



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 11:21 AM UTC

PDB ID : 4V9B / pdb_00004v9b
Title : Crystal Structure of the 70S ribosome with tigecycline.
Authors : Jenner, L.; Yusupov, M.; Yusupova, G.
Deposited on : 2012-07-18
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
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

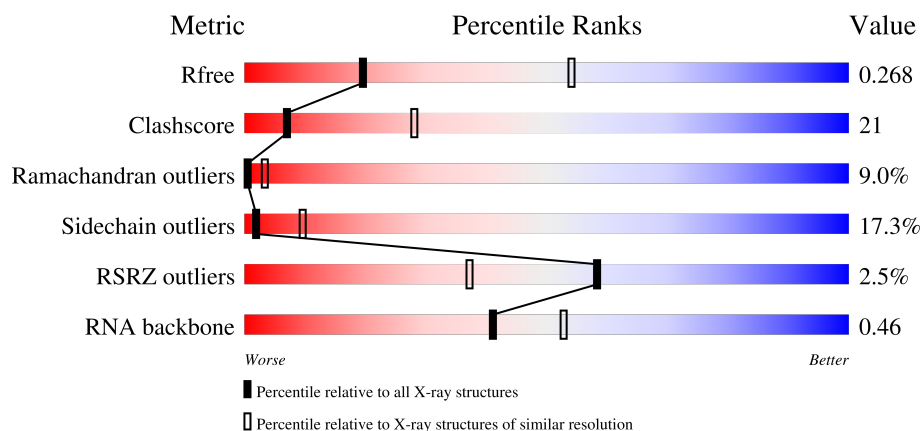
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

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

Mol	Chain	Length	Quality of chain
1	AA	1506	2% 37% 48% 15%
1	CA	1506	41% 44% 15%
2	AE	256	32% 40% 20% 7%
2	CE	256	2% 25% 45% 19% 7%

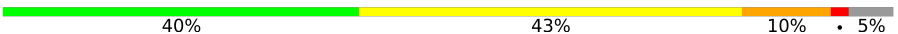
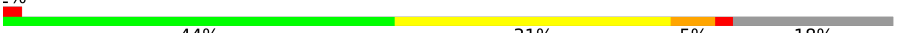
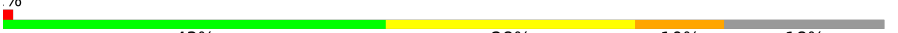
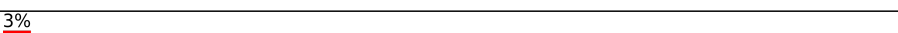
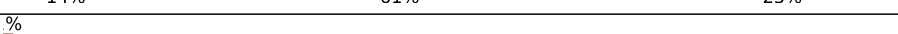
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Mol	Chain	Length	Quality of chain
3	AF	239	
3	CF	239	
4	AG	208	
4	CG	208	
5	AH	162	
5	CH	162	
6	AI	101	
6	CI	101	
7	AJ	156	
7	CJ	156	
8	AK	138	
8	CK	138	
9	AL	128	
9	CL	128	
10	AM	105	
10	CM	105	
11	AN	129	
11	CN	129	
12	AO	128	
12	CO	128	
13	AP	126	
13	CP	126	
14	AQ	61	
14	CQ	61	
15	AR	89	

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Mol	Chain	Length	Quality of chain
15	CR	89	
16	AS	88	
16	CS	88	
17	AT	105	
17	CT	105	
18	AU	88	
18	CU	88	
19	AV	93	
19	CV	93	
20	AW	106	
20	CW	106	
21	AX	27	
21	CX	27	
22	AC	77	
22	AD	77	
22	CC	77	
22	CD	77	
23	A1	6	
23	C1	6	
24	BA	2912	
24	DA	2912	
25	BB	122	
25	DB	122	
26	BD	276	
26	DD	276	

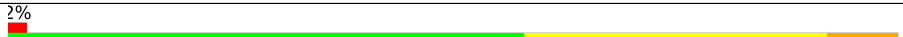
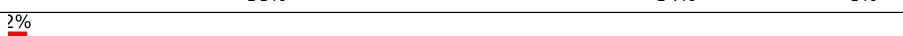
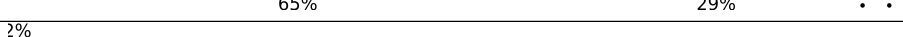
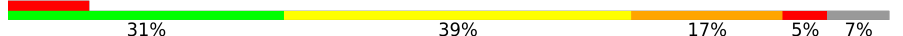
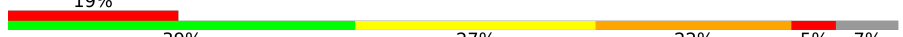
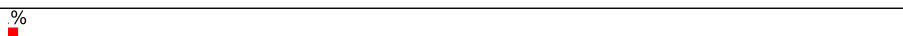
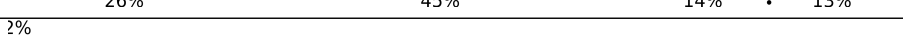
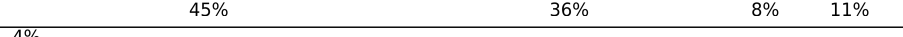
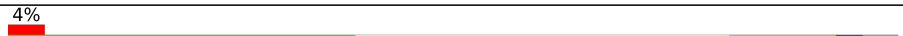
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Mol	Chain	Length	Quality of chain
27	BE	206	
27	DE	206	
28	BF	210	
28	DF	210	
29	BG	182	
29	DG	182	
30	BH	180	
30	DH	180	
31	BK	148	
31	DK	148	
32	BM	140	
32	DM	140	
33	BN	122	
33	DN	122	
34	BO	150	
34	DO	150	
35	BP	141	
35	DP	141	
36	B0	118	
36	D0	118	
37	BQ	112	
37	DQ	112	
38	BR	146	
38	DR	146	
39	B1	118	

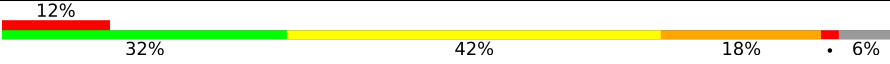
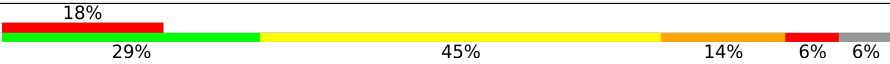
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Mol	Chain	Length	Quality of chain
39	D1	118	
40	B2	101	
40	D2	101	
41	BS	113	
41	DS	113	
42	BT	96	
42	DT	96	
43	BU	110	
43	DU	110	
44	BV	206	
44	DV	206	
45	B3	85	
45	D3	85	
46	BZ	98	
46	DZ	98	
47	BW	72	
47	DW	72	
48	BX	60	
48	DX	60	
49	B4	71	
49	D4	71	
50	B5	60	
50	D5	60	
51	B6	54	
51	D6	54	

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Mol	Chain	Length	Quality of chain
52	B7	49	
52	D7	49	
53	B8	65	
53	D8	65	

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	3082	-	-	-	X
54	MG	BA	3111	-	-	-	X
54	MG	BA	3166	-	-	-	X
54	MG	BA	3171	-	-	-	X
54	MG	BA	3510	-	-	-	X
54	MG	BA	3566	-	-	-	X
54	MG	CA	1603	-	-	-	X
54	MG	CA	1622	-	-	-	X
54	MG	CA	1681	-	-	-	X
54	MG	CA	1746	-	-	-	X
54	MG	CA	1753	-	-	-	X
54	MG	CA	1779	-	-	-	X
54	MG	CL	201	-	-	-	X
54	MG	DA	3064	-	-	-	X
54	MG	DA	3067	-	-	-	X
54	MG	DA	3085	-	-	-	X
54	MG	DA	3150	-	-	-	X
54	MG	DA	3167	-	-	-	X
54	MG	DA	3258	-	-	-	X
54	MG	DA	3324	-	-	-	X
54	MG	DA	3418	-	-	-	X
54	MG	DA	3453	-	-	-	X
54	MG	DA	3521	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 295766 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	1506	Total	C	N	O	P	0	0	0
			32369	14408	5997	10459	1505			
1	CA	1506	Total	C	N	O	P	0	0	0
			32372	14408	5997	10461	1506			

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AE	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
2	CE	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AF	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
3	CF	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AG	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	CG	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AH	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	CH	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AI	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CI	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AJ	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CJ	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AK	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CK	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AL	127	Total	C	N	O		0	0	0
			1010	639	197	174				
9	CL	127	Total	C	N	O		0	0	0
			1010	639	197	174				

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AM	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CM	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AN	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	CN	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AO	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			
12	CO	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AP	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
13	CP	117	Total	C	N	O	S	0	0	0
			933	577	192	162	2			

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AQ	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
14	CQ	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AR	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CR	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AS	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	CS	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AT	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	CT	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AU	72	Total	C	N	O	0	0	0
			591	376	117	98			
18	CU	72	Total	C	N	O	0	0	0
			591	376	117	98			

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AV	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	CV	78	Total	C	N	O	S	0	0	0
			624	398	115	109	2			

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AW	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
20	CW	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AX	25	Total	C	N	O	0	0	0
			217	134	52	31			
21	CX	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called TRNA-FMET.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AC	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			
22	AD	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			
22	CC	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			
22	CD	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AC	17A	C	U	conflict	GB AP008226.1
AC	50	U	C	conflict	GB AP008226.1
AC	51	C	G	conflict	GB AP008226.1
AC	63	G	C	conflict	GB AP008226.1
AD	17A	C	U	conflict	GB AP008226.1
AD	50	U	C	conflict	GB AP008226.1
AD	51	C	G	conflict	GB AP008226.1
AD	63	G	C	conflict	GB AP008226.1
CC	17A	C	U	conflict	GB AP008226.1
CC	50	U	C	conflict	GB AP008226.1
CC	51	C	G	conflict	GB AP008226.1
CC	63	G	C	conflict	GB AP008226.1
CD	17A	C	U	conflict	GB AP008226.1
CD	50	U	C	conflict	GB AP008226.1
CD	51	C	G	conflict	GB AP008226.1
CD	63	G	C	conflict	GB AP008226.1

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	A1	6	Total	C	N	O	P	0	0	0
			129	58	24	41	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	C1	6	Total	C	N	O	P	0	0	0
			129	58	24	41	6			

- Molecule 24 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BA	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			
24	DA	2906	Total	C	N	O	P	0	0	0
			62587	27857	11709	20116	2905			

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	161	U	-	expression tag	GB AP008226.1
BA	654A	A	G	conflict	GB AP008226.1
BA	654E	C	G	conflict	GB AP008226.1
BA	654P	G	C	conflict	GB AP008226.1
BA	654T	A	C	conflict	GB AP008226.1
BA	1058	U	G	conflict	GB AP008226.1
BA	1080	A	C	conflict	GB AP008226.1
DA	166	U	-	insertion	GB AP008226.1
DA	654A	A	G	conflict	GB AP008226.1
DA	654E	C	G	conflict	GB AP008226.1
DA	654P	G	C	conflict	GB AP008226.1
DA	654T	A	C	conflict	GB AP008226.1
DA	1058	U	G	conflict	GB AP008226.1
DA	1080	A	C	conflict	GB AP008226.1

- Molecule 25 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BB	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
25	DB	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 26 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 27 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BE	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			
27	DE	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

- Molecule 28 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
28	DF	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

- Molecule 29 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
29	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 30 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BH	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			
30	DH	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			

- Molecule 31 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BK	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
31	DK	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 32 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BM	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
32	DM	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 33 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BN	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
33	DN	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 34 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BO	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			
34	DO	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			

- Molecule 35 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BP	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
35	DP	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 36 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	B0	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
36	D0	117	Total	C	N	O		0	0	0
			960	599	202	159				

- Molecule 37 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
37	BQ	111	Total	C	N	O	0	0	0
			882	556	176	150			
37	DQ	111	Total	C	N	O	0	0	0
			882	556	176	150			

- Molecule 38 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BR	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
38	DR	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 39 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	B1	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
39	D1	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 40 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	B2	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
40	D2	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 41 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BS	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			
41	DS	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

- Molecule 42 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BT	92	Total	C	N	O	0	0	0
			725	471	131	123			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DT	92	Total	C	N	O	0	0	0
			725	471	131	123			

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BU	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			
43	DU	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			

- Molecule 44 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BV	175	Total	C	N	O	S	0	0	0
			1397	892	251	251	3			
44	DV	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			

- Molecule 45 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	B3	76	Total	C	N	O	S	0	0	0
			607	376	128	102	1			
45	D3	77	Total	C	N	O	S	0	0	0
			613	379	129	104	1			

- Molecule 46 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BZ	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			
46	DZ	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BW	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			
47	DW	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
48	BX	59	Total	C	N	O	0	0	0
			469	298	90	81			
48	DX	59	Total	C	N	O	0	0	0
			469	298	90	81			

- Molecule 49 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B4	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			
49	D4	63	Total	C	N	O	S	0	0	0
			515	326	93	91	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
50	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 51 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B6	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			
51	D6	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
52	D7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B8	61	Total 488	C 312	N 99	O 75	S 2	0	0	0
53	D8	61	Total 488	C 312	N 99	O 75	S 2	0	0	0

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	236	Total 236	Mg 236	0	0
54	AG	1	Total 1	Mg 1	0	0
54	AH	1	Total 1	Mg 1	0	0
54	AN	2	Total 2	Mg 2	0	0
54	AQ	1	Total 1	Mg 1	0	0
54	AT	1	Total 1	Mg 1	0	0
54	AC	8	Total 8	Mg 8	0	0
54	AD	1	Total 1	Mg 1	0	0
54	A1	1	Total 1	Mg 1	0	0
54	BA	632	Total 632	Mg 632	0	0
54	BB	16	Total 16	Mg 16	0	0
54	BD	1	Total 1	Mg 1	0	0
54	BE	4	Total 4	Mg 4	0	0
54	BF	2	Total 2	Mg 2	0	0
54	BO	2	Total 2	Mg 2	0	0
54	B0	1	Total 1	Mg 1	0	0
54	B1	1	Total 1	Mg 1	0	0
54	B2	1	Total 1	Mg 1	0	0

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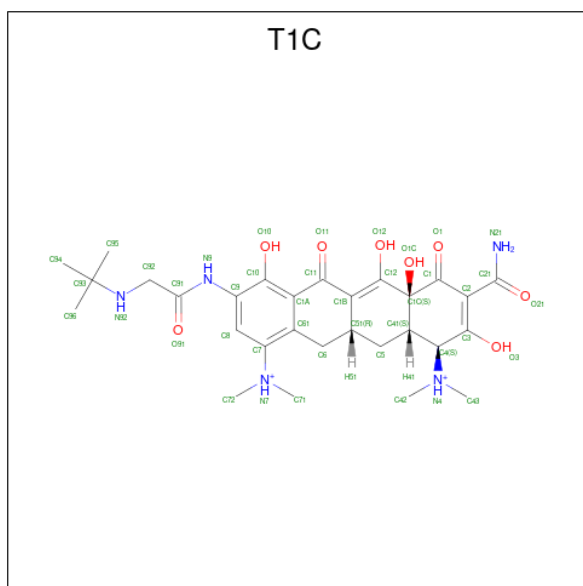
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BU	2	Total 2	Mg 2	0	0
54	B3	2	Total 2	Mg 2	0	0
54	B5	1	Total 1	Mg 1	0	0
54	B7	3	Total 3	Mg 3	0	0
54	B8	2	Total 2	Mg 2	0	0
54	CA	199	Total 199	Mg 199	0	0
54	CG	2	Total 2	Mg 2	0	0
54	CL	1	Total 1	Mg 1	0	0
54	CN	1	Total 1	Mg 1	0	0
54	CS	1	Total 1	Mg 1	0	0
54	CX	1	Total 1	Mg 1	0	0
54	CC	9	Total 9	Mg 9	0	0
54	DA	523	Total 523	Mg 523	0	0
54	DB	15	Total 15	Mg 15	0	0
54	DE	4	Total 4	Mg 4	0	0
54	DP	1	Total 1	Mg 1	0	0
54	DR	1	Total 1	Mg 1	0	0
54	D1	1	Total 1	Mg 1	0	0
54	DU	2	Total 2	Mg 2	0	0
54	D3	1	Total 1	Mg 1	0	0
54	D5	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	D8	1	Total	Mg	0	0
			1	1		

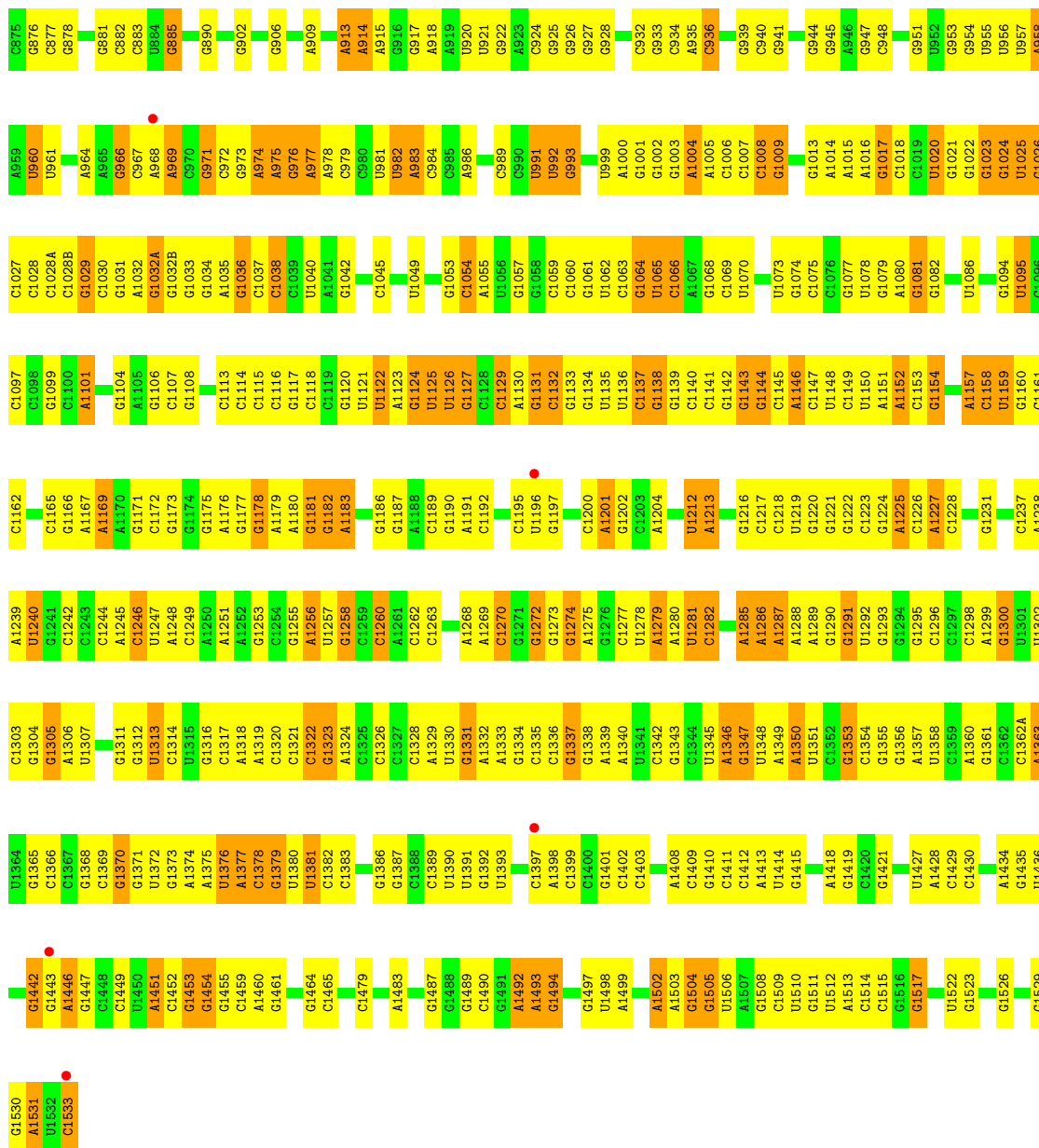
- Molecule 55 is TIGECYCLINE (CCD ID: T1C) (formula: $C_{29}H_{41}N_5O_8$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	AA	1	Total	C	N	O	0	0
			42	29	5	8		
55	CA	1	Total	C	N	O	0	0
			42	29	5	8		

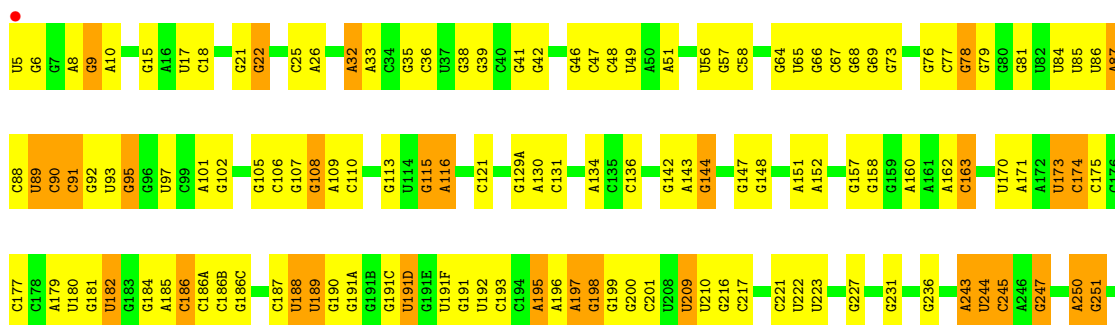
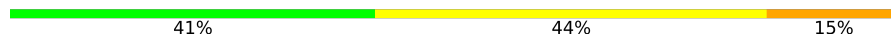
- Molecule 56 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AG	1	Total	Zn	0	0
			1	1		
56	AQ	1	Total	Zn	0	0
			1	1		
56	CG	1	Total	Zn	0	0
			1	1		
56	CQ	1	Total	Zn	0	0
			1	1		

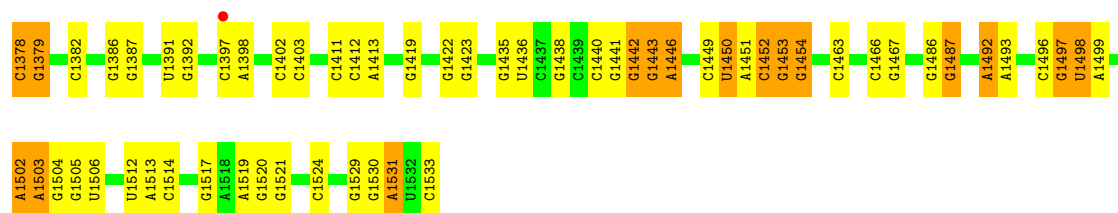


- Molecule 1: 16S ribosomal RNA

Chain CA:

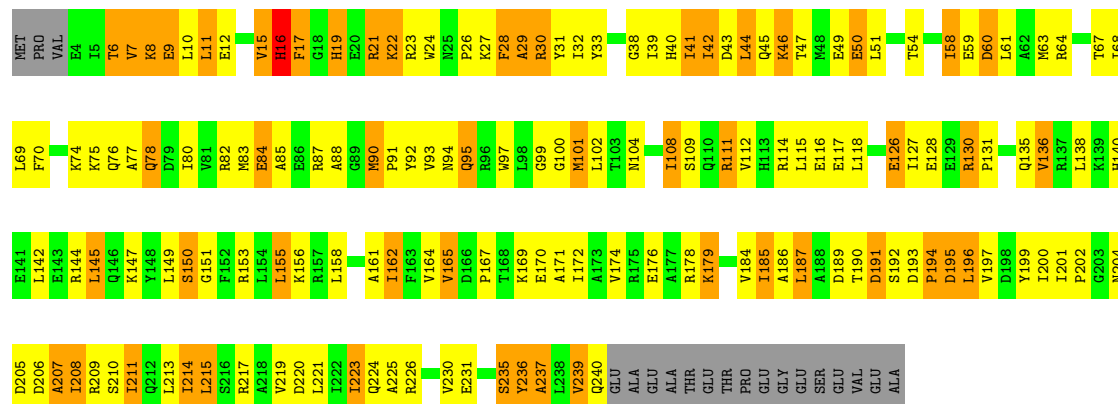


G1310	G1311	G1312	G1316	G1317	G1318	G1319	G1320	G1321	G1322	G1323	G1324	G1325	G1326	G1327	G1328	G1329	G1330	G1331	G1332	G1333	G1334	G1335	G1336	G1337	G1338	G1339	G1340	G1341	G1342	G1343	G1344	G1345	G1346	G1347	G1348	G1349	G1350	G1351	G1352	G1353	G1358	G1362	G1362A	G1363	G1364	G1365	G1366	G1369	G1370	G1373	G1374	G1375	G1376	G1377				
C1249	A1250	A1251	A1252	G1253	G1254	G1255	A1256	G1257	G1258	G1259	G1260	A1261	C1262	C1263	G1264	G1265	G1266	G1267	A1268	A1269	G1270	G1271	G1272	G1273	G1274	G1275	G1276	G1277	G1278	A1279	A1280	A1281	G1282	G1283	G1284	A1285	A1286	A1287	A1288	A1289	G1290	G1291	G1292	G1293	G1296	C1297	C1298	A1299	G1300	U1301	G1302	G1303	G1304	G1305	A1306	U1307	G1308	G1309
G1178	A1179	A1180	G1181	G1182	A1183	G1186	G1187	G1188	A1188	G1189	G1190	A1191	C1192	C1195	G1196	G1197	C1200	A1201	G1202	G1203	G1204	U1205	G1206	G1207	G1210	U1212	A1213	G1214	G1215	G1216	C1217	G1218	U1219	G1220	G1221	G1224	A1225	G1226	A1227	C1228	A1229	G1230	G1231	U1232	U1235	A1236	C1237	A1238	A1239	U1240	C1243	C1244	A1245					
G1044	C1045	G1048	U1049	G1050	C1051	U1052	G1053	C1054	A1055	U1056	G1057	G1058	C1059	G1060	G1061	U1062	C1063	G1064	U1065	C1066	C1069	G1072	U1073	G1074	C1075	G1076	G1077	U1078	G1079	A1080	G1081	G1084	U1085	U1086	G1087	G1088	U1091	G1094	U1095	C1096	C1097	C1098	G1099	C1100	A1101	A1102	C1103	G1104	A1105	G1106	C1107	G1108	G1109					
A1110	A1111	C1112	G1117	C1118	G1119	G1120	U1121	U1122	A1123	G1124	U1125	U1126	G1127	C1128	G1129	A1130	G1131	C1132	G1133	G1134	U1135	U1136	C1137	G1138	G1139	C1140	C1141	G1142	G1143	G1144	C1145	A1146	C1147	U1148	C1149	A1152	C1153	G1154	G1155	G1156	A1157	C1158	U1159	G1160	C1161	C1162	G1166	A1170	G1171	G1172	G1173	G1174	G1175	A1176	G1177			
G1178	A1179	A1180	G1181	G1182	A1183	G1186	G1187	G1188	A1188	G1189	G1190	A1191	C1192	C1195	G1196	G1197	C1200	A1201	G1202	G1203	G1204	U1205	G1206	G1207	G1210	U1212	A1213	G1214	G1215	G1216	C1217	G1218	U1219	G1220	G1221	G1224	A1225	G1226	A1227	C1228	A1229	G1230	G1231	U1232	U1235	A1236	C1237	A1238	A1239	U1240	C1243	C1244	A1245					
C1249	A1250	A1251	A1252	G1253	G1254	G1255	A1256	G1257	G1258	G1259	G1260	A1261	C1262	C1263	G1264	G1265	G1266	G1267	A1268	A1269	G1270	G1271	G1272	G1273	G1274	G1275	G1276	G1277	G1278	A1279	A1280	A1281	G1282	G1283	G1284	A1285	A1286	A1287	A1288	A1289	G1290	G1291	G1292	G1293	G1296	C1297	C1298	A1299	G1300	U1301	G1302	G1303	G1304	G1305	A1306	U1307	G1308	G1309
G1310	G1311	G1312	G1316	G1317	G1318	G1319	G1320	G1321	G1322	G1323	G1324	G1325	G1326	G1327	G1328	G1329	G1330	G1331	A1332	G1333	G1334	G1335	G1336	G1337	G1338	A1339	A1340	U1341	G1342	G1343	G1344	U1345	A1346	G1347	U1348	A1349	G1350	U1351	C1352	G1353	U1358	C1362	C1362A	A1363	U1364	G1365	G1366	G1369	G1370	G1373	A1374	G1375	U1376	A1377				



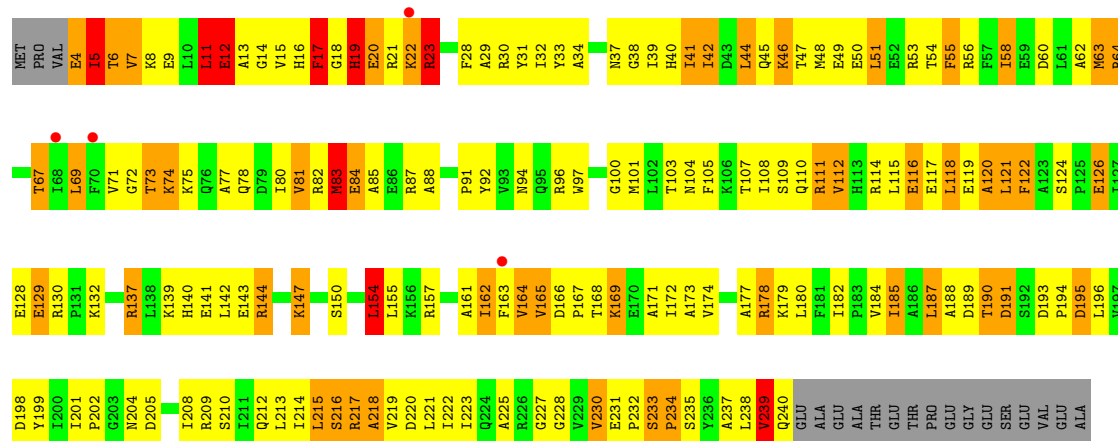
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

Chain AE: 32% 40% 20% 7%



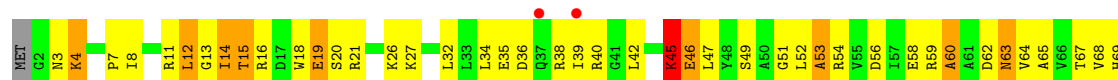
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

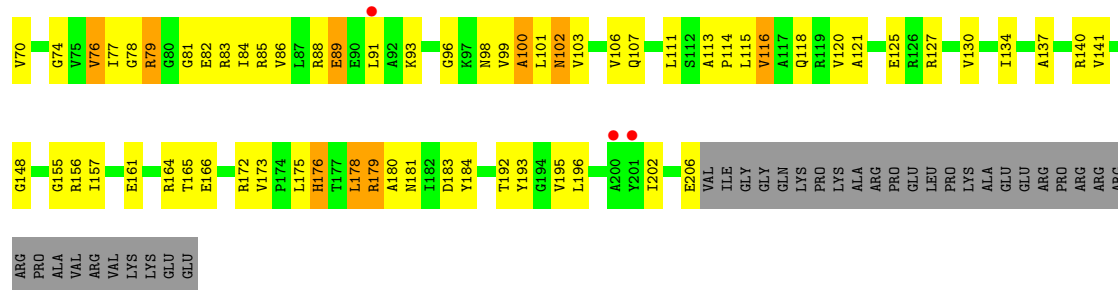
Chain CE: 2% 25% 45% 19% 7%



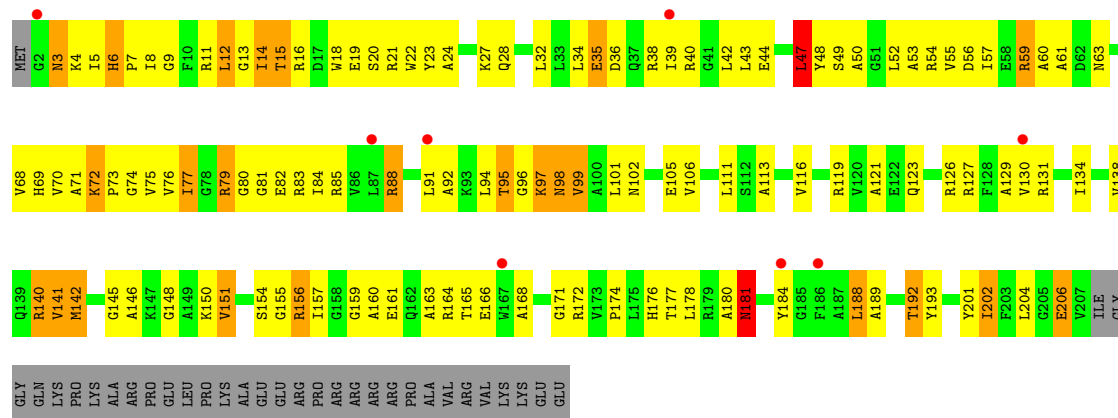
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain AF: 2% 41% 37% 8% 14%

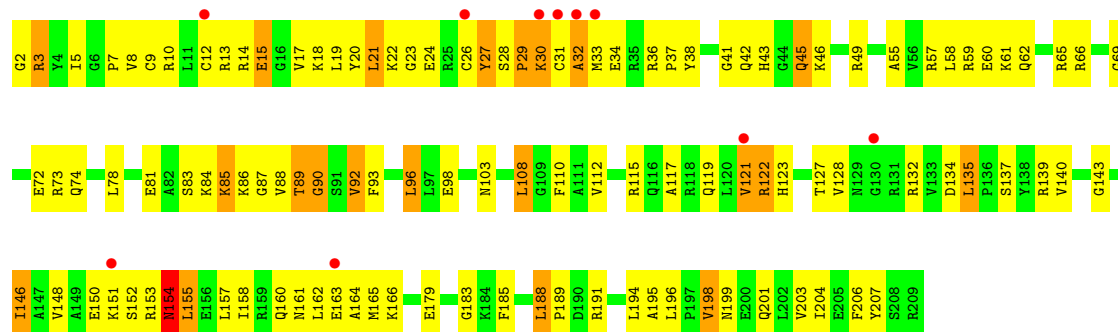




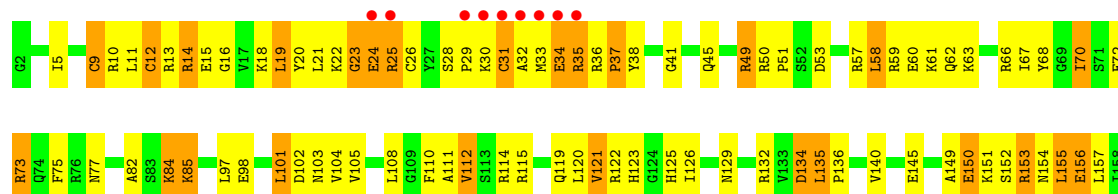
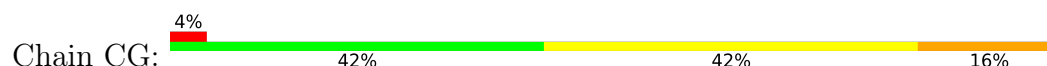
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

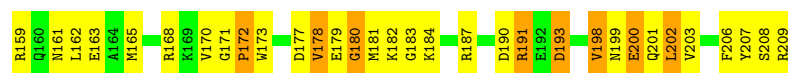


• Molecule 4: 30S RIBOSOMAL PROTEIN S4

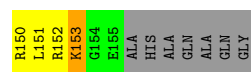
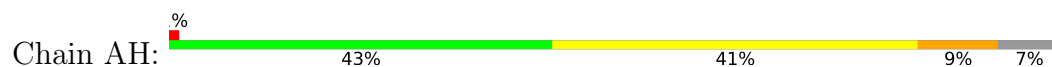


• Molecule 4: 30S RIBOSOMAL PROTEIN S4





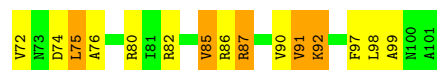
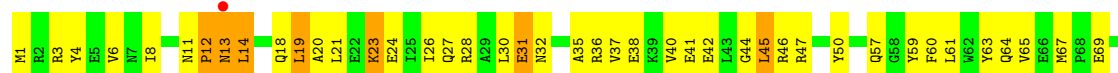
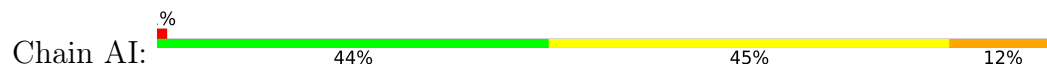
• Molecule 5: 30S RIBOSOMAL PROTEIN S5



• Molecule 5: 30S RIBOSOMAL PROTEIN S5



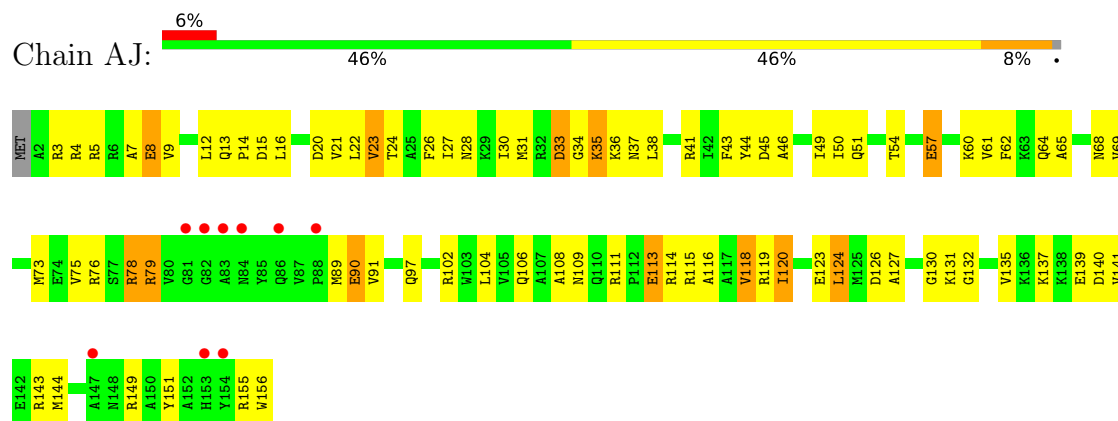
• Molecule 6: 30S RIBOSOMAL PROTEIN S6



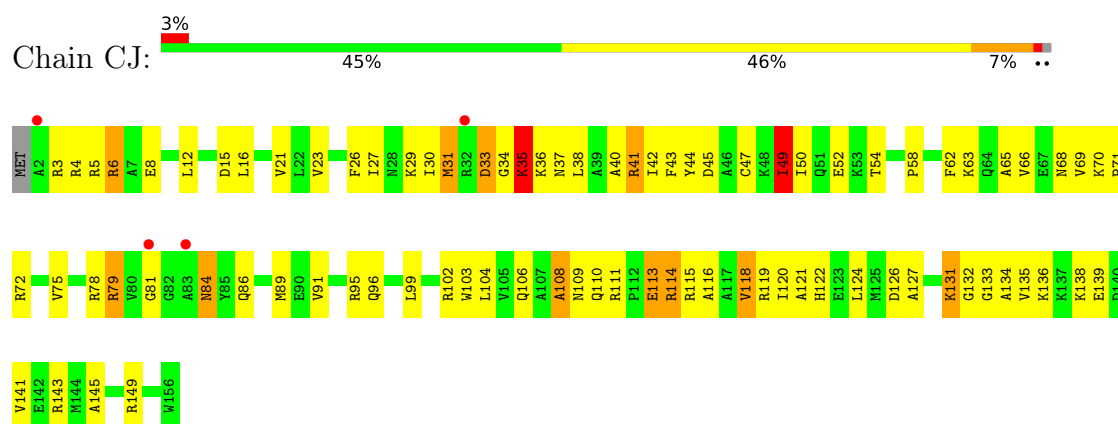
• Molecule 6: 30S RIBOSOMAL PROTEIN S6



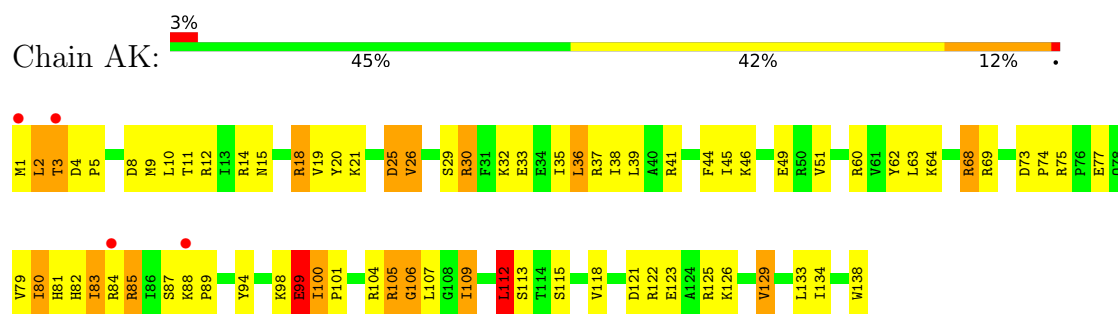
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



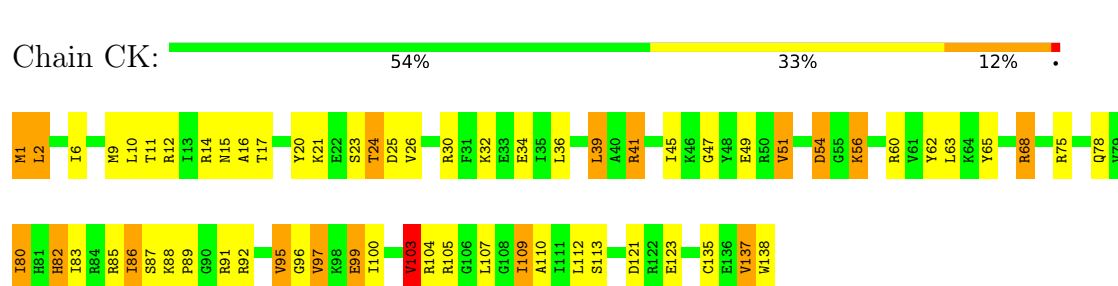
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



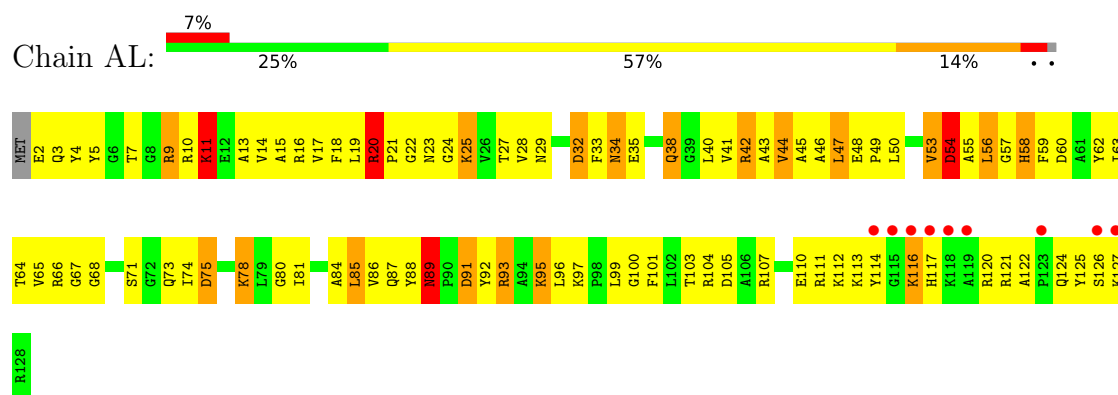
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



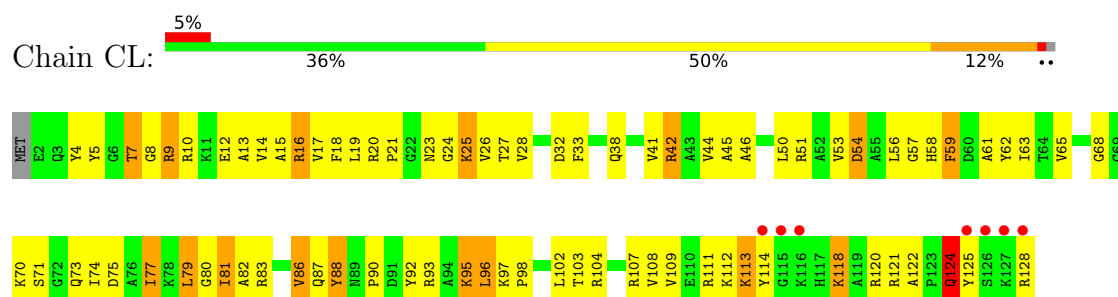
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



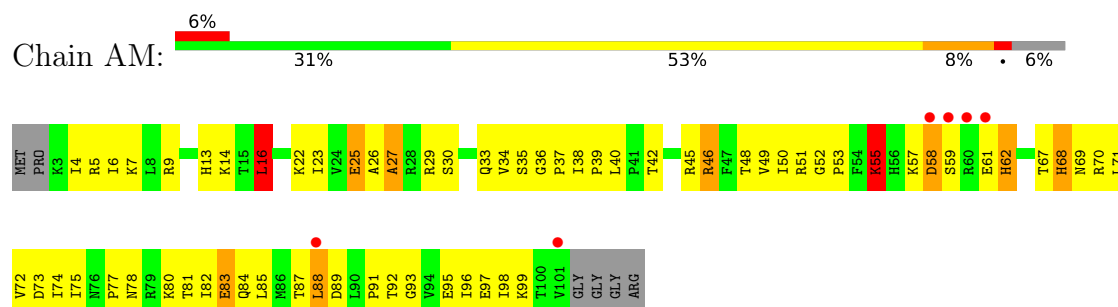
- Molecule 9: 30S RIBOSOMAL PROTEIN S9



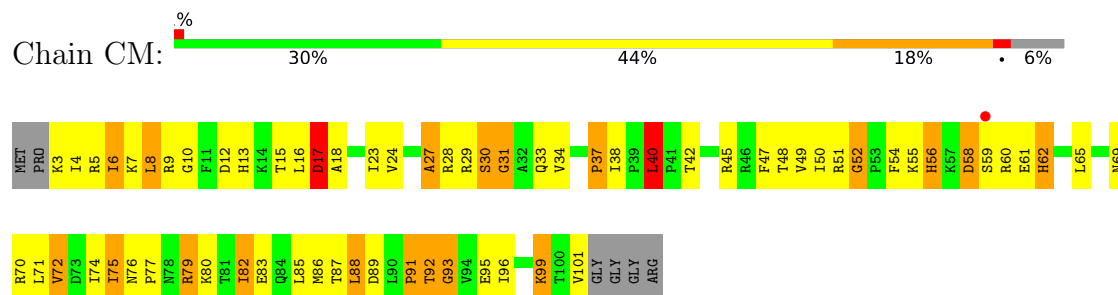
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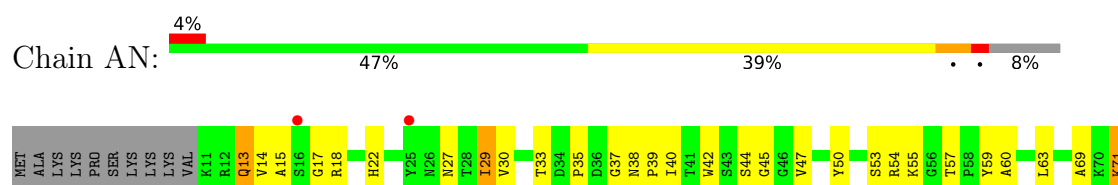
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



• Molecule 10: 30S RIBOSOMAL PROTEIN S10

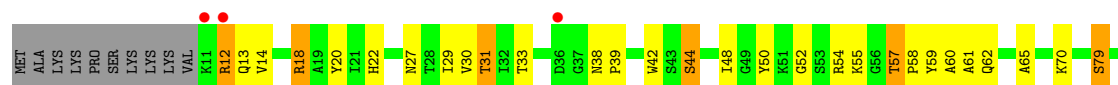


• Molecule 11: 30S RIBOSOMAL PROTEIN S11





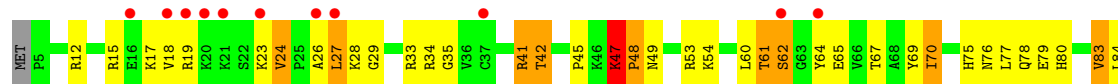
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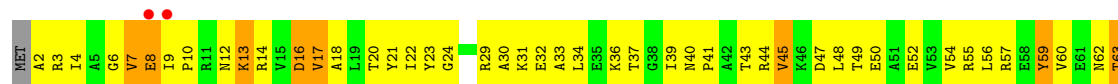
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



• Molecule 12: 30S RIBOSOMAL PROTEIN S12

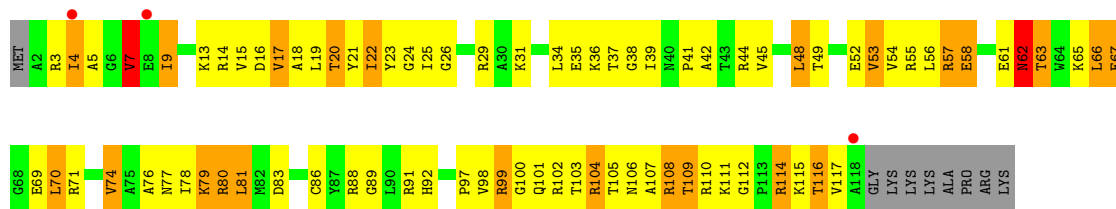


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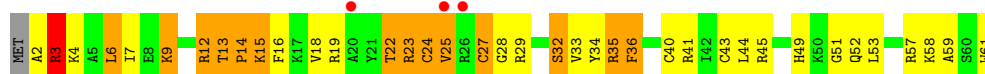


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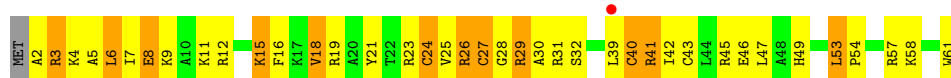
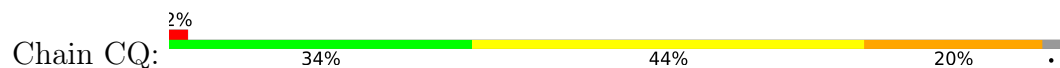




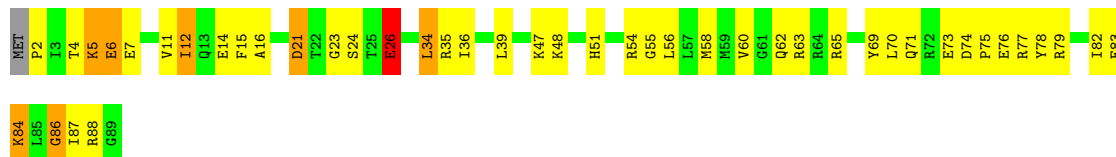
• Molecule 14: 30S RIBOSOMAL PROTEIN S14



• Molecule 14: 30S RIBOSOMAL PROTEIN S14



• Molecule 15: 30S RIBOSOMAL PROTEIN S15



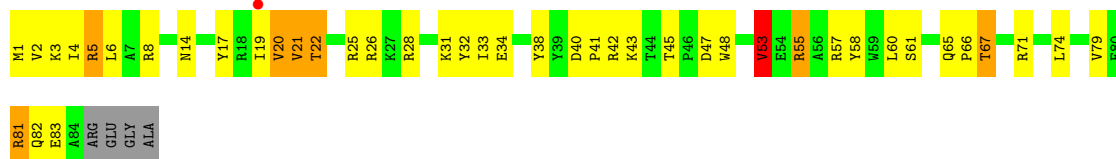
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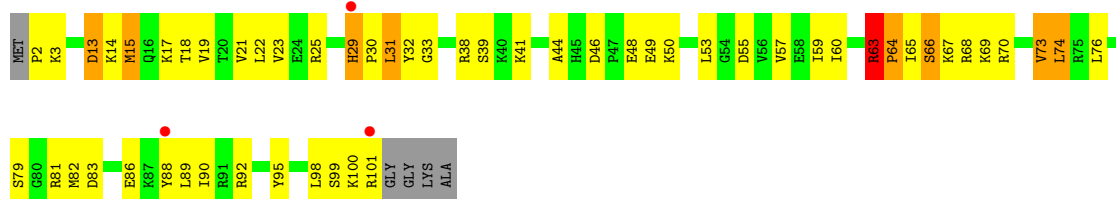
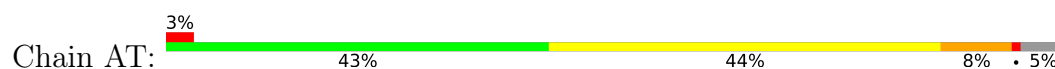
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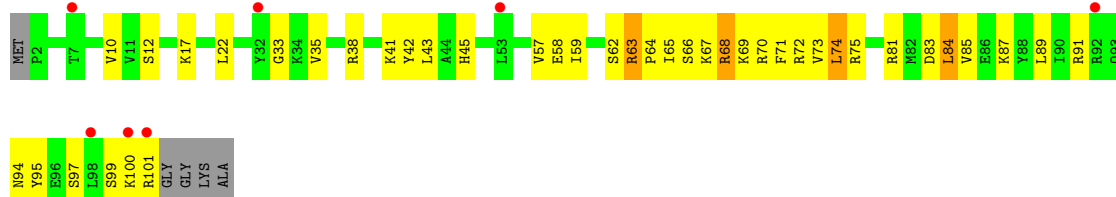
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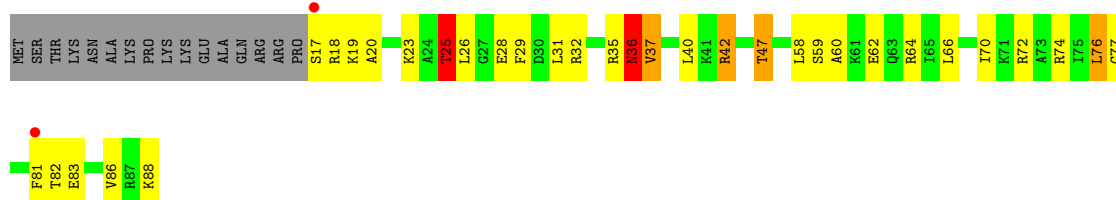
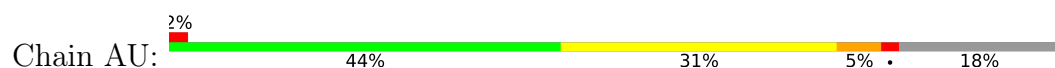
• Molecule 17: 30S RIBOSOMAL PROTEIN S17



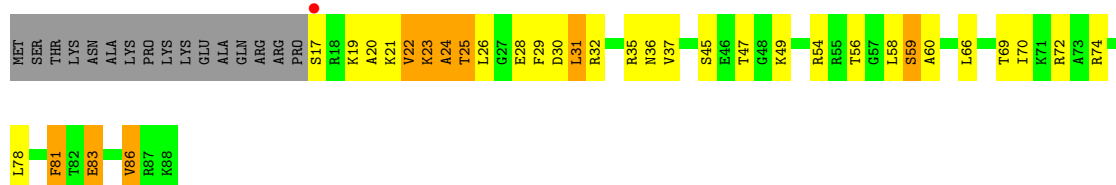
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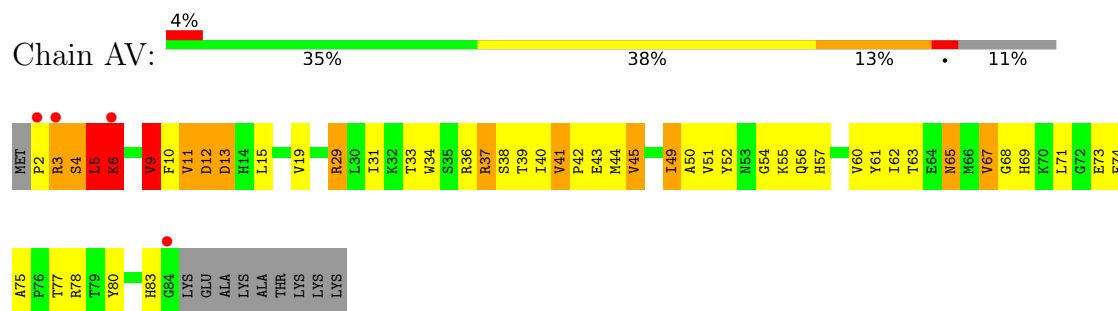
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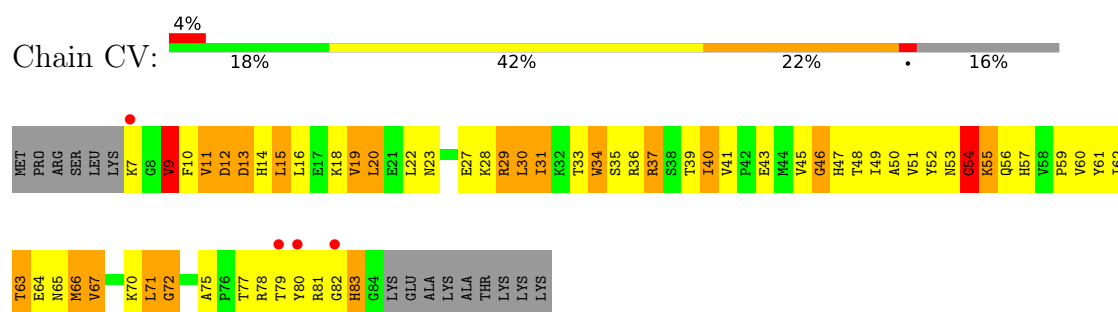
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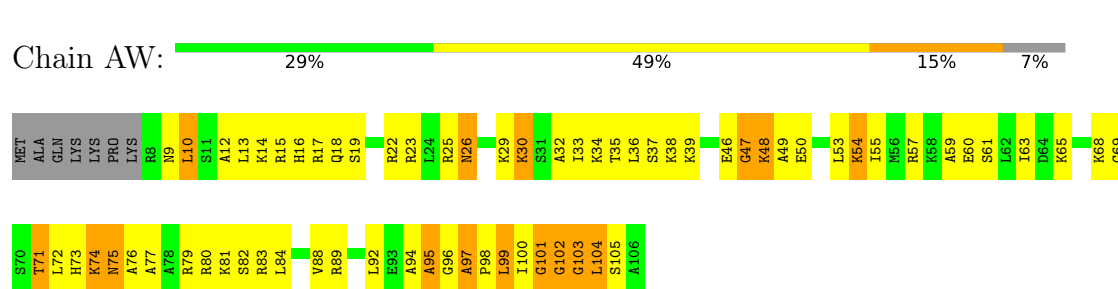
- Molecule 19: 30S RIBOSOMAL PROTEIN S19



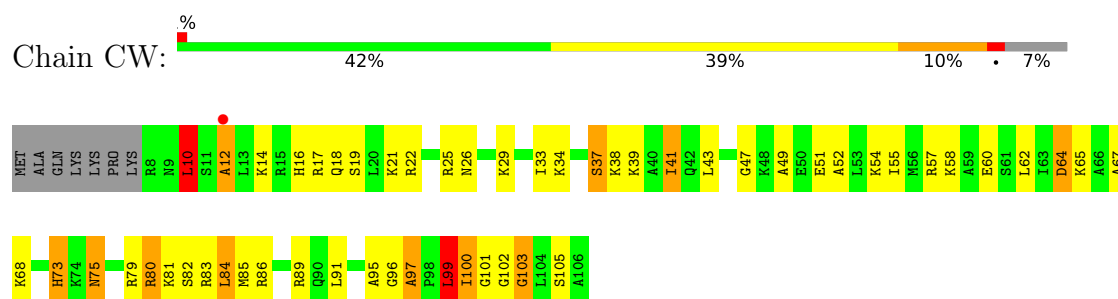
- Molecule 19: 30S RIBOSOMAL PROTEIN S19



- Molecule 20: 30S RIBOSOMAL PROTEIN S20



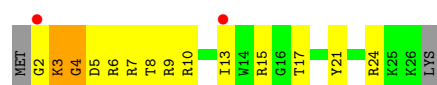
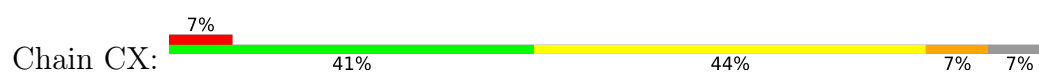
- Molecule 20: 30S RIBOSOMAL PROTEIN S20



- Molecule 21: 30S RIBOSOMAL PROTEIN THX



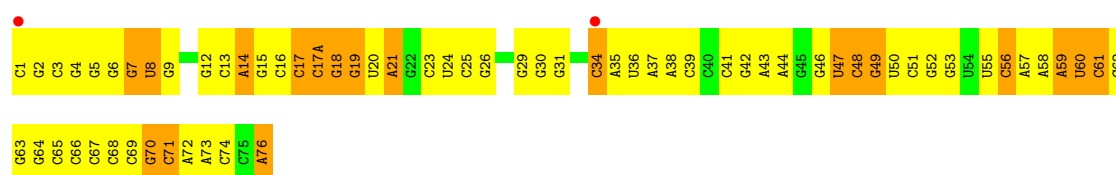
- Molecule 21: 30S RIBOSOMAL PROTEIN THX



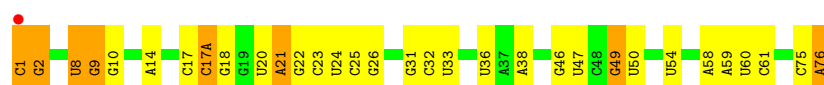
• Molecule 22: TRNA-FMET



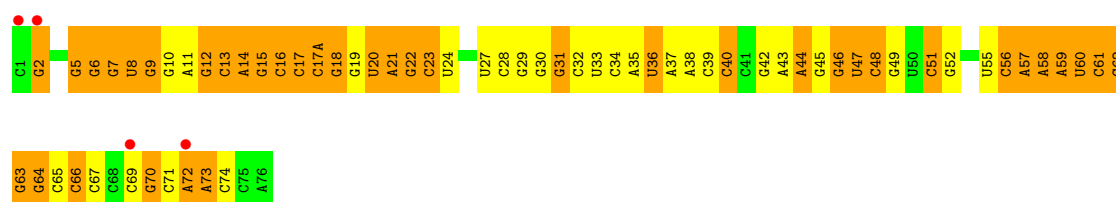
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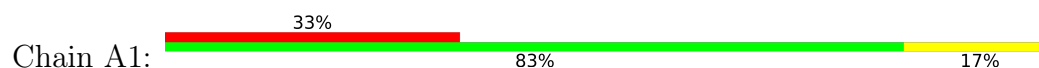
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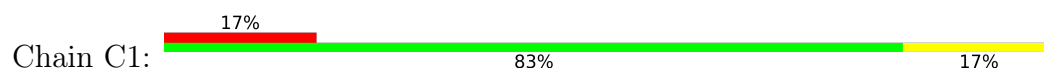
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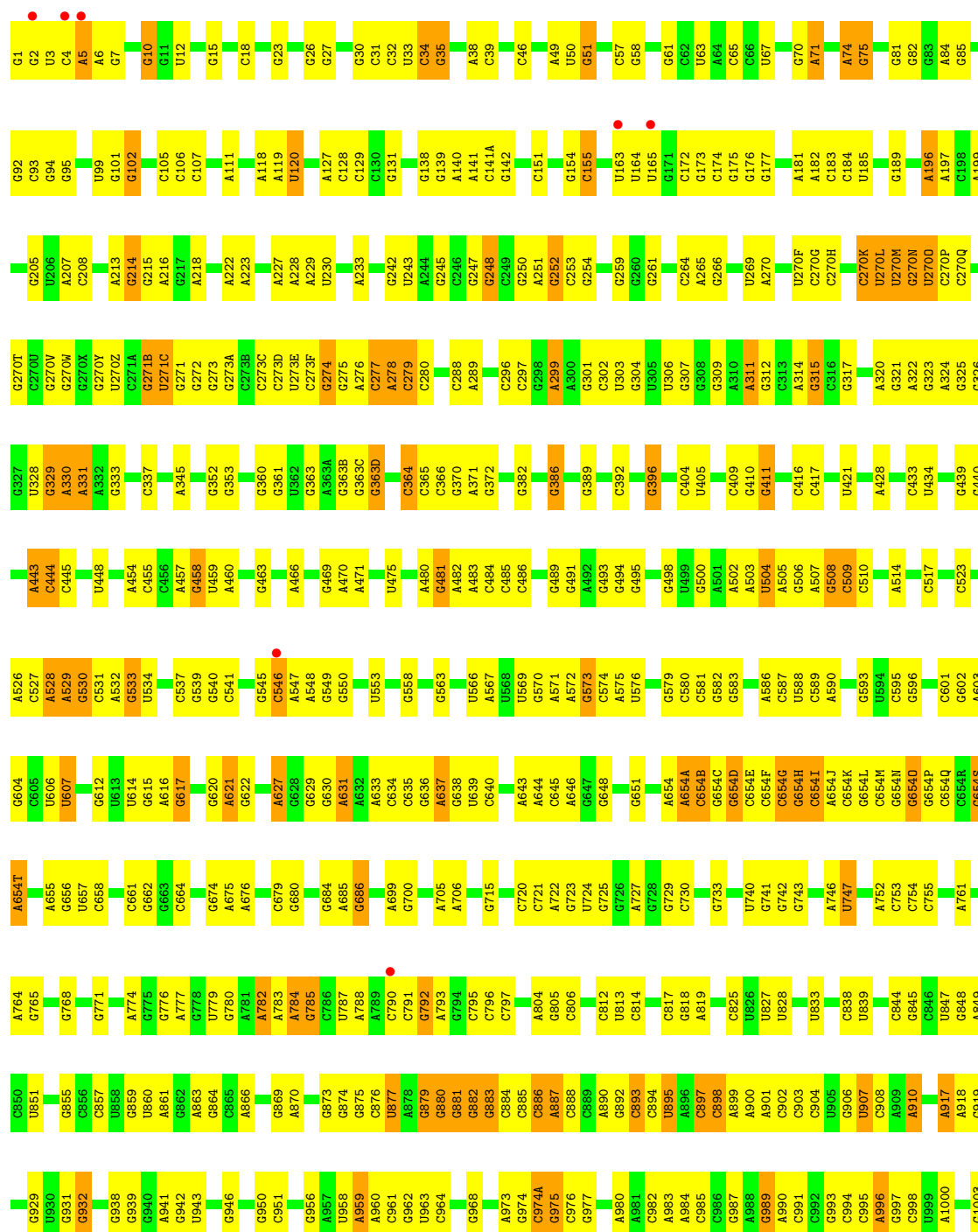
• Molecule 23: MRNA



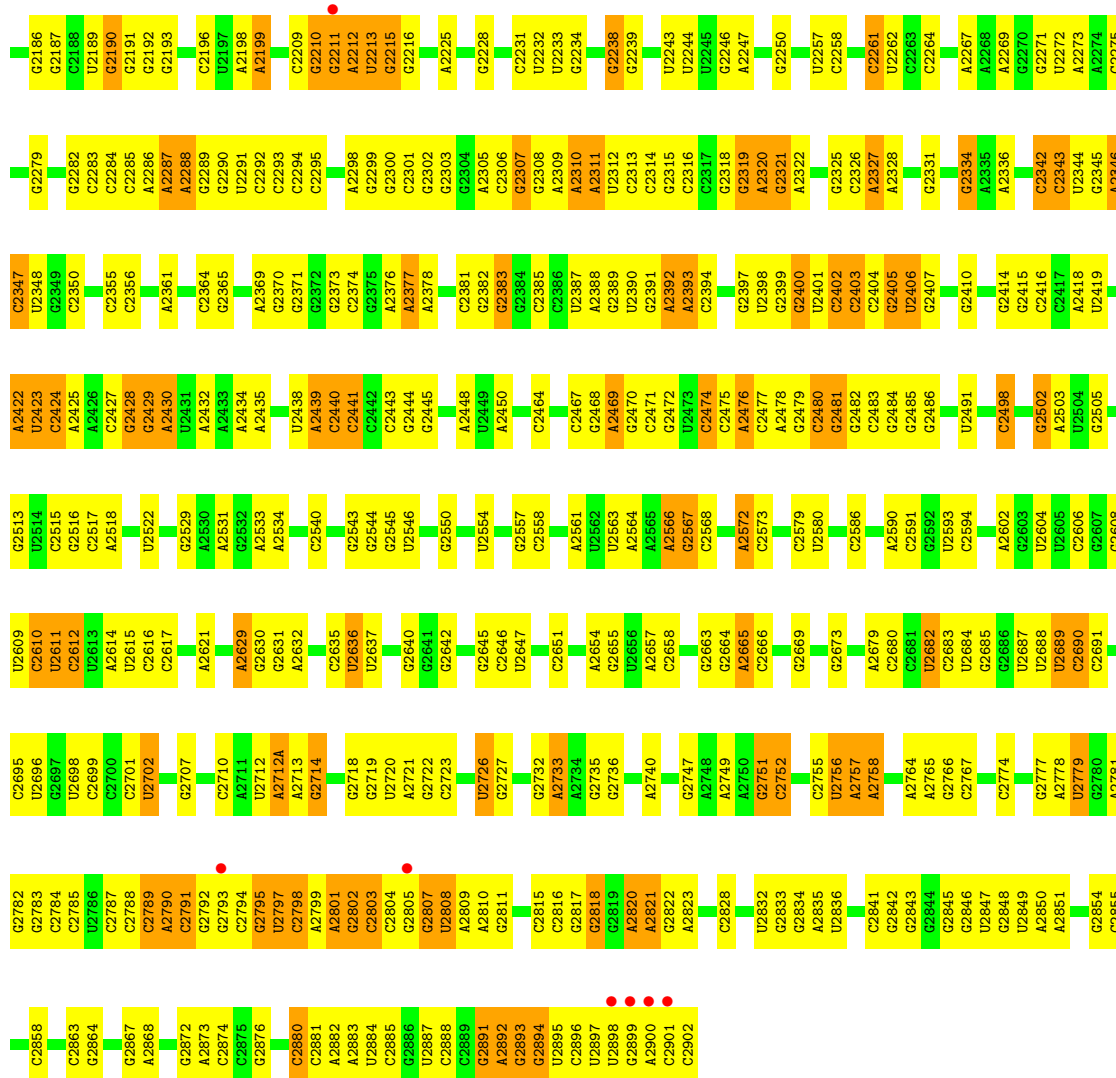
• Molecule 23: MRNA



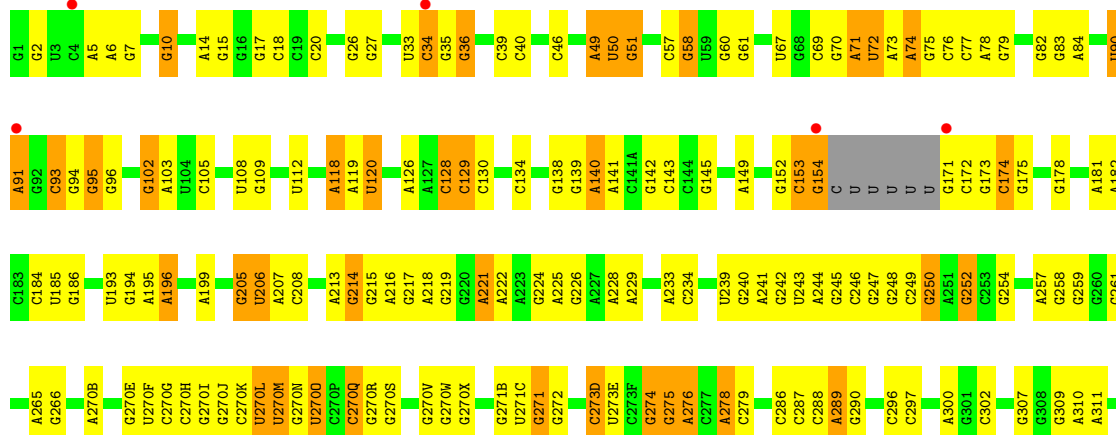
• Molecule 24: 23S ribosomal RNA



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G2124	U2041	U1940	C1645	U1406	A1480	G1216	U1316	C1072	C1006
A2042	A2042	C1836	G1646	U1482	A1317	G1217	A1143	A1073	C1007
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A2051	A2051	G1845	C1649	G1487	G1324	A1220	G1150	C1076	A1010
G2052	G2052	A1847	A1652	A1490	G1328	G1221	G1151	A1077	G1011
G2053	G2053	G1858	G1653	A1491	U1329	C1222	G1152	U1078	G1012
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C2055	C2055	G1861	G1655	C1493	A1331	G1224	G1154	A1080	U1014
G2056	G2056	U1864	C1656	A1496	G1332	A1227	G1155	U1081	G1015
A2060	A2060	A1864	C1657	U1497	U1333	G1228	A1156	U1082	U1019
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A2062	A2062	C1870	A1663	C1498	U1335	G1230	C1161	A1084	A1021
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G2066	G2066	G1872	A1668	G1500	G1339	G1236	G1163	C1087	U1023
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U2068	U2068	C1881	G1674	U1506	G1349	G1238	U1165	G1089	G1025
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C2140	C2140	G1883	A1676	A1508	A1354	G1244	G1169	C1091	A1027
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G2142	G2142	G1888	A1678	A1511	G1355	A1256	G1171	U1093	U1033
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C2163	C2163	A1919	G1731	U1535	G1447	G1294	U1198	U1129	U1058
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G2166	G2166	G1930	U1817	A1460	G1458	G1299	C1201	U1205	G1063
U2167	U2167	U1931	G1818	G1461	U1459	U1300	G1202	G1135	C1064
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C2174	C2174	U1937	A1829		G1473				
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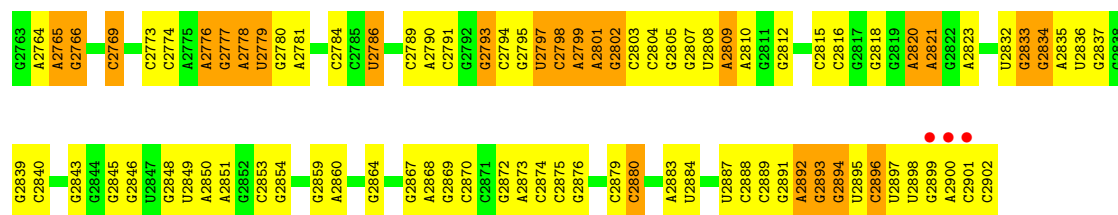


• Molecule 24: 23S ribosomal RNA

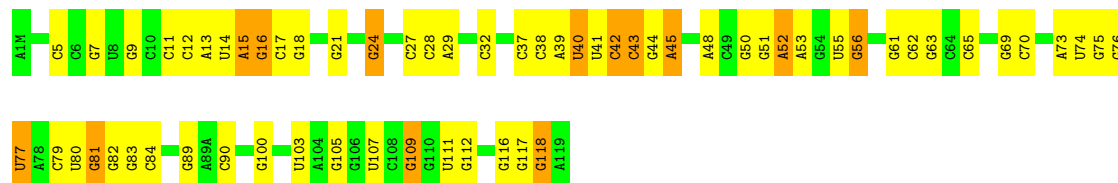


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C1450	G1368	U1273	C1180	G1107	A1046	A980	C894	C814	G723	G654A	A578	G495	G398	C317
C1451	G1372	A1276	C1181	G1110	A1048	A983	U895	A819	G724	G654B	G579	G399	G399	C318
U1454	U1379	A1277	C1182	G1111	A1049	A984	A896	A820	G725	G654C	C581	U403	U403	C319
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C1458	G1379	G1280	C1184	G1113	G1051	C988	C898	U827	G729	G654E	G583	U504	U504	G321
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C1463	G1389	A1286	C1188	G1117	G1055	C993	C904	G833	G739	G654I	U588	C509	C409	G325
G1464	A1287	U1287	C1189	G1118	G1056	C994	C905	U833	A734	G654J	U589	C510	G410	G326
G1465	G1191	A1288	G1192	G1119	A1057	C995	G906	U835	G748	G654K	G592	U511	G411	U328
G1466	G1122	G1122	G1123	G1120	U1058	A996	U907	A835	G748	G654L	G512	G512	G414	G329
C1467	C1123	C1201	G1124	G1121	U1060	C997	C908	G843	A752	G654M	A515	A330	A330	A331
C1470	G1125	G1202	G1126	G1122	G1062	C998	A909	U846	C753	G654N	C516	A332	A332	G333
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G1472	U1130	C1204	U1065	A1000	C1064	A1000	C914	G848	C756	G654P	G602	C435	C435	C343
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G1474	U1131	U1130	U1066	C1005	A1067	C1005	G916	U851	C758	G654R	G604	U429	U429	C336
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G1523	G1448	G1449	U1176	U1033	G1095	U1033	G954	G878	G799	G673	U639	G567	G567	A390
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G1528	G1453	G1454	U1181	U1038	A1099	U1038	G959	G883	A803	G678	U639	G572	G572	A489
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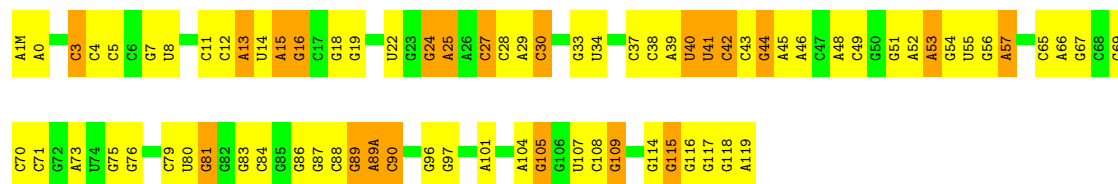
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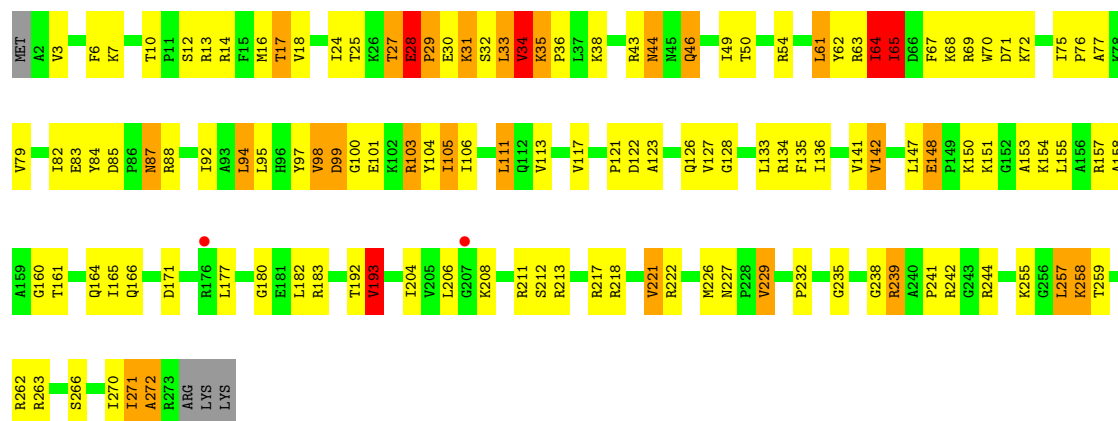
• Molecule 25: 5S RIBOSOMAL RNA



• Molecule 25: 5S RIBOSOMAL RNA

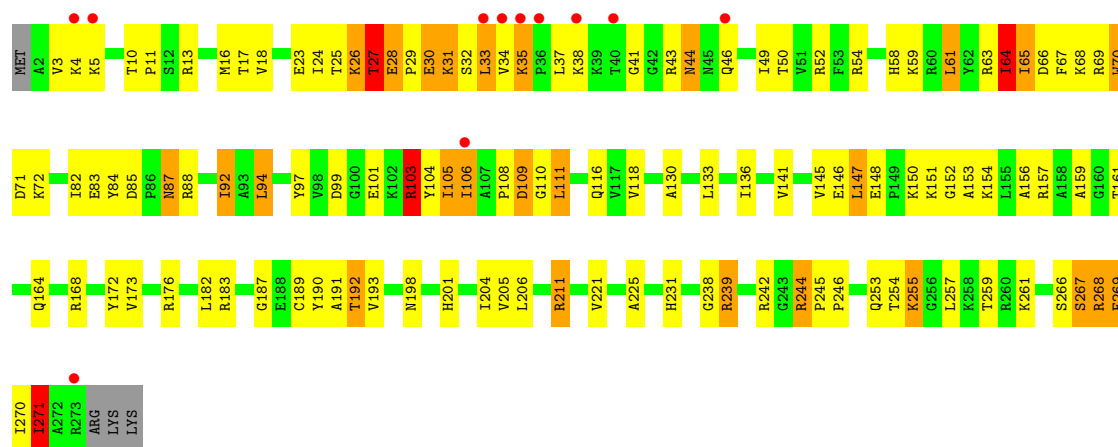


• Molecule 26: 50S ribosomal protein L2

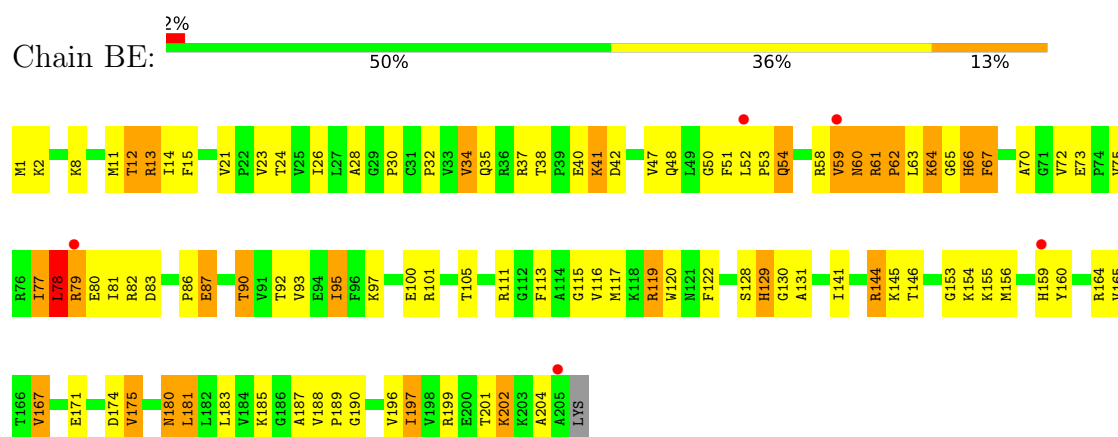


• Molecule 26: 50S ribosomal protein L2

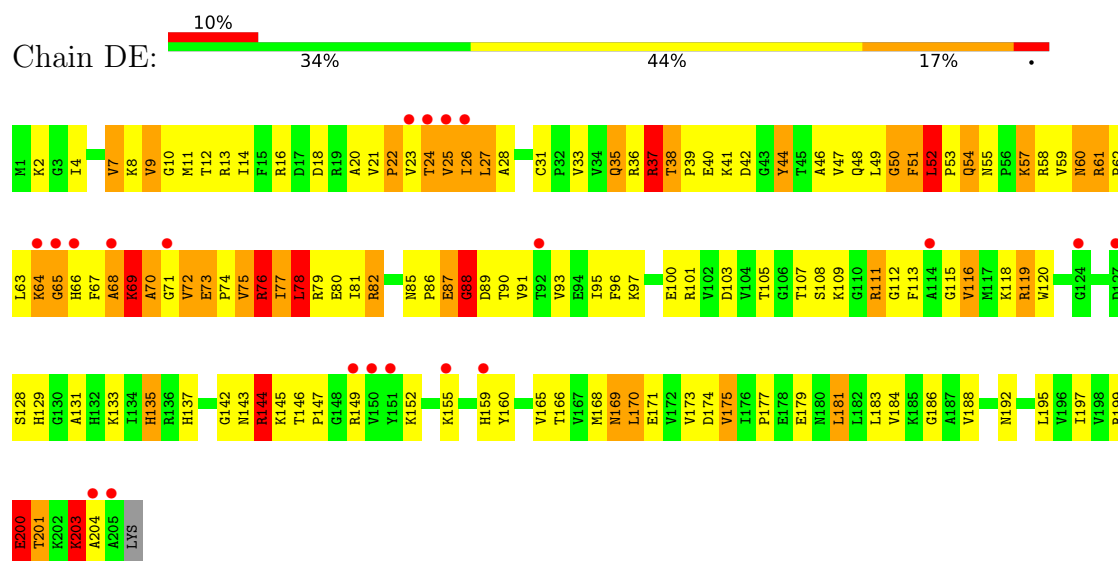




• Molecule 27: 50S ribosomal protein L3

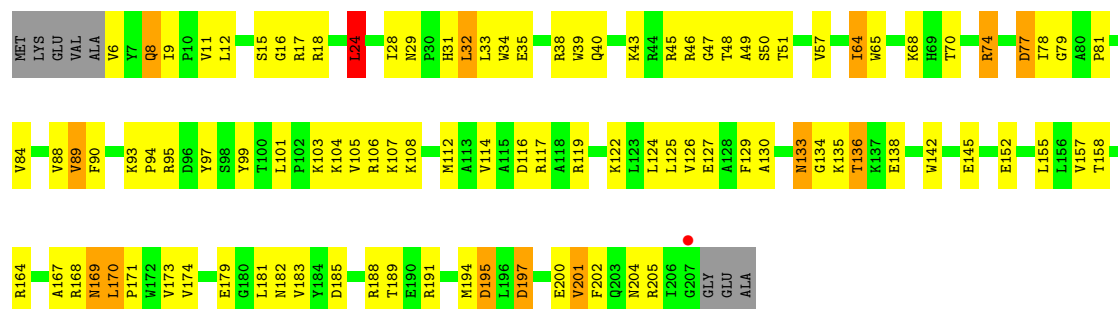


• Molecule 27: 50S ribosomal protein L3

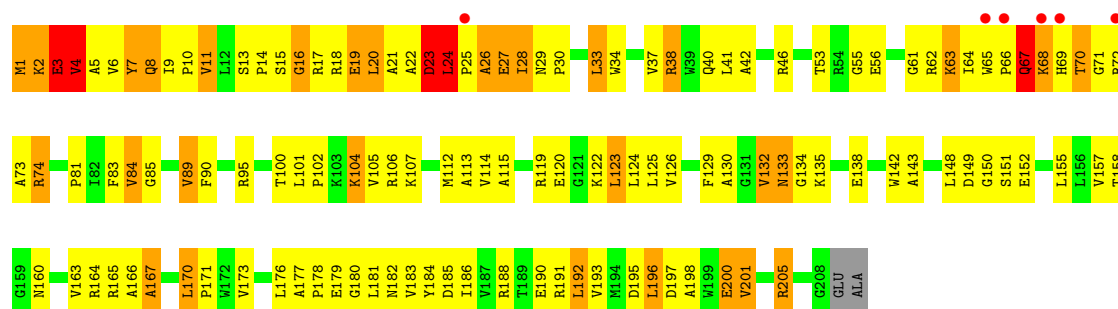


• Molecule 28: 50S ribosomal protein L4

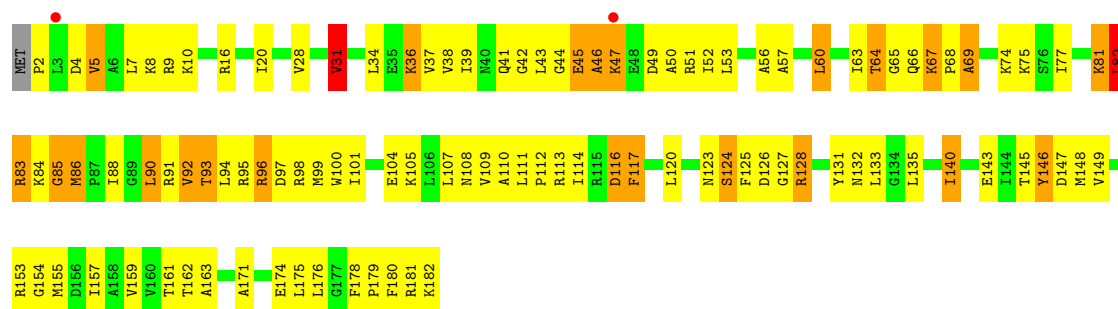




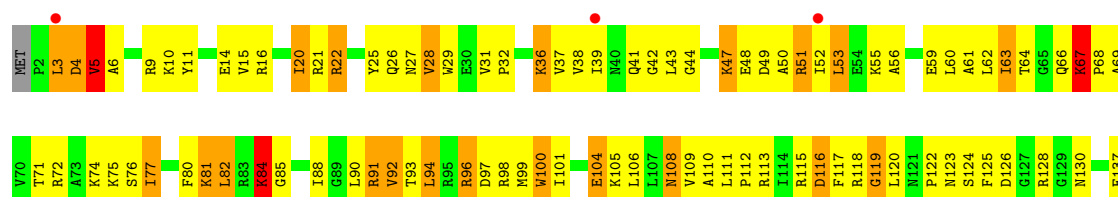
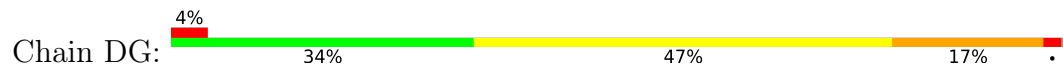
• Molecule 28: 50S ribosomal protein L4



• Molecule 29: 50S ribosomal protein L5

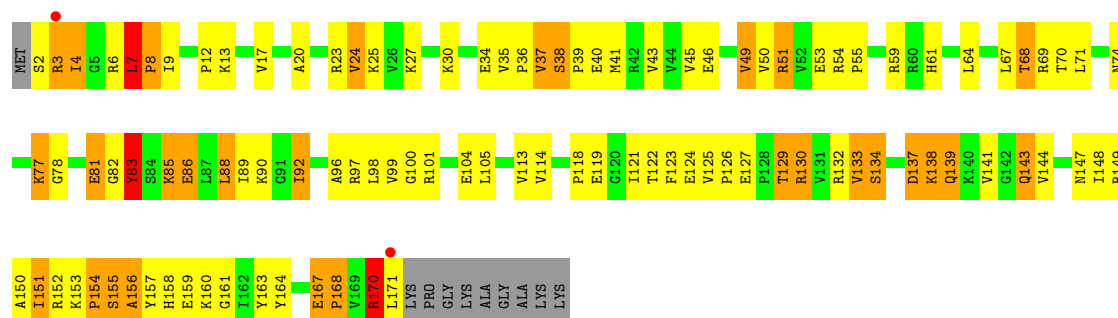


• Molecule 29: 50S ribosomal protein L5

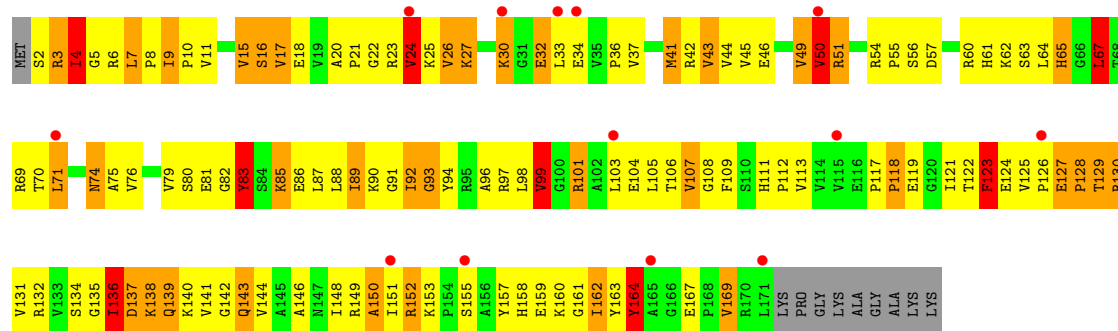




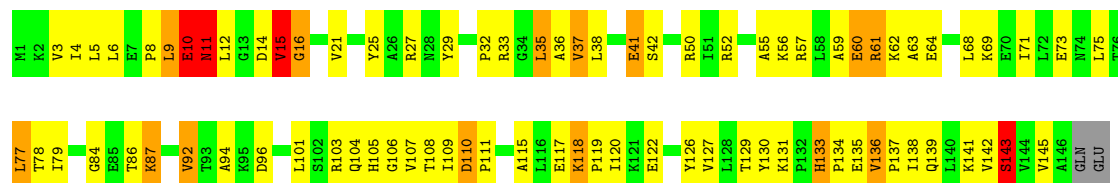
• Molecule 30: 50S ribosomal protein L6



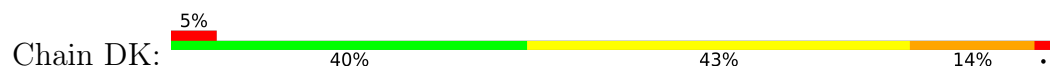
• Molecule 30: 50S ribosomal protein L6

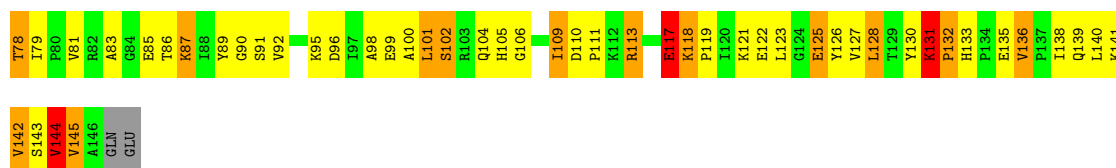


• Molecule 31: 50S ribosomal protein L9



• Molecule 31: 50S ribosomal protein L9





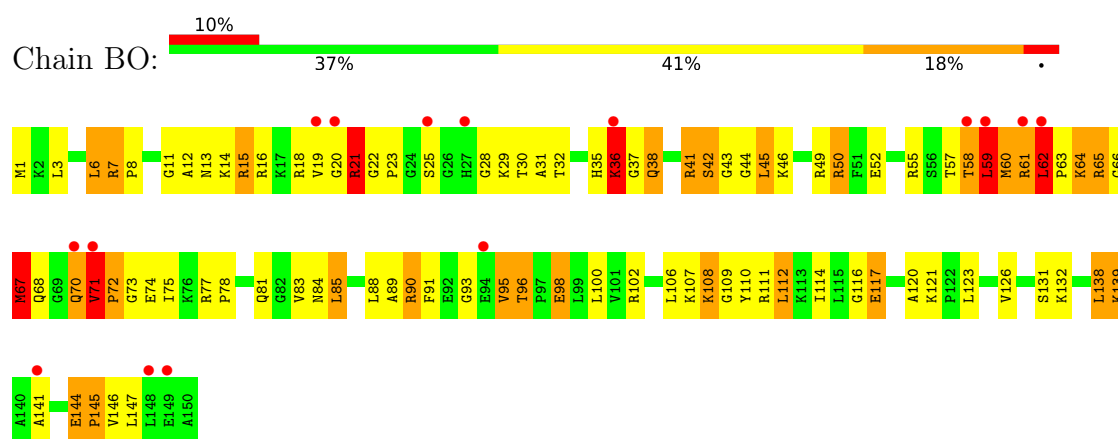
- Molecule 32: 50S ribosomal protein L13

- Molecule 32: 50S ribosomal protein L13

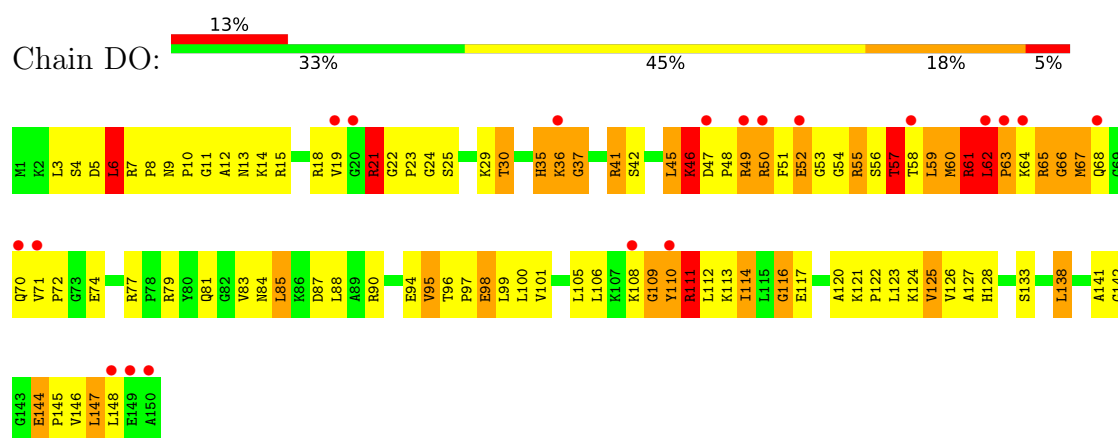
- Molecule 33: 50S ribosomal protein L14

- Molecule 33: 50S ribosomal protein L14

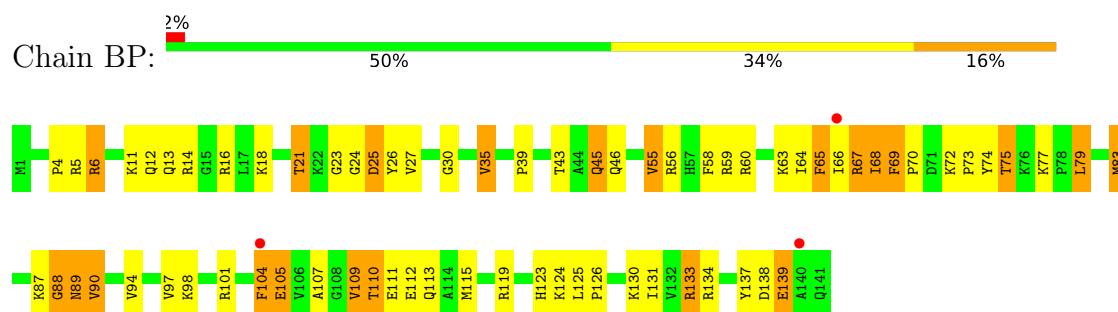
- Molecule 34: 50S ribosomal protein L15



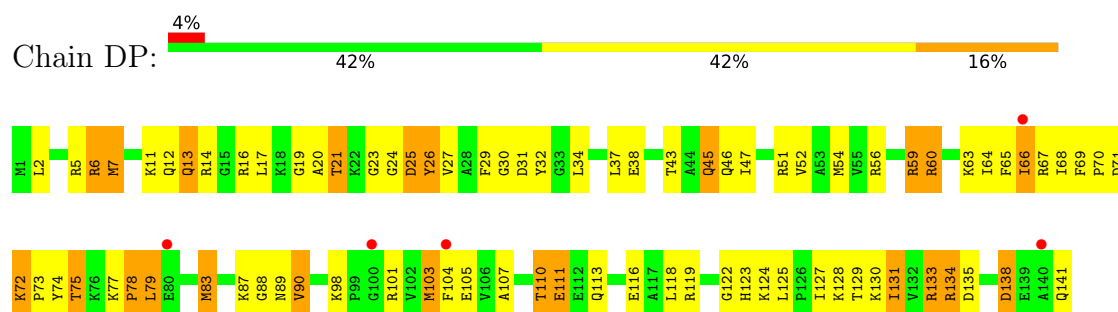
- Molecule 34: 50S ribosomal protein L15



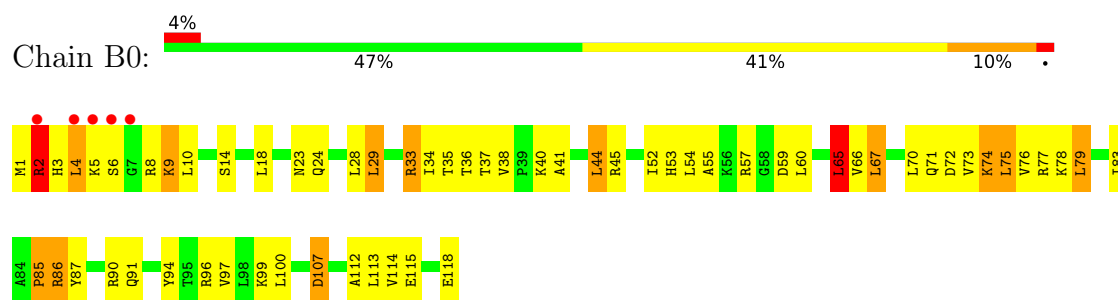
- Molecule 35: 50S ribosomal protein L16



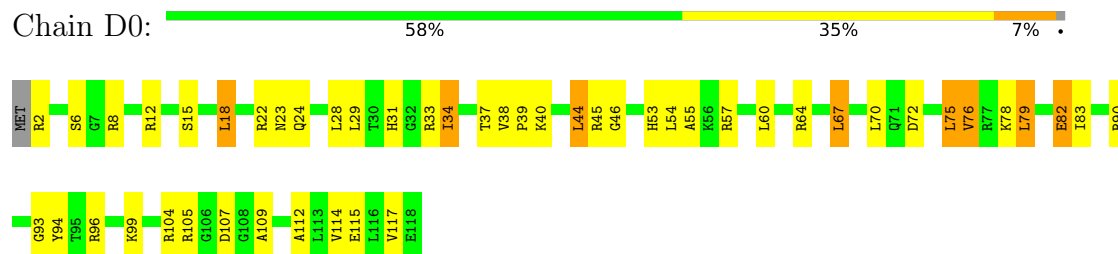
- Molecule 35: 50S ribosomal protein L16



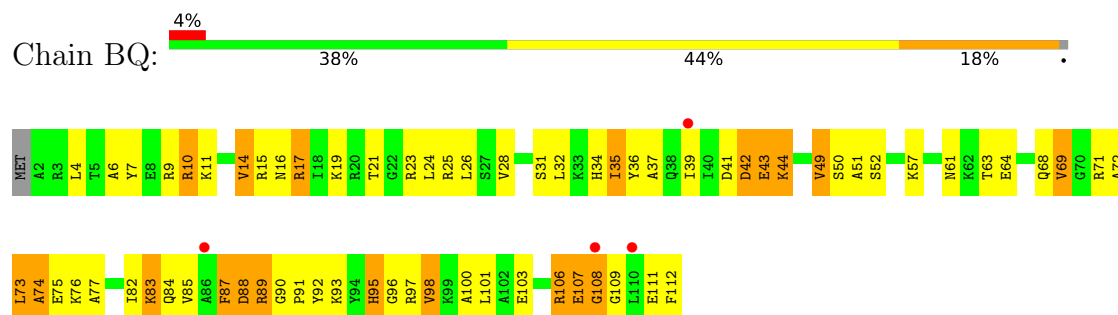
- Molecule 36: 50S ribosomal protein L17



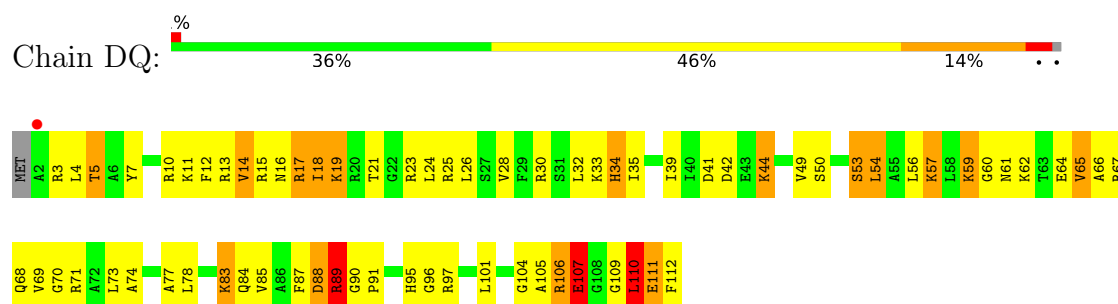
- Molecule 36: 50S ribosomal protein L17



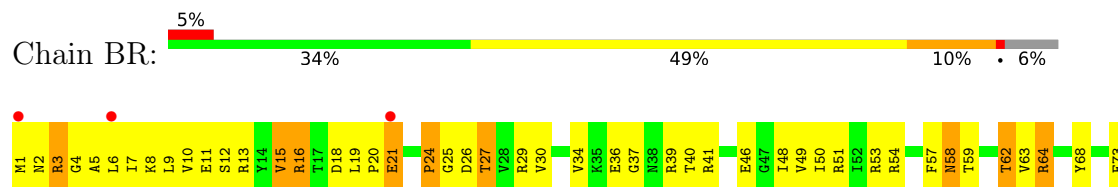
- Molecule 37: 50S ribosomal protein L18

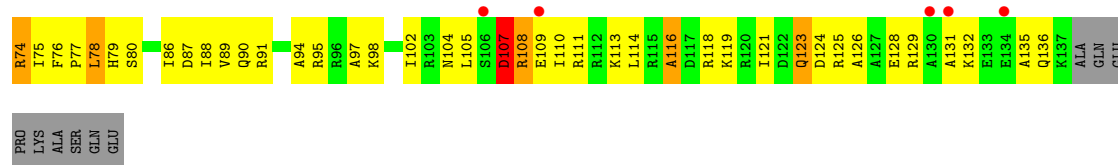


- Molecule 37: 50S ribosomal protein L18

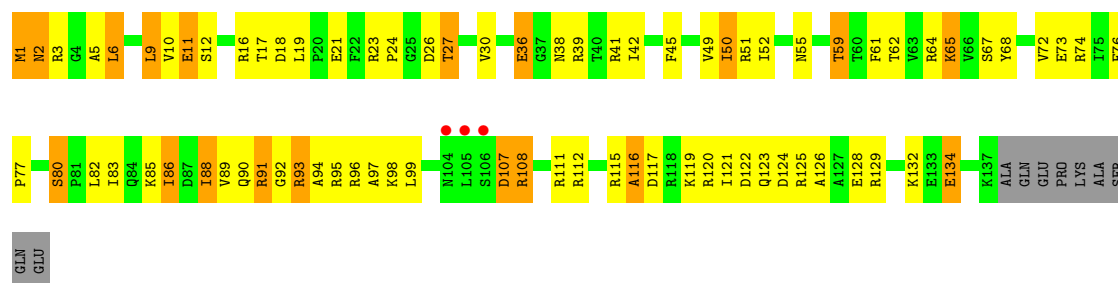


- Molecule 38: 50S ribosomal protein L19

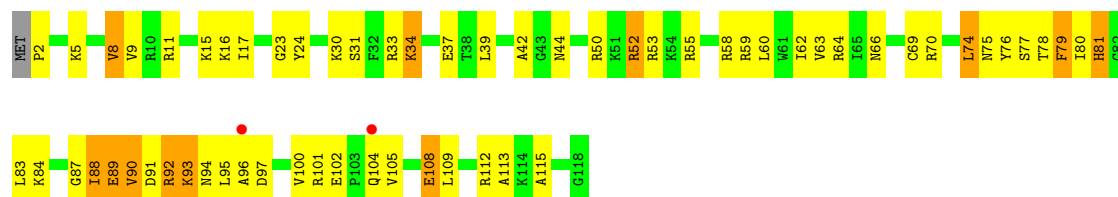




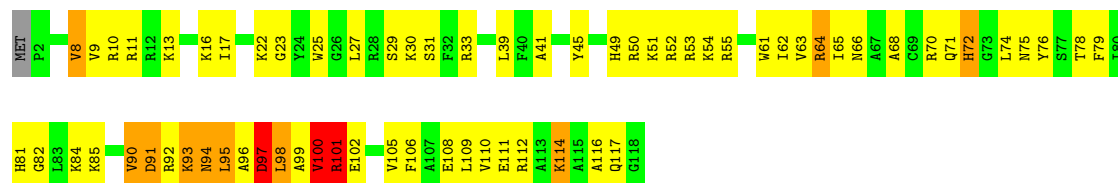
• Molecule 38: 50S ribosomal protein L19



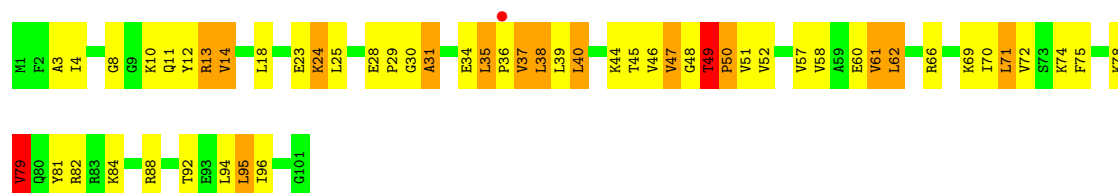
• Molecule 39: 50S ribosomal protein L20



• Molecule 39: 50S ribosomal protein L20



• Molecule 40: 50S ribosomal protein L21



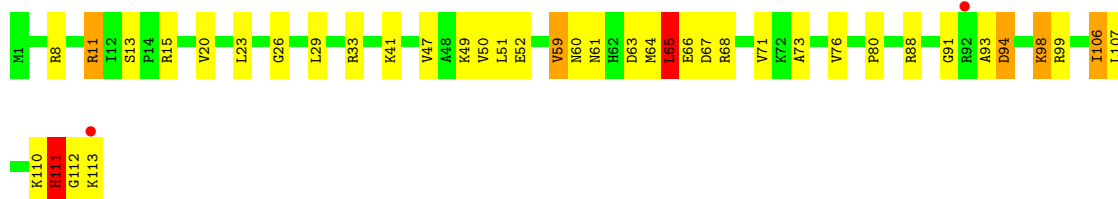
- Molecule 40: 50S ribosomal protein L21



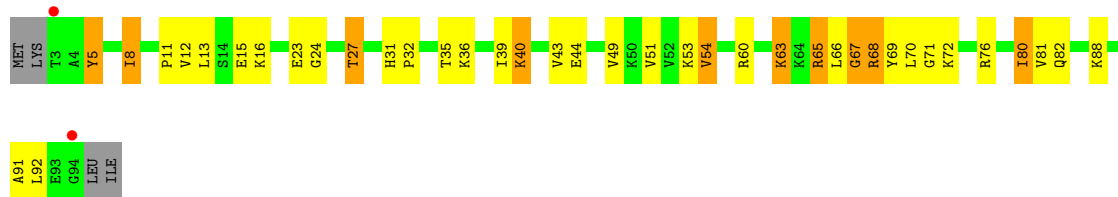
- Molecule 41: 50S ribosomal protein L22



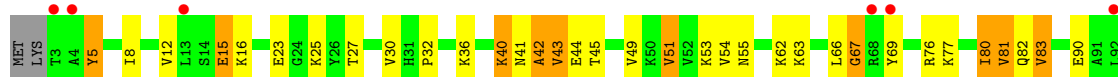
- Molecule 41: 50S ribosomal protein L22



- Molecule 42: 50S ribosomal protein L23



- Molecule 42: 50S ribosomal protein L23

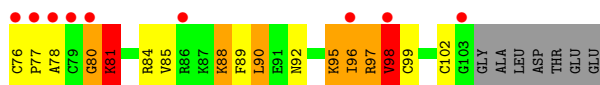
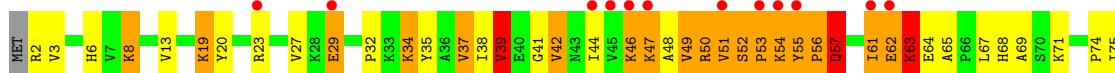




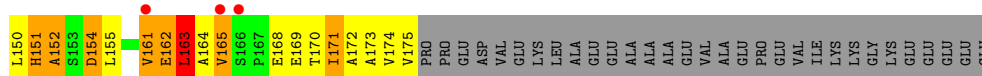
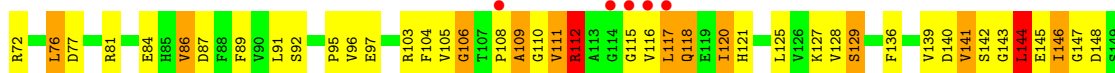
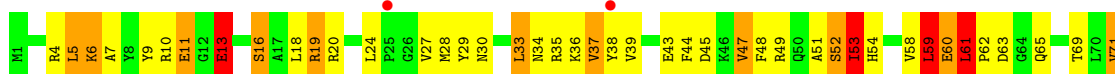
- Molecule 43: 50S ribosomal protein L24



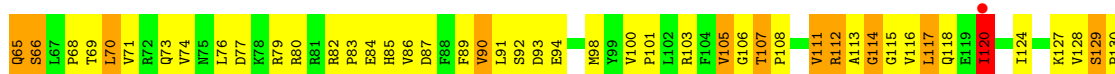
- Molecule 43: 50S ribosomal protein L24

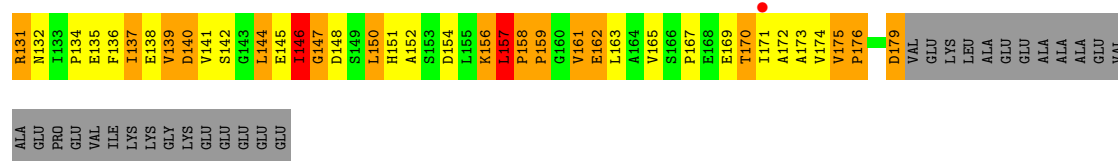


- Molecule 44: 50S ribosomal protein L25

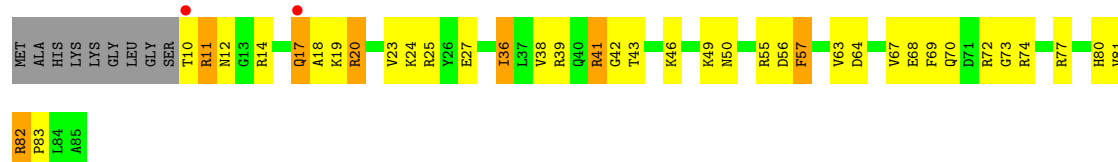


- Molecule 44: 50S ribosomal protein L25

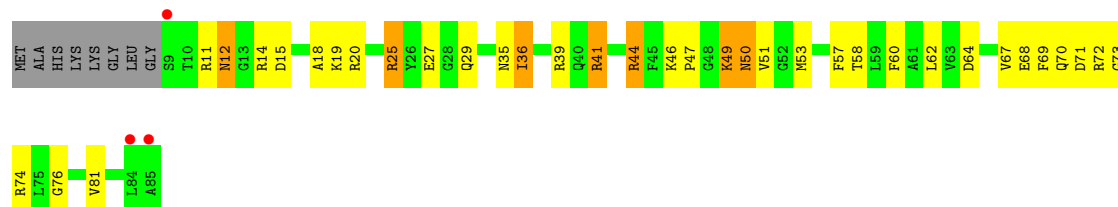




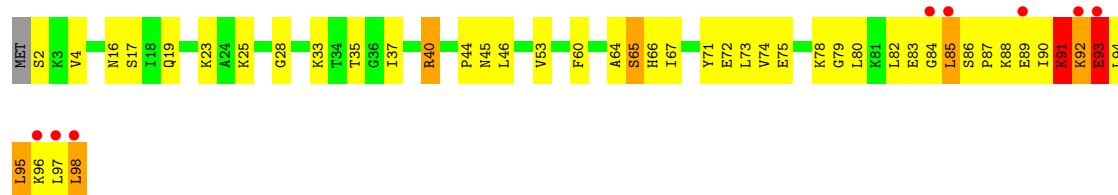
• Molecule 45: 50S ribosomal protein L27



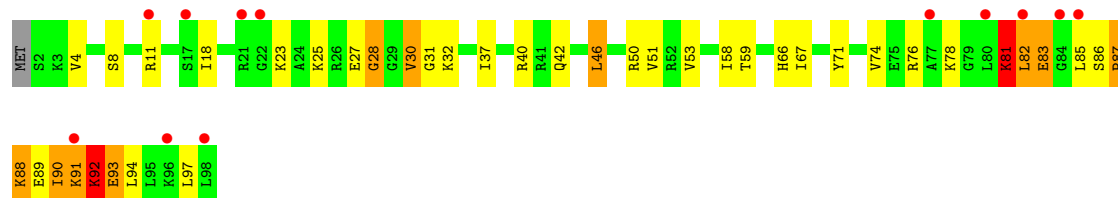
• Molecule 45: 50S ribosomal protein L27



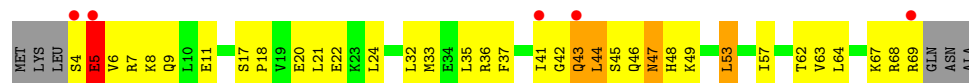
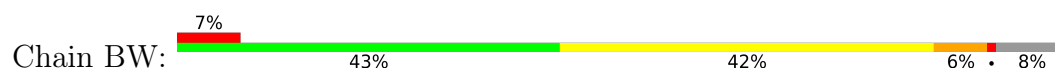
• Molecule 46: 50S ribosomal protein L28



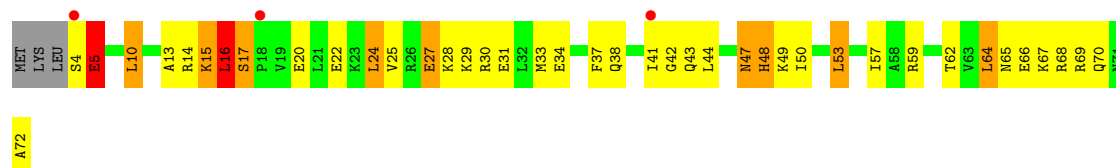
• Molecule 46: 50S ribosomal protein L28



• Molecule 47: 50S ribosomal protein L29



• Molecule 47: 50S ribosomal protein L29



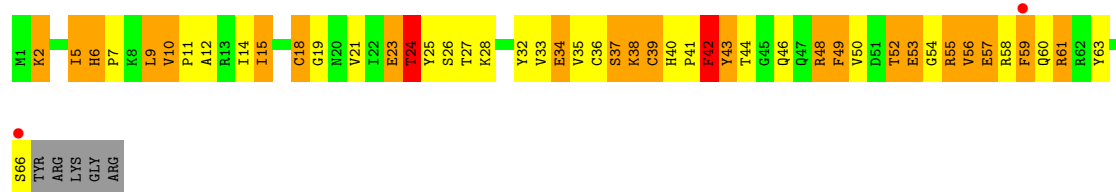
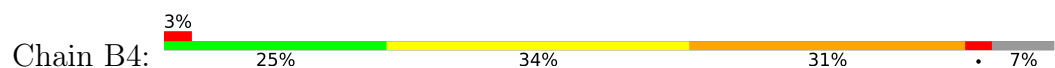
• Molecule 48: 50S ribosomal protein L30



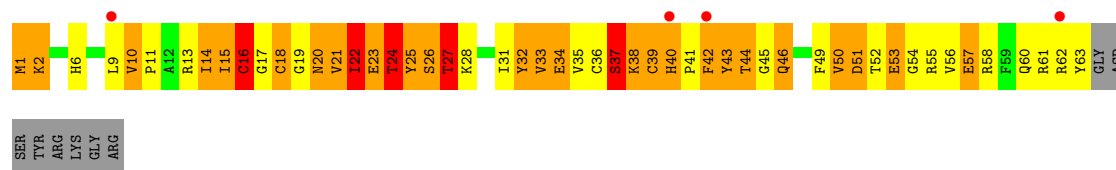
• Molecule 48: 50S ribosomal protein L30



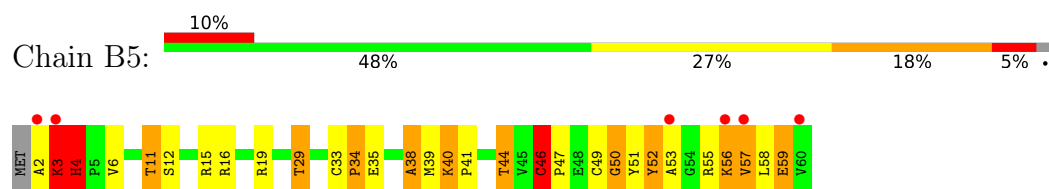
• Molecule 49: 50S ribosomal protein L31



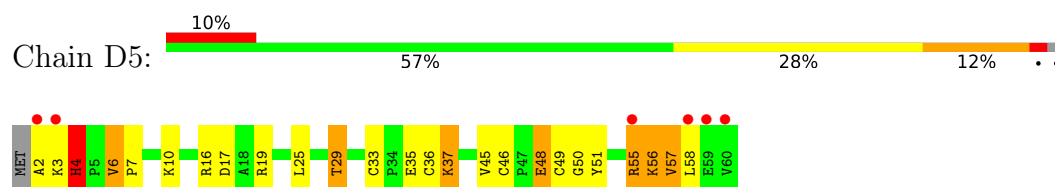
• Molecule 49: 50S ribosomal protein L31



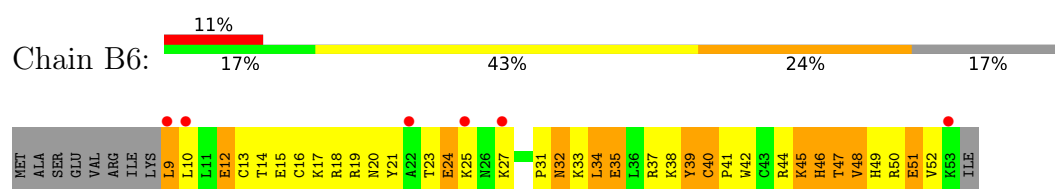
- Molecule 50: 50S ribosomal protein L32



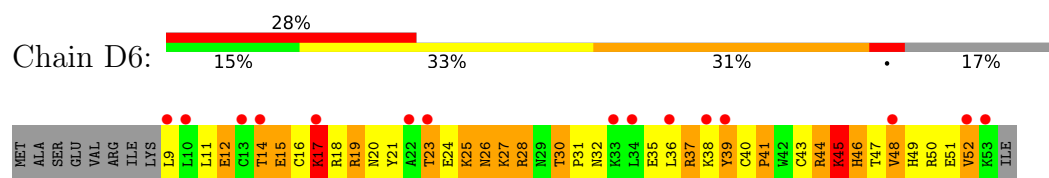
- Molecule 50: 50S ribosomal protein L32



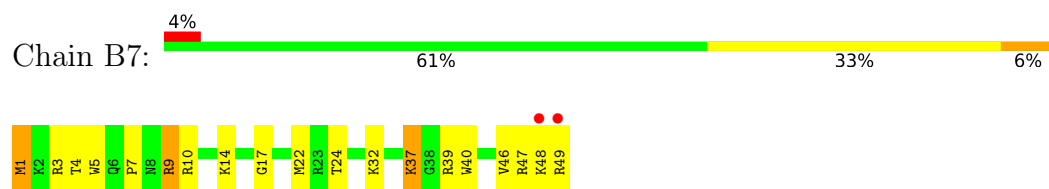
- Molecule 51: 50S ribosomal protein L33



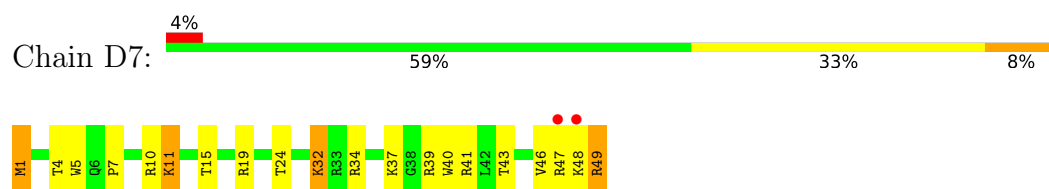
- Molecule 51: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L34

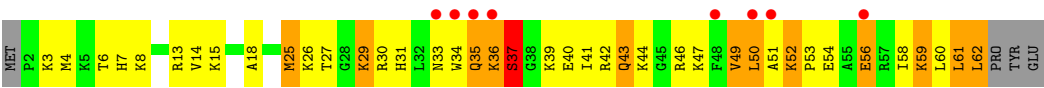


- Molecule 52: 50S ribosomal protein L34

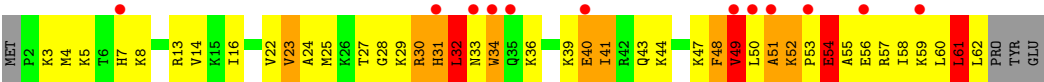


- Molecule 53: 50S ribosomal protein L35





• Molecule 53: 50S ribosomal protein L35



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.06Å 450.27Å 616.89Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	153.59 – 3.10 153.59 – 3.10	Depositor EDS
% Data completeness (in resolution range)	99.9 (153.59-3.10) 93.4 (153.59-3.10)	Depositor EDS
R_{merge}	0.47	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.89 (at 3.07Å)	Xtriage
Refinement program	PHENIX dev_987	Depositor
R, R_{free}	0.213 , 0.269 0.213 , 0.268	Depositor DCC
R_{free} test set	2000 reflections (0.19%)	wwPDB-VP
Wilson B-factor (Å ²)	83.6	Xtriage
Anisotropy	0.211	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 39.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	295766	wwPDB-VP
Average B, all atoms (Å ²)	111.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.43% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: T1C, ZN, MG

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	0.35	10/36234 (0.0%)	0.43	7/56554 (0.0%)
1	CA	0.30	0/36237	0.40	0/56558
2	AE	0.48	0/1959	0.96	4/2642 (0.2%)
2	CE	0.50	0/1959	1.04	14/2642 (0.5%)
3	AF	0.49	0/1629	0.93	2/2195 (0.1%)
3	CF	0.48	0/1636	0.88	5/2205 (0.2%)
4	AG	0.55	0/1733	1.01	2/2318 (0.1%)
4	CG	0.50	0/1733	0.95	3/2318 (0.1%)
5	AH	0.53	0/1171	0.95	4/1576 (0.3%)
5	CH	0.48	0/1171	0.95	4/1576 (0.3%)
6	AI	0.50	0/856	0.89	0/1154
6	CI	0.45	0/856	0.87	0/1154
7	AJ	0.57	1/1276 (0.1%)	0.99	3/1709 (0.2%)
7	CJ	0.47	0/1276	0.95	2/1709 (0.1%)
8	AK	0.48	0/1136	1.05	4/1527 (0.3%)
8	CK	0.45	0/1136	0.98	5/1527 (0.3%)
9	AL	0.59	0/1029	0.93	2/1379 (0.1%)
9	CL	0.52	0/1029	0.94	0/1379
10	AM	0.47	0/814	0.89	1/1095 (0.1%)
10	CM	0.58	2/814 (0.2%)	0.98	5/1095 (0.5%)
11	AN	0.51	0/900	0.98	4/1213 (0.3%)
11	CN	0.60	1/900 (0.1%)	1.01	1/1213 (0.1%)
12	AO	0.54	0/991	0.90	0/1327
12	CO	0.50	0/991	0.99	3/1327 (0.2%)
13	AP	0.54	0/938	0.94	0/1258
13	CP	0.47	0/943	0.93	0/1265
14	AQ	0.54	0/501	1.01	2/664 (0.3%)
14	CQ	0.49	0/501	1.01	2/664 (0.3%)
15	AR	0.51	0/745	0.92	0/992
15	CR	0.48	0/745	0.91	0/992
16	AS	0.51	0/721	0.99	4/970 (0.4%)
16	CS	0.50	0/721	0.92	1/970 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AT	0.47	0/847	0.96	5/1131 (0.4%)
17	CT	0.46	0/847	0.90	2/1131 (0.2%)
18	AU	0.51	0/596	0.98	2/790 (0.3%)
18	CU	0.49	0/596	0.92	1/790 (0.1%)
19	AV	0.62	0/680	1.11	2/915 (0.2%)
19	CV	0.65	0/638	1.11	1/860 (0.1%)
20	AW	0.48	0/765	1.00	2/1007 (0.2%)
20	CW	0.48	0/765	1.01	2/1007 (0.2%)
21	AX	0.44	0/221	0.81	0/288
21	CX	0.50	0/221	0.92	0/288
22	AC	0.34	0/1832	0.40	0/2855
22	AD	0.27	1/1832 (0.1%)	0.38	0/2855
22	CC	0.30	1/1832 (0.1%)	0.40	0/2855
22	CD	0.31	1/1832 (0.1%)	0.43	0/2855
23	A1	0.39	0/144	0.38	0/222
23	C1	0.34	0/144	0.42	0/222
24	BA	0.38	0/70233	0.46	0/109643
24	DA	0.35	0/70100	0.44	0/109435
25	BB	0.36	0/2928	0.43	0/4568
25	DB	0.30	0/2928	0.41	0/4568
26	BD	0.70	1/2165 (0.0%)	1.14	11/2919 (0.4%)
26	DD	0.69	1/2165 (0.0%)	1.05	10/2919 (0.3%)
27	BE	0.59	0/1601	1.03	6/2160 (0.3%)
27	DE	0.62	0/1601	1.00	9/2160 (0.4%)
28	BF	0.61	0/1620	1.07	6/2194 (0.3%)
28	DF	0.54	0/1662	1.02	5/2249 (0.2%)
29	BG	0.53	0/1499	0.94	5/2016 (0.2%)
29	DG	0.47	0/1499	0.98	7/2016 (0.3%)
30	BH	0.58	0/1332	1.02	8/1802 (0.4%)
30	DH	0.51	0/1332	1.07	11/1802 (0.6%)
31	BK	0.56	0/1151	0.97	1/1558 (0.1%)
31	DK	0.57	0/1151	0.98	2/1558 (0.1%)
32	BM	0.64	0/1131	0.93	0/1525
32	DM	0.48	0/1131	0.91	1/1525 (0.1%)
33	BN	0.60	0/943	1.01	3/1269 (0.2%)
33	DN	0.55	0/943	0.97	4/1269 (0.3%)
34	BO	0.67	0/1162	1.12	9/1544 (0.6%)
34	DO	0.54	1/1162 (0.1%)	1.03	5/1544 (0.3%)
35	BP	0.59	0/1143	0.97	2/1527 (0.1%)
35	DP	0.57	0/1143	0.97	4/1527 (0.3%)
36	B0	0.64	0/982	0.95	2/1312 (0.2%)
36	D0	0.56	0/974	0.93	0/1302
37	BQ	0.62	0/892	0.99	0/1187

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	DQ	0.56	0/892	1.03	3/1187 (0.3%)
38	BR	0.56	0/1155	1.00	5/1542 (0.3%)
38	DR	0.51	0/1155	0.95	3/1542 (0.2%)
39	B1	0.59	0/982	1.03	3/1306 (0.2%)
39	D1	0.50	0/982	0.99	2/1306 (0.2%)
40	B2	0.61	0/790	0.97	2/1057 (0.2%)
40	D2	0.53	0/790	1.01	4/1057 (0.4%)
41	BS	0.61	0/911	0.95	0/1220
41	DS	0.59	0/911	0.91	0/1220
42	BT	0.65	0/739	0.96	1/993 (0.1%)
42	DT	0.62	0/739	0.97	2/993 (0.2%)
43	BU	0.70	0/798	1.08	6/1064 (0.6%)
43	DU	0.67	0/798	1.03	4/1064 (0.4%)
44	BV	0.54	0/1427	0.97	2/1935 (0.1%)
44	DV	0.52	0/1460	1.06	9/1982 (0.5%)
45	B3	0.74	3/615 (0.5%)	0.95	0/819
45	D3	0.56	0/621	0.94	1/827 (0.1%)
46	BZ	0.62	0/770	0.95	0/1022
46	DZ	0.62	0/770	0.95	0/1022
47	BW	0.58	0/560	1.12	2/741 (0.3%)
47	DW	0.51	0/583	1.14	6/771 (0.8%)
48	BX	0.53	0/474	0.86	0/635
48	DX	0.50	0/474	0.94	2/635 (0.3%)
49	B4	0.68	0/545	1.15	5/733 (0.7%)
49	D4	0.64	0/527	1.01	2/709 (0.3%)
50	B5	0.67	0/473	1.37	6/639 (0.9%)
50	D5	0.58	0/473	1.01	2/639 (0.3%)
51	B6	0.63	0/396	1.06	3/529 (0.6%)
51	D6	0.61	0/396	0.80	0/529
52	B7	0.69	0/438	1.04	2/575 (0.3%)
52	D7	0.65	0/438	0.97	0/575
53	B8	0.73	0/494	1.10	5/649 (0.8%)
53	D8	0.77	1/494 (0.2%)	1.28	3/649 (0.5%)
All	All	0.42	24/319716 (0.0%)	0.63	297/478502 (0.1%)

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	193	C	C5'-C4'	11.09	1.67	1.51
1	AA	1381	U	C1'-N1	10.07	1.63	1.48
1	AA	193	C	O5'-C5'	9.59	1.56	1.42
1	AA	193	C	P-O5'	9.28	1.73	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	192	U	O3'-P	8.29	1.73	1.61
26	BD	64	ILE	CA-CB	7.86	1.61	1.53
10	CM	56	HIS	ND1-CE1	-7.12	1.25	1.32
53	D8	49	VAL	CA-CB	7.08	1.64	1.54
1	AA	193	C	C1'-N1	7.03	1.58	1.48
1	AA	192	U	C1'-N1	6.91	1.58	1.48
11	CN	124	LYS	CD-CE	6.74	1.72	1.52
45	B3	17	GLN	CB-CG	6.04	1.70	1.52
34	DO	19	VAL	CA-C	5.88	1.58	1.52
1	AA	192	U	C3'-C2'	5.82	1.61	1.52
45	B3	17	GLN	CA-CB	5.68	1.60	1.53
1	AA	193	C	O4'-C1'	5.54	1.50	1.41
7	AJ	79	ARG	CA-C	5.51	1.59	1.52
1	AA	193	C	C4'-O4'	5.48	1.53	1.45
10	CM	56	HIS	CG-ND1	5.27	1.44	1.38
22	AD	17(A)	C	C4-N4	-5.16	1.23	1.33
45	B3	17	GLN	CG-CD	5.15	1.65	1.52
22	CC	17(A)	C	C4-N4	-5.14	1.23	1.33
22	CD	17(A)	C	C4-N4	-5.12	1.23	1.33
26	DD	64	ILE	CA-CB	5.09	1.60	1.53

All (297) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	BD	272	ALA	N-CA-C	11.75	122.00	108.49
50	B5	4	HIS	CA-C-N	-10.36	110.26	120.52
50	B5	4	HIS	C-N-CA	-10.36	110.26	120.52
4	AG	12	CYS	N-CA-C	-10.33	100.02	111.28
26	BD	28	GLU	CA-C-N	-10.13	109.08	119.92
26	BD	28	GLU	C-N-CA	-10.13	109.08	119.92
44	DV	175	VAL	CA-C-N	9.75	130.42	120.38
44	DV	175	VAL	C-N-CA	9.75	130.42	120.38
50	B5	59	GLU	N-CA-C	-9.20	102.18	113.41
12	CO	47	LYS	CA-C-N	-8.81	108.83	119.84
12	CO	47	LYS	C-N-CA	-8.81	108.83	119.84
27	BE	64	LYS	N-CA-C	-8.77	103.68	112.97
30	BH	7	LEU	CA-C-N	-8.74	108.92	119.84
30	BH	7	LEU	C-N-CA	-8.74	108.92	119.84
50	B5	46	CYS	CA-C-N	8.65	130.65	119.84
50	B5	46	CYS	C-N-CA	8.65	130.65	119.84
27	BE	58	ARG	N-CA-C	-8.58	99.79	111.55
1	AA	192	U	P-O3'-C3'	8.56	133.04	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	DV	107	THR	CA-C-N	-8.56	111.00	119.64
44	DV	107	THR	C-N-CA	-8.56	111.00	119.64
8	AK	100	ILE	CA-C-N	8.42	130.37	119.84
8	AK	100	ILE	C-N-CA	8.42	130.37	119.84
47	BW	6	VAL	CB-CA-C	-8.27	103.79	111.06
16	AS	20	VAL	N-CA-C	8.21	119.42	107.75
16	AS	81	ARG	NE-CZ-NH1	-8.20	113.30	121.50
53	D8	34	TRP	N-CA-C	8.15	122.81	112.86
26	DD	28	GLU	CA-C-N	-7.98	112.48	120.31
26	DD	28	GLU	C-N-CA	-7.98	112.48	120.31
47	BW	5	GLU	N-CA-C	-7.80	102.84	113.30
2	CE	111	ARG	CG-CD-NE	-7.78	94.89	112.00
2	CE	111	ARG	CA-CB-CG	-7.68	98.73	114.10
40	D2	39	LEU	N-CA-C	-7.67	101.77	113.89
26	BD	235	GLY	N-CA-C	7.54	124.53	111.78
10	CM	52	GLY	CA-C-N	7.40	127.12	119.64
10	CM	52	GLY	C-N-CA	7.40	127.12	119.64
34	BO	59	LEU	N-CA-C	-7.38	103.41	113.30
34	DO	9	ASN	CA-C-N	7.37	129.06	119.84
34	DO	9	ASN	C-N-CA	7.37	129.06	119.84
53	D8	54	GLU	N-CA-C	-7.33	103.94	113.17
4	CG	12	CYS	CA-CB-SG	7.32	131.24	114.40
50	D5	4	HIS	CA-C-N	-7.30	112.46	119.76
50	D5	4	HIS	C-N-CA	-7.30	112.46	119.76
42	BT	5	TYR	N-CA-C	-7.21	104.50	112.72
38	BR	13	ARG	N-CA-C	-7.21	102.50	113.89
38	BR	108	ARG	N-CA-C	-7.19	103.96	114.39
27	BE	77	ILE	N-CA-C	-7.19	104.38	113.22
37	DQ	44	LYS	N-CA-C	-7.10	106.53	114.62
50	B5	38	ALA	N-CA-C	7.08	118.97	110.19
51	B6	40	CYS	CA-C-N	7.05	127.22	120.31
51	B6	40	CYS	C-N-CA	7.05	127.22	120.31
1	AA	193	C	P-O5'-C5'	7.01	131.42	120.90
11	AN	112	THR	CA-C-N	6.99	126.96	119.76
11	AN	112	THR	C-N-CA	6.99	126.96	119.76
8	AK	79	VAL	N-CA-C	-6.92	104.24	111.58
2	CE	231	GLU	CA-C-N	6.92	128.49	119.84
2	CE	231	GLU	C-N-CA	6.92	128.49	119.84
2	CE	19	HIS	N-CA-C	6.89	116.41	108.49
49	B4	39	CYS	N-CA-C	-6.88	102.37	111.24
1	AA	1381	U	N3-C4-C5	6.87	135.22	114.60
30	BH	170	ARG	N-CA-C	6.87	117.56	108.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AN	38	ASN	CA-C-N	6.85	126.82	119.76
11	AN	38	ASN	C-N-CA	6.85	126.82	119.76
43	DU	46	LYS	CB-CG-CD	-6.81	95.64	111.30
19	AV	6	LYS	N-CA-C	6.79	118.61	110.19
2	CE	23	ARG	N-CA-C	-6.76	102.94	113.02
18	CU	81	PHE	N-CA-C	-6.76	103.71	112.23
35	BP	69	PHE	CA-C-N	6.73	128.25	119.84
35	BP	69	PHE	C-N-CA	6.73	128.25	119.84
34	BO	64	LYS	N-CA-C	-6.72	103.96	111.28
40	D2	37	VAL	CB-CA-C	-6.62	100.44	111.29
53	B8	54	GLU	N-CA-C	-6.60	104.00	111.07
2	AE	130	ARG	CA-C-N	6.60	128.09	119.84
2	AE	130	ARG	C-N-CA	6.60	128.09	119.84
40	D2	80	GLN	N-CA-C	6.55	120.20	109.85
14	AQ	13	THR	CA-C-N	6.54	128.02	119.84
14	AQ	13	THR	C-N-CA	6.54	128.02	119.84
5	AH	48	ALA	CA-C-N	6.53	128.00	119.84
5	AH	48	ALA	C-N-CA	6.53	128.00	119.84
29	DG	118	ARG	N-CA-C	-6.53	100.77	110.23
7	CJ	72	ARG	N-CA-C	-6.51	105.49	113.50
29	DG	44	GLY	N-CA-C	-6.51	107.51	114.67
11	CN	124	LYS	N-CA-CB	-6.49	98.68	109.72
30	DH	161	GLY	N-CA-C	6.48	119.42	111.45
27	DE	61	ARG	CA-C-N	-6.47	111.75	119.84
27	DE	61	ARG	C-N-CA	-6.47	111.75	119.84
28	BF	64	ILE	N-CA-C	6.46	116.57	110.30
42	DT	43	VAL	N-CA-C	-6.45	106.70	112.12
42	DT	5	TYR	N-CA-C	-6.43	105.01	112.92
16	AS	81	ARG	CD-NE-CZ	-6.42	115.41	124.40
30	DH	111	HIS	CA-C-N	6.40	127.84	119.84
30	DH	111	HIS	C-N-CA	6.40	127.84	119.84
29	DG	67	LYS	CA-C-N	6.38	126.34	120.03
29	DG	67	LYS	C-N-CA	6.38	126.34	120.03
20	AW	101	GLY	N-CA-C	-6.36	105.61	115.73
5	AH	127	ASN	CA-C-N	6.32	125.81	119.24
5	AH	127	ASN	C-N-CA	6.32	125.81	119.24
5	CH	127	ASN	CA-C-N	6.32	126.52	119.32
5	CH	127	ASN	C-N-CA	6.32	126.52	119.32
43	BU	76	CYS	CA-C-N	6.31	127.72	119.84
43	BU	76	CYS	C-N-CA	6.31	127.72	119.84
26	DD	103	ARG	N-CA-C	6.28	117.40	108.74
2	CE	233	SER	CA-C-N	6.27	127.67	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CE	233	SER	C-N-CA	6.27	127.67	119.84
27	BE	73	GLU	CA-C-N	-6.25	114.30	120.98
27	BE	73	GLU	C-N-CA	-6.25	114.30	120.98
29	DG	3	LEU	N-CA-C	-6.25	106.88	114.75
7	AJ	79	ARG	CD-NE-CZ	-6.24	115.66	124.40
3	AF	19	GLU	N-CA-C	-6.22	106.91	114.75
44	DV	158	PRO	N-CA-C	6.21	118.27	110.70
27	DE	52	LEU	CA-C-N	6.20	127.59	119.84
27	DE	52	LEU	C-N-CA	6.20	127.59	119.84
18	AU	81	PHE	N-CA-C	-6.19	104.79	112.90
35	DP	125	LEU	CA-C-N	6.15	127.53	119.84
35	DP	125	LEU	C-N-CA	6.15	127.53	119.84
48	DX	11	SER	CA-C-N	6.15	126.26	119.87
48	DX	11	SER	C-N-CA	6.15	126.26	119.87
14	CQ	53	LEU	CA-C-N	6.14	127.52	119.84
14	CQ	53	LEU	C-N-CA	6.14	127.52	119.84
17	AT	29	HIS	CA-C-N	6.10	127.47	119.84
17	AT	29	HIS	C-N-CA	6.10	127.47	119.84
10	AM	33	GLN	N-CA-C	6.05	118.10	110.24
31	BK	15	VAL	N-CA-C	6.04	121.90	109.34
49	B4	38	LYS	N-CA-C	-6.02	105.79	113.02
30	BH	141	VAL	CB-CA-C	-6.00	104.20	111.88
36	B0	2	ARG	NE-CZ-NH1	-6.00	115.50	121.50
30	BH	20	ALA	N-CA-C	-5.98	103.25	110.13
47	DW	17	SER	CA-C-N	5.97	141.33	127.00
47	DW	17	SER	C-N-CA	5.97	141.33	127.00
43	DU	81	LYS	N-CA-C	5.96	113.58	108.22
4	CG	12	CYS	N-CA-C	-5.96	105.11	112.38
53	D8	31	HIS	CB-CA-C	5.94	122.24	110.42
4	CG	180	GLY	N-CA-C	-5.92	105.44	113.37
39	B1	96	ALA	N-CA-C	-5.89	105.29	112.88
43	BU	52	SER	CA-C-N	-5.89	112.48	119.84
43	BU	52	SER	C-N-CA	-5.89	112.48	119.84
44	BV	61	LEU	CA-C-N	5.87	127.17	119.84
44	BV	61	LEU	C-N-CA	5.87	127.17	119.84
7	AJ	57	GLU	CA-C-N	5.86	127.16	119.84
7	AJ	57	GLU	C-N-CA	5.86	127.16	119.84
2	CE	12	GLU	N-CA-C	-5.84	106.69	113.88
20	CW	12	ALA	N-CA-C	-5.84	106.06	112.72
26	BD	229	VAL	CB-CA-C	-5.84	103.11	112.16
36	B0	9	LYS	N-CA-C	-5.84	99.67	109.07
43	DU	34	LYS	N-CA-C	-5.83	105.53	114.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BG	81	LYS	CB-CA-C	-5.83	109.87	116.63
37	DQ	107	GLU	N-CA-C	5.81	117.86	107.80
31	DK	113	ARG	N-CA-C	-5.80	106.02	112.57
4	AG	12	CYS	CA-CB-SG	5.78	127.69	114.40
2	CE	17	PHE	N-CA-C	5.78	118.64	110.14
16	CS	53	VAL	N-CA-C	5.77	116.23	110.23
3	CF	146	ALA	N-CA-C	5.76	117.76	110.33
29	DG	178	PHE	CA-C-N	5.76	127.04	119.84
29	DG	178	PHE	C-N-CA	5.76	127.04	119.84
26	DD	231	HIS	CA-C-N	5.74	127.02	119.84
26	DD	231	HIS	C-N-CA	5.74	127.02	119.84
39	D1	97	ASP	N-CA-C	-5.73	104.39	111.33
52	B7	17	GLY	N-CA-C	5.72	118.62	112.33
27	DE	44	TYR	N-CA-C	5.72	122.93	113.50
33	BN	66	LYS	N-CA-C	-5.71	106.48	113.50
8	CK	80	ILE	CB-CA-C	-5.70	106.19	112.68
3	CF	161	GLU	N-CA-C	-5.70	106.88	113.88
51	B6	45	LYS	N-CA-C	5.69	118.74	109.06
20	AW	74	LYS	CB-CA-C	-5.68	109.03	115.79
26	BD	65	ILE	N-CA-C	5.68	117.30	109.46
43	DU	92	ASN	N-CA-C	5.67	118.20	110.55
47	DW	17	SER	C-N-CD	-5.64	108.19	120.60
40	B2	49	THR	CA-C-N	-5.63	112.80	119.84
40	B2	49	THR	C-N-CA	-5.63	112.80	119.84
39	B1	92	ARG	N-CA-C	-5.62	106.01	112.86
38	BR	3	ARG	N-CA-C	-5.62	104.60	112.12
10	CM	40	LEU	CA-C-N	-5.62	114.14	119.76
10	CM	40	LEU	C-N-CA	-5.62	114.14	119.76
39	B1	9	VAL	N-CA-C	5.61	116.25	110.36
40	D2	86	GLY	N-CA-C	-5.61	105.86	113.37
47	DW	5	GLU	N-CA-C	-5.61	106.21	113.16
49	D4	61	ARG	N-CA-C	-5.61	105.17	111.28
26	DD	41	GLY	N-CA-C	-5.60	104.80	111.36
8	CK	56	LYS	CA-C-N	5.60	125.78	119.90
8	CK	56	LYS	C-N-CA	5.60	125.78	119.90
44	DV	129	SER	CA-C-N	5.60	125.70	119.32
44	DV	129	SER	C-N-CA	5.60	125.70	119.32
1	AA	192	U	O3'-P-O5'	5.59	112.38	104.00
28	DF	151	SER	N-CA-C	-5.58	106.24	113.16
30	BH	38	SER	CA-C-N	5.56	125.92	119.47
30	BH	38	SER	C-N-CA	5.56	125.92	119.47
34	BO	37	GLY	N-CA-C	-5.55	100.03	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BO	139	LYS	N-CA-C	-5.55	105.33	111.71
26	DD	33	LEU	CB-CA-C	-5.54	110.20	116.63
2	CE	130	ARG	CA-C-N	5.53	126.76	119.84
2	CE	130	ARG	C-N-CA	5.53	126.76	119.84
2	AE	6	THR	N-CA-C	5.53	118.28	109.65
28	DF	170	LEU	CA-C-N	5.53	125.19	119.05
28	DF	170	LEU	C-N-CA	5.53	125.19	119.05
30	DH	153	LYS	CA-C-N	-5.53	113.98	120.12
30	DH	153	LYS	C-N-CA	-5.53	113.98	120.12
16	AS	5	ARG	N-CA-C	5.49	115.49	108.24
29	BG	31	VAL	CA-C-N	5.48	125.49	119.90
29	BG	31	VAL	C-N-CA	5.48	125.49	119.90
17	CT	63	ARG	CA-C-N	5.44	125.76	119.93
17	CT	63	ARG	C-N-CA	5.44	125.76	119.93
19	AV	29	ARG	N-CA-C	5.42	115.71	108.23
38	DR	80	SER	CA-C-N	5.42	125.08	119.56
38	DR	80	SER	C-N-CA	5.42	125.08	119.56
44	DV	147	GLY	N-CA-C	-5.41	100.36	113.18
28	BF	24	LEU	CA-C-N	5.39	126.58	119.84
28	BF	24	LEU	C-N-CA	5.39	126.58	119.84
28	DF	20	LEU	N-CA-C	5.38	117.15	108.32
43	BU	92	ASN	N-CA-C	5.38	117.47	110.53
30	DH	67	LEU	CB-CA-C	-5.37	102.68	110.96
30	DH	41	MET	CB-CA-C	-5.37	110.40	116.63
1	AA	1381	U	C4-C5-C6	-5.37	103.59	119.70
49	D4	2	LYS	N-CA-C	-5.37	107.10	113.97
53	B8	29	LYS	CA-C-N	-5.37	114.81	123.23
53	B8	29	LYS	C-N-CA	-5.37	114.81	123.23
3	AF	176	HIS	N-CA-C	-5.36	106.75	113.72
12	CO	23	LYS	N-CA-C	-5.36	105.43	113.89
2	AE	17	PHE	N-CA-C	-5.35	107.76	114.56
34	DO	111	ARG	N-CA-C	5.35	118.04	110.50
39	D1	9	VAL	N-CA-C	5.34	115.79	110.23
28	BF	93	LYS	CA-C-N	-5.34	113.78	119.98
28	BF	93	LYS	C-N-CA	-5.34	113.78	119.98
27	DE	88	GLY	N-CA-C	5.34	125.83	113.18
20	CW	85	MET	N-CA-C	5.33	117.78	111.33
8	AK	112	LEU	N-CA-C	5.32	117.48	109.23
34	BO	67	MET	N-CA-C	-5.32	104.37	111.02
27	DE	137	HIS	N-CA-C	5.30	117.46	110.36
26	BD	193	VAL	N-CA-C	5.29	116.41	109.21
2	CE	126	GLU	N-CA-C	-5.29	106.66	113.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	AT	13	ASP	N-CA-C	-5.29	105.68	113.61
30	BH	83	TYR	N-CA-C	5.28	122.04	110.80
30	DH	50	VAL	N-CA-C	5.27	115.64	107.78
5	CH	76	ILE	CA-C-N	5.26	125.57	119.47
5	CH	76	ILE	C-N-CA	5.26	125.57	119.47
28	DF	23	ASP	N-CA-C	-5.26	107.17	113.21
26	BD	180	GLY	N-CA-C	-5.25	107.76	114.37
34	BO	62	LEU	CA-C-N	5.25	126.40	119.84
34	BO	62	LEU	C-N-CA	5.25	126.40	119.84
33	DN	71	ARG	CA-C-N	5.24	126.39	119.84
33	DN	71	ARG	C-N-CA	5.24	126.39	119.84
38	DR	108	ARG	N-CA-C	-5.24	106.48	112.92
32	DM	42	TRP	N-CA-C	5.23	117.61	110.24
43	BU	89	PHE	N-CA-C	-5.22	99.68	110.80
49	B4	37	SER	N-CA-C	-5.22	108.17	114.75
28	BF	84	VAL	N-CA-C	-5.22	102.33	109.37
17	AT	63	ARG	CA-C-N	5.21	126.35	119.84
17	AT	63	ARG	C-N-CA	5.21	126.35	119.84
53	B8	50	LEU	N-CA-C	5.20	117.65	108.75
3	CF	6	HIS	CA-C-N	5.20	124.70	119.19
3	CF	6	HIS	C-N-CA	5.20	124.70	119.19
19	CV	54	GLY	N-CA-C	-5.19	100.89	113.18
34	BO	35	HIS	N-CA-C	5.18	116.62	111.07
47	DW	50	ILE	N-CA-C	5.18	115.40	110.53
27	DE	38	THR	CA-C-N	5.18	126.31	119.84
27	DE	38	THR	C-N-CA	5.18	126.31	119.84
29	BG	69	ALA	N-CA-C	-5.17	103.87	110.53
7	CJ	81	GLY	N-CA-C	-5.16	107.68	115.32
18	AU	60	ALA	N-CA-C	-5.16	105.35	110.97
45	D3	44	ARG	N-CA-C	-5.16	105.74	111.36
33	BN	118	ALA	CA-C-N	5.15	124.76	119.56
33	BN	118	ALA	C-N-CA	5.15	124.76	119.56
30	DH	136	ILE	N-CA-C	5.14	120.04	109.34
8	CK	75	ARG	CA-C-N	5.13	125.13	119.90
8	CK	75	ARG	C-N-CA	5.13	125.13	119.90
10	CM	27	ALA	N-CA-C	-5.12	108.78	114.62
30	DH	101	ARG	N-CA-C	-5.12	105.87	111.82
52	B7	37	LYS	N-CA-C	-5.12	106.30	112.54
33	DN	94	ARG	N-CA-C	-5.10	107.06	113.28
34	DO	37	GLY	N-CA-C	-5.09	101.11	113.18
47	DW	27	GLU	N-CA-C	-5.09	105.81	111.36
49	B4	10	VAL	CA-C-N	5.09	126.20	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	B4	10	VAL	C-N-CA	5.09	126.20	119.84
27	BE	131	ALA	CB-CA-C	-5.09	110.31	117.23
53	B8	49	VAL	CA-C-O	-5.09	117.66	121.68
1	AA	192	U	O4'-C1'-N1	5.08	116.12	108.50
1	AA	193	C	C5-C6-N1	5.08	136.24	121.00
37	DQ	34	HIS	N-CA-C	5.08	117.60	110.14
3	CF	77	ILE	CB-CA-C	-5.07	105.33	111.87
26	BD	7	LYS	N-CA-C	-5.06	103.10	110.08
35	DP	72	LYS	CA-C-N	5.06	125.50	120.14
35	DP	72	LYS	C-N-CA	5.06	125.50	120.14
29	BG	181	ARG	N-CA-C	-5.05	107.27	112.93
34	DO	19	VAL	N-CA-C	5.05	114.69	108.53
38	BR	50	ILE	CB-CA-C	-5.04	105.59	111.94
38	BR	109	GLU	N-CA-C	-5.04	106.39	112.54
9	AL	20	ARG	CA-C-N	5.04	125.03	119.89
9	AL	20	ARG	C-N-CA	5.04	125.03	119.89
26	DD	269	PHE	N-CA-C	-5.04	106.28	114.09
31	DK	131	LYS	C-N-CD	-5.03	109.54	120.60
33	DN	66	LYS	N-CA-C	-5.02	107.22	113.55
44	DV	173	ALA	N-CA-C	-5.02	104.49	110.41
34	BO	20	GLY	N-CA-C	-5.02	101.29	113.18
26	DD	136	ILE	CA-C-N	5.02	125.01	119.89
26	DD	136	ILE	C-N-CA	5.02	125.01	119.89
2	CE	112	VAL	N-CA-C	-5.01	105.66	110.72
26	BD	148	GLU	CA-C-N	5.00	126.09	119.84
26	BD	148	GLU	C-N-CA	5.00	126.09	119.84
30	DH	4	ILE	CB-CA-C	-5.00	103.08	111.29

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32369	0	16338	916	10
1	CA	32372	0	16336	880	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	AE	1924	0	1975	123	0
2	CE	1924	0	1975	148	0
3	AF	1605	0	1668	72	0
3	CF	1612	0	1677	117	0
4	AG	1703	0	1763	112	0
4	CG	1703	0	1764	213	0
5	AH	1155	0	1213	60	0
5	CH	1155	0	1212	57	0
6	AI	843	0	857	44	0
6	CI	843	0	857	31	0
7	AJ	1257	0	1296	76	0
7	CJ	1257	0	1296	68	0
8	AK	1116	0	1177	60	0
8	CK	1116	0	1177	46	0
9	AL	1010	0	1037	90	0
9	CL	1010	0	1037	96	0
10	AM	801	0	849	59	0
10	CM	801	0	849	55	1
11	AN	885	0	904	40	0
11	CN	885	0	904	40	0
12	AO	975	0	1062	76	0
12	CO	975	0	1062	44	0
13	AP	928	0	987	63	0
13	CP	933	0	992	90	0
14	AQ	492	0	529	41	0
14	CQ	492	0	531	44	0
15	AR	734	0	771	27	0
15	CR	734	0	771	33	0
16	AS	705	0	725	39	0
16	CS	705	0	725	32	0
17	AT	834	0	904	44	0
17	CT	834	0	904	27	0
18	AU	591	0	662	24	0
18	CU	591	0	662	27	0
19	AV	665	0	686	50	0
19	CV	624	0	636	81	0
20	AW	763	0	861	58	0
20	CW	763	0	861	49	0
21	AX	217	0	234	7	0
21	CX	217	0	234	21	0
22	AC	1640	0	836	19	0
22	AD	1640	0	836	98	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	CC	1640	0	836	23	0
22	CD	1640	0	836	89	0
23	A1	129	0	65	0	0
23	C1	129	0	65	0	0
24	BA	62707	0	31612	1389	0
24	DA	62587	0	31554	1355	0
25	BB	2617	0	1328	60	0
25	DB	2617	0	1328	85	0
26	BD	2115	0	2195	116	0
26	DD	2115	0	2195	146	0
27	BE	1568	0	1634	104	0
27	DE	1568	0	1634	207	0
28	BF	1585	0	1632	77	0
28	DF	1627	0	1680	131	0
29	BG	1474	0	1535	93	0
29	DG	1474	0	1535	107	0
30	BH	1307	0	1382	137	0
30	DH	1307	0	1382	126	9
31	BK	1136	0	1223	49	0
31	DK	1136	0	1223	49	0
32	BM	1104	0	1180	69	0
32	DM	1104	0	1180	55	0
33	BN	933	0	996	31	0
33	DN	933	0	996	43	0
34	BO	1145	0	1227	114	0
34	DO	1145	0	1228	155	0
35	BP	1122	0	1179	90	0
35	DP	1122	0	1179	61	0
36	B0	968	0	1033	62	0
36	D0	960	0	1021	36	0
37	BQ	882	0	943	54	0
37	DQ	882	0	943	73	0
38	BR	1141	0	1202	67	0
38	DR	1141	0	1202	65	0
39	B1	964	0	1022	65	0
39	D1	964	0	1022	71	0
40	B2	779	0	852	44	1
40	D2	779	0	852	88	0
41	BS	900	0	964	29	0
41	DS	900	0	964	25	0
42	BT	725	0	778	25	0
42	DT	725	0	778	23	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	BU	785	0	878	81	0
43	DU	785	0	878	61	0
44	BV	1397	0	1430	83	0
44	DV	1428	0	1454	90	0
45	B3	607	0	628	41	0
45	D3	613	0	633	35	0
46	BZ	763	0	848	31	0
46	DZ	763	0	848	34	0
47	BW	558	0	610	27	0
47	DW	581	0	629	31	0
48	BX	469	0	518	17	0
48	DX	469	0	518	19	0
49	B4	533	0	522	57	0
49	D4	515	0	510	79	0
50	B5	459	0	480	35	1
50	D5	459	0	480	25	0
51	B6	389	0	404	42	0
51	D6	389	0	404	78	0
52	B7	430	0	480	18	0
52	D7	430	0	480	12	0
53	B8	488	0	559	51	0
53	D8	488	0	560	72	0
54	A1	1	0	0	0	0
54	AA	236	0	0	0	0
54	AC	8	0	0	0	0
54	AD	1	0	0	0	0
54	AG	1	0	0	0	0
54	AH	1	0	0	0	0
54	AN	2	0	0	0	0
54	AQ	1	0	0	0	0
54	AT	1	0	0	0	0
54	B0	1	0	0	0	0
54	B1	1	0	0	0	0
54	B2	1	0	0	0	0
54	B3	2	0	0	0	0
54	B5	1	0	0	0	0
54	B7	3	0	0	0	0
54	B8	2	0	0	0	0
54	BA	632	0	0	0	0
54	BB	16	0	0	0	0
54	BD	1	0	0	0	0
54	BE	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	BF	2	0	0	0	0
54	BO	2	0	0	0	0
54	BU	2	0	0	0	0
54	CA	199	0	0	0	0
54	CC	9	0	0	0	0
54	CG	2	0	0	0	0
54	CL	1	0	0	0	0
54	CN	1	0	0	0	0
54	CS	1	0	0	0	0
54	CX	1	0	0	0	0
54	D1	1	0	0	0	0
54	D3	1	0	0	0	0
54	D5	1	0	0	0	0
54	D8	1	0	0	0	0
54	DA	523	0	0	0	0
54	DB	15	0	0	0	0
54	DE	4	0	0	0	0
54	DP	1	0	0	0	0
54	DR	1	0	0	0	0
54	DU	2	0	0	0	0
55	AA	42	0	39	2	0
55	CA	42	0	38	5	0
56	AG	1	0	0	0	0
56	AQ	1	0	0	0	0
56	CG	1	0	0	0	0
56	CQ	1	0	0	0	0
All	All	295766	0	199075	9506	11

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 21.

All (9506) 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)
24:BA:2751:G:C2	30:BH:3:ARG:HD3	1.42	1.55
30:DH:127:GLU:CG	30:DH:128:PRO:HD3	1.36	1.54
27:DE:11:MET:SD	27:DE:24:THR:HG22	1.47	1.52
40:D2:49:THR:HB	40:D2:50:PRO:CD	1.45	1.47
26:DD:34:VAL:CG2	26:DD:35:LYS:HZ3	1.26	1.46
26:DD:34:VAL:HG22	26:DD:35:LYS:CE	1.44	1.46
34:DO:71:VAL:CG1	34:DO:72:PRO:HD3	1.44	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:34:VAL:HG23	26:DD:35:LYS:NZ	1.22	1.43
1:CA:412:A:N6	4:CG:35:ARG:HG3	1.34	1.41
12:AO:46:LYS:C	12:AO:48:PRO:HD2	1.44	1.41
26:DD:34:VAL:CG2	26:DD:35:LYS:NZ	1.76	1.40
4:CG:22:LYS:HG2	4:CG:26:CYS:CB	1.50	1.39
34:DO:62:LEU:HD11	53:D8:25:MET:C	1.47	1.39
4:CG:9:CYS:SG	4:CG:31:CYS:SG	1.40	1.39
12:AO:46:LYS:HG2	12:AO:48:PRO:CD	1.53	1.38
26:DD:35:LYS:CD	26:DD:64:ILE:HG23	1.52	1.35
12:AO:46:LYS:HE3	12:AO:48:PRO:CG	1.58	1.33
34:BO:71:VAL:HG13	34:BO:72:PRO:CD	1.62	1.28
26:DD:34:VAL:HG22	26:DD:35:LYS:CD	1.62	1.28
4:CG:22:LYS:HG3	4:CG:26:CYS:N	1.47	1.28
34:BO:71:VAL:HG22	34:BO:72:PRO:CD	1.62	1.28
12:AO:46:LYS:CE	12:AO:48:PRO:HG2	1.63	1.27
43:BU:82:PRO:HD2	43:BU:97:ARG:CD	1.64	1.26
26:DD:34:VAL:CG2	26:DD:35:LYS:CE	2.11	1.26
40:D2:38:LEU:O	40:D2:51:VAL:HG13	1.18	1.26
4:AG:28:SER:OG	4:AG:29:PRO:HD2	1.36	1.25
4:CG:9:CYS:SG	4:CG:22:LYS:HE3	1.76	1.24
4:CG:33:MET:CE	4:CG:37:PRO:HB3	1.68	1.24
27:DE:11:MET:SD	27:DE:24:THR:CG2	2.26	1.24
34:BO:71:VAL:CG2	34:BO:72:PRO:HD3	1.68	1.23
1:CA:429:U:C2'	4:CG:25:ARG:HH21	1.50	1.23
4:CG:12:CYS:SG	4:CG:31:CYS:SG	1.21	1.21
12:AO:46:LYS:HG2	12:AO:48:PRO:HD3	1.21	1.20
30:BH:4:ILE:HD12	30:BH:4:ILE:O	1.36	1.20
4:AG:9:CYS:HB3	4:AG:32:ALA:CB	1.70	1.20
30:BH:153:LYS:CG	30:BH:154:PRO:HD2	1.72	1.20
34:BO:71:VAL:CG1	34:BO:72:PRO:HD3	1.72	1.20
35:BP:66:ILE:HA	35:BP:104:PHE:HA	1.21	1.19
30:BH:92:ILE:CD1	30:BH:160:LYS:HE2	1.73	1.18
4:CG:22:LYS:HZ2	4:CG:26:CYS:N	1.42	1.18
27:DE:11:MET:CG	27:DE:24:THR:HG22	1.74	1.18
4:CG:22:LYS:HD2	4:CG:25:ARG:CG	1.73	1.18
1:CA:412:A:C6	4:CG:35:ARG:HG3	1.80	1.17
4:AG:9:CYS:CB	4:AG:32:ALA:HB2	1.74	1.16
35:BP:66:ILE:HG22	35:BP:104:PHE:CD1	1.79	1.16
27:BE:63:LEU:HD12	27:BE:63:LEU:O	1.43	1.16
34:DO:71:VAL:HG12	34:DO:72:PRO:CD	1.75	1.16
27:DE:66:HIS:NE2	27:DE:67:PHE:HD1	1.43	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:65:PHE:O	35:BP:104:PHE:O	1.65	1.15
34:DO:62:LEU:HD11	53:D8:25:MET:O	1.41	1.14
49:D4:39:CYS:C	49:D4:41:PRO:HD3	1.71	1.14
1:CA:429:U:H2'	4:CG:25:ARG:NH2	1.63	1.14
35:BP:66:ILE:HG22	35:BP:104:PHE:HD1	1.10	1.14
26:DD:35:LYS:HD2	26:DD:64:ILE:CG2	1.76	1.14
26:DD:35:LYS:HE3	26:DD:64:ILE:O	1.45	1.13
34:BO:6:LEU:HD13	34:BO:7:ARG:H	1.13	1.13
24:BA:2751:G:C2	30:BH:3:ARG:CD	2.30	1.13
4:CG:22:LYS:HZ2	4:CG:25:ARG:C	1.57	1.13
27:BE:59:VAL:HG12	27:BE:60:ASN:H	1.00	1.12
27:DE:78:LEU:O	27:DE:79:ARG:HD2	1.50	1.12
4:CG:33:MET:HE3	4:CG:37:PRO:HB3	1.19	1.11
34:DO:49:ARG:HG2	34:DO:49:ARG:O	1.49	1.11
34:BO:6:LEU:CD1	34:BO:7:ARG:H	1.62	1.11
26:DD:34:VAL:C	26:DD:35:LYS:HD3	1.74	1.11
32:BM:15:LEU:HD21	32:BM:128:HIS:CE1	1.85	1.10
34:BO:71:VAL:HG13	34:BO:72:PRO:HD2	1.23	1.10
4:CG:22:LYS:CG	4:CG:26:CYS:HB2	1.80	1.10
24:DA:2114:A:N6	24:DA:2119:A:N7	1.99	1.10
40:D2:49:THR:CB	40:D2:50:PRO:HD2	1.81	1.10
30:BH:92:ILE:HD12	30:BH:160:LYS:HE2	1.13	1.10
24:BA:2531:A:H5'	30:BH:157:TYR:CE2	1.86	1.09
28:DF:24:LEU:HB3	28:DF:25:PRO:CD	1.82	1.09
51:D6:15:GLU:HG2	51:D6:16:CYS:N	1.45	1.09
30:DH:127:GLU:CB	30:DH:128:PRO:CD	2.30	1.09
4:CG:22:LYS:CG	4:CG:26:CYS:CB	2.30	1.08
4:CG:22:LYS:NZ	4:CG:25:ARG:HG3	1.65	1.08
34:DO:62:LEU:CD1	53:D8:25:MET:O	2.00	1.08
34:DO:71:VAL:CG1	34:DO:72:PRO:CD	2.30	1.08
30:DH:127:GLU:CG	30:DH:128:PRO:CD	2.30	1.08
4:CG:33:MET:CE	4:CG:37:PRO:CB	2.32	1.08
28:DF:24:LEU:HB3	28:DF:25:PRO:HD2	1.09	1.07
34:DO:62:LEU:HD21	53:D8:25:MET:O	1.54	1.07
34:DO:64:LYS:HB3	53:D8:25:MET:HG3	1.36	1.07
43:DU:52:SER:CA	43:DU:56:PRO:HA	1.85	1.07
27:DE:11:MET:HA	27:DE:24:THR:HA	1.07	1.07
34:BO:71:VAL:CG1	34:BO:72:PRO:CD	2.30	1.07
30:BH:113:VAL:HG11	30:BH:151:ILE:HD13	1.36	1.06
43:BU:82:PRO:HD2	43:BU:97:ARG:HD3	1.23	1.06
34:DO:48:PRO:O	34:DO:50:ARG:N	1.87	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:61:ARG:O	34:DO:62:LEU:HB2	1.45	1.06
34:BO:71:VAL:HG22	34:BO:72:PRO:N	1.55	1.06
3:CF:164:ARG:HG2	3:CF:165:THR:H	1.16	1.06
34:DO:62:LEU:CG	53:D8:25:MET:O	2.03	1.06
1:CA:412:A:N6	4:CG:35:ARG:CG	2.20	1.05
26:DD:34:VAL:HG22	26:DD:35:LYS:HD3	1.33	1.05
51:D6:14:THR:HB	51:D6:20:ASN:O	1.56	1.05
1:AA:528:C:H41	12:AO:49:ASN:ND2	1.54	1.05
4:CG:22:LYS:HG2	4:CG:26:CYS:HB2	1.07	1.05
30:DH:127:GLU:CB	30:DH:128:PRO:HD3	1.83	1.05
4:CG:22:LYS:CD	4:CG:25:ARG:HG3	1.85	1.05
43:DU:52:SER:HA	43:DU:56:PRO:CA	1.86	1.05
24:DA:2638:G:P	27:DE:82:ARG:HH22	1.78	1.05
30:BH:153:LYS:HG3	30:BH:154:PRO:HD2	1.36	1.04
27:DE:9:VAL:HG21	27:DE:25:VAL:CG1	1.87	1.04
27:BE:59:VAL:HG12	27:BE:60:ASN:N	1.71	1.04
34:BO:71:VAL:CG2	34:BO:72:PRO:CD	2.30	1.04
12:AO:46:LYS:C	12:AO:48:PRO:CD	2.30	1.04
43:BU:81:LYS:HE3	43:BU:81:LYS:CA	1.83	1.04
26:DD:35:LYS:HE3	26:DD:64:ILE:HG12	1.36	1.04
24:BA:1112:G:O2'	30:BH:2:SER:HB3	1.55	1.03
27:DE:60:ASN:HB3	27:DE:63:LEU:HD11	1.36	1.03
26:DD:35:LYS:CD	26:DD:35:LYS:N	2.21	1.03
40:D2:49:THR:CB	40:D2:50:PRO:CD	2.30	1.03
34:BO:71:VAL:CB	34:BO:72:PRO:HD3	1.88	1.03
30:BH:149:ARG:NH2	30:BH:167:GLU:OE2	1.92	1.03
43:DU:50:ARG:HB3	43:DU:53:PRO:HG3	1.05	1.03
43:BU:81:LYS:HA	43:BU:81:LYS:CE	1.86	1.02
4:CG:22:LYS:HD2	4:CG:25:ARG:HG2	1.40	1.02
28:DF:21:ALA:O	28:DF:24:LEU:HD23	1.56	1.02
49:D4:40:HIS:HA	49:D4:44:THR:O	1.59	1.02
24:BA:2751:G:N2	30:BH:3:ARG:CD	2.21	1.02
4:CG:33:MET:HE1	4:CG:37:PRO:CB	1.90	1.02
12:AO:46:LYS:HE3	12:AO:48:PRO:HG2	1.03	1.02
26:DD:35:LYS:CE	26:DD:64:ILE:O	2.06	1.02
34:DO:64:LYS:O	34:DO:64:LYS:HD3	1.59	1.02
40:D2:39:LEU:HG	40:D2:51:VAL:HG22	1.06	1.02
24:BA:2400:G:O6	24:BA:2416:C:N4	1.91	1.01
40:D2:39:LEU:HG	40:D2:51:VAL:CG2	1.88	1.01
43:DU:50:ARG:HB3	43:DU:53:PRO:CG	1.89	1.01
4:CG:22:LYS:HG2	4:CG:26:CYS:HB3	1.39	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D4:38:LYS:HZ3	49:D4:38:LYS:HB2	1.25	1.01
20:AW:57:ARG:HD2	20:AW:102:GLY:O	1.59	1.01
24:DA:2444:G:OP2	28:DF:68:LYS:NZ	1.94	1.01
24:DA:2638:G:OP2	27:DE:82:ARG:NH2	1.93	1.01
30:BH:153:LYS:HG2	30:BH:154:PRO:HD2	1.42	1.01
4:CG:22:LYS:CE	4:CG:25:ARG:HG3	1.90	1.01
24:BA:2531:A:H4'	30:BH:157:TYR:CD2	1.95	1.00
43:BU:83:THR:O	43:BU:83:THR:HG22	1.57	1.00
28:DF:2:LYS:O	28:DF:24:LEU:HG	1.62	1.00
43:DU:52:SER:HA	43:DU:56:PRO:HA	1.01	1.00
34:BO:71:VAL:O	34:BO:73:GLY:N	1.94	1.00
44:DV:146:ILE:HD12	44:DV:147:GLY:H	1.24	1.00
27:DE:55:ASN:ND2	27:DE:73:GLU:O	1.95	0.99
43:DU:56:PRO:O	43:DU:57:GLN:HB2	1.58	0.99
30:DH:127:GLU:HG3	30:DH:128:PRO:HD3	1.03	0.99
51:D6:12:GLU:HG3	51:D6:21:TYR:CD1	1.97	0.99
24:BA:2531:A:H5'	30:BH:157:TYR:HE2	1.14	0.99
27:DE:9:VAL:HG21	27:DE:25:VAL:HG12	1.43	0.99
26:BD:43:ARG:NH1	26:BD:44:ASN:OD1	1.96	0.99
27:DE:66:HIS:NE2	27:DE:67:PHE:CD1	2.30	0.99
30:DH:127:GLU:HB3	30:DH:128:PRO:HD2	1.44	0.99
40:D2:91:TYR:HD2	40:D2:91:TYR:C	1.71	0.99
28:DF:3:GLU:HA	28:DF:24:LEU:CG	1.91	0.98
30:DH:127:GLU:HG3	30:DH:128:PRO:CD	1.90	0.98
24:DA:2096:U:H3	24:DA:2193:G:H1	1.11	0.98
29:DG:112:PRO:HG2	49:D4:37:SER:CB	1.94	0.98
29:DG:112:PRO:CG	49:D4:37:SER:HB2	1.92	0.98
26:DD:34:VAL:HG22	26:DD:35:LYS:HE2	1.46	0.98
24:DA:93:C:O5'	43:DU:54:LYS:NZ	1.96	0.98
34:DO:62:LEU:CD2	53:D8:25:MET:O	2.09	0.98
40:D2:38:LEU:O	40:D2:51:VAL:CG1	2.12	0.98
4:CG:22:LYS:CG	4:CG:26:CYS:H	1.76	0.98
27:DE:11:MET:CA	27:DE:24:THR:HA	1.93	0.98
51:D6:17:LYS:HD2	51:D6:17:LYS:N	1.77	0.97
1:CA:412:A:C6	4:CG:35:ARG:CG	2.47	0.97
26:DD:35:LYS:CE	26:DD:64:ILE:HG12	1.94	0.97
1:AA:1129:C:N4	1:AA:1133:G:N7	2.11	0.97
1:AA:458:C:N3	1:AA:474:G:N1	2.11	0.97
4:CG:22:LYS:HG3	4:CG:26:CYS:H	0.82	0.97
1:AA:529:G:O6	12:AO:49:ASN:HB3	1.65	0.97
27:DE:11:MET:HA	27:DE:24:THR:CA	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:3:GLU:HA	28:DF:24:LEU:CD1	1.95	0.97
30:DH:127:GLU:HB3	30:DH:128:PRO:CD	1.94	0.97
49:D4:16:CYS:SG	49:D4:17:GLY:N	2.38	0.96
28:DF:66:PRO:O	28:DF:67:GLN:HB3	1.62	0.96
27:DE:78:LEU:C	27:DE:79:ARG:HD2	1.88	0.96
25:DB:18:G:H1	25:DB:65:C:H42	1.09	0.96
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.30	0.95
43:BU:82:PRO:HD2	43:BU:97:ARG:HD2	1.44	0.95
27:DE:60:ASN:HD22	27:DE:63:LEU:HD21	1.30	0.95
34:BO:71:VAL:HG22	34:BO:72:PRO:HD3	1.34	0.95
34:BO:71:VAL:CB	34:BO:72:PRO:CD	2.44	0.95
12:AO:46:LYS:CG	12:AO:48:PRO:CD	2.44	0.95
49:D4:39:CYS:C	49:D4:41:PRO:CD	2.40	0.94
24:BA:2015:A:H1'	50:B5:2:ALA:HA	1.48	0.94
27:DE:23:VAL:HA	27:DE:184:VAL:O	1.66	0.94
43:BU:81:LYS:HE3	43:BU:81:LYS:HA	0.96	0.94
4:CG:33:MET:SD	4:CG:37:PRO:HA	2.07	0.94
24:BA:676:A:H8	24:BA:2069:G:H21	1.10	0.94
24:DA:1070:A:C8	24:DA:1096:A:H1'	2.03	0.94
40:D2:49:THR:HB	40:D2:50:PRO:HD3	1.49	0.94
9:AL:10:ARG:NH1	9:AL:75:ASP:OD2	2.01	0.94
1:CA:412:A:H61	4:CG:35:ARG:HG3	1.19	0.94
27:DE:66:HIS:HE2	27:DE:67:PHE:HD1	1.09	0.94
49:D4:40:HIS:N	49:D4:41:PRO:CD	2.30	0.94
10:AM:48:THR:HG23	10:AM:62:HIS:HB3	1.49	0.94
34:BO:6:LEU:CD1	34:BO:7:ARG:N	2.30	0.94
24:DA:330:A:H2	24:DA:1210:A:HO2'	1.10	0.94
40:D2:47:VAL:O	40:D2:47:VAL:HG22	1.66	0.94
24:BA:2751:G:N2	30:BH:3:ARG:HD3	1.81	0.94
1:CA:429:U:H2'	4:CG:25:ARG:HH21	0.77	0.94
28:DF:3:GLU:HA	28:DF:24:LEU:HG	1.49	0.94
51:D6:39:TYR:C	51:D6:39:TYR:CD2	2.47	0.93
51:D6:39:TYR:HD2	51:D6:39:TYR:O	1.51	0.93
1:CA:1147:C:H2'	9:CL:16:ARG:HH21	1.32	0.93
51:D6:14:THR:O	51:D6:49:HIS:HA	1.68	0.93
35:BP:66:ILE:HA	35:BP:104:PHE:CA	1.97	0.93
29:DG:112:PRO:HG2	49:D4:37:SER:HB2	0.98	0.93
24:BA:1138:G:H21	32:BM:106:MET:HE3	1.34	0.93
24:DA:93:C:H4'	43:DU:54:LYS:HZ2	1.31	0.93
34:BO:6:LEU:O	34:BO:7:ARG:HG2	1.69	0.93
2:CE:185:ILE:HG22	2:CE:199:TYR:HB2	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D4:38:LYS:HB2	49:D4:38:LYS:NZ	1.77	0.92
12:AO:46:LYS:O	12:AO:48:PRO:HD2	1.69	0.92
34:DO:62:LEU:CD1	53:D8:25:MET:C	2.38	0.92
26:DD:35:LYS:HD2	26:DD:64:ILE:HG23	0.92	0.92
4:CG:19:LEU:HD21	4:CG:67:ILE:HG12	1.50	0.92
4:CG:22:LYS:HD2	4:CG:25:ARG:HG3	1.44	0.92
21:CX:6:ARG:HH21	21:CX:15:ARG:HH22	1.13	0.92
34:BO:71:VAL:CG2	34:BO:72:PRO:N	2.30	0.92
22:CD:51:C:O2	22:CD:63:G:N1	2.02	0.92
22:CC:75:C:H3'	22:CC:76:A:H5''	1.52	0.91
24:DA:676:A:H8	24:DA:2069:G:H21	1.18	0.91
24:DA:1054:A:N6	24:DA:1105:U:O4	2.01	0.91
26:DD:34:VAL:HG23	26:DD:35:LYS:HZ2	1.23	0.91
24:BA:2531:A:C5'	30:BH:157:TYR:CE2	2.53	0.91
34:BO:71:VAL:HG13	34:BO:72:PRO:HD3	1.38	0.91
28:DF:26:ALA:O	28:DF:27:GLU:HG3	1.70	0.91
43:DU:52:SER:OG	43:DU:56:PRO:HG3	1.70	0.91
27:DE:67:PHE:HE2	27:DE:69:LYS:HZ2	1.09	0.91
34:DO:62:LEU:H	34:DO:63:PRO:HD3	1.35	0.91
35:BP:66:ILE:HG13	35:BP:67:ARG:H	1.35	0.91
40:D2:91:TYR:C	40:D2:91:TYR:CD2	2.47	0.91
27:BE:35:GLN:HB2	27:BE:64:LYS:HZ1	1.34	0.91
24:DA:960:A:H61	35:DP:83:MET:HE2	1.36	0.90
1:AA:686:U:H1'	11:AN:42:TRP:HE1	1.36	0.90
28:DF:24:LEU:CB	28:DF:25:PRO:HD2	1.99	0.90
1:CA:1127:G:N3	1:CA:1147:C:N4	2.19	0.90
24:BA:2873:A:C2	36:B0:5:LYS:HA	2.06	0.90
24:DA:2061:G:OP1	28:DF:68:LYS:HE3	1.71	0.90
26:DD:49:ILE:HD11	26:DD:52:ARG:HA	1.53	0.90
1:CA:1028(A):C:N4	1:CA:1032(B):G:O6	2.03	0.90
1:CA:1189:C:OP1	10:CM:51:ARG:NH2	2.05	0.90
24:BA:2811:G:OP1	27:BE:60:ASN:HB2	1.71	0.90
2:CE:7:VAL:HG13	2:CE:8:LYS:HG3	1.54	0.90
20:AW:57:ARG:CG	20:AW:102:GLY:O	2.20	0.90
27:DE:66:HIS:CE1	27:DE:67:PHE:HB2	2.07	0.90
4:CG:22:LYS:CG	4:CG:26:CYS:N	2.34	0.89
30:BH:4:ILE:HD12	30:BH:4:ILE:C	1.98	0.89
24:DA:1073:A:OP2	24:DA:1094:U:N3	2.04	0.89
24:BA:2334:G:O6	45:B3:74:ARG:NH2	2.05	0.89
51:D6:15:GLU:HG3	51:D6:47:THR:CG2	2.03	0.89
1:AA:1270:C:HO2'	1:AA:1313:U:HO2'	1.03	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:46:LYS:HE3	12:AO:48:PRO:HG3	1.53	0.89
20:AW:57:ARG:CD	20:AW:102:GLY:O	2.19	0.89
40:D2:39:LEU:CG	40:D2:51:VAL:HG22	2.00	0.89
2:AE:12:GLU:HA	2:AE:16:HIS:HD2	1.32	0.89
24:DA:1169:G:H1	24:DA:1180:C:H42	1.12	0.89
1:CA:1310:G:OP1	13:CP:80:ARG:NH2	2.06	0.89
24:DA:2807:G:N1	24:DA:2893:G:O6	2.06	0.89
25:DB:3:C:H42	25:DB:117:G:H1	1.21	0.89
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.37	0.89
40:D2:49:THR:HB	40:D2:50:PRO:HD2	0.91	0.89
4:CG:22:LYS:NZ	4:CG:25:ARG:C	2.30	0.89
24:DA:93:C:C5'	43:DU:54:LYS:HZ1	1.85	0.89
24:BA:1410:G:O6	24:BA:1592:C:N4	2.06	0.88
24:BA:2419:U:P	53:B8:33:ASN:HD22	1.95	0.88
35:DP:75:THR:HG21	35:DP:87:LYS:HE3	1.53	0.88
26:DD:34:VAL:CG2	26:DD:35:LYS:CD	2.49	0.88
34:BO:3:LEU:O	34:BO:6:LEU:HG	1.73	0.88
4:CG:9:CYS:SG	4:CG:31:CYS:CB	2.61	0.88
27:DE:63:LEU:O	27:DE:64:LYS:HG2	1.72	0.88
34:DO:47:ASP:HB3	34:DO:48:PRO:C	1.98	0.88
27:DE:13:ARG:HA	27:DE:21:VAL:O	1.73	0.88
34:DO:49:ARG:HD2	53:D8:59:LYS:HG3	1.52	0.88
1:AA:1006:C:N3	1:AA:1023:G:N1	2.22	0.88
24:BA:2811:G:OP1	27:BE:61:ARG:HD3	1.73	0.88
3:CF:164:ARG:HG2	3:CF:165:THR:N	1.88	0.88
24:BA:259:G:H21	24:BA:621:A:H8	1.22	0.88
34:DO:62:LEU:HD12	53:D8:25:MET:HB2	1.54	0.88
51:D6:15:GLU:HG2	51:D6:16:CYS:H	1.05	0.88
4:CG:12:CYS:SG	4:CG:31:CYS:CB	2.61	0.87
22:CD:52:G:O6	22:CD:62:C:N4	2.07	0.87
4:CG:49:ARG:HE	4:CG:50:ARG:H	1.22	0.87
24:DA:2130:U:HO2'	24:DA:2133:G:HO2'	1.12	0.87
26:DD:34:VAL:CG2	26:DD:35:LYS:HD3	2.05	0.87
34:DO:64:LYS:HB3	53:D8:25:MET:CG	2.05	0.87
30:BH:154:PRO:HB3	30:BH:163:TYR:CZ	2.09	0.87
35:BP:66:ILE:CA	35:BP:104:PHE:HA	2.05	0.87
24:BA:2287:A:H62	24:BA:2344:U:H3	1.22	0.87
11:CN:29:ILE:HG22	11:CN:44:SER:HB2	1.54	0.87
1:AA:1007:C:N3	1:AA:1022:G:N1	2.23	0.87
43:BU:49:VAL:O	43:BU:51:VAL:N	2.08	0.87
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:617:G:OP1	28:DF:40:GLN:NE2	2.07	0.87
26:DD:34:VAL:HG21	26:DD:35:LYS:HZ3	1.36	0.86
27:DE:9:VAL:CG2	27:DE:25:VAL:HG12	2.05	0.86
34:DO:47:ASP:HB3	34:DO:48:PRO:CA	2.05	0.86
36:D0:37:THR:HG22	36:D0:39:PRO:HD2	1.57	0.86
19:AV:68:GLY:H	49:B4:55:ARG:HH22	1.21	0.86
30:BH:153:LYS:CG	30:BH:154:PRO:CD	2.52	0.86
1:CA:686:U:H1'	11:CN:42:TRP:HE1	1.39	0.86
24:DA:1138:G:H21	32:DM:106:MET:HE3	1.39	0.86
4:CG:33:MET:HE1	4:CG:37:PRO:HB2	1.54	0.86
43:DU:50:ARG:CB	43:DU:53:PRO:HG3	2.00	0.86
1:AA:1382:C:O5'	7:AJ:79:ARG:NH2	2.09	0.86
2:AE:63:MET:HB3	2:AE:225:ALA:HB1	1.56	0.86
1:CA:1009:G:N1	1:CA:1020:U:O2	2.08	0.86
1:CA:1158:C:O2	1:CA:1181:G:N2	2.07	0.86
24:DA:287:C:N4	24:DA:354:G:O6	2.09	0.86
12:AO:46:LYS:HG2	12:AO:48:PRO:CG	2.06	0.86
24:DA:2777:G:H5''	24:DA:2778:A:H5'	1.58	0.86
45:D3:11:ARG:O	45:D3:14:ARG:NH2	2.07	0.86
35:BP:66:ILE:HG13	35:BP:67:ARG:N	1.91	0.86
1:CA:963:G:H21	10:CM:55:LYS:HE2	1.41	0.86
4:CG:22:LYS:HZ3	4:CG:25:ARG:HG3	1.36	0.86
24:DA:833:U:O2	34:DO:55:ARG:NH1	2.09	0.86
50:B5:40:LYS:NZ	50:B5:46:CYS:SG	2.48	0.86
53:D8:32:LEU:HD12	53:D8:34:TRP:H	1.41	0.86
24:BA:2680:C:OP2	27:BE:111:ARG:NH2	2.09	0.85
4:CG:35:ARG:O	4:CG:36:ARG:HG3	1.75	0.85
51:D6:44:ARG:HD3	51:D6:47:THR:HG21	1.57	0.85
24:DA:252:G:OP2	34:DO:50:ARG:NH2	2.10	0.85
43:BU:82:PRO:CD	43:BU:97:ARG:HD2	2.05	0.85
47:BW:47:ASN:O	47:BW:49:LYS:N	2.08	0.85
51:B6:19:ARG:NH1	51:B6:21:TYR:CE2	2.43	0.85
4:CG:13:ARG:HD3	4:CG:32:ALA:HB1	1.57	0.85
27:DE:66:HIS:CD2	27:DE:67:PHE:HD1	1.94	0.85
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.55	0.85
51:B6:12:GLU:HB3	51:B6:23:THR:HG22	1.57	0.85
24:BA:2127:G:O6	24:BA:2161:C:N4	2.10	0.85
30:BH:92:ILE:CD1	30:BH:160:LYS:CE	2.53	0.85
51:B6:20:ASN:OD1	51:B6:42:TRP:CZ3	2.29	0.85
24:BA:1052:C:N3	24:BA:1107:G:N2	2.24	0.85
35:BP:64:ILE:O	35:BP:65:PHE:CD2	2.30	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2379:G:O2'	37:DQ:17:ARG:NH1	2.09	0.85
1:AA:1260:C:O2	1:AA:1275:A:N6	2.10	0.85
1:CA:962:C:H42	1:CA:973:G:H1	1.25	0.85
30:DH:83:TYR:HA	30:DH:134:SER:HB3	1.58	0.85
33:DN:115:VAL:HG13	33:DN:121:VAL:HG21	1.59	0.84
51:D6:15:GLU:CG	51:D6:16:CYS:N	2.34	0.84
24:BA:2810:A:O3'	27:BE:61:ARG:HG2	1.78	0.84
1:CA:412:A:C6	4:CG:35:ARG:CD	2.59	0.84
22:CD:12:G:O6	22:CD:23:C:N4	2.11	0.84
24:BA:1728:G:H8	24:BA:1732:A:H62	1.25	0.84
32:BM:128:HIS:HB2	32:BM:129:PRO:HD2	1.58	0.84
24:BA:2751:G:N3	30:BH:3:ARG:HD3	1.93	0.84
1:CA:1006:C:N3	1:CA:1023:G:N1	2.25	0.84
1:CA:1324:A:H4'	1:CA:1362:C:H4'	1.56	0.84
24:DA:1019:U:H3	24:DA:1142(A):A:H62	1.25	0.84
43:BU:81:LYS:HD3	43:BU:97:ARG:CZ	2.08	0.84
2:CE:21:ARG:HH21	2:CE:38:GLY:HA3	1.42	0.84
2:CE:78:GLN:O	2:CE:94:ASN:ND2	2.10	0.84
24:DA:2115:G:O3'	24:DA:2165:G:N2	2.11	0.84
22:AD:16:C:H4'	22:AD:60:U:H4'	1.59	0.84
22:CD:15:G:N1	22:CD:48:C:N3	2.26	0.84
24:DA:2292:C:OP1	37:DQ:17:ARG:NH2	2.11	0.84
26:DD:35:LYS:HD2	26:DD:35:LYS:N	1.91	0.84
26:DD:35:LYS:HE3	26:DD:64:ILE:C	2.02	0.84
34:DO:64:LYS:CB	53:D8:25:MET:HG3	2.08	0.84
24:DA:2125:G:N1	24:DA:2172:U:OP1	2.10	0.83
28:DF:3:GLU:HA	28:DF:24:LEU:HD11	1.58	0.83
19:CV:33:THR:HG22	19:CV:34:TRP:H	1.42	0.83
19:CV:36:ARG:HH11	19:CV:51:VAL:HG11	1.42	0.83
51:D6:39:TYR:CE2	51:D6:40:CYS:O	2.30	0.83
24:BA:654(D):G:N2	24:BA:654(Q):C:N3	2.25	0.83
27:BE:59:VAL:CG1	27:BE:60:ASN:H	1.80	0.83
34:DO:62:LEU:H	34:DO:63:PRO:CD	1.90	0.83
1:AA:1320:C:N3	19:AV:36:ARG:NH1	2.26	0.83
4:CG:13:ARG:CD	4:CG:32:ALA:HB1	2.08	0.83
24:BA:2808:U:O2	24:BA:2892:A:N6	2.09	0.83
1:CA:1502:A:H2	1:CA:1505:G:H1	1.25	0.83
51:D6:15:GLU:HB2	51:D6:47:THR:HG23	1.59	0.83
1:AA:954:G:O6	1:AA:1225:A:N6	2.11	0.83
24:BA:2867:G:OP2	38:BR:119:LYS:NZ	2.12	0.83
1:CA:279:A:OP2	17:CT:95:TYR:OH	1.96	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:9:CYS:SG	4:CG:22:LYS:CE	2.65	0.83
8:AK:30:ARG:CZ	8:AK:30:ARG:HB2	2.09	0.83
24:BA:2873:A:N3	36:B0:5:LYS:HA	1.94	0.83
28:BF:155:LEU:HB2	28:BF:189:THR:HG21	1.60	0.83
46:BZ:60:PHE:HE2	46:BZ:91:LYS:HZ1	1.26	0.83
2:AE:12:GLU:HA	2:AE:16:HIS:CD2	2.14	0.83
42:BT:27:THR:HG23	42:BT:80:ILE:HB	1.60	0.83
24:BA:2751:G:O2'	24:BA:2752:C:O5'	1.96	0.83
35:BP:64:ILE:O	35:BP:65:PHE:CG	2.32	0.83
9:CL:4:TYR:HB2	9:CL:19:LEU:HB2	1.60	0.83
25:DB:90:C:OP2	35:DP:16:ARG:NH2	2.11	0.83
24:BA:2168:G:N7	24:BA:2171:A:N6	2.27	0.82
3:CF:116:VAL:HG11	3:CF:141:VAL:HG21	1.60	0.82
1:CA:429:U:C2'	4:CG:25:ARG:NH2	2.29	0.82
24:DA:654(B):C:N3	24:DA:654(S):G:N1	2.25	0.82
51:D6:39:TYR:CD2	51:D6:39:TYR:O	2.32	0.82
1:AA:468:A:H5''	16:AS:80:PHE:HB3	1.59	0.82
24:DA:1899:G:H21	24:DA:1902:C:H41	1.24	0.82
1:AA:1009:G:O6	1:AA:1020:U:N3	2.09	0.82
43:BU:82:PRO:CD	43:BU:97:ARG:CD	2.53	0.82
45:B3:27:GLU:HG3	45:B3:68:GLU:HA	1.62	0.82
19:CV:31:ILE:HD11	19:CV:50:ALA:H	1.45	0.82
34:DO:71:VAL:HG13	34:DO:72:PRO:HD3	1.59	0.82
25:BB:42:C:O2'	29:BG:67:LYS:O	1.98	0.82
5:CH:78:HIS:HA	8:CK:105:ARG:HG3	1.62	0.82
28:DF:28:ILE:CD1	28:DF:119:ARG:HE	1.91	0.82
24:BA:1409:C:N4	24:BA:1593:G:O6	2.12	0.82
3:CF:44:GLU:HA	3:CF:52:LEU:HD11	1.61	0.82
24:BA:49:A:N7	24:BA:120:U:H5	1.78	0.82
26:DD:35:LYS:HD3	26:DD:35:LYS:N	1.87	0.82
1:AA:928:G:O2'	1:AA:1533:C:OP1	1.96	0.81
24:BA:1899:G:N2	24:BA:1902:C:H41	1.77	0.81
1:CA:1202:G:O2'	14:CQ:27:CYS:SG	2.38	0.81
51:D6:14:THR:O	51:D6:49:HIS:CA	2.28	0.81
34:BO:64:LYS:O	34:BO:66:GLY:N	2.13	0.81
1:CA:1007:C:N3	1:CA:1022:G:N1	2.26	0.81
22:CD:47:U:H3'	22:CD:48:C:H4'	1.62	0.81
24:DA:1063:G:O6	24:DA:1075:C:N4	2.14	0.81
25:DB:5:C:H42	25:DB:115:G:H1	1.28	0.81
30:DH:127:GLU:HG2	30:DH:128:PRO:HD3	1.57	0.81
1:AA:455:C:H42	1:AA:477:G:H1	1.27	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:20:SER:HB2	3:AF:40:ARG:HH22	1.43	0.81
7:AJ:15:ASP:OD1	7:AJ:44:TYR:OH	1.96	0.81
24:BA:1678:G:N2	24:BA:1989:G:H22	1.79	0.81
24:DA:2658:C:N4	24:DA:2663:G:O6	2.11	0.81
27:DE:69:LYS:H	27:DE:69:LYS:HD2	1.43	0.81
30:DH:149:ARG:HA	30:DH:162:ILE:HG21	1.63	0.81
43:DU:50:ARG:C	43:DU:53:PRO:HD3	2.05	0.81
3:CF:164:ARG:CG	3:CF:165:THR:H	1.91	0.81
24:DA:1652:A:OP1	36:D0:8:ARG:NH1	2.13	0.81
27:DE:87:GLU:O	27:DE:89:ASP:N	2.13	0.81
24:BA:2415:G:H4'	34:BO:67:MET:H	1.45	0.81
30:BH:113:VAL:HG11	30:BH:151:ILE:CD1	2.10	0.81
30:DH:3:ARG:HG3	30:DH:4:ILE:HG12	1.62	0.81
24:BA:620:G:H4'	24:BA:621:A:H5''	1.63	0.81
34:BO:38:GLN:HG2	34:BO:45:LEU:HD12	1.63	0.81
37:BQ:106:ARG:HH21	37:BQ:107:GLU:HB3	1.44	0.81
43:BU:80:GLY:C	43:BU:81:LYS:NZ	2.38	0.81
27:DE:23:VAL:HG21	27:DE:183:LEU:HG	1.63	0.81
1:AA:390:C:O3'	16:AS:28:ARG:NH2	2.13	0.81
1:AA:1023:G:H3'	1:AA:1024:G:H5''	1.63	0.81
11:AN:99:GLN:HG2	11:AN:105:VAL:HG11	1.62	0.81
24:BA:1538:G:H2'	24:BA:1539:G:H8	1.46	0.81
27:DE:11:MET:HG3	27:DE:24:THR:HG22	1.61	0.81
1:AA:1447:G:O6	1:AA:1459:C:N4	2.13	0.80
24:BA:2327:A:H2'	24:BA:2328:A:C8	2.16	0.80
34:BO:13:ASN:O	34:BO:15:ARG:N	2.14	0.80
24:DA:1079:C:N4	24:DA:1088:A:OP1	2.14	0.80
24:BA:661:C:O2'	34:BO:13:ASN:O	1.98	0.80
22:CC:8:U:O2	22:CC:14:A:N6	2.14	0.80
22:CD:8:U:O4	22:CD:14:A:N6	2.15	0.80
24:DA:84:A:N6	24:DA:102:G:O2'	2.14	0.80
24:DA:1019:U:OP1	24:DA:1035:U:O2'	1.99	0.80
24:DA:219:G:N2	24:DA:234:C:O2	2.14	0.80
27:DE:66:HIS:CD2	27:DE:67:PHE:CD1	2.69	0.80
34:DO:60:MET:C	34:DO:61:ARG:HG2	2.06	0.80
7:AJ:16:LEU:HD11	9:AL:42:ARG:HA	1.62	0.80
24:BA:993:G:OP1	39:B1:50:ARG:NH2	2.13	0.80
8:CK:12:ARG:HD2	8:CK:26:VAL:HG12	1.63	0.80
24:DA:2542:A:O2'	24:DA:2543:G:O5'	1.99	0.80
24:DA:2749:A:H4'	30:DH:62:LYS:HG2	1.62	0.80
51:D6:15:GLU:HG3	51:D6:47:THR:HG21	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:87:ARG:NH1	2:AE:220:ASP:OD1	2.14	0.80
24:BA:630:G:OP1	53:B8:46:ARG:NH1	2.15	0.80
32:BM:15:LEU:HD21	32:BM:128:HIS:HE1	1.46	0.80
34:BO:70:GLN:N	34:BO:70:GLN:NE2	2.30	0.80
25:DB:30:C:H42	25:DB:54:G:H1	1.28	0.80
28:DF:26:ALA:O	28:DF:27:GLU:CG	2.30	0.80
32:BM:128:HIS:HB2	32:BM:129:PRO:CD	2.11	0.80
28:DF:63:LYS:NZ	28:DF:67:GLN:HE21	1.79	0.80
1:AA:559:A:H4'	1:AA:560:U:H3'	1.64	0.80
2:AE:69:LEU:HB3	2:AE:162:ILE:HG22	1.62	0.80
24:BA:2056:G:N2	50:B5:4:HIS:O	2.15	0.80
24:BA:2485:G:H5''	35:BP:46:GLN:HE21	1.47	0.80
34:BO:6:LEU:HD13	34:BO:7:ARG:N	1.93	0.80
4:CG:108:LEU:HD21	4:CG:183:GLY:HA3	1.64	0.80
30:DH:6:ARG:HE	30:DH:62:LYS:HE3	1.44	0.80
24:BA:771:G:OP1	52:B7:10:ARG:NH1	2.15	0.80
22:CD:6:G:O6	22:CD:67:C:N4	2.15	0.80
24:DA:1800:C:OP2	26:DD:183:ARG:NH2	2.15	0.80
34:DO:60:MET:O	34:DO:61:ARG:CD	2.30	0.80
26:DD:35:LYS:CG	26:DD:64:ILE:HG23	2.10	0.80
30:DH:92:ILE:HG22	30:DH:93:GLY:H	1.45	0.79
44:DV:59:LEU:O	44:DV:61:LEU:N	2.14	0.79
27:DE:26:ILE:O	27:DE:27:LEU:HB2	1.83	0.79
25:BB:43:C:OP1	49:B4:6:HIS:NE2	2.11	0.79
34:BO:6:LEU:O	34:BO:7:ARG:CG	2.30	0.79
24:DA:2795:G:N7	24:DA:2797:U:O2'	2.15	0.79
25:DB:86:G:N1	25:DB:90:C:N3	2.27	0.79
43:BU:83:THR:O	43:BU:83:THR:CG2	2.30	0.79
4:CG:23:GLY:HA3	4:CG:112:VAL:CG2	2.13	0.79
24:DA:2849:U:O4	38:DR:23:ARG:NH2	2.14	0.79
26:DD:35:LYS:HE3	26:DD:64:ILE:CG1	2.13	0.79
1:AA:1133:G:N2	1:AA:1141:C:O2	2.16	0.79
26:BD:221:VAL:HG22	26:BD:226:MET:HE2	1.63	0.79
24:DA:1069:A:H5'	24:DA:1070:A:C8	2.18	0.79
34:DO:60:MET:O	34:DO:61:ARG:CG	2.30	0.79
1:CA:617:G:H1	1:CA:623:C:H42	1.29	0.79
1:CA:987:G:N2	1:CA:1218:C:O2	2.14	0.79
24:DA:2808:U:O2	24:DA:2892:A:N6	2.16	0.79
1:AA:974:A:OP2	14:AQ:41:ARG:NH1	2.14	0.79
26:DD:25:THR:HG22	26:DD:82:ILE:H	1.46	0.79
1:AA:17:U:O2	1:AA:1079:G:N2	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1006:C:O2	1:CA:1023:G:N2	2.16	0.79
24:DA:886:C:H2'	24:DA:888:C:H42	1.46	0.79
24:DA:1111:A:H1'	30:DH:2:SER:HA	1.65	0.79
29:DG:67:LYS:HB3	49:D4:6:HIS:HD2	1.46	0.79
51:D6:19:ARG:HH21	51:D6:52:VAL:HG11	1.46	0.79
1:AA:1007:C:O2	1:AA:1022:G:N2	2.12	0.79
24:BA:1059:G:O6	24:BA:1079:C:N4	2.10	0.79
24:BA:2701:C:H3'	24:BA:2702:U:H5''	1.64	0.79
24:BA:2784:C:O2'	27:BE:37:ARG:NH1	2.16	0.79
16:CS:14:ASN:OD1	16:CS:42:ARG:NH2	2.16	0.79
27:DE:26:ILE:HG22	27:DE:27:LEU:N	1.98	0.79
27:DE:63:LEU:O	27:DE:64:LYS:CG	2.30	0.79
4:CG:187:ARG:NH2	4:CG:193:ASP:OD2	2.15	0.78
43:BU:81:LYS:HB3	43:BU:97:ARG:CD	2.12	0.78
3:CF:35:GLU:OE2	3:CF:59:ARG:NH2	2.15	0.78
24:DA:2068:U:H3	24:DA:2430:A:H2	1.29	0.78
28:DF:188:ARG:HA	34:DO:3:LEU:HD11	1.65	0.78
24:BA:1105:U:H2'	24:BA:1106:G:H8	1.47	0.78
26:DD:35:LYS:HG3	26:DD:64:ILE:N	1.97	0.78
34:DO:64:LYS:O	34:DO:64:LYS:CD	2.32	0.78
51:D6:14:THR:CB	51:D6:20:ASN:O	2.31	0.78
1:AA:941:G:O6	1:AA:1342:C:N4	2.15	0.78
4:AG:28:SER:HG	4:AG:29:PRO:HD2	1.46	0.78
25:BB:40:U:C4	49:B4:2:LYS:HE2	2.19	0.78
28:BF:185:ASP:OD1	28:BF:188:ARG:NH1	2.15	0.78
1:CA:1007:C:O2	1:CA:1022:G:N2	2.16	0.78
4:CG:22:LYS:CD	4:CG:25:ARG:CG	2.48	0.78
25:DB:80:U:H2'	25:DB:81:G:H21	1.48	0.78
1:AA:1381:U:O2	7:AJ:79:ARG:HG2	1.84	0.78
27:BE:63:LEU:O	27:BE:63:LEU:CD1	2.30	0.78
34:BO:88:LEU:HD12	34:BO:95:VAL:HG11	1.65	0.78
19:CV:29:ARG:HD2	19:CV:48:THR:H	1.47	0.78
24:DA:2287:A:H62	24:DA:2344:U:H3	1.32	0.78
37:BQ:26:LEU:HB3	37:BQ:87:PHE:HA	1.65	0.78
24:DA:654(B):C:O2	24:DA:654(S):G:N2	2.12	0.78
34:DO:11:GLY:O	34:DO:13:ASN:N	2.17	0.78
53:D8:40:GLU:H	53:D8:43:GLN:HG3	1.48	0.78
20:AW:69:GLY:O	20:AW:73:HIS:NE2	2.17	0.78
25:DB:18:G:N2	25:DB:65:C:N3	2.30	0.78
35:DP:43:THR:HB	35:DP:45:GLN:HE21	1.48	0.78
49:D4:39:CYS:C	49:D4:40:HIS:ND1	2.42	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AK:25:ASP:OD1	8:AK:25:ASP:N	2.16	0.78
27:BE:61:ARG:HD3	27:BE:61:ARG:N	1.99	0.78
1:CA:1104:G:OP1	2:CE:144:ARG:NH1	2.13	0.78
24:DA:288:C:N4	24:DA:353:G:O6	2.15	0.78
1:AA:64:G:O6	1:AA:99:C:N4	2.16	0.78
22:AD:57:A:H2'	22:AD:58:A:H8	1.49	0.78
24:BA:2390:U:OP2	53:B8:34:TRP:CZ2	2.37	0.78
4:CG:9:CYS:O	4:CG:32:ALA:HB2	1.84	0.78
24:DA:1188:U:H4'	40:D2:79:VAL:HG11	1.66	0.78
24:DA:1332:G:N2	24:DA:1609:A:O2'	2.16	0.78
24:DA:2746:U:OP1	30:DH:85:LYS:NZ	2.14	0.78
28:DF:53:THR:HG23	28:DF:55:GLY:H	1.48	0.78
50:B5:33:CYS:HB2	50:B5:40:LYS:HD3	1.65	0.78
1:CA:1296:C:OP1	13:CP:14:ARG:NH2	2.17	0.78
24:DA:2137:C:N4	24:DA:2154:G:O6	2.18	0.77
25:DB:24:G:N3	25:DB:27:C:N4	2.32	0.77
24:BA:1525:G:H2'	24:BA:1526:G:H8	1.48	0.77
34:BO:6:LEU:HD12	34:BO:7:ARG:N	1.99	0.77
1:CA:589:C:H42	1:CA:650:G:H1	1.32	0.77
20:AW:53:LEU:O	20:AW:57:ARG:HG3	1.84	0.77
24:BA:2580:U:H4'	27:BE:130:GLY:HA3	1.66	0.77
1:CA:411:A:C5	1:CA:413:G:H1'	2.19	0.77
24:DA:660:G:H21	34:DO:12:ALA:HA	1.49	0.77
24:DA:1678:G:N2	24:DA:1989:G:H22	1.80	0.77
24:DA:2467:C:H4'	35:DP:123:HIS:CD2	2.19	0.77
24:DA:2744:G:N2	30:DH:143:GLN:OE1	2.18	0.77
26:DD:35:LYS:NZ	26:DD:64:ILE:HG12	1.99	0.77
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.15	0.77
24:BA:1071:G:N2	24:BA:1091:G:OP2	2.17	0.77
30:BH:4:ILE:HD11	30:BH:7:LEU:HG	1.66	0.77
13:CP:37:THR:O	13:CP:55:ARG:NH2	2.17	0.77
26:DD:34:VAL:CG2	26:DD:35:LYS:HE2	2.09	0.77
34:DO:71:VAL:HG12	34:DO:72:PRO:HD3	0.79	0.77
1:AA:198:G:O6	1:AA:219:C:N4	2.17	0.77
1:AA:446:G:H1	1:AA:488:C:H42	1.30	0.77
24:BA:1091:G:N1	24:BA:1100:C:N3	2.30	0.77
24:DA:2666:C:N3	30:DH:152:ARG:NH2	2.33	0.77
41:DS:65:LEU:HD13	41:DS:68:ARG:HD2	1.67	0.77
10:AM:49:VAL:HG23	14:AQ:41:ARG:HB2	1.67	0.77
12:AO:47:LYS:N	12:AO:48:PRO:CD	2.46	0.77
24:BA:1085:A:H4'	24:BA:1086:A:H5'	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1086:A:O2'	24:BA:1103:A:N1	2.18	0.77
24:BA:2789:C:O2	24:BA:2894:G:N2	2.17	0.77
4:CG:19:LEU:O	4:CG:26:CYS:SG	2.43	0.77
5:CH:92:LYS:HB3	5:CH:119:LEU:HB2	1.66	0.77
24:DA:2357:U:OP1	45:D3:20:ARG:NH1	2.15	0.77
24:BA:1112:G:HO2'	30:BH:2:SER:HB3	1.50	0.77
44:BV:19:ARG:NH1	44:BV:84:GLU:O	2.18	0.77
28:DF:25:PRO:HB3	28:DF:119:ARG:HD3	1.65	0.77
44:DV:92:SER:O	44:DV:94:GLU:N	2.17	0.77
24:BA:780:G:H21	24:BA:783:A:H62	1.33	0.77
1:CA:78:G:O6	1:CA:91:C:N4	2.16	0.77
24:DA:1049:C:N3	30:DH:2:SER:N	2.33	0.77
24:DA:1542:G:H3'	24:DA:1543:A:H5''	1.67	0.77
24:DA:2343:C:O2'	24:DA:2373:G:O2'	1.97	0.77
34:DO:71:VAL:HG13	34:DO:72:PRO:CD	2.14	0.77
24:BA:640:C:H42	24:BA:648:G:H1	1.30	0.77
1:CA:415:A:N6	1:CA:428:G:O6	2.17	0.77
1:CA:1289:A:OP1	21:CX:9:ARG:NH2	2.17	0.77
1:CA:1309:G:O2'	13:CP:77:ASN:ND2	2.18	0.77
24:DA:529:A:H4'	24:DA:530:G:H5'	1.67	0.77
24:DA:1689:A:H62	24:DA:1698:A:H2	1.31	0.77
28:DF:3:GLU:CA	28:DF:24:LEU:HG	2.14	0.77
24:BA:601:C:OP1	28:BF:108:LYS:NZ	2.18	0.76
24:BA:602:G:HO2'	24:BA:604:G:HO2'	1.31	0.76
32:BM:53:VAL:HG11	32:BM:128:HIS:CD2	2.20	0.76
43:BU:81:LYS:CD	43:BU:97:ARG:CZ	2.62	0.76
53:B8:34:TRP:CZ3	53:B8:35:GLN:OE1	2.38	0.76
1:CA:412:A:C6	4:CG:35:ARG:HD2	2.20	0.76
3:CF:131:ARG:HH21	3:CF:164:ARG:NH2	1.82	0.76
34:DO:62:LEU:CD1	53:D8:25:MET:HB2	2.14	0.76
1:AA:1006:C:O2	1:AA:1023:G:N2	2.15	0.76
12:AO:47:LYS:N	12:AO:48:PRO:HD2	2.00	0.76
27:DE:9:VAL:CG2	27:DE:25:VAL:CG1	2.61	0.76
27:DE:63:LEU:O	27:DE:64:LYS:CB	2.32	0.76
27:DE:66:HIS:CG	27:DE:67:PHE:HA	2.20	0.76
29:DG:68:PRO:HA	29:DG:92:VAL:HB	1.66	0.76
1:AA:1502:A:H2	1:AA:1505:G:H1	1.29	0.76
24:BA:631:A:OP2	53:B8:46:ARG:NH2	2.19	0.76
22:CC:54:U:O2	22:CC:58:A:N6	2.13	0.76
44:DV:151:HIS:HB3	44:DV:167:PRO:HB3	1.67	0.76
1:AA:78:G:O6	1:AA:90:C:N4	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:339:C:OP2	33:BN:97:ARG:NH1	2.19	0.76
24:BA:1169:G:H1	24:BA:1180:C:H42	1.30	0.76
24:BA:2811:G:H5'	27:BE:60:ASN:HD22	1.50	0.76
27:BE:47:VAL:HG11	27:BE:86:PRO:HD2	1.67	0.76
24:DA:993:G:OP1	39:D1:50:ARG:NH2	2.17	0.76
51:D6:15:GLU:CG	51:D6:16:CYS:H	1.91	0.76
51:B6:13:CYS:HA	51:B6:51:GLU:HA	1.68	0.76
22:CD:16:C:H5''	22:CD:17:C:H5	1.49	0.76
24:DA:2873:A:H8	36:D0:6:SER:H	1.33	0.76
38:DR:55:ASN:H	38:DR:59:THR:HG22	1.50	0.76
24:DA:2297:C:O2	24:DA:2321:G:N2	2.15	0.76
44:DV:77:ASP:OD2	44:DV:80:ARG:NH1	2.19	0.76
1:AA:1060:C:H5''	10:AM:51:ARG:HG2	1.66	0.76
24:BA:2531:A:H4'	30:BH:157:TYR:CE2	2.21	0.76
1:CA:186:C:H42	1:CA:191:G:H1	1.33	0.76
32:DM:4:TYR:O	39:D1:64:ARG:NH1	2.18	0.76
32:DM:56:ASN:H	32:DM:125:GLY:HA3	1.51	0.76
25:BB:39:A:H2'	25:BB:40:U:C6	2.21	0.76
1:CA:1260:C:O2	1:CA:1275:A:N6	2.18	0.76
28:DF:66:PRO:O	28:DF:67:GLN:CB	2.32	0.76
35:DP:26:TYR:OH	35:DP:141:GLN:OE1	2.03	0.76
44:DV:161:VAL:HG23	44:DV:162:GLU:HG2	1.67	0.76
1:AA:1360:A:OP2	14:AQ:35:ARG:NH2	2.19	0.76
24:BA:1087:G:N2	24:BA:1102:C:O2	2.18	0.76
24:BA:2142:C:O2	24:BA:2149:G:N2	2.14	0.76
27:BE:61:ARG:N	27:BE:62:PRO:HD2	2.01	0.76
30:BH:157:TYR:O	30:BH:158:HIS:CG	2.39	0.76
28:DF:8:GLN:HA	28:DF:15:SER:HA	1.68	0.76
40:D2:10:LYS:NZ	40:D2:23:GLU:OE1	2.15	0.76
1:AA:79:G:H22	1:AA:89:U:H3	1.33	0.76
5:AH:63:ARG:HA	5:AH:66:MET:HE2	1.67	0.76
30:BH:4:ILE:HD11	30:BH:7:LEU:H	1.51	0.76
4:CG:12:CYS:CB	4:CG:31:CYS:SG	2.74	0.76
5:CH:100:VAL:O	5:CH:107:ARG:NH2	2.18	0.76
24:DA:2638:G:P	27:DE:82:ARG:NH2	2.55	0.76
26:DD:17:THR:O	26:DD:211:ARG:NH2	2.19	0.76
44:DV:103:ARG:HB2	44:DV:138:GLU:HA	1.66	0.76
51:D6:14:THR:O	51:D6:49:HIS:CB	2.33	0.76
1:AA:1129:C:H4'	1:AA:1130:A:H5'	1.68	0.75
25:BB:40:U:O2	25:BB:45:A:N6	2.18	0.75
4:CG:22:LYS:HZ2	4:CG:26:CYS:CA	1.98	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2419:U:O4	53:B8:30:ARG:NE	2.18	0.75
24:DA:1093:G:N1	24:DA:1097:U:OP2	2.19	0.75
37:DQ:3:ARG:HE	37:DQ:4:LEU:N	1.83	0.75
24:BA:2392:A:H8	34:BO:60:MET:HB3	1.51	0.75
3:CF:13:GLY:HA3	14:CQ:57:ARG:HE	1.50	0.75
4:CG:35:ARG:O	4:CG:36:ARG:CG	2.33	0.75
27:DE:11:MET:CE	27:DE:24:THR:CG2	2.64	0.75
2:CE:82:ARG:H	2:CE:94:ASN:HD21	1.34	0.75
4:CG:30:LYS:O	4:CG:31:CYS:HB3	1.86	0.75
20:CW:57:ARG:HH21	20:CW:102:GLY:HA2	1.51	0.75
24:DA:1728:G:H8	24:DA:1732:A:H62	1.33	0.75
16:AS:19:ILE:HG22	16:AS:36:ILE:HG13	1.67	0.75
22:AD:51:C:N3	22:AD:63:G:N1	2.29	0.75
24:BA:2123:G:O6	24:BA:2175:C:N4	2.19	0.75
26:BD:35:LYS:HG2	26:BD:64:ILE:N	2.02	0.75
1:CA:1103:C:O2'	2:CE:111:ARG:NH1	2.20	0.75
4:AG:9:CYS:HB3	4:AG:32:ALA:HB2	0.84	0.75
24:BA:1062:G:N1	24:BA:1076:C:N3	2.33	0.75
26:BD:69:ARG:NH2	26:BD:128:GLY:O	2.19	0.75
30:BH:4:ILE:CD1	30:BH:7:LEU:H	1.99	0.75
34:BO:65:ARG:HH21	53:B8:15:LYS:HB2	1.50	0.75
19:CV:50:ALA:HB1	19:CV:57:HIS:HB3	1.68	0.75
53:D8:29:LYS:HB2	53:D8:44:LYS:HB3	1.67	0.75
30:BH:92:ILE:HD12	30:BH:160:LYS:CE	2.06	0.75
2:CE:195:ASP:O	8:CK:68:ARG:NH2	2.19	0.75
24:DA:93:C:C5'	43:DU:54:LYS:NZ	2.50	0.75
24:DA:1036:G:N1	24:DA:1119:C:N3	2.29	0.75
49:D4:39:CYS:HB3	49:D4:41:PRO:CD	2.17	0.75
11:AN:54:ARG:NH2	22:AD:39:C:O2'	2.19	0.75
34:BO:71:VAL:O	34:BO:72:PRO:C	2.30	0.75
24:DA:1036:G:N2	24:DA:1119:C:O2	2.15	0.75
24:DA:1899:G:H21	24:DA:1902:C:N4	1.84	0.75
34:DO:62:LEU:HD22	53:D8:27:THR:CG2	2.17	0.75
2:AE:100:GLY:N	2:AE:176:GLU:OE2	2.20	0.75
20:AW:22:ARG:O	20:AW:26:ASN:ND2	2.20	0.75
21:CX:9:ARG:O	21:CX:13:ILE:N	2.19	0.75
25:DB:86:G:O6	25:DB:90:C:N4	2.15	0.75
34:DO:62:LEU:N	34:DO:63:PRO:HD3	1.96	0.75
24:BA:654(B):C:N4	24:BA:654(S):G:O6	2.20	0.74
24:BA:960:A:H61	35:BP:83:MET:HE2	1.51	0.74
1:CA:5:U:O2'	4:CG:84:LYS:NZ	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:13:ARG:CA	27:DE:21:VAL:O	2.35	0.74
2:AE:21:ARG:HG2	2:AE:22:LYS:HG2	1.69	0.74
24:BA:2756:U:O4	24:BA:2758:A:N6	2.19	0.74
27:BE:50:GLY:HA2	27:BE:77:ILE:HA	1.69	0.74
42:BT:8:ILE:HD11	42:BT:43:VAL:HG22	1.69	0.74
1:CA:6:G:P	4:CG:84:LYS:HZ3	2.09	0.74
4:CG:30:LYS:O	4:CG:31:CYS:CB	2.35	0.74
25:DB:1(M):A:N6	25:DB:117:G:N7	2.35	0.74
1:AA:438:G:H2'	1:AA:494:U:O4	1.87	0.74
24:BA:1509:C:H3'	24:BA:1510:A:H5''	1.69	0.74
24:BA:2751:G:N2	30:BH:3:ARG:NE	2.35	0.74
25:BB:42:C:O2	29:BG:93:THR:N	2.17	0.74
44:BV:145:GLU:HB3	44:BV:148:ASP:HB2	1.69	0.74
1:CA:1147:C:H2'	9:CL:16:ARG:NH2	2.02	0.74
24:DA:2420:C:H41	53:D8:31:HIS:HB3	1.52	0.74
27:DE:71:GLY:C	27:DE:73:GLU:H	1.95	0.74
37:DQ:12:PHE:O	37:DQ:16:ASN:ND2	2.20	0.74
1:AA:966:G:O2'	9:AL:127:LYS:O	2.04	0.74
24:BA:2133:G:H1'	24:BA:2158:A:H61	1.52	0.74
4:CG:22:LYS:NZ	4:CG:26:CYS:N	2.30	0.74
27:DE:69:LYS:HD2	27:DE:69:LYS:N	2.03	0.74
39:D1:90:VAL:O	39:D1:92:ARG:N	2.21	0.74
41:DS:59:VAL:HG23	41:DS:65:LEU:H	1.51	0.74
49:D4:56:VAL:HA	49:D4:60:GLN:HE22	1.50	0.74
1:AA:154:C:O2	1:AA:167:G:N2	2.19	0.74
24:BA:469:G:O6	52:B7:37:LYS:NZ	2.20	0.74
24:BA:2127:G:N1	24:BA:2161:C:N3	2.35	0.74
1:CA:1139:G:N2	1:CA:1142:G:O6	2.21	0.74
28:DF:101:LEU:O	28:DF:106:ARG:NH1	2.20	0.74
1:AA:439:A:OP2	1:AA:493:G:N1	2.20	0.74
4:AG:157:LEU:O	4:AG:161:ASN:ND2	2.20	0.74
19:AV:19:VAL:HG21	19:AV:44:MET:HE2	1.68	0.74
24:BA:882:G:O6	24:BA:893:C:N4	2.20	0.74
24:BA:1064:C:N3	24:BA:1074:G:N2	2.34	0.74
24:BA:2099:U:N3	24:BA:2190:G:O6	2.16	0.74
35:BP:64:ILE:HG22	35:BP:65:PHE:N	2.01	0.74
1:CA:1305:G:N2	1:CA:1331:G:H2'	2.02	0.74
7:CJ:35:LYS:HG3	7:CJ:38:LEU:HB3	1.68	0.74
19:CV:33:THR:HG22	19:CV:35:SER:H	1.53	0.74
24:DA:527:C:N4	24:DA:2779:U:OP2	2.21	0.74
1:AA:1454:G:OP1	20:AW:39:LYS:NZ	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:41:VAL:HG12	19:AV:44:MET:HB2	1.68	0.74
24:BA:2000:G:OP1	36:B0:5:LYS:NZ	2.20	0.74
24:BA:2789:C:N3	24:BA:2894:G:N1	2.34	0.74
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.88	0.74
24:DA:780:G:H21	24:DA:783:A:H62	1.35	0.74
24:DA:1171:G:O2'	24:DA:1173:G:O5'	2.04	0.74
24:DA:2139:C:H42	24:DA:2152:G:H1	1.36	0.74
25:DB:15:A:H5'	25:DB:16:G:C8	2.21	0.74
32:DM:91:LEU:HA	32:DM:95:PRO:HB3	1.68	0.74
1:AA:528:C:H41	12:AO:49:ASN:HD22	1.34	0.74
43:BU:38:ILE:HD11	43:BU:64:GLU:HG3	1.67	0.74
24:DA:93:C:H4'	43:DU:54:LYS:NZ	2.03	0.74
24:BA:2820:A:H4'	36:B0:3:HIS:HD2	1.53	0.74
24:DA:403:U:H4'	24:DA:404:C:H5'	1.70	0.74
24:DA:854:G:O6	24:DA:923:C:N4	2.20	0.74
24:DA:1037:G:O6	24:DA:1118:C:N4	2.17	0.74
24:DA:1477:A:N6	24:DA:1516:U:O4	2.18	0.74
30:BH:46:GLU:HB2	30:BH:49:VAL:HG23	1.70	0.73
24:DA:768:G:O2'	24:DA:1379:A:N6	2.21	0.73
24:DA:989:G:OP2	48:DX:11:SER:OG	2.05	0.73
24:DA:1039:G:O6	24:DA:1116:C:N4	2.19	0.73
24:DA:2652:C:H42	24:DA:2668:G:H1	1.36	0.73
1:AA:450:G:OP1	16:AS:43:LYS:NZ	2.20	0.73
5:AH:35:GLY:HA3	5:AH:112:LEU:HB3	1.70	0.73
22:AD:76:A:O2'	24:BA:2394:C:N3	2.17	0.73
24:BA:1093:G:N1	24:BA:1097:U:OP2	2.20	0.73
47:BW:4:SER:HB2	47:BW:5:GLU:OE2	1.87	0.73
50:B5:38:ALA:HB3	50:B5:40:LYS:HE3	1.70	0.73
1:CA:1232:U:H5''	9:CL:124:GLN:HB3	1.69	0.73
24:DA:2124:G:O6	24:DA:2174:C:N4	2.16	0.73
24:DA:2875:C:H4'	38:DR:5:ALA:HB2	1.69	0.73
4:AG:163:GLU:OE2	4:AG:166:LYS:NZ	2.20	0.73
24:BA:1112:G:O3'	30:BH:2:SER:N	2.22	0.73
24:BA:1778:U:H2'	24:BA:1784:A:N6	2.03	0.73
24:BA:2370:G:N3	51:B6:45:LYS:NZ	2.36	0.73
1:CA:963:G:N3	10:CM:55:LYS:NZ	2.35	0.73
5:CH:101:ILE:HD11	5:CH:119:LEU:HD23	1.71	0.73
24:DA:889:C:H2'	24:DA:890:A:H4'	1.70	0.73
34:DO:62:LEU:HD11	53:D8:25:MET:CA	2.16	0.73
3:CF:20:SER:OG	3:CF:40:ARG:NH2	2.20	0.73
3:CF:70:VAL:HG12	3:CF:72:LYS:H	1.51	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:25:PRO:O	28:DF:26:ALA:HB3	1.89	0.73
1:CA:411:A:H62	1:CA:413:G:H21	1.35	0.73
24:DA:2757:A:N1	30:DH:67:LEU:HD11	2.03	0.73
27:DE:69:LYS:O	27:DE:70:ALA:HB2	1.88	0.73
28:DF:25:PRO:O	28:DF:26:ALA:CB	2.36	0.73
3:AF:127:ARG:NH2	3:AF:192:THR:OG1	2.21	0.73
4:AG:191:ARG:HH12	4:AG:195:ALA:HA	1.54	0.73
24:BA:881:G:N1	24:BA:895:U:O4	2.19	0.73
39:B1:92:ARG:O	39:B1:94:ASN:N	2.20	0.73
1:CA:526:C:OP2	12:CO:91:LYS:NZ	2.22	0.73
1:CA:1028(A):C:N3	1:CA:1032(B):G:N1	2.31	0.73
2:CE:5:ILE:HG13	2:CE:56:ARG:HH12	1.54	0.73
33:DN:63:VAL:HG12	33:DN:106:LEU:HD11	1.71	0.73
13:AP:37:THR:O	13:AP:55:ARG:NH2	2.21	0.73
24:BA:873:G:H1	24:BA:904:C:H42	1.36	0.73
24:BA:2393:A:H4'	34:BO:61:ARG:H	1.54	0.73
24:BA:2438:U:O3'	24:BA:2439:A:H3'	1.88	0.73
32:BM:76:SER:O	32:BM:78:TYR:N	2.20	0.73
1:CA:429:U:O2'	4:CG:25:ARG:NE	2.21	0.73
1:CA:1326:C:OP1	21:CX:17:THR:OG1	2.07	0.73
24:DA:1070:A:H8	24:DA:1096:A:H1'	1.52	0.73
24:DA:2749:A:N1	24:DA:2750:A:N6	2.36	0.73
1:AA:358:U:O3'	31:DK:87:LYS:HD3	1.89	0.73
1:AA:1125:U:OP2	1:AA:1145:C:N4	2.22	0.73
4:CG:199:ASN:O	4:CG:201:GLN:N	2.22	0.73
17:CT:66:SER:O	17:CT:70:ARG:NH1	2.21	0.73
9:AL:16:ARG:HB2	9:AL:64:THR:HG22	1.69	0.73
22:AD:15:G:O6	22:AD:48:C:O2'	2.04	0.73
24:BA:67:U:H3	24:BA:74:A:H2	1.33	0.73
24:BA:1403:C:H5''	24:BA:1471:A:H1'	1.69	0.73
24:BA:2404:C:O3'	34:BO:77:ARG:NH2	2.21	0.73
38:BR:26:ASP:HB3	38:BR:91:ARG:HA	1.70	0.73
43:BU:81:LYS:HD3	43:BU:97:ARG:NH1	2.03	0.73
1:CA:1117:G:N2	1:CA:1180:A:O2'	2.22	0.73
2:CE:33:TYR:HB3	2:CE:41:ILE:HG22	1.71	0.73
24:DA:2365:G:N7	53:D8:39:LYS:NZ	2.36	0.73
51:D6:12:GLU:HG3	51:D6:21:TYR:CE1	2.23	0.73
51:D6:14:THR:HG21	51:D6:19:ARG:HG3	1.69	0.73
30:BH:153:LYS:HG2	30:BH:154:PRO:CD	2.15	0.73
38:BR:1:MET:O	38:BR:3:ARG:N	2.20	0.73
1:CA:988:G:N1	1:CA:1217:C:N3	2.32	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2681:C:H5	24:DA:2725:A:H62	1.36	0.73
36:D0:34:ILE:HG22	36:D0:114:VAL:HB	1.69	0.73
2:AE:77:ALA:HB2	2:AE:211:ILE:HD13	1.70	0.72
5:CH:122:GLU:O	5:CH:126:ARG:NH1	2.22	0.72
14:CQ:24:CYS:SG	14:CQ:29:ARG:NH1	2.61	0.72
1:AA:1114:C:H42	1:AA:1186:G:H1	1.37	0.72
1:AA:1127:G:N1	1:AA:1145:C:O2	2.22	0.72
24:BA:270(F):U:H3	24:BA:270(T):G:H1	1.36	0.72
9:AL:46:ALA:HA	9:AL:78:LYS:HB2	1.70	0.72
31:BK:59:ALA:O	31:BK:63:ALA:N	2.21	0.72
34:BO:52:GLU:HG3	34:BO:57:THR:HG22	1.71	0.72
1:AA:590:C:OP1	8:AK:30:ARG:NH1	2.21	0.72
2:AE:15:VAL:HG22	2:AE:209:ARG:HB2	1.71	0.72
2:AE:88:ALA:HB2	2:AE:219:VAL:HG13	1.71	0.72
2:AE:208:ILE:HD13	2:AE:239:VAL:HG13	1.70	0.72
7:CJ:23:VAL:HG13	7:CJ:43:PHE:HE2	1.54	0.72
21:CX:2:GLY:O	21:CX:4:GLY:N	2.17	0.72
24:DA:1057:A:N6	24:DA:1088:A:OP2	2.21	0.72
28:DF:28:ILE:HD13	28:DF:119:ARG:HH21	1.53	0.72
36:D0:67:LEU:HD12	36:D0:76:VAL:HG21	1.71	0.72
47:DW:22:GLU:HG2	47:DW:64:LEU:HD11	1.71	0.72
1:CA:412:A:C5	4:CG:35:ARG:HD2	2.25	0.72
1:CA:1037:C:H2'	1:CA:1038:C:C6	2.24	0.72
11:CN:127:LYS:HE3	11:CN:127:LYS:H	1.54	0.72
25:DB:49:C:OP2	37:DQ:30:ARG:NH1	2.23	0.72
1:AA:1304:G:OP1	21:AX:2:GLY:N	2.23	0.72
30:BH:153:LYS:HG3	30:BH:154:PRO:CD	2.14	0.72
1:CA:1075:C:H5''	2:CE:179:LYS:HZ1	1.54	0.72
1:CA:890:G:O2'	1:CA:906:G:O6	2.07	0.72
9:CL:16:ARG:HD3	9:CL:18:PHE:CZ	2.24	0.72
24:DA:1105:U:H2'	24:DA:1106:G:H8	1.53	0.72
43:BU:4:LYS:HE3	43:BU:5:MET:H	1.53	0.72
24:DA:7:G:H1	24:DA:2896:C:H42	1.38	0.72
24:DA:1247:A:OP1	28:DF:95:ARG:NH2	2.22	0.72
28:DF:23:ASP:C	28:DF:24:LEU:HD22	2.15	0.72
33:DN:120:GLU:OE2	38:DR:67:SER:OG	2.07	0.72
4:AG:29:PRO:O	4:AG:30:LYS:HB3	1.89	0.72
24:DA:661:C:O2'	34:DO:13:ASN:O	2.06	0.72
24:DA:883:G:H1	24:DA:893:C:N4	1.87	0.72
24:DA:1225:C:O2'	40:D2:85:LYS:N	2.15	0.72
34:DO:47:ASP:HB3	34:DO:48:PRO:HA	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1319:A:OP2	19:AV:5:LEU:HD21	1.89	0.72
1:AA:1161:C:N4	1:AA:1175:G:O6	2.19	0.71
1:AA:1192:C:OP2	3:AF:4:LYS:NZ	2.22	0.71
2:AE:60:ASP:N	2:AE:60:ASP:OD1	2.22	0.71
5:AH:144:THR:HG22	5:AH:146:ALA:H	1.54	0.71
19:AV:41:VAL:HB	19:AV:42:PRO:HA	1.71	0.71
20:AW:89:ARG:HD2	20:AW:104:LEU:HD11	1.72	0.71
39:D1:90:VAL:HG22	40:D2:39:LEU:HB3	1.71	0.71
1:AA:403:C:O2'	4:AG:122:ARG:NH1	2.21	0.71
24:BA:1888:G:N2	24:BA:1888:G:OP2	2.23	0.71
24:BA:1899:G:O2'	24:BA:1900:A:O5'	2.07	0.71
1:CA:438:G:H4'	4:CG:123:HIS:HD1	1.54	0.71
8:CK:10:LEU:HD22	8:CK:83:ILE:HD11	1.71	0.71
24:DA:1071:G:N3	24:DA:1089:G:O2'	2.22	0.71
24:DA:1093:G:H22	24:DA:1097:U:H5''	1.54	0.71
1:AA:591:U:H2'	1:AA:592:G:H8	1.55	0.71
2:AE:235:SER:O	2:AE:237:ALA:N	2.22	0.71
24:BA:2610:C:H4'	24:BA:2611:U:OP2	1.88	0.71
24:DA:2163:C:H5''	24:DA:2171:A:C8	2.25	0.71
29:DG:11:TYR:HA	29:DG:15:VAL:HB	1.73	0.71
30:BH:154:PRO:O	30:BH:155:SER:CB	2.38	0.71
1:CA:1057:G:H1	1:CA:1203:C:H42	1.37	0.71
24:DA:2023:G:OP2	24:DA:2617:C:H4'	1.90	0.71
24:BA:2635:C:H5''	27:BE:78:LEU:HA	1.72	0.71
32:BM:95:PRO:O	32:BM:97:ARG:N	2.24	0.71
12:CO:70:ILE:HD13	12:CO:77:LEU:HD12	1.72	0.71
22:CD:8:U:H3	22:CD:15:G:H22	1.38	0.71
22:CD:36:U:H2'	22:CD:37:A:H8	1.54	0.71
24:DA:2611:U:H2'	50:D5:3:LYS:HG3	1.72	0.71
28:DF:133:ASN:ND2	28:DF:138:GLU:OE2	2.23	0.71
15:AR:26:GLU:OE2	15:AR:77:ARG:NH1	2.23	0.71
24:BA:1064:C:N4	24:BA:1070:A:OP1	2.24	0.71
26:BD:12:SER:HB2	26:BD:208:LYS:HB3	1.73	0.71
30:BH:4:ILE:C	30:BH:4:ILE:CD1	2.63	0.71
31:BK:21:VAL:HG21	31:BK:25:TYR:HD2	1.55	0.71
43:BU:80:GLY:C	43:BU:81:LYS:HZ1	1.96	0.71
44:BV:72:ARG:NH2	44:BV:97:GLU:O	2.24	0.71
1:CA:1004:A:O2'	1:CA:1036:G:N1	2.24	0.71
24:DA:2:G:H1	24:DA:2901:C:H42	1.38	0.71
24:DA:2343:C:HO2'	24:DA:2373:G:HO2'	1.22	0.71
26:DD:85:ASP:HB2	26:DD:92:ILE:HD13	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:33:LEU:HD23	44:DV:90:VAL:HG21	1.73	0.71
53:D8:33:ASN:HA	53:D8:34:TRP:CE3	2.26	0.71
1:AA:76:G:N1	1:AA:93:U:O2	2.19	0.71
25:BB:43:C:O2	29:BG:95:ARG:NH2	2.18	0.71
39:B1:97:ASP:OD2	39:B1:101:ARG:NH1	2.23	0.71
6:CI:15:ASP:OD1	6:CI:17:SER:N	2.23	0.71
24:DA:1228:G:OP2	39:D1:16:LYS:NZ	2.22	0.71
24:DA:1569:A:H2'	24:DA:1570:A:C8	2.26	0.71
1:AA:528:C:N4	12:AO:49:ASN:ND2	2.36	0.71
24:BA:138:G:N2	42:BT:44:GLU:OE2	2.18	0.71
24:BA:2723:C:O2'	36:B0:2:ARG:NH1	2.24	0.71
24:BA:2884:U:O2	50:B5:52:TYR:OH	2.09	0.71
1:CA:708:C:OP1	11:CN:85:ARG:NH2	2.18	0.71
1:CA:947:G:H4'	13:CP:109:THR:HG23	1.72	0.71
7:CJ:113:GLU:O	7:CJ:119:ARG:NH1	2.22	0.71
19:CV:29:ARG:NH1	19:CV:46:GLY:O	2.23	0.71
30:DH:6:ARG:NE	30:DH:62:LYS:HE3	2.05	0.71
1:AA:601:C:H2'	1:AA:602:A:H8	1.54	0.71
3:CF:75:VAL:O	3:CF:83:ARG:NE	2.23	0.71
19:CV:40:ILE:HD11	19:CV:67:VAL:H	1.56	0.71
24:DA:907:U:O2'	35:DP:101:ARG:NH2	2.21	0.71
27:DE:76:ARG:O	27:DE:78:LEU:N	2.22	0.71
28:DF:63:LYS:HZ3	28:DF:67:GLN:HE21	1.39	0.71
49:D4:43:TYR:O	49:D4:46:GLN:N	2.23	0.71
24:BA:792:G:H5''	24:BA:793:A:H5'	1.73	0.71
31:BK:130:TYR:HB3	31:BK:136:VAL:HG13	1.73	0.71
35:BP:55:VAL:HG12	35:BP:64:ILE:HD11	1.72	0.71
49:B4:2:LYS:N	49:B4:2:LYS:HE3	2.06	0.71
1:CA:1224:G:O3'	13:CP:102:ARG:NH1	2.23	0.71
24:DA:958:U:OP2	35:DP:14:ARG:NH1	2.23	0.71
24:DA:2315:G:OP1	29:DG:36:LYS:NZ	2.22	0.71
27:DE:60:ASN:ND2	27:DE:63:LEU:HD21	2.03	0.71
27:DE:72:VAL:O	27:DE:72:VAL:HG12	1.90	0.71
29:DG:36:LYS:HE2	29:DG:160:VAL:HG21	1.72	0.71
19:AV:4:SER:OG	19:AV:5:LEU:N	2.12	0.70
24:BA:2102:U:H3	24:BA:2187:G:H1	1.39	0.70
24:BA:2419:U:OP2	53:B8:33:ASN:ND2	2.24	0.70
44:BV:59:LEU:HD12	44:BV:69:THR:HG21	1.73	0.70
1:CA:961:U:O2	1:CA:1201:A:N6	2.18	0.70
1:CA:1443:G:H3'	1:CA:1446:A:H5''	1.71	0.70
9:CL:17:VAL:HA	9:CL:63:ILE:HG12	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CO:117:ARG:HB3	12:CO:122:THR:HB	1.71	0.70
34:DO:62:LEU:N	34:DO:63:PRO:CD	2.52	0.70
1:AA:664:G:H22	1:AA:741:G:H1	1.39	0.70
1:AA:936:C:O2	1:AA:1382:C:N4	2.20	0.70
8:AK:85:ARG:NE	8:AK:87:SER:O	2.24	0.70
19:AV:40:ILE:HG12	19:AV:41:VAL:HG13	1.71	0.70
24:BA:273(F):C:H3'	24:BA:274:G:H5''	1.73	0.70
24:BA:1070:A:H4'	24:BA:1071:G:H5''	1.72	0.70
24:BA:1689:A:H62	24:BA:1698:A:H2	1.35	0.70
1:CA:409:G:H1	1:CA:433:C:H42	1.39	0.70
1:CA:1023:G:H3'	1:CA:1024:G:H5''	1.72	0.70
3:CF:81:GLY:HA2	3:CF:85:ARG:HH21	1.54	0.70
4:CG:22:LYS:HZ3	4:CG:25:ARG:CG	2.03	0.70
24:DA:1058:U:H2'	24:DA:1059:G:C8	2.26	0.70
27:DE:11:MET:HE3	27:DE:24:THR:HG23	1.73	0.70
1:AA:748:C:H4'	1:AA:749:C:O5'	1.92	0.70
30:BH:126:PRO:HG2	30:BH:130:ARG:HH12	1.55	0.70
34:BO:61:ARG:HB3	53:B8:13:ARG:HD3	1.72	0.70
43:BU:81:LYS:HB3	43:BU:82:PRO:HD2	1.73	0.70
49:B4:52:THR:OG1	49:B4:53:GLU:N	2.22	0.70
1:CA:427:U:OP1	4:CG:13:ARG:NH2	2.24	0.70
1:CA:1129:C:N4	1:CA:1141:C:H41	1.89	0.70
2:CE:101:MET:HA	2:CE:108:ILE:HG13	1.73	0.70
9:CL:9:ARG:HH21	9:CL:104:ARG:HD2	1.56	0.70
10:CM:61:GLU:HG3	14:CQ:58:LYS:HE2	1.73	0.70
22:CC:8:U:O2'	22:CC:21:A:N1	2.25	0.70
27:DE:9:VAL:HG21	27:DE:25:VAL:HG11	1.72	0.70
1:AA:403:C:OP2	4:AG:74:GLN:NE2	2.24	0.70
1:AA:977:A:H8	1:AA:1223:C:C4	2.10	0.70
7:AJ:15:ASP:HB3	7:AJ:20:ASP:H	1.56	0.70
9:AL:28:VAL:HG22	9:AL:63:ILE:HB	1.72	0.70
19:AV:40:ILE:HD11	19:AV:62:ILE:HD13	1.73	0.70
24:BA:998:C:OP2	39:B1:58:ARG:NH1	2.23	0.70
24:BA:1057:A:N6	24:BA:1087:G:OP1	2.18	0.70
24:BA:1695:G:N7	26:BD:14:ARG:NH2	2.38	0.70
43:BU:10:GLY:O	43:BU:26:LYS:NZ	2.24	0.70
1:CA:136:C:H42	1:CA:227:G:H1	1.38	0.70
4:CG:157:LEU:O	4:CG:161:ASN:ND2	2.24	0.70
19:CV:29:ARG:HH12	19:CV:61:TYR:HD1	1.40	0.70
51:D6:14:THR:HB	51:D6:20:ASN:C	2.17	0.70
13:AP:13:LYS:O	13:AP:44:ARG:NH1	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:416:C:N4	24:BA:2407:G:O6	2.16	0.70
24:BA:1649:G:O2'	36:B0:107:ASP:OD2	2.10	0.70
24:BA:2068:U:H3	24:BA:2430:A:H2	1.37	0.70
26:BD:35:LYS:NZ	26:BD:104:TYR:HB2	2.06	0.70
36:B0:2:ARG:HD3	36:B0:2:ARG:N	2.05	0.70
13:CP:57:ARG:NH1	49:D4:34:GLU:O	2.24	0.70
14:CQ:45:ARG:O	14:CQ:49:HIS:ND1	2.23	0.70
39:D1:92:ARG:HG3	39:D1:94:ASN:HB3	1.73	0.70
44:DV:157:LEU:HB3	44:DV:161:VAL:HG12	1.71	0.70
40:B2:24:LYS:HA	40:B2:92:THR:HG23	1.71	0.70
41:BS:88:ARG:HB3	41:BS:92:ARG:HB2	1.72	0.70
44:BV:154:ASP:OD1	44:BV:154:ASP:N	2.25	0.70
1:CA:979:C:N4	14:CQ:18:VAL:O	2.24	0.70
1:CA:1224:G:C6	1:CA:1322:C:H1'	2.26	0.70
1:CA:1291:G:OP1	7:CJ:37:ASN:ND2	2.24	0.70
3:CF:50:ALA:HB1	3:CF:70:VAL:HG11	1.74	0.70
16:CS:1:MET:HE1	16:CS:65:GLN:HB2	1.74	0.70
24:DA:1012:U:H3	24:DA:1143:A:H2	1.37	0.70
37:DQ:35:ILE:HD11	37:DQ:97:ARG:HE	1.57	0.70
44:DV:10:ARG:NH2	44:DV:26:GLY:O	2.25	0.70
1:AA:148:G:H2'	1:AA:149:A:H8	1.57	0.70
10:AM:40:LEU:HB2	10:AM:69:ASN:HB3	1.72	0.70
34:DO:62:LEU:HD22	53:D8:27:THR:HG23	1.73	0.70
1:AA:1347:G:N7	9:AL:11:LYS:NZ	2.39	0.70
24:BA:276:A:H2'	24:BA:277:C:H5''	1.74	0.70
24:BA:2134:A:OP2	24:BA:2157:G:N2	2.23	0.70
30:BH:154:PRO:O	30:BH:155:SER:HB2	1.90	0.70
51:B6:20:ASN:OD1	51:B6:42:TRP:CE3	2.44	0.70
24:DA:2471:C:N4	24:DA:2476:A:O2'	2.24	0.70
51:D6:47:THR:HG23	51:D6:47:THR:O	1.89	0.70
1:AA:1492:A:OP1	12:AO:47:LYS:N	2.21	0.70
24:BA:102:G:OP1	47:BW:7:ARG:NH2	2.24	0.70
26:BD:71:ASP:OD2	26:BD:103:ARG:NH2	2.25	0.70
1:CA:426:G:OP1	4:CG:38:TYR:OH	2.06	0.70
1:CA:827:U:H3	1:CA:872:A:H62	1.38	0.70
22:CD:36:U:H2'	22:CD:37:A:C8	2.27	0.70
25:DB:57:A:H1'	29:DG:29:TRP:HB2	1.74	0.70
24:BA:1903:G:OP1	26:BD:241:PRO:HB2	1.91	0.70
1:CA:1002:G:N2	1:CA:1038:C:N3	2.31	0.70
11:CN:54:ARG:NH2	22:CD:39:C:O2'	2.25	0.70
26:DD:30:GLU:OE1	26:DD:63:ARG:NE	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D2:35:LEU:HG	40:D2:37:VAL:HG13	1.72	0.70
40:D2:47:VAL:O	40:D2:47:VAL:CG2	2.40	0.70
24:BA:574:C:N3	27:BE:145:LYS:NZ	2.33	0.69
27:BE:63:LEU:HD12	27:BE:63:LEU:C	2.16	0.69
35:BP:21:THR:H	35:BP:98:LYS:HB2	1.55	0.69
40:B2:44:LYS:O	40:B2:46:VAL:N	2.23	0.69
1:CA:833:U:H3	1:CA:853:G:H1	1.39	0.69
24:DA:270(H):C:O2	46:DZ:78:LYS:NZ	2.24	0.69
24:DA:443:A:N6	28:DF:41:LEU:O	2.25	0.69
40:D2:34:GLU:OE1	40:D2:56:SER:OG	2.10	0.69
1:AA:964:A:O2'	10:AM:55:LYS:NZ	2.24	0.69
6:AI:23:LYS:HZ3	6:AI:23:LYS:HB2	1.57	0.69
29:BG:66:GLN:OE1	29:BG:98:ARG:NH1	2.25	0.69
53:B8:35:GLN:O	53:B8:36:LYS:C	2.34	0.69
2:CE:16:HIS:CD2	2:CE:209:ARG:HB3	2.26	0.69
4:CG:105:VAL:HG13	4:CG:110:PHE:HB2	1.75	0.69
27:DE:11:MET:HE3	27:DE:24:THR:CG2	2.21	0.69
40:D2:69:LYS:HD2	40:D2:86:GLY:HA3	1.73	0.69
2:AE:165:VAL:O	2:AE:205:ASP:HB2	1.92	0.69
24:BA:607:U:H3	24:BA:621:A:H2	1.38	0.69
3:CF:19:GLU:O	3:CF:40:ARG:NH2	2.24	0.69
24:DA:1225:C:HO2'	40:D2:85:LYS:H	1.37	0.69
24:DA:2134:A:N6	24:DA:2157:G:O2'	2.24	0.69
24:DA:2318:G:H22	37:DQ:3:ARG:HB2	1.56	0.69
29:DG:105:LYS:HG2	49:D4:24:THR:HG22	1.73	0.69
34:DO:64:LYS:HD2	53:D8:25:MET:SD	2.32	0.69
49:D4:23:GLU:O	49:D4:25:TYR:N	2.24	0.69
39:B1:92:ARG:C	39:B1:94:ASN:H	2.00	0.69
53:B8:53:PRO:HA	53:B8:56:GLU:HB2	1.74	0.69
43:DU:49:VAL:O	43:DU:51:VAL:N	2.25	0.69
39:B1:75:ASN:HB2	39:B1:78:THR:HG23	1.74	0.69
5:CH:102:ALA:HB1	5:CH:106:PRO:HG2	1.74	0.69
24:DA:1141:U:OP2	32:DM:63:THR:OG1	2.10	0.69
27:DE:26:ILE:O	27:DE:27:LEU:CB	2.41	0.69
40:D2:91:TYR:HD2	40:D2:91:TYR:O	1.75	0.69
46:DZ:92:LYS:O	46:DZ:94:LEU:N	2.24	0.69
1:AA:438:G:H4'	4:AG:123:HIS:CG	2.28	0.69
24:BA:1057:A:OP2	24:BA:1102:C:N4	2.25	0.69
24:BA:2306:C:N4	29:BG:42:GLY:O	2.24	0.69
25:BB:9:G:N1	25:BB:111:U:O2	2.16	0.69
51:B6:12:GLU:HA	51:B6:23:THR:HA	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CE:12:GLU:O	2:CE:14:GLY:N	2.25	0.69
25:DB:28:C:H42	25:DB:56:G:H1	1.38	0.69
25:DB:48:A:H4'	37:DQ:95:HIS:HD2	1.58	0.69
3:AF:65:ALA:HA	3:AF:100:ALA:HB3	1.74	0.69
24:BA:1069:A:O2'	24:BA:1070:A:H5''	1.93	0.69
24:BA:1411:C:H42	24:BA:1591:G:H1	1.41	0.69
24:BA:2791:C:N4	24:BA:2805:G:O6	2.18	0.69
11:CN:100:ALA:O	11:CN:102:GLY:N	2.25	0.69
24:DA:1105:U:H2'	24:DA:1106:G:C8	2.28	0.69
24:DA:1332:G:H21	24:DA:1610:A:H8	1.40	0.69
29:DG:67:LYS:HB3	49:D4:6:HIS:CD2	2.28	0.69
24:BA:1058:U:H2'	24:BA:1059:G:H8	1.57	0.69
24:BA:1063:G:N2	24:BA:1076:C:O2	2.26	0.69
24:BA:1510:A:O2'	24:BA:1512:G:N7	2.26	0.69
24:BA:2816:C:O3'	36:B0:99:LYS:NZ	2.25	0.69
24:BA:2820:A:H4'	36:B0:3:HIS:CD2	2.26	0.69
25:BB:15:A:H5'	25:BB:16:G:C8	2.28	0.69
26:BD:35:LYS:NZ	26:BD:64:ILE:O	2.22	0.69
39:B1:92:ARG:NH1	40:B2:11:GLN:O	2.24	0.69
1:CA:1503:A:OP1	1:CA:1531:A:O2'	2.10	0.69
2:CE:12:GLU:OE1	2:CE:16:HIS:N	2.25	0.69
13:CP:62:ASN:N	13:CP:62:ASN:OD1	2.25	0.69
22:CD:51:C:H2'	22:CD:52:G:C8	2.28	0.69
24:DA:1141:U:OP1	32:DM:25:ARG:NH1	2.21	0.69
26:DD:35:LYS:CE	26:DD:64:ILE:HG23	2.22	0.69
33:DN:88:ASN:HB3	33:DN:94:ARG:HD3	1.74	0.69
50:D5:16:ARG:NH1	50:D5:17:ASP:OD1	2.25	0.69
3:AF:20:SER:OG	3:AF:36:ASP:OD2	2.11	0.69
24:BA:2315:G:O2'	29:BG:128:ARG:NH2	2.26	0.69
2:CE:16:HIS:O	2:CE:204:ASN:ND2	2.25	0.69
24:DA:2438:U:O3'	24:DA:2439:A:H3'	1.93	0.69
27:DE:105:THR:OG1	27:DE:199:ARG:NH2	2.25	0.69
43:DU:42:VAL:HG13	43:DU:65:ALA:HB3	1.74	0.69
2:AE:197:VAL:O	8:AK:68:ARG:NH2	2.26	0.69
24:BA:1105:U:H2'	24:BA:1106:G:C8	2.27	0.69
24:BA:2470:G:O6	24:BA:2480:C:N4	2.16	0.69
43:BU:99:CYS:SG	43:BU:100:ALA:N	2.66	0.69
1:CA:662:G:O2'	1:CA:836:G:OP1	2.11	0.69
3:CF:131:ARG:NH2	3:CF:164:ARG:NH2	2.40	0.69
40:D2:49:THR:O	40:D2:50:PRO:C	2.36	0.69
3:AF:35:GLU:OE2	3:AF:59:ARG:NH2	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2470:G:N1	24:BA:2480:C:N3	2.37	0.68
29:BG:101:ILE:HD12	49:B4:25:TYR:HB2	1.74	0.68
30:BH:40:GLU:OE1	30:BH:61:HIS:NE2	2.25	0.68
1:CA:978:A:O2'	1:CA:1322:C:N3	2.25	0.68
4:CG:13:ARG:CG	4:CG:32:ALA:HB1	2.23	0.68
24:DA:2120:G:H1	24:DA:2178:C:H42	1.41	0.68
34:DO:52:GLU:OE1	34:DO:54:GLY:N	2.26	0.68
35:DP:19:GLY:H	35:DP:98:LYS:HZ2	1.42	0.68
1:AA:749:C:H2'	1:AA:750:G:H8	1.57	0.68
8:AK:36:LEU:O	8:AK:39:LEU:N	2.26	0.68
8:AK:41:ARG:NH1	8:AK:123:GLU:OE2	2.25	0.68
22:AD:15:G:N2	22:AD:48:C:O2	2.26	0.68
27:BE:105:THR:OG1	27:BE:199:ARG:NH2	2.26	0.68
29:BG:64:THR:HG23	29:BG:94:LEU:HD13	1.73	0.68
35:BP:66:ILE:O	35:BP:67:ARG:CB	2.40	0.68
38:BR:25:GLY:H	38:BR:49:VAL:HG23	1.58	0.68
1:CA:1069:C:H42	1:CA:1106:G:H1	1.38	0.68
24:DA:2162:G:H2'	24:DA:2163:C:H6	1.58	0.68
26:DD:148:GLU:HB2	26:DD:151:LYS:HD2	1.75	0.68
30:DH:30:LYS:NZ	30:DH:79:VAL:O	2.26	0.68
43:DU:55:TYR:O	43:DU:56:PRO:C	2.36	0.68
49:D4:16:CYS:H	49:D4:20:ASN:H	1.41	0.68
3:AF:56:ASP:OD2	3:AF:69:HIS:NE2	2.26	0.68
4:AG:15:GLU:OE1	4:AG:66:ARG:NH1	2.24	0.68
24:BA:1062:G:O6	24:BA:1075:C:N4	2.26	0.68
24:BA:2471:C:N4	24:BA:2476:A:O2'	2.24	0.68
43:BU:81:LYS:HG3	43:BU:97:ARG:NE	2.08	0.68
27:DE:26:ILE:HG22	27:DE:27:LEU:H	1.57	0.68
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.25	0.68
1:CA:1280:A:OP1	10:CM:7:LYS:NZ	2.26	0.68
4:CG:34:GLU:O	4:CG:35:ARG:HB2	1.93	0.68
37:DQ:26:LEU:HD22	37:DQ:87:PHE:HD1	1.58	0.68
1:AA:474:G:H5''	16:AS:81:ARG:NH1	2.08	0.68
34:BO:65:ARG:O	34:BO:68:GLN:NE2	2.27	0.68
1:CA:1148:U:O4'	9:CL:16:ARG:NH2	2.25	0.68
3:CF:47:LEU:HB3	3:CF:52:LEU:HD22	1.76	0.68
19:CV:20:LEU:HA	19:CV:23:ASN:HB2	1.74	0.68
27:DE:36:ARG:NH1	27:DE:85:ASN:OD1	2.26	0.68
34:DO:60:MET:C	34:DO:61:ARG:CG	2.66	0.68
1:AA:581:G:OP1	15:AR:65:ARG:NH1	2.27	0.68
24:BA:1021:A:H61	24:BA:1142(A):A:H61	1.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1434:A:H61	24:BA:1558:A:N6	1.92	0.68
39:B1:102:GLU:OE1	40:B2:13:ARG:NH2	2.26	0.68
1:AA:562:C:H1'	12:AO:15:ARG:HB3	1.74	0.68
1:AA:1148:U:O2	9:AL:66:ARG:NH2	2.22	0.68
24:DA:561:G:H1'	39:D1:45:TYR:HE1	1.58	0.68
24:DA:873:G:H1	24:DA:904:C:H42	1.39	0.68
29:DG:94:LEU:HD12	29:DG:99:MET:HA	1.76	0.68
44:DV:132:ASN:HD22	44:DV:159:PRO:HB2	1.58	0.68
1:AA:1086:U:H3	1:AA:1099:G:H22	1.42	0.68
13:AP:10:PRO:HB2	13:AP:18:ALA:HB1	1.74	0.68
13:AP:67:GLU:CD	13:AP:68:GLY:H	2.02	0.68
24:BA:1178:C:O2'	24:BA:1179:C:O4'	2.11	0.68
43:BU:4:LYS:HE3	43:BU:5:MET:N	2.09	0.68
2:CE:8:LYS:HD3	2:CE:11:LEU:HD13	1.74	0.68
2:CE:18:GLY:O	2:CE:19:HIS:ND1	2.26	0.68
4:CG:22:LYS:O	4:CG:25:ARG:HB3	1.93	0.68
22:CC:33:U:N3	22:CC:36:U:OP2	2.26	0.68
27:DE:12:THR:O	27:DE:22:PRO:HA	1.93	0.68
38:DR:125:ARG:NH1	38:DR:128:GLU:OE2	2.26	0.68
45:D3:18:ALA:HB3	45:D3:20:ARG:HH21	1.58	0.68
26:BD:35:LYS:HD2	26:BD:104:TYR:CE2	2.29	0.68
30:BH:143:GLN:NE2	30:BH:147:ASN:OD1	2.27	0.68
35:BP:66:ILE:HG22	35:BP:104:PHE:CE1	2.29	0.68
51:B6:32:ASN:N	51:B6:32:ASN:OD1	2.25	0.68
1:CA:1309:G:N7	13:CP:99:ARG:NH2	2.41	0.68
10:CM:10:GLY:H	10:CM:16:LEU:HD11	1.59	0.68
10:CM:27:ALA:HA	10:CM:30:SER:HB3	1.75	0.68
38:DR:64:ARG:HB2	38:DR:73:GLU:HG2	1.76	0.68
1:AA:690:G:H1	11:AN:55:LYS:HZ1	1.42	0.68
37:BQ:35:ILE:HD11	37:BQ:101:LEU:HD22	1.76	0.68
1:CA:975:A:H4'	1:CA:976:G:H5''	1.74	0.68
1:CA:1132:C:H42	1:CA:1142:G:H1	1.40	0.68
2:CE:167:PRO:O	2:CE:171:ALA:N	2.27	0.68
27:DE:11:MET:HG3	27:DE:24:THR:CG2	2.23	0.68
44:DV:10:ARG:HH21	44:DV:26:GLY:H	1.42	0.68
45:D3:27:GLU:HB2	45:D3:69:PHE:HD2	1.59	0.68
1:AA:171:A:H2'	1:AA:172:A:C8	2.29	0.67
24:BA:2365:G:N7	53:B8:39:LYS:NZ	2.37	0.67
36:B0:4:LEU:HD12	36:B0:4:LEU:N	2.09	0.67
49:B4:59:PHE:O	49:B4:63:TYR:N	2.26	0.67
53:B8:36:LYS:HD2	53:B8:40:GLU:OE2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:36:C:OP1	12:CO:123:LYS:NZ	2.27	0.67
2:CE:7:VAL:HG22	2:CE:8:LYS:H	1.60	0.67
13:CP:22:ILE:HB	13:CP:25:ILE:HG13	1.75	0.67
28:DF:102:PRO:HB2	28:DF:105:VAL:HG23	1.76	0.67
34:DO:21:ARG:HA	34:DO:21:ARG:HE	1.57	0.67
40:D2:37:VAL:O	40:D2:51:VAL:CG1	2.42	0.67
1:AA:1179:A:H4'	9:AL:103:THR:HA	1.75	0.67
24:BA:321:G:O3'	28:BF:168:ARG:NH2	2.27	0.67
24:BA:1805:U:O2	26:BD:50:THR:HB	1.93	0.67
1:CA:1226:C:O2'	13:CP:111:LYS:NZ	2.26	0.67
3:CF:14:ILE:O	3:CF:16:ARG:N	2.27	0.67
8:CK:17:THR:O	8:CK:78:GLN:NE2	2.28	0.67
42:DT:90:GLU:HA	42:DT:93:GLU:HB2	1.75	0.67
49:D4:39:CYS:O	49:D4:40:HIS:CB	2.43	0.67
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.59	0.67
26:BD:27:THR:HG21	26:BD:84:TYR:HB3	1.77	0.67
30:BH:4:ILE:HD13	30:BH:6:ARG:HG3	1.75	0.67
1:CA:582:U:OP1	15:CR:64:ARG:NH1	2.28	0.67
1:CA:632:A:H4'	1:CA:633:G:O5'	1.95	0.67
3:CF:32:LEU:HB3	3:CF:59:ARG:HH12	1.59	0.67
13:CP:108:ARG:HH21	13:CP:111:LYS:HE3	1.59	0.67
14:CQ:8:GLU:OE2	14:CQ:11:LYS:NZ	2.27	0.67
24:DA:300:A:OP2	43:DU:84:ARG:NH1	2.23	0.67
24:DA:1725:G:N1	24:DA:1735:C:N3	2.34	0.67
26:DD:35:LYS:CD	26:DD:64:ILE:CG2	2.49	0.67
51:D6:15:GLU:CG	51:D6:47:THR:HG21	2.23	0.67
1:AA:368:U:OP1	31:DK:91:SER:OG	2.11	0.67
1:AA:877:C:OP1	8:AK:88:LYS:NZ	2.21	0.67
1:CA:201:C:O2'	1:CA:209:U:OP2	2.12	0.67
24:DA:1022:G:O2'	24:DA:1023:U:OP2	2.11	0.67
26:DD:35:LYS:HE2	26:DD:64:ILE:O	1.94	0.67
4:AG:29:PRO:O	4:AG:30:LYS:CB	2.41	0.67
14:AQ:59:ALA:HB1	14:AQ:61:TRP:HZ3	1.57	0.67
24:BA:764:A:N3	26:BD:213:ARG:NH1	2.42	0.67
24:BA:768:G:O2'	24:BA:1379:A:N6	2.27	0.67
12:CO:53:ARG:HH12	12:CO:92:ASP:HB3	1.60	0.67
34:DO:47:ASP:OD2	34:DO:50:ARG:NH1	2.28	0.67
44:DV:146:ILE:HD12	44:DV:147:GLY:N	2.04	0.67
1:AA:95:G:H3'	1:AA:96:G:C8	2.29	0.67
24:BA:1686:C:H42	24:BA:1702:G:H1	1.43	0.67
24:BA:2344:U:OP1	51:B6:38:LYS:NZ	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2371:G:H21	51:B6:46:HIS:CE1	2.12	0.67
33:BN:76:ALA:HB3	38:BR:75:ILE:HB	1.75	0.67
36:B0:2:ARG:HG3	36:B0:5:LYS:NZ	2.09	0.67
1:CA:1270:C:OP2	21:CX:24:ARG:NH2	2.27	0.67
24:DA:2135:A:H62	24:DA:2156:G:H21	1.43	0.67
1:AA:129(A):G:H4'	1:AA:130:A:H5''	1.76	0.67
1:AA:429:U:H3'	4:AG:9:CYS:SG	2.34	0.67
16:AS:20:VAL:HG23	16:AS:35:LYS:HA	1.77	0.67
24:BA:2843:G:H1	24:BA:2874:C:H42	1.43	0.67
1:CA:1002:G:H1	1:CA:1038:C:H42	1.41	0.67
1:CA:1158:C:N3	1:CA:1181:G:N1	2.40	0.67
3:CF:141:VAL:HG11	3:CF:202:ILE:HD13	1.77	0.67
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.27	0.67
1:AA:1446:A:O2'	38:BR:125:ARG:NH1	2.28	0.67
24:BA:919:G:N2	24:BA:2269:A:OP2	2.28	0.67
4:CG:13:ARG:O	4:CG:15:GLU:N	2.27	0.67
27:DE:4:ILE:HD11	27:DE:28:ALA:HB1	1.77	0.67
39:D1:66:ASN:HD21	39:D1:70:ARG:HE	1.43	0.67
1:AA:343:U:O2	1:AA:346:G:N2	2.22	0.67
24:BA:2286:A:O2'	51:B6:37:ARG:NH2	2.27	0.67
26:BD:35:LYS:HG2	26:BD:64:ILE:H	1.59	0.67
2:CE:83:MET:HA	2:CE:83:MET:HE3	1.76	0.67
3:CF:123:GLN:HA	3:CF:126:ARG:HB2	1.75	0.67
8:CK:85:ARG:NH1	8:CK:87:SER:O	2.26	0.67
17:CT:67:LYS:O	17:CT:69:LYS:N	2.22	0.67
24:DA:390:A:C6	34:DO:71:VAL:HG21	2.30	0.67
27:BE:60:ASN:CG	27:BE:62:PRO:HD2	2.20	0.67
37:BQ:25:ARG:NH1	37:BQ:42:ASP:OD1	2.25	0.67
1:CA:560:U:O2'	1:CA:561:U:OP2	2.10	0.67
1:CA:1187:G:O2'	9:CL:111:ARG:NH1	2.28	0.67
2:CE:223:ILE:O	2:CE:227:GLY:N	2.27	0.67
24:DA:675:A:N3	24:DA:2443:C:O2'	2.28	0.67
24:DA:1084:A:N7	24:DA:1085:A:N6	2.42	0.67
27:DE:66:HIS:CD2	27:DE:67:PHE:HA	2.30	0.67
13:AP:105:THR:OG1	13:AP:106:ASN:N	2.27	0.66
22:AD:51:C:O2	22:AD:63:G:N2	2.17	0.66
1:CA:985:C:H2'	1:CA:986:A:O4'	1.95	0.66
1:CA:998:G:N2	1:CA:1043:C:O2	2.28	0.66
6:CI:2:ARG:HH21	6:CI:69:GLU:HG3	1.59	0.66
7:CJ:70:LYS:HD3	7:CJ:96:GLN:HB3	1.77	0.66
9:CL:5:TYR:N	9:CL:87:GLN:OE1	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2183:C:H2'	24:DA:2184:G:H8	1.59	0.66
49:D4:39:CYS:O	49:D4:41:PRO:HD3	1.95	0.66
1:AA:86:U:O2'	1:AA:87:A:O4'	2.11	0.66
1:AA:405:U:H5''	1:AA:495:A:H2	1.58	0.66
1:AA:975:A:H4'	1:AA:976:G:H5''	1.78	0.66
1:AA:1382:C:O4'	7:AJ:79:ARG:CZ	2.43	0.66
22:AD:52:G:O6	22:AD:62:C:N4	2.27	0.66
24:BA:998:C:N4	24:BA:1157:G:O6	2.17	0.66
24:BA:2261:C:H5'	24:BA:2388:A:H4'	1.76	0.66
29:BG:34:LEU:HB3	29:BG:99:MET:HE1	1.77	0.66
35:BP:66:ILE:CG1	35:BP:67:ARG:H	2.06	0.66
24:DA:1141:U:P	32:DM:25:ARG:HH12	2.18	0.66
34:DO:85:LEU:HA	34:DO:88:LEU:HB3	1.77	0.66
1:AA:642:A:N3	8:AK:113:SER:OG	2.27	0.66
6:AI:87:ARG:HH11	6:AI:87:ARG:HG3	1.59	0.66
1:CA:113:G:H1'	1:CA:354:G:H5'	1.77	0.66
1:CA:113:G:N3	1:CA:353:A:O2'	2.25	0.66
1:CA:1304:G:N1	1:CA:1332:A:OP2	2.27	0.66
22:CC:75:C:H3'	22:CC:76:A:C5'	2.24	0.66
24:DA:1225:C:O2	40:D2:84:LYS:NZ	2.27	0.66
24:DA:1414:G:O6	24:DA:1587:A:N6	2.28	0.66
25:DB:56:G:H5'	29:DG:27:ASN:HD22	1.59	0.66
25:DB:114:G:O2'	37:DQ:50:SER:OG	2.13	0.66
28:DF:2:LYS:C	28:DF:24:LEU:HG	2.19	0.66
32:DM:42:TRP:O	39:D1:64:ARG:NH2	2.28	0.66
40:D2:52:VAL:CG1	40:D2:55:ALA:HB3	2.25	0.66
1:AA:62:U:O2'	1:AA:379:C:O2	2.11	0.66
1:AA:598:U:H4'	8:AK:94:TYR:CD2	2.30	0.66
8:AK:8:ASP:OD1	8:AK:12:ARG:NH1	2.28	0.66
15:AR:16:ALA:HB1	15:AR:21:ASP:HB3	1.76	0.66
22:AD:36:U:H2'	22:AD:37:A:H8	1.60	0.66
24:BA:288:C:H2'	24:BA:289:A:H8	1.60	0.66
24:BA:2788:C:O2'	24:BA:2809:A:N3	2.28	0.66
43:BU:48:ALA:HB1	43:BU:50:ARG:HG2	1.76	0.66
1:CA:1308:U:OP1	13:CP:101:GLN:NE2	2.28	0.66
4:CG:22:LYS:HE3	4:CG:26:CYS:HB2	1.76	0.66
9:CL:46:ALA:HB1	9:CL:77:ILE:HD11	1.77	0.66
13:CP:80:ARG:HD2	19:CV:66:MET:SD	2.35	0.66
24:DA:288:C:N3	24:DA:353:G:N1	2.34	0.66
1:AA:674:G:N2	1:AA:717:C:O2	2.28	0.66
8:AK:69:ARG:NH2	8:AK:73:ASP:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:39:THR:HG22	19:AV:40:ILE:H	1.60	0.66
24:BA:617:G:OP1	28:BF:40:GLN:NE2	2.28	0.66
24:BA:1398:C:OP1	42:BT:53:LYS:NZ	2.29	0.66
24:BA:2164:C:OP2	24:BA:2166:G:N2	2.29	0.66
30:BH:159:GLU:O	30:BH:159:GLU:HG2	1.94	0.66
35:BP:66:ILE:O	35:BP:67:ARG:HB2	1.96	0.66
1:CA:345:C:H1'	1:CA:346:G:C2	2.30	0.66
1:CA:1073:U:O2	2:CE:104:ASN:ND2	2.28	0.66
3:CF:34:LEU:HG	3:CF:38:ARG:HH21	1.60	0.66
34:DO:13:ASN:O	34:DO:15:ARG:N	2.26	0.66
40:D2:37:VAL:O	40:D2:51:VAL:HG11	1.95	0.66
1:AA:1242:C:N4	1:AA:1295:G:O6	2.18	0.66
4:AG:31:CYS:C	4:AG:33:MET:H	2.04	0.66
12:AO:46:LYS:HE2	12:AO:48:PRO:HG2	1.72	0.66
24:BA:1999:C:OP1	24:BA:2723:C:O2'	2.14	0.66
24:BA:2293:C:H5''	37:BQ:89:ARG:HH12	1.58	0.66
29:BG:112:PRO:HG3	49:B4:38:LYS:HD3	1.78	0.66
1:CA:421:U:H5	3:CF:127:ARG:HH12	1.42	0.66
1:CA:522:C:H1'	1:CA:536:C:H5''	1.78	0.66
1:CA:988:G:O6	1:CA:1217:C:N4	2.18	0.66
1:CA:1325:C:OP2	21:CX:15:ARG:NH2	2.27	0.66
24:DA:2313:C:H4'	29:DG:91:ARG:HG3	1.77	0.66
26:DD:246:PRO:HD2	26:DD:255:LYS:HG2	1.76	0.66
34:BO:58:THR:OG1	53:B8:52:LYS:NZ	2.25	0.66
35:BP:64:ILE:C	35:BP:65:PHE:CD2	2.74	0.66
2:CE:48:MET:HE3	2:CE:49:GLU:HG3	1.76	0.66
1:AA:376:G:H1	1:AA:387:U:H3	1.44	0.66
1:AA:475:G:H2'	1:AA:476:G:O4'	1.96	0.66
24:BA:2787:C:O2'	27:BE:61:ARG:CB	2.43	0.66
33:BN:1:MET:HB2	33:BN:32:TYR:HB3	1.77	0.66
1:CA:589:C:N3	1:CA:650:G:N2	2.40	0.66
1:CA:664:G:H22	1:CA:741:G:H1	1.43	0.66
3:CF:131:ARG:HH21	3:CF:164:ARG:HH22	1.40	0.66
4:CG:33:MET:O	4:CG:35:ARG:N	2.29	0.66
24:DA:1011:G:N2	24:DA:1150:C:N3	2.41	0.66
24:DA:1184:G:OP2	48:DX:30:ARG:NH2	2.29	0.66
24:DA:1725:G:O6	24:DA:1735:C:N4	2.16	0.66
27:DE:63:LEU:O	27:DE:64:LYS:HB2	1.95	0.66
51:D6:27:LYS:HZ3	51:D6:28:ARG:HH12	1.43	0.66
2:AE:46:LYS:HA	2:AE:49:GLU:HB2	1.77	0.66
5:AH:11:ILE:HD11	5:AH:31:LEU:HD13	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:53:ILE:H	44:BV:71:VAL:HG13	1.61	0.66
1:CA:636:U:H2'	1:CA:637:G:H8	1.59	0.66
4:CG:13:ARG:HG2	4:CG:32:ALA:CB	2.26	0.66
28:DF:24:LEU:HD22	28:DF:24:LEU:N	2.11	0.66
28:DF:28:ILE:HD12	28:DF:119:ARG:HE	1.61	0.66
28:DF:63:LYS:HE2	28:DF:67:GLN:HB2	1.77	0.66
9:AL:11:LYS:O	9:AL:13:ALA:N	2.26	0.66
20:AW:75:ASN:OD1	20:AW:75:ASN:N	2.29	0.66
24:BA:1434:A:H61	24:BA:1558:A:H62	1.43	0.66
32:BM:47:ALA:HB2	32:BM:112:LEU:HD11	1.79	0.66
1:CA:6:G:H4'	1:CA:298:A:H4'	1.76	0.66
24:DA:994:C:OP2	39:D1:54:LYS:NZ	2.22	0.66
24:DA:2816:C:O3'	36:D0:99:LYS:NZ	2.28	0.66
28:DF:132:VAL:HG22	28:DF:133:ASN:H	1.61	0.66
29:DG:145:THR:O	29:DG:147:ASP:N	2.28	0.66
8:AK:121:ASP:N	8:AK:121:ASP:OD1	2.29	0.65
12:AO:46:LYS:CG	12:AO:48:PRO:CG	2.72	0.65
25:BB:42:C:C6	29:BG:69:ALA:HB2	2.31	0.65
25:BB:43:C:OP2	49:B4:2:LYS:NZ	2.28	0.65
26:BD:35:LYS:HZ1	26:BD:104:TYR:HB2	1.61	0.65
34:BO:71:VAL:CG1	34:BO:72:PRO:HD2	2.09	0.65
4:CG:22:LYS:CE	4:CG:26:CYS:HB2	2.26	0.65
14:CQ:23:ARG:NH1	14:CQ:29:ARG:O	2.29	0.65
26:DD:31:LYS:NZ	26:DD:94:LEU:HD11	2.10	0.65
34:DO:121:LYS:HB3	34:DO:123:LEU:HD22	1.76	0.65
39:D1:72:HIS:HD2	39:D1:110:VAL:HG21	1.59	0.65
1:AA:1202:G:O2'	14:AQ:27:CYS:O	2.14	0.65
3:AF:77:ILE:HA	3:AF:84:ILE:HB	1.76	0.65
4:AG:18:LYS:HG3	4:AG:33:MET:SD	2.36	0.65
24:BA:2154:G:H2'	24:BA:2155:G:H8	1.62	0.65
51:B6:20:ASN:O	51:B6:21:TYR:HB2	1.97	0.65
1:CA:1454:G:OP1	20:CW:39:LYS:NZ	2.29	0.65
3:CF:79:ARG:NH2	3:CF:81:GLY:O	2.25	0.65
4:CG:153:ARG:NH1	4:CG:181:MET:SD	2.69	0.65
24:DA:2130:U:H2'	24:DA:2158:A:N1	2.10	0.65
27:DE:60:ASN:CB	27:DE:63:LEU:HD11	2.21	0.65
30:DH:20:ALA:HB3	30:DH:23:ARG:HB2	1.78	0.65
24:BA:1071:G:H22	24:BA:1090:U:H3'	1.61	0.65
24:BA:2346:A:H5''	24:BA:2383:G:H1'	1.78	0.65
24:BA:2394:C:OP1	34:BO:63:PRO:HD2	1.95	0.65
2:CE:53:ARG:NH2	2:CE:198:ASP:O	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:76:LEU:HA	44:DV:83:PRO:HA	1.77	0.65
4:AG:72:GLU:OE1	4:AG:207:TYR:OH	2.13	0.65
24:BA:528:A:O2'	24:BA:529:A:H5''	1.97	0.65
30:BH:4:ILE:HD13	30:BH:6:ARG:H	1.62	0.65
36:B0:75:LEU:O	36:B0:79:LEU:N	2.28	0.65
1:CA:501:C:H2'	1:CA:502:G:H8	1.61	0.65
1:CA:1301:U:O3'	13:CP:21:TYR:OH	2.12	0.65
8:CK:11:THR:O	8:CK:15:ASN:ND2	2.28	0.65
10:CM:48:THR:HA	10:CM:62:HIS:HB3	1.78	0.65
15:CR:70:LEU:HD11	15:CR:77:ARG:HG3	1.79	0.65
24:DA:2134:A:H62	24:DA:2158:A:H8	1.45	0.65
1:AA:81:G:N2	1:AA:82:U:O2	2.30	0.65
1:AA:1003:G:H2'	1:AA:1004:A:O3'	1.96	0.65
15:AR:14:GLU:OE2	15:AR:84:LYS:NZ	2.28	0.65
24:BA:1557:C:OP2	24:BA:1558:A:O2'	2.13	0.65
31:BK:78:THR:HG23	31:BK:141:LYS:HG3	1.79	0.65
2:CE:63:MET:HG3	2:CE:225:ALA:HB1	1.77	0.65
5:CH:102:ALA:O	5:CH:107:ARG:NH1	2.28	0.65
30:DH:6:ARG:HH11	30:DH:6:ARG:HB2	1.60	0.65
31:DK:143:SER:OG	31:DK:144:VAL:N	2.25	0.65
24:BA:1093:G:H1'	24:BA:1099:G:N1	2.12	0.65
24:BA:1899:G:HO2'	24:BA:1900:A:P	2.20	0.65
24:BA:2807:G:N1	24:BA:2893:G:O6	2.16	0.65
24:BA:2880:C:O2'	36:B0:90:ARG:NH1	2.28	0.65
28:BF:32:LEU:HD13	28:BF:105:VAL:HG13	1.79	0.65
34:BO:21:ARG:HA	34:BO:21:ARG:HE	1.62	0.65
44:BV:4:ARG:HA	44:BV:58:VAL:HB	1.78	0.65
1:CA:1255:G:OP1	10:CM:45:ARG:NH2	2.29	0.65
24:DA:1359:A:H62	24:DA:1372:U:H3	1.43	0.65
25:DB:56:G:H5'	29:DG:27:ASN:ND2	2.11	0.65
32:DM:103:VAL:HG11	32:DM:120:LEU:HD13	1.79	0.65
38:DR:93:ARG:HG2	38:DR:117:ASP:HB3	1.79	0.65
2:AE:101:MET:HA	2:AE:108:ILE:HG13	1.79	0.65
5:AH:101:ILE:O	5:AH:120:THR:OG1	2.15	0.65
6:AI:41:GLU:OE2	18:AU:35:ARG:NH2	2.29	0.65
24:BA:1227:A:OP1	40:B2:84:LYS:NZ	2.27	0.65
24:DA:1394:U:O2	42:DT:16:LYS:NZ	2.29	0.65
24:DA:2133:G:H2'	24:DA:2157:G:H1	1.62	0.65
24:DA:2210:G:H3'	24:DA:2211:G:C5	2.31	0.65
28:DF:132:VAL:O	28:DF:134:GLY:N	2.24	0.65
49:D4:13:ARG:HG2	49:D4:22:ILE:HG23	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:143:A:H2	1:AA:220:G:H1	1.43	0.65
24:BA:1055:G:O2'	24:BA:1085:A:N1	2.23	0.65
29:BG:16:ARG:O	29:BG:20:ILE:HG13	1.97	0.65
31:BK:110:ASP:N	31:BK:130:TYR:OH	2.29	0.65
4:CG:23:GLY:HA3	4:CG:112:VAL:HG21	1.79	0.65
5:CH:10:MET:HA	5:CH:32:VAL:HG22	1.78	0.65
21:CX:6:ARG:HH21	21:CX:15:ARG:NH2	1.91	0.65
24:DA:2290:G:H1	24:DA:2342:C:H42	1.44	0.65
27:DE:71:GLY:O	27:DE:73:GLU:N	2.30	0.65
29:DG:120:LEU:HB2	29:DG:180:PHE:HD1	1.61	0.65
30:DH:89:ILE:HD12	30:DH:129:THR:HB	1.79	0.65
1:AA:1503:A:H5'	1:AA:1531:A:H1'	1.77	0.65
4:AG:27:TYR:OH	6:CI:15:ASP:OD2	2.15	0.65
5:AH:137:GLU:OE1	5:AH:141:GLN:NE2	2.27	0.65
22:AD:17:C:OP2	22:AD:60:U:O2'	2.15	0.65
24:BA:1111:A:O2'	30:BH:2:SER:HA	1.95	0.65
28:BF:133:ASN:O	28:BF:135:LYS:N	2.27	0.65
44:BV:170:THR:O	44:BV:172:ALA:N	2.27	0.65
45:B3:24:LYS:O	45:B3:25:ARG:NH1	2.29	0.65
7:CJ:68:ASN:ND2	7:CJ:127:ALA:O	2.30	0.65
14:CQ:27:CYS:O	14:CQ:29:ARG:NH1	2.29	0.65
24:DA:1434:A:H61	24:DA:1558:A:H62	1.44	0.65
24:DA:1467:C:H42	24:DA:1525:G:H1	1.44	0.65
24:DA:2287:A:N6	24:DA:2344:U:H3	1.93	0.65
27:DE:23:VAL:C	27:DE:25:VAL:H	2.04	0.65
30:DH:86:GLU:HG3	30:DH:132:ARG:HB3	1.77	0.65
32:DM:15:LEU:HD23	32:DM:134:ARG:HG3	1.79	0.65
34:DO:49:ARG:O	34:DO:49:ARG:CG	2.30	0.65
49:D4:39:CYS:O	49:D4:40:HIS:HB2	1.96	0.65
2:AE:187:LEU:HA	2:AE:201:ILE:HB	1.79	0.65
4:AG:28:SER:O	4:AG:30:LYS:N	2.30	0.65
10:CM:34:VAL:HG22	10:CM:74:ILE:HG12	1.78	0.65
19:CV:72:GLY:HA2	19:CV:75:ALA:HB3	1.78	0.65
26:DD:35:LYS:HZ1	26:DD:64:ILE:HG12	1.60	0.65
49:D4:40:HIS:N	49:D4:41:PRO:HD2	2.11	0.65
1:AA:686:U:O4	1:AA:703:G:H1'	1.97	0.64
24:BA:729:G:OP2	26:BD:13:ARG:NH1	2.30	0.64
24:BA:2286:A:H2'	51:B6:31:PRO:HD3	1.79	0.64
26:BD:35:LYS:HD2	26:BD:104:TYR:CD2	2.31	0.64
29:BG:56:ALA:HB2	29:BG:153:ARG:HE	1.62	0.64
32:BM:131:GLN:OE1	32:BM:131:GLN:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DB:33:G:OP2	29:DG:96:ARG:NH2	2.30	0.64
38:DR:26:ASP:OD1	38:DR:120:ARG:NH2	2.27	0.64
41:DS:88:ARG:NH1	41:DS:94:ASP:OD2	2.24	0.64
1:AA:517:G:N1	1:AA:533:A:OP2	2.30	0.64
24:BA:2612:C:H5'	50:B5:3:LYS:HD3	1.79	0.64
26:BD:27:THR:HA	26:BD:83:GLU:HG2	1.79	0.64
29:BG:65:GLY:HA2	49:B4:7:PRO:HG2	1.80	0.64
31:BK:9:LEU:HD21	31:BK:35:LEU:HD12	1.79	0.64
1:CA:376:G:H1	1:CA:387:U:H3	1.45	0.64
24:DA:2485:G:H5''	35:DP:46:GLN:HE21	1.62	0.64
26:DD:31:LYS:HE3	26:DD:33:LEU:HD12	1.79	0.64
30:DH:7:LEU:HD12	30:DH:8:PRO:HD3	1.79	0.64
1:AA:1348:U:H3	1:AA:1374:A:H2	1.46	0.64
9:AL:10:ARG:HE	9:AL:105:ASP:HB3	1.62	0.64
13:AP:3:ARG:HD2	49:B4:34:GLU:HB2	1.79	0.64
24:BA:817:C:O2'	24:BA:839:U:OP1	2.13	0.64
24:BA:860:U:H5	24:BA:917:A:C2	2.13	0.64
24:BA:1525:G:H2'	24:BA:1526:G:C8	2.32	0.64
25:BB:21:G:H1	25:BB:62:C:H42	1.45	0.64
43:BU:81:LYS:HB3	43:BU:97:ARG:HD3	1.77	0.64
1:CA:407:G:OP1	4:CG:115:ARG:NH2	2.30	0.64
1:CA:956:U:O3'	19:CV:81:ARG:NH2	2.29	0.64
1:CA:1124:G:O2'	1:CA:1145:C:N4	2.30	0.64
1:CA:1330:U:H4'	13:CP:23:TYR:CE1	2.31	0.64
10:CM:79:ARG:O	10:CM:83:GLU:N	2.31	0.64
24:DA:1300:U:H4'	24:DA:1301:A:H5'	1.78	0.64
24:DA:1899:G:N2	24:DA:1902:C:H41	1.95	0.64
24:DA:2059:A:H5'	24:DA:2060:A:OP2	1.96	0.64
40:D2:62:LEU:HD11	40:D2:95:LEU:HD12	1.80	0.64
51:D6:43:CYS:O	51:D6:44:ARG:C	2.39	0.64
1:AA:153:C:H42	1:AA:168:G:H1	1.45	0.64
1:AA:1025:U:O2'	1:AA:1026:G:OP2	2.15	0.64
6:AI:20:ALA:HA	6:AI:23:LYS:HZ3	1.62	0.64
24:BA:50:U:H3'	24:BA:51:G:H5'	1.79	0.64
24:BA:1537:C:H2'	24:BA:1538:G:C8	2.32	0.64
34:BO:84:ASN:ND2	34:BO:117:GLU:OE2	2.31	0.64
4:CG:13:ARG:HG2	4:CG:32:ALA:HB1	1.79	0.64
27:DE:131:ALA:HB1	27:DE:135:HIS:CE1	2.33	0.64
1:AA:1145:C:H4'	1:AA:1146:A:H8	1.61	0.64
8:AK:20:TYR:HE2	8:AK:75:ARG:HD2	1.60	0.64
24:BA:410:G:O6	24:BA:417:C:N4	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1070:A:O2'	24:BA:1097:U:O5'	2.15	0.64
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.80	0.64
24:DA:84:A:OP2	43:DU:8:LYS:NZ	2.26	0.64
24:DA:2392:A:H2	24:DA:2424:C:H42	1.43	0.64
24:DA:2415:G:O3'	34:DO:66:GLY:HA3	1.97	0.64
27:DE:11:MET:CG	27:DE:24:THR:CG2	2.63	0.64
1:AA:129(A):G:O2'	1:AA:189:U:OP1	2.14	0.64
24:BA:654(B):C:N3	24:BA:654(S):G:N1	2.43	0.64
24:BA:956:G:OP2	35:BP:14:ARG:NH2	2.31	0.64
24:BA:1014:U:H2'	24:BA:1015:G:H5''	1.80	0.64
24:BA:2111:C:N4	24:BA:2147:G:H21	1.94	0.64
24:BA:2371:G:H21	51:B6:46:HIS:HE1	1.44	0.64
24:BA:2849:U:H4'	24:BA:2868:A:C2	2.33	0.64
47:BW:22:GLU:OE2	47:BW:68:ARG:NH2	2.30	0.64
1:CA:1075:C:H5''	2:CE:179:LYS:NZ	2.11	0.64
4:CG:23:GLY:O	4:CG:25:ARG:N	2.30	0.64
24:DA:859:G:O2'	24:DA:916:G:O6	2.15	0.64
37:DQ:19:LYS:O	37:DQ:21:THR:N	2.31	0.64
38:DR:3:ARG:HG2	38:DR:6:LEU:HB2	1.79	0.64
40:D2:68:LYS:HD2	40:D2:69:LYS:H	1.62	0.64
7:AJ:143:ARG:NH1	22:AD:41:C:O3'	2.27	0.64
24:BA:1535:U:OP2	24:BA:1537:C:N4	2.25	0.64
24:BA:2306:C:H3'	24:BA:2307:G:H5'	1.79	0.64
24:BA:2474:C:H5''	24:BA:2475:C:H5	1.62	0.64
26:BD:43:ARG:HD2	26:BD:44:ASN:OD1	1.98	0.64
28:BF:64:ILE:HD11	28:BF:78:ILE:HG23	1.80	0.64
29:BG:113:ARG:HD2	49:B4:33:VAL:HG13	1.79	0.64
44:BV:147:GLY:H	44:BV:174:VAL:HB	1.62	0.64
1:CA:89:U:O2'	1:CA:90:C:O5'	2.14	0.64
1:CA:260:G:OP1	20:CW:80:ARG:NH2	2.30	0.64
1:CA:1032(B):G:H5'	1:CA:1033:G:OP2	1.98	0.64
1:CA:1095:U:P	1:CA:1108:G:H1	2.21	0.64
3:CF:47:LEU:HD12	3:CF:52:LEU:HB3	1.80	0.64
4:CG:22:LYS:NZ	4:CG:26:CYS:CA	2.61	0.64
25:DB:44:G:OP1	29:DG:98:ARG:NH2	2.30	0.64
4:AG:13:ARG:O	4:AG:15:GLU:N	2.30	0.64
15:AR:76:GLU:OE2	15:AR:79:ARG:NH2	2.31	0.64
15:AR:87:ILE:HG22	15:AR:88:ARG:HG2	1.79	0.64
24:BA:861:A:N3	25:BB:79:C:O2'	2.30	0.64
35:BP:66:ILE:O	35:BP:67:ARG:HG3	1.97	0.64
4:CG:31:CYS:C	4:CG:33:MET:H	2.06	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CU:37:VAL:HG11	18:CU:78:LEU:HB3	1.79	0.64
24:DA:2469:A:O2'	35:DP:56:ARG:NE	2.31	0.64
27:DE:63:LEU:HB3	27:DE:73:GLU:OE1	1.98	0.64
28:DF:26:ALA:C	28:DF:27:GLU:HG3	2.22	0.64
28:DF:107:LYS:NZ	28:DF:205:ARG:O	2.30	0.64
37:DQ:88:ASP:OD1	37:DQ:90:GLY:N	2.19	0.64
38:DR:107:ASP:N	38:DR:107:ASP:OD1	2.29	0.64
40:D2:32:THR:HG22	40:D2:60:GLU:HB3	1.79	0.64
51:D6:14:THR:OG1	51:D6:15:GLU:N	2.30	0.64
1:AA:160:A:N6	1:AA:347:G:O2'	2.31	0.64
1:AA:992:U:H4'	1:AA:993:G:O5'	1.98	0.64
4:AG:28:SER:OG	4:AG:29:PRO:CD	2.30	0.64
9:AL:41:VAL:O	9:AL:43:ALA:N	2.31	0.64
12:AO:46:LYS:CA	12:AO:48:PRO:HD2	2.26	0.64
24:BA:1593:G:H2'	24:BA:1594:G:C8	2.33	0.64
1:CA:1025:U:H2'	1:CA:1026:G:C8	2.33	0.64
24:DA:34:C:O2'	24:DA:35:G:OP2	2.14	0.64
40:D2:1:MET:HG3	40:D2:43:GLU:H	1.63	0.64
1:AA:674:G:H2'	1:AA:675:A:H8	1.62	0.64
30:BH:152:ARG:NH1	30:BH:153:LYS:O	2.30	0.64
40:B2:35:LEU:C	40:B2:37:VAL:H	2.05	0.64
10:CM:50:ILE:HG22	10:CM:52:GLY:H	1.63	0.64
22:CD:12:G:O2'	22:CD:13:C:OP1	2.14	0.64
26:DD:70:TRP:HZ3	26:DD:146:GLU:CD	2.06	0.64
1:AA:982:U:H5''	14:AQ:6:LEU:HD11	1.80	0.63
11:AN:33:THR:HA	11:AN:39:PRO:HA	1.79	0.63
24:BA:747:U:H5	50:B5:3:LYS:HZ2	1.46	0.63
24:BA:1091:G:N2	24:BA:1100:C:O2	2.19	0.63
27:BE:174:ASP:HB3	27:BE:183:LEU:HD13	1.80	0.63
42:BT:67:GLY:O	42:BT:69:TYR:N	2.24	0.63
43:BU:81:LYS:HB3	43:BU:82:PRO:CD	2.27	0.63
44:BV:13:GLU:HB3	44:BV:18:LEU:HD11	1.79	0.63
1:CA:243:A:H4'	1:CA:244:U:O5'	1.97	0.63
1:CA:1075:C:OP1	2:CE:179:LYS:NZ	2.31	0.63
1:CA:1186:G:O3'	9:CL:113:LYS:NZ	2.32	0.63
3:CF:164:ARG:CZ	3:CF:166:GLU:OE1	2.46	0.63
7:CJ:79:ARG:NH2	22:CD:34:C:OP2	2.22	0.63
7:CJ:126:ASP:O	7:CJ:132:GLY:N	2.31	0.63
19:CV:22:LEU:HG	19:CV:27:GLU:HA	1.79	0.63
24:DA:39:C:O2	28:DF:46:ARG:NH2	2.32	0.63
24:DA:523:C:O2	24:DA:553:U:O2'	2.15	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:851:U:OP1	48:DX:49:LYS:NZ	2.26	0.63
24:DA:1007:C:OP1	32:DM:35:ARG:NH1	2.30	0.63
26:DD:69:ARG:O	26:DD:71:ASP:N	2.31	0.63
27:DE:10:GLY:O	27:DE:24:THR:O	2.16	0.63
29:DG:112:PRO:HB2	49:D4:35:VAL:HG11	1.80	0.63
51:D6:17:LYS:O	51:D6:19:ARG:N	2.30	0.63
1:AA:1224:G:O2'	1:AA:1322:C:OP2	2.16	0.63
9:AL:18:PHE:HD2	9:AL:62:TYR:HD2	1.46	0.63
22:AD:18:G:H22	22:AD:55:U:H1'	1.63	0.63
24:BA:1019:U:OP1	24:BA:1035:U:O2'	2.10	0.63
24:BA:2747:G:O6	24:BA:2755:C:H5''	1.98	0.63
1:CA:1004:A:H5''	1:CA:1024:G:H2'	1.79	0.63
1:CA:1249:C:O2'	9:CL:73:GLN:OE1	2.14	0.63
1:CA:1290:G:H5'	7:CJ:35:LYS:HE2	1.79	0.63
24:DA:995:C:O2	32:DM:3:THR:OG1	2.16	0.63
28:DF:63:LYS:HZ3	28:DF:67:GLN:NE2	1.95	0.63
30:DH:33:LEU:HD12	30:DH:75:ALA:HA	1.79	0.63
47:DW:42:GLY:O	47:DW:44:LEU:N	2.28	0.63
6:AI:28:ARG:O	6:AI:32:ASN:ND2	2.32	0.63
16:AS:57:ARG:HH21	16:AS:79:VAL:HA	1.62	0.63
17:AT:57:VAL:HG12	17:AT:76:LEU:HA	1.79	0.63
19:AV:36:ARG:NH2	19:AV:75:ALA:O	2.28	0.63
26:BD:147:LEU:HD22	26:BD:155:LEU:HD11	1.80	0.63
35:BP:64:ILE:HG22	35:BP:65:PHE:H	1.63	0.63
1:CA:280:C:O4'	17:CT:38:ARG:NH1	2.31	0.63
1:CA:376:G:H5''	16:CS:5:ARG:HD3	1.80	0.63
1:CA:971:G:N2	1:CA:1363:A:OP2	2.30	0.63
4:CG:18:LYS:HE3	4:CG:20:TYR:HE1	1.63	0.63
24:DA:1593:G:H2'	24:DA:1594:G:C8	2.34	0.63
26:DD:35:LYS:HG3	26:DD:64:ILE:H	1.61	0.63
27:DE:23:VAL:CG2	27:DE:183:LEU:HG	2.26	0.63
32:DM:24:GLY:O	32:DM:28:THR:HG22	1.99	0.63
34:DO:61:ARG:O	34:DO:62:LEU:CB	2.32	0.63
1:AA:631:G:H2'	1:AA:632:A:H8	1.62	0.63
1:AA:1137:C:O2	1:AA:1138:G:N1	2.32	0.63
1:AA:1329:A:H5'	13:AP:29:ARG:HD2	1.79	0.63
22:AD:51:C:N4	22:AD:63:G:O6	2.27	0.63
24:BA:270(O):U:O2	31:BK:52:ARG:NH2	2.30	0.63
24:BA:1170:G:N2	24:BA:1180:C:N3	2.45	0.63
37:BQ:11:LYS:HD3	37:BQ:91:PRO:HD3	1.79	0.63
1:CA:986:A:N3	19:CV:52:TYR:OH	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CE:74:LYS:NZ	2:CE:205:ASP:O	2.30	0.63
7:CJ:106:GLN:O	7:CJ:110:GLN:NE2	2.27	0.63
24:DA:1817:G:OP1	26:DD:88:ARG:NH2	2.30	0.63
27:DE:68:ALA:O	27:DE:69:LYS:C	2.41	0.63
37:DQ:23:ARG:NH2	37:DQ:84:GLN:OE1	2.31	0.63
51:D6:47:THR:O	51:D6:48:VAL:O	2.16	0.63
1:AA:69:G:H3'	1:AA:73:G:H21	1.64	0.63
1:AA:757:U:H2'	1:AA:758:G:O4'	1.99	0.63
1:AA:933:G:N7	7:AJ:3:ARG:NH1	2.46	0.63
1:AA:1016:A:H5'	14:AQ:15:LYS:HZ2	1.64	0.63
3:AF:21:ARG:NH2	3:AF:56:ASP:OD1	2.31	0.63
28:BF:122:LYS:NZ	28:BF:152:GLU:OE2	2.27	0.63
29:BG:67:LYS:HG2	49:B4:5:ILE:HG13	1.79	0.63
30:BH:83:TYR:OH	30:BH:133:VAL:HB	1.99	0.63
1:CA:545:C:OP1	4:CG:61:LYS:NZ	2.31	0.63
1:CA:967:C:O2'	9:CL:125:TYR:OH	2.17	0.63
2:CE:30:ARG:HH21	2:CE:194:PRO:HG2	1.64	0.63
3:CF:71:ALA:HB2	3:CF:106:VAL:HB	1.80	0.63
8:CK:109:ILE:HG12	8:CK:137:VAL:HG23	1.80	0.63
24:DA:602:G:O2'	24:DA:604:G:O2'	2.13	0.63
24:DA:892:G:N7	24:DA:893:C:N4	2.46	0.63
24:DA:1075:C:OP2	24:DA:1077:A:N6	2.32	0.63
1:AA:1449:C:O2'	1:AA:1451:A:N6	2.32	0.63
3:AF:89:GLU:HG3	3:AF:93:LYS:HD2	1.80	0.63
12:AO:46:LYS:CB	12:AO:48:PRO:HD2	2.29	0.63
24:BA:280:C:N3	24:BA:360:G:N1	2.38	0.63
28:BF:101:LEU:O	28:BF:106:ARG:NH1	2.32	0.63
1:CA:1180:A:H5'	9:CL:103:THR:HG23	1.80	0.63
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.34	0.63
3:CF:8:ILE:HG23	3:CF:16:ARG:HD3	1.81	0.63
3:CF:181:ASN:HD21	3:CF:204:LEU:HB2	1.64	0.63
4:CG:22:LYS:HZ3	4:CG:25:ARG:HH11	1.45	0.63
24:DA:389:G:H22	34:DO:71:VAL:HG12	1.63	0.63
24:DA:635:C:O2'	24:DA:639:U:OP1	2.17	0.63
24:DA:2415:G:H4'	34:DO:67:MET:N	2.13	0.63
29:DG:67:LYS:H	49:D4:6:HIS:CD2	2.17	0.63
30:DH:81:GLU:HG2	30:DH:83:TYR:HB2	1.80	0.63
37:DQ:15:ARG:HH12	37:DQ:90:GLY:HA2	1.63	0.63
38:DR:36:GLU:OE1	38:DR:41:ARG:NH1	2.32	0.63
43:DU:88:LYS:O	43:DU:90:LEU:N	2.32	0.63
51:D6:15:GLU:CG	51:D6:47:THR:CG2	2.75	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:279:C:H42	24:BA:361:G:H1	1.45	0.63
24:BA:571:A:O2'	40:B2:78:LYS:NZ	2.32	0.63
24:BA:907:U:O2'	35:BP:101:ARG:NH2	2.32	0.63
27:BE:61:ARG:N	27:BE:61:ARG:CD	2.61	0.63
9:CL:128:ARG:NH2	22:CC:32:C:OP2	2.23	0.63
24:DA:643:A:N1	24:DA:2369:A:O2'	2.32	0.63
30:DH:4:ILE:HG21	30:DH:6:ARG:NH2	2.13	0.63
34:DO:52:GLU:OE1	34:DO:55:ARG:N	2.21	0.63
35:DP:19:GLY:H	35:DP:98:LYS:NZ	1.95	0.63
1:AA:1455:G:H5'	20:AW:32:ALA:HB2	1.81	0.63
12:AO:46:LYS:HG2	12:AO:48:PRO:HD2	1.62	0.63
12:AO:47:LYS:HG2	12:AO:48:PRO:HD3	1.81	0.63
24:BA:654(N):G:H2'	24:BA:654(O):G:O4'	1.99	0.63
24:BA:1019:U:H3	24:BA:1142(A):A:H62	1.46	0.63
24:BA:2387:U:OP1	45:B3:55:ARG:NH1	2.31	0.63
43:BU:81:LYS:CG	43:BU:97:ARG:NE	2.61	0.63
5:CH:127:ASN:OD1	5:CH:130:ASN:ND2	2.31	0.63
9:CL:128:ARG:NH1	22:CC:31:G:OP2	2.26	0.63
10:CM:61:GLU:OE2	14:CQ:45:ARG:NH1	2.31	0.63
24:DA:1266:G:O5'	41:DS:15:ARG:NH2	2.32	0.63
24:DA:2306:C:N4	29:DG:42:GLY:O	2.31	0.63
27:DE:120:TRP:CD1	27:DE:155:LYS:HB3	2.33	0.63
33:DN:1:MET:HE3	33:DN:67:LYS:HG2	1.80	0.63
1:AA:601:C:H2'	1:AA:602:A:C8	2.34	0.63
4:AG:128:VAL:HG22	4:AG:146:ILE:HG23	1.81	0.63
24:BA:1061:U:O2'	24:BA:1070:A:O4'	2.13	0.63
24:BA:2114:A:N6	24:BA:2118:U:OP2	2.24	0.63
24:BA:2284:C:H41	51:B6:25:LYS:NZ	1.97	0.63
31:BK:133:HIS:HB2	31:BK:134:PRO:HD2	1.80	0.63
3:CF:47:LEU:HD13	3:CF:50:ALA:HB3	1.81	0.63
6:CI:91:VAL:HG11	18:CU:72:ARG:NH1	2.13	0.63
22:CD:22:G:P	22:CD:46:G:H1	2.21	0.63
26:DD:34:VAL:HG23	26:DD:35:LYS:HZ3	0.84	0.63
48:DX:3:ARG:NH1	48:DX:38:GLU:OE2	2.32	0.63
1:AA:1504:G:H3'	1:AA:1504:G:P	2.39	0.62
12:AO:46:LYS:CE	12:AO:48:PRO:CG	2.40	0.62
24:BA:2096:U:H3	24:BA:2193:G:H1	1.47	0.62
24:BA:2632:A:HO2'	24:BA:2811:G:HO2'	1.41	0.62
29:BG:112:PRO:HB3	49:B4:37:SER:HB2	1.81	0.62
1:CA:377:G:OP1	16:CS:3:LYS:HD2	1.98	0.62
2:CE:84:GLU:HA	2:CE:87:ARG:HD2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CW:89:ARG:NH1	20:CW:105:SER:O	2.32	0.62
24:DA:96:G:H4'	47:DW:48:HIS:CD2	2.34	0.62
24:DA:1062:G:N2	24:DA:1076:C:H42	1.96	0.62
24:DA:1077:A:O2'	24:DA:1078:U:O4'	2.09	0.62
34:DO:125:VAL:HG13	34:DO:144:GLU:HB3	1.81	0.62
37:DQ:109:GLY:O	37:DQ:111:GLU:N	2.32	0.62
44:DV:100:VAL:HG11	44:DV:134:PRO:HG2	1.81	0.62
1:AA:1131:G:OP1	9:AL:20:ARG:NH2	2.31	0.62
2:AE:8:LYS:HZ1	2:AE:11:LEU:HD13	1.63	0.62
5:AH:60:TYR:O	5:AH:64:ARG:NH2	2.32	0.62
22:AD:17:C:H41	22:AD:18:G:H5'	1.64	0.62
27:BE:197:ILE:HD11	27:BE:199:ARG:HE	1.63	0.62
36:B0:74:LYS:O	36:B0:76:VAL:N	2.32	0.62
2:CE:204:ASN:HB2	2:CE:210:SER:HB3	1.81	0.62
3:CF:75:VAL:HG12	3:CF:83:ARG:HH21	1.64	0.62
9:CL:95:LYS:O	9:CL:95:LYS:NZ	2.31	0.62
20:CW:10:LEU:HD21	20:CW:12:ALA:HB3	1.81	0.62
24:DA:326:G:H1	24:DA:336:C:H42	1.46	0.62
30:DH:158:HIS:ND1	30:DH:158:HIS:O	2.32	0.62
44:DV:129:SER:OG	44:DV:132:ASN:OD1	2.17	0.62
1:AA:74:C:H42	1:AA:96:G:H1	1.46	0.62
1:AA:244:U:H4'	1:AA:245:C:O5'	1.97	0.62
4:AG:196:LEU:HB3	4:AG:198:VAL:HG23	1.81	0.62
6:AI:97:PHE:HB2	18:AU:32:ARG:HE	1.64	0.62
13:AP:3:ARG:HG2	13:AP:7:VAL:HG13	1.79	0.62
18:AU:47:THR:O	18:AU:83:GLU:N	2.33	0.62
24:BA:2791:C:H2'	24:BA:2792:G:H8	1.64	0.62
24:BA:2795:G:H3'	24:BA:2797:U:C5'	2.29	0.62
1:CA:1220:G:O2'	19:CV:52:TYR:O	2.16	0.62
1:CA:1348:U:H3	1:CA:1374:A:H2	1.46	0.62
4:CG:22:LYS:HZ3	4:CG:25:ARG:NH1	1.97	0.62
24:DA:1093:G:H1	24:DA:1097:U:P	2.22	0.62
24:DA:1534:G:H2'	24:DA:1537:C:H42	1.63	0.62
24:DA:1542:G:O6	24:DA:1543:A:N6	2.32	0.62
24:DA:2658:C:N3	24:DA:2663:G:N1	2.34	0.62
26:DD:69:ARG:C	26:DD:71:ASP:H	2.07	0.62
27:DE:51:PHE:O	27:DE:74:PRO:HB2	1.99	0.62
29:DG:108:ASN:HB3	49:D4:38:LYS:CD	2.29	0.62
33:DN:68:GLU:HB3	33:DN:78:ARG:NH1	2.15	0.62
1:AA:1218:C:OP1	14:AQ:9:LYS:NZ	2.29	0.62
19:AV:68:GLY:H	49:B4:55:ARG:NH2	1.93	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AW:10:LEU:HG	20:AW:12:ALA:H	1.64	0.62
24:BA:2684:U:O2'	33:BN:68:GLU:HG3	1.99	0.62
35:BP:66:ILE:CG1	35:BP:67:ARG:N	2.62	0.62
39:B1:92:ARG:HD2	40:B2:11:GLN:HB2	1.79	0.62
1:CA:17:U:H2'	1:CA:18:C:C6	2.34	0.62
4:CG:72:GLU:OE1	4:CG:207:TYR:OH	2.14	0.62
4:CG:101:LEU:HD23	4:CG:121:VAL:HG11	1.81	0.62
13:CP:108:ARG:NH1	13:CP:112:GLY:O	2.33	0.62
19:CV:10:PHE:O	19:CV:39:THR:OG1	2.15	0.62
24:DA:1061:U:H4'	24:DA:1070:A:H1'	1.81	0.62
49:D4:43:TYR:O	49:D4:45:GLY:N	2.32	0.62
1:AA:1073:U:O2'	2:AE:104:ASN:OD1	2.16	0.62
35:BP:65:PHE:C	35:BP:104:PHE:O	2.41	0.62
1:CA:989:C:HO2'	1:CA:1016:A:H2	1.45	0.62
4:CG:53:ASP:O	4:CG:57:ARG:NH1	2.32	0.62
10:CM:28:ARG:HH21	10:CM:34:VAL:HB	1.64	0.62
24:DA:1064:C:H2'	24:DA:1065:U:H5	1.64	0.62
24:DA:1568:G:OP2	26:DD:63:ARG:NH2	2.30	0.62
24:DA:2135:A:N3	24:DA:2159:G:O2'	2.32	0.62
30:DH:129:THR:OG1	30:DH:130:ARG:N	2.27	0.62
34:DO:30:THR:HG21	34:DO:35:HIS:H	1.64	0.62
1:AA:1421:G:O6	1:AA:1479:C:N4	2.29	0.62
7:AJ:34:GLY:O	7:AJ:36:LYS:N	2.33	0.62
9:AL:10:ARG:NH2	9:AL:105:ASP:OD2	2.26	0.62
12:AO:55:VAL:HG12	12:AO:69:TYR:HA	1.80	0.62
24:BA:1026:U:H1'	24:BA:1027:A:O5'	1.98	0.62
7:CJ:62:PHE:HA	7:CJ:124:LEU:HD22	1.80	0.62
24:DA:1464:C:HO2'	24:DA:1528:A:H8	1.45	0.62
24:DA:2126:A:N6	24:DA:2163:C:O2	2.31	0.62
25:DB:51:G:N7	37:DQ:62:LYS:NZ	2.45	0.62
27:DE:47:VAL:HG22	27:DE:48:GLN:H	1.63	0.62
27:DE:101:ARG:NH1	27:DE:171:GLU:HB2	2.13	0.62
44:DV:29:TYR:HE1	44:DV:87:ASP:HB3	1.64	0.62
1:AA:179:A:N6	1:AA:196:A:OP2	2.32	0.62
2:AE:100:GLY:O	2:AE:104:ASN:N	2.22	0.62
14:AQ:3:ARG:HH11	14:AQ:3:ARG:HA	1.65	0.62
15:AR:82:ILE:O	15:AR:86:GLY:N	2.26	0.62
34:BO:6:LEU:C	34:BO:7:ARG:HG2	2.24	0.62
43:BU:81:LYS:CA	43:BU:81:LYS:CE	2.57	0.62
1:CA:947:G:O3'	13:CP:109:THR:OG1	2.17	0.62
2:CE:187:LEU:HA	2:CE:201:ILE:HB	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:783:A:H8	24:DA:784:A:H4'	1.64	0.62
24:DA:1183:G:O3'	48:DX:29:ARG:NH2	2.33	0.62
26:DD:63:ARG:H	26:DD:87:ASN:HD21	1.48	0.62
28:DF:63:LYS:NZ	28:DF:67:GLN:NE2	2.46	0.62
1:AA:827:U:H5	1:AA:872:A:N1	1.98	0.62
3:AF:14:ILE:O	3:AF:16:ARG:N	2.27	0.62
24:BA:996:A:OP2	39:B1:92:ARG:NH2	2.33	0.62
39:B1:11:ARG:O	39:B1:15:LYS:HG3	1.99	0.62
41:BS:73:ALA:HB3	41:BS:106:ILE:HG23	1.80	0.62
41:BS:79:GLY:HA3	41:BS:100:THR:HG22	1.82	0.62
1:CA:501:C:H2'	1:CA:502:G:C8	2.34	0.62
1:CA:1259:C:O2'	1:CA:1283:G:N3	2.33	0.62
4:CG:33:MET:SD	4:CG:37:PRO:CA	2.85	0.62
7:CJ:115:ARG:HB2	7:CJ:118:VAL:HG12	1.80	0.62
13:CP:97:PRO:HB2	13:CP:101:GLN:HG3	1.80	0.62
24:DA:153:C:OP2	46:DZ:88:LYS:NZ	2.20	0.62
26:DD:146:GLU:HB2	26:DD:189:CYS:HB3	1.81	0.62
27:DE:18:ASP:HB3	38:DR:82:LEU:HD11	1.80	0.62
28:DF:143:ALA:HB1	28:DF:148:LEU:HB2	1.80	0.62
34:DO:60:MET:O	34:DO:61:ARG:CB	2.48	0.62
50:D5:45:VAL:HG13	50:D5:50:GLY:HA2	1.80	0.62
24:BA:280:C:N4	24:BA:360:G:O6	2.17	0.62
24:BA:746:A:C5	24:BA:2611:U:H5''	2.34	0.62
24:BA:2111:C:N3	24:BA:2118:U:O2'	2.26	0.62
28:BF:47:GLY:HA3	28:BF:95:ARG:O	2.00	0.62
34:BO:58:THR:HB	34:BO:61:ARG:HH12	1.64	0.62
41:BS:13:SER:HB3	41:BS:16:LYS:HE2	1.80	0.62
50:B5:41:PRO:O	50:B5:44:THR:OG1	2.17	0.62
1:CA:1079:G:O3'	5:CH:14:ARG:NH2	2.33	0.62
1:CA:1352:C:OP1	21:CX:3:LYS:NZ	2.27	0.62
16:CS:21:VAL:HG22	16:CS:33:ILE:HD12	1.81	0.62
40:D2:2:PHE:H	40:D2:42:GLY:HA3	1.65	0.62
1:AA:78:G:H3'	1:AA:79:G:H8	1.65	0.62
1:AA:1059:C:O3'	14:AQ:45:ARG:NH2	2.33	0.62
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.35	0.62
24:BA:517:C:OP1	50:B5:16:ARG:NH2	2.33	0.62
24:BA:2023:G:H5'	24:BA:2617:C:H4'	1.82	0.62
24:BA:2111:C:H42	24:BA:2147:G:H21	1.47	0.62
24:BA:2306:C:H3'	24:BA:2307:G:C5'	2.30	0.62
24:BA:2873:A:C2	36:B0:5:LYS:CA	2.83	0.62
26:BD:92:ILE:HD12	26:BD:104:TYR:CE1	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:4:ILE:CD1	30:BH:6:ARG:H	2.13	0.62
32:BM:114:ARG:O	32:BM:116:LEU:N	2.29	0.62
37:BQ:11:LYS:HD2	37:BQ:15:ARG:NH2	2.15	0.62
43:BU:54:LYS:H	43:BU:54:LYS:HD2	1.64	0.62
1:CA:1317:C:N3	19:CV:37:ARG:NH1	2.47	0.62
13:CP:13:LYS:HA	13:CP:44:ARG:HH11	1.64	0.62
24:DA:2173:A:N6	24:DA:2174:C:HO2'	1.98	0.62
24:DA:2191:G:O2'	24:DA:2192:G:OP1	2.15	0.62
27:DE:28:ALA:HB3	27:DE:93:VAL:HG22	1.82	0.62
37:DQ:26:LEU:HB3	37:DQ:87:PHE:HA	1.82	0.62
40:D2:45:THR:O	40:D2:47:VAL:HG12	1.99	0.62
4:AG:9:CYS:O	4:AG:32:ALA:HB1	2.00	0.61
24:BA:1069:A:H2'	24:BA:1073:A:N7	2.14	0.61
24:BA:2118:U:H3	24:BA:2148:G:H4'	1.64	0.61
30:BH:92:ILE:HD13	30:BH:160:LYS:CE	2.29	0.61
2:CE:23:ARG:NE	2:CE:23:ARG:O	2.33	0.61
4:CG:35:ARG:C	4:CG:36:ARG:HG3	2.24	0.61
24:DA:2228:G:OP1	26:DD:261:LYS:NZ	2.25	0.61
25:DB:38:C:O4'	37:DQ:95:HIS:NE2	2.32	0.61
1:AA:591:U:H2'	1:AA:592:G:C8	2.35	0.61
1:AA:677:U:H3	1:AA:713:G:H22	1.48	0.61
6:AI:30:LEU:HB3	6:AI:35:ALA:HB3	1.81	0.61
9:AL:50:LEU:HD23	9:AL:85:LEU:HD22	1.83	0.61
24:BA:2432:A:C4	46:BZ:33:LYS:HG2	2.35	0.61
30:BH:156:ALA:O	30:BH:157:TYR:HB2	2.00	0.61
34:BO:59:LEU:O	53:B8:13:ARG:NH1	2.33	0.61
1:CA:390:C:O2'	16:CS:28:ARG:NH1	2.33	0.61
4:CG:22:LYS:CD	4:CG:26:CYS:HB2	2.30	0.61
19:CV:33:THR:CG2	19:CV:34:TRP:H	2.11	0.61
24:DA:1203:G:H3'	24:DA:1204:A:H5''	1.82	0.61
1:AA:160:A:H1'	1:AA:344:A:N7	2.14	0.61
1:AA:523:A:H61	12:AO:92:ASP:HB2	1.66	0.61
3:AF:74:GLY:HA2	3:AF:77:ILE:HB	1.83	0.61
4:AG:110:PHE:HE2	4:AG:148:VAL:HG23	1.65	0.61
8:AK:11:THR:HG23	8:AK:14:ARG:HH12	1.64	0.61
24:BA:71:A:H2	42:BT:31:HIS:HE2	1.48	0.61
24:BA:654(I):C:O2'	24:BA:654(J):A:O4'	2.14	0.61
24:BA:1790:C:H5''	24:BA:1791:A:OP1	2.00	0.61
24:BA:2682:U:O2'	38:BR:58:ASN:OD1	2.13	0.61
28:BF:133:ASN:ND2	28:BF:138:GLU:OE2	2.32	0.61
30:BH:92:ILE:HD12	30:BH:92:ILE:H	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:9:G:H1	1:CA:25:C:H42	1.47	0.61
3:CF:59:ARG:HE	3:CF:97:LYS:HE2	1.65	0.61
24:DA:883:G:H1	24:DA:893:C:H42	1.46	0.61
24:DA:2297:C:N3	24:DA:2321:G:N1	2.36	0.61
24:DA:2415:G:H4'	34:DO:67:MET:H	1.65	0.61
29:DG:64:THR:HG23	29:DG:66:GLN:H	1.64	0.61
31:DK:75:LEU:HD13	31:DK:139:GLN:HB3	1.83	0.61
51:D6:35:GLU:O	51:D6:37:ARG:NH1	2.34	0.61
1:AA:130:A:H5'	17:AT:63:ARG:HH21	1.66	0.61
1:AA:406:G:H5'	4:AG:5:ILE:HD13	1.83	0.61
1:AA:1013:G:N2	1:AA:1016:A:OP2	2.34	0.61
1:AA:1347:G:H5''	9:AL:107:ARG:HG2	1.82	0.61
8:AK:121:ASP:HB2	8:AK:125:ARG:NH2	2.16	0.61
22:AD:8:U:O2'	22:AD:46:G:N2	2.33	0.61
24:BA:1645:G:H5''	24:BA:1646:C:H5'	1.82	0.61
24:BA:2531:A:C4'	30:BH:157:TYR:CE2	2.82	0.61
30:BH:126:PRO:HG2	30:BH:130:ARG:NH1	2.16	0.61
36:B0:85:PRO:O	36:B0:87:TYR:N	2.33	0.61
1:CA:1281:U:OP2	1:CA:1282:C:N4	2.26	0.61
1:CA:1308:U:P	13:CP:101:GLN:HE22	2.23	0.61
4:CG:23:GLY:O	4:CG:24:GLU:C	2.43	0.61
7:CJ:111:ARG:CZ	7:CJ:122:HIS:HB3	2.31	0.61
24:DA:848:G:H2'	24:DA:849:A:C8	2.35	0.61
31:DK:123:LEU:HD22	31:DK:143:SER:HA	1.82	0.61
49:D4:41:PRO:O	49:D4:42:PHE:CB	2.49	0.61
1:AA:974:A:OP2	14:AQ:29:ARG:NH2	2.34	0.61
1:AA:1296:C:OP1	13:AP:44:ARG:NH2	2.32	0.61
22:AD:12:G:H2'	22:AD:13:C:C6	2.36	0.61
24:BA:320:A:OP1	28:BF:135:LYS:NZ	2.29	0.61
24:BA:330:A:HO2'	24:BA:331:A:H8	1.48	0.61
24:BA:640:C:N4	24:BA:648:G:H1	1.98	0.61
24:BA:1264:G:H5'	50:B5:11:THR:HG21	1.82	0.61
24:BA:2346:A:O2'	51:B6:24:GLU:OE1	2.17	0.61
22:CD:18:G:H1'	22:CD:58:A:C2	2.35	0.61
24:DA:69:C:O2	24:DA:73:A:O2'	2.17	0.61
24:DA:1771:C:H1'	24:DA:1786:A:C8	2.36	0.61
24:DA:2602:A:H4'	24:DA:2603:G:O5'	1.99	0.61
40:D2:52:VAL:HG11	40:D2:55:ALA:HB3	1.83	0.61
1:AA:501:C:OP1	12:AO:117:ARG:NH2	2.34	0.61
1:AA:674:G:H2'	1:AA:675:A:C8	2.35	0.61
10:AM:22:LYS:NZ	10:AM:88:LEU:O	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:67:THR:H	16:AS:70:ALA:HB3	1.66	0.61
24:BA:1065:U:O2	24:BA:1073:A:N6	2.21	0.61
24:BA:2146:C:O2'	24:BA:2147:G:N7	2.29	0.61
24:BA:2415:G:H4'	34:BO:67:MET:N	2.15	0.61
31:BK:14:ASP:O	31:BK:16:GLY:N	2.32	0.61
37:BQ:11:LYS:HD2	37:BQ:15:ARG:HH21	1.65	0.61
41:BS:35:ILE:O	41:BS:39:THR:OG1	2.17	0.61
44:BV:109:ALA:HB3	44:BV:115:GLY:HA3	1.81	0.61
4:CG:33:MET:O	4:CG:34:GLU:C	2.44	0.61
9:CL:10:ARG:NH1	9:CL:75:ASP:OD2	2.33	0.61
10:CM:79:ARG:HA	10:CM:82:ILE:HG22	1.82	0.61
24:DA:328:U:H4'	43:DU:68:HIS:CE1	2.36	0.61
49:D4:42:PHE:HD1	49:D4:43:TYR:N	1.99	0.61
5:AH:100:VAL:O	5:AH:107:ARG:NH2	2.33	0.61
22:AD:56:C:H2'	22:AD:57:A:C8	2.34	0.61
24:BA:1:G:N2	24:BA:2902:C:O2	2.33	0.61
24:BA:1332:G:H21	24:BA:1610:A:H8	1.48	0.61
28:BF:200:GLU:OE2	28:BF:204:ASN:ND2	2.33	0.61
1:CA:382:A:H2'	1:CA:383:A:C8	2.36	0.61
1:CA:1128:C:O2'	1:CA:1129:C:OP1	2.17	0.61
4:CG:103:ASN:OD1	4:CG:114:ARG:NE	2.26	0.61
24:DA:2392:A:H1'	34:DO:61:ARG:NH2	2.16	0.61
25:DB:13:A:N1	25:DB:69:G:O2'	2.29	0.61
25:DB:48:A:OP2	37:DQ:30:ARG:NH2	2.33	0.61
25:DB:104:A:O2'	44:DV:30:ASN:O	2.18	0.61
27:DE:63:LEU:C	27:DE:64:LYS:HG2	2.25	0.61
27:DE:67:PHE:HE2	27:DE:69:LYS:NZ	1.93	0.61
43:DU:52:SER:N	43:DU:53:PRO:CD	2.63	0.61
1:AA:173:U:H5''	1:AA:197:A:O4'	2.01	0.61
2:AE:82:ARG:NH1	2:AE:92:TYR:OH	2.34	0.61
2:AE:112:VAL:HG21	2:AE:153:ARG:HA	1.81	0.61
4:AG:9:CYS:O	4:AG:32:ALA:CB	2.49	0.61
22:AC:47:U:O2'	22:AC:48:C:O5'	2.18	0.61
24:BA:635:C:O2'	24:BA:639:U:OP1	2.19	0.61
24:BA:1593:G:H2'	24:BA:1594:G:H8	1.66	0.61
26:BD:28:GLU:OE1	26:BD:28:GLU:N	2.34	0.61
1:CA:690:G:H22	11:CN:55:LYS:HE2	1.66	0.61
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.35	0.61
4:CG:191:ARG:NH1	4:CG:200:GLU:OE1	2.34	0.61
24:DA:1568:G:P	26:DD:63:ARG:HH22	2.23	0.61
27:DE:67:PHE:CE2	27:DE:69:LYS:NZ	2.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:21:ALA:O	28:DF:24:LEU:CD2	2.42	0.61
42:DT:55:ASN:HB2	42:DT:80:ILE:HG12	1.81	0.61
1:AA:1286:A:N6	1:AA:1354:C:O3'	2.34	0.61
24:BA:1534:G:O2'	24:BA:1535:U:O4'	2.18	0.61
29:BG:41:GLN:HG2	29:BG:155:MET:HB3	1.83	0.61
51:B6:9:LEU:N	51:B6:27:LYS:HD3	2.16	0.61
1:CA:1104:G:H4'	2:CE:111:ARG:CZ	2.31	0.61
5:CH:39:GLY:HA2	5:CH:69:VAL:HB	1.82	0.61
22:CD:7:G:H4'	22:CD:8:U:OP2	2.00	0.61
24:DA:586:A:H5'	28:DF:89:VAL:HG21	1.82	0.61
24:DA:2172:U:O2'	24:DA:2174:C:OP2	2.14	0.61
4:AG:18:LYS:NZ	4:AG:34:GLU:OE1	2.34	0.61
17:AT:48:GLU:O	17:AT:50:LYS:N	2.34	0.61
17:AT:59:ILE:HG22	17:AT:73:VAL:HA	1.83	0.61
24:BA:278:A:H5'	24:BA:279:C:C5	2.36	0.61
24:BA:620:G:H4'	24:BA:621:A:C5'	2.31	0.61
38:BR:62:THR:HG22	38:BR:75:ILE:HG12	1.82	0.61
38:BR:123:GLN:O	38:BR:125:ARG:N	2.33	0.61
1:CA:245:C:N3	1:CA:283:C:N4	2.48	0.61
1:CA:753:A:OP1	15:CR:69:TYR:OH	2.16	0.61
1:CA:951:G:O2'	1:CA:970:C:O2'	2.17	0.61
3:CF:6:HIS:HD2	3:CF:8:ILE:H	1.49	0.61
7:CJ:65:ALA:HB1	7:CJ:127:ALA:HB3	1.81	0.61
24:DA:654(O):G:H2'	24:DA:654(P):G:H8	1.66	0.61
24:DA:729:G:OP2	26:DD:13:ARG:NH1	2.34	0.61
24:DA:2119:A:N7	24:DA:2170:A:N6	2.49	0.61
24:DA:2212:A:H1'	24:DA:2215:G:C5	2.35	0.61
26:DD:43:ARG:HD2	26:DD:44:ASN:CG	2.26	0.61
29:DG:39:ILE:HB	29:DG:92:VAL:HG13	1.83	0.61
44:DV:70:LEU:HD11	44:DV:98:MET:HE3	1.83	0.61
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.36	0.60
1:AA:1157:A:N7	1:AA:1178:G:N2	2.49	0.60
1:AA:1329:A:N7	21:AX:7:ARG:NH2	2.45	0.60
24:BA:1188:U:H4'	40:B2:79:VAL:HG22	1.83	0.60
44:BV:10:ARG:HG2	44:BV:38:TYR:HD2	1.66	0.60
2:CE:6:THR:HG22	2:CE:221:LEU:HD22	1.83	0.60
3:CF:63:ASN:HB2	3:CF:98:ASN:HB3	1.81	0.60
24:DA:1488:G:H5'	24:DA:1489:U:OP2	2.00	0.60
24:DA:2839:G:H5'	36:D0:46:GLY:HA2	1.81	0.60
45:D3:27:GLU:HG3	45:D3:68:GLU:HA	1.83	0.60
1:AA:80:G:H5''	1:AA:81:G:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:243:A:H4'	1:AA:244:U:H3'	1.82	0.60
1:AA:1244:C:H2'	1:AA:1245:A:H8	1.64	0.60
4:AG:65:ARG:O	4:AG:69:GLY:N	2.29	0.60
20:AW:30:LYS:HE2	20:AW:80:ARG:HH12	1.66	0.60
20:AW:57:ARG:HG2	20:AW:102:GLY:O	1.99	0.60
24:BA:579:G:H2'	24:BA:580:C:C6	2.35	0.60
24:BA:1568:G:OP2	26:BD:63:ARG:NH2	2.33	0.60
34:BO:52:GLU:OE1	34:BO:55:ARG:NH1	2.30	0.60
47:BW:33:MET:HG2	47:BW:37:PHE:HE1	1.66	0.60
9:CL:8:GLY:HA2	9:CL:79:LEU:HB3	1.83	0.60
24:DA:517:C:OP1	50:D5:16:ARG:NH2	2.34	0.60
24:DA:1171:G:H1'	24:DA:1173:G:OP1	2.00	0.60
24:DA:2748:A:H1'	30:DH:67:LEU:HG	1.83	0.60
26:DD:34:VAL:C	26:DD:35:LYS:CD	2.56	0.60
44:DV:17:ALA:HA	44:DV:20:ARG:HD2	1.82	0.60
1:AA:736:C:H2'	1:AA:737:A:H8	1.66	0.60
1:AA:1005:A:O2'	1:AA:1036:G:N2	2.35	0.60
10:AM:58:ASP:N	10:AM:58:ASP:OD1	2.34	0.60
15:AR:6:GLU:OE2	15:AR:6:GLU:N	2.33	0.60
24:BA:1072:C:N3	24:BA:1092:C:N4	2.46	0.60
24:BA:1077:A:H3'	24:BA:1077:A:N3	2.17	0.60
35:BP:138:ASP:OD1	44:BV:81:ARG:NH2	2.34	0.60
41:BS:1:MET:HB3	41:BS:64:MET:HE2	1.83	0.60
1:CA:1118:C:H42	1:CA:1155:G:H1	1.47	0.60
1:CA:1237:C:O2'	1:CA:1300:G:N2	2.34	0.60
1:CA:1251:A:N3	1:CA:1369:C:O2'	2.32	0.60
2:CE:67:THR:HG21	2:CE:155:LEU:HG	1.82	0.60
22:CD:43:A:H2'	22:CD:44:A:C8	2.35	0.60
24:DA:1071:G:H1'	24:DA:1089:G:H2'	1.83	0.60
27:DE:55:ASN:O	27:DE:57:LYS:NZ	2.26	0.60
29:DG:11:TYR:OH	29:DG:16:ARG:NH2	2.33	0.60
29:DG:120:LEU:HB2	29:DG:180:PHE:CD1	2.36	0.60
29:DG:145:THR:O	29:DG:145:THR:OG1	2.14	0.60
1:AA:28:G:H1	1:AA:555:C:H42	1.49	0.60
1:AA:128:G:O2'	17:AT:3:LYS:NZ	2.33	0.60
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.36	0.60
8:AK:10:LEU:HD22	8:AK:83:ILE:HD11	1.83	0.60
9:AL:42:ARG:NH1	9:AL:71:SER:OG	2.34	0.60
24:BA:272:G:H1	24:BA:365:C:H42	1.49	0.60
24:BA:1005:C:O2'	32:BM:28:THR:HG21	2.01	0.60
24:BA:2343:C:O2'	24:BA:2373:G:O2'	2.19	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:60:ASN:OD1	27:BE:62:PRO:HG2	2.01	0.60
39:B1:92:ARG:NH2	40:B2:10:LYS:HB3	2.17	0.60
48:BX:18:ASP:N	48:BX:18:ASP:OD1	2.34	0.60
50:B5:40:LYS:HG2	50:B5:47:PRO:HD2	1.83	0.60
1:CA:316:G:OP2	1:CA:351:G:O2'	2.18	0.60
22:CD:16:C:H5'	22:CD:18:G:OP2	2.01	0.60
24:DA:908:C:O2'	35:DP:71:ASP:OD2	2.12	0.60
24:DA:1418:G:OP1	24:DA:1588:C:O2'	2.19	0.60
27:DE:69:LYS:O	27:DE:70:ALA:CB	2.49	0.60
43:DU:39:VAL:HG23	43:DU:41:GLY:H	1.66	0.60
1:AA:75:C:N3	1:AA:96:G:N2	2.49	0.60
1:AA:977:A:H8	1:AA:1223:C:N3	1.99	0.60
1:AA:1025:U:H4'	1:AA:1026:G:O5'	2.01	0.60
1:AA:1455:G:OP1	20:AW:35:THR:OG1	2.17	0.60
2:AE:74:LYS:HG2	2:AE:169:LYS:HE3	1.82	0.60
11:AN:92:GLU:OE1	18:AU:88:LYS:NZ	2.35	0.60
12:AO:47:LYS:CG	12:AO:48:PRO:HD3	2.32	0.60
19:AV:40:ILE:HG23	19:AV:41:VAL:HG22	1.83	0.60
45:B3:12:ASN:HA	45:B3:14:ARG:HH21	1.66	0.60
51:B6:47:THR:OG1	51:B6:48:VAL:N	2.33	0.60
1:CA:485:G:O2'	1:CA:486:U:O5'	2.19	0.60
1:CA:584:G:OP1	17:CT:91:ARG:NH2	2.30	0.60
1:CA:745:C:OP1	1:CA:851:G:O2'	2.17	0.60
1:CA:1255:G:P	10:CM:45:ARG:HH22	2.25	0.60
1:CA:1438:G:O6	1:CA:1463:C:N4	2.19	0.60
1:CA:1452:C:H4'	1:CA:1453:G:H5'	1.84	0.60
15:CR:39:LEU:HD12	15:CR:56:LEU:HD13	1.83	0.60
19:CV:63:THR:OG1	19:CV:65:ASN:O	2.20	0.60
22:CD:56:C:H2'	22:CD:57:A:H8	1.66	0.60
24:DA:141:A:H8	24:DA:1595:G:H21	1.48	0.60
30:DH:6:ARG:NH1	30:DH:54:ARG:HH12	2.00	0.60
38:DR:1:MET:O	38:DR:3:ARG:N	2.34	0.60
49:D4:39:CYS:O	49:D4:40:HIS:ND1	2.35	0.60
1:AA:278:G:OP2	17:AT:92:ARG:NH2	2.34	0.60
1:AA:613:C:H2'	1:AA:614:A:H8	1.66	0.60
1:AA:977:A:O2'	1:AA:981:U:N3	2.30	0.60
1:AA:1024:G:H4'	1:AA:1024:G:OP1	1.99	0.60
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.37	0.60
2:AE:194:PRO:O	2:AE:196:LEU:N	2.35	0.60
4:AG:88:VAL:HA	5:AH:97:GLY:HA3	1.82	0.60
24:BA:247:G:H4'	24:BA:386:G:C5	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:627:A:N1	24:BA:636:G:O2'	2.35	0.60
24:BA:654(F):C:C4	24:BA:654(G):C:H1'	2.36	0.60
24:BA:2116:G:OP1	24:BA:2166:G:O2'	2.19	0.60
24:BA:2302:G:O2'	29:BG:126:ASP:O	2.19	0.60
36:B0:4:LEU:HD12	36:B0:4:LEU:H	1.65	0.60
1:CA:1004:A:H1'	1:CA:1036:G:H1	1.66	0.60
4:CG:22:LYS:NZ	4:CG:26:CYS:HA	2.17	0.60
6:CI:13:ASN:ND2	6:CI:55:ASP:OD2	2.33	0.60
19:CV:31:ILE:HD13	19:CV:33:THR:OG1	2.02	0.60
19:CV:36:ARG:HH12	19:CV:75:ALA:HB3	1.66	0.60
22:CD:43:A:H2'	22:CD:44:A:H8	1.66	0.60
24:DA:94:G:H2'	24:DA:95:G:O4'	2.02	0.60
24:DA:1139:G:HO2'	24:DA:1143:A:H62	1.47	0.60
24:DA:2655:G:N2	24:DA:2665:A:OP2	2.35	0.60
27:DE:35:GLN:HE21	27:DE:36:ARG:H	1.48	0.60
29:DG:37:VAL:HG22	29:DG:159:VAL:HG12	1.82	0.60
36:D0:78:LYS:HE2	36:D0:83:ILE:HD11	1.83	0.60
44:DV:10:ARG:NH2	44:DV:26:GLY:H	2.00	0.60
1:AA:262:A:H2'	1:AA:263:A:C8	2.37	0.60
1:AA:1147:C:O2	9:AL:16:ARG:NH2	2.35	0.60
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.37	0.60
1:AA:1381:U:C2	7:AJ:79:ARG:HG2	2.37	0.60
2:AE:32:ILE:HD11	2:AE:40:HIS:HB3	1.84	0.60
16:AS:15:PRO:O	16:AS:16:HIS:ND1	2.35	0.60
22:AD:50:U:H3	22:AD:64:G:H1	1.50	0.60
24:BA:523:C:O2	24:BA:553:U:O2'	2.20	0.60
24:BA:796:C:H2'	24:BA:797:C:C6	2.37	0.60
24:BA:1062:G:N2	24:BA:1076:C:N3	2.48	0.60
24:BA:1243:G:H4'	34:BO:7:ARG:HH21	1.67	0.60
25:BB:24:G:N7	25:BB:56:G:H2'	2.17	0.60
26:BD:182:LEU:H	26:BD:272:ALA:HB3	1.66	0.60
29:BG:5:VAL:HG11	29:BG:100:TRP:HB3	1.84	0.60
30:BH:124:GLU:HG2	30:BH:126:PRO:HD3	1.82	0.60
1:CA:412:A:N1	4:CG:35:ARG:HG3	2.15	0.60
4:CG:31:CYS:O	4:CG:33:MET:N	2.30	0.60
20:CW:75:ASN:N	20:CW:75:ASN:OD1	2.35	0.60
20:CW:100:ILE:C	20:CW:102:GLY:H	2.10	0.60
24:DA:296:C:H2'	24:DA:297:C:H6	1.66	0.60
24:DA:1064:C:H2'	24:DA:1065:U:C5	2.36	0.60
33:DN:4:PRO:O	33:DN:5:GLN:HB2	2.00	0.60
44:DV:11:GLU:O	44:DV:36:LYS:NZ	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AJ:16:LEU:HD13	9:AL:44:VAL:HG13	1.83	0.60
18:AU:66:LEU:O	18:AU:70:ILE:HG13	2.02	0.60
24:BA:270(M):U:OP1	31:BK:50:ARG:NH1	2.30	0.60
24:BA:545:G:O2'	24:BA:547:A:N6	2.32	0.60
24:BA:1091:G:O6	24:BA:1100:C:N4	2.24	0.60
24:BA:2125:G:N2	24:BA:2172:U:OP1	2.34	0.60
24:BA:2815:C:H5'	50:B5:29:THR:HG21	1.83	0.60
4:CG:22:LYS:CG	4:CG:26:CYS:CA	2.80	0.60
14:CQ:9:LYS:HA	14:CQ:12:ARG:HD3	1.84	0.60
24:DA:1454:U:O2	36:D0:60:LEU:HD11	2.02	0.60
24:DA:2542:A:O2'	24:DA:2543:G:H8	1.84	0.60
25:DB:8:U:OP1	37:DQ:11:LYS:NZ	2.33	0.60
26:DD:69:ARG:C	26:DD:71:ASP:N	2.60	0.60
51:D6:15:GLU:CB	51:D6:47:THR:HG23	2.31	0.60
1:AA:405:U:O4	4:AG:2:GLY:N	2.35	0.60
1:AA:1032(A):G:H2'	1:AA:1032(B):G:H8	1.67	0.60
3:AF:35:GLU:O	3:AF:39:ILE:N	2.34	0.60
11:AN:40:ILE:HD12	11:AN:77:MET:HE1	1.84	0.60
12:AO:86:ARG:HG3	12:AO:101:VAL:HG22	1.84	0.60
22:AD:8:U:H2'	22:AD:13:C:H41	1.66	0.60
24:BA:2842:G:H2'	24:BA:2843:G:H8	1.66	0.60
27:BE:61:ARG:HD3	27:BE:61:ARG:H	1.65	0.60
31:BK:118:LYS:HD2	31:BK:119:PRO:HD2	1.84	0.60
34:BO:70:GLN:N	34:BO:70:GLN:HE21	1.99	0.60
1:CA:1325:C:P	21:CX:15:ARG:HE	2.25	0.60
8:CK:12:ARG:NH1	8:CK:25:ASP:O	2.34	0.60
24:DA:1055:G:N2	24:DA:1104:C:N3	2.50	0.60
24:DA:2131:G:O4'	24:DA:2158:A:N6	2.34	0.60
43:DU:74:PRO:O	43:DU:80:GLY:HA2	2.01	0.60
1:AA:1330:U:H4'	13:AP:23:TYR:HE1	1.66	0.60
22:AD:12:G:O6	22:AD:23:C:N4	2.28	0.60
24:BA:1070:A:C4'	24:BA:1071:G:H5''	2.31	0.60
24:BA:1165:U:H2'	24:BA:1166:C:C6	2.37	0.60
41:BS:12:ILE:HG13	41:BS:42:ARG:HH11	1.67	0.60
1:CA:436:C:H4'	4:CG:156:GLU:HB2	1.84	0.60
1:CA:750:G:N3	15:CR:23:GLY:HA3	2.16	0.60
1:CA:920:U:H2'	1:CA:921:U:C6	2.36	0.60
2:CE:81:VAL:O	2:CE:85:ALA:N	2.33	0.60
19:CV:33:THR:HG22	19:CV:35:SER:N	2.17	0.60
24:DA:274:G:O2'	24:DA:275:G:O4'	2.20	0.60
24:DA:1066:U:O2'	24:DA:1069:A:N7	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2199:A:OP1	46:DZ:50:ARG:NH2	2.35	0.60
24:DA:2365:G:H4'	45:D3:60:PHE:CZ	2.37	0.60
25:DB:12:C:O2	45:D3:74:ARG:NH1	2.35	0.60
26:DD:34:VAL:CA	26:DD:35:LYS:HD3	2.31	0.60
26:DD:72:LYS:NZ	26:DD:99:ASP:OD2	2.35	0.60
40:D2:49:THR:O	40:D2:51:VAL:N	2.35	0.60
1:AA:1319:A:H3'	19:AV:3:ARG:HH21	1.67	0.59
12:AO:47:LYS:O	12:AO:48:PRO:C	2.44	0.59
24:BA:959:A:H62	35:BP:83:MET:HE1	1.66	0.59
24:BA:1079:C:H41	24:BA:1088:A:P	2.24	0.59
24:BA:1092:C:O2'	30:BH:170:ARG:NH1	2.30	0.59
24:BA:1486:A:H2'	24:BA:1487:G:H8	1.67	0.59
28:BF:114:VAL:HG21	28:BF:202:PHE:CZ	2.37	0.59
35:BP:35:VAL:HG13	35:BP:130:LYS:HB3	1.82	0.59
49:B4:15:ILE:HB	49:B4:32:TYR:CD1	2.36	0.59
1:CA:573:A:N3	1:CA:883:C:O2'	2.30	0.59
1:CA:1118:C:H5'	9:CL:104:ARG:HD3	1.84	0.59
1:CA:1239:A:O2'	7:CJ:114:ARG:O	2.16	0.59
2:CE:5:ILE:HD12	2:CE:56:ARG:HH22	1.66	0.59
15:CR:16:ALA:HB1	15:CR:21:ASP:HB3	1.84	0.59
28:DF:160:ASN:OD1	28:DF:163:VAL:N	2.33	0.59
29:DG:161:THR:HG22	29:DG:163:ALA:H	1.66	0.59
34:DO:63:PRO:HB3	53:D8:13:ARG:HG2	1.83	0.59
49:D4:39:CYS:CB	49:D4:41:PRO:CD	2.80	0.59
1:AA:391:G:O3'	16:AS:8:ARG:NH2	2.36	0.59
24:BA:1817:G:OP1	26:BD:88:ARG:NH2	2.33	0.59
24:BA:2483:C:N3	35:BP:124:LYS:NZ	2.44	0.59
33:BN:20:MET:HE3	33:BN:44:LYS:HE3	1.83	0.59
34:BO:70:GLN:HE21	34:BO:70:GLN:H	1.50	0.59
43:BU:76:CYS:HB3	43:BU:96:ILE:HD13	1.84	0.59
1:CA:142:G:H1	1:CA:221:C:H42	1.49	0.59
1:CA:1202:G:N2	14:CQ:46:GLU:OE1	2.27	0.59
19:CV:33:THR:HG22	19:CV:34:TRP:N	2.13	0.59
47:DW:41:ILE:HD11	47:DW:44:LEU:HD22	1.84	0.59
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.37	0.59
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.02	0.59
8:AK:44:PHE:HE2	8:AK:109:ILE:HG21	1.66	0.59
9:AL:43:ALA:HA	9:AL:74:ILE:HD13	1.84	0.59
17:AT:64:PRO:HA	17:AT:70:ARG:HG3	1.84	0.59
24:BA:931:G:O2'	48:BX:24:LYS:NZ	2.28	0.59
31:BK:120:ILE:HD11	31:BK:126:TYR:CZ	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:70:GLN:NE2	34:BO:70:GLN:H	1.99	0.59
44:BV:95:PRO:HA	44:BV:129:SER:HA	1.82	0.59
1:CA:56:U:H2'	1:CA:57:G:C8	2.37	0.59
1:CA:544:G:OP2	4:CG:66:ARG:NH2	2.35	0.59
1:CA:957:U:H1'	1:CA:960:U:H5	1.65	0.59
1:CA:1027:C:H2'	1:CA:1028:C:H6	1.66	0.59
1:CA:1300:G:O2'	1:CA:1301:U:O5'	2.18	0.59
1:CA:1502:A:H2	1:CA:1505:G:N1	1.98	0.59
13:CP:98:VAL:O	13:CP:100:GLY:N	2.34	0.59
24:DA:2287:A:O2'	24:DA:2288:A:H5''	2.01	0.59
34:DO:62:LEU:CD1	53:D8:25:MET:CB	2.80	0.59
42:DT:43:VAL:HG23	42:DT:51:VAL:HG21	1.84	0.59
1:AA:914:A:H2'	1:AA:915:A:H8	1.67	0.59
1:AA:1127:G:H21	1:AA:1146:A:H62	1.50	0.59
18:AU:25:THR:O	18:AU:42:ARG:NH2	2.34	0.59
43:BU:47:LYS:HG2	43:BU:60:PHE:CE1	2.38	0.59
1:CA:953:G:H5'	1:CA:965:A:H61	1.66	0.59
1:CA:954:G:O6	13:CP:104:ARG:NH1	2.35	0.59
22:CD:66:C:H2'	22:CD:67:C:C6	2.37	0.59
24:DA:139:G:N2	24:DA:141:A:N1	2.44	0.59
24:DA:330:A:H2	24:DA:1210:A:O2'	1.81	0.59
24:DA:1191:G:P	34:DO:18:ARG:HH22	2.26	0.59
24:DA:1245:G:OP1	34:DO:13:ASN:ND2	2.35	0.59
30:DH:6:ARG:O	30:DH:69:ARG:HG2	2.02	0.59
1:AA:375:U:O3'	16:AS:6:LEU:HB2	2.03	0.59
1:AA:618:C:H5''	1:AA:619:U:H5''	1.85	0.59
1:AA:673:G:H5''	6:AI:87:ARG:NH1	2.17	0.59
1:AA:1292:U:P	7:AJ:41:ARG:HH22	2.25	0.59
5:AH:78:HIS:HE1	5:AH:143:ARG:H	1.50	0.59
5:AH:152:ARG:NH2	8:AK:107:LEU:O	2.29	0.59
24:BA:654(A):A:H2	24:BA:654(T):A:N1	2.00	0.59
24:BA:1224:G:OP2	40:B2:66:ARG:NH2	2.32	0.59
24:BA:1287:A:N7	36:B0:107:ASP:HB2	2.17	0.59
24:BA:1783:A:H5'	24:BA:2608:G:H4'	1.84	0.59
29:BG:161:THR:HG22	29:BG:163:ALA:H	1.66	0.59
34:BO:71:VAL:C	34:BO:73:GLY:N	2.60	0.59
1:CA:382:A:H2'	1:CA:383:A:H8	1.67	0.59
1:CA:422:C:O2'	1:CA:423:G:N3	2.33	0.59
1:CA:1109:C:OP2	3:CF:176:HIS:ND1	2.36	0.59
1:CA:1256:A:H62	1:CA:1277:C:H3'	1.67	0.59
4:CG:104:VAL:O	4:CG:108:LEU:N	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1113:U:H2'	24:DA:1114:G:C8	2.38	0.59
24:DA:1171:G:O2'	24:DA:1173:G:O4'	2.19	0.59
24:DA:1582:C:HO2'	24:DA:1586:A:H8	1.48	0.59
24:DA:2836:U:H2'	24:DA:2837:G:C8	2.37	0.59
33:DN:34:THR:OG1	33:DN:35:VAL:N	2.34	0.59
49:D4:42:PHE:O	49:D4:44:THR:N	2.34	0.59
51:D6:44:ARG:HD3	51:D6:47:THR:CG2	2.31	0.59
1:AA:67:C:H2'	1:AA:68:G:C8	2.37	0.59
1:AA:553:A:H5''	12:AO:24:VAL:HG21	1.84	0.59
5:AH:147:ASP:HA	5:AH:150:ARG:NH1	2.17	0.59
24:BA:654(F):C:N4	24:BA:654(G):C:O2	2.35	0.59
24:BA:910:A:H62	35:BP:12:GLN:HA	1.68	0.59
24:BA:1061:U:O3'	24:BA:1070:A:H4'	2.03	0.59
24:BA:1068:G:H2'	24:BA:1069:A:C8	2.38	0.59
24:BA:1228:G:OP2	39:B1:16:LYS:NZ	2.35	0.59
24:BA:2787:C:O2'	27:BE:61:ARG:HB3	2.02	0.59
37:BQ:24:LEU:HB2	37:BQ:85:VAL:HG12	1.84	0.59
1:CA:877:C:OP1	8:CK:88:LYS:NZ	2.34	0.59
1:CA:957:U:P	19:CV:81:ARG:HH22	2.25	0.59
18:CU:22:VAL:HG12	18:CU:56:THR:HA	1.83	0.59
24:DA:1645:G:H5''	24:DA:1646:C:H5'	1.83	0.59
28:DF:3:GLU:HB3	28:DF:24:LEU:CD2	2.31	0.59
38:DR:21:GLU:O	38:DR:91:ARG:NH2	2.36	0.59
51:D6:46:HIS:CD2	51:D6:46:HIS:H	2.20	0.59
1:AA:186(D):C:H42	1:AA:191(C):G:H1	1.51	0.59
1:AA:951:G:OP2	13:AP:102:ARG:NH2	2.36	0.59
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.68	0.59
24:BA:581:C:H2'	24:BA:582:G:C8	2.38	0.59
24:BA:2468:G:OP1	35:BP:119:ARG:NH2	2.26	0.59
29:BG:5:VAL:HG12	29:BG:8:LYS:H	1.66	0.59
35:BP:66:ILE:HA	35:BP:104:PHE:N	2.17	0.59
40:B2:34:GLU:HB3	40:B2:58:VAL:HG12	1.84	0.59
1:CA:352:C:O2'	1:CA:353:A:O5'	2.20	0.59
1:CA:963:G:H21	10:CM:55:LYS:CE	2.13	0.59
1:CA:1069:C:O2'	1:CA:1192:C:O2	2.16	0.59
55:CA:1800:T1C:H92	55:CA:1800:T1C:H8	1.68	0.59
24:DA:654(F):C:O2	24:DA:654(P):G:N2	2.35	0.59
24:DA:1024:G:H3'	24:DA:1025:G:H5''	1.85	0.59
24:DA:2108:C:O2	24:DA:2181:G:N2	2.24	0.59
24:DA:2757:A:C2	30:DH:67:LEU:HD11	2.38	0.59
25:DB:39:A:C6	49:D4:1:MET:HB2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:25:THR:O	26:DD:27:THR:N	2.36	0.59
29:DG:113:ARG:HD3	29:DG:140:ILE:O	2.03	0.59
30:DH:135:GLY:O	30:DH:137:ASP:N	2.35	0.59
51:D6:27:LYS:HZ3	51:D6:28:ARG:NH1	2.00	0.59
1:AA:183:G:H2'	1:AA:184:G:H8	1.67	0.59
1:AA:437:U:H5'	4:AG:155:LEU:HD21	1.85	0.59
1:AA:877:C:H5''	8:AK:88:LYS:HD3	1.85	0.59
2:AE:126:GLU:OE1	2:AE:130:ARG:NH1	2.36	0.59
13:AP:30:ALA:O	13:AP:32:GLU:N	2.36	0.59
1:CA:318:G:H1	1:CA:335:C:H42	1.49	0.59
16:CS:4:ILE:HB	16:CS:66:PRO:HB3	1.84	0.59
24:DA:880:G:O6	24:DA:897:C:N4	2.36	0.59
24:DA:960:A:H61	35:DP:83:MET:CE	2.14	0.59
24:DA:1070:A:C5'	24:DA:1071:G:H5''	2.33	0.59
30:DH:163:TYR:HE2	30:DH:169:VAL:HG11	1.68	0.59
37:DQ:85:VAL:HG22	37:DQ:110:LEU:HB3	1.84	0.59
40:D2:49:THR:CB	40:D2:50:PRO:HD3	2.18	0.59
44:DV:70:LEU:O	44:DV:89:PHE:N	2.23	0.59
49:D4:14:ILE:HG13	49:D4:33:VAL:HG11	1.84	0.59
49:D4:37:SER:OG	49:D4:38:LYS:N	2.33	0.59
1:AA:196:A:OP1	20:AW:68:LYS:NZ	2.36	0.59
1:AA:458:C:N4	1:AA:474:G:O6	2.27	0.59
1:AA:474:G:H2'	1:AA:475:G:C8	2.37	0.59
1:AA:1381:U:H2'	7:AJ:79:ARG:NE	2.18	0.59
2:AE:76:GLN:NE2	2:AE:206:ASP:HB3	2.17	0.59
5:AH:10:MET:HB3	5:AH:32:VAL:HG22	1.84	0.59
17:AT:65:ILE:HG21	17:AT:69:LYS:HE2	1.84	0.59
19:AV:31:ILE:HB	19:AV:49:ILE:HG23	1.85	0.59
24:BA:527:C:OP2	24:BA:2779:U:H5	1.86	0.59
24:BA:1007:C:H5''	32:BM:35:ARG:HH11	1.67	0.59
24:BA:1058:U:H2'	24:BA:1059:G:C8	2.37	0.59
25:BB:42:C:N3	29:BG:93:THR:OG1	2.33	0.59
25:BB:111:U:H2'	25:BB:112:G:H8	1.66	0.59
36:B0:100:LEU:HD11	36:B0:113:LEU:HD13	1.84	0.59
43:BU:76:CYS:SG	43:BU:77:PRO:HD2	2.42	0.59
4:CG:22:LYS:HG3	4:CG:26:CYS:CA	2.32	0.59
24:DA:1593:G:H2'	24:DA:1594:G:H8	1.67	0.59
24:DA:2133:G:H2'	24:DA:2157:G:N1	2.18	0.59
24:DA:2849:U:H4'	24:DA:2868:A:C2	2.38	0.59
29:DG:38:VAL:HG22	29:DG:93:THR:HG23	1.85	0.59
34:DO:46:LYS:HD3	34:DO:51:PHE:CD1	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:223:ILE:HA	2:AE:226:ARG:HG2	1.84	0.59
7:AJ:120:ILE:O	7:AJ:124:LEU:HB2	2.03	0.59
14:AQ:12:ARG:C	14:AQ:14:PRO:HD2	2.28	0.59
22:AD:36:U:H2'	22:AD:37:A:C8	2.38	0.59
24:BA:1889:A:H2'	24:BA:1890:A:C8	2.38	0.59
31:BK:56:LYS:O	31:BK:59:ALA:N	2.35	0.59
36:B0:2:ARG:HD3	36:B0:2:ARG:H	1.68	0.59
1:CA:191:G:O2'	20:CW:103:GLY:HA2	2.02	0.59
1:CA:837:G:O6	1:CA:849:C:N4	2.36	0.59
2:CE:21:ARG:HA	2:CE:40:HIS:HD2	1.68	0.59
3:CF:88:ARG:HA	3:CF:91:LEU:HD13	1.84	0.59
4:CG:22:LYS:NZ	4:CG:25:ARG:CG	2.53	0.59
24:DA:536:A:OP1	39:D1:53:ARG:NH1	2.35	0.59
30:DH:61:HIS:O	30:DH:65:HIS:N	2.28	0.59
31:DK:130:TYR:HB3	31:DK:136:VAL:HG13	1.85	0.59
33:DN:75:SER:OG	38:DR:74:ARG:NH1	2.36	0.59
40:D2:76:LYS:HZ1	40:D2:82:ARG:HH11	1.50	0.59
52:D7:32:LYS:HB3	52:D7:32:LYS:NZ	2.18	0.59
1:AA:43:C:O2'	1:AA:623:C:O2'	2.21	0.58
1:AA:1029:G:O2'	1:AA:1032(A):G:N1	2.35	0.58
1:AA:1150:U:O2'	10:AM:39:PRO:O	2.20	0.58
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.10	0.58
5:AH:12:LEU:HB3	5:AH:31:LEU:HB2	1.83	0.58
8:AK:11:THR:O	8:AK:15:ASN:ND2	2.19	0.58
24:BA:1652:A:OP1	36:B0:8:ARG:NH1	2.35	0.58
24:BA:1861:G:H1	24:BA:1881:C:H42	1.50	0.58
24:BA:2683:C:OP1	38:BR:53:ARG:NH2	2.36	0.58
24:BA:2751:G:H8	24:BA:2751:G:O5'	1.86	0.58
27:BE:120:TRP:CE3	27:BE:155:LYS:HD3	2.38	0.58
28:BF:8:GLN:O	28:BF:8:GLN:NE2	2.36	0.58
1:CA:707:C:OP1	11:CN:85:ARG:NH1	2.29	0.58
1:CA:976:G:N2	1:CA:1362(A):C:OP2	2.34	0.58
9:CL:92:TYR:O	9:CL:96:LEU:HB2	2.03	0.58
15:CR:6:GLU:OE1	15:CR:6:GLU:N	2.32	0.58
24:DA:1111:A:O2'	30:DH:3:ARG:N	2.36	0.58
24:DA:1567:A:H5'	26:DD:58:HIS:CD2	2.38	0.58
26:DD:43:ARG:NH1	26:DD:44:ASN:ND2	2.51	0.58
27:DE:52:LEU:O	27:DE:75:VAL:N	2.36	0.58
30:DH:74:ASN:OD1	30:DH:74:ASN:N	2.35	0.58
51:D6:44:ARG:O	51:D6:45:LYS:HG3	2.03	0.58
1:AA:1216:G:OP1	14:AQ:2:ALA:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AI:91:VAL:HG11	18:AU:72:ARG:NH1	2.18	0.58
7:AJ:69:VAL:HG22	7:AJ:135:VAL:HG22	1.85	0.58
9:AL:110:GLU:OE2	9:AL:113:LYS:NZ	2.33	0.58
16:AS:28:ARG:NH1	16:AS:29:ASP:OD1	2.35	0.58
24:BA:2791:C:H2'	24:BA:2792:G:C8	2.38	0.58
1:CA:1117:G:H2'	9:CL:104:ARG:NH1	2.18	0.58
22:CD:22:G:O2'	22:CD:23:C:OP1	2.20	0.58
24:DA:2306:C:H3'	24:DA:2307:G:H5''	1.84	0.58
24:DA:2562:U:H1'	33:DN:23:ARG:HD3	1.84	0.58
38:DR:24:PRO:HA	38:DR:49:VAL:HG13	1.85	0.58
41:DS:73:ALA:HB3	41:DS:106:ILE:HG12	1.85	0.58
2:AE:68:ILE:HG13	2:AE:161:ALA:HB3	1.85	0.58
10:AM:25:GLU:O	10:AM:27:ALA:N	2.29	0.58
24:BA:1067:A:H5''	24:BA:1068:G:C8	2.37	0.58
25:BB:12:C:N3	45:B3:74:ARG:NH1	2.51	0.58
25:BB:15:A:H5'	25:BB:16:G:H8	1.68	0.58
32:BM:130:HIS:HB2	32:BM:134:ARG:NH2	2.18	0.58
34:BO:126:VAL:HG13	34:BO:145:PRO:HG2	1.85	0.58
43:BU:80:GLY:O	43:BU:81:LYS:NZ	2.34	0.58
1:CA:530:G:O2'	1:CA:531:U:OP1	2.20	0.58
1:CA:913:A:OP1	12:CO:47:LYS:NZ	2.36	0.58
4:CG:162:LEU:HD22	4:CG:178:VAL:HG13	1.86	0.58
22:CD:62:C:H2'	22:CD:63:G:H8	1.68	0.58
24:DA:328:U:H4'	43:DU:68:HIS:ND1	2.17	0.58
24:DA:779:U:OP1	26:DD:49:ILE:HG22	2.02	0.58
24:DA:2130:U:H4'	24:DA:2134:A:H5'	1.85	0.58
26:DD:146:GLU:OE1	26:DD:190:TYR:N	2.18	0.58
27:DE:23:VAL:HG21	27:DE:183:LEU:CG	2.32	0.58
31:DK:68:LEU:HA	31:DK:71:ILE:HG22	1.85	0.58
34:DO:47:ASP:CB	34:DO:48:PRO:HA	2.30	0.58
3:AF:15:THR:HG23	3:AF:181:ASN:HA	1.85	0.58
5:AH:102:ALA:HB1	5:AH:106:PRO:HG2	1.84	0.58
6:AI:50:TYR:OH	18:AU:74:ARG:O	2.20	0.58
12:AO:47:LYS:O	12:AO:49:ASN:N	2.36	0.58
22:AD:62:C:H2'	22:AD:63:G:H8	1.67	0.58
24:BA:1980:G:O2'	24:BA:1982:C:OP2	2.16	0.58
24:BA:2820:A:O2'	24:BA:2821:A:OP1	2.18	0.58
26:BD:85:ASP:OD2	26:BD:88:ARG:NH1	2.36	0.58
1:CA:542:G:H5'	4:CG:41:GLY:HA3	1.84	0.58
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.68	0.58
2:CE:16:HIS:CG	2:CE:209:ARG:HB3	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:9:CYS:SG	4:CG:26:CYS:SG	3.01	0.58
21:CX:10:ARG:HA	21:CX:13:ILE:HB	1.85	0.58
22:CC:1:C:O2'	22:CC:2:G:O5'	2.20	0.58
25:DB:89(A):A:H5'	25:DB:90:C:OP2	2.04	0.58
1:AA:108:G:OP2	1:AA:326:G:N1	2.22	0.58
1:AA:973:G:OP1	10:AM:57:LYS:NZ	2.23	0.58
1:AA:1124:G:H3'	1:AA:1145:C:H41	1.67	0.58
1:AA:1149:C:OP2	9:AL:9:ARG:NH2	2.36	0.58
2:AE:45:GLN:NE2	2:AE:49:GLU:OE2	2.36	0.58
24:BA:330:A:O2'	24:BA:331:A:H8	1.86	0.58
24:BA:874:G:O2'	44:BV:170:THR:HG21	2.03	0.58
24:BA:910:A:C5	35:BP:13:GLN:HG3	2.38	0.58
24:BA:960:A:H61	35:BP:83:MET:CE	2.17	0.58
38:BR:64:ARG:HB2	38:BR:73:GLU:HG2	1.85	0.58
43:BU:81:LYS:HG3	43:BU:97:ARG:CZ	2.32	0.58
47:BW:33:MET:HG2	47:BW:37:PHE:CE1	2.39	0.58
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.39	0.58
1:CA:1325:C:OP1	21:CX:15:ARG:NE	2.33	0.58
24:DA:1171:G:H1	24:DA:1174:A:H61	1.51	0.58
24:DA:2843:G:H1	24:DA:2874:C:H42	1.51	0.58
24:DA:2889:C:H3'	24:DA:2891:G:H8	1.68	0.58
27:DE:37:ARG:HA	27:DE:42:ASP:OD2	2.03	0.58
39:D1:92:ARG:CZ	40:D2:11:GLN:H	2.15	0.58
1:AA:82:U:H3	1:AA:87:A:H2	1.52	0.58
1:AA:690:G:H22	11:AN:55:LYS:NZ	2.02	0.58
1:AA:859:A:H2'	1:AA:860:A:O4'	2.03	0.58
1:AA:890:G:O2'	1:AA:906:G:O6	2.15	0.58
24:BA:483:A:H4'	43:BU:49:VAL:HA	1.85	0.58
24:BA:2102:U:O2	24:BA:2187:G:N2	2.26	0.58
24:BA:2154:G:H2'	24:BA:2155:G:C8	2.39	0.58
24:BA:2257:U:O2'	24:BA:2258:C:H5'	2.03	0.58
24:BA:2470:G:H5'	35:BP:56:ARG:HH21	1.68	0.58
24:BA:2818:G:H1	24:BA:2828:C:H42	1.50	0.58
36:B0:33:ARG:HH22	50:B5:55:ARG:HB3	1.67	0.58
38:BR:129:ARG:HA	38:BR:132:LYS:HB3	1.85	0.58
1:CA:406:G:H21	4:CG:119:GLN:HE22	1.52	0.58
1:CA:468:A:H2'	1:CA:474:G:O4'	2.04	0.58
1:CA:588:G:O6	1:CA:651:C:N4	2.36	0.58
1:CA:941:G:O6	1:CA:1342:C:N4	2.37	0.58
4:CG:22:LYS:NZ	4:CG:25:ARG:NH1	2.52	0.58
24:DA:654(O):G:H2'	24:DA:654(P):G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2387:U:O2'	45:D3:41:ARG:NH1	2.36	0.58
30:DH:2:SER:O	30:DH:4:ILE:N	2.37	0.58
44:DV:19:ARG:NE	44:DV:84:GLU:OE2	2.36	0.58
1:AA:5:U:O2'	1:AA:6:G:O5'	2.21	0.58
1:AA:1070:U:OP1	5:AH:18:ARG:NH1	2.26	0.58
1:AA:1346:A:H5'	9:AL:120:ARG:NH1	2.18	0.58
3:AF:13:GLY:HA2	14:AQ:57:ARG:HH21	1.67	0.58
7:AJ:130:GLY:O	7:AJ:132:GLY:N	2.37	0.58
22:AD:56:C:H2'	22:AD:57:A:H8	1.68	0.58
24:BA:685:A:OP1	24:BA:686:G:N2	2.37	0.58
24:BA:1063:G:H1'	24:BA:1077:A:H62	1.68	0.58
38:BR:16:ARG:HD3	38:BR:79:HIS:HA	1.85	0.58
1:CA:408:A:H2'	1:CA:409:G:O4'	2.04	0.58
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.67	0.58
3:CF:3:ASN:N	3:CF:3:ASN:OD1	2.36	0.58
18:CU:59:SER:OG	18:CU:60:ALA:N	2.36	0.58
24:DA:1858:G:O2'	24:DA:1884:A:N6	2.36	0.58
24:DA:2327:A:H2'	24:DA:2328:A:C8	2.39	0.58
29:DG:167:GLU:O	29:DG:170:ARG:HB3	2.04	0.58
32:DM:58:ASP:OD1	32:DM:58:ASP:N	2.36	0.58
34:DO:62:LEU:HG	53:D8:25:MET:O	1.98	0.58
39:D1:92:ARG:NH1	40:D2:11:GLN:O	2.37	0.58
1:AA:162:A:H3'	1:AA:163:C:H4'	1.86	0.58
1:AA:272:C:H2'	1:AA:273:A:H8	1.67	0.58
1:AA:545:C:O2'	1:AA:549:C:OP1	2.16	0.58
1:AA:664:G:N2	1:AA:741:G:H1	2.00	0.58
1:AA:1195:C:O3'	55:AA:1837:T1C:N21	2.36	0.58
13:AP:23:TYR:HE2	13:AP:71:ARG:HB2	1.68	0.58
1:CA:627:G:H2'	1:CA:628:G:H8	1.67	0.58
1:CA:1015:A:O3'	14:CQ:15:LYS:NZ	2.33	0.58
13:CP:65:LYS:HB2	13:CP:69:GLU:CD	2.28	0.58
24:DA:2839:G:C5'	36:D0:46:GLY:HA2	2.34	0.58
27:DE:174:ASP:OD1	27:DE:175:VAL:N	2.36	0.58
40:D2:35:LEU:HG	40:D2:37:VAL:CG1	2.33	0.58
42:DT:8:ILE:HB	47:DW:33:MET:HE3	1.85	0.58
3:AF:76:VAL:HG21	3:AF:103:VAL:HG21	1.86	0.58
9:AL:4:TYR:HB2	9:AL:19:LEU:HB2	1.85	0.58
24:BA:1190:G:H5'	34:BO:32:THR:HA	1.86	0.58
24:BA:2751:G:H21	30:BH:3:ARG:NE	2.02	0.58
43:BU:56:PRO:O	43:BU:58:GLY:N	2.37	0.58
53:B8:50:LEU:HD12	53:B8:51:ALA:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1086:U:H3	1:CA:1099:G:H22	1.52	0.58
4:CG:73:ARG:O	4:CG:77:ASN:ND2	2.32	0.58
9:CL:28:VAL:HG22	9:CL:63:ILE:HB	1.85	0.58
15:CR:33:THR:HG23	15:CR:63:ARG:HH11	1.69	0.58
24:DA:242:G:O5'	53:D8:3:LYS:HE3	2.04	0.58
24:DA:889:C:N3	24:DA:890:A:O2'	2.36	0.58
24:DA:1210:A:H5''	24:DA:1211:U:H3'	1.86	0.58
24:DA:1478:G:H2'	24:DA:1479:G:H8	1.69	0.58
27:DE:7:VAL:O	27:DE:26:ILE:HG23	2.03	0.58
44:DV:45:ASP:O	44:DV:49:ARG:HG2	2.03	0.58
1:AA:976:G:OP1	14:AQ:32:SER:N	2.37	0.58
2:AE:210:SER:O	2:AE:214:ILE:HG22	2.04	0.58
18:AU:59:SER:N	18:AU:62:GLU:OE1	2.36	0.58
19:AV:40:ILE:O	49:B4:63:TYR:OH	2.21	0.58
24:BA:2390:U:P	53:B8:34:TRP:CZ2	2.97	0.58
24:BA:2646:C:OP2	24:BA:2732:G:O2'	2.18	0.58
24:BA:2751:G:O5'	24:BA:2751:G:C8	2.57	0.58
29:BG:66:GLN:HA	49:B4:6:HIS:CE1	2.38	0.58
1:CA:429:U:C3'	4:CG:25:ARG:NH2	2.67	0.58
1:CA:1440:C:O2'	1:CA:1442:G:N2	2.35	0.58
10:CM:5:ARG:N	10:CM:99:LYS:O	2.34	0.58
24:DA:140:A:H8	24:DA:1408:C:HO2'	1.51	0.58
24:DA:221:A:N1	24:DA:265:A:O2'	2.33	0.58
24:DA:631:A:OP2	53:D8:47:LYS:NZ	2.34	0.58
24:DA:1059:G:H3'	24:DA:1060:U:H2'	1.84	0.58
24:DA:1728:G:C6	24:DA:1730:U:H5'	2.38	0.58
24:DA:1899:G:O2'	24:DA:1900:A:H5''	2.04	0.58
24:DA:2053:G:H5'	27:DE:144:ARG:O	2.04	0.58
27:DE:4:ILE:CD1	27:DE:28:ALA:HB1	2.34	0.58
29:DG:104:GLU:HG2	49:D4:23:GLU:HG2	1.85	0.58
40:D2:5:VAL:HB	40:D2:37:VAL:HG12	1.86	0.58
1:AA:62:U:H3	1:AA:105:G:H1	1.51	0.57
1:AA:589:C:H42	1:AA:650:G:H1	1.50	0.57
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.38	0.57
1:AA:1453:G:O2'	20:AW:39:LYS:NZ	2.34	0.57
7:AJ:16:LEU:HD12	9:AL:41:VAL:HG12	1.85	0.57
19:AV:50:ALA:HB1	19:AV:57:HIS:HB3	1.86	0.57
24:BA:2112:G:H1	24:BA:2169:A:H61	1.50	0.57
24:BA:2531:A:C4'	30:BH:157:TYR:CD2	2.82	0.57
24:BA:2789:C:O2'	24:BA:2893:G:N2	2.37	0.57
49:B4:12:ALA:HB3	49:B4:24:THR:OG1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:776:G:N2	1:CA:802:A:OP2	2.35	0.57
1:CA:1266:G:N2	1:CA:1270:C:N3	2.51	0.57
3:CF:91:LEU:O	3:CF:95:THR:OG1	2.22	0.57
9:CL:50:LEU:HG	9:CL:81:ILE:HD11	1.84	0.57
13:CP:81:LEU:O	13:CP:89:GLY:HA3	2.04	0.57
16:CS:53:VAL:HG12	16:CS:79:VAL:HG22	1.85	0.57
24:DA:463:G:N2	24:DA:466:A:OP2	2.33	0.57
24:DA:806:C:O2	24:DA:2444:G:O2'	2.22	0.57
35:DP:65:PHE:O	35:DP:67:ARG:N	2.37	0.57
1:AA:510:A:OP2	4:AG:49:ARG:NH2	2.37	0.57
7:AJ:155:ARG:HH21	7:AJ:156:TRP:HA	1.69	0.57
16:AS:76:GLN:NE2	16:AS:76:GLN:O	2.35	0.57
24:BA:70:G:H21	24:BA:71:A:H62	1.51	0.57
24:BA:942:G:O2'	24:BA:1189:A:N3	2.34	0.57
24:BA:1024:G:H3'	24:BA:1025:G:H5''	1.84	0.57
24:BA:1164:G:H2'	24:BA:1165:U:C6	2.39	0.57
24:BA:2210:G:H3'	24:BA:2211:G:C8	2.39	0.57
24:BA:2781:A:H5''	24:BA:2782:G:H5'	1.85	0.57
1:CA:1091:U:N3	1:CA:1094:G:OP2	2.27	0.57
2:CE:72:GLY:HA3	2:CE:81:VAL:HG21	1.85	0.57
4:CG:165:MET:SD	4:CG:168:ARG:NH2	2.78	0.57
9:CL:97:LYS:HB3	9:CL:98:PRO:HD3	1.86	0.57
9:CL:112:LYS:HG2	9:CL:118:LYS:HA	1.86	0.57
19:CV:49:ILE:HD13	19:CV:62:ILE:HD11	1.85	0.57
24:DA:270(R):G:H21	46:DZ:78:LYS:HD3	1.67	0.57
24:DA:654(I):C:N4	24:DA:654(M):C:O2	2.36	0.57
24:DA:2404:C:O3'	34:DO:77:ARG:NH2	2.37	0.57
24:DA:2823:A:OP1	27:DE:113:PHE:HB2	2.04	0.57
1:AA:428:G:O3'	4:AG:36:ARG:NH2	2.36	0.57
1:AA:701:C:O2	1:AA:703:G:N1	2.37	0.57
1:AA:835:U:OP1	18:AU:64:ARG:NH1	2.38	0.57
1:AA:1342:C:H4'	9:AL:125:TYR:HB3	1.85	0.57
3:AF:52:LEU:HA	3:AF:70:VAL:HG22	1.85	0.57
5:AH:54:ALA:O	5:AH:58:ALA:N	2.30	0.57
12:AO:126:LYS:HE3	12:AO:128:ALA:H	1.69	0.57
13:AP:3:ARG:HB3	49:B4:34:GLU:HG3	1.86	0.57
22:AD:43:A:H2'	22:AD:44:A:H8	1.69	0.57
24:BA:958:U:OP2	35:BP:14:ARG:NH1	2.36	0.57
24:BA:1538:G:H8	24:BA:1538:G:O5'	1.87	0.57
24:BA:2884:U:H2'	24:BA:2885:C:O4'	2.03	0.57
35:BP:64:ILE:CG2	35:BP:65:PHE:N	2.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:147:G:H1	1:CA:175:C:H42	1.52	0.57
1:CA:1219:U:P	14:CQ:19:ARG:HH12	2.26	0.57
1:CA:1306:A:N6	1:CA:1331:G:O2'	2.37	0.57
6:CI:67:MET:HE1	6:CI:75:LEU:HD22	1.86	0.57
24:DA:1019:U:HO2'	24:DA:1021:A:H2	1.49	0.57
24:DA:1093:G:N2	24:DA:1098:A:H62	2.02	0.57
24:DA:1753:G:OP2	38:DR:115:ARG:NH2	2.37	0.57
24:DA:2816:C:O2	24:DA:2883:A:O2'	2.21	0.57
1:AA:1077:G:O6	5:AH:47:LYS:NZ	2.38	0.57
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.85	0.57
2:AE:185:ILE:HA	2:AE:199:TYR:O	2.05	0.57
8:AK:105:ARG:O	8:AK:107:LEU:N	2.30	0.57
24:BA:1406:U:H2'	24:BA:1407:C:C6	2.40	0.57
24:BA:1912:A:H4'	24:BA:1913:A:OP1	2.04	0.57
26:BD:62:TYR:CE2	26:BD:64:ILE:HA	2.40	0.57
26:BD:158:ALA:O	26:BD:161:THR:OG1	2.16	0.57
30:BH:157:TYR:O	30:BH:158:HIS:ND1	2.38	0.57
35:BP:66:ILE:C	35:BP:67:ARG:HG3	2.30	0.57
42:BT:68:ARG:NH1	42:BT:69:TYR:OH	2.38	0.57
3:CF:134:ILE:CG2	3:CF:168:ALA:HB3	2.34	0.57
11:CN:54:ARG:HH12	22:CD:40:C:P	2.28	0.57
24:DA:1050:A:H3'	24:DA:1051:G:H8	1.69	0.57
24:DA:1071:G:H2'	24:DA:1072:C:C6	2.39	0.57
24:DA:2370:G:H2'	24:DA:2371:G:O4'	2.05	0.57
38:DR:92:GLY:HA2	38:DR:116:ALA:HA	1.85	0.57
46:DZ:86:SER:N	46:DZ:87:PRO:HD2	2.20	0.57
1:AA:1347:G:C8	9:AL:11:LYS:NZ	2.73	0.57
12:AO:35:GLY:HA2	12:AO:60:LEU:HA	1.86	0.57
19:AV:4:SER:O	19:AV:5:LEU:HB2	2.04	0.57
20:AW:50:GLU:HB2	20:AW:99:LEU:HG	1.86	0.57
24:BA:746:A:C6	24:BA:2611:U:H5''	2.39	0.57
24:BA:1138:G:H21	32:BM:106:MET:CE	2.14	0.57
29:BG:97:ASP:O	29:BG:101:ILE:HG12	2.05	0.57
34:BO:23:PRO:O	34:BO:25:SER:N	2.37	0.57
36:B0:83:ILE:HG22	36:B0:87:TYR:HE2	1.69	0.57
47:BW:43:GLN:C	47:BW:45:SER:H	2.12	0.57
1:CA:636:U:H2'	1:CA:637:G:C8	2.38	0.57
2:CE:30:ARG:NH2	2:CE:195:ASP:OD1	2.38	0.57
3:CF:134:ILE:HG21	3:CF:168:ALA:HB3	1.86	0.57
4:CG:32:ALA:O	4:CG:36:ARG:C	2.47	0.57
9:CL:42:ARG:NH1	9:CL:71:SER:OG	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CV:40:ILE:HD11	19:CV:67:VAL:N	2.18	0.57
24:DA:1030:G:H1	24:DA:1124:C:H42	1.52	0.57
24:DA:1037:G:N1	24:DA:1118:C:N3	2.32	0.57
29:DG:97:ASP:HA	29:DG:100:TRP:CD1	2.39	0.57
34:DO:62:LEU:HD22	53:D8:27:THR:HG22	1.87	0.57
37:DQ:66:ALA:HA	37:DQ:69:VAL:HG12	1.85	0.57
1:AA:7:G:H5'	1:AA:298:A:O4'	2.04	0.57
9:AL:5:TYR:HH	9:AL:7:THR:HG1	1.53	0.57
12:AO:46:LYS:O	12:AO:48:PRO:CD	2.44	0.57
24:BA:2114:A:C8	24:BA:2117:A:H5'	2.39	0.57
24:BA:2893:G:H4'	24:BA:2894:G:O4'	2.04	0.57
26:BD:35:LYS:HA	26:BD:64:ILE:HG22	1.87	0.57
28:BF:40:GLN:HE22	28:BF:182:ASN:HB2	1.69	0.57
35:BP:30:GLY:HA2	35:BP:107:ALA:HB2	1.87	0.57
42:BT:15:GLU:CD	42:BT:15:GLU:H	2.13	0.57
51:B6:18:ARG:NH1	51:B6:18:ARG:HB2	2.19	0.57
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.05	0.57
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.39	0.57
2:CE:42:ILE:HD11	2:CE:202:PRO:HB2	1.87	0.57
19:CV:31:ILE:HD11	19:CV:50:ALA:O	2.05	0.57
24:DA:270(L):U:O2'	24:DA:270(M):U:OP1	2.21	0.57
24:DA:1819:A:H4'	24:DA:1820:U:O5'	2.04	0.57
24:DA:1856:G:H1	24:DA:1886:C:H42	1.52	0.57
25:DB:66:A:H61	25:DB:108:C:H5''	1.70	0.57
28:DF:2:LYS:O	28:DF:24:LEU:CG	2.46	0.57
32:DM:38:HIS:NE2	32:DM:50:ASP:OD2	2.24	0.57
45:D3:25:ARG:HD2	45:D3:29:GLN:NE2	2.19	0.57
1:AA:425:G:O3'	4:AG:45:GLN:NE2	2.37	0.57
1:AA:673:G:H2'	1:AA:674:G:C8	2.39	0.57
1:AA:714:G:H2'	1:AA:715:A:C8	2.39	0.57
1:AA:967:C:H4'	9:AL:125:TYR:HE1	1.69	0.57
17:AT:22:LEU:HD11	17:AT:39:SER:HB3	1.85	0.57
22:AD:70:G:N2	22:AD:71:C:O4'	2.37	0.57
28:BF:108:LYS:O	28:BF:112:MET:HG3	2.05	0.57
29:BG:83:ARG:O	29:BG:85:GLY:N	2.38	0.57
1:CA:426:G:OP1	4:CG:36:ARG:NH2	2.37	0.57
1:CA:765:G:N2	1:CA:813:U:OP2	2.36	0.57
2:CE:15:VAL:O	2:CE:209:ARG:NH2	2.37	0.57
2:CE:82:ARG:NH1	2:CE:92:TYR:OH	2.38	0.57
2:CE:233:SER:OG	2:CE:234:PRO:HD2	2.04	0.57
13:CP:31:LYS:HA	13:CP:34:LEU:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:666:G:OP1	34:DO:47:ASP:O	2.22	0.57
29:DG:77:ILE:H	29:DG:82:LEU:HB2	1.70	0.57
31:DK:91:SER:HB2	31:DK:119:PRO:HB2	1.87	0.57
49:D4:21:VAL:HG22	49:D4:22:ILE:H	1.69	0.57
1:AA:1167:A:H2'	1:AA:1169:A:C8	2.39	0.57
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.04	0.57
2:AE:61:LEU:HD22	2:AE:68:ILE:HD11	1.87	0.57
4:AG:60:GLU:OE2	4:AG:199:ASN:N	2.32	0.57
24:BA:74:A:H4'	24:BA:75:G:O5'	2.05	0.57
24:BA:654(M):C:H3'	24:BA:654(N):G:H8	1.69	0.57
24:BA:1065:U:N3	24:BA:1066:U:H1'	2.20	0.57
24:BA:1332:G:N2	24:BA:1609:A:O2'	2.38	0.57
27:BE:13:ARG:HD2	38:BR:58:ASN:HB2	1.86	0.57
30:BH:64:LEU:O	30:BH:68:THR:OG1	2.22	0.57
1:CA:977:A:O2'	1:CA:981:U:N3	2.37	0.57
1:CA:979:C:H3'	1:CA:980:C:H5''	1.85	0.57
2:CE:137:ARG:NH1	2:CE:141:GLU:OE1	2.37	0.57
3:CF:11:ARG:O	3:CF:14:ILE:N	2.34	0.57
4:CG:60:GLU:OE2	4:CG:199:ASN:N	2.38	0.57
24:DA:1472:A:H2'	24:DA:1473:G:O4'	2.05	0.57
1:AA:130:A:O2'	1:AA:131:C:O5'	2.21	0.57
1:AA:328:C:H4'	1:AA:329:A:H5'	1.86	0.57
24:BA:857:C:H4'	45:B3:23:VAL:HG21	1.86	0.57
24:BA:2346:A:O3'	51:B6:39:TYR:OH	2.20	0.57
24:BA:2469:A:O2'	35:BP:56:ARG:NE	2.37	0.57
31:BK:3:VAL:HG12	31:BK:38:LEU:HA	1.85	0.57
46:BZ:53:VAL:HG22	46:BZ:74:VAL:HG23	1.87	0.57
49:B4:23:GLU:O	49:B4:25:TYR:N	2.37	0.57
1:CA:1192:C:OP2	3:CF:4:LYS:NZ	2.37	0.57
12:CO:34:ARG:HG2	12:CO:35:GLY:H	1.70	0.57
13:CP:54:VAL:O	13:CP:58:GLU:N	2.38	0.57
17:CT:81:ARG:NH2	17:CT:83:ASP:OD2	2.37	0.57
24:DA:531:C:OP1	24:DA:561:G:N2	2.38	0.57
24:DA:894:C:H5'	24:DA:895:U:OP2	2.05	0.57
24:DA:1052:C:H42	24:DA:1106:G:H1	1.51	0.57
24:DA:1192:G:OP2	34:DO:18:ARG:NH2	2.37	0.57
29:DG:108:ASN:HB3	49:D4:38:LYS:HD3	1.87	0.57
34:DO:64:LYS:O	34:DO:64:LYS:CG	2.52	0.57
39:D1:61:TRP:CZ3	39:D1:94:ASN:HB2	2.40	0.57
1:AA:1304:G:N1	1:AA:1332:A:OP2	2.37	0.57
2:AE:9:GLU:H	2:AE:9:GLU:CD	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AT:99:SER:O	17:AT:101:ARG:N	2.37	0.57
22:AD:7:G:N2	22:AD:67:C:O2	2.38	0.57
24:BA:874:G:H1	24:BA:903:C:H42	1.52	0.57
24:BA:1063:G:H2'	24:BA:1064:C:O4'	2.04	0.57
24:BA:2298:A:H2'	24:BA:2299:G:O4'	2.05	0.57
24:BA:2612:C:H3'	50:B5:3:LYS:HE2	1.85	0.57
27:BE:28:ALA:HB3	27:BE:93:VAL:HG12	1.87	0.57
46:BZ:65:SER:OG	46:BZ:66:HIS:N	2.38	0.57
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.40	0.57
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.69	0.57
2:CE:218:ALA:O	2:CE:222:ILE:N	2.35	0.57
14:CQ:40:CYS:O	14:CQ:42:ILE:N	2.38	0.57
16:CS:57:ARG:HA	16:CS:60:LEU:HD12	1.87	0.57
24:DA:1021:A:H62	24:DA:1141:U:H3	1.52	0.57
24:DA:1534:G:H2'	24:DA:1537:C:N4	2.19	0.57
30:DH:92:ILE:HG22	30:DH:93:GLY:N	2.18	0.57
34:DO:62:LEU:CD1	53:D8:25:MET:CA	2.81	0.57
35:DP:21:THR:H	35:DP:98:LYS:HB2	1.70	0.57
40:D2:85:LYS:HE3	40:D2:87:HIS:CD2	2.40	0.57
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.05	0.56
12:AO:71:PRO:O	12:AO:102:ARG:NH1	2.38	0.56
24:BA:2370:G:N2	51:B6:40:CYS:SG	2.78	0.56
24:BA:2791:C:O2	24:BA:2807:G:N2	2.38	0.56
30:BH:113:VAL:HG21	30:BH:151:ILE:HG21	1.87	0.56
32:BM:15:LEU:HD21	32:BM:128:HIS:NE2	2.16	0.56
37:BQ:88:ASP:OD1	37:BQ:90:GLY:N	2.32	0.56
1:CA:1140:C:H2'	1:CA:1141:C:C6	2.39	0.56
18:CU:45:SER:OG	18:CU:47:THR:OG1	2.22	0.56
19:CV:83:HIS:ND1	19:CV:83:HIS:O	2.38	0.56
24:DA:247:G:H4'	24:DA:386:G:C5	2.40	0.56
24:DA:2394:C:OP1	34:DO:63:PRO:HG2	2.04	0.56
24:DA:2401:U:H3'	24:DA:2402:C:H5''	1.87	0.56
24:DA:2532:G:O2'	24:DA:2657:A:N1	2.37	0.56
25:DB:15:A:H5'	25:DB:16:G:H8	1.69	0.56
29:DG:112:PRO:HA	29:DG:117:PHE:HD2	1.70	0.56
41:DS:59:VAL:HA	41:DS:64:MET:H	1.70	0.56
1:AA:737:A:H2'	1:AA:738:C:C6	2.40	0.56
1:AA:1368:G:OP1	9:AL:111:ARG:NH2	2.37	0.56
10:AM:4:ILE:HB	10:AM:74:ILE:HG13	1.87	0.56
10:AM:78:ASN:HB2	10:AM:81:THR:HG23	1.86	0.56
13:AP:65:LYS:HE3	13:AP:69:GLU:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:588:U:H1'	28:BF:90:PHE:HB3	1.87	0.56
24:BA:2010:G:H5''	41:BS:42:ARG:HB2	1.87	0.56
47:BW:8:LYS:HA	47:BW:11:GLU:HG2	1.87	0.56
1:CA:452:A:O2'	1:CA:453:A:O4'	2.23	0.56
1:CA:790:A:OP1	22:CC:38:A:O2'	2.23	0.56
1:CA:1029:G:O2'	1:CA:1031:G:OP2	2.23	0.56
4:CG:125:HIS:ND1	4:CG:152:SER:OG	2.32	0.56
24:DA:1155:A:O3'	39:D1:55:ARG:NH1	2.38	0.56
24:DA:2015:A:H1'	50:D5:2:ALA:HA	1.87	0.56
24:DA:2168:G:H1	24:DA:2170:A:H8	1.53	0.56
24:DA:2401:U:H2'	24:DA:2402:C:C6	2.40	0.56
30:DH:69:ARG:O	30:DH:69:ARG:NH1	2.30	0.56
39:D1:92:ARG:HD2	40:D2:11:GLN:HB2	1.86	0.56
1:AA:191:G:O2'	20:AW:101:GLY:O	2.20	0.56
1:AA:1104:G:OP1	2:AE:144:ARG:NH2	2.30	0.56
1:AA:1121:U:O4	1:AA:1151:A:N6	2.38	0.56
1:AA:1157:A:O2'	1:AA:1181:G:N2	2.38	0.56
4:AG:24:GLU:O	4:AG:28:SER:N	2.38	0.56
13:AP:33:ALA:HA	13:AP:36:LYS:HB2	1.86	0.56
20:AW:100:ILE:HG12	20:AW:102:GLY:H	1.71	0.56
24:BA:242:G:H5'	53:B8:62:LEU:HD13	1.86	0.56
24:BA:533:G:H5'	39:B1:24:TYR:CD1	2.40	0.56
24:BA:740:U:H2'	24:BA:741:G:C8	2.40	0.56
24:BA:880:G:HO2'	24:BA:881:G:P	2.28	0.56
24:BA:1068:G:O2'	24:BA:1070:A:N7	2.38	0.56
24:BA:1139:G:O2'	24:BA:1143:A:N1	2.36	0.56
24:BA:1427:A:H4'	24:BA:1428:C:O5'	2.05	0.56
24:BA:1607:C:H4'	24:BA:1608:A:O5'	2.05	0.56
24:BA:2164:C:H3'	24:BA:2165:G:H8	1.71	0.56
28:BF:11:VAL:HG22	28:BF:125:LEU:HB2	1.87	0.56
31:BK:77:LEU:HA	31:BK:105:HIS:CE1	2.41	0.56
46:BZ:86:SER:O	46:BZ:89:GLU:N	2.34	0.56
1:CA:1057:G:OP1	3:CF:154:SER:OG	2.22	0.56
2:CE:6:THR:OG1	2:CE:7:VAL:N	2.36	0.56
4:CG:36:ARG:C	4:CG:38:TYR:H	2.12	0.56
4:CG:36:ARG:HA	4:CG:38:TYR:CE2	2.40	0.56
14:CQ:4:LYS:HA	14:CQ:7:ILE:HG12	1.86	0.56
16:CS:20:VAL:HG21	16:CS:32:TYR:CG	2.40	0.56
17:CT:43:LEU:HD12	17:CT:68:ARG:HG2	1.86	0.56
19:CV:12:ASP:OD1	19:CV:37:ARG:NE	2.39	0.56
20:CW:64:ASP:OD1	20:CW:81:LYS:HD2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CD:65:C:H2'	22:CD:66:C:C6	2.40	0.56
24:DA:196:A:O2'	24:DA:805:G:O6	2.20	0.56
24:DA:274:G:H2'	24:DA:275:G:C8	2.39	0.56
24:DA:300:A:OP1	43:DU:84:ARG:NH2	2.19	0.56
24:DA:587:C:OP2	34:DO:21:ARG:NH2	2.39	0.56
24:DA:654(D):G:H1	24:DA:654(Q):C:N4	2.04	0.56
24:DA:796:C:H2'	24:DA:797:C:C6	2.40	0.56
24:DA:2163:C:H5''	24:DA:2171:A:H8	1.68	0.56
24:DA:2576:G:O2'	24:DA:2579:C:OP2	2.18	0.56
24:DA:2747:G:O6	24:DA:2755:C:H5''	2.05	0.56
29:DG:72:ARG:NE	29:DG:85:GLY:O	2.35	0.56
30:DH:42:ARG:NH2	30:DH:43:VAL:O	2.38	0.56
34:DO:48:PRO:O	34:DO:51:PHE:N	2.39	0.56
37:DQ:61:ASN:OD1	37:DQ:64:GLU:N	2.35	0.56
39:D1:92:ARG:O	39:D1:94:ASN:N	2.38	0.56
1:AA:76:G:H2'	1:AA:77:C:H5'	1.87	0.56
1:AA:513:C:H42	1:AA:538:G:H1	1.53	0.56
1:AA:881:G:OP2	12:AO:12:ARG:NH2	2.34	0.56
10:AM:25:GLU:C	10:AM:27:ALA:H	2.12	0.56
22:AD:8:U:H4'	22:AD:48:C:H4'	1.88	0.56
24:BA:4:C:H2'	24:BA:5:A:C8	2.40	0.56
24:BA:987:G:O2'	24:BA:1000:A:N3	2.34	0.56
24:BA:2119:A:N1	24:BA:2170:A:C6	2.74	0.56
27:BE:37:ARG:NH1	27:BE:42:ASP:OD1	2.37	0.56
1:CA:553:A:O2'	12:CO:29:GLY:O	2.23	0.56
24:DA:300:A:O2'	24:DA:318:C:O2	2.23	0.56
24:DA:1022:G:H22	24:DA:1142(A):A:H2	1.50	0.56
24:DA:1085:A:O2'	24:DA:1086:A:H8	1.88	0.56
24:DA:2277:G:OP2	45:D3:12:ASN:ND2	2.39	0.56
24:DA:2318:G:N2	37:DQ:3:ARG:HB2	2.20	0.56
26:DD:70:TRP:CZ3	26:DD:146:GLU:CD	2.83	0.56
26:DD:108:PRO:HD2	26:DD:111:LEU:HG	1.86	0.56
28:DF:5:ALA:O	28:DF:7:TYR:N	2.38	0.56
46:DZ:18:ILE:HG12	46:DZ:37:ILE:HG13	1.87	0.56
48:DX:19:GLN:HE22	48:DX:52:HIS:CE1	2.24	0.56
20:AW:47:GLY:O	20:AW:49:ALA:N	2.37	0.56
24:BA:533:G:H5'	39:B1:24:TYR:CE1	2.41	0.56
24:BA:593:G:H1'	53:B8:4:MET:HE1	1.88	0.56
24:BA:1069:A:H5''	24:BA:1070:A:OP1	2.05	0.56
24:BA:1264:G:OP1	50:B5:19:ARG:NH2	2.27	0.56
24:BA:2051:A:H4'	27:BE:141:ILE:HG12	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:59:VAL:CG1	27:BE:60:ASN:N	2.45	0.56
36:B0:53:HIS:ND1	36:B0:94:TYR:OH	2.28	0.56
40:B2:28:GLU:O	40:B2:30:GLY:N	2.39	0.56
44:BV:16:SER:O	44:BV:20:ARG:NH1	2.38	0.56
44:BV:63:ASP:HB3	44:BV:65:GLN:HG3	1.87	0.56
44:BV:121:HIS:ND1	44:BV:169:GLU:OE1	2.37	0.56
1:CA:73:G:H1	1:CA:97:U:H3	1.51	0.56
1:CA:974:A:OP2	14:CQ:41:ARG:NH1	2.39	0.56
24:DA:286:C:H2'	24:DA:287:C:H6	1.71	0.56
24:DA:1533:C:C2	24:DA:1534:G:H1'	2.40	0.56
24:DA:1871:A:H2'	24:DA:1872:A:C8	2.40	0.56
43:DU:68:HIS:HB3	43:DU:71:LYS:HG3	1.87	0.56
49:D4:41:PRO:O	49:D4:42:PHE:HB3	2.05	0.56
1:AA:91:C:H2'	1:AA:92:G:O4'	2.05	0.56
24:BA:2566:A:H4'	24:BA:2567:G:O5'	2.05	0.56
35:BP:75:THR:HB	35:BP:89:ASN:H	1.70	0.56
37:BQ:83:LYS:O	37:BQ:109:GLY:HA2	2.06	0.56
40:B2:25:LEU:H	40:B2:92:THR:HG21	1.70	0.56
44:BV:52:SER:O	44:BV:54:HIS:N	2.38	0.56
51:B6:15:GLU:OE2	51:B6:47:THR:OG1	2.23	0.56
1:CA:345:C:OP2	38:DR:39:ARG:NH2	2.31	0.56
7:CJ:95:ARG:HH21	7:CJ:99:LEU:HD11	1.70	0.56
13:CP:107:ALA:HB3	13:CP:111:LYS:HE2	1.86	0.56
24:DA:1046:A:H5''	24:DA:1047:G:H5'	1.87	0.56
24:DA:1070:A:H2'	24:DA:1096:A:N3	2.20	0.56
24:DA:1093:G:H1'	24:DA:1099:G:C2	2.41	0.56
24:DA:1164:G:H1	24:DA:1185:C:H42	1.54	0.56
31:DK:14:ASP:N	31:DK:17:GLN:OE1	2.39	0.56
35:DP:111:GLU:OE1	35:DP:133:ARG:NH2	2.39	0.56
41:DS:29:LEU:O	41:DS:33:ARG:HG3	2.05	0.56
1:AA:453:A:O2'	16:AS:68:ASP:O	2.23	0.56
1:AA:870:U:H4'	1:AA:871:U:H5''	1.87	0.56
5:AH:91:LEU:HD12	5:AH:120:THR:HG22	1.87	0.56
6:AI:1:MET:HE2	6:AI:67:MET:HA	1.87	0.56
24:BA:2397:G:H5''	46:BZ:28:GLY:HA2	1.86	0.56
27:BE:128:SER:OG	27:BE:129:HIS:N	2.36	0.56
30:BH:25:LYS:NZ	30:BH:34:GLU:OE1	2.38	0.56
38:BR:78:LEU:HB3	38:BR:79:HIS:CD2	2.41	0.56
48:BX:12:PRO:O	48:BX:20:LYS:NZ	2.38	0.56
1:CA:988:G:H5'	1:CA:989:C:OP2	2.05	0.56
1:CA:1129:C:H42	1:CA:1141:C:H41	1.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1291:G:OP1	7:CJ:41:ARG:NH2	2.39	0.56
2:CE:54:THR:HG23	2:CE:199:TYR:HB3	1.87	0.56
24:DA:67:U:N3	24:DA:74:A:H2	2.03	0.56
24:DA:654(B):C:N4	24:DA:654(S):G:O6	2.25	0.56
25:DB:24:G:N7	25:DB:56:G:O2'	2.32	0.56
27:DE:14:ILE:HD11	27:DE:173:VAL:HG11	1.86	0.56
31:DK:72:LEU:O	31:DK:74:ASN:N	2.39	0.56
40:D2:37:VAL:HG21	40:D2:57:VAL:H	1.70	0.56
47:DW:15:LYS:HA	47:DW:67:LYS:HD2	1.86	0.56
51:D6:47:THR:O	51:D6:48:VAL:C	2.49	0.56
1:AA:533:A:O2'	1:AA:535:A:OP2	2.18	0.56
2:AE:6:THR:O	2:AE:217:ARG:NH2	2.39	0.56
12:AO:62:SER:C	12:AO:64:TYR:H	2.14	0.56
13:AP:91:ARG:HB2	13:AP:98:VAL:HG13	1.88	0.56
24:BA:545:G:H2'	24:BA:546:C:H5''	1.87	0.56
24:BA:910:A:N7	35:BP:13:GLN:HG3	2.19	0.56
30:BH:90:LYS:HD3	30:BH:159:GLU:OE2	2.04	0.56
1:CA:1014:A:H4'	19:CV:14:HIS:CG	2.41	0.56
1:CA:1226:C:O2	19:CV:83:HIS:NE2	2.36	0.56
3:CF:111:LEU:HD11	3:CF:145:GLY:HA3	1.88	0.56
13:CP:17:VAL:O	13:CP:20:THR:OG1	2.21	0.56
24:DA:1131:G:O6	24:DA:2040:C:H1'	2.06	0.56
24:DA:2147:G:H2'	24:DA:2148:G:O4'	2.05	0.56
27:DE:51:PHE:CE2	27:DE:52:LEU:HG	2.40	0.56
27:DE:71:GLY:O	27:DE:73:GLU:HG2	2.06	0.56
31:DK:125:GLU:HB2	31:DK:141:LYS:HD3	1.88	0.56
35:DP:24:GLY:HA2	35:DP:101:ARG:HD2	1.86	0.56
40:D2:33:VAL:N	40:D2:59:ALA:O	2.35	0.56
44:DV:89:PHE:O	44:DV:91:LEU:N	2.39	0.56
1:AA:95:G:H3'	1:AA:96:G:H8	1.69	0.56
1:AA:1147:C:C2	9:AL:16:ARG:NH2	2.73	0.56
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.71	0.56
1:AA:1347:G:H22	1:AA:1374:A:P	2.28	0.56
6:AI:82:ARG:HB2	6:AI:85:VAL:HG23	1.88	0.56
7:AJ:144:MET:HE2	22:AD:41:C:H1'	1.88	0.56
10:AM:35:SER:N	10:AM:73:ASP:O	2.38	0.56
24:BA:630:G:N2	24:BA:633:A:OP2	2.35	0.56
24:BA:1335:U:OP2	42:BT:65:ARG:NH2	2.37	0.56
24:BA:1533:C:H2'	24:BA:1534:G:C8	2.41	0.56
24:BA:2864:G:OP1	38:BR:119:LYS:HD2	2.06	0.56
24:BA:2882:A:OP1	36:B0:96:ARG:NH1	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:150:ALA:O	30:BH:151:ILE:C	2.49	0.56
35:BP:66:ILE:O	35:BP:67:ARG:CG	2.53	0.56
37:BQ:92:TYR:HB2	37:BQ:98:VAL:HG11	1.88	0.56
44:BV:30:ASN:HA	44:BV:89:PHE:HE1	1.71	0.56
46:BZ:91:LYS:HZ3	46:BZ:91:LYS:HA	1.70	0.56
1:CA:501:C:OP1	12:CO:117:ARG:NH2	2.34	0.56
2:CE:178:ARG:NH1	2:CE:196:LEU:O	2.32	0.56
5:CH:43:LEU:O	5:CH:65:ASN:ND2	2.33	0.56
19:CV:22:LEU:HD22	19:CV:30:LEU:HD11	1.88	0.56
19:CV:53:ASN:ND2	19:CV:56:GLN:O	2.39	0.56
22:CD:21:A:H2	22:CD:48:C:C5	2.24	0.56
24:DA:771:G:OP1	52:D7:10:ARG:NH1	2.39	0.56
24:DA:1279:G:H4'	36:D0:31:HIS:CD2	2.40	0.56
24:DA:1936:A:OP2	24:DA:1962:C:N4	2.35	0.56
24:DA:2046:G:H5'	50:D5:19:ARG:HG3	1.88	0.56
24:DA:2173:A:N6	24:DA:2174:C:O2'	2.38	0.56
24:DA:2777:G:OP2	24:DA:2781:A:O2'	2.19	0.56
28:DF:53:THR:HG22	28:DF:56:GLU:HG3	1.88	0.56
32:DM:128:HIS:NE2	32:DM:134:ARG:HD3	2.21	0.56
38:DR:129:ARG:HA	38:DR:132:LYS:HB2	1.88	0.56
43:DU:68:HIS:H	43:DU:71:LYS:HZ3	1.53	0.56
1:AA:590:C:P	8:AK:30:ARG:HH12	2.28	0.56
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.21	0.56
2:AE:82:ARG:HB2	2:AE:94:ASN:HD22	1.71	0.56
2:AE:162:ILE:HD11	2:AE:184:VAL:HG22	1.88	0.56
4:AG:98:GLU:HG3	4:AG:103:ASN:HD21	1.71	0.56
5:AH:147:ASP:HA	5:AH:150:ARG:HH12	1.70	0.56
13:AP:2:ALA:HA	13:AP:9:ILE:HG23	1.88	0.56
24:BA:617:G:OP2	28:BF:43:LYS:NZ	2.34	0.56
24:BA:1414:G:H1	24:BA:1588:C:H42	1.52	0.56
24:BA:2347:C:O5'	51:B6:39:TYR:OH	2.23	0.56
32:BM:35:ARG:O	32:BM:37:LYS:N	2.39	0.56
39:B1:92:ARG:CZ	40:B2:11:GLN:H	2.19	0.56
40:B2:14:VAL:HB	40:B2:96:ILE:HG13	1.87	0.56
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.56
1:CA:1131:G:H2'	1:CA:1132:C:H6	1.71	0.56
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.41	0.56
4:CG:190:ASP:OD1	4:CG:191:ARG:N	2.39	0.56
12:CO:24:VAL:HG12	12:CO:26:ALA:HB2	1.87	0.56
22:CD:60:U:H3'	22:CD:61:C:C6	2.41	0.56
24:DA:480:A:OP2	43:DU:46:LYS:HD2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:872:A:P	35:DP:5:ARG:HH22	2.29	0.56
24:DA:2355:C:H1'	45:D3:39:ARG:HH21	1.71	0.56
32:DM:104:LYS:HA	32:DM:107:LEU:HD12	1.88	0.56
42:DT:53:LYS:HB3	42:DT:82:GLN:HB3	1.88	0.56
3:AF:148:GLY:HA3	3:AF:172:ARG:O	2.06	0.55
4:AG:22:LYS:HB2	4:AG:26:CYS:HB2	1.88	0.55
8:AK:9:MET:HG3	8:AK:26:VAL:HG21	1.86	0.55
12:AO:117:ARG:NH2	12:AO:124:LYS:HB2	2.21	0.55
24:BA:141:A:H8	24:BA:1595:G:H21	1.55	0.55
24:BA:638:G:C5	24:BA:651:G:C2	2.95	0.55
24:BA:1059:G:H2'	24:BA:1060:U:C5	2.41	0.55
24:BA:1154:G:OP2	39:B1:58:ARG:NH2	2.39	0.55
24:BA:1479:G:H2'	24:BA:1480:G:H8	1.70	0.55
24:BA:1844:C:H5''	26:BD:258:LYS:HG3	1.88	0.55
44:BV:127:LYS:HE2	44:BV:161:VAL:HG11	1.88	0.55
1:CA:731:G:OP1	1:CA:766:A:H1'	2.06	0.55
3:CF:24:ALA:HB1	3:CF:28:GLN:HB2	1.88	0.55
4:CG:61:LYS:HD3	4:CG:62:GLN:HG2	1.88	0.55
6:CI:36:ARG:NH2	6:CI:66:GLU:OE1	2.39	0.55
7:CJ:16:LEU:HD12	9:CL:41:VAL:HG12	1.87	0.55
13:CP:57:ARG:HG3	13:CP:61:GLU:HG3	1.87	0.55
19:CV:46:GLY:HA2	19:CV:61:TYR:CE1	2.42	0.55
24:DA:620:G:H4'	24:DA:621:A:H5''	1.88	0.55
24:DA:654(H):G:H3'	24:DA:654(I):C:C5'	2.36	0.55
24:DA:1638:C:O2	24:DA:2698:U:O2'	2.19	0.55
44:DV:106:GLY:HA3	44:DV:140:ASP:HB3	1.88	0.55
51:D6:44:ARG:HG3	51:D6:45:LYS:N	2.20	0.55
1:AA:186(B):C:O4'	20:AW:89:ARG:NH2	2.38	0.55
1:AA:1003:G:N2	1:AA:1005:A:O5'	2.39	0.55
17:AT:19:VAL:HG23	17:AT:44:ALA:HB3	1.88	0.55
22:AD:17:C:N4	22:AD:19:G:OP1	2.39	0.55
24:BA:1748:G:H2'	24:BA:1749:A:C8	2.42	0.55
24:BA:2133:G:H2'	24:BA:2157:G:N2	2.21	0.55
24:BA:2655:G:O2'	24:BA:2664:G:O6	2.20	0.55
33:BN:80:ASP:OD2	38:BR:64:ARG:NH2	2.37	0.55
34:BO:64:LYS:HB2	53:B8:25:MET:HG2	1.88	0.55
39:B1:88:ILE:HD11	39:B1:112:ARG:HD3	1.88	0.55
1:CA:200:G:H1	1:CA:217:C:H42	1.52	0.55
1:CA:979:C:O2'	1:CA:1220:G:OP2	2.24	0.55
1:CA:1366:C:O2'	10:CM:60:ARG:NH2	2.38	0.55
14:CQ:21:TYR:HE1	14:CQ:23:ARG:HE	1.52	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2666:C:H42	30:DH:152:ARG:HH22	1.54	0.55
24:DA:2801:A:H2'	24:DA:2802:G:C4'	2.36	0.55
26:DD:31:LYS:HZ2	26:DD:94:LEU:HD11	1.70	0.55
27:DE:63:LEU:HD22	27:DE:73:GLU:HG3	1.88	0.55
43:DU:56:PRO:O	43:DU:57:GLN:CB	2.41	0.55
44:DV:76:LEU:HD23	44:DV:76:LEU:H	1.70	0.55
44:DV:127:LYS:NZ	44:DV:162:GLU:OE2	2.39	0.55
2:AE:84:GLU:OE1	2:AE:87:ARG:NH2	2.35	0.55
2:AE:223:ILE:C	2:AE:225:ALA:H	2.14	0.55
6:AI:69:GLU:O	6:AI:72:VAL:HG12	2.06	0.55
8:AK:121:ASP:HB2	8:AK:125:ARG:HH21	1.71	0.55
16:AS:20:VAL:HG21	16:AS:32:TYR:CD2	2.40	0.55
19:AV:68:GLY:N	49:B4:55:ARG:HH22	1.98	0.55
24:BA:1268:A:H2'	24:BA:1269:A:O4'	2.06	0.55
24:BA:2557:G:H2'	24:BA:2558:C:C6	2.41	0.55
28:BF:197:ASP:N	28:BF:197:ASP:OD1	2.39	0.55
34:BO:83:VAL:HG12	34:BO:112:LEU:HD21	1.87	0.55
1:CA:448:A:H2'	1:CA:449:C:O2	2.05	0.55
1:CA:537:G:H5''	12:CO:113:ARG:NH1	2.22	0.55
1:CA:677:U:H3	1:CA:713:G:H22	1.54	0.55
1:CA:928:G:O2'	1:CA:1533:C:OP1	2.24	0.55
1:CA:1342:C:H4'	9:CL:125:TYR:HB3	1.87	0.55
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.41	0.55
4:CG:22:LYS:H	4:CG:26:CYS:HB3	1.69	0.55
9:CL:114:TYR:HE2	10:CM:59:SER:HA	1.71	0.55
19:CV:29:ARG:HB3	19:CV:48:THR:OG1	2.07	0.55
24:DA:93:C:C4'	43:DU:54:LYS:NZ	2.69	0.55
24:DA:2584:U:H2'	24:DA:2585:U:C6	2.41	0.55
26:DD:44:ASN:OD1	26:DD:44:ASN:N	2.37	0.55
37:DQ:105:ALA:O	37:DQ:107:GLU:N	2.39	0.55
44:DV:5:LEU:HD21	44:DV:39:VAL:HB	1.87	0.55
1:AA:419:C:H5'	1:AA:420:U:OP2	2.07	0.55
1:AA:1226:C:O2'	13:AP:111:LYS:NZ	2.40	0.55
4:AG:88:VAL:O	4:AG:90:GLY:N	2.39	0.55
4:AG:196:LEU:C	4:AG:198:VAL:H	2.14	0.55
6:AI:12:PRO:O	6:AI:14:LEU:N	2.39	0.55
13:AP:80:ARG:NH1	19:AV:65:ASN:O	2.39	0.55
16:AS:49:LEU:HD12	16:AS:50:LYS:H	1.70	0.55
20:AW:55:ILE:O	20:AW:59:ALA:N	2.25	0.55
24:BA:1062:G:N2	24:BA:1088:A:N1	2.54	0.55
24:BA:2533:A:H2'	24:BA:2534:A:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:69:ARG:HD3	26:BD:105:ILE:HD11	1.87	0.55
44:BV:63:ASP:C	44:BV:65:GLN:H	2.14	0.55
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.42	0.55
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.40	0.55
1:CA:1219:U:O2'	19:CV:34:TRP:HB3	2.06	0.55
22:CD:16:C:OP1	22:CD:20:U:N3	2.28	0.55
24:DA:654(H):G:H3'	24:DA:654(I):C:H5''	1.88	0.55
24:DA:863:A:H2'	24:DA:864:G:C8	2.42	0.55
24:DA:1403:C:OP1	24:DA:1522:G:N2	2.35	0.55
27:DE:21:VAL:HG12	27:DE:22:PRO:N	2.22	0.55
28:DF:28:ILE:HD12	28:DF:119:ARG:NE	2.21	0.55
38:DR:3:ARG:CZ	38:DR:6:LEU:HD13	2.37	0.55
40:D2:53:GLU:O	40:D2:55:ALA:N	2.36	0.55
44:DV:113:ALA:O	44:DV:115:GLY:N	2.39	0.55
44:DV:157:LEU:HD12	44:DV:161:VAL:HA	1.88	0.55
48:DX:18:ASP:OD1	48:DX:18:ASP:N	2.32	0.55
1:AA:833:U:H3	1:AA:853:G:H1	1.54	0.55
24:BA:724:U:H2'	24:BA:725:G:O4'	2.06	0.55
24:BA:1068:G:O2'	24:BA:1070:A:N6	2.40	0.55
24:BA:1069:A:H4'	24:BA:1070:A:O5'	2.06	0.55
24:BA:2043:C:OP1	24:BA:2777:G:O2'	2.22	0.55
24:BA:2086:U:H2'	24:BA:2087:G:C8	2.41	0.55
24:BA:2093:G:H1	24:BA:2196:C:H42	1.54	0.55
26:BD:72:LYS:NZ	26:BD:101:GLU:OE2	2.39	0.55
1:CA:177:C:OP1	20:CW:65:LYS:NZ	2.34	0.55
1:CA:328:C:H4'	1:CA:329:A:H5'	1.88	0.55
1:CA:1292:U:H2'	1:CA:1293:G:C8	2.42	0.55
5:CH:60:TYR:O	5:CH:64:ARG:NH1	2.39	0.55
24:DA:1657:C:H2'	24:DA:1658:C:H6	1.71	0.55
24:DA:2286:A:H4'	24:DA:2287:A:O4'	2.06	0.55
25:DB:18:G:H1	25:DB:65:C:N4	1.91	0.55
28:DF:126:VAL:O	28:DF:196:LEU:N	2.39	0.55
34:DO:47:ASP:N	34:DO:48:PRO:HA	2.20	0.55
1:AA:452:A:H62	1:AA:480:U:H3	1.54	0.55
1:AA:1251:A:N3	1:AA:1369:C:O2'	2.39	0.55
3:AF:52:LEU:HD23	3:AF:52:LEU:H	1.72	0.55
4:AG:150:GLU:HA	4:AG:153:ARG:HG2	1.87	0.55
11:AN:126:ARG:O	11:AN:128:ALA:N	2.40	0.55
17:AT:15:MET:HB3	17:AT:18:THR:HB	1.89	0.55
24:BA:1479:G:N7	24:BA:1510:A:N6	2.54	0.55
24:BA:2418:A:OP2	53:B8:29:LYS:NZ	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2848:G:C8	38:BR:97:ALA:HB2	2.41	0.55
30:BH:70:THR:O	30:BH:74:ASN:ND2	2.40	0.55
38:BR:57:PHE:O	38:BR:58:ASN:ND2	2.39	0.55
53:B8:42:ARG:C	53:B8:44:LYS:H	2.15	0.55
1:CA:627:G:H2'	1:CA:628:G:C8	2.42	0.55
2:CE:58:ILE:O	2:CE:62:ALA:N	2.32	0.55
24:DA:483:A:H4'	43:DU:49:VAL:HA	1.88	0.55
25:DB:42:C:O2	29:DG:93:THR:N	2.39	0.55
27:DE:9:VAL:HG13	27:DE:26:ILE:O	2.06	0.55
27:DE:11:MET:SD	27:DE:24:THR:HG21	2.38	0.55
30:DH:34:GLU:OE1	30:DH:34:GLU:N	2.34	0.55
45:D3:71:ASP:OD1	45:D3:72:ARG:N	2.39	0.55
50:D5:46:CYS:SG	50:D5:48:GLU:HG2	2.46	0.55
51:D6:19:ARG:HH21	51:D6:52:VAL:CG1	2.18	0.55
1:AA:1007:C:N4	1:AA:1022:G:O6	2.20	0.55
2:AE:230:VAL:HG12	2:AE:231:GLU:H	1.72	0.55
12:AO:24:VAL:HB	12:AO:27:LEU:HD12	1.89	0.55
24:BA:279:C:N4	24:BA:361:G:H1	2.04	0.55
24:BA:297:C:H5''	43:BU:85:VAL:CG2	2.36	0.55
24:BA:529:A:H4'	24:BA:530:G:H5'	1.87	0.55
24:BA:774:A:H2	24:BA:787:U:O2'	1.90	0.55
24:BA:2148:G:H2'	24:BA:2149:G:C8	2.41	0.55
37:BQ:26:LEU:HD11	37:BQ:73:LEU:HD13	1.89	0.55
38:BR:11:GLU:H	38:BR:11:GLU:CD	2.14	0.55
40:B2:25:LEU:HD11	40:B2:94:LEU:HD11	1.89	0.55
1:CA:200:G:H1	1:CA:217:C:N4	2.04	0.55
1:CA:1373:G:OP1	9:CL:42:ARG:NH1	2.38	0.55
2:CE:116:GLU:O	2:CE:120:ALA:N	2.38	0.55
4:CG:22:LYS:CG	4:CG:26:CYS:HB3	2.18	0.55
24:DA:83:G:N2	24:DA:103:A:OP2	2.36	0.55
24:DA:782:A:N7	26:DD:221:VAL:HG21	2.21	0.55
24:DA:2873:A:H8	36:D0:6:SER:N	2.03	0.55
25:DB:8:U:O3'	37:DQ:25:ARG:NH2	2.37	0.55
25:DB:24:G:H4'	25:DB:25:A:C8	2.42	0.55
26:DD:25:THR:CG2	26:DD:82:ILE:H	2.16	0.55
28:DF:125:LEU:HD23	28:DF:125:LEU:H	1.72	0.55
28:DF:185:ASP:OD1	28:DF:188:ARG:NH2	2.37	0.55
30:DH:22:GLY:O	30:DH:37:VAL:N	2.40	0.55
30:DH:60:ARG:O	30:DH:63:SER:OG	2.20	0.55
34:DO:85:LEU:HB3	34:DO:114:ILE:HD11	1.89	0.55
34:DO:101:VAL:HG23	34:DO:106:LEU:HD23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D2:85:LYS:HE3	40:D2:87:HIS:HD2	1.72	0.55
41:DS:41:LYS:HD2	50:D5:25:LEU:HD11	1.88	0.55
1:AA:67:C:H2'	1:AA:68:G:H8	1.71	0.55
1:AA:1368:G:H5''	9:AL:112:LYS:HB3	1.89	0.55
4:AG:154:ASN:N	4:AG:154:ASN:OD1	2.32	0.55
22:AD:62:C:H2'	22:AD:63:G:C8	2.42	0.55
24:BA:514:A:N3	24:BA:581:C:O2'	2.37	0.55
24:BA:528:A:N1	24:BA:2042:A:H2'	2.22	0.55
24:BA:2561:A:H2	33:BN:23:ARG:NH1	2.05	0.55
35:BP:75:THR:HG21	35:BP:87:LYS:HE3	1.88	0.55
44:BV:29:TYR:HE1	44:BV:87:ASP:HB2	1.72	0.55
1:CA:529:G:O6	12:CO:49:ASN:ND2	2.39	0.55
1:CA:811:C:O2'	1:CA:901:A:N1	2.38	0.55
1:CA:1152:A:O3'	10:CM:13:HIS:NE2	2.40	0.55
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.14	0.55
7:CJ:43:PHE:O	7:CJ:47:CYS:N	2.36	0.55
11:CN:20:TYR:CZ	11:CN:83:ILE:HD12	2.42	0.55
24:DA:1427:A:H4'	24:DA:1428:C:O5'	2.06	0.55
24:DA:1434:A:H61	24:DA:1558:A:N6	2.04	0.55
27:DE:66:HIS:CG	27:DE:67:PHE:CA	2.88	0.55
29:DG:170:ARG:HH22	29:DG:182:LYS:HD3	1.70	0.55
34:DO:79:ARG:NE	34:DO:109:GLY:O	2.38	0.55
49:D4:39:CYS:O	49:D4:40:HIS:CG	2.60	0.55
1:AA:89:U:O2'	1:AA:90:C:O4'	2.24	0.55
1:AA:1059:C:O2	10:AM:53:PRO:HG3	2.07	0.55
5:AH:64:ARG:O	5:AH:66:MET:N	2.39	0.55
22:AD:8:U:H1'	22:AD:14:A:N6	2.22	0.55
7:CJ:113:GLU:HB2	7:CJ:119:ARG:HG2	1.89	0.55
13:CP:92:HIS:CE1	13:CP:98:VAL:HG21	2.41	0.55
27:DE:67:PHE:O	27:DE:68:ALA:C	2.49	0.55
30:DH:26:VAL:HG21	30:DH:76:VAL:HA	1.88	0.55
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.38	0.55
5:AH:36:ASP:OD2	5:AH:38:GLN:HB2	2.06	0.55
14:AQ:24:CYS:SG	14:AQ:27:CYS:N	2.80	0.55
16:AS:26:ARG:NH1	16:AS:31:LYS:HB3	2.21	0.55
22:AC:9:G:O2'	22:AC:10:G:N7	2.35	0.55
24:BA:1613:G:O2'	52:B7:3:ARG:NE	2.39	0.55
24:BA:2134:A:OP2	24:BA:2156:G:N1	2.40	0.55
24:BA:2186:G:H2'	24:BA:2187:G:C8	2.42	0.55
24:BA:2636:U:OP1	27:BE:79:ARG:HA	2.06	0.55
25:BB:90:C:H5'	35:BP:18:LYS:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:41:GLN:NE2	29:BG:154:GLY:O	2.38	0.55
33:BN:73:ASP:OD1	33:BN:73:ASP:N	2.35	0.55
35:BP:64:ILE:CG2	35:BP:65:PHE:H	2.19	0.55
1:CA:957:U:H1'	1:CA:960:U:C5	2.42	0.55
14:CQ:39:LEU:HD13	14:CQ:47:LEU:HD12	1.89	0.55
24:DA:1186:G:H2'	24:DA:1187:G:O4'	2.07	0.55
24:DA:1449(A):G:N2	24:DA:1462:C:N3	2.44	0.55
24:DA:2820:A:O2'	24:DA:2821:A:OP1	2.24	0.55
27:DE:13:ARG:CB	27:DE:21:VAL:O	2.54	0.55
39:D1:75:ASN:HB2	39:D1:78:THR:HG23	1.89	0.55
1:AA:126:G:H4'	1:AA:634:C:H1'	1.87	0.54
1:AA:420:U:O2'	1:AA:423:G:O6	2.17	0.54
1:AA:437:U:O2	4:AG:119:GLN:NE2	2.39	0.54
1:AA:1115:C:H2'	1:AA:1116:C:H6	1.71	0.54
1:AA:1343:G:H4'	9:AL:122:ALA:HB3	1.89	0.54
24:BA:128:C:O2'	52:B7:49:ARG:NH1	2.28	0.54
24:BA:1359:A:H2'	24:BA:1360:A:H5'	1.89	0.54
30:BH:122:THR:O	30:BH:134:SER:N	2.40	0.54
34:BO:91:PHE:O	34:BO:121:LYS:NZ	2.32	0.54
38:BR:15:VAL:HG23	38:BR:79:HIS:CE1	2.42	0.54
43:BU:96:ILE:HG12	43:BU:99:CYS:H	1.71	0.54
1:CA:545:C:H5'	4:CG:72:GLU:HB2	1.89	0.54
1:CA:736:C:H2'	1:CA:737:A:C8	2.42	0.54
1:CA:1256:A:N6	1:CA:1277:C:H3'	2.21	0.54
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.42	0.54
3:CF:70:VAL:O	3:CF:106:VAL:N	2.37	0.54
22:CD:70:G:H2'	22:CD:71:C:O4'	2.07	0.54
24:DA:1536:A:OP2	24:DA:1537:C:N4	2.40	0.54
24:DA:2345:G:OP2	51:D6:39:TYR:HA	2.07	0.54
27:DE:25:VAL:HG12	27:DE:26:ILE:N	2.22	0.54
27:DE:131:ALA:HB1	27:DE:135:HIS:HE1	1.72	0.54
29:DG:55:LYS:NZ	29:DG:148:MET:SD	2.80	0.54
29:DG:109:VAL:O	29:DG:113:ARG:HG3	2.07	0.54
32:DM:93:THR:O	32:DM:94:HIS:ND1	2.41	0.54
1:AA:67:C:H1'	1:AA:171:A:C2	2.42	0.54
1:AA:405:U:H5''	1:AA:495:A:C2	2.41	0.54
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.42	0.54
18:AU:17:SER:O	18:AU:18:ARG:NH1	2.40	0.54
24:BA:1009:A:OP2	32:BM:37:LYS:NZ	2.40	0.54
24:BA:1062:G:H3'	24:BA:1063:G:C8	2.42	0.54
24:BA:1071:G:H3'	24:BA:1071:G:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1104:C:H2'	24:BA:1105:U:C6	2.42	0.54
24:BA:1191:G:OP1	34:BO:32:THR:OG1	2.25	0.54
24:BA:2148:G:H2'	24:BA:2149:G:H8	1.72	0.54
24:BA:2173:A:H8	24:BA:2173:A:OP2	1.90	0.54
28:BF:64:ILE:HG22	28:BF:65:TRP:CD1	2.42	0.54
34:BO:49:ARG:HE	53:B8:58:ILE:HG22	1.73	0.54
43:BU:80:GLY:C	43:BU:81:LYS:HZ2	2.15	0.54
43:BU:96:ILE:HD11	43:BU:98:VAL:HG12	1.88	0.54
1:CA:1145:C:H5''	1:CA:1146:A:OP1	2.07	0.54
24:DA:637:A:OP1	34:DO:133:SER:OG	2.14	0.54
24:DA:2130:U:O2'	24:DA:2133:G:O2'	2.00	0.54
24:DA:2784:C:O2	27:DE:37:ARG:NH2	2.40	0.54
26:DD:145:VAL:HG13	26:DD:191:ALA:HB2	1.90	0.54
29:DG:5:VAL:HG11	29:DG:100:TRP:HB2	1.88	0.54
29:DG:173:LEU:HB3	29:DG:178:PHE:CG	2.42	0.54
32:DM:34:LEU:O	32:DM:49:GLY:HA3	2.07	0.54
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.73	0.54
5:AH:54:ALA:HA	5:AH:57:LYS:HG2	1.89	0.54
9:AL:93:ARG:HD2	9:AL:97:LYS:HB2	1.88	0.54
10:AM:16:LEU:HD12	10:AM:70:ARG:HD2	1.89	0.54
14:AQ:9:LYS:HA	14:AQ:12:ARG:HG2	1.90	0.54
22:AD:8:U:H2'	22:AD:13:C:N4	2.21	0.54
24:BA:1074:G:H2'	24:BA:1075:C:C6	2.42	0.54
24:BA:1175:U:O2	24:BA:1176:G:N2	2.39	0.54
24:BA:1209:G:H21	24:BA:1210:A:H62	1.55	0.54
24:BA:1316:U:H2'	24:BA:1317:A:C8	2.42	0.54
24:BA:1486:A:H2'	24:BA:1487:G:C8	2.42	0.54
24:BA:2246:G:H2'	24:BA:2247:A:H8	1.71	0.54
24:BA:2378:A:H4'	37:BQ:23:ARG:NH1	2.22	0.54
24:BA:2400:G:H2'	24:BA:2400:G:N3	2.20	0.54
24:BA:2790:A:H2	24:BA:2894:G:H5''	1.72	0.54
38:BR:131:ALA:O	38:BR:135:ALA:N	2.36	0.54
47:BW:53:LEU:O	47:BW:57:ILE:HG13	2.06	0.54
52:B7:9:ARG:HH21	52:B7:47:ARG:HG3	1.70	0.54
1:CA:409:G:H1	1:CA:433:C:N4	2.03	0.54
1:CA:667:G:H4'	15:CR:51:HIS:ND1	2.23	0.54
1:CA:718:G:O6	18:CU:74:ARG:NH1	2.41	0.54
1:CA:1023:G:O5'	1:CA:1024:G:N2	2.39	0.54
1:CA:1054:C:O2'	1:CA:1055:A:OP2	2.22	0.54
1:CA:1166:G:N2	1:CA:1170:A:OP2	2.40	0.54
19:CV:63:THR:OG1	19:CV:65:ASN:OD1	2.24	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:270(I):G:H2'	24:DA:270(J):G:H8	1.73	0.54
25:DB:24:G:N2	25:DB:27:C:N3	2.40	0.54
26:DD:16:MET:HG3	26:DD:206:LEU:O	2.07	0.54
27:DE:67:PHE:O	27:DE:67:PHE:CD2	2.60	0.54
1:AA:838:G:OP2	1:AA:842:C:N4	2.41	0.54
3:AF:53:ALA:HB2	3:AF:115:LEU:HD11	1.88	0.54
4:AG:119:GLN:HE21	4:AG:123:HIS:CD2	2.25	0.54
24:BA:2146:C:H4'	24:BA:2147:G:C4	2.42	0.54
24:BA:2791:C:N3	24:BA:2805:G:N1	2.52	0.54
24:BA:2822:G:H5''	27:BE:159:HIS:NE2	2.23	0.54
30:BH:154:PRO:HB3	30:BH:163:TYR:OH	2.07	0.54
35:BP:68:ILE:O	35:BP:69:PHE:HB2	2.06	0.54
43:BU:89:PHE:HD2	43:BU:90:LEU:HD13	1.72	0.54
49:B4:24:THR:OG1	49:B4:25:TYR:N	2.38	0.54
1:CA:148:G:H1	1:CA:174:C:H42	1.55	0.54
6:CI:25:ILE:HA	6:CI:28:ARG:HB2	1.89	0.54
8:CK:96:GLY:N	8:CK:99:GLU:OE2	2.40	0.54
12:CO:83:VAL:HG21	12:CO:100:ILE:HD13	1.88	0.54
24:DA:747:U:O2	24:DA:2014:A:H1'	2.07	0.54
24:DA:752:A:H3'	52:D7:1:MET:SD	2.46	0.54
24:DA:1070:A:H5'	24:DA:1071:G:H5''	1.89	0.54
24:DA:1856:G:N2	24:DA:1886:C:N3	2.50	0.54
24:DA:2262:U:OP2	45:D3:19:LYS:NZ	2.41	0.54
24:DA:2798:C:OP1	24:DA:2801:A:N6	2.31	0.54
24:DA:2815:C:H5'	50:D5:29:THR:HG21	1.89	0.54
25:DB:55:U:H2'	25:DB:56:G:C8	2.42	0.54
25:DB:84:C:OP1	48:DX:15:TYR:OH	2.20	0.54
34:DO:23:PRO:O	34:DO:25:SER:N	2.40	0.54
1:AA:452:A:O2'	1:AA:453:A:O4'	2.24	0.54
3:AF:98:ASN:O	3:AF:100:ALA:N	2.32	0.54
24:BA:270(K):C:HO2'	24:BA:270(L):U:H5	1.53	0.54
24:BA:2640:G:H1	24:BA:2774:C:H42	1.55	0.54
33:BN:63:VAL:HG11	33:BN:85:VAL:HG23	1.89	0.54
39:B1:44:ASN:HD21	40:B2:75:PHE:H	1.56	0.54
51:B6:18:ARG:O	51:B6:19:ARG:HB2	2.08	0.54
1:CA:1106:G:H5''	3:CF:172:ARG:HG2	1.89	0.54
24:DA:861:A:N3	25:DB:79:C:O2'	2.35	0.54
24:DA:1071:G:H2'	24:DA:1072:C:H6	1.72	0.54
24:DA:2887:U:H2'	24:DA:2888:C:H6	1.72	0.54
29:DG:10:LYS:HG2	29:DG:15:VAL:HG23	1.88	0.54
29:DG:97:ASP:HA	29:DG:100:TRP:HD1	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:112:LEU:H	34:DO:128:HIS:CE1	2.25	0.54
1:AA:113:G:H1'	1:AA:354:G:H5'	1.90	0.54
1:AA:538:G:H5''	12:AO:114:LYS:HB2	1.89	0.54
1:AA:1022:G:H2'	1:AA:1023:G:O4'	2.07	0.54
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.42	0.54
1:AA:1202:G:O4'	14:AQ:29:ARG:NH1	2.41	0.54
1:AA:1373:G:O3'	7:AJ:36:LYS:NZ	2.40	0.54
2:AE:24:TRP:CZ3	2:AE:26:PRO:HA	2.42	0.54
16:AS:4:ILE:HD12	16:AS:66:PRO:HB3	1.90	0.54
20:AW:101:GLY:O	20:AW:103:GLY:N	2.31	0.54
24:BA:70:G:H21	24:BA:71:A:N6	2.05	0.54
24:BA:500:G:N2	24:BA:502:A:H3'	2.21	0.54
24:BA:604:G:OP2	34:BO:90:ARG:NH2	2.39	0.54
24:BA:1061:U:H1'	24:BA:1070:A:N3	2.23	0.54
24:BA:1266:G:O5'	41:BS:15:ARG:NH2	2.41	0.54
24:BA:1844:C:H2'	24:BA:1845:G:H8	1.73	0.54
24:BA:2801:A:OP1	24:BA:2895:U:O2'	2.24	0.54
32:BM:130:HIS:HB2	32:BM:134:ARG:CZ	2.37	0.54
37:BQ:26:LEU:HD23	37:BQ:87:PHE:HD1	1.72	0.54
43:BU:43:ASN:HA	43:BU:64:GLU:HA	1.89	0.54
46:BZ:87:PRO:O	46:BZ:91:LYS:HB2	2.08	0.54
1:CA:730:G:C5	1:CA:731:G:H1'	2.42	0.54
1:CA:939:G:H1	1:CA:1344:C:H42	1.54	0.54
4:CG:150:GLU:N	4:CG:150:GLU:OE2	2.35	0.54
4:CG:150:GLU:O	4:CG:152:SER:N	2.41	0.54
5:CH:83:GLU:HB3	5:CH:88:LYS:HG2	1.88	0.54
24:DA:259:G:H21	24:DA:621:A:H8	1.56	0.54
24:DA:547:A:H3'	24:DA:548:A:H8	1.72	0.54
24:DA:1091:G:H2'	24:DA:1092:C:C6	2.42	0.54
24:DA:1114:G:H2'	24:DA:1115:G:C8	2.42	0.54
24:DA:1912:A:H4'	24:DA:1913:A:OP1	2.08	0.54
28:DF:122:LYS:O	28:DF:124:LEU:N	2.39	0.54
30:DH:140:LYS:O	30:DH:144:VAL:HG23	2.08	0.54
33:DN:8:LEU:HD13	33:DN:82:ASN:HB3	1.90	0.54
34:DO:47:ASP:H	34:DO:48:PRO:HA	1.72	0.54
37:DQ:65:VAL:HA	37:DQ:68:GLN:HG3	1.88	0.54
38:DR:65:LYS:HD2	38:DR:67:SER:HB2	1.90	0.54
44:DV:9:TYR:CE1	44:DV:35:ARG:HD3	2.42	0.54
45:D3:51:VAL:N	45:D3:62:LEU:HD12	2.23	0.54
49:D4:39:CYS:HB3	49:D4:41:PRO:CG	2.38	0.54
1:AA:545:C:OP2	4:AG:62:GLN:NE2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.88	0.54
1:AA:989:C:H42	1:AA:1216:G:H1	1.56	0.54
1:AA:1123:A:H4'	10:AM:36:GLY:HA3	1.89	0.54
1:AA:1177:G:O5'	9:AL:97:LYS:NZ	2.41	0.54
2:AE:42:ILE:HD11	2:AE:202:PRO:HB2	1.90	0.54
2:AE:116:GLU:OE2	2:AE:156:LYS:NZ	2.38	0.54
7:AJ:151:TYR:OH	11:AN:54:ARG:NE	2.40	0.54
24:BA:2522:U:O2'	24:BA:2647:U:OP1	2.21	0.54
24:BA:2816:C:O2	24:BA:2883:A:O2'	2.22	0.54
31:BK:73:GLU:HG3	31:BK:137:PRO:HD2	1.89	0.54
32:BM:131:GLN:CD	32:BM:131:GLN:H	2.15	0.54
1:CA:600:C:H5''	8:CK:97:VAL:HG22	1.90	0.54
1:CA:1212:U:O2'	1:CA:1213:A:O4'	2.25	0.54
12:CO:47:LYS:HB3	12:CO:48:PRO:HD3	1.90	0.54
12:CO:102:ARG:HB3	12:CO:109:GLY:HA2	1.90	0.54
14:CQ:26:ARG:CZ	14:CQ:47:LEU:HD21	2.36	0.54
19:CV:28:LYS:HZ3	19:CV:30:LEU:HB3	1.72	0.54
22:CD:29:G:H2'	22:CD:30:G:C8	2.42	0.54
24:DA:389:G:H22	34:DO:72:PRO:HD3	1.72	0.54
24:DA:1589:C:H2'	24:DA:1590:U:H6	1.73	0.54
24:DA:1853:A:N3	24:DA:2233:U:O2'	2.35	0.54
26:DD:38:LYS:O	26:DD:38:LYS:HG2	2.07	0.54
30:DH:46:GLU:N	30:DH:49:VAL:O	2.41	0.54
30:DH:56:SER:OG	30:DH:57:ASP:N	2.40	0.54
44:DV:144:LEU:HD22	44:DV:174:VAL:HG21	1.89	0.54
1:AA:824:C:N4	1:AA:876:G:H1	2.06	0.54
19:AV:42:PRO:O	19:AV:45:VAL:HG22	2.07	0.54
22:AD:18:G:H1'	22:AD:58:A:C6	2.42	0.54
24:BA:1161:C:O2'	40:B2:8:GLY:HA2	2.08	0.54
24:BA:1178:C:H2'	24:BA:1179:C:C6	2.43	0.54
24:BA:1729:A:O2'	24:BA:1730:U:H5''	2.08	0.54
24:BA:2163:C:H3'	24:BA:2164:C:H6	1.71	0.54
24:BA:2246:G:H2'	24:BA:2247:A:C8	2.43	0.54
24:BA:2284:C:H41	51:B6:25:LYS:HZ3	1.55	0.54
30:BH:8:PRO:HG2	30:BH:69:ARG:HE	1.71	0.54
36:B0:1:MET:HG2	36:B0:3:HIS:CE1	2.43	0.54
1:CA:948:C:H3'	13:CP:106:ASN:HD22	1.72	0.54
1:CA:1226:C:H2'	13:CP:103:THR:HB	1.88	0.54
9:CL:18:PHE:HD2	9:CL:62:TYR:CE2	2.26	0.54
18:CU:22:VAL:HG22	18:CU:23:LYS:H	1.71	0.54
19:CV:66:MET:HA	19:CV:67:VAL:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:814:C:O3'	40:D2:84:LYS:NZ	2.40	0.54
24:DA:1056:G:H5''	24:DA:1057:A:H5'	1.89	0.54
24:DA:1139:G:O2'	24:DA:1143:A:N6	2.31	0.54
49:D4:39:CYS:HB3	49:D4:41:PRO:HD3	1.90	0.54
1:AA:145:G:H1	1:AA:177:C:H42	1.54	0.54
1:AA:521:G:OP2	12:AO:54:LYS:NZ	2.36	0.54
1:AA:1151:A:H1'	10:AM:39:PRO:HG2	1.90	0.54
4:AG:30:LYS:N	4:AG:34:GLU:HG3	2.23	0.54
7:AJ:111:ARG:NH1	7:AJ:113:GLU:OE2	2.41	0.54
22:AD:18:G:N3	22:AD:58:A:N6	2.56	0.54
24:BA:2159:G:H2'	24:BA:2160:G:H5'	1.89	0.54
24:BA:2749:A:H5''	30:BH:6:ARG:HD3	1.90	0.54
32:BM:13:TRP:O	32:BM:134:ARG:HA	2.08	0.54
33:BN:104:ARG:NH1	38:BR:36:GLU:OE1	2.41	0.54
35:BP:65:PHE:O	35:BP:67:ARG:HG3	2.08	0.54
45:B3:50:ASN:HB3	45:B3:63:VAL:HG22	1.90	0.54
1:CA:321:A:N6	1:CA:329:A:OP2	2.41	0.54
4:CG:9:CYS:O	4:CG:32:ALA:CB	2.55	0.54
6:CI:35:ALA:HB2	6:CI:67:MET:HE3	1.90	0.54
8:CK:86:ILE:HG12	8:CK:135:CYS:HA	1.90	0.54
10:CM:3:LYS:N	10:CM:74:ILE:O	2.40	0.54
24:DA:302:C:H42	24:DA:315:G:H1	1.55	0.54
24:DA:779:U:P	26:DD:49:ILE:HG22	2.48	0.54
24:DA:2735:G:H2'	24:DA:2736:G:H8	1.71	0.54
24:DA:2795:G:N2	24:DA:2802:G:N7	2.56	0.54
24:DA:2795:G:H1'	24:DA:2802:G:N1	2.23	0.54
24:DA:2808:U:H5''	24:DA:2891:G:O6	2.08	0.54
25:DB:104:A:H2'	25:DB:105:G:O4'	2.08	0.54
34:DO:49:ARG:HD2	53:D8:59:LYS:CG	2.31	0.54
38:DR:27:THR:HG23	38:DR:90:GLN:HB3	1.89	0.54
43:DU:37:VAL:HG23	43:DU:67:LEU:HB3	1.90	0.54
44:DV:134:PRO:O	44:DV:136:PHE:N	2.41	0.54
47:DW:68:ARG:HA	47:DW:72:ALA:HB2	1.89	0.54
1:AA:136:C:H42	1:AA:227:G:H1	1.55	0.54
1:AA:411:A:C5	1:AA:413:G:H1'	2.43	0.54
1:AA:1453:G:HO2'	20:AW:39:LYS:NZ	2.06	0.54
3:AF:19:GLU:HA	3:AF:54:ARG:HH12	1.73	0.54
6:AI:44:GLY:O	6:AI:60:PHE:N	2.34	0.54
9:AL:32:ASP:O	9:AL:35:GLU:N	2.36	0.54
12:AO:46:LYS:O	12:AO:47:LYS:C	2.51	0.54
17:AT:86:GLU:O	17:AT:90:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AC:67:C:H2'	22:AC:68:C:H6	1.73	0.54
24:BA:6:A:H1'	32:BM:131:GLN:HB3	1.90	0.54
28:BF:157:VAL:HB	28:BF:194:MET:HG2	1.90	0.54
39:B1:59:ARG:O	39:B1:63:VAL:HG23	2.08	0.54
1:CA:345:C:O2	1:CA:346:G:N2	2.41	0.54
1:CA:1118:C:N4	1:CA:1155:G:H1	2.06	0.54
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.72	0.54
2:CE:120:ALA:O	2:CE:122:PHE:N	2.41	0.54
10:CM:8:LEU:HA	10:CM:96:ILE:HA	1.90	0.54
10:CM:49:VAL:HG11	14:CQ:41:ARG:HA	1.90	0.54
24:DA:666:G:H5''	34:DO:47:ASP:O	2.08	0.54
24:DA:2316:C:O2'	29:DG:128:ARG:NH2	2.40	0.54
24:DA:2869:G:H2'	24:DA:2870:C:O4'	2.07	0.54
27:DE:23:VAL:HG21	27:DE:183:LEU:CD2	2.38	0.54
30:DH:42:ARG:HH21	30:DH:44:VAL:HB	1.70	0.54
31:DK:54:GLN:HA	31:DK:57:ARG:HB3	1.90	0.54
42:DT:15:GLU:N	42:DT:15:GLU:OE1	2.37	0.54
51:D6:17:LYS:HD2	51:D6:17:LYS:H	1.64	0.54
1:AA:122:G:H4'	1:AA:312:C:HO2'	1.72	0.53
12:AO:46:LYS:CG	12:AO:48:PRO:HD2	2.26	0.53
22:AD:31:G:H1	22:AD:39:C:H42	1.56	0.53
24:BA:2086:U:H5'	26:BD:262:ARG:NH2	2.23	0.53
26:BD:28:GLU:HB3	26:BD:29:PRO:CD	2.38	0.53
26:BD:35:LYS:HZ1	26:BD:65:ILE:HA	1.73	0.53
31:BK:6:LEU:HD13	31:BK:36:ALA:HA	1.91	0.53
1:CA:448:A:H62	1:CA:486:U:H3	1.56	0.53
1:CA:457:C:H2'	1:CA:458:C:C6	2.43	0.53
1:CA:652:U:H1'	1:CA:653:A:H2	1.73	0.53
1:CA:1129:C:OP2	9:CL:62:TYR:OH	2.19	0.53
9:CL:70:LYS:O	9:CL:74:ILE:HG13	2.07	0.53
17:CT:45:HIS:CD2	17:CT:65:ILE:HG12	2.42	0.53
24:DA:1111:A:H4'	30:DH:3:ARG:HB2	1.90	0.53
24:DA:2393:A:HO2'	53:D8:13:ARG:HH12	1.54	0.53
24:DA:2646:C:H2'	24:DA:2647:U:O4'	2.07	0.53
27:DE:69:LYS:N	27:DE:69:LYS:CD	2.70	0.53
30:DH:6:ARG:HB2	30:DH:6:ARG:NH1	2.23	0.53
30:DH:42:ARG:HE	30:DH:44:VAL:HG12	1.73	0.53
30:DH:124:GLU:O	30:DH:125:VAL:C	2.51	0.53
33:DN:7:TYR:HE1	33:DN:20:MET:HE3	1.73	0.53
39:D1:61:TRP:CD2	39:D1:94:ASN:HA	2.43	0.53
44:DV:54:HIS:CG	44:DV:101:PRO:HD3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:501:C:H2'	1:AA:502:G:H8	1.73	0.53
1:AA:925:G:H1	1:AA:1391:U:H3	1.55	0.53
1:AA:1347:G:N2	1:AA:1374:A:OP2	2.36	0.53
2:AE:70:PHE:O	2:AE:93:VAL:N	2.32	0.53
4:AG:30:LYS:HG3	4:AG:30:LYS:O	2.08	0.53
12:AO:61:THR:OG1	12:AO:62:SER:N	2.41	0.53
17:AT:18:THR:OG1	17:AT:69:LYS:NZ	2.34	0.53
24:BA:582:G:H1	24:BA:1258:C:H42	1.56	0.53
24:BA:1364:G:OP2	46:BZ:2:SER:OG	2.26	0.53
26:BD:44:ASN:HB3	26:BD:49:ILE:HA	1.89	0.53
35:BP:63:LYS:HG3	35:BP:65:PHE:CZ	2.43	0.53
51:B6:41:PRO:HG3	51:B6:47:THR:HG22	1.90	0.53
1:CA:64:G:H4'	1:CA:65:U:H3'	1.90	0.53
1:CA:173:U:O2	1:CA:197:A:N6	2.42	0.53
1:CA:571:U:O2	1:CA:918:A:H5'	2.09	0.53
1:CA:1221:G:H5'	19:CV:36:ARG:HD3	1.90	0.53
4:CG:120:LEU:HB3	4:CG:126:ILE:HD11	1.90	0.53
5:CH:71:LEU:HD21	5:CH:74:GLY:H	1.73	0.53
24:DA:307:G:H21	24:DA:330:A:H62	1.55	0.53
24:DA:1025:G:C4	24:DA:1135:C:H1'	2.44	0.53
24:DA:2751:G:H5''	24:DA:2752:C:OP2	2.08	0.53
24:DA:2880:C:O2	36:D0:93:GLY:N	2.40	0.53
34:DO:22:GLY:O	34:DO:25:SER:HB3	2.07	0.53
34:DO:48:PRO:O	34:DO:49:ARG:C	2.48	0.53
42:DT:49:VAL:HB	42:DT:83:VAL:HG21	1.90	0.53
4:AG:98:GLU:O	4:AG:103:ASN:ND2	2.41	0.53
5:AH:142:LEU:O	5:AH:143:ARG:NH1	2.35	0.53
8:AK:51:VAL:HG11	8:AK:60:ARG:HD2	1.90	0.53
12:AO:17:LYS:O	12:AO:19:ARG:N	2.41	0.53
24:BA:363(B):G:H2'	24:BA:363(C):G:H8	1.74	0.53
24:BA:637:A:OP2	34:BO:131:SER:OG	2.20	0.53
24:BA:873:G:H1	24:BA:904:C:N4	2.06	0.53
24:BA:973:A:H5'	24:BA:1188:U:H1'	1.91	0.53
27:BE:116:VAL:O	27:BE:117:MET:HB3	2.08	0.53
29:BG:126:ASP:OD1	29:BG:127:GLY:N	2.41	0.53
30:BH:24:VAL:HG13	30:BH:35:VAL:HB	1.91	0.53
51:B6:31:PRO:C	51:B6:35:GLU:HG2	2.33	0.53
1:CA:261:U:OP2	20:CW:79:ARG:NH2	2.41	0.53
1:CA:1224:G:N1	1:CA:1322:C:O2'	2.41	0.53
13:CP:15:VAL:O	13:CP:19:LEU:N	2.35	0.53
24:DA:1072:C:H5	24:DA:1097:U:H5'	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2898:U:H2'	24:DA:2899:G:C8	2.43	0.53
28:DF:1:MET:HB2	28:DF:2:LYS:HD3	1.90	0.53
36:D0:29:LEU:HB3	36:D0:75:LEU:HD11	1.90	0.53
37:DQ:24:LEU:HD12	37:DQ:41:ASP:HA	1.89	0.53
47:DW:53:LEU:O	47:DW:57:ILE:HG13	2.08	0.53
1:AA:22:G:H4'	1:AA:885:G:C8	2.43	0.53
1:AA:115:G:H4'	1:AA:116:A:O5'	2.09	0.53
1:AA:143:A:OP1	1:AA:144:G:H5'	2.09	0.53
1:AA:667:G:H4'	15:AR:51:HIS:CE1	2.44	0.53
1:AA:731:G:OP1	1:AA:766:A:H1'	2.07	0.53
4:AG:30:LYS:HA	4:AG:34:GLU:HB2	1.89	0.53
9:AL:9:ARG:HB3	9:AL:14:VAL:HG13	1.90	0.53
10:AM:6:ILE:HG22	10:AM:98:ILE:HG12	1.90	0.53
11:AN:85:ARG:NH2	11:AN:111:ASP:OD2	2.37	0.53
16:AS:20:VAL:HG21	16:AS:32:TYR:CG	2.44	0.53
24:BA:173:G:H2'	24:BA:174:C:C6	2.42	0.53
24:BA:572:A:H5''	24:BA:573:G:OP2	2.07	0.53
24:BA:855:G:O2'	45:B3:27:GLU:OE2	2.19	0.53
43:BU:63:LYS:HD2	43:BU:64:GLU:H	1.72	0.53
44:BV:52:SER:C	44:BV:54:HIS:H	2.15	0.53
1:CA:8:A:N6	4:CG:209:ARG:HG3	2.22	0.53
1:CA:332:G:OP2	20:CW:10:LEU:HD22	2.08	0.53
1:CA:544:G:OP1	4:CG:59:ARG:NH2	2.36	0.53
1:CA:998(A):C:H2'	1:CA:999:U:O4'	2.08	0.53
4:CG:12:CYS:SG	4:CG:31:CYS:O	2.67	0.53
13:CP:14:ARG:NH1	13:CP:14:ARG:HB2	2.22	0.53
24:DA:819:A:OP2	24:DA:1187:G:N2	2.22	0.53
24:DA:1044:G:O2'	24:DA:1111:A:N1	2.39	0.53
24:DA:1188:U:H4'	40:D2:79:VAL:CG1	2.36	0.53
24:DA:1999:C:H4'	24:DA:2723:C:O2	2.08	0.53
25:DB:18:G:H2'	25:DB:19:G:C8	2.44	0.53
26:DD:31:LYS:HG3	26:DD:31:LYS:O	2.07	0.53
28:DF:184:TYR:O	28:DF:188:ARG:HB2	2.08	0.53
1:AA:649:G:H2'	1:AA:650:G:H8	1.73	0.53
1:AA:688:G:H2'	1:AA:689:C:H6	1.74	0.53
1:AA:989:C:N4	1:AA:1216:G:H1	2.07	0.53
3:AF:7:PRO:O	3:AF:11:ARG:NH1	2.41	0.53
9:AL:22:GLY:N	9:AL:58:HIS:O	2.29	0.53
13:AP:57:ARG:HD2	49:B4:35:VAL:HG23	1.90	0.53
24:BA:1050:A:N6	24:BA:1051:G:C6	2.77	0.53
24:BA:1416:G:H1	24:BA:1582:C:H42	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2355:C:H1'	45:B3:39:ARG:HH21	1.73	0.53
26:BD:65:ILE:HD11	26:BD:67:PHE:CZ	2.43	0.53
30:BH:4:ILE:HD13	30:BH:6:ARG:N	2.24	0.53
44:BV:45:ASP:O	44:BV:49:ARG:HG2	2.09	0.53
1:CA:412:A:N1	4:CG:35:ARG:CG	2.72	0.53
1:CA:544:G:OP1	4:CG:62:GLN:NE2	2.34	0.53
24:DA:1055:G:H1	24:DA:1104:C:H42	1.54	0.53
24:DA:1169:G:N2	24:DA:1180:C:N3	2.35	0.53
24:DA:1688:U:O2	24:DA:1700:A:H5'	2.08	0.53
24:DA:1771:C:O2'	24:DA:1786:A:H8	1.91	0.53
24:DA:2688:U:H5	24:DA:2720:U:OP2	1.90	0.53
25:DB:28:C:N4	25:DB:56:G:H1	2.06	0.53
28:DF:64:ILE:C	28:DF:65:TRP:CD1	2.87	0.53
30:DH:109:PHE:CZ	30:DH:152:ARG:HB2	2.43	0.53
32:DM:15:LEU:HD22	32:DM:53:VAL:HB	1.90	0.53
35:DP:24:GLY:HA3	35:DP:25:ASP:HB2	1.91	0.53
40:D2:98:GLU:OE1	40:D2:100:ARG:NH1	2.39	0.53
1:AA:1427:U:H2'	1:AA:1428:A:H8	1.74	0.53
2:AE:150:SER:OG	2:AE:151:GLY:N	2.42	0.53
24:BA:444:C:H4'	28:BF:49:ALA:HB2	1.89	0.53
24:BA:1490:A:O2'	26:BD:99:ASP:OD1	2.27	0.53
24:BA:1516:U:H2'	24:BA:1517:G:H8	1.73	0.53
27:BE:48:GLN:OE1	27:BE:64:LYS:NZ	2.23	0.53
1:CA:79:G:H1	1:CA:90:C:H42	1.56	0.53
1:CA:464:G:C6	1:CA:466:C:H5'	2.43	0.53
1:CA:1260:C:OP1	1:CA:1284:C:O2'	2.17	0.53
1:CA:1274:G:H2'	1:CA:1275:A:H8	1.74	0.53
3:CF:81:GLY:HA2	3:CF:85:ARG:NH2	2.23	0.53
20:CW:33:ILE:O	20:CW:37:SER:OG	2.22	0.53
24:DA:320:A:H4'	24:DA:322:A:C8	2.44	0.53
24:DA:469:G:O6	52:D7:37:LYS:HE2	2.09	0.53
24:DA:712:G:H1	24:DA:719:C:H42	1.57	0.53
24:DA:855:G:O2'	45:D3:27:GLU:OE2	2.25	0.53
24:DA:1011:G:OP1	39:D1:75:ASN:HB3	2.08	0.53
24:DA:1165:U:H2'	24:DA:1166:C:C6	2.44	0.53
27:DE:53:PRO:O	27:DE:55:ASN:ND2	2.42	0.53
27:DE:55:ASN:C	27:DE:57:LYS:H	2.16	0.53
27:DE:81:ILE:O	27:DE:81:ILE:HG22	2.09	0.53
30:DH:26:VAL:HG11	30:DH:75:ALA:HB1	1.90	0.53
47:DW:14:ARG:HG3	47:DW:15:LYS:HG2	1.91	0.53
53:D8:28:GLY:O	53:D8:36:LYS:NZ	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:277:C:H2'	1:AA:278:G:H8	1.73	0.53
2:AE:6:THR:OG1	2:AE:7:VAL:N	2.36	0.53
18:AU:36:ASN:HD22	18:AU:36:ASN:H	1.55	0.53
24:BA:297:C:H5''	43:BU:85:VAL:HG21	1.91	0.53
24:BA:309:G:N3	24:BA:329:G:O2'	2.41	0.53
24:BA:1142(A):A:H4'	32:BM:25:ARG:HH22	1.72	0.53
24:BA:2564:A:C2	24:BA:2647:U:H4'	2.44	0.53
24:BA:2863:C:H2'	24:BA:2864:G:H8	1.74	0.53
34:BO:61:ARG:HH21	34:BO:61:ARG:HB2	1.73	0.53
36:B0:87:TYR:HD1	36:B0:90:ARG:HD2	1.72	0.53
49:B4:42:PHE:O	49:B4:44:THR:N	2.42	0.53
1:CA:390:C:O3'	16:CS:28:ARG:NH2	2.39	0.53
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.09	0.53
1:CA:984:C:H42	1:CA:1221:G:H1	1.54	0.53
1:CA:1000:A:H2'	1:CA:1001:G:H8	1.73	0.53
1:CA:1189:C:H5''	3:CF:5:ILE:HD12	1.89	0.53
2:CE:212:GLN:CD	2:CE:235:SER:HA	2.34	0.53
19:CV:13:ASP:HA	19:CV:16:LEU:HB3	1.90	0.53
22:CD:32:C:C4	22:CD:33:U:C4	2.97	0.53
24:DA:1006:C:H1'	32:DM:106:MET:HE2	1.89	0.53
24:DA:1066:U:H3	24:DA:1069:A:H5''	1.74	0.53
24:DA:1729:A:O2'	24:DA:1731:G:N2	2.42	0.53
24:DA:2142:C:H2'	24:DA:2143:C:C6	2.44	0.53
26:DD:65:ILE:HD11	26:DD:106:ILE:HG22	1.91	0.53
28:DF:167:ALA:HB1	28:DF:173:VAL:HG11	1.90	0.53
34:DO:65:ARG:HB3	34:DO:68:GLN:HE22	1.73	0.53
45:D3:49:LYS:O	45:D3:50:ASN:ND2	2.42	0.53
51:D6:47:THR:CG2	51:D6:47:THR:O	2.57	0.53
1:AA:347:G:OP1	38:BR:41:ARG:NH1	2.41	0.53
1:AA:530:G:O2'	1:AA:531:U:OP1	2.26	0.53
1:AA:781:A:O2'	1:AA:1522:U:O2	2.24	0.53
1:AA:977:A:C8	1:AA:1223:C:C4	2.95	0.53
1:AA:1129:C:OP1	9:AL:62:TYR:OH	2.25	0.53
1:AA:1366:C:OP1	9:AL:117:HIS:NE2	2.41	0.53
11:AN:57:THR:HG22	11:AN:59:TYR:H	1.74	0.53
20:AW:72:LEU:HD21	20:AW:77:ALA:N	2.23	0.53
24:BA:443:A:H1'	24:BA:1201:C:O4'	2.09	0.53
24:BA:839:U:H3	24:BA:939:G:H1	1.57	0.53
24:BA:860:U:C5	24:BA:917:A:C2	2.96	0.53
24:BA:1063:G:N3	24:BA:1077:A:N6	2.57	0.53
24:BA:1416:G:HO2'	24:BA:1417:C:H6	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1460:A:O2'	24:BA:1461:G:OP1	2.27	0.53
24:BA:2103:C:H2'	24:BA:2104:G:C8	2.43	0.53
24:BA:2147:G:H2'	24:BA:2148:G:O4'	2.09	0.53
24:BA:2803:C:H2'	24:BA:2804:C:C6	2.43	0.53
36:B0:4:LEU:N	36:B0:4:LEU:CD1	2.72	0.53
38:BR:53:ARG:O	38:BR:59:THR:OG1	2.27	0.53
1:CA:946:A:H2'	1:CA:947:G:C8	2.44	0.53
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.38	0.53
1:CA:1126:U:H4'	1:CA:1127:G:C8	2.43	0.53
2:CE:11:LEU:HD22	2:CE:217:ARG:HH12	1.74	0.53
13:CP:7:VAL:HG13	29:DG:115:ARG:HB3	1.91	0.53
20:CW:29:LYS:O	20:CW:33:ILE:HG12	2.09	0.53
24:DA:1025:G:OP1	24:DA:1025:G:H8	1.91	0.53
24:DA:1175:U:O2'	24:DA:1176:G:N3	2.29	0.53
24:DA:1540:G:H2'	24:DA:1541:U:O4'	2.09	0.53
24:DA:2068:U:N3	24:DA:2430:A:H2	2.03	0.53
24:DA:2115:G:H2'	24:DA:2116:G:N7	2.24	0.53
24:DA:2439:A:H5'	24:DA:2439:A:C8	2.44	0.53
32:DM:25:ARG:NH1	32:DM:25:ARG:HG3	2.23	0.53
46:DZ:92:LYS:C	46:DZ:94:LEU:H	2.17	0.53
1:AA:377:G:OP1	16:AS:3:LYS:HD2	2.09	0.53
1:AA:581:G:N2	1:AA:760:G:N7	2.56	0.53
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.72	0.53
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.44	0.53
2:AE:100:GLY:O	2:AE:102:LEU:N	2.42	0.53
10:AM:7:LYS:HB2	10:AM:97:GLU:HB2	1.90	0.53
15:AR:55:GLY:HA2	15:AR:58:MET:HE3	1.91	0.53
24:BA:1129:A:N6	24:BA:2491:U:OP1	2.41	0.53
24:BA:1418:G:OP1	24:BA:1588:C:O2'	2.26	0.53
24:BA:2377:A:H2'	24:BA:2378:A:C8	2.44	0.53
24:BA:2439:A:H5'	24:BA:2439:A:C8	2.43	0.53
24:BA:2640:G:OP1	32:BM:97:ARG:NH2	2.41	0.53
28:BF:117:ARG:NH2	28:BF:189:THR:O	2.39	0.53
1:CA:468:A:H1'	16:CS:82:GLN:HE22	1.73	0.53
2:CE:69:LEU:O	2:CE:163:PHE:N	2.37	0.53
11:CN:98:LEU:O	11:CN:101:SER:OG	2.19	0.53
16:CS:40:ASP:OD2	16:CS:43:LYS:N	2.42	0.53
24:DA:320:A:H4'	24:DA:322:A:N7	2.24	0.53
24:DA:646:A:H2'	24:DA:647:G:O4'	2.09	0.53
24:DA:2099:U:H3	24:DA:2190:G:H1	1.55	0.53
27:DE:66:HIS:HA	27:DE:68:ALA:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:97:LYS:N	27:DE:100:GLU:OE1	2.39	0.53
44:DV:59:LEU:HG	44:DV:69:THR:OG1	2.09	0.53
51:D6:14:THR:OG1	51:D6:20:ASN:N	2.30	0.53
1:AA:60:A:H4'	1:AA:61:G:H5'	1.90	0.53
1:AA:153:C:N4	1:AA:168:G:H1	2.07	0.53
1:AA:259:G:OP2	20:AW:83:ARG:NH2	2.42	0.53
1:AA:692:U:OP1	11:AN:124:LYS:NZ	2.34	0.53
1:AA:1178:G:N2	1:AA:1181:G:N7	2.34	0.53
20:AW:53:LEU:O	20:AW:57:ARG:CG	2.54	0.53
24:BA:82:G:H5''	24:BA:296:C:H5'	1.91	0.53
24:BA:1036:G:H1	24:BA:1119:C:H42	1.57	0.53
24:BA:1287:A:C8	36:B0:107:ASP:HB2	2.44	0.53
24:BA:1786:A:C2	24:BA:2606:C:H1'	2.43	0.53
24:BA:2645:G:N2	24:BA:2767:C:OP2	2.41	0.53
29:BG:66:GLN:HA	49:B4:6:HIS:ND1	2.23	0.53
29:BG:108:ASN:HA	49:B4:38:LYS:HB3	1.90	0.53
35:BP:39:PRO:HA	35:BP:97:VAL:O	2.08	0.53
44:BV:142:SER:HB3	44:BV:143:GLY:HA2	1.91	0.53
51:B6:18:ARG:HB2	51:B6:18:ARG:CZ	2.39	0.53
24:DA:270(I):G:O6	24:DA:270(Q):C:N4	2.42	0.53
24:DA:271(B):G:N7	24:DA:421:U:H2'	2.24	0.53
24:DA:1094:U:O2'	24:DA:1096:A:OP1	2.26	0.53
24:DA:2754:U:H5'	24:DA:2755:C:OP2	2.08	0.53
30:DH:46:GLU:OE1	30:DH:51:ARG:NH1	2.41	0.53
33:DN:111:PHE:HB3	33:DN:114:ILE:HG13	1.90	0.53
37:DQ:14:VAL:HG11	37:DQ:89:ARG:HH11	1.74	0.53
39:D1:82:GLY:HA2	39:D1:85:LYS:HG3	1.91	0.53
43:DU:54:LYS:C	43:DU:55:TYR:HD2	2.17	0.53
44:DV:127:LYS:O	44:DV:162:GLU:HB2	2.08	0.53
1:AA:181:G:N2	1:AA:195:A:N3	2.57	0.52
1:AA:542:G:H5'	4:AG:41:GLY:HA3	1.90	0.52
1:AA:1358:U:H5''	14:AQ:34:TYR:HA	1.91	0.52
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.74	0.52
10:AM:34:VAL:HG12	10:AM:74:ILE:HG22	1.91	0.52
24:BA:1969:A:O2'	24:BA:1972:A:N3	2.42	0.52
24:BA:2135:A:O4'	24:BA:2160:G:H5''	2.08	0.52
24:BA:2279:G:OP2	45:B3:11:ARG:NH2	2.42	0.52
24:BA:2820:A:C4'	36:B0:3:HIS:CD2	2.92	0.52
30:BH:137:ASP:OD1	30:BH:139:GLN:N	2.43	0.52
35:BP:63:LYS:CG	35:BP:65:PHE:CZ	2.93	0.52
36:B0:54:LEU:HD21	36:B0:65:LEU:HD23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:198:G:H2'	1:CA:199:G:C8	2.45	0.52
1:CA:838:G:N2	1:CA:849:C:N3	2.57	0.52
1:CA:1298:C:O2'	1:CA:1299:A:OP2	2.22	0.52
8:CK:51:VAL:HG21	8:CK:60:ARG:NH1	2.25	0.52
14:CQ:24:CYS:SG	14:CQ:25:VAL:N	2.82	0.52
24:DA:379:G:N2	46:DZ:42:GLN:OE1	2.28	0.52
24:DA:511:U:H3'	24:DA:512:G:H5''	1.90	0.52
24:DA:1169:G:H1	24:DA:1180:C:N4	1.95	0.52
24:DA:1470:G:N2	24:DA:1522:G:OP2	2.39	0.52
24:DA:2133:G:N2	24:DA:2158:A:OP2	2.43	0.52
24:DA:2420:C:OP2	53:D8:34:TRP:CE2	2.62	0.52
27:DE:11:MET:HG3	27:DE:24:THR:HA	1.91	0.52
30:DH:10:PRO:HG2	30:DH:50:VAL:HG13	1.91	0.52
35:DP:37:LEU:HD21	35:DP:130:LYS:HE2	1.91	0.52
43:DU:52:SER:CB	43:DU:56:PRO:HA	2.37	0.52
46:DZ:82:LEU:HD23	46:DZ:82:LEU:H	1.74	0.52
1:AA:1178:G:O5'	9:AL:93:ARG:NH2	2.41	0.52
2:AE:207:ALA:O	2:AE:209:ARG:N	2.42	0.52
10:AM:23:ILE:HD11	10:AM:72:VAL:HG11	1.90	0.52
24:BA:1177:A:H4'	24:BA:1178:C:H5''	1.92	0.52
24:BA:2099:U:H2'	24:BA:2100:G:C8	2.43	0.52
24:BA:2212:A:H1'	24:BA:2215:G:C5	2.45	0.52
24:BA:2474:C:H5''	24:BA:2475:C:C5	2.42	0.52
24:BA:2795:G:OP2	24:BA:2797:U:H5'	2.09	0.52
43:BU:35:TYR:CE2	43:BU:69:ALA:HB3	2.45	0.52
1:CA:33:A:O2'	1:CA:363:A:N3	2.38	0.52
1:CA:1162:C:H42	1:CA:1174:G:H1	1.55	0.52
24:DA:77:C:H42	24:DA:109:G:H1	1.57	0.52
24:DA:627:A:N7	34:DO:84:ASN:ND2	2.50	0.52
24:DA:890:A:H2'	24:DA:892:G:N7	2.23	0.52
24:DA:1537:C:H2'	24:DA:1538:G:O4'	2.10	0.52
25:DB:13:A:O2'	25:DB:14:U:H3'	2.09	0.52
26:DD:85:ASP:OD2	26:DD:88:ARG:NH1	2.37	0.52
28:DF:2:LYS:HG2	28:DF:25:PRO:HD2	1.90	0.52
28:DF:149:ASP:OD1	28:DF:150:GLY:N	2.42	0.52
29:DG:150:ASP:OD1	29:DG:153:ARG:NH2	2.40	0.52
29:DG:165:THR:HG23	29:DG:168:GLU:HG3	1.91	0.52
32:DM:55:VAL:HB	32:DM:126:PRO:HA	1.92	0.52
34:DO:127:ALA:O	34:DO:147:LEU:N	2.37	0.52
36:D0:55:ALA:HB2	36:D0:79:LEU:HD13	1.91	0.52
43:DU:42:VAL:O	43:DU:65:ALA:N	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:190:G:O6	1:AA:264:U:H5''	2.08	0.52
1:AA:606:G:H22	1:AA:631:G:H5''	1.74	0.52
1:AA:1314:C:H41	19:AV:5:LEU:HA	1.73	0.52
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.09	0.52
2:AE:15:VAL:HB	2:AE:204:ASN:HD22	1.74	0.52
7:AJ:143:ARG:NH2	22:AD:42:G:H5'	2.25	0.52
12:AO:46:LYS:CG	12:AO:48:PRO:HG2	2.38	0.52
16:AS:34:GLU:OE2	16:AS:59:TRP:NE1	2.41	0.52
24:BA:729:G:C5	26:BD:208:LYS:HB2	2.44	0.52
24:BA:2422:A:O2'	24:BA:2423:U:H5''	2.10	0.52
24:BA:2749:A:N3	30:BH:59:ARG:NH1	2.57	0.52
35:BP:64:ILE:C	35:BP:65:PHE:CG	2.87	0.52
44:BV:30:ASN:OD1	44:BV:33:LEU:N	2.39	0.52
44:BV:48:PHE:O	44:BV:52:SER:HB3	2.10	0.52
45:B3:70:GLN:HG2	45:B3:72:ARG:HG2	1.91	0.52
1:CA:102:G:O2'	1:CA:151:A:N3	2.38	0.52
2:CE:47:THR:O	2:CE:51:LEU:HB2	2.09	0.52
3:CF:21:ARG:NH1	3:CF:21:ARG:HB3	2.23	0.52
3:CF:72:LYS:HD2	3:CF:75:VAL:HG23	1.92	0.52
4:CG:49:ARG:HE	4:CG:50:ARG:N	1.99	0.52
22:CC:75:C:OP2	22:CC:76:A:H5'	2.10	0.52
24:DA:139:G:N2	24:DA:1596:A:H4'	2.24	0.52
24:DA:2425:A:H4'	24:DA:2426:A:H5''	1.92	0.52
27:DE:72:VAL:O	27:DE:73:GLU:C	2.52	0.52
32:DM:17:ASP:OD1	32:DM:56:ASN:ND2	2.42	0.52
33:DN:89:ASN:N	33:DN:89:ASN:OD1	2.42	0.52
37:DQ:53:SER:O	37:DQ:56:LEU:N	2.35	0.52
38:DR:11:GLU:OE1	38:DR:11:GLU:N	2.33	0.52
38:DR:134:GLU:OE2	38:DR:134:GLU:N	2.39	0.52
52:D7:5:TRP:NE1	52:D7:7:PRO:HG3	2.24	0.52
1:AA:237:C:H4'	17:AT:25:ARG:HH12	1.75	0.52
1:AA:352:C:O2'	1:AA:353:A:O3'	2.28	0.52
1:AA:375:U:O2'	16:AS:6:LEU:O	2.26	0.52
1:AA:1255:G:P	10:AM:45:ARG:HH22	2.32	0.52
1:AA:1328:C:OP1	21:AX:21:TYR:OH	2.22	0.52
2:AE:50:GLU:OE1	2:AE:54:THR:OG1	2.27	0.52
3:AF:16:ARG:NH1	3:AF:183:ASP:OD1	2.35	0.52
11:AN:89:ALA:O	11:AN:91:ARG:N	2.42	0.52
16:AS:57:ARG:O	16:AS:61:SER:N	2.41	0.52
24:BA:1174:A:H62	24:BA:1175:U:H5	1.57	0.52
24:BA:2469:A:H61	24:BA:2481:G:H1'	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:28:ILE:HG22	28:BF:112:MET:HB3	1.92	0.52
30:BH:70:THR:HG22	30:BH:74:ASN:HD21	1.74	0.52
39:B1:74:LEU:HD22	39:B1:78:THR:OG1	2.09	0.52
44:BV:5:LEU:O	44:BV:6:LYS:HB2	2.09	0.52
44:BV:169:GLU:OE2	44:BV:171:ILE:N	2.43	0.52
1:CA:587:G:N2	1:CA:754:C:OP2	2.40	0.52
24:DA:153:C:P	46:DZ:88:LYS:HZ1	2.31	0.52
24:DA:242:G:C5'	53:D8:62:LEU:HD13	2.39	0.52
24:DA:1063:G:C6	24:DA:1064:C:H1'	2.43	0.52
24:DA:2155:G:H3'	24:DA:2156:G:H8	1.75	0.52
24:DA:2591:C:OP1	26:DD:239:ARG:HD2	2.10	0.52
35:DP:43:THR:OG1	35:DP:45:GLN:HG2	2.09	0.52
39:D1:13:LYS:O	39:D1:17:ILE:HG12	2.08	0.52
40:D2:68:LYS:HD2	40:D2:69:LYS:N	2.25	0.52
1:AA:1224:G:N2	1:AA:1362(A):C:O2	2.42	0.52
5:AH:77:PRO:HD2	5:AH:142:LEU:HD13	1.91	0.52
13:AP:49:THR:HB	13:AP:52:GLU:HG3	1.91	0.52
19:AV:5:LEU:HD23	19:AV:10:PHE:CE1	2.44	0.52
19:AV:12:ASP:OD1	19:AV:37:ARG:NH1	2.42	0.52
24:BA:363(B):G:H2'	24:BA:363(C):G:C8	2.44	0.52
24:BA:897:C:H2'	24:BA:898:C:C6	2.45	0.52
24:BA:989:G:OP2	48:BX:11:SER:OG	2.20	0.52
24:BA:1036:G:P	30:BH:59:ARG:HB2	2.49	0.52
24:BA:2726:U:O2'	24:BA:2727:G:H8	1.92	0.52
27:BE:174:ASP:OD1	27:BE:175:VAL:N	2.43	0.52
28:BF:181:LEU:O	28:BF:205:ARG:NH2	2.43	0.52
28:BF:185:ASP:HA	28:BF:188:ARG:HD3	1.91	0.52
43:BU:81:LYS:CG	43:BU:97:ARG:CZ	2.87	0.52
1:CA:585:G:C6	1:CA:586:C:C4	2.98	0.52
1:CA:690:G:H2'	1:CA:691:G:O4'	2.10	0.52
1:CA:1000:A:H2'	1:CA:1001:G:C8	2.45	0.52
1:CA:1173:G:OP1	7:CJ:5:ARG:NH1	2.40	0.52
1:CA:1373:G:P	9:CL:42:ARG:HH12	2.33	0.52
2:CE:118:LEU:HD12	2:CE:142:LEU:HB2	1.92	0.52
4:CG:82:ALA:HA	4:CG:85:LYS:HB2	1.91	0.52
10:CM:37:PRO:HA	10:CM:72:VAL:HG23	1.90	0.52
10:CM:91:PRO:HB2	10:CM:93:GLY:H	1.75	0.52
13:CP:53:VAL:HG12	13:CP:57:ARG:HE	1.74	0.52
17:CT:58:GLU:OE1	17:CT:75:ARG:NH2	2.42	0.52
24:DA:17:G:H4'	39:D1:25:TRP:CH2	2.44	0.52
24:DA:33:U:O2'	24:DA:34:C:O2	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1449(A):G:H1	24:DA:1462:C:H42	1.57	0.52
24:DA:2169:A:H2'	24:DA:2169:A:N3	2.25	0.52
24:DA:2371:G:H4'	51:D6:45:LYS:CD	2.40	0.52
24:DA:2420:C:OP2	24:DA:2420:C:H6	1.92	0.52
24:DA:2745:C:H4'	30:DH:142:GLY:O	2.10	0.52
25:DB:30:C:N3	25:DB:54:G:N2	2.42	0.52
38:DR:91:ARG:HD2	38:DR:124:ASP:OD2	2.10	0.52
39:D1:98:LEU:HB3	39:D1:102:GLU:HB2	1.91	0.52
1:AA:164:U:H2'	1:AA:165:C:C6	2.45	0.52
1:AA:606:G:O2'	1:AA:632:A:N6	2.43	0.52
1:AA:736:C:H2'	1:AA:737:A:C8	2.45	0.52
1:AA:1279:A:OP2	10:AM:9:ARG:NH1	2.42	0.52
1:AA:1316:G:H4'	14:AQ:18:VAL:HG11	1.92	0.52
4:AG:20:TYR:HA	4:AG:26:CYS:HB3	1.92	0.52
16:AS:4:ILE:HA	16:AS:20:VAL:O	2.09	0.52
22:AD:6:G:C6	22:AD:7:G:C6	2.97	0.52
22:AD:58:A:H3'	22:AD:61:C:H41	1.75	0.52
24:BA:270(M):U:H1'	24:BA:270(N):G:C2	2.45	0.52
24:BA:1041:C:H2'	24:BA:1042:G:H8	1.75	0.52
24:BA:2415:G:H4'	34:BO:66:GLY:HA3	1.91	0.52
24:BA:2898:U:O2'	32:BM:131:GLN:O	2.27	0.52
26:BD:77:ALA:HB2	26:BD:97:TYR:CD2	2.45	0.52
32:BM:30:ILE:HG23	32:BM:52:VAL:HG11	1.90	0.52
1:CA:196:A:P	20:CW:68:LYS:HZ1	2.32	0.52
1:CA:1128:C:H1'	1:CA:1146:A:N6	2.17	0.52
2:CE:216:SER:O	2:CE:218:ALA:N	2.41	0.52
7:CJ:139:GLU:O	7:CJ:143:ARG:N	2.39	0.52
13:CP:14:ARG:HG3	13:CP:42:ALA:HA	1.91	0.52
17:CT:81:ARG:HA	17:CT:81:ARG:HE	1.75	0.52
22:CD:21:A:H2	22:CD:48:C:H5	1.58	0.52
24:DA:309:G:N3	24:DA:329:G:O2'	2.41	0.52
24:DA:491:G:O6	41:DS:49:LYS:HE2	2.09	0.52
24:DA:854:G:H2'	24:DA:855:G:C8	2.45	0.52
24:DA:1149:G:H2'	24:DA:1150:C:C6	2.44	0.52
24:DA:1278:A:O2'	36:D0:34:ILE:HD11	2.09	0.52
24:DA:1996:C:OP1	33:DN:31:LYS:HE2	2.10	0.52
24:DA:2527:C:H42	24:DA:2536:G:H1	1.58	0.52
27:DE:26:ILE:CG2	27:DE:27:LEU:H	2.19	0.52
29:DG:100:TRP:CD1	29:DG:100:TRP:H	2.26	0.52
30:DH:146:ALA:O	30:DH:150:ALA:N	2.33	0.52
30:DH:149:ARG:HH12	30:DH:163:TYR:HA	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D2:38:LEU:HB3	40:D2:52:VAL:HG12	1.90	0.52
48:DX:52:HIS:CE1	48:DX:53:LEU:HD23	2.45	0.52
53:D8:40:GLU:HA	53:D8:43:GLN:HB2	1.91	0.52
1:AA:261:U:OP2	20:AW:79:ARG:NH2	2.43	0.52
1:AA:427:U:OP2	4:AG:36:ARG:NH1	2.43	0.52
1:AA:640:A:O2'	8:AK:115:SER:O	2.23	0.52
1:AA:881:G:P	12:AO:12:ARG:HH22	2.32	0.52
9:AL:54:ASP:N	9:AL:54:ASP:OD1	2.42	0.52
22:AD:21:A:N1	22:AD:46:G:H2'	2.25	0.52
22:AD:58:A:H2	22:AD:60:U:H3'	1.75	0.52
24:BA:322:A:P	28:BF:168:ARG:HH21	2.31	0.52
24:BA:1423:G:H2'	24:BA:1424:G:H8	1.74	0.52
24:BA:2019:A:O4'	39:B1:34:LYS:HD2	2.09	0.52
24:BA:2169:A:H3'	24:BA:2170:A:C8	2.45	0.52
24:BA:2439:A:H3'	24:BA:2439:A:P	2.49	0.52
30:BH:4:ILE:HD13	30:BH:6:ARG:CG	2.38	0.52
34:BO:98:GLU:OE1	34:BO:102:ARG:NH1	2.43	0.52
36:B0:86:ARG:NH2	36:B0:118:GLU:OXT	2.43	0.52
49:B4:23:GLU:OE1	49:B4:24:THR:N	2.42	0.52
1:CA:536:C:H2'	1:CA:537:G:C8	2.45	0.52
1:CA:1392:G:H21	1:CA:1502:A:H8	1.55	0.52
2:CE:50:GLU:O	2:CE:54:THR:OG1	2.19	0.52
8:CK:45:ILE:HD11	8:CK:80:ILE:HD11	1.90	0.52
13:CP:98:VAL:N	13:CP:101:GLN:HE21	2.07	0.52
20:CW:54:LYS:HA	20:CW:57:ARG:NH1	2.25	0.52
22:CD:60:U:OP2	22:CD:61:C:N4	2.35	0.52
24:DA:2420:C:P	53:D8:34:TRP:CD2	3.03	0.52
26:DD:35:LYS:HD2	26:DD:35:LYS:H	1.72	0.52
28:DF:3:GLU:HB3	28:DF:24:LEU:HD21	1.90	0.52
29:DG:77:ILE:HG22	29:DG:80:PHE:H	1.75	0.52
33:DN:47:ILE:HG13	33:DN:48:PRO:HD2	1.91	0.52
39:D1:61:TRP:CH2	39:D1:94:ASN:HB2	2.45	0.52
49:D4:49:PHE:HD2	49:D4:50:VAL:HG22	1.74	0.52
51:D6:15:GLU:HG3	51:D6:47:THR:OG1	2.10	0.52
13:AP:3:ARG:HH12	29:BG:113:ARG:HB3	1.75	0.52
24:BA:1049:C:H2'	24:BA:1050:A:H5''	1.91	0.52
24:BA:1769:G:O2'	24:BA:1958:C:OP1	2.22	0.52
24:BA:2156:G:H2'	24:BA:2157:G:C4	2.44	0.52
24:BA:2557:G:H2'	24:BA:2558:C:H6	1.75	0.52
32:BM:58:ASP:OD1	32:BM:125:GLY:N	2.30	0.52
38:BR:132:LYS:O	38:BR:136:GLN:NE2	2.31	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:B2:3:ALA:HB1	40:B2:38:LEU:HD11	1.92	0.52
40:B2:4:ILE:HG22	40:B2:39:LEU:HD13	1.90	0.52
46:BZ:65:SER:OG	46:BZ:66:HIS:ND1	2.38	0.52
52:B7:5:TRP:NE1	52:B7:7:PRO:HG3	2.25	0.52
1:CA:992:U:O2'	1:CA:993:G:OP2	2.18	0.52
1:CA:1003:G:N2	1:CA:1038:C:O2	2.42	0.52
1:CA:1180:A:OP1	9:CL:103:THR:OG1	2.22	0.52
2:CE:73:THR:O	2:CE:73:THR:OG1	2.16	0.52
10:CM:55:LYS:O	10:CM:56:HIS:ND1	2.43	0.52
16:CS:58:TYR:O	16:CS:61:SER:N	2.42	0.52
22:CC:23:C:H2'	22:CC:24:U:C6	2.44	0.52
22:CD:30:G:H2'	22:CD:31:G:H8	1.73	0.52
24:DA:154:G:O6	24:DA:172:C:N4	2.41	0.52
24:DA:686:G:N2	24:DA:788:A:H61	2.08	0.52
24:DA:1818:U:O2'	26:DD:154:LYS:O	2.26	0.52
26:DD:267:SER:O	26:DD:269:PHE:N	2.43	0.52
28:DF:29:ASN:HB3	28:DF:112:MET:HE1	1.91	0.52
29:DG:16:ARG:O	29:DG:20:ILE:HG22	2.10	0.52
34:DO:122:PRO:HA	34:DO:142:GLY:H	1.74	0.52
45:D3:47:PRO:HG3	45:D3:53:MET:HB2	1.91	0.52
49:D4:25:TYR:O	49:D4:27:THR:N	2.42	0.52
1:AA:475:G:P	1:AA:475:G:H8	2.33	0.52
1:AA:716:A:N3	11:AN:118:GLY:HA2	2.25	0.52
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.25	0.52
1:AA:1447:G:N1	1:AA:1459:C:N3	2.39	0.52
3:AF:46:GLU:O	3:AF:83:ARG:NH2	2.43	0.52
12:AO:38:THR:O	12:AO:79:GLU:HG3	2.10	0.52
13:AP:3:ARG:HD2	29:BG:113:ARG:HH21	1.75	0.52
24:BA:272:G:H2'	24:BA:273:G:C8	2.45	0.52
24:BA:382:G:H1	24:BA:392:C:H42	1.56	0.52
24:BA:1533:C:H2'	24:BA:1534:G:H8	1.74	0.52
28:BF:164:ARG:O	28:BF:168:ARG:HB2	2.09	0.52
37:BQ:10:ARG:O	37:BQ:14:VAL:HG12	2.09	0.52
41:BS:88:ARG:NH1	41:BS:94:ASP:OD2	2.42	0.52
44:BV:120:ILE:HG12	44:BV:121:HIS:N	2.24	0.52
49:B4:57:GLU:O	49:B4:61:ARG:N	2.30	0.52
1:CA:359:U:H2'	1:CA:360:A:C8	2.45	0.52
4:CG:22:LYS:O	4:CG:23:GLY:C	2.52	0.52
4:CG:119:GLN:HG2	4:CG:123:HIS:CD2	2.45	0.52
24:DA:5:A:H2'	24:DA:6:A:H8	1.75	0.52
24:DA:71:A:H4'	24:DA:72:U:H5''	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:271:G:H2'	24:DA:272:G:C8	2.45	0.52
24:DA:639:U:H3	24:DA:649:G:H1	1.58	0.52
24:DA:1651:G:OP1	36:D0:40:LYS:HE3	2.09	0.52
26:DD:44:ASN:HB3	26:DD:49:ILE:HA	1.92	0.52
49:D4:14:ILE:HG13	49:D4:33:VAL:CG1	2.40	0.52
49:D4:36:CYS:O	49:D4:38:LYS:N	2.43	0.52
1:AA:108:G:P	1:AA:326:G:H22	2.33	0.52
1:AA:540:G:H2'	1:AA:541:G:O4'	2.09	0.52
1:AA:1253:G:P	10:AM:46:ARG:HH22	2.33	0.52
22:AD:3:C:H2'	22:AD:4:G:H8	1.74	0.52
24:BA:587:C:OP2	34:BO:21:ARG:NH2	2.43	0.52
24:BA:1069:A:H3'	24:BA:1073:A:H62	1.75	0.52
24:BA:2475:C:H2'	24:BA:2477:C:OP1	2.10	0.52
43:BU:75:ILE:HG22	43:BU:79:CYS:C	2.35	0.52
46:BZ:85:LEU:HD12	46:BZ:88:LYS:HB2	1.92	0.52
50:B5:49:CYS:O	50:B5:51:TYR:N	2.44	0.52
1:CA:425:G:O3'	4:CG:45:GLN:NE2	2.43	0.52
1:CA:785:G:H1	1:CA:797:C:H42	1.56	0.52
2:CE:137:ARG:NH1	2:CE:141:GLU:HB2	2.25	0.52
4:CG:57:ARG:HB3	4:CG:206:PHE:HB2	1.92	0.52
22:CD:71:C:C4	22:CD:72:A:C6	2.98	0.52
24:DA:322:A:H5'	24:DA:340:A:H1'	1.90	0.52
24:DA:2162:G:H2'	24:DA:2163:C:C6	2.41	0.52
27:DE:23:VAL:C	27:DE:25:VAL:N	2.66	0.52
28:DF:164:ARG:NH1	28:DF:177:ALA:HB2	2.25	0.52
31:DK:68:LEU:O	31:DK:70:GLU:N	2.43	0.52
31:DK:75:LEU:HD12	31:DK:76:THR:H	1.75	0.52
37:DQ:25:ARG:HH11	37:DQ:25:ARG:HB2	1.75	0.52
38:DR:119:LYS:O	38:DR:123:GLN:HG3	2.10	0.52
47:DW:13:ALA:HA	47:DW:16:LEU:HD21	1.92	0.52
49:D4:51:ASP:N	49:D4:51:ASP:OD1	2.43	0.52
1:AA:1253:G:OP1	10:AM:46:ARG:NH2	2.37	0.51
10:AM:25:GLU:O	10:AM:29:ARG:N	2.43	0.51
10:AM:35:SER:HB2	10:AM:73:ASP:HB2	1.92	0.51
24:BA:106:C:H2'	24:BA:107:C:H6	1.75	0.51
24:BA:589:C:H2'	24:BA:590:A:C8	2.45	0.51
24:BA:1086:A:H1'	24:BA:1103:A:H61	1.75	0.51
24:BA:1264:G:H5'	50:B5:11:THR:CG2	2.39	0.51
24:BA:2157:G:O2'	24:BA:2158:A:O5'	2.28	0.51
24:BA:2321:G:H5''	24:BA:2322:A:OP2	2.10	0.51
24:BA:2419:U:H4'	51:B6:23:THR:HG21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2797:U:OP1	24:BA:2798:C:N4	2.43	0.51
26:BD:27:THR:HG23	26:BD:83:GLU:HB3	1.91	0.51
37:BQ:15:ARG:NH1	37:BQ:88:ASP:OD2	2.40	0.51
44:BV:53:ILE:HG22	44:BV:71:VAL:HG22	1.91	0.51
1:CA:1318:A:O2'	19:CV:37:ARG:HB3	2.11	0.51
13:CP:39:ILE:HD13	13:CP:52:GLU:HB3	1.91	0.51
17:CT:94:ASN:O	17:CT:97:SER:OG	2.26	0.51
24:DA:1754:C:OP1	38:DR:96:ARG:NH1	2.43	0.51
24:DA:1757:U:O2	24:DA:1762:A:N6	2.19	0.51
24:DA:2006:C:O2'	24:DA:2823:A:N3	2.42	0.51
28:DF:3:GLU:CB	28:DF:24:LEU:HD21	2.40	0.51
29:DG:49:ASP:OD2	29:DG:51:ARG:NH1	2.42	0.51
34:DO:52:GLU:OE1	34:DO:53:GLY:N	2.42	0.51
1:AA:1240:U:O4	7:AJ:109:ASN:ND2	2.43	0.51
4:AG:108:LEU:HB3	4:AG:110:PHE:CD1	2.45	0.51
4:AG:188:LEU:HD22	4:AG:189:PRO:HD2	1.93	0.51
19:AV:41:VAL:O	49:B4:63:TYR:OH	2.29	0.51
22:AD:7:G:H5''	22:AD:8:U:H5'	1.92	0.51
24:BA:270(P):C:H2'	24:BA:270(Q):C:C6	2.44	0.51
24:BA:314:A:C2'	24:BA:315:G:H5'	2.40	0.51
24:BA:528:A:C2	24:BA:2043:C:H4'	2.46	0.51
24:BA:780:G:OP1	26:BD:218:ARG:NH2	2.43	0.51
24:BA:1140:C:OP1	32:BM:23:LEU:HB3	2.09	0.51
24:BA:2149:G:H2'	24:BA:2150:U:O4'	2.10	0.51
24:BA:2159:G:C2'	24:BA:2160:G:H5'	2.39	0.51
24:BA:2651:C:H42	24:BA:2669:G:H1	1.59	0.51
25:BB:42:C:H1'	29:BG:69:ALA:N	2.26	0.51
28:BF:32:LEU:HD13	28:BF:105:VAL:CG1	2.41	0.51
49:B4:54:GLY:O	49:B4:56:VAL:N	2.44	0.51
1:CA:959:A:HO2'	1:CA:984:C:HO2'	1.58	0.51
1:CA:1216:G:OP1	14:CQ:2:ALA:N	2.43	0.51
2:CE:91:PRO:HD3	2:CE:155:LEU:HD23	1.93	0.51
3:CF:156:ARG:NE	3:CF:160:ALA:O	2.35	0.51
5:CH:73:ASN:N	5:CH:73:ASN:OD1	2.44	0.51
13:CP:34:LEU:O	13:CP:38:GLY:N	2.42	0.51
14:CQ:27:CYS:SG	14:CQ:29:ARG:NH2	2.83	0.51
22:CD:30:G:H2'	22:CD:31:G:C8	2.45	0.51
24:DA:616:A:C8	28:DF:176:LEU:HD11	2.46	0.51
24:DA:1112:G:H5'	30:DH:3:ARG:CZ	2.41	0.51
24:DA:1899:G:N2	24:DA:1902:C:N4	2.54	0.51
24:DA:2512:C:H2'	24:DA:2513:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DR:6:LEU:HA	38:DR:9:LEU:HB2	1.92	0.51
51:D6:46:HIS:CD2	51:D6:46:HIS:N	2.78	0.51
1:AA:437:U:H2'	1:AA:438:G:O4'	2.09	0.51
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.46	0.51
2:AE:167:PRO:HG2	2:AE:192:SER:HB3	1.91	0.51
11:AN:78:GLN:O	11:AN:103:LEU:HA	2.10	0.51
19:AV:41:VAL:HB	19:AV:42:PRO:CA	2.40	0.51
24:BA:882:G:HO2'	24:BA:883:G:H8	1.54	0.51
24:BA:882:G:O2'	24:BA:883:G:O5'	2.28	0.51
24:BA:897:C:H2'	24:BA:898:C:H6	1.75	0.51
24:BA:898:C:H2'	24:BA:899:A:O4'	2.11	0.51
24:BA:1106:G:H2'	24:BA:1107:G:O4'	2.10	0.51
24:BA:2271:G:OP1	45:B3:18:ALA:HB1	2.09	0.51
24:BA:2695:C:H2'	24:BA:2696:U:H6	1.74	0.51
31:BK:41:GLU:OE2	31:BK:42:SER:N	2.39	0.51
40:B2:62:LEU:HD22	40:B2:95:LEU:HB2	1.93	0.51
1:CA:266:G:N3	1:CA:266:G:H2'	2.24	0.51
1:CA:853:G:H2'	1:CA:854:G:H8	1.74	0.51
2:CE:12:GLU:HA	2:CE:15:VAL:HG12	1.92	0.51
3:CF:56:ASP:OD1	3:CF:57:ILE:N	2.44	0.51
5:CH:8:GLU:OE2	5:CH:63:ARG:NH2	2.43	0.51
7:CJ:132:GLY:O	7:CJ:134:ALA:N	2.34	0.51
9:CL:8:GLY:O	9:CL:15:ALA:N	2.35	0.51
24:DA:601:C:O2'	28:DF:104:LYS:NZ	2.44	0.51
24:DA:1087:G:H1	24:DA:1102:C:N4	2.09	0.51
24:DA:1171:G:H1	24:DA:1174:A:N6	2.08	0.51
27:DE:8:LYS:HB3	27:DE:192:ASN:HA	1.90	0.51
27:DE:60:ASN:HA	27:DE:63:LEU:HD21	1.92	0.51
32:DM:128:HIS:O	32:DM:130:HIS:ND1	2.40	0.51
34:DO:30:THR:CG2	34:DO:35:HIS:H	2.23	0.51
1:AA:1131:G:C4	1:AA:1132:C:H5	2.28	0.51
22:AC:47:U:O2'	22:AC:48:C:P	2.69	0.51
22:AD:74:C:H4'	46:BZ:23:LYS:HB2	1.92	0.51
24:BA:1203:G:H3'	24:BA:1204:A:H5''	1.91	0.51
24:BA:1971:A:C4	26:BD:241:PRO:HD3	2.45	0.51
24:BA:2698:U:H2'	24:BA:2699:C:C6	2.45	0.51
24:BA:2849:U:OP2	38:BR:95:ARG:NH1	2.43	0.51
29:BG:39:ILE:HG23	29:BG:157:ILE:HG12	1.92	0.51
30:BH:129:THR:O	30:BH:129:THR:OG1	2.28	0.51
44:BV:48:PHE:CE1	44:BV:71:VAL:HG11	2.45	0.51
1:CA:77:C:H2'	1:CA:78:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:994:A:C5	1:CA:1216:G:H4'	2.46	0.51
2:CE:16:HIS:ND1	2:CE:209:ARG:O	2.43	0.51
2:CE:47:THR:O	2:CE:51:LEU:N	2.43	0.51
2:CE:188:ALA:N	2:CE:201:ILE:O	2.31	0.51
8:CK:21:LYS:HG2	8:CK:23:SER:O	2.10	0.51
24:DA:1812:A:H2'	24:DA:1813:G:C8	2.46	0.51
24:DA:2115:G:H2'	24:DA:2116:G:C5	2.45	0.51
29:DG:60:LEU:O	29:DG:64:THR:HG22	2.10	0.51
30:DH:4:ILE:HG21	30:DH:6:ARG:HH21	1.76	0.51
30:DH:67:LEU:O	30:DH:71:LEU:HB3	2.09	0.51
33:DN:24:VAL:HB	33:DN:33:ALA:HB2	1.92	0.51
46:DZ:87:PRO:O	46:DZ:91:LYS:N	2.42	0.51
1:AA:1081:G:H2'	1:AA:1082:G:H8	1.76	0.51
1:AA:1392:G:N2	1:AA:1502:A:H8	2.08	0.51
3:AF:46:GLU:HB2	3:AF:83:ARG:NH2	2.24	0.51
9:AL:3:GLN:OE1	9:AL:20:ARG:NH1	2.35	0.51
9:AL:5:TYR:N	9:AL:87:GLN:OE1	2.36	0.51
9:AL:10:ARG:HE	9:AL:105:ASP:CB	2.23	0.51
18:AU:35:ARG:O	18:AU:37:VAL:N	2.43	0.51
20:AW:35:THR:O	20:AW:38:LYS:HB2	2.11	0.51
24:BA:95:G:O2'	47:BW:46:GLN:O	2.27	0.51
24:BA:2439:A:H4'	24:BA:2440:C:O5'	2.11	0.51
24:BA:2561:A:H2	33:BN:23:ARG:HH11	1.57	0.51
32:BM:17:ASP:OD1	32:BM:56:ASN:ND2	2.35	0.51
41:BS:12:ILE:HD13	41:BS:17:VAL:HB	1.91	0.51
48:BX:41:PRO:HA	48:BX:44:ARG:HG3	1.91	0.51
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.45	0.51
1:CA:1320:C:H5'	19:CV:70:LYS:NZ	2.25	0.51
10:CM:33:GLN:HB2	10:CM:75:ILE:HG12	1.92	0.51
24:DA:6:A:N3	32:DM:131:GLN:HG3	2.26	0.51
24:DA:1063:G:C4	24:DA:1076:C:C2	2.98	0.51
24:DA:1094:U:H5'	24:DA:1098:A:H61	1.74	0.51
24:DA:1486:A:H2'	24:DA:1487:G:H8	1.76	0.51
27:DE:37:ARG:NH1	27:DE:80:GLU:OE2	2.37	0.51
27:DE:66:HIS:NE2	27:DE:67:PHE:HB2	2.24	0.51
27:DE:72:VAL:O	27:DE:72:VAL:CG1	2.58	0.51
29:DG:76:SER:HA	29:DG:82:LEU:HB3	1.90	0.51
30:DH:23:ARG:HA	30:DH:36:PRO:HA	1.93	0.51
31:DK:1:MET:N	31:DK:21:VAL:O	2.39	0.51
38:DR:45:PHE:CD2	38:DR:74:ARG:HD2	2.46	0.51
1:AA:8:A:H5'	5:AH:101:ILE:HG22	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.16	0.51
10:AM:81:THR:OG1	10:AM:82:ILE:N	2.44	0.51
17:AT:81:ARG:NH2	17:AT:83:ASP:OD2	2.37	0.51
24:BA:1678:G:H22	24:BA:1989:G:H22	1.55	0.51
24:BA:1766:U:H2'	24:BA:1767:C:H6	1.74	0.51
24:BA:2290:G:H1	24:BA:2342:C:H42	1.59	0.51
24:BA:2685:G:P	38:BR:51:ARG:HH22	2.33	0.51
28:BF:31:HIS:O	28:BF:35:GLU:N	2.34	0.51
29:BG:38:VAL:HG22	29:BG:93:THR:HG23	1.91	0.51
40:B2:35:LEU:HB2	40:B2:37:VAL:HG22	1.92	0.51
1:CA:686:U:H2'	1:CA:687:A:C8	2.46	0.51
1:CA:954:G:H21	1:CA:1227:A:H62	1.57	0.51
1:CA:1162:C:N4	1:CA:1174:G:H1	2.08	0.51
1:CA:1216:G:H5''	14:CQ:5:ALA:CB	2.41	0.51
1:CA:1230:C:O2'	9:CL:128:ARG:O	2.29	0.51
1:CA:1322:C:OP2	19:CV:78:ARG:NH1	2.42	0.51
1:CA:1329:A:O3'	13:CP:25:ILE:N	2.36	0.51
6:CI:94:GLN:OE1	18:CU:32:ARG:NH1	2.43	0.51
10:CM:87:THR:O	10:CM:89:ASP:N	2.44	0.51
12:CO:26:ALA:HB2	12:CO:98:TYR:HE1	1.74	0.51
24:DA:2232:U:P	46:DZ:40:ARG:HH12	2.33	0.51
24:DA:2641:G:O3'	32:DM:76:SER:OG	2.27	0.51
25:DB:83:G:H4'	48:DX:52:HIS:CG	2.46	0.51
27:DE:119:ARG:HG2	27:DE:160:TYR:HB2	1.92	0.51
27:DE:201:THR:HG21	27:DE:203:LYS:HE2	1.93	0.51
28:DF:83:PHE:O	28:DF:85:GLY:N	2.44	0.51
29:DG:101:ILE:C	29:DG:105:LYS:HZ3	2.18	0.51
29:DG:106:LEU:HA	29:DG:110:ALA:HB3	1.92	0.51
39:D1:49:HIS:HA	39:D1:52:ARG:HB2	1.92	0.51
1:AA:1237:C:O2'	1:AA:1300:G:N1	2.39	0.51
2:AE:58:ILE:HD11	2:AE:185:ILE:HD12	1.93	0.51
4:AG:150:GLU:C	4:AG:152:SER:H	2.18	0.51
6:AI:23:LYS:HB2	6:AI:23:LYS:NZ	2.26	0.51
10:AM:9:ARG:HG2	10:AM:69:ASN:OD1	2.10	0.51
22:AD:18:G:N1	22:AD:55:U:O2'	2.44	0.51
24:BA:1528:A:C2	24:BA:1542:G:C2	2.99	0.51
24:BA:2533:A:OP1	24:BA:2665:A:H1'	2.11	0.51
24:BA:2810:A:N6	24:BA:2891:G:O2'	2.43	0.51
26:BD:155:LEU:HD23	26:BD:177:LEU:HD22	1.93	0.51
27:BE:61:ARG:O	27:BE:63:LEU:N	2.43	0.51
29:BG:114:ILE:HD13	29:BG:140:ILE:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:67:LEU:O	30:BH:71:LEU:HB2	2.11	0.51
31:BK:33:ARG:HB3	31:BK:35:LEU:HD23	1.92	0.51
39:B1:62:ILE:HG23	39:B1:76:TYR:CE2	2.46	0.51
46:BZ:17:SER:HB2	46:BZ:40:ARG:HG2	1.93	0.51
1:CA:191(F):U:H2'	1:CA:191:G:H8	1.75	0.51
1:CA:920:U:H2'	1:CA:921:U:H6	1.76	0.51
1:CA:1104:G:H2'	1:CA:1105:A:C8	2.45	0.51
3:CF:155:GLY:O	3:CF:157:ILE:N	2.42	0.51
4:CG:104:VAL:HG21	4:CG:140:VAL:HG21	1.91	0.51
4:CG:108:LEU:HD12	4:CG:170:VAL:HG21	1.93	0.51
4:CG:159:ARG:O	4:CG:163:GLU:N	2.37	0.51
10:CM:99:LYS:HD3	10:CM:101:VAL:HG23	1.92	0.51
24:DA:769:G:H2'	24:DA:770:G:H8	1.75	0.51
24:DA:1063:G:C2	24:DA:1064:C:H4'	2.45	0.51
27:DE:109:LYS:O	27:DE:111:ARG:NH2	2.44	0.51
27:DE:128:SER:OG	27:DE:129:HIS:N	2.43	0.51
29:DG:96:ARG:O	29:DG:98:ARG:N	2.40	0.51
35:DP:138:ASP:OD1	35:DP:138:ASP:N	2.44	0.51
40:D2:65:GLY:O	40:D2:91:TYR:N	2.39	0.51
44:DV:103:ARG:N	44:DV:137:ILE:O	2.36	0.51
1:AA:110:C:H2'	1:AA:111:G:O4'	2.10	0.51
1:AA:324:G:N1	1:AA:327:A:OP2	2.42	0.51
2:AE:138:LEU:O	2:AE:142:LEU:N	2.41	0.51
12:AO:49:ASN:O	12:AO:50:SER:HB2	2.11	0.51
13:AP:59:TYR:CE1	13:AP:63:THR:HG21	2.46	0.51
15:AR:11:VAL:HG21	15:AR:34:LEU:HD22	1.92	0.51
24:BA:1060:U:C5	24:BA:1062:G:H4'	2.45	0.51
24:BA:2168:G:H3'	24:BA:2168:G:N3	2.25	0.51
26:BD:85:ASP:OD1	26:BD:87:ASN:ND2	2.44	0.51
29:BG:37:VAL:HG22	29:BG:159:VAL:HG12	1.93	0.51
30:BH:4:ILE:HD13	30:BH:6:ARG:CB	2.41	0.51
31:BK:127:VAL:HG22	31:BK:139:GLN:HB3	1.93	0.51
50:B5:49:CYS:HA	50:B5:56:LYS:HB2	1.92	0.51
53:B8:43:GLN:C	53:B8:44:LYS:HD2	2.35	0.51
1:CA:1106:G:H4'	3:CF:171:GLY:O	2.11	0.51
9:CL:5:TYR:HA	9:CL:17:VAL:O	2.11	0.51
12:CO:27:LEU:HD22	12:CO:60:LEU:HD23	1.93	0.51
12:CO:28:LYS:HD2	12:CO:33:ARG:HH22	1.76	0.51
22:CD:62:C:O2'	22:CD:63:G:H5'	2.11	0.51
24:DA:130:C:O3'	24:DA:1349:A:O2'	2.26	0.51
24:DA:546:C:H2'	24:DA:547:A:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1567:A:O2'	26:DD:63:ARG:NH2	2.44	0.51
24:DA:1991:U:H2'	24:DA:1992:G:H5''	1.93	0.51
24:DA:2542:A:H1'	24:DA:2543:G:C8	2.46	0.51
35:DP:6:ARG:O	35:DP:7:MET:HG2	2.10	0.51
37:DQ:15:ARG:NH1	37:DQ:90:GLY:HA2	2.26	0.51
38:DR:24:PRO:HD3	38:DR:52:ILE:HG13	1.93	0.51
40:D2:22:VAL:HG22	40:D2:23:GLU:H	1.76	0.51
44:DV:52:SER:O	44:DV:52:SER:OG	2.29	0.51
4:AG:110:PHE:CE2	4:AG:148:VAL:HG23	2.45	0.51
5:AH:68:GLU:HG3	5:AH:68:GLU:O	2.11	0.51
9:AL:4:TYR:O	9:AL:19:LEU:N	2.35	0.51
12:AO:62:SER:O	12:AO:64:TYR:N	2.43	0.51
18:AU:18:ARG:HB3	18:AU:19:LYS:HD2	1.93	0.51
22:AD:21:A:N6	22:AD:47:U:OP2	2.42	0.51
24:BA:276:A:C2'	24:BA:277:C:H5''	2.40	0.51
24:BA:1019:U:H3	24:BA:1142(A):A:N6	2.09	0.51
24:BA:1171:G:C5	24:BA:1174:A:C6	2.99	0.51
24:BA:1449:A:O2'	24:BA:1530:G:N2	2.42	0.51
24:BA:1590:U:H2'	24:BA:1591:G:C8	2.46	0.51
28:BF:45:ARG:HD3	28:BF:97:TYR:CG	2.45	0.51
44:BV:4:ARG:HE	44:BV:58:VAL:HG11	1.75	0.51
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.46	0.51
3:CF:47:LEU:O	3:CF:50:ALA:N	2.33	0.51
13:CP:15:VAL:HA	13:CP:18:ALA:HB3	1.91	0.51
13:CP:54:VAL:HA	13:CP:57:ARG:HB3	1.92	0.51
24:DA:1478:G:H2'	24:DA:1479:G:C8	2.45	0.51
24:DA:1846:G:H1	24:DA:1894:C:H42	1.59	0.51
24:DA:1856:G:H1	24:DA:1886:C:N4	2.09	0.51
24:DA:2031:A:C6	24:DA:2498:C:H1'	2.46	0.51
24:DA:2801:A:H2'	24:DA:2802:G:O4'	2.11	0.51
28:DF:3:GLU:O	28:DF:5:ALA:N	2.44	0.51
34:DO:62:LEU:CD2	53:D8:27:THR:HG23	2.38	0.51
35:DP:34:LEU:HD11	35:DP:129:THR:HB	1.93	0.51
1:AA:323:U:H2'	1:AA:324:G:O4'	2.11	0.51
1:AA:932:C:O3'	7:AJ:4:ARG:NH2	2.44	0.51
1:AA:1151:A:H2'	1:AA:1152:A:C8	2.46	0.51
3:AF:86:VAL:O	3:AF:89:GLU:HB3	2.10	0.51
20:AW:49:ALA:HB2	20:AW:92:LEU:HD22	1.92	0.51
24:BA:337:C:H5''	43:BU:4:LYS:HD3	1.93	0.51
24:BA:1025:G:C4	24:BA:1135:C:H1'	2.46	0.51
24:BA:1071:G:N2	24:BA:1090:U:H3'	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1092:C:H2'	24:BA:1093:G:H5'	1.91	0.51
24:BA:1899:G:H21	24:BA:1902:C:H41	1.56	0.51
27:BE:111:ARG:HA	36:B0:1:MET:SD	2.50	0.51
30:BH:53:GLU:OE1	30:BH:54:ARG:N	2.42	0.51
34:BO:13:ASN:OD1	34:BO:15:ARG:HB2	2.10	0.51
38:BR:107:ASP:H	38:BR:110:ILE:HG22	1.76	0.51
43:BU:49:VAL:HG12	43:BU:50:ARG:CZ	2.41	0.51
49:B4:60:GLN:HA	49:B4:63:TYR:HB3	1.91	0.51
1:CA:848:C:H2'	1:CA:849:C:C6	2.45	0.51
1:CA:1442:G:O6	1:CA:1446:A:N6	2.42	0.51
7:CJ:49:ILE:HA	7:CJ:52:GLU:HG2	1.93	0.51
9:CL:4:TYR:CZ	9:CL:88:TYR:HB3	2.46	0.51
24:DA:670:A:H5''	34:DO:42:SER:O	2.11	0.51
24:DA:2730:C:O2'	27:DE:168:MET:O	2.28	0.51
30:DH:96:ALA:HB1	30:DH:99:VAL:HG21	1.93	0.51
35:DP:11:LYS:NZ	35:DP:87:LYS:O	2.43	0.51
36:D0:104:ARG:HD2	36:D0:109:ALA:HB3	1.93	0.51
53:D8:61:LEU:HD13	53:D8:62:LEU:HD12	1.92	0.51
1:AA:186(F):C:H2'	1:AA:187:C:O4'	2.11	0.50
1:AA:957:U:H1'	1:AA:960:U:C5	2.47	0.50
11:AN:22:HIS:HB3	11:AN:29:ILE:HG23	1.93	0.50
24:BA:439:G:O2'	24:BA:440:G:H5'	2.11	0.50
24:BA:1049:C:C4	24:BA:1050:A:C2	2.99	0.50
24:BA:1771:C:HO2'	24:BA:1786:A:H8	1.58	0.50
24:BA:2111:C:C2	24:BA:2118:U:H4'	2.46	0.50
24:BA:2212:A:O2'	24:BA:2213:U:O5'	2.28	0.50
24:BA:2389:G:H5''	24:BA:2390:U:O4'	2.11	0.50
27:BE:61:ARG:N	27:BE:62:PRO:CD	2.72	0.50
31:BK:57:ARG:HA	31:BK:60:GLU:HB2	1.93	0.50
37:BQ:37:ALA:HB2	37:BQ:101:LEU:HD21	1.92	0.50
37:BQ:41:ASP:OD2	37:BQ:44:LYS:NZ	2.34	0.50
37:BQ:64:GLU:O	37:BQ:68:GLN:HG3	2.11	0.50
45:B3:68:GLU:OE2	45:B3:82:ARG:NH1	2.44	0.50
1:CA:345:C:O2'	1:CA:346:G:O5'	2.26	0.50
1:CA:1186:G:H21	14:CQ:61:TRP:C	2.19	0.50
2:CE:28:PHE:O	2:CE:32:ILE:HG23	2.11	0.50
3:CF:85:ARG:HA	3:CF:88:ARG:HG2	1.93	0.50
4:CG:111:ALA:HB2	4:CG:120:LEU:HD12	1.93	0.50
14:CQ:45:ARG:HG3	14:CQ:49:HIS:CE1	2.46	0.50
24:DA:207:A:H2'	24:DA:208:C:O4'	2.11	0.50
24:DA:635:C:H2'	24:DA:636:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1054:A:H2	24:DA:1084:A:N1	2.09	0.50
24:DA:2748:A:H2'	24:DA:2749:A:C8	2.45	0.50
29:DG:27:ASN:OD1	29:DG:28:VAL:N	2.44	0.50
37:DQ:83:LYS:O	37:DQ:110:LEU:N	2.41	0.50
43:DU:37:VAL:O	43:DU:67:LEU:N	2.42	0.50
49:D4:16:CYS:SG	49:D4:18:CYS:N	2.80	0.50
51:D6:14:THR:CB	51:D6:20:ASN:H	2.22	0.50
1:AA:52:G:H2'	1:AA:53:A:H8	1.76	0.50
1:AA:75:C:C4	1:AA:76:G:C8	2.99	0.50
1:AA:639:G:H2'	1:AA:640:A:H8	1.75	0.50
1:AA:692:U:O2'	1:AA:694:A:N7	2.35	0.50
1:AA:958:A:C2	19:AV:55:LYS:HB2	2.46	0.50
1:AA:972:C:O3'	10:AM:57:LYS:HD3	2.11	0.50
1:AA:1075:C:OP1	2:AE:179:LYS:HE2	2.12	0.50
7:AJ:36:LYS:HB2	7:AJ:36:LYS:HZ2	1.76	0.50
22:AC:25:C:H2'	22:AC:26:G:O4'	2.11	0.50
24:BA:943:U:OP2	34:BO:36:LYS:NZ	2.34	0.50
24:BA:1177:A:H5'	24:BA:1178:C:C6	2.47	0.50
24:BA:1210:A:H5'	24:BA:1210:A:H8	1.75	0.50
24:BA:1454:U:O2'	24:BA:1455:G:N7	2.41	0.50
24:BA:1869:G:H5'	24:BA:1870:C:OP2	2.12	0.50
24:BA:2287:A:N6	24:BA:2344:U:H3	2.01	0.50
24:BA:2402:C:H2'	24:BA:2403:C:H5'	1.93	0.50
24:BA:2540:C:O2'	24:BA:2740:A:N3	2.38	0.50
24:BA:2751:G:H1'	24:BA:2752:C:OP1	2.12	0.50
24:BA:2842:G:H2'	24:BA:2843:G:C8	2.45	0.50
26:BD:35:LYS:HE3	26:BD:63:ARG:C	2.36	0.50
29:BG:109:VAL:O	29:BG:113:ARG:HG3	2.10	0.50
29:BG:145:THR:O	29:BG:147:ASP:N	2.43	0.50
32:BM:59:LYS:O	32:BM:61:ARG:NH1	2.44	0.50
36:B0:57:ARG:HB3	36:B0:59:ASP:OD1	2.11	0.50
37:BQ:111:GLU:HG2	37:BQ:112:PHE:CD2	2.46	0.50
40:B2:71:LEU:HD22	40:B2:84:LYS:HE2	1.93	0.50
51:B6:19:ARG:NH1	51:B6:21:TYR:CZ	2.76	0.50
1:CA:619:U:C2	4:CG:135:LEU:HD21	2.46	0.50
3:CF:21:ARG:HB3	3:CF:21:ARG:HH11	1.76	0.50
5:CH:51:VAL:O	5:CH:55:VAL:HG23	2.11	0.50
5:CH:63:ARG:HA	5:CH:66:MET:HE1	1.94	0.50
22:CD:27:U:H3	22:CD:43:A:H61	1.57	0.50
22:CD:57:A:H4'	22:CD:58:A:OP1	2.11	0.50
24:DA:863:A:H2'	24:DA:864:G:H8	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1266:G:O4'	41:DS:15:ARG:NH2	2.43	0.50
24:DA:2637:U:H5''	27:DE:82:ARG:HH21	1.75	0.50
26:DD:4:LYS:HB3	26:DD:18:VAL:HG12	1.93	0.50
26:DD:35:LYS:HE3	26:DD:64:ILE:CB	2.41	0.50
29:DG:69:ALA:HB3	29:DG:91:ARG:HH21	1.76	0.50
40:D2:35:LEU:O	40:D2:37:VAL:HG22	2.11	0.50
40:D2:84:LYS:HG3	40:D2:85:LYS:HB2	1.92	0.50
51:D6:39:TYR:O	51:D6:41:PRO:HD3	2.12	0.50
1:AA:468:A:H4'	16:AS:80:PHE:O	2.11	0.50
1:AA:1130:A:H62	1:AA:1144:G:N2	2.08	0.50
1:AA:1502:A:H2	1:AA:1505:G:N1	2.05	0.50
2:AE:16:HIS:HE1	2:AE:209:ARG:HB3	1.75	0.50
5:AH:143:ARG:NE	8:AK:77:GLU:OE1	2.28	0.50
7:AJ:108:ALA:HA	7:AJ:111:ARG:HD2	1.93	0.50
8:AK:30:ARG:HB2	8:AK:30:ARG:NH1	2.26	0.50
21:AX:6:ARG:C	21:AX:8:THR:H	2.19	0.50
24:BA:38:A:N3	28:BF:48:THR:OG1	2.45	0.50
24:BA:747:U:C4	50:B5:2:ALA:N	2.79	0.50
24:BA:1520:U:H2'	24:BA:1521:G:O4'	2.11	0.50
24:BA:2186:G:H2'	24:BA:2187:G:H8	1.75	0.50
25:BB:28:C:H2'	25:BB:29:A:O4'	2.11	0.50
29:BG:66:GLN:NE2	29:BG:93:THR:O	2.40	0.50
30:BH:157:TYR:C	30:BH:158:HIS:CG	2.90	0.50
50:B5:12:SER:OG	50:B5:15:ARG:HB2	2.11	0.50
1:CA:881:G:P	12:CO:12:ARG:HH12	2.34	0.50
1:CA:1126:U:N3	1:CA:1281:U:O4'	2.44	0.50
4:CG:12:CYS:SG	4:CG:26:CYS:SG	3.10	0.50
9:CL:4:TYR:HA	9:CL:87:GLN:HE22	1.76	0.50
12:CO:124:LYS:HD2	12:CO:125:PRO:HD2	1.94	0.50
24:DA:494:G:OP1	41:DS:8:ARG:NH1	2.37	0.50
24:DA:1061:U:H4'	24:DA:1070:A:O2'	2.10	0.50
24:DA:2657:A:O3'	30:DH:160:LYS:NZ	2.44	0.50
24:DA:2803:C:H2'	24:DA:2804:C:O4'	2.11	0.50
25:DB:38:C:O2	25:DB:48:A:H1'	2.11	0.50
26:DD:85:ASP:OD1	26:DD:87:ASN:ND2	2.44	0.50
27:DE:23:VAL:O	27:DE:25:VAL:N	2.44	0.50
27:DE:74:PRO:O	27:DE:75:VAL:C	2.55	0.50
27:DE:96:PHE:O	27:DE:175:VAL:HG11	2.10	0.50
28:DF:64:ILE:O	28:DF:65:TRP:HD1	1.94	0.50
31:DK:1:MET:N	31:DK:20:ASP:OD1	2.28	0.50
34:DO:49:ARG:CZ	53:D8:59:LYS:HG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DW:38:GLN:HB3	47:DW:44:LEU:O	2.12	0.50
1:AA:78:G:H3'	1:AA:79:G:C8	2.46	0.50
1:AA:536:C:H2'	1:AA:537:G:C8	2.47	0.50
1:AA:947:G:H2'	1:AA:948:C:C6	2.47	0.50
1:AA:1133:G:N1	1:AA:1141:C:N3	2.43	0.50
3:AF:3:ASN:N	3:AF:3:ASN:OD1	2.43	0.50
3:AF:13:GLY:HA3	14:AQ:57:ARG:HE	1.76	0.50
3:AF:137:ALA:O	3:AF:141:VAL:HG23	2.12	0.50
13:AP:3:ARG:HG3	13:AP:9:ILE:HD11	1.94	0.50
22:AD:48:C:OP2	22:AD:49:G:H5''	2.11	0.50
24:BA:463:G:N2	24:BA:466:A:OP2	2.42	0.50
24:BA:1061:U:H1'	24:BA:1070:A:C2	2.46	0.50
24:BA:1991:U:H2'	24:BA:1992:G:H5''	1.93	0.50
24:BA:2881:C:H2'	24:BA:2882:A:H8	1.77	0.50
29:BG:143:GLU:OE1	49:B4:26:SER:OG	2.18	0.50
30:BH:23:ARG:HA	30:BH:37:VAL:HB	1.93	0.50
31:BK:69:LYS:O	31:BK:73:GLU:HB2	2.10	0.50
32:BM:115:ARG:HA	32:BM:118:LYS:HE2	1.93	0.50
32:BM:127:ASP:O	32:BM:128:HIS:HB3	2.10	0.50
1:CA:189:U:O2'	17:CT:63:ARG:NH2	2.43	0.50
1:CA:300:A:O2'	1:CA:564:C:N3	2.36	0.50
1:CA:1328:C:OP1	21:CX:21:TYR:OH	2.27	0.50
3:CF:47:LEU:O	3:CF:49:SER:N	2.45	0.50
12:CO:103:GLY:N	12:CO:107:ALA:O	2.39	0.50
24:DA:254:G:N7	53:D8:5:LYS:HE2	2.26	0.50
24:DA:1542:G:H3'	24:DA:1543:A:C5'	2.40	0.50
24:DA:2138:C:C2	24:DA:2154:G:C2	2.99	0.50
24:DA:2748:A:N7	24:DA:2753:A:N6	2.60	0.50
24:DA:2893:G:H4'	24:DA:2894:G:O5'	2.11	0.50
31:DK:27:ARG:HD2	46:DZ:71:TYR:CE1	2.47	0.50
38:DR:77:PRO:HB2	38:DR:80:SER:HB2	1.93	0.50
39:D1:92:ARG:HG2	39:D1:95:LEU:HB2	1.93	0.50
44:DV:41:LEU:O	44:DV:45:ASP:N	2.27	0.50
44:DV:116:VAL:N	44:DV:179:ASP:OD1	2.44	0.50
1:AA:404:U:H5'	4:AG:122:ARG:HG3	1.94	0.50
1:AA:501:C:H2'	1:AA:502:G:C8	2.47	0.50
1:AA:711:G:H2'	1:AA:712:A:H8	1.75	0.50
1:AA:975:A:HO2'	14:AQ:32:SER:HG	1.57	0.50
1:AA:1016:A:O2'	1:AA:1217:C:O2	2.29	0.50
1:AA:1086:U:H3	1:AA:1099:G:N2	2.09	0.50
1:AA:1162:C:C2	1:AA:1175:G:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AJ:22:LEU:HG	7:AJ:62:PHE:HE2	1.76	0.50
8:AK:98:LYS:O	8:AK:100:ILE:N	2.45	0.50
9:AL:53:VAL:O	9:AL:55:ALA:N	2.43	0.50
11:AN:44:SER:OG	11:AN:47:VAL:HG23	2.12	0.50
12:AO:46:LYS:CD	12:AO:48:PRO:HG2	2.38	0.50
24:BA:7:G:H4'	32:BM:13:TRP:HH2	1.75	0.50
24:BA:581:C:H2'	24:BA:582:G:H8	1.77	0.50
24:BA:643:A:N1	24:BA:2369:A:O2'	2.43	0.50
24:BA:783:A:H8	24:BA:784:A:H4'	1.77	0.50
24:BA:1097:U:H3'	24:BA:1098:A:H8	1.76	0.50
24:BA:1221:C:H2'	24:BA:1222:C:H6	1.77	0.50
24:BA:2629:A:O2'	24:BA:2630:G:H5''	2.11	0.50
24:BA:2801:A:C4	24:BA:2802:G:H1'	2.46	0.50
28:BF:50:SER:HB2	28:BF:94:PRO:HD3	1.93	0.50
30:BH:3:ARG:C	30:BH:4:ILE:HG23	2.37	0.50
30:BH:164:TYR:N	30:BH:167:GLU:OE1	2.42	0.50
36:B0:33:ARG:HG2	36:B0:115:GLU:HB3	1.94	0.50
39:B1:66:ASN:O	39:B1:70:ARG:HB2	2.11	0.50
44:BV:106:GLY:N	44:BV:139:VAL:O	2.45	0.50
1:CA:983:A:H2	1:CA:984:C:C6	2.30	0.50
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.46	0.50
1:CA:1250:A:N3	1:CA:1370:G:O2'	2.45	0.50
1:CA:1309:G:OP1	13:CP:88:ARG:NH2	2.43	0.50
13:CP:48:LEU:HD11	13:CP:53:VAL:HG22	1.92	0.50
24:DA:582:G:H2'	24:DA:583:G:C8	2.47	0.50
24:DA:1069:A:H3'	24:DA:1073:A:H62	1.77	0.50
24:DA:1087:G:O6	24:DA:1089:G:N2	2.43	0.50
25:DB:118:G:H3'	25:DB:119:A:C8	2.45	0.50
29:DG:75:LYS:HA	29:DG:84:LYS:HE2	1.94	0.50
30:DH:41:MET:N	30:DH:41:MET:SD	2.84	0.50
30:DH:137:ASP:OD2	30:DH:139:GLN:N	2.44	0.50
44:DV:127:LYS:N	44:DV:162:GLU:O	2.44	0.50
46:DZ:91:LYS:O	46:DZ:93:GLU:N	2.45	0.50
51:D6:15:GLU:OE2	51:D6:16:CYS:O	2.30	0.50
1:AA:426:G:OP1	4:AG:38:TYR:OH	2.26	0.50
1:AA:453:A:H4'	16:AS:72:ARG:HB2	1.94	0.50
1:AA:1255:G:H1	1:AA:1282:C:H42	1.59	0.50
2:AE:31:TYR:HA	2:AE:46:LYS:HD3	1.92	0.50
4:AG:65:ARG:NE	4:AG:72:GLU:OE2	2.45	0.50
19:AV:13:ASP:OD1	19:AV:13:ASP:N	2.45	0.50
22:AC:23:C:H2'	22:AC:24:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:185:U:H4'	24:BA:218:A:H4'	1.94	0.50
24:BA:818:G:H4'	24:BA:838:C:O3'	2.12	0.50
24:BA:1447:G:H1'	24:BA:1545(A):A:H1'	1.93	0.50
24:BA:2142:C:H2'	24:BA:2143:C:C6	2.47	0.50
24:BA:2291:U:H2'	24:BA:2292:C:C6	2.46	0.50
24:BA:2326:C:H42	24:BA:2389:G:H1	1.60	0.50
24:BA:2394:C:OP1	34:BO:62:LEU:HG	2.12	0.50
24:BA:2642:G:OP1	32:BM:76:SER:OG	2.30	0.50
24:BA:2848:G:H8	38:BR:97:ALA:HB2	1.76	0.50
28:BF:103:LYS:HA	28:BF:106:ARG:HG3	1.94	0.50
32:BM:134:ARG:O	32:BM:136:GLU:N	2.44	0.50
46:BZ:73:LEU:HD13	46:BZ:90:ILE:O	2.12	0.50
1:CA:933:G:O6	7:CJ:3:ARG:NH2	2.45	0.50
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.12	0.50
3:CF:150:LYS:HB3	3:CF:201:TYR:HB2	1.92	0.50
4:CG:31:CYS:C	4:CG:33:MET:N	2.70	0.50
22:CC:59:A:H2'	22:CC:60:U:H5'	1.94	0.50
24:DA:250:G:P	34:DO:60:MET:HE1	2.51	0.50
24:DA:389:G:N2	34:DO:71:VAL:HG12	2.26	0.50
24:DA:2120:G:H1	24:DA:2178:C:N4	2.08	0.50
24:DA:2875:C:H4'	38:DR:5:ALA:CB	2.41	0.50
25:DB:66:A:H61	25:DB:107:U:H2'	1.76	0.50
26:DD:10:THR:OG1	26:DD:13:ARG:HB2	2.11	0.50
27:DE:13:ARG:HB2	27:DE:21:VAL:O	2.12	0.50
30:DH:8:PRO:O	30:DH:69:ARG:NE	2.41	0.50
36:D0:53:HIS:ND1	36:D0:94:TYR:OH	2.32	0.50
1:AA:74:C:H2'	1:AA:75:C:O4'	2.12	0.50
1:AA:346:G:H5'	38:BR:41:ARG:HD3	1.93	0.50
1:AA:429:U:P	4:AG:13:ARG:HH21	2.34	0.50
1:AA:573:A:N3	1:AA:883:C:O2'	2.39	0.50
1:AA:605:U:H2'	1:AA:606:G:O4'	2.12	0.50
1:AA:689:C:OP1	11:AN:27:ASN:ND2	2.43	0.50
1:AA:708:C:OP1	11:AN:85:ARG:NH2	2.34	0.50
1:AA:878:G:H1'	8:AK:3:THR:HG21	1.94	0.50
1:AA:1249:C:O2'	9:AL:73:GLN:OE1	2.27	0.50
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.47	0.50
4:AG:108:LEU:HB3	4:AG:110:PHE:HD1	1.77	0.50
5:AH:80:ILE:HG13	8:AK:104:ARG:NH2	2.27	0.50
14:AQ:3:ARG:C	14:AQ:3:ARG:HD3	2.35	0.50
20:AW:14:LYS:HB2	20:AW:17:ARG:HH21	1.77	0.50
24:BA:2114:A:N6	24:BA:2115:G:O6	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2593:U:H2'	24:BA:2594:C:C6	2.47	0.50
26:BD:35:LYS:HB3	26:BD:36:PRO:HA	1.92	0.50
26:BD:206:LEU:HD12	26:BD:211:ARG:HG2	1.93	0.50
29:BG:135:LEU:HD23	29:BG:140:ILE:HD11	1.92	0.50
33:BN:97:ARG:HG2	33:BN:99:PHE:CE1	2.47	0.50
44:BV:10:ARG:HD3	44:BV:38:TYR:HB3	1.93	0.50
1:CA:143:A:O3'	1:CA:144:G:H8	1.95	0.50
1:CA:1373:G:H4'	7:CJ:31:MET:SD	2.52	0.50
4:CG:129:ASN:OD1	4:CG:145:GLU:N	2.34	0.50
5:CH:80:ILE:HG22	8:CK:104:ARG:NH2	2.26	0.50
5:CH:148:VAL:HG21	8:CK:107:LEU:HD23	1.94	0.50
6:CI:8:ILE:HD12	6:CI:26:ILE:HD13	1.92	0.50
8:CK:12:ARG:NH1	8:CK:26:VAL:HA	2.26	0.50
22:CD:8:U:H5''	22:CD:12:G:OP2	2.11	0.50
22:CD:22:G:H2'	22:CD:23:C:C6	2.47	0.50
22:CD:62:C:C2'	22:CD:63:G:H5'	2.42	0.50
24:DA:270(L):U:H3'	24:DA:270(M):U:H5''	1.92	0.50
24:DA:1175:U:O2	24:DA:1176:G:N1	2.44	0.50
24:DA:1295:C:O4'	36:D0:23:ASN:ND2	2.38	0.50
24:DA:1331:A:O2'	24:DA:1332:G:H8	1.94	0.50
24:DA:2086:U:H2'	24:DA:2087:G:C8	2.47	0.50
24:DA:2378:A:H4'	37:DQ:23:ARG:NH1	2.27	0.50
24:DA:2472:G:N2	24:DA:2477:C:OP1	2.44	0.50
29:DG:145:THR:OG1	29:DG:147:ASP:OD1	2.29	0.50
37:DQ:78:LEU:HD11	37:DQ:107:GLU:HB3	1.94	0.50
44:DV:91:LEU:HD22	44:DV:130:PRO:HG3	1.94	0.50
46:DZ:92:LYS:NZ	46:DZ:97:LEU:HD21	2.27	0.50
1:AA:102:G:C6	1:AA:103:C:C4	3.00	0.50
1:AA:344:A:H8	1:AA:346:G:N7	2.09	0.50
1:AA:407:G:H1	1:AA:435:C:H42	1.59	0.50
1:AA:971:G:N2	1:AA:1363:A:OP2	2.34	0.50
13:AP:74:VAL:O	13:AP:78:ILE:HG12	2.11	0.50
22:AD:7:G:N1	22:AD:66:C:O2	2.43	0.50
24:BA:272:G:H2'	24:BA:273:G:H8	1.77	0.50
24:BA:991:C:H42	24:BA:1163:G:H1	1.60	0.50
27:BE:111:ARG:HD3	27:BE:160:TYR:CD2	2.47	0.50
35:BP:67:ARG:O	35:BP:68:ILE:O	2.30	0.50
40:B2:28:GLU:O	40:B2:31:ALA:N	2.39	0.50
44:BV:141:VAL:HB	44:BV:144:LEU:HG	1.93	0.50
53:B8:36:LYS:O	53:B8:37:SER:O	2.30	0.50
1:CA:1243:C:OP2	21:CX:10:ARG:NH2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.47	0.50
1:CA:1305:G:H8	21:CX:5:ASP:HB2	1.77	0.50
21:CX:2:GLY:C	21:CX:4:GLY:H	2.16	0.50
24:DA:1110:G:H2'	24:DA:1111:A:H8	1.76	0.50
24:DA:1155:A:O2'	24:DA:1156:A:H2'	2.11	0.50
24:DA:1638:C:H4'	24:DA:2710:C:O2	2.11	0.50
24:DA:2264:C:N4	45:D3:15:ASP:OD2	2.45	0.50
27:DE:81:ILE:O	27:DE:82:ARG:O	2.30	0.50
44:DV:29:TYR:CE1	44:DV:87:ASP:HB3	2.46	0.50
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.11	0.50
1:AA:1291:G:O2'	9:AL:38:GLN:OE1	2.30	0.50
4:AG:93:PHE:HA	4:AG:96:LEU:HD23	1.94	0.50
6:AI:63:TYR:O	6:AI:65:VAL:HG13	2.12	0.50
7:AJ:149:ARG:HD3	11:AN:59:TYR:CE1	2.46	0.50
12:AO:90:VAL:HG12	12:AO:93:LEU:H	1.75	0.50
13:AP:98:VAL:O	13:AP:100:GLY:N	2.45	0.50
22:AD:3:C:H2'	22:AD:4:G:C8	2.47	0.50
22:AD:69:C:C2	22:AD:70:G:H1'	2.47	0.50
24:BA:1138:G:O2'	32:BM:102:ALA:O	2.30	0.50
24:BA:1534:G:N1	24:BA:1539:G:H1'	2.27	0.50
24:BA:1899:G:H22	24:BA:1902:C:H41	1.56	0.50
24:BA:2015:A:N3	50:B5:2:ALA:N	2.59	0.50
24:BA:2735:G:H2'	24:BA:2736:G:H8	1.76	0.50
25:BB:15:A:H1'	25:BB:109:G:N9	2.27	0.50
27:BE:51:PHE:CE2	27:BE:52:LEU:HG	2.47	0.50
27:BE:59:VAL:O	27:BE:60:ASN:HB3	2.12	0.50
32:BM:26:LEU:O	32:BM:30:ILE:HG13	2.12	0.50
34:BO:42:SER:O	34:BO:44:GLY:N	2.45	0.50
37:BQ:28:VAL:HG11	37:BQ:98:VAL:HG12	1.92	0.50
44:BV:48:PHE:HE1	44:BV:71:VAL:HG21	1.75	0.50
44:BV:150:LEU:HG	44:BV:154:ASP:HB2	1.94	0.50
1:CA:452:A:H62	1:CA:480:U:H3	1.58	0.50
1:CA:843:U:C5	1:CA:848:C:H1'	2.47	0.50
1:CA:1379:G:OP2	7:CJ:6:ARG:NH1	2.45	0.50
2:CE:140:HIS:ND1	2:CE:143:GLU:OE2	2.45	0.50
3:CF:74:GLY:HA2	3:CF:77:ILE:HB	1.94	0.50
4:CG:22:LYS:O	4:CG:23:GLY:O	2.30	0.50
9:CL:121:ARG:NH1	9:CL:122:ALA:O	2.45	0.50
24:DA:1071:G:C8	24:DA:1097:U:H4'	2.47	0.50
24:DA:1266:G:O2'	24:DA:2012:G:O6	2.24	0.50
24:DA:2115:G:H4'	24:DA:2166:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2293:C:O3'	37:DQ:89:ARG:NH2	2.28	0.50
24:DA:2505:G:O6	24:DA:2576:G:H2'	2.12	0.50
24:DA:2746:U:H4'	30:DH:138:LYS:HG3	1.93	0.50
24:DA:2799:A:H5''	24:DA:2801:A:OP2	2.12	0.50
24:DA:2845:G:O2'	24:DA:2846:G:H5'	2.11	0.50
27:DE:76:ARG:HG3	27:DE:195:LEU:HD22	1.94	0.50
27:DE:120:TRP:CG	27:DE:155:LYS:HB3	2.46	0.50
27:DE:147:PRO:HB2	27:DE:149:ARG:HG2	1.94	0.50
29:DG:56:ALA:HA	29:DG:59:GLU:HG2	1.93	0.50
30:DH:30:LYS:HZ1	30:DH:80:SER:C	2.20	0.50
40:D2:48:GLY:O	40:D2:49:THR:O	2.30	0.50
1:AA:73:G:H2'	1:AA:74:C:O4'	2.12	0.49
1:AA:87:A:H2'	1:AA:88:C:C6	2.46	0.49
1:AA:407:G:H2'	1:AA:408:A:H8	1.76	0.49
1:AA:413:G:H2'	1:AA:428:G:N2	2.27	0.49
1:AA:452:A:H2'	1:AA:453:A:H8	1.77	0.49
1:AA:486:U:H2'	1:AA:487:A:C8	2.47	0.49
1:AA:659:U:H2'	1:AA:660:G:H8	1.76	0.49
1:AA:834:C:H42	1:AA:852:G:H1	1.59	0.49
1:AA:1152:A:OP1	10:AM:68:HIS:NE2	2.44	0.49
1:AA:1191:A:OP1	3:AF:4:LYS:NZ	2.44	0.49
1:AA:1347:G:C8	9:AL:107:ARG:HB3	2.47	0.49
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.12	0.49
6:AI:13:ASN:OD1	6:AI:57:GLN:NE2	2.45	0.49
24:BA:245:G:O6	53:B8:8:LYS:NZ	2.41	0.49
24:BA:265:A:H1'	24:BA:266:G:O4'	2.11	0.49
24:BA:956:G:OP1	35:BP:88:GLY:N	2.36	0.49
24:BA:1022:G:N2	24:BA:1142(A):A:N1	2.58	0.49
24:BA:2109:U:O4	24:BA:2179:C:N4	2.44	0.49
24:BA:2392:A:H2	24:BA:2424:C:H42	1.60	0.49
27:BE:40:GLU:N	27:BE:40:GLU:OE2	2.44	0.49
29:BG:111:LEU:HD23	29:BG:120:LEU:HD21	1.94	0.49
36:B0:70:LEU:O	36:B0:72:ASP:N	2.45	0.49
39:B1:17:ILE:HG23	39:B1:39:LEU:HD12	1.94	0.49
44:BV:48:PHE:HE1	44:BV:71:VAL:HG11	1.75	0.49
51:B6:15:GLU:HG3	51:B6:16:CYS:H	1.77	0.49
53:B8:34:TRP:CE3	53:B8:35:GLN:HB2	2.46	0.49
53:B8:42:ARG:O	53:B8:44:LYS:N	2.42	0.49
1:CA:244:U:H6	1:CA:244:U:H5'	1.77	0.49
1:CA:412:A:C5	4:CG:35:ARG:CD	2.91	0.49
1:CA:1200:C:H1'	1:CA:1204:A:N6	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1228:C:OP2	13:CP:108:ARG:NH2	2.45	0.49
1:CA:1310:G:H5'	13:CP:77:ASN:HD21	1.77	0.49
4:CG:22:LYS:HZ3	4:CG:25:ARG:CD	2.25	0.49
10:CM:17:ASP:HB2	10:CM:70:ARG:HH12	1.77	0.49
19:CV:15:LEU:HD12	19:CV:18:LYS:HD2	1.94	0.49
24:DA:375:C:H42	24:DA:399:G:H1	1.59	0.49
24:DA:920:G:H2'	24:DA:921:G:H8	1.77	0.49
24:DA:1088:A:O3'	24:DA:1089:G:H8	1.95	0.49
24:DA:1657:C:H4'	27:DE:133:LYS:HB3	1.92	0.49
24:DA:2124:G:C6	24:DA:2125:G:H1'	2.47	0.49
24:DA:2689:U:H4'	24:DA:2690:C:O5'	2.11	0.49
27:DE:24:THR:O	27:DE:25:VAL:O	2.30	0.49
35:DP:12:GLN:HG2	35:DP:73:PRO:HD2	1.92	0.49
37:DQ:41:ASP:OD2	37:DQ:44:LYS:NZ	2.44	0.49
1:AA:130:A:H5'	17:AT:63:ARG:NH2	2.26	0.49
1:AA:703:G:H4'	1:AA:704:A:O5'	2.12	0.49
1:AA:947:G:H4'	13:AP:109:THR:HG23	1.93	0.49
1:AA:1028(B):C:H3'	1:AA:1029:G:H5''	1.94	0.49
1:AA:1292:U:P	7:AJ:41:ARG:HH12	2.34	0.49
1:AA:1351:U:H1'	7:AJ:33:ASP:HB3	1.94	0.49
1:AA:1392:G:H21	1:AA:1502:A:H8	1.58	0.49
2:AE:109:SER:O	2:AE:112:VAL:HG12	2.12	0.49
3:AF:59:ARG:HG2	3:AF:64:VAL:HG12	1.94	0.49
7:AJ:108:ALA:O	7:AJ:119:ARG:HD2	2.12	0.49
17:AT:41:LYS:HD3	17:AT:88:TYR:CE2	2.46	0.49
24:BA:1021:A:H8	24:BA:1021:A:H3'	1.77	0.49
24:BA:2795:G:C5	24:BA:2802:G:C6	3.00	0.49
27:BE:63:LEU:C	27:BE:65:GLY:H	2.19	0.49
28:BF:116:ASP:OD2	28:BF:119:ARG:NH2	2.45	0.49
49:B4:26:SER:OG	49:B4:27:THR:N	2.44	0.49
1:CA:631:G:H3'	1:CA:632:A:C8	2.47	0.49
1:CA:754:C:O5'	15:CR:72:ARG:NH2	2.44	0.49
1:CA:1028:C:N3	1:CA:1028(A):C:N4	2.59	0.49
3:CF:52:LEU:HD23	3:CF:52:LEU:H	1.77	0.49
3:CF:92:ALA:HB2	3:CF:99:VAL:HG21	1.94	0.49
7:CJ:15:ASP:OD1	7:CJ:44:TYR:OH	2.30	0.49
7:CJ:149:ARG:HD2	11:CN:59:TYR:CZ	2.48	0.49
8:CK:12:ARG:O	8:CK:16:ALA:N	2.43	0.49
8:CK:110:ALA:HB3	8:CK:121:ASP:HB3	1.94	0.49
16:CS:74:LEU:O	16:CS:79:VAL:HG23	2.12	0.49
22:CD:35:A:H2'	22:CD:36:U:C6	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:548:A:C2	24:DA:549:G:H1'	2.47	0.49
24:DA:882:G:H1	24:DA:894:C:H42	1.59	0.49
24:DA:2427:C:H5''	24:DA:2428:G:OP1	2.13	0.49
24:DA:2674:G:OP1	33:DN:26:LYS:NZ	2.45	0.49
25:DB:37:C:N3	25:DB:48:A:O2'	2.45	0.49
25:DB:70:C:H2'	25:DB:71:C:H6	1.77	0.49
29:DG:119:GLY:HA3	29:DG:180:PHE:O	2.12	0.49
35:DP:52:VAL:O	35:DP:56:ARG:HB2	2.12	0.49
40:D2:47:VAL:O	40:D2:48:GLY:O	2.30	0.49
48:DX:13:ILE:H	48:DX:13:ILE:HD12	1.78	0.49
1:AA:197:A:H4'	1:AA:198:G:O5'	2.12	0.49
2:AE:17:PHE:CZ	2:AE:44:LEU:HD11	2.47	0.49
5:AH:10:MET:HA	5:AH:32:VAL:HA	1.94	0.49
20:AW:30:LYS:CE	20:AW:80:ARG:HH12	2.25	0.49
24:BA:1176:G:H3'	24:BA:1177:A:C8	2.47	0.49
24:BA:1472:A:H2'	24:BA:1473:G:O4'	2.12	0.49
24:BA:1788:C:OP1	26:BD:222:ARG:NH2	2.39	0.49
25:BB:11:C:H3'	25:BB:12:C:H6	1.76	0.49
30:BH:3:ARG:O	30:BH:4:ILE:CG2	2.60	0.49
30:BH:3:ARG:O	30:BH:4:ILE:HG23	2.12	0.49
31:BK:29:TYR:C	31:BK:32:PRO:HD2	2.37	0.49
1:CA:560:U:H4'	1:CA:561:U:O5'	2.12	0.49
1:CA:818:G:O2'	1:CA:819:A:H5'	2.12	0.49
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.46	0.49
1:CA:1108:G:H5'	3:CF:176:HIS:ND1	2.28	0.49
1:CA:1239:A:H4'	1:CA:1240:U:H5''	1.93	0.49
2:CE:147:LYS:O	2:CE:147:LYS:NZ	2.45	0.49
4:CG:22:LYS:HG3	4:CG:25:ARG:HB3	1.94	0.49
4:CG:34:GLU:O	4:CG:35:ARG:CB	2.60	0.49
8:CK:14:ARG:HE	8:CK:83:ILE:HG23	1.76	0.49
16:CS:34:GLU:OE2	16:CS:55:ARG:NH1	2.45	0.49
19:CV:31:ILE:CD1	19:CV:50:ALA:H	2.21	0.49
24:DA:389:G:H22	34:DO:72:PRO:CD	2.24	0.49
24:DA:629:G:H4'	24:DA:650:C:O2	2.13	0.49
24:DA:654(E):C:N4	24:DA:654(P):G:H1	2.10	0.49
24:DA:1106:G:C2	24:DA:1107:G:C4	3.01	0.49
24:DA:1204:A:O2'	24:DA:1205:U:OP2	2.30	0.49
24:DA:1223:C:OP2	40:D2:88:ARG:NH2	2.45	0.49
24:DA:1405:U:H2'	24:DA:1406:U:C6	2.48	0.49
24:DA:1448:G:H1'	24:DA:1528:A:H62	1.77	0.49
24:DA:2445:G:OP1	28:DF:74:ARG:NH2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:26:LYS:H	26:DD:26:LYS:HD2	1.77	0.49
27:DE:67:PHE:CE2	27:DE:69:LYS:HD3	2.48	0.49
28:DF:65:TRP:HB3	28:DF:66:PRO:HD2	1.94	0.49
31:DK:76:THR:O	31:DK:78:THR:OG1	2.28	0.49
35:DP:116:GLU:OE2	35:DP:119:ARG:NE	2.44	0.49
49:D4:18:CYS:N	49:D4:19:GLY:HA2	2.27	0.49
1:AA:49:U:C2	1:AA:361:G:N2	2.81	0.49
1:AA:431:A:H2'	1:AA:432:A:O4'	2.12	0.49
1:AA:711:G:H2'	1:AA:712:A:C8	2.47	0.49
1:AA:1004:A:C8	1:AA:1026:G:C6	3.00	0.49
1:AA:1101:A:C4	2:AE:99:GLY:HA3	2.47	0.49
1:AA:1408:A:O2'	24:BA:1916:A:N1	2.41	0.49
3:AF:20:SER:HB2	3:AF:40:ARG:NH2	2.21	0.49
7:AJ:155:ARG:NH2	7:AJ:156:TRP:HA	2.27	0.49
13:AP:81:LEU:O	13:AP:89:GLY:HA3	2.12	0.49
22:AD:55:U:H3	22:AD:57:A:H3'	1.76	0.49
24:BA:32:C:O2'	24:BA:33:U:H5'	2.13	0.49
24:BA:1028:A:N3	24:BA:2486:G:O2'	2.40	0.49
24:BA:1265:A:H8	24:BA:1265:A:OP1	1.96	0.49
24:BA:1438:U:H2'	24:BA:1439:A:H8	1.78	0.49
25:BB:48:A:H4'	37:BQ:95:HIS:HD2	1.76	0.49
27:BE:120:TRP:CD1	27:BE:155:LYS:HB3	2.47	0.49
28:BF:29:ASN:HB3	28:BF:112:MET:HE1	1.94	0.49
33:BN:2:ILE:HD11	33:BN:82:ASN:HB3	1.93	0.49
35:BP:111:GLU:CD	35:BP:133:ARG:HH21	2.21	0.49
1:CA:195:A:O5'	20:CW:68:LYS:NZ	2.45	0.49
1:CA:410:G:N1	1:CA:431:A:OP2	2.42	0.49
1:CA:659:U:H2'	1:CA:660:G:O4'	2.12	0.49
1:CA:998:G:H2'	1:CA:998(A):C:C6	2.47	0.49
1:CA:1264:C:H2'	1:CA:1265:G:C8	2.47	0.49
8:CK:20:TYR:HA	8:CK:65:TYR:CZ	2.47	0.49
24:DA:128:C:O5'	52:D7:48:LYS:NZ	2.46	0.49
24:DA:1069:A:H4'	24:DA:1096:A:O2'	2.12	0.49
24:DA:1097:U:H3'	24:DA:1098:A:C8	2.47	0.49
24:DA:2335:A:C8	24:DA:2337:G:C5	3.01	0.49
31:DK:110:ASP:H	31:DK:130:TYR:HH	1.60	0.49
40:D2:83:ARG:HD2	40:D2:83:ARG:N	2.28	0.49
46:DZ:89:GLU:O	46:DZ:93:GLU:HB2	2.12	0.49
1:AA:824:C:H42	1:AA:876:G:H1	1.60	0.49
1:AA:835:U:H3	1:AA:851:G:H1	1.59	0.49
1:AA:1117:G:O3'	9:AL:104:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:179:ARG:HD3	3:AF:206:GLU:HG2	1.94	0.49
6:AI:4:TYR:HD1	6:AI:92:LYS:HA	1.78	0.49
22:AD:53:G:N2	22:AD:61:C:O2	2.44	0.49
24:BA:617:G:O2'	28:BF:205:ARG:NH1	2.45	0.49
24:BA:1011:G:OP1	39:B1:75:ASN:HB3	2.13	0.49
24:BA:1069:A:O2'	24:BA:1072:C:OP2	2.29	0.49
24:BA:1339:G:H5''	42:BT:16:LYS:HD2	1.94	0.49
24:BA:2631:G:O2'	24:BA:2810:A:N1	2.42	0.49
25:BB:77:U:P	44:BV:19:ARG:HH22	2.36	0.49
29:BG:180:PHE:C	29:BG:182:LYS:H	2.21	0.49
36:B0:2:ARG:HG3	36:B0:5:LYS:HZ1	1.77	0.49
41:BS:70:TYR:H	41:BS:70:TYR:HD1	1.61	0.49
11:CN:79:SER:OG	11:CN:106:LYS:HD3	2.12	0.49
24:DA:224:G:N7	24:DA:420:C:H4'	2.28	0.49
24:DA:1021:A:OP2	32:DM:65:LYS:NZ	2.45	0.49
24:DA:2115:G:N2	24:DA:2172:U:O4	2.46	0.49
26:DD:28:GLU:HB3	26:DD:29:PRO:HD3	1.94	0.49
28:DF:33:LEU:HD13	28:DF:112:MET:HE3	1.95	0.49
29:DG:166:ASP:OD1	29:DG:166:ASP:N	2.45	0.49
34:DO:62:LEU:HD11	53:D8:25:MET:CB	2.40	0.49
37:DQ:66:ALA:O	37:DQ:70:GLY:N	2.33	0.49
41:DS:11:ARG:CZ	41:DS:98:LYS:HB3	2.42	0.49
49:D4:20:ASN:ND2	49:D4:21:VAL:H	2.10	0.49
1:AA:560:U:H4'	1:AA:561:U:O5'	2.13	0.49
1:AA:757:U:OP1	1:AA:822:C:O2'	2.28	0.49
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.46	0.49
1:AA:1382:C:C6	1:AA:1383:C:H5	2.30	0.49
7:AJ:73:MET:HA	7:AJ:90:GLU:HA	1.94	0.49
13:AP:80:ARG:HH22	19:AV:69:HIS:CE1	2.30	0.49
24:BA:818:G:N1	24:BA:1188:U:OP2	2.34	0.49
24:BA:1050:A:C8	24:BA:2751:G:C5	3.01	0.49
24:BA:2243:U:H2'	24:BA:2244:U:C6	2.47	0.49
24:BA:2291:U:O2'	24:BA:2374:C:O2	2.22	0.49
24:BA:2468:G:H22	24:BA:2481:G:H2'	1.77	0.49
24:BA:2516:G:C6	24:BA:2517:C:N4	2.80	0.49
25:BB:116:G:H2'	25:BB:117:G:O4'	2.13	0.49
26:BD:97:TYR:CE1	26:BD:103:ARG:HG3	2.48	0.49
26:BD:148:GLU:HB2	26:BD:151:LYS:HD2	1.93	0.49
31:BK:8:PRO:HD3	31:BK:15:VAL:HG12	1.94	0.49
50:B5:46:CYS:SG	50:B5:50:GLY:HA3	2.53	0.49
1:CA:1140:C:H2'	1:CA:1141:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1800:T1C:N21	55:CA:1800:T1C:O3	2.43	0.49
3:CF:116:VAL:HG11	3:CF:141:VAL:CG2	2.39	0.49
3:CF:192:THR:HG23	3:CF:193:TYR:HD2	1.78	0.49
5:CH:127:ASN:O	5:CH:131:ILE:HG12	2.12	0.49
8:CK:95:VAL:HG23	8:CK:99:GLU:HB2	1.95	0.49
9:CL:24:GLY:N	9:CL:58:HIS:O	2.46	0.49
11:CN:31:THR:HA	11:CN:42:TRP:HA	1.94	0.49
12:CO:41:ARG:HD2	12:CO:42:THR:H	1.77	0.49
18:CU:30:ASP:C	18:CU:32:ARG:H	2.21	0.49
24:DA:270(V):G:H2'	24:DA:270(W):G:C8	2.47	0.49
24:DA:851:U:O2'	48:DX:42:ALA:O	2.24	0.49
24:DA:918:A:O2'	25:DB:96:G:N2	2.42	0.49
24:DA:1051:G:N2	24:DA:1052:C:O4'	2.45	0.49
24:DA:1057:A:N6	24:DA:1058:U:H3	2.10	0.49
24:DA:2334:G:O6	45:D3:74:ARG:NH2	2.46	0.49
24:DA:2401:U:H2'	24:DA:2402:C:H6	1.75	0.49
27:DE:116:VAL:C	27:DE:118:LYS:H	2.19	0.49
28:DF:40:GLN:HE22	28:DF:182:ASN:HB2	1.76	0.49
29:DG:22:ARG:HH12	29:DG:175:LEU:HD21	1.78	0.49
31:DK:111:PRO:C	31:DK:113:ARG:H	2.20	0.49
50:D5:56:LYS:HZ3	50:D5:58:LEU:HD11	1.77	0.49
51:D6:16:CYS:O	51:D6:17:LYS:O	2.30	0.49
1:AA:148:G:H2'	1:AA:149:A:C8	2.44	0.49
1:AA:314:C:O2'	1:AA:315:A:H5'	2.13	0.49
1:AA:617:G:H1	1:AA:623:C:H42	1.61	0.49
1:AA:662:G:H2'	1:AA:663:A:C8	2.47	0.49
3:AF:60:ALA:N	3:AF:63:ASN:OD1	2.46	0.49
15:AR:36:ILE:HD12	15:AR:63:ARG:HH11	1.78	0.49
15:AR:78:TYR:CZ	15:AR:82:ILE:HD11	2.48	0.49
20:AW:60:GLU:HG3	20:AW:81:LYS:HD2	1.95	0.49
24:BA:271(B):G:O2'	24:BA:271(C):U:OP2	2.29	0.49
24:BA:523:C:H5''	24:BA:541:C:O2'	2.13	0.49
24:BA:546:C:H6	24:BA:546:C:OP1	1.95	0.49
24:BA:1078:U:O2'	24:BA:1079:C:H5''	2.12	0.49
24:BA:2134:A:O2'	24:BA:2159:G:N3	2.45	0.49
24:BA:2148:G:C2	24:BA:2149:G:C4	3.01	0.49
24:BA:2271:G:H5''	45:B3:20:ARG:HH11	1.77	0.49
24:BA:2361:A:O5'	53:B8:27:THR:OG1	2.31	0.49
30:BH:6:ARG:NH2	30:BH:54:ARG:HH22	2.11	0.49
30:BH:149:ARG:HH12	30:BH:163:TYR:HA	1.78	0.49
35:BP:111:GLU:OE1	35:BP:133:ARG:NH2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:20:TYR:CE1	43:BU:42:VAL:HA	2.47	0.49
1:CA:660:G:H2'	1:CA:661:G:O4'	2.13	0.49
1:CA:1022:G:C2	1:CA:1023:G:C4	3.01	0.49
2:CE:137:ARG:HH12	2:CE:141:GLU:HB2	1.78	0.49
3:CF:121:ALA:HB1	3:CF:188:LEU:O	2.13	0.49
4:CG:172:PRO:O	4:CG:187:ARG:NH1	2.38	0.49
5:CH:9:LYS:CB	5:CH:112:LEU:HD11	2.43	0.49
7:CJ:34:GLY:O	7:CJ:36:LYS:N	2.41	0.49
20:CW:100:ILE:O	20:CW:102:GLY:N	2.41	0.49
24:DA:351:G:O3'	24:DA:352:G:H8	1.94	0.49
24:DA:856:C:HO2'	24:DA:857:C:P	2.33	0.49
24:DA:1062:G:H22	24:DA:1076:C:H42	1.59	0.49
24:DA:1072:C:O2	24:DA:1092:C:H5	1.95	0.49
24:DA:2808:U:H3'	24:DA:2891:G:H1	1.78	0.49
37:DQ:7:TYR:CE2	37:DQ:91:PRO:HG2	2.48	0.49
51:D6:14:THR:CA	51:D6:20:ASN:O	2.61	0.49
1:AA:617:G:O6	1:AA:623:C:N4	2.44	0.49
1:AA:1127:G:N3	1:AA:1147:C:N4	2.60	0.49
1:AA:1157:A:H2'	1:AA:1157:A:N3	2.27	0.49
7:AJ:61:VAL:HG12	7:AJ:124:LEU:HD22	1.94	0.49
8:AK:41:ARG:HH12	8:AK:123:GLU:CD	2.20	0.49
17:AT:53:LEU:HD23	17:AT:82:MET:HE1	1.94	0.49
22:AC:47:U:H1'	22:AC:48:C:C6	2.48	0.49
24:BA:273:G:H1	24:BA:364:C:N4	2.10	0.49
24:BA:275:G:O2'	24:BA:276:A:O4'	2.30	0.49
24:BA:606:U:OP2	28:BF:104:LYS:NZ	2.41	0.49
24:BA:655:A:H8	24:BA:656:G:O4'	1.96	0.49
24:BA:1176:G:H4'	24:BA:1176:G:OP1	2.11	0.49
24:BA:2345:G:H1'	24:BA:2382:G:H5'	1.94	0.49
24:BA:2665:A:H2'	24:BA:2666:C:O4'	2.13	0.49
27:BE:11:MET:HG2	27:BE:24:THR:HA	1.93	0.49
36:B0:41:ALA:O	36:B0:44:LEU:N	2.42	0.49
42:BT:11:PRO:HG2	42:BT:13:LEU:HD21	1.93	0.49
53:B8:37:SER:O	53:B8:41:ILE:HG22	2.12	0.49
1:CA:222:U:H2'	1:CA:223:U:C6	2.48	0.49
1:CA:439:A:C5	1:CA:440:A:H1'	2.48	0.49
2:CE:16:HIS:HB2	2:CE:210:SER:HB2	1.94	0.49
2:CE:212:GLN:HG3	2:CE:235:SER:O	2.13	0.49
2:CE:219:VAL:O	2:CE:223:ILE:HG13	2.13	0.49
8:CK:110:ALA:N	8:CK:121:ASP:OD1	2.38	0.49
9:CL:13:ALA:HB2	9:CL:68:GLY:HA3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CV:31:ILE:HD11	19:CV:50:ALA:N	2.22	0.49
24:DA:26:G:OP1	41:DS:80:PRO:HB3	2.11	0.49
24:DA:300:A:P	43:DU:84:ARG:HH22	2.34	0.49
24:DA:592:G:H21	53:D8:4:MET:CE	2.25	0.49
24:DA:2097:C:H2'	24:DA:2098:U:O4'	2.12	0.49
24:DA:2107:C:H42	24:DA:2182:G:H1	1.60	0.49
24:DA:2145:C:H3'	24:DA:2147:G:N2	2.28	0.49
24:DA:2246:G:H2'	24:DA:2247:A:C8	2.48	0.49
24:DA:2542:A:O2'	24:DA:2543:G:P	2.71	0.49
25:DB:86:G:N2	25:DB:90:C:O2	2.26	0.49
26:DD:34:VAL:CB	26:DD:35:LYS:HD3	2.43	0.49
27:DE:60:ASN:HB3	27:DE:63:LEU:CD1	2.25	0.49
28:DF:5:ALA:N	28:DF:18:ARG:O	2.45	0.49
31:DK:128:LEU:O	31:DK:138:ILE:N	2.33	0.49
45:D3:12:ASN:HA	45:D3:14:ARG:HH21	1.77	0.49
53:D8:52:LYS:C	53:D8:54:GLU:H	2.21	0.49
1:AA:200:G:H1	1:AA:217:C:H42	1.60	0.49
1:AA:408:A:H2'	1:AA:409:G:O4'	2.12	0.49
1:AA:816:A:OP1	1:AA:1526:G:O2'	2.25	0.49
1:AA:1107:C:C4	1:AA:1108:G:C8	3.00	0.49
1:AA:1108:G:H5'	3:AF:176:HIS:CE1	2.48	0.49
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.13	0.49
1:AA:1240:U:OP2	7:AJ:116:ALA:N	2.46	0.49
1:AA:1318:A:H1'	19:AV:37:ARG:HH21	1.78	0.49
5:AH:102:ALA:O	5:AH:107:ARG:NH1	2.46	0.49
10:AM:49:VAL:CG2	14:AQ:41:ARG:HB2	2.42	0.49
22:AD:70:G:H2'	22:AD:70:G:N3	2.28	0.49
24:BA:3:U:H2'	24:BA:4:C:O4'	2.12	0.49
24:BA:1064:C:N4	24:BA:1069:A:H5''	2.28	0.49
24:BA:1093:G:H2'	24:BA:1094:U:H5'	1.94	0.49
24:BA:2095:C:H2'	24:BA:2096:U:O4'	2.12	0.49
24:BA:2138:C:C2	24:BA:2154:G:C2	3.00	0.49
24:BA:2295:C:OP1	37:BQ:10:ARG:NH1	2.45	0.49
24:BA:2398:U:H2'	24:BA:2399:G:C8	2.48	0.49
24:BA:2401:U:H2'	24:BA:2402:C:H6	1.77	0.49
24:BA:2418:A:P	53:B8:29:LYS:HZ1	2.32	0.49
24:BA:2593:U:H2'	24:BA:2594:C:H6	1.78	0.49
25:BB:76:G:N2	25:BB:100:G:O6	2.32	0.49
26:BD:10:THR:OG1	26:BD:13:ARG:HB2	2.13	0.49
27:BE:97:LYS:N	27:BE:100:GLU:OE1	2.43	0.49
29:BG:113:ARG:HB2	29:BG:140:ILE:HB	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:144:VAL:O	30:BH:148:ILE:HG13	2.12	0.49
32:BM:58:ASP:OD1	32:BM:58:ASP:N	2.28	0.49
50:B5:52:TYR:HD1	50:B5:53:ALA:H	1.59	0.49
1:CA:1087:G:H2'	1:CA:1088:G:H8	1.77	0.49
1:CA:1202:G:H22	14:CQ:46:GLU:CD	2.18	0.49
1:CA:1262:C:H42	1:CA:1273:G:H1	1.61	0.49
1:CA:1278:U:H5''	1:CA:1279:A:O4'	2.13	0.49
2:CE:83:MET:HG3	2:CE:87:ARG:HH22	1.77	0.49
11:CN:52:GLY:H	11:CN:55:LYS:HE3	1.77	0.49
24:DA:20:C:OP1	39:D1:22:LYS:NZ	2.28	0.49
24:DA:363(B):G:H2'	24:DA:363(C):G:H8	1.77	0.49
27:DE:116:VAL:O	27:DE:118:LYS:N	2.39	0.49
27:DE:179:GLU:HB2	27:DE:181:LEU:HD23	1.94	0.49
30:DH:108:GLY:O	30:DH:152:ARG:NH1	2.46	0.49
35:DP:66:ILE:HG13	35:DP:67:ARG:H	1.78	0.49
39:D1:98:LEU:HA	39:D1:100:VAL:O	2.13	0.49
1:AA:108:G:H5''	1:AA:109:A:H5''	1.94	0.49
1:AA:130:A:C8	17:AT:63:ARG:HB2	2.48	0.49
1:AA:186(C):G:C6	1:AA:191(E):G:C6	3.01	0.49
1:AA:636:U:H2'	1:AA:637:G:H8	1.77	0.49
1:AA:659:U:C2	1:AA:660:G:C8	3.01	0.49
1:AA:936:C:C2	1:AA:1382:C:N4	2.80	0.49
1:AA:986:A:H1'	19:AV:55:LYS:HA	1.95	0.49
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.39	0.49
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.48	0.49
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.78	0.49
2:AE:90:MET:HE2	2:AE:91:PRO:HD2	1.94	0.49
3:AF:137:ALA:HA	3:AF:140:ARG:HE	1.78	0.49
3:AF:173:VAL:HG12	3:AF:175:LEU:HD11	1.95	0.49
5:AH:33:VAL:HG11	5:AH:109:ILE:HG12	1.93	0.49
11:AN:13:GLN:NE2	11:AN:75:TYR:O	2.46	0.49
20:AW:95:ALA:O	20:AW:97:ALA:N	2.37	0.49
22:AD:7:G:H2'	22:AD:49:G:O4'	2.13	0.49
24:BA:389:G:H1	34:BO:71:VAL:H	1.61	0.49
24:BA:1048:A:P	24:BA:1110:G:H22	2.36	0.49
24:BA:1098:A:H3'	24:BA:1099:G:H8	1.78	0.49
24:BA:2123:G:H2'	24:BA:2124:G:O4'	2.13	0.49
24:BA:2364:C:H4'	45:B3:56:ASP:OD1	2.13	0.49
24:BA:2702:U:OP1	24:BA:2702:U:C6	2.66	0.49
29:BG:16:ARG:HH12	29:BG:31:VAL:HG11	1.77	0.49
30:BH:2:SER:O	30:BH:3:ARG:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BM:20:GLY:HA2	32:BM:61:ARG:HD3	1.95	0.49
32:BM:130:HIS:ND1	32:BM:130:HIS:O	2.45	0.49
35:BP:66:ILE:HA	35:BP:104:PHE:H	1.78	0.49
37:BQ:6:ALA:O	37:BQ:10:ARG:HB3	2.12	0.49
42:BT:68:ARG:HD2	42:BT:69:TYR:CE1	2.48	0.49
46:BZ:83:GLU:C	46:BZ:85:LEU:H	2.20	0.49
1:CA:107:G:C2	1:CA:108:G:H1'	2.48	0.49
1:CA:975:A:H8	1:CA:975:A:H5'	1.78	0.49
1:CA:1031:G:O6	1:CA:1032:A:N6	2.46	0.49
4:CG:32:ALA:O	4:CG:36:ARG:O	2.31	0.49
10:CM:3:LYS:N	10:CM:75:ILE:HA	2.28	0.49
24:DA:1019:U:H3	24:DA:1142(A):A:N6	2.04	0.49
24:DA:2061:G:OP1	28:DF:68:LYS:CE	2.53	0.49
27:DE:53:PRO:O	27:DE:55:ASN:N	2.46	0.49
29:DG:50:ALA:HA	29:DG:53:LEU:HB3	1.94	0.49
31:DK:69:LYS:HA	31:DK:136:VAL:HG21	1.94	0.49
35:DP:74:TYR:O	35:DP:90:VAL:HA	2.12	0.49
1:AA:272:C:H2'	1:AA:273:A:C8	2.46	0.48
1:AA:407:G:H2'	1:AA:408:A:C8	2.48	0.48
1:AA:1298:C:N4	7:AJ:114:ARG:HB3	2.27	0.48
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.78	0.48
6:AI:50:TYR:CE1	18:AU:77:GLY:HA2	2.48	0.48
8:AK:11:THR:HG23	8:AK:14:ARG:NH1	2.28	0.48
8:AK:82:HIS:N	8:AK:138:TRP:O	2.45	0.48
9:AL:21:PRO:HA	9:AL:59:PHE:HA	1.95	0.48
13:AP:16:ASP:N	13:AP:16:ASP:OD1	2.44	0.48
24:BA:127:A:H5''	24:BA:128:C:O4'	2.12	0.48
24:BA:582:G:H2'	24:BA:583:G:C8	2.48	0.48
24:BA:918:A:N3	25:BB:80:U:O2'	2.38	0.48
24:BA:1061:U:O2'	24:BA:1070:A:N3	2.46	0.48
24:BA:1094:U:H4'	24:BA:1096:A:OP2	2.13	0.48
26:BD:34:VAL:HG22	26:BD:35:LYS:HG3	1.94	0.48
33:BN:71:ARG:HH11	38:BR:74:ARG:HH21	1.61	0.48
37:BQ:7:TYR:CE1	37:BQ:91:PRO:HG3	2.48	0.48
37:BQ:26:LEU:HD23	37:BQ:87:PHE:CD1	2.47	0.48
43:BU:97:ARG:HD3	43:BU:97:ARG:H	1.79	0.48
44:BV:4:ARG:HH21	44:BV:58:VAL:HG11	1.76	0.48
44:BV:146:ILE:HA	44:BV:174:VAL:HB	1.95	0.48
1:CA:1104:G:H2'	1:CA:1105:A:H8	1.77	0.48
12:CO:89:ARG:HA	12:CO:97:ARG:HA	1.95	0.48
24:DA:270(I):G:H2'	24:DA:270(J):G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:702:G:H1	24:DA:730:C:H42	1.61	0.48
24:DA:988:A:H3'	48:DX:11:SER:OG	2.12	0.48
24:DA:2161:C:H2'	24:DA:2162:G:H8	1.78	0.48
24:DA:2297:C:N4	24:DA:2321:G:O6	2.42	0.48
24:DA:2695:C:H2'	24:DA:2696:U:C6	2.48	0.48
29:DG:105:LYS:CE	49:D4:26:SER:HB3	2.42	0.48
29:DG:170:ARG:NH2	29:DG:182:LYS:HD3	2.27	0.48
34:DO:37:GLY:HA2	34:DO:41:ARG:NH2	2.28	0.48
37:DQ:83:LYS:HZ2	37:DQ:84:GLN:HG2	1.77	0.48
44:DV:111:VAL:O	44:DV:113:ALA:N	2.46	0.48
1:AA:60:A:N6	1:AA:110:C:N3	2.59	0.48
1:AA:589:C:OP1	8:AK:32:LYS:NZ	2.46	0.48
1:AA:857:C:H2'	1:AA:858:G:O4'	2.13	0.48
1:AA:1247:U:H2'	1:AA:1248:A:O4'	2.13	0.48
1:AA:1322:C:H6	1:AA:1322:C:OP1	1.96	0.48
5:AH:78:HIS:CE1	5:AH:143:ARG:H	2.31	0.48
6:AI:23:LYS:HA	6:AI:26:ILE:HD12	1.96	0.48
8:AK:112:LEU:HB3	8:AK:133:LEU:HA	1.94	0.48
17:AT:31:LEU:HD22	17:AT:32:TYR:CE1	2.48	0.48
24:BA:1264:G:H3'	24:BA:1265:A:H5''	1.94	0.48
24:BA:1533:C:N4	24:BA:1538:G:H1	2.12	0.48
25:BB:111:U:H2'	25:BB:112:G:C8	2.47	0.48
27:BE:144:ARG:HB3	27:BE:145:LYS:H	1.40	0.48
42:BT:67:GLY:C	42:BT:69:TYR:H	2.17	0.48
47:BW:47:ASN:OD1	47:BW:47:ASN:N	2.46	0.48
1:CA:838:G:N1	1:CA:842:C:H1'	2.27	0.48
1:CA:922:G:C6	1:CA:923:A:C6	3.01	0.48
3:CF:60:ALA:HB3	3:CF:63:ASN:HD21	1.78	0.48
4:CG:23:GLY:HA3	4:CG:112:VAL:HG22	1.94	0.48
7:CJ:132:GLY:C	7:CJ:134:ALA:H	2.19	0.48
10:CM:58:ASP:N	10:CM:58:ASP:OD1	2.45	0.48
11:CN:89:ALA:O	11:CN:91:ARG:N	2.43	0.48
24:DA:270(I):G:H1	24:DA:270(Q):C:H42	1.60	0.48
24:DA:392:C:H5''	24:DA:409:C:H5''	1.95	0.48
24:DA:892:G:C8	24:DA:893:C:C4	3.01	0.48
24:DA:1056:G:H5''	24:DA:1057:A:C5'	2.43	0.48
24:DA:2899:G:H2'	24:DA:2900:A:C8	2.48	0.48
26:DD:35:LYS:CE	26:DD:64:ILE:CG1	2.79	0.48
27:DE:112:GLY:O	27:DE:159:HIS:HA	2.13	0.48
28:DF:16:GLY:O	28:DF:18:ARG:N	2.46	0.48
34:DO:49:ARG:O	34:DO:50:ARG:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:20:ALA:HB2	44:DV:79:ARG:NH2	2.28	0.48
35:DP:51:ARG:O	35:DP:54:MET:N	2.45	0.48
37:DQ:25:ARG:HH12	37:DQ:42:ASP:CG	2.21	0.48
38:DR:21:GLU:N	38:DR:21:GLU:OE2	2.45	0.48
44:DV:30:ASN:HB2	44:DV:33:LEU:HB3	1.94	0.48
47:DW:33:MET:HG2	47:DW:37:PHE:HE1	1.78	0.48
49:D4:39:CYS:CB	49:D4:41:PRO:HD2	2.43	0.48
51:D6:14:THR:HA	51:D6:20:ASN:O	2.13	0.48
1:AA:9:G:H5''	5:AH:126:ARG:HE	1.78	0.48
1:AA:87:A:H2'	1:AA:88:C:H6	1.78	0.48
1:AA:401:C:O2'	1:AA:621:A:N3	2.45	0.48
1:AA:619:U:C2	4:AG:135:LEU:HD21	2.48	0.48
1:AA:881:G:H2'	1:AA:882:C:O4'	2.13	0.48
2:AE:214:ILE:HG23	2:AE:215:LEU:HD22	1.94	0.48
6:AI:36:ARG:NH2	6:AI:38:GLU:OE2	2.46	0.48
8:AK:4:ASP:OD2	8:AK:85:ARG:NH1	2.46	0.48
11:AN:15:ALA:HB1	11:AN:78:GLN:HB2	1.96	0.48
24:BA:906:G:OP1	35:BP:26:TYR:OH	2.28	0.48
24:BA:950:G:H2'	24:BA:951:C:C6	2.49	0.48
24:BA:2065:C:H2'	24:BA:2066:C:C6	2.48	0.48
45:B3:36:ILE:HD13	45:B3:39:ARG:HG2	1.94	0.48
1:CA:187:C:H2'	1:CA:188:U:O4'	2.13	0.48
1:CA:198:G:H2'	1:CA:199:G:H8	1.77	0.48
1:CA:371:G:H1	1:CA:390:C:H42	1.61	0.48
1:CA:409:G:OP1	4:CG:22:LYS:O	2.31	0.48
1:CA:438:G:N1	1:CA:495:A:OP2	2.44	0.48
1:CA:559:A:H4'	1:CA:560:U:H5''	1.95	0.48
1:CA:973:G:O3'	14:CQ:41:ARG:NH2	2.35	0.48
1:CA:1250:A:H4'	9:CL:68:GLY:N	2.28	0.48
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.96	0.48
1:CA:1347:G:O6	9:CL:10:ARG:NH2	2.46	0.48
1:CA:1378:C:H5''	1:CA:1379:G:OP2	2.13	0.48
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.14	0.48
2:CE:163:PHE:HD2	2:CE:185:ILE:HG13	1.78	0.48
5:CH:8:GLU:HG2	5:CH:34:VAL:HG22	1.95	0.48
7:CJ:16:LEU:HD11	9:CL:42:ARG:HA	1.93	0.48
7:CJ:41:ARG:O	7:CJ:45:ASP:N	2.35	0.48
13:CP:19:LEU:O	13:CP:22:ILE:HG13	2.13	0.48
19:CV:9:VAL:HG21	49:D4:63:TYR:CZ	2.49	0.48
24:DA:1086:A:OP1	24:DA:1104:C:H1'	2.13	0.48
24:DA:1567:A:OP2	26:DD:84:TYR:OH	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2155:G:H3'	24:DA:2156:G:C8	2.49	0.48
24:DA:2271:G:OP1	45:D3:18:ALA:HB1	2.13	0.48
28:DF:28:ILE:CD1	28:DF:119:ARG:NE	2.69	0.48
37:DQ:16:ASN:HA	37:DQ:19:LYS:HD2	1.95	0.48
44:DV:59:LEU:HD12	44:DV:69:THR:HG21	1.94	0.48
46:DZ:51:VAL:HG23	46:DZ:58:ILE:HB	1.95	0.48
1:AA:67:C:O2'	1:AA:171:A:H1'	2.13	0.48
1:AA:559:A:OP1	5:AH:126:ARG:NH2	2.45	0.48
1:AA:941:G:O2'	1:AA:1350:A:H4'	2.12	0.48
1:AA:1002:G:H2'	1:AA:1003:G:C8	2.49	0.48
1:AA:1227:A:OP1	19:AV:80:TYR:OH	2.19	0.48
1:AA:1272:G:C6	1:AA:1273:G:C4	3.01	0.48
3:AF:58:GLU:HB2	3:AF:65:ALA:HB3	1.95	0.48
4:AG:26:CYS:HA	4:AG:31:CYS:CB	2.41	0.48
11:AN:103:LEU:O	11:AN:105:VAL:N	2.46	0.48
13:AP:105:THR:O	13:AP:107:ALA:N	2.46	0.48
15:AR:12:ILE:O	15:AR:16:ALA:N	2.36	0.48
22:AD:61:C:H3'	22:AD:61:C:OP2	2.13	0.48
24:BA:151:C:H42	24:BA:175:G:H1	1.61	0.48
24:BA:1044:G:O2'	24:BA:1047:G:O2'	2.29	0.48
24:BA:2572:A:N7	27:BE:145:LYS:HB2	2.28	0.48
24:BA:2687:U:H2'	24:BA:2688:U:O4'	2.14	0.48
44:BV:4:ARG:NH1	44:BV:60:GLU:OE2	2.46	0.48
1:CA:412:A:N6	4:CG:35:ARG:CD	2.70	0.48
1:CA:448:A:OP2	1:CA:485:G:N2	2.42	0.48
1:CA:974:A:H5'	14:CQ:31:ARG:HD3	1.95	0.48
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.78	0.48
1:CA:1108:G:H5'	3:CF:176:HIS:HD1	1.78	0.48
1:CA:1347:G:N7	9:CL:10:ARG:NH2	2.58	0.48
2:CE:174:VAL:HA	2:CE:177:ALA:HB3	1.94	0.48
9:CL:8:GLY:HA3	9:CL:80:GLY:H	1.79	0.48
24:DA:142:G:H2'	24:DA:143:C:H6	1.78	0.48
24:DA:1060:U:O4'	24:DA:1062:G:H5'	2.14	0.48
24:DA:1085:A:C4	24:DA:1086:A:C8	3.00	0.48
24:DA:1428:C:O2'	24:DA:1569:A:OP2	2.19	0.48
24:DA:2150:U:H2'	24:DA:2151:G:C8	2.48	0.48
24:DA:2165:G:P	24:DA:2166:G:H21	2.35	0.48
24:DA:2749:A:H1'	30:DH:63:SER:HB3	1.95	0.48
28:DF:63:LYS:CE	28:DF:67:GLN:HB2	2.42	0.48
30:DH:124:GLU:OE1	30:DH:124:GLU:N	2.47	0.48
34:DO:108:LYS:O	34:DO:110:TYR:N	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:122:G:H4'	1:AA:312:C:O2'	2.14	0.48
1:AA:123:C:OP1	1:AA:311:C:O2'	2.28	0.48
1:AA:162:A:N7	1:AA:163:C:H1'	2.28	0.48
1:AA:342:C:H2'	1:AA:343:U:O4'	2.13	0.48
1:AA:1382:C:P	7:AJ:79:ARG:HH21	2.36	0.48
2:AE:76:GLN:HE22	2:AE:206:ASP:HB3	1.79	0.48
17:AT:67:LYS:O	17:AT:69:LYS:N	2.46	0.48
24:BA:270(V):G:H2'	24:BA:270(W):G:H8	1.79	0.48
24:BA:433:C:H2'	24:BA:434:U:C6	2.48	0.48
24:BA:1663:C:HO2'	24:BA:1664:A:H8	1.61	0.48
24:BA:2344:U:C2	51:B6:37:ARG:HD3	2.48	0.48
24:BA:2391:G:C6	24:BA:2427:C:H1'	2.48	0.48
24:BA:2393:A:H4'	34:BO:61:ARG:N	2.25	0.48
24:BA:2401:U:H2'	24:BA:2402:C:C6	2.48	0.48
30:BH:77:LYS:HE2	30:BH:138:LYS:HD3	1.94	0.48
39:B1:95:LEU:HD22	40:B2:4:ILE:HG12	1.95	0.48
44:BV:11:GLU:HA	44:BV:36:LYS:HE3	1.95	0.48
1:CA:373:A:H2'	1:CA:374:A:H8	1.79	0.48
1:CA:689:C:OP1	11:CN:44:SER:OG	2.25	0.48
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.13	0.48
11:CN:58:PRO:HB3	11:CN:93:GLN:HG3	1.96	0.48
11:CN:85:ARG:HG2	11:CN:111:ASP:O	2.14	0.48
18:CU:66:LEU:O	18:CU:70:ILE:HG13	2.14	0.48
24:DA:67:U:H3	24:DA:74:A:H2	1.56	0.48
24:DA:631:A:OP1	34:DO:64:LYS:NZ	2.46	0.48
24:DA:1788:C:H5''	26:DD:225:ALA:HB1	1.95	0.48
24:DA:2135:A:OP2	24:DA:2136:C:N4	2.46	0.48
24:DA:2748:A:O5'	30:DH:70:THR:HG21	2.13	0.48
24:DA:2790:A:H4'	24:DA:2893:G:H21	1.78	0.48
39:D1:25:TRP:CD1	39:D1:25:TRP:C	2.92	0.48
44:DV:117:LEU:HD22	44:DV:118:GLN:H	1.78	0.48
48:DX:39:ASP:O	48:DX:44:ARG:NH2	2.46	0.48
51:D6:43:CYS:O	51:D6:44:ARG:O	2.32	0.48
1:AA:12:U:H4'	1:AA:526:C:H4'	1.95	0.48
1:AA:156:G:C2	1:AA:166:G:C2	3.01	0.48
1:AA:191:G:C6	1:AA:192:U:C4	3.02	0.48
2:AE:67:THR:HA	2:AE:90:MET:HE1	1.96	0.48
19:AV:15:LEU:HD23	19:AV:15:LEU:H	1.78	0.48
20:AW:89:ARG:NH2	20:AW:104:LEU:HD21	2.29	0.48
22:AD:57:A:H2'	22:AD:58:A:C8	2.40	0.48
24:BA:307:G:H21	24:BA:330:A:H62	1.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:720:C:H2'	24:BA:721:C:H6	1.79	0.48
24:BA:1021:A:H2'	24:BA:1023:U:H5'	1.96	0.48
24:BA:1496:A:H2'	24:BA:1577:C:O2'	2.14	0.48
24:BA:2121:G:H1	24:BA:2177:C:H42	1.60	0.48
26:BD:68:LYS:O	26:BD:69:ARG:HG2	2.14	0.48
30:BH:51:ARG:HH11	30:BH:51:ARG:HB2	1.78	0.48
39:B1:52:ARG:HA	39:B1:55:ARG:HG3	1.95	0.48
40:B2:25:LEU:H	40:B2:92:THR:CG2	2.27	0.48
42:BT:5:TYR:HB3	47:BW:33:MET:HB2	1.95	0.48
53:B8:52:LYS:H	53:B8:53:PRO:HD2	1.79	0.48
1:CA:15:G:H4'	5:CH:24:ARG:NH1	2.28	0.48
1:CA:266:G:O3'	17:CT:67:LYS:HB2	2.14	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
1:CA:984:C:H2'	1:CA:985:C:H6	1.78	0.48
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.48	0.48
4:CG:61:LYS:HA	4:CG:203:VAL:HG22	1.96	0.48
9:CL:54:ASP:N	9:CL:54:ASP:OD1	2.47	0.48
24:DA:141:A:C8	24:DA:1408:C:H1'	2.48	0.48
24:DA:245:G:O3'	34:DO:70:GLN:O	2.32	0.48
24:DA:246:C:P	34:DO:70:GLN:O	2.72	0.48
24:DA:343:C:H2'	24:DA:344:G:H8	1.77	0.48
24:DA:956:G:H2'	24:DA:957:A:H2'	1.96	0.48
24:DA:1181:C:H2'	24:DA:1182:A:C8	2.48	0.48
24:DA:2113:U:O4	24:DA:2168:G:O2'	2.24	0.48
24:DA:2867:G:OP2	38:DR:119:LYS:NZ	2.34	0.48
29:DG:111:LEU:HB3	29:DG:117:PHE:CE2	2.49	0.48
40:D2:20:LEU:O	40:D2:94:LEU:N	2.29	0.48
1:AA:96:G:C2	1:AA:97:U:C2	3.02	0.48
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.49	0.48
1:AA:1307:U:OP1	13:AP:101:GLN:NE2	2.42	0.48
3:AF:155:GLY:O	3:AF:157:ILE:N	2.47	0.48
4:AG:90:GLY:O	4:AG:93:PHE:HB2	2.14	0.48
7:AJ:140:ASP:OD1	7:AJ:143:ARG:NH2	2.41	0.48
15:AR:7:GLU:O	15:AR:11:VAL:HG23	2.13	0.48
20:AW:100:ILE:HD13	20:AW:102:GLY:HA3	1.95	0.48
22:AC:23:C:H2'	22:AC:24:U:H6	1.78	0.48
24:BA:84:A:OP2	43:BU:8:LYS:NZ	2.38	0.48
24:BA:1803:A:O2'	26:BD:259:THR:HG21	2.13	0.48
24:BA:2031:A:C6	24:BA:2498:C:H1'	2.49	0.48
24:BA:2427:C:H5''	24:BA:2428:G:OP1	2.13	0.48
25:BB:29:A:OP2	37:BQ:31:SER:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:92:ILE:HD12	26:BD:104:TYR:CD1	2.49	0.48
29:BG:56:ALA:HB2	29:BG:153:ARG:NE	2.27	0.48
35:BP:12:GLN:HG2	35:BP:73:PRO:HD2	1.95	0.48
36:B0:2:ARG:CG	36:B0:5:LYS:HZ1	2.27	0.48
38:BR:57:PHE:C	38:BR:58:ASN:HD22	2.21	0.48
39:B1:109:LEU:O	39:B1:113:ALA:N	2.46	0.48
40:B2:30:GLY:N	40:B2:61:VAL:O	2.46	0.48
44:BV:48:PHE:CE1	44:BV:71:VAL:HG21	2.47	0.48
48:BX:26:LEU:O	48:BX:35:ARG:NE	2.47	0.48
49:B4:55:ARG:O	49:B4:59:PHE:HB2	2.14	0.48
1:CA:812:C:H4'	1:CA:813:U:O5'	2.14	0.48
1:CA:1218:C:P	14:CQ:9:LYS:HZ3	2.37	0.48
2:CE:82:ARG:NH1	2:CE:150:SER:OG	2.47	0.48
8:CK:88:LYS:C	8:CK:92:ARG:HH21	2.21	0.48
13:CP:3:ARG:HD2	29:DG:113:ARG:HH21	1.78	0.48
20:CW:14:LYS:HB2	20:CW:17:ARG:HH21	1.78	0.48
24:DA:1047:G:O2'	24:DA:1048:A:OP2	2.28	0.48
24:DA:1060:U:H5''	24:DA:1061:U:C4	2.49	0.48
24:DA:1779:U:OP2	24:DA:1784:A:N6	2.36	0.48
24:DA:1812:A:H2'	24:DA:1813:G:H8	1.78	0.48
24:DA:2114:A:N6	24:DA:2115:G:O6	2.47	0.48
24:DA:2393:A:H4'	34:DO:61:ARG:HA	1.96	0.48
24:DA:2638:G:HO2'	24:DA:2639:A:H8	1.60	0.48
26:DD:63:ARG:H	26:DD:87:ASN:ND2	2.10	0.48
29:DG:126:ASP:OD2	29:DG:130:ASN:ND2	2.46	0.48
30:DH:44:VAL:O	30:DH:51:ARG:N	2.40	0.48
37:DQ:10:ARG:O	37:DQ:14:VAL:HG13	2.14	0.48
41:DS:26:GLY:H	41:DS:71:VAL:HB	1.79	0.48
1:AA:163:C:H2'	1:AA:164:U:C6	2.48	0.48
1:AA:260:G:H2'	1:AA:261:U:C6	2.48	0.48
1:AA:280:C:N3	17:AT:39:SER:N	2.61	0.48
1:AA:409:G:OP1	4:AG:24:GLU:N	2.47	0.48
1:AA:567:G:O6	12:AO:15:ARG:NH1	2.28	0.48
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.48	0.48
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.49	0.48
8:AK:19:VAL:HG23	8:AK:21:LYS:HG3	1.95	0.48
9:AL:95:LYS:HB2	9:AL:95:LYS:HE3	1.46	0.48
13:AP:8:GLU:OE2	13:AP:22:ILE:HA	2.13	0.48
20:AW:14:LYS:HA	20:AW:17:ARG:HE	1.78	0.48
24:BA:458:G:O2'	24:BA:469:G:O6	2.22	0.48
24:BA:534:U:H5'	39:B1:42:ALA:HB1	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:654(C):G:H3'	24:BA:654(D):G:H8	1.78	0.48
24:BA:1101:U:H2'	24:BA:1102:C:H6	1.79	0.48
24:BA:1152:C:H5''	39:B1:80:ILE:HB	1.94	0.48
24:BA:1728:G:N2	24:BA:1730:U:OP2	2.46	0.48
29:BG:111:LEU:H	29:BG:111:LEU:HD12	1.78	0.48
31:BK:92:VAL:HG13	31:BK:120:ILE:HG23	1.96	0.48
36:B0:3:HIS:O	36:B0:4:LEU:C	2.56	0.48
37:BQ:69:VAL:HA	37:BQ:72:ALA:HB3	1.96	0.48
38:BR:29:ARG:NH1	38:BR:46:GLU:OE1	2.42	0.48
43:BU:81:LYS:HD3	43:BU:97:ARG:NE	2.29	0.48
1:CA:26:A:N3	4:CG:209:ARG:NH2	2.61	0.48
1:CA:405:U:OP1	1:CA:406:G:O2'	2.21	0.48
1:CA:490:G:OP2	4:CG:132:ARG:NH2	2.47	0.48
1:CA:501:C:H1'	1:CA:549:C:H1'	1.96	0.48
1:CA:542:G:P	4:CG:10:ARG:HH22	2.37	0.48
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.14	0.48
7:CJ:58:PRO:O	7:CJ:62:PHE:N	2.37	0.48
13:CP:78:ILE:HD12	13:CP:92:HIS:CD2	2.48	0.48
20:CW:21:LYS:O	20:CW:25:ARG:HG3	2.14	0.48
20:CW:82:SER:OG	20:CW:86:ARG:NH2	2.47	0.48
22:CD:63:G:H2'	22:CD:64:G:H8	1.79	0.48
24:DA:330:A:O2'	24:DA:331:A:H8	1.97	0.48
24:DA:1071:G:H1'	24:DA:1089:G:C2'	2.43	0.48
24:DA:1111:A:O3'	24:DA:1112:G:H4'	2.14	0.48
24:DA:1782:C:H1'	24:DA:2609:U:H5''	1.95	0.48
24:DA:1913:A:H4'	24:DA:1914:C:OP1	2.14	0.48
24:DA:2080:G:O2'	24:DA:2081:C:H5'	2.14	0.48
24:DA:2468:G:P	35:DP:119:ARG:HH22	2.36	0.48
27:DE:23:VAL:O	27:DE:24:THR:OG1	2.30	0.48
28:DF:70:THR:HG23	28:DF:71:GLY:N	2.28	0.48
29:DG:123:ASN:C	29:DG:125:PHE:H	2.22	0.48
37:DQ:14:VAL:O	37:DQ:18:ILE:HG23	2.14	0.48
44:DV:15:PRO:HA	44:DV:18:LEU:HD23	1.95	0.48
46:DZ:91:LYS:HA	46:DZ:91:LYS:HZ3	1.79	0.48
47:DW:15:LYS:HD2	47:DW:67:LYS:NZ	2.29	0.48
1:AA:467:G:H3'	1:AA:467:G:OP2	2.13	0.48
1:AA:1146:A:H2'	1:AA:1147:C:O4'	2.13	0.48
4:AG:191:ARG:NH1	4:AG:195:ALA:HA	2.27	0.48
7:AJ:45:ASP:O	7:AJ:49:ILE:HG12	2.13	0.48
11:AN:80:VAL:HG23	11:AN:82:VAL:HG23	1.94	0.48
24:BA:529:A:H8	24:BA:530:G:C6	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:629:G:OP2	53:B8:15:LYS:NZ	2.47	0.48
24:BA:654(F):C:O2	24:BA:654(O):G:N2	2.43	0.48
24:BA:845:G:H8	24:BA:845:G:OP2	1.97	0.48
24:BA:1021:A:H3'	24:BA:1021:A:C8	2.48	0.48
24:BA:1357:U:H2'	24:BA:1358:G:O4'	2.13	0.48
24:BA:1458:C:H4'	24:BA:1459:G:O4'	2.14	0.48
24:BA:1496:A:H5'	24:BA:1497:U:OP1	2.13	0.48
26:BD:232:PRO:HB3	26:BD:244:ARG:NH1	2.29	0.48
30:BH:149:ARG:CZ	30:BH:167:GLU:OE2	2.61	0.48
35:BP:72:LYS:HB3	35:BP:94:VAL:HG23	1.96	0.48
1:CA:134:A:H61	16:CS:25:ARG:NH1	2.11	0.48
1:CA:755:G:OP2	15:CR:65:ARG:HD3	2.13	0.48
1:CA:921:U:O2	5:CH:19:MET:HB3	2.12	0.48
1:CA:1032:A:H3'	1:CA:1032(A):G:H4'	1.94	0.48
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.48	0.48
5:CH:21:ALA:O	5:CH:23:GLY:N	2.40	0.48
13:CP:15:VAL:HG12	13:CP:45:VAL:HG22	1.95	0.48
15:CR:61:GLY:O	15:CR:65:ARG:NH1	2.47	0.48
15:CR:82:ILE:HB	15:CR:87:ILE:HB	1.95	0.48
20:CW:57:ARG:HE	20:CW:102:GLY:HA2	1.78	0.48
24:DA:1412:A:H2'	24:DA:1413:G:C8	2.49	0.48
24:DA:2212:A:H4'	24:DA:2213:U:C4	2.49	0.48
24:DA:2467:C:O2	35:DP:124:LYS:NZ	2.40	0.48
24:DA:2889:C:H2'	24:DA:2891:G:O4'	2.13	0.48
25:DB:33:G:C6	25:DB:34:U:C4	3.02	0.48
31:DK:9:LEU:HD11	31:DK:12:LEU:HD22	1.96	0.48
32:DM:30:ILE:O	32:DM:34:LEU:HD22	2.14	0.48
50:D5:3:LYS:HE3	50:D5:4:HIS:HB2	1.95	0.48
53:D8:48:PHE:CG	53:D8:49:VAL:N	2.82	0.48
1:AA:357:G:O2'	31:DK:89:TYR:O	2.30	0.48
1:AA:501:C:H1'	1:AA:549:C:H1'	1.96	0.48
1:AA:1464:G:H2'	1:AA:1465:C:H6	1.78	0.48
1:AA:1493:A:H5'	1:AA:1494:G:OP2	2.14	0.48
4:AG:150:GLU:N	4:AG:150:GLU:OE2	2.47	0.48
13:AP:12:ASN:O	13:AP:14:ARG:N	2.47	0.48
24:BA:207:A:H2'	24:BA:208:C:O4'	2.14	0.48
24:BA:247:G:H4'	24:BA:386:G:C6	2.49	0.48
24:BA:459:U:OP2	52:B7:39:ARG:NH1	2.46	0.48
24:BA:1074:G:H2'	24:BA:1075:C:H6	1.79	0.48
24:BA:1508:A:O2'	24:BA:1509:C:O5'	2.32	0.48
24:BA:1796:U:H2'	24:BA:1797:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:105:LYS:HD3	49:B4:26:SER:HB2	1.95	0.48
38:BR:107:ASP:OD1	38:BR:107:ASP:N	2.46	0.48
40:B2:60:GLU:O	40:B2:62:LEU:N	2.47	0.48
41:BS:18:ARG:HD3	41:BS:76:VAL:HG13	1.96	0.48
41:BS:82:LEU:HB2	41:BS:98:LYS:HB2	1.95	0.48
42:BT:40:LYS:HG3	42:BT:51:VAL:HB	1.95	0.48
46:BZ:92:LYS:HA	46:BZ:95:LEU:HB2	1.95	0.48
1:CA:115:G:H4'	1:CA:116:A:O5'	2.13	0.48
1:CA:534:U:H5'	1:CA:535:A:OP2	2.13	0.48
1:CA:768:A:H5'	1:CA:1524:C:H1'	1.96	0.48
1:CA:1056:U:H5'	3:CF:163:ALA:HB2	1.95	0.48
2:CE:180:LEU:C	2:CE:182:ILE:H	2.22	0.48
17:CT:59:ILE:CG2	17:CT:71:PHE:HB3	2.44	0.48
20:CW:57:ARG:NH2	20:CW:102:GLY:HA2	2.24	0.48
24:DA:620:G:N3	24:DA:620:G:H5'	2.29	0.48
24:DA:1024:G:C3'	24:DA:1025:G:H5''	2.44	0.48
24:DA:2134:A:C2	24:DA:2135:A:C8	3.02	0.48
26:DD:27:THR:HB	26:DD:83:GLU:HG2	1.96	0.48
26:DD:37:LEU:O	26:DD:38:LYS:C	2.57	0.48
38:DR:18:ASP:OD1	38:DR:18:ASP:N	2.46	0.48
50:D5:3:LYS:HG2	50:D5:4:HIS:N	2.28	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.48	0.47
2:AE:114:ARG:HA	2:AE:117:GLU:HB3	1.96	0.47
11:AN:13:GLN:HG3	11:AN:76:GLY:HA3	1.96	0.47
13:AP:91:ARG:HH22	13:AP:103:THR:HG21	1.78	0.47
22:AC:18:G:O2'	22:AC:19:G:O5'	2.28	0.47
24:BA:259:G:N2	24:BA:621:A:H8	2.01	0.47
24:BA:550:G:O2'	24:BA:1220:A:N3	2.43	0.47
24:BA:1057:A:C8	24:BA:1086:A:H2'	2.49	0.47
24:BA:1993:U:H4'	27:BE:128:SER:HB3	1.96	0.47
24:BA:2114:A:N7	24:BA:2117:A:H5'	2.28	0.47
24:BA:2313:C:H4'	29:BG:91:ARG:HG3	1.94	0.47
24:BA:2679:A:H4'	27:BE:165:VAL:HG11	1.96	0.47
24:BA:2689:U:OP2	24:BA:2719:G:N2	2.44	0.47
1:CA:56:U:H2'	1:CA:57:G:H8	1.78	0.47
1:CA:757:U:O2'	1:CA:879:C:O2	2.32	0.47
1:CA:1256:A:H5''	1:CA:1258:G:N3	2.28	0.47
1:CA:1422:G:O3'	33:DN:49:ARG:NH1	2.47	0.47
3:CF:43:LEU:O	3:CF:47:LEU:HB2	2.14	0.47
10:CM:40:LEU:HD13	10:CM:71:LEU:HB2	1.96	0.47
18:CU:21:LYS:NZ	18:CU:54:ARG:O	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CW:47:GLY:O	20:CW:49:ALA:N	2.47	0.47
24:DA:820:A:N3	24:DA:943:U:H4'	2.29	0.47
24:DA:1140:C:O3'	32:DM:25:ARG:NH2	2.47	0.47
24:DA:1505:C:H2'	24:DA:1506:C:H6	1.79	0.47
24:DA:1785:A:H4'	24:DA:1982:C:O2'	2.14	0.47
24:DA:2790:A:OP2	24:DA:2790:A:H8	1.97	0.47
25:DB:55:U:C1'	29:DG:29:TRP:HE1	2.27	0.47
25:DB:89:G:N3	25:DB:89(A):A:H2	2.11	0.47
29:DG:115:ARG:O	29:DG:117:PHE:N	2.46	0.47
32:DM:25:ARG:HG3	32:DM:25:ARG:HH11	1.79	0.47
33:DN:88:ASN:O	33:DN:91:LEU:N	2.47	0.47
38:DR:107:ASP:O	38:DR:111:ARG:NH1	2.47	0.47
1:AA:374:A:O4'	1:AA:481:G:N2	2.48	0.47
1:AA:411:A:C6	1:AA:429:U:C4	3.02	0.47
1:AA:663:A:O3'	18:AU:64:ARG:NH2	2.45	0.47
1:AA:737:A:H2'	1:AA:738:C:H6	1.79	0.47
1:AA:939:G:H5''	7:AJ:102:ARG:NH1	2.29	0.47
1:AA:1311:G:O3'	49:B4:58:ARG:NH2	2.47	0.47
10:AM:38:ILE:HG23	10:AM:71:LEU:HB3	1.97	0.47
13:AP:57:ARG:HD2	49:B4:35:VAL:CG2	2.44	0.47
14:AQ:45:ARG:NH1	14:AQ:49:HIS:HE1	2.12	0.47
20:AW:72:LEU:HD21	20:AW:77:ALA:H	1.79	0.47
24:BA:1312:U:H4'	24:BA:1313:U:O5'	2.14	0.47
24:BA:2162:G:H2'	24:BA:2163:C:H6	1.79	0.47
24:BA:2726:U:HO2'	24:BA:2727:G:H8	1.60	0.47
30:BH:153:LYS:O	30:BH:154:PRO:O	2.32	0.47
31:BK:4:ILE:N	31:BK:37:VAL:O	2.47	0.47
45:B3:27:GLU:HB2	45:B3:69:PHE:HD1	1.79	0.47
1:CA:179:A:H2'	1:CA:180:U:H6	1.79	0.47
1:CA:1014:A:P	1:CA:1014:A:H8	2.37	0.47
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.50	0.47
3:CF:73:PRO:O	3:CF:77:ILE:N	2.36	0.47
7:CJ:33:ASP:C	7:CJ:35:LYS:H	2.21	0.47
13:CP:16:ASP:OD1	13:CP:16:ASP:N	2.45	0.47
14:CQ:26:ARG:HB3	14:CQ:43:CYS:SG	2.54	0.47
15:CR:15:PHE:CZ	15:CR:84:LYS:HG2	2.48	0.47
24:DA:363(B):G:H2'	24:DA:363(C):G:C8	2.49	0.47
24:DA:526:A:O2'	24:DA:2043:C:O2	2.29	0.47
24:DA:2155:G:C6	24:DA:2156:G:C6	3.01	0.47
24:DA:2730:C:O3'	27:DE:169:ASN:HB3	2.14	0.47
24:DA:2832:U:H3'	24:DA:2833:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:47:VAL:O	27:DE:80:GLU:HA	2.14	0.47
39:D1:62:ILE:HG13	39:D1:76:TYR:CZ	2.49	0.47
40:D2:85:LYS:HG3	40:D2:87:HIS:HB2	1.96	0.47
51:D6:11:LEU:HD23	51:D6:51:GLU:CD	2.40	0.47
1:AA:403:C:OP1	4:AG:137:SER:OG	2.28	0.47
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.79	0.47
20:AW:29:LYS:O	20:AW:33:ILE:HG12	2.14	0.47
24:BA:1706:U:C2	24:BA:1757:U:H5'	2.49	0.47
44:BV:27:VAL:HG13	44:BV:29:TYR:CD1	2.49	0.47
46:BZ:16:ASN:HB3	46:BZ:37:ILE:HG23	1.95	0.47
1:CA:192:U:O2'	20:CW:60:GLU:OE2	2.17	0.47
1:CA:977:A:H2'	1:CA:978:A:H5'	1.95	0.47
2:CE:219:VAL:HA	2:CE:222:ILE:HB	1.96	0.47
3:CF:11:ARG:O	3:CF:13:GLY:N	2.47	0.47
4:CG:73:ARG:HD2	4:CG:73:ARG:HA	1.64	0.47
11:CN:18:ARG:HB2	11:CN:33:THR:CG2	2.44	0.47
24:DA:108:U:H2'	24:DA:109:G:H8	1.78	0.47
24:DA:219:G:N2	24:DA:430:G:O6	2.48	0.47
24:DA:565:C:H4'	24:DA:1253:A:C6	2.49	0.47
24:DA:686:G:OP1	52:D7:11:LYS:HE2	2.14	0.47
24:DA:948:G:H21	24:DA:985:C:P	2.37	0.47
24:DA:984:A:H5''	24:DA:985:C:H5	1.80	0.47
24:DA:1416:G:O2'	24:DA:1417:C:O4'	2.31	0.47
27:DE:36:ARG:HH21	27:DE:88:GLY:HA2	1.80	0.47
28:DF:185:ASP:HA	28:DF:188:ARG:HE	1.78	0.47
35:DP:103:MET:HE1	35:DP:127:ILE:HD11	1.96	0.47
37:DQ:67:ARG:HA	37:DQ:104:GLY:HA3	1.96	0.47
44:DV:150:LEU:HD22	44:DV:154:ASP:CG	2.39	0.47
46:DZ:87:PRO:O	46:DZ:88:LYS:C	2.58	0.47
51:D6:14:THR:O	51:D6:49:HIS:HB3	2.13	0.47
1:AA:242:C:H2'	1:AA:243:A:H5''	1.96	0.47
1:AA:442:C:H42	1:AA:492:G:H1	1.60	0.47
1:AA:827:U:C5	1:AA:872:A:N1	2.79	0.47
1:AA:1106:G:H5''	3:AF:172:ARG:HG2	1.95	0.47
1:AA:1389:C:H2'	1:AA:1390:U:O4'	2.14	0.47
2:AE:149:LEU:O	2:AE:153:ARG:N	2.47	0.47
5:AH:62:ALA:C	5:AH:64:ARG:H	2.22	0.47
8:AK:105:ARG:C	8:AK:107:LEU:H	2.19	0.47
9:AL:11:LYS:C	9:AL:13:ALA:H	2.19	0.47
12:AO:54:LYS:HB3	12:AO:70:ILE:HD12	1.96	0.47
13:AP:24:GLY:HA3	13:AP:66:LEU:HD22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AW:14:LYS:HG2	20:AW:18:GLN:HG3	1.96	0.47
24:BA:273:G:H1	24:BA:364:C:H42	1.60	0.47
24:BA:576:U:O5'	24:BA:576:U:H6	1.98	0.47
24:BA:1087:G:H2'	24:BA:1089:G:H4'	1.96	0.47
24:BA:1669:A:H5''	24:BA:2550:G:OP1	2.15	0.47
24:BA:1871:A:H2'	24:BA:1872:A:C8	2.49	0.47
24:BA:2023:G:H4'	24:BA:2617:C:O3'	2.14	0.47
24:BA:2579:C:H2'	24:BA:2580:U:O4'	2.15	0.47
25:BB:117:G:H2'	25:BB:118:G:O4'	2.13	0.47
31:BK:5:LEU:HD11	31:BK:12:LEU:HB3	1.96	0.47
32:BM:22:THR:HB	32:BM:25:ARG:HB2	1.96	0.47
32:BM:48:MET:SD	32:BM:48:MET:N	2.82	0.47
39:B1:105:VAL:O	39:B1:109:LEU:HG	2.15	0.47
44:BV:151:HIS:ND1	44:BV:154:ASP:OD2	2.26	0.47
44:BV:161:VAL:HG12	44:BV:162:GLU:HG2	1.95	0.47
46:BZ:86:SER:N	46:BZ:87:PRO:HD2	2.30	0.47
1:CA:142:G:H2'	1:CA:143:A:H8	1.79	0.47
1:CA:184:G:H2'	1:CA:185:A:C8	2.49	0.47
1:CA:619:U:C4	4:CG:135:LEU:HD11	2.50	0.47
1:CA:862:C:H1'	1:CA:874:G:H5''	1.95	0.47
1:CA:1004:A:C2	1:CA:1006:C:C2	3.02	0.47
1:CA:1034:G:H2'	1:CA:1035:A:H8	1.79	0.47
1:CA:1049:U:H4'	1:CA:1050:G:H5''	1.96	0.47
2:CE:12:GLU:O	2:CE:15:VAL:N	2.45	0.47
3:CF:79:ARG:H	3:CF:79:ARG:CZ	2.28	0.47
4:CG:150:GLU:HA	4:CG:153:ARG:HD2	1.94	0.47
4:CG:207:TYR:O	4:CG:209:ARG:N	2.40	0.47
14:CQ:53:LEU:HD23	14:CQ:53:LEU:HA	1.66	0.47
19:CV:12:ASP:HB3	19:CV:14:HIS:CD2	2.50	0.47
24:DA:93:C:H5'	24:DA:94:G:OP2	2.14	0.47
24:DA:459:U:H5''	52:D7:40:TRP:CD2	2.49	0.47
24:DA:856:C:H3'	24:DA:856:C:H6	1.78	0.47
24:DA:1063:G:N1	24:DA:1075:C:N3	2.54	0.47
24:DA:1111:A:C1'	30:DH:2:SER:HA	2.42	0.47
24:DA:2311:A:C2	29:DG:47:LYS:HE3	2.50	0.47
25:DB:28:C:H2'	25:DB:29:A:O4'	2.14	0.47
27:DE:14:ILE:O	27:DE:20:ALA:HA	2.15	0.47
27:DE:49:LEU:O	27:DE:78:LEU:HB3	2.14	0.47
27:DE:65:GLY:O	27:DE:66:HIS:HB2	2.12	0.47
27:DE:169:ASN:C	27:DE:169:ASN:HD22	2.23	0.47
28:DF:24:LEU:N	28:DF:24:LEU:CD2	2.75	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:102:SER:O	31:DK:106:GLY:N	2.47	0.47
35:DP:30:GLY:HA2	35:DP:107:ALA:HB2	1.96	0.47
41:DS:59:VAL:HG23	41:DS:65:LEU:N	2.26	0.47
49:D4:39:CYS:C	49:D4:41:PRO:HD2	2.32	0.47
1:AA:526:C:OP2	12:AO:91:LYS:HE2	2.13	0.47
1:AA:878:G:H5'	8:AK:89:PRO:HG2	1.96	0.47
7:AJ:78:ARG:NH2	7:AJ:155:ARG:O	2.46	0.47
7:AJ:140:ASP:O	7:AJ:144:MET:HE3	2.15	0.47
24:BA:176:G:O2'	24:BA:177:G:H5'	2.15	0.47
24:BA:1534:G:H2'	24:BA:1538:G:N2	2.28	0.47
24:BA:2319:G:N1	24:BA:2334:G:OP2	2.47	0.47
24:BA:2445:G:OP1	28:BF:74:ARG:NH2	2.48	0.47
27:BE:21:VAL:HG13	27:BE:185:LYS:HG3	1.96	0.47
33:BN:94:ARG:HH11	33:BN:94:ARG:HB3	1.80	0.47
38:BR:26:ASP:O	38:BR:49:VAL:HG22	2.14	0.47
1:CA:859:A:H2'	1:CA:860:A:O4'	2.15	0.47
1:CA:1196:U:O2'	1:CA:1197:G:P	2.72	0.47
1:CA:1238:A:OP1	1:CA:1335:C:O2'	2.26	0.47
2:CE:103:THR:HG21	2:CE:179:LYS:NZ	2.30	0.47
5:CH:153:LYS:O	5:CH:155:GLU:N	2.47	0.47
12:CO:61:THR:O	12:CO:62:SER:OG	2.28	0.47
13:CP:97:PRO:HA	13:CP:110:ARG:HD3	1.95	0.47
22:CD:15:G:C2	22:CD:48:C:N3	2.82	0.47
24:DA:286:C:H2'	24:DA:287:C:C6	2.49	0.47
24:DA:1069:A:O2'	24:DA:1072:C:OP2	2.28	0.47
24:DA:1321:A:H2'	24:DA:1322:A:O4'	2.14	0.47
24:DA:1607:C:H4'	24:DA:1608:A:O5'	2.14	0.47
24:DA:2135:A:N6	24:DA:2156:G:H21	2.12	0.47
24:DA:2145:C:H3'	24:DA:2147:G:H21	1.78	0.47
24:DA:2187:G:H2'	24:DA:2188:C:O4'	2.14	0.47
25:DB:40:U:H1'	25:DB:46:A:N1	2.29	0.47
34:DO:71:VAL:H	34:DO:72:PRO:CD	2.28	0.47
43:DU:54:LYS:C	43:DU:55:TYR:CD2	2.92	0.47
1:AA:345:C:H4'	1:AA:346:G:C4	2.50	0.47
1:AA:350:G:H2'	1:AA:351:G:C8	2.50	0.47
1:AA:1228:C:OP1	13:AP:108:ARG:NH2	2.46	0.47
6:AI:99:ALA:O	18:AU:28:GLU:HA	2.13	0.47
12:AO:49:ASN:O	12:AO:50:SER:CB	2.62	0.47
24:BA:213:A:H2'	24:BA:214:G:O4'	2.14	0.47
24:BA:1026:U:H1'	24:BA:1027:A:P	2.55	0.47
24:BA:1072:C:N4	24:BA:1099:G:O6	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1095:A:H2'	24:BA:1095:A:N3	2.30	0.47
24:BA:1858:G:O2'	24:BA:1884:A:N6	2.47	0.47
24:BA:1939:U:OP1	24:BA:2604:U:O2'	2.31	0.47
28:BF:51:THR:HB	28:BF:88:VAL:HG21	1.95	0.47
30:BH:137:ASP:OD1	30:BH:138:LYS:N	2.48	0.47
32:BM:96:GLU:HG2	32:BM:97:ARG:N	2.29	0.47
36:B0:1:MET:HE2	36:B0:1:MET:HB2	1.79	0.47
36:B0:2:ARG:HG3	36:B0:5:LYS:HZ2	1.80	0.47
48:BX:6:VAL:HB	48:BX:54:VAL:HG21	1.95	0.47
50:B5:49:CYS:HB3	50:B5:56:LYS:HD2	1.96	0.47
1:CA:57:G:H2'	1:CA:58:C:C6	2.49	0.47
1:CA:142:G:H2'	1:CA:143:A:C8	2.49	0.47
1:CA:339:C:C2'	1:CA:340:U:H5'	2.45	0.47
1:CA:560:U:HO2'	1:CA:561:U:P	2.34	0.47
1:CA:1320:C:H42	19:CV:36:ARG:NE	2.13	0.47
1:CA:1321:C:P	1:CA:1322:C:H3'	2.55	0.47
2:CE:119:GLU:HG3	2:CE:142:LEU:HD11	1.97	0.47
3:CF:134:ILE:HG23	3:CF:151:VAL:HB	1.95	0.47
6:CI:83:ASP:N	6:CI:83:ASP:OD1	2.48	0.47
11:CN:54:ARG:O	11:CN:57:THR:OG1	2.30	0.47
13:CP:108:ARG:NH2	13:CP:111:LYS:HE3	2.27	0.47
15:CR:15:PHE:HZ	15:CR:84:LYS:HG2	1.78	0.47
15:CR:39:LEU:HD12	15:CR:56:LEU:HB2	1.96	0.47
18:CU:74:ARG:HB3	18:CU:81:PHE:CE1	2.50	0.47
19:CV:53:ASN:OD1	19:CV:55:LYS:N	2.41	0.47
24:DA:1069:A:H3'	24:DA:1073:A:N6	2.30	0.47
24:DA:1786:A:C2	24:DA:2606:C:H1'	2.50	0.47
24:DA:2299:G:C2	24:DA:2318:G:H8	2.32	0.47
24:DA:2794:C:H2'	24:DA:2795:G:O4'	2.15	0.47
26:DD:17:THR:OG1	26:DD:205:VAL:N	2.45	0.47
29:DG:81:LYS:HB3	29:DG:82:LEU:H	1.49	0.47
30:DH:86:GLU:HA	30:DH:132:ARG:HA	1.96	0.47
31:DK:78:THR:HG21	31:DK:104:GLN:HG3	1.96	0.47
34:DO:71:VAL:HG13	34:DO:72:PRO:N	2.25	0.47
37:DQ:35:ILE:HD11	37:DQ:97:ARG:NE	2.27	0.47
39:D1:92:ARG:NH2	40:D2:11:GLN:H	2.12	0.47
43:DU:46:LYS:O	43:DU:48:ALA:N	2.47	0.47
47:DW:16:LEU:HD12	47:DW:20:GLU:HB2	1.95	0.47
51:D6:14:THR:HG21	51:D6:19:ARG:CG	2.44	0.47
1:AA:109:A:C6	1:AA:326:G:C6	3.03	0.47
1:AA:232:G:H1'	1:AA:262:A:N1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:286:G:C6	1:AA:287:U:C4	3.03	0.47
1:AA:475:G:C8	1:AA:475:G:OP2	2.67	0.47
1:AA:975:A:O2'	14:AQ:32:SER:OG	2.29	0.47
1:AA:1068:G:N2	1:AA:1191:A:N3	2.46	0.47
1:AA:1097:C:H1'	1:AA:1169:A:C2	2.49	0.47
1:AA:1127:G:N2	1:AA:1146:A:H62	2.13	0.47
1:AA:1152:A:O3'	10:AM:13:HIS:NE2	2.48	0.47
2:AE:16:HIS:CD2	2:AE:213:LEU:HD22	2.49	0.47
2:AE:136:VAL:O	2:AE:140:HIS:N	2.38	0.47
2:AE:192:SER:OG	2:AE:193:ASP:OD1	2.25	0.47
3:AF:46:GLU:CD	3:AF:46:GLU:H	2.22	0.47
4:AG:108:LEU:HD21	4:AG:183:GLY:HA3	1.96	0.47
7:AJ:64:GLN:OE1	7:AJ:68:ASN:ND2	2.44	0.47
8:AK:44:PHE:CE2	8:AK:109:ILE:HG21	2.48	0.47
9:AL:4:TYR:CE2	9:AL:88:TYR:HB2	2.50	0.47
17:AT:13:ASP:HA	17:AT:19:VAL:HG12	1.97	0.47
22:AD:67:C:H2'	22:AD:68:C:H6	1.80	0.47
22:AD:67:C:H2'	22:AD:68:C:C6	2.50	0.47
24:BA:141:A:C8	24:BA:1408:C:H1'	2.49	0.47
24:BA:288:C:H2'	24:BA:289:A:C8	2.43	0.47
24:BA:654(D):G:N2	24:BA:654(P):G:O6	2.47	0.47
24:BA:870:A:P	35:BP:6:ARG:HH21	2.38	0.47
24:BA:1060:U:C4	24:BA:1062:G:H4'	2.49	0.47
24:BA:1062:G:H8	24:BA:1062:G:O5'	1.97	0.47
24:BA:1354:A:OP1	26:BD:38:LYS:NZ	2.44	0.47
24:BA:1422:G:H1'	24:BA:1496:A:H62	1.79	0.47
24:BA:1800:C:OP1	26:BD:266:SER:OG	2.29	0.47
24:BA:2272:U:H5''	24:BA:2273:A:OP1	2.15	0.47
24:BA:2406:U:O4	34:BO:70:GLN:HB2	2.15	0.47
24:BA:2721:A:H2'	24:BA:2722:G:O4'	2.14	0.47
24:BA:2756:U:H4'	24:BA:2757:A:OP1	2.14	0.47
25:BB:38:C:O4'	37:BQ:95:HIS:NE2	2.47	0.47
26:BD:30:GLU:HG3	26:BD:63:ARG:CZ	2.45	0.47
26:BD:35:LYS:HZ2	26:BD:64:ILE:C	2.17	0.47
26:BD:35:LYS:HD3	26:BD:63:ARG:CB	2.45	0.47
31:BK:52:ARG:O	31:BK:56:LYS:N	2.46	0.47
34:BO:89:ALA:O	34:BO:91:PHE:N	2.47	0.47
41:BS:62:HIS:HB2	41:BS:64:MET:HE3	1.96	0.47
41:BS:79:GLY:N	41:BS:100:THR:O	2.45	0.47
51:B6:34:LEU:O	51:B6:51:GLU:HB3	2.15	0.47
1:CA:69:G:H2'	1:CA:73:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:191(F):U:H2'	1:CA:191:G:C8	2.50	0.47
1:CA:216:G:O2'	1:CA:217:C:O4'	2.33	0.47
1:CA:595:G:O2'	1:CA:641:U:O4	2.30	0.47
1:CA:1300:G:O2'	1:CA:1301:U:P	2.73	0.47
5:CH:16:THR:O	5:CH:16:THR:OG1	2.33	0.47
8:CK:41:ARG:HH22	8:CK:123:GLU:CD	2.22	0.47
8:CK:88:LYS:HB2	8:CK:89:PRO:HD2	1.95	0.47
13:CP:98:VAL:H	13:CP:101:GLN:HE21	1.62	0.47
20:CW:49:ALA:HA	20:CW:52:ALA:HB3	1.97	0.47
20:CW:67:ALA:O	20:CW:73:HIS:ND1	2.48	0.47
22:CC:1:C:HO2'	22:CC:2:G:C5'	2.28	0.47
22:CD:5:G:H2'	22:CD:5:G:N3	2.30	0.47
22:CD:18:G:H2'	22:CD:57:A:C2	2.50	0.47
22:CD:42:G:H2'	22:CD:43:A:H8	1.80	0.47
22:CD:62:C:H2'	22:CD:63:G:C8	2.50	0.47
24:DA:5:A:H2'	24:DA:6:A:C8	2.50	0.47
24:DA:196:A:H2'	24:DA:196:A:N3	2.30	0.47
24:DA:257:A:H2'	24:DA:258:G:O4'	2.15	0.47
24:DA:539:G:H2'	24:DA:540:G:H8	1.79	0.47
24:DA:1094:U:C5'	24:DA:1098:A:H61	2.27	0.47
24:DA:1219:G:H1	24:DA:1230:C:H42	1.61	0.47
24:DA:1728:G:O6	24:DA:1730:U:H5'	2.14	0.47
24:DA:2032:G:H21	27:DE:146:THR:HG23	1.80	0.47
24:DA:2065:C:H5''	24:DA:2252:G:H1'	1.96	0.47
24:DA:2356:C:H4'	45:D3:20:ARG:HG3	1.97	0.47
24:DA:2393:A:OP1	53:D8:30:ARG:HB3	2.14	0.47
24:DA:2635:C:H5''	27:DE:77:ILE:O	2.15	0.47
26:DD:71:ASP:CG	26:DD:103:ARG:HH22	2.22	0.47
27:DE:35:GLN:OE1	27:DE:37:ARG:NH2	2.47	0.47
28:DF:37:VAL:HG21	34:DO:6:LEU:HD21	1.97	0.47
33:DN:50:GLY:O	33:DN:53:LYS:NZ	2.41	0.47
34:DO:79:ARG:CZ	34:DO:109:GLY:HA3	2.45	0.47
40:D2:35:LEU:O	40:D2:37:VAL:HG13	2.15	0.47
42:DT:5:TYR:HB3	47:DW:33:MET:HB2	1.95	0.47
44:DV:68:PRO:HG2	44:DV:91:LEU:O	2.14	0.47
45:D3:50:ASN:C	45:D3:62:LEU:HD12	2.39	0.47
46:DZ:81:LYS:HZ2	46:DZ:82:LEU:HB3	1.80	0.47
1:AA:823:G:H21	8:AK:1:MET:HE1	1.79	0.47
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.15	0.47
1:AA:1028(A):C:H2'	1:AA:1028(B):C:H6	1.79	0.47
1:AA:1226:C:H4'	19:AV:80:TYR:CZ	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1346:A:H5''	9:AL:120:ARG:HH12	1.79	0.47
4:AG:8:VAL:HG21	4:AG:115:ARG:CZ	2.43	0.47
6:AI:46:ARG:HG3	6:AI:47:ARG:H	1.79	0.47
7:AJ:57:GLU:HB2	7:AJ:60:LYS:HG2	1.95	0.47
7:AJ:111:ARG:HD2	7:AJ:123:GLU:HB2	1.96	0.47
11:AN:45:GLY:O	11:AN:50:TYR:HB2	2.14	0.47
22:AD:38:A:H2'	22:AD:39:C:O4'	2.15	0.47
22:AD:48:C:OP2	22:AD:48:C:H3'	2.14	0.47
24:BA:1062:G:C2	24:BA:1076:C:N3	2.83	0.47
24:BA:1797:C:O2'	26:BD:259:THR:HG22	2.15	0.47
24:BA:2116:G:H1	24:BA:2162:G:P	2.38	0.47
24:BA:2163:C:H3'	24:BA:2164:C:C6	2.50	0.47
24:BA:2170:A:H8	24:BA:2170:A:O5'	1.98	0.47
27:BE:66:HIS:CG	27:BE:67:PHE:N	2.82	0.47
36:B0:1:MET:HB3	36:B0:2:ARG:H	1.43	0.47
38:BR:108:ARG:HA	38:BR:111:ARG:HG3	1.96	0.47
44:BV:118:GLN:HE22	44:BV:171:ILE:C	2.23	0.47
1:CA:716:A:N3	11:CN:118:GLY:HA2	2.30	0.47
1:CA:812:C:OP1	1:CA:903:G:H1'	2.13	0.47
1:CA:1220:G:H5'	19:CV:34:TRP:O	2.14	0.47
1:CA:1322:C:O2'	1:CA:1323:G:O5'	2.33	0.47
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.80	0.47
2:CE:17:PHE:HD2	2:CE:44:LEU:HD22	1.79	0.47
2:CE:114:ARG:NH1	2:CE:117:GLU:OE1	2.48	0.47
2:CE:195:ASP:OD1	2:CE:195:ASP:N	2.48	0.47
4:CG:38:TYR:CE1	4:CG:45:GLN:HG2	2.50	0.47
6:CI:97:PHE:O	18:CU:31:LEU:HD23	2.15	0.47
7:CJ:114:ARG:H	7:CJ:114:ARG:HG2	1.41	0.47
8:CK:103:VAL:HG21	8:CK:109:ILE:C	2.39	0.47
15:CR:29:VAL:O	15:CR:33:THR:OG1	2.30	0.47
21:CX:6:ARG:NH2	21:CX:15:ARG:HH22	1.96	0.47
22:CD:16:C:OP2	22:CD:17:C:N4	2.38	0.47
24:DA:1027:A:H8	24:DA:1027:A:OP2	1.97	0.47
24:DA:1114:G:H2'	24:DA:1115:G:H8	1.78	0.47
24:DA:1797:C:O2'	26:DD:259:THR:OG1	2.25	0.47
24:DA:1805:U:O2	26:DD:50:THR:HB	2.15	0.47
24:DA:2735:G:H1	24:DA:2769:C:H42	1.62	0.47
25:DB:43:C:P	49:D4:6:HIS:HE1	2.37	0.47
28:DF:22:ALA:C	28:DF:24:LEU:H	2.23	0.47
29:DG:143:GLU:O	49:D4:28:LYS:NZ	2.36	0.47
34:DO:146:VAL:HG22	34:DO:147:LEU:HD23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D0:78:LYS:O	36:D0:82:GLU:HB3	2.15	0.47
49:D4:36:CYS:O	49:D4:36:CYS:SG	2.72	0.47
49:D4:43:TYR:O	49:D4:44:THR:C	2.58	0.47
1:AA:365:U:H5''	1:AA:366:C:OP1	2.15	0.47
1:AA:1015:A:H2'	1:AA:1016:A:O4'	2.15	0.47
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.50	0.47
2:AE:42:ILE:CD1	2:AE:202:PRO:HB2	2.45	0.47
3:AF:7:PRO:O	3:AF:11:ARG:HG2	2.15	0.47
4:AG:31:CYS:O	4:AG:33:MET:N	2.48	0.47
4:AG:33:MET:O	4:AG:34:GLU:C	2.58	0.47
7:AJ:102:ARG:O	7:AJ:106:GLN:HG3	2.15	0.47
8:AK:68:ARG:HD2	8:AK:74:PRO:HB2	1.96	0.47
13:AP:45:VAL:O	13:AP:48:LEU:HD22	2.14	0.47
22:AD:66:C:H2'	22:AD:67:C:C6	2.50	0.47
22:AD:68:C:H2'	22:AD:69:C:H6	1.80	0.47
24:BA:392:C:H5''	24:BA:409:C:H5''	1.96	0.47
24:BA:503:A:H4'	24:BA:504:U:H5''	1.96	0.47
24:BA:902:C:H2'	24:BA:903:C:C6	2.50	0.47
24:BA:1187:G:H5''	40:B2:81:TYR:CE1	2.50	0.47
24:BA:1500:G:O2'	26:BD:100:GLY:O	2.30	0.47
24:BA:2292:C:P	37:BQ:17:ARG:HH22	2.38	0.47
24:BA:2756:U:H1'	24:BA:2757:A:H5''	1.97	0.47
24:BA:2863:C:H2'	24:BA:2864:G:C8	2.50	0.47
27:BE:30:PRO:O	27:BE:32:PRO:HD3	2.15	0.47
29:BG:49:ASP:OD2	29:BG:51:ARG:NH2	2.48	0.47
30:BH:23:ARG:HH12	30:BH:25:LYS:HE2	1.79	0.47
30:BH:55:PRO:HG2	30:BH:61:HIS:CE1	2.50	0.47
35:BP:24:GLY:HA3	35:BP:25:ASP:HB2	1.97	0.47
35:BP:63:LYS:HG3	35:BP:65:PHE:CE2	2.50	0.47
35:BP:75:THR:HA	35:BP:90:VAL:H	1.78	0.47
37:BQ:71:ARG:NH2	37:BQ:107:GLU:OE1	2.48	0.47
38:BR:102:ILE:C	38:BR:104:ASN:H	2.21	0.47
43:BU:4:LYS:NZ	43:BU:35:TYR:OH	2.30	0.47
45:B3:64:ASP:OD1	45:B3:64:ASP:N	2.48	0.47
48:BX:4:LEU:HA	48:BX:4:LEU:HD23	1.55	0.47
53:B8:36:LYS:O	53:B8:37:SER:C	2.58	0.47
1:CA:247:G:OP2	17:CT:100:LYS:HG3	2.14	0.47
1:CA:740:U:H2'	1:CA:741:G:H8	1.80	0.47
1:CA:1004:A:C2	1:CA:1024:G:H1'	2.50	0.47
1:CA:1020:U:H2'	1:CA:1021:G:H8	1.79	0.47
1:CA:1104:G:C2	1:CA:1105:A:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1133:G:H1	1:CA:1141:C:H42	1.62	0.47
5:CH:11:ILE:HG22	5:CH:12:LEU:HB2	1.96	0.47
15:CR:20:GLY:O	15:CR:22:THR:HG22	2.15	0.47
22:CD:33:U:O2'	22:CD:35:A:N7	2.40	0.47
24:DA:94:G:P	43:DU:54:LYS:HE3	2.55	0.47
24:DA:217:G:H2'	24:DA:218:A:O4'	2.15	0.47
24:DA:893:C:O2'	24:DA:894:C:P	2.73	0.47
24:DA:1716:U:O2'	24:DA:1717:G:H5'	2.15	0.47
24:DA:1842:G:O2'	26:DD:253:GLN:OE1	2.32	0.47
24:DA:2030:A:H4'	24:DA:2031:A:C8	2.50	0.47
24:DA:2135:A:HO2'	24:DA:2160:G:HO2'	1.63	0.47
24:DA:2153:G:C2	24:DA:2154:G:C8	3.03	0.47
24:DA:2853:C:H2'	24:DA:2854:G:H8	1.80	0.47
39:D1:109:LEU:HA	39:D1:112:ARG:HG3	1.97	0.47
40:D2:66:ARG:HB2	40:D2:88:ARG:HB3	1.97	0.47
44:DV:152:ALA:HB3	44:DV:167:PRO:HA	1.97	0.47
1:AA:376:G:H5''	16:AS:5:ARG:HB2	1.96	0.47
1:AA:953:G:N7	13:AP:104:ARG:NH2	2.61	0.47
1:AA:1005:A:N1	1:AA:1024:G:H8	2.13	0.47
1:AA:1078:U:O2'	5:AH:130:ASN:OD1	2.18	0.47
1:AA:1512:U:H3	1:AA:1523:G:H1	1.63	0.47
2:AE:8:LYS:HZ2	2:AE:8:LYS:H	1.61	0.47
2:AE:75:LYS:HA	2:AE:78:GLN:HG3	1.96	0.47
4:AG:83:SER:HA	4:AG:89:THR:O	2.15	0.47
12:AO:28:LYS:O	12:AO:30:ALA:N	2.48	0.47
24:BA:2119:A:H61	24:BA:2170:A:H61	1.62	0.47
24:BA:2804:C:H2'	24:BA:2805:G:O4'	2.15	0.47
30:BH:101:ARG:CZ	30:BH:122:THR:HG23	2.45	0.47
32:BM:15:LEU:CD2	32:BM:128:HIS:CE1	2.78	0.47
32:BM:96:GLU:HG2	32:BM:97:ARG:H	1.79	0.47
37:BQ:34:HIS:HB2	37:BQ:36:TYR:HE1	1.80	0.47
37:BQ:103:GLU:O	37:BQ:106:ARG:HG2	2.14	0.47
47:BW:33:MET:O	47:BW:36:ARG:HB2	2.15	0.47
47:BW:43:GLN:O	47:BW:45:SER:N	2.48	0.47
47:BW:49:LYS:O	47:BW:53:LEU:HB2	2.14	0.47
1:CA:41:G:H2'	1:CA:42:G:C8	2.49	0.47
1:CA:452:A:H2'	1:CA:453:A:C8	2.50	0.47
1:CA:523:A:N1	12:CO:92:ASP:HB2	2.29	0.47
4:CG:60:GLU:HG2	4:CG:202:LEU:HB2	1.96	0.47
6:CI:30:LEU:O	6:CI:35:ALA:HB3	2.14	0.47
6:CI:35:ALA:HB1	6:CI:65:VAL:HG11	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CM:4:ILE:HD11	10:CM:77:PRO:HB3	1.96	0.47
10:CM:29:ARG:C	10:CM:31:GLY:H	2.22	0.47
10:CM:38:ILE:HB	10:CM:71:LEU:HB3	1.96	0.47
24:DA:2:G:N2	24:DA:2901:C:N3	2.63	0.47
24:DA:57:C:H2'	24:DA:58:G:O4'	2.15	0.47
24:DA:184:C:H2'	24:DA:185:U:H6	1.80	0.47
24:DA:616:A:H8	28:DF:176:LEU:HD11	1.80	0.47
24:DA:1090:U:N3	24:DA:1102:C:N3	2.63	0.47
24:DA:2012:G:OP1	41:DS:11:ARG:NH2	2.43	0.47
24:DA:2543:G:H2'	24:DA:2544:G:C8	2.50	0.47
24:DA:2793:G:C5	24:DA:2794:C:C4	3.03	0.47
25:DB:40:U:N3	25:DB:43:C:H5''	2.30	0.47
25:DB:89:G:H2'	25:DB:89(A):A:N3	2.30	0.47
27:DE:37:ARG:HD2	27:DE:44:TYR:OH	2.15	0.47
27:DE:60:ASN:HD22	27:DE:63:LEU:CD2	2.15	0.47
27:DE:71:GLY:C	27:DE:73:GLU:N	2.59	0.47
28:DF:178:PRO:HB3	28:DF:198:ALA:HB1	1.97	0.47
30:DH:91:GLY:HA3	30:DH:94:TYR:CE2	2.49	0.47
35:DP:29:PHE:N	35:DP:105:GLU:OE1	2.45	0.47
39:D1:29:SER:C	39:D1:30:LYS:HD2	2.40	0.47
42:DT:43:VAL:CG2	42:DT:51:VAL:HG21	2.45	0.47
44:DV:23:LYS:HE2	44:DV:40:ASP:HB2	1.97	0.47
46:DZ:87:PRO:HA	46:DZ:90:ILE:HG23	1.97	0.47
47:DW:66:GLU:HG2	47:DW:69:ARG:HH22	1.79	0.47
1:AA:182:U:O4	1:AA:223:U:H1'	2.15	0.46
1:AA:255:G:H4'	17:AT:17:LYS:HG2	1.97	0.46
1:AA:258:G:H1	1:AA:268:C:H42	1.62	0.46
1:AA:1409:C:H2'	1:AA:1410:G:C8	2.50	0.46
2:AE:8:LYS:O	2:AE:8:LYS:NZ	2.46	0.46
7:AJ:143:ARG:HH22	22:AD:42:G:H5'	1.80	0.46
11:AN:89:ALA:C	11:AN:91:ARG:H	2.22	0.46
14:AQ:53:LEU:HD23	14:AQ:53:LEU:HA	1.71	0.46
20:AW:61:SER:O	20:AW:65:LYS:HB2	2.15	0.46
24:BA:74:A:C8	24:BA:74:A:O5'	2.68	0.46
24:BA:106:C:H2'	24:BA:107:C:C6	2.50	0.46
24:BA:720:C:H2'	24:BA:721:C:C6	2.50	0.46
24:BA:1470:G:N2	24:BA:1522:G:OP2	2.33	0.46
24:BA:2415:G:O3'	34:BO:66:GLY:HA3	2.15	0.46
24:BA:2635:C:OP1	27:BE:78:LEU:HB2	2.14	0.46
24:BA:2712:U:H1'	24:BA:2712(A):A:C8	2.50	0.46
24:BA:2789:C:H1'	24:BA:2892:A:H2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:17:THR:HG22	26:BD:204:ILE:HA	1.97	0.46
30:BH:78:GLY:HA2	30:BH:82:GLY:HA3	1.97	0.46
32:BM:34:LEU:HA	32:BM:34:LEU:HD13	1.76	0.46
37:BQ:74:ALA:HB1	37:BQ:107:GLU:O	2.16	0.46
39:B1:105:VAL:HG11	40:B2:40:LEU:HD11	1.97	0.46
53:B8:50:LEU:HD12	53:B8:51:ALA:N	2.30	0.46
1:CA:785:G:N2	1:CA:797:C:N3	2.55	0.46
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.50	0.46
1:CA:1095:U:H5''	1:CA:1109:C:O2	2.14	0.46
1:CA:1290:G:H5''	1:CA:1291:G:OP2	2.15	0.46
2:CE:237:ALA:C	2:CE:239:VAL:H	2.24	0.46
3:CF:20:SER:HG	3:CF:40:ARG:HH22	1.57	0.46
4:CG:22:LYS:NZ	4:CG:25:ARG:HH11	2.07	0.46
6:CI:101:ALA:OXT	18:CU:28:GLU:HB2	2.15	0.46
8:CK:36:LEU:HA	8:CK:39:LEU:HD23	1.97	0.46
12:CO:76:ASN:HD21	12:CO:108:ALA:H	1.63	0.46
18:CU:47:THR:O	18:CU:83:GLU:N	2.44	0.46
19:CV:13:ASP:N	19:CV:13:ASP:OD1	2.47	0.46
24:DA:654(G):C:H2'	24:DA:654(H):G:O4'	2.15	0.46
24:DA:654(H):G:N1	24:DA:654(I):C:N3	2.63	0.46
24:DA:669:G:O2'	24:DA:670:A:P	2.73	0.46
24:DA:1019:U:O2'	24:DA:1021:A:H2	1.98	0.46
24:DA:1080:A:H62	24:DA:1088:A:P	2.38	0.46
24:DA:2161:C:H2'	24:DA:2162:G:C8	2.50	0.46
24:DA:2542:A:H1'	24:DA:2543:G:N7	2.29	0.46
35:DP:69:PHE:HA	35:DP:70:PRO:HD3	1.80	0.46
35:DP:122:GLY:HA2	35:DP:129:THR:HG21	1.97	0.46
36:D0:70:LEU:O	36:D0:72:ASP:N	2.46	0.46
39:D1:50:ARG:HG2	39:D1:53:ARG:NH2	2.30	0.46
39:D1:66:ASN:CG	39:D1:76:TYR:HB2	2.40	0.46
43:DU:2:ARG:HA	43:DU:2:ARG:NH1	2.31	0.46
1:AA:1035:A:C2	1:AA:1036:G:H1'	2.50	0.46
1:AA:1454:G:H4'	20:AW:36:LEU:HD21	1.98	0.46
3:AF:8:ILE:HD11	3:AF:184:TYR:HB3	1.96	0.46
9:AL:34:ASN:N	9:AL:34:ASN:OD1	2.45	0.46
19:AV:42:PRO:C	19:AV:44:MET:H	2.23	0.46
24:BA:39:C:O2	28:BF:46:ARG:NH2	2.48	0.46
24:BA:902:C:H2'	24:BA:903:C:H6	1.80	0.46
24:BA:2464:C:H42	24:BA:2486:G:H1	1.64	0.46
24:BA:2467:C:H4'	35:BP:123:HIS:CD2	2.50	0.46
26:BD:6:PHE:HE1	26:BD:18:VAL:HG23	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:12:SER:O	26:BD:16:MET:HB2	2.14	0.46
30:BH:154:PRO:HA	30:BH:160:LYS:O	2.16	0.46
35:BP:43:THR:HG22	35:BP:94:VAL:HG12	1.97	0.46
50:B5:39:MET:C	50:B5:40:LYS:HD2	2.41	0.46
1:CA:46:G:O2'	1:CA:365:U:H1'	2.15	0.46
1:CA:109:A:C6	1:CA:326:G:C6	3.03	0.46
1:CA:429:U:H3'	4:CG:25:ARG:NH2	2.30	0.46
1:CA:666:G:OP2	1:CA:725:G:N2	2.40	0.46
1:CA:740:U:H2'	1:CA:741:G:C8	2.50	0.46
1:CA:1235:U:O2'	1:CA:1305:G:O5'	2.34	0.46
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.15	0.46
3:CF:130:VAL:O	3:CF:134:ILE:HG12	2.15	0.46
4:CG:33:MET:C	4:CG:35:ARG:N	2.72	0.46
9:CL:9:ARG:CB	9:CL:14:VAL:HG12	2.45	0.46
13:CP:23:TYR:HE2	13:CP:71:ARG:HD3	1.80	0.46
13:CP:49:THR:N	13:CP:52:GLU:OE1	2.40	0.46
13:CP:91:ARG:NE	13:CP:97:PRO:O	2.48	0.46
20:CW:51:GLU:HA	20:CW:54:LYS:HB3	1.96	0.46
22:CD:31:G:C5	22:CD:32:C:C4	3.04	0.46
24:DA:134:C:H42	24:DA:145:G:H1	1.62	0.46
24:DA:1063:G:C5	24:DA:1076:C:C2	3.03	0.46
24:DA:1083:U:O2'	24:DA:1085:A:N7	2.45	0.46
24:DA:1464:C:O2'	24:DA:1528:A:H8	1.96	0.46
24:DA:2112:G:H1	24:DA:2169:A:N6	2.12	0.46
24:DA:2156:G:H3'	24:DA:2157:G:C8	2.49	0.46
24:DA:2233:U:H2'	24:DA:2234:G:C8	2.51	0.46
30:DH:122:THR:C	30:DH:123:PHE:CG	2.93	0.46
34:DO:60:MET:O	34:DO:61:ARG:HD3	2.12	0.46
38:DR:16:ARG:HH12	38:DR:83:ILE:HB	1.81	0.46
38:DR:24:PRO:O	38:DR:94:ALA:HB2	2.15	0.46
44:DV:10:ARG:HB3	44:DV:36:LYS:HB3	1.98	0.46
44:DV:30:ASN:ND2	44:DV:90:VAL:O	2.47	0.46
51:D6:37:ARG:O	51:D6:49:HIS:NE2	2.48	0.46
1:AA:406:G:N2	4:AG:119:GLN:HE22	2.13	0.46
1:AA:452:A:O2'	1:AA:453:A:O5'	2.34	0.46
1:AA:1118:C:P	9:AL:104:ARG:HH11	2.39	0.46
1:AA:1151:A:H2'	1:AA:1152:A:H8	1.80	0.46
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.46	0.46
1:AA:1269:A:H2	1:AA:1312:G:N3	2.13	0.46
8:AK:80:ILE:H	8:AK:80:ILE:HG12	1.36	0.46
13:AP:34:LEU:O	13:AP:39:ILE:N	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:33:THR:OG1	19:AV:34:TRP:N	2.43	0.46
24:BA:250:G:H2'	24:BA:251:A:C8	2.50	0.46
24:BA:996:A:H4'	39:B1:92:ARG:HE	1.80	0.46
24:BA:1375:C:H2'	24:BA:1376:C:H6	1.81	0.46
24:BA:1657:C:H2'	24:BA:1658:C:H6	1.80	0.46
24:BA:2695:C:H2'	24:BA:2696:U:C6	2.50	0.46
25:BB:38:C:O2	25:BB:48:A:H1'	2.15	0.46
25:BB:80:U:H2'	25:BB:81:G:H21	1.80	0.46
26:BD:33:LEU:CD2	26:BD:34:VAL:H	2.28	0.46
38:BR:26:ASP:CB	38:BR:91:ARG:HA	2.43	0.46
44:BV:76:LEU:HD23	44:BV:76:LEU:H	1.79	0.46
1:CA:108:G:H5''	1:CA:109:A:H5''	1.97	0.46
1:CA:147:G:H1	1:CA:175:C:N4	2.12	0.46
1:CA:356:A:N3	1:CA:368:U:O2'	2.37	0.46
1:CA:591:U:OP2	8:CK:30:ARG:NH1	2.49	0.46
1:CA:1014:A:H4'	19:CV:14:HIS:ND1	2.30	0.46
2:CE:84:GLU:CD	2:CE:87:ARG:HH11	2.23	0.46
5:CH:32:VAL:HB	5:CH:58:ALA:HB1	1.96	0.46
6:CI:32:ASN:N	6:CI:32:ASN:OD1	2.48	0.46
12:CO:27:LEU:HD23	12:CO:33:ARG:HG2	1.96	0.46
22:CC:9:G:O2'	22:CC:10:G:N7	2.40	0.46
24:DA:10:G:C5	24:DA:2629:A:C6	3.03	0.46
24:DA:896:A:H3'	24:DA:897:C:H5''	1.97	0.46
24:DA:2129:C:O2'	24:DA:2130:U:H5'	2.15	0.46
24:DA:2346:A:N6	51:D6:28:ARG:HH21	2.13	0.46
24:DA:2853:C:H2'	24:DA:2854:G:C8	2.50	0.46
26:DD:130:ALA:HA	26:DD:192:THR:HA	1.98	0.46
34:DO:111:ARG:HG2	34:DO:128:HIS:CD2	2.51	0.46
44:DV:54:HIS:HB3	44:DV:101:PRO:HD3	1.96	0.46
1:AA:19:C:H2'	1:AA:20:U:H6	1.81	0.46
2:AE:17:PHE:CE1	2:AE:44:LEU:HD11	2.50	0.46
2:AE:46:LYS:HE2	2:AE:46:LYS:HB3	1.64	0.46
4:AG:9:CYS:CB	4:AG:32:ALA:CB	2.59	0.46
6:AI:76:ALA:O	6:AI:80:ARG:HG3	2.15	0.46
8:AK:99:GLU:H	8:AK:99:GLU:HG3	1.40	0.46
14:AQ:13:THR:N	14:AQ:14:PRO:HD2	2.31	0.46
15:AR:69:TYR:CZ	15:AR:73:GLU:HG3	2.50	0.46
17:AT:67:LYS:C	17:AT:69:LYS:H	2.23	0.46
22:AD:7:G:O2'	22:AD:8:U:OP2	2.24	0.46
22:AD:8:U:H5''	22:AD:48:C:H4'	1.98	0.46
24:BA:270(N):G:N2	31:BK:50:ARG:HH12	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:320:A:H4'	24:BA:322:A:N7	2.29	0.46
24:BA:459:U:H2'	24:BA:460:A:H8	1.81	0.46
24:BA:558:G:P	32:BM:111:PRO:HG2	2.55	0.46
24:BA:1024:G:N2	24:BA:1142(A):A:H2	2.13	0.46
24:BA:2056:G:H2'	24:BA:2056:G:N3	2.30	0.46
24:BA:2115:G:N3	24:BA:2171:A:C6	2.83	0.46
24:BA:2157:G:O2'	24:BA:2158:A:P	2.74	0.46
24:BA:2387:U:P	45:B3:55:ARG:HH12	2.38	0.46
25:BB:24:G:O2'	25:BB:56:G:N7	2.43	0.46
28:BF:122:LYS:HD2	28:BF:191:ARG:HG3	1.97	0.46
29:BG:16:ARG:NH1	29:BG:31:VAL:HG11	2.31	0.46
29:BG:83:ARG:H	29:BG:86:MET:HE3	1.79	0.46
29:BG:131:TYR:HB3	29:BG:159:VAL:CG2	2.45	0.46
38:BR:78:LEU:HB3	38:BR:79:HIS:HD2	1.80	0.46
41:BS:2:GLU:C	41:BS:64:MET:HE1	2.40	0.46
1:CA:580:U:H2'	1:CA:581:G:O4'	2.16	0.46
1:CA:984:C:H2'	1:CA:985:C:C6	2.51	0.46
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.80	0.46
5:CH:76:ILE:HG23	5:CH:142:LEU:HD13	1.96	0.46
7:CJ:41:ARG:HG3	7:CJ:42:ILE:N	2.30	0.46
14:CQ:29:ARG:HG2	14:CQ:29:ARG:HH11	1.81	0.46
22:CD:56:C:C2	22:CD:57:A:C8	3.04	0.46
24:DA:213:A:H2'	24:DA:214:G:O4'	2.15	0.46
24:DA:495:G:N3	41:DS:61:ASN:ND2	2.62	0.46
24:DA:698:C:O2'	24:DA:734:A:N6	2.47	0.46
24:DA:1342:A:C2	24:DA:1397:U:C2	3.03	0.46
24:DA:2572:A:N7	27:DE:145:LYS:HB2	2.31	0.46
29:DG:105:LYS:NZ	49:D4:24:THR:O	2.36	0.46
31:DK:117:GLU:HB2	31:DK:118:LYS:H	1.51	0.46
44:DV:70:LEU:HD23	44:DV:70:LEU:HA	1.73	0.46
1:AA:458:C:H2'	1:AA:464:G:H8	1.80	0.46
1:AA:458:C:H2'	1:AA:464:G:C8	2.50	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.04	0.46
1:AA:914:A:H2'	1:AA:915:A:C8	2.48	0.46
1:AA:947:G:OP1	13:AP:108:ARG:HB3	2.15	0.46
1:AA:1006:C:N4	1:AA:1023:G:O6	2.39	0.46
1:AA:1064:G:H1'	1:AA:1190:G:H21	1.81	0.46
1:AA:1095:U:P	1:AA:1108:G:H1	2.38	0.46
2:AE:28:PHE:CD2	2:AE:190:THR:HG22	2.51	0.46
5:AH:19:MET:HE2	5:AH:19:MET:HB3	1.83	0.46
22:AD:51:C:H2'	22:AD:52:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1174:A:N7	24:BA:1175:U:H6	2.13	0.46
24:BA:1266:G:O2'	24:BA:2012:G:O6	2.28	0.46
24:BA:1445:C:H42	24:BA:1466:G:H1	1.63	0.46
24:BA:2182:G:H2'	24:BA:2183:C:C6	2.51	0.46
24:BA:2567:G:H2'	24:BA:2568:C:C6	2.51	0.46
24:BA:2718:G:O2'	24:BA:2847:U:OP1	2.32	0.46
26:BD:182:LEU:H	26:BD:272:ALA:CB	2.27	0.46
28:BF:32:LEU:HA	28:BF:35:GLU:HB2	1.97	0.46
29:BG:43:LEU:HD23	29:BG:53:LEU:HD12	1.96	0.46
41:BS:55:ALA:C	41:BS:57:ASN:H	2.23	0.46
1:CA:9:G:H1	1:CA:25:C:N4	2.14	0.46
1:CA:170:U:H2'	1:CA:171:A:H8	1.81	0.46
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.16	0.46
1:CA:1348:U:N3	1:CA:1374:A:H2	2.12	0.46
2:CE:46:LYS:HA	2:CE:46:LYS:HD3	1.70	0.46
7:CJ:26:PHE:CE1	7:CJ:30:ILE:HD11	2.51	0.46
8:CK:1:MET:N	8:CK:1:MET:SD	2.88	0.46
10:CM:23:ILE:HG23	10:CM:85:LEU:HD22	1.97	0.46
13:CP:9:ILE:HD12	29:DG:146:TYR:CD2	2.51	0.46
19:CV:64:GLU:N	19:CV:64:GLU:OE1	2.48	0.46
24:DA:443:A:H1'	24:DA:1201:C:O4'	2.15	0.46
24:DA:616:A:C5	28:DF:180:GLY:HA3	2.51	0.46
24:DA:1255:U:H5''	24:DA:1256:G:H5''	1.96	0.46
24:DA:2419:U:H5''	53:D8:34:TRP:CD1	2.51	0.46
24:DA:2602:A:H4'	24:DA:2603:G:C5'	2.46	0.46
26:DD:133:LEU:HB3	26:DD:173:VAL:HG21	1.98	0.46
28:DF:34:TRP:CE3	34:DO:8:PRO:HB3	2.51	0.46
28:DF:123:LEU:HA	28:DF:192:LEU:HB3	1.97	0.46
29:DG:41:GLN:NE2	29:DG:60:LEU:HD12	2.31	0.46
30:DH:163:TYR:CE2	30:DH:169:VAL:HG11	2.49	0.46
34:DO:59:LEU:O	34:DO:61:ARG:N	2.48	0.46
34:DO:71:VAL:N	34:DO:72:PRO:CD	2.78	0.46
37:DQ:14:VAL:HG21	37:DQ:89:ARG:HG2	1.97	0.46
37:DQ:104:GLY:O	37:DQ:106:ARG:HG2	2.16	0.46
43:DU:96:ILE:HD12	43:DU:98:VAL:HG12	1.97	0.46
44:DV:105:VAL:HG13	44:DV:106:GLY:H	1.79	0.46
1:AA:165:C:H2'	1:AA:166:G:C8	2.50	0.46
1:AA:1028(B):C:H3'	1:AA:1029:G:C5'	2.45	0.46
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.80	0.46
2:AE:15:VAL:O	2:AE:17:PHE:N	2.43	0.46
2:AE:114:ARG:O	2:AE:118:LEU:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:16:ARG:NH1	3:AF:183:ASP:HA	2.31	0.46
3:AF:116:VAL:O	3:AF:120:VAL:HG23	2.16	0.46
12:AO:46:LYS:CD	12:AO:48:PRO:CG	2.92	0.46
24:BA:411:G:N3	34:BO:71:VAL:HG21	2.31	0.46
24:BA:1763:G:H4'	24:BA:1763:G:OP1	2.15	0.46
24:BA:1932:A:H2'	24:BA:1933:G:O4'	2.16	0.46
24:BA:2846:G:P	38:BR:54:ARG:HB2	2.56	0.46
26:BD:76:PRO:HG2	26:BD:98:VAL:HG21	1.98	0.46
30:BH:17:VAL:HG21	30:BH:50:VAL:HG21	1.96	0.46
43:BU:95:LYS:HE3	43:BU:95:LYS:HB2	1.62	0.46
53:B8:35:GLN:O	53:B8:36:LYS:O	2.33	0.46
1:CA:514:C:C2	1:CA:515:G:C8	3.04	0.46
1:CA:603:U:H2'	1:CA:604:G:C8	2.50	0.46
1:CA:606:G:N2	1:CA:631:G:O2'	2.48	0.46
1:CA:618:C:H5'	1:CA:619:U:H5''	1.98	0.46
1:CA:984:C:N4	1:CA:1221:G:H1	2.13	0.46
1:CA:1048:G:O4'	1:CA:1215:G:H4'	2.16	0.46
2:CE:174:VAL:O	2:CE:178:ARG:N	2.42	0.46
4:CG:18:LYS:HE3	4:CG:20:TYR:CE1	2.48	0.46
4:CG:171:GLY:C	4:CG:173:TRP:H	2.23	0.46
7:CJ:66:VAL:HG12	7:CJ:70:LYS:NZ	2.31	0.46
7:CJ:69:VAL:HG22	7:CJ:135:VAL:HG22	1.98	0.46
9:CL:25:LYS:O	9:CL:61:ALA:N	2.33	0.46
18:CU:70:ILE:O	18:CU:74:ARG:HG3	2.14	0.46
19:CV:11:VAL:HG23	19:CV:39:THR:HB	1.97	0.46
20:CW:14:LYS:O	20:CW:18:GLN:HG3	2.16	0.46
20:CW:75:ASN:O	20:CW:79:ARG:N	2.38	0.46
24:DA:881:G:H3'	24:DA:882:G:H8	1.81	0.46
24:DA:893:C:O2'	24:DA:894:C:OP2	2.27	0.46
24:DA:1094:U:H5'	24:DA:1098:A:N1	2.31	0.46
24:DA:1162:G:H21	40:D2:89:GLN:HE22	1.64	0.46
24:DA:1410:G:H2'	24:DA:1411:C:C6	2.50	0.46
24:DA:1582:C:O2'	24:DA:1586:A:H8	1.98	0.46
24:DA:2131:G:OP1	24:DA:2132:U:H3'	2.16	0.46
24:DA:2402:C:H2'	24:DA:2403:C:H5'	1.97	0.46
25:DB:55:U:O3'	29:DG:27:ASN:ND2	2.48	0.46
26:DD:31:LYS:CE	26:DD:33:LEU:HD12	2.46	0.46
26:DD:105:ILE:HA	26:DD:105:ILE:HD13	1.82	0.46
27:DE:47:VAL:HG22	27:DE:48:GLN:N	2.30	0.46
27:DE:72:VAL:O	27:DE:73:GLU:O	2.33	0.46
27:DE:93:VAL:HG11	27:DE:181:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:70:THR:HG23	28:DF:72:ARG:H	1.79	0.46
33:DN:75:SER:OG	33:DN:76:ALA:N	2.48	0.46
37:DQ:107:GLU:H	37:DQ:110:LEU:HD21	1.80	0.46
40:D2:14:VAL:HB	40:D2:96:ILE:HG13	1.98	0.46
1:AA:166:G:H2'	1:AA:167:G:H8	1.81	0.46
1:AA:414:A:OP2	1:AA:428:G:N2	2.44	0.46
1:AA:458:C:O2	1:AA:474:G:N2	2.48	0.46
1:AA:858:G:O6	1:AA:869:G:H3'	2.16	0.46
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.16	0.46
2:AE:21:ARG:C	2:AE:23:ARG:H	2.24	0.46
2:AE:88:ALA:O	2:AE:226:ARG:NH1	2.49	0.46
3:AF:121:ALA:O	3:AF:125:GLU:HG3	2.15	0.46
5:AH:110:LEU:HD13	5:AH:118:ILE:HD13	1.98	0.46
12:AO:20:LYS:HE2	12:AO:20:LYS:HB3	1.80	0.46
17:AT:23:VAL:O	17:AT:39:SER:HA	2.16	0.46
24:BA:57:C:H2'	24:BA:58:G:O4'	2.16	0.46
24:BA:270(Y):G:C2	24:BA:270(Z):U:O4	2.69	0.46
24:BA:445:C:OP1	39:B1:2:PRO:HA	2.16	0.46
24:BA:705:A:C2	24:BA:706:A:C4	3.04	0.46
24:BA:1007:C:OP1	32:BM:35:ARG:NH1	2.49	0.46
24:BA:1071:G:N3	24:BA:1089:G:H3'	2.30	0.46
24:BA:1198:U:H2'	24:BA:1199:U:C6	2.50	0.46
24:BA:1316:U:H2'	24:BA:1317:A:H8	1.80	0.46
24:BA:1529:A:C8	24:BA:1530:G:C8	3.04	0.46
24:BA:1543:A:H1'	24:BA:1544:C:H3'	1.98	0.46
24:BA:2285:C:H5'	24:BA:2288:A:C6	2.51	0.46
24:BA:2646:C:O5'	24:BA:2646:C:H6	1.99	0.46
26:BD:54:ARG:O	26:BD:218:ARG:HD3	2.16	0.46
26:BD:76:PRO:O	26:BD:98:VAL:HG23	2.15	0.46
27:BE:65:GLY:HA2	27:BE:70:ALA:HB2	1.98	0.46
27:BE:167:VAL:CG1	27:BE:189:PRO:HD3	2.46	0.46
31:BK:75:LEU:HD21	31:BK:105:HIS:HB3	1.98	0.46
32:BM:75:TYR:CE2	32:BM:77:GLY:HA2	2.51	0.46
39:B1:78:THR:OG1	39:B1:79:PHE:N	2.39	0.46
45:B3:42:GLY:C	45:B3:57:PHE:HD2	2.24	0.46
48:BX:5:LYS:HD2	48:BX:34:GLU:OE1	2.15	0.46
1:CA:130:A:C8	17:CT:63:ARG:HG3	2.51	0.46
1:CA:409:G:H8	1:CA:409:G:O5'	1.99	0.46
1:CA:409:G:H3'	1:CA:410:G:H8	1.80	0.46
1:CA:422:C:H1'	1:CA:423:G:C2	2.51	0.46
1:CA:1255:G:O2'	1:CA:1259:C:O4'	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1291:G:O2'	9:CL:38:GLN:HB3	2.15	0.46
1:CA:1330:U:H3'	1:CA:1331:G:O4'	2.15	0.46
3:CF:63:ASN:CB	3:CF:98:ASN:HB3	2.45	0.46
6:CI:77:ARG:HH22	6:CI:78:GLU:HG2	1.79	0.46
9:CL:12:GLU:O	9:CL:68:GLY:N	2.49	0.46
24:DA:118:A:N3	24:DA:178:G:H1'	2.31	0.46
24:DA:242:G:H5''	53:D8:62:LEU:HD13	1.98	0.46
24:DA:581:C:H2'	24:DA:582:G:C8	2.51	0.46
24:DA:1783:A:H5'	24:DA:2608:G:H4'	1.98	0.46
24:DA:2401:U:H3'	24:DA:2402:C:C5'	2.45	0.46
24:DA:2401:U:O2	24:DA:2402:C:H5	1.99	0.46
33:DN:68:GLU:OE2	33:DN:78:ARG:NH1	2.49	0.46
34:DO:94:GLU:HG3	34:DO:124:LYS:HD3	1.96	0.46
1:AA:313:A:H2'	1:AA:314:C:C6	2.51	0.46
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.51	0.46
4:AG:22:LYS:HB2	4:AG:26:CYS:H	1.81	0.46
6:AI:3:ARG:HD3	6:AI:64:GLN:NE2	2.31	0.46
11:AN:71:LYS:O	11:AN:75:TYR:N	2.45	0.46
24:BA:654(H):G:H1	24:BA:654(M):C:H2'	1.81	0.46
24:BA:2150:U:H2'	24:BA:2151:G:C8	2.51	0.46
26:BD:70:TRP:CZ2	26:BD:150:LYS:HA	2.51	0.46
33:BN:22:ILE:HD12	33:BN:22:ILE:HA	1.78	0.46
34:BO:46:LYS:HE2	34:BO:46:LYS:HB3	1.63	0.46
35:BP:46:GLN:HE22	35:BP:126:PRO:HG3	1.81	0.46
42:BT:60:ARG:HH22	52:B7:47:ARG:NH2	2.14	0.46
43:BU:82:PRO:HD3	43:BU:97:ARG:HD2	1.93	0.46
49:B4:60:GLN:HA	49:B4:63:TYR:CB	2.46	0.46
50:B5:46:CYS:HA	50:B5:47:PRO:HD2	1.63	0.46
1:CA:186(C):G:H1	1:CA:191(D):U:H3	1.64	0.46
1:CA:281:G:OP2	1:CA:281:G:H8	1.98	0.46
1:CA:321:A:H62	1:CA:328:C:H1'	1.79	0.46
1:CA:922:G:N3	1:CA:1398:A:H2	2.14	0.46
1:CA:1004:A:H1'	1:CA:1036:G:H22	1.80	0.46
1:CA:1014:A:C6	1:CA:1015:A:C6	3.03	0.46
4:CG:58:LEU:HD22	4:CG:62:GLN:HG3	1.98	0.46
4:CG:171:GLY:HA2	4:CG:172:PRO:HD3	1.80	0.46
5:CH:59:GLY:HA2	5:CH:62:ALA:HB3	1.98	0.46
7:CJ:79:ARG:HH12	22:CD:34:C:P	2.39	0.46
7:CJ:116:ALA:O	7:CJ:120:ILE:HG12	2.16	0.46
13:CP:3:ARG:HB3	13:CP:9:ILE:HG12	1.97	0.46
13:CP:25:ILE:HG22	13:CP:26:GLY:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:62:SER:OG	17:CT:72:ARG:HG3	2.16	0.46
19:CV:49:ILE:HG21	19:CV:71:LEU:HD22	1.97	0.46
24:DA:602:G:N2	24:DA:655:A:N7	2.56	0.46
24:DA:1262:A:N3	50:D5:10:LYS:HE3	2.31	0.46
24:DA:2116:G:N1	24:DA:2163:C:OP1	2.49	0.46
24:DA:2291:U:O2'	24:DA:2374:C:O2	2.27	0.46
24:DA:2530:A:C4	30:DH:157:TYR:HE2	2.33	0.46
24:DA:2786:U:O2	27:DE:62:PRO:HB3	2.15	0.46
25:DB:87:G:H2'	25:DB:89:G:N7	2.30	0.46
27:DE:67:PHE:CD2	27:DE:69:LYS:HD3	2.51	0.46
27:DE:76:ARG:C	27:DE:78:LEU:H	2.19	0.46
28:DF:24:LEU:CB	28:DF:25:PRO:CD	2.62	0.46
34:DO:120:ALA:HB1	34:DO:138:LEU:HB3	1.97	0.46
35:DP:23:GLY:HA2	35:DP:25:ASP:HB2	1.98	0.46
38:DR:45:PHE:CE2	38:DR:74:ARG:HD2	2.50	0.46
44:DV:132:ASN:ND2	44:DV:159:PRO:HB2	2.26	0.46
1:AA:127:G:O2'	17:AT:2:PRO:O	2.34	0.46
1:AA:999:U:H2'	1:AA:1000:A:C8	2.51	0.46
2:AE:29:ALA:O	2:AE:31:TYR:N	2.49	0.46
4:AG:143:GLY:N	4:AG:185:PHE:O	2.40	0.46
7:AJ:139:GLU:C	7:AJ:141:VAL:H	2.24	0.46
9:AL:13:ALA:HB2	9:AL:68:GLY:HA3	1.98	0.46
22:AD:56:C:N3	24:BA:2112:G:N2	2.63	0.46
24:BA:10:G:N2	24:BA:2801:A:O3'	2.48	0.46
24:BA:654(M):C:H5''	24:BA:654(N):G:N7	2.31	0.46
24:BA:1079:C:H5'	24:BA:1080:A:OP2	2.16	0.46
24:BA:1218:C:H42	24:BA:1231:G:H1	1.63	0.46
24:BA:1292:U:H2'	24:BA:1293:C:C6	2.50	0.46
24:BA:1378:A:O2'	24:BA:1380:G:N7	2.42	0.46
24:BA:1432:C:H2'	24:BA:1433:U:O4'	2.15	0.46
24:BA:1891:G:H2'	24:BA:1892:C:O4'	2.16	0.46
24:BA:2068:U:N3	24:BA:2430:A:H2	2.10	0.46
24:BA:2154:G:C2	24:BA:2155:G:C5	3.04	0.46
25:BB:11:C:H3'	25:BB:12:C:C6	2.51	0.46
25:BB:15:A:H1'	25:BB:109:G:C4	2.51	0.46
30:BH:85:LYS:O	30:BH:133:VAL:HG23	2.16	0.46
31:BK:56:LYS:NZ	31:BK:60:GLU:HG2	2.31	0.46
44:BV:168:GLU:N	44:BV:168:GLU:OE2	2.49	0.46
46:BZ:96:LYS:O	46:BZ:98:LEU:N	2.49	0.46
1:CA:719:C:O2'	18:CU:49:LYS:HB3	2.15	0.46
1:CA:1118:C:H5'	9:CL:104:ARG:CD	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CF:18:TRP:NE1	14:CQ:53:LEU:O	2.48	0.46
3:CF:61:ALA:N	3:CF:63:ASN:OD1	2.31	0.46
4:CG:134:ASP:OD1	4:CG:134:ASP:N	2.49	0.46
6:CI:71:ARG:O	6:CI:75:LEU:N	2.45	0.46
9:CL:56:LEU:O	9:CL:58:HIS:N	2.41	0.46
9:CL:111:ARG:O	9:CL:113:LYS:HE2	2.16	0.46
11:CN:27:ASN:ND2	11:CN:55:LYS:HD2	2.31	0.46
13:CP:66:LEU:HA	13:CP:70:LEU:HB3	1.98	0.46
24:DA:2:G:H22	24:DA:2901:C:H42	1.64	0.46
24:DA:108:U:H2'	24:DA:109:G:C8	2.51	0.46
24:DA:397:G:O2'	24:DA:2231:C:H1'	2.16	0.46
24:DA:577:G:O2'	24:DA:1254:A:OP1	2.33	0.46
24:DA:782:A:H4'	24:DA:783:A:H5'	1.98	0.46
24:DA:882:G:H1	24:DA:894:C:N4	2.14	0.46
24:DA:1186:G:O5'	24:DA:1186:G:H8	1.99	0.46
24:DA:2129:C:H2'	24:DA:2130:U:O4'	2.15	0.46
24:DA:2387:U:H1'	45:D3:41:ARG:HD2	1.98	0.46
24:DA:2685:G:O2'	24:DA:2726:U:H5	1.99	0.46
24:DA:2795:G:H1'	24:DA:2802:G:C6	2.51	0.46
25:DB:15:A:H1'	25:DB:109:G:N9	2.31	0.46
27:DE:46:ALA:HB2	27:DE:82:ARG:HA	1.96	0.46
30:DH:46:GLU:CD	30:DH:51:ARG:HD2	2.41	0.46
36:D0:115:GLU:OE2	50:D5:55:ARG:HB2	2.16	0.46
43:DU:54:LYS:O	43:DU:55:TYR:HB3	2.15	0.46
47:DW:62:THR:O	47:DW:66:GLU:HG3	2.16	0.46
1:AA:90:C:H2'	1:AA:91:C:N1	2.31	0.46
1:AA:129:U:H5'	17:AT:3:LYS:HZ1	1.80	0.46
1:AA:974:A:O2'	1:AA:975:A:O5'	2.33	0.46
1:AA:1016:A:H5'	14:AQ:15:LYS:NZ	2.29	0.46
1:AA:1023:G:H3'	1:AA:1024:G:C5'	2.39	0.46
1:AA:1346:A:OP1	9:AL:120:ARG:NH1	2.44	0.46
2:AE:51:LEU:HA	2:AE:54:THR:HB	1.98	0.46
4:AG:31:CYS:H	4:AG:34:GLU:HG2	1.82	0.46
12:AO:126:LYS:HA	12:AO:126:LYS:HD2	1.69	0.46
24:BA:303:U:H2'	24:BA:304:G:H8	1.81	0.46
24:BA:1823:G:P	26:BD:54:ARG:HH21	2.39	0.46
24:BA:2635:C:C5'	27:BE:78:LEU:HA	2.43	0.46
24:BA:2897:U:H2'	24:BA:2898:U:O4'	2.16	0.46
26:BD:134:ARG:HG3	26:BD:135:PHE:CE1	2.50	0.46
29:BG:4:ASP:OD1	29:BG:9:ARG:NH1	2.49	0.46
30:BH:99:VAL:O	30:BH:101:ARG:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:79:ILE:O	31:BK:143:SER:N	2.49	0.46
38:BR:27:THR:HG23	38:BR:90:GLN:HB3	1.98	0.46
39:B1:92:ARG:C	39:B1:94:ASN:N	2.68	0.46
45:B3:70:GLN:OE1	45:B3:72:ARG:HD3	2.16	0.46
47:BW:18:PRO:HA	47:BW:21:LEU:HB2	1.98	0.46
52:B7:9:ARG:CZ	52:B7:48:LYS:HB2	2.46	0.46
1:CA:1137:C:H5''	1:CA:1138:G:OP1	2.16	0.46
1:CA:1274:G:H2'	1:CA:1275:A:C8	2.49	0.46
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.50	0.46
3:CF:6:HIS:HA	3:CF:7:PRO:HD3	1.74	0.46
4:CG:23:GLY:C	4:CG:25:ARG:N	2.74	0.46
5:CH:9:LYS:HB3	5:CH:112:LEU:HD11	1.98	0.46
5:CH:27:ARG:HH11	5:CH:47:LYS:HZ1	1.64	0.46
9:CL:21:PRO:HA	9:CL:59:PHE:HA	1.97	0.46
12:CO:117:ARG:NE	12:CO:123:LYS:O	2.41	0.46
16:CS:65:GLN:HA	16:CS:66:PRO:HD3	1.74	0.46
24:DA:547:A:H3'	24:DA:548:A:C8	2.50	0.46
24:DA:662:G:OP1	34:DO:15:ARG:NE	2.49	0.46
24:DA:673:C:H5''	28:DF:81:PRO:HD2	1.97	0.46
24:DA:2128:C:H2'	24:DA:2129:C:Cl'	2.45	0.46
24:DA:2355:C:O2	45:D3:39:ARG:NH2	2.49	0.46
24:DA:2402:C:H4'	24:DA:2402:C:OP1	2.15	0.46
24:DA:2833:G:O2'	24:DA:2834:G:OP1	2.25	0.46
24:DA:2880:C:O2'	36:D0:90:ARG:NH1	2.40	0.46
34:DO:59:LEU:HG	53:D8:56:GLU:OE2	2.16	0.46
46:DZ:87:PRO:O	46:DZ:89:GLU:N	2.49	0.46
1:AA:131:C:OP1	1:AA:190:G:N2	2.49	0.45
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.51	0.45
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.81	0.45
3:AF:63:ASN:ND2	3:AF:65:ALA:H	2.13	0.45
11:AN:60:ALA:HA	11:AN:63:LEU:HD12	1.98	0.45
17:AT:95:TYR:HA	17:AT:98:LEU:HD12	1.98	0.45
22:AD:56:C:N4	22:AD:57:A:H62	2.13	0.45
24:BA:593:G:H4'	53:B8:61:LEU:HD22	1.98	0.45
24:BA:875:G:H2'	24:BA:876:C:O4'	2.16	0.45
24:BA:1131:G:C8	24:BA:2025:C:H4'	2.51	0.45
24:BA:1188:U:O2'	24:BA:1189:A:H5'	2.16	0.45
24:BA:1408:C:C2	24:BA:1595:G:N2	2.84	0.45
24:BA:1435:G:H1	24:BA:1557:C:H42	1.64	0.45
24:BA:2099:U:H2'	24:BA:2100:G:H8	1.82	0.45
24:BA:2231:C:H2'	24:BA:2232:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:31:LYS:HE3	26:BD:94:LEU:HD11	1.97	0.45
26:BD:68:LYS:HA	26:BD:70:TRP:CH2	2.51	0.45
27:BE:115:GLY:O	27:BE:119:ARG:HB2	2.16	0.45
27:BE:119:ARG:HG2	27:BE:160:TYR:HB2	1.98	0.45
36:B0:97:VAL:HG22	36:B0:114:VAL:HG22	1.98	0.45
44:BV:109:ALA:HB1	44:BV:174:VAL:HG13	1.97	0.45
52:B7:9:ARG:NE	52:B7:48:LYS:HB2	2.31	0.45
1:CA:804:U:H5''	1:CA:805:C:OP2	2.16	0.45
1:CA:1232:U:OP1	9:CL:124:GLN:HG3	2.16	0.45
6:CI:3:ARG:HB2	6:CI:93:SER:HB2	1.98	0.45
7:CJ:50:ILE:HD11	7:CJ:121:ALA:HA	1.98	0.45
9:CL:9:ARG:HB2	9:CL:14:VAL:HG12	1.97	0.45
12:CO:54:LYS:HB3	12:CO:54:LYS:HE2	1.78	0.45
12:CO:67:THR:OG1	12:CO:95:GLY:O	2.32	0.45
18:CU:22:VAL:O	18:CU:24:ALA:N	2.50	0.45
24:DA:171:G:H2'	24:DA:172:C:H6	1.81	0.45
24:DA:173:G:C2	24:DA:174:C:C2	3.04	0.45
24:DA:270(B):A:H62	24:DA:270(X):G:N2	2.13	0.45
24:DA:482:A:OP2	24:DA:507:A:N6	2.37	0.45
24:DA:769:G:H2'	24:DA:770:G:C8	2.51	0.45
24:DA:828:U:H4'	24:DA:831:G:N1	2.30	0.45
24:DA:901:A:H2'	24:DA:901:A:N3	2.30	0.45
24:DA:1083:U:O2	24:DA:1085:A:H2'	2.16	0.45
24:DA:1511:A:H2'	24:DA:1512:G:O4'	2.15	0.45
24:DA:2052:G:O4'	27:DE:142:GLY:HA3	2.15	0.45
24:DA:2802:G:C6	24:DA:2803:C:C2	3.04	0.45
25:DB:42:C:H4'	29:DG:67:LYS:HD2	1.96	0.45
26:DD:66:ASP:CG	26:DD:68:LYS:O	2.59	0.45
30:DH:20:ALA:HB1	30:DH:23:ARG:HH21	1.82	0.45
32:DM:112:LEU:HD12	32:DM:112:LEU:HA	1.75	0.45
34:DO:71:VAL:H	34:DO:72:PRO:HD2	1.80	0.45
35:DP:37:LEU:HD21	35:DP:130:LYS:HB3	1.98	0.45
40:D2:76:LYS:HZ1	40:D2:82:ARG:NH1	2.14	0.45
40:D2:76:LYS:HD2	40:D2:80:GLN:O	2.16	0.45
46:DZ:81:LYS:NZ	46:DZ:82:LEU:HB3	2.31	0.45
1:AA:75:C:C2	1:AA:96:G:N2	2.84	0.45
1:AA:304:U:H2'	1:AA:305:G:C8	2.51	0.45
1:AA:652:U:H1'	1:AA:653:A:C2	2.51	0.45
1:AA:960:U:H3	1:AA:1225:A:H1'	1.82	0.45
1:AA:983:A:H2	1:AA:984:C:C6	2.34	0.45
1:AA:1442:G:C6	1:AA:1446:A:N6	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:27:LYS:C	2:AE:29:ALA:H	2.23	0.45
3:AF:113:ALA:HB2	3:AF:202:ILE:HG13	1.97	0.45
4:AG:30:LYS:H	4:AG:34:GLU:HG3	1.81	0.45
8:AK:36:LEU:O	8:AK:38:ILE:N	2.50	0.45
10:AM:39:PRO:HA	10:AM:70:ARG:HA	1.96	0.45
17:AT:46:ASP:C	17:AT:48:GLU:H	2.24	0.45
24:BA:5:A:H2'	24:BA:6:A:C8	2.51	0.45
24:BA:723:G:H2'	24:BA:724:U:O4'	2.15	0.45
24:BA:982:C:O5'	24:BA:982:C:H6	1.98	0.45
24:BA:1007:C:H5''	32:BM:35:ARG:NH1	2.30	0.45
24:BA:1091:G:C2	24:BA:1092:C:C2	3.05	0.45
24:BA:1111:A:O2'	24:BA:1112:G:H4'	2.17	0.45
24:BA:1657:C:H2'	24:BA:1658:C:C6	2.51	0.45
24:BA:2516:G:O6	24:BA:2517:C:N4	2.49	0.45
24:BA:2611:U:OP2	24:BA:2611:U:H6	1.99	0.45
24:BA:2732:G:H3'	24:BA:2733:A:O4'	2.16	0.45
24:BA:2896:C:H2'	24:BA:2897:U:H6	1.81	0.45
27:BE:101:ARG:HD2	27:BE:171:GLU:HA	1.98	0.45
28:BF:50:SER:OG	28:BF:51:THR:N	2.49	0.45
30:BH:4:ILE:HB	30:BH:6:ARG:HG3	1.98	0.45
37:BQ:43:GLU:HB2	45:B3:49:LYS:HE2	1.98	0.45
47:BW:17:SER:HB2	47:BW:20:GLU:HG3	1.97	0.45
49:B4:37:SER:HB3	49:B4:41:PRO:O	2.16	0.45
1:CA:67:C:H2'	1:CA:68:G:H8	1.81	0.45
1:CA:642:A:N3	8:CK:113:SER:OG	2.44	0.45
1:CA:1290:G:H5'	7:CJ:35:LYS:CE	2.46	0.45
5:CH:76:ILE:HG22	5:CH:78:HIS:H	1.81	0.45
10:CM:54:PHE:CE2	10:CM:55:LYS:HD2	2.51	0.45
13:CP:91:ARG:HB2	13:CP:98:VAL:HG22	1.99	0.45
20:CW:43:LEU:O	20:CW:47:GLY:N	2.43	0.45
22:CD:48:C:N4	22:CD:59:A:C5	2.84	0.45
24:DA:389:G:OP1	46:DZ:25:LYS:HD2	2.16	0.45
24:DA:1171:G:N2	24:DA:1173:G:O2'	2.49	0.45
24:DA:1851:U:H2'	24:DA:1852:C:O4'	2.16	0.45
24:DA:2168:G:H2'	24:DA:2168:G:N3	2.31	0.45
24:DA:2646:C:OP2	24:DA:2732:G:O2'	2.20	0.45
24:DA:2778:A:HO2'	24:DA:2780:G:HO2'	1.61	0.45
25:DB:11:C:H3'	25:DB:12:C:C6	2.51	0.45
30:DH:144:VAL:O	30:DH:148:ILE:HG12	2.16	0.45
39:D1:66:ASN:HB2	39:D1:76:TYR:HB2	1.98	0.45
40:D2:2:PHE:O	40:D2:42:GLY:N	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:16:SER:HA	44:DV:19:ARG:HD2	1.98	0.45
1:AA:263:A:OP2	20:AW:79:ARG:NH1	2.49	0.45
1:AA:920:U:H2'	1:AA:921:U:C6	2.52	0.45
1:AA:1069:C:O2'	1:AA:1192:C:O2	2.28	0.45
3:AF:36:ASP:HB3	3:AF:40:ARG:NH1	2.30	0.45
9:AL:29:ASN:OD1	9:AL:64:THR:HA	2.15	0.45
9:AL:99:LEU:HD23	9:AL:101:PHE:HE2	1.81	0.45
11:AN:124:LYS:HG2	11:AN:125:PHE:CE1	2.51	0.45
17:AT:13:ASP:OD1	17:AT:13:ASP:N	2.42	0.45
19:AV:73:GLU:HB2	19:AV:74:PHE:CD1	2.52	0.45
22:AC:29:G:H1	22:AC:41:C:H42	1.64	0.45
24:BA:817:C:H4'	24:BA:932:G:C5	2.51	0.45
24:BA:857:C:OP1	45:B3:77:ARG:NH2	2.45	0.45
24:BA:1568:G:P	26:BD:63:ARG:HH22	2.38	0.45
24:BA:2399:G:H2'	24:BA:2400:G:O4'	2.15	0.45
24:BA:2636:U:OP1	27:BE:80:GLU:N	2.45	0.45
25:BB:103:U:O3'	44:BV:72:ARG:HD3	2.16	0.45
26:BD:35:LYS:NZ	26:BD:65:ILE:HA	2.31	0.45
29:BG:10:LYS:HE2	29:BG:175:LEU:O	2.17	0.45
34:BO:6:LEU:C	34:BO:7:ARG:CG	2.88	0.45
36:B0:70:LEU:C	36:B0:72:ASP:H	2.25	0.45
43:BU:9:LYS:HA	43:BU:27:VAL:HG22	1.97	0.45
43:BU:57:GLN:CD	43:BU:58:GLY:H	2.24	0.45
49:B4:43:TYR:O	49:B4:46:GLN:NE2	2.49	0.45
1:CA:601:C:H2'	1:CA:602:A:C8	2.51	0.45
1:CA:1178:G:N2	1:CA:1180:A:H3'	2.31	0.45
1:CA:1195:C:C4	1:CA:1197:G:C8	3.04	0.45
1:CA:1423:G:H5'	33:DN:49:ARG:HH12	1.81	0.45
3:CF:174:PRO:HB2	3:CF:177:THR:HB	1.99	0.45
6:CI:100:ASN:HB2	18:CU:23:LYS:HD2	1.98	0.45
11:CN:12:ARG:NH1	11:CN:13:GLN:O	2.49	0.45
11:CN:62:GLN:HB2	11:CN:93:GLN:OE1	2.16	0.45
24:DA:242:G:H5'	53:D8:62:LEU:HD13	1.97	0.45
24:DA:1601:G:O2'	52:D7:49:ARG:NH2	2.47	0.45
24:DA:2027:G:H2'	24:DA:2028:U:O4'	2.15	0.45
24:DA:2131:G:H5'	24:DA:2132:U:H5''	1.98	0.45
24:DA:2294:C:OP2	37:DQ:13:ARG:NH1	2.48	0.45
24:DA:2611:U:H2'	50:D5:3:LYS:HZ2	1.81	0.45
31:DK:90:GLY:O	31:DK:121:LYS:HG2	2.16	0.45
34:DO:47:ASP:HB3	34:DO:48:PRO:O	2.15	0.45
35:DP:118:LEU:HB2	35:DP:131:ILE:HD13	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:52:SER:OG	43:DU:56:PRO:CG	2.54	0.45
43:DU:81:LYS:HD3	43:DU:97:ARG:NH2	2.31	0.45
44:DV:63:ASP:HB3	44:DV:65:GLN:HG3	1.99	0.45
47:DW:31:GLU:HB2	47:DW:53:LEU:HD11	1.98	0.45
1:AA:129:U:H5'	17:AT:3:LYS:NZ	2.31	0.45
1:AA:188:U:H2'	1:AA:189:U:H5''	1.97	0.45
1:AA:812:C:H4'	1:AA:813:U:O5'	2.16	0.45
1:AA:944:G:O6	1:AA:1337:G:H8	2.00	0.45
1:AA:1282:C:OP2	1:AA:1282:C:H6	1.99	0.45
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.16	0.45
7:AJ:45:ASP:O	7:AJ:49:ILE:N	2.49	0.45
8:AK:82:HIS:HE1	8:AK:84:ARG:HD3	1.82	0.45
9:AL:15:ALA:HA	9:AL:65:VAL:HA	1.98	0.45
13:AP:20:THR:C	13:AP:22:ILE:H	2.24	0.45
18:AU:23:LYS:HD2	18:AU:58:LEU:HD23	1.99	0.45
20:AW:35:THR:HA	20:AW:38:LYS:HD2	1.99	0.45
22:AD:48:C:H5''	22:AD:49:G:H5'	1.97	0.45
24:BA:1210:A:OP1	24:BA:1211:U:O2'	2.31	0.45
24:BA:2157:G:N3	24:BA:2158:A:H2	2.14	0.45
24:BA:2467:C:H4'	35:BP:123:HIS:CG	2.51	0.45
26:BD:25:THR:HB	26:BD:82:ILE:H	1.82	0.45
27:BE:111:ARG:HD3	27:BE:160:TYR:CE2	2.52	0.45
28:BF:29:ASN:H	28:BF:112:MET:CE	2.30	0.45
34:BO:85:LEU:HD22	34:BO:120:ALA:HA	1.97	0.45
43:BU:63:LYS:HD2	43:BU:64:GLU:N	2.31	0.45
53:B8:7:HIS:CD2	53:B8:59:LYS:HD2	2.52	0.45
1:CA:280:C:H3'	1:CA:281:G:H5'	1.98	0.45
1:CA:428:G:C5	1:CA:430:A:C6	3.03	0.45
1:CA:1133:G:C6	1:CA:1134:G:C6	3.05	0.45
1:CA:1330:U:H4'	13:CP:23:TYR:HE1	1.77	0.45
1:CA:1378:C:H5	1:CA:1379:G:N9	2.13	0.45
1:CA:1392:G:N2	1:CA:1502:A:H8	2.13	0.45
3:CF:164:ARG:O	3:CF:165:THR:OG1	2.30	0.45
4:CG:61:LYS:HB2	4:CG:203:VAL:HG13	1.98	0.45
5:CH:50:GLU:HB2	5:CH:53:LEU:HD13	1.97	0.45
15:CR:82:ILE:O	15:CR:86:GLY:N	2.48	0.45
17:CT:85:VAL:HG12	17:CT:89:LEU:HG	1.99	0.45
22:CD:38:A:H2'	22:CD:39:C:O4'	2.17	0.45
24:DA:388:G:OP1	46:DZ:32:LYS:N	2.49	0.45
24:DA:1040:C:H2'	24:DA:1041:C:C6	2.51	0.45
24:DA:1416:G:H2'	24:DA:1417:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1823:G:P	26:DD:54:ARG:HH21	2.40	0.45
24:DA:2065:C:H2'	24:DA:2066:C:H6	1.79	0.45
24:DA:2186:G:C2	24:DA:2187:G:C8	3.05	0.45
24:DA:2542:A:O2'	24:DA:2543:G:C8	2.67	0.45
26:DD:182:LEU:O	26:DD:271:ILE:HG12	2.17	0.45
28:DF:125:LEU:HD12	28:DF:196:LEU:HD22	1.99	0.45
38:DR:51:ARG:HG2	38:DR:98:LYS:HE3	1.99	0.45
39:D1:75:ASN:HD22	39:D1:78:THR:CG2	2.30	0.45
43:DU:46:LYS:O	43:DU:47:LYS:C	2.59	0.45
43:DU:84:ARG:HB3	43:DU:95:LYS:HG3	1.97	0.45
44:DV:52:SER:C	44:DV:54:HIS:H	2.23	0.45
51:D6:44:ARG:HG3	51:D6:45:LYS:H	1.81	0.45
1:AA:238:G:P	17:AT:25:ARG:HH22	2.39	0.45
1:AA:587:G:C2	1:AA:755:G:C5	3.04	0.45
1:AA:1080:A:H5''	1:AA:1081:G:OP2	2.17	0.45
1:AA:1118:C:OP1	9:AL:9:ARG:HD3	2.16	0.45
1:AA:1531:A:H8	1:AA:1531:A:OP2	1.99	0.45
2:AE:21:ARG:HB3	2:AE:39:ILE:HA	1.98	0.45
3:AF:102:ASN:OD1	3:AF:102:ASN:N	2.49	0.45
5:AH:153:LYS:O	8:AK:64:LYS:NZ	2.41	0.45
6:AI:27:GLN:O	6:AI:31:GLU:HB2	2.17	0.45
18:AU:37:VAL:O	18:AU:40:LEU:N	2.48	0.45
24:BA:1568:G:P	26:BD:63:ARG:HH12	2.39	0.45
24:BA:1638:C:O2	24:BA:2698:U:O2'	2.29	0.45
24:BA:1935:G:H1'	24:BA:1964:G:N2	2.30	0.45
24:BA:2113:U:H5''	24:BA:2114:A:C8	2.52	0.45
24:BA:2811:G:OP1	27:BE:61:ARG:CD	2.55	0.45
31:BK:10:GLU:OE2	31:BK:11:ASN:N	2.46	0.45
33:BN:101:PRO:HB3	33:BN:122:LEU:HD12	1.99	0.45
50:B5:3:LYS:H	50:B5:3:LYS:HG3	1.43	0.45
1:CA:298:A:H8	1:CA:298:A:O5'	1.99	0.45
1:CA:924:C:H42	1:CA:1392:G:H1	1.65	0.45
1:CA:1272:G:H2'	1:CA:1273:G:C8	2.51	0.45
7:CJ:26:PHE:O	7:CJ:30:ILE:HG13	2.16	0.45
7:CJ:149:ARG:HD2	11:CN:59:TYR:CE1	2.52	0.45
8:CK:24:THR:OG1	8:CK:63:LEU:HD21	2.17	0.45
9:CL:86:VAL:HG23	9:CL:90:PRO:HA	1.98	0.45
13:CP:7:VAL:HG11	29:DG:115:ARG:NH2	2.32	0.45
15:CR:82:ILE:HD13	15:CR:83:GLU:H	1.81	0.45
22:CD:29:G:H2'	22:CD:30:G:H8	1.81	0.45
24:DA:270(R):G:H2'	24:DA:270(S):G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:289:A:H5'	24:DA:290:G:OP2	2.17	0.45
24:DA:363:G:C6	24:DA:363(A):A:C5	3.05	0.45
24:DA:565:C:H4'	24:DA:1253:A:N6	2.31	0.45
24:DA:637:A:P	34:DO:116:GLY:H	2.39	0.45
24:DA:1628:G:H2'	24:DA:1629:U:C6	2.51	0.45
24:DA:2219:G:OP1	26:DD:172:TYR:OH	2.27	0.45
24:DA:2801:A:OP1	24:DA:2895:U:O2'	2.17	0.45
24:DA:2883:A:H3'	24:DA:2884:U:H5'	1.98	0.45
29:DG:25:TYR:OH	29:DG:168:GLU:OE2	2.34	0.45
30:DH:18:GLU:HB2	30:DH:25:LYS:HD2	1.98	0.45
30:DH:45:VAL:HA	30:DH:50:VAL:HA	1.98	0.45
40:D2:62:LEU:HD21	40:D2:95:LEU:HB2	1.98	0.45
47:DW:33:MET:HG2	47:DW:37:PHE:CE1	2.52	0.45
1:AA:110:C:O2'	16:AS:25:ARG:O	2.33	0.45
1:AA:145:G:H1	1:AA:177:C:N4	2.14	0.45
1:AA:639:G:H2'	1:AA:640:A:C8	2.50	0.45
1:AA:1165:C:H2'	1:AA:1166:G:O4'	2.17	0.45
1:AA:1200:C:H4'	1:AA:1201:A:H5''	1.98	0.45
1:AA:1378:C:O2	7:AJ:76:ARG:NH1	2.49	0.45
4:AG:8:VAL:HG13	4:AG:21:LEU:HD13	1.97	0.45
6:AI:44:GLY:C	6:AI:60:PHE:H	2.23	0.45
9:AL:24:GLY:N	9:AL:57:GLY:O	2.49	0.45
20:AW:12:ALA:O	20:AW:15:ARG:HB2	2.16	0.45
20:AW:97:ALA:O	20:AW:99:LEU:N	2.49	0.45
24:BA:142:G:O3'	42:BT:35:THR:HG21	2.16	0.45
24:BA:320:A:H2'	28:BF:136:THR:HG21	1.99	0.45
24:BA:411:G:C2	34:BO:71:VAL:CG2	3.00	0.45
24:BA:588:U:C2	28:BF:90:PHE:CD1	3.05	0.45
24:BA:976:C:H2'	24:BA:977:G:H8	1.82	0.45
24:BA:1091:G:C6	24:BA:1092:C:C4	3.05	0.45
24:BA:1492:G:H1	24:BA:1498:C:H42	1.63	0.45
24:BA:1771:C:O2'	24:BA:1786:A:H8	1.99	0.45
24:BA:2141:G:H2'	24:BA:2142:C:C6	2.52	0.45
24:BA:2401:U:H5''	24:BA:2402:C:OP2	2.16	0.45
24:BA:2755:C:O2'	24:BA:2756:U:H2'	2.16	0.45
28:BF:197:ASP:O	28:BF:201:VAL:HG12	2.17	0.45
43:BU:86:ARG:HD3	43:BU:95:LYS:HD3	1.98	0.45
1:CA:339:C:H2'	1:CA:340:U:H5'	1.99	0.45
1:CA:422:C:O2'	1:CA:423:G:H5''	2.17	0.45
1:CA:539:A:H2'	1:CA:540:G:C8	2.51	0.45
1:CA:1054:C:H2'	55:CA:1800:T1C:H9	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1130:A:H5'	9:CL:20:ARG:NH2	2.31	0.45
4:CG:101:LEU:O	4:CG:104:VAL:N	2.47	0.45
7:CJ:66:VAL:HG12	7:CJ:70:LYS:HZ2	1.82	0.45
8:CK:30:ARG:O	8:CK:34:GLU:HG2	2.16	0.45
9:CL:82:ALA:O	9:CL:86:VAL:HG12	2.16	0.45
19:CV:65:ASN:HD22	49:D4:55:ARG:HH11	1.65	0.45
22:CD:22:G:HO2'	22:CD:23:C:P	2.37	0.45
24:DA:142:G:H2'	24:DA:143:C:C6	2.52	0.45
24:DA:832:G:H5'	34:DO:45:LEU:HD11	1.97	0.45
24:DA:974:G:O2'	24:DA:975:G:N7	2.34	0.45
24:DA:2472:G:N1	24:DA:2477:C:OP1	2.50	0.45
24:DA:2542:A:HO2'	24:DA:2543:G:P	2.39	0.45
24:DA:2612:C:P	50:D5:3:LYS:HZ3	2.40	0.45
27:DE:50:GLY:HA2	27:DE:78:LEU:HD22	1.99	0.45
27:DE:103:ASP:N	27:DE:200:GLU:O	2.45	0.45
29:DG:122:PRO:HB3	29:DG:170:ARG:HH11	1.81	0.45
37:DQ:83:LYS:HB3	37:DQ:109:GLY:N	2.32	0.45
44:DV:23:LYS:HA	44:DV:23:LYS:HD3	1.80	0.45
53:D8:52:LYS:H	53:D8:52:LYS:HG2	1.51	0.45
1:AA:357:G:OP1	1:AA:366:C:O2'	2.31	0.45
1:AA:370:C:O2'	1:AA:482:A:O2'	2.27	0.45
1:AA:1000:A:O2'	24:DA:2137:C:OP1	2.32	0.45
1:AA:1382:C:C6	7:AJ:79:ARG:NH2	2.85	0.45
9:AL:41:VAL:C	9:AL:43:ALA:H	2.23	0.45
9:AL:47:LEU:HD13	9:AL:47:LEU:H	1.82	0.45
9:AL:116:LYS:HB3	9:AL:121:ARG:O	2.17	0.45
21:AX:17:THR:O	21:AX:22:ARG:NH1	2.35	0.45
22:AD:53:G:H22	22:AD:61:C:H1'	1.81	0.45
24:BA:851:U:OP1	48:BX:49:LYS:NZ	2.39	0.45
24:BA:1063:G:O6	24:BA:1075:C:N4	2.50	0.45
24:BA:1405:U:H2'	24:BA:1406:U:C6	2.51	0.45
24:BA:1508:A:H4'	24:BA:1509:C:Cl'	2.47	0.45
24:BA:2074:U:H2'	24:BA:2075:U:C6	2.51	0.45
24:BA:2190:G:N2	24:BA:2191:G:H1'	2.32	0.45
24:BA:2199:A:N3	24:BA:2199:A:H2'	2.32	0.45
24:BA:2315:G:H2'	24:BA:2316:C:C6	2.52	0.45
24:BA:2441:C:OP2	24:BA:2586:C:O2'	2.30	0.45
24:BA:2811:G:C5'	27:BE:60:ASN:HD22	2.22	0.45
33:BN:75:SER:HB2	38:BR:74:ARG:HH12	1.82	0.45
44:BV:5:LEU:HD22	44:BV:47:VAL:HG11	1.99	0.45
45:B3:36:ILE:CD1	45:B3:39:ARG:HG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:64:ALA:HA	46:BZ:67:ILE:HG13	1.98	0.45
1:CA:1291:G:H4'	9:CL:38:GLN:O	2.17	0.45
3:CF:73:PRO:O	3:CF:76:VAL:N	2.49	0.45
3:CF:159:GLY:HA2	3:CF:193:TYR:CZ	2.51	0.45
4:CG:14:ARG:HH11	4:CG:14:ARG:HG3	1.82	0.45
8:CK:6:ILE:O	8:CK:10:LEU:HG	2.17	0.45
10:CM:48:THR:CA	10:CM:62:HIS:HB3	2.47	0.45
19:CV:66:MET:HA	19:CV:67:VAL:C	2.40	0.45
22:CD:22:G:O2'	22:CD:23:C:P	2.75	0.45
24:DA:833:U:H2'	24:DA:834:C:C6	2.52	0.45
24:DA:1017:G:H1	24:DA:1145:C:H42	1.64	0.45
24:DA:1028:A:N6	24:DA:1125:G:H2'	2.32	0.45
24:DA:1171:G:N1	24:DA:1174:A:N1	2.64	0.45
24:DA:1798:U:H5'	26:DD:259:THR:OG1	2.16	0.45
24:DA:2008:C:H2'	24:DA:2009:G:H8	1.81	0.45
24:DA:2113:U:OP1	24:DA:2118:U:H5'	2.16	0.45
24:DA:2659:G:OP1	30:DH:158:HIS:NE2	2.50	0.45
25:DB:1(M):A:N6	25:DB:117:G:O6	2.50	0.45
27:DE:101:ARG:HD3	27:DE:171:GLU:HA	1.99	0.45
28:DF:64:ILE:O	28:DF:65:TRP:CD1	2.69	0.45
34:DO:3:LEU:C	34:DO:5:ASP:H	2.25	0.45
38:DR:1:MET:HE2	38:DR:1:MET:HA	1.98	0.45
45:D3:70:GLN:OE1	45:D3:72:ARG:HD2	2.17	0.45
48:DX:19:GLN:HE22	48:DX:52:HIS:HE1	1.63	0.45
1:AA:528:C:N4	12:AO:49:ASN:HD22	2.09	0.45
1:AA:690:G:H2'	1:AA:691:G:O4'	2.17	0.45
1:AA:1115:C:H2'	1:AA:1116:C:C6	2.50	0.45
1:AA:1130:A:H62	1:AA:1144:G:H21	1.63	0.45
1:AA:1348:U:H5	1:AA:1373:G:C2	2.35	0.45
4:AG:92:VAL:HG22	4:AG:96:LEU:HD21	1.99	0.45
16:AS:22:THR:OG1	16:AS:23:ASP:N	2.49	0.45
24:BA:664:C:P	34:BO:18:ARG:HH21	2.40	0.45
24:BA:1510:A:O2'	24:BA:1511:A:N7	2.49	0.45
24:BA:2345:G:N3	24:BA:2381:C:H2'	2.32	0.45
25:BB:5:C:OP1	25:BB:61:G:O2'	2.29	0.45
25:BB:103:U:O2'	44:BV:72:ARG:HG2	2.15	0.45
27:BE:12:THR:OG1	27:BE:13:ARG:N	2.50	0.45
32:BM:62:VAL:HG22	32:BM:63:THR:H	1.82	0.45
35:BP:75:THR:OG1	35:BP:88:GLY:HA3	2.17	0.45
44:BV:103:ARG:HG3	44:BV:136:PHE:CG	2.51	0.45
48:BX:12:PRO:HB2	48:BX:20:LYS:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B8:29:LYS:HB3	53:B8:44:LYS:HG2	1.98	0.45
1:CA:857:C:H2'	1:CA:858:G:O4'	2.17	0.45
1:CA:1072:G:O6	1:CA:1102:A:N6	2.50	0.45
1:CA:1133:G:H1	1:CA:1141:C:N4	2.15	0.45
3:CF:159:GLY:HA2	3:CF:193:TYR:CE1	2.52	0.45
4:CG:12:CYS:CB	4:CG:26:CYS:SG	3.05	0.45
11:CN:89:ALA:C	11:CN:91:ARG:H	2.25	0.45
13:CP:13:LYS:NZ	13:CP:21:TYR:OH	2.50	0.45
20:CW:67:ALA:HA	20:CW:73:HIS:H	1.82	0.45
22:CD:9:G:H4'	22:CD:10:G:OP2	2.17	0.45
22:CD:12:G:N1	22:CD:23:C:N3	2.52	0.45
22:CD:29:G:C6	22:CD:30:G:C6	3.05	0.45
22:CD:38:A:C6	22:CD:39:C:C2	3.05	0.45
24:DA:270(V):G:H2'	24:DA:270(W):G:H8	1.81	0.45
24:DA:654(C):G:H2'	24:DA:654(D):G:O4'	2.16	0.45
24:DA:929:G:O5'	24:DA:929:G:H8	2.00	0.45
24:DA:996:A:O4'	39:D1:92:ARG:NH2	2.50	0.45
24:DA:1758:G:H5''	24:DA:1758:G:N3	2.31	0.45
24:DA:2516:G:C6	24:DA:2517:C:N4	2.85	0.45
24:DA:2593:U:H2'	24:DA:2594:C:C6	2.52	0.45
24:DA:2864:G:OP1	38:DR:119:LYS:HD2	2.16	0.45
25:DB:40:U:H3'	25:DB:41:U:H5'	1.99	0.45
34:DO:49:ARG:HG3	53:D8:55:ALA:O	2.16	0.45
1:AA:41:G:H2'	1:AA:42:G:H8	1.81	0.45
1:AA:102:G:O2'	1:AA:151:A:N3	2.40	0.45
1:AA:124:G:H1	1:AA:237:C:H42	1.65	0.45
1:AA:316:G:OP2	1:AA:351:G:O2'	2.34	0.45
1:AA:739:C:OP1	15:AR:2:PRO:HD3	2.17	0.45
1:AA:976:G:P	14:AQ:32:SER:H	2.39	0.45
2:AE:76:GLN:CD	2:AE:206:ASP:HB3	2.42	0.45
2:AE:144:ARG:HG3	2:AE:145:LEU:N	2.32	0.45
3:AF:45:LYS:HB2	3:AF:45:LYS:NZ	2.32	0.45
6:AI:99:ALA:HB3	18:AU:29:PHE:CE1	2.52	0.45
10:AM:75:ILE:O	10:AM:77:PRO:HD3	2.17	0.45
22:AD:5:G:C2	22:AD:69:C:C2	3.05	0.45
24:BA:6:A:H2'	24:BA:7:G:O4'	2.16	0.45
24:BA:1063:G:H2'	24:BA:1064:C:C6	2.52	0.45
24:BA:1591:G:H2'	24:BA:1592:C:C6	2.52	0.45
24:BA:1820:U:C4	26:BD:160:GLY:HA3	2.52	0.45
24:BA:2012:G:OP1	41:BS:11:ARG:NH2	2.38	0.45
24:BA:2124:G:H2'	24:BA:2125:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2294:C:P	37:BQ:89:ARG:HH22	2.40	0.45
24:BA:2334:G:H5'	37:BQ:9:ARG:HG2	1.98	0.45
25:BB:39:A:C2	25:BB:40:U:C4	3.05	0.45
25:BB:80:U:O2'	25:BB:81:G:H5''	2.17	0.45
26:BD:31:LYS:O	26:BD:33:LEU:N	2.50	0.45
30:BH:159:GLU:O	30:BH:159:GLU:CG	2.65	0.45
31:BK:29:TYR:O	31:BK:32:PRO:HD2	2.16	0.45
37:BQ:15:ARG:HG3	37:BQ:19:LYS:HD2	1.99	0.45
37:BQ:100:ALA:HA	37:BQ:103:GLU:HB2	1.99	0.45
49:B4:48:ARG:NH2	49:B4:49:PHE:O	2.50	0.45
1:CA:1048:G:OP2	14:CQ:3:ARG:NH2	2.36	0.45
1:CA:1179:A:N3	9:CL:104:ARG:NH1	2.65	0.45
4:CG:19:LEU:HD23	4:CG:20:TYR:H	1.82	0.45
4:CG:68:TYR:OH	4:CG:98:GLU:OE1	2.18	0.45
4:CG:162:LEU:HD23	4:CG:162:LEU:HA	1.81	0.45
6:CI:42:GLU:OE1	6:CI:59:TYR:OH	2.29	0.45
10:CM:12:ASP:O	10:CM:15:THR:OG1	2.29	0.45
21:CX:9:ARG:O	21:CX:13:ILE:HG13	2.17	0.45
24:DA:676:A:H8	24:DA:2069:G:N2	2.01	0.45
24:DA:910:A:C5	35:DP:13:GLN:HG3	2.51	0.45
24:DA:1039:G:N1	24:DA:1116:C:N3	2.52	0.45
24:DA:1210:A:H5'	24:DA:1212:G:H5'	1.99	0.45
24:DA:1655:A:H4'	27:DE:115:GLY:N	2.32	0.45
24:DA:2376:A:H8	24:DA:2376:A:OP1	2.00	0.45
24:DA:2688:U:C5	24:DA:2720:U:OP2	2.69	0.45
24:DA:2694:G:O2'	24:DA:2695:C:H5'	2.17	0.45
27:DE:11:MET:CB	27:DE:24:THR:HA	2.45	0.45
27:DE:41:LYS:HB2	27:DE:41:LYS:HE3	1.75	0.45
27:DE:175:VAL:HG22	27:DE:177:PRO:HD3	1.98	0.45
38:DR:116:ALA:HB1	38:DR:121:ILE:HD11	1.99	0.45
46:DZ:46:LEU:HA	46:DZ:46:LEU:HD12	1.85	0.45
47:DW:24:LEU:O	47:DW:28:LYS:HG2	2.16	0.45
49:D4:53:GLU:CD	49:D4:58:ARG:HB2	2.42	0.45
51:D6:26:ASN:HD22	51:D6:51:GLU:CD	2.25	0.45
1:AA:143:A:H5''	1:AA:144:G:O5'	2.17	0.45
1:AA:652:U:H1'	1:AA:653:A:H2	1.81	0.45
1:AA:1152:A:H4'	10:AM:13:HIS:CD2	2.51	0.45
1:AA:1381:U:H2'	7:AJ:79:ARG:HG3	1.99	0.45
1:AA:1418:A:C2	1:AA:1483:A:C2	3.05	0.45
3:AF:20:SER:CB	3:AF:40:ARG:HH22	2.21	0.45
5:AH:144:THR:H	5:AH:147:ASP:HB2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:102:ARG:HG3	12:AO:120:TYR:HA	1.99	0.45
13:AP:17:VAL:O	13:AP:20:THR:OG1	2.29	0.45
15:AR:39:LEU:HD23	15:AR:39:LEU:HA	1.86	0.45
20:AW:101:GLY:O	20:AW:104:LEU:N	2.49	0.45
24:BA:795:C:H2'	24:BA:796:C:C6	2.52	0.45
24:BA:984:A:H5''	24:BA:985:C:H5	1.81	0.45
24:BA:1063:G:O6	24:BA:1074:G:N1	2.49	0.45
24:BA:1411:C:N4	24:BA:1591:G:H1	2.09	0.45
24:BA:1591:G:H2'	24:BA:1592:C:H6	1.81	0.45
24:BA:2331:G:O2'	45:B3:43:THR:HG22	2.17	0.45
24:BA:2751:G:O2'	24:BA:2752:C:P	2.75	0.45
24:BA:2823:A:OP1	27:BE:113:PHE:HB2	2.16	0.45
28:BF:188:ARG:HG2	34:BO:3:LEU:HD11	1.99	0.45
29:BG:49:ASP:OD1	29:BG:50:ALA:N	2.49	0.45
31:BK:135:GLU:N	31:BK:135:GLU:OE2	2.49	0.45
34:BO:70:GLN:O	34:BO:71:VAL:O	2.35	0.45
38:BR:3:ARG:HB2	38:BR:7:ILE:HG13	1.99	0.45
39:B1:44:ASN:HD21	40:B2:75:PHE:N	2.15	0.45
1:CA:188:U:O2'	1:CA:189:U:H5'	2.17	0.45
1:CA:345:C:H1'	1:CA:346:G:N1	2.32	0.45
1:CA:1220:G:H21	19:CV:54:GLY:HA2	1.82	0.45
2:CE:4:GLU:HB3	2:CE:5:ILE:H	1.63	0.45
2:CE:87:ARG:HE	2:CE:87:ARG:HB3	1.49	0.45
2:CE:118:LEU:HD11	2:CE:141:GLU:HB3	1.98	0.45
3:CF:8:ILE:HD11	3:CF:184:TYR:HB3	1.98	0.45
7:CJ:71:PRO:HD3	7:CJ:103:TRP:CZ3	2.52	0.45
12:CO:27:LEU:HB3	12:CO:33:ARG:NE	2.32	0.45
13:CP:14:ARG:HG2	13:CP:16:ASP:OD1	2.17	0.45
13:CP:92:HIS:HE1	13:CP:98:VAL:HG21	1.79	0.45
24:DA:639:U:H2'	24:DA:640:C:C6	2.51	0.45
24:DA:1006:C:C2	24:DA:1138:G:N2	2.85	0.45
24:DA:1396:U:O2	24:DA:1396:U:H2'	2.17	0.45
24:DA:2115:G:H3'	24:DA:2115:G:OP2	2.16	0.45
27:DE:21:VAL:HG13	27:DE:22:PRO:HD2	1.97	0.45
28:DF:170:LEU:HA	28:DF:171:PRO:HD2	1.85	0.45
31:DK:8:PRO:HD3	31:DK:15:VAL:HG22	1.98	0.45
33:DN:70:LYS:NZ	33:DN:70:LYS:HB3	2.32	0.45
34:DO:36:LYS:HZ3	34:DO:36:LYS:HG2	1.67	0.45
44:DV:151:HIS:N	44:DV:154:ASP:OD2	2.49	0.45
49:D4:15:ILE:H	49:D4:15:ILE:HG13	1.46	0.45
51:D6:39:TYR:CE2	51:D6:40:CYS:C	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:129:U:H3	1:AA:232:G:H1	1.65	0.44
1:AA:129(A):G:C2	1:AA:191(A):G:C8	3.05	0.44
1:AA:155:C:O2	1:AA:166:G:N1	2.50	0.44
1:AA:237:C:H4'	17:AT:25:ARG:NH1	2.32	0.44
1:AA:580:U:H2'	1:AA:581:G:O4'	2.16	0.44
1:AA:1220:G:N2	19:AV:54:GLY:O	2.49	0.44
1:AA:1318:A:H5''	19:AV:10:PHE:CD2	2.52	0.44
1:AA:1464:G:H2'	1:AA:1465:C:C6	2.52	0.44
19:AV:6:LYS:N	19:AV:6:LYS:HD2	2.31	0.44
22:AD:37:A:H2'	22:AD:38:A:O4'	2.17	0.44
24:BA:612:G:O2'	24:BA:616:A:N1	2.48	0.44
24:BA:654(N):G:C6	24:BA:654(O):G:C5	3.05	0.44
24:BA:742:G:H2'	24:BA:743:G:C8	2.52	0.44
24:BA:886:C:C2	24:BA:887:A:H1'	2.52	0.44
24:BA:1069:A:O3'	24:BA:1074:G:N1	2.50	0.44
24:BA:1534:G:H2'	24:BA:1538:G:H22	1.81	0.44
24:BA:1636:C:H2'	24:BA:1637:A:C8	2.52	0.44
24:BA:2126:A:N6	24:BA:2163:C:H4'	2.32	0.44
24:BA:2238:G:H2'	24:BA:2238:G:N3	2.32	0.44
24:BA:2751:G:N2	30:BH:3:ARG:HD2	2.25	0.44
28:BF:77:ASP:HB2	28:BF:79:GLY:H	1.81	0.44
28:BF:179:GLU:OE1	28:BF:179:GLU:N	2.38	0.44
30:BH:41:MET:H	30:BH:41:MET:HE2	1.83	0.44
31:BK:52:ARG:HA	31:BK:55:ALA:HB3	1.99	0.44
39:B1:90:VAL:O	40:B2:11:GLN:NE2	2.26	0.44
1:CA:192:U:H2'	1:CA:193:C:H6	1.82	0.44
1:CA:579:G:C6	1:CA:580:U:C4	3.05	0.44
1:CA:673:G:H2'	1:CA:674:G:C8	2.52	0.44
3:CF:28:GLN:OE1	3:CF:28:GLN:N	2.50	0.44
4:CG:26:CYS:HA	4:CG:31:CYS:HB2	1.97	0.44
7:CJ:86:GLN:NE2	22:CD:40:C:O4'	2.46	0.44
7:CJ:149:ARG:O	7:CJ:149:ARG:HD3	2.17	0.44
8:CK:54:ASP:OD1	8:CK:54:ASP:N	2.49	0.44
10:CM:15:THR:HG21	10:CM:92:THR:HG21	1.99	0.44
13:CP:114:ARG:O	13:CP:116:THR:N	2.51	0.44
20:CW:99:LEU:HB2	20:CW:100:ILE:H	1.45	0.44
24:DA:83:G:N1	24:DA:102:G:H2'	2.32	0.44
24:DA:270(R):G:H2'	24:DA:270(S):G:H8	1.80	0.44
24:DA:307:G:N2	24:DA:309:G:H3'	2.32	0.44
24:DA:1052:C:C2	24:DA:1107:G:N2	2.85	0.44
24:DA:1054:A:H8	24:DA:1054:A:OP2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1110:G:H2'	24:DA:1111:A:C8	2.52	0.44
24:DA:1270:C:H5''	24:DA:1271:G:O5'	2.17	0.44
24:DA:1416:G:O2'	24:DA:1417:C:O5'	2.29	0.44
24:DA:1441:G:H2'	24:DA:1442:G:H8	1.82	0.44
24:DA:1540:G:C2	24:DA:1541:U:C2	3.05	0.44
24:DA:1729:A:O2'	24:DA:1730:U:H5''	2.17	0.44
24:DA:2105:C:H2'	24:DA:2106:G:H8	1.83	0.44
24:DA:2321:G:H2'	24:DA:2321:G:N3	2.32	0.44
27:DE:101:ARG:O	27:DE:201:THR:OG1	2.35	0.44
28:DF:67:GLN:HE21	28:DF:67:GLN:HB2	1.60	0.44
30:DH:8:PRO:C	30:DH:9:ILE:HD13	2.42	0.44
30:DH:131:VAL:HG12	30:DH:132:ARG:O	2.17	0.44
31:DK:79:ILE:HB	31:DK:142:VAL:HB	1.98	0.44
31:DK:92:VAL:HG23	31:DK:96:ASP:HB2	1.99	0.44
31:DK:131:LYS:HB3	31:DK:132:PRO:HA	1.99	0.44
32:DM:6:PRO:HB3	32:DM:41:ASP:OD1	2.17	0.44
32:DM:69:GLN:O	32:DM:71:ILE:HG23	2.17	0.44
47:DW:4:SER:HB3	47:DW:5:GLU:OE2	2.16	0.44
51:D6:28:ARG:HA	51:D6:28:ARG:HD3	1.84	0.44
53:D8:52:LYS:HB3	53:D8:52:LYS:HE2	1.78	0.44
1:AA:344:A:H5''	1:AA:345:C:OP2	2.17	0.44
1:AA:439:A:H2'	1:AA:440:A:O4'	2.16	0.44
1:AA:1036:G:C6	1:AA:1037:C:C2	3.05	0.44
1:AA:1345:U:H4'	1:AA:1346:A:H5'	1.99	0.44
2:AE:189:ASP:OD1	2:AE:190:THR:N	2.50	0.44
4:AG:158:ILE:O	4:AG:162:LEU:N	2.37	0.44
5:AH:95:ALA:O	5:AH:98:THR:OG1	2.30	0.44
7:AJ:46:ALA:O	7:AJ:50:ILE:HG12	2.17	0.44
24:BA:489:G:N7	41:BS:49:LYS:NZ	2.64	0.44
24:BA:860:U:H5	24:BA:917:A:N1	2.16	0.44
24:BA:1080:A:C6	24:BA:1081:U:C4	3.05	0.44
24:BA:1100:C:C4	24:BA:1101:U:C4	3.05	0.44
24:BA:1142:U:H5'	24:BA:1142(A):A:C8	2.52	0.44
24:BA:1479:G:H2'	24:BA:1480:G:C8	2.50	0.44
24:BA:2163:C:OP1	24:BA:2172:U:H5	2.01	0.44
24:BA:2298:A:H62	24:BA:2318:G:H8	1.65	0.44
27:BE:119:ARG:HD2	27:BE:120:TRP:CE2	2.51	0.44
31:BK:94:ALA:HB1	31:BK:111:PRO:HB2	1.98	0.44
1:CA:129(A):G:C2	1:CA:188:U:O2'	2.70	0.44
1:CA:181:G:H4'	1:CA:182:U:H5'	1.98	0.44
1:CA:250:A:H4'	1:CA:251:G:O5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.17	0.44
2:CE:34:ALA:O	2:CE:41:ILE:N	2.51	0.44
2:CE:97:TRP:CH2	2:CE:173:ALA:HA	2.52	0.44
2:CE:189:ASP:O	2:CE:191:ASP:N	2.50	0.44
3:CF:8:ILE:HD12	3:CF:16:ARG:CD	2.46	0.44
19:CV:30:LEU:HD12	19:CV:30:LEU:O	2.17	0.44
22:CD:16:C:H5''	22:CD:17:C:C5	2.40	0.44
24:DA:528:A:C2	24:DA:2042:A:H2'	2.52	0.44
24:DA:916:G:O2'	24:DA:917:A:O4'	2.36	0.44
24:DA:1011:G:C2	24:DA:1151:G:C2	3.05	0.44
24:DA:1276:A:O2'	36:D0:12:ARG:NH2	2.48	0.44
24:DA:1614:A:C6	41:DS:91:GLY:HA2	2.52	0.44
24:DA:2016:U:H1'	50:D5:6:VAL:HG13	1.99	0.44
24:DA:2750:A:OP2	30:DH:62:LYS:NZ	2.40	0.44
24:DA:2776:A:OP1	24:DA:2776:A:H3'	2.17	0.44
27:DE:2:LYS:NZ	27:DE:95:ILE:O	2.50	0.44
28:DF:130:ALA:H	28:DF:142:TRP:CD1	2.35	0.44
32:DM:67:LEU:HA	32:DM:87:LEU:HB3	1.98	0.44
32:DM:95:PRO:O	32:DM:98:VAL:HG22	2.18	0.44
33:DN:25:LEU:HB2	33:DN:38:VAL:HG23	1.98	0.44
33:DN:87:ILE:HG23	33:DN:88:ASN:O	2.17	0.44
37:DQ:19:LYS:O	37:DQ:21:THR:HG22	2.18	0.44
37:DQ:83:LYS:HZ2	37:DQ:84:GLN:H	1.65	0.44
37:DQ:104:GLY:C	37:DQ:106:ARG:HG2	2.42	0.44
38:DR:91:ARG:NH1	38:DR:124:ASP:OD1	2.47	0.44
39:D1:65:ILE:O	39:D1:68:ALA:N	2.50	0.44
48:DX:22:ALA:O	48:DX:26:LEU:HG	2.17	0.44
49:D4:31:ILE:HG22	49:D4:32:TYR:HB2	1.98	0.44
1:AA:964:A:N3	1:AA:969:A:O2'	2.32	0.44
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.31	0.44
55:AA:1837:T1C:H433	55:AA:1837:T1C:H41	1.74	0.44
2:AE:60:ASP:HB2	2:AE:64:ARG:HH22	1.82	0.44
3:AF:11:ARG:HH21	3:AF:180:ALA:HB3	1.82	0.44
10:AM:61:GLU:OE1	14:AQ:58:LYS:HE2	2.17	0.44
22:AC:47:U:H1'	22:AC:48:C:H6	1.82	0.44
22:AD:34:C:H2'	22:AD:35:A:H8	1.82	0.44
22:AD:59:A:C6	22:AD:60:U:C4	3.04	0.44
24:BA:1093:G:H1'	24:BA:1099:G:C2	2.51	0.44
24:BA:1344:G:H4'	24:BA:1384:A:C5	2.52	0.44
24:BA:1638:C:H5''	24:BA:2710:C:O2'	2.17	0.44
24:BA:1771:C:HO2'	24:BA:1786:A:Cl'	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:134:ARG:HG3	26:BD:135:PHE:CD1	2.52	0.44
30:BH:23:ARG:HB3	30:BH:36:PRO:HA	2.00	0.44
33:BN:98:VAL:HG12	33:BN:117:LEU:CB	2.47	0.44
34:BO:78:PRO:HB3	34:BO:111:ARG:HD2	1.99	0.44
44:BV:97:GLU:HG2	44:BV:125:LEU:HD11	1.99	0.44
1:CA:932:C:OP2	7:CJ:3:ARG:HB3	2.18	0.44
1:CA:1237:C:H42	1:CA:1337:G:H1	1.63	0.44
2:CE:19:HIS:HB3	2:CE:20:GLU:H	1.46	0.44
9:CL:32:ASP:OD1	9:CL:33:PHE:N	2.50	0.44
10:CM:16:LEU:C	10:CM:18:ALA:H	2.26	0.44
22:CD:72:A:H2'	22:CD:73:A:O4'	2.17	0.44
24:DA:126:A:O5'	52:D7:19:ARG:HG3	2.18	0.44
24:DA:550:G:O2'	24:DA:1220:A:N3	2.37	0.44
24:DA:636:G:OP2	34:DO:113:LYS:NZ	2.37	0.44
24:DA:649:G:H2'	24:DA:650:C:O4'	2.17	0.44
24:DA:977:G:N3	24:DA:1001:A:H2	2.16	0.44
24:DA:2017:U:O2	50:D5:10:LYS:HB2	2.17	0.44
24:DA:2474:C:H5''	24:DA:2475:C:C5	2.53	0.44
24:DA:2658:C:O3'	30:DH:158:HIS:NE2	2.51	0.44
30:DH:97:ARG:O	30:DH:99:VAL:N	2.49	0.44
32:DM:14:VAL:HA	32:DM:135:PRO:HD2	1.98	0.44
34:DO:65:ARG:HH22	53:D8:47:LYS:HE2	1.82	0.44
39:D1:91:ASP:O	39:D1:92:ARG:HG2	2.17	0.44
43:DU:32:PRO:C	43:DU:34:LYS:H	2.25	0.44
44:DV:100:VAL:HG13	44:DV:101:PRO:HD2	1.99	0.44
1:AA:129(A):G:C2	1:AA:188:U:O2'	2.70	0.44
1:AA:412:A:O2'	1:AA:413:G:OP2	2.21	0.44
1:AA:438:G:O2'	1:AA:496:A:N6	2.50	0.44
1:AA:1060:C:C5'	10:AM:51:ARG:HG2	2.42	0.44
1:AA:1157:A:H62	1:AA:1178:G:N2	2.14	0.44
1:AA:1157:A:N1	1:AA:1180:A:H2'	2.33	0.44
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.52	0.44
1:AA:1350:A:H61	1:AA:1372:U:H3	1.65	0.44
2:AE:230:VAL:HG12	2:AE:231:GLU:N	2.33	0.44
3:AF:77:ILE:HG12	3:AF:84:ILE:HD12	2.00	0.44
4:AG:163:GLU:O	4:AG:165:MET:N	2.50	0.44
7:AJ:23:VAL:O	7:AJ:27:ILE:N	2.45	0.44
24:BA:81:G:H1	24:BA:105:C:H42	1.65	0.44
24:BA:480:A:O4'	43:BU:44:ILE:HG12	2.18	0.44
24:BA:813:U:H2'	24:BA:814:C:C6	2.53	0.44
24:BA:881:G:C6	24:BA:882:G:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1038:C:H2'	24:BA:1039:G:O4'	2.17	0.44
24:BA:1608:A:H1'	24:BA:1610:A:OP2	2.18	0.44
24:BA:1771:C:H1'	24:BA:1786:A:C8	2.52	0.44
24:BA:1864:U:H3	24:BA:1878:G:H1	1.65	0.44
24:BA:2168:G:C5	24:BA:2171:A:N6	2.85	0.44
24:BA:2250:G:C5	35:BP:83:MET:HB3	2.53	0.44
24:BA:2286:A:H61	51:B6:24:GLU:HG2	1.83	0.44
24:BA:2635:C:O2'	27:BE:48:GLN:NE2	2.50	0.44
24:BA:2843:G:H1	24:BA:2874:C:N4	2.14	0.44
30:BH:149:ARG:HH21	30:BH:153:LYS:HE3	1.81	0.44
31:BK:104:GLN:HG2	31:BK:105:HIS:CD2	2.52	0.44
33:BN:71:ARG:NH1	38:BR:74:ARG:HH21	2.15	0.44
35:BP:55:VAL:HG12	35:BP:64:ILE:CD1	2.45	0.44
1:CA:87:A:H2'	1:CA:87:A:N3	2.32	0.44
1:CA:467:G:C6	1:CA:468:A:C5	3.06	0.44
1:CA:474:G:H5'	16:CS:81:ARG:HB3	1.99	0.44
55:CA:1800:T1C:H8	55:CA:1800:T1C:N92	2.30	0.44
2:CE:128:GLU:HG3	2:CE:129:GLU:HG3	1.99	0.44
2:CE:166:ASP:HB3	2:CE:169:LYS:HB2	1.98	0.44
2:CE:208:ILE:H	2:CE:208:ILE:HD12	1.82	0.44
4:CG:155:LEU:C	4:CG:157:LEU:H	2.25	0.44
9:CL:4:TYR:N	9:CL:19:LEU:O	2.50	0.44
10:CM:76:ASN:HA	10:CM:77:PRO:HD2	1.89	0.44
13:CP:62:ASN:HB2	13:CP:63:THR:H	1.60	0.44
15:CR:87:ILE:O	15:CR:88:ARG:HB2	2.17	0.44
16:CS:22:THR:HA	16:CS:33:ILE:HG13	2.00	0.44
24:DA:78:A:H2'	24:DA:79:G:H8	1.82	0.44
24:DA:588:U:H1'	28:DF:90:PHE:CG	2.53	0.44
24:DA:686:G:H21	24:DA:788:A:H61	1.65	0.44
24:DA:895:U:H5'	44:DV:146:ILE:HG12	1.98	0.44
24:DA:1292:U:H2'	24:DA:1293:C:C6	2.52	0.44
24:DA:2543:G:H21	24:DA:2646:C:H5''	1.82	0.44
24:DA:2756:U:H4'	24:DA:2757:A:OP1	2.17	0.44
24:DA:2851:A:O2'	36:D0:64:ARG:NH2	2.50	0.44
26:DD:97:TYR:HB2	26:DD:101:GLU:O	2.17	0.44
26:DD:109:ASP:O	26:DD:111:LEU:N	2.51	0.44
28:DF:129:PHE:HA	28:DF:142:TRP:NE1	2.32	0.44
29:DG:20:ILE:O	29:DG:20:ILE:HG13	2.16	0.44
30:DH:27:LYS:HB2	30:DH:32:GLU:HB3	1.98	0.44
34:DO:57:THR:C	34:DO:59:LEU:H	2.25	0.44
49:D4:42:PHE:CD1	49:D4:42:PHE:C	2.94	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:178:C:H2'	1:AA:179:A:O4'	2.16	0.44
1:AA:181:G:O2'	1:AA:182:U:H6	2.00	0.44
1:AA:346:G:H2'	1:AA:346:G:N3	2.33	0.44
1:AA:1015:A:O2'	14:AQ:15:LYS:NZ	2.50	0.44
1:AA:1036:G:H3'	1:AA:1037:C:H6	1.82	0.44
1:AA:1399:C:C2	1:AA:1502:A:N6	2.86	0.44
2:AE:59:GLU:O	2:AE:63:MET:HG2	2.18	0.44
4:AG:201:GLN:HA	4:AG:204:ILE:HD12	1.99	0.44
5:AH:52:PRO:O	5:AH:56:GLN:N	2.39	0.44
8:AK:49:GLU:HG2	8:AK:62:TYR:HE2	1.81	0.44
9:AL:13:ALA:HA	9:AL:67:GLY:C	2.43	0.44
19:AV:67:VAL:HG21	49:B4:60:GLN:HE21	1.82	0.44
20:AW:76:ALA:O	20:AW:80:ARG:HG2	2.17	0.44
24:BA:396:G:O3'	46:BZ:44:PRO:HA	2.17	0.44
24:BA:493:G:H2'	24:BA:494:G:O4'	2.18	0.44
24:BA:883:G:H2'	24:BA:884:C:O4'	2.17	0.44
24:BA:1063:G:H22	24:BA:1076:C:H1'	1.82	0.44
24:BA:1417:C:H2'	24:BA:1418:G:O4'	2.18	0.44
24:BA:1587:A:H2'	24:BA:1588:C:C6	2.52	0.44
24:BA:2121:G:H2'	24:BA:2122:U:O4'	2.17	0.44
24:BA:2122:U:H3	24:BA:2176:A:H61	1.66	0.44
24:BA:2406:U:C2	34:BO:72:PRO:HB2	2.52	0.44
25:BB:90:C:OP2	35:BP:16:ARG:NH2	2.50	0.44
29:BG:47:LYS:HE3	29:BG:47:LYS:HB2	1.87	0.44
31:BK:57:ARG:O	31:BK:61:ARG:HG2	2.17	0.44
35:BP:23:GLY:HA2	35:BP:24:GLY:HA3	1.62	0.44
41:BS:76:VAL:HG23	41:BS:101:SER:HB3	2.00	0.44
44:BV:173:ALA:HB1	44:BV:175:VAL:HG23	1.98	0.44
45:B3:11:ARG:O	45:B3:14:ARG:NH2	2.50	0.44
48:BX:26:LEU:HD21	48:BX:46:ASN:HB3	2.00	0.44
1:CA:1028(B):C:H3'	1:CA:1029:G:H5''	1.98	0.44
1:CA:1443:G:H3'	1:CA:1446:A:C5'	2.44	0.44
2:CE:17:PHE:CD2	2:CE:44:LEU:HD22	2.52	0.44
9:CL:73:GLN:O	9:CL:77:ILE:HG23	2.18	0.44
12:CO:76:ASN:OD1	12:CO:76:ASN:N	2.50	0.44
20:CW:95:ALA:O	20:CW:97:ALA:N	2.45	0.44
24:DA:435:C:H2'	24:DA:436:C:H5'	1.99	0.44
24:DA:1093:G:N7	24:DA:1094:U:C4	2.86	0.44
24:DA:2110:G:H5''	24:DA:2145:C:H42	1.82	0.44
24:DA:2134:A:H2'	24:DA:2134:A:N3	2.33	0.44
24:DA:2148:G:H2'	24:DA:2149:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2850:A:C2	24:DA:2851:A:C4	3.05	0.44
26:DD:43:ARG:HH11	26:DD:44:ASN:ND2	2.14	0.44
27:DE:8:LYS:O	27:DE:10:GLY:N	2.51	0.44
27:DE:11:MET:HG3	27:DE:24:THR:CA	2.48	0.44
27:DE:25:VAL:CG1	27:DE:26:ILE:N	2.80	0.44
27:DE:101:ARG:CZ	27:DE:171:GLU:HB2	2.46	0.44
30:DH:87:LEU:HD23	30:DH:164:TYR:HA	1.99	0.44
35:DP:110:THR:OG1	35:DP:113:GLN:N	2.48	0.44
42:DT:15:GLU:H	42:DT:15:GLU:CD	2.24	0.44
45:D3:50:ASN:ND2	45:D3:81:VAL:O	2.38	0.44
1:AA:160:A:H1'	1:AA:344:A:C5	2.53	0.44
1:AA:452:A:H2'	1:AA:453:A:C8	2.53	0.44
1:AA:1014:A:N3	1:AA:1219:U:H1'	2.33	0.44
1:AA:1153:C:H2'	1:AA:1154:G:O4'	2.17	0.44
1:AA:1311:G:N7	19:AV:2:PRO:HA	2.32	0.44
2:AE:142:LEU:O	2:AE:145:LEU:N	2.50	0.44
6:AI:12:PRO:HG3	6:AI:57:GLN:O	2.18	0.44
6:AI:98:LEU:HD13	18:AU:28:GLU:HG3	1.99	0.44
13:AP:80:ARG:NH1	49:B4:55:ARG:HE	2.14	0.44
15:AR:15:PHE:CE1	15:AR:84:LYS:HG2	2.52	0.44
16:AS:58:TYR:O	16:AS:62:VAL:HG22	2.17	0.44
17:AT:99:SER:HB2	17:AT:101:ARG:HH11	1.83	0.44
24:BA:38:A:H2'	24:BA:39:C:C6	2.53	0.44
24:BA:654(A):A:C2	24:BA:654(T):A:N1	2.85	0.44
24:BA:784:A:H5'	24:BA:785:G:OP1	2.17	0.44
24:BA:1057:A:OP2	24:BA:1089:G:N2	2.50	0.44
24:BA:1213:A:H1'	24:BA:1238:G:N3	2.32	0.44
24:BA:1309:G:H4'	52:B7:7:PRO:HB2	2.00	0.44
24:BA:1517:G:H2'	24:BA:1518:C:C6	2.52	0.44
24:BA:1638:C:H4'	24:BA:2710:C:O2	2.17	0.44
24:BA:2149:G:C6	24:BA:2150:U:C2	3.05	0.44
24:BA:2468:G:N2	24:BA:2481:G:H2'	2.33	0.44
24:BA:2845:G:H2'	24:BA:2846:G:C8	2.52	0.44
24:BA:2896:C:H2'	24:BA:2897:U:C6	2.52	0.44
33:BN:97:ARG:HG2	33:BN:99:PHE:HE1	1.82	0.44
35:BP:4:PRO:HD3	35:BP:70:PRO:O	2.18	0.44
35:BP:45:GLN:H	35:BP:45:GLN:HG2	1.46	0.44
41:BS:4:LYS:HB3	41:BS:106:ILE:HB	1.99	0.44
1:CA:601:C:H2'	1:CA:602:A:H8	1.83	0.44
2:CE:30:ARG:NH2	2:CE:194:PRO:HG2	2.31	0.44
2:CE:116:GLU:HA	2:CE:119:GLU:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:83:ASP:OD1	17:CT:84:LEU:N	2.50	0.44
24:DA:26:G:C6	24:DA:27:G:N1	2.85	0.44
24:DA:118:A:H1'	24:DA:178:G:O4'	2.18	0.44
24:DA:476:G:H4'	24:DA:502:A:N1	2.33	0.44
24:DA:1106:G:N2	24:DA:1107:G:N3	2.66	0.44
24:DA:1239:G:H2'	24:DA:1240:U:O4'	2.17	0.44
24:DA:1332:G:N2	24:DA:1610:A:C8	2.86	0.44
24:DA:2145:C:H6	24:DA:2147:G:N2	2.15	0.44
24:DA:2176:A:H2'	24:DA:2177:C:H6	1.82	0.44
24:DA:2207:C:H42	24:DA:2217:G:H1	1.64	0.44
24:DA:2257:U:O2'	24:DA:2258:C:H5'	2.17	0.44
24:DA:2572:A:OP1	24:DA:2574:G:H4'	2.17	0.44
24:DA:2773:C:OP1	27:DE:166:THR:OG1	2.36	0.44
27:DE:203:LYS:O	27:DE:204:ALA:HB3	2.18	0.44
28:DF:68:LYS:HB3	28:DF:69:HIS:H	1.68	0.44
32:DM:112:LEU:O	32:DM:115:ARG:N	2.50	0.44
35:DP:63:LYS:HB2	44:DV:116:VAL:HG11	1.99	0.44
37:DQ:49:VAL:HG21	37:DQ:77:ALA:HB2	1.98	0.44
51:D6:15:GLU:CB	51:D6:47:THR:CG2	2.95	0.44
1:AA:171:A:H2'	1:AA:172:A:H8	1.80	0.44
1:AA:537:G:H2'	1:AA:538:G:C8	2.53	0.44
1:AA:603:U:H2'	1:AA:604:G:H8	1.82	0.44
1:AA:991:U:C4	1:AA:1212:U:H1'	2.52	0.44
1:AA:1029:G:O2'	1:AA:1031:G:OP2	2.35	0.44
1:AA:1124:G:O2'	10:AM:38:ILE:HD12	2.17	0.44
2:AE:170:GLU:O	2:AE:174:VAL:HG23	2.18	0.44
3:AF:88:ARG:NH1	3:AF:101:LEU:O	2.50	0.44
6:AI:4:TYR:CD1	6:AI:92:LYS:HA	2.53	0.44
22:AD:1:C:H41	22:AD:71:C:H42	1.66	0.44
24:BA:34:C:O2'	24:BA:35:G:OP2	2.33	0.44
24:BA:253:C:H2'	24:BA:254:G:O4'	2.17	0.44
24:BA:459:U:H5''	52:B7:40:TRP:CD2	2.53	0.44
24:BA:639:U:H2'	24:BA:640:C:C6	2.53	0.44
24:BA:654(C):G:H3'	24:BA:654(D):G:C8	2.53	0.44
24:BA:654(H):G:H1	24:BA:654(M):C:C2'	2.30	0.44
24:BA:1186:G:H2'	24:BA:1187:G:O4'	2.18	0.44
24:BA:1514:U:H2'	24:BA:1515:C:C6	2.52	0.44
24:BA:1514:U:H2'	24:BA:1515:C:H6	1.83	0.44
24:BA:2134:A:N6	24:BA:2156:G:O2'	2.49	0.44
24:BA:2629:A:N6	24:BA:2895:U:C2	2.86	0.44
24:BA:2712:U:OP1	24:BA:2714:G:H4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:121:PRO:HB3	26:BD:135:PHE:CE2	2.53	0.44
29:BG:101:ILE:HG23	49:B4:24:THR:O	2.17	0.44
29:BG:111:LEU:O	29:BG:114:ILE:HB	2.18	0.44
30:BH:92:ILE:HD13	30:BH:160:LYS:NZ	2.32	0.44
31:BK:101:LEU:HD23	31:BK:101:LEU:HA	1.73	0.44
35:BP:58:PHE:O	35:BP:60:ARG:N	2.49	0.44
39:B1:78:THR:O	39:B1:81:HIS:N	2.50	0.44
44:BV:152:ALA:N	44:BV:154:ASP:OD1	2.50	0.44
45:B3:23:VAL:HA	45:B3:38:VAL:HG22	1.98	0.44
1:CA:35:G:C2	1:CA:550:G:C2	3.06	0.44
1:CA:1029:G:H1'	1:CA:1032(A):G:H1	1.83	0.44
1:CA:1226:C:H4'	19:CV:80:TYR:CZ	2.53	0.44
1:CA:1237:C:OP1	1:CA:1238:A:H1'	2.18	0.44
2:CE:51:LEU:O	2:CE:55:PHE:N	2.36	0.44
3:CF:79:ARG:NH2	3:CF:83:ARG:H	2.16	0.44
5:CH:33:VAL:HB	5:CH:112:LEU:HD12	1.99	0.44
5:CH:79:GLU:OE1	8:CK:104:ARG:HA	2.18	0.44
5:CH:96:PRO:HA	5:CH:117:ASP:CG	2.42	0.44
12:CO:47:LYS:HB3	12:CO:48:PRO:CD	2.47	0.44
22:CD:8:U:N3	22:CD:48:C:O2	2.51	0.44
22:CD:30:G:C4	22:CD:31:G:C8	3.06	0.44
24:DA:78:A:H2'	24:DA:79:G:C8	2.53	0.44
24:DA:128:C:H4'	24:DA:129:C:OP1	2.18	0.44
24:DA:205:G:O2'	24:DA:206:U:OP2	2.36	0.44
24:DA:523:C:O2'	24:DA:553:U:O2	2.35	0.44
24:DA:1131:G:O6	24:DA:2024:G:N2	2.43	0.44
24:DA:2015:A:N3	50:D5:2:ALA:N	2.65	0.44
24:DA:2115:G:C6	24:DA:2117:A:C8	3.06	0.44
27:DE:21:VAL:CG1	27:DE:22:PRO:N	2.80	0.44
27:DE:55:ASN:HD21	27:DE:75:VAL:N	2.15	0.44
28:DF:157:VAL:HG12	28:DF:198:ALA:HB1	2.00	0.44
32:DM:66:LYS:O	32:DM:70:LYS:N	2.50	0.44
43:DU:97:ARG:NH2	43:DU:98:VAL:HB	2.33	0.44
44:DV:3:TYR:O	44:DV:57:ILE:HA	2.18	0.44
50:D5:25:LEU:HD23	50:D5:25:LEU:HA	1.66	0.44
1:AA:127:G:H4'	17:AT:2:PRO:HD2	1.99	0.44
1:AA:130:A:N7	17:AT:63:ARG:HB2	2.33	0.44
1:AA:158:G:H2'	1:AA:159:G:H8	1.82	0.44
1:AA:396:G:O2'	1:AA:398:C:OP1	2.22	0.44
1:AA:411:A:N7	1:AA:413:G:H1'	2.32	0.44
1:AA:924:C:H2'	1:AA:925:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.53	0.44
1:AA:1134:G:C6	1:AA:1135:U:C2	3.06	0.44
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.48	0.44
1:AA:1374:A:P	7:AJ:36:LYS:HZ1	2.40	0.44
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.53	0.44
1:AA:1504:G:H4'	1:AA:1505:G:O4'	2.18	0.44
3:AF:130:VAL:O	3:AF:134:ILE:HG12	2.18	0.44
4:AG:61:LYS:HA	4:AG:203:VAL:HG22	1.99	0.44
5:AH:107:ARG:C	5:AH:109:ILE:H	2.26	0.44
10:AM:80:LYS:NZ	10:AM:83:GLU:OE1	2.49	0.44
24:BA:94:G:H21	47:BW:47:ASN:HD22	1.64	0.44
24:BA:621:A:OP2	34:BO:108:LYS:NZ	2.49	0.44
24:BA:783:A:C8	24:BA:784:A:H4'	2.52	0.44
24:BA:860:U:H2'	24:BA:861:A:H8	1.83	0.44
24:BA:869:G:H1	24:BA:908:C:H42	1.66	0.44
24:BA:1088:A:H3'	24:BA:1088:A:N3	2.33	0.44
24:BA:2282:G:H4'	24:BA:2389:G:O2'	2.18	0.44
24:BA:2376:A:H2'	24:BA:2377:A:O4'	2.18	0.44
24:BA:2817:G:H2'	24:BA:2818:G:O4'	2.17	0.44
28:BF:135:LYS:HB3	28:BF:138:GLU:HG3	1.98	0.44
35:BP:104:PHE:HE2	35:BP:125:LEU:HD11	1.83	0.44
37:BQ:35:ILE:HG22	37:BQ:97:ARG:HH21	1.83	0.44
38:BR:3:ARG:O	38:BR:5:ALA:N	2.50	0.44
41:BS:76:VAL:CG2	41:BS:101:SER:HB3	2.48	0.44
53:B8:6:THR:HG23	53:B8:62:LEU:HD12	2.00	0.44
1:CA:328:C:H4'	1:CA:329:A:C5'	2.47	0.44
1:CA:445:G:H2'	1:CA:446:G:C8	2.53	0.44
1:CA:1118:C:C5'	9:CL:9:ARG:HE	2.30	0.44
2:CE:74:LYS:HG2	2:CE:169:LYS:HE2	2.00	0.44
3:CF:7:PRO:HB3	3:CF:11:ARG:HH12	1.83	0.44
3:CF:166:GLU:HA	3:CF:166:GLU:OE2	2.18	0.44
5:CH:84:PHE:O	5:CH:86:ALA:N	2.50	0.44
7:CJ:36:LYS:O	7:CJ:40:ALA:N	2.51	0.44
13:CP:14:ARG:HB2	13:CP:14:ARG:HH11	1.82	0.44
14:CQ:3:ARG:O	14:CQ:7:ILE:HG23	2.16	0.44
19:CV:15:LEU:O	19:CV:19:VAL:HG23	2.18	0.44
19:CV:29:ARG:CD	19:CV:48:THR:H	2.25	0.44
22:CC:23:C:H2'	22:CC:24:U:H6	1.83	0.44
24:DA:271:G:H2'	24:DA:272:G:H8	1.81	0.44
24:DA:479:A:N3	24:DA:481:G:H5''	2.33	0.44
24:DA:1010:A:H5'	39:D1:62:ILE:HG21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1283:G:O2'	24:DA:1285:G:N7	2.44	0.44
24:DA:2168:G:N2	24:DA:2169:A:H3'	2.33	0.44
24:DA:2295:C:OP2	37:DQ:10:ARG:HD3	2.18	0.44
24:DA:2693:A:H2'	24:DA:2694:G:H8	1.83	0.44
26:DD:31:LYS:HZ3	26:DD:94:LEU:HD11	1.80	0.44
30:DH:7:LEU:H	30:DH:7:LEU:HG	1.63	0.44
42:DT:25:LYS:HA	42:DT:81:VAL:O	2.18	0.44
44:DV:120:ILE:HG21	44:DV:169:GLU:CD	2.42	0.44
1:AA:827:U:H5	1:AA:872:A:H61	1.65	0.44
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.53	0.44
1:AA:1028(A):C:H2'	1:AA:1028(B):C:C6	2.53	0.44
1:AA:1178:G:P	9:AL:93:ARG:HE	2.40	0.44
1:AA:1256:A:N3	1:AA:1277:C:N4	2.66	0.44
5:AH:7:GLU:OE1	5:AH:37:ARG:NE	2.35	0.44
9:AL:46:ALA:HB2	9:AL:74:ILE:HG23	2.00	0.44
11:AN:99:GLN:OE1	11:AN:105:VAL:HG21	2.18	0.44
14:AQ:59:ALA:HB1	14:AQ:61:TRP:CZ3	2.46	0.44
24:BA:111:A:H4'	47:BW:69:ARG:NH2	2.33	0.44
24:BA:569:U:C4	24:BA:570:G:C6	3.06	0.44
24:BA:1175:U:H1'	24:BA:1176:G:N3	2.33	0.44
24:BA:1218:C:N4	24:BA:1231:G:H1	2.16	0.44
24:BA:1795:C:O2	26:BD:255:LYS:HE2	2.18	0.44
24:BA:1818:U:O4	26:BD:154:LYS:HD3	2.17	0.44
24:BA:2303:G:O2'	29:BG:132:ASN:HB2	2.18	0.44
24:BA:2543:G:H2'	24:BA:2544:G:O4'	2.18	0.44
25:BB:21:G:H1	25:BB:62:C:N4	2.14	0.44
25:BB:37:C:H2'	25:BB:38:C:H5'	2.00	0.44
33:BN:78:ARG:HE	33:BN:78:ARG:HB3	1.51	0.44
43:BU:56:PRO:HG2	43:BU:57:GLN:HG3	2.00	0.44
44:BV:7:ALA:HB2	44:BV:59:LEU:CD2	2.47	0.44
44:BV:150:LEU:HD21	44:BV:155:LEU:HG	2.00	0.44
51:B6:17:LYS:O	51:B6:18:ARG:HB3	2.18	0.44
1:CA:255:G:O6	1:CA:270:A:N6	2.51	0.44
1:CA:323:U:H2'	1:CA:324:G:O4'	2.17	0.44
1:CA:358:U:H2'	1:CA:359:U:H6	1.83	0.44
1:CA:516:U:C4	1:CA:517:G:C6	3.05	0.44
1:CA:528:C:H41	12:CO:49:ASN:ND2	2.14	0.44
1:CA:652:U:H1'	1:CA:653:A:C2	2.53	0.44
1:CA:957:U:O2	1:CA:959:A:C8	2.71	0.44
1:CA:1015:A:C6	1:CA:1016:A:C6	3.06	0.44
1:CA:1118:C:O4'	9:CL:104:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1134:G:N2	1:CA:1141:C:N3	2.66	0.44
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.18	0.44
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.52	0.44
2:CE:124:SER:C	2:CE:126:GLU:H	2.26	0.44
2:CE:189:ASP:N	2:CE:189:ASP:OD1	2.51	0.44
2:CE:215:LEU:O	2:CE:219:VAL:HG12	2.18	0.44
7:CJ:102:ARG:HG2	7:CJ:106:GLN:NE2	2.33	0.44
24:DA:84:A:H3'	43:DU:8:LYS:HG2	2.00	0.44
24:DA:657:U:H2'	24:DA:658:C:C6	2.52	0.44
24:DA:843:G:H1	24:DA:935:C:H42	1.66	0.44
24:DA:883:G:O2'	24:DA:884:C:H5'	2.18	0.44
24:DA:1053:C:N4	24:DA:1106:G:C6	2.86	0.44
24:DA:1151:G:H4'	39:D1:81:HIS:CG	2.53	0.44
24:DA:1517:G:H4'	24:DA:1556:C:O2'	2.16	0.44
24:DA:1550:C:OP1	24:DA:1727:U:O2'	2.17	0.44
24:DA:1869:G:H2'	24:DA:1871:A:N7	2.33	0.44
24:DA:2156:G:C6	24:DA:2157:G:N1	2.86	0.44
24:DA:2537:U:H2'	24:DA:2538:C:C6	2.53	0.44
24:DA:2685:G:P	38:DR:51:ARG:HH22	2.41	0.44
25:DB:24:G:H4'	25:DB:25:A:H8	1.82	0.44
26:DD:92:ILE:HD12	26:DD:104:TYR:CD2	2.52	0.44
27:DE:50:GLY:HA3	27:DE:74:PRO:HG3	2.00	0.44
31:DK:64:GLU:HA	31:DK:67:ARG:HB2	2.00	0.44
33:DN:24:VAL:HA	33:DN:39:ILE:HG22	2.00	0.44
33:DN:44:LYS:HD3	33:DN:44:LYS:HA	1.79	0.44
33:DN:65:THR:O	33:DN:79:PHE:HB2	2.18	0.44
43:DU:67:LEU:HD12	43:DU:67:LEU:HA	1.62	0.44
44:DV:26:GLY:HA2	44:DV:86:VAL:H	1.82	0.44
45:D3:19:LYS:HD3	45:D3:19:LYS:HA	1.83	0.44
1:AA:105:G:H2'	1:AA:106:C:C6	2.53	0.43
1:AA:603:U:H2'	1:AA:604:G:C8	2.53	0.43
1:AA:1218:C:H2'	1:AA:1219:U:H6	1.82	0.43
1:AA:1285:A:H1'	1:AA:1286:A:OP2	2.18	0.43
1:AA:1382:C:O2'	1:AA:1383:C:H5'	2.17	0.43
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.17	0.43
9:AL:91:ASP:OD1	9:AL:91:ASP:N	2.43	0.43
15:AR:54:ARG:HG2	15:AR:58:MET:HE2	1.99	0.43
15:AR:56:LEU:O	15:AR:60:VAL:HG23	2.18	0.43
24:BA:3:U:OP1	24:BA:2790:A:N6	2.49	0.43
24:BA:7:G:H4'	32:BM:13:TRP:CH2	2.52	0.43
24:BA:273(C):C:C2	24:BA:363(D):G:N2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:314:A:H2'	24:BA:315:G:H5'	1.99	0.43
24:BA:498:G:H21	43:BU:47:LYS:NZ	2.16	0.43
43:BU:97:ARG:NH2	43:BU:98:VAL:HB	2.33	0.43
1:CA:196:A:OP1	20:CW:68:LYS:NZ	2.51	0.43
1:CA:448:A:P	1:CA:485:G:H22	2.40	0.43
1:CA:631:G:OP2	1:CA:632:A:N6	2.38	0.43
1:CA:944:G:C2	1:CA:1340:A:C6	3.06	0.43
1:CA:993:G:H1	1:CA:1045:C:H42	1.66	0.43
1:CA:1040:U:H2'	1:CA:1041:A:O4'	2.18	0.43
1:CA:1087:G:H22	1:CA:1099:G:H1'	1.82	0.43
1:CA:1119:C:H2'	1:CA:1120:G:O4'	2.18	0.43
1:CA:1216:G:H2'	1:CA:1217:C:C6	2.53	0.43
2:CE:22:LYS:H	2:CE:40:HIS:CD2	2.35	0.43
4:CG:19:LEU:HD23	4:CG:20:TYR:N	2.33	0.43
5:CH:75:THR:OG1	5:CH:117:ASP:O	2.23	0.43
7:CJ:135:VAL:HA	7:CJ:138:LYS:HB3	2.00	0.43
7:CJ:136:LYS:NZ	7:CJ:143:ARG:HH12	2.16	0.43
24:DA:90:U:H3'	24:DA:90:U:O2	2.18	0.43
24:DA:239:U:H2'	24:DA:240:G:O4'	2.18	0.43
24:DA:456:C:O2'	24:DA:457:A:H5'	2.17	0.43
24:DA:459:U:H2'	24:DA:460:A:H8	1.83	0.43
24:DA:896:A:N3	44:DV:176:PRO:HG2	2.33	0.43
24:DA:1112:G:O3'	30:DH:3:ARG:HA	2.18	0.43
24:DA:1592:C:H2'	24:DA:1593:G:C8	2.53	0.43
24:DA:1800:C:H3'	26:DD:147:LEU:HD23	2.00	0.43
24:DA:1955:U:O3'	24:DA:1956:U:H6	2.02	0.43
24:DA:2143:C:H2'	24:DA:2144:U:C6	2.53	0.43
24:DA:2224:G:OP1	26:DD:268:ARG:NH1	2.51	0.43
24:DA:2294:C:P	37:DQ:89:ARG:HH12	2.40	0.43
24:DA:2344:U:O2'	51:D6:37:ARG:HG2	2.18	0.43
24:DA:2710:C:OP1	36:D0:15:SER:HB3	2.18	0.43
24:DA:2755:C:O2'	24:DA:2756:U:H2'	2.18	0.43
24:DA:2795:G:H2'	24:DA:2798:C:P	2.58	0.43
26:DD:267:SER:C	26:DD:269:PHE:H	2.26	0.43
37:DQ:88:ASP:OD1	37:DQ:89:ARG:N	2.44	0.43
38:DR:19:LEU:HD22	38:DR:86:ILE:HG22	2.00	0.43
40:D2:51:VAL:O	40:D2:52:VAL:C	2.61	0.43
1:AA:377:G:OP1	16:AS:5:ARG:NH1	2.52	0.43
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.83	0.43
1:AA:1306:A:O2'	13:AP:109:THR:OG1	2.33	0.43
3:AF:89:GLU:O	3:AF:93:LYS:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AH:51:VAL:O	5:AH:55:VAL:HG23	2.18	0.43
8:AK:33:GLU:C	8:AK:35:ILE:H	2.26	0.43
11:AN:17:GLY:HA3	11:AN:77:MET:SD	2.58	0.43
22:AD:8:U:O4	22:AD:13:C:H3'	2.18	0.43
22:AD:48:C:H5''	22:AD:49:G:C5'	2.49	0.43
24:BA:705:A:C8	24:BA:727:A:C2	3.06	0.43
24:BA:1047:G:N2	24:BA:1110:G:H2'	2.33	0.43
24:BA:1077:A:H5'	24:BA:1078:U:H5'	2.00	0.43
24:BA:1093:G:H1	24:BA:1097:U:P	2.40	0.43
24:BA:1102:C:H2'	24:BA:1103:A:C8	2.53	0.43
24:BA:1129:A:O2'	24:BA:2515:C:O2	2.36	0.43
24:BA:1142:U:H5'	24:BA:1142(A):A:H8	1.83	0.43
24:BA:1510:A:OP1	24:BA:1511:A:H5'	2.18	0.43
24:BA:1534:G:H1	24:BA:1539:G:H1'	1.84	0.43
24:BA:1731:G:H8	24:BA:1731:G:OP2	2.01	0.43
24:BA:2345:G:OP2	51:B6:39:TYR:HA	2.18	0.43
24:BA:2356:C:H4'	45:B3:20:ARG:HG3	2.00	0.43
24:BA:2424:C:O2	24:BA:2429:G:O2'	2.33	0.43
24:BA:2502:G:H5''	24:BA:2503:A:H5''	2.00	0.43
28:BF:167:ALA:HB1	28:BF:173:VAL:HG11	1.99	0.43
29:BG:63:ILE:HG22	29:BG:143:GLU:OE2	2.18	0.43
33:BN:26:LYS:HB3	33:BN:27:GLY:H	1.68	0.43
38:BR:51:ARG:HG3	38:BR:98:LYS:HE3	1.99	0.43
39:B1:44:ASN:HD21	40:B2:74:LYS:HA	1.83	0.43
46:BZ:93:GLU:N	46:BZ:93:GLU:CD	2.77	0.43
1:CA:105:G:C6	1:CA:106:C:C4	3.05	0.43
1:CA:354:G:O2'	1:CA:389:A:OP1	2.31	0.43
1:CA:757:U:H2'	1:CA:758:G:O4'	2.18	0.43
1:CA:1105:A:H2'	1:CA:1106:G:C8	2.52	0.43
1:CA:1181:G:O2'	1:CA:1182:G:O5'	2.31	0.43
4:CG:22:LYS:N	4:CG:26:CYS:HB3	2.32	0.43
11:CN:38:ASN:HA	11:CN:39:PRO:HD3	1.83	0.43
13:CP:22:ILE:HB	13:CP:25:ILE:CG1	2.46	0.43
24:DA:261:G:O2'	24:DA:609(A):G:O2'	2.34	0.43
24:DA:265:A:H1'	24:DA:266:G:O4'	2.18	0.43
24:DA:919:G:N2	24:DA:2269:A:OP2	2.51	0.43
24:DA:1071:G:N7	24:DA:1097:U:H4'	2.33	0.43
24:DA:1110:G:H8	24:DA:1110:G:O5'	2.00	0.43
24:DA:1314:C:H42	24:DA:1338:G:H1	1.65	0.43
24:DA:2148:G:H2'	24:DA:2149:G:C8	2.53	0.43
24:DA:2294:C:H5'	37:DQ:10:ARG:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2748:A:C8	24:DA:2753:A:N6	2.86	0.43
25:DB:39:A:N1	49:D4:1:MET:N	2.61	0.43
26:DD:23:GLU:O	26:DD:25:THR:N	2.51	0.43
26:DD:31:LYS:HE3	26:DD:31:LYS:HB2	1.83	0.43
28:DF:152:GLU:OE1	28:DF:191:ARG:HD2	2.18	0.43
31:DK:109:ILE:HB	31:DK:130:TYR:OH	2.18	0.43
33:DN:98:VAL:HG22	33:DN:117:LEU:HB3	2.01	0.43
38:DR:107:ASP:HB2	38:DR:108:ARG:H	1.59	0.43
39:D1:8:VAL:HG12	39:D1:11:ARG:HH21	1.82	0.43
47:DW:10:LEU:HD12	47:DW:10:LEU:HA	1.86	0.43
1:AA:142:G:H2'	1:AA:143:A:H8	1.83	0.43
1:AA:184:G:O6	1:AA:194:C:N4	2.51	0.43
1:AA:917:G:H2'	1:AA:918:A:C8	2.53	0.43
1:AA:1126:U:C6	1:AA:1127:G:C8	3.06	0.43
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.52	0.43
1:AA:1489:G:H2'	1:AA:1490:C:O4'	2.19	0.43
2:AE:80:ILE:O	2:AE:84:GLU:HG2	2.17	0.43
4:AG:57:ARG:HB3	4:AG:206:PHE:HB2	2.01	0.43
4:AG:96:LEU:HD12	4:AG:139:ARG:NH1	2.34	0.43
7:AJ:65:ALA:O	7:AJ:69:VAL:HG23	2.17	0.43
10:AM:46:ARG:HE	10:AM:46:ARG:HB2	1.45	0.43
11:AN:69:ALA:HB1	11:AN:103:LEU:HD21	2.00	0.43
13:AP:32:GLU:OE2	13:AP:33:ALA:N	2.50	0.43
20:AW:25:ARG:O	20:AW:29:LYS:HG3	2.17	0.43
21:AX:9:ARG:HG3	21:AX:13:ILE:HD11	1.99	0.43
22:AD:63:G:C6	22:AD:64:G:C5	3.06	0.43
24:BA:264:C:O2'	24:BA:265:A:H2'	2.17	0.43
24:BA:1532:C:H2'	24:BA:1533:C:O4'	2.18	0.43
24:BA:1688:U:H2'	24:BA:1698:A:N6	2.33	0.43
24:BA:1952:A:C5	33:BN:22:ILE:HD11	2.53	0.43
24:BA:2801:A:C5	24:BA:2802:G:H1'	2.53	0.43
26:BD:46:GLN:H	26:BD:46:GLN:HG3	1.21	0.43
26:BD:61:LEU:HB2	26:BD:63:ARG:NH1	2.34	0.43
29:BG:7:LEU:HD11	29:BG:176:LEU:O	2.17	0.43
30:BH:4:ILE:O	30:BH:4:ILE:CD1	2.30	0.43
34:BO:58:THR:CB	34:BO:61:ARG:HH12	2.31	0.43
34:BO:96:THR:O	34:BO:100:LEU:HD12	2.18	0.43
34:BO:138:LEU:HD11	34:BO:144:GLU:HG2	2.00	0.43
43:BU:28:LYS:HE2	43:BU:64:GLU:OE2	2.18	0.43
44:BV:144:LEU:HB3	44:BV:145:GLU:H	1.58	0.43
49:B4:12:ALA:HB3	49:B4:24:THR:HG1	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:67:C:H2'	1:CA:68:G:C8	2.54	0.43
1:CA:373:A:N3	1:CA:374:A:C8	2.86	0.43
1:CA:426:G:OP1	4:CG:36:ARG:CZ	2.66	0.43
1:CA:523:A:H61	12:CO:92:ASP:HB2	1.84	0.43
1:CA:1121:U:C4	1:CA:1122:U:C4	3.06	0.43
1:CA:1260:C:N4	1:CA:1274:G:O6	2.51	0.43
1:CA:1375:A:H4'	7:CJ:29:LYS:NZ	2.33	0.43
2:CE:109:SER:O	2:CE:111:ARG:N	2.52	0.43
4:CG:36:ARG:N	4:CG:37:PRO:CD	2.81	0.43
4:CG:63:LYS:HD2	4:CG:198:VAL:HG13	1.99	0.43
7:CJ:78:ARG:O	7:CJ:84:ASN:HA	2.18	0.43
8:CK:82:HIS:N	8:CK:138:TRP:O	2.51	0.43
10:CM:45:ARG:O	10:CM:65:LEU:N	2.39	0.43
11:CN:22:HIS:HB3	11:CN:29:ILE:HG12	2.00	0.43
11:CN:30:VAL:HG21	11:CN:65:ALA:HA	1.99	0.43
20:CW:51:GLU:O	20:CW:55:ILE:HG12	2.18	0.43
22:CD:16:C:O2'	22:CD:61:C:OP1	2.31	0.43
24:DA:39:C:H2'	24:DA:40:C:C6	2.53	0.43
24:DA:138:G:N2	42:DT:44:GLU:OE2	2.44	0.43
24:DA:193:U:O3'	24:DA:803:U:H4'	2.18	0.43
24:DA:880:G:H2'	24:DA:881:G:H8	1.82	0.43
24:DA:892:G:C5	24:DA:893:C:N4	2.86	0.43
24:DA:1061:U:O3'	24:DA:1070:A:H4'	2.18	0.43
24:DA:1324:G:H4'	24:DA:1616:A:C2	2.53	0.43
24:DA:1416:G:H2'	24:DA:1417:C:H6	1.83	0.43
24:DA:1651:G:OP1	36:D0:37:THR:HG21	2.19	0.43
24:DA:1688:U:H1'	24:DA:1701:A:C6	2.54	0.43
24:DA:2317:C:H2'	24:DA:2318:G:O4'	2.18	0.43
24:DA:2840:C:H4'	36:D0:53:HIS:CE1	2.54	0.43
26:DD:109:ASP:C	26:DD:111:LEU:H	2.26	0.43
27:DE:36:ARG:NH2	27:DE:88:GLY:HA2	2.33	0.43
27:DE:63:LEU:O	27:DE:73:GLU:OE1	2.36	0.43
28:DF:155:LEU:HD22	28:DF:186:ILE:HA	2.00	0.43
30:DH:149:ARG:C	30:DH:151:ILE:H	2.26	0.43
32:DM:56:ASN:H	32:DM:125:GLY:CA	2.27	0.43
39:D1:17:ILE:HG23	39:D1:39:LEU:HD12	2.00	0.43
1:AA:865:A:H2	1:AA:918:A:H4'	1.83	0.43
1:AA:1065:U:H4'	1:AA:1066:C:O5'	2.18	0.43
1:AA:1212:U:H5''	1:AA:1213:A:OP1	2.17	0.43
1:AA:1328:C:O3'	13:AP:29:ARG:HG3	2.19	0.43
1:AA:1333:A:C8	1:AA:1334:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:45:LYS:C	3:AF:47:LEU:H	2.26	0.43
4:AG:81:GLU:OE1	4:AG:139:ARG:NH2	2.52	0.43
6:AI:14:LEU:HD13	6:AI:19:LEU:HA	2.00	0.43
13:AP:37:THR:HB	13:AP:55:ARG:HH21	1.83	0.43
22:AC:19:G:H3'	22:AC:20:U:H6	1.82	0.43
22:AD:18:G:H1	22:AD:55:U:H1'	1.83	0.43
24:BA:322:A:OP1	28:BF:168:ARG:NE	2.51	0.43
24:BA:654(G):C:H42	24:BA:654(L):G:H5''	1.83	0.43
24:BA:784:A:O4'	26:BD:227:ASN:ND2	2.51	0.43
24:BA:959:A:N6	35:BP:83:MET:HE1	2.33	0.43
24:BA:1068:G:H1'	24:BA:1096:A:N3	2.34	0.43
24:BA:1089:G:H5''	24:BA:1090:U:OP1	2.18	0.43
24:BA:1096:A:H5'	24:BA:1097:U:H5''	2.00	0.43
24:BA:1728:G:O6	24:BA:1730:U:H5'	2.18	0.43
24:BA:1766:U:H2'	24:BA:1767:C:C6	2.52	0.43
24:BA:2157:G:H1'	24:BA:2158:A:C2	2.52	0.43
24:BA:2307:G:O6	29:BG:44:GLY:N	2.51	0.43
24:BA:2444:G:OP2	28:BF:68:LYS:HD2	2.18	0.43
24:BA:2690:C:OP2	36:B0:14:SER:HB3	2.17	0.43
25:BB:39:A:C2'	25:BB:40:U:C6	2.98	0.43
30:BH:156:ALA:O	30:BH:157:TYR:CB	2.64	0.43
36:B0:33:ARG:HH12	50:B5:55:ARG:CB	2.31	0.43
41:BS:11:ARG:CZ	41:BS:98:LYS:HB3	2.49	0.43
43:BU:49:VAL:N	43:BU:50:ARG:HE	2.17	0.43
45:B3:70:GLN:HB3	45:B3:80:HIS:HE2	1.82	0.43
47:BW:42:GLY:C	47:BW:44:LEU:H	2.26	0.43
52:B7:10:ARG:O	52:B7:14:LYS:HB2	2.19	0.43
1:CA:21:G:H2'	1:CA:22:G:C8	2.53	0.43
1:CA:458:C:H42	1:CA:474:G:H1	1.66	0.43
1:CA:690:G:C6	1:CA:691:G:C6	3.06	0.43
1:CA:728:A:H2'	1:CA:729:A:C8	2.53	0.43
1:CA:983:A:H3'	1:CA:983:A:N3	2.34	0.43
1:CA:1325:C:P	21:CX:15:ARG:HH21	2.37	0.43
4:CG:34:GLU:OE2	4:CG:34:GLU:HA	2.18	0.43
9:CL:82:ALA:HB1	9:CL:96:LEU:HD21	1.99	0.43
13:CP:67:GLU:N	13:CP:70:LEU:HD12	2.33	0.43
13:CP:76:ALA:O	13:CP:80:ARG:HG3	2.18	0.43
19:CV:19:VAL:HB	19:CV:20:LEU:HD22	1.99	0.43
19:CV:31:ILE:C	19:CV:31:ILE:HD12	2.44	0.43
20:CW:22:ARG:O	20:CW:26:ASN:ND2	2.52	0.43
22:CC:1:C:HO2'	22:CC:2:G:P	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:307:G:N1	24:DA:310:A:OP2	2.51	0.43
24:DA:1055:G:N3	24:DA:1085:A:H2	2.16	0.43
24:DA:1436:G:H1'	24:DA:1477:A:O2'	2.19	0.43
24:DA:1491:G:O2'	26:DD:101:GLU:HB2	2.18	0.43
24:DA:1790:C:H2'	24:DA:1791:A:C5	2.54	0.43
24:DA:1819:A:OP1	26:DD:161:THR:HG21	2.18	0.43
24:DA:2420:C:OP1	53:D8:34:TRP:CE3	2.72	0.43
24:DA:2735:G:H2'	24:DA:2736:G:C8	2.52	0.43
26:DD:159:ALA:HB1	26:DD:198:ASN:O	2.18	0.43
33:DN:114:ILE:O	33:DN:118:ALA:N	2.49	0.43
35:DP:23:GLY:HA2	35:DP:24:GLY:HA3	1.63	0.43
46:DZ:74:VAL:C	46:DZ:76:ARG:H	2.27	0.43
52:D7:34:ARG:NH1	52:D7:41:ARG:O	2.51	0.43
53:D8:29:LYS:O	53:D8:31:HIS:N	2.51	0.43
1:AA:103:C:H2'	1:AA:104:G:C8	2.53	0.43
1:AA:1147:C:H2'	9:AL:16:ARG:NH2	2.34	0.43
2:AE:33:TYR:HB2	2:AE:43:ASP:N	2.34	0.43
4:AG:29:PRO:C	4:AG:30:LYS:HG2	2.44	0.43
4:AG:121:VAL:O	4:AG:134:ASP:HA	2.18	0.43
5:AH:139:LEU:HA	5:AH:142:LEU:HG	2.01	0.43
7:AJ:24:THR:HA	7:AJ:27:ILE:HB	2.00	0.43
8:AK:81:HIS:HB2	8:AK:138:TRP:CE3	2.54	0.43
10:AM:45:ARG:HD3	14:AQ:36:PHE:CE2	2.54	0.43
12:AO:10:LEU:HB3	17:AT:32:TYR:CE2	2.53	0.43
16:AS:46:PRO:O	16:AS:48:TRP:HD1	2.00	0.43
24:BA:154:G:H2'	24:BA:155:C:C6	2.54	0.43
24:BA:270:A:N1	24:BA:366:C:O2'	2.49	0.43
24:BA:1050:A:H2'	24:BA:1051:G:O4'	2.18	0.43
24:BA:1057:A:O2'	24:BA:1058:U:O5'	2.36	0.43
24:BA:1070:A:H3'	24:BA:1072:C:OP2	2.18	0.43
24:BA:1693:U:O2'	26:BD:14:ARG:NH2	2.52	0.43
24:BA:1728:G:H2'	24:BA:1731:G:O6	2.18	0.43
24:BA:2286:A:C8	24:BA:2287:A:N6	2.87	0.43
45:B3:41:ARG:HA	45:B3:41:ARG:HE	1.82	0.43
47:BW:42:GLY:O	47:BW:44:LEU:N	2.52	0.43
51:B6:14:THR:HG1	51:B6:21:TYR:H	1.63	0.43
1:CA:9:G:H2'	1:CA:10:A:H8	1.84	0.43
1:CA:162:A:C5	1:CA:163:C:H1'	2.54	0.43
1:CA:938:A:N6	1:CA:939:G:C6	2.86	0.43
1:CA:1081:G:OP1	5:CH:18:ARG:HB2	2.17	0.43
1:CA:1117:G:H2'	9:CL:104:ARG:CZ	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1160:G:H22	1:CA:1176:A:H2	1.66	0.43
1:CA:1226:C:H4'	19:CV:80:TYR:OH	2.19	0.43
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.33	0.43
5:CH:42:GLY:HA2	5:CH:65:ASN:O	2.19	0.43
12:CO:48:PRO:O	12:CO:49:ASN:ND2	2.51	0.43
13:CP:77:ASN:HA	13:CP:80:ARG:HE	1.84	0.43
18:CU:19:LYS:CG	18:CU:20:ALA:H	2.32	0.43
24:DA:254:G:H4'	24:DA:384:U:H5'	1.99	0.43
24:DA:856:C:O2'	24:DA:857:C:OP1	2.23	0.43
24:DA:1051:G:H2'	24:DA:1052:C:H5'	2.01	0.43
24:DA:2191:G:C4	24:DA:2192:G:C8	3.06	0.43
25:DB:3:C:N4	25:DB:117:G:H1	2.02	0.43
25:DB:12:C:OP2	25:DB:12:C:H6	2.01	0.43
27:DE:77:ILE:C	27:DE:78:LEU:HG	2.44	0.43
28:DF:53:THR:HG22	28:DF:56:GLU:CG	2.48	0.43
28:DF:63:LYS:HZ1	28:DF:67:GLN:HE21	1.58	0.43
29:DG:112:PRO:HB2	49:D4:35:VAL:CG1	2.48	0.43
29:DG:174:GLU:OE1	29:DG:182:LYS:NZ	2.41	0.43
35:DP:31:ASP:O	35:DP:134:ARG:HB3	2.19	0.43
41:DS:111:HIS:HB2	41:DS:112:GLY:H	1.61	0.43
53:D8:29:LYS:HB2	53:D8:44:LYS:CB	2.42	0.43
1:AA:713:G:H2'	1:AA:714:G:C8	2.53	0.43
1:AA:913:A:H4'	1:AA:914:A:O5'	2.19	0.43
1:AA:1079:G:C6	1:AA:1080:A:N6	2.87	0.43
1:AA:1151:A:O2'	10:AM:70:ARG:NH1	2.52	0.43
2:AE:21:ARG:O	2:AE:23:ARG:N	2.44	0.43
4:AG:3:ARG:HH21	4:AG:3:ARG:CG	2.31	0.43
24:BA:92:G:H2'	24:BA:93:C:C6	2.53	0.43
24:BA:528:A:C2	24:BA:2042:A:H2'	2.54	0.43
24:BA:897:C:O2'	24:BA:898:C:OP1	2.34	0.43
24:BA:958:U:OP1	35:BP:74:TYR:OH	2.20	0.43
24:BA:1063:G:C5	24:BA:1064:C:C4	3.07	0.43
24:BA:1065:U:C2	24:BA:1066:U:H1'	2.53	0.43
24:BA:2590:A:OP2	26:BD:238:GLY:HA2	2.18	0.43
24:BA:2688:U:H5	24:BA:2720:U:OP2	2.02	0.43
25:BB:69:G:C5	25:BB:70:C:C5	3.07	0.43
26:BD:67:PHE:CD1	26:BD:153:ALA:HB3	2.53	0.43
26:BD:92:ILE:HB	26:BD:104:TYR:HD1	1.82	0.43
38:BR:48:ILE:O	38:BR:63:VAL:HA	2.18	0.43
38:BR:125:ARG:HA	38:BR:128:GLU:HB3	2.01	0.43
42:BT:5:TYR:O	47:BW:36:ARG:NH2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:24:GLY:O	42:BT:82:GLN:HA	2.18	0.43
44:BV:61:LEU:HA	44:BV:62:PRO:HD3	1.76	0.43
46:BZ:72:GLU:O	46:BZ:75:GLU:HB2	2.18	0.43
1:CA:318:G:H2'	1:CA:319:G:H8	1.84	0.43
1:CA:736:C:O2'	6:CI:90:VAL:O	2.35	0.43
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.47	0.43
1:CA:1219:U:OP1	14:CQ:19:ARG:NH1	2.52	0.43
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.82	0.43
2:CE:80:ILE:HG21	2:CE:212:GLN:HG2	1.99	0.43
2:CE:174:VAL:HG13	2:CE:184:VAL:HG21	2.01	0.43
3:CF:180:ALA:HA	3:CF:206:GLU:HB3	2.00	0.43
5:CH:135:THR:O	5:CH:138:ALA:HB3	2.19	0.43
11:CN:61:ALA:HB1	11:CN:94:ALA:HB2	2.01	0.43
11:CN:82:VAL:HB	11:CN:108:ILE:HG23	2.00	0.43
24:DA:152:G:H2'	24:DA:153:C:O4'	2.18	0.43
24:DA:226:G:H21	24:DA:228:A:H62	1.66	0.43
24:DA:343:C:H2'	24:DA:344:G:C8	2.53	0.43
24:DA:579:G:H2'	24:DA:580:C:C6	2.54	0.43
24:DA:686:G:H2'	24:DA:788:A:N1	2.34	0.43
24:DA:1084:A:O2'	24:DA:1105:U:H1'	2.19	0.43
24:DA:1094:U:O2'	24:DA:1095:A:H5''	2.19	0.43
24:DA:1339:G:H21	24:DA:1603:A:H1'	1.83	0.43
24:DA:1579:A:H2'	24:DA:1580:A:C8	2.53	0.43
24:DA:2224:G:H4'	24:DA:2226:C:C2	2.53	0.43
24:DA:2749:A:O3'	30:DH:62:LYS:HE2	2.18	0.43
26:DD:67:PHE:HB3	26:DD:153:ALA:HB3	1.99	0.43
27:DE:57:LYS:C	27:DE:58:ARG:HD2	2.44	0.43
27:DE:116:VAL:HG23	27:DE:120:TRP:HD1	1.83	0.43
34:DO:46:LYS:HD3	34:DO:51:PHE:CG	2.54	0.43
37:DQ:5:THR:OG1	37:DQ:7:TYR:HB3	2.19	0.43
47:DW:37:PHE:O	47:DW:41:ILE:HG23	2.19	0.43
51:D6:11:LEU:HD23	51:D6:51:GLU:OE1	2.18	0.43
1:AA:92:G:H2'	1:AA:93:U:O4'	2.19	0.43
1:AA:735:C:H2'	1:AA:736:C:H6	1.84	0.43
1:AA:1057:G:C4	1:AA:1204:A:C2	3.07	0.43
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.54	0.43
2:AE:12:GLU:N	2:AE:12:GLU:OE2	2.51	0.43
4:AG:34:GLU:HA	4:AG:34:GLU:OE2	2.18	0.43
11:AN:18:ARG:NH2	11:AN:35:PRO:O	2.52	0.43
12:AO:86:ARG:HE	12:AO:86:ARG:HB3	1.60	0.43
16:AS:8:ARG:HB3	16:AS:28:ARG:NH1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:337:C:H5''	43:BU:4:LYS:CD	2.49	0.43
24:BA:581:C:OP1	39:B1:33:ARG:HG3	2.18	0.43
24:BA:593:G:C1'	53:B8:4:MET:HE1	2.47	0.43
24:BA:654(B):C:H2'	24:BA:654(C):G:O4'	2.19	0.43
24:BA:747:U:OP1	50:B5:3:LYS:HG2	2.19	0.43
24:BA:825:C:H4'	24:BA:2428:G:N7	2.34	0.43
24:BA:1035:U:H2'	24:BA:1036:G:C8	2.53	0.43
24:BA:1071:G:C8	24:BA:1089:G:C5	3.07	0.43
24:BA:1075:C:C2	24:BA:1076:C:H1'	2.54	0.43
24:BA:1090:U:H1'	24:BA:1102:C:H1'	2.00	0.43
24:BA:1151:G:H4'	39:B1:81:HIS:CD2	2.54	0.43
24:BA:1153:C:H5'	39:B1:76:TYR:HE1	1.83	0.43
24:BA:1471:A:OP2	24:BA:1521:G:N1	2.34	0.43
24:BA:1819:A:H4'	24:BA:1820:U:O5'	2.19	0.43
24:BA:2008:C:H2'	24:BA:2009:G:H8	1.84	0.43
24:BA:2169:A:C5	24:BA:2170:A:C6	3.07	0.43
24:BA:2292:C:OP1	37:BQ:17:ARG:NH1	2.46	0.43
24:BA:2311:A:C2	29:BG:88:ILE:HD11	2.53	0.43
24:BA:2751:G:N1	30:BH:3:ARG:HD3	2.14	0.43
27:BE:1:MET:N	27:BE:83:ASP:O	2.36	0.43
27:BE:2:LYS:NZ	27:BE:100:GLU:OE2	2.32	0.43
27:BE:30:PRO:HD3	27:BE:180:ASN:CG	2.44	0.43
28:BF:64:ILE:HG22	28:BF:65:TRP:NE1	2.33	0.43
28:BF:64:ILE:HG23	28:BF:64:ILE:HD12	1.87	0.43
30:BH:41:MET:HE3	30:BH:64:LEU:HB3	2.01	0.43
30:BH:98:LEU:HD22	30:BH:125:VAL:HG23	2.01	0.43
31:BK:129:THR:HA	31:BK:137:PRO:HA	1.99	0.43
36:B0:2:ARG:CG	36:B0:5:LYS:NZ	2.81	0.43
38:BR:77:PRO:HB2	38:BR:80:SER:HB2	2.01	0.43
41:BS:58:ALA:HB1	41:BS:64:MET:HB2	2.01	0.43
43:BU:35:TYR:CD2	43:BU:69:ALA:HB3	2.53	0.43
44:BV:106:GLY:HA3	44:BV:144:LEU:HD12	2.00	0.43
44:BV:151:HIS:HD1	44:BV:151:HIS:H	1.67	0.43
46:BZ:40:ARG:HE	46:BZ:40:ARG:HB2	1.64	0.43
1:CA:443:C:H2'	1:CA:444:C:H6	1.84	0.43
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.18	0.43
1:CA:1057:G:C4	1:CA:1204:A:C2	3.06	0.43
1:CA:1147:C:C5	1:CA:1148:U:C4	3.07	0.43
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.50	0.43
7:CJ:134:ALA:O	7:CJ:138:LYS:N	2.45	0.43
20:CW:100:ILE:C	20:CW:102:GLY:N	2.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CD:20:U:H5''	22:CD:21:A:O4'	2.18	0.43
24:DA:814:C:H5''	40:D2:84:LYS:HB3	2.00	0.43
24:DA:856:C:H3'	24:DA:856:C:C6	2.53	0.43
24:DA:1112:G:H5'	30:DH:3:ARG:NE	2.34	0.43
24:DA:1484:G:C2	24:DA:1506:C:C2	3.07	0.43
24:DA:1525:G:H2'	24:DA:1526:G:H8	1.84	0.43
24:DA:1810:A:H2'	24:DA:1811:G:O4'	2.19	0.43
24:DA:2419:U:H3'	53:D8:34:TRP:NE1	2.34	0.43
24:DA:2556:C:H2'	24:DA:2557:G:O4'	2.19	0.43
24:DA:2615:U:C2	50:D5:7:PRO:HA	2.53	0.43
24:DA:2623:G:H2'	24:DA:2624:G:C8	2.54	0.43
24:DA:2784:C:H4'	27:DE:42:ASP:OD1	2.18	0.43
25:DB:48:A:H4'	37:DQ:95:HIS:CD2	2.45	0.43
28:DF:120:GLU:HG3	28:DF:122:LYS:HG2	2.00	0.43
28:DF:200:GLU:OE2	28:DF:201:VAL:N	2.52	0.43
30:DH:83:TYR:OH	30:DH:132:ARG:NH2	2.51	0.43
33:DN:2:ILE:HD12	33:DN:6:THR:HG21	1.99	0.43
38:DR:26:ASP:O	38:DR:49:VAL:HG12	2.18	0.43
44:DV:108:PRO:HB3	44:DV:144:LEU:HD11	2.00	0.43
49:D4:42:PHE:HD1	49:D4:42:PHE:C	2.26	0.43
1:AA:52:G:H2'	1:AA:53:A:C8	2.54	0.43
1:AA:1295:G:O3'	13:AP:14:ARG:NH1	2.52	0.43
2:AE:85:ALA:O	2:AE:90:MET:N	2.31	0.43
2:AE:215:LEU:HD13	2:AE:215:LEU:HA	1.81	0.43
4:AG:85:LYS:HB3	4:AG:86:LYS:H	1.59	0.43
9:AL:49:PRO:HD3	9:AL:101:PHE:CE1	2.54	0.43
10:AM:87:THR:O	10:AM:89:ASP:N	2.50	0.43
12:AO:53:ARG:HB3	12:AO:69:TYR:HE1	1.83	0.43
13:AP:80:ARG:CZ	49:B4:55:ARG:HE	2.31	0.43
14:AQ:4:LYS:O	14:AQ:7:ILE:HG12	2.19	0.43
20:AW:26:ASN:HB2	20:AW:71:THR:OG1	2.19	0.43
24:BA:1543:A:C2	24:BA:1545:A:C4	3.06	0.43
24:BA:2591:C:P	26:BD:239:ARG:HG3	2.58	0.43
24:BA:2887:U:H2'	24:BA:2888:C:H6	1.84	0.43
27:BE:48:GLN:CD	27:BE:77:ILE:HD12	2.43	0.43
27:BE:105:THR:HB	27:BE:197:ILE:HG12	2.01	0.43
29:BG:107:LEU:HD11	29:BG:178:PHE:CE1	2.53	0.43
29:BG:146:TYR:O	29:BG:149:VAL:HG22	2.19	0.43
32:BM:34:LEU:O	32:BM:49:GLY:HA3	2.18	0.43
32:BM:41:ASP:HA	39:B1:64:ARG:HH22	1.82	0.43
34:BO:91:PHE:HD2	34:BO:95:VAL:HG22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BX:7:LYS:HB2	48:BX:34:GLU:HG2	2.01	0.43
1:CA:110:C:O2'	16:CS:25:ARG:O	2.36	0.43
1:CA:1011:G:C2	1:CA:1019:C:C2	3.07	0.43
1:CA:1099:G:C6	1:CA:1100:C:N3	2.86	0.43
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.19	0.43
2:CE:105:PHE:HE2	2:CE:157:ARG:C	2.27	0.43
4:CG:129:ASN:HA	4:CG:145:GLU:HB3	1.99	0.43
5:CH:74:GLY:HA3	5:CH:116:THR:OG1	2.19	0.43
9:CL:5:TYR:H	9:CL:87:GLN:CD	2.24	0.43
18:CU:29:PHE:CE2	18:CU:31:LEU:HB3	2.54	0.43
20:CW:34:LYS:O	20:CW:38:LYS:N	2.42	0.43
24:DA:2:G:H1	24:DA:2901:C:N4	2.10	0.43
24:DA:184:C:H2'	24:DA:185:U:C6	2.54	0.43
24:DA:270(E):G:H2'	24:DA:270(F):U:O4'	2.18	0.43
24:DA:588:U:H2'	24:DA:589:C:C6	2.54	0.43
24:DA:640:C:H42	24:DA:648:G:H1	1.67	0.43
24:DA:783:A:C8	24:DA:784:A:H4'	2.49	0.43
24:DA:1309:G:O2'	24:DA:1611:C:O2'	2.22	0.43
24:DA:2115:G:C6	24:DA:2117:A:H8	2.36	0.43
24:DA:2129:C:C2'	24:DA:2130:U:H5'	2.49	0.43
24:DA:2130:U:O2'	24:DA:2134:A:H8	2.01	0.43
24:DA:2157:G:H2'	24:DA:2158:A:H8	1.84	0.43
29:DG:170:ARG:NH2	29:DG:174:GLU:OE1	2.37	0.43
31:DK:10:GLU:OE2	31:DK:11:ASN:ND2	2.52	0.43
31:DK:74:ASN:HB2	31:DK:75:LEU:H	1.51	0.43
32:DM:56:ASN:HB3	32:DM:59:LYS:HB2	2.00	0.43
37:DQ:110:LEU:HB2	37:DQ:112:PHE:CZ	2.54	0.43
40:D2:44:LYS:O	40:D2:46:VAL:HG12	2.19	0.43
43:DU:46:LYS:HB2	43:DU:46:LYS:HE3	1.28	0.43
46:DZ:53:VAL:HG22	46:DZ:74:VAL:HG13	2.00	0.43
1:AA:22:G:H2'	1:AA:23:C:C6	2.54	0.43
1:AA:298:A:H2'	1:AA:299:G:O4'	2.19	0.43
1:AA:631:G:H2'	1:AA:632:A:C8	2.48	0.43
1:AA:1153:C:H5''	10:AM:14:LYS:NZ	2.34	0.43
1:AA:1175:G:H2'	1:AA:1176:A:H8	1.83	0.43
1:AA:1382:C:O4'	7:AJ:79:ARG:NE	2.51	0.43
2:AE:12:GLU:O	2:AE:17:PHE:HE1	2.02	0.43
2:AE:193:ASP:OD1	2:AE:193:ASP:N	2.52	0.43
6:AI:45:LEU:HD12	6:AI:59:TYR:HD1	1.84	0.43
20:AW:54:LYS:HB2	20:AW:54:LYS:HE3	1.78	0.43
22:AD:7:G:C6	22:AD:49:G:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:458:G:O2'	52:B7:39:ARG:HD3	2.19	0.43
24:BA:507:A:H5''	24:BA:508:G:H5'	2.01	0.43
24:BA:849:A:N6	24:BA:929:G:O2'	2.48	0.43
24:BA:994:C:O2'	24:BA:996:A:OP1	2.25	0.43
24:BA:1092:C:HO2'	30:BH:170:ARG:HH12	1.62	0.43
24:BA:1328:G:OP2	24:BA:1328:G:H8	2.02	0.43
24:BA:1332:G:N2	24:BA:1610:A:C8	2.83	0.43
24:BA:1332:G:C8	24:BA:1332:G:H5'	2.53	0.43
24:BA:1354:A:H2'	24:BA:1355:G:O4'	2.18	0.43
24:BA:1406:U:H2'	24:BA:1407:C:H6	1.82	0.43
24:BA:2123:G:C6	24:BA:2124:G:C4	3.07	0.43
24:BA:2658:C:H4'	30:BH:158:HIS:CE1	2.53	0.43
25:BB:17:C:H2'	25:BB:18:G:O4'	2.19	0.43
30:BH:88:LEU:HG	30:BH:90:LYS:NZ	2.34	0.43
30:BH:104:GLU:HG3	30:BH:114:VAL:HG22	2.00	0.43
31:BK:133:HIS:HB2	31:BK:134:PRO:CD	2.49	0.43
32:BM:57:ALA:O	32:BM:60:ILE:HG23	2.19	0.43
33:BN:26:LYS:HB2	33:BN:26:LYS:HE3	1.77	0.43
34:BO:41:ARG:N	34:BO:41:ARG:HD2	2.34	0.43
37:BQ:72:ALA:O	37:BQ:76:LYS:HG3	2.19	0.43
41:BS:33:ARG:NH2	41:BS:52:GLU:OE1	2.51	0.43
45:B3:27:GLU:HA	45:B3:67:VAL:HG12	2.01	0.43
49:B4:14:ILE:HG13	49:B4:24:THR:HG21	2.01	0.43
53:B8:52:LYS:N	53:B8:53:PRO:HD2	2.33	0.43
1:CA:197:A:H1'	1:CA:198:G:O4'	2.18	0.43
1:CA:475:G:H2'	1:CA:476:G:H8	1.84	0.43
1:CA:589:C:N4	1:CA:650:G:H1	2.08	0.43
1:CA:757:U:O2'	1:CA:879:C:H1'	2.18	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.19	0.43
1:CA:922:G:H4'	5:CH:20:GLN:HA	2.01	0.43
1:CA:1255:G:H2'	1:CA:1258:G:H21	1.82	0.43
5:CH:100:VAL:HA	5:CH:118:ILE:HG22	2.00	0.43
7:CJ:108:ALA:O	7:CJ:110:GLN:N	2.52	0.43
8:CK:9:MET:HE1	8:CK:32:LYS:HA	1.99	0.43
9:CL:5:TYR:HE1	9:CL:16:ARG:HG3	1.83	0.43
9:CL:17:VAL:HG22	9:CL:63:ILE:HD11	2.00	0.43
14:CQ:42:ILE:HA	14:CQ:45:ARG:HB3	1.99	0.43
16:CS:8:ARG:HD3	16:CS:17:TYR:CE1	2.54	0.43
19:CV:33:THR:CG2	19:CV:34:TRP:N	2.79	0.43
19:CV:71:LEU:HD23	19:CV:71:LEU:HA	1.76	0.43
20:CW:64:ASP:OD1	20:CW:64:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CD:14:A:N1	22:CD:15:G:N2	2.67	0.43
24:DA:244:A:O3'	34:DO:74:GLU:HB3	2.18	0.43
24:DA:601:C:O2'	24:DA:605:C:H5''	2.18	0.43
24:DA:653:A:H5''	24:DA:654:A:OP1	2.18	0.43
24:DA:988:A:P	48:DX:11:SER:HB2	2.59	0.43
24:DA:1138:G:O2'	32:DM:102:ALA:O	2.37	0.43
24:DA:1939:U:OP1	24:DA:2604:U:O2'	2.35	0.43
24:DA:2477:C:H5'	24:DA:2479:G:O6	2.19	0.43
24:DA:2516:G:C6	24:DA:2517:C:C4	3.07	0.43
24:DA:2694:G:H2'	24:DA:2695:C:H6	1.84	0.43
33:DN:66:LYS:NZ	33:DN:80:ASP:O	2.48	0.43
41:DS:110:LYS:HG3	41:DS:111:HIS:CD2	2.53	0.43
44:DV:144:LEU:HB2	44:DV:174:VAL:HG21	2.01	0.43
1:AA:28:G:O2'	1:AA:296:U:OP1	2.33	0.43
1:AA:300:A:C5	1:AA:301:G:H1'	2.54	0.43
1:AA:457:C:H2'	1:AA:458:C:C6	2.53	0.43
1:AA:1025:U:H4'	1:AA:1026:G:H8	1.84	0.43
1:AA:1180:A:OP1	9:AL:103:THR:OG1	2.35	0.43
2:AE:58:ILE:HD11	2:AE:185:ILE:CD1	2.49	0.43
2:AE:74:LYS:O	2:AE:78:GLN:HG3	2.19	0.43
7:AJ:28:ASN:HA	7:AJ:31:MET:HE3	2.00	0.43
13:AP:44:ARG:O	13:AP:47:ASP:N	2.51	0.43
17:AT:29:HIS:CD2	17:AT:30:PRO:HD2	2.53	0.43
22:AD:49:G:H8	22:AD:49:G:O5'	2.01	0.43
24:BA:128:C:H2'	24:BA:129:C:C6	2.54	0.43
24:BA:311:A:C6	24:BA:328:U:C4	3.07	0.43
24:BA:312:G:H5'	24:BA:331:A:O2'	2.19	0.43
24:BA:848:G:H2'	24:BA:849:A:C8	2.54	0.43
24:BA:1424:G:H2'	24:BA:1425:G:O4'	2.19	0.43
24:BA:1533:C:H3'	24:BA:1534:G:H5''	2.01	0.43
24:BA:1973:G:H2'	24:BA:1974:C:H6	1.84	0.43
29:BG:44:GLY:C	29:BG:46:ALA:H	2.27	0.43
35:BP:110:THR:HG23	35:BP:113:GLN:OE1	2.19	0.43
36:B0:75:LEU:O	36:B0:79:LEU:HB2	2.19	0.43
38:BR:87:ASP:OD1	38:BR:87:ASP:N	2.51	0.43
41:BS:6:ILE:HG12	41:BS:104:THR:HG23	2.01	0.43
45:B3:19:LYS:HA	45:B3:19:LYS:HD3	1.83	0.43
48:BX:17:LYS:H	48:BX:17:LYS:HG2	1.57	0.43
1:CA:157:G:H2'	1:CA:158:G:H8	1.84	0.43
1:CA:410:G:C2	1:CA:429:U:C2	3.07	0.43
1:CA:792:A:H1'	1:CA:794:A:N7	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:842:C:H4'	1:CA:843:U:C5	2.54	0.43
1:CA:1028:C:H2'	1:CA:1028(A):C:C5	2.53	0.43
1:CA:1035:A:N6	1:CA:1036:G:C5	2.87	0.43
2:CE:217:ARG:HA	2:CE:220:ASP:HB2	2.00	0.43
6:CI:69:GLU:CD	6:CI:69:GLU:H	2.27	0.43
10:CM:9:ARG:HB2	10:CM:95:GLU:HB3	2.01	0.43
11:CN:120:ARG:HA	11:CN:121:PRO:HD3	1.76	0.43
12:CO:17:LYS:HA	12:CO:17:LYS:HD3	1.71	0.43
15:CR:3:ILE:HG22	15:CR:38:ARG:NH1	2.33	0.43
19:CV:81:ARG:HE	19:CV:81:ARG:HB2	1.30	0.43
22:CC:31:G:H2'	22:CC:32:C:H6	1.84	0.43
22:CD:46:G:H8	22:CD:46:G:OP1	2.01	0.43
24:DA:35:G:H2'	24:DA:36:G:O4'	2.19	0.43
24:DA:890:A:H2'	24:DA:892:G:C8	2.54	0.43
24:DA:899:A:O2'	24:DA:900:A:H5'	2.19	0.43
24:DA:1068:G:C2	24:DA:1069:A:C4	3.07	0.43
24:DA:1255:U:C5	28:DF:73:ALA:HA	2.54	0.43
24:DA:1359:A:H2'	24:DA:1360:A:H5'	2.00	0.43
24:DA:1363:C:O2'	24:DA:1809:A:N3	2.44	0.43
24:DA:1534:G:H5'	24:DA:1535:U:OP2	2.19	0.43
24:DA:1607:C:N4	24:DA:1622:G:OP2	2.42	0.43
24:DA:2198:A:OP1	31:DK:33:ARG:NH2	2.51	0.43
24:DA:2314:C:O2'	24:DA:2315:G:H5'	2.18	0.43
24:DA:2378:A:O2'	37:DQ:23:ARG:HD2	2.19	0.43
24:DA:2666:C:N4	30:DH:152:ARG:HH22	2.17	0.43
29:DG:178:PHE:HA	29:DG:179:PRO:HD2	1.66	0.43
30:DH:61:HIS:HA	30:DH:64:LEU:HD12	2.00	0.43
31:DK:122:GLU:HB3	31:DK:126:TYR:OH	2.18	0.43
38:DR:74:ARG:HD3	38:DR:76:PHE:CZ	2.54	0.43
46:DZ:4:VAL:HG12	46:DZ:11:ARG:HB3	2.01	0.43
49:D4:26:SER:OG	49:D4:27:THR:N	2.51	0.43
1:AA:843:U:H3'	1:AA:848:C:C6	2.54	0.42
1:AA:1291:G:OP1	7:AJ:37:ASN:ND2	2.53	0.42
4:AG:119:GLN:HG2	4:AG:123:HIS:CD2	2.54	0.42
6:AI:19:LEU:O	6:AI:23:LYS:NZ	2.52	0.42
8:AK:106:GLY:HA2	8:AK:122:ARG:HH12	1.83	0.42
12:AO:115:LYS:O	12:AO:117:ARG:N	2.45	0.42
13:AP:50:GLU:O	13:AP:54:VAL:HG23	2.19	0.42
22:AD:52:G:C2	22:AD:53:G:C8	3.07	0.42
24:BA:271(B):G:N7	24:BA:421:U:H2'	2.34	0.42
24:BA:443:A:H5''	24:BA:444:C:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:662:G:H5'	34:BO:15:ARG:HA	2.01	0.42
24:BA:1060:U:H3	24:BA:1088:A:H8	1.67	0.42
24:BA:2632:A:O2'	24:BA:2811:G:O2'	2.21	0.42
26:BD:79:VAL:HG21	26:BD:111:LEU:HD21	2.00	0.42
27:BE:34:VAL:O	27:BE:67:PHE:HB3	2.19	0.42
27:BE:78:LEU:HG	27:BE:79:ARG:HG3	2.01	0.42
28:BF:127:GLU:O	28:BF:129:PHE:N	2.51	0.42
29:BG:131:TYR:HB3	29:BG:159:VAL:HG23	2.00	0.42
35:BP:137:TYR:C	35:BP:139:GLU:H	2.27	0.42
37:BQ:88:ASP:O	37:BQ:89:ARG:HB3	2.19	0.42
44:BV:110:GLY:C	44:BV:112:ARG:H	2.27	0.42
1:CA:113:G:C1'	1:CA:354:G:H5'	2.47	0.42
1:CA:151:A:H2'	1:CA:152:A:O4'	2.19	0.42
1:CA:345:C:HO2'	1:CA:346:G:P	2.42	0.42
1:CA:552:U:H2'	1:CA:553:A:C8	2.54	0.42
1:CA:571:U:O4	1:CA:864:A:N6	2.52	0.42
1:CA:936:C:O2	1:CA:1382:C:N4	2.32	0.42
2:CE:18:GLY:HA2	2:CE:42:ILE:HG22	2.00	0.42
2:CE:69:LEU:HG	2:CE:91:PRO:HB2	2.00	0.42
5:CH:53:LEU:O	5:CH:57:LYS:HB2	2.19	0.42
6:CI:23:LYS:HE2	6:CI:23:LYS:HB3	1.83	0.42
7:CJ:69:VAL:HG21	7:CJ:104:LEU:HD11	2.00	0.42
9:CL:128:ARG:NH2	22:CC:31:G:O5'	2.49	0.42
13:CP:52:GLU:HA	13:CP:55:ARG:HG3	2.01	0.42
18:CU:35:ARG:O	18:CU:37:VAL:N	2.51	0.42
22:CC:17:C:OP2	22:CC:17(A):C:O2'	2.37	0.42
22:CC:25:C:H2'	22:CC:26:G:O4'	2.19	0.42
24:DA:139:G:H22	24:DA:1596:A:H4'	1.84	0.42
24:DA:528:A:H2	24:DA:2043:C:C5'	2.31	0.42
24:DA:1036:G:O6	24:DA:1119:C:N4	2.39	0.42
24:DA:1097:U:C4	24:DA:1098:A:C5	3.07	0.42
24:DA:1576:U:H2'	24:DA:1577:C:H6	1.84	0.42
24:DA:2115:G:N2	24:DA:2172:U:C4	2.87	0.42
24:DA:2168:G:N1	24:DA:2170:A:H8	2.15	0.42
24:DA:2607:G:H2'	24:DA:2608:G:O4'	2.18	0.42
24:DA:2665:A:H2'	24:DA:2666:C:C6	2.54	0.42
25:DB:104:A:O4'	44:DV:29:TYR:HE2	2.02	0.42
27:DE:144:ARG:HB3	27:DE:145:LYS:H	1.37	0.42
31:DK:56:LYS:O	31:DK:60:GLU:HB2	2.19	0.42
31:DK:76:THR:CG2	31:DK:140:LEU:HD13	2.49	0.42
36:D0:24:GLN:HB3	36:D0:44:LEU:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DR:10:VAL:O	38:DR:12:SER:N	2.52	0.42
39:D1:72:HIS:CD2	39:D1:110:VAL:HG21	2.46	0.42
44:DV:68:PRO:O	44:DV:91:LEU:N	2.52	0.42
48:DX:9:VAL:HG12	48:DX:32:GLN:HE22	1.84	0.42
53:D8:23:VAL:HG22	53:D8:47:LYS:HB3	2.01	0.42
1:AA:575:G:C4	1:AA:881:G:C2	3.08	0.42
1:AA:922:G:N3	1:AA:1398:A:H2	2.17	0.42
1:AA:968:A:H8	1:AA:968:A:OP1	2.02	0.42
1:AA:1113:C:H42	1:AA:1187:G:H1	1.65	0.42
2:AE:83:MET:O	2:AE:87:ARG:N	2.45	0.42
4:AG:78:LEU:HB2	4:AG:93:PHE:HE1	1.84	0.42
4:AG:108:LEU:HD23	4:AG:110:PHE:CE1	2.54	0.42
6:AI:1:MET:HG2	6:AI:67:MET:C	2.44	0.42
13:AP:50:GLU:OE2	13:AP:50:GLU:N	2.34	0.42
13:AP:78:ILE:HG22	13:AP:82:MET:HG3	2.00	0.42
16:AS:23:ASP:OD2	16:AS:25:ARG:NH1	2.52	0.42
20:AW:46:GLU:O	20:AW:48:LYS:N	2.49	0.42
22:AD:8:U:C2	22:AD:14:A:C5	3.07	0.42
22:AD:36:U:C2	22:AD:37:A:C8	3.06	0.42
24:BA:243:U:OP1	53:B8:6:THR:OG1	2.28	0.42
24:BA:277:C:H5'	24:BA:278:A:C8	2.54	0.42
24:BA:475:U:C4	24:BA:481:G:O6	2.72	0.42
24:BA:679:C:H2'	24:BA:680:G:H8	1.85	0.42
24:BA:733:G:C8	24:BA:761:A:N6	2.87	0.42
24:BA:879:G:H8	24:BA:879:G:OP2	2.01	0.42
24:BA:1061:U:H3'	24:BA:1062:G:C5'	2.50	0.42
24:BA:1063:G:C6	24:BA:1064:C:N3	2.87	0.42
24:BA:1181:C:H2'	24:BA:1182:A:C8	2.54	0.42
24:BA:2135:A:C2	24:BA:2136:C:H1'	2.54	0.42
24:BA:2209:C:O2	24:BA:2216:G:C2	2.73	0.42
28:BF:126:VAL:HG11	28:BF:142:TRP:HH2	1.84	0.42
29:BG:95:ARG:C	29:BG:99:MET:HG2	2.44	0.42
32:BM:17:ASP:O	32:BM:56:ASN:HB2	2.19	0.42
36:B0:3:HIS:O	36:B0:5:LYS:HG3	2.20	0.42
36:B0:5:LYS:O	36:B0:6:SER:C	2.62	0.42
40:B2:35:LEU:H	40:B2:35:LEU:HD22	1.84	0.42
40:B2:49:THR:OG1	40:B2:50:PRO:HD2	2.19	0.42
44:BV:35:ARG:NH1	44:BV:35:ARG:HB3	2.34	0.42
53:B8:52:LYS:N	53:B8:53:PRO:CD	2.82	0.42
1:CA:35:G:H1	1:CA:549:C:H42	1.67	0.42
1:CA:186:C:H1'	20:CW:81:LYS:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:468:A:O2'	16:CS:81:ARG:HA	2.18	0.42
1:CA:689:C:OP1	11:CN:27:ASN:ND2	2.43	0.42
1:CA:826:C:H42	1:CA:874:G:H1	1.66	0.42
1:CA:851:G:H2'	1:CA:852:G:H8	1.83	0.42
1:CA:955:U:H2'	1:CA:956:U:H6	1.84	0.42
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.54	0.42
2:CE:55:PHE:HA	2:CE:58:ILE:HD11	2.01	0.42
2:CE:55:PHE:HA	2:CE:55:PHE:HD1	1.73	0.42
2:CE:71:VAL:O	2:CE:164:VAL:HA	2.19	0.42
2:CE:77:ALA:O	2:CE:81:VAL:HG23	2.19	0.42
3:CF:119:ARG:HD3	3:CF:123:GLN:NE2	2.34	0.42
7:CJ:35:LYS:HD3	7:CJ:35:LYS:HA	1.78	0.42
8:CK:45:ILE:HG22	8:CK:47:GLY:H	1.83	0.42
11:CN:109:VAL:HG12	18:CU:86:VAL:HA	2.01	0.42
13:CP:36:LYS:HE2	13:CP:36:LYS:HB3	1.72	0.42
15:CR:22:THR:O	15:CR:22:THR:OG1	2.37	0.42
20:CW:100:ILE:HG22	20:CW:102:GLY:H	1.83	0.42
24:DA:994:C:O2	40:D2:10:LYS:HE2	2.19	0.42
24:DA:1252:G:O4'	39:D1:33:ARG:HD2	2.20	0.42
24:DA:1545:A:N6	24:DA:1545(A):A:N1	2.66	0.42
24:DA:1614:A:N6	41:DS:88:ARG:H	2.17	0.42
24:DA:2115:G:O2'	24:DA:2165:G:N2	2.52	0.42
24:DA:2294:C:P	37:DQ:89:ARG:HH22	2.42	0.42
28:DF:3:GLU:CA	28:DF:24:LEU:HD11	2.41	0.42
28:DF:152:GLU:HA	28:DF:190:GLU:OE2	2.20	0.42
32:DM:54:VAL:HB	32:DM:122:VAL:HG22	2.01	0.42
33:DN:104:ARG:N	33:DN:122:LEU:O	2.52	0.42
39:D1:68:ALA:O	39:D1:71:GLN:HB3	2.18	0.42
39:D1:92:ARG:HH22	40:D2:10:LYS:HB3	1.84	0.42
40:D2:71:LEU:HA	40:D2:86:GLY:HA2	2.01	0.42
47:DW:13:ALA:HA	47:DW:16:LEU:CD2	2.48	0.42
53:D8:24:ALA:O	53:D8:47:LYS:HA	2.19	0.42
53:D8:50:LEU:O	53:D8:51:ALA:HB2	2.18	0.42
1:AA:17:U:H2'	1:AA:18:C:C6	2.54	0.42
1:AA:35:G:H2'	1:AA:36:C:H6	1.84	0.42
1:AA:159:G:H1'	1:AA:162:A:N6	2.34	0.42
1:AA:310:G:OP1	16:AS:27:LYS:NZ	2.43	0.42
1:AA:1351:U:C1'	7:AJ:33:ASP:HB3	2.50	0.42
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.54	0.42
2:AE:97:TRP:HH2	2:AE:176:GLU:CD	2.28	0.42
3:AF:178:LEU:HD13	3:AF:178:LEU:HA	1.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AG:188:LEU:HA	4:AG:189:PRO:HD2	1.86	0.42
5:AH:64:ARG:HB3	5:AH:65:ASN:H	1.61	0.42
6:AI:99:ALA:HB1	18:AU:23:LYS:NZ	2.34	0.42
7:AJ:20:ASP:OD2	7:AJ:23:VAL:N	2.45	0.42
8:AK:39:LEU:O	8:AK:44:PHE:N	2.45	0.42
13:AP:108:ARG:NH2	13:AP:114:ARG:HA	2.34	0.42
22:AC:63:G:H2'	22:AC:64:G:H8	1.84	0.42
24:BA:270(N):G:H21	31:BK:50:ARG:HH12	1.67	0.42
24:BA:833:U:O2	34:BO:55:ARG:NH2	2.43	0.42
24:BA:994:C:OP1	39:B1:53:ARG:NH2	2.52	0.42
24:BA:1694:C:H4'	24:BA:1695:G:O5'	2.19	0.42
24:BA:2098:U:H2'	24:BA:2099:U:O4'	2.20	0.42
24:BA:2545:G:H2'	24:BA:2546:U:O4'	2.19	0.42
24:BA:2854:G:H2'	24:BA:2855:C:H6	1.84	0.42
26:BD:61:LEU:HD12	26:BD:61:LEU:HA	1.91	0.42
29:BG:57:ALA:HB2	29:BG:90:LEU:HD21	2.01	0.42
30:BH:154:PRO:HA	30:BH:161:GLY:HA3	2.00	0.42
32:BM:15:LEU:HB3	32:BM:136:GLU:HA	2.01	0.42
38:BR:57:PHE:CG	38:BR:58:ASN:N	2.87	0.42
43:BU:75:ILE:HG22	43:BU:79:CYS:O	2.18	0.42
45:B3:46:LYS:HE2	45:B3:46:LYS:HB3	1.84	0.42
48:BX:28:LEU:HD23	48:BX:33:GLN:HG2	2.01	0.42
1:CA:245:C:C2	1:CA:284:G:C2	3.08	0.42
1:CA:640:A:N6	1:CA:641:U:O4	2.53	0.42
1:CA:997:U:H2'	1:CA:998:G:H8	1.85	0.42
1:CA:1014:A:H2	1:CA:1219:U:H1'	1.85	0.42
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.18	0.42
1:CA:1305:G:N2	1:CA:1332:A:OP2	2.51	0.42
1:CA:1320:C:H42	19:CV:36:ARG:CZ	2.33	0.42
1:CA:1320:C:N4	19:CV:36:ARG:HB2	2.34	0.42
2:CE:8:LYS:O	2:CE:9:GLU:HB3	2.19	0.42
2:CE:60:ASP:O	2:CE:64:ARG:HB2	2.20	0.42
2:CE:69:LEU:HB3	2:CE:162:ILE:HG22	2.01	0.42
3:CF:21:ARG:NH1	10:CM:92:THR:OG1	2.51	0.42
3:CF:148:GLY:HA3	3:CF:172:ARG:O	2.19	0.42
9:CL:96:LEU:H	9:CL:98:PRO:HD2	1.83	0.42
16:CS:82:GLN:NE2	16:CS:83:GLU:H	2.18	0.42
22:CD:22:G:OP2	22:CD:46:G:N1	2.30	0.42
24:DA:2:G:H22	24:DA:2901:C:N4	2.16	0.42
24:DA:128:C:H2'	24:DA:129:C:H6	1.85	0.42
24:DA:724:U:H2'	24:DA:725:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:858:U:O2	24:DA:2268:A:H2'	2.19	0.42
24:DA:1073:A:H2'	24:DA:1074:G:C8	2.54	0.42
24:DA:1178:C:N4	24:DA:1179:C:N3	2.67	0.42
24:DA:1246:A:OP1	28:DF:38:ARG:NH1	2.51	0.42
24:DA:2169:A:N1	24:DA:2170:A:C4	2.87	0.42
24:DA:2346:A:H5''	24:DA:2383:G:H1'	2.01	0.42
24:DA:2568:C:H2'	24:DA:2569:G:O4'	2.19	0.42
24:DA:2590:A:OP2	26:DD:238:GLY:HA2	2.20	0.42
24:DA:2747:G:OP1	30:DH:138:LYS:HE2	2.18	0.42
24:DA:2765:A:H2	24:DA:2766:G:O4'	2.02	0.42
26:DD:147:LEU:HD13	26:DD:147:LEU:HA	1.90	0.42
27:DE:9:VAL:HG23	27:DE:10:GLY:N	2.34	0.42
27:DE:53:PRO:HA	27:DE:74:PRO:HA	2.02	0.42
28:DF:21:ALA:C	28:DF:23:ASP:H	2.25	0.42
29:DG:61:ALA:HB2	29:DG:68:PRO:HD3	2.01	0.42
30:DH:7:LEU:N	30:DH:8:PRO:HD2	2.34	0.42
32:DM:48:MET:HE2	32:DM:48:MET:HB3	1.90	0.42
34:DO:87:ASP:O	34:DO:90:ARG:HD3	2.19	0.42
35:DP:32:TYR:OH	35:DP:133:ARG:NH2	2.52	0.42
38:DR:16:ARG:NH2	38:DR:19:LEU:HD21	2.35	0.42
43:DU:68:HIS:H	43:DU:71:LYS:NZ	2.18	0.42
1:AA:165:C:H2'	1:AA:166:G:H8	1.84	0.42
1:AA:288:A:H2'	1:AA:289:G:H4'	2.02	0.42
1:AA:848:C:H2'	1:AA:849:C:C6	2.55	0.42
1:AA:1017:G:H2'	1:AA:1018:C:O4'	2.19	0.42
2:AE:29:ALA:O	2:AE:32:ILE:N	2.52	0.42
3:AF:85:ARG:HD2	3:AF:85:ARG:HA	1.85	0.42
4:AG:196:LEU:HD23	4:AG:196:LEU:HA	1.86	0.42
5:AH:106:PRO:O	5:AH:110:LEU:HG	2.19	0.42
5:AH:127:ASN:HA	5:AH:128:PRO:HD2	1.86	0.42
9:AL:127:LYS:NZ	22:AC:33:U:OP1	2.52	0.42
17:AT:29:HIS:HA	17:AT:30:PRO:HD2	1.80	0.42
24:BA:30:G:H2'	24:BA:31:C:C6	2.54	0.42
24:BA:196:A:N3	24:BA:196:A:H2'	2.34	0.42
24:BA:686:G:N2	24:BA:788:A:H61	2.16	0.42
24:BA:1064:C:C4	24:BA:1065:U:C2	3.06	0.42
24:BA:2040:C:H2'	24:BA:2041:U:O4'	2.19	0.42
24:BA:2131:G:OP1	24:BA:2132:U:H3'	2.20	0.42
24:BA:2171:A:O2'	24:BA:2172:U:O5'	2.37	0.42
24:BA:2262:U:H4'	24:BA:2328:A:C2	2.55	0.42
24:BA:2314:C:H2'	24:BA:2315:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:6:VAL:N	28:BF:24:LEU:O	2.52	0.42
28:BF:81:PRO:HB3	28:BF:89:VAL:HG22	2.01	0.42
32:BM:17:ASP:O	32:BM:19:GLU:N	2.48	0.42
40:B2:69:LYS:HA	40:B2:88:ARG:HG2	2.01	0.42
43:BU:5:MET:HG2	43:BU:30:VAL:HG11	2.01	0.42
47:BW:35:LEU:HD12	47:BW:35:LEU:HA	1.83	0.42
51:B6:45:LYS:HD3	51:B6:45:LYS:HA	1.68	0.42
1:CA:67:C:H1'	1:CA:171:A:C2	2.55	0.42
1:CA:197:A:C6	1:CA:221:C:H4'	2.54	0.42
1:CA:256:U:H5''	17:CT:17:LYS:HZ1	1.85	0.42
1:CA:743:U:H2'	1:CA:744:C:C6	2.54	0.42
1:CA:957:U:O2	1:CA:959:A:H8	2.02	0.42
1:CA:993:G:H1	1:CA:1045:C:N4	2.17	0.42
1:CA:1118:C:O4'	9:CL:104:ARG:HD3	2.19	0.42
1:CA:1190:G:H5'	3:CF:176:HIS:NE2	2.34	0.42
1:CA:1261:A:H62	1:CA:1274:G:H21	1.67	0.42
1:CA:1338:G:C6	1:CA:1339:A:C6	3.07	0.42
2:CE:29:ALA:HA	2:CE:32:ILE:HG12	2.02	0.42
2:CE:178:ARG:HH22	2:CE:196:LEU:C	2.28	0.42
3:CF:113:ALA:HB2	3:CF:202:ILE:HG13	2.00	0.42
7:CJ:41:ARG:O	7:CJ:45:ASP:HB2	2.19	0.42
9:CL:23:ASN:N	9:CL:58:HIS:O	2.53	0.42
9:CL:93:ARG:HG3	9:CL:102:LEU:HD11	2.01	0.42
16:CS:40:ASP:HA	16:CS:41:PRO:HD2	1.89	0.42
20:CW:41:ILE:HG22	20:CW:91:LEU:HD11	2.02	0.42
20:CW:83:ARG:HA	20:CW:86:ARG:HH12	1.83	0.42
22:CD:28:C:H2'	22:CD:29:G:C8	2.54	0.42
24:DA:70:G:OP1	24:DA:112:U:N3	2.43	0.42
24:DA:243:U:OP2	53:D8:8:LYS:HE2	2.19	0.42
24:DA:515:A:H1'	24:DA:581:C:H1'	2.02	0.42
24:DA:721:C:H2'	24:DA:722:A:C8	2.54	0.42
24:DA:1046:A:H5''	24:DA:1047:G:C5'	2.49	0.42
24:DA:1569:A:O5'	26:DD:59:LYS:NZ	2.40	0.42
24:DA:2401:U:O2	24:DA:2402:C:C5	2.73	0.42
25:DB:89:G:C4	25:DB:89(A):A:C2	3.08	0.42
26:DD:164:GLN:OE1	26:DD:176:ARG:NH2	2.40	0.42
27:DE:73:GLU:HA	27:DE:73:GLU:OE2	2.18	0.42
28:DF:23:ASP:O	28:DF:115:ALA:HA	2.18	0.42
29:DG:105:LYS:CD	49:D4:26:SER:HB3	2.49	0.42
31:DK:125:GLU:HA	31:DK:141:LYS:HA	2.02	0.42
39:D1:66:ASN:ND2	39:D1:70:ARG:HE	2.14	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:93:U:H2'	1:AA:95:G:C8	2.54	0.42
1:AA:297:G:O2'	1:AA:299:G:N7	2.52	0.42
1:AA:475:G:H8	1:AA:475:G:OP2	2.02	0.42
1:AA:627:G:H2'	1:AA:628:G:H8	1.85	0.42
1:AA:652:U:O4	1:AA:752:G:O2'	2.28	0.42
1:AA:1353:G:C2	1:AA:1370:G:C2	3.07	0.42
1:AA:1436:U:OP1	20:AW:23:ARG:NH2	2.48	0.42
2:AE:164:VAL:HB	2:AE:186:ALA:HB2	2.02	0.42
7:AJ:79:ARG:HH11	7:AJ:79:ARG:HD3	1.68	0.42
11:AN:92:GLU:O	11:AN:96:ARG:HG3	2.20	0.42
14:AQ:29:ARG:HD3	14:AQ:40:CYS:HB2	2.01	0.42
14:AQ:40:CYS:SG	14:AQ:43:CYS:N	2.78	0.42
22:AC:19:G:C2	22:AC:57:A:N3	2.87	0.42
24:BA:51:G:OP2	24:BA:51:G:H8	2.03	0.42
24:BA:92:G:H2'	24:BA:93:C:H6	1.84	0.42
24:BA:365:C:H2'	24:BA:366:C:O4'	2.20	0.42
24:BA:995:C:O2	32:BM:3:THR:OG1	2.35	0.42
24:BA:1071:G:O2'	24:BA:1089:G:OP2	2.24	0.42
24:BA:1996:C:OP1	33:BN:31:LYS:HE3	2.19	0.42
24:BA:2147:G:C6	24:BA:2148:G:C4	3.07	0.42
24:BA:2312:U:OP1	29:BG:74:LYS:N	2.50	0.42
24:BA:2658:C:O3'	30:BH:158:HIS:NE2	2.53	0.42
24:BA:2663:G:C6	24:BA:2664:G:C4	3.08	0.42
24:BA:2680:C:H1'	27:BE:187:ALA:HB1	2.02	0.42
25:BB:50:G:C2	25:BB:51:G:H1'	2.55	0.42
27:BE:52:LEU:O	27:BE:75:VAL:N	2.31	0.42
28:BF:77:ASP:OD1	28:BF:77:ASP:N	2.52	0.42
29:BG:65:GLY:HA3	49:B4:9:LEU:HD22	2.00	0.42
30:BH:157:TYR:N	30:BH:171:LEU:O	2.53	0.42
32:BM:18:ALA:HA	32:BM:21:LYS:HG3	2.01	0.42
32:BM:137:LYS:HD2	32:BM:137:LYS:HA	1.69	0.42
34:BO:21:ARG:HA	34:BO:21:ARG:NE	2.31	0.42
34:BO:65:ARG:NH2	53:B8:15:LYS:HB2	2.25	0.42
38:BR:91:ARG:O	38:BR:116:ALA:HA	2.19	0.42
42:BT:63:LYS:H	42:BT:63:LYS:HG2	1.49	0.42
44:BV:5:LEU:HB3	44:BV:6:LYS:H	1.60	0.42
1:CA:401:C:O2'	1:CA:621:A:N3	2.46	0.42
1:CA:491:G:C2	1:CA:492:G:C4	3.08	0.42
1:CA:1001:G:C2	1:CA:1002:G:H1'	2.55	0.42
1:CA:1022:G:H3'	1:CA:1023:G:H8	1.83	0.42
1:CA:1034:G:C4	1:CA:1035:A:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1055:A:N6	1:CA:1206:G:N7	2.67	0.42
1:CA:1251:A:H4'	9:CL:12:GLU:CD	2.44	0.42
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.34	0.42
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.54	0.42
1:CA:1451:A:OP2	1:CA:1452:C:N4	2.52	0.42
3:CF:52:LEU:HD12	3:CF:55:VAL:HG21	2.01	0.42
3:CF:138:VAL:O	3:CF:142:MET:HB2	2.19	0.42
7:CJ:16:LEU:HD11	9:CL:45:ALA:HB2	1.99	0.42
9:CL:7:THR:O	9:CL:83:ARG:NH1	2.52	0.42
13:CP:20:THR:HA	13:CP:25:ILE:HG21	2.01	0.42
18:CU:23:LYS:O	18:CU:25:THR:N	2.52	0.42
22:CD:2:G:H1	22:CD:71:C:N4	2.17	0.42
22:CD:18:G:H21	22:CD:57:A:H3'	1.84	0.42
24:DA:90:U:H2'	24:DA:91:A:H5''	2.02	0.42
24:DA:390:A:C6	34:DO:71:VAL:CG2	3.00	0.42
24:DA:1331:A:HO2'	24:DA:1332:G:H8	1.68	0.42
24:DA:1538:G:H2'	24:DA:1539:G:C8	2.54	0.42
24:DA:2563:U:O2	24:DA:2565:A:C8	2.72	0.42
24:DA:2685:G:OP1	38:DR:51:ARG:NH2	2.50	0.42
24:DA:2698:U:H2'	24:DA:2699:C:C6	2.54	0.42
26:DD:34:VAL:HG11	26:DD:103:ARG:HA	2.01	0.42
35:DP:16:ARG:O	35:DP:17:LEU:HD23	2.19	0.42
39:D1:85:LYS:HB2	39:D1:116:ALA:HB1	2.01	0.42
40:D2:32:THR:HA	40:D2:60:GLU:HA	2.01	0.42
42:DT:51:VAL:HA	42:DT:83:VAL:HA	2.01	0.42
1:AA:97:U:H2'	1:AA:99:C:C6	2.55	0.42
1:AA:159:G:C2	1:AA:163:C:C2	3.08	0.42
1:AA:181:G:O2'	1:AA:182:U:O5'	2.35	0.42
1:AA:762:C:H2'	1:AA:763:G:H8	1.83	0.42
2:AE:21:ARG:HG3	2:AE:38:GLY:O	2.19	0.42
3:AF:88:ARG:HA	3:AF:91:LEU:HD12	2.01	0.42
7:AJ:26:PHE:O	7:AJ:30:ILE:HG13	2.20	0.42
9:AL:45:ALA:HA	9:AL:48:GLU:HG2	2.01	0.42
9:AL:56:LEU:HB3	9:AL:57:GLY:H	1.55	0.42
11:AN:18:ARG:HH21	11:AN:37:GLY:N	2.17	0.42
12:AO:47:LYS:HG3	12:AO:48:PRO:N	2.34	0.42
16:AS:5:ARG:HH12	16:AS:24:ALA:HA	1.83	0.42
22:AD:35:A:H2'	22:AD:36:U:O4'	2.20	0.42
24:BA:595:C:H2'	24:BA:596:G:O4'	2.20	0.42
24:BA:699:A:H2'	24:BA:700:G:O4'	2.20	0.42
24:BA:884:C:H6	24:BA:884:C:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1050:A:C6	24:BA:1051:G:C5	3.07	0.42
24:BA:1295:C:O4'	36:B0:23:ASN:ND2	2.36	0.42
24:BA:1367:A:N7	24:BA:1368:G:H1'	2.34	0.42
24:BA:1541:U:H2'	24:BA:1542:G:O4'	2.20	0.42
24:BA:2392:A:H8	34:BO:60:MET:CB	2.26	0.42
24:BA:2657:A:N6	24:BA:2664:G:O2'	2.53	0.42
25:BB:39:A:C2	25:BB:44:G:C4	3.06	0.42
27:BE:52:LEU:HD23	27:BE:52:LEU:HA	1.80	0.42
29:BG:123:ASN:C	29:BG:125:PHE:H	2.27	0.42
43:BU:44:ILE:HG13	43:BU:45:VAL:H	1.83	0.42
44:BV:169:GLU:OE2	44:BV:170:THR:N	2.53	0.42
45:B3:57:PHE:HD1	45:B3:57:PHE:N	2.18	0.42
49:B4:57:GLU:HA	49:B4:60:GLN:HB2	2.00	0.42
1:CA:129(A):G:C2	1:CA:191(A):G:C8	3.08	0.42
1:CA:236:G:H5''	17:CT:42:TYR:OH	2.19	0.42
1:CA:265:G:O3'	17:CT:66:SER:HA	2.19	0.42
1:CA:397:A:H5'	1:CA:398:C:OP1	2.20	0.42
1:CA:562:C:H4'	1:CA:563:A:H5'	2.02	0.42
1:CA:580:U:H3	1:CA:761:G:H1	1.68	0.42
1:CA:686:U:O4	1:CA:703:G:H1'	2.19	0.42
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.19	0.42
1:CA:1170:A:N6	1:CA:1171:G:N3	2.66	0.42
1:CA:1213:A:N1	1:CA:1215:G:H1'	2.34	0.42
1:CA:1443:G:O2'	38:DR:122:ASP:OD2	2.38	0.42
2:CE:31:TYR:O	2:CE:42:ILE:HG13	2.20	0.42
9:CL:128:ARG:NH2	22:CC:31:G:H3'	2.35	0.42
10:CM:45:ARG:HB3	10:CM:65:LEU:HB3	2.02	0.42
24:DA:389:G:H8	24:DA:389:G:O5'	2.03	0.42
24:DA:443:A:H5''	24:DA:444:C:OP1	2.19	0.42
24:DA:445:C:O2'	24:DA:449:A:N3	2.49	0.42
24:DA:492:A:H2'	24:DA:493:G:O4'	2.20	0.42
24:DA:566:U:H5''	34:DO:29:LYS:HE3	2.02	0.42
24:DA:752:A:H4'	24:DA:753:C:O5'	2.19	0.42
24:DA:835:A:OP1	53:D8:52:LYS:HD3	2.20	0.42
24:DA:1299:G:H5'	24:DA:1301:A:O4'	2.20	0.42
24:DA:1728:G:H8	24:DA:1732:A:N6	2.10	0.42
24:DA:2679:A:H4'	27:DE:165:VAL:HG11	2.02	0.42
24:DA:2732:G:H3'	24:DA:2733:A:O4'	2.18	0.42
27:DE:58:ARG:O	27:DE:60:ASN:ND2	2.52	0.42
29:DG:109:VAL:HG13	49:D4:33:VAL:HG23	2.01	0.42
30:DH:67:LEU:HA	30:DH:70:THR:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:78:THR:OG1	31:DK:104:GLN:OE1	2.37	0.42
39:D1:92:ARG:HD2	40:D2:11:GLN:OE1	2.20	0.42
43:DU:52:SER:HG	43:DU:56:PRO:HG3	1.80	0.42
46:DZ:88:LYS:HE2	46:DZ:88:LYS:HB3	1.85	0.42
48:DX:39:ASP:OD1	48:DX:44:ARG:NH2	2.39	0.42
51:D6:15:GLU:HG3	51:D6:47:THR:HG23	1.97	0.42
1:AA:57:G:H2'	1:AA:58:C:C6	2.55	0.42
1:AA:376:G:OP1	16:AS:5:ARG:HB2	2.20	0.42
1:AA:429:U:H1'	1:AA:430:A:H5''	2.01	0.42
1:AA:457:C:H2'	1:AA:458:C:H6	1.83	0.42
1:AA:631:G:C2'	1:AA:632:A:H8	2.32	0.42
1:AA:1338:G:C6	1:AA:1339:A:C6	3.08	0.42
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.34	0.42
1:AA:1517:G:N3	24:BA:1919:A:O2'	2.51	0.42
2:AE:44:LEU:HA	2:AE:47:THR:OG1	2.19	0.42
3:AF:16:ARG:HH12	3:AF:183:ASP:HA	1.85	0.42
9:AL:9:ARG:HB2	9:AL:14:VAL:HG22	2.02	0.42
10:AM:83:GLU:O	10:AM:87:THR:OG1	2.27	0.42
11:AN:50:TYR:HD2	11:AN:54:ARG:CB	2.31	0.42
11:AN:87:THR:HA	11:AN:91:ARG:NH1	2.35	0.42
13:AP:62:ASN:HA	49:B4:49:PHE:CE2	2.55	0.42
20:AW:33:ILE:O	20:AW:37:SER:OG	2.18	0.42
22:AD:25:C:H2'	22:AD:26:G:C8	2.55	0.42
24:BA:325:G:O2'	24:BA:326:G:H5'	2.19	0.42
24:BA:684:G:C2	24:BA:774:A:C2	3.08	0.42
24:BA:1265:A:H3'	50:B5:19:ARG:NH1	2.35	0.42
24:BA:1331:A:O2'	24:BA:1332:G:H8	2.03	0.42
24:BA:1861:G:H1	24:BA:1881:C:N4	2.16	0.42
24:BA:2228:G:OP2	26:BD:263:ARG:NH1	2.44	0.42
24:BA:2612:C:H5'	50:B5:3:LYS:CD	2.49	0.42
24:BA:2795:G:H3'	24:BA:2797:U:H5''	2.02	0.42
25:BB:42:C:O2	29:BG:92:VAL:HA	2.19	0.42
27:BE:119:ARG:NH1	27:BE:156:MET:O	2.53	0.42
29:BG:5:VAL:HG13	49:B4:23:GLU:OE2	2.19	0.42
29:BG:124:SER:HB2	29:BG:131:TYR:CE1	2.55	0.42
30:BH:30:LYS:NZ	30:BH:81:GLU:HA	2.34	0.42
31:BK:109:ILE:HB	31:BK:130:TYR:CZ	2.54	0.42
34:BO:50:ARG:HD3	53:B8:7:HIS:CD2	2.55	0.42
34:BO:85:LEU:HA	34:BO:88:LEU:CD2	2.50	0.42
35:BP:63:LYS:HG2	35:BP:65:PHE:CZ	2.54	0.42
35:BP:109:VAL:HG13	35:BP:113:GLN:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B0:85:PRO:C	36:B0:87:TYR:H	2.27	0.42
44:BV:9:TYR:OH	44:BV:63:ASP:OD2	2.34	0.42
44:BV:24:LEU:N	44:BV:39:VAL:O	2.51	0.42
1:CA:130:A:N3	1:CA:263:A:O2'	2.51	0.42
1:CA:411:A:C4	1:CA:413:G:H1'	2.52	0.42
1:CA:1118:C:O3'	9:CL:83:ARG:NH2	2.41	0.42
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.19	0.42
1:CA:1272:G:H2'	1:CA:1273:G:H8	1.84	0.42
1:CA:1298:C:C5	7:CJ:114:ARG:HD2	2.55	0.42
1:CA:1310:G:C6	1:CA:1311:G:C5	3.07	0.42
4:CG:22:LYS:CG	4:CG:25:ARG:HB3	2.50	0.42
8:CK:17:THR:HB	8:CK:78:GLN:NE2	2.34	0.42
11:CN:124:LYS:H	11:CN:124:LYS:HG2	1.48	0.42
13:CP:74:VAL:HA	13:CP:77:ASN:HB3	2.02	0.42
16:CS:67:THR:O	16:CS:71:ARG:N	2.47	0.42
24:DA:140:A:H8	24:DA:1408:C:O2'	2.02	0.42
24:DA:185:U:H2'	24:DA:186:G:C8	2.55	0.42
24:DA:882:G:C2	24:DA:883:G:C8	3.07	0.42
24:DA:997:G:OP1	39:D1:93:LYS:HD3	2.20	0.42
24:DA:1030:G:OP2	35:DP:128:LYS:NZ	2.51	0.42
24:DA:1113:U:H2'	24:DA:1114:G:H8	1.84	0.42
24:DA:2133:G:N2	24:DA:2157:G:H2'	2.35	0.42
24:DA:2299:G:N1	24:DA:2318:G:C8	2.88	0.42
24:DA:2361:A:O5'	53:D8:27:THR:OG1	2.37	0.42
24:DA:2371:G:H5'	51:D6:45:LYS:HE2	2.01	0.42
24:DA:2849:U:OP2	38:DR:95:ARG:NH1	2.53	0.42
36:D0:34:ILE:HD12	36:D0:34:ILE:HA	1.90	0.42
39:D1:97:ASP:OD2	39:D1:101:ARG:NE	2.53	0.42
41:DS:66:GLU:O	41:DS:68:ARG:N	2.42	0.42
46:DZ:81:LYS:H	46:DZ:82:LEU:HD23	1.83	0.42
51:D6:25:LYS:HB2	51:D6:26:ASN:H	1.54	0.42
51:D6:44:ARG:CG	51:D6:45:LYS:H	2.32	0.42
1:AA:15:G:H4'	5:AH:24:ARG:NH1	2.34	0.42
1:AA:153:C:H2'	1:AA:154:C:O4'	2.19	0.42
1:AA:160:A:N6	1:AA:161:A:N1	2.68	0.42
1:AA:321:A:C2	1:AA:333:G:C2	3.08	0.42
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.42
1:AA:562:C:O2	12:AO:16:GLU:N	2.52	0.42
1:AA:955:U:H1'	1:AA:1227:A:H61	1.84	0.42
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.85	0.42
1:AA:1227:A:O2'	13:AP:115:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.20	0.42
3:AF:82:GLU:O	3:AF:86:VAL:HG13	2.19	0.42
10:AM:50:ILE:HG22	10:AM:52:GLY:H	1.85	0.42
10:AM:61:GLU:OE2	14:AQ:45:ARG:HD2	2.20	0.42
21:AX:2:GLY:O	21:AX:4:GLY:N	2.53	0.42
22:AD:29:G:H2'	22:AD:30:G:C8	2.55	0.42
24:BA:411:G:C2	34:BO:71:VAL:HG23	2.54	0.42
24:BA:526:A:O2'	24:BA:2043:C:O2	2.24	0.42
24:BA:880:G:O2'	24:BA:881:G:OP1	2.27	0.42
24:BA:996:A:H4'	39:B1:92:ARG:HG2	2.01	0.42
24:BA:1165:U:H2'	24:BA:1166:C:H6	1.84	0.42
24:BA:1655:A:H4'	27:BE:115:GLY:N	2.35	0.42
24:BA:1811:G:H2'	24:BA:1812:A:O4'	2.20	0.42
24:BA:1999:C:H2'	24:BA:2000:G:H8	1.84	0.42
24:BA:2171:A:H2'	24:BA:2172:U:C6	2.55	0.42
24:BA:2331:G:H4'	45:B3:43:THR:H	1.85	0.42
26:BD:127:VAL:HA	26:BD:193:VAL:HG22	2.02	0.42
27:BE:181:LEU:HD21	38:BR:7:ILE:HG23	2.02	0.42
29:BG:82:LEU:HA	29:BG:82:LEU:HD23	1.75	0.42
34:BO:22:GLY:O	34:BO:28:GLY:HA3	2.20	0.42
34:BO:126:VAL:HG12	34:BO:147:LEU:HB2	2.00	0.42
38:BR:39:ARG:HG2	38:BR:40:THR:H	1.85	0.42
38:BR:116:ALA:HB1	38:BR:121:ILE:HD11	2.02	0.42
43:BU:97:ARG:HH21	43:BU:98:VAL:HB	1.85	0.42
44:BV:104:PHE:HA	44:BV:139:VAL:HB	2.01	0.42
47:BW:33:MET:O	47:BW:37:PHE:HD1	2.02	0.42
51:B6:14:THR:O	51:B6:50:ARG:N	2.47	0.42
1:CA:32:A:C2	1:CA:33:A:C4	3.08	0.42
1:CA:38:G:H22	1:CA:397:A:P	2.43	0.42
1:CA:49:U:C2	1:CA:361:G:N2	2.88	0.42
1:CA:313:A:H2'	1:CA:314:C:C6	2.55	0.42
1:CA:407:G:C6	1:CA:408:A:C6	3.08	0.42
1:CA:524:G:H2'	1:CA:525:C:C6	2.55	0.42
1:CA:527:G:O2'	1:CA:535:A:N1	2.42	0.42
1:CA:620:C:H2'	1:CA:621:A:O4'	2.20	0.42
1:CA:775:G:N2	1:CA:804:U:O4	2.53	0.42
1:CA:989:C:O2'	1:CA:1016:A:H2	2.01	0.42
1:CA:1014:A:H4'	19:CV:14:HIS:HB2	2.02	0.42
1:CA:1329:A:H4'	13:CP:24:GLY:HA2	2.00	0.42
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.84	0.42
2:CE:12:GLU:HB3	2:CE:213:LEU:HD22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CE:112:VAL:O	2:CE:115:LEU:HB3	2.20	0.42
2:CE:168:THR:OG1	2:CE:191:ASP:O	2.32	0.42
3:CF:20:SER:O	14:CQ:54:PRO:HG3	2.20	0.42
3:CF:43:LEU:HD21	3:CF:68:VAL:HG21	2.01	0.42
9:CL:17:VAL:HG21	9:CL:80:GLY:C	2.44	0.42
13:CP:39:ILE:HD12	13:CP:56:LEU:HG	2.02	0.42
20:CW:62:LEU:HA	20:CW:65:LYS:HB2	2.02	0.42
24:DA:270(N):G:O2'	24:DA:270(O):U:H5'	2.19	0.42
24:DA:588:U:H1'	28:DF:90:PHE:HB3	2.02	0.42
24:DA:755:C:H2'	24:DA:756:C:C6	2.55	0.42
24:DA:957:A:N6	24:DA:2459:A:C8	2.88	0.42
24:DA:1066:U:H1'	24:DA:1073:A:N1	2.35	0.42
24:DA:1096:A:C6	24:DA:1097:U:C2	3.08	0.42
24:DA:1332:G:H5'	24:DA:1332:G:C8	2.55	0.42
24:DA:1394:U:H4'	24:DA:1603:A:H4'	2.02	0.42
24:DA:1461:G:H2'	24:DA:1462:C:H6	1.85	0.42
24:DA:1726:G:C6	24:DA:1727:U:C4	3.08	0.42
24:DA:2139:C:N4	24:DA:2152:G:H1	2.12	0.42
24:DA:2210:G:H5'	24:DA:2211:G:C6	2.55	0.42
24:DA:2212:A:H4'	24:DA:2213:U:N3	2.35	0.42
24:DA:2652:C:N4	24:DA:2668:G:H1	2.09	0.42
24:DA:2665:A:H2'	24:DA:2666:C:H6	1.85	0.42
25:DB:30:C:N4	25:DB:54:G:H1	2.07	0.42
26:DD:30:GLU:CD	26:DD:63:ARG:HH21	2.28	0.42
27:DE:16:ARG:NH2	27:DE:171:GLU:OE1	2.49	0.42
29:DG:108:ASN:OD1	29:DG:108:ASN:N	2.50	0.42
29:DG:125:PHE:HB3	29:DG:166:ASP:HB2	2.02	0.42
33:DN:1:MET:HB2	33:DN:32:TYR:HB3	2.02	0.42
33:DN:79:PHE:CD2	38:DR:72:VAL:HG22	2.54	0.42
34:DO:144:GLU:HA	34:DO:145:PRO:HD3	1.81	0.42
38:DR:50:ILE:HA	38:DR:50:ILE:HD13	1.76	0.42
38:DR:88:ILE:HD11	38:DR:91:ARG:HG2	2.01	0.42
41:DS:13:SER:HA	41:DS:99:ARG:HB2	2.02	0.42
41:DS:23:LEU:HD12	41:DS:23:LEU:HA	1.87	0.42
46:DZ:23:LYS:HD2	46:DZ:28:GLY:HA3	2.01	0.42
47:DW:25:VAL:O	47:DW:29:LYS:HG3	2.19	0.42
50:D5:36:CYS:HB3	50:D5:37:LYS:H	1.65	0.42
1:AA:133:U:OP1	20:AW:74:LYS:NZ	2.52	0.42
1:AA:509:A:H5''	4:AG:55:ALA:HB2	2.02	0.42
1:AA:590:C:C2'	1:AA:591:U:O5'	2.68	0.42
1:AA:626:U:H2'	1:AA:627:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:627:G:H2'	1:AA:628:G:C8	2.55	0.42
1:AA:680:C:H2'	1:AA:681:C:H6	1.85	0.42
1:AA:909:A:N3	1:AA:1413:A:O2'	2.46	0.42
1:AA:1268:A:N3	1:AA:1326:C:O2'	2.44	0.42
5:AH:9:LYS:N	5:AH:33:VAL:O	2.52	0.42
7:AJ:115:ARG:HB3	7:AJ:118:VAL:HG12	2.00	0.42
24:BA:484:C:H2'	24:BA:485:C:C6	2.54	0.42
24:BA:780:G:N2	24:BA:783:A:H62	2.08	0.42
24:BA:806:C:OP2	34:BO:41:ARG:HD3	2.20	0.42
24:BA:974(A):C:H4'	24:BA:975:G:O5'	2.20	0.42
24:BA:1153:C:H5'	39:B1:76:TYR:CE1	2.55	0.42
24:BA:1359:A:C2	24:BA:1372:U:O4	2.73	0.42
24:BA:1512:G:C6	24:BA:1513:C:C4	3.08	0.42
24:BA:1870:C:H2'	24:BA:1871:A:O4'	2.19	0.42
24:BA:2785:C:OP1	27:BE:41:LYS:NZ	2.46	0.42
24:BA:2815:C:H2'	24:BA:2816:C:C6	2.55	0.42
25:BB:27:C:O3'	37:BQ:36:TYR:OH	2.37	0.42
25:BB:83:G:OP1	48:BX:19:GLN:NE2	2.51	0.42
27:BE:92:THR:O	27:BE:95:ILE:HG12	2.19	0.42
27:BE:116:VAL:HG21	27:BE:122:PHE:CE2	2.54	0.42
27:BE:119:ARG:HD2	27:BE:120:TRP:NE1	2.34	0.42
29:BG:95:ARG:O	29:BG:99:MET:N	2.42	0.42
29:BG:116:ASP:HB2	29:BG:117:PHE:H	1.43	0.42
30:BH:6:ARG:NH2	30:BH:54:ARG:HH12	2.16	0.42
30:BH:96:ALA:HA	30:BH:105:LEU:HA	2.02	0.42
30:BH:123:PHE:CD1	30:BH:133:VAL:HG13	2.55	0.42
32:BM:40:PRO:O	39:B1:64:ARG:NH2	2.51	0.42
32:BM:133:GLN:O	32:BM:134:ARG:NH1	2.52	0.42
34:BO:15:ARG:O	34:BO:16:ARG:C	2.61	0.42
34:BO:132:LYS:HA	34:BO:132:LYS:HD3	1.87	0.42
38:BR:25:GLY:N	38:BR:49:VAL:HG23	2.28	0.42
39:B1:30:LYS:HA	39:B1:30:LYS:HD3	1.89	0.42
43:BU:15:VAL:HB	43:BU:20:TYR:O	2.20	0.42
43:BU:90:LEU:HB3	43:BU:91:GLU:H	1.38	0.42
44:BV:59:LEU:HA	44:BV:59:LEU:HD23	1.66	0.42
1:CA:250:A:H1'	1:CA:251:G:OP2	2.20	0.42
1:CA:321:A:N7	1:CA:328:C:C6	2.88	0.42
1:CA:960:U:N3	1:CA:1225:A:C4	2.83	0.42
1:CA:1028(A):C:H2'	1:CA:1028(B):C:C6	2.55	0.42
1:CA:1348:U:H4'	9:CL:120:ARG:HD2	2.01	0.42
1:CA:1351:U:O4'	7:CJ:33:ASP:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1441:G:H4'	1:CA:1442:G:C4	2.55	0.42
2:CE:80:ILE:HA	2:CE:83:MET:HB2	2.01	0.42
2:CE:184:VAL:N	2:CE:198:ASP:OD2	2.48	0.42
3:CF:70:VAL:HG12	3:CF:71:ALA:N	2.35	0.42
4:CG:50:ARG:HA	4:CG:51:PRO:HD3	1.79	0.42
8:CK:51:VAL:HG11	8:CK:60:ARG:NH1	2.35	0.42
12:CO:41:ARG:HB3	12:CO:41:ARG:HH11	1.84	0.42
13:CP:74:VAL:O	13:CP:77:ASN:HB3	2.20	0.42
16:CS:58:TYR:C	16:CS:58:TYR:CD1	2.97	0.42
22:CD:60:U:P	22:CD:62:C:H41	2.39	0.42
24:DA:185:U:H4'	24:DA:218:A:H4'	2.02	0.42
24:DA:246:C:OP1	34:DO:70:GLN:O	2.38	0.42
24:DA:1012:U:O4	32:DM:28:THR:HG21	2.19	0.42
24:DA:1257:C:H4'	28:DF:83:PHE:CE1	2.54	0.42
24:DA:1280:G:OP1	36:D0:33:ARG:NH1	2.53	0.42
24:DA:1460:A:H4'	24:DA:1461:G:OP2	2.20	0.42
24:DA:1465:G:H4'	24:DA:1528:A:H1'	2.01	0.42
24:DA:1508:A:H4'	24:DA:1510:A:C2	2.55	0.42
24:DA:1788:C:H2'	24:DA:1789:A:O4'	2.19	0.42
24:DA:1914:C:H2'	24:DA:1915:U:O4'	2.19	0.42
24:DA:2116:G:N1	24:DA:2165:G:O6	2.52	0.42
24:DA:2286:A:H5'	51:D6:28:ARG:NE	2.34	0.42
24:DA:2848:G:C8	38:DR:97:ALA:HB2	2.55	0.42
25:DB:87:G:O2'	25:DB:89:G:O6	2.32	0.42
26:DD:11:PRO:C	26:DD:13:ARG:H	2.28	0.42
30:DH:107:VAL:HB	30:DH:109:PHE:HE1	1.84	0.42
31:DK:95:LYS:O	31:DK:99:GLU:HG3	2.20	0.42
35:DP:72:LYS:HA	35:DP:73:PRO:HD3	1.75	0.42
38:DR:61:PHE:CE1	38:DR:76:PHE:HB2	2.55	0.42
39:D1:100:VAL:O	39:D1:102:GLU:N	2.40	0.42
41:DS:47:VAL:HA	41:DS:50:VAL:HG12	2.01	0.42
43:DU:52:SER:N	43:DU:53:PRO:HD3	2.35	0.42
44:DV:100:VAL:O	44:DV:124:ILE:HG22	2.19	0.42
1:AA:130:A:H2	1:AA:263:A:N3	2.18	0.42
1:AA:556:C:C2	1:AA:557:G:C8	3.07	0.42
1:AA:868:C:H2'	1:AA:869:G:O4'	2.18	0.42
1:AA:1289:A:N1	1:AA:1371:G:O2'	2.52	0.42
1:AA:1399:C:C2	1:AA:1401:G:C5	3.08	0.42
2:AE:111:ARG:HD3	2:AE:111:ARG:HA	1.89	0.42
4:AG:29:PRO:O	4:AG:30:LYS:CG	2.67	0.42
4:AG:62:GLN:HE22	4:AG:65:ARG:HH21	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AJ:120:ILE:H	7:AJ:120:ILE:HG12	1.69	0.42
22:AD:24:U:H2'	22:AD:25:C:H6	1.84	0.42
24:BA:270(O):U:O2	24:BA:270(O):U:H2'	2.20	0.42
24:BA:664:C:OP1	34:BO:18:ARG:NH2	2.40	0.42
24:BA:1971:A:C5	26:BD:241:PRO:HD3	2.55	0.42
24:BA:2334:G:N2	37:BQ:16:ASN:OD1	2.44	0.42
24:BA:2477:C:H5'	24:BA:2479:G:O6	2.20	0.42
29:BG:171:ALA:O	29:BG:175:LEU:HG	2.20	0.42
30:BH:86:GLU:OE2	30:BH:86:GLU:N	2.51	0.42
30:BH:123:PHE:CE1	30:BH:133:VAL:HG13	2.55	0.42
34:BO:6:LEU:O	34:BO:7:ARG:O	2.37	0.42
42:BT:31:HIS:HA	42:BT:32:PRO:HD3	1.79	0.42
47:BW:43:GLN:C	47:BW:45:SER:N	2.78	0.42
52:B7:22:MET:HE3	52:B7:22:MET:HB3	1.92	0.42
1:CA:300:A:H2'	1:CA:564:C:H42	1.84	0.42
1:CA:604:G:H2'	1:CA:605:U:O4'	2.20	0.42
1:CA:866:C:C4	1:CA:867:G:H1'	2.54	0.42
1:CA:980:C:H3'	1:CA:981:U:H6	1.84	0.42
1:CA:1135:U:O2'	1:CA:1138:G:O6	2.26	0.42
1:CA:1450:U:OP1	1:CA:1450:U:H4'	2.20	0.42
4:CG:13:ARG:HD2	4:CG:38:TYR:O	2.20	0.42
4:CG:134:ASP:O	4:CG:136:PRO:HD3	2.19	0.42
5:CH:88:LYS:HB2	5:CH:123:LEU:HB2	2.02	0.42
15:CR:2:PRO:HB2	15:CR:3:ILE:H	1.62	0.42
16:CS:20:VAL:HG21	16:CS:32:TYR:CD2	2.55	0.42
21:CX:2:GLY:O	21:CX:5:ASP:N	2.41	0.42
22:CD:12:G:HO2'	22:CD:13:C:P	2.41	0.42
24:DA:903:C:H2'	24:DA:904:C:C6	2.55	0.42
24:DA:1115:G:H2'	24:DA:1116:C:C6	2.54	0.42
24:DA:1139:G:HO2'	24:DA:1143:A:N6	2.12	0.42
24:DA:1191:G:OP1	34:DO:18:ARG:NH1	2.37	0.42
24:DA:1288:U:C2	24:DA:1327:C:O2	2.73	0.42
24:DA:1788:C:H5''	26:DD:225:ALA:CB	2.50	0.42
24:DA:2124:G:H3'	24:DA:2125:G:C8	2.55	0.42
24:DA:2628:C:H1'	24:DA:2781:A:H2'	2.02	0.42
24:DA:2795:G:H1'	24:DA:2802:G:H1	1.85	0.42
24:DA:2843:G:H1	24:DA:2874:C:N4	2.18	0.42
27:DE:23:VAL:HG11	27:DE:183:LEU:HB3	2.01	0.42
30:DH:10:PRO:HD2	30:DH:50:VAL:O	2.20	0.42
34:DO:110:TYR:HB3	34:DO:111:ARG:H	1.59	0.42
35:DP:23:GLY:CA	35:DP:25:ASP:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DQ:59:LYS:HD3	37:DQ:60:GLY:H	1.85	0.42
37:DQ:62:LYS:HB3	37:DQ:97:ARG:HD3	2.02	0.42
38:DR:1:MET:HB3	38:DR:2:ASN:H	1.43	0.42
42:DT:67:GLY:O	42:DT:69:TYR:N	2.46	0.42
43:DU:20:TYR:CZ	43:DU:42:VAL:HA	2.55	0.42
49:D4:60:GLN:OE1	49:D4:60:GLN:N	2.49	0.42
50:D5:48:GLU:HA	50:D5:56:LYS:NZ	2.35	0.42
51:D6:30:THR:HA	51:D6:31:PRO:HA	1.74	0.42
1:AA:62:U:OP1	1:AA:385:C:O2'	2.36	0.41
1:AA:177:C:H2'	1:AA:178:C:C6	2.55	0.41
1:AA:736:C:O2'	6:AI:90:VAL:O	2.38	0.41
1:AA:939:G:H2'	1:AA:940:C:H6	1.84	0.41
1:AA:945:G:H2'	1:AA:945:G:N3	2.35	0.41
1:AA:1021:G:H2'	1:AA:1022:G:O4'	2.19	0.41
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.55	0.41
2:AE:30:ARG:O	2:AE:46:LYS:NZ	2.31	0.41
4:AG:18:LYS:CG	4:AG:33:MET:SD	3.05	0.41
4:AG:33:MET:HG3	4:AG:37:PRO:HA	2.01	0.41
11:AN:59:TYR:O	11:AN:63:LEU:HG	2.20	0.41
12:AO:90:VAL:O	12:AO:91:LYS:HB3	2.20	0.41
22:AC:76:A:N1	24:BA:2450:A:O2'	2.49	0.41
24:BA:128:C:O3'	52:B7:49:ARG:NH2	2.53	0.41
24:BA:506:G:H5''	24:BA:509:C:H1'	2.02	0.41
24:BA:675:A:C8	24:BA:804:A:C6	3.08	0.41
24:BA:1392:A:C6	24:BA:1393:A:C6	3.07	0.41
24:BA:1697:G:OP2	24:BA:1698:A:O2'	2.32	0.41
24:BA:2348:U:O2'	51:B6:42:TRP:HD1	2.03	0.41
24:BA:2443:C:H2'	24:BA:2444:G:H8	1.84	0.41
24:BA:2636:U:P	27:BE:79:ARG:HA	2.59	0.41
25:BB:39:A:H2'	25:BB:40:U:C5	2.54	0.41
27:BE:8:LYS:NZ	27:BE:190:GLY:O	2.51	0.41
29:BG:36:LYS:HE2	29:BG:38:VAL:HG21	2.02	0.41
32:BM:55:VAL:HB	32:BM:126:PRO:HA	2.01	0.41
35:BP:56:ARG:HD2	35:BP:56:ARG:HA	1.85	0.41
37:BQ:106:ARG:NH2	37:BQ:107:GLU:HB3	2.23	0.41
43:BU:55:TYR:CG	43:BU:61:ILE:HD11	2.54	0.41
43:BU:81:LYS:HD3	43:BU:97:ARG:HD2	2.02	0.41
44:BV:63:ASP:C	44:BV:65:GLN:N	2.78	0.41
53:B8:51:ALA:N	53:B8:53:PRO:HD2	2.35	0.41
1:CA:197:A:H3'	1:CA:197:A:OP2	2.20	0.41
1:CA:735:C:H2'	1:CA:736:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1032:A:H3'	1:CA:1032(A):G:C5'	2.50	0.41
1:CA:1305:G:O2'	1:CA:1306:A:H8	2.03	0.41
2:CE:40:HIS:CB	2:CE:190:THR:HG21	2.50	0.41
2:CE:185:ILE:HA	2:CE:199:TYR:O	2.20	0.41
4:CG:178:VAL:O	4:CG:180:GLY:N	2.46	0.41
6:CI:10:LEU:HD11	6:CI:61:LEU:HD22	2.01	0.41
22:CC:49:G:H2'	22:CC:50:U:O4'	2.20	0.41
24:DA:118:A:OP2	24:DA:119:A:H2'	2.20	0.41
24:DA:469:G:C6	52:D7:39:ARG:NH1	2.88	0.41
24:DA:960:A:H5''	24:DA:961:C:OP1	2.19	0.41
24:DA:1096:A:H8	24:DA:1096:A:OP2	2.03	0.41
24:DA:1465:G:N3	24:DA:1545(A):A:H2	2.17	0.41
24:DA:1591:G:H2'	24:DA:1592:C:C6	2.54	0.41
24:DA:1935:G:O2'	24:DA:1936:A:H5''	2.20	0.41
24:DA:2191:G:O2'	24:DA:2192:G:P	2.78	0.41
24:DA:2342:C:O2	24:DA:2374:C:H4'	2.20	0.41
24:DA:2678:C:H2'	24:DA:2679:A:O4'	2.20	0.41
24:DA:2794:C:C4	24:DA:2795:G:C5	3.07	0.41
24:DA:2876:G:O5'	38:DR:3:ARG:HA	2.20	0.41
25:DB:52:A:N6	37:DQ:33:LYS:HG2	2.35	0.41
25:DB:116:G:H2'	25:DB:117:G:O4'	2.20	0.41
26:DD:61:LEU:HD12	26:DD:61:LEU:HA	1.79	0.41
26:DD:168:ARG:HG2	26:DD:173:VAL:HG12	2.02	0.41
26:DD:244:ARG:HB2	26:DD:245:PRO:HD2	2.01	0.41
34:DO:62:LEU:HD13	34:DO:62:LEU:HA	1.79	0.41
35:DP:2:LEU:HD13	35:DP:69:PHE:CD1	2.55	0.41
35:DP:77:LYS:O	35:DP:79:LEU:N	2.53	0.41
39:D1:39:LEU:HD23	39:D1:39:LEU:HA	1.79	0.41
39:D1:95:LEU:C	39:D1:97:ASP:H	2.28	0.41
44:DV:108:PRO:HB3	44:DV:144:LEU:HD21	2.01	0.41
53:D8:60:LEU:C	53:D8:61:LEU:HD12	2.45	0.41
1:AA:130:A:OP2	17:AT:63:ARG:NH2	2.53	0.41
1:AA:356:A:H2'	1:AA:357:G:O4'	2.20	0.41
1:AA:404:U:OP1	4:AG:3:ARG:NH2	2.47	0.41
1:AA:637:G:H2'	1:AA:638:G:C8	2.54	0.41
2:AE:186:ALA:O	2:AE:201:ILE:N	2.38	0.41
4:AG:59:ARG:HH21	4:AG:66:ARG:NH1	2.18	0.41
8:AK:39:LEU:HB3	8:AK:45:ILE:HG23	2.01	0.41
9:AL:25:LYS:O	9:AL:60:ASP:HB3	2.20	0.41
14:AQ:22:THR:O	14:AQ:23:ARG:HD3	2.20	0.41
20:AW:71:THR:HB	20:AW:72:LEU:H	1.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AD:29:G:H2'	22:AD:30:G:H8	1.85	0.41
24:BA:242:G:C5'	53:B8:62:LEU:HD13	2.51	0.41
24:BA:844:C:H2'	24:BA:845:G:O4'	2.20	0.41
24:BA:963:U:H2'	24:BA:964:C:C6	2.55	0.41
24:BA:973:A:O4'	24:BA:1188:U:C6	2.74	0.41
24:BA:1059:G:N1	24:BA:1079:C:N3	2.56	0.41
24:BA:1070:A:N7	24:BA:1096:A:C8	2.88	0.41
24:BA:1198:U:H2'	24:BA:1199:U:H6	1.85	0.41
24:BA:1243:G:H4'	34:BO:7:ARG:NH2	2.35	0.41
24:BA:1466:G:N2	24:BA:1547:C:N3	2.68	0.41
24:BA:1491:G:H2'	24:BA:1492:G:H8	1.83	0.41
26:BD:25:THR:OG1	26:BD:113:VAL:HG21	2.20	0.41
28:BF:39:TRP:NE1	28:BF:99:TYR:O	2.52	0.41
29:BG:104:GLU:HG2	49:B4:23:GLU:OE1	2.19	0.41
32:BM:130:HIS:O	32:BM:130:HIS:CG	2.72	0.41
34:BO:61:ARG:HA	34:BO:61:ARG:HD3	1.56	0.41
35:BP:67:ARG:C	35:BP:68:ILE:O	2.63	0.41
36:B0:38:VAL:HG22	36:B0:112:ALA:HB2	2.01	0.41
39:B1:91:ASP:C	39:B1:93:LYS:N	2.77	0.41
44:BV:6:LYS:NZ	44:BV:43:GLU:HG3	2.35	0.41
1:CA:346:G:N2	1:CA:347:G:C8	2.88	0.41
1:CA:430:A:H2'	1:CA:431:A:O4'	2.20	0.41
1:CA:1002:G:O6	1:CA:1037:C:N4	2.53	0.41
1:CA:1127:G:N2	1:CA:1145:C:O2	2.53	0.41
1:CA:1324:A:C4'	1:CA:1362:C:H4'	2.40	0.41
1:CA:1496:C:H2'	1:CA:1497:G:C8	2.55	0.41
1:CA:1497:G:H2'	1:CA:1498:U:H5'	2.03	0.41
55:CA:1800:T1C:H41	55:CA:1800:T1C:H423	1.48	0.41
2:CE:140:HIS:ND1	2:CE:140:HIS:O	2.54	0.41
3:CF:80:GLY:O	3:CF:85:ARG:NH2	2.53	0.41
6:CI:77:ARG:HB3	6:CI:77:ARG:HH11	1.85	0.41
11:CN:54:ARG:NH1	22:CD:40:C:OP1	2.50	0.41
20:CW:16:HIS:O	20:CW:19:SER:OG	2.33	0.41
21:CX:9:ARG:HG3	21:CX:10:ARG:H	1.85	0.41
24:DA:944:G:H5''	24:DA:945:A:O5'	2.19	0.41
24:DA:1342:A:C2	24:DA:1602:U:N3	2.86	0.41
24:DA:1461:G:H2'	24:DA:1462:C:C6	2.55	0.41
24:DA:2470:G:H5'	35:DP:56:ARG:NH2	2.35	0.41
26:DD:246:PRO:O	26:DD:254:THR:HG22	2.21	0.41
26:DD:267:SER:C	26:DD:269:PHE:N	2.78	0.41
27:DE:9:VAL:CG1	27:DE:26:ILE:O	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:143:ASN:HD22	27:DE:147:PRO:HD3	1.85	0.41
28:DF:29:ASN:HA	28:DF:30:PRO:HD2	1.76	0.41
29:DG:119:GLY:O	29:DG:181:ARG:HG3	2.20	0.41
31:DK:101:LEU:HA	31:DK:105:HIS:HB2	2.01	0.41
34:DO:52:GLU:CD	34:DO:52:GLU:N	2.78	0.41
35:DP:68:ILE:HD13	35:DP:103:MET:HG2	2.02	0.41
40:D2:89:GLN:HA	40:D2:90:PRO:HD3	1.83	0.41
45:D3:46:LYS:HA	45:D3:47:PRO:HD3	1.81	0.41
49:D4:36:CYS:HB3	49:D4:39:CYS:HB2	1.32	0.41
53:D8:60:LEU:O	53:D8:61:LEU:HD12	2.19	0.41
1:AA:29:G:O2'	1:AA:30:U:H5'	2.20	0.41
1:AA:193:C:O3'	20:AW:61:SER:OG	2.35	0.41
1:AA:329:A:C5	1:AA:332:G:C6	3.09	0.41
1:AA:560:U:H6	1:AA:560:U:H2'	1.66	0.41
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.20	0.41
1:AA:825:G:O4'	8:AK:2:LEU:HD21	2.21	0.41
1:AA:979:C:OP1	1:AA:1223:C:N4	2.53	0.41
2:AE:171:ALA:HA	2:AE:174:VAL:HB	2.01	0.41
2:AE:194:PRO:HB2	2:AE:195:ASP:H	1.62	0.41
2:AE:201:ILE:HG21	2:AE:214:ILE:HG13	2.02	0.41
3:AF:32:LEU:O	3:AF:35:GLU:HB2	2.19	0.41
6:AI:11:ASN:HA	6:AI:12:PRO:HD2	1.82	0.41
8:AK:46:LYS:N	8:AK:64:LYS:HG3	2.36	0.41
9:AL:112:LYS:HD3	9:AL:113:LYS:N	2.36	0.41
19:AV:38:SER:O	19:AV:71:LEU:HD12	2.20	0.41
24:BA:26:G:C6	24:BA:27:G:N1	2.88	0.41
24:BA:49:A:N7	24:BA:120:U:C5	2.71	0.41
24:BA:138:G:O2'	24:BA:139:G:H5'	2.20	0.41
24:BA:242:G:O5'	53:B8:3:LYS:HE3	2.20	0.41
24:BA:322:A:OP2	28:BF:169:ASN:HB2	2.20	0.41
24:BA:370:G:H4'	24:BA:371:A:OP2	2.20	0.41
24:BA:1324:G:C4	24:BA:1328:G:O6	2.73	0.41
24:BA:1441:G:C2	24:BA:1551:C:N3	2.88	0.41
24:BA:1936:A:C8	24:BA:1940:U:O2	2.73	0.41
24:BA:1992:G:N2	24:BA:1996:C:O2'	2.52	0.41
24:BA:2347:C:P	51:B6:39:TYR:OH	2.79	0.41
24:BA:2399:G:H1'	51:B6:21:TYR:CE2	2.55	0.41
24:BA:2811:G:P	27:BE:60:ASN:HB2	2.58	0.41
27:BE:51:PHE:CD2	27:BE:52:LEU:HG	2.55	0.41
27:BE:61:ARG:HB2	27:BE:62:PRO:HD3	2.02	0.41
27:BE:201:THR:OG1	27:BE:202:LYS:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:43:LEU:HD12	29:BG:43:LEU:HA	1.84	0.41
30:BH:167:GLU:HA	30:BH:168:PRO:HD3	1.80	0.41
38:BR:11:GLU:OE1	38:BR:11:GLU:N	2.37	0.41
38:BR:74:ARG:HD3	38:BR:76:PHE:CZ	2.56	0.41
39:B1:105:VAL:CG1	40:B2:40:LEU:HD11	2.50	0.41
42:BT:36:LYS:HE2	42:BT:54:VAL:O	2.20	0.41
43:BU:49:VAL:H	43:BU:50:ARG:HH21	1.68	0.41
1:CA:792:A:O2'	1:CA:794:A:N6	2.37	0.41
4:CG:119:GLN:HG2	4:CG:123:HIS:NE2	2.36	0.41
7:CJ:141:VAL:O	7:CJ:145:ALA:N	2.52	0.41
8:CK:49:GLU:HG2	8:CK:62:TYR:HE1	1.84	0.41
11:CN:99:GLN:HG2	11:CN:105:VAL:HG21	2.02	0.41
13:CP:74:VAL:C	13:CP:77:ASN:HB3	2.45	0.41
24:DA:105:C:HO2'	43:DU:2:ARG:HH22	1.59	0.41
24:DA:138:G:H1	42:DT:44:GLU:CD	2.28	0.41
24:DA:194:G:H2'	24:DA:195:A:O4'	2.20	0.41
24:DA:448:U:H1'	28:DF:84:VAL:HG13	2.02	0.41
24:DA:821:A:H2'	24:DA:946:G:H5''	2.03	0.41
24:DA:1056:G:O2'	24:DA:1086:A:O2'	2.19	0.41
24:DA:1161:C:O2'	40:D2:8:GLY:HA2	2.20	0.41
24:DA:1479:G:O2'	24:DA:1558:A:H5'	2.21	0.41
24:DA:2134:A:N7	24:DA:2158:A:C8	2.88	0.41
24:DA:2393:A:P	53:D8:30:ARG:HB3	2.60	0.41
24:DA:2638:G:O2'	24:DA:2639:A:H8	2.02	0.41
27:DE:76:ARG:HG2	27:DE:195:LEU:HD13	2.02	0.41
28:DF:170:LEU:HA	28:DF:170:LEU:HD23	1.90	0.41
30:DH:4:ILE:HB	30:DH:5:GLY:H	1.72	0.41
30:DH:109:PHE:HZ	30:DH:152:ARG:HB2	1.84	0.41
32:DM:16:ILE:HB	32:DM:54:VAL:HG22	2.01	0.41
34:DO:98:GLU:HA	34:DO:101:VAL:HB	2.02	0.41
42:DT:53:LYS:NZ	42:DT:55:ASN:OD1	2.49	0.41
1:AA:20:U:H2'	1:AA:21:G:O4'	2.21	0.41
1:AA:108:G:OP2	1:AA:108:G:N2	2.54	0.41
1:AA:216:G:O6	1:AA:217:C:N4	2.54	0.41
1:AA:724:G:C2	1:AA:725:G:C8	3.08	0.41
1:AA:954:G:N2	1:AA:1226:C:O2	2.46	0.41
1:AA:1031:G:O6	1:AA:1032:A:N6	2.53	0.41
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.85	0.41
1:AA:1239:A:H4'	1:AA:1240:U:H5''	2.02	0.41
1:AA:1319:A:H3'	19:AV:3:ARG:NH2	2.34	0.41
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.20	0.41
9:AL:80:GLY:O	9:AL:84:ALA:N	2.34	0.41
18:AU:58:LEU:HD23	18:AU:58:LEU:HA	1.91	0.41
19:AV:52:TYR:HA	19:AV:56:GLN:O	2.21	0.41
24:BA:876:C:H2'	24:BA:877:U:O4'	2.20	0.41
24:BA:1047:G:H3'	24:BA:1110:G:H1	1.84	0.41
24:BA:1454:U:OP1	36:B0:77:ARG:NH1	2.46	0.41
24:BA:1568:G:O5'	26:BD:61:LEU:HD22	2.19	0.41
24:BA:1654:A:OP1	36:B0:1:MET:N	2.49	0.41
24:BA:1668:A:H4'	24:BA:1669:A:O5'	2.20	0.41
24:BA:1677:A:H2'	24:BA:1678:G:O4'	2.21	0.41
24:BA:1952:A:C6	33:BN:22:ILE:HD11	2.55	0.41
24:BA:2077:A:H2'	24:BA:2078:C:H6	1.86	0.41
24:BA:2815:C:H2'	24:BA:2816:C:H6	1.85	0.41
28:BF:34:TRP:NE1	34:BO:8:PRO:HD3	2.36	0.41
29:BG:88:ILE:HD12	29:BG:88:ILE:HA	1.86	0.41
38:BR:5:ALA:HA	38:BR:8:LYS:HG2	2.02	0.41
40:B2:35:LEU:O	40:B2:37:VAL:N	2.31	0.41
41:BS:55:ALA:O	41:BS:59:VAL:HG23	2.20	0.41
45:B3:12:ASN:HA	45:B3:14:ARG:NH2	2.32	0.41
46:BZ:92:LYS:NZ	46:BZ:92:LYS:HB2	2.35	0.41
1:CA:738:C:H5''	6:CI:69:GLU:HB2	2.02	0.41
1:CA:976:G:OP1	14:CQ:32:SER:N	2.40	0.41
1:CA:1251:A:H5'	9:CL:12:GLU:HB3	2.02	0.41
15:CR:33:THR:HG23	15:CR:63:ARG:NH1	2.33	0.41
15:CR:85:LEU:HD23	15:CR:85:LEU:HA	1.91	0.41
22:CD:59:A:C8	22:CD:60:U:C5	3.09	0.41
24:DA:273(D):C:N4	24:DA:273(E):U:O4	2.53	0.41
24:DA:685:A:C2	24:DA:689:A:C6	3.08	0.41
24:DA:896:A:OP2	44:DV:146:ILE:HD11	2.20	0.41
24:DA:1065:U:C2	24:DA:1074:G:C2	3.08	0.41
24:DA:1475:G:C2	24:DA:1519:G:C2	3.08	0.41
24:DA:2154:G:C4	24:DA:2155:G:C8	3.08	0.41
24:DA:2328:A:H2'	24:DA:2329:G:C8	2.55	0.41
24:DA:2526:G:H5'	24:DA:2742:C:O2'	2.21	0.41
27:DE:37:ARG:HB2	27:DE:46:ALA:O	2.21	0.41
34:DO:122:PRO:HA	34:DO:142:GLY:N	2.34	0.41
36:D0:38:VAL:HG22	36:D0:112:ALA:HB2	2.02	0.41
40:D2:37:VAL:O	40:D2:51:VAL:HG13	2.18	0.41
40:D2:52:VAL:HG13	40:D2:55:ALA:HB3	2.01	0.41
46:DZ:8:SER:HB3	46:DZ:66:HIS:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DW:27:GLU:O	47:DW:31:GLU:HG3	2.20	0.41
1:AA:157:G:C2	1:AA:165:C:C2	3.08	0.41
1:AA:648:A:H2'	1:AA:649:G:C8	2.56	0.41
1:AA:936:C:H42	1:AA:1379:G:H1	1.69	0.41
1:AA:960:U:H3	1:AA:1225:A:C1'	2.33	0.41
1:AA:1312:G:P	49:B4:58:ARG:HH22	2.43	0.41
9:AL:81:ILE:O	9:AL:85:LEU:HD23	2.21	0.41
12:AO:62:SER:HB2	12:AO:64:TYR:HD2	1.85	0.41
19:AV:63:THR:OG1	19:AV:65:ASN:OD1	2.26	0.41
24:BA:141(A):C:H2'	24:BA:142:G:O4'	2.20	0.41
24:BA:566:U:H2'	24:BA:567:A:O4'	2.20	0.41
24:BA:674:G:O2'	28:BF:74:ARG:HG3	2.20	0.41
24:BA:1213:A:N3	24:BA:1238:G:O2'	2.46	0.41
24:BA:1491:G:H2'	24:BA:1492:G:C8	2.55	0.41
24:BA:2841:C:H42	24:BA:2876:G:H1	1.68	0.41
26:BD:65:ILE:HD11	26:BD:67:PHE:CE1	2.56	0.41
27:BE:48:GLN:OE1	27:BE:77:ILE:HD12	2.19	0.41
30:BH:154:PRO:HB2	30:BH:155:SER:H	1.60	0.41
36:B0:52:ILE:O	36:B0:55:ALA:N	2.52	0.41
37:BQ:49:VAL:HG21	37:BQ:77:ALA:HB2	2.02	0.41
37:BQ:74:ALA:HA	37:BQ:108:GLY:HA3	2.02	0.41
38:BR:51:ARG:HH21	38:BR:62:THR:HG21	1.85	0.41
39:B1:108:GLU:HG3	40:B2:44:LYS:HD3	2.03	0.41
42:BT:39:ILE:O	42:BT:43:VAL:HG23	2.20	0.41
47:BW:8:LYS:HB2	47:BW:8:LYS:HE3	1.89	0.41
1:CA:6:G:H4'	1:CA:298:A:C4'	2.46	0.41
1:CA:87:A:C2	1:CA:88:C:C6	3.09	0.41
1:CA:186(A):C:H2'	1:CA:186(B):C:H6	1.85	0.41
1:CA:458:C:N4	1:CA:464:G:C6	2.89	0.41
1:CA:536:C:H2'	1:CA:537:G:H8	1.86	0.41
1:CA:688:G:H2'	1:CA:689:C:H6	1.85	0.41
1:CA:778:G:H8	1:CA:778:G:O5'	2.03	0.41
1:CA:939:G:C6	1:CA:940:C:N4	2.89	0.41
1:CA:958:A:N1	19:CV:54:GLY:HA3	2.34	0.41
1:CA:1104:G:H4'	2:CE:111:ARG:NH2	2.36	0.41
1:CA:1438:G:N1	1:CA:1463:C:N3	2.42	0.41
2:CE:84:GLU:OE2	2:CE:87:ARG:NH1	2.53	0.41
3:CF:9:GLY:HA3	14:CQ:49:HIS:HA	2.02	0.41
3:CF:157:ILE:CD1	3:CF:166:GLU:HG2	2.50	0.41
9:CL:79:LEU:HD12	9:CL:83:ARG:HD2	2.01	0.41
10:CM:38:ILE:O	10:CM:71:LEU:N	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:88:ARG:O	13:CP:92:HIS:ND1	2.54	0.41
17:CT:97:SER:N	17:CT:101:ARG:HH11	2.19	0.41
18:CU:31:LEU:HD23	18:CU:31:LEU:H	1.85	0.41
18:CU:66:LEU:O	18:CU:69:THR:OG1	2.36	0.41
19:CV:39:THR:HG22	19:CV:40:ILE:H	1.85	0.41
24:DA:1313:U:H2'	24:DA:1610:A:N1	2.36	0.41
24:DA:1356:G:H2'	24:DA:1357:U:O4'	2.21	0.41
24:DA:1525:G:H2'	24:DA:1526:G:C8	2.55	0.41
24:DA:1878:G:H2'	24:DA:1879:C:C6	2.55	0.41
24:DA:2086:U:H2'	24:DA:2087:G:H8	1.84	0.41
24:DA:2141:G:C6	24:DA:2151:G:C6	3.09	0.41
24:DA:2211:G:O2'	24:DA:2212:A:OP1	2.28	0.41
24:DA:2330:G:H4'	45:D3:44:ARG:HH12	1.85	0.41
24:DA:2420:C:OP2	53:D8:34:TRP:CD2	2.73	0.41
24:DA:2472:G:H1'	24:DA:2478:A:H61	1.86	0.41
24:DA:2887:U:H2'	24:DA:2888:C:C6	2.53	0.41
25:DB:39:A:N6	49:D4:1:MET:HB2	2.35	0.41
26:DD:70:TRP:HH2	26:DD:152:GLY:H	1.69	0.41
28:DF:155:LEU:HD12	28:DF:155:LEU:HA	1.91	0.41
29:DG:63:ILE:HG22	29:DG:143:GLU:HB2	2.01	0.41
31:DK:98:ALA:HA	31:DK:109:ILE:HD11	2.01	0.41
32:DM:89:LYS:O	32:DM:93:THR:OG1	2.39	0.41
34:DO:3:LEU:H	34:DO:3:LEU:HD12	1.86	0.41
38:DR:64:ARG:CB	38:DR:73:GLU:HG2	2.48	0.41
39:D1:114:LYS:H	39:D1:114:LYS:HG2	1.50	0.41
40:D2:25:LEU:HA	40:D2:25:LEU:HD23	1.85	0.41
42:DT:49:VAL:HG23	42:DT:51:VAL:HG23	2.02	0.41
45:D3:29:GLN:O	45:D3:67:VAL:HG23	2.20	0.41
47:DW:47:ASN:O	47:DW:49:LYS:N	2.54	0.41
1:AA:201:C:N4	1:AA:209:U:O2	2.53	0.41
1:AA:244:U:H4'	1:AA:245:C:C5'	2.50	0.41
1:AA:939:G:H5''	7:AJ:102:ARG:HH12	1.86	0.41
1:AA:1002:G:C6	1:AA:1003:G:C6	3.08	0.41
5:AH:100:VAL:HG13	5:AH:107:ARG:HH21	1.86	0.41
7:AJ:111:ARG:H	7:AJ:111:ARG:HG3	1.57	0.41
10:AM:5:ARG:HH21	10:AM:99:LYS:HD2	1.84	0.41
10:AM:45:ARG:HD3	14:AQ:36:PHE:HE2	1.85	0.41
12:AO:46:LYS:CG	12:AO:48:PRO:HD3	2.15	0.41
13:AP:40:ASN:HA	13:AP:41:PRO:HD3	1.88	0.41
18:AU:76:LEU:HD13	18:AU:76:LEU:HA	1.88	0.41
22:AD:31:G:H1	22:AD:39:C:N4	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:172:C:H2'	24:BA:173:G:C8	2.56	0.41
24:BA:182:A:H2'	24:BA:183:C:C6	2.55	0.41
24:BA:248:G:H5'	24:BA:250:G:N7	2.35	0.41
24:BA:270(V):G:C4	24:BA:270(W):G:C8	3.09	0.41
24:BA:273(E):U:H2'	24:BA:273(F):C:O4'	2.21	0.41
24:BA:275:G:N2	24:BA:278:A:H61	2.18	0.41
24:BA:606:U:H4'	24:BA:658:C:H4'	2.02	0.41
24:BA:1394:U:H4'	24:BA:1603:A:H4'	2.03	0.41
24:BA:1516:U:C2	24:BA:1517:G:C8	3.09	0.41
24:BA:1629:U:H2'	24:BA:1630:G:C8	2.55	0.41
24:BA:1717:G:C5	24:BA:1743:G:C2	3.08	0.41
24:BA:2127:G:N2	24:BA:2161:C:O2	2.50	0.41
24:BA:2392:A:H2	24:BA:2424:C:N4	2.18	0.41
24:BA:2636:U:H1'	24:BA:2783:G:N2	2.35	0.41
26:BD:142:VAL:HG23	26:BD:193:VAL:HA	2.02	0.41
27:BE:105:THR:HG21	27:BE:164:ARG:CZ	2.51	0.41
28:BF:16:GLY:O	28:BF:18:ARG:N	2.53	0.41
28:BF:170:LEU:HD13	28:BF:170:LEU:HA	1.88	0.41
32:BM:41:ASP:HA	39:B1:64:ARG:NH2	2.36	0.41
39:B1:69:CYS:SG	39:B1:79:PHE:HD2	2.44	0.41
40:B2:44:LYS:O	40:B2:46:VAL:HG12	2.21	0.41
46:BZ:94:LEU:HD23	46:BZ:94:LEU:HA	1.84	0.41
1:CA:791:G:C6	1:CA:792:A:N7	2.89	0.41
1:CA:823:G:N3	8:CK:1:MET:HE1	2.35	0.41
1:CA:918:A:H2'	1:CA:919:A:O4'	2.20	0.41
1:CA:1213:A:C5	1:CA:1215:G:C4	3.08	0.41
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.21	0.41
1:CA:1326:C:H2'	1:CA:1327:C:H6	1.86	0.41
2:CE:163:PHE:HA	2:CE:185:ILE:HG12	2.02	0.41
4:CG:11:LEU:C	4:CG:13:ARG:N	2.78	0.41
4:CG:22:LYS:NZ	4:CG:25:ARG:O	2.52	0.41
4:CG:155:LEU:O	4:CG:157:LEU:N	2.50	0.41
11:CN:114:VAL:HA	11:CN:115:PRO:HD3	1.90	0.41
19:CV:29:ARG:HD3	19:CV:47:HIS:HA	2.03	0.41
24:DA:82:G:N1	24:DA:103:A:OP2	2.53	0.41
24:DA:315:G:C6	24:DA:316:C:C4	3.09	0.41
24:DA:581:C:OP1	39:D1:33:ARG:HG3	2.20	0.41
24:DA:583:G:OP2	39:D1:10:ARG:HD2	2.20	0.41
24:DA:811:U:O2'	34:DO:21:ARG:HG3	2.20	0.41
24:DA:1188:U:O2'	24:DA:1189:A:H5'	2.20	0.41
24:DA:1254:A:H5''	24:DA:1255:U:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1659:U:C4	24:DA:1660:C:C5	3.09	0.41
24:DA:2135:A:H3'	24:DA:2136:C:C6	2.56	0.41
24:DA:2156:G:C6	24:DA:2157:G:C2	3.08	0.41
24:DA:2823:A:OP1	27:DE:159:HIS:NE2	2.51	0.41
24:DA:2889:C:H3'	24:DA:2891:G:C8	2.51	0.41
27:DE:26:ILE:CG2	27:DE:27:LEU:N	2.66	0.41
29:DG:173:LEU:HB3	29:DG:178:PHE:CD2	2.55	0.41
33:DN:47:ILE:HD12	33:DN:47:ILE:HA	1.83	0.41
36:D0:18:LEU:HD22	36:D0:22:ARG:CD	2.50	0.41
49:D4:16:CYS:HA	49:D4:33:VAL:HG13	2.03	0.41
51:D6:18:ARG:O	51:D6:19:ARG:HB3	2.21	0.41
53:D8:49:VAL:HG13	53:D8:50:LEU:N	2.35	0.41
1:AA:135:C:O2	16:AS:1:MET:N	2.47	0.41
1:AA:511:C:O2'	1:AA:512:U:H5''	2.21	0.41
1:AA:537:G:H2'	1:AA:538:G:H8	1.85	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.21	0.41
1:AA:977:A:H2'	1:AA:978:A:H5''	2.02	0.41
1:AA:1175:G:H2'	1:AA:1176:A:C8	2.55	0.41
1:AA:1370:G:H2'	1:AA:1371:G:H8	1.86	0.41
1:AA:1381:U:H2'	7:AJ:79:ARG:HE	1.86	0.41
2:AE:95:GLN:HG3	2:AE:147:LYS:O	2.20	0.41
2:AE:115:LEU:HD13	2:AE:145:LEU:HB3	2.02	0.41
3:AF:114:PRO:O	3:AF:118:GLN:HG3	2.21	0.41
5:AH:87:SER:HB3	5:AH:131:ILE:HD13	2.02	0.41
7:AJ:113:GLU:HB2	7:AJ:119:ARG:HG2	2.03	0.41
8:AK:49:GLU:O	8:AK:51:VAL:HG13	2.21	0.41
12:AO:23:LYS:HB3	12:AO:23:LYS:HE2	1.75	0.41
17:AT:66:SER:HB3	17:AT:69:LYS:HD3	2.01	0.41
22:AD:14:A:N7	22:AD:15:G:C5	2.88	0.41
24:BA:654(I):C:O2	24:BA:654(I):C:H2'	2.21	0.41
24:BA:975:G:H1'	24:BA:990:A:C2	2.56	0.41
24:BA:980:A:C4	24:BA:1136:G:O4'	2.74	0.41
24:BA:1171:G:C2	24:BA:1179:C:N3	2.89	0.41
24:BA:1791:A:C8	24:BA:1792:G:C8	3.09	0.41
24:BA:2065:C:H2'	24:BA:2066:C:H6	1.85	0.41
24:BA:2167:U:H6	24:BA:2167:U:P	2.43	0.41
24:BA:2310:A:N3	29:BG:77:ILE:HD11	2.35	0.41
28:BF:116:ASP:CG	34:BO:1:MET:HB2	2.45	0.41
28:BF:170:LEU:HA	28:BF:171:PRO:HD2	1.91	0.41
29:BG:111:LEU:CD2	29:BG:120:LEU:HD21	2.51	0.41
30:BH:38:SER:HA	30:BH:39:PRO:HD3	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:51:ALA:HB3	37:BQ:73:LEU:HG	2.02	0.41
40:B2:10:LYS:NZ	40:B2:23:GLU:OE1	2.54	0.41
44:BV:152:ALA:C	44:BV:154:ASP:H	2.29	0.41
46:BZ:87:PRO:HA	46:BZ:90:ILE:HB	2.03	0.41
52:B7:1:MET:HE3	52:B7:1:MET:HB2	1.92	0.41
1:CA:445:G:H2'	1:CA:446:G:H8	1.85	0.41
1:CA:628:G:H2'	1:CA:629:G:O4'	2.20	0.41
1:CA:742:G:OP2	15:CR:35:ARG:NH2	2.53	0.41
1:CA:975:A:H4'	1:CA:976:G:C5'	2.47	0.41
1:CA:1206:G:C4	1:CA:1207:G:C8	3.09	0.41
2:CE:88:ALA:HB2	2:CE:219:VAL:HG23	2.02	0.41
3:CF:47:LEU:HG	3:CF:52:LEU:HD13	2.01	0.41
4:CG:177:ASP:OD2	4:CG:182:LYS:HE2	2.21	0.41
12:CO:34:ARG:HG2	12:CO:35:GLY:N	2.34	0.41
16:CS:58:TYR:C	16:CS:58:TYR:HD1	2.29	0.41
22:CD:36:U:OP2	22:CD:36:U:H6	2.04	0.41
24:DA:61:G:H1	24:DA:93:C:H42	1.66	0.41
24:DA:319:C:H2'	24:DA:320:A:O4'	2.21	0.41
24:DA:1000:A:C6	24:DA:1001:A:N1	2.88	0.41
24:DA:1338:G:N7	42:DT:62:LYS:NZ	2.63	0.41
24:DA:1626:G:H5''	24:DA:1627:G:H5'	2.03	0.41
24:DA:2134:A:H2	24:DA:2159:G:H1'	1.86	0.41
24:DA:2155:G:C5	24:DA:2156:G:C5	3.08	0.41
24:DA:2157:G:H2'	24:DA:2158:A:C8	2.55	0.41
24:DA:2312:U:O5'	29:DG:74:LYS:NZ	2.54	0.41
24:DA:2773:C:H2'	24:DA:2774:C:H6	1.85	0.41
29:DG:104:GLU:OE2	29:DG:108:ASN:ND2	2.54	0.41
30:DH:82:GLY:O	30:DH:135:GLY:N	2.48	0.41
30:DH:122:THR:HB	30:DH:124:GLU:OE2	2.21	0.41
31:DK:144:VAL:HG13	31:DK:145:VAL:O	2.21	0.41
34:DO:49:ARG:NE	53:D8:59:LYS:HD3	2.36	0.41
37:DQ:65:VAL:O	37:DQ:68:GLN:HB2	2.21	0.41
39:D1:105:VAL:O	39:D1:109:LEU:HG	2.21	0.41
53:D8:16:ILE:HD13	53:D8:57:ARG:HG3	2.01	0.41
1:AA:427:U:O4	1:AA:428:G:N1	2.54	0.41
1:AA:1138:G:H3'	1:AA:1138:G:N3	2.36	0.41
1:AA:1287:A:C6	1:AA:1288:A:C6	3.09	0.41
1:AA:1291:G:H2'	1:AA:1292:U:H6	1.84	0.41
3:AF:62:ASP:OD1	3:AF:62:ASP:N	2.54	0.41
5:AH:58:ALA:O	5:AH:62:ALA:N	2.45	0.41
8:AK:14:ARG:O	8:AK:18:ARG:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AL:11:LYS:NZ	9:AL:107:ARG:O	2.54	0.41
10:AM:42:THR:HG23	10:AM:68:HIS:HA	2.02	0.41
14:AQ:51:GLY:C	14:AQ:53:LEU:H	2.27	0.41
15:AR:74:ASP:HA	15:AR:75:PRO:HD2	1.89	0.41
19:AV:15:LEU:O	19:AV:19:VAL:HG23	2.21	0.41
19:AV:31:ILE:O	19:AV:50:ALA:N	2.48	0.41
22:AD:1:C:H41	22:AD:71:C:N4	2.19	0.41
22:AD:18:G:N2	22:AD:55:U:H1'	2.33	0.41
24:BA:657:U:H2'	24:BA:658:C:C6	2.56	0.41
24:BA:1025:G:H8	24:BA:1025:G:OP1	2.04	0.41
24:BA:1073:A:N6	24:BA:1074:G:N3	2.69	0.41
24:BA:1178:C:H4'	24:BA:1179:C:OP1	2.21	0.41
24:BA:2287:A:C6	24:BA:2289:G:C4	3.09	0.41
24:BA:2399:G:H2'	24:BA:2400:G:C1'	2.51	0.41
24:BA:2415:G:C4'	34:BO:67:MET:H	2.24	0.41
24:BA:2471:C:H2'	24:BA:2472:G:O4'	2.20	0.41
24:BA:2790:A:H1'	24:BA:2893:G:O2'	2.21	0.41
26:BD:43:ARG:CB	26:BD:54:ARG:HB2	2.50	0.41
26:BD:43:ARG:HB3	26:BD:54:ARG:HB2	2.02	0.41
26:BD:63:ARG:H	26:BD:87:ASN:HD21	1.68	0.41
27:BE:32:PRO:HA	27:BE:90:THR:HA	2.02	0.41
30:BH:74:ASN:HA	30:BH:77:LYS:HB3	2.02	0.41
30:BH:101:ARG:HH22	30:BH:122:THR:HA	1.86	0.41
30:BH:157:TYR:C	30:BH:158:HIS:ND1	2.79	0.41
32:BM:15:LEU:CD2	32:BM:128:HIS:NE2	2.84	0.41
32:BM:76:SER:C	32:BM:78:TYR:H	2.19	0.41
37:BQ:83:LYS:C	37:BQ:109:GLY:HA2	2.45	0.41
38:BR:24:PRO:O	38:BR:94:ALA:HB2	2.21	0.41
39:B1:8:VAL:HG23	39:B1:11:ARG:HH21	1.86	0.41
39:B1:34:LYS:NZ	39:B1:37:GLU:OE1	2.32	0.41
39:B1:87:GLY:O	39:B1:89:GLU:N	2.51	0.41
43:BU:12:THR:O	43:BU:75:ILE:HG12	2.21	0.41
43:BU:50:ARG:C	43:BU:52:SER:N	2.78	0.41
44:BV:52:SER:C	44:BV:54:HIS:N	2.79	0.41
44:BV:106:GLY:HA2	44:BV:140:ASP:HA	2.01	0.41
46:BZ:25:LYS:HE3	46:BZ:25:LYS:HB2	1.82	0.41
1:CA:384:G:H2'	1:CA:385:C:H6	1.86	0.41
1:CA:458:C:C4	1:CA:464:G:C5	3.09	0.41
1:CA:868:C:H2'	1:CA:869:G:O4'	2.21	0.41
1:CA:922:G:H2'	1:CA:923:A:C8	2.56	0.41
1:CA:1153:C:C4	1:CA:1154:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1297:C:H4'	1:CA:1298:C:O5'	2.20	0.41
2:CE:100:GLY:O	2:CE:104:ASN:N	2.33	0.41
3:CF:14:ILE:HD13	3:CF:15:THR:N	2.35	0.41
3:CF:22:TRP:HB2	3:CF:23:TYR:H	1.55	0.41
3:CF:39:ILE:HG21	3:CF:57:ILE:HD11	2.03	0.41
4:CG:23:GLY:CA	4:CG:112:VAL:CG2	2.93	0.41
4:CG:68:TYR:CD2	4:CG:97:LEU:HD13	2.56	0.41
7:CJ:71:PRO:HB2	7:CJ:91:VAL:HG21	2.03	0.41
10:CM:40:LEU:HB3	10:CM:69:ASN:HB3	2.03	0.41
13:CP:14:ARG:H	13:CP:44:ARG:HH11	1.68	0.41
13:CP:81:LEU:HD22	13:CP:88:ARG:HE	1.86	0.41
15:CR:33:THR:HG22	15:CR:37:ASN:OD1	2.20	0.41
16:CS:26:ARG:HH21	16:CS:31:LYS:HD3	1.86	0.41
18:CU:37:VAL:CG1	18:CU:78:LEU:HB3	2.47	0.41
19:CV:80:TYR:O	19:CV:82:GLY:N	2.50	0.41
22:CD:31:G:H2'	22:CD:32:C:O4'	2.21	0.41
22:CD:31:G:C6	22:CD:32:C:N3	2.88	0.41
24:DA:49:A:H4'	24:DA:50:U:O5'	2.20	0.41
24:DA:49:A:H5'	24:DA:51:G:O4'	2.20	0.41
24:DA:83:G:C2	24:DA:102:G:H2'	2.56	0.41
24:DA:1045:A:H4'	24:DA:1047:G:C5'	2.51	0.41
24:DA:1053:C:N4	24:DA:1054:A:C6	2.88	0.41
24:DA:1287:A:C5	24:DA:1288:U:C4	3.08	0.41
24:DA:1814:G:C6	24:DA:1815:A:C6	3.08	0.41
24:DA:2128:C:C4	24:DA:2129:C:C4	3.08	0.41
24:DA:2341:G:H2'	24:DA:2342:C:C6	2.56	0.41
24:DA:2580:U:C5	24:DA:2581:G:C6	3.08	0.41
24:DA:2637:U:H2'	24:DA:2638:G:O4'	2.21	0.41
26:DD:133:LEU:HB2	26:DD:187:GLY:HA2	2.02	0.41
33:DN:106:LEU:HA	33:DN:106:LEU:HD23	1.83	0.41
35:DP:38:GLU:OE1	35:DP:128:LYS:N	2.47	0.41
37:DQ:34:HIS:ND1	37:DQ:53:SER:HB2	2.36	0.41
39:D1:27:LEU:HD22	39:D1:31:SER:HB2	2.03	0.41
44:DV:139:VAL:HG12	44:DV:140:ASP:H	1.85	0.41
44:DV:163:LEU:HD23	44:DV:163:LEU:H	1.86	0.41
47:DW:30:ARG:NH2	47:DW:34:GLU:OE2	2.32	0.41
1:AA:56:U:H2'	1:AA:57:G:C8	2.55	0.41
1:AA:129(A):G:N2	1:AA:191(A):G:N7	2.69	0.41
1:AA:451:A:OP1	1:AA:481:G:N1	2.42	0.41
1:AA:658:G:H2'	1:AA:659:U:C6	2.55	0.41
1:AA:666:G:OP2	1:AA:725:G:N2	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:667:G:H4'	15:AR:51:HIS:ND1	2.36	0.41
1:AA:668:G:H4'	15:AR:48:LYS:HB2	2.02	0.41
1:AA:672:U:O2'	1:AA:673:G:H5'	2.21	0.41
1:AA:944:G:C2	1:AA:1340:A:C6	3.08	0.41
1:AA:977:A:H1'	1:AA:982:U:O4	2.21	0.41
1:AA:1081:G:H2'	1:AA:1082:G:C8	2.54	0.41
1:AA:1231:G:O3'	9:AL:126:SER:OG	2.26	0.41
1:AA:1237:C:HO2'	1:AA:1300:G:H1	1.61	0.41
1:AA:1273:G:C6	1:AA:1274:G:C4	3.09	0.41
3:AF:8:ILE:O	3:AF:11:ARG:N	2.53	0.41
3:AF:42:LEU:HA	3:AF:42:LEU:HD12	1.78	0.41
4:AG:26:CYS:HA	4:AG:31:CYS:HB2	2.01	0.41
4:AG:29:PRO:O	4:AG:30:LYS:HG2	2.21	0.41
6:AI:6:VAL:HG12	6:AI:8:ILE:HG13	2.02	0.41
9:AL:48:GLU:N	9:AL:49:PRO:HD2	2.36	0.41
10:AM:25:GLU:C	10:AM:27:ALA:N	2.78	0.41
10:AM:81:THR:O	10:AM:85:LEU:HG	2.21	0.41
17:AT:74:LEU:HD22	17:AT:74:LEU:HA	1.86	0.41
19:AV:9:VAL:HB	49:B4:66:SER:CB	2.51	0.41
20:AW:16:HIS:O	20:AW:19:SER:HB2	2.20	0.41
22:AD:51:C:C2	22:AD:64:G:N2	2.89	0.41
24:BA:5:A:H2'	24:BA:6:A:H8	1.85	0.41
24:BA:184:C:H2'	24:BA:185:U:C6	2.56	0.41
24:BA:189:G:H2'	24:BA:205:G:N2	2.35	0.41
24:BA:252:G:OP2	34:BO:50:ARG:NH2	2.50	0.41
24:BA:273(A):G:C6	24:BA:364:C:N4	2.88	0.41
24:BA:881:G:H22	24:BA:895:U:H3	1.67	0.41
24:BA:1014:U:C2'	24:BA:1015:G:H5''	2.49	0.41
24:BA:1055:G:H3'	24:BA:1056:G:H8	1.85	0.41
24:BA:1059:G:OP2	24:BA:1060:U:H3'	2.21	0.41
24:BA:1164:G:H2'	24:BA:1165:U:H6	1.83	0.41
24:BA:1291:C:H5'	24:BA:1536:A:H5'	2.03	0.41
24:BA:1322:A:N1	24:BA:1333:C:O2'	2.39	0.41
24:BA:1949:G:H2'	24:BA:1950:G:O4'	2.20	0.41
24:BA:2110:G:H5''	24:BA:2145:C:H42	1.85	0.41
24:BA:2147:G:C8	24:BA:2147:G:H3'	2.56	0.41
24:BA:2165:G:O6	24:BA:2166:G:N2	2.54	0.41
24:BA:2261:C:H1'	24:BA:2388:A:N3	2.36	0.41
24:BA:2262:U:H4'	24:BA:2328:A:H2	1.86	0.41
24:BA:2415:G:C6	24:BA:2416:C:C4	3.08	0.41
24:BA:2432:A:C5	46:BZ:33:LYS:HG2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2531:A:H2	24:BA:2658:C:O2	2.03	0.41
24:BA:2563:U:H4'	33:BN:28:SER:HA	2.02	0.41
24:BA:2640:G:H1	24:BA:2774:C:N4	2.18	0.41
24:BA:2687:U:C4	24:BA:2688:U:C5	3.09	0.41
24:BA:2854:G:H2'	24:BA:2855:C:C6	2.55	0.41
24:BA:2881:C:H2'	24:BA:2882:A:C8	2.54	0.41
25:BB:9:G:O6	25:BB:111:U:N3	2.45	0.41
25:BB:29:A:P	37:BQ:32:LEU:HD13	2.60	0.41
25:BB:51:G:H5'	25:BB:52:A:OP2	2.21	0.41
26:BD:35:LYS:HB3	26:BD:63:ARG:HA	2.03	0.41
26:BD:35:LYS:HD3	26:BD:63:ARG:CA	2.51	0.41
26:BD:38:LYS:O	26:BD:38:LYS:HG3	2.20	0.41
26:BD:133:LEU:HA	26:BD:133:LEU:HD23	1.85	0.41
28:BF:40:GLN:NE2	28:BF:182:ASN:HB2	2.35	0.41
30:BH:118:PRO:O	30:BH:121:ILE:HB	2.20	0.41
32:BM:55:VAL:CG1	32:BM:128:HIS:ND1	2.84	0.41
37:BQ:93:LYS:HG2	37:BQ:95:HIS:HB2	2.03	0.41
38:BR:19:LEU:HA	38:BR:20:PRO:HD3	1.95	0.41
38:BR:21:GLU:OE2	38:BR:91:ARG:NH2	2.54	0.41
39:B1:89:GLU:H	39:B1:89:GLU:HG3	1.77	0.41
41:BS:86:LEU:HD12	41:BS:87:PRO:HD2	2.03	0.41
52:B7:9:ARG:H	52:B7:9:ARG:HG3	1.70	0.41
1:CA:160:A:H61	1:CA:347:G:H1'	1.85	0.41
1:CA:406:G:C4	1:CA:495:A:C6	3.09	0.41
1:CA:564:C:OP1	12:CO:15:ARG:NH2	2.53	0.41
1:CA:828:A:N6	1:CA:858:G:O2'	2.48	0.41
1:CA:842:C:H4'	1:CA:843:U:H5	1.85	0.41
1:CA:994:A:N7	1:CA:1216:G:H4'	2.36	0.41
1:CA:1014:A:C5	19:CV:34:TRP:CD1	3.09	0.41
1:CA:1028:C:C2	1:CA:1034:G:C2	3.09	0.41
1:CA:1152:A:H4'	10:CM:13:HIS:CD2	2.56	0.41
1:CA:1291:G:C6	1:CA:1292:U:C4	3.09	0.41
1:CA:1299:A:C6	1:CA:1301:U:C2	3.09	0.41
1:CA:1311:G:H2'	1:CA:1312:G:O4'	2.20	0.41
3:CF:47:LEU:HD22	3:CF:47:LEU:HA	1.91	0.41
3:CF:131:ARG:NH2	3:CF:166:GLU:OE2	2.53	0.41
4:CG:28:SER:HA	4:CG:29:PRO:HA	1.57	0.41
4:CG:70:ILE:HD11	4:CG:75:PHE:HD1	1.86	0.41
5:CH:150:ARG:O	5:CH:154:GLY:HA3	2.21	0.41
7:CJ:116:ALA:HA	7:CJ:119:ARG:HG3	2.03	0.41
9:CL:51:ARG:HH12	9:CL:56:LEU:HD13	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CM:6:ILE:HG23	10:CM:72:VAL:HG12	2.02	0.41
15:CR:35:ARG:O	15:CR:39:LEU:HB2	2.21	0.41
20:CW:10:LEU:HG	20:CW:12:ALA:H	1.85	0.41
22:CD:14:A:N1	22:CD:15:G:N3	2.69	0.41
22:CD:52:G:O6	22:CD:62:C:C4	2.72	0.41
22:CD:60:U:H3'	22:CD:61:C:C5	2.56	0.41
24:DA:118:A:OP2	24:DA:119:A:H5''	2.20	0.41
24:DA:141:A:H1'	24:DA:1408:C:O4'	2.21	0.41
24:DA:171:G:H2'	24:DA:172:C:C6	2.55	0.41
24:DA:275:G:H21	24:DA:276:A:N6	2.19	0.41
24:DA:276:A:H8	24:DA:278:A:N7	2.19	0.41
24:DA:459:U:H2'	24:DA:460:A:C8	2.55	0.41
24:DA:654(B):C:C2	24:DA:654(T):A:C2	3.08	0.41
24:DA:885:C:H3'	24:DA:886:C:C6	2.55	0.41
24:DA:1044:G:H4'	24:DA:1048:A:H1'	2.03	0.41
24:DA:1047:G:C5	24:DA:1110:G:O6	2.73	0.41
24:DA:1053:C:N3	24:DA:1106:G:C2	2.89	0.41
24:DA:1056:G:H5'	24:DA:1086:A:N3	2.36	0.41
24:DA:1138:G:N2	32:DM:106:MET:HE3	2.20	0.41
24:DA:1178:C:C4	24:DA:1179:C:C4	3.09	0.41
24:DA:1424:G:OP1	26:DD:33:LEU:HD23	2.21	0.41
24:DA:1447:G:H1'	24:DA:1545(A):A:H1'	2.02	0.41
24:DA:1678:G:N2	24:DA:1989:G:N2	2.58	0.41
24:DA:1910:G:O2'	24:DA:1911:U:H5'	2.21	0.41
24:DA:2018:G:H2'	24:DA:2019:A:O4'	2.20	0.41
24:DA:2261:C:H1'	24:DA:2388:A:N3	2.36	0.41
24:DA:2798:C:H5''	24:DA:2801:A:N6	2.36	0.41
25:DB:15:A:H3'	25:DB:16:G:H5'	2.02	0.41
27:DE:31:CYS:SG	27:DE:51:PHE:HB2	2.60	0.41
27:DE:38:THR:HA	27:DE:39:PRO:HD2	1.82	0.41
28:DF:130:ALA:H	28:DF:142:TRP:HD1	1.67	0.41
28:DF:134:GLY:HA2	28:DF:166:ALA:HB2	2.02	0.41
28:DF:179:GLU:HA	28:DF:205:ARG:HH22	1.86	0.41
29:DG:22:ARG:H	29:DG:22:ARG:HG2	1.41	0.41
30:DH:118:PRO:HB2	30:DH:119:GLU:H	1.53	0.41
32:DM:28:THR:O	32:DM:32:THR:OG1	2.38	0.41
32:DM:68:GLU:HG2	32:DM:88:GLU:OE1	2.21	0.41
32:DM:96:GLU:HB2	32:DM:122:VAL:HG12	2.02	0.41
33:DN:119:PRO:HB2	38:DR:68:TYR:CE2	2.56	0.41
34:DO:97:PRO:HD3	34:DO:126:VAL:O	2.21	0.41
35:DP:60:ARG:HA	35:DP:60:ARG:HD3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:D1:78:THR:OG1	39:D1:79:PHE:N	2.53	0.41
39:D1:91:ASP:OD2	39:D1:96:ALA:HB2	2.21	0.41
42:DT:27:THR:HG22	42:DT:80:ILE:HG22	2.02	0.41
43:DU:35:TYR:CE2	43:DU:69:ALA:HB3	2.56	0.41
44:DV:23:LYS:HB3	44:DV:38:TYR:CD1	2.56	0.41
45:D3:73:GLY:O	45:D3:76:GLY:N	2.44	0.41
47:DW:16:LEU:HD12	47:DW:20:GLU:OE2	2.21	0.41
49:D4:56:VAL:HG13	49:D4:57:GLU:HG3	2.03	0.41
50:D5:56:LYS:HB3	50:D5:57:VAL:H	1.58	0.41
51:D6:26:ASN:C	51:D6:28:ARG:H	2.29	0.41
51:D6:44:ARG:CZ	51:D6:47:THR:HB	2.50	0.41
1:AA:103:C:H2'	1:AA:104:G:H8	1.86	0.41
1:AA:116:A:H2'	1:AA:117:G:O4'	2.21	0.41
1:AA:1061:G:OP1	10:AM:59:SER:OG	2.28	0.41
1:AA:1135:U:H2'	1:AA:1137:C:N3	2.35	0.41
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.85	0.41
1:AA:1363:A:H1'	1:AA:1365:G:N7	2.36	0.41
5:AH:7:GLU:N	5:AH:35:GLY:O	2.51	0.41
6:AI:24:GLU:OE1	6:AI:28:ARG:NH2	2.53	0.41
7:AJ:12:LEU:HD13	7:AJ:12:LEU:HA	1.95	0.41
9:AL:17:VAL:HG22	9:AL:63:ILE:HG12	2.03	0.41
22:AD:64:G:H2'	22:AD:65:C:O4'	2.21	0.41
24:BA:18:C:O3'	39:B1:23:GLY:HA2	2.21	0.41
24:BA:65:C:H5'	42:BT:71:GLY:HA3	2.03	0.41
24:BA:273(D):C:H2'	24:BA:273(E):U:H6	1.85	0.41
24:BA:299:A:H8	24:BA:299:A:OP2	2.02	0.41
24:BA:301:G:C4	24:BA:302:C:C5	3.09	0.41
24:BA:654(A):A:H2'	24:BA:654(B):C:C6	2.56	0.41
24:BA:654(S):G:O2'	24:BA:654(T):A:O5'	2.23	0.41
24:BA:782:A:H5'	24:BA:783:A:C2	2.56	0.41
24:BA:880:G:C4	24:BA:881:G:C8	3.09	0.41
24:BA:1045:A:C8	24:BA:1047:G:C2	3.08	0.41
24:BA:1509:C:C2'	24:BA:1510:A:OP1	2.68	0.41
24:BA:1530:G:C6	24:BA:1531:C:C4	3.09	0.41
24:BA:1625:C:H2'	24:BA:1626:G:O4'	2.21	0.41
24:BA:1784:A:H4'	24:BA:1785:A:C5'	2.51	0.41
24:BA:2022:U:O2'	24:BA:2617:C:H5'	2.20	0.41
24:BA:2124:G:C6	24:BA:2125:G:C2	3.09	0.41
24:BA:2636:U:H2'	24:BA:2637:U:C6	2.56	0.41
25:BB:14:U:H1'	25:BB:107:U:H1'	2.03	0.41
29:BG:2:PRO:HB3	49:B4:25:TYR:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:74:ASN:HA	30:BH:77:LYS:HD3	2.01	0.41
31:BK:87:LYS:HA	31:BK:87:LYS:HD3	1.96	0.41
36:B0:67:LEU:HD22	36:B0:76:VAL:HG21	2.02	0.41
38:BR:6:LEU:O	38:BR:10:VAL:HG23	2.21	0.41
40:B2:35:LEU:C	40:B2:37:VAL:N	2.74	0.41
1:CA:876:G:H1'	8:CK:11:THR:HG21	2.02	0.41
1:CA:1132:C:N4	1:CA:1142:G:H1	2.14	0.41
2:CE:21:ARG:O	2:CE:23:ARG:N	2.54	0.41
2:CE:116:GLU:H	2:CE:116:GLU:HG2	1.53	0.41
2:CE:209:ARG:HD3	2:CE:240:GLN:OE1	2.21	0.41
3:CF:76:VAL:HA	3:CF:83:ARG:HE	1.86	0.41
5:CH:18:ARG:N	5:CH:25:ARG:O	2.54	0.41
5:CH:67:VAL:HG22	5:CH:68:GLU:O	2.21	0.41
12:CO:47:LYS:CB	12:CO:48:PRO:HD3	2.51	0.41
12:CO:78:GLN:O	12:CO:80:HIS:N	2.53	0.41
16:CS:38:TYR:OH	16:CS:47:ASP:OD2	2.37	0.41
17:CT:63:ARG:HA	17:CT:64:PRO:HD3	1.96	0.41
20:CW:14:LYS:HB2	20:CW:17:ARG:NH2	2.36	0.41
24:DA:18:C:O3'	39:D1:23:GLY:HA2	2.21	0.41
24:DA:540:G:H1	24:DA:553:U:H3	1.67	0.41
24:DA:721:C:H2'	24:DA:722:A:H8	1.86	0.41
24:DA:920:G:H2'	24:DA:921:G:C8	2.54	0.41
24:DA:975:G:H1'	24:DA:990:A:C2	2.56	0.41
24:DA:1028:A:N3	24:DA:2486:G:O2'	2.51	0.41
24:DA:1039:G:C6	24:DA:1040:C:C4	3.08	0.41
24:DA:1079:C:H41	24:DA:1088:A:H5''	1.86	0.41
24:DA:1093:G:H1'	24:DA:1099:G:N1	2.36	0.41
24:DA:1651:G:P	36:D0:37:THR:HG21	2.61	0.41
24:DA:1761:C:H3'	24:DA:1762:A:H5''	2.02	0.41
24:DA:2114:A:H61	24:DA:2170:A:N6	2.18	0.41
24:DA:2320:A:N6	24:DA:2333:A:H2'	2.36	0.41
24:DA:2808:U:H2'	24:DA:2809:A:H8	1.86	0.41
29:DG:173:LEU:HD12	29:DG:178:PHE:CZ	2.55	0.41
31:DK:128:LEU:O	31:DK:138:ILE:HG22	2.21	0.41
31:DK:130:TYR:C	31:DK:131:LYS:HD2	2.45	0.41
33:DN:105:GLU:N	33:DN:105:GLU:OE1	2.54	0.41
34:DO:88:LEU:HD11	34:DO:95:VAL:HG21	2.03	0.41
39:D1:99:ALA:HB2	39:D1:106:PHE:CD1	2.56	0.41
39:D1:100:VAL:C	39:D1:102:GLU:H	2.26	0.41
39:D1:108:GLU:OE1	40:D2:45:THR:HA	2.21	0.41
42:DT:40:LYS:O	42:DT:42:ALA:N	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:43:GLU:O	44:DV:47:VAL:HG23	2.21	0.41
49:D4:10:VAL:HA	49:D4:11:PRO:HD2	1.84	0.41
1:AA:152:A:N6	1:AA:170:U:C2	2.89	0.40
1:AA:405:U:O2'	1:AA:497:U:H5'	2.21	0.40
1:AA:956:U:H2'	1:AA:957:U:O4'	2.21	0.40
1:AA:983:A:H1'	1:AA:1049:U:O2	2.20	0.40
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.31	0.40
1:AA:1157:A:H1'	1:AA:1158:C:C4	2.55	0.40
1:AA:1176:A:C6	1:AA:1177:G:C2	3.09	0.40
3:AF:164:ARG:NH1	3:AF:166:GLU:OE1	2.54	0.40
8:AK:122:ARG:O	8:AK:126:LYS:HG3	2.21	0.40
13:AP:56:LEU:O	13:AP:60:VAL:N	2.47	0.40
24:BA:140:A:H8	24:BA:1408:C:HO2'	1.64	0.40
24:BA:270(G):C:H2'	24:BA:270(H):C:C6	2.55	0.40
24:BA:306:U:H2'	24:BA:307:G:O4'	2.21	0.40
24:BA:322:A:H3'	28:BF:169:ASN:OD1	2.21	0.40
24:BA:638:G:H2'	24:BA:639:U:C6	2.57	0.40
24:BA:1045:A:OP1	24:BA:1045:A:H4'	2.21	0.40
24:BA:1152:C:H4'	39:B1:77:SER:HA	2.02	0.40
24:BA:1580:A:H8	24:BA:1580:A:OP2	2.03	0.40
24:BA:1800:C:OP2	26:BD:183:ARG:NH2	2.46	0.40
24:BA:2053:G:H1	24:BA:2616:C:H42	1.68	0.40
24:BA:2115:G:N2	24:BA:2119:A:N3	2.70	0.40
24:BA:2298:A:OP1	29:BG:74:LYS:NZ	2.37	0.40
24:BA:2299:G:OP1	29:BG:75:LYS:NZ	2.53	0.40
24:BA:2898:U:H2'	24:BA:2899:G:C8	2.56	0.40
26:BD:75:ILE:HD13	26:BD:99:ASP:OD2	2.21	0.40
27:BE:41:LYS:HB2	27:BE:41:LYS:HE2	1.77	0.40
33:BN:68:GLU:CD	33:BN:68:GLU:H	2.28	0.40
33:BN:120:GLU:HB2	38:BR:68:TYR:HE2	1.85	0.40
35:BP:63:LYS:CG	35:BP:65:PHE:CE2	3.04	0.40
40:B2:38:LEU:H	40:B2:51:VAL:HG13	1.86	0.40
44:BV:162:GLU:HB2	44:BV:163:LEU:H	1.64	0.40
45:B3:57:PHE:N	45:B3:57:PHE:CD1	2.89	0.40
1:CA:8:A:N7	4:CG:209:ARG:HA	2.36	0.40
1:CA:505:G:OP2	1:CA:534:U:H2'	2.20	0.40
1:CA:522:C:OP2	12:CO:69:TYR:OH	2.30	0.40
1:CA:794:A:H4'	1:CA:1521:G:O2'	2.20	0.40
1:CA:969:A:H2'	1:CA:970:C:O4'	2.21	0.40
1:CA:997:U:H2'	1:CA:998:G:C8	2.55	0.40
1:CA:1118:C:C4'	9:CL:104:ARG:HD3	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1129:C:N3	1:CA:1139:G:N1	2.69	0.40
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.56	0.40
1:CA:1443:G:N2	38:DR:119:LYS:HB2	2.36	0.40
2:CE:20:GLU:HG3	2:CE:189:ASP:OD2	2.21	0.40
2:CE:193:ASP:HA	2:CE:194:PRO:HD2	1.94	0.40
4:CG:38:TYR:CD1	4:CG:45:GLN:HG2	2.56	0.40
5:CH:90:VAL:O	5:CH:120:THR:HA	2.20	0.40
9:CL:14:VAL:O	9:CL:65:VAL:HG23	2.22	0.40
13:CP:81:LEU:C	13:CP:89:GLY:HA3	2.46	0.40
15:CR:71:GLN:HB2	15:CR:78:TYR:CD2	2.56	0.40
15:CR:75:PRO:O	15:CR:78:TYR:HB3	2.20	0.40
24:DA:820:A:C2	24:DA:943:U:H4'	2.56	0.40
24:DA:870:A:OP1	35:DP:6:ARG:NH1	2.48	0.40
24:DA:897:C:H5'	24:DA:898:C:P	2.60	0.40
24:DA:1342:A:H2	24:DA:1602:U:N3	2.18	0.40
24:DA:1460:A:O2'	24:DA:1461:G:OP2	2.33	0.40
24:DA:1651:G:H2'	24:DA:1652:A:O4'	2.21	0.40
24:DA:1666:G:H1'	33:DN:3:GLN:HE21	1.86	0.40
25:DB:44:G:P	29:DG:98:ARG:HH22	2.43	0.40
27:DE:101:ARG:HA	27:DE:170:LEU:O	2.21	0.40
28:DF:155:LEU:N	28:DF:191:ARG:O	2.42	0.40
30:DH:24:VAL:HB	30:DH:25:LYS:H	1.52	0.40
30:DH:94:TYR:HA	30:DH:106:THR:O	2.21	0.40
37:DQ:64:GLU:O	37:DQ:68:GLN:HG2	2.20	0.40
39:D1:41:ALA:HB1	39:D1:45:TYR:CE2	2.56	0.40
40:D2:60:GLU:HG2	40:D2:97:LYS:HD3	2.04	0.40
44:DV:112:ARG:C	44:DV:114:GLY:H	2.29	0.40
45:D3:53:MET:HG2	45:D3:57:PHE:HA	2.02	0.40
1:AA:19:C:OP1	5:AH:125:SER:OG	2.27	0.40
1:AA:453:A:C6	1:AA:454:C:C4	3.09	0.40
1:AA:558:G:H2'	1:AA:559:A:H2	1.86	0.40
1:AA:589:C:N4	1:AA:650:G:H1	2.17	0.40
1:AA:658:G:H2'	1:AA:659:U:H6	1.86	0.40
1:AA:972:C:H4'	10:AM:57:LYS:HB2	2.02	0.40
1:AA:1375:A:C6	1:AA:1376:U:C4	3.09	0.40
2:AE:12:GLU:HG2	2:AE:44:LEU:HD22	2.02	0.40
2:AE:41:ILE:HD12	2:AE:41:ILE:HA	1.82	0.40
3:AF:70:VAL:N	3:AF:106:VAL:HG23	2.35	0.40
4:AG:117:ALA:O	4:AG:121:VAL:HG23	2.22	0.40
7:AJ:27:ILE:HD11	7:AJ:43:PHE:CD2	2.57	0.40
13:AP:39:ILE:HG22	13:AP:40:ASN:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AR:4:THR:OG1	15:AR:6:GLU:HG2	2.21	0.40
22:AC:28:C:H2'	22:AC:29:G:H8	1.86	0.40
22:AD:18:G:N2	22:AD:58:A:N7	2.58	0.40
24:BA:242:G:H5'	53:B8:62:LEU:HD22	2.02	0.40
24:BA:486:C:N3	24:BA:495:G:C2	2.89	0.40
24:BA:754:C:H2'	24:BA:755:C:C6	2.57	0.40
24:BA:1036:G:OP1	30:BH:59:ARG:HB2	2.21	0.40
24:BA:1085:A:N3	24:BA:1086:A:C5	2.89	0.40
24:BA:1907:G:H2'	24:BA:1908:C:C6	2.56	0.40
24:BA:2232:U:P	46:BZ:40:ARG:HH12	2.44	0.40
25:BB:11:C:OP1	45:B3:72:ARG:HD2	2.21	0.40
29:BG:67:LYS:HA	29:BG:68:PRO:HD3	1.89	0.40
33:BN:36:GLY:HA3	33:BN:109:LYS:HG3	2.02	0.40
35:BP:24:GLY:HA2	35:BP:101:ARG:HD2	2.03	0.40
35:BP:115:MET:HG2	35:BP:131:ILE:HG21	2.03	0.40
39:B1:92:ARG:HB3	39:B1:95:LEU:HD12	2.03	0.40
44:BV:44:PHE:CZ	44:BV:86:VAL:HG11	2.57	0.40
47:BW:63:VAL:O	47:BW:67:LYS:HG3	2.21	0.40
50:B5:34:PRO:HB2	50:B5:35:GLU:H	1.79	0.40
1:CA:881:G:H2'	1:CA:882:C:O4'	2.21	0.40
1:CA:980:C:H3'	1:CA:981:U:C6	2.56	0.40
1:CA:1111:A:H2'	1:CA:1112:C:H6	1.84	0.40
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.21	0.40
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.57	0.40
2:CE:161:ALA:HB1	2:CE:185:ILE:CD1	2.52	0.40
3:CF:97:LYS:O	3:CF:99:VAL:N	2.54	0.40
4:CG:98:GLU:OE2	4:CG:103:ASN:ND2	2.42	0.40
5:CH:110:LEU:O	5:CH:115:VAL:HG22	2.22	0.40
6:CI:1:MET:HE2	6:CI:68:PRO:HD3	2.03	0.40
10:CM:17:ASP:OD1	10:CM:70:ARG:NH1	2.54	0.40
11:CN:50:TYR:HD2	11:CN:60:ALA:HB2	1.86	0.40
17:CT:22:LEU:HD13	17:CT:41:LYS:HG2	2.02	0.40
17:CT:74:LEU:HD23	17:CT:74:LEU:HA	1.76	0.40
22:CD:37:A:C5	22:CD:38:A:C5	3.08	0.40
24:DA:676:A:H1'	24:DA:2443:C:O4'	2.21	0.40
24:DA:858:U:H1'	24:DA:2268:A:H2'	2.02	0.40
24:DA:918:A:H5''	25:DB:97:G:O2'	2.21	0.40
24:DA:1141:U:H2'	32:DM:63:THR:HG21	2.02	0.40
24:DA:1459:G:C2'	24:DA:1460:A:H5'	2.51	0.40
24:DA:1471:A:OP2	24:DA:1521:G:N1	2.47	0.40
24:DA:2095:C:H2'	24:DA:2096:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2344:U:OP1	51:D6:38:LYS:HD2	2.21	0.40
24:DA:2401:U:O5'	24:DA:2401:U:C6	2.74	0.40
24:DA:2557:G:H2'	24:DA:2558:C:C6	2.57	0.40
24:DA:2776:A:H4'	24:DA:2777:G:O5'	2.21	0.40
24:DA:2850:A:N7	24:DA:2868:A:O2'	2.37	0.40
27:DE:18:ASP:OD1	27:DE:18:ASP:N	2.55	0.40
28:DF:4:VAL:HA	28:DF:19:GLU:HB3	2.04	0.40
28:DF:7:TYR:CE2	28:DF:16:GLY:HA3	2.55	0.40
30:DH:15:VAL:HG23	30:DH:17:VAL:HG23	2.03	0.40
32:DM:127:ASP:OD1	32:DM:127:ASP:N	2.55	0.40
35:DP:77:LYS:HA	35:DP:78:PRO:HD3	1.93	0.40
37:DQ:59:LYS:HD3	37:DQ:60:GLY:N	2.37	0.40
42:DT:32:PRO:HA	42:DT:77:LYS:HB2	2.03	0.40
44:DV:116:VAL:HG23	44:DV:179:ASP:OD1	2.21	0.40
50:D5:3:LYS:NZ	50:D5:4:HIS:ND1	2.65	0.40
1:AA:191(C):G:C6	1:AA:191(D):U:C4	3.10	0.40
1:AA:1129:C:N4	1:AA:1133:G:C5	2.87	0.40
9:AL:99:LEU:HB3	9:AL:101:PHE:CE2	2.56	0.40
15:AR:56:LEU:HD21	24:BA:715:G:C2	2.56	0.40
19:AV:68:GLY:N	49:B4:55:ARG:HH12	2.20	0.40
22:AC:43:A:H2'	22:AC:44:A:C8	2.55	0.40
22:AD:52:G:C6	22:AD:53:G:N7	2.89	0.40
24:BA:547:A:H2'	24:BA:548:A:C4	2.56	0.40
24:BA:863:A:H2'	24:BA:864:G:C8	2.56	0.40
24:BA:997:G:OP1	39:B1:93:LYS:HD2	2.21	0.40
24:BA:1024:G:C3'	24:BA:1025:G:H5''	2.48	0.40
24:BA:1112:G:O2'	30:BH:2:SER:CB	2.47	0.40
24:BA:1557:C:H5''	24:BA:1558:A:OP2	2.21	0.40
24:BA:2233:U:H2'	24:BA:2234:G:C8	2.56	0.40
24:BA:2271:G:C5'	45:B3:20:ARG:HH11	2.33	0.40
24:BA:2286:A:H4'	24:BA:2287:A:O4'	2.22	0.40
24:BA:2300:G:H2'	24:BA:2301:C:C6	2.56	0.40
24:BA:2590:A:H2'	24:BA:2591:C:C6	2.56	0.40
24:BA:2630:G:H2'	24:BA:2631:G:C8	2.56	0.40
26:BD:85:ASP:HB2	26:BD:92:ILE:HG12	2.04	0.40
28:BF:12:LEU:HD13	28:BF:124:LEU:HD11	2.04	0.40
31:BK:9:LEU:O	31:BK:10:GLU:HB3	2.21	0.40
31:BK:27:ARG:HD3	46:BZ:71:TYR:CE1	2.57	0.40
31:BK:61:ARG:HB2	31:BK:62:LYS:H	1.77	0.40
31:BK:79:ILE:HA	31:BK:79:ILE:HD13	1.82	0.40
34:BO:108:LYS:O	34:BO:110:TYR:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:77:LYS:HD3	35:BP:77:LYS:HA	1.91	0.40
36:B0:10:LEU:HD13	36:B0:40:LYS:HG2	2.03	0.40
36:B0:33:ARG:HH12	50:B5:55:ARG:HB3	1.87	0.40
1:CA:256:U:P	17:CT:17:LYS:HZ2	2.39	0.40
1:CA:474:G:H2'	1:CA:475:G:H8	1.85	0.40
1:CA:701:C:O2	1:CA:703:G:N1	2.54	0.40
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.20	0.40
1:CA:1048:G:OP1	14:CQ:3:ARG:HB3	2.21	0.40
3:CF:54:ARG:HB2	3:CF:69:HIS:CG	2.57	0.40
5:CH:84:PHE:HB2	5:CH:134:ALA:HB2	2.02	0.40
16:CS:43:LYS:HA	16:CS:48:TRP:CD1	2.55	0.40
19:CV:37:ARG:H	19:CV:37:ARG:HG3	1.50	0.40
20:CW:37:SER:O	20:CW:41:ILE:HG13	2.22	0.40
24:DA:51:G:N2	24:DA:120:U:O2	2.50	0.40
24:DA:134:C:N4	24:DA:145:G:H1	2.20	0.40
24:DA:834:C:H1'	24:DA:2358:G:N3	2.36	0.40
24:DA:872:A:H2'	24:DA:873:G:C8	2.56	0.40
24:DA:1093:G:N2	24:DA:1097:U:H5''	2.28	0.40
24:DA:1516:U:H2'	24:DA:1517:G:H8	1.86	0.40
24:DA:1654:A:OP1	36:D0:2:ARG:HD3	2.21	0.40
24:DA:1999:C:H5''	24:DA:2723:C:O2'	2.21	0.40
24:DA:2103:C:H2'	24:DA:2104:G:C8	2.56	0.40
24:DA:2129:C:C4	24:DA:2130:U:N3	2.90	0.40
24:DA:2159:G:H2'	24:DA:2160:G:O4'	2.21	0.40
25:DB:52:A:O3'	25:DB:53:A:H8	2.05	0.40
26:DD:70:TRP:CZ3	26:DD:146:GLU:OE2	2.74	0.40
26:DD:71:ASP:CG	26:DD:103:ARG:NH2	2.79	0.40
27:DE:2:LYS:HD2	27:DE:95:ILE:CG2	2.51	0.40
28:DF:3:GLU:HG3	28:DF:19:GLU:HB2	2.02	0.40
28:DF:164:ARG:HH12	28:DF:177:ALA:HB2	1.87	0.40
30:DH:2:SER:O	30:DH:2:SER:OG	2.39	0.40
44:DV:14:LYS:HA	44:DV:15:PRO:HD2	1.89	0.40
44:DV:157:LEU:C	44:DV:161:VAL:HG12	2.47	0.40
44:DV:170:THR:O	44:DV:172:ALA:N	2.54	0.40
51:D6:39:TYR:CD2	51:D6:40:CYS:O	2.71	0.40
1:AA:475:G:H8	1:AA:475:G:O5'	2.04	0.40
1:AA:511:C:O3'	4:AG:43:HIS:NE2	2.54	0.40
1:AA:651:C:H2'	1:AA:652:U:C6	2.56	0.40
1:AA:720:C:OP2	1:AA:721:G:O2'	2.34	0.40
1:AA:1245:A:H2'	1:AA:1246:C:O4'	2.21	0.40
2:AE:19:HIS:CE1	2:AE:206:ASP:CG	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:74:LYS:NZ	2:AE:205:ASP:OD1	2.53	0.40
2:AE:211:ILE:O	2:AE:215:LEU:HB2	2.21	0.40
3:AF:12:LEU:C	3:AF:14:ILE:H	2.30	0.40
5:AH:15:ARG:NE	5:AH:26:PHE:CE2	2.90	0.40
6:AI:18:GLN:O	6:AI:21:LEU:HB2	2.20	0.40
6:AI:61:LEU:HB3	6:AI:63:TYR:HE1	1.86	0.40
6:AI:67:MET:SD	6:AI:75:LEU:HD12	2.61	0.40
7:AJ:13:GLN:HA	7:AJ:14:PRO:HD3	1.95	0.40
7:AJ:108:ALA:HB2	7:AJ:123:GLU:HG2	2.03	0.40
24:BA:651:G:H4'	53:B8:18:ALA:HB3	2.03	0.40
24:BA:825:C:H4'	24:BA:2428:G:C5	2.57	0.40
24:BA:1026:U:O2	24:BA:1027:A:H3'	2.21	0.40
24:BA:1441:G:H2'	24:BA:1442:G:H8	1.86	0.40
24:BA:1753:G:H2'	24:BA:1755:A:OP2	2.22	0.40
24:BA:2147:G:H3'	24:BA:2147:G:H8	1.87	0.40
24:BA:2320:A:H2'	24:BA:2320:A:N3	2.36	0.40
24:BA:2688:U:C5	24:BA:2720:U:OP2	2.75	0.40
27:BE:81:ILE:O	27:BE:82:ARG:HB3	2.22	0.40
27:BE:119:ARG:HH11	27:BE:120:TRP:HE1	1.69	0.40
28:BF:195:ASP:OD1	28:BF:197:ASP:N	2.53	0.40
29:BG:60:LEU:HB3	29:BG:68:PRO:HG3	2.03	0.40
36:B0:33:ARG:HH21	50:B5:57:VAL:HG22	1.85	0.40
36:B0:78:LYS:O	36:B0:83:ILE:HG13	2.22	0.40
44:BV:28:MET:HB2	44:BV:37:VAL:HG11	2.02	0.40
44:BV:35:ARG:HB3	44:BV:35:ARG:HH11	1.87	0.40
48:BX:60:GLU:N	48:BX:60:GLU:OE1	2.54	0.40
1:CA:93:U:H2'	1:CA:95:G:H5''	2.03	0.40
1:CA:507:C:OP2	1:CA:508:C:O2'	2.33	0.40
1:CA:785:G:H1	1:CA:797:C:N4	2.19	0.40
1:CA:1063:C:H2'	1:CA:1064:G:C8	2.56	0.40
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.21	0.40
1:CA:1492:A:C6	24:DA:1913:A:N6	2.90	0.40
3:CF:5:ILE:HD11	10:CM:51:ARG:HH12	1.86	0.40
4:CG:14:ARG:C	4:CG:16:GLY:N	2.79	0.40
6:CI:55:ASP:HA	6:CI:56:PRO:HD3	1.78	0.40
12:CO:75:HIS:HB2	12:CO:76:ASN:H	1.72	0.40
15:CR:18:PHE:CE1	15:CR:21:ASP:HB2	2.56	0.40
15:CR:57:LEU:HD23	15:CR:57:LEU:HA	1.94	0.40
24:DA:76:C:O3'	47:DW:59:ARG:HG3	2.21	0.40
24:DA:185:U:H2'	24:DA:186:G:H8	1.86	0.40
24:DA:329:G:H1	43:DU:19:LYS:HZ2	1.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:363:G:H5'	24:DA:363(A):A:OP2	2.22	0.40
24:DA:414:C:H4'	24:DA:1879:C:O2	2.21	0.40
24:DA:586:A:N1	24:DA:809:G:O2'	2.40	0.40
24:DA:753:C:O5'	24:DA:753:C:H6	2.03	0.40
24:DA:892:G:H2'	24:DA:893:C:C6	2.57	0.40
24:DA:946:G:H2'	24:DA:947:G:C8	2.57	0.40
24:DA:1041:C:H2'	24:DA:1042:G:C8	2.56	0.40
24:DA:1088:A:O2'	24:DA:1089:G:OP2	2.39	0.40
24:DA:1516:U:H2'	24:DA:1517:G:C8	2.57	0.40
24:DA:1850:G:H2'	24:DA:1851:U:O4'	2.21	0.40
24:DA:2101:G:C6	24:DA:2102:U:C4	3.09	0.40
24:DA:2125:G:O5'	24:DA:2125:G:H8	2.04	0.40
24:DA:2371:G:H4'	51:D6:45:LYS:HD2	2.04	0.40
24:DA:2745:C:H4'	30:DH:142:GLY:C	2.46	0.40
24:DA:2745:C:H2'	24:DA:2746:U:O4'	2.22	0.40
24:DA:2795:G:N3	24:DA:2802:G:C6	2.90	0.40
26:DD:201:HIS:O	26:DD:204:ILE:HG12	2.22	0.40
26:DD:255:LYS:HD2	26:DD:255:LYS:O	2.21	0.40
28:DF:135:LYS:HD2	28:DF:135:LYS:HA	1.82	0.40
28:DF:165:ARG:HH11	28:DF:165:ARG:HB3	1.86	0.40
29:DG:4:ASP:HA	29:DG:9:ARG:NH2	2.37	0.40
30:DH:16:SER:HB2	30:DH:27:LYS:HB3	2.03	0.40
31:DK:117:GLU:OE1	31:DK:118:LYS:N	2.54	0.40
34:DO:98:GLU:HG2	34:DO:99:LEU:N	2.36	0.40
39:D1:92:ARG:HD3	39:D1:95:LEU:HD12	2.04	0.40
44:DV:77:ASP:N	44:DV:82:ARG:O	2.51	0.40
45:D3:25:ARG:HD2	45:D3:29:GLN:HE22	1.85	0.40
45:D3:36:ILE:HG13	45:D3:58:THR:CG2	2.51	0.40
47:DW:10:LEU:O	47:DW:14:ARG:N	2.27	0.40
49:D4:37:SER:C	49:D4:39:CYS:H	2.29	0.40
1:AA:52:G:C6	1:AA:360:A:C2	3.10	0.40
1:AA:91:C:N4	1:AA:92:G:C6	2.89	0.40
1:AA:136:C:N4	1:AA:227:G:H1	2.17	0.40
1:AA:152:A:C8	1:AA:153:C:C5	3.10	0.40
1:AA:191(A):G:C6	1:AA:191(B):G:C5	3.09	0.40
1:AA:660:G:OP1	15:AR:5:LYS:NZ	2.44	0.40
1:AA:1053:G:H4'	1:AA:1054:C:H3'	2.03	0.40
1:AA:1097:C:H1'	1:AA:1169:A:H2	1.86	0.40
1:AA:1122:U:O4	1:AA:1123:A:N6	2.54	0.40
1:AA:1255:G:OP1	10:AM:45:ARG:NH2	2.39	0.40
1:AA:1381:U:C4	7:AJ:79:ARG:NH1	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.22	0.40
2:AE:187:LEU:HD23	2:AE:201:ILE:O	2.21	0.40
5:AH:41:VAL:O	5:AH:67:VAL:HG12	2.20	0.40
5:AH:75:THR:OG1	5:AH:76:ILE:N	2.53	0.40
9:AL:89:ASN:OD1	9:AL:89:ASN:N	2.53	0.40
10:AM:30:SER:OG	10:AM:84:GLN:NE2	2.28	0.40
12:AO:58:VAL:O	12:AO:65:GLU:HA	2.21	0.40
16:AS:21:VAL:HG22	16:AS:34:GLU:O	2.21	0.40
22:AC:17:C:C4	22:AC:17(A):C:C4	3.10	0.40
22:AD:53:G:N1	22:AD:61:C:C2	2.89	0.40
24:BA:459:U:H2'	24:BA:460:A:C8	2.57	0.40
24:BA:582:G:H1	24:BA:1258:C:N4	2.19	0.40
24:BA:960:A:C8	24:BA:962:G:C8	3.09	0.40
24:BA:996:A:H4'	39:B1:92:ARG:CG	2.51	0.40
24:BA:1028:A:N6	24:BA:1125:G:H2'	2.36	0.40
24:BA:1087:G:H2'	24:BA:1089:G:C4'	2.52	0.40
24:BA:1170:G:N2	24:BA:1180:C:C2	2.89	0.40
24:BA:1215:G:H2'	24:BA:1216:G:O4'	2.22	0.40
24:BA:1440:G:O6	24:BA:1552:G:C2	2.75	0.40
24:BA:1581:G:C6	24:BA:1582:C:C4	3.10	0.40
24:BA:1797:C:C2'	24:BA:1798:U:H5'	2.52	0.40
24:BA:2048:G:C2	24:BA:2621:A:C2	3.10	0.40
24:BA:2314:C:H2'	24:BA:2315:G:C8	2.57	0.40
24:BA:2405:G:OP1	34:BO:77:ARG:NH2	2.55	0.40
25:BB:55:U:H2'	25:BB:56:G:O4'	2.22	0.40
26:BD:206:LEU:O	26:BD:211:ARG:HD3	2.22	0.40
27:BE:38:THR:HB	27:BE:40:GLU:OE2	2.21	0.40
37:BQ:83:LYS:HB3	37:BQ:84:GLN:H	1.56	0.40
38:BR:125:ARG:HG2	38:BR:126:ALA:N	2.36	0.40
39:B1:92:ARG:HD3	39:B1:94:ASN:HB3	2.04	0.40
42:BT:91:ALA:O	42:BT:92:LEU:HD23	2.21	0.40
43:BU:37:VAL:O	43:BU:67:LEU:N	2.54	0.40
45:B3:17:GLN:O	45:B3:19:LYS:HE3	2.22	0.40
1:CA:106:C:O2	1:CA:379:C:H4'	2.22	0.40
1:CA:872:A:C4	1:CA:874:G:C8	3.09	0.40
1:CA:1057:G:H1	1:CA:1203:C:N4	2.10	0.40
1:CA:1060:C:H2'	1:CA:1061:G:H8	1.86	0.40
1:CA:1118:C:C5'	9:CL:104:ARG:HD3	2.52	0.40
1:CA:1200:C:H1'	1:CA:1204:A:H61	1.85	0.40
2:CE:91:PRO:HG3	2:CE:154:LEU:HB3	2.02	0.40
3:CF:12:LEU:HD23	3:CF:12:LEU:HA	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CH:18:ARG:O	5:CH:25:ARG:N	2.46	0.40
6:CI:19:LEU:O	6:CI:23:LYS:HG3	2.22	0.40
9:CL:26:VAL:HG13	9:CL:61:ALA:HB3	2.04	0.40
9:CL:107:ARG:H	9:CL:107:ARG:HG3	1.76	0.40
10:CM:82:ILE:O	10:CM:86:MET:HB2	2.21	0.40
13:CP:34:LEU:HD13	13:CP:41:PRO:HB3	2.03	0.40
13:CP:79:LYS:O	13:CP:79:LYS:HD3	2.22	0.40
14:CQ:4:LYS:C	14:CQ:6:LEU:H	2.29	0.40
19:CV:7:LYS:HA	19:CV:7:LYS:HD2	1.87	0.40
24:DA:270(L):U:O2'	24:DA:270(N):G:N2	2.55	0.40
24:DA:558:G:P	32:DM:111:PRO:HD2	2.62	0.40
24:DA:592:G:H21	53:D8:4:MET:HE1	1.86	0.40
24:DA:688:U:H5'	24:DA:1780:A:C2	2.56	0.40
24:DA:1072:C:C4	24:DA:1093:G:C6	3.10	0.40
24:DA:1174:A:C6	24:DA:1176:G:H1'	2.56	0.40
24:DA:1323:U:H2'	24:DA:1324:G:H5'	2.03	0.40
24:DA:1599:C:OP1	42:DT:36:LYS:HG3	2.21	0.40
24:DA:1769:G:O2'	24:DA:1958:C:OP1	2.31	0.40
24:DA:2540:C:H2'	24:DA:2541:A:O4'	2.22	0.40
24:DA:2736:G:H2'	24:DA:2737:G:H8	1.85	0.40
27:DE:52:LEU:HD23	27:DE:52:LEU:HA	1.95	0.40
30:DH:54:ARG:HB3	30:DH:65:HIS:HB2	2.03	0.40
32:DM:90:MET:HE2	32:DM:90:MET:HA	2.03	0.40
33:DN:67:LYS:HE3	33:DN:68:GLU:OE1	2.21	0.40
37:DQ:110:LEU:HD12	37:DQ:111:GLU:H	1.86	0.40
37:DQ:110:LEU:CD1	37:DQ:111:GLU:H	2.34	0.40
40:D2:78:LYS:O	40:D2:79:VAL:HG13	2.22	0.40
43:DU:63:LYS:HE3	43:DU:64:GLU:OE2	2.21	0.40

All (11) 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)
1:AA:85:U:O5'	30:DH:126:PRO:CA[3_555]	1.25	0.95
1:AA:85:U:C4'	30:DH:126:PRO:CB[3_555]	1.47	0.73
1:AA:84:U:O3'	30:DH:127:GLU:N[3_555]	1.76	0.44
1:AA:84:U:OP2	30:DH:127:GLU:CG[3_555]	1.98	0.22
1:AA:85:U:C5'	30:DH:126:PRO:CB[3_555]	2.00	0.20
1:AA:82:U:O2'	30:DH:125:VAL:CG1[3_555]	2.10	0.10
1:AA:85:U:O5'	30:DH:126:PRO:CB[3_555]	2.12	0.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:B2:49:THR:OG1	50:B5:59:GLU:OE2[4_465]	2.13	0.07
1:AA:85:U:C5'	30:DH:126:PRO:CA[3_555]	2.16	0.04
1:AA:85:U:O5'	30:DH:126:PRO:N[3_555]	2.17	0.03
1:AA:1162:C:O2'	10:CM:80:LYS:NZ[4_555]	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	AE	235/256 (92%)	170 (72%)	41 (17%)	24 (10%)	0	3
2	CE	235/256 (92%)	165 (70%)	38 (16%)	32 (14%)	0	1
3	AF	203/239 (85%)	138 (68%)	44 (22%)	21 (10%)	0	2
3	CF	204/239 (85%)	135 (66%)	48 (24%)	21 (10%)	0	2
4	AG	206/208 (99%)	154 (75%)	35 (17%)	17 (8%)	0	4
4	CG	206/208 (99%)	150 (73%)	36 (18%)	20 (10%)	0	3
5	AH	149/162 (92%)	118 (79%)	26 (17%)	5 (3%)	3	16
5	CH	149/162 (92%)	130 (87%)	13 (9%)	6 (4%)	2	13
6	AI	99/101 (98%)	86 (87%)	9 (9%)	4 (4%)	2	13
6	CI	99/101 (98%)	87 (88%)	10 (10%)	2 (2%)	6	25
7	AJ	153/156 (98%)	127 (83%)	21 (14%)	5 (3%)	3	17
7	CJ	153/156 (98%)	120 (78%)	25 (16%)	8 (5%)	1	10
8	AK	136/138 (99%)	103 (76%)	23 (17%)	10 (7%)	1	5
8	CK	136/138 (99%)	120 (88%)	10 (7%)	6 (4%)	2	12
9	AL	125/128 (98%)	87 (70%)	26 (21%)	12 (10%)	0	3
9	CL	125/128 (98%)	90 (72%)	31 (25%)	4 (3%)	3	18
10	AM	97/105 (92%)	70 (72%)	18 (19%)	9 (9%)	0	3
10	CM	97/105 (92%)	65 (67%)	24 (25%)	8 (8%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	AN	117/129 (91%)	90 (77%)	19 (16%)	8 (7%)	1	5
11	CN	117/129 (91%)	96 (82%)	16 (14%)	5 (4%)	2	12
12	AO	123/128 (96%)	87 (71%)	24 (20%)	12 (10%)	0	3
12	CO	123/128 (96%)	103 (84%)	10 (8%)	10 (8%)	1	4
13	AP	114/126 (90%)	81 (71%)	20 (18%)	13 (11%)	0	1
13	CP	115/126 (91%)	75 (65%)	22 (19%)	18 (16%)	0	0
14	AQ	58/61 (95%)	40 (69%)	7 (12%)	11 (19%)	0	0
14	CQ	58/61 (95%)	40 (69%)	12 (21%)	6 (10%)	0	2
15	AR	86/89 (97%)	60 (70%)	20 (23%)	6 (7%)	1	5
15	CR	86/89 (97%)	73 (85%)	6 (7%)	7 (8%)	1	4
16	AS	82/88 (93%)	65 (79%)	16 (20%)	1 (1%)	10	37
16	CS	82/88 (93%)	66 (80%)	15 (18%)	1 (1%)	10	37
17	AT	98/105 (93%)	78 (80%)	14 (14%)	6 (6%)	1	7
17	CT	98/105 (93%)	85 (87%)	11 (11%)	2 (2%)	6	25
18	AU	70/88 (80%)	59 (84%)	7 (10%)	4 (6%)	1	8
18	CU	70/88 (80%)	56 (80%)	7 (10%)	7 (10%)	0	3
19	AV	81/93 (87%)	54 (67%)	19 (24%)	8 (10%)	0	3
19	CV	76/93 (82%)	44 (58%)	17 (22%)	15 (20%)	0	0
20	AW	97/106 (92%)	72 (74%)	12 (12%)	13 (13%)	0	1
20	CW	97/106 (92%)	70 (72%)	18 (19%)	9 (9%)	0	3
21	AX	23/27 (85%)	14 (61%)	7 (30%)	2 (9%)	0	4
21	CX	23/27 (85%)	17 (74%)	3 (13%)	3 (13%)	0	1
26	BD	270/276 (98%)	231 (86%)	26 (10%)	13 (5%)	2	11
26	DD	270/276 (98%)	217 (80%)	40 (15%)	13 (5%)	2	11
27	BE	203/206 (98%)	161 (79%)	28 (14%)	14 (7%)	1	5
27	DE	203/206 (98%)	133 (66%)	33 (16%)	37 (18%)	0	0
28	BF	200/210 (95%)	175 (88%)	20 (10%)	5 (2%)	4	21
28	DF	206/210 (98%)	151 (73%)	29 (14%)	26 (13%)	0	1
29	BG	179/182 (98%)	120 (67%)	42 (24%)	17 (10%)	0	3
29	DG	179/182 (98%)	121 (68%)	38 (21%)	20 (11%)	0	2
30	BH	168/180 (93%)	124 (74%)	24 (14%)	20 (12%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	DH	168/180 (93%)	92 (55%)	45 (27%)	31 (18%)	0	0
31	BK	144/148 (97%)	102 (71%)	25 (17%)	17 (12%)	0	1
31	DK	144/148 (97%)	104 (72%)	28 (19%)	12 (8%)	0	4
32	BM	136/140 (97%)	101 (74%)	25 (18%)	10 (7%)	1	5
32	DM	136/140 (97%)	110 (81%)	22 (16%)	4 (3%)	3	19
33	BN	120/122 (98%)	113 (94%)	5 (4%)	2 (2%)	7	30
33	DN	120/122 (98%)	103 (86%)	14 (12%)	3 (2%)	4	21
34	BO	148/150 (99%)	99 (67%)	21 (14%)	28 (19%)	0	0
34	DO	148/150 (99%)	83 (56%)	44 (30%)	21 (14%)	0	1
35	BP	139/141 (99%)	96 (69%)	26 (19%)	17 (12%)	0	1
35	DP	139/141 (99%)	105 (76%)	19 (14%)	15 (11%)	0	2
36	B0	116/118 (98%)	88 (76%)	19 (16%)	9 (8%)	1	4
36	D0	115/118 (98%)	99 (86%)	13 (11%)	3 (3%)	4	21
37	BQ	109/112 (97%)	78 (72%)	19 (17%)	12 (11%)	0	2
37	DQ	109/112 (97%)	78 (72%)	20 (18%)	11 (10%)	0	3
38	BR	135/146 (92%)	101 (75%)	25 (18%)	9 (7%)	1	6
38	DR	135/146 (92%)	110 (82%)	19 (14%)	6 (4%)	2	12
39	B1	115/118 (98%)	101 (88%)	10 (9%)	4 (4%)	3	16
39	D1	115/118 (98%)	88 (76%)	18 (16%)	9 (8%)	1	4
40	B2	99/101 (98%)	78 (79%)	11 (11%)	10 (10%)	0	3
40	D2	99/101 (98%)	73 (74%)	12 (12%)	14 (14%)	0	1
41	BS	111/113 (98%)	102 (92%)	6 (5%)	3 (3%)	4	20
41	DS	111/113 (98%)	98 (88%)	8 (7%)	5 (4%)	2	12
42	BT	90/96 (94%)	78 (87%)	10 (11%)	2 (2%)	5	24
42	DT	90/96 (94%)	69 (77%)	13 (14%)	8 (9%)	0	3
43	BU	100/110 (91%)	69 (69%)	14 (14%)	17 (17%)	0	0
43	DU	100/110 (91%)	53 (53%)	22 (22%)	25 (25%)	0	0
44	BV	173/206 (84%)	117 (68%)	31 (18%)	25 (14%)	0	0
44	DV	177/206 (86%)	111 (63%)	35 (20%)	31 (18%)	0	0
45	B3	74/85 (87%)	65 (88%)	7 (10%)	2 (3%)	4	20
45	D3	75/85 (88%)	66 (88%)	7 (9%)	2 (3%)	4	20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	BZ	95/98 (97%)	78 (82%)	10 (10%)	7 (7%)	1	5
46	DZ	95/98 (97%)	71 (75%)	14 (15%)	10 (10%)	0	2
47	BW	64/72 (89%)	52 (81%)	9 (14%)	3 (5%)	2	11
47	DW	67/72 (93%)	53 (79%)	6 (9%)	8 (12%)	0	1
48	BX	57/60 (95%)	51 (90%)	4 (7%)	2 (4%)	3	16
48	DX	57/60 (95%)	49 (86%)	5 (9%)	3 (5%)	1	10
49	B4	64/71 (90%)	34 (53%)	15 (23%)	15 (23%)	0	0
49	D4	61/71 (86%)	25 (41%)	18 (30%)	18 (30%)	0	0
50	B5	57/60 (95%)	41 (72%)	9 (16%)	7 (12%)	0	1
50	D5	57/60 (95%)	46 (81%)	7 (12%)	4 (7%)	1	5
51	B6	43/54 (80%)	24 (56%)	14 (33%)	5 (12%)	0	1
51	D6	43/54 (80%)	19 (44%)	13 (30%)	11 (26%)	0	0
52	B7	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
52	D7	47/49 (96%)	45 (96%)	2 (4%)	0	100	100
53	B8	59/65 (91%)	45 (76%)	8 (14%)	6 (10%)	0	3
53	D8	59/65 (91%)	42 (71%)	8 (14%)	9 (15%)	0	0
All	All	11341/12044 (94%)	8521 (75%)	1799 (16%)	1021 (9%)	0	3

All (1021) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AE	29	ALA
2	AE	30	ARG
2	AE	95	GLN
2	AE	101	MET
2	AE	208	ILE
2	AE	236	TYR
3	AF	45	LYS
3	AF	99	VAL
3	AF	100	ALA
3	AF	107	GLN
4	AG	14	ARG
4	AG	30	LYS
4	AG	89	THR
4	AG	154	ASN
4	AG	155	LEU

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Mol	Chain	Res	Type
5	AH	115	VAL
6	AI	13	ASN
7	AJ	35	LYS
7	AJ	131	LYS
8	AK	37	ARG
8	AK	99	GLU
9	AL	42	ARG
10	AM	26	ALA
10	AM	91	PRO
11	AN	127	LYS
12	AO	18	VAL
12	AO	62	SER
13	AP	31	LYS
13	AP	99	ARG
13	AP	106	ASN
14	AQ	14	PRO
15	AR	21	ASP
15	AR	26	GLU
17	AT	49	GLU
17	AT	100	LYS
19	AV	5	LEU
19	AV	9	VAL
19	AV	41	VAL
20	AW	71	THR
26	BD	27	THR
26	BD	28	GLU
26	BD	33	LEU
26	BD	122	ASP
26	BD	239	ARG
27	BE	53	PRO
27	BE	87	GLU
28	BF	15	SER
28	BF	134	GLY
29	BG	45	GLU
29	BG	47	LYS
29	BG	84	LYS
30	BH	3	ARG
30	BH	12	PRO
30	BH	137	ASP
30	BH	151	ILE
30	BH	154	PRO
31	BK	15	VAL

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Mol	Chain	Res	Type
31	BK	133	HIS
32	BM	22	THR
32	BM	36	GLY
32	BM	77	GLY
32	BM	96	GLU
34	BO	6	LEU
34	BO	42	SER
34	BO	65	ARG
34	BO	71	VAL
34	BO	72	PRO
34	BO	90	ARG
34	BO	108	LYS
35	BP	21	THR
35	BP	67	ARG
35	BP	68	ILE
35	BP	88	GLY
35	BP	105	GLU
36	B0	86	ARG
37	BQ	74	ALA
37	BQ	88	ASP
37	BQ	89	ARG
38	BR	2	ASN
38	BR	107	ASP
39	B1	93	LYS
40	B2	31	ALA
40	B2	45	THR
40	B2	47	VAL
40	B2	61	VAL
43	BU	40	GLU
43	BU	50	ARG
43	BU	53	PRO
43	BU	57	GLN
43	BU	77	PRO
43	BU	78	ALA
44	BV	6	LYS
44	BV	51	ALA
44	BV	53	ILE
44	BV	60	GLU
44	BV	111	VAL
44	BV	117	LEU
44	BV	165	VAL
44	BV	171	ILE

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Mol	Chain	Res	Type
46	BZ	91	LYS
46	BZ	97	LEU
47	BW	48	HIS
49	B4	5	ILE
49	B4	18	CYS
49	B4	24	THR
49	B4	43	TYR
50	B5	50	GLY
50	B5	58	LEU
51	B6	33	LYS
53	B8	36	LYS
53	B8	37	SER
53	B8	52	LYS
2	CE	5	ILE
2	CE	7	VAL
2	CE	13	ALA
2	CE	64	ARG
2	CE	74	LYS
2	CE	154	LEU
2	CE	190	THR
2	CE	191	ASP
2	CE	232	PRO
2	CE	234	PRO
3	CF	12	LEU
3	CF	48	TYR
3	CF	53	ALA
3	CF	156	ARG
4	CG	14	ARG
4	CG	24	GLU
4	CG	31	CYS
4	CG	34	GLU
4	CG	35	ARG
4	CG	150	GLU
4	CG	151	LYS
4	CG	200	GLU
5	CH	154	GLY
7	CJ	35	LYS
8	CK	99	GLU
8	CK	103	VAL
9	CL	124	GLN
11	CN	100	ALA
11	CN	101	SER

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Mol	Chain	Res	Type
12	CO	47	LYS
12	CO	48	PRO
12	CO	62	SER
12	CO	79	GLU
13	CP	5	ALA
13	CP	80	ARG
13	CP	99	ARG
13	CP	116	THR
14	CQ	41	ARG
18	CU	24	ALA
19	CV	9	VAL
20	CW	100	ILE
21	CX	3	LYS
26	DD	26	LYS
26	DD	32	SER
26	DD	267	SER
27	DE	25	VAL
27	DE	27	LEU
27	DE	54	GLN
27	DE	61	ARG
27	DE	64	LYS
27	DE	70	ALA
27	DE	72	VAL
27	DE	77	ILE
27	DE	82	ARG
27	DE	86	PRO
27	DE	87	GLU
27	DE	88	GLY
27	DE	200	GLU
28	DF	4	VAL
28	DF	6	VAL
28	DF	17	ARG
28	DF	26	ALA
28	DF	132	VAL
29	DG	4	ASP
29	DG	81	LYS
29	DG	84	LYS
29	DG	116	ASP
30	DH	3	ARG
30	DH	24	VAL
30	DH	55	PRO
30	DH	83	TYR

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Mol	Chain	Res	Type
30	DH	123	PHE
30	DH	128	PRO
30	DH	130	ARG
30	DH	136	ILE
30	DH	152	ARG
31	DK	69	LYS
31	DK	83	ALA
31	DK	102	SER
31	DK	117	GLU
31	DK	132	PRO
34	DO	10	PRO
34	DO	21	ARG
34	DO	46	LYS
34	DO	49	ARG
34	DO	50	ARG
34	DO	56	SER
34	DO	60	MET
34	DO	61	ARG
34	DO	62	LEU
34	DO	63	PRO
35	DP	7	MET
35	DP	13	GLN
35	DP	21	THR
35	DP	66	ILE
35	DP	89	ASN
37	DQ	54	LEU
37	DQ	88	ASP
37	DQ	89	ARG
37	DQ	96	GLY
37	DQ	106	ARG
37	DQ	110	LEU
38	DR	2	ASN
38	DR	134	GLU
39	D1	91	ASP
40	D2	47	VAL
40	D2	50	PRO
40	D2	79	VAL
43	DU	44	ILE
43	DU	50	ARG
43	DU	53	PRO
43	DU	56	PRO
43	DU	77	PRO

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Mol	Chain	Res	Type
43	DU	78	ALA
43	DU	85	VAL
43	DU	89	PHE
44	DV	53	ILE
44	DV	60	GLU
44	DV	93	ASP
44	DV	112	ARG
44	DV	114	GLY
44	DV	120	ILE
44	DV	131	ARG
44	DV	135	GLU
44	DV	146	ILE
44	DV	159	PRO
44	DV	176	PRO
46	DZ	81	LYS
46	DZ	83	GLU
46	DZ	88	LYS
46	DZ	93	GLU
47	DW	17	SER
49	D4	16	CYS
49	D4	20	ASN
49	D4	21	VAL
49	D4	22	ILE
49	D4	24	THR
49	D4	33	VAL
49	D4	40	HIS
49	D4	44	THR
49	D4	46	GLN
50	D5	4	HIS
50	D5	57	VAL
51	D6	26	ASN
51	D6	44	ARG
51	D6	48	VAL
53	D8	49	VAL
53	D8	51	ALA
53	D8	61	LEU
2	AE	28	PHE
2	AE	155	LEU
2	AE	194	PRO
2	AE	224	GLN
2	AE	235	SER
2	AE	237	ALA

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Mol	Chain	Res	Type
3	AF	12	LEU
3	AF	14	ILE
3	AF	26	LYS
3	AF	46	GLU
3	AF	60	ALA
4	AG	29	PRO
4	AG	85	LYS
4	AG	90	GLY
4	AG	164	ALA
5	AH	65	ASN
8	AK	2	LEU
8	AK	36	LEU
8	AK	68	ARG
8	AK	106	GLY
9	AL	33	PHE
9	AL	53	VAL
9	AL	54	ASP
9	AL	58	HIS
11	AN	87	THR
11	AN	90	GLY
11	AN	104	GLN
12	AO	29	GLY
12	AO	50	SER
12	AO	63	GLY
12	AO	79	GLU
12	AO	121	GLY
12	AO	128	ALA
13	AP	6	GLY
13	AP	13	LYS
13	AP	110	ARG
14	AQ	12	ARG
14	AQ	24	CYS
14	AQ	28	GLY
17	AT	55	ASP
18	AU	36	ASN
19	AV	45	VAL
20	AW	48	LYS
20	AW	95	ALA
20	AW	96	GLY
20	AW	102	GLY
26	BD	32	SER
27	BE	15	PHE

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Mol	Chain	Res	Type
27	BE	54	GLN
27	BE	60	ASN
27	BE	204	ALA
28	BF	17	ARG
28	BF	130	ALA
29	BG	5	VAL
29	BG	148	MET
30	BH	8	PRO
30	BH	81	GLU
30	BH	100	GLY
30	BH	138	LYS
30	BH	155	SER
30	BH	156	ALA
31	BK	106	GLY
31	BK	143	SER
31	BK	145	VAL
32	BM	9	VAL
34	BO	14	LYS
34	BO	43	GLY
34	BO	109	GLY
34	BO	116	GLY
35	BP	6	ARG
35	BP	25	ASP
35	BP	27	VAL
35	BP	79	LEU
35	BP	133	ARG
37	BQ	75	GLU
37	BQ	96	GLY
38	BR	12	SER
38	BR	123	GLN
38	BR	124	ASP
39	B1	79	PHE
39	B1	88	ILE
39	B1	115	ALA
40	B2	29	PRO
41	BS	56	ALA
41	BS	93	ALA
43	BU	5	MET
43	BU	41	GLY
43	BU	52	SER
43	BU	56	PRO
43	BU	82	PRO

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Mol	Chain	Res	Type
43	BU	83	THR
43	BU	98	VAL
44	BV	105	VAL
44	BV	106	GLY
44	BV	112	ARG
44	BV	151	HIS
44	BV	161	VAL
44	BV	163	LEU
48	BX	38	GLU
49	B4	23	GLU
49	B4	55	ARG
49	B4	56	VAL
50	B5	34	PRO
53	B8	31	HIS
53	B8	43	GLN
2	CE	11	LEU
2	CE	20	GLU
2	CE	22	LYS
2	CE	75	LYS
2	CE	81	VAL
2	CE	83	MET
2	CE	121	LEU
2	CE	122	PHE
2	CE	165	VAL
2	CE	214	ILE
2	CE	217	ARG
3	CF	27	LYS
3	CF	42	LEU
3	CF	47	LEU
3	CF	98	ASN
3	CF	129	ALA
3	CF	189	ALA
3	CF	206	GLU
4	CG	23	GLY
4	CG	154	ASN
4	CG	156	GLU
5	CH	85	GLY
5	CH	152	ARG
7	CJ	109	ASN
7	CJ	131	LYS
9	CL	59	PHE
9	CL	96	LEU

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Mol	Chain	Res	Type
10	CM	30	SER
10	CM	88	LEU
11	CN	89	ALA
12	CO	19	ARG
13	CP	58	GLU
13	CP	86	CYS
13	CP	104	ARG
13	CP	114	ARG
13	CP	117	VAL
14	CQ	15	LYS
14	CQ	28	GLY
14	CQ	29	ARG
15	CR	62	GLN
15	CR	79	ARG
16	CS	81	ARG
18	CU	25	THR
18	CU	36	ASN
19	CV	29	ARG
19	CV	34	TRP
19	CV	45	VAL
19	CV	71	LEU
20	CW	84	LEU
20	CW	96	GLY
20	CW	99	LEU
21	CX	7	ARG
26	DD	30	GLU
26	DD	70	TRP
27	DE	9	VAL
27	DE	26	ILE
27	DE	37	ARG
27	DE	51	PHE
27	DE	59	VAL
27	DE	78	LEU
27	DE	90	THR
28	DF	10	PRO
28	DF	27	GLU
28	DF	28	ILE
28	DF	61	GLY
28	DF	67	GLN
28	DF	70	THR
28	DF	84	VAL
28	DF	89	VAL

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Mol	Chain	Res	Type
28	DF	133	ASN
29	DG	5	VAL
29	DG	32	PRO
29	DG	36	LYS
29	DG	96	ARG
29	DG	119	GLY
29	DG	146	TYR
30	DH	4	ILE
30	DH	92	ILE
30	DH	93	GLY
30	DH	118	PRO
30	DH	138	LYS
31	DK	68	LEU
31	DK	73	GLU
31	DK	101	LEU
31	DK	144	VAL
32	DM	135	PRO
33	DN	5	GLN
33	DN	28	SER
34	DO	6	LEU
34	DO	57	THR
34	DO	66	GLY
34	DO	109	GLY
34	DO	141	ALA
35	DP	27	VAL
35	DP	88	GLY
35	DP	90	VAL
36	D0	82	GLU
36	D0	107	ASP
37	DQ	57	LYS
37	DQ	74	ALA
38	DR	11	GLU
38	DR	17	THR
39	D1	72	HIS
39	D1	90	VAL
39	D1	93	LYS
39	D1	98	LEU
39	D1	100	VAL
40	D2	48	GLY
40	D2	49	THR
40	D2	54	GLY
40	D2	83	ARG

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Mol	Chain	Res	Type
40	D2	99	ILE
41	DS	63	ASP
41	DS	67	ASP
42	DT	41	ASN
42	DT	93	GLU
43	DU	39	VAL
43	DU	47	LYS
43	DU	57	GLN
43	DU	61	ILE
43	DU	99	CYS
44	DV	7	ALA
44	DV	66	SER
44	DV	90	VAL
44	DV	105	VAL
44	DV	140	ASP
44	DV	142	SER
44	DV	145	GLU
44	DV	156	LYS
44	DV	158	PRO
44	DV	171	ILE
46	DZ	27	GLU
46	DZ	87	PRO
46	DZ	92	LYS
47	DW	48	HIS
47	DW	70	GLN
48	DX	38	GLU
49	D4	26	SER
49	D4	37	SER
49	D4	43	TYR
50	D5	49	CYS
51	D6	17	LYS
51	D6	45	LYS
53	D8	30	ARG
53	D8	32	LEU
53	D8	41	ILE
2	AE	191	ASP
2	AE	195	ASP
3	AF	15	THR
3	AF	18	TRP
3	AF	53	ALA
3	AF	79	ARG
3	AF	156	ARG

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Mol	Chain	Res	Type
4	AG	42	GLN
4	AG	73	ARG
5	AH	63	ARG
6	AI	42	GLU
7	AJ	127	ALA
9	AL	11	LYS
9	AL	32	ASP
10	AM	27	ALA
10	AM	37	PRO
10	AM	55	LYS
12	AO	48	PRO
12	AO	51	ALA
12	AO	61	THR
12	AO	115	LYS
13	AP	4	ILE
13	AP	8	GLU
13	AP	43	THR
14	AQ	3	ARG
14	AQ	15	LYS
14	AQ	16	PHE
14	AQ	52	GLN
15	AR	23	GLY
15	AR	71	GLN
18	AU	20	ALA
18	AU	37	VAL
19	AV	43	GLU
19	AV	65	ASN
20	AW	82	SER
20	AW	94	ALA
20	AW	97	ALA
20	AW	98	PRO
21	AX	3	LYS
21	AX	7	ARG
26	BD	123	ALA
27	BE	62	PRO
27	BE	72	VAL
27	BE	79	ARG
27	BE	153	GLY
29	BG	36	LYS
29	BG	46	ALA
29	BG	64	THR
29	BG	96	ARG

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Mol	Chain	Res	Type
29	BG	117	PHE
29	BG	124	SER
30	BH	27	LYS
30	BH	83	TYR
30	BH	85	LYS
30	BH	167	GLU
31	BK	10	GLU
31	BK	11	ASN
31	BK	103	ARG
31	BK	117	GLU
32	BM	11	PRO
33	BN	97	ARG
34	BO	7	ARG
34	BO	21	ARG
34	BO	29	LYS
34	BO	36	LYS
34	BO	38	GLN
34	BO	50	ARG
34	BO	117	GLU
34	BO	141	ALA
35	BP	59	ARG
35	BP	89	ASN
36	B0	29	LEU
36	B0	45	ARG
36	B0	65	LEU
36	B0	66	VAL
37	BQ	4	LEU
37	BQ	21	THR
37	BQ	57	LYS
43	BU	33	LYS
43	BU	34	LYS
44	BV	13	GLU
44	BV	109	ALA
44	BV	164	ALA
46	BZ	45	ASN
47	BW	44	LEU
49	B4	34	GLU
49	B4	40	HIS
49	B4	42	PHE
50	B5	3	LYS
50	B5	57	VAL
51	B6	46	HIS

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Mol	Chain	Res	Type
51	B6	49	HIS
2	CE	6	THR
2	CE	63	MET
2	CE	96	ARG
2	CE	216	SER
2	CE	218	ALA
3	CF	15	THR
3	CF	82	GLU
3	CF	141	VAL
3	CF	181	ASN
4	CG	101	LEU
4	CG	153	ARG
6	CI	70	ASP
7	CJ	108	ALA
8	CK	2	LEU
8	CK	68	ARG
8	CK	100	ILE
10	CM	17	ASP
10	CM	91	PRO
12	CO	65	GLU
13	CP	20	THR
13	CP	57	ARG
13	CP	63	THR
14	CQ	30	ALA
15	CR	80	ALA
15	CR	86	GLY
18	CU	23	LYS
19	CV	19	VAL
20	CW	10	LEU
20	CW	73	HIS
20	CW	103	GLY
26	DD	3	VAL
26	DD	110	GLY
27	DE	24	THR
27	DE	60	ASN
27	DE	69	LYS
27	DE	144	ARG
27	DE	203	LYS
28	DF	3	GLU
28	DF	9	ILE
28	DF	11	VAL
28	DF	42	ALA

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Mol	Chain	Res	Type
28	DF	62	ARG
29	DG	6	ALA
29	DG	82	LEU
29	DG	124	SER
29	DG	179	PRO
30	DH	17	VAL
30	DH	21	PRO
30	DH	27	LYS
30	DH	90	LYS
30	DH	98	LEU
30	DH	99	VAL
30	DH	112	PRO
30	DH	127	GLU
30	DH	150	ALA
30	DH	164	TYR
32	DM	3	THR
34	DO	14	LYS
35	DP	104	PHE
35	DP	134	ARG
36	D0	45	ARG
37	DQ	19	LYS
37	DQ	111	GLU
38	DR	116	ALA
39	D1	101	ARG
39	D1	117	GLN
41	DS	93	ALA
41	DS	111	HIS
42	DT	42	ALA
43	DU	23	ARG
43	DU	55	TYR
43	DU	62	GLU
43	DU	102	CYS
44	DV	12	GLY
44	DV	161	VAL
45	D3	35	ASN
46	DZ	28	GLY
47	DW	10	LEU
47	DW	47	ASN
48	DX	13	ILE
49	D4	10	VAL
49	D4	27	THR
49	D4	42	PHE

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Mol	Chain	Res	Type
49	D4	54	GLY
50	D5	55	ARG
51	D6	28	ARG
51	D6	41	PRO
2	AE	19	HIS
2	AE	78	GLN
2	AE	207	ALA
3	AF	4	LYS
3	AF	179	ARG
4	AG	151	LYS
5	AH	73	ASN
7	AJ	8	GLU
8	AK	105	ARG
9	AL	56	LEU
9	AL	78	LYS
10	AM	92	THR
11	AN	82	VAL
13	AP	59	TYR
20	AW	84	LEU
26	BD	31	LYS
26	BD	257	LEU
27	BE	90	THR
28	BF	133	ASN
29	BG	82	LEU
29	BG	86	MET
30	BH	13	LYS
30	BH	168	PRO
31	BK	16	GLY
31	BK	118	LYS
32	BM	23	LEU
32	BM	95	PRO
32	BM	128	HIS
33	BN	5	GLN
34	BO	31	ALA
34	BO	62	LEU
34	BO	107	LYS
35	BP	11	LYS
35	BP	65	PHE
36	B0	75	LEU
37	BQ	61	ASN
37	BQ	87	PHE
38	BR	24	PRO

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Mol	Chain	Res	Type
38	BR	37	GLY
38	BR	116	ALA
40	B2	36	PRO
40	B2	49	THR
40	B2	50	PRO
42	BT	68	ARG
43	BU	89	PHE
44	BV	108	PRO
44	BV	152	ALA
45	B3	73	GLY
46	BZ	79	GLY
47	BW	43	GLN
49	B4	9	LEU
50	B5	56	LYS
51	B6	35	GLU
2	CE	39	ILE
2	CE	110	GLN
3	CF	96	GLY
3	CF	140	ARG
3	CF	142	MET
4	CG	25	ARG
4	CG	149	ALA
5	CH	22	GLY
5	CH	146	ALA
7	CJ	31	MET
9	CL	57	GLY
10	CM	31	GLY
11	CN	90	GLY
11	CN	91	ARG
12	CO	18	VAL
12	CO	45	PRO
12	CO	61	THR
12	CO	121	GLY
13	CP	62	ASN
13	CP	115	LYS
14	CQ	3	ARG
17	CT	99	SER
19	CV	30	LEU
19	CV	55	LYS
26	DD	27	THR
26	DD	156	ALA
26	DD	268	ARG

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Mol	Chain	Res	Type
27	DE	22	PRO
27	DE	57	LYS
27	DE	68	ALA
28	DF	14	PRO
28	DF	123	LEU
28	DF	167	ALA
29	DG	62	LEU
29	DG	104	GLU
30	DH	85	LYS
30	DH	167	GLU
31	DK	26	ALA
31	DK	30	LEU
32	DM	47	ALA
33	DN	26	LYS
34	DO	35	HIS
34	DO	55	ARG
35	DP	25	ASP
35	DP	78	PRO
37	DQ	53	SER
38	DR	126	ALA
39	D1	94	ASN
40	D2	85	LYS
42	DT	23	GLU
42	DT	40	LYS
43	DU	29	GLU
43	DU	52	SER
43	DU	90	LEU
44	DV	41	LEU
44	DV	65	GLN
47	DW	15	LYS
47	DW	43	GLN
49	D4	25	TYR
51	D6	23	THR
53	D8	48	PHE
53	D8	53	PRO
2	AE	16	HIS
2	AE	22	LYS
2	AE	126	GLU
3	AF	78	GLY
3	AF	89	GLU
4	AG	32	ALA
4	AG	132	ARG

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Mol	Chain	Res	Type
7	AJ	7	ALA
8	AK	101	PRO
8	AK	129	VAL
9	AL	89	ASN
9	AL	100	GLY
9	AL	116	LYS
10	AM	16	LEU
10	AM	93	GLY
11	AN	91	ARG
11	AN	103	LEU
11	AN	105	VAL
13	AP	21	TYR
14	AQ	19	ARG
17	AT	64	PRO
17	AT	68	ARG
18	AU	25	THR
19	AV	12	ASP
27	BE	59	VAL
27	BE	78	LEU
27	BE	129	HIS
29	BG	110	ALA
29	BG	146	TYR
31	BK	61	ARG
31	BK	84	GLY
31	BK	110	ASP
31	BK	115	ALA
31	BK	122	GLU
34	BO	11	GLY
34	BO	12	ALA
34	BO	19	VAL
34	BO	95	VAL
35	BP	134	ARG
36	B0	71	GLN
36	B0	107	ASP
40	B2	48	GLY
41	BS	65	LEU
44	BV	118	GLN
44	BV	141	VAL
44	BV	162	GLU
46	BZ	93	GLU
46	BZ	95	LEU
48	BX	39	ASP

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Mol	Chain	Res	Type
49	B4	11	PRO
49	B4	53	GLU
51	B6	47	THR
2	CE	120	ALA
2	CE	230	VAL
3	CF	35	GLU
3	CF	36	ASP
4	CG	102	ASP
7	CJ	4	ARG
10	CM	37	PRO
13	CP	29	ARG
15	CR	88	ARG
17	CT	33	GLY
18	CU	22	VAL
18	CU	31	LEU
18	CU	59	SER
19	CV	46	GLY
19	CV	59	PRO
19	CV	67	VAL
26	DD	239	ARG
27	DE	52	LEU
27	DE	73	GLU
27	DE	76	ARG
29	DG	21	ARG
29	DG	138	GLN
29	DG	150	ASP
30	DH	65	HIS
30	DH	117	PRO
30	DH	137	ASP
30	DH	155	SER
31	DK	100	ALA
34	DO	117	GLU
35	DP	59	ARG
40	D2	44	LYS
42	DT	15	GLU
42	DT	51	VAL
43	DU	3	VAL
43	DU	63	LYS
44	DV	62	PRO
44	DV	141	VAL
44	DV	162	GLU
44	DV	165	VAL

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Mol	Chain	Res	Type
45	D3	64	ASP
46	DZ	30	VAL
49	D4	57	GLU
51	D6	19	ARG
51	D6	25	LYS
51	D6	36	LEU
53	D8	7	HIS
2	AE	239	VAL
6	AI	12	PRO
10	AM	88	LEU
13	AP	16	ASP
14	AQ	36	PHE
15	AR	70	LEU
16	AS	81	ARG
17	AT	33	GLY
20	AW	63	ILE
26	BD	34	VAL
26	BD	111	LEU
29	BG	85	GLY
30	BH	7	LEU
30	BH	127	GLU
31	BK	87	LYS
35	BP	90	VAL
35	BP	104	PHE
36	B0	85	PRO
43	BU	3	VAL
44	BV	52	SER
44	BV	59	LEU
44	BV	144	LEU
45	B3	83	PRO
53	B8	35	GLN
4	CG	208	SER
5	CH	17	ALA
7	CJ	133	GLY
19	CV	66	MET
19	CV	79	THR
27	DE	7	VAL
27	DE	65	GLY
28	DF	113	ALA
29	DG	147	ASP
35	DP	79	LEU
40	D2	38	LEU

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Mol	Chain	Res	Type
40	D2	84	LYS
41	DS	65	LEU
42	DT	67	GLY
43	DU	80	GLY
44	DV	148	ASP
47	DW	16	LEU
2	AE	15	VAL
5	AH	70	PRO
20	AW	47	GLY
32	BM	135	PRO
34	BO	145	PRO
40	B2	79	VAL
49	B4	19	GLY
7	CJ	49	ILE
10	CM	24	VAL
13	CP	4	ILE
13	CP	53	VAL
15	CR	19	PRO
15	CR	23	GLY
19	CV	54	GLY
20	CW	101	GLY
21	CX	4	GLY
26	DD	24	ILE
27	DE	50	GLY
27	DE	75	VAL
27	DE	116	VAL
27	DE	186	GLY
28	DF	24	LEU
28	DF	114	VAL
48	DX	27	GLY
2	AE	131	PRO
3	AF	96	GLY
4	AG	7	PRO
6	AI	40	VAL
13	AP	7	VAL
19	AV	11	VAL
26	BD	271	ILE
42	BT	67	GLY
46	BZ	84	GLY
4	CG	172	PRO
10	CM	93	GLY
28	DF	16	GLY

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Mol	Chain	Res	Type
44	DV	157	LEU
4	AG	23	GLY
4	AG	87	GLY
29	BG	179	PRO
34	BO	93	GLY
37	BQ	82	ILE
38	BR	4	GLY
49	B4	28	LYS
2	CE	239	VAL
13	CP	7	VAL
19	CV	72	GLY
26	DD	271	ILE
35	DP	47	ILE
43	DU	42	VAL
43	DU	98	VAL
46	DZ	31	GLY
2	AE	211	ILE
3	AF	51	GLY
3	AF	81	GLY
14	AQ	25	VAL
20	AW	103	GLY
26	BD	35	LYS
30	BH	92	ILE
37	BQ	108	GLY
50	B5	4	HIS
2	CE	228	GLY
3	CF	99	VAL
4	CG	5	ILE
4	CG	37	PRO
6	CI	40	VAL
8	CK	86	ILE
20	CW	97	ALA
30	DH	15	VAL
32	DM	113	GLY
34	DO	24	GLY
40	D2	36	PRO
40	D2	52	VAL
8	AK	5	PRO
15	AR	86	GLY
34	DO	116	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AE	205/220 (93%)	163 (80%)	42 (20%)	1	5
2	CE	205/220 (93%)	160 (78%)	45 (22%)	1	4
3	AF	159/188 (85%)	140 (88%)	19 (12%)	5	21
3	CF	160/188 (85%)	139 (87%)	21 (13%)	4	17
4	AG	180/180 (100%)	153 (85%)	27 (15%)	3	13
4	CG	180/180 (100%)	158 (88%)	22 (12%)	5	20
5	AH	116/123 (94%)	98 (84%)	18 (16%)	2	12
5	CH	116/123 (94%)	102 (88%)	14 (12%)	5	20
6	AI	90/90 (100%)	77 (86%)	13 (14%)	3	14
6	CI	90/90 (100%)	75 (83%)	15 (17%)	2	10
7	AJ	126/127 (99%)	103 (82%)	23 (18%)	2	8
7	CJ	126/127 (99%)	107 (85%)	19 (15%)	3	13
8	AK	119/119 (100%)	103 (87%)	16 (13%)	4	17
8	CK	119/119 (100%)	103 (87%)	16 (13%)	4	17
9	AL	98/99 (99%)	74 (76%)	24 (24%)	1	3
9	CL	98/99 (99%)	78 (80%)	20 (20%)	1	5
10	AM	89/92 (97%)	78 (88%)	11 (12%)	4	19
10	CM	89/92 (97%)	74 (83%)	15 (17%)	2	10
11	AN	90/99 (91%)	77 (86%)	13 (14%)	3	14
11	CN	90/99 (91%)	75 (83%)	15 (17%)	2	10
12	AO	104/107 (97%)	88 (85%)	16 (15%)	2	12
12	CO	104/107 (97%)	91 (88%)	13 (12%)	4	19
13	AP	94/101 (93%)	86 (92%)	8 (8%)	10	35
13	CP	94/101 (93%)	76 (81%)	18 (19%)	1	7
14	AQ	49/50 (98%)	38 (78%)	11 (22%)	1	4
14	CQ	49/50 (98%)	41 (84%)	8 (16%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AR	79/80 (99%)	68 (86%)	11 (14%)	3	15
15	CR	79/80 (99%)	72 (91%)	7 (9%)	9	33
16	AS	72/74 (97%)	56 (78%)	16 (22%)	1	4
16	CS	72/74 (97%)	61 (85%)	11 (15%)	3	12
17	AT	95/97 (98%)	83 (87%)	12 (13%)	4	19
17	CT	95/97 (98%)	86 (90%)	9 (10%)	8	30
18	AU	63/77 (82%)	54 (86%)	9 (14%)	3	14
18	CU	63/77 (82%)	58 (92%)	5 (8%)	11	37
19	AV	72/80 (90%)	55 (76%)	17 (24%)	1	3
19	CV	67/80 (84%)	52 (78%)	15 (22%)	1	4
20	AW	76/82 (93%)	64 (84%)	12 (16%)	2	12
20	CW	76/82 (93%)	67 (88%)	9 (12%)	5	21
21	AX	20/22 (91%)	20 (100%)	0	100	100
21	CX	20/22 (91%)	19 (95%)	1 (5%)	22	53
26	BD	214/218 (98%)	175 (82%)	39 (18%)	2	8
26	DD	214/218 (98%)	181 (85%)	33 (15%)	2	12
27	BE	165/166 (99%)	139 (84%)	26 (16%)	2	12
27	DE	165/166 (99%)	140 (85%)	25 (15%)	3	13
28	BF	161/166 (97%)	139 (86%)	22 (14%)	3	15
28	DF	165/166 (99%)	134 (81%)	31 (19%)	1	7
29	BG	155/156 (99%)	136 (88%)	19 (12%)	4	20
29	DG	155/156 (99%)	122 (79%)	33 (21%)	1	5
30	BH	142/148 (96%)	119 (84%)	23 (16%)	2	11
30	DH	142/148 (96%)	105 (74%)	37 (26%)	0	2
31	BK	122/124 (98%)	100 (82%)	22 (18%)	2	8
31	DK	122/124 (98%)	90 (74%)	32 (26%)	0	2
32	BM	117/119 (98%)	92 (79%)	25 (21%)	1	5
32	DM	117/119 (98%)	96 (82%)	21 (18%)	2	9
33	BN	100/100 (100%)	84 (84%)	16 (16%)	2	12
33	DN	100/100 (100%)	87 (87%)	13 (13%)	4	18
34	BO	116/116 (100%)	88 (76%)	28 (24%)	1	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	DO	116/116 (100%)	83 (72%)	33 (28%)	0	1
35	BP	111/111 (100%)	99 (89%)	12 (11%)	6	25
35	DP	111/111 (100%)	96 (86%)	15 (14%)	4	16
36	B0	101/101 (100%)	81 (80%)	20 (20%)	1	6
36	D0	100/101 (99%)	87 (87%)	13 (13%)	4	18
37	BQ	87/88 (99%)	68 (78%)	19 (22%)	1	5
37	DQ	87/88 (99%)	69 (79%)	18 (21%)	1	5
38	BR	120/127 (94%)	99 (82%)	21 (18%)	2	9
38	DR	120/127 (94%)	99 (82%)	21 (18%)	2	9
39	B1	93/94 (99%)	78 (84%)	15 (16%)	2	11
39	D1	93/94 (99%)	81 (87%)	12 (13%)	4	18
40	B2	82/82 (100%)	62 (76%)	20 (24%)	1	3
40	D2	82/82 (100%)	60 (73%)	22 (27%)	0	2
41	BS	92/92 (100%)	77 (84%)	15 (16%)	2	11
41	DS	92/92 (100%)	78 (85%)	14 (15%)	3	13
42	BT	74/78 (95%)	58 (78%)	16 (22%)	1	5
42	DT	74/78 (95%)	64 (86%)	10 (14%)	4	16
43	BU	85/91 (93%)	60 (71%)	25 (29%)	0	1
43	DU	85/91 (93%)	61 (72%)	24 (28%)	0	1
44	BV	154/179 (86%)	123 (80%)	31 (20%)	1	5
44	DV	158/179 (88%)	132 (84%)	26 (16%)	2	11
45	B3	61/67 (91%)	53 (87%)	8 (13%)	4	17
45	D3	62/67 (92%)	56 (90%)	6 (10%)	8	30
46	BZ	82/83 (99%)	68 (83%)	14 (17%)	2	10
46	DZ	82/83 (99%)	71 (87%)	11 (13%)	4	17
47	BW	62/67 (92%)	53 (86%)	9 (14%)	3	14
47	DW	64/67 (96%)	58 (91%)	6 (9%)	8	31
48	BX	51/52 (98%)	42 (82%)	9 (18%)	2	9
48	DX	51/52 (98%)	43 (84%)	8 (16%)	2	12
49	B4	59/63 (94%)	42 (71%)	17 (29%)	0	1
49	D4	57/63 (90%)	36 (63%)	21 (37%)	0	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	B5	51/52 (98%)	42 (82%)	9 (18%)	2	9
50	D5	51/52 (98%)	43 (84%)	8 (16%)	2	12
51	B6	44/52 (85%)	33 (75%)	11 (25%)	0	2
51	D6	44/52 (85%)	28 (64%)	16 (36%)	0	0
52	B7	42/42 (100%)	36 (86%)	6 (14%)	3	14
52	D7	42/42 (100%)	32 (76%)	10 (24%)	1	3
53	B8	51/55 (93%)	40 (78%)	11 (22%)	1	5
53	D8	51/55 (93%)	40 (78%)	11 (22%)	1	5
All	All	9584/9992 (96%)	7930 (83%)	1654 (17%)	2	9

All (1654) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AE	7	VAL
2	AE	8	LYS
2	AE	9	GLU
2	AE	10	LEU
2	AE	11	LEU
2	AE	16	HIS
2	AE	21	ARG
2	AE	41	ILE
2	AE	42	ILE
2	AE	44	LEU
2	AE	46	LYS
2	AE	50	GLU
2	AE	58	ILE
2	AE	60	ASP
2	AE	84	GLU
2	AE	90	MET
2	AE	108	ILE
2	AE	111	ARG
2	AE	127	ILE
2	AE	128	GLU
2	AE	135	GLN
2	AE	136	VAL
2	AE	145	LEU
2	AE	150	SER
2	AE	155	LEU
2	AE	158	LEU

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Mol	Chain	Res	Type
2	AE	162	ILE
2	AE	165	VAL
2	AE	172	ILE
2	AE	178	ARG
2	AE	179	LYS
2	AE	185	ILE
2	AE	187	LEU
2	AE	191	ASP
2	AE	196	LEU
2	AE	200	ILE
2	AE	214	ILE
2	AE	215	LEU
2	AE	221	LEU
2	AE	223	ILE
2	AE	236	TYR
2	AE	240	GLN
3	AF	27	LYS
3	AF	34	LEU
3	AF	38	ARG
3	AF	45	LYS
3	AF	49	SER
3	AF	63	ASN
3	AF	67	THR
3	AF	68	VAL
3	AF	76	VAL
3	AF	79	ARG
3	AF	102	ASN
3	AF	111	LEU
3	AF	116	VAL
3	AF	161	GLU
3	AF	165	THR
3	AF	178	LEU
3	AF	193	TYR
3	AF	195	VAL
3	AF	196	LEU
4	AG	3	ARG
4	AG	10	ARG
4	AG	15	GLU
4	AG	17	VAL
4	AG	19	LEU
4	AG	21	LEU
4	AG	27	TYR

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Mol	Chain	Res	Type
4	AG	45	GLN
4	AG	46	LYS
4	AG	58	LEU
4	AG	84	LYS
4	AG	92	VAL
4	AG	96	LEU
4	AG	108	LEU
4	AG	112	VAL
4	AG	121	VAL
4	AG	122	ARG
4	AG	127	THR
4	AG	135	LEU
4	AG	140	VAL
4	AG	146	ILE
4	AG	154	ASN
4	AG	160	GLN
4	AG	179	GLU
4	AG	188	LEU
4	AG	194	LEU
4	AG	198	VAL
5	AH	11	ILE
5	AH	12	LEU
5	AH	13	ILE
5	AH	16	THR
5	AH	31	LEU
5	AH	33	VAL
5	AH	41	VAL
5	AH	43	LEU
5	AH	50	GLU
5	AH	56	GLN
5	AH	64	ARG
5	AH	79	GLU
5	AH	80	ILE
5	AH	91	LEU
5	AH	112	LEU
5	AH	120	THR
5	AH	151	LEU
5	AH	153	LYS
6	AI	14	LEU
6	AI	19	LEU
6	AI	23	LYS
6	AI	31	GLU

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Mol	Chain	Res	Type
6	AI	37	VAL
6	AI	45	LEU
6	AI	74	ASP
6	AI	75	LEU
6	AI	85	VAL
6	AI	86	ARG
6	AI	87	ARG
6	AI	91	VAL
6	AI	92	LYS
7	AJ	5	ARG
7	AJ	8	GLU
7	AJ	9	VAL
7	AJ	21	VAL
7	AJ	23	VAL
7	AJ	33	ASP
7	AJ	35	LYS
7	AJ	38	LEU
7	AJ	51	GLN
7	AJ	54	THR
7	AJ	75	VAL
7	AJ	78	ARG
7	AJ	89	MET
7	AJ	90	GLU
7	AJ	91	VAL
7	AJ	97	GLN
7	AJ	104	LEU
7	AJ	113	GLU
7	AJ	118	VAL
7	AJ	120	ILE
7	AJ	124	LEU
7	AJ	126	ASP
7	AJ	137	LYS
8	AK	3	THR
8	AK	18	ARG
8	AK	25	ASP
8	AK	26	VAL
8	AK	29	SER
8	AK	30	ARG
8	AK	63	LEU
8	AK	80	ILE
8	AK	83	ILE
8	AK	85	ARG

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Mol	Chain	Res	Type
8	AK	99	GLU
8	AK	109	ILE
8	AK	112	LEU
8	AK	118	VAL
8	AK	129	VAL
8	AK	134	ILE
9	AL	2	GLU
9	AL	9	ARG
9	AL	11	LYS
9	AL	20	ARG
9	AL	23	ASN
9	AL	25	LYS
9	AL	27	THR
9	AL	34	ASN
9	AL	38	GLN
9	AL	40	LEU
9	AL	44	VAL
9	AL	47	LEU
9	AL	54	ASP
9	AL	75	ASP
9	AL	85	LEU
9	AL	86	VAL
9	AL	89	ASN
9	AL	91	ASP
9	AL	92	TYR
9	AL	93	ARG
9	AL	95	LYS
9	AL	96	LEU
9	AL	114	TYR
9	AL	124	GLN
10	AM	16	LEU
10	AM	25	GLU
10	AM	46	ARG
10	AM	55	LYS
10	AM	58	ASP
10	AM	62	HIS
10	AM	67	THR
10	AM	68	HIS
10	AM	83	GLU
10	AM	95	GLU
10	AM	96	ILE
11	AN	13	GLN

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Mol	Chain	Res	Type
11	AN	14	VAL
11	AN	29	ILE
11	AN	30	VAL
11	AN	53	SER
11	AN	71	LYS
11	AN	84	VAL
11	AN	87	THR
11	AN	91	ARG
11	AN	93	GLN
11	AN	105	VAL
11	AN	109	VAL
11	AN	114	VAL
12	AO	6	THR
12	AO	11	VAL
12	AO	21	LYS
12	AO	23	LYS
12	AO	34	ARG
12	AO	39	VAL
12	AO	60	LEU
12	AO	62	SER
12	AO	66	VAL
12	AO	70	ILE
12	AO	90	VAL
12	AO	92	ASP
12	AO	96	VAL
12	AO	119	LYS
12	AO	124	LYS
12	AO	127	GLU
13	AP	17	VAL
13	AP	45	VAL
13	AP	63	THR
13	AP	64	TRP
13	AP	88	ARG
13	AP	98	VAL
13	AP	108	ARG
13	AP	109	THR
14	AQ	3	ARG
14	AQ	6	LEU
14	AQ	9	LYS
14	AQ	22	THR
14	AQ	23	ARG
14	AQ	25	VAL

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Mol	Chain	Res	Type
14	AQ	27	CYS
14	AQ	32	SER
14	AQ	33	VAL
14	AQ	35	ARG
14	AQ	44	LEU
15	AR	5	LYS
15	AR	6	GLU
15	AR	12	ILE
15	AR	24	SER
15	AR	26	GLU
15	AR	34	LEU
15	AR	35	ARG
15	AR	47	LYS
15	AR	62	GLN
15	AR	83	GLU
15	AR	84	LYS
16	AS	2	VAL
16	AS	4	ILE
16	AS	6	LEU
16	AS	8	ARG
16	AS	16	HIS
16	AS	20	VAL
16	AS	25	ARG
16	AS	33	ILE
16	AS	38	TYR
16	AS	49	LEU
16	AS	53	VAL
16	AS	55	ARG
16	AS	60	LEU
16	AS	62	VAL
16	AS	76	GLN
16	AS	81	ARG
17	AT	14	LYS
17	AT	15	MET
17	AT	21	VAL
17	AT	31	LEU
17	AT	38	ARG
17	AT	60	ILE
17	AT	63	ARG
17	AT	66	SER
17	AT	73	VAL
17	AT	74	LEU

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Mol	Chain	Res	Type
17	AT	79	SER
17	AT	89	LEU
18	AU	25	THR
18	AU	26	LEU
18	AU	31	LEU
18	AU	36	ASN
18	AU	42	ARG
18	AU	47	THR
18	AU	76	LEU
18	AU	82	THR
18	AU	86	VAL
19	AV	3	ARG
19	AV	4	SER
19	AV	5	LEU
19	AV	6	LYS
19	AV	9	VAL
19	AV	11	VAL
19	AV	13	ASP
19	AV	29	ARG
19	AV	37	ARG
19	AV	49	ILE
19	AV	51	VAL
19	AV	60	VAL
19	AV	61	TYR
19	AV	67	VAL
19	AV	77	THR
19	AV	78	ARG
19	AV	83	HIS
20	AW	9	ASN
20	AW	10	LEU
20	AW	13	LEU
20	AW	26	ASN
20	AW	30	LYS
20	AW	34	LYS
20	AW	54	LYS
20	AW	75	ASN
20	AW	88	VAL
20	AW	99	LEU
20	AW	104	LEU
20	AW	105	SER
26	BD	3	VAL
26	BD	17	THR

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Mol	Chain	Res	Type
26	BD	24	ILE
26	BD	29	PRO
26	BD	34	VAL
26	BD	44	ASN
26	BD	46	GLN
26	BD	61	LEU
26	BD	64	ILE
26	BD	65	ILE
26	BD	87	ASN
26	BD	94	LEU
26	BD	95	LEU
26	BD	98	VAL
26	BD	99	ASP
26	BD	103	ARG
26	BD	105	ILE
26	BD	106	ILE
26	BD	117	VAL
26	BD	126	GLN
26	BD	136	ILE
26	BD	141	VAL
26	BD	142	VAL
26	BD	157	ARG
26	BD	164	GLN
26	BD	165	ILE
26	BD	166	GLN
26	BD	171	ASP
26	BD	192	THR
26	BD	193	VAL
26	BD	212	SER
26	BD	217	ARG
26	BD	221	VAL
26	BD	229	VAL
26	BD	242	ARG
26	BD	257	LEU
26	BD	258	LYS
26	BD	270	ILE
26	BD	271	ILE
27	BE	12	THR
27	BE	13	ARG
27	BE	14	ILE
27	BE	23	VAL
27	BE	26	ILE

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Mol	Chain	Res	Type
27	BE	34	VAL
27	BE	41	LYS
27	BE	54	GLN
27	BE	61	ARG
27	BE	66	HIS
27	BE	67	PHE
27	BE	78	LEU
27	BE	87	GLU
27	BE	95	ILE
27	BE	119	ARG
27	BE	144	ARG
27	BE	146	THR
27	BE	154	LYS
27	BE	167	VAL
27	BE	175	VAL
27	BE	180	ASN
27	BE	181	LEU
27	BE	188	VAL
27	BE	196	VAL
27	BE	197	ILE
27	BE	202	LYS
28	BF	8	GLN
28	BF	9	ILE
28	BF	24	LEU
28	BF	32	LEU
28	BF	33	LEU
28	BF	38	ARG
28	BF	57	VAL
28	BF	70	THR
28	BF	74	ARG
28	BF	77	ASP
28	BF	89	VAL
28	BF	107	LYS
28	BF	136	THR
28	BF	145	GLU
28	BF	158	THR
28	BF	169	ASN
28	BF	170	LEU
28	BF	174	VAL
28	BF	183	VAL
28	BF	195	ASP
28	BF	197	ASP

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Mol	Chain	Res	Type
28	BF	201	VAL
29	BG	28	VAL
29	BG	31	VAL
29	BG	45	GLU
29	BG	52	ILE
29	BG	60	LEU
29	BG	67	LYS
29	BG	81	LYS
29	BG	82	LEU
29	BG	83	ARG
29	BG	90	LEU
29	BG	92	VAL
29	BG	93	THR
29	BG	96	ARG
29	BG	116	ASP
29	BG	128	ARG
29	BG	133	LEU
29	BG	140	ILE
29	BG	162	THR
29	BG	174	GLU
30	BH	4	ILE
30	BH	9	ILE
30	BH	24	VAL
30	BH	37	VAL
30	BH	43	VAL
30	BH	45	VAL
30	BH	49	VAL
30	BH	51	ARG
30	BH	68	THR
30	BH	77	LYS
30	BH	86	GLU
30	BH	88	LEU
30	BH	89	ILE
30	BH	97	ARG
30	BH	119	GLU
30	BH	129	THR
30	BH	130	ARG
30	BH	132	ARG
30	BH	133	VAL
30	BH	134	SER
30	BH	139	GLN
30	BH	143	GLN

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Mol	Chain	Res	Type
30	BH	170	ARG
31	BK	9	LEU
31	BK	10	GLU
31	BK	11	ASN
31	BK	15	VAL
31	BK	35	LEU
31	BK	37	VAL
31	BK	41	GLU
31	BK	60	GLU
31	BK	64	GLU
31	BK	68	LEU
31	BK	71	ILE
31	BK	77	LEU
31	BK	86	THR
31	BK	92	VAL
31	BK	96	ASP
31	BK	107	VAL
31	BK	108	THR
31	BK	131	LYS
31	BK	136	VAL
31	BK	138	ILE
31	BK	142	VAL
31	BK	143	SER
32	BM	1	MET
32	BM	5	VAL
32	BM	7	LYS
32	BM	8	GLN
32	BM	10	GLU
32	BM	14	VAL
32	BM	15	LEU
32	BM	30	ILE
32	BM	32	THR
32	BM	33	LEU
32	BM	34	LEU
32	BM	35	ARG
32	BM	46	VAL
32	BM	48	MET
32	BM	58	ASP
32	BM	60	ILE
32	BM	61	ARG
32	BM	67	LEU
32	BM	85	ILE

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Mol	Chain	Res	Type
32	BM	87	LEU
32	BM	97	ARG
32	BM	98	VAL
32	BM	99	LEU
32	BM	120	LEU
32	BM	134	ARG
33	BN	22	ILE
33	BN	24	VAL
33	BN	28	SER
33	BN	38	VAL
33	BN	47	ILE
33	BN	53	LYS
33	BN	58	VAL
33	BN	61	VAL
33	BN	66	LYS
33	BN	68	GLU
33	BN	73	ASP
33	BN	78	ARG
33	BN	94	ARG
33	BN	97	ARG
33	BN	115	VAL
33	BN	117	LEU
34	BO	15	ARG
34	BO	21	ARG
34	BO	30	THR
34	BO	36	LYS
34	BO	41	ARG
34	BO	45	LEU
34	BO	58	THR
34	BO	59	LEU
34	BO	60	MET
34	BO	61	ARG
34	BO	62	LEU
34	BO	67	MET
34	BO	70	GLN
34	BO	71	VAL
34	BO	74	GLU
34	BO	75	ILE
34	BO	81	GLN
34	BO	85	LEU
34	BO	96	THR
34	BO	98	GLU

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Mol	Chain	Res	Type
34	BO	106	LEU
34	BO	112	LEU
34	BO	114	ILE
34	BO	123	LEU
34	BO	138	LEU
34	BO	139	LYS
34	BO	144	GLU
34	BO	146	VAL
35	BP	5	ARG
35	BP	35	VAL
35	BP	45	GLN
35	BP	55	VAL
35	BP	75	THR
35	BP	79	LEU
35	BP	83	MET
35	BP	105	GLU
35	BP	109	VAL
35	BP	110	THR
35	BP	112	GLU
35	BP	139	GLU
36	B0	2	ARG
36	B0	4	LEU
36	B0	9	LYS
36	B0	18	LEU
36	B0	24	GLN
36	B0	28	LEU
36	B0	29	LEU
36	B0	33	ARG
36	B0	34	ILE
36	B0	35	THR
36	B0	36	THR
36	B0	37	THR
36	B0	44	LEU
36	B0	60	LEU
36	B0	65	LEU
36	B0	67	LEU
36	B0	73	VAL
36	B0	74	LYS
36	B0	79	LEU
36	B0	91	GLN
37	BQ	10	ARG
37	BQ	14	VAL

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Mol	Chain	Res	Type
37	BQ	17	ARG
37	BQ	35	ILE
37	BQ	39	ILE
37	BQ	42	ASP
37	BQ	43	GLU
37	BQ	44	LYS
37	BQ	49	VAL
37	BQ	50	SER
37	BQ	52	SER
37	BQ	63	THR
37	BQ	69	VAL
37	BQ	73	LEU
37	BQ	83	LYS
37	BQ	95	HIS
37	BQ	98	VAL
37	BQ	106	ARG
37	BQ	107	GLU
38	BR	9	LEU
38	BR	15	VAL
38	BR	16	ARG
38	BR	18	ASP
38	BR	21	GLU
38	BR	27	THR
38	BR	30	VAL
38	BR	34	VAL
38	BR	58	ASN
38	BR	62	THR
38	BR	64	ARG
38	BR	74	ARG
38	BR	78	LEU
38	BR	86	ILE
38	BR	88	ILE
38	BR	89	VAL
38	BR	105	LEU
38	BR	107	ASP
38	BR	113	LYS
38	BR	114	LEU
38	BR	118	ARG
39	B1	5	LYS
39	B1	8	VAL
39	B1	31	SER
39	B1	34	LYS

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Mol	Chain	Res	Type
39	B1	52	ARG
39	B1	60	LEU
39	B1	74	LEU
39	B1	81	HIS
39	B1	83	LEU
39	B1	84	LYS
39	B1	89	GLU
39	B1	90	VAL
39	B1	100	VAL
39	B1	104	GLN
39	B1	108	GLU
40	B2	12	TYR
40	B2	13	ARG
40	B2	14	VAL
40	B2	18	LEU
40	B2	24	LYS
40	B2	35	LEU
40	B2	37	VAL
40	B2	38	LEU
40	B2	40	LEU
40	B2	47	VAL
40	B2	49	THR
40	B2	52	VAL
40	B2	57	VAL
40	B2	62	LEU
40	B2	70	ILE
40	B2	71	LEU
40	B2	72	VAL
40	B2	79	VAL
40	B2	82	ARG
40	B2	95	LEU
41	BS	11	ARG
41	BS	12	ILE
41	BS	16	LYS
41	BS	51	LEU
41	BS	59	VAL
41	BS	67	ASP
41	BS	69	LEU
41	BS	70	TYR
41	BS	76	VAL
41	BS	78	GLU
41	BS	88	ARG

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Mol	Chain	Res	Type
41	BS	96	ILE
41	BS	100	THR
41	BS	106	ILE
41	BS	107	LEU
42	BT	8	ILE
42	BT	12	VAL
42	BT	23	GLU
42	BT	27	THR
42	BT	40	LYS
42	BT	49	VAL
42	BT	54	VAL
42	BT	63	LYS
42	BT	65	ARG
42	BT	66	LEU
42	BT	70	LEU
42	BT	72	LYS
42	BT	76	ARG
42	BT	80	ILE
42	BT	81	VAL
42	BT	88	LYS
43	BU	3	VAL
43	BU	4	LYS
43	BU	14	LEU
43	BU	27	VAL
43	BU	33	LYS
43	BU	38	ILE
43	BU	40	GLU
43	BU	42	VAL
43	BU	50	ARG
43	BU	52	SER
43	BU	55	TYR
43	BU	57	GLN
43	BU	62	GLU
43	BU	64	GLU
43	BU	70	SER
43	BU	71	LYS
43	BU	75	ILE
43	BU	76	CYS
43	BU	81	LYS
43	BU	85	VAL
43	BU	89	PHE
43	BU	95	LYS

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Mol	Chain	Res	Type
43	BU	97	ARG
43	BU	98	VAL
43	BU	101	LYS
44	BV	5	LEU
44	BV	11	GLU
44	BV	13	GLU
44	BV	16	SER
44	BV	19	ARG
44	BV	33	LEU
44	BV	34	ASN
44	BV	37	VAL
44	BV	47	VAL
44	BV	53	ILE
44	BV	59	LEU
44	BV	61	LEU
44	BV	71	VAL
44	BV	76	LEU
44	BV	77	ASP
44	BV	86	VAL
44	BV	91	LEU
44	BV	92	SER
44	BV	96	VAL
44	BV	111	VAL
44	BV	112	ARG
44	BV	116	VAL
44	BV	117	LEU
44	BV	120	ILE
44	BV	128	VAL
44	BV	129	SER
44	BV	144	LEU
44	BV	146	ILE
44	BV	154	ASP
44	BV	163	LEU
44	BV	165	VAL
45	B3	10	THR
45	B3	11	ARG
45	B3	20	ARG
45	B3	36	ILE
45	B3	41	ARG
45	B3	57	PHE
45	B3	81	VAL
45	B3	82	ARG

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Mol	Chain	Res	Type
46	BZ	4	VAL
46	BZ	19	GLN
46	BZ	35	THR
46	BZ	40	ARG
46	BZ	46	LEU
46	BZ	65	SER
46	BZ	78	LYS
46	BZ	80	LEU
46	BZ	82	LEU
46	BZ	85	LEU
46	BZ	91	LYS
46	BZ	92	LYS
46	BZ	93	GLU
46	BZ	98	LEU
47	BW	5	GLU
47	BW	9	GLN
47	BW	24	LEU
47	BW	32	LEU
47	BW	41	ILE
47	BW	47	ASN
47	BW	53	LEU
47	BW	62	THR
47	BW	64	LEU
48	BX	8	LEU
48	BX	11	SER
48	BX	31	LEU
48	BX	32	GLN
48	BX	38	GLU
48	BX	40	THR
48	BX	44	ARG
48	BX	56	VAL
48	BX	58	VAL
49	B4	2	LYS
49	B4	6	HIS
49	B4	10	VAL
49	B4	15	ILE
49	B4	18	CYS
49	B4	21	VAL
49	B4	24	THR
49	B4	36	CYS
49	B4	39	CYS
49	B4	42	PHE

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Mol	Chain	Res	Type
49	B4	48	ARG
49	B4	49	PHE
49	B4	50	VAL
49	B4	52	THR
49	B4	57	GLU
49	B4	59	PHE
49	B4	61	ARG
50	B5	3	LYS
50	B5	4	HIS
50	B5	6	VAL
50	B5	11	THR
50	B5	29	THR
50	B5	40	LYS
50	B5	44	THR
50	B5	46	CYS
50	B5	52	TYR
51	B6	9	LEU
51	B6	10	LEU
51	B6	12	GLU
51	B6	24	GLU
51	B6	32	ASN
51	B6	34	LEU
51	B6	39	TYR
51	B6	44	ARG
51	B6	48	VAL
51	B6	51	GLU
51	B6	52	VAL
52	B7	1	MET
52	B7	4	THR
52	B7	9	ARG
52	B7	24	THR
52	B7	32	LYS
52	B7	46	VAL
53	B8	14	VAL
53	B8	25	MET
53	B8	26	LYS
53	B8	37	SER
53	B8	47	LYS
53	B8	49	VAL
53	B8	56	GLU
53	B8	59	LYS
53	B8	60	LEU

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Mol	Chain	Res	Type
53	B8	61	LEU
53	B8	62	LEU
2	CE	4	GLU
2	CE	5	ILE
2	CE	11	LEU
2	CE	12	GLU
2	CE	17	PHE
2	CE	19	HIS
2	CE	23	ARG
2	CE	37	ASN
2	CE	41	ILE
2	CE	42	ILE
2	CE	44	LEU
2	CE	45	GLN
2	CE	46	LYS
2	CE	51	LEU
2	CE	55	PHE
2	CE	58	ILE
2	CE	67	THR
2	CE	69	LEU
2	CE	73	THR
2	CE	83	MET
2	CE	84	GLU
2	CE	107	THR
2	CE	116	GLU
2	CE	118	LEU
2	CE	121	LEU
2	CE	129	GLU
2	CE	132	LYS
2	CE	137	ARG
2	CE	139	LYS
2	CE	144	ARG
2	CE	147	LYS
2	CE	154	LEU
2	CE	162	ILE
2	CE	164	VAL
2	CE	165	VAL
2	CE	169	LYS
2	CE	172	ILE
2	CE	178	ARG
2	CE	185	ILE
2	CE	187	LEU

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Mol	Chain	Res	Type
2	CE	195	ASP
2	CE	215	LEU
2	CE	230	VAL
2	CE	238	LEU
2	CE	239	VAL
3	CF	3	ASN
3	CF	14	ILE
3	CF	47	LEU
3	CF	59	ARG
3	CF	72	LYS
3	CF	79	ARG
3	CF	84	ILE
3	CF	88	ARG
3	CF	94	LEU
3	CF	95	THR
3	CF	97	LYS
3	CF	101	LEU
3	CF	102	ASN
3	CF	105	GLU
3	CF	140	ARG
3	CF	151	VAL
3	CF	178	LEU
3	CF	181	ASN
3	CF	188	LEU
3	CF	192	THR
3	CF	202	ILE
4	CG	9	CYS
4	CG	19	LEU
4	CG	21	LEU
4	CG	49	ARG
4	CG	58	LEU
4	CG	70	ILE
4	CG	73	ARG
4	CG	84	LYS
4	CG	85	LYS
4	CG	112	VAL
4	CG	121	VAL
4	CG	122	ARG
4	CG	134	ASP
4	CG	135	LEU
4	CG	155	LEU
4	CG	178	VAL

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Mol	Chain	Res	Type
4	CG	179	GLU
4	CG	184	LYS
4	CG	191	ARG
4	CG	193	ASP
4	CG	198	VAL
4	CG	202	LEU
5	CH	12	LEU
5	CH	13	ILE
5	CH	16	THR
5	CH	33	VAL
5	CH	47	LYS
5	CH	64	ARG
5	CH	73	ASN
5	CH	75	THR
5	CH	79	GLU
5	CH	81	GLU
5	CH	91	LEU
5	CH	107	ARG
5	CH	120	THR
5	CH	135	THR
6	CI	7	ASN
6	CI	14	LEU
6	CI	16	GLN
6	CI	28	ARG
6	CI	32	ASN
6	CI	40	VAL
6	CI	43	LEU
6	CI	47	ARG
6	CI	54	LYS
6	CI	61	LEU
6	CI	72	VAL
6	CI	77	ARG
6	CI	83	ASP
6	CI	87	ARG
6	CI	98	LEU
7	CJ	6	ARG
7	CJ	8	GLU
7	CJ	12	LEU
7	CJ	21	VAL
7	CJ	27	ILE
7	CJ	33	ASP
7	CJ	35	LYS

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Mol	Chain	Res	Type
7	CJ	41	ARG
7	CJ	49	ILE
7	CJ	54	THR
7	CJ	63	LYS
7	CJ	75	VAL
7	CJ	79	ARG
7	CJ	84	ASN
7	CJ	89	MET
7	CJ	113	GLU
7	CJ	114	ARG
7	CJ	118	VAL
7	CJ	131	LYS
8	CK	1	MET
8	CK	2	LEU
8	CK	24	THR
8	CK	39	LEU
8	CK	41	ARG
8	CK	51	VAL
8	CK	54	ASP
8	CK	56	LYS
8	CK	82	HIS
8	CK	91	ARG
8	CK	95	VAL
8	CK	97	VAL
8	CK	103	VAL
8	CK	109	ILE
8	CK	112	LEU
8	CK	137	VAL
9	CL	7	THR
9	CL	9	ARG
9	CL	16	ARG
9	CL	25	LYS
9	CL	27	THR
9	CL	42	ARG
9	CL	44	VAL
9	CL	53	VAL
9	CL	54	ASP
9	CL	77	ILE
9	CL	79	LEU
9	CL	81	ILE
9	CL	86	VAL
9	CL	88	TYR

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Mol	Chain	Res	Type
9	CL	95	LYS
9	CL	108	VAL
9	CL	109	VAL
9	CL	113	LYS
9	CL	118	LYS
9	CL	124	GLN
10	CM	6	ILE
10	CM	8	LEU
10	CM	17	ASP
10	CM	40	LEU
10	CM	42	THR
10	CM	47	PHE
10	CM	58	ASP
10	CM	62	HIS
10	CM	72	VAL
10	CM	75	ILE
10	CM	79	ARG
10	CM	82	ILE
10	CM	88	LEU
10	CM	92	THR
10	CM	99	LYS
11	CN	12	ARG
11	CN	14	VAL
11	CN	18	ARG
11	CN	31	THR
11	CN	44	SER
11	CN	48	ILE
11	CN	57	THR
11	CN	70	LYS
11	CN	79	SER
11	CN	105	VAL
11	CN	106	LYS
11	CN	109	VAL
11	CN	114	VAL
11	CN	124	LYS
11	CN	127	LYS
12	CO	24	VAL
12	CO	27	LEU
12	CO	41	ARG
12	CO	42	THR
12	CO	64	TYR
12	CO	70	ILE

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Mol	Chain	Res	Type
12	CO	83	VAL
12	CO	84	LEU
12	CO	85	ILE
12	CO	92	ASP
12	CO	104	VAL
12	CO	111	LYS
12	CO	116	SER
13	CP	4	ILE
13	CP	7	VAL
13	CP	9	ILE
13	CP	17	VAL
13	CP	22	ILE
13	CP	35	GLU
13	CP	48	LEU
13	CP	62	ASN
13	CP	66	LEU
13	CP	67	GLU
13	CP	70	LEU
13	CP	74	VAL
13	CP	79	LYS
13	CP	81	LEU
13	CP	83	ASP
13	CP	105	THR
13	CP	108	ARG
13	CP	109	THR
14	CQ	6	LEU
14	CQ	8	GLU
14	CQ	16	PHE
14	CQ	18	VAL
14	CQ	24	CYS
14	CQ	26	ARG
14	CQ	27	CYS
14	CQ	40	CYS
15	CR	3	ILE
15	CR	10	LYS
15	CR	22	THR
15	CR	33	THR
15	CR	39	LEU
15	CR	66	LEU
15	CR	82	ILE
16	CS	2	VAL
16	CS	5	ARG

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Mol	Chain	Res	Type
16	CS	6	LEU
16	CS	19	ILE
16	CS	20	VAL
16	CS	21	VAL
16	CS	22	THR
16	CS	45	THR
16	CS	53	VAL
16	CS	55	ARG
16	CS	67	THR
17	CT	10	VAL
17	CT	12	SER
17	CT	35	VAL
17	CT	57	VAL
17	CT	68	ARG
17	CT	73	VAL
17	CT	74	LEU
17	CT	84	LEU
17	CT	87	LYS
18	CU	17	SER
18	CU	26	LEU
18	CU	58	LEU
18	CU	83	GLU
18	CU	86	VAL
19	CV	9	VAL
19	CV	11	VAL
19	CV	12	ASP
19	CV	13	ASP
19	CV	15	LEU
19	CV	20	LEU
19	CV	31	ILE
19	CV	37	ARG
19	CV	40	ILE
19	CV	41	VAL
19	CV	43	GLU
19	CV	60	VAL
19	CV	63	THR
19	CV	77	THR
19	CV	83	HIS
20	CW	10	LEU
20	CW	37	SER
20	CW	41	ILE
20	CW	58	LYS

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Mol	Chain	Res	Type
20	CW	64	ASP
20	CW	75	ASN
20	CW	80	ARG
20	CW	84	LEU
20	CW	99	LEU
21	CX	8	THR
26	DD	5	LYS
26	DD	27	THR
26	DD	31	LYS
26	DD	35	LYS
26	DD	44	ASN
26	DD	46	GLN
26	DD	61	LEU
26	DD	64	ILE
26	DD	65	ILE
26	DD	87	ASN
26	DD	92	ILE
26	DD	94	LEU
26	DD	103	ARG
26	DD	105	ILE
26	DD	106	ILE
26	DD	109	ASP
26	DD	111	LEU
26	DD	116	GLN
26	DD	118	VAL
26	DD	141	VAL
26	DD	147	LEU
26	DD	150	LYS
26	DD	157	ARG
26	DD	192	THR
26	DD	193	VAL
26	DD	211	ARG
26	DD	242	ARG
26	DD	244	ARG
26	DD	255	LYS
26	DD	257	LEU
26	DD	266	SER
26	DD	270	ILE
26	DD	271	ILE
27	DE	33	VAL
27	DE	35	GLN
27	DE	37	ARG

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Mol	Chain	Res	Type
27	DE	40	GLU
27	DE	54	GLN
27	DE	69	LYS
27	DE	76	ARG
27	DE	78	LEU
27	DE	91	VAL
27	DE	107	THR
27	DE	108	SER
27	DE	111	ARG
27	DE	119	ARG
27	DE	135	HIS
27	DE	144	ARG
27	DE	152	LYS
27	DE	169	ASN
27	DE	170	LEU
27	DE	175	VAL
27	DE	181	LEU
27	DE	188	VAL
27	DE	197	ILE
27	DE	200	GLU
27	DE	201	THR
27	DE	203	LYS
28	DF	1	MET
28	DF	2	LYS
28	DF	3	GLU
28	DF	4	VAL
28	DF	7	TYR
28	DF	8	GLN
28	DF	11	VAL
28	DF	13	SER
28	DF	19	GLU
28	DF	20	LEU
28	DF	23	ASP
28	DF	24	LEU
28	DF	33	LEU
28	DF	38	ARG
28	DF	63	LYS
28	DF	67	GLN
28	DF	68	LYS
28	DF	74	ARG
28	DF	100	THR
28	DF	104	LYS

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Mol	Chain	Res	Type
28	DF	158	THR
28	DF	181	LEU
28	DF	183	VAL
28	DF	192	LEU
28	DF	193	VAL
28	DF	195	ASP
28	DF	196	LEU
28	DF	197	ASP
28	DF	200	GLU
28	DF	201	VAL
28	DF	205	ARG
29	DG	3	LEU
29	DG	5	VAL
29	DG	14	GLU
29	DG	20	ILE
29	DG	22	ARG
29	DG	26	GLN
29	DG	28	VAL
29	DG	31	VAL
29	DG	43	LEU
29	DG	47	LYS
29	DG	48	GLU
29	DG	51	ARG
29	DG	52	ILE
29	DG	53	LEU
29	DG	63	ILE
29	DG	67	LYS
29	DG	71	THR
29	DG	77	ILE
29	DG	84	LYS
29	DG	88	ILE
29	DG	90	LEU
29	DG	91	ARG
29	DG	92	VAL
29	DG	94	LEU
29	DG	100	TRP
29	DG	108	ASN
29	DG	116	ASP
29	DG	137	GLU
29	DG	139	LEU
29	DG	145	THR
29	DG	148	MET

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Mol	Chain	Res	Type
29	DG	165	THR
29	DG	173	LEU
30	DH	4	ILE
30	DH	7	LEU
30	DH	9	ILE
30	DH	11	VAL
30	DH	16	SER
30	DH	24	VAL
30	DH	26	VAL
30	DH	30	LYS
30	DH	32	GLU
30	DH	43	VAL
30	DH	49	VAL
30	DH	50	VAL
30	DH	51	ARG
30	DH	67	LEU
30	DH	71	LEU
30	DH	74	ASN
30	DH	83	TYR
30	DH	88	LEU
30	DH	89	ILE
30	DH	99	VAL
30	DH	101	ARG
30	DH	103	LEU
30	DH	104	GLU
30	DH	105	LEU
30	DH	107	VAL
30	DH	113	VAL
30	DH	121	ILE
30	DH	123	PHE
30	DH	129	THR
30	DH	136	ILE
30	DH	139	GLN
30	DH	141	VAL
30	DH	143	GLN
30	DH	159	GLU
30	DH	162	ILE
30	DH	164	TYR
30	DH	169	VAL
31	DK	37	VAL
31	DK	40	THR
31	DK	44	LEU

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Mol	Chain	Res	Type
31	DK	50	ARG
31	DK	52	ARG
31	DK	56	LYS
31	DK	60	GLU
31	DK	62	LYS
31	DK	66	GLU
31	DK	67	ARG
31	DK	71	ILE
31	DK	74	ASN
31	DK	76	THR
31	DK	77	LEU
31	DK	78	THR
31	DK	81	VAL
31	DK	85	GLU
31	DK	86	THR
31	DK	87	LYS
31	DK	109	ILE
31	DK	117	GLU
31	DK	118	LYS
31	DK	125	GLU
31	DK	127	VAL
31	DK	128	LEU
31	DK	131	LYS
31	DK	133	HIS
31	DK	135	GLU
31	DK	136	VAL
31	DK	142	VAL
31	DK	144	VAL
31	DK	145	VAL
32	DM	7	LYS
32	DM	9	VAL
32	DM	14	VAL
32	DM	15	LEU
32	DM	22	THR
32	DM	28	THR
32	DM	29	LYS
32	DM	32	THR
32	DM	33	LEU
32	DM	34	LEU
32	DM	38	HIS
32	DM	43	THR
32	DM	58	ASP

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Mol	Chain	Res	Type
32	DM	60	ILE
32	DM	63	THR
32	DM	65	LYS
32	DM	87	LEU
32	DM	93	THR
32	DM	94	HIS
32	DM	99	LEU
32	DM	137	LYS
33	DN	9	GLU
33	DN	10	VAL
33	DN	23	ARG
33	DN	24	VAL
33	DN	34	THR
33	DN	47	ILE
33	DN	70	LYS
33	DN	78	ARG
33	DN	80	ASP
33	DN	87	ILE
33	DN	89	ASN
33	DN	94	ARG
33	DN	114	ILE
34	DO	4	SER
34	DO	6	LEU
34	DO	7	ARG
34	DO	21	ARG
34	DO	30	THR
34	DO	36	LYS
34	DO	41	ARG
34	DO	45	LEU
34	DO	46	LYS
34	DO	52	GLU
34	DO	57	THR
34	DO	58	THR
34	DO	59	LEU
34	DO	61	ARG
34	DO	62	LEU
34	DO	65	ARG
34	DO	67	MET
34	DO	81	GLN
34	DO	83	VAL
34	DO	85	LEU
34	DO	95	VAL

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Mol	Chain	Res	Type
34	DO	96	THR
34	DO	98	GLU
34	DO	100	LEU
34	DO	105	LEU
34	DO	110	TYR
34	DO	111	ARG
34	DO	114	ILE
34	DO	125	VAL
34	DO	138	LEU
34	DO	144	GLU
34	DO	147	LEU
34	DO	148	LEU
35	DP	6	ARG
35	DP	26	TYR
35	DP	45	GLN
35	DP	59	ARG
35	DP	60	ARG
35	DP	64	ILE
35	DP	75	THR
35	DP	83	MET
35	DP	103	MET
35	DP	110	THR
35	DP	111	GLU
35	DP	131	ILE
35	DP	133	ARG
35	DP	135	ASP
35	DP	138	ASP
36	D0	18	LEU
36	D0	28	LEU
36	D0	34	ILE
36	D0	44	LEU
36	D0	54	LEU
36	D0	57	ARG
36	D0	67	LEU
36	D0	75	LEU
36	D0	76	VAL
36	D0	79	LEU
36	D0	96	ARG
36	D0	105	ARG
36	D0	117	VAL
37	DQ	5	THR
37	DQ	14	VAL

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Mol	Chain	Res	Type
37	DQ	17	ARG
37	DQ	18	ILE
37	DQ	28	VAL
37	DQ	32	LEU
37	DQ	39	ILE
37	DQ	54	LEU
37	DQ	57	LYS
37	DQ	59	LYS
37	DQ	65	VAL
37	DQ	71	ARG
37	DQ	73	LEU
37	DQ	83	LYS
37	DQ	89	ARG
37	DQ	101	LEU
37	DQ	107	GLU
37	DQ	110	LEU
38	DR	1	MET
38	DR	6	LEU
38	DR	9	LEU
38	DR	27	THR
38	DR	30	VAL
38	DR	36	GLU
38	DR	38	ASN
38	DR	42	ILE
38	DR	50	ILE
38	DR	59	THR
38	DR	62	THR
38	DR	65	LYS
38	DR	85	LYS
38	DR	86	ILE
38	DR	88	ILE
38	DR	89	VAL
38	DR	91	ARG
38	DR	93	ARG
38	DR	99	LEU
38	DR	107	ASP
38	DR	112	ARG
39	D1	8	VAL
39	D1	51	LYS
39	D1	63	VAL
39	D1	64	ARG
39	D1	74	LEU

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Mol	Chain	Res	Type
39	D1	84	LYS
39	D1	95	LEU
39	D1	97	ASP
39	D1	100	VAL
39	D1	101	ARG
39	D1	111	GLU
39	D1	114	LYS
40	D2	23	GLU
40	D2	26	ASP
40	D2	28	GLU
40	D2	33	VAL
40	D2	40	LEU
40	D2	46	VAL
40	D2	49	THR
40	D2	52	VAL
40	D2	57	VAL
40	D2	61	VAL
40	D2	68	LYS
40	D2	72	VAL
40	D2	73	SER
40	D2	79	VAL
40	D2	81	TYR
40	D2	83	ARG
40	D2	84	LYS
40	D2	85	LYS
40	D2	88	ARG
40	D2	89	GLN
40	D2	91	TYR
40	D2	95	LEU
41	DS	11	ARG
41	DS	20	VAL
41	DS	51	LEU
41	DS	52	GLU
41	DS	59	VAL
41	DS	60	ASN
41	DS	65	LEU
41	DS	76	VAL
41	DS	94	ASP
41	DS	98	LYS
41	DS	106	ILE
41	DS	107	LEU
41	DS	111	HIS

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Mol	Chain	Res	Type
41	DS	113	LYS
42	DT	12	VAL
42	DT	30	VAL
42	DT	45	THR
42	DT	54	VAL
42	DT	63	LYS
42	DT	66	LEU
42	DT	76	ARG
42	DT	80	ILE
42	DT	81	VAL
42	DT	83	VAL
43	DU	6	HIS
43	DU	8	LYS
43	DU	13	VAL
43	DU	19	LYS
43	DU	27	VAL
43	DU	29	GLU
43	DU	37	VAL
43	DU	38	ILE
43	DU	39	VAL
43	DU	49	VAL
43	DU	51	VAL
43	DU	54	LYS
43	DU	57	GLN
43	DU	61	ILE
43	DU	62	GLU
43	DU	63	LYS
43	DU	75	ILE
43	DU	76	CYS
43	DU	81	LYS
43	DU	88	LYS
43	DU	95	LYS
43	DU	96	ILE
43	DU	97	ARG
43	DU	98	VAL
44	DV	32	HIS
44	DV	42	VAL
44	DV	53	ILE
44	DV	56	VAL
44	DV	66	SER
44	DV	70	LEU
44	DV	71	VAL

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Mol	Chain	Res	Type
44	DV	73	GLN
44	DV	74	VAL
44	DV	85	HIS
44	DV	107	THR
44	DV	111	VAL
44	DV	117	LEU
44	DV	120	ILE
44	DV	128	VAL
44	DV	131	ARG
44	DV	137	ILE
44	DV	139	VAL
44	DV	144	LEU
44	DV	146	ILE
44	DV	150	LEU
44	DV	156	LYS
44	DV	157	LEU
44	DV	170	THR
44	DV	175	VAL
44	DV	179	ASP
45	D3	12	ASN
45	D3	25	ARG
45	D3	36	ILE
45	D3	41	ARG
45	D3	49	LYS
45	D3	50	ASN
46	DZ	30	VAL
46	DZ	46	LEU
46	DZ	59	THR
46	DZ	67	ILE
46	DZ	81	LYS
46	DZ	82	LEU
46	DZ	83	GLU
46	DZ	85	LEU
46	DZ	90	ILE
46	DZ	91	LYS
46	DZ	92	LYS
47	DW	5	GLU
47	DW	16	LEU
47	DW	24	LEU
47	DW	53	LEU
47	DW	64	LEU
47	DW	65	ASN

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Mol	Chain	Res	Type
48	DX	8	LEU
48	DX	9	VAL
48	DX	18	ASP
48	DX	24	LYS
48	DX	36	VAL
48	DX	38	GLU
48	DX	40	THR
48	DX	59	VAL
49	D4	1	MET
49	D4	2	LYS
49	D4	9	LEU
49	D4	14	ILE
49	D4	15	ILE
49	D4	16	CYS
49	D4	18	CYS
49	D4	22	ILE
49	D4	23	GLU
49	D4	24	THR
49	D4	27	THR
49	D4	32	TYR
49	D4	34	GLU
49	D4	37	SER
49	D4	38	LYS
49	D4	39	CYS
49	D4	50	VAL
49	D4	51	ASP
49	D4	52	THR
49	D4	53	GLU
49	D4	62	ARG
50	D5	6	VAL
50	D5	29	THR
50	D5	33	CYS
50	D5	35	GLU
50	D5	37	LYS
50	D5	48	GLU
50	D5	51	TYR
50	D5	56	LYS
51	D6	9	LEU
51	D6	12	GLU
51	D6	14	THR
51	D6	15	GLU
51	D6	17	LYS

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Mol	Chain	Res	Type
51	D6	23	THR
51	D6	24	GLU
51	D6	27	LYS
51	D6	30	THR
51	D6	32	ASN
51	D6	37	ARG
51	D6	39	TYR
51	D6	45	LYS
51	D6	46	HIS
51	D6	50	ARG
51	D6	52	VAL
52	D7	1	MET
52	D7	4	THR
52	D7	11	LYS
52	D7	15	THR
52	D7	24	THR
52	D7	32	LYS
52	D7	43	THR
52	D7	46	VAL
52	D7	47	ARG
52	D7	49	ARG
53	D8	14	VAL
53	D8	22	VAL
53	D8	23	VAL
53	D8	32	LEU
53	D8	40	GLU
53	D8	41	ILE
53	D8	49	VAL
53	D8	52	LYS
53	D8	54	GLU
53	D8	58	ILE
53	D8	61	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (81) such sidechains are listed below:

Mol	Chain	Res	Type
2	AE	110	GLN
3	AF	28	GLN
4	AG	103	ASN
4	AG	119	GLN
5	AH	78	HIS
11	AN	13	GLN

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Mol	Chain	Res	Type
11	AN	116	HIS
12	AO	49	ASN
20	AW	16	HIS
20	AW	45	GLN
26	BD	129	ASN
26	BD	227	ASN
28	BF	8	GLN
28	BF	203	GLN
31	BK	28	ASN
31	BK	105	HIS
34	BO	70	GLN
36	B0	3	HIS
39	B1	44	ASN
39	B1	81	HIS
42	BT	55	ASN
44	BV	34	ASN
45	B3	17	GLN
45	B3	29	GLN
46	BZ	19	GLN
47	BW	46	GLN
47	BW	56	GLN
47	BW	65	ASN
49	B4	20	ASN
51	B6	46	HIS
53	B8	33	ASN
53	B8	43	GLN
2	CE	40	HIS
2	CE	94	ASN
3	CF	6	HIS
3	CF	123	GLN
3	CF	181	ASN
4	CG	43	HIS
4	CG	45	GLN
4	CG	119	GLN
4	CG	201	GLN
7	CJ	28	ASN
7	CJ	106	GLN
8	CK	78	GLN
11	CN	26	ASN
11	CN	38	ASN
11	CN	116	HIS
12	CO	49	ASN

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Mol	Chain	Res	Type
13	CP	77	ASN
13	CP	101	GLN
15	CR	13	GLN
16	CS	82	GLN
17	CT	45	HIS
19	CV	23	ASN
19	CV	47	HIS
20	CW	18	GLN
26	DD	58	HIS
26	DD	143	HIS
27	DE	35	GLN
27	DE	55	ASN
27	DE	60	ASN
27	DE	169	ASN
28	DF	8	GLN
28	DF	67	GLN
29	DG	26	GLN
29	DG	41	GLN
31	DK	74	ASN
35	DP	45	GLN
36	D0	31	HIS
38	DR	55	ASN
39	D1	49	HIS
39	D1	66	ASN
39	D1	72	HIS
39	D1	81	HIS
40	D2	89	GLN
41	DS	34	ASN
48	DX	19	GLN
48	DX	32	GLN
48	DX	52	HIS
51	D6	46	HIS
52	D7	6	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1506/1506 (100%)	316 (20%)	26 (1%)
1	CA	1505/1506 (99%)	312 (20%)	30 (1%)
22	AC	76/77 (98%)	8 (10%)	1 (1%)
22	AD	76/77 (98%)	24 (31%)	1 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	CC	77/77 (100%)	12 (15%)	1 (1%)
22	CD	76/77 (98%)	45 (59%)	5 (6%)
23	A1	5/6 (83%)	1 (20%)	0
23	C1	5/6 (83%)	1 (20%)	0
24	BA	2911/2912 (99%)	594 (20%)	44 (1%)
24	DA	2904/2912 (99%)	646 (22%)	39 (1%)
25	BB	121/122 (99%)	27 (22%)	0
25	DB	121/122 (99%)	32 (26%)	0
All	All	9383/9400 (99%)	2018 (21%)	147 (1%)

All (2018) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	8	A
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	61	G
1	AA	65	U
1	AA	66	G
1	AA	76	G
1	AA	78	G
1	AA	79	G
1	AA	81	G
1	AA	84	U
1	AA	85	U
1	AA	86	U
1	AA	87	A
1	AA	88	C
1	AA	89	U
1	AA	90	C
1	AA	91	C
1	AA	92	G
1	AA	95	G
1	AA	101	A
1	AA	108	G
1	AA	116	A

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Mol	Chain	Res	Type
1	AA	121	C
1	AA	122	G
1	AA	131	C
1	AA	132	C
1	AA	142	G
1	AA	144	G
1	AA	147	G
1	AA	156	G
1	AA	163	C
1	AA	172	A
1	AA	173	U
1	AA	174	C
1	AA	182	U
1	AA	183	G
1	AA	186	C
1	AA	186(D)	C
1	AA	189	U
1	AA	190	G
1	AA	191(A)	G
1	AA	195	A
1	AA	199	G
1	AA	208	U
1	AA	209	U
1	AA	210	U
1	AA	226	G
1	AA	245	C
1	AA	247	G
1	AA	251	G
1	AA	256	U
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	306	G
1	AA	316	G
1	AA	321	A
1	AA	325	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	344	A

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Mol	Chain	Res	Type
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	365	U
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	405	U
1	AA	406	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	418	C
1	AA	419	C
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	442	C
1	AA	466	C
1	AA	467	G
1	AA	482	A
1	AA	485	G
1	AA	496	A
1	AA	497	U
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	512	U
1	AA	513	C
1	AA	518	C
1	AA	527	G
1	AA	531	U

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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	563	A
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	591	U
1	AA	618	C
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	633	G
1	AA	639	G
1	AA	642	A
1	AA	653	A
1	AA	661	G
1	AA	665	A
1	AA	686	U
1	AA	688	G
1	AA	703	G
1	AA	704	A
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	759	A
1	AA	774	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	812	C
1	AA	813	U
1	AA	817	C
1	AA	821	G
1	AA	828	A

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Mol	Chain	Res	Type
1	AA	841	U
1	AA	842	C
1	AA	843	U
1	AA	848	C
1	AA	859	A
1	AA	864	A
1	AA	870	U
1	AA	872	A
1	AA	873	A
1	AA	885	G
1	AA	902	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	936	C
1	AA	958	A
1	AA	960	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	982	U
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1001	G
1	AA	1004	A
1	AA	1008	C
1	AA	1009	G
1	AA	1017	G
1	AA	1020	U
1	AA	1023	G
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1028	C

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Mol	Chain	Res	Type
1	AA	1029	G
1	AA	1030	C
1	AA	1032(A)	G
1	AA	1033	G
1	AA	1036	G
1	AA	1038	C
1	AA	1040	U
1	AA	1042	G
1	AA	1045	C
1	AA	1054	C
1	AA	1055	A
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
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	1132	C
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1143	G
1	AA	1144	G
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1157	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1169	A
1	AA	1178	G

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Mol	Chain	Res	Type
1	AA	1181	G
1	AA	1182	G
1	AA	1183	A
1	AA	1189	C
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1240	U
1	AA	1246	C
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1260	C
1	AA	1270	C
1	AA	1272	G
1	AA	1274	G
1	AA	1278	U
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1291	G
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1303	C
1	AA	1305	G
1	AA	1313	U
1	AA	1317	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1336	C

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Mol	Chain	Res	Type
1	AA	1337	G
1	AA	1346	A
1	AA	1347	G
1	AA	1350	A
1	AA	1353	G
1	AA	1363	A
1	AA	1370	G
1	AA	1376	U
1	AA	1377	A
1	AA	1378	C
1	AA	1379	G
1	AA	1397	C
1	AA	1419	G
1	AA	1442	G
1	AA	1443	G
1	AA	1446	A
1	AA	1451	A
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1533	C
22	AC	2	G
22	AC	7	G
22	AC	9	G
22	AC	19	G
22	AC	31	G
22	AC	34	C
22	AC	47	U

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Mol	Chain	Res	Type
22	AC	48	C
22	AD	2	G
22	AD	7	G
22	AD	8	U
22	AD	9	G
22	AD	14	A
22	AD	17	C
22	AD	17(A)	C
22	AD	18	G
22	AD	19	G
22	AD	20	U
22	AD	21	A
22	AD	34	C
22	AD	47	U
22	AD	48	C
22	AD	49	G
22	AD	56	C
22	AD	59	A
22	AD	60	U
22	AD	61	C
22	AD	70	G
22	AD	71	C
22	AD	72	A
22	AD	73	A
22	AD	76	A
23	A1	19	U
24	BA	2	G
24	BA	5	A
24	BA	10	G
24	BA	12	U
24	BA	15	G
24	BA	23	G
24	BA	34	C
24	BA	35	G
24	BA	46	C
24	BA	51	G
24	BA	61	G
24	BA	63	U
24	BA	71	A
24	BA	74	A
24	BA	75	G
24	BA	85	G

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Mol	Chain	Res	Type
24	BA	99	U
24	BA	101	G
24	BA	102	G
24	BA	118	A
24	BA	119	A
24	BA	120	U
24	BA	131	G
24	BA	155	C
24	BA	163	U
24	BA	164	U
24	BA	165	U
24	BA	181	A
24	BA	196	A
24	BA	197	A
24	BA	199	A
24	BA	214	G
24	BA	215	G
24	BA	216	A
24	BA	222	A
24	BA	223	A
24	BA	227	A
24	BA	228	A
24	BA	229	A
24	BA	230	U
24	BA	233	A
24	BA	248	G
24	BA	252	G
24	BA	261	G
24	BA	269	U
24	BA	270(K)	C
24	BA	270(L)	U
24	BA	270(M)	U
24	BA	270(N)	G
24	BA	270(O)	U
24	BA	271(C)	U
24	BA	271	G
24	BA	274	G
24	BA	277	C
24	BA	278	A
24	BA	279	C
24	BA	299	A
24	BA	311	A

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Mol	Chain	Res	Type
24	BA	315	G
24	BA	317	G
24	BA	323	G
24	BA	324	A
24	BA	329	G
24	BA	330	A
24	BA	331	A
24	BA	333	G
24	BA	345	A
24	BA	352	G
24	BA	353	G
24	BA	363	G
24	BA	363(D)	G
24	BA	364	C
24	BA	372	G
24	BA	386	G
24	BA	396	G
24	BA	405	U
24	BA	411	G
24	BA	428	A
24	BA	443	A
24	BA	444	C
24	BA	448	U
24	BA	454	A
24	BA	455	C
24	BA	457	A
24	BA	458	G
24	BA	470	A
24	BA	471	A
24	BA	481	G
24	BA	482	A
24	BA	491	G
24	BA	504	U
24	BA	505	A
24	BA	508	G
24	BA	509	C
24	BA	510	C
24	BA	528	A
24	BA	529	A
24	BA	530	G
24	BA	531	C
24	BA	532	A

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Mol	Chain	Res	Type
24	BA	533	G
24	BA	537	C
24	BA	539	G
24	BA	540	G
24	BA	546	C
24	BA	549	G
24	BA	563	G
24	BA	573	G
24	BA	575	A
24	BA	586	A
24	BA	603	A
24	BA	607	U
24	BA	614	U
24	BA	615	G
24	BA	617	G
24	BA	621	A
24	BA	622	G
24	BA	627	A
24	BA	631	A
24	BA	634	C
24	BA	637	A
24	BA	644	A
24	BA	645	C
24	BA	646	A
24	BA	654	A
24	BA	654(A)	A
24	BA	654(B)	C
24	BA	654(D)	G
24	BA	654(E)	C
24	BA	654(G)	C
24	BA	654(H)	G
24	BA	654(I)	C
24	BA	654(K)	C
24	BA	654(O)	G
24	BA	654(T)	A
24	BA	686	G
24	BA	722	A
24	BA	730	C
24	BA	747	U
24	BA	753	C
24	BA	765	G
24	BA	776	G

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Mol	Chain	Res	Type
24	BA	777	A
24	BA	779	U
24	BA	782	A
24	BA	784	A
24	BA	785	G
24	BA	790	C
24	BA	791	C
24	BA	792	G
24	BA	805	G
24	BA	812	C
24	BA	819	A
24	BA	827	U
24	BA	828	U
24	BA	847	U
24	BA	859	G
24	BA	866	A
24	BA	877	U
24	BA	879	G
24	BA	880	G
24	BA	881	G
24	BA	882	G
24	BA	883	G
24	BA	885	C
24	BA	886	C
24	BA	887	A
24	BA	888	C
24	BA	890	A
24	BA	892	G
24	BA	893	C
24	BA	894	C
24	BA	895	U
24	BA	897	C
24	BA	898	C
24	BA	900	A
24	BA	901	A
24	BA	907	U
24	BA	910	A
24	BA	917	A
24	BA	932	G
24	BA	938	G
24	BA	941	A
24	BA	946	G

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Mol	Chain	Res	Type
24	BA	959	A
24	BA	961	C
24	BA	968	G
24	BA	974	G
24	BA	974(A)	C
24	BA	975	G
24	BA	983	A
24	BA	989	G
24	BA	996	A
24	BA	1003	G
24	BA	1005	C
24	BA	1011	G
24	BA	1012	U
24	BA	1013	C
24	BA	1015	G
24	BA	1022	G
24	BA	1023	U
24	BA	1025	G
24	BA	1026	U
24	BA	1027	A
24	BA	1033	U
24	BA	1045	A
24	BA	1046	A
24	BA	1047	G
24	BA	1050	A
24	BA	1055	G
24	BA	1056	G
24	BA	1057	A
24	BA	1059	G
24	BA	1060	U
24	BA	1061	U
24	BA	1062	G
24	BA	1066	U
24	BA	1067	A
24	BA	1068	G
24	BA	1070	A
24	BA	1071	G
24	BA	1073	A
24	BA	1076	C
24	BA	1077	A
24	BA	1078	U
24	BA	1079	C

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Mol	Chain	Res	Type
24	BA	1083	U
24	BA	1085	A
24	BA	1086	A
24	BA	1087	G
24	BA	1088	A
24	BA	1090	U
24	BA	1092	C
24	BA	1095	A
24	BA	1097	U
24	BA	1104	C
24	BA	1105	U
24	BA	1111	A
24	BA	1122	G
24	BA	1126	A
24	BA	1129	A
24	BA	1130	U
24	BA	1131	G
24	BA	1135	C
24	BA	1136	G
24	BA	1139	G
24	BA	1142	U
24	BA	1142(A)	A
24	BA	1148	A
24	BA	1149	G
24	BA	1151	G
24	BA	1155	A
24	BA	1156	A
24	BA	1173	G
24	BA	1174	A
24	BA	1175	U
24	BA	1176	G
24	BA	1177	A
24	BA	1178	C
24	BA	1179	C
24	BA	1180	C
24	BA	1195	G
24	BA	1204	A
24	BA	1205	U
24	BA	1210	A
24	BA	1211	U
24	BA	1218	C
24	BA	1220	A

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Mol	Chain	Res	Type
24	BA	1229(A)	G
24	BA	1236	G
24	BA	1244	G
24	BA	1253	A
24	BA	1256	G
24	BA	1265	A
24	BA	1271	G
24	BA	1272	A
24	BA	1273	U
24	BA	1298	C
24	BA	1300	U
24	BA	1301	A
24	BA	1313	U
24	BA	1314	C
24	BA	1329	U
24	BA	1338	G
24	BA	1344	G
24	BA	1349	A
24	BA	1359	A
24	BA	1360	A
24	BA	1365	A
24	BA	1368	G
24	BA	1380	G
24	BA	1385	G
24	BA	1395	A
24	BA	1402	C
24	BA	1411	C
24	BA	1416	G
24	BA	1420	U
24	BA	1421	G
24	BA	1428	C
24	BA	1444(A)	A
24	BA	1449	A
24	BA	1449(A)	G
24	BA	1453	A
24	BA	1455	G
24	BA	1459	G
24	BA	1460	A
24	BA	1461	G
24	BA	1467	C
24	BA	1471	A
24	BA	1483	G

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Mol	Chain	Res	Type
24	BA	1493	C
24	BA	1497	U
24	BA	1505	C
24	BA	1507	A
24	BA	1509	C
24	BA	1510	A
24	BA	1511	A
24	BA	1520	U
24	BA	1522	G
24	BA	1534	G
24	BA	1535	U
24	BA	1536	A
24	BA	1537	C
24	BA	1543	A
24	BA	1544	C
24	BA	1545	A
24	BA	1554	A
24	BA	1558	A
24	BA	1559	G
24	BA	1560	G
24	BA	1566	A
24	BA	1569	A
24	BA	1578	U
24	BA	1580	A
24	BA	1585	C
24	BA	1586	A
24	BA	1608	A
24	BA	1609	A
24	BA	1616	A
24	BA	1617	C
24	BA	1618	A
24	BA	1640	C
24	BA	1648	C
24	BA	1654	A
24	BA	1674	G
24	BA	1675	C
24	BA	1695	G
24	BA	1727	U
24	BA	1728	G
24	BA	1729	A
24	BA	1730	U
24	BA	1731	G

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Mol	Chain	Res	Type
24	BA	1733	G
24	BA	1735	C
24	BA	1742	C
24	BA	1743	G
24	BA	1750	G
24	BA	1756	G
24	BA	1762	A
24	BA	1763	G
24	BA	1764	G
24	BA	1773	A
24	BA	1791	A
24	BA	1799	G
24	BA	1800	C
24	BA	1802	A
24	BA	1816	G
24	BA	1820	U
24	BA	1829	A
24	BA	1835	G
24	BA	1836	C
24	BA	1839	G
24	BA	1847	A
24	BA	1858	G
24	BA	1869	G
24	BA	1870	C
24	BA	1878	G
24	BA	1882	C
24	BA	1888	G
24	BA	1900	A
24	BA	1906	G
24	BA	1912	A
24	BA	1913	A
24	BA	1914	C
24	BA	1919	A
24	BA	1929	G
24	BA	1930	G
24	BA	1931	U
24	BA	1936	A
24	BA	1938	A
24	BA	1955	U
24	BA	1963	U
24	BA	1967	C
24	BA	1969	A

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Mol	Chain	Res	Type
24	BA	1970	A
24	BA	1971	A
24	BA	1972	A
24	BA	1982	C
24	BA	1993	U
24	BA	2023	G
24	BA	2030	A
24	BA	2031	A
24	BA	2032	G
24	BA	2033	A
24	BA	2039	C
24	BA	2043	C
24	BA	2051	A
24	BA	2052	G
24	BA	2054	A
24	BA	2055	C
24	BA	2056	G
24	BA	2060	A
24	BA	2061	G
24	BA	2062	A
24	BA	2069	G
24	BA	2096	U
24	BA	2099	U
24	BA	2110	G
24	BA	2111	C
24	BA	2112	G
24	BA	2113	U
24	BA	2114	A
24	BA	2115	G
24	BA	2117	A
24	BA	2118	U
24	BA	2119	A
24	BA	2120	G
24	BA	2126	A
24	BA	2128	C
24	BA	2129	C
24	BA	2131	G
24	BA	2132	U
24	BA	2133	G
24	BA	2135	A
24	BA	2137	C
24	BA	2139	C

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Mol	Chain	Res	Type
24	BA	2146	C
24	BA	2148	G
24	BA	2151	G
24	BA	2157	G
24	BA	2158	A
24	BA	2160	G
24	BA	2165	G
24	BA	2166	G
24	BA	2168	G
24	BA	2169	A
24	BA	2171	A
24	BA	2173	A
24	BA	2174	C
24	BA	2176	A
24	BA	2178	C
24	BA	2189	U
24	BA	2190	G
24	BA	2192	G
24	BA	2198	A
24	BA	2199	A
24	BA	2210	G
24	BA	2211	G
24	BA	2212	A
24	BA	2213	U
24	BA	2215	G
24	BA	2225	A
24	BA	2238	G
24	BA	2239	G
24	BA	2261	C
24	BA	2264	C
24	BA	2267	A
24	BA	2275	C
24	BA	2283	C
24	BA	2287	A
24	BA	2288	A
24	BA	2305	A
24	BA	2307	G
24	BA	2308	G
24	BA	2309	A
24	BA	2310	A
24	BA	2311	A
24	BA	2319	G

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Mol	Chain	Res	Type
24	BA	2320	A
24	BA	2321	G
24	BA	2325	G
24	BA	2327	A
24	BA	2334	G
24	BA	2336	A
24	BA	2342	C
24	BA	2343	C
24	BA	2346	A
24	BA	2347	C
24	BA	2350	C
24	BA	2377	A
24	BA	2383	G
24	BA	2385	C
24	BA	2392	A
24	BA	2393	A
24	BA	2400	G
24	BA	2402	C
24	BA	2403	C
24	BA	2405	G
24	BA	2406	U
24	BA	2410	G
24	BA	2414	G
24	BA	2422	A
24	BA	2423	U
24	BA	2424	C
24	BA	2425	A
24	BA	2428	G
24	BA	2429	G
24	BA	2430	A
24	BA	2434	A
24	BA	2435	A
24	BA	2439	A
24	BA	2440	C
24	BA	2441	C
24	BA	2448	A
24	BA	2469	A
24	BA	2474	C
24	BA	2476	A
24	BA	2478	A
24	BA	2480	C
24	BA	2482	G

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Mol	Chain	Res	Type
24	BA	2484	G
24	BA	2498	C
24	BA	2502	G
24	BA	2505	G
24	BA	2513	G
24	BA	2518	A
24	BA	2529	G
24	BA	2554	U
24	BA	2567	G
24	BA	2572	A
24	BA	2573	C
24	BA	2602	A
24	BA	2609	U
24	BA	2611	U
24	BA	2612	C
24	BA	2614	A
24	BA	2615	U
24	BA	2629	A
24	BA	2636	U
24	BA	2654	A
24	BA	2665	A
24	BA	2673	G
24	BA	2682	U
24	BA	2689	U
24	BA	2690	C
24	BA	2691	C
24	BA	2702	U
24	BA	2707	G
24	BA	2712(A)	A
24	BA	2713	A
24	BA	2714	G
24	BA	2726	U
24	BA	2733	A
24	BA	2752	C
24	BA	2757	A
24	BA	2758	A
24	BA	2764	A
24	BA	2765	A
24	BA	2766	G
24	BA	2778	A
24	BA	2779	U
24	BA	2789	C

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Mol	Chain	Res	Type
24	BA	2790	A
24	BA	2791	C
24	BA	2793	G
24	BA	2794	C
24	BA	2795	G
24	BA	2797	U
24	BA	2798	C
24	BA	2799	A
24	BA	2801	A
24	BA	2802	G
24	BA	2803	C
24	BA	2807	G
24	BA	2808	U
24	BA	2818	G
24	BA	2820	A
24	BA	2821	A
24	BA	2832	U
24	BA	2833	G
24	BA	2834	G
24	BA	2835	A
24	BA	2836	U
24	BA	2850	A
24	BA	2851	A
24	BA	2858	C
24	BA	2872	G
24	BA	2880	C
24	BA	2891	G
24	BA	2892	A
24	BA	2893	G
24	BA	2894	G
24	BA	2900	A
24	BA	2901	C
25	BB	7	G
25	BB	13	A
25	BB	15	A
25	BB	16	G
25	BB	24	G
25	BB	32	C
25	BB	40	U
25	BB	41	U
25	BB	42	C
25	BB	43	C

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Mol	Chain	Res	Type
25	BB	45	A
25	BB	52	A
25	BB	53	A
25	BB	56	G
25	BB	63	G
25	BB	65	C
25	BB	73	A
25	BB	74	U
25	BB	75	G
25	BB	77	U
25	BB	81	G
25	BB	82	G
25	BB	84	C
25	BB	89	G
25	BB	105	G
25	BB	109	G
25	BB	118	G
1	CA	9	G
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	66	G
1	CA	76	G
1	CA	78	G
1	CA	81	G
1	CA	84	U
1	CA	85	U
1	CA	86	U
1	CA	87	A
1	CA	90	C
1	CA	91	C
1	CA	92	G
1	CA	95	G
1	CA	101	A
1	CA	108	G
1	CA	116	A
1	CA	121	C
1	CA	131	C
1	CA	144	G

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Mol	Chain	Res	Type
1	CA	163	C
1	CA	173	U
1	CA	174	C
1	CA	182	U
1	CA	186	C
1	CA	188	U
1	CA	189	U
1	CA	190	G
1	CA	191(C)	G
1	CA	191(D)	U
1	CA	195	A
1	CA	197	A
1	CA	198	G
1	CA	209	U
1	CA	210	U
1	CA	231	G
1	CA	244	U
1	CA	245	C
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	279	A
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	340	U
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	349	A
1	CA	350	G
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C

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Mol	Chain	Res	Type
1	CA	373	A
1	CA	381	C
1	CA	384	G
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	409	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	418	C
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	429	U
1	CA	439	A
1	CA	452	A
1	CA	466	C
1	CA	467	G
1	CA	483	C
1	CA	484	G
1	CA	485	G
1	CA	486	U
1	CA	495	A
1	CA	496	A
1	CA	497	U
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	521	G
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	535	A
1	CA	536	C
1	CA	547	A
1	CA	550	G

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Mol	Chain	Res	Type
1	CA	559	A
1	CA	561	U
1	CA	563	A
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	577	G
1	CA	596	C
1	CA	614	A
1	CA	618	C
1	CA	630	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	661	G
1	CA	665	A
1	CA	671	G
1	CA	688	G
1	CA	693	G
1	CA	704	A
1	CA	724	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	787	A
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	796	C
1	CA	801	U
1	CA	802	A
1	CA	812	C
1	CA	813	U
1	CA	817	C
1	CA	819	A
1	CA	821	G
1	CA	828	A
1	CA	841	U
1	CA	842	C
1	CA	843	U
1	CA	848	C

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Mol	Chain	Res	Type
1	CA	859	A
1	CA	874	G
1	CA	885	G
1	CA	889	A
1	CA	914	A
1	CA	919	A
1	CA	922	G
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	958	A
1	CA	960	U
1	CA	961	U
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	983	A
1	CA	989	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	1002	G
1	CA	1004	A
1	CA	1006	C
1	CA	1007	C
1	CA	1009	G
1	CA	1021	G
1	CA	1024	G
1	CA	1025	U
1	CA	1028	C
1	CA	1028(A)	C
1	CA	1029	G

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Mol	Chain	Res	Type
1	CA	1030	C
1	CA	1031	G
1	CA	1032(A)	G
1	CA	1032(B)	G
1	CA	1033	G
1	CA	1036	G
1	CA	1038	C
1	CA	1040	U
1	CA	1042	G
1	CA	1052	U
1	CA	1054	C
1	CA	1055	A
1	CA	1066	C
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1145	C
1	CA	1146	A
1	CA	1147	C
1	CA	1148	U
1	CA	1154	G
1	CA	1157	A
1	CA	1158	C
1	CA	1159	U
1	CA	1171	G
1	CA	1179	A
1	CA	1180	A
1	CA	1181	G

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Mol	Chain	Res	Type
1	CA	1182	G
1	CA	1183	A
1	CA	1187	G
1	CA	1190	G
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1225	A
1	CA	1227	A
1	CA	1228	C
1	CA	1238	A
1	CA	1253	G
1	CA	1257	U
1	CA	1258	G
1	CA	1260	C
1	CA	1267	C
1	CA	1269	A
1	CA	1270	C
1	CA	1275	A
1	CA	1278	U
1	CA	1280	A
1	CA	1286	A
1	CA	1287	A
1	CA	1288	A
1	CA	1290	G
1	CA	1291	G
1	CA	1297	C
1	CA	1298	C
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1303	C
1	CA	1305	G
1	CA	1312	G
1	CA	1317	C
1	CA	1319	A
1	CA	1322	C
1	CA	1323	G

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Mol	Chain	Res	Type
1	CA	1324	A
1	CA	1329	A
1	CA	1331	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363	A
1	CA	1364	U
1	CA	1370	G
1	CA	1378	C
1	CA	1379	G
1	CA	1397	C
1	CA	1419	G
1	CA	1442	G
1	CA	1443	G
1	CA	1446	A
1	CA	1449	C
1	CA	1450	U
1	CA	1452	C
1	CA	1453	G
1	CA	1454	G
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1499	A
1	CA	1502	A
1	CA	1503	A
1	CA	1504	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
22	CC	2	G
22	CC	8	U
22	CC	9	G
22	CC	18	G
22	CC	20	U
22	CC	21	A
22	CC	22	G

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Mol	Chain	Res	Type
22	CC	46	G
22	CC	47	U
22	CC	49	G
22	CC	61	C
22	CC	76	A
22	CD	2	G
22	CD	5	G
22	CD	7	G
22	CD	8	U
22	CD	9	G
22	CD	11	A
22	CD	13	C
22	CD	14	A
22	CD	15	G
22	CD	16	C
22	CD	17	C
22	CD	17(A)	C
22	CD	18	G
22	CD	19	G
22	CD	20	U
22	CD	21	A
22	CD	22	G
22	CD	23	C
22	CD	24	U
22	CD	31	G
22	CD	36	U
22	CD	40	C
22	CD	44	A
22	CD	45	G
22	CD	46	G
22	CD	47	U
22	CD	48	C
22	CD	49	G
22	CD	51	C
22	CD	55	U
22	CD	56	C
22	CD	57	A
22	CD	58	A
22	CD	59	A
22	CD	60	U
22	CD	61	C
22	CD	62	C

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Mol	Chain	Res	Type
22	CD	63	G
22	CD	64	G
22	CD	66	C
22	CD	69	C
22	CD	70	G
22	CD	72	A
22	CD	73	A
22	CD	74	C
23	C1	19	U
24	DA	10	G
24	DA	14	A
24	DA	15	G
24	DA	34	C
24	DA	36	G
24	DA	46	C
24	DA	49	A
24	DA	50	U
24	DA	51	G
24	DA	58	G
24	DA	60	G
24	DA	71	A
24	DA	72	U
24	DA	74	A
24	DA	75	G
24	DA	90	U
24	DA	91	A
24	DA	93	C
24	DA	95	G
24	DA	102	G
24	DA	118	A
24	DA	120	U
24	DA	129	C
24	DA	140	A
24	DA	149	A
24	DA	153	C
24	DA	154	G
24	DA	174	C
24	DA	175	G
24	DA	181	A
24	DA	182	A
24	DA	196	A
24	DA	199	A

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Mol	Chain	Res	Type
24	DA	205	G
24	DA	206	U
24	DA	214	G
24	DA	215	G
24	DA	216	A
24	DA	221	A
24	DA	222	A
24	DA	225	A
24	DA	229	A
24	DA	233	A
24	DA	241	A
24	DA	248	G
24	DA	250	G
24	DA	252	G
24	DA	270(G)	C
24	DA	270(K)	C
24	DA	270(L)	U
24	DA	270(M)	U
24	DA	270(O)	U
24	DA	270(Q)	C
24	DA	271(C)	U
24	DA	271	G
24	DA	273(D)	C
24	DA	274	G
24	DA	275	G
24	DA	276	A
24	DA	279	C
24	DA	289	A
24	DA	311	A
24	DA	324	A
24	DA	329	G
24	DA	330	A
24	DA	333	G
24	DA	352	G
24	DA	353	G
24	DA	355	G
24	DA	358	U
24	DA	362	U
24	DA	363	G
24	DA	363(B)	G
24	DA	363(E)	U
24	DA	363(F)	A

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Mol	Chain	Res	Type
24	DA	372	G
24	DA	385	C
24	DA	386	G
24	DA	396	G
24	DA	405	U
24	DA	406	G
24	DA	407	G
24	DA	411	G
24	DA	428	A
24	DA	443	A
24	DA	444	C
24	DA	448	U
24	DA	455	C
24	DA	457	A
24	DA	464	U
24	DA	470	A
24	DA	480	A
24	DA	481	G
24	DA	489	G
24	DA	504	U
24	DA	505	A
24	DA	508	G
24	DA	509	C
24	DA	512	G
24	DA	527	C
24	DA	529	A
24	DA	530	G
24	DA	531	C
24	DA	532	A
24	DA	533	G
24	DA	537	C
24	DA	547	A
24	DA	549	G
24	DA	556	G
24	DA	563	G
24	DA	569	U
24	DA	573	G
24	DA	575	A
24	DA	586	A
24	DA	603	A
24	DA	607	U
24	DA	613	U

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Mol	Chain	Res	Type
24	DA	614	U
24	DA	615	G
24	DA	617	G
24	DA	621	A
24	DA	622	G
24	DA	627	A
24	DA	634	C
24	DA	637	A
24	DA	645	C
24	DA	646	A
24	DA	651	G
24	DA	654	A
24	DA	654(A)	A
24	DA	654(G)	C
24	DA	654(H)	G
24	DA	654(I)	C
24	DA	654(K)	C
24	DA	654(L)	G
24	DA	654(N)	G
24	DA	654(Q)	C
24	DA	654(R)	C
24	DA	654(T)	A
24	DA	669	G
24	DA	670	A
24	DA	686	G
24	DA	708	C
24	DA	717	G
24	DA	726	G
24	DA	730	C
24	DA	739	G
24	DA	748	G
24	DA	753	C
24	DA	758	C
24	DA	776	G
24	DA	779	U
24	DA	782	A
24	DA	783	A
24	DA	784	A
24	DA	785	G
24	DA	790	C
24	DA	792	G
24	DA	793	A

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Mol	Chain	Res	Type
24	DA	800	A
24	DA	805	G
24	DA	812	C
24	DA	819	A
24	DA	827	U
24	DA	828	U
24	DA	832	G
24	DA	846	C
24	DA	857	C
24	DA	859	G
24	DA	866	A
24	DA	869	G
24	DA	878	A
24	DA	882	G
24	DA	883	G
24	DA	885	C
24	DA	888	C
24	DA	889	C
24	DA	890	A
24	DA	892	G
24	DA	893	C
24	DA	894	C
24	DA	895	U
24	DA	896	A
24	DA	897	C
24	DA	898	C
24	DA	899	A
24	DA	901	A
24	DA	905	U
24	DA	906	G
24	DA	907	U
24	DA	910	A
24	DA	914	C
24	DA	915	C
24	DA	917	A
24	DA	926	A
24	DA	932	G
24	DA	938	G
24	DA	941	A
24	DA	945	A
24	DA	946	G
24	DA	959	A

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Mol	Chain	Res	Type
24	DA	961	C
24	DA	974	G
24	DA	980	A
24	DA	983	A
24	DA	990	A
24	DA	996	A
24	DA	999	U
24	DA	1005	C
24	DA	1011	G
24	DA	1012	U
24	DA	1013	C
24	DA	1015	G
24	DA	1016	G
24	DA	1020	A
24	DA	1022	G
24	DA	1023	U
24	DA	1024	G
24	DA	1025	G
24	DA	1026	U
24	DA	1027	A
24	DA	1033	U
24	DA	1039	G
24	DA	1045	A
24	DA	1046	A
24	DA	1047	G
24	DA	1048	A
24	DA	1051	G
24	DA	1052	C
24	DA	1053	C
24	DA	1054	A
24	DA	1057	A
24	DA	1059	G
24	DA	1061	U
24	DA	1062	G
24	DA	1063	G
24	DA	1064	C
24	DA	1065	U
24	DA	1066	U
24	DA	1067	A
24	DA	1068	G
24	DA	1069	A
24	DA	1070	A

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Mol	Chain	Res	Type
24	DA	1071	G
24	DA	1073	A
24	DA	1076	C
24	DA	1079	C
24	DA	1082	U
24	DA	1083	U
24	DA	1086	A
24	DA	1087	G
24	DA	1088	A
24	DA	1089	G
24	DA	1091	G
24	DA	1092	C
24	DA	1094	U
24	DA	1095	A
24	DA	1096	A
24	DA	1098	A
24	DA	1099	G
24	DA	1105	U
24	DA	1112	G
24	DA	1122	G
24	DA	1126	A
24	DA	1129	A
24	DA	1130	U
24	DA	1135	C
24	DA	1136	G
24	DA	1142(A)	A
24	DA	1143	A
24	DA	1149	G
24	DA	1155	A
24	DA	1160	G
24	DA	1170	G
24	DA	1173	G
24	DA	1174	A
24	DA	1175	U
24	DA	1176	G
24	DA	1177	A
24	DA	1178	C
24	DA	1180	C
24	DA	1204	A
24	DA	1205	U
24	DA	1220	A
24	DA	1236	G

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Mol	Chain	Res	Type
24	DA	1247	A
24	DA	1253	A
24	DA	1255	U
24	DA	1256	G
24	DA	1269	A
24	DA	1271	G
24	DA	1272	A
24	DA	1273	U
24	DA	1286	A
24	DA	1300	U
24	DA	1301	A
24	DA	1314	C
24	DA	1325	G
24	DA	1329	U
24	DA	1349	A
24	DA	1352	U
24	DA	1359	A
24	DA	1360	A
24	DA	1365	A
24	DA	1368	G
24	DA	1379	A
24	DA	1380	G
24	DA	1384	A
24	DA	1385	G
24	DA	1386	C
24	DA	1389	G
24	DA	1392	A
24	DA	1393	A
24	DA	1395	A
24	DA	1403	C
24	DA	1407	C
24	DA	1416	G
24	DA	1419	A
24	DA	1420	U
24	DA	1421	G
24	DA	1428	C
24	DA	1437	C
24	DA	1444(A)	A
24	DA	1449	A
24	DA	1449(A)	G
24	DA	1451	C
24	DA	1455	G

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Mol	Chain	Res	Type
24	DA	1458	C
24	DA	1460	A
24	DA	1461	G
24	DA	1467	C
24	DA	1471	A
24	DA	1475	G
24	DA	1483	G
24	DA	1488	G
24	DA	1490	A
24	DA	1493	C
24	DA	1497	U
24	DA	1509	C
24	DA	1510	A
24	DA	1522	G
24	DA	1534	G
24	DA	1535	U
24	DA	1536	A
24	DA	1537	C
24	DA	1543	A
24	DA	1544	C
24	DA	1545	A
24	DA	1558	A
24	DA	1559	G
24	DA	1560	G
24	DA	1569	A
24	DA	1578	U
24	DA	1580	A
24	DA	1585	C
24	DA	1586	A
24	DA	1588	C
24	DA	1593	G
24	DA	1598	C
24	DA	1608	A
24	DA	1610	A
24	DA	1616	A
24	DA	1618	A
24	DA	1640	C
24	DA	1648	C
24	DA	1654	A
24	DA	1674	G
24	DA	1675	C
24	DA	1696	G

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Mol	Chain	Res	Type
24	DA	1700	A
24	DA	1701	A
24	DA	1725	G
24	DA	1728	G
24	DA	1729	A
24	DA	1730	U
24	DA	1731	G
24	DA	1742	C
24	DA	1743	G
24	DA	1756	G
24	DA	1758	G
24	DA	1762	A
24	DA	1763	G
24	DA	1764	G
24	DA	1773	A
24	DA	1780	A
24	DA	1782	C
24	DA	1791	A
24	DA	1800	C
24	DA	1801	G
24	DA	1802	A
24	DA	1816	G
24	DA	1820	U
24	DA	1829	A
24	DA	1834	U
24	DA	1835	G
24	DA	1839	G
24	DA	1847	A
24	DA	1848	A
24	DA	1858	G
24	DA	1869	G
24	DA	1871	A
24	DA	1878	G
24	DA	1888	G
24	DA	1889	A
24	DA	1900	A
24	DA	1906	G
24	DA	1912	A
24	DA	1913	A
24	DA	1914	C
24	DA	1917	U
24	DA	1929	G

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Mol	Chain	Res	Type
24	DA	1930	G
24	DA	1931	U
24	DA	1936	A
24	DA	1952	A
24	DA	1955	U
24	DA	1956	U
24	DA	1963	U
24	DA	1965	C
24	DA	1967	C
24	DA	1970	A
24	DA	1971	A
24	DA	1972	A
24	DA	1992	G
24	DA	1993	U
24	DA	1994	C
24	DA	2020	A
24	DA	2023	G
24	DA	2031	A
24	DA	2032	G
24	DA	2033	A
24	DA	2036	C
24	DA	2043	C
24	DA	2049	G
24	DA	2055	C
24	DA	2056	G
24	DA	2059	A
24	DA	2060	A
24	DA	2061	G
24	DA	2062	A
24	DA	2069	G
24	DA	2082	A
24	DA	2093	G
24	DA	2099	U
24	DA	2100	G
24	DA	2108	C
24	DA	2110	G
24	DA	2111	C
24	DA	2112	G
24	DA	2113	U
24	DA	2114	A
24	DA	2115	G
24	DA	2116	G

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Mol	Chain	Res	Type
24	DA	2117	A
24	DA	2118	U
24	DA	2119	A
24	DA	2120	G
24	DA	2123	G
24	DA	2124	G
24	DA	2125	G
24	DA	2126	A
24	DA	2127	G
24	DA	2128	C
24	DA	2129	C
24	DA	2130	U
24	DA	2131	G
24	DA	2132	U
24	DA	2133	G
24	DA	2135	A
24	DA	2136	C
24	DA	2137	C
24	DA	2139	C
24	DA	2145	C
24	DA	2146	C
24	DA	2147	G
24	DA	2148	G
24	DA	2156	G
24	DA	2158	A
24	DA	2159	G
24	DA	2160	G
24	DA	2162	G
24	DA	2164	C
24	DA	2165	G
24	DA	2166	G
24	DA	2167	U
24	DA	2168	G
24	DA	2169	A
24	DA	2170	A
24	DA	2171	A
24	DA	2173	A
24	DA	2174	C
24	DA	2178	C
24	DA	2189	U
24	DA	2190	G
24	DA	2192	G

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Mol	Chain	Res	Type
24	DA	2198	A
24	DA	2199	A
24	DA	2210	G
24	DA	2211	G
24	DA	2212	A
24	DA	2213	U
24	DA	2215	G
24	DA	2225	A
24	DA	2226	C
24	DA	2238	G
24	DA	2239	G
24	DA	2245	U
24	DA	2275	C
24	DA	2280	G
24	DA	2283	C
24	DA	2287	A
24	DA	2288	A
24	DA	2297	C
24	DA	2305	A
24	DA	2307	G
24	DA	2308	G
24	DA	2309	A
24	DA	2321	G
24	DA	2325	G
24	DA	2334	G
24	DA	2335	A
24	DA	2336	A
24	DA	2342	C
24	DA	2345	G
24	DA	2346	A
24	DA	2347	C
24	DA	2350	C
24	DA	2354	G
24	DA	2383	G
24	DA	2385	C
24	DA	2392	A
24	DA	2394	C
24	DA	2401	U
24	DA	2402	C
24	DA	2403	C
24	DA	2406	U
24	DA	2407	G

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Mol	Chain	Res	Type
24	DA	2410	G
24	DA	2411	A
24	DA	2420	C
24	DA	2424	C
24	DA	2425	A
24	DA	2428	G
24	DA	2429	G
24	DA	2430	A
24	DA	2434	A
24	DA	2435	A
24	DA	2439	A
24	DA	2440	C
24	DA	2441	C
24	DA	2445	G
24	DA	2448	A
24	DA	2468	G
24	DA	2469	A
24	DA	2475	C
24	DA	2476	A
24	DA	2477	C
24	DA	2482	G
24	DA	2483	C
24	DA	2484	G
24	DA	2502	G
24	DA	2505	G
24	DA	2506	U
24	DA	2518	A
24	DA	2529	G
24	DA	2543	G
24	DA	2554	U
24	DA	2566	A
24	DA	2567	G
24	DA	2569	G
24	DA	2572	A
24	DA	2582	G
24	DA	2584	U
24	DA	2585	U
24	DA	2586	C
24	DA	2602	A
24	DA	2603	G
24	DA	2609	U
24	DA	2610	C

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Mol	Chain	Res	Type
24	DA	2611	U
24	DA	2612	C
24	DA	2615	U
24	DA	2629	A
24	DA	2630	G
24	DA	2636	U
24	DA	2654	A
24	DA	2655	G
24	DA	2665	A
24	DA	2673	G
24	DA	2689	U
24	DA	2690	C
24	DA	2700	C
24	DA	2702	U
24	DA	2703	C
24	DA	2707	G
24	DA	2712(A)	A
24	DA	2713	A
24	DA	2714	G
24	DA	2726	U
24	DA	2733	A
24	DA	2744	G
24	DA	2748	A
24	DA	2750	A
24	DA	2751	G
24	DA	2752	C
24	DA	2754	U
24	DA	2757	A
24	DA	2759	G
24	DA	2761	G
24	DA	2762	G
24	DA	2764	A
24	DA	2765	A
24	DA	2766	G
24	DA	2769	C
24	DA	2777	G
24	DA	2778	A
24	DA	2779	U
24	DA	2786	U
24	DA	2789	C
24	DA	2791	C
24	DA	2793	G

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Mol	Chain	Res	Type
24	DA	2797	U
24	DA	2798	C
24	DA	2799	A
24	DA	2801	A
24	DA	2802	G
24	DA	2805	G
24	DA	2809	A
24	DA	2810	A
24	DA	2812	G
24	DA	2818	G
24	DA	2820	A
24	DA	2821	A
24	DA	2833	G
24	DA	2834	G
24	DA	2835	A
24	DA	2860	A
24	DA	2872	G
24	DA	2879	C
24	DA	2880	C
24	DA	2892	A
24	DA	2893	G
24	DA	2894	G
24	DA	2896	C
24	DA	2897	U
24	DA	2902	C
25	DB	0	A
25	DB	3	C
25	DB	4	C
25	DB	7	G
25	DB	13	A
25	DB	15	A
25	DB	16	G
25	DB	22	U
25	DB	24	G
25	DB	25	A
25	DB	27	C
25	DB	30	C
25	DB	40	U
25	DB	41	U
25	DB	42	C
25	DB	44	G
25	DB	45	A

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Mol	Chain	Res	Type
25	DB	53	A
25	DB	57	A
25	DB	67	G
25	DB	73	A
25	DB	75	G
25	DB	76	G
25	DB	81	G
25	DB	88	C
25	DB	89	G
25	DB	89(A)	A
25	DB	90	C
25	DB	101	A
25	DB	105	G
25	DB	109	G
25	DB	115	G

All (147) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	115	G
1	AA	181	G
1	AA	244	U
1	AA	266	G
1	AA	412	A
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	560	U
1	AA	687	A
1	AA	703	G
1	AA	748	C
1	AA	812	C
1	AA	842	C
1	AA	913	A
1	AA	974	A
1	AA	992	U
1	AA	1025	U
1	AA	1027	C
1	AA	1065	U
1	AA	1256	A

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Mol	Chain	Res	Type
1	AA	1285	A
1	AA	1498	U
1	AA	1504	G
22	AC	47	U
22	AD	7	G
24	BA	74	A
24	BA	196	A
24	BA	222	A
24	BA	229	A
24	BA	271(B)	G
24	BA	404	C
24	BA	654(S)	G
24	BA	752	A
24	BA	880	G
24	BA	897	C
24	BA	974(A)	C
24	BA	1022	G
24	BA	1026	U
24	BA	1060	U
24	BA	1069	A
24	BA	1103	A
24	BA	1173	G
24	BA	1178	C
24	BA	1210	A
24	BA	1312	U
24	BA	1379	A
24	BA	1427	A
24	BA	1508	A
24	BA	1536	A
24	BA	1558	A
24	BA	1608	A
24	BA	1617	C
24	BA	1653	G
24	BA	1694	C
24	BA	1799	G
24	BA	1819	A
24	BA	1899	G
24	BA	1912	A
24	BA	1992	G
24	BA	2157	G
24	BA	2211	G
24	BA	2422	A

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Mol	Chain	Res	Type
24	BA	2439	A
24	BA	2481	G
24	BA	2566	A
24	BA	2610	C
24	BA	2689	U
24	BA	2751	G
24	BA	2756	U
1	CA	89	U
1	CA	115	G
1	CA	197	A
1	CA	243	A
1	CA	244	U
1	CA	250	A
1	CA	266	G
1	CA	328	C
1	CA	345	C
1	CA	352	C
1	CA	412	A
1	CA	485	G
1	CA	509	A
1	CA	560	U
1	CA	632	A
1	CA	687	A
1	CA	748	C
1	CA	812	C
1	CA	913	A
1	CA	992	U
1	CA	1126	U
1	CA	1128	C
1	CA	1196	U
1	CA	1285	A
1	CA	1297	C
1	CA	1300	G
1	CA	1346	A
1	CA	1442	G
1	CA	1453	G
1	CA	1498	U
22	CC	1	C
22	CD	6	G
22	CD	7	G
22	CD	12	G
22	CD	22	G

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Mol	Chain	Res	Type
22	CD	57	A
24	DA	49	A
24	DA	128	C
24	DA	205	G
24	DA	249	C
24	DA	278	A
24	DA	654(S)	G
24	DA	669	G
24	DA	752	A
24	DA	856	C
24	DA	877	U
24	DA	888	C
24	DA	1022	G
24	DA	1066	U
24	DA	1085	A
24	DA	1088	A
24	DA	1171	G
24	DA	1300	U
24	DA	1427	A
24	DA	1460	A
24	DA	1558	A
24	DA	1653	G
24	DA	1819	A
24	DA	1912	A
24	DA	1913	A
24	DA	1955	U
24	DA	1992	G
24	DA	2191	G
24	DA	2211	G
24	DA	2406	U
24	DA	2439	A
24	DA	2447	G
24	DA	2542	A
24	DA	2602	A
24	DA	2610	C
24	DA	2689	U
24	DA	2747	G
24	DA	2776	A
24	DA	2859	G
24	DA	2893	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1692 ligands modelled in this entry, 1690 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
55	T1C	AA	1837	54	45,45,45	0.95	5 (11%)	56,72,72	1.88	11 (19%)
55	T1C	CA	1800	54	45,45,45	0.98	5 (11%)	56,72,72	1.62	11 (19%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	T1C	AA	1837	54	-	7/22/80/80	0/4/4/4
55	T1C	CA	1800	54	-	9/22/80/80	0/4/4/4

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1800	T1C	C9-N9	-2.61	1.36	1.41
55	AA	1837	T1C	C1C-C12	2.55	1.54	1.52
55	AA	1837	T1C	C9-N9	-2.53	1.36	1.41
55	AA	1837	T1C	C1C-C1	-2.41	1.51	1.55
55	CA	1800	T1C	C1B-C12	-2.37	1.33	1.36
55	AA	1837	T1C	C2-C3	-2.35	1.34	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1800	T1C	C93-N92	-2.28	1.45	1.49
55	CA	1800	T1C	C2-C3	-2.14	1.35	1.40
55	CA	1800	T1C	C1C-C1	-2.12	1.52	1.55
55	AA	1837	T1C	C1A-C11	2.03	1.51	1.46

All (22) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	AA	1837	T1C	C41-C1C-C1	-6.62	103.46	111.05
55	AA	1837	T1C	O12-C12-C1C	4.82	120.35	113.37
55	AA	1837	T1C	C11-C1B-C12	4.29	122.19	118.80
55	CA	1800	T1C	C1-C1C-C12	4.12	114.71	109.88
55	CA	1800	T1C	O12-C12-C1C	4.06	119.25	113.37
55	AA	1837	T1C	C9-N9-C91	-4.06	112.97	126.61
55	AA	1837	T1C	C5-C41-C4	-3.82	108.21	113.73
55	CA	1800	T1C	C9-N9-C91	-3.77	113.95	126.61
55	CA	1800	T1C	C51-C5-C41	-3.70	104.07	110.38
55	AA	1837	T1C	C1C-C41-C4	3.35	116.22	111.64
55	CA	1800	T1C	C92-N92-C93	-3.27	111.63	115.77
55	CA	1800	T1C	O3-C3-C2	-3.14	117.68	122.93
55	CA	1800	T1C	O12-C12-C1B	-2.99	117.73	123.52
55	AA	1837	T1C	O12-C12-C1B	-2.87	117.95	123.52
55	AA	1837	T1C	C6-C61-C1A	2.76	122.81	118.13
55	AA	1837	T1C	O3-C3-C2	-2.64	118.51	122.93
55	CA	1800	T1C	C41-C1C-C1	-2.55	108.12	111.05
55	CA	1800	T1C	C6-C61-C1A	2.47	122.32	118.13
55	CA	1800	T1C	O1C-C1C-C12	-2.47	106.19	110.14
55	AA	1837	T1C	C72-N7-C71	-2.28	108.86	116.18
55	AA	1837	T1C	C51-C5-C41	-2.25	106.55	110.38
55	CA	1800	T1C	O1-C1-C1C	2.04	123.00	119.11

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	AA	1837	T1C	C92-C91-N9-C9
55	AA	1837	T1C	O91-C91-N9-C9
55	CA	1800	T1C	C92-C91-N9-C9
55	CA	1800	T1C	O91-C91-N9-C9
55	CA	1800	T1C	C41-C4-N4-C42
55	CA	1800	T1C	C3-C2-C21-O21
55	CA	1800	T1C	C3-C2-C21-N21

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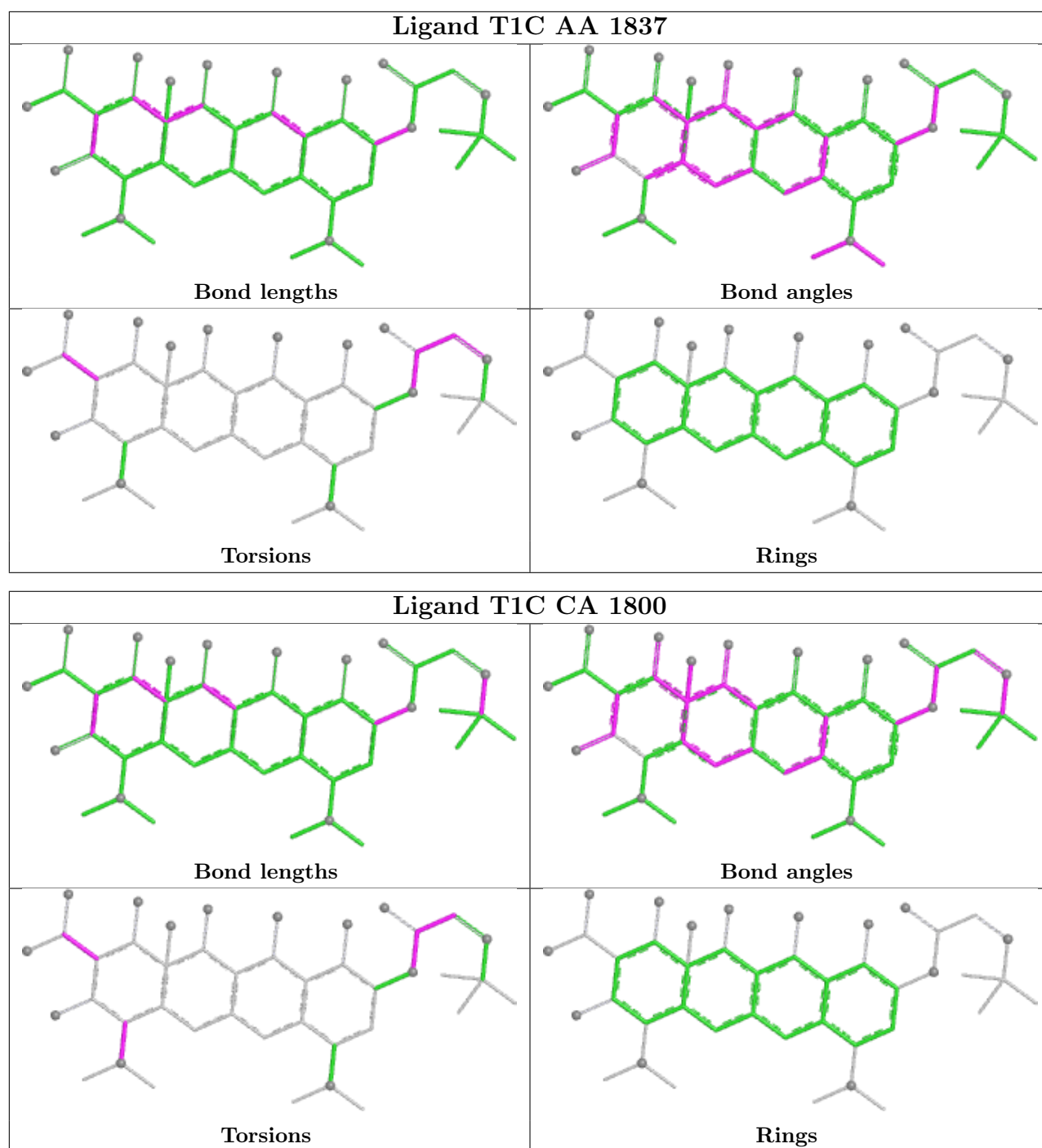
Mol	Chain	Res	Type	Atoms
55	CA	1800	T1C	C1-C2-C21-O21
55	CA	1800	T1C	C1-C2-C21-N21
55	AA	1837	T1C	O91-C91-C92-N92
55	CA	1800	T1C	O91-C91-C92-N92
55	AA	1837	T1C	N9-C91-C92-N92
55	CA	1800	T1C	N9-C91-C92-N92
55	AA	1837	T1C	C3-C2-C21-N21
55	AA	1837	T1C	C91-C92-N92-C93
55	AA	1837	T1C	C1-C2-C21-N21

There are no ring outliers.

2 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	AA	1837	T1C	2	0
55	CA	1800	T1C	5	0

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



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1506/1506 (100%)	-0.42	8 (0%) 87 73	66, 112, 190, 248	0
1	CA	1506/1506 (100%)	-0.43	4 (0%) 90 80	76, 117, 189, 249	0
2	AE	237/256 (92%)	-0.00	0 100 100	116, 147, 183, 192	0
2	CE	237/256 (92%)	-0.00	4 (1%) 69 48	126, 162, 192, 208	0
3	AF	205/239 (85%)	0.34	5 (2%) 59 38	99, 124, 157, 164	0
3	CF	206/239 (86%)	0.36	8 (3%) 43 24	121, 145, 174, 184	0
4	AG	208/208 (100%)	0.44	10 (4%) 35 19	95, 118, 140, 145	0
4	CG	208/208 (100%)	0.45	9 (4%) 40 22	93, 113, 133, 142	0
5	AH	151/162 (93%)	0.14	2 (1%) 75 56	90, 110, 132, 163	0
5	CH	151/162 (93%)	0.13	0 100 100	97, 117, 139, 165	0
6	AI	101/101 (100%)	0.03	1 (0%) 79 61	91, 112, 125, 144	0
6	CI	101/101 (100%)	-0.22	0 100 100	90, 107, 128, 148	0
7	AJ	155/156 (99%)	0.24	9 (5%) 29 16	111, 129, 157, 167	0
7	CJ	155/156 (99%)	0.26	4 (2%) 57 36	116, 133, 162, 173	0
8	AK	138/138 (100%)	0.20	4 (2%) 53 32	97, 117, 127, 137	0
8	CK	138/138 (100%)	-0.09	0 100 100	105, 122, 135, 143	0
9	AL	127/128 (99%)	0.13	9 (7%) 22 12	100, 144, 163, 167	0
9	CL	127/128 (99%)	0.28	7 (5%) 30 16	114, 155, 170, 176	0
10	AM	99/105 (94%)	0.38	6 (6%) 27 15	100, 146, 171, 175	0
10	CM	99/105 (94%)	0.15	1 (1%) 79 61	117, 159, 174, 180	0
11	AN	119/129 (92%)	0.45	5 (4%) 40 22	83, 108, 138, 168	0
11	CN	119/129 (92%)	0.33	6 (5%) 34 18	91, 112, 138, 163	0
12	AO	125/128 (97%)	0.41	7 (5%) 30 16	78, 92, 116, 168	0
12	CO	125/128 (97%)	0.43	13 (10%) 11 6	84, 104, 129, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AP	116/126 (92%)	0.22	3 (2%) 57 36	100, 133, 147, 157	0
13	CP	117/126 (92%)	0.26	3 (2%) 57 36	121, 155, 170, 177	0
14	AQ	60/61 (98%)	0.47	3 (5%) 34 18	103, 114, 127, 135	0
14	CQ	60/61 (98%)	0.57	1 (1%) 69 48	130, 139, 155, 162	0
15	AR	88/89 (98%)	0.01	0 100 100	89, 108, 124, 127	0
15	CR	88/89 (98%)	-0.01	0 100 100	89, 113, 131, 136	0
16	AS	84/88 (95%)	0.31	0 100 100	107, 122, 145, 171	0
16	CS	84/88 (95%)	-0.01	1 (1%) 76 58	91, 107, 126, 167	0
17	AT	100/105 (95%)	0.25	3 (3%) 52 31	96, 114, 126, 133	0
17	CT	100/105 (95%)	0.54	7 (7%) 22 12	91, 111, 128, 149	0
18	AU	72/88 (81%)	-0.01	2 (2%) 55 34	95, 112, 141, 169	0
18	CU	72/88 (81%)	-0.13	1 (1%) 73 53	96, 117, 152, 173	0
19	AV	83/93 (89%)	0.03	4 (4%) 35 19	115, 136, 151, 157	0
19	CV	78/93 (83%)	0.34	4 (5%) 33 18	135, 166, 181, 188	0
20	AW	99/106 (93%)	0.10	0 100 100	111, 127, 157, 162	0
20	CW	99/106 (93%)	-0.12	1 (1%) 79 61	91, 116, 148, 165	0
21	AX	25/27 (92%)	0.18	0 100 100	111, 120, 140, 160	0
21	CX	25/27 (92%)	0.61	2 (8%) 18 10	117, 138, 154, 170	0
22	AC	77/77 (100%)	-0.21	1 (1%) 75 56	77, 100, 135, 151	0
22	AD	77/77 (100%)	0.18	2 (2%) 57 36	93, 214, 228, 234	0
22	CC	77/77 (100%)	-0.32	1 (1%) 75 56	80, 118, 151, 171	0
22	CD	77/77 (100%)	0.48	4 (5%) 33 17	93, 220, 238, 248	0
23	A1	6/6 (100%)	0.63	2 (33%) 1 0	85, 89, 129, 143	0
23	C1	6/6 (100%)	0.88	1 (16%) 4 2	103, 111, 138, 153	0
24	BA	2912/2912 (100%)	-0.62	17 (0%) 85 70	53, 82, 212, 247	0
24	DA	2906/2912 (99%)	-0.54	12 (0%) 88 76	60, 90, 232, 251	0
25	BB	122/122 (100%)	-0.56	0 100 100	78, 106, 126, 184	0
25	DB	122/122 (100%)	-0.40	0 100 100	91, 127, 154, 200	0
26	BD	272/276 (98%)	0.04	2 (0%) 84 68	55, 75, 94, 102	0
26	DD	272/276 (98%)	0.12	11 (4%) 42 23	58, 81, 99, 122	0
27	BE	205/206 (99%)	0.28	5 (2%) 59 38	60, 92, 135, 153	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
27	DE	205/206 (99%)	0.54	20 (9%) 13 7	60, 97, 142, 165	0
28	BF	202/210 (96%)	-0.20	1 (0%) 87 73	54, 84, 118, 133	0
28	DF	208/210 (99%)	0.14	6 (2%) 53 32	66, 102, 156, 182	0
29	BG	181/182 (99%)	0.09	2 (1%) 78 59	95, 116, 145, 154	0
29	DG	181/182 (99%)	0.31	7 (3%) 43 24	117, 141, 165, 177	0
30	BH	170/180 (94%)	0.06	2 (1%) 76 58	88, 113, 132, 151	0
30	DH	170/180 (94%)	0.73	13 (7%) 20 11	146, 200, 223, 235	0
31	BK	146/148 (98%)	-0.13	0 100 100	87, 129, 146, 151	0
31	DK	146/148 (98%)	0.14	7 (4%) 35 19	88, 132, 151, 159	0
32	BM	138/140 (98%)	0.56	10 (7%) 21 11	78, 93, 128, 145	0
32	DM	138/140 (98%)	0.04	2 (1%) 73 53	80, 107, 137, 157	0
33	BN	122/122 (100%)	0.26	3 (2%) 58 37	69, 87, 102, 112	0
33	DN	122/122 (100%)	0.22	2 (1%) 70 49	70, 91, 109, 116	0
34	BO	150/150 (100%)	0.59	15 (10%) 12 6	60, 91, 114, 167	0
34	DO	150/150 (100%)	0.55	19 (12%) 8 4	66, 105, 140, 179	0
35	BP	141/141 (100%)	0.16	3 (2%) 63 42	68, 91, 113, 135	0
35	DP	141/141 (100%)	0.44	5 (3%) 47 27	80, 106, 130, 152	0
36	B0	118/118 (100%)	0.13	5 (4%) 40 22	72, 89, 104, 118	0
36	D0	117/118 (99%)	0.11	0 100 100	71, 89, 108, 119	0
37	BQ	111/112 (99%)	0.17	4 (3%) 46 26	85, 104, 127, 137	0
37	DQ	111/112 (99%)	0.08	1 (0%) 81 63	98, 121, 142, 151	0
38	BR	137/146 (93%)	0.67	8 (5%) 29 16	80, 102, 150, 169	0
38	DR	137/146 (93%)	0.23	3 (2%) 62 41	80, 99, 159, 185	0
39	B1	117/118 (99%)	0.13	2 (1%) 69 48	63, 83, 112, 138	0
39	D1	117/118 (99%)	-0.26	0 100 100	72, 101, 136, 154	0
40	B2	101/101 (100%)	0.21	1 (0%) 79 61	64, 102, 126, 145	0
40	D2	101/101 (100%)	0.18	3 (2%) 52 31	71, 123, 139, 148	0
41	BS	113/113 (100%)	-0.04	2 (1%) 67 47	63, 80, 110, 161	0
41	DS	113/113 (100%)	0.12	2 (1%) 67 47	68, 83, 113, 161	0
42	BT	92/96 (95%)	0.14	2 (2%) 62 41	64, 78, 100, 111	0
42	DT	92/96 (95%)	0.21	7 (7%) 20 11	77, 94, 118, 128	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
43	BU	102/110 (92%)	0.50	10 (9%) 13 7	75, 99, 149, 163	0
43	DU	102/110 (92%)	1.27	21 (20%) 2 1	93, 118, 160, 182	0
44	BV	175/206 (84%)	0.43	10 (5%) 29 16	97, 131, 195, 201	0
44	DV	179/206 (86%)	0.53	2 (1%) 78 59	118, 157, 213, 219	0
45	B3	76/85 (89%)	0.21	2 (2%) 57 36	69, 85, 101, 140	0
45	D3	77/85 (90%)	0.20	3 (3%) 43 24	74, 95, 111, 151	0
46	BZ	97/98 (98%)	0.32	8 (8%) 17 10	65, 85, 132, 164	0
46	DZ	97/98 (98%)	0.82	12 (12%) 8 5	67, 91, 135, 157	0
47	BW	66/72 (91%)	0.48	5 (7%) 20 11	70, 87, 108, 132	0
47	DW	69/72 (95%)	0.00	3 (4%) 40 22	90, 112, 133, 164	0
48	BX	59/60 (98%)	0.14	1 (1%) 69 48	73, 86, 121, 137	0
48	DX	59/60 (98%)	0.16	1 (1%) 69 48	79, 102, 144, 162	0
49	B4	66/71 (92%)	0.20	2 (3%) 52 31	122, 158, 180, 186	0
49	D4	63/71 (88%)	0.46	4 (6%) 26 14	154, 187, 197, 205	0
50	B5	59/60 (98%)	0.62	6 (10%) 12 6	57, 90, 166, 172	0
50	D5	59/60 (98%)	0.48	6 (10%) 12 6	68, 91, 178, 192	0
51	B6	45/54 (83%)	1.30	6 (13%) 7 4	128, 153, 163, 164	0
51	D6	45/54 (83%)	1.78	15 (33%) 1 0	138, 164, 181, 183	0
52	B7	49/49 (100%)	0.07	2 (4%) 41 23	55, 61, 92, 120	0
52	D7	49/49 (100%)	0.37	2 (4%) 41 23	63, 70, 107, 130	0
53	B8	61/65 (93%)	0.77	8 (13%) 7 4	66, 81, 98, 124	0
53	D8	61/65 (93%)	0.99	12 (19%) 3 1	73, 87, 106, 121	0
All	All	20927/21444 (97%)	-0.09	513 (2%) 58 37	53, 106, 186, 251	0

All (513) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
34	DO	62	LEU	8.8
11	AN	127	LYS	8.6
17	CT	101	ARG	8.2
24	BA	2899	G	6.9
11	AN	128	ALA	6.2
43	DU	103	GLY	6.1
4	CG	32	ALA	6.0

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Mol	Chain	Res	Type	RSRZ
24	BA	2900	A	6.0
9	CL	127	LYS	5.8
27	DE	205	ALA	5.6
12	AO	16	GLU	5.6
4	AG	32	ALA	5.4
9	CL	115	GLY	5.4
26	DD	38	LYS	5.4
35	DP	140	ALA	5.3
27	DE	204	ALA	5.3
50	D5	60	VAL	5.3
12	AO	47	LYS	5.3
12	AO	19	ARG	5.2
12	CO	19	ARG	5.2
26	DD	35	LYS	5.1
11	CN	127	LYS	5.1
40	B2	36	PRO	5.0
43	DU	78	ALA	4.8
46	BZ	98	LEU	4.8
32	BM	138	LEU	4.8
50	B5	3	LYS	4.8
4	AG	130	GLY	4.5
43	DU	77	PRO	4.5
43	DU	45	VAL	4.5
46	DZ	96	LYS	4.4
51	D6	23	THR	4.3
24	BA	2898	U	4.3
7	AJ	86	GLN	4.3
51	B6	10	LEU	4.3
43	DU	76	CYS	4.2
34	BO	148	LEU	4.2
53	D8	50	LEU	4.2
51	D6	53	LYS	4.2
12	CO	21	LYS	4.1
4	AG	31	CYS	4.1
24	DA	171	G	4.1
53	B8	34	TRP	4.1
51	D6	52	VAL	4.1
9	AL	117	HIS	4.0
50	D5	58	LEU	4.0
51	B6	27	LYS	4.0
17	AT	101	ARG	4.0
24	DA	2899	G	4.0

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Mol	Chain	Res	Type	RSRZ
17	CT	100	LYS	4.0
46	BZ	89	GLU	4.0
24	BA	5	A	3.9
4	AG	12	CYS	3.9
32	BM	128	HIS	3.9
37	BQ	108	GLY	3.9
9	CL	128	ARG	3.9
12	CO	64	TYR	3.9
26	DD	5	LYS	3.9
43	BU	50	ARG	3.9
53	D8	56	GLU	3.9
44	BV	117	LEU	3.9
46	DZ	22	GLY	3.8
7	AJ	81	GLY	3.8
38	BR	130	ALA	3.8
51	B6	25	LYS	3.8
12	AO	14	GLY	3.8
28	DF	65	TRP	3.7
43	DU	53	PRO	3.7
51	D6	9	LEU	3.7
52	B7	48	LYS	3.7
34	DO	19	VAL	3.7
36	B0	2	ARG	3.7
1	AA	1533	C	3.7
24	BA	2901	C	3.7
28	DF	66	PRO	3.7
26	DD	34	VAL	3.7
53	B8	50	LEU	3.7
50	D5	59	GLU	3.7
32	BM	9	VAL	3.7
47	BW	69	ARG	3.7
12	CO	20	LYS	3.7
19	CV	82	GLY	3.7
11	AN	129	SER	3.6
7	AJ	83	ALA	3.6
27	DE	151	TYR	3.6
24	DA	1535	U	3.6
51	B6	9	LEU	3.6
4	CG	34	GLU	3.6
11	CN	129	SER	3.6
43	BU	103	GLY	3.6
41	DS	92	ARG	3.6

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Mol	Chain	Res	Type	RSRZ
50	B5	2	ALA	3.6
30	DH	171	LEU	3.6
19	AV	84	GLY	3.6
42	BT	94	GLY	3.6
11	CN	128	ALA	3.6
24	BA	4	C	3.6
38	DR	105	LEU	3.6
53	D8	40	GLU	3.6
32	BM	131	GLN	3.5
1	AA	1397	C	3.5
22	AC	1	C	3.5
4	CG	24	GLU	3.5
46	DZ	11	ARG	3.5
3	CF	130	VAL	3.5
22	CC	1	C	3.5
9	CL	126	SER	3.4
12	AO	17	LYS	3.4
53	D8	49	VAL	3.4
38	DR	104	ASN	3.4
43	DU	96	ILE	3.4
34	DO	52	GLU	3.4
51	D6	34	LEU	3.4
24	DA	2901	C	3.4
4	CG	29	PRO	3.4
42	DT	69	TYR	3.3
51	D6	10	LEU	3.3
43	DU	62	GLU	3.3
22	AD	1	C	3.3
27	BE	205	ALA	3.3
27	DE	23	VAL	3.3
44	BV	115	GLY	3.3
52	D7	47	ARG	3.2
31	DK	18	VAL	3.2
43	BU	83	THR	3.2
50	D5	2	ALA	3.2
36	B0	7	GLY	3.2
51	D6	17	LYS	3.2
8	AK	88	LYS	3.2
42	DT	13	LEU	3.2
47	BW	43	GLN	3.2
30	DH	34	GLU	3.2
43	DU	46	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
12	CO	26	ALA	3.2
24	DA	91	A	3.2
45	D3	85	ALA	3.2
34	BO	141	ALA	3.2
46	BZ	84	GLY	3.1
34	BO	19	VAL	3.1
4	AG	30	LYS	3.1
17	CT	98	LEU	3.1
50	D5	3	LYS	3.1
34	DO	150	ALA	3.1
53	B8	51	ALA	3.1
31	DK	14	ASP	3.1
31	DK	20	ASP	3.1
24	BA	163	U	3.1
34	DO	64	LYS	3.1
28	DF	72	ARG	3.1
3	AF	201	TYR	3.1
23	C1	19	U	3.0
27	DE	150	VAL	3.0
33	DN	1	MET	3.0
43	DU	55	TYR	3.0
34	DO	58	THR	3.0
34	DO	108	LYS	3.0
51	B6	53	LYS	3.0
26	BD	207	GLY	3.0
19	CV	7	LYS	3.0
12	CO	16	GLU	3.0
20	CW	12	ALA	3.0
27	DE	155	LYS	3.0
27	DE	124	GLY	3.0
52	B7	49	ARG	2.9
1	CA	1202	G	2.9
30	DH	24	VAL	2.9
34	BO	20	GLY	2.9
4	CG	30	LYS	2.9
28	DF	68	LYS	2.9
34	DO	71	VAL	2.9
3	CF	87	LEU	2.9
30	DH	71	LEU	2.9
32	DM	84	LYS	2.9
43	BU	82	PRO	2.9
3	AF	200	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
43	DU	29	GLU	2.9
44	BV	165	VAL	2.9
43	DU	44	ILE	2.9
47	BW	41	ILE	2.9
51	D6	14	THR	2.9
30	DH	126	PRO	2.9
21	CX	2	GLY	2.9
24	DA	654(K)	C	2.9
27	DE	24	THR	2.9
34	BO	58	THR	2.9
46	DZ	77	ALA	2.9
4	AG	26	CYS	2.9
43	DU	98	VAL	2.9
4	CG	25	ARG	2.9
4	CG	35	ARG	2.9
9	AL	126	SER	2.8
45	B3	17	GLN	2.8
10	AM	61	GLU	2.8
43	BU	99	CYS	2.8
30	DH	33	LEU	2.8
42	DT	92	LEU	2.8
1	AA	85	U	2.8
17	CT	53	LEU	2.8
46	DZ	85	LEU	2.8
44	BV	38	TYR	2.8
37	BQ	86	ALA	2.8
3	CF	167	TRP	2.8
46	DZ	82	LEU	2.8
30	DH	151	ILE	2.8
36	B0	6	SER	2.8
26	DD	40	THR	2.8
37	BQ	110	LEU	2.8
43	DU	80	GLY	2.8
9	AL	114	TYR	2.8
26	DD	273	ARG	2.8
9	CL	116	LYS	2.8
43	DU	51	VAL	2.8
12	CO	27	LEU	2.8
18	CU	17	SER	2.8
27	DE	68	ALA	2.7
51	D6	22	ALA	2.7
24	DA	2900	A	2.7

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Mol	Chain	Res	Type	RSRZ
34	BO	70	GLN	2.7
34	BO	59	LEU	2.7
6	AI	13	ASN	2.7
9	AL	118	LYS	2.7
39	B1	104	GLN	2.7
14	AQ	25	VAL	2.7
43	DU	47	LYS	2.7
47	BW	4	SER	2.7
51	D6	38	LYS	2.7
30	BH	171	LEU	2.7
34	BO	27	HIS	2.7
50	D5	55	ARG	2.7
9	AL	127	LYS	2.7
30	DH	30	LYS	2.7
34	DO	149	GLU	2.7
24	DA	154	G	2.7
45	D3	84	LEU	2.7
51	D6	48	VAL	2.7
34	BO	61	ARG	2.6
46	BZ	96	LYS	2.6
1	AA	345	C	2.6
13	AP	8	GLU	2.6
38	BR	109	GLU	2.6
14	CQ	39	LEU	2.6
27	DE	114	ALA	2.6
35	BP	104	PHE	2.6
53	D8	53	PRO	2.6
24	BA	2062	A	2.6
38	BR	21	GLU	2.6
34	BO	71	VAL	2.6
48	BX	56	VAL	2.6
22	CD	1	C	2.6
24	DA	34	C	2.6
29	BG	47	LYS	2.6
52	D7	48	LYS	2.6
7	AJ	82	GLY	2.6
27	DE	71	GLY	2.6
1	AA	1196	U	2.6
1	CA	5	U	2.6
30	DH	165	ALA	2.6
42	BT	3	THR	2.6
44	BV	116	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
19	AV	6	LYS	2.6
36	B0	5	LYS	2.6
53	D8	31	HIS	2.6
28	BF	207	GLY	2.6
34	BO	62	LEU	2.6
34	BO	94	GLU	2.6
12	CO	23	LYS	2.6
37	BQ	39	ILE	2.6
2	CE	70	PHE	2.6
19	CV	80	TYR	2.6
26	DD	46	GLN	2.6
31	DK	4	ILE	2.5
44	DV	171	ILE	2.5
4	AG	33	MET	2.5
30	DH	50	VAL	2.5
28	DF	69	HIS	2.5
4	CG	31	CYS	2.5
3	AF	91	LEU	2.5
9	AL	115	GLY	2.5
12	CO	62	SER	2.5
38	DR	106	SER	2.5
51	D6	36	LEU	2.5
42	DT	68	ARG	2.5
38	BR	131	ALA	2.5
13	AP	9	ILE	2.5
53	D8	34	TRP	2.5
7	AJ	88	PRO	2.5
3	CF	91	LEU	2.5
26	DD	33	LEU	2.5
43	BU	81	LYS	2.5
32	DM	69	GLN	2.5
33	DN	22	ILE	2.5
44	BV	108	PRO	2.5
46	BZ	92	LYS	2.5
35	DP	100	GLY	2.5
51	B6	22	ALA	2.5
14	AQ	26	ARG	2.5
33	BN	31	LYS	2.5
9	AL	123	PRO	2.5
3	CF	184	TYR	2.5
31	DK	16	GLY	2.5
53	B8	35	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
34	BO	25	SER	2.4
34	DO	50	ARG	2.4
7	AJ	154	TYR	2.4
27	BE	52	LEU	2.4
24	DA	2062	A	2.4
42	DT	94	GLY	2.4
35	BP	66	ILE	2.4
43	DU	54	LYS	2.4
18	AU	17	SER	2.4
45	D3	9	SER	2.4
30	DH	103	LEU	2.4
27	BE	59	VAL	2.4
34	DO	110	TYR	2.4
27	DE	26	ILE	2.4
34	DO	70	GLN	2.4
43	DU	86	ARG	2.4
5	AH	83	GLU	2.4
35	DP	80	GLU	2.4
38	BR	134	GLU	2.4
47	BW	5	GLU	2.4
49	D4	9	LEU	2.4
32	BM	129	PRO	2.4
27	DE	66	HIS	2.4
17	CT	92	ARG	2.4
34	DO	49	ARG	2.4
34	DO	148	LEU	2.4
36	B0	4	LEU	2.4
46	DZ	98	LEU	2.4
23	A1	14	A	2.4
24	BA	1536	A	2.4
32	BM	136	GLU	2.4
24	BA	165	U	2.4
43	BU	54	LYS	2.3
9	CL	125	TYR	2.3
4	CG	33	MET	2.3
4	AG	121	VAL	2.3
40	D2	48	GLY	2.3
3	AF	39	ILE	2.3
7	AJ	153	HIS	2.3
35	BP	140	ALA	2.3
11	CN	36	ASP	2.3
38	BR	6	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
10	AM	101	VAL	2.3
44	BV	161	VAL	2.3
9	AL	116	LYS	2.3
50	B5	56	LYS	2.3
7	CJ	32	ARG	2.3
3	CF	39	ILE	2.3
9	AL	119	ALA	2.3
10	AM	59	SER	2.3
44	BV	114	GLY	2.3
53	D8	7	HIS	2.3
23	A1	19	U	2.3
50	B5	57	VAL	2.3
11	CN	12	ARG	2.3
13	AP	102	ARG	2.3
27	DE	149	ARG	2.3
29	DG	39	ILE	2.3
32	BM	132	ALA	2.3
42	DT	3	THR	2.3
43	BU	90	LEU	2.3
18	AU	81	PHE	2.3
24	BA	2	G	2.3
34	DO	68	GLN	2.3
53	D8	35	GLN	2.3
33	BN	108	GLU	2.3
13	CP	4	ILE	2.3
12	CO	128	ALA	2.3
12	CO	129	ALA	2.3
22	CD	69	C	2.3
17	CT	7	THR	2.3
29	DG	152	LEU	2.3
32	BM	15	LEU	2.3
35	DP	104	PHE	2.3
46	DZ	17	SER	2.3
51	D6	33	LYS	2.3
34	BO	149	GLU	2.2
24	BA	2805	G	2.2
26	DD	36	PRO	2.2
47	DW	18	PRO	2.2
7	CJ	2	ALA	2.2
14	AQ	20	ALA	2.2
37	DQ	2	ALA	2.2
38	BR	1	MET	2.2

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Mol	Chain	Res	Type	RSRZ
41	BS	113	LYS	2.2
49	D4	62	ARG	2.2
50	B5	60	VAL	2.2
53	B8	56	GLU	2.2
28	DF	25	PRO	2.2
46	DZ	80	LEU	2.2
53	B8	48	PHE	2.2
19	CV	79	THR	2.2
24	BA	2211	G	2.2
24	BA	2793	G	2.2
12	AO	15	ARG	2.2
47	DW	41	ILE	2.2
7	CJ	83	ALA	2.2
29	BG	3	LEU	2.2
29	DG	155	MET	2.2
34	DO	47	ASP	2.2
27	BE	159	HIS	2.2
11	AN	25	TYR	2.2
10	CM	59	SER	2.2
11	AN	16	SER	2.2
1	AA	1443	G	2.2
7	CJ	81	GLY	2.2
12	AO	63	GLY	2.2
19	AV	2	PRO	2.2
34	DO	20	GLY	2.2
27	DE	127	ASP	2.2
3	CF	186	PHE	2.2
22	AD	34	C	2.2
24	BA	790	C	2.2
51	D6	39	TYR	2.2
4	AG	163	GLU	2.2
8	AK	1	MET	2.2
46	DZ	91	LYS	2.2
12	CO	18	VAL	2.1
29	DG	161	THR	2.1
17	CT	32	TYR	2.1
21	CX	13	ILE	2.1
26	DD	106	ILE	2.1
53	D8	51	ALA	2.1
26	BD	176	ARG	2.1
7	AJ	84	ASN	2.1
34	DO	63	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
53	B8	33	ASN	2.1
49	B4	59	PHE	2.1
48	DX	36	VAL	2.1
45	B3	10	THR	2.1
1	CA	412	A	2.1
16	CS	19	ILE	2.1
29	DG	52	ILE	2.1
43	DU	61	ILE	2.1
41	DS	113	LYS	2.1
46	DZ	21	ARG	2.1
43	BU	80	GLY	2.1
1	CA	1397	C	2.1
53	D8	33	ASN	2.1
30	DH	115	VAL	2.1
43	DU	79	CYS	2.1
1	AA	86	U	2.1
34	BO	36	LYS	2.1
27	BE	79	ARG	2.1
39	B1	96	ALA	2.1
50	B5	53	ALA	2.1
13	CP	8	GLU	2.1
27	DE	65	GLY	2.1
46	BZ	93	GLU	2.1
49	D4	42	PHE	2.1
27	DE	25	VAL	2.1
17	AT	29	HIS	2.1
27	DE	64	LYS	2.1
12	CO	37	CYS	2.1
27	DE	159	HIS	2.1
32	BM	130	HIS	2.1
46	BZ	85	LEU	2.1
5	AH	24	ARG	2.1
9	CL	114	TYR	2.1
17	AT	88	TYR	2.1
31	DK	1	MET	2.1
3	AF	37	GLN	2.1
24	DA	1026	U	2.1
46	DZ	84	GLY	2.1
38	BR	106	SER	2.1
44	BV	166	SER	2.1
47	DW	4	SER	2.1
49	B4	66	SER	2.1

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Mol	Chain	Res	Type	RSRZ
29	DG	149	VAL	2.1
1	AA	968	A	2.1
26	DD	4	LYS	2.1
53	D8	59	LYS	2.1
35	DP	66	ILE	2.1
43	DU	23	ARG	2.1
44	DV	120	ILE	2.1
40	D2	32	THR	2.1
51	D6	13	CYS	2.1
13	CP	118	ALA	2.1
24	BA	546	C	2.1
31	DK	36	ALA	2.1
42	DT	4	ALA	2.1
3	CF	2	GLY	2.1
2	CE	163	PHE	2.1
40	D2	34	GLU	2.1
2	CE	22	LYS	2.0
34	DO	36	LYS	2.0
30	DH	155	SER	2.0
46	BZ	97	LEU	2.0
49	D4	40	HIS	2.0
7	AJ	147	ALA	2.0
8	AK	3	THR	2.0
10	AM	58	ASP	2.0
33	BN	81	ASP	2.0
44	BV	25	PRO	2.0
4	AG	151	LYS	2.0
11	CN	11	LYS	2.0
53	B8	36	LYS	2.0
32	BM	53	VAL	2.0
10	AM	60	ARG	2.0
10	AM	88	LEU	2.0
19	AV	3	ARG	2.0
22	CD	2	G	2.0
24	BA	1534	G	2.0
30	BH	3	ARG	2.0
2	CE	68	ILE	2.0
27	DE	92	THR	2.0
43	BU	89	PHE	2.0
22	CD	72	A	2.0
8	AK	84	ARG	2.0
41	BS	92	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
29	DG	3	LEU	2.0
24	DA	4	C	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3301	1/1	-0.12	0.15	140,140,140,140	0
54	MG	AA	1785	1/1	0.06	0.20	146,146,146,146	0
54	MG	AA	1673	1/1	0.27	0.18	131,131,131,131	0
54	MG	CA	1765	1/1	0.27	0.16	122,122,122,122	0
54	MG	AA	1782	1/1	0.27	0.28	124,124,124,124	0
54	MG	AA	1739	1/1	0.29	0.12	191,191,191,191	0
54	MG	CA	1622	1/1	0.30	0.46	113,113,113,113	0
54	MG	BA	3427	1/1	0.31	0.12	160,160,160,160	0
54	MG	CA	1705	1/1	0.31	0.13	135,135,135,135	0
54	MG	AA	1773	1/1	0.32	0.21	125,125,125,125	0
54	MG	CA	1787	1/1	0.32	0.30	136,136,136,136	0
54	MG	BA	3597	1/1	0.32	0.20	103,103,103,103	0
54	MG	DA	3444	1/1	0.32	0.12	133,133,133,133	0
54	MG	AA	1629	1/1	0.33	0.15	134,134,134,134	0
54	MG	AA	1827	1/1	0.33	0.17	112,112,112,112	0
54	MG	BB	209	1/1	0.33	0.13	112,112,112,112	0
54	MG	DB	207	1/1	0.33	0.25	133,133,133,133	0
54	MG	CA	1739	1/1	0.35	0.28	120,120,120,120	0
54	MG	AA	1749	1/1	0.35	0.16	130,130,130,130	0
54	MG	AA	1769	1/1	0.36	0.18	122,122,122,122	0
54	MG	AA	1786	1/1	0.37	0.14	145,145,145,145	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	AA	1675	1/1	0.37	0.36	112,112,112,112	0
54	MG	DA	3296	1/1	0.37	0.24	104,104,104,104	0
54	MG	DA	3399	1/1	0.38	0.15	103,103,103,103	0
54	MG	DB	206	1/1	0.39	0.33	104,104,104,104	0
54	MG	CA	1664	1/1	0.39	0.17	169,169,169,169	0
54	MG	CA	1781	1/1	0.40	0.21	148,148,148,148	0
54	MG	BA	3308	1/1	0.41	0.24	108,108,108,108	0
54	MG	CC	108	1/1	0.42	0.15	120,120,120,120	0
54	MG	AA	1614	1/1	0.43	0.16	132,132,132,132	0
54	MG	CA	1658	1/1	0.44	0.26	104,104,104,104	0
54	MG	BA	3348	1/1	0.44	0.12	140,140,140,140	0
54	MG	CA	1722	1/1	0.45	0.36	104,104,104,104	0
54	MG	CA	1653	1/1	0.46	0.17	124,124,124,124	0
54	MG	DA	3038	1/1	0.46	0.26	119,119,119,119	0
54	MG	BA	3352	1/1	0.47	0.24	112,112,112,112	0
54	MG	AC	105	1/1	0.47	0.21	100,100,100,100	0
54	MG	DA	3088	1/1	0.49	0.28	110,110,110,110	0
54	MG	CA	1625	1/1	0.50	0.21	115,115,115,115	0
54	MG	DA	3406	1/1	0.50	0.27	113,113,113,113	0
54	MG	BA	3293	1/1	0.50	0.23	89,89,89,89	0
54	MG	AA	1818	1/1	0.50	0.37	121,121,121,121	0
54	MG	DA	3338	1/1	0.50	0.33	105,105,105,105	0
54	MG	CA	1748	1/1	0.51	0.20	110,110,110,110	0
54	MG	AA	1637	1/1	0.51	0.20	122,122,122,122	0
54	MG	CA	1642	1/1	0.51	0.26	116,116,116,116	0
54	MG	DA	3289	1/1	0.52	0.26	110,110,110,110	0
54	MG	BA	3288	1/1	0.52	0.24	115,115,115,115	0
54	MG	BA	3056	1/1	0.52	0.35	109,109,109,109	0
54	MG	CA	1700	1/1	0.53	0.15	133,133,133,133	0
54	MG	BA	3231	1/1	0.54	0.20	89,89,89,89	0
54	MG	DA	3072	1/1	0.54	0.17	109,109,109,109	0
54	MG	AA	1752	1/1	0.54	0.09	134,134,134,134	0
54	MG	AA	1682	1/1	0.54	0.25	103,103,103,103	0
54	MG	CL	201	1/1	0.55	0.46	104,104,104,104	0
54	MG	BA	3435	1/1	0.55	0.31	94,94,94,94	0
54	MG	DA	3405	1/1	0.56	0.12	153,153,153,153	0
54	MG	DA	3071	1/1	0.56	0.14	107,107,107,107	0
54	MG	AA	1716	1/1	0.56	0.24	106,106,106,106	0
54	MG	DA	3500	1/1	0.56	0.27	98,98,98,98	0
54	MG	BA	3503	1/1	0.56	0.24	117,117,117,117	0
54	MG	AA	1756	1/1	0.56	0.17	121,121,121,121	0
54	MG	DA	3117	1/1	0.57	0.19	102,102,102,102	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1713	1/1	0.57	0.21	109,109,109,109	0
54	MG	BA	3149	1/1	0.57	0.14	91,91,91,91	0
54	MG	DA	3040	1/1	0.57	0.24	103,103,103,103	0
54	MG	DA	3274	1/1	0.58	0.32	100,100,100,100	0
54	MG	AA	1617	1/1	0.58	0.29	97,97,97,97	0
54	MG	AA	1764	1/1	0.58	0.24	111,111,111,111	0
54	MG	CA	1741	1/1	0.58	0.19	114,114,114,114	0
54	MG	BA	3130	1/1	0.59	0.27	105,105,105,105	0
54	MG	DA	3324	1/1	0.59	0.47	90,90,90,90	0
54	MG	AA	1620	1/1	0.59	0.09	140,140,140,140	0
54	MG	AC	104	1/1	0.59	0.28	100,100,100,100	0
54	MG	BA	3414	1/1	0.59	0.13	102,102,102,102	0
54	MG	AA	1812	1/1	0.59	0.31	99,99,99,99	0
54	MG	CA	1626	1/1	0.59	0.24	115,115,115,115	0
54	MG	DA	3460	1/1	0.59	0.09	100,100,100,100	0
54	MG	DA	3495	1/1	0.59	0.17	125,125,125,125	0
54	MG	CA	1794	1/1	0.59	0.28	112,112,112,112	0
54	MG	CA	1714	1/1	0.59	0.12	161,161,161,161	0
54	MG	AA	1710	1/1	0.59	0.11	118,118,118,118	0
54	MG	AA	1789	1/1	0.60	0.34	109,109,109,109	0
54	MG	AA	1646	1/1	0.60	0.30	105,105,105,105	0
54	MG	DA	3370	1/1	0.60	0.31	87,87,87,87	0
54	MG	AA	1724	1/1	0.60	0.24	126,126,126,126	0
54	MG	DA	3151	1/1	0.60	0.24	106,106,106,106	0
54	MG	DA	3322	1/1	0.60	0.20	104,104,104,104	0
54	MG	DA	3435	1/1	0.61	0.10	134,134,134,134	0
54	MG	DA	3442	1/1	0.61	0.28	105,105,105,105	0
54	MG	CA	1724	1/1	0.61	0.30	94,94,94,94	0
54	MG	DA	3278	1/1	0.61	0.24	91,91,91,91	0
54	MG	CA	1682	1/1	0.61	0.30	94,94,94,94	0
54	MG	CA	1753	1/1	0.61	0.41	105,105,105,105	0
54	MG	CA	1761	1/1	0.61	0.24	103,103,103,103	0
54	MG	DA	3067	1/1	0.61	0.49	93,93,93,93	0
54	MG	DA	3430	1/1	0.62	0.25	110,110,110,110	0
54	MG	DA	3315	1/1	0.62	0.28	95,95,95,95	0
54	MG	DA	3036	1/1	0.62	0.30	114,114,114,114	0
54	MG	CA	1719	1/1	0.62	0.23	104,104,104,104	0
54	MG	AA	1808	1/1	0.62	0.23	125,125,125,125	0
54	MG	CA	1696	1/1	0.62	0.15	121,121,121,121	0
54	MG	CA	1732	1/1	0.62	0.26	108,108,108,108	0
54	MG	CX	101	1/1	0.62	0.27	101,101,101,101	0
54	MG	AA	1624	1/1	0.62	0.16	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1772	1/1	0.63	0.12	128,128,128,128	0
54	MG	DA	3192	1/1	0.63	0.31	92,92,92,92	0
54	MG	BA	3091	1/1	0.63	0.26	128,128,128,128	0
54	MG	BA	3280	1/1	0.63	0.07	106,106,106,106	0
54	MG	AD	101	1/1	0.63	0.24	114,114,114,114	0
54	MG	AA	1823	1/1	0.63	0.11	151,151,151,151	0
54	MG	DB	215	1/1	0.63	0.13	120,120,120,120	0
54	MG	DA	3348	1/1	0.64	0.34	90,90,90,90	0
54	MG	BA	3566	1/1	0.64	0.45	70,70,70,70	0
54	MG	DA	3373	1/1	0.64	0.34	107,107,107,107	0
54	MG	BA	3180	1/1	0.64	0.39	92,92,92,92	0
54	MG	BA	3118	1/1	0.64	0.34	83,83,83,83	0
54	MG	AA	1654	1/1	0.64	0.30	99,99,99,99	0
54	MG	DA	3077	1/1	0.64	0.25	110,110,110,110	0
54	MG	AA	1612	1/1	0.64	0.12	131,131,131,131	0
54	MG	DA	3138	1/1	0.65	0.15	121,121,121,121	0
54	MG	DA	3358	1/1	0.65	0.23	113,113,113,113	0
54	MG	BA	3468	1/1	0.65	0.25	99,99,99,99	0
54	MG	BA	3418	1/1	0.65	0.30	104,104,104,104	0
54	MG	DA	3466	1/1	0.65	0.17	123,123,123,123	0
54	MG	DA	3381	1/1	0.65	0.22	93,93,93,93	0
54	MG	DA	3319	1/1	0.65	0.15	97,97,97,97	0
54	MG	DA	3506	1/1	0.65	0.38	91,91,91,91	0
54	MG	BA	3423	1/1	0.65	0.20	100,100,100,100	0
54	MG	BA	3464	1/1	0.65	0.12	101,101,101,101	0
54	MG	CA	1746	1/1	0.65	0.43	97,97,97,97	0
54	MG	CA	1773	1/1	0.66	0.25	113,113,113,113	0
54	MG	BA	3362	1/1	0.66	0.32	83,83,83,83	0
54	MG	CA	1785	1/1	0.66	0.21	101,101,101,101	0
54	MG	BA	3443	1/1	0.66	0.14	116,116,116,116	0
54	MG	BB	213	1/1	0.66	0.16	103,103,103,103	0
54	MG	CA	1603	1/1	0.66	0.40	115,115,115,115	0
54	MG	BA	3453	1/1	0.66	0.18	78,78,78,78	0
54	MG	BA	3307	1/1	0.66	0.25	75,75,75,75	0
54	MG	AA	1709	1/1	0.66	0.10	106,106,106,106	0
54	MG	CA	1629	1/1	0.66	0.18	107,107,107,107	0
54	MG	DA	3287	1/1	0.66	0.18	102,102,102,102	0
54	MG	AA	1776	1/1	0.66	0.26	102,102,102,102	0
54	MG	DB	209	1/1	0.66	0.14	97,97,97,97	0
54	MG	DB	212	1/1	0.66	0.27	101,101,101,101	0
54	MG	AA	1690	1/1	0.66	0.12	131,131,131,131	0
54	MG	DA	3345	1/1	0.67	0.30	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3493	1/1	0.67	0.38	74,74,74,74	0
54	MG	CA	1709	1/1	0.67	0.10	97,97,97,97	0
54	MG	DA	3360	1/1	0.67	0.34	86,86,86,86	0
54	MG	AA	1732	1/1	0.67	0.24	104,104,104,104	0
54	MG	BA	3341	1/1	0.67	0.29	67,67,67,67	0
54	MG	DA	3145	1/1	0.67	0.19	86,86,86,86	0
54	MG	BB	214	1/1	0.67	0.17	99,99,99,99	0
54	MG	CA	1725	1/1	0.68	0.22	115,115,115,115	0
54	MG	AA	1726	1/1	0.68	0.17	95,95,95,95	0
54	MG	AA	1677	1/1	0.68	0.28	109,109,109,109	0
54	MG	DA	3086	1/1	0.68	0.12	109,109,109,109	0
54	MG	BA	3500	1/1	0.68	0.12	92,92,92,92	0
54	MG	AA	1734	1/1	0.68	0.13	135,135,135,135	0
54	MG	DA	3459	1/1	0.68	0.30	87,87,87,87	0
54	MG	DA	3121	1/1	0.68	0.27	109,109,109,109	0
54	MG	BA	3522	1/1	0.68	0.19	100,100,100,100	0
54	MG	CC	107	1/1	0.68	0.24	105,105,105,105	0
54	MG	DA	3149	1/1	0.68	0.21	79,79,79,79	0
54	MG	AA	1736	1/1	0.68	0.26	92,92,92,92	0
54	MG	DA	3520	1/1	0.68	0.27	99,99,99,99	0
54	MG	DA	3167	1/1	0.68	0.45	105,105,105,105	0
54	MG	BA	3446	1/1	0.68	0.35	94,94,94,94	0
54	MG	BA	3625	1/1	0.68	0.13	113,113,113,113	0
54	MG	AA	1711	1/1	0.68	0.09	132,132,132,132	0
54	MG	BA	3227	1/1	0.68	0.27	101,101,101,101	0
54	MG	DA	3432	1/1	0.69	0.19	102,102,102,102	0
54	MG	CC	109	1/1	0.69	0.22	111,111,111,111	0
54	MG	DA	3029	1/1	0.69	0.14	96,96,96,96	0
54	MG	CA	1662	1/1	0.69	0.12	110,110,110,110	0
54	MG	AA	1828	1/1	0.69	0.20	107,107,107,107	0
54	MG	BA	3621	1/1	0.69	0.29	93,93,93,93	0
54	MG	BA	3157	1/1	0.69	0.17	72,72,72,72	0
54	MG	BA	3394	1/1	0.69	0.16	102,102,102,102	0
54	MG	BA	3271	1/1	0.69	0.20	98,98,98,98	0
54	MG	DA	3074	1/1	0.69	0.29	102,102,102,102	0
54	MG	CA	1708	1/1	0.69	0.29	98,98,98,98	0
54	MG	DA	3391	1/1	0.69	0.25	107,107,107,107	0
54	MG	AA	1757	1/1	0.69	0.21	102,102,102,102	0
54	MG	CA	1656	1/1	0.69	0.16	127,127,127,127	0
54	MG	BA	3196	1/1	0.69	0.16	85,85,85,85	0
54	MG	CA	1715	1/1	0.69	0.38	102,102,102,102	0
54	MG	AA	1608	1/1	0.70	0.32	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3446	1/1	0.70	0.25	99,99,99,99	0
54	MG	CA	1628	1/1	0.70	0.09	110,110,110,110	0
54	MG	BA	3608	1/1	0.70	0.16	89,89,89,89	0
54	MG	CA	1676	1/1	0.70	0.20	90,90,90,90	0
54	MG	AA	1706	1/1	0.70	0.21	94,94,94,94	0
54	MG	AA	1731	1/1	0.70	0.19	97,97,97,97	0
54	MG	CA	1697	1/1	0.70	0.29	95,95,95,95	0
54	MG	DA	3507	1/1	0.70	0.09	117,117,117,117	0
54	MG	DA	3250	1/1	0.70	0.19	105,105,105,105	0
54	MG	DB	205	1/1	0.70	0.31	84,84,84,84	0
54	MG	CA	1655	1/1	0.70	0.38	93,93,93,93	0
54	MG	CA	1703	1/1	0.70	0.37	85,85,85,85	0
54	MG	DA	3434	1/1	0.70	0.22	92,92,92,92	0
54	MG	DA	3357	1/1	0.70	0.16	123,123,123,123	0
54	MG	AA	1765	1/1	0.70	0.24	122,122,122,122	0
54	MG	DA	3024	1/1	0.71	0.20	110,110,110,110	0
54	MG	AC	106	1/1	0.71	0.18	104,104,104,104	0
54	MG	DA	3134	1/1	0.71	0.19	96,96,96,96	0
54	MG	BA	3509	1/1	0.71	0.11	102,102,102,102	0
54	MG	DA	3331	1/1	0.71	0.21	79,79,79,79	0
54	MG	DA	3382	1/1	0.71	0.39	94,94,94,94	0
54	MG	BA	3403	1/1	0.71	0.14	103,103,103,103	0
54	MG	DA	3452	1/1	0.71	0.28	95,95,95,95	0
54	MG	CA	1649	1/1	0.71	0.31	88,88,88,88	0
54	MG	CG	301	1/1	0.71	0.24	113,113,113,113	0
54	MG	DA	3096	1/1	0.71	0.38	88,88,88,88	0
54	MG	CA	1729	1/1	0.72	0.16	108,108,108,108	0
54	MG	BA	3615	1/1	0.72	0.24	83,83,83,83	0
54	MG	DA	3075	1/1	0.72	0.23	93,93,93,93	0
54	MG	AA	1721	1/1	0.72	0.22	95,95,95,95	0
54	MG	DA	3085	1/1	0.72	0.46	89,89,89,89	0
54	MG	DA	3281	1/1	0.72	0.22	92,92,92,92	0
54	MG	DA	3004	1/1	0.72	0.33	105,105,105,105	0
54	MG	AA	1722	1/1	0.72	0.23	96,96,96,96	0
54	MG	DA	3493	1/1	0.72	0.15	90,90,90,90	0
54	MG	CA	1742	1/1	0.72	0.38	90,90,90,90	0
54	MG	DA	3387	1/1	0.72	0.24	89,89,89,89	0
54	MG	CA	1616	1/1	0.72	0.17	102,102,102,102	0
54	MG	CA	1618	1/1	0.72	0.18	108,108,108,108	0
54	MG	DA	3517	1/1	0.72	0.31	80,80,80,80	0
54	MG	CA	1621	1/1	0.72	0.30	82,82,82,82	0
54	MG	DA	3049	1/1	0.72	0.21	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3407	1/1	0.72	0.12	94,94,94,94	0
54	MG	DA	3426	1/1	0.72	0.35	95,95,95,95	0
54	MG	DB	208	1/1	0.72	0.27	94,94,94,94	0
54	MG	DA	3065	1/1	0.72	0.29	82,82,82,82	0
54	MG	CA	1754	1/1	0.72	0.27	108,108,108,108	0
54	MG	BA	3245	1/1	0.72	0.23	67,67,67,67	0
54	MG	AA	1705	1/1	0.73	0.14	104,104,104,104	0
54	MG	DA	3284	1/1	0.73	0.27	76,76,76,76	0
54	MG	DA	3456	1/1	0.73	0.14	105,105,105,105	0
54	MG	AA	1639	1/1	0.73	0.30	88,88,88,88	0
54	MG	BA	3629	1/1	0.73	0.21	100,100,100,100	0
54	MG	DA	3123	1/1	0.73	0.38	92,92,92,92	0
54	MG	AA	1610	1/1	0.73	0.18	102,102,102,102	0
54	MG	AA	1801	1/1	0.73	0.10	113,113,113,113	0
54	MG	DA	3141	1/1	0.73	0.28	88,88,88,88	0
54	MG	AA	1725	1/1	0.73	0.24	105,105,105,105	0
54	MG	CA	1760	1/1	0.73	0.30	109,109,109,109	0
54	MG	BB	215	1/1	0.73	0.14	110,110,110,110	0
54	MG	DA	3410	1/1	0.73	0.17	67,67,67,67	0
54	MG	DA	3335	1/1	0.73	0.31	91,91,91,91	0
54	MG	B8	101	1/1	0.73	0.14	91,91,91,91	0
54	MG	BA	3604	1/1	0.73	0.34	92,92,92,92	0
54	MG	AG	301	1/1	0.73	0.10	122,122,122,122	0
54	MG	DA	3355	1/1	0.73	0.36	84,84,84,84	0
54	MG	CA	1779	1/1	0.73	0.46	97,97,97,97	0
54	MG	BA	3290	1/1	0.73	0.25	82,82,82,82	0
54	MG	DE	302	1/1	0.73	0.15	96,96,96,96	0
54	MG	DA	3330	1/1	0.74	0.29	95,95,95,95	0
54	MG	BA	3426	1/1	0.74	0.34	100,100,100,100	0
54	MG	AA	1797	1/1	0.74	0.30	102,102,102,102	0
54	MG	CA	1751	1/1	0.74	0.23	95,95,95,95	0
54	MG	AA	1693	1/1	0.74	0.17	106,106,106,106	0
54	MG	DA	3346	1/1	0.74	0.21	93,93,93,93	0
54	MG	BA	3442	1/1	0.74	0.20	89,89,89,89	0
54	MG	CA	1755	1/1	0.74	0.25	104,104,104,104	0
54	MG	BA	3605	1/1	0.74	0.27	72,72,72,72	0
54	MG	AC	108	1/1	0.74	0.27	95,95,95,95	0
54	MG	BA	3164	1/1	0.74	0.26	83,83,83,83	0
54	MG	CA	1636	1/1	0.74	0.25	100,100,100,100	0
54	MG	DA	3269	1/1	0.74	0.25	97,97,97,97	0
54	MG	BA	3447	1/1	0.74	0.30	83,83,83,83	0
54	MG	BA	3450	1/1	0.74	0.09	166,166,166,166	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3451	1/1	0.74	0.27	93,93,93,93	0
54	MG	BA	3368	1/1	0.74	0.13	98,98,98,98	0
54	MG	BA	3375	1/1	0.74	0.37	99,99,99,99	0
54	MG	AA	1719	1/1	0.74	0.20	98,98,98,98	0
54	MG	CA	1660	1/1	0.74	0.18	101,101,101,101	0
54	MG	AA	1829	1/1	0.74	0.27	81,81,81,81	0
54	MG	DA	3092	1/1	0.74	0.36	85,85,85,85	0
54	MG	AA	1788	1/1	0.74	0.29	91,91,91,91	0
54	MG	AA	1758	1/1	0.74	0.21	71,71,71,71	0
54	MG	BA	3330	1/1	0.74	0.25	91,91,91,91	0
54	MG	CA	1673	1/1	0.75	0.38	74,74,74,74	0
54	MG	AA	1720	1/1	0.75	0.14	113,113,113,113	0
54	MG	DA	3369	1/1	0.75	0.27	91,91,91,91	0
54	MG	DA	3453	1/1	0.75	0.50	92,92,92,92	0
54	MG	BA	3054	1/1	0.75	0.22	100,100,100,100	0
54	MG	CA	1695	1/1	0.75	0.15	119,119,119,119	0
54	MG	BA	3264	1/1	0.75	0.23	78,78,78,78	0
54	MG	AA	1712	1/1	0.75	0.29	94,94,94,94	0
54	MG	AA	1683	1/1	0.75	0.15	97,97,97,97	0
54	MG	CA	1652	1/1	0.75	0.27	106,106,106,106	0
54	MG	CA	1615	1/1	0.75	0.23	113,113,113,113	0
54	MG	BA	3171	1/1	0.75	0.47	92,92,92,92	0
54	MG	BA	3483	1/1	0.75	0.21	105,105,105,105	0
54	MG	DA	3154	1/1	0.75	0.13	102,102,102,102	0
54	MG	CA	1752	1/1	0.75	0.26	94,94,94,94	0
54	MG	DA	3415	1/1	0.75	0.33	92,92,92,92	0
54	MG	DA	3424	1/1	0.75	0.26	114,114,114,114	0
54	MG	BA	3111	1/1	0.75	0.41	85,85,85,85	0
54	MG	AA	1638	1/1	0.75	0.19	109,109,109,109	0
54	MG	DA	3258	1/1	0.75	0.43	86,86,86,86	0
54	MG	BA	3383	1/1	0.75	0.22	86,86,86,86	0
54	MG	BA	3122	1/1	0.75	0.28	98,98,98,98	0
54	MG	DA	3090	1/1	0.75	0.14	119,119,119,119	0
54	MG	AA	1772	1/1	0.76	0.35	110,110,110,110	0
54	MG	CA	1684	1/1	0.76	0.21	91,91,91,91	0
54	MG	DA	3418	1/1	0.76	0.45	97,97,97,97	0
54	MG	CA	1686	1/1	0.76	0.19	96,96,96,96	0
54	MG	CA	1756	1/1	0.76	0.34	76,76,76,76	0
54	MG	BA	3319	1/1	0.76	0.23	82,82,82,82	0
54	MG	BA	3321	1/1	0.76	0.25	100,100,100,100	0
54	MG	DA	3318	1/1	0.76	0.29	88,88,88,88	0
54	MG	AA	1821	1/1	0.76	0.16	96,96,96,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3551	1/1	0.76	0.14	93,93,93,93	0
54	MG	BA	3554	1/1	0.76	0.20	94,94,94,94	0
54	MG	CA	1776	1/1	0.76	0.29	98,98,98,98	0
54	MG	BA	3555	1/1	0.76	0.17	105,105,105,105	0
54	MG	BA	3235	1/1	0.76	0.24	79,79,79,79	0
54	MG	BA	3576	1/1	0.76	0.19	93,93,93,93	0
54	MG	BA	3594	1/1	0.76	0.09	81,81,81,81	0
54	MG	BA	3062	1/1	0.76	0.17	106,106,106,106	0
54	MG	BA	3075	1/1	0.76	0.16	82,82,82,82	0
54	MG	BA	3082	1/1	0.76	0.43	80,80,80,80	0
54	MG	CA	1643	1/1	0.76	0.24	86,86,86,86	0
54	MG	AA	1707	1/1	0.76	0.07	127,127,127,127	0
54	MG	AA	1621	1/1	0.76	0.34	101,101,101,101	0
54	MG	BA	3183	1/1	0.76	0.25	75,75,75,75	0
54	MG	BA	3392	1/1	0.76	0.10	91,91,91,91	0
54	MG	BA	3049	1/1	0.76	0.14	59,59,59,59	0
54	MG	DA	3521	1/1	0.76	0.41	104,104,104,104	0
54	MG	BA	3631	1/1	0.76	0.32	96,96,96,96	0
54	MG	BB	202	1/1	0.76	0.21	101,101,101,101	0
54	MG	DA	3037	1/1	0.76	0.24	101,101,101,101	0
54	MG	DA	3261	1/1	0.76	0.31	97,97,97,97	0
54	MG	BA	3304	1/1	0.76	0.32	81,81,81,81	0
54	MG	BA	3477	1/1	0.76	0.15	92,92,92,92	0
54	MG	BA	3406	1/1	0.76	0.31	88,88,88,88	0
54	MG	BA	3207	1/1	0.76	0.29	78,78,78,78	0
55	T1C	AA	1837	42/42	0.76	0.20	81,103,111,117	0
54	MG	BA	3540	1/1	0.77	0.35	78,78,78,78	0
54	MG	CA	1689	1/1	0.77	0.32	98,98,98,98	0
54	MG	DA	3412	1/1	0.77	0.18	89,89,89,89	0
54	MG	AA	1628	1/1	0.77	0.28	96,96,96,96	0
54	MG	CA	1758	1/1	0.77	0.24	94,94,94,94	0
54	MG	BA	3429	1/1	0.77	0.30	103,103,103,103	0
54	MG	BA	3360	1/1	0.77	0.24	85,85,85,85	0
54	MG	BA	3089	1/1	0.77	0.30	87,87,87,87	0
54	MG	BA	3570	1/1	0.77	0.17	65,65,65,65	0
54	MG	BA	3363	1/1	0.77	0.21	79,79,79,79	0
54	MG	DA	3089	1/1	0.77	0.24	81,81,81,81	0
54	MG	DA	3323	1/1	0.77	0.23	84,84,84,84	0
54	MG	AA	1741	1/1	0.77	0.17	99,99,99,99	0
54	MG	BA	3109	1/1	0.77	0.20	89,89,89,89	0
54	MG	CA	1631	1/1	0.77	0.12	102,102,102,102	0
54	MG	BA	3377	1/1	0.77	0.17	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	AA	1804	1/1	0.77	0.34	81,81,81,81	0
54	MG	BA	3114	1/1	0.77	0.11	98,98,98,98	0
54	MG	AA	1634	1/1	0.77	0.26	97,97,97,97	0
54	MG	BA	3397	1/1	0.77	0.24	84,84,84,84	0
54	MG	DA	3473	1/1	0.77	0.27	70,70,70,70	0
54	MG	BA	3469	1/1	0.77	0.06	94,94,94,94	0
54	MG	AA	1684	1/1	0.77	0.33	90,90,90,90	0
54	MG	BA	3481	1/1	0.77	0.14	79,79,79,79	0
54	MG	CA	1737	1/1	0.77	0.18	93,93,93,93	0
54	MG	DA	3363	1/1	0.77	0.30	92,92,92,92	0
54	MG	DA	3153	1/1	0.77	0.28	88,88,88,88	0
54	MG	AC	102	1/1	0.77	0.29	102,102,102,102	0
54	MG	CA	1740	1/1	0.77	0.27	103,103,103,103	0
54	MG	BA	3408	1/1	0.77	0.22	79,79,79,79	0
54	MG	AA	1715	1/1	0.77	0.20	112,112,112,112	0
54	MG	AA	1738	1/1	0.77	0.20	120,120,120,120	0
54	MG	BA	3347	1/1	0.77	0.30	86,86,86,86	0
54	MG	DA	3392	1/1	0.77	0.16	82,82,82,82	0
54	MG	BF	302	1/1	0.77	0.28	71,71,71,71	0
54	MG	DB	213	1/1	0.77	0.10	111,111,111,111	0
54	MG	DB	214	1/1	0.77	0.12	101,101,101,101	0
54	MG	DA	3400	1/1	0.77	0.26	95,95,95,95	0
54	MG	BA	3510	1/1	0.77	0.43	97,97,97,97	0
54	MG	BA	3163	1/1	0.77	0.19	94,94,94,94	0
54	MG	DA	3327	1/1	0.78	0.34	75,75,75,75	0
54	MG	DA	3033	1/1	0.78	0.19	93,93,93,93	0
54	MG	CA	1720	1/1	0.78	0.25	86,86,86,86	0
54	MG	CA	1679	1/1	0.78	0.21	97,97,97,97	0
54	MG	DA	3436	1/1	0.78	0.32	92,92,92,92	0
54	MG	BA	3248	1/1	0.78	0.22	76,76,76,76	0
54	MG	BB	211	1/1	0.78	0.16	99,99,99,99	0
54	MG	DA	3150	1/1	0.78	0.40	91,91,91,91	0
54	MG	CA	1727	1/1	0.78	0.14	128,128,128,128	0
54	MG	DA	3060	1/1	0.78	0.35	78,78,78,78	0
54	MG	DA	3064	1/1	0.78	0.41	88,88,88,88	0
54	MG	DA	3457	1/1	0.78	0.24	84,84,84,84	0
54	MG	DA	3458	1/1	0.78	0.11	91,91,91,91	0
54	MG	BA	3380	1/1	0.78	0.23	74,74,74,74	0
54	MG	CA	1730	1/1	0.78	0.13	117,117,117,117	0
54	MG	DA	3248	1/1	0.78	0.26	93,93,93,93	0
54	MG	AA	1601	1/1	0.78	0.28	76,76,76,76	0
54	MG	BA	3197	1/1	0.78	0.23	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3273	1/1	0.78	0.20	80,80,80,80	0
54	MG	AA	1816	1/1	0.78	0.32	93,93,93,93	0
54	MG	DA	3270	1/1	0.78	0.32	90,90,90,90	0
54	MG	BA	3221	1/1	0.78	0.30	93,93,93,93	0
54	MG	DA	3083	1/1	0.78	0.34	90,90,90,90	0
54	MG	CA	1798	1/1	0.78	0.21	115,115,115,115	0
54	MG	AA	1691	1/1	0.78	0.17	107,107,107,107	0
54	MG	DA	3087	1/1	0.78	0.34	79,79,79,79	0
54	MG	AA	1751	1/1	0.78	0.17	90,90,90,90	0
54	MG	BA	3534	1/1	0.78	0.08	85,85,85,85	0
54	MG	BA	3622	1/1	0.78	0.23	97,97,97,97	0
54	MG	CA	1710	1/1	0.78	0.20	102,102,102,102	0
54	MG	DA	3094	1/1	0.78	0.16	107,107,107,107	0
54	MG	DA	3414	1/1	0.78	0.18	92,92,92,92	0
54	MG	BA	3232	1/1	0.78	0.28	95,95,95,95	0
54	MG	AA	1735	1/1	0.78	0.23	104,104,104,104	0
54	MG	AA	1775	1/1	0.78	0.12	113,113,113,113	0
54	MG	BA	3316	1/1	0.78	0.23	91,91,91,91	0
54	MG	AA	1748	1/1	0.79	0.08	152,152,152,152	0
54	MG	DA	3305	1/1	0.79	0.31	78,78,78,78	0
54	MG	AA	1652	1/1	0.79	0.37	93,93,93,93	0
54	MG	DA	3017	1/1	0.79	0.28	105,105,105,105	0
54	MG	DA	3100	1/1	0.79	0.40	64,64,64,64	0
54	MG	BA	3367	1/1	0.79	0.23	91,91,91,91	0
54	MG	BA	3306	1/1	0.79	0.26	94,94,94,94	0
54	MG	BA	3518	1/1	0.79	0.36	87,87,87,87	0
54	MG	DA	3325	1/1	0.79	0.21	92,92,92,92	0
54	MG	DA	3034	1/1	0.79	0.17	82,82,82,82	0
54	MG	DA	3328	1/1	0.79	0.18	98,98,98,98	0
54	MG	BA	3520	1/1	0.79	0.17	86,86,86,86	0
54	MG	CA	1645	1/1	0.79	0.33	78,78,78,78	0
54	MG	BA	3099	1/1	0.79	0.10	68,68,68,68	0
54	MG	DA	3336	1/1	0.79	0.35	90,90,90,90	0
54	MG	AA	1759	1/1	0.79	0.10	101,101,101,101	0
54	MG	DA	3043	1/1	0.79	0.25	88,88,88,88	0
54	MG	AA	1687	1/1	0.79	0.08	137,137,137,137	0
54	MG	AA	1688	1/1	0.79	0.20	118,118,118,118	0
54	MG	BA	3192	1/1	0.79	0.30	100,100,100,100	0
54	MG	DA	3158	1/1	0.79	0.26	71,71,71,71	0
54	MG	CA	1657	1/1	0.79	0.18	114,114,114,114	0
54	MG	BA	3327	1/1	0.79	0.32	85,85,85,85	0
54	MG	DA	3217	1/1	0.79	0.30	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3238	1/1	0.79	0.17	65,65,65,65	0
54	MG	B7	103	1/1	0.79	0.24	79,79,79,79	0
54	MG	BA	3268	1/1	0.79	0.19	86,86,86,86	0
54	MG	DA	3253	1/1	0.79	0.26	88,88,88,88	0
54	MG	BA	3340	1/1	0.79	0.19	84,84,84,84	0
54	MG	CA	1670	1/1	0.79	0.29	73,73,73,73	0
54	MG	AA	1754	1/1	0.79	0.18	91,91,91,91	0
54	MG	DA	3079	1/1	0.79	0.20	95,95,95,95	0
54	MG	BA	3064	1/1	0.79	0.24	63,63,63,63	0
54	MG	BA	3204	1/1	0.79	0.37	106,106,106,106	0
54	MG	AA	1755	1/1	0.79	0.24	88,88,88,88	0
54	MG	CA	1683	1/1	0.79	0.40	86,86,86,86	0
54	MG	BA	3419	1/1	0.79	0.24	81,81,81,81	0
54	MG	BA	3489	1/1	0.79	0.19	84,84,84,84	0
54	MG	DA	3291	1/1	0.79	0.33	84,84,84,84	0
54	MG	AA	1702	1/1	0.79	0.27	80,80,80,80	0
54	MG	BA	3301	1/1	0.80	0.28	91,91,91,91	0
54	MG	DA	3039	1/1	0.80	0.27	80,80,80,80	0
54	MG	BA	3513	1/1	0.80	0.20	78,78,78,78	0
54	MG	DA	3042	1/1	0.80	0.19	78,78,78,78	0
54	MG	BA	3517	1/1	0.80	0.30	90,90,90,90	0
54	MG	BA	3218	1/1	0.80	0.24	90,90,90,90	0
54	MG	DA	3056	1/1	0.80	0.27	97,97,97,97	0
54	MG	AA	1641	1/1	0.80	0.23	74,74,74,74	0
54	MG	DA	3438	1/1	0.80	0.26	82,82,82,82	0
54	MG	BA	3225	1/1	0.80	0.25	75,75,75,75	0
54	MG	AA	1613	1/1	0.80	0.28	97,97,97,97	0
54	MG	BA	3084	1/1	0.80	0.07	109,109,109,109	0
54	MG	AA	1625	1/1	0.80	0.19	83,83,83,83	0
54	MG	BA	3165	1/1	0.80	0.29	48,48,48,48	0
54	MG	BA	3166	1/1	0.80	0.43	72,72,72,72	0
54	MG	AA	1822	1/1	0.80	0.24	101,101,101,101	0
54	MG	AA	1798	1/1	0.80	0.15	93,93,93,93	0
54	MG	CA	1609	1/1	0.80	0.11	121,121,121,121	0
54	MG	DA	3362	1/1	0.80	0.34	79,79,79,79	0
54	MG	CA	1797	1/1	0.80	0.31	101,101,101,101	0
54	MG	AA	1824	1/1	0.80	0.33	93,93,93,93	0
54	MG	BA	3582	1/1	0.80	0.32	78,78,78,78	0
54	MG	AA	1626	1/1	0.80	0.24	84,84,84,84	0
54	MG	CA	1735	1/1	0.80	0.29	86,86,86,86	0
54	MG	DA	3282	1/1	0.80	0.22	88,88,88,88	0
54	MG	CA	1681	1/1	0.80	0.45	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3515	1/1	0.80	0.29	101,101,101,101	0
54	MG	DA	3389	1/1	0.80	0.19	82,82,82,82	0
54	MG	AA	1662	1/1	0.80	0.17	71,71,71,71	0
54	MG	BA	3485	1/1	0.80	0.16	79,79,79,79	0
54	MG	AA	1666	1/1	0.80	0.21	88,88,88,88	0
54	MG	BA	3355	1/1	0.80	0.30	86,86,86,86	0
54	MG	DA	3299	1/1	0.80	0.17	99,99,99,99	0
54	MG	BA	3200	1/1	0.80	0.31	76,76,76,76	0
54	MG	CA	1694	1/1	0.80	0.26	91,91,91,91	0
54	MG	DA	3409	1/1	0.80	0.31	95,95,95,95	0
54	MG	BA	3617	1/1	0.80	0.19	83,83,83,83	0
54	MG	DA	3411	1/1	0.80	0.33	88,88,88,88	0
54	MG	AA	1836	1/1	0.80	0.12	91,91,91,91	0
54	MG	AA	1668	1/1	0.80	0.31	81,81,81,81	0
54	MG	DU	201	1/1	0.80	0.18	89,89,89,89	0
54	MG	CA	1638	1/1	0.80	0.25	100,100,100,100	0
55	T1C	CA	1800	42/42	0.80	0.18	101,116,124,127	0
54	MG	CA	1767	1/1	0.81	0.25	80,80,80,80	0
54	MG	CA	1768	1/1	0.81	0.26	97,97,97,97	0
54	MG	BA	3050	1/1	0.81	0.20	79,79,79,79	0
54	MG	BA	3387	1/1	0.81	0.25	90,90,90,90	0
54	MG	BA	3474	1/1	0.81	0.18	86,86,86,86	0
54	MG	BA	3092	1/1	0.81	0.25	72,72,72,72	0
54	MG	CA	1711	1/1	0.81	0.14	100,100,100,100	0
54	MG	AA	1805	1/1	0.81	0.42	91,91,91,91	0
54	MG	DA	3419	1/1	0.81	0.29	97,97,97,97	0
54	MG	DA	3421	1/1	0.81	0.34	86,86,86,86	0
54	MG	BA	3102	1/1	0.81	0.27	80,80,80,80	0
54	MG	BA	3400	1/1	0.81	0.19	72,72,72,72	0
54	MG	DA	3429	1/1	0.81	0.17	103,103,103,103	0
54	MG	AA	1704	1/1	0.81	0.25	88,88,88,88	0
54	MG	DA	3306	1/1	0.81	0.14	88,88,88,88	0
54	MG	AA	1809	1/1	0.81	0.19	105,105,105,105	0
54	MG	AA	1743	1/1	0.81	0.23	100,100,100,100	0
54	MG	BA	3071	1/1	0.81	0.28	90,90,90,90	0
54	MG	DA	3095	1/1	0.81	0.17	88,88,88,88	0
54	MG	BA	3508	1/1	0.81	0.29	83,83,83,83	0
54	MG	BA	3074	1/1	0.81	0.18	76,76,76,76	0
54	MG	BA	3274	1/1	0.81	0.17	81,81,81,81	0
54	MG	BA	3511	1/1	0.81	0.20	80,80,80,80	0
54	MG	DA	3002	1/1	0.81	0.23	87,87,87,87	0
54	MG	BA	3128	1/1	0.81	0.10	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3283	1/1	0.81	0.25	78,78,78,78	0
54	MG	CA	1672	1/1	0.81	0.25	79,79,79,79	0
54	MG	DA	3142	1/1	0.81	0.23	83,83,83,83	0
54	MG	DA	3337	1/1	0.81	0.31	80,80,80,80	0
54	MG	DA	3143	1/1	0.81	0.13	84,84,84,84	0
54	MG	BB	216	1/1	0.81	0.07	111,111,111,111	0
54	MG	DA	3490	1/1	0.81	0.18	77,77,77,77	0
54	MG	BA	3287	1/1	0.81	0.45	70,70,70,70	0
54	MG	AA	1799	1/1	0.81	0.22	111,111,111,111	0
54	MG	BA	3361	1/1	0.81	0.31	76,76,76,76	0
54	MG	DA	3152	1/1	0.81	0.22	86,86,86,86	0
54	MG	BA	3523	1/1	0.81	0.23	82,82,82,82	0
54	MG	BA	3440	1/1	0.81	0.21	73,73,73,73	0
54	MG	CA	1750	1/1	0.81	0.29	97,97,97,97	0
54	MG	BA	3135	1/1	0.81	0.33	85,85,85,85	0
54	MG	DA	3187	1/1	0.81	0.31	83,83,83,83	0
54	MG	DB	202	1/1	0.81	0.16	116,116,116,116	0
54	MG	BA	3291	1/1	0.81	0.23	85,85,85,85	0
54	MG	DA	3371	1/1	0.81	0.23	98,98,98,98	0
54	MG	AA	1696	1/1	0.81	0.15	80,80,80,80	0
54	MG	DA	3045	1/1	0.81	0.21	93,93,93,93	0
54	MG	BA	3299	1/1	0.81	0.28	79,79,79,79	0
54	MG	BA	3151	1/1	0.81	0.25	91,91,91,91	0
54	MG	AA	1833	1/1	0.81	0.26	98,98,98,98	0
54	MG	AA	1679	1/1	0.81	0.16	86,86,86,86	0
54	MG	BA	3382	1/1	0.81	0.34	89,89,89,89	0
54	MG	DA	3265	1/1	0.81	0.19	91,91,91,91	0
54	MG	CA	1701	1/1	0.81	0.23	90,90,90,90	0
54	MG	DA	3068	1/1	0.81	0.26	86,86,86,86	0
54	MG	BA	3466	1/1	0.81	0.18	81,81,81,81	0
54	MG	BA	3100	1/1	0.82	0.16	105,105,105,105	0
54	MG	AA	1606	1/1	0.82	0.20	101,101,101,101	0
54	MG	BA	3590	1/1	0.82	0.23	83,83,83,83	0
54	MG	BA	3344	1/1	0.82	0.12	91,91,91,91	0
54	MG	BA	3222	1/1	0.82	0.18	62,62,62,62	0
54	MG	BA	3072	1/1	0.82	0.20	81,81,81,81	0
54	MG	DA	3081	1/1	0.82	0.27	91,91,91,91	0
54	MG	AA	1664	1/1	0.82	0.44	81,81,81,81	0
54	MG	BA	3416	1/1	0.82	0.17	92,92,92,92	0
54	MG	BA	3614	1/1	0.82	0.09	92,92,92,92	0
54	MG	AA	1653	1/1	0.82	0.25	89,89,89,89	0
54	MG	CA	1792	1/1	0.82	0.15	105,105,105,105	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3359	1/1	0.82	0.21	83,83,83,83	0
54	MG	BA	3080	1/1	0.82	0.21	82,82,82,82	0
54	MG	BA	3300	1/1	0.82	0.17	95,95,95,95	0
54	MG	BA	3182	1/1	0.82	0.30	81,81,81,81	0
54	MG	CA	1654	1/1	0.82	0.19	107,107,107,107	0
54	MG	CS	101	1/1	0.82	0.28	95,95,95,95	0
54	MG	AA	1615	1/1	0.82	0.12	114,114,114,114	0
54	MG	CC	101	1/1	0.82	0.10	110,110,110,110	0
54	MG	DA	3450	1/1	0.82	0.21	94,94,94,94	0
54	MG	CC	106	1/1	0.82	0.14	98,98,98,98	0
54	MG	BA	3630	1/1	0.82	0.18	93,93,93,93	0
54	MG	BA	3305	1/1	0.82	0.31	79,79,79,79	0
54	MG	BA	3191	1/1	0.82	0.19	78,78,78,78	0
54	MG	BA	3370	1/1	0.82	0.09	100,100,100,100	0
54	MG	BA	3519	1/1	0.82	0.19	115,115,115,115	0
54	MG	BA	3372	1/1	0.82	0.37	81,81,81,81	0
54	MG	DA	3344	1/1	0.82	0.28	82,82,82,82	0
54	MG	DA	3018	1/1	0.82	0.21	90,90,90,90	0
54	MG	BA	3250	1/1	0.82	0.32	61,61,61,61	0
54	MG	AA	1811	1/1	0.82	0.19	102,102,102,102	0
54	MG	BA	3525	1/1	0.82	0.25	47,47,47,47	0
54	MG	BA	3313	1/1	0.82	0.43	94,94,94,94	0
54	MG	CA	1745	1/1	0.82	0.16	102,102,102,102	0
54	MG	BU	202	1/1	0.82	0.09	71,71,71,71	0
54	MG	DA	3511	1/1	0.82	0.25	77,77,77,77	0
54	MG	B3	102	1/1	0.82	0.09	80,80,80,80	0
54	MG	DA	3516	1/1	0.82	0.30	76,76,76,76	0
54	MG	CA	1749	1/1	0.82	0.30	91,91,91,91	0
54	MG	DA	3177	1/1	0.82	0.41	65,65,65,65	0
54	MG	BA	3088	1/1	0.82	0.09	84,84,84,84	0
54	MG	BA	3544	1/1	0.82	0.22	83,83,83,83	0
54	MG	CA	1601	1/1	0.82	0.24	95,95,95,95	0
54	MG	DA	3044	1/1	0.82	0.15	78,78,78,78	0
54	MG	DA	3243	1/1	0.82	0.22	71,71,71,71	0
54	MG	DA	3246	1/1	0.82	0.25	89,89,89,89	0
54	MG	BA	3549	1/1	0.82	0.13	74,74,74,74	0
54	MG	DB	211	1/1	0.82	0.44	90,90,90,90	0
54	MG	AA	1655	1/1	0.82	0.28	97,97,97,97	0
54	MG	CA	1692	1/1	0.82	0.34	93,93,93,93	0
54	MG	AA	1814	1/1	0.82	0.24	91,91,91,91	0
54	MG	DA	3063	1/1	0.82	0.26	95,95,95,95	0
54	MG	BA	3063	1/1	0.82	0.29	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3393	1/1	0.82	0.27	89,89,89,89	0
54	MG	AA	1815	1/1	0.82	0.36	98,98,98,98	0
54	MG	CA	1762	1/1	0.82	0.23	83,83,83,83	0
54	MG	AA	1647	1/1	0.83	0.31	92,92,92,92	0
54	MG	BA	3206	1/1	0.83	0.34	89,89,89,89	0
54	MG	BA	3289	1/1	0.83	0.22	94,94,94,94	0
54	MG	DA	3082	1/1	0.83	0.24	97,97,97,97	0
54	MG	BA	3148	1/1	0.83	0.29	85,85,85,85	0
54	MG	BB	208	1/1	0.83	0.10	89,89,89,89	0
54	MG	CA	1728	1/1	0.83	0.30	76,76,76,76	0
54	MG	BA	3215	1/1	0.83	0.33	74,74,74,74	0
54	MG	AA	1649	1/1	0.83	0.27	81,81,81,81	0
54	MG	AA	1708	1/1	0.83	0.17	96,96,96,96	0
54	MG	CC	105	1/1	0.83	0.34	86,86,86,86	0
54	MG	BA	3444	1/1	0.83	0.30	81,81,81,81	0
54	MG	BA	3153	1/1	0.83	0.20	76,76,76,76	0
54	MG	BA	3223	1/1	0.83	0.30	84,84,84,84	0
54	MG	BA	3543	1/1	0.83	0.17	98,98,98,98	0
54	MG	BA	3154	1/1	0.83	0.30	59,59,59,59	0
54	MG	DA	3101	1/1	0.83	0.26	100,100,100,100	0
54	MG	DA	3114	1/1	0.83	0.26	70,70,70,70	0
54	MG	BA	3548	1/1	0.83	0.34	76,76,76,76	0
54	MG	AA	1790	1/1	0.83	0.20	97,97,97,97	0
54	MG	BA	3057	1/1	0.83	0.31	70,70,70,70	0
54	MG	BA	3060	1/1	0.83	0.18	92,92,92,92	0
54	MG	DA	3326	1/1	0.83	0.28	82,82,82,82	0
54	MG	AA	1717	1/1	0.83	0.26	87,87,87,87	0
54	MG	BA	3386	1/1	0.83	0.13	76,76,76,76	0
54	MG	BA	3236	1/1	0.83	0.44	74,74,74,74	0
54	MG	DA	3455	1/1	0.83	0.27	80,80,80,80	0
54	MG	BA	3472	1/1	0.83	0.16	114,114,114,114	0
54	MG	DA	3333	1/1	0.83	0.29	90,90,90,90	0
54	MG	AA	1681	1/1	0.83	0.16	101,101,101,101	0
54	MG	AA	1631	1/1	0.83	0.26	92,92,92,92	0
54	MG	AA	1733	1/1	0.83	0.20	88,88,88,88	0
54	MG	BA	3596	1/1	0.83	0.39	85,85,85,85	0
54	MG	DA	3343	1/1	0.83	0.38	72,72,72,72	0
54	MG	AA	1777	1/1	0.83	0.14	117,117,117,117	0
54	MG	CA	1698	1/1	0.83	0.36	96,96,96,96	0
54	MG	AA	1676	1/1	0.83	0.19	109,109,109,109	0
54	MG	BA	3337	1/1	0.83	0.34	64,64,64,64	0
54	MG	DA	3353	1/1	0.83	0.33	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3047	1/1	0.83	0.38	91,91,91,91	0
54	MG	DA	3168	1/1	0.83	0.09	69,69,69,69	0
54	MG	DA	3169	1/1	0.83	0.27	74,74,74,74	0
54	MG	BA	3119	1/1	0.83	0.20	84,84,84,84	0
54	MG	DA	3178	1/1	0.83	0.48	70,70,70,70	0
54	MG	AA	1763	1/1	0.83	0.25	89,89,89,89	0
54	MG	DA	3057	1/1	0.83	0.32	70,70,70,70	0
54	MG	AA	1825	1/1	0.83	0.16	92,92,92,92	0
54	MG	DA	3231	1/1	0.83	0.25	74,74,74,74	0
54	MG	CA	1639	1/1	0.83	0.36	95,95,95,95	0
54	MG	BA	3276	1/1	0.83	0.35	91,91,91,91	0
54	MG	A1	101	1/1	0.83	0.17	94,94,94,94	0
54	MG	DA	3386	1/1	0.83	0.19	71,71,71,71	0
54	MG	CA	1778	1/1	0.83	0.23	107,107,107,107	0
54	MG	DA	3388	1/1	0.83	0.20	78,78,78,78	0
54	MG	BA	3281	1/1	0.83	0.27	72,72,72,72	0
54	MG	CA	1648	1/1	0.83	0.22	88,88,88,88	0
54	MG	DA	3254	1/1	0.83	0.49	79,79,79,79	0
54	MG	DA	3398	1/1	0.83	0.22	84,84,84,84	0
54	MG	BA	3131	1/1	0.83	0.26	80,80,80,80	0
54	MG	CA	1651	1/1	0.83	0.10	114,114,114,114	0
54	MG	CA	1791	1/1	0.83	0.09	95,95,95,95	0
54	MG	DA	3099	1/1	0.84	0.26	60,60,60,60	0
54	MG	BA	3601	1/1	0.84	0.27	83,83,83,83	0
54	MG	BA	3257	1/1	0.84	0.23	73,73,73,73	0
54	MG	DA	3108	1/1	0.84	0.32	65,65,65,65	0
54	MG	DA	3113	1/1	0.84	0.37	83,83,83,83	0
54	MG	CA	1690	1/1	0.84	0.25	86,86,86,86	0
54	MG	CA	1624	1/1	0.84	0.18	92,92,92,92	0
54	MG	DA	3416	1/1	0.84	0.25	86,86,86,86	0
54	MG	DA	3303	1/1	0.84	0.10	94,94,94,94	0
54	MG	AA	1768	1/1	0.84	0.13	89,89,89,89	0
54	MG	AA	1699	1/1	0.84	0.11	96,96,96,96	0
54	MG	BA	3391	1/1	0.84	0.28	85,85,85,85	0
54	MG	BA	3270	1/1	0.84	0.19	91,91,91,91	0
54	MG	BA	3120	1/1	0.84	0.19	76,76,76,76	0
54	MG	DA	3320	1/1	0.84	0.11	105,105,105,105	0
54	MG	CA	1759	1/1	0.84	0.28	100,100,100,100	0
54	MG	CA	1633	1/1	0.84	0.26	85,85,85,85	0
54	MG	BA	3039	1/1	0.84	0.27	76,76,76,76	0
54	MG	DA	3147	1/1	0.84	0.28	79,79,79,79	0
54	MG	DA	3437	1/1	0.84	0.24	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3454	1/1	0.84	0.25	92,92,92,92	0
54	MG	CA	1764	1/1	0.84	0.20	89,89,89,89	0
54	MG	BA	3623	1/1	0.84	0.11	93,93,93,93	0
54	MG	AA	1780	1/1	0.84	0.23	90,90,90,90	0
54	MG	DA	3448	1/1	0.84	0.29	89,89,89,89	0
54	MG	BA	3533	1/1	0.84	0.13	89,89,89,89	0
54	MG	CA	1771	1/1	0.84	0.32	96,96,96,96	0
54	MG	BA	3356	1/1	0.84	0.36	81,81,81,81	0
54	MG	DA	3166	1/1	0.84	0.21	91,91,91,91	0
54	MG	BA	3536	1/1	0.84	0.27	74,74,74,74	0
54	MG	CA	1712	1/1	0.84	0.16	99,99,99,99	0
54	MG	DA	3342	1/1	0.84	0.27	90,90,90,90	0
54	MG	AA	1671	1/1	0.84	0.25	81,81,81,81	0
54	MG	DA	3175	1/1	0.84	0.25	71,71,71,71	0
54	MG	BB	205	1/1	0.84	0.26	91,91,91,91	0
54	MG	AA	1826	1/1	0.84	0.13	117,117,117,117	0
54	MG	DA	3184	1/1	0.84	0.08	87,87,87,87	0
54	MG	BA	3312	1/1	0.84	0.34	84,84,84,84	0
54	MG	DA	3188	1/1	0.84	0.21	82,82,82,82	0
54	MG	BA	3055	1/1	0.84	0.24	84,84,84,84	0
54	MG	DA	3207	1/1	0.84	0.27	72,72,72,72	0
54	MG	BA	3240	1/1	0.84	0.20	84,84,84,84	0
54	MG	AA	1694	1/1	0.84	0.23	87,87,87,87	0
54	MG	AA	1819	1/1	0.84	0.28	92,92,92,92	0
54	MG	DA	3364	1/1	0.84	0.14	102,102,102,102	0
54	MG	AA	1692	1/1	0.84	0.19	94,94,94,94	0
54	MG	BA	3559	1/1	0.84	0.47	65,65,65,65	0
54	MG	BA	3252	1/1	0.84	0.49	63,63,63,63	0
54	MG	BA	3334	1/1	0.84	0.14	84,84,84,84	0
54	MG	BA	3573	1/1	0.84	0.27	87,87,87,87	0
54	MG	BA	3494	1/1	0.84	0.15	72,72,72,72	0
54	MG	BA	3336	1/1	0.84	0.21	72,72,72,72	0
54	MG	DA	3260	1/1	0.84	0.31	72,72,72,72	0
54	MG	CA	1674	1/1	0.84	0.31	87,87,87,87	0
54	MG	BA	3430	1/1	0.84	0.18	93,93,93,93	0
54	MG	CA	1607	1/1	0.84	0.42	81,81,81,81	0
54	MG	BA	3253	1/1	0.84	0.31	82,82,82,82	0
54	MG	DA	3393	1/1	0.84	0.30	92,92,92,92	0
54	MG	BA	3381	1/1	0.84	0.27	89,89,89,89	0
54	MG	DA	3276	1/1	0.84	0.18	91,91,91,91	0
54	MG	BA	3339	1/1	0.84	0.28	85,85,85,85	0
54	MG	BA	3599	1/1	0.84	0.19	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3016	1/1	0.84	0.30	74,74,74,74	0
54	MG	AA	1648	1/1	0.85	0.07	115,115,115,115	0
54	MG	BA	3259	1/1	0.85	0.30	56,56,56,56	0
54	MG	DA	3078	1/1	0.85	0.23	65,65,65,65	0
54	MG	DA	3422	1/1	0.85	0.13	83,83,83,83	0
54	MG	BA	3136	1/1	0.85	0.17	60,60,60,60	0
54	MG	BA	3470	1/1	0.85	0.21	90,90,90,90	0
54	MG	DA	3428	1/1	0.85	0.08	86,86,86,86	0
54	MG	CA	1688	1/1	0.85	0.32	88,88,88,88	0
54	MG	AA	1729	1/1	0.85	0.11	102,102,102,102	0
54	MG	BA	3473	1/1	0.85	0.28	84,84,84,84	0
54	MG	DA	3205	1/1	0.85	0.23	80,80,80,80	0
54	MG	AA	1672	1/1	0.85	0.30	86,86,86,86	0
54	MG	DA	3214	1/1	0.85	0.19	69,69,69,69	0
54	MG	BA	3628	1/1	0.85	0.31	78,78,78,78	0
54	MG	BA	3425	1/1	0.85	0.13	87,87,87,87	0
54	MG	DA	3439	1/1	0.85	0.15	95,95,95,95	0
54	MG	AA	1792	1/1	0.85	0.16	108,108,108,108	0
54	MG	BA	3482	1/1	0.85	0.31	84,84,84,84	0
54	MG	BA	3632	1/1	0.85	0.12	114,114,114,114	0
54	MG	AA	1820	1/1	0.85	0.07	112,112,112,112	0
54	MG	AA	1714	1/1	0.85	0.10	88,88,88,88	0
54	MG	DA	3451	1/1	0.85	0.22	81,81,81,81	0
54	MG	DA	3251	1/1	0.85	0.23	87,87,87,87	0
54	MG	DA	3354	1/1	0.85	0.06	126,126,126,126	0
54	MG	DA	3021	1/1	0.85	0.28	63,63,63,63	0
54	MG	BA	3552	1/1	0.85	0.12	79,79,79,79	0
54	MG	BA	3155	1/1	0.85	0.40	55,55,55,55	0
54	MG	BA	3490	1/1	0.85	0.31	102,102,102,102	0
54	MG	AA	1746	1/1	0.85	0.14	110,110,110,110	0
54	MG	AA	1747	1/1	0.85	0.22	88,88,88,88	0
54	MG	BA	3498	1/1	0.85	0.23	94,94,94,94	0
54	MG	DA	3367	1/1	0.85	0.42	89,89,89,89	0
54	MG	BA	3499	1/1	0.85	0.22	82,82,82,82	0
54	MG	BA	3094	1/1	0.85	0.24	103,103,103,103	0
54	MG	BA	3285	1/1	0.85	0.30	67,67,67,67	0
54	MG	DA	3129	1/1	0.85	0.24	79,79,79,79	0
54	MG	DA	3279	1/1	0.85	0.29	70,70,70,70	0
54	MG	DA	3132	1/1	0.85	0.21	80,80,80,80	0
54	MG	CA	1769	1/1	0.85	0.27	101,101,101,101	0
54	MG	DA	3514	1/1	0.85	0.22	92,92,92,92	0
54	MG	BA	3395	1/1	0.85	0.30	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1716	1/1	0.85	0.21	103,103,103,103	0
54	MG	AN	202	1/1	0.85	0.10	88,88,88,88	0
54	MG	CA	1774	1/1	0.85	0.16	105,105,105,105	0
54	MG	DA	3295	1/1	0.85	0.14	128,128,128,128	0
54	MG	BA	3595	1/1	0.85	0.13	91,91,91,91	0
54	MG	BA	3249	1/1	0.85	0.26	74,74,74,74	0
54	MG	AA	1800	1/1	0.85	0.20	89,89,89,89	0
54	MG	CA	1780	1/1	0.85	0.25	74,74,74,74	0
54	MG	DA	3402	1/1	0.85	0.13	91,91,91,91	0
54	MG	DA	3304	1/1	0.85	0.18	88,88,88,88	0
54	MG	BA	3217	1/1	0.85	0.24	98,98,98,98	0
54	MG	BA	3170	1/1	0.85	0.16	57,57,57,57	0
54	MG	CA	1614	1/1	0.85	0.30	100,100,100,100	0
54	MG	DA	3316	1/1	0.85	0.28	76,76,76,76	0
54	MG	BA	3410	1/1	0.85	0.26	83,83,83,83	0
54	MG	BA	3462	1/1	0.85	0.18	94,94,94,94	0
54	MG	CA	1678	1/1	0.85	0.21	75,75,75,75	0
54	MG	CA	1617	1/1	0.85	0.23	109,109,109,109	0
54	MG	BA	3411	1/1	0.85	0.28	80,80,80,80	0
54	MG	BA	3441	1/1	0.86	0.26	95,95,95,95	0
54	MG	BA	3505	1/1	0.86	0.21	51,51,51,51	0
54	MG	DA	3137	1/1	0.86	0.26	86,86,86,86	0
54	MG	AA	1835	1/1	0.86	0.33	100,100,100,100	0
54	MG	CA	1693	1/1	0.86	0.35	89,89,89,89	0
54	MG	CA	1757	1/1	0.86	0.34	100,100,100,100	0
54	MG	AA	1643	1/1	0.86	0.16	91,91,91,91	0
54	MG	AA	1802	1/1	0.86	0.08	100,100,100,100	0
54	MG	AH	201	1/1	0.86	0.19	91,91,91,91	0
54	MG	BA	3095	1/1	0.86	0.40	57,57,57,57	0
54	MG	DA	3420	1/1	0.86	0.16	84,84,84,84	0
54	MG	AA	1744	1/1	0.86	0.14	81,81,81,81	0
54	MG	AA	1632	1/1	0.86	0.19	94,94,94,94	0
54	MG	BA	3349	1/1	0.86	0.07	64,64,64,64	0
54	MG	BA	3619	1/1	0.86	0.27	87,87,87,87	0
54	MG	CA	1704	1/1	0.86	0.27	99,99,99,99	0
54	MG	CA	1634	1/1	0.86	0.21	87,87,87,87	0
54	MG	DA	3164	1/1	0.86	0.23	84,84,84,84	0
54	MG	BA	3258	1/1	0.86	0.25	74,74,74,74	0
54	MG	DA	3433	1/1	0.86	0.21	91,91,91,91	0
54	MG	BA	3459	1/1	0.86	0.32	78,78,78,78	0
54	MG	BA	3302	1/1	0.86	0.39	59,59,59,59	0
54	MG	BA	3624	1/1	0.86	0.15	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3404	1/1	0.86	0.40	90,90,90,90	0
54	MG	BA	3531	1/1	0.86	0.08	83,83,83,83	0
54	MG	DA	3332	1/1	0.86	0.21	94,94,94,94	0
54	MG	BA	3303	1/1	0.86	0.23	69,69,69,69	0
54	MG	DA	3443	1/1	0.86	0.12	85,85,85,85	0
54	MG	AA	1667	1/1	0.86	0.35	82,82,82,82	0
54	MG	DA	3185	1/1	0.86	0.23	77,77,77,77	0
54	MG	AA	1774	1/1	0.86	0.32	79,79,79,79	0
54	MG	BA	3539	1/1	0.86	0.24	59,59,59,59	0
54	MG	DA	3191	1/1	0.86	0.32	62,62,62,62	0
54	MG	BA	3267	1/1	0.86	0.34	75,75,75,75	0
54	MG	BA	3542	1/1	0.86	0.19	77,77,77,77	0
54	MG	BA	3471	1/1	0.86	0.42	78,78,78,78	0
54	MG	DA	3209	1/1	0.86	0.28	61,61,61,61	0
54	MG	DA	3347	1/1	0.86	0.09	79,79,79,79	0
54	MG	AA	1791	1/1	0.86	0.16	96,96,96,96	0
54	MG	CA	1795	1/1	0.86	0.23	87,87,87,87	0
54	MG	DA	3219	1/1	0.86	0.31	70,70,70,70	0
54	MG	DA	3461	1/1	0.86	0.16	93,93,93,93	0
54	MG	DA	3221	1/1	0.86	0.30	74,74,74,74	0
54	MG	DA	3472	1/1	0.86	0.20	88,88,88,88	0
54	MG	AA	1727	1/1	0.86	0.18	88,88,88,88	0
54	MG	DA	3475	1/1	0.86	0.28	66,66,66,66	0
54	MG	DA	3488	1/1	0.86	0.23	77,77,77,77	0
54	MG	AA	1650	1/1	0.86	0.39	87,87,87,87	0
54	MG	AA	1656	1/1	0.86	0.32	73,73,73,73	0
54	MG	BA	3314	1/1	0.86	0.36	81,81,81,81	0
54	MG	DA	3497	1/1	0.86	0.18	86,86,86,86	0
54	MG	BA	3424	1/1	0.86	0.22	86,86,86,86	0
54	MG	DA	3503	1/1	0.86	0.34	76,76,76,76	0
54	MG	BA	3008	1/1	0.86	0.33	59,59,59,59	0
54	MG	BA	3079	1/1	0.86	0.34	103,103,103,103	0
54	MG	CC	102	1/1	0.86	0.28	77,77,77,77	0
54	MG	BA	3488	1/1	0.86	0.31	94,94,94,94	0
54	MG	DA	3093	1/1	0.86	0.31	88,88,88,88	0
54	MG	BA	3022	1/1	0.86	0.26	66,66,66,66	0
54	MG	DA	3375	1/1	0.86	0.28	96,96,96,96	0
54	MG	DA	3519	1/1	0.86	0.15	81,81,81,81	0
54	MG	DA	3376	1/1	0.86	0.20	62,62,62,62	0
54	MG	DA	3380	1/1	0.86	0.15	90,90,90,90	0
54	MG	BA	3036	1/1	0.86	0.28	73,73,73,73	0
54	MG	B8	102	1/1	0.86	0.15	107,107,107,107	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1743	1/1	0.86	0.13	85,85,85,85	0
54	MG	AA	1611	1/1	0.86	0.12	118,118,118,118	0
54	MG	BA	3237	1/1	0.86	0.34	64,64,64,64	0
54	MG	DA	3275	1/1	0.86	0.24	76,76,76,76	0
54	MG	DA	3011	1/1	0.86	0.11	103,103,103,103	0
54	MG	BA	3583	1/1	0.86	0.26	88,88,88,88	0
54	MG	BA	3588	1/1	0.86	0.33	77,77,77,77	0
54	MG	BA	3436	1/1	0.86	0.20	75,75,75,75	0
54	MG	BA	3438	1/1	0.86	0.15	90,90,90,90	0
54	MG	AA	1753	1/1	0.86	0.17	97,97,97,97	0
54	MG	DA	3286	1/1	0.86	0.30	63,63,63,63	0
54	MG	DA	3127	1/1	0.86	0.12	91,91,91,91	0
54	MG	DA	3025	1/1	0.86	0.21	91,91,91,91	0
54	MG	AA	1779	1/1	0.87	0.34	78,78,78,78	0
54	MG	CA	1605	1/1	0.87	0.29	87,87,87,87	0
54	MG	DA	3035	1/1	0.87	0.18	92,92,92,92	0
54	MG	DA	3309	1/1	0.87	0.12	64,64,64,64	0
54	MG	CA	1685	1/1	0.87	0.24	82,82,82,82	0
54	MG	BA	3495	1/1	0.87	0.16	80,80,80,80	0
54	MG	BA	3431	1/1	0.87	0.22	88,88,88,88	0
54	MG	AA	1669	1/1	0.87	0.27	76,76,76,76	0
54	MG	BA	3378	1/1	0.87	0.28	80,80,80,80	0
54	MG	BA	3229	1/1	0.87	0.32	64,64,64,64	0
54	MG	BA	3326	1/1	0.87	0.31	89,89,89,89	0
54	MG	AA	1660	1/1	0.87	0.17	68,68,68,68	0
54	MG	BA	3115	1/1	0.87	0.35	74,74,74,74	0
54	MG	DA	3046	1/1	0.87	0.47	78,78,78,78	0
54	MG	AA	1770	1/1	0.87	0.07	110,110,110,110	0
54	MG	CA	1623	1/1	0.87	0.07	142,142,142,142	0
54	MG	DA	3329	1/1	0.87	0.32	88,88,88,88	0
54	MG	BA	3030	1/1	0.87	0.31	70,70,70,70	0
54	MG	BA	3390	1/1	0.87	0.23	95,95,95,95	0
54	MG	DA	3058	1/1	0.87	0.22	84,84,84,84	0
54	MG	BA	3607	1/1	0.87	0.37	62,62,62,62	0
54	MG	DA	3181	1/1	0.87	0.21	78,78,78,78	0
54	MG	CA	1702	1/1	0.87	0.24	84,84,84,84	0
54	MG	BA	3516	1/1	0.87	0.31	90,90,90,90	0
54	MG	DA	3186	1/1	0.87	0.27	84,84,84,84	0
54	MG	BA	3032	1/1	0.87	0.26	56,56,56,56	0
54	MG	BA	3034	1/1	0.87	0.34	78,78,78,78	0
54	MG	CA	1632	1/1	0.87	0.22	88,88,88,88	0
54	MG	DA	3069	1/1	0.87	0.25	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	AA	1817	1/1	0.87	0.07	137,137,137,137	0
54	MG	BA	3247	1/1	0.87	0.28	59,59,59,59	0
54	MG	BA	3342	1/1	0.87	0.20	85,85,85,85	0
54	MG	BA	3343	1/1	0.87	0.35	73,73,73,73	0
54	MG	DA	3215	1/1	0.87	0.27	68,68,68,68	0
54	MG	AA	1636	1/1	0.87	0.14	76,76,76,76	0
54	MG	CA	1641	1/1	0.87	0.23	78,78,78,78	0
54	MG	DA	3462	1/1	0.87	0.10	94,94,94,94	0
54	MG	DA	3463	1/1	0.87	0.29	75,75,75,75	0
54	MG	DA	3464	1/1	0.87	0.22	89,89,89,89	0
54	MG	CA	1788	1/1	0.87	0.30	91,91,91,91	0
54	MG	DA	3225	1/1	0.87	0.32	57,57,57,57	0
54	MG	CA	1790	1/1	0.87	0.15	105,105,105,105	0
54	MG	BA	3527	1/1	0.87	0.18	78,78,78,78	0
54	MG	BA	3530	1/1	0.87	0.16	85,85,85,85	0
54	MG	DA	3365	1/1	0.87	0.27	73,73,73,73	0
54	MG	CA	1717	1/1	0.87	0.32	86,86,86,86	0
54	MG	BA	3463	1/1	0.87	0.26	84,84,84,84	0
54	MG	DA	3496	1/1	0.87	0.27	86,86,86,86	0
54	MG	BA	3402	1/1	0.87	0.40	83,83,83,83	0
54	MG	BA	3297	1/1	0.87	0.19	86,86,86,86	0
54	MG	BA	3298	1/1	0.87	0.32	43,43,43,43	0
54	MG	AA	1750	1/1	0.87	0.14	92,92,92,92	0
54	MG	BA	3407	1/1	0.87	0.26	85,85,85,85	0
54	MG	AA	1803	1/1	0.87	0.34	75,75,75,75	0
54	MG	BA	3354	1/1	0.87	0.21	83,83,83,83	0
54	MG	AA	1678	1/1	0.87	0.23	87,87,87,87	0
54	MG	CC	104	1/1	0.87	0.20	103,103,103,103	0
54	MG	DA	3098	1/1	0.87	0.07	112,112,112,112	0
54	MG	CA	1731	1/1	0.87	0.18	70,70,70,70	0
54	MG	BA	3143	1/1	0.87	0.34	63,63,63,63	0
54	MG	DA	3390	1/1	0.87	0.22	76,76,76,76	0
54	MG	DB	201	1/1	0.87	0.24	90,90,90,90	0
54	MG	BB	212	1/1	0.87	0.26	82,82,82,82	0
54	MG	AC	101	1/1	0.87	0.16	68,68,68,68	0
54	MG	BA	3479	1/1	0.87	0.28	80,80,80,80	0
54	MG	AA	1603	1/1	0.87	0.15	89,89,89,89	0
54	MG	AA	1807	1/1	0.87	0.33	79,79,79,79	0
54	MG	BE	304	1/1	0.87	0.11	90,90,90,90	0
54	MG	BA	3152	1/1	0.87	0.07	80,80,80,80	0
54	MG	BA	3558	1/1	0.87	0.32	58,58,58,58	0
54	MG	AA	1674	1/1	0.87	0.21	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	DA	3130	1/1	0.87	0.36	52,52,52,52	0
54	MG	DA	3020	1/1	0.87	0.36	81,81,81,81	0
54	MG	AA	1700	1/1	0.87	0.07	84,84,84,84	0
54	MG	AA	1794	1/1	0.87	0.34	93,93,93,93	0
54	MG	BA	3107	1/1	0.87	0.29	76,76,76,76	0
54	MG	BA	3160	1/1	0.87	0.26	92,92,92,92	0
54	MG	BA	3371	1/1	0.88	0.20	77,77,77,77	0
54	MG	AA	1635	1/1	0.88	0.13	111,111,111,111	0
54	MG	BA	3491	1/1	0.88	0.14	84,84,84,84	0
54	MG	CA	1604	1/1	0.88	0.28	91,91,91,91	0
54	MG	AA	1742	1/1	0.88	0.21	82,82,82,82	0
54	MG	BA	3577	1/1	0.88	0.14	72,72,72,72	0
54	MG	CA	1608	1/1	0.88	0.20	94,94,94,94	0
54	MG	BA	3376	1/1	0.88	0.18	84,84,84,84	0
54	MG	DA	3298	1/1	0.88	0.26	73,73,73,73	0
54	MG	CA	1611	1/1	0.88	0.37	106,106,106,106	0
54	MG	DA	3300	1/1	0.88	0.25	83,83,83,83	0
54	MG	DA	3148	1/1	0.88	0.19	86,86,86,86	0
54	MG	BA	3177	1/1	0.88	0.21	87,87,87,87	0
54	MG	AA	1737	1/1	0.88	0.22	95,95,95,95	0
54	MG	BA	3433	1/1	0.88	0.20	94,94,94,94	0
54	MG	BA	3379	1/1	0.88	0.17	101,101,101,101	0
54	MG	DA	3308	1/1	0.88	0.26	78,78,78,78	0
54	MG	DA	3427	1/1	0.88	0.27	74,74,74,74	0
54	MG	BA	3502	1/1	0.88	0.10	113,113,113,113	0
54	MG	DA	3048	1/1	0.88	0.29	61,61,61,61	0
54	MG	BA	3101	1/1	0.88	0.29	42,42,42,42	0
54	MG	DA	3160	1/1	0.88	0.32	69,69,69,69	0
54	MG	BA	3437	1/1	0.88	0.26	81,81,81,81	0
54	MG	BA	3598	1/1	0.88	0.29	75,75,75,75	0
54	MG	BA	3332	1/1	0.88	0.31	92,92,92,92	0
54	MG	BA	3145	1/1	0.88	0.33	61,61,61,61	0
54	MG	BA	3602	1/1	0.88	0.30	71,71,71,71	0
54	MG	BA	3146	1/1	0.88	0.21	75,75,75,75	0
54	MG	AA	1767	1/1	0.88	0.25	82,82,82,82	0
54	MG	DA	3066	1/1	0.88	0.24	80,80,80,80	0
54	MG	BA	3606	1/1	0.88	0.12	81,81,81,81	0
54	MG	DA	3182	1/1	0.88	0.32	74,74,74,74	0
54	MG	DA	3445	1/1	0.88	0.28	96,96,96,96	0
54	MG	BA	3243	1/1	0.88	0.30	63,63,63,63	0
54	MG	BA	3388	1/1	0.88	0.14	82,82,82,82	0
54	MG	BA	3389	1/1	0.88	0.22	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3193	1/1	0.88	0.30	56,56,56,56	0
54	MG	AA	1834	1/1	0.88	0.25	86,86,86,86	0
54	MG	BA	3296	1/1	0.88	0.22	81,81,81,81	0
54	MG	CA	1640	1/1	0.88	0.21	99,99,99,99	0
54	MG	DA	3195	1/1	0.88	0.38	82,82,82,82	0
54	MG	DA	3341	1/1	0.88	0.36	68,68,68,68	0
54	MG	DA	3197	1/1	0.88	0.24	82,82,82,82	0
54	MG	DA	3204	1/1	0.88	0.27	71,71,71,71	0
54	MG	AA	1723	1/1	0.88	0.28	82,82,82,82	0
54	MG	BA	3199	1/1	0.88	0.24	80,80,80,80	0
54	MG	AA	1728	1/1	0.88	0.35	70,70,70,70	0
54	MG	DA	3210	1/1	0.88	0.26	57,57,57,57	0
54	MG	DA	3213	1/1	0.88	0.21	64,64,64,64	0
54	MG	DA	3350	1/1	0.88	0.29	85,85,85,85	0
54	MG	AA	1740	1/1	0.88	0.36	83,83,83,83	0
54	MG	BA	3399	1/1	0.88	0.18	77,77,77,77	0
54	MG	DA	3084	1/1	0.88	0.21	67,67,67,67	0
54	MG	DA	3476	1/1	0.88	0.25	66,66,66,66	0
54	MG	DA	3218	1/1	0.88	0.41	56,56,56,56	0
54	MG	DA	3489	1/1	0.88	0.18	79,79,79,79	0
54	MG	AA	1761	1/1	0.88	0.13	94,94,94,94	0
54	MG	DA	3359	1/1	0.88	0.36	91,91,91,91	0
54	MG	BA	3350	1/1	0.88	0.31	72,72,72,72	0
54	MG	BA	3012	1/1	0.88	0.24	66,66,66,66	0
54	MG	DA	3226	1/1	0.88	0.37	75,75,75,75	0
54	MG	DA	3227	1/1	0.88	0.14	67,67,67,67	0
54	MG	DA	3501	1/1	0.88	0.13	82,82,82,82	0
54	MG	BA	3353	1/1	0.88	0.26	95,95,95,95	0
54	MG	DA	3366	1/1	0.88	0.25	78,78,78,78	0
54	MG	BA	3537	1/1	0.88	0.18	65,65,65,65	0
54	MG	DA	3240	1/1	0.88	0.22	86,86,86,86	0
54	MG	BA	3405	1/1	0.88	0.13	72,72,72,72	0
54	MG	BA	3209	1/1	0.88	0.23	64,64,64,64	0
54	MG	BA	3156	1/1	0.88	0.28	57,57,57,57	0
54	MG	DA	3374	1/1	0.88	0.34	87,87,87,87	0
54	MG	BA	3263	1/1	0.88	0.22	73,73,73,73	0
54	MG	BA	3059	1/1	0.88	0.11	78,78,78,78	0
54	MG	DA	3379	1/1	0.88	0.31	88,88,88,88	0
54	MG	DA	3523	1/1	0.88	0.22	90,90,90,90	0
54	MG	DA	3001	1/1	0.88	0.23	77,77,77,77	0
54	MG	BA	3090	1/1	0.88	0.12	85,85,85,85	0
54	MG	DB	203	1/1	0.88	0.23	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3257	1/1	0.88	0.33	56,56,56,56	0
54	MG	BA	3219	1/1	0.88	0.10	82,82,82,82	0
54	MG	DA	3008	1/1	0.88	0.21	77,77,77,77	0
54	MG	BA	3309	1/1	0.88	0.31	69,69,69,69	0
54	MG	BA	3018	1/1	0.88	0.36	55,55,55,55	0
54	MG	DB	210	1/1	0.88	0.25	95,95,95,95	0
54	MG	AA	1795	1/1	0.88	0.31	86,86,86,86	0
54	MG	BA	3129	1/1	0.88	0.30	84,84,84,84	0
54	MG	BA	3557	1/1	0.88	0.25	44,44,44,44	0
54	MG	BA	3487	1/1	0.88	0.18	72,72,72,72	0
54	MG	DA	3023	1/1	0.88	0.18	76,76,76,76	0
54	MG	AT	201	1/1	0.88	0.28	87,87,87,87	0
54	MG	D1	201	1/1	0.88	0.33	72,72,72,72	0
54	MG	BA	3562	1/1	0.88	0.30	53,53,53,53	0
54	MG	DA	3401	1/1	0.88	0.32	93,93,93,93	0
54	MG	BA	3563	1/1	0.88	0.29	59,59,59,59	0
56	ZN	AQ	102	1/1	0.88	0.17	138,138,138,138	0
54	MG	BA	3603	1/1	0.89	0.35	93,93,93,93	0
54	MG	DA	3122	1/1	0.89	0.24	84,84,84,84	0
54	MG	BA	3331	1/1	0.89	0.15	88,88,88,88	0
54	MG	DA	3125	1/1	0.89	0.27	71,71,71,71	0
54	MG	DA	3126	1/1	0.89	0.20	67,67,67,67	0
54	MG	BA	3385	1/1	0.89	0.27	79,79,79,79	0
54	MG	BA	3514	1/1	0.89	0.18	76,76,76,76	0
54	MG	DA	3294	1/1	0.89	0.26	77,77,77,77	0
54	MG	DA	3417	1/1	0.89	0.28	81,81,81,81	0
54	MG	CA	1635	1/1	0.89	0.21	93,93,93,93	0
54	MG	DA	3006	1/1	0.89	0.44	95,95,95,95	0
54	MG	DA	3133	1/1	0.89	0.14	76,76,76,76	0
54	MG	AA	1713	1/1	0.89	0.34	82,82,82,82	0
54	MG	BA	3168	1/1	0.89	0.23	85,85,85,85	0
54	MG	DA	3015	1/1	0.89	0.36	64,64,64,64	0
54	MG	DA	3140	1/1	0.89	0.38	80,80,80,80	0
54	MG	BA	3612	1/1	0.89	0.23	67,67,67,67	0
54	MG	BA	3284	1/1	0.89	0.23	76,76,76,76	0
54	MG	BA	3013	1/1	0.89	0.20	65,65,65,65	0
54	MG	AQ	101	1/1	0.89	0.07	94,94,94,94	0
54	MG	CA	1736	1/1	0.89	0.16	90,90,90,90	0
54	MG	DA	3312	1/1	0.89	0.29	81,81,81,81	0
54	MG	BA	3521	1/1	0.89	0.42	81,81,81,81	0
54	MG	AA	1644	1/1	0.89	0.36	68,68,68,68	0
54	MG	BA	3134	1/1	0.89	0.25	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3025	1/1	0.89	0.26	61,61,61,61	0
54	MG	DA	3031	1/1	0.89	0.23	72,72,72,72	0
54	MG	DA	3032	1/1	0.89	0.17	79,79,79,79	0
54	MG	BA	3526	1/1	0.89	0.09	97,97,97,97	0
54	MG	AA	1651	1/1	0.89	0.32	86,86,86,86	0
54	MG	BA	3529	1/1	0.89	0.29	87,87,87,87	0
54	MG	BA	3456	1/1	0.89	0.07	225,225,225,225	0
54	MG	CA	1747	1/1	0.89	0.38	96,96,96,96	0
54	MG	BA	3241	1/1	0.89	0.15	70,70,70,70	0
54	MG	DA	3449	1/1	0.89	0.33	88,88,88,88	0
54	MG	BA	3532	1/1	0.89	0.24	82,82,82,82	0
54	MG	BA	3396	1/1	0.89	0.09	117,117,117,117	0
54	MG	BB	201	1/1	0.89	0.21	77,77,77,77	0
54	MG	CA	1659	1/1	0.89	0.20	92,92,92,92	0
54	MG	BA	3345	1/1	0.89	0.53	91,91,91,91	0
54	MG	BB	203	1/1	0.89	0.25	70,70,70,70	0
54	MG	BA	3184	1/1	0.89	0.16	66,66,66,66	0
54	MG	BB	206	1/1	0.89	0.20	84,84,84,84	0
54	MG	BA	3186	1/1	0.89	0.32	69,69,69,69	0
54	MG	AA	1627	1/1	0.89	0.40	76,76,76,76	0
54	MG	BA	3144	1/1	0.89	0.28	68,68,68,68	0
54	MG	BA	3541	1/1	0.89	0.28	74,74,74,74	0
54	MG	DA	3190	1/1	0.89	0.27	67,67,67,67	0
54	MG	BA	3068	1/1	0.89	0.20	94,94,94,94	0
54	MG	DA	3465	1/1	0.89	0.28	50,50,50,50	0
54	MG	BA	3069	1/1	0.89	0.29	68,68,68,68	0
54	MG	AA	1630	1/1	0.89	0.15	88,88,88,88	0
54	MG	BA	3103	1/1	0.89	0.21	76,76,76,76	0
54	MG	DA	3349	1/1	0.89	0.22	78,78,78,78	0
54	MG	BE	301	1/1	0.89	0.36	59,59,59,59	0
54	MG	DA	3483	1/1	0.89	0.41	79,79,79,79	0
54	MG	AA	1718	1/1	0.89	0.28	87,87,87,87	0
54	MG	BA	3409	1/1	0.89	0.14	73,73,73,73	0
54	MG	BA	3478	1/1	0.89	0.33	64,64,64,64	0
54	MG	BA	3357	1/1	0.89	0.33	77,77,77,77	0
54	MG	AA	1665	1/1	0.89	0.34	82,82,82,82	0
54	MG	BA	3413	1/1	0.89	0.07	87,87,87,87	0
54	MG	CA	1775	1/1	0.89	0.11	84,84,84,84	0
54	MG	DA	3499	1/1	0.89	0.31	92,92,92,92	0
54	MG	BA	3047	1/1	0.89	0.28	77,77,77,77	0
54	MG	BA	3484	1/1	0.89	0.21	76,76,76,76	0
54	MG	CA	1602	1/1	0.89	0.18	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3262	1/1	0.89	0.24	61,61,61,61	0
54	MG	AA	1796	1/1	0.89	0.30	76,76,76,76	0
54	MG	DA	3510	1/1	0.89	0.12	77,77,77,77	0
54	MG	CA	1782	1/1	0.89	0.25	93,93,93,93	0
54	MG	AA	1642	1/1	0.89	0.36	88,88,88,88	0
54	MG	CA	1786	1/1	0.89	0.26	83,83,83,83	0
54	MG	CA	1606	1/1	0.89	0.19	83,83,83,83	0
54	MG	BA	3311	1/1	0.89	0.23	73,73,73,73	0
54	MG	BA	3053	1/1	0.89	0.28	90,90,90,90	0
54	MG	AA	1771	1/1	0.89	0.13	94,94,94,94	0
54	MG	BA	3086	1/1	0.89	0.35	73,73,73,73	0
54	MG	DA	3377	1/1	0.89	0.17	85,85,85,85	0
54	MG	BA	3161	1/1	0.89	0.23	70,70,70,70	0
54	MG	BA	3428	1/1	0.89	0.13	90,90,90,90	0
54	MG	CA	1706	1/1	0.89	0.32	90,90,90,90	0
54	MG	BA	3586	1/1	0.89	0.37	71,71,71,71	0
54	MG	BA	3317	1/1	0.89	0.23	87,87,87,87	0
54	MG	BA	3318	1/1	0.89	0.28	71,71,71,71	0
54	MG	DA	3259	1/1	0.89	0.30	78,78,78,78	0
54	MG	BA	3272	1/1	0.89	0.12	53,53,53,53	0
54	MG	BA	3432	1/1	0.89	0.23	81,81,81,81	0
54	MG	DA	3262	1/1	0.89	0.13	95,95,95,95	0
54	MG	DA	3263	1/1	0.89	0.33	62,62,62,62	0
54	MG	BA	3162	1/1	0.89	0.18	85,85,85,85	0
54	MG	DA	3394	1/1	0.89	0.20	75,75,75,75	0
54	MG	BA	3504	1/1	0.89	0.10	90,90,90,90	0
54	MG	DA	3102	1/1	0.89	0.18	68,68,68,68	0
54	MG	BA	3325	1/1	0.89	0.16	79,79,79,79	0
54	MG	AA	1616	1/1	0.89	0.29	81,81,81,81	0
54	MG	D3	101	1/1	0.89	0.31	78,78,78,78	0
54	MG	BA	3123	1/1	0.89	0.23	74,74,74,74	0
54	MG	DA	3115	1/1	0.89	0.28	66,66,66,66	0
54	MG	BA	3127	1/1	0.89	0.14	90,90,90,90	0
54	MG	CA	1669	1/1	0.90	0.27	81,81,81,81	0
54	MG	BA	3528	1/1	0.90	0.15	74,74,74,74	0
54	MG	BA	3346	1/1	0.90	0.17	74,74,74,74	0
54	MG	DA	3202	1/1	0.90	0.26	60,60,60,60	0
54	MG	BA	3138	1/1	0.90	0.27	65,65,65,65	0
54	MG	BA	3014	1/1	0.90	0.33	49,49,49,49	0
54	MG	DA	3206	1/1	0.90	0.21	73,73,73,73	0
54	MG	CA	1675	1/1	0.90	0.20	96,96,96,96	0
54	MG	DA	3334	1/1	0.90	0.24	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3238	1/1	0.90	0.33	63,63,63,63	0
54	MG	DA	3005	1/1	0.90	0.44	99,99,99,99	0
54	MG	DA	3440	1/1	0.90	0.16	86,86,86,86	0
54	MG	BA	3434	1/1	0.90	0.10	86,86,86,86	0
54	MG	BA	3017	1/1	0.90	0.22	53,53,53,53	0
54	MG	BA	3045	1/1	0.90	0.15	64,64,64,64	0
54	MG	BA	3277	1/1	0.90	0.14	89,89,89,89	0
54	MG	CA	1612	1/1	0.90	0.09	94,94,94,94	0
54	MG	CA	1613	1/1	0.90	0.20	86,86,86,86	0
54	MG	BA	3242	1/1	0.90	0.19	59,59,59,59	0
54	MG	BA	3121	1/1	0.90	0.21	98,98,98,98	0
54	MG	DA	3110	1/1	0.90	0.27	60,60,60,60	0
54	MG	BA	3492	1/1	0.90	0.19	87,87,87,87	0
54	MG	AA	1697	1/1	0.90	0.15	90,90,90,90	0
54	MG	DA	3454	1/1	0.90	0.29	90,90,90,90	0
54	MG	DA	3234	1/1	0.90	0.16	94,94,94,94	0
54	MG	BA	3019	1/1	0.90	0.22	48,48,48,48	0
54	MG	CA	1620	1/1	0.90	0.27	75,75,75,75	0
54	MG	DA	3028	1/1	0.90	0.12	74,74,74,74	0
54	MG	BA	3150	1/1	0.90	0.34	76,76,76,76	0
54	MG	BA	3546	1/1	0.90	0.21	98,98,98,98	0
54	MG	DA	3124	1/1	0.90	0.24	71,71,71,71	0
54	MG	BA	3496	1/1	0.90	0.25	97,97,97,97	0
54	MG	BA	3124	1/1	0.90	0.38	85,85,85,85	0
54	MG	BA	3550	1/1	0.90	0.24	98,98,98,98	0
54	MG	DA	3256	1/1	0.90	0.23	60,60,60,60	0
54	MG	BA	3322	1/1	0.90	0.23	76,76,76,76	0
54	MG	CA	1766	1/1	0.90	0.30	74,74,74,74	0
54	MG	BA	3323	1/1	0.90	0.24	87,87,87,87	0
54	MG	AA	1605	1/1	0.90	0.07	103,103,103,103	0
54	MG	BA	3364	1/1	0.90	0.21	78,78,78,78	0
54	MG	DA	3135	1/1	0.90	0.18	79,79,79,79	0
54	MG	DA	3484	1/1	0.90	0.17	69,69,69,69	0
54	MG	DA	3485	1/1	0.90	0.30	77,77,77,77	0
54	MG	DA	3487	1/1	0.90	0.25	95,95,95,95	0
54	MG	BA	3220	1/1	0.90	0.10	76,76,76,76	0
54	MG	BA	3006	1/1	0.90	0.26	56,56,56,56	0
54	MG	DA	3268	1/1	0.90	0.35	76,76,76,76	0
54	MG	BA	3507	1/1	0.90	0.20	79,79,79,79	0
54	MG	BA	3455	1/1	0.90	0.08	74,74,74,74	0
54	MG	CA	1707	1/1	0.90	0.26	88,88,88,88	0
54	MG	BA	3328	1/1	0.90	0.25	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1777	1/1	0.90	0.18	78,78,78,78	0
54	MG	BA	3565	1/1	0.90	0.32	45,45,45,45	0
54	MG	DA	3383	1/1	0.90	0.21	87,87,87,87	0
54	MG	BB	207	1/1	0.90	0.15	84,84,84,84	0
54	MG	DA	3504	1/1	0.90	0.38	79,79,79,79	0
54	MG	BA	3254	1/1	0.90	0.21	72,72,72,72	0
54	MG	BA	3567	1/1	0.90	0.23	62,62,62,62	0
54	MG	BA	3256	1/1	0.90	0.36	80,80,80,80	0
54	MG	BA	3028	1/1	0.90	0.29	59,59,59,59	0
54	MG	DA	3062	1/1	0.90	0.25	60,60,60,60	0
54	MG	AA	1762	1/1	0.90	0.28	92,92,92,92	0
54	MG	CA	1646	1/1	0.90	0.08	92,92,92,92	0
54	MG	DA	3293	1/1	0.90	0.29	72,72,72,72	0
54	MG	DA	3518	1/1	0.90	0.30	83,83,83,83	0
54	MG	BA	3415	1/1	0.90	0.31	80,80,80,80	0
54	MG	DA	3162	1/1	0.90	0.13	81,81,81,81	0
54	MG	DA	3163	1/1	0.90	0.22	66,66,66,66	0
54	MG	DA	3522	1/1	0.90	0.24	81,81,81,81	0
54	MG	CA	1789	1/1	0.90	0.15	82,82,82,82	0
54	MG	DA	3165	1/1	0.90	0.31	64,64,64,64	0
54	MG	DA	3404	1/1	0.90	0.17	86,86,86,86	0
54	MG	BA	3335	1/1	0.90	0.17	75,75,75,75	0
54	MG	DB	204	1/1	0.90	0.16	87,87,87,87	0
54	MG	BA	3224	1/1	0.90	0.46	76,76,76,76	0
54	MG	BA	3260	1/1	0.90	0.33	62,62,62,62	0
54	MG	DA	3070	1/1	0.90	0.28	68,68,68,68	0
54	MG	DA	3172	1/1	0.90	0.34	66,66,66,66	0
54	MG	BA	3113	1/1	0.90	0.27	54,54,54,54	0
54	MG	BA	3589	1/1	0.90	0.23	66,66,66,66	0
54	MG	BO	201	1/1	0.90	0.20	79,79,79,79	0
54	MG	DA	3310	1/1	0.90	0.43	85,85,85,85	0
54	MG	DA	3180	1/1	0.90	0.24	68,68,68,68	0
54	MG	BA	3132	1/1	0.90	0.19	65,65,65,65	0
54	MG	AA	1686	1/1	0.90	0.20	88,88,88,88	0
54	MG	B7	101	1/1	0.90	0.35	69,69,69,69	0
54	MG	BA	3265	1/1	0.90	0.18	82,82,82,82	0
54	MG	AA	1831	1/1	0.90	0.27	91,91,91,91	0
54	MG	DU	202	1/1	0.90	0.09	96,96,96,96	0
54	MG	BA	3116	1/1	0.90	0.20	84,84,84,84	0
54	MG	D8	101	1/1	0.90	0.29	80,80,80,80	0
54	MG	CA	1663	1/1	0.90	0.14	90,90,90,90	0
54	MG	BA	3198	1/1	0.90	0.33	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1738	1/1	0.90	0.36	74,74,74,74	0
54	MG	DA	3285	1/1	0.91	0.23	57,57,57,57	0
54	MG	BA	3417	1/1	0.91	0.31	82,82,82,82	0
54	MG	DA	3368	1/1	0.91	0.23	82,82,82,82	0
54	MG	BA	3524	1/1	0.91	0.24	77,77,77,77	0
54	MG	BA	3031	1/1	0.91	0.21	58,58,58,58	0
54	MG	DA	3290	1/1	0.91	0.24	75,75,75,75	0
54	MG	BA	3087	1/1	0.91	0.24	72,72,72,72	0
54	MG	BA	3234	1/1	0.91	0.17	79,79,79,79	0
54	MG	BA	3201	1/1	0.91	0.26	66,66,66,66	0
54	MG	BA	3315	1/1	0.91	0.25	83,83,83,83	0
54	MG	BA	3581	1/1	0.91	0.12	59,59,59,59	0
54	MG	DA	3297	1/1	0.91	0.40	84,84,84,84	0
54	MG	BA	3369	1/1	0.91	0.33	68,68,68,68	0
54	MG	DA	3201	1/1	0.91	0.34	66,66,66,66	0
54	MG	BA	3460	1/1	0.91	0.07	189,189,189,189	0
54	MG	BA	3066	1/1	0.91	0.17	60,60,60,60	0
54	MG	DA	3470	1/1	0.91	0.22	54,54,54,54	0
54	MG	BB	204	1/1	0.91	0.31	87,87,87,87	0
54	MG	AA	1813	1/1	0.91	0.23	88,88,88,88	0
54	MG	DA	3474	1/1	0.91	0.20	65,65,65,65	0
54	MG	DA	3003	1/1	0.91	0.16	77,77,77,77	0
54	MG	BA	3175	1/1	0.91	0.23	61,61,61,61	0
54	MG	DA	3477	1/1	0.91	0.13	67,67,67,67	0
54	MG	DA	3480	1/1	0.91	0.57	64,64,64,64	0
54	MG	BA	3373	1/1	0.91	0.21	85,85,85,85	0
54	MG	DA	3211	1/1	0.91	0.22	52,52,52,52	0
54	MG	BA	3591	1/1	0.91	0.25	69,69,69,69	0
54	MG	DA	3311	1/1	0.91	0.32	74,74,74,74	0
54	MG	BA	3467	1/1	0.91	0.22	62,62,62,62	0
54	MG	BA	3176	1/1	0.91	0.14	73,73,73,73	0
54	MG	DA	3073	1/1	0.91	0.23	66,66,66,66	0
54	MG	DA	3492	1/1	0.91	0.19	96,96,96,96	0
54	MG	DA	3012	1/1	0.91	0.29	87,87,87,87	0
54	MG	DA	3013	1/1	0.91	0.24	95,95,95,95	0
54	MG	AA	1830	1/1	0.91	0.12	89,89,89,89	0
54	MG	DA	3403	1/1	0.91	0.13	62,62,62,62	0
54	MG	DA	3498	1/1	0.91	0.13	71,71,71,71	0
54	MG	DA	3144	1/1	0.91	0.19	79,79,79,79	0
54	MG	BA	3020	1/1	0.91	0.25	49,49,49,49	0
54	MG	DA	3146	1/1	0.91	0.23	86,86,86,86	0
54	MG	DA	3502	1/1	0.91	0.17	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3133	1/1	0.91	0.23	72,72,72,72	0
54	MG	AA	1730	1/1	0.91	0.20	90,90,90,90	0
54	MG	DA	3236	1/1	0.91	0.26	56,56,56,56	0
54	MG	DA	3237	1/1	0.91	0.30	52,52,52,52	0
54	MG	BA	3246	1/1	0.91	0.28	62,62,62,62	0
54	MG	AA	1760	1/1	0.91	0.19	87,87,87,87	0
54	MG	DA	3241	1/1	0.91	0.32	74,74,74,74	0
54	MG	BE	303	1/1	0.91	0.17	89,89,89,89	0
54	MG	BA	3547	1/1	0.91	0.13	84,84,84,84	0
54	MG	BA	3058	1/1	0.91	0.29	68,68,68,68	0
54	MG	BA	3512	1/1	0.91	0.16	87,87,87,87	0
54	MG	DA	3157	1/1	0.91	0.27	58,58,58,58	0
54	MG	CA	1783	1/1	0.91	0.33	80,80,80,80	0
54	MG	CA	1784	1/1	0.91	0.27	95,95,95,95	0
54	MG	DA	3339	1/1	0.91	0.13	76,76,76,76	0
54	MG	DA	3161	1/1	0.91	0.12	84,84,84,84	0
54	MG	B2	201	1/1	0.91	0.19	104,104,104,104	0
54	MG	BA	3077	1/1	0.91	0.15	82,82,82,82	0
54	MG	BA	3140	1/1	0.91	0.37	47,47,47,47	0
54	MG	BA	3515	1/1	0.91	0.26	93,93,93,93	0
54	MG	DA	3431	1/1	0.91	0.12	81,81,81,81	0
54	MG	BA	3480	1/1	0.91	0.35	75,75,75,75	0
54	MG	BA	3412	1/1	0.91	0.25	78,78,78,78	0
54	MG	DA	3097	1/1	0.91	0.14	89,89,89,89	0
54	MG	BA	3046	1/1	0.91	0.28	60,60,60,60	0
54	MG	DA	3170	1/1	0.91	0.16	58,58,58,58	0
54	MG	CA	1699	1/1	0.91	0.30	80,80,80,80	0
54	MG	DA	3174	1/1	0.91	0.17	52,52,52,52	0
54	MG	AA	1695	1/1	0.91	0.09	76,76,76,76	0
54	MG	DA	3356	1/1	0.91	0.13	84,84,84,84	0
54	MG	DA	3441	1/1	0.91	0.06	111,111,111,111	0
54	MG	BA	3618	1/1	0.91	0.23	87,87,87,87	0
54	MG	DR	201	1/1	0.91	0.07	82,82,82,82	0
54	MG	BA	3048	1/1	0.91	0.21	67,67,67,67	0
54	MG	DA	3277	1/1	0.91	0.27	76,76,76,76	0
54	MG	DA	3179	1/1	0.91	0.27	73,73,73,73	0
54	MG	DA	3104	1/1	0.91	0.19	71,71,71,71	0
54	MG	DA	3447	1/1	0.91	0.11	80,80,80,80	0
54	MG	BA	3005	1/1	0.91	0.28	59,59,59,59	0
54	MG	BA	3448	1/1	0.91	0.24	79,79,79,79	0
54	MG	DA	3112	1/1	0.91	0.24	58,58,58,58	0
56	ZN	CG	303	1/1	0.91	0.13	139,139,139,139	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3050	1/1	0.92	0.24	67,67,67,67	0
54	MG	DA	3051	1/1	0.92	0.39	78,78,78,78	0
54	MG	DA	3054	1/1	0.92	0.35	65,65,65,65	0
54	MG	AA	1698	1/1	0.92	0.14	85,85,85,85	0
54	MG	BA	3275	1/1	0.92	0.33	90,90,90,90	0
54	MG	CA	1647	1/1	0.92	0.13	84,84,84,84	0
54	MG	BE	302	1/1	0.92	0.09	76,76,76,76	0
54	MG	BA	3203	1/1	0.92	0.10	75,75,75,75	0
54	MG	CA	1718	1/1	0.92	0.09	100,100,100,100	0
54	MG	DA	3156	1/1	0.92	0.28	49,49,49,49	0
54	MG	CA	1650	1/1	0.92	0.16	93,93,93,93	0
54	MG	BA	3592	1/1	0.92	0.17	73,73,73,73	0
54	MG	BA	3038	1/1	0.92	0.27	53,53,53,53	0
54	MG	BA	3141	1/1	0.92	0.25	76,76,76,76	0
54	MG	BO	202	1/1	0.92	0.16	68,68,68,68	0
54	MG	CA	1726	1/1	0.92	0.37	82,82,82,82	0
54	MG	DA	3372	1/1	0.92	0.21	84,84,84,84	0
54	MG	CA	1796	1/1	0.92	0.20	81,81,81,81	0
54	MG	B1	201	1/1	0.92	0.28	68,68,68,68	0
54	MG	AC	107	1/1	0.92	0.09	94,94,94,94	0
54	MG	BA	3040	1/1	0.92	0.29	58,58,58,58	0
54	MG	BA	3211	1/1	0.92	0.17	48,48,48,48	0
54	MG	BA	3042	1/1	0.92	0.18	62,62,62,62	0
54	MG	BA	3600	1/1	0.92	0.15	65,65,65,65	0
54	MG	CA	1734	1/1	0.92	0.28	78,78,78,78	0
54	MG	DA	3479	1/1	0.92	0.17	68,68,68,68	0
54	MG	CA	1661	1/1	0.92	0.25	88,88,88,88	0
54	MG	DA	3482	1/1	0.92	0.31	54,54,54,54	0
54	MG	BA	3173	1/1	0.92	0.17	60,60,60,60	0
54	MG	DA	3384	1/1	0.92	0.36	81,81,81,81	0
54	MG	BA	3016	1/1	0.92	0.28	57,57,57,57	0
54	MG	BA	3401	1/1	0.92	0.20	73,73,73,73	0
54	MG	CA	1667	1/1	0.92	0.27	70,70,70,70	0
54	MG	BA	3445	1/1	0.92	0.36	64,64,64,64	0
54	MG	BA	3147	1/1	0.92	0.26	73,73,73,73	0
54	MG	BA	3067	1/1	0.92	0.19	60,60,60,60	0
54	MG	AA	1806	1/1	0.92	0.40	87,87,87,87	0
54	MG	BA	3365	1/1	0.92	0.24	86,86,86,86	0
54	MG	BA	3366	1/1	0.92	0.31	65,65,65,65	0
54	MG	BA	3452	1/1	0.92	0.20	108,108,108,108	0
54	MG	BA	3181	1/1	0.92	0.21	64,64,64,64	0
54	MG	BA	3616	1/1	0.92	0.30	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3009	1/1	0.92	0.22	71,71,71,71	0
54	MG	BA	3295	1/1	0.92	0.32	78,78,78,78	0
54	MG	AA	1787	1/1	0.92	0.12	89,89,89,89	0
54	MG	BA	3096	1/1	0.92	0.31	56,56,56,56	0
54	MG	DA	3198	1/1	0.92	0.26	57,57,57,57	0
54	MG	DA	3505	1/1	0.92	0.32	73,73,73,73	0
54	MG	DA	3014	1/1	0.92	0.35	67,67,67,67	0
54	MG	BA	3333	1/1	0.92	0.16	83,83,83,83	0
54	MG	DA	3509	1/1	0.92	0.23	64,64,64,64	0
54	MG	AA	1685	1/1	0.92	0.20	73,73,73,73	0
54	MG	BA	3556	1/1	0.92	0.32	49,49,49,49	0
54	MG	DA	3513	1/1	0.92	0.39	81,81,81,81	0
54	MG	BA	3001	1/1	0.92	0.34	57,57,57,57	0
54	MG	DA	3019	1/1	0.92	0.19	79,79,79,79	0
54	MG	CA	1619	1/1	0.92	0.13	75,75,75,75	0
54	MG	BA	3374	1/1	0.92	0.22	74,74,74,74	0
54	MG	CA	1691	1/1	0.92	0.27	89,89,89,89	0
54	MG	DA	3212	1/1	0.92	0.26	48,48,48,48	0
54	MG	BA	3228	1/1	0.92	0.14	62,62,62,62	0
54	MG	BA	3560	1/1	0.92	0.20	54,54,54,54	0
54	MG	DA	3026	1/1	0.92	0.26	76,76,76,76	0
54	MG	DA	3027	1/1	0.92	0.13	93,93,93,93	0
54	MG	BA	3465	1/1	0.92	0.17	79,79,79,79	0
54	MG	DA	3423	1/1	0.92	0.15	83,83,83,83	0
54	MG	BA	3003	1/1	0.92	0.20	61,61,61,61	0
54	MG	BA	3338	1/1	0.92	0.13	77,77,77,77	0
54	MG	BA	3230	1/1	0.92	0.14	71,71,71,71	0
54	MG	AA	1659	1/1	0.92	0.21	56,56,56,56	0
54	MG	BA	3568	1/1	0.92	0.19	55,55,55,55	0
54	MG	DA	3228	1/1	0.92	0.26	70,70,70,70	0
54	MG	BA	3569	1/1	0.92	0.29	51,51,51,51	0
54	MG	DA	3232	1/1	0.92	0.23	54,54,54,54	0
54	MG	CA	1770	1/1	0.92	0.12	65,65,65,65	0
54	MG	BA	3266	1/1	0.92	0.28	72,72,72,72	0
54	MG	DA	3340	1/1	0.92	0.34	83,83,83,83	0
54	MG	AA	1810	1/1	0.92	0.43	89,89,89,89	0
54	MG	BA	3574	1/1	0.92	0.23	60,60,60,60	0
54	MG	BA	3007	1/1	0.92	0.24	59,59,59,59	0
54	MG	AA	1784	1/1	0.92	0.13	82,82,82,82	0
54	MG	BB	210	1/1	0.92	0.37	76,76,76,76	0
54	MG	BA	3384	1/1	0.92	0.27	73,73,73,73	0
54	MG	BA	3011	1/1	0.92	0.24	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3249	1/1	0.92	0.20	74,74,74,74	0
54	MG	BA	3112	1/1	0.92	0.42	71,71,71,71	0
54	MG	BA	3310	1/1	0.92	0.24	70,70,70,70	0
54	MG	DA	3351	1/1	0.92	0.18	85,85,85,85	0
54	MG	AA	1680	1/1	0.92	0.09	105,105,105,105	0
54	MG	CA	1644	1/1	0.92	0.22	85,85,85,85	0
54	MG	AA	1701	1/1	0.93	0.07	96,96,96,96	0
54	MG	BA	3076	1/1	0.93	0.22	86,86,86,86	0
54	MG	BA	3061	1/1	0.93	0.15	84,84,84,84	0
54	MG	AA	1633	1/1	0.93	0.25	90,90,90,90	0
54	MG	DA	3408	1/1	0.93	0.24	76,76,76,76	0
54	MG	BA	3358	1/1	0.93	0.30	82,82,82,82	0
54	MG	BA	3178	1/1	0.93	0.23	51,51,51,51	0
54	MG	DA	3189	1/1	0.93	0.33	56,56,56,56	0
54	MG	BA	3278	1/1	0.93	0.36	64,64,64,64	0
54	MG	DA	3413	1/1	0.93	0.13	84,84,84,84	0
54	MG	DA	3267	1/1	0.93	0.23	78,78,78,78	0
54	MG	CA	1793	1/1	0.93	0.36	82,82,82,82	0
54	MG	BA	3255	1/1	0.93	0.19	69,69,69,69	0
54	MG	BA	3587	1/1	0.93	0.10	88,88,88,88	0
54	MG	DA	3196	1/1	0.93	0.28	72,72,72,72	0
54	MG	CA	1677	1/1	0.93	0.31	73,73,73,73	0
54	MG	DA	3080	1/1	0.93	0.22	74,74,74,74	0
54	MG	BA	3626	1/1	0.93	0.23	87,87,87,87	0
54	MG	BA	3033	1/1	0.93	0.29	62,62,62,62	0
54	MG	BA	3021	1/1	0.93	0.24	63,63,63,63	0
54	MG	CG	302	1/1	0.93	0.08	114,114,114,114	0
54	MG	AA	1645	1/1	0.93	0.22	81,81,81,81	0
54	MG	BA	3421	1/1	0.93	0.30	73,73,73,73	0
54	MG	BA	3486	1/1	0.93	0.29	73,73,73,73	0
54	MG	CA	1763	1/1	0.93	0.28	80,80,80,80	0
54	MG	CA	1723	1/1	0.93	0.31	82,82,82,82	0
54	MG	DA	3288	1/1	0.93	0.27	77,77,77,77	0
54	MG	DA	3508	1/1	0.93	0.34	65,65,65,65	0
54	MG	BA	3023	1/1	0.93	0.26	45,45,45,45	0
54	MG	DA	3091	1/1	0.93	0.21	73,73,73,73	0
54	MG	BA	3286	1/1	0.93	0.26	73,73,73,73	0
54	MG	CA	1687	1/1	0.93	0.18	84,84,84,84	0
54	MG	DA	3216	1/1	0.93	0.07	78,78,78,78	0
54	MG	BA	3216	1/1	0.93	0.22	62,62,62,62	0
54	MG	BA	3142	1/1	0.93	0.25	66,66,66,66	0
54	MG	BA	3239	1/1	0.93	0.23	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3220	1/1	0.93	0.21	60,60,60,60	0
54	MG	BA	3024	1/1	0.93	0.26	56,56,56,56	0
54	MG	DA	3222	1/1	0.93	0.39	82,82,82,82	0
54	MG	BA	3105	1/1	0.93	0.23	60,60,60,60	0
54	MG	DA	3302	1/1	0.93	0.16	64,64,64,64	0
54	MG	DA	3159	1/1	0.93	0.19	67,67,67,67	0
54	MG	BA	3106	1/1	0.93	0.36	73,73,73,73	0
54	MG	BA	3294	1/1	0.93	0.21	75,75,75,75	0
54	MG	DA	3230	1/1	0.93	0.35	64,64,64,64	0
54	MG	AA	1766	1/1	0.93	0.07	98,98,98,98	0
54	MG	DA	3378	1/1	0.93	0.26	70,70,70,70	0
54	MG	DA	3052	1/1	0.93	0.27	60,60,60,60	0
54	MG	BA	3320	1/1	0.93	0.33	82,82,82,82	0
54	MG	DA	3235	1/1	0.93	0.36	74,74,74,74	0
54	MG	DA	3105	1/1	0.93	0.23	65,65,65,65	0
54	MG	DA	3106	1/1	0.93	0.25	66,66,66,66	0
54	MG	DA	3007	1/1	0.93	0.30	76,76,76,76	0
54	MG	DA	3317	1/1	0.93	0.18	67,67,67,67	0
54	MG	DA	3239	1/1	0.93	0.28	64,64,64,64	0
54	MG	BA	3564	1/1	0.93	0.12	71,71,71,71	0
54	MG	DA	3111	1/1	0.93	0.40	105,105,105,105	0
54	MG	BA	3027	1/1	0.93	0.23	53,53,53,53	0
54	MG	DE	303	1/1	0.93	0.25	85,85,85,85	0
54	MG	DE	304	1/1	0.93	0.29	66,66,66,66	0
54	MG	DA	3244	1/1	0.93	0.05	89,89,89,89	0
54	MG	DA	3245	1/1	0.93	0.24	76,76,76,76	0
54	MG	BA	3110	1/1	0.93	0.24	58,58,58,58	0
54	MG	AA	1618	1/1	0.93	0.17	82,82,82,82	0
54	MG	BA	3609	1/1	0.93	0.32	80,80,80,80	0
54	MG	BA	3611	1/1	0.93	0.19	55,55,55,55	0
54	MG	DA	3120	1/1	0.93	0.27	60,60,60,60	0
54	MG	BA	3324	1/1	0.93	0.32	70,70,70,70	0
54	MG	AA	1661	1/1	0.93	0.36	81,81,81,81	0
54	MG	BA	3535	1/1	0.93	0.16	79,79,79,79	0
54	MG	B0	201	1/1	0.94	0.20	67,67,67,67	0
54	MG	BA	3009	1/1	0.94	0.10	66,66,66,66	0
54	MG	BA	3194	1/1	0.94	0.20	64,64,64,64	0
54	MG	DA	3076	1/1	0.94	0.15	93,93,93,93	0
54	MG	DA	3469	1/1	0.94	0.34	50,50,50,50	0
54	MG	BU	201	1/1	0.94	0.09	95,95,95,95	0
54	MG	BA	3506	1/1	0.94	0.33	74,74,74,74	0
54	MG	AA	1689	1/1	0.94	0.33	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3026	1/1	0.94	0.21	59,59,59,59	0
54	MG	DA	3223	1/1	0.94	0.31	73,73,73,73	0
54	MG	BA	3139	1/1	0.94	0.36	48,48,48,48	0
54	MG	AA	1640	1/1	0.94	0.26	77,77,77,77	0
54	MG	AA	1670	1/1	0.94	0.21	86,86,86,86	0
54	MG	AA	1778	1/1	0.94	0.33	70,70,70,70	0
54	MG	DA	3229	1/1	0.94	0.37	57,57,57,57	0
54	MG	BA	3202	1/1	0.94	0.18	71,71,71,71	0
54	MG	DA	3313	1/1	0.94	0.28	54,54,54,54	0
54	MG	DA	3314	1/1	0.94	0.19	91,91,91,91	0
54	MG	DA	3155	1/1	0.94	0.23	74,74,74,74	0
54	MG	DA	3022	1/1	0.94	0.21	61,61,61,61	0
54	MG	DA	3233	1/1	0.94	0.18	75,75,75,75	0
54	MG	BA	3561	1/1	0.94	0.20	57,57,57,57	0
54	MG	BA	3167	1/1	0.94	0.15	68,68,68,68	0
54	MG	BA	3070	1/1	0.94	0.13	64,64,64,64	0
54	MG	DA	3494	1/1	0.94	0.35	72,72,72,72	0
54	MG	CA	1721	1/1	0.94	0.34	74,74,74,74	0
54	MG	BA	3620	1/1	0.94	0.20	63,63,63,63	0
54	MG	BA	3169	1/1	0.94	0.10	65,65,65,65	0
54	MG	BA	3052	1/1	0.94	0.28	81,81,81,81	0
54	MG	BA	3279	1/1	0.94	0.29	68,68,68,68	0
54	MG	CA	1610	1/1	0.94	0.11	97,97,97,97	0
54	MG	BA	3208	1/1	0.94	0.49	67,67,67,67	0
54	MG	BA	3475	1/1	0.94	0.09	79,79,79,79	0
54	MG	BA	3476	1/1	0.94	0.18	71,71,71,71	0
54	MG	DA	3247	1/1	0.94	0.32	76,76,76,76	0
54	MG	BA	3015	1/1	0.94	0.07	88,88,88,88	0
54	MG	BA	3210	1/1	0.94	0.18	59,59,59,59	0
54	MG	AA	1602	1/1	0.94	0.14	82,82,82,82	0
54	MG	BA	3212	1/1	0.94	0.31	52,52,52,52	0
54	MG	DA	3252	1/1	0.94	0.18	67,67,67,67	0
54	MG	BA	3214	1/1	0.94	0.18	56,56,56,56	0
54	MG	BA	3580	1/1	0.94	0.34	68,68,68,68	0
54	MG	DA	3512	1/1	0.94	0.15	63,63,63,63	0
54	MG	AA	1658	1/1	0.94	0.21	68,68,68,68	0
54	MG	BA	3439	1/1	0.94	0.25	70,70,70,70	0
54	MG	BA	3251	1/1	0.94	0.31	48,48,48,48	0
54	MG	AA	1781	1/1	0.94	0.04	103,103,103,103	0
54	MG	BA	3125	1/1	0.94	0.26	75,75,75,75	0
54	MG	BA	3004	1/1	0.94	0.21	72,72,72,72	0
54	MG	BA	3292	1/1	0.94	0.10	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1627	1/1	0.94	0.08	111,111,111,111	0
54	MG	DA	3264	1/1	0.94	0.15	68,68,68,68	0
54	MG	BA	3329	1/1	0.94	0.34	62,62,62,62	0
54	MG	DA	3266	1/1	0.94	0.13	87,87,87,87	0
54	MG	AA	1619	1/1	0.94	0.11	96,96,96,96	0
54	MG	CA	1630	1/1	0.94	0.08	91,91,91,91	0
54	MG	AA	1832	1/1	0.94	0.23	87,87,87,87	0
54	MG	BA	3593	1/1	0.94	0.21	78,78,78,78	0
54	MG	DA	3271	1/1	0.94	0.12	67,67,67,67	0
54	MG	DA	3272	1/1	0.94	0.11	65,65,65,65	0
54	MG	AA	1783	1/1	0.94	0.32	88,88,88,88	0
54	MG	DA	3194	1/1	0.94	0.41	54,54,54,54	0
54	MG	DA	3059	1/1	0.94	0.33	87,87,87,87	0
54	MG	BA	3449	1/1	0.94	0.23	70,70,70,70	0
54	MG	DA	3361	1/1	0.94	0.36	77,77,77,77	0
54	MG	BA	3083	1/1	0.94	0.29	68,68,68,68	0
54	MG	DA	3128	1/1	0.94	0.26	56,56,56,56	0
54	MG	DA	3199	1/1	0.94	0.21	63,63,63,63	0
54	MG	BA	3041	1/1	0.94	0.43	66,66,66,66	0
54	MG	CA	1637	1/1	0.94	0.09	97,97,97,97	0
54	MG	DA	3203	1/1	0.94	0.35	73,73,73,73	0
54	MG	DA	3131	1/1	0.94	0.28	77,77,77,77	0
54	MG	BD	301	1/1	0.94	0.12	91,91,91,91	0
54	MG	BA	3085	1/1	0.94	0.27	75,75,75,75	0
54	MG	BA	3497	1/1	0.94	0.18	72,72,72,72	0
54	MG	BA	3261	1/1	0.94	0.21	65,65,65,65	0
54	MG	BA	3190	1/1	0.94	0.29	75,75,75,75	0
54	MG	DA	3292	1/1	0.94	0.21	78,78,78,78	0
54	MG	AA	1793	1/1	0.94	0.15	71,71,71,71	0
54	MG	DA	3139	1/1	0.94	0.14	63,63,63,63	0
56	ZN	AG	302	1/1	0.94	0.19	115,115,115,115	0
54	MG	BA	3159	1/1	0.94	0.19	69,69,69,69	0
54	MG	BA	3458	1/1	0.94	0.33	78,78,78,78	0
54	MG	BA	3093	1/1	0.95	0.06	72,72,72,72	0
54	MG	BA	3585	1/1	0.95	0.38	77,77,77,77	0
54	MG	DA	3116	1/1	0.95	0.25	60,60,60,60	0
54	MG	AN	201	1/1	0.95	0.06	91,91,91,91	0
54	MG	DA	3118	1/1	0.95	0.10	57,57,57,57	0
54	MG	DA	3119	1/1	0.95	0.31	58,58,58,58	0
54	MG	BA	3613	1/1	0.95	0.09	64,64,64,64	0
54	MG	BA	3398	1/1	0.95	0.29	78,78,78,78	0
54	MG	DA	3010	1/1	0.95	0.31	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3185	1/1	0.95	0.37	62,62,62,62	0
54	MG	DA	3467	1/1	0.95	0.26	72,72,72,72	0
54	MG	BA	3104	1/1	0.95	0.20	45,45,45,45	0
54	MG	DA	3425	1/1	0.95	0.22	82,82,82,82	0
54	MG	DA	3471	1/1	0.95	0.26	51,51,51,51	0
54	MG	BA	3538	1/1	0.95	0.19	76,76,76,76	0
54	MG	BA	3233	1/1	0.95	0.09	82,82,82,82	0
54	MG	BA	3420	1/1	0.95	0.09	65,65,65,65	0
54	MG	BA	3187	1/1	0.95	0.30	71,71,71,71	0
54	MG	BA	3501	1/1	0.95	0.26	90,90,90,90	0
54	MG	CA	1665	1/1	0.95	0.14	82,82,82,82	0
54	MG	CA	1666	1/1	0.95	0.10	76,76,76,76	0
54	MG	BA	3282	1/1	0.95	0.27	60,60,60,60	0
54	MG	DA	3171	1/1	0.95	0.42	64,64,64,64	0
54	MG	BA	3126	1/1	0.95	0.30	73,73,73,73	0
54	MG	DA	3173	1/1	0.95	0.28	53,53,53,53	0
54	MG	BA	3545	1/1	0.95	0.26	76,76,76,76	0
54	MG	CA	1671	1/1	0.95	0.12	77,77,77,77	0
54	MG	DA	3176	1/1	0.95	0.45	58,58,58,58	0
54	MG	DA	3396	1/1	0.95	0.26	73,73,73,73	0
54	MG	BA	3035	1/1	0.95	0.24	52,52,52,52	0
54	MG	DA	3491	1/1	0.95	0.11	71,71,71,71	0
54	MG	AA	1663	1/1	0.95	0.11	72,72,72,72	0
54	MG	DE	301	1/1	0.95	0.23	67,67,67,67	0
54	MG	BF	301	1/1	0.95	0.06	76,76,76,76	0
54	MG	BA	3269	1/1	0.95	0.16	49,49,49,49	0
54	MG	BA	3098	1/1	0.95	0.23	45,45,45,45	0
54	MG	BA	3575	1/1	0.95	0.22	52,52,52,52	0
54	MG	DA	3030	1/1	0.95	0.10	64,64,64,64	0
54	MG	BA	3108	1/1	0.95	0.16	56,56,56,56	0
54	MG	BA	3002	1/1	0.95	0.24	58,58,58,58	0
54	MG	CA	1680	1/1	0.95	0.06	104,104,104,104	0
54	MG	D5	101	1/1	0.95	0.11	63,63,63,63	0
54	MG	BA	3578	1/1	0.95	0.20	73,73,73,73	0
54	MG	BA	3051	1/1	0.95	0.26	74,74,74,74	0
54	MG	AA	1609	1/1	0.95	0.30	61,61,61,61	0
54	MG	B3	101	1/1	0.95	0.41	84,84,84,84	0
54	MG	BA	3213	1/1	0.95	0.09	61,61,61,61	0
54	MG	DA	3193	1/1	0.95	0.21	76,76,76,76	0
54	MG	CC	103	1/1	0.96	0.24	73,73,73,73	0
54	MG	BA	3137	1/1	0.96	0.10	54,54,54,54	0
54	MG	DA	3481	1/1	0.96	0.26	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3351	1/1	0.96	0.21	62,62,62,62	0
54	MG	BA	3188	1/1	0.96	0.20	47,47,47,47	0
54	MG	BA	3065	1/1	0.96	0.44	68,68,68,68	0
54	MG	CA	1744	1/1	0.96	0.14	70,70,70,70	0
54	MG	DA	3486	1/1	0.96	0.15	78,78,78,78	0
54	MG	AA	1604	1/1	0.96	0.09	88,88,88,88	0
54	MG	DA	3208	1/1	0.96	0.24	57,57,57,57	0
54	MG	B5	1701	1/1	0.96	0.23	60,60,60,60	0
54	MG	BA	3205	1/1	0.96	0.23	51,51,51,51	0
54	MG	BA	3179	1/1	0.96	0.41	60,60,60,60	0
54	MG	BA	3627	1/1	0.96	0.35	69,69,69,69	0
54	MG	DA	3273	1/1	0.96	0.17	54,54,54,54	0
54	MG	DA	3242	1/1	0.96	0.37	66,66,66,66	0
54	MG	BA	3081	1/1	0.96	0.15	72,72,72,72	0
54	MG	DA	3103	1/1	0.96	0.12	66,66,66,66	0
54	MG	BA	3553	1/1	0.96	0.22	50,50,50,50	0
54	MG	DA	3055	1/1	0.96	0.18	51,51,51,51	0
54	MG	DA	3385	1/1	0.96	0.33	63,63,63,63	0
54	MG	BA	3610	1/1	0.96	0.21	55,55,55,55	0
54	MG	DA	3280	1/1	0.96	0.23	44,44,44,44	0
54	MG	DA	3107	1/1	0.96	0.13	56,56,56,56	0
54	MG	BA	3571	1/1	0.96	0.24	45,45,45,45	0
54	MG	DA	3283	1/1	0.96	0.09	69,69,69,69	0
54	MG	DP	201	1/1	0.96	0.15	76,76,76,76	0
54	MG	DA	3136	1/1	0.96	0.18	63,63,63,63	0
54	MG	AC	103	1/1	0.96	0.36	83,83,83,83	0
54	MG	DA	3321	1/1	0.96	0.37	78,78,78,78	0
54	MG	BA	3195	1/1	0.96	0.14	43,43,43,43	0
54	MG	AA	1703	1/1	0.96	0.27	61,61,61,61	0
54	MG	DA	3224	1/1	0.96	0.41	49,49,49,49	0
54	MG	DA	3255	1/1	0.96	0.34	62,62,62,62	0
54	MG	AA	1657	1/1	0.96	0.30	58,58,58,58	0
54	MG	BA	3172	1/1	0.96	0.42	62,62,62,62	0
54	MG	BA	3044	1/1	0.96	0.23	60,60,60,60	0
54	MG	BA	3078	1/1	0.96	0.28	63,63,63,63	0
54	MG	BA	3244	1/1	0.96	0.21	53,53,53,53	0
54	MG	BA	3043	1/1	0.97	0.27	57,57,57,57	0
54	MG	BA	3174	1/1	0.97	0.20	63,63,63,63	0
54	MG	BA	3037	1/1	0.97	0.18	68,68,68,68	0
54	MG	DA	3041	1/1	0.97	0.09	82,82,82,82	0
54	MG	AA	1745	1/1	0.97	0.39	78,78,78,78	0
54	MG	CA	1733	1/1	0.97	0.32	79,79,79,79	0

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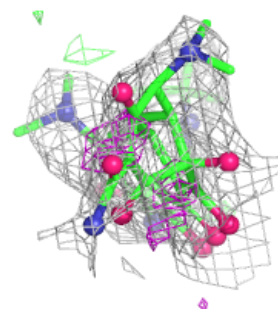
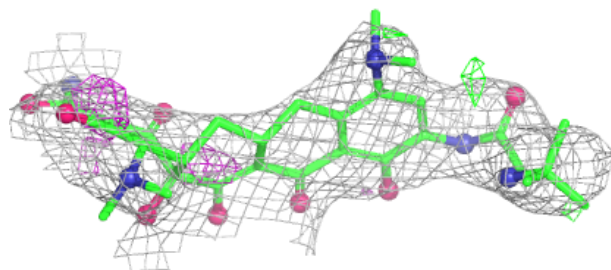
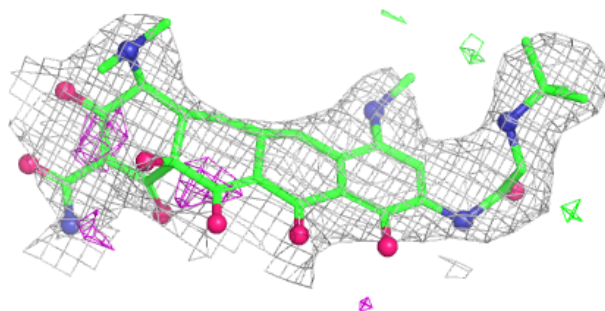
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CN	201	1/1	0.97	0.05	95,95,95,95	0
54	MG	AA	1622	1/1	0.97	0.31	70,70,70,70	0
54	MG	BA	3584	1/1	0.97	0.14	66,66,66,66	0
54	MG	DA	3468	1/1	0.97	0.31	47,47,47,47	0
54	MG	BA	3097	1/1	0.97	0.40	69,69,69,69	0
54	MG	DA	3109	1/1	0.97	0.32	61,61,61,61	0
54	MG	BA	3457	1/1	0.97	0.35	49,49,49,49	0
54	MG	DA	3307	1/1	0.97	0.23	75,75,75,75	0
54	MG	BA	3189	1/1	0.97	0.36	52,52,52,52	0
54	MG	BA	3422	1/1	0.97	0.23	52,52,52,52	0
54	MG	BA	3029	1/1	0.97	0.25	62,62,62,62	0
54	MG	BA	3461	1/1	0.97	0.23	73,73,73,73	0
54	MG	DA	3053	1/1	0.97	0.37	70,70,70,70	0
54	MG	AA	1607	1/1	0.97	0.08	89,89,89,89	0
54	MG	B7	102	1/1	0.97	0.33	78,78,78,78	0
54	MG	BA	3010	1/1	0.97	0.17	45,45,45,45	0
54	MG	BA	3117	1/1	0.97	0.25	57,57,57,57	0
54	MG	DA	3183	1/1	0.97	0.30	70,70,70,70	0
54	MG	DA	3395	1/1	0.98	0.06	103,103,103,103	0
54	MG	BA	3572	1/1	0.98	0.29	45,45,45,45	0
54	MG	DA	3397	1/1	0.98	0.33	52,52,52,52	0
54	MG	BA	3158	1/1	0.98	0.08	79,79,79,79	0
54	MG	DA	3352	1/1	0.98	0.25	71,71,71,71	0
54	MG	DA	3200	1/1	0.98	0.31	58,58,58,58	0
54	MG	DA	3478	1/1	0.98	0.43	63,63,63,63	0
54	MG	AA	1623	1/1	0.98	0.08	82,82,82,82	0
54	MG	DA	3061	1/1	0.98	0.10	67,67,67,67	0
54	MG	BA	3226	1/1	0.98	0.18	64,64,64,64	0
54	MG	BA	3073	1/1	0.98	0.07	73,73,73,73	0
54	MG	CA	1799	1/1	0.98	0.04	115,115,115,115	0
56	ZN	CQ	101	1/1	0.98	0.04	123,123,123,123	0
54	MG	BA	3579	1/1	0.99	0.38	51,51,51,51	0
54	MG	CA	1668	1/1	0.99	0.35	61,61,61,61	0

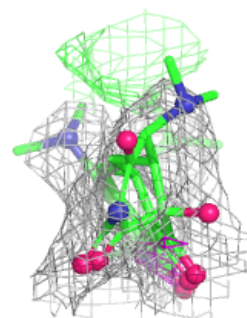
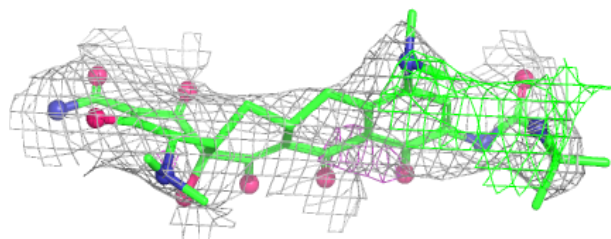
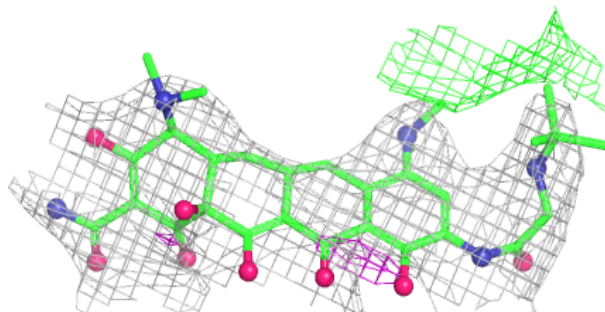
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around T1C AA 1837:

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

**Electron density around T1C CA 1800:**

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



6.5 Other polymers [i](#)

There are no such residues in this entry.