
Chain AA:

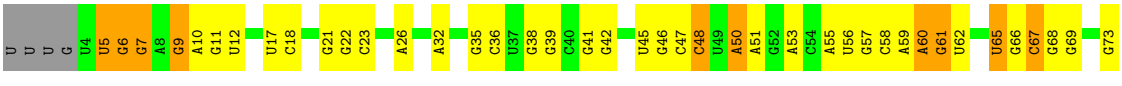


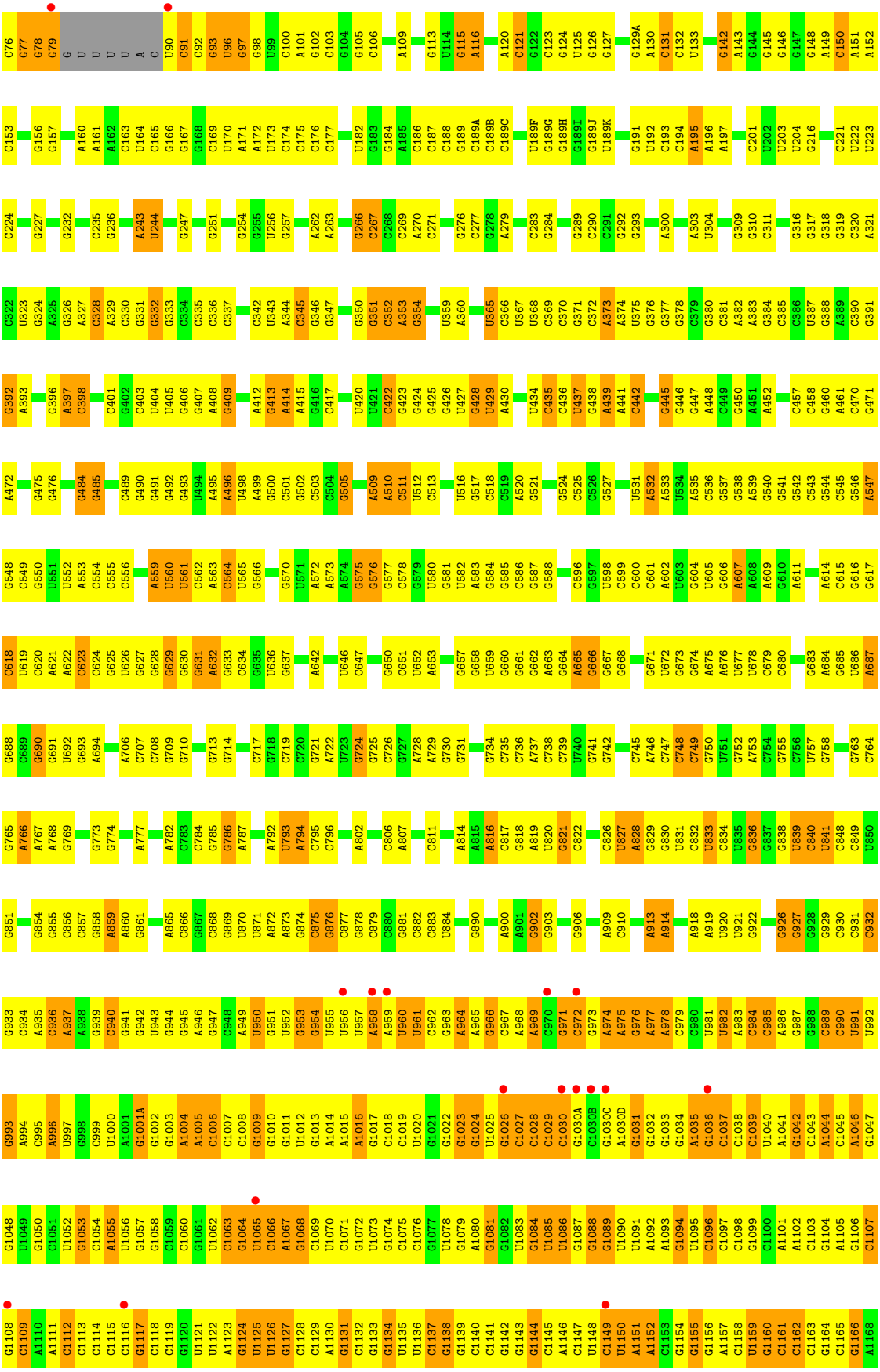


• Molecule 1: 16S Ribosomal RNA

Chain CA:



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C153 G156 G157 A160 A161 A162 C163 U164 C165 G166 G167 G168 C169 U170 A171 A172 U173 C174 C175 C176 C177 U182 G183 G184 A185 C186 C187 C188 G189 C189A C189B C189C U189F G189G G189H G189I G189J U189K G191 U192 C193 C194 A195 A196 A197 C201 U202 U203 U204 G216 C221 U222 U223
C224 G227 G232 C235 G236 A243 U244 G247 G251 G254 G255 U256 G257 A262 A263 G266 C267 C268 C269 A270 C271 G276 C277 G278 A279 C283 G284 G289 C290 C291 G292 G293 A300 A303 U304 G309 G310 C311 G316 G317 G318 G319 C320 A321
C322 U323 G324 A325 G326 A327 C328 A329 C330 G331 G332 G333 C334 C335 C336 C337 C342 U343 A344 C345 G346 G347 G350 G351 C352 A353 G354 U359 A360 U365 C366 U367 U368 C369 C370 G371 C372 A373 A374 A375 G376 G377 G378 C379 G380 C381 A382 A383 G384 C385 C386 U387 G388 A389 C390 G391
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A472 G475 G476 G484 G485 C489 G490 G491 G492 G493 U494 A495 A496 U498 A499 G500 C501 G502 C503 C504 G505 A509 A510 C511 U512 C513 U516 G517 C518 C519 A520 G521 G524 C525 C526 G527 U531 A532 A533 U534 A535 C536 G537 G538 A539 G540 G541 G542 C543 G544 C545 G546 A547
G548 C549 G550 U551 U552 A553 C554 C555 C556 A559 U560 U561 C562 A563 C564 U565 G566 G570 U571 A572 A573 A574 G575 G576 G577 C578 G579 U580 G581 U582 A583 G584 C585 C586 G587 G588 C596 G597 U598 C599 C600 C601 A602 U603 G604 U605 G606 A607 A608 A609 G610 A611 A614 C615 G616 G617
C618 U619 C620 A621 A622 C623 C624 G625 U626 G627 G628 G629 G630 G631 A632 G633 C634 G635 U636 G637 A642 A573 U646 C647 G650 C651 U652 A653 G657 G658 G659 G660 G661 G662 A663 G664 A665 G666 G667 G668 G671 U672 G673 G674 A675 A676 U677 U678 C679 C680 G683 A684 G685 U686 A687
G688 C689 G690 G691 U692 G693 A694 A706 C707 C708 G709 G710 G713 G714 C717 G718 C719 G720 G721 A722 U723 G724 G725 C726 G727 A728 A729 G730 G731 G734 C735 C736 A737 C738 C739 U740 G741 G742 C745 A746 C747 C748 C749 G750 U751 G752 A753 C754 G755 C756 U757 G758 G763 C764
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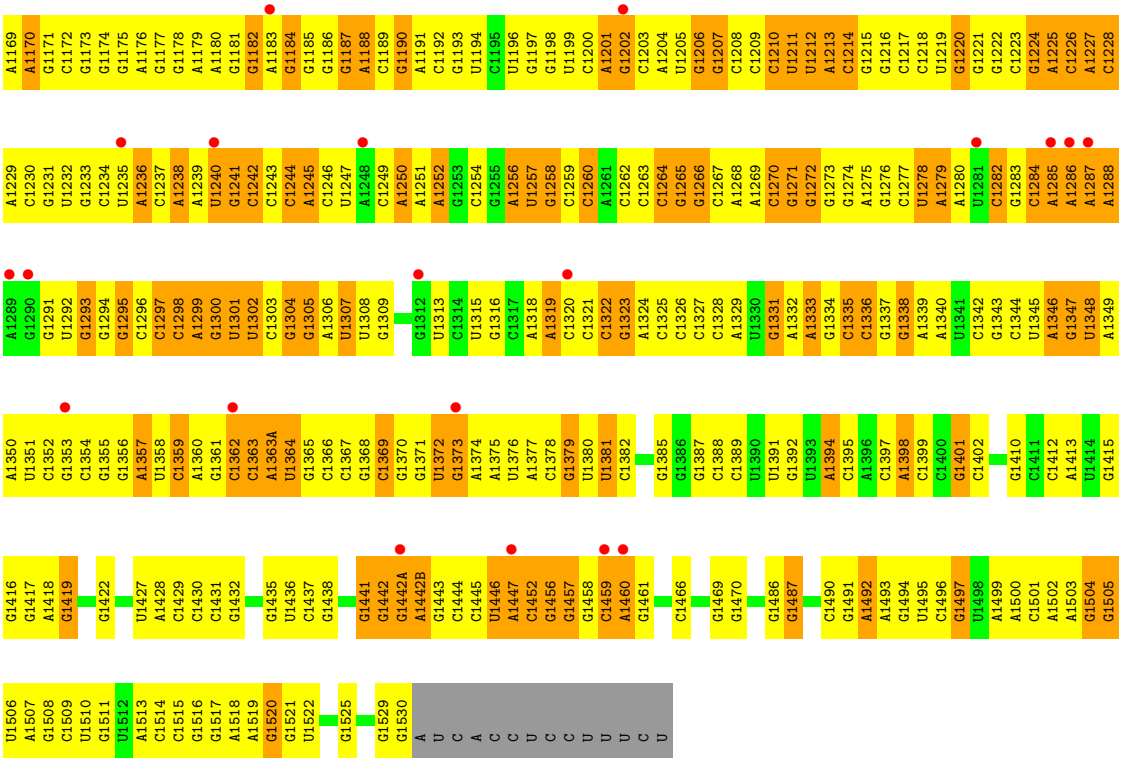

• Molecule 2: 30S Ribosomal Protein S2

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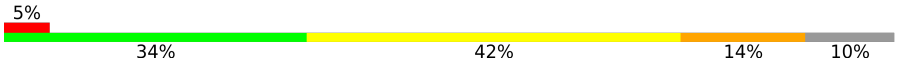

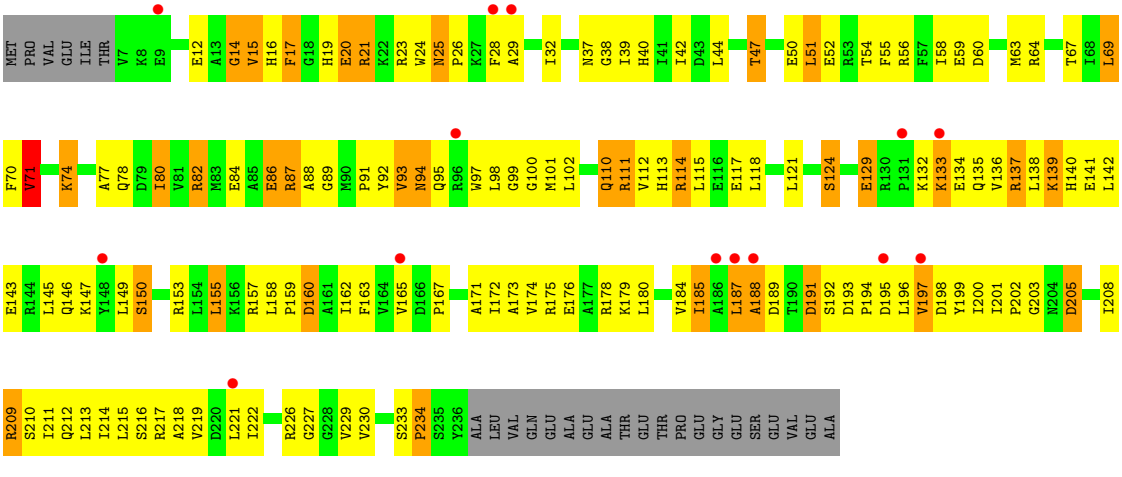

• Molecule 2: 30S Ribosomal Protein S2

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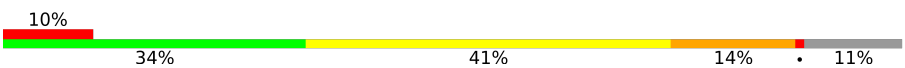

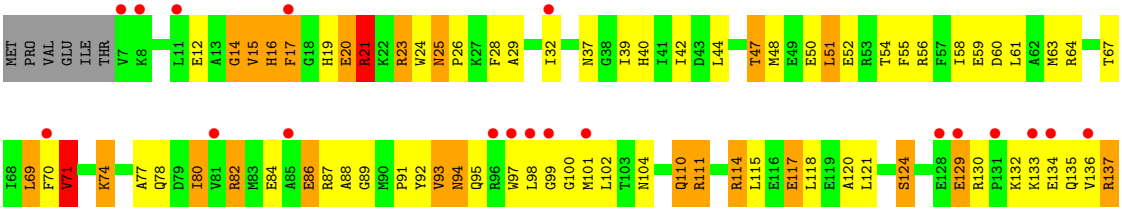

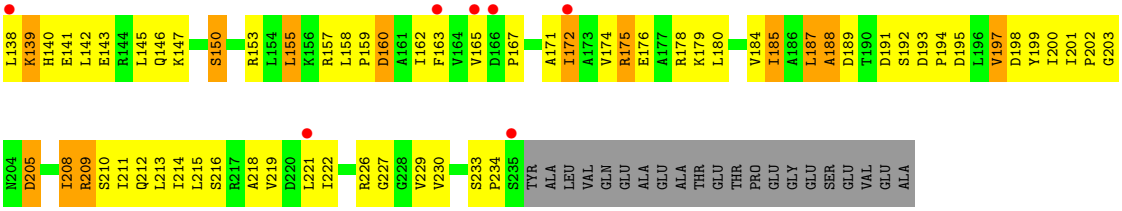

• Molecule 3: 30S Ribosomal Protein S3

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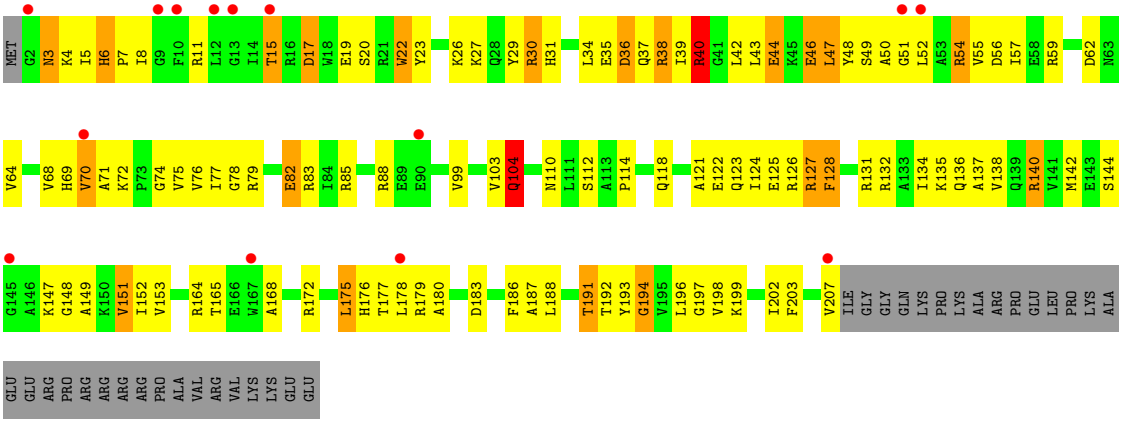

• Molecule 3: 30S Ribosomal Protein S3

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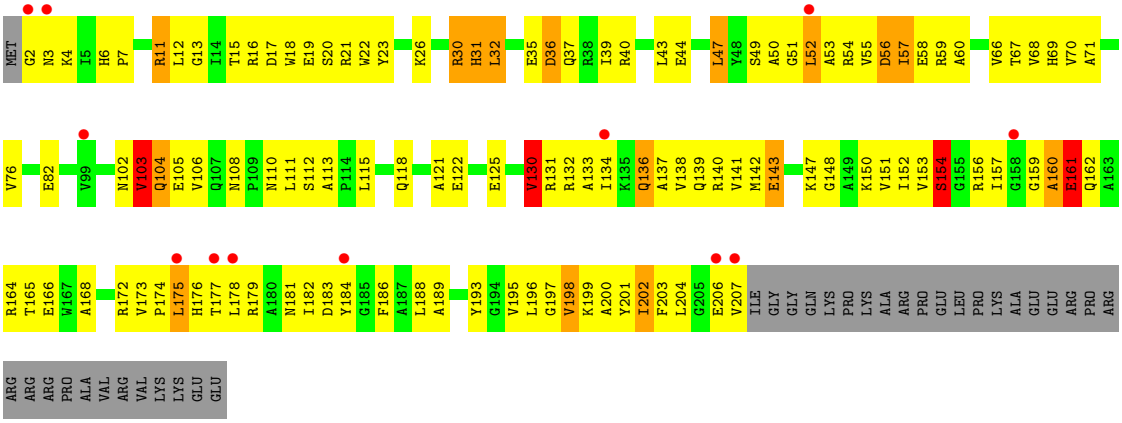

• Molecule 4: 30S Ribosomal Protein S4

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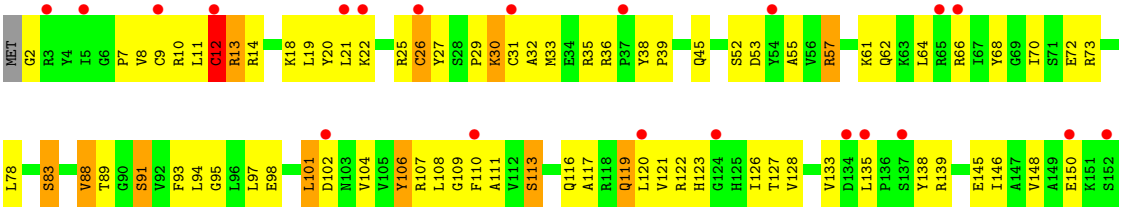
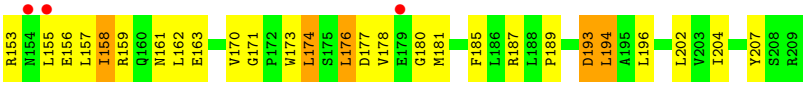
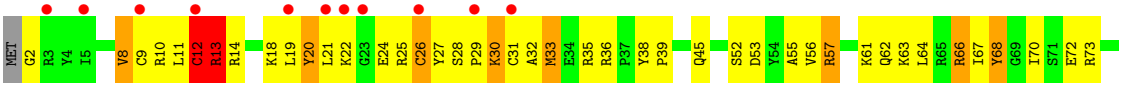
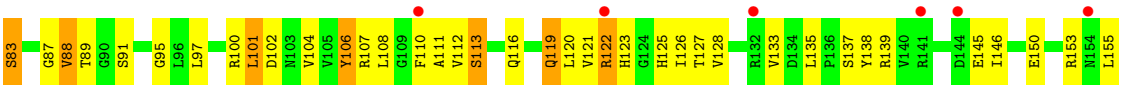


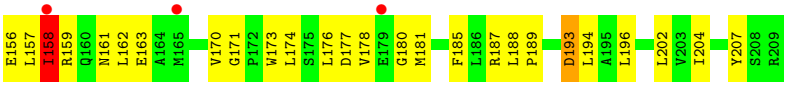


• Molecule 4: 30S Ribosomal Protein S4

Chain CD:







• Molecule 5: 30S Ribosomal Protein S5

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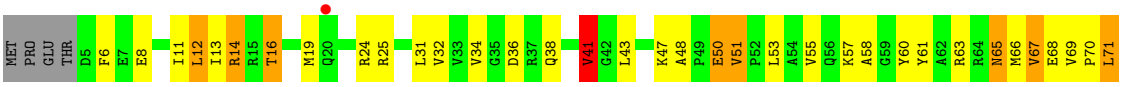
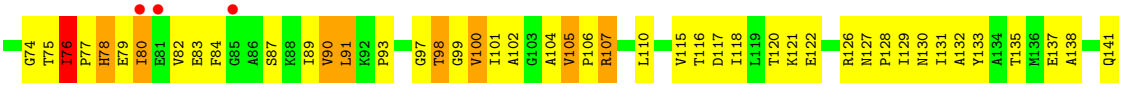
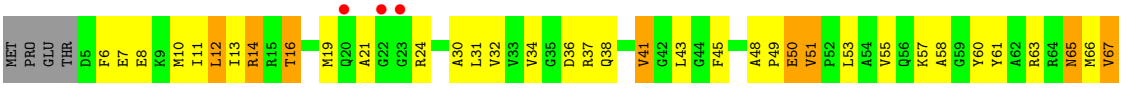
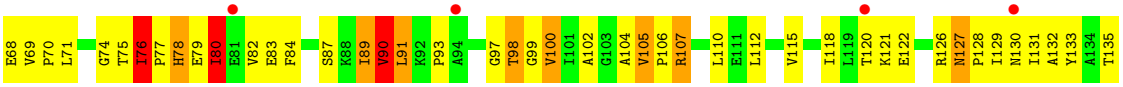




• Molecule 5: 30S Ribosomal Protein S5

Chain CE:





• Molecule 6: 30S Ribosomal Protein S6

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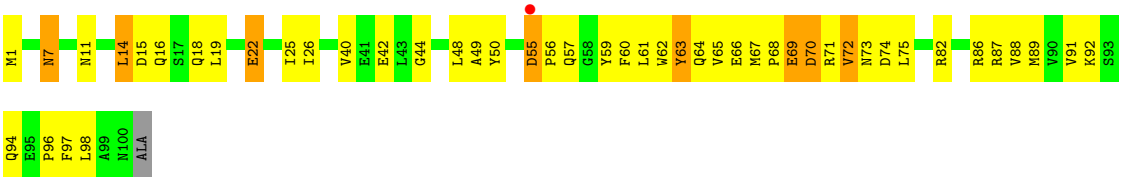
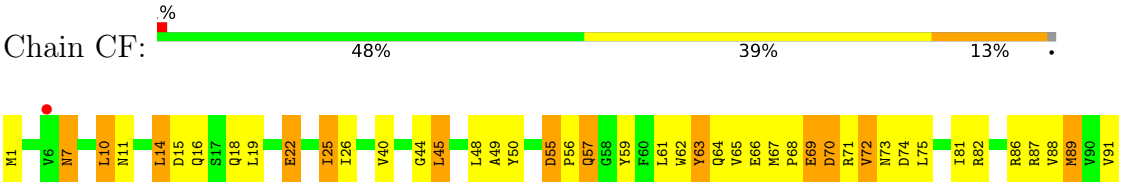
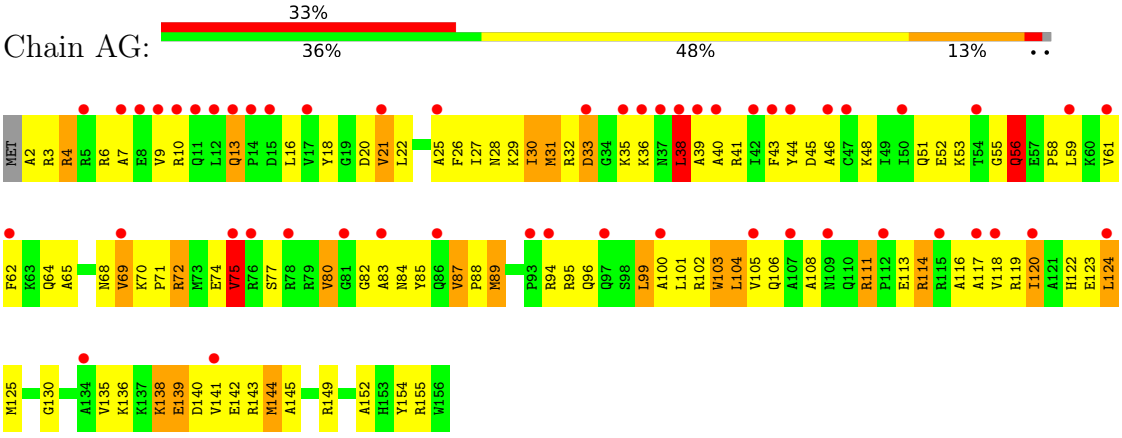


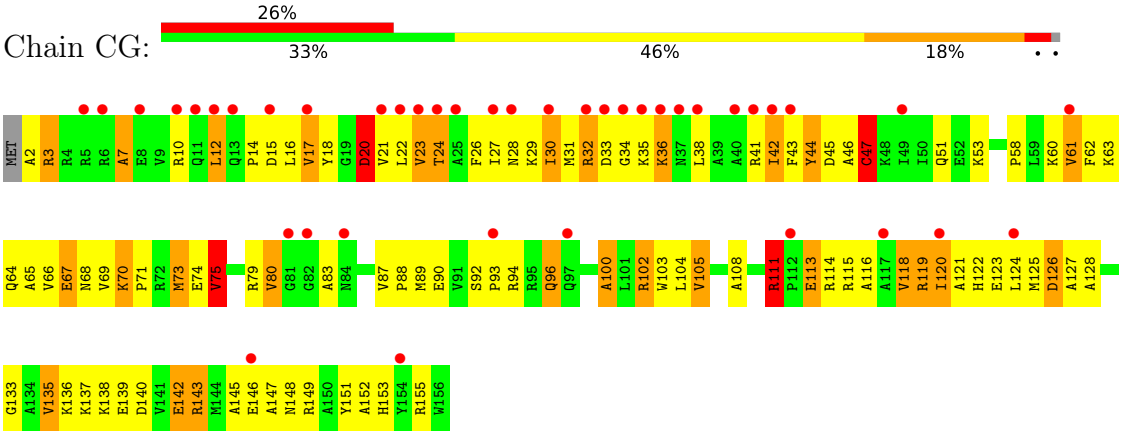
• Molecule 6: 30S Ribosomal Protein S6



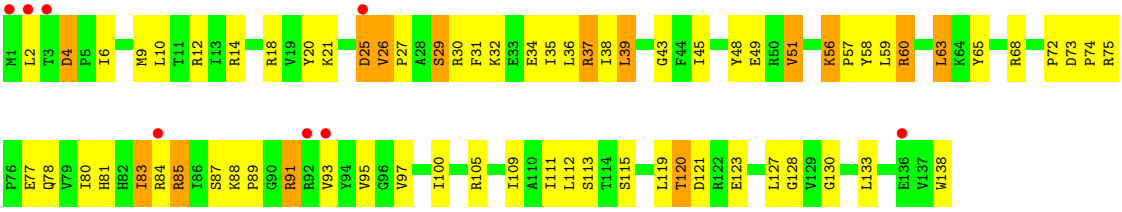
• Molecule 7: 30S Ribosomal Protein S7



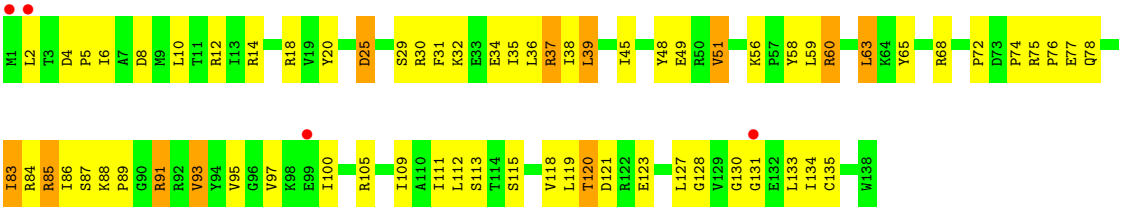
• Molecule 7: 30S Ribosomal Protein S7



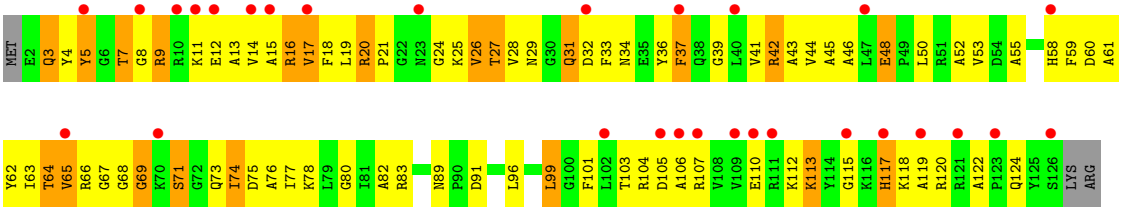
• Molecule 8: 30S Ribosomal Protein S8



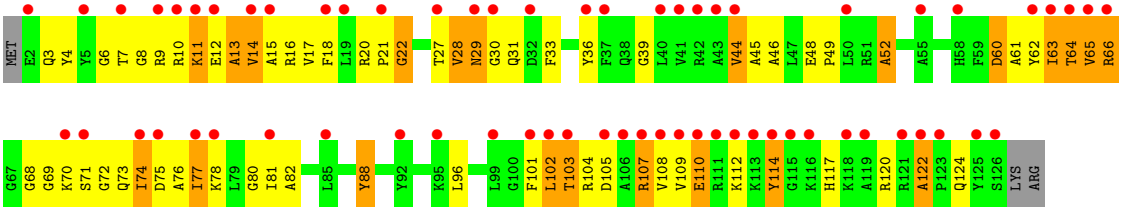
• Molecule 8: 30S Ribosomal Protein S8



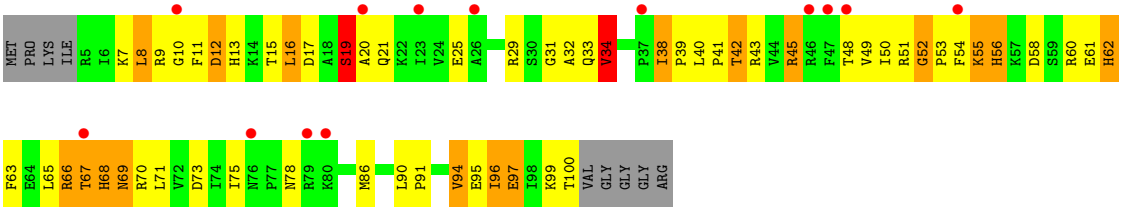
• Molecule 9: 30S Ribosomal Protein S9



• Molecule 9: 30S Ribosomal Protein S9

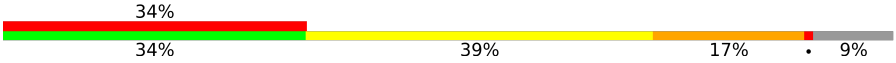


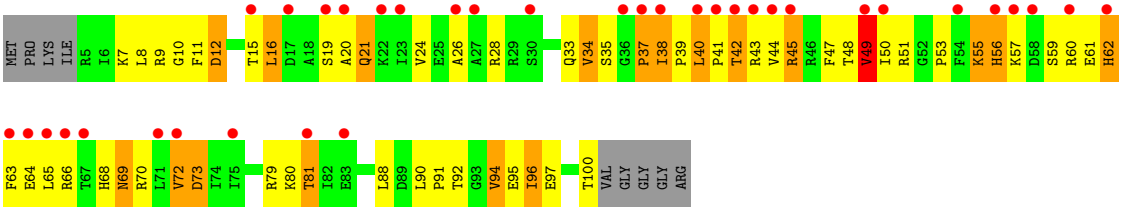
• Molecule 10: 30S Ribosomal Protein S10



• Molecule 10: 30S Ribosomal Protein S10

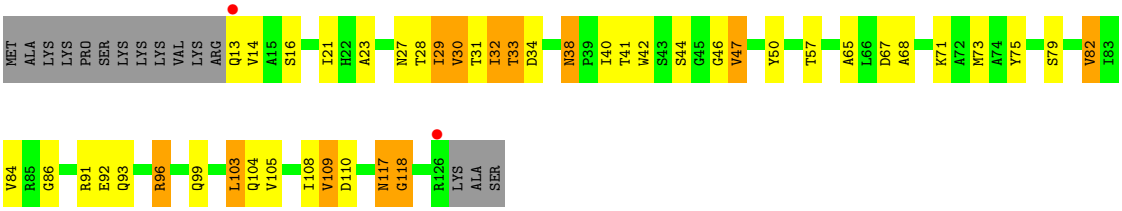
Chain CJ:





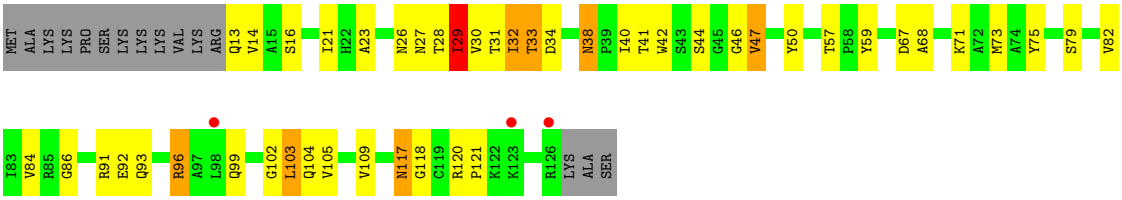
• Molecule 11: 30S Ribosomal Protein S11

Chain AK:



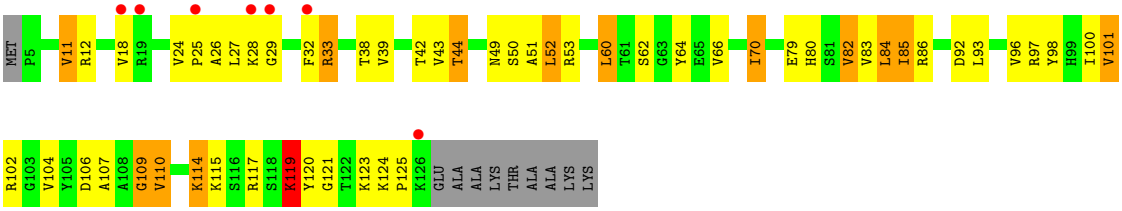
• Molecule 11: 30S Ribosomal Protein S11

Chain CK:



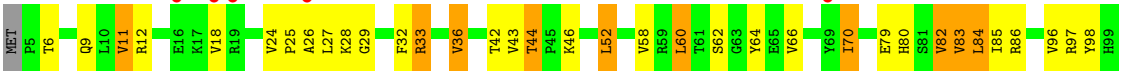
• Molecule 12: 30S Ribosomal Protein S12

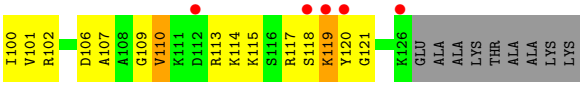
Chain AL:



• Molecule 12: 30S Ribosomal Protein S12

Chain CL:





• Molecule 13: 30S Ribosomal Protein S13

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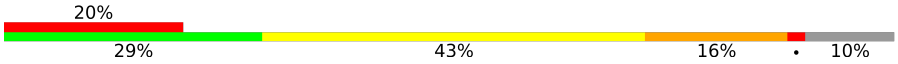
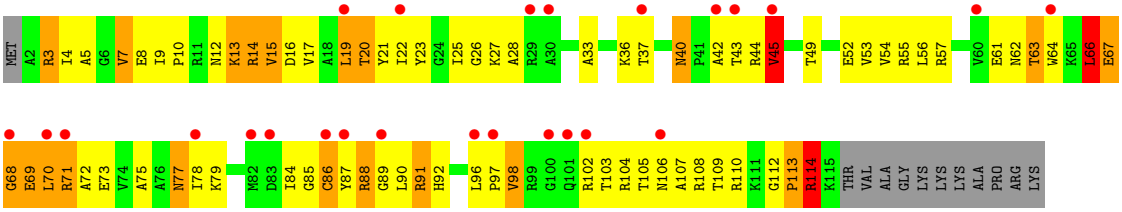
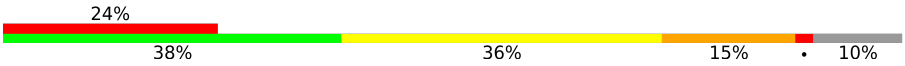
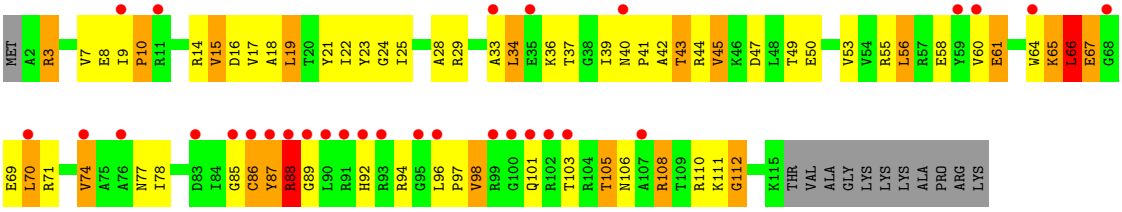




• Molecule 13: 30S Ribosomal Protein S13

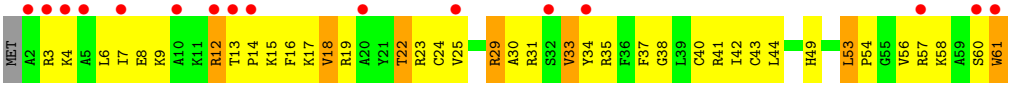
Chain CM:





• Molecule 14: 30S Ribosomal Protein S14

Chain AN:



• Molecule 14: 30S Ribosomal Protein S14

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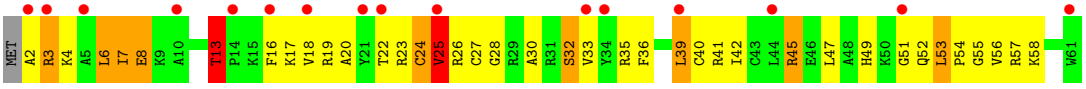
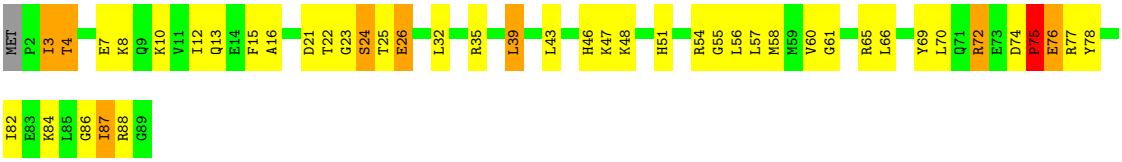


• Molecule 15: 30S Ribosomal Protein S15

Chain AO:



• Molecule 15: 30S Ribosomal Protein S15

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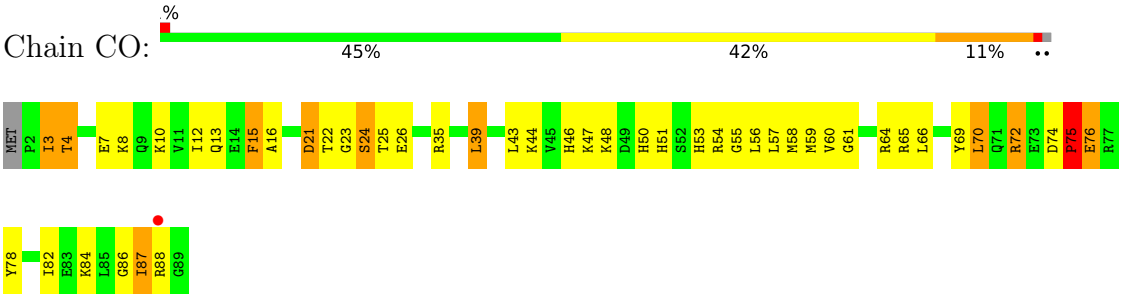

• Molecule 16: 30S Ribosomal Protein S16

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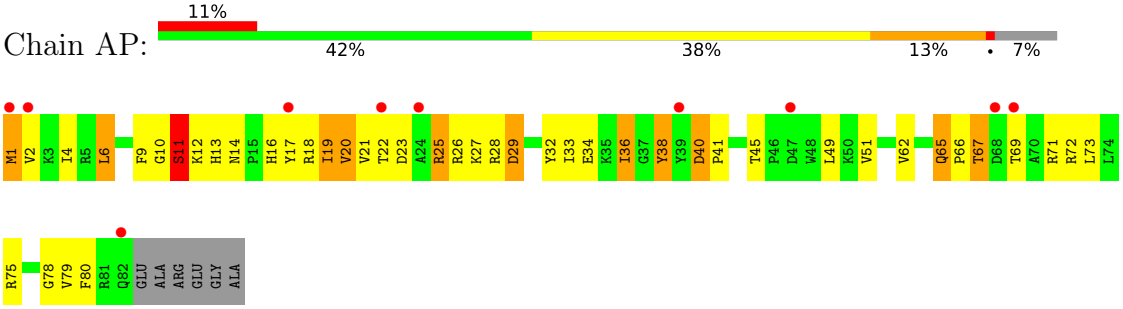
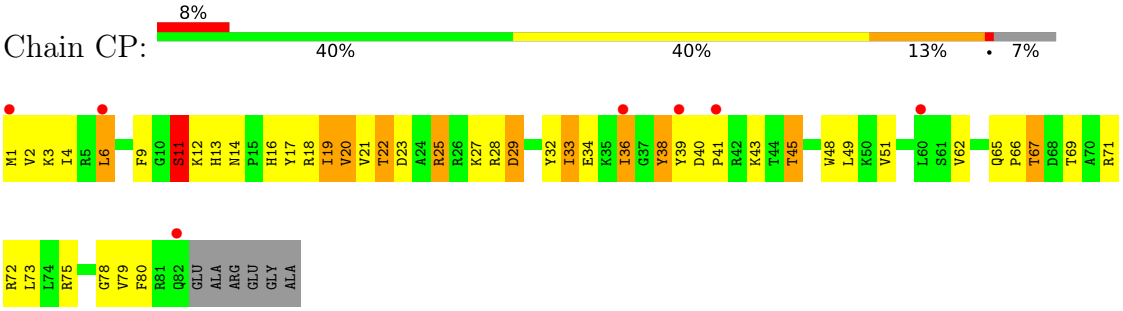


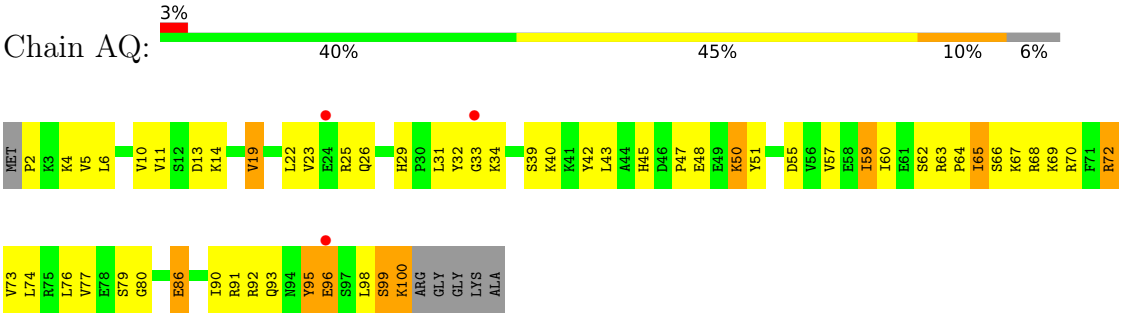
• Molecule 16: 30S Ribosomal Protein S16

Chain CP:



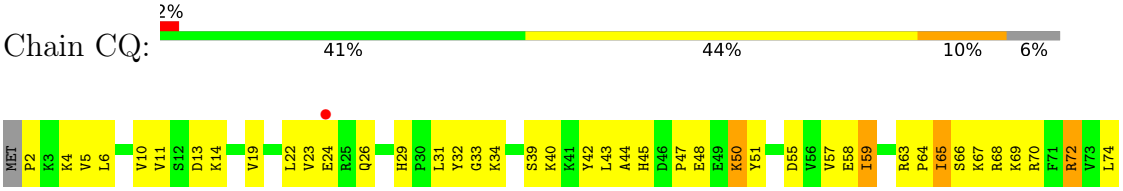
• Molecule 17: 30S Ribosomal Protein S17

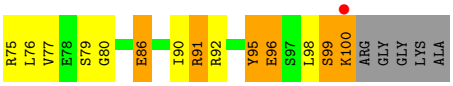
Chain AQ:



• Molecule 17: 30S Ribosomal Protein S17

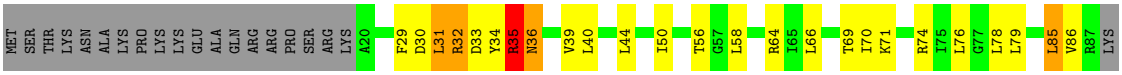
Chain CQ:





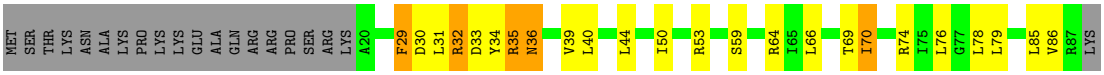
• Molecule 18: 30S Ribosomal Protein S18

Chain AR:



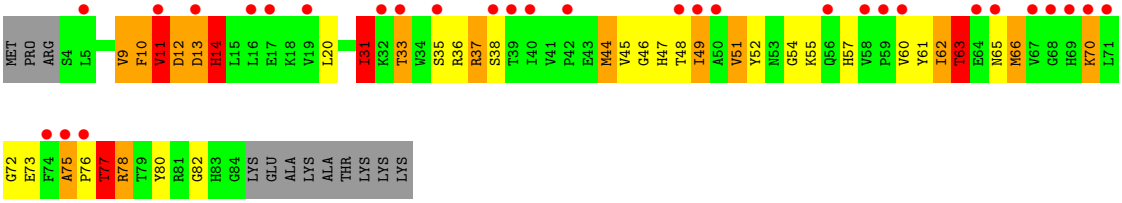
• Molecule 18: 30S Ribosomal Protein S18

Chain CR:



• Molecule 19: 30S Ribosomal Protein S19

Chain AS:



• Molecule 19: 30S Ribosomal Protein S19

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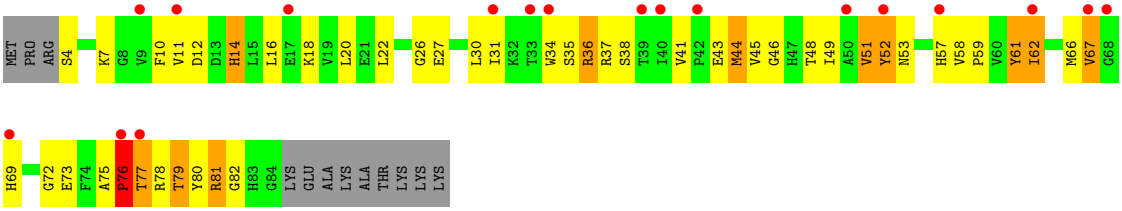
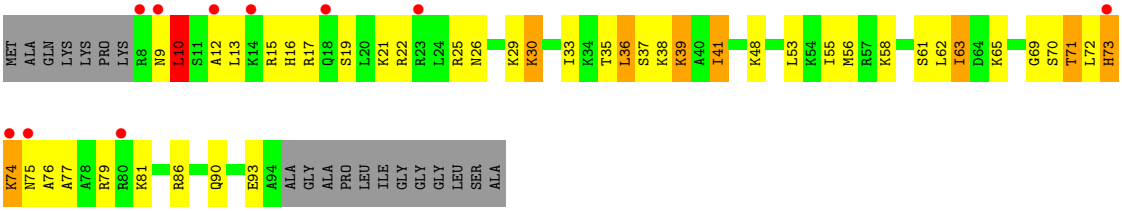


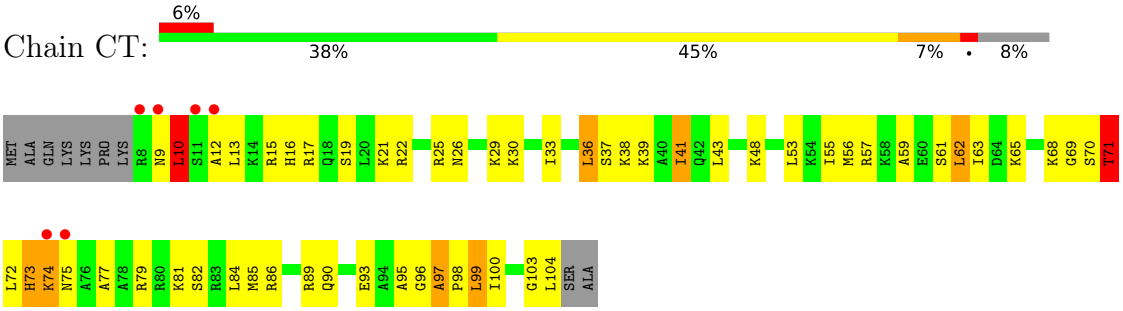
• Molecule 20: 30S Ribosomal Protein S20

Chain AT:



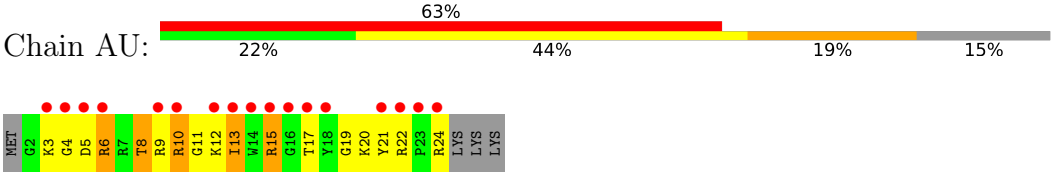
• Molecule 20: 30S Ribosomal Protein S20

Chain CT:



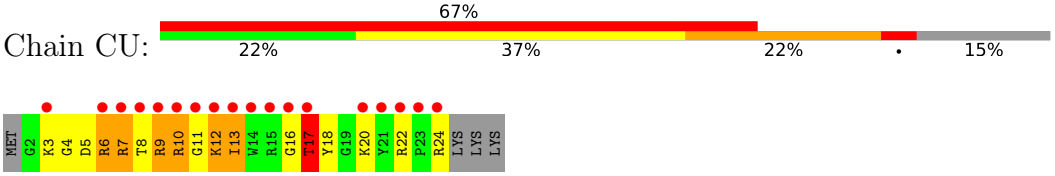
• Molecule 21: 30S Ribosomal Protein THX

Chain AU:



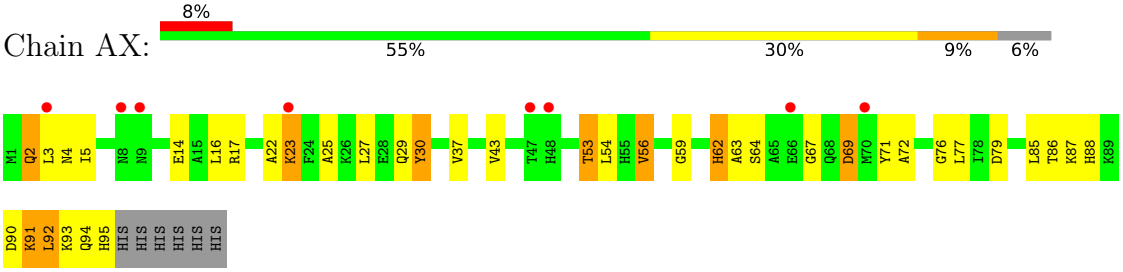
• Molecule 21: 30S Ribosomal Protein THX

Chain CU:



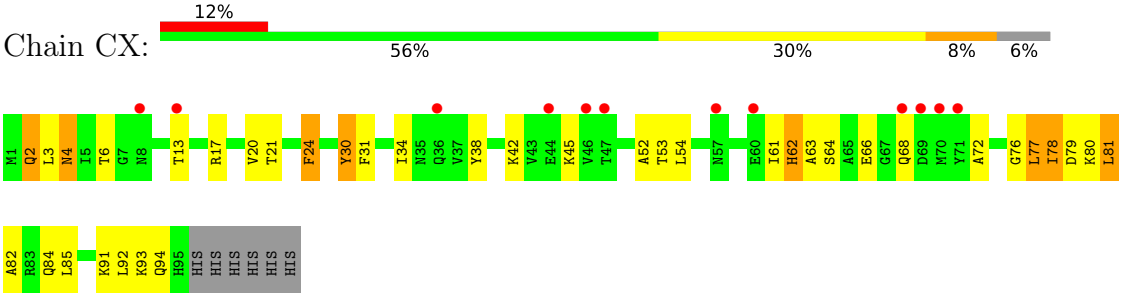
• Molecule 22: Probable sigma(54) modulation protein

Chain AX:



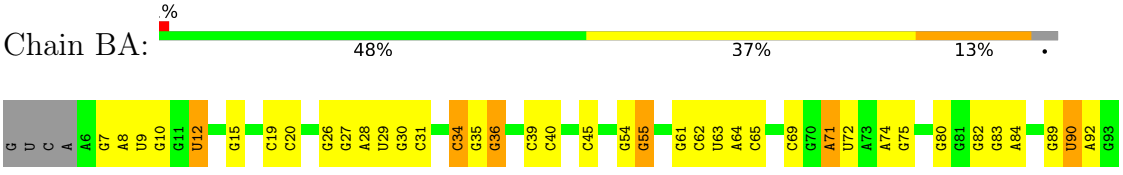
• Molecule 22: Probable sigma(54) modulation protein

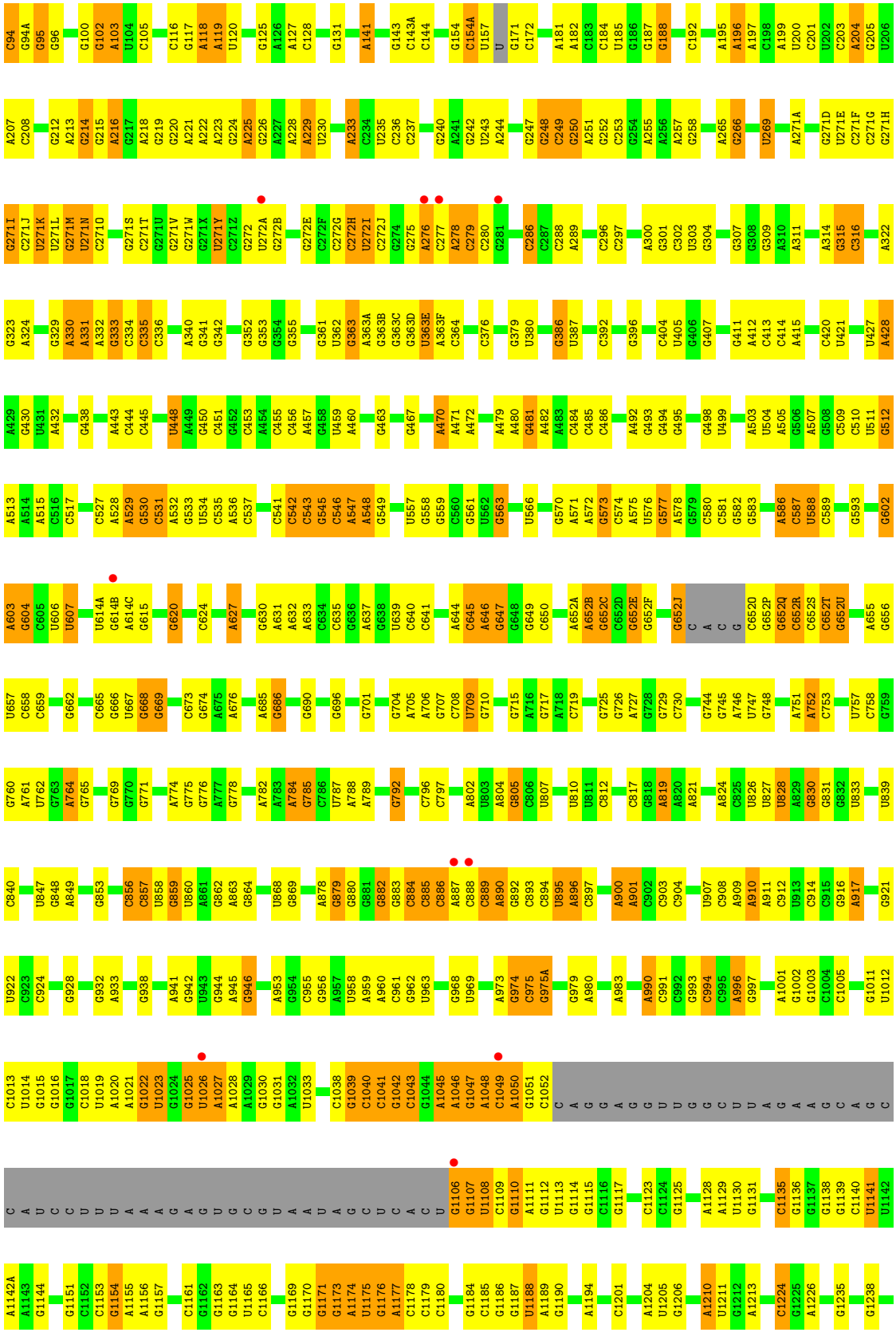
Chain CX:



• Molecule 23: 23S Ribosomal RNA

Chain BA:

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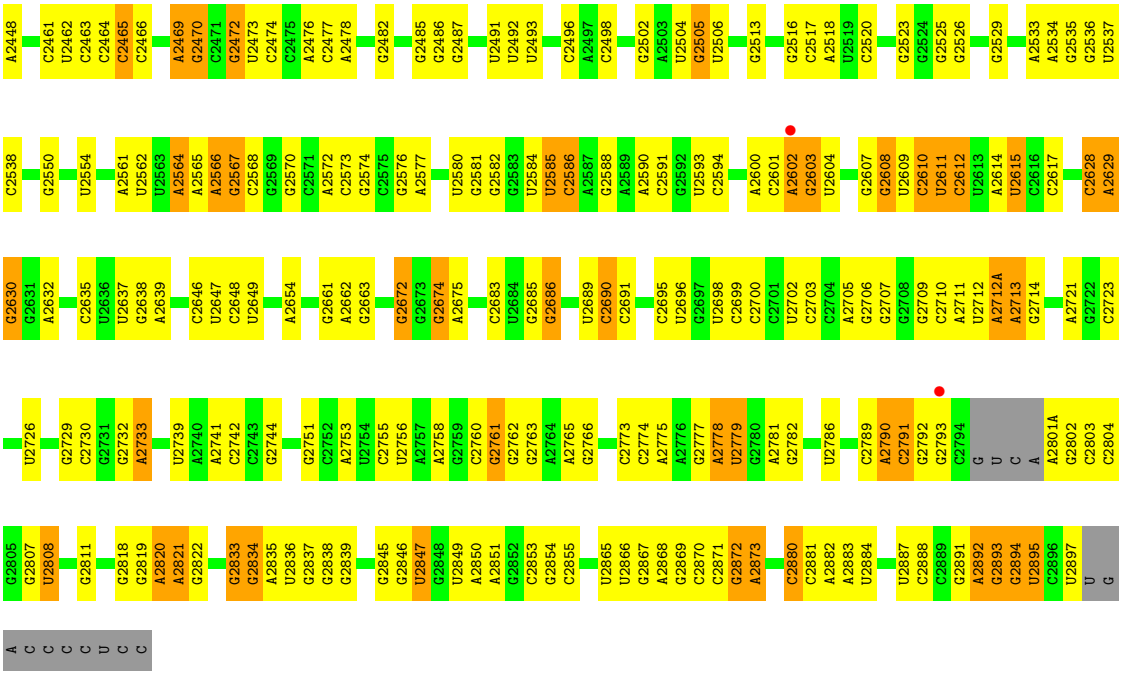
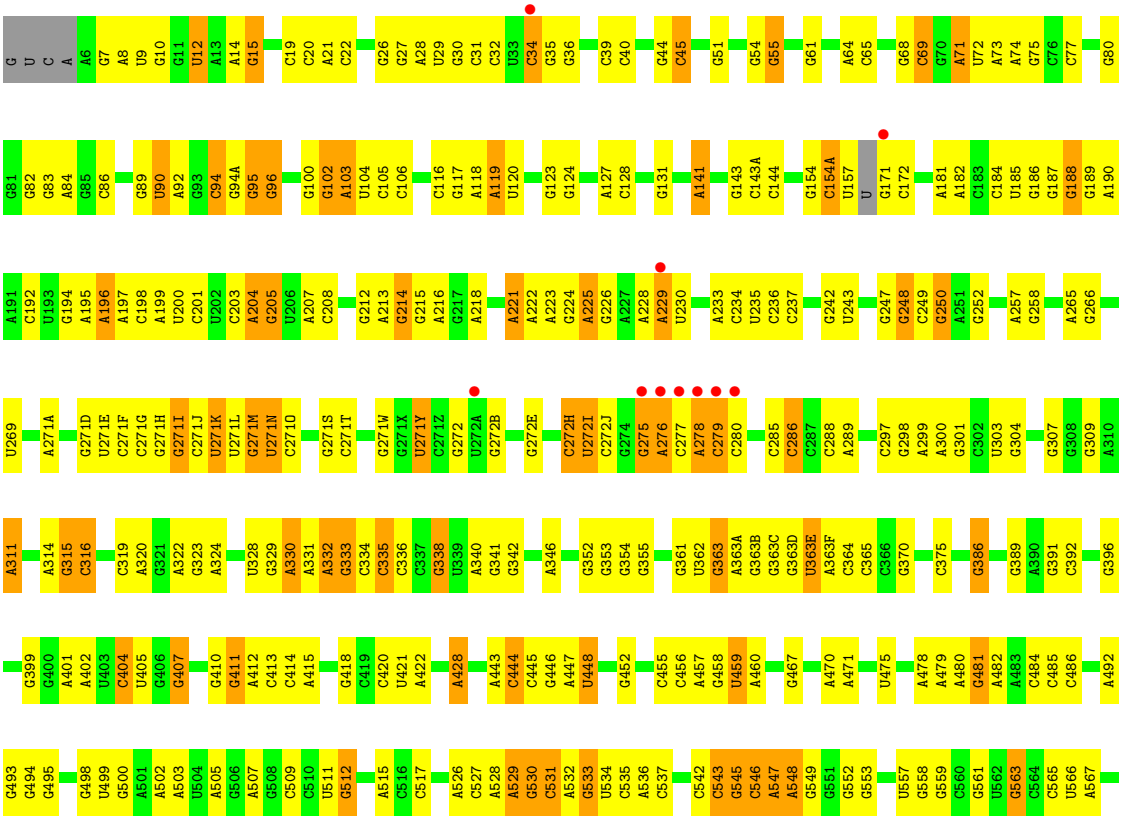
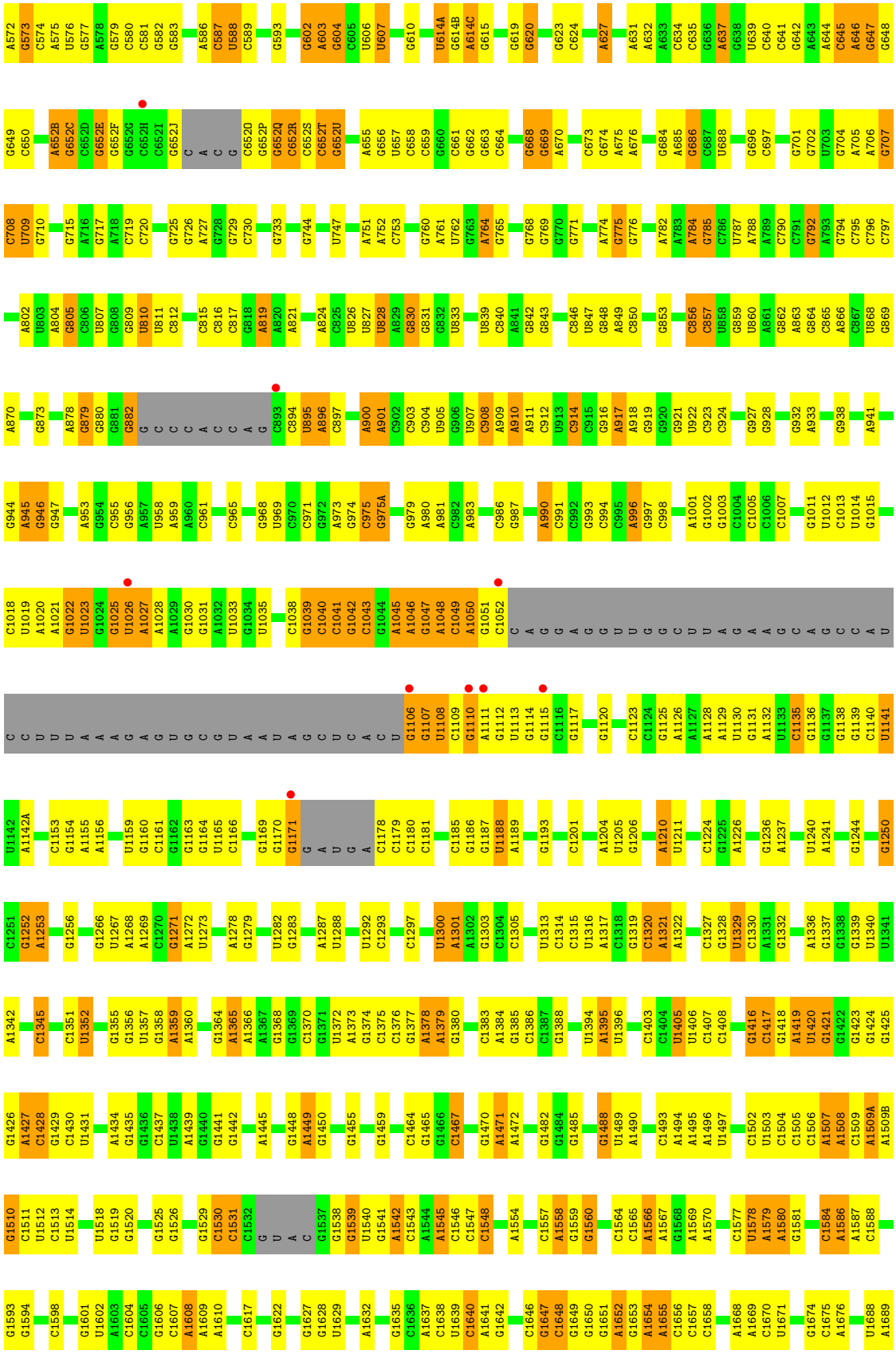
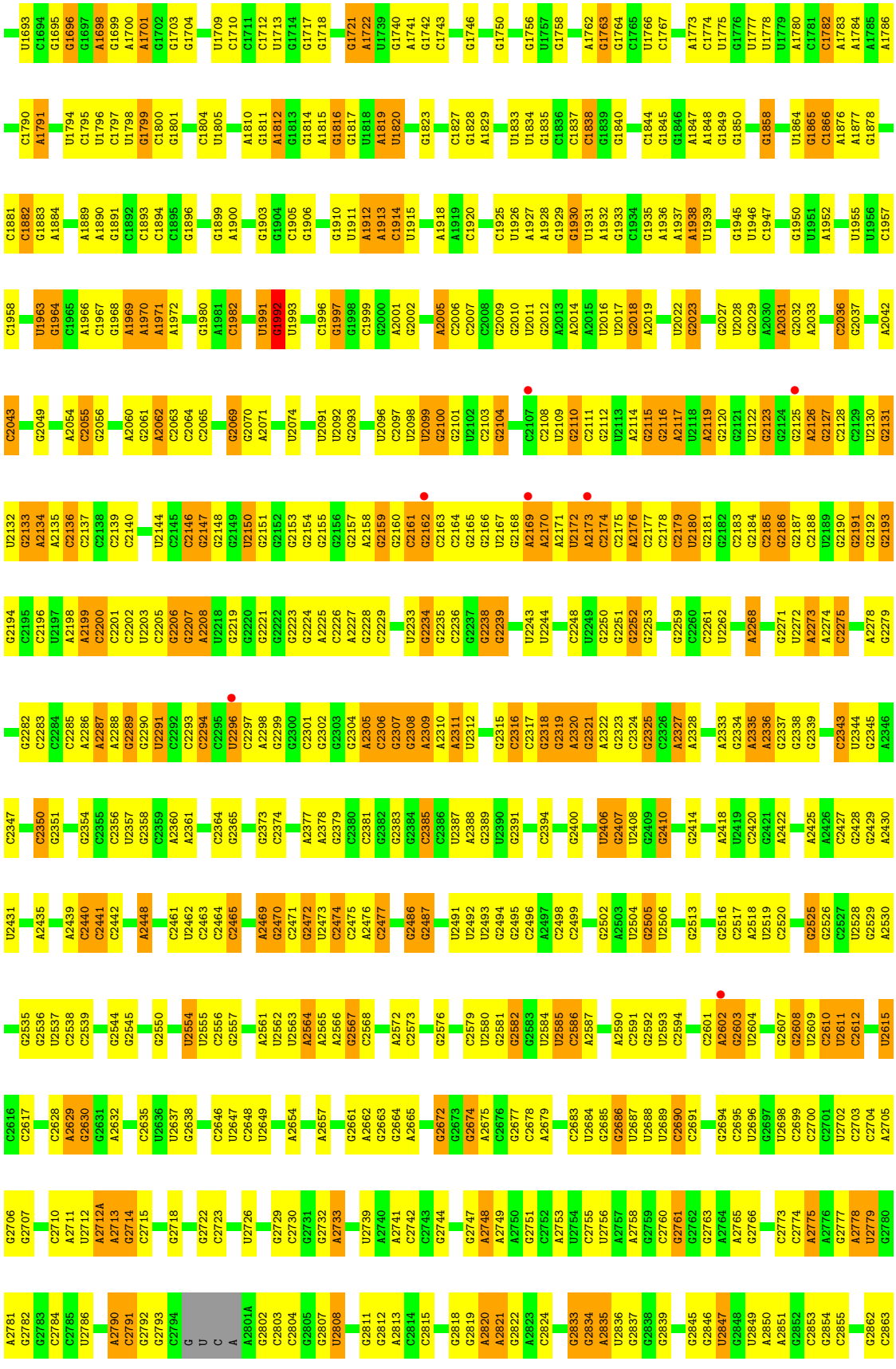


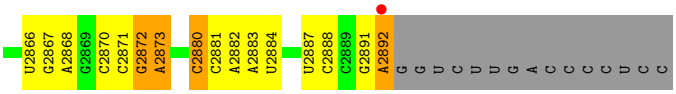
• Molecule 23: 23S Ribosomal RNA

Chain DA:



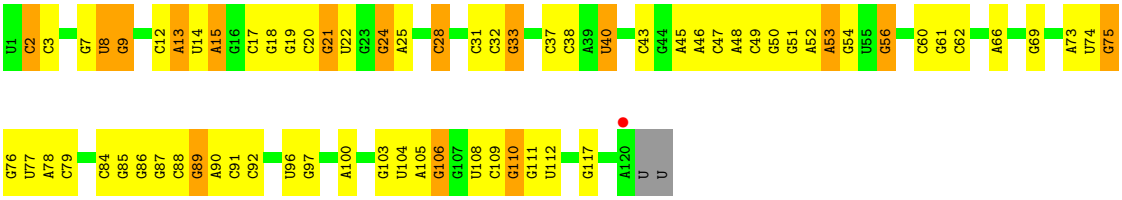






• Molecule 24: 5S Ribosomal RNA

Chain BB:



• Molecule 24: 5S Ribosomal RNA

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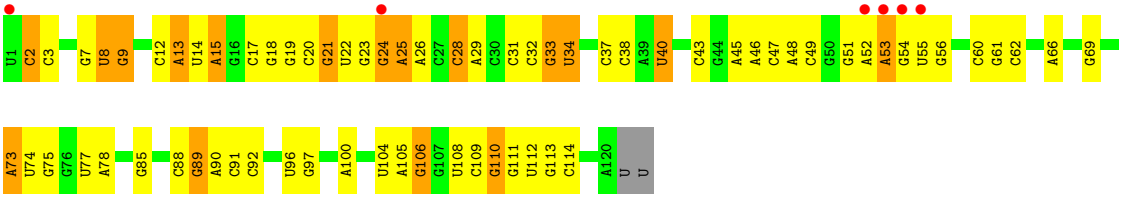
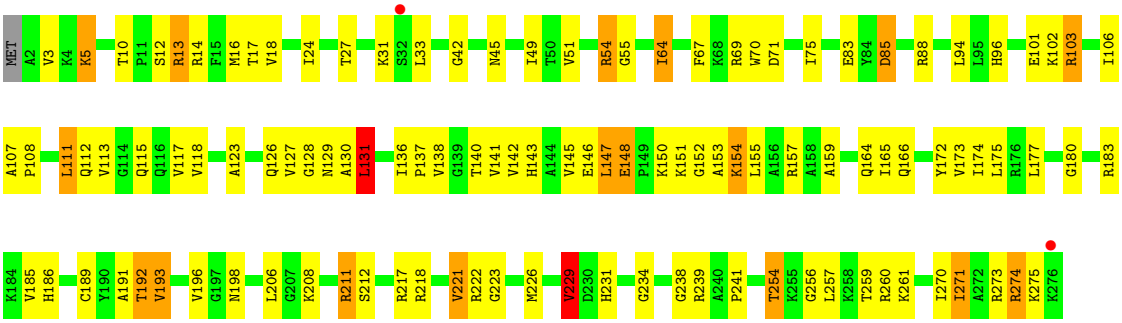


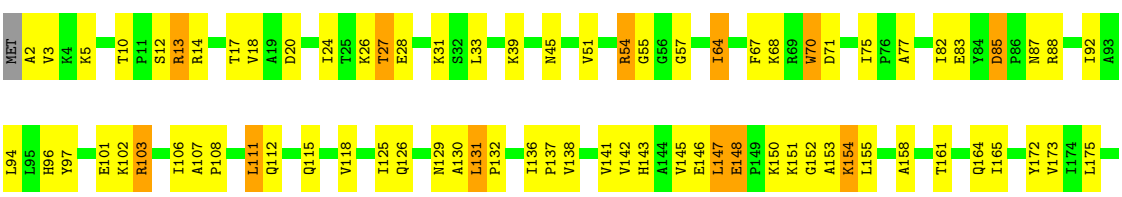
• Molecule 25: 50S Ribosomal Protein L2

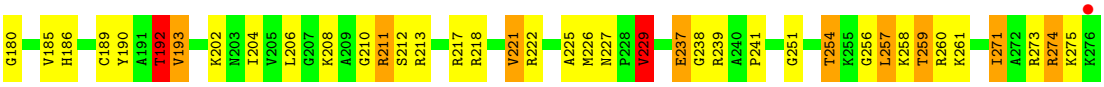
Chain BD:



• Molecule 25: 50S Ribosomal Protein L2

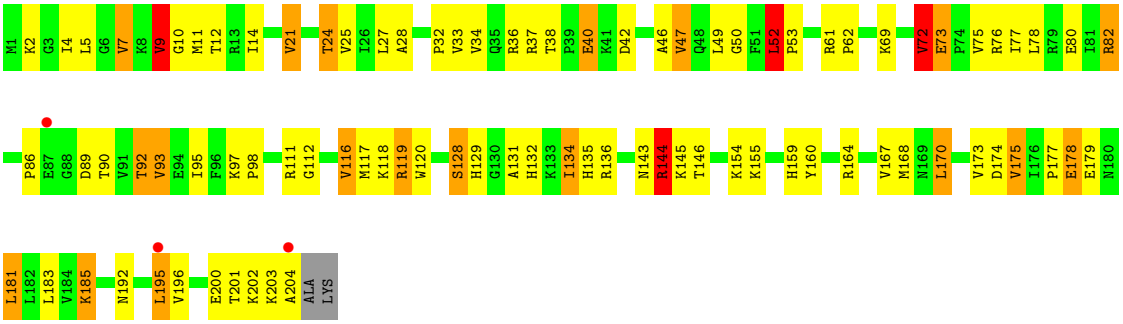
Chain DD:





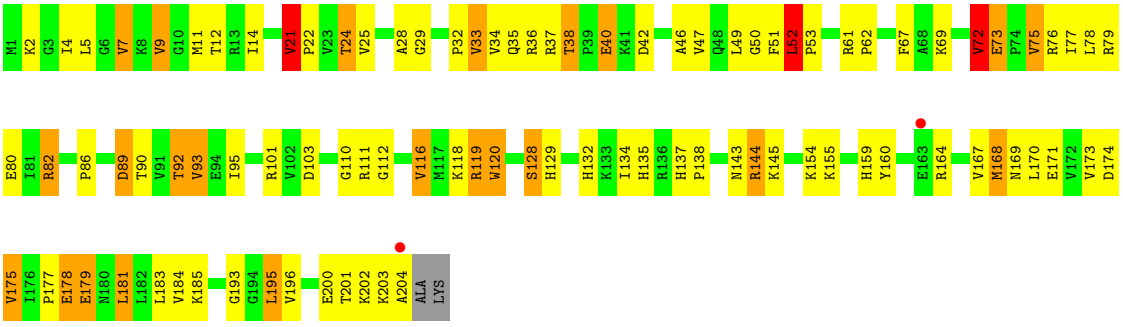
• Molecule 26: 50S Ribosomal Protein L3

Chain BE:



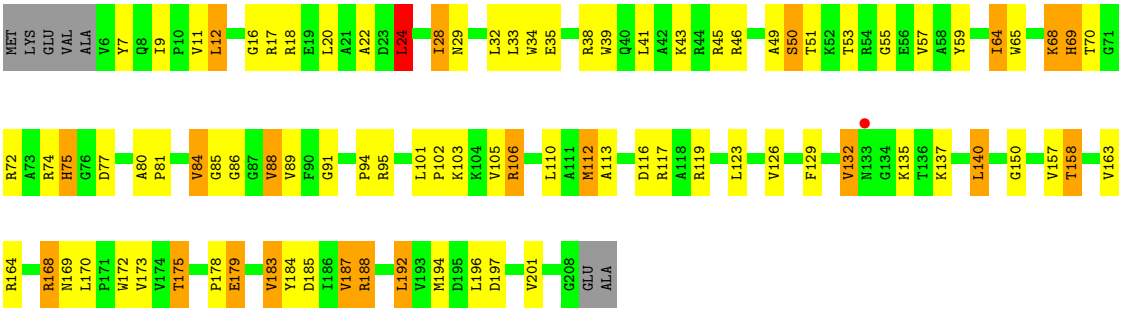
• Molecule 26: 50S Ribosomal Protein L3

Chain DE:



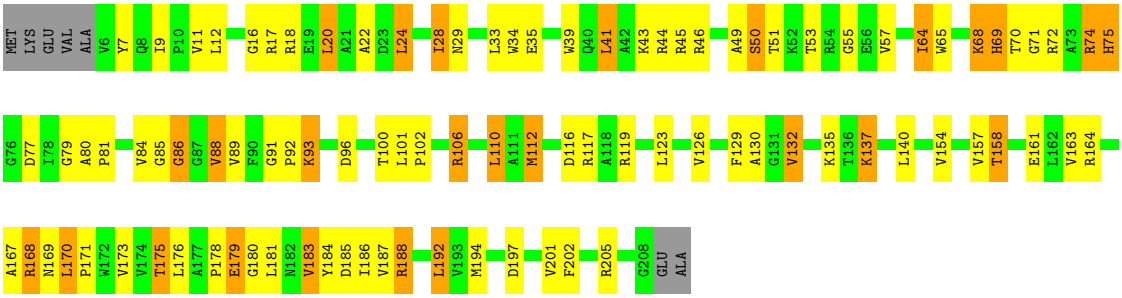
• Molecule 27: 50S Ribosomal Protein L4

Chain BF:



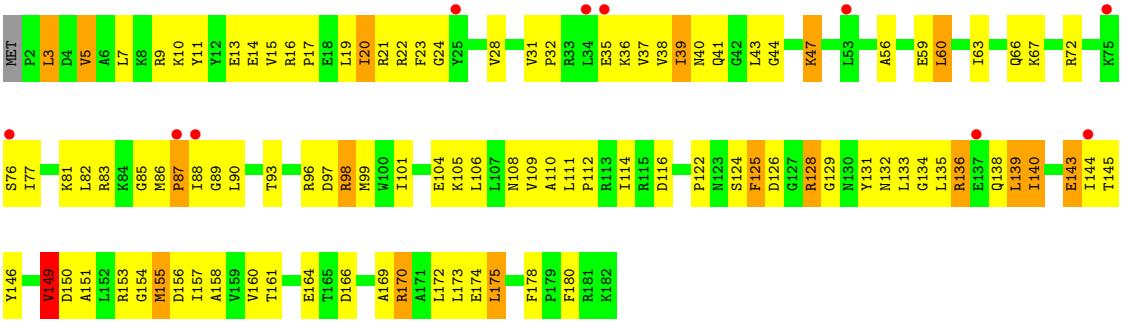
• Molecule 27: 50S Ribosomal Protein L4

Chain DF:



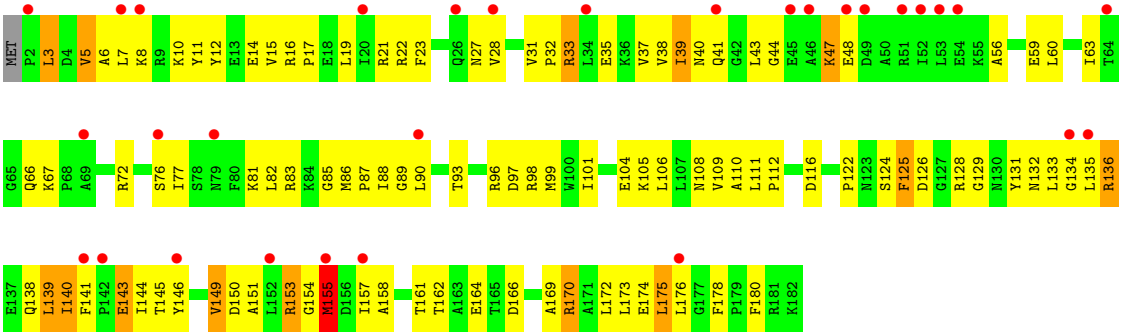
• Molecule 28: 50S Ribosomal Protein L5

Chain BG:



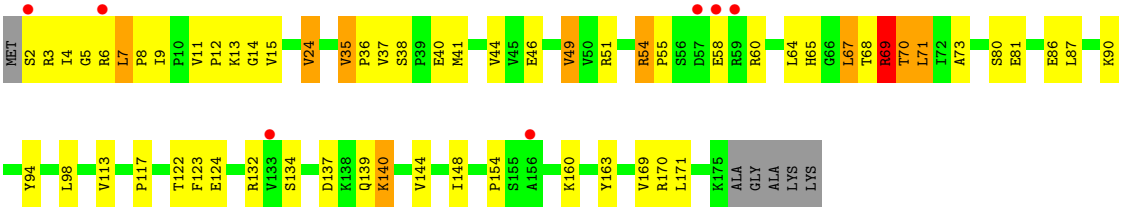
• Molecule 28: 50S Ribosomal Protein L5

Chain DG:



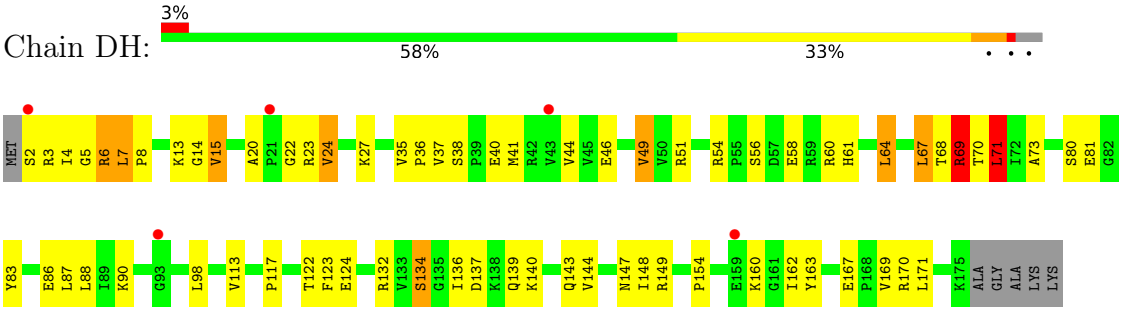
• Molecule 29: 50S Ribosomal Protein L6

Chain BH:



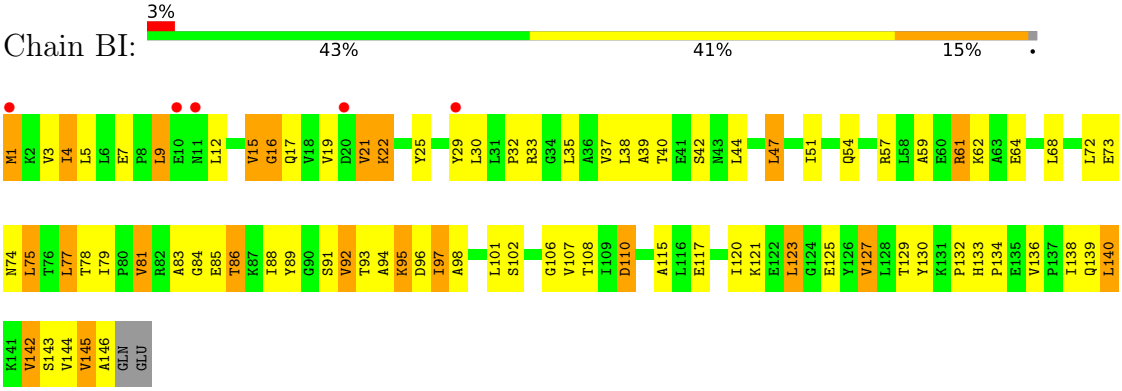
• Molecule 29: 50S Ribosomal Protein L6

Chain DH:



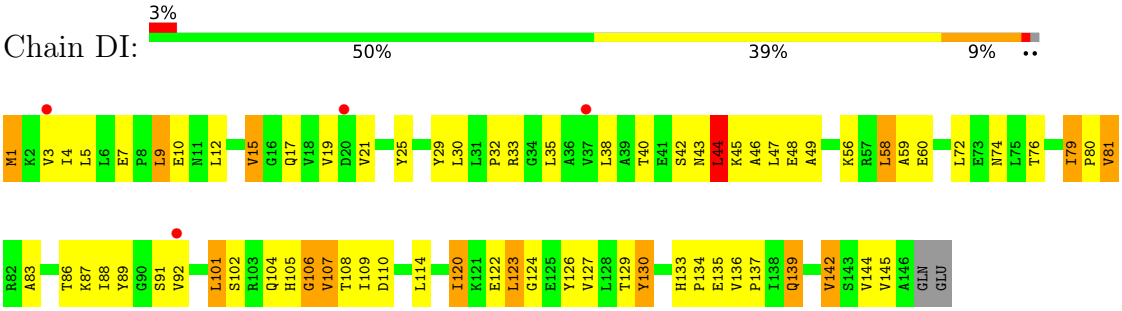
• Molecule 30: 50S Ribosomal Protein L9

Chain BI:



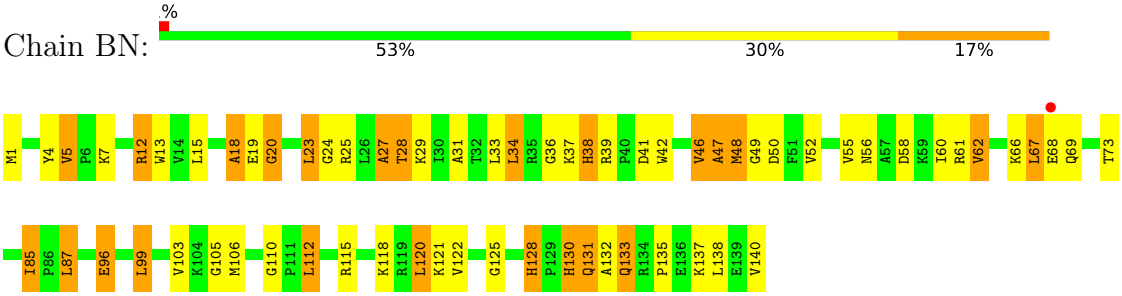
• Molecule 30: 50S Ribosomal Protein L9

Chain DI:



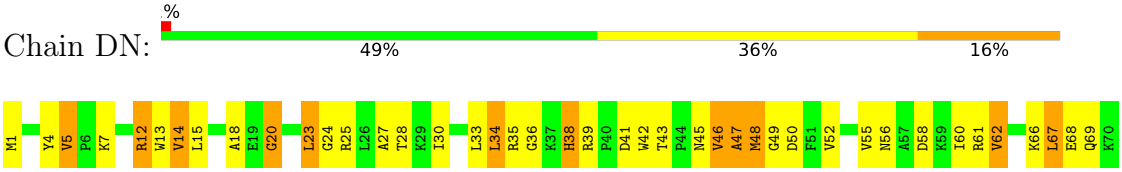
• Molecule 31: 50S Ribosomal Protein L13

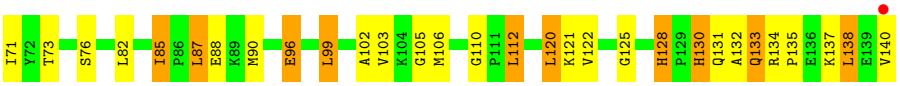
Chain BN:



• Molecule 31: 50S Ribosomal Protein L13

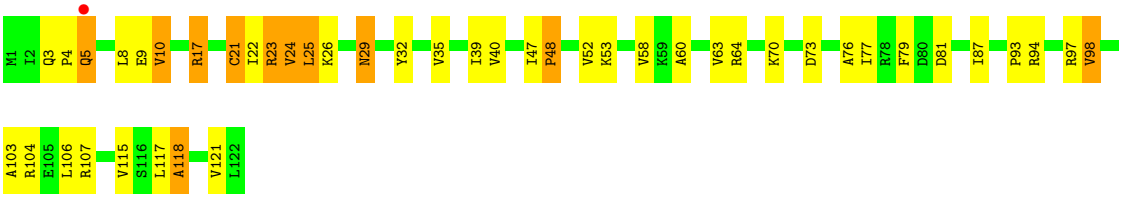
Chain DN:





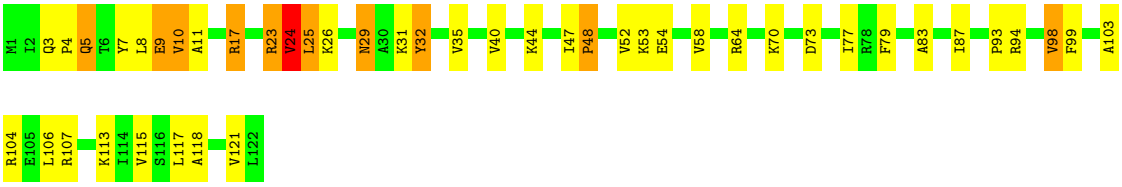
• Molecule 32: 50S Ribosomal Protein L14

Chain BO:



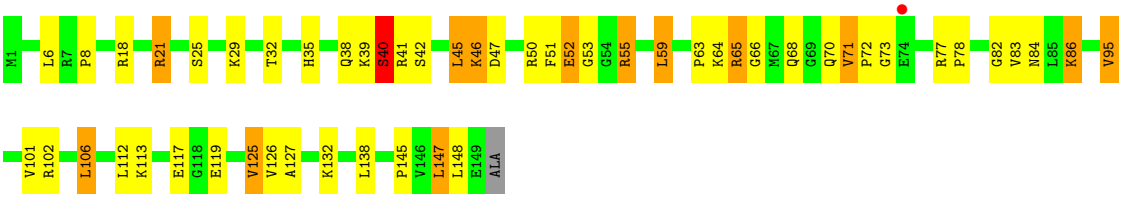
• Molecule 32: 50S Ribosomal Protein L14

Chain DO:



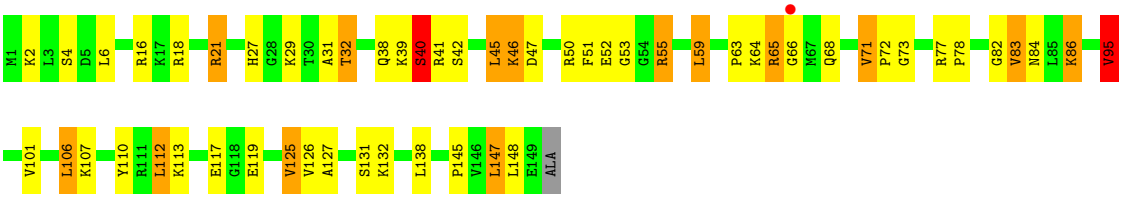
• Molecule 33: 50S Ribosomal Protein L15

Chain BP:



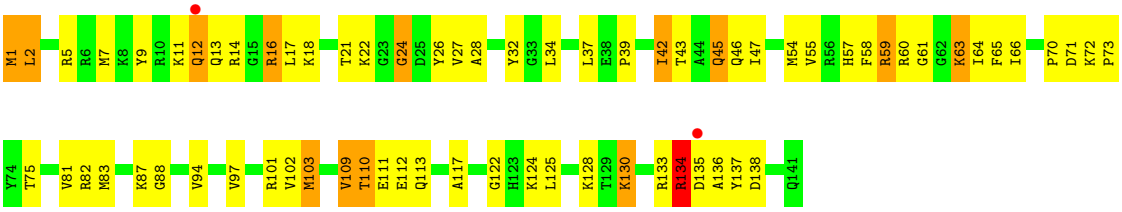
• Molecule 33: 50S Ribosomal Protein L15

Chain DP:



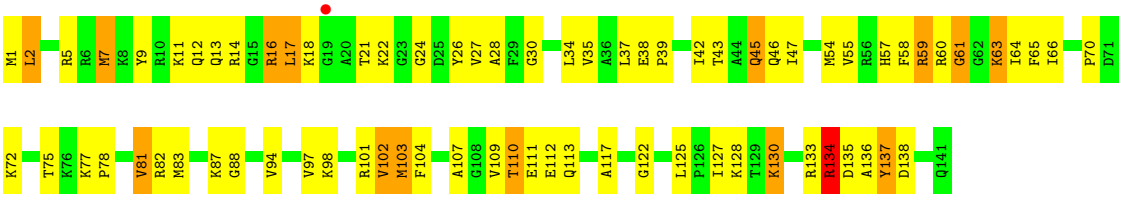
• Molecule 34: 50S Ribosomal Protein L16

Chain BQ:



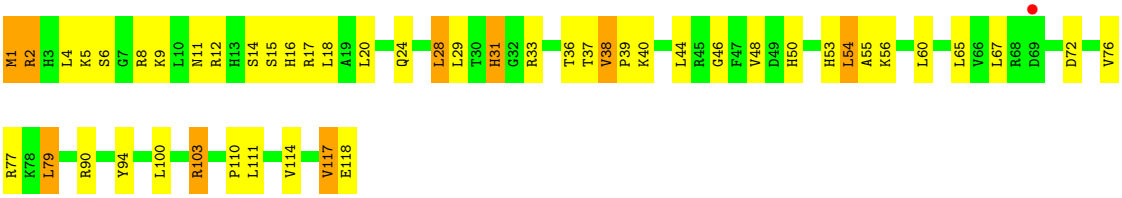
• Molecule 34: 50S Ribosomal Protein L16

Chain DQ:



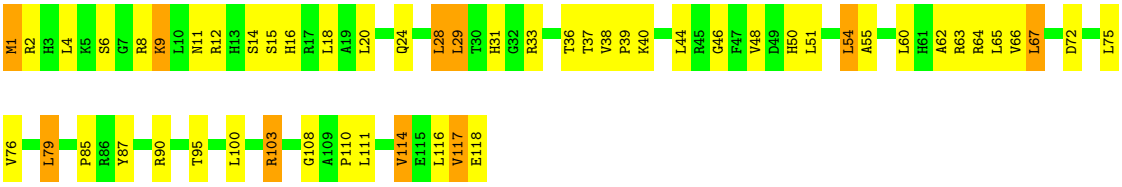
• Molecule 35: 50S Ribosomal Protein L17

Chain BR:



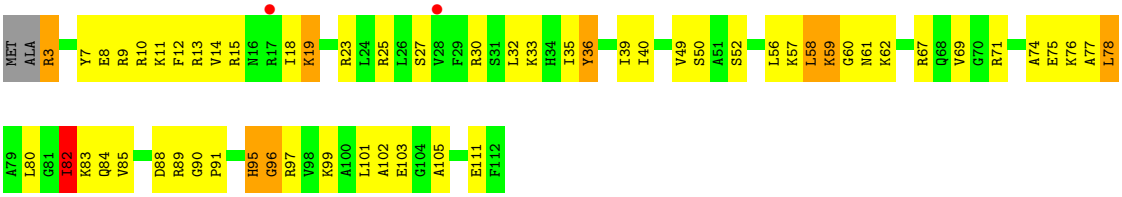
• Molecule 35: 50S Ribosomal Protein L17

Chain DR:



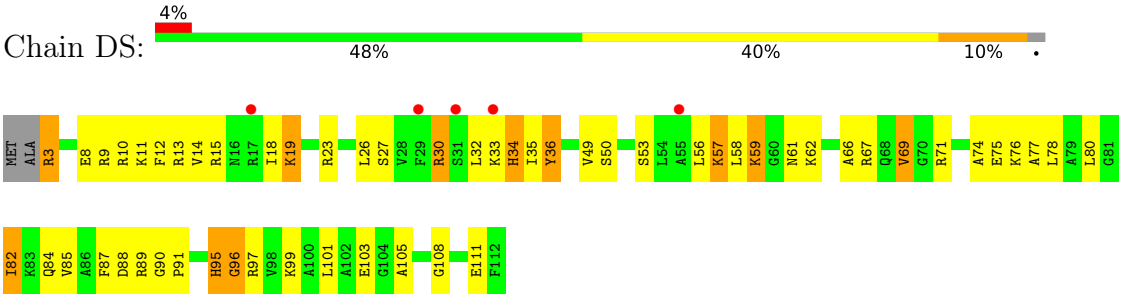
• Molecule 36: 50S Ribosomal Protein L18

Chain BS:



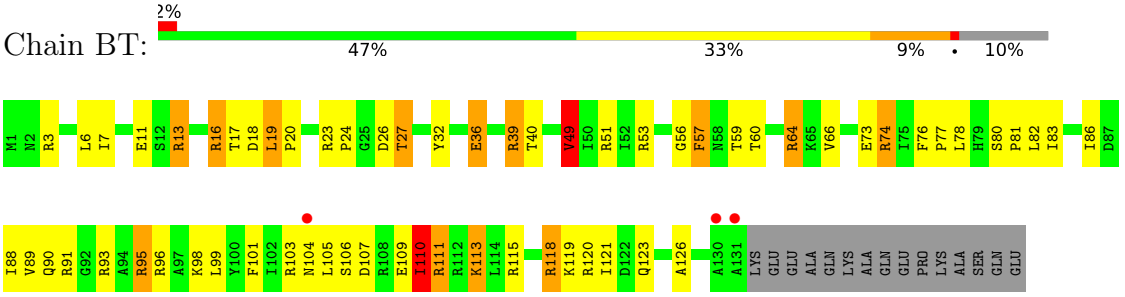
• Molecule 36: 50S Ribosomal Protein L18

Chain DS:



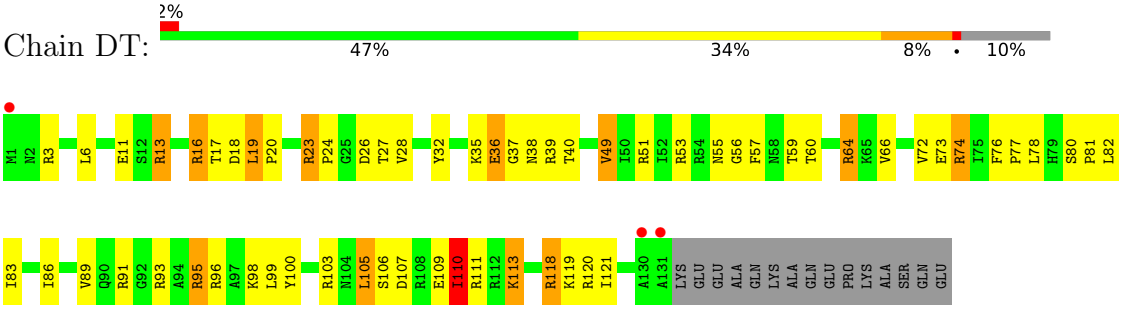
• Molecule 37: 50S Ribosomal Protein L19

Chain BT:



• Molecule 37: 50S Ribosomal Protein L19

Chain DT:

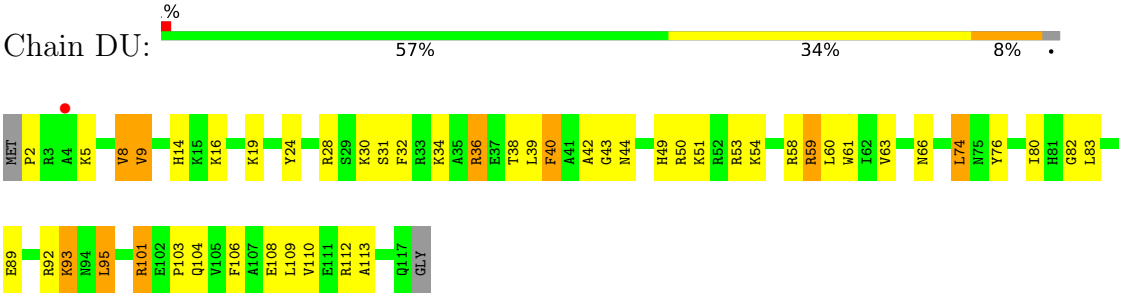


• Molecule 38: 50S Ribosomal Protein L20

Chain BU:

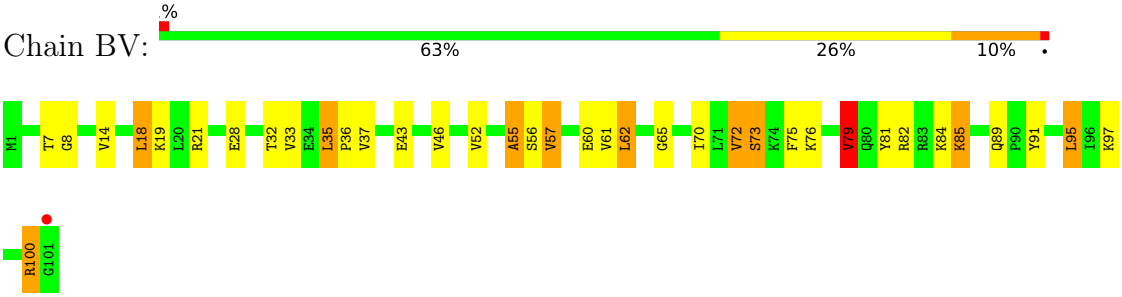
• Molecule 38: 50S Ribosomal Protein L20

Chain DU:



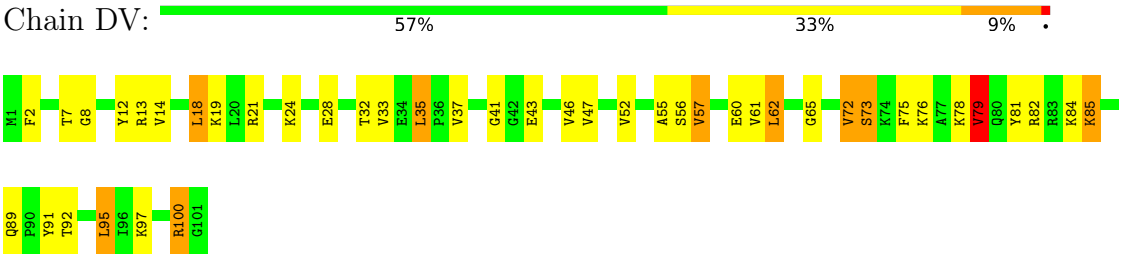
• Molecule 39: 50S Ribosomal Protein L21

Chain BV:



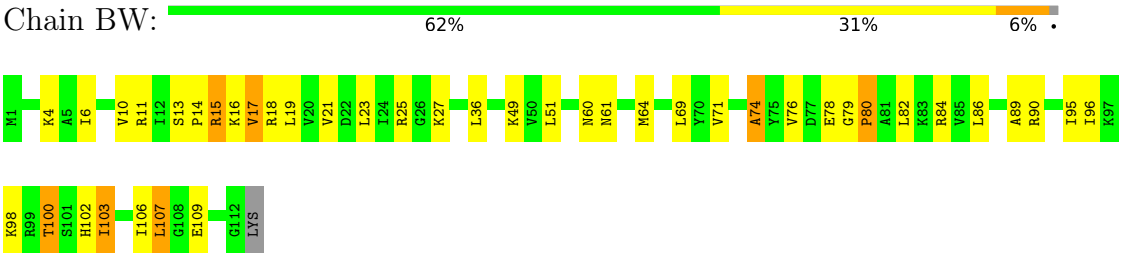
• Molecule 39: 50S Ribosomal Protein L21

Chain DV:



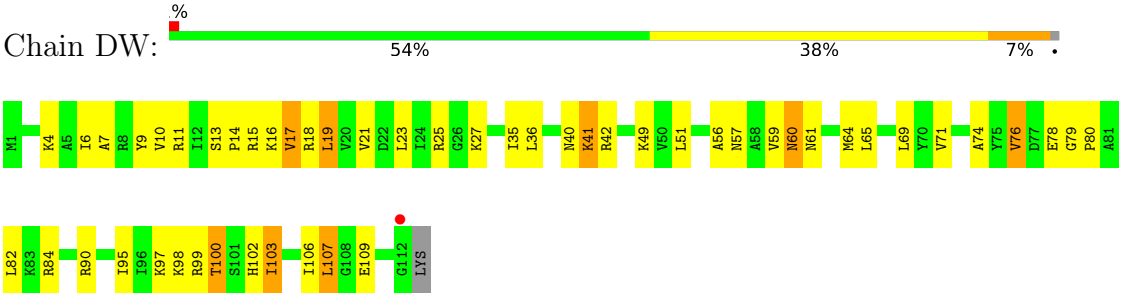
• Molecule 40: 50S Ribosomal Protein L22

Chain BW:



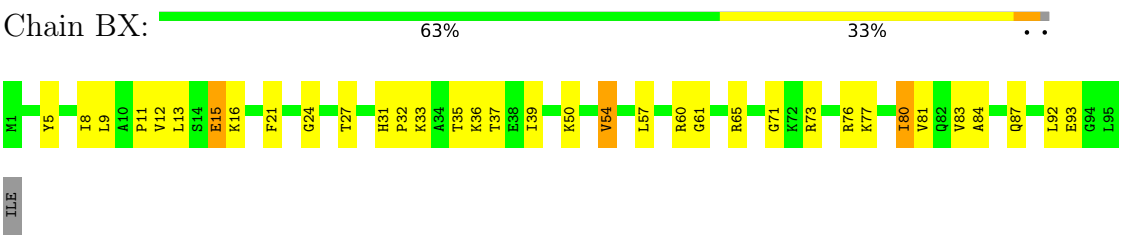
• Molecule 40: 50S Ribosomal Protein L22

Chain DW:



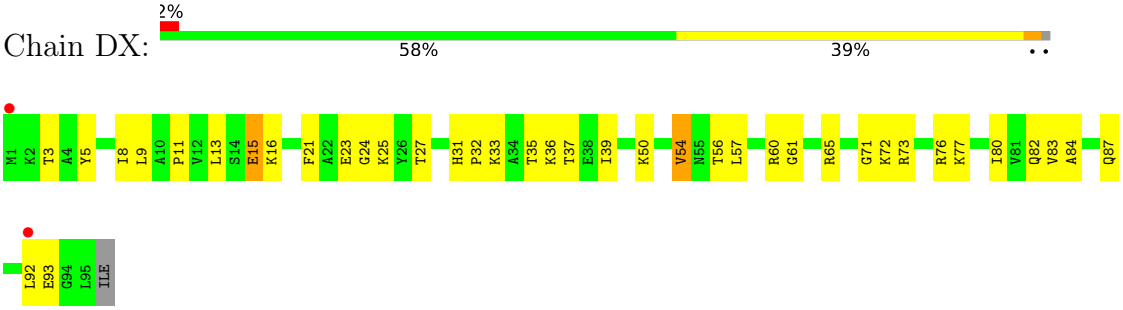
• Molecule 41: 50S Ribosomal Protein L23

Chain BX:



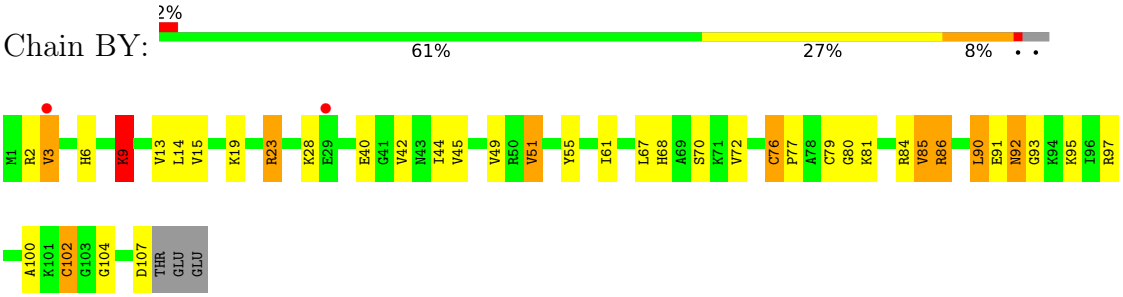
• Molecule 41: 50S Ribosomal Protein L23

Chain DX:



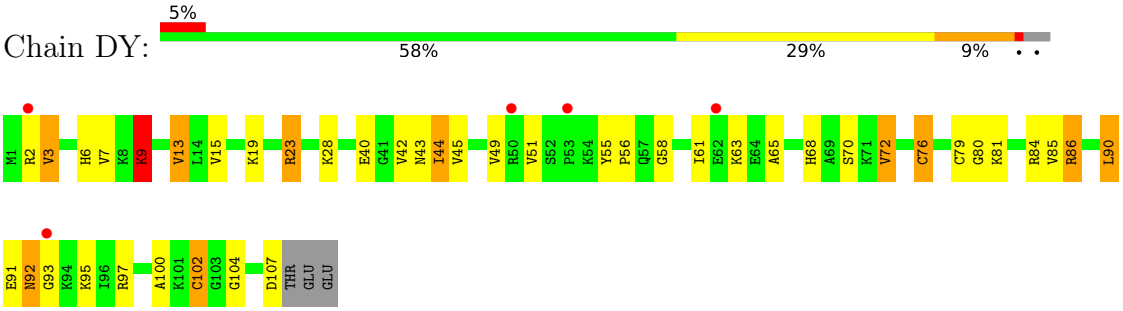
• Molecule 42: 50S Ribosomal Protein L24

Chain BY:



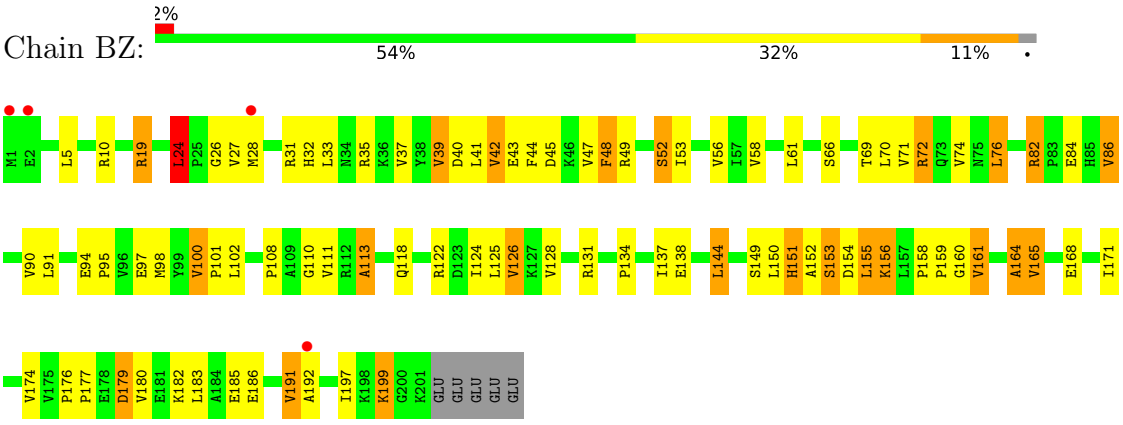
• Molecule 42: 50S Ribosomal Protein L24

Chain DY:



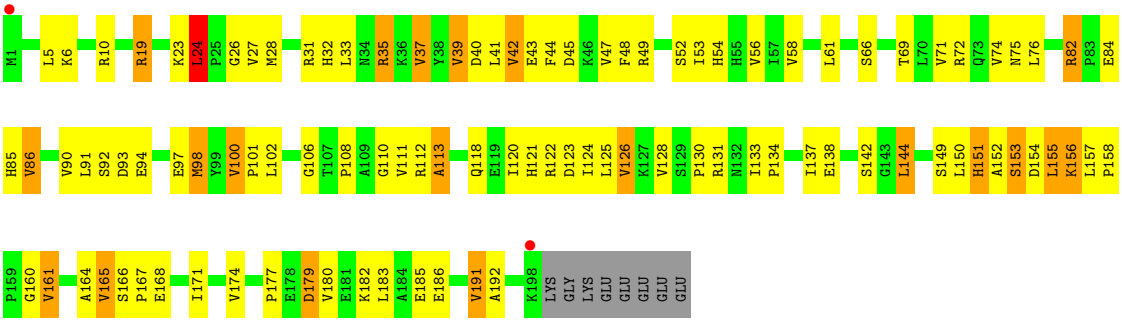
• Molecule 43: 50S Ribosomal Protein L25

Chain BZ:



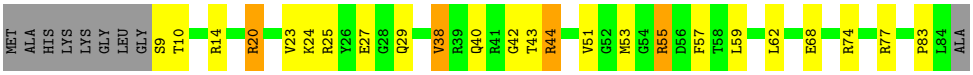
• Molecule 43: 50S Ribosomal Protein L25

Chain DZ:



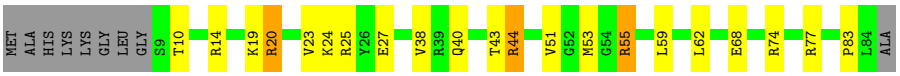
• Molecule 44: 50S Ribosomal Protein L27

Chain B0:



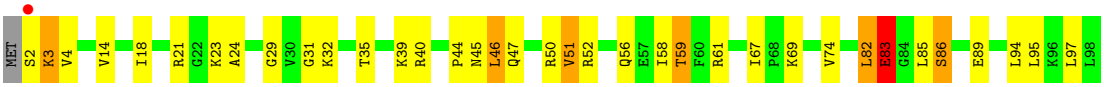
• Molecule 44: 50S Ribosomal Protein L27

Chain D0:



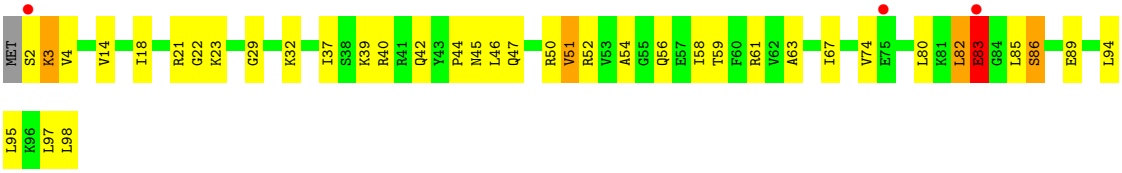
• Molecule 45: 50S Ribosomal Protein L28

Chain B1:



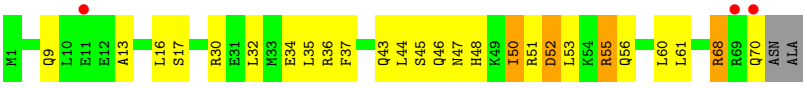
• Molecule 45: 50S Ribosomal Protein L28

Chain D1:



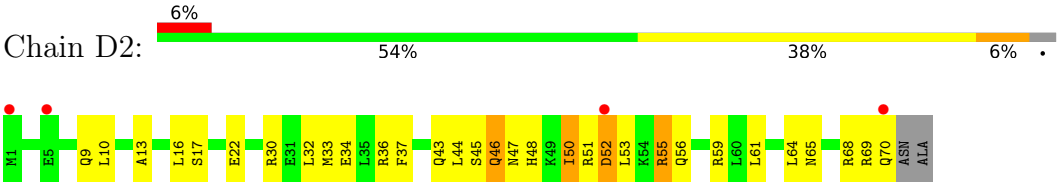
• Molecule 46: 50S Ribosomal Protein L29

Chain B2:



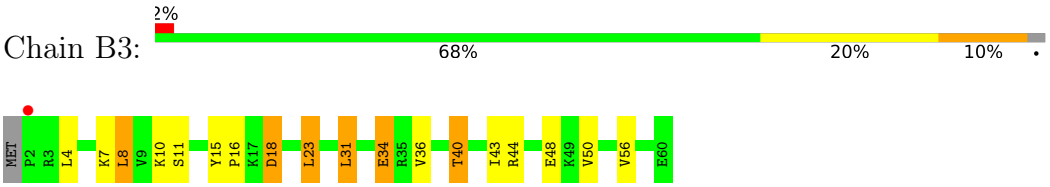
• Molecule 46: 50S Ribosomal Protein L29

Chain D2:



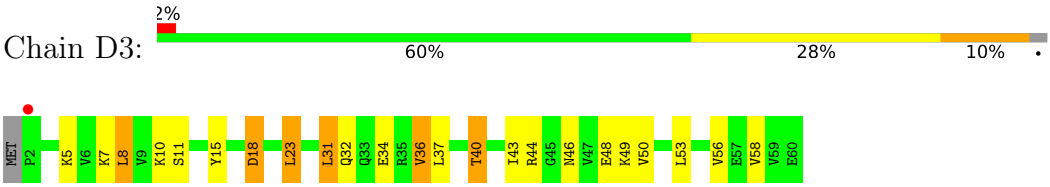
• Molecule 47: 50S Ribosomal Protein L30

Chain B3:



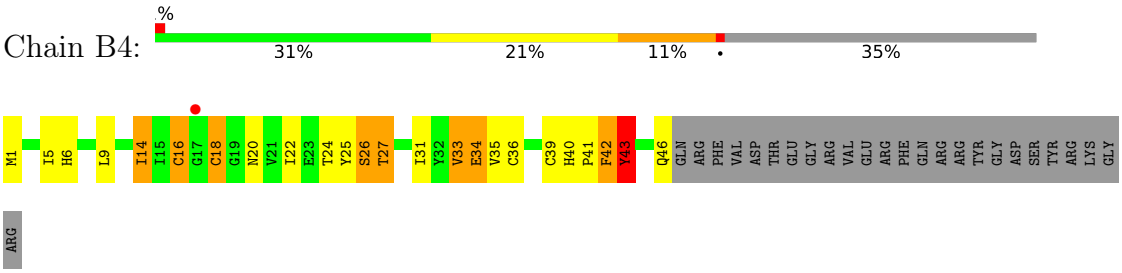
• Molecule 47: 50S Ribosomal Protein L30

Chain D3:



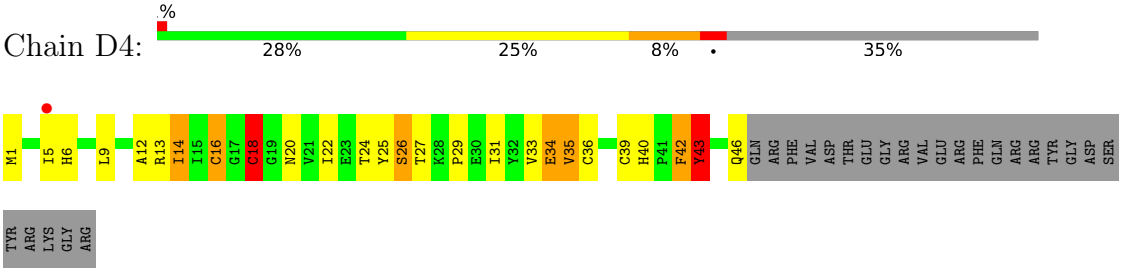
• Molecule 48: 50S Ribosomal Protein L31

Chain B4:



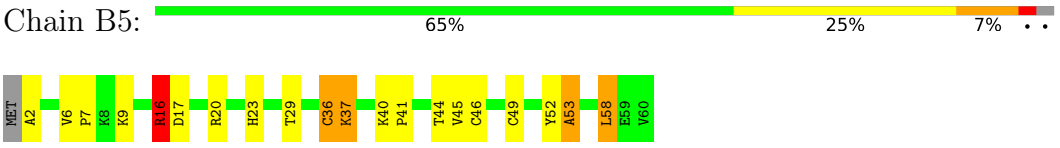
• Molecule 48: 50S Ribosomal Protein L31

Chain D4:



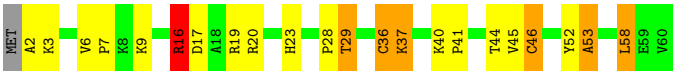
• Molecule 49: 50S Ribosomal Protein L32

Chain B5:



• Molecule 49: 50S Ribosomal Protein L32

Chain D5:

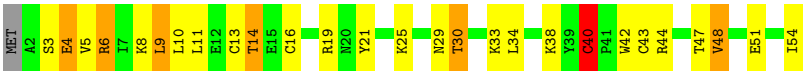


• Molecule 50: 50S Ribosomal Protein L33

Chain B6:

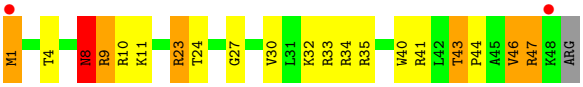
• Molecule 50: 50S Ribosomal Protein L33

Chain D6:



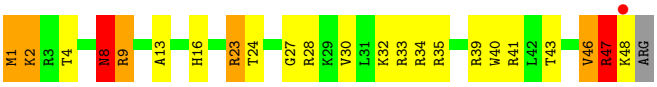
• Molecule 51: 50S Ribosomal Protein L34

Chain B7:



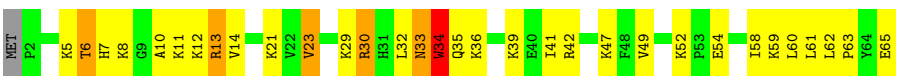
• Molecule 51: 50S Ribosomal Protein L34

Chain D7:



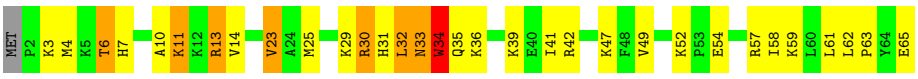
• Molecule 52: 50S Ribosomal Protein L35

Chain B8:



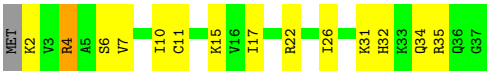
• Molecule 52: 50S Ribosomal Protein L35

Chain D8:



• Molecule 53: 50S Ribosomal Protein L36

Chain B9:



• Molecule 53: 50S Ribosomal Protein L36

Chain D9:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	208.97Å 447.24Å 617.67Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.98 – 3.10 49.98 – 3.10	Depositor EDS
% Data completeness (in resolution range)	96.0 (49.98-3.10) 96.0 (49.98-3.10)	Depositor EDS
R_{merge}	0.23	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.39 (at 3.12Å)	Xtriage
Refinement program	PHENIX 1.7.2_869	Depositor
R, R_{free}	0.216 , 0.258 0.213 , 0.256	Depositor DCC
R_{free} test set	49829 reflections (4.82%)	wwPDB-VP
Wilson B-factor (Å^2)	65.0	Xtriage
Anisotropy	0.263	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.26 , 46.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.42$, $< L^2 > = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	286308	wwPDB-VP
Average B, all atoms (Å^2)	74.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.51% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.63	3/36123 (0.0%)	0.56	5/56379 (0.0%)
1	CA	0.61	3/36028 (0.0%)	0.56	4/56231 (0.0%)
2	AB	0.87	0/1822	1.25	13/2468 (0.5%)
2	CB	0.92	0/1809	1.24	15/2450 (0.6%)
3	AC	1.03	0/1474	1.37	14/2003 (0.7%)
3	CC	1.06	3/1474 (0.2%)	1.30	9/2003 (0.4%)
4	AD	0.85	1/1556 (0.1%)	1.30	17/2113 (0.8%)
4	CD	0.86	4/1556 (0.3%)	1.32	22/2113 (1.0%)
5	AE	0.76	0/1121	1.25	11/1517 (0.7%)
5	CE	0.76	0/1121	1.26	14/1517 (0.9%)
6	AF	0.75	0/790	1.17	4/1077 (0.4%)
6	CF	0.74	0/790	1.17	5/1077 (0.5%)
7	AG	1.39	2/1183 (0.2%)	1.51	23/1599 (1.4%)
7	CG	1.27	3/1183 (0.3%)	1.45	15/1599 (0.9%)
8	AH	0.72	0/1065	1.17	8/1445 (0.6%)
8	CH	0.69	0/1065	1.17	5/1445 (0.3%)
9	AI	1.28	1/867 (0.1%)	1.51	13/1180 (1.1%)
9	CI	1.43	1/867 (0.1%)	1.40	12/1180 (1.0%)
10	AJ	1.18	2/676 (0.3%)	1.51	8/924 (0.9%)
10	CJ	1.34	1/676 (0.1%)	1.47	10/924 (1.1%)
11	AK	0.76	0/843	1.19	5/1144 (0.4%)
11	CK	0.72	0/843	1.19	7/1144 (0.6%)
12	AL	0.78	0/921	1.17	6/1247 (0.5%)
12	CL	0.80	0/921	1.21	6/1247 (0.5%)
13	AM	1.49	5/814 (0.6%)	1.58	18/1107 (1.6%)
13	CM	1.42	3/814 (0.4%)	1.59	12/1107 (1.1%)
14	AN	0.91	0/487	1.32	4/649 (0.6%)
14	CN	0.93	1/487 (0.2%)	1.22	3/649 (0.5%)
15	AO	0.82	0/735	1.13	1/981 (0.1%)
15	CO	0.82	0/735	1.17	3/981 (0.3%)
16	AP	0.77	0/667	1.24	4/905 (0.4%)
16	CP	0.71	0/667	1.20	2/905 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.75	0/836	1.20	3/1117 (0.3%)
17	CQ	0.76	0/836	1.24	3/1117 (0.3%)
18	AR	0.73	0/519	1.14	4/699 (0.6%)
18	CR	0.73	0/519	1.08	2/699 (0.3%)
19	AS	1.41	2/574 (0.3%)	1.47	10/781 (1.3%)
19	CS	1.43	3/574 (0.5%)	1.51	11/781 (1.4%)
20	AT	0.75	0/666	1.18	2/880 (0.2%)
20	CT	0.82	0/715	1.30	10/947 (1.1%)
21	AU	1.01	0/203	1.30	0/266
21	CU	1.14	0/203	1.34	2/266 (0.8%)
22	AX	0.93	0/637	1.27	3/864 (0.3%)
22	CX	1.06	0/606	1.39	7/828 (0.8%)
23	BA	0.86	3/68445 (0.0%)	0.61	7/106848 (0.0%)
23	DA	0.67	0/67893	0.59	4/105980 (0.0%)
24	BB	0.65	0/2878	0.55	0/4490
24	DB	0.62	0/2878	0.55	0/4490
25	BD	1.18	6/2185 (0.3%)	1.33	15/2942 (0.5%)
25	DD	0.99	1/2186 (0.0%)	1.30	14/2944 (0.5%)
26	BE	1.16	5/1588 (0.3%)	1.34	10/2145 (0.5%)
26	DE	0.97	1/1588 (0.1%)	1.31	10/2145 (0.5%)
27	BF	1.16	3/1615 (0.2%)	1.33	17/2188 (0.8%)
27	DF	0.90	1/1615 (0.1%)	1.33	19/2188 (0.9%)
28	BG	0.76	0/1393	1.21	8/1892 (0.4%)
28	DG	0.84	0/1393	1.26	9/1892 (0.5%)
29	BH	1.00	2/1343 (0.1%)	1.28	9/1820 (0.5%)
29	DH	0.79	0/1343	1.25	6/1820 (0.3%)
30	BI	0.82	0/1052	1.29	13/1441 (0.9%)
30	DI	0.89	0/967	1.43	13/1334 (1.0%)
31	BN	1.16	3/1139 (0.3%)	1.34	14/1538 (0.9%)
31	DN	0.89	0/1139	1.38	15/1538 (1.0%)
32	BO	1.10	2/933 (0.2%)	1.35	10/1257 (0.8%)
32	DO	0.90	0/933	1.30	10/1257 (0.8%)
33	BP	1.06	0/1148	1.31	9/1529 (0.6%)
33	DP	0.86	0/1148	1.31	7/1529 (0.5%)
34	BQ	1.08	1/1143 (0.1%)	1.27	8/1527 (0.5%)
34	DQ	0.91	0/1143	1.26	10/1527 (0.7%)
35	BR	1.12	1/982 (0.1%)	1.19	2/1312 (0.2%)
35	DR	0.94	0/982	1.18	1/1312 (0.1%)
36	BS	0.88	0/875	1.20	4/1168 (0.3%)
36	DS	0.80	0/875	1.17	4/1168 (0.3%)
37	BT	1.06	3/1077 (0.3%)	1.30	13/1444 (0.9%)
37	DT	0.89	0/1077	1.26	9/1444 (0.6%)
38	BU	1.37	2/977 (0.2%)	1.19	4/1301 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DU	1.00	1/977 (0.1%)	1.16	4/1301 (0.3%)
39	BV	1.09	1/782 (0.1%)	1.27	4/1049 (0.4%)
39	DV	0.90	0/782	1.25	2/1049 (0.2%)
40	BW	1.40	4/891 (0.4%)	1.19	1/1197 (0.1%)
40	DW	1.20	5/891 (0.6%)	1.21	1/1197 (0.1%)
41	BX	1.16	1/756 (0.1%)	1.14	2/1016 (0.2%)
41	DX	0.94	0/756	1.15	2/1016 (0.2%)
42	BY	1.03	1/798 (0.1%)	1.30	8/1073 (0.7%)
42	DY	0.86	0/798	1.29	9/1073 (0.8%)
43	BZ	0.91	0/1569	1.31	16/2137 (0.7%)
43	DZ	0.87	1/1555 (0.1%)	1.30	12/2118 (0.6%)
44	B0	1.03	0/602	1.26	3/804 (0.4%)
44	D0	0.89	0/602	1.31	1/804 (0.1%)
45	B1	1.13	2/752 (0.3%)	1.23	4/1003 (0.4%)
45	D1	1.05	2/752 (0.3%)	1.22	4/1003 (0.4%)
46	B2	1.05	0/590	1.23	3/781 (0.4%)
46	D2	0.92	0/590	1.22	3/781 (0.4%)
47	B3	1.05	0/463	1.23	4/623 (0.6%)
47	D3	0.85	0/463	1.30	2/623 (0.3%)
48	B4	0.82	0/358	1.31	4/487 (0.8%)
48	D4	0.99	0/358	1.32	5/487 (1.0%)
49	B5	1.14	0/469	1.40	5/634 (0.8%)
49	D5	1.00	0/469	1.35	7/634 (1.1%)
50	B6	1.06	0/456	1.21	3/609 (0.5%)
50	D6	0.82	0/456	1.19	3/609 (0.5%)
51	B7	1.36	1/426 (0.2%)	1.39	3/561 (0.5%)
51	D7	1.13	2/426 (0.5%)	1.30	5/561 (0.9%)
52	B8	1.23	1/516 (0.2%)	1.51	8/679 (1.2%)
52	D8	1.00	0/516	1.44	6/679 (0.9%)
53	B9	1.05	0/300	1.23	1/395 (0.3%)
53	D9	0.89	1/300 (0.3%)	1.19	0/395
All	All	0.81	95/305420 (0.0%)	0.83	764/457343 (0.2%)

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
2	AB	0	3
2	CB	0	4
3	AC	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
3	CC	0	1
4	AD	0	1
4	CD	0	1
7	CG	0	2
9	AI	0	1
9	CI	0	1
10	AJ	0	2
10	CJ	0	2
13	AM	0	4
13	CM	0	2
14	AN	0	1
15	AO	0	1
15	CO	0	1
17	AQ	0	1
17	CQ	0	1
19	AS	0	1
19	CS	0	1
20	AT	0	1
20	CT	0	1
23	BA	0	1
23	DA	0	1
26	BE	0	1
26	DE	0	1
27	DF	0	1
30	DI	0	1
34	BQ	0	1
34	DQ	0	1
36	BS	0	1
36	DS	0	1
41	BX	0	1
41	DX	0	1
43	BZ	0	3
43	DZ	0	1
45	B1	0	1
45	D1	0	1
48	B4	0	1
48	D4	0	1
All	All	0	56

All (95) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	B7	30	VAL	CA-CB	-9.53	1.43	1.54
45	B1	67	ILE	CA-CB	-9.22	1.49	1.54
45	D1	67	ILE	CA-CB	-8.42	1.50	1.54
13	AM	9	ILE	CA-CB	8.13	1.64	1.54
23	BA	2055	C	P-OP1	-8.10	1.32	1.49
40	BW	103	ILE	CA-CB	-7.65	1.44	1.54
7	CG	17	VAL	CA-CB	7.63	1.62	1.54
51	D7	30	VAL	CA-CB	-7.55	1.45	1.54
29	BH	11	VAL	CA-CB	-7.20	1.48	1.54
34	BQ	66	ILE	CA-CB	-7.16	1.45	1.53
10	AJ	99	LYS	CA-C	7.01	1.58	1.52
13	AM	37	THR	CA-CB	7.00	1.65	1.53
40	DW	21	VAL	CA-CB	-6.96	1.46	1.54
13	CM	49	THR	CA-CB	6.94	1.65	1.53
1	CA	1442(A)	G	N9-C4	6.88	1.51	1.38
13	AM	9	ILE	CA-C	6.63	1.59	1.52
13	AM	36	LYS	CA-C	6.58	1.58	1.52
25	BD	75	ILE	CA-C	-6.45	1.48	1.53
29	BH	70	THR	CA-C	-6.38	1.46	1.53
35	BR	38	VAL	CA-CB	-6.37	1.50	1.54
31	BN	31	ALA	CA-CB	-6.29	1.43	1.53
26	BE	134	ILE	CA-CB	-6.23	1.46	1.54
26	DE	21	VAL	CA-CB	-6.22	1.48	1.54
31	BN	27	ALA	CA-CB	-6.20	1.43	1.53
9	AI	64	THR	CA-CB	6.20	1.61	1.53
27	BF	187	VAL	CA-CB	-6.14	1.47	1.54
3	CC	60	ALA	CA-C	6.09	1.56	1.52
1	AA	1442(A)	G	N9-C4	6.09	1.50	1.38
37	BT	88	ILE	CA-CB	-6.04	1.47	1.53
25	BD	113	VAL	CA-CB	-6.03	1.47	1.54
1	AA	1442(A)	G	C2-N3	6.01	1.44	1.32
27	DF	64	ILE	CA-CB	-6.01	1.46	1.54
7	AG	83	ALA	CA-C	5.99	1.59	1.52
4	CD	12	CYS	CB-SG	5.98	2.00	1.81
10	AJ	94	VAL	CA-CB	5.98	1.62	1.54
23	BA	577	G	P-OP1	-5.92	1.37	1.49
14	CN	13	THR	CA-CB	5.89	1.60	1.53
38	DU	9	VAL	CA-CB	-5.85	1.47	1.54
13	CM	43	THR	CA-CB	5.82	1.61	1.53
19	CS	67	VAL	CA-CB	5.81	1.62	1.54
19	AS	31	ILE	CA-CB	5.81	1.61	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	69	G	O3'-P	-5.79	1.52	1.61
10	CJ	72	VAL	CA-CB	5.75	1.60	1.54
4	AD	30	LYS	CA-C	5.74	1.60	1.52
3	CC	57	ILE	CA-CB	5.74	1.62	1.54
45	D1	63	ALA	CA-CB	-5.73	1.44	1.53
7	AG	80	VAL	CA-CB	5.72	1.60	1.53
1	CA	1442(A)	G	C2-N3	5.72	1.44	1.32
40	DW	103	ILE	CA-CB	-5.72	1.47	1.54
31	BN	85	ILE	CA-CB	-5.70	1.47	1.54
13	AM	49	THR	CA-CB	5.68	1.63	1.53
19	CS	77	THR	CA-C	5.68	1.59	1.52
19	AS	63	THR	CA-CB	5.66	1.62	1.53
4	CD	30	LYS	CA-C	5.60	1.59	1.52
40	DW	7	ALA	CA-CB	-5.56	1.45	1.53
27	BF	113	ALA	CA-CB	-5.51	1.44	1.53
7	CG	42	ILE	CA-CB	5.49	1.61	1.54
40	DW	76	VAL	CA-CB	-5.49	1.47	1.54
7	CG	120	ILE	CA-CB	5.47	1.61	1.54
3	CC	103	VAL	CA-CB	5.45	1.61	1.54
27	BF	49	ALA	CA-C	-5.45	1.45	1.52
32	BO	76	ALA	CA-CB	-5.43	1.44	1.53
23	BA	2055	C	P-OP2	-5.43	1.38	1.49
26	BE	144	ARG	CA-CB	-5.38	1.49	1.54
37	BT	76	PHE	CA-C	-5.38	1.47	1.52
1	AA	69	G	O3'-P	5.36	1.69	1.61
26	BE	131	ALA	CA-CB	-5.35	1.45	1.53
40	BW	21	VAL	CA-CB	-5.35	1.48	1.54
25	BD	196	VAL	CA-CB	-5.34	1.49	1.54
41	BX	80	ILE	CA-CB	-5.33	1.47	1.53
25	BD	191	ALA	CA-CB	-5.30	1.44	1.53
9	CI	103	THR	CA-CB	5.29	1.62	1.53
43	DZ	133	ILE	CA-CB	5.29	1.58	1.54
26	BE	131	ALA	CA-C	-5.19	1.46	1.52
25	DD	192	THR	CA-CB	5.17	1.60	1.53
51	D7	13	ALA	CA-CB	-5.17	1.45	1.53
25	BD	131	LEU	CA-C	-5.14	1.46	1.52
40	BW	102	HIS	ND1-CE1	5.13	1.37	1.32
40	BW	74	ALA	CA-CB	-5.13	1.45	1.53
26	BE	117	MET	CA-C	-5.13	1.47	1.53
4	CD	158	ILE	CA-CB	5.12	1.60	1.54
38	BU	8	VAL	CA-CB	-5.12	1.48	1.54
40	DW	95	ILE	CA-CB	-5.11	1.48	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	BY	67	LEU	CA-C	-5.10	1.46	1.52
38	BU	17	ILE	CA-C	-5.08	1.46	1.52
13	CM	49	THR	N-CA	5.07	1.52	1.46
37	BT	7	ILE	CA-CB	-5.05	1.48	1.54
32	BO	60	ALA	CA-CB	-5.05	1.45	1.53
53	D9	32	HIS	ND1-CE1	-5.05	1.27	1.32
52	B8	60	LEU	CA-C	-5.05	1.45	1.52
4	CD	12	CYS	CA-CB	5.04	1.61	1.53
25	BD	49	ILE	C-O	-5.03	1.18	1.24
19	CS	31	ILE	CA-C	5.03	1.58	1.52
45	B1	24	ALA	CA-CB	-5.02	1.45	1.53
39	BV	79	VAL	CA-CB	-5.02	1.49	1.54

All (764) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	DI	106	GLY	N-CA-C	13.70	130.21	111.03
10	AJ	52	GLY	CA-C-N	11.61	131.95	119.87
10	AJ	52	GLY	C-N-CA	11.61	131.95	119.87
52	B8	52	LYS	CA-C-N	-11.48	107.03	118.97
52	B8	52	LYS	C-N-CA	-11.48	107.03	118.97
20	AT	9	ASN	N-CA-C	11.47	123.39	108.24
31	DN	20	GLY	N-CA-C	-11.45	99.94	114.37
47	D3	11	SER	CA-C-N	11.12	131.44	119.87
47	D3	11	SER	C-N-CA	11.12	131.44	119.87
13	CM	39	ILE	N-CA-C	11.06	123.78	112.83
52	B8	34	TRP	N-CA-C	-11.04	95.96	110.53
30	DI	79	ILE	CA-C-N	10.82	133.37	119.84
30	DI	79	ILE	C-N-CA	10.82	133.37	119.84
20	CT	9	ASN	N-CA-C	10.47	122.07	108.24
7	AG	130	GLY	N-CA-C	10.39	126.05	112.13
43	DZ	151	HIS	N-CA-C	10.36	127.18	113.30
43	DZ	153	SER	N-CA-C	-10.11	100.22	111.14
43	BZ	153	SER	N-CA-C	-10.05	100.41	111.36
47	B3	11	SER	CA-C-N	9.98	130.25	119.87
47	B3	11	SER	C-N-CA	9.98	130.25	119.87
31	BN	20	GLY	N-CA-C	-9.96	101.82	114.37
32	BO	118	ALA	CA-C-N	9.95	129.69	118.85
32	BO	118	ALA	C-N-CA	9.95	129.69	118.85
52	D8	34	TRP	N-CA-C	-9.87	97.50	110.43
3	AC	124	ILE	N-CA-C	9.82	120.64	110.72
52	D8	52	LYS	CA-C-N	-9.81	108.77	118.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	D8	52	LYS	C-N-CA	-9.81	108.77	118.97
2	AB	193	ASP	CA-C-N	9.72	129.35	119.24
2	AB	193	ASP	C-N-CA	9.72	129.35	119.24
7	AG	38	LEU	N-CA-C	9.68	121.59	111.14
4	CD	21	LEU	N-CA-C	-9.64	101.53	113.38
4	AD	153	ARG	N-CA-C	-9.56	101.13	113.17
19	CS	77	THR	N-CA-C	9.50	121.58	111.03
27	BF	80	ALA	CA-C-N	9.31	128.94	119.82
27	BF	80	ALA	C-N-CA	9.31	128.94	119.82
33	DP	47	ASP	CA-C-N	9.28	128.93	119.56
33	DP	47	ASP	C-N-CA	9.28	128.93	119.56
43	BZ	151	HIS	N-CA-C	9.23	125.67	113.30
48	D4	26	SER	N-CA-C	9.20	120.39	108.24
32	DO	118	ALA	CA-C-N	9.19	128.93	119.19
32	DO	118	ALA	C-N-CA	9.19	128.93	119.19
4	CD	12	CYS	N-CA-C	-9.14	100.28	111.33
48	B4	26	SER	N-CA-C	9.08	120.23	108.24
27	BF	89	VAL	CA-C-N	-9.03	109.78	123.14
27	BF	89	VAL	C-N-CA	-9.03	109.78	123.14
31	DN	46	VAL	N-CA-C	9.02	123.26	113.43
26	BE	134	ILE	N-CA-C	8.98	120.70	112.17
14	AN	13	THR	CA-C-N	8.96	131.04	119.84
14	AN	13	THR	C-N-CA	8.96	131.04	119.84
44	D0	44	ARG	N-CA-C	-8.95	102.14	113.23
19	CS	58	VAL	N-CA-C	8.93	117.16	107.60
31	BN	128	HIS	CA-C-N	8.89	129.12	119.87
31	BN	128	HIS	C-N-CA	8.89	129.12	119.87
7	CG	70	LYS	CA-C-N	8.80	129.34	119.83
7	CG	70	LYS	C-N-CA	8.80	129.34	119.83
38	BU	9	VAL	N-CA-C	8.68	118.76	110.42
31	DN	128	HIS	CA-C-N	8.65	128.87	119.87
31	DN	128	HIS	C-N-CA	8.65	128.87	119.87
4	AD	21	LEU	N-CA-C	-8.54	102.88	113.38
19	CS	30	LEU	N-CA-C	8.54	120.90	110.91
27	DF	89	VAL	CA-C-N	-8.51	110.54	123.14
27	DF	89	VAL	C-N-CA	-8.51	110.54	123.14
13	CM	108	ARG	N-CA-C	8.50	121.77	111.40
12	AL	26	ALA	N-CA-C	-8.49	102.93	113.20
4	AD	12	CYS	N-CA-C	-8.45	101.11	111.33
33	BP	47	ASP	CA-C-N	8.38	128.59	119.87
33	BP	47	ASP	C-N-CA	8.38	128.59	119.87
25	DD	85	ASP	CA-C-N	8.38	128.02	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	DD	85	ASP	C-N-CA	8.38	128.02	119.56
7	AG	77	SER	N-CA-C	8.35	120.54	110.19
27	DF	80	ALA	CA-C-N	8.34	127.99	119.82
27	DF	80	ALA	C-N-CA	8.34	127.99	119.82
4	CD	153	ARG	N-CA-C	-8.28	102.74	113.17
17	AQ	95	TYR	CA-C-N	-8.26	110.76	122.41
17	AQ	95	TYR	C-N-CA	-8.26	110.76	122.41
1	AA	1442(A)	G	C4-N9-C1'	8.26	151.27	126.50
6	CF	55	ASP	CA-C-N	8.21	129.00	119.47
6	CF	55	ASP	C-N-CA	8.21	129.00	119.47
4	AD	176	LEU	N-CA-C	8.20	121.88	108.26
1	CA	1442(A)	G	C4-N9-C1'	8.19	151.07	126.50
25	BD	55	GLY	N-CA-C	8.18	120.39	112.04
49	B5	53	ALA	N-CA-C	8.08	120.36	110.91
34	BQ	136	ALA	N-CA-C	-8.08	103.22	113.72
42	DY	80	GLY	N-CA-C	-8.07	105.09	114.69
19	AS	49	ILE	N-CA-C	8.06	119.86	109.30
52	B8	33	ASN	N-CA-C	8.06	123.30	113.38
25	DD	229	VAL	CB-CA-C	-8.06	99.67	112.16
6	CF	16	GLN	N-CA-C	-8.05	102.44	111.14
39	BV	79	VAL	CB-CA-C	8.05	119.79	110.93
4	CD	171	GLY	CA-C-N	8.03	128.47	119.32
4	CD	171	GLY	C-N-CA	8.03	128.47	119.32
34	DQ	134	ARG	N-CA-C	8.02	121.03	111.33
26	DE	118	LYS	N-CA-C	-7.99	93.77	110.80
12	CL	26	ALA	N-CA-C	-7.98	103.66	113.15
36	BS	96	GLY	N-CA-C	-7.97	94.28	113.18
25	DD	70	TRP	N-CA-C	-7.93	103.32	113.16
7	CG	111	ARG	CA-C-N	7.92	129.75	119.84
7	CG	111	ARG	C-N-CA	7.92	129.75	119.84
9	AI	61	ALA	N-CA-C	7.90	120.00	108.86
19	CS	36	ARG	N-CA-C	-7.88	103.68	113.38
31	BN	46	VAL	N-CA-C	7.85	121.98	113.43
2	CB	193	ASP	CA-C-N	7.82	128.24	119.32
2	CB	193	ASP	C-N-CA	7.82	128.24	119.32
22	CX	52	ALA	N-CA-C	7.81	120.74	108.79
25	DD	55	GLY	N-CA-C	7.79	119.98	112.04
40	DW	17	VAL	CB-CA-C	-7.79	101.81	112.24
26	DE	89	ASP	N-CA-C	-7.77	102.44	112.23
2	AB	124	SER	CA-C-N	7.74	127.39	119.19
2	AB	124	SER	C-N-CA	7.74	127.39	119.19
13	CM	9	ILE	CA-C-N	7.74	129.51	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	CM	9	ILE	C-N-CA	7.74	129.51	119.84
4	AD	26	CYS	N-CA-C	-7.73	95.10	108.56
17	CQ	95	TYR	CA-C-N	-7.73	111.51	122.41
17	CQ	95	TYR	C-N-CA	-7.73	111.51	122.41
12	CL	44	THR	CA-C-N	7.72	127.63	120.21
12	CL	44	THR	C-N-CA	7.72	127.63	120.21
20	CT	96	GLY	N-CA-C	7.72	121.83	112.48
25	BD	229	VAL	CB-CA-C	-7.71	100.22	112.16
3	CC	108	ASN	CA-C-N	7.71	127.25	118.85
3	CC	108	ASN	C-N-CA	7.71	127.25	118.85
25	BD	85	ASP	CA-C-N	7.71	127.34	119.56
25	BD	85	ASP	C-N-CA	7.71	127.34	119.56
20	CT	99	LEU	N-CA-C	7.70	120.83	110.35
4	CD	176	LEU	N-CA-C	7.68	121.01	108.26
34	DQ	136	ALA	N-CA-C	-7.68	103.73	113.72
48	B4	42	PHE	CA-C-N	7.68	135.53	121.70
48	B4	42	PHE	C-N-CA	7.68	135.53	121.70
4	AD	171	GLY	CA-C-N	7.60	127.99	119.32
4	AD	171	GLY	C-N-CA	7.60	127.99	119.32
9	AI	31	GLN	N-CA-C	7.59	118.28	108.34
23	DA	2296	U	C2-N1-C1'	-7.58	94.97	117.70
2	CB	192	SER	N-CA-C	7.54	118.22	108.34
10	AJ	34	VAL	N-CA-C	7.53	125.00	109.34
36	DS	96	GLY	N-CA-C	-7.52	95.35	113.18
11	CK	57	THR	CA-C-N	7.47	127.01	119.24
11	CK	57	THR	C-N-CA	7.47	127.01	119.24
9	CI	110	GLU	N-CA-C	7.47	121.61	109.59
44	B0	44	ARG	N-CA-C	-7.44	104.00	113.23
34	DQ	137	TYR	N-CA-C	-7.42	102.88	112.23
48	D4	42	PHE	CA-C-N	7.42	135.06	121.70
48	D4	42	PHE	C-N-CA	7.42	135.06	121.70
23	BA	2296	U	C2-N1-C1'	-7.40	95.50	117.70
37	BT	57	PHE	N-CA-C	-7.40	104.23	113.18
9	AI	65	VAL	N-CA-C	7.39	118.71	107.77
34	BQ	134	ARG	N-CA-C	7.38	120.25	111.33
14	CN	25	VAL	N-CA-C	7.37	119.22	112.29
2	AB	23	ARG	N-CA-C	-7.36	103.39	112.88
2	CB	129	GLU	N-CA-C	-7.34	95.16	110.80
4	AD	150	GLU	N-CA-C	-7.33	102.31	111.11
13	AM	67	GLU	N-CA-C	7.32	121.00	110.24
52	D8	13	ARG	N-CA-C	7.32	123.11	113.30
10	CJ	88	LEU	N-CA-C	7.32	117.90	108.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	BZ	100	VAL	CA-C-N	7.30	128.97	119.84
43	BZ	100	VAL	C-N-CA	7.30	128.97	119.84
35	DR	114	VAL	CB-CA-C	-7.29	101.51	110.99
43	BZ	24	LEU	CA-C-N	7.29	127.34	119.90
43	BZ	24	LEU	C-N-CA	7.29	127.34	119.90
9	CI	22	GLY	N-CA-C	7.29	124.50	110.66
11	AK	57	THR	CA-C-N	7.27	126.80	119.24
11	AK	57	THR	C-N-CA	7.27	126.80	119.24
2	AB	192	SER	N-CA-C	7.26	117.86	108.34
4	CD	150	GLU	N-CA-C	-7.24	102.42	111.11
25	BD	256	GLY	N-CA-C	7.22	123.67	115.08
2	CB	23	ARG	N-CA-C	-7.21	103.64	113.30
30	DI	43	ASN	N-CA-C	7.21	122.25	113.17
2	AB	129	GLU	N-CA-C	-7.19	95.49	110.80
13	AM	112	GLY	CA-C-N	-7.16	112.26	119.92
13	AM	112	GLY	C-N-CA	-7.16	112.26	119.92
25	BD	70	TRP	N-CA-C	-7.14	104.30	113.16
30	BI	110	ASP	CA-C-N	7.14	127.46	119.32
30	BI	110	ASP	C-N-CA	7.14	127.46	119.32
18	AR	29	PHE	N-CA-C	7.12	117.67	108.34
32	DO	9	GLU	N-CA-C	-7.11	101.14	110.53
32	BO	48	PRO	CA-C-N	-7.10	112.41	123.13
32	BO	48	PRO	C-N-CA	-7.10	112.41	123.13
6	AF	55	ASP	CA-C-N	7.08	127.69	119.47
6	AF	55	ASP	C-N-CA	7.08	127.69	119.47
39	DV	79	VAL	CB-CA-C	7.08	118.72	110.93
43	DZ	149	SER	N-CA-C	7.06	117.83	107.88
27	BF	29	ASN	CA-C-N	7.05	126.31	118.97
27	BF	29	ASN	C-N-CA	7.05	126.31	118.97
14	AN	60	SER	N-CA-C	7.02	119.13	110.91
52	B8	29	LYS	N-CA-C	7.01	121.54	112.92
12	AL	119	LYS	N-CA-C	-7.01	100.82	110.35
34	DQ	21	THR	CB-CA-C	-7.00	99.98	109.71
29	BH	71	LEU	N-CA-C	-6.99	95.90	110.80
2	CB	124	SER	CA-C-N	6.99	128.57	119.84
2	CB	124	SER	C-N-CA	6.99	128.57	119.84
5	AE	105	VAL	CA-C-N	-6.98	111.79	119.19
5	AE	105	VAL	C-N-CA	-6.98	111.79	119.19
31	BN	131	GLN	N-CA-C	-6.98	104.57	113.23
1	AA	1442(A)	G	C8-N9-C1'	-6.98	106.06	127.00
52	D8	33	ASN	N-CA-C	6.97	121.95	113.38
43	BZ	149	SER	N-CA-C	6.97	117.71	107.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	BP	73	GLY	N-CA-C	6.97	119.21	110.29
43	DZ	113	ALA	N-CA-C	-6.96	104.53	113.16
20	AT	10	LEU	N-CA-C	6.95	120.31	110.23
25	BD	271	ILE	N-CA-C	6.93	117.54	110.82
13	AM	14	ARG	N-CA-C	6.91	119.75	110.35
43	DZ	24	LEU	CA-C-N	6.91	126.95	119.90
43	DZ	24	LEU	C-N-CA	6.91	126.95	119.90
33	BP	53	GLY	N-CA-C	-6.88	105.10	115.00
13	AM	69	GLU	N-CA-C	-6.84	98.97	109.65
6	AF	16	GLN	N-CA-C	-6.84	103.76	111.14
1	CA	1442(A)	G	C8-N9-C1'	-6.83	106.52	127.00
32	BO	5	GLN	N-CA-CB	-6.82	107.28	114.10
33	BP	35	HIS	N-CA-C	6.81	119.83	108.73
29	BH	54	ARG	CA-C-N	6.80	126.49	119.82
29	BH	54	ARG	C-N-CA	6.80	126.49	119.82
20	CT	10	LEU	N-CA-C	6.80	120.10	110.23
8	AH	100	ILE	CA-C-N	6.79	126.71	119.85
8	AH	100	ILE	C-N-CA	6.79	126.71	119.85
42	BY	86	ARG	N-CA-C	-6.78	100.19	109.95
13	CM	42	ALA	N-CA-C	6.76	119.51	111.33
26	BE	89	ASP	N-CA-C	-6.76	103.72	112.23
3	AC	77	ILE	N-CA-C	6.75	116.90	110.42
22	CX	42	LYS	N-CA-C	6.75	117.50	108.38
36	BS	39	ILE	CB-CA-C	-6.75	102.79	110.96
31	DN	131	GLN	N-CA-C	-6.75	104.86	113.23
33	DP	73	GLY	N-CA-C	6.75	118.92	110.29
7	AG	75	VAL	N-CA-C	6.72	118.25	108.58
19	AS	82	GLY	N-CA-C	6.70	120.04	110.46
42	BY	92	ASN	N-CA-C	6.68	121.04	113.02
7	CG	79	ARG	N-CA-C	6.66	120.32	110.46
30	DI	133	HIS	CA-C-N	6.66	126.58	119.85
30	DI	133	HIS	C-N-CA	6.66	126.58	119.85
3	AC	151	VAL	N-CA-C	6.64	118.28	108.45
23	BA	1992	G	C2'-C3'-O3'	6.64	119.45	109.50
31	BN	47	ALA	N-CA-C	6.63	120.24	111.28
9	CI	96	LEU	N-CA-C	6.63	124.93	110.80
43	BZ	199	LYS	N-CA-C	6.63	121.14	113.38
8	CH	56	LYS	CA-C-N	6.63	126.99	119.83
8	CH	56	LYS	C-N-CA	6.63	126.99	119.83
49	D5	19	ARG	N-CA-C	-6.63	104.67	112.89
4	CD	26	CYS	N-CA-C	-6.62	97.00	108.52
25	DD	256	GLY	N-CA-C	6.61	122.94	115.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	D8	29	LYS	N-CA-C	6.60	121.49	113.17
3	AC	103	VAL	N-CA-C	6.59	117.80	108.17
18	CR	29	PHE	N-CA-C	6.59	116.97	108.34
30	BI	95	LYS	N-CA-C	-6.57	103.00	111.02
10	CJ	90	LEU	N-CA-C	6.53	121.63	112.75
52	B8	13	ARG	N-CA-C	6.52	122.03	113.30
7	AG	13	GLN	CA-C-N	-6.51	113.58	120.03
7	AG	13	GLN	C-N-CA	-6.51	113.58	120.03
3	AC	57	ILE	N-CA-C	6.51	117.00	107.37
3	CC	130	VAL	N-CA-C	6.51	117.13	110.82
7	CG	105	VAL	N-CA-C	6.51	116.67	110.42
12	AL	44	THR	CA-C-N	6.49	126.44	120.21
12	AL	44	THR	C-N-CA	6.49	126.44	120.21
8	CH	100	ILE	CA-C-N	6.49	126.41	119.85
8	CH	100	ILE	C-N-CA	6.49	126.41	119.85
5	CE	105	VAL	CA-C-N	-6.49	112.31	119.19
5	CE	105	VAL	C-N-CA	-6.49	112.31	119.19
13	AM	17	VAL	CB-CA-C	-6.49	103.58	111.88
42	BY	76	CYS	CA-C-N	6.49	126.42	119.28
42	BY	76	CYS	C-N-CA	6.49	126.42	119.28
50	B6	40	CYS	CA-C-N	6.48	126.11	119.56
50	B6	40	CYS	C-N-CA	6.48	126.11	119.56
31	DN	69	GLN	N-CA-C	6.47	121.34	113.38
14	CN	53	LEU	CA-C-N	6.47	127.93	119.84
14	CN	53	LEU	C-N-CA	6.47	127.93	119.84
19	CS	48	THR	N-CA-C	6.47	119.44	108.90
21	CU	17	THR	N-CA-C	6.47	119.88	109.86
41	DX	3	THR	N-CA-C	-6.46	100.64	110.14
23	DA	1992	G	C2'-C3'-O3'	6.45	119.17	109.50
8	AH	56	LYS	CA-C-N	6.45	126.79	119.83
8	AH	56	LYS	C-N-CA	6.45	126.79	119.83
34	DQ	77	LYS	CA-C-N	6.42	126.39	119.78
34	DQ	77	LYS	C-N-CA	6.42	126.39	119.78
2	AB	20	GLU	N-CA-C	6.40	118.91	109.69
38	BU	42	ALA	N-CA-C	-6.40	104.40	111.82
12	CL	119	LYS	N-CA-C	-6.39	101.65	110.35
4	CD	12	CYS	CA-CB-SG	6.37	129.04	114.40
2	CB	20	GLU	N-CA-C	6.36	118.84	109.69
5	AE	67	VAL	N-CA-C	6.35	117.50	108.42
38	DU	9	VAL	N-CA-C	6.35	116.51	110.42
43	BZ	197	ILE	N-CA-C	6.33	117.83	109.21
26	DE	168	MET	N-CA-C	6.33	119.86	109.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	CG	75	VAL	N-CA-C	6.31	117.32	107.28
7	AG	83	ALA	N-CA-C	6.31	118.71	107.80
3	AC	72	LYS	CA-C-N	6.30	125.99	119.82
3	AC	72	LYS	C-N-CA	6.30	125.99	119.82
7	CG	65	ALA	N-CA-C	6.29	117.83	110.97
34	BQ	137	TYR	N-CA-C	-6.29	104.31	112.23
7	AG	87	VAL	CA-C-N	6.29	126.66	119.93
7	AG	87	VAL	C-N-CA	6.29	126.66	119.93
45	D1	45	ASN	CA-C-N	-6.28	113.52	122.94
45	D1	45	ASN	C-N-CA	-6.28	113.52	122.94
37	BT	76	PHE	CA-C-N	6.28	126.49	119.90
37	BT	76	PHE	C-N-CA	6.28	126.49	119.90
27	BF	68	LYS	N-CA-C	6.27	124.16	110.80
43	BZ	122	ARG	N-CA-C	-6.27	105.64	113.28
16	AP	20	VAL	N-CA-C	6.26	116.62	108.35
32	DO	48	PRO	CA-C-N	-6.26	113.67	123.13
32	DO	48	PRO	C-N-CA	-6.26	113.67	123.13
34	DQ	61	GLY	N-CA-C	6.26	120.30	112.79
49	B5	36	CYS	N-CA-C	6.26	121.05	113.17
2	AB	188	ALA	N-CA-C	6.24	118.36	110.24
10	CJ	42	THR	N-CA-C	6.24	118.70	108.52
43	DZ	122	ARG	N-CA-C	-6.24	105.66	113.28
10	CJ	81	THR	N-CA-C	-6.24	105.24	112.92
23	DA	2296	U	C6-N1-C1'	6.23	139.90	121.20
46	D2	45	SER	N-CA-C	-6.22	102.15	110.55
46	D2	52	ASP	N-CA-C	-6.22	104.04	111.69
50	D6	40	CYS	CA-CB-SG	-6.21	100.11	114.40
41	BX	54	VAL	CB-CA-C	-6.21	101.44	110.63
46	B2	45	SER	N-CA-C	-6.21	102.52	110.53
30	DI	7	GLU	CA-C-N	-6.20	113.59	119.85
30	DI	7	GLU	C-N-CA	-6.20	113.59	119.85
3	CC	161	GLU	N-CA-C	6.19	120.39	112.34
49	D5	46	CYS	CA-C-N	6.19	126.31	119.87
49	D5	46	CYS	C-N-CA	6.19	126.31	119.87
26	BE	118	LYS	N-CA-C	-6.19	97.62	110.80
31	BN	23	LEU	CA-C-N	-6.18	113.61	123.31
31	BN	23	LEU	C-N-CA	-6.18	113.61	123.31
46	B2	68	ARG	CB-CA-C	-6.18	102.93	112.07
9	AI	32	ASP	N-CA-C	6.17	117.84	110.19
7	AG	82	GLY	N-CA-C	6.16	123.87	115.00
47	B3	56	VAL	CB-CA-C	-6.16	101.34	110.33
13	CM	112	GLY	CA-C-N	-6.15	112.15	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	CM	112	GLY	C-N-CA	-6.15	112.15	119.84
26	BE	9	VAL	N-CA-C	6.15	117.17	111.45
19	AS	60	VAL	N-CA-C	6.15	117.06	107.28
46	B2	52	ASP	N-CA-C	-6.14	104.13	111.69
49	D5	53	ALA	N-CA-C	6.13	118.09	110.91
27	DF	68	LYS	N-CA-C	6.13	123.86	110.80
40	BW	17	VAL	CB-CA-C	-6.13	103.76	112.22
34	BQ	24	GLY	N-CA-C	-6.13	106.25	115.32
9	CI	60	ASP	N-CA-C	6.12	119.47	109.06
25	DD	148	GLU	N-CA-C	-6.11	101.22	110.50
48	D4	18	CYS	N-CA-C	-6.11	105.69	113.02
7	CG	47	CYS	N-CA-C	-6.10	105.88	113.38
26	DE	116	VAL	CA-C-N	-6.09	113.83	122.41
26	DE	116	VAL	C-N-CA	-6.09	113.83	122.41
7	AG	84	ASN	N-CA-C	6.08	118.64	108.73
27	BF	70	THR	N-CA-C	6.08	119.53	111.75
49	B5	16	ARG	N-CA-C	-6.08	104.58	111.14
9	AI	25	LYS	N-CA-C	6.08	119.27	110.28
5	CE	67	VAL	N-CA-C	6.07	117.10	108.42
32	BO	29	ASN	CA-C-N	-6.07	114.62	123.00
32	BO	29	ASN	C-N-CA	-6.07	114.62	123.00
30	DI	44	LEU	N-CA-C	-6.06	104.79	111.82
23	DA	2296	U	N3-C4-O4	-6.05	101.23	119.40
13	AM	13	LYS	N-CA-C	6.04	119.22	109.79
43	BZ	113	ALA	N-CA-C	-6.04	105.66	113.16
10	CJ	26	ALA	N-CA-C	6.02	120.46	113.18
10	CJ	56	HIS	N-CA-C	6.02	123.61	110.80
26	BE	116	VAL	CA-C-N	-6.01	113.93	122.41
26	BE	116	VAL	C-N-CA	-6.01	113.93	122.41
5	AE	76	ILE	CA-C-N	6.01	125.40	118.85
5	AE	76	ILE	C-N-CA	6.01	125.40	118.85
7	AG	68	ASN	N-CA-C	6.01	117.63	111.14
32	DO	29	ASN	CA-C-N	-6.01	114.71	123.00
32	DO	29	ASN	C-N-CA	-6.01	114.71	123.00
10	AJ	62	HIS	N-CA-C	6.00	118.19	108.41
13	AM	114	ARG	N-CA-C	6.00	118.90	109.96
5	CE	76	ILE	CA-C-N	6.00	125.39	118.85
5	CE	76	ILE	C-N-CA	6.00	125.39	118.85
16	CP	11	SER	N-CA-C	6.00	116.01	108.45
13	AM	45	VAL	N-CA-C	5.98	119.46	111.44
29	DH	71	LEU	N-CA-C	-5.98	98.06	110.80
42	DY	92	ASN	N-CA-C	5.98	120.20	113.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	DN	47	ALA	N-CA-C	5.98	119.49	111.24
19	CS	52	TYR	N-CA-C	5.98	118.66	108.02
9	CI	29	ASN	N-CA-C	5.97	119.34	111.28
31	DN	110	GLY	CA-C-N	5.97	125.45	119.24
31	DN	110	GLY	C-N-CA	5.97	125.45	119.24
28	DG	149	VAL	N-CA-C	5.96	117.72	109.80
4	AD	30	LYS	N-CA-C	5.95	120.67	113.17
23	BA	2296	U	C6-N1-C1'	5.95	139.06	121.20
10	AJ	38	ILE	N-CA-C	5.95	114.52	107.73
28	DG	125	PHE	CA-C-N	5.95	128.57	120.54
28	DG	125	PHE	C-N-CA	5.95	128.57	120.54
50	B6	4	GLU	N-CA-C	-5.94	104.89	111.36
5	CE	48	ALA	CA-C-N	5.94	125.64	119.82
5	CE	48	ALA	C-N-CA	5.94	125.64	119.82
2	CB	25	ASN	CA-C-N	5.93	125.61	119.56
2	CB	25	ASN	C-N-CA	5.93	125.61	119.56
37	BT	27	THR	N-CA-C	-5.93	100.23	109.72
26	BE	168	MET	N-CA-C	5.93	118.71	109.52
3	AC	75	VAL	N-CA-C	-5.92	103.36	111.89
33	DP	53	GLY	N-CA-C	-5.91	106.82	115.63
30	BI	64	GLU	N-CA-C	-5.91	105.56	112.89
27	DF	74	ARG	CA-C-N	-5.90	112.92	122.36
27	DF	74	ARG	C-N-CA	-5.90	112.92	122.36
27	DF	75	HIS	N-CA-C	5.89	117.92	109.14
31	DN	23	LEU	CA-C-N	-5.89	114.06	123.31
31	DN	23	LEU	C-N-CA	-5.89	114.06	123.31
28	DG	67	LYS	CA-C-N	5.88	126.22	119.92
28	DG	67	LYS	C-N-CA	5.88	126.22	119.92
9	AI	5	TYR	N-CA-C	5.88	118.79	109.50
4	AD	83	SER	N-CA-C	-5.88	104.95	111.36
8	AH	29	SER	N-CA-C	5.88	118.21	108.99
31	BN	110	GLY	CA-C-N	5.86	126.00	119.32
31	BN	110	GLY	C-N-CA	5.86	126.00	119.32
4	CD	13	ARG	N-CA-C	5.85	117.53	111.03
22	CX	61	ILE	N-CA-C	5.85	117.58	109.80
9	AI	117	HIS	N-CA-C	5.85	118.41	111.33
7	AG	80	VAL	CB-CA-C	-5.85	103.80	111.81
13	CM	49	THR	N-CA-C	5.83	123.23	110.80
32	DO	24	VAL	CA-C-N	-5.83	114.14	122.77
32	DO	24	VAL	C-N-CA	-5.83	114.14	122.77
2	AB	25	ASN	CA-C-N	5.83	125.54	119.82
2	AB	25	ASN	C-N-CA	5.83	125.54	119.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	BI	79	ILE	CA-C-N	-5.83	113.69	119.99
30	BI	79	ILE	C-N-CA	-5.83	113.69	119.99
49	D5	36	CYS	N-CA-C	5.82	120.51	113.17
19	CS	14	HIS	N-CA-C	-5.82	106.18	113.28
37	BT	19	LEU	CA-C-N	5.82	125.77	119.78
37	BT	19	LEU	C-N-CA	5.82	125.77	119.78
3	AC	82	GLU	N-CA-C	5.82	117.31	110.97
43	DZ	191	VAL	N-CA-C	5.81	121.42	109.34
49	D5	3	LYS	N-CA-C	5.81	119.34	112.72
30	BI	7	GLU	CA-C-N	-5.80	113.99	119.85
30	BI	7	GLU	C-N-CA	-5.80	113.99	119.85
4	AD	12	CYS	CA-CB-SG	5.79	127.72	114.40
5	CE	129	ILE	CB-CA-C	-5.79	104.47	111.88
4	CD	56	VAL	CB-CA-C	-5.79	104.58	111.81
27	BF	75	HIS	N-CA-C	5.78	117.75	109.14
20	CT	97	ALA	CA-C-N	5.78	140.87	127.00
20	CT	97	ALA	C-N-CA	5.78	140.87	127.00
27	DF	70	THR	N-CA-C	5.78	119.14	111.75
13	CM	66	LEU	N-CA-C	5.77	123.09	110.80
37	BT	78	LEU	N-CA-C	-5.77	105.50	112.54
14	AN	13	THR	N-CA-C	5.76	118.79	108.47
5	AE	129	ILE	CB-CA-C	-5.76	104.51	111.88
7	AG	111	ARG	CA-C-N	5.76	125.30	119.19
7	AG	111	ARG	C-N-CA	5.76	125.30	119.19
19	AS	11	VAL	N-CA-C	5.76	118.53	112.83
25	DD	271	ILE	N-CA-C	5.76	116.41	110.82
48	B4	18	CYS	N-CA-C	-5.74	106.50	112.93
3	AC	149	ALA	N-CA-C	5.74	117.57	108.79
34	DQ	98	LYS	CA-C-N	-5.74	114.03	119.76
34	DQ	98	LYS	C-N-CA	-5.74	114.03	119.76
7	CG	74	GLU	N-CA-C	5.72	116.64	108.74
28	BG	67	LYS	CA-C-N	5.72	126.04	119.92
28	BG	67	LYS	C-N-CA	5.72	126.04	119.92
4	AD	88	VAL	N-CA-C	5.72	116.98	108.23
7	AG	31	MET	N-CA-C	5.72	118.27	110.55
15	AO	47	LYS	N-CA-C	-5.72	106.14	113.23
37	BT	104	ASN	N-CA-C	5.72	119.95	112.92
25	BD	42	GLY	N-CA-C	-5.72	107.49	114.92
9	CI	44	VAL	N-CA-C	5.72	116.03	107.51
11	AK	118	GLY	N-CA-C	5.71	126.72	113.18
32	BO	24	VAL	CA-C-N	-5.70	114.34	122.77
32	BO	24	VAL	C-N-CA	-5.70	114.34	122.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	BG	125	PHE	CA-C-N	5.70	128.18	120.38
28	BG	125	PHE	C-N-CA	5.70	128.18	120.38
43	DZ	100	VAL	CA-C-N	5.70	126.96	119.84
43	DZ	100	VAL	C-N-CA	5.70	126.96	119.84
25	BD	254	THR	CA-C-N	-5.69	114.72	123.14
25	BD	254	THR	C-N-CA	-5.69	114.72	123.14
4	CD	87	GLY	N-CA-C	5.69	121.32	110.86
8	AH	80	ILE	CB-CA-C	-5.68	104.55	111.88
34	BQ	47	ILE	N-CA-C	5.68	115.81	110.30
12	AL	109	GLY	N-CA-C	-5.68	103.46	112.66
27	BF	64	ILE	CB-CA-C	-5.68	104.39	112.22
34	DQ	17	LEU	N-CA-C	5.68	119.19	112.72
13	AM	66	LEU	N-CA-C	5.67	115.60	108.45
42	BY	80	GLY	N-CA-C	-5.67	108.33	115.08
42	DY	9	LYS	N-CA-C	-5.67	100.45	109.59
31	BN	69	GLN	N-CA-C	5.67	120.36	113.38
51	B7	43	THR	CA-C-N	5.66	125.68	119.90
51	B7	43	THR	C-N-CA	5.66	125.68	119.90
25	BD	75	ILE	N-CA-C	-5.66	103.77	108.63
7	CG	20	ASP	N-CA-C	5.65	119.05	107.69
41	DX	54	VAL	CB-CA-C	-5.65	102.27	110.63
23	BA	2296	U	N3-C4-O4	-5.64	102.47	119.40
50	D6	40	CYS	CA-C-N	5.64	125.25	119.56
50	D6	40	CYS	C-N-CA	5.64	125.25	119.56
28	DG	155	MET	N-CA-C	5.63	115.55	108.45
3	CC	159	GLY	N-CA-C	5.62	121.45	114.37
4	AD	26	CYS	CA-CB-SG	5.61	127.31	114.40
38	DU	8	VAL	N-CA-C	5.61	116.25	110.36
51	D7	43	THR	CA-C-N	5.61	125.62	119.90
51	D7	43	THR	C-N-CA	5.61	125.62	119.90
13	CM	98	VAL	N-CA-C	5.61	116.26	110.82
8	AH	4	ASP	CA-C-N	5.61	124.80	118.97
8	AH	4	ASP	C-N-CA	5.61	124.80	118.97
27	BF	24	LEU	CA-C-N	5.60	125.92	119.93
27	BF	24	LEU	C-N-CA	5.60	125.92	119.93
27	BF	86	GLY	N-CA-C	5.59	121.70	112.30
19	CS	27	GLU	N-CA-C	5.59	117.11	109.18
36	DS	82	ILE	CA-C-N	5.59	131.75	121.70
36	DS	82	ILE	C-N-CA	5.59	131.75	121.70
46	D2	46	GLN	CB-CA-C	-5.58	103.96	112.11
22	CX	24	PHE	N-CA-C	5.58	118.56	111.69
37	DT	76	PHE	CA-C-N	5.58	125.86	119.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	DT	76	PHE	C-N-CA	5.58	125.86	119.83
13	AM	19	LEU	N-CA-C	5.58	119.26	112.23
43	BZ	191	VAL	N-CA-C	5.58	120.94	109.34
45	D1	22	GLY	N-CA-C	5.58	118.54	112.29
1	AA	1442(A)	G	N3-C2-N2	5.57	136.62	119.90
36	BS	82	ILE	CA-C-N	5.57	131.73	121.70
36	BS	82	ILE	C-N-CA	5.57	131.73	121.70
4	CD	28	SER	CA-C-N	-5.57	114.40	121.91
4	CD	28	SER	C-N-CA	-5.57	114.40	121.91
37	DT	19	LEU	CA-C-N	5.56	125.50	119.78
37	DT	19	LEU	C-N-CA	5.56	125.50	119.78
12	CL	18	VAL	N-CA-C	5.55	117.05	111.00
25	DD	27	THR	N-CA-C	5.55	120.16	113.17
37	DT	80	SER	CA-C-N	5.54	125.64	119.87
37	DT	80	SER	C-N-CA	5.54	125.64	119.87
10	AJ	97	GLU	N-CA-C	5.54	117.46	108.26
27	DF	86	GLY	N-CA-C	5.54	121.61	112.30
31	DN	134	ARG	CA-C-N	5.54	125.72	119.90
31	DN	134	ARG	C-N-CA	5.54	125.72	119.90
29	DH	54	ARG	CA-C-N	5.54	125.25	119.82
29	DH	54	ARG	C-N-CA	5.54	125.25	119.82
29	BH	69	ARG	CA-C-N	-5.53	114.61	122.41
29	BH	69	ARG	C-N-CA	-5.53	114.61	122.41
6	CF	25	ILE	N-CA-C	-5.53	105.33	110.53
18	CR	86	VAL	N-CA-C	5.53	116.55	108.53
2	CB	188	ALA	N-CA-C	5.53	117.43	110.24
26	DE	134	ILE	N-CA-C	5.53	117.42	112.17
27	DF	29	ASN	CA-C-N	5.52	124.72	118.97
27	DF	29	ASN	C-N-CA	5.52	124.72	118.97
19	AS	77	THR	N-CA-C	5.52	119.75	111.96
25	BD	75	ILE	CB-CA-C	-5.52	105.81	110.94
9	AI	52	ALA	N-CA-C	5.51	117.36	111.36
27	DF	137	LYS	N-CA-C	-5.51	105.28	111.28
32	DO	5	GLN	N-CA-CB	-5.51	108.59	114.10
27	BF	49	ALA	N-CA-C	-5.50	101.50	110.20
45	B1	31	GLY	CA-C-O	-5.50	118.49	122.45
13	CM	15	VAL	N-CA-C	5.50	118.76	111.17
13	AM	68	GLY	N-CA-C	-5.49	107.11	114.25
3	CC	154	SER	N-CA-C	5.49	118.36	108.48
19	AS	75	ALA	CA-C-N	5.48	125.47	120.21
19	AS	75	ALA	C-N-CA	5.48	125.47	120.21
3	CC	82	GLU	N-CA-C	5.47	117.67	111.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	CJ	37	PRO	N-CA-C	5.47	119.78	111.19
49	D5	16	ARG	N-CA-C	-5.47	105.01	110.97
9	AI	69	GLY	N-CA-C	-5.47	105.27	112.81
51	B7	8	ASN	CB-CA-C	5.47	119.09	109.80
10	CJ	40	LEU	N-CA-C	-5.47	103.18	110.07
5	CE	50	GLU	N-CA-C	5.46	117.49	109.24
30	DI	81	VAL	N-CA-C	5.46	116.57	108.65
7	AG	20	ASP	N-CA-C	5.46	117.79	108.90
28	BG	149	VAL	N-CA-C	5.46	117.06	109.80
5	AE	48	ALA	CA-C-N	5.45	125.16	119.82
5	AE	48	ALA	C-N-CA	5.45	125.16	119.82
25	BD	123	ALA	CA-C-N	5.45	125.40	119.78
25	BD	123	ALA	C-N-CA	5.45	125.40	119.78
39	BV	55	ALA	N-CA-C	5.45	117.92	110.24
51	D7	2	LYS	N-CA-C	-5.45	102.13	110.30
13	AM	9	ILE	CA-C-N	5.44	125.87	119.99
13	AM	9	ILE	C-N-CA	5.44	125.87	119.99
7	AG	70	LYS	CA-C-N	5.44	125.61	119.90
7	AG	70	LYS	C-N-CA	5.44	125.61	119.90
6	AF	14	LEU	N-CA-C	5.43	116.93	110.19
27	BF	16	GLY	N-CA-C	5.43	126.06	113.18
2	CB	193	ASP	N-CA-C	5.43	118.46	108.69
3	AC	104	GLN	N-CA-C	5.42	117.27	108.26
29	DH	69	ARG	CA-C-N	-5.42	114.76	122.41
29	DH	69	ARG	C-N-CA	-5.42	114.76	122.41
42	DY	86	ARG	N-CA-C	-5.42	102.14	109.95
29	BH	140	LYS	N-CA-C	-5.42	105.45	111.36
5	CE	127	ASN	CA-C-N	5.41	124.60	118.97
5	CE	127	ASN	C-N-CA	5.41	124.60	118.97
13	CM	44	ARG	N-CA-C	5.41	118.33	110.17
22	CX	2	GLN	N-CA-C	5.40	117.51	109.25
30	BI	21	VAL	N-CA-C	5.39	115.39	108.82
42	BY	9	LYS	N-CA-C	-5.39	100.91	109.59
1	CA	1442(A)	G	N3-C2-N2	5.38	136.06	119.90
12	AL	18	VAL	N-CA-C	5.38	116.86	111.00
30	BI	97	ILE	CB-CA-C	-5.38	104.99	111.88
19	CS	76	PRO	CA-C-N	5.38	127.95	120.63
19	CS	76	PRO	C-N-CA	5.38	127.95	120.63
26	DE	120	TRP	N-CA-C	5.38	119.94	113.17
7	AG	136	LYS	N-CA-C	5.37	116.82	110.97
33	BP	40	SER	N-CA-C	-5.36	106.78	113.38
4	CD	33	MET	N-CA-C	-5.36	106.00	112.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	BP	70	GLN	N-CA-C	5.36	117.22	109.07
43	BZ	48	PHE	N-CA-C	5.36	117.12	111.28
29	BH	9	ILE	CB-CA-C	-5.35	104.74	110.95
26	DE	50	GLY	N-CA-C	-5.35	104.44	112.89
39	BV	37	VAL	N-CA-C	5.35	116.22	107.24
13	AM	62	ASN	N-CA-C	5.34	118.27	111.69
11	CK	118	GLY	N-CA-C	5.34	125.84	113.18
47	B3	16	PRO	N-CA-C	5.34	119.87	111.38
3	CC	76	VAL	N-CA-C	5.33	118.10	112.83
37	DT	110	ILE	N-CA-C	-5.32	104.77	110.36
9	AI	11	LYS	N-CA-C	5.32	118.92	111.90
25	DD	82	ILE	CB-CA-C	-5.32	104.08	110.99
4	AD	19	LEU	CA-C-N	-5.32	114.90	122.77
4	AD	19	LEU	C-N-CA	-5.32	114.90	122.77
2	AB	234	PRO	N-CA-C	5.31	119.56	111.11
30	BI	22	LYS	N-CA-C	-5.31	103.08	109.83
7	AG	10	ARG	N-CA-C	5.31	117.72	110.55
2	CB	229	VAL	N-CA-C	5.31	117.10	109.51
9	CI	52	ALA	N-CA-C	-5.31	106.58	113.16
9	CI	52	ALA	CA-C-N	5.31	128.79	123.16
9	CI	52	ALA	C-N-CA	5.31	128.79	123.16
15	CO	47	LYS	N-CA-C	-5.31	106.65	113.23
42	BY	92	ASN	CA-C-N	5.30	131.24	121.70
42	BY	92	ASN	C-N-CA	5.30	131.24	121.70
4	CD	8	VAL	N-CA-C	5.30	116.46	111.48
38	BU	28	ARG	NE-CZ-NH1	-5.29	116.21	121.50
5	CE	80	ILE	N-CA-C	5.29	116.28	108.45
27	DF	179	GLU	N-CA-C	-5.28	106.67	113.01
26	BE	146	THR	CB-CA-C	-5.28	103.24	109.47
5	CE	145	LYS	N-CA-C	-5.28	105.53	111.28
5	AE	50	GLU	N-CA-C	5.28	117.21	109.24
43	BZ	164	ALA	N-CA-C	5.28	119.41	112.92
32	BO	9	GLU	N-CA-C	-5.27	103.57	110.53
41	BX	12	VAL	CB-CA-C	-5.27	104.58	110.96
5	AE	145	LYS	N-CA-C	-5.27	105.53	111.28
18	AR	31	LEU	N-CA-C	-5.27	106.70	113.02
27	DF	9	ILE	N-CA-C	5.27	116.03	107.71
38	DU	40	PHE	N-CA-C	-5.27	105.43	111.07
42	DY	13	VAL	N-CA-C	5.27	117.64	108.95
4	AD	174	LEU	N-CA-C	5.26	117.41	109.41
4	CD	88	VAL	N-CA-C	5.26	115.67	107.99
34	BQ	12	GLN	N-CA-C	5.26	117.18	109.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	DF	154	VAL	N-CA-C	5.26	115.55	107.77
10	AJ	19	SER	N-CA-C	5.25	119.84	113.38
13	AM	113	PRO	N-CA-C	5.25	119.48	111.34
33	DP	40	SER	N-CA-C	-5.25	106.72	113.23
33	BP	63	PRO	CA-C-O	-5.25	115.45	121.86
43	DZ	157	LEU	N-CA-C	5.25	121.42	109.81
26	BE	136	ARG	N-CA-C	5.25	119.32	113.02
15	CO	21	ASP	N-CA-C	5.25	117.28	109.25
22	CX	45	LYS	CB-CA-C	-5.25	110.54	116.63
18	AR	35	ARG	N-CA-C	-5.25	106.88	113.28
30	DI	114	LEU	N-CA-C	5.25	117.49	110.35
3	CC	198	VAL	N-CA-C	5.24	115.94	106.61
19	AS	14	HIS	N-CA-C	-5.24	106.89	113.28
2	CB	16	HIS	N-CA-C	5.24	121.40	114.12
6	CF	14	LEU	N-CA-C	5.24	116.68	110.19
26	DE	193	GLY	N-CA-C	-5.24	108.49	115.40
4	CD	83	SER	N-CA-C	-5.23	105.58	111.28
10	CJ	69	ASN	N-CA-C	5.22	116.92	108.41
4	CD	30	LYS	N-CA-C	5.22	120.29	113.30
52	B8	21	LYS	CA-C-N	-5.21	116.31	123.14
52	B8	21	LYS	C-N-CA	-5.21	116.31	123.14
27	BF	9	ILE	N-CA-C	5.21	115.94	107.71
37	BT	115	ARG	N-CA-C	-5.21	103.52	110.55
13	AM	79	LYS	N-CA-C	-5.21	105.78	111.82
1	AA	1442(A)	G	N1-C2-N2	-5.20	100.61	116.20
3	AC	40	ARG	N-CA-C	-5.20	105.79	111.82
9	AI	7	THR	N-CA-C	5.20	117.09	108.20
37	DT	81	PRO	N-CA-C	-5.20	107.64	114.03
21	CU	7	ARG	N-CA-C	-5.19	106.97	113.15
20	CT	9	ASN	CA-C-N	5.19	128.08	120.71
20	CT	9	ASN	C-N-CA	5.19	128.08	120.71
4	AD	93	PHE	N-CA-C	-5.19	105.52	111.07
31	DN	76	SER	N-CA-C	-5.19	103.68	110.53
5	AE	41	VAL	CB-CA-C	-5.19	102.38	110.52
29	BH	70	THR	N-CA-C	-5.19	98.85	108.24
43	BZ	176	PRO	CA-C-N	5.19	126.33	119.84
43	BZ	176	PRO	C-N-CA	5.19	126.33	119.84
49	B5	46	CYS	CA-C-N	5.19	125.26	119.87
49	B5	46	CYS	C-N-CA	5.19	125.26	119.87
33	BP	52	GLU	N-CA-C	5.18	119.30	112.92
37	DT	78	LEU	N-CA-C	-5.18	106.22	112.54
23	BA	1799	G	C2'-C3'-O3'	5.18	117.27	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	DE	110	GLY	O-C-N	5.18	126.30	122.62
28	BG	155	MET	N-CA-C	5.18	114.98	108.45
27	BF	179	GLU	N-CA-C	-5.18	106.80	113.01
33	DP	131	SER	N-CA-C	-5.18	103.56	110.55
17	CQ	26	GLN	N-CA-C	-5.17	101.68	109.85
22	AX	43	VAL	N-CA-C	5.17	115.40	108.17
25	BD	148	GLU	N-CA-C	-5.17	102.64	110.50
37	BT	88	ILE	CB-CA-C	-5.17	104.69	111.25
3	AC	142	MET	N-CA-C	5.16	118.04	111.69
26	BE	144	ARG	N-CA-CB	5.16	114.78	109.51
7	CG	60	LYS	N-CA-C	5.16	119.73	113.38
31	BN	7	LYS	N-CA-C	-5.16	103.23	110.50
29	BH	35	VAL	N-CA-C	5.16	113.12	107.60
19	CS	18	LYS	N-CA-C	5.16	119.62	112.45
30	BI	108	THR	N-CA-C	5.15	118.11	110.48
43	DZ	35	ARG	N-CA-C	5.15	117.81	108.69
9	AI	42	ARG	CA-C-N	5.14	127.43	120.38
9	AI	42	ARG	C-N-CA	5.14	127.43	120.38
35	BR	5	LYS	N-CA-C	5.14	117.14	108.96
9	CI	13	ALA	N-CA-C	5.14	116.79	108.41
27	DF	93	LYS	CA-C-N	-5.14	114.28	119.83
27	DF	93	LYS	C-N-CA	-5.14	114.28	119.83
29	DH	15	VAL	N-CA-C	-5.14	101.57	108.35
28	DG	139	LEU	N-CA-C	-5.13	106.79	113.16
11	CK	38	ASN	CA-C-N	5.13	125.13	119.90
11	CK	38	ASN	C-N-CA	5.13	125.13	119.90
7	CG	28	ASN	N-CA-C	5.12	117.27	111.02
37	BT	40	THR	N-CA-C	5.12	116.76	108.26
4	CD	188	LEU	CA-C-N	5.12	125.41	119.93
4	CD	188	LEU	C-N-CA	5.12	125.41	119.93
7	CG	102	ARG	N-CA-C	5.12	116.67	111.14
12	CL	109	GLY	N-CA-C	-5.12	104.76	112.60
25	DD	225	ALA	N-CA-C	-5.12	106.81	113.16
38	BU	114	LYS	N-CA-C	-5.12	105.13	111.33
37	BT	110	ILE	CB-CA-C	-5.12	105.33	111.88
9	CI	122	ALA	CA-C-N	5.12	125.03	119.76
9	CI	122	ALA	C-N-CA	5.12	125.03	119.76
31	BN	52	VAL	N-CA-C	5.11	115.21	107.80
38	DU	93	LYS	N-CA-C	-5.11	105.40	110.97
45	D1	18	ILE	CB-CA-C	-5.11	104.09	111.19
17	AQ	26	GLN	N-CA-C	-5.10	101.78	109.85
28	BG	20	ILE	CB-CA-C	-5.10	105.36	112.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	DD	92	ILE	N-CA-C	5.10	116.70	108.85
22	CX	13	THR	N-CA-C	5.10	116.51	110.19
51	D7	8	ASN	CB-CA-C	5.10	118.47	109.80
28	BG	60	LEU	N-CA-C	-5.09	105.73	111.28
16	AP	40	ASP	CA-C-N	5.09	125.16	119.87
16	AP	40	ASP	C-N-CA	5.09	125.16	119.87
10	CJ	49	VAL	N-CA-C	5.09	117.06	108.81
25	DD	87	ASN	N-CA-C	5.09	119.47	113.16
27	DF	16	GLY	N-CA-C	5.09	125.23	113.18
42	DY	92	ASN	CA-C-N	5.09	130.85	121.70
42	DY	92	ASN	C-N-CA	5.09	130.85	121.70
11	CK	102	GLY	N-CA-C	-5.08	107.52	114.64
16	AP	11	SER	N-CA-C	5.08	114.86	108.45
31	BN	37	LYS	N-CA-C	-5.08	106.92	113.02
15	CO	15	PHE	N-CA-C	5.08	119.58	113.17
11	CK	29	ILE	CB-CA-C	-5.08	103.06	110.62
30	BI	16	GLY	N-CA-C	-5.07	108.70	115.40
37	BT	49	VAL	N-CA-CB	5.07	116.63	110.95
51	D7	47	ARG	N-CA-C	5.07	117.39	110.24
48	D4	35	VAL	N-CA-C	5.07	114.05	106.85
7	CG	68	ASN	N-CA-C	5.07	119.15	112.92
13	AM	7	VAL	N-CA-C	5.07	119.88	109.34
5	CE	90	VAL	CB-CA-C	-5.07	103.13	110.63
20	CT	95	ALA	N-CA-C	5.06	115.49	108.00
25	DD	75	ILE	N-CA-C	-5.06	104.28	108.63
45	B1	69	LYS	N-CA-C	-5.06	106.37	112.54
31	DN	7	LYS	N-CA-C	-5.06	103.37	110.50
44	B0	42	GLY	CA-C-N	-5.06	115.66	123.14
44	B0	42	GLY	C-N-CA	-5.06	115.66	123.14
20	CT	97	ALA	C-N-CD	-5.05	109.48	120.60
36	DS	34	HIS	N-CA-C	5.05	117.97	110.14
7	AG	87	VAL	N-CA-C	5.05	113.49	107.73
34	BQ	21	THR	CB-CA-C	-5.05	101.57	109.70
45	B1	45	ASN	CA-C-N	-5.05	114.55	122.73
45	B1	45	ASN	C-N-CA	-5.05	114.55	122.73
22	AX	30	TYR	N-CA-C	5.05	120.43	113.97
33	DP	95	VAL	N-CA-C	5.04	115.17	108.11
23	BA	752	A	C2'-C3'-O3'	5.04	117.06	109.50
53	B9	22	ARG	N-CA-C	5.04	117.62	109.40
30	DI	91	SER	N-CA-C	5.04	116.85	109.24
1	CA	1442(A)	G	N3-C4-N9	5.04	141.10	126.00
8	CH	93	VAL	N-CA-C	5.04	114.82	107.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	55	GLY	N-CA-C	5.03	125.11	113.18
39	DV	37	VAL	N-CA-C	5.03	115.22	107.77
11	AK	38	ASN	CA-C-N	5.03	125.02	119.89
11	AK	38	ASN	C-N-CA	5.03	125.02	119.89
4	CD	68	TYR	N-CA-C	5.03	117.88	111.69
23	BA	272(A)	U	P-O3'-C3'	5.03	125.73	119.70
22	AX	64	SER	N-CA-C	5.02	117.02	109.23
1	AA	1442(A)	G	N3-C4-N9	5.02	141.07	126.00
2	CB	21	ARG	N-CA-C	-5.02	102.02	109.96
3	AC	194	GLY	N-CA-C	5.02	117.38	110.56
39	BV	36	PRO	CA-C-O	-5.02	115.66	122.08
35	BR	31	HIS	CB-CA-C	-5.01	101.72	110.09
34	BQ	124	LYS	N-CA-C	-5.01	106.94	113.16
28	DG	141	PHE	CA-C-N	5.01	124.62	119.56
28	DG	141	PHE	C-N-CA	5.01	124.62	119.56
19	AS	48	THR	CA-C-N	5.01	128.00	120.69
19	AS	48	THR	C-N-CA	5.01	128.00	120.69
42	DY	76	CYS	CA-C-N	5.01	124.79	119.28
42	DY	76	CYS	C-N-CA	5.01	124.79	119.28
18	AR	86	VAL	N-CA-C	5.01	115.79	108.53
2	AB	229	VAL	N-CA-C	5.01	116.67	109.51
16	CP	20	VAL	N-CA-C	5.00	114.96	108.35
10	AJ	12	ASP	N-CA-C	5.00	116.28	109.18
30	DI	130	TYR	N-CA-C	5.00	116.42	110.97

There are no chirality outliers.

All (56) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	129	GLU	Peptide
2	AB	14	GLY	Peptide
2	AB	71	VAL	Peptide
3	AC	147	LYS	Peptide
3	AC	19	GLU	Peptide
3	AC	51	GLY	Peptide
4	AD	29	PRO	Peptide
9	AI	117	HIS	Peptide
10	AJ	56	HIS	Peptide
10	AJ	86	MET	Peptide
13	AM	105	THR	Peptide
13	AM	40	ASN	Peptide
13	AM	85	GLY	Peptide

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Mol	Chain	Res	Type	Group
13	AM	86	CYS	Peptide
14	AN	12	ARG	Peptide
15	AO	75	PRO	Peptide
17	AQ	96	GLU	Peptide
19	AS	12	ASP	Peptide
20	AT	48	LYS	Peptide
45	B1	83	GLU	Peptide
48	B4	43	TYR	Peptide
23	BA	2335	A	Sidechain
26	BE	72	VAL	Peptide
34	BQ	18	LYS	Peptide
36	BS	82	ILE	Peptide
41	BX	93	GLU	Peptide
43	BZ	159	PRO	Peptide
43	BZ	191	VAL	Peptide
43	BZ	199	LYS	Peptide
2	CB	129	GLU	Peptide
2	CB	130	ARG	Peptide
2	CB	14	GLY	Peptide
2	CB	71	VAL	Peptide
3	CC	160	ALA	Peptide
4	CD	29	PRO	Peptide
7	CG	146	GLU	Peptide
7	CG	7	ALA	Peptide
9	CI	102	LEU	Peptide
10	CJ	21	GLN	Peptide
10	CJ	92	THR	Peptide
13	CM	65	LYS	Peptide
13	CM	86	CYS	Peptide
15	CO	75	PRO	Peptide
17	CQ	96	GLU	Peptide
19	CS	76	PRO	Peptide
20	CT	48	LYS	Peptide
45	D1	83	GLU	Peptide
48	D4	43	TYR	Peptide
23	DA	2335	A	Sidechain
26	DE	72	VAL	Peptide
27	DF	85	GLY	Peptide
30	DI	86	THR	Peptide
34	DQ	18	LYS	Peptide
36	DS	82	ILE	Peptide
41	DX	93	GLU	Peptide

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Mol	Chain	Res	Type	Group
43	DZ	191	VAL	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32270	0	16286	1215	0
1	CA	32185	0	16244	1269	1
2	AB	1787	0	1752	128	0
2	CB	1775	0	1743	124	0
3	AC	1450	0	1314	93	0
3	CC	1450	0	1314	126	0
4	AD	1526	0	1415	74	0
4	CD	1526	0	1415	89	0
5	AE	1105	0	1130	58	0
5	CE	1105	0	1130	62	0
6	AF	777	0	737	35	0
6	CF	777	0	737	38	0
7	AG	1164	0	1106	88	0
7	CG	1164	0	1106	101	0
8	AH	1045	0	1033	49	0
8	CH	1045	0	1033	51	0
9	AI	852	0	742	85	0
9	CI	852	0	742	82	0
10	AJ	663	0	558	55	0
10	CJ	663	0	558	71	0
11	AK	828	0	822	28	0
11	CK	828	0	822	28	0
12	AL	905	0	916	41	0
12	CL	905	0	916	33	0
13	AM	804	0	752	59	0
13	CM	804	0	752	60	0
14	AN	478	0	497	35	0
14	CN	478	0	496	58	0
15	AO	724	0	749	35	0
15	CO	724	0	749	32	0
16	AP	651	0	638	33	0
16	CP	651	0	638	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
17	AQ	823	0	891	44	0
17	CQ	823	0	891	48	0
18	AR	514	0	530	27	0
18	CR	514	0	530	23	0
19	AS	560	0	466	46	0
19	CS	560	0	466	42	0
20	AT	665	0	731	33	0
20	CT	713	0	766	42	0
21	AU	199	0	208	32	0
21	CU	199	0	208	22	0
22	AX	631	0	540	20	0
22	CX	601	0	485	16	0
23	BA	61112	0	30809	1223	1
23	DA	60621	0	30566	1233	0
24	BB	2573	0	1306	56	0
24	DB	2573	0	1306	55	0
25	BD	2135	0	2214	76	0
25	DD	2136	0	2218	81	0
26	BE	1555	0	1607	54	0
26	DE	1555	0	1607	61	0
27	BF	1580	0	1621	63	0
27	DF	1580	0	1621	63	0
28	BG	1368	0	1324	81	0
28	DG	1368	0	1324	92	0
29	BH	1317	0	1376	35	0
29	DH	1317	0	1376	37	0
30	BI	1037	0	1036	60	1
30	DI	953	0	858	44	0
31	BN	1112	0	1180	35	0
31	DN	1112	0	1180	46	0
32	BO	923	0	981	27	0
32	DO	923	0	981	28	0
33	BP	1131	0	1201	47	0
33	DP	1131	0	1201	57	0
34	BQ	1122	0	1179	47	0
34	DQ	1122	0	1179	50	0
35	BR	968	0	1033	34	0
35	DR	968	0	1033	37	0
36	BS	865	0	905	51	0
36	DS	865	0	905	51	0
37	BT	1063	0	1103	42	0
37	DT	1063	0	1103	45	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	BU	959	0	1019	36	0
38	DU	959	0	1019	36	0
39	BV	771	0	830	23	0
39	DV	771	0	830	26	0
40	BW	881	0	935	22	0
40	DW	881	0	935	33	0
41	BX	742	0	799	23	0
41	DX	742	0	799	28	0
42	BY	785	0	828	24	0
42	DY	785	0	828	25	0
43	BZ	1536	0	1518	53	0
43	DZ	1522	0	1511	67	0
44	B0	594	0	604	17	0
44	D0	594	0	604	16	0
45	B1	745	0	804	21	0
45	D1	745	0	804	24	0
46	B2	588	0	643	15	0
46	D2	588	0	643	19	0
47	B3	458	0	503	8	0
47	D3	458	0	503	13	0
48	B4	349	0	336	25	0
48	D4	349	0	336	29	0
49	B5	455	0	472	13	0
49	D5	455	0	472	14	0
50	B6	449	0	462	18	0
50	D6	449	0	462	15	0
51	B7	418	0	467	15	0
51	D7	418	0	467	19	0
52	B8	509	0	565	18	0
52	D8	509	0	565	25	0
53	B9	297	0	316	8	0
53	D9	297	0	316	9	0
54	AA	135	0	0	0	0
54	AC	1	0	0	0	0
54	AD	1	0	0	0	0
54	AF	1	0	0	0	0
54	AQ	1	0	0	0	0
54	B0	3	0	0	0	0
54	B1	1	0	0	0	0
54	B2	1	0	0	0	0
54	B3	1	0	0	0	0
54	B5	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	B8	2	0	0	0	0
54	B9	1	0	0	0	0
54	BA	660	0	0	0	0
54	BB	23	0	0	0	0
54	BD	3	0	0	0	0
54	BE	5	0	0	0	0
54	BF	2	0	0	0	0
54	BG	1	0	0	0	0
54	BP	1	0	0	0	0
54	BQ	4	0	0	0	0
54	BR	1	0	0	0	0
54	BS	1	0	0	0	0
54	BT	2	0	0	0	0
54	BV	1	0	0	0	0
54	BW	2	0	0	0	0
54	BZ	1	0	0	0	0
54	CA	162	0	0	0	0
54	CE	1	0	0	0	0
54	CQ	1	0	0	0	0
54	D0	2	0	0	0	0
54	D1	1	0	0	0	0
54	D5	1	0	0	0	0
54	D8	2	0	0	0	0
54	DA	598	0	0	0	0
54	DB	8	0	0	0	0
54	DD	2	0	0	0	0
54	DE	4	0	0	0	0
54	DF	1	0	0	0	0
54	DO	2	0	0	0	0
54	DP	1	0	0	0	0
54	DQ	2	0	0	0	0
54	DR	3	0	0	0	0
55	AD	1	0	0	0	0
55	AN	1	0	0	0	0
55	B4	1	0	0	0	0
55	B5	1	0	0	0	0
55	B6	1	0	0	0	0
55	B9	1	0	0	0	0
55	BY	1	0	0	0	0
55	CD	1	0	0	0	0
55	CN	1	0	0	0	0
55	D4	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	D5	1	0	0	0	0
55	D6	1	0	0	0	0
55	D9	1	0	0	0	0
55	DY	1	0	0	0	0
56	AA	268	0	0	32	0
56	AE	1	0	0	0	0
56	AL	1	0	0	0	0
56	AO	1	0	0	0	0
56	AP	1	0	0	0	0
56	AT	1	0	0	0	0
56	AX	1	0	0	0	0
56	B0	8	0	0	0	0
56	B1	2	0	0	0	0
56	B3	1	0	0	0	0
56	B5	3	0	0	0	0
56	B6	1	0	0	1	0
56	B7	5	0	0	0	0
56	B8	10	0	0	0	0
56	B9	1	0	0	1	0
56	BA	1694	0	0	170	0
56	BB	57	0	0	3	1
56	BD	20	0	0	3	0
56	BE	11	0	0	0	0
56	BF	6	0	0	1	0
56	BH	1	0	0	0	0
56	BN	2	0	0	0	0
56	BO	2	0	0	0	0
56	BP	11	0	0	2	0
56	BQ	5	0	0	0	0
56	BR	6	0	0	1	0
56	BT	1	0	0	0	0
56	BU	3	0	0	0	0
56	BV	3	0	0	0	0
56	BW	3	0	0	0	0
56	BX	2	0	0	0	0
56	BY	4	0	0	0	0
56	CA	265	0	0	25	0
56	CC	1	0	0	2	0
56	CD	1	0	0	0	0
56	CE	2	0	0	0	0
56	CK	1	0	0	1	0
56	CL	2	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	CN	1	0	0	0	0
56	CP	1	0	0	0	0
56	CQ	1	0	0	0	0
56	CT	1	0	0	0	0
56	CX	1	0	0	0	0
56	D0	1	0	0	0	0
56	D1	5	0	0	0	0
56	D3	1	0	0	0	0
56	D4	1	0	0	0	0
56	D7	3	0	0	0	0
56	D8	1	0	0	0	0
56	DA	1174	0	0	171	0
56	DB	17	0	0	0	0
56	DD	8	0	0	2	0
56	DE	11	0	0	2	0
56	DF	7	0	0	1	0
56	DN	1	0	0	0	0
56	DO	5	0	0	1	0
56	DP	10	0	0	1	0
56	DQ	3	0	0	0	0
56	DR	2	0	0	1	0
56	DT	2	0	0	0	0
56	DU	5	0	0	0	0
56	DV	2	0	0	1	0
56	DW	2	0	0	0	0
56	DX	1	0	0	1	0
56	DY	2	0	0	0	0
All	All	286308	0	187082	8441	2

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 18.

All (8441) 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)
1:AA:1441:G:H2'	1:AA:1459:C:N4	1.20	1.46
1:AA:1459:C:C5	1:AA:1460:A:N6	1.79	1.44
1:AA:1441:G:C2'	1:AA:1459:C:N4	1.88	1.36
1:AA:1441:G:C2'	1:AA:1459:C:H41	1.44	1.29
1:CA:1441:G:H2'	1:CA:1459:C:N4	1.50	1.25
1:CA:1441:G:C2'	1:CA:1459:C:H41	1.54	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2296:U:O4	23:BA:2335:A:N6	1.76	1.19
23:DA:2296:U:O4	23:DA:2335:A:N6	1.77	1.15
1:CA:989:C:N4	1:CA:1216:G:H1	1.46	1.14
23:BA:885:C:C4	23:BA:890:A:N6	2.20	1.10
1:AA:1007:C:N4	1:AA:1022:G:H1	1.49	1.08
23:BA:885:C:N4	23:BA:890:A:C6	2.22	1.08
23:BA:2820:A:OP2	35:BR:2:ARG:NH2	1.87	1.07
23:DA:2820:A:OP2	35:DR:2:ARG:NH2	1.88	1.06
7:AG:88:PRO:HB3	7:AG:145:ALA:HA	1.38	1.05
23:DA:2711:A:OP2	56:DA:3992:HOH:O	1.73	1.04
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.41	1.03
23:BA:2036:C:OP1	56:BA:4559:HOH:O	1.77	1.02
1:AA:1010:G:H1	1:AA:1019:C:N4	1.57	1.02
23:DA:847:U:O4	23:DA:933:A:N6	1.92	1.02
23:BA:847:U:O4	23:BA:933:A:N6	1.92	1.02
4:AD:9:CYS:SG	4:AD:22:LYS:NZ	2.34	1.01
1:CA:1441:G:C2'	1:CA:1459:C:N4	2.17	1.01
23:DA:1439:A:OP1	56:DA:4126:HOH:O	1.79	1.01
1:AA:1459:C:C3'	1:AA:1460:A:C8	2.44	1.00
1:CA:949:A:H61	1:CA:1232:U:H3	1.05	1.00
23:DA:527:C:OP1	56:DA:4533:HOH:O	1.77	1.00
1:CA:1089:G:H1	1:CA:1096:C:N4	1.58	1.00
23:DA:1671:U:OP2	56:DA:3807:HOH:O	1.78	0.99
1:AA:839:U:H5'	1:AA:840:C:H5	1.28	0.98
1:CA:1459:C:C5	1:CA:1460:A:N6	2.30	0.98
1:AA:1459:C:H3'	1:AA:1460:A:N7	1.77	0.98
1:AA:1051:C:N4	1:AA:1207:G:N1	2.11	0.97
1:AA:1457:G:H2'	1:AA:1458:G:H8	1.24	0.97
23:BA:463:G:OP1	56:BA:3949:HOH:O	1.79	0.97
23:BA:2122:U:H3	23:BA:2176:A:H61	1.00	0.97
48:D4:42:PHE:HB3	48:D4:43:TYR:HB2	1.45	0.96
23:DA:563:G:OP2	56:DA:4622:HOH:O	1.83	0.96
1:AA:1151:A:HO2'	1:AA:1152:A:H8	0.99	0.96
1:CA:1459:C:C3'	1:CA:1460:A:C8	2.48	0.96
10:CJ:50:ILE:HA	10:CJ:60:ARG:HG2	1.47	0.96
23:BA:631:A:OP1	33:BP:65:ARG:NH1	1.98	0.96
23:BA:450:G:O6	56:BA:4578:HOH:O	1.84	0.96
1:CA:1459:C:H3'	1:CA:1460:A:N7	1.81	0.95
1:AA:1458:G:OP1	20:AT:35:THR:OG1	1.85	0.95
1:AA:1459:C:H5	1:AA:1460:A:H62	1.02	0.95
1:AA:1168:A:H2'	1:AA:1169:A:H8	1.27	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:839:U:H5'	1:CA:840:C:H5	1.28	0.95
1:AA:1051:C:N4	1:AA:1207:G:H1	1.63	0.95
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.01	0.95
8:AH:6:ILE:HB	8:AH:85:ARG:HH12	1.28	0.95
1:CA:1457:G:H2'	1:CA:1458:G:H8	1.27	0.95
7:AG:88:PRO:HG3	7:AG:149:ARG:HA	1.44	0.95
23:DA:2122:U:H3	23:DA:2176:A:N6	1.64	0.94
8:CH:6:ILE:HB	8:CH:85:ARG:HH12	1.29	0.94
23:DA:2227:A:OP2	56:DA:4145:HOH:O	1.85	0.94
1:AA:984:C:H42	1:AA:1221:G:H1	1.05	0.94
1:CA:950:U:H3	1:CA:1231:G:H1	1.05	0.94
13:CM:3:ARG:HE	13:CM:45:VAL:HG12	1.29	0.94
1:AA:986:A:H61	1:AA:1219:U:H3	0.97	0.94
23:BA:1359:A:N6	23:BA:1372:U:O4	1.99	0.94
1:CA:1089:G:H1	1:CA:1096:C:H42	0.96	0.94
1:CA:1113:C:N4	1:CA:1187:G:H1	1.64	0.94
1:CA:1128:C:H42	1:CA:1143:G:H1	1.11	0.93
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.50	0.93
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.47	0.93
1:AA:559:A:H4'	1:AA:560:U:H3'	1.50	0.93
1:CA:939:G:H1	1:CA:1344:C:H42	1.15	0.93
23:BA:2228:G:OP1	25:BD:261:LYS:NZ	2.01	0.93
48:B4:42:PHE:HB3	48:B4:43:TYR:HB2	1.48	0.93
1:CA:1350:A:H61	1:CA:1372:U:H3	1.11	0.93
1:AA:79:G:H2'	1:AA:80:G:H8	1.32	0.93
2:AB:20:GLU:O	2:AB:40:HIS:N	2.01	0.93
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.48	0.93
1:CA:932:C:N4	1:CA:1385:G:H1	1.66	0.93
37:DT:16:ARG:NH2	37:DT:83:ILE:O	2.02	0.93
3:AC:121:ALA:HB2	3:AC:187:ALA:HB1	1.48	0.93
1:AA:1459:C:C6	1:AA:1460:A:N6	2.36	0.93
23:BA:1689:A:H62	23:BA:1698:A:H2	1.14	0.93
1:CA:1262:C:H42	1:CA:1273:G:H1	1.16	0.93
23:BA:271(I):G:H1	23:BA:271(O):C:H42	0.97	0.92
1:CA:1113:C:H42	1:CA:1187:G:H1	0.93	0.92
1:CA:1349:A:N7	1:CA:1373:G:N2	2.15	0.92
2:CB:20:GLU:O	2:CB:40:HIS:N	2.02	0.92
1:CA:954:G:N2	1:CA:1227:A:N7	2.17	0.92
23:DA:271(I):G:H1	23:DA:271(O):C:H42	0.94	0.92
1:AA:1343:G:H4'	9:AI:122:ALA:HB3	1.52	0.92
2:AB:50:GLU:O	2:AB:54:THR:OG1	1.88	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:271(I):G:H1	23:DA:271(O):C:N4	1.68	0.92
1:CA:932:C:N4	1:CA:1385:G:N1	2.17	0.92
6:CF:15:ASP:HB2	6:CF:18:GLN:H	1.34	0.92
1:CA:1441:G:H2'	1:CA:1459:C:H41	0.76	0.92
1:CA:1262:C:N4	1:CA:1273:G:H1	1.67	0.91
1:AA:1239:A:N6	1:AA:1299:A:H62	1.68	0.91
23:DA:1970:A:OP1	56:DA:4210:HOH:O	1.88	0.91
23:DA:2036:C:OP1	56:DA:4431:HOH:O	1.88	0.91
1:CA:1006:C:H42	1:CA:1024:G:H21	1.09	0.91
1:AA:1246:C:N4	1:AA:1291:G:H1	1.67	0.91
1:AA:963:G:H1	1:AA:972:C:H42	1.09	0.91
1:CA:1443:G:O6	1:CA:1459:C:O2	1.89	0.91
2:AB:19:HIS:ND1	2:AB:189:ASP:OD2	2.03	0.91
1:CA:581:G:OP2	56:CA:2043:HOH:O	1.87	0.91
1:AA:993:G:H2'	1:AA:995:C:H41	1.35	0.91
1:AA:1128:C:H42	1:AA:1143:G:H1	1.17	0.91
1:CA:949:A:N6	1:CA:1232:U:H3	1.68	0.91
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.52	0.90
23:BA:583:G:N7	56:BA:5068:HOH:O	2.03	0.90
23:DA:631:A:OP1	33:DP:65:ARG:NH1	2.03	0.90
23:BA:676:A:H8	23:BA:2069:G:H21	1.17	0.90
1:AA:1486:G:N7	56:AA:1839:HOH:O	2.03	0.90
23:BA:1533:G:H21	23:BA:1536:C:H5	1.19	0.90
1:CA:1055:A:N7	1:CA:1200:C:N4	2.17	0.90
6:AF:15:ASP:HB2	6:AF:18:GLN:H	1.36	0.90
23:BA:271(I):G:H1	23:BA:271(O):C:N4	1.69	0.90
23:DA:2304:G:H1	23:DA:2312:U:H3	1.19	0.90
28:BG:63:ILE:HA	28:BG:143:GLU:HG3	1.54	0.90
33:BP:39:LYS:HB2	33:BP:45:LEU:HG	1.53	0.90
1:CA:1346:A:OP1	9:CI:120:ARG:NH1	2.05	0.90
23:DA:1797:C:HO2'	25:DD:259:THR:HG1	1.14	0.90
23:BA:2322:A:H61	23:BA:2335:A:N6	1.70	0.90
23:BA:1210:A:H8	23:BA:1210:A:H5"	1.35	0.90
1:AA:986:A:N6	1:AA:1219:U:H3	1.69	0.90
1:CA:1502:A:OP1	56:CA:2034:HOH:O	1.88	0.90
6:CF:81:ILE:HD11	25:DD:125:ILE:HB	1.51	0.90
11:CK:29:ILE:HG23	11:CK:44:SER:HB3	1.51	0.90
23:DA:330:A:H2	23:DA:1210:A:H2'	1.36	0.89
23:BA:1189:A:OP2	56:BA:4525:HOH:O	1.88	0.89
1:CA:1371:G:H5"	9:CI:69:GLY:H	1.35	0.89
23:DA:407:G:OP2	56:DA:4603:HOH:O	1.89	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1170:A:H3'	1:CA:1171:G:H8	1.37	0.89
23:DA:1359:A:N6	23:DA:1372:U:O4	2.06	0.89
1:AA:1025:U:O2	1:AA:1036:G:O6	1.90	0.89
23:BA:2406:U:OP1	56:BA:4498:HOH:O	1.90	0.89
2:CB:19:HIS:ND1	2:CB:189:ASP:OD2	2.04	0.89
23:DA:2036:C:H6	23:DA:2036:C:H5'	1.37	0.89
1:AA:1239:A:H62	1:AA:1299:A:H62	0.89	0.89
1:CA:955:U:H1'	1:CA:1227:A:H61	1.36	0.89
1:AA:1459:C:H3'	1:AA:1460:A:C8	2.07	0.89
1:CA:673:G:H2'	1:CA:674:G:C8	2.07	0.89
37:BT:16:ARG:NH2	37:BT:83:ILE:O	2.05	0.88
23:DA:2122:U:H3	23:DA:2176:A:H61	0.91	0.88
1:CA:937:A:N6	1:CA:1345:U:O4	2.06	0.88
1:CA:989:C:N3	1:CA:1216:G:N2	2.22	0.88
28:DG:41:GLN:HB3	28:DG:43:LEU:HD13	1.52	0.88
1:AA:1441:G:C2'	1:AA:1459:C:H42	1.86	0.88
23:BA:2366:A:OP1	56:BA:4104:HOH:O	1.90	0.88
2:CB:50:GLU:O	2:CB:54:THR:OG1	1.89	0.88
23:DA:1376:C:OP2	56:DA:3934:HOH:O	1.90	0.88
1:CA:1444:C:N4	1:CA:1459:C:O2	2.07	0.88
23:DA:2228:G:OP1	25:DD:261:LYS:NZ	2.05	0.88
33:DP:39:LYS:HB2	33:DP:45:LEU:HG	1.55	0.88
45:B1:82:LEU:HA	45:B1:85:LEU:HD23	1.53	0.88
1:CA:1130:A:H61	1:CA:1144:G:H1'	1.39	0.88
23:DA:785:G:OP2	56:DA:4113:HOH:O	1.92	0.87
23:DA:1019:U:H3	23:DA:1142(A):A:H62	1.21	0.87
23:DA:2322:A:H61	23:DA:2335:A:N6	1.72	0.87
1:AA:1111:A:H61	3:AC:177:THR:HA	1.39	0.87
23:BA:974:G:N7	56:BA:4207:HOH:O	2.08	0.87
23:DA:927:G:N7	56:DA:4233:HOH:O	2.08	0.87
1:AA:1279:A:OP2	10:AJ:9:ARG:NH1	2.07	0.87
23:BA:2122:U:H3	23:BA:2176:A:N6	1.71	0.87
23:BA:2304:G:H1	23:BA:2312:U:H3	1.22	0.87
23:DA:1865:G:N7	56:DA:4472:HOH:O	2.06	0.87
1:AA:984:C:N4	1:AA:1221:G:H1	1.70	0.87
1:CA:860:A:OP2	56:CA:1871:HOH:O	1.91	0.87
1:CA:559:A:H4'	1:CA:560:U:H3'	1.57	0.87
1:CA:986:A:N3	19:CS:52:TYR:OH	2.07	0.86
23:DA:1689:A:H62	23:DA:1698:A:H2	1.19	0.86
23:BA:1284:A:N7	56:BA:5015:HOH:O	2.06	0.86
1:CA:758:G:N7	56:CA:2044:HOH:O	2.06	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1352:U:OP2	56:DA:3935:HOH:O	1.94	0.86
1:CA:953:G:O6	1:CA:1228:C:N3	2.09	0.86
1:CA:1030:C:N4	1:CA:1031:G:C6	2.43	0.86
23:DA:1204:A:H2	23:DA:1241:A:H62	1.23	0.86
23:DA:1345:C:OP2	56:DA:3943:HOH:O	1.92	0.86
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.08	0.86
1:AA:1246:C:H42	1:AA:1291:G:H1	0.89	0.86
1:CA:949:A:H1'	1:CA:1364:U:N3	1.91	0.86
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.39	0.86
23:BA:883:G:H2'	23:BA:884:C:H5"	1.57	0.86
23:BA:1530:C:O2'	23:BA:1531:C:O5'	1.94	0.86
23:DA:2287:A:N6	23:DA:2344:U:H3	1.73	0.86
23:BA:558:G:N7	56:BA:4943:HOH:O	2.09	0.86
45:D1:82:LEU:HA	45:D1:85:LEU:HD23	1.58	0.86
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.41	0.85
23:BA:745:G:O6	56:BA:5274:HOH:O	1.94	0.85
7:CG:123:GLU:HA	7:CG:126:ASP:HB2	1.56	0.85
1:AA:1007:C:N3	1:AA:1022:G:N2	2.24	0.85
3:AC:152:ILE:HB	3:AC:199:LYS:HB2	1.57	0.85
23:BA:1474:C:N4	56:BA:4420:HOH:O	2.10	0.85
28:DG:63:ILE:HA	28:DG:143:GLU:HG3	1.58	0.85
1:AA:1459:C:C4	1:AA:1460:A:N6	2.44	0.85
1:CA:782:A:OP1	56:CA:1947:HOH:O	1.93	0.85
1:CA:1459:C:O3'	1:CA:1460:A:C8	2.30	0.85
23:BA:2639:A:OP2	56:BA:4119:HOH:O	1.94	0.85
19:CS:16:LEU:HA	19:CS:20:LEU:HB2	1.59	0.85
23:BA:885:C:N4	23:BA:890:A:N6	2.22	0.85
23:DA:1641:A:OP2	56:DA:4176:HOH:O	1.94	0.85
28:DG:15:VAL:HG13	28:DG:175:LEU:HB3	1.57	0.85
27:BF:101:LEU:O	27:BF:106:ARG:NH1	2.10	0.85
1:AA:1459:C:O3'	1:AA:1460:A:C8	2.30	0.84
23:BA:2317:C:H2'	23:BA:2318:G:H5'	1.58	0.84
1:CA:932:C:N3	1:CA:1385:G:N2	2.25	0.84
23:DA:2526:G:O6	56:DA:4287:HOH:O	1.95	0.84
11:AK:29:ILE:HG23	11:AK:44:SER:HB3	1.57	0.84
5:CE:122:GLU:O	5:CE:126:ARG:NH1	2.09	0.84
23:BA:1177:A:O2'	23:BA:1178:C:O4'	1.95	0.84
33:BP:126:VAL:HG12	33:BP:148:LEU:HD22	1.60	0.84
1:CA:1458:G:C2	1:CA:1459:C:O4'	2.30	0.84
23:BA:242:G:OP1	56:BA:4242:HOH:O	1.94	0.84
30:BI:3:VAL:HG12	30:BI:38:LEU:HA	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:673:G:H2'	1:AA:674:G:C8	2.13	0.84
1:CA:1327:C:OP1	21:CU:20:LYS:N	2.11	0.84
23:DA:833:U:O2	33:DP:55:ARG:NH2	2.09	0.84
23:DA:1980:G:O2'	23:DA:1982:C:OP2	1.95	0.84
23:BA:510:C:OP1	56:BA:3896:HOH:O	1.94	0.84
1:CA:1466:C:OP2	56:CA:1864:HOH:O	1.94	0.84
23:DA:1271:G:OP2	56:DA:3848:HOH:O	1.96	0.84
23:DA:1530:C:O2'	23:DA:1531:C:O5'	1.96	0.84
23:DA:2808:U:O2	23:DA:2892:A:N6	2.10	0.84
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.12	0.84
10:AJ:91:PRO:HG2	10:AJ:94:VAL:HB	1.60	0.84
1:CA:1459:C:H3'	1:CA:1460:A:C8	2.11	0.84
16:CP:19:ILE:HG22	16:CP:36:ILE:HG13	1.59	0.84
9:CI:16:ARG:HB2	9:CI:64:THR:HG23	1.57	0.83
23:DA:2161:C:C5	23:DA:2161:C:OP2	2.30	0.83
1:AA:1118:C:H42	1:AA:1155:G:H1	1.26	0.83
23:BA:330:A:H2	23:BA:1210:A:H2'	1.43	0.83
23:BA:2036:C:H5'	23:BA:2036:C:H6	1.42	0.83
10:CJ:8:LEU:HD11	10:CJ:20:ALA:HB2	1.59	0.83
23:BA:805:G:OP1	56:BA:4504:HOH:O	1.95	0.83
1:CA:1300:G:H1	1:CA:1334:G:H2'	1.43	0.83
23:DA:2298:A:H62	23:DA:2318:G:H8	1.24	0.83
1:AA:1158:C:H4'	2:AB:133:LYS:HD2	1.60	0.83
25:BD:118:VAL:H	25:BD:129:ASN:HD22	1.25	0.83
1:CA:973:G:H3'	1:CA:974:A:H5"	1.59	0.83
23:DA:2385:C:OP1	56:DA:4159:HOH:O	1.95	0.83
1:CA:1368:G:H5"	9:CI:112:LYS:HB3	1.60	0.83
23:BA:1210:A:H5"	23:BA:1210:A:C8	2.13	0.83
23:BA:2134:A:O2'	23:BA:2159:G:N2	2.12	0.83
1:CA:48:C:OP2	56:CA:1850:HOH:O	1.95	0.83
23:DA:2161:C:OP2	23:DA:2161:C:C6	2.31	0.83
31:BN:20:GLY:HA2	31:BN:61:ARG:HG3	1.60	0.82
7:CG:14:PRO:HG3	7:CG:21:VAL:HG12	1.61	0.82
1:AA:1130:A:H61	1:AA:1144:G:H1'	1.43	0.82
1:AA:1186:G:N2	14:AN:61:TRP:O	2.10	0.82
20:AT:10:LEU:HG	20:AT:12:ALA:H	1.45	0.82
23:BA:624:C:OP1	56:BA:4243:HOH:O	1.96	0.82
1:CA:1508:G:OP1	56:CA:2021:HOH:O	1.97	0.82
3:CC:20:SER:HB3	3:CC:22:TRP:HE1	1.43	0.82
1:AA:1051:C:N3	1:AA:1207:G:N2	2.27	0.82
5:AE:122:GLU:O	5:AE:126:ARG:NH1	2.12	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.12	0.82
23:DA:2074:U:OP1	56:DA:4301:HOH:O	1.97	0.82
23:DA:2694:G:N7	56:DA:4770:HOH:O	2.12	0.82
30:DI:3:VAL:HG12	30:DI:38:LEU:HA	1.60	0.82
33:DP:126:VAL:HG12	33:DP:148:LEU:HD22	1.61	0.82
23:DA:2194:G:N7	56:DA:4551:HOH:O	2.13	0.82
23:BA:1667:G:O6	56:BA:4985:HOH:O	1.95	0.82
1:CA:97:G:HO2'	1:CA:98:G:H8	1.27	0.82
1:AA:812:C:N3	56:AA:1914:HOH:O	2.13	0.82
1:AA:893:C:O2	56:AA:1809:HOH:O	1.98	0.82
1:AA:963:G:H1	1:AA:972:C:N4	1.77	0.82
1:AA:977:A:O2'	1:AA:981:U:N3	2.12	0.82
23:BA:922:U:O4	56:BA:4369:HOH:O	1.98	0.82
1:CA:1156:G:H21	1:CA:1179:A:H61	1.24	0.82
23:DA:810:U:OP1	56:DA:4451:HOH:O	1.96	0.82
31:DN:130:HIS:HB3	31:DN:133:GLN:HE21	1.43	0.82
23:BA:578:A:OP2	56:BA:4057:HOH:O	1.97	0.81
31:BN:130:HIS:HB3	31:BN:133:GLN:HE21	1.43	0.81
9:CI:28:VAL:HB	9:CI:36:TYR:HB3	1.59	0.81
28:BG:41:GLN:HB3	28:BG:43:LEU:HD13	1.60	0.81
1:CA:1288:A:N1	1:CA:1371:G:H1'	1.94	0.81
1:CA:1457:G:C4	1:CA:1458:G:C8	2.68	0.81
1:AA:642:A:N3	8:AH:113:SER:OG	2.14	0.81
1:AA:1457:G:H2'	1:AA:1458:G:C8	2.14	0.81
38:BU:28:ARG:NH1	38:BU:38:THR:OG1	2.12	0.81
1:CA:1251:A:N6	1:CA:1285:A:N1	2.27	0.81
23:DA:2317:C:H2'	23:DA:2318:G:H5'	1.62	0.81
1:AA:1065:U:H6	1:AA:1190:G:H21	1.23	0.81
23:BA:2033:A:OP1	56:BA:4596:HOH:O	1.97	0.81
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.14	0.81
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.44	0.81
1:CA:1422:G:H5'	32:DO:48:PRO:HB3	1.63	0.81
23:DA:676:A:H8	23:DA:2069:G:H21	1.25	0.81
1:AA:1121:U:H3	1:AA:1152:A:H61	1.24	0.81
23:BA:1320:C:OP2	56:BA:5012:HOH:O	1.99	0.81
39:BV:62:LEU:HD11	39:BV:95:LEU:HB2	1.63	0.81
1:AA:1239:A:H62	1:AA:1299:A:N6	1.75	0.81
10:AJ:61:GLU:OE1	14:AN:58:LYS:NZ	2.14	0.81
1:CA:1009:G:O6	1:CA:1020:U:O2	1.98	0.81
1:CA:1237:C:O2'	1:CA:1300:G:N2	2.11	0.81
3:CC:137:ALA:HA	3:CC:140:ARG:HD3	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:768:A:N7	56:AA:1907:HOH:O	2.14	0.81
23:DA:1303:G:OP1	56:DA:4525:HOH:O	1.97	0.81
23:BA:1173:G:N1	23:BA:1176:G:OP2	2.11	0.80
28:BG:15:VAL:HG13	28:BG:175:LEU:HB3	1.63	0.80
1:CA:581:G:N7	56:CA:2044:HOH:O	2.14	0.80
23:DA:2134:A:O2'	23:DA:2159:G:N2	2.15	0.80
1:AA:1119:C:H2'	1:AA:1120:G:H8	1.46	0.80
1:CA:940:C:H42	1:CA:1343:G:H1	1.25	0.80
1:AA:1457:G:C4	1:AA:1458:G:C8	2.70	0.80
23:BA:2287:A:N6	23:BA:2344:U:H3	1.80	0.80
23:DA:271(A):A:N7	23:DA:271(W):G:N2	2.30	0.80
8:AH:4:ASP:OD1	8:AH:85:ARG:NH1	2.14	0.80
1:CA:1235:U:H5"	21:CU:3:LYS:HB2	1.63	0.80
7:CG:42:ILE:HA	7:CG:45:ASP:HB2	1.63	0.80
23:DA:1022:G:H22	23:DA:1142(A):A:H2	1.29	0.80
23:BA:300:A:N6	56:BA:3924:HOH:O	2.13	0.80
23:BA:1541:G:O6	56:BA:4734:HOH:O	1.98	0.80
23:DA:71:A:C2	41:DX:31:HIS:HE1	1.99	0.80
23:BA:2161:C:C5	23:BA:2161:C:OP2	2.34	0.80
1:CA:1027:C:C2	1:CA:1034:G:N2	2.47	0.80
1:CA:1050:G:O6	1:CA:1208:C:N3	2.15	0.80
1:AA:148:G:H2'	1:AA:149:A:H8	1.47	0.79
23:BA:561:G:N7	56:BA:5347:HOH:O	2.15	0.79
52:D8:33:ASN:HA	52:D8:36:LYS:HD2	1.63	0.79
13:AM:72:ALA:HA	13:AM:75:ALA:HB3	1.64	0.79
7:CG:42:ILE:HB	7:CG:116:ALA:HB3	1.64	0.79
23:DA:1403:C:H5"	23:DA:1471:A:H1'	1.65	0.79
1:AA:1236:A:OP2	21:AU:3:LYS:NZ	2.14	0.79
13:CM:86:CYS:HB3	13:CM:89:GLY:H	1.44	0.79
27:DF:178:PRO:HB2	27:DF:201:VAL:HG11	1.64	0.79
1:AA:942:G:H2'	1:AA:943:U:H6	1.45	0.79
1:AA:1013:G:H21	1:AA:1016:A:H8	1.30	0.79
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.46	0.79
23:DA:80:G:N7	56:DA:4050:HOH:O	2.15	0.79
23:DA:2472:G:H5'	23:DA:2473:U:H5"	1.65	0.79
23:BA:1517:G:O6	56:BA:4420:HOH:O	2.00	0.79
1:CA:90:U:H2'	1:CA:91:C:C6	2.18	0.79
1:CA:977:A:O2'	1:CA:981:U:N3	2.12	0.79
1:CA:1350:A:N6	1:CA:1372:U:H3	1.81	0.79
1:AA:97:G:HO2'	1:AA:98:G:H8	1.31	0.79
23:BA:1607:C:N4	23:BA:1622:G:OP2	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1888:G:N7	56:BA:4835:HOH:O	2.15	0.79
23:BA:885:C:C4	23:BA:890:A:C6	2.69	0.79
23:BA:2296:U:O4	23:BA:2335:A:C6	2.36	0.79
40:DW:25:ARG:NH2	40:DW:74:ALA:O	2.16	0.79
1:AA:1268:A:N3	1:AA:1326:C:O2'	2.15	0.79
25:BD:239:ARG:N	56:BD:410:HOH:O	2.15	0.79
1:CA:1457:G:H2'	1:CA:1458:G:C8	2.17	0.79
23:BA:2298:A:H62	23:BA:2318:G:H8	1.27	0.79
28:BG:105:LYS:NZ	48:B4:25:TYR:O	2.16	0.79
1:CA:1075:C:OP1	2:CB:179:LYS:NZ	2.13	0.79
23:DA:1604:C:OP1	56:DA:3790:HOH:O	2.01	0.79
19:AS:46:GLY:HA2	19:AS:61:TYR:HE1	1.47	0.78
23:BA:1019:U:H3	23:BA:1142(A):A:H62	1.29	0.78
23:BA:1664:A:OP1	56:BA:4771:HOH:O	2.00	0.78
1:AA:166:G:H2'	1:AA:167:G:H8	1.48	0.78
1:AA:1010:G:H1	1:AA:1019:C:H42	0.82	0.78
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.63	0.78
23:BA:784:A:OP1	56:BA:4425:HOH:O	2.00	0.78
2:CB:87:ARG:HE	2:CB:233:SER:HB2	1.47	0.78
1:AA:12:U:O4	56:AA:1980:HOH:O	2.02	0.78
2:AB:87:ARG:HE	2:AB:233:SER:HB2	1.48	0.78
1:CA:839:U:H5'	1:CA:840:C:C5	2.18	0.78
1:CA:1128:C:N4	1:CA:1143:G:H1	1.80	0.78
1:AA:1103:C:H5"	2:AB:98:LEU:HD13	1.64	0.78
20:AT:10:LEU:HD21	20:AT:12:ALA:HB3	1.65	0.78
1:CA:1170:A:H3'	1:CA:1171:G:C8	2.18	0.78
1:CA:1179:A:H4'	9:CI:103:THR:HA	1.66	0.78
8:CH:4:ASP:OD1	8:CH:85:ARG:NH1	2.16	0.78
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.65	0.78
17:CQ:76:LEU:HD11	17:CQ:79:SER:HB2	1.62	0.78
37:DT:95:ARG:HG2	37:DT:95:ARG:HH11	1.47	0.78
1:AA:977:A:HO2'	1:AA:981:U:H3	1.30	0.78
1:AA:1327:C:OP1	21:AU:20:LYS:N	2.14	0.78
23:BA:1639:U:H2'	23:BA:1640:C:H5"	1.64	0.78
1:CA:1377:A:H2'	7:CG:7:ALA:HB1	1.64	0.78
28:DG:138:GLN:HG3	28:DG:144:ILE:HG21	1.64	0.78
23:BA:1970:A:N1	56:BA:5040:HOH:O	2.16	0.78
43:BZ:82:ARG:HB3	43:BZ:82:ARG:HH21	1.48	0.78
23:BA:778:G:O6	56:BA:3910:HOH:O	2.02	0.78
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.66	0.78
23:BA:1022:G:H22	23:BA:1142(A):A:H2	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1670:C:OP1	56:DA:3807:HOH:O	2.01	0.78
1:AA:770:C:OP1	56:AA:1879:HOH:O	2.00	0.78
23:BA:31:C:OP1	56:BA:3883:HOH:O	2.01	0.78
3:CC:43:LEU:HD23	3:CC:47:LEU:HD13	1.65	0.78
1:AA:1259:C:O2'	1:AA:1283:G:N3	2.17	0.77
1:AA:1294:G:H2'	1:AA:1295:G:C8	2.19	0.77
23:BA:154(A):C:N4	23:BA:171:G:H1	1.83	0.77
13:AM:108:ARG:HD2	13:AM:113:PRO:HA	1.65	0.77
23:BA:2161:C:OP2	23:BA:2161:C:C6	2.38	0.77
40:BW:25:ARG:NH2	40:BW:74:ALA:O	2.16	0.77
1:CA:176:C:OP1	20:CT:29:LYS:NZ	2.15	0.77
2:CB:71:VAL:HG13	2:CB:93:VAL:HG23	1.66	0.77
9:CI:13:ALA:HB1	9:CI:73:GLN:HG3	1.66	0.77
23:DA:1416:G:O6	56:DA:4489:HOH:O	2.02	0.77
27:DF:101:LEU:O	27:DF:106:ARG:NH1	2.18	0.77
23:BA:1468:C:OP1	56:BA:4172:HOH:O	2.02	0.77
23:BA:2285:C:OP2	50:B6:6:ARG:NH1	2.17	0.77
7:CG:16:LEU:HD22	9:CI:45:ALA:H	1.49	0.77
23:DA:411:G:OP1	56:DA:4065:HOH:O	2.02	0.77
23:DA:574:C:OP1	56:DA:3903:HOH:O	2.03	0.77
23:DA:945:A:N7	56:DA:3684:HOH:O	2.17	0.77
23:DA:1639:U:OP1	56:DA:3985:HOH:O	2.02	0.77
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.50	0.77
1:AA:352:C:OP2	56:AA:1847:HOH:O	2.01	0.77
1:AA:750:G:N3	15:AO:23:GLY:HA3	1.99	0.77
23:BA:2472:G:H5'	23:BA:2473:U:H5"	1.66	0.77
1:AA:1162:C:H42	1:AA:1174:G:H1	1.28	0.77
2:AB:71:VAL:HG13	2:AB:93:VAL:HG23	1.66	0.77
23:BA:1840:G:N7	56:BA:4640:HOH:O	2.17	0.77
23:DA:2206:G:H5'	23:DA:2207:G:N7	1.99	0.77
1:AA:1459:C:C3'	1:AA:1460:A:N7	2.46	0.77
15:AO:54:ARG:HG2	15:AO:58:MET:HE2	1.65	0.77
1:CA:266:G:O2'	1:CA:267:C:OP2	2.02	0.77
14:CN:32:SER:HB3	14:CN:41:ARG:HB3	1.67	0.77
1:AA:266:G:O2'	1:AA:267:C:OP2	2.01	0.77
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.64	0.77
1:CA:1237:C:N4	1:CA:1337:G:H1	1.82	0.77
23:DA:1971:A:OP1	56:DA:4210:HOH:O	2.02	0.77
1:CA:953:G:N1	1:CA:1228:C:O2	2.17	0.76
23:DA:452:G:OP2	56:DA:4034:HOH:O	2.01	0.76
1:AA:773:G:OP1	56:AA:1808:HOH:O	2.02	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:50:ILE:HA	10:AJ:60:ARG:HG2	1.65	0.76
6:CF:7:ASN:HD21	18:CR:34:TYR:HE1	1.31	0.76
23:BA:1535:A:H3'	23:BA:1535:A:OP2	1.84	0.76
1:CA:1235:U:O2'	1:CA:1305:G:OP1	2.03	0.76
23:DA:1639:U:H2'	23:DA:1640:C:H5"	1.66	0.76
1:CA:547:A:OP1	56:CA:1986:HOH:O	2.04	0.76
24:DB:66:A:H61	24:DB:109:C:H5'	1.49	0.76
25:BD:118:VAL:H	25:BD:129:ASN:ND2	1.83	0.76
1:CA:1222:G:OP2	1:CA:1322:C:N4	2.19	0.76
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	1.68	0.76
13:AM:23:TYR:HD1	13:AM:67:GLU:HG2	1.51	0.76
17:AQ:76:LEU:HD11	17:AQ:79:SER:HB2	1.68	0.76
31:DN:20:GLY:HA2	31:DN:61:ARG:HG3	1.66	0.76
1:AA:942:G:H2'	1:AA:943:U:C6	2.20	0.76
1:AA:1030(C):G:O6	1:AA:1031:G:N2	2.19	0.76
23:BA:2408:U:OP2	56:BA:4497:HOH:O	2.04	0.76
23:BA:2439:A:O2'	56:BA:4426:HOH:O	2.03	0.76
1:CA:1005:A:H1'	1:CA:1036:G:H22	1.50	0.76
23:DA:2136:C:H42	23:DA:2155:G:H1	1.33	0.76
23:DA:2296:U:O4	23:DA:2335:A:C6	2.38	0.76
23:BA:2070:G:OP2	56:BA:3863:HOH:O	2.04	0.76
23:BA:2206:G:H5'	23:BA:2207:G:N7	2.01	0.76
1:CA:1130:A:H4'	9:CI:3:GLN:HE22	1.51	0.76
1:CA:1254:C:H42	1:CA:1283:G:H1	1.33	0.76
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.50	0.76
1:AA:345:C:P	37:BT:39:ARG:HH22	2.09	0.75
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.21	0.75
2:AB:197:VAL:O	8:AH:68:ARG:NH2	2.19	0.75
13:AM:19:LEU:HA	13:AM:22:ILE:HG13	1.69	0.75
23:BA:744:G:OP1	56:BA:4604:HOH:O	2.03	0.75
23:BA:2365:G:OP1	56:BA:4102:HOH:O	2.03	0.75
23:DA:1236:G:OP1	56:DA:4251:HOH:O	2.04	0.75
23:BA:990:A:OP2	56:BA:4518:HOH:O	2.04	0.75
23:BA:1790:C:N3	56:BA:3738:HOH:O	2.18	0.75
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.52	0.75
23:BA:188:G:N7	56:BA:4302:HOH:O	2.18	0.75
1:CA:977:A:HO2'	1:CA:981:U:H3	1.34	0.75
1:CA:1004:A:N6	1:CA:1035:A:N7	2.34	0.75
23:DA:1607:C:N4	23:DA:1622:G:OP2	2.19	0.75
23:DA:2407:G:OP1	56:DA:4068:HOH:O	2.04	0.75
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:278:A:O2'	23:BA:279:C:OP1	2.04	0.75
23:BA:380:U:OP1	56:BA:4338:HOH:O	2.05	0.75
23:BA:1319:G:OP2	56:BA:3806:HOH:O	2.04	0.75
1:CA:177:C:OP1	20:CT:65:LYS:NZ	2.19	0.75
11:CK:79:SER:HA	11:CK:104:GLN:HB2	1.68	0.75
23:BA:942:G:O6	56:BA:4958:HOH:O	2.04	0.75
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.69	0.75
23:DA:386:G:O3'	56:DA:4075:HOH:O	2.03	0.75
23:BA:2147:G:H2'	23:BA:2148:G:O4'	1.86	0.75
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.01	0.75
1:CA:1251:A:N6	1:CA:1354:C:O2'	2.17	0.75
7:CG:69:VAL:HG21	7:CG:104:LEU:HD13	1.69	0.75
23:DA:1226:A:OP1	39:DV:84:LYS:NZ	2.18	0.75
23:DA:1268:A:OP1	56:DA:3880:HOH:O	2.04	0.75
23:DA:2005:A:OP1	56:DA:3802:HOH:O	2.03	0.75
2:AB:54:THR:HG23	2:AB:199:TYR:HB3	1.69	0.75
23:DA:399:G:OP2	56:DA:4081:HOH:O	2.04	0.75
23:DA:853:G:O6	56:DA:4226:HOH:O	2.04	0.75
23:BA:1900:A:OP2	56:BA:4627:HOH:O	2.05	0.75
23:BA:1980:G:O2'	23:BA:1982:C:OP2	2.04	0.75
24:BB:31:C:O2'	24:BB:53:A:N6	2.20	0.75
2:CB:197:VAL:O	8:CH:68:ARG:NH2	2.20	0.75
23:DA:1376:C:OP2	56:DA:3933:HOH:O	2.05	0.75
4:AD:159:ARG:O	4:AD:163:GLU:N	2.16	0.75
50:B6:22:ALA:O	56:B6:201:HOH:O	2.05	0.75
3:CC:17:ASP:O	3:CC:54:ARG:NH2	2.19	0.75
23:DA:2296:U:OP2	36:DS:9:ARG:NH2	2.18	0.75
1:CA:166:G:H2'	1:CA:167:G:H8	1.52	0.74
1:CA:192:U:H2'	1:CA:193:C:H6	1.51	0.74
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.69	0.74
19:CS:36:ARG:NH1	19:CS:75:ALA:O	2.19	0.74
23:DA:1817:G:OP1	25:DD:88:ARG:NH2	2.19	0.74
31:DN:47:ALA:HB2	31:DN:112:LEU:HD11	1.68	0.74
1:AA:1304:G:O2'	1:AA:1333:A:N6	2.20	0.74
1:CA:1262:C:N3	1:CA:1273:G:N2	2.34	0.74
1:CA:1459:C:O3'	1:CA:1460:A:H8	1.67	0.74
7:CG:73:MET:HG2	7:CG:145:ALA:HB1	1.69	0.74
23:DA:2147:G:H2'	23:DA:2148:G:O4'	1.87	0.74
30:DI:87:LYS:H	30:DI:122:GLU:HA	1.52	0.74
11:AK:79:SER:HA	11:AK:104:GLN:HB2	1.68	0.74
23:BA:2371:G:O6	56:BA:4873:HOH:O	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:839:U:H5'	1:AA:840:C:C5	2.18	0.74
1:AA:1060:C:H2'	1:AA:1061:G:H8	1.52	0.74
4:AD:57:ARG:HE	4:AD:202:LEU:HD22	1.53	0.74
23:BA:71:A:C2	41:BX:31:HIS:HE1	2.05	0.74
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.52	0.74
1:CA:1457:G:C5	1:CA:1458:G:N7	2.55	0.74
7:CG:138:LYS:NZ	7:CG:142:GLU:OE1	2.20	0.74
23:DA:2712:U:O2'	23:DA:2712(A):A:OP2	2.06	0.74
1:AA:1219:U:OP1	14:AN:19:ARG:NH2	2.20	0.74
23:BA:1190:G:N7	56:BA:4525:HOH:O	2.20	0.74
25:BD:234:GLY:O	56:BD:415:HOH:O	2.04	0.74
1:AA:1005:A:OP1	1:AA:1024:G:N2	2.20	0.74
1:AA:1156:G:H21	1:AA:1179:A:H61	1.36	0.74
23:BA:910:A:OP2	56:BA:4357:HOH:O	2.04	0.74
1:CA:949:A:H1'	1:CA:1364:U:H3	1.50	0.74
13:CM:86:CYS:HB3	13:CM:89:GLY:N	2.01	0.74
28:DG:76:SER:HA	28:DG:83:ARG:HA	1.69	0.74
1:CA:437:U:H5"	4:CD:155:LEU:HD11	1.69	0.74
1:CA:447:G:OP2	56:CA:1821:HOH:O	2.05	0.74
1:CA:1006:C:H2'	1:CA:1007:C:C2	2.23	0.74
23:DA:1022:G:O2'	56:DA:3688:HOH:O	2.01	0.74
23:DA:1637:A:OP2	56:DA:3960:HOH:O	2.06	0.74
25:DD:118:VAL:H	25:DD:129:ASN:HD22	1.36	0.74
1:CA:946:A:H61	1:CA:1235:U:H3	1.35	0.74
23:DA:1913:A:H3'	23:DA:1913:A:OP2	1.86	0.74
1:CA:1346:A:H2	1:CA:1347:G:H21	1.33	0.74
9:CI:4:TYR:CZ	9:CI:88:TYR:HB2	2.23	0.74
48:D4:18:CYS:SG	48:D4:39:CYS:HB3	2.28	0.74
1:AA:1243:C:H42	1:AA:1294:G:H1	1.33	0.74
23:BA:833:U:O2	33:BP:55:ARG:NH2	2.20	0.74
1:CA:1030:C:N3	1:CA:1031:G:C2	2.56	0.74
4:CD:159:ARG:O	4:CD:163:GLU:N	2.18	0.74
1:AA:1321:C:H5'	1:AA:1322:C:H5"	1.70	0.73
23:BA:1030:G:OP1	56:BA:4411:HOH:O	2.05	0.73
24:BB:60:C:N4	56:BB:316:HOH:O	2.19	0.73
23:DA:71:A:H2	41:DX:31:HIS:HE1	1.36	0.73
23:DA:346:A:OP2	56:DA:4507:HOH:O	2.05	0.73
1:AA:1128:C:N4	1:AA:1143:G:H1	1.86	0.73
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.22	0.73
9:AI:26:VAL:HB	9:AI:33:PHE:HA	1.69	0.73
23:BA:883:G:H1	23:BA:893:C:H42	1.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1171:G:H1'	23:BA:1173:G:H5'	1.69	0.73
1:CA:1444:C:H42	1:CA:1458:G:H1	1.36	0.73
43:DZ:10:ARG:NH2	43:DZ:26:GLY:O	2.20	0.73
23:BA:271(A):A:N7	23:BA:271(W):G:N2	2.35	0.73
23:BA:1047:G:H2'	23:BA:1110:G:H22	1.53	0.73
23:BA:2296:U:OP2	36:BS:9:ARG:NH2	2.21	0.73
24:BB:86:G:O6	56:BB:339:HOH:O	2.06	0.73
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.51	0.73
1:AA:1442:G:N7	1:AA:1442(A):G:C6	2.57	0.73
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.71	0.73
23:BA:1913:A:H3'	23:BA:1913:A:OP2	1.88	0.73
23:BA:2109:U:H3	23:BA:2180:U:H3	1.36	0.73
52:B8:33:ASN:HA	52:B8:36:LYS:HD2	1.69	0.73
1:CA:940:C:N4	1:CA:1343:G:H1	1.84	0.73
7:CG:43:PHE:HA	7:CG:46:ALA:HB3	1.70	0.73
23:DA:607:U:OP1	27:DF:102:PRO:HA	1.88	0.73
23:DA:1377:G:OP2	56:DA:3929:HOH:O	2.06	0.73
37:BT:95:ARG:HG2	37:BT:95:ARG:HH11	1.53	0.73
7:CG:88:PRO:HG2	7:CG:152:ALA:HA	1.70	0.73
23:DA:271(F):C:H2'	23:DA:271(G):C:H6	1.51	0.73
23:DA:278:A:O2'	23:DA:279:C:OP1	2.06	0.73
49:D5:16:ARG:HG2	49:D5:16:ARG:HH11	1.52	0.73
1:AA:484:G:O2'	1:AA:485:G:OP2	2.07	0.73
1:AA:1294:G:H2'	1:AA:1295:G:H8	1.53	0.73
1:AA:1442(B):A:N7	37:BT:118:ARG:NH2	2.35	0.73
9:AI:71:SER:HA	9:AI:74:ILE:HG22	1.69	0.73
23:DA:154(A):C:N4	23:DA:171:G:H1	1.85	0.73
6:AF:7:ASN:HD21	18:AR:34:TYR:HE1	1.34	0.73
23:BA:531:C:OP1	23:BA:561:G:N2	2.20	0.73
23:BA:1845:G:N7	56:BA:5140:HOH:O	2.22	0.73
14:CN:7:ILE:HG22	14:CN:23:ARG:HE	1.52	0.73
23:DA:29:U:H2'	23:DA:30:G:C8	2.22	0.73
1:CA:484:G:O2'	1:CA:485:G:OP2	2.06	0.73
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.24	0.73
23:DA:1250:G:N7	33:DP:18:ARG:NH2	2.37	0.73
30:DI:40:THR:O	30:DI:44:LEU:N	2.17	0.73
1:AA:1457:G:C5	1:AA:1458:G:N7	2.56	0.73
1:CA:1324:A:H5'	1:CA:1363:C:H5"	1.71	0.73
14:CN:16:PHE:H	14:CN:19:ARG:HB2	1.54	0.73
37:DT:118:ARG:CZ	37:DT:118:ARG:HA	2.19	0.73
1:AA:192:U:H2'	1:AA:193:C:H6	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1441:G:O2'	1:AA:1459:C:N4	2.21	0.73
23:BA:2534:A:N7	56:BA:5059:HOH:O	2.21	0.73
1:CA:1165:C:N4	1:CA:1171:G:H1	1.86	0.73
2:CB:60:ASP:O	2:CB:64:ARG:HG3	1.89	0.73
1:AA:251:G:N7	56:AA:1924:HOH:O	2.22	0.72
1:AA:993:G:N2	1:AA:996:A:H61	1.86	0.72
3:AC:11:ARG:HE	3:AC:180:ALA:HB3	1.53	0.72
23:BA:2136:C:H42	23:BA:2155:G:H1	1.36	0.72
23:BA:2706:G:O6	56:BA:4852:HOH:O	2.06	0.72
15:CO:54:ARG:HG2	15:CO:58:MET:HE2	1.69	0.72
11:AK:31:THR:HG22	11:AK:42:TRP:HB2	1.71	0.72
23:DA:768:G:N7	56:DA:3978:HOH:O	2.21	0.72
1:AA:222:U:H2'	1:AA:223:U:C6	2.24	0.72
23:DA:2526:G:H21	53:D9:2:LYS:HG2	1.54	0.72
23:DA:1721:G:H8	23:DA:1741:A:H62	1.37	0.72
1:AA:1075:C:OP1	2:AB:179:LYS:NZ	2.15	0.72
23:BA:674:G:OP2	56:BA:3870:HOH:O	2.07	0.72
23:BA:1817:G:OP1	25:BD:88:ARG:NH2	2.23	0.72
23:BA:2287:A:H62	23:BA:2344:U:H3	1.36	0.72
43:BZ:10:ARG:NH2	43:BZ:26:GLY:O	2.22	0.72
1:CA:427:U:OP2	4:CD:36:ARG:NH2	2.22	0.72
1:CA:1442:G:N7	1:CA:1442(A):G:C6	2.57	0.72
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.25	0.72
15:AO:39:LEU:HB3	15:AO:56:LEU:HD23	1.71	0.72
23:BA:1721:G:H8	23:BA:1741:A:H62	1.37	0.72
28:BG:76:SER:HA	28:BG:83:ARG:HA	1.71	0.72
1:CA:1147:C:O2	9:CI:16:ARG:NH2	2.23	0.72
1:AA:1377:A:H3'	1:AA:1377:A:H8	1.55	0.72
1:CA:1443:G:O6	1:CA:1459:C:C2	2.42	0.72
19:CS:46:GLY:HA2	19:CS:61:TYR:CE1	2.25	0.72
23:DA:1019:U:HO2'	23:DA:1021:A:H2	1.37	0.72
23:DA:1237:A:OP1	56:DA:4018:HOH:O	2.06	0.72
34:DQ:58:PHE:HB3	34:DQ:61:GLY:HA3	1.72	0.72
36:DS:11:LYS:HG3	36:DS:91:PRO:HD3	1.72	0.72
1:AA:735:C:H2'	1:AA:736:C:H6	1.53	0.72
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.72	0.72
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	1.70	0.72
15:CO:16:ALA:HB1	15:CO:21:ASP:HB3	1.72	0.72
23:DA:404:C:OP1	56:DA:4250:HOH:O	2.06	0.72
23:DA:411:G:H5"	56:DA:4065:HOH:O	1.90	0.72
25:DD:17:THR:O	25:DD:211:ARG:NH2	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DT:64:ARG:NH1	37:DT:103:ARG:HA	2.05	0.72
1:AA:993:G:H21	1:AA:996:A:H61	1.37	0.72
23:BA:1429:G:H2'	23:BA:1430:C:C6	2.25	0.72
30:BI:83:ALA:HB2	30:BI:88:ILE:HA	1.70	0.72
1:CA:964:A:H2'	1:CA:969:A:H1'	1.71	0.72
1:CA:1231:G:N2	1:CA:1232:U:H1'	2.05	0.72
1:AA:1441:G:N2	1:AA:1459:C:C5	2.57	0.72
10:AJ:8:LEU:HD22	10:AJ:96:ILE:HG22	1.71	0.72
23:BA:607:U:OP1	27:BF:102:PRO:HA	1.90	0.72
23:BA:2117:A:H61	23:BA:2166:G:H22	1.38	0.72
1:CA:148:G:H2'	1:CA:149:A:H8	1.54	0.72
2:CB:87:ARG:HH21	2:CB:233:SER:H	1.37	0.72
3:CC:13:GLY:HA3	14:CN:57:ARG:HH22	1.55	0.72
7:CG:41:ARG:NH2	9:CI:39:GLY:O	2.23	0.72
23:DA:1394:U:OP1	56:DA:3790:HOH:O	2.08	0.72
23:DA:1507:A:O2'	23:DA:1508:A:H8	1.72	0.72
23:BA:243:U:OP1	52:B8:6:THR:OG1	2.08	0.71
1:CA:1131:G:H1	1:CA:1143:G:H21	1.38	0.71
1:AA:1329:A:H5"	13:AM:25:ILE:HA	1.72	0.71
23:BA:882:G:H1	23:BA:894:C:H42	1.38	0.71
1:CA:939:G:H1	1:CA:1344:C:N4	1.87	0.71
2:CB:137:ARG:HH11	2:CB:137:ARG:HB2	1.55	0.71
20:CT:10:LEU:HG	20:CT:12:ALA:H	1.54	0.71
23:DA:1332:G:OP1	56:DA:3783:HOH:O	2.08	0.71
23:DA:2126:A:N6	23:DA:2163:C:H5'	2.05	0.71
23:DA:2287:A:H62	23:DA:2344:U:H3	1.37	0.71
28:DG:105:LYS:NZ	48:D4:25:TYR:O	2.22	0.71
23:BA:1324:G:O6	56:BA:4953:HOH:O	2.07	0.71
30:BI:130:TYR:HB3	30:BI:138:ILE:HB	1.70	0.71
1:CA:976:G:N2	1:CA:1363(A):A:OP1	2.23	0.71
23:DA:141:A:H8	23:DA:1408:C:HO2'	1.35	0.71
23:BA:1370:C:OP1	56:BA:4694:HOH:O	2.08	0.71
23:BA:1634:A:N1	56:BA:4325:HOH:O	2.23	0.71
23:BA:2322:A:N6	23:BA:2335:A:H61	1.87	0.71
1:CA:642:A:N3	8:CH:113:SER:OG	2.22	0.71
13:CM:71:ARG:HA	13:CM:74:VAL:HB	1.71	0.71
23:DA:1495:A:OP2	56:DA:4274:HOH:O	2.07	0.71
23:DA:2109:U:H3	23:DA:2180:U:H3	1.38	0.71
23:DA:2268:A:OP1	56:DA:4335:HOH:O	2.08	0.71
39:DV:62:LEU:HD11	39:DV:95:LEU:HB2	1.72	0.71
1:AA:1118:C:N4	1:AA:1155:G:H1	1.86	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1220:G:H2'	1:AA:1221:G:O4'	1.91	0.71
2:AB:60:ASP:O	2:AB:64:ARG:HG3	1.91	0.71
2:AB:167:PRO:O	2:AB:171:ALA:N	2.24	0.71
7:AG:74:GLU:O	7:AG:89:MET:N	2.23	0.71
13:AM:86:CYS:HB3	13:AM:89:GLY:HA3	1.72	0.71
23:BA:1045:A:N3	23:BA:1045:A:H2'	2.04	0.71
23:BA:1235:G:OP1	56:BA:4227:HOH:O	2.08	0.71
1:CA:538:G:H5"	12:CL:114:LYS:HB2	1.72	0.71
13:CM:70:LEU:O	13:CM:74:VAL:N	2.24	0.71
23:DA:2226:C:OP2	56:DA:4146:HOH:O	2.07	0.71
23:DA:2646:C:OP2	23:DA:2732:G:O2'	2.07	0.71
23:BA:269:U:OP1	56:BA:5071:HOH:O	2.07	0.71
1:CA:576:G:OP1	56:CA:1944:HOH:O	2.08	0.71
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.55	0.71
23:DA:1560:G:OP1	56:DA:4341:HOH:O	2.08	0.71
43:DZ:110:GLY:HA3	43:DZ:174:VAL:HG11	1.71	0.71
23:BA:1665:A:OP2	56:BA:4771:HOH:O	2.09	0.71
1:CA:1156:G:H21	1:CA:1179:A:N6	1.88	0.71
7:CG:15:ASP:N	7:CG:20:ASP:O	2.18	0.71
23:DA:392:C:OP1	56:DA:4594:HOH:O	2.07	0.71
39:DV:56:SER:H	39:DV:100:ARG:HB2	1.53	0.71
50:D6:3:SER:OG	50:D6:4:GLU:N	2.24	0.71
1:AA:1224:G:N1	1:AA:1363:C:O2	2.24	0.71
9:AI:3:GLN:NE2	9:AI:4:TYR:O	2.23	0.71
23:BA:1204:A:H2	23:BA:1241:A:H62	1.37	0.71
1:CA:735:C:H2'	1:CA:736:C:H6	1.54	0.71
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.26	0.71
10:CJ:8:LEU:O	10:CJ:69:ASN:HA	1.89	0.71
2:AB:137:ARG:HB2	2:AB:137:ARG:HH11	1.56	0.71
4:AD:108:LEU:HD11	4:AD:174:LEU:HD22	1.72	0.71
1:CA:903:G:OP1	56:CA:1954:HOH:O	2.09	0.71
11:CK:31:THR:HG22	11:CK:42:TRP:HB2	1.72	0.71
14:CN:24:CYS:HB2	14:CN:40:CYS:N	2.06	0.71
23:DA:1047:G:H2'	23:DA:1110:G:H22	1.54	0.71
23:DA:1313:U:OP1	56:DA:3775:HOH:O	2.09	0.71
23:DA:2042:A:OP1	56:DA:3616:HOH:O	2.09	0.71
28:DG:56:ALA:HB2	28:DG:153:ARG:HE	1.56	0.71
1:AA:352:C:O2'	1:AA:354:G:OP1	2.07	0.71
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.55	0.71
23:BA:2126:A:N6	23:BA:2163:C:H5'	2.06	0.71
39:BV:72:VAL:HG13	39:BV:85:LYS:HB3	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1347:G:N2	1:CA:1374:A:O5’	2.24	0.71
13:CM:15:VAL:HG22	13:CM:41:PRO:HA	1.72	0.71
28:BG:56:ALA:HB2	28:BG:153:ARG:HE	1.56	0.70
1:CA:1342:C:H2’	1:CA:1343:G:C8	2.25	0.70
23:DA:2747:G:N7	56:DA:4479:HOH:O	2.24	0.70
1:AA:73:G:H1	1:AA:96:U:H3	1.39	0.70
3:AC:78:GLY:HA3	3:AC:83:ARG:H	1.56	0.70
3:AC:186:PHE:CE2	3:AC:188:LEU:HB2	2.26	0.70
34:BQ:58:PHE:HB3	34:BQ:61:GLY:HA3	1.74	0.70
1:CA:605:U:H2’	1:CA:606:G:C8	2.26	0.70
1:CA:1499:A:OP2	56:CA:1857:HOH:O	2.08	0.70
3:CC:150:LYS:HB2	3:CC:173:VAL:HG21	1.73	0.70
13:CM:3:ARG:NH2	13:CM:45:VAL:O	2.21	0.70
23:DA:1914:C:H2’	23:DA:1915:U:C6	2.26	0.70
1:AA:519:C:OP2	12:AL:50:SER:OG	2.08	0.70
1:AA:1441:G:H2’	1:AA:1459:C:H41	0.83	0.70
27:BF:178:PRO:HB2	27:BF:201:VAL:HG11	1.72	0.70
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.73	0.70
23:DA:1210:A:H5”	23:DA:1210:A:C8	2.26	0.70
1:AA:48:C:O2	56:AA:1897:HOH:O	2.07	0.70
26:BE:47:VAL:HG11	26:BE:86:PRO:HD2	1.73	0.70
34:BQ:111:GLU:OE1	34:BQ:133:ARG:NH2	2.24	0.70
23:DA:370:G:OP2	56:DA:4078:HOH:O	2.08	0.70
1:AA:262:A:H2’	1:AA:263:A:C8	2.25	0.70
1:AA:365:U:H5”	1:AA:366:C:OP1	1.91	0.70
1:AA:1367:C:OP1	9:AI:115:GLY:N	2.23	0.70
28:BG:16:ARG:HE	28:BG:31:VAL:HG21	1.57	0.70
1:CA:1173:G:H2’	1:CA:1174:G:H8	1.55	0.70
1:CA:1273:G:H3’	1:CA:1274:G:C8	2.27	0.70
1:CA:1286:A:H2	21:CU:22:ARG:HH21	1.37	0.70
1:CA:1301:U:OP1	13:CM:21:TYR:OH	2.07	0.70
10:CJ:79:ARG:O	10:CJ:81:THR:N	2.21	0.70
23:DA:882:G:H1	23:DA:894:C:H42	1.38	0.70
26:DE:175:VAL:HG23	26:DE:177:PRO:HD3	1.73	0.70
30:DI:83:ALA:HA	30:DI:89:TYR:CE2	2.27	0.70
1:AA:1444:C:H42	1:AA:1458:G:H1	1.38	0.70
3:AC:70:VAL:HG12	3:AC:71:ALA:H	1.56	0.70
29:BH:154:PRO:HB3	29:BH:163:TYR:CZ	2.27	0.70
1:CA:1237:C:H42	1:CA:1337:G:H1	1.39	0.70
23:DA:1186:G:OP1	56:DA:4637:HOH:O	2.09	0.70
23:DA:2781:A:H5”	23:DA:2782:G:H5’	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2600:A:OP2	56:BA:4426:HOH:O	2.09	0.70
1:CA:222:U:H2'	1:CA:223:U:C6	2.27	0.70
23:DA:531:C:OP1	23:DA:561:G:N2	2.24	0.70
23:DA:2115:G:H4'	23:DA:2167:U:H4'	1.74	0.70
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.74	0.70
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.73	0.70
23:DA:1022:G:N2	23:DA:1023:U:O4	2.25	0.70
24:DB:31:C:O2'	24:DB:53:A:N6	2.24	0.70
1:AA:382:A:H2'	1:AA:383:A:C8	2.26	0.70
1:AA:986:A:H1'	19:AS:55:LYS:HA	1.73	0.70
40:BW:13:SER:HB3	40:BW:16:LYS:HD2	1.72	0.70
1:CA:1231:G:N1	1:CA:1232:U:O2	2.25	0.70
23:DA:2285:C:OP2	50:D6:6:ARG:NH1	2.24	0.70
43:DZ:82:ARG:HB3	43:DZ:82:ARG:HH21	1.56	0.70
3:AC:127:ARG:HB3	3:AC:127:ARG:HH11	1.55	0.70
23:BA:453:C:OP1	56:BA:4578:HOH:O	2.09	0.70
30:BI:1:MET:N	30:BI:21:VAL:O	2.24	0.70
4:CD:57:ARG:HE	4:CD:202:LEU:HD22	1.57	0.70
4:CD:104:VAL:HA	4:CD:107:ARG:HB2	1.73	0.70
39:DV:72:VAL:HG13	39:DV:85:LYS:HB3	1.73	0.70
41:DX:56:THR:O	56:DX:101:HOH:O	2.09	0.70
18:AR:35:ARG:NH1	18:AR:35:ARG:HB3	2.07	0.69
2:CB:167:PRO:O	2:CB:171:ALA:N	2.25	0.69
23:DA:1364:G:OP2	45:D1:3:LYS:HG2	1.92	0.69
28:DG:16:ARG:HE	28:DG:31:VAL:HG21	1.57	0.69
1:AA:1131:G:H1	1:AA:1143:G:H21	1.40	0.69
23:BA:2322:A:H61	23:BA:2335:A:H61	1.39	0.69
23:BA:2637:U:H5"	26:BE:82:ARG:HH21	1.57	0.69
23:DA:89:G:H3'	23:DA:90:U:H5"	1.74	0.69
36:DS:10:ARG:HH21	36:DS:91:PRO:HB2	1.57	0.69
23:BA:1997:G:OP2	56:BA:4618:HOH:O	2.10	0.69
23:BA:2781:A:H5"	23:BA:2782:G:H5'	1.74	0.69
25:BD:17:THR:O	25:BD:211:ARG:NH2	2.23	0.69
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.73	0.69
13:CM:86:CYS:O	19:CS:73:GLU:HB3	1.91	0.69
23:DA:842:G:N7	56:DA:4657:HOH:O	2.24	0.69
23:DA:1778:U:OP2	56:DA:4141:HOH:O	2.10	0.69
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.20	0.69
23:BA:517:C:OP1	49:B5:16:ARG:NH2	2.24	0.69
23:BA:1507:A:O2'	23:BA:1508:A:H8	1.74	0.69
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2887:U:H2'	23:DA:2888:C:C6	2.27	0.69
23:BA:29:U:H2'	23:BA:30:G:C8	2.27	0.69
23:BA:1364:G:OP2	45:B1:3:LYS:HG2	1.91	0.69
23:BA:2306:C:H3'	23:BA:2307:G:C8	2.27	0.69
30:BI:83:ALA:HA	30:BI:89:TYR:CE2	2.27	0.69
43:BZ:110:GLY:HA3	43:BZ:174:VAL:HG11	1.72	0.69
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.28	0.69
1:CA:1442(B):A:N7	37:DT:118:ARG:NH1	2.41	0.69
10:CJ:44:VAL:HG13	10:CJ:66:ARG:HG2	1.75	0.69
23:DA:15:G:OP2	56:DA:4618:HOH:O	2.09	0.69
23:DA:1266:G:O5'	40:DW:15:ARG:NH2	2.24	0.69
23:DA:1380:G:OP2	56:DA:4635:HOH:O	2.09	0.69
1:AA:1225:A:OP1	13:AM:103:THR:N	2.24	0.69
1:AA:1240:U:O4	7:AG:30:ILE:HG22	1.92	0.69
4:AD:104:VAL:HA	4:AD:107:ARG:HB2	1.74	0.69
7:AG:71:PRO:HG3	7:AG:138:LYS:HG3	1.74	0.69
23:BA:956:G:OP2	34:BQ:14:ARG:NH2	2.25	0.69
1:CA:1242:C:O2'	1:CA:1303:C:OP1	2.11	0.69
7:CG:139:GLU:O	7:CG:143:ARG:NE	2.25	0.69
10:CJ:8:LEU:HD13	10:CJ:16:LEU:HG	1.73	0.69
23:DA:1026:U:O2'	23:DA:1027:A:O5'	2.10	0.69
38:DU:92:ARG:HA	38:DU:95:LEU:HB2	1.75	0.69
43:DZ:45:ASP:OD2	43:DZ:49:ARG:NH1	2.25	0.69
1:AA:1246:C:N3	1:AA:1291:G:N2	2.40	0.69
1:AA:1457:G:OP1	20:AT:39:LYS:NZ	2.21	0.69
23:BA:1914:C:H2'	23:BA:1915:U:C6	2.28	0.69
42:BY:23:ARG:HG2	42:BY:42:VAL:HG22	1.75	0.69
51:B7:24:THR:HG23	51:B7:27:GLY:H	1.55	0.69
1:CA:405:U:O4	4:CD:2:GLY:N	2.26	0.69
1:CA:1089:G:N2	1:CA:1096:C:N3	2.36	0.69
23:DA:2117:A:H61	23:DA:2166:G:H22	1.37	0.69
28:DG:124:SER:HB2	28:DG:131:TYR:CE1	2.28	0.69
30:DI:126:TYR:HB2	30:DI:142:VAL:HG23	1.75	0.69
1:AA:1262:C:H42	1:AA:1273:G:H1	1.41	0.69
1:AA:1300:G:O2'	1:AA:1301:U:O5'	2.08	0.69
23:BA:94:C:H5'	23:BA:94(A):G:OP2	1.93	0.69
23:BA:438:G:O6	56:BA:4813:HOH:O	2.09	0.69
23:BA:1359:A:N6	23:BA:1372:U:C4	2.58	0.69
23:BA:2115:G:H4'	23:BA:2167:U:H4'	1.74	0.69
1:CA:1376:U:H5'	7:CG:102:ARG:HH22	1.57	0.69
10:CJ:50:ILE:HD12	10:CJ:50:ILE:H	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:587:C:OP2	33:DP:21:ARG:NH2	2.26	0.69
23:DA:1434:A:H61	23:DA:1558:A:N6	1.90	0.69
23:DA:1828:G:OP2	56:DA:3773:HOH:O	2.10	0.69
23:DA:2002:G:O6	56:DA:3873:HOH:O	2.11	0.69
23:DA:2130:U:HO2'	23:DA:2133:G:HO2'	1.39	0.69
27:DF:53:THR:HG23	27:DF:55:GLY:H	1.57	0.69
1:AA:1222:G:H5"	19:AS:78:ARG:NE	2.08	0.69
1:AA:1459:C:H6	1:AA:1460:A:N7	1.90	0.69
23:BA:392:C:OP1	56:BA:3960:HOH:O	2.11	0.69
23:BA:580:C:H2'	23:BA:581:C:H6	1.57	0.69
23:BA:2588:G:OP1	56:BA:4425:HOH:O	2.10	0.69
1:CA:1460:A:H8	1:CA:1460:A:P	2.15	0.69
3:CC:40:ARG:HA	3:CC:43:LEU:HD12	1.75	0.69
5:CE:50:GLU:HB2	5:CE:53:LEU:HD22	1.74	0.69
15:CO:39:LEU:HB3	15:CO:56:LEU:HD23	1.75	0.69
26:DE:28:ALA:HB3	26:DE:93:VAL:HG12	1.74	0.69
1:AA:724:G:OP2	56:AA:1871:HOH:O	2.09	0.69
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.28	0.69
1:AA:1104:G:O3'	2:AB:111:ARG:NH2	2.26	0.69
1:AA:1123:A:H61	1:AA:1150:U:H3	1.40	0.69
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.59	0.69
11:AK:27:ASN:OD1	11:AK:28:THR:N	2.26	0.69
23:BA:1226:A:OP1	39:BV:84:LYS:NZ	2.25	0.69
1:CA:434:U:H2'	1:CA:435:C:C6	2.27	0.69
3:CC:103:VAL:HG12	3:CC:104:GLN:H	1.58	0.69
23:DA:1495:A:OP2	56:DA:4271:HOH:O	2.11	0.69
23:DA:2322:A:N6	23:DA:2335:A:H61	1.91	0.69
1:AA:377:G:H2'	1:AA:378:G:C8	2.28	0.68
1:AA:1459:C:O3'	1:AA:1460:A:H8	1.76	0.68
23:BA:1266:G:O5'	40:BW:15:ARG:NH2	2.26	0.68
44:B0:53:MET:HG3	44:B0:59:LEU:HD23	1.76	0.68
1:CA:1502:A:H2	1:CA:1505:G:N1	1.92	0.68
33:DP:59:LEU:HD11	52:D8:10:ALA:HB2	1.75	0.68
1:AA:1259:C:N4	1:AA:1260:C:O2	2.26	0.68
1:CA:977:A:N6	1:CA:1224:G:OP1	2.26	0.68
10:CJ:39:PRO:HA	10:CJ:70:ARG:HG2	1.75	0.68
1:CA:952:U:H3	1:CA:1229:A:H61	1.39	0.68
28:DG:106:LEU:HD12	28:DG:110:ALA:HB3	1.75	0.68
43:DZ:33:LEU:HD23	43:DZ:90:VAL:HG21	1.75	0.68
1:AA:244:U:O2	56:AA:1809:HOH:O	2.07	0.68
23:BA:271(V):G:N7	56:BA:4906:HOH:O	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:804:A:OP1	56:BA:4505:HOH:O	2.10	0.68
23:BA:1529:G:C6	23:BA:1530:C:N4	2.61	0.68
27:BF:185:ASP:HA	27:BF:188:ARG:HD3	1.75	0.68
28:BG:101:ILE:HD13	48:B4:25:TYR:HB2	1.76	0.68
23:DA:1950:G:OP2	56:DA:3603:HOH:O	2.11	0.68
40:DW:84:ARG:HG3	40:DW:98:LYS:HD2	1.76	0.68
1:AA:434:U:H2'	1:AA:435:C:C6	2.28	0.68
7:AG:48:LYS:O	7:AG:52:GLU:HG2	1.93	0.68
23:BA:2010:G:N7	56:BA:5219:HOH:O	2.27	0.68
2:CB:135:GLN:HA	2:CB:138:LEU:HD12	1.73	0.68
23:DA:2134:A:C2	23:DA:2159:G:H1'	2.28	0.68
23:DA:2760:C:H2'	23:DA:2761:G:H5"	1.74	0.68
23:DA:2773:C:H5"	26:DE:164:ARG:HG2	1.75	0.68
2:AB:135:GLN:HA	2:AB:138:LEU:HD12	1.75	0.68
23:BA:450:G:OP2	56:BA:4582:HOH:O	2.12	0.68
23:BA:975:C:OP2	56:BA:4205:HOH:O	2.10	0.68
23:BA:1250:G:N7	33:BP:18:ARG:NH2	2.42	0.68
30:BI:93:THR:HG23	30:BI:96:ASP:H	1.58	0.68
1:CA:223:U:H2'	1:CA:224:C:H6	1.58	0.68
1:CA:1002:G:H22	1:CA:1039:C:H1'	1.58	0.68
23:DA:248:G:OP1	56:DA:4076:HOH:O	2.10	0.68
23:BA:379:G:O6	56:BA:4400:HOH:O	2.11	0.68
23:BA:2786:U:O2'	26:BE:62:PRO:O	2.07	0.68
1:CA:975:A:O3'	1:CA:1358:U:O2'	2.12	0.68
1:CA:1238:A:N1	1:CA:1241:G:N2	2.33	0.68
7:CG:66:VAL:HG22	7:CG:100:ALA:HB1	1.74	0.68
24:DB:48:A:H4'	36:DS:95:HIS:HD2	1.58	0.68
27:DF:7:TYR:H	27:DF:22:ALA:HB3	1.59	0.68
1:AA:1004:A:H61	1:AA:1034:G:H2'	1.58	0.68
49:B5:16:ARG:NH1	49:B5:17:ASP:OD1	2.26	0.68
50:B6:13:CYS:SG	50:B6:47:THR:HG21	2.33	0.68
1:CA:1444:C:N4	1:CA:1458:G:H1	1.92	0.68
5:CE:80:ILE:HG13	5:CE:91:LEU:HB2	1.76	0.68
18:CR:35:ARG:NH1	18:CR:35:ARG:HB3	2.09	0.68
23:DA:1120:G:O6	56:DA:4641:HOH:O	2.08	0.68
27:DF:185:ASP:HA	27:DF:188:ARG:HD3	1.75	0.68
40:DW:18:ARG:HG3	40:DW:76:VAL:HB	1.75	0.68
47:D3:23:LEU:HD13	47:D3:50:VAL:HG11	1.75	0.68
1:AA:768:A:OP2	56:AA:1910:HOH:O	2.12	0.68
2:AB:222:ILE:O	2:AB:226:ARG:HG2	1.92	0.68
23:BA:271(I):G:N2	23:BA:271(O):C:N3	2.38	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1157:G:OP1	56:BA:4196:HOH:O	2.12	0.68
23:BA:1484:G:N7	56:BA:4165:HOH:O	2.26	0.68
1:CA:959:A:H61	19:CS:78:ARG:HA	1.59	0.68
1:CA:1459:C:C3'	1:CA:1460:A:N7	2.52	0.68
3:CC:20:SER:HB3	3:CC:22:TRP:NE1	2.08	0.68
23:DA:1355:G:O6	56:DA:4120:HOH:O	2.10	0.68
1:AA:1366:C:O2'	10:AJ:60:ARG:NH1	2.27	0.68
17:AQ:13:ASP:CG	17:AQ:14:LYS:H	2.02	0.68
23:BA:2712(A):A:H5"	23:BA:2713:A:OP2	1.93	0.68
23:BA:2833:G:H3'	23:BA:2834:G:H5'	1.75	0.68
23:DA:1763:G:H4'	23:DA:1763:G:OP1	1.94	0.68
17:AQ:6:LEU:HD23	17:AQ:23:VAL:HG11	1.74	0.67
23:BA:821:A:N1	56:BA:5237:HOH:O	2.27	0.67
23:BA:1352:U:OP2	56:BA:3914:HOH:O	2.12	0.67
1:CA:1165:C:H42	1:CA:1171:G:H1	1.40	0.67
25:DD:108:PRO:HB3	25:DD:143:HIS:CE1	2.29	0.67
39:DV:35:LEU:HB2	39:DV:57:VAL:HG13	1.74	0.67
1:AA:1249:C:H42	1:AA:1287:A:H3'	1.59	0.67
13:AM:91:ARG:O	13:AM:110:ARG:NH1	2.28	0.67
1:CA:73:G:H1	1:CA:96:U:H3	1.41	0.67
1:CA:1150:U:O4	1:CA:1151:A:N6	2.27	0.67
23:DA:1670:C:H5"	56:DA:3807:HOH:O	1.95	0.67
23:DA:2206:G:H5'	23:DA:2207:G:C5	2.29	0.67
1:AA:22:G:O6	56:AA:1983:HOH:O	2.09	0.67
1:AA:1224:G:O6	1:AA:1363:C:N3	2.27	0.67
1:AA:1226:C:C4	13:AM:104:ARG:HA	2.30	0.67
2:CB:157:ARG:NH2	2:CB:160:ASP:OD1	2.23	0.67
4:CD:133:VAL:HG11	4:CD:138:TYR:HD1	1.58	0.67
23:DA:1529:G:C6	23:DA:1530:C:N4	2.61	0.67
1:AA:59:A:H5"	1:AA:60:A:H5"	1.75	0.67
1:AA:316:G:OP2	1:AA:351:G:O2'	2.12	0.67
10:AJ:16:LEU:HD13	10:AJ:70:ARG:HG2	1.77	0.67
23:BA:271(F):C:H2'	23:BA:271(G):C:H6	1.59	0.67
36:BS:11:LYS:HG3	36:BS:91:PRO:HD3	1.75	0.67
37:BT:118:ARG:HA	37:BT:118:ARG:CZ	2.25	0.67
23:BA:885:C:C5	23:BA:890:A:N6	2.61	0.67
23:BA:2336:A:H61	44:B0:43:THR:HG22	1.60	0.67
5:CE:57:LYS:HG2	5:CE:61:TYR:CE2	2.30	0.67
23:DA:1045:A:H2'	23:DA:1045:A:N3	2.08	0.67
1:AA:1316:G:H22	1:AA:1319:A:H5"	1.58	0.67
4:AD:30:LYS:HA	4:AD:35:ARG:HD2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:118:LYS:O	9:AI:120:ARG:N	2.27	0.67
23:BA:620:G:N3	23:BA:620:G:H5"	2.10	0.67
23:BA:1403:C:H5"	23:BA:1471:A:H1'	1.77	0.67
23:BA:2249:U:O2'	56:BA:4487:HOH:O	2.13	0.67
1:CA:548:G:OP1	56:CA:1988:HOH:O	2.13	0.67
7:CG:142:GLU:HB3	7:CG:143:ARG:HH21	1.60	0.67
23:DA:2322:A:H61	23:DA:2335:A:H61	1.43	0.67
29:DH:56:SER:OG	29:DH:61:HIS:ND1	2.24	0.67
35:DR:11:ASN:ND2	56:DR:302:HOH:O	2.27	0.67
1:AA:1109:C:P	3:AC:176:HIS:HD1	2.17	0.67
23:BA:271(M):G:OP2	30:BI:57:ARG:NH2	2.28	0.67
2:CB:222:ILE:O	2:CB:226:ARG:HG2	1.94	0.67
3:CC:36:ASP:O	3:CC:39:ILE:HB	1.94	0.67
23:DA:27:G:O2'	23:DA:28:A:OP2	2.09	0.67
23:DA:2431:U:O4	56:DA:3998:HOH:O	2.10	0.67
23:DA:2519:U:OP2	56:DA:4292:HOH:O	2.13	0.67
1:AA:973:G:H3'	1:AA:974:A:H5"	1.77	0.67
16:AP:49:LEU:HD11	16:AP:51:VAL:HG23	1.76	0.67
23:BA:885:C:OP1	23:BA:885:C:H4'	1.92	0.67
29:BH:86:GLU:OE2	29:BH:132:ARG:NH1	2.28	0.67
1:CA:1144:G:H21	1:CA:1146:A:N6	1.92	0.67
1:CA:1309:G:OP1	13:CM:92:HIS:NE2	2.28	0.67
3:CC:11:ARG:HH11	3:CC:11:ARG:HB2	1.59	0.67
23:DA:1014:U:H2'	23:DA:1015:G:H8	1.60	0.67
1:AA:1010:G:N2	1:AA:1019:C:N3	2.40	0.67
1:AA:1157:A:H61	1:AA:1178:G:H1'	1.58	0.67
1:AA:1372:U:H5"	9:AI:71:SER:HB3	1.77	0.67
1:AA:1442(A):G:N3	1:AA:1442(B):A:H2'	2.10	0.67
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.76	0.67
23:BA:2243:U:H2'	23:BA:2244:U:C6	2.30	0.67
1:CA:330:C:O2	56:CA:1861:HOH:O	2.11	0.67
1:CA:1030(A):G:O2'	1:CA:1030(C):G:N7	2.27	0.67
1:CA:1351:U:H2'	1:CA:1352:C:H6	1.60	0.67
23:DA:2427:C:OP2	56:DA:4447:HOH:O	2.12	0.67
48:D4:42:PHE:CB	48:D4:43:TYR:HB2	2.25	0.67
1:AA:401:C:OP1	4:AD:73:ARG:NH2	2.27	0.67
4:AD:133:VAL:HG11	4:AD:138:TYR:HD1	1.60	0.67
23:BA:1186:G:OP2	56:BA:4518:HOH:O	2.11	0.67
23:DA:365:C:OP2	56:DA:4247:HOH:O	2.12	0.67
23:DA:1351:C:OP2	56:DA:3930:HOH:O	2.12	0.67
23:DA:2199:A:H3'	23:DA:2200:C:H6	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:71:ASP:HB3	25:DD:103:ARG:HH22	1.60	0.67
36:DS:96:GLY:HA2	36:DS:97:ARG:C	2.20	0.67
45:D1:50:ARG:HG2	45:D1:59:THR:HG22	1.76	0.67
1:AA:1007:C:H42	1:AA:1022:G:H1	0.74	0.66
10:AJ:16:LEU:O	10:AJ:20:ALA:N	2.26	0.66
23:BA:2134:A:C2	23:BA:2159:G:H1'	2.30	0.66
3:CC:32:LEU:HD11	3:CC:59:ARG:HD2	1.76	0.66
3:CC:157:ILE:O	3:CC:164:ARG:NH2	2.28	0.66
23:DA:856:C:H5'	44:D0:27:GLU:OE2	1.94	0.66
44:D0:53:MET:HG3	44:D0:59:LEU:HD23	1.77	0.66
1:AA:605:U:H2'	1:AA:606:G:C8	2.29	0.66
5:AE:71:LEU:HD11	5:AE:74:GLY:H	1.60	0.66
23:BA:862:G:OP2	56:BA:4352:HOH:O	2.13	0.66
28:BG:138:GLN:HG3	28:BG:144:ILE:HG21	1.75	0.66
1:CA:425:G:O3'	4:CD:45:GLN:NE2	2.28	0.66
1:CA:1084:G:H21	1:CA:1102:A:N6	1.93	0.66
23:DA:1132:A:OP2	56:DA:3690:HOH:O	2.13	0.66
1:AA:142:G:H2'	1:AA:143:A:H8	1.59	0.66
1:AA:1121:U:H3	1:AA:1152:A:N6	1.93	0.66
9:AI:46:ALA:HB1	9:AI:77:ILE:HB	1.77	0.66
23:BA:587:C:OP2	33:BP:21:ARG:NH2	2.28	0.66
23:BA:1434:A:H61	23:BA:1558:A:N6	1.93	0.66
27:BF:7:TYR:H	27:BF:22:ALA:HB3	1.60	0.66
40:BW:4:LYS:HB2	40:BW:106:ILE:HG12	1.77	0.66
1:CA:976:G:P	14:CN:32:SER:H	2.19	0.66
23:DA:2022:U:OP1	56:DA:3884:HOH:O	2.13	0.66
1:AA:1268:A:H4'	21:AU:20:LYS:HA	1.78	0.66
1:AA:1299:A:H4'	1:AA:1300:G:OP1	1.95	0.66
9:AI:7:THR:H	9:AI:83:ARG:HD3	1.60	0.66
23:BA:105:C:OP1	56:BA:3776:HOH:O	2.13	0.66
23:BA:885:C:C2	23:BA:886:C:H1'	2.31	0.66
31:BN:47:ALA:HB2	31:BN:112:LEU:HD11	1.76	0.66
37:BT:24:PRO:HA	37:BT:49:VAL:HG22	1.75	0.66
1:CA:1297:C:H4'	1:CA:1298:C:H5'	1.76	0.66
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.30	0.66
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	1.78	0.66
26:DE:47:VAL:HG11	26:DE:86:PRO:HD2	1.77	0.66
42:DY:9:LYS:NZ	42:DY:28:LYS:O	2.28	0.66
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.09	0.66
1:AA:1457:G:C4	1:AA:1458:G:N7	2.63	0.66
2:AB:87:ARG:HH21	2:AB:233:SER:H	1.42	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.61	0.66
23:BA:1026:U:O2'	23:BA:1027:A:O5'	2.13	0.66
23:BA:1265:A:OP2	56:BA:4992:HOH:O	2.12	0.66
1:CA:382:A:H2'	1:CA:383:A:C8	2.30	0.66
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.11	0.66
1:CA:1231:G:C2	1:CA:1232:U:H1'	2.31	0.66
1:CA:1381:U:H3'	1:CA:1382:C:H6	1.61	0.66
3:CC:156:ARG:NE	3:CC:161:GLU:OE2	2.28	0.66
15:CO:70:LEU:HG	15:CO:78:TYR:HB2	1.77	0.66
23:DA:512:G:N7	56:DA:3836:HOH:O	2.29	0.66
23:DA:674:G:H1'	27:DF:74:ARG:HD3	1.78	0.66
9:AI:65:VAL:O	9:AI:73:GLN:NE2	2.28	0.66
10:AJ:31:GLY:HA3	10:AJ:78:ASN:CB	2.25	0.66
23:BA:2318:G:N2	36:BS:3:ARG:HD3	2.10	0.66
24:BB:66:A:H61	24:BB:109:C:H5'	1.60	0.66
39:BV:35:LEU:HB2	39:BV:57:VAL:HG13	1.77	0.66
1:CA:365:U:H5"	1:CA:366:C:OP1	1.95	0.66
4:CD:32:ALA:HA	4:CD:35:ARG:HB2	1.77	0.66
15:CO:3:ILE:HD13	15:CO:3:ILE:H	1.61	0.66
22:CX:4:ASN:HB2	22:CX:38:TYR:HA	1.78	0.66
23:DA:2130:U:O2'	23:DA:2133:G:O2'	2.10	0.66
31:DN:15:LEU:HB2	31:DN:135:PRO:HB2	1.77	0.66
1:AA:242:C:OP1	56:AA:1818:HOH:O	2.12	0.66
1:AA:1347:G:O2'	1:AA:1373:G:O6	2.13	0.66
1:AA:1417:G:O6	56:AA:1843:HOH:O	2.12	0.66
23:BA:1171:G:O2'	23:BA:1173:G:OP2	2.06	0.66
23:BA:1379:A:H4'	23:BA:1380:G:OP2	1.95	0.66
23:BA:1561:G:OP2	56:BA:4362:HOH:O	2.14	0.66
1:CA:171:A:H2'	1:CA:172:A:C8	2.29	0.66
1:CA:1046:A:H3'	1:CA:1047:G:H8	1.60	0.66
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.29	0.66
4:CD:157:LEU:O	4:CD:161:ASN:ND2	2.20	0.66
19:CS:46:GLY:N	19:CS:62:ILE:O	2.28	0.66
20:CT:33:ILE:O	20:CT:37:SER:OG	2.12	0.66
23:DA:1970:A:H4'	56:DA:4210:HOH:O	1.95	0.66
23:DA:2786:U:O2'	26:DE:62:PRO:O	2.07	0.66
1:AA:1378:C:H1'	1:AA:1379:G:O5'	1.95	0.66
5:AE:57:LYS:HG2	5:AE:61:TYR:CE2	2.30	0.66
23:BA:1778:U:H2'	23:BA:1784:A:N6	2.10	0.66
28:BG:122:PRO:HG3	28:BG:180:PHE:HB3	1.78	0.66
1:CA:1112:C:N3	3:CC:178:LEU:HB2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1457:G:C4	1:CA:1458:G:N7	2.64	0.66
1:CA:1457:G:N3	1:CA:1458:G:C8	2.63	0.66
20:CT:10:LEU:HD21	20:CT:12:ALA:HB3	1.76	0.66
23:DA:1315:C:OP2	56:DA:3783:HOH:O	2.14	0.66
1:AA:186:C:H2'	1:AA:187:C:C6	2.31	0.66
1:AA:1304:G:N2	1:AA:1332:A:OP2	2.28	0.66
1:AA:1377:A:H3'	1:AA:1377:A:C8	2.31	0.66
1:AA:1459:C:C6	1:AA:1460:A:N7	2.64	0.66
23:BA:563:G:OP2	56:BA:4466:HOH:O	2.14	0.66
23:BA:2705:A:OP2	56:BA:4854:HOH:O	2.13	0.66
29:DH:86:GLU:OE2	29:DH:132:ARG:NH1	2.29	0.66
1:AA:662:G:O2'	1:AA:836:G:OP1	2.13	0.66
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.95	0.66
1:AA:1441:G:H21	1:AA:1459:C:H5	1.43	0.66
4:AD:32:ALA:HA	4:AD:35:ARG:HB2	1.77	0.66
11:AK:41:THR:HG21	11:AK:71:LYS:HD2	1.78	0.66
23:BA:1016:G:N7	56:BA:5119:HOH:O	2.28	0.66
1:CA:1106:G:H5"	3:CC:172:ARG:HD3	1.77	0.66
17:CQ:13:ASP:CG	17:CQ:14:LYS:H	2.04	0.66
23:DA:123:G:OP1	56:DA:3622:HOH:O	2.13	0.66
1:AA:1120:G:N2	1:AA:1154:G:H1'	2.11	0.65
1:AA:1296:C:OP2	1:AA:1297:C:N4	2.27	0.65
21:AU:15:ARG:HG3	21:AU:17:THR:HG23	1.79	0.65
36:BS:10:ARG:HH21	36:BS:91:PRO:HB2	1.60	0.65
23:DA:552:G:O6	56:DA:4483:HOH:O	2.13	0.65
23:DA:910:A:C5	34:DQ:13:GLN:HG3	2.31	0.65
23:DA:1405:U:H2'	23:DA:1406:U:C6	2.30	0.65
37:DT:56:GLY:O	37:DT:59:THR:HG22	1.95	0.65
1:AA:41:G:H2'	1:AA:42:G:C8	2.30	0.65
1:AA:174:C:H2'	1:AA:175:C:H6	1.61	0.65
1:AA:243:A:H4'	1:AA:244:U:O5'	1.97	0.65
4:AD:155:LEU:HB3	4:AD:158:ILE:HB	1.79	0.65
5:AE:50:GLU:HB2	5:AE:53:LEU:HD22	1.76	0.65
23:BA:376:C:OP2	56:BA:3961:HOH:O	2.13	0.65
1:CA:1211:U:H4'	1:CA:1212:U:OP2	1.96	0.65
1:CA:1245:A:H61	1:CA:1292:U:H3	1.43	0.65
17:CQ:6:LEU:HD23	17:CQ:23:VAL:HG11	1.77	0.65
21:CU:17:THR:OG1	21:CU:18:TYR:N	2.29	0.65
23:DA:688:U:O4	56:DA:3974:HOH:O	2.11	0.65
1:AA:1128:C:H5'	9:AI:16:ARG:NH2	2.11	0.65
1:AA:1502:A:H2	1:AA:1505:G:H1	1.42	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:639:U:H2'	23:BA:640:C:C6	2.32	0.65
23:BA:856:C:H5'	44:B0:27:GLU:OE2	1.96	0.65
23:BA:2319:G:N2	36:BS:3:ARG:HD2	2.11	0.65
47:B3:23:LEU:HD13	47:B3:50:VAL:HG11	1.78	0.65
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.31	0.65
5:CE:12:LEU:HB3	5:CE:31:LEU:HB3	1.78	0.65
23:DA:154(A):C:N4	23:DA:171:G:N1	2.45	0.65
23:DA:1838:C:O2'	56:DA:4310:HOH:O	2.13	0.65
1:AA:1120:G:H22	1:AA:1154:G:H1'	1.60	0.65
1:AA:1221:G:H5'	19:AS:36:ARG:HD3	1.79	0.65
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.78	0.65
21:AU:12:LYS:HE3	21:AU:19:GLY:HA3	1.79	0.65
23:BA:2533:A:OP2	56:BA:5056:HOH:O	2.14	0.65
23:BA:2712:U:O2'	23:BA:2712(A):A:OP2	2.14	0.65
37:BT:60:THR:HG22	37:BT:77:PRO:HA	1.79	0.65
51:B7:34:ARG:NH1	51:B7:41:ARG:O	2.30	0.65
1:CA:1028:C:N3	1:CA:1033:G:C6	2.65	0.65
1:CA:1078:U:H1'	5:CE:130:ASN:HD21	1.61	0.65
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.32	0.65
1:CA:1306:A:H3'	1:CA:1307:U:H6	1.62	0.65
22:CX:17:ARG:HA	22:CX:20:VAL:HG12	1.78	0.65
23:DA:1423:G:H2'	23:DA:1424:G:H8	1.62	0.65
26:DE:11:MET:HG2	26:DE:24:THR:HB	1.79	0.65
28:DG:11:TYR:CE2	28:DG:16:ARG:HD3	2.31	0.65
1:AA:166:G:H2'	1:AA:167:G:C8	2.31	0.65
1:AA:974:A:H8	1:AA:974:A:OP1	1.80	0.65
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.32	0.65
11:AK:13:GLN:N	11:AK:75:TYR:O	2.28	0.65
23:BA:504:U:OP2	56:BA:4934:HOH:O	2.13	0.65
23:BA:606:U:H4'	23:BA:658:C:H4'	1.79	0.65
23:BA:1423:G:H2'	23:BA:1424:G:H8	1.62	0.65
28:BG:11:TYR:CE2	28:BG:16:ARG:HD3	2.31	0.65
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.78	0.65
5:CE:43:LEU:O	5:CE:65:ASN:ND2	2.30	0.65
21:CU:10:ARG:HA	21:CU:10:ARG:HE	1.61	0.65
25:DD:118:VAL:H	25:DD:129:ASN:ND2	1.94	0.65
1:AA:324:G:OP1	20:AT:70:SER:HB2	1.96	0.65
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.31	0.65
37:BT:64:ARG:NH1	37:BT:103:ARG:HA	2.11	0.65
43:BZ:45:ASP:OD2	43:BZ:49:ARG:NH1	2.29	0.65
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1377:A:H2'	7:CG:7:ALA:CB	2.27	0.65
4:CD:108:LEU:HD11	4:CD:174:LEU:HD22	1.79	0.65
7:CG:43:PHE:HD1	7:CG:46:ALA:HB3	1.61	0.65
23:DA:71:A:H2	41:DX:31:HIS:CE1	2.15	0.65
23:DA:301:G:OP2	42:DY:84:ARG:NH2	2.29	0.65
23:DA:1352:U:OP2	56:DA:3932:HOH:O	2.14	0.65
32:DO:25:LEU:HD21	32:DO:40:VAL:HG23	1.79	0.65
51:D7:24:THR:HG23	51:D7:27:GLY:H	1.61	0.65
1:AA:1443:G:O6	1:AA:1459:C:H1'	1.96	0.65
23:BA:1587:A:H2'	23:BA:1588:C:C6	2.31	0.65
23:BA:2887:U:H2'	23:BA:2888:C:C6	2.32	0.65
1:CA:186:C:H2'	1:CA:187:C:C6	2.32	0.65
23:DA:1379:A:H4'	23:DA:1380:G:OP2	1.95	0.65
23:DA:2319:G:N2	36:DS:3:ARG:HD2	2.11	0.65
23:BA:154(A):C:N4	23:BA:171:G:N1	2.44	0.65
1:CA:1373:G:H5'	7:CG:36:LYS:HG3	1.79	0.65
23:DA:1914:C:H2'	23:DA:1915:U:H6	1.61	0.65
28:DG:122:PRO:HG3	28:DG:180:PHE:HB3	1.79	0.65
1:AA:1003:G:N2	1:AA:1037:C:C2	2.64	0.65
1:AA:1442(A):G:C2	1:AA:1442(B):A:H2'	2.32	0.65
1:AA:1460:A:H8	1:AA:1460:A:P	2.19	0.65
23:BA:1833:U:H2'	23:BA:1834:U:H6	1.60	0.65
1:CA:1500:A:OP1	56:CA:2021:HOH:O	2.15	0.65
1:CA:1502:A:H2	1:CA:1505:G:H1	1.42	0.65
5:CE:71:LEU:HD11	5:CE:74:GLY:H	1.62	0.65
23:DA:252:G:OP2	33:DP:50:ARG:NH1	2.30	0.65
23:DA:484:C:H2'	23:DA:485:C:C6	2.32	0.65
23:DA:2322:A:N6	23:DA:2335:A:N6	2.44	0.65
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.25	0.65
1:AA:1502:A:H2	1:AA:1505:G:N1	1.94	0.65
9:AI:8:GLY:HA3	9:AI:76:ALA:HB1	1.78	0.65
22:AX:87:LYS:O	22:AX:91:LYS:HG3	1.97	0.65
23:BA:696:G:N7	56:BA:5334:HOH:O	2.29	0.65
23:BA:1174:A:H5'	23:BA:1177:A:H62	1.61	0.65
23:BA:1560:G:OP1	56:BA:4362:HOH:O	2.13	0.65
4:CD:20:TYR:HA	4:CD:26:CYS:SG	2.36	0.65
23:DA:639:U:H2'	23:DA:640:C:C6	2.32	0.65
23:DA:1359:A:N6	23:DA:1372:U:C4	2.63	0.65
30:DI:120:ILE:HG21	30:DI:126:TYR:CE1	2.31	0.65
1:AA:382:A:H2'	1:AA:383:A:H8	1.61	0.64
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1378:C:O2'	1:AA:1379:G:H8	1.80	0.64
14:AN:29:ARG:HD2	14:AN:31:ARG:HB2	1.78	0.64
21:AU:13:ILE:HA	21:AU:22:ARG:NH1	2.12	0.64
23:BA:314:A:N6	56:BA:5256:HOH:O	2.21	0.64
23:BA:886:C:H2'	23:BA:889:C:H41	1.62	0.64
23:BA:1174:A:H4'	23:BA:1175:U:OP1	1.97	0.64
23:BA:1833:U:O2'	23:BA:1969:A:N1	2.29	0.64
23:BA:2721:A:OP2	56:BA:4075:HOH:O	2.14	0.64
1:CA:996:A:H2'	1:CA:997:U:C6	2.32	0.64
19:CS:41:VAL:H	19:CS:44:MET:HE3	1.62	0.64
23:DA:250:G:OP2	52:D8:13:ARG:NH2	2.29	0.64
23:DA:2122:U:H2'	23:DA:2123:G:C8	2.32	0.64
23:DA:2305:A:H5"	28:DG:134:GLY:HA3	1.79	0.64
26:DE:112:GLY:O	26:DE:159:HIS:HA	1.97	0.64
40:DW:4:LYS:HB2	40:DW:106:ILE:HG12	1.79	0.64
1:AA:1458:G:C2	1:AA:1459:C:O4'	2.50	0.64
27:BF:53:THR:HG23	27:BF:55:GLY:H	1.62	0.64
42:BY:23:ARG:HB2	42:BY:23:ARG:HH11	1.61	0.64
1:CA:1128:C:H4'	9:CI:16:ARG:HH22	1.62	0.64
1:CA:1142:G:C6	1:CA:1143:G:H1'	2.32	0.64
14:CN:24:CYS:SG	14:CN:27:CYS:N	2.70	0.64
49:D5:16:ARG:NH1	49:D5:17:ASP:OD1	2.31	0.64
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	1.96	0.64
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.61	0.64
5:AE:43:LEU:O	5:AE:65:ASN:ND2	2.30	0.64
9:AI:27:THR:HB	9:AI:62:TYR:HA	1.80	0.64
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.62	0.64
23:BA:2305:A:H5"	28:BG:134:GLY:HA3	1.80	0.64
36:BS:96:GLY:HA2	36:BS:97:ARG:C	2.22	0.64
1:CA:538:G:OP2	12:CL:115:LYS:HB2	1.97	0.64
1:CA:1210:C:H3'	1:CA:1211:U:H5"	1.80	0.64
23:DA:96:G:H4'	46:D2:48:HIS:CD2	2.31	0.64
27:DF:129:PHE:CD2	27:DF:163:VAL:HG21	2.32	0.64
34:DQ:111:GLU:OE1	34:DQ:133:ARG:NH2	2.30	0.64
35:DR:117:VAL:HG12	35:DR:118:GLU:H	1.62	0.64
41:DX:27:THR:HG23	41:DX:80:ILE:HG13	1.79	0.64
1:AA:1243:C:N4	1:AA:1294:G:H1	1.95	0.64
1:AA:1444:C:N4	1:AA:1458:G:H1	1.95	0.64
12:AL:27:LEU:O	12:AL:29:GLY:N	2.31	0.64
23:BA:459:U:H5"	51:B7:40:TRP:CD2	2.33	0.64
23:BA:674:G:H1'	27:BF:74:ARG:HD3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2526:G:H21	53:B9:2:LYS:HG2	1.63	0.64
48:B4:16:CYS:SG	48:B4:20:ASN:HB3	2.38	0.64
1:CA:1111:A:N1	3:CC:177:THR:HG23	2.12	0.64
9:CI:22:GLY:HA3	9:CI:60:ASP:HB2	1.79	0.64
23:DA:816:C:OP2	56:DA:4440:HOH:O	2.14	0.64
23:DA:1778:U:H2'	23:DA:1784:A:N6	2.12	0.64
1:AA:41:G:H2'	1:AA:42:G:H8	1.62	0.64
1:AA:946:A:H2'	1:AA:947:G:C8	2.33	0.64
1:AA:1444:C:N4	1:AA:1459:C:O2	2.30	0.64
2:AB:157:ARG:NH2	2:AB:160:ASP:OD1	2.21	0.64
23:BA:2322:A:N6	23:BA:2335:A:N6	2.42	0.64
26:BE:28:ALA:HB3	26:BE:93:VAL:HG12	1.78	0.64
38:BU:44:ASN:ND2	39:BV:75:PHE:O	2.24	0.64
40:BW:18:ARG:HG3	40:BW:76:VAL:HB	1.80	0.64
3:CC:54:ARG:HH11	3:CC:56:ASP:HB2	1.63	0.64
11:CK:41:THR:HG21	11:CK:71:LYS:HD2	1.79	0.64
14:CN:7:ILE:HG22	14:CN:23:ARG:NE	2.12	0.64
23:DA:910:A:H62	34:DQ:12:GLN:HA	1.61	0.64
23:DA:1429:G:H2'	23:DA:1430:C:C6	2.32	0.64
23:DA:2637:U:H5"	26:DE:82:ARG:HH21	1.62	0.64
27:DF:116:ASP:OD1	27:DF:119:ARG:NH2	2.31	0.64
30:DI:83:ALA:HB2	30:DI:88:ILE:HA	1.77	0.64
33:DP:50:ARG:HD3	52:D8:7:HIS:CD2	2.32	0.64
36:DS:14:VAL:O	36:DS:18:ILE:HG12	1.97	0.64
1:AA:1142:G:C6	1:AA:1143:G:H1'	2.33	0.64
7:AG:99:LEU:HA	7:AG:102:ARG:NH2	2.13	0.64
23:BA:90:U:H2'	23:BA:92:A:C8	2.32	0.64
23:BA:492:A:OP2	56:BA:4859:HOH:O	2.15	0.64
23:BA:1176:G:H1'	23:BA:1177:A:OP1	1.96	0.64
23:BA:2808:U:H5'	23:BA:2891:G:O6	1.97	0.64
25:BD:71:ASP:HB3	25:BD:103:ARG:HH22	1.63	0.64
36:BS:58:LEU:HB2	36:BS:59:LYS:HB2	1.78	0.64
2:CB:87:ARG:HD2	2:CB:219:VAL:HG11	1.77	0.64
23:DA:188:G:H1	23:DA:208:C:H42	1.44	0.64
23:DA:526:A:OP1	56:DA:4533:HOH:O	2.15	0.64
23:DA:1210:A:H5"	23:DA:1210:A:H8	1.62	0.64
28:DG:101:ILE:HD13	48:D4:25:TYR:HB2	1.80	0.64
1:AA:102:G:H2'	1:AA:103:C:H6	1.60	0.64
1:AA:814:A:H2'	1:AA:816:A:H5"	1.78	0.64
14:AN:29:ARG:HG3	14:AN:31:ARG:H	1.63	0.64
23:BA:787:U:OP1	56:BA:4569:HOH:O	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2492:U:H2'	23:BA:2493:U:C6	2.32	0.64
1:CA:1181:G:H4'	1:CA:1184:G:H5'	1.78	0.64
1:CA:1381:U:H3'	1:CA:1382:C:C6	2.33	0.64
23:DA:8:A:OP1	31:DN:121:LYS:NZ	2.30	0.64
23:DA:1786:A:H1'	23:DA:1938:A:N6	2.13	0.64
23:DA:2833:G:H3'	23:DA:2834:G:H5'	1.79	0.64
15:AO:70:LEU:HG	15:AO:78:TYR:HB2	1.80	0.64
20:AT:63:ILE:HD12	20:AT:81:LYS:HG2	1.79	0.64
23:BA:1176:G:H21	23:BA:1178:C:P	2.21	0.64
33:BP:25:SER:O	56:BP:304:HOH:O	2.15	0.64
1:CA:59:A:H5"	1:CA:60:A:H5"	1.80	0.64
1:CA:1060:C:O3'	10:CJ:59:SER:OG	2.15	0.64
23:DA:467:G:OP1	51:D7:33:ARG:NH1	2.31	0.64
23:DA:1650:G:O6	56:DA:4754:HOH:O	2.11	0.64
3:AC:137:ALA:O	3:AC:140:ARG:HB3	1.96	0.64
23:BA:271(J):C:O2'	23:BA:271(K):U:H5'	1.98	0.64
23:BA:2122:U:H2'	23:BA:2123:G:C8	2.32	0.64
27:BF:123:LEU:HD13	27:BF:192:LEU:HD13	1.80	0.64
30:BI:12:LEU:HD22	30:BI:19:VAL:HG21	1.79	0.64
9:CI:31:GLN:CD	9:CI:36:TYR:HD1	2.05	0.64
11:CK:73:MET:HG3	11:CK:103:LEU:HD21	1.80	0.64
45:D1:3:LYS:HB2	45:D1:61:ARG:HH11	1.63	0.64
1:AA:49:U:O4	1:AA:365:U:H5	1.81	0.64
1:AA:1059:C:OP1	3:AC:199:LYS:NZ	2.30	0.64
1:AA:1144:G:H21	1:AA:1146:A:N6	1.96	0.64
1:AA:1457:G:N3	1:AA:1458:G:C8	2.66	0.64
23:BA:89:G:H3'	23:BA:90:U:H5"	1.79	0.64
23:BA:1288:U:C2	23:BA:1327:C:O2	2.51	0.64
23:BA:2206:G:O2'	23:BA:2207:G:OP1	2.13	0.64
25:BD:142:VAL:HG23	25:BD:193:VAL:HA	1.79	0.64
26:BE:128:SER:OG	26:BE:129:HIS:N	2.27	0.64
1:CA:1130:A:N6	1:CA:1144:G:H1'	2.11	0.64
1:CA:1326:C:H5"	21:CU:18:TYR:O	1.98	0.64
9:CI:17:VAL:HG11	9:CI:81:ILE:HA	1.80	0.64
20:CT:97:ALA:HB3	20:CT:99:LEU:H	1.62	0.64
23:DA:553:G:O6	56:DA:4483:HOH:O	2.14	0.64
23:DA:2206:G:O2'	23:DA:2207:G:OP1	2.15	0.64
5:AE:98:THR:HG22	5:AE:99:GLY:H	1.61	0.63
20:AT:33:ILE:O	20:AT:37:SER:OG	2.14	0.63
23:BA:994:C:H3'	38:BU:54:LYS:HE3	1.81	0.63
23:BA:1019:U:HO2'	23:BA:1021:A:H2	1.44	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1639:U:C2'	23:BA:1640:C:H5"	2.28	0.63
1:CA:991:U:H3'	1:CA:1212:U:H3	1.62	0.63
1:CA:1027:C:N1	1:CA:1034:G:N2	2.45	0.63
23:DA:271(J):C:O2'	23:DA:271(K):U:H5'	1.97	0.63
27:DF:68:LYS:HB3	27:DF:69:HIS:ND1	2.13	0.63
29:DH:70:THR:HA	29:DH:73:ALA:HB3	1.80	0.63
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.34	0.63
23:BA:2115:G:C2	23:BA:2117:A:N7	2.66	0.63
30:BI:62:LYS:HG2	30:BI:133:HIS:CE1	2.33	0.63
50:B6:3:SER:OG	50:B6:4:GLU:N	2.28	0.63
1:CA:926:G:H21	22:CX:94:GLN:HE22	1.44	0.63
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.33	0.63
23:DA:2602:A:H4'	23:DA:2603:G:OP1	1.98	0.63
25:DD:237:GLU:OE1	56:DD:407:HOH:O	2.15	0.63
28:DG:135:LEU:HB2	28:DG:155:MET:HE3	1.80	0.63
1:AA:1400:C:N3	22:AX:63:ALA:HA	2.13	0.63
23:BA:301:G:OP2	42:BY:84:ARG:NH2	2.31	0.63
23:BA:1536:C:H4'	23:BA:1537:G:OP1	1.97	0.63
1:CA:102:G:H2'	1:CA:103:C:H6	1.62	0.63
1:CA:171:A:H2'	1:CA:172:A:H8	1.63	0.63
9:CI:9:ARG:HH11	9:CI:104:ARG:HE	1.45	0.63
11:CK:84:VAL:HG11	11:CK:91:ARG:HD2	1.80	0.63
23:DA:83:G:OP1	42:DY:95:LYS:NZ	2.31	0.63
23:DA:90:U:H2'	23:DA:92:A:C8	2.33	0.63
23:DA:1011:G:OP2	38:DU:66:ASN:ND2	2.28	0.63
23:DA:1784:A:OP1	56:DA:4604:HOH:O	2.15	0.63
23:DA:2306:C:H3'	23:DA:2307:G:C8	2.33	0.63
25:DD:5:LYS:HA	25:DD:17:THR:HG22	1.81	0.63
3:AC:187:ALA:HB3	3:AC:198:VAL:HB	1.80	0.63
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.64	0.63
9:AI:28:VAL:HG21	9:AI:37:PHE:HE2	1.63	0.63
28:BG:56:ALA:HA	28:BG:153:ARG:HH21	1.63	0.63
1:CA:1121:U:O4	1:CA:1152:A:N1	2.31	0.63
5:CE:98:THR:HG22	5:CE:99:GLY:H	1.63	0.63
23:DA:2336:A:H61	44:D0:43:THR:HG22	1.64	0.63
38:DU:28:ARG:NH1	38:DU:38:THR:OG1	2.31	0.63
1:AA:533:A:OP2	56:AA:1816:HOH:O	2.15	0.63
1:AA:1009:G:O6	1:AA:1020:U:O2	2.17	0.63
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.29	0.63
1:AA:1441:G:C3'	1:AA:1459:C:H42	2.12	0.63
1:CA:1243:C:H5"	21:CU:8:THR:HG21	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:89:GLY:HA2	13:CM:92:HIS:CD2	2.33	0.63
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.14	0.63
23:DA:668:G:H5"	23:DA:669:G:OP2	1.97	0.63
33:DP:38:GLN:HA	33:DP:41:ARG:HG2	1.80	0.63
23:BA:2867:G:OP2	37:BT:119:LYS:NZ	2.31	0.63
32:BO:25:LEU:HD21	32:BO:40:VAL:HG23	1.81	0.63
43:BZ:82:ARG:HB3	43:BZ:82:ARG:NH2	2.14	0.63
1:CA:952:U:H3	1:CA:1229:A:N6	1.97	0.63
1:CA:989:C:H42	1:CA:1216:G:H1	0.72	0.63
23:DA:68:G:O6	56:DA:4046:HOH:O	2.15	0.63
23:DA:2592:G:OP1	56:DA:3768:HOH:O	2.15	0.63
25:DD:108:PRO:HG2	25:DD:111:LEU:HG	1.80	0.63
26:DE:9:VAL:HG22	26:DE:25:VAL:HB	1.81	0.63
23:BA:314:A:C2'	23:BA:315:G:H5'	2.28	0.63
23:BA:910:A:H62	34:BQ:12:GLN:HA	1.63	0.63
23:BA:1968:G:OP1	56:BA:3899:HOH:O	2.15	0.63
28:BG:150:ASP:CG	28:BG:151:ALA:H	2.07	0.63
33:BP:127:ALA:O	33:BP:148:LEU:HD23	1.98	0.63
23:DA:95:G:O2'	46:D2:46:GLN:HA	1.99	0.63
23:DA:546:C:H2'	23:DA:547:A:H5'	1.80	0.63
30:DI:1:MET:N	30:DI:21:VAL:O	2.31	0.63
1:AA:174:C:H2'	1:AA:175:C:C6	2.33	0.63
23:BA:249:C:OP1	56:BA:4502:HOH:O	2.15	0.63
23:BA:484:C:H2'	23:BA:485:C:C6	2.34	0.63
23:BA:570:G:H5"	56:BA:4144:HOH:O	1.98	0.63
23:BA:1278:A:OP1	35:BR:36:THR:HG23	1.98	0.63
29:BH:3:ARG:CZ	29:BH:4:ILE:H	2.12	0.63
34:BQ:54:MET:HE3	34:BQ:64:ILE:HD13	1.81	0.63
49:B5:16:ARG:HH11	49:B5:16:ARG:HG2	1.62	0.63
53:B9:4:ARG:NH1	56:B9:201:HOH:O	2.32	0.63
1:CA:1219:U:HO2'	19:CS:34:TRP:CD1	2.17	0.63
23:DA:2243:U:H2'	23:DA:2244:U:C6	2.34	0.63
1:AA:1310:G:H2'	1:AA:1311:G:C8	2.34	0.63
1:AA:1340:A:H2'	1:AA:1341:U:O4'	1.97	0.63
2:AB:17:PHE:H	2:AB:17:PHE:HD2	1.46	0.63
3:AC:47:LEU:HB3	3:AC:52:LEU:HD13	1.78	0.63
13:AM:40:ASN:O	13:AM:42:ALA:N	2.26	0.63
17:AQ:50:LYS:HD3	17:AQ:51:TYR:CE1	2.34	0.63
23:BA:240:G:O6	56:BA:4246:HOH:O	2.12	0.63
23:BA:1532:C:H2'	23:BA:1533:G:O4'	1.99	0.63
23:BA:1566:A:OP1	25:BD:211:ARG:NH1	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2646:C:OP2	23:BA:2732:G:O2'	2.15	0.63
29:BH:70:THR:HA	29:BH:73:ALA:HB3	1.81	0.63
1:AA:79:G:H2'	1:AA:80:G:C8	2.24	0.62
1:CA:352:C:O2'	1:CA:354:G:OP1	2.12	0.62
7:CG:111:ARG:NH1	7:CG:119:ARG:O	2.32	0.62
16:CP:29:ASP:OD2	16:CP:29:ASP:N	2.31	0.62
19:CS:80:TYR:O	19:CS:81:ARG:HG3	1.99	0.62
23:DA:993:G:OP1	38:DU:50:ARG:NH2	2.31	0.62
23:DA:1140:C:O3'	31:DN:25:ARG:NH1	2.31	0.62
23:DA:1485:G:H1	23:DA:1504:C:H42	1.47	0.62
1:AA:169:C:H2'	1:AA:170:U:H6	1.65	0.62
1:AA:171:A:H2'	1:AA:172:A:C8	2.34	0.62
1:AA:1378:C:HO2'	1:AA:1379:G:H8	1.45	0.62
7:AG:65:ALA:HB2	7:AG:124:LEU:HD23	1.81	0.62
7:AG:139:GLU:O	7:AG:143:ARG:N	2.32	0.62
17:AQ:65:ILE:HD13	17:AQ:69:LYS:HE2	1.79	0.62
23:BA:1171:G:O2'	23:BA:1173:G:H2'	2.00	0.62
46:B2:50:ILE:C	46:B2:52:ASP:H	2.07	0.62
1:CA:324:G:OP1	20:CT:70:SER:HB2	1.99	0.62
1:CA:920:U:H2'	1:CA:921:U:C6	2.34	0.62
4:CD:30:LYS:HA	4:CD:35:ARG:HD2	1.80	0.62
23:DA:459:U:H5"	51:D7:40:TRP:CD2	2.33	0.62
36:DS:58:LEU:HB2	36:DS:59:LYS:HB2	1.80	0.62
40:DW:13:SER:HB3	40:DW:16:LYS:HD2	1.80	0.62
1:AA:1237:C:H2'	1:AA:1335:C:H5'	1.81	0.62
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.34	0.62
1:AA:1459:C:C6	1:AA:1460:A:C6	2.87	0.62
3:AC:43:LEU:HD22	3:AC:47:LEU:HB2	1.81	0.62
3:AC:140:ARG:NH1	3:AC:140:ARG:HB2	2.14	0.62
23:BA:1047:G:H2'	23:BA:1110:G:H1	1.64	0.62
23:BA:2562:U:H1'	32:BO:23:ARG:HH11	1.63	0.62
1:CA:1359:C:OP2	14:CN:35:ARG:HD2	1.99	0.62
1:CA:1444:C:N3	1:CA:1459:C:H1'	2.14	0.62
23:DA:644:A:H4'	23:DA:645:C:C5	2.34	0.62
23:DA:956:G:OP2	34:DQ:14:ARG:NH2	2.33	0.62
23:DA:2394:C:OP1	52:D8:30:ARG:NH1	2.32	0.62
1:AA:1135:U:H2'	1:AA:1137:C:O4'	1.99	0.62
1:AA:1306:A:H1'	1:AA:1332:A:C6	2.33	0.62
13:AM:87:TYR:HB2	19:AS:76:PRO:HG3	1.81	0.62
23:BA:1405:U:H2'	23:BA:1406:U:C6	2.35	0.62
23:BA:2567:G:H2'	23:BA:2568:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:166:G:H2'	1:CA:167:G:C8	2.34	0.62
1:CA:1103:C:H2'	1:CA:1104:G:O4'	1.99	0.62
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.81	0.62
4:CD:138:TYR:HD2	4:CD:139:ARG:N	1.98	0.62
23:DA:2119:A:C2	23:DA:2170:A:H2'	2.35	0.62
23:DA:2306:C:H5'	23:DA:2307:G:H2'	1.80	0.62
23:DA:2318:G:N2	36:DS:3:ARG:HD3	2.14	0.62
1:AA:191:G:H1'	56:AA:1977:HOH:O	2.00	0.62
23:BA:83:G:OP1	42:BY:95:LYS:NZ	2.32	0.62
23:BA:1763:G:H4'	23:BA:1763:G:OP1	1.99	0.62
23:BA:1858:G:O6	56:BA:4008:HOH:O	2.13	0.62
23:BA:2327:A:H2'	23:BA:2328:A:C8	2.34	0.62
26:BE:175:VAL:HG23	26:BE:177:PRO:HD3	1.80	0.62
33:BP:59:LEU:HD11	52:B8:10:ALA:HB2	1.81	0.62
1:CA:1155:G:H2'	1:CA:1156:G:C8	2.34	0.62
1:CA:1356:G:H2'	1:CA:1357:A:H8	1.61	0.62
7:CG:149:ARG:HB2	11:CK:59:TYR:CD1	2.35	0.62
26:DE:135:HIS:CD2	26:DE:135:HIS:H	2.18	0.62
1:AA:1315:U:H2'	1:AA:1316:G:O4'	1.99	0.62
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.07	0.62
23:BA:1914:C:H2'	23:BA:1915:U:H6	1.65	0.62
37:BT:11:GLU:OE1	37:BT:57:PHE:HB3	2.00	0.62
1:CA:918:A:H2'	1:CA:919:A:C8	2.33	0.62
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.00	0.62
1:CA:1239:A:H62	1:CA:1299:A:N6	1.97	0.62
1:CA:1347:G:N1	1:CA:1374:A:OP2	2.28	0.62
1:AA:745:C:OP1	1:AA:851:G:O2'	2.18	0.62
1:AA:828:A:H2'	1:AA:829:G:O4'	2.00	0.62
2:AB:15:VAL:HG23	2:AB:209:ARG:HG2	1.82	0.62
9:AI:65:VAL:HG22	9:AI:73:GLN:HG2	1.81	0.62
23:BA:1049:C:H4'	23:BA:1050:A:OP1	1.99	0.62
23:BA:1560:G:H3'	56:BA:4361:HOH:O	1.99	0.62
23:BA:2104:G:N7	23:BA:2186:G:N2	2.48	0.62
23:BA:2127:G:H21	23:BA:2173:A:H1'	1.64	0.62
23:BA:2760:C:H2'	23:BA:2761:G:H5"	1.81	0.62
34:BQ:27:VAL:N	34:BQ:138:ASP:OD1	2.33	0.62
38:BU:92:ARG:HA	38:BU:95:LEU:HB2	1.81	0.62
1:CA:662:G:O2'	1:CA:836:G:OP1	2.17	0.62
1:CA:735:C:H2'	1:CA:736:C:C6	2.33	0.62
1:CA:1005:A:H1'	1:CA:1036:G:N2	2.13	0.62
1:CA:1323:G:O2'	1:CA:1362:C:O2'	2.18	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:148:GLU:OE1	25:DD:151:LYS:NZ	2.22	0.62
27:DF:185:ASP:HA	27:DF:188:ARG:CD	2.30	0.62
1:AA:1347:G:H5"	9:AI:107:ARG:HG2	1.80	0.62
14:AN:12:ARG:O	14:AN:14:PRO:HD3	1.99	0.62
23:BA:580:C:H2'	23:BA:581:C:C6	2.35	0.62
23:BA:2206:G:H5'	23:BA:2207:G:C5	2.35	0.62
23:BA:2318:G:O2'	23:BA:2319:G:OP1	2.15	0.62
1:CA:664:G:P	18:CR:64:ARG:HH21	2.21	0.62
1:CA:1113:C:N3	1:CA:1187:G:N2	2.45	0.62
1:CA:1239:A:H62	1:CA:1299:A:H61	1.48	0.62
2:CB:78:GLN:O	2:CB:94:ASN:ND2	2.32	0.62
14:CN:24:CYS:HB2	14:CN:40:CYS:H	1.65	0.62
23:DA:184:C:H2'	23:DA:185:U:C6	2.35	0.62
1:AA:194:C:H2'	1:AA:195:A:H5"	1.82	0.62
1:AA:1026:G:H21	1:AA:1027:C:H5'	1.65	0.62
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.99	0.62
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.80	0.62
23:BA:1721:G:H2'	23:BA:1740:G:O6	2.00	0.62
27:BF:65:TRP:HH2	27:BF:72:ARG:HH21	1.48	0.62
1:CA:542:G:H2'	1:CA:543:C:C6	2.35	0.62
1:CA:745:C:H2'	1:CA:746:A:H8	1.63	0.62
1:CA:1135:U:H2'	1:CA:1137:C:O4'	1.99	0.62
1:CA:1238:A:OP2	1:CA:1335:C:H1'	1.99	0.62
21:CU:3:LYS:HG2	21:CU:10:ARG:HG3	1.82	0.62
23:DA:203:C:H3'	23:DA:204:A:H5"	1.81	0.62
23:DA:271(I):G:N2	23:DA:271(O):C:N3	2.43	0.62
23:DA:1495:A:H2'	23:DA:1496:A:C8	2.35	0.62
41:DX:36:LYS:HG2	41:DX:54:VAL:HB	1.81	0.62
2:AB:136:VAL:HA	2:AB:139:LYS:HB3	1.82	0.62
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.81	0.62
23:BA:188:G:H1	23:BA:208:C:H42	1.48	0.62
23:BA:1153:C:OP1	38:BU:92:ARG:NH1	2.33	0.62
23:BA:2602:A:H4'	23:BA:2603:G:OP1	2.00	0.62
27:BF:185:ASP:HA	27:BF:188:ARG:CD	2.30	0.62
1:CA:971:G:OP1	1:CA:972:C:H5"	2.00	0.62
3:CC:181:ASN:ND2	3:CC:181:ASN:O	2.33	0.62
1:AA:353:A:H8	1:AA:353:A:H5'	1.65	0.61
1:AA:1048:G:OP1	14:AN:3:ARG:HB3	1.99	0.61
2:AB:28:PHE:HD2	2:AB:194:PRO:HG3	1.63	0.61
23:BA:307:G:N2	23:BA:309:G:H3'	2.15	0.61
23:BA:1165:U:H2'	23:BA:1166:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:49:C:OP1	36:BS:97:ARG:N	2.33	0.61
1:CA:957:U:O2'	1:CA:959:A:N7	2.32	0.61
1:CA:1165:C:N3	1:CA:1171:G:N2	2.48	0.61
3:CC:131:ARG:NH2	3:CC:166:GLU:OE2	2.32	0.61
23:DA:1494:A:H2'	23:DA:1495:A:C8	2.35	0.61
23:DA:2377:A:H2'	23:DA:2378:A:C8	2.34	0.61
1:AA:142:G:H2'	1:AA:143:A:C8	2.34	0.61
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.81	0.61
13:AM:33:ALA:HB2	13:AM:64:TRP:CH2	2.35	0.61
23:BA:250:G:OP2	52:B8:13:ARG:NH2	2.33	0.61
23:BA:2119:A:C2	23:BA:2170:A:H2'	2.35	0.61
23:BA:2394:C:OP1	52:B8:30:ARG:NH1	2.33	0.61
1:CA:971:G:O2'	1:CA:1365:G:H4'	2.00	0.61
1:CA:1452:C:O2'	1:CA:1456:G:OP2	2.18	0.61
3:CC:184:TYR:HE1	3:CC:199:LYS:HB3	1.65	0.61
4:CD:155:LEU:HB3	4:CD:158:ILE:HB	1.82	0.61
23:DA:2161:C:H2'	23:DA:2162:G:C8	2.35	0.61
23:DA:2302:G:O2'	28:DG:126:ASP:O	2.16	0.61
32:DO:64:ARG:HG2	32:DO:79:PHE:CG	2.35	0.61
1:AA:984:C:N3	1:AA:1221:G:N2	2.43	0.61
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.00	0.61
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.25	0.61
25:BD:222:ARG:NH1	56:BD:420:HOH:O	2.32	0.61
37:BT:53:ARG:NH1	37:BT:60:THR:OG1	2.33	0.61
1:CA:426:G:OP1	4:CD:38:TYR:OH	2.12	0.61
1:CA:663:A:O3'	18:CR:64:ARG:NH2	2.33	0.61
1:CA:1055:A:N1	1:CA:1056:U:H1'	2.14	0.61
1:CA:1379:G:H21	1:CA:1381:U:H5	1.47	0.61
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.35	0.61
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.65	0.61
11:CK:13:GLN:N	11:CK:75:TYR:O	2.32	0.61
23:DA:1351:C:H3'	56:DA:3935:HOH:O	1.99	0.61
23:DA:2036:C:H5'	23:DA:2036:C:C6	2.29	0.61
23:DA:2127:G:H21	23:DA:2173:A:H1'	1.64	0.61
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.36	0.61
17:AQ:22:LEU:HD11	17:AQ:39:SER:HB3	1.82	0.61
23:BA:467:G:OP1	51:B7:33:ARG:NH1	2.32	0.61
23:BA:1022:G:O2'	56:BA:3731:HOH:O	2.05	0.61
31:BN:15:LEU:HB2	31:BN:135:PRO:HB2	1.82	0.61
1:CA:1166:G:O2'	1:CA:1169:A:N7	2.28	0.61
7:CG:47:CYS:SG	7:CG:58:PRO:HB3	2.41	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:47:PHE:O	10:CJ:63:PHE:N	2.31	0.61
23:DA:559:G:H22	38:DU:49:HIS:CD2	2.19	0.61
38:DU:58:ARG:HA	38:DU:61:TRP:CE3	2.36	0.61
1:AA:1442:G:N7	1:AA:1442(A):G:C5	2.68	0.61
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.65	0.61
23:BA:1972:A:OP2	56:BA:4868:HOH:O	2.16	0.61
23:BA:2162:G:H1'	23:BA:2173:A:H1'	1.82	0.61
1:CA:1441:G:N2	1:CA:1459:C:H5	1.98	0.61
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.82	0.61
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.26	0.61
10:CJ:45:ARG:O	10:CJ:65:LEU:N	2.33	0.61
23:DA:2591:C:OP2	25:DD:239:ARG:HB3	1.99	0.61
1:AA:376:G:H1	1:AA:387:U:H3	1.47	0.61
23:BA:668:G:H5"	23:BA:669:G:OP2	2.01	0.61
37:BT:56:GLY:O	37:BT:59:THR:HG22	2.00	0.61
1:CA:376:G:H1	1:CA:387:U:H3	1.47	0.61
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.36	0.61
23:DA:15:G:H5"	56:DA:4619:HOH:O	2.00	0.61
23:DA:1815:A:OP2	25:DD:54:ARG:NH2	2.33	0.61
23:DA:2162:G:H1'	23:DA:2173:A:H1'	1.81	0.61
23:DA:2318:G:O2'	23:DA:2319:G:OP1	2.15	0.61
46:D2:50:ILE:C	46:D2:52:ASP:H	2.07	0.61
1:AA:977:A:H8	1:AA:1223:C:C4	2.19	0.61
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.34	0.61
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.81	0.61
12:AL:102:ARG:HA	12:AL:107:ALA:HB1	1.82	0.61
19:AS:46:GLY:HA2	19:AS:61:TYR:CE1	2.34	0.61
45:B1:50:ARG:HG2	45:B1:59:THR:HG22	1.83	0.61
1:CA:955:U:H1'	1:CA:1227:A:N6	2.13	0.61
1:CA:1238:A:N6	1:CA:1296:C:O2	2.33	0.61
1:CA:1442(A):G:N3	1:CA:1442(B):A:H2'	2.15	0.61
23:DA:143(A):C:H2'	23:DA:144:C:H6	1.65	0.61
23:DA:1048:A:H4'	23:DA:1049:C:OP1	2.01	0.61
23:BA:910:A:C5	34:BQ:13:GLN:HG3	2.35	0.61
23:BA:1030:G:OP2	34:BQ:128:LYS:NZ	2.32	0.61
23:BA:1534:U:H3'	23:BA:1535:A:C2	2.36	0.61
23:BA:2306:C:H5'	23:BA:2307:G:H2'	1.81	0.61
1:CA:142:G:H2'	1:CA:143:A:H8	1.64	0.61
1:CA:243:A:H4'	1:CA:244:U:O5'	2.00	0.61
1:CA:532:A:N1	3:CC:193:TYR:HB3	2.16	0.61
1:CA:833:U:H2'	1:CA:834:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1016:A:C5	1:CA:1017:G:H1'	2.35	0.61
1:CA:1306:A:H3'	1:CA:1307:U:C6	2.36	0.61
7:CG:12:LEU:HD21	7:CG:24:THR:HB	1.82	0.61
23:DA:1327:C:OP2	56:DA:4452:HOH:O	2.16	0.61
23:DA:1584:C:H2'	23:DA:1586:A:H5'	1.83	0.61
1:AA:765:G:H5"	1:AA:766:A:OP1	2.00	0.61
1:AA:1245:A:H2'	1:AA:1246:C:H5'	1.82	0.61
19:AS:63:THR:HB	19:AS:65:ASN:H	1.65	0.61
23:BA:271(E):U:H2'	23:BA:271(F):C:C6	2.36	0.61
36:BS:14:VAL:O	36:BS:18:ILE:HG12	2.01	0.61
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.65	0.61
2:CB:178:ARG:HH22	8:CH:68:ARG:HH22	1.48	0.61
18:CR:44:LEU:HD21	18:CR:70:ILE:HD13	1.82	0.61
27:DF:126:VAL:HG21	27:DF:129:PHE:CE1	2.36	0.61
38:DU:76:TYR:CE2	38:DU:80:ILE:HG13	2.35	0.61
1:AA:345:C:OP2	37:BT:39:ARG:NH2	2.32	0.61
1:AA:1190:G:H4'	3:AC:176:HIS:CE1	2.35	0.61
1:AA:1377:A:C8	7:AG:7:ALA:HB1	2.36	0.61
1:AA:1442(A):G:C6	1:AA:1442(B):A:C2	2.89	0.61
19:AS:36:ARG:HB2	19:AS:72:GLY:CA	2.31	0.61
23:BA:1584:C:H2'	23:BA:1586:A:H5'	1.82	0.61
1:CA:407:G:H4'	4:CD:116:GLN:HA	1.83	0.61
1:CA:542:G:H2'	1:CA:543:C:H6	1.66	0.61
1:CA:1131:G:H1	1:CA:1143:G:N2	1.98	0.61
1:CA:1242:C:H4'	1:CA:1303:C:O3'	2.01	0.61
2:CB:15:VAL:HG23	2:CB:209:ARG:HG2	1.82	0.61
2:CB:54:THR:O	2:CB:58:ILE:HG13	2.00	0.61
23:DA:492:A:H2'	23:DA:493:G:O4'	2.01	0.61
23:DA:606:U:H4'	23:DA:658:C:H4'	1.83	0.61
23:DA:1278:A:OP1	35:DR:36:THR:HG23	2.01	0.61
23:DA:2567:G:H2'	23:DA:2568:C:C6	2.36	0.61
1:AA:37:U:O2'	1:AA:547:A:N1	2.30	0.60
1:AA:123:C:O2'	1:AA:290:C:O2	2.17	0.60
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.01	0.60
2:AB:82:ARG:HG2	2:AB:92:TYR:OH	2.01	0.60
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.01	0.60
23:BA:1047:G:H2'	23:BA:1110:G:N2	2.16	0.60
23:BA:1187:G:O6	56:BA:4432:HOH:O	2.13	0.60
30:BI:139:GLN:HE21	30:BI:139:GLN:HA	1.65	0.60
1:CA:994:A:H2	14:CN:4:LYS:HD3	1.66	0.60
2:CB:77:ALA:HB2	2:CB:211:ILE:HG12	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1816:G:OP2	56:DA:3705:HOH:O	2.16	0.60
23:DA:2327:A:H2'	23:DA:2328:A:C8	2.35	0.60
25:DD:206:LEU:HD22	25:DD:211:ARG:HG2	1.83	0.60
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.34	0.60
1:AA:983:A:H2	1:AA:984:C:C6	2.19	0.60
1:AA:1459:C:H2'	1:AA:1460:A:C5	2.35	0.60
2:AB:24:TRP:HZ3	2:AB:29:ALA:HB2	1.65	0.60
22:AX:69:ASP:HB2	22:AX:72:ALA:HB2	1.83	0.60
23:BA:387:U:OP1	56:BA:3957:HOH:O	2.16	0.60
23:BA:1784:A:OP1	56:BA:4606:HOH:O	2.16	0.60
25:BD:108:PRO:HG2	25:BD:111:LEU:HG	1.83	0.60
43:BZ:48:PHE:HE2	43:BZ:71:VAL:HG11	1.65	0.60
43:BZ:158:PRO:O	43:BZ:161:VAL:HB	2.02	0.60
1:CA:376:G:OP2	16:CP:67:THR:HG21	2.00	0.60
1:CA:745:C:OP1	1:CA:851:G:O2'	2.18	0.60
4:CD:89:THR:HB	4:CD:204:ILE:HD11	1.83	0.60
12:CL:27:LEU:O	12:CL:29:GLY:N	2.34	0.60
23:DA:1014:U:H2'	23:DA:1015:G:C8	2.35	0.60
30:DI:102:SER:HA	30:DI:106:GLY:HA3	1.83	0.60
51:D7:23:ARG:HB3	51:D7:23:ARG:HH11	1.65	0.60
1:AA:532:A:H61	3:AC:193:TYR:HB3	1.65	0.60
1:AA:1251:A:N3	1:AA:1369:C:O2'	2.29	0.60
6:AF:69:GLU:O	6:AF:72:VAL:HG13	2.00	0.60
23:BA:644:A:H4'	23:BA:645:C:C5	2.36	0.60
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.81	0.60
1:CA:1442(A):G:C6	1:CA:1442(B):A:C2	2.89	0.60
6:CF:61:LEU:HB3	6:CF:63:TYR:CE2	2.33	0.60
23:DA:143:G:H2'	23:DA:143(A):C:C6	2.36	0.60
23:DA:2835:A:N3	56:DA:4320:HOH:O	2.30	0.60
24:DB:110:G:H2'	24:DB:111:G:H8	1.66	0.60
41:DX:32:PRO:HA	41:DX:77:LYS:HB2	1.84	0.60
42:DY:102:CYS:O	42:DY:104:GLY:N	2.34	0.60
1:AA:1186:G:H4'	9:AI:110:GLU:OE1	2.02	0.60
1:AA:1220:G:H1'	19:AS:52:TYR:CD2	2.36	0.60
23:BA:527:C:OP1	56:BA:4556:HOH:O	2.15	0.60
23:BA:1131:G:H21	31:BN:73:THR:HG21	1.65	0.60
37:BT:53:ARG:HB3	37:BT:53:ARG:HH11	1.66	0.60
1:CA:59:A:H1'	1:CA:354:G:N2	2.17	0.60
1:CA:509:A:H3'	56:CA:1939:HOH:O	2.00	0.60
16:CP:49:LEU:HD11	16:CP:51:VAL:HG23	1.83	0.60
23:DA:1047:G:H21	23:DA:1111:A:N6	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1153:C:OP1	38:DU:92:ARG:NH1	2.33	0.60
24:DB:110:G:H2'	24:DB:111:G:C8	2.35	0.60
27:DF:46:ARG:HG2	27:DF:46:ARG:HH11	1.66	0.60
1:AA:100:C:H2'	1:AA:101:A:C8	2.36	0.60
1:AA:102:G:H2'	1:AA:103:C:C6	2.36	0.60
1:AA:627:G:H2'	1:AA:628:G:H8	1.66	0.60
1:AA:1051:C:N4	1:AA:1207:G:C6	2.69	0.60
1:AA:1300:G:O2'	1:AA:1303:C:N4	2.34	0.60
7:AG:41:ARG:O	7:AG:45:ASP:N	2.29	0.60
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.84	0.60
19:AS:51:VAL:HB	19:AS:75:ALA:HB3	1.84	0.60
23:BA:9:U:H3	23:BA:2629:A:H2	1.48	0.60
23:BA:430:G:OP1	56:BA:4251:HOH:O	2.16	0.60
23:BA:1819:A:H4'	23:BA:1820:U:O5'	2.01	0.60
23:BA:2318:G:H22	36:BS:3:ARG:HH11	1.48	0.60
28:BG:106:LEU:HD12	28:BG:110:ALA:HB3	1.81	0.60
1:CA:41:G:H2'	1:CA:42:G:C8	2.36	0.60
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.10	0.60
17:CQ:48:GLU:HB2	17:CQ:50:LYS:HG2	1.83	0.60
23:DA:528:A:N1	23:DA:2042:A:H2'	2.17	0.60
49:D5:20:ARG:HG2	49:D5:23:HIS:CD2	2.36	0.60
1:AA:171:A:H2'	1:AA:172:A:H8	1.65	0.60
1:AA:303:A:H2'	1:AA:304:U:O4'	2.01	0.60
1:AA:510:A:OP2	56:AA:1890:HOH:O	2.17	0.60
1:AA:735:C:H2'	1:AA:736:C:C6	2.34	0.60
3:AC:36:ASP:HA	3:AC:39:ILE:HB	1.83	0.60
19:AS:45:VAL:HA	19:AS:62:ILE:HB	1.81	0.60
23:BA:747:U:O2	23:BA:2014:A:H1'	2.01	0.60
1:CA:745:C:H2'	1:CA:746:A:C8	2.37	0.60
1:CA:1401:G:OP1	22:CX:80:LYS:HE2	2.02	0.60
12:CL:79:GLU:O	12:CL:80:HIS:HB2	2.01	0.60
14:CN:25:VAL:H	14:CN:39:LEU:HD23	1.65	0.60
23:DA:760:G:OP1	56:DA:3635:HOH:O	2.17	0.60
23:DA:1165:U:H2'	23:DA:1166:C:C6	2.37	0.60
23:DA:1470:G:N7	56:DA:4123:HOH:O	2.32	0.60
23:DA:1587:A:H2'	23:DA:1588:C:C6	2.36	0.60
23:DA:2228:G:O6	56:DA:4148:HOH:O	2.11	0.60
23:DA:2572:A:N7	26:DE:145:LYS:HB2	2.16	0.60
28:DG:11:TYR:CZ	28:DG:16:ARG:HD3	2.36	0.60
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.37	0.60
1:AA:1256:A:OP2	1:AA:1279:A:N6	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AX:69:ASP:HB3	22:AX:71:TYR:H	1.66	0.60
23:BA:2845:G:O2'	23:BA:2846:G:H5'	2.02	0.60
24:BB:110:G:H2'	24:BB:111:G:C8	2.36	0.60
25:BD:108:PRO:HB3	25:BD:143:HIS:CE1	2.37	0.60
28:BG:77:ILE:N	28:BG:82:LEU:O	2.30	0.60
30:BI:145:VAL:HG12	30:BI:146:ALA:H	1.67	0.60
1:CA:41:G:H2'	1:CA:42:G:H8	1.67	0.60
1:CA:1027:C:C4	1:CA:1034:G:N1	2.70	0.60
1:CA:1063:C:H2'	1:CA:1064:G:C8	2.36	0.60
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.66	0.60
1:CA:1236:A:H4'	1:CA:1304:G:H5'	1.84	0.60
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.82	0.60
23:DA:620:G:H5"	23:DA:620:G:N3	2.16	0.60
23:DA:1430:C:H2'	23:DA:1431:U:C6	2.36	0.60
24:DB:14:U:O3'	24:DB:108:U:O2'	2.19	0.60
33:DP:127:ALA:O	33:DP:148:LEU:HD23	2.02	0.60
43:DZ:48:PHE:HE2	43:DZ:71:VAL:HG11	1.66	0.60
1:AA:937:A:H3'	1:AA:938:A:H8	1.65	0.60
2:AB:87:ARG:HD2	2:AB:219:VAL:HG11	1.83	0.60
23:BA:887:A:H5'	23:BA:889:C:H41	1.67	0.60
23:BA:1796:U:H2'	23:BA:1797:C:C6	2.37	0.60
23:BA:2136:C:N4	23:BA:2155:G:H1	2.00	0.60
24:BB:110:G:H2'	24:BB:111:G:H8	1.67	0.60
27:BF:184:TYR:O	27:BF:188:ARG:HG3	2.02	0.60
42:BY:76:CYS:HB3	42:BY:79:CYS:HB2	1.82	0.60
1:CA:677:U:H3	1:CA:713:G:H22	1.48	0.60
1:CA:981:U:H2'	1:CA:982:U:C5	2.36	0.60
1:CA:1046:A:H3'	1:CA:1047:G:C8	2.37	0.60
23:DA:226:G:H21	23:DA:228:A:H62	1.49	0.60
23:DA:1021:A:H62	23:DA:1141:U:H3	1.48	0.60
24:DB:49:C:OP1	36:DS:97:ARG:N	2.33	0.60
25:DD:108:PRO:HB3	25:DD:143:HIS:HE1	1.66	0.60
26:DE:32:PRO:HA	26:DE:90:THR:HG22	1.84	0.60
36:DS:10:ARG:NH2	36:DS:91:PRO:HB2	2.16	0.60
40:DW:80:PRO:O	40:DW:100:THR:HB	2.01	0.60
51:D7:34:ARG:NH1	51:D7:41:ARG:O	2.34	0.60
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.37	0.60
3:AC:35:GLU:O	3:AC:38:ARG:N	2.34	0.60
23:BA:1177:A:OP1	23:BA:1177:A:H3'	2.02	0.60
23:BA:1607:C:H4'	23:BA:1608:A:O5'	2.02	0.60
23:BA:2199:A:H3'	23:BA:2200:C:H6	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:83:ALA:HA	30:BI:89:TYR:CD2	2.36	0.60
30:BI:115:ALA:HB2	30:BI:129:THR:OG1	2.01	0.60
37:BT:53:ARG:NH1	37:BT:53:ARG:HB3	2.16	0.60
41:BX:36:LYS:HG2	41:BX:54:VAL:HB	1.83	0.60
1:CA:174:C:H2'	1:CA:175:C:H6	1.65	0.60
1:CA:450:G:OP1	16:CP:43:LYS:NZ	2.35	0.60
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.02	0.60
1:CA:1441:G:N2	1:CA:1459:C:C5	2.70	0.60
23:DA:2199:A:H3'	23:DA:2200:C:C6	2.37	0.60
23:DA:2335:A:N7	23:DA:2337:G:C5	2.70	0.60
24:DB:52:A:N6	36:DS:33:LYS:HG2	2.16	0.60
34:DQ:122:GLY:HA2	34:DQ:125:LEU:HD12	1.83	0.60
1:AA:323:U:O3'	20:AT:22:ARG:HD3	2.02	0.60
1:AA:1125:U:H5'	1:AA:1126:U:H5	1.67	0.60
6:AF:67:MET:HE1	6:AF:75:LEU:HD13	1.84	0.60
23:BA:71:A:H2	41:BX:31:HIS:HE1	1.47	0.60
23:BA:1048:A:H4'	23:BA:1049:C:OP1	2.00	0.60
23:BA:1277:G:OP1	56:BA:3727:HOH:O	2.17	0.60
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.84	0.60
1:CA:1305:G:H1'	1:CA:1306:A:C8	2.36	0.60
1:CA:1442(A):G:C2	1:CA:1442(B):A:H2'	2.37	0.60
3:CC:137:ALA:O	3:CC:141:VAL:HG23	2.02	0.60
9:CI:46:ALA:HB1	9:CI:77:ILE:HB	1.84	0.60
9:CI:49:PRO:HG2	9:CI:78:LYS:HA	1.84	0.60
23:DA:1721:G:H2'	23:DA:1740:G:O6	2.01	0.60
23:DA:2712(A):A:H5"	23:DA:2713:A:OP2	2.01	0.60
38:DU:76:TYR:OH	38:DU:92:ARG:NH1	2.35	0.60
48:D4:14:ILE:HG22	48:D4:33:VAL:HG23	1.84	0.60
1:AA:535:A:OP1	56:AA:1882:HOH:O	2.17	0.59
1:AA:904:C:OP2	56:AA:1900:HOH:O	2.17	0.59
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.13	0.59
1:AA:1305:G:H5"	21:AU:5:ASP:HA	1.84	0.59
4:AD:89:THR:HB	4:AD:204:ILE:HD11	1.82	0.59
9:AI:28:VAL:HG21	9:AI:37:PHE:CE2	2.37	0.59
23:BA:253:C:OP2	52:B8:5:LYS:NZ	2.30	0.59
27:BF:129:PHE:CD2	27:BF:163:VAL:HG21	2.37	0.59
50:B6:9:LEU:HD13	50:B6:51:GLU:HG3	1.84	0.59
1:CA:438:G:OP1	4:CD:125:HIS:HE1	1.85	0.59
1:CA:972:C:H2'	10:CJ:55:LYS:HB2	1.84	0.59
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.02	0.59
10:CJ:49:VAL:HG21	14:CN:41:ARG:HB2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.67	0.59
23:DA:994:C:H3'	38:DU:54:LYS:HE3	1.83	0.59
23:DA:2808:U:H5'	23:DA:2891:G:O6	2.02	0.59
25:DD:33:LEU:O	25:DD:64:ILE:HG13	2.02	0.59
44:D0:53:MET:HG3	44:D0:59:LEU:CD2	2.32	0.59
1:AA:986:A:H2'	1:AA:987:G:C8	2.37	0.59
1:AA:1130:A:N6	1:AA:1144:G:H1'	2.17	0.59
1:AA:1162:C:N4	1:AA:1174:G:H1	1.98	0.59
1:AA:1309:G:O6	1:AA:1328:C:N3	2.35	0.59
2:AB:195:ASP:O	8:AH:74:PRO:HG3	2.01	0.59
1:CA:683:G:H2'	1:CA:684:A:C8	2.37	0.59
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.37	0.59
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.83	0.59
10:CJ:20:ALA:O	10:CJ:24:VAL:N	2.35	0.59
23:DA:94:C:H5'	23:DA:94(A):G:OP2	2.01	0.59
23:DA:1796:U:H2'	23:DA:1797:C:C6	2.37	0.59
23:DA:2104:G:N7	23:DA:2186:G:N2	2.49	0.59
1:AA:495:A:O2'	56:AA:1993:HOH:O	2.17	0.59
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.38	0.59
19:AS:62:ILE:HA	19:AS:66:MET:SD	2.42	0.59
23:BA:2612:C:O5'	49:B5:2:ALA:HB3	2.02	0.59
23:BA:2683:C:O2	32:BO:70:LYS:NZ	2.35	0.59
41:BX:27:THR:HG23	41:BX:80:ILE:HG13	1.84	0.59
48:B4:42:PHE:CB	48:B4:43:TYR:HB2	2.27	0.59
1:CA:316:G:OP2	1:CA:351:G:O2'	2.20	0.59
1:CA:542:G:P	4:CD:10:ARG:HH22	2.26	0.59
1:CA:927:G:O2'	1:CA:1503:A:N7	2.35	0.59
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.37	0.59
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.37	0.59
3:CC:11:ARG:HD3	3:CC:178:LEU:O	2.02	0.59
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG12	1.83	0.59
23:DA:580:C:H2'	23:DA:581:C:H6	1.66	0.59
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.84	0.59
23:BA:1449:A:H5'	23:BA:1450:G:OP2	2.03	0.59
23:BA:2773:C:H5"	26:BE:164:ARG:HG2	1.84	0.59
44:B0:27:GLU:HG3	44:B0:68:GLU:HA	1.84	0.59
1:CA:169:C:H2'	1:CA:170:U:H6	1.68	0.59
1:CA:509:A:H5"	4:CD:55:ALA:HB2	1.83	0.59
1:CA:583:A:H2'	1:CA:584:G:O4'	2.02	0.59
1:CA:973:G:H4'	14:CN:41:ARG:HH22	1.68	0.59
4:CD:26:CYS:HA	4:CD:31:CYS:HB2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:72:GLU:OE1	4:CD:207:TYR:OH	2.13	0.59
7:CG:16:LEU:HD22	9:CI:45:ALA:N	2.16	0.59
18:CR:36:ASN:C	18:CR:36:ASN:HD22	2.10	0.59
23:DA:192:C:OP1	56:DA:3825:HOH:O	2.16	0.59
23:DA:330:A:C2	23:DA:1210:A:H2'	2.27	0.59
1:AA:484:G:HO2'	1:AA:485:G:P	2.25	0.59
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.67	0.59
1:AA:1422:G:H5'	32:BO:48:PRO:HB3	1.84	0.59
7:AG:30:ILE:HA	7:AG:105:VAL:HG21	1.83	0.59
23:BA:652(B):A:N3	23:BA:652(B):A:H2'	2.18	0.59
23:BA:2406:U:H2'	23:BA:2406:U:OP2	2.02	0.59
40:BW:84:ARG:HG3	40:BW:98:LYS:HD2	1.84	0.59
1:CA:765:G:H5"	1:CA:766:A:OP1	2.03	0.59
1:CA:1015:A:H2'	1:CA:1016:A:O4'	2.02	0.59
1:CA:1117:G:H1'	1:CA:1184:G:H22	1.66	0.59
9:CI:9:ARG:HB2	9:CI:14:VAL:HG13	1.83	0.59
23:DA:873:G:N2	23:DA:905:U:O2	2.36	0.59
23:DA:1049:C:H4'	23:DA:1050:A:OP1	2.02	0.59
23:DA:1639:U:C2'	23:DA:1640:C:H5"	2.33	0.59
23:DA:2294:C:P	36:DS:89:ARG:HH22	2.26	0.59
1:AA:501:C:H1'	1:AA:549:C:H1'	1.85	0.59
1:AA:833:U:H2'	1:AA:834:C:C6	2.37	0.59
1:AA:958:A:N6	19:AS:77:THR:O	2.35	0.59
1:AA:975:A:H4'	1:AA:976:G:H5"	1.84	0.59
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.17	0.59
18:AR:44:LEU:HD21	18:AR:70:ILE:HD13	1.85	0.59
23:BA:61:G:H1	23:BA:94:C:H42	1.49	0.59
23:BA:2820:A:OP1	35:BR:4:LEU:HD23	2.01	0.59
1:CA:166:G:N7	56:CA:1921:HOH:O	2.32	0.59
1:CA:627:G:H2'	1:CA:628:G:H8	1.68	0.59
1:CA:737:A:H2'	1:CA:738:C:C6	2.37	0.59
1:CA:1158:C:O2'	1:CA:1160:G:OP1	2.12	0.59
1:CA:1371:G:H5"	9:CI:69:GLY:N	2.13	0.59
1:CA:1442(B):A:N7	37:DT:118:ARG:NH2	2.50	0.59
3:CC:115:LEU:HA	3:CC:118:GLN:HG2	1.85	0.59
13:CM:24:GLY:HA3	13:CM:66:LEU:HD22	1.84	0.59
40:DW:79:GLY:HA3	40:DW:100:THR:HG22	1.85	0.59
1:AA:186:C:H2'	1:AA:187:C:H6	1.68	0.59
1:AA:1321:C:C5'	1:AA:1322:C:H5"	2.32	0.59
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.83	0.59
23:BA:196:A:O4'	33:BP:46:LYS:HE2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BU:76:TYR:CE2	38:BU:80:ILE:HG13	2.37	0.59
1:CA:615:C:H2'	1:CA:616:G:H8	1.68	0.59
1:CA:753:A:OP1	15:CO:69:TYR:OH	2.19	0.59
1:CA:1203:C:OP1	14:CN:3:ARG:NH1	2.33	0.59
1:CA:1249:C:N4	1:CA:1287:A:H5'	2.18	0.59
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.66	0.59
23:DA:911:A:OP1	56:DA:4345:HOH:O	2.17	0.59
31:DN:42:TRP:CD1	31:DN:48:MET:HE1	2.38	0.59
36:DS:67:ARG:HG2	36:DS:71:ARG:NH2	2.18	0.59
1:AA:652:U:C2	1:AA:752:G:N2	2.71	0.59
1:AA:1325:C:H5'	21:AU:17:THR:HG21	1.85	0.59
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.03	0.59
14:AN:24:CYS:HB2	14:AN:40:CYS:HB3	1.85	0.59
23:BA:1049:C:H2'	23:BA:1050:A:H8	1.68	0.59
27:BF:85:GLY:O	56:BF:403:HOH:O	2.15	0.59
28:BG:124:SER:HB2	28:BG:131:TYR:CE1	2.37	0.59
29:BH:117:PRO:HB3	29:BH:123:PHE:CE2	2.37	0.59
1:CA:408:A:OP1	4:CD:113:SER:OG	2.17	0.59
1:CA:833:U:H2'	1:CA:834:C:H6	1.67	0.59
1:CA:913:A:H4'	1:CA:914:A:O5'	2.03	0.59
1:CA:1442(B):A:N7	37:DT:118:ARG:CZ	2.66	0.59
6:CF:70:ASP:N	6:CF:70:ASP:OD1	2.36	0.59
23:DA:586:A:N1	23:DA:809:G:O2'	2.34	0.59
23:DA:928:G:N1	56:DA:4230:HOH:O	2.32	0.59
1:AA:266:G:H5"	1:AA:267:C:C5	2.38	0.59
1:AA:858:G:O6	1:AA:869:G:H3'	2.02	0.59
1:AA:983:A:H3'	1:AA:984:C:C5'	2.33	0.59
1:AA:1178:G:O2'	1:AA:1180:A:N7	2.33	0.59
1:AA:1328:C:OP1	13:AM:28:ALA:HB1	2.03	0.59
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.84	0.59
19:AS:10:PHE:HZ	19:AS:37:ARG:HD3	1.68	0.59
22:AX:14:GLU:HA	22:AX:17:ARG:HD3	1.83	0.59
23:BA:203:C:H3'	23:BA:204:A:H5"	1.85	0.59
23:BA:2272:U:H5"	23:BA:2273:A:OP1	2.02	0.59
27:BF:50:SER:HB2	27:BF:94:PRO:HD3	1.84	0.59
41:BX:8:ILE:O	46:B2:36:ARG:NH2	2.35	0.59
1:CA:382:A:H2'	1:CA:383:A:H8	1.68	0.59
1:CA:1189:C:OP1	14:CN:58:LYS:NZ	2.29	0.59
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.03	0.59
18:CR:31:LEU:H	18:CR:31:LEU:HD23	1.67	0.59
23:DA:1050:A:H2'	23:DA:1051:G:H8	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1509(A):A:H3'	23:DA:1509(B):A:H8	1.67	0.59
42:DY:23:ARG:HG2	42:DY:42:VAL:HG22	1.83	0.59
1:AA:1459:C:C6	1:AA:1460:A:C5	2.91	0.59
3:AC:27:LYS:O	3:AC:31:HIS:CE1	2.55	0.59
23:BA:546:C:H2'	23:BA:547:A:H5'	1.83	0.59
23:BA:784:A:H5'	23:BA:785:G:OP1	2.02	0.59
23:BA:1047:G:H21	23:BA:1111:A:N6	2.01	0.59
1:CA:377:G:H2'	1:CA:378:G:C8	2.37	0.59
1:CA:857:C:H2'	1:CA:858:G:O4'	2.03	0.59
1:CA:944:G:H2'	1:CA:1338:G:O6	2.02	0.59
1:CA:1246:C:N3	1:CA:1291:G:O6	2.36	0.59
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.85	0.59
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.37	0.59
7:CG:64:GLN:HG3	7:CG:128:ALA:HB1	1.85	0.59
1:AA:626:U:H2'	1:AA:627:G:C8	2.37	0.58
4:AD:18:LYS:HA	4:AD:33:MET:HG3	1.84	0.58
12:AL:79:GLU:O	12:AL:80:HIS:HB2	2.01	0.58
23:BA:1790:C:H5"	23:BA:1791:A:OP1	2.02	0.58
23:BA:1865:G:H5'	23:BA:1866:C:OP2	2.03	0.58
23:BA:2406:U:OP1	56:BA:4496:HOH:O	2.17	0.58
45:B1:3:LYS:HB2	45:B1:61:ARG:HH11	1.68	0.58
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.38	0.58
1:CA:1269:A:OP1	21:CU:24:ARG:HB2	2.03	0.58
2:CB:69:LEU:HD22	2:CB:91:PRO:HB2	1.85	0.58
9:CI:29:ASN:HD21	9:CI:65:VAL:H	1.51	0.58
14:CN:24:CYS:HA	14:CN:39:LEU:HA	1.85	0.58
23:DA:1156:A:C8	38:DU:51:LYS:HD2	2.38	0.58
23:DA:2150:U:H2'	23:DA:2151:G:H8	1.68	0.58
23:DA:2321:G:H2'	23:DA:2321:G:N3	2.17	0.58
41:DX:8:ILE:O	46:D2:36:ARG:NH2	2.36	0.58
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.38	0.58
1:AA:1309:G:N1	1:AA:1328:C:O2	2.27	0.58
3:AC:127:ARG:HB3	3:AC:127:ARG:NH1	2.17	0.58
9:AI:27:THR:HB	9:AI:62:TYR:CD1	2.38	0.58
23:BA:2196:C:OP2	56:BA:4415:HOH:O	2.17	0.58
31:BN:120:LEU:HD22	31:BN:122:VAL:HG23	1.83	0.58
23:DA:908:C:OP1	34:DQ:22:LYS:HB3	2.03	0.58
23:DA:1833:U:H2'	23:DA:1834:U:H6	1.68	0.58
23:DA:1882:C:H5'	23:DA:1883:G:OP2	2.02	0.58
23:DA:1899:G:N3	23:DA:1899:G:H2'	2.17	0.58
23:DA:1997:G:OP2	56:DA:4358:HOH:O	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2406:U:C2	33:DP:72:PRO:HG2	2.38	0.58
23:DA:2612:C:O5'	49:D5:2:ALA:HB3	2.03	0.58
24:DB:43:C:H5"	48:D4:1:MET:HG2	1.86	0.58
25:DD:142:VAL:HG23	25:DD:193:VAL:HA	1.85	0.58
28:DG:60:LEU:HD23	28:DG:63:ILE:HD12	1.85	0.58
28:DG:72:ARG:HH12	28:DG:87:PRO:HG3	1.68	0.58
1:AA:988:G:H4'	1:AA:1014:A:H61	1.69	0.58
1:AA:1131:G:H1	1:AA:1143:G:N2	2.00	0.58
1:AA:1156:G:N2	1:AA:1179:A:H61	2.01	0.58
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.03	0.58
7:AG:99:LEU:HD23	7:AG:102:ARG:HH22	1.67	0.58
18:AR:36:ASN:C	18:AR:36:ASN:HD22	2.10	0.58
23:BA:8:A:OP1	31:BN:121:LYS:NZ	2.36	0.58
23:BA:226:G:H21	23:BA:228:A:H62	1.50	0.58
23:BA:588:U:H2'	23:BA:589:C:C6	2.38	0.58
23:BA:1426:G:N7	25:BD:31:LYS:NZ	2.51	0.58
1:CA:102:G:H2'	1:CA:103:C:C6	2.38	0.58
1:CA:1121:U:H2'	1:CA:1122:U:H5'	1.85	0.58
1:CA:1124:G:O2'	10:CJ:38:ILE:HG21	2.03	0.58
1:CA:1442:G:N7	1:CA:1442(A):G:C5	2.71	0.58
2:CB:195:ASP:O	8:CH:74:PRO:HG3	2.02	0.58
7:CG:14:PRO:HA	7:CG:21:VAL:HA	1.84	0.58
8:CH:31:PHE:CE2	8:CH:35:ILE:HD11	2.38	0.58
23:DA:314:A:C2'	23:DA:315:G:H5'	2.32	0.58
23:DA:2298:A:N6	23:DA:2318:G:H8	1.98	0.58
26:DE:128:SER:OG	26:DE:129:HIS:N	2.35	0.58
29:DH:124:GLU:HB2	29:DH:132:ARG:HB3	1.85	0.58
1:AA:279:A:C5	17:AQ:98:LEU:HD23	2.39	0.58
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.69	0.58
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.85	0.58
23:BA:184:C:H2'	23:BA:185:U:C6	2.38	0.58
23:BA:581:C:H2'	23:BA:582:G:H8	1.69	0.58
1:CA:100:C:H2'	1:CA:101:A:C8	2.38	0.58
1:CA:606:G:H5"	1:CA:607:A:H5'	1.85	0.58
1:CA:979:C:H42	14:CN:18:VAL:HG12	1.66	0.58
3:CC:137:ALA:HA	3:CC:140:ARG:HB2	1.84	0.58
4:CD:193:ASP:N	4:CD:193:ASP:OD1	2.35	0.58
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.69	0.58
23:DA:2023:G:H5'	23:DA:2617:C:H4'	1.85	0.58
33:DP:39:LYS:CB	33:DP:45:LEU:HG	2.32	0.58
1:AA:31:G:N7	56:AA:1893:HOH:O	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:414:A:H2'	1:AA:415:A:C8	2.39	0.58
1:AA:615:C:H2'	1:AA:616:G:H8	1.68	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.38	0.58
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.03	0.58
25:BD:148:GLU:HB2	25:BD:151:LYS:HD2	1.86	0.58
1:CA:353:A:H5'	1:CA:353:A:H8	1.69	0.58
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.35	0.58
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.12	0.58
2:CB:136:VAL:HA	2:CB:139:LYS:HB3	1.85	0.58
23:DA:1045:A:H4'	23:DA:1047:G:C4	2.38	0.58
23:DA:1991:U:H2'	23:DA:1992:G:H5"	1.86	0.58
23:DA:2406:U:H2'	23:DA:2406:U:OP2	2.04	0.58
28:DG:56:ALA:HA	28:DG:153:ARG:HH21	1.67	0.58
45:D1:23:LYS:HB3	45:D1:29:GLY:HA3	1.85	0.58
1:AA:76:C:H3'	1:AA:77:G:H5"	1.85	0.58
1:AA:148:G:H2'	1:AA:149:A:C8	2.34	0.58
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.67	0.58
4:AD:26:CYS:HA	4:AD:31:CYS:HB2	1.84	0.58
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.03	0.58
13:AM:3:ARG:HB3	13:AM:8:GLU:O	2.04	0.58
13:AM:19:LEU:O	13:AM:22:ILE:HB	2.04	0.58
19:AS:44:MET:O	19:AS:47:HIS:ND1	2.37	0.58
23:BA:581:C:H2'	23:BA:582:G:C8	2.39	0.58
23:BA:2610:C:H4'	23:BA:2611:U:OP2	2.04	0.58
28:BG:11:TYR:CZ	28:BG:16:ARG:HD3	2.38	0.58
30:BI:77:LEU:HB3	30:BI:142:VAL:HG12	1.85	0.58
1:CA:174:C:H2'	1:CA:175:C:C6	2.37	0.58
1:CA:951:G:N2	1:CA:952:U:H1'	2.19	0.58
23:DA:2115:G:C2	23:DA:2117:A:N7	2.71	0.58
29:DH:46:GLU:HB2	29:DH:49:VAL:HG12	1.83	0.58
37:DT:11:GLU:OE1	37:DT:57:PHE:HB3	2.03	0.58
51:D7:47:ARG:HH11	51:D7:47:ARG:HG3	1.69	0.58
1:AA:223:U:H2'	1:AA:224:C:H6	1.68	0.58
3:AC:3:ASN:OD1	3:AC:3:ASN:N	2.37	0.58
12:AL:83:VAL:HG13	12:AL:100:ILE:HG23	1.86	0.58
20:AT:61:SER:O	20:AT:65:LYS:HG2	2.03	0.58
23:BA:662:G:OP1	56:BA:4541:HOH:O	2.17	0.58
23:BA:1021:A:H62	23:BA:1141:U:H3	1.52	0.58
23:BA:1351:C:H3'	56:BA:3914:HOH:O	2.03	0.58
23:BA:1352:U:P	56:BA:3914:HOH:O	2.60	0.58
47:B3:10:LYS:NZ	47:B3:15:TYR:OH	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:300:A:H1'	1:CA:565:U:O2	2.04	0.58
11:CK:27:ASN:OD1	11:CK:28:THR:N	2.36	0.58
19:CS:51:VAL:O	19:CS:57:HIS:HA	2.04	0.58
23:DA:1047:G:H2'	23:DA:1110:G:H1	1.67	0.58
30:DI:104:GLN:HG2	30:DI:105:HIS:CD2	2.38	0.58
34:DQ:43:THR:OG1	34:DQ:45:GLN:HG2	2.04	0.58
1:AA:17:U:H2'	1:AA:18:C:C6	2.38	0.58
1:AA:1253:G:C6	1:AA:1254:C:C4	2.91	0.58
18:AR:35:ARG:HB3	18:AR:35:ARG:HH11	1.66	0.58
23:BA:2892:A:H2'	23:BA:2893:G:H5'	1.84	0.58
24:BB:14:U:O3'	24:BB:108:U:O2'	2.20	0.58
2:CB:28:PHE:HD2	2:CB:194:PRO:HG3	1.68	0.58
7:CG:92:SER:HB2	7:CG:93:PRO:HD2	1.85	0.58
19:CS:36:ARG:HB3	19:CS:72:GLY:CA	2.34	0.58
23:DA:19:C:H2'	23:DA:20:C:H6	1.69	0.58
23:DA:546:C:H6	23:DA:547:A:H5'	1.68	0.58
23:DA:548:A:N6	39:DV:19:LYS:H	2.02	0.58
23:DA:1188:U:H4'	39:DV:79:VAL:HG22	1.84	0.58
23:DA:2235:G:O6	56:DA:4468:HOH:O	2.17	0.58
34:DQ:54:MET:HE3	34:DQ:64:ILE:HD13	1.85	0.58
1:AA:857:C:H2'	1:AA:858:G:O4'	2.04	0.58
1:AA:972:C:O2	10:AJ:55:LYS:HG3	2.03	0.58
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.29	0.58
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.69	0.58
1:AA:1231:G:H2'	1:AA:1232:U:C6	2.39	0.58
10:AJ:25:GLU:O	10:AJ:29:ARG:N	2.35	0.58
16:AP:29:ASP:OD2	16:AP:29:ASP:N	2.35	0.58
22:AX:56:VAL:H	22:AX:59:GLY:HA2	1.69	0.58
23:BA:1429:G:H2'	23:BA:1430:C:H6	1.67	0.58
23:BA:1899:G:H2'	23:BA:1899:G:N3	2.18	0.58
23:BA:2002:G:OP2	35:BR:9:LYS:NZ	2.37	0.58
1:CA:56:U:H2'	1:CA:57:G:C8	2.38	0.58
1:CA:194:C:H2'	1:CA:195:A:H5"	1.85	0.58
1:CA:652:U:C2	1:CA:752:G:N2	2.71	0.58
1:CA:785:G:C2'	1:CA:786:G:H5'	2.34	0.58
1:CA:814:A:H2'	1:CA:816:A:H5"	1.85	0.58
1:CA:1097:C:O2'	1:CA:1170:A:H1'	2.04	0.58
3:CC:18:TRP:HD1	14:CN:54:PRO:HA	1.69	0.58
3:CC:160:ALA:HB3	3:CC:164:ARG:NH2	2.19	0.58
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.85	0.58
23:DA:536:A:H2'	23:DA:537:C:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:543:C:H3'	23:DA:545:G:O4'	2.04	0.58
23:DA:661:C:O3'	56:DA:4438:HOH:O	2.17	0.58
23:DA:1602:U:O4	56:DA:3941:HOH:O	2.14	0.58
23:DA:2136:C:N4	23:DA:2155:G:H1	1.98	0.58
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.84	0.58
23:BA:2593:U:H2'	23:BA:2594:C:C6	2.39	0.58
41:BX:32:PRO:HA	41:BX:77:LYS:HB2	1.84	0.58
19:CS:36:ARG:HB3	19:CS:72:GLY:N	2.18	0.58
20:CT:63:ILE:HD12	20:CT:81:LYS:HG2	1.85	0.58
23:DA:141:A:C8	23:DA:1408:C:O2'	2.55	0.58
23:DA:298:G:H5"	23:DA:299:A:OP1	2.04	0.58
23:DA:1047:G:H2'	23:DA:1110:G:N2	2.19	0.58
23:DA:1628:G:H2'	23:DA:1629:U:C6	2.39	0.58
1:AA:601:C:H2'	1:AA:602:A:H8	1.68	0.57
1:AA:664:G:P	18:AR:64:ARG:HH21	2.27	0.57
1:AA:1095:U:H5"	1:AA:1109:C:O2	2.04	0.57
5:AE:12:LEU:HB3	5:AE:31:LEU:HB3	1.86	0.57
9:AI:13:ALA:HA	9:AI:67:GLY:HA3	1.86	0.57
23:BA:83:G:N2	23:BA:102:G:H2'	2.19	0.57
23:BA:883:G:H1	23:BA:893:C:N4	2.02	0.57
23:BA:885:C:N3	23:BA:886:C:H1'	2.19	0.57
23:BA:1689:A:N6	23:BA:1698:A:H2	1.93	0.57
24:BB:52:A:O2'	24:BB:53:A:H5"	2.03	0.57
1:CA:303:A:H2'	1:CA:304:U:O4'	2.04	0.57
1:CA:709:G:H2'	1:CA:710:G:H8	1.69	0.57
1:CA:958:A:N3	1:CA:985:C:O2'	2.37	0.57
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.04	0.57
1:CA:1345:U:O2	1:CA:1375:A:N6	2.37	0.57
1:AA:374:A:N1	1:AA:390:C:O2'	2.36	0.57
1:AA:448:A:OP2	1:AA:485:G:N1	2.35	0.57
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.18	0.57
1:AA:1318:A:H1'	19:AS:37:ARG:NH2	2.19	0.57
2:AB:69:LEU:HD22	2:AB:91:PRO:HB2	1.85	0.57
2:AB:71:VAL:O	2:AB:165:VAL:HG23	2.05	0.57
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.36	0.57
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.02	0.57
23:BA:647:G:N7	56:BA:5356:HOH:O	2.32	0.57
23:BA:2161:C:H2'	23:BA:2162:G:C8	2.38	0.57
23:BA:2294:C:P	36:BS:89:ARG:HH22	2.27	0.57
23:BA:2377:A:H2'	23:BA:2378:A:C8	2.39	0.57
24:BB:103:G:OP2	56:BB:314:HOH:O	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:626:U:H2'	1:CA:627:G:C8	2.39	0.57
1:CA:1441:G:C2	1:CA:1459:C:H5	2.21	0.57
2:CB:17:PHE:H	2:CB:17:PHE:HD2	1.50	0.57
7:CG:31:MET:HE3	7:CG:34:GLY:HA2	1.85	0.57
8:CH:6:ILE:O	8:CH:10:LEU:HG	2.04	0.57
21:CU:12:LYS:HB3	21:CU:22:ARG:HH11	1.69	0.57
27:DF:101:LEU:HD12	27:DF:102:PRO:HD2	1.85	0.57
28:DG:77:ILE:N	28:DG:82:LEU:O	2.37	0.57
1:AA:153:C:N3	1:AA:169:C:N4	2.52	0.57
1:AA:745:C:H2'	1:AA:746:A:H8	1.69	0.57
1:AA:1459:C:C2'	1:AA:1460:A:C8	2.87	0.57
2:AB:80:ILE:HD11	2:AB:215:LEU:HB2	1.86	0.57
9:AI:29:ASN:HB2	9:AI:36:TYR:CZ	2.38	0.57
13:AM:15:VAL:HG12	13:AM:45:VAL:HG23	1.87	0.57
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.69	0.57
23:BA:769:G:O6	56:BA:4262:HOH:O	2.13	0.57
23:BA:1014:U:H2'	23:BA:1015:G:H8	1.69	0.57
23:BA:2318:G:N2	36:BS:3:ARG:HH11	2.02	0.57
1:CA:448:A:OP2	1:CA:485:G:N1	2.31	0.57
1:CA:1007:C:H2'	1:CA:1008:C:C5	2.39	0.57
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.53	0.57
1:CA:1130:A:H61	1:CA:1144:G:C1'	2.15	0.57
3:CC:132:ARG:O	3:CC:136:GLN:N	2.32	0.57
23:DA:2562:U:H1'	32:DO:23:ARG:HH11	1.69	0.57
42:DY:92:ASN:N	42:DY:93:GLY:HA2	2.19	0.57
50:D6:9:LEU:HD13	50:D6:51:GLU:HG3	1.85	0.57
1:AA:606:G:H5"	1:AA:607:A:H5'	1.86	0.57
1:AA:1320:C:H1'	19:AS:73:GLU:HB3	1.85	0.57
1:AA:1492:A:H2'	1:AA:1492:A:N3	2.19	0.57
7:AG:35:LYS:HD2	7:AG:38:LEU:HB3	1.86	0.57
23:BA:631:A:OP2	52:B8:47:LYS:NZ	2.22	0.57
23:BA:2184:G:H2'	23:BA:2185:C:O4'	2.03	0.57
23:BA:2853:C:H2'	23:BA:2854:G:H8	1.69	0.57
34:BQ:122:GLY:HA2	34:BQ:125:LEU:HD12	1.86	0.57
1:CA:38:G:C2	1:CA:397:A:C2	2.92	0.57
1:CA:359:U:H2'	1:CA:360:A:H8	1.69	0.57
1:CA:940:C:H1'	1:CA:1374:A:H2	1.68	0.57
4:CD:174:LEU:HD23	4:CD:185:PHE:HA	1.87	0.57
5:CE:68:GLU:CD	5:CE:70:PRO:HG3	2.30	0.57
23:DA:271(M):G:O2'	23:DA:271(N):U:OP1	2.18	0.57
1:AA:677:U:H3	1:AA:713:G:H22	1.50	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1015:A:H2'	1:AA:1016:A:O4'	2.03	0.57
1:AA:1095:U:OP2	1:AA:1108:G:N1	2.31	0.57
1:AA:1458:G:H2'	1:AA:1458:G:N3	2.19	0.57
23:BA:2275:C:H6	23:BA:2275:C:H5'	1.69	0.57
39:BV:56:SER:H	39:BV:100:ARG:HB2	1.67	0.57
43:BZ:125:LEU:HG	43:BZ:164:ALA:HB3	1.87	0.57
1:CA:1347:G:O2'	1:CA:1373:G:N1	2.38	0.57
1:CA:1457:G:C6	1:CA:1458:G:C5	2.92	0.57
2:CB:74:LYS:NZ	2:CB:205:ASP:OD2	2.28	0.57
23:DA:1406:U:H2'	23:DA:1407:C:C6	2.39	0.57
23:DA:1935:G:H1'	23:DA:1964:G:N2	2.19	0.57
25:DD:274:ARG:HA	25:DD:275:LYS:HB3	1.85	0.57
29:DH:3:ARG:CZ	29:DH:4:ILE:H	2.17	0.57
30:DI:135:GLU:C	30:DI:137:PRO:HD3	2.30	0.57
33:DP:46:LYS:HE3	33:DP:51:PHE:CD1	2.40	0.57
38:DU:76:TYR:HH	38:DU:92:ARG:HH11	1.50	0.57
1:AA:414:A:H2'	1:AA:415:A:H8	1.68	0.57
3:AC:17:ASP:O	3:AC:54:ARG:NH2	2.37	0.57
3:AC:36:ASP:O	3:AC:40:ARG:HG2	2.04	0.57
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.86	0.57
8:AH:63:LEU:HB2	8:AH:65:TYR:HE1	1.70	0.57
9:AI:24:GLY:HA2	9:AI:59:PHE:C	2.29	0.57
23:BA:530:G:O4'	23:BA:530:G:N3	2.32	0.57
23:BA:543:C:H3'	23:BA:545:G:O4'	2.05	0.57
23:BA:1495:A:H2'	23:BA:1496:A:C8	2.39	0.57
23:BA:1669:A:H5"	23:BA:2550:G:OP1	2.04	0.57
23:BA:1833:U:H2'	23:BA:1834:U:C6	2.39	0.57
23:BA:2299:G:O6	56:BA:5003:HOH:O	2.14	0.57
37:BT:26:ASP:OD2	37:BT:91:ARG:NH1	2.38	0.57
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.87	0.57
2:CB:87:ARG:HH11	2:CB:219:VAL:HG12	1.69	0.57
7:CG:41:ARG:O	7:CG:45:ASP:N	2.37	0.57
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.86	0.57
28:DG:150:ASP:CG	28:DG:151:ALA:H	2.11	0.57
35:DR:36:THR:HG22	35:DR:37:THR:H	1.70	0.57
1:AA:359:U:H2'	1:AA:360:A:H8	1.70	0.57
1:AA:1002:G:H2'	1:AA:1003:G:H5'	1.85	0.57
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.36	0.57
1:AA:1305:G:H2'	21:AU:6:ARG:H	1.69	0.57
8:AH:121:ASP:N	8:AH:121:ASP:OD1	2.38	0.57
13:AM:64:TRP:HB3	13:AM:66:LEU:HD23	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1014:U:H2'	23:BA:1015:G:C8	2.40	0.57
23:BA:1045:A:H4'	23:BA:1047:G:C4	2.40	0.57
23:BA:2335:A:N7	23:BA:2337:G:C5	2.72	0.57
1:CA:763:G:H2'	1:CA:764:C:H6	1.70	0.57
17:CQ:65:ILE:HD13	17:CQ:69:LYS:HE2	1.86	0.57
23:DA:243:U:OP1	52:D8:6:THR:OG1	2.14	0.57
23:DA:2853:C:H2'	23:DA:2854:G:H8	1.67	0.57
34:DQ:37:LEU:HD21	34:DQ:130:LYS:HB2	1.87	0.57
1:AA:169:C:H2'	1:AA:170:U:C6	2.39	0.57
1:AA:785:G:C2'	1:AA:786:G:H5'	2.35	0.57
1:AA:814:A:OP2	56:AA:2008:HOH:O	2.17	0.57
1:AA:943:U:H2'	1:AA:944:G:O4'	2.03	0.57
1:AA:1321:C:H5"	1:AA:1322:C:H2'	1.86	0.57
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.05	0.57
7:AG:88:PRO:HG2	7:AG:152:ALA:HB2	1.87	0.57
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.04	0.57
23:BA:602:G:O2'	23:BA:655:A:N6	2.37	0.57
23:BA:2790:A:H3'	23:BA:2790:A:N3	2.19	0.57
44:B0:40:GLN:OE1	44:B0:44:ARG:N	2.31	0.57
51:B7:23:ARG:HB3	51:B7:23:ARG:HH11	1.70	0.57
1:CA:76:C:H3'	1:CA:77:G:H5"	1.87	0.57
6:CF:7:ASN:OD1	6:CF:7:ASN:N	2.37	0.57
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.87	0.57
14:CN:22:THR:HG21	14:CN:35:ARG:HG2	1.86	0.57
23:DA:1627:G:OP2	56:DA:3954:HOH:O	2.17	0.57
23:DA:1963:U:H4'	23:DA:1964:G:OP1	2.05	0.57
28:DG:19:LEU:HD22	28:DG:23:PHE:HE1	1.70	0.57
28:DG:32:PRO:HB2	28:DG:172:LEU:HD22	1.87	0.57
49:D5:45:VAL:HG11	49:D5:58:LEU:HD13	1.87	0.57
3:AC:29:TYR:HE1	10:AJ:65:LEU:HD21	1.69	0.57
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.05	0.57
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.38	0.57
33:BP:84:ASN:HB2	33:BP:86:LYS:HD3	1.85	0.57
43:BZ:33:LEU:HD23	43:BZ:90:VAL:HG21	1.87	0.57
1:CA:186:C:H2'	1:CA:187:C:H6	1.69	0.57
1:CA:932:C:H5'	7:CG:3:ARG:HD3	1.86	0.57
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.05	0.57
10:CJ:40:LEU:HD11	10:CJ:69:ASN:HB3	1.86	0.57
23:DA:971:C:OP2	56:DA:4254:HOH:O	2.18	0.57
23:DA:1049:C:H2'	23:DA:1050:A:H8	1.70	0.57
23:DA:1329:U:H5"	23:DA:1330:C:H5	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1434:A:H61	23:DA:1558:A:H62	1.52	0.57
25:DD:2:ALA:HB3	25:DD:20:ASP:HB3	1.86	0.57
30:DI:123:LEU:HD23	30:DI:123:LEU:H	1.69	0.57
42:DY:76:CYS:HB3	42:DY:79:CYS:HB2	1.87	0.57
43:DZ:108:PRO:HB2	43:DZ:111:VAL:HG23	1.85	0.57
49:D5:45:VAL:HA	49:D5:52:TYR:HB2	1.87	0.57
50:D6:16:CYS:HB3	50:D6:43:CYS:SG	2.44	0.57
1:AA:840:C:H4'	1:AA:841:U:OP1	2.05	0.57
1:AA:1179:A:N6	1:AA:1180:A:C6	2.73	0.57
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.40	0.57
3:AC:23:TYR:OH	10:AJ:9:ARG:HD2	2.04	0.57
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	1.87	0.57
23:BA:1174:A:H1'	23:BA:1175:U:H5"	1.87	0.57
23:BA:2321:G:N3	23:BA:2321:G:H2'	2.20	0.57
35:BR:11:ASN:ND2	56:BR:304:HOH:O	2.38	0.57
1:CA:359:U:H2'	1:CA:360:A:C8	2.39	0.57
1:CA:437:U:OP1	4:CD:155:LEU:HG	2.04	0.57
1:CA:683:G:H2'	1:CA:684:A:H8	1.70	0.57
1:CA:1297:C:C4'	1:CA:1298:C:H5'	2.34	0.57
1:CA:1305:G:H1'	1:CA:1306:A:H8	1.70	0.57
19:CS:22:LEU:HA	19:CS:26:GLY:O	2.05	0.57
23:DA:642:G:O6	56:DA:3715:HOH:O	2.16	0.57
23:DA:821:A:H2'	23:DA:946:G:H5"	1.87	0.57
23:DA:1657:C:H2'	23:DA:1658:C:C6	2.39	0.57
23:DA:2184:G:H2'	23:DA:2185:C:O4'	2.05	0.57
1:AA:359:U:H2'	1:AA:360:A:C8	2.40	0.56
1:AA:1072:G:C5	1:AA:1073:U:C4	2.93	0.56
13:AM:70:LEU:H	13:AM:73:GLU:CB	2.17	0.56
23:BA:1022:G:N2	23:BA:1023:U:O4	2.38	0.56
23:BA:1329:U:H5"	23:BA:1330:C:H5	1.69	0.56
23:BA:2461:C:H2'	23:BA:2462:U:C6	2.39	0.56
24:BB:52:A:N6	36:BS:33:LYS:HG2	2.20	0.56
43:BZ:179:ASP:HB2	43:BZ:182:LYS:HD3	1.87	0.56
1:CA:1343:G:H4'	9:CI:122:ALA:HB3	1.86	0.56
23:DA:495:G:H21	40:DW:61:ASN:HD21	1.53	0.56
23:DA:848:G:OP1	56:DA:4235:HOH:O	2.18	0.56
27:DF:184:TYR:O	27:DF:188:ARG:HG3	2.05	0.56
53:D9:10:ILE:N	53:D9:14:CYS:SG	2.77	0.56
1:AA:1245:A:C2'	1:AA:1246:C:H5'	2.35	0.56
1:AA:1249:C:N4	1:AA:1288:A:OP2	2.37	0.56
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:558:G:C5	56:BA:4943:HOH:O	2.57	0.56
23:BA:1882:C:H5'	23:BA:1883:G:OP2	2.06	0.56
23:BA:1991:U:H2'	23:BA:1992:G:H5"	1.87	0.56
24:BB:40:U:H1'	24:BB:45:A:H61	1.70	0.56
25:BD:5:LYS:HA	25:BD:17:THR:HG22	1.88	0.56
1:CA:555:C:H2'	1:CA:556:C:C6	2.40	0.56
20:CT:73:HIS:HB3	20:CT:74:LYS:HG2	1.87	0.56
23:DA:422:A:OP2	56:DA:4080:HOH:O	2.18	0.56
23:DA:580:C:H2'	23:DA:581:C:C6	2.40	0.56
23:DA:1030:G:OP2	34:DQ:128:LYS:NZ	2.35	0.56
23:DA:2591:C:OP1	25:DD:239:ARG:HG2	2.05	0.56
31:DN:96:GLU:H	31:DN:96:GLU:CD	2.13	0.56
33:DP:52:GLU:OE2	52:D8:57:ARG:NH1	2.37	0.56
37:DT:93:ARG:HH11	37:DT:93:ARG:HG2	1.69	0.56
1:AA:21:G:H2'	1:AA:22:G:C8	2.41	0.56
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.39	0.56
1:AA:616:G:C2	1:AA:617:G:C8	2.93	0.56
1:AA:663:A:O3'	18:AR:64:ARG:NH2	2.38	0.56
1:AA:683:G:H2'	1:AA:684:A:C8	2.40	0.56
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.88	0.56
1:AA:1005:A:N6	1:AA:1024:G:O2'	2.39	0.56
1:AA:1148:U:O3'	9:AI:14:VAL:HG21	2.04	0.56
1:AA:1290:G:H3'	1:AA:1291:G:H8	1.70	0.56
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.85	0.56
4:AD:159:ARG:O	4:AD:162:LEU:N	2.38	0.56
23:BA:71:A:H5'	23:BA:71:A:C8	2.40	0.56
23:BA:908:C:OP1	34:BQ:22:LYS:HB3	2.06	0.56
23:BA:1762:A:H8	23:BA:1762:A:O5'	1.88	0.56
23:BA:2023:G:H5'	23:BA:2617:C:H4'	1.87	0.56
23:BA:2322:A:H2'	23:BA:2323:G:O4'	2.05	0.56
26:BE:11:MET:HG2	26:BE:24:THR:HB	1.87	0.56
27:BF:28:ILE:HD13	27:BF:119:ARG:HE	1.69	0.56
28:BG:72:ARG:HH12	28:BG:87:PRO:HG3	1.69	0.56
1:CA:601:C:H2'	1:CA:602:A:H8	1.69	0.56
1:CA:1443:G:O6	1:CA:1459:C:H1'	2.05	0.56
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.86	0.56
17:CQ:45:HIS:CD2	17:CQ:65:ILE:HG12	2.40	0.56
18:CR:35:ARG:HB3	18:CR:35:ARG:HH11	1.68	0.56
23:DA:271(E):U:H2'	23:DA:271(F):C:C6	2.39	0.56
23:DA:747:U:O2	23:DA:2014:A:H1'	2.04	0.56
23:DA:1050:A:C4	23:DA:1051:G:C8	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1403:C:C5'	23:DA:1471:A:H1'	2.35	0.56
23:DA:1607:C:H4'	23:DA:1608:A:O5'	2.04	0.56
23:DA:2110:G:OP2	23:DA:2110:G:H8	1.88	0.56
23:DA:2273:A:H2'	23:DA:2274:A:C8	2.40	0.56
23:DA:2661:G:H2'	23:DA:2662:A:C8	2.41	0.56
31:DN:24:GLY:HA2	31:DN:27:ALA:HB3	1.85	0.56
36:DS:96:GLY:N	36:DS:99:LYS:H	2.03	0.56
40:DW:18:ARG:NH1	40:DW:76:VAL:O	2.38	0.56
40:DW:60:ASN:HD22	40:DW:60:ASN:N	2.02	0.56
43:DZ:82:ARG:HB3	43:DZ:82:ARG:NH2	2.19	0.56
1:AA:738:C:H2'	1:AA:739:C:H6	1.70	0.56
1:AA:1249:C:H2'	1:AA:1250:A:H5"	1.87	0.56
23:BA:690:G:O6	56:BA:5170:HOH:O	2.15	0.56
23:BA:1935:G:H1'	23:BA:1964:G:N2	2.20	0.56
23:BA:1963:U:H4'	23:BA:1964:G:OP1	2.06	0.56
23:BA:2615:U:C2	49:B5:7:PRO:HA	2.40	0.56
29:BH:7:LEU:HD12	29:BH:8:PRO:HD2	1.87	0.56
36:BS:95:HIS:C	36:BS:99:LYS:HB3	2.31	0.56
51:B7:47:ARG:HH11	51:B7:47:ARG:HG3	1.70	0.56
1:CA:192:U:H2'	1:CA:193:C:C6	2.35	0.56
1:CA:858:G:O6	1:CA:869:G:H3'	2.05	0.56
1:CA:1160:G:C6	1:CA:1181:G:N1	2.74	0.56
1:CA:1237:C:N3	1:CA:1337:G:N2	2.53	0.56
5:CE:19:MET:SD	5:CE:24:ARG:HB3	2.46	0.56
23:DA:1131:G:H21	31:DN:73:THR:HG21	1.71	0.56
23:DA:1812:A:O2'	25:DD:45:ASN:N	2.38	0.56
23:DA:1858:G:H1'	23:DA:1884:A:N6	2.21	0.56
23:DA:2322:A:H2'	23:DA:2323:G:O4'	2.05	0.56
26:DE:201:THR:OG1	26:DE:202:LYS:N	2.38	0.56
37:DT:24:PRO:HA	37:DT:49:VAL:HG22	1.87	0.56
37:DT:60:THR:HG22	37:DT:77:PRO:HA	1.87	0.56
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.40	0.56
7:AG:28:ASN:HD21	7:AG:36:LYS:HE2	1.69	0.56
17:AQ:4:LYS:HD2	17:AQ:5:VAL:H	1.71	0.56
23:BA:1786:A:H1'	23:BA:1938:A:N6	2.19	0.56
25:BD:175:LEU:HD12	25:BD:185:VAL:HG21	1.87	0.56
26:BE:9:VAL:HG22	26:BE:25:VAL:HB	1.88	0.56
33:BP:39:LYS:CB	33:BP:45:LEU:HG	2.32	0.56
35:BR:28:LEU:HD12	35:BR:48:VAL:HG21	1.87	0.56
1:CA:828:A:H2'	1:CA:829:G:O4'	2.05	0.56
1:CA:1442(B):A:H62	37:DT:118:ARG:NH2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:74:LYS:O	2:CB:78:GLN:HB2	2.05	0.56
2:CB:88:ALA:HB1	2:CB:222:ILE:HG21	1.88	0.56
7:CG:10:ARG:O	7:CG:94:ARG:NH2	2.38	0.56
23:DA:631:A:OP2	52:D8:47:LYS:NZ	2.25	0.56
35:DR:20:LEU:HD21	35:DR:40:LYS:HD3	1.87	0.56
38:DU:36:ARG:HD2	38:DU:40:PHE:CZ	2.41	0.56
1:AA:277:C:H5"	17:AQ:68:ARG:NH2	2.21	0.56
1:AA:375:U:C2	1:AA:376:G:C8	2.94	0.56
1:AA:1396:A:C2	5:AE:19:MET:HG3	2.41	0.56
23:BA:185:U:H4'	23:BA:218:A:H4'	1.88	0.56
23:BA:252:G:OP2	33:BP:50:ARG:NH1	2.39	0.56
23:BA:559:G:H22	38:BU:49:HIS:CD2	2.23	0.56
23:BA:1430:C:H2'	23:BA:1431:U:C6	2.39	0.56
25:BD:130:ALA:C	25:BD:131:LEU:HD12	2.31	0.56
26:BE:174:ASP:OD2	26:BE:175:VAL:N	2.39	0.56
28:BG:133:LEU:HG	28:BG:157:ILE:HB	1.86	0.56
35:BR:50:HIS:CE1	35:BR:54:LEU:HD21	2.41	0.56
42:BY:86:ARG:HD2	42:BY:100:ALA:HA	1.88	0.56
44:B0:53:MET:HG3	44:B0:59:LEU:CD2	2.35	0.56
1:CA:1142:G:C5	1:CA:1143:G:H1'	2.40	0.56
1:CA:1392:G:H21	1:CA:1502:A:H8	1.52	0.56
3:CC:18:TRP:HE1	14:CN:56:VAL:N	2.02	0.56
6:CF:69:GLU:O	6:CF:72:VAL:HG13	2.06	0.56
12:CL:102:ARG:HA	12:CL:107:ALA:HB1	1.86	0.56
23:DA:1762:A:H8	23:DA:1762:A:O5'	1.87	0.56
23:DA:2835:A:N7	56:DA:4350:HOH:O	2.33	0.56
28:DG:86:MET:O	28:DG:88:ILE:HG13	2.06	0.56
48:D4:35:VAL:HA	48:D4:39:CYS:SG	2.44	0.56
1:AA:1371:G:H4'	9:AI:69:GLY:HA3	1.87	0.56
2:AB:98:LEU:HB2	2:AB:101:MET:HE3	1.88	0.56
6:AF:7:ASN:N	6:AF:7:ASN:OD1	2.38	0.56
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.69	0.56
23:BA:1140:C:O3'	31:BN:25:ARG:NH1	2.38	0.56
23:BA:1173:G:H1'	23:BA:1177:A:H61	1.70	0.56
23:BA:1488:G:N2	23:BA:1502:C:C2	2.73	0.56
23:BA:1494:A:H2'	23:BA:1495:A:C8	2.41	0.56
23:BA:1510:G:H2'	23:BA:1511:C:C6	2.41	0.56
23:BA:2199:A:H3'	23:BA:2200:C:C6	2.41	0.56
32:BO:64:ARG:NH1	32:BO:81:ASP:OD2	2.38	0.56
1:CA:142:G:H2'	1:CA:143:A:C8	2.40	0.56
1:CA:335:C:H2'	1:CA:336:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.06	0.56
1:CA:991:U:H3'	1:CA:1212:U:N3	2.20	0.56
1:CA:1124:G:H2'	1:CA:1126:U:O4	2.05	0.56
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.38	0.56
10:CJ:12:ASP:C	10:CJ:68:HIS:HD2	2.13	0.56
10:CJ:51:ARG:HB2	10:CJ:59:SER:OG	2.05	0.56
23:DA:2477:C:O2	53:D9:4:ARG:NH2	2.35	0.56
28:DG:5:VAL:HG12	48:D4:25:TYR:CE1	2.41	0.56
34:DQ:24:GLY:O	34:DQ:102:VAL:HG23	2.05	0.56
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.41	0.56
1:AA:1276:G:H1'	1:AA:1282:C:O2'	2.05	0.56
7:AG:116:ALA:HA	7:AG:119:ARG:HB3	1.88	0.56
17:AQ:45:HIS:CD2	17:AQ:65:ILE:HG12	2.41	0.56
23:BA:1268:A:H2'	23:BA:1269:A:O4'	2.06	0.56
23:BA:1587:A:H2'	23:BA:1588:C:H6	1.68	0.56
40:BW:80:PRO:O	40:BW:100:THR:HB	2.06	0.56
1:CA:148:G:H2'	1:CA:149:A:C8	2.39	0.56
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.32	0.56
1:CA:1072:G:C5	1:CA:1073:U:C4	2.94	0.56
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.70	0.56
1:CA:1458:G:H2'	1:CA:1458:G:N3	2.20	0.56
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.41	0.56
11:CK:23:ALA:O	11:CK:86:GLY:HA3	2.06	0.56
13:CM:94:ARG:HH11	13:CM:96:LEU:HD12	1.70	0.56
23:DA:1375:C:H3'	56:DA:3934:HOH:O	2.05	0.56
23:DA:1449:A:H5'	23:DA:1450:G:OP2	2.05	0.56
23:DA:1601:G:N7	56:DA:3941:HOH:O	2.33	0.56
23:DA:2335:A:O2'	23:DA:2336:A:OP2	2.21	0.56
43:DZ:158:PRO:O	43:DZ:161:VAL:HB	2.06	0.56
1:AA:160:A:H2'	1:AA:161:A:O4'	2.05	0.56
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.88	0.56
15:AO:69:TYR:HA	15:AO:72:ARG:HD3	1.86	0.56
1:CA:540:G:H2'	1:CA:541:G:O4'	2.06	0.56
1:CA:966:G:OP2	1:CA:966:G:H8	1.88	0.56
1:CA:1084:G:H21	1:CA:1102:A:H62	1.54	0.56
1:CA:1222:G:H5"	19:CS:78:ARG:HE	1.70	0.56
3:CC:125:GLU:HG3	3:CC:189:ALA:HB1	1.88	0.56
23:DA:751:A:H5'	40:DW:90:ARG:HA	1.86	0.56
23:DA:1865:G:H5'	23:DA:1866:C:OP2	2.06	0.56
23:DA:2492:U:H2'	23:DA:2493:U:C6	2.40	0.56
29:DH:144:VAL:O	29:DH:148:ILE:HG12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DS:15:ARG:O	36:DS:19:LYS:HG2	2.06	0.56
36:DS:99:LYS:HE2	36:DS:103:GLU:OE2	2.06	0.56
1:AA:692:U:O2'	1:AA:694:A:N7	2.39	0.56
2:AB:51:LEU:O	2:AB:55:PHE:HD2	1.89	0.56
3:AC:11:ARG:NE	3:AC:180:ALA:HB3	2.20	0.56
7:AG:139:GLU:HB3	7:AG:143:ARG:CZ	2.34	0.56
19:AS:36:ARG:HB2	19:AS:72:GLY:HA3	1.87	0.56
23:BA:546:C:H6	23:BA:547:A:H5'	1.70	0.56
24:BB:8:U:O3'	36:BS:25:ARG:NH2	2.39	0.56
25:BD:118:VAL:N	25:BD:129:ASN:ND2	2.53	0.56
1:CA:631:G:H2'	1:CA:632:A:C8	2.41	0.56
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.40	0.56
1:CA:1492:A:N3	1:CA:1492:A:H2'	2.21	0.56
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.06	0.56
2:CB:82:ARG:HG2	2:CB:92:TYR:OH	2.05	0.56
23:DA:275:G:C2'	23:DA:276:A:H5'	2.36	0.56
23:DA:1635:G:OP1	56:DA:3959:HOH:O	2.18	0.56
26:DE:174:ASP:OD2	26:DE:175:VAL:N	2.37	0.56
43:DZ:151:HIS:HD2	43:DZ:168:GLU:O	1.89	0.56
46:D2:13:ALA:HA	46:D2:16:LEU:HD12	1.88	0.56
52:D8:61:LEU:C	52:D8:63:PRO:HD3	2.31	0.56
1:AA:684:A:H2'	1:AA:685:G:C8	2.41	0.55
1:AA:999:C:H2'	1:AA:1000:U:H6	1.70	0.55
1:AA:1441:G:N2	1:AA:1459:C:H5	2.02	0.55
5:AE:68:GLU:CD	5:AE:70:PRO:HG3	2.31	0.55
23:BA:2298:A:N6	23:BA:2318:G:H8	2.02	0.55
23:BA:2591:C:OP2	25:BD:239:ARG:HB3	2.06	0.55
23:BA:2690:C:OP2	35:BR:14:SER:HB3	2.06	0.55
1:CA:189(F):U:O2	17:CQ:63:ARG:NH2	2.38	0.55
1:CA:434:U:H2'	1:CA:435:C:H6	1.69	0.55
1:CA:1033:G:C8	1:CA:1034:G:C8	2.94	0.55
1:CA:1254:C:N3	1:CA:1283:G:N2	2.54	0.55
7:CG:113:GLU:HG3	7:CG:119:ARG:HG3	1.88	0.55
22:CX:76:GLY:O	22:CX:80:LYS:HG2	2.05	0.55
28:DG:89:GLY:C	28:DG:90:LEU:HD23	2.31	0.55
32:DO:73:ASP:OD1	37:DT:32:TYR:OH	2.07	0.55
1:AA:626:U:H2'	1:AA:627:G:H8	1.72	0.55
1:AA:833:U:H2'	1:AA:834:C:H6	1.70	0.55
1:AA:1037:C:H2'	1:AA:1038:C:H6	1.70	0.55
1:AA:1459:C:C5'	1:AA:1460:A:OP2	2.54	0.55
3:AC:23:TYR:CG	10:AJ:10:GLY:HA2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.88	0.55
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.39	0.55
23:BA:1050:A:C4	23:BA:1051:G:C8	2.95	0.55
23:BA:1357:U:OP2	56:BA:4686:HOH:O	2.18	0.55
24:BB:20:C:C2'	24:BB:21:G:H5'	2.36	0.55
28:BG:86:MET:O	28:BG:88:ILE:HG13	2.06	0.55
3:CC:154:SER:O	3:CC:196:LEU:HD13	2.07	0.55
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.21	0.55
7:CG:71:PRO:HG3	7:CG:103:TRP:CZ3	2.42	0.55
23:DA:1364:G:C8	45:D1:3:LYS:HD3	2.41	0.55
23:DA:2845:G:O2'	23:DA:2846:G:H5'	2.06	0.55
24:DB:66:A:N6	24:DB:109:C:H5'	2.19	0.55
26:DE:52:LEU:HB3	26:DE:76:ARG:HG2	1.89	0.55
43:DZ:52:SER:OG	43:DZ:53:ILE:N	2.39	0.55
1:AA:68:G:H22	1:AA:101:A:H2	1.54	0.55
1:AA:344:A:H4'	1:AA:345:C:OP2	2.06	0.55
1:AA:434:U:H2'	1:AA:435:C:H6	1.70	0.55
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.06	0.55
1:AA:1442(A):G:C5	1:AA:1442(B):A:C2	2.94	0.55
2:AB:97:TRP:CZ3	2:AB:99:GLY:HA2	2.40	0.55
19:AS:63:THR:H	19:AS:66:MET:CG	2.20	0.55
35:BR:117:VAL:HG12	35:BR:118:GLU:H	1.71	0.55
37:BT:106:SER:O	37:BT:110:ILE:HG12	2.06	0.55
1:CA:266:G:H5"	1:CA:267:C:C5	2.41	0.55
1:CA:428:G:H4'	1:CA:429:U:O5'	2.06	0.55
1:CA:553:A:H2'	1:CA:554:C:C6	2.41	0.55
1:CA:997:U:O4	1:CA:1044:A:N1	2.39	0.55
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.87	0.55
20:CT:90:GLN:O	20:CT:93:GLU:HB3	2.06	0.55
23:DA:364:C:OP2	56:DA:4247:HOH:O	2.18	0.55
23:DA:1019:U:H3	23:DA:1142(A):A:N6	1.99	0.55
23:DA:1366:A:OP1	45:D1:3:LYS:NZ	2.38	0.55
23:DA:1638:C:O2	23:DA:2698:U:O2'	2.25	0.55
23:DA:2014:A:OP1	56:DA:3657:HOH:O	2.18	0.55
1:AA:583:A:H2'	1:AA:584:G:O4'	2.06	0.55
1:AA:745:C:H2'	1:AA:746:A:C8	2.40	0.55
1:AA:806:C:H2'	1:AA:807:A:H8	1.70	0.55
1:AA:1305:G:N1	1:AA:1331:G:O2'	2.32	0.55
10:AJ:43:ARG:O	10:AJ:67:THR:HG23	2.06	0.55
13:AM:91:ARG:HB2	13:AM:98:VAL:HG22	1.87	0.55
23:BA:652(S):C:H2'	23:BA:652(T):C:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2096:U:H3	23:BA:2193:G:H1	1.54	0.55
23:BA:2562:U:H1'	32:BO:23:ARG:HD3	1.87	0.55
33:BP:50:ARG:HD3	52:B8:7:HIS:CD2	2.41	0.55
37:BT:20:PRO:HG2	37:BT:86:ILE:O	2.05	0.55
42:BY:15:VAL:HG21	42:BY:42:VAL:HG11	1.89	0.55
45:B1:94:LEU:O	45:B1:97:LEU:HB2	2.06	0.55
1:CA:615:C:H2'	1:CA:616:G:C8	2.42	0.55
1:CA:616:G:C2	1:CA:617:G:C8	2.95	0.55
1:CA:626:U:H2'	1:CA:627:G:H8	1.72	0.55
6:CF:55:ASP:HB3	6:CF:86:ARG:HH12	1.72	0.55
23:DA:1632:A:N6	56:DA:3946:HOH:O	2.40	0.55
1:AA:957:U:N3	1:AA:960:U:OP2	2.39	0.55
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.06	0.55
1:AA:1250:A:H2'	1:AA:1251:A:O4'	2.07	0.55
2:AB:178:ARG:HH22	8:AH:68:ARG:HH22	1.54	0.55
23:BA:511:U:C5	23:BA:512:G:C5	2.94	0.55
23:BA:536:A:H2'	23:BA:537:C:C6	2.40	0.55
23:BA:1018:C:O2'	23:BA:1019:U:H5'	2.07	0.55
23:BA:1509(A):A:H3'	23:BA:1509(B):A:H8	1.71	0.55
1:CA:17:U:H2'	1:CA:18:C:C6	2.41	0.55
1:CA:575:G:H4'	1:CA:575:G:OP1	2.06	0.55
1:CA:946:A:N6	1:CA:1235:U:H3	2.03	0.55
1:CA:1060:C:H4'	10:CJ:51:ARG:HB3	1.87	0.55
2:CB:137:ARG:HB2	2:CB:137:ARG:NH1	2.20	0.55
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.88	0.55
3:CC:118:GLN:HA	3:CC:121:ALA:HB3	1.87	0.55
3:CC:172:ARG:HH21	3:CC:174:PRO:HG3	1.71	0.55
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.07	0.55
23:DA:27:G:HO2'	23:DA:28:A:P	2.27	0.55
23:DA:652(S):C:H2'	23:DA:652(T):C:O4'	2.05	0.55
23:DA:1833:U:H2'	23:DA:1834:U:C6	2.41	0.55
1:AA:865:A:H2'	1:AA:866:C:C6	2.42	0.55
1:AA:1276:G:N2	1:AA:1283:G:O4'	2.39	0.55
1:AA:1452:C:O2'	1:AA:1456:G:OP2	2.20	0.55
2:AB:55:PHE:CD1	2:AB:58:ILE:HD12	2.41	0.55
2:AB:80:ILE:HG13	2:AB:215:LEU:HD12	1.89	0.55
23:BA:443:A:N7	27:BF:45:ARG:HG2	2.21	0.55
23:BA:674:G:C1'	27:BF:74:ARG:HD3	2.37	0.55
23:BA:1419:A:O2'	23:BA:1421:G:N7	2.32	0.55
23:BA:1889:A:H2'	23:BA:1890:A:C8	2.41	0.55
2:CB:187:LEU:HD23	2:CB:201:ILE:HB	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.89	0.55
12:CL:25:PRO:C	12:CL:27:LEU:H	2.11	0.55
14:CN:23:ARG:HD2	14:CN:28:GLY:C	2.31	0.55
23:DA:922:U:O4	56:DA:4224:HOH:O	2.16	0.55
23:DA:1509(B):A:H3'	23:DA:1510:G:H8	1.72	0.55
28:DG:59:GLU:O	28:DG:63:ILE:N	2.40	0.55
48:D4:14:ILE:HD11	48:D4:24:THR:OG1	2.06	0.55
1:AA:55:A:C5	1:AA:56:U:C5	2.95	0.55
1:AA:575:G:OP1	1:AA:575:G:H4'	2.07	0.55
1:AA:1002:G:C2'	1:AA:1003:G:H5'	2.35	0.55
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.07	0.55
20:AT:16:HIS:O	20:AT:19:SER:OG	2.21	0.55
23:BA:2732:G:H3'	23:BA:2733:A:O4'	2.07	0.55
30:BI:74:ASN:HD22	30:BI:75:LEU:HD13	1.70	0.55
1:CA:223:U:H2'	1:CA:224:C:C6	2.41	0.55
1:CA:277:C:H5"	17:CQ:68:ARG:NH2	2.22	0.55
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.06	0.55
23:DA:2463:C:C2'	23:DA:2464:C:H5'	2.37	0.55
24:DB:52:A:O2'	24:DB:53:A:H5"	2.06	0.55
31:DN:99:LEU:HD22	31:DN:103:VAL:HG23	1.89	0.55
34:DQ:42:ILE:HD13	34:DQ:97:VAL:HG21	1.89	0.55
37:DT:23:ARG:HG3	37:DT:120:ARG:NH1	2.22	0.55
3:AC:42:LEU:O	3:AC:46:GLU:HB2	2.06	0.55
13:AM:3:ARG:NH2	13:AM:10:PRO:O	2.29	0.55
23:BA:71:A:H2	41:BX:31:HIS:CE1	2.24	0.55
23:BA:141:A:H8	23:BA:1408:C:HO2'	1.47	0.55
23:BA:548:A:N6	39:BV:19:LYS:H	2.04	0.55
30:BI:81:VAL:O	30:BI:146:ALA:HA	2.06	0.55
1:CA:920:U:C2	1:CA:921:U:C5	2.95	0.55
1:CA:999:C:H2'	1:CA:1000:U:C6	2.41	0.55
3:CC:2:GLY:N	56:CC:301:HOH:O	2.40	0.55
23:DA:196:A:O4'	33:DP:46:LYS:HE2	2.07	0.55
23:DA:2319:G:H22	36:DS:3:ARG:HD2	1.71	0.55
24:DB:55:U:O3'	28:DG:27:ASN:ND2	2.40	0.55
25:DD:175:LEU:HD12	25:DD:185:VAL:HG21	1.89	0.55
27:DF:65:TRP:HH2	27:DF:72:ARG:HH21	1.55	0.55
27:DF:123:LEU:HD13	27:DF:192:LEU:HD13	1.88	0.55
33:DP:112:LEU:HD22	33:DP:113:LYS:N	2.22	0.55
35:DR:12:ARG:HG2	35:DR:16:HIS:CG	2.42	0.55
38:DU:59:ARG:O	38:DU:63:VAL:HG23	2.07	0.55
1:AA:1065:U:H6	1:AA:1190:G:N2	2.01	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:9:VAL:HG21	7:AG:94:ARG:HE	1.71	0.55
14:AN:37:PHE:CE1	14:AN:53:LEU:HD13	2.41	0.55
23:BA:272:G:N7	23:BA:421:U:H2'	2.22	0.55
23:BA:2629:A:O2'	23:BA:2630:G:OP2	2.17	0.55
33:BP:38:GLN:O	33:BP:40:SER:N	2.40	0.55
36:BS:49:VAL:HG13	36:BS:76:LYS:HD2	1.89	0.55
40:BW:18:ARG:NH1	40:BW:76:VAL:O	2.39	0.55
1:CA:932:C:C5'	7:CG:3:ARG:HD3	2.37	0.55
1:CA:978:A:H5"	1:CA:979:C:OP2	2.06	0.55
1:CA:1189:C:P	10:CJ:51:ARG:HH22	2.30	0.55
3:CC:152:ILE:HD12	3:CC:199:LYS:HB2	1.88	0.55
7:CG:75:VAL:HA	7:CG:87:VAL:O	2.07	0.55
7:CG:137:LYS:HA	7:CG:140:ASP:CG	2.32	0.55
17:CQ:4:LYS:HD2	17:CQ:5:VAL:H	1.71	0.55
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.42	0.55
23:DA:1419:A:O2'	23:DA:1421:G:N7	2.29	0.55
30:DI:134:PRO:C	30:DI:136:VAL:H	2.14	0.55
37:DT:109:GLU:O	37:DT:113:LYS:N	2.35	0.55
42:DY:43:ASN:OD1	42:DY:65:ALA:HB3	2.07	0.55
1:AA:737:A:H2'	1:AA:738:C:C6	2.41	0.55
3:AC:191:THR:O	3:AC:194:GLY:N	2.36	0.55
11:AK:21:ILE:HB	11:AK:84:VAL:HG22	1.88	0.55
17:AQ:48:GLU:HB2	17:AQ:50:LYS:HG2	1.88	0.55
23:BA:885:C:N4	23:BA:890:A:C5	2.71	0.55
23:BA:1279:G:H4'	35:BR:31:HIS:CD2	2.42	0.55
23:BA:1406:U:H2'	23:BA:1407:C:C6	2.42	0.55
23:BA:1858:G:H1'	23:BA:1884:A:N6	2.22	0.55
23:BA:2753:A:N3	53:B9:15:LYS:NZ	2.54	0.55
25:BD:274:ARG:HA	25:BD:275:LYS:HB3	1.88	0.55
26:BE:52:LEU:HB3	26:BE:76:ARG:HG2	1.88	0.55
28:BG:60:LEU:HD23	28:BG:63:ILE:HD12	1.89	0.55
1:CA:537:G:H5"	12:CL:113:ARG:NH1	2.21	0.55
1:CA:678:U:H2'	1:CA:679:C:C6	2.41	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.07	0.55
5:CE:76:ILE:HG22	5:CE:93:PRO:HB3	1.89	0.55
10:CJ:48:THR:HA	10:CJ:62:HIS:HA	1.89	0.55
23:DA:517:C:OP1	49:D5:16:ARG:NH2	2.40	0.55
23:DA:1300:U:H4'	23:DA:1301:A:C5'	2.36	0.55
23:DA:1494:A:H2'	23:DA:1495:A:H8	1.70	0.55
23:DA:2463:C:O2'	23:DA:2464:C:H5'	2.07	0.55
23:DA:2699:C:H2'	23:DA:2700:C:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:542:G:H2'	1:AA:543:C:C6	2.42	0.54
1:AA:598:U:H2'	1:AA:599:C:C6	2.42	0.54
1:AA:918:A:H2'	1:AA:919:A:C8	2.42	0.54
2:AB:218:ALA:O	2:AB:222:ILE:HG13	2.07	0.54
6:AF:61:LEU:HB3	6:AF:63:TYR:CE2	2.41	0.54
7:AG:35:LYS:HD2	7:AG:38:LEU:HD22	1.88	0.54
23:BA:275:G:C2'	23:BA:276:A:H5'	2.37	0.54
23:BA:530:G:N1	56:BA:4475:HOH:O	2.16	0.54
23:BA:2110:G:H8	23:BA:2110:G:OP2	1.89	0.54
23:BA:2577:A:OP1	56:BA:4599:HOH:O	2.18	0.54
27:BF:46:ARG:HG2	27:BF:46:ARG:HH11	1.72	0.54
30:BI:21:VAL:HG23	30:BI:22:LYS:O	2.07	0.54
33:BP:38:GLN:C	33:BP:40:SER:H	2.14	0.54
45:B1:23:LYS:HB3	45:B1:29:GLY:HA3	1.89	0.54
48:B4:18:CYS:SG	48:B4:39:CYS:HB3	2.47	0.54
1:CA:668:G:O2'	15:CO:46:HIS:HB3	2.07	0.54
1:CA:840:C:H4'	1:CA:841:U:OP1	2.06	0.54
1:CA:1002:G:N2	1:CA:1039:C:H1'	2.19	0.54
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB3	1.89	0.54
23:DA:271(D):G:H2'	23:DA:271(E):U:O4'	2.07	0.54
23:DA:530:G:O4'	23:DA:530:G:N3	2.40	0.54
23:DA:1019:U:O2'	23:DA:1021:A:H2	1.90	0.54
23:DA:2867:G:OP2	37:DT:119:LYS:NZ	2.35	0.54
1:AA:1142:G:C5	1:AA:1143:G:H1'	2.42	0.54
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.11	0.54
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.71	0.54
31:BN:15:LEU:HD12	31:BN:137:LYS:HG2	1.90	0.54
34:BQ:43:THR:N	34:BQ:46:GLN:OE1	2.40	0.54
1:CA:21:G:H2'	1:CA:22:G:C8	2.42	0.54
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.08	0.54
1:CA:1459:C:C4	1:CA:1460:A:N6	2.75	0.54
2:CB:95:GLN:HG3	2:CB:147:LYS:HD3	1.89	0.54
13:CM:69:GLU:C	13:CM:71:ARG:H	2.15	0.54
23:DA:652(B):A:H2'	23:DA:652(B):A:N3	2.22	0.54
23:DA:1912:A:O2'	23:DA:1913:A:OP2	2.25	0.54
27:DF:28:ILE:HD13	27:DF:119:ARG:HE	1.71	0.54
28:DG:38:VAL:HG22	28:DG:93:THR:HG23	1.89	0.54
28:DG:178:PHE:HB3	28:DG:180:PHE:CE1	2.43	0.54
30:DI:12:LEU:HD22	30:DI:19:VAL:HG21	1.89	0.54
37:DT:53:ARG:HB3	37:DT:53:ARG:HH11	1.71	0.54
1:AA:192:U:H2'	1:AA:193:C:C6	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:615:C:H2'	1:AA:616:G:C8	2.42	0.54
1:AA:951:G:C6	1:AA:1231:G:C6	2.96	0.54
1:AA:1090:U:H3	1:AA:1095:U:H3	1.56	0.54
2:AB:77:ALA:HB2	2:AB:211:ILE:HG12	1.88	0.54
6:AF:91:VAL:HG12	6:AF:92:LYS:O	2.07	0.54
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.07	0.54
23:BA:2319:G:C2	36:BS:3:ARG:HA	2.42	0.54
23:BA:2880:C:O3'	35:BR:90:ARG:NH1	2.40	0.54
26:BE:32:PRO:HA	26:BE:90:THR:HG22	1.89	0.54
38:BU:58:ARG:HA	38:BU:61:TRP:CE3	2.43	0.54
44:B0:55:ARG:CZ	44:B0:55:ARG:HB3	2.37	0.54
1:CA:148:G:O2'	1:CA:149:A:H5'	2.08	0.54
1:CA:429:U:H3'	4:CD:22:LYS:NZ	2.22	0.54
1:CA:1127:G:H5'	9:CI:66:ARG:HH22	1.72	0.54
3:CC:122:GLU:HA	3:CC:125:GLU:HB2	1.88	0.54
9:CI:17:VAL:HG21	9:CI:80:GLY:HA3	1.89	0.54
23:DA:2753:A:N3	53:D9:15:LYS:NZ	2.55	0.54
23:DA:2884:U:O2	49:D5:53:ALA:HB2	2.08	0.54
28:DG:37:VAL:HG23	28:DG:99:MET:HG3	1.88	0.54
33:DP:38:GLN:O	33:DP:40:SER:N	2.40	0.54
41:DX:5:TYR:CZ	46:D2:30:ARG:HB2	2.42	0.54
51:D7:8:ASN:C	51:D7:8:ASN:OD1	2.50	0.54
1:AA:753:A:OP1	15:AO:69:TYR:OH	2.24	0.54
1:AA:944:G:N2	1:AA:1338:G:C8	2.75	0.54
1:AA:977:A:H2'	1:AA:978:A:H5'	1.89	0.54
2:AB:51:LEU:HD23	2:AB:55:PHE:HE2	1.73	0.54
13:AM:20:THR:HG23	13:AM:26:GLY:HA2	1.89	0.54
23:BA:271(M):G:O2'	23:BA:271(N):U:OP1	2.16	0.54
36:BS:67:ARG:HG2	36:BS:71:ARG:NH2	2.23	0.54
37:BT:51:ARG:HG3	37:BT:98:LYS:HE3	1.89	0.54
23:DA:997:G:OP1	38:DU:92:ARG:HG2	2.07	0.54
23:DA:2526:G:H5'	23:DA:2742:C:O2'	2.08	0.54
23:DA:2836:U:C4	23:DA:2883:A:N6	2.76	0.54
26:DE:72:VAL:HA	26:DE:73:GLU:OE2	2.08	0.54
1:AA:407:G:H1	1:AA:435:C:H42	1.55	0.54
1:AA:749:C:H2'	1:AA:750:G:H8	1.72	0.54
1:AA:1025:U:O2	1:AA:1036:G:C6	2.61	0.54
1:AA:1239:A:O2'	7:AG:114:ARG:HB2	2.07	0.54
1:AA:1333:A:H3'	1:AA:1334:G:C8	2.40	0.54
23:BA:630:G:N2	23:BA:633:A:OP2	2.38	0.54
23:BA:2307:G:H5'	23:BA:2308:G:N2	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2492:U:H2'	23:BA:2493:U:H6	1.73	0.54
28:BG:116:ASP:H	28:BG:136:ARG:HH22	1.54	0.54
1:CA:160:A:H2'	1:CA:161:A:O4'	2.07	0.54
1:CA:1030(A):G:H2'	1:CA:1030(C):G:OP2	2.08	0.54
1:CA:1242:C:O2'	1:CA:1303:C:H5"	2.08	0.54
1:CA:1490:C:H2'	1:CA:1491:G:O4'	2.07	0.54
2:CB:71:VAL:O	2:CB:165:VAL:HG23	2.07	0.54
2:CB:80:ILE:HD11	2:CB:215:LEU:HB2	1.88	0.54
7:CG:23:VAL:HG22	7:CG:43:PHE:HE2	1.71	0.54
23:DA:185:U:H4'	23:DA:218:A:H4'	1.90	0.54
23:DA:446:G:OP2	56:DA:4028:HOH:O	2.19	0.54
23:DA:1028:A:N6	23:DA:1125:G:H2'	2.22	0.54
28:DG:66:GLN:HG2	48:D4:1:MET:HE1	1.89	0.54
31:DN:56:ASN:H	31:DN:125:GLY:HA3	1.72	0.54
33:DP:38:GLN:C	33:DP:40:SER:H	2.13	0.54
1:AA:154:C:H42	1:AA:167:G:H1	1.55	0.54
1:AA:509:A:H5"	4:AD:55:ALA:HB2	1.88	0.54
1:AA:1261:A:H61	1:AA:1274:G:C2'	2.21	0.54
1:AA:1469:G:H2'	1:AA:1470:G:C8	2.43	0.54
2:AB:137:ARG:HB2	2:AB:137:ARG:NH1	2.21	0.54
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.89	0.54
17:AQ:65:ILE:H	17:AQ:65:ILE:HD12	1.73	0.54
23:BA:1019:U:O2'	23:BA:1021:A:H2	1.91	0.54
23:BA:2463:C:C2'	23:BA:2464:C:H5'	2.37	0.54
30:BI:92:VAL:HG13	30:BI:120:ILE:HB	1.90	0.54
42:BY:90:LEU:C	42:BY:92:ASN:H	2.15	0.54
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.73	0.54
1:CA:392:G:H5'	16:CP:13:HIS:CE1	2.42	0.54
1:CA:826:C:H2'	1:CA:827:U:C6	2.42	0.54
1:CA:1298:C:H5"	1:CA:1299:A:C8	2.43	0.54
3:CC:186:PHE:HE1	3:CC:197:GLY:HA2	1.71	0.54
4:CD:18:LYS:HA	4:CD:33:MET:HG3	1.90	0.54
17:CQ:92:ARG:O	17:CQ:95:TYR:HB2	2.07	0.54
23:DA:51:G:O2'	23:DA:119:A:N1	2.39	0.54
23:DA:315:G:H2'	23:DA:316:C:C6	2.43	0.54
23:DA:2357:U:O2	56:DA:4163:HOH:O	2.18	0.54
23:DA:2850:A:C2	23:DA:2851:A:C4	2.96	0.54
24:DB:61:G:C6	24:DB:62:C:C4	2.95	0.54
44:D0:27:GLU:HG3	44:D0:68:GLU:HA	1.90	0.54
47:D3:18:ASP:OD1	47:D3:18:ASP:N	2.35	0.54
1:AA:539:A:H2'	1:AA:540:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:945:G:H2'	1:AA:945:G:N3	2.22	0.54
3:AC:23:TYR:CD2	10:AJ:95:GLU:HB2	2.43	0.54
9:AI:9:ARG:HG2	9:AI:104:ARG:HE	1.72	0.54
14:AN:24:CYS:SG	14:AN:25:VAL:N	2.80	0.54
23:BA:493:G:O6	56:BA:4858:HOH:O	2.18	0.54
23:BA:1912:A:O2'	23:BA:1913:A:OP2	2.25	0.54
26:BE:112:GLY:O	26:BE:159:HIS:HA	2.08	0.54
35:BR:103:ARG:HH12	35:BR:110:PRO:HD3	1.72	0.54
46:B2:51:ARG:O	46:B2:55:ARG:HB2	2.06	0.54
1:CA:65:U:H2'	1:CA:381:C:H5	1.73	0.54
3:CC:181:ASN:ND2	3:CC:204:LEU:O	2.41	0.54
7:CG:18:TYR:CE1	7:CG:58:PRO:HB2	2.43	0.54
23:DA:1507:A:O2'	23:DA:1508:A:O5'	2.17	0.54
24:DB:105:A:OP1	43:DZ:72:ARG:NH1	2.38	0.54
29:DH:69:ARG:HG3	29:DH:70:THR:N	2.23	0.54
1:AA:157:G:H1	1:AA:164:U:H3	1.56	0.54
1:AA:631:G:H2'	1:AA:632:A:C8	2.42	0.54
1:AA:1255:G:H5"	3:AC:26:LYS:NZ	2.22	0.54
5:AE:76:ILE:HG22	5:AE:93:PRO:HB3	1.90	0.54
16:AP:72:ARG:HG2	16:AP:73:LEU:HD23	1.90	0.54
23:BA:1534:U:H3'	23:BA:1535:A:N1	2.23	0.54
23:BA:1693:U:O2'	25:BD:14:ARG:NH2	2.40	0.54
23:BA:1774:C:O5'	23:BA:1774:C:H6	1.91	0.54
27:BF:126:VAL:HG21	27:BF:129:PHE:CE1	2.43	0.54
42:BY:92:ASN:N	42:BY:93:GLY:HA2	2.22	0.54
47:B3:7:LYS:HG3	47:B3:34:GLU:HG2	1.90	0.54
1:CA:605:U:H2'	1:CA:606:G:H8	1.72	0.54
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.90	0.54
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.73	0.54
1:CA:1443:G:H1	1:CA:1459:C:C2'	2.20	0.54
15:CO:75:PRO:O	15:CO:78:TYR:HB3	2.07	0.54
23:DA:903:C:H2'	23:DA:904:C:C6	2.43	0.54
23:DA:2116:G:H4'	23:DA:2117:A:OP1	2.08	0.54
23:DA:2849:U:H4'	23:DA:2868:A:C2	2.43	0.54
27:DF:11:VAL:O	27:DF:17:ARG:HA	2.08	0.54
1:AA:380:G:N2	1:AA:384:G:C5	2.76	0.54
1:AA:390:C:H2'	1:AA:391:G:C8	2.43	0.54
1:AA:1368:G:OP2	9:AI:112:LYS:HG2	2.07	0.54
2:AB:87:ARG:HH11	2:AB:219:VAL:HG12	1.72	0.54
3:AC:34:LEU:HD13	14:AN:25:VAL:HG11	1.89	0.54
20:AT:73:HIS:HB3	20:AT:74:LYS:HG2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1485:G:H1	23:BA:1504:C:H42	1.56	0.54
37:BT:109:GLU:O	37:BT:113:LYS:N	2.36	0.54
1:CA:922:G:N3	1:CA:1398:A:H2	2.06	0.54
1:CA:1181:G:N2	1:CA:1182:G:H22	2.06	0.54
1:CA:1260:C:OP1	1:CA:1284:C:H4'	2.08	0.54
1:CA:1266:G:OP2	1:CA:1266:G:H8	1.90	0.54
4:CD:173:TRP:CD2	4:CD:189:PRO:HG3	2.43	0.54
23:DA:603:A:H4'	23:DA:604:G:H5'	1.89	0.54
23:DA:878:A:H2'	23:DA:879:G:H5'	1.90	0.54
23:DA:1321:A:H2'	23:DA:1322:A:O4'	2.08	0.54
23:DA:2562:U:H1'	32:DO:23:ARG:HD3	1.90	0.54
39:DV:78:LYS:O	56:DV:202:HOH:O	2.18	0.54
45:D1:2:SER:HB3	45:D1:46:LEU:HD11	1.90	0.54
51:D7:9:ARG:HH21	51:D7:47:ARG:HD3	1.73	0.54
1:AA:877:C:H5"	8:AH:88:LYS:HD3	1.90	0.54
1:AA:964:A:H5"	1:AA:1198:G:O3'	2.08	0.54
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.27	0.54
1:AA:1118:C:O4'	1:AA:1179:A:C4	2.60	0.54
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.08	0.54
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.72	0.54
23:BA:322:A:OP1	27:BF:168:ARG:NH1	2.41	0.54
23:BA:975(A):G:H1'	23:BA:990:A:C2	2.43	0.54
23:BA:1050:A:H2'	23:BA:1051:G:H8	1.72	0.54
23:BA:1173:G:O2'	23:BA:1174:A:O5'	2.26	0.54
23:BA:1586:A:H8	23:BA:1586:A:O5'	1.90	0.54
23:BA:1815:A:OP2	25:BD:54:ARG:NH2	2.41	0.54
27:BF:11:VAL:O	27:BF:17:ARG:HA	2.08	0.54
27:BF:64:ILE:HD12	27:BF:65:TRP:CE3	2.42	0.54
28:BG:44:GLY:HA2	28:BG:88:ILE:HG22	1.90	0.54
48:B4:36:CYS:N	48:B4:39:CYS:SG	2.76	0.54
1:CA:60:A:H4'	1:CA:61:G:O5'	2.08	0.54
1:CA:393:A:OP2	16:CP:12:LYS:HD2	2.08	0.54
1:CA:1076:C:H42	1:CA:1081:G:H1	1.56	0.54
1:CA:1157:A:C2	1:CA:1180:A:H2'	2.43	0.54
1:CA:1507:A:O3'	56:CA:2020:HOH:O	2.18	0.54
2:CB:24:TRP:HZ3	2:CB:29:ALA:HB2	1.73	0.54
3:CC:43:LEU:O	3:CC:47:LEU:HB2	2.08	0.54
9:CI:70:LYS:HA	9:CI:73:GLN:HB2	1.90	0.54
23:DA:307:G:N2	23:DA:309:G:H3'	2.23	0.54
23:DA:828:U:H4'	23:DA:831:G:N1	2.23	0.54
23:DA:2461:C:H2'	23:DA:2462:U:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:7:PRO:HB3	3:AC:175:LEU:HD21	1.90	0.53
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.91	0.53
15:AO:75:PRO:O	15:AO:78:TYR:HB3	2.08	0.53
20:AT:26:ASN:OD1	20:AT:71:THR:HG23	2.08	0.53
23:BA:1364:G:C8	45:B1:3:LYS:HD3	2.43	0.53
23:BA:1427:A:H4'	23:BA:1428:C:O5'	2.06	0.53
23:BA:1812:A:O2'	25:BD:45:ASN:N	2.40	0.53
23:BA:1948:G:O6	56:BA:4989:HOH:O	2.18	0.53
23:BA:2513:G:N2	26:BE:143:ASN:HD21	2.06	0.53
31:BN:56:ASN:H	31:BN:125:GLY:HA3	1.73	0.53
36:BS:10:ARG:NH2	36:BS:91:PRO:HB2	2.23	0.53
1:CA:123:C:O2'	1:CA:290:C:O2	2.20	0.53
1:CA:279:A:C5	17:CQ:98:LEU:HD23	2.42	0.53
3:CC:30:ARG:HG3	3:CC:31:HIS:CD2	2.43	0.53
9:CI:29:ASN:H	9:CI:63:ILE:HG22	1.73	0.53
13:CM:19:LEU:HA	13:CM:22:ILE:HD12	1.89	0.53
23:DA:9:U:H3	23:DA:2629:A:H2	1.52	0.53
23:DA:911:A:H2'	34:DQ:9:TYR:OH	2.08	0.53
25:DD:148:GLU:HB2	25:DD:151:LYS:HD2	1.90	0.53
28:DG:124:SER:HB2	28:DG:131:TYR:CZ	2.43	0.53
30:DI:101:LEU:HD21	30:DI:107:VAL:HG12	1.90	0.53
35:DR:36:THR:HG22	35:DR:37:THR:N	2.23	0.53
1:AA:1269:A:C8	1:AA:1270:C:H1'	2.43	0.53
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.08	0.53
3:AC:40:ARG:HE	3:AC:55:VAL:HB	1.73	0.53
4:AD:177:ASP:CG	4:AD:180:GLY:HA3	2.33	0.53
12:AL:70:ILE:HG12	12:AL:100:ILE:HD13	1.90	0.53
23:BA:445:C:OP1	38:BU:2:PRO:HA	2.08	0.53
23:BA:603:A:H4'	23:BA:604:G:H5'	1.90	0.53
1:CA:35:G:H2'	1:CA:36:C:C6	2.43	0.53
1:CA:950:U:O4	1:CA:1231:G:O6	2.26	0.53
1:CA:1288:A:N3	1:CA:1352:C:O2'	2.41	0.53
1:CA:1304:G:N2	1:CA:1332:A:OP2	2.38	0.53
1:CA:1305:G:H2'	21:CU:4:GLY:O	2.08	0.53
1:CA:1394:A:N1	1:CA:1500:A:O2'	2.36	0.53
5:CE:127:ASN:O	5:CE:131:ILE:HG12	2.09	0.53
7:CG:26:PHE:HZ	7:CG:105:VAL:HB	1.73	0.53
7:CG:113:GLU:HB2	7:CG:118:VAL:HB	1.90	0.53
7:CG:114:ARG:O	7:CG:119:ARG:NH1	2.36	0.53
8:CH:85:ARG:NE	8:CH:87:SER:O	2.41	0.53
15:CO:69:TYR:HA	15:CO:72:ARG:HD3	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:46:GLY:HA2	19:CS:61:TYR:HE1	1.73	0.53
31:DN:120:LEU:HD22	31:DN:122:VAL:HG23	1.90	0.53
1:AA:1249:C:OP1	9:AI:36:TYR:OH	2.24	0.53
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.09	0.53
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.74	0.53
34:BQ:27:VAL:HG11	34:BQ:134:ARG:HG2	1.89	0.53
1:CA:35:G:N2	1:CA:550:G:H1'	2.23	0.53
1:CA:262:A:H2'	1:CA:263:A:C8	2.43	0.53
1:CA:598:U:H2'	1:CA:599:C:C6	2.43	0.53
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.35	0.53
23:DA:19:C:H2'	23:DA:20:C:C6	2.43	0.53
23:DA:649:G:H2'	23:DA:650:C:C6	2.43	0.53
23:DA:674:G:C1'	27:DF:74:ARG:HD3	2.38	0.53
23:DA:1140:C:OP1	31:DN:23:LEU:O	2.25	0.53
30:DI:5:LEU:HD11	30:DI:19:VAL:HG22	1.90	0.53
32:DO:10:VAL:HG13	32:DO:17:ARG:O	2.09	0.53
32:DO:73:ASP:OD2	32:DO:73:ASP:N	2.39	0.53
36:DS:99:LYS:O	36:DS:103:GLU:HG3	2.08	0.53
1:AA:262:A:C6	1:AA:263:A:C6	2.97	0.53
1:AA:447:G:H2'	1:AA:485:G:N2	2.23	0.53
7:AG:30:ILE:O	7:AG:32:ARG:NH1	2.41	0.53
23:BA:271(E):U:H3	23:BA:271(S):G:H1	1.57	0.53
23:BA:1929:G:OP1	56:BA:3707:HOH:O	2.18	0.53
23:BA:2884:U:O2	49:B5:53:ALA:HB2	2.08	0.53
26:BE:201:THR:OG1	26:BE:202:LYS:N	2.41	0.53
27:BF:68:LYS:HB3	27:BF:69:HIS:ND1	2.23	0.53
1:CA:157:G:H1	1:CA:164:U:H3	1.55	0.53
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.09	0.53
1:CA:447:G:H2'	1:CA:485:G:N2	2.22	0.53
1:CA:1192:C:H6	1:CA:1192:C:H3'	1.74	0.53
3:CC:148:GLY:HA3	3:CC:172:ARG:H	1.73	0.53
6:CF:7:ASN:ND2	18:CR:34:TYR:HE1	2.05	0.53
23:DA:71:A:H5'	23:DA:71:A:C8	2.44	0.53
23:DA:413:C:H6	23:DA:413:C:O5'	1.92	0.53
23:DA:729:G:OP2	25:DD:13:ARG:NH1	2.40	0.53
23:DA:769:G:H5'	23:DA:1379:A:N6	2.23	0.53
23:DA:1026:U:H5"	23:DA:1026:U:O2	2.09	0.53
23:DA:1138:G:O2'	31:DN:105:GLY:HA3	2.08	0.53
23:DA:1252:G:C2	23:DA:1253:A:C2	2.96	0.53
23:DA:1279:G:H4'	35:DR:31:HIS:CD2	2.43	0.53
23:DA:2602:A:H1'	23:DA:2603:G:C5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2732:G:H3'	23:DA:2733:A:O4'	2.07	0.53
23:DA:2741:A:H2'	23:DA:2742:C:O4'	2.08	0.53
26:DE:9:VAL:HG13	26:DE:25:VAL:O	2.09	0.53
31:DN:36:GLY:HA2	31:DN:38:HIS:CE1	2.43	0.53
33:DP:84:ASN:HB2	33:DP:86:LYS:HD3	1.90	0.53
37:DT:64:ARG:HB2	37:DT:73:GLU:HG2	1.89	0.53
1:AA:77:G:O6	1:AA:78:G:C2	2.62	0.53
1:AA:350:G:O2'	1:AA:351:G:H5'	2.08	0.53
1:AA:951:G:N1	1:AA:1231:G:C5	2.77	0.53
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.73	0.53
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.44	0.53
13:AM:23:TYR:CE1	13:AM:70:LEU:HB3	2.44	0.53
13:AM:67:GLU:HB3	13:AM:71:ARG:HH21	1.73	0.53
15:AO:4:THR:O	15:AO:8:LYS:N	2.35	0.53
23:BA:459:U:H4'	51:B7:40:TRP:CZ3	2.44	0.53
23:BA:2296:U:N3	23:BA:2333:A:N3	2.56	0.53
1:CA:407:G:H1	1:CA:435:C:H42	1.55	0.53
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.73	0.53
10:CJ:45:ARG:HB3	10:CJ:65:LEU:HB3	1.91	0.53
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.43	0.53
23:DA:1352:U:P	56:DA:3932:HOH:O	2.67	0.53
23:DA:2097:C:H2'	23:DA:2098:U:O4'	2.08	0.53
23:DA:2318:G:H22	36:DS:3:ARG:HH11	1.56	0.53
24:DB:2:C:H2'	24:DB:3:C:C6	2.42	0.53
42:DY:79:CYS:HB3	42:DY:81:LYS:H	1.73	0.53
1:AA:14:U:O4	56:AA:2012:HOH:O	2.18	0.53
1:AA:176:C:H2'	1:AA:177:C:C6	2.44	0.53
1:AA:542:G:H2'	1:AA:543:C:H6	1.73	0.53
1:AA:683:G:H2'	1:AA:684:A:H8	1.73	0.53
1:AA:826:C:H4'	8:AH:12:ARG:HD3	1.91	0.53
1:AA:969:A:H2'	1:AA:970:C:H5'	1.90	0.53
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.74	0.53
1:AA:1441:G:C2	1:AA:1459:C:C5	2.97	0.53
1:AA:1490:C:H2'	1:AA:1491:G:O4'	2.09	0.53
3:AC:56:ASP:HB3	3:AC:69:HIS:HE1	1.73	0.53
25:BD:101:GLU:OE1	25:BD:103:ARG:NH1	2.40	0.53
28:BG:145:THR:OG1	28:BG:146:TYR:N	2.40	0.53
48:B4:40:HIS:CE1	48:B4:42:PHE:HB2	2.44	0.53
1:CA:414:A:H2'	1:CA:415:A:C8	2.44	0.53
1:CA:1349:A:H5'	9:CI:120:ARG:HB3	1.90	0.53
1:CA:1457:G:C6	1:CA:1458:G:N7	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:23:TYR:CE2	10:CJ:95:GLU:HB2	2.44	0.53
17:CQ:50:LYS:HD3	17:CQ:51:TYR:CE1	2.44	0.53
23:DA:2133:G:H21	23:DA:2158:A:H62	1.55	0.53
23:DA:2513:G:N2	26:DE:143:ASN:HD21	2.07	0.53
23:DA:2638:G:P	26:DE:82:ARG:HH22	2.31	0.53
25:DD:131:LEU:HD22	25:DD:136:ILE:HG12	1.91	0.53
41:DX:35:THR:O	41:DX:39:ILE:HG13	2.08	0.53
49:D5:41:PRO:O	49:D5:44:THR:OG1	2.27	0.53
1:AA:1095:U:P	1:AA:1108:G:H1	2.32	0.53
1:AA:1206:G:C6	1:AA:1207:G:C6	2.96	0.53
3:AC:68:VAL:HG12	3:AC:70:VAL:HG22	1.90	0.53
10:AJ:8:LEU:HA	10:AJ:95:GLU:O	2.09	0.53
23:BA:1040:C:H2'	23:BA:1041:C:C1'	2.39	0.53
23:BA:1914:C:H6	23:BA:1914:C:OP2	1.91	0.53
27:BF:116:ASP:OD1	27:BF:119:ARG:NH2	2.42	0.53
30:BI:98:ALA:O	30:BI:101:LEU:N	2.38	0.53
1:CA:323:U:O3'	20:CT:22:ARG:HD3	2.09	0.53
1:CA:380:G:N2	1:CA:384:G:C5	2.77	0.53
1:CA:611:A:H61	1:CA:629:G:H1	1.55	0.53
1:CA:646:U:H2'	1:CA:647:C:H6	1.74	0.53
1:CA:738:C:H2'	1:CA:739:C:H6	1.73	0.53
3:CC:112:SER:O	3:CC:112:SER:OG	2.25	0.53
5:CE:69:VAL:O	5:CE:71:LEU:N	2.41	0.53
8:CH:6:ILE:HB	8:CH:85:ARG:NH1	2.12	0.53
13:CM:87:TYR:HB2	19:CS:73:GLU:HA	1.90	0.53
23:DA:71:A:H3'	23:DA:71:A:OP2	2.09	0.53
23:DA:566:U:H5"	33:DP:29:LYS:HE3	1.89	0.53
23:DA:1587:A:H2'	23:DA:1588:C:H6	1.74	0.53
23:DA:1858:G:H1'	23:DA:1884:A:H61	1.72	0.53
28:DG:105:LYS:NZ	48:D4:26:SER:HB2	2.24	0.53
35:DR:55:ALA:HB2	35:DR:79:LEU:HD13	1.90	0.53
43:DZ:152:ALA:HA	43:DZ:155:LEU:HD13	1.89	0.53
1:AA:345:C:H4'	1:AA:346:G:C4	2.44	0.53
1:AA:1457:G:C6	1:AA:1458:G:C5	2.96	0.53
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.09	0.53
13:AM:23:TYR:CD1	13:AM:67:GLU:HG2	2.39	0.53
23:BA:83:G:P	42:BY:95:LYS:HZ1	2.31	0.53
23:BA:528:A:N1	23:BA:2042:A:H2'	2.23	0.53
23:BA:2104:G:O6	23:BA:2185:C:N3	2.41	0.53
23:BA:2320:A:N3	23:BA:2320:A:H2'	2.23	0.53
23:BA:2849:U:H4'	23:BA:2868:A:C2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:87:G:N2	24:BB:90:A:OP2	2.36	0.53
25:BD:130:ALA:HB2	25:BD:192:THR:HB	1.90	0.53
28:BG:19:LEU:HD22	28:BG:23:PHE:HE1	1.74	0.53
29:BH:124:GLU:HB2	29:BH:132:ARG:HB3	1.90	0.53
30:BI:110:ASP:N	30:BI:130:TYR:OH	2.35	0.53
1:CA:951:G:C6	1:CA:1231:G:C6	2.97	0.53
1:CA:1030:C:N4	1:CA:1031:G:C5	2.71	0.53
1:CA:1208:C:H2'	1:CA:1209:C:C6	2.43	0.53
1:CA:1373:G:O3'	7:CG:31:MET:HE1	2.09	0.53
2:CB:51:LEU:O	2:CB:55:PHE:HD2	1.92	0.53
7:CG:111:ARG:HH22	7:CG:122:HIS:HB3	1.74	0.53
7:CG:140:ASP:O	7:CG:143:ARG:HD2	2.08	0.53
23:DA:1288:U:C2	23:DA:1327:C:O2	2.61	0.53
34:DQ:27:VAL:N	34:DQ:138:ASP:OD1	2.41	0.53
40:DW:71:VAL:HA	40:DW:107:LEU:HD12	1.91	0.53
47:D3:7:LYS:HG3	47:D3:34:GLU:HG2	1.91	0.53
1:AA:189(A):C:H42	1:AA:189(J):G:H1	1.56	0.53
1:AA:946:A:O2'	1:AA:1333:A:N3	2.39	0.53
1:AA:1063:C:H2'	1:AA:1064:G:N7	2.24	0.53
1:AA:1078:U:O2	5:AE:130:ASN:ND2	2.42	0.53
1:AA:1267:C:O2	1:AA:1327:C:O2'	2.23	0.53
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.89	0.53
22:AX:2:GLN:HE21	22:AX:2:GLN:HA	1.72	0.53
23:BA:303:U:O4	56:BA:4551:HOH:O	2.19	0.53
23:BA:1297:C:OP1	23:BA:2710:C:H4'	2.08	0.53
23:BA:2661:G:H2'	23:BA:2662:A:C8	2.44	0.53
35:BR:36:THR:HG22	35:BR:37:THR:H	1.73	0.53
38:BU:82:GLY:HA3	38:BU:113:ALA:HB1	1.90	0.53
45:B1:82:LEU:O	45:B1:83:GLU:HG3	2.08	0.53
1:CA:943:U:H2'	1:CA:944:G:C8	2.44	0.53
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.89	0.53
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.74	0.53
23:DA:826:U:OP1	23:DA:2428:G:H3'	2.09	0.53
23:DA:2324:C:H5"	23:DA:2325:G:H5'	1.90	0.53
23:DA:2629:A:O2'	23:DA:2630:G:OP2	2.21	0.53
37:DT:53:ARG:HB3	37:DT:53:ARG:NH1	2.24	0.53
1:AA:59:A:H5"	1:AA:60:A:C5'	2.39	0.53
1:AA:78:G:H1	1:AA:91:C:H42	1.54	0.53
1:AA:553:A:H2'	1:AA:554:C:C6	2.44	0.53
1:AA:1220:G:H1'	19:AS:52:TYR:HD2	1.74	0.53
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5"	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:187:LEU:HD13	2:AB:205:ASP:HA	1.90	0.53
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.09	0.53
17:AQ:92:ARG:O	17:AQ:95:TYR:HB2	2.09	0.53
23:BA:1358:G:OP2	56:BA:4687:HOH:O	2.19	0.53
23:BA:2126:A:H4'	23:BA:2127:G:O5'	2.09	0.53
23:BA:2516:G:O6	23:BA:2517:C:N4	2.42	0.53
23:BA:2865:U:O4	56:BA:4115:HOH:O	2.14	0.53
24:BB:15:A:H1'	24:BB:110:G:C5	2.44	0.53
27:BF:164:ARG:HD2	27:BF:175:THR:HG23	1.90	0.53
30:BI:5:LEU:H	30:BI:5:LEU:HD12	1.74	0.53
33:BP:38:GLN:HA	33:BP:41:ARG:HG2	1.91	0.53
42:BY:9:LYS:NZ	42:BY:28:LYS:O	2.41	0.53
1:CA:59:A:H3'	1:CA:331:G:H22	1.73	0.53
1:CA:67:C:O2'	1:CA:171:A:N3	2.39	0.53
1:CA:169:C:H2'	1:CA:170:U:C6	2.43	0.53
1:CA:742:G:OP2	15:CO:35:ARG:NH2	2.42	0.53
1:CA:932:C:N4	1:CA:1385:G:C6	2.77	0.53
1:CA:1265:G:H2'	1:CA:1266:G:C8	2.44	0.53
1:CA:1316:G:H4'	14:CN:18:VAL:HG21	1.90	0.53
6:CF:67:MET:HE1	6:CF:75:LEU:HD13	1.90	0.53
11:CK:32:ILE:HD11	11:CK:68:ALA:HB1	1.91	0.53
23:DA:896:A:N1	34:DQ:60:ARG:NH2	2.56	0.53
23:DA:917:A:H5'	23:DA:918:A:OP2	2.08	0.53
23:DA:2126:A:H4'	23:DA:2127:G:O5'	2.09	0.53
23:DA:2312:U:O2'	28:DG:40:ASN:ND2	2.37	0.53
28:DG:111:LEU:HB2	28:DG:112:PRO:HD3	1.91	0.53
42:DY:23:ARG:HH11	42:DY:23:ARG:HB2	1.74	0.53
48:D4:40:HIS:CE1	48:D4:42:PHE:HB2	2.44	0.53
50:D6:13:CYS:SG	50:D6:47:THR:HG21	2.49	0.53
1:AA:1004:A:H2	1:AA:1037:C:H42	1.58	0.52
1:AA:1059:C:O2'	10:AJ:53:PRO:HD3	2.09	0.52
1:AA:1442(A):G:H2'	1:AA:1442(B):A:O4'	2.09	0.52
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.09	0.52
12:AL:32:PHE:O	12:AL:33:ARG:HD2	2.09	0.52
23:BA:83:G:N2	23:BA:103:A:OP2	2.38	0.52
23:BA:821:A:H2'	23:BA:946:G:H5"	1.90	0.52
23:BA:1301:A:C8	23:BA:1303:G:C8	2.96	0.52
23:BA:2250:G:C5	34:BQ:83:MET:HB2	2.44	0.52
23:BA:2741:A:H2'	23:BA:2742:C:O4'	2.09	0.52
34:BQ:24:GLY:O	34:BQ:102:VAL:HG23	2.08	0.52
1:CA:91:C:H2'	1:CA:92:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:292:G:N7	1:CA:293:G:H1'	2.24	0.52
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.44	0.52
1:CA:1247:U:H1'	1:CA:1291:G:N2	2.23	0.52
1:CA:1324:A:C5'	1:CA:1363:C:H5"	2.39	0.52
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.09	0.52
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.08	0.52
23:DA:61:G:H1	23:DA:94:C:H42	1.58	0.52
23:DA:2364:C:H2'	23:DA:2365:G:O4'	2.09	0.52
26:DE:195:LEU:HG	26:DE:196:VAL:N	2.24	0.52
50:D6:14:THR:HB	50:D6:48:VAL:O	2.09	0.52
1:AA:194:C:C2'	1:AA:195:A:H5"	2.40	0.52
1:AA:709:G:H2'	1:AA:710:G:H8	1.74	0.52
1:AA:742:G:OP2	15:AO:35:ARG:NH2	2.41	0.52
2:AB:21:ARG:H	2:AB:21:ARG:NE	2.07	0.52
2:AB:134:GLU:O	2:AB:137:ARG:HG3	2.10	0.52
3:AC:131:ARG:HH12	3:AC:135:LYS:HE3	1.73	0.52
23:BA:2469:A:H5'	23:BA:2470:G:OP2	2.09	0.52
23:BA:2564:A:C2	23:BA:2647:U:H4'	2.44	0.52
24:BB:40:U:H1'	24:BB:45:A:N6	2.25	0.52
50:B6:8:LYS:HD3	52:B8:34:TRP:CD2	2.44	0.52
1:CA:79:G:N2	1:CA:91:C:O2	2.43	0.52
1:CA:336:C:H2'	1:CA:337:C:H6	1.73	0.52
1:CA:609:A:H5'	16:CP:18:ARG:HH22	1.74	0.52
1:CA:1252:A:H2	1:CA:1355:G:H1'	1.72	0.52
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.44	0.52
1:CA:1300:G:N1	1:CA:1334:G:H2'	2.19	0.52
7:CG:26:PHE:CZ	7:CG:105:VAL:HB	2.45	0.52
10:CJ:10:GLY:HA3	10:CJ:94:VAL:HG22	1.91	0.52
1:AA:50:A:H8	1:AA:50:A:OP1	1.92	0.52
1:AA:105:G:H2'	1:AA:106:C:C6	2.44	0.52
1:AA:184:G:C4'	1:AA:224:C:H4'	2.39	0.52
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.45	0.52
1:AA:1443:G:H1	1:AA:1459:C:C2'	2.22	0.52
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.08	0.52
23:BA:975:C:H6	56:BA:4752:HOH:O	1.89	0.52
23:BA:1156:A:C8	38:BU:51:LYS:HD2	2.44	0.52
23:BA:2572:A:N7	26:BE:144:ARG:HD2	2.24	0.52
23:BA:2580:U:O4	56:BA:4292:HOH:O	2.14	0.52
23:BA:2699:C:H2'	23:BA:2700:C:O4'	2.09	0.52
28:BG:32:PRO:HB2	28:BG:172:LEU:HD22	1.91	0.52
42:BY:23:ARG:HB2	42:BY:23:ARG:NH1	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:43:GLU:O	43:BZ:47:VAL:HG23	2.09	0.52
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.75	0.52
1:CA:1191:A:OP2	3:CC:3:ASN:ND2	2.42	0.52
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.45	0.52
4:CD:32:ALA:O	4:CD:36:ARG:N	2.42	0.52
9:CI:28:VAL:HB	9:CI:36:TYR:CB	2.34	0.52
12:CL:32:PHE:HE1	12:CL:86:ARG:HG3	1.74	0.52
23:DA:819:A:C4	23:DA:1189:A:C2	2.97	0.52
23:DA:2173:A:OP2	23:DA:2174:C:H5	1.93	0.52
23:DA:2282:G:H4'	23:DA:2389:G:O2'	2.08	0.52
25:DD:85:ASP:OD2	25:DD:88:ARG:NH1	2.40	0.52
36:DS:56:LEU:C	36:DS:58:LEU:HD22	2.34	0.52
1:AA:913:A:H4'	1:AA:914:A:O5'	2.09	0.52
1:AA:1003:G:H1	1:AA:1037:C:N4	2.07	0.52
1:AA:1316:G:H22	1:AA:1319:A:C5'	2.21	0.52
2:AB:213:LEU:HD22	2:AB:214:ILE:HD13	1.91	0.52
12:AL:110:VAL:HG23	12:AL:120:TYR:HB3	1.90	0.52
23:BA:315:G:H2'	23:BA:316:C:C6	2.44	0.52
23:BA:911:A:H2'	34:BQ:9:TYR:OH	2.08	0.52
23:BA:2296:U:H4'	23:BA:2297:C:OP1	2.09	0.52
38:BU:76:TYR:OH	38:BU:92:ARG:NH1	2.41	0.52
40:BW:82:LEU:HD22	40:BW:84:ARG:NH2	2.23	0.52
43:BZ:152:ALA:HA	43:BZ:155:LEU:HD13	1.92	0.52
1:CA:437:U:O3'	4:CD:125:HIS:NE2	2.39	0.52
1:CA:501:C:H1'	1:CA:549:C:H1'	1.92	0.52
1:CA:1442(A):G:C5	1:CA:1442(B):A:C2	2.96	0.52
23:DA:443:A:N7	27:DF:45:ARG:HG2	2.24	0.52
23:DA:485:C:H2'	23:DA:486:C:H6	1.74	0.52
23:DA:1628:G:H2'	23:DA:1629:U:H6	1.74	0.52
23:DA:2180:U:H2'	23:DA:2181:G:C8	2.44	0.52
25:DD:130:ALA:HB2	25:DD:192:THR:HB	1.91	0.52
46:D2:51:ARG:O	46:D2:55:ARG:HB2	2.09	0.52
48:D4:1:MET:HE2	48:D4:6:HIS:CE1	2.45	0.52
1:AA:6:G:O2'	1:AA:7:G:H5"	2.09	0.52
1:AA:659:U:H2'	1:AA:660:G:O4'	2.10	0.52
1:AA:990:C:H2'	1:AA:991:U:C6	2.45	0.52
1:AA:1238:A:H2	1:AA:1241:G:H21	1.56	0.52
1:AA:1442(B):A:H62	37:BT:118:ARG:NH2	2.07	0.52
2:AB:42:ILE:HD12	2:AB:203:GLY:HA2	1.92	0.52
3:AC:29:TYR:OH	14:AN:54:PRO:O	2.28	0.52
8:AH:111:ILE:H	8:AH:111:ILE:HD12	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:79:SER:OG	17:AQ:80:GLY:N	2.41	0.52
23:BA:511:U:O4	23:BA:512:G:N1	2.43	0.52
23:BA:2850:A:C2	23:BA:2851:A:C4	2.97	0.52
25:BD:131:LEU:HD22	25:BD:136:ILE:HG12	1.91	0.52
25:BD:206:LEU:HD22	25:BD:211:ARG:HG2	1.91	0.52
30:BI:125:GLU:OE1	30:BI:143:SER:HB3	2.09	0.52
31:BN:24:GLY:HA2	31:BN:27:ALA:HB3	1.91	0.52
1:CA:1030(C):G:N7	1:CA:1031:G:N2	2.58	0.52
1:CA:1060:C:N4	56:CC:301:HOH:O	2.42	0.52
1:CA:1441:G:C3'	1:CA:1459:C:N4	2.73	0.52
3:CC:182:ILE:HG23	3:CC:202:ILE:C	2.34	0.52
19:CS:12:ASP:C	19:CS:14:HIS:H	2.17	0.52
21:CU:12:LYS:HB3	21:CU:22:ARG:NH1	2.24	0.52
21:CU:12:LYS:O	21:CU:16:GLY:N	2.37	0.52
23:DA:7:G:H2'	23:DA:8:A:C8	2.44	0.52
23:DA:528:A:C2	23:DA:2042:A:H2'	2.44	0.52
23:DA:853:G:H1	23:DA:924:C:H42	1.56	0.52
23:DA:1914:C:OP2	23:DA:1914:C:H6	1.91	0.52
27:DF:164:ARG:HD2	27:DF:175:THR:HG23	1.90	0.52
36:DS:11:LYS:O	36:DS:15:ARG:HG3	2.10	0.52
1:AA:66:G:O4'	1:AA:173:U:C4	2.63	0.52
1:AA:969:A:OP1	10:AJ:55:LYS:NZ	2.38	0.52
6:AF:70:ASP:OD1	6:AF:70:ASP:N	2.42	0.52
8:AH:85:ARG:NE	8:AH:87:SER:O	2.42	0.52
23:BA:1971:A:C4	25:BD:241:PRO:HD3	2.44	0.52
23:BA:2180:U:H2'	23:BA:2181:G:C8	2.45	0.52
36:BS:15:ARG:O	36:BS:19:LYS:HG2	2.09	0.52
43:BZ:160:GLY:HA2	43:BZ:161:VAL:HB	1.91	0.52
1:CA:18:C:H5"	5:CE:127:ASN:HD21	1.74	0.52
1:CA:586:C:H2'	1:CA:587:G:H5'	1.92	0.52
1:CA:785:G:H2'	1:CA:786:G:H5'	1.92	0.52
1:CA:1098:C:H5'	1:CA:1169:A:H1'	1.92	0.52
1:CA:1125:U:H5'	1:CA:1126:U:C5	2.44	0.52
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.45	0.52
1:CA:1459:C:C2'	1:CA:1460:A:C8	2.93	0.52
2:CB:21:ARG:H	2:CB:21:ARG:NE	2.08	0.52
3:CC:55:VAL:HG12	3:CC:57:ILE:HG13	1.91	0.52
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.09	0.52
9:CI:20:ARG:HB3	9:CI:60:ASP:O	2.10	0.52
23:DA:196:A:O2'	23:DA:805:G:O6	2.27	0.52
23:DA:1049:C:O2'	23:DA:1050:A:O5'	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1546:C:H5'	23:DA:1547:C:H5'	1.92	0.52
24:DB:20:C:C2'	24:DB:21:G:H5'	2.39	0.52
34:DQ:26:TYR:CE1	34:DQ:28:ALA:HB2	2.44	0.52
43:DZ:182:LYS:O	43:DZ:186:GLU:HG2	2.09	0.52
1:AA:97:G:O2'	1:AA:98:G:H8	1.91	0.52
1:AA:999:C:H2'	1:AA:1000:U:C6	2.45	0.52
2:AB:88:ALA:HB1	2:AB:222:ILE:HG21	1.92	0.52
23:BA:1818:U:O4	25:BD:154:LYS:HE3	2.10	0.52
23:BA:2319:G:N2	36:BS:3:ARG:HA	2.25	0.52
24:BB:61:G:C6	24:BB:62:C:C4	2.98	0.52
35:BR:55:ALA:HB2	35:BR:79:LEU:HD13	1.91	0.52
43:BZ:40:ASP:OD1	43:BZ:42:VAL:HG13	2.09	0.52
1:CA:860:A:N6	1:CA:861:G:C2	2.78	0.52
1:CA:1048:G:C6	1:CA:1210:C:N4	2.77	0.52
1:CA:1053:G:N7	1:CA:1199:U:H2'	2.25	0.52
1:CA:1109:C:O5'	1:CA:1109:C:H6	1.93	0.52
1:CA:1305:G:OP2	1:CA:1305:G:C8	2.63	0.52
2:CB:97:TRP:CZ2	2:CB:101:MET:HB2	2.44	0.52
3:CC:153:VAL:HA	3:CC:197:GLY:O	2.10	0.52
7:CG:113:GLU:OE2	7:CG:119:ARG:HA	2.09	0.52
8:CH:121:ASP:OD1	8:CH:121:ASP:N	2.40	0.52
11:CK:26:ASN:O	56:CK:201:HOH:O	2.18	0.52
23:DA:602:G:O2'	23:DA:655:A:N6	2.43	0.52
23:DA:652(O):C:H2'	23:DA:652(P):G:C8	2.45	0.52
23:DA:863:A:H2'	23:DA:864:G:C8	2.44	0.52
23:DA:1790:C:H5"	23:DA:1791:A:OP1	2.09	0.52
23:DA:2200:C:H5'	23:DA:2201:C:OP2	2.07	0.52
23:DA:2690:C:OP2	35:DR:14:SER:HB3	2.10	0.52
1:AA:1130:A:H61	1:AA:1144:G:C1'	2.20	0.52
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.75	0.52
2:AB:86:GLU:C	2:AB:89:GLY:H	2.17	0.52
23:BA:102:G:O2'	23:BA:103:A:O5'	2.27	0.52
23:BA:218:A:C2	23:BA:235:U:H4'	2.45	0.52
23:BA:492:A:H2'	23:BA:493:G:O4'	2.10	0.52
23:BA:498:G:O2'	23:BA:499:U:H5'	2.10	0.52
23:BA:993:G:OP1	38:BU:50:ARG:NH2	2.43	0.52
23:BA:1403:C:C5'	23:BA:1471:A:H1'	2.38	0.52
23:BA:2672:G:H5"	23:BA:2672:G:H8	1.73	0.52
31:BN:96:GLU:CD	31:BN:96:GLU:H	2.18	0.52
47:B3:18:ASP:OD1	47:B3:18:ASP:N	2.42	0.52
1:CA:1327:C:H2'	1:CA:1328:C:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.91	0.52
11:CK:21:ILE:HB	11:CK:84:VAL:HG22	1.90	0.52
19:CS:49:ILE:O	19:CS:59:PRO:HA	2.09	0.52
23:DA:143(A):C:H2'	23:DA:144:C:C6	2.44	0.52
23:DA:1669:A:H5"	23:DA:2550:G:OP1	2.10	0.52
23:DA:2096:U:H3	23:DA:2193:G:H1	1.57	0.52
36:DS:26:LEU:HD22	36:DS:87:PHE:CD1	2.45	0.52
42:DY:28:LYS:HG3	42:DY:40:GLU:HG2	1.92	0.52
1:AA:750:G:C2	15:AO:23:GLY:HA3	2.44	0.52
1:AA:756:C:N4	56:AA:2015:HOH:O	2.32	0.52
1:AA:971:G:O2'	1:AA:1365:G:O3'	2.28	0.52
1:AA:1298:C:N4	7:AG:114:ARG:HD2	2.24	0.52
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.45	0.52
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.10	0.52
7:AG:71:PRO:HG3	7:AG:138:LYS:CG	2.39	0.52
23:BA:229:A:C8	23:BA:229:A:H3'	2.45	0.52
23:BA:878:A:H2'	23:BA:879:G:H5'	1.92	0.52
23:BA:1335:U:O4	56:BA:4449:HOH:O	2.17	0.52
23:BA:2117:A:N6	23:BA:2171:A:C6	2.78	0.52
36:BS:35:ILE:HG12	36:BS:101:LEU:HD12	1.91	0.52
43:BZ:52:SER:OG	43:BZ:53:ILE:N	2.41	0.52
43:BZ:98:MET:O	43:BZ:125:LEU:HD12	2.09	0.52
1:CA:1239:A:H4'	1:CA:1240:U:OP1	2.09	0.52
1:CA:1492:A:H4'	1:CA:1492:A:OP1	2.10	0.52
19:CS:16:LEU:CA	19:CS:20:LEU:HB2	2.37	0.52
23:DA:71:A:H5'	23:DA:71:A:H8	1.75	0.52
23:DA:944:G:O3'	56:DA:3793:HOH:O	2.19	0.52
23:DA:1819:A:H4'	23:DA:1820:U:O5'	2.10	0.52
23:DA:2308:G:H4'	23:DA:2309:A:OP2	2.08	0.52
35:DR:37:THR:OG1	35:DR:40:LYS:HG3	2.09	0.52
1:AA:56:U:H2'	1:AA:57:G:C8	2.45	0.52
1:AA:93:G:O2'	1:AA:96:U:H5'	2.10	0.52
1:AA:149:A:O2'	1:AA:150:C:C6	2.63	0.52
1:AA:763:G:H2'	1:AA:764:C:H6	1.75	0.52
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.45	0.52
23:BA:335:C:H2'	23:BA:336:C:H6	1.75	0.52
23:BA:582:G:H2'	23:BA:583:G:C8	2.44	0.52
23:BA:2109:U:H1'	23:BA:2181:G:N2	2.24	0.52
23:BA:2319:G:H22	36:BS:3:ARG:HD2	1.75	0.52
23:BA:2364:C:H2'	23:BA:2365:G:O4'	2.10	0.52
47:B3:40:THR:HG23	47:B3:43:ILE:HD12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:153:C:N3	1:CA:169:C:N4	2.58	0.52
1:CA:977:A:H1'	1:CA:982:U:H3	1.74	0.52
1:CA:1004:A:H2	1:CA:1037:C:N4	2.08	0.52
1:CA:1238:A:N7	1:CA:1299:A:N1	2.57	0.52
1:CA:1458:G:H3'	1:CA:1459:C:H5"	1.92	0.52
1:CA:1459:C:C5'	1:CA:1460:A:OP2	2.57	0.52
5:CE:14:ARG:HE	5:CE:16:THR:HG22	1.74	0.52
7:CG:142:GLU:CB	7:CG:143:ARG:HH21	2.22	0.52
23:DA:1810:A:H2'	23:DA:1811:G:O4'	2.09	0.52
23:DA:2537:U:H2'	23:DA:2538:C:C6	2.45	0.52
29:DH:7:LEU:HD12	29:DH:8:PRO:HD2	1.92	0.52
35:DR:37:THR:HG1	35:DR:40:LYS:HG3	1.75	0.52
37:DT:95:ARG:HG2	37:DT:95:ARG:NH1	2.19	0.52
38:DU:44:ASN:ND2	39:DV:75:PHE:O	2.36	0.52
1:AA:189:G:H2'	1:AA:189(A):C:H6	1.73	0.51
1:AA:668:G:O2'	15:AO:46:HIS:HB3	2.10	0.51
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.45	0.51
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.74	0.51
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.25	0.51
6:AF:7:ASN:ND2	18:AR:34:TYR:HE1	2.05	0.51
7:AG:95:ARG:O	7:AG:99:LEU:HG	2.10	0.51
7:AG:101:LEU:HA	7:AG:104:LEU:HD23	1.92	0.51
7:AG:140:ASP:HA	7:AG:143:ARG:HB2	1.91	0.51
11:AK:73:MET:HG3	11:AK:103:LEU:HD21	1.91	0.51
13:AM:87:TYR:HB2	19:AS:73:GLU:O	2.10	0.51
22:AX:56:VAL:N	22:AX:59:GLY:HA2	2.24	0.51
23:BA:1173:G:H1'	23:BA:1177:A:N6	2.24	0.51
23:BA:2308:G:H4'	23:BA:2309:A:OP2	2.10	0.51
24:BB:48:A:H4'	36:BS:95:HIS:HD2	1.75	0.51
1:CA:676:A:O2'	1:CA:677:U:H5'	2.10	0.51
1:CA:1029:C:N3	1:CA:1032:G:O6	2.43	0.51
1:CA:1128:C:N3	1:CA:1143:G:N2	2.47	0.51
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.11	0.51
23:DA:229:A:H3'	23:DA:229:A:C8	2.45	0.51
23:DA:706:A:H2'	23:DA:707:G:O4'	2.10	0.51
23:DA:764:A:OP1	25:DD:208:LYS:HE2	2.10	0.51
23:DA:1688:U:H1'	23:DA:1701:A:C6	2.45	0.51
23:DA:2109:U:H1'	23:DA:2181:G:N2	2.25	0.51
23:DA:2564:A:C2	23:DA:2647:U:H4'	2.45	0.51
23:DA:2880:C:O3'	35:DR:90:ARG:NH1	2.43	0.51
28:DG:116:ASP:H	28:DG:136:ARG:HH22	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:428:G:H4'	1:AA:429:U:O5'	2.10	0.51
1:AA:1126:U:H1'	1:AA:1280:A:C5	2.46	0.51
1:AA:1316:G:C6	1:AA:1318:A:H5"	2.46	0.51
7:AG:26:PHE:CG	7:AG:101:LEU:HD22	2.46	0.51
23:BA:1040:C:H2'	23:BA:1041:C:H1'	1.91	0.51
28:BG:22:ARG:HH21	28:BG:175:LEU:HD11	1.74	0.51
28:BG:111:LEU:HB2	28:BG:112:PRO:HD3	1.92	0.51
30:BI:83:ALA:HA	30:BI:89:TYR:HE2	1.74	0.51
32:BO:77:ILE:HG13	37:BT:74:ARG:HG2	1.92	0.51
42:BY:28:LYS:HG3	42:BY:40:GLU:HG2	1.93	0.51
1:CA:666:G:H5'	1:CA:726:C:H1'	1.93	0.51
1:CA:826:C:H4'	8:CH:12:ARG:HD3	1.91	0.51
1:CA:971:G:H1	1:CA:1363(A):A:H5'	1.75	0.51
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.09	0.51
2:CB:16:HIS:CD2	2:CB:209:ARG:HG3	2.45	0.51
9:CI:10:ARG:CB	9:CI:75:ASP:HB2	2.39	0.51
16:CP:72:ARG:HG2	16:CP:73:LEU:HD23	1.92	0.51
20:CT:61:SER:O	20:CT:65:LYS:HG2	2.11	0.51
23:DA:581:C:H2'	23:DA:582:G:C8	2.46	0.51
23:DA:588:U:H2'	23:DA:589:C:C6	2.45	0.51
23:DA:2441:C:OP2	23:DA:2586:C:O2'	2.27	0.51
23:DA:2790:A:H3'	23:DA:2790:A:N3	2.25	0.51
26:DE:111:ARG:HD3	26:DE:160:TYR:CE1	2.45	0.51
1:AA:277:C:OP1	17:AQ:68:ARG:NH2	2.41	0.51
1:AA:611:A:H61	1:AA:629:G:H1	1.57	0.51
1:AA:881:G:P	12:AL:12:ARG:HH22	2.33	0.51
1:AA:920:U:O4'	1:AA:1080:A:C2	2.64	0.51
1:AA:1022:G:H2'	1:AA:1023:G:C8	2.45	0.51
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.44	0.51
1:AA:1222:G:H5"	19:AS:78:ARG:CZ	2.41	0.51
1:AA:1277:C:H2'	1:AA:1279:A:H8	1.76	0.51
1:AA:1372:U:H5"	9:AI:71:SER:CB	2.40	0.51
4:AD:36:ARG:HB3	4:AD:38:TYR:CZ	2.46	0.51
4:AD:193:ASP:OD1	4:AD:193:ASP:N	2.44	0.51
10:AJ:33:GLN:O	10:AJ:34:VAL:HG22	2.08	0.51
21:AU:15:ARG:HA	21:AU:15:ARG:HE	1.76	0.51
23:BA:1530:C:O2'	23:BA:1531:C:P	2.68	0.51
23:BA:1593:G:H2'	23:BA:1594:G:C8	2.46	0.51
23:BA:2200:C:H5'	23:BA:2201:C:OP2	2.09	0.51
30:BI:4:ILE:HG21	30:BI:47:LEU:HG	1.92	0.51
36:BS:99:LYS:O	36:BS:103:GLU:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:746:A:H2'	1:CA:747:C:C6	2.45	0.51
1:CA:1347:G:H1'	1:CA:1348:U:H5	1.75	0.51
23:DA:83:G:N2	23:DA:102:G:H2'	2.25	0.51
23:DA:228:A:H2'	23:DA:230:U:O4'	2.11	0.51
23:DA:1427:A:H4'	23:DA:1428:C:O5'	2.11	0.51
23:DA:2208:A:H1'	23:DA:2219:G:C5	2.46	0.51
23:DA:2319:G:C2	36:DS:3:ARG:HA	2.46	0.51
23:DA:2853:C:H2'	23:DA:2854:G:C8	2.46	0.51
27:DF:183:VAL:O	27:DF:187:VAL:HG23	2.11	0.51
28:DG:41:GLN:HG3	28:DG:60:LEU:HD11	1.93	0.51
29:DH:154:PRO:HB3	29:DH:163:TYR:CZ	2.44	0.51
48:D4:40:HIS:O	48:D4:42:PHE:N	2.41	0.51
50:D6:11:LEU:HB2	50:D6:21:TYR:HB2	1.90	0.51
1:AA:129(A):G:H1'	1:AA:189(F):U:H2'	1.91	0.51
1:AA:232:G:H1'	1:AA:262:A:N1	2.26	0.51
1:AA:266:G:H5"	1:AA:267:C:H5	1.73	0.51
1:AA:357:G:N7	56:AA:1886:HOH:O	2.35	0.51
1:AA:540:G:H2'	1:AA:541:G:O4'	2.10	0.51
1:AA:658:G:C2	1:AA:749:C:N3	2.79	0.51
1:AA:1460:A:H8	1:AA:1460:A:O5'	1.93	0.51
23:BA:143(A):C:H2'	23:BA:144:C:H6	1.75	0.51
23:BA:1792:G:O2'	23:BA:1830:C:OP1	2.28	0.51
23:BA:2097:C:H2'	23:BA:2098:U:O4'	2.10	0.51
23:BA:2304:G:H21	28:BG:156:ASP:CG	2.19	0.51
27:BF:34:TRP:HE3	27:BF:35:GLU:HG2	1.74	0.51
29:BH:24:VAL:HG13	29:BH:37:VAL:HG21	1.92	0.51
30:BI:72:LEU:C	30:BI:74:ASN:H	2.17	0.51
31:BN:99:LEU:HD22	31:BN:103:VAL:HG23	1.91	0.51
1:CA:475:G:H2'	1:CA:476:G:C8	2.46	0.51
1:CA:806:C:H2'	1:CA:807:A:H8	1.76	0.51
1:CA:954:G:N2	1:CA:1227:A:H62	2.08	0.51
1:CA:1137:C:H5'	1:CA:1138:G:C6	2.45	0.51
1:CA:1157:A:N1	1:CA:1180:A:H2'	2.25	0.51
1:CA:1220:G:H2'	1:CA:1221:G:C8	2.45	0.51
2:CB:55:PHE:CD1	2:CB:58:ILE:HD12	2.45	0.51
3:CC:30:ARG:HB3	14:CN:36:PHE:O	2.11	0.51
9:CI:28:VAL:O	9:CI:36:TYR:HB2	2.10	0.51
17:CQ:66:SER:O	17:CQ:69:LYS:N	2.26	0.51
23:DA:188:G:H1	23:DA:208:C:N4	2.09	0.51
23:DA:573:G:O2'	23:DA:574:C:H3'	2.11	0.51
23:DA:1113:U:H2'	23:DA:1114:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1530:C:O2'	23:DA:1531:C:P	2.68	0.51
27:DF:129:PHE:O	27:DF:132:VAL:HG13	2.10	0.51
28:DG:145:THR:OG1	28:DG:146:TYR:N	2.34	0.51
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.26	0.51
2:AB:28:PHE:CZ	2:AB:189:ASP:HA	2.46	0.51
13:AM:23:TYR:HE1	13:AM:70:LEU:HB3	1.75	0.51
23:BA:774:A:H2'	23:BA:774:A:N3	2.26	0.51
23:BA:1782:C:H2'	23:BA:2608:G:O2'	2.11	0.51
23:BA:2169:A:H3'	23:BA:2170:A:H8	1.75	0.51
23:BA:2572:A:N7	26:BE:145:LYS:HB2	2.26	0.51
34:BQ:42:ILE:HD13	34:BQ:97:VAL:HG21	1.91	0.51
1:CA:659:U:H2'	1:CA:660:G:O4'	2.11	0.51
1:CA:939:G:N3	1:CA:1375:A:H2	2.08	0.51
1:CA:1157:A:H61	1:CA:1178:G:H21	1.58	0.51
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.75	0.51
16:CP:75:ARG:HA	16:CP:80:PHE:HD1	1.75	0.51
23:DA:187:G:N3	23:DA:1365:A:H2	2.08	0.51
23:DA:2144:U:H2'	23:DA:2146:C:N4	2.26	0.51
28:DG:3:LEU:HD11	28:DG:97:ASP:HB3	1.92	0.51
29:DH:40:GLU:OE2	29:DH:60:ARG:NH1	2.43	0.51
32:DO:31:LYS:HB3	32:DO:32:TYR:CE2	2.45	0.51
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.43	0.51
1:AA:939:G:C6	1:AA:940:C:N4	2.79	0.51
1:AA:1371:G:H4'	9:AI:69:GLY:CA	2.41	0.51
5:AE:69:VAL:O	5:AE:71:LEU:N	2.42	0.51
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.45	0.51
23:BA:271(D):G:H2'	23:BA:271(E):U:O4'	2.11	0.51
23:BA:2872:G:O2'	23:BA:2873:A:H5'	2.09	0.51
24:BB:2:C:H2'	24:BB:3:C:C6	2.45	0.51
26:BE:135:HIS:H	26:BE:135:HIS:CD2	2.26	0.51
28:BG:41:GLN:HG3	28:BG:60:LEU:HD11	1.92	0.51
30:BI:16:GLY:O	30:BI:47:LEU:HD11	2.10	0.51
37:BT:18:ASP:OD1	37:BT:18:ASP:N	2.37	0.51
52:B8:61:LEU:O	52:B8:63:PRO:HD3	2.10	0.51
1:CA:50:A:H8	1:CA:50:A:OP1	1.93	0.51
1:CA:97:G:O2'	1:CA:98:G:H8	1.90	0.51
1:CA:586:C:O2'	1:CA:878:G:H4'	2.11	0.51
1:CA:757:U:OP1	1:CA:822:C:O2'	2.28	0.51
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.10	0.51
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.11	0.51
12:CL:110:VAL:HG23	12:CL:120:TYR:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:14:ARG:CZ	13:CM:41:PRO:HB2	2.40	0.51
23:DA:2134:A:N6	23:DA:2157:G:H1'	2.26	0.51
24:DB:7:G:H5"	24:DB:7:G:H8	1.76	0.51
25:DD:67:PHE:HB3	25:DD:153:ALA:H	1.76	0.51
28:DG:6:ALA:O	28:DG:10:LYS:N	2.38	0.51
33:DP:95:VAL:HG22	33:DP:125:VAL:HB	1.93	0.51
52:D8:23:VAL:HG12	52:D8:47:LYS:HB3	1.92	0.51
1:AA:148:G:O2'	1:AA:149:A:H5'	2.10	0.51
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.35	0.51
5:AE:78:HIS:HA	8:AH:105:ARG:HG3	1.93	0.51
7:AG:103:TRP:HZ3	7:AG:138:LYS:HB2	1.75	0.51
13:AM:12:ASN:O	13:AM:44:ARG:HB3	2.10	0.51
23:BA:26:G:H1'	23:BA:515:A:H61	1.76	0.51
23:BA:2036:C:H5'	23:BA:2036:C:C6	2.33	0.51
23:BA:2116:G:H4'	23:BA:2117:A:OP1	2.11	0.51
24:BB:7:G:H8	24:BB:7:G:H5"	1.75	0.51
24:BB:28:C:OP1	36:BS:36:TYR:OH	2.23	0.51
28:BG:96:ARG:N	28:BG:99:MET:HE2	2.26	0.51
28:BG:105:LYS:NZ	48:B4:26:SER:HB2	2.26	0.51
29:BH:46:GLU:HB2	29:BH:49:VAL:HG12	1.93	0.51
1:CA:1188:A:H2'	1:CA:1189:C:H5'	1.93	0.51
1:CA:1240:U:O5'	1:CA:1241:G:H8	1.93	0.51
1:CA:1241:G:H5"	1:CA:1242:C:OP2	2.10	0.51
1:CA:1305:G:H8	21:CU:5:ASP:HA	1.76	0.51
3:CC:36:ASP:O	3:CC:40:ARG:HG2	2.11	0.51
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.11	0.51
7:CG:69:VAL:HA	7:CG:138:LYS:HB2	1.93	0.51
9:CI:9:ARG:NH1	9:CI:104:ARG:HE	2.09	0.51
12:CL:32:PHE:O	12:CL:33:ARG:HD2	2.10	0.51
18:CR:36:ASN:ND2	18:CR:39:VAL:H	2.09	0.51
23:DA:396:G:O3'	45:D1:44:PRO:HA	2.11	0.51
23:DA:2199:A:H5"	23:DA:2200:C:OP2	2.10	0.51
1:AA:300:A:H1'	1:AA:565:U:O2	2.11	0.51
1:AA:1348:U:C2	1:AA:1349:A:C8	2.99	0.51
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.10	0.51
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.46	0.51
9:AI:20:ARG:O	9:AI:60:ASP:N	2.44	0.51
10:AJ:13:HIS:HB3	10:AJ:68:HIS:ND1	2.26	0.51
14:AN:57:ARG:HG2	14:AN:58:LYS:N	2.26	0.51
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.10	0.51
23:BA:288:C:H2'	23:BA:289:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1252:G:C2	23:BA:1253:A:C2	2.99	0.51
23:BA:1999:C:H5"	23:BA:2723:C:O2'	2.11	0.51
29:BH:137:ASP:HB3	29:BH:140:LYS:HE2	1.93	0.51
30:BI:25:TYR:CD1	30:BI:30:LEU:HD11	2.46	0.51
32:BO:64:ARG:HG2	32:BO:79:PHE:CG	2.46	0.51
42:BY:102:CYS:O	42:BY:104:GLY:N	2.44	0.51
43:BZ:69:THR:HG22	43:BZ:90:VAL:HA	1.93	0.51
1:CA:184:G:C4'	1:CA:224:C:H4'	2.41	0.51
1:CA:838:G:N2	1:CA:849:C:C2	2.79	0.51
1:CA:865:A:H2'	1:CA:866:C:C6	2.46	0.51
1:CA:990:C:C4	1:CA:991:U:C4	2.99	0.51
1:CA:1359:C:OP1	14:CN:22:THR:OG1	2.20	0.51
2:CB:12:GLU:O	2:CB:16:HIS:ND1	2.40	0.51
2:CB:20:GLU:HG3	2:CB:191:ASP:OD1	2.10	0.51
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.93	0.51
9:CI:31:GLN:NE2	9:CI:36:TYR:HD1	2.09	0.51
13:CM:18:ALA:HB2	13:CM:45:VAL:HG21	1.92	0.51
15:CO:39:LEU:HD13	15:CO:56:LEU:HD23	1.92	0.51
23:DA:340:A:H2'	23:DA:341:G:O4'	2.10	0.51
23:DA:627:A:H62	33:DP:84:ASN:HD21	1.59	0.51
23:DA:2318:G:N2	36:DS:3:ARG:HH11	2.09	0.51
26:DE:37:ARG:HB2	26:DE:46:ALA:N	2.26	0.51
26:DE:111:ARG:HD3	26:DE:160:TYR:CD1	2.45	0.51
26:DE:178:GLU:H	26:DE:178:GLU:CD	2.19	0.51
28:DG:133:LEU:HG	28:DG:157:ILE:HB	1.92	0.51
31:DN:55:VAL:HG22	31:DN:125:GLY:HA3	1.92	0.51
36:DS:14:VAL:HG11	36:DS:90:GLY:O	2.10	0.51
43:DZ:98:MET:HE2	43:DZ:100:VAL:HG22	1.93	0.51
43:DZ:151:HIS:N	43:DZ:154:ASP:OD1	2.42	0.51
1:AA:1190:G:H5"	3:AC:4:LYS:HA	1.93	0.51
2:AB:97:TRP:HZ3	2:AB:99:GLY:HA2	1.76	0.51
4:AD:121:VAL:HA	4:AD:126:ILE:HG12	1.92	0.51
7:AG:58:PRO:HA	7:AG:61:VAL:HG23	1.93	0.51
9:AI:14:VAL:HG22	9:AI:66:ARG:O	2.11	0.51
23:BA:980:A:N3	23:BA:2037:G:O2'	2.36	0.51
23:BA:1654:A:OP1	35:BR:1:MET:HA	2.11	0.51
23:BA:2134:A:N6	23:BA:2157:G:H1'	2.26	0.51
27:BF:101:LEU:HB3	27:BF:106:ARG:HD3	1.92	0.51
35:BR:36:THR:HG22	35:BR:37:THR:N	2.25	0.51
43:BZ:24:LEU:C	43:BZ:24:LEU:HD12	2.36	0.51
50:B6:23:THR:OG1	50:B6:24:GLU:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B7:8:ASN:C	51:B7:8:ASN:OD1	2.53	0.51
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.11	0.51
8:CH:63:LEU:HB2	8:CH:65:TYR:CE1	2.46	0.51
13:CM:10:PRO:HG2	13:CM:45:VAL:HG11	1.93	0.51
19:CS:10:PHE:CE2	19:CS:38:SER:HB3	2.45	0.51
20:CT:16:HIS:O	20:CT:19:SER:N	2.44	0.51
23:DA:265:A:H1'	23:DA:266:G:O4'	2.11	0.51
23:DA:784:A:C5	25:DD:229:VAL:HG21	2.46	0.51
23:DA:1018:C:O2'	23:DA:1019:U:H5'	2.10	0.51
23:DA:1336:A:H2'	23:DA:1337:G:C8	2.46	0.51
23:DA:1510:G:H2'	23:DA:1511:C:C6	2.46	0.51
27:DF:181:LEU:HD11	27:DF:186:ILE:HD11	1.93	0.51
40:DW:35:ILE:HG23	49:D5:28:PRO:HD2	1.93	0.51
43:DZ:101:PRO:O	43:DZ:102:LEU:HD12	2.11	0.51
43:DZ:160:GLY:HA2	43:DZ:161:VAL:HB	1.92	0.51
45:D1:86:SER:HB3	45:D1:89:GLU:OE2	2.10	0.51
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.51
1:AA:77:G:O6	1:AA:78:G:N1	2.44	0.51
1:AA:91:C:H2'	1:AA:92:C:C6	2.46	0.51
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.46	0.51
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.46	0.51
1:AA:978:A:H61	1:AA:1316:G:H1'	1.75	0.51
2:AB:12:GLU:O	2:AB:16:HIS:ND1	2.41	0.51
7:AG:22:LEU:O	7:AG:25:ALA:HB3	2.11	0.51
22:AX:88:HIS:O	22:AX:92:LEU:HB2	2.11	0.51
23:BA:71:A:OP2	23:BA:71:A:H3'	2.11	0.51
23:BA:187:G:N3	23:BA:1365:A:H2	2.09	0.51
23:BA:1927:A:H2'	23:BA:1928:A:C8	2.46	0.51
26:BE:7:VAL:HG13	26:BE:27:LEU:HB3	1.93	0.51
1:CA:6:G:O2'	1:CA:7:G:H5"	2.11	0.51
1:CA:460:G:O6	1:CA:470:C:H5"	2.11	0.51
1:CA:616:G:C2	1:CA:617:G:N7	2.79	0.51
1:CA:1004:A:H2'	1:CA:1036:G:O6	2.11	0.51
1:CA:1284:C:H3'	1:CA:1285:A:H2'	1.93	0.51
1:CA:1345:U:OP1	9:CI:120:ARG:HD3	2.11	0.51
8:CH:63:LEU:HB2	8:CH:65:TYR:HE1	1.75	0.51
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.10	0.51
16:CP:11:SER:OG	16:CP:12:LYS:N	2.44	0.51
20:CT:69:GLY:O	20:CT:73:HIS:NE2	2.43	0.51
23:DA:229:A:H3'	23:DA:229:A:H8	1.76	0.51
23:DA:271(F):C:H2'	23:DA:271(G):C:C6	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1297:C:OP1	23:DA:2710:C:H4'	2.11	0.51
23:DA:1342:A:OP2	56:DA:3939:HOH:O	2.19	0.51
23:DA:1796:U:H2'	23:DA:1797:C:H6	1.74	0.51
23:DA:2320:A:H2'	23:DA:2320:A:N3	2.25	0.51
23:DA:2610:C:H4'	23:DA:2611:U:OP2	2.11	0.51
23:DA:2839:G:H5'	35:DR:46:GLY:HA2	1.92	0.51
35:DR:72:ASP:O	35:DR:76:VAL:HG23	2.11	0.51
1:AA:7:G:H21	5:AE:121:LYS:HG2	1.76	0.50
1:AA:953:G:C5	1:AA:1229:A:C6	2.98	0.50
1:AA:1312:G:C2	1:AA:1326:C:C2	2.99	0.50
13:AM:92:HIS:NE2	13:AM:98:VAL:HG11	2.25	0.50
23:BA:503:A:O2'	56:BA:4934:HOH:O	2.18	0.50
23:BA:1858:G:H1'	23:BA:1884:A:H61	1.76	0.50
24:BB:37:C:C5	24:BB:38:C:C5	2.98	0.50
27:BF:158:THR:O	27:BF:164:ARG:NH1	2.44	0.50
1:CA:189:G:H2'	1:CA:189(A):C:H6	1.76	0.50
1:CA:658:G:C2	1:CA:749:C:N3	2.79	0.50
1:CA:838:G:H2'	1:CA:839:U:H5"	1.93	0.50
1:CA:966:G:H5"	1:CA:969:A:N7	2.26	0.50
1:CA:1006:C:O2	1:CA:1024:G:H1'	2.10	0.50
1:CA:1192:C:C5	1:CA:1193:G:C8	2.99	0.50
1:CA:1254:C:N4	1:CA:1283:G:H1	2.06	0.50
10:CJ:62:HIS:H	10:CJ:62:HIS:CD2	2.29	0.50
23:DA:796:C:H2'	23:DA:797:C:C6	2.47	0.50
23:DA:1693:U:O2'	25:DD:14:ARG:NH2	2.44	0.50
23:DA:2672:G:H8	23:DA:2672:G:H5"	1.76	0.50
24:DB:37:C:C5	24:DB:38:C:C5	2.99	0.50
41:DX:21:PHE:CZ	41:DX:92:LEU:HD12	2.46	0.50
43:DZ:39:VAL:HG21	43:DZ:44:PHE:HB2	1.93	0.50
1:AA:292:G:N7	1:AA:293:G:H1'	2.26	0.50
7:AG:88:PRO:HG3	7:AG:149:ARG:CA	2.30	0.50
23:BA:141:A:C8	23:BA:1408:C:O2'	2.60	0.50
23:BA:543:C:H42	23:BA:549:G:H1	1.60	0.50
23:BA:748:G:C8	40:BW:89:ALA:HB1	2.46	0.50
23:BA:2173:A:OP2	23:BA:2174:C:H5	1.93	0.50
23:BA:2782:G:N7	56:BA:4087:HOH:O	2.35	0.50
23:BA:2839:G:C5'	35:BR:46:GLY:HA2	2.40	0.50
23:BA:2839:G:H5'	35:BR:46:GLY:HA2	1.92	0.50
25:BD:137:PRO:O	25:BD:140:THR:HG23	2.12	0.50
27:BF:34:TRP:CE3	27:BF:35:GLU:HG2	2.45	0.50
31:BN:23:LEU:HB2	31:BN:60:ILE:HG12	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:101:PRO:O	43:BZ:102:LEU:HD12	2.11	0.50
3:CC:56:ASP:O	3:CC:67:THR:HB	2.11	0.50
9:CI:13:ALA:HB3	9:CI:72:GLY:C	2.37	0.50
12:CL:83:VAL:HG13	12:CL:100:ILE:HG23	1.93	0.50
15:CO:82:ILE:O	15:CO:86:GLY:N	2.44	0.50
23:DA:459:U:H4'	51:D7:40:TRP:CZ3	2.46	0.50
23:DA:662:G:OP1	56:DA:4439:HOH:O	2.19	0.50
23:DA:1586:A:H8	23:DA:1586:A:O5'	1.93	0.50
23:DA:2350:C:H2'	23:DA:2351:G:O4'	2.12	0.50
23:DA:2590:A:OP2	25:DD:238:GLY:HA2	2.12	0.50
23:DA:2632:A:O2'	23:DA:2811:G:O2'	2.23	0.50
37:DT:106:SER:O	37:DT:110:ILE:HG12	2.11	0.50
48:D4:34:GLU:CD	48:D4:35:VAL:H	2.20	0.50
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.46	0.50
1:AA:586:C:C2'	1:AA:587:G:H5'	2.42	0.50
1:AA:586:C:H2'	1:AA:587:G:H5'	1.94	0.50
1:AA:601:C:H2'	1:AA:602:A:C8	2.45	0.50
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.93	0.50
3:AC:22:TRP:CH2	14:AN:54:PRO:HG2	2.46	0.50
9:AI:17:VAL:HG21	9:AI:80:GLY:C	2.36	0.50
23:BA:80:G:O6	56:BA:4435:HOH:O	2.18	0.50
23:BA:314:A:O2'	23:BA:315:G:H5'	2.10	0.50
23:BA:796:C:H2'	23:BA:797:C:C6	2.46	0.50
23:BA:1977:A:OP2	56:BA:4902:HOH:O	2.18	0.50
1:CA:436:C:O2'	1:CA:437:U:OP2	2.25	0.50
1:CA:586:C:C2'	1:CA:587:G:H5'	2.41	0.50
1:CA:750:G:C2	15:CO:23:GLY:HA3	2.46	0.50
1:CA:1029:C:O2	1:CA:1032:G:N1	2.44	0.50
1:CA:1055:A:C2	1:CA:1056:U:H1'	2.46	0.50
1:CA:1058:G:N2	10:CJ:53:PRO:HG3	2.26	0.50
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.11	0.50
7:CG:87:VAL:HG22	7:CG:151:TYR:HB3	1.93	0.50
17:CQ:45:HIS:HD2	17:CQ:65:ILE:HG12	1.76	0.50
23:DA:207:A:H2'	23:DA:208:C:O4'	2.11	0.50
23:DA:863:A:N7	56:DA:4347:HOH:O	2.35	0.50
23:DA:1641:A:H2'	23:DA:1642:G:O4'	2.11	0.50
23:DA:1799:G:H5'	23:DA:1819:A:H61	1.76	0.50
23:DA:1925:C:O2'	23:DA:1926:U:H5'	2.11	0.50
23:DA:2150:U:H2'	23:DA:2151:G:C8	2.47	0.50
25:DD:154:LYS:C	25:DD:155:LEU:HD12	2.36	0.50
28:DG:11:TYR:HA	28:DG:15:VAL:HB	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:56:LYS:O	30:DI:60:GLU:HG2	2.11	0.50
33:DP:84:ASN:CG	33:DP:117:GLU:HB2	2.35	0.50
48:D4:12:ALA:HA	48:D4:29:PRO:HA	1.93	0.50
1:AA:599:C:H4'	8:AH:130:GLY:C	2.36	0.50
1:AA:872:A:C8	1:AA:874:G:C8	3.00	0.50
1:AA:1016:A:H3'	1:AA:1017:G:H8	1.76	0.50
23:BA:530:G:C6	23:BA:2022:U:H5"	2.46	0.50
23:BA:769:G:N7	56:BA:4267:HOH:O	2.35	0.50
23:BA:2523:G:O6	56:BA:5195:HOH:O	2.19	0.50
24:BB:17:C:H2'	24:BB:18:G:O4'	2.11	0.50
52:B8:61:LEU:C	52:B8:63:PRO:HD3	2.37	0.50
1:CA:601:C:H2'	1:CA:602:A:C8	2.46	0.50
1:CA:1016:A:O2'	1:CA:1217:C:O2'	2.25	0.50
1:CA:1346:A:H1'	1:CA:1347:G:H5"	1.94	0.50
1:CA:1378:C:H5"	1:CA:1379:G:OP2	2.11	0.50
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.46	0.50
6:CF:69:GLU:N	6:CF:69:GLU:OE1	2.45	0.50
7:CG:115:ARG:O	7:CG:119:ARG:HD3	2.12	0.50
10:CJ:28:ARG:CB	10:CJ:34:VAL:HG21	2.42	0.50
23:DA:375:C:H5"	56:DA:4596:HOH:O	2.10	0.50
23:DA:979:G:H3'	23:DA:980:A:C5'	2.41	0.50
23:DA:1364:G:OP1	45:D1:2:SER:HA	2.12	0.50
23:DA:1794:U:H2'	23:DA:1795:C:C6	2.47	0.50
23:DA:2104:G:O6	23:DA:2185:C:N3	2.44	0.50
23:DA:2114:A:O2'	23:DA:2168:G:H5'	2.11	0.50
23:DA:2173:A:H2'	23:DA:2174:C:H5'	1.92	0.50
23:DA:2465:C:O2	23:DA:2486:G:C2	2.64	0.50
29:DH:24:VAL:HG13	29:DH:37:VAL:HG21	1.92	0.50
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.76	0.50
1:AA:1154:G:C6	1:AA:1155:G:C6	2.99	0.50
1:AA:1264:C:O2	1:AA:1272:G:N2	2.44	0.50
1:AA:1374:A:O2'	7:AG:28:ASN:HB3	2.12	0.50
4:AD:155:LEU:HD23	4:AD:156:GLU:N	2.26	0.50
6:AF:19:LEU:HD11	6:AF:59:TYR:CZ	2.47	0.50
7:AG:103:TRP:CZ3	7:AG:138:LYS:HB2	2.47	0.50
14:AN:34:TYR:O	14:AN:38:GLY:N	2.40	0.50
23:BA:649:G:H2'	23:BA:650:C:C6	2.46	0.50
23:BA:1558:A:O4'	23:BA:1558:A:N3	2.45	0.50
23:BA:2130:U:O2'	23:BA:2133:G:O2'	2.11	0.50
23:BA:2206:G:HO2'	23:BA:2207:G:P	2.34	0.50
23:BA:2286:A:OP1	50:B6:29:ASN:ND2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2638:G:P	26:BE:82:ARG:HH22	2.34	0.50
38:BU:76:TYR:HH	38:BU:92:ARG:HH11	1.59	0.50
48:B4:35:VAL:HA	48:B4:39:CYS:SG	2.52	0.50
1:CA:187:C:H5"	20:CT:86:ARG:HG3	1.93	0.50
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.44	0.50
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.34	0.50
1:CA:1173:G:C5	1:CA:1174:G:N7	2.79	0.50
1:CA:1457:G:N1	1:CA:1458:G:C5	2.79	0.50
2:CB:167:PRO:CG	2:CB:188:ALA:HB2	2.42	0.50
9:CI:28:VAL:HG23	9:CI:33:PHE:HA	1.94	0.50
10:CJ:63:PHE:HA	14:CN:58:LYS:HA	1.94	0.50
23:DA:1766:U:H2'	23:DA:1767:C:H6	1.76	0.50
23:DA:2272:U:H5"	23:DA:2273:A:OP1	2.11	0.50
24:DB:90:A:N7	24:DB:91:C:H1'	2.27	0.50
26:DE:37:ARG:HB2	26:DE:46:ALA:H	1.77	0.50
26:DE:38:THR:O	26:DE:42:ASP:N	2.43	0.50
36:DS:49:VAL:HG13	36:DS:76:LYS:HD2	1.92	0.50
1:AA:142:G:N3	1:AA:143:A:C8	2.80	0.50
1:AA:148:G:C2	1:AA:149:A:N7	2.80	0.50
1:AA:269:C:H2'	1:AA:270:A:C8	2.47	0.50
1:AA:544:G:C2	1:AA:545:C:C2	3.00	0.50
1:AA:616:G:C2	1:AA:617:G:N7	2.79	0.50
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.47	0.50
1:AA:1288:A:H2'	1:AA:1289:A:O4'	2.12	0.50
1:AA:1459:C:P	1:AA:1460:A:OP2	2.69	0.50
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.93	0.50
23:BA:279:C:H42	23:BA:361:G:H1	1.59	0.50
23:BA:481:G:H1'	23:BA:507:A:N1	2.27	0.50
23:BA:1177:A:H3'	23:BA:1177:A:P	2.51	0.50
23:BA:1651:G:H2'	23:BA:1652:A:O4'	2.12	0.50
23:BA:2144:U:H2'	23:BA:2146:C:N4	2.26	0.50
28:BG:98:ARG:NH1	28:BG:98:ARG:HB2	2.26	0.50
30:BI:29:TYR:O	30:BI:32:PRO:HD2	2.11	0.50
34:BQ:134:ARG:O	34:BQ:138:ASP:HB2	2.11	0.50
36:BS:11:LYS:O	36:BS:15:ARG:HG3	2.12	0.50
1:CA:749:C:H2'	1:CA:750:G:H8	1.77	0.50
1:CA:1117:G:H1'	1:CA:1184:G:N2	2.26	0.50
1:CA:1328:C:H5"	13:CM:28:ALA:HB3	1.94	0.50
1:CA:1459:C:O5'	1:CA:1460:A:OP2	2.30	0.50
2:CB:187:LEU:HD13	2:CB:205:ASP:HA	1.93	0.50
7:CG:24:THR:HG22	7:CG:27:ILE:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.80	0.50
23:DA:1328:G:H8	23:DA:1328:G:O5'	1.94	0.50
23:DA:1430:C:H2'	23:DA:1431:U:H6	1.77	0.50
24:DB:77:U:H4'	43:DZ:84:GLU:OE1	2.12	0.50
27:DF:22:ALA:HB1	27:DF:24:LEU:HD22	1.92	0.50
27:DF:71:GLY:N	56:DF:402:HOH:O	2.21	0.50
31:DN:34:LEU:O	31:DN:49:GLY:HA3	2.11	0.50
41:DX:31:HIS:CD2	41:DX:33:LYS:H	2.29	0.50
1:AA:646:U:H2'	1:AA:647:C:H6	1.75	0.50
1:AA:1111:A:N6	3:AC:177:THR:HA	2.19	0.50
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.47	0.50
1:AA:1316:G:N1	1:AA:1318:A:H5"	2.27	0.50
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.46	0.50
1:AA:1459:C:O5'	1:AA:1460:A:OP2	2.30	0.50
8:AH:63:LEU:HB2	8:AH:65:TYR:CE1	2.45	0.50
15:AO:82:ILE:O	15:AO:86:GLY:N	2.44	0.50
23:BA:95:G:O2'	46:B2:46:GLN:HA	2.12	0.50
23:BA:187:G:N7	56:BA:4299:HOH:O	2.35	0.50
23:BA:485:C:H2'	23:BA:486:C:H6	1.76	0.50
23:BA:576:U:O5'	23:BA:576:U:H6	1.95	0.50
23:BA:1021:A:H3'	23:BA:1021:A:C8	2.47	0.50
23:BA:1178:C:H2'	23:BA:1179:C:C6	2.46	0.50
29:BH:171:LEU:H	29:BH:171:LEU:HD23	1.76	0.50
1:CA:811:C:H4'	1:CA:900:A:N6	2.27	0.50
1:CA:918:A:H2'	1:CA:919:A:H8	1.74	0.50
1:CA:976:G:OP2	14:CN:32:SER:N	2.43	0.50
1:CA:1088:G:N2	1:CA:1089:G:H1'	2.27	0.50
1:CA:1151:A:N3	10:CJ:70:ARG:NH2	2.60	0.50
1:CA:1352:C:H1'	1:CA:1371:G:N2	2.26	0.50
3:CC:186:PHE:HA	3:CC:198:VAL:O	2.11	0.50
9:CI:71:SER:HA	9:CI:74:ILE:HB	1.94	0.50
14:CN:2:ALA:HB1	14:CN:6:LEU:HD13	1.92	0.50
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.12	0.50
23:DA:2296:U:N3	23:DA:2333:A:N3	2.60	0.50
23:DA:2345:G:O6	56:DA:4167:HOH:O	2.19	0.50
31:DN:67:LEU:HA	31:DN:87:LEU:HD12	1.93	0.50
34:DQ:27:VAL:HG11	34:DQ:134:ARG:HG2	1.94	0.50
37:DT:51:ARG:HG3	37:DT:98:LYS:HE3	1.94	0.50
45:D1:51:VAL:HG11	45:D1:74:VAL:HG21	1.92	0.50
50:D6:4:GLU:HG3	50:D6:5:VAL:N	2.27	0.50
1:AA:65:U:H2'	1:AA:381:C:C5	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:425:G:O3'	4:AD:45:GLN:NE2	2.44	0.50
1:AA:1279:A:H61	3:AC:26:LYS:NZ	2.09	0.50
1:AA:1357:A:H5"	1:AA:1358:U:OP2	2.11	0.50
1:AA:1396:A:H2	5:AE:19:MET:HG3	1.77	0.50
1:AA:1521:G:H2'	1:AA:1522:U:H6	1.76	0.50
4:AD:101:LEU:HD23	4:AD:102:ASP:N	2.27	0.50
13:AM:15:VAL:O	13:AM:19:LEU:HD13	2.12	0.50
23:BA:286:C:H42	23:BA:355:G:H1	1.60	0.50
23:BA:413:C:O5'	23:BA:413:C:H6	1.95	0.50
23:BA:860:U:C2	23:BA:2268:A:C8	3.00	0.50
23:BA:1026:U:H5"	23:BA:1026:U:O2	2.12	0.50
23:BA:1300:U:H4'	23:BA:1301:A:C5'	2.41	0.50
23:BA:2251:G:C6	23:BA:2252:G:C5	3.00	0.50
28:BG:89:GLY:C	28:BG:90:LEU:HD23	2.36	0.50
31:BN:132:ALA:HB3	31:BN:133:GLN:NE2	2.27	0.50
32:BO:35:VAL:HG21	32:BO:103:ALA:HB3	1.93	0.50
1:CA:544:G:C2	1:CA:545:C:C2	3.00	0.50
1:CA:1339:A:N6	1:CA:1340:A:N3	2.59	0.50
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.50
2:CB:80:ILE:HG13	2:CB:215:LEU:HD12	1.93	0.50
21:CU:6:ARG:HA	21:CU:11:GLY:HA3	1.92	0.50
23:DA:69:C:N4	56:DA:4046:HOH:O	2.45	0.50
23:DA:996:A:C2	23:DA:997:G:C8	3.00	0.50
23:DA:2126:A:H1'	23:DA:2127:G:OP2	2.12	0.50
23:DA:2755:C:HO2'	23:DA:2756:U:H6	1.60	0.50
23:DA:2773:C:O2'	23:DA:2774:C:H5'	2.12	0.50
28:DG:81:LYS:CB	28:DG:82:LEU:HD12	2.41	0.50
43:DZ:180:VAL:O	43:DZ:183:LEU:HB2	2.12	0.50
50:D6:14:THR:HG21	50:D6:48:VAL:HG13	1.93	0.50
1:AA:652:U:O4	1:AA:752:G:O2'	2.27	0.50
1:AA:954:G:N2	1:AA:1227:A:H62	2.09	0.50
1:AA:1178:G:N2	1:AA:1180:A:H3'	2.26	0.50
1:AA:1360:A:H3'	1:AA:1361:G:H8	1.77	0.50
2:AB:167:PRO:CG	2:AB:188:ALA:HB2	2.42	0.50
7:AG:43:PHE:HA	7:AG:46:ALA:HB3	1.93	0.50
12:AL:25:PRO:C	12:AL:27:LEU:H	2.16	0.50
17:AQ:31:LEU:HD23	17:AQ:32:TYR:CZ	2.47	0.50
23:BA:534:U:H5'	38:BU:42:ALA:HB1	1.93	0.50
23:BA:979:G:H3'	23:BA:980:A:C5'	2.42	0.50
23:BA:1339:G:H5"	41:BX:16:LYS:HD3	1.94	0.50
23:BA:2158:A:H1'	23:BA:2159:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2275:C:H5'	23:BA:2275:C:C6	2.47	0.50
28:BG:66:GLN:HG2	48:B4:1:MET:HE1	1.93	0.50
30:BI:1:MET:HE2	30:BI:38:LEU:HD21	1.94	0.50
30:BI:123:LEU:HD23	30:BI:123:LEU:H	1.76	0.50
36:BS:96:GLY:N	36:BS:99:LYS:H	2.10	0.50
41:BX:61:GLY:HA3	41:BX:73:ARG:O	2.11	0.50
1:CA:1309:G:C6	1:CA:1329:A:C6	3.00	0.50
5:CE:104:ALA:O	5:CE:107:ARG:HG2	2.12	0.50
6:CF:67:MET:HE1	6:CF:75:LEU:HD22	1.93	0.50
7:CG:113:GLU:HB2	7:CG:119:ARG:HG3	1.92	0.50
7:CG:143:ARG:O	7:CG:147:ALA:N	2.37	0.50
13:CM:3:ARG:HB3	13:CM:8:GLU:O	2.12	0.50
14:CN:26:ARG:HH11	14:CN:47:LEU:HD21	1.76	0.50
23:DA:784:A:H5'	23:DA:785:G:OP1	2.11	0.50
23:DA:2125:G:N2	23:DA:2126:A:H62	2.10	0.50
24:DB:111:G:H2'	24:DB:112:U:H6	1.77	0.50
25:DD:101:GLU:OE1	25:DD:103:ARG:HD3	2.12	0.50
25:DD:254:THR:O	25:DD:254:THR:OG1	2.28	0.50
28:DG:44:GLY:HA2	28:DG:88:ILE:HG22	1.94	0.50
30:DI:76:THR:O	30:DI:105:HIS:HE1	1.94	0.50
1:AA:369:C:O2'	1:AA:370:C:H5'	2.12	0.49
1:AA:757:U:H2'	1:AA:758:G:O4'	2.12	0.49
1:AA:975:A:H5'	1:AA:975:A:H8	1.76	0.49
1:AA:1016:A:H3'	1:AA:1017:G:C8	2.47	0.49
2:AB:132:LYS:O	2:AB:135:GLN:HG2	2.11	0.49
10:AJ:8:LEU:HD22	10:AJ:96:ILE:HA	1.94	0.49
10:AJ:40:LEU:HD12	10:AJ:69:ASN:HB2	1.94	0.49
23:BA:216:A:C4	23:BA:432:A:C2	3.00	0.49
23:BA:330:A:C2	23:BA:1210:A:H2'	2.34	0.49
23:BA:725:G:C6	23:BA:726:G:N1	2.80	0.49
23:BA:960:A:C8	23:BA:962:G:C8	3.00	0.49
23:BA:1419:A:C8	23:BA:1421:G:C6	3.00	0.49
27:BF:22:ALA:HB1	27:BF:24:LEU:HD22	1.94	0.49
1:CA:414:A:H2'	1:CA:415:A:H8	1.77	0.49
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.27	0.49
1:CA:966:G:H5"	1:CA:969:A:C8	2.46	0.49
1:CA:1025:U:O2	1:CA:1036:G:O6	2.30	0.49
1:CA:1111:A:H8	1:CA:1111:A:O5'	1.94	0.49
1:CA:1278:U:H5'	1:CA:1279:A:O4'	2.12	0.49
23:DA:1328:G:H2'	23:DA:1330:C:C5	2.47	0.49
23:DA:1689:A:N6	23:DA:1698:A:H2	1.98	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2472:G:H5'	23:DA:2473:U:C5'	2.39	0.49
24:DB:17:C:H2'	24:DB:18:G:O4'	2.12	0.49
25:DD:130:ALA:C	25:DD:131:LEU:HD12	2.37	0.49
45:D1:82:LEU:O	45:D1:83:GLU:HG3	2.11	0.49
1:AA:587:G:O2'	1:AA:588:G:OP2	2.26	0.49
1:AA:1255:G:H5"	3:AC:26:LYS:HZ1	1.77	0.49
1:AA:1379:G:O6	7:AG:2:ALA:N	2.45	0.49
2:AB:179:LYS:HA	8:AH:72:PRO:HG3	1.93	0.49
9:AI:8:GLY:CA	9:AI:76:ALA:HB1	2.41	0.49
9:AI:16:ARG:HB2	9:AI:64:THR:HG22	1.93	0.49
20:AT:73:HIS:C	20:AT:74:LYS:HG2	2.37	0.49
23:BA:30:G:H2'	23:BA:31:C:C6	2.47	0.49
23:BA:686:G:OP1	51:B7:11:LYS:NZ	2.30	0.49
23:BA:1174:A:H5'	23:BA:1177:A:N6	2.25	0.49
23:BA:2033:A:P	56:BA:4596:HOH:O	2.69	0.49
23:BA:2165:G:H2'	23:BA:2166:G:C8	2.47	0.49
23:BA:2350:C:H2'	23:BA:2351:G:O4'	2.12	0.49
23:BA:2782:G:OP2	56:BA:4090:HOH:O	2.18	0.49
23:BA:2853:C:H2'	23:BA:2854:G:C8	2.47	0.49
25:BD:108:PRO:HB3	25:BD:143:HIS:HE1	1.75	0.49
32:BO:10:VAL:HG13	32:BO:17:ARG:O	2.12	0.49
32:BO:73:ASP:OD1	37:BT:32:TYR:OH	2.22	0.49
40:BW:86:LEU:HD22	40:BW:96:ILE:HD11	1.94	0.49
41:BX:31:HIS:CD2	41:BX:33:LYS:H	2.30	0.49
41:BX:50:LYS:HB3	41:BX:84:ALA:HB2	1.93	0.49
1:CA:55:A:C5	1:CA:56:U:C5	3.00	0.49
1:CA:191:G:N2	20:CT:103:GLY:HA2	2.26	0.49
1:CA:502:G:C2	1:CA:503:C:C2	3.00	0.49
1:CA:1370:G:H5"	9:CI:12:GLU:OE2	2.12	0.49
2:CB:28:PHE:CZ	2:CB:189:ASP:HA	2.47	0.49
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.12	0.49
4:CD:9:CYS:SG	4:CD:22:LYS:NZ	2.70	0.49
13:CM:33:ALA:HA	13:CM:36:LYS:CB	2.43	0.49
15:CO:15:PHE:CE2	15:CO:84:LYS:HD2	2.48	0.49
23:DA:184:C:H2'	23:DA:185:U:H6	1.77	0.49
23:DA:1506:C:H2'	23:DA:1507:A:H5'	1.95	0.49
23:DA:2496:C:OP1	34:DQ:82:ARG:HB3	2.12	0.49
43:DZ:179:ASP:HB2	43:DZ:182:LYS:HD3	1.94	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	2.12	0.49
1:AA:618:C:H5'	1:AA:619:U:H5"	1.94	0.49
1:AA:1027:C:H2'	1:AA:1028:C:C4	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1123:A:N6	1:AA:1150:U:H3	2.08	0.49
1:AA:1517:G:H1'	23:BA:1919:A:O3'	2.12	0.49
6:AF:42:GLU:OE1	6:AF:59:TYR:OH	2.26	0.49
17:AQ:45:HIS:HD2	17:AQ:65:ILE:HG12	1.76	0.49
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.11	0.49
23:BA:1028:A:N6	23:BA:1125:G:H2'	2.28	0.49
23:BA:1434:A:H61	23:BA:1558:A:H62	1.59	0.49
23:BA:1506:C:H2'	23:BA:1507:A:H5'	1.94	0.49
23:BA:2516:G:C6	23:BA:2517:C:N4	2.80	0.49
24:BB:13:A:N1	24:BB:69:G:O2'	2.40	0.49
31:BN:58:ASP:OD1	31:BN:58:ASP:N	2.43	0.49
1:CA:103:C:P	20:CT:17:ARG:HH21	2.36	0.49
1:CA:448:A:P	1:CA:485:G:H22	2.35	0.49
1:CA:1001(A):G:H2'	1:CA:1002:G:H8	1.77	0.49
2:CB:218:ALA:O	2:CB:222:ILE:HG13	2.12	0.49
3:CC:139:GLN:O	3:CC:143:GLU:HB2	2.13	0.49
3:CC:175:LEU:H	3:CC:175:LEU:HD12	1.77	0.49
13:CM:23:TYR:HB3	13:CM:67:GLU:CD	2.37	0.49
23:DA:102:G:HO2'	23:DA:103:A:P	2.34	0.49
23:DA:1513:C:H2'	23:DA:1514:U:H6	1.77	0.49
23:DA:2010:G:O6	56:DA:4669:HOH:O	2.19	0.49
25:DD:238:GLY:O	25:DD:239:ARG:HB3	2.13	0.49
29:DH:171:LEU:HD23	29:DH:171:LEU:H	1.77	0.49
41:DX:9:LEU:HA	46:D2:36:ARG:HH21	1.77	0.49
43:DZ:138:GLU:HG2	43:DZ:156:LYS:NZ	2.28	0.49
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.12	0.49
1:AA:1446:U:H4'	1:AA:1447:A:C2	2.48	0.49
2:AB:226:ARG:HG3	2:AB:227:GLY:H	1.78	0.49
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.70	0.49
23:BA:2133:G:C2'	23:BA:2158:A:H61	2.26	0.49
23:BA:2406:U:C2	33:BP:72:PRO:HG2	2.48	0.49
23:BA:2602:A:H1'	23:BA:2603:G:C5'	2.41	0.49
26:BE:178:GLU:CD	26:BE:178:GLU:H	2.21	0.49
37:BT:91:ARG:HH11	37:BT:120:ARG:NH1	2.09	0.49
46:B2:13:ALA:HA	46:B2:16:LEU:HD12	1.93	0.49
1:CA:77:G:O6	1:CA:78:G:N1	2.45	0.49
1:CA:757:U:H2'	1:CA:758:G:O4'	2.11	0.49
1:CA:1094:G:H22	1:CA:1105:A:H62	1.61	0.49
1:CA:1371:G:H2'	1:CA:1372:U:O4'	2.12	0.49
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.49
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:219:VAL:O	2:CB:222:ILE:HB	2.12	0.49
4:CD:25:ARG:O	4:CD:27:TYR:N	2.43	0.49
6:CF:49:ALA:HB2	18:CR:78:LEU:O	2.12	0.49
7:CG:103:TRP:CE2	7:CG:137:LYS:HD2	2.47	0.49
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.94	0.49
13:CM:50:GLU:O	13:CM:53:VAL:HG12	2.12	0.49
23:DA:105:C:H2'	23:DA:106:C:C6	2.47	0.49
23:DA:443:A:H1'	23:DA:1201:C:O4'	2.12	0.49
23:DA:557:U:H2'	23:DA:558:G:H8	1.77	0.49
23:DA:1268:A:H2'	23:DA:1269:A:O4'	2.12	0.49
23:DA:1489:U:H3'	23:DA:1489:U:H6	1.78	0.49
23:DA:1512:U:H2'	23:DA:1513:C:C6	2.46	0.49
23:DA:1889:A:H2'	23:DA:1890:A:C8	2.47	0.49
23:DA:2250:G:C5	34:DQ:83:MET:HB2	2.47	0.49
42:DY:40:GLU:O	42:DY:42:VAL:HG23	2.11	0.49
1:AA:336:C:H2'	1:AA:337:C:H6	1.77	0.49
1:AA:826:C:H2'	1:AA:827:U:C6	2.48	0.49
1:AA:1345:U:C6	1:AA:1377:A:H2	2.30	0.49
2:AB:24:TRP:CZ3	2:AB:29:ALA:HB2	2.47	0.49
2:AB:187:LEU:HD23	2:AB:201:ILE:HB	1.94	0.49
8:AH:48:TYR:HA	8:AH:60:ARG:O	2.13	0.49
23:BA:1171:G:OP2	23:BA:1171:G:H8	1.96	0.49
23:BA:2892:A:H2'	23:BA:2893:G:C5'	2.42	0.49
24:BB:106:G:H5'	43:BZ:31:ARG:HG2	1.94	0.49
30:BI:84:GLY:C	30:BI:86:THR:H	2.21	0.49
1:CA:35:G:N1	1:CA:550:G:C2	2.81	0.49
5:CE:91:LEU:HD12	5:CE:120:THR:HG22	1.94	0.49
22:CX:53:THR:HG23	22:CX:62:HIS:HB3	1.94	0.49
23:DA:1774:C:H6	23:DA:1774:C:O5'	1.94	0.49
24:DB:15:A:H1'	24:DB:110:G:C5	2.47	0.49
47:D3:46:ASN:O	47:D3:50:VAL:HG22	2.13	0.49
1:AA:130:A:OP2	1:AA:189(F):U:C2	2.66	0.49
1:AA:436:C:O2'	1:AA:437:U:OP2	2.22	0.49
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.47	0.49
1:AA:1459:C:H3'	1:AA:1459:C:H6	1.77	0.49
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.78	0.49
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.43	0.49
9:AI:3:GLN:NE2	9:AI:18:PHE:HA	2.27	0.49
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.46	0.49
17:AQ:76:LEU:HD21	17:AQ:79:SER:N	2.27	0.49
21:AU:10:ARG:HA	21:AU:13:ILE:HG22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:784:A:C5	25:BD:229:VAL:HG21	2.47	0.49
23:BA:1688:U:H1'	23:BA:1701:A:C6	2.48	0.49
23:BA:1840:G:C6	23:BA:1841:U:C4	3.01	0.49
23:BA:1952:A:C6	23:BA:1953:A:N1	2.80	0.49
23:BA:2580:U:C5	23:BA:2581:G:C6	3.01	0.49
24:BB:31:C:N4	36:BS:32:LEU:HD13	2.28	0.49
24:BB:43:C:H5"	48:B4:1:MET:HG2	1.93	0.49
28:BG:11:TYR:HA	28:BG:15:VAL:HB	1.93	0.49
38:BU:59:ARG:O	38:BU:63:VAL:HG23	2.12	0.49
42:BY:6:HIS:H	42:BY:6:HIS:CD2	2.30	0.49
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.30	0.49
1:CA:1023:G:H8	1:CA:1023:G:OP2	1.95	0.49
1:CA:1212:U:H5'	1:CA:1213:A:OP1	2.13	0.49
7:CG:51:GLN:HG3	7:CG:58:PRO:HD3	1.95	0.49
7:CG:137:LYS:HD3	7:CG:140:ASP:HB2	1.95	0.49
43:DZ:125:LEU:HG	43:DZ:164:ALA:HB3	1.94	0.49
53:D9:10:ILE:HD12	53:D9:32:HIS:HA	1.93	0.49
1:AA:460:G:O6	1:AA:470:C:H5"	2.13	0.49
1:AA:1083:U:C5	1:AA:1084:G:C6	3.01	0.49
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.77	0.49
6:AF:55:ASP:HB3	6:AF:86:ARG:HH12	1.75	0.49
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.47	0.49
13:AM:90:LEU:C	13:AM:91:ARG:HG2	2.36	0.49
23:BA:528:A:C2	23:BA:2043:C:H4'	2.47	0.49
23:BA:826:U:C4'	33:BP:55:ARG:HB2	2.43	0.49
23:BA:885:C:H5'	23:BA:886:C:OP2	2.13	0.49
23:BA:886:C:H2'	23:BA:887:A:H5'	1.95	0.49
23:BA:1364:G:OP1	45:B1:2:SER:HA	2.13	0.49
23:BA:2114:A:O2'	23:BA:2168:G:H5'	2.12	0.49
23:BA:2150:U:H2'	23:BA:2151:G:H8	1.77	0.49
23:BA:2203:U:O2'	23:BA:2205:C:H5'	2.12	0.49
23:BA:2335:A:O2'	23:BA:2336:A:OP2	2.28	0.49
23:BA:2648:C:H2'	23:BA:2649:U:C6	2.47	0.49
43:BZ:48:PHE:O	43:BZ:52:SER:N	2.45	0.49
1:CA:674:G:H2'	1:CA:675:A:C8	2.47	0.49
1:CA:951:G:C5	1:CA:1231:G:C6	3.01	0.49
1:CA:974:A:H8	1:CA:974:A:OP1	1.95	0.49
1:CA:1251:A:H4'	9:CI:12:GLU:OE2	2.12	0.49
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.43	0.49
7:CG:29:LYS:HB3	7:CG:105:VAL:HG11	1.93	0.49
7:CG:71:PRO:HB3	7:CG:138:LYS:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:51:ARG:CZ	10:CJ:61:GLU:HB3	2.43	0.49
17:CQ:65:ILE:H	17:CQ:65:ILE:HD12	1.78	0.49
20:CT:26:ASN:OD1	20:CT:71:THR:HG23	2.12	0.49
23:DA:1031:G:H1	23:DA:1123:C:H42	1.59	0.49
23:DA:2711:A:OP1	23:DA:2712(A):A:OP1	2.31	0.49
24:DB:90:A:C5	24:DB:91:C:H1'	2.48	0.49
32:DO:115:VAL:HG13	32:DO:121:VAL:HG21	1.94	0.49
43:DZ:111:VAL:C	43:DZ:113:ALA:H	2.21	0.49
1:AA:22:G:H2'	1:AA:23:C:C6	2.48	0.49
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.28	0.49
7:AG:139:GLU:HB3	7:AG:143:ARG:NH2	2.28	0.49
9:AI:15:ALA:HB1	9:AI:63:ILE:HG23	1.95	0.49
18:AR:30:ASP:HB3	18:AR:33:ASP:HB2	1.94	0.49
23:BA:96:G:H4'	46:B2:48:HIS:CD2	2.48	0.49
23:BA:1533:G:N2	23:BA:1536:C:H5	2.00	0.49
23:BA:1799:G:H5'	23:BA:1819:A:H61	1.77	0.49
24:BB:105:A:OP1	43:BZ:72:ARG:NH1	2.37	0.49
26:BE:2:LYS:HG3	26:BE:200:GLU:HB2	1.95	0.49
33:BP:138:LEU:HD23	33:BP:145:PRO:HG3	1.94	0.49
40:BW:14:PRO:HG2	40:BW:78:GLU:HG2	1.94	0.49
42:BY:68:HIS:ND1	42:BY:70:SER:HB3	2.28	0.49
45:B1:2:SER:HB3	45:B1:46:LEU:HD11	1.95	0.49
1:CA:93:G:O2'	1:CA:96:U:H5'	2.13	0.49
1:CA:186:C:O3'	20:CT:82:SER:HB2	2.13	0.49
1:CA:396:G:O2'	1:CA:398:C:OP1	2.19	0.49
1:CA:950:U:N3	1:CA:1231:G:N1	2.42	0.49
1:CA:993:G:H2'	1:CA:995:C:H41	1.78	0.49
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.48	0.49
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.13	0.49
17:CQ:76:LEU:HD21	17:CQ:79:SER:N	2.27	0.49
23:DA:143:G:H2'	23:DA:143(A):C:H6	1.77	0.49
23:DA:1156:A:OP2	56:DA:4263:HOH:O	2.20	0.49
23:DA:1405:U:H2'	23:DA:1406:U:H6	1.74	0.49
23:DA:2307:G:H5'	23:DA:2308:G:N2	2.28	0.49
30:DI:58:LEU:HG	30:DI:59:ALA:N	2.28	0.49
1:AA:270:A:H2'	1:AA:271:C:C6	2.47	0.49
1:AA:420:U:N3	1:AA:422:C:N3	2.60	0.49
1:AA:1003:G:N2	1:AA:1004:A:O2'	2.45	0.49
1:AA:1224:G:C6	1:AA:1363:C:N3	2.81	0.49
7:AG:113:GLU:HG2	7:AG:119:ARG:HB2	1.95	0.49
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.94	0.49
23:BA:2322:A:N6	23:BA:2335:A:C6	2.72	0.49
23:BA:2593:U:H2'	23:BA:2594:C:H6	1.76	0.49
31:BN:42:TRP:CD1	31:BN:48:MET:HE1	2.48	0.49
1:CA:448:A:OP2	1:CA:485:G:N2	2.45	0.49
1:CA:952:U:O2	1:CA:1229:A:N1	2.46	0.49
1:CA:986:A:H2'	1:CA:987:G:C8	2.47	0.49
1:CA:1026:G:N3	1:CA:1027:C:H5'	2.28	0.49
1:CA:1210:C:H3'	1:CA:1211:U:C5'	2.43	0.49
17:CQ:86:GLU:HG2	17:CQ:90:ILE:HD11	1.95	0.49
23:DA:947:G:N2	23:DA:971:C:C2	2.81	0.49
23:DA:2125:G:N2	23:DA:2126:A:N6	2.61	0.49
23:DA:2158:A:H1'	23:DA:2159:G:C8	2.48	0.49
1:AA:417:C:O5'	1:AA:417:C:H6	1.96	0.49
1:AA:674:G:H2'	1:AA:675:A:C8	2.47	0.49
1:AA:946:A:OP2	1:AA:946:A:H8	1.95	0.49
1:AA:1057:G:N2	1:AA:1204:A:H1'	2.28	0.49
1:AA:1255:G:H2'	1:AA:1258:G:H21	1.77	0.49
2:AB:78:GLN:O	2:AB:94:ASN:ND2	2.43	0.49
3:AC:59:ARG:HG2	3:AC:64:VAL:CB	2.43	0.49
21:AU:5:ASP:HB3	21:AU:8:THR:OG1	2.11	0.49
23:BA:751:A:H5'	40:BW:90:ARG:HA	1.95	0.49
23:BA:1356:G:C6	23:BA:1357:U:C4	3.01	0.49
23:BA:1657:C:H2'	23:BA:1658:C:C6	2.48	0.49
23:BA:1796:U:H2'	23:BA:1797:C:H6	1.77	0.49
23:BA:2461:C:H2'	23:BA:2462:U:H6	1.77	0.49
23:BA:2648:C:H2'	23:BA:2649:U:H6	1.78	0.49
24:BB:96:U:H2'	24:BB:97:G:H8	1.78	0.49
31:BN:39:ARG:NH2	31:BN:41:ASP:OD2	2.44	0.49
1:CA:830:G:H2'	1:CA:831:U:O4'	2.13	0.49
1:CA:868:C:H2'	1:CA:869:G:O4'	2.13	0.49
1:CA:1240:U:H3'	1:CA:1241:G:O4'	2.13	0.49
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.95	0.49
3:CC:32:LEU:HD21	3:CC:59:ARG:CZ	2.43	0.49
3:CC:148:GLY:CA	3:CC:172:ARG:H	2.25	0.49
17:CQ:66:SER:HB3	17:CQ:69:LYS:HB2	1.95	0.49
19:CS:12:ASP:HB2	19:CS:38:SER:OG	2.13	0.49
23:DA:271(E):U:H3	23:DA:271(S):G:H1	1.60	0.49
23:DA:704:G:H1'	23:DA:726:G:N2	2.27	0.49
23:DA:774:A:N3	23:DA:774:A:H2'	2.28	0.49
23:DA:1593:G:H2'	23:DA:1594:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2462:U:H1'	23:DA:2491:U:O4	2.13	0.49
23:DA:2854:G:H2'	23:DA:2855:C:C6	2.47	0.49
33:DP:64:LYS:HA	52:D8:13:ARG:HB3	1.94	0.49
33:DP:83:VAL:CG1	33:DP:112:LEU:HD21	2.43	0.49
1:AA:859:A:H2'	1:AA:860:A:O4'	2.13	0.48
1:AA:959:A:O2'	1:AA:961:U:H5'	2.13	0.48
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.13	0.48
1:AA:986:A:H1'	19:AS:54:GLY:O	2.13	0.48
1:AA:1458:G:H3'	1:AA:1459:C:H5"	1.94	0.48
5:AE:91:LEU:HD12	5:AE:120:THR:HG22	1.94	0.48
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.95	0.48
23:BA:127:A:H5"	23:BA:128:C:C6	2.48	0.48
23:BA:226:G:H21	23:BA:228:A:N6	2.10	0.48
23:BA:826:U:H4'	33:BP:55:ARG:HB2	1.95	0.48
23:BA:1140:C:OP1	31:BN:23:LEU:O	2.30	0.48
23:BA:1419:A:O2'	23:BA:1420:U:H5"	2.13	0.48
23:BA:1509(B):A:H3'	23:BA:1510:G:H8	1.77	0.48
23:BA:1632:A:C6	23:BA:1633:G:C6	3.01	0.48
23:BA:1638:C:O2	23:BA:2698:U:O2'	2.28	0.48
23:BA:1794:U:H2'	23:BA:1795:C:H6	1.78	0.48
23:BA:1866:C:H2'	23:BA:1876:A:O4'	2.13	0.48
43:BZ:180:VAL:O	43:BZ:183:LEU:HB2	2.12	0.48
1:CA:266:G:H5"	1:CA:267:C:H5	1.77	0.48
1:CA:766:A:H2'	1:CA:767:A:O4'	2.12	0.48
1:CA:881:G:P	12:CL:12:ARG:HH22	2.35	0.48
1:CA:1144:G:H21	1:CA:1146:A:H61	1.60	0.48
1:CA:1251:A:N3	1:CA:1369:C:O2'	2.34	0.48
1:CA:1320:C:H42	19:CS:36:ARG:HE	1.61	0.48
3:CC:139:GLN:HA	3:CC:142:MET:HB2	1.93	0.48
7:CG:66:VAL:HA	7:CG:69:VAL:HG23	1.93	0.48
12:CL:70:ILE:HG12	12:CL:100:ILE:HD13	1.95	0.48
13:CM:23:TYR:CD1	13:CM:67:GLU:HA	2.48	0.48
23:DA:848:G:H2'	23:DA:849:A:C8	2.48	0.48
23:DA:955:C:OP1	34:DQ:87:LYS:HE2	2.13	0.48
23:DA:2293:C:H2'	23:DA:2294:C:C6	2.48	0.48
29:DH:80:SER:OG	29:DH:81:GLU:N	2.44	0.48
31:DN:132:ALA:HB3	31:DN:133:GLN:NE2	2.28	0.48
42:DY:6:HIS:H	42:DY:6:HIS:CD2	2.31	0.48
1:AA:775:G:O2'	1:AA:776:G:H5'	2.13	0.48
1:AA:963:G:N2	1:AA:972:C:N3	2.50	0.48
1:AA:978:A:N6	1:AA:1316:G:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1067:A:H8	1:AA:1067:A:O5'	1.96	0.48
1:AA:1202:G:N2	14:AN:43:CYS:SG	2.85	0.48
1:AA:1234:C:H2'	1:AA:1235:U:C6	2.48	0.48
1:AA:1360:A:H3'	1:AA:1361:G:C8	2.48	0.48
2:AB:74:LYS:NZ	2:AB:205:ASP:OD2	2.33	0.48
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.96	0.48
2:AB:149:LEU:HA	2:AB:149:LEU:HD23	1.62	0.48
5:AE:71:LEU:HD23	5:AE:115:VAL:HG22	1.95	0.48
17:AQ:55:ASP:HA	17:AQ:79:SER:HA	1.95	0.48
18:AR:36:ASN:ND2	18:AR:39:VAL:H	2.11	0.48
23:BA:784:A:C8	23:BA:792:G:C5	3.01	0.48
23:BA:2130:U:H2'	23:BA:2131:G:N7	2.27	0.48
36:BS:96:GLY:N	36:BS:99:LYS:HB3	2.28	0.48
48:B4:34:GLU:CD	48:B4:35:VAL:H	2.21	0.48
1:CA:346:G:H2'	1:CA:347:G:O4'	2.14	0.48
1:CA:420:U:N3	1:CA:422:C:N3	2.61	0.48
1:CA:565:U:OP2	1:CA:566:G:O2'	2.30	0.48
1:CA:1069:C:H4'	1:CA:1192:C:O2	2.13	0.48
1:CA:1124:G:H1'	10:CJ:38:ILE:HG21	1.95	0.48
1:CA:1373:G:OP1	7:CG:36:LYS:HB2	2.13	0.48
9:CI:20:ARG:HG2	9:CI:21:PRO:O	2.13	0.48
12:CL:42:THR:HB	12:CL:52:LEU:HD12	1.94	0.48
23:DA:870:A:C2	23:DA:908:C:C2	3.01	0.48
23:DA:1654:A:OP1	35:DR:1:MET:HA	2.13	0.48
23:DA:2154:G:H2'	23:DA:2155:G:C8	2.48	0.48
23:DA:2648:C:H2'	23:DA:2649:U:C6	2.48	0.48
31:DN:62:VAL:CG1	31:DN:66:LYS:HB2	2.44	0.48
32:DO:35:VAL:HG21	32:DO:103:ALA:HB3	1.95	0.48
41:DX:11:PRO:HG2	41:DX:13:LEU:HD21	1.95	0.48
1:AA:335:C:H2'	1:AA:336:C:C6	2.48	0.48
1:AA:838:G:H2'	1:AA:839:U:H5"	1.94	0.48
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.46	0.48
1:AA:978:A:O2'	1:AA:1322:C:N3	2.39	0.48
1:AA:1058:G:C6	1:AA:1059:C:N3	2.80	0.48
1:AA:1231:G:H2'	1:AA:1232:U:H6	1.76	0.48
1:AA:1293:G:O2'	1:AA:1294:G:OP2	2.25	0.48
1:AA:1309:G:C6	1:AA:1329:A:C5	3.00	0.48
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.47	0.48
1:AA:1457:G:C6	1:AA:1458:G:N7	2.82	0.48
3:AC:153:VAL:HG22	3:AC:198:VAL:HG13	1.95	0.48
9:AI:9:ARG:HG2	9:AI:104:ARG:HH21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:89:ASN:C	9:AI:91:ASP:H	2.21	0.48
12:AL:27:LEU:C	12:AL:29:GLY:H	2.21	0.48
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.94	0.48
22:AX:22:ALA:O	22:AX:25:ALA:HB3	2.13	0.48
23:BA:573:G:O2'	23:BA:574:C:H3'	2.13	0.48
23:BA:729:G:OP2	25:BD:13:ARG:NH1	2.45	0.48
23:BA:955:C:OP1	34:BQ:87:LYS:HE2	2.13	0.48
23:BA:1047:G:H2'	23:BA:1110:G:N1	2.26	0.48
23:BA:1664:A:OP1	56:BA:4773:HOH:O	2.19	0.48
23:BA:2205:C:O2	23:BA:2220:G:C2	2.66	0.48
24:BB:96:U:H2'	24:BB:97:G:C8	2.47	0.48
26:BE:119:ARG:HG2	26:BE:160:TYR:HB2	1.94	0.48
27:BF:197:ASP:O	27:BF:201:VAL:HG12	2.12	0.48
29:BH:67:LEU:O	29:BH:71:LEU:HB2	2.13	0.48
41:BX:9:LEU:HA	46:B2:36:ARG:HH21	1.79	0.48
49:B5:20:ARG:HG2	49:B5:23:HIS:CD2	2.48	0.48
1:CA:9:G:H2'	1:CA:10:A:C8	2.48	0.48
1:CA:123:C:OP1	1:CA:311:C:O2'	2.23	0.48
1:CA:189(A):C:H42	1:CA:189(J):G:H1	1.60	0.48
1:CA:512:U:H2'	1:CA:513:C:H6	1.79	0.48
1:CA:1004:A:C2	1:CA:1037:C:N4	2.82	0.48
1:CA:1013:G:HO2'	1:CA:1014:A:H8	1.58	0.48
1:CA:1165:C:C2	1:CA:1171:G:N2	2.81	0.48
2:CB:77:ALA:HB1	2:CB:211:ILE:HG21	1.94	0.48
3:CC:132:ARG:O	3:CC:136:GLN:HB2	2.13	0.48
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.94	0.48
23:DA:102:G:O2'	23:DA:103:A:O5'	2.26	0.48
23:DA:171:G:H2'	23:DA:172:C:O4'	2.14	0.48
23:DA:333:G:H5"	23:DA:334:C:OP2	2.12	0.48
23:DA:444:C:H4'	27:DF:49:ALA:HB2	1.94	0.48
23:DA:975:C:H5	56:DA:4455:HOH:O	1.95	0.48
23:DA:1316:U:H2'	23:DA:1317:A:C8	2.49	0.48
23:DA:1505:C:H2'	23:DA:1506:C:H6	1.78	0.48
35:DR:103:ARG:HH12	35:DR:110:PRO:HD3	1.77	0.48
43:DZ:150:LEU:O	43:DZ:171:ILE:HG13	2.13	0.48
48:D4:22:ILE:HG22	48:D4:24:THR:HG23	1.95	0.48
1:AA:223:U:H2'	1:AA:224:C:C6	2.49	0.48
1:AA:230:G:H1'	16:AP:25:ARG:HH22	1.78	0.48
1:AA:806:C:H2'	1:AA:807:A:C8	2.48	0.48
1:AA:838:G:N2	1:AA:849:C:C2	2.81	0.48
1:AA:954:G:H21	1:AA:1227:A:H62	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1268:A:H1'	1:AA:1327:C:H5'	1.94	0.48
1:AA:1301:U:H4'	13:AM:21:TYR:OH	2.14	0.48
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.49	0.48
1:AA:1443:G:O6	1:AA:1444:C:C4	2.66	0.48
1:AA:1443:G:O6	1:AA:1459:C:O2	2.31	0.48
1:AA:1459:C:C2'	1:AA:1460:A:N7	2.77	0.48
2:AB:95:GLN:HG3	2:AB:147:LYS:HD3	1.95	0.48
3:AC:59:ARG:HA	3:AC:64:VAL:HA	1.93	0.48
3:AC:114:PRO:HD3	3:AC:183:ASP:OD1	2.13	0.48
20:AT:86:ARG:CZ	20:AT:86:ARG:HB3	2.42	0.48
23:BA:83:G:H22	23:BA:102:G:H2'	1.77	0.48
23:BA:535:C:O3'	38:BU:53:ARG:NH1	2.46	0.48
23:BA:848:G:H2'	23:BA:849:A:C8	2.49	0.48
23:BA:1366:A:OP1	45:B1:3:LYS:NZ	2.46	0.48
23:BA:2318:G:N3	23:BA:2318:G:H2'	2.28	0.48
26:BE:72:VAL:HA	26:BE:73:GLU:OE2	2.13	0.48
28:BG:59:GLU:O	28:BG:63:ILE:HG13	2.13	0.48
33:BP:52:GLU:OE1	33:BP:55:ARG:NH1	2.47	0.48
37:BT:95:ARG:HG2	37:BT:95:ARG:NH1	2.26	0.48
42:BY:79:CYS:HB3	42:BY:81:LYS:H	1.77	0.48
43:BZ:151:HIS:C	43:BZ:153:SER:H	2.22	0.48
48:B4:14:ILE:HG22	48:B4:33:VAL:HG23	1.95	0.48
50:B6:14:THR:HG21	50:B6:48:VAL:HG13	1.95	0.48
1:CA:390:C:H2'	1:CA:391:G:C8	2.49	0.48
1:CA:599:C:H4'	8:CH:130:GLY:C	2.38	0.48
1:CA:625:G:C6	1:CA:626:U:C4	3.01	0.48
1:CA:684:A:H2'	1:CA:685:G:C8	2.47	0.48
1:CA:1071:C:H5"	5:CE:49:PRO:HG2	1.94	0.48
1:CA:1086:U:H4'	1:CA:1389:C:H5"	1.94	0.48
2:CB:37:ASN:O	2:CB:39:ILE:HD12	2.13	0.48
8:CH:37:ARG:HE	8:CH:37:ARG:HB3	1.50	0.48
15:CO:43:LEU:O	15:CO:44:LYS:C	2.57	0.48
23:DA:223:A:O2'	23:DA:420:C:O2	2.32	0.48
23:DA:659:C:H4'	27:DF:100:THR:O	2.12	0.48
23:DA:968:G:H2'	23:DA:969:U:O4'	2.13	0.48
23:DA:2165:G:H2'	23:DA:2166:G:C8	2.48	0.48
23:DA:2275:C:H6	23:DA:2275:C:H5'	1.78	0.48
23:DA:2318:G:N3	23:DA:2318:G:H2'	2.29	0.48
23:DA:2713:A:H2'	23:DA:2713:A:N3	2.29	0.48
27:DF:50:SER:OG	27:DF:51:THR:N	2.45	0.48
32:DO:77:ILE:HG13	37:DT:74:ARG:HG2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DT:28:VAL:HG13	37:DT:86:ILE:HG23	1.95	0.48
42:DY:15:VAL:HG21	42:DY:42:VAL:HG11	1.94	0.48
1:AA:1338:G:H5'	1:AA:1339:A:OP2	2.13	0.48
2:AB:178:ARG:NH1	2:AB:196:LEU:O	2.46	0.48
4:AD:162:LEU:HD13	4:AD:181:MET:HE1	1.95	0.48
23:BA:71:A:H5'	23:BA:71:A:H8	1.75	0.48
23:BA:271(I):G:H2'	23:BA:271(J):C:C6	2.48	0.48
23:BA:828:U:H4'	23:BA:831:G:N1	2.28	0.48
23:BA:1213:A:N3	23:BA:1238:G:O2'	2.45	0.48
23:BA:2069:G:OP2	56:BA:3862:HOH:O	2.20	0.48
23:BA:2807:G:N1	23:BA:2808:U:C2	2.82	0.48
33:BP:95:VAL:HG22	33:BP:125:VAL:HB	1.96	0.48
34:BQ:63:LYS:HD2	34:BQ:65:PHE:CZ	2.49	0.48
36:BS:56:LEU:C	36:BS:58:LEU:HD22	2.38	0.48
1:CA:560:U:OP2	56:CA:1914:HOH:O	2.20	0.48
1:CA:626:U:C2	1:CA:627:G:C8	3.02	0.48
1:CA:859:A:H2'	1:CA:860:A:O4'	2.13	0.48
1:CA:1256:A:H5'	1:CA:1258:G:O4'	2.13	0.48
1:CA:1446:U:H4'	1:CA:1447:A:C2	2.49	0.48
1:CA:1508:G:P	56:CA:2020:HOH:O	2.71	0.48
2:CB:42:ILE:HD12	2:CB:203:GLY:HA2	1.96	0.48
3:CC:111:LEU:HD23	3:CC:141:VAL:HG13	1.94	0.48
6:CF:19:LEU:HD11	6:CF:59:TYR:CZ	2.49	0.48
17:CQ:76:LEU:HD21	17:CQ:79:SER:H	1.79	0.48
23:DA:335:C:H2'	23:DA:336:C:H6	1.79	0.48
23:DA:493:G:H2'	23:DA:494:G:O4'	2.14	0.48
23:DA:2469:A:H5'	23:DA:2470:G:OP2	2.13	0.48
23:DA:2748:A:H5'	29:DH:4:ILE:HD12	1.94	0.48
24:DB:13:A:N1	24:DB:69:G:O2'	2.38	0.48
31:DN:30:ILE:HG22	31:DN:34:LEU:HD22	1.94	0.48
31:DN:39:ARG:NH2	31:DN:41:ASP:OD2	2.46	0.48
1:AA:60:A:H4'	1:AA:61:G:O5'	2.14	0.48
1:AA:393:A:C2	1:AA:394:G:C8	3.02	0.48
1:AA:830:G:H2'	1:AA:831:U:O4'	2.14	0.48
1:AA:1084:G:H5"	1:AA:1085:U:OP2	2.13	0.48
1:AA:1206:G:C6	1:AA:1207:G:C5	3.00	0.48
1:AA:1441:G:N2	1:AA:1459:C:C6	2.82	0.48
5:AE:137:GLU:O	5:AE:141:GLN:HB2	2.14	0.48
15:AO:4:THR:H	15:AO:7:GLU:HB2	1.79	0.48
20:AT:38:LYS:O	20:AT:41:ILE:HG13	2.14	0.48
22:AX:69:ASP:HB3	22:AX:71:TYR:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:7:G:H2'	23:BA:8:A:C8	2.48	0.48
23:BA:12:U:H2'	23:BA:12:U:O2	2.14	0.48
23:BA:2324:C:H5"	23:BA:2325:G:H5'	1.95	0.48
26:BE:92:THR:O	26:BE:95:ILE:HG23	2.12	0.48
27:BF:123:LEU:HD11	27:BF:194:MET:HE2	1.94	0.48
28:BG:104:GLU:O	28:BG:108:ASN:ND2	2.47	0.48
28:BG:132:ASN:OD1	28:BG:158:ALA:HA	2.13	0.48
30:BI:5:LEU:HD12	30:BI:17:GLN:O	2.13	0.48
35:BR:37:THR:OG1	35:BR:40:LYS:HG3	2.13	0.48
40:BW:71:VAL:HA	40:BW:107:LEU:HD12	1.94	0.48
1:CA:990:C:N4	1:CA:991:U:O4	2.47	0.48
1:CA:1023:G:C2'	1:CA:1024:G:H5'	2.43	0.48
1:CA:1245:A:N6	1:CA:1292:U:H3	2.10	0.48
1:CA:1460:A:H8	1:CA:1460:A:O5'	1.95	0.48
2:CB:86:GLU:C	2:CB:89:GLY:H	2.22	0.48
7:CG:88:PRO:O	7:CG:89:MET:HG3	2.13	0.48
8:CH:111:ILE:H	8:CH:111:ILE:HD12	1.78	0.48
17:CQ:31:LEU:HD23	17:CQ:32:TYR:CZ	2.48	0.48
23:DA:485:C:H2'	23:DA:486:C:C6	2.48	0.48
23:DA:910:A:C6	23:DA:911:A:C6	3.01	0.48
23:DA:1040:C:H2'	23:DA:1041:C:H1'	1.95	0.48
23:DA:1999:C:H5"	23:DA:2723:C:O2'	2.14	0.48
28:DG:104:GLU:O	28:DG:108:ASN:ND2	2.47	0.48
28:DG:154:GLY:HA2	28:DG:155:MET:HE2	1.95	0.48
29:DH:67:LEU:O	29:DH:71:LEU:HB2	2.14	0.48
32:DO:4:PRO:O	32:DO:5:GLN:HB2	2.13	0.48
36:DS:96:GLY:H	36:DS:99:LYS:H	1.60	0.48
39:DV:60:GLU:HB2	39:DV:97:LYS:HE2	1.95	0.48
1:AA:391:G:C6	1:AA:392:G:C5	3.02	0.48
1:AA:677:U:H2'	1:AA:678:U:C6	2.48	0.48
1:AA:766:A:H2'	1:AA:767:A:O4'	2.13	0.48
1:AA:1099:G:H3'	1:AA:1100:C:H6	1.77	0.48
1:AA:1262:C:N4	1:AA:1273:G:H1	2.07	0.48
1:AA:1326:C:H5"	21:AU:19:GLY:HA2	1.95	0.48
7:AG:108:ALA:CB	7:AG:120:ILE:HG12	2.43	0.48
9:AI:118:LYS:C	9:AI:120:ARG:H	2.20	0.48
12:AL:102:ARG:NH2	12:AL:109:GLY:O	2.47	0.48
22:AX:27:LEU:HD21	22:AX:85:LEU:HD13	1.95	0.48
23:BA:652(J):G:H21	47:D3:5:LYS:NZ	2.12	0.48
23:BA:1049:C:O2'	23:BA:1050:A:O5'	2.22	0.48
23:BA:1494:A:H2'	23:BA:1495:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2127:G:N2	23:BA:2173:A:H1'	2.28	0.48
23:BA:2175:C:H2'	23:BA:2176:A:O4'	2.14	0.48
23:BA:2315:G:H2'	23:BA:2316:C:C6	2.49	0.48
23:BA:2751:G:C4	29:BH:2:SER:N	2.82	0.48
25:BD:101:GLU:OE1	25:BD:103:ARG:HD3	2.14	0.48
30:BI:102:SER:HA	30:BI:106:GLY:HA3	1.95	0.48
32:BO:107:ARG:CZ	37:BT:36:GLU:HG3	2.43	0.48
41:BX:15:GLU:H	41:BX:15:GLU:CD	2.21	0.48
44:B0:23:VAL:HG13	44:B0:38:VAL:HG23	1.95	0.48
46:B2:50:ILE:O	46:B2:51:ARG:HB3	2.13	0.48
51:B7:9:ARG:HB3	51:B7:46:VAL:HG23	1.96	0.48
1:CA:636:U:H2'	1:CA:637:G:H8	1.78	0.48
1:CA:1003:G:H1	1:CA:1037:C:N4	2.12	0.48
1:CA:1210:C:H1'	1:CA:1214:C:C2	2.49	0.48
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.49	0.48
2:CB:97:TRP:CZ3	2:CB:99:GLY:HA2	2.49	0.48
2:CB:102:LEU:HB3	2:CB:180:LEU:HD12	1.96	0.48
9:CI:65:VAL:HG13	9:CI:73:GLN:NE2	2.28	0.48
10:CJ:9:ARG:O	10:CJ:95:GLU:N	2.28	0.48
11:CK:33:THR:HA	11:CK:40:ILE:HG12	1.95	0.48
23:DA:300:A:P	42:DY:86:ARG:HH22	2.36	0.48
23:DA:498:G:O2'	23:DA:499:U:H5'	2.14	0.48
23:DA:709:U:H2'	23:DA:710:G:C8	2.49	0.48
23:DA:1001:A:H2'	23:DA:1002:G:O4'	2.13	0.48
23:DA:1488:G:N2	23:DA:1502:C:C2	2.82	0.48
23:DA:1651:G:N2	23:DA:2007:C:C2	2.82	0.48
23:DA:2001:A:H2'	23:DA:2002:G:C8	2.49	0.48
23:DA:2464:C:H1'	56:DA:3666:HOH:O	2.13	0.48
27:DF:39:TRP:O	27:DF:43:LYS:HG2	2.13	0.48
28:DG:59:GLU:O	28:DG:63:ILE:HG13	2.14	0.48
29:DH:117:PRO:HB3	29:DH:123:PHE:CE2	2.48	0.48
31:DN:67:LEU:HA	31:DN:67:LEU:HD22	1.71	0.48
34:DQ:38:GLU:HB2	34:DQ:127:ILE:HG22	1.95	0.48
37:DT:26:ASP:OD2	37:DT:91:ARG:NH1	2.47	0.48
1:AA:375:U:C4	1:AA:376:G:N7	2.82	0.48
1:AA:767:A:H2'	1:AA:768:A:O4'	2.14	0.48
1:AA:1271:G:C6	1:AA:1272:G:C6	3.01	0.48
1:AA:1351:U:H1'	7:AG:33:ASP:HB3	1.94	0.48
1:AA:1377:A:C8	1:AA:1377:A:C3'	2.96	0.48
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.13	0.48
4:AD:108:LEU:HD12	4:AD:174:LEU:HD13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:5:ALA:HA	13:AM:61:GLU:HG2	1.96	0.48
13:AM:13:LYS:HA	13:AM:44:ARG:HB3	1.96	0.48
16:AP:65:GLN:HE21	16:AP:65:GLN:HB3	1.42	0.48
16:AP:75:ARG:HA	16:AP:80:PHE:HD1	1.79	0.48
23:BA:171:G:H2'	23:BA:172:C:O4'	2.13	0.48
23:BA:363(A):A:H2'	23:BA:363(B):G:H8	1.78	0.48
23:BA:646:A:H2'	23:BA:647:G:O4'	2.14	0.48
23:BA:1001:A:H2'	23:BA:1002:G:O4'	2.13	0.48
23:BA:1113:U:H2'	23:BA:1114:G:C8	2.49	0.48
23:BA:2001:A:H2'	23:BA:2002:G:C8	2.49	0.48
26:BE:21:VAL:HG23	26:BE:185:LYS:HG3	1.96	0.48
31:BN:36:GLY:HA2	31:BN:38:HIS:CE1	2.49	0.48
36:BS:14:VAL:HG11	36:BS:90:GLY:O	2.14	0.48
36:BS:62:LYS:HB3	36:BS:97:ARG:HD2	1.95	0.48
1:CA:38:G:H22	1:CA:397:A:H5"	1.78	0.48
1:CA:921:U:O2	5:CE:19:MET:HB2	2.14	0.48
1:CA:962:C:H2'	1:CA:963:G:O4'	2.13	0.48
1:CA:968:A:H8	1:CA:968:A:OP1	1.97	0.48
1:CA:1085:U:C2	1:CA:1094:G:O6	2.67	0.48
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.49	0.48
4:CD:101:LEU:HD23	4:CD:102:ASP:N	2.29	0.48
16:CP:28:ARG:HG2	16:CP:29:ASP:OD2	2.13	0.48
23:DA:645:C:O2	23:DA:645:C:H2'	2.13	0.48
23:DA:1159:U:H2'	23:DA:1160:G:H8	1.79	0.48
23:DA:1464:C:H2'	23:DA:1465:G:C8	2.48	0.48
23:DA:1652:A:OP1	35:DR:8:ARG:NH1	2.44	0.48
24:DB:33:G:C6	24:DB:34:U:N3	2.82	0.48
24:DB:110:G:C2	24:DB:111:G:C5	3.01	0.48
26:DE:120:TRP:CE3	26:DE:155:LYS:HD3	2.49	0.48
26:DE:175:VAL:CG2	26:DE:177:PRO:HD3	2.43	0.48
27:DF:34:TRP:HE3	27:DF:35:GLU:HG2	1.79	0.48
30:DI:5:LEU:H	30:DI:5:LEU:HD12	1.79	0.48
30:DI:29:TYR:O	30:DI:32:PRO:HD2	2.14	0.48
30:DI:79:ILE:HA	30:DI:80:PRO:HD2	1.66	0.48
36:DS:62:LYS:HB3	36:DS:97:ARG:HD2	1.96	0.48
43:DZ:43:GLU:O	43:DZ:47:VAL:HG23	2.14	0.48
1:AA:651:C:H2'	1:AA:652:U:C6	2.49	0.48
1:AA:1279:A:H61	3:AC:26:LYS:HZ3	1.61	0.48
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.95	0.48
3:AC:79:ARG:H	3:AC:82:GLU:HB3	1.76	0.48
4:AD:106:TYR:CD2	4:AD:106:TYR:C	2.91	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:50:TYR:OH	18:AR:74:ARG:O	2.30	0.48
17:AQ:13:ASP:CG	17:AQ:14:LYS:N	2.71	0.48
18:AR:66:LEU:O	18:AR:70:ILE:HG13	2.14	0.48
23:BA:1359:A:N6	23:BA:1372:U:C5	2.82	0.48
23:BA:1388:G:H4'	23:BA:1525:G:O2'	2.14	0.48
23:BA:1423:G:H2'	23:BA:1424:G:C8	2.47	0.48
23:BA:1433:U:O2	23:BA:1561:G:C2	2.67	0.48
23:BA:2173:A:H2'	23:BA:2174:C:H5'	1.96	0.48
23:BA:2312:U:O2'	28:BG:40:ASN:ND2	2.41	0.48
33:BP:101:VAL:HA	33:BP:106:LEU:O	2.13	0.48
37:BT:123:GLN:O	37:BT:126:ALA:HB3	2.14	0.48
40:BW:4:LYS:HE2	40:BW:6:ILE:HD11	1.96	0.48
1:CA:300:A:O2'	1:CA:564:C:N3	2.38	0.48
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.49	0.48
1:CA:1276:G:H2'	1:CA:1277:C:O4'	2.13	0.48
2:CB:117:GLU:O	2:CB:120:ALA:HB3	2.14	0.48
3:CC:7:PRO:O	3:CC:11:ARG:NH1	2.47	0.48
7:CG:32:ARG:HA	7:CG:32:ARG:HD3	1.50	0.48
10:CJ:62:HIS:CD2	10:CJ:62:HIS:N	2.81	0.48
11:CK:92:GLU:HB3	11:CK:96:ARG:HH12	1.77	0.48
23:DA:784:A:O4'	25:DD:227:ASN:ND2	2.46	0.48
23:DA:2196:C:OP2	56:DA:4151:HOH:O	2.20	0.48
23:DA:2722:G:H5'	35:DR:4:LEU:HD12	1.96	0.48
39:DV:82:ARG:HD2	39:DV:82:ARG:N	2.29	0.48
44:D0:40:GLN:OE1	44:D0:44:ARG:N	2.37	0.48
45:D1:94:LEU:O	45:D1:97:LEU:HB2	2.13	0.48
48:D4:14:ILE:HG23	48:D4:31:ILE:HB	1.95	0.48
1:AA:156:G:C6	1:AA:166:G:C6	3.02	0.48
1:AA:748:C:O5'	1:AA:748:C:H6	1.97	0.48
1:AA:1106:G:H5"	3:AC:172:ARG:HG2	1.94	0.48
5:AE:36:ASP:OD2	5:AE:38:GLN:N	2.44	0.48
5:AE:104:ALA:O	5:AE:107:ARG:HG2	2.14	0.48
7:AG:62:PHE:HZ	7:AG:101:LEU:HD21	1.78	0.48
23:BA:528:A:O2'	23:BA:529:A:H5'	2.14	0.48
23:BA:1925:C:O2'	23:BA:1926:U:H5'	2.14	0.48
23:BA:2110:G:O2'	23:BA:2120:G:H5'	2.14	0.48
28:BG:3:LEU:HD11	28:BG:97:ASP:HB3	1.95	0.48
1:CA:324:G:OP2	56:CA:1973:HOH:O	2.20	0.48
1:CA:671:G:H2'	1:CA:672:U:C6	2.48	0.48
1:CA:719:C:O2'	18:CR:50:ILE:O	2.32	0.48
1:CA:989:C:C4	1:CA:990:C:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1236:A:O2'	1:CA:1304:G:H4'	2.13	0.48
1:CA:1360:A:C6	14:CN:18:VAL:HG11	2.49	0.48
1:CA:1516:G:N1	1:CA:1519:A:OP2	2.45	0.48
3:CC:175:LEU:HD23	3:CC:201:TYR:HE2	1.79	0.48
4:CD:106:TYR:C	4:CD:106:TYR:CD2	2.90	0.48
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.49	0.48
12:CL:32:PHE:HB3	12:CL:84:LEU:HD11	1.95	0.48
20:CT:25:ARG:O	20:CT:29:LYS:HG3	2.14	0.48
23:DA:973:A:O4'	23:DA:1188:U:C6	2.66	0.48
23:DA:1188:U:C4'	39:DV:79:VAL:HG22	2.44	0.48
23:DA:1467:C:C5	23:DA:1546:C:H2'	2.49	0.48
23:DA:1564:C:H2'	23:DA:1565:C:C6	2.48	0.48
23:DA:1996:C:O3'	56:DA:4359:HOH:O	2.20	0.48
23:DA:2319:G:N2	36:DS:3:ARG:HA	2.29	0.48
23:DA:2665:A:OP2	56:DA:3746:HOH:O	2.20	0.48
56:DA:4218:HOH:O	51:D7:48:LYS:NZ	2.47	0.48
29:DH:20:ALA:HB3	29:DH:23:ARG:HB2	1.96	0.48
32:DO:54:GLU:HB2	56:DO:303:HOH:O	2.14	0.48
35:DR:50:HIS:CE1	35:DR:54:LEU:HD21	2.48	0.48
40:DW:82:LEU:HD22	40:DW:84:ARG:NH2	2.28	0.48
1:AA:1226:C:H5"	19:AS:80:TYR:CD1	2.50	0.47
1:AA:1319:A:N6	1:AA:1360:A:N1	2.62	0.47
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.48	0.47
2:AB:102:LEU:HB3	2:AB:180:LEU:HD12	1.94	0.47
5:AE:75:THR:HA	5:AE:115:VAL:HG13	1.96	0.47
7:AG:26:PHE:HA	7:AG:101:LEU:HD13	1.96	0.47
7:AG:75:VAL:CG1	7:AG:144:MET:HB3	2.44	0.47
11:AK:23:ALA:O	11:AK:86:GLY:HA3	2.13	0.47
12:AL:62:SER:C	12:AL:64:TYR:H	2.21	0.47
15:AO:61:GLY:O	15:AO:65:ARG:HG3	2.14	0.47
19:AS:47:HIS:HB2	19:AS:49:ILE:HG13	1.95	0.47
20:AT:36:LEU:HA	20:AT:36:LEU:HD13	1.61	0.47
23:BA:1011:G:OP2	38:BU:66:ASN:ND2	2.44	0.47
23:BA:2208:A:H1'	23:BA:2219:G:C5	2.49	0.47
38:BU:109:LEU:HA	38:BU:109:LEU:HD23	1.67	0.47
41:BX:24:GLY:O	41:BX:83:VAL:HG22	2.14	0.47
50:B6:11:LEU:HB3	50:B6:49:HIS:HB3	1.96	0.47
1:CA:57:G:H2'	1:CA:58:C:C6	2.49	0.47
1:CA:176:C:H2'	1:CA:177:C:C6	2.49	0.47
1:CA:458:C:H2'	1:CA:460:G:C8	2.49	0.47
1:CA:673:G:H5"	6:CF:87:ARG:CZ	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1296:C:H5”	1:CA:1302:U:C4	2.49	0.47
1:CA:1442(A):G:H3’	1:CA:1442(B):A:H5”	1.96	0.47
2:CB:98:LEU:HB2	2:CB:101:MET:HE3	1.95	0.47
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.95	0.47
4:CD:108:LEU:HD12	4:CD:174:LEU:HD13	1.96	0.47
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.94	0.47
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.46	0.47
23:DA:1388:G:H4’	23:DA:1525:G:O2’	2.13	0.47
23:DA:2343:C:HO2’	23:DA:2373:G:HO2’	1.61	0.47
25:DD:71:ASP:HB3	25:DD:103:ARG:NH2	2.27	0.47
36:DS:35:ILE:HG12	36:DS:101:LEU:HD12	1.96	0.47
44:D0:14:ARG:HG3	44:D0:14:ARG:HH11	1.78	0.47
1:AA:165:C:H2’	1:AA:166:G:H8	1.79	0.47
1:AA:600:C:H2’	1:AA:601:C:C6	2.49	0.47
1:AA:785:G:H2’	1:AA:786:G:H5’	1.94	0.47
1:AA:983:A:N3	1:AA:984:C:H5’	2.28	0.47
1:AA:1128:C:H1’	1:AA:1146:A:N6	2.29	0.47
1:AA:1307:U:O5’	1:AA:1307:U:H6	1.97	0.47
5:AE:8:GLU:HB2	5:AE:34:VAL:HG23	1.96	0.47
8:AH:56:LYS:HA	8:AH:57:PRO:HD2	1.73	0.47
23:BA:31:C:N4	56:BA:5264:HOH:O	2.46	0.47
23:BA:863:A:H2’	23:BA:864:G:C8	2.49	0.47
27:BF:112:MET:HE2	27:BF:112:MET:HB2	1.60	0.47
27:BF:183:VAL:O	27:BF:187:VAL:HG23	2.14	0.47
31:BN:34:LEU:O	31:BN:49:GLY:HA3	2.14	0.47
32:BO:98:VAL:HG13	32:BO:117:LEU:HB3	1.97	0.47
34:BQ:43:THR:OG1	34:BQ:45:GLN:HG2	2.13	0.47
43:BZ:108:PRO:HB2	43:BZ:111:VAL:HG23	1.96	0.47
1:CA:149:A:O2’	1:CA:150:C:C6	2.67	0.47
1:CA:309:G:H2’	1:CA:310:G:H8	1.79	0.47
1:CA:375:U:C2	1:CA:376:G:C8	3.01	0.47
1:CA:401:C:OP1	4:CD:73:ARG:NH2	2.47	0.47
1:CA:545:C:OP2	4:CD:62:GLN:NE2	2.46	0.47
1:CA:1089:G:N1	1:CA:1096:C:N4	2.39	0.47
1:CA:1319:A:H5’	19:CS:4:SER:HA	1.96	0.47
1:CA:1442(A):G:H2’	1:CA:1442(B):A:O4’	2.14	0.47
7:CG:133:GLY:HA2	7:CG:136:LYS:CB	2.44	0.47
10:CJ:44:VAL:HG22	10:CJ:66:ARG:HD3	1.95	0.47
13:CM:85:GLY:HA3	13:CM:86:CYS:HA	1.32	0.47
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.49	0.47
23:DA:1047:G:H2’	23:DA:1110:G:N1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:64:ILE:HD11	27:DF:75:HIS:HB2	1.95	0.47
1:AA:657:G:H2'	1:AA:658:G:H8	1.79	0.47
1:AA:977:A:C8	1:AA:1223:C:C4	3.00	0.47
1:AA:1127:G:O2'	9:AI:16:ARG:NH2	2.48	0.47
1:AA:1186:G:H21	14:AN:61:TRP:C	2.17	0.47
1:AA:1246:C:H2'	1:AA:1247:U:O4'	2.14	0.47
1:AA:1277:C:H2'	1:AA:1278:U:H5"	1.97	0.47
1:AA:1347:G:H5"	9:AI:107:ARG:CG	2.44	0.47
22:AX:29:GLN:C	22:AX:30:TYR:HD2	2.23	0.47
23:BA:229:A:H3'	23:BA:229:A:H8	1.77	0.47
23:BA:330:A:HO2'	23:BA:331:A:H8	1.62	0.47
23:BA:645:C:O2	23:BA:645:C:H2'	2.14	0.47
23:BA:789:A:H5"	56:BA:4568:HOH:O	2.14	0.47
23:BA:1246:A:OP1	27:BF:38:ARG:NH1	2.45	0.47
23:BA:2091:U:O2'	45:B1:47:GLN:HG3	2.14	0.47
23:BA:2119:A:OP1	23:BA:2119:A:H2'	2.15	0.47
23:BA:2713:A:H2'	23:BA:2713:A:N3	2.30	0.47
28:BG:38:VAL:HG22	28:BG:93:THR:HG23	1.95	0.47
39:BV:52:VAL:CG2	39:BV:55:ALA:HB3	2.44	0.47
39:BV:76:LYS:HB2	39:BV:81:TYR:HB3	1.96	0.47
41:BX:5:TYR:CZ	46:B2:30:ARG:HB2	2.48	0.47
1:CA:564:C:O2'	8:CH:91:ARG:NH2	2.34	0.47
1:CA:717:C:H4'	11:CK:117:ASN:HB3	1.95	0.47
1:CA:806:C:H2'	1:CA:807:A:C8	2.50	0.47
1:CA:940:C:N3	1:CA:1343:G:N2	2.60	0.47
1:CA:1017:G:H2'	1:CA:1018:C:C6	2.49	0.47
1:CA:1157:A:C5	1:CA:1181:G:C2	3.03	0.47
3:CC:136:GLN:HB2	3:CC:136:GLN:HE21	1.50	0.47
4:CD:177:ASP:CG	4:CD:180:GLY:HA3	2.39	0.47
5:CE:110:LEU:HD13	5:CE:118:ILE:HG21	1.95	0.47
7:CG:80:VAL:HG23	7:CG:83:ALA:O	2.14	0.47
23:DA:1106:G:O2'	23:DA:1107:G:OP1	2.29	0.47
27:DF:117:ARG:HA	27:DF:117:ARG:HD3	1.57	0.47
34:DQ:2:LEU:HB3	34:DQ:70:PRO:HG3	1.96	0.47
34:DQ:39:PRO:HA	34:DQ:97:VAL:O	2.14	0.47
1:AA:370:C:H2'	1:AA:371:G:C8	2.49	0.47
1:AA:954:G:H2'	1:AA:955:U:C6	2.50	0.47
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.48	0.47
1:AA:1128:C:N3	1:AA:1143:G:N2	2.51	0.47
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.14	0.47
1:AA:1375:A:O3'	7:AG:29:LYS:HE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:72:GLU:OE1	4:AD:207:TYR:OH	2.19	0.47
5:AE:66:MET:HE3	5:AE:66:MET:HB3	1.71	0.47
7:AG:32:ARG:O	7:AG:35:LYS:HG3	2.15	0.47
10:AJ:38:ILE:HG13	10:AJ:40:LEU:HD21	1.96	0.47
16:AP:23:ASP:OD1	16:AP:25:ARG:HG3	2.14	0.47
23:BA:55:G:O2'	23:BA:127:A:N1	2.44	0.47
23:BA:495:G:H21	40:BW:61:ASN:HD21	1.61	0.47
23:BA:641:C:O2'	23:BA:2350:C:OP1	2.28	0.47
23:BA:1320:C:P	56:BA:5012:HOH:O	2.67	0.47
23:BA:1513:C:H2'	23:BA:1514:U:H6	1.78	0.47
23:BA:1628:G:H2'	23:BA:1629:U:C6	2.49	0.47
23:BA:2094:G:H5'	30:BI:25:TYR:CD2	2.50	0.47
25:BD:10:THR:OG1	25:BD:13:ARG:HB2	2.15	0.47
28:BG:154:GLY:HA2	28:BG:155:MET:HE2	1.97	0.47
33:BP:65:ARG:HD3	33:BP:66:GLY:N	2.29	0.47
34:BQ:11:LYS:HE2	34:BQ:88:GLY:O	2.15	0.47
50:B6:14:THR:HB	50:B6:48:VAL:O	2.13	0.47
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.47	0.47
1:CA:475:G:H2'	1:CA:476:G:H8	1.78	0.47
1:CA:604:G:C5	1:CA:605:U:C5	3.02	0.47
1:CA:930:C:H2'	1:CA:931:C:H6	1.79	0.47
1:CA:965:A:OP1	1:CA:1198:G:H5"	2.14	0.47
2:CB:70:PHE:CD2	2:CB:163:PHE:HB3	2.50	0.47
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.97	0.47
7:CG:127:ALA:HB1	7:CG:135:VAL:HG13	1.96	0.47
13:CM:97:PRO:HB2	13:CM:103:THR:HG22	1.95	0.47
16:CP:71:ARG:O	16:CP:75:ARG:N	2.47	0.47
20:CT:86:ARG:CZ	20:CT:86:ARG:HB3	2.43	0.47
23:DA:445:C:OP1	38:DU:2:PRO:HA	2.14	0.47
23:DA:557:U:O2	31:DN:45:ASN:HB2	2.15	0.47
23:DA:1268:A:P	56:DA:3880:HOH:O	2.70	0.47
23:DA:1540:U:H2'	23:DA:1541:G:O4'	2.15	0.47
43:DZ:151:HIS:C	43:DZ:153:SER:H	2.21	0.47
1:AA:96:U:O2'	1:AA:97:G:H8	1.98	0.47
1:AA:142:G:H1	1:AA:221:C:H42	1.61	0.47
1:AA:580:U:H2'	1:AA:581:G:O4'	2.15	0.47
1:AA:666:G:H5'	1:AA:726:C:H1'	1.97	0.47
1:AA:1352:C:OP1	21:AU:3:LYS:NZ	2.47	0.47
2:AB:16:HIS:CD2	2:AB:209:ARG:HG3	2.49	0.47
3:AC:153:VAL:HA	3:AC:197:GLY:O	2.14	0.47
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:33:THR:HA	11:AK:40:ILE:HG12	1.97	0.47
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.95	0.47
23:BA:244:A:C2	23:BA:255:A:C4	3.02	0.47
23:BA:528:A:C2	23:BA:2042:A:H2'	2.49	0.47
23:BA:830:G:H4'	23:BA:831:G:OP2	2.15	0.47
23:BA:1321:A:H2'	23:BA:1322:A:O4'	2.14	0.47
23:BA:2133:G:H21	23:BA:2158:A:H62	1.61	0.47
28:BG:5:VAL:HG12	48:B4:25:TYR:CE1	2.49	0.47
30:BI:130:TYR:HD2	30:BI:132:PRO:HD3	1.79	0.47
45:B1:51:VAL:HG11	45:B1:74:VAL:HG21	1.95	0.47
1:CA:73:G:C6	1:CA:97:G:C6	3.02	0.47
1:CA:491:G:H2'	1:CA:492:G:O4'	2.15	0.47
1:CA:767:A:H2'	1:CA:768:A:O4'	2.14	0.47
2:CB:61:LEU:HD21	2:CB:160:ASP:HB2	1.97	0.47
7:CG:42:ILE:CA	7:CG:45:ASP:HB2	2.41	0.47
7:CG:108:ALA:O	7:CG:119:ARG:HB3	2.14	0.47
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.96	0.47
23:DA:322:A:OP1	27:DF:168:ARG:NH1	2.48	0.47
23:DA:652(T):C:H2'	23:DA:652(U):G:C8	2.49	0.47
23:DA:868:U:H2'	23:DA:869:G:O4'	2.14	0.47
25:DD:118:VAL:N	25:DD:129:ASN:ND2	2.60	0.47
27:DF:158:THR:O	27:DF:164:ARG:NH1	2.44	0.47
43:DZ:98:MET:CE	43:DZ:100:VAL:HG22	2.43	0.47
43:DZ:126:VAL:HG21	43:DZ:161:VAL:HG13	1.96	0.47
1:AA:142:G:C4	1:AA:143:A:C8	3.03	0.47
1:AA:458:C:H2'	1:AA:460:G:C8	2.49	0.47
1:AA:460:G:H1'	1:AA:472:A:H61	1.80	0.47
1:AA:1307:U:C4	1:AA:1308:U:C5	3.03	0.47
3:AC:132:ARG:O	3:AC:136:GLN:N	2.39	0.47
3:AC:180:ALA:O	3:AC:203:PHE:HE1	1.96	0.47
7:AG:16:LEU:HD22	9:AI:45:ALA:H	1.79	0.47
8:AH:31:PHE:CE2	8:AH:35:ILE:HD11	2.49	0.47
13:AM:69:GLU:C	13:AM:71:ARG:H	2.21	0.47
17:AQ:66:SER:HB3	17:AQ:69:LYS:HB2	1.97	0.47
23:BA:322:A:OP2	27:BF:169:ASN:HB2	2.14	0.47
23:BA:993:G:C6	23:BA:994:C:C4	3.03	0.47
23:BA:1545:A:H2'	23:BA:1546:C:O4'	2.15	0.47
23:BA:1578:U:H2'	23:BA:1579:A:H5'	1.96	0.47
23:BA:2126:A:H1'	23:BA:2127:G:OP2	2.14	0.47
23:BA:2243:U:H2'	23:BA:2244:U:H6	1.79	0.47
23:BA:2462:U:H1'	23:BA:2491:U:O4	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2505:G:H2'	23:BA:2576:G:O6	2.13	0.47
26:BE:40:GLU:H	26:BE:40:GLU:CD	2.22	0.47
33:BP:65:ARG:HB3	56:BP:311:HOH:O	2.14	0.47
50:B6:25:LYS:HE3	50:B6:30:THR:O	2.15	0.47
1:CA:59:A:H5"	1:CA:60:A:C5'	2.45	0.47
1:CA:113:G:N3	1:CA:353:A:O2'	2.37	0.47
1:CA:920:U:H2'	1:CA:921:U:H6	1.78	0.47
1:CA:1441:G:C2	1:CA:1459:C:C5	3.02	0.47
1:CA:1458:G:N2	1:CA:1459:C:O4'	2.47	0.47
56:CA:1967:HOH:O	16:CP:13:HIS:CD2	2.67	0.47
6:CF:45:LEU:HD11	6:CF:57:GLN:OE1	2.14	0.47
9:CI:9:ARG:HD2	9:CI:104:ARG:HH21	1.78	0.47
10:CJ:9:ARG:HG2	10:CJ:69:ASN:CG	2.39	0.47
22:CX:3:LEU:HD21	22:CX:24:PHE:HB2	1.96	0.47
23:DA:212:G:O2'	23:DA:213:A:H5'	2.15	0.47
23:DA:530:G:C6	23:DA:2022:U:H5"	2.50	0.47
23:DA:684:G:OP1	51:D7:16:HIS:ND1	2.46	0.47
23:DA:1339:G:H5"	41:DX:16:LYS:HD3	1.97	0.47
23:DA:1488:G:N1	23:DA:1489:U:O2	2.47	0.47
24:DB:31:C:N4	36:DS:32:LEU:HD13	2.30	0.47
1:AA:131:C:OP2	1:AA:189(G):G:O2'	2.32	0.47
1:AA:345:C:H4'	1:AA:346:G:C5	2.50	0.47
1:AA:346:G:H2'	1:AA:347:G:O4'	2.15	0.47
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.96	0.47
1:AA:605:U:H2'	1:AA:606:G:H8	1.76	0.47
1:AA:626:U:C2	1:AA:627:G:C8	3.03	0.47
1:AA:676:A:O2'	1:AA:677:U:H5'	2.15	0.47
1:AA:971:G:OP1	1:AA:972:C:H5"	2.15	0.47
1:AA:977:A:C2'	1:AA:978:A:H5'	2.45	0.47
1:AA:1133:G:H2'	1:AA:1134:G:C8	2.50	0.47
1:AA:1298:C:C4	7:AG:114:ARG:HD2	2.49	0.47
1:AA:1327:C:H5"	21:AU:20:LYS:HB2	1.96	0.47
2:AB:155:LEU:HD11	2:AB:159:PRO:HD3	1.95	0.47
5:AE:19:MET:SD	5:AE:24:ARG:HB3	2.55	0.47
9:AI:27:THR:HA	9:AI:31:GLN:O	2.14	0.47
11:AK:32:ILE:HD11	11:AK:68:ALA:HB1	1.96	0.47
11:AK:46:GLY:HA2	11:AK:50:TYR:O	2.15	0.47
13:AM:96:LEU:C	13:AM:110:ARG:HD3	2.40	0.47
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.96	0.47
23:BA:652(O):C:H2'	23:BA:652(P):G:C8	2.50	0.47
23:BA:885:C:H3'	23:BA:886:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:975:C:C6	56:BA:4752:HOH:O	2.56	0.47
23:BA:1358:G:O2'	23:BA:1359:A:H5'	2.14	0.47
23:BA:1695:G:H2'	23:BA:1696:G:O4'	2.15	0.47
23:BA:1794:U:H2'	23:BA:1795:C:C6	2.49	0.47
23:BA:1810:A:H2'	23:BA:1811:G:O4'	2.14	0.47
23:BA:1954:G:O2'	23:BA:1956:U:O4	2.19	0.47
23:BA:2469:A:C2	23:BA:2482:G:C8	3.03	0.47
23:BA:2505:G:O6	23:BA:2576:G:H2'	2.14	0.47
23:BA:2674:G:H2'	23:BA:2675:A:C8	2.49	0.47
24:BB:110:G:C2	24:BB:111:G:C5	3.02	0.47
25:BD:33:LEU:O	25:BD:64:ILE:HG13	2.14	0.47
26:BE:10:GLY:HA2	26:BE:192:ASN:OD1	2.14	0.47
27:BF:117:ARG:HD3	27:BF:117:ARG:HA	1.56	0.47
28:BG:81:LYS:CB	28:BG:82:LEU:HD12	2.44	0.47
31:BN:55:VAL:HG22	31:BN:125:GLY:HA3	1.96	0.47
32:BO:70:LYS:HB3	32:BO:70:LYS:HE2	1.70	0.47
43:BZ:126:VAL:HG21	43:BZ:161:VAL:HG13	1.95	0.47
43:BZ:151:HIS:HD2	43:BZ:168:GLU:O	1.98	0.47
1:CA:109:A:C6	1:CA:326:G:C6	3.03	0.47
1:CA:505:G:C6	1:CA:535:A:C2	3.03	0.47
1:CA:709:G:C4	1:CA:710:G:C8	3.02	0.47
1:CA:819:A:H4'	1:CA:820:U:OP2	2.13	0.47
1:CA:946:A:C2	1:CA:1236:A:C2	3.02	0.47
1:CA:1023:G:H3'	1:CA:1024:G:C8	2.49	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.30	0.47
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.96	0.47
1:CA:1225:A:N3	1:CA:1225:A:H2'	2.30	0.47
2:CB:78:GLN:C	2:CB:94:ASN:HD21	2.22	0.47
2:CB:142:LEU:HG	2:CB:146:GLN:HE21	1.80	0.47
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	1.96	0.47
2:CB:226:ARG:HG3	2:CB:227:GLY:H	1.80	0.47
5:CE:8:GLU:HB2	5:CE:34:VAL:HG23	1.96	0.47
6:CF:99:ALA:HB3	18:CR:29:PHE:CE1	2.49	0.47
7:CG:71:PRO:HA	7:CG:138:LYS:NZ	2.30	0.47
13:CM:60:VAL:HG13	13:CM:64:TRP:CZ3	2.50	0.47
23:DA:86:C:H4'	23:DA:104:U:H1'	1.97	0.47
23:DA:218:A:C2	23:DA:235:U:H4'	2.49	0.47
23:DA:226:G:H21	23:DA:228:A:N6	2.13	0.47
23:DA:396:G:H1'	45:D1:42:GLN:HB3	1.97	0.47
23:DA:543:C:H42	23:DA:549:G:H1	1.62	0.47
23:DA:879:G:H2'	23:DA:880:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1545:A:H2'	23:DA:1546:C:O4'	2.14	0.47
23:DA:1578:U:H2'	23:DA:1579:A:H5'	1.97	0.47
23:DA:1849:G:H2'	23:DA:1850:G:H8	1.79	0.47
23:DA:2011:U:OP1	40:DW:42:ARG:NH1	2.48	0.47
23:DA:2117:A:N6	23:DA:2166:G:H22	2.11	0.47
23:DA:2127:G:N2	23:DA:2173:A:H1'	2.29	0.47
23:DA:2336:A:H61	44:D0:43:THR:CG2	2.28	0.47
23:DA:2698:U:H2'	23:DA:2699:C:C6	2.50	0.47
23:DA:2881:C:H2'	23:DA:2882:A:O4'	2.15	0.47
29:DH:37:VAL:HG12	29:DH:38:SER:O	2.14	0.47
32:DO:98:VAL:HG13	32:DO:117:LEU:HB3	1.96	0.47
33:DP:52:GLU:CD	52:D8:57:ARG:HH12	2.22	0.47
33:DP:138:LEU:HD23	33:DP:145:PRO:HG3	1.97	0.47
36:DS:95:HIS:C	36:DS:99:LYS:HB3	2.39	0.47
37:DT:93:ARG:HG2	37:DT:93:ARG:NH1	2.30	0.47
38:DU:14:HIS:HA	38:DU:32:PHE:CE2	2.50	0.47
39:DV:65:GLY:HA3	39:DV:91:TYR:CZ	2.50	0.47
1:AA:51:A:C6	1:AA:353:A:C2	3.02	0.47
1:AA:719:C:O2'	18:AR:50:ILE:O	2.32	0.47
1:AA:937:A:H3'	1:AA:938:A:C8	2.48	0.47
1:AA:1002:G:N2	1:AA:1039:C:H1'	2.30	0.47
1:AA:1004:A:H2'	1:AA:1036:G:O6	2.15	0.47
1:AA:1027:C:C1'	1:AA:1034:G:H22	2.27	0.47
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.44	0.47
1:AA:1125:U:H5'	1:AA:1126:U:C5	2.47	0.47
1:AA:1276:G:H2'	1:AA:1277:C:O4'	2.15	0.47
1:AA:1399:C:C2	1:AA:1401:G:C5	3.03	0.47
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.15	0.47
2:AB:111:ARG:HD3	2:AB:111:ARG:HA	1.54	0.47
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.44	0.47
23:BA:34:C:H5"	23:BA:35:G:OP2	2.15	0.47
23:BA:301:G:C4	23:BA:302:C:C5	3.03	0.47
23:BA:1641:A:H2'	23:BA:1642:G:O4'	2.14	0.47
23:BA:2516:G:C6	23:BA:2517:C:C4	3.02	0.47
32:BO:4:PRO:O	32:BO:5:GLN:HB2	2.14	0.47
39:BV:60:GLU:HB2	39:BV:97:LYS:HE2	1.96	0.47
43:BZ:151:HIS:N	43:BZ:154:ASP:OD1	2.46	0.47
1:CA:555:C:H2'	1:CA:556:C:H6	1.79	0.47
1:CA:692:U:O2'	1:CA:694:A:N7	2.44	0.47
1:CA:973:G:C3'	1:CA:974:A:H5"	2.37	0.47
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:171:ALA:HA	2:CB:174:VAL:HB	1.96	0.47
5:CE:78:HIS:HA	8:CH:105:ARG:HG3	1.95	0.47
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.15	0.47
9:CI:10:ARG:O	9:CI:72:GLY:HA2	2.15	0.47
11:CK:32:ILE:H	11:CK:32:ILE:HG12	1.57	0.47
19:CS:12:ASP:O	19:CS:14:HIS:N	2.40	0.47
23:DA:614(C):A:C4	27:DF:180:GLY:HA2	2.50	0.47
23:DA:1039:G:H1'	23:DA:1117:G:N2	2.30	0.47
23:DA:1204:A:N1	23:DA:1241:A:N7	2.63	0.47
23:DA:1429:G:H2'	23:DA:1430:C:H6	1.77	0.47
23:DA:2262:U:H4'	23:DA:2328:A:C2	2.50	0.47
35:DR:50:HIS:O	35:DR:54:LEU:HD22	2.15	0.47
43:DZ:40:ASP:OD1	43:DZ:42:VAL:HG13	2.15	0.47
47:D3:44:ARG:O	47:D3:48:GLU:HG3	2.15	0.47
1:AA:403:C:H2'	1:AA:404:U:H6	1.79	0.47
1:AA:475:G:H2'	1:AA:476:G:C8	2.49	0.47
1:AA:539:A:OP2	12:AL:115:LYS:HD2	2.14	0.47
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.48	0.47
1:AA:836:G:C6	1:AA:851:G:C6	3.03	0.47
1:AA:959:A:C2	1:AA:1221:G:N3	2.83	0.47
1:AA:1003:G:N2	1:AA:1004:A:HO2'	2.12	0.47
1:AA:1112:C:H6	1:AA:1112:C:O5'	1.98	0.47
1:AA:1492:A:H4'	1:AA:1492:A:OP1	2.14	0.47
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.15	0.47
7:AG:13:GLN:O	7:AG:21:VAL:HA	2.15	0.47
10:AJ:9:ARG:HG3	10:AJ:95:GLU:HB3	1.96	0.47
15:AO:15:PHE:CE2	15:AO:84:LYS:HD2	2.49	0.47
19:AS:52:TYR:HD1	19:AS:57:HIS:CD2	2.32	0.47
23:BA:576:U:H2'	23:BA:577:G:C8	2.49	0.47
23:BA:1529:G:O2'	23:BA:1530:C:H5'	2.15	0.47
23:BA:2536:G:C6	23:BA:2537:U:C4	3.03	0.47
28:BG:135:LEU:HB2	28:BG:155:MET:HE3	1.97	0.47
35:BR:20:LEU:HD21	35:BR:40:LYS:HD3	1.96	0.47
52:B8:54:GLU:O	52:B8:58:ILE:HG12	2.15	0.47
1:CA:9:G:H2'	1:CA:10:A:H8	1.79	0.47
1:CA:77:G:O6	1:CA:78:G:C2	2.68	0.47
1:CA:130:A:O2'	1:CA:131:C:O5'	2.32	0.47
1:CA:964:A:H8	1:CA:964:A:O5'	1.98	0.47
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.50	0.47
1:CA:1299:A:C4	1:CA:1301:U:H1'	2.50	0.47
1:CA:1315:U:O2'	1:CA:1360:A:N3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:121:VAL:HA	4:CD:126:ILE:HG12	1.95	0.47
4:CD:159:ARG:O	4:CD:162:LEU:N	2.47	0.47
9:CI:105:ASP:HB2	9:CI:107:ARG:HD3	1.97	0.47
10:CJ:45:ARG:N	10:CJ:65:LEU:O	2.33	0.47
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.43	0.47
15:CO:74:ASP:OD1	15:CO:76:GLU:HB2	2.15	0.47
23:DA:1930:G:O2'	23:DA:1968:G:O6	2.31	0.47
23:DA:2777:G:H5"	23:DA:2778:A:H5'	1.97	0.47
23:DA:2807:G:N1	23:DA:2808:U:C2	2.83	0.47
25:DD:172:TYR:CD1	25:DD:186:HIS:HA	2.50	0.47
26:DE:67:PHE:HD1	26:DE:72:VAL:HG12	1.80	0.47
28:DG:5:VAL:HG11	28:DG:101:ILE:HG12	1.96	0.47
30:DI:110:ASP:N	30:DI:130:TYR:OH	2.45	0.47
30:DI:124:GLY:H	30:DI:144:VAL:HG13	1.80	0.47
31:DN:30:ILE:HG23	31:DN:52:VAL:HG11	1.97	0.47
38:DU:76:TYR:CZ	38:DU:80:ILE:HG13	2.49	0.47
42:DY:90:LEU:C	42:DY:92:ASN:H	2.21	0.47
51:D7:1:MET:O	51:D7:2:LYS:C	2.57	0.47
1:AA:627:G:H2'	1:AA:628:G:C8	2.48	0.47
1:AA:627:G:N3	1:AA:628:G:C8	2.83	0.47
1:AA:939:G:O2'	1:AA:1375:A:H2'	2.15	0.47
1:AA:943:U:O4	1:AA:1340:A:N1	2.48	0.47
1:AA:1190:G:OP1	3:AC:5:ILE:N	2.48	0.47
1:AA:1446:U:H4'	1:AA:1447:A:C6	2.50	0.47
9:AI:7:THR:HG21	9:AI:9:ARG:HH11	1.80	0.47
17:AQ:86:GLU:O	17:AQ:90:ILE:HG13	2.15	0.47
17:AQ:99:SER:C	17:AQ:100:LYS:HD3	2.40	0.47
23:BA:184:C:H2'	23:BA:185:U:H6	1.79	0.47
23:BA:819:A:C4	23:BA:1189:A:C2	3.03	0.47
23:BA:1649:G:N1	23:BA:2009:G:C6	2.83	0.47
23:BA:2008:C:OP2	56:BA:4713:HOH:O	2.20	0.47
23:BA:2176:A:H5'	23:BA:2177:C:OP2	2.15	0.47
26:BE:52:LEU:O	26:BE:76:ARG:HG2	2.15	0.47
27:BF:179:GLU:CD	27:BF:179:GLU:H	2.23	0.47
28:BG:37:VAL:HG23	28:BG:99:MET:HG3	1.96	0.47
37:BT:93:ARG:HG2	37:BT:93:ARG:HH11	1.79	0.47
44:B0:24:LYS:O	44:B0:25:ARG:HD3	2.15	0.47
1:CA:56:U:H2'	1:CA:57:G:H8	1.80	0.47
1:CA:232:G:H1'	1:CA:262:A:N1	2.30	0.47
1:CA:949:A:C6	1:CA:950:U:C4	3.03	0.47
1:CA:1395:C:O2'	1:CA:1401:G:O2'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:25:ILE:CD1	6:CF:82:ARG:HE	2.28	0.47
10:CJ:50:ILE:CA	10:CJ:60:ARG:HG2	2.32	0.47
13:CM:16:ASP:HB3	13:CM:34:LEU:HD11	1.97	0.47
14:CN:4:LYS:HA	14:CN:7:ILE:HG12	1.96	0.47
14:CN:18:VAL:HG12	14:CN:18:VAL:O	2.15	0.47
23:DA:272:G:N7	23:DA:421:U:H2'	2.30	0.47
23:DA:652(Q):G:H2'	23:DA:652(R):C:C6	2.50	0.47
23:DA:1695:G:H2'	23:DA:1696:G:O4'	2.15	0.47
23:DA:1891:G:H8	23:DA:1891:G:O5'	1.97	0.47
23:DA:2311:A:O2'	23:DA:2312:U:O4'	2.33	0.47
23:DA:2317:C:N4	23:DA:2318:G:C6	2.83	0.47
23:DA:2319:G:H1'	23:DA:2320:A:H5"	1.97	0.47
23:DA:2820:A:O2'	23:DA:2821:A:OP1	2.29	0.47
23:DA:2846:G:H2'	23:DA:2847:U:O4'	2.15	0.47
24:DB:24:G:H4'	24:DB:25:A:C8	2.49	0.47
26:DE:92:THR:O	26:DE:95:ILE:HG23	2.14	0.47
32:DO:107:ARG:CZ	37:DT:36:GLU:HG3	2.44	0.47
33:DP:84:ASN:ND2	33:DP:117:GLU:HB2	2.29	0.47
40:DW:64:MET:HE2	40:DW:69:LEU:HD21	1.97	0.47
43:DZ:102:LEU:HD13	43:DZ:123:ASP:HA	1.97	0.47
50:D6:25:LYS:HE3	50:D6:30:THR:O	2.13	0.47
53:D9:17:ILE:HA	53:D9:17:ILE:HD13	1.61	0.47
1:AA:309:G:H2'	1:AA:310:G:H8	1.79	0.46
1:AA:921:U:H2'	1:AA:922:G:O4'	2.15	0.46
1:AA:934:C:H42	1:AA:939:G:N2	2.13	0.46
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.49	0.46
1:AA:1362:C:H2'	1:AA:1363:C:H5"	1.97	0.46
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.15	0.46
16:AP:23:ASP:O	16:AP:26:ARG:HB2	2.15	0.46
20:AT:30:LYS:HA	20:AT:33:ILE:HD13	1.97	0.46
23:BA:414:C:H2'	23:BA:415:A:C8	2.51	0.46
23:BA:879:G:H2'	23:BA:880:G:O4'	2.15	0.46
29:BH:40:GLU:OE2	29:BH:60:ARG:NH1	2.48	0.46
29:BH:154:PRO:HB3	29:BH:163:TYR:CE2	2.51	0.46
30:BI:127:VAL:HA	30:BI:140:LEU:O	2.15	0.46
34:BQ:26:TYR:CE1	34:BQ:28:ALA:HB2	2.50	0.46
38:BU:76:TYR:CZ	38:BU:80:ILE:HG13	2.50	0.46
1:CA:350:G:O2'	1:CA:351:G:H5'	2.15	0.46
1:CA:600:C:H2'	1:CA:601:C:C6	2.50	0.46
1:CA:956:U:H4'	19:CS:82:GLY:O	2.15	0.46
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.50	0.46
1:CA:1441:G:N3	1:CA:1459:C:H5	2.13	0.46
2:CB:59:GLU:O	2:CB:63:MET:HG2	2.15	0.46
3:CC:19:GLU:HA	3:CC:54:ARG:HH12	1.80	0.46
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.50	0.46
7:CG:69:VAL:HG21	7:CG:104:LEU:CD1	2.40	0.46
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.15	0.46
23:DA:1021:A:C8	23:DA:1021:A:H3'	2.50	0.46
23:DA:1530:C:H1'	23:DA:1531:C:OP1	2.14	0.46
23:DA:2206:G:HO2'	23:DA:2207:G:P	2.38	0.46
23:DA:2536:G:C6	23:DA:2537:U:C4	3.03	0.46
25:DD:132:PRO:HD3	25:DD:190:TYR:CZ	2.50	0.46
28:DG:11:TYR:HB2	28:DG:176:LEU:HD21	1.97	0.46
28:DG:132:ASN:OD1	28:DG:158:ALA:HA	2.15	0.46
34:DQ:133:ARG:HG2	34:DQ:134:ARG:N	2.29	0.46
40:DW:64:MET:HE3	40:DW:109:GLU:HG3	1.96	0.46
42:DY:7:VAL:HG21	42:DY:72:VAL:HG12	1.96	0.46
42:DY:86:ARG:HD2	42:DY:100:ALA:HA	1.97	0.46
43:DZ:19:ARG:HA	43:DZ:23:LYS:O	2.15	0.46
43:DZ:121:HIS:HB3	43:DZ:123:ASP:O	2.15	0.46
1:AA:555:C:H2'	1:AA:556:C:C6	2.50	0.46
1:AA:746:A:H2'	1:AA:747:C:C6	2.50	0.46
1:AA:1137:C:H5'	1:AA:1138:G:C6	2.50	0.46
1:AA:1198:G:C6	1:AA:1199:U:C4	3.04	0.46
9:AI:43:ALA:O	9:AI:45:ALA:HA	2.15	0.46
13:AM:10:PRO:O	13:AM:45:VAL:HG11	2.15	0.46
16:AP:28:ARG:HG2	16:AP:29:ASP:OD2	2.15	0.46
23:BA:143(A):C:H2'	23:BA:144:C:C6	2.50	0.46
23:BA:443:A:H1'	23:BA:1201:C:O4'	2.14	0.46
23:BA:709:U:H2'	23:BA:710:G:C8	2.51	0.46
23:BA:896:A:N1	34:BQ:60:ARG:NH2	2.63	0.46
23:BA:2472:G:H5'	23:BA:2473:U:C5'	2.40	0.46
26:BE:47:VAL:CG1	26:BE:86:PRO:HD2	2.42	0.46
30:BI:9:LEU:HB3	30:BI:12:LEU:HB2	1.97	0.46
30:BI:73:GLU:HG2	30:BI:139:GLN:O	2.15	0.46
36:BS:96:GLY:H	36:BS:99:LYS:H	1.64	0.46
38:BU:36:ARG:HD2	38:BU:40:PHE:CZ	2.50	0.46
41:BX:35:THR:O	41:BX:39:ILE:HG13	2.16	0.46
43:BZ:138:GLU:HG2	43:BZ:156:LYS:NZ	2.30	0.46
1:CA:105:G:H2'	1:CA:106:C:C6	2.51	0.46
2:CB:233:SER:OG	2:CB:234:PRO:HD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:119:ARG:HE	7:CG:119:ARG:HB2	1.45	0.46
11:CK:84:VAL:CG1	11:CK:91:ARG:HD2	2.44	0.46
17:CQ:55:ASP:HA	17:CQ:79:SER:HA	1.97	0.46
23:DA:527:C:C4	23:DA:2779:U:H2'	2.49	0.46
23:DA:910:A:N7	34:DQ:13:GLN:HG3	2.29	0.46
23:DA:981:A:N1	23:DA:2027:G:O2'	2.46	0.46
23:DA:1049:C:H1'	23:DA:1113:U:H4'	1.97	0.46
23:DA:2169:A:H3'	23:DA:2170:A:H8	1.81	0.46
23:DA:2298:A:H2'	23:DA:2299:G:O4'	2.15	0.46
27:DF:110:LEU:HD21	27:DF:181:LEU:HG	1.96	0.46
47:D3:10:LYS:NZ	47:D3:15:TYR:OH	2.47	0.46
1:AA:928:G:C2	1:AA:1390:U:O2	2.68	0.46
1:AA:1328:C:H2'	1:AA:1329:A:H8	1.80	0.46
1:AA:1380:U:C5	7:AG:3:ARG:HA	2.50	0.46
2:AB:47:THR:HG23	2:AB:202:PRO:HG2	1.97	0.46
10:AJ:32:ALA:HA	10:AJ:33:GLN:HA	1.70	0.46
19:AS:9:VAL:HG12	19:AS:10:PHE:H	1.80	0.46
23:BA:54:G:O6	56:BA:3995:HOH:O	2.20	0.46
23:BA:118:A:C8	23:BA:119:A:C8	3.03	0.46
23:BA:207:A:H2'	23:BA:208:C:O4'	2.15	0.46
23:BA:944:G:H2'	56:BA:4981:HOH:O	2.15	0.46
23:BA:1450:G:H2'	23:BA:1450(A):C:H6	1.80	0.46
24:BB:46:A:C5	24:BB:47:C:C5	3.03	0.46
33:BP:82:GLY:HA2	33:BP:113:LYS:O	2.15	0.46
34:BQ:2:LEU:HB3	34:BQ:70:PRO:HG3	1.97	0.46
36:BS:59:LYS:HE2	36:BS:60:GLY:HA2	1.98	0.46
1:CA:11:G:C6	1:CA:12:U:C4	3.03	0.46
1:CA:413:G:N7	4:CD:35:ARG:NH2	2.63	0.46
1:CA:707:C:O2'	1:CA:708:C:H5'	2.16	0.46
1:CA:1006:C:H42	1:CA:1024:G:N2	1.93	0.46
1:CA:1016:A:H1'	1:CA:1218:C:H1'	1.97	0.46
1:CA:1106:G:H5"	3:CC:172:ARG:CD	2.44	0.46
1:CA:1157:A:C6	1:CA:1180:A:C5	3.03	0.46
1:CA:1240:U:C5'	1:CA:1241:G:H8	2.29	0.46
1:CA:1297:C:C3'	1:CA:1298:C:H5'	2.44	0.46
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.50	0.46
1:CA:1349:A:H2'	1:CA:1350:A:C8	2.39	0.46
3:CC:147:LYS:O	3:CC:203:PHE:HD2	1.97	0.46
4:CD:36:ARG:HB3	4:CD:38:TYR:CZ	2.51	0.46
7:CG:44:TYR:HA	7:CG:47:CYS:HB2	1.97	0.46
11:CK:99:GLN:HG3	11:CK:105:VAL:HG11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:36:ARG:HB3	19:CS:72:GLY:HA3	1.97	0.46
23:DA:512:G:C8	56:DA:3836:HOH:O	2.68	0.46
23:DA:582:G:H2'	23:DA:583:G:C8	2.50	0.46
23:DA:1945:G:H2'	23:DA:1946:U:C6	2.51	0.46
23:DA:2544:G:H1'	23:DA:2646:C:H4'	1.97	0.46
23:DA:2870:C:H2'	23:DA:2871:C:O4'	2.16	0.46
25:DD:118:VAL:N	25:DD:129:ASN:HD22	2.09	0.46
28:DG:19:LEU:HG	28:DG:175:LEU:HD22	1.97	0.46
29:DH:149:ARG:HG3	29:DH:162:ILE:O	2.15	0.46
29:DH:149:ARG:NH1	29:DH:167:GLU:OE1	2.49	0.46
33:DP:65:ARG:HD3	33:DP:66:GLY:N	2.30	0.46
37:DT:118:ARG:HG3	37:DT:118:ARG:HH11	1.80	0.46
1:AA:545:C:OP2	4:AD:62:GLN:NE2	2.49	0.46
1:AA:1027:C:C2	1:AA:1034:G:N1	2.82	0.46
1:AA:1104:G:C2	1:AA:1105:A:C4	3.03	0.46
3:AC:36:ASP:HB2	3:AC:40:ARG:NH1	2.30	0.46
3:AC:123:GLN:O	3:AC:128:PHE:HB2	2.16	0.46
4:AD:157:LEU:O	4:AD:161:ASN:ND2	2.29	0.46
9:AI:18:PHE:CD1	9:AI:62:TYR:HB3	2.51	0.46
13:AM:102:ARG:NH1	13:AM:104:ARG:HD3	2.31	0.46
21:AU:12:LYS:HE2	21:AU:21:TYR:HD1	1.81	0.46
23:BA:27:G:O2'	23:BA:28:A:OP2	2.26	0.46
23:BA:188:G:H1	23:BA:208:C:N4	2.13	0.46
23:BA:228:A:H2'	23:BA:230:U:O4'	2.15	0.46
23:BA:265:A:N6	23:BA:427:U:O2'	2.43	0.46
23:BA:706:A:H2'	23:BA:707:G:O4'	2.16	0.46
23:BA:1505:C:H2'	23:BA:1506:C:H6	1.80	0.46
23:BA:1534:U:O2'	23:BA:1535:A:P	2.73	0.46
23:BA:1907:G:C6	23:BA:1908:C:C4	3.04	0.46
23:BA:2319:G:H1'	23:BA:2320:A:H5"	1.98	0.46
23:BA:2463:C:O2'	23:BA:2464:C:H5'	2.16	0.46
23:BA:2729:G:H2'	23:BA:2730:C:O4'	2.16	0.46
23:BA:2774:C:H2'	23:BA:2775:A:O4'	2.15	0.46
43:BZ:39:VAL:HG21	43:BZ:44:PHE:HB2	1.98	0.46
1:CA:191:G:H21	20:CT:103:GLY:HA2	1.81	0.46
1:CA:953:G:C6	1:CA:1228:C:N3	2.82	0.46
1:CA:1264:C:O2'	1:CA:1265:G:H5'	2.15	0.46
1:CA:1441:G:H5'	1:CA:1442:G:OP1	2.15	0.46
1:CA:1501:C:N4	1:CA:1504:G:C2	2.84	0.46
3:CC:32:LEU:CD1	3:CC:59:ARG:HD2	2.44	0.46
23:DA:39:C:H2'	23:DA:40:C:H6	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:634:C:H2'	23:DA:635:C:C6	2.51	0.46
23:DA:775:G:C4	23:DA:794:G:C8	3.03	0.46
23:DA:1040:C:H2'	23:DA:1041:C:C1'	2.44	0.46
23:DA:1282:U:H2'	23:DA:1283:G:O4'	2.15	0.46
23:DA:2002:G:OP2	35:DR:9:LYS:NZ	2.48	0.46
23:DA:2110:G:O2'	23:DA:2120:G:H5'	2.15	0.46
23:DA:2175:C:H2'	23:DA:2176:A:O4'	2.16	0.46
25:DD:77:ALA:HA	25:DD:97:TYR:HA	1.97	0.46
25:DD:112:GLN:HB2	25:DD:115:GLN:OE1	2.16	0.46
34:DQ:103:MET:CE	34:DQ:125:LEU:HD13	2.45	0.46
39:DV:95:LEU:HD13	39:DV:97:LYS:HD3	1.98	0.46
47:D3:10:LYS:HB3	47:D3:53:LEU:HA	1.97	0.46
51:D7:9:ARG:HB3	51:D7:46:VAL:HG23	1.97	0.46
1:AA:489:C:C4	1:AA:490:G:N7	2.84	0.46
1:AA:914:A:OP1	56:AA:1805:HOH:O	2.21	0.46
1:AA:986:A:O2'	19:AS:55:LYS:O	2.34	0.46
1:AA:1151:A:O4'	10:AJ:39:PRO:HB2	2.16	0.46
1:AA:1164:G:C4	1:AA:1173:G:C2	3.03	0.46
1:AA:1330:U:O4	1:AA:1331:G:C2	2.68	0.46
3:AC:23:TYR:HA	10:AJ:11:PHE:CE1	2.51	0.46
4:AD:173:TRP:CD2	4:AD:189:PRO:HG3	2.51	0.46
9:AI:8:GLY:O	9:AI:14:VAL:HA	2.15	0.46
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.69	0.46
23:BA:143:G:H2'	23:BA:143(A):C:C6	2.50	0.46
23:BA:534:U:O2'	38:BU:49:HIS:CD2	2.68	0.46
23:BA:1557:C:H5"	23:BA:1558:A:OP2	2.16	0.46
23:BA:2117:A:N6	23:BA:2166:G:H22	2.10	0.46
23:BA:2223:G:H2'	23:BA:2224:G:H5'	1.97	0.46
29:BH:90:LYS:O	29:BH:160:LYS:HA	2.16	0.46
35:BR:12:ARG:HG2	35:BR:16:HIS:CG	2.50	0.46
39:BV:91:TYR:CD1	39:BV:91:TYR:C	2.94	0.46
1:CA:270:A:H2'	1:CA:271:C:C6	2.51	0.46
1:CA:324:G:N2	1:CA:327:A:C8	2.84	0.46
1:CA:890:G:O2'	1:CA:906:G:O6	2.32	0.46
1:CA:922:G:H1'	5:CE:19:MET:HB2	1.98	0.46
1:CA:1300:G:HO2'	1:CA:1301:U:P	2.38	0.46
1:CA:1349:A:C2	1:CA:1374:A:C5	3.02	0.46
4:CD:173:TRP:HB2	4:CD:187:ARG:O	2.15	0.46
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.16	0.46
7:CG:96:GLN:HE21	7:CG:96:GLN:HB3	1.49	0.46
20:CT:56:MET:HE1	20:CT:85:MET:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:77:ALA:O	20:CT:81:LYS:HG3	2.15	0.46
22:CX:53:THR:HG23	22:CX:62:HIS:ND1	2.30	0.46
23:DA:448:U:H1'	27:DF:84:VAL:HG11	1.97	0.46
23:DA:1025:G:C4	23:DA:1135:C:H1'	2.51	0.46
23:DA:2133:G:C2'	23:DA:2158:A:H61	2.28	0.46
23:DA:2635:C:O2'	26:DE:80:GLU:OE1	2.29	0.46
23:DA:2818:G:O2'	23:DA:2819:G:H5'	2.16	0.46
27:DF:185:ASP:OD1	27:DF:188:ARG:NH1	2.45	0.46
32:DO:23:ARG:HG3	32:DO:24:VAL:N	2.30	0.46
32:DO:87:ILE:HG22	32:DO:93:PRO:HA	1.97	0.46
34:DQ:2:LEU:HB3	34:DQ:70:PRO:CG	2.45	0.46
37:DT:18:ASP:OD1	37:DT:18:ASP:N	2.28	0.46
1:AA:102:G:O2'	1:AA:151:A:N3	2.46	0.46
1:AA:932:C:H2'	1:AA:933:G:C8	2.51	0.46
1:AA:1254:C:H5'	1:AA:1356:G:H4'	1.97	0.46
2:AB:74:LYS:O	2:AB:78:GLN:HB2	2.15	0.46
9:AI:15:ALA:HA	9:AI:65:VAL:HB	1.96	0.46
19:AS:12:ASP:O	19:AS:14:HIS:N	2.42	0.46
20:AT:36:LEU:HD12	20:AT:55:ILE:HG23	1.97	0.46
22:AX:23:LYS:HD3	22:AX:23:LYS:HA	1.72	0.46
25:BD:112:GLN:HA	25:BD:112:GLN:NE2	2.31	0.46
36:BS:36:TYR:N	36:BS:36:TYR:CD1	2.84	0.46
51:B7:9:ARG:HH21	51:B7:47:ARG:HD3	1.80	0.46
1:CA:96:U:O2'	1:CA:97:G:H8	1.99	0.46
1:CA:940:C:H1'	1:CA:1374:A:C2	2.49	0.46
1:CA:949:A:H1'	1:CA:1364:U:C2	2.49	0.46
1:CA:1170:A:H5"	1:CA:1171:G:OP2	2.16	0.46
1:CA:1206:G:C4	1:CA:1207:G:C8	3.04	0.46
1:CA:1499:A:O2'	1:CA:1520:G:H5'	2.15	0.46
2:CB:55:PHE:HA	2:CB:58:ILE:HD12	1.98	0.46
9:CI:27:THR:HB	9:CI:61:ALA:O	2.15	0.46
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.15	0.46
22:CX:63:ALA:HB3	22:CX:81:LEU:HD23	1.97	0.46
23:DA:247:G:H4'	23:DA:386:G:C5	2.51	0.46
23:DA:787:U:OP1	56:DA:4090:HOH:O	2.20	0.46
23:DA:1797:C:C2'	23:DA:1798:U:H5'	2.46	0.46
23:DA:1866:C:H2'	23:DA:1876:A:O4'	2.16	0.46
23:DA:1910:G:O2'	23:DA:1911:U:H5'	2.15	0.46
23:DA:2054:A:H5"	23:DA:2055:C:O5'	2.16	0.46
23:DA:2130:U:OP2	23:DA:2132:U:H5	1.98	0.46
23:DA:2279:G:O6	44:D0:14:ARG:HD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2839:G:C5'	35:DR:46:GLY:HA2	2.46	0.46
24:DB:8:U:H5'	24:DB:9:G:OP2	2.16	0.46
28:DG:10:LYS:O	28:DG:14:GLU:HB3	2.16	0.46
33:DP:6:LEU:HA	33:DP:6:LEU:HD23	1.60	0.46
34:DQ:26:TYR:HE1	34:DQ:28:ALA:HB2	1.80	0.46
34:DQ:134:ARG:O	34:DQ:138:ASP:HB2	2.15	0.46
47:D3:40:THR:HG23	47:D3:43:ILE:HD12	1.98	0.46
52:D8:31:HIS:O	52:D8:32:LEU:HB2	2.16	0.46
1:AA:269:C:H2'	1:AA:270:A:H8	1.79	0.46
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.49	0.46
1:AA:384:G:H2'	1:AA:385:C:H6	1.80	0.46
1:AA:678:U:H2'	1:AA:679:C:C6	2.50	0.46
1:AA:1206:G:C2	1:AA:1207:G:C4	3.04	0.46
1:AA:1392:G:N2	1:AA:1502:A:H8	2.13	0.46
23:BA:213:A:H2'	23:BA:214:G:O4'	2.15	0.46
23:BA:807:U:OP2	33:BP:41:ARG:NH2	2.49	0.46
23:BA:1142(A):A:C5	23:BA:1144:G:C5	3.03	0.46
23:BA:1259:G:H2'	23:BA:1260:G:C8	2.51	0.46
23:BA:1829:A:P	56:BA:5038:HOH:O	2.73	0.46
23:BA:1932:A:H2'	23:BA:1933:G:O4'	2.16	0.46
23:BA:2137:C:H42	23:BA:2154:G:H1	1.64	0.46
1:CA:403:C:O2'	4:CD:122:ARG:NH1	2.49	0.46
1:CA:604:G:H2'	1:CA:605:U:O4'	2.16	0.46
1:CA:651:C:H2'	1:CA:652:U:C6	2.50	0.46
1:CA:1246:C:H2'	1:CA:1247:U:H6	1.81	0.46
1:CA:1443:G:O6	1:CA:1444:C:C4	2.69	0.46
3:CC:110:ASN:O	3:CC:141:VAL:HG22	2.15	0.46
17:CQ:99:SER:C	17:CQ:100:LYS:HD3	2.41	0.46
20:CT:43:LEU:HD23	20:CT:43:LEU:HA	1.71	0.46
23:DA:192:C:O2'	23:DA:802:A:N3	2.42	0.46
23:DA:319:C:H2'	23:DA:320:A:O4'	2.16	0.46
23:DA:848:G:N3	23:DA:933:A:H1'	2.30	0.46
23:DA:1003:G:N2	23:DA:1153:C:C2	2.84	0.46
23:DA:1485:G:H1	23:DA:1504:C:N4	2.13	0.46
26:DE:2:LYS:HG3	26:DE:200:GLU:HB2	1.97	0.46
28:DG:106:LEU:HD12	28:DG:110:ALA:CB	2.43	0.46
28:DG:129:GLY:HA2	28:DG:166:ASP:HA	1.98	0.46
37:DT:105:LEU:HB3	37:DT:109:GLU:HB2	1.98	0.46
45:D1:50:ARG:HG2	45:D1:59:THR:CG2	2.45	0.46
1:AA:377:G:H2'	1:AA:378:G:H8	1.76	0.46
1:AA:860:A:N6	1:AA:861:G:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:865:A:H2'	1:AA:866:C:H6	1.81	0.46
1:AA:868:C:H2'	1:AA:869:G:O4'	2.16	0.46
1:AA:982:U:H5"	14:AN:6:LEU:HD23	1.98	0.46
1:AA:1173:G:C6	1:AA:1174:G:C8	3.04	0.46
1:AA:1192:C:C5	1:AA:1193:G:C8	3.04	0.46
3:AC:64:VAL:O	3:AC:99:VAL:HA	2.15	0.46
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.96	0.46
10:AJ:7:LYS:HA	10:AJ:71:LEU:HA	1.97	0.46
10:AJ:61:GLU:OE2	14:AN:49:HIS:NE2	2.43	0.46
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.51	0.46
23:BA:257:A:H2'	23:BA:258:G:O4'	2.16	0.46
23:BA:333:G:H5"	23:BA:334:C:OP2	2.14	0.46
23:BA:470:A:OP1	27:BF:59:TYR:HE2	1.99	0.46
23:BA:859:G:O2'	23:BA:916:G:O6	2.28	0.46
23:BA:2186:G:N3	23:BA:2186:G:H2'	2.30	0.46
23:BA:2273:A:H2'	23:BA:2274:A:C8	2.50	0.46
24:BB:91:C:C2'	24:BB:92:C:H5'	2.46	0.46
25:BD:172:TYR:CD1	25:BD:186:HIS:HA	2.50	0.46
30:BI:133:HIS:HD2	30:BI:134:PRO:HD2	1.80	0.46
45:B1:86:SER:HB3	45:B1:89:GLU:OE2	2.16	0.46
1:CA:192:U:O3'	20:CT:57:ARG:HD2	2.16	0.46
1:CA:854:G:H3'	1:CA:871:U:O4	2.16	0.46
1:CA:1266:G:OP2	1:CA:1266:G:C8	2.69	0.46
2:CB:134:GLU:O	2:CB:137:ARG:HG3	2.16	0.46
3:CC:137:ALA:CA	3:CC:140:ARG:HD3	2.41	0.46
4:CD:88:VAL:HA	5:CE:97:GLY:HA2	1.98	0.46
4:CD:119:GLN:HG2	4:CD:123:HIS:CD2	2.50	0.46
5:CE:137:GLU:O	5:CE:141:GLN:HB2	2.15	0.46
8:CH:113:SER:O	8:CH:131:GLY:HA3	2.16	0.46
10:CJ:11:PHE:HA	10:CJ:66:ARG:O	2.15	0.46
12:CL:27:LEU:C	12:CL:29:GLY:H	2.24	0.46
23:DA:1529:G:O2'	23:DA:1530:C:H5'	2.15	0.46
23:DA:1646:C:H3'	56:DA:3850:HOH:O	2.15	0.46
23:DA:2440:C:H5'	56:DA:4295:HOH:O	2.14	0.46
28:DG:96:ARG:N	28:DG:99:MET:HE2	2.31	0.46
30:DI:46:ALA:HA	30:DI:49:ALA:HB3	1.97	0.46
34:DQ:43:THR:N	34:DQ:46:GLN:OE1	2.42	0.46
40:DW:9:TYR:H	40:DW:102:HIS:CE1	2.34	0.46
43:DZ:75:ASN:HB2	43:DZ:85:HIS:HB3	1.98	0.46
1:AA:103:C:P	20:AT:17:ARG:HH21	2.39	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:512:U:H2'	1:AA:513:C:H6	1.81	0.46
1:AA:922:G:H1'	5:AE:19:MET:HB2	1.97	0.46
1:AA:941:G:C2	1:AA:942:G:C8	3.03	0.46
1:AA:979:C:C4	1:AA:1318:A:N6	2.84	0.46
1:AA:1055:A:H62	1:AA:1200:C:H42	1.64	0.46
1:AA:1222:G:OP1	1:AA:1321:C:H2'	2.15	0.46
1:AA:1367:C:C4	1:AA:1368:G:N7	2.84	0.46
2:AB:20:GLU:HG3	2:AB:191:ASP:OD1	2.16	0.46
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.98	0.46
15:AO:26:GLU:H	15:AO:26:GLU:HG2	1.44	0.46
19:AS:12:ASP:OD2	19:AS:37:ARG:NH1	2.44	0.46
23:BA:64:A:O3'	41:BX:71:GLY:HA3	2.15	0.46
23:BA:192:C:O2'	23:BA:802:A:N3	2.48	0.46
23:BA:212:G:O2'	23:BA:213:A:H5'	2.16	0.46
23:BA:2464:C:O2'	23:BA:2465:C:P	2.74	0.46
23:BA:2836:U:H2'	23:BA:2837:G:C8	2.51	0.46
31:BN:13:TRP:O	31:BN:135:PRO:HA	2.16	0.46
39:BV:52:VAL:HG21	39:BV:55:ALA:HB3	1.98	0.46
41:BX:60:ARG:HE	41:BX:60:ARG:HB3	1.43	0.46
48:B4:22:ILE:HG22	48:B4:24:THR:HG23	1.97	0.46
49:B5:41:PRO:O	49:B5:44:THR:OG1	2.34	0.46
1:CA:539:A:H2'	1:CA:540:G:C8	2.51	0.46
1:CA:1030(D):A:N6	1:CA:1031:G:H21	2.14	0.46
1:CA:1111:A:H61	3:CC:177:THR:HA	1.79	0.46
1:CA:1297:C:H5"	1:CA:1299:A:N7	2.30	0.46
2:CB:110:GLN:O	2:CB:114:ARG:HB2	2.16	0.46
2:CB:155:LEU:HD11	2:CB:159:PRO:HD3	1.97	0.46
5:CE:75:THR:HG23	5:CE:76:ILE:O	2.16	0.46
7:CG:111:ARG:HH12	7:CG:122:HIS:HB2	1.80	0.46
9:CI:17:VAL:CG2	9:CI:80:GLY:HA3	2.46	0.46
17:CQ:79:SER:OG	17:CQ:80:GLY:N	2.48	0.46
23:DA:760:G:H2'	23:DA:761:A:O4'	2.15	0.46
23:DA:2172:U:H4'	23:DA:2173:A:OP2	2.15	0.46
23:DA:2190:G:H2'	23:DA:2191:G:O4'	2.16	0.46
23:DA:2208:A:H1'	23:DA:2219:G:C4	2.51	0.46
24:DB:66:A:H61	24:DB:109:C:C5'	2.24	0.46
44:D0:55:ARG:CZ	44:D0:55:ARG:HB3	2.46	0.46
46:D2:22:GLU:HG2	46:D2:64:LEU:HD11	1.97	0.46
46:D2:50:ILE:C	46:D2:52:ASP:N	2.72	0.46
1:AA:536:C:H2'	1:AA:537:G:C8	2.51	0.46
1:AA:1441:G:N3	1:AA:1459:C:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:19:HIS:HD1	2:AB:189:ASP:CG	2.20	0.46
4:AD:25:ARG:O	4:AD:27:TYR:N	2.46	0.46
15:AO:39:LEU:HD13	15:AO:56:LEU:HD23	1.98	0.46
16:AP:1:MET:HE2	16:AP:1:MET:HB3	1.89	0.46
23:BA:652(Q):G:H2'	23:BA:652(R):C:C6	2.51	0.46
23:BA:1188:U:H4'	39:BV:79:VAL:HG22	1.97	0.46
23:BA:1912:A:HO2'	23:BA:1913:A:P	2.39	0.46
23:BA:2193:G:H2'	23:BA:2194:G:C8	2.51	0.46
23:BA:2233:U:H2'	23:BA:2234:G:C8	2.50	0.46
23:BA:2685:G:H2'	23:BA:2686:G:H5"	1.97	0.46
23:BA:2836:U:C4	23:BA:2883:A:N6	2.84	0.46
23:BA:2846:G:H2'	23:BA:2847:U:O4'	2.16	0.46
23:BA:2850:A:OP2	23:BA:2866:U:C5	2.69	0.46
36:BS:74:ALA:HB2	36:BS:105:ALA:HA	1.97	0.46
37:BT:105:LEU:HB3	37:BT:109:GLU:HB2	1.98	0.46
1:CA:262:A:C6	1:CA:263:A:C6	3.04	0.46
1:CA:614:A:H2'	1:CA:615:C:H6	1.80	0.46
1:CA:636:U:H2'	1:CA:637:G:C8	2.51	0.46
1:CA:763:G:H2'	1:CA:764:C:C6	2.50	0.46
2:CB:171:ALA:O	2:CB:175:ARG:N	2.39	0.46
3:CC:37:GLN:NE2	14:CN:52:GLN:OE1	2.49	0.46
9:CI:6:GLY:O	9:CI:17:VAL:HB	2.16	0.46
10:CJ:8:LEU:CD1	10:CJ:20:ALA:HB2	2.41	0.46
20:CT:59:ALA:O	20:CT:62:LEU:N	2.49	0.46
23:DA:77:C:OP1	46:D2:59:ARG:HD3	2.16	0.46
23:DA:213:A:H2'	23:DA:214:G:O4'	2.16	0.46
23:DA:363(D):G:O2'	23:DA:363(E):U:H5'	2.16	0.46
23:DA:1423:G:H2'	23:DA:1424:G:C8	2.46	0.46
23:DA:1699:G:N2	56:DA:4405:HOH:O	2.34	0.46
25:DD:146:GLU:HB2	25:DD:189:CYS:HB3	1.96	0.46
27:DF:34:TRP:CE3	27:DF:35:GLU:HG2	2.51	0.46
27:DF:168:ARG:CB	27:DF:168:ARG:HH11	2.29	0.46
28:DG:76:SER:CA	28:DG:83:ARG:HA	2.44	0.46
33:DP:52:GLU:HG3	52:D8:57:ARG:HH22	1.81	0.46
36:DS:74:ALA:HB2	36:DS:105:ALA:HA	1.97	0.46
40:DW:40:ASN:O	40:DW:41:LYS:HG2	2.16	0.46
45:D1:54:ALA:HB1	45:D1:83:GLU:HB3	1.97	0.46
52:D8:61:LEU:O	52:D8:63:PRO:HD3	2.16	0.46
1:AA:154:C:N4	1:AA:167:G:H1	2.15	0.45
1:AA:173:U:C6	1:AA:197:A:C2	3.03	0.45
1:AA:189(F):U:O2	17:AQ:63:ARG:NH2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:516:U:C4	1:AA:517:G:C6	3.05	0.45
1:AA:528:C:H41	12:AL:49:ASN:CG	2.23	0.45
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.17	0.45
1:AA:1104:G:C6	1:AA:1105:A:C5	3.04	0.45
1:AA:1381:U:O2	1:AA:1381:U:H2'	2.14	0.45
2:AB:74:LYS:H	2:AB:74:LYS:HG2	1.56	0.45
2:AB:143:GLU:O	2:AB:146:GLN:HB2	2.16	0.45
2:AB:233:SER:OG	2:AB:234:PRO:HD2	2.17	0.45
3:AC:30:ARG:NH2	14:AN:38:GLY:HA2	2.32	0.45
9:AI:7:THR:N	9:AI:83:ARG:HD3	2.29	0.45
13:AM:102:ARG:HH12	13:AM:104:ARG:HD3	1.80	0.45
23:BA:448:U:H1'	27:BF:84:VAL:HG11	1.98	0.45
23:BA:1652:A:OP1	35:BR:8:ARG:NH1	2.49	0.45
23:BA:2022:U:O2'	23:BA:2617:C:H5'	2.16	0.45
23:BA:2282:G:OP1	23:BA:2283:C:H1'	2.16	0.45
23:BA:2526:G:H5'	23:BA:2742:C:O2'	2.16	0.45
23:BA:2850:A:OP2	23:BA:2866:U:H5	1.98	0.45
25:BD:112:GLN:HB2	25:BD:115:GLN:OE1	2.15	0.45
27:BF:39:TRP:O	27:BF:43:LYS:HG2	2.15	0.45
1:CA:1010:G:N2	1:CA:1020:U:H1'	2.31	0.45
1:CA:1342:C:H1'	9:CI:124:GLN:OE1	2.17	0.45
4:CD:91:SER:O	4:CD:95:GLY:N	2.38	0.45
6:CF:91:VAL:HG12	6:CF:92:LYS:O	2.16	0.45
7:CG:61:VAL:O	7:CG:64:GLN:HB3	2.16	0.45
7:CG:73:MET:HG3	7:CG:89:MET:O	2.15	0.45
8:CH:97:VAL:HG21	8:CH:128:GLY:HA2	1.99	0.45
11:CK:67:ASP:OD2	11:CK:71:LYS:HE3	2.16	0.45
21:CU:3:LYS:HG2	21:CU:10:ARG:CG	2.45	0.45
23:DA:29:U:H2'	23:DA:30:G:H8	1.77	0.45
23:DA:414:C:H2'	23:DA:415:A:C8	2.50	0.45
23:DA:833:U:O2'	33:DP:52:GLU:HG2	2.15	0.45
23:DA:1434:A:O2'	23:DA:1435:G:H5'	2.16	0.45
23:DA:2592:G:H2'	23:DA:2593:U:O4'	2.16	0.45
23:DA:2657:A:O3'	29:DH:160:LYS:NZ	2.49	0.45
23:DA:2784:C:H1'	26:DE:37:ARG:HH12	1.80	0.45
28:DG:110:ALA:HA	28:DG:140:ILE:O	2.16	0.45
31:DN:13:TRP:O	31:DN:135:PRO:HA	2.15	0.45
32:DO:117:LEU:HA	32:DO:117:LEU:HD23	1.74	0.45
47:D3:7:LYS:HE2	47:D3:32:GLN:O	2.16	0.45
1:AA:65:U:H2'	1:AA:381:C:H5	1.79	0.45
1:AA:721:G:H4'	1:AA:722:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1057:G:H2'	1:AA:1058:G:C8	2.51	0.45
1:AA:1060:C:H2'	1:AA:1061:G:C8	2.40	0.45
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.31	0.45
1:AA:1243:C:N3	1:AA:1294:G:N2	2.64	0.45
1:AA:1378:C:H2'	1:AA:1378:C:OP2	2.15	0.45
2:AB:32:ILE:HD11	2:AB:40:HIS:CG	2.52	0.45
3:AC:30:ARG:NE	14:AN:35:ARG:O	2.46	0.45
8:AH:37:ARG:HE	8:AH:37:ARG:HB3	1.51	0.45
9:AI:96:LEU:HA	9:AI:101:PHE:HB2	1.98	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:CD1	2.52	0.45
11:AK:34:ASP:OD2	11:AK:38:ASN:N	2.49	0.45
13:AM:4:ILE:HD11	13:AM:57:ARG:HA	1.97	0.45
13:AM:14:ARG:HA	13:AM:44:ARG:HA	1.99	0.45
23:BA:581:C:OP1	38:BU:33:ARG:HG3	2.16	0.45
23:BA:2190:G:H2'	23:BA:2191:G:O4'	2.15	0.45
23:BA:2293:C:H2'	23:BA:2294:C:C6	2.51	0.45
25:BD:166:GLN:HB2	25:BD:174:ILE:HG22	1.97	0.45
40:BW:79:GLY:HA3	40:BW:100:THR:HG22	1.98	0.45
41:BX:11:PRO:HD3	46:B2:37:PHE:CE2	2.52	0.45
44:B0:51:VAL:N	44:B0:62:LEU:HD12	2.31	0.45
46:B2:9:GLN:HE22	46:B2:56:GLN:HG2	1.82	0.45
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.51	0.45
1:CA:560:U:H4'	1:CA:561:U:H5"	1.98	0.45
1:CA:624:C:H2'	1:CA:625:G:C8	2.51	0.45
1:CA:1106:G:O3'	3:CC:172:ARG:HD2	2.15	0.45
1:CA:1251:A:H1'	1:CA:1369:C:O2'	2.17	0.45
1:CA:1283:G:H2'	1:CA:1284:C:C6	2.51	0.45
2:CB:135:GLN:O	2:CB:139:LYS:N	2.42	0.45
3:CC:18:TRP:HE1	14:CN:56:VAL:H	1.64	0.45
4:CD:62:GLN:HB3	4:CD:66:ARG:HD2	1.98	0.45
4:CD:107:ARG:NE	4:CD:173:TRP:HZ2	2.14	0.45
9:CI:110:GLU:OE1	9:CI:120:ARG:NH2	2.49	0.45
16:CP:75:ARG:HA	16:CP:80:PHE:CD1	2.52	0.45
23:DA:288:C:H2'	23:DA:289:A:H8	1.81	0.45
23:DA:535:C:O3'	38:DU:53:ARG:NH1	2.48	0.45
23:DA:725:G:C6	23:DA:726:G:N1	2.84	0.45
23:DA:997:G:O2'	23:DA:998:C:H5'	2.16	0.45
23:DA:1178:C:H2'	23:DA:1179:C:C6	2.51	0.45
23:DA:2335:A:N6	23:DA:2337:G:H1'	2.31	0.45
23:DA:2815:C:H5'	49:D5:29:THR:HG21	1.97	0.45
30:DI:45:LYS:HD2	30:DI:45:LYS:HA	1.73	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:509:A:OP2	56:AA:1888:HOH:O	2.21	0.45
1:AA:890:G:O2'	1:AA:906:G:O6	2.31	0.45
1:AA:902:G:H2'	1:AA:903:G:H8	1.82	0.45
1:AA:1011:G:H2'	1:AA:1012:U:C6	2.52	0.45
1:AA:1075:C:P	2:AB:179:LYS:HZ1	2.32	0.45
1:AA:1146:A:C6	1:AA:1147:C:C4	3.05	0.45
1:AA:1220:G:C2	1:AA:1221:G:H1'	2.52	0.45
1:AA:1392:G:H21	1:AA:1502:A:H8	1.63	0.45
2:AB:87:ARG:HH21	2:AB:233:SER:N	2.13	0.45
3:AC:85:ARG:HA	3:AC:88:ARG:CB	2.46	0.45
4:AD:62:GLN:HB3	4:AD:66:ARG:HD2	1.98	0.45
8:AH:31:PHE:O	8:AH:35:ILE:HG13	2.16	0.45
9:AI:31:GLN:HG2	9:AI:36:TYR:HD1	1.81	0.45
9:AI:55:ALA:HB3	9:AI:58:HIS:CB	2.46	0.45
16:AP:75:ARG:HA	16:AP:80:PHE:CD1	2.51	0.45
21:AU:12:LYS:HB3	21:AU:17:THR:O	2.16	0.45
23:BA:909:A:C6	23:BA:912:C:C2	3.05	0.45
23:BA:1292:U:H2'	23:BA:1293:C:C6	2.51	0.45
23:BA:1512:U:H2'	23:BA:1513:C:C6	2.51	0.45
23:BA:2140:C:H2'	23:BA:2141:G:H8	1.80	0.45
23:BA:2287:A:C5	23:BA:2289:G:C5	3.04	0.45
23:BA:2387:U:OP1	44:B0:55:ARG:NH2	2.49	0.45
23:BA:2567:G:H2'	23:BA:2568:C:H6	1.81	0.45
23:BA:2711:A:OP1	23:BA:2712(A):A:OP1	2.34	0.45
23:BA:2833:G:C3'	23:BA:2834:G:H5'	2.44	0.45
25:BD:96:HIS:NE2	25:BD:102:LYS:HE2	2.31	0.45
26:BE:195:LEU:HG	26:BE:196:VAL:N	2.30	0.45
29:BH:37:VAL:HG12	29:BH:38:SER:O	2.15	0.45
49:B5:36:CYS:O	49:B5:37:LYS:HD3	2.16	0.45
1:CA:958:A:N6	1:CA:959:A:C6	2.84	0.45
1:CA:1022:G:H2'	1:CA:1023:G:C1'	2.47	0.45
1:CA:1030:C:C5	1:CA:1032:G:N2	2.84	0.45
1:CA:1124:G:C5	1:CA:1127:G:N2	2.83	0.45
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.99	0.45
1:CA:1173:G:H2'	1:CA:1174:G:C8	2.44	0.45
1:CA:1201:A:H1'	1:CA:1202:G:OP2	2.17	0.45
1:CA:1346:A:C1'	1:CA:1347:G:H5"	2.47	0.45
6:CF:50:TYR:OH	18:CR:74:ARG:O	2.31	0.45
10:CJ:10:GLY:O	10:CJ:68:HIS:N	2.34	0.45
10:CJ:45:ARG:HD3	14:CN:36:PHE:CE1	2.51	0.45
15:CO:61:GLY:O	15:CO:65:ARG:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:314:A:O2'	23:DA:315:G:H5'	2.15	0.45
23:DA:614(A):U:H6	23:DA:614(A):U:O5'	2.00	0.45
23:DA:878:A:C6	23:DA:900:A:C8	3.03	0.45
23:DA:1050:A:H2'	23:DA:1051:G:C8	2.50	0.45
23:DA:1205:U:H4'	23:DA:1206:G:OP2	2.16	0.45
23:DA:1352:U:O2	23:DA:1570:A:H2	1.99	0.45
23:DA:1425:G:H2'	23:DA:1426:G:C8	2.51	0.45
23:DA:2296:U:H4'	23:DA:2297:C:OP1	2.15	0.45
23:DA:2318:G:O2'	23:DA:2319:G:H5"	2.15	0.45
23:DA:2505:G:O6	23:DA:2576:G:H2'	2.16	0.45
23:DA:2872:G:O2'	23:DA:2873:A:H5'	2.16	0.45
24:DB:28:C:H2'	24:DB:29:A:C8	2.50	0.45
26:DE:181:LEU:HD13	26:DE:181:LEU:HA	1.66	0.45
39:DV:52:VAL:CG2	39:DV:55:ALA:HB3	2.45	0.45
40:DW:4:LYS:HE2	40:DW:6:ILE:HD11	1.98	0.45
42:DY:44:ILE:HA	42:DY:63:LYS:O	2.17	0.45
1:AA:35:G:O2'	12:AL:121:GLY:HA2	2.17	0.45
1:AA:445:G:H2'	1:AA:445:G:N3	2.31	0.45
1:AA:684:A:C6	1:AA:685:G:C6	3.04	0.45
1:AA:763:G:H2'	1:AA:764:C:C6	2.52	0.45
1:AA:1149:C:H2'	1:AA:1150:U:O4'	2.16	0.45
1:AA:1190:G:C5'	3:AC:4:LYS:HA	2.47	0.45
1:AA:1275:A:H2'	1:AA:1276:G:C8	2.51	0.45
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.46	0.45
5:AE:126:ARG:HA	5:AE:131:ILE:HD11	1.98	0.45
6:AF:49:ALA:HB2	18:AR:78:LEU:O	2.16	0.45
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	1.97	0.45
13:AM:114:ARG:H	13:AM:114:ARG:HG2	1.28	0.45
15:AO:26:GLU:OE1	15:AO:77:ARG:HG2	2.16	0.45
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.17	0.45
23:BA:485:C:H2'	23:BA:486:C:C6	2.51	0.45
23:BA:1328:G:H8	23:BA:1328:G:O5'	1.99	0.45
23:BA:1903:G:OP1	25:BD:241:PRO:HB2	2.16	0.45
23:BA:2054:A:H5"	23:BA:2055:C:O5'	2.16	0.45
23:BA:2115:G:H4'	23:BA:2167:U:C4'	2.45	0.45
23:BA:2777:G:H5"	23:BA:2778:A:H5'	1.98	0.45
25:BD:71:ASP:HB3	25:BD:103:ARG:NH2	2.28	0.45
31:BN:67:LEU:HA	31:BN:87:LEU:HD12	1.98	0.45
33:BP:127:ALA:C	33:BP:148:LEU:HD23	2.40	0.45
34:BQ:103:MET:CE	34:BQ:125:LEU:HD13	2.46	0.45
37:BT:120:ARG:HA	37:BT:123:GLN:HG2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:403:C:H2'	1:CA:404:U:H6	1.80	0.45
1:CA:580:U:H2'	1:CA:581:G:O4'	2.15	0.45
1:CA:1190:G:H5"	3:CC:3:ASN:O	2.17	0.45
1:CA:1308:U:OP1	13:CM:110:ARG:HD2	2.17	0.45
2:CB:21:ARG:H	2:CB:21:ARG:HE	1.64	0.45
4:CD:173:TRP:CG	4:CD:189:PRO:HG3	2.51	0.45
11:CK:46:GLY:HA2	11:CK:50:TYR:O	2.16	0.45
13:CM:87:TYR:CD1	19:CS:76:PRO:HB3	2.51	0.45
17:CQ:13:ASP:CG	17:CQ:14:LYS:N	2.71	0.45
23:DA:863:A:H2'	23:DA:864:G:H8	1.80	0.45
23:DA:945:A:H2	56:DA:3920:HOH:O	2.00	0.45
23:DA:1154:G:H8	23:DA:1154:G:O5'	1.99	0.45
23:DA:1266:G:O2'	23:DA:2012:G:O6	2.28	0.45
23:DA:1441:G:H2'	23:DA:1442:G:C8	2.50	0.45
23:DA:1794:U:H2'	23:DA:1795:C:H6	1.80	0.45
23:DA:2117:A:H61	23:DA:2166:G:N2	2.10	0.45
23:DA:2173:A:C2'	23:DA:2174:C:H5'	2.47	0.45
23:DA:2271:G:C6	23:DA:2272:U:C4	3.05	0.45
23:DA:2290:G:C2	23:DA:2343:C:O2	2.69	0.45
23:DA:2408:U:OP2	56:DA:4072:HOH:O	2.21	0.45
23:DA:2887:U:H2'	23:DA:2888:C:H6	1.80	0.45
25:DD:146:GLU:HG2	25:DD:152:GLY:C	2.41	0.45
27:DF:51:THR:HG23	27:DF:92:PRO:HG2	1.97	0.45
27:DF:64:ILE:HG13	27:DF:65:TRP:N	2.31	0.45
36:DS:32:LEU:O	36:DS:62:LYS:HE2	2.15	0.45
43:DZ:61:LEU:HD13	43:DZ:61:LEU:HA	1.72	0.45
43:DZ:69:THR:HG22	43:DZ:90:VAL:HA	1.98	0.45
43:DZ:144:LEU:HD12	43:DZ:144:LEU:HA	1.77	0.45
44:D0:51:VAL:N	44:D0:62:LEU:HD12	2.31	0.45
1:AA:112:G:C2	1:AA:330:C:N4	2.84	0.45
1:AA:370:C:H2'	1:AA:371:G:H8	1.81	0.45
1:AA:436:C:O2'	1:AA:437:U:P	2.75	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
1:AA:975:A:H5"	1:AA:1363(A):A:N6	2.32	0.45
1:AA:1053:G:O2'	1:AA:1199:U:H5	2.00	0.45
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.45
1:AA:1110:A:H2'	1:AA:1111:A:O4'	2.15	0.45
1:AA:1240:U:H3'	1:AA:1241:G:H8	1.80	0.45
4:AD:194:LEU:HB3	4:AD:196:LEU:HD11	1.99	0.45
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.43	0.45
22:AX:30:TYR:CD2	22:AX:30:TYR:N	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:858:U:O2	23:BA:2268:A:H2'	2.17	0.45
23:BA:1320:C:O2'	56:BA:4949:HOH:O	2.21	0.45
28:BG:72:ARG:HD3	28:BG:85:GLY:HA2	1.98	0.45
30:BI:4:ILE:HD11	30:BI:44:LEU:HD12	1.99	0.45
43:BZ:35:ARG:HD2	43:BZ:35:ARG:HA	1.63	0.45
1:CA:458:C:H2'	1:CA:460:G:H8	1.81	0.45
1:CA:460:G:H1'	1:CA:472:A:H61	1.81	0.45
1:CA:516:U:C4	1:CA:517:G:C6	3.04	0.45
1:CA:627:G:H2'	1:CA:628:G:C8	2.50	0.45
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.51	0.45
1:CA:677:U:H2'	1:CA:678:U:C6	2.51	0.45
1:CA:706:A:N3	11:CK:31:THR:HG21	2.32	0.45
1:CA:957:U:O2	1:CA:959:A:C8	2.69	0.45
1:CA:990:C:H2'	1:CA:991:U:C6	2.51	0.45
1:CA:1029:C:N4	1:CA:1030(A):G:H22	2.15	0.45
1:CA:1287:A:H61	1:CA:1370:G:H21	1.65	0.45
1:CA:1399:C:C2	1:CA:1502:A:N6	2.85	0.45
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.17	0.45
6:CF:1:MET:HE3	6:CF:66:GLU:HG2	1.98	0.45
12:CL:85:ILE:HD13	12:CL:85:ILE:HA	1.74	0.45
13:CM:40:ASN:HA	13:CM:41:PRO:HD2	1.85	0.45
16:CP:43:LYS:HD3	16:CP:48:TRP:CZ3	2.50	0.45
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.16	0.45
21:CU:10:ARG:HE	21:CU:10:ARG:CA	2.27	0.45
23:DA:102:G:O2'	23:DA:103:A:P	2.75	0.45
23:DA:581:C:H2'	23:DA:582:G:H8	1.80	0.45
23:DA:979:G:H3'	23:DA:980:A:H5"	1.98	0.45
23:DA:1394:U:C4	23:DA:1395:A:C5	3.04	0.45
23:DA:2275:C:H5'	23:DA:2275:C:C6	2.51	0.45
23:DA:2505:G:H2'	23:DA:2576:G:O6	2.17	0.45
24:DB:21:G:H2'	24:DB:22:U:O4'	2.16	0.45
30:DI:56:LYS:C	30:DI:60:GLU:HG2	2.42	0.45
1:AA:664:G:H22	1:AA:741:G:H1	1.65	0.45
1:AA:957:U:H3	1:AA:960:U:H5"	1.82	0.45
1:AA:1061:G:C6	1:AA:1197:G:C6	3.04	0.45
1:AA:1250:A:N6	1:AA:1251:A:N6	2.65	0.45
1:AA:1306:A:H2'	1:AA:1307:U:C6	2.52	0.45
1:AA:1338:G:H3'	1:AA:1339:A:C8	2.52	0.45
1:AA:1339:A:N6	1:AA:1340:A:N3	2.64	0.45
1:AA:1378:C:OP2	7:AG:7:ALA:HB3	2.16	0.45
2:AB:28:PHE:CD2	2:AB:194:PRO:HG3	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:197:VAL:HG12	2:AB:198:ASP:H	1.82	0.45
23:BA:1418:G:OP1	23:BA:1588:C:O2'	2.31	0.45
23:BA:2064:C:H2'	23:BA:2065:C:C6	2.51	0.45
23:BA:2154:G:H2'	23:BA:2155:G:C8	2.52	0.45
23:BA:2309:A:N6	23:BA:2310:A:N1	2.65	0.45
23:BA:2464:C:O2'	23:BA:2465:C:OP2	2.30	0.45
23:BA:2854:G:H2'	23:BA:2855:C:C6	2.51	0.45
23:BA:2870:C:H2'	23:BA:2871:C:O4'	2.16	0.45
24:BB:89:G:OP2	24:BB:89:G:H8	2.00	0.45
24:BB:111:G:H2'	24:BB:112:U:H6	1.81	0.45
28:BG:56:ALA:CA	28:BG:153:ARG:HH21	2.29	0.45
29:BH:7:LEU:HD12	29:BH:8:PRO:CD	2.47	0.45
33:BP:59:LEU:HD11	52:B8:10:ALA:CB	2.46	0.45
33:BP:101:VAL:HG23	33:BP:106:LEU:HB3	1.97	0.45
34:BQ:37:LEU:HD21	34:BQ:130:LYS:HB2	1.98	0.45
41:BX:84:ALA:HB3	41:BX:87:GLN:CD	2.41	0.45
49:B5:45:VAL:HA	49:B5:52:TYR:HB2	1.98	0.45
1:CA:5:U:H5"	1:CA:6:G:C8	2.52	0.45
1:CA:953:G:C4	1:CA:1229:A:C2	3.05	0.45
1:CA:1147:C:H2'	1:CA:1148:U:H6	1.81	0.45
1:CA:1159:U:H5	1:CA:1172:C:H5	1.65	0.45
1:CA:1418:A:H5"	1:CA:1419:G:OP2	2.16	0.45
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.99	0.45
4:CD:24:GLU:O	4:CD:27:TYR:HD1	1.98	0.45
4:CD:108:LEU:HB3	4:CD:110:PHE:CE1	2.52	0.45
5:CE:36:ASP:OD2	5:CE:38:GLN:N	2.43	0.45
7:CG:113:GLU:CB	7:CG:118:VAL:HB	2.45	0.45
10:CJ:15:THR:O	10:CJ:19:SER:OG	2.34	0.45
18:CR:53:ARG:HE	18:CR:59:SER:C	2.25	0.45
23:DA:242:G:O4'	52:D8:3:LYS:HE3	2.17	0.45
23:DA:528:A:C2'	23:DA:529:A:H5'	2.47	0.45
23:DA:850:C:O3'	47:D3:49:LYS:HE2	2.17	0.45
23:DA:2137:C:H42	23:DA:2154:G:H1	1.64	0.45
23:DA:2615:U:C2	49:D5:7:PRO:HA	2.52	0.45
25:DD:222:ARG:NH1	56:DD:402:HOH:O	2.48	0.45
33:DP:63:PRO:HG2	52:D8:25:MET:HB2	1.98	0.45
36:DS:66:ALA:HA	36:DS:69:VAL:CG1	2.47	0.45
41:DX:36:LYS:HG3	41:DX:56:THR:HG23	1.99	0.45
43:DZ:48:PHE:O	43:DZ:52:SER:N	2.47	0.45
1:AA:327:A:C4	1:AA:329:A:C8	3.05	0.45
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.31	0.45
1:AA:741:G:H2'	1:AA:742:G:C8	2.52	0.45
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.52	0.45
1:AA:1457:G:N1	1:AA:1458:G:C5	2.84	0.45
1:AA:1459:C:H2'	1:AA:1460:A:N7	2.31	0.45
4:AD:14:ARG:HA	4:AD:39:PRO:HB3	1.98	0.45
4:AD:64:LEU:HD12	4:AD:68:TYR:HE1	1.81	0.45
9:AI:19:LEU:HA	9:AI:19:LEU:HD23	1.66	0.45
20:AT:25:ARG:O	20:AT:29:LYS:HG3	2.17	0.45
23:BA:26:G:C6	23:BA:27:G:N1	2.85	0.45
23:BA:247:G:H4'	23:BA:386:G:C5	2.52	0.45
23:BA:323:G:H1'	23:BA:1205:U:O2	2.17	0.45
23:BA:570:G:H2'	23:BA:2030:A:C5	2.52	0.45
23:BA:1287:A:C6	23:BA:1288:U:C4	3.05	0.45
23:BA:1540:U:H2'	23:BA:1541:G:O4'	2.16	0.45
23:BA:2056:G:C2	23:BA:2057:A:C8	3.05	0.45
24:BB:20:C:H2'	24:BB:21:G:H5'	1.97	0.45
38:BU:5:LYS:HB2	38:BU:5:LYS:HE3	1.74	0.45
38:BU:43:GLY:HA3	39:BV:73:SER:OG	2.15	0.45
1:CA:1092:A:H8	1:CA:1092:A:OP1	2.00	0.45
1:CA:1254:C:H5	10:CJ:43:ARG:CZ	2.29	0.45
1:CA:1399:C:C2	1:CA:1401:G:C5	3.04	0.45
4:CD:194:LEU:HB3	4:CD:196:LEU:HD11	1.97	0.45
5:CE:7:GLU:OE2	5:CE:37:ARG:NH2	2.45	0.45
5:CE:75:THR:HA	5:CE:115:VAL:HG13	1.97	0.45
14:CN:26:ARG:HE	14:CN:26:ARG:HB3	1.51	0.45
20:CT:36:LEU:HD12	20:CT:55:ILE:HG23	1.98	0.45
23:DA:534:U:O2'	38:DU:49:HIS:CD2	2.70	0.45
23:DA:593:G:H4'	52:D8:4:MET:HE2	1.99	0.45
23:DA:1028:A:H61	23:DA:1125:G:H2'	1.82	0.45
23:DA:2062:A:P	56:DA:4041:HOH:O	2.74	0.45
23:DA:2133:G:H2'	23:DA:2158:A:H61	1.81	0.45
23:DA:2309:A:N6	23:DA:2310:A:N1	2.64	0.45
24:DB:2:C:H2'	24:DB:3:C:H6	1.82	0.45
27:DF:88:VAL:HG21	27:DF:91:GLY:HA3	1.98	0.45
33:DP:71:VAL:HG23	33:DP:72:PRO:HA	1.98	0.45
1:AA:256:U:H2'	1:AA:257:G:C8	2.51	0.45
1:AA:502:G:C2	1:AA:503:C:C2	3.04	0.45
1:AA:1027:C:H2'	1:AA:1028:C:C5	2.51	0.45
1:AA:1027:C:H1'	1:AA:1034:G:H22	1.82	0.45
1:AA:1269:A:OP1	21:AU:24:ARG:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1317:C:C5	1:AA:1318:A:C8	3.04	0.45
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.47	0.45
3:AC:140:ARG:HB2	3:AC:140:ARG:CZ	2.47	0.45
7:AG:108:ALA:O	7:AG:119:ARG:HG2	2.16	0.45
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.99	0.45
20:AT:77:ALA:O	20:AT:81:LYS:HG3	2.17	0.45
23:BA:272(E):G:C2	23:BA:364:C:N3	2.85	0.45
23:BA:363(D):G:O2'	23:BA:363(E):U:H5'	2.16	0.45
23:BA:1287:A:C5	23:BA:1288:U:C4	3.05	0.45
23:BA:2742:C:OP1	53:B9:35:ARG:HD3	2.17	0.45
26:BE:111:ARG:HD3	26:BE:160:TYR:CD1	2.52	0.45
27:BF:188:ARG:HG3	27:BF:188:ARG:H	1.48	0.45
30:BI:40:THR:C	30:BI:42:SER:N	2.73	0.45
34:BQ:60:ARG:NH1	43:BZ:177:PRO:HG3	2.31	0.45
38:BU:17:ILE:HA	38:BU:17:ILE:HD13	1.81	0.45
53:B9:11:CYS:HB3	53:B9:32:HIS:CE1	2.52	0.45
1:CA:9:G:C2	1:CA:26:A:N1	2.84	0.45
1:CA:375:U:C4	1:CA:376:G:N7	2.84	0.45
1:CA:391:G:C6	1:CA:392:G:C5	3.05	0.45
1:CA:510:A:H5"	1:CA:511:C:OP2	2.17	0.45
1:CA:675:A:H2'	1:CA:676:A:C8	2.52	0.45
1:CA:872:A:C8	1:CA:874:G:C8	3.05	0.45
1:CA:1124:G:O2'	10:CJ:38:ILE:HD13	2.17	0.45
1:CA:1221:G:H1'	19:CS:53:ASN:O	2.17	0.45
1:CA:1252:A:H61	1:CA:1285:A:N6	2.15	0.45
1:CA:1457:G:C2	1:CA:1458:G:C8	3.05	0.45
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.17	0.45
2:CB:51:LEU:HD23	2:CB:55:PHE:HE2	1.82	0.45
2:CB:205:ASP:C	2:CB:211:ILE:HD11	2.42	0.45
9:CI:11:LYS:O	9:CI:12:GLU:HB3	2.17	0.45
9:CI:66:ARG:C	9:CI:73:GLN:HE21	2.25	0.45
9:CI:114:TYR:N	9:CI:114:TYR:HD2	2.13	0.45
12:CL:11:VAL:HG22	17:CQ:29:HIS:CD2	2.52	0.45
12:CL:113:ARG:NH2	56:CL:201:HOH:O	2.50	0.45
23:DA:652(E):G:O6	23:DA:652(T):C:N3	2.50	0.45
23:DA:1651:G:H2'	23:DA:1652:A:O4'	2.17	0.45
23:DA:1845:G:OP1	25:DD:258:LYS:NZ	2.39	0.45
23:DA:2203:U:O2	23:DA:2221:G:C2	2.70	0.45
23:DA:2319:G:H22	36:DS:3:ARG:CD	2.29	0.45
23:DA:2601:C:H3'	23:DA:2602:A:C8	2.52	0.45
23:DA:2820:A:OP1	35:DR:4:LEU:HD23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:106:G:H5'	43:DZ:31:ARG:HG2	1.99	0.45
26:DE:179:GLU:HB3	26:DE:181:LEU:HD23	1.99	0.45
27:DF:64:ILE:HD12	27:DF:65:TRP:CE3	2.51	0.45
28:DG:33:ARG:HD3	28:DG:162:THR:OG1	2.17	0.45
28:DG:106:LEU:HA	28:DG:110:ALA:HB3	1.99	0.45
38:DU:74:LEU:HD12	38:DU:74:LEU:H	1.82	0.45
41:DX:15:GLU:H	41:DX:15:GLU:CD	2.25	0.45
41:DX:84:ALA:HB3	41:DX:87:GLN:CD	2.42	0.45
43:DZ:54:HIS:ND1	43:DZ:101:PRO:HG3	2.31	0.45
1:AA:12:U:O2'	1:AA:526:C:H4'	2.17	0.45
1:AA:18:C:H5"	5:AE:127:ASN:HD21	1.81	0.45
1:AA:21:G:P	56:AA:1970:HOH:O	2.74	0.45
1:AA:35:G:H2'	1:AA:36:C:C6	2.51	0.45
1:AA:67:C:H2'	1:AA:68:G:C8	2.52	0.45
1:AA:339:C:OP2	32:BO:97:ARG:HD3	2.17	0.45
1:AA:586:C:O2'	1:AA:878:G:H4'	2.17	0.45
1:AA:624:C:H2'	1:AA:625:G:C8	2.52	0.45
1:AA:1190:G:OP2	3:AC:5:ILE:HB	2.17	0.45
2:AB:171:ALA:HA	2:AB:174:VAL:HB	1.98	0.45
4:AD:88:VAL:HA	5:AE:97:GLY:HA2	1.99	0.45
7:AG:102:ARG:NH1	7:AG:103:TRP:HE1	2.15	0.45
7:AG:118:VAL:HG13	7:AG:122:HIS:NE2	2.31	0.45
12:AL:84:LEU:HD13	12:AL:85:ILE:N	2.32	0.45
20:AT:53:LEU:HA	20:AT:56:MET:HG2	1.99	0.45
20:AT:69:GLY:O	20:AT:73:HIS:NE2	2.50	0.45
23:BA:29:U:H2'	23:BA:30:G:H8	1.77	0.45
23:BA:30:G:H2'	23:BA:31:C:H6	1.82	0.45
23:BA:307:G:H21	23:BA:330:A:H62	1.65	0.45
23:BA:396:G:O3'	45:B1:44:PRO:HA	2.16	0.45
23:BA:1025:G:C4	23:BA:1135:C:H1'	2.52	0.45
23:BA:1046:A:O2'	23:BA:1047:G:OP2	2.34	0.45
23:BA:1164:G:H2'	23:BA:1165:U:C6	2.52	0.45
23:BA:1814:G:H2'	23:BA:1815:A:C8	2.52	0.45
23:BA:2130:U:OP2	23:BA:2132:U:H5	2.00	0.45
23:BA:2252:G:H2'	23:BA:2253:G:O4'	2.17	0.45
23:BA:2607:G:H2'	23:BA:2608:G:O4'	2.17	0.45
24:BB:104:U:O3'	43:BZ:72:ARG:NH1	2.50	0.45
25:BD:146:GLU:HG2	25:BD:152:GLY:C	2.42	0.45
26:BE:134:ILE:C	26:BE:134:ILE:HD12	2.42	0.45
32:BO:87:ILE:HG22	32:BO:93:PRO:HA	1.98	0.45
33:BP:147:LEU:HD22	33:BP:147:LEU:HA	1.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BQ:109:VAL:HG22	34:BQ:113:GLN:OE1	2.17	0.45
37:BT:19:LEU:HA	37:BT:20:PRO:HD3	1.81	0.45
47:B3:44:ARG:O	47:B3:48:GLU:HG3	2.17	0.45
1:CA:142:G:N3	1:CA:143:A:C8	2.85	0.45
1:CA:194:C:C2'	1:CA:195:A:H5"	2.47	0.45
1:CA:546:G:OP1	4:CD:73:ARG:HG2	2.17	0.45
1:CA:949:A:N6	1:CA:1232:U:N3	2.40	0.45
1:CA:1079:G:C2	1:CA:1080:A:C6	3.05	0.45
1:CA:1107:C:C4	1:CA:1108:G:C8	3.04	0.45
1:CA:1299:A:C5	1:CA:1301:U:H1'	2.51	0.45
1:CA:1323:G:H8	1:CA:1323:G:OP2	1.99	0.45
1:CA:1360:A:C5	14:CN:18:VAL:HG11	2.51	0.45
2:CB:70:PHE:HB2	2:CB:92:TYR:HB3	1.98	0.45
3:CC:12:LEU:HB3	3:CC:18:TRP:CH2	2.52	0.45
9:CI:8:GLY:C	9:CI:76:ALA:HA	2.42	0.45
9:CI:13:ALA:HB3	9:CI:72:GLY:HA3	1.99	0.45
13:CM:74:VAL:O	13:CM:78:ILE:HG12	2.17	0.45
13:CM:108:ARG:O	13:CM:112:GLY:N	2.50	0.45
19:CS:7:LYS:HA	19:CS:7:LYS:HD3	1.77	0.45
19:CS:20:LEU:HD21	19:CS:43:GLU:HG2	1.99	0.45
23:DA:116:C:H2'	23:DA:117:G:O4'	2.17	0.45
23:DA:673:C:H5"	27:DF:81:PRO:HD2	1.99	0.45
23:DA:1419:A:O2'	23:DA:1420:U:H5"	2.17	0.45
23:DA:1448:G:H5"	23:DA:1542:A:OP1	2.17	0.45
23:DA:1903:G:OP1	25:DD:241:PRO:HB2	2.16	0.45
23:DA:2251:G:C6	23:DA:2252:G:C5	3.05	0.45
23:DA:2290:G:H2'	23:DA:2291:U:O4'	2.16	0.45
23:DA:2563:U:O2	23:DA:2565:A:H8	2.00	0.45
23:DA:2581:G:H4'	23:DA:2582:G:C8	2.51	0.45
31:DN:73:THR:CG2	31:DN:82:LEU:HD11	2.47	0.45
31:DN:137:LYS:O	31:DN:138:LEU:HD23	2.17	0.45
37:DT:13:ARG:H	37:DT:13:ARG:HG2	1.29	0.45
40:DW:4:LYS:CB	40:DW:106:ILE:HG12	2.47	0.45
40:DW:9:TYR:HA	40:DW:100:THR:HG23	1.99	0.45
41:DX:31:HIS:HA	41:DX:32:PRO:HD3	1.83	0.45
42:DY:56:PRO:C	42:DY:58:GLY:H	2.25	0.45
45:D1:3:LYS:HB2	45:D1:61:ARG:NH1	2.29	0.45
48:D4:36:CYS:N	48:D4:39:CYS:SG	2.89	0.45
1:AA:458:C:H2'	1:AA:460:G:H8	1.82	0.45
1:AA:509:A:C8	1:AA:509:A:H3'	2.51	0.45
1:AA:674:G:H2'	1:AA:675:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1342:C:H1'	9:AI:124:GLN:HG2	1.98	0.45
1:AA:1345:U:H5"	9:AI:120:ARG:NH1	2.31	0.45
1:AA:1350:A:O2'	7:AG:33:ASP:OD2	2.32	0.45
6:AF:67:MET:HE1	6:AF:75:LEU:HD22	1.99	0.45
7:AG:85:TYR:O	7:AG:87:VAL:HG23	2.17	0.45
7:AG:138:LYS:HA	7:AG:141:VAL:HB	1.99	0.45
10:AJ:19:SER:CB	10:AJ:91:PRO:HG3	2.47	0.45
16:AP:19:ILE:CG2	16:AP:36:ILE:HG13	2.36	0.45
23:BA:455:C:N3	23:BA:472:A:H2'	2.32	0.45
23:BA:994:C:OP2	38:BU:54:LYS:NZ	2.34	0.45
23:BA:1328:G:H2'	23:BA:1330:C:C5	2.52	0.45
31:BN:128:HIS:CD2	31:BN:128:HIS:H	2.34	0.45
33:BP:64:LYS:HA	52:B8:13:ARG:HB3	1.98	0.45
34:BQ:2:LEU:HB3	34:BQ:70:PRO:CG	2.47	0.45
38:BU:74:LEU:H	38:BU:74:LEU:HD12	1.82	0.45
42:BY:85:VAL:HG23	42:BY:86:ARG:O	2.17	0.45
43:BZ:94:GLU:HB2	43:BZ:95:PRO:HD2	1.99	0.45
43:BZ:182:LYS:O	43:BZ:186:GLU:HG2	2.16	0.45
45:B1:3:LYS:HB2	45:B1:61:ARG:NH1	2.32	0.45
50:B6:4:GLU:HG3	50:B6:5:VAL:N	2.31	0.45
1:CA:148:G:N2	1:CA:175:C:C2	2.85	0.45
1:CA:276:G:O3'	17:CQ:68:ARG:NH1	2.50	0.45
1:CA:724:G:C2	1:CA:725:G:C8	3.05	0.45
1:CA:939:G:N2	1:CA:1344:C:N3	2.56	0.45
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.52	0.45
1:CA:1224:G:N1	1:CA:1322:C:O4'	2.50	0.45
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.82	0.45
1:CA:1237:C:C2	1:CA:1337:G:N2	2.83	0.45
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.81	0.45
5:CE:55:VAL:O	5:CE:58:ALA:HB3	2.17	0.45
15:CO:4:THR:H	15:CO:7:GLU:HB2	1.81	0.45
20:CT:36:LEU:HD13	20:CT:36:LEU:HA	1.68	0.45
23:DA:221:A:N1	23:DA:265:A:O2'	2.47	0.45
23:DA:576:U:H5	56:DA:3905:HOH:O	2.00	0.45
23:DA:1357:U:H2'	23:DA:1358:G:O4'	2.17	0.45
23:DA:1814:G:H2'	23:DA:1815:A:C8	2.52	0.45
23:DA:2186:G:H2'	23:DA:2186:G:N3	2.32	0.45
23:DA:2674:G:H2'	23:DA:2675:A:C8	2.52	0.45
23:DA:2741:A:H61	23:DA:2763:G:H1'	1.81	0.45
25:DD:147:LEU:HD13	25:DD:155:LEU:HD11	1.99	0.45
30:DI:87:LYS:N	30:DI:122:GLU:HA	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DS:27:SER:HA	36:DS:88:ASP:HB3	1.98	0.45
1:AA:113:G:O4'	1:AA:354:G:H4'	2.17	0.44
1:AA:292:G:C5	1:AA:293:G:H1'	2.51	0.44
1:AA:402:G:C6	1:AA:403:C:C4	3.06	0.44
1:AA:491:G:H2'	1:AA:492:G:O4'	2.16	0.44
1:AA:614:A:H2'	1:AA:615:C:C6	2.52	0.44
1:AA:956:U:H2'	1:AA:957:U:H5'	1.99	0.44
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.17	0.44
1:AA:1117:G:H1'	9:AI:106:ALA:HB1	1.99	0.44
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.44	0.44
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.17	0.44
1:AA:1463:C:OP1	37:BT:111:ARG:NE	2.50	0.44
2:AB:216:SER:OG	2:AB:217:ARG:N	2.50	0.44
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.16	0.44
9:AI:105:ASP:HB2	9:AI:107:ARG:HD3	1.99	0.44
10:AJ:48:THR:HG23	10:AJ:62:HIS:HB3	1.99	0.44
11:AK:41:THR:HG22	11:AK:42:TRP:N	2.31	0.44
13:AM:52:GLU:HG2	13:AM:55:ARG:NH2	2.32	0.44
15:AO:32:LEU:HD23	15:AO:32:LEU:HA	1.74	0.44
23:BA:195:A:H4'	23:BA:251:A:O2'	2.17	0.44
23:BA:223:A:O2'	23:BA:420:C:O2	2.35	0.44
23:BA:979:G:H3'	23:BA:980:A:H5"	1.98	0.44
23:BA:1319:G:C2	23:BA:1334:G:C5	3.04	0.44
38:BU:83:LEU:HD12	38:BU:113:ALA:HB2	1.99	0.44
43:BZ:100:VAL:HG11	43:BZ:134:PRO:HG2	2.00	0.44
48:B4:1:MET:HE2	48:B4:6:HIS:CE1	2.52	0.44
49:B5:36:CYS:HB3	49:B5:49:CYS:HB3	1.99	0.44
52:B8:23:VAL:HG12	52:B8:47:LYS:HB3	1.99	0.44
1:CA:9:G:OP1	5:CE:122:GLU:HB2	2.17	0.44
1:CA:156:G:C6	1:CA:166:G:C6	3.05	0.44
1:CA:690:G:H2'	1:CA:691:G:O4'	2.17	0.44
1:CA:966:G:C2	1:CA:967:C:C2	3.05	0.44
1:CA:984:C:H2'	1:CA:985:C:O4'	2.18	0.44
1:CA:991:U:C4	1:CA:1212:U:H1'	2.53	0.44
1:CA:1002:G:O6	1:CA:1038:C:N3	2.50	0.44
1:CA:1003:G:H3'	1:CA:1004:A:H4'	1.98	0.44
1:CA:1164:G:H1	1:CA:1171:G:H22	1.65	0.44
1:CA:1344:C:H5"	9:CI:120:ARG:HG2	1.99	0.44
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.53	0.44
2:CB:21:ARG:O	2:CB:23:ARG:N	2.47	0.44
4:CD:64:LEU:HD12	4:CD:68:TYR:HE1	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:84:PHE:CE1	5:CE:133:TYR:HB3	2.52	0.44
7:CG:73:MET:CG	7:CG:145:ALA:HB1	2.42	0.44
10:CJ:61:GLU:OE2	14:CN:49:HIS:NE2	2.50	0.44
14:CN:23:ARG:HG3	14:CN:24:CYS:O	2.17	0.44
17:CQ:58:GLU:OE1	17:CQ:75:ARG:NH2	2.50	0.44
18:CR:30:ASP:HB3	18:CR:33:ASP:HB2	1.98	0.44
22:CX:77:LEU:HD23	22:CX:77:LEU:HA	1.81	0.44
23:DA:34:C:H41	23:DA:447:A:H61	1.65	0.44
23:DA:186:G:H2'	23:DA:187:G:H8	1.82	0.44
23:DA:257:A:H2'	23:DA:258:G:O4'	2.16	0.44
23:DA:272(H):C:H6	23:DA:272(H):C:H5"	1.81	0.44
23:DA:529:A:H5"	56:DA:4762:HOH:O	2.17	0.44
23:DA:530:G:O6	23:DA:2023:G:OP1	2.35	0.44
23:DA:593:G:C4'	52:D8:4:MET:HE2	2.47	0.44
23:DA:986:C:C2'	23:DA:987:G:H5'	2.47	0.44
23:DA:1782:C:H2'	23:DA:2608:G:O2'	2.17	0.44
26:DE:171:GLU:O	26:DE:184:VAL:HG23	2.16	0.44
27:DF:7:TYR:N	27:DF:22:ALA:HB3	2.29	0.44
27:DF:20:LEU:HD23	27:DF:20:LEU:HA	1.82	0.44
29:DH:5:GLY:HA2	29:DH:69:ARG:HB3	1.99	0.44
33:DP:101:VAL:HA	33:DP:106:LEU:O	2.17	0.44
43:DZ:28:MET:HG3	43:DZ:35:ARG:HB2	1.99	0.44
1:AA:138:G:H2'	1:AA:139:G:O4'	2.17	0.44
1:AA:260:G:H2'	1:AA:261:U:C6	2.52	0.44
1:AA:510:A:H1'	1:AA:543:C:H1'	1.99	0.44
1:AA:673:G:H5"	6:AF:87:ARG:CZ	2.47	0.44
1:AA:1065:U:H4'	1:AA:1066:C:O5'	2.17	0.44
1:AA:1240:U:H3	7:AG:39:ALA:CB	2.31	0.44
1:AA:1269:A:H1'	1:AA:1326:C:H1'	1.99	0.44
1:AA:1295:G:O3'	13:AM:14:ARG:NH1	2.50	0.44
1:AA:1380:U:OP2	1:AA:1380:U:H2'	2.16	0.44
1:AA:1399:C:C2	1:AA:1502:A:N6	2.85	0.44
1:AA:1516:G:N1	1:AA:1519:A:OP2	2.50	0.44
2:AB:70:PHE:HB2	2:AB:92:TYR:HB3	1.99	0.44
5:AE:101:ILE:O	5:AE:120:THR:OG1	2.24	0.44
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.99	0.44
8:AH:26:VAL:HG23	8:AH:27:PRO:O	2.17	0.44
23:BA:996:A:C2	23:BA:997:G:C8	3.05	0.44
23:BA:997:G:OP1	38:BU:92:ARG:HG2	2.18	0.44
23:BA:1300:U:H4'	23:BA:1301:A:H5'	1.99	0.44
23:BA:1464:C:H2'	23:BA:1465:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1845:G:C2'	23:BA:1846:G:H5'	2.47	0.44
23:BA:2318:G:O2'	23:BA:2319:G:H5"	2.17	0.44
23:BA:2378:A:H4'	36:BS:23:ARG:HH11	1.82	0.44
24:BB:32:C:C2	24:BB:51:G:N2	2.85	0.44
28:BG:111:LEU:HA	28:BG:114:ILE:HG13	1.99	0.44
29:BH:144:VAL:O	29:BH:148:ILE:HG12	2.17	0.44
1:CA:369:C:O2'	1:CA:370:C:H5'	2.17	0.44
1:CA:609:A:H5'	16:CP:18:ARG:NH2	2.32	0.44
1:CA:838:G:C2'	1:CA:839:U:H5"	2.47	0.44
1:CA:1157:A:C2	1:CA:1181:G:N3	2.86	0.44
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.53	0.44
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.98	0.44
7:CG:18:TYR:HE1	7:CG:58:PRO:HB2	1.81	0.44
7:CG:26:PHE:CD2	7:CG:30:ILE:HD11	2.52	0.44
22:CX:81:LEU:HA	22:CX:84:GLN:HB2	1.98	0.44
23:DA:300:A:H3'	42:DY:84:ARG:NH2	2.33	0.44
23:DA:1566:A:OP1	25:DD:211:ARG:NH1	2.50	0.44
23:DA:2228:G:C5	23:DA:2229:C:C4	3.05	0.44
23:DA:2356:C:O3'	44:D0:20:ARG:HD3	2.17	0.44
26:DE:33:VAL:HG12	26:DE:89:ASP:O	2.16	0.44
28:DG:22:ARG:HH21	28:DG:175:LEU:HD11	1.81	0.44
30:DI:29:TYR:C	30:DI:32:PRO:HD2	2.42	0.44
36:DS:36:TYR:N	36:DS:36:TYR:CD1	2.85	0.44
36:DS:53:SER:O	36:DS:57:LYS:N	2.50	0.44
38:DU:112:ARG:NH2	39:DV:47:VAL:HB	2.32	0.44
46:D2:65:ASN:O	46:D2:69:ARG:NH1	2.50	0.44
50:D6:8:LYS:HD3	52:D8:34:TRP:CD2	2.52	0.44
1:AA:113:G:H2'	1:AA:114:U:C6	2.52	0.44
1:AA:560:U:H4'	1:AA:561:U:O5'	2.17	0.44
1:AA:838:G:C2'	1:AA:839:U:H5"	2.48	0.44
1:AA:1005:A:H1'	1:AA:1036:G:N2	2.31	0.44
1:AA:1060:C:C2	1:AA:1198:G:N2	2.85	0.44
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.17	0.44
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.53	0.44
2:AB:55:PHE:CG	2:AB:58:ILE:HD12	2.52	0.44
4:AD:119:GLN:HE21	4:AD:119:GLN:HB3	1.57	0.44
11:AK:84:VAL:CG1	11:AK:91:ARG:HD2	2.48	0.44
11:AK:99:GLN:HG3	11:AK:105:VAL:HG11	1.99	0.44
13:AM:108:ARG:O	13:AM:113:PRO:HD3	2.18	0.44
15:AO:78:TYR:O	15:AO:82:ILE:HG12	2.17	0.44
19:AS:51:VAL:HG11	19:AS:72:GLY:HA2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AX:53:THR:HA	22:AX:62:HIS:HB3	1.99	0.44
23:BA:271(F):C:H2'	23:BA:271(G):C:C6	2.46	0.44
23:BA:428:A:H8	23:BA:428:A:OP2	2.00	0.44
23:BA:545:G:OP1	23:BA:545:G:H4'	2.17	0.44
23:BA:566:U:H5"	33:BP:29:LYS:HE3	1.98	0.44
23:BA:1161:C:O2'	39:BV:8:GLY:HA2	2.18	0.44
23:BA:1282:U:H2'	23:BA:1283:G:O4'	2.17	0.44
23:BA:2208:A:H1'	23:BA:2219:G:C4	2.52	0.44
23:BA:2306:C:N3	23:BA:2307:G:O6	2.50	0.44
23:BA:2391:G:O6	23:BA:2425:A:H8	2.00	0.44
23:BA:2491:U:O2'	23:BA:2570:G:OP1	2.27	0.44
24:BB:60:C:C2	24:BB:61:G:C8	3.06	0.44
28:BG:9:ARG:NH1	28:BG:13:GLU:OE1	2.46	0.44
28:BG:150:ASP:CG	28:BG:151:ALA:N	2.74	0.44
30:BI:33:ARG:HB2	30:BI:35:LEU:HD12	1.99	0.44
38:BU:106:PHE:O	38:BU:110:VAL:HG23	2.18	0.44
53:B9:10:ILE:HD12	53:B9:32:HIS:HA	1.99	0.44
1:CA:152:A:N6	1:CA:169:C:N3	2.65	0.44
1:CA:1041:A:H2'	1:CA:1042:G:O4'	2.17	0.44
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.17	0.44
1:CA:1361:G:H8	1:CA:1361:G:O5'	2.01	0.44
1:CA:1367:C:N4	1:CA:1368:G:O6	2.50	0.44
2:CB:24:TRP:CZ3	2:CB:29:ALA:HB2	2.51	0.44
2:CB:143:GLU:O	2:CB:146:GLN:HB2	2.17	0.44
2:CB:178:ARG:HH22	8:CH:68:ARG:NH2	2.13	0.44
5:CE:66:MET:HB3	5:CE:66:MET:HE3	1.65	0.44
9:CI:13:ALA:HB2	9:CI:68:GLY:N	2.33	0.44
10:CJ:48:THR:HG23	10:CJ:62:HIS:HB3	1.98	0.44
10:CJ:50:ILE:HD13	14:CN:41:ARG:HH11	1.82	0.44
13:CM:23:TYR:HB3	13:CM:67:GLU:OE1	2.17	0.44
23:DA:500:G:N1	23:DA:503:A:OP2	2.50	0.44
23:DA:646:A:H2'	23:DA:647:G:O4'	2.17	0.44
23:DA:649:G:H2'	23:DA:650:C:H6	1.82	0.44
23:DA:1108:U:O2	23:DA:1108:U:H2'	2.17	0.44
23:DA:1509(A):A:H3'	23:DA:1509(B):A:C8	2.50	0.44
23:DA:2130:U:H2'	23:DA:2131:G:N7	2.31	0.44
23:DA:2751:G:C4	29:DH:2:SER:N	2.86	0.44
24:DB:104:U:O3'	43:DZ:72:ARG:NH1	2.50	0.44
27:DF:179:GLU:CD	27:DF:179:GLU:H	2.24	0.44
28:DG:133:LEU:HD12	28:DG:134:GLY:N	2.32	0.44
32:DO:3:GLN:HB2	32:DO:4:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DQ:59:ARG:HB3	34:DQ:60:ARG:H	1.69	0.44
40:DW:60:ASN:HD22	40:DW:60:ASN:H	1.63	0.44
1:AA:153:C:H42	1:AA:169:C:N4	2.15	0.44
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.17	0.44
1:AA:439:A:C4	1:AA:496:A:C2	3.06	0.44
1:AA:997:U:H2'	1:AA:998:G:O4'	2.17	0.44
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.50	0.44
1:AA:1251:A:O2'	1:AA:1370:G:H5'	2.18	0.44
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.99	0.44
3:AC:110:ASN:ND2	3:AC:140:ARG:HD2	2.32	0.44
3:AC:178:LEU:HA	3:AC:178:LEU:HD13	1.53	0.44
5:AE:76:ILE:HD11	5:AE:142:LEU:HD11	1.99	0.44
9:AI:71:SER:O	9:AI:75:ASP:N	2.28	0.44
12:AL:38:THR:OG1	12:AL:39:VAL:N	2.51	0.44
15:AO:43:LEU:HA	15:AO:43:LEU:HD23	1.84	0.44
20:AT:16:HIS:O	20:AT:19:SER:N	2.50	0.44
23:BA:504:U:H2'	56:BA:4228:HOH:O	2.18	0.44
23:BA:868:U:H2'	23:BA:869:G:O4'	2.17	0.44
23:BA:1049:C:H1'	23:BA:1113:U:H4'	1.99	0.44
23:BA:1949:G:C6	23:BA:1950:G:C6	3.06	0.44
23:BA:2058:A:H5"	23:BA:2059:A:OP2	2.17	0.44
23:BA:2306:C:H3'	23:BA:2307:G:H8	1.77	0.44
23:BA:2319:G:H22	36:BS:3:ARG:CD	2.30	0.44
24:BB:90:A:C5	24:BB:91:C:H1'	2.53	0.44
27:BF:101:LEU:HD12	27:BF:101:LEU:HA	1.74	0.44
28:BG:178:PHE:HB3	28:BG:180:PHE:CE1	2.53	0.44
36:BS:88:ASP:OD1	36:BS:90:GLY:N	2.47	0.44
37:BT:27:THR:HB	37:BT:89:VAL:HG23	1.98	0.44
42:BY:76:CYS:HA	42:BY:77:PRO:HD3	1.87	0.44
43:BZ:111:VAL:C	43:BZ:113:ALA:H	2.25	0.44
48:B4:26:SER:OG	48:B4:27:THR:N	2.43	0.44
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.17	0.44
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.52	0.44
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.31	0.44
1:CA:1128:C:H1'	1:CA:1146:A:N6	2.32	0.44
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.99	0.44
7:CG:53:LYS:HB3	7:CG:53:LYS:HE2	1.54	0.44
7:CG:70:LYS:HA	7:CG:71:PRO:HD2	1.74	0.44
7:CG:137:LYS:HA	7:CG:140:ASP:OD2	2.17	0.44
9:CI:17:VAL:HG11	9:CI:81:ILE:CA	2.47	0.44
9:CI:74:ILE:HG22	9:CI:75:ASP:OD2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:389:G:H8	23:DA:389:G:O5'	2.01	0.44
23:DA:528:A:O2'	23:DA:529:A:H5'	2.17	0.44
23:DA:627:A:C6	23:DA:637:A:C8	3.05	0.44
23:DA:729:G:H2'	23:DA:1775:U:H1'	2.00	0.44
23:DA:1007:C:OP1	31:DN:35:ARG:NH1	2.50	0.44
23:DA:1804:C:H2'	23:DA:1805:U:H6	1.83	0.44
23:DA:2125:G:H21	23:DA:2126:A:N6	2.15	0.44
23:DA:2226:C:H3'	56:DA:4145:HOH:O	2.18	0.44
23:DA:2695:C:H2'	23:DA:2696:U:C6	2.53	0.44
24:DB:20:C:H2'	24:DB:21:G:H5'	2.00	0.44
28:DG:56:ALA:CA	28:DG:153:ARG:HH21	2.31	0.44
31:DN:128:HIS:H	31:DN:128:HIS:CD2	2.36	0.44
35:DR:85:PRO:O	35:DR:87:TYR:N	2.50	0.44
36:DS:10:ARG:O	36:DS:14:VAL:HG12	2.17	0.44
41:DX:60:ARG:HE	41:DX:60:ARG:HB3	1.45	0.44
1:AA:373:A:H2'	1:AA:374:A:H8	1.82	0.44
1:AA:685:G:C2	1:AA:686:U:C4	3.06	0.44
1:AA:960:U:C4	1:AA:1225:A:H1'	2.52	0.44
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.53	0.44
2:AB:80:ILE:HG12	2:AB:211:ILE:HG22	2.00	0.44
9:AI:99:LEU:HB3	9:AI:101:PHE:HD1	1.83	0.44
13:AM:77:ASN:N	13:AM:77:ASN:OD1	2.50	0.44
19:AS:11:VAL:HG13	19:AS:13:ASP:H	1.82	0.44
19:AS:61:TYR:CG	19:AS:62:ILE:N	2.86	0.44
20:AT:74:LYS:HB2	20:AT:75:ASN:H	1.47	0.44
23:BA:125:G:C6	51:B7:10:ARG:HG3	2.52	0.44
23:BA:993:G:C6	23:BA:994:C:N4	2.85	0.44
23:BA:1171:G:HO2'	23:BA:1173:G:P	2.30	0.44
23:BA:1547:C:H2'	23:BA:1548:C:C6	2.53	0.44
23:BA:1799:G:H5'	23:BA:1819:A:N6	2.32	0.44
23:BA:2282:G:H4'	23:BA:2389:G:O2'	2.17	0.44
23:BA:2496:C:OP1	34:BQ:82:ARG:HB3	2.18	0.44
25:BD:107:ALA:HA	25:BD:108:PRO:HD2	1.90	0.44
25:BD:145:VAL:HG12	25:BD:146:GLU:O	2.18	0.44
27:BF:168:ARG:HH11	27:BF:168:ARG:CB	2.31	0.44
28:BG:39:ILE:HG23	28:BG:157:ILE:HD13	2.00	0.44
38:BU:39:LEU:HA	38:BU:39:LEU:HD23	1.74	0.44
48:B4:14:ILE:HD11	48:B4:24:THR:OG1	2.16	0.44
1:CA:142:G:H1	1:CA:221:C:H42	1.64	0.44
1:CA:1001(A):G:H2'	1:CA:1002:G:C8	2.52	0.44
1:CA:1155:G:H2'	1:CA:1156:G:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1225:A:H5'	1:CA:1226:C:OP2	2.17	0.44
1:CA:1299:A:C8	1:CA:1301:U:H1'	2.52	0.44
1:CA:1459:C:P	1:CA:1460:A:OP2	2.75	0.44
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.17	0.44
3:CC:153:VAL:HG12	3:CC:196:LEU:HD12	2.00	0.44
7:CG:62:PHE:HD1	7:CG:124:LEU:HD21	1.82	0.44
19:CS:81:ARG:NH1	19:CS:81:ARG:HB2	2.31	0.44
23:DA:864:G:C6	23:DA:865:C:N4	2.86	0.44
23:DA:1717:G:C2	23:DA:1718:G:C8	3.05	0.44
23:DA:1827:C:OP2	25:DD:222:ARG:HD2	2.17	0.44
25:DD:148:GLU:CB	25:DD:151:LYS:HD2	2.47	0.44
26:DE:119:ARG:HG2	26:DE:160:TYR:HB2	2.00	0.44
27:DF:79:GLY:HA2	27:DF:86:GLY:HA2	1.99	0.44
29:DH:38:SER:HB2	29:DH:64:LEU:HD22	1.99	0.44
29:DH:137:ASP:HB3	29:DH:140:LYS:HE2	2.00	0.44
30:DI:33:ARG:HB2	30:DI:35:LEU:HD12	1.98	0.44
35:DR:103:ARG:NH1	35:DR:103:ARG:HG2	2.33	0.44
1:AA:717:C:H4'	11:AK:117:ASN:HB3	1.99	0.44
1:AA:1057:G:C5	1:AA:1204:A:C2	3.05	0.44
1:AA:1293:G:C2	1:AA:1294:G:C4	3.06	0.44
1:AA:1441:G:H5'	1:AA:1442:G:OP1	2.17	0.44
3:AC:40:ARG:O	3:AC:44:GLU:N	2.50	0.44
8:AH:73:ASP:OD2	8:AH:75:ARG:HB2	2.18	0.44
13:AM:52:GLU:HG2	13:AM:55:ARG:HH22	1.82	0.44
13:AM:63:THR:HB	13:AM:64:TRP:CE3	2.53	0.44
17:AQ:45:HIS:CE1	17:AQ:47:PRO:HG3	2.53	0.44
23:BA:272(H):C:H6	23:BA:272(H):C:H5"	1.82	0.44
23:BA:1488:G:N1	23:BA:1489:U:O2	2.50	0.44
23:BA:1525:G:H2'	23:BA:1526:G:O4'	2.17	0.44
23:BA:1530:C:HO2'	23:BA:1531:C:P	2.35	0.44
23:BA:2031:A:C6	23:BA:2498:C:H1'	2.53	0.44
23:BA:2150:U:H2'	23:BA:2151:G:C8	2.53	0.44
23:BA:2698:U:H2'	23:BA:2699:C:C6	2.52	0.44
25:BD:69:ARG:NH2	25:BD:128:GLY:O	2.50	0.44
34:BQ:1:MET:HE2	34:BQ:1:MET:N	2.33	0.44
34:BQ:57:HIS:CD2	34:BQ:117:ALA:HB2	2.52	0.44
52:B8:62:LEU:HB3	52:B8:65:GLU:HG2	1.99	0.44
1:CA:317:G:C6	1:CA:318:G:C5	3.06	0.44
1:CA:346:G:N2	1:CA:347:G:C8	2.86	0.44
1:CA:427:U:P	4:CD:13:ARG:HH22	2.40	0.44
1:CA:429:U:H3'	4:CD:22:LYS:HZ1	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:958:A:N6	1:CA:959:A:N1	2.66	0.44
1:CA:982:U:H4'	1:CA:983:A:O5'	2.17	0.44
1:CA:989:C:N4	1:CA:1216:G:N1	2.28	0.44
1:CA:1250:A:C2	1:CA:1370:G:H1'	2.53	0.44
1:CA:1296:C:H4'	1:CA:1302:U:C4	2.53	0.44
1:CA:1372:U:C4	1:CA:1373:G:C6	3.05	0.44
3:CC:71:ALA:HA	3:CC:106:VAL:N	2.32	0.44
3:CC:151:VAL:C	3:CC:152:ILE:HG13	2.43	0.44
10:CJ:51:ARG:NH2	10:CJ:61:GLU:HB3	2.33	0.44
11:CK:73:MET:HE3	11:CK:103:LEU:HD22	1.99	0.44
12:CL:82:VAL:HG23	12:CL:106:ASP:OD2	2.17	0.44
13:CM:10:PRO:HG2	13:CM:45:VAL:HG21	1.98	0.44
23:DA:83:G:H22	23:DA:102:G:H2'	1.81	0.44
23:DA:297:C:H3'	56:DA:3761:HOH:O	2.18	0.44
23:DA:311:A:C8	23:DA:332:A:N7	2.86	0.44
23:DA:579:G:H2'	23:DA:580:C:C6	2.53	0.44
23:DA:848:G:N9	23:DA:933:A:H8	2.15	0.44
23:DA:921:G:C5	23:DA:922:U:C4	3.05	0.44
23:DA:975(A):G:H1'	23:DA:990:A:C2	2.53	0.44
23:DA:1161:C:O2'	39:DV:8:GLY:HA2	2.17	0.44
26:DE:73:GLU:O	26:DE:73:GLU:CD	2.61	0.44
28:DG:16:ARG:HB2	28:DG:17:PRO:HD3	2.00	0.44
28:DG:178:PHE:HB3	28:DG:180:PHE:HE1	1.82	0.44
29:DH:27:LYS:HB3	29:DH:27:LYS:HE2	1.77	0.44
33:DP:77:ARG:HB2	33:DP:78:PRO:HD2	1.99	0.44
35:DR:95:THR:HG22	35:DR:116:LEU:HD23	1.99	0.44
40:DW:19:LEU:HD12	40:DW:19:LEU:HA	1.70	0.44
42:DY:68:HIS:ND1	42:DY:70:SER:HB3	2.32	0.44
52:D8:39:LYS:HA	52:D8:42:ARG:NH1	2.33	0.44
1:AA:9:G:OP1	5:AE:122:GLU:HB2	2.17	0.44
1:AA:12:U:H4'	1:AA:526:C:O2'	2.18	0.44
1:AA:115:G:H4'	1:AA:116:A:O5'	2.17	0.44
1:AA:604:G:C5	1:AA:605:U:C5	3.06	0.44
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.33	0.44
1:AA:1242:C:H4'	1:AA:1303:C:O3'	2.18	0.44
1:AA:1267:C:O2	1:AA:1327:C:H4'	2.17	0.44
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	2.00	0.44
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.53	0.44
2:AB:97:TRP:CZ2	2:AB:101:MET:HB2	2.53	0.44
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	1.99	0.44
3:AC:22:TRP:O	10:AJ:11:PHE:HD1	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:107:ARG:NE	4:AD:173:TRP:HZ2	2.15	0.44
5:AE:75:THR:HG23	5:AE:76:ILE:O	2.17	0.44
10:AJ:50:ILE:HD13	14:AN:41:ARG:NH1	2.32	0.44
12:AL:32:PHE:HB3	12:AL:84:LEU:HD11	1.99	0.44
12:AL:60:LEU:HB3	12:AL:62:SER:H	1.82	0.44
23:BA:335:C:H2'	23:BA:336:C:C6	2.52	0.44
23:BA:1530:C:H1'	23:BA:1531:C:OP1	2.18	0.44
23:BA:1965:C:H3'	23:BA:1966:A:H2'	1.99	0.44
23:BA:2032:G:O2'	26:BE:145:LYS:NZ	2.50	0.44
23:BA:2309:A:C6	23:BA:2310:A:C2	3.05	0.44
23:BA:2478:A:H5'	53:B9:31:LYS:HD3	2.00	0.44
23:BA:2601:C:H3'	23:BA:2602:A:C8	2.53	0.44
23:BA:2881:C:H2'	23:BA:2882:A:O4'	2.18	0.44
26:BE:9:VAL:HB	37:BT:3:ARG:HG2	1.99	0.44
27:BF:64:ILE:HG13	27:BF:65:TRP:N	2.32	0.44
28:BG:59:GLU:O	28:BG:63:ILE:N	2.46	0.44
28:BG:143:GLU:H	28:BG:143:GLU:HG2	1.55	0.44
32:BO:17:ARG:HD2	32:BO:47:ILE:HG23	1.99	0.44
33:BP:71:VAL:HG23	33:BP:72:PRO:HA	2.00	0.44
40:BW:36:LEU:HA	40:BW:36:LEU:HD23	1.71	0.44
43:BZ:72:ARG:HA	43:BZ:72:ARG:HD3	1.58	0.44
43:BZ:144:LEU:HD12	43:BZ:144:LEU:HA	1.76	0.44
48:B4:9:LEU:HD22	48:B4:26:SER:HA	2.00	0.44
50:B6:47:THR:HG22	50:B6:48:VAL:N	2.31	0.44
53:B9:32:HIS:O	53:B9:34:GLN:HG3	2.18	0.44
1:CA:35:G:C2	1:CA:550:G:N3	2.85	0.44
1:CA:120:A:H2'	1:CA:121:C:H4'	1.98	0.44
1:CA:657:G:H2'	1:CA:658:G:H8	1.82	0.44
1:CA:1006:C:C2	1:CA:1023:G:N1	2.86	0.44
1:CA:1323:G:N2	1:CA:1361:G:O2'	2.51	0.44
1:CA:1459:C:H3'	1:CA:1459:C:H6	1.83	0.44
2:CB:197:VAL:HG12	2:CB:198:ASP:H	1.82	0.44
4:CD:31:CYS:O	4:CD:31:CYS:SG	2.76	0.44
5:CE:76:ILE:HD11	5:CE:142:LEU:HD11	2.00	0.44
9:CI:73:GLN:O	9:CI:76:ALA:HB3	2.18	0.44
10:CJ:96:ILE:H	10:CJ:96:ILE:HG13	1.61	0.44
20:CT:21:LYS:O	20:CT:25:ARG:HG3	2.17	0.44
23:DA:857:C:H4'	44:D0:23:VAL:HG21	1.99	0.44
23:DA:1126:A:H8	23:DA:1126:A:OP1	2.01	0.44
23:DA:1426:G:N7	25:DD:31:LYS:NZ	2.58	0.44
23:DA:1547:C:H2'	23:DA:1548:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1557:C:H5”	23:DA:1558:A:OP2	2.18	0.44
23:DA:2117:A:N6	23:DA:2171:A:C6	2.86	0.44
23:DA:2291:U:O2’	23:DA:2374:C:O2	2.35	0.44
24:DB:96:U:H2’	24:DB:97:G:C8	2.53	0.44
25:DD:68:LYS:HD2	25:DD:70:TRP:CZ2	2.52	0.44
37:DT:99:LEU:O	37:DT:100:TYR:C	2.61	0.44
43:DZ:98:MET:O	43:DZ:125:LEU:HD12	2.17	0.44
44:D0:24:LYS:O	44:D0:25:ARG:HD3	2.17	0.44
1:AA:191:G:C6	1:AA:192:U:C4	3.06	0.44
1:AA:460:G:N2	1:AA:471:G:N7	2.66	0.44
1:AA:564:C:O2’	8:AH:91:ARG:NH2	2.42	0.44
1:AA:1065:U:H5’	1:AA:1190:G:N2	2.33	0.44
1:AA:1226:C:OP2	13:AM:103:THR:OG1	2.30	0.44
2:AB:55:PHE:HA	2:AB:58:ILE:CG1	2.47	0.44
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	2.00	0.44
5:AE:84:PHE:CE1	5:AE:133:TYR:HB3	2.53	0.44
7:AG:18:TYR:CZ	7:AG:58:PRO:HB2	2.53	0.44
7:AG:56:GLN:OE1	7:AG:61:VAL:HG22	2.17	0.44
7:AG:87:VAL:HA	7:AG:88:PRO:HD2	1.78	0.44
7:AG:103:TRP:HA	7:AG:106:GLN:HE21	1.82	0.44
11:AK:92:GLU:HB3	11:AK:96:ARG:HH12	1.82	0.44
14:AN:6:LEU:HD12	14:AN:9:LYS:CB	2.48	0.44
19:AS:36:ARG:NH1	19:AS:52:TYR:O	2.51	0.44
23:BA:36:G:O2’	23:BA:450:G:H2’	2.18	0.44
23:BA:63:U:OP2	56:BA:5009:HOH:O	2.21	0.44
23:BA:141:A:H8	23:BA:1408:C:O2’	1.99	0.44
23:BA:1039:G:H1’	23:BA:1117:G:N2	2.32	0.44
23:BA:1040:C:H6	23:BA:1040:C:O5’	2.00	0.44
23:BA:1108:U:O2	23:BA:1108:U:H2’	2.17	0.44
23:BA:1142(A):A:C4	23:BA:1144:G:C8	3.05	0.44
23:BA:1790:C:H2’	23:BA:1791:A:C5	2.53	0.44
23:BA:1910:G:O2’	23:BA:1911:U:H5’	2.17	0.44
23:BA:1952:A:N3	32:BO:22:ILE:HD12	2.33	0.44
23:BA:2169:A:H3’	23:BA:2170:A:C8	2.51	0.44
23:BA:2336:A:H61	44:B0:43:THR:CG2	2.29	0.44
23:BA:2463:C:H2’	23:BA:2464:C:H5’	2.00	0.44
26:BE:111:ARG:HD3	26:BE:160:TYR:CE1	2.52	0.44
27:BF:129:PHE:O	27:BF:132:VAL:HG13	2.18	0.44
32:BO:63:VAL:HG12	32:BO:106:LEU:HD11	2.00	0.44
32:BO:117:LEU:HD23	32:BO:117:LEU:HA	1.71	0.44
33:BP:38:GLN:C	33:BP:40:SER:N	2.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BP:38:GLN:HG3	33:BP:45:LEU:HD23	1.99	0.44
33:BP:46:LYS:HE3	33:BP:51:PHE:CD1	2.53	0.44
43:BZ:150:LEU:O	43:BZ:171:ILE:HG13	2.18	0.44
51:B7:43:THR:HA	51:B7:44:PRO:HD2	1.74	0.44
1:CA:35:G:H2'	1:CA:36:C:H6	1.81	0.44
1:CA:189(B):C:H2'	1:CA:189(C):C:O4'	2.18	0.44
1:CA:328:C:H4'	1:CA:329:A:H5'	1.99	0.44
1:CA:560:U:H4'	1:CA:561:U:C5'	2.47	0.44
1:CA:687:A:H4'	11:CK:47:VAL:HG13	2.00	0.44
1:CA:979:C:O2	14:CN:19:ARG:HG2	2.18	0.44
1:CA:1065:U:H6	1:CA:1190:G:H21	1.64	0.44
1:CA:1112:C:H42	3:CC:178:LEU:HD23	1.83	0.44
1:CA:1117:G:H5"	1:CA:1117:G:C8	2.53	0.44
1:CA:1442(A):G:H2'	1:CA:1442(B):A:H5"	2.00	0.44
5:CE:71:LEU:HD23	5:CE:115:VAL:HG22	1.99	0.44
10:CJ:7:LYS:N	10:CJ:97:GLU:O	2.48	0.44
20:CT:74:LYS:HB2	20:CT:75:ASN:H	1.47	0.44
23:DA:303:U:H2'	23:DA:304:G:C8	2.53	0.44
23:DA:511:U:C5	23:DA:512:G:C5	3.05	0.44
23:DA:548:A:H61	39:DV:19:LYS:H	1.65	0.44
23:DA:641:C:O2'	23:DA:2350:C:OP1	2.30	0.44
23:DA:733:G:N7	56:DA:3799:HOH:O	2.36	0.44
23:DA:815:C:C2	23:DA:1193:G:C2	3.06	0.44
23:DA:2064:C:H2'	23:DA:2065:C:C6	2.53	0.44
23:DA:2378:A:H4'	36:DS:23:ARG:HH11	1.83	0.44
23:DA:2687:U:H2'	23:DA:2688:U:O4'	2.18	0.44
23:DA:2748:A:C6	23:DA:2749:A:C5	3.06	0.44
23:DA:2884:U:H1'	49:D5:53:ALA:HB2	2.00	0.44
28:DG:47:LYS:HG3	28:DG:48:GLU:H	1.82	0.44
28:DG:169:ALA:O	28:DG:173:LEU:HG	2.17	0.44
33:DP:2:LYS:HG2	33:DP:4:SER:H	1.83	0.44
34:DQ:57:HIS:CD2	34:DQ:117:ALA:HB2	2.53	0.44
1:AA:627:G:C2	1:AA:628:G:C8	3.06	0.44
1:AA:926:G:H21	22:AX:94:GLN:HE22	1.66	0.44
1:AA:1308:U:OP1	13:AM:97:PRO:HA	2.18	0.44
1:AA:1418:A:H2	23:BA:1948:G:N3	2.15	0.44
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5"	2.48	0.44
2:AB:59:GLU:HB3	2:AB:63:MET:HE2	2.00	0.44
9:AI:13:ALA:HB2	9:AI:68:GLY:CA	2.47	0.44
10:AJ:13:HIS:HB3	10:AJ:68:HIS:HD1	1.82	0.44
18:AR:33:ASP:O	18:AR:40:LEU:HD11	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:102:G:O2'	23:BA:103:A:P	2.76	0.44
23:BA:493:G:H2'	23:BA:494:G:O4'	2.17	0.44
23:BA:528:A:O2'	56:BA:4483:HOH:O	1.85	0.44
23:BA:570:G:H2'	23:BA:2030:A:N7	2.33	0.44
23:BA:973:A:O4'	23:BA:1188:U:C6	2.71	0.44
23:BA:1185:C:H5"	23:BA:1186:G:OP1	2.18	0.44
23:BA:1357:U:H2'	23:BA:1358:G:O4'	2.18	0.44
23:BA:1648:C:H2'	23:BA:1649:G:O5'	2.18	0.44
23:BA:2199:A:H5"	23:BA:2200:C:OP2	2.18	0.44
23:BA:2296:U:C4	23:BA:2333:A:H1'	2.53	0.44
23:BA:2572:A:C8	26:BE:144:ARG:HD2	2.52	0.44
24:BB:7:G:H5"	24:BB:7:G:C8	2.52	0.44
30:BI:47:LEU:HD23	30:BI:47:LEU:HA	1.88	0.44
30:BI:98:ALA:C	30:BI:101:LEU:H	2.26	0.44
34:BQ:12:GLN:HG2	34:BQ:73:PRO:HD2	1.99	0.44
42:BY:40:GLU:O	42:BY:42:VAL:HG23	2.17	0.44
1:CA:35:G:H22	1:CA:550:G:H1'	1.83	0.44
1:CA:129(A):G:O2'	1:CA:189(F):U:OP1	2.33	0.44
1:CA:148:G:C2	1:CA:175:C:C2	3.06	0.44
1:CA:269:C:H2'	1:CA:270:A:C8	2.52	0.44
1:CA:614:A:H2'	1:CA:615:C:C6	2.53	0.44
1:CA:1030(C):G:C5	1:CA:1030(D):A:N7	2.86	0.44
1:CA:1358:U:C5	1:CA:1359:C:C4	3.06	0.44
5:CE:127:ASN:HA	5:CE:128:PRO:HD3	1.80	0.44
6:CF:25:ILE:HD12	6:CF:82:ARG:HE	1.83	0.44
10:CJ:55:LYS:O	10:CJ:56:HIS:CG	2.71	0.44
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.18	0.44
15:CO:88:ARG:HA	15:CO:88:ARG:HD2	1.83	0.44
23:DA:30:G:H2'	23:DA:31:C:C6	2.53	0.44
23:DA:272(H):C:H5'	23:DA:272(I):U:OP2	2.17	0.44
23:DA:484:C:H2'	23:DA:485:C:H6	1.80	0.44
23:DA:830:G:H4'	23:DA:831:G:OP2	2.18	0.44
23:DA:1153:C:H2'	23:DA:1154:G:O4'	2.17	0.44
23:DA:1766:U:H2'	23:DA:1767:C:C6	2.53	0.44
23:DA:2119:A:OP1	23:DA:2119:A:H2'	2.18	0.44
23:DA:2133:G:N2	23:DA:2158:A:H62	2.16	0.44
25:DD:158:ALA:O	25:DD:161:THR:OG1	2.25	0.44
28:DG:72:ARG:HD3	28:DG:85:GLY:HA2	1.99	0.44
34:DQ:16:ARG:C	34:DQ:17:LEU:HD23	2.42	0.44
40:DW:56:ALA:O	40:DW:57:ASN:C	2.59	0.44
43:DZ:24:LEU:HD12	43:DZ:24:LEU:C	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:983:A:C2	1:AA:984:C:H5'	2.53	0.43
1:AA:1010:G:H2'	1:AA:1010:G:N3	2.33	0.43
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.80	0.43
1:AA:1241:G:H2'	1:AA:1241:G:N3	2.33	0.43
1:AA:1267:C:O2'	21:AU:20:LYS:HD3	2.18	0.43
1:AA:1317:C:N3	19:AS:37:ARG:NH2	2.61	0.43
1:AA:1342:C:O2'	9:AI:124:GLN:HA	2.17	0.43
1:AA:1442(A):G:C5	1:AA:1442(B):A:N3	2.86	0.43
2:AB:70:PHE:H	2:AB:92:TYR:HA	1.83	0.43
3:AC:122:GLU:HA	3:AC:125:GLU:OE2	2.18	0.43
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.99	0.43
7:AG:16:LEU:HD22	9:AI:45:ALA:N	2.33	0.43
23:BA:102:G:HO2'	23:BA:103:A:P	2.40	0.43
23:BA:275:G:O2'	23:BA:276:A:H5'	2.18	0.43
23:BA:885:C:C4	23:BA:886:C:H1'	2.53	0.43
23:BA:1956:U:H2'	23:BA:1957:C:H5'	2.01	0.43
28:BG:96:ARG:H	28:BG:99:MET:HE2	1.81	0.43
29:BH:13:LYS:HA	29:BH:14:GLY:HA2	1.60	0.43
31:BN:115:ARG:O	31:BN:118:LYS:HB2	2.18	0.43
51:B7:1:MET:HE3	51:B7:1:MET:HB2	1.86	0.43
52:B8:39:LYS:HA	52:B8:42:ARG:NH1	2.33	0.43
1:CA:283:C:H2'	1:CA:284:G:O4'	2.18	0.43
1:CA:516:U:O4	1:CA:517:G:N1	2.51	0.43
1:CA:959:A:H61	19:CS:78:ARG:CA	2.29	0.43
1:CA:991:U:N3	1:CA:1212:U:H1'	2.32	0.43
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.33	0.43
2:CB:70:PHE:H	2:CB:92:TYR:HA	1.82	0.43
3:CC:15:THR:HG22	3:CC:16:ARG:N	2.33	0.43
3:CC:134:ILE:CG2	3:CC:151:VAL:HB	2.46	0.43
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.76	0.43
7:CG:22:LEU:HA	7:CG:22:LEU:HD12	1.78	0.43
23:DA:55:G:N3	23:DA:127:A:H2	2.15	0.43
23:DA:980:A:N3	23:DA:2037:G:O2'	2.40	0.43
23:DA:1316:U:H2'	23:DA:1317:A:H8	1.83	0.43
23:DA:1565:C:O2'	23:DA:1567:A:N7	2.49	0.43
23:DA:1804:C:O5'	23:DA:1804:C:H6	1.99	0.43
23:DA:2238:G:N7	56:DA:4648:HOH:O	2.36	0.43
23:DA:2305:A:C5'	28:DG:134:GLY:HA3	2.47	0.43
23:DA:2677:G:H2'	23:DA:2678:C:C6	2.53	0.43
24:DB:38:C:O2	24:DB:48:A:H1'	2.17	0.43
24:DB:40:U:H1'	24:DB:45:A:N6	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:46:A:C5	24:DB:47:C:C5	3.06	0.43
39:DV:76:LYS:HD2	39:DV:81:TYR:CD1	2.53	0.43
1:AA:73:G:C6	1:AA:97:G:C6	3.06	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.17	0.43
1:AA:427:U:C4	1:AA:428:G:C6	3.05	0.43
1:AA:475:G:H2'	1:AA:476:G:H8	1.82	0.43
1:AA:564:C:HO2'	8:AH:91:ARG:HH22	1.61	0.43
1:AA:636:U:H2'	1:AA:637:G:H8	1.83	0.43
1:AA:1046:A:H2'	1:AA:1047:G:O4'	2.17	0.43
1:AA:1221:G:H8	1:AA:1221:G:O5'	2.02	0.43
1:AA:1250:A:H1'	1:AA:1370:G:O2'	2.17	0.43
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.18	0.43
23:BA:62:C:OP1	56:BA:5009:HOH:O	2.21	0.43
23:BA:296:C:O2'	23:BA:297:C:H5'	2.18	0.43
23:BA:1740:G:H2'	23:BA:1741:A:H8	1.83	0.43
23:BA:1786:A:OP1	56:BA:4757:HOH:O	2.20	0.43
23:BA:1814:G:H4'	25:BD:51:VAL:HG21	2.01	0.43
23:BA:2119:A:N6	23:BA:2168:G:H1'	2.33	0.43
23:BA:2789:C:N3	23:BA:2894:G:O6	2.51	0.43
27:BF:64:ILE:HG13	27:BF:65:TRP:H	1.83	0.43
1:CA:559:A:N3	1:CA:559:A:H5'	2.32	0.43
1:CA:713:G:H2'	1:CA:714:G:C8	2.52	0.43
1:CA:957:U:H4'	19:CS:79:THR:HG23	2.00	0.43
1:CA:994:A:O2'	14:CN:8:GLU:HG2	2.18	0.43
1:CA:1014:A:H2'	1:CA:1015:A:N9	2.33	0.43
1:CA:1193:G:C5	1:CA:1194:U:C5	3.06	0.43
1:CA:1246:C:H2'	1:CA:1247:U:C6	2.53	0.43
5:CE:32:VAL:O	5:CE:43:LEU:HD12	2.18	0.43
8:CH:36:LEU:O	8:CH:45:ILE:HD11	2.18	0.43
15:CO:78:TYR:O	15:CO:82:ILE:HG12	2.18	0.43
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.71	0.43
23:DA:54:G:O2'	51:D7:35:ARG:HD3	2.18	0.43
23:DA:354:G:H2'	23:DA:355:G:O4'	2.18	0.43
23:DA:391:G:O2'	23:DA:410:G:OP1	2.28	0.43
23:DA:824:A:H1'	23:DA:2358:G:N7	2.34	0.43
23:DA:1210:A:H8	23:DA:1210:A:C5'	2.30	0.43
23:DA:1340:U:H4'	23:DA:1394:U:O2'	2.18	0.43
23:DA:1364:G:P	45:D1:3:LYS:HG2	2.57	0.43
23:DA:2176:A:H5'	23:DA:2177:C:OP2	2.18	0.43
23:DA:2685:G:H2'	23:DA:2686:G:H5"	2.00	0.43
25:DD:77:ALA:HB2	25:DD:97:TYR:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:96:HIS:HD2	25:DD:102:LYS:HG2	1.82	0.43
34:DQ:60:ARG:NH1	43:DZ:177:PRO:HG3	2.33	0.43
36:DS:74:ALA:CB	36:DS:108:GLY:HA3	2.48	0.43
39:DV:18:LEU:HD23	39:DV:18:LEU:HA	1.84	0.43
43:DZ:35:ARG:HA	43:DZ:35:ARG:HD2	1.64	0.43
1:AA:383:A:OP1	1:AA:454:C:O2'	2.30	0.43
1:AA:981:U:OP1	14:AN:6:LEU:HD11	2.19	0.43
1:AA:988:G:C2	1:AA:1218:C:C2	3.05	0.43
1:AA:1367:C:H5'	10:AJ:60:ARG:NH1	2.32	0.43
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.53	0.43
4:AD:110:PHE:HD2	4:AD:148:VAL:HG22	1.84	0.43
11:AK:67:ASP:OD2	11:AK:71:LYS:HE3	2.17	0.43
12:AL:85:ILE:HD13	12:AL:85:ILE:HA	1.75	0.43
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.54	0.43
17:AQ:59:ILE:HG22	17:AQ:72:ARG:C	2.43	0.43
17:AQ:65:ILE:HD12	17:AQ:69:LYS:O	2.18	0.43
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.99	0.43
23:BA:196:A:O2'	23:BA:805:G:O6	2.28	0.43
23:BA:265:A:H1'	23:BA:266:G:O4'	2.19	0.43
23:BA:300:A:H3'	42:BY:84:ARG:NH2	2.33	0.43
23:BA:652(B):A:O2'	23:BA:652(C):G:H5'	2.18	0.43
23:BA:652(E):G:O6	23:BA:652(T):C:N3	2.51	0.43
23:BA:1003:G:N2	23:BA:1153:C:C2	2.86	0.43
23:BA:1050:A:H2'	23:BA:1051:G:C8	2.52	0.43
23:BA:1518:U:H2'	23:BA:1519:G:O4'	2.18	0.43
23:BA:1535:A:H3'	23:BA:1535:A:P	2.58	0.43
23:BA:1632:A:N6	23:BA:1633:G:C6	2.87	0.43
23:BA:2261:C:O2'	23:BA:2262:U:H5'	2.18	0.43
23:BA:2291:U:O2'	23:BA:2374:C:O2	2.36	0.43
33:BP:77:ARG:HB2	33:BP:78:PRO:HD2	2.01	0.43
34:BQ:71:ASP:O	34:BQ:73:PRO:HD3	2.18	0.43
35:BR:72:ASP:O	35:BR:76:VAL:HG23	2.18	0.43
35:BR:103:ARG:NH1	35:BR:103:ARG:HG2	2.33	0.43
49:B5:45:VAL:HG11	49:B5:58:LEU:HD13	1.99	0.43
1:CA:256:U:H2'	1:CA:257:G:C8	2.53	0.43
1:CA:582:U:OP1	15:CO:64:ARG:NH1	2.51	0.43
1:CA:674:G:H2'	1:CA:675:A:H8	1.83	0.43
1:CA:883:C:O2'	1:CA:884:U:H5'	2.18	0.43
1:CA:1367:C:H5"	9:CI:114:TYR:CB	2.48	0.43
1:CA:1410:G:C4	1:CA:1491:G:N2	2.87	0.43
2:CB:55:PHE:CG	2:CB:58:ILE:HD12	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:16:LEU:HD23	9:CI:48:GLU:CD	2.44	0.43
12:CL:60:LEU:HB3	12:CL:62:SER:H	1.83	0.43
12:CL:62:SER:C	12:CL:64:TYR:H	2.26	0.43
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	2.00	0.43
16:CP:78:GLY:C	16:CP:80:PHE:H	2.26	0.43
17:CQ:10:VAL:HG13	17:CQ:19:VAL:HB	2.00	0.43
18:CR:33:ASP:O	18:CR:40:LEU:HD11	2.18	0.43
23:DA:34:C:H5"	23:DA:35:G:OP2	2.18	0.43
23:DA:322:A:OP2	27:DF:169:ASN:HB2	2.17	0.43
23:DA:675:A:N6	23:DA:676:A:N6	2.66	0.43
23:DA:768:G:C5	56:DA:3978:HOH:O	2.67	0.43
23:DA:1513:C:H2'	23:DA:1514:U:C6	2.53	0.43
23:DA:2223:G:H2'	23:DA:2224:G:H5'	2.00	0.43
23:DA:2704:C:H2'	23:DA:2705:A:O4'	2.18	0.43
23:DA:2793:G:N2	23:DA:2804:C:H1'	2.32	0.43
27:DF:123:LEU:HD11	27:DF:194:MET:HE2	2.00	0.43
27:DF:197:ASP:O	27:DF:201:VAL:HG12	2.18	0.43
36:DS:30:ARG:HG3	36:DS:97:ARG:CZ	2.48	0.43
37:DT:36:GLU:HB3	37:DT:37:GLY:H	1.72	0.43
43:DZ:45:ASP:O	43:DZ:48:PHE:N	2.50	0.43
43:DZ:166:SER:HA	43:DZ:167:PRO:HD3	1.93	0.43
45:D1:98:LEU:HD23	45:D1:98:LEU:HA	1.91	0.43
1:AA:324:G:N2	1:AA:327:A:C8	2.86	0.43
1:AA:328:C:H4'	1:AA:329:A:H5'	2.00	0.43
1:AA:854:G:H3'	1:AA:871:U:O4	2.18	0.43
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.53	0.43
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.49	0.43
1:AA:1442(A):G:C2'	1:AA:1442(B):A:H5"	2.49	0.43
2:AB:78:GLN:C	2:AB:94:ASN:HD21	2.27	0.43
3:AC:6:HIS:CD2	3:AC:6:HIS:C	2.96	0.43
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	2.00	0.43
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.52	0.43
7:AG:87:VAL:HG11	7:AG:154:TYR:O	2.19	0.43
8:AH:39:LEU:O	8:AH:43:GLY:N	2.51	0.43
9:AI:27:THR:O	9:AI:63:ILE:N	2.51	0.43
11:AK:110:ASP:HB3	18:AR:85:LEU:HD12	2.00	0.43
23:BA:503:A:O2'	56:BA:4932:HOH:O	2.20	0.43
23:BA:895:U:H6	23:BA:895:U:H5"	1.84	0.43
23:BA:1138:G:H2'	31:BN:106:MET:HE2	2.01	0.43
23:BA:1142(A):A:C4	23:BA:1144:G:N7	2.87	0.43
23:BA:2306:C:C4	23:BA:2307:G:O6	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2309:A:C6	23:BA:2310:A:N1	2.86	0.43
23:BA:2590:A:OP2	25:BD:238:GLY:HA2	2.18	0.43
29:BH:70:THR:HA	29:BH:73:ALA:CB	2.47	0.43
39:BV:76:LYS:HD2	39:BV:81:TYR:CD1	2.54	0.43
41:BX:54:VAL:HG13	41:BX:81:VAL:HG12	2.01	0.43
45:B1:52:ARG:HA	45:B1:56:GLN:O	2.18	0.43
1:CA:18:C:H4'	1:CA:1078:U:O2	2.18	0.43
1:CA:79:G:N2	1:CA:91:C:C2	2.87	0.43
1:CA:946:A:N1	1:CA:1236:A:C2	2.87	0.43
1:CA:1149:C:O2'	1:CA:1150:U:H5'	2.18	0.43
1:CA:1210:C:H5"	1:CA:1211:U:C6	2.54	0.43
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.52	0.43
1:CA:1321:C:H3'	1:CA:1322:C:H2'	2.00	0.43
1:CA:1362:C:O2'	1:CA:1363:C:H5'	2.17	0.43
1:CA:1379:G:H2'	1:CA:1380:U:H5'	2.00	0.43
1:CA:1443:G:O6	1:CA:1459:C:C1'	2.66	0.43
1:CA:1457:G:C6	1:CA:1458:G:C6	3.06	0.43
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.92	0.43
3:CC:21:ARG:O	3:CC:58:GLU:HG3	2.18	0.43
7:CG:115:ARG:O	7:CG:118:VAL:HG23	2.18	0.43
13:CM:14:ARG:NH1	13:CM:41:PRO:HB2	2.32	0.43
13:CM:58:GLU:O	13:CM:61:GLU:HB2	2.19	0.43
15:CO:24:SER:O	15:CO:25:THR:C	2.61	0.43
17:CQ:59:ILE:HG22	17:CQ:72:ARG:C	2.43	0.43
23:DA:272(E):G:C2	23:DA:364:C:N3	2.87	0.43
23:DA:842:G:H2'	23:DA:843:G:O4'	2.17	0.43
23:DA:2387:U:OP1	44:D0:55:ARG:NH2	2.51	0.43
23:DA:2494:G:C4	23:DA:2495:G:C8	3.06	0.43
23:DA:2774:C:H2'	23:DA:2775:A:O4'	2.19	0.43
25:DD:145:VAL:HG12	25:DD:146:GLU:O	2.18	0.43
26:DE:52:LEU:O	26:DE:76:ARG:HG2	2.18	0.43
28:DG:43:LEU:HB3	28:DG:44:GLY:H	1.64	0.43
35:DR:103:ARG:HG2	35:DR:103:ARG:HH11	1.83	0.43
35:DR:103:ARG:HH11	35:DR:103:ARG:CG	2.32	0.43
46:D2:10:LEU:HA	46:D2:10:LEU:HD23	1.75	0.43
1:AA:109:A:C6	1:AA:326:G:C6	3.06	0.43
1:AA:397:A:H3'	1:AA:397:A:N3	2.34	0.43
1:AA:614:A:H2'	1:AA:615:C:H6	1.82	0.43
1:AA:625:G:C6	1:AA:626:U:C4	3.06	0.43
1:AA:675:A:H2'	1:AA:676:A:C8	2.53	0.43
1:AA:730:G:C5	1:AA:731:G:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1176:A:H8	1:AA:1176:A:O5'	2.02	0.43
1:AA:1320:C:H5'	19:AS:70:LYS:HB2	2.00	0.43
4:AD:91:SER:O	4:AD:95:GLY:N	2.37	0.43
6:AF:68:PRO:HG2	6:AF:71:ARG:HD2	2.00	0.43
8:AH:9:MET:SD	8:AH:32:LYS:HB3	2.59	0.43
13:AM:68:GLY:H	13:AM:71:ARG:HE	1.66	0.43
17:AQ:76:LEU:HD21	17:AQ:79:SER:H	1.83	0.43
23:BA:94:C:H2'	23:BA:94:C:O2	2.17	0.43
23:BA:316:C:N4	56:BA:5253:HOH:O	2.50	0.43
23:BA:729:G:H2'	23:BA:1775:U:H1'	1.99	0.43
23:BA:769:G:H5'	23:BA:1379:A:N6	2.33	0.43
23:BA:885:C:H3'	23:BA:886:C:O4'	2.19	0.43
23:BA:2165:G:H2'	23:BA:2166:G:H8	1.83	0.43
25:BD:33:LEU:HD23	25:BD:33:LEU:HA	1.63	0.43
28:BG:76:SER:CA	28:BG:83:ARG:HA	2.45	0.43
30:BI:29:TYR:C	30:BI:32:PRO:HD2	2.43	0.43
33:BP:106:LEU:HD23	33:BP:106:LEU:HA	1.83	0.43
1:CA:17:U:O2'	1:CA:1079:G:N3	2.49	0.43
1:CA:164:U:H2'	1:CA:165:C:C6	2.54	0.43
1:CA:277:C:OP1	17:CQ:68:ARG:NH2	2.48	0.43
1:CA:384:G:H2'	1:CA:385:C:H6	1.82	0.43
1:CA:397:A:H3'	1:CA:397:A:N3	2.34	0.43
1:CA:445:G:N3	1:CA:445:G:H2'	2.33	0.43
1:CA:650:G:O2'	1:CA:651:C:H5'	2.18	0.43
1:CA:965:A:H4'	1:CA:966:G:O5'	2.18	0.43
1:CA:1348:U:H2'	1:CA:1349:A:C8	2.53	0.43
1:CA:1357:A:C8	1:CA:1358:U:C5	3.07	0.43
2:CB:28:PHE:CD2	2:CB:194:PRO:HG3	2.51	0.43
23:DA:234:C:H2'	23:DA:235:U:C6	2.54	0.43
23:DA:475:U:C4	23:DA:481:G:O6	2.71	0.43
23:DA:1358:G:O2'	23:DA:1359:A:H5'	2.18	0.43
23:DA:1722:A:C5	23:DA:1740:G:C6	3.07	0.43
23:DA:1740:G:H2'	23:DA:1741:A:H8	1.83	0.43
23:DA:2070:G:C2	23:DA:2442:C:C2	3.07	0.43
23:DA:2470:G:C2	23:DA:2471:C:C6	3.07	0.43
23:DA:2556:C:H2'	23:DA:2557:G:O4'	2.19	0.43
23:DA:2850:A:OP2	23:DA:2866:U:H5	2.01	0.43
33:DP:27:HIS:O	33:DP:31:ALA:HA	2.19	0.43
33:DP:59:LEU:HD11	52:D8:10:ALA:CB	2.45	0.43
38:DU:39:LEU:HD23	38:DU:39:LEU:HA	1.85	0.43
40:DW:14:PRO:HG2	40:DW:78:GLU:HG2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DX:50:LYS:HB3	41:DX:84:ALA:HB2	1.99	0.43
43:DZ:111:VAL:O	43:DZ:112:ARG:HB2	2.18	0.43
1:AA:79:G:N2	1:AA:91:C:O2	2.52	0.43
1:AA:622:A:C8	1:AA:623:C:C5	3.07	0.43
1:AA:687:A:H4'	11:AK:47:VAL:HG13	2.01	0.43
1:AA:1305:G:H5"	21:AU:5:ASP:CA	2.46	0.43
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.83	0.43
1:AA:1442(A):G:H2'	1:AA:1442(B):A:H5"	2.00	0.43
4:AD:78:LEU:HD23	4:AD:78:LEU:HA	1.77	0.43
12:AL:93:LEU:HA	12:AL:93:LEU:HD23	1.83	0.43
16:AP:40:ASP:HA	16:AP:41:PRO:HD2	1.91	0.43
23:BA:744:G:OP1	26:BE:132:HIS:ND1	2.50	0.43
23:BA:1655:A:H3'	23:BA:1656:C:H6	1.84	0.43
23:BA:1842:G:C5	23:BA:1843:C:C4	3.06	0.43
23:BA:2125:G:N2	23:BA:2126:A:H62	2.17	0.43
23:BA:2290:G:C2	23:BA:2343:C:O2	2.72	0.43
23:BA:2360:A:H2'	23:BA:2361:A:O4'	2.19	0.43
25:BD:5:LYS:HB3	25:BD:5:LYS:HE3	1.77	0.43
25:BD:154:LYS:H	25:BD:154:LYS:HG2	1.70	0.43
25:BD:155:LEU:HD23	25:BD:177:LEU:HD22	1.99	0.43
27:BF:32:LEU:HD21	27:BF:105:VAL:HG13	2.01	0.43
31:BN:67:LEU:HA	31:BN:67:LEU:HD22	1.73	0.43
32:BO:21:CYS:HB2	32:BO:39:ILE:HD12	1.99	0.43
1:CA:65:U:H6	1:CA:65:U:H5"	1.83	0.43
1:CA:142:G:C4	1:CA:143:A:C8	3.07	0.43
1:CA:189(F):U:C5	17:CQ:72:ARG:NH2	2.86	0.43
1:CA:370:C:H2'	1:CA:371:G:C8	2.53	0.43
1:CA:441:A:H3'	1:CA:442:C:C6	2.54	0.43
1:CA:578:C:O2'	1:CA:728:A:N3	2.37	0.43
1:CA:949:A:OP1	13:CM:101:GLN:HB3	2.19	0.43
1:CA:1295:G:H2'	1:CA:1296:C:H5'	2.01	0.43
2:CB:80:ILE:HG12	2:CB:211:ILE:HG22	2.01	0.43
4:CD:138:TYR:C	4:CD:138:TYR:CD2	2.97	0.43
5:CE:30:ALA:O	5:CE:45:PHE:HD1	2.01	0.43
7:CG:31:MET:HG3	7:CG:35:LYS:O	2.18	0.43
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	2.01	0.43
9:CI:18:PHE:HD1	9:CI:62:TYR:HD2	1.66	0.43
9:CI:28:VAL:O	9:CI:31:GLN:HG2	2.18	0.43
13:CM:70:LEU:O	13:CM:74:VAL:HG23	2.18	0.43
16:CP:38:TYR:CD2	16:CP:38:TYR:N	2.86	0.43
19:CS:36:ARG:HG2	19:CS:51:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:39:C:H2'	23:DA:40:C:C6	2.53	0.43
23:DA:363(A):A:H2'	23:DA:363(B):G:H8	1.82	0.43
23:DA:819:A:OP2	23:DA:1187:G:N2	2.35	0.43
23:DA:2259:G:C2	23:DA:2282:G:N1	2.87	0.43
23:DA:2273:A:O2'	23:DA:2274:A:H5'	2.19	0.43
23:DA:2287:A:C5	23:DA:2289:G:C5	3.06	0.43
23:DA:2315:G:H2'	23:DA:2316:C:C6	2.53	0.43
23:DA:2695:C:H2'	23:DA:2696:U:H6	1.84	0.43
23:DA:2760:C:C2'	23:DA:2761:G:H5"	2.45	0.43
23:DA:2850:A:OP2	23:DA:2866:U:C5	2.72	0.43
28:DG:19:LEU:HD22	28:DG:23:PHE:CE1	2.51	0.43
29:DH:83:TYR:O	29:DH:134:SER:HA	2.19	0.43
30:DI:83:ALA:HA	30:DI:89:TYR:CD2	2.54	0.43
33:DP:101:VAL:HG23	33:DP:106:LEU:HB3	2.00	0.43
34:DQ:66:ILE:HG12	34:DQ:104:PHE:CD2	2.53	0.43
35:DR:29:LEU:HB3	35:DR:75:LEU:HD21	1.99	0.43
35:DR:38:VAL:HB	35:DR:39:PRO:HD3	1.99	0.43
41:DX:5:TYR:HB3	46:D2:33:MET:HB2	2.00	0.43
51:D7:1:MET:HE3	51:D7:1:MET:HB2	1.85	0.43
1:AA:327:A:C5	1:AA:329:A:C5	3.06	0.43
1:AA:604:G:H2'	1:AA:605:U:O4'	2.18	0.43
1:AA:1044:A:H2'	1:AA:1045:C:H4'	2.00	0.43
1:AA:1352:C:H5"	21:AU:3:LYS:HE2	2.00	0.43
3:AC:48:TYR:O	3:AC:50:ALA:N	2.50	0.43
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.53	0.43
7:AG:41:ARG:O	7:AG:44:TYR:N	2.50	0.43
7:AG:58:PRO:HA	7:AG:61:VAL:CG2	2.47	0.43
10:AJ:12:ASP:OD2	10:AJ:13:HIS:N	2.43	0.43
14:AN:43:CYS:O	14:AN:44:LEU:C	2.62	0.43
15:AO:55:GLY:HA2	15:AO:58:MET:HG3	1.99	0.43
23:BA:857:C:N4	23:BA:858:U:O4	2.52	0.43
23:BA:1042:G:C6	23:BA:1043:C:C4	3.07	0.43
23:BA:1049:C:H41	23:BA:1111:A:H2	1.63	0.43
23:BA:1169:G:H1	23:BA:1180:C:H42	1.64	0.43
23:BA:1693:U:O2'	23:BA:1695:G:O6	2.29	0.43
23:BA:2356:C:O3'	44:B0:20:ARG:HD3	2.18	0.43
23:BA:2635:C:O2'	26:BE:80:GLU:OE1	2.31	0.43
32:BO:98:VAL:HG22	32:BO:118:ALA:HA	2.01	0.43
36:BS:10:ARG:O	36:BS:14:VAL:HG12	2.18	0.43
37:BT:80:SER:HA	37:BT:81:PRO:HD2	1.74	0.43
1:CA:35:G:C6	1:CA:550:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:187:C:H2'	1:CA:188:C:C6	2.54	0.43
1:CA:267:C:OP2	17:CQ:67:LYS:HD2	2.19	0.43
1:CA:614:A:C6	1:CA:627:G:N1	2.87	0.43
1:CA:929:G:C6	1:CA:930:C:C4	3.07	0.43
1:CA:1005:A:N7	1:CA:1024:G:O2'	2.52	0.43
1:CA:1013:G:O2'	1:CA:1014:A:C8	2.69	0.43
1:CA:1137:C:C5'	1:CA:1138:G:C6	3.01	0.43
1:CA:1178:G:N2	1:CA:1181:G:N7	2.65	0.43
1:CA:1299:A:H2'	1:CA:1299:A:N3	2.33	0.43
1:CA:1350:A:N1	1:CA:1372:U:O2	2.51	0.43
3:CC:53:ALA:CB	3:CC:112:SER:HB2	2.48	0.43
3:CC:67:THR:HG22	3:CC:69:HIS:CE1	2.53	0.43
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	2.01	0.43
6:CF:10:LEU:HB2	6:CF:59:TYR:HB3	2.00	0.43
8:CH:4:ASP:HA	8:CH:5:PRO:HD3	1.91	0.43
8:CH:8:ASP:O	8:CH:12:ARG:N	2.43	0.43
8:CH:29:SER:HB3	8:CH:32:LYS:CG	2.43	0.43
23:DA:271(H):G:O2'	23:DA:271(I):G:P	2.76	0.43
23:DA:428:A:H8	23:DA:428:A:OP2	2.02	0.43
23:DA:566:U:H2'	23:DA:567:A:O4'	2.19	0.43
23:DA:1287:A:C5	23:DA:1288:U:C4	3.07	0.43
23:DA:1419:A:C8	23:DA:1421:G:C6	3.06	0.43
23:DA:1893:C:C5	23:DA:1894:C:C5	3.06	0.43
23:DA:2286:A:OP1	50:D6:29:ASN:ND2	2.52	0.43
23:DA:2301:C:H2'	23:DA:2302:G:C8	2.54	0.43
23:DA:2647:U:H2'	23:DA:2648:C:C6	2.54	0.43
25:DD:10:THR:OG1	25:DD:13:ARG:HB2	2.19	0.43
31:DN:58:ASP:OD1	31:DN:58:ASP:N	2.51	0.43
33:DP:127:ALA:C	33:DP:148:LEU:HD23	2.44	0.43
43:DZ:93:ASP:HA	43:DZ:130:PRO:HG2	2.00	0.43
45:D1:52:ARG:HA	45:D1:56:GLN:O	2.18	0.43
1:AA:189(B):C:H2'	1:AA:189(C):C:O4'	2.18	0.43
1:AA:671:G:H2'	1:AA:672:U:C6	2.53	0.43
1:AA:762:C:H2'	1:AA:763:G:H8	1.84	0.43
1:AA:863:U:H2'	1:AA:865:A:OP2	2.18	0.43
1:AA:1055:A:H62	1:AA:1200:C:N4	2.16	0.43
1:AA:1254:C:H5"	10:AJ:45:ARG:HH21	1.82	0.43
2:AB:205:ASP:C	2:AB:211:ILE:HD11	2.43	0.43
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.19	0.43
12:AL:11:VAL:HG22	17:AQ:29:HIS:CD2	2.53	0.43
16:AP:71:ARG:O	16:AP:75:ARG:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:219:G:C6	56:BA:3973:HOH:O	2.72	0.43
23:BA:451:C:H5'	56:BA:4580:HOH:O	2.19	0.43
23:BA:527:C:C4	23:BA:2779:U:H2'	2.54	0.43
23:BA:757:U:H2'	23:BA:758:C:O4'	2.19	0.43
23:BA:760:G:H2'	23:BA:761:A:O4'	2.19	0.43
23:BA:2028:U:H2'	23:BA:2029:G:O4'	2.18	0.43
23:BA:2801(A):A:H1'	23:BA:2895:U:H1'	2.00	0.43
28:BG:122:PRO:HG3	28:BG:180:PHE:HD2	1.84	0.43
30:BI:59:ALA:HA	30:BI:62:LYS:HB2	2.01	0.43
30:BI:94:ALA:O	30:BI:95:LYS:C	2.61	0.43
39:BV:52:VAL:HG23	39:BV:52:VAL:O	2.18	0.43
40:BW:64:MET:HE3	40:BW:109:GLU:HG3	1.99	0.43
43:BZ:137:ILE:HG23	43:BZ:156:LYS:HD2	2.01	0.43
1:CA:352:C:O2	1:CA:352:C:H2'	2.18	0.43
1:CA:652:U:O4	1:CA:752:G:O2'	2.33	0.43
1:CA:741:G:H2'	1:CA:742:G:C8	2.53	0.43
1:CA:941:G:N2	9:CI:124:GLN:HE22	2.15	0.43
1:CA:1112:C:N4	3:CC:178:LEU:HD23	2.33	0.43
1:CA:1415:G:C6	1:CA:1486:G:C6	3.06	0.43
2:CB:19:HIS:HD1	2:CB:189:ASP:CG	2.23	0.43
4:CD:155:LEU:HD23	4:CD:156:GLU:N	2.33	0.43
13:CM:15:VAL:HG13	13:CM:43:THR:O	2.19	0.43
17:CQ:45:HIS:CE1	17:CQ:47:PRO:HG3	2.54	0.43
19:CS:16:LEU:CB	19:CS:20:LEU:HD12	2.49	0.43
23:DA:188:G:N2	23:DA:208:C:N3	2.46	0.43
23:DA:533:G:H5'	38:DU:24:TYR:CD2	2.53	0.43
23:DA:1169:G:N2	23:DA:1181:C:C2	2.87	0.43
23:DA:1204:A:H2	23:DA:1241:A:N6	2.04	0.43
26:DE:5:LEU:HD21	26:DE:79:ARG:HB2	2.01	0.43
28:DG:98:ARG:NH1	28:DG:98:ARG:HB2	2.33	0.43
30:DI:108:THR:OG1	30:DI:109:ILE:N	2.51	0.43
32:DO:106:LEU:HA	32:DO:106:LEU:HD23	1.75	0.43
35:DR:103:ARG:NH1	35:DR:108:GLY:O	2.52	0.43
43:DZ:28:MET:HG2	43:DZ:37:VAL:HG11	2.00	0.43
43:DZ:44:PHE:CE2	43:DZ:86:VAL:HG11	2.54	0.43
51:D7:24:THR:O	51:D7:28:ARG:HG3	2.19	0.43
52:D8:10:ALA:O	52:D8:11:LYS:C	2.58	0.43
52:D8:54:GLU:O	52:D8:58:ILE:HG12	2.19	0.43
1:AA:318:G:H2'	1:AA:319:G:H8	1.83	0.43
1:AA:499:A:H4'	1:AA:500:G:H5'	2.00	0.43
1:AA:811:C:H4'	1:AA:900:A:N6	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:970:C:C2	1:AA:1231:G:H1'	2.54	0.43
3:AC:70:VAL:N	3:AC:104:GLN:O	2.42	0.43
6:AF:60:PHE:O	6:AF:61:LEU:HD12	2.19	0.43
8:AH:4:ASP:HB2	8:AH:89:PRO:HG3	2.01	0.43
12:AL:53:ARG:HG2	12:AL:93:LEU:HD11	2.01	0.43
19:AS:35:SER:HB3	19:AS:38:SER:HB3	2.01	0.43
20:AT:55:ILE:O	20:AT:58:LYS:N	2.52	0.43
22:AX:4:ASN:HB2	22:AX:37:VAL:O	2.18	0.43
22:AX:76:GLY:O	22:AX:79:ASP:HB3	2.19	0.43
23:BA:548:A:H61	39:BV:19:LYS:H	1.67	0.43
23:BA:557:U:H2'	23:BA:558:G:H8	1.84	0.43
23:BA:903:C:H2'	23:BA:904:C:C6	2.53	0.43
23:BA:2133:G:H2'	23:BA:2158:A:H61	1.83	0.43
25:BD:159:ALA:HB1	25:BD:198:ASN:O	2.19	0.43
26:BE:9:VAL:HG13	26:BE:25:VAL:O	2.19	0.43
28:BG:10:LYS:O	28:BG:14:GLU:HB3	2.19	0.43
29:BH:3:ARG:HG3	29:BH:3:ARG:NH1	2.34	0.43
39:BV:65:GLY:HA3	39:BV:91:TYR:CZ	2.54	0.43
48:B4:40:HIS:HA	48:B4:41:PRO:HD3	1.81	0.43
1:CA:292:G:C5	1:CA:293:G:H1'	2.53	0.43
1:CA:345:C:O2'	1:CA:346:G:C2	2.70	0.43
1:CA:604:G:C6	1:CA:605:U:C4	3.07	0.43
1:CA:984:C:H2'	1:CA:985:C:C6	2.53	0.43
1:CA:1003:G:O2'	1:CA:1024:G:N2	2.52	0.43
1:CA:1026:G:H3'	1:CA:1027:C:C5'	2.49	0.43
1:CA:1265:G:O2'	1:CA:1266:G:H5'	2.18	0.43
3:CC:19:GLU:HB3	3:CC:40:ARG:NH2	2.34	0.43
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.17	0.43
6:CF:95:GLU:HA	6:CF:96:PRO:HD3	1.90	0.43
8:CH:14:ARG:O	8:CH:18:ARG:HD3	2.19	0.43
9:CI:9:ARG:HG3	9:CI:14:VAL:HG22	2.01	0.43
13:CM:64:TRP:HB2	13:CM:66:LEU:HD23	2.00	0.43
17:CQ:19:VAL:HG23	17:CQ:44:ALA:HB3	2.01	0.43
20:CT:73:HIS:C	20:CT:74:LYS:HG2	2.44	0.43
23:DA:328:U:H4'	42:DY:68:HIS:CD2	2.54	0.43
23:DA:1503:U:H2'	23:DA:1504:C:C6	2.53	0.43
23:DA:1647:G:P	23:DA:1647:G:H3'	2.59	0.43
23:DA:1946:U:H2'	23:DA:1947:C:C6	2.54	0.43
23:DA:2031:A:C6	23:DA:2498:C:H1'	2.54	0.43
23:DA:2119:A:N6	23:DA:2168:G:H1'	2.34	0.43
26:DE:52:LEU:HA	26:DE:53:PRO:HD2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DR:28:LEU:HD12	35:DR:48:VAL:HG21	2.00	0.43
43:DZ:137:ILE:HG23	43:DZ:156:LYS:HD2	2.01	0.43
52:D8:62:LEU:HB3	52:D8:65:GLU:HG2	1.99	0.43
1:AA:11:G:C6	1:AA:12:U:C4	3.07	0.43
1:AA:66:G:N2	1:AA:172:A:N3	2.67	0.43
1:AA:352:C:H2'	1:AA:352:C:O2	2.17	0.43
1:AA:707:C:O2'	1:AA:708:C:H5'	2.18	0.43
1:AA:713:G:H2'	1:AA:714:G:C8	2.54	0.43
1:AA:1237:C:H2'	1:AA:1335:C:C5'	2.49	0.43
1:AA:1442:G:C8	1:AA:1442(A):G:C5	3.07	0.43
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.88	0.43
4:AD:32:ALA:O	4:AD:36:ARG:N	2.51	0.43
4:AD:61:LYS:HE3	4:AD:62:GLN:OE1	2.18	0.43
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.19	0.43
7:AG:26:PHE:CD1	7:AG:101:LEU:HD22	2.54	0.43
9:AI:20:ARG:HA	9:AI:21:PRO:HD2	1.90	0.43
9:AI:48:GLU:OE2	9:AI:48:GLU:HA	2.18	0.43
23:BA:272(H):C:H5'	23:BA:272(I):U:OP2	2.18	0.43
23:BA:658:C:H2'	23:BA:659:C:C6	2.54	0.43
23:BA:1011:G:C4	23:BA:1151:G:N2	2.87	0.43
23:BA:1163:G:O2'	23:BA:1164:G:H5'	2.18	0.43
23:BA:1425:G:H2'	23:BA:1426:G:C8	2.54	0.43
23:BA:1586:A:H2'	23:BA:1587:A:H5'	2.01	0.43
23:BA:1804:C:O5'	23:BA:1804:C:H6	2.01	0.43
23:BA:1804:C:H2'	23:BA:1805:U:H6	1.83	0.43
23:BA:1957:C:H2'	23:BA:1958:C:C6	2.54	0.43
23:BA:2296:U:C4	23:BA:2333:A:N3	2.87	0.43
23:BA:2307:G:H5'	23:BA:2308:G:C2	2.53	0.43
23:BA:2793:G:N2	23:BA:2804:C:H1'	2.34	0.43
25:BD:112:GLN:O	25:BD:115:GLN:HG2	2.19	0.43
27:BF:12:LEU:HD22	27:BF:12:LEU:HA	1.73	0.43
28:BG:124:SER:HB2	28:BG:131:TYR:CZ	2.53	0.43
29:BH:69:ARG:HG3	29:BH:70:THR:N	2.33	0.43
37:BT:90:GLN:HG3	37:BT:91:ARG:N	2.34	0.43
43:BZ:124:ILE:HD11	43:BZ:165:VAL:HG11	2.00	0.43
43:BZ:128:VAL:HG23	43:BZ:161:VAL:HG22	2.00	0.43
1:CA:902:G:H2'	1:CA:903:G:H8	1.84	0.43
1:CA:1010:G:C4	1:CA:1011:G:C8	3.07	0.43
1:CA:1013:G:N2	1:CA:1017:G:C6	2.87	0.43
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.84	0.43
1:CA:1238:A:C8	1:CA:1239:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1279:A:O2'	1:CA:1282:C:N4	2.52	0.43
3:CC:13:GLY:HA3	14:CN:57:ARG:NH2	2.30	0.43
5:CE:126:ARG:HA	5:CE:131:ILE:HD11	2.00	0.43
10:CJ:39:PRO:HG3	10:CJ:70:ARG:HH21	1.84	0.43
13:CM:16:ASP:HB3	13:CM:34:LEU:CD1	2.48	0.43
23:DA:64:A:O3'	41:DX:71:GLY:HA3	2.19	0.43
23:DA:1035:U:O4	56:DA:4641:HOH:O	2.22	0.43
23:DA:1042:G:C6	23:DA:1043:C:C4	3.07	0.43
23:DA:1356:G:C6	23:DA:1357:U:C4	3.07	0.43
23:DA:1586:A:H2'	23:DA:1587:A:H5'	2.00	0.43
23:DA:2171:A:H4'	23:DA:2172:U:O5'	2.18	0.43
23:DA:2360:A:H2'	23:DA:2361:A:O4'	2.18	0.43
23:DA:2593:U:H2'	23:DA:2594:C:C6	2.54	0.43
25:DD:101:GLU:OE1	25:DD:103:ARG:NH1	2.46	0.43
29:DH:90:LYS:O	29:DH:160:LYS:HA	2.19	0.43
33:DP:107:LYS:O	33:DP:110:TYR:HB2	2.19	0.43
36:DS:96:GLY:N	36:DS:99:LYS:HB3	2.34	0.43
37:DT:37:GLY:HA2	37:DT:38:ASN:HA	1.52	0.43
40:DW:36:LEU:HD23	40:DW:36:LEU:HA	1.77	0.43
46:D2:50:ILE:O	46:D2:52:ASP:N	2.45	0.43
46:D2:61:LEU:HD23	46:D2:61:LEU:HA	1.84	0.43
1:AA:113:G:N3	1:AA:353:A:O2'	2.46	0.42
1:AA:401:C:O2'	1:AA:621:A:N3	2.49	0.42
1:AA:445:G:H3'	1:AA:446:G:H8	1.84	0.42
1:AA:1044:A:OP2	1:AA:1044:A:H8	2.02	0.42
1:AA:1118:C:N3	1:AA:1155:G:N2	2.56	0.42
1:AA:1240:U:O2	7:AG:38:LEU:HD23	2.20	0.42
1:AA:1348:U:C4	1:AA:1373:G:N2	2.87	0.42
1:AA:1373:G:H5"	7:AG:36:LYS:HD2	2.00	0.42
2:AB:16:HIS:CD2	2:AB:213:LEU:HD12	2.54	0.42
2:AB:216:SER:O	2:AB:219:VAL:N	2.52	0.42
3:AC:36:ASP:OD2	3:AC:36:ASP:N	2.52	0.42
5:AE:14:ARG:HE	5:AE:16:THR:HG22	1.84	0.42
9:AI:113:LYS:HD3	9:AI:113:LYS:N	2.34	0.42
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.18	0.42
17:AQ:60:ILE:O	17:AQ:62:SER:OG	2.33	0.42
19:AS:36:ARG:HB2	19:AS:72:GLY:HA2	1.99	0.42
23:BA:271(K):U:H6	23:BA:271(K):U:H2'	1.60	0.42
23:BA:968:G:H2'	23:BA:969:U:O4'	2.19	0.42
23:BA:1047:G:H2'	23:BA:1110:G:C2	2.54	0.42
23:BA:1205:U:H4'	23:BA:1206:G:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1546:C:H5'	23:BA:1547:C:H5'	2.00	0.42
25:BD:85:ASP:OD2	25:BD:88:ARG:NH1	2.49	0.42
25:BD:118:VAL:N	25:BD:129:ASN:HD22	2.03	0.42
25:BD:223:GLY:HA3	25:BD:231:HIS:CE1	2.54	0.42
26:BE:134:ILE:H	26:BE:134:ILE:HG13	1.71	0.42
27:BF:140:LEU:HD13	27:BF:140:LEU:HA	1.61	0.42
28:BG:16:ARG:HB2	28:BG:17:PRO:HD3	2.01	0.42
28:BG:146:TYR:O	28:BG:149:VAL:HG12	2.19	0.42
29:BH:3:ARG:NH2	29:BH:5:GLY:H	2.17	0.42
29:BH:54:ARG:HA	29:BH:55:PRO:HD2	1.87	0.42
34:BQ:70:PRO:HA	34:BQ:94:VAL:O	2.19	0.42
46:B2:56:GLN:O	46:B2:60:LEU:HG	2.19	0.42
50:B6:30:THR:O	50:B6:30:THR:OG1	2.37	0.42
1:CA:235:C:H2'	1:CA:236:G:H8	1.84	0.42
1:CA:1050:G:N1	1:CA:1208:C:O2	2.40	0.42
1:CA:1234:C:C4	1:CA:1235:U:C4	3.07	0.42
1:CA:1283:G:N2	1:CA:1284:C:C2	2.87	0.42
1:CA:1288:A:C6	1:CA:1371:G:H1'	2.54	0.42
2:CB:14:GLY:HA3	2:CB:16:HIS:HE1	1.84	0.42
3:CC:12:LEU:HD22	3:CC:18:TRP:CE3	2.53	0.42
3:CC:113:ALA:HB1	3:CC:200:ALA:HB3	2.01	0.42
4:CD:31:CYS:C	4:CD:33:MET:H	2.27	0.42
5:CE:8:GLU:CB	5:CE:34:VAL:HG23	2.49	0.42
10:CJ:55:LYS:O	10:CJ:55:LYS:HG2	2.17	0.42
11:CK:41:THR:HG22	11:CK:42:TRP:N	2.34	0.42
13:CM:97:PRO:HG3	13:CM:110:ARG:HB3	2.00	0.42
22:CX:30:TYR:N	22:CX:30:TYR:CD2	2.86	0.42
23:DA:12:U:O2	23:DA:12:U:H2'	2.19	0.42
23:DA:1352:U:P	56:DA:3935:HOH:O	2.71	0.42
23:DA:1359:A:N6	23:DA:1372:U:C5	2.87	0.42
23:DA:1488:G:C2	23:DA:1489:U:O2	2.72	0.42
23:DA:2252:G:H2'	23:DA:2253:G:O4'	2.18	0.42
23:DA:2474:C:H5"	23:DA:2475:C:OP2	2.18	0.42
23:DA:2544:G:H2'	23:DA:2545:G:O4'	2.19	0.42
23:DA:2678:C:H2'	23:DA:2679:A:O4'	2.19	0.42
24:DB:28:C:H2'	24:DB:29:A:O4'	2.19	0.42
24:DB:78:A:C2	24:DB:100:A:C4	3.07	0.42
27:DF:41:LEU:O	27:DF:44:ARG:HG2	2.19	0.42
28:DG:5:VAL:HG12	48:D4:25:TYR:HE1	1.81	0.42
30:DI:92:VAL:CG1	30:DI:120:ILE:HB	2.49	0.42
31:DN:36:GLY:HA3	31:DN:49:GLY:HA2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DQ:63:LYS:HD2	34:DQ:65:PHE:CZ	2.53	0.42
34:DQ:137:TYR:HE2	43:DZ:49:ARG:NH1	2.17	0.42
42:DY:102:CYS:C	42:DY:104:GLY:H	2.27	0.42
48:D4:16:CYS:HB3	48:D4:20:ASN:HB3	2.00	0.42
1:AA:237:C:H5"	17:AQ:25:ARG:CZ	2.49	0.42
1:AA:1004:A:H5'	1:AA:1025:U:O4	2.19	0.42
1:AA:1221:G:H4'	19:AS:77:THR:HG21	2.00	0.42
1:AA:1456:G:O2'	20:AT:39:LYS:HD3	2.19	0.42
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.97	0.42
5:AE:8:GLU:CB	5:AE:34:VAL:HG23	2.49	0.42
6:AF:14:LEU:HD22	6:AF:18:GLN:CB	2.49	0.42
17:AQ:29:HIS:HB3	17:AQ:33:GLY:N	2.34	0.42
17:AQ:63:ARG:HA	17:AQ:64:PRO:HD3	1.86	0.42
20:AT:21:LYS:O	20:AT:25:ARG:HG3	2.18	0.42
23:BA:39:C:H2'	23:BA:40:C:H6	1.83	0.42
23:BA:302:C:O2'	23:BA:303:U:H5'	2.20	0.42
23:BA:673:C:H5"	27:BF:81:PRO:HD2	2.01	0.42
23:BA:686:G:N2	23:BA:788:A:H61	2.17	0.42
23:BA:1488:G:H5"	23:BA:1489:U:OP2	2.18	0.42
23:BA:1891:G:O5'	23:BA:1891:G:H8	2.03	0.42
23:BA:2079:U:O3'	45:B1:35:THR:OG1	2.35	0.42
23:BA:2302:G:O2'	28:BG:126:ASP:O	2.32	0.42
25:BD:154:LYS:HB2	25:BD:155:LEU:HD12	2.01	0.42
26:BE:170:LEU:HA	26:BE:170:LEU:HD12	1.77	0.42
27:BF:88:VAL:HG21	27:BF:91:GLY:HA3	2.01	0.42
27:BF:106:ARG:H	27:BF:106:ARG:HG2	1.37	0.42
30:BI:140:LEU:HD23	30:BI:140:LEU:HA	1.82	0.42
31:BN:62:VAL:CG1	31:BN:66:LYS:HB2	2.49	0.42
46:B2:61:LEU:HD23	46:B2:61:LEU:HA	1.76	0.42
47:B3:8:LEU:HD13	47:B3:31:LEU:HD23	2.00	0.42
1:CA:132:C:H2'	1:CA:133:U:O4'	2.19	0.42
1:CA:151:A:C2	1:CA:152:A:H1'	2.54	0.42
1:CA:373:A:H2'	1:CA:374:A:H8	1.84	0.42
1:CA:1055:A:N6	1:CA:1206:G:N7	2.68	0.42
1:CA:1055:A:C8	1:CA:1206:G:C2	3.07	0.42
1:CA:1093:A:C2	1:CA:1095:U:H5'	2.54	0.42
1:CA:1350:A:C6	1:CA:1351:U:C4	3.07	0.42
4:CD:111:ALA:HB1	4:CD:116:GLN:OE1	2.19	0.42
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.54	0.42
9:CI:27:THR:CG2	9:CI:30:GLY:H	2.33	0.42
16:CP:22:THR:HA	16:CP:33:ILE:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:74:LYS:HE2	20:CT:74:LYS:HB3	1.84	0.42
23:DA:190:A:O5'	23:DA:205:G:N2	2.51	0.42
23:DA:236:C:H2'	23:DA:237:C:C6	2.54	0.42
23:DA:330:A:H2	23:DA:1210:A:C2'	2.20	0.42
23:DA:479:A:H4'	23:DA:480:A:OP1	2.17	0.42
23:DA:588:U:O4	23:DA:670:A:H1'	2.20	0.42
23:DA:807:U:OP2	33:DP:41:ARG:NH2	2.52	0.42
23:DA:817:C:O2'	23:DA:839:U:H5"	2.20	0.42
23:DA:839:U:H2'	23:DA:840:C:C6	2.54	0.42
23:DA:866:A:C6	23:DA:914:C:C5	3.07	0.42
23:DA:1022:G:C5	23:DA:1140:C:C4	3.08	0.42
23:DA:1046:A:O2'	23:DA:1047:G:OP2	2.31	0.42
23:DA:1649:G:N1	23:DA:2009:G:C6	2.87	0.42
23:DA:1823:G:OP1	25:DD:54:ARG:NH1	2.53	0.42
23:DA:2169:A:H3'	23:DA:2170:A:C8	2.54	0.42
23:DA:2580:U:C5	23:DA:2581:G:C6	3.07	0.42
23:DA:2684:U:C4	23:DA:2685:G:N7	2.87	0.42
23:DA:2706:G:O2'	35:DR:64:ARG:HD3	2.19	0.42
26:DE:21:VAL:HA	26:DE:22:PRO:HD2	1.94	0.42
29:DH:149:ARG:HH12	29:DH:167:GLU:CD	2.26	0.42
31:DN:15:LEU:HD12	31:DN:137:LYS:HG2	1.99	0.42
43:DZ:27:VAL:HA	43:DZ:35:ARG:O	2.19	0.42
1:AA:5:U:H5"	1:AA:6:G:C8	2.54	0.42
1:AA:405:U:O4	4:AD:2:GLY:N	2.53	0.42
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.83	0.42
1:AA:1099:G:H3'	1:AA:1100:C:C6	2.53	0.42
1:AA:1238:A:H2'	1:AA:1239:A:H8	1.83	0.42
1:AA:1297:C:O2'	7:AG:114:ARG:NH2	2.52	0.42
1:AA:1309:G:C6	1:AA:1310:G:C5	3.07	0.42
2:AB:110:GLN:H	2:AB:110:GLN:HG3	1.51	0.42
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.20	0.42
7:AG:16:LEU:HD22	9:AI:44:VAL:O	2.19	0.42
7:AG:113:GLU:O	7:AG:119:ARG:HD3	2.19	0.42
12:AL:33:ARG:HD2	12:AL:33:ARG:HA	1.76	0.42
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HG13	2.01	0.42
19:AS:33:THR:HG21	19:AS:49:ILE:HG23	2.01	0.42
22:AX:67:GLY:HA3	22:AX:72:ALA:HB3	2.00	0.42
23:BA:1031:G:H1	23:BA:1123:C:H42	1.66	0.42
23:BA:2298:A:H2'	23:BA:2299:G:O4'	2.19	0.42
23:BA:2441:C:OP2	23:BA:2586:C:O2'	2.32	0.42
23:BA:2791:C:N4	23:BA:2893:G:O4'	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:9:G:OP1	36:BS:25:ARG:NH2	2.52	0.42
25:BD:136:ILE:HA	25:BD:137:PRO:HD3	1.92	0.42
26:BE:52:LEU:HA	26:BE:53:PRO:HD2	1.83	0.42
31:BN:36:GLY:O	31:BN:42:TRP:HD1	2.03	0.42
32:BO:3:GLN:HB2	32:BO:4:PRO:HD2	2.01	0.42
35:BR:103:ARG:HG2	35:BR:103:ARG:HH11	1.85	0.42
43:BZ:24:LEU:HD22	43:BZ:41:LEU:HD23	2.01	0.42
43:BZ:61:LEU:HA	43:BZ:61:LEU:HD13	1.72	0.42
48:B4:14:ILE:HG23	48:B4:31:ILE:HB	2.01	0.42
1:CA:1192:C:H3'	1:CA:1192:C:C6	2.54	0.42
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.55	0.42
1:CA:1250:A:N1	1:CA:1251:A:C2	2.87	0.42
1:CA:1263:C:N3	1:CA:1272:G:O6	2.51	0.42
1:CA:1321:C:H5"	1:CA:1322:C:H2'	2.01	0.42
1:CA:1378:C:OP2	7:CG:2:ALA:HB2	2.19	0.42
2:CB:132:LYS:O	2:CB:135:GLN:HG2	2.19	0.42
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.35	0.42
12:CL:114:LYS:O	12:CL:117:ARG:HG3	2.20	0.42
15:CO:57:LEU:O	15:CO:60:VAL:N	2.52	0.42
17:CQ:66:SER:HB3	17:CQ:69:LYS:HD3	2.00	0.42
23:DA:248:G:H5'	23:DA:250:G:N7	2.35	0.42
23:DA:311:A:C6	23:DA:328:U:C4	3.07	0.42
23:DA:362:U:O2'	23:DA:363:G:H5"	2.20	0.42
23:DA:623:G:H2'	23:DA:624:C:C6	2.54	0.42
23:DA:744:G:OP1	26:DE:132:HIS:ND1	2.50	0.42
23:DA:1292:U:H2'	23:DA:1293:C:C6	2.54	0.42
25:DD:180:GLY:HA3	25:DD:275:LYS:CG	2.49	0.42
25:DD:180:GLY:HA3	25:DD:275:LYS:HG2	2.00	0.42
28:DG:138:GLN:HE21	28:DG:144:ILE:HD13	1.83	0.42
32:DO:11:ALA:O	32:DO:99:PHE:N	2.40	0.42
34:DQ:66:ILE:HG12	34:DQ:104:PHE:HD2	1.84	0.42
37:DT:19:LEU:HA	37:DT:20:PRO:HD3	1.79	0.42
39:DV:52:VAL:HG21	39:DV:55:ALA:HB3	2.01	0.42
43:DZ:128:VAL:HG23	43:DZ:161:VAL:HG22	2.01	0.42
45:D1:32:LYS:HE2	45:D1:32:LYS:HB3	1.90	0.42
46:D2:9:GLN:HE22	46:D2:56:GLN:HG2	1.84	0.42
48:D4:1:MET:HB3	48:D4:6:HIS:CD2	2.53	0.42
1:AA:62:U:H5"	1:AA:385:C:O2	2.20	0.42
1:AA:309:G:O2'	1:AA:607:A:N1	2.52	0.42
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.35	0.42
1:AA:950:U:N3	1:AA:951:G:N7	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1053:G:C6	1:AA:1199:U:H2'	2.54	0.42
1:AA:1111:A:N1	3:AC:177:THR:HG23	2.34	0.42
1:AA:1172:C:C2	1:AA:1173:G:C8	3.07	0.42
1:AA:1255:G:H3'	1:AA:1279:A:N6	2.34	0.42
1:AA:1277:C:C2'	1:AA:1279:A:H8	2.32	0.42
1:AA:1363:C:H5'	1:AA:1363(A):A:O5'	2.19	0.42
2:AB:165:VAL:O	2:AB:187:LEU:HB3	2.20	0.42
3:AC:164:ARG:HE	3:AC:164:ARG:HB2	1.38	0.42
12:AL:114:LYS:O	12:AL:117:ARG:HG3	2.19	0.42
23:BA:340:A:H2'	23:BA:341:G:O4'	2.19	0.42
23:BA:362:U:O2'	23:BA:363:G:H5"	2.19	0.42
23:BA:528:A:C2'	23:BA:529:A:H5'	2.49	0.42
23:BA:674:G:H1'	27:BF:74:ARG:CD	2.48	0.42
23:BA:1352:U:O2	23:BA:1570:A:H2	2.02	0.42
23:BA:1434:A:O2'	23:BA:1435:G:H5'	2.19	0.42
23:BA:2065:C:H2'	23:BA:2066:C:C6	2.54	0.42
23:BA:2584:U:H2'	23:BA:2585:U:H2'	2.00	0.42
31:BN:12:ARG:HD3	31:BN:50:ASP:OD2	2.19	0.42
35:BR:94:TYR:C	35:BR:117:VAL:HG23	2.44	0.42
37:BT:13:ARG:H	37:BT:13:ARG:HG2	1.27	0.42
1:CA:512:U:H2'	1:CA:513:C:C6	2.53	0.42
1:CA:624:C:H2'	1:CA:625:G:H8	1.85	0.42
1:CA:748:C:O5'	1:CA:748:C:H6	2.03	0.42
1:CA:827:U:H5"	1:CA:828:A:OP2	2.19	0.42
1:CA:1150:U:O2'	10:CJ:39:PRO:HB2	2.19	0.42
1:CA:1157:A:OP1	1:CA:1158:C:C5	2.72	0.42
1:CA:1251:A:N6	1:CA:1285:A:C6	2.85	0.42
1:CA:1345:U:C5	1:CA:1377:A:C2	3.08	0.42
1:CA:1366:C:OP1	9:CI:117:HIS:ND1	2.52	0.42
2:CB:32:ILE:HD11	2:CB:40:HIS:HB3	2.00	0.42
2:CB:52:GLU:HG2	2:CB:56:ARG:NH1	2.35	0.42
3:CC:11:ARG:HB2	3:CC:11:ARG:NH1	2.31	0.42
4:CD:18:LYS:HD2	4:CD:33:MET:HB2	2.02	0.42
4:CD:162:LEU:HD13	4:CD:181:MET:HE1	2.01	0.42
5:CE:89:ILE:HD13	5:CE:90:VAL:N	2.34	0.42
20:CT:16:HIS:O	20:CT:19:SER:OG	2.27	0.42
22:CX:31:PHE:CG	22:CX:85:LEU:HB3	2.54	0.42
23:DA:279:C:H42	23:DA:361:G:H1	1.66	0.42
23:DA:576:U:H2'	23:DA:577:G:C8	2.54	0.42
23:DA:1378:A:O2'	23:DA:1380:G:N7	2.42	0.42
23:DA:2202:C:H2'	23:DA:2203:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2235:G:H2'	23:DA:2236:C:C6	2.54	0.42
24:DB:7:G:H5"	24:DB:7:G:C8	2.54	0.42
26:DE:35:GLN:HG3	26:DE:36:ARG:N	2.35	0.42
26:DE:93:VAL:HG13	56:DE:402:HOH:O	2.19	0.42
28:DG:143:GLU:H	28:DG:143:GLU:HG2	1.51	0.42
31:DN:34:LEU:HD12	31:DN:34:LEU:HA	1.76	0.42
38:DU:83:LEU:HD12	38:DU:113:ALA:HB2	2.01	0.42
40:DW:65:LEU:HD23	40:DW:65:LEU:HA	1.86	0.42
47:D3:8:LEU:HD13	47:D3:31:LEU:HD23	2.02	0.42
1:AA:684:A:N6	56:AA:2047:HOH:O	2.46	0.42
1:AA:1137:C:C5'	1:AA:1138:G:C6	3.02	0.42
1:AA:1237:C:C4	1:AA:1336:C:C2	3.08	0.42
1:AA:1373:G:H5"	7:AG:36:LYS:CD	2.50	0.42
1:AA:1443:G:O6	1:AA:1459:C:C2	2.72	0.42
1:AA:1501:C:N4	1:AA:1504:G:C2	2.87	0.42
2:AB:19:HIS:HE1	2:AB:205:ASP:OD1	2.02	0.42
4:AD:97:LEU:HA	4:AD:97:LEU:HD23	1.78	0.42
4:AD:108:LEU:CB	4:AD:110:PHE:HE1	2.33	0.42
10:AJ:17:ASP:O	10:AJ:21:GLN:HB2	2.20	0.42
13:AM:106:ASN:HB3	13:AM:107:ALA:H	1.68	0.42
23:BA:322:A:H4'	23:BA:323:G:OP2	2.20	0.42
23:BA:479:A:H4'	23:BA:480:A:OP1	2.20	0.42
23:BA:571:A:H5'	23:BA:2030:A:N7	2.35	0.42
23:BA:705:A:C2	23:BA:727:A:H1'	2.55	0.42
23:BA:824:A:H1'	23:BA:2358:G:N7	2.34	0.42
23:BA:1107:G:N7	23:BA:1108:U:C5	2.88	0.42
23:BA:1441:G:H2'	23:BA:1442:G:C8	2.55	0.42
23:BA:2065:C:H2'	23:BA:2066:C:H6	1.85	0.42
23:BA:2070:G:C2	23:BA:2442:C:C2	3.08	0.42
23:BA:2632:A:O2'	23:BA:2811:G:O2'	2.21	0.42
27:BF:64:ILE:HD11	27:BF:75:HIS:HB2	2.02	0.42
28:BG:47:LYS:HA	28:BG:88:ILE:HG22	2.01	0.42
30:BI:5:LEU:HD11	30:BI:19:VAL:HG22	2.01	0.42
30:BI:39:ALA:HB1	30:BI:44:LEU:HD11	2.01	0.42
34:BQ:110:THR:HG23	34:BQ:113:GLN:HB2	2.00	0.42
42:BY:51:VAL:O	42:BY:51:VAL:HG12	2.20	0.42
44:B0:53:MET:HE3	44:B0:57:PHE:HA	2.00	0.42
45:B1:82:LEU:CA	45:B1:85:LEU:HD23	2.36	0.42
47:B3:4:LEU:HD23	47:B3:4:LEU:HA	1.88	0.42
1:CA:384:G:H2'	1:CA:385:C:C6	2.54	0.42
1:CA:617:G:C2	1:CA:618:C:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:773:G:H4'	25:DD:202:LYS:HE2	2.01	0.42
1:CA:1003:G:H2'	1:CA:1004:A:H4'	2.01	0.42
1:CA:1057:G:H2'	1:CA:1058:G:H8	1.85	0.42
1:CA:1105:A:N1	1:CA:1106:G:C5	2.87	0.42
1:CA:1203:C:P	14:CN:3:ARG:HH12	2.42	0.42
1:CA:1306:A:H62	1:CA:1331:G:N2	2.17	0.42
2:CB:114:ARG:HD2	2:CB:114:ARG:O	2.19	0.42
3:CC:12:LEU:O	14:CN:57:ARG:NH1	2.52	0.42
4:CD:112:VAL:HG22	4:CD:116:GLN:OE1	2.19	0.42
4:CD:158:ILE:O	4:CD:162:LEU:HD12	2.19	0.42
9:CI:46:ALA:CB	9:CI:77:ILE:HB	2.48	0.42
10:CJ:50:ILE:HD12	10:CJ:50:ILE:N	2.31	0.42
13:CM:15:VAL:O	13:CM:18:ALA:HB3	2.19	0.42
17:CQ:29:HIS:HB3	17:CQ:33:GLY:N	2.34	0.42
23:DA:323:G:OP1	23:DA:338:G:N2	2.48	0.42
23:DA:566:U:OP1	33:DP:29:LYS:HD2	2.19	0.42
23:DA:656:G:H2'	23:DA:657:U:O4'	2.19	0.42
23:DA:719:C:H2'	23:DA:720:C:C6	2.54	0.42
23:DA:916:G:H5'	23:DA:917:A:OP1	2.20	0.42
23:DA:1288:U:O2'	23:DA:1647:G:N2	2.52	0.42
23:DA:1489:U:H3'	23:DA:1489:U:C6	2.53	0.42
23:DA:1638:C:H4'	23:DA:2710:C:O2	2.19	0.42
23:DA:1799:G:H5'	23:DA:1819:A:N6	2.33	0.42
23:DA:1913:A:H3'	23:DA:1913:A:P	2.59	0.42
23:DA:2018:G:H2'	23:DA:2019:A:O4'	2.19	0.42
23:DA:2114:A:H3'	23:DA:2115:G:C8	2.55	0.42
23:DA:2273:A:H2'	23:DA:2274:A:H8	1.83	0.42
23:DA:2290:G:O2'	23:DA:2381:C:H1'	2.20	0.42
23:DA:2309:A:C6	23:DA:2310:A:C2	3.08	0.42
23:DA:2664:G:H3'	56:DA:3746:HOH:O	2.18	0.42
23:DA:2755:C:C4	53:D9:19:ARG:NH1	2.87	0.42
25:DD:39:LYS:NZ	25:DD:57:GLY:O	2.53	0.42
28:DG:43:LEU:HD22	28:DG:90:LEU:HG	2.01	0.42
31:DN:23:LEU:HB2	31:DN:60:ILE:HG12	2.00	0.42
36:DS:56:LEU:O	36:DS:58:LEU:HD22	2.20	0.42
37:DT:27:THR:HB	37:DT:89:VAL:HG23	2.02	0.42
38:DU:82:GLY:HA3	38:DU:113:ALA:HB1	2.00	0.42
41:DX:11:PRO:HD3	46:D2:37:PHE:CE2	2.55	0.42
1:AA:167:G:H2'	1:AA:168:G:C8	2.54	0.42
1:AA:353:A:H5'	1:AA:353:A:C8	2.51	0.42
1:AA:571:U:O5'	1:AA:571:U:H6	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:741:G:H2'	1:AA:742:G:H8	1.85	0.42
1:AA:819:A:H4'	1:AA:820:U:OP2	2.20	0.42
1:AA:951:G:N1	1:AA:1231:G:N7	2.67	0.42
1:AA:1067:A:H1'	1:AA:1068:G:O4'	2.19	0.42
1:AA:1248:A:H2	1:AA:1289:A:H62	1.67	0.42
2:AB:70:PHE:CD2	2:AB:163:PHE:HB3	2.54	0.42
3:AC:11:ARG:HD3	3:AC:15:THR:HG21	2.01	0.42
3:AC:43:LEU:HD23	3:AC:43:LEU:HA	1.67	0.42
3:AC:153:VAL:HG13	3:AC:197:GLY:O	2.20	0.42
6:AF:25:ILE:HD12	6:AF:82:ARG:HE	1.84	0.42
13:AM:88:ARG:O	13:AM:88:ARG:HG2	2.19	0.42
14:AN:53:LEU:HA	14:AN:54:PRO:HD3	1.69	0.42
16:AP:9:PHE:CD2	16:AP:18:ARG:HG3	2.54	0.42
21:AU:12:LYS:CE	21:AU:19:GLY:HA3	2.48	0.42
23:BA:248:G:H5'	23:BA:250:G:N7	2.34	0.42
23:BA:586:A:C2	23:BA:1254:A:C2	3.08	0.42
23:BA:764:A:OP1	25:BD:208:LYS:HE2	2.19	0.42
23:BA:853:G:H1	23:BA:924:C:H42	1.67	0.42
23:BA:928:G:H8	23:BA:928:G:O5'	2.03	0.42
23:BA:1166:C:O2	23:BA:1184:G:C2	2.73	0.42
23:BA:1259:G:O2'	23:BA:1260:G:H5'	2.20	0.42
23:BA:1489:U:H3'	23:BA:1489:U:H6	1.83	0.42
23:BA:1507:A:O2'	23:BA:1508:A:O5'	2.29	0.42
23:BA:1747(A):G:N7	56:BA:5107:HOH:O	2.36	0.42
23:BA:1749:A:N6	56:BA:5361:HOH:O	2.53	0.42
23:BA:2273:A:O2'	23:BA:2274:A:H5'	2.18	0.42
23:BA:2464:C:O2'	23:BA:2465:C:H5"	2.19	0.42
23:BA:2821:A:H2'	23:BA:2822:G:O4'	2.19	0.42
24:BB:79:C:O5'	24:BB:79:C:H6	2.02	0.42
25:BD:130:ALA:HA	25:BD:192:THR:HA	2.01	0.42
25:BD:146:GLU:HB2	25:BD:189:CYS:HB3	2.02	0.42
28:BG:110:ALA:HA	28:BG:140:ILE:O	2.19	0.42
29:BH:94:TYR:N	29:BH:94:TYR:CD1	2.87	0.42
32:BO:115:VAL:HG13	32:BO:121:VAL:HG21	2.02	0.42
34:BQ:39:PRO:HA	34:BQ:97:VAL:O	2.19	0.42
40:BW:64:MET:HE2	40:BW:69:LEU:HD21	2.01	0.42
1:CA:170:U:O2'	1:CA:171:A:H5'	2.20	0.42
1:CA:1160:G:O6	1:CA:1181:G:C6	2.73	0.42
1:CA:1166:G:N2	1:CA:1169:A:H3'	2.35	0.42
1:CA:1459:C:H2'	1:CA:1460:A:C8	2.55	0.42
3:CC:179:ARG:HG3	3:CC:206:GLU:OE1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:14:VAL:C	9:CI:76:ALA:HB1	2.45	0.42
23:DA:229:A:C8	23:DA:229:A:OP1	2.73	0.42
23:DA:271(S):G:C6	23:DA:271(T):C:C4	3.07	0.42
23:DA:663:G:C6	23:DA:664:C:C4	3.08	0.42
23:DA:674:G:H1'	27:DF:74:ARG:CD	2.49	0.42
23:DA:922:U:H2'	23:DA:923:C:C6	2.55	0.42
23:DA:1287:A:H5"	23:DA:1288:U:OP2	2.19	0.42
23:DA:1849:G:H2'	23:DA:1850:G:C8	2.55	0.42
23:DA:1927:A:H2'	23:DA:1928:A:C8	2.54	0.42
23:DA:2309:A:C6	23:DA:2310:A:N1	2.88	0.42
23:DA:2420:C:O5'	23:DA:2420:C:H6	2.02	0.42
23:DA:2836:U:H2'	23:DA:2837:G:C8	2.55	0.42
24:DB:91:C:C2'	24:DB:92:C:H5'	2.49	0.42
26:DE:29:GLY:HA3	56:DE:402:HOH:O	2.20	0.42
33:DP:59:LEU:HD23	33:DP:59:LEU:HA	1.70	0.42
33:DP:82:GLY:HA2	33:DP:113:LYS:O	2.20	0.42
37:DT:118:ARG:HA	37:DT:118:ARG:NE	2.34	0.42
53:D9:32:HIS:O	53:D9:34:GLN:HG3	2.19	0.42
1:AA:116:A:OP2	1:AA:116:A:C8	2.73	0.42
1:AA:184:G:H5'	1:AA:224:C:O2'	2.20	0.42
1:AA:502:G:OP1	12:AL:117:ARG:N	2.52	0.42
1:AA:709:G:H2'	1:AA:710:G:C8	2.55	0.42
1:AA:757:U:OP1	1:AA:822:C:O2'	2.34	0.42
1:AA:778:G:H2'	1:AA:779:C:O4'	2.20	0.42
1:AA:958:A:H8	1:AA:958:A:OP1	2.02	0.42
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.37	0.42
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.35	0.42
1:AA:1134:G:H2'	1:AA:1135:U:H5'	2.01	0.42
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.20	0.42
1:AA:1299:A:H2'	1:AA:1301:U:H1'	2.01	0.42
1:AA:1305:G:H2'	21:AU:5:ASP:HA	2.02	0.42
2:AB:14:GLY:HA3	2:AB:16:HIS:HE1	1.85	0.42
2:AB:70:PHE:HB2	2:AB:92:TYR:CB	2.49	0.42
2:AB:77:ALA:HB1	2:AB:211:ILE:HG21	2.00	0.42
10:AJ:66:ARG:HB3	10:AJ:68:HIS:NE2	2.34	0.42
12:AL:42:THR:HB	12:AL:52:LEU:HD12	2.01	0.42
13:AM:91:ARG:HB2	13:AM:98:VAL:HG13	2.01	0.42
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.55	0.42
16:AP:78:GLY:C	16:AP:80:PHE:H	2.27	0.42
23:BA:219:G:O6	56:BA:3973:HOH:O	2.22	0.42
23:BA:804:A:H5"	23:BA:805:G:OP1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1153:C:H2'	23:BA:1154:G:O4'	2.19	0.42
23:BA:1356:G:C5	23:BA:1357:U:C5	3.07	0.42
23:BA:1717:G:C2	23:BA:1718:G:C8	3.08	0.42
23:BA:2161:C:C5	23:BA:2162:G:N7	2.88	0.42
23:BA:2304:G:O6	23:BA:2312:U:O4	2.37	0.42
24:BB:75:G:H5"	24:BB:76:G:OP2	2.20	0.42
24:BB:78:A:C2	24:BB:100:A:C4	3.08	0.42
28:BG:138:GLN:HE22	28:BG:153:ARG:NH2	2.18	0.42
29:BH:137:ASP:HB3	29:BH:140:LYS:CB	2.49	0.42
33:BP:84:ASN:CG	33:BP:117:GLU:HB2	2.44	0.42
33:BP:101:VAL:HG12	33:BP:102:ARG:N	2.34	0.42
36:BS:61:ASN:O	36:BS:62:LYS:C	2.63	0.42
37:BT:64:ARG:HB2	37:BT:73:GLU:HG2	2.00	0.42
43:BZ:27:VAL:HA	43:BZ:35:ARG:O	2.19	0.42
1:CA:235:C:H2'	1:CA:236:G:C8	2.55	0.42
1:CA:331:G:O4'	56:CA:1860:HOH:O	2.21	0.42
1:CA:439:A:C4	1:CA:496:A:C2	3.08	0.42
1:CA:472:A:H4'	16:CP:80:PHE:O	2.20	0.42
1:CA:949:A:O2'	1:CA:971:G:O6	2.35	0.42
1:CA:1001(A):G:N2	1:CA:1040:U:C2	2.88	0.42
1:CA:1128:C:H1'	1:CA:1146:A:N1	2.35	0.42
1:CA:1151:A:C4	1:CA:1152:A:C8	3.08	0.42
1:CA:1286:A:H2	21:CU:22:ARG:NH2	2.09	0.42
1:CA:1309:G:C6	1:CA:1329:A:N6	2.87	0.42
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.19	0.42
6:CF:68:PRO:HG2	6:CF:71:ARG:HD2	2.01	0.42
7:CG:43:PHE:O	7:CG:43:PHE:CD1	2.73	0.42
16:CP:23:ASP:OD1	16:CP:25:ARG:HG3	2.20	0.42
17:CQ:86:GLU:O	17:CQ:90:ILE:HG13	2.18	0.42
23:DA:335:C:H2'	23:DA:336:C:C6	2.55	0.42
23:DA:696:G:O2'	23:DA:697:C:H5'	2.20	0.42
23:DA:860:U:C2	23:DA:2268:A:C8	3.08	0.42
23:DA:1300:U:H4'	23:DA:1301:A:H5'	2.02	0.42
23:DA:1577:C:OP2	56:DA:4265:HOH:O	2.21	0.42
23:DA:1844:C:OP1	25:DD:257:LEU:HD23	2.19	0.42
23:DA:1932:A:H2'	23:DA:1933:G:O4'	2.19	0.42
23:DA:2005:A:H5"	23:DA:2006:C:OP2	2.20	0.42
23:DA:2561:A:H2'	23:DA:2562:U:O4'	2.19	0.42
23:DA:2862:G:H2'	23:DA:2863:C:H6	1.85	0.42
24:DB:40:U:H1'	24:DB:45:A:H61	1.83	0.42
24:DB:96:U:H2'	24:DB:97:G:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:64:ILE:HG13	27:DF:65:TRP:H	1.85	0.42
30:DI:9:LEU:HB3	30:DI:12:LEU:HB2	2.01	0.42
32:DO:17:ARG:HD2	32:DO:47:ILE:HG23	2.02	0.42
33:DP:55:ARG:HA	56:DP:309:HOH:O	2.20	0.42
34:DQ:70:PRO:HA	34:DQ:94:VAL:O	2.19	0.42
34:DQ:78:PRO:O	34:DQ:81:VAL:HG13	2.20	0.42
38:DU:43:GLY:HA3	39:DV:73:SER:OG	2.18	0.42
43:DZ:152:ALA:HA	43:DZ:155:LEU:HB2	2.00	0.42
1:AA:346:G:N2	1:AA:347:G:C8	2.88	0.42
1:AA:602:A:C6	1:AA:603:U:N3	2.88	0.42
1:AA:922:G:C6	1:AA:923:A:C6	3.07	0.42
1:AA:1004:A:N6	1:AA:1034:G:H2'	2.31	0.42
1:AA:1009:G:N3	1:AA:1010:G:H1'	2.34	0.42
2:AB:69:LEU:HD13	2:AB:92:TYR:HA	2.02	0.42
2:AB:110:GLN:O	2:AB:114:ARG:HB2	2.20	0.42
3:AC:23:TYR:CD1	10:AJ:10:GLY:HA2	2.55	0.42
4:AD:31:CYS:C	4:AD:33:MET:H	2.27	0.42
9:AI:105:ASP:C	9:AI:107:ARG:H	2.28	0.42
23:BA:27:G:HO2'	23:BA:28:A:P	2.42	0.42
23:BA:330:A:H2	23:BA:1210:A:C2'	2.24	0.42
23:BA:839:U:H2'	23:BA:840:C:C6	2.54	0.42
23:BA:1011:G:C2	23:BA:1151:G:C2	3.07	0.42
23:BA:1376:C:N4	23:BA:1377:G:C6	2.88	0.42
23:BA:1467:C:C5	23:BA:1546:C:H2'	2.54	0.42
23:BA:1488:G:C6	23:BA:1489:U:N3	2.87	0.42
23:BA:2117:A:H61	23:BA:2166:G:N2	2.12	0.42
23:BA:2279:G:O6	44:B0:14:ARG:HD2	2.20	0.42
23:BA:2741:A:H61	23:BA:2763:G:H1'	1.85	0.42
24:BB:21:G:H2'	24:BB:22:U:O4'	2.20	0.42
29:BH:5:GLY:HA2	29:BH:69:ARG:HB3	2.01	0.42
29:BH:38:SER:HB2	29:BH:64:LEU:HD22	2.02	0.42
29:BH:80:SER:OG	29:BH:81:GLU:N	2.53	0.42
30:BI:9:LEU:HD21	30:BI:35:LEU:CD2	2.50	0.42
30:BI:77:LEU:HD22	30:BI:77:LEU:HA	1.78	0.42
31:BN:18:ALA:O	31:BN:19:GLU:HB3	2.18	0.42
52:B8:8:LYS:HB3	52:B8:12:LYS:HE3	2.02	0.42
1:CA:622:A:C8	1:CA:623:C:C5	3.07	0.42
1:CA:646:U:H2'	1:CA:647:C:C6	2.55	0.42
1:CA:1201:A:H4'	1:CA:1202:G:O5'	2.19	0.42
1:CA:1306:A:H1'	1:CA:1332:A:N3	2.35	0.42
1:CA:1309:G:OP1	13:CM:92:HIS:CE1	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1309:G:O3'	13:CM:77:ASN:HB3	2.20	0.42
1:CA:1379:G:N7	7:CG:2:ALA:N	2.68	0.42
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.85	0.42
2:CB:172:ILE:H	2:CB:172:ILE:HG13	1.43	0.42
3:CC:30:ARG:HG3	3:CC:31:HIS:HD2	1.85	0.42
3:CC:31:HIS:CD2	3:CC:31:HIS:H	2.36	0.42
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	2.01	0.42
7:CG:31:MET:O	7:CG:32:ARG:NH1	2.53	0.42
10:CJ:35:SER:HB3	10:CJ:73:ASP:HB3	2.01	0.42
11:CK:120:ARG:HA	11:CK:121:PRO:HD3	1.85	0.42
23:DA:71:A:H5"	23:DA:73:A:C8	2.54	0.42
23:DA:117:G:C6	23:DA:119:A:C6	3.08	0.42
23:DA:907:U:O2'	34:DQ:101:ARG:NH2	2.43	0.42
23:DA:1022:G:C6	23:DA:1140:C:C4	3.08	0.42
23:DA:1163:G:O2'	23:DA:1164:G:H5'	2.20	0.42
23:DA:1525:G:H2'	23:DA:1526:G:O4'	2.19	0.42
23:DA:1833:U:O2'	23:DA:1969:A:N1	2.34	0.42
23:DA:2019:A:H4'	38:DU:34:LYS:HD2	2.01	0.42
23:DA:2114:A:C6	23:DA:2115:G:C2	3.07	0.42
23:DA:2833:G:C3'	23:DA:2834:G:H5'	2.48	0.42
33:DP:38:GLN:O	33:DP:39:LYS:HB3	2.19	0.42
1:AA:791:G:C6	1:AA:792:A:N7	2.88	0.42
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.55	0.42
1:AA:1440:C:H2'	1:AA:1441:G:O4'	2.20	0.42
2:AB:21:ARG:H	2:AB:21:ARG:HE	1.66	0.42
10:AJ:8:LEU:O	10:AJ:70:ARG:N	2.43	0.42
10:AJ:8:LEU:O	10:AJ:69:ASN:HA	2.20	0.42
18:AR:71:LYS:HA	18:AR:74:ARG:HD2	2.02	0.42
21:AU:13:ILE:N	21:AU:22:ARG:HD2	2.35	0.42
23:BA:627:A:H62	33:BP:84:ASN:HD21	1.68	0.42
23:BA:863:A:H2'	23:BA:864:G:H8	1.83	0.42
23:BA:900:A:H2'	23:BA:901:A:H8	1.85	0.42
23:BA:1138:G:O2'	31:BN:105:GLY:HA3	2.19	0.42
23:BA:1324:G:C5	23:BA:1328:G:O6	2.73	0.42
23:BA:1769:G:O2'	23:BA:1958:C:OP1	2.28	0.42
23:BA:1952:A:C2	32:BO:22:ILE:HD12	2.55	0.42
23:BA:2178:C:H2'	23:BA:2179:C:O4'	2.19	0.42
23:BA:2565:A:H5"	23:BA:2566:A:OP2	2.19	0.42
23:BA:2782:G:C8	56:BA:4087:HOH:O	2.70	0.42
23:BA:2791:C:H3'	23:BA:2791:C:OP2	2.19	0.42
23:BA:2838:G:C6	23:BA:2839:G:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:181:LEU:HD13	26:BE:181:LEU:HA	1.74	0.42
35:BR:50:HIS:O	35:BR:54:LEU:HD22	2.20	0.42
46:B2:50:ILE:O	46:B2:52:ASP:N	2.45	0.42
1:CA:45:U:H2'	1:CA:46:G:C8	2.55	0.42
1:CA:560:U:H4'	1:CA:561:U:O5'	2.18	0.42
1:CA:1070:U:O2	1:CA:1106:G:C2	2.72	0.42
1:CA:1191:A:H8	1:CA:1191:A:O5'	2.03	0.42
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	2.02	0.42
1:CA:1357:A:C5	1:CA:1358:U:C4	3.08	0.42
1:CA:1375:A:H4'	7:CG:29:LYS:HZ3	1.85	0.42
1:CA:1378:C:O5'	1:CA:1378:C:H6	2.02	0.42
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.20	0.42
4:CD:108:LEU:HB3	4:CD:110:PHE:HE1	1.84	0.42
5:CE:10:MET:HG2	5:CE:13:ILE:HD11	2.02	0.42
14:CN:25:VAL:N	14:CN:39:LEU:HD23	2.34	0.42
15:CO:50:HIS:O	15:CO:53:HIS:HB3	2.19	0.42
19:CS:53:ASN:ND2	19:CS:77:THR:O	2.49	0.42
20:CT:38:LYS:O	20:CT:41:ILE:HG13	2.19	0.42
23:DA:7:G:H4'	31:DN:13:TRP:CH2	2.55	0.42
23:DA:271(I):G:H2'	23:DA:271(J):C:C6	2.55	0.42
23:DA:652(E):G:C2	23:DA:652(U):G:C2	3.08	0.42
23:DA:1179:C:H2'	23:DA:1180:C:C6	2.55	0.42
23:DA:2022:U:O2'	23:DA:2617:C:H5'	2.20	0.42
23:DA:2525:G:C2	23:DA:2539:C:C2	3.08	0.42
27:DF:112:MET:HE2	27:DF:112:MET:HB2	1.59	0.42
28:DG:105:LYS:HZ1	48:D4:26:SER:HB2	1.84	0.42
28:DG:150:ASP:CG	28:DG:151:ALA:N	2.77	0.42
36:DS:34:HIS:ND1	36:DS:53:SER:OG	2.52	0.42
38:DU:106:PHE:O	38:DU:110:VAL:HG23	2.20	0.42
1:AA:448:A:H2'	1:AA:449:C:C6	2.55	0.42
1:AA:1002:G:C2	1:AA:1039:C:C2	3.08	0.42
1:AA:1347:G:H5"	9:AI:107:ARG:CB	2.49	0.42
7:AG:51:GLN:HG2	7:AG:58:PRO:HD3	2.02	0.42
7:AG:99:LEU:HG	7:AG:99:LEU:H	1.69	0.42
23:BA:19:C:H2'	23:BA:20:C:H6	1.84	0.42
23:BA:635:C:O2'	23:BA:639:U:OP1	2.33	0.42
23:BA:1889:A:N1	23:BA:2234:G:H1'	2.35	0.42
23:BA:2121:G:O6	23:BA:2176:A:N6	2.53	0.42
24:BB:91:C:O2'	24:BB:92:C:H5'	2.19	0.42
30:BI:121:LYS:HD3	30:BI:121:LYS:HA	1.91	0.42
50:B6:9:LEU:CD2	50:B6:25:LYS:HB3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:683:G:C6	1:CA:684:A:C5	3.08	0.42
1:CA:909:A:H2'	1:CA:910:C:O4'	2.20	0.42
1:CA:1074:G:C4	1:CA:1102:A:C2	3.08	0.42
1:CA:1084:G:C5	1:CA:1085:U:C4	3.07	0.42
1:CA:1123:A:H2'	1:CA:1124:G:O4'	2.19	0.42
1:CA:1262:C:N4	1:CA:1273:G:N1	2.39	0.42
1:CA:1305:G:O2'	1:CA:1306:A:OP2	2.38	0.42
1:CA:1338:G:H2'	1:CA:1339:A:O4'	2.19	0.42
2:CB:216:SER:O	2:CB:219:VAL:N	2.53	0.42
8:CH:25:ASP:HB2	8:CH:58:TYR:CD2	2.55	0.42
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.20	0.42
23:DA:21:A:O2'	23:DA:22:C:H5'	2.20	0.42
23:DA:1319:G:C6	23:DA:1320:C:N4	2.87	0.42
23:DA:1518:U:H2'	23:DA:1519:G:O4'	2.20	0.42
23:DA:2304:G:O6	23:DA:2312:U:O4	2.38	0.42
23:DA:2516:G:C6	23:DA:2517:C:C4	3.08	0.42
24:DB:32:C:C2	24:DB:51:G:N2	2.88	0.42
28:DG:125:PHE:HB3	28:DG:166:ASP:CG	2.45	0.42
32:DO:70:LYS:HB3	32:DO:70:LYS:HE2	1.76	0.42
37:DT:110:ILE:HG12	37:DT:110:ILE:H	1.58	0.42
43:DZ:6:LYS:HB3	43:DZ:6:LYS:HE2	1.88	0.42
48:D4:13:ARG:N	48:D4:29:PRO:O	2.37	0.42
50:D6:19:ARG:H	50:D6:19:ARG:HD2	1.85	0.42
1:AA:184:G:O4'	1:AA:224:C:H4'	2.19	0.41
1:AA:392:G:H5'	16:AP:13:HIS:CE1	2.55	0.41
1:AA:984:C:N3	1:AA:1222:G:C2	2.88	0.41
1:AA:1096:C:O2'	1:AA:1170:A:O2'	2.33	0.41
1:AA:1219:U:N3	1:AA:1220:G:N7	2.68	0.41
1:AA:1237:C:N4	1:AA:1336:C:C2	2.88	0.41
1:AA:1316:G:C2	1:AA:1318:A:H5"	2.55	0.41
1:AA:1348:U:N3	1:AA:1374:A:C8	2.84	0.41
4:AD:148:VAL:HG11	4:AD:158:ILE:HG13	2.02	0.41
7:AG:113:GLU:HG2	7:AG:119:ARG:CB	2.50	0.41
12:AL:123:LYS:H	12:AL:123:LYS:HG2	1.59	0.41
17:AQ:66:SER:HB3	17:AQ:69:LYS:HD3	2.01	0.41
23:BA:12:U:O2	23:BA:12:U:C2'	2.68	0.41
23:BA:593:G:N2	23:BA:665:C:C2	2.87	0.41
23:BA:907:U:O2'	34:BQ:101:ARG:NH2	2.45	0.41
23:BA:1405:U:H2'	23:BA:1406:U:H6	1.80	0.41
23:BA:1797:C:C2'	23:BA:1798:U:H5'	2.50	0.41
23:BA:1814:G:O3'	25:BD:54:ARG:NH2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2574:G:O2'	26:BE:143:ASN:HB3	2.20	0.41
25:BD:13:ARG:HD2	25:BD:16:MET:HE3	2.00	0.41
25:BD:221:VAL:HG22	25:BD:226:MET:HE3	2.02	0.41
26:BE:4:ILE:HG12	26:BE:5:LEU:O	2.20	0.41
26:BE:14:ILE:HG13	26:BE:21:VAL:HG13	2.02	0.41
27:BF:7:TYR:N	27:BF:22:ALA:HB3	2.30	0.41
28:BG:19:LEU:HD22	28:BG:23:PHE:CE1	2.53	0.41
29:BH:87:LEU:HD23	29:BH:87:LEU:HA	1.84	0.41
34:BQ:34:LEU:HD12	34:BQ:34:LEU:HA	1.86	0.41
38:BU:61:TRP:O	38:BU:62:ILE:C	2.62	0.41
45:B1:32:LYS:HE2	45:B1:32:LYS:HB3	1.93	0.41
46:B2:35:LEU:HD23	46:B2:35:LEU:HA	1.71	0.41
50:B6:40:CYS:HA	50:B6:41:PRO:HD3	1.68	0.41
1:CA:611:A:N6	1:CA:629:G:H1	2.16	0.41
1:CA:706:A:C5	1:CA:707:C:C5	3.08	0.41
1:CA:1048:G:O4'	1:CA:1215:G:H5"	2.20	0.41
1:CA:1071:C:H5"	5:CE:49:PRO:CG	2.50	0.41
1:CA:1124:G:H1'	10:CJ:38:ILE:CG2	2.50	0.41
1:CA:1325:C:H4'	21:CU:17:THR:HG21	2.02	0.41
3:CC:136:GLN:CG	3:CC:140:ARG:HD2	2.50	0.41
7:CG:63:LYS:HA	7:CG:67:GLU:OE2	2.20	0.41
9:CI:9:ARG:N	9:CI:76:ALA:HA	2.35	0.41
15:CO:43:LEU:HD23	15:CO:43:LEU:HA	1.86	0.41
16:CP:6:LEU:HG	16:CP:17:TYR:HB3	2.01	0.41
23:DA:565:C:H2'	23:DA:566:U:O4'	2.20	0.41
23:DA:675:A:C8	23:DA:804:A:C6	3.08	0.41
23:DA:816:C:P	56:DA:4440:HOH:O	2.77	0.41
23:DA:2293:C:H2'	23:DA:2294:C:H6	1.83	0.41
23:DA:2464:C:O2'	23:DA:2465:C:P	2.78	0.41
23:DA:2748:A:N6	23:DA:2749:A:C6	2.88	0.41
29:DH:13:LYS:HA	29:DH:14:GLY:HA2	1.59	0.41
33:DP:38:GLN:C	33:DP:40:SER:N	2.74	0.41
34:DQ:11:LYS:HE2	34:DQ:88:GLY:O	2.20	0.41
36:DS:66:ALA:O	36:DS:69:VAL:N	2.53	0.41
38:DU:5:LYS:HB2	38:DU:5:LYS:HE3	1.83	0.41
41:DX:61:GLY:HA3	41:DX:73:ARG:O	2.20	0.41
41:DX:72:LYS:HB3	41:DX:72:LYS:HE3	1.92	0.41
1:AA:124:G:H2'	1:AA:125:U:O4'	2.20	0.41
1:AA:575:G:C5	1:AA:881:G:C2	3.08	0.41
1:AA:611:A:N6	1:AA:629:G:H1	2.17	0.41
1:AA:1043:C:H2'	1:AA:1044:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1290:G:H3'	1:AA:1291:G:C8	2.51	0.41
2:AB:97:TRP:CZ2	2:AB:173:ALA:HA	2.55	0.41
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.19	0.41
9:AI:71:SER:O	9:AI:74:ILE:N	2.53	0.41
13:AM:71:ARG:H	13:AM:71:ARG:HG3	1.58	0.41
16:AP:6:LEU:HG	16:AP:17:TYR:CB	2.50	0.41
16:AP:6:LEU:HD12	16:AP:6:LEU:HA	1.83	0.41
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.20	0.41
21:AU:3:LYS:HA	21:AU:10:ARG:HB3	2.01	0.41
21:AU:15:ARG:HE	21:AU:15:ARG:CA	2.33	0.41
23:BA:236:C:H2'	23:BA:237:C:C6	2.54	0.41
23:BA:656:G:H2'	23:BA:657:U:O4'	2.21	0.41
23:BA:666:G:O2'	23:BA:667:U:H5'	2.20	0.41
23:BA:817:C:O2'	23:BA:839:U:H5"	2.20	0.41
23:BA:857:C:H4'	44:B0:23:VAL:HG21	2.02	0.41
23:BA:916:G:H5'	23:BA:917:A:OP1	2.20	0.41
23:BA:1313:U:H3'	23:BA:1314:C:H5'	2.02	0.41
23:BA:1697:G:OP2	23:BA:1698:A:O2'	2.27	0.41
23:BA:1925:C:C2'	23:BA:1926:U:H5'	2.49	0.41
23:BA:2126:A:N1	23:BA:2162:G:O2'	2.48	0.41
23:BA:2193:G:H2'	23:BA:2194:G:H8	1.85	0.41
24:BB:46:A:C5	24:BB:47:C:C4	3.08	0.41
26:BE:32:PRO:HD2	26:BE:50:GLY:O	2.21	0.41
27:BF:150:GLY:HA2	27:BF:172:TRP:CD2	2.55	0.41
38:BU:32:PHE:O	38:BU:35:ALA:HB3	2.21	0.41
40:BW:107:LEU:HD12	40:BW:107:LEU:HA	1.85	0.41
1:CA:101:A:C6	1:CA:102:G:N7	2.88	0.41
1:CA:196:A:OP1	20:CT:68:LYS:NZ	2.33	0.41
1:CA:417:C:H6	1:CA:417:C:O5'	2.03	0.41
1:CA:445:G:H3'	1:CA:446:G:H8	1.85	0.41
1:CA:585:G:N3	1:CA:879:C:H4'	2.36	0.41
1:CA:792:A:H4'	1:CA:793:U:H5"	2.02	0.41
1:CA:877:C:H5"	8:CH:88:LYS:HD3	2.02	0.41
1:CA:1095:U:P	1:CA:1108:G:H22	2.42	0.41
1:CA:1116:C:H2'	1:CA:1117:G:O4'	2.20	0.41
1:CA:1288:A:H1'	1:CA:1353:G:H4'	2.01	0.41
1:CA:1313:U:OP1	19:CS:7:LYS:NZ	2.53	0.41
1:CA:1442:G:N7	1:CA:1442(A):G:O6	2.53	0.41
1:CA:1445:C:H2'	1:CA:1446:U:H5'	2.02	0.41
2:CB:70:PHE:HB2	2:CB:92:TYR:CB	2.50	0.41
3:CC:12:LEU:HA	3:CC:16:ARG:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.20	0.41
4:CD:97:LEU:HD23	4:CD:97:LEU:HA	1.86	0.41
13:CM:111:LYS:HE2	13:CM:111:LYS:HB3	1.60	0.41
14:CN:13:THR:HG21	14:CN:20:ALA:HB2	2.02	0.41
23:DA:44:G:H5"	23:DA:45:C:OP1	2.20	0.41
23:DA:323:G:H1'	23:DA:1205:U:O2	2.19	0.41
23:DA:1530:C:O2'	23:DA:1531:C:H6	2.03	0.41
23:DA:1740:G:H2'	23:DA:1741:A:C8	2.55	0.41
23:DA:1912:A:HO2'	23:DA:1913:A:P	2.43	0.41
56:DA:4439:HOH:O	33:DP:16:ARG:HG3	2.20	0.41
24:DB:28:C:H2'	24:DB:29:A:H8	1.85	0.41
24:DB:89:G:OP2	24:DB:89:G:H8	2.03	0.41
26:DE:103:ASP:OD2	26:DE:168:MET:HE3	2.19	0.41
27:DF:101:LEU:HB3	27:DF:106:ARG:HD3	2.01	0.41
29:DH:87:LEU:HD23	29:DH:87:LEU:HA	1.87	0.41
30:DI:44:LEU:HD12	30:DI:44:LEU:HA	1.74	0.41
31:DN:24:GLY:HA2	31:DN:27:ALA:CB	2.50	0.41
33:DP:31:ALA:C	33:DP:32:THR:HG23	2.45	0.41
40:DW:10:VAL:HG21	40:DW:103:ILE:HD12	2.02	0.41
46:D2:50:ILE:O	46:D2:51:ARG:HB3	2.20	0.41
48:D4:1:MET:HB3	48:D4:6:HIS:NE2	2.35	0.41
1:AA:9:G:H2'	1:AA:10:A:C8	2.55	0.41
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.53	0.41
1:AA:951:G:C6	1:AA:952:U:C4	3.08	0.41
1:AA:1126:U:O2	1:AA:1126:U:H2'	2.20	0.41
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.54	0.41
1:AA:1212:U:H5'	1:AA:1213:A:OP1	2.20	0.41
1:AA:1226:C:H5"	19:AS:80:TYR:CE1	2.55	0.41
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.20	0.41
1:AA:1305:G:H5'	21:AU:4:GLY:O	2.20	0.41
2:AB:187:LEU:CD1	2:AB:205:ASP:HA	2.50	0.41
6:AF:1:MET:HE3	6:AF:66:GLU:HG2	2.01	0.41
8:AH:87:SER:HA	8:AH:93:VAL:HG23	2.03	0.41
9:AI:41:VAL:HG12	9:AI:42:ARG:N	2.35	0.41
13:AM:5:ALA:HB1	13:AM:66:LEU:HD12	2.02	0.41
16:AP:17:TYR:N	16:AP:17:TYR:CD1	2.87	0.41
23:BA:141:A:OP2	56:BA:3981:HOH:O	2.22	0.41
23:BA:1488:G:C2	23:BA:1489:U:O2	2.73	0.41
23:BA:2435:A:H2'	23:BA:2436:G:O5'	2.21	0.41
23:BA:2811:G:N2	23:BA:2891:G:H1'	2.36	0.41
34:BQ:16:ARG:C	34:BQ:17:LEU:HD23	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BR:94:TYR:O	35:BR:117:VAL:HG23	2.20	0.41
1:CA:165:C:H2'	1:CA:166:G:H8	1.86	0.41
1:CA:484:G:O2'	1:CA:485:G:P	2.78	0.41
1:CA:684:A:C6	1:CA:685:G:C6	3.08	0.41
1:CA:748:C:H4'	1:CA:749:C:O5'	2.20	0.41
1:CA:990:C:C4	1:CA:991:U:O4	2.73	0.41
1:CA:1050:G:C6	1:CA:1208:C:N3	2.87	0.41
1:CA:1063:C:OP2	1:CA:1063:C:H6	2.04	0.41
1:CA:1305:G:C8	21:CU:5:ASP:HA	2.53	0.41
1:CA:1308:U:O2'	1:CA:1309:G:H5'	2.20	0.41
1:CA:1339:A:C5	1:CA:1340:A:H1'	2.55	0.41
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.20	0.41
2:CB:48:MET:HA	2:CB:51:LEU:HD12	2.03	0.41
3:CC:51:GLY:O	3:CC:52:LEU:HD22	2.20	0.41
4:CD:61:LYS:HE3	4:CD:62:GLN:OE1	2.20	0.41
5:CE:137:GLU:HA	5:CE:140:ARG:HB3	2.02	0.41
20:CT:53:LEU:HA	20:CT:56:MET:HG2	2.03	0.41
23:DA:846:C:O2'	56:DA:3686:HOH:O	2.22	0.41
23:DA:849:A:H5"	23:DA:850:C:OP2	2.19	0.41
23:DA:860:U:H1'	23:DA:2268:A:H5'	2.02	0.41
23:DA:900:A:H2'	23:DA:901:A:H8	1.85	0.41
23:DA:945:A:C4	23:DA:2448:A:C2	3.07	0.41
23:DA:1925:C:C2'	23:DA:1926:U:H5'	2.50	0.41
23:DA:2016:U:H2'	23:DA:2017:U:C6	2.55	0.41
23:DA:2321:G:N3	23:DA:2321:G:C2'	2.81	0.41
23:DA:2464:C:O2'	23:DA:2465:C:OP2	2.34	0.41
23:DA:2554:U:H2'	23:DA:2555:U:C6	2.55	0.41
23:DA:2821:A:H2'	23:DA:2822:G:O4'	2.19	0.41
25:DD:107:ALA:HA	25:DD:108:PRO:HD2	1.94	0.41
28:DG:109:VAL:C	28:DG:112:PRO:HD2	2.44	0.41
28:DG:125:PHE:CZ	28:DG:170:ARG:HA	2.55	0.41
30:DI:15:VAL:C	30:DI:17:GLN:H	2.27	0.41
30:DI:25:TYR:CD1	30:DI:30:LEU:HD11	2.55	0.41
37:DT:53:ARG:NH1	37:DT:60:THR:OG1	2.53	0.41
38:DU:106:PHE:O	38:DU:109:LEU:HB2	2.20	0.41
41:DX:24:GLY:O	41:DX:83:VAL:HG22	2.20	0.41
42:DY:23:ARG:HB2	42:DY:23:ARG:NH1	2.35	0.41
43:DZ:100:VAL:HG11	43:DZ:134:PRO:HG2	2.03	0.41
50:D6:10:LEU:HG	50:D6:54:ILE:HD12	2.03	0.41
1:AA:9:G:H2'	1:AA:10:A:H8	1.85	0.41
1:AA:148:G:C2	1:AA:175:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:170:U:O2'	1:AA:171:A:H5'	2.20	0.41
1:AA:187:C:H2'	1:AA:188:C:C6	2.56	0.41
1:AA:384:G:H2'	1:AA:385:C:C6	2.55	0.41
1:AA:560:U:H6	1:AA:560:U:H2'	1.61	0.41
1:AA:872:A:C4	1:AA:874:G:N7	2.88	0.41
1:AA:1190:G:C8	1:AA:1190:G:H3'	2.56	0.41
1:AA:1277:C:H2'	1:AA:1279:A:C8	2.55	0.41
1:AA:1313:U:H2'	1:AA:1314:C:C6	2.56	0.41
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.18	0.41
6:AF:55:ASP:HA	6:AF:56:PRO:HD2	1.83	0.41
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.45	0.41
7:AG:40:ALA:O	7:AG:44:TYR:N	2.53	0.41
8:AH:37:ARG:HH21	8:AH:38:ILE:CD1	2.33	0.41
10:AJ:52:GLY:HA2	10:AJ:53:PRO:HD2	1.56	0.41
21:AU:20:LYS:HB3	21:AU:20:LYS:HZ3	1.84	0.41
23:BA:229:A:C8	23:BA:229:A:OP1	2.73	0.41
23:BA:541:C:O2'	23:BA:542:C:H5'	2.21	0.41
23:BA:1026:U:HO2'	23:BA:1027:A:P	2.44	0.41
23:BA:1040:C:H2'	23:BA:1041:C:O4'	2.20	0.41
23:BA:1368:G:C2	23:BA:1369:G:C8	3.08	0.41
23:BA:1740:G:H2'	23:BA:1741:A:C8	2.55	0.41
23:BA:1742:G:H2'	23:BA:1743:C:O4'	2.21	0.41
23:BA:1759:A:H1'	23:BA:2711:A:C2	2.55	0.41
23:BA:2126:A:C2	23:BA:2162:G:N3	2.88	0.41
24:BB:33:G:C2	24:BB:50:G:C2	3.09	0.41
30:BI:61:ARG:HH11	30:BI:61:ARG:HA	1.85	0.41
33:BP:38:GLN:HA	33:BP:41:ARG:CG	2.50	0.41
43:BZ:28:MET:HG3	43:BZ:35:ARG:HB2	2.02	0.41
1:CA:409:G:OP1	4:CD:25:ARG:N	2.35	0.41
1:CA:509:A:H3'	1:CA:509:A:C8	2.55	0.41
1:CA:618:C:H5'	1:CA:619:U:H5"	2.03	0.41
1:CA:721:G:H4'	1:CA:722:A:O4'	2.20	0.41
1:CA:994:A:C2	14:CN:4:LYS:HD3	2.52	0.41
1:CA:1083:U:C5	1:CA:1084:G:C6	3.08	0.41
1:CA:1368:G:O2'	1:CA:1369:C:H5'	2.20	0.41
2:CB:165:VAL:O	2:CB:187:LEU:HB3	2.21	0.41
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	2.01	0.41
8:CH:87:SER:HB2	8:CH:93:VAL:HB	2.01	0.41
9:CI:82:ALA:HB2	9:CI:101:PHE:HB3	2.02	0.41
23:DA:1530:C:H42	23:DA:1539:G:H1	1.68	0.41
23:DA:1783:A:C2	23:DA:2587:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2153:G:H2'	23:DA:2154:G:O4'	2.21	0.41
23:DA:2173:A:C3'	23:DA:2174:C:H5'	2.50	0.41
23:DA:2261:C:O2'	23:DA:2262:U:H5'	2.21	0.41
23:DA:2742:C:OP1	53:D9:35:ARG:HD3	2.20	0.41
25:DD:210:GLY:O	25:DD:213:ARG:N	2.53	0.41
26:DE:47:VAL:CG1	26:DE:86:PRO:HD2	2.47	0.41
40:DW:97:LYS:HE3	40:DW:99:ARG:NH2	2.35	0.41
1:AA:164:U:H2'	1:AA:165:C:C6	2.56	0.41
1:AA:317:G:C6	1:AA:318:G:C5	3.09	0.41
1:AA:372:C:O2	1:AA:372:C:O2'	2.37	0.41
1:AA:520:A:OP2	12:AL:51:ALA:HB1	2.20	0.41
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.86	0.41
1:AA:1164:G:C6	1:AA:1173:G:C6	3.08	0.41
1:AA:1195:C:N3	1:AA:1197:G:C8	2.88	0.41
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.20	0.41
1:AA:1306:A:H1'	1:AA:1332:A:C5	2.55	0.41
3:AC:123:GLN:HA	3:AC:126:ARG:HD2	2.02	0.41
3:AC:140:ARG:HB2	3:AC:140:ARG:HH11	1.84	0.41
4:AD:176:LEU:HD12	4:AD:176:LEU:HA	1.84	0.41
5:AE:12:LEU:HD22	5:AE:13:ILE:H	1.85	0.41
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.20	0.41
7:AG:71:PRO:HD2	7:AG:99:LEU:HD13	2.02	0.41
7:AG:72:ARG:HB3	7:AG:96:GLN:HE22	1.86	0.41
8:AH:25:ASP:HB2	8:AH:58:TYR:CD2	2.55	0.41
11:AK:30:VAL:HG21	11:AK:65:ALA:HA	2.02	0.41
11:AK:82:VAL:CG1	11:AK:108:ILE:HG12	2.50	0.41
23:BA:910:A:C6	23:BA:911:A:C6	3.09	0.41
23:BA:962:G:C6	23:BA:963:U:C4	3.08	0.41
23:BA:1028:A:H61	23:BA:1125:G:H2'	1.86	0.41
23:BA:1536:C:C5	23:BA:1537:G:C5	3.09	0.41
23:BA:2161:C:OP2	23:BA:2161:C:H5	1.97	0.41
23:BA:2415:G:H2'	23:BA:2416:C:C6	2.55	0.41
23:BA:2755:C:HO2'	23:BA:2756:U:H6	1.67	0.41
25:BD:275:LYS:HG3	25:BD:275:LYS:O	2.21	0.41
27:BF:101:LEU:HD12	27:BF:102:PRO:HD2	2.02	0.41
28:BG:109:VAL:C	28:BG:112:PRO:HD2	2.45	0.41
31:BN:28:THR:HG22	31:BN:29:LYS:N	2.35	0.41
33:BP:6:LEU:HA	33:BP:6:LEU:HD23	1.61	0.41
34:BQ:32:TYR:HE2	34:BQ:133:ARG:HE	1.69	0.41
36:BS:7:TYR:CE1	36:BS:91:PRO:HG3	2.55	0.41
39:BV:70:ILE:HD13	39:BV:70:ILE:HA	1.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BV:82:ARG:N	39:BV:82:ARG:HD2	2.36	0.41
41:BX:11:PRO:HG2	41:BX:13:LEU:HD21	2.02	0.41
41:BX:21:PHE:CZ	41:BX:92:LEU:HD12	2.56	0.41
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.56	0.41
1:CA:766:A:H2	1:CA:1525:G:N3	2.19	0.41
1:CA:936:C:H3'	1:CA:937:A:H8	1.85	0.41
1:CA:1003:G:C3'	1:CA:1004:A:H4'	2.51	0.41
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	2.00	0.41
1:CA:1416:G:H2'	1:CA:1417:G:O4'	2.20	0.41
1:CA:1437:C:H2'	1:CA:1438:G:C8	2.56	0.41
1:CA:1442:G:C8	1:CA:1442(A):G:C5	3.09	0.41
2:CB:110:GLN:H	2:CB:110:GLN:HG3	1.49	0.41
3:CC:18:TRP:NE1	14:CN:55:GLY:N	2.69	0.41
3:CC:35:GLU:OE2	3:CC:59:ARG:NH2	2.53	0.41
8:CH:4:ASP:HB2	8:CH:89:PRO:HG3	2.03	0.41
13:CM:23:TYR:HE1	13:CM:71:ARG:HG2	1.85	0.41
14:CN:23:ARG:HG3	14:CN:24:CYS:N	2.34	0.41
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.54	0.41
17:CQ:63:ARG:HA	17:CQ:64:PRO:HD3	1.89	0.41
17:CQ:91:ARG:HE	17:CQ:91:ARG:HB2	1.55	0.41
23:DA:286:C:H42	23:DA:355:G:H1	1.68	0.41
23:DA:478:A:C6	23:DA:480:A:C6	3.08	0.41
23:DA:909:A:C6	23:DA:912:C:C2	3.08	0.41
23:DA:1051:G:N3	23:DA:1051:G:H2'	2.36	0.41
23:DA:2092:U:H4'	23:DA:2093:G:O5'	2.21	0.41
23:DA:2239:G:H5'	25:DD:251:GLY:HA3	2.02	0.41
23:DA:2299:G:N1	23:DA:2318:G:C8	2.89	0.41
23:DA:2812:G:C2	23:DA:2813:A:C4	3.08	0.41
26:DE:137:HIS:HB3	26:DE:138:PRO:HD2	2.02	0.41
29:DH:3:ARG:NH2	29:DH:5:GLY:H	2.19	0.41
29:DH:35:VAL:HA	29:DH:36:PRO:HD2	1.77	0.41
30:DI:139:GLN:HA	30:DI:139:GLN:HE21	1.85	0.41
32:DO:7:TYR:OH	32:DO:44:LYS:HG3	2.20	0.41
32:DO:9:GLU:HB2	32:DO:83:ALA:HB2	2.03	0.41
39:DV:76:LYS:HB2	39:DV:81:TYR:HB3	2.03	0.41
43:DZ:106:GLY:HA3	43:DZ:142:SER:OG	2.21	0.41
1:AA:59:A:N3	1:AA:59:A:H2'	2.35	0.41
1:AA:373:A:C2	1:AA:374:A:C8	3.08	0.41
1:AA:476:G:N2	1:AA:477:A:C4	2.88	0.41
1:AA:512:U:H2'	1:AA:513:C:C6	2.55	0.41
1:AA:690:G:H2'	1:AA:691:G:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:971:G:N2	1:AA:1363(A):A:O4'	2.51	0.41
1:AA:1168:A:C6	1:AA:1169:A:C6	3.09	0.41
1:AA:1169:A:C2'	1:AA:1170:A:C8	3.01	0.41
1:AA:1237:C:HO2'	1:AA:1300:G:H22	1.55	0.41
1:AA:1300:G:H4'	1:AA:1301:U:H6	1.85	0.41
2:AB:135:GLN:O	2:AB:139:LYS:N	2.44	0.41
3:AC:186:PHE:CZ	3:AC:188:LEU:HB2	2.55	0.41
4:AD:13:ARG:NH2	4:AD:36:ARG:HH21	2.19	0.41
4:AD:113:SER:O	4:AD:117:ALA:N	2.46	0.41
9:AI:14:VAL:O	9:AI:65:VAL:HA	2.20	0.41
9:AI:31:GLN:HG2	9:AI:36:TYR:CD1	2.55	0.41
23:BA:1319:G:C6	23:BA:1320:C:N4	2.89	0.41
23:BA:1686:C:C2'	23:BA:1687:G:H5'	2.50	0.41
23:BA:1832:C:N4	23:BA:1833:U:C4	2.88	0.41
23:BA:2051:A:C6	23:BA:2614:A:C5	3.08	0.41
23:BA:2516:G:O2'	23:BA:2517:C:H5'	2.20	0.41
23:BA:2537:U:H2'	23:BA:2538:C:C6	2.55	0.41
25:BD:102:LYS:C	25:BD:103:ARG:HG2	2.46	0.41
25:BD:111:LEU:HD23	25:BD:111:LEU:HA	1.67	0.41
25:BD:148:GLU:CB	25:BD:151:LYS:HD2	2.49	0.41
28:BG:129:GLY:HA2	28:BG:166:ASP:HA	2.02	0.41
30:BI:139:GLN:HA	30:BI:139:GLN:NE2	2.31	0.41
32:BO:106:LEU:HD23	32:BO:106:LEU:HA	1.84	0.41
36:BS:99:LYS:HE2	36:BS:103:GLU:OE2	2.20	0.41
40:BW:10:VAL:HG21	40:BW:103:ILE:HD12	2.03	0.41
48:B4:40:HIS:O	48:B4:42:PHE:N	2.49	0.41
50:B6:19:ARG:H	50:B6:19:ARG:HD2	1.85	0.41
1:CA:102:G:C4	1:CA:103:C:C5	3.09	0.41
1:CA:124:G:H2'	1:CA:125:U:O4'	2.20	0.41
1:CA:832:C:O2'	1:CA:833:U:P	2.79	0.41
1:CA:1176:A:C6	1:CA:1177:G:O6	2.73	0.41
1:CA:1265:G:N2	1:CA:1271:G:N3	2.69	0.41
2:CB:24:TRP:CZ2	2:CB:26:PRO:HB3	2.55	0.41
3:CC:130:VAL:HA	3:CC:133:ALA:HB3	2.02	0.41
4:CD:63:LYS:O	4:CD:67:ILE:HG13	2.21	0.41
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.56	0.41
8:CH:75:ARG:HA	8:CH:76:PRO:HD2	1.68	0.41
10:CJ:57:LYS:O	10:CJ:60:ARG:HG3	2.21	0.41
12:CL:36:VAL:O	12:CL:58:VAL:HG13	2.20	0.41
16:CP:45:THR:O	16:CP:48:TRP:HB3	2.21	0.41
20:CT:53:LEU:HD12	20:CT:99:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1253:A:C5	56:DA:4450:HOH:O	2.72	0.41
23:DA:2127:G:H1'	23:DA:2173:A:C2	2.56	0.41
23:DA:2130:U:O3'	23:DA:2133:G:H4'	2.20	0.41
23:DA:2178:C:H2'	23:DA:2179:C:O4'	2.20	0.41
23:DA:2233:U:H2'	23:DA:2234:G:C8	2.56	0.41
23:DA:2528:U:H2'	23:DA:2530:A:O5'	2.21	0.41
23:DA:2791:C:H2'	23:DA:2792:G:C8	2.55	0.41
24:DB:73:A:C4	24:DB:105:A:C2	3.08	0.41
26:DE:7:VAL:HG12	26:DE:51:PHE:CE1	2.55	0.41
26:DE:51:PHE:O	26:DE:75:VAL:HG13	2.21	0.41
28:DG:8:LYS:O	28:DG:12:TYR:HD1	2.03	0.41
28:DG:66:GLN:HG2	48:D4:1:MET:CE	2.51	0.41
28:DG:138:GLN:HE22	28:DG:153:ARG:NH2	2.19	0.41
31:DN:102:ALA:O	31:DN:106:MET:HG3	2.21	0.41
34:DQ:72:LYS:HB3	34:DQ:94:VAL:HG23	2.03	0.41
37:DT:20:PRO:HG2	37:DT:86:ILE:O	2.20	0.41
37:DT:55:ASN:H	37:DT:59:THR:HB	1.84	0.41
1:AA:27:G:H2'	1:AA:28:G:O4'	2.21	0.41
1:AA:65:U:H5"	1:AA:65:U:H6	1.86	0.41
1:AA:546:G:OP1	4:AD:73:ARG:HG2	2.21	0.41
1:AA:623:C:C4	1:AA:624:C:C5	3.08	0.41
1:AA:688:G:H2'	1:AA:689:C:C6	2.56	0.41
1:AA:992:U:O2	1:AA:993:G:N2	2.54	0.41
1:AA:1025:U:C2	1:AA:1036:G:O6	2.68	0.41
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.20	0.41
2:AB:52:GLU:HG2	2:AB:56:ARG:NH1	2.36	0.41
3:AC:123:GLN:O	3:AC:126:ARG:HB2	2.21	0.41
4:AD:146:ILE:N	4:AD:146:ILE:HD12	2.36	0.41
5:AE:116:THR:HG23	5:AE:117:ASP:OD2	2.21	0.41
7:AG:45:ASP:HB2	7:AG:117:ALA:HB1	2.03	0.41
16:AP:11:SER:OG	16:AP:12:LYS:N	2.51	0.41
23:BA:54:G:O2'	51:B7:35:ARG:HD3	2.21	0.41
23:BA:269:U:C5	23:BA:271(Y):U:C5	3.08	0.41
23:BA:303:U:H2'	23:BA:304:G:C8	2.56	0.41
23:BA:1106:G:H2'	23:BA:1107:G:H21	1.85	0.41
23:BA:1453:U:OP1	35:BR:77:ARG:NH1	2.53	0.41
23:BA:1936:A:C8	23:BA:1940:U:O2	2.74	0.41
23:BA:2099:U:H3	23:BA:2190:G:H1	1.69	0.41
23:BA:2114:A:H3'	23:BA:2115:G:C8	2.55	0.41
23:BA:2117:A:H2'	23:BA:2118:U:H3'	2.02	0.41
23:BA:2321:G:N3	23:BA:2321:G:C2'	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:77:U:OP1	43:BZ:19:ARG:NH2	2.53	0.41
26:BE:120:TRP:CD1	26:BE:155:LYS:HB3	2.56	0.41
29:BH:137:ASP:HB3	29:BH:140:LYS:HB3	2.02	0.41
30:BI:15:VAL:C	30:BI:17:GLN:H	2.29	0.41
30:BI:77:LEU:HB3	30:BI:142:VAL:CG1	2.50	0.41
30:BI:94:ALA:HA	30:BI:97:ILE:HG13	2.03	0.41
48:B4:1:MET:HB3	48:B4:6:HIS:CD2	2.56	0.41
1:CA:67:C:H2'	1:CA:68:G:C8	2.55	0.41
1:CA:189(J):G:H2'	1:CA:189(K):U:C6	2.55	0.41
1:CA:317:G:C6	1:CA:318:G:N7	2.89	0.41
1:CA:627:G:O2'	1:CA:628:G:H5'	2.21	0.41
1:CA:734:G:C5	1:CA:735:C:C4	3.09	0.41
1:CA:737:A:H2'	1:CA:738:C:H6	1.84	0.41
1:CA:855:G:C6	1:CA:856:C:C4	3.08	0.41
1:CA:881:G:H2'	1:CA:882:C:O4'	2.19	0.41
1:CA:921:U:O2'	5:CE:19:MET:O	2.31	0.41
1:CA:1004:A:N3	1:CA:1037:C:N3	2.69	0.41
1:CA:1014:A:H5'	19:CS:14:HIS:CD2	2.56	0.41
2:CB:55:PHE:HA	2:CB:58:ILE:CG1	2.51	0.41
7:CG:69:VAL:HG11	7:CG:104:LEU:HB2	2.02	0.41
8:CH:86:ILE:CB	8:CH:133:LEU:HD22	2.51	0.41
10:CJ:61:GLU:OE2	14:CN:45:ARG:HG2	2.20	0.41
10:CJ:63:PHE:CD1	14:CN:58:LYS:HA	2.51	0.41
13:CM:53:VAL:HA	13:CM:56:LEU:HD12	2.03	0.41
19:CS:62:ILE:H	19:CS:62:ILE:HD12	1.86	0.41
23:DA:224:G:H2'	23:DA:225:A:O4'	2.21	0.41
23:DA:401:A:H2'	23:DA:402:A:O4'	2.21	0.41
23:DA:528:A:C2	23:DA:2043:C:H4'	2.55	0.41
23:DA:647:G:H2'	23:DA:648:G:O4'	2.21	0.41
23:DA:725:G:H8	23:DA:725:G:O5'	2.04	0.41
23:DA:826:U:C4'	33:DP:55:ARG:HB2	2.51	0.41
23:DA:928:G:H8	23:DA:928:G:O5'	2.04	0.41
23:DA:1648:C:H2'	23:DA:1649:G:O5'	2.20	0.41
23:DA:1709:U:H2'	23:DA:1710:C:C6	2.56	0.41
23:DA:1814:G:H4'	25:DD:51:VAL:HG21	2.03	0.41
23:DA:2091:U:O2'	45:D1:47:GLN:HG3	2.21	0.41
23:DA:2165:G:H2'	23:DA:2166:G:H8	1.84	0.41
23:DA:2822:G:O2'	23:DA:2824:C:OP2	2.31	0.41
26:DE:40:GLU:H	26:DE:40:GLU:CD	2.29	0.41
28:DG:72:ARG:NH1	28:DG:87:PRO:HG3	2.34	0.41
28:DG:82:LEU:HD22	28:DG:86:MET:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:106:LEU:O	28:DG:111:LEU:HG	2.21	0.41
28:DG:174:GLU:HG2	28:DG:180:PHE:CD1	2.56	0.41
29:DH:3:ARG:HG2	29:DH:6:ARG:CZ	2.49	0.41
30:DI:106:GLY:HA2	30:DI:107:VAL:HB	2.03	0.41
31:DN:96:GLU:HB2	31:DN:122:VAL:HG12	2.03	0.41
34:DQ:34:LEU:HA	34:DQ:34:LEU:HD12	1.77	0.41
39:DV:81:TYR:C	39:DV:82:ARG:HD2	2.46	0.41
1:AA:963:G:O2'	1:AA:1199:U:H5"	2.21	0.41
1:AA:1015:A:H8	1:AA:1015:A:O5'	2.03	0.41
1:AA:1052:U:H5"	1:AA:1053:G:OP2	2.21	0.41
1:AA:1126:U:H1'	1:AA:1280:A:C6	2.56	0.41
1:AA:1128:C:H1'	1:AA:1146:A:N1	2.36	0.41
1:AA:1206:G:C4	1:AA:1207:G:C8	3.09	0.41
1:AA:1373:G:H4'	7:AG:31:MET:HE1	2.03	0.41
1:AA:1442(B):A:N7	37:BT:118:ARG:CZ	2.83	0.41
1:AA:1502:A:C2	1:AA:1505:G:N1	2.76	0.41
2:AB:137:ARG:HG3	2:AB:137:ARG:H	1.71	0.41
15:AO:74:ASP:OD1	15:AO:76:GLU:HB2	2.21	0.41
23:BA:28:A:C5	23:BA:29:U:C5	3.09	0.41
23:BA:65:C:O2'	23:BA:456:C:O2	2.38	0.41
23:BA:1022:G:C6	23:BA:1140:C:C4	3.09	0.41
23:BA:1537:G:O2'	23:BA:1538:G:H5'	2.21	0.41
23:BA:1827:C:OP2	25:BD:222:ARG:HD2	2.21	0.41
23:BA:1947:C:N3	23:BA:1960:A:C2	2.89	0.41
23:BA:2172:U:H4'	23:BA:2173:A:OP2	2.21	0.41
26:BE:36:ARG:NH1	26:BE:86:PRO:O	2.37	0.41
28:BG:5:VAL:HG11	28:BG:101:ILE:HG12	2.02	0.41
29:BH:12:PRO:O	29:BH:14:GLY:HA2	2.20	0.41
34:BQ:26:TYR:HE1	34:BQ:28:ALA:HB2	1.85	0.41
35:BR:38:VAL:HB	35:BR:39:PRO:HD3	2.02	0.41
36:BS:27:SER:HA	36:BS:88:ASP:HB3	2.02	0.41
36:BS:78:LEU:HD13	36:BS:78:LEU:HA	1.82	0.41
38:BU:74:LEU:HD12	38:BU:74:LEU:N	2.36	0.41
1:CA:22:G:H2'	1:CA:23:C:C6	2.56	0.41
1:CA:269:C:H2'	1:CA:270:A:H8	1.84	0.41
1:CA:329:A:C2	1:CA:332:G:C8	3.09	0.41
1:CA:560:U:H6	1:CA:560:U:H2'	1.61	0.41
1:CA:954:G:N1	1:CA:1226:C:C2	2.88	0.41
1:CA:997:U:N3	1:CA:1044:A:C2	2.89	0.41
1:CA:1098:C:C5'	1:CA:1169:A:H1'	2.49	0.41
1:CA:1368:G:OP2	9:CI:112:LYS:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1443:G:H1	1:CA:1459:C:H2'	1.86	0.41
3:CC:57:ILE:HG23	3:CC:66:VAL:HA	2.03	0.41
3:CC:66:VAL:O	3:CC:102:ASN:HB3	2.21	0.41
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.53	0.41
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	2.03	0.41
12:CL:46:LYS:H	12:CL:46:LYS:HG2	1.69	0.41
16:CP:6:LEU:HG	16:CP:17:TYR:CB	2.50	0.41
23:DA:272(E):G:C2	23:DA:364:C:C2	3.08	0.41
23:DA:534:U:H5'	38:DU:42:ALA:HB1	2.03	0.41
23:DA:918:A:C5	23:DA:919:G:H1'	2.56	0.41
23:DA:1131:G:H21	31:DN:73:THR:CG2	2.34	0.41
23:DA:1188:U:O2'	23:DA:1189:A:H5'	2.20	0.41
23:DA:1441:G:H2'	23:DA:1442:G:H8	1.85	0.41
23:DA:2463:C:H2'	23:DA:2464:C:H5'	2.03	0.41
25:DD:26:LYS:HE2	25:DD:28:GLU:O	2.21	0.41
26:DE:4:ILE:HG12	26:DE:5:LEU:O	2.20	0.41
28:DG:39:ILE:HG23	28:DG:157:ILE:HD13	2.02	0.41
36:DS:11:LYS:HD3	36:DS:15:ARG:NH2	2.36	0.41
39:DV:2:PHE:CZ	39:DV:41:GLY:HA3	2.56	0.41
43:DZ:39:VAL:CG2	43:DZ:44:PHE:HB2	2.51	0.41
43:DZ:72:ARG:HA	43:DZ:72:ARG:HD3	1.61	0.41
1:AA:32:A:C6	1:AA:33:A:C6	3.09	0.41
1:AA:123:C:OP1	1:AA:311:C:O2'	2.24	0.41
1:AA:283:C:H2'	1:AA:284:G:O4'	2.21	0.41
1:AA:373:A:N3	1:AA:374:A:C8	2.89	0.41
1:AA:448:A:P	1:AA:485:G:H22	2.43	0.41
1:AA:657:G:C2	1:AA:750:G:C5	3.08	0.41
1:AA:918:A:H2'	1:AA:919:A:H8	1.84	0.41
1:AA:1004:A:H3'	1:AA:1025:U:H3	1.86	0.41
1:AA:1012:U:O5'	1:AA:1012:U:H6	2.04	0.41
1:AA:1261:A:C4	1:AA:1275:A:C2	3.09	0.41
1:AA:1305:G:H5'	21:AU:4:GLY:C	2.45	0.41
1:AA:1442(B):A:N7	37:BT:118:ARG:NH1	2.68	0.41
1:AA:1457:G:C6	1:AA:1458:G:C6	3.08	0.41
1:AA:1459:C:H5'	1:AA:1460:A:OP2	2.21	0.41
2:AB:142:LEU:HG	2:AB:146:GLN:HE21	1.86	0.41
4:AD:101:LEU:CD2	4:AD:121:VAL:HG11	2.51	0.41
7:AG:9:VAL:HG21	7:AG:94:ARG:NE	2.35	0.41
7:AG:27:ILE:O	7:AG:30:ILE:HG13	2.20	0.41
9:AI:50:LEU:HA	9:AI:53:VAL:O	2.20	0.41
12:AL:82:VAL:HG23	12:AL:106:ASP:OD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:84:LEU:HD22	12:AL:84:LEU:HA	1.93	0.41
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.88	0.41
14:AN:23:ARG:CZ	14:AN:30:ALA:HB2	2.50	0.41
15:AO:57:LEU:HD23	15:AO:57:LEU:HA	1.83	0.41
15:AO:88:ARG:HA	15:AO:88:ARG:HD2	1.85	0.41
16:AP:38:TYR:CD2	16:AP:38:TYR:N	2.88	0.41
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	2.02	0.41
21:AU:13:ILE:HA	21:AU:22:ARG:HH11	1.82	0.41
23:BA:116:C:H2'	23:BA:117:G:O4'	2.21	0.41
23:BA:220:G:O2'	23:BA:233:A:N3	2.50	0.41
23:BA:330:A:O2'	23:BA:331:A:H8	2.04	0.41
23:BA:606:U:H4'	23:BA:658:C:C4'	2.49	0.41
23:BA:890:A:H3'	23:BA:892:G:C8	2.56	0.41
23:BA:1224:C:O2'	39:BV:85:LYS:HA	2.21	0.41
23:BA:1473:G:H2'	23:BA:1474:C:O4'	2.21	0.41
23:BA:2197:U:O2	23:BA:2198:A:O2'	2.35	0.41
23:BA:2202:C:H2'	23:BA:2203:U:O4'	2.20	0.41
23:BA:2278:A:OP1	34:BQ:11:LYS:HD2	2.20	0.41
23:BA:2335:A:N6	23:BA:2337:G:H1'	2.35	0.41
23:BA:2615:U:N1	49:B5:7:PRO:HA	2.35	0.41
23:BA:2695:C:H2'	23:BA:2696:U:H6	1.86	0.41
23:BA:2869:G:H2'	23:BA:2870:C:O4'	2.20	0.41
23:BA:2887:U:O2'	23:BA:2888:C:H5'	2.21	0.41
25:BD:147:LEU:HD13	25:BD:155:LEU:HD11	2.03	0.41
29:BH:5:GLY:HA3	29:BH:65:HIS:CD2	2.56	0.41
31:BN:128:HIS:O	31:BN:131:GLN:NE2	2.40	0.41
33:BP:59:LEU:HD23	33:BP:59:LEU:HA	1.73	0.41
34:BQ:101:ARG:HG3	34:BQ:102:VAL:N	2.36	0.41
34:BQ:133:ARG:HG2	34:BQ:134:ARG:N	2.36	0.41
35:BR:103:ARG:HH11	35:BR:103:ARG:CG	2.33	0.41
36:BS:77:ALA:O	36:BS:80:LEU:N	2.48	0.41
36:BS:82:ILE:HA	36:BS:83:LYS:CB	2.51	0.41
36:BS:99:LYS:O	36:BS:102:ALA:HB3	2.20	0.41
42:BY:6:HIS:H	42:BY:6:HIS:HD2	1.68	0.41
1:CA:373:A:C2	1:CA:374:A:C8	3.09	0.41
1:CA:499:A:H4'	1:CA:500:G:H5'	2.02	0.41
1:CA:575:G:O2'	1:CA:821:G:H5'	2.21	0.41
1:CA:584:G:OP1	17:CQ:91:ARG:NH2	2.54	0.41
1:CA:626:U:H4'	16:CP:38:TYR:CZ	2.56	0.41
1:CA:657:G:C2	1:CA:750:G:C5	3.09	0.41
1:CA:968:A:C8	1:CA:1062:U:H4'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1065:U:O2'	1:CA:1066:C:OP2	2.27	0.41
1:CA:1072:G:O6	1:CA:1102:A:N6	2.53	0.41
1:CA:1126:U:O2	1:CA:1126:U:H2'	2.21	0.41
1:CA:1154:G:C2	1:CA:1155:G:C5	3.09	0.41
1:CA:1308:U:H5'	13:CM:110:ARG:NH1	2.36	0.41
1:CA:1380:U:H5	7:CG:3:ARG:HA	1.85	0.41
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.51	0.41
1:CA:1442(A):G:C2'	1:CA:1442(B):A:H5"	2.50	0.41
2:CB:111:ARG:HD3	2:CB:111:ARG:HA	1.52	0.41
2:CB:180:LEU:HD23	2:CB:180:LEU:HA	1.79	0.41
3:CC:12:LEU:HD11	14:CN:51:GLY:HA2	2.03	0.41
3:CC:19:GLU:HA	3:CC:54:ARG:NH1	2.36	0.41
3:CC:121:ALA:HB2	3:CC:198:VAL:HG21	2.03	0.41
3:CC:136:GLN:HG2	3:CC:140:ARG:HD2	2.01	0.41
4:CD:146:ILE:N	4:CD:146:ILE:HD12	2.36	0.41
6:CF:55:ASP:HA	6:CF:56:PRO:HD2	1.78	0.41
7:CG:62:PHE:HA	7:CG:124:LEU:CD2	2.50	0.41
8:CH:30:ARG:O	8:CH:34:GLU:HB2	2.20	0.41
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.20	0.41
8:CH:87:SER:HB2	8:CH:93:VAL:H	1.86	0.41
9:CI:44:VAL:HA	9:CI:45:ALA:HA	1.58	0.41
10:CJ:9:ARG:HG2	10:CJ:69:ASN:ND2	2.36	0.41
10:CJ:15:THR:HG22	10:CJ:91:PRO:HB2	2.03	0.41
10:CJ:39:PRO:HG3	10:CJ:70:ARG:HE	1.85	0.41
10:CJ:62:HIS:H	10:CJ:62:HIS:HD2	1.68	0.41
12:CL:6:THR:O	12:CL:9:GLN:HB2	2.20	0.41
13:CM:60:VAL:HG13	13:CM:64:TRP:HZ3	1.86	0.41
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.85	0.41
15:CO:21:ASP:OD2	15:CO:24:SER:HB3	2.20	0.41
16:CP:9:PHE:HB2	16:CP:16:HIS:O	2.21	0.41
21:CU:18:TYR:CG	21:CU:24:ARG:HG3	2.55	0.41
22:CX:78:ILE:HD13	22:CX:78:ILE:HA	1.83	0.41
22:CX:79:ASP:O	22:CX:82:ALA:HB3	2.21	0.41
23:DA:127:A:H5"	23:DA:128:C:C6	2.54	0.41
23:DA:271(Y):U:H6	23:DA:271(Y):U:H2'	1.69	0.41
23:DA:285:C:H2'	23:DA:286:C:H6	1.86	0.41
23:DA:458:G:O2'	51:D7:39:ARG:HD3	2.20	0.41
23:DA:563:G:H5'	23:DA:572:A:H4'	2.02	0.41
23:DA:708:C:H5'	23:DA:709:U:OP2	2.21	0.41
23:DA:794:G:H2'	23:DA:795:C:C6	2.55	0.41
23:DA:928:G:O6	56:DA:3686:HOH:O	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1171:G:H8	23:DA:1171:G:OP2	2.03	0.41
23:DA:1185:C:H5"	23:DA:1186:G:OP1	2.21	0.41
23:DA:1376:C:N4	23:DA:1377:G:C6	2.89	0.41
23:DA:1668:A:OP1	32:DO:5:GLN:HG3	2.21	0.41
23:DA:1712:C:H2'	23:DA:1713:U:C6	2.55	0.41
23:DA:1742:G:H2'	23:DA:1743:C:O4'	2.20	0.41
23:DA:2203:U:O2'	23:DA:2205:C:H5'	2.20	0.41
23:DA:2305:A:H2'	23:DA:2306:C:O4'	2.20	0.41
23:DA:2498:C:O2'	23:DA:2499:C:H5'	2.21	0.41
23:DA:2572:A:N7	26:DE:144:ARG:HD2	2.35	0.41
23:DA:2607:G:H2'	23:DA:2608:G:O4'	2.21	0.41
23:DA:2683:C:O2	32:DO:70:LYS:NZ	2.29	0.41
24:DB:46:A:C5	24:DB:47:C:C4	3.09	0.41
25:DD:136:ILE:HA	25:DD:137:PRO:HD3	1.95	0.41
25:DD:221:VAL:HG22	25:DD:226:MET:CE	2.51	0.41
26:DE:14:ILE:HG13	26:DE:21:VAL:HG13	2.03	0.41
27:DF:167:ALA:HB1	27:DF:173:VAL:HG11	2.02	0.41
29:DH:22:GLY:HA2	29:DH:37:VAL:O	2.20	0.41
29:DH:143:GLN:HG3	29:DH:147:ASN:ND2	2.36	0.41
30:DI:12:LEU:HD23	30:DI:12:LEU:HA	1.88	0.41
31:DN:12:ARG:HG3	31:DN:14:VAL:HG23	2.03	0.41
33:DP:38:GLN:HG3	33:DP:45:LEU:HD23	2.02	0.41
34:DQ:7:MET:HE3	34:DQ:7:MET:HB2	1.44	0.41
36:DS:77:ALA:O	36:DS:80:LEU:N	2.48	0.41
37:DT:35:LYS:HA	37:DT:40:THR:HG22	2.03	0.41
41:DX:25:LYS:HG3	41:DX:82:GLN:OE1	2.21	0.41
43:DZ:124:ILE:HD11	43:DZ:165:VAL:HG11	2.03	0.41
45:D1:82:LEU:CA	45:D1:85:LEU:HD23	2.40	0.41
48:D4:14:ILE:HD12	48:D4:22:ILE:HB	2.03	0.41
50:D6:40:CYS:SG	50:D6:42:TRP:N	2.92	0.41
1:AA:200:G:H2'	1:AA:201:C:O4'	2.21	0.41
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.55	0.41
1:AA:933:G:P	7:AG:4:ARG:HE	2.41	0.41
1:AA:1170:A:C2	1:AA:1171:G:H1'	2.56	0.41
1:AA:1219:U:P	14:AN:19:ARG:HH22	2.42	0.41
1:AA:1235:U:H4'	21:AU:4:GLY:H	1.84	0.41
1:AA:1359:C:O2'	1:AA:1361:G:N7	2.53	0.41
2:AB:215:LEU:HA	2:AB:215:LEU:HD23	1.68	0.41
3:AC:40:ARG:O	3:AC:44:GLU:HB2	2.20	0.41
4:AD:156:GLU:N	4:AD:156:GLU:OE1	2.53	0.41
7:AG:75:VAL:HG11	7:AG:144:MET:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:76:ALA:O	9:AI:80:GLY:N	2.29	0.41
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.54	0.41
15:AO:24:SER:O	15:AO:25:THR:C	2.63	0.41
23:BA:1257:C:O2'	27:BF:84:VAL:HG23	2.20	0.41
23:BA:1336:A:H2'	23:BA:1337:G:C8	2.56	0.41
23:BA:2108:C:H42	23:BA:2181:G:H1	1.69	0.41
23:BA:2330:G:H2'	23:BA:2331:G:O4'	2.21	0.41
23:BA:2893:G:N3	23:BA:2893:G:H2'	2.36	0.41
26:BE:37:ARG:HB2	26:BE:46:ALA:N	2.36	0.41
27:BF:196:LEU:HD23	27:BF:196:LEU:HA	1.72	0.41
28:BG:125:PHE:HB3	28:BG:166:ASP:CG	2.46	0.41
28:BG:128:ARG:HE	28:BG:128:ARG:HB2	1.55	0.41
28:BG:139:LEU:HB3	28:BG:144:ILE:HG22	2.03	0.41
28:BG:169:ALA:O	28:BG:173:LEU:HG	2.21	0.41
28:BG:174:GLU:HG2	28:BG:180:PHE:CD1	2.56	0.41
34:BQ:72:LYS:HB3	34:BQ:94:VAL:HG23	2.03	0.41
39:BV:18:LEU:HA	39:BV:18:LEU:HD23	1.84	0.41
43:BZ:152:ALA:HA	43:BZ:155:LEU:HB2	2.02	0.41
44:B0:25:ARG:HD2	44:B0:29:GLN:NE2	2.36	0.41
1:CA:148:G:C2	1:CA:149:A:N7	2.88	0.41
1:CA:436:C:O2'	1:CA:437:U:P	2.79	0.41
1:CA:437:U:C4	1:CA:438:G:C6	3.09	0.41
1:CA:627:G:N3	1:CA:628:G:C8	2.88	0.41
1:CA:685:G:C2	1:CA:686:U:C4	3.09	0.41
1:CA:836:G:C6	1:CA:851:G:C6	3.09	0.41
1:CA:1268:A:O2'	1:CA:1326:C:H4'	2.21	0.41
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.20	0.41
2:CB:74:LYS:H	2:CB:74:LYS:HG2	1.58	0.41
3:CC:150:LYS:O	3:CC:201:TYR:N	2.54	0.41
3:CC:184:TYR:HA	3:CC:200:ALA:O	2.21	0.41
9:CI:109:VAL:HG22	9:CI:110:GLU:H	1.86	0.41
13:CM:19:LEU:HA	13:CM:22:ILE:CD1	2.51	0.41
13:CM:25:ILE:HG23	13:CM:29:ARG:CB	2.51	0.41
23:DA:189:G:H2'	23:DA:205:G:N2	2.36	0.41
23:DA:198:C:H5'	23:DA:2244:U:OP1	2.21	0.41
23:DA:322:A:H4'	23:DA:323:G:OP2	2.21	0.41
23:DA:410:G:C2	23:DA:418:G:C2	3.09	0.41
23:DA:481:G:H1'	23:DA:507:A:N1	2.36	0.41
23:DA:862:G:OP2	56:DA:4349:HOH:O	2.21	0.41
23:DA:1507:A:O2'	23:DA:1508:A:C8	2.63	0.41
23:DA:1957:C:H2'	23:DA:1958:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2115:G:H4'	23:DA:2167:U:C4'	2.45	0.41
23:DA:2338:G:O2'	23:DA:2339:G:H5'	2.21	0.41
24:DB:113:G:H2'	24:DB:114:C:O4'	2.21	0.41
34:DQ:110:THR:HG23	34:DQ:113:GLN:HB2	2.02	0.41
40:DW:79:GLY:CA	40:DW:100:THR:HG22	2.49	0.41
47:D3:36:VAL:O	47:D3:37:LEU:HD23	2.20	0.41
1:AA:78:G:O2'	1:AA:79:G:OP2	2.36	0.40
1:AA:134:A:H1'	1:AA:325:A:C5	2.56	0.40
1:AA:357:G:C2	1:AA:358:U:C5	3.09	0.40
1:AA:622:A:C8	1:AA:623:C:C6	3.09	0.40
1:AA:832:C:N3	1:AA:855:G:C6	2.89	0.40
1:AA:1008:C:H2'	1:AA:1009:G:O4'	2.21	0.40
1:AA:1099:G:H5'	1:AA:1100:C:OP2	2.21	0.40
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.51	0.40
1:AA:1202:G:H1'	14:AN:42:ILE:HD13	2.02	0.40
1:AA:1255:G:H3'	1:AA:1279:A:H61	1.87	0.40
2:AB:37:ASN:O	2:AB:39:ILE:HD12	2.21	0.40
2:AB:38:GLY:O	2:AB:39:ILE:HG13	2.21	0.40
2:AB:70:PHE:HE2	2:AB:163:PHE:HD2	1.69	0.40
4:AD:94:LEU:HD23	4:AD:94:LEU:HA	1.89	0.40
4:AD:98:GLU:O	4:AD:104:VAL:HG23	2.21	0.40
6:AF:97:PHE:CD2	18:AR:31:LEU:HD21	2.50	0.40
10:AJ:91:PRO:CG	10:AJ:94:VAL:HB	2.42	0.40
13:AM:3:ARG:CZ	13:AM:3:ARG:HB2	2.51	0.40
18:AR:56:THR:HB	18:AR:58:LEU:HD13	2.03	0.40
23:BA:19:C:H2'	23:BA:20:C:C6	2.57	0.40
23:BA:224:G:H2'	23:BA:225:A:O4'	2.22	0.40
23:BA:288:C:H2'	23:BA:289:A:C8	2.56	0.40
23:BA:652(T):C:H2'	23:BA:652(U):G:C8	2.56	0.40
23:BA:883:G:H8	23:BA:883:G:O5'	2.04	0.40
23:BA:2125:G:N2	23:BA:2126:A:N6	2.69	0.40
23:BA:2251:G:C6	23:BA:2252:G:C6	3.09	0.40
23:BA:2791:C:C4	23:BA:2893:G:O4'	2.73	0.40
27:BF:103:LYS:H	27:BF:103:LYS:HG3	1.74	0.40
28:BG:36:LYS:HE3	28:BG:160:VAL:HG21	2.03	0.40
34:BQ:59:ARG:HB3	34:BQ:60:ARG:H	1.73	0.40
1:CA:115:G:H4'	1:CA:116:A:O5'	2.19	0.40
1:CA:145:G:C6	1:CA:146:G:C5	3.09	0.40
1:CA:489:C:C4	1:CA:490:G:N7	2.89	0.40
1:CA:628:G:O2'	1:CA:629:G:H5'	2.21	0.40
1:CA:693:G:H2'	1:CA:694:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:875:C:H5”	1:CA:876:G:OP2	2.21	0.40
1:CA:1091:U:C2	1:CA:1095:U:C4	3.09	0.40
1:CA:1095:U:OP2	1:CA:1108:G:N1	2.50	0.40
1:CA:1204:A:H5”	1:CA:1205:U:OP2	2.21	0.40
1:CA:1206:G:C2’	1:CA:1207:G:H5’	2.51	0.40
1:CA:1318:A:H4’	19:CS:10:PHE:CD2	2.56	0.40
2:CB:25:ASN:HA	2:CB:26:PRO:HD2	1.93	0.40
2:CB:94:ASN:HB3	2:CB:95:GLN:NE2	2.36	0.40
3:CC:54:ARG:HB3	3:CC:69:HIS:CD2	2.57	0.40
8:CH:134:ILE:HG22	8:CH:135:CYS:SG	2.61	0.40
9:CI:9:ARG:HA	9:CI:14:VAL:HA	2.03	0.40
19:CS:35:SER:HA	19:CS:37:ARG:HG2	2.03	0.40
23:DA:26:G:H1’	23:DA:515:A:H61	1.86	0.40
23:DA:652(B):A:O2’	23:DA:652(C):G:H5’	2.21	0.40
23:DA:686:G:N2	23:DA:788:A:H61	2.20	0.40
23:DA:994:C:OP2	38:DU:54:LYS:NZ	2.41	0.40
23:DA:1026:U:HO2’	23:DA:1027:A:P	2.43	0.40
23:DA:1417:C:H2’	23:DA:1418:G:O4’	2.21	0.40
23:DA:1655:A:H3’	23:DA:1656:C:H6	1.86	0.40
23:DA:1790:C:H2’	23:DA:1791:A:C5	2.56	0.40
23:DA:1971:A:H5”	56:DA:4209:HOH:O	2.19	0.40
23:DA:2110:G:C6	23:DA:2120:G:C8	3.09	0.40
23:DA:2464:C:N3	23:DA:2487:G:C2	2.89	0.40
23:DA:2791:C:H3’	23:DA:2791:C:OP2	2.21	0.40
30:DI:1:MET:HE2	30:DI:38:LEU:HD21	2.03	0.40
30:DI:72:LEU:C	30:DI:74:ASN:H	2.29	0.40
31:DN:85:ILE:HD12	31:DN:90:MET:HE1	2.02	0.40
33:DP:147:LEU:HD22	33:DP:147:LEU:HA	1.87	0.40
34:DQ:30:GLY:HA2	34:DQ:107:ALA:HB2	2.03	0.40
35:DR:62:ALA:O	35:DR:66:VAL:HG23	2.21	0.40
37:DT:109:GLU:O	37:DT:110:ILE:C	2.61	0.40
38:DU:101:ARG:C	38:DU:103:PRO:HD3	2.46	0.40
43:DZ:101:PRO:C	43:DZ:102:LEU:HD12	2.46	0.40
1:AA:35:G:H2’	1:AA:36:C:H6	1.86	0.40
1:AA:189(C):C:H2’	1:AA:189(D):C:O4’	2.21	0.40
1:AA:634:C:H2’	1:AA:635:G:H8	1.86	0.40
1:AA:690:G:C6	1:AA:691:G:C6	3.09	0.40
1:AA:693:G:H2’	1:AA:694:A:C8	2.56	0.40
1:AA:789:U:O2	1:AA:791:G:C8	2.74	0.40
1:AA:1345:U:OP1	9:AI:120:ARG:NH1	2.54	0.40
1:AA:1445:C:H2’	1:AA:1446:U:H5’	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1452:C:H6	1:AA:1452:C:H5"	1.86	0.40
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.21	0.40
4:AD:109:GLY:C	4:AD:111:ALA:N	2.78	0.40
4:AD:111:ALA:HB1	4:AD:116:GLN:OE1	2.21	0.40
8:AH:81:HIS:N	8:AH:138:TRP:O	2.54	0.40
11:AK:91:ARG:NH1	11:AK:110:ASP:OD1	2.55	0.40
23:BA:7:G:H2'	23:BA:8:A:O4'	2.20	0.40
23:BA:271(H):G:O2'	23:BA:271(I):G:P	2.79	0.40
23:BA:719:C:H6	23:BA:719:C:O5'	2.04	0.40
23:BA:1194:A:N7	56:BA:5296:HOH:O	2.37	0.40
23:BA:1224:C:O5'	23:BA:1224:C:H6	2.04	0.40
23:BA:1247:A:OP1	27:BF:95:ARG:NH2	2.46	0.40
23:BA:1450:G:H2'	23:BA:1450(A):C:C6	2.56	0.40
23:BA:1817:G:H2'	23:BA:1818:U:H5'	2.03	0.40
23:BA:1876:A:OP2	23:BA:1876:A:H8	2.04	0.40
23:BA:2228:G:C5	23:BA:2229:C:C4	3.09	0.40
23:BA:2241:A:N7	56:BA:4293:HOH:O	2.37	0.40
23:BA:2342:C:O2'	23:BA:2374:C:H5"	2.21	0.40
23:BA:2349:G:OP1	56:BA:3933:HOH:O	2.22	0.40
23:BA:2561:A:H2'	23:BA:2562:U:O4'	2.21	0.40
23:BA:2709:G:N2	56:BA:4848:HOH:O	2.54	0.40
23:BA:2892:A:C2'	23:BA:2893:G:H5'	2.51	0.40
24:BB:24:G:N7	24:BB:56:G:H2'	2.36	0.40
24:BB:90:A:N7	24:BB:91:C:H1'	2.36	0.40
25:BD:67:PHE:HB3	25:BD:153:ALA:H	1.86	0.40
25:BD:180:GLY:HA3	25:BD:275:LYS:HG2	2.03	0.40
29:BH:35:VAL:HA	29:BH:36:PRO:HD2	1.74	0.40
30:BI:134:PRO:C	30:BI:136:VAL:H	2.29	0.40
38:BU:101:ARG:C	38:BU:103:PRO:HD3	2.47	0.40
43:BZ:44:PHE:CE2	43:BZ:86:VAL:HG11	2.56	0.40
1:CA:78:G:H1	1:CA:91:C:H42	1.68	0.40
1:CA:318:G:H2'	1:CA:319:G:H8	1.85	0.40
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.56	0.40
1:CA:377:G:H2'	1:CA:378:G:H8	1.82	0.40
1:CA:536:C:H2'	1:CA:537:G:C8	2.56	0.40
1:CA:620:C:H2'	1:CA:621:A:O4'	2.21	0.40
1:CA:918:A:H2'	1:CA:919:A:O4'	2.21	0.40
1:CA:959:A:H2'	1:CA:960:U:H4'	2.02	0.40
1:CA:997:U:O5'	1:CA:997:U:H6	2.04	0.40
1:CA:1089:G:C6	1:CA:1090:U:C4	3.09	0.40
1:CA:1287:A:N6	1:CA:1370:G:H21	2.18	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1308:U:H5'	13:CM:110:ARG:CZ	2.51	0.40
2:CB:70:PHE:HE2	2:CB:163:PHE:HD2	1.69	0.40
3:CC:23:TYR:HE2	10:CJ:95:GLU:CD	2.30	0.40
5:CE:102:ALA:O	5:CE:107:ARG:NH1	2.54	0.40
8:CH:38:ILE:HG13	8:CH:118:VAL:HG12	2.03	0.40
10:CJ:45:ARG:HD3	10:CJ:65:LEU:HD23	2.02	0.40
16:CP:39:TYR:CG	16:CP:73:LEU:HD13	2.56	0.40
20:CT:89:ARG:HH22	20:CT:104:LEU:H	1.67	0.40
23:DA:28:A:C5	23:DA:29:U:C5	3.09	0.40
23:DA:31:C:C4	23:DA:32:C:C5	3.10	0.40
23:DA:478:A:N6	23:DA:502:A:N6	2.69	0.40
23:DA:610:G:N2	23:DA:619:G:H1'	2.35	0.40
23:DA:719:C:H2'	23:DA:720:C:H6	1.87	0.40
23:DA:729:G:OP1	25:DD:10:THR:OG1	2.31	0.40
23:DA:895:U:H5"	23:DA:895:U:H6	1.86	0.40
23:DA:1512:U:H2'	23:DA:1513:C:H6	1.87	0.40
23:DA:1971:A:C4	25:DD:241:PRO:HD3	2.56	0.40
23:DA:2100:G:C6	23:DA:2101:G:C5	3.09	0.40
23:DA:2360:A:H8	23:DA:2360:A:O5'	2.05	0.40
23:DA:2492:U:H2'	23:DA:2493:U:H6	1.83	0.40
23:DA:2584:U:H2'	23:DA:2585:U:H2'	2.02	0.40
23:DA:2714:G:O2'	23:DA:2715:C:H5'	2.20	0.40
25:DD:275:LYS:O	25:DD:275:LYS:HG3	2.21	0.40
27:DF:93:LYS:HD3	27:DF:93:LYS:HA	1.85	0.40
27:DF:202:PHE:O	27:DF:205:ARG:HB3	2.21	0.40
30:DI:45:LYS:O	30:DI:48:GLU:N	2.54	0.40
30:DI:134:PRO:C	30:DI:136:VAL:N	2.80	0.40
31:DN:12:ARG:HD3	31:DN:50:ASP:OD2	2.21	0.40
33:DP:86:LYS:HB3	33:DP:117:GLU:O	2.22	0.40
1:AA:91:C:H6	1:AA:91:C:O5'	2.04	0.40
1:AA:127:G:O2'	17:AQ:2:PRO:O	2.39	0.40
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	2.21	0.40
1:AA:566:G:H4'	1:AA:567:G:OP1	2.21	0.40
1:AA:855:G:C6	1:AA:856:C:C4	3.09	0.40
1:AA:875:C:C4	1:AA:876:G:N7	2.90	0.40
1:AA:1002:G:C2	1:AA:1003:G:H1'	2.57	0.40
1:AA:1030(C):G:H8	1:AA:1030(C):G:H3'	1.86	0.40
1:AA:1074:G:N3	1:AA:1102:A:C2	2.90	0.40
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.20	0.40
4:AD:22:LYS:HB3	4:AD:26:CYS:HB2	2.02	0.40
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:113:GLU:O	7:AG:119:ARG:HB2	2.20	0.40
8:AH:36:LEU:O	8:AH:45:ILE:HD11	2.21	0.40
9:AI:5:TYR:HE1	9:AI:16:ARG:HA	1.87	0.40
9:AI:78:LYS:O	9:AI:82:ALA:HB3	2.22	0.40
11:AK:110:ASP:CB	18:AR:85:LEU:HD12	2.52	0.40
20:AT:53:LEU:O	20:AT:56:MET:HG3	2.21	0.40
23:BA:530:G:O6	23:BA:2023:G:OP1	2.39	0.40
23:BA:704:G:H1'	23:BA:726:G:N2	2.37	0.40
23:BA:884:C:H2'	23:BA:885:C:O4'	2.22	0.40
23:BA:1022:G:C5	23:BA:1140:C:C4	3.09	0.40
23:BA:1647:G:P	23:BA:1647:G:H3'	2.60	0.40
23:BA:1996:C:H4'	23:BA:1997:G:OP1	2.21	0.40
23:BA:2296:U:N3	23:BA:2333:A:C2	2.89	0.40
23:BA:2301:C:H2'	23:BA:2302:G:H8	1.86	0.40
23:BA:2317:C:C2'	23:BA:2318:G:H5'	2.39	0.40
24:BB:8:U:H5'	24:BB:9:G:OP2	2.21	0.40
25:BD:183:ARG:HG3	25:BD:270:ILE:HG12	2.03	0.40
27:BF:34:TRP:NE1	33:BP:8:PRO:HD3	2.36	0.40
28:BG:20:ILE:O	28:BG:24:GLY:N	2.46	0.40
35:BR:16:HIS:O	35:BR:17:ARG:C	2.63	0.40
35:BR:53:HIS:O	35:BR:56:LYS:HB2	2.20	0.40
36:BS:32:LEU:HD23	36:BS:32:LEU:HA	1.85	0.40
37:BT:99:LEU:HD22	37:BT:101:PHE:HE1	1.85	0.40
43:BZ:76:LEU:HD12	43:BZ:76:LEU:HA	1.64	0.40
1:CA:127:G:O2'	17:CQ:2:PRO:O	2.39	0.40
1:CA:665:A:H2'	1:CA:725:G:N2	2.36	0.40
1:CA:729:A:H2'	1:CA:730:G:H8	1.87	0.40
1:CA:1250:A:N1	1:CA:1251:A:N1	2.70	0.40
1:CA:1265:G:N2	1:CA:1271:G:C4	2.90	0.40
1:CA:1270:C:H6	1:CA:1270:C:O5'	2.05	0.40
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.56	0.40
1:CA:1300:G:O2'	1:CA:1301:U:O5'	2.33	0.40
1:CA:1300:G:O6	1:CA:1334:G:H3'	2.21	0.40
1:CA:1392:G:N2	1:CA:1502:A:H8	2.19	0.40
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.86	0.40
1:CA:1429:C:O2'	23:DA:1704:G:H5'	2.21	0.40
3:CC:52:LEU:HD23	3:CC:52:LEU:O	2.21	0.40
3:CC:131:ARG:HH21	3:CC:166:GLU:CD	2.29	0.40
4:CD:18:LYS:HG3	4:CD:31:CYS:SG	2.60	0.40
11:CK:34:ASP:OD2	11:CK:38:ASN:N	2.54	0.40
13:CM:86:CYS:SG	13:CM:88:ARG:HG2	2.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:123:G:H2'	23:DA:124:G:O4'	2.21	0.40
23:DA:275:G:H2'	23:DA:276:A:H5'	2.04	0.40
23:DA:303:U:H2'	23:DA:304:G:H8	1.86	0.40
23:DA:414:C:O2'	23:DA:415:A:H5'	2.22	0.40
23:DA:996:A:N6	23:DA:1160:G:C6	2.90	0.40
23:DA:1558:A:N3	23:DA:1558:A:O4'	2.52	0.40
23:DA:1864:U:H5"	23:DA:2410:G:O2'	2.22	0.40
23:DA:2286:A:H4'	23:DA:2287:A:O4'	2.22	0.40
24:DB:60:C:C2	24:DB:61:G:C8	3.09	0.40
26:DE:101:ARG:HD2	26:DE:169:ASN:CG	2.46	0.40
26:DE:203:LYS:CB	26:DE:204:ALA:HA	2.51	0.40
27:DF:170:LEU:HA	27:DF:171:PRO:HD3	1.90	0.40
28:DG:97:ASP:O	28:DG:101:ILE:HG13	2.22	0.40
31:DN:67:LEU:O	31:DN:88:GLU:HG3	2.21	0.40
33:DP:106:LEU:HD23	33:DP:106:LEU:HA	1.88	0.40
35:DR:67:LEU:HD13	35:DR:67:LEU:HA	1.72	0.40
36:DS:61:ASN:O	36:DS:62:LYS:C	2.63	0.40
40:DW:59:VAL:HG12	40:DW:60:ASN:HD22	1.86	0.40
43:DZ:92:SER:HB2	43:DZ:94:GLU:HG2	2.03	0.40
49:D5:36:CYS:O	49:D5:37:LYS:HD3	2.22	0.40
1:AA:519:C:H2'	1:AA:520:A:C8	2.55	0.40
1:AA:628:G:O2'	1:AA:629:G:H5'	2.21	0.40
1:AA:663:A:C2'	1:AA:664:G:H5'	2.51	0.40
1:AA:683:G:C2	1:AA:708:C:C2	3.09	0.40
1:AA:827:U:H5"	1:AA:828:A:OP2	2.20	0.40
1:AA:870:U:H3'	56:AA:1963:HOH:O	2.21	0.40
1:AA:1005:A:OP2	1:AA:1005:A:C8	2.75	0.40
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.70	0.40
1:AA:1097:C:H1'	1:AA:1170:A:H1'	2.03	0.40
1:AA:1151:A:C5'	10:AJ:41:PRO:HA	2.51	0.40
3:AC:30:ARG:HH21	14:AN:35:ARG:HA	1.86	0.40
3:AC:74:GLY:C	3:AC:76:VAL:N	2.78	0.40
5:AE:90:VAL:HG23	5:AE:121:LYS:O	2.21	0.40
5:AE:127:ASN:HA	5:AE:128:PRO:HD3	1.85	0.40
8:AH:30:ARG:O	8:AH:34:GLU:HB2	2.21	0.40
9:AI:103:THR:O	9:AI:103:THR:HG23	2.21	0.40
15:AO:21:ASP:OD2	15:AO:24:SER:HB3	2.21	0.40
19:AS:36:ARG:HH22	19:AS:76:PRO:HA	1.87	0.40
23:BA:528:A:N1	23:BA:2043:C:O5'	2.55	0.40
23:BA:563:G:H5'	23:BA:572:A:H4'	2.04	0.40
23:BA:921:G:H2'	23:BA:922:U:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1448:G:H5”	23:BA:1542:A:OP1	2.21	0.40
23:BA:2409:G:C6	23:BA:2410:G:C5	3.09	0.40
23:BA:2466:C:C2	23:BA:2485:G:C2	3.09	0.40
23:BA:2628:C:H5”	23:BA:2629:A:O5’	2.21	0.40
23:BA:2818:G:O2’	23:BA:2819:G:H5’	2.21	0.40
28:BG:97:ASP:O	28:BG:101:ILE:HG13	2.22	0.40
35:BR:2:ARG:CZ	35:BR:2:ARG:HB3	2.46	0.40
43:BZ:70:LEU:HD23	43:BZ:70:LEU:HA	1.93	0.40
1:CA:35:G:N3	12:CL:118:SER:HB2	2.37	0.40
1:CA:68:G:N2	1:CA:152:A:O2’	2.55	0.40
1:CA:784:C:H4’	23:DA:1837:C:OP1	2.21	0.40
1:CA:794:A:H2’	1:CA:795:C:O4’	2.21	0.40
1:CA:1072:G:C2	1:CA:1104:G:C2	3.10	0.40
1:CA:1175:G:C2	1:CA:1176:A:C4	3.10	0.40
1:CA:1256:A:H5”	1:CA:1257:U:OP1	2.21	0.40
1:CA:1442(A):G:C3’	1:CA:1442(B):A:H5”	2.51	0.40
1:CA:1446:U:H4’	1:CA:1447:A:C6	2.56	0.40
4:CD:138:TYR:HD2	4:CD:138:TYR:C	2.30	0.40
6:CF:89:MET:HE1	6:CF:91:VAL:HG22	2.04	0.40
7:CG:38:LEU:O	7:CG:42:ILE:HG12	2.22	0.40
9:CI:52:ALA:HB2	9:CI:101:PHE:CE1	2.56	0.40
17:CQ:13:ASP:HB3	17:CQ:19:VAL:HG12	2.03	0.40
23:DA:315:G:H2’	23:DA:316:C:H6	1.87	0.40
23:DA:792:G:O2’	23:DA:2440:C:N3	2.51	0.40
23:DA:994:C:OP1	38:DU:53:ARG:NH2	2.53	0.40
23:DA:1579:A:H2’	23:DA:1580:A:C8	2.56	0.40
23:DA:1602:U:O4	56:DA:3939:HOH:O	2.21	0.40
23:DA:1606:G:H5”	23:DA:1607:C:OP1	2.21	0.40
23:DA:1722:A:C2	23:DA:1740:G:C8	3.09	0.40
23:DA:1756:G:H4’	23:DA:1758:G:O4’	2.22	0.40
23:DA:1918:A:O2’	23:DA:1920:C:N4	2.54	0.40
23:DA:2099:U:H3	23:DA:2190:G:H1	1.68	0.40
23:DA:2287:A:N6	23:DA:2344:U:N3	2.56	0.40
23:DA:2427:C:H5”	23:DA:2428:G:OP1	2.22	0.40
26:DE:9:VAL:HB	37:DT:3:ARG:HG2	2.02	0.40
26:DE:179:GLU:HB3	26:DE:181:LEU:CD2	2.51	0.40
28:DG:16:ARG:NE	28:DG:31:VAL:HG21	2.33	0.40
31:DN:47:ALA:HB2	31:DN:112:LEU:CD1	2.45	0.40
34:DQ:35:VAL:HG23	34:DQ:101:ARG:O	2.20	0.40
34:DQ:42:ILE:CG2	34:DQ:47:ILE:HG13	2.51	0.40
39:DV:24:LYS:HA	39:DV:92:THR:OG1	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:D0:14:ARG:HG3	44:D0:14:ARG:NH1	2.36	0.40
48:D4:9:LEU:HD22	48:D4:26:SER:HA	2.02	0.40
1:AA:560:U:H4'	1:AA:561:U:C5'	2.51	0.40
1:AA:1041:A:C2'	1:AA:1042:G:H5'	2.52	0.40
1:AA:1193:G:H4'	5:AE:25:ARG:NH2	2.37	0.40
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.51	0.40
1:AA:1360:A:C8	14:AN:18:VAL:HG12	2.56	0.40
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.03	0.40
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	2.03	0.40
9:AI:67:GLY:O	9:AI:73:GLN:HG3	2.22	0.40
11:AK:82:VAL:O	11:AK:109:VAL:HG23	2.21	0.40
13:AM:92:HIS:HA	13:AM:110:ARG:HH22	1.86	0.40
13:AM:92:HIS:CE1	13:AM:98:VAL:HG21	2.56	0.40
18:AR:56:THR:CB	18:AR:58:LEU:HD13	2.52	0.40
23:BA:271(S):G:C6	23:BA:271(T):C:C4	3.09	0.40
23:BA:314:A:H2'	23:BA:315:G:H5'	2.03	0.40
23:BA:515:A:H1'	23:BA:581:C:H1'	2.04	0.40
23:BA:646:A:H5'	56:BA:5354:HOH:O	2.21	0.40
23:BA:1019:U:H3	23:BA:1142(A):A:N6	2.06	0.40
23:BA:1154:G:H8	23:BA:1154:G:O5'	2.04	0.40
23:BA:1260:G:C6	23:BA:1261:C:C4	3.10	0.40
23:BA:1406:U:H2'	23:BA:1407:C:H6	1.83	0.40
23:BA:2291:U:H2'	23:BA:2292:C:C6	2.57	0.40
23:BA:2762:G:H2'	23:BA:2763:G:H5'	2.04	0.40
23:BA:2791:C:H2'	23:BA:2792:G:C8	2.57	0.40
56:BA:4338:HOH:O	45:B1:18:ILE:N	2.48	0.40
24:BB:77:U:H4'	43:BZ:84:GLU:OE1	2.22	0.40
24:BB:117:G:O5'	24:BB:117:G:H8	2.04	0.40
26:BE:38:THR:O	26:BE:42:ASP:N	2.51	0.40
26:BE:97:LYS:HA	26:BE:98:PRO:HD3	1.96	0.40
26:BE:203:LYS:CB	26:BE:204:ALA:HA	2.52	0.40
28:BG:125:PHE:CE1	28:BG:170:ARG:HG2	2.57	0.40
30:BI:37:VAL:HG12	30:BI:38:LEU:N	2.36	0.40
42:BY:14:LEU:HD12	42:BY:23:ARG:O	2.21	0.40
48:B4:39:CYS:O	48:B4:40:HIS:C	2.65	0.40
1:CA:35:G:O2'	12:CL:121:GLY:HA2	2.21	0.40
1:CA:105:G:H2'	1:CA:106:C:H6	1.87	0.40
1:CA:126:G:OP1	1:CA:605:U:O2'	2.39	0.40
1:CA:319:G:C2	1:CA:320:C:C2	3.10	0.40
1:CA:460:G:N2	1:CA:471:G:N7	2.69	0.40
1:CA:947:G:O2'	1:CA:1306:A:H4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.56	0.40
1:CA:1313:U:H3	1:CA:1324:A:H61	1.69	0.40
1:CA:1336:C:H4'	1:CA:1337:G:O4'	2.22	0.40
1:CA:1346:A:H4'	1:CA:1347:G:OP1	2.21	0.40
2:CB:14:GLY:HA3	2:CB:16:HIS:CE1	2.56	0.40
2:CB:80:ILE:HG21	2:CB:208:ILE:CG2	2.51	0.40
2:CB:100:GLY:HA3	2:CB:104:ASN:HB3	2.03	0.40
8:CH:112:LEU:HB3	8:CH:133:LEU:HA	2.03	0.40
10:CJ:40:LEU:HG	10:CJ:69:ASN:O	2.21	0.40
13:CM:105:THR:OG1	13:CM:106:ASN:N	2.52	0.40
16:CP:40:ASP:HA	16:CP:41:PRO:HD2	1.93	0.40
22:CX:68:GLN:O	22:CX:72:ALA:HB3	2.22	0.40
23:DA:26:G:C6	23:DA:27:G:N1	2.89	0.40
23:DA:65:C:O2'	23:DA:456:C:O2	2.39	0.40
23:DA:94:C:O2	23:DA:94:C:H2'	2.20	0.40
23:DA:194:G:H2'	23:DA:195:A:O4'	2.21	0.40
23:DA:705:A:C2	23:DA:727:A:H1'	2.57	0.40
23:DA:1204:A:N6	23:DA:1240:U:H2'	2.37	0.40
23:DA:1676:A:C8	56:DA:4368:HOH:O	2.72	0.40
23:DA:2028:U:H2'	23:DA:2029:G:O4'	2.22	0.40
23:DA:2070:G:H2'	23:DA:2071:A:C8	2.57	0.40
23:DA:2139:C:H2'	23:DA:2140:C:O4'	2.22	0.40
23:DA:2406:U:OP2	23:DA:2406:U:H6	2.04	0.40
23:DA:2576:G:O2'	23:DA:2579:C:OP2	2.29	0.40
23:DA:2729:G:H2'	23:DA:2730:C:C6	2.56	0.40
24:DB:23:G:H1	24:DB:60:C:H42	1.69	0.40
25:DD:154:LYS:HB2	25:DD:155:LEU:HD12	2.03	0.40
43:DZ:144:LEU:HD21	43:DZ:150:LEU:HG	2.03	0.40
51:D7:47:ARG:HH11	51:D7:47:ARG:CG	2.33	0.40
51:D7:48:LYS:HB2	51:D7:48:LYS:HE2	1.88	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1594:G:OP1	56:BB:323:HOH:O[1_455]	2.18	0.02
30:BI:91:SER:OG	1:CA:368:U:OP1[3_654]	2.19	0.01

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	228/256 (89%)	199 (87%)	28 (12%)	1 (0%)	30 61
2	CB	227/256 (89%)	197 (87%)	29 (13%)	1 (0%)	30 61
3	AC	204/239 (85%)	175 (86%)	28 (14%)	1 (0%)	24 57
3	CC	204/239 (85%)	177 (87%)	27 (13%)	0	100 100
4	AD	206/209 (99%)	190 (92%)	16 (8%)	0	100 100
4	CD	206/209 (99%)	190 (92%)	16 (8%)	0	100 100
5	AE	146/162 (90%)	134 (92%)	12 (8%)	0	100 100
5	CE	146/162 (90%)	135 (92%)	10 (7%)	1 (1%)	18 49
6	AF	98/101 (97%)	97 (99%)	1 (1%)	0	100 100
6	CF	98/101 (97%)	96 (98%)	2 (2%)	0	100 100
7	AG	153/156 (98%)	138 (90%)	13 (8%)	2 (1%)	9 35
7	CG	153/156 (98%)	132 (86%)	20 (13%)	1 (1%)	18 49
8	AH	136/138 (99%)	131 (96%)	5 (4%)	0	100 100
8	CH	136/138 (99%)	131 (96%)	5 (4%)	0	100 100
9	AI	123/128 (96%)	112 (91%)	10 (8%)	1 (1%)	16 47
9	CI	123/128 (96%)	111 (90%)	11 (9%)	1 (1%)	16 47
10	AJ	94/105 (90%)	78 (83%)	13 (14%)	3 (3%)	3 18
10	CJ	94/105 (90%)	76 (81%)	16 (17%)	2 (2%)	5 25
11	AK	112/129 (87%)	106 (95%)	6 (5%)	0	100 100
11	CK	112/129 (87%)	106 (95%)	6 (5%)	0	100 100
12	AL	120/132 (91%)	110 (92%)	9 (8%)	1 (1%)	16 47
12	CL	120/132 (91%)	109 (91%)	10 (8%)	1 (1%)	16 47
13	AM	112/126 (89%)	89 (80%)	21 (19%)	2 (2%)	6 28
13	CM	112/126 (89%)	87 (78%)	21 (19%)	4 (4%)	2 16
14	AN	58/61 (95%)	47 (81%)	9 (16%)	2 (3%)	3 16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
14	CN	58/61 (95%)	52 (90%)	6 (10%)	0	100 100
15	AO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	5 23
15	CO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	5 23
16	AP	80/88 (91%)	75 (94%)	4 (5%)	1 (1%)	9 35
16	CP	80/88 (91%)	74 (92%)	5 (6%)	1 (1%)	9 35
17	AQ	97/105 (92%)	90 (93%)	7 (7%)	0	100 100
17	CQ	97/105 (92%)	89 (92%)	8 (8%)	0	100 100
18	AR	66/88 (75%)	63 (96%)	3 (4%)	0	100 100
18	CR	66/88 (75%)	63 (96%)	3 (4%)	0	100 100
19	AS	79/93 (85%)	67 (85%)	11 (14%)	1 (1%)	9 35
19	CS	79/93 (85%)	65 (82%)	13 (16%)	1 (1%)	9 35
20	AT	85/106 (80%)	78 (92%)	7 (8%)	0	100 100
20	CT	95/106 (90%)	84 (88%)	8 (8%)	3 (3%)	3 18
21	AU	21/27 (78%)	19 (90%)	2 (10%)	0	100 100
21	CU	21/27 (78%)	20 (95%)	1 (5%)	0	100 100
22	AX	93/101 (92%)	79 (85%)	13 (14%)	1 (1%)	11 39
22	CX	93/101 (92%)	84 (90%)	9 (10%)	0	100 100
25	BD	273/276 (99%)	260 (95%)	12 (4%)	1 (0%)	30 61
25	DD	273/276 (99%)	259 (95%)	13 (5%)	1 (0%)	30 61
26	BE	202/206 (98%)	190 (94%)	10 (5%)	2 (1%)	12 41
26	DE	202/206 (98%)	188 (93%)	12 (6%)	2 (1%)	12 41
27	BF	201/210 (96%)	195 (97%)	6 (3%)	0	100 100
27	DF	201/210 (96%)	193 (96%)	7 (4%)	1 (0%)	24 57
28	BG	179/182 (98%)	150 (84%)	28 (16%)	1 (1%)	21 52
28	DG	179/182 (98%)	150 (84%)	29 (16%)	0	100 100
29	BH	172/180 (96%)	163 (95%)	8 (5%)	1 (1%)	21 52
29	DH	172/180 (96%)	162 (94%)	9 (5%)	1 (1%)	21 52
30	BI	144/148 (97%)	121 (84%)	21 (15%)	2 (1%)	9 34
30	DI	144/148 (97%)	123 (85%)	19 (13%)	2 (1%)	9 34
31	BN	138/140 (99%)	129 (94%)	6 (4%)	3 (2%)	5 24
31	DN	138/140 (99%)	128 (93%)	7 (5%)	3 (2%)	5 24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	BO	120/122 (98%)	117 (98%)	3 (2%)	0	100	100
32	DO	120/122 (98%)	118 (98%)	2 (2%)	0	100	100
33	BP	147/150 (98%)	137 (93%)	10 (7%)	0	100	100
33	DP	147/150 (98%)	136 (92%)	11 (8%)	0	100	100
34	BQ	139/141 (99%)	130 (94%)	8 (6%)	1 (1%)	18	49
34	DQ	139/141 (99%)	130 (94%)	8 (6%)	1 (1%)	18	49
35	BR	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
35	DR	116/118 (98%)	110 (95%)	6 (5%)	0	100	100
36	BS	108/112 (96%)	101 (94%)	7 (6%)	0	100	100
36	DS	108/112 (96%)	101 (94%)	7 (6%)	0	100	100
37	BT	129/146 (88%)	127 (98%)	2 (2%)	0	100	100
37	DT	129/146 (88%)	126 (98%)	3 (2%)	0	100	100
38	BU	114/118 (97%)	114 (100%)	0	0	100	100
38	DU	114/118 (97%)	114 (100%)	0	0	100	100
39	BV	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
39	DV	99/101 (98%)	94 (95%)	5 (5%)	0	100	100
40	BW	110/113 (97%)	108 (98%)	1 (1%)	1 (1%)	14	44
40	DW	110/113 (97%)	107 (97%)	3 (3%)	0	100	100
41	BX	93/96 (97%)	88 (95%)	5 (5%)	0	100	100
41	DX	93/96 (97%)	88 (95%)	5 (5%)	0	100	100
42	BY	105/110 (96%)	94 (90%)	10 (10%)	1 (1%)	12	41
42	DY	105/110 (96%)	94 (90%)	10 (10%)	1 (1%)	12	41
43	BZ	199/206 (97%)	183 (92%)	14 (7%)	2 (1%)	12	41
43	DZ	196/206 (95%)	180 (92%)	14 (7%)	2 (1%)	12	41
44	B0	74/85 (87%)	72 (97%)	2 (3%)	0	100	100
44	D0	74/85 (87%)	73 (99%)	1 (1%)	0	100	100
45	B1	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	11	39
45	D1	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	11	39
46	B2	68/72 (94%)	64 (94%)	4 (6%)	0	100	100
46	D2	68/72 (94%)	63 (93%)	5 (7%)	0	100	100
47	B3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
47	D3	57/60 (95%)	55 (96%)	2 (4%)	0	100 100
48	B4	44/71 (62%)	36 (82%)	8 (18%)	0	100 100
48	D4	44/71 (62%)	36 (82%)	8 (18%)	0	100 100
49	B5	57/60 (95%)	52 (91%)	5 (9%)	0	100 100
49	D5	57/60 (95%)	52 (91%)	5 (9%)	0	100 100
50	B6	51/54 (94%)	48 (94%)	3 (6%)	0	100 100
50	D6	51/54 (94%)	48 (94%)	3 (6%)	0	100 100
51	B7	46/49 (94%)	43 (94%)	2 (4%)	1 (2%)	5 24
51	D7	46/49 (94%)	43 (94%)	2 (4%)	1 (2%)	5 24
52	B8	62/65 (95%)	59 (95%)	3 (5%)	0	100 100
52	D8	62/65 (95%)	59 (95%)	3 (5%)	0	100 100
53	B9	34/37 (92%)	34 (100%)	0	0	100 100
53	D9	34/37 (92%)	33 (97%)	1 (3%)	0	100 100
All	All	11552/12330 (94%)	10628 (92%)	855 (7%)	69 (1%)	21 52

All (69) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
20	CT	100	ILE
12	AL	28	LYS
14	AN	15	LYS
16	AP	79	VAL
12	CL	28	LYS
16	CP	79	VAL
15	AO	75	PRO
19	AS	13	ASP
31	BN	5	VAL
34	BQ	135	ASP
9	CI	102	LEU
10	CJ	80	LYS
13	CM	88	ARG
15	CO	75	PRO
31	DN	18	ALA
34	DQ	135	ASP
7	AG	56	GLN
9	AI	119	ALA
10	AJ	34	VAL

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Mol	Chain	Res	Type
15	AO	76	GLU
30	BI	86	THR
31	BN	4	TYR
43	BZ	192	ALA
45	B1	3	LYS
51	B7	46	VAL
2	CB	150	SER
15	CO	76	GLU
31	DN	4	TYR
31	DN	5	VAL
43	DZ	192	ALA
45	D1	3	LYS
51	D7	46	VAL
2	AB	150	SER
14	AN	17	LYS
29	BH	170	ARG
31	BN	18	ALA
7	CG	100	ALA
10	CJ	41	PRO
13	CM	87	TYR
29	DH	170	ARG
30	DI	10	GLU
3	AC	62	ASP
7	AG	100	ALA
30	BI	107	VAL
5	CE	21	ALA
20	CT	71	THR
27	DF	130	ALA
10	AJ	75	ILE
19	CS	45	VAL
30	DI	107	VAL
22	AX	56	VAL
26	BE	52	LEU
26	BE	72	VAL
26	DE	52	LEU
26	DE	72	VAL
13	AM	84	ILE
25	BD	3	VAL
40	BW	80	PRO
42	BY	3	VAL
13	CM	10	PRO
25	DD	3	VAL

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Mol	Chain	Res	Type
42	DY	3	VAL
28	BG	87	PRO
13	CM	7	VAL
43	DZ	161	VAL
10	AJ	90	LEU
13	AM	7	VAL
43	BZ	161	VAL
20	CT	98	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	178/220 (81%)	133 (75%)	45 (25%)	0 2
2	CB	177/220 (80%)	135 (76%)	42 (24%)	1 3
3	AC	114/188 (61%)	79 (69%)	35 (31%)	0 0
3	CC	114/188 (61%)	86 (75%)	28 (25%)	1 3
4	AD	141/181 (78%)	118 (84%)	23 (16%)	2 11
4	CD	141/181 (78%)	119 (84%)	22 (16%)	2 12
5	AE	108/123 (88%)	82 (76%)	26 (24%)	1 3
5	CE	108/123 (88%)	84 (78%)	24 (22%)	1 4
6	AF	76/90 (84%)	60 (79%)	16 (21%)	1 5
6	CF	76/90 (84%)	57 (75%)	19 (25%)	0 2
7	AG	103/127 (81%)	74 (72%)	29 (28%)	0 1
7	CG	103/127 (81%)	71 (69%)	32 (31%)	0 0
8	AH	103/119 (87%)	81 (79%)	22 (21%)	1 5
8	CH	103/119 (87%)	83 (81%)	20 (19%)	1 7
9	AI	62/99 (63%)	47 (76%)	15 (24%)	1 3
9	CI	62/99 (63%)	48 (77%)	14 (23%)	1 4
10	AJ	53/92 (58%)	35 (66%)	18 (34%)	0 0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
10	CJ	53/92 (58%)	37 (70%)	16 (30%)	0 0
11	AK	81/99 (82%)	68 (84%)	13 (16%)	2 12
11	CK	81/99 (82%)	68 (84%)	13 (16%)	2 12
12	AL	91/109 (84%)	73 (80%)	18 (20%)	1 6
12	CL	91/109 (84%)	75 (82%)	16 (18%)	2 9
13	AM	64/101 (63%)	43 (67%)	21 (33%)	0 0
13	CM	64/101 (63%)	48 (75%)	16 (25%)	0 2
14	AN	46/50 (92%)	35 (76%)	11 (24%)	1 3
14	CN	46/50 (92%)	32 (70%)	14 (30%)	0 0
15	AO	77/80 (96%)	65 (84%)	12 (16%)	2 12
15	CO	77/80 (96%)	64 (83%)	13 (17%)	2 10
16	AP	63/74 (85%)	45 (71%)	18 (29%)	0 1
16	CP	63/74 (85%)	45 (71%)	18 (29%)	0 1
17	AQ	94/97 (97%)	77 (82%)	17 (18%)	2 8
17	CQ	94/97 (97%)	78 (83%)	16 (17%)	2 10
18	AR	49/77 (64%)	43 (88%)	6 (12%)	5 20
18	CR	49/77 (64%)	42 (86%)	7 (14%)	3 14
19	AS	43/80 (54%)	27 (63%)	16 (37%)	0 0
19	CS	43/80 (54%)	33 (77%)	10 (23%)	1 4
20	AT	64/82 (78%)	52 (81%)	12 (19%)	1 7
20	CT	65/82 (79%)	53 (82%)	12 (18%)	1 8
21	AU	18/22 (82%)	12 (67%)	6 (33%)	0 0
21	CU	18/22 (82%)	11 (61%)	7 (39%)	0 0
22	AX	45/87 (52%)	29 (64%)	16 (36%)	0 0
22	CX	38/87 (44%)	22 (58%)	16 (42%)	0 0
25	BD	215/218 (99%)	174 (81%)	41 (19%)	1 7
25	DD	215/218 (99%)	176 (82%)	39 (18%)	2 8
26	BE	163/166 (98%)	127 (78%)	36 (22%)	1 4
26	DE	163/166 (98%)	127 (78%)	36 (22%)	1 4
27	BF	159/166 (96%)	129 (81%)	30 (19%)	1 7
27	DF	159/166 (96%)	129 (81%)	30 (19%)	1 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
28	BG	128/156 (82%)	109 (85%)	19 (15%)	3 13
28	DG	128/156 (82%)	107 (84%)	21 (16%)	2 11
29	BH	141/148 (95%)	123 (87%)	18 (13%)	4 18
29	DH	141/148 (95%)	119 (84%)	22 (16%)	2 12
30	BI	98/124 (79%)	76 (78%)	22 (22%)	1 4
30	DI	74/124 (60%)	57 (77%)	17 (23%)	1 4
31	BN	117/119 (98%)	95 (81%)	22 (19%)	1 7
31	DN	117/119 (98%)	92 (79%)	25 (21%)	1 5
32	BO	98/100 (98%)	82 (84%)	16 (16%)	2 11
32	DO	98/100 (98%)	82 (84%)	16 (16%)	2 11
33	BP	114/116 (98%)	94 (82%)	20 (18%)	2 9
33	DP	114/116 (98%)	94 (82%)	20 (18%)	2 9
34	BQ	111/111 (100%)	93 (84%)	18 (16%)	2 11
34	DQ	111/111 (100%)	93 (84%)	18 (16%)	2 11
35	BR	101/101 (100%)	81 (80%)	20 (20%)	1 6
35	DR	101/101 (100%)	79 (78%)	22 (22%)	1 5
36	BS	84/88 (96%)	64 (76%)	20 (24%)	1 3
36	DS	84/88 (96%)	67 (80%)	17 (20%)	1 5
37	BT	110/127 (87%)	90 (82%)	20 (18%)	2 8
37	DT	110/127 (87%)	88 (80%)	22 (20%)	1 6
38	BU	93/94 (99%)	76 (82%)	17 (18%)	2 8
38	DU	93/94 (99%)	77 (83%)	16 (17%)	2 10
39	BV	80/82 (98%)	60 (75%)	20 (25%)	0 2
39	DV	80/82 (98%)	58 (72%)	22 (28%)	0 1
40	BW	89/92 (97%)	77 (86%)	12 (14%)	4 16
40	DW	89/92 (97%)	78 (88%)	11 (12%)	4 19
41	BX	75/78 (96%)	70 (93%)	5 (7%)	15 43
41	DX	75/78 (96%)	69 (92%)	6 (8%)	11 37
42	BY	80/91 (88%)	61 (76%)	19 (24%)	1 3
42	DY	80/91 (88%)	61 (76%)	19 (24%)	1 3
43	BZ	159/179 (89%)	132 (83%)	27 (17%)	2 10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
43	DZ	159/179 (89%)	131 (82%)	28 (18%)	2 9
44	B0	59/67 (88%)	51 (86%)	8 (14%)	3 16
44	D0	59/67 (88%)	51 (86%)	8 (14%)	3 16
45	B1	78/83 (94%)	65 (83%)	13 (17%)	2 10
45	D1	78/83 (94%)	65 (83%)	13 (17%)	2 10
46	B2	65/67 (97%)	54 (83%)	11 (17%)	2 10
46	D2	65/67 (97%)	54 (83%)	11 (17%)	2 10
47	B3	49/52 (94%)	42 (86%)	7 (14%)	3 14
47	D3	49/52 (94%)	41 (84%)	8 (16%)	2 11
48	B4	39/63 (62%)	31 (80%)	8 (20%)	1 5
48	D4	39/63 (62%)	31 (80%)	8 (20%)	1 5
49	B5	50/52 (96%)	43 (86%)	7 (14%)	3 15
49	D5	50/52 (96%)	42 (84%)	8 (16%)	2 12
50	B6	50/52 (96%)	37 (74%)	13 (26%)	0 2
50	D6	50/52 (96%)	39 (78%)	11 (22%)	1 4
51	B7	41/42 (98%)	34 (83%)	7 (17%)	2 10
51	D7	41/42 (98%)	34 (83%)	7 (17%)	2 10
52	B8	52/55 (94%)	41 (79%)	11 (21%)	1 5
52	D8	52/55 (94%)	41 (79%)	11 (21%)	1 5
53	B9	32/34 (94%)	27 (84%)	5 (16%)	2 12
53	D9	32/34 (94%)	26 (81%)	6 (19%)	1 7
All	All	8775/10240 (86%)	7015 (80%)	1760 (20%)	1 5

All (1760) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	17	PHE
2	AB	21	ARG
2	AB	47	THR
2	AB	51	LEU
2	AB	67	THR
2	AB	69	LEU
2	AB	71	VAL
2	AB	74	LYS

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Mol	Chain	Res	Type
2	AB	80	ILE
2	AB	82	ARG
2	AB	86	GLU
2	AB	87	ARG
2	AB	93	VAL
2	AB	94	ASN
2	AB	110	GLN
2	AB	111	ARG
2	AB	113	HIS
2	AB	114	ARG
2	AB	117	GLU
2	AB	118	LEU
2	AB	121	LEU
2	AB	124	SER
2	AB	133	LYS
2	AB	137	ARG
2	AB	139	LYS
2	AB	140	HIS
2	AB	150	SER
2	AB	153	ARG
2	AB	155	LEU
2	AB	160	ASP
2	AB	172	ILE
2	AB	175	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	191	ASP
2	AB	197	VAL
2	AB	200	ILE
2	AB	205	ASP
2	AB	208	ILE
2	AB	209	ARG
2	AB	210	SER
2	AB	212	GLN
2	AB	221	LEU
2	AB	230	VAL
3	AC	3	ASN
3	AC	6	HIS
3	AC	8	ILE
3	AC	15	THR
3	AC	17	ASP
3	AC	20	SER

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Mol	Chain	Res	Type
3	AC	22	TRP
3	AC	30	ARG
3	AC	36	ASP
3	AC	37	GLN
3	AC	38	ARG
3	AC	40	ARG
3	AC	44	GLU
3	AC	46	GLU
3	AC	47	LEU
3	AC	49	SER
3	AC	54	ARG
3	AC	70	VAL
3	AC	104	GLN
3	AC	112	SER
3	AC	118	GLN
3	AC	127	ARG
3	AC	128	PHE
3	AC	138	VAL
3	AC	140	ARG
3	AC	144	SER
3	AC	151	VAL
3	AC	165	THR
3	AC	175	LEU
3	AC	179	ARG
3	AC	191	THR
3	AC	192	THR
3	AC	196	LEU
3	AC	202	ILE
3	AC	207	VAL
4	AD	8	VAL
4	AD	11	LEU
4	AD	12	CYS
4	AD	13	ARG
4	AD	20	TYR
4	AD	52	SER
4	AD	53	ASP
4	AD	57	ARG
4	AD	70	ILE
4	AD	83	SER
4	AD	91	SER
4	AD	101	LEU
4	AD	106	TYR

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Mol	Chain	Res	Type
4	AD	113	SER
4	AD	119	GLN
4	AD	122	ARG
4	AD	127	THR
4	AD	135	LEU
4	AD	158	ILE
4	AD	170	VAL
4	AD	178	VAL
4	AD	193	ASP
4	AD	194	LEU
5	AE	11	ILE
5	AE	12	LEU
5	AE	14	ARG
5	AE	16	THR
5	AE	41	VAL
5	AE	47	LYS
5	AE	51	VAL
5	AE	60	TYR
5	AE	63	ARG
5	AE	65	ASN
5	AE	71	LEU
5	AE	76	ILE
5	AE	78	HIS
5	AE	79	GLU
5	AE	80	ILE
5	AE	82	VAL
5	AE	83	GLU
5	AE	87	SER
5	AE	89	ILE
5	AE	90	VAL
5	AE	91	LEU
5	AE	98	THR
5	AE	100	VAL
5	AE	105	VAL
5	AE	107	ARG
5	AE	152	ARG
6	AF	7	ASN
6	AF	22	GLU
6	AF	40	VAL
6	AF	48	LEU
6	AF	57	GLN
6	AF	63	TYR

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Mol	Chain	Res	Type
6	AF	65	VAL
6	AF	69	GLU
6	AF	70	ASP
6	AF	72	VAL
6	AF	73	ASN
6	AF	74	ASP
6	AF	88	VAL
6	AF	89	MET
6	AF	94	GLN
6	AF	98	LEU
7	AG	4	ARG
7	AG	6	ARG
7	AG	21	VAL
7	AG	30	ILE
7	AG	33	ASP
7	AG	38	LEU
7	AG	53	LYS
7	AG	56	GLN
7	AG	59	LEU
7	AG	64	GLN
7	AG	69	VAL
7	AG	72	ARG
7	AG	75	VAL
7	AG	80	VAL
7	AG	89	MET
7	AG	99	LEU
7	AG	103	TRP
7	AG	104	LEU
7	AG	114	ARG
7	AG	120	ILE
7	AG	123	GLU
7	AG	124	LEU
7	AG	125	MET
7	AG	135	VAL
7	AG	138	LYS
7	AG	139	GLU
7	AG	142	GLU
7	AG	144	MET
7	AG	155	ARG
8	AH	2	LEU
8	AH	21	LYS
8	AH	25	ASP

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Mol	Chain	Res	Type
8	AH	26	VAL
8	AH	37	ARG
8	AH	39	LEU
8	AH	49	GLU
8	AH	51	VAL
8	AH	60	ARG
8	AH	63	LEU
8	AH	77	GLU
8	AH	78	GLN
8	AH	83	ILE
8	AH	84	ARG
8	AH	85	ARG
8	AH	91	ARG
8	AH	95	VAL
8	AH	109	ILE
8	AH	115	SER
8	AH	119	LEU
8	AH	120	THR
8	AH	127	LEU
9	AI	3	GLN
9	AI	9	ARG
9	AI	12	GLU
9	AI	16	ARG
9	AI	17	VAL
9	AI	20	ARG
9	AI	26	VAL
9	AI	27	THR
9	AI	34	ASN
9	AI	37	PHE
9	AI	48	GLU
9	AI	71	SER
9	AI	74	ILE
9	AI	99	LEU
9	AI	113	LYS
10	AJ	8	LEU
10	AJ	15	THR
10	AJ	16	LEU
10	AJ	19	SER
10	AJ	34	VAL
10	AJ	42	THR
10	AJ	45	ARG
10	AJ	54	PHE

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Mol	Chain	Res	Type
10	AJ	55	LYS
10	AJ	63	PHE
10	AJ	66	ARG
10	AJ	67	THR
10	AJ	68	HIS
10	AJ	69	ASN
10	AJ	73	ASP
10	AJ	96	ILE
10	AJ	97	GLU
10	AJ	100	THR
11	AK	14	VAL
11	AK	16	SER
11	AK	29	ILE
11	AK	30	VAL
11	AK	32	ILE
11	AK	33	THR
11	AK	47	VAL
11	AK	82	VAL
11	AK	93	GLN
11	AK	96	ARG
11	AK	103	LEU
11	AK	109	VAL
11	AK	117	ASN
12	AL	11	VAL
12	AL	33	ARG
12	AL	43	VAL
12	AL	44	THR
12	AL	52	LEU
12	AL	60	LEU
12	AL	66	VAL
12	AL	70	ILE
12	AL	82	VAL
12	AL	84	LEU
12	AL	85	ILE
12	AL	96	VAL
12	AL	97	ARG
12	AL	101	VAL
12	AL	104	VAL
12	AL	110	VAL
12	AL	114	LYS
12	AL	119	LYS
13	AM	3	ARG

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Mol	Chain	Res	Type
13	AM	15	VAL
13	AM	16	ASP
13	AM	20	THR
13	AM	27	LYS
13	AM	43	THR
13	AM	45	VAL
13	AM	53	VAL
13	AM	54	VAL
13	AM	56	LEU
13	AM	63	THR
13	AM	66	LEU
13	AM	70	LEU
13	AM	71	ARG
13	AM	77	ASN
13	AM	78	ILE
13	AM	88	ARG
13	AM	91	ARG
13	AM	98	VAL
13	AM	109	THR
13	AM	114	ARG
14	AN	4	LYS
14	AN	7	ILE
14	AN	8	GLU
14	AN	16	PHE
14	AN	18	VAL
14	AN	22	THR
14	AN	29	ARG
14	AN	33	VAL
14	AN	53	LEU
14	AN	56	VAL
14	AN	61	TRP
15	AO	3	ILE
15	AO	4	THR
15	AO	10	LYS
15	AO	13	GLN
15	AO	22	THR
15	AO	24	SER
15	AO	26	GLU
15	AO	39	LEU
15	AO	48	LYS
15	AO	66	LEU
15	AO	72	ARG

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Mol	Chain	Res	Type
15	AO	87	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	11	SER
16	AP	19	ILE
16	AP	21	VAL
16	AP	22	THR
16	AP	25	ARG
16	AP	27	LYS
16	AP	29	ASP
16	AP	33	ILE
16	AP	36	ILE
16	AP	38	TYR
16	AP	45	THR
16	AP	62	VAL
16	AP	65	GLN
16	AP	67	THR
16	AP	69	THR
17	AQ	11	VAL
17	AQ	19	VAL
17	AQ	34	LYS
17	AQ	43	LEU
17	AQ	50	LYS
17	AQ	57	VAL
17	AQ	59	ILE
17	AQ	65	ILE
17	AQ	72	ARG
17	AQ	74	LEU
17	AQ	77	VAL
17	AQ	86	GLU
17	AQ	91	ARG
17	AQ	93	GLN
17	AQ	96	GLU
17	AQ	99	SER
17	AQ	100	LYS
18	AR	32	ARG
18	AR	35	ARG
18	AR	36	ASN
18	AR	76	LEU
18	AR	79	LEU
18	AR	85	LEU

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Mol	Chain	Res	Type
19	AS	9	VAL
19	AS	10	PHE
19	AS	11	VAL
19	AS	14	HIS
19	AS	20	LEU
19	AS	31	ILE
19	AS	33	THR
19	AS	37	ARG
19	AS	44	MET
19	AS	51	VAL
19	AS	62	ILE
19	AS	63	THR
19	AS	66	MET
19	AS	70	LYS
19	AS	77	THR
19	AS	78	ARG
20	AT	10	LEU
20	AT	13	LEU
20	AT	30	LYS
20	AT	36	LEU
20	AT	39	LYS
20	AT	41	ILE
20	AT	62	LEU
20	AT	63	ILE
20	AT	71	THR
20	AT	72	LEU
20	AT	73	HIS
20	AT	74	LYS
21	AU	6	ARG
21	AU	8	THR
21	AU	9	ARG
21	AU	10	ARG
21	AU	13	ILE
21	AU	15	ARG
22	AX	2	GLN
22	AX	3	LEU
22	AX	5	ILE
22	AX	16	LEU
22	AX	23	LYS
22	AX	53	THR
22	AX	54	LEU
22	AX	62	HIS

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Mol	Chain	Res	Type
22	AX	69	ASP
22	AX	77	LEU
22	AX	86	THR
22	AX	90	ASP
22	AX	91	LYS
22	AX	92	LEU
22	AX	93	LYS
22	AX	95	HIS
25	BD	5	LYS
25	BD	12	SER
25	BD	13	ARG
25	BD	18	VAL
25	BD	24	ILE
25	BD	27	THR
25	BD	54	ARG
25	BD	64	ILE
25	BD	83	GLU
25	BD	94	LEU
25	BD	103	ARG
25	BD	106	ILE
25	BD	111	LEU
25	BD	117	VAL
25	BD	126	GLN
25	BD	127	VAL
25	BD	131	LEU
25	BD	138	VAL
25	BD	141	VAL
25	BD	147	LEU
25	BD	150	LYS
25	BD	154	LYS
25	BD	157	ARG
25	BD	164	GLN
25	BD	165	ILE
25	BD	173	VAL
25	BD	192	THR
25	BD	193	VAL
25	BD	211	ARG
25	BD	212	SER
25	BD	217	ARG
25	BD	218	ARG
25	BD	221	VAL
25	BD	229	VAL

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Mol	Chain	Res	Type
25	BD	254	THR
25	BD	257	LEU
25	BD	259	THR
25	BD	260	ARG
25	BD	271	ILE
25	BD	273	ARG
25	BD	274	ARG
26	BE	7	VAL
26	BE	9	VAL
26	BE	12	THR
26	BE	21	VAL
26	BE	24	THR
26	BE	33	VAL
26	BE	34	VAL
26	BE	40	GLU
26	BE	47	VAL
26	BE	49	LEU
26	BE	52	LEU
26	BE	61	ARG
26	BE	69	LYS
26	BE	72	VAL
26	BE	73	GLU
26	BE	75	VAL
26	BE	77	ILE
26	BE	78	LEU
26	BE	82	ARG
26	BE	92	THR
26	BE	93	VAL
26	BE	116	VAL
26	BE	119	ARG
26	BE	128	SER
26	BE	144	ARG
26	BE	154	LYS
26	BE	167	VAL
26	BE	170	LEU
26	BE	173	VAL
26	BE	175	VAL
26	BE	178	GLU
26	BE	179	GLU
26	BE	181	LEU
26	BE	183	LEU
26	BE	185	LYS

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Mol	Chain	Res	Type
26	BE	195	LEU
27	BF	12	LEU
27	BF	18	ARG
27	BF	20	LEU
27	BF	24	LEU
27	BF	28	ILE
27	BF	33	LEU
27	BF	41	LEU
27	BF	50	SER
27	BF	51	THR
27	BF	57	VAL
27	BF	69	HIS
27	BF	77	ASP
27	BF	84	VAL
27	BF	88	VAL
27	BF	106	ARG
27	BF	110	LEU
27	BF	112	MET
27	BF	132	VAL
27	BF	135	LYS
27	BF	137	LYS
27	BF	140	LEU
27	BF	157	VAL
27	BF	158	THR
27	BF	168	ARG
27	BF	170	LEU
27	BF	173	VAL
27	BF	175	THR
27	BF	183	VAL
27	BF	188	ARG
27	BF	192	LEU
28	BG	3	LEU
28	BG	5	VAL
28	BG	7	LEU
28	BG	21	ARG
28	BG	28	VAL
28	BG	35	GLU
28	BG	39	ILE
28	BG	47	LYS
28	BG	98	ARG
28	BG	128	ARG
28	BG	136	ARG

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Mol	Chain	Res	Type
28	BG	139	LEU
28	BG	140	ILE
28	BG	143	GLU
28	BG	149	VAL
28	BG	161	THR
28	BG	164	GLU
28	BG	170	ARG
28	BG	175	LEU
29	BH	6	ARG
29	BH	7	LEU
29	BH	15	VAL
29	BH	24	VAL
29	BH	41	MET
29	BH	44	VAL
29	BH	49	VAL
29	BH	51	ARG
29	BH	58	GLU
29	BH	67	LEU
29	BH	68	THR
29	BH	69	ARG
29	BH	98	LEU
29	BH	113	VAL
29	BH	122	THR
29	BH	134	SER
29	BH	139	GLN
29	BH	169	VAL
30	BI	1	MET
30	BI	4	ILE
30	BI	9	LEU
30	BI	15	VAL
30	BI	47	LEU
30	BI	51	ILE
30	BI	54	GLN
30	BI	61	ARG
30	BI	68	LEU
30	BI	75	LEU
30	BI	77	LEU
30	BI	78	THR
30	BI	81	VAL
30	BI	85	GLU
30	BI	92	VAL
30	BI	117	GLU

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Mol	Chain	Res	Type
30	BI	123	LEU
30	BI	127	VAL
30	BI	140	LEU
30	BI	142	VAL
30	BI	144	VAL
30	BI	145	VAL
31	BN	1	MET
31	BN	5	VAL
31	BN	12	ARG
31	BN	28	THR
31	BN	33	LEU
31	BN	34	LEU
31	BN	38	HIS
31	BN	46	VAL
31	BN	48	MET
31	BN	62	VAL
31	BN	67	LEU
31	BN	68	GLU
31	BN	85	ILE
31	BN	87	LEU
31	BN	96	GLU
31	BN	99	LEU
31	BN	112	LEU
31	BN	120	LEU
31	BN	130	HIS
31	BN	133	GLN
31	BN	138	LEU
31	BN	140	VAL
32	BO	8	LEU
32	BO	10	VAL
32	BO	17	ARG
32	BO	21	CYS
32	BO	23	ARG
32	BO	24	VAL
32	BO	25	LEU
32	BO	26	LYS
32	BO	29	ASN
32	BO	32	TYR
32	BO	52	VAL
32	BO	53	LYS
32	BO	58	VAL
32	BO	94	ARG

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Mol	Chain	Res	Type
32	BO	98	VAL
32	BO	104	ARG
33	BP	21	ARG
33	BP	32	THR
33	BP	40	SER
33	BP	42	SER
33	BP	45	LEU
33	BP	46	LYS
33	BP	55	ARG
33	BP	59	LEU
33	BP	65	ARG
33	BP	68	GLN
33	BP	71	VAL
33	BP	83	VAL
33	BP	86	LYS
33	BP	95	VAL
33	BP	106	LEU
33	BP	112	LEU
33	BP	119	GLU
33	BP	125	VAL
33	BP	132	LYS
33	BP	147	LEU
34	BQ	1	MET
34	BQ	2	LEU
34	BQ	5	ARG
34	BQ	7	MET
34	BQ	16	ARG
34	BQ	42	ILE
34	BQ	45	GLN
34	BQ	55	VAL
34	BQ	59	ARG
34	BQ	63	LYS
34	BQ	75	THR
34	BQ	81	VAL
34	BQ	103	MET
34	BQ	109	VAL
34	BQ	110	THR
34	BQ	112	GLU
34	BQ	130	LYS
34	BQ	134	ARG
35	BR	1	MET
35	BR	2	ARG

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Mol	Chain	Res	Type
35	BR	6	SER
35	BR	15	SER
35	BR	18	LEU
35	BR	24	GLN
35	BR	28	LEU
35	BR	29	LEU
35	BR	33	ARG
35	BR	44	LEU
35	BR	54	LEU
35	BR	60	LEU
35	BR	65	LEU
35	BR	67	LEU
35	BR	79	LEU
35	BR	100	LEU
35	BR	103	ARG
35	BR	111	LEU
35	BR	114	VAL
35	BR	117	VAL
36	BS	3	ARG
36	BS	8	GLU
36	BS	12	PHE
36	BS	13	ARG
36	BS	19	LYS
36	BS	30	ARG
36	BS	36	TYR
36	BS	40	ILE
36	BS	50	SER
36	BS	52	SER
36	BS	57	LYS
36	BS	58	LEU
36	BS	59	LYS
36	BS	69	VAL
36	BS	75	GLU
36	BS	78	LEU
36	BS	84	GLN
36	BS	85	VAL
36	BS	95	HIS
36	BS	111	GLU
37	BT	6	LEU
37	BT	13	ARG
37	BT	16	ARG
37	BT	17	THR

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Mol	Chain	Res	Type
37	BT	23	ARG
37	BT	36	GLU
37	BT	39	ARG
37	BT	49	VAL
37	BT	64	ARG
37	BT	66	VAL
37	BT	74	ARG
37	BT	82	LEU
37	BT	95	ARG
37	BT	96	ARG
37	BT	107	ASP
37	BT	110	ILE
37	BT	111	ARG
37	BT	113	LYS
37	BT	118	ARG
37	BT	121	ILE
38	BU	5	LYS
38	BU	8	VAL
38	BU	9	VAL
38	BU	16	LYS
38	BU	19	LYS
38	BU	27	LEU
38	BU	30	LYS
38	BU	31	SER
38	BU	36	ARG
38	BU	59	ARG
38	BU	60	LEU
38	BU	74	LEU
38	BU	85	LYS
38	BU	93	LYS
38	BU	95	LEU
38	BU	104	GLN
38	BU	108	GLU
39	BV	7	THR
39	BV	14	VAL
39	BV	18	LEU
39	BV	21	ARG
39	BV	28	GLU
39	BV	32	THR
39	BV	33	VAL
39	BV	35	LEU
39	BV	43	GLU

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Mol	Chain	Res	Type
39	BV	46	VAL
39	BV	57	VAL
39	BV	61	VAL
39	BV	62	LEU
39	BV	72	VAL
39	BV	73	SER
39	BV	79	VAL
39	BV	85	LYS
39	BV	89	GLN
39	BV	95	LEU
39	BV	100	ARG
40	BW	11	ARG
40	BW	15	ARG
40	BW	17	VAL
40	BW	19	LEU
40	BW	23	LEU
40	BW	27	LYS
40	BW	49	LYS
40	BW	51	LEU
40	BW	60	ASN
40	BW	95	ILE
40	BW	100	THR
40	BW	107	LEU
41	BX	15	GLU
41	BX	37	THR
41	BX	57	LEU
41	BX	65	ARG
41	BX	76	ARG
42	BY	2	ARG
42	BY	3	VAL
42	BY	9	LYS
42	BY	13	VAL
42	BY	19	LYS
42	BY	23	ARG
42	BY	44	ILE
42	BY	45	VAL
42	BY	49	VAL
42	BY	51	VAL
42	BY	55	TYR
42	BY	61	ILE
42	BY	72	VAL
42	BY	85	VAL

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Mol	Chain	Res	Type
42	BY	90	LEU
42	BY	91	GLU
42	BY	97	ARG
42	BY	102	CYS
42	BY	107	ASP
43	BZ	5	LEU
43	BZ	19	ARG
43	BZ	24	LEU
43	BZ	32	HIS
43	BZ	37	VAL
43	BZ	39	VAL
43	BZ	42	VAL
43	BZ	52	SER
43	BZ	56	VAL
43	BZ	58	VAL
43	BZ	66	SER
43	BZ	72	ARG
43	BZ	74	VAL
43	BZ	76	LEU
43	BZ	82	ARG
43	BZ	86	VAL
43	BZ	91	LEU
43	BZ	97	GLU
43	BZ	118	GLN
43	BZ	126	VAL
43	BZ	131	ARG
43	BZ	144	LEU
43	BZ	155	LEU
43	BZ	156	LYS
43	BZ	165	VAL
43	BZ	179	ASP
43	BZ	185	GLU
44	B0	9	SER
44	B0	10	THR
44	B0	20	ARG
44	B0	38	VAL
44	B0	55	ARG
44	B0	74	ARG
44	B0	77	ARG
44	B0	83	PRO
45	B1	4	VAL
45	B1	14	VAL

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Mol	Chain	Res	Type
45	B1	21	ARG
45	B1	39	LYS
45	B1	40	ARG
45	B1	46	LEU
45	B1	51	VAL
45	B1	58	ILE
45	B1	59	THR
45	B1	82	LEU
45	B1	83	GLU
45	B1	86	SER
45	B1	95	LEU
46	B2	17	SER
46	B2	32	LEU
46	B2	34	GLU
46	B2	43	GLN
46	B2	44	LEU
46	B2	47	ASN
46	B2	50	ILE
46	B2	53	LEU
46	B2	55	ARG
46	B2	68	ARG
46	B2	70	GLN
47	B3	8	LEU
47	B3	18	ASP
47	B3	23	LEU
47	B3	31	LEU
47	B3	34	GLU
47	B3	36	VAL
47	B3	40	THR
48	B4	5	ILE
48	B4	14	ILE
48	B4	16	CYS
48	B4	27	THR
48	B4	33	VAL
48	B4	34	GLU
48	B4	43	TYR
48	B4	46	GLN
49	B5	6	VAL
49	B5	9	LYS
49	B5	16	ARG
49	B5	29	THR
49	B5	37	LYS

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Mol	Chain	Res	Type
49	B5	40	LYS
49	B5	58	LEU
50	B6	4	GLU
50	B6	6	ARG
50	B6	9	LEU
50	B6	14	THR
50	B6	23	THR
50	B6	25	LYS
50	B6	30	THR
50	B6	33	LYS
50	B6	34	LEU
50	B6	38	LYS
50	B6	40	CYS
50	B6	44	ARG
50	B6	48	VAL
51	B7	1	MET
51	B7	4	THR
51	B7	8	ASN
51	B7	9	ARG
51	B7	23	ARG
51	B7	32	LYS
51	B7	47	ARG
52	B8	6	THR
52	B8	11	LYS
52	B8	14	VAL
52	B8	23	VAL
52	B8	30	ARG
52	B8	32	LEU
52	B8	34	TRP
52	B8	35	GLN
52	B8	41	ILE
52	B8	49	VAL
52	B8	59	LYS
53	B9	4	ARG
53	B9	6	SER
53	B9	7	VAL
53	B9	17	ILE
53	B9	26	ILE
2	CB	15	VAL
2	CB	17	PHE
2	CB	21	ARG
2	CB	47	THR

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Mol	Chain	Res	Type
2	CB	51	LEU
2	CB	67	THR
2	CB	69	LEU
2	CB	71	VAL
2	CB	74	LYS
2	CB	80	ILE
2	CB	82	ARG
2	CB	86	GLU
2	CB	93	VAL
2	CB	94	ASN
2	CB	110	GLN
2	CB	111	ARG
2	CB	114	ARG
2	CB	117	GLU
2	CB	118	LEU
2	CB	121	LEU
2	CB	124	SER
2	CB	133	LYS
2	CB	137	ARG
2	CB	139	LYS
2	CB	140	HIS
2	CB	150	SER
2	CB	153	ARG
2	CB	155	LEU
2	CB	160	ASP
2	CB	172	ILE
2	CB	175	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	197	VAL
2	CB	200	ILE
2	CB	205	ASP
2	CB	208	ILE
2	CB	209	ARG
2	CB	210	SER
2	CB	212	GLN
2	CB	221	LEU
2	CB	230	VAL
3	CC	4	LYS
3	CC	11	ARG
3	CC	26	LYS
3	CC	30	ARG

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Mol	Chain	Res	Type
3	CC	31	HIS
3	CC	32	LEU
3	CC	36	ASP
3	CC	44	GLU
3	CC	47	LEU
3	CC	49	SER
3	CC	52	LEU
3	CC	56	ASP
3	CC	103	VAL
3	CC	104	GLN
3	CC	130	VAL
3	CC	136	GLN
3	CC	143	GLU
3	CC	154	SER
3	CC	161	GLU
3	CC	162	GLN
3	CC	165	THR
3	CC	175	LEU
3	CC	176	HIS
3	CC	183	ASP
3	CC	188	LEU
3	CC	195	VAL
3	CC	202	ILE
3	CC	207	VAL
4	CD	8	VAL
4	CD	11	LEU
4	CD	12	CYS
4	CD	13	ARG
4	CD	20	TYR
4	CD	52	SER
4	CD	53	ASP
4	CD	57	ARG
4	CD	66	ARG
4	CD	70	ILE
4	CD	83	SER
4	CD	101	LEU
4	CD	106	TYR
4	CD	113	SER
4	CD	119	GLN
4	CD	122	ARG
4	CD	127	THR
4	CD	135	LEU

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Mol	Chain	Res	Type
4	CD	158	ILE
4	CD	170	VAL
4	CD	178	VAL
4	CD	193	ASP
5	CE	11	ILE
5	CE	12	LEU
5	CE	14	ARG
5	CE	16	THR
5	CE	41	VAL
5	CE	51	VAL
5	CE	60	TYR
5	CE	63	ARG
5	CE	65	ASN
5	CE	76	ILE
5	CE	78	HIS
5	CE	79	GLU
5	CE	80	ILE
5	CE	82	VAL
5	CE	83	GLU
5	CE	87	SER
5	CE	89	ILE
5	CE	90	VAL
5	CE	91	LEU
5	CE	98	THR
5	CE	100	VAL
5	CE	105	VAL
5	CE	107	ARG
5	CE	152	ARG
6	CF	7	ASN
6	CF	10	LEU
6	CF	22	GLU
6	CF	40	VAL
6	CF	45	LEU
6	CF	48	LEU
6	CF	57	GLN
6	CF	63	TYR
6	CF	65	VAL
6	CF	69	GLU
6	CF	70	ASP
6	CF	72	VAL
6	CF	73	ASN
6	CF	74	ASP

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Mol	Chain	Res	Type
6	CF	88	VAL
6	CF	89	MET
6	CF	94	GLN
6	CF	98	LEU
6	CF	100	ASN
7	CG	3	ARG
7	CG	12	LEU
7	CG	17	VAL
7	CG	20	ASP
7	CG	23	VAL
7	CG	24	THR
7	CG	30	ILE
7	CG	32	ARG
7	CG	33	ASP
7	CG	36	LYS
7	CG	44	TYR
7	CG	47	CYS
7	CG	61	VAL
7	CG	67	GLU
7	CG	73	MET
7	CG	75	VAL
7	CG	80	VAL
7	CG	90	GLU
7	CG	96	GLN
7	CG	111	ARG
7	CG	113	GLU
7	CG	118	VAL
7	CG	119	ARG
7	CG	120	ILE
7	CG	125	MET
7	CG	126	ASP
7	CG	135	VAL
7	CG	142	GLU
7	CG	143	ARG
7	CG	148	ASN
7	CG	153	HIS
7	CG	155	ARG
8	CH	2	LEU
8	CH	25	ASP
8	CH	37	ARG
8	CH	39	LEU
8	CH	49	GLU

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Mol	Chain	Res	Type
8	CH	51	VAL
8	CH	60	ARG
8	CH	63	LEU
8	CH	77	GLU
8	CH	78	GLN
8	CH	83	ILE
8	CH	84	ARG
8	CH	85	ARG
8	CH	91	ARG
8	CH	95	VAL
8	CH	109	ILE
8	CH	115	SER
8	CH	119	LEU
8	CH	120	THR
8	CH	127	LEU
9	CI	7	THR
9	CI	11	LYS
9	CI	14	VAL
9	CI	28	VAL
9	CI	63	ILE
9	CI	64	THR
9	CI	65	VAL
9	CI	66	ARG
9	CI	74	ILE
9	CI	77	ILE
9	CI	88	TYR
9	CI	107	ARG
9	CI	108	VAL
9	CI	114	TYR
10	CJ	12	ASP
10	CJ	16	LEU
10	CJ	21	GLN
10	CJ	33	GLN
10	CJ	34	VAL
10	CJ	38	ILE
10	CJ	42	THR
10	CJ	45	ARG
10	CJ	49	VAL
10	CJ	55	LYS
10	CJ	62	HIS
10	CJ	64	GLU
10	CJ	73	ASP

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Mol	Chain	Res	Type
10	CJ	94	VAL
10	CJ	96	ILE
10	CJ	100	THR
11	CK	14	VAL
11	CK	16	SER
11	CK	29	ILE
11	CK	30	VAL
11	CK	32	ILE
11	CK	33	THR
11	CK	47	VAL
11	CK	82	VAL
11	CK	93	GLN
11	CK	96	ARG
11	CK	103	LEU
11	CK	109	VAL
11	CK	117	ASN
12	CL	11	VAL
12	CL	33	ARG
12	CL	36	VAL
12	CL	43	VAL
12	CL	44	THR
12	CL	52	LEU
12	CL	60	LEU
12	CL	66	VAL
12	CL	70	ILE
12	CL	82	VAL
12	CL	83	VAL
12	CL	84	LEU
12	CL	96	VAL
12	CL	97	ARG
12	CL	110	VAL
12	CL	119	LYS
13	CM	3	ARG
13	CM	17	VAL
13	CM	19	LEU
13	CM	34	LEU
13	CM	45	VAL
13	CM	47	ASP
13	CM	55	ARG
13	CM	56	LEU
13	CM	61	GLU
13	CM	65	LYS

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Mol	Chain	Res	Type
13	CM	66	LEU
13	CM	67	GLU
13	CM	70	LEU
13	CM	74	VAL
13	CM	88	ARG
13	CM	105	THR
14	CN	3	ARG
14	CN	6	LEU
14	CN	7	ILE
14	CN	8	GLU
14	CN	13	THR
14	CN	17	LYS
14	CN	24	CYS
14	CN	25	VAL
14	CN	32	SER
14	CN	33	VAL
14	CN	39	LEU
14	CN	42	ILE
14	CN	45	ARG
14	CN	53	LEU
15	CO	3	ILE
15	CO	4	THR
15	CO	10	LYS
15	CO	13	GLN
15	CO	22	THR
15	CO	24	SER
15	CO	26	GLU
15	CO	39	LEU
15	CO	48	LYS
15	CO	66	LEU
15	CO	70	LEU
15	CO	72	ARG
15	CO	87	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	6	LEU
16	CP	11	SER
16	CP	19	ILE
16	CP	21	VAL
16	CP	22	THR
16	CP	25	ARG
16	CP	27	LYS

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Mol	Chain	Res	Type
16	CP	29	ASP
16	CP	33	ILE
16	CP	36	ILE
16	CP	38	TYR
16	CP	45	THR
16	CP	62	VAL
16	CP	65	GLN
16	CP	67	THR
16	CP	69	THR
17	CQ	11	VAL
17	CQ	24	GLU
17	CQ	34	LYS
17	CQ	43	LEU
17	CQ	50	LYS
17	CQ	57	VAL
17	CQ	59	ILE
17	CQ	65	ILE
17	CQ	72	ARG
17	CQ	74	LEU
17	CQ	77	VAL
17	CQ	86	GLU
17	CQ	91	ARG
17	CQ	96	GLU
17	CQ	99	SER
17	CQ	100	LYS
18	CR	32	ARG
18	CR	35	ARG
18	CR	36	ASN
18	CR	70	ILE
18	CR	76	LEU
18	CR	79	LEU
18	CR	85	LEU
19	CS	11	VAL
19	CS	44	MET
19	CS	51	VAL
19	CS	61	TYR
19	CS	62	ILE
19	CS	66	MET
19	CS	67	VAL
19	CS	69	HIS
19	CS	79	THR
19	CS	81	ARG

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Mol	Chain	Res	Type
20	CT	10	LEU
20	CT	13	LEU
20	CT	30	LYS
20	CT	36	LEU
20	CT	39	LYS
20	CT	41	ILE
20	CT	62	LEU
20	CT	71	THR
20	CT	72	LEU
20	CT	73	HIS
20	CT	74	LYS
20	CT	84	LEU
21	CU	6	ARG
21	CU	7	ARG
21	CU	9	ARG
21	CU	10	ARG
21	CU	12	LYS
21	CU	13	ILE
21	CU	17	THR
22	CX	2	GLN
22	CX	4	ASN
22	CX	6	THR
22	CX	21	THR
22	CX	30	TYR
22	CX	34	ILE
22	CX	54	LEU
22	CX	62	HIS
22	CX	64	SER
22	CX	66	GLU
22	CX	77	LEU
22	CX	78	ILE
22	CX	81	LEU
22	CX	91	LYS
22	CX	92	LEU
22	CX	93	LYS
25	DD	12	SER
25	DD	13	ARG
25	DD	18	VAL
25	DD	24	ILE
25	DD	27	THR
25	DD	54	ARG
25	DD	64	ILE

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Mol	Chain	Res	Type
25	DD	83	GLU
25	DD	94	LEU
25	DD	103	ARG
25	DD	106	ILE
25	DD	111	LEU
25	DD	126	GLN
25	DD	131	LEU
25	DD	138	VAL
25	DD	141	VAL
25	DD	147	LEU
25	DD	150	LYS
25	DD	154	LYS
25	DD	164	GLN
25	DD	165	ILE
25	DD	173	VAL
25	DD	192	THR
25	DD	193	VAL
25	DD	204	ILE
25	DD	211	ARG
25	DD	212	SER
25	DD	217	ARG
25	DD	218	ARG
25	DD	221	VAL
25	DD	229	VAL
25	DD	237	GLU
25	DD	254	THR
25	DD	257	LEU
25	DD	259	THR
25	DD	260	ARG
25	DD	271	ILE
25	DD	273	ARG
25	DD	274	ARG
26	DE	7	VAL
26	DE	9	VAL
26	DE	12	THR
26	DE	21	VAL
26	DE	24	THR
26	DE	33	VAL
26	DE	34	VAL
26	DE	38	THR
26	DE	40	GLU
26	DE	49	LEU

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Mol	Chain	Res	Type
26	DE	52	LEU
26	DE	61	ARG
26	DE	69	LYS
26	DE	72	VAL
26	DE	73	GLU
26	DE	75	VAL
26	DE	77	ILE
26	DE	78	LEU
26	DE	82	ARG
26	DE	92	THR
26	DE	93	VAL
26	DE	116	VAL
26	DE	119	ARG
26	DE	128	SER
26	DE	144	ARG
26	DE	154	LYS
26	DE	167	VAL
26	DE	170	LEU
26	DE	173	VAL
26	DE	175	VAL
26	DE	178	GLU
26	DE	179	GLU
26	DE	181	LEU
26	DE	183	LEU
26	DE	185	LYS
26	DE	195	LEU
27	DF	12	LEU
27	DF	18	ARG
27	DF	20	LEU
27	DF	24	LEU
27	DF	28	ILE
27	DF	33	LEU
27	DF	41	LEU
27	DF	50	SER
27	DF	57	VAL
27	DF	69	HIS
27	DF	77	ASP
27	DF	88	VAL
27	DF	96	ASP
27	DF	106	ARG
27	DF	110	LEU
27	DF	112	MET

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Mol	Chain	Res	Type
27	DF	132	VAL
27	DF	135	LYS
27	DF	137	LYS
27	DF	140	LEU
27	DF	157	VAL
27	DF	158	THR
27	DF	161	GLU
27	DF	168	ARG
27	DF	170	LEU
27	DF	175	THR
27	DF	176	LEU
27	DF	183	VAL
27	DF	188	ARG
27	DF	192	LEU
28	DG	3	LEU
28	DG	5	VAL
28	DG	7	LEU
28	DG	21	ARG
28	DG	28	VAL
28	DG	33	ARG
28	DG	35	GLU
28	DG	39	ILE
28	DG	47	LYS
28	DG	128	ARG
28	DG	136	ARG
28	DG	139	LEU
28	DG	140	ILE
28	DG	143	GLU
28	DG	149	VAL
28	DG	153	ARG
28	DG	155	MET
28	DG	161	THR
28	DG	164	GLU
28	DG	170	ARG
28	DG	175	LEU
29	DH	6	ARG
29	DH	7	LEU
29	DH	15	VAL
29	DH	24	VAL
29	DH	41	MET
29	DH	44	VAL
29	DH	49	VAL

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Mol	Chain	Res	Type
29	DH	51	ARG
29	DH	58	GLU
29	DH	64	LEU
29	DH	67	LEU
29	DH	68	THR
29	DH	69	ARG
29	DH	71	LEU
29	DH	88	LEU
29	DH	98	LEU
29	DH	113	VAL
29	DH	122	THR
29	DH	134	SER
29	DH	136	ILE
29	DH	139	GLN
29	DH	169	VAL
30	DI	1	MET
30	DI	4	ILE
30	DI	9	LEU
30	DI	15	VAL
30	DI	42	SER
30	DI	44	LEU
30	DI	47	LEU
30	DI	58	LEU
30	DI	81	VAL
30	DI	101	LEU
30	DI	120	ILE
30	DI	123	LEU
30	DI	127	VAL
30	DI	129	THR
30	DI	139	GLN
30	DI	142	VAL
30	DI	145	VAL
31	DN	1	MET
31	DN	5	VAL
31	DN	12	ARG
31	DN	14	VAL
31	DN	28	THR
31	DN	33	LEU
31	DN	34	LEU
31	DN	38	HIS
31	DN	43	THR
31	DN	46	VAL

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Mol	Chain	Res	Type
31	DN	48	MET
31	DN	62	VAL
31	DN	67	LEU
31	DN	68	GLU
31	DN	71	ILE
31	DN	85	ILE
31	DN	87	LEU
31	DN	96	GLU
31	DN	99	LEU
31	DN	112	LEU
31	DN	120	LEU
31	DN	130	HIS
31	DN	133	GLN
31	DN	138	LEU
31	DN	140	VAL
32	DO	8	LEU
32	DO	10	VAL
32	DO	17	ARG
32	DO	23	ARG
32	DO	24	VAL
32	DO	25	LEU
32	DO	26	LYS
32	DO	29	ASN
32	DO	32	TYR
32	DO	52	VAL
32	DO	53	LYS
32	DO	58	VAL
32	DO	94	ARG
32	DO	98	VAL
32	DO	104	ARG
32	DO	113	LYS
33	DP	21	ARG
33	DP	32	THR
33	DP	40	SER
33	DP	42	SER
33	DP	45	LEU
33	DP	46	LYS
33	DP	55	ARG
33	DP	59	LEU
33	DP	65	ARG
33	DP	68	GLN
33	DP	71	VAL

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Mol	Chain	Res	Type
33	DP	83	VAL
33	DP	86	LYS
33	DP	95	VAL
33	DP	106	LEU
33	DP	112	LEU
33	DP	119	GLU
33	DP	125	VAL
33	DP	132	LYS
33	DP	147	LEU
34	DQ	1	MET
34	DQ	2	LEU
34	DQ	5	ARG
34	DQ	7	MET
34	DQ	16	ARG
34	DQ	45	GLN
34	DQ	55	VAL
34	DQ	59	ARG
34	DQ	63	LYS
34	DQ	75	THR
34	DQ	81	VAL
34	DQ	102	VAL
34	DQ	103	MET
34	DQ	109	VAL
34	DQ	110	THR
34	DQ	112	GLU
34	DQ	130	LYS
34	DQ	134	ARG
35	DR	1	MET
35	DR	6	SER
35	DR	9	LYS
35	DR	15	SER
35	DR	18	LEU
35	DR	24	GLN
35	DR	28	LEU
35	DR	29	LEU
35	DR	33	ARG
35	DR	44	LEU
35	DR	51	LEU
35	DR	54	LEU
35	DR	60	LEU
35	DR	63	ARG
35	DR	65	LEU

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Mol	Chain	Res	Type
35	DR	67	LEU
35	DR	79	LEU
35	DR	100	LEU
35	DR	103	ARG
35	DR	111	LEU
35	DR	114	VAL
35	DR	117	VAL
36	DS	3	ARG
36	DS	8	GLU
36	DS	12	PHE
36	DS	13	ARG
36	DS	19	LYS
36	DS	30	ARG
36	DS	36	TYR
36	DS	50	SER
36	DS	57	LYS
36	DS	59	LYS
36	DS	69	VAL
36	DS	75	GLU
36	DS	78	LEU
36	DS	84	GLN
36	DS	85	VAL
36	DS	95	HIS
36	DS	111	GLU
37	DT	6	LEU
37	DT	13	ARG
37	DT	16	ARG
37	DT	17	THR
37	DT	23	ARG
37	DT	36	GLU
37	DT	39	ARG
37	DT	49	VAL
37	DT	64	ARG
37	DT	66	VAL
37	DT	72	VAL
37	DT	74	ARG
37	DT	82	LEU
37	DT	95	ARG
37	DT	96	ARG
37	DT	105	LEU
37	DT	107	ASP
37	DT	110	ILE

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Mol	Chain	Res	Type
37	DT	111	ARG
37	DT	113	LYS
37	DT	118	ARG
37	DT	121	ILE
38	DU	8	VAL
38	DU	9	VAL
38	DU	16	LYS
38	DU	19	LYS
38	DU	30	LYS
38	DU	31	SER
38	DU	36	ARG
38	DU	59	ARG
38	DU	60	LEU
38	DU	74	LEU
38	DU	89	GLU
38	DU	93	LYS
38	DU	95	LEU
38	DU	101	ARG
38	DU	104	GLN
38	DU	108	GLU
39	DV	7	THR
39	DV	12	TYR
39	DV	13	ARG
39	DV	14	VAL
39	DV	18	LEU
39	DV	21	ARG
39	DV	28	GLU
39	DV	32	THR
39	DV	33	VAL
39	DV	35	LEU
39	DV	43	GLU
39	DV	46	VAL
39	DV	57	VAL
39	DV	61	VAL
39	DV	62	LEU
39	DV	72	VAL
39	DV	73	SER
39	DV	79	VAL
39	DV	85	LYS
39	DV	89	GLN
39	DV	95	LEU
39	DV	100	ARG

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Mol	Chain	Res	Type
40	DW	11	ARG
40	DW	17	VAL
40	DW	19	LEU
40	DW	23	LEU
40	DW	27	LYS
40	DW	41	LYS
40	DW	49	LYS
40	DW	51	LEU
40	DW	60	ASN
40	DW	100	THR
40	DW	107	LEU
41	DX	15	GLU
41	DX	23	GLU
41	DX	37	THR
41	DX	57	LEU
41	DX	65	ARG
41	DX	76	ARG
42	DY	2	ARG
42	DY	3	VAL
42	DY	9	LYS
42	DY	13	VAL
42	DY	19	LYS
42	DY	23	ARG
42	DY	44	ILE
42	DY	45	VAL
42	DY	49	VAL
42	DY	51	VAL
42	DY	55	TYR
42	DY	61	ILE
42	DY	72	VAL
42	DY	85	VAL
42	DY	90	LEU
42	DY	91	GLU
42	DY	97	ARG
42	DY	102	CYS
42	DY	107	ASP
43	DZ	5	LEU
43	DZ	19	ARG
43	DZ	24	LEU
43	DZ	32	HIS
43	DZ	37	VAL
43	DZ	39	VAL

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Mol	Chain	Res	Type
43	DZ	41	LEU
43	DZ	42	VAL
43	DZ	56	VAL
43	DZ	58	VAL
43	DZ	66	SER
43	DZ	74	VAL
43	DZ	76	LEU
43	DZ	82	ARG
43	DZ	86	VAL
43	DZ	91	LEU
43	DZ	97	GLU
43	DZ	98	MET
43	DZ	118	GLN
43	DZ	120	ILE
43	DZ	126	VAL
43	DZ	131	ARG
43	DZ	144	LEU
43	DZ	155	LEU
43	DZ	156	LYS
43	DZ	165	VAL
43	DZ	179	ASP
43	DZ	185	GLU
44	D0	10	THR
44	D0	19	LYS
44	D0	20	ARG
44	D0	38	VAL
44	D0	55	ARG
44	D0	74	ARG
44	D0	77	ARG
44	D0	83	PRO
45	D1	4	VAL
45	D1	14	VAL
45	D1	21	ARG
45	D1	37	ILE
45	D1	39	LYS
45	D1	40	ARG
45	D1	51	VAL
45	D1	58	ILE
45	D1	80	LEU
45	D1	82	LEU
45	D1	83	GLU
45	D1	86	SER

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Mol	Chain	Res	Type
45	D1	95	LEU
46	D2	17	SER
46	D2	32	LEU
46	D2	34	GLU
46	D2	43	GLN
46	D2	44	LEU
46	D2	47	ASN
46	D2	50	ILE
46	D2	53	LEU
46	D2	55	ARG
46	D2	68	ARG
46	D2	70	GLN
47	D3	8	LEU
47	D3	18	ASP
47	D3	23	LEU
47	D3	31	LEU
47	D3	36	VAL
47	D3	40	THR
47	D3	56	VAL
47	D3	58	VAL
48	D4	5	ILE
48	D4	14	ILE
48	D4	16	CYS
48	D4	18	CYS
48	D4	27	THR
48	D4	34	GLU
48	D4	43	TYR
48	D4	46	GLN
49	D5	6	VAL
49	D5	9	LYS
49	D5	16	ARG
49	D5	29	THR
49	D5	37	LYS
49	D5	40	LYS
49	D5	46	CYS
49	D5	58	LEU
50	D6	4	GLU
50	D6	6	ARG
50	D6	9	LEU
50	D6	14	THR
50	D6	30	THR
50	D6	33	LYS

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Mol	Chain	Res	Type
50	D6	34	LEU
50	D6	38	LYS
50	D6	40	CYS
50	D6	44	ARG
50	D6	48	VAL
51	D7	1	MET
51	D7	4	THR
51	D7	8	ASN
51	D7	9	ARG
51	D7	23	ARG
51	D7	32	LYS
51	D7	47	ARG
52	D8	6	THR
52	D8	11	LYS
52	D8	14	VAL
52	D8	23	VAL
52	D8	30	ARG
52	D8	32	LEU
52	D8	34	TRP
52	D8	35	GLN
52	D8	41	ILE
52	D8	49	VAL
52	D8	59	LYS
53	D9	2	LYS
53	D9	4	ARG
53	D9	6	SER
53	D9	7	VAL
53	D9	17	ILE
53	D9	26	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (139) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	94	ASN
2	AB	146	GLN
2	AB	212	GLN
3	AC	6	HIS
3	AC	170	GLN
4	AD	201	GLN
5	AE	78	HIS
6	AF	64	GLN
6	AF	94	GLN

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Mol	Chain	Res	Type
6	AF	100	ASN
7	AG	28	ASN
7	AG	106	GLN
8	AH	81	HIS
9	AI	38	GLN
10	AJ	21	GLN
10	AJ	56	HIS
11	AK	22	HIS
15	AO	13	GLN
15	AO	42	HIS
16	AP	13	HIS
16	AP	16	HIS
16	AP	65	GLN
16	AP	76	GLN
17	AQ	45	HIS
18	AR	36	ASN
19	AS	57	HIS
19	AS	83	HIS
20	AT	16	HIS
22	AX	2	GLN
22	AX	35	ASN
22	AX	94	GLN
22	AX	95	HIS
25	BD	112	GLN
25	BD	129	ASN
25	BD	143	HIS
25	BD	201	HIS
26	BE	55	ASN
26	BE	135	HIS
26	BE	143	ASN
26	BE	180	ASN
26	BE	192	ASN
27	BF	75	HIS
28	BG	40	ASN
28	BG	108	ASN
28	BG	138	GLN
29	BH	74	ASN
29	BH	143	GLN
30	BI	74	ASN
30	BI	133	HIS
30	BI	139	GLN
31	BN	128	HIS

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Mol	Chain	Res	Type
31	BN	133	GLN
32	BO	3	GLN
33	BP	84	ASN
34	BQ	12	GLN
36	BS	68	GLN
37	BT	123	GLN
38	BU	49	HIS
38	BU	72	HIS
38	BU	104	GLN
40	BW	60	ASN
40	BW	61	ASN
41	BX	31	HIS
43	BZ	34	ASN
46	B2	9	GLN
48	B4	46	GLN
49	B5	23	HIS
50	B6	49	HIS
2	CB	94	ASN
2	CB	110	GLN
2	CB	140	HIS
2	CB	146	GLN
2	CB	212	GLN
3	CC	31	HIS
3	CC	37	GLN
3	CC	136	GLN
5	CE	38	GLN
5	CE	65	ASN
5	CE	78	HIS
5	CE	130	ASN
6	CF	64	GLN
6	CF	73	ASN
6	CF	94	GLN
6	CF	100	ASN
7	CG	28	ASN
7	CG	64	GLN
7	CG	96	GLN
7	CG	148	ASN
8	CH	81	HIS
9	CI	3	GLN
9	CI	73	GLN
10	CJ	68	HIS
11	CK	22	HIS

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Mol	Chain	Res	Type
12	CL	80	HIS
13	CM	40	ASN
13	CM	77	ASN
14	CN	52	GLN
15	CO	13	GLN
15	CO	42	HIS
16	CP	16	HIS
16	CP	65	GLN
16	CP	76	GLN
17	CQ	45	HIS
18	CR	36	ASN
19	CS	83	HIS
20	CT	16	HIS
22	CX	35	ASN
22	CX	94	GLN
25	DD	112	GLN
25	DD	129	ASN
25	DD	143	HIS
26	DE	192	ASN
27	DF	75	HIS
27	DF	169	ASN
28	DG	40	ASN
28	DG	108	ASN
28	DG	138	GLN
29	DH	74	ASN
30	DI	43	ASN
30	DI	105	HIS
30	DI	139	GLN
31	DN	128	HIS
31	DN	133	GLN
32	DO	3	GLN
33	DP	84	ASN
34	DQ	57	HIS
35	DR	24	GLN
36	DS	68	GLN
37	DT	123	GLN
38	DU	49	HIS
38	DU	104	GLN
40	DW	60	ASN
40	DW	61	ASN
40	DW	62	HIS
41	DX	31	HIS

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Mol	Chain	Res	Type
43	DZ	32	HIS
43	DZ	34	ASN
46	D2	9	GLN
48	D4	46	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1499/1522 (98%)	386 (25%)	33 (2%)
1	CA	1495/1522 (98%)	397 (26%)	34 (2%)
23	BA	2833/2913 (97%)	614 (21%)	60 (2%)
23	DA	2807/2913 (96%)	604 (21%)	56 (1%)
24	BB	119/122 (97%)	25 (21%)	0
24	DB	119/122 (97%)	26 (21%)	0
All	All	8872/9114 (97%)	2052 (23%)	183 (2%)

All (2052) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	7	G
1	AA	9	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	53	A
1	AA	60	A
1	AA	61	G
1	AA	62	U
1	AA	65	U
1	AA	66	G
1	AA	67	C
1	AA	70	G
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	89	C

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Mol	Chain	Res	Type
1	AA	90	U
1	AA	91	C
1	AA	93	G
1	AA	96	U
1	AA	97	G
1	AA	115	G
1	AA	116	A
1	AA	121	C
1	AA	131	C
1	AA	142	G
1	AA	150	C
1	AA	163	C
1	AA	173	U
1	AA	182	U
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	201	C
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	227	G
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	289	G
1	AA	306	G
1	AA	321	A
1	AA	328	C
1	AA	332	G
1	AA	341	C
1	AA	342	C
1	AA	343	U
1	AA	344	A
1	AA	345	C
1	AA	351	G
1	AA	352	C
1	AA	353	A

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Mol	Chain	Res	Type
1	AA	354	G
1	AA	365	U
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	392	G
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	429	U
1	AA	435	C
1	AA	437	U
1	AA	439	A
1	AA	442	C
1	AA	445	G
1	AA	446	G
1	AA	452	A
1	AA	457	C
1	AA	461	A
1	AA	484	G
1	AA	485	G
1	AA	493	G
1	AA	496	A
1	AA	498	U
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	520	A
1	AA	521	G
1	AA	524	G
1	AA	527	G
1	AA	531	U
1	AA	532	A

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Mol	Chain	Res	Type
1	AA	533	A
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	570	G
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	596	C
1	AA	607	A
1	AA	618	C
1	AA	623	C
1	AA	629	G
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	633	G
1	AA	653	A
1	AA	661	G
1	AA	665	A
1	AA	666	G
1	AA	680	C
1	AA	687	A
1	AA	688	G
1	AA	690	G
1	AA	724	G
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	766	A
1	AA	774	G
1	AA	777	A
1	AA	786	G
1	AA	787	A
1	AA	792	A
1	AA	793	U

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Mol	Chain	Res	Type
1	AA	794	A
1	AA	796	C
1	AA	802	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	821	G
1	AA	827	U
1	AA	828	A
1	AA	833	U
1	AA	836	G
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	870	U
1	AA	875	C
1	AA	876	G
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	939	G
1	AA	943	U
1	AA	944	G
1	AA	945	G
1	AA	946	A
1	AA	948	C
1	AA	958	A
1	AA	960	U
1	AA	961	U
1	AA	964	A
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A

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Mol	Chain	Res	Type
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	979	C
1	AA	980	C
1	AA	981	U
1	AA	983	A
1	AA	984	C
1	AA	985	C
1	AA	990	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	997	U
1	AA	1000	U
1	AA	1001(A)	G
1	AA	1003	G
1	AA	1004	A
1	AA	1005	A
1	AA	1006	C
1	AA	1010	G
1	AA	1011	G
1	AA	1013	G
1	AA	1014	A
1	AA	1016	A
1	AA	1021	G
1	AA	1022	G
1	AA	1023	G
1	AA	1026	G
1	AA	1027	C
1	AA	1030(A)	G
1	AA	1031	G
1	AA	1034	G
1	AA	1035	A
1	AA	1036	G
1	AA	1042	G
1	AA	1044	A
1	AA	1045	C
1	AA	1046	A
1	AA	1051	C
1	AA	1053	G

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Mol	Chain	Res	Type
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1070	U
1	AA	1073	U
1	AA	1074	G
1	AA	1081	G
1	AA	1082	G
1	AA	1084	G
1	AA	1085	U
1	AA	1090	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1113	C
1	AA	1117	G
1	AA	1121	U
1	AA	1122	U
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1131	G
1	AA	1134	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1144	G
1	AA	1145	C
1	AA	1149	C
1	AA	1152	A
1	AA	1153	C
1	AA	1154	G
1	AA	1155	G
1	AA	1157	A
1	AA	1159	U

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Mol	Chain	Res	Type
1	AA	1160	G
1	AA	1164	G
1	AA	1175	G
1	AA	1184	G
1	AA	1190	G
1	AA	1196	U
1	AA	1197	G
1	AA	1199	U
1	AA	1201	A
1	AA	1202	G
1	AA	1206	G
1	AA	1207	G
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1220	G
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1242	C
1	AA	1244	C
1	AA	1246	C
1	AA	1247	U
1	AA	1250	A
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1260	C
1	AA	1266	G
1	AA	1270	C
1	AA	1275	A
1	AA	1277	C
1	AA	1278	U
1	AA	1280	A
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A

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Mol	Chain	Res	Type
1	AA	1287	A
1	AA	1294	G
1	AA	1297	C
1	AA	1298	C
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1304	G
1	AA	1305	G
1	AA	1306	A
1	AA	1308	U
1	AA	1312	G
1	AA	1316	G
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1322	C
1	AA	1325	C
1	AA	1328	C
1	AA	1330	U
1	AA	1331	G
1	AA	1332	A
1	AA	1333	A
1	AA	1334	G
1	AA	1335	C
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1339	A
1	AA	1345	U
1	AA	1346	A
1	AA	1347	G
1	AA	1349	A
1	AA	1355	G
1	AA	1360	A
1	AA	1363	C
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1365	G
1	AA	1369	C
1	AA	1378	C
1	AA	1379	G

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Mol	Chain	Res	Type
1	AA	1380	U
1	AA	1388	C
1	AA	1395	C
1	AA	1398	A
1	AA	1401	G
1	AA	1419	G
1	AA	1441	G
1	AA	1442	G
1	AA	1442(B)	A
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1459	C
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1495	U
1	AA	1497	G
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
23	BA	10	G
23	BA	12	U
23	BA	15	G
23	BA	34	C
23	BA	36	G
23	BA	45	C
23	BA	55	G
23	BA	69	C
23	BA	71	A
23	BA	72	U
23	BA	74	A
23	BA	75	G
23	BA	82	G
23	BA	84	A

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Mol	Chain	Res	Type
23	BA	90	U
23	BA	94	C
23	BA	95	G
23	BA	100	G
23	BA	102	G
23	BA	103	A
23	BA	118	A
23	BA	119	A
23	BA	120	U
23	BA	131	G
23	BA	141	A
23	BA	154	G
23	BA	154(A)	C
23	BA	157	U
23	BA	181	A
23	BA	182	A
23	BA	188	G
23	BA	196	A
23	BA	197	A
23	BA	199	A
23	BA	200	U
23	BA	201	C
23	BA	204	A
23	BA	205	G
23	BA	214	G
23	BA	215	G
23	BA	216	A
23	BA	221	A
23	BA	222	A
23	BA	225	A
23	BA	229	A
23	BA	233	A
23	BA	248	G
23	BA	250	G
23	BA	266	G
23	BA	269	U
23	BA	271(I)	G
23	BA	271(K)	U
23	BA	271(L)	U
23	BA	271(M)	G
23	BA	271(N)	U
23	BA	271(Y)	U

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Mol	Chain	Res	Type
23	BA	272(B)	G
23	BA	272(G)	C
23	BA	272(H)	C
23	BA	272(I)	U
23	BA	272(J)	C
23	BA	276	A
23	BA	277	C
23	BA	278	A
23	BA	279	C
23	BA	280	C
23	BA	286	C
23	BA	311	A
23	BA	315	G
23	BA	316	C
23	BA	324	A
23	BA	329	G
23	BA	330	A
23	BA	331	A
23	BA	332	A
23	BA	333	G
23	BA	335	C
23	BA	342	G
23	BA	352	G
23	BA	353	G
23	BA	363	G
23	BA	363(C)	G
23	BA	363(F)	A
23	BA	386	G
23	BA	404	C
23	BA	405	U
23	BA	407	G
23	BA	411	G
23	BA	412	A
23	BA	428	A
23	BA	444	C
23	BA	448	U
23	BA	457	A
23	BA	460	A
23	BA	470	A
23	BA	471	A
23	BA	481	G
23	BA	482	A

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Mol	Chain	Res	Type
23	BA	505	A
23	BA	509	C
23	BA	512	G
23	BA	513	A
23	BA	529	A
23	BA	530	G
23	BA	531	C
23	BA	532	A
23	BA	533	G
23	BA	543	C
23	BA	545	G
23	BA	546	C
23	BA	547	A
23	BA	548	A
23	BA	563	G
23	BA	573	G
23	BA	575	A
23	BA	586	A
23	BA	587	C
23	BA	588	U
23	BA	602	G
23	BA	603	A
23	BA	604	G
23	BA	607	U
23	BA	614(A)	U
23	BA	614(B)	G
23	BA	614(C)	A
23	BA	615	G
23	BA	620	G
23	BA	627	A
23	BA	632	A
23	BA	637	A
23	BA	645	C
23	BA	646	A
23	BA	647	G
23	BA	652(A)	A
23	BA	652(B)	A
23	BA	652(C)	G
23	BA	652(E)	G
23	BA	652(F)	G
23	BA	652(J)	G
23	BA	652(Q)	G

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Mol	Chain	Res	Type
23	BA	652(R)	C
23	BA	652(T)	C
23	BA	652(U)	G
23	BA	668	G
23	BA	669	G
23	BA	686	G
23	BA	701	G
23	BA	708	C
23	BA	709	U
23	BA	715	G
23	BA	717	G
23	BA	730	C
23	BA	752	A
23	BA	753	C
23	BA	762	U
23	BA	764	A
23	BA	765	G
23	BA	771	G
23	BA	775	G
23	BA	776	G
23	BA	782	A
23	BA	784	A
23	BA	785	G
23	BA	792	G
23	BA	805	G
23	BA	810	U
23	BA	812	C
23	BA	819	A
23	BA	827	U
23	BA	828	U
23	BA	830	G
23	BA	857	C
23	BA	859	G
23	BA	879	G
23	BA	882	G
23	BA	884	C
23	BA	885	C
23	BA	886	C
23	BA	888	C
23	BA	889	C
23	BA	890	A
23	BA	895	U

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Mol	Chain	Res	Type
23	BA	896	A
23	BA	897	C
23	BA	900	A
23	BA	901	A
23	BA	910	A
23	BA	914	C
23	BA	917	A
23	BA	932	G
23	BA	938	G
23	BA	941	A
23	BA	945	A
23	BA	946	G
23	BA	953	A
23	BA	958	U
23	BA	959	A
23	BA	961	C
23	BA	974	G
23	BA	975	C
23	BA	975(A)	G
23	BA	983	A
23	BA	990	A
23	BA	991	C
23	BA	994	C
23	BA	996	A
23	BA	1005	C
23	BA	1012	U
23	BA	1013	C
23	BA	1020	A
23	BA	1022	G
23	BA	1023	U
23	BA	1025	G
23	BA	1026	U
23	BA	1027	A
23	BA	1033	U
23	BA	1038	C
23	BA	1039	G
23	BA	1040	C
23	BA	1041	C
23	BA	1042	G
23	BA	1043	C
23	BA	1045	A
23	BA	1046	A

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Mol	Chain	Res	Type
23	BA	1047	G
23	BA	1048	A
23	BA	1049	C
23	BA	1050	A
23	BA	1052	C
23	BA	1107	G
23	BA	1108	U
23	BA	1109	C
23	BA	1110	G
23	BA	1112	G
23	BA	1115	G
23	BA	1128	A
23	BA	1129	A
23	BA	1130	U
23	BA	1135	C
23	BA	1136	G
23	BA	1139	G
23	BA	1141	U
23	BA	1154	G
23	BA	1155	A
23	BA	1170	G
23	BA	1171	G
23	BA	1173	G
23	BA	1174	A
23	BA	1175	U
23	BA	1176	G
23	BA	1177	A
23	BA	1188	U
23	BA	1210	A
23	BA	1211	U
23	BA	1224	C
23	BA	1244	G
23	BA	1252	G
23	BA	1253	A
23	BA	1256	G
23	BA	1267	U
23	BA	1271	G
23	BA	1272	A
23	BA	1273	U
23	BA	1292	U
23	BA	1300	U
23	BA	1301	A

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Mol	Chain	Res	Type
23	BA	1305	C
23	BA	1314	C
23	BA	1320	C
23	BA	1321	A
23	BA	1329	U
23	BA	1345	C
23	BA	1352	U
23	BA	1359	A
23	BA	1360	A
23	BA	1365	A
23	BA	1368	G
23	BA	1370	C
23	BA	1373	A
23	BA	1374	G
23	BA	1378	A
23	BA	1379	A
23	BA	1380	G
23	BA	1383	C
23	BA	1384	A
23	BA	1385	G
23	BA	1386	C
23	BA	1395	A
23	BA	1405	U
23	BA	1416	G
23	BA	1417	C
23	BA	1419	A
23	BA	1420	U
23	BA	1421	G
23	BA	1427	A
23	BA	1428	C
23	BA	1429	G
23	BA	1437	C
23	BA	1445	A
23	BA	1449	A
23	BA	1455	G
23	BA	1459	G
23	BA	1467	C
23	BA	1471	A
23	BA	1482	G
23	BA	1488	G
23	BA	1490	A
23	BA	1493	C

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Mol	Chain	Res	Type
23	BA	1497	U
23	BA	1507	A
23	BA	1508	A
23	BA	1509	C
23	BA	1509(A)	A
23	BA	1510	G
23	BA	1520	G
23	BA	1531	C
23	BA	1533	G
23	BA	1534	U
23	BA	1535	A
23	BA	1536	C
23	BA	1537	G
23	BA	1539	G
23	BA	1540	U
23	BA	1542	A
23	BA	1543	C
23	BA	1545	A
23	BA	1548	C
23	BA	1554	A
23	BA	1558	A
23	BA	1559	G
23	BA	1560	G
23	BA	1566	A
23	BA	1569	A
23	BA	1578	U
23	BA	1579	A
23	BA	1580	A
23	BA	1581	G
23	BA	1584	C
23	BA	1586	A
23	BA	1598	C
23	BA	1608	A
23	BA	1609	A
23	BA	1610	A
23	BA	1617	C
23	BA	1635	G
23	BA	1640	C
23	BA	1647	G
23	BA	1648	C
23	BA	1652	A
23	BA	1654	A

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Mol	Chain	Res	Type
23	BA	1674	G
23	BA	1675	C
23	BA	1696	G
23	BA	1698	A
23	BA	1700	A
23	BA	1701	A
23	BA	1703	G
23	BA	1721	G
23	BA	1722	A
23	BA	1746	G
23	BA	1763	G
23	BA	1764	G
23	BA	1773	A
23	BA	1780	A
23	BA	1782	C
23	BA	1791	A
23	BA	1799	G
23	BA	1800	C
23	BA	1801	G
23	BA	1812	A
23	BA	1816	G
23	BA	1819	A
23	BA	1820	U
23	BA	1826	G
23	BA	1828	G
23	BA	1829	A
23	BA	1835	G
23	BA	1838	C
23	BA	1840	G
23	BA	1847	A
23	BA	1848	A
23	BA	1858	G
23	BA	1865	G
23	BA	1866	C
23	BA	1877	A
23	BA	1878	G
23	BA	1881	C
23	BA	1882	C
23	BA	1896	G
23	BA	1900	A
23	BA	1905	C
23	BA	1906	G

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Mol	Chain	Res	Type
23	BA	1912	A
23	BA	1913	A
23	BA	1914	C
23	BA	1929	G
23	BA	1930	G
23	BA	1931	U
23	BA	1936	A
23	BA	1937	A
23	BA	1938	A
23	BA	1939	U
23	BA	1952	A
23	BA	1955	U
23	BA	1963	U
23	BA	1964	G
23	BA	1967	C
23	BA	1969	A
23	BA	1970	A
23	BA	1971	A
23	BA	1972	A
23	BA	1982	C
23	BA	1991	U
23	BA	1993	U
23	BA	1997	G
23	BA	2005	A
23	BA	2020	A
23	BA	2023	G
23	BA	2031	A
23	BA	2032	G
23	BA	2033	A
23	BA	2036	C
23	BA	2043	C
23	BA	2049	G
23	BA	2055	C
23	BA	2056	G
23	BA	2060	A
23	BA	2061	G
23	BA	2062	A
23	BA	2069	G
23	BA	2099	U
23	BA	2100	G
23	BA	2103	C
23	BA	2104	G

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Mol	Chain	Res	Type
23	BA	2108	C
23	BA	2110	G
23	BA	2111	C
23	BA	2112	G
23	BA	2115	G
23	BA	2116	G
23	BA	2117	A
23	BA	2119	A
23	BA	2123	G
23	BA	2126	A
23	BA	2127	G
23	BA	2128	C
23	BA	2131	G
23	BA	2133	G
23	BA	2134	A
23	BA	2135	A
23	BA	2136	C
23	BA	2146	C
23	BA	2147	G
23	BA	2150	U
23	BA	2159	G
23	BA	2160	G
23	BA	2161	C
23	BA	2162	G
23	BA	2164	C
23	BA	2169	A
23	BA	2170	A
23	BA	2172	U
23	BA	2173	A
23	BA	2174	C
23	BA	2176	A
23	BA	2179	C
23	BA	2180	U
23	BA	2183	C
23	BA	2185	C
23	BA	2186	G
23	BA	2187	G
23	BA	2188	C
23	BA	2191	G
23	BA	2192	G
23	BA	2193	G
23	BA	2198	A

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Mol	Chain	Res	Type
23	BA	2199	A
23	BA	2200	C
23	BA	2206	G
23	BA	2207	G
23	BA	2208	A
23	BA	2225	A
23	BA	2234	G
23	BA	2238	G
23	BA	2239	G
23	BA	2240	C
23	BA	2248	C
23	BA	2249	U
23	BA	2252	G
23	BA	2268	A
23	BA	2273	A
23	BA	2275	C
23	BA	2278	A
23	BA	2283	C
23	BA	2287	A
23	BA	2288	A
23	BA	2289	G
23	BA	2291	U
23	BA	2294	C
23	BA	2305	A
23	BA	2306	C
23	BA	2308	G
23	BA	2309	A
23	BA	2311	A
23	BA	2316	C
23	BA	2319	G
23	BA	2320	A
23	BA	2321	G
23	BA	2325	G
23	BA	2334	G
23	BA	2336	A
23	BA	2343	C
23	BA	2347	C
23	BA	2350	C
23	BA	2354	G
23	BA	2379	G
23	BA	2383	G
23	BA	2385	C

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Mol	Chain	Res	Type
23	BA	2388	A
23	BA	2400	G
23	BA	2406	U
23	BA	2407	G
23	BA	2410	G
23	BA	2414	G
23	BA	2418	A
23	BA	2422	A
23	BA	2425	A
23	BA	2429	G
23	BA	2430	A
23	BA	2435	A
23	BA	2439	A
23	BA	2440	C
23	BA	2441	C
23	BA	2448	A
23	BA	2465	C
23	BA	2469	A
23	BA	2470	G
23	BA	2472	G
23	BA	2474	C
23	BA	2476	A
23	BA	2477	C
23	BA	2486	G
23	BA	2487	G
23	BA	2502	G
23	BA	2504	U
23	BA	2505	G
23	BA	2506	U
23	BA	2518	A
23	BA	2520	C
23	BA	2525	G
23	BA	2529	G
23	BA	2535	G
23	BA	2554	U
23	BA	2564	A
23	BA	2566	A
23	BA	2567	G
23	BA	2573	C
23	BA	2582	G
23	BA	2585	U
23	BA	2586	C

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Mol	Chain	Res	Type
23	BA	2602	A
23	BA	2603	G
23	BA	2604	U
23	BA	2608	G
23	BA	2609	U
23	BA	2610	C
23	BA	2611	U
23	BA	2612	C
23	BA	2615	U
23	BA	2628	C
23	BA	2629	A
23	BA	2630	G
23	BA	2654	A
23	BA	2663	G
23	BA	2672	G
23	BA	2674	G
23	BA	2686	G
23	BA	2690	C
23	BA	2691	C
23	BA	2702	U
23	BA	2703	C
23	BA	2707	G
23	BA	2712(A)	A
23	BA	2713	A
23	BA	2714	G
23	BA	2726	U
23	BA	2733	A
23	BA	2739	U
23	BA	2744	G
23	BA	2758	A
23	BA	2761	G
23	BA	2765	A
23	BA	2766	G
23	BA	2778	A
23	BA	2779	U
23	BA	2790	A
23	BA	2791	C
23	BA	2802	G
23	BA	2803	C
23	BA	2808	U
23	BA	2820	A
23	BA	2821	A

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Mol	Chain	Res	Type
23	BA	2833	G
23	BA	2834	G
23	BA	2835	A
23	BA	2847	U
23	BA	2872	G
23	BA	2873	A
23	BA	2880	C
23	BA	2892	A
23	BA	2893	G
23	BA	2894	G
23	BA	2895	U
23	BA	2897	U
24	BB	2	C
24	BB	8	U
24	BB	9	G
24	BB	12	C
24	BB	13	A
24	BB	15	A
24	BB	19	G
24	BB	21	G
24	BB	24	G
24	BB	25	A
24	BB	28	C
24	BB	33	G
24	BB	40	U
24	BB	53	A
24	BB	54	G
24	BB	56	G
24	BB	73	A
24	BB	74	U
24	BB	75	G
24	BB	84	C
24	BB	85	G
24	BB	88	C
24	BB	89	G
24	BB	106	G
24	BB	110	G
1	CA	5	U
1	CA	6	G
1	CA	7	G
1	CA	9	G
1	CA	32	A

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Mol	Chain	Res	Type
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	53	A
1	CA	60	A
1	CA	61	G
1	CA	62	U
1	CA	65	U
1	CA	66	G
1	CA	67	C
1	CA	77	G
1	CA	78	G
1	CA	79	G
1	CA	91	C
1	CA	93	G
1	CA	96	U
1	CA	97	G
1	CA	115	G
1	CA	116	A
1	CA	121	C
1	CA	131	C
1	CA	142	G
1	CA	150	C
1	CA	163	C
1	CA	173	U
1	CA	182	U
1	CA	189(G)	G
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	201	C
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	227	G
1	CA	243	A
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G

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Mol	Chain	Res	Type
1	CA	267	C
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	332	G
1	CA	342	C
1	CA	343	U
1	CA	344	A
1	CA	345	C
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	365	U
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	388	G
1	CA	392	G
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	409	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	423	G
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	437	U
1	CA	439	A
1	CA	442	C
1	CA	445	G
1	CA	452	A
1	CA	457	C
1	CA	461	A
1	CA	484	G
1	CA	485	G
1	CA	493	G

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Mol	Chain	Res	Type
1	CA	496	A
1	CA	498	U
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	520	A
1	CA	521	G
1	CA	524	G
1	CA	525	C
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	547	A
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	563	A
1	CA	564	C
1	CA	570	G
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	588	G
1	CA	596	C
1	CA	607	A
1	CA	618	C
1	CA	623	C
1	CA	629	G
1	CA	630	G
1	CA	631	G
1	CA	632	A
1	CA	633	G
1	CA	634	C
1	CA	653	A
1	CA	661	G
1	CA	665	A

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Mol	Chain	Res	Type
1	CA	666	G
1	CA	680	C
1	CA	687	A
1	CA	688	G
1	CA	690	G
1	CA	724	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	766	A
1	CA	774	G
1	CA	777	A
1	CA	786	G
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	796	C
1	CA	802	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	821	G
1	CA	827	U
1	CA	828	A
1	CA	833	U
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	870	U
1	CA	873	A
1	CA	875	C
1	CA	876	G
1	CA	902	G
1	CA	913	A
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	932	C
1	CA	933	G

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Mol	Chain	Res	Type
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	937	A
1	CA	940	C
1	CA	942	G
1	CA	945	G
1	CA	950	U
1	CA	953	G
1	CA	954	G
1	CA	958	A
1	CA	960	U
1	CA	961	U
1	CA	964	A
1	CA	966	G
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	982	U
1	CA	984	C
1	CA	985	C
1	CA	989	C
1	CA	990	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	996	A
1	CA	1001(A)	G
1	CA	1004	A
1	CA	1005	A
1	CA	1006	C
1	CA	1009	G
1	CA	1012	U
1	CA	1016	A
1	CA	1019	C
1	CA	1023	G
1	CA	1024	G

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Mol	Chain	Res	Type
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1029	C
1	CA	1030	C
1	CA	1031	G
1	CA	1035	A
1	CA	1036	G
1	CA	1037	C
1	CA	1039	C
1	CA	1042	G
1	CA	1043	C
1	CA	1044	A
1	CA	1045	C
1	CA	1046	A
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1063	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1081	G
1	CA	1084	G
1	CA	1085	U
1	CA	1086	U
1	CA	1088	G
1	CA	1089	G
1	CA	1094	G
1	CA	1096	C
1	CA	1101	A
1	CA	1107	C
1	CA	1109	C
1	CA	1112	C
1	CA	1114	C
1	CA	1115	C
1	CA	1117	G
1	CA	1118	C
1	CA	1119	C
1	CA	1124	G
1	CA	1125	U

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Mol	Chain	Res	Type
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1131	G
1	CA	1134	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1144	G
1	CA	1145	C
1	CA	1149	C
1	CA	1150	U
1	CA	1151	A
1	CA	1152	A
1	CA	1155	G
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1162	C
1	CA	1166	G
1	CA	1170	A
1	CA	1182	G
1	CA	1183	A
1	CA	1184	G
1	CA	1185	G
1	CA	1186	G
1	CA	1187	G
1	CA	1188	A
1	CA	1190	G
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1206	G
1	CA	1207	G
1	CA	1210	C
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C

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Mol	Chain	Res	Type
1	CA	1220	G
1	CA	1224	G
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1228	C
1	CA	1233	G
1	CA	1236	A
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1242	C
1	CA	1244	C
1	CA	1245	A
1	CA	1250	A
1	CA	1252	A
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1260	C
1	CA	1264	C
1	CA	1265	G
1	CA	1266	G
1	CA	1267	C
1	CA	1270	C
1	CA	1271	G
1	CA	1272	G
1	CA	1275	A
1	CA	1278	U
1	CA	1279	A
1	CA	1280	A
1	CA	1282	C
1	CA	1284	C
1	CA	1286	A
1	CA	1287	A
1	CA	1288	A
1	CA	1293	G
1	CA	1294	G
1	CA	1295	G
1	CA	1297	C
1	CA	1298	C
1	CA	1299	A

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Mol	Chain	Res	Type
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1304	G
1	CA	1305	G
1	CA	1307	U
1	CA	1319	A
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1333	A
1	CA	1335	C
1	CA	1336	C
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1348	U
1	CA	1357	A
1	CA	1359	C
1	CA	1362	C
1	CA	1363	C
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1369	C
1	CA	1372	U
1	CA	1373	G
1	CA	1379	G
1	CA	1381	U
1	CA	1394	A
1	CA	1397	C
1	CA	1398	A
1	CA	1401	G
1	CA	1419	G
1	CA	1441	G
1	CA	1442	G
1	CA	1442(B)	A
1	CA	1446	U
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1457	G
1	CA	1459	C

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Mol	Chain	Res	Type
1	CA	1460	A
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1495	U
1	CA	1497	G
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
23	DA	10	G
23	DA	12	U
23	DA	14	A
23	DA	15	G
23	DA	34	C
23	DA	36	G
23	DA	45	C
23	DA	55	G
23	DA	69	C
23	DA	71	A
23	DA	72	U
23	DA	74	A
23	DA	75	G
23	DA	82	G
23	DA	84	A
23	DA	90	U
23	DA	94	C
23	DA	95	G
23	DA	96	G
23	DA	100	G
23	DA	102	G
23	DA	103	A
23	DA	118	A
23	DA	119	A
23	DA	120	U
23	DA	131	G
23	DA	141	A
23	DA	154	G

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Mol	Chain	Res	Type
23	DA	154(A)	C
23	DA	157	U
23	DA	181	A
23	DA	182	A
23	DA	188	G
23	DA	196	A
23	DA	197	A
23	DA	199	A
23	DA	200	U
23	DA	201	C
23	DA	204	A
23	DA	205	G
23	DA	214	G
23	DA	215	G
23	DA	216	A
23	DA	221	A
23	DA	222	A
23	DA	225	A
23	DA	229	A
23	DA	233	A
23	DA	248	G
23	DA	250	G
23	DA	269	U
23	DA	271(I)	G
23	DA	271(K)	U
23	DA	271(L)	U
23	DA	271(M)	G
23	DA	271(N)	U
23	DA	271(Y)	U
23	DA	272(B)	G
23	DA	272(H)	C
23	DA	272(I)	U
23	DA	272(J)	C
23	DA	275	G
23	DA	276	A
23	DA	277	C
23	DA	278	A
23	DA	279	C
23	DA	280	C
23	DA	286	C
23	DA	311	A
23	DA	315	G

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Mol	Chain	Res	Type
23	DA	316	C
23	DA	324	A
23	DA	329	G
23	DA	330	A
23	DA	331	A
23	DA	332	A
23	DA	333	G
23	DA	335	C
23	DA	338	G
23	DA	342	G
23	DA	352	G
23	DA	353	G
23	DA	363	G
23	DA	363(C)	G
23	DA	363(F)	A
23	DA	386	G
23	DA	404	C
23	DA	405	U
23	DA	407	G
23	DA	411	G
23	DA	412	A
23	DA	428	A
23	DA	444	C
23	DA	448	U
23	DA	455	C
23	DA	457	A
23	DA	459	U
23	DA	460	A
23	DA	470	A
23	DA	471	A
23	DA	481	G
23	DA	482	A
23	DA	505	A
23	DA	509	C
23	DA	512	G
23	DA	529	A
23	DA	530	G
23	DA	531	C
23	DA	532	A
23	DA	533	G
23	DA	543	C
23	DA	545	G

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Mol	Chain	Res	Type
23	DA	546	C
23	DA	547	A
23	DA	548	A
23	DA	563	G
23	DA	573	G
23	DA	575	A
23	DA	587	C
23	DA	588	U
23	DA	602	G
23	DA	603	A
23	DA	604	G
23	DA	607	U
23	DA	614(A)	U
23	DA	614(B)	G
23	DA	614(C)	A
23	DA	615	G
23	DA	620	G
23	DA	627	A
23	DA	632	A
23	DA	637	A
23	DA	645	C
23	DA	646	A
23	DA	647	G
23	DA	652(B)	A
23	DA	652(C)	G
23	DA	652(E)	G
23	DA	652(F)	G
23	DA	652(J)	G
23	DA	652(Q)	G
23	DA	652(R)	C
23	DA	652(T)	C
23	DA	652(U)	G
23	DA	668	G
23	DA	669	G
23	DA	685	A
23	DA	686	G
23	DA	701	G
23	DA	702	G
23	DA	707	G
23	DA	708	C
23	DA	709	U
23	DA	715	G

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Mol	Chain	Res	Type
23	DA	717	G
23	DA	730	C
23	DA	752	A
23	DA	753	C
23	DA	762	U
23	DA	764	A
23	DA	765	G
23	DA	771	G
23	DA	775	G
23	DA	776	G
23	DA	782	A
23	DA	784	A
23	DA	785	G
23	DA	790	C
23	DA	792	G
23	DA	805	G
23	DA	810	U
23	DA	811	U
23	DA	812	C
23	DA	819	A
23	DA	827	U
23	DA	828	U
23	DA	830	G
23	DA	857	C
23	DA	859	G
23	DA	879	G
23	DA	882	G
23	DA	895	U
23	DA	896	A
23	DA	897	C
23	DA	900	A
23	DA	901	A
23	DA	908	C
23	DA	910	A
23	DA	914	C
23	DA	917	A
23	DA	932	G
23	DA	938	G
23	DA	941	A
23	DA	945	A
23	DA	946	G
23	DA	953	A

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Mol	Chain	Res	Type
23	DA	958	U
23	DA	959	A
23	DA	961	C
23	DA	965	C
23	DA	974	G
23	DA	975	C
23	DA	975(A)	G
23	DA	983	A
23	DA	990	A
23	DA	991	C
23	DA	996	A
23	DA	1005	C
23	DA	1012	U
23	DA	1013	C
23	DA	1020	A
23	DA	1022	G
23	DA	1023	U
23	DA	1025	G
23	DA	1026	U
23	DA	1027	A
23	DA	1033	U
23	DA	1038	C
23	DA	1039	G
23	DA	1040	C
23	DA	1041	C
23	DA	1042	G
23	DA	1043	C
23	DA	1045	A
23	DA	1046	A
23	DA	1047	G
23	DA	1048	A
23	DA	1049	C
23	DA	1050	A
23	DA	1052	C
23	DA	1107	G
23	DA	1108	U
23	DA	1109	C
23	DA	1110	G
23	DA	1112	G
23	DA	1115	G
23	DA	1128	A
23	DA	1129	A

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Mol	Chain	Res	Type
23	DA	1130	U
23	DA	1135	C
23	DA	1136	G
23	DA	1139	G
23	DA	1141	U
23	DA	1155	A
23	DA	1170	G
23	DA	1171	G
23	DA	1188	U
23	DA	1210	A
23	DA	1211	U
23	DA	1224	C
23	DA	1244	G
23	DA	1250	G
23	DA	1252	G
23	DA	1253	A
23	DA	1256	G
23	DA	1267	U
23	DA	1271	G
23	DA	1272	A
23	DA	1273	U
23	DA	1300	U
23	DA	1301	A
23	DA	1305	C
23	DA	1314	C
23	DA	1320	C
23	DA	1321	A
23	DA	1329	U
23	DA	1345	C
23	DA	1352	U
23	DA	1359	A
23	DA	1360	A
23	DA	1365	A
23	DA	1368	G
23	DA	1370	C
23	DA	1373	A
23	DA	1374	G
23	DA	1378	A
23	DA	1379	A
23	DA	1383	C
23	DA	1384	A
23	DA	1385	G

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Mol	Chain	Res	Type
23	DA	1386	C
23	DA	1395	A
23	DA	1405	U
23	DA	1416	G
23	DA	1417	C
23	DA	1419	A
23	DA	1420	U
23	DA	1421	G
23	DA	1427	A
23	DA	1428	C
23	DA	1437	C
23	DA	1445	A
23	DA	1449	A
23	DA	1455	G
23	DA	1459	G
23	DA	1467	C
23	DA	1471	A
23	DA	1472	A
23	DA	1482	G
23	DA	1488	G
23	DA	1490	A
23	DA	1493	C
23	DA	1497	U
23	DA	1507	A
23	DA	1508	A
23	DA	1509	C
23	DA	1509(A)	A
23	DA	1510	G
23	DA	1520	G
23	DA	1531	C
23	DA	1539	G
23	DA	1542	A
23	DA	1543	C
23	DA	1545	A
23	DA	1548	C
23	DA	1554	A
23	DA	1558	A
23	DA	1559	G
23	DA	1560	G
23	DA	1566	A
23	DA	1569	A
23	DA	1578	U

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Mol	Chain	Res	Type
23	DA	1579	A
23	DA	1580	A
23	DA	1581	G
23	DA	1584	C
23	DA	1586	A
23	DA	1598	C
23	DA	1608	A
23	DA	1609	A
23	DA	1610	A
23	DA	1617	C
23	DA	1640	C
23	DA	1647	G
23	DA	1648	C
23	DA	1652	A
23	DA	1654	A
23	DA	1655	A
23	DA	1674	G
23	DA	1675	C
23	DA	1696	G
23	DA	1698	A
23	DA	1700	A
23	DA	1701	A
23	DA	1703	G
23	DA	1721	G
23	DA	1722	A
23	DA	1746	G
23	DA	1750	G
23	DA	1763	G
23	DA	1764	G
23	DA	1773	A
23	DA	1777	U
23	DA	1780	A
23	DA	1782	C
23	DA	1791	A
23	DA	1799	G
23	DA	1800	C
23	DA	1801	G
23	DA	1812	A
23	DA	1816	G
23	DA	1819	A
23	DA	1820	U
23	DA	1829	A

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Mol	Chain	Res	Type
23	DA	1835	G
23	DA	1838	C
23	DA	1840	G
23	DA	1847	A
23	DA	1848	A
23	DA	1858	G
23	DA	1865	G
23	DA	1866	C
23	DA	1877	A
23	DA	1878	G
23	DA	1881	C
23	DA	1882	C
23	DA	1896	G
23	DA	1900	A
23	DA	1905	C
23	DA	1906	G
23	DA	1912	A
23	DA	1913	A
23	DA	1914	C
23	DA	1929	G
23	DA	1930	G
23	DA	1931	U
23	DA	1936	A
23	DA	1937	A
23	DA	1938	A
23	DA	1939	U
23	DA	1952	A
23	DA	1955	U
23	DA	1963	U
23	DA	1964	G
23	DA	1966	A
23	DA	1967	C
23	DA	1969	A
23	DA	1970	A
23	DA	1971	A
23	DA	1972	A
23	DA	1982	C
23	DA	1991	U
23	DA	1993	U
23	DA	1997	G
23	DA	2005	A
23	DA	2018	G

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Mol	Chain	Res	Type
23	DA	2023	G
23	DA	2031	A
23	DA	2032	G
23	DA	2033	A
23	DA	2036	C
23	DA	2043	C
23	DA	2049	G
23	DA	2055	C
23	DA	2056	G
23	DA	2060	A
23	DA	2061	G
23	DA	2062	A
23	DA	2063	C
23	DA	2069	G
23	DA	2099	U
23	DA	2100	G
23	DA	2103	C
23	DA	2104	G
23	DA	2108	C
23	DA	2110	G
23	DA	2111	C
23	DA	2112	G
23	DA	2115	G
23	DA	2116	G
23	DA	2117	A
23	DA	2119	A
23	DA	2123	G
23	DA	2126	A
23	DA	2127	G
23	DA	2128	C
23	DA	2131	G
23	DA	2133	G
23	DA	2134	A
23	DA	2135	A
23	DA	2136	C
23	DA	2146	C
23	DA	2147	G
23	DA	2150	U
23	DA	2159	G
23	DA	2160	G
23	DA	2161	C
23	DA	2162	G

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Mol	Chain	Res	Type
23	DA	2164	C
23	DA	2169	A
23	DA	2170	A
23	DA	2172	U
23	DA	2173	A
23	DA	2174	C
23	DA	2176	A
23	DA	2179	C
23	DA	2180	U
23	DA	2183	C
23	DA	2185	C
23	DA	2186	G
23	DA	2187	G
23	DA	2188	C
23	DA	2191	G
23	DA	2192	G
23	DA	2193	G
23	DA	2198	A
23	DA	2199	A
23	DA	2200	C
23	DA	2206	G
23	DA	2207	G
23	DA	2208	A
23	DA	2225	A
23	DA	2234	G
23	DA	2238	G
23	DA	2239	G
23	DA	2248	C
23	DA	2252	G
23	DA	2268	A
23	DA	2273	A
23	DA	2275	C
23	DA	2278	A
23	DA	2283	C
23	DA	2287	A
23	DA	2288	A
23	DA	2289	G
23	DA	2291	U
23	DA	2294	C
23	DA	2305	A
23	DA	2306	C
23	DA	2307	G

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Mol	Chain	Res	Type
23	DA	2308	G
23	DA	2309	A
23	DA	2311	A
23	DA	2316	C
23	DA	2319	G
23	DA	2320	A
23	DA	2321	G
23	DA	2325	G
23	DA	2327	A
23	DA	2334	G
23	DA	2336	A
23	DA	2343	C
23	DA	2347	C
23	DA	2350	C
23	DA	2354	G
23	DA	2379	G
23	DA	2383	G
23	DA	2385	C
23	DA	2388	A
23	DA	2391	G
23	DA	2400	G
23	DA	2406	U
23	DA	2407	G
23	DA	2410	G
23	DA	2414	G
23	DA	2418	A
23	DA	2422	A
23	DA	2425	A
23	DA	2429	G
23	DA	2430	A
23	DA	2435	A
23	DA	2439	A
23	DA	2440	C
23	DA	2441	C
23	DA	2448	A
23	DA	2465	C
23	DA	2469	A
23	DA	2470	G
23	DA	2472	G
23	DA	2474	C
23	DA	2476	A
23	DA	2477	C

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Mol	Chain	Res	Type
23	DA	2486	G
23	DA	2487	G
23	DA	2502	G
23	DA	2504	U
23	DA	2505	G
23	DA	2506	U
23	DA	2518	A
23	DA	2520	C
23	DA	2525	G
23	DA	2529	G
23	DA	2535	G
23	DA	2554	U
23	DA	2564	A
23	DA	2566	A
23	DA	2567	G
23	DA	2573	C
23	DA	2582	G
23	DA	2585	U
23	DA	2586	C
23	DA	2602	A
23	DA	2603	G
23	DA	2604	U
23	DA	2608	G
23	DA	2609	U
23	DA	2610	C
23	DA	2611	U
23	DA	2612	C
23	DA	2615	U
23	DA	2628	C
23	DA	2629	A
23	DA	2630	G
23	DA	2654	A
23	DA	2663	G
23	DA	2672	G
23	DA	2674	G
23	DA	2686	G
23	DA	2690	C
23	DA	2691	C
23	DA	2702	U
23	DA	2703	C
23	DA	2707	G
23	DA	2712(A)	A

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Mol	Chain	Res	Type
23	DA	2713	A
23	DA	2714	G
23	DA	2718	G
23	DA	2726	U
23	DA	2733	A
23	DA	2739	U
23	DA	2744	G
23	DA	2748	A
23	DA	2758	A
23	DA	2761	G
23	DA	2765	A
23	DA	2766	G
23	DA	2775	A
23	DA	2778	A
23	DA	2779	U
23	DA	2790	A
23	DA	2791	C
23	DA	2802	G
23	DA	2803	C
23	DA	2808	U
23	DA	2820	A
23	DA	2821	A
23	DA	2833	G
23	DA	2834	G
23	DA	2835	A
23	DA	2847	U
23	DA	2872	G
23	DA	2873	A
23	DA	2880	C
23	DA	2892	A
24	DB	2	C
24	DB	8	U
24	DB	9	G
24	DB	12	C
24	DB	13	A
24	DB	15	A
24	DB	19	G
24	DB	21	G
24	DB	24	G
24	DB	25	A
24	DB	26	A
24	DB	28	C

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Mol	Chain	Res	Type
24	DB	33	G
24	DB	34	U
24	DB	40	U
24	DB	53	A
24	DB	54	G
24	DB	56	G
24	DB	73	A
24	DB	74	U
24	DB	75	G
24	DB	85	G
24	DB	88	C
24	DB	89	G
24	DB	106	G
24	DB	110	G

All (183) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	60	A
1	AA	115	G
1	AA	173	U
1	AA	243	A
1	AA	266	G
1	AA	344	A
1	AA	428	G
1	AA	484	G
1	AA	495	A
1	AA	509	A
1	AA	532	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	793	U
1	AA	913	A
1	AA	934	C
1	AA	968	A
1	AA	992	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1156	G
1	AA	1201	A

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Mol	Chain	Res	Type
1	AA	1285	A
1	AA	1299	A
1	AA	1300	G
1	AA	1346	A
1	AA	1378	C
1	AA	1442	G
1	AA	1452	C
1	AA	1493	A
1	AA	1504	G
23	BA	71	A
23	BA	102	G
23	BA	196	A
23	BA	249	C
23	BA	271(K)	U
23	BA	271(L)	U
23	BA	271(M)	G
23	BA	278	A
23	BA	363(E)	U
23	BA	481	G
23	BA	542	C
23	BA	547	A
23	BA	587	C
23	BA	669	G
23	BA	685	A
23	BA	746	A
23	BA	752	A
23	BA	764	A
23	BA	827	U
23	BA	856	C
23	BA	900	A
23	BA	945	A
23	BA	974	G
23	BA	1026	U
23	BA	1047	G
23	BA	1049	C
23	BA	1106	G
23	BA	1108	U
23	BA	1110	G
23	BA	1155	A
23	BA	1174	A
23	BA	1175	U
23	BA	1176	G

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Mol	Chain	Res	Type
23	BA	1210	A
23	BA	1300	U
23	BA	1378	A
23	BA	1419	A
23	BA	1427	A
23	BA	1507	A
23	BA	1530	C
23	BA	1536	C
23	BA	1538	G
23	BA	1558	A
23	BA	1608	A
23	BA	1653	G
23	BA	1799	G
23	BA	1819	A
23	BA	1992	G
23	BA	2116	G
23	BA	2126	A
23	BA	2172	U
23	BA	2308	G
23	BA	2318	G
23	BA	2406	U
23	BA	2439	A
23	BA	2602	A
23	BA	2610	C
23	BA	2689	U
23	BA	2778	A
23	BA	2802	G
1	CA	60	A
1	CA	115	G
1	CA	173	U
1	CA	243	A
1	CA	266	G
1	CA	344	A
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	495	A
1	CA	509	A
1	CA	560	U
1	CA	561	U
1	CA	687	A
1	CA	748	C

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Mol	Chain	Res	Type
1	CA	793	U
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1211	U
1	CA	1227	A
1	CA	1256	A
1	CA	1280	A
1	CA	1285	A
1	CA	1299	A
1	CA	1300	G
1	CA	1346	A
1	CA	1442	G
1	CA	1493	A
1	CA	1504	G
23	DA	71	A
23	DA	102	G
23	DA	196	A
23	DA	249	C
23	DA	271(K)	U
23	DA	271(L)	U
23	DA	271(M)	G
23	DA	278	A
23	DA	363(E)	U
23	DA	481	G
23	DA	542	C
23	DA	547	A
23	DA	587	C
23	DA	669	G
23	DA	685	A
23	DA	752	A
23	DA	764	A
23	DA	827	U
23	DA	856	C
23	DA	900	A
23	DA	945	A
23	DA	1026	U
23	DA	1047	G

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Mol	Chain	Res	Type
23	DA	1049	C
23	DA	1106	G
23	DA	1108	U
23	DA	1110	G
23	DA	1155	A
23	DA	1210	A
23	DA	1300	U
23	DA	1301	A
23	DA	1378	A
23	DA	1396	U
23	DA	1419	A
23	DA	1427	A
23	DA	1507	A
23	DA	1530	C
23	DA	1538	G
23	DA	1558	A
23	DA	1608	A
23	DA	1653	G
23	DA	1799	G
23	DA	1819	A
23	DA	1992	G
23	DA	2116	G
23	DA	2126	A
23	DA	2172	U
23	DA	2308	G
23	DA	2318	G
23	DA	2406	U
23	DA	2439	A
23	DA	2602	A
23	DA	2610	C
23	DA	2689	U
23	DA	2778	A
23	DA	2802	G

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 1662 ligands modelled in this entry, 1662 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1501/1522 (98%)	0.19	34 (2%) 61 39	47, 95, 155, 169	0
1	CA	1497/1522 (98%)	0.12	37 (2%) 58 37	50, 96, 158, 171	0
2	AB	230/256 (89%)	0.57	14 (6%) 27 15	87, 114, 134, 148	0
2	CB	229/256 (89%)	0.81	26 (11%) 10 5	92, 116, 136, 149	0
3	AC	206/239 (86%)	0.67	14 (6%) 23 12	85, 109, 127, 136	0
3	CC	206/239 (86%)	0.75	12 (5%) 29 16	94, 120, 143, 158	0
4	AD	208/209 (99%)	0.97	24 (11%) 9 5	75, 94, 114, 125	0
4	CD	208/209 (99%)	0.90	20 (9%) 13 7	76, 93, 114, 124	0
5	AE	148/162 (91%)	0.17	4 (2%) 56 35	66, 86, 103, 125	0
5	CE	148/162 (91%)	0.46	7 (4%) 36 19	69, 88, 104, 127	0
6	AF	100/101 (99%)	0.16	1 (1%) 79 61	67, 82, 100, 116	0
6	CF	100/101 (99%)	0.28	1 (1%) 79 61	70, 86, 103, 117	0
7	AG	155/156 (99%)	1.59	52 (33%) 1 0	113, 139, 153, 159	0
7	CG	155/156 (99%)	1.42	41 (26%) 1 1	122, 137, 149, 159	0
8	AH	138/138 (100%)	0.60	8 (5%) 29 16	71, 90, 100, 110	0
8	CH	138/138 (100%)	0.63	4 (2%) 53 32	71, 92, 103, 113	0
9	AI	125/128 (97%)	1.36	29 (23%) 2 1	110, 137, 149, 154	0
9	CI	125/128 (97%)	2.19	64 (51%) 0 0	115, 139, 152, 163	0
10	AJ	96/105 (91%)	0.98	13 (13%) 7 4	92, 126, 141, 147	0
10	CJ	96/105 (91%)	1.67	36 (37%) 1 0	108, 134, 150, 160	0
11	AK	114/129 (88%)	0.21	2 (1%) 67 47	60, 86, 108, 120	0
11	CK	114/129 (88%)	0.24	3 (2%) 57 36	63, 89, 107, 126	0
12	AL	122/132 (92%)	0.58	7 (5%) 29 16	62, 77, 95, 112	0
12	CL	122/132 (92%)	0.64	10 (8%) 17 10	63, 77, 96, 109	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/126 (90%)	1.37	25 (21%) 2 1	112, 139, 150, 153	0
13	CM	114/126 (90%)	1.42	30 (26%) 1 1	116, 140, 151, 160	0
14	AN	60/61 (98%)	1.33	16 (26%) 1 1	93, 118, 131, 144	0
14	CN	60/61 (98%)	1.56	16 (26%) 1 1	103, 122, 134, 139	0
15	AO	88/89 (98%)	0.29	0 100 100	63, 85, 103, 113	0
15	CO	88/89 (98%)	0.24	1 (1%) 78 59	63, 85, 105, 111	0
16	AP	82/88 (93%)	1.02	10 (12%) 8 5	76, 88, 110, 120	0
16	CP	82/88 (93%)	0.97	7 (8%) 16 9	73, 85, 105, 117	0
17	AQ	99/105 (94%)	0.41	3 (3%) 52 31	68, 82, 102, 106	0
17	CQ	99/105 (94%)	0.42	2 (2%) 65 44	69, 83, 101, 108	0
18	AR	68/88 (77%)	0.12	0 100 100	71, 82, 105, 112	0
18	CR	68/88 (77%)	0.04	0 100 100	75, 85, 105, 117	0
19	AS	81/93 (87%)	1.65	30 (37%) 1 0	113, 138, 147, 152	0
19	CS	81/93 (87%)	1.34	18 (22%) 2 1	114, 140, 150, 153	0
20	AT	87/106 (82%)	0.92	10 (11%) 9 5	75, 88, 103, 111	0
20	CT	97/106 (91%)	0.66	6 (6%) 26 14	72, 86, 105, 115	0
21	AU	23/27 (85%)	3.01	17 (73%) 0 0	128, 136, 145, 154	0
21	CU	23/27 (85%)	2.96	18 (78%) 0 0	129, 137, 148, 150	0
22	AX	95/101 (94%)	0.76	8 (8%) 17 9	69, 94, 115, 123	0
22	CX	95/101 (94%)	1.07	12 (12%) 8 4	88, 106, 129, 145	0
23	BA	2837/2913 (97%)	-0.46	27 (0%) 79 61	26, 47, 132, 176	0
23	DA	2814/2913 (96%)	-0.47	27 (0%) 79 61	28, 50, 133, 176	0
24	BB	120/122 (98%)	-0.04	1 (0%) 82 65	43, 72, 93, 110	0
24	DB	120/122 (98%)	0.34	6 (5%) 34 18	48, 81, 106, 117	0
25	BD	275/276 (99%)	-0.14	2 (0%) 84 68	29, 45, 63, 113	0
25	DD	275/276 (99%)	-0.19	1 (0%) 88 76	30, 47, 66, 116	0
26	BE	204/206 (99%)	-0.13	3 (1%) 72 52	28, 49, 72, 95	0
26	DE	204/206 (99%)	-0.21	2 (0%) 79 61	29, 50, 76, 95	0
27	BF	203/210 (96%)	-0.06	1 (0%) 87 73	29, 54, 88, 111	0
27	DF	203/210 (96%)	-0.08	0 100 100	31, 59, 90, 112	0
28	BG	181/182 (99%)	0.71	10 (5%) 30 16	76, 110, 133, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	181/182 (99%)	1.14	30 (16%) 4 2	86, 117, 138, 148	0
29	BH	174/180 (96%)	0.37	7 (4%) 42 23	54, 73, 94, 110	0
29	DH	174/180 (96%)	0.52	5 (2%) 53 32	65, 82, 101, 119	0
30	BI	146/148 (98%)	0.06	5 (3%) 48 28	54, 81, 99, 115	0
30	DI	146/148 (98%)	0.35	4 (2%) 56 35	56, 89, 108, 120	0
31	BN	140/140 (100%)	-0.02	1 (0%) 84 68	38, 49, 78, 92	0
31	DN	140/140 (100%)	-0.06	1 (0%) 84 68	40, 54, 82, 96	0
32	BO	122/122 (100%)	-0.20	1 (0%) 82 65	35, 50, 69, 77	0
32	DO	122/122 (100%)	-0.32	0 100 100	36, 52, 69, 77	0
33	BP	149/150 (99%)	0.14	1 (0%) 84 68	30, 58, 89, 105	0
33	DP	149/150 (99%)	0.13	1 (0%) 84 68	31, 62, 92, 112	0
34	BQ	141/141 (100%)	0.01	2 (1%) 73 53	39, 54, 71, 83	0
34	DQ	141/141 (100%)	0.05	1 (0%) 84 68	41, 58, 77, 88	0
35	BR	118/118 (100%)	-0.17	1 (0%) 82 65	34, 44, 58, 77	0
35	DR	118/118 (100%)	-0.10	0 100 100	36, 47, 62, 78	0
36	BS	110/112 (98%)	0.20	2 (1%) 67 47	50, 69, 89, 96	0
36	DS	110/112 (98%)	0.64	5 (4%) 38 20	55, 74, 94, 102	0
37	BT	131/146 (89%)	0.03	3 (2%) 61 39	43, 55, 92, 119	0
37	DT	131/146 (89%)	-0.00	3 (2%) 61 39	46, 57, 93, 128	0
38	BU	116/118 (98%)	-0.09	0 100 100	32, 44, 62, 71	0
38	DU	116/118 (98%)	-0.05	1 (0%) 81 63	34, 48, 66, 73	0
39	BV	101/101 (100%)	-0.09	1 (0%) 79 61	29, 56, 79, 103	0
39	DV	101/101 (100%)	-0.15	0 100 100	32, 62, 85, 103	0
40	BW	112/113 (99%)	-0.28	0 100 100	33, 40, 62, 103	0
40	DW	112/113 (99%)	-0.23	1 (0%) 81 63	35, 42, 67, 105	0
41	BX	95/96 (98%)	0.07	0 100 100	38, 49, 72, 88	0
41	DX	95/96 (98%)	0.10	2 (2%) 63 42	41, 52, 77, 90	0
42	BY	107/110 (97%)	0.29	2 (1%) 66 45	47, 61, 85, 108	0
42	DY	107/110 (97%)	0.56	5 (4%) 36 19	52, 65, 89, 113	0
43	BZ	201/206 (97%)	0.28	4 (1%) 65 44	53, 76, 99, 122	0
43	DZ	198/206 (96%)	0.29	2 (1%) 79 61	62, 81, 102, 121	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	B0	76/85 (89%)	-0.03	0 100 100	39, 48, 64, 91	0
44	D0	76/85 (89%)	0.09	0 100 100	43, 52, 66, 92	0
45	B1	97/98 (98%)	-0.04	1 (1%) 79 61	36, 48, 82, 97	0
45	D1	97/98 (98%)	-0.01	3 (3%) 51 30	36, 51, 83, 98	0
46	B2	70/72 (97%)	0.25	3 (4%) 40 22	46, 60, 76, 107	0
46	D2	70/72 (97%)	0.39	4 (5%) 29 16	50, 64, 81, 103	0
47	B3	59/60 (98%)	0.14	1 (1%) 69 48	38, 49, 86, 97	0
47	D3	59/60 (98%)	0.18	1 (1%) 69 48	41, 53, 93, 102	0
48	B4	46/71 (64%)	0.21	1 (2%) 62 41	101, 129, 144, 148	0
48	D4	46/71 (64%)	0.70	1 (2%) 62 41	113, 133, 144, 152	0
49	B5	59/60 (98%)	-0.28	0 100 100	30, 45, 66, 80	0
49	D5	59/60 (98%)	-0.23	0 100 100	32, 47, 68, 81	0
50	B6	53/54 (98%)	-0.35	0 100 100	42, 51, 70, 79	0
50	D6	53/54 (98%)	-0.19	0 100 100	43, 54, 72, 82	0
51	B7	48/49 (97%)	-0.11	2 (4%) 40 22	30, 34, 55, 80	0
51	D7	48/49 (97%)	-0.12	1 (2%) 63 42	32, 35, 58, 84	0
52	B8	64/65 (98%)	-0.07	0 100 100	38, 43, 52, 70	0
52	D8	64/65 (98%)	0.06	0 100 100	40, 45, 55, 70	0
53	B9	36/37 (97%)	0.17	0 100 100	44, 55, 62, 73	0
53	D9	36/37 (97%)	0.59	3 (8%) 17 9	47, 59, 68, 75	0
All	All	20641/21444 (96%)	0.13	884 (4%) 40 22	26, 71, 144, 176	0

All (884) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
8	CH	1	MET	8.3
9	CI	40	LEU	7.2
8	AH	1	MET	6.9
21	AU	14	TRP	6.1
7	CG	8	GLU	6.0
9	CI	41	VAL	5.8
21	AU	23	PRO	5.8
21	CU	11	GLY	5.8
2	CB	99	GLY	5.6
10	CJ	26	ALA	5.6

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Mol	Chain	Res	Type	RSRZ
11	CK	126	ARG	5.6
9	CI	110	GLU	5.5
7	CG	33	ASP	5.5
9	CI	106	ALA	5.4
13	AM	89	GLY	5.4
7	AG	9	VAL	5.3
7	CG	40	ALA	5.3
25	DD	276	LYS	5.3
2	AB	188	ALA	5.2
14	CN	2	ALA	5.2
9	CI	109	VAL	5.1
21	CU	14	TRP	5.0
9	CI	42	ARG	5.0
21	AU	4	GLY	5.0
28	BG	87	PRO	4.9
21	AU	16	GLY	4.8
21	AU	13	ILE	4.8
1	CA	1030(B)	C	4.8
9	AI	126	SER	4.8
9	CI	77	ILE	4.7
45	D1	2	SER	4.7
13	CM	70	LEU	4.6
14	CN	25	VAL	4.5
14	AN	32	SER	4.5
1	CA	1030(A)	G	4.4
21	CU	15	ARG	4.4
20	AT	12	ALA	4.4
37	BT	131	ALA	4.4
13	CM	87	TYR	4.4
51	D7	48	LYS	4.4
21	CU	13	ILE	4.3
10	CJ	57	LYS	4.3
23	BA	272(A)	U	4.2
20	CT	9	ASN	4.2
19	CS	69	HIS	4.2
21	CU	22	ARG	4.2
1	AA	1364	U	4.2
9	CI	111	ARG	4.2
9	CI	74	ILE	4.2
14	CN	14	PRO	4.2
9	CI	108	VAL	4.1
10	CJ	58	ASP	4.1

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Mol	Chain	Res	Type	RSRZ
12	AL	29	GLY	4.1
19	CS	39	THR	4.1
9	CI	102	LEU	4.1
22	CX	71	TYR	4.1
28	BG	35	GLU	4.1
7	AG	14	PRO	4.1
13	AM	102	ARG	4.1
14	AN	14	PRO	4.1
9	CI	44	VAL	4.1
4	AD	31	CYS	4.1
2	CB	70	PHE	4.1
21	AU	15	ARG	4.1
19	CS	67	VAL	4.0
9	CI	11	LYS	4.0
9	CI	2	GLU	4.0
25	BD	276	LYS	4.0
4	CD	110	PHE	4.0
7	CG	35	LYS	4.0
22	CX	8	ASN	4.0
13	CM	107	ALA	4.0
21	CU	17	THR	3.9
20	CT	8	ARG	3.9
4	CD	9	CYS	3.9
2	CB	133	LYS	3.9
7	AG	40	ALA	3.9
10	CJ	49	VAL	3.9
28	DG	155	MET	3.9
7	CG	42	ILE	3.9
9	CI	125	TYR	3.9
7	CG	27	ILE	3.9
1	CA	1286	A	3.8
1	AA	1459	C	3.8
9	CI	37	PHE	3.8
10	CJ	72	VAL	3.8
4	CD	31	CYS	3.8
7	AG	134	ALA	3.8
19	AS	40	ILE	3.8
28	DG	90	LEU	3.8
19	AS	64	GLU	3.8
23	DA	276	A	3.8
1	AA	1226	C	3.7
1	CA	1459	C	3.7

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Mol	Chain	Res	Type	RSRZ
7	CG	37	ASN	3.7
10	CJ	54	PHE	3.7
23	BA	888	C	3.7
9	AI	15	ALA	3.7
23	DA	1171	G	3.7
9	CI	126	SER	3.7
21	CU	12	LYS	3.7
16	AP	68	ASP	3.7
16	AP	69	THR	3.7
20	AT	8	ARG	3.7
4	AD	154	ASN	3.7
9	CI	123	PRO	3.6
7	AG	105	VAL	3.6
16	CP	39	TYR	3.6
7	CG	97	GLN	3.6
23	DA	272(A)	U	3.6
21	AU	24	ARG	3.6
3	AC	2	GLY	3.6
10	CJ	41	PRO	3.6
4	AD	9	CYS	3.6
7	CG	38	LEU	3.6
9	CI	118	LYS	3.6
4	AD	66	ARG	3.5
9	AI	119	ALA	3.5
3	AC	9	GLY	3.5
21	CU	23	PRO	3.5
4	AD	21	LEU	3.5
19	CS	40	ILE	3.5
23	BA	277	C	3.5
22	AX	8	ASN	3.5
23	BA	2296	U	3.5
9	CI	119	ALA	3.5
14	AN	57	ARG	3.5
14	CN	22	THR	3.5
19	AS	39	THR	3.5
21	AU	17	THR	3.5
7	CG	13	GLN	3.5
13	AM	101	GLN	3.5
9	CI	70	LYS	3.5
13	AM	37	THR	3.5
28	BG	53	LEU	3.5
19	CS	68	GLY	3.4

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Mol	Chain	Res	Type	RSRZ
7	AG	5	ARG	3.4
14	AN	10	ALA	3.4
19	AS	42	PRO	3.4
22	CX	69	ASP	3.4
17	AQ	96	GLU	3.4
19	AS	76	PRO	3.4
37	DT	131	ALA	3.4
13	CM	103	THR	3.4
9	AI	123	PRO	3.4
9	CI	113	LYS	3.4
2	CB	163	PHE	3.4
7	AG	115	ARG	3.4
9	CI	10	ARG	3.4
11	AK	126	ARG	3.4
1	CA	1353	G	3.4
13	CM	89	GLY	3.4
4	AD	12	CYS	3.3
9	CI	14	VAL	3.3
13	CM	33	ALA	3.3
23	DA	275	G	3.3
1	AA	1447	A	3.3
12	AL	126	LYS	3.3
23	DA	2602	A	3.3
19	AS	33	THR	3.3
4	AD	120	LEU	3.3
9	CI	30	GLY	3.3
21	CU	16	GLY	3.3
4	AD	37	PRO	3.3
12	AL	28	LYS	3.3
29	BH	2	SER	3.3
7	AG	124	LEU	3.3
10	CJ	62	HIS	3.3
7	CG	36	LYS	3.3
12	AL	18	VAL	3.3
13	CM	64	TRP	3.3
4	AD	5	ILE	3.3
40	DW	112	GLY	3.3
4	AD	26	CYS	3.2
9	AI	106	ALA	3.2
13	AM	97	PRO	3.2
7	AG	43	PHE	3.2
23	BA	276	A	3.2

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Mol	Chain	Res	Type	RSRZ
9	CI	105	ASP	3.2
3	CC	158	GLY	3.2
7	CG	49	ILE	3.2
1	CA	1036	G	3.2
9	CI	114	TYR	3.2
21	AU	18	TYR	3.2
2	CB	136	VAL	3.2
7	AG	112	PRO	3.2
8	AH	93	VAL	3.2
7	AG	76	ARG	3.2
9	AI	105	ASP	3.1
9	CI	75	ASP	3.1
10	CJ	65	LEU	3.1
7	AG	8	GLU	3.1
20	AT	9	ASN	3.1
7	AG	44	TYR	3.1
21	CU	9	ARG	3.1
7	CG	120	ILE	3.1
28	BG	75	LYS	3.1
45	B1	2	SER	3.1
3	AC	12	LEU	3.1
9	AI	115	GLY	3.1
9	CI	50	LEU	3.1
10	AJ	10	GLY	3.1
19	AS	68	GLY	3.1
9	AI	109	VAL	3.1
19	CS	76	PRO	3.1
19	AS	75	ALA	3.1
4	AD	155	LEU	3.1
5	CE	120	THR	3.1
9	CI	71	SER	3.1
1	CA	1240	U	3.1
13	CM	101	GLN	3.1
37	DT	130	ALA	3.1
10	CJ	64	GLU	3.1
19	AS	58	VAL	3.1
7	AG	36	LYS	3.1
23	DA	2125	G	3.1
7	AG	38	LEU	3.1
20	AT	18	GLN	3.1
26	BE	195	LEU	3.1
5	CE	22	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
13	CM	91	ARG	3.1
21	AU	10	ARG	3.1
9	AI	11	LYS	3.1
9	CI	32	ASP	3.1
9	CI	36	TYR	3.1
8	CH	2	LEU	3.0
9	AI	117	HIS	3.0
2	AB	96	ARG	3.0
7	CG	32	ARG	3.0
10	CJ	60	ARG	3.0
3	AC	207	VAL	3.0
7	CG	23	VAL	3.0
7	AG	35	LYS	3.0
7	AG	62	PHE	3.0
1	CA	1447	A	3.0
5	CE	94	ALA	3.0
7	AG	25	ALA	3.0
7	CG	28	ASN	3.0
32	BO	5	GLN	3.0
2	CB	81	VAL	3.0
20	AT	74	LYS	3.0
1	AA	1240	U	3.0
1	CA	90	U	3.0
14	CN	21	TYR	3.0
9	CI	66	ARG	3.0
13	CM	99	ARG	3.0
5	CE	130	ASN	3.0
7	AG	75	VAL	3.0
7	AG	118	VAL	3.0
42	BY	3	VAL	3.0
2	AB	131	PRO	3.0
19	AS	50	ALA	3.0
1	AA	1290	G	3.0
7	CG	21	VAL	3.0
9	CI	29	ASN	3.0
37	BT	104	ASN	3.0
33	BP	74	GLU	3.0
23	BA	887	A	3.0
42	DY	2	ARG	3.0
14	AN	2	ALA	3.0
13	AM	87	TYR	3.0
6	AF	55	ASP	3.0

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Mol	Chain	Res	Type	RSRZ
7	CG	11	GLN	3.0
28	DG	45	GLU	2.9
19	AS	60	VAL	2.9
3	AC	10	PHE	2.9
43	BZ	28	MET	2.9
51	B7	1	MET	2.9
3	AC	15	THR	2.9
9	CI	9	ARG	2.9
13	CM	90	LEU	2.9
9	CI	15	ALA	2.9
21	AU	21	TYR	2.9
33	DP	66	GLY	2.9
1	AA	1220	G	2.9
8	AH	25	ASP	2.9
28	DG	41	GLN	2.9
1	CA	1183	A	2.9
9	AI	102	LEU	2.9
21	AU	9	ARG	2.9
8	CH	99	GLU	2.9
9	CI	43	ALA	2.9
10	AJ	20	ALA	2.9
19	CS	31	ILE	2.9
7	CG	22	LEU	2.9
13	AM	82	MET	2.9
13	AM	83	ASP	2.9
29	BH	57	ASP	2.9
9	CI	21	PRO	2.9
10	AJ	26	ALA	2.9
19	CS	33	THR	2.9
3	AC	13	GLY	2.9
9	AI	8	GLY	2.9
9	AI	121	ARG	2.9
10	AJ	46	ARG	2.9
12	CL	69	TYR	2.9
21	CU	24	ARG	2.9
1	AA	380	G	2.9
8	AH	2	LEU	2.9
9	CI	116	LYS	2.9
23	DA	277	C	2.8
23	DA	1026	U	2.8
20	CT	12	ALA	2.8
21	AU	3	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
4	AD	135	LEU	2.8
7	CG	30	ILE	2.8
9	CI	63	ILE	2.8
24	BB	120	A	2.8
7	CG	24	THR	2.8
12	CL	112	ASP	2.8
1	AA	1113	C	2.8
21	CU	6	ARG	2.8
21	CU	7	ARG	2.8
9	AI	37	PHE	2.8
10	AJ	23	ILE	2.8
13	AM	68	GLY	2.8
28	DG	76	SER	2.8
37	BT	130	ALA	2.8
9	CI	112	LYS	2.8
28	DG	54	GLU	2.8
1	CA	1287	A	2.8
5	AE	85	GLY	2.8
24	DB	54	G	2.8
19	AS	69	HIS	2.8
2	AB	165	VAL	2.8
7	CG	17	VAL	2.8
9	AI	14	VAL	2.8
20	CT	74	LYS	2.8
51	B7	48	LYS	2.8
4	AD	179	GLU	2.8
14	AN	13	THR	2.8
19	AS	5	LEU	2.8
2	CB	97	TRP	2.8
28	BG	25	TYR	2.8
7	AG	97	GLN	2.8
28	DG	28	VAL	2.8
4	AD	150	GLU	2.8
28	DG	157	ILE	2.8
7	AG	10	ARG	2.7
21	CU	10	ARG	2.7
21	CU	3	LYS	2.7
7	AG	13	GLN	2.7
13	CM	60	VAL	2.7
24	DB	52	A	2.7
30	DI	37	VAL	2.7
53	D9	23	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
9	CI	12	GLU	2.7
10	CJ	75	ILE	2.7
16	CP	1	MET	2.7
19	AS	35	SER	2.7
43	BZ	1	MET	2.7
29	DH	93	GLY	2.7
23	BA	2793	G	2.7
7	CG	81	GLY	2.7
9	CI	7	THR	2.7
36	BS	17	ARG	2.7
36	DS	33	LYS	2.7
7	AG	69	VAL	2.7
7	AG	141	VAL	2.7
1	AA	1291	G	2.7
10	CJ	45	ARG	2.7
20	AT	23	ARG	2.7
28	DG	134	GLY	2.7
23	BA	2602	A	2.7
2	CB	221	LEU	2.7
22	CX	46	VAL	2.7
7	AG	42	ILE	2.7
46	B2	70	GLN	2.7
19	AS	74	PHE	2.7
4	CD	22	LYS	2.7
9	AI	12	GLU	2.7
9	AI	70	LYS	2.7
17	AQ	24	GLU	2.7
7	CG	117	ALA	2.7
26	DE	204	ALA	2.7
9	AI	65	VAL	2.7
13	AM	96	LEU	2.7
4	CD	158	ILE	2.6
19	AS	59	PRO	2.6
48	D4	5	ILE	2.6
9	AI	111	ARG	2.6
12	AL	19	ARG	2.6
12	AL	32	PHE	2.6
4	AD	22	LYS	2.6
42	DY	93	GLY	2.6
7	AG	54	THR	2.6
10	AJ	67	THR	2.6
7	CG	124	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
19	CS	11	VAL	2.6
28	BG	76	SER	2.6
10	CJ	37	PRO	2.6
23	DA	171	G	2.6
1	CA	956	U	2.6
21	CU	20	LYS	2.6
24	DB	1	U	2.6
1	AA	1288	A	2.6
6	CF	6	VAL	2.6
9	CI	65	VAL	2.6
1	CA	1362	C	2.6
4	AD	152	SER	2.6
9	CI	92	TYR	2.6
9	CI	78	LYS	2.6
13	CM	93	ARG	2.6
22	AX	23	LYS	2.6
7	CG	93	PRO	2.6
22	CX	68	GLN	2.6
23	DA	2296	U	2.6
1	CA	79	G	2.6
23	DA	1106	G	2.6
23	DA	1110	G	2.6
7	AG	100	ALA	2.6
29	DH	43	VAL	2.6
1	CA	1460	A	2.6
19	CS	57	HIS	2.6
37	DT	1	MET	2.6
2	CB	131	PRO	2.6
9	CI	115	GLY	2.6
13	CM	95	GLY	2.6
10	CJ	83	GLU	2.6
7	AG	17	VAL	2.6
28	DG	46	ALA	2.6
31	DN	140	VAL	2.6
7	CG	5	ARG	2.6
12	CL	126	LYS	2.6
23	BA	2130	U	2.6
28	BG	144	ILE	2.6
16	AP	39	TYR	2.6
23	BA	1106	G	2.6
23	BA	2173	A	2.6
4	CD	23	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
9	AI	32	ASP	2.6
9	CI	99	LEU	2.6
17	CQ	24	GLU	2.6
30	BI	10	GLU	2.6
43	BZ	2	GLU	2.6
4	CD	3	ARG	2.6
9	AI	10	ARG	2.6
36	DS	55	ALA	2.6
5	AE	80	ILE	2.5
2	CB	101	MET	2.5
3	AC	178	LEU	2.5
14	CN	44	LEU	2.5
41	DX	92	LEU	2.5
21	AU	5	ASP	2.5
22	AX	9	ASN	2.5
2	CB	134	GLU	2.5
12	CL	16	GLU	2.5
10	CJ	23	ILE	2.5
19	AS	49	ILE	2.5
9	AI	5	TYR	2.5
12	AL	25	PRO	2.5
2	CB	98	LEU	2.5
7	AG	12	LEU	2.5
16	AP	82	GLN	2.5
17	CQ	100	LYS	2.5
28	DG	51	ARG	2.5
13	CM	35	GLU	2.5
13	AM	22	ILE	2.5
28	DG	20	ILE	2.5
10	CJ	67	THR	2.5
10	CJ	81	THR	2.5
30	BI	1	MET	2.5
1	AA	1224	G	2.5
1	AA	1456	G	2.5
1	CA	1030(C)	G	2.5
1	CA	1290	G	2.5
1	CA	1373	G	2.5
3	AC	52	LEU	2.5
1	AA	63	C	2.5
9	CI	107	ARG	2.5
11	CK	98	LEU	2.5
13	CM	102	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
16	CP	60	LEU	2.5
4	CD	12	CYS	2.5
23	DA	2107	C	2.5
19	AS	56	GLN	2.5
3	CC	99	VAL	2.5
7	AG	39	ALA	2.5
38	DU	4	ALA	2.5
1	AA	204	U	2.5
26	DE	163	GLU	2.5
4	AD	134	ASP	2.5
7	AG	93	PRO	2.5
4	AD	65	ARG	2.5
12	CL	119	LYS	2.5
16	AP	17	TYR	2.5
21	CU	21	TYR	2.5
1	AA	1460	A	2.5
1	CA	1248	A	2.5
3	CC	2	GLY	2.5
19	CS	9	VAL	2.5
7	AG	47	CYS	2.5
3	AC	90	GLU	2.5
10	CJ	50	ILE	2.5
46	B2	11	GLU	2.5
4	CD	165	MET	2.5
4	AD	110	PHE	2.5
24	DB	55	U	2.5
9	CI	85	LEU	2.5
13	CM	96	LEU	2.5
14	CN	51	GLY	2.5
7	CG	61	VAL	2.5
29	DH	2	SER	2.4
36	DS	31	SER	2.4
1	CA	959	A	2.4
1	AA	1331	G	2.4
9	CI	27	THR	2.4
1	CA	970	C	2.4
1	CA	1320	C	2.4
28	DG	53	LEU	2.4
14	CN	34	TYR	2.4
7	AG	21	VAL	2.4
7	AG	61	VAL	2.4
7	AG	117	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
14	AN	5	ALA	2.4
2	CB	129	GLU	2.4
45	D1	75	GLU	2.4
11	CK	123	LYS	2.4
19	AS	32	LYS	2.4
16	CP	6	LEU	2.4
13	AM	64	TRP	2.4
2	AB	148	TYR	2.4
2	CB	165	VAL	2.4
22	AX	48	HIS	2.4
23	DA	34	C	2.4
22	CX	36	GLN	2.4
4	AD	3	ARG	2.4
43	DZ	198	LYS	2.4
22	CX	60	GLU	2.4
45	D1	83	GLU	2.4
4	CD	26	CYS	2.4
19	AS	71	LEU	2.4
14	CN	61	TRP	2.4
19	AS	65	ASN	2.4
28	DG	142	PRO	2.4
7	CG	15	ASP	2.4
19	AS	19	VAL	2.4
10	CJ	36	GLY	2.4
12	CL	26	ALA	2.4
1	CA	1285	A	2.4
11	AK	13	GLN	2.4
3	CC	178	LEU	2.4
23	BA	1049	C	2.4
23	BA	2146	C	2.4
23	BA	2116	G	2.4
29	BH	133	VAL	2.4
42	DY	53	PRO	2.4
20	CT	75	ASN	2.4
10	CJ	38	ILE	2.4
13	CM	11	ARG	2.4
14	AN	12	ARG	2.4
16	CP	82	GLN	2.4
34	BQ	12	GLN	2.4
1	AA	1287	A	2.4
23	BA	1535	A	2.4
19	AS	38	SER	2.4

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Mol	Chain	Res	Type	RSRZ
19	CS	34	TRP	2.4
1	AA	135	C	2.3
10	AJ	48	THR	2.3
23	BA	2108	C	2.3
23	DA	893	C	2.3
7	CG	25	ALA	2.3
7	CG	41	ARG	2.3
13	CM	83	ASP	2.3
23	BA	614(B)	G	2.3
23	DA	2162	G	2.3
4	CD	21	LEU	2.3
10	CJ	71	LEU	2.3
28	BG	34	LEU	2.3
28	DG	26	GLN	2.3
28	DG	152	LEU	2.3
2	AB	197	VAL	2.3
1	AA	1289	A	2.3
1	CA	958	A	2.3
13	CM	100	GLY	2.3
13	CM	76	ALA	2.3
3	CC	184	TYR	2.3
7	AG	109	ASN	2.3
1	CA	972	C	2.3
13	AM	19	LEU	2.3
28	DG	7	LEU	2.3
29	DH	159	GLU	2.3
12	CL	18	VAL	2.3
30	DI	3	VAL	2.3
10	CJ	66	ARG	2.3
15	CO	88	ARG	2.3
21	AU	6	ARG	2.3
4	AD	137	SER	2.3
7	AG	7	ALA	2.3
22	CX	13	THR	2.3
26	BE	204	ALA	2.3
10	CJ	56	HIS	2.3
20	AT	73	HIS	2.3
3	CC	175	LEU	2.3
7	CG	84	ASN	2.3
9	AI	40	LEU	2.3
22	AX	3	LEU	2.3
1	AA	1332	A	2.3

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Mol	Chain	Res	Type	RSRZ
9	AI	110	GLU	2.3
22	AX	66	GLU	2.3
1	AA	948	C	2.3
1	AA	1028	C	2.3
13	AM	60	VAL	2.3
19	AS	67	VAL	2.3
9	CI	121	ARG	2.3
10	AJ	79	ARG	2.3
13	CM	88	ARG	2.3
10	AJ	37	PRO	2.3
7	AG	81	GLY	2.3
14	AN	7	ILE	2.3
43	DZ	1	MET	2.3
2	CB	138	LEU	2.3
10	CJ	40	LEU	2.3
1	CA	1442(A)	G	2.3
23	BA	2152	G	2.3
36	DS	29	PHE	2.3
4	CD	144	ASP	2.3
7	AG	86	GLN	2.3
46	D2	70	GLN	2.3
2	CB	96	ARG	2.3
7	AG	94	ARG	2.3
23	DA	1111	A	2.3
23	DA	2169	A	2.3
42	DY	62	GLU	2.3
23	BA	2118	U	2.3
19	CS	42	PRO	2.3
7	AG	83	ALA	2.3
9	CI	122	ALA	2.3
14	AN	20	ALA	2.3
1	CA	1030	C	2.3
23	DA	1052	C	2.3
14	AN	60	SER	2.3
4	AD	54	TYR	2.3
9	CI	5	TYR	2.3
19	CS	52	TYR	2.3
4	CD	154	ASN	2.3
10	CJ	22	LYS	2.3
20	AT	75	ASN	2.3
7	AG	78	ARG	2.3
9	AI	107	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
3	AC	70	VAL	2.3
9	AI	17	VAL	2.3
13	CM	74	VAL	2.3
4	CD	179	GLU	2.2
5	AE	81	GLU	2.2
22	CX	44	GLU	2.2
29	BH	58	GLU	2.2
1	CA	1312	G	2.2
7	AG	50	ILE	2.2
16	CP	41	PRO	2.2
1	AA	1183	A	2.2
9	CI	18	PHE	2.2
9	CI	101	PHE	2.2
7	CG	154	TYR	2.2
30	BI	29	TYR	2.2
1	CA	1116	C	2.2
7	CG	6	ARG	2.2
13	AM	29	ARG	2.2
3	CC	207	VAL	2.2
7	AG	11	GLN	2.2
7	AG	37	ASN	2.2
13	AM	45	VAL	2.2
53	D9	36	GLN	2.2
13	CM	86	CYS	2.2
30	DI	20	ASP	2.2
3	CC	134	ILE	2.2
9	CI	81	ILE	2.2
13	AM	78	ILE	2.2
53	D9	10	ILE	2.2
7	AG	59	LEU	2.2
9	CI	55	ALA	2.2
10	CJ	27	ALA	2.2
22	AX	70	MET	2.2
48	B4	17	GLY	2.2
9	CI	58	HIS	2.2
28	DG	64	THR	2.2
29	BH	59	ARG	2.2
23	DA	2173	A	2.2
10	AJ	76	ASN	2.2
3	CC	206	GLU	2.2
8	AH	136	GLU	2.2
4	AD	102	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
23	DA	652(H)	C	2.2
9	CI	19	LEU	2.2
13	AM	42	ALA	2.2
14	CN	10	ALA	2.2
7	CG	10	ARG	2.2
20	AT	80	ARG	2.2
16	AP	22	THR	2.2
9	CI	62	TYR	2.2
13	CM	59	TYR	2.2
2	CB	7	VAL	2.2
1	AA	1353	G	2.2
1	CA	1289	A	2.2
2	AB	9	GLU	2.2
2	CB	128	GLU	2.2
31	BN	68	GLU	2.2
2	CB	85	ALA	2.2
10	CJ	20	ALA	2.2
16	AP	1	MET	2.2
2	AB	133	LYS	2.2
2	CB	166	ASP	2.2
19	AS	70	LYS	2.2
2	AB	28	PHE	2.2
10	AJ	54	PHE	2.2
29	BH	6	ARG	2.2
23	DA	279	C	2.2
19	CS	77	THR	2.2
14	CN	18	VAL	2.2
7	CG	146	GLU	2.2
1	AA	950	U	2.2
1	CA	1281	U	2.2
7	CG	82	GLY	2.2
9	CI	95	LYS	2.2
13	AM	106	ASN	2.2
19	CS	50	ALA	2.2
13	CM	85	GLY	2.2
14	AN	4	LYS	2.2
28	DG	69	ALA	2.2
28	DG	79	ASN	2.2
13	AM	86	CYS	2.2
28	DG	49	ASP	2.2
35	BR	69	ASP	2.2
23	BA	281	G	2.2

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Mol	Chain	Res	Type	RSRZ
9	CI	103	THR	2.1
19	AS	48	THR	2.1
1	AA	1217	C	2.1
23	BA	2142	C	2.1
5	AE	20	GLN	2.1
7	AG	46	ALA	2.1
29	BH	156	ALA	2.1
43	BZ	192	ALA	2.1
10	CJ	43	ARG	2.1
12	CL	19	ARG	2.1
13	AM	100	GLY	2.1
29	DH	21	PRO	2.1
2	AB	195	ASP	2.1
16	AP	47	ASP	2.1
23	BA	2150	U	2.1
14	CN	33	VAL	2.1
4	CD	5	ILE	2.1
20	AT	14	LYS	2.1
1	AA	64	G	2.1
1	CA	1202	G	2.1
22	CX	70	MET	2.1
4	CD	141	ARG	2.1
23	BA	2160	G	2.1
7	AG	107	ALA	2.1
46	B2	69	ARG	2.1
7	CG	34	GLY	2.1
8	CH	131	GLY	2.1
19	AS	17	GLU	2.1
46	D2	5	GLU	2.1
47	B3	2	PRO	2.1
47	D3	2	PRO	2.1
3	CC	3	ASN	2.1
13	CM	40	ASN	2.1
22	CX	57	ASN	2.1
30	BI	20	ASP	2.1
46	D2	52	ASP	2.1
9	AI	58	HIS	2.1
2	AB	221	LEU	2.1
2	CB	32	ILE	2.1
9	AI	47	LEU	2.1
28	DG	176	LEU	2.1
4	CD	132	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
8	AH	84	ARG	2.1
13	AM	30	ALA	2.1
14	CN	5	ALA	2.1
1	AA	1493	A	2.1
4	CD	29	PRO	2.1
13	CM	68	GLY	2.1
23	DA	229	A	2.1
34	DQ	19	GLY	2.1
2	CB	17	PHE	2.1
1	AA	1002	G	2.1
23	DA	1115	G	2.1
36	BS	28	VAL	2.1
1	AA	1145	C	2.1
1	CA	1149	C	2.1
13	AM	70	LEU	2.1
13	CM	9	ILE	2.1
19	AS	13	ASP	2.1
21	AU	12	LYS	2.1
7	CG	12	LEU	2.1
19	CS	62	ILE	2.1
28	DG	34	LEU	2.1
10	CJ	42	THR	2.1
14	AN	3	ARG	2.1
14	CN	3	ARG	2.1
12	CL	120	TYR	2.1
41	DX	1	MET	2.1
46	D2	1	MET	2.1
3	AC	145	GLY	2.1
5	CE	81	GLU	2.1
14	CN	16	PHE	2.1
28	DG	48	GLU	2.1
12	CL	118	SER	2.1
20	CT	11	SER	2.1
25	BD	32	SER	2.1
10	CJ	44	VAL	2.1
16	AP	2	VAL	2.1
2	CB	8	LYS	2.1
10	AJ	80	LYS	2.1
23	DA	2892	A	2.1
24	DB	53	A	2.1
2	CB	172	ILE	2.1
3	AC	167	TRP	2.1

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Mol	Chain	Res	Type	RSRZ
13	AM	71	ARG	2.1
21	AU	22	ARG	2.1
9	CI	64	THR	2.1
10	CJ	15	THR	2.1
21	CU	8	THR	2.1
22	AX	47	THR	2.1
28	DG	146	TYR	2.1
1	AA	219	C	2.1
1	AA	1354	C	2.1
1	CA	1026	G	2.1
1	CA	1108	G	2.1
2	AB	29	ALA	2.1
2	AB	186	ALA	2.1
23	DA	280	C	2.1
23	BA	2151	G	2.1
24	DB	24	G	2.1
3	AC	51	GLY	2.1
5	CE	23	GLY	2.1
17	AQ	33	GLY	2.1
7	CG	112	PRO	2.1
28	BG	137	GLU	2.1
1	CA	1235	U	2.0
7	AG	120	ILE	2.0
14	CN	39	LEU	2.0
16	CP	36	ILE	2.0
19	AS	16	LEU	2.0
27	BF	133	ASN	2.0
13	CM	92	HIS	2.0
3	CC	177	THR	2.0
7	AG	15	ASP	2.0
7	AG	33	ASP	2.0
8	AH	3	THR	2.0
10	CJ	17	ASP	2.0
13	AM	43	THR	2.0
22	CX	47	THR	2.0
23	DA	278	A	2.0
34	BQ	135	ASP	2.0
7	CG	43	PHE	2.0
10	AJ	47	PHE	2.0
28	DG	141	PHE	2.0
39	BV	101	GLY	2.0
19	CS	17	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
26	BE	87	GLU	2.0
42	BY	29	GLU	2.0
19	AS	11	VAL	2.0
2	AB	187	LEU	2.0
2	CB	11	LEU	2.0
3	CC	52	LEU	2.0
4	CD	19	LEU	2.0
4	CD	122	ARG	2.0
8	AH	92	ARG	2.0
23	BA	2168	G	2.0
28	DG	135	LEU	2.0
2	CB	235	SER	2.0
10	CJ	19	SER	2.0
10	CJ	30	SER	2.0
28	BG	88	ILE	2.0
1	CA	1065	U	2.0
9	AI	23	ASN	2.0
23	BA	1026	U	2.0
23	BA	2144	U	2.0
30	BI	11	ASN	2.0
14	AN	61	TRP	2.0
16	AP	24	ALA	2.0
14	AN	34	TYR	2.0
4	AD	124	GLY	2.0
10	CJ	63	PHE	2.0
5	CE	20	GLN	2.0
28	DG	2	PRO	2.0
28	DG	8	LYS	2.0
1	AA	977	A	2.0
14	AN	25	VAL	2.0
30	DI	92	VAL	2.0
36	DS	17	ARG	2.0
42	DY	50	ARG	2.0
28	DG	52	ILE	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1669	1/1	0.32	0.23	103,103,103,103	0
54	MG	DA	3276	1/1	0.47	0.52	60,60,60,60	0
54	MG	CA	1664	1/1	0.54	0.31	80,80,80,80	0
54	MG	CA	1684	1/1	0.55	0.36	91,91,91,91	0
54	MG	AA	1625	1/1	0.56	0.30	79,79,79,79	0
54	MG	CA	1633	1/1	0.57	0.29	77,77,77,77	0
54	MG	AA	1607	1/1	0.59	0.27	78,78,78,78	0
54	MG	DO	201	1/1	0.59	0.13	120,120,120,120	0
54	MG	AA	1705	1/1	0.60	0.16	97,97,97,97	0
54	MG	CA	1652	1/1	0.62	0.24	76,76,76,76	0
54	MG	BA	3037	1/1	0.63	0.32	75,75,75,75	0
54	MG	BA	3237	1/1	0.63	0.18	71,71,71,71	0
54	MG	BA	3236	1/1	0.64	0.22	66,66,66,66	0
54	MG	DA	3464	1/1	0.64	0.19	89,89,89,89	0
54	MG	BA	3038	1/1	0.64	0.39	76,76,76,76	0
54	MG	BA	3060	1/1	0.65	0.25	54,54,54,54	0
54	MG	CA	1608	1/1	0.65	0.33	93,93,93,93	0
54	MG	DA	3091	1/1	0.65	0.19	55,55,55,55	0
54	MG	DA	3268	1/1	0.66	0.38	54,54,54,54	0
54	MG	DA	3557	1/1	0.67	0.18	103,103,103,103	0
54	MG	BA	3655	1/1	0.67	0.11	104,104,104,104	0
54	MG	CA	1632	1/1	0.68	0.19	69,69,69,69	0
54	MG	BA	3113	1/1	0.68	0.19	60,60,60,60	0
54	MG	DA	3167	1/1	0.68	0.17	51,51,51,51	0
54	MG	CA	1680	1/1	0.68	0.22	78,78,78,78	0
54	MG	CA	1604	1/1	0.69	0.32	81,81,81,81	0
54	MG	AA	1712	1/1	0.69	0.29	86,86,86,86	0
54	MG	AA	1619	1/1	0.69	0.29	86,86,86,86	0
54	MG	DA	3297	1/1	0.70	0.21	78,78,78,78	0
54	MG	DA	3247	1/1	0.70	0.28	67,67,67,67	0
54	MG	DA	3532	1/1	0.70	0.11	116,116,116,116	0
54	MG	CA	1642	1/1	0.70	0.23	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3030	1/1	0.70	0.18	55,55,55,55	0
54	MG	AA	1666	1/1	0.71	0.23	74,74,74,74	0
54	MG	DA	3328	1/1	0.71	0.35	57,57,57,57	0
54	MG	DA	3187	1/1	0.71	0.12	71,71,71,71	0
54	MG	DA	3066	1/1	0.71	0.16	62,62,62,62	0
54	MG	AA	1616	1/1	0.71	0.11	92,92,92,92	0
54	MG	DA	3165	1/1	0.71	0.24	60,60,60,60	0
54	MG	AA	1618	1/1	0.72	0.21	94,94,94,94	0
54	MG	CA	1649	1/1	0.72	0.31	66,66,66,66	0
54	MG	CA	1753	1/1	0.72	0.13	86,86,86,86	0
54	MG	AA	1640	1/1	0.73	0.27	58,58,58,58	0
54	MG	AA	1620	1/1	0.73	0.29	65,65,65,65	0
54	MG	BA	3014	1/1	0.73	0.10	65,65,65,65	0
54	MG	AA	1637	1/1	0.73	0.26	84,84,84,84	0
54	MG	DA	3236	1/1	0.73	0.24	47,47,47,47	0
54	MG	CA	1626	1/1	0.73	0.32	62,62,62,62	0
54	MG	CA	1655	1/1	0.73	0.20	98,98,98,98	0
54	MG	AA	1613	1/1	0.74	0.28	65,65,65,65	0
54	MG	DA	3525	1/1	0.74	0.09	106,106,106,106	0
54	MG	CA	1717	1/1	0.74	0.12	110,110,110,110	0
54	MG	AA	1622	1/1	0.74	0.28	81,81,81,81	0
54	MG	DA	3434	1/1	0.74	0.14	60,60,60,60	0
54	MG	BA	3305	1/1	0.75	0.31	69,69,69,69	0
54	MG	BA	3512	1/1	0.75	0.17	109,109,109,109	0
54	MG	BA	3261	1/1	0.75	0.26	34,34,34,34	0
54	MG	CA	1661	1/1	0.75	0.31	67,67,67,67	0
54	MG	DA	3123	1/1	0.75	0.28	53,53,53,53	0
54	MG	CA	1677	1/1	0.76	0.14	64,64,64,64	0
54	MG	DA	3073	1/1	0.76	0.28	68,68,68,68	0
54	MG	BA	3337	1/1	0.76	0.10	49,49,49,49	0
54	MG	BA	3104	1/1	0.76	0.28	63,63,63,63	0
54	MG	CA	1692	1/1	0.76	0.37	86,86,86,86	0
54	MG	CA	1699	1/1	0.76	0.15	83,83,83,83	0
54	MG	DA	3486	1/1	0.76	0.18	64,64,64,64	0
54	MG	DA	3179	1/1	0.76	0.25	68,68,68,68	0
54	MG	BA	3287	1/1	0.76	0.17	44,44,44,44	0
54	MG	BB	219	1/1	0.76	0.10	105,105,105,105	0
54	MG	AA	1645	1/1	0.76	0.20	60,60,60,60	0
54	MG	D5	101	1/1	0.76	0.14	52,52,52,52	0
54	MG	BA	3048	1/1	0.77	0.20	68,68,68,68	0
54	MG	CA	1697	1/1	0.77	0.10	57,57,57,57	0
54	MG	DA	3189	1/1	0.77	0.10	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1614	1/1	0.77	0.24	56,56,56,56	0
54	MG	DA	3497	1/1	0.77	0.15	83,83,83,83	0
54	MG	BB	204	1/1	0.77	0.18	52,52,52,52	0
54	MG	CA	1637	1/1	0.77	0.33	73,73,73,73	0
54	MG	CA	1656	1/1	0.77	0.25	86,86,86,86	0
54	MG	DA	3582	1/1	0.77	0.16	63,63,63,63	0
54	MG	DA	3177	1/1	0.77	0.24	88,88,88,88	0
54	MG	DA	3301	1/1	0.77	0.29	50,50,50,50	0
54	MG	CA	1663	1/1	0.78	0.28	64,64,64,64	0
54	MG	BA	3079	1/1	0.78	0.17	50,50,50,50	0
54	MG	CA	1667	1/1	0.78	0.27	77,77,77,77	0
54	MG	CA	1676	1/1	0.78	0.18	73,73,73,73	0
54	MG	CA	1614	1/1	0.78	0.15	85,85,85,85	0
54	MG	DB	204	1/1	0.78	0.30	74,74,74,74	0
54	MG	CA	1737	1/1	0.78	0.12	89,89,89,89	0
54	MG	CA	1662	1/1	0.78	0.32	75,75,75,75	0
54	MG	AA	1674	1/1	0.79	0.38	63,63,63,63	0
54	MG	DA	3278	1/1	0.79	0.11	83,83,83,83	0
54	MG	AA	1702	1/1	0.79	0.14	68,68,68,68	0
54	MG	DA	3130	1/1	0.79	0.22	47,47,47,47	0
54	MG	DA	3146	1/1	0.79	0.16	44,44,44,44	0
54	MG	CA	1607	1/1	0.79	0.23	50,50,50,50	0
54	MG	CA	1735	1/1	0.79	0.26	69,69,69,69	0
54	MG	BA	3174	1/1	0.79	0.14	32,32,32,32	0
54	MG	CA	1740	1/1	0.79	0.29	68,68,68,68	0
54	MG	DA	3521	1/1	0.79	0.12	86,86,86,86	0
54	MG	BA	3513	1/1	0.79	0.14	86,86,86,86	0
54	MG	BA	3593	1/1	0.79	0.14	84,84,84,84	0
54	MG	DA	3218	1/1	0.79	0.41	62,62,62,62	0
54	MG	BA	3194	1/1	0.79	0.27	63,63,63,63	0
54	MG	BA	3301	1/1	0.79	0.40	75,75,75,75	0
54	MG	DA	3257	1/1	0.79	0.33	56,56,56,56	0
54	MG	DA	3075	1/1	0.79	0.18	58,58,58,58	0
54	MG	DA	3188	1/1	0.80	0.09	69,69,69,69	0
54	MG	BA	3232	1/1	0.80	0.17	64,64,64,64	0
54	MG	AA	1678	1/1	0.80	0.35	74,74,74,74	0
54	MG	BA	3582	1/1	0.80	0.11	79,79,79,79	0
54	MG	CA	1668	1/1	0.80	0.24	87,87,87,87	0
54	MG	AA	1692	1/1	0.80	0.18	144,144,144,144	0
54	MG	AA	1651	1/1	0.80	0.23	60,60,60,60	0
54	MG	CA	1629	1/1	0.80	0.18	87,87,87,87	0
54	MG	DA	3567	1/1	0.80	0.18	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3020	1/1	0.80	0.29	56,56,56,56	0
54	MG	BA	3367	1/1	0.80	0.15	71,71,71,71	0
54	MG	DA	3048	1/1	0.80	0.11	40,40,40,40	0
54	MG	BA	3470	1/1	0.80	0.18	60,60,60,60	0
54	MG	BA	3196	1/1	0.81	0.15	46,46,46,46	0
54	MG	AA	1663	1/1	0.81	0.40	64,64,64,64	0
54	MG	AA	1731	1/1	0.81	0.10	119,119,119,119	0
54	MG	CA	1616	1/1	0.81	0.25	58,58,58,58	0
54	MG	DA	3116	1/1	0.81	0.18	43,43,43,43	0
54	MG	CA	1756	1/1	0.81	0.21	80,80,80,80	0
54	MG	DA	3221	1/1	0.81	0.24	51,51,51,51	0
54	MG	DA	3127	1/1	0.81	0.23	56,56,56,56	0
54	MG	CA	1758	1/1	0.81	0.11	84,84,84,84	0
54	MG	DA	3254	1/1	0.81	0.26	64,64,64,64	0
54	MG	BB	212	1/1	0.81	0.20	60,60,60,60	0
54	MG	BA	3195	1/1	0.81	0.24	60,60,60,60	0
54	MG	BA	3238	1/1	0.81	0.25	53,53,53,53	0
54	MG	DA	3277	1/1	0.81	0.19	77,77,77,77	0
54	MG	DA	3172	1/1	0.81	0.21	64,64,64,64	0
54	MG	DO	202	1/1	0.81	0.12	39,39,39,39	0
54	MG	DA	3280	1/1	0.81	0.16	58,58,58,58	0
54	MG	DA	3324	1/1	0.82	0.10	51,51,51,51	0
54	MG	AA	1688	1/1	0.82	0.14	96,96,96,96	0
54	MG	DA	3400	1/1	0.82	0.19	66,66,66,66	0
54	MG	AA	1611	1/1	0.82	0.07	83,83,83,83	0
54	MG	AA	1626	1/1	0.82	0.08	71,71,71,71	0
54	MG	DA	3157	1/1	0.82	0.19	44,44,44,44	0
54	MG	DA	3058	1/1	0.82	0.20	58,58,58,58	0
54	MG	BA	3109	1/1	0.82	0.33	62,62,62,62	0
54	MG	DA	3071	1/1	0.82	0.13	44,44,44,44	0
54	MG	CA	1601	1/1	0.82	0.19	45,45,45,45	0
54	MG	AA	1635	1/1	0.82	0.15	61,61,61,61	0
54	MG	DA	3184	1/1	0.82	0.09	46,46,46,46	0
54	MG	CA	1660	1/1	0.82	0.31	70,70,70,70	0
54	MG	DA	3282	1/1	0.82	0.17	64,64,64,64	0
54	MG	AA	1684	1/1	0.82	0.32	60,60,60,60	0
54	MG	CA	1636	1/1	0.82	0.32	59,59,59,59	0
54	MG	DA	3321	1/1	0.82	0.24	51,51,51,51	0
54	MG	CA	1641	1/1	0.83	0.19	52,52,52,52	0
54	MG	DA	3131	1/1	0.83	0.22	56,56,56,56	0
54	MG	BA	3146	1/1	0.83	0.22	65,65,65,65	0
54	MG	DA	3238	1/1	0.83	0.32	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1604	1/1	0.83	0.17	73,73,73,73	0
54	MG	DA	3481	1/1	0.83	0.27	61,61,61,61	0
54	MG	DA	3164	1/1	0.83	0.22	56,56,56,56	0
54	MG	DA	3496	1/1	0.83	0.14	66,66,66,66	0
54	MG	DA	3059	1/1	0.83	0.10	45,45,45,45	0
54	MG	CA	1739	1/1	0.83	0.13	87,87,87,87	0
54	MG	DA	3275	1/1	0.83	0.17	47,47,47,47	0
54	MG	DA	3168	1/1	0.83	0.24	42,42,42,42	0
54	MG	CA	1683	1/1	0.83	0.27	100,100,100,100	0
54	MG	DA	3564	1/1	0.83	0.16	61,61,61,61	0
54	MG	CA	1742	1/1	0.83	0.09	113,113,113,113	0
54	MG	BA	3123	1/1	0.83	0.17	43,43,43,43	0
54	MG	CA	1653	1/1	0.83	0.36	57,57,57,57	0
54	MG	BS	201	1/1	0.83	0.19	49,49,49,49	0
54	MG	CE	201	1/1	0.83	0.29	77,77,77,77	0
54	MG	CA	1640	1/1	0.83	0.25	82,82,82,82	0
54	MG	BA	3231	1/1	0.84	0.19	47,47,47,47	0
54	MG	AA	1726	1/1	0.84	0.15	86,86,86,86	0
54	MG	DA	3147	1/1	0.84	0.26	54,54,54,54	0
54	MG	BA	3399	1/1	0.84	0.10	43,43,43,43	0
54	MG	CA	1646	1/1	0.84	0.24	59,59,59,59	0
54	MG	DA	3283	1/1	0.84	0.21	61,61,61,61	0
54	MG	DA	3002	1/1	0.84	0.12	69,69,69,69	0
54	MG	BA	3438	1/1	0.84	0.13	65,65,65,65	0
54	MG	AA	1632	1/1	0.84	0.20	71,71,71,71	0
54	MG	CA	1685	1/1	0.84	0.45	71,71,71,71	0
54	MG	DA	3049	1/1	0.84	0.15	49,49,49,49	0
54	MG	CA	1686	1/1	0.84	0.18	61,61,61,61	0
54	MG	BA	3063	1/1	0.84	0.20	54,54,54,54	0
54	MG	DA	3062	1/1	0.84	0.26	49,49,49,49	0
54	MG	DA	3478	1/1	0.84	0.18	87,87,87,87	0
54	MG	DA	3063	1/1	0.84	0.33	60,60,60,60	0
54	MG	CA	1693	1/1	0.84	0.41	59,59,59,59	0
54	MG	DA	3193	1/1	0.84	0.14	40,40,40,40	0
54	MG	DA	3212	1/1	0.84	0.32	75,75,75,75	0
54	MG	AA	1608	1/1	0.84	0.35	67,67,67,67	0
54	MG	CA	1625	1/1	0.84	0.32	63,63,63,63	0
54	MG	BA	3239	1/1	0.84	0.27	67,67,67,67	0
54	MG	DA	3546	1/1	0.84	0.22	64,64,64,64	0
54	MG	BA	3100	1/1	0.84	0.10	42,42,42,42	0
54	MG	DA	3096	1/1	0.84	0.44	59,59,59,59	0
54	MG	AA	1624	1/1	0.84	0.35	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3569	1/1	0.84	0.10	104,104,104,104	0
54	MG	AA	1673	1/1	0.84	0.39	60,60,60,60	0
54	MG	DA	3258	1/1	0.84	0.24	52,52,52,52	0
54	MG	DA	3265	1/1	0.84	0.22	44,44,44,44	0
54	MG	BA	3197	1/1	0.84	0.24	41,41,41,41	0
54	MG	BA	3307	1/1	0.84	0.12	44,44,44,44	0
54	MG	AA	1699	1/1	0.85	0.10	99,99,99,99	0
54	MG	DA	3125	1/1	0.85	0.20	50,50,50,50	0
54	MG	BA	3128	1/1	0.85	0.18	49,49,49,49	0
54	MG	DA	3231	1/1	0.85	0.17	36,36,36,36	0
54	MG	DA	3401	1/1	0.85	0.14	108,108,108,108	0
54	MG	DA	3232	1/1	0.85	0.39	57,57,57,57	0
54	MG	BA	3094	1/1	0.85	0.21	54,54,54,54	0
54	MG	BA	3347	1/1	0.85	0.11	94,94,94,94	0
54	MG	BA	3039	1/1	0.85	0.12	32,32,32,32	0
54	MG	BA	3368	1/1	0.85	0.11	53,53,53,53	0
54	MG	BA	3384	1/1	0.85	0.07	88,88,88,88	0
54	MG	BA	3189	1/1	0.85	0.16	41,41,41,41	0
54	MG	DA	3262	1/1	0.85	0.20	53,53,53,53	0
54	MG	BA	3102	1/1	0.85	0.29	44,44,44,44	0
54	MG	BA	3241	1/1	0.85	0.19	65,65,65,65	0
54	MG	CA	1624	1/1	0.85	0.31	63,63,63,63	0
54	MG	CA	1716	1/1	0.85	0.13	102,102,102,102	0
54	MG	DA	3561	1/1	0.85	0.13	71,71,71,71	0
54	MG	AA	1686	1/1	0.85	0.12	68,68,68,68	0
54	MG	BA	3264	1/1	0.85	0.30	41,41,41,41	0
54	MG	BA	3273	1/1	0.85	0.33	37,37,37,37	0
54	MG	AA	1660	1/1	0.85	0.36	80,80,80,80	0
54	MG	AA	1671	1/1	0.85	0.22	67,67,67,67	0
54	MG	DB	207	1/1	0.85	0.20	57,57,57,57	0
54	MG	BA	3658	1/1	0.85	0.11	114,114,114,114	0
54	MG	CA	1672	1/1	0.85	0.19	66,66,66,66	0
54	MG	DA	3303	1/1	0.85	0.33	34,34,34,34	0
54	MG	DA	3153	1/1	0.86	0.17	58,58,58,58	0
54	MG	BA	3258	1/1	0.86	0.28	55,55,55,55	0
54	MG	BA	3185	1/1	0.86	0.25	51,51,51,51	0
54	MG	AA	1661	1/1	0.86	0.21	55,55,55,55	0
54	MG	BA	3015	1/1	0.86	0.22	48,48,48,48	0
54	MG	DA	3287	1/1	0.86	0.23	57,57,57,57	0
54	MG	DA	3028	1/1	0.86	0.21	67,67,67,67	0
54	MG	BA	3280	1/1	0.86	0.26	46,46,46,46	0
54	MG	DA	3040	1/1	0.86	0.16	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3310	1/1	0.86	0.27	28,28,28,28	0
54	MG	DA	3316	1/1	0.86	0.27	69,69,69,69	0
54	MG	BA	3016	1/1	0.86	0.11	47,47,47,47	0
54	MG	DA	3181	1/1	0.86	0.18	49,49,49,49	0
54	MG	DA	3326	1/1	0.86	0.16	46,46,46,46	0
54	MG	BA	3288	1/1	0.86	0.11	66,66,66,66	0
54	MG	DA	3185	1/1	0.86	0.14	57,57,57,57	0
54	MG	BA	3030	1/1	0.86	0.08	48,48,48,48	0
54	MG	AA	1679	1/1	0.86	0.17	44,44,44,44	0
54	MG	BB	206	1/1	0.86	0.17	57,57,57,57	0
54	MG	BB	207	1/1	0.86	0.18	52,52,52,52	0
54	MG	DA	3196	1/1	0.86	0.36	58,58,58,58	0
54	MG	AA	1636	1/1	0.86	0.18	79,79,79,79	0
54	MG	AA	1650	1/1	0.86	0.33	53,53,53,53	0
54	MG	CA	1707	1/1	0.86	0.11	94,94,94,94	0
54	MG	BA	3340	1/1	0.86	0.09	79,79,79,79	0
54	MG	AA	1668	1/1	0.86	0.33	62,62,62,62	0
54	MG	CA	1720	1/1	0.86	0.15	89,89,89,89	0
54	MG	DA	3537	1/1	0.86	0.08	63,63,63,63	0
54	MG	CA	1721	1/1	0.86	0.24	64,64,64,64	0
54	MG	DA	3548	1/1	0.86	0.08	89,89,89,89	0
54	MG	AA	1676	1/1	0.86	0.20	59,59,59,59	0
54	MG	BA	3002	1/1	0.86	0.29	51,51,51,51	0
54	MG	BA	3162	1/1	0.86	0.11	42,42,42,42	0
54	MG	BA	3394	1/1	0.86	0.10	50,50,50,50	0
54	MG	BA	3067	1/1	0.86	0.15	43,43,43,43	0
54	MG	DA	3133	1/1	0.86	0.21	36,36,36,36	0
54	MG	DA	3145	1/1	0.86	0.18	61,61,61,61	0
54	MG	DA	3270	1/1	0.86	0.11	64,64,64,64	0
54	MG	DA	3274	1/1	0.86	0.24	61,61,61,61	0
54	MG	CA	1620	1/1	0.86	0.17	58,58,58,58	0
54	MG	BA	3433	1/1	0.86	0.11	55,55,55,55	0
54	MG	DA	3141	1/1	0.87	0.26	60,60,60,60	0
54	MG	CA	1754	1/1	0.87	0.16	74,74,74,74	0
54	MG	BA	3589	1/1	0.87	0.14	94,94,94,94	0
54	MG	CA	1757	1/1	0.87	0.09	80,80,80,80	0
54	MG	CA	1669	1/1	0.87	0.29	76,76,76,76	0
54	MG	DA	3155	1/1	0.87	0.08	64,64,64,64	0
54	MG	CA	1670	1/1	0.87	0.35	73,73,73,73	0
54	MG	DA	3001	1/1	0.87	0.20	48,48,48,48	0
54	MG	BA	3243	1/1	0.87	0.28	42,42,42,42	0
54	MG	DA	3298	1/1	0.87	0.08	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3299	1/1	0.87	0.29	65,65,65,65	0
54	MG	DA	3011	1/1	0.87	0.20	42,42,42,42	0
54	MG	DA	3016	1/1	0.87	0.24	62,62,62,62	0
54	MG	BA	3252	1/1	0.87	0.26	36,36,36,36	0
54	MG	BA	3072	1/1	0.87	0.23	59,59,59,59	0
54	MG	BA	3660	1/1	0.87	0.11	104,104,104,104	0
54	MG	CA	1634	1/1	0.87	0.16	64,64,64,64	0
54	MG	DA	3045	1/1	0.87	0.12	38,38,38,38	0
54	MG	BA	3073	1/1	0.87	0.24	52,52,52,52	0
54	MG	DA	3398	1/1	0.87	0.13	88,88,88,88	0
54	MG	BA	3025	1/1	0.87	0.10	48,48,48,48	0
54	MG	DA	3055	1/1	0.87	0.19	56,56,56,56	0
54	MG	DA	3424	1/1	0.87	0.07	52,52,52,52	0
54	MG	BA	3026	1/1	0.87	0.18	52,52,52,52	0
54	MG	DA	3460	1/1	0.87	0.12	65,65,65,65	0
54	MG	BA	3275	1/1	0.87	0.23	26,26,26,26	0
54	MG	BA	3097	1/1	0.87	0.12	47,47,47,47	0
54	MG	DA	3201	1/1	0.87	0.16	49,49,49,49	0
54	MG	DA	3206	1/1	0.87	0.36	52,52,52,52	0
54	MG	DA	3209	1/1	0.87	0.21	51,51,51,51	0
54	MG	BG	201	1/1	0.87	0.22	60,60,60,60	0
54	MG	DA	3515	1/1	0.87	0.12	37,37,37,37	0
54	MG	DA	3216	1/1	0.87	0.14	51,51,51,51	0
54	MG	DA	3522	1/1	0.87	0.16	61,61,61,61	0
54	MG	CA	1648	1/1	0.87	0.30	60,60,60,60	0
54	MG	BQ	203	1/1	0.87	0.11	73,73,73,73	0
54	MG	BA	3404	1/1	0.87	0.10	45,45,45,45	0
54	MG	DA	3540	1/1	0.87	0.07	53,53,53,53	0
54	MG	BA	3421	1/1	0.87	0.13	68,68,68,68	0
54	MG	DA	3235	1/1	0.87	0.15	54,54,54,54	0
54	MG	DA	3082	1/1	0.87	0.20	36,36,36,36	0
54	MG	CA	1718	1/1	0.87	0.10	83,83,83,83	0
54	MG	AA	1623	1/1	0.87	0.16	74,74,74,74	0
54	MG	DA	3102	1/1	0.87	0.28	40,40,40,40	0
54	MG	BA	3183	1/1	0.87	0.19	29,29,29,29	0
54	MG	BA	3298	1/1	0.87	0.24	54,54,54,54	0
54	MG	CA	1609	1/1	0.87	0.24	70,70,70,70	0
54	MG	BA	3062	1/1	0.87	0.19	45,45,45,45	0
54	MG	AA	1709	1/1	0.87	0.12	101,101,101,101	0
54	MG	BA	3532	1/1	0.87	0.12	79,79,79,79	0
54	MG	AA	1646	1/1	0.87	0.29	59,59,59,59	0
54	MG	DA	3162	1/1	0.88	0.19	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1649	1/1	0.88	0.26	43,43,43,43	0
54	MG	BA	3547	1/1	0.88	0.12	105,105,105,105	0
54	MG	CA	1679	1/1	0.88	0.26	59,59,59,59	0
54	MG	DA	3296	1/1	0.88	0.22	67,67,67,67	0
54	MG	BA	3306	1/1	0.88	0.09	55,55,55,55	0
54	MG	CA	1681	1/1	0.88	0.09	82,82,82,82	0
54	MG	DA	3046	1/1	0.88	0.13	42,42,42,42	0
54	MG	BA	3205	1/1	0.88	0.12	54,54,54,54	0
54	MG	BA	3313	1/1	0.88	0.11	37,37,37,37	0
54	MG	BA	3642	1/1	0.88	0.10	139,139,139,139	0
54	MG	BA	3251	1/1	0.88	0.19	27,27,27,27	0
54	MG	BA	3207	1/1	0.88	0.09	33,33,33,33	0
54	MG	DA	3060	1/1	0.88	0.14	41,41,41,41	0
54	MG	BA	3344	1/1	0.88	0.19	61,61,61,61	0
54	MG	DA	3327	1/1	0.88	0.14	52,52,52,52	0
54	MG	CA	1639	1/1	0.88	0.21	76,76,76,76	0
54	MG	DA	3353	1/1	0.88	0.15	61,61,61,61	0
54	MG	BA	3212	1/1	0.88	0.28	68,68,68,68	0
54	MG	BA	3223	1/1	0.88	0.23	60,60,60,60	0
54	MG	BA	3263	1/1	0.88	0.15	36,36,36,36	0
54	MG	DA	3410	1/1	0.88	0.08	86,86,86,86	0
54	MG	DA	3416	1/1	0.88	0.13	66,66,66,66	0
54	MG	DA	3208	1/1	0.88	0.28	53,53,53,53	0
54	MG	BB	210	1/1	0.88	0.09	60,60,60,60	0
54	MG	BA	3369	1/1	0.88	0.08	52,52,52,52	0
54	MG	BA	3126	1/1	0.88	0.15	41,41,41,41	0
54	MG	DA	3093	1/1	0.88	0.21	56,56,56,56	0
54	MG	DA	3219	1/1	0.88	0.17	38,38,38,38	0
54	MG	BE	302	1/1	0.88	0.07	41,41,41,41	0
54	MG	DA	3222	1/1	0.88	0.29	68,68,68,68	0
54	MG	DA	3100	1/1	0.88	0.21	38,38,38,38	0
54	MG	AA	1606	1/1	0.88	0.41	79,79,79,79	0
54	MG	DA	3115	1/1	0.88	0.27	59,59,59,59	0
54	MG	BA	3234	1/1	0.88	0.18	69,69,69,69	0
54	MG	BA	3400	1/1	0.88	0.19	47,47,47,47	0
54	MG	DA	3239	1/1	0.88	0.25	58,58,58,58	0
54	MG	CA	1657	1/1	0.88	0.10	61,61,61,61	0
54	MG	DA	3251	1/1	0.88	0.14	40,40,40,40	0
54	MG	BA	3276	1/1	0.88	0.15	23,23,23,23	0
54	MG	BA	3279	1/1	0.88	0.24	27,27,27,27	0
54	MG	DA	3552	1/1	0.88	0.17	35,35,35,35	0
54	MG	BA	3192	1/1	0.88	0.18	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3107	1/1	0.88	0.28	60,60,60,60	0
54	MG	BA	3442	1/1	0.88	0.09	76,76,76,76	0
54	MG	CA	1612	1/1	0.88	0.15	65,65,65,65	0
54	MG	AQ	201	1/1	0.88	0.19	58,58,58,58	0
54	MG	DA	3273	1/1	0.88	0.22	50,50,50,50	0
54	MG	AA	1664	1/1	0.88	0.24	57,57,57,57	0
54	MG	DA	3148	1/1	0.88	0.12	48,48,48,48	0
54	MG	DF	301	1/1	0.88	0.19	50,50,50,50	0
54	MG	BA	3240	1/1	0.88	0.32	71,71,71,71	0
54	MG	CA	1621	1/1	0.88	0.21	64,64,64,64	0
54	MG	D0	101	1/1	0.88	0.13	41,41,41,41	0
54	MG	CA	1674	1/1	0.88	0.17	74,74,74,74	0
54	MG	DA	3267	1/1	0.89	0.26	54,54,54,54	0
54	MG	BA	3216	1/1	0.89	0.14	43,43,43,43	0
54	MG	CA	1729	1/1	0.89	0.10	81,81,81,81	0
54	MG	BA	3222	1/1	0.89	0.16	60,60,60,60	0
54	MG	DA	3129	1/1	0.89	0.16	61,61,61,61	0
54	MG	BA	3010	1/1	0.89	0.22	39,39,39,39	0
54	MG	BA	3397	1/1	0.89	0.09	86,86,86,86	0
54	MG	BA	3225	1/1	0.89	0.18	44,44,44,44	0
54	MG	DA	3134	1/1	0.89	0.17	62,62,62,62	0
54	MG	CA	1654	1/1	0.89	0.20	65,65,65,65	0
54	MG	DA	3281	1/1	0.89	0.09	42,42,42,42	0
54	MG	DA	3144	1/1	0.89	0.29	42,42,42,42	0
54	MG	BA	3013	1/1	0.89	0.09	49,49,49,49	0
54	MG	BA	3171	1/1	0.89	0.14	31,31,31,31	0
54	MG	DA	3288	1/1	0.89	0.17	39,39,39,39	0
54	MG	DA	3295	1/1	0.89	0.21	59,59,59,59	0
54	MG	B0	101	1/1	0.89	0.19	39,39,39,39	0
54	MG	B1	101	1/1	0.89	0.18	45,45,45,45	0
54	MG	BA	3409	1/1	0.89	0.09	68,68,68,68	0
54	MG	CA	1602	1/1	0.89	0.35	62,62,62,62	0
54	MG	CQ	201	1/1	0.89	0.34	62,62,62,62	0
54	MG	BA	3233	1/1	0.89	0.31	41,41,41,41	0
54	MG	DA	3308	1/1	0.89	0.17	33,33,33,33	0
54	MG	DA	3309	1/1	0.89	0.24	28,28,28,28	0
54	MG	AA	1603	1/1	0.89	0.23	79,79,79,79	0
54	MG	BA	3101	1/1	0.89	0.12	37,37,37,37	0
54	MG	DA	3012	1/1	0.89	0.16	30,30,30,30	0
54	MG	DA	3015	1/1	0.89	0.23	38,38,38,38	0
54	MG	DA	3170	1/1	0.89	0.11	56,56,56,56	0
54	MG	BA	3290	1/1	0.89	0.13	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1633	1/1	0.89	0.21	62,62,62,62	0
54	MG	DA	3329	1/1	0.89	0.13	41,41,41,41	0
54	MG	DA	3331	1/1	0.89	0.23	71,71,71,71	0
54	MG	DA	3332	1/1	0.89	0.20	53,53,53,53	0
54	MG	DA	3024	1/1	0.89	0.27	47,47,47,47	0
54	MG	DA	3372	1/1	0.89	0.10	41,41,41,41	0
54	MG	BA	3300	1/1	0.89	0.22	48,48,48,48	0
54	MG	CA	1615	1/1	0.89	0.20	65,65,65,65	0
54	MG	DA	3035	1/1	0.89	0.24	60,60,60,60	0
54	MG	AA	1602	1/1	0.89	0.22	89,89,89,89	0
54	MG	CA	1675	1/1	0.89	0.42	61,61,61,61	0
54	MG	BA	3304	1/1	0.89	0.12	54,54,54,54	0
54	MG	AC	301	1/1	0.89	0.09	57,57,57,57	0
54	MG	DA	3435	1/1	0.89	0.28	57,57,57,57	0
54	MG	DA	3438	1/1	0.89	0.09	90,90,90,90	0
54	MG	DA	3453	1/1	0.89	0.09	79,79,79,79	0
54	MG	AA	1659	1/1	0.89	0.46	70,70,70,70	0
54	MG	DA	3197	1/1	0.89	0.26	49,49,49,49	0
54	MG	BA	3112	1/1	0.89	0.15	55,55,55,55	0
54	MG	BA	3001	1/1	0.89	0.11	43,43,43,43	0
54	MG	CA	1627	1/1	0.89	0.20	55,55,55,55	0
54	MG	DA	3488	1/1	0.89	0.08	58,58,58,58	0
54	MG	CA	1628	1/1	0.89	0.20	75,75,75,75	0
54	MG	BA	3245	1/1	0.89	0.25	23,23,23,23	0
54	MG	CA	1630	1/1	0.89	0.33	72,72,72,72	0
54	MG	BA	3249	1/1	0.89	0.22	25,25,25,25	0
54	MG	BA	3032	1/1	0.89	0.13	40,40,40,40	0
54	MG	AA	1615	1/1	0.89	0.19	54,54,54,54	0
54	MG	CA	1698	1/1	0.89	0.09	47,47,47,47	0
54	MG	DA	3535	1/1	0.89	0.23	64,64,64,64	0
54	MG	DA	3223	1/1	0.89	0.25	54,54,54,54	0
54	MG	DA	3225	1/1	0.89	0.28	51,51,51,51	0
54	MG	DA	3081	1/1	0.89	0.12	58,58,58,58	0
54	MG	BB	202	1/1	0.89	0.15	43,43,43,43	0
54	MG	BA	3352	1/1	0.89	0.10	81,81,81,81	0
54	MG	DA	3555	1/1	0.89	0.09	56,56,56,56	0
54	MG	DA	3092	1/1	0.89	0.19	41,41,41,41	0
54	MG	CA	1712	1/1	0.89	0.12	87,87,87,87	0
54	MG	CA	1714	1/1	0.89	0.10	87,87,87,87	0
54	MG	DA	3241	1/1	0.89	0.09	35,35,35,35	0
54	MG	BA	3082	1/1	0.89	0.21	36,36,36,36	0
54	MG	DA	3248	1/1	0.89	0.13	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3587	1/1	0.89	0.13	95,95,95,95	0
54	MG	DB	202	1/1	0.89	0.27	50,50,50,50	0
54	MG	BA	3131	1/1	0.89	0.24	62,62,62,62	0
54	MG	DA	3252	1/1	0.89	0.38	59,59,59,59	0
54	MG	DA	3103	1/1	0.89	0.30	54,54,54,54	0
54	MG	DA	3114	1/1	0.89	0.18	30,30,30,30	0
54	MG	BB	208	1/1	0.89	0.12	43,43,43,43	0
54	MG	BB	209	1/1	0.89	0.20	60,60,60,60	0
54	MG	DA	3119	1/1	0.89	0.30	48,48,48,48	0
55	ZN	D4	101	1/1	0.89	0.12	214,214,214,214	0
54	MG	DA	3160	1/1	0.90	0.08	42,42,42,42	0
54	MG	DA	3161	1/1	0.90	0.17	39,39,39,39	0
54	MG	DA	3294	1/1	0.90	0.14	42,42,42,42	0
54	MG	DA	3019	1/1	0.90	0.11	40,40,40,40	0
54	MG	BA	3114	1/1	0.90	0.08	63,63,63,63	0
54	MG	BA	3217	1/1	0.90	0.12	41,41,41,41	0
54	MG	AA	1695	1/1	0.90	0.12	74,74,74,74	0
54	MG	AA	1697	1/1	0.90	0.10	106,106,106,106	0
54	MG	DA	3169	1/1	0.90	0.09	45,45,45,45	0
54	MG	BA	3029	1/1	0.90	0.09	32,32,32,32	0
54	MG	BA	3226	1/1	0.90	0.09	50,50,50,50	0
54	MG	DA	3042	1/1	0.90	0.15	33,33,33,33	0
54	MG	DA	3044	1/1	0.90	0.16	46,46,46,46	0
54	MG	BA	3076	1/1	0.90	0.18	44,44,44,44	0
54	MG	DA	3320	1/1	0.90	0.18	38,38,38,38	0
54	MG	BA	3132	1/1	0.90	0.10	33,33,33,33	0
54	MG	BA	3137	1/1	0.90	0.17	38,38,38,38	0
54	MG	CA	1618	1/1	0.90	0.27	64,64,64,64	0
54	MG	DA	3052	1/1	0.90	0.29	52,52,52,52	0
54	MG	CA	1682	1/1	0.90	0.22	58,58,58,58	0
54	MG	AA	1677	1/1	0.90	0.15	62,62,62,62	0
54	MG	BA	3554	1/1	0.90	0.08	88,88,88,88	0
54	MG	BA	3570	1/1	0.90	0.10	78,78,78,78	0
54	MG	DA	3198	1/1	0.90	0.27	57,57,57,57	0
54	MG	BA	3581	1/1	0.90	0.09	86,86,86,86	0
54	MG	CA	1689	1/1	0.90	0.24	61,61,61,61	0
54	MG	AA	1665	1/1	0.90	0.18	51,51,51,51	0
54	MG	BA	3090	1/1	0.90	0.18	62,62,62,62	0
54	MG	DA	3211	1/1	0.90	0.25	48,48,48,48	0
54	MG	CA	1694	1/1	0.90	0.06	62,62,62,62	0
54	MG	BA	3173	1/1	0.90	0.25	32,32,32,32	0
54	MG	DA	3076	1/1	0.90	0.18	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3597	1/1	0.90	0.15	84,84,84,84	0
54	MG	BA	3600	1/1	0.90	0.07	81,81,81,81	0
54	MG	DA	3447	1/1	0.90	0.11	74,74,74,74	0
54	MG	DA	3452	1/1	0.90	0.07	90,90,90,90	0
54	MG	DA	3088	1/1	0.90	0.25	55,55,55,55	0
54	MG	BA	3035	1/1	0.90	0.20	45,45,45,45	0
54	MG	BA	3646	1/1	0.90	0.08	142,142,142,142	0
54	MG	DA	3228	1/1	0.90	0.34	40,40,40,40	0
54	MG	BA	3009	1/1	0.90	0.21	45,45,45,45	0
54	MG	DA	3483	1/1	0.90	0.17	59,59,59,59	0
54	MG	DA	3095	1/1	0.90	0.25	53,53,53,53	0
54	MG	CA	1635	1/1	0.90	0.12	60,60,60,60	0
54	MG	BA	3336	1/1	0.90	0.05	45,45,45,45	0
54	MG	BA	3099	1/1	0.90	0.10	46,46,46,46	0
54	MG	DA	3499	1/1	0.90	0.10	67,67,67,67	0
54	MG	BA	3186	1/1	0.90	0.22	26,26,26,26	0
54	MG	BB	203	1/1	0.90	0.21	70,70,70,70	0
54	MG	AA	1672	1/1	0.90	0.28	46,46,46,46	0
54	MG	CA	1733	1/1	0.90	0.13	82,82,82,82	0
54	MG	AA	1629	1/1	0.90	0.23	44,44,44,44	0
54	MG	CA	1645	1/1	0.90	0.36	60,60,60,60	0
54	MG	BA	3250	1/1	0.90	0.23	26,26,26,26	0
54	MG	DA	3255	1/1	0.90	0.07	58,58,58,58	0
54	MG	DA	3256	1/1	0.90	0.33	52,52,52,52	0
54	MG	BA	3353	1/1	0.90	0.12	91,91,91,91	0
54	MG	BA	3364	1/1	0.90	0.08	81,81,81,81	0
54	MG	DA	3261	1/1	0.90	0.22	44,44,44,44	0
54	MG	AA	1642	1/1	0.90	0.31	54,54,54,54	0
54	MG	BA	3052	1/1	0.90	0.24	52,52,52,52	0
54	MG	BA	3056	1/1	0.90	0.13	57,57,57,57	0
54	MG	BE	301	1/1	0.90	0.28	34,34,34,34	0
54	MG	DA	3140	1/1	0.90	0.21	64,64,64,64	0
54	MG	AA	1675	1/1	0.90	0.17	76,76,76,76	0
54	MG	BE	305	1/1	0.90	0.12	60,60,60,60	0
54	MG	DA	3590	1/1	0.90	0.12	82,82,82,82	0
54	MG	BA	3111	1/1	0.90	0.36	56,56,56,56	0
54	MG	BQ	201	1/1	0.90	0.15	51,51,51,51	0
54	MG	AA	1627	1/1	0.90	0.19	59,59,59,59	0
54	MG	DE	301	1/1	0.90	0.14	41,41,41,41	0
54	MG	BA	3269	1/1	0.90	0.24	35,35,35,35	0
54	MG	DA	3151	1/1	0.90	0.15	43,43,43,43	0
54	MG	BA	3271	1/1	0.90	0.12	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3018	1/1	0.90	0.23	40,40,40,40	0
54	MG	BA	3407	1/1	0.90	0.10	47,47,47,47	0
54	MG	DA	3285	1/1	0.90	0.13	64,64,64,64	0
54	MG	BA	3120	1/1	0.91	0.14	51,51,51,51	0
54	MG	BA	3081	1/1	0.91	0.21	42,42,42,42	0
54	MG	DA	3067	1/1	0.91	0.25	49,49,49,49	0
54	MG	BQ	202	1/1	0.91	0.08	34,34,34,34	0
54	MG	BA	3524	1/1	0.91	0.08	38,38,38,38	0
54	MG	CA	1650	1/1	0.91	0.29	60,60,60,60	0
54	MG	DA	3195	1/1	0.91	0.25	48,48,48,48	0
54	MG	BA	3310	1/1	0.91	0.21	23,23,23,23	0
54	MG	BA	3040	1/1	0.91	0.12	30,30,30,30	0
54	MG	BA	3085	1/1	0.91	0.22	52,52,52,52	0
54	MG	CA	1734	1/1	0.91	0.16	66,66,66,66	0
54	MG	DA	3089	1/1	0.91	0.17	52,52,52,52	0
54	MG	DA	3207	1/1	0.91	0.21	54,54,54,54	0
54	MG	B3	101	1/1	0.91	0.14	51,51,51,51	0
54	MG	AA	1634	1/1	0.91	0.17	56,56,56,56	0
54	MG	DA	3210	1/1	0.91	0.23	53,53,53,53	0
54	MG	BA	3579	1/1	0.91	0.07	100,100,100,100	0
54	MG	BA	3254	1/1	0.91	0.23	25,25,25,25	0
54	MG	DA	3367	1/1	0.91	0.15	30,30,30,30	0
54	MG	CA	1605	1/1	0.91	0.30	67,67,67,67	0
54	MG	DA	3382	1/1	0.91	0.13	53,53,53,53	0
54	MG	DA	3387	1/1	0.91	0.08	60,60,60,60	0
54	MG	DA	3098	1/1	0.91	0.08	37,37,37,37	0
54	MG	BA	3257	1/1	0.91	0.26	23,23,23,23	0
54	MG	BA	3049	1/1	0.91	0.23	53,53,53,53	0
54	MG	CA	1755	1/1	0.91	0.06	129,129,129,129	0
54	MG	DA	3107	1/1	0.91	0.16	54,54,54,54	0
54	MG	AA	1704	1/1	0.91	0.07	86,86,86,86	0
54	MG	DA	3426	1/1	0.91	0.12	81,81,81,81	0
54	MG	DA	3227	1/1	0.91	0.17	52,52,52,52	0
54	MG	BA	3139	1/1	0.91	0.34	46,46,46,46	0
54	MG	BA	3141	1/1	0.91	0.15	36,36,36,36	0
54	MG	BA	3621	1/1	0.91	0.23	52,52,52,52	0
54	MG	DA	3233	1/1	0.91	0.08	38,38,38,38	0
54	MG	DA	3120	1/1	0.91	0.21	43,43,43,43	0
54	MG	BA	3637	1/1	0.91	0.14	108,108,108,108	0
54	MG	AA	1601	1/1	0.91	0.27	55,55,55,55	0
54	MG	DA	3466	1/1	0.91	0.08	68,68,68,68	0
54	MG	AA	1652	1/1	0.91	0.33	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3647	1/1	0.91	0.07	70,70,70,70	0
54	MG	DA	3482	1/1	0.91	0.13	56,56,56,56	0
54	MG	DA	3246	1/1	0.91	0.32	68,68,68,68	0
54	MG	BA	3654	1/1	0.91	0.07	126,126,126,126	0
54	MG	BA	3164	1/1	0.91	0.31	50,50,50,50	0
54	MG	BA	3230	1/1	0.91	0.13	30,30,30,30	0
54	MG	BA	3061	1/1	0.91	0.29	54,54,54,54	0
54	MG	DA	3139	1/1	0.91	0.45	59,59,59,59	0
54	MG	BA	3031	1/1	0.91	0.14	44,44,44,44	0
54	MG	DA	3517	1/1	0.91	0.21	66,66,66,66	0
54	MG	DA	3021	1/1	0.91	0.16	51,51,51,51	0
54	MG	DA	3023	1/1	0.91	0.11	43,43,43,43	0
54	MG	AA	1656	1/1	0.91	0.31	59,59,59,59	0
54	MG	DA	3528	1/1	0.91	0.08	124,124,124,124	0
54	MG	DA	3259	1/1	0.91	0.18	43,43,43,43	0
54	MG	BA	3283	1/1	0.91	0.33	21,21,21,21	0
54	MG	BA	3177	1/1	0.91	0.23	57,57,57,57	0
54	MG	DA	3031	1/1	0.91	0.29	53,53,53,53	0
54	MG	DA	3544	1/1	0.91	0.07	72,72,72,72	0
54	MG	DA	3150	1/1	0.91	0.22	42,42,42,42	0
54	MG	DA	3032	1/1	0.91	0.14	49,49,49,49	0
54	MG	DA	3033	1/1	0.91	0.18	66,66,66,66	0
54	MG	BA	3033	1/1	0.91	0.13	36,36,36,36	0
54	MG	AA	1658	1/1	0.91	0.33	57,57,57,57	0
54	MG	CA	1688	1/1	0.91	0.30	54,54,54,54	0
54	MG	AA	1647	1/1	0.91	0.21	55,55,55,55	0
54	MG	BA	3074	1/1	0.91	0.20	53,53,53,53	0
54	MG	BA	3191	1/1	0.91	0.16	40,40,40,40	0
54	MG	CA	1638	1/1	0.91	0.17	52,52,52,52	0
54	MG	CA	1695	1/1	0.91	0.06	50,50,50,50	0
54	MG	AA	1643	1/1	0.91	0.23	47,47,47,47	0
54	MG	DA	3597	1/1	0.91	0.11	93,93,93,93	0
54	MG	DB	201	1/1	0.91	0.17	43,43,43,43	0
54	MG	BA	3456	1/1	0.91	0.13	32,32,32,32	0
54	MG	DA	3284	1/1	0.91	0.11	55,55,55,55	0
54	MG	DA	3056	1/1	0.91	0.12	43,43,43,43	0
54	MG	AA	1670	1/1	0.91	0.20	53,53,53,53	0
54	MG	DA	3176	1/1	0.91	0.41	70,70,70,70	0
54	MG	DA	3290	1/1	0.91	0.32	58,58,58,58	0
54	MG	CA	1704	1/1	0.91	0.10	92,92,92,92	0
54	MG	DQ	202	1/1	0.91	0.07	33,33,33,33	0
54	MG	DA	3178	1/1	0.91	0.22	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3486	1/1	0.91	0.10	75,75,75,75	0
54	MG	CA	1643	1/1	0.91	0.25	70,70,70,70	0
54	MG	BA	3219	1/1	0.92	0.18	46,46,46,46	0
54	MG	BA	3553	1/1	0.92	0.07	89,89,89,89	0
54	MG	BA	3335	1/1	0.92	0.08	66,66,66,66	0
54	MG	CA	1611	1/1	0.92	0.21	43,43,43,43	0
54	MG	BA	3559	1/1	0.92	0.08	71,71,71,71	0
54	MG	AA	1648	1/1	0.92	0.28	44,44,44,44	0
54	MG	BA	3572	1/1	0.92	0.12	63,63,63,63	0
54	MG	BA	3259	1/1	0.92	0.25	27,27,27,27	0
54	MG	BA	3045	1/1	0.92	0.15	45,45,45,45	0
54	MG	DA	3171	1/1	0.92	0.14	61,61,61,61	0
54	MG	BA	3108	1/1	0.92	0.14	51,51,51,51	0
54	MG	DA	3304	1/1	0.92	0.27	29,29,29,29	0
54	MG	DA	3305	1/1	0.92	0.14	35,35,35,35	0
54	MG	DA	3306	1/1	0.92	0.17	29,29,29,29	0
54	MG	CA	1687	1/1	0.92	0.12	62,62,62,62	0
54	MG	BA	3027	1/1	0.92	0.13	38,38,38,38	0
54	MG	BA	3266	1/1	0.92	0.32	22,22,22,22	0
54	MG	DA	3312	1/1	0.92	0.32	29,29,29,29	0
54	MG	BA	3267	1/1	0.92	0.20	36,36,36,36	0
54	MG	DA	3318	1/1	0.92	0.24	58,58,58,58	0
54	MG	DA	3319	1/1	0.92	0.34	57,57,57,57	0
54	MG	DA	3180	1/1	0.92	0.15	49,49,49,49	0
54	MG	BA	3358	1/1	0.92	0.08	55,55,55,55	0
54	MG	DA	3322	1/1	0.92	0.18	49,49,49,49	0
54	MG	BA	3601	1/1	0.92	0.09	76,76,76,76	0
54	MG	BA	3360	1/1	0.92	0.05	35,35,35,35	0
54	MG	BA	3363	1/1	0.92	0.10	64,64,64,64	0
54	MG	BA	3638	1/1	0.92	0.11	67,67,67,67	0
54	MG	CA	1631	1/1	0.92	0.17	48,48,48,48	0
54	MG	DA	3190	1/1	0.92	0.15	59,59,59,59	0
54	MG	DA	3191	1/1	0.92	0.12	51,51,51,51	0
54	MG	DA	3345	1/1	0.92	0.18	54,54,54,54	0
54	MG	DA	3192	1/1	0.92	0.09	50,50,50,50	0
54	MG	BA	3268	1/1	0.92	0.24	27,27,27,27	0
54	MG	DA	3370	1/1	0.92	0.07	32,32,32,32	0
54	MG	BA	3110	1/1	0.92	0.35	66,66,66,66	0
54	MG	DA	3070	1/1	0.92	0.31	57,57,57,57	0
54	MG	BA	3078	1/1	0.92	0.17	30,30,30,30	0
54	MG	DA	3072	1/1	0.92	0.28	50,50,50,50	0
54	MG	DA	3199	1/1	0.92	0.21	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3649	1/1	0.92	0.10	125,125,125,125	0
54	MG	AA	1654	1/1	0.92	0.38	59,59,59,59	0
54	MG	BA	3370	1/1	0.92	0.15	41,41,41,41	0
54	MG	DA	3077	1/1	0.92	0.23	49,49,49,49	0
54	MG	BA	3012	1/1	0.92	0.29	27,27,27,27	0
54	MG	AA	1610	1/1	0.92	0.14	56,56,56,56	0
54	MG	DA	3086	1/1	0.92	0.21	48,48,48,48	0
54	MG	DA	3437	1/1	0.92	0.07	85,85,85,85	0
54	MG	BA	3059	1/1	0.92	0.11	48,48,48,48	0
54	MG	BA	3086	1/1	0.92	0.33	57,57,57,57	0
54	MG	CA	1730	1/1	0.92	0.06	62,62,62,62	0
54	MG	CA	1731	1/1	0.92	0.07	74,74,74,74	0
54	MG	DA	3459	1/1	0.92	0.06	53,53,53,53	0
54	MG	DA	3220	1/1	0.92	0.22	51,51,51,51	0
54	MG	CA	1732	1/1	0.92	0.07	110,110,110,110	0
54	MG	BA	3125	1/1	0.92	0.22	45,45,45,45	0
54	MG	BA	3403	1/1	0.92	0.08	67,67,67,67	0
54	MG	CA	1644	1/1	0.92	0.24	53,53,53,53	0
54	MG	BA	3285	1/1	0.92	0.15	38,38,38,38	0
54	MG	BA	3286	1/1	0.92	0.18	52,52,52,52	0
54	MG	DA	3229	1/1	0.92	0.19	44,44,44,44	0
54	MG	DA	3230	1/1	0.92	0.16	45,45,45,45	0
54	MG	BA	3408	1/1	0.92	0.12	50,50,50,50	0
54	MG	BA	3088	1/1	0.92	0.10	33,33,33,33	0
54	MG	DA	3110	1/1	0.92	0.24	53,53,53,53	0
54	MG	DA	3510	1/1	0.92	0.08	74,74,74,74	0
54	MG	DA	3111	1/1	0.92	0.15	50,50,50,50	0
54	MG	DA	3112	1/1	0.92	0.18	51,51,51,51	0
54	MG	DA	3113	1/1	0.92	0.20	59,59,59,59	0
54	MG	CA	1746	1/1	0.92	0.06	97,97,97,97	0
54	MG	CA	1750	1/1	0.92	0.07	78,78,78,78	0
54	MG	CA	1751	1/1	0.92	0.18	61,61,61,61	0
54	MG	AD	302	1/1	0.92	0.27	77,77,77,77	0
54	MG	BA	3427	1/1	0.92	0.12	89,89,89,89	0
54	MG	DA	3122	1/1	0.92	0.23	49,49,49,49	0
54	MG	AF	201	1/1	0.92	0.11	62,62,62,62	0
54	MG	BA	3292	1/1	0.92	0.30	70,70,70,70	0
54	MG	AA	1628	1/1	0.92	0.17	68,68,68,68	0
54	MG	AA	1609	1/1	0.92	0.23	51,51,51,51	0
54	MG	CA	1759	1/1	0.92	0.11	69,69,69,69	0
54	MG	BA	3461	1/1	0.92	0.11	79,79,79,79	0
54	MG	BA	3246	1/1	0.92	0.33	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3023	1/1	0.92	0.10	52,52,52,52	0
54	MG	DA	3563	1/1	0.92	0.09	70,70,70,70	0
54	MG	BA	3209	1/1	0.92	0.22	56,56,56,56	0
54	MG	DA	3264	1/1	0.92	0.22	61,61,61,61	0
54	MG	DA	3009	1/1	0.92	0.23	46,46,46,46	0
54	MG	BV	201	1/1	0.92	0.08	67,67,67,67	0
54	MG	DA	3583	1/1	0.92	0.10	65,65,65,65	0
54	MG	DA	3142	1/1	0.92	0.17	37,37,37,37	0
54	MG	DA	3143	1/1	0.92	0.20	60,60,60,60	0
54	MG	DA	3271	1/1	0.92	0.19	57,57,57,57	0
54	MG	BA	3140	1/1	0.92	0.37	36,36,36,36	0
54	MG	BA	3516	1/1	0.92	0.16	63,63,63,63	0
54	MG	DB	203	1/1	0.92	0.21	58,58,58,58	0
54	MG	BA	3068	1/1	0.92	0.13	50,50,50,50	0
54	MG	AA	1723	1/1	0.92	0.06	112,112,112,112	0
54	MG	BA	3539	1/1	0.92	0.08	47,47,47,47	0
54	MG	DE	304	1/1	0.92	0.14	42,42,42,42	0
54	MG	BA	3543	1/1	0.92	0.09	119,119,119,119	0
54	MG	CA	1673	1/1	0.92	0.43	57,57,57,57	0
54	MG	BA	3544	1/1	0.92	0.10	46,46,46,46	0
54	MG	DQ	201	1/1	0.92	0.05	40,40,40,40	0
54	MG	CA	1606	1/1	0.92	0.20	59,59,59,59	0
54	MG	DA	3156	1/1	0.92	0.17	35,35,35,35	0
54	MG	DA	3029	1/1	0.92	0.11	40,40,40,40	0
54	MG	D8	101	1/1	0.92	0.12	48,48,48,48	0
54	MG	D8	102	1/1	0.92	0.18	45,45,45,45	0
54	MG	DA	3159	1/1	0.92	0.14	45,45,45,45	0
54	MG	DA	3084	1/1	0.93	0.15	37,37,37,37	0
54	MG	BA	3648	1/1	0.93	0.08	91,91,91,91	0
54	MG	BA	3393	1/1	0.93	0.09	37,37,37,37	0
54	MG	BA	3159	1/1	0.93	0.20	46,46,46,46	0
54	MG	AA	1720	1/1	0.93	0.10	68,68,68,68	0
54	MG	BA	3656	1/1	0.93	0.08	68,68,68,68	0
54	MG	AA	1638	1/1	0.93	0.11	53,53,53,53	0
54	MG	AA	1662	1/1	0.93	0.22	58,58,58,58	0
54	MG	CA	1736	1/1	0.93	0.10	70,70,70,70	0
54	MG	DA	3097	1/1	0.93	0.19	23,23,23,23	0
54	MG	DA	3330	1/1	0.93	0.08	37,37,37,37	0
54	MG	BA	3172	1/1	0.93	0.30	47,47,47,47	0
54	MG	AA	1617	1/1	0.93	0.14	45,45,45,45	0
54	MG	BA	3017	1/1	0.93	0.13	31,31,31,31	0
54	MG	BB	205	1/1	0.93	0.20	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3358	1/1	0.93	0.08	39,39,39,39	0
54	MG	AA	1734	1/1	0.93	0.07	96,96,96,96	0
54	MG	DA	3368	1/1	0.93	0.09	52,52,52,52	0
54	MG	DA	3108	1/1	0.93	0.11	42,42,42,42	0
54	MG	DA	3371	1/1	0.93	0.14	43,43,43,43	0
54	MG	BA	3021	1/1	0.93	0.05	44,44,44,44	0
54	MG	DA	3374	1/1	0.93	0.21	37,37,37,37	0
54	MG	BA	3295	1/1	0.93	0.21	54,54,54,54	0
54	MG	DA	3383	1/1	0.93	0.07	54,54,54,54	0
54	MG	BA	3296	1/1	0.93	0.07	43,43,43,43	0
54	MG	DA	3391	1/1	0.93	0.07	37,37,37,37	0
54	MG	BA	3297	1/1	0.93	0.10	46,46,46,46	0
54	MG	BB	211	1/1	0.93	0.07	47,47,47,47	0
54	MG	DA	3226	1/1	0.93	0.29	55,55,55,55	0
54	MG	DA	3408	1/1	0.93	0.07	51,51,51,51	0
54	MG	AA	1657	1/1	0.93	0.23	58,58,58,58	0
54	MG	DA	3411	1/1	0.93	0.07	49,49,49,49	0
54	MG	BB	216	1/1	0.93	0.08	82,82,82,82	0
54	MG	AA	1680	1/1	0.93	0.16	72,72,72,72	0
54	MG	BA	3443	1/1	0.93	0.14	47,47,47,47	0
54	MG	BA	3444	1/1	0.93	0.09	53,53,53,53	0
54	MG	BA	3446	1/1	0.93	0.09	30,30,30,30	0
54	MG	BF	301	1/1	0.93	0.15	33,33,33,33	0
54	MG	BF	302	1/1	0.93	0.09	42,42,42,42	0
54	MG	DA	3004	1/1	0.93	0.07	88,88,88,88	0
54	MG	DA	3008	1/1	0.93	0.17	58,58,58,58	0
54	MG	BA	3057	1/1	0.93	0.19	51,51,51,51	0
54	MG	DA	3457	1/1	0.93	0.07	64,64,64,64	0
54	MG	CA	1665	1/1	0.93	0.13	84,84,84,84	0
54	MG	BA	3302	1/1	0.93	0.15	47,47,47,47	0
54	MG	DA	3138	1/1	0.93	0.24	41,41,41,41	0
54	MG	BA	3467	1/1	0.93	0.15	30,30,30,30	0
54	MG	BA	3303	1/1	0.93	0.19	64,64,64,64	0
54	MG	BA	3124	1/1	0.93	0.08	33,33,33,33	0
54	MG	AA	1682	1/1	0.93	0.20	76,76,76,76	0
54	MG	BA	3091	1/1	0.93	0.22	40,40,40,40	0
54	MG	AA	1605	1/1	0.93	0.19	66,66,66,66	0
54	MG	BA	3308	1/1	0.93	0.09	52,52,52,52	0
54	MG	DA	3026	1/1	0.93	0.11	39,39,39,39	0
54	MG	AA	1706	1/1	0.93	0.07	91,91,91,91	0
54	MG	DA	3260	1/1	0.93	0.11	41,41,41,41	0
54	MG	BA	3536	1/1	0.93	0.08	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3513	1/1	0.93	0.07	34,34,34,34	0
54	MG	DA	3149	1/1	0.93	0.10	53,53,53,53	0
54	MG	CA	1603	1/1	0.93	0.24	56,56,56,56	0
54	MG	AA	1630	1/1	0.93	0.18	39,39,39,39	0
54	MG	DA	3266	1/1	0.93	0.24	47,47,47,47	0
54	MG	DA	3523	1/1	0.93	0.06	74,74,74,74	0
54	MG	DA	3152	1/1	0.93	0.22	61,61,61,61	0
54	MG	BA	3316	1/1	0.93	0.13	45,45,45,45	0
54	MG	BA	3317	1/1	0.93	0.09	34,34,34,34	0
54	MG	BA	3199	1/1	0.93	0.18	41,41,41,41	0
54	MG	BA	3552	1/1	0.93	0.11	82,82,82,82	0
54	MG	BA	3203	1/1	0.93	0.24	55,55,55,55	0
54	MG	CA	1610	1/1	0.93	0.26	60,60,60,60	0
54	MG	DA	3545	1/1	0.93	0.09	82,82,82,82	0
54	MG	BA	3204	1/1	0.93	0.10	38,38,38,38	0
54	MG	BA	3135	1/1	0.93	0.18	45,45,45,45	0
54	MG	DA	3163	1/1	0.93	0.29	30,30,30,30	0
54	MG	DA	3554	1/1	0.93	0.07	47,47,47,47	0
54	MG	BA	3007	1/1	0.93	0.21	28,28,28,28	0
54	MG	CA	1691	1/1	0.93	0.27	51,51,51,51	0
54	MG	AA	1653	1/1	0.93	0.16	49,49,49,49	0
54	MG	DA	3053	1/1	0.93	0.12	40,40,40,40	0
54	MG	AA	1713	1/1	0.93	0.07	91,91,91,91	0
54	MG	BA	3215	1/1	0.93	0.15	50,50,50,50	0
54	MG	DA	3568	1/1	0.93	0.05	78,78,78,78	0
54	MG	AA	1717	1/1	0.93	0.09	93,93,93,93	0
54	MG	DA	3580	1/1	0.93	0.17	52,52,52,52	0
54	MG	BA	3145	1/1	0.93	0.12	44,44,44,44	0
54	MG	DA	3289	1/1	0.93	0.33	54,54,54,54	0
54	MG	DA	3584	1/1	0.93	0.22	48,48,48,48	0
54	MG	DA	3586	1/1	0.93	0.06	49,49,49,49	0
54	MG	DA	3175	1/1	0.93	0.16	44,44,44,44	0
54	MG	BA	3105	1/1	0.93	0.24	28,28,28,28	0
54	MG	DA	3596	1/1	0.93	0.07	125,125,125,125	0
54	MG	BA	3220	1/1	0.93	0.20	31,31,31,31	0
54	MG	DA	3598	1/1	0.93	0.11	76,76,76,76	0
54	MG	CA	1702	1/1	0.93	0.07	64,64,64,64	0
54	MG	BA	3221	1/1	0.93	0.32	57,57,57,57	0
54	MG	CA	1705	1/1	0.93	0.07	96,96,96,96	0
54	MG	DA	3069	1/1	0.93	0.35	42,42,42,42	0
54	MG	DB	206	1/1	0.93	0.26	58,58,58,58	0
54	MG	BA	3147	1/1	0.93	0.21	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3274	1/1	0.93	0.20	26,26,26,26	0
54	MG	DE	303	1/1	0.93	0.16	45,45,45,45	0
54	MG	BA	3150	1/1	0.93	0.10	42,42,42,42	0
54	MG	BA	3375	1/1	0.93	0.07	34,34,34,34	0
54	MG	BA	3154	1/1	0.93	0.23	50,50,50,50	0
54	MG	BA	3645	1/1	0.93	0.07	102,102,102,102	0
54	MG	DP	201	1/1	0.93	0.10	54,54,54,54	0
54	MG	BA	3385	1/1	0.93	0.09	63,63,63,63	0
54	MG	BA	3389	1/1	0.93	0.15	46,46,46,46	0
54	MG	DA	3311	1/1	0.93	0.27	26,26,26,26	0
54	MG	CA	1727	1/1	0.93	0.17	46,46,46,46	0
54	MG	DA	3313	1/1	0.93	0.23	29,29,29,29	0
54	MG	DA	3194	1/1	0.93	0.14	37,37,37,37	0
54	MG	DA	3317	1/1	0.93	0.06	47,47,47,47	0
54	MG	DA	3323	1/1	0.94	0.12	40,40,40,40	0
54	MG	DA	3068	1/1	0.94	0.12	33,33,33,33	0
54	MG	DA	3325	1/1	0.94	0.10	38,38,38,38	0
54	MG	BA	3019	1/1	0.94	0.19	34,34,34,34	0
54	MG	BA	3020	1/1	0.94	0.10	82,82,82,82	0
54	MG	BA	3208	1/1	0.94	0.08	38,38,38,38	0
54	MG	BA	3075	1/1	0.94	0.20	46,46,46,46	0
54	MG	BA	3577	1/1	0.94	0.06	77,77,77,77	0
54	MG	DA	3074	1/1	0.94	0.08	54,54,54,54	0
54	MG	CA	1706	1/1	0.94	0.07	103,103,103,103	0
54	MG	DA	3342	1/1	0.94	0.10	38,38,38,38	0
54	MG	BA	3359	1/1	0.94	0.08	70,70,70,70	0
54	MG	BA	3004	1/1	0.94	0.07	76,76,76,76	0
54	MG	DA	3079	1/1	0.94	0.14	47,47,47,47	0
54	MG	DA	3364	1/1	0.94	0.09	32,32,32,32	0
54	MG	DA	3202	1/1	0.94	0.15	66,66,66,66	0
54	MG	DA	3205	1/1	0.94	0.22	47,47,47,47	0
54	MG	CA	1713	1/1	0.94	0.09	73,73,73,73	0
54	MG	BA	3152	1/1	0.94	0.29	54,54,54,54	0
54	MG	BA	3272	1/1	0.94	0.27	31,31,31,31	0
54	MG	CA	1623	1/1	0.94	0.24	43,43,43,43	0
54	MG	DA	3087	1/1	0.94	0.16	54,54,54,54	0
54	MG	BA	3590	1/1	0.94	0.20	31,31,31,31	0
54	MG	BA	3592	1/1	0.94	0.07	47,47,47,47	0
54	MG	BA	3366	1/1	0.94	0.18	83,83,83,83	0
54	MG	DA	3396	1/1	0.94	0.09	52,52,52,52	0
54	MG	BA	3153	1/1	0.94	0.29	51,51,51,51	0
54	MG	BA	3598	1/1	0.94	0.07	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3094	1/1	0.94	0.09	56,56,56,56	0
54	MG	BA	3005	1/1	0.94	0.15	60,60,60,60	0
54	MG	AA	1707	1/1	0.94	0.08	102,102,102,102	0
54	MG	BA	3160	1/1	0.94	0.20	39,39,39,39	0
54	MG	BA	3633	1/1	0.94	0.07	43,43,43,43	0
54	MG	BA	3050	1/1	0.94	0.11	35,35,35,35	0
54	MG	BA	3377	1/1	0.94	0.10	32,32,32,32	0
54	MG	DA	3433	1/1	0.94	0.07	47,47,47,47	0
54	MG	BA	3382	1/1	0.94	0.05	100,100,100,100	0
54	MG	DA	3104	1/1	0.94	0.16	34,34,34,34	0
54	MG	BA	3008	1/1	0.94	0.13	28,28,28,28	0
54	MG	CA	1738	1/1	0.94	0.10	112,112,112,112	0
54	MG	DA	3442	1/1	0.94	0.09	82,82,82,82	0
54	MG	BA	3281	1/1	0.94	0.18	24,24,24,24	0
54	MG	BA	3282	1/1	0.94	0.20	27,27,27,27	0
54	MG	BA	3390	1/1	0.94	0.07	62,62,62,62	0
54	MG	DA	3455	1/1	0.94	0.05	68,68,68,68	0
54	MG	BA	3165	1/1	0.94	0.25	51,51,51,51	0
54	MG	DA	3237	1/1	0.94	0.20	62,62,62,62	0
54	MG	CA	1749	1/1	0.94	0.15	61,61,61,61	0
54	MG	BA	3651	1/1	0.94	0.15	87,87,87,87	0
54	MG	BA	3166	1/1	0.94	0.26	36,36,36,36	0
54	MG	DA	3471	1/1	0.94	0.10	31,31,31,31	0
54	MG	DA	3476	1/1	0.94	0.07	66,66,66,66	0
54	MG	DA	3245	1/1	0.94	0.26	57,57,57,57	0
54	MG	DA	3118	1/1	0.94	0.25	43,43,43,43	0
54	MG	BA	3119	1/1	0.94	0.20	42,42,42,42	0
54	MG	BA	3053	1/1	0.94	0.30	57,57,57,57	0
54	MG	DA	3484	1/1	0.94	0.05	64,64,64,64	0
54	MG	DA	3485	1/1	0.94	0.12	58,58,58,58	0
54	MG	DA	3249	1/1	0.94	0.17	49,49,49,49	0
54	MG	DA	3487	1/1	0.94	0.06	48,48,48,48	0
54	MG	BA	3657	1/1	0.94	0.21	65,65,65,65	0
54	MG	DA	3491	1/1	0.94	0.18	44,44,44,44	0
54	MG	BA	3122	1/1	0.94	0.19	49,49,49,49	0
54	MG	DA	3253	1/1	0.94	0.14	50,50,50,50	0
54	MG	BA	3054	1/1	0.94	0.10	34,34,34,34	0
54	MG	DA	3505	1/1	0.94	0.07	91,91,91,91	0
54	MG	DA	3506	1/1	0.94	0.09	96,96,96,96	0
54	MG	BA	3175	1/1	0.94	0.07	43,43,43,43	0
54	MG	BA	3293	1/1	0.94	0.05	48,48,48,48	0
54	MG	BA	3176	1/1	0.94	0.12	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1708	1/1	0.94	0.19	91,91,91,91	0
54	MG	DA	3132	1/1	0.94	0.26	49,49,49,49	0
54	MG	BA	3178	1/1	0.94	0.37	43,43,43,43	0
54	MG	AA	1683	1/1	0.94	0.39	58,58,58,58	0
54	MG	BA	3299	1/1	0.94	0.21	66,66,66,66	0
54	MG	DA	3526	1/1	0.94	0.07	98,98,98,98	0
54	MG	DA	3007	1/1	0.94	0.20	48,48,48,48	0
54	MG	DA	3530	1/1	0.94	0.09	132,132,132,132	0
54	MG	BA	3435	1/1	0.94	0.08	48,48,48,48	0
54	MG	CA	1658	1/1	0.94	0.12	58,58,58,58	0
54	MG	DA	3010	1/1	0.94	0.11	42,42,42,42	0
54	MG	BA	3436	1/1	0.94	0.09	70,70,70,70	0
54	MG	AA	1644	1/1	0.94	0.28	39,39,39,39	0
54	MG	AA	1641	1/1	0.94	0.23	42,42,42,42	0
54	MG	DA	3272	1/1	0.94	0.27	30,30,30,30	0
54	MG	BB	213	1/1	0.94	0.08	38,38,38,38	0
54	MG	DA	3550	1/1	0.94	0.09	58,58,58,58	0
54	MG	BB	215	1/1	0.94	0.12	65,65,65,65	0
54	MG	DA	3553	1/1	0.94	0.10	54,54,54,54	0
54	MG	BA	3187	1/1	0.94	0.27	42,42,42,42	0
54	MG	CA	1666	1/1	0.94	0.20	64,64,64,64	0
54	MG	BA	3129	1/1	0.94	0.27	37,37,37,37	0
54	MG	DA	3559	1/1	0.94	0.05	79,79,79,79	0
54	MG	BA	3244	1/1	0.94	0.07	30,30,30,30	0
54	MG	DA	3279	1/1	0.94	0.15	44,44,44,44	0
54	MG	DA	3025	1/1	0.94	0.22	49,49,49,49	0
54	MG	DA	3565	1/1	0.94	0.08	34,34,34,34	0
54	MG	AA	1639	1/1	0.94	0.22	67,67,67,67	0
54	MG	DA	3154	1/1	0.94	0.24	26,26,26,26	0
54	MG	AA	1719	1/1	0.94	0.05	144,144,144,144	0
54	MG	BA	3193	1/1	0.94	0.30	35,35,35,35	0
54	MG	BA	3133	1/1	0.94	0.23	53,53,53,53	0
54	MG	AA	1681	1/1	0.94	0.20	50,50,50,50	0
54	MG	BA	3492	1/1	0.94	0.15	27,27,27,27	0
54	MG	BA	3036	1/1	0.94	0.15	36,36,36,36	0
54	MG	AA	1612	1/1	0.94	0.13	86,86,86,86	0
54	MG	BA	3514	1/1	0.94	0.08	61,61,61,61	0
54	MG	BT	202	1/1	0.94	0.13	52,52,52,52	0
54	MG	DA	3043	1/1	0.94	0.17	54,54,54,54	0
54	MG	BA	3515	1/1	0.94	0.08	72,72,72,72	0
54	MG	BW	202	1/1	0.94	0.07	33,33,33,33	0
54	MG	BA	3256	1/1	0.94	0.23	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3523	1/1	0.94	0.05	110,110,110,110	0
54	MG	B2	101	1/1	0.94	0.07	45,45,45,45	0
54	MG	DB	205	1/1	0.94	0.15	55,55,55,55	0
54	MG	DA	3051	1/1	0.94	0.12	38,38,38,38	0
54	MG	DA	3174	1/1	0.94	0.17	51,51,51,51	0
54	MG	DB	208	1/1	0.94	0.06	104,104,104,104	0
54	MG	BA	3318	1/1	0.94	0.14	35,35,35,35	0
54	MG	BA	3320	1/1	0.94	0.09	42,42,42,42	0
54	MG	BA	3329	1/1	0.94	0.14	74,74,74,74	0
54	MG	BA	3332	1/1	0.94	0.07	50,50,50,50	0
54	MG	CA	1690	1/1	0.94	0.23	64,64,64,64	0
54	MG	BA	3540	1/1	0.94	0.07	35,35,35,35	0
54	MG	BA	3070	1/1	0.94	0.14	37,37,37,37	0
54	MG	DA	3182	1/1	0.94	0.24	46,46,46,46	0
54	MG	DA	3061	1/1	0.94	0.10	32,32,32,32	0
54	MG	BA	3201	1/1	0.94	0.26	31,31,31,31	0
54	MG	D0	102	1/1	0.94	0.17	72,72,72,72	0
54	MG	DA	3186	1/1	0.94	0.16	54,54,54,54	0
54	MG	BA	3202	1/1	0.94	0.16	48,48,48,48	0
54	MG	BA	3003	1/1	0.94	0.18	74,74,74,74	0
55	ZN	AD	301	1/1	0.94	0.19	74,74,74,74	0
55	ZN	B4	101	1/1	0.94	0.08	199,199,199,199	0
55	ZN	CD	301	1/1	0.94	0.17	71,71,71,71	0
54	MG	BA	3143	1/1	0.94	0.08	30,30,30,30	0
54	MG	BA	3206	1/1	0.95	0.19	49,49,49,49	0
54	MG	DA	3354	1/1	0.95	0.08	49,49,49,49	0
54	MG	BA	3167	1/1	0.95	0.24	31,31,31,31	0
54	MG	DA	3361	1/1	0.95	0.06	30,30,30,30	0
54	MG	BA	3585	1/1	0.95	0.06	52,52,52,52	0
54	MG	BA	3587	1/1	0.95	0.09	60,60,60,60	0
54	MG	BA	3169	1/1	0.95	0.13	31,31,31,31	0
54	MG	BA	3255	1/1	0.95	0.15	25,25,25,25	0
54	MG	BA	3034	1/1	0.95	0.13	41,41,41,41	0
54	MG	BA	3210	1/1	0.95	0.14	40,40,40,40	0
54	MG	DA	3213	1/1	0.95	0.20	48,48,48,48	0
54	MG	DA	3379	1/1	0.95	0.07	59,59,59,59	0
54	MG	DA	3214	1/1	0.95	0.15	37,37,37,37	0
54	MG	DA	3215	1/1	0.95	0.14	49,49,49,49	0
54	MG	BA	3024	1/1	0.95	0.08	41,41,41,41	0
54	MG	DA	3217	1/1	0.95	0.27	32,32,32,32	0
54	MG	DA	3393	1/1	0.95	0.08	41,41,41,41	0
54	MG	BA	3406	1/1	0.95	0.06	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3213	1/1	0.95	0.09	43,43,43,43	0
54	MG	BA	3260	1/1	0.95	0.18	30,30,30,30	0
54	MG	BA	3608	1/1	0.95	0.10	71,71,71,71	0
54	MG	BA	3616	1/1	0.95	0.14	131,131,131,131	0
54	MG	BA	3084	1/1	0.95	0.25	59,59,59,59	0
54	MG	DA	3224	1/1	0.95	0.27	32,32,32,32	0
54	MG	BA	3411	1/1	0.95	0.07	63,63,63,63	0
54	MG	BA	3412	1/1	0.95	0.08	78,78,78,78	0
54	MG	BA	3413	1/1	0.95	0.10	57,57,57,57	0
54	MG	BA	3420	1/1	0.95	0.07	61,61,61,61	0
54	MG	BA	3311	1/1	0.95	0.09	24,24,24,24	0
54	MG	BA	3424	1/1	0.95	0.11	72,72,72,72	0
54	MG	BA	3134	1/1	0.95	0.26	41,41,41,41	0
54	MG	DA	3109	1/1	0.95	0.11	59,59,59,59	0
54	MG	DA	3439	1/1	0.95	0.08	57,57,57,57	0
54	MG	DA	3441	1/1	0.95	0.13	48,48,48,48	0
54	MG	AA	1724	1/1	0.95	0.09	74,74,74,74	0
54	MG	DA	3445	1/1	0.95	0.09	42,42,42,42	0
54	MG	DA	3446	1/1	0.95	0.11	42,42,42,42	0
54	MG	AA	1687	1/1	0.95	0.14	62,62,62,62	0
54	MG	DA	3449	1/1	0.95	0.15	42,42,42,42	0
54	MG	DA	3450	1/1	0.95	0.06	67,67,67,67	0
54	MG	BA	3087	1/1	0.95	0.24	46,46,46,46	0
54	MG	CA	1752	1/1	0.95	0.06	71,71,71,71	0
54	MG	DA	3454	1/1	0.95	0.05	64,64,64,64	0
54	MG	BA	3319	1/1	0.95	0.12	54,54,54,54	0
54	MG	BA	3439	1/1	0.95	0.13	59,59,59,59	0
54	MG	DA	3240	1/1	0.95	0.24	53,53,53,53	0
54	MG	AA	1631	1/1	0.95	0.21	41,41,41,41	0
54	MG	DA	3244	1/1	0.95	0.29	33,33,33,33	0
54	MG	DA	3465	1/1	0.95	0.05	75,75,75,75	0
54	MG	BA	3182	1/1	0.95	0.21	37,37,37,37	0
54	MG	DA	3469	1/1	0.95	0.06	56,56,56,56	0
54	MG	DA	3470	1/1	0.95	0.06	47,47,47,47	0
54	MG	BA	3270	1/1	0.95	0.32	25,25,25,25	0
54	MG	BA	3659	1/1	0.95	0.05	81,81,81,81	0
54	MG	DA	3477	1/1	0.95	0.05	53,53,53,53	0
54	MG	BA	3445	1/1	0.95	0.08	31,31,31,31	0
54	MG	CA	1760	1/1	0.95	0.06	87,87,87,87	0
54	MG	DA	3250	1/1	0.95	0.12	49,49,49,49	0
54	MG	CA	1761	1/1	0.95	0.15	65,65,65,65	0
54	MG	DA	3126	1/1	0.95	0.33	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	201	1/1	0.95	0.17	57,57,57,57	0
54	MG	AA	1690	1/1	0.95	0.07	72,72,72,72	0
54	MG	BA	3449	1/1	0.95	0.17	29,29,29,29	0
54	MG	BA	3142	1/1	0.95	0.20	42,42,42,42	0
54	MG	DA	3489	1/1	0.95	0.07	79,79,79,79	0
54	MG	BA	3459	1/1	0.95	0.08	38,38,38,38	0
54	MG	DA	3493	1/1	0.95	0.10	63,63,63,63	0
54	MG	DA	3006	1/1	0.95	0.20	38,38,38,38	0
54	MG	BA	3058	1/1	0.95	0.08	32,32,32,32	0
54	MG	DA	3136	1/1	0.95	0.31	62,62,62,62	0
54	MG	DA	3137	1/1	0.95	0.06	38,38,38,38	0
54	MG	BA	3465	1/1	0.95	0.09	44,44,44,44	0
54	MG	DA	3508	1/1	0.95	0.08	60,60,60,60	0
54	MG	DA	3263	1/1	0.95	0.21	40,40,40,40	0
54	MG	BA	3338	1/1	0.95	0.12	62,62,62,62	0
54	MG	CA	1659	1/1	0.95	0.21	48,48,48,48	0
54	MG	DA	3516	1/1	0.95	0.09	32,32,32,32	0
54	MG	BA	3469	1/1	0.95	0.09	40,40,40,40	0
54	MG	BA	3339	1/1	0.95	0.08	70,70,70,70	0
54	MG	BA	3227	1/1	0.95	0.11	32,32,32,32	0
54	MG	DA	3269	1/1	0.95	0.34	47,47,47,47	0
54	MG	BA	3092	1/1	0.95	0.29	26,26,26,26	0
54	MG	DA	3017	1/1	0.95	0.12	50,50,50,50	0
54	MG	BA	3500	1/1	0.95	0.08	44,44,44,44	0
54	MG	BA	3504	1/1	0.95	0.08	65,65,65,65	0
54	MG	BA	3507	1/1	0.95	0.13	41,41,41,41	0
54	MG	DA	3022	1/1	0.95	0.12	34,34,34,34	0
54	MG	BA	3188	1/1	0.95	0.26	39,39,39,39	0
54	MG	DA	3538	1/1	0.95	0.06	87,87,87,87	0
54	MG	BB	223	1/1	0.95	0.06	133,133,133,133	0
54	MG	DA	3541	1/1	0.95	0.05	130,130,130,130	0
54	MG	BA	3278	1/1	0.95	0.25	30,30,30,30	0
54	MG	BA	3118	1/1	0.95	0.17	44,44,44,44	0
54	MG	DA	3027	1/1	0.95	0.17	56,56,56,56	0
54	MG	CA	1671	1/1	0.95	0.31	49,49,49,49	0
54	MG	BA	3190	1/1	0.95	0.13	27,27,27,27	0
54	MG	BA	3011	1/1	0.95	0.18	26,26,26,26	0
54	MG	BA	3520	1/1	0.95	0.06	95,95,95,95	0
54	MG	BA	3235	1/1	0.95	0.13	50,50,50,50	0
54	MG	BA	3095	1/1	0.95	0.18	48,48,48,48	0
54	MG	BA	3529	1/1	0.95	0.06	65,65,65,65	0
54	MG	DA	3036	1/1	0.95	0.12	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3038	1/1	0.95	0.08	37,37,37,37	0
54	MG	DA	3562	1/1	0.95	0.07	58,58,58,58	0
54	MG	CA	1678	1/1	0.95	0.11	55,55,55,55	0
54	MG	DA	3041	1/1	0.95	0.28	36,36,36,36	0
54	MG	BA	3121	1/1	0.95	0.15	36,36,36,36	0
54	MG	BQ	204	1/1	0.95	0.06	43,43,43,43	0
54	MG	BA	3096	1/1	0.95	0.29	47,47,47,47	0
54	MG	BA	3538	1/1	0.95	0.08	66,66,66,66	0
54	MG	DA	3300	1/1	0.95	0.14	41,41,41,41	0
54	MG	AA	1735	1/1	0.95	0.07	110,110,110,110	0
54	MG	BA	3155	1/1	0.95	0.06	41,41,41,41	0
54	MG	BA	3157	1/1	0.95	0.27	48,48,48,48	0
54	MG	B0	102	1/1	0.95	0.09	54,54,54,54	0
54	MG	B0	103	1/1	0.95	0.07	89,89,89,89	0
54	MG	DA	3589	1/1	0.95	0.06	75,75,75,75	0
54	MG	DA	3307	1/1	0.95	0.20	35,35,35,35	0
54	MG	DA	3591	1/1	0.95	0.08	66,66,66,66	0
54	MG	BA	3077	1/1	0.95	0.09	42,42,42,42	0
54	MG	DA	3054	1/1	0.95	0.20	46,46,46,46	0
54	MG	BA	3374	1/1	0.95	0.06	34,34,34,34	0
54	MG	AA	1685	1/1	0.95	0.07	71,71,71,71	0
54	MG	B5	103	1/1	0.95	0.10	57,57,57,57	0
54	MG	DA	3183	1/1	0.95	0.23	26,26,26,26	0
54	MG	DA	3314	1/1	0.95	0.21	43,43,43,43	0
54	MG	B9	102	1/1	0.95	0.13	28,28,28,28	0
54	MG	BA	3294	1/1	0.95	0.10	39,39,39,39	0
54	MG	AA	1667	1/1	0.95	0.19	38,38,38,38	0
54	MG	BA	3555	1/1	0.95	0.07	47,47,47,47	0
54	MG	BA	3557	1/1	0.95	0.09	78,78,78,78	0
54	MG	DE	302	1/1	0.95	0.26	21,21,21,21	0
54	MG	DA	3065	1/1	0.95	0.18	53,53,53,53	0
54	MG	BA	3127	1/1	0.95	0.23	38,38,38,38	0
54	MG	BA	3562	1/1	0.95	0.08	59,59,59,59	0
54	MG	CA	1700	1/1	0.95	0.09	70,70,70,70	0
54	MG	BA	3565	1/1	0.95	0.06	68,68,68,68	0
54	MG	CA	1703	1/1	0.95	0.15	56,56,56,56	0
54	MG	BA	3247	1/1	0.95	0.32	26,26,26,26	0
54	MG	BA	3386	1/1	0.95	0.09	40,40,40,40	0
54	MG	DR	202	1/1	0.95	0.24	34,34,34,34	0
54	MG	BA	3574	1/1	0.95	0.17	33,33,33,33	0
54	MG	BA	3080	1/1	0.95	0.08	39,39,39,39	0
54	MG	D1	101	1/1	0.95	0.20	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1708	1/1	0.95	0.07	80,80,80,80	0
54	MG	DA	3200	1/1	0.95	0.15	34,34,34,34	0
54	MG	DA	3337	1/1	0.95	0.15	30,30,30,30	0
54	MG	DA	3340	1/1	0.95	0.09	45,45,45,45	0
55	ZN	AN	101	1/1	0.95	0.06	117,117,117,117	0
54	MG	DA	3341	1/1	0.95	0.11	43,43,43,43	0
54	MG	CA	1711	1/1	0.95	0.06	103,103,103,103	0
54	MG	BA	3103	1/1	0.95	0.20	29,29,29,29	0
54	MG	BA	3333	1/1	0.96	0.12	40,40,40,40	0
54	MG	BA	3116	1/1	0.96	0.07	53,53,53,53	0
54	MG	DA	3013	1/1	0.96	0.12	37,37,37,37	0
54	MG	DA	3436	1/1	0.96	0.10	81,81,81,81	0
54	MG	BB	222	1/1	0.96	0.09	80,80,80,80	0
54	MG	BA	3542	1/1	0.96	0.05	83,83,83,83	0
54	MG	BD	301	1/1	0.96	0.13	49,49,49,49	0
54	MG	DA	3018	1/1	0.96	0.18	54,54,54,54	0
54	MG	BA	3117	1/1	0.96	0.14	39,39,39,39	0
54	MG	DA	3443	1/1	0.96	0.06	75,75,75,75	0
54	MG	AA	1727	1/1	0.96	0.06	61,61,61,61	0
54	MG	AA	1729	1/1	0.96	0.06	80,80,80,80	0
54	MG	BA	3551	1/1	0.96	0.10	82,82,82,82	0
54	MG	BA	3214	1/1	0.96	0.16	52,52,52,52	0
54	MG	BA	3417	1/1	0.96	0.07	48,48,48,48	0
54	MG	BP	201	1/1	0.96	0.06	45,45,45,45	0
54	MG	BA	3418	1/1	0.96	0.06	49,49,49,49	0
54	MG	BA	3419	1/1	0.96	0.27	21,21,21,21	0
54	MG	BA	3181	1/1	0.96	0.07	38,38,38,38	0
54	MG	BA	3558	1/1	0.96	0.19	28,28,28,28	0
54	MG	DA	3458	1/1	0.96	0.05	62,62,62,62	0
54	MG	AA	1655	1/1	0.96	0.29	43,43,43,43	0
54	MG	BA	3422	1/1	0.96	0.10	76,76,76,76	0
54	MG	BA	3563	1/1	0.96	0.06	70,70,70,70	0
54	MG	BA	3564	1/1	0.96	0.10	59,59,59,59	0
54	MG	BA	3345	1/1	0.96	0.14	71,71,71,71	0
54	MG	BA	3566	1/1	0.96	0.10	44,44,44,44	0
54	MG	DA	3037	1/1	0.96	0.12	43,43,43,43	0
54	MG	BA	3567	1/1	0.96	0.06	54,54,54,54	0
54	MG	DA	3472	1/1	0.96	0.14	50,50,50,50	0
54	MG	DA	3473	1/1	0.96	0.12	38,38,38,38	0
54	MG	BA	3569	1/1	0.96	0.05	69,69,69,69	0
54	MG	DA	3158	1/1	0.96	0.18	46,46,46,46	0
54	MG	BA	3425	1/1	0.96	0.10	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3480	1/1	0.96	0.12	52,52,52,52	0
54	MG	BA	3346	1/1	0.96	0.06	52,52,52,52	0
54	MG	BA	3291	1/1	0.96	0.07	39,39,39,39	0
54	MG	B8	102	1/1	0.96	0.05	61,61,61,61	0
54	MG	BA	3148	1/1	0.96	0.23	47,47,47,47	0
54	MG	BA	3578	1/1	0.96	0.08	44,44,44,44	0
54	MG	DA	3047	1/1	0.96	0.14	38,38,38,38	0
54	MG	BA	3218	1/1	0.96	0.05	55,55,55,55	0
54	MG	BA	3580	1/1	0.96	0.10	49,49,49,49	0
54	MG	DA	3050	1/1	0.96	0.23	34,34,34,34	0
54	MG	CA	1696	1/1	0.96	0.30	61,61,61,61	0
54	MG	DA	3492	1/1	0.96	0.05	56,56,56,56	0
54	MG	DA	3286	1/1	0.96	0.20	33,33,33,33	0
54	MG	DA	3494	1/1	0.96	0.08	37,37,37,37	0
54	MG	BA	3437	1/1	0.96	0.10	49,49,49,49	0
54	MG	BA	3149	1/1	0.96	0.36	57,57,57,57	0
54	MG	BA	3584	1/1	0.96	0.05	42,42,42,42	0
54	MG	DA	3500	1/1	0.96	0.07	74,74,74,74	0
54	MG	DA	3503	1/1	0.96	0.10	34,34,34,34	0
54	MG	BA	3098	1/1	0.96	0.11	40,40,40,40	0
54	MG	DA	3292	1/1	0.96	0.13	33,33,33,33	0
54	MG	DA	3293	1/1	0.96	0.23	33,33,33,33	0
54	MG	DA	3509	1/1	0.96	0.06	37,37,37,37	0
54	MG	BA	3440	1/1	0.96	0.09	46,46,46,46	0
54	MG	AA	1732	1/1	0.96	0.05	94,94,94,94	0
54	MG	DA	3514	1/1	0.96	0.11	42,42,42,42	0
54	MG	BA	3028	1/1	0.96	0.10	22,22,22,22	0
54	MG	BA	3043	1/1	0.96	0.06	39,39,39,39	0
54	MG	BA	3224	1/1	0.96	0.16	50,50,50,50	0
54	MG	DA	3520	1/1	0.96	0.17	56,56,56,56	0
54	MG	BA	3596	1/1	0.96	0.05	48,48,48,48	0
54	MG	BA	3262	1/1	0.96	0.16	27,27,27,27	0
54	MG	BA	3448	1/1	0.96	0.07	38,38,38,38	0
54	MG	DA	3524	1/1	0.96	0.12	79,79,79,79	0
54	MG	DA	3302	1/1	0.96	0.26	21,21,21,21	0
54	MG	CA	1617	1/1	0.96	0.06	87,87,87,87	0
54	MG	AA	1711	1/1	0.96	0.15	46,46,46,46	0
54	MG	BA	3452	1/1	0.96	0.07	64,64,64,64	0
54	MG	BA	3156	1/1	0.96	0.21	39,39,39,39	0
54	MG	DA	3533	1/1	0.96	0.08	89,89,89,89	0
54	MG	CA	1622	1/1	0.96	0.21	47,47,47,47	0
54	MG	BA	3609	1/1	0.96	0.05	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3612	1/1	0.96	0.08	59,59,59,59	0
54	MG	BA	3265	1/1	0.96	0.22	29,29,29,29	0
54	MG	BA	3046	1/1	0.96	0.07	36,36,36,36	0
54	MG	BA	3627	1/1	0.96	0.06	50,50,50,50	0
54	MG	BA	3083	1/1	0.96	0.09	43,43,43,43	0
54	MG	BA	3064	1/1	0.96	0.23	34,34,34,34	0
54	MG	DA	3078	1/1	0.96	0.16	48,48,48,48	0
54	MG	BA	3378	1/1	0.96	0.10	25,25,25,25	0
54	MG	DA	3080	1/1	0.96	0.22	44,44,44,44	0
54	MG	BA	3640	1/1	0.96	0.05	116,116,116,116	0
54	MG	BA	3641	1/1	0.96	0.12	72,72,72,72	0
54	MG	DA	3083	1/1	0.96	0.15	37,37,37,37	0
54	MG	BA	3106	1/1	0.96	0.20	52,52,52,52	0
54	MG	DA	3558	1/1	0.96	0.07	36,36,36,36	0
54	MG	DA	3203	1/1	0.96	0.24	33,33,33,33	0
54	MG	DA	3560	1/1	0.96	0.08	57,57,57,57	0
54	MG	DA	3085	1/1	0.96	0.11	43,43,43,43	0
54	MG	BA	3644	1/1	0.96	0.06	88,88,88,88	0
54	MG	BA	3472	1/1	0.96	0.13	26,26,26,26	0
54	MG	BA	3477	1/1	0.96	0.07	53,53,53,53	0
54	MG	BA	3478	1/1	0.96	0.06	41,41,41,41	0
54	MG	BA	3163	1/1	0.96	0.25	23,23,23,23	0
54	MG	CA	1741	1/1	0.96	0.17	79,79,79,79	0
54	MG	BA	3066	1/1	0.96	0.26	39,39,39,39	0
54	MG	DA	3573	1/1	0.96	0.20	31,31,31,31	0
54	MG	DA	3578	1/1	0.96	0.11	29,29,29,29	0
54	MG	CA	1745	1/1	0.96	0.16	116,116,116,116	0
54	MG	DA	3333	1/1	0.96	0.09	37,37,37,37	0
54	MG	BA	3496	1/1	0.96	0.08	39,39,39,39	0
54	MG	CA	1747	1/1	0.96	0.07	95,95,95,95	0
54	MG	BA	3499	1/1	0.96	0.09	60,60,60,60	0
54	MG	BA	3006	1/1	0.96	0.13	25,25,25,25	0
54	MG	DA	3588	1/1	0.96	0.07	34,34,34,34	0
54	MG	DA	3099	1/1	0.96	0.14	36,36,36,36	0
54	MG	DA	3347	1/1	0.96	0.11	35,35,35,35	0
54	MG	DA	3348	1/1	0.96	0.07	41,41,41,41	0
54	MG	DA	3593	1/1	0.96	0.06	83,83,83,83	0
54	MG	DA	3595	1/1	0.96	0.10	58,58,58,58	0
54	MG	DA	3352	1/1	0.96	0.06	33,33,33,33	0
54	MG	BA	3502	1/1	0.96	0.08	34,34,34,34	0
54	MG	DA	3101	1/1	0.96	0.18	39,39,39,39	0
54	MG	BA	3503	1/1	0.96	0.06	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3360	1/1	0.96	0.06	37,37,37,37	0
54	MG	AA	1722	1/1	0.96	0.06	66,66,66,66	0
54	MG	BA	3069	1/1	0.96	0.26	42,42,42,42	0
54	MG	CA	1647	1/1	0.96	0.13	86,86,86,86	0
54	MG	BA	3391	1/1	0.96	0.07	39,39,39,39	0
54	MG	BA	3392	1/1	0.96	0.09	110,110,110,110	0
54	MG	AA	1621	1/1	0.96	0.26	62,62,62,62	0
54	MG	DD	302	1/1	0.96	0.29	38,38,38,38	0
54	MG	CA	1651	1/1	0.96	0.19	46,46,46,46	0
54	MG	DA	3373	1/1	0.96	0.14	32,32,32,32	0
54	MG	BA	3170	1/1	0.96	0.09	29,29,29,29	0
54	MG	AA	1693	1/1	0.96	0.06	51,51,51,51	0
54	MG	CA	1762	1/1	0.96	0.10	156,156,156,156	0
54	MG	BA	3398	1/1	0.96	0.08	52,52,52,52	0
54	MG	BA	3522	1/1	0.96	0.09	74,74,74,74	0
54	MG	DA	3234	1/1	0.96	0.25	41,41,41,41	0
54	MG	AA	1725	1/1	0.96	0.07	56,56,56,56	0
54	MG	BA	3328	1/1	0.96	0.16	30,30,30,30	0
54	MG	DR	201	1/1	0.96	0.16	40,40,40,40	0
54	MG	DA	3397	1/1	0.96	0.07	34,34,34,34	0
54	MG	DA	3003	1/1	0.96	0.10	46,46,46,46	0
54	MG	BA	3525	1/1	0.96	0.07	35,35,35,35	0
54	MG	BA	3528	1/1	0.96	0.07	39,39,39,39	0
54	MG	DA	3406	1/1	0.96	0.05	58,58,58,58	0
54	MG	BA	3401	1/1	0.96	0.06	58,58,58,58	0
54	MG	AA	1689	1/1	0.96	0.06	99,99,99,99	0
54	MG	DA	3243	1/1	0.96	0.14	28,28,28,28	0
54	MG	DA	3414	1/1	0.96	0.10	51,51,51,51	0
54	MG	BA	3330	1/1	0.96	0.06	34,34,34,34	0
54	MG	DA	3128	1/1	0.96	0.20	45,45,45,45	0
54	MG	BA	3115	1/1	0.96	0.21	45,45,45,45	0
54	MG	BA	3351	1/1	0.97	0.07	60,60,60,60	0
54	MG	DA	3315	1/1	0.97	0.05	31,31,31,31	0
54	MG	BA	3460	1/1	0.97	0.13	61,61,61,61	0
54	MG	DA	3039	1/1	0.97	0.12	28,28,28,28	0
54	MG	BA	3180	1/1	0.97	0.15	41,41,41,41	0
54	MG	BA	3462	1/1	0.97	0.05	43,43,43,43	0
54	MG	BA	3284	1/1	0.97	0.25	24,24,24,24	0
54	MG	BA	3356	1/1	0.97	0.05	29,29,29,29	0
54	MG	BA	3042	1/1	0.97	0.13	40,40,40,40	0
54	MG	BA	3136	1/1	0.97	0.20	45,45,45,45	0
54	MG	BA	3314	1/1	0.97	0.11	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3490	1/1	0.97	0.06	33,33,33,33	0
54	MG	BA	3474	1/1	0.97	0.06	37,37,37,37	0
54	MG	CA	1722	1/1	0.97	0.12	71,71,71,71	0
54	MG	CA	1724	1/1	0.97	0.07	49,49,49,49	0
54	MG	CA	1725	1/1	0.97	0.08	65,65,65,65	0
54	MG	DA	3495	1/1	0.97	0.07	83,83,83,83	0
54	MG	CA	1726	1/1	0.97	0.15	52,52,52,52	0
54	MG	BA	3476	1/1	0.97	0.10	49,49,49,49	0
54	MG	AA	1710	1/1	0.97	0.06	79,79,79,79	0
54	MG	BB	217	1/1	0.97	0.07	67,67,67,67	0
54	MG	BA	3410	1/1	0.97	0.08	77,77,77,77	0
54	MG	BA	3479	1/1	0.97	0.08	32,32,32,32	0
54	MG	DA	3339	1/1	0.97	0.04	44,44,44,44	0
54	MG	DA	3057	1/1	0.97	0.06	35,35,35,35	0
54	MG	BA	3482	1/1	0.97	0.10	27,27,27,27	0
54	MG	BA	3184	1/1	0.97	0.17	40,40,40,40	0
54	MG	DA	3511	1/1	0.97	0.05	49,49,49,49	0
54	MG	DA	3343	1/1	0.97	0.05	37,37,37,37	0
54	MG	BD	302	1/1	0.97	0.06	28,28,28,28	0
54	MG	BA	3488	1/1	0.97	0.10	24,24,24,24	0
54	MG	BA	3138	1/1	0.97	0.15	42,42,42,42	0
54	MG	DA	3349	1/1	0.97	0.06	35,35,35,35	0
54	MG	DA	3518	1/1	0.97	0.05	69,69,69,69	0
54	MG	DA	3519	1/1	0.97	0.10	52,52,52,52	0
54	MG	BA	3583	1/1	0.97	0.12	34,34,34,34	0
54	MG	DA	3064	1/1	0.97	0.22	48,48,48,48	0
54	MG	AA	1718	1/1	0.97	0.04	96,96,96,96	0
54	MG	DA	3356	1/1	0.97	0.09	60,60,60,60	0
54	MG	BA	3414	1/1	0.97	0.07	29,29,29,29	0
54	MG	BA	3586	1/1	0.97	0.05	63,63,63,63	0
54	MG	BA	3415	1/1	0.97	0.06	33,33,33,33	0
54	MG	DA	3527	1/1	0.97	0.05	91,91,91,91	0
54	MG	AA	1700	1/1	0.97	0.06	42,42,42,42	0
54	MG	DA	3366	1/1	0.97	0.09	31,31,31,31	0
54	MG	DA	3531	1/1	0.97	0.07	91,91,91,91	0
54	MG	BA	3321	1/1	0.97	0.07	32,32,32,32	0
54	MG	BA	3093	1/1	0.97	0.13	42,42,42,42	0
54	MG	BA	3371	1/1	0.97	0.04	33,33,33,33	0
54	MG	DA	3536	1/1	0.97	0.08	51,51,51,51	0
54	MG	BR	201	1/1	0.97	0.07	29,29,29,29	0
54	MG	DA	3166	1/1	0.97	0.15	45,45,45,45	0
54	MG	BA	3510	1/1	0.97	0.05	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BT	201	1/1	0.97	0.04	53,53,53,53	0
54	MG	DA	3543	1/1	0.97	0.08	53,53,53,53	0
54	MG	BA	3373	1/1	0.97	0.07	44,44,44,44	0
54	MG	BA	3130	1/1	0.97	0.08	43,43,43,43	0
54	MG	BW	201	1/1	0.97	0.15	32,32,32,32	0
54	MG	DA	3386	1/1	0.97	0.05	39,39,39,39	0
54	MG	DA	3549	1/1	0.97	0.12	45,45,45,45	0
54	MG	BA	3248	1/1	0.97	0.26	27,27,27,27	0
54	MG	BZ	301	1/1	0.97	0.17	55,55,55,55	0
54	MG	DA	3392	1/1	0.97	0.09	35,35,35,35	0
54	MG	AA	1714	1/1	0.97	0.13	57,57,57,57	0
54	MG	BA	3604	1/1	0.97	0.06	50,50,50,50	0
54	MG	DA	3556	1/1	0.97	0.06	56,56,56,56	0
54	MG	BA	3426	1/1	0.97	0.08	37,37,37,37	0
54	MG	BA	3228	1/1	0.97	0.30	37,37,37,37	0
54	MG	DA	3399	1/1	0.97	0.06	51,51,51,51	0
54	MG	BA	3429	1/1	0.97	0.08	47,47,47,47	0
54	MG	BA	3432	1/1	0.97	0.04	67,67,67,67	0
54	MG	DA	3403	1/1	0.97	0.04	34,34,34,34	0
54	MG	B5	102	1/1	0.97	0.08	52,52,52,52	0
54	MG	BA	3618	1/1	0.97	0.07	52,52,52,52	0
54	MG	B8	101	1/1	0.97	0.09	51,51,51,51	0
54	MG	DA	3090	1/1	0.97	0.24	53,53,53,53	0
54	MG	DA	3413	1/1	0.97	0.07	56,56,56,56	0
54	MG	BA	3229	1/1	0.97	0.10	41,41,41,41	0
54	MG	DA	3571	1/1	0.97	0.07	55,55,55,55	0
54	MG	BA	3622	1/1	0.97	0.10	45,45,45,45	0
54	MG	DA	3417	1/1	0.97	0.07	31,31,31,31	0
54	MG	DA	3418	1/1	0.97	0.11	31,31,31,31	0
54	MG	DA	3419	1/1	0.97	0.05	44,44,44,44	0
54	MG	DA	3421	1/1	0.97	0.06	93,93,93,93	0
54	MG	BA	3623	1/1	0.97	0.07	73,73,73,73	0
54	MG	BA	3144	1/1	0.97	0.25	46,46,46,46	0
54	MG	DA	3429	1/1	0.97	0.04	56,56,56,56	0
54	MG	DA	3431	1/1	0.97	0.06	59,59,59,59	0
54	MG	DA	3432	1/1	0.97	0.07	70,70,70,70	0
54	MG	BA	3527	1/1	0.97	0.12	29,29,29,29	0
54	MG	BA	3253	1/1	0.97	0.27	19,19,19,19	0
54	MG	BA	3211	1/1	0.97	0.06	26,26,26,26	0
54	MG	BA	3388	1/1	0.97	0.05	47,47,47,47	0
54	MG	BA	3533	1/1	0.97	0.11	61,61,61,61	0
54	MG	BA	3534	1/1	0.97	0.11	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3643	1/1	0.97	0.09	59,59,59,59	0
54	MG	DA	3440	1/1	0.97	0.10	42,42,42,42	0
54	MG	BA	3277	1/1	0.97	0.26	22,22,22,22	0
54	MG	BA	3537	1/1	0.97	0.08	31,31,31,31	0
54	MG	AA	1716	1/1	0.97	0.10	116,116,116,116	0
54	MG	DA	3291	1/1	0.97	0.18	53,53,53,53	0
54	MG	DA	3106	1/1	0.97	0.20	37,37,37,37	0
54	MG	BA	3341	1/1	0.97	0.05	44,44,44,44	0
54	MG	DA	3448	1/1	0.97	0.04	42,42,42,42	0
54	MG	DD	301	1/1	0.97	0.15	47,47,47,47	0
54	MG	BA	3343	1/1	0.97	0.05	73,73,73,73	0
54	MG	BA	3161	1/1	0.97	0.18	40,40,40,40	0
54	MG	DA	3451	1/1	0.97	0.06	103,103,103,103	0
54	MG	BA	3022	1/1	0.97	0.06	46,46,46,46	0
54	MG	DA	3204	1/1	0.97	0.27	43,43,43,43	0
54	MG	BA	3652	1/1	0.97	0.05	97,97,97,97	0
54	MG	BA	3653	1/1	0.97	0.10	104,104,104,104	0
54	MG	DA	3456	1/1	0.97	0.06	42,42,42,42	0
54	MG	BA	3395	1/1	0.97	0.10	60,60,60,60	0
54	MG	BA	3396	1/1	0.97	0.06	29,29,29,29	0
54	MG	BA	3550	1/1	0.97	0.04	87,87,87,87	0
54	MG	BA	3041	1/1	0.97	0.23	40,40,40,40	0
54	MG	DA	3462	1/1	0.97	0.06	51,51,51,51	0
54	MG	DR	203	1/1	0.97	0.21	51,51,51,51	0
54	MG	DA	3463	1/1	0.97	0.04	69,69,69,69	0
54	MG	DA	3117	1/1	0.97	0.12	47,47,47,47	0
54	MG	CA	1701	1/1	0.97	0.09	72,72,72,72	0
54	MG	BA	3450	1/1	0.97	0.06	38,38,38,38	0
54	MG	BA	3179	1/1	0.97	0.21	37,37,37,37	0
54	MG	BA	3455	1/1	0.97	0.11	22,22,22,22	0
54	MG	BA	3348	1/1	0.97	0.05	59,59,59,59	0
54	MG	DA	3124	1/1	0.97	0.26	37,37,37,37	0
55	ZN	BY	201	1/1	0.97	0.04	69,69,69,69	0
54	MG	DA	3034	1/1	0.97	0.04	32,32,32,32	0
54	MG	BA	3556	1/1	0.97	0.13	57,57,57,57	0
55	ZN	DY	201	1/1	0.97	0.04	94,94,94,94	0
54	MG	BA	3457	1/1	0.97	0.09	27,27,27,27	0
55	ZN	D9	101	1/1	0.97	0.07	65,65,65,65	0
54	MG	BA	3541	1/1	0.98	0.07	42,42,42,42	0
54	MG	DA	3334	1/1	0.98	0.07	52,52,52,52	0
54	MG	DA	3335	1/1	0.98	0.07	36,36,36,36	0
54	MG	DA	3135	1/1	0.98	0.27	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3338	1/1	0.98	0.11	42,42,42,42	0
54	MG	CA	1613	1/1	0.98	0.20	66,66,66,66	0
54	MG	BA	3466	1/1	0.98	0.10	39,39,39,39	0
54	MG	AA	1721	1/1	0.98	0.04	62,62,62,62	0
54	MG	BA	3047	1/1	0.98	0.13	35,35,35,35	0
54	MG	BA	3545	1/1	0.98	0.04	43,43,43,43	0
54	MG	DA	3344	1/1	0.98	0.04	30,30,30,30	0
54	MG	BA	3546	1/1	0.98	0.12	73,73,73,73	0
54	MG	DA	3346	1/1	0.98	0.06	35,35,35,35	0
54	MG	CA	1619	1/1	0.98	0.05	50,50,50,50	0
54	MG	DA	3242	1/1	0.98	0.23	34,34,34,34	0
54	MG	CA	1710	1/1	0.98	0.10	48,48,48,48	0
54	MG	DA	3498	1/1	0.98	0.04	28,28,28,28	0
54	MG	DA	3350	1/1	0.98	0.03	47,47,47,47	0
54	MG	DA	3351	1/1	0.98	0.05	40,40,40,40	0
54	MG	DA	3501	1/1	0.98	0.04	58,58,58,58	0
54	MG	DA	3502	1/1	0.98	0.05	37,37,37,37	0
54	MG	BA	3381	1/1	0.98	0.05	66,66,66,66	0
54	MG	DA	3504	1/1	0.98	0.05	63,63,63,63	0
54	MG	BA	3548	1/1	0.98	0.05	29,29,29,29	0
54	MG	BA	3549	1/1	0.98	0.04	55,55,55,55	0
54	MG	DA	3507	1/1	0.98	0.07	80,80,80,80	0
54	MG	DA	3355	1/1	0.98	0.09	49,49,49,49	0
54	MG	BA	3471	1/1	0.98	0.08	27,27,27,27	0
54	MG	DA	3357	1/1	0.98	0.06	36,36,36,36	0
54	MG	CA	1715	1/1	0.98	0.05	103,103,103,103	0
54	MG	BA	3650	1/1	0.98	0.12	88,88,88,88	0
54	MG	BA	3342	1/1	0.98	0.05	32,32,32,32	0
54	MG	DA	3363	1/1	0.98	0.14	26,26,26,26	0
54	MG	BA	3473	1/1	0.98	0.10	30,30,30,30	0
54	MG	DA	3365	1/1	0.98	0.04	40,40,40,40	0
54	MG	AA	1694	1/1	0.98	0.04	80,80,80,80	0
54	MG	AA	1730	1/1	0.98	0.04	51,51,51,51	0
54	MG	BA	3158	1/1	0.98	0.09	40,40,40,40	0
54	MG	DA	3369	1/1	0.98	0.04	50,50,50,50	0
54	MG	AA	1701	1/1	0.98	0.04	48,48,48,48	0
54	MG	BA	3051	1/1	0.98	0.13	48,48,48,48	0
54	MG	BA	3481	1/1	0.98	0.07	25,25,25,25	0
54	MG	BA	3242	1/1	0.98	0.13	38,38,38,38	0
54	MG	CA	1728	1/1	0.98	0.07	60,60,60,60	0
54	MG	DA	3375	1/1	0.98	0.06	31,31,31,31	0
54	MG	DA	3378	1/1	0.98	0.10	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3529	1/1	0.98	0.05	56,56,56,56	0
54	MG	BA	3560	1/1	0.98	0.04	74,74,74,74	0
54	MG	DA	3381	1/1	0.98	0.03	42,42,42,42	0
54	MG	BA	3483	1/1	0.98	0.07	28,28,28,28	0
54	MG	BA	3484	1/1	0.98	0.09	27,27,27,27	0
54	MG	DA	3534	1/1	0.98	0.07	28,28,28,28	0
54	MG	DA	3384	1/1	0.98	0.05	45,45,45,45	0
54	MG	BA	3430	1/1	0.98	0.05	49,49,49,49	0
54	MG	BA	3431	1/1	0.98	0.05	71,71,71,71	0
54	MG	DA	3388	1/1	0.98	0.13	43,43,43,43	0
54	MG	DA	3539	1/1	0.98	0.06	67,67,67,67	0
54	MG	BA	3490	1/1	0.98	0.04	28,28,28,28	0
54	MG	BA	3350	1/1	0.98	0.06	40,40,40,40	0
54	MG	DA	3542	1/1	0.98	0.05	83,83,83,83	0
54	MG	BA	3568	1/1	0.98	0.07	39,39,39,39	0
54	MG	DA	3395	1/1	0.98	0.05	39,39,39,39	0
54	MG	BA	3493	1/1	0.98	0.05	40,40,40,40	0
54	MG	BA	3494	1/1	0.98	0.05	34,34,34,34	0
54	MG	BA	3571	1/1	0.98	0.07	44,44,44,44	0
54	MG	AA	1698	1/1	0.98	0.07	69,69,69,69	0
54	MG	BA	3573	1/1	0.98	0.11	23,23,23,23	0
54	MG	DA	3551	1/1	0.98	0.07	62,62,62,62	0
54	MG	DA	3173	1/1	0.98	0.15	52,52,52,52	0
54	MG	DA	3402	1/1	0.98	0.04	44,44,44,44	0
54	MG	AA	1733	1/1	0.98	0.04	78,78,78,78	0
54	MG	DA	3405	1/1	0.98	0.05	32,32,32,32	0
54	MG	CA	1743	1/1	0.98	0.07	61,61,61,61	0
54	MG	CA	1744	1/1	0.98	0.04	83,83,83,83	0
54	MG	DA	3409	1/1	0.98	0.04	73,73,73,73	0
54	MG	BB	214	1/1	0.98	0.06	40,40,40,40	0
54	MG	BA	3575	1/1	0.98	0.06	41,41,41,41	0
54	MG	DA	3412	1/1	0.98	0.04	58,58,58,58	0
54	MG	BA	3576	1/1	0.98	0.07	21,21,21,21	0
54	MG	BA	3323	1/1	0.98	0.06	23,23,23,23	0
54	MG	DA	3415	1/1	0.98	0.04	43,43,43,43	0
54	MG	BB	218	1/1	0.98	0.05	45,45,45,45	0
54	MG	BA	3354	1/1	0.98	0.04	37,37,37,37	0
54	MG	BB	221	1/1	0.98	0.03	50,50,50,50	0
54	MG	BA	3355	1/1	0.98	0.06	29,29,29,29	0
54	MG	DA	3570	1/1	0.98	0.10	28,28,28,28	0
54	MG	BA	3324	1/1	0.98	0.05	42,42,42,42	0
54	MG	DA	3572	1/1	0.98	0.11	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3422	1/1	0.98	0.07	43,43,43,43	0
54	MG	BA	3505	1/1	0.98	0.12	41,41,41,41	0
54	MG	DA	3579	1/1	0.98	0.05	57,57,57,57	0
54	MG	BA	3506	1/1	0.98	0.06	30,30,30,30	0
54	MG	DA	3427	1/1	0.98	0.04	59,59,59,59	0
54	MG	BD	303	1/1	0.98	0.14	35,35,35,35	0
54	MG	BA	3325	1/1	0.98	0.05	40,40,40,40	0
54	MG	BA	3509	1/1	0.98	0.08	50,50,50,50	0
54	MG	BA	3441	1/1	0.98	0.07	56,56,56,56	0
54	MG	BA	3326	1/1	0.98	0.04	49,49,49,49	0
54	MG	BA	3089	1/1	0.98	0.17	41,41,41,41	0
54	MG	BA	3588	1/1	0.98	0.03	64,64,64,64	0
54	MG	BA	3361	1/1	0.98	0.04	59,59,59,59	0
54	MG	DA	3592	1/1	0.98	0.04	83,83,83,83	0
54	MG	AA	1703	1/1	0.98	0.04	66,66,66,66	0
54	MG	BA	3151	1/1	0.98	0.24	33,33,33,33	0
54	MG	BA	3518	1/1	0.98	0.08	50,50,50,50	0
54	MG	BA	3594	1/1	0.98	0.05	86,86,86,86	0
54	MG	DA	3005	1/1	0.98	0.10	77,77,77,77	0
54	MG	BA	3595	1/1	0.98	0.16	27,27,27,27	0
54	MG	DA	3444	1/1	0.98	0.04	41,41,41,41	0
54	MG	BA	3447	1/1	0.98	0.04	29,29,29,29	0
54	MG	BA	3405	1/1	0.98	0.07	61,61,61,61	0
54	MG	DA	3105	1/1	0.98	0.18	46,46,46,46	0
54	MG	BA	3331	1/1	0.98	0.06	48,48,48,48	0
54	MG	BA	3599	1/1	0.98	0.06	30,30,30,30	0
54	MG	BA	3055	1/1	0.98	0.15	53,53,53,53	0
54	MG	BA	3451	1/1	0.98	0.06	28,28,28,28	0
54	MG	AA	1691	1/1	0.98	0.07	43,43,43,43	0
54	MG	BA	3605	1/1	0.98	0.06	55,55,55,55	0
54	MG	BA	3607	1/1	0.98	0.07	99,99,99,99	0
54	MG	BA	3453	1/1	0.98	0.04	46,46,46,46	0
54	MG	BA	3334	1/1	0.98	0.04	51,51,51,51	0
54	MG	BA	3610	1/1	0.98	0.05	63,63,63,63	0
54	MG	BA	3611	1/1	0.98	0.04	44,44,44,44	0
54	MG	BA	3530	1/1	0.98	0.09	56,56,56,56	0
54	MG	BA	3613	1/1	0.98	0.04	65,65,65,65	0
54	MG	DA	3461	1/1	0.98	0.08	41,41,41,41	0
54	MG	BA	3615	1/1	0.98	0.04	52,52,52,52	0
54	MG	BA	3531	1/1	0.98	0.04	89,89,89,89	0
54	MG	DA	3121	1/1	0.98	0.10	34,34,34,34	0
54	MG	BA	3617	1/1	0.98	0.05	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3198	1/1	0.98	0.15	44,44,44,44	0
54	MG	DA	3468	1/1	0.98	0.03	53,53,53,53	0
54	MG	BA	3620	1/1	0.98	0.04	68,68,68,68	0
54	MG	BA	3168	1/1	0.98	0.20	28,28,28,28	0
54	MG	BA	3372	1/1	0.98	0.03	49,49,49,49	0
54	MG	BA	3200	1/1	0.98	0.16	31,31,31,31	0
54	MG	BA	3626	1/1	0.98	0.09	64,64,64,64	0
54	MG	DA	3475	1/1	0.98	0.06	30,30,30,30	0
54	MG	BA	3289	1/1	0.98	0.14	34,34,34,34	0
54	MG	BA	3309	1/1	0.98	0.06	31,31,31,31	0
54	MG	BA	3464	1/1	0.98	0.06	39,39,39,39	0
54	MG	DA	3479	1/1	0.98	0.05	62,62,62,62	0
54	MG	BA	3376	1/1	0.98	0.04	26,26,26,26	0
54	MG	BA	3639	1/1	0.98	0.15	65,65,65,65	0
54	MG	DA	3394	1/1	0.99	0.03	47,47,47,47	0
54	MG	BE	303	1/1	0.99	0.07	26,26,26,26	0
54	MG	BE	304	1/1	0.99	0.10	25,25,25,25	0
54	MG	BA	3428	1/1	0.99	0.05	56,56,56,56	0
54	MG	DA	3474	1/1	0.99	0.03	30,30,30,30	0
54	MG	BA	3365	1/1	0.99	0.03	69,69,69,69	0
54	MG	BA	3315	1/1	0.99	0.07	31,31,31,31	0
54	MG	BA	3508	1/1	0.99	0.09	29,29,29,29	0
54	MG	BA	3475	1/1	0.99	0.06	39,39,39,39	0
54	MG	BA	3379	1/1	0.99	0.04	22,22,22,22	0
54	MG	BA	3511	1/1	0.99	0.07	32,32,32,32	0
54	MG	DA	3404	1/1	0.99	0.10	36,36,36,36	0
54	MG	BA	3380	1/1	0.99	0.06	26,26,26,26	0
54	MG	DA	3336	1/1	0.99	0.10	41,41,41,41	0
54	MG	DA	3407	1/1	0.99	0.06	70,70,70,70	0
54	MG	AA	1728	1/1	0.99	0.07	53,53,53,53	0
54	MG	BA	3591	1/1	0.99	0.03	34,34,34,34	0
54	MG	DA	3566	1/1	0.99	0.05	54,54,54,54	0
54	MG	CA	1748	1/1	0.99	0.04	58,58,58,58	0
54	MG	BA	3454	1/1	0.99	0.05	25,25,25,25	0
54	MG	BA	3480	1/1	0.99	0.06	31,31,31,31	0
54	MG	BA	3434	1/1	0.99	0.05	62,62,62,62	0
54	MG	BA	3517	1/1	0.99	0.05	26,26,26,26	0
54	MG	BA	3044	1/1	0.99	0.08	33,33,33,33	0
54	MG	BA	3519	1/1	0.99	0.03	64,64,64,64	0
54	MG	DA	3574	1/1	0.99	0.03	41,41,41,41	0
54	MG	DA	3575	1/1	0.99	0.08	35,35,35,35	0
54	MG	DA	3576	1/1	0.99	0.04	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3577	1/1	0.99	0.04	57,57,57,57	0
54	MG	BA	3416	1/1	0.99	0.03	25,25,25,25	0
54	MG	BA	3521	1/1	0.99	0.04	40,40,40,40	0
54	MG	BA	3458	1/1	0.99	0.05	35,35,35,35	0
54	MG	DA	3581	1/1	0.99	0.03	52,52,52,52	0
54	MG	DA	3420	1/1	0.99	0.06	37,37,37,37	0
54	MG	BA	3561	1/1	0.99	0.07	54,54,54,54	0
54	MG	BA	3602	1/1	0.99	0.05	56,56,56,56	0
54	MG	DA	3585	1/1	0.99	0.05	33,33,33,33	0
54	MG	DA	3423	1/1	0.99	0.05	32,32,32,32	0
54	MG	BA	3603	1/1	0.99	0.03	40,40,40,40	0
54	MG	DA	3425	1/1	0.99	0.03	47,47,47,47	0
54	MG	BA	3485	1/1	0.99	0.03	32,32,32,32	0
54	MG	BA	3383	1/1	0.99	0.05	70,70,70,70	0
54	MG	DA	3428	1/1	0.99	0.03	68,68,68,68	0
54	MG	BA	3065	1/1	0.99	0.06	41,41,41,41	0
54	MG	DA	3430	1/1	0.99	0.04	30,30,30,30	0
54	MG	DA	3594	1/1	0.99	0.09	58,58,58,58	0
54	MG	BA	3526	1/1	0.99	0.07	22,22,22,22	0
54	MG	BA	3489	1/1	0.99	0.06	23,23,23,23	0
54	MG	BA	3071	1/1	0.99	0.13	34,34,34,34	0
54	MG	CA	1709	1/1	0.99	0.09	63,63,63,63	0
54	MG	DA	3512	1/1	0.99	0.04	42,42,42,42	0
54	MG	DA	3359	1/1	0.99	0.04	33,33,33,33	0
54	MG	BA	3491	1/1	0.99	0.04	28,28,28,28	0
54	MG	BA	3312	1/1	0.99	0.05	51,51,51,51	0
54	MG	DA	3362	1/1	0.99	0.04	26,26,26,26	0
54	MG	BA	3387	1/1	0.99	0.06	63,63,63,63	0
54	MG	BA	3614	1/1	0.99	0.03	66,66,66,66	0
54	MG	BA	3349	1/1	0.99	0.03	36,36,36,36	0
54	MG	BA	3495	1/1	0.99	0.04	35,35,35,35	0
54	MG	BA	3423	1/1	0.99	0.05	33,33,33,33	0
54	MG	BA	3535	1/1	0.99	0.09	55,55,55,55	0
54	MG	BA	3619	1/1	0.99	0.04	64,64,64,64	0
54	MG	CA	1719	1/1	0.99	0.02	54,54,54,54	0
54	MG	DA	3014	1/1	0.99	0.13	31,31,31,31	0
54	MG	BA	3497	1/1	0.99	0.16	61,61,61,61	0
54	MG	BA	3498	1/1	0.99	0.07	32,32,32,32	0
54	MG	AA	1696	1/1	0.99	0.07	66,66,66,66	0
54	MG	CA	1723	1/1	0.99	0.07	55,55,55,55	0
54	MG	DA	3376	1/1	0.99	0.05	30,30,30,30	0
54	MG	BA	3468	1/1	0.99	0.07	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3624	1/1	0.99	0.04	36,36,36,36	0
54	MG	DA	3380	1/1	0.99	0.04	42,42,42,42	0
54	MG	BA	3625	1/1	0.99	0.04	53,53,53,53	0
54	MG	BB	220	1/1	0.99	0.10	60,60,60,60	0
54	MG	BA	3362	1/1	0.99	0.04	43,43,43,43	0
54	MG	BA	3322	1/1	0.99	0.03	37,37,37,37	0
54	MG	DA	3385	1/1	0.99	0.07	49,49,49,49	0
54	MG	BA	3628	1/1	0.99	0.06	35,35,35,35	0
54	MG	BA	3629	1/1	0.99	0.04	24,24,24,24	0
54	MG	BA	3630	1/1	0.99	0.04	34,34,34,34	0
54	MG	DA	3389	1/1	0.99	0.04	51,51,51,51	0
54	MG	DA	3390	1/1	0.99	0.06	47,47,47,47	0
54	MG	BA	3631	1/1	0.99	0.05	26,26,26,26	0
55	ZN	B5	101	1/1	0.99	0.02	45,45,45,45	0
55	ZN	B9	101	1/1	0.99	0.02	50,50,50,50	0
54	MG	DA	3467	1/1	0.99	0.05	43,43,43,43	0
55	ZN	CN	101	1/1	0.99	0.05	107,107,107,107	0
54	MG	AA	1715	1/1	0.99	0.05	61,61,61,61	0
54	MG	DA	3547	1/1	0.99	0.09	29,29,29,29	0
55	ZN	D6	101	1/1	0.99	0.03	63,63,63,63	0
54	MG	BA	3634	1/1	0.99	0.08	53,53,53,53	0
54	MG	BA	3463	1/1	1.00	0.02	28,28,28,28	0
54	MG	DA	3377	1/1	1.00	0.02	33,33,33,33	0
54	MG	BA	3327	1/1	1.00	0.06	23,23,23,23	0
54	MG	BA	3357	1/1	1.00	0.05	25,25,25,25	0
55	ZN	B6	101	1/1	1.00	0.01	48,48,48,48	0
54	MG	BA	3501	1/1	1.00	0.06	29,29,29,29	0
54	MG	BA	3632	1/1	1.00	0.02	54,54,54,54	0
54	MG	BA	3402	1/1	1.00	0.03	54,54,54,54	0
54	MG	BA	3487	1/1	1.00	0.07	20,20,20,20	0
54	MG	BA	3635	1/1	1.00	0.02	23,23,23,23	0
55	ZN	D5	102	1/1	1.00	0.02	69,69,69,69	0
54	MG	BA	3636	1/1	1.00	0.03	28,28,28,28	0
54	MG	BA	3606	1/1	1.00	0.02	34,34,34,34	0

6.5 Other polymers (i)

There are no such residues in this entry.