



# Full wwPDB X-ray Structure Validation Report ⓘ

Sep 17, 2023 – 12:03 AM EDT

PDB ID : 4V9B  
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](mailto: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>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.35.1  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.35.1

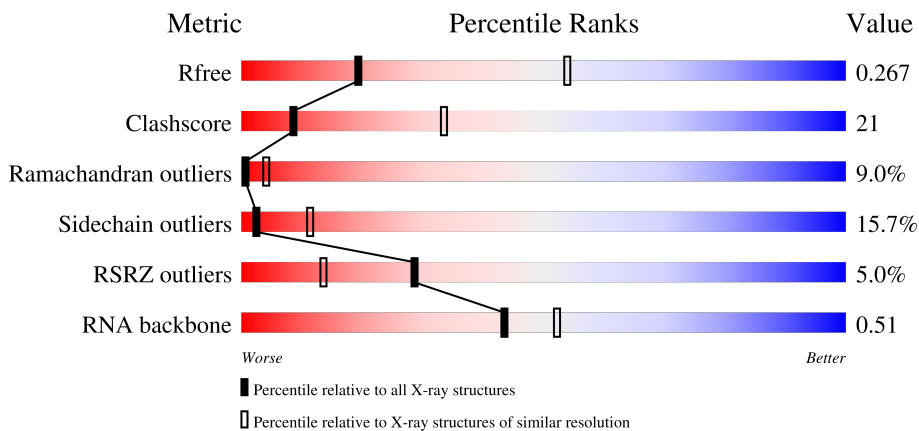
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.10 Å.

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



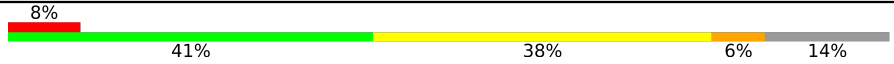
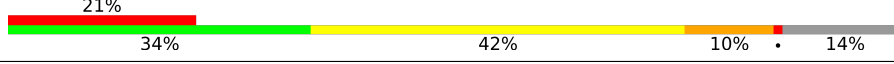

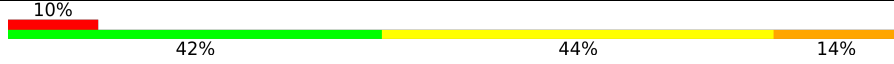
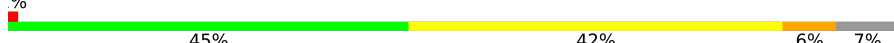
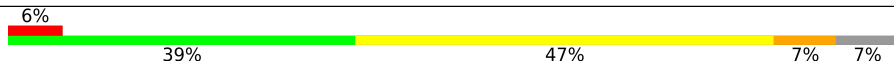


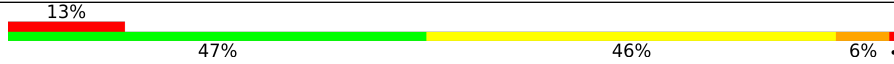



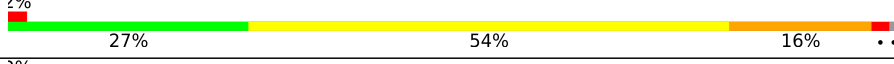
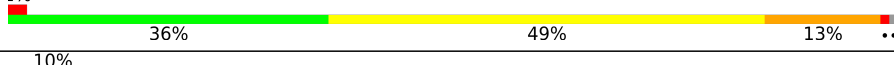

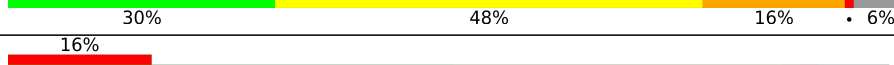

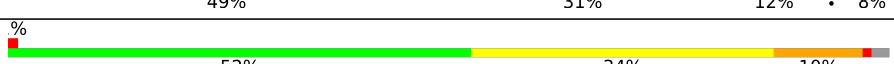

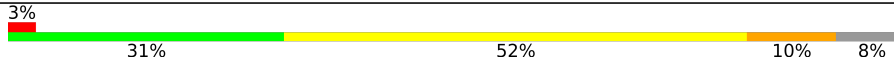
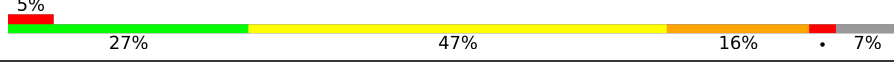




Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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	 37% 48% 15%
1	CA	1506	 41% 43% 15%
2	AE	256	 7% 32% 43% 16% 7%
2	CE	256	 16% 28% 45% 18% 7%




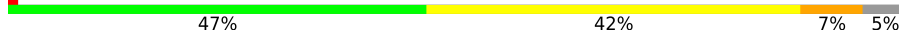


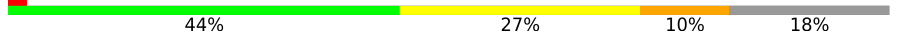
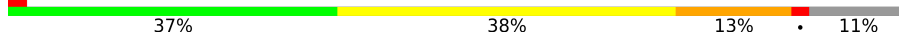
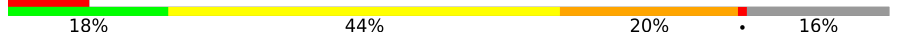
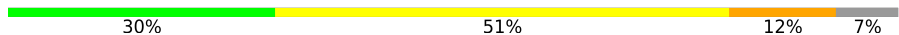
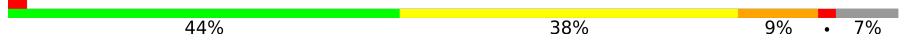

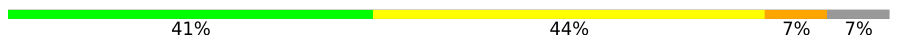












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Mol	Chain	Length	Quality of chain
3	AF	239	
3	CF	239	
4	AG	208	
4	CG	208	
5	AH	162	
5	CH	162	
6	AI	101	
6	CI	101	
7	AJ	156	
7	CJ	156	
8	AK	138	
8	CK	138	
9	AL	128	
9	CL	128	
10	AM	105	
10	CM	105	
11	AN	129	
11	CN	129	
12	AO	128	
12	CO	128	
13	AP	126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

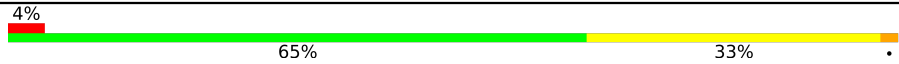

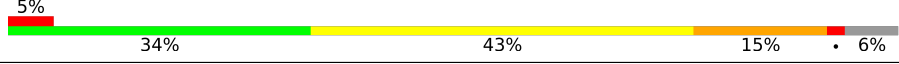
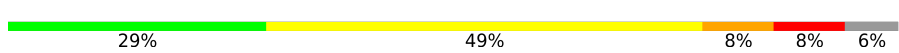
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Mol	Chain	Length	Quality of chain
39	D1	118	45% 42% 10% ..
40	B2	101	5% 50% 39% 9% .
40	D2	101	16% 31% 50% 14% 6%
41	BS	113	3% 61% 33% 6%
41	DS	113	2% 61% 31% 6% .
42	BT	96	4% 58% 30% 7% .
42	DT	96	5% 63% 24% 9% .
43	BU	110	8% 34% 36% 20% . 7%
43	DU	110	27% 41% 27% 20% 5% 7%
44	BV	206	30% 35% 33% 15% . 15%
44	DV	206	28% 28% 47% 12% 13%
45	B3	85	2% 45% 38% 7% 11%
45	D3	85	2% 48% 38% 5% 9%
46	BZ	98	11% 51% 40% 7% ..
46	DZ	98	59% 31% 8% ..
47	BW	72	46% 39% 6% . 8%
47	DW	72	6% 40% 44% 11% .
48	BX	60	7% 50% 45% ..
48	DX	60	10% 57% 35% 5% ..
49	B4	71	59% 27% 34% 27% 6% 7%
49	D4	71	20% 30% 31% 8% 11%
50	B5	60	15% 48% 25% 23% ..
50	D5	60	12% 53% 33% 12% .
51	B6	54	83% 17% 46% 20% 17%
51	D6	54	78% 17% 33% 31% . 17%

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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	AA	1740	-	-	-	X
54	MG	AA	1773	-	-	-	X
54	MG	AA	1782	-	-	-	X
54	MG	AA	1818	-	-	-	X
54	MG	BA	3111	-	-	-	X
54	MG	BA	3180	-	-	-	X
54	MG	BA	3237	-	-	-	X
54	MG	BA	3288	-	-	-	X
54	MG	BA	3300	-	-	-	X
54	MG	BA	3353	-	-	-	X
54	MG	BA	3393	-	-	-	X
54	MG	BA	3423	-	-	-	X
54	MG	BA	3469	-	-	-	X
54	MG	BA	3503	-	-	-	X
54	MG	BA	3509	-	-	-	X
54	MG	BA	3510	-	-	-	X
54	MG	BA	3518	-	-	-	X
54	MG	BA	3522	-	-	-	X
54	MG	BA	3566	-	-	-	X
54	MG	BA	3580	-	-	-	X
54	MG	BA	3588	-	-	-	X
54	MG	BA	3594	-	-	-	X
54	MG	CA	1716	-	-	-	X
54	MG	CA	1785	-	-	-	X
54	MG	DA	3270	-	-	-	X
54	MG	DA	3324	-	-	-	X
54	MG	DA	3329	-	-	-	X
54	MG	DA	3460	-	-	-	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
			Total	C	N	O	P			
1	AA	1506	Total 32369	C 14408	N 5997	O 10459	P 1505	0	0	0
1	CA	1506	Total 32372	C 14408	N 5997	O 10461	P 1506	0	0	0

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

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

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

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

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

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

- 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
			Total	C	N	O	S			
10	CM	99	801	504	157	139	1	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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
			Total	C	N	O	P			
23	C1	6	129	58	24	41	6	0	0	0

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

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

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
			Total	C	N	O	P			
25	BB	122	2617	1166	486	844	121	0	0	0
25	DB	122	2617	1166	486	844	121	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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	S	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
			Total	C	N	O			
42	DT	92	725	471	131	123	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

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

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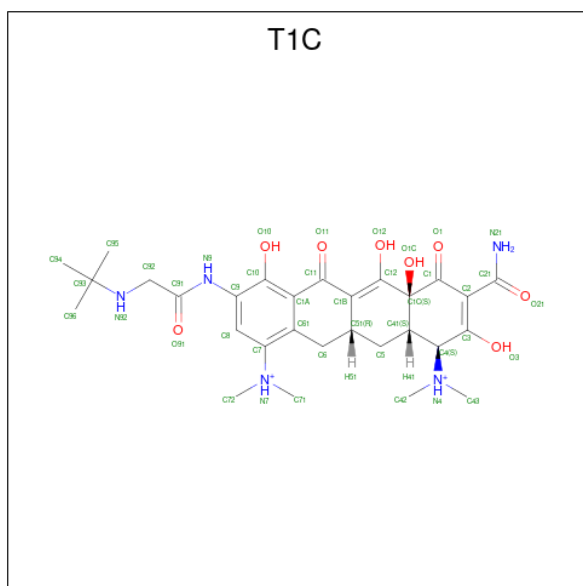
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	BU	2	Total Mg 2 2	0	0
54	B3	2	Total Mg 2 2	0	0
54	B5	1	Total Mg 1 1	0	0
54	B7	3	Total Mg 3 3	0	0
54	B8	2	Total Mg 2 2	0	0
54	CA	199	Total Mg 199 199	0	0
54	CG	2	Total Mg 2 2	0	0
54	CL	1	Total Mg 1 1	0	0
54	CN	1	Total Mg 1 1	0	0
54	CS	1	Total Mg 1 1	0	0
54	CX	1	Total Mg 1 1	0	0
54	CC	9	Total Mg 9 9	0	0
54	DA	523	Total Mg 523 523	0	0
54	DB	15	Total Mg 15 15	0	0
54	DE	4	Total Mg 4 4	0	0
54	DP	1	Total Mg 1 1	0	0
54	DR	1	Total Mg 1 1	0	0
54	D1	1	Total Mg 1 1	0	0
54	DU	2	Total Mg 2 2	0	0
54	D3	1	Total Mg 1 1	0	0
54	D5	1	Total Mg 1 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 (three-letter code: T1C) (formula: C<sub>29</sub>H<sub>41</sub>N<sub>5</sub>O<sub>8</sub>).



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		

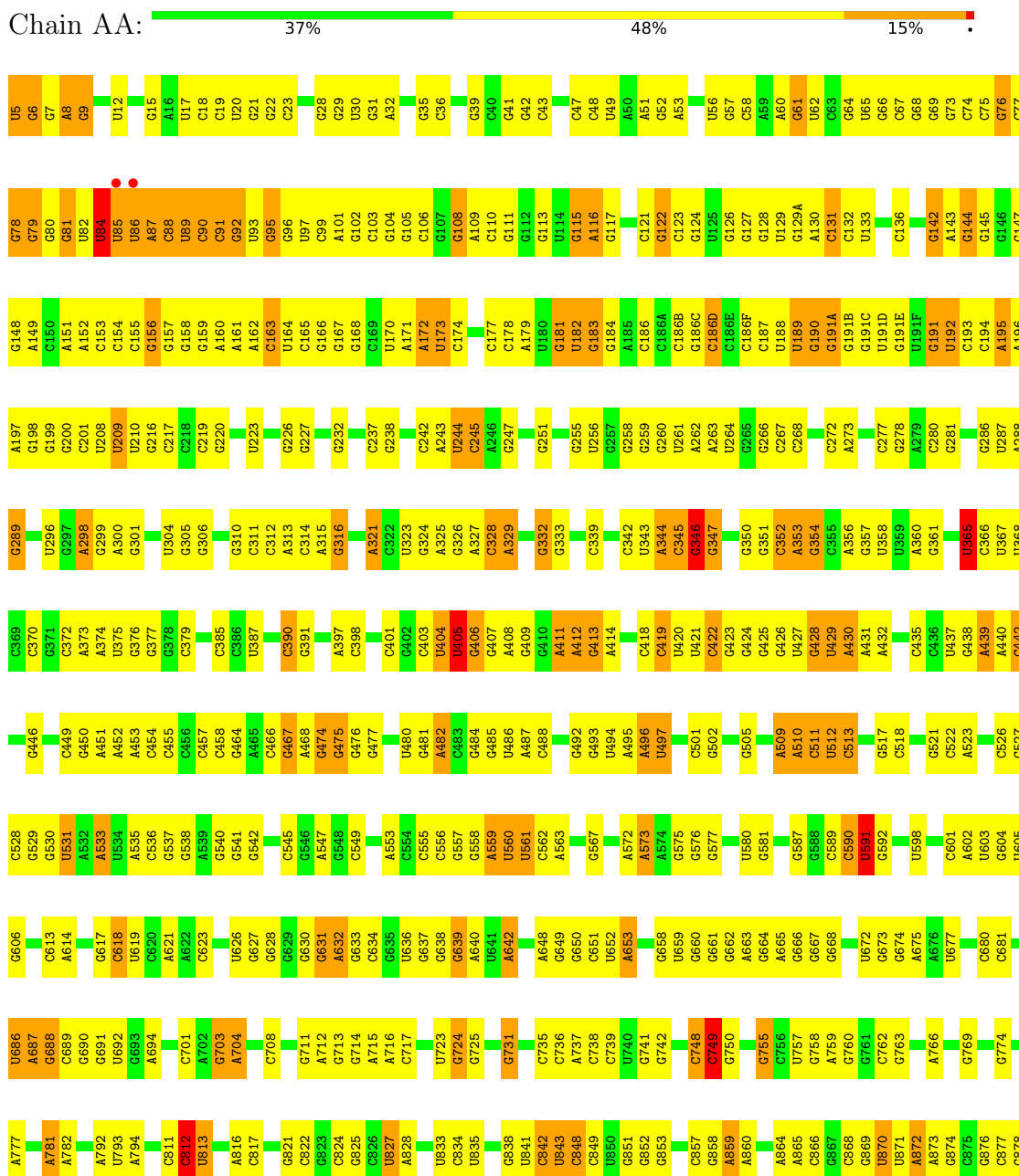
- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

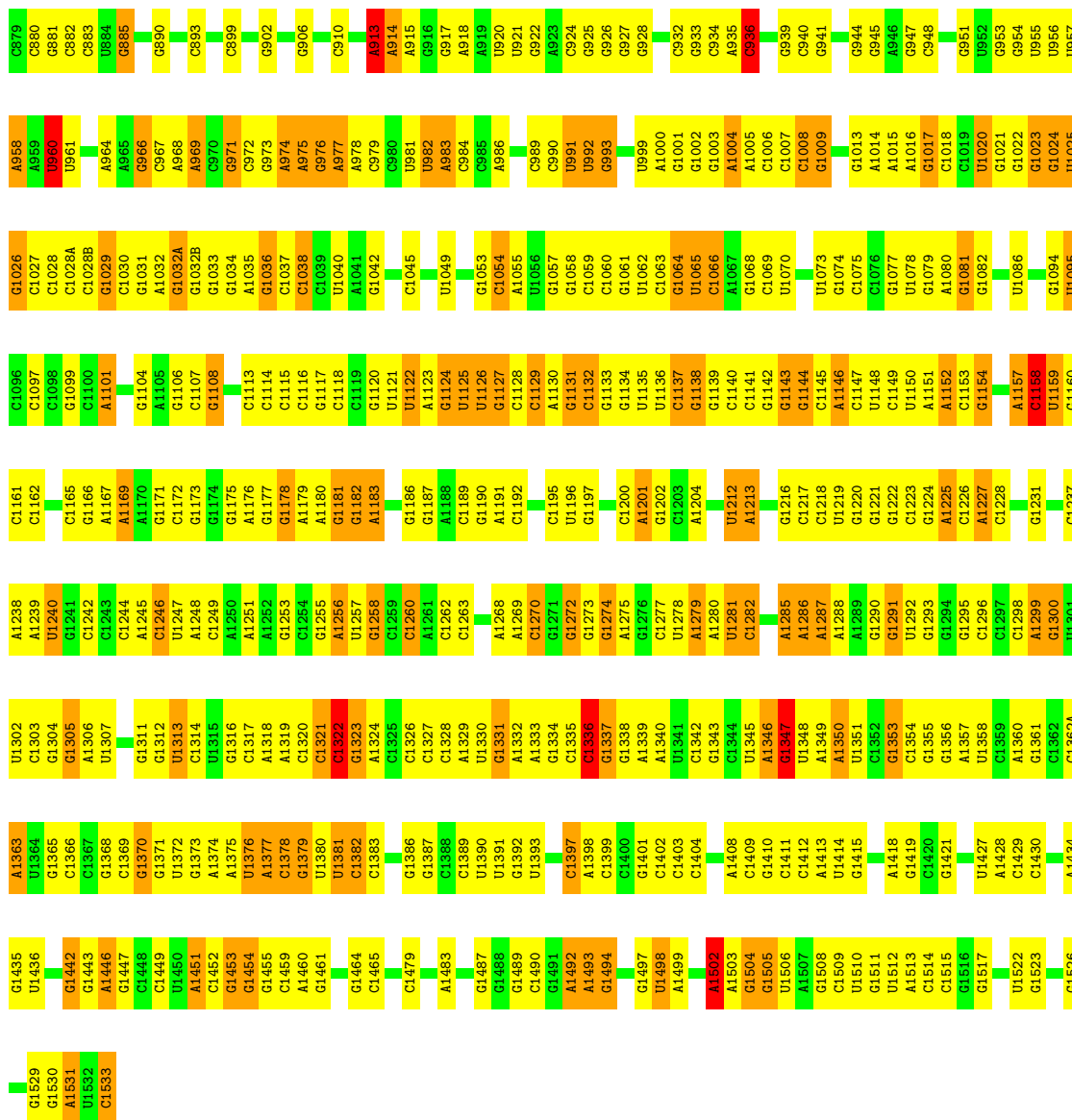
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AG	1	Total	Zn	0	0
			1	1		
56	AQ	1	Total	Zn	0	0
			1	1		
56	CG	1	Total	Zn	0	0
			1	1		
56	CQ	1	Total	Zn	0	0
			1	1		

### 3 Residue-property plots

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

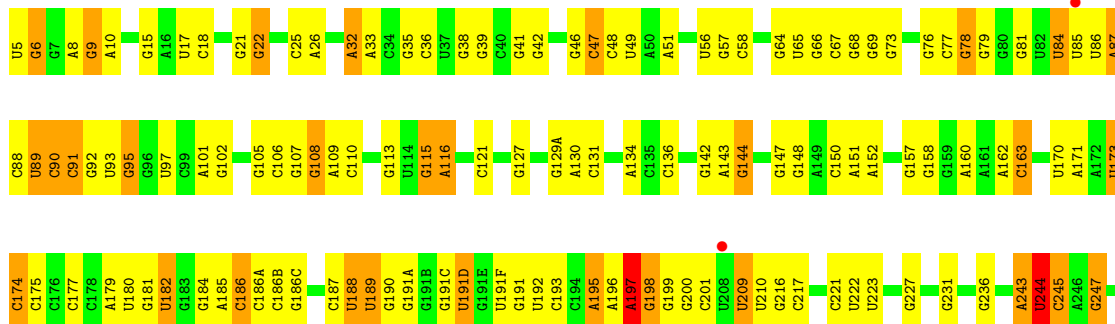
- Molecule 1: 16S ribosomal RNA





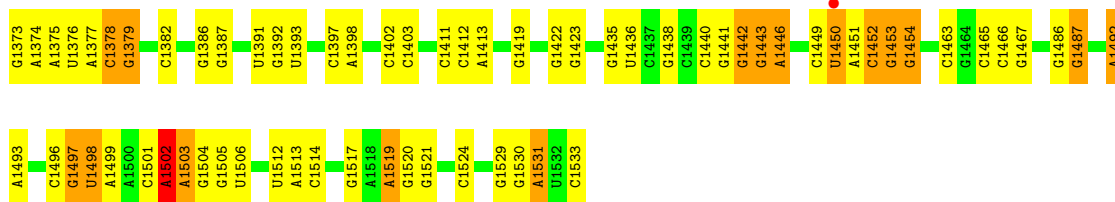
● Molecule 1: 16S ribosomal RNA

Chain CA: 41% 43% 15%

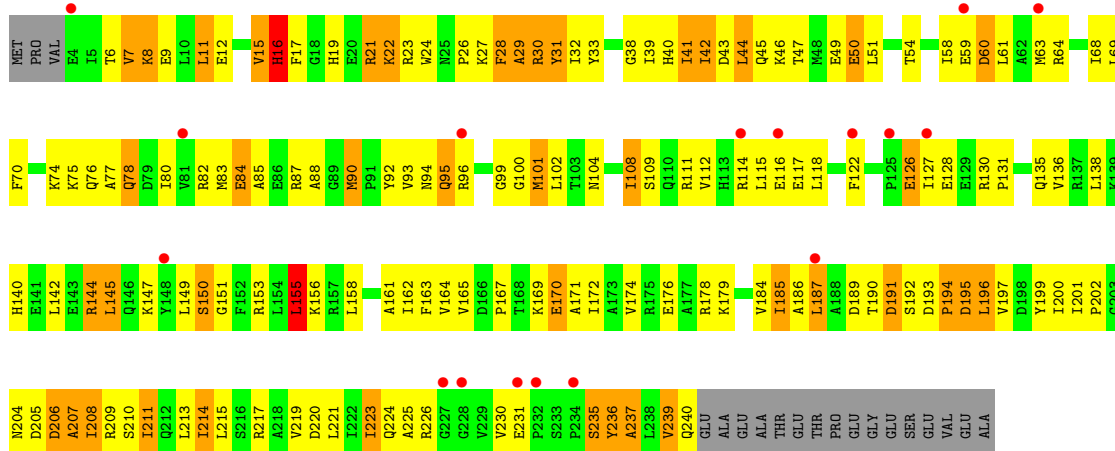


A1306	A1307	A1308	A1309	A1310	A1311	A1312	G1316	C1317	C1318	C1319	C1320	C1321	C1322	C1323	C1324	C1325	C1326	C1327	C1328	A1329	A1330	A1331	A1332	A1333	A1334	A1335	C1336	C1337	C1338	A1339	A1340	U1341	C1342	C1343	C1344	U1345	A1346	A1347	A1348	A1349	A1350	A1351	C1352	C1353	U1358	C1362A	C1363	U1364	G1365	C1366	C1369	G1370	G1371	G1372	G1373	G1374	G1375				
C1243	C1244	A1245	C1249	A1250	A1251	A1252	G1253	C1254	G1255	A1256	U1257	G1258	C1259	C1260	A1261	C1262	C1263	C1264	G1265	G1266	C1267	A1268	A1269	C1270	C1271	G1272	G1273	G1274	A1275	G1276	C1277	U1278	A1279	A1280	U1281	C1282	G1283	C1284	A1285	A1286	A1287	A1288	A1289	G1290	U1292	G1293	C1296	C1297	C1298	A1299	G1300	C1301	U1302	C1303	G1304	G1305					
G1175	A1176	G1177	G1178	A1179	A1180	G1181	G1182	A1183	G1186	G1187	A1188	C1189	A1190	A1191	C1192	C1195	U1196	G1197	G1198	U1199	C1200	A1201	G1202	C1203	A1204	C1205	U1206	G1207	U1212	A1213	C1214	A1215	G1216	C1217	C1218	U1219	G1220	G1221	G1224	A1225	C1226	A1227	C1228	A1229	U1230	G1231	U1232	U1235	A1236	U1237	A1238	U1239	U1240								
G1042	C1043	A1044	C1045	A1046	G1047	G1048	U1049	G1050	C1051	U1052	G1053	C1054	A1055	U1056	G1057	G1058	C1059	C1060	G1061	U1062	A1063	C1064	U1065	C1066	C1069	G1072	U1073	A1074	C1075	C1076	U1077	U1078	C1079	A1080	G1081	G1084	U1085	U1086	G1087	G1088	U1091	G1094	U1095	C1096	C1097	G1098	G1099	C1100	A1101	G1103	A1102	C1103	G1104	A1105	G1106						
C985	A986	G987	C988	C989	G990	U991	U992	G993	A994	U997	G998	C999	C998A	U999	A993	A998	G1001	G1002	G1003	A1004	A1005	C1006	C1007	C1008	G1009	G1010	G1011	A1014	A1015	A1016	C1017	G1018	C1019	U1020	G1021	G1022	G1023	G1024	U1025	A985	G1026	C1027	C1028	C1028A	C1028B	G1029	C1030	G1031	A1032	G1032A	G1032B	G1033	G1034	A1035	G1036	A1102	C1037	C1038	U1039	C1040	A1041
U841	C842	U843	C844	C845	U850	G851	C852	G853	C854	C857	C858	A859	A860	G861	A862	G863	A864	A865	A866	A867	A868	A869	A870	U873	A874	A875	A876	C877	C878	C879	C880	C881	C882	C883	U884	G885	A889	C890	C891	C892	C893	C894	C895	C896	C897	A898	A901	G902	G903	U820	G821	C826	U827	A828	U833	G836	A837	U920			
U921	G922	A923	C924	G925	G926	G927	G928	C932	G933	C934	A935	C936	A937	A938	G939	C940	G941	G944	G945	A946	G947	C948	G951	U952	G953	C954	U955	U956	U957	A958	A959	U960	U961	G962	G963	A964	A965	C966	C967	C968	A969	A901	G902	G903	A974	A975	G976	A977	A978	C979	A913	A914	A918	A919	A983	C984					
G755	C756	G757	G758	G759	G761	G765	A766	A767	G768	G769	G775	G776	A777	G778	G785	G786	A787	A790	G791	A792	U793	A794	C795	C796	C797	G798	G799	G800	U801	A802	G803	U804	C805	C811	C812	U813	A814	A815	A816	C817	C818	C819	C820	C821	C826	U827	A828	U833	G836	A837	U920										
A583	G584	G585	C586	G587	G588	C589	C590	U591	G595	C596	C600	C601	A602	U603	G604	U605	G606	A614	G617	U618	U619	C620	A621	A622	G623	G627	G628	G629	G630	A631	A632	G633	U636	G637	A640	U641	G650	C651	U652	A653	U659	U660	U661	G652	C654	U657	C658	A659	A672	A673	G660	G661	G662	A663	G664	A665	U666	U667	G667		
G671	U672	G673	G674	U677	U686	A687	G688	C689	G690	G691	U692	G693	C701	U702	G703	A704	C707	A715	A716	A717	A718	A719	A720	G721	G724	G725	A728	A729	G730	G731	C735	A737	G736	U739	C738	U740	U741	G742	U743	U744	G745	G746	G747	G748	G749	G750	A753	C754													
C511	C514	G515	U516	G517	C518	G521	C522	A523	G524	C525	C526	G527	C528	G529	G530	U531	A532	A533	U534	A535	C536	U537	A538	G539	G540	G541	G542	C543	C544	C545	C546	C547	C548	C549	G550	U551	U552	A553	A559	U560	C562	A563	C564	U571	A572	A573	G576	C577	C578	G579	U580	U582									
A250	G251	G255	U256	G260	U261	G265	C266	C267	A270	A279	C280	G281	C282	C283	G284	G289	A298	C299	A300	A313	C314	C315	C316	G317	G318	G319	C320	A321	C322	U323	G324	A325	G326	A327	C328	A329	G332	G333	G335	C339	U340	C345	G346	G347	G348	A349	G422	G423	G424												

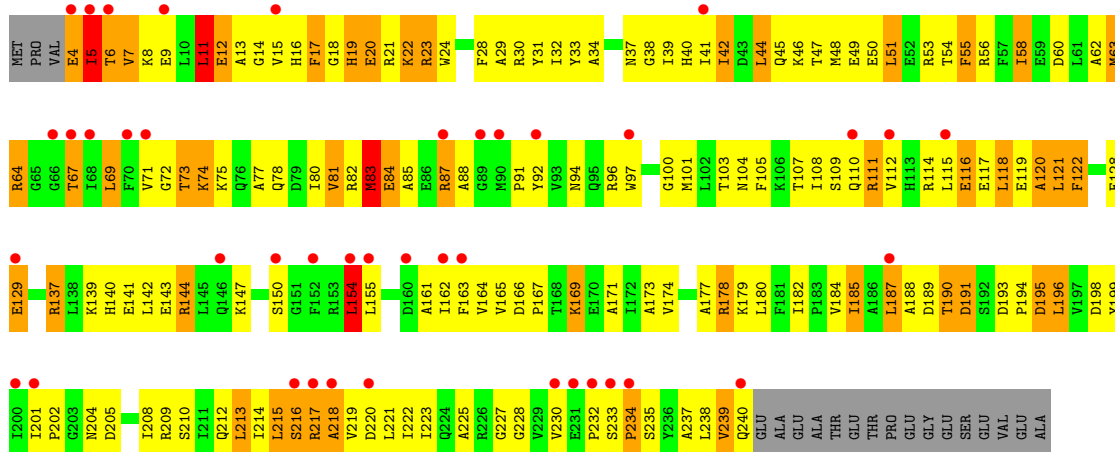
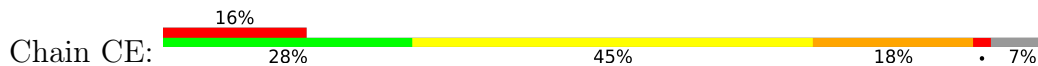




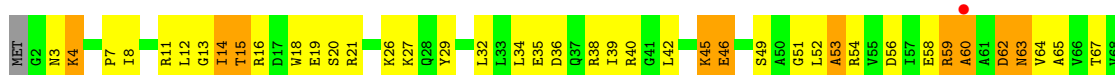
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

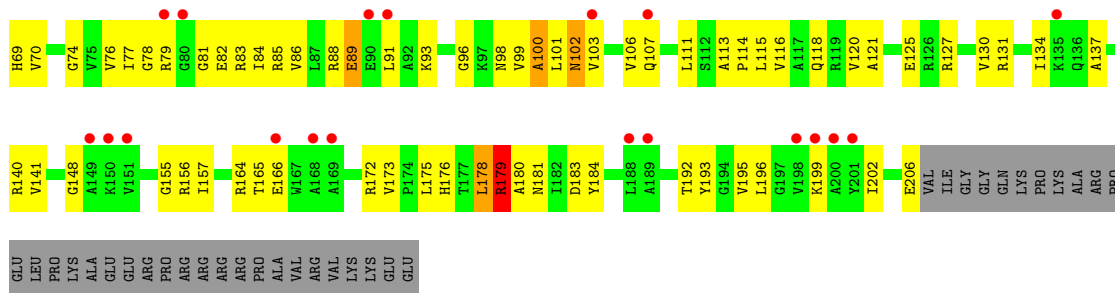


• Molecule 2: 30S RIBOSOMAL PROTEIN S2

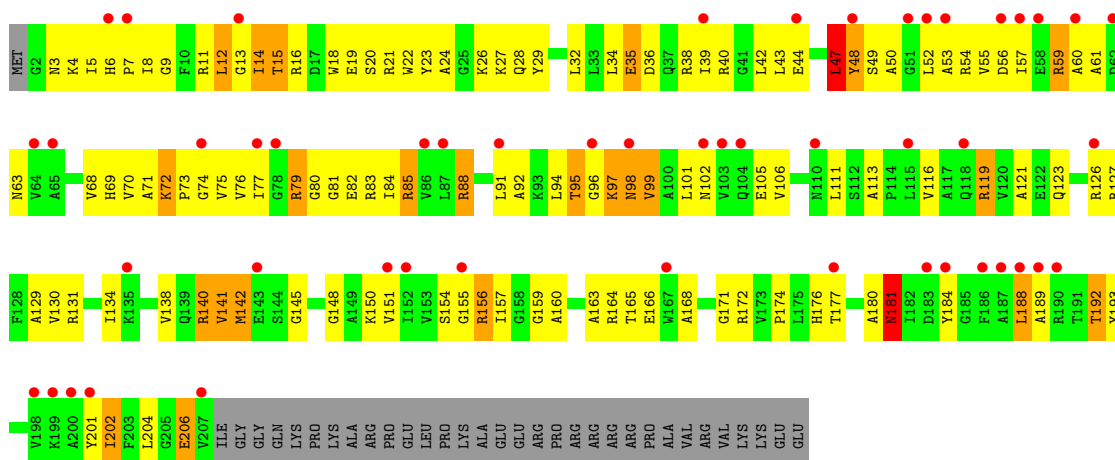


• Molecule 3: 30S RIBOSOMAL PROTEIN S3

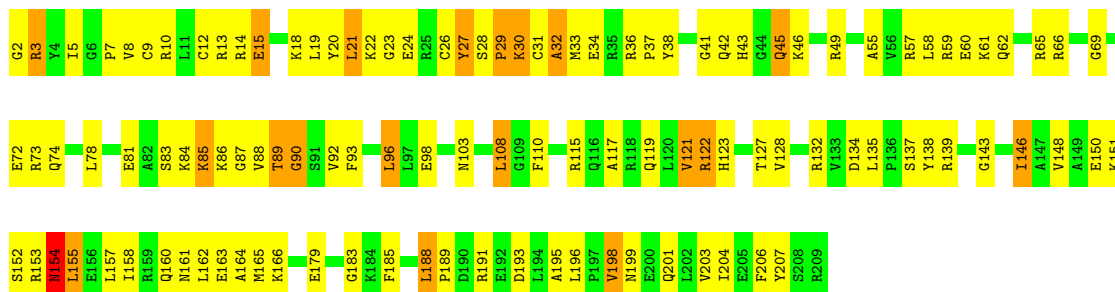




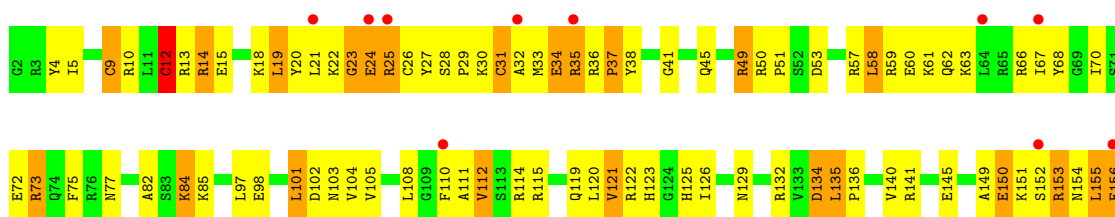
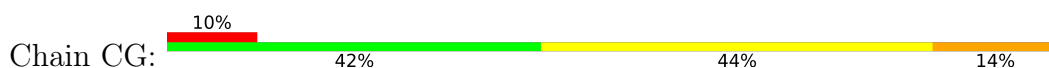
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

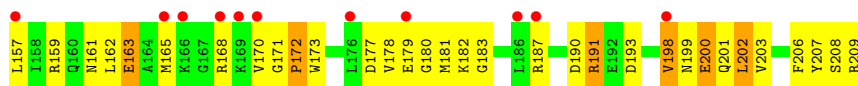


• Molecule 4: 30S RIBOSOMAL PROTEIN S4

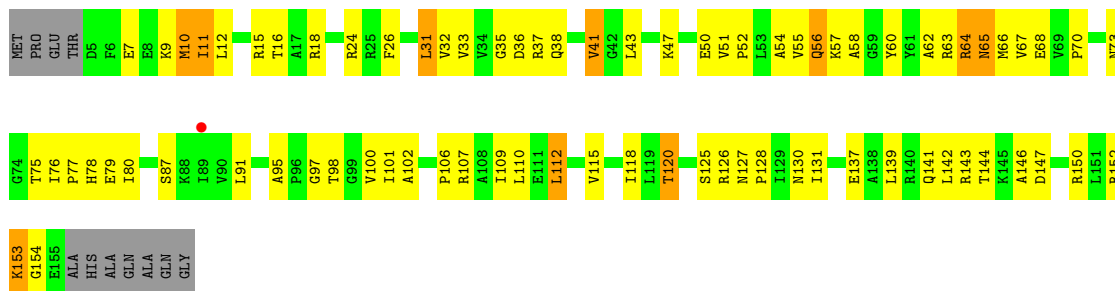


• Molecule 4: 30S RIBOSOMAL PROTEIN S4

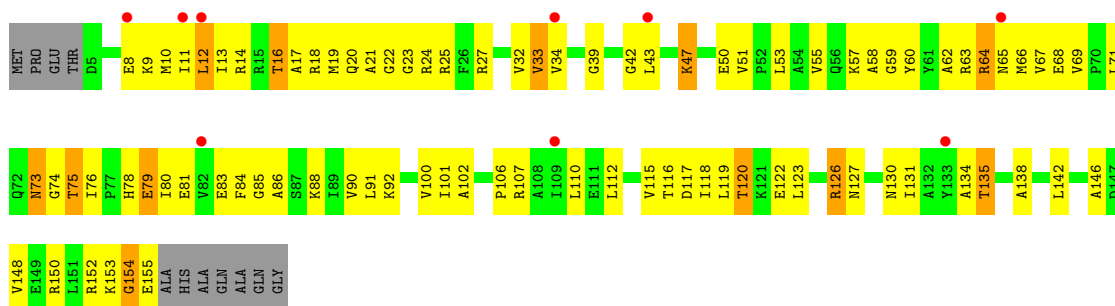
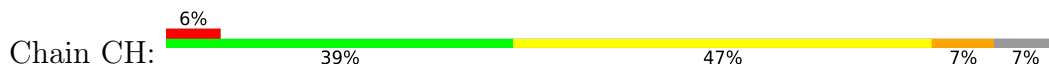




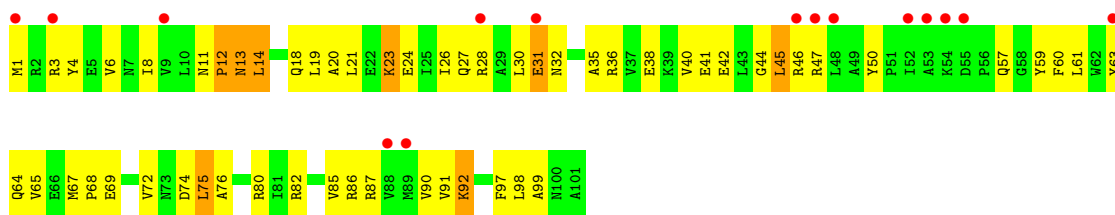
● Molecule 5: 30S RIBOSOMAL PROTEIN S5



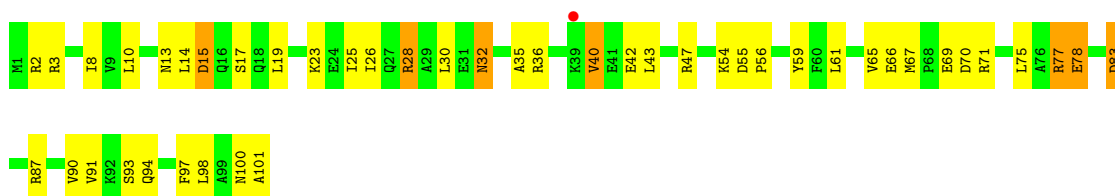
● Molecule 5: 30S RIBOSOMAL PROTEIN S5



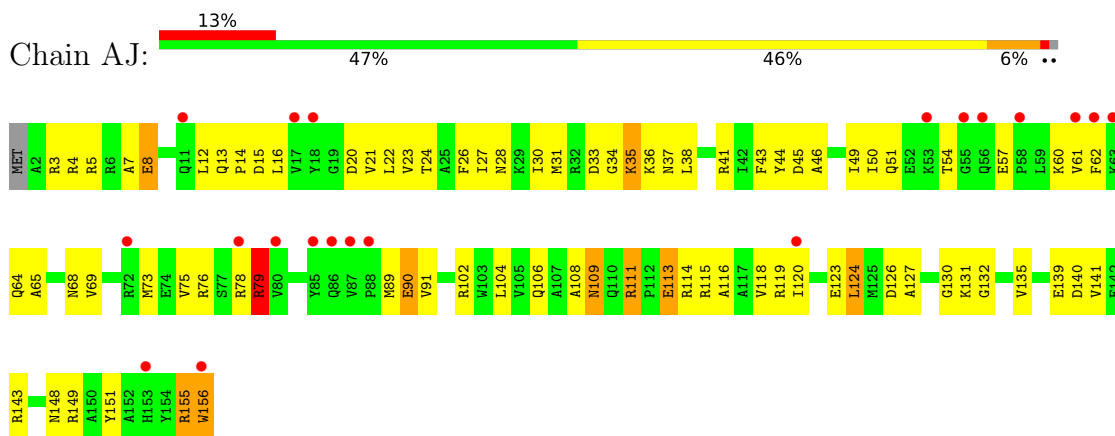
● Molecule 6: 30S RIBOSOMAL PROTEIN S6



● Molecule 6: 30S RIBOSOMAL PROTEIN S6



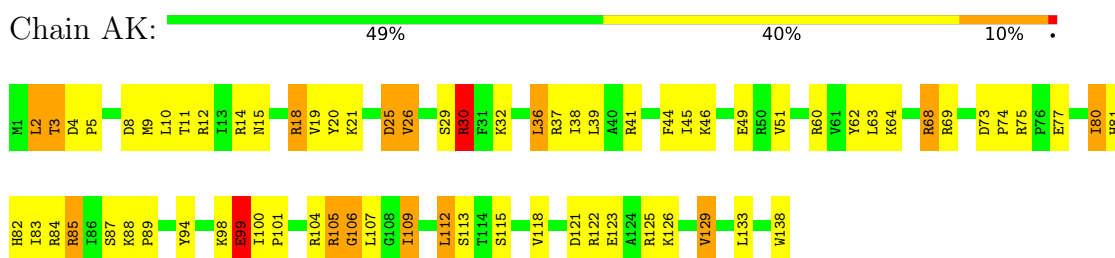
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



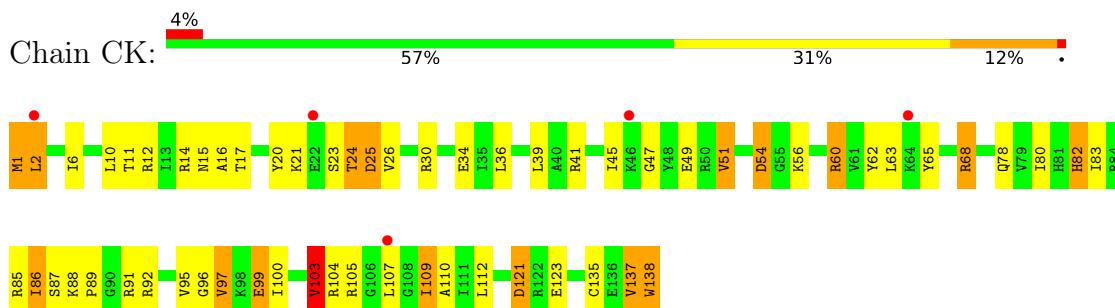
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



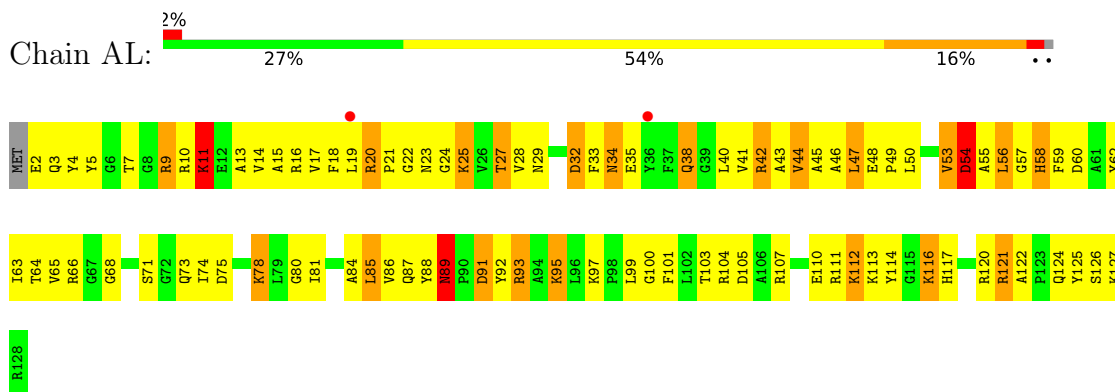
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



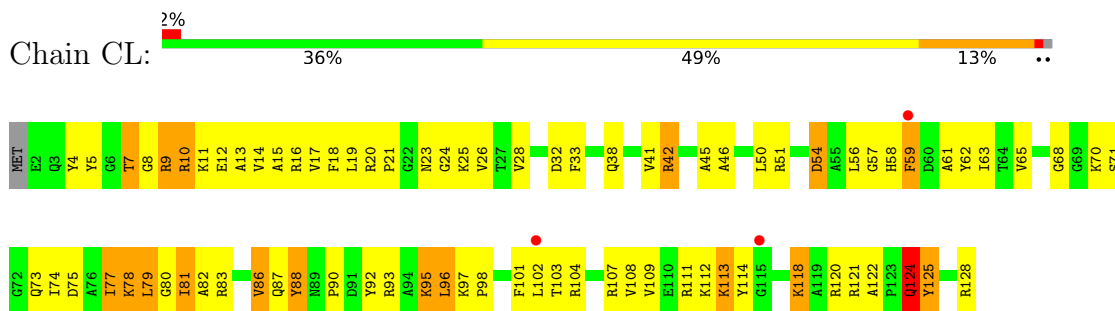
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



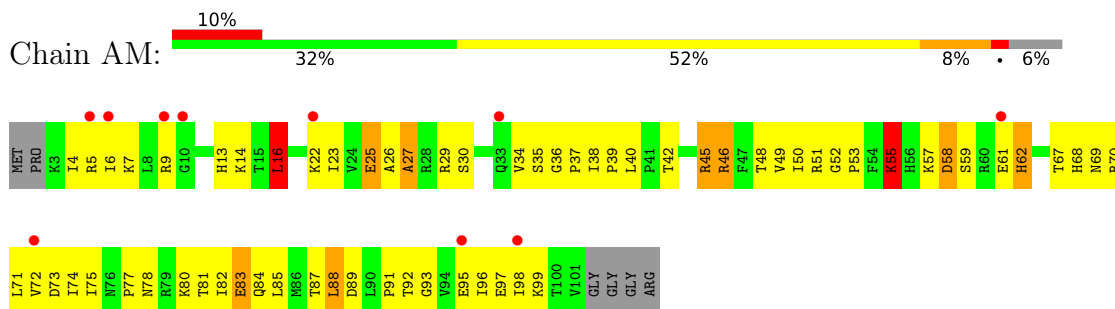
- Molecule 9: 30S RIBOSOMAL PROTEIN S9



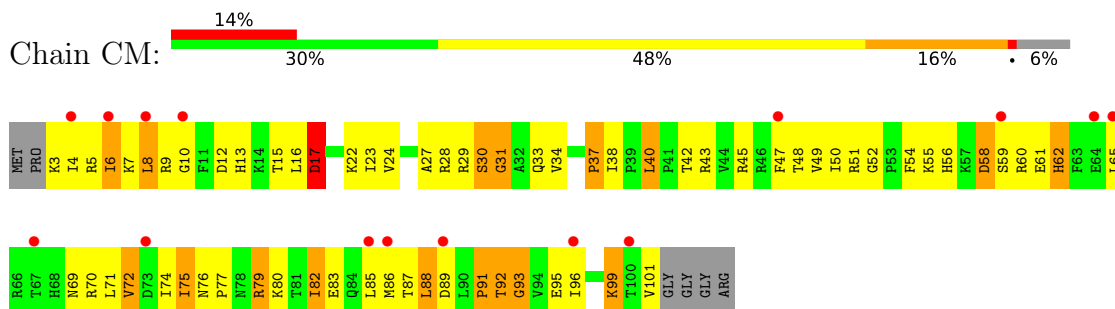
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



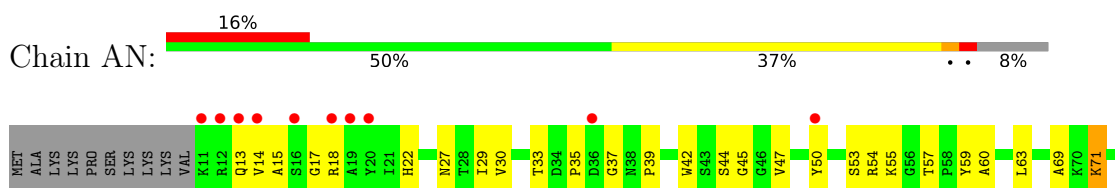
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



• Molecule 10: 30S RIBOSOMAL PROTEIN S10

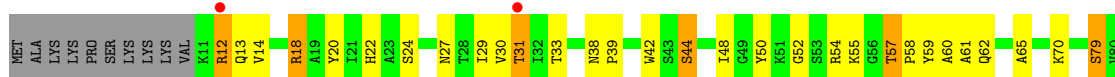


• Molecule 11: 30S RIBOSOMAL PROTEIN S11





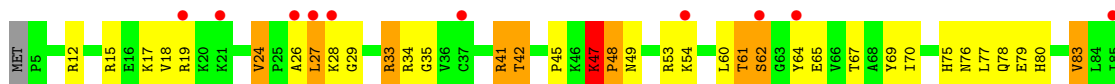
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



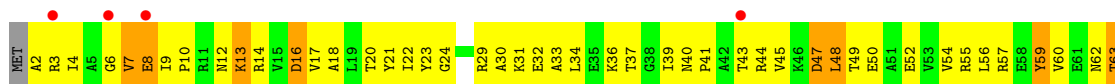
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



• Molecule 12: 30S RIBOSOMAL PROTEIN S12

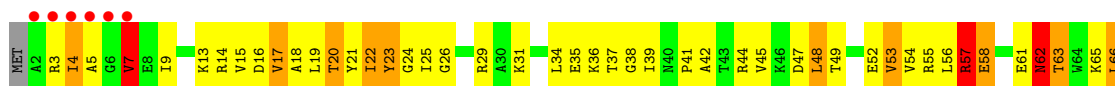


• Molecule 13: 30S RIBOSOMAL PROTEIN S13

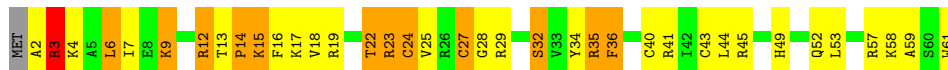
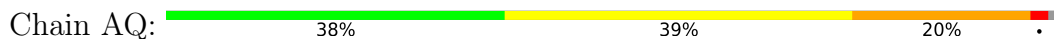


• Molecule 13: 30S RIBOSOMAL PROTEIN S13

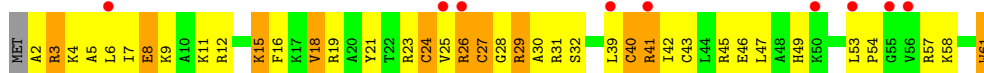




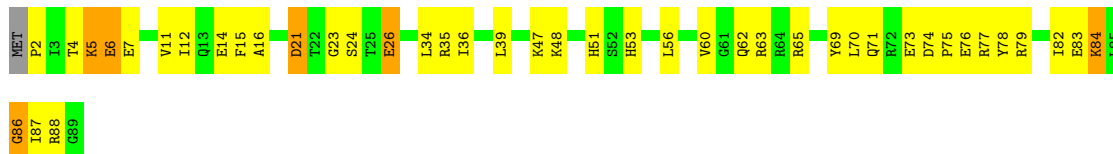
- Molecule 14: 30S RIBOSOMAL PROTEIN S14



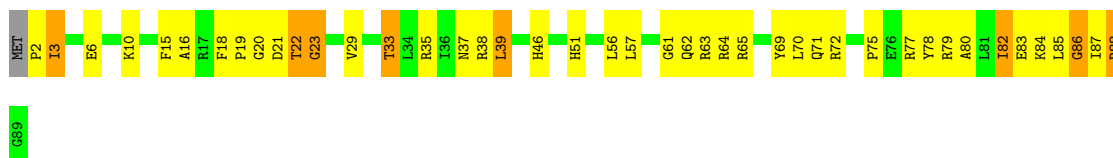
- Molecule 14: 30S RIBOSOMAL PROTEIN S14



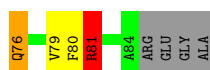
- Molecule 15: 30S RIBOSOMAL PROTEIN S15



- Molecule 15: 30S RIBOSOMAL PROTEIN S15



- Molecule 16: 30S RIBOSOMAL PROTEIN S16



- Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain CS: 



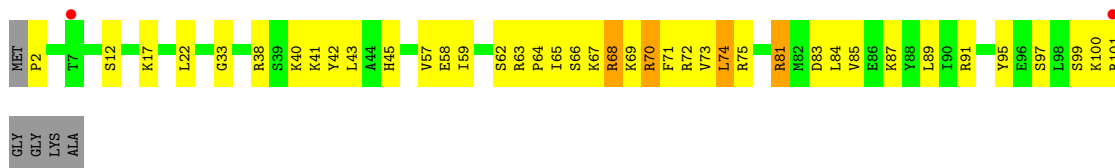
- Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain AT: 



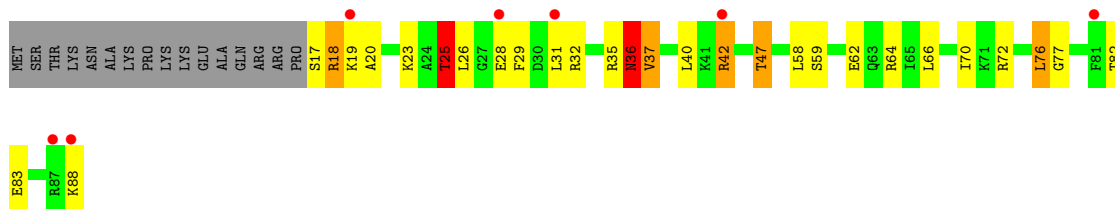
- Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain CT: 



- Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain AU: 

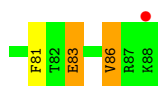


- Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain CU: 



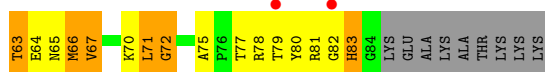
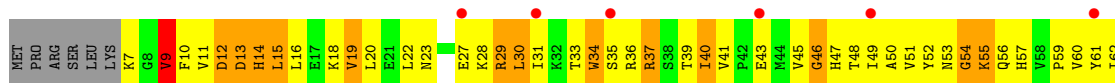
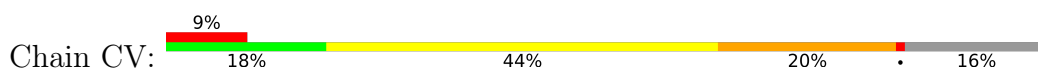




• Molecule 19: 30S RIBOSOMAL PROTEIN S19



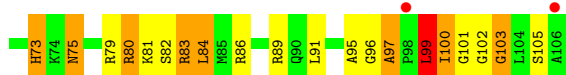
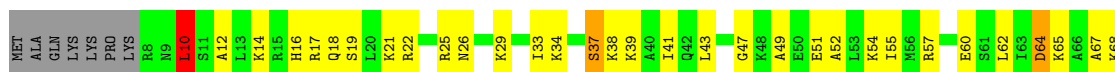
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



• Molecule 20: 30S RIBOSOMAL PROTEIN S20



• Molecule 20: 30S RIBOSOMAL PROTEIN S20



• Molecule 21: 30S RIBOSOMAL PROTEIN THX





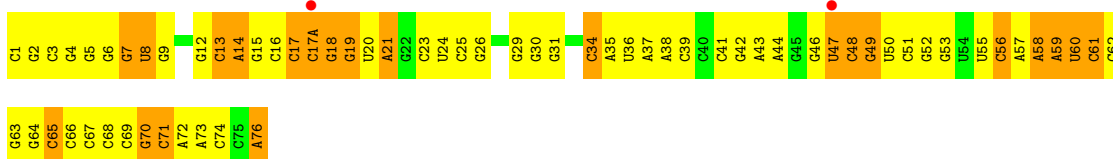
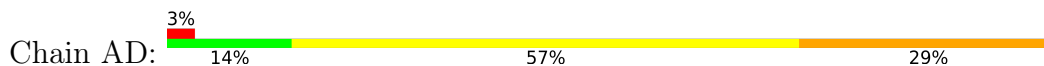
• Molecule 21: 30S RIBOSOMAL PROTEIN THX



• Molecule 22: TRNA-FMET



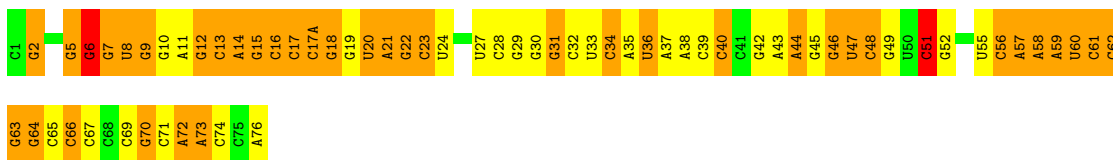
• Molecule 22: TRNA-FMET



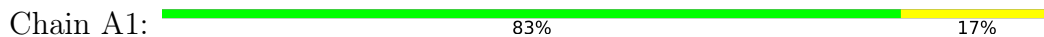
• Molecule 22: TRNA-FMET



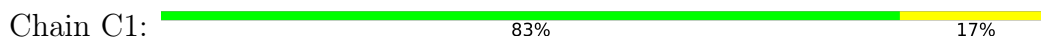
• Molecule 22: TRNA-FMET



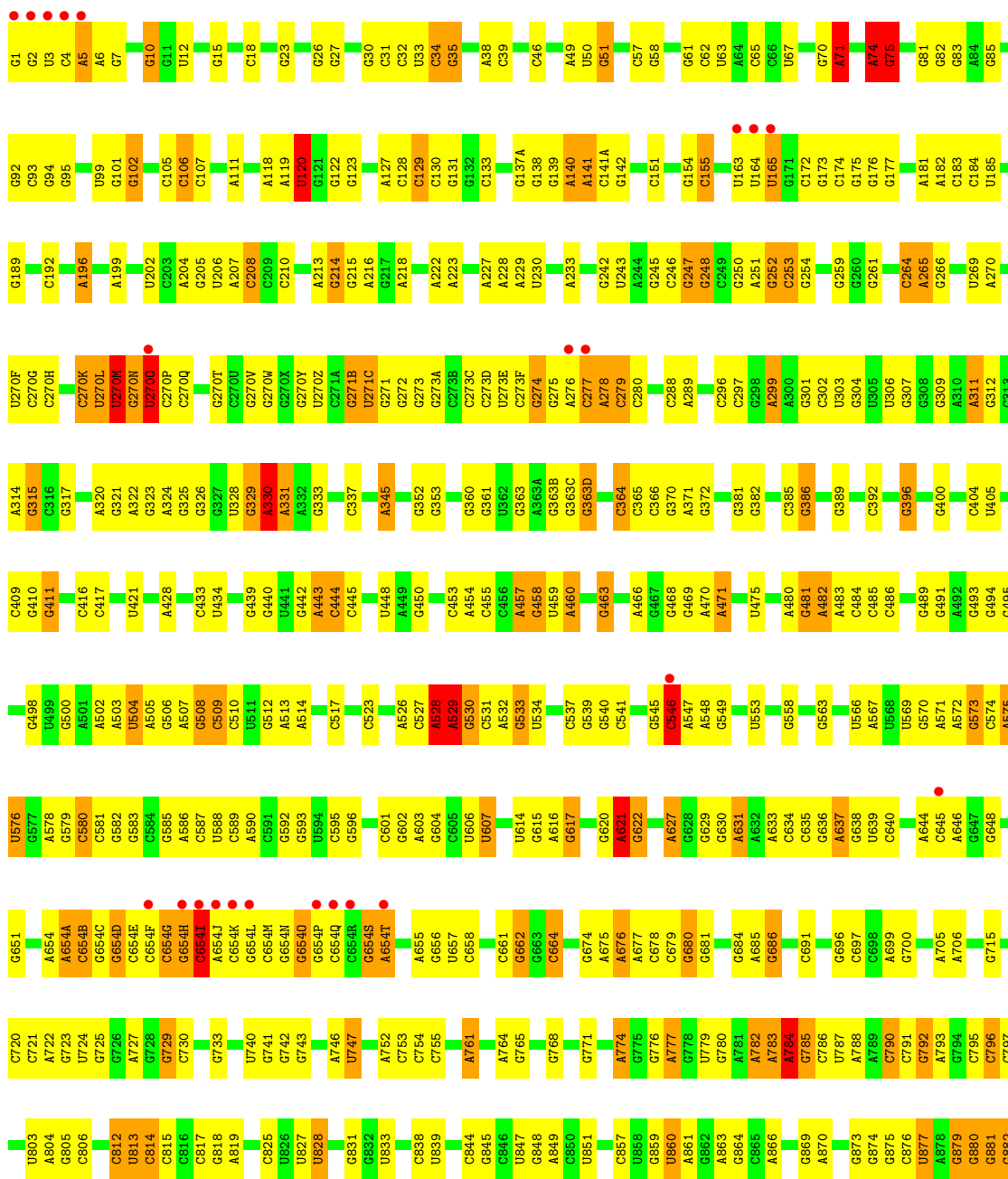
• Molecule 23: MRNA



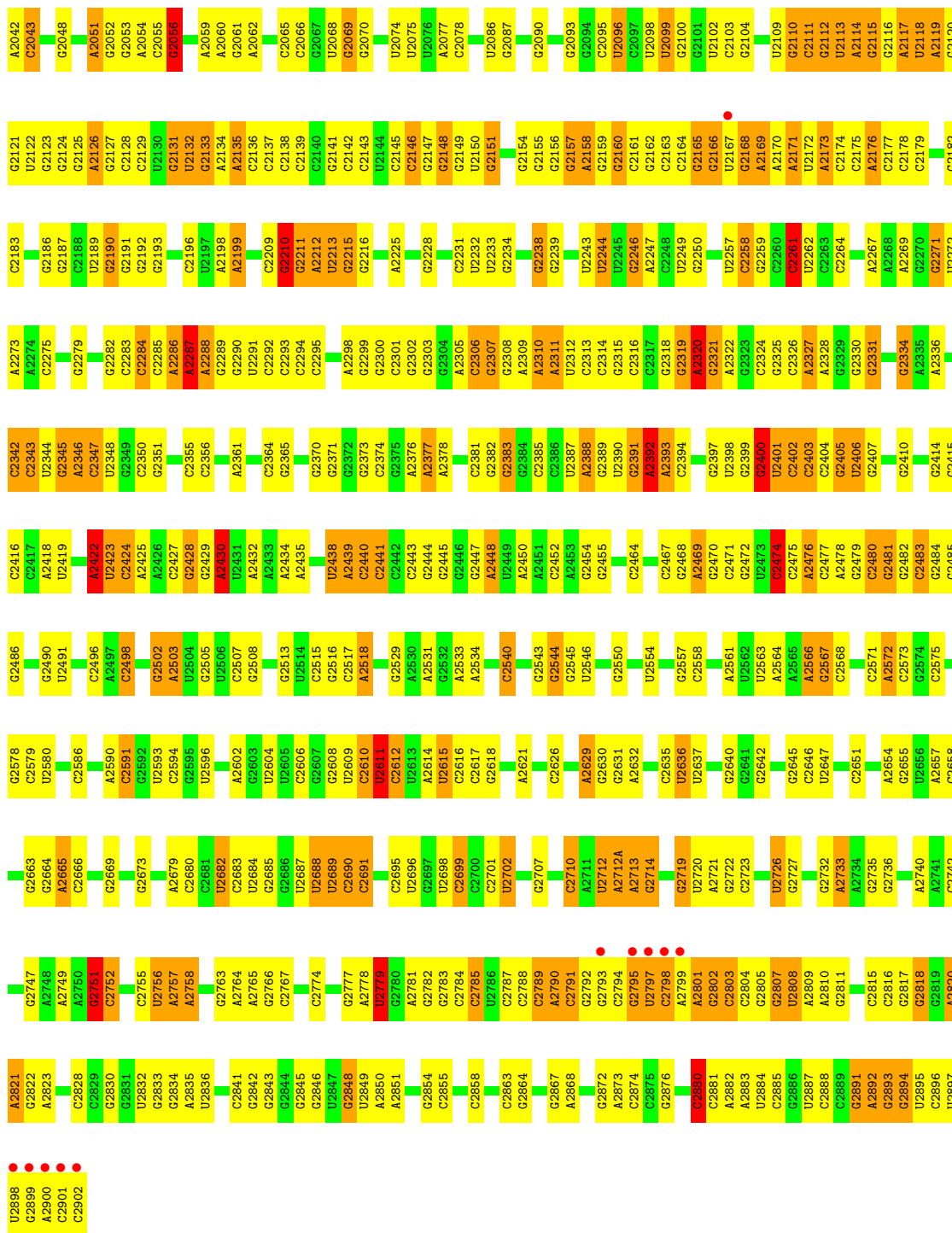
• Molecule 23: MRNA



• Molecule 24: 23S ribosomal RNA



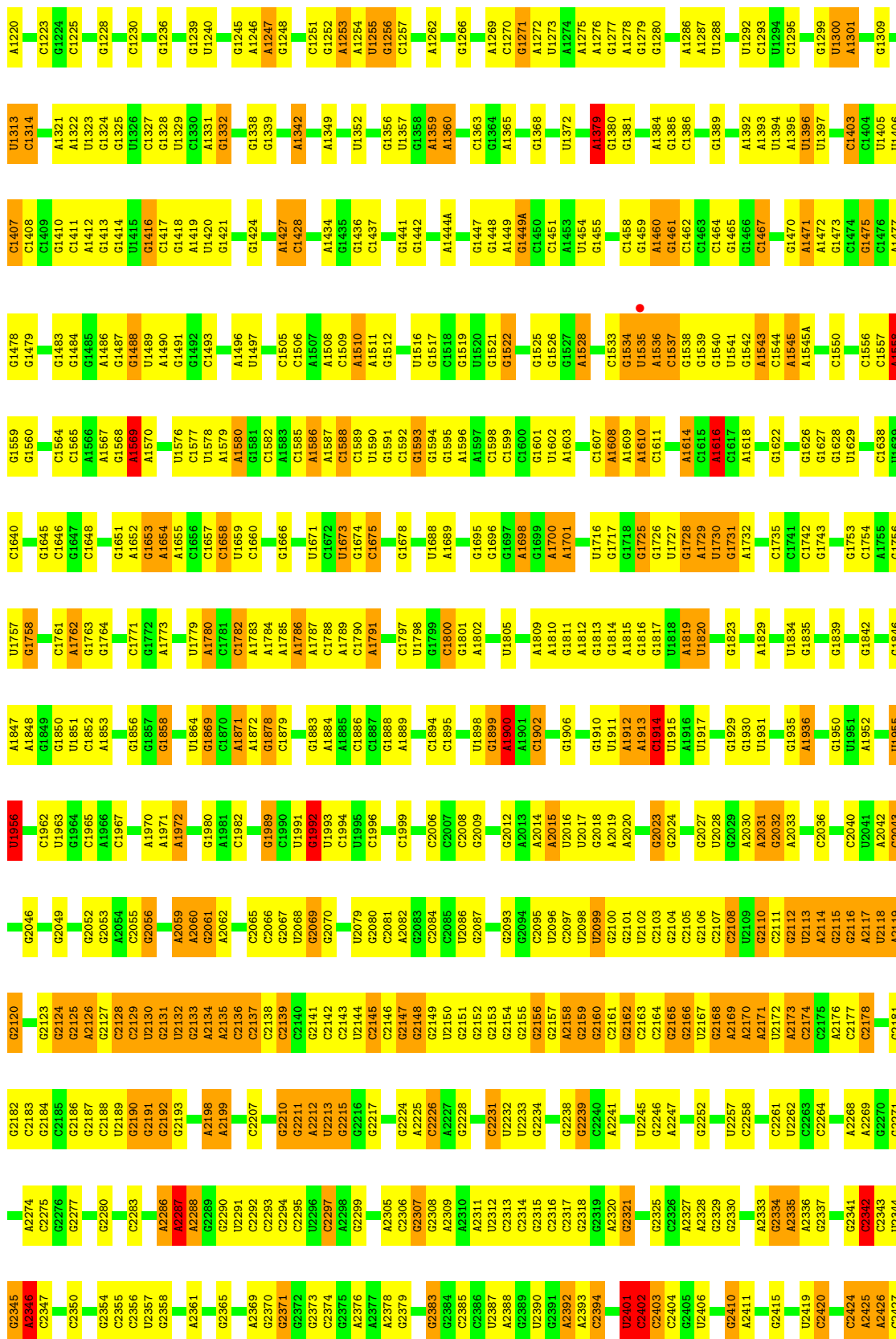
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A1952	A1847	G1772	A1580	A1507	G1426	G1344	G1244	G1173	A1095	G1034	C964	C884
U1955	G1858	A1773	G1581	A1508	A1427	A1349	A1253	A1174	A1096	G1036	C968	C885
U1963	G1861	U1775	C1583	C1509	C1428	A1354	U1255	G1175	U1097	G1037	C974	C886
G1964	G1861	U1775	A1585	A1510	C1432	G1355	G1256	G1176	A1098	C1037	A973	C887
C1967	U1864	U1778	A1586	G1512	U1433	G1356	C1257	C1178	G1099	G1038	G974	C889
G1968	G1869	C1782	A1587	C1513	U1434	G1357	C1258	C1179	C1100	C1040	C974A	A890
A1969	C1870	U1783	C1588	U1514	G1435	U1358	G1259	C1180	C1102	G1041	C975	A892
A1970	A1871	G1822	C1589	C1515	U1438	A1359	G1260	C1181	A1103	G1042	C976	C893
A1971	A1872	A1784	G1591	U1516	U1439	A1359	C1261	C1182	C1104	C1043	C977	C894
A1972	G1878	A1786	C1592	C1517	G1440	A1360	G1262	G1186	U1105	G1044	A980	U895
G1973	A1787	U1788	G1593	G1519	G1441	G1364	A1265	G1187	U1106	A1045	A981	A896
C1974	C1788	G1822	G1594	U1520	G1442	A1365	G1266	U1188	G1107	A1046	A982	C897
G1975	A1889	G1822	G1595	G1521	G1443	A1366	U1267	U1189	G1110	G1047	C983	C898
A1978	U1693	U1792	U1602	G1522	A1444A	A1367	A1269	G1190	A1111	C1049	A984	A899
C1979	U1694	G1792	A1603	G1523	C1445	G1368	C1270	G1191	A1112	A1050	C985	A901
G1980	G1695	C1795	A1607	G1524	G1446	U1372	A1271	G1195	C1119	C1052	C987	C903
A1981	G1696	U1796	C1607	G1525	G1447	U1372	A1272	G1198	G1122	G1055	A988	C904
C1982	G1697	U1797	A1608	G1526	G1448	C1375	A1287	U1199	G1122	G1056	A989	U905
G1989	A1698	U1798	A1609	A1528	G1449A	G1376	A1287	U1199	G1122	G1055	A990	G906
C1990	G1702	G1799	A1610	A1529	G1453	G1377	C1291	C1201	G1125	A1057	C991	U907
A1991	G1702	C1800	G1613	C1530	U1454	A1378	U1292	G1202	A1126	U1058	C992	C908
G1992	U1706	G1800	C1614	C1531	G1455	A1379	U1293	G1203	A1129	G1059	A999	A909
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C1994	G1717	G1802	A1616	U1533	G1457	A1381	U1295	G1205	G1131	U1060	C995	A911
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G2000	A1729	G1626	G1626	G1537	G1461	A1393	C1299	G1211	G1137	U1065	U999	A917
C2008	U1730	U1630	U1630	G1538	G1462	A1394	U1300	U1212	G1137	U1066	A1000	A918
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G2010	G1733	G1632	G1632	U1540	U1472	A1396	A1301	A1213	G1138	G1068	C1004	G929
U2011	G1733	U1633	U1633	G1541	G1473	A1398	G1309	G1214	C1140	A1069	C1005	G930
G2012	G1734	C1634	C1634	C1542	G1474	G1398	G1309	G1215	U1141	A1070	C1006	U930
A2015	C1735	G1636	G1636	C1544	U1471	G1398	G1309	G1216	U1142	G1071	C1007	G931
A2019	C1735	A1637	A1637	A1545	A1472	G1402	U1312	G1218	A1424A	A1072	C1008	G932
U2022	G1741	G1638	G1638	A1546	G1473	C1403	U1313	G1218	A1148	A1073	C1008	G932
G2023	C1742	U1639	U1639	C1547	G1479	U1404	C1314	G1219	G1149	G1074	A1009	G938
C2024	G1743	C1640	C1640	C1548	U1482	U1405	C1315	G1220	C1150	C1075	A1010	G939
A2019	G1748	G1644	G1644	C1551	U1483	U1406	C1316	G1221	G1151	A1076	U1012	G940
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A2030	U1757	A1652	A1652	A1553	U1486	G1409	U1322	G1223	C1153	C1079	U1014	G942
A2031	U1757	G1653	G1653	A1554	G1487	G1410	G1324	G1224	G1154	A1080	G1015	U943
G2032	A1762	A1655	A1655	C1557	U1488	C1411	G1324	A1227	A1155	U1081	G1015	G943
A2033	G1763	C1656	C1656	U1558	U1489	U1414	G1328	G1228	A1156	U1082	U1019	G946
U1940	C1657	U1657	U1657	G1559	A1490	U1415	G1329	G1229	G1157	U1083	A1020	G946
G1949	U1765	G1658	G1658	U1560	G1491	U1416	C1330	G1229A	C1161	A1085	A1021	G950
G1950	C1767	C1663	C1663	G1561	G1492	C1417	G1331	C1231	G1162	A1086	G1022	C951
				U1562	C1493	G1418	G1332	G1236	G1163	G1087	U1023	G956
				C1563	C1493	U1419	G1332	G1236	G1163	A1088	G1024	G956
				U1569	A1496	U1420	C1334	G1237	G1165	G1089	G1025	A957
				C1577	U1497	G1421	U1335	G1238	U1165	A1089	U1026	U958
				U1578	C1498	G1422	U1335	G1238	C1166	U1090	A1027	A859
					C1577	G1423	G1338	A1241	G1169	G1091	A1028	A960
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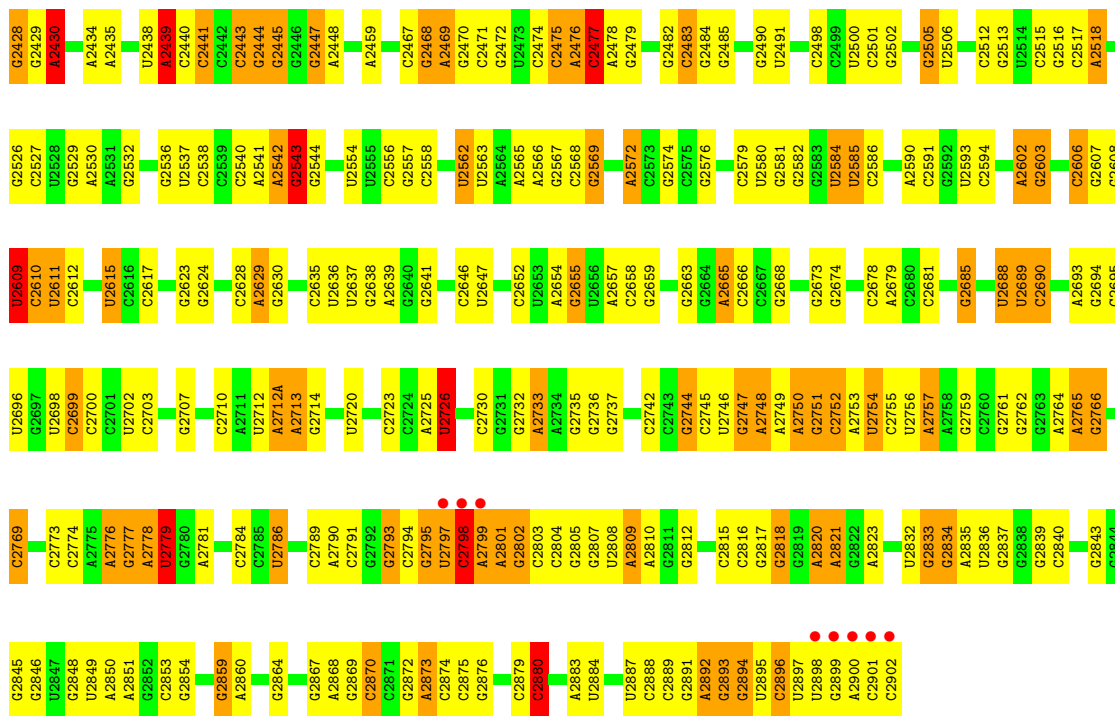


● Molecule 24: 23S ribosomal RNA

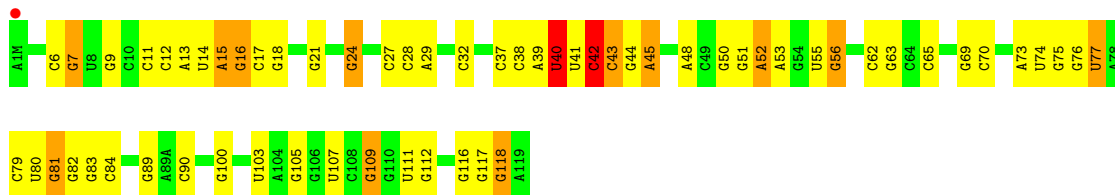


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A1077	U871	G1016	A789	C645	U569	A482	G388	G508	A257	A182	A1142A
U1078	A872	G1017	C790	A646	G570	A483	G389	G509	A258	A183	A1143
C1079	G873	C1018	C791	G647	G571	A484	G390	G510	G259	C183	G1144
A1080	G874	U1019	G792	G648	G572	G489	G391	A311	G260	C184	C1145
U1081	A793	U1020	A793	G649	G573	G490	G392	A265	A266	U185	G1146
U1082	C796	A1021	C796	G650	A575	A492	G393	A267	A268	G94	G1147
U1083	G879	G1022	G879	G651	U876	G493	G394	A269	A270	G95	G1148
A1084	G880	U1023	G880	C652	U877	G494	G395	A271	A272	G96	G1149
A1085	G881	G1024	A800	A653	A578	G495	G396	A273	A274	G102	G1150
A1086	G882	G1025	G882	A654	G579	G496	G397	A275	A276	A103	G1151
G1087	G883	U1026	G883	A655	A580	G497	G398	A277	A278	U108	G1152
U1088	G884	A1027	A801	A656	C580	G498	G399	A279	A280	G109	G1153
G1089	C885	A1028	U803	G654C	G582	A502	U403	A320	U270F	U108	G1154
U1090	C886	U1029	G804	G654D	G583	A503	C404	A321	C270G	G109	G1155
G1091	A897	G1030	A805	G654E	G584	A504	U405	A322	C270H	U112	G1156
C1092	C888	U1031	G806	G654F	A586	A505	G406	A323	G270I	G116	G1157
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U1095	A960	U1034	G726	G654I	U589	A508	G409	A326	U270L	A207	G1164
A1096	G981	U1035	C812	C654J	C589	C510	G410	A327	U270M	C208	G1165
C1097	C993	G1036	U813	A654K	G592	G512	G411	A328	U270N	U120	C1166
U1098	C994	U1037	C914	G654L	G600	A515	C414	A329	U270O	G121	G1167
G1099	C995	G1038	A819	G654M	G601	A516	C420	A330	C270P	A126	G1173
C1102	C996	C1040	A820	G654N	G602	C516	C421	A331	G270Q	A127	G1174
A1103	G974	C1041	A821	G654O	G603	C517	U421	A332	G270R	G128	G1175
G1104	G975	U1042	U827	C654P	A603	C523	A428	A333	G270S	C129	G1176
U1105	C976	G1043	G739	G654Q	G604	C527	A429	A334	G270T	C130	G1177
G1106	G977	U1044	U828	C654R	G605	A527	G430	A335	G270X	C134	G1178
U1107	C992	A1045	U747	G654S	U606	A528	C435	A336	G270Y	G138	G1179
G1108	C993	U1046	G748	A654T	U607	A529	C436	A337	G271B	G139	G1180
C1109	C994	G1047	C749	A655	C611	G530	C453	A338	U271C	A140	G1181
A1110	U905	A1048	G832	G655	G612	G531	A443	A339	G271D	A141	G1182
G1111	G906	C1049	U833	G656	U613	C531	C444	A340	G271E	G142	G1183
C1112	U907	A1050	A834	U657	U614	A532	U448	A341	G271F	C143	G1184
U1113	C908	G1051	G835	C658	U615	G533	U457	A342	G271G	G144	G1185
G1114	A909	U1052	G836	C659	G616	A536	G458	A343	C273D	G145	G1186
C1115	A910	C1053	G837	G660	A616	C537	C459	A344	U273E	A228	G1187
U1116	A911	A1054	U846	G661	G617	G539	A454	A345	G273F	A229	G1188
G1117	C912	G1055	U847	G662	G618	G540	A455	A346	G274	A222	G1189
C1118	U913	U1056	G848	G666	G619	C541	C456	A347	G275	A233	G1190
U1119	C914	A1057	A849	G667	G620	G546	U459	A348	A276	A149	G1191
G1120	C915	C1058	C850	A670	A621	C546	A460	A349	C277	G152	G1192
C1121	G916	U1059	U851	G668	G622	A547	A461	A350	A278	C153	G1193
U1122	A917	G1060	G852	A671	G623	A548	A462	A351	C279	C	G1194
G1123	C923	U1061	U860	C673	A627	A549	A463	A352	G286	U	G1195
C1124	A926	G1062	A861	G674	G628	G548	A464	A353	C287	U	G1196
U1125	G928	U1063	G862	A675	G629	G553	A465	A354	C288	U	G1197
A1126	G929	C1064	A863	G676	G630	U553	G463	A355	A289	U	G1198
G1127	A1000	U1065	G864	A677	A631	U554	U464	G354	G290	G171	G1199
U1128	A1001	U1066	C865	A678	A632	G556	G466	G355	G291	C172	G1200
C1129	C1005	U1067	U865	C678	C634	U557	A466	U358	G292	G173	G1201
U1130	A1006	A1068	A866	G679	C635	G558	A467	U359	A277	G174	G1202
G1131	C1007	G1069	G867	A685	G636	G559	A468	C375	A278	G175	G1203
C1132	G1007	U1070	A868	A686	G637	G560	A469	G379	A279	G176	G1204
U1133	A1010	G1071	A869	C687	A638	U562	G469	U383	A277	G177	G1205
G1134	G1011	C1072	A874	U688	U639	U563	A470	U384	A277	G178	G1206
C1135	U1012	A1073	A875	A689	C640	C564	G476	U385	A300	G179	G1207
U1136	U1013	U1074	A876	A690	C641	C565	A477	C385	G301	G179	G1208
G1137	U1014	C1075	C786	C691	A643	U566	A480	G386	G302	G179	G1209
C1138	G1014	G1075	U787						A303	G179	G1210
U1139	U1015	A1074							G304	G179	G1211
G1140	C1015	G1074							C302	G179	G1212
U1141	U1016	C1075							G303	G179	G1213

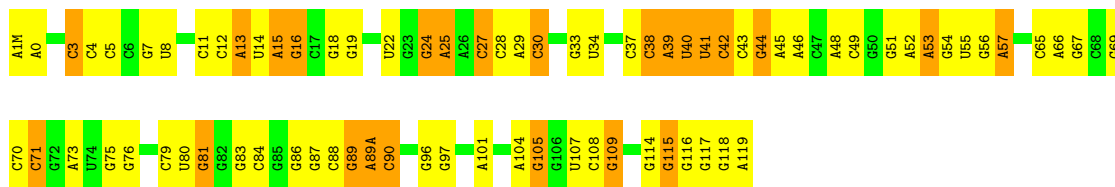




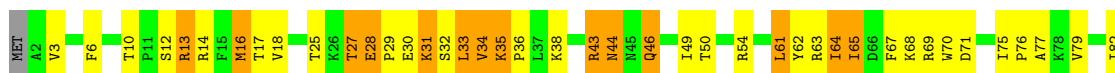
• Molecule 25: 5S RIBOSOMAL RNA



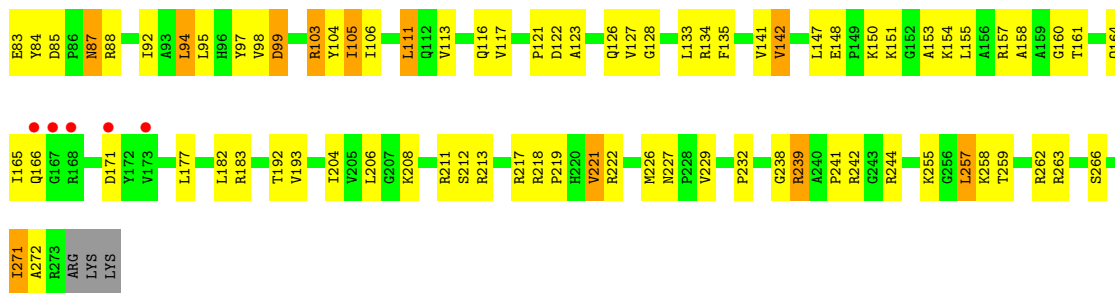
• Molecule 25: 5S RIBOSOMAL RNA



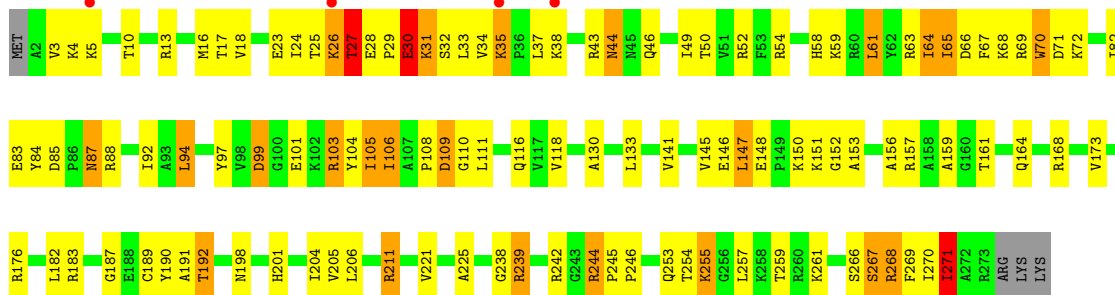
• Molecule 26: 50S ribosomal protein L2



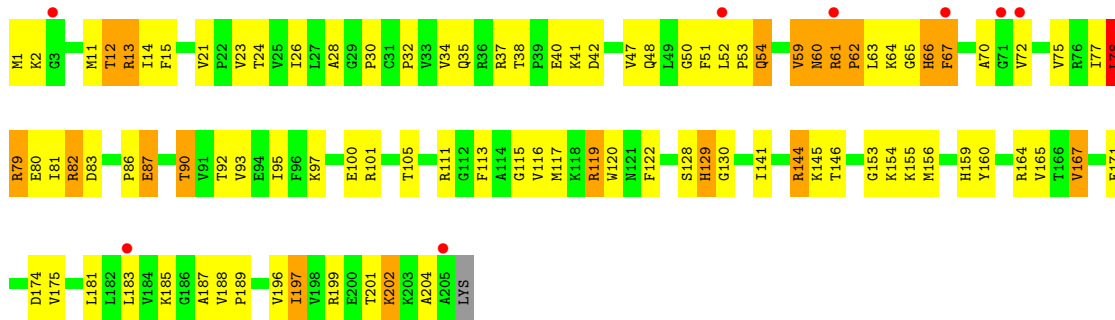




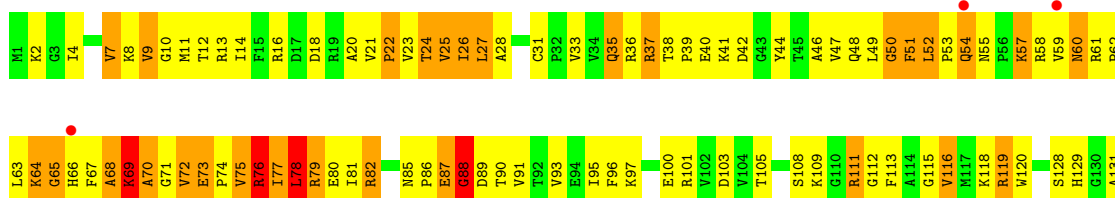
• Molecule 26: 50S ribosomal protein L2



• Molecule 27: 50S ribosomal protein L3

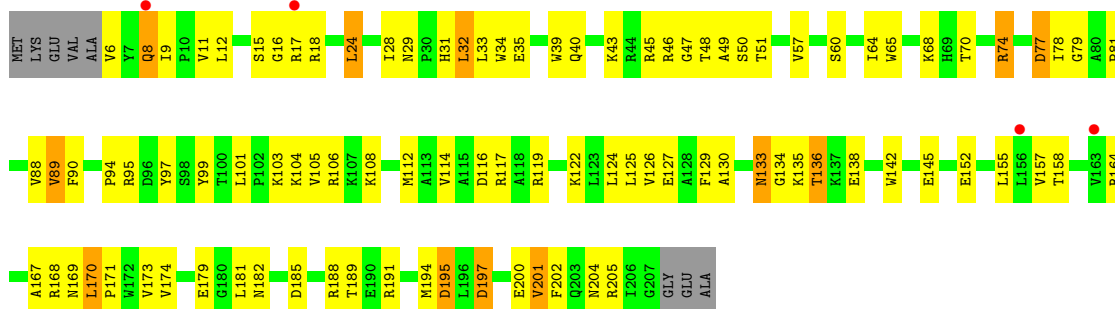


• Molecule 27: 50S ribosomal protein L3

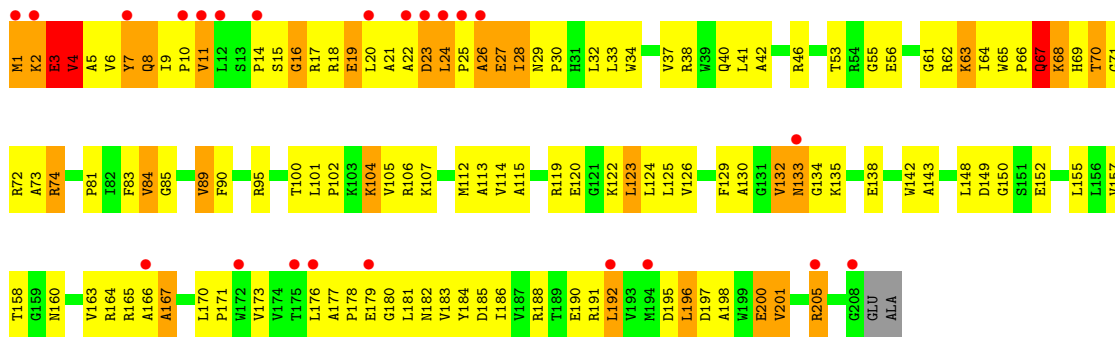




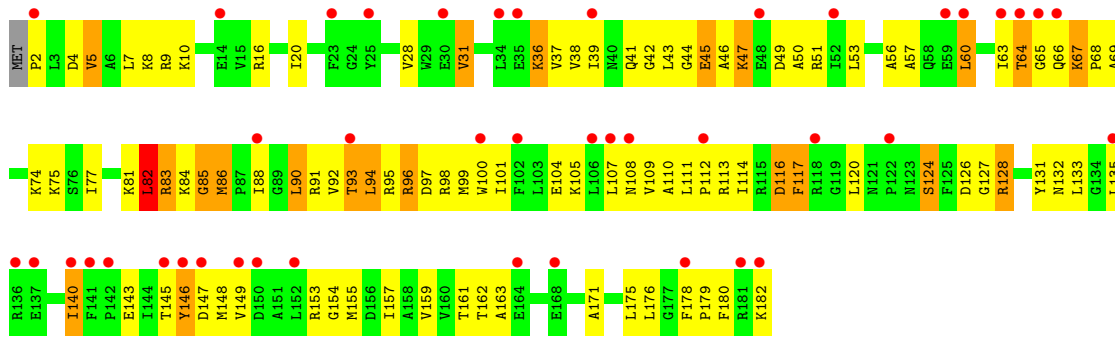
• Molecule 28: 50S ribosomal protein L4



• Molecule 28: 50S ribosomal protein L4

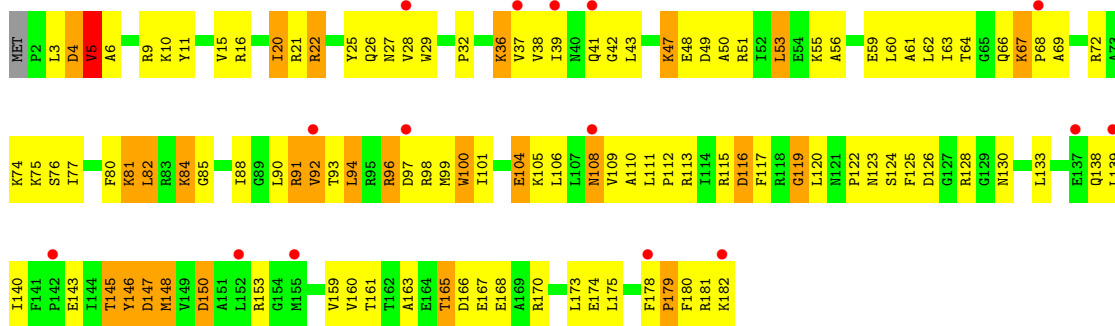


• Molecule 29: 50S ribosomal protein L5

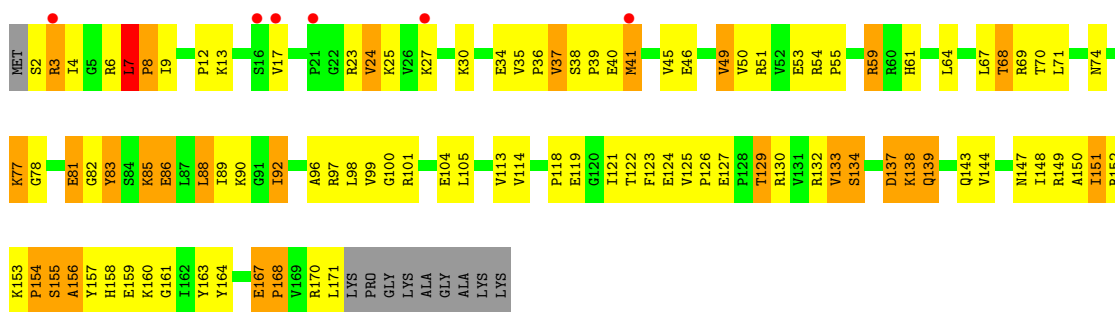


• Molecule 29: 50S ribosomal protein L5

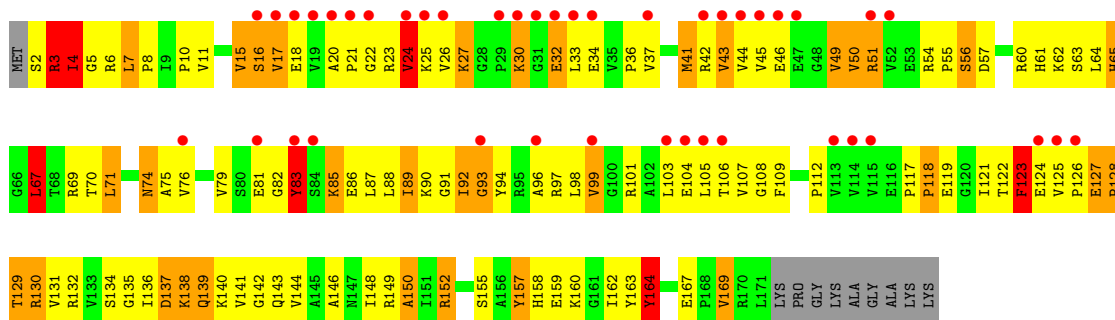
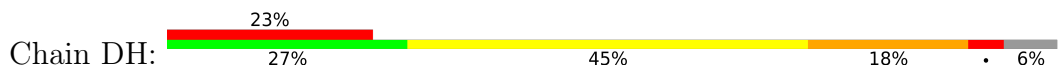




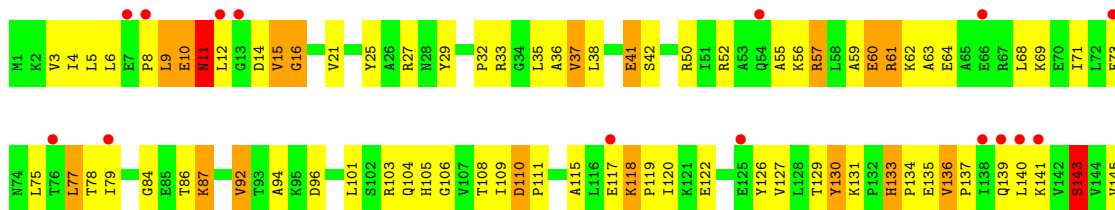
• Molecule 30: 50S ribosomal protein L6



• Molecule 30: 50S ribosomal protein L6



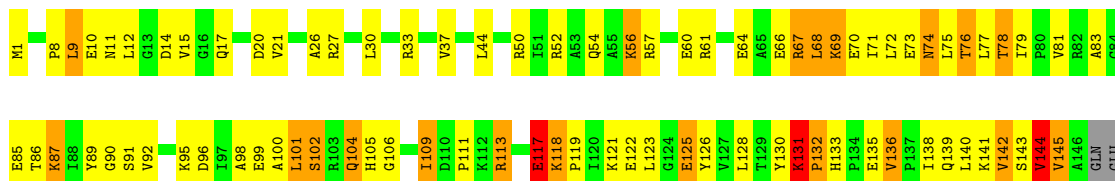
• Molecule 31: 50S ribosomal protein L9





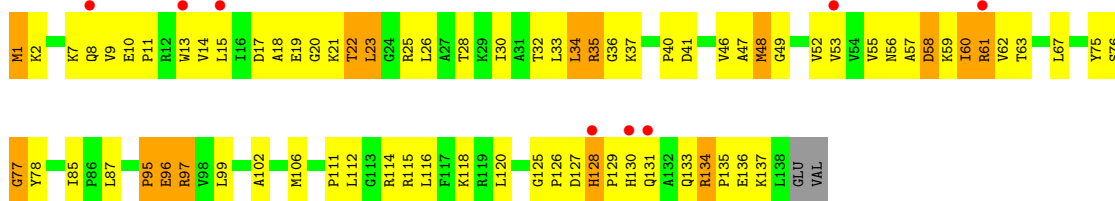
- Molecule 31: 50S ribosomal protein L9

Chain DK: 42% 41% 14% ..



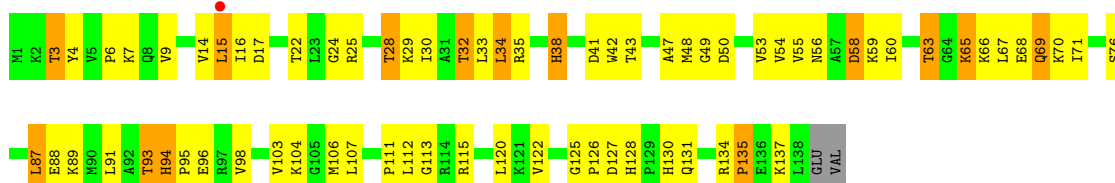
- Molecule 32: 50S ribosomal protein L13

Chain BM: 6% 44% 44% 11% .



- Molecule 32: 50S ribosomal protein L13

Chain DM: 48% 41% 10% .



- Molecule 33: 50S ribosomal protein L14

Chain BN: 71% 24% ..



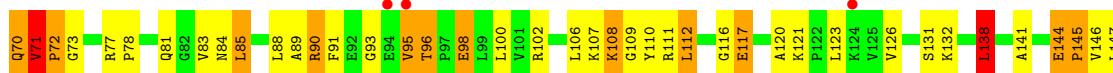
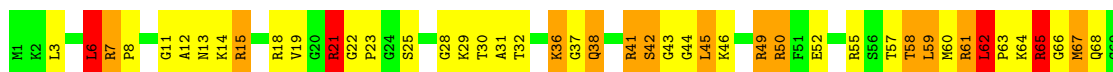
- Molecule 33: 50S ribosomal protein L14

Chain DN: 52% 38% 11% .





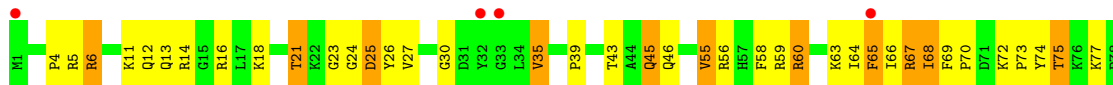
- Molecule 34: 50S ribosomal protein L15



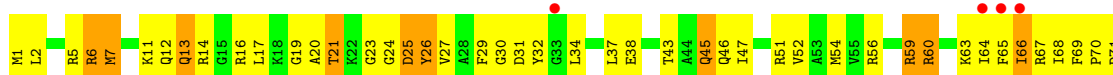
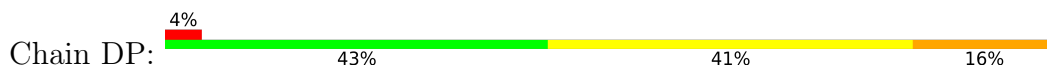
- Molecule 34: 50S ribosomal protein L15



- Molecule 35: 50S ribosomal protein L16

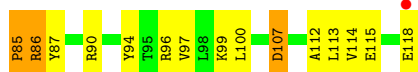


- Molecule 35: 50S ribosomal protein L16

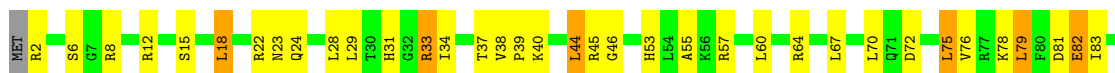




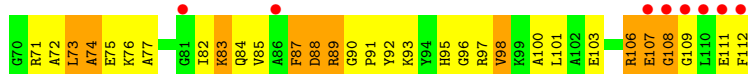
- Molecule 36: 50S ribosomal protein L17



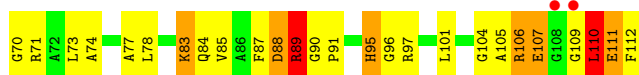
- Molecule 36: 50S ribosomal protein L17



- Molecule 37: 50S ribosomal protein L18

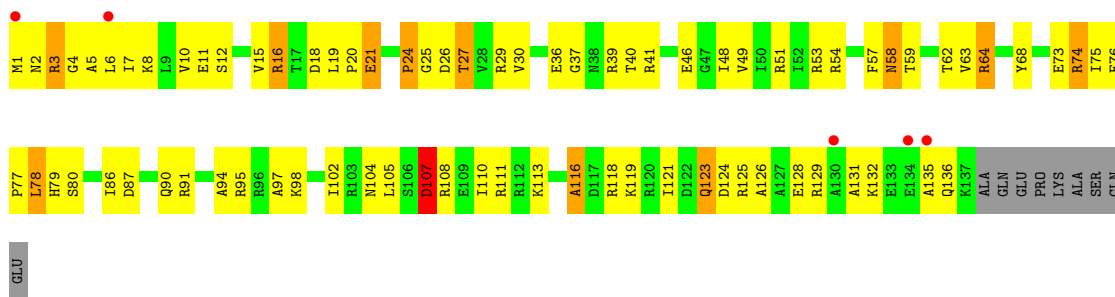


- Molecule 37: 50S ribosomal protein L18

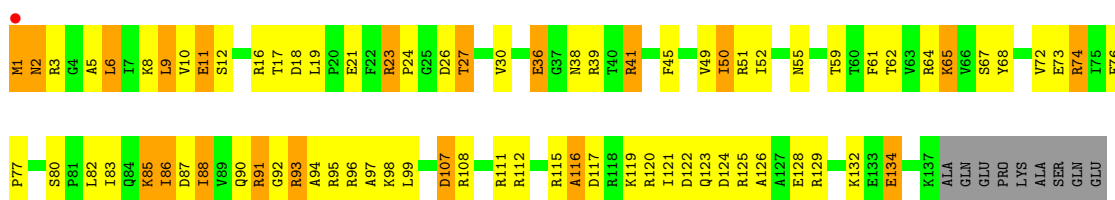


- Molecule 38: 50S ribosomal protein L19

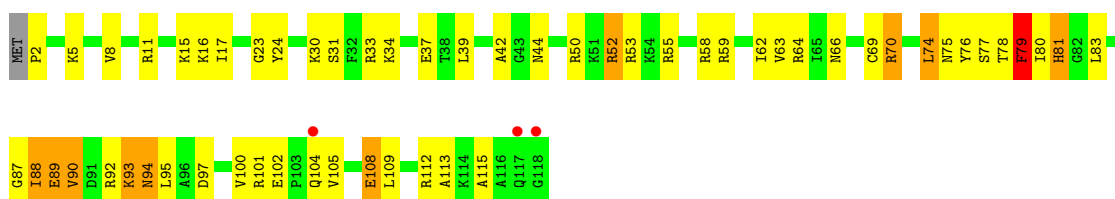




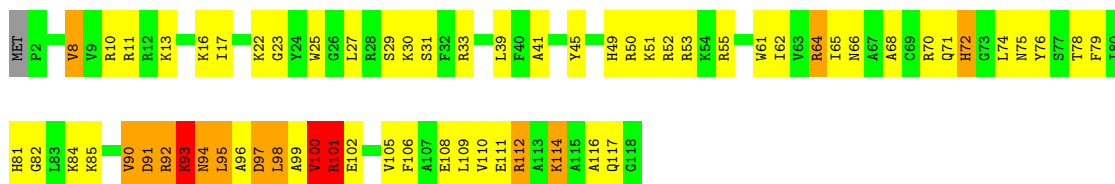
- Molecule 38: 50S ribosomal protein L19



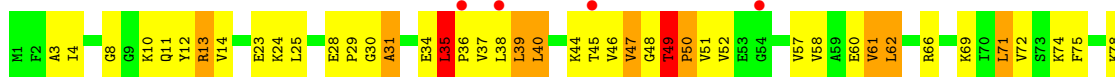
- Molecule 39: 50S ribosomal protein L20



- Molecule 39: 50S ribosomal protein L20

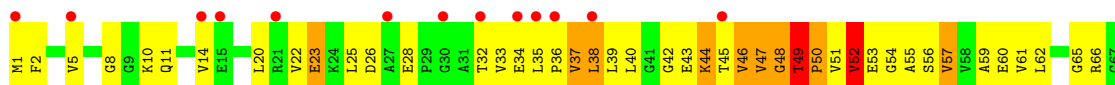


- Molecule 40: 50S ribosomal protein L21





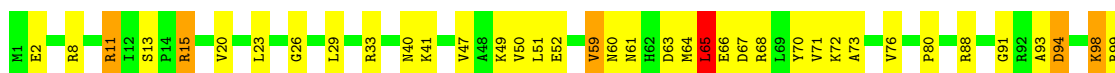
- Molecule 40: 50S ribosomal protein L21



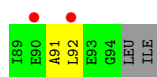
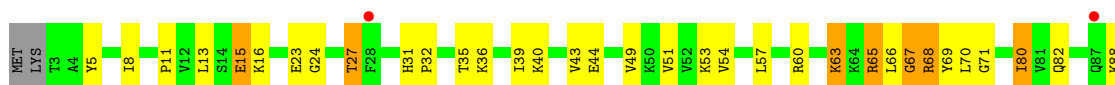
- Molecule 41: 50S ribosomal protein L22



- Molecule 41: 50S ribosomal protein L22



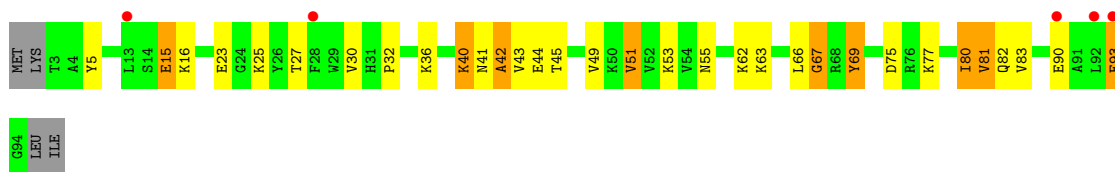
- Molecule 42: 50S ribosomal protein L23



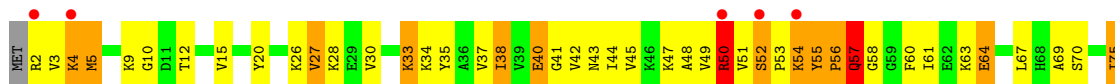
- Molecule 42: 50S ribosomal protein L23



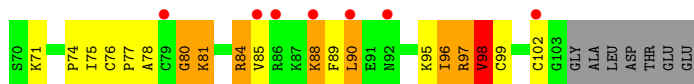
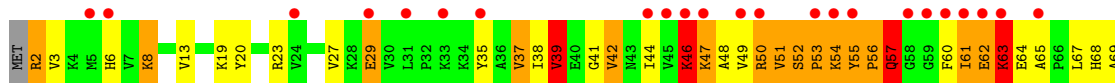
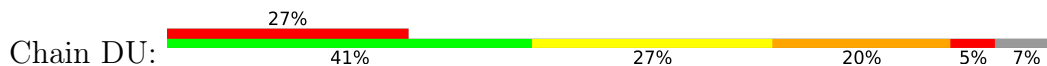




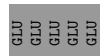
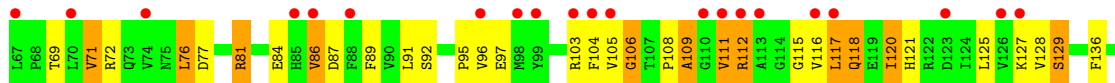
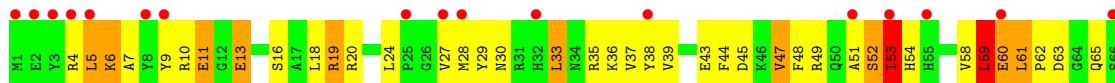
• Molecule 43: 50S ribosomal protein L24



• Molecule 43: 50S ribosomal protein L24

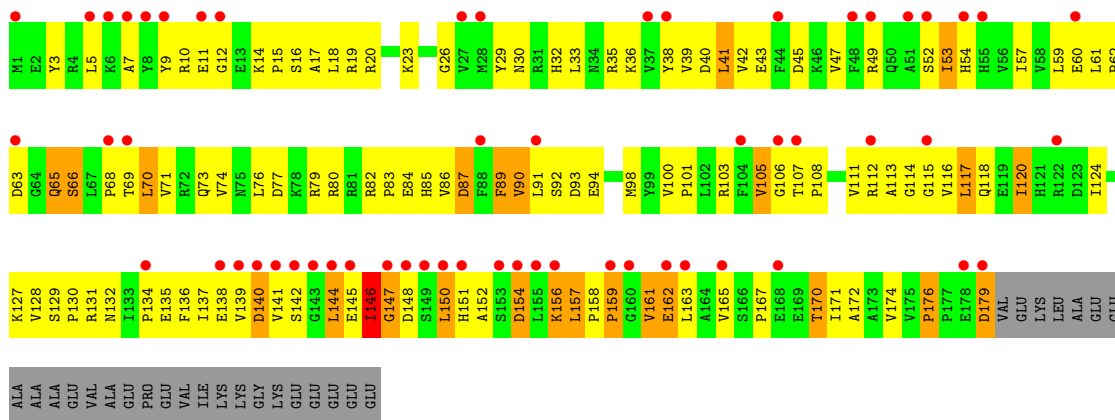


• Molecule 44: 50S ribosomal protein L25



• Molecule 44: 50S ribosomal protein L25

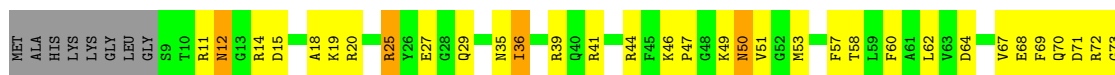




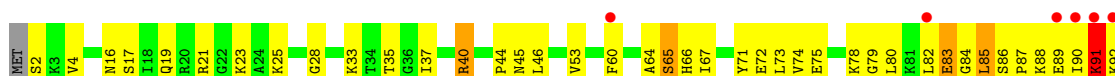
• Molecule 45: 50S ribosomal protein L27



• Molecule 45: 50S ribosomal protein L27



• Molecule 46: 50S ribosomal protein L28



• Molecule 46: 50S ribosomal protein L28

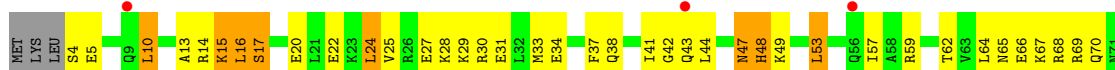




• Molecule 47: 50S ribosomal protein L29



• Molecule 47: 50S ribosomal protein L29



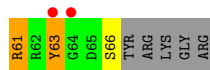
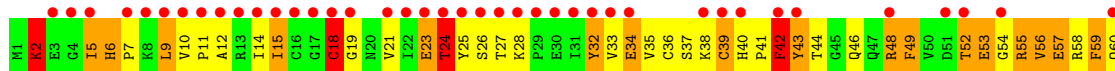
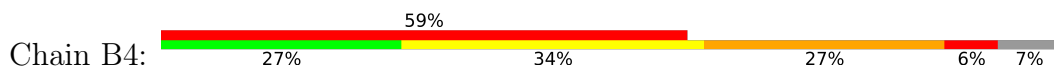
• Molecule 48: 50S ribosomal protein L30



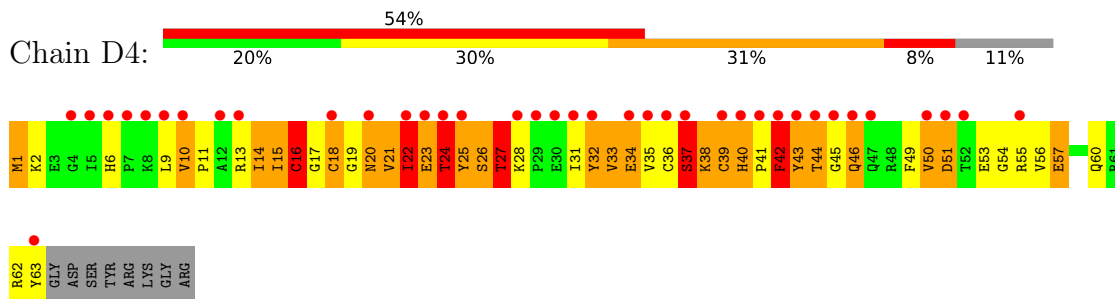
• Molecule 48: 50S ribosomal protein L30



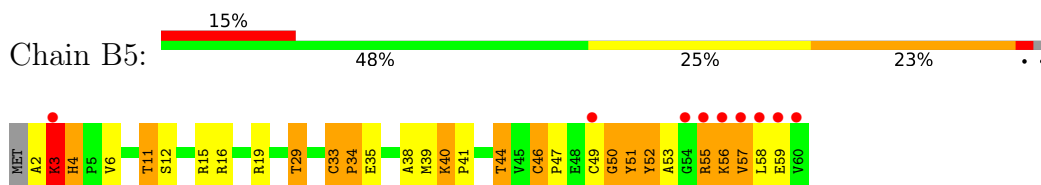
• Molecule 49: 50S ribosomal protein L31



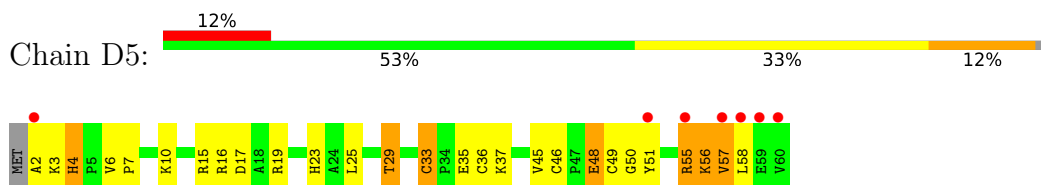
- Molecule 49: 50S ribosomal protein L31



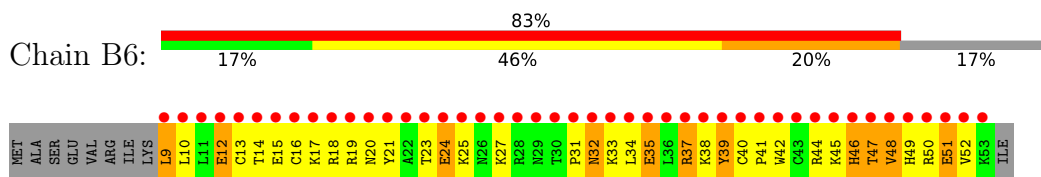
- Molecule 50: 50S ribosomal protein L32



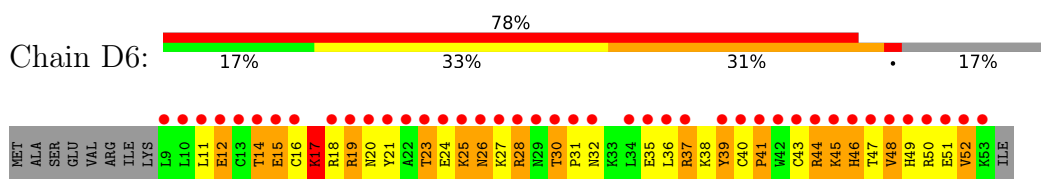
- Molecule 50: 50S ribosomal protein L32



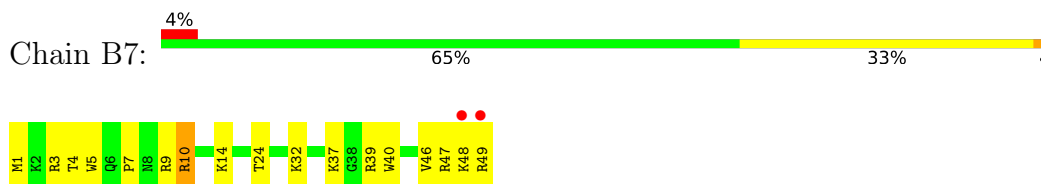
- Molecule 51: 50S ribosomal protein L33



- Molecule 51: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L34

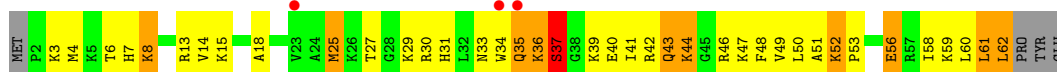


- Molecule 52: 50S ribosomal protein L34





- 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, $\alpha$ , $\beta$ , $\gamma$	210.06Å 450.27Å 616.89Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	153.59 – 3.10 254.47 – 3.10	Depositor EDS
% Data completeness (in resolution range)	99.9 (153.59-3.10) 93.4 (254.47-3.10)	Depositor EDS
$R_{merge}$	0.47	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.89 (at 3.07Å)	Xtrriage
Refinement program	PHENIX dev_987	Depositor
R, $R_{free}$	0.213 , 0.269 0.212 , 0.267	Depositor DCC
$R_{free}$ test set	2000 reflections (0.19%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	83.6	Xtrriage
Anisotropy	0.211	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.25 , 56.5	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.44$ , $\langle L^2 \rangle = 0.26$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	295766	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	111.0	wwPDB-VP

Xtrriage'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.*

<sup>1</sup>Intensities estimated from amplitudes.

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

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.58	23/36234 (0.1%)	1.04	97/56554 (0.2%)
1	CA	0.50	5/36237 (0.0%)	0.95	67/56558 (0.1%)
2	AE	0.37	0/1959	0.60	1/2642 (0.0%)
2	CE	0.38	0/1959	0.68	4/2642 (0.2%)
3	AF	0.39	0/1629	0.57	0/2195
3	CF	0.37	0/1636	0.56	0/2205
4	AG	0.48	1/1733 (0.1%)	0.66	1/2318 (0.0%)
4	CG	0.45	1/1733 (0.1%)	0.63	1/2318 (0.0%)
5	AH	0.42	0/1171	0.60	0/1576
5	CH	0.38	0/1171	0.57	0/1576
6	AI	0.43	0/856	0.61	0/1154
6	CI	0.37	0/856	0.52	0/1154
7	AJ	0.45	0/1276	0.65	2/1709 (0.1%)
7	CJ	0.39	0/1276	0.59	0/1709
8	AK	0.39	0/1136	0.68	3/1527 (0.2%)
8	CK	0.35	0/1136	0.56	0/1527
9	AL	0.45	0/1029	0.65	0/1379
9	CL	0.41	0/1029	0.62	0/1379
10	AM	0.34	0/814	0.56	0/1095
10	CM	0.38	0/814	0.58	0/1095
11	AN	0.41	0/900	0.58	0/1213
11	CN	0.52	1/900 (0.1%)	0.66	1/1213 (0.1%)
12	AO	0.44	0/991	0.62	0/1327
12	CO	0.42	0/991	0.65	1/1327 (0.1%)
13	AP	0.39	0/938	0.59	0/1258
13	CP	0.35	0/943	0.63	1/1265 (0.1%)
14	AQ	0.45	0/501	0.68	0/664
14	CQ	0.45	0/501	0.64	0/664
15	AR	0.41	0/745	0.57	0/992
15	CR	0.42	0/745	0.54	0/992
16	AS	0.40	0/721	0.79	3/970 (0.3%)
16	CS	0.40	0/721	0.58	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AT	0.40	0/847	0.57	0/1131
17	CT	0.39	0/847	0.55	0/1131
18	AU	0.41	0/596	0.64	0/790
18	CU	0.41	0/596	0.60	0/790
19	AV	0.46	0/680	0.75	1/915 (0.1%)
19	CV	0.47	0/638	0.78	0/860
20	AW	0.36	0/765	0.59	0/1007
20	CW	0.37	0/765	0.58	0/1007
21	AX	0.37	0/221	0.55	0/288
21	CX	0.36	0/221	0.63	0/288
22	AC	0.66	2/1832 (0.1%)	1.08	8/2855 (0.3%)
22	AD	0.52	2/1832 (0.1%)	1.08	9/2855 (0.3%)
22	CC	0.56	2/1832 (0.1%)	1.00	9/2855 (0.3%)
22	CD	0.54	2/1832 (0.1%)	1.15	11/2855 (0.4%)
23	A1	0.63	0/144	0.84	0/222
23	C1	0.55	0/144	0.86	0/222
24	BA	0.67	14/70233 (0.0%)	1.18	443/109643 (0.4%)
24	DA	0.61	4/70100 (0.0%)	1.09	282/109435 (0.3%)
25	BB	0.63	0/2928	1.12	12/4568 (0.3%)
25	DB	0.55	0/2928	0.99	3/4568 (0.1%)
26	BD	0.54	0/2165	0.73	0/2919
26	DD	0.57	1/2165 (0.0%)	0.70	0/2919
27	BE	0.49	0/1601	0.64	0/2160
27	DE	0.50	0/1601	0.67	1/2160 (0.0%)
28	BF	0.49	0/1620	0.69	0/2194
28	DF	0.44	0/1662	0.64	0/2249
29	BG	0.42	0/1499	0.59	0/2016
29	DG	0.36	0/1499	0.59	0/2016
30	BH	0.44	0/1332	0.63	1/1802 (0.1%)
30	DH	0.34	0/1332	0.70	1/1802 (0.1%)
31	BK	0.41	0/1151	0.63	0/1558
31	DK	0.40	0/1151	0.63	1/1558 (0.1%)
32	BM	0.47	0/1131	0.62	0/1525
32	DM	0.39	0/1131	0.58	0/1525
33	BN	0.47	0/943	0.61	0/1269
33	DN	0.46	0/943	0.61	0/1269
34	BO	0.54	0/1162	0.82	2/1544 (0.1%)
34	DO	0.42	0/1162	0.71	0/1544
35	BP	0.50	0/1143	0.66	0/1527
35	DP	0.45	0/1143	0.63	0/1527
36	B0	0.51	0/982	0.74	1/1312 (0.1%)
36	D0	0.46	0/974	0.63	0/1302
37	BQ	0.51	0/892	0.69	1/1187 (0.1%)



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
37	DQ	0.44	0/892	0.73	1/1187 (0.1%)
38	BR	0.45	0/1155	0.62	0/1542
38	DR	0.43	0/1155	0.60	0/1542
39	B1	0.52	0/982	0.67	0/1306
39	D1	0.42	0/982	0.64	0/1306
40	B2	0.50	0/790	0.68	1/1057 (0.1%)
40	D2	0.42	0/790	0.69	1/1057 (0.1%)
41	BS	0.47	0/911	0.63	0/1220
41	DS	0.47	0/911	0.59	0/1220
42	BT	0.58	0/739	0.65	0/993
42	DT	0.55	0/739	0.64	0/993
43	BU	0.54	0/798	0.74	0/1064
43	DU	0.50	0/798	0.69	1/1064 (0.1%)
44	BV	0.40	0/1427	0.63	0/1935
44	DV	0.37	0/1460	0.67	1/1982 (0.1%)
45	B3	0.65	2/615 (0.3%)	0.70	0/819
45	D3	0.46	0/621	0.61	0/827
46	BZ	0.50	0/770	0.65	0/1022
46	DZ	0.49	0/770	0.68	0/1022
47	BW	0.56	1/560 (0.2%)	0.70	0/741
47	DW	0.48	0/583	0.71	1/771 (0.1%)
48	BX	0.44	0/474	0.58	0/635
48	DX	0.40	0/474	0.56	0/635
49	B4	0.65	2/545 (0.4%)	0.77	1/733 (0.1%)
49	D4	0.44	0/527	0.69	0/709
50	B5	0.52	0/473	0.76	0/639
50	D5	0.45	0/473	0.67	0/639
51	B6	0.48	0/396	0.70	0/529
51	D6	0.52	0/396	0.68	0/529
52	B7	0.59	0/438	0.74	0/575
52	D7	0.54	0/438	0.65	0/575
53	B8	0.66	0/494	0.77	0/649
53	D8	0.61	0/494	0.93	1/649 (0.2%)
All	All	0.57	63/319716 (0.0%)	0.99	976/478502 (0.2%)

All (63) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	193	C	P-O5'	13.92	1.73	1.59
1	AA	193	C	C5'-C4'	13.77	1.67	1.51
1	AA	1381	U	C2-N3	-13.28	1.28	1.37
22	AD	17(A)	C	C4-N4	-11.47	1.23	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	CC	17(A)	C	C4-N4	-11.41	1.23	1.33
22	CD	17(A)	C	C4-N4	-11.38	1.23	1.33
22	AC	17(A)	C	C4-N4	-11.08	1.24	1.33
1	AA	1381	U	C4-O4	-11.04	1.14	1.23
1	AA	192	U	O3'-P	10.36	1.73	1.61
1	AA	1381	U	C1'-N1	9.87	1.63	1.48
1	AA	1382	C	N1-C2	9.41	1.49	1.40
11	CN	124	LYS	CD-CE	8.56	1.72	1.51
4	AG	12	CYS	CB-SG	7.96	1.95	1.82
1	AA	192	U	C3'-C2'	7.75	1.61	1.52
1	AA	193	C	O5'-C5'	7.74	1.56	1.44
1	AA	1382	C	N1-C6	7.62	1.41	1.37
1	AA	1382	C	P-O5'	7.09	1.66	1.59
22	AC	17(A)	C	N3-C4	6.93	1.38	1.33
1	AA	193	C	C1'-N1	6.83	1.58	1.48
24	BA	783	A	N9-C4	-6.81	1.33	1.37
49	B4	18	CYS	CB-SG	-6.78	1.70	1.82
1	AA	192	U	C1'-N1	6.71	1.58	1.48
45	B3	17	GLN	CB-CG	6.67	1.70	1.52
24	BA	1142(A)	A	N9-C4	-6.44	1.33	1.37
1	AA	193	C	O4'-C1'	6.39	1.50	1.41
22	CD	17(A)	C	N3-C4	6.33	1.38	1.33
1	AA	193	C	C4'-O4'	6.32	1.53	1.45
22	AD	17(A)	C	N3-C4	6.27	1.38	1.33
1	AA	192	U	C2'-C1'	-6.21	1.46	1.53
24	BA	774	A	N9-C4	-6.13	1.34	1.37
45	B3	17	GLN	CG-CD	6.03	1.65	1.51
24	BA	1992	G	N9-C4	5.99	1.42	1.38
1	AA	1381	U	C2-O2	-5.99	1.17	1.22
24	DA	2430	A	N9-C4	-5.89	1.34	1.37
24	DA	2518	A	N9-C4	-5.88	1.34	1.37
24	BA	2000	G	P-OP2	-5.84	1.39	1.49
24	BA	676	A	N9-C4	-5.83	1.34	1.37
24	BA	2000	G	P-O5'	5.82	1.65	1.59
22	CC	17(A)	C	N3-C4	5.78	1.38	1.33
24	BA	1799	G	N9-C4	5.56	1.42	1.38
1	AA	474	G	N9-C4	-5.54	1.33	1.38
1	CA	1104	G	C5-C4	-5.51	1.34	1.38
24	BA	2751	G	N9-C4	-5.49	1.33	1.38
24	DA	2443	C	N1-C6	-5.46	1.33	1.37
1	CA	797	C	P-O5'	5.45	1.65	1.59
1	AA	193	C	N1-C2	5.39	1.45	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	B4	39	CYS	CB-SG	-5.32	1.73	1.81
47	BW	5	GLU	CB-CG	5.32	1.62	1.52
24	BA	777	A	N3-C4	-5.26	1.31	1.34
4	CG	9	CYS	CB-SG	-5.25	1.73	1.81
1	AA	193	C	C4-C5	-5.20	1.38	1.43
1	AA	192	U	C4-O4	5.18	1.27	1.23
1	CA	1104	G	C8-N7	-5.13	1.27	1.30
1	AA	590	C	N1-C6	-5.11	1.34	1.37
1	CA	1104	G	C5'-C4'	-5.10	1.45	1.51
24	BA	2751	G	N3-C4	-5.10	1.31	1.35
24	DA	1992	G	N9-C4	5.06	1.42	1.38
24	BA	1999	C	N1-C6	-5.04	1.34	1.37
24	BA	1786	A	N9-C4	-5.03	1.34	1.37
24	BA	2751	G	C5-C4	5.03	1.41	1.38
1	AA	1382	C	C2-N3	5.02	1.39	1.35
26	DD	30	GLU	CG-CD	5.02	1.59	1.51
1	CA	1104	G	C2'-C1'	5.01	1.58	1.53

All (976) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1381	U	N3-C4-C5	34.37	135.22	114.60
1	AA	193	C	C6-N1-C2	-33.39	106.94	120.30
1	AA	193	C	C5-C6-N1	30.48	136.24	121.00
1	AA	1381	U	C4-C5-C6	-26.85	103.59	119.70
22	CD	17(A)	C	N3-C4-C5	-19.72	114.01	121.90
22	AD	17(A)	C	N3-C4-C5	-19.52	114.09	121.90
22	CC	17(A)	C	N3-C4-C5	-18.15	114.64	121.90
1	AA	1381	U	C2-N3-C4	-17.69	116.39	127.00
22	AC	17(A)	C	N3-C4-C5	-17.36	114.96	121.90
25	BB	40	U	C5-C6-N1	16.71	131.06	122.70
1	AA	1381	U	N3-C4-O4	-16.54	107.82	119.40
22	AD	17(A)	C	C2-N3-C4	15.63	127.72	119.90
22	CD	17(A)	C	C2-N3-C4	15.12	127.46	119.90
1	AA	192	U	C6-N1-C2	-14.92	112.05	121.00
1	AA	1381	U	C5-C4-O4	-14.91	116.95	125.90
16	AS	81	ARG	NE-CZ-NH1	-14.00	113.30	120.30
22	CC	17(A)	C	C2-N3-C4	13.98	126.89	119.90
22	AC	17(A)	C	C2-N3-C4	13.76	126.78	119.90
24	BA	2751	G	N7-C8-N9	13.04	119.62	113.10
24	BA	2447	G	N1-C6-O6	11.97	127.08	119.90
1	CA	1104	G	N3-C4-C5	11.78	134.49	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	774	A	C2-N3-C4	-11.70	104.75	110.60
25	BB	40	U	C2-N1-C1'	11.68	131.72	117.70
24	BA	2751	G	C5-C6-N1	-11.59	105.70	111.50
1	AA	1382	C	C4-C5-C6	11.35	123.07	117.40
25	BB	40	U	C6-N1-C2	-11.28	114.23	121.00
1	AA	475	G	C8-N9-C4	-11.13	101.95	106.40
1	AA	192	U	P-O3'-C3'	11.12	133.04	119.70
24	BA	2401	U	C5-C6-N1	10.96	128.18	122.70
24	DA	2401	U	C5-C6-N1	10.78	128.09	122.70
24	BA	676	A	C5-N7-C8	-10.75	98.53	103.90
1	CA	1104	G	N9-C4-C5	-10.74	101.10	105.40
1	CA	1104	G	C4-C5-N7	10.74	115.10	110.80
24	BA	2751	G	C5-N7-C8	-10.71	98.94	104.30
1	AA	405	U	C5-C4-O4	10.69	132.31	125.90
24	BA	2699	C	C6-N1-C2	10.65	124.56	120.30
24	BA	2751	G	C6-N1-C2	10.62	131.47	125.10
24	DA	1786	A	C5-N7-C8	-10.44	98.68	103.90
24	BA	1332	G	C5-N7-C8	-10.40	99.10	104.30
24	BA	783	A	C5-N7-C8	-10.29	98.75	103.90
1	AA	192	U	N3-C4-C5	-10.28	108.43	114.60
24	BA	2000	G	N9-C4-C5	10.21	109.48	105.40
24	DA	1786	A	N7-C8-N9	10.20	118.90	113.80
24	BA	676	A	C2-N3-C4	-10.14	105.53	110.60
24	BA	1332	G	C6-C5-N7	-10.11	124.34	130.40
7	AJ	79	ARG	NE-CZ-NH2	-10.03	115.29	120.30
24	BA	1178	C	N1-C2-O2	9.96	124.87	118.90
1	AA	192	U	O4'-C1'-N1	9.91	116.12	108.20
24	BA	1899	G	C2-N3-C4	-9.86	106.97	111.90
25	BB	40	U	N1-C2-O2	9.78	129.64	122.80
1	AA	192	U	N1-C2-N3	9.77	120.76	114.90
24	BA	120	U	C4-C5-C6	9.64	125.49	119.70
24	BA	1786	A	C5-N7-C8	-9.64	99.08	103.90
24	BA	1332	G	C4-C5-N7	9.62	114.65	110.80
36	B0	2	ARG	NE-CZ-NH1	-9.59	115.50	120.30
24	BA	2751	G	N3-C4-C5	9.58	133.39	128.60
4	CG	12	CYS	CA-CB-SG	9.58	131.24	114.00
22	AD	17(A)	C	N1-C2-O2	9.55	124.63	118.90
24	BA	2000	G	C6-C5-N7	9.55	136.13	130.40
24	BA	1332	G	N7-C8-N9	9.54	117.87	113.10
24	DA	2447	G	N1-C6-O6	9.54	125.62	119.90
24	BA	2000	G	N3-C4-N9	-9.54	120.28	126.00
24	BA	1799	G	N3-C4-C5	-9.51	123.85	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	654(I)	C	C2-N1-C1'	9.46	129.21	118.80
24	BA	528	A	C2-N3-C4	-9.45	105.88	110.60
24	BA	676	A	N1-C6-N6	9.44	124.26	118.60
25	BB	40	U	C2-N3-C4	9.43	132.66	127.00
24	BA	1178	C	N3-C2-O2	-9.43	115.30	121.90
24	BA	2388	A	C8-N9-C4	9.38	109.55	105.80
24	BA	1332	G	C2-N3-C4	-9.34	107.23	111.90
24	DA	2401	U	C5-C4-O4	-9.33	120.30	125.90
25	BB	40	U	N3-C4-O4	9.32	125.92	119.40
24	BA	1178	C	C2-N1-C1'	9.24	128.97	118.80
22	CD	17(A)	C	N1-C2-O2	9.15	124.39	118.90
22	CC	17(A)	C	C5-C4-N4	9.06	126.55	120.20
24	BA	1992	G	N3-C4-C5	-9.06	124.07	128.60
24	BA	1049	C	N1-C2-O2	8.92	124.25	118.90
1	CA	1267	C	C2-N1-C1'	8.89	128.58	118.80
24	BA	2400	G	C8-N9-C4	-8.88	102.85	106.40
24	BA	2056	G	N3-C2-N2	-8.86	113.70	119.90
1	AA	192	U	C5-C6-N1	8.82	127.11	122.70
1	AA	192	U	N3-C2-O2	-8.79	116.05	122.20
22	AD	17(A)	C	C5-C4-N4	8.78	126.35	120.20
1	AA	193	C	C4-C5-C6	-8.75	113.02	117.40
24	BA	2751	G	C2-N3-C4	-8.74	107.53	111.90
24	DA	90	U	N3-C2-O2	-8.71	116.10	122.20
22	AC	17(A)	C	C5-C4-N4	8.68	126.28	120.20
1	CA	1267	C	N1-C2-O2	8.66	124.09	118.90
24	BA	330	A	C2-N3-C4	-8.64	106.28	110.60
24	DA	783	A	C5-N7-C8	-8.63	99.59	103.90
24	BA	1496	A	C8-N9-C4	-8.62	102.35	105.80
24	BA	140	A	C5-N7-C8	-8.61	99.60	103.90
24	BA	74	A	C2-N3-C4	-8.60	106.30	110.60
24	BA	676	A	C4-C5-N7	8.58	114.99	110.70
24	BA	654(I)	C	C6-N1-C2	-8.58	116.87	120.30
1	AA	193	C	N3-C4-N4	8.57	124.00	118.00
1	CA	1104	G	C8-N9-C4	8.55	109.82	106.40
24	DA	74	A	C2-N3-C4	-8.53	106.33	110.60
24	BA	1528	A	C8-N9-C4	-8.51	102.39	105.80
24	DA	783	A	N1-C6-N6	8.50	123.70	118.60
24	BA	783	A	C2-N3-C4	-8.48	106.36	110.60
24	DA	2430	A	C2-N3-C4	-8.46	106.37	110.60
22	CD	17(A)	C	C5-C4-N4	8.46	126.12	120.20
24	BA	2751	G	N3-C4-N9	-8.43	120.94	126.00
24	DA	783	A	C4-C5-N7	8.43	114.91	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	450	G	N1-C6-O6	8.41	124.95	119.90
24	BA	1049	C	C6-N1-C2	-8.41	116.94	120.30
24	BA	790	C	C6-N1-C2	8.39	123.66	120.30
24	DA	90	U	C2-N1-C1'	8.34	127.71	117.70
24	DA	801	G	N1-C6-O6	-8.31	114.91	119.90
1	AA	193	C	N3-C2-O2	-8.30	116.09	121.90
24	BA	1992	G	C8-N9-C4	-8.29	103.08	106.40
24	BA	783	A	N7-C8-N9	8.27	117.94	113.80
24	BA	140	A	N7-C8-N9	8.21	117.90	113.80
25	BB	40	U	N3-C2-O2	-8.20	116.46	122.20
24	DA	90	U	N1-C2-O2	8.17	128.52	122.80
1	AA	1158	C	C6-N1-C2	-8.15	117.04	120.30
24	DA	676	A	C2-N3-C4	-8.13	106.53	110.60
24	BA	2751	G	C4-N9-C1'	8.12	137.06	126.50
1	AA	475	G	N9-C4-C5	8.09	108.64	105.40
24	BA	2000	G	C4-C5-N7	-8.09	107.56	110.80
24	DA	1992	G	N3-C4-C5	-8.06	124.57	128.60
1	AA	192	U	C5-C4-O4	8.06	130.73	125.90
24	BA	1950	G	C8-N9-C4	-8.05	103.18	106.40
2	CE	111	ARG	CG-CD-NE	-8.05	94.89	111.80
1	AA	193	C	N3-C4-C5	-8.04	118.69	121.90
24	BA	1142(A)	A	C2-N3-C4	-8.02	106.59	110.60
24	BA	1786	A	N7-C8-N9	8.00	117.80	113.80
24	DA	130	C	C6-N1-C2	8.00	123.50	120.30
24	BA	1787	A	N9-C4-C5	-8.00	102.60	105.80
24	BA	1786	A	C4-C5-N7	7.98	114.69	110.70
24	DA	2477	C	N1-C2-O2	7.97	123.68	118.90
1	AA	193	C	C2-N3-C4	7.95	123.87	119.90
1	AA	193	C	N1-C2-O2	7.94	123.66	118.90
24	BA	676	A	N7-C8-N9	7.90	117.75	113.80
24	BA	1931	U	N3-C2-O2	-7.87	116.69	122.20
24	DA	774	A	C2-N3-C4	-7.87	106.66	110.60
24	DA	2699	C	C6-N1-C2	7.85	123.44	120.30
24	BA	71	A	C5-N7-C8	-7.80	100.00	103.90
24	DA	2430	A	N1-C6-N6	7.80	123.28	118.60
24	BA	1210	A	C8-N9-C4	-7.80	102.68	105.80
24	BA	2447	G	C5-C6-O6	-7.79	123.93	128.60
1	AA	474	G	N3-C4-C5	7.78	132.49	128.60
24	DA	2688	U	N3-C2-O2	-7.75	116.77	122.20
1	AA	405	U	N1-C2-N3	7.74	119.54	114.90
24	DA	828	U	N1-C2-O2	7.72	128.21	122.80
24	BA	654(I)	C	N1-C2-O2	7.72	123.53	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	405	U	C6-N1-C1'	7.72	132.00	121.20
24	DA	2067	G	C8-N9-C4	-7.72	103.31	106.40
1	AA	193	C	C2-N1-C1'	7.71	127.28	118.80
24	BA	270(M)	U	C2-N1-C1'	7.69	126.93	117.70
24	BA	828	U	C5-C4-O4	7.67	130.50	125.90
1	AA	405	U	C6-N1-C2	-7.65	116.41	121.00
24	BA	1049	C	N3-C2-O2	-7.65	116.55	121.90
24	BA	2400	G	N9-C4-C5	7.63	108.45	105.40
22	CC	17(A)	C	N1-C2-O2	7.63	123.48	118.90
4	AG	12	CYS	CA-CB-SG	7.61	127.69	114.00
24	DA	530	G	C4-C5-N7	7.60	113.84	110.80
24	DA	2477	C	C2-N1-C1'	7.54	127.10	118.80
24	DA	1332	G	N7-C8-N9	7.52	116.86	113.10
24	BA	1787	A	C8-N9-C4	7.49	108.79	105.80
24	DA	1786	A	C6-C5-N7	-7.48	127.06	132.30
1	AA	474	G	C8-N9-C4	7.48	109.39	106.40
24	BA	210	C	C6-N1-C2	7.48	123.29	120.30
24	DA	2401	U	C2-N1-C1'	7.47	126.67	117.70
24	BA	2452	C	C6-N1-C2	7.47	123.29	120.30
24	DA	1992	G	C8-N9-C4	-7.46	103.42	106.40
25	BB	40	U	N3-C4-C5	-7.46	110.12	114.60
24	BA	2591	C	N1-C2-O2	-7.45	114.43	118.90
24	DA	676	A	C5-N7-C8	-7.43	100.19	103.90
24	BA	471	A	N1-C6-N6	7.42	123.05	118.60
24	BA	585	G	C8-N9-C4	-7.41	103.44	106.40
24	DA	1786	A	C2-N3-C4	-7.41	106.89	110.60
24	BA	1210	A	N7-C8-N9	7.40	117.50	113.80
24	BA	2699	C	C5-C6-N1	-7.40	117.30	121.00
24	BA	1496	A	N7-C8-N9	7.38	117.49	113.80
1	AA	1158	C	C2-N1-C1'	7.38	126.92	118.80
1	AA	591	U	C5-C4-O4	7.38	130.32	125.90
1	AA	1336	C	N1-C2-O2	7.37	123.32	118.90
24	DA	1980	G	C8-N9-C4	-7.37	103.45	106.40
1	AA	405	U	N3-C4-C5	-7.37	110.18	114.60
24	BA	828	U	N3-C2-O2	-7.36	117.05	122.20
24	BA	621	A	C5-N7-C8	-7.36	100.22	103.90
24	BA	2710	C	C6-N1-C2	7.35	123.24	120.30
24	DA	2287	A	C2-N3-C4	-7.31	106.94	110.60
1	AA	475	G	N7-C8-N9	7.30	116.75	113.10
24	DA	2426	A	C8-N9-C4	-7.28	102.89	105.80
24	BA	2392	A	N7-C8-N9	7.26	117.43	113.80
24	DA	1786	A	C4-C5-N7	7.25	114.33	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2873	A	N7-C8-N9	7.25	117.42	113.80
22	AC	17(A)	C	N1-C2-O2	7.24	123.25	118.90
24	BA	71	A	C2-N3-C4	-7.24	106.98	110.60
24	BA	1049	C	C5-C6-N1	7.21	124.61	121.00
24	DA	121	G	C5-C6-O6	-7.21	124.27	128.60
24	DA	405	U	C2-N1-C1'	7.20	126.34	117.70
24	DA	530	G	C6-C5-N7	-7.20	126.08	130.40
1	AA	1336	C	C2-N1-C1'	7.16	126.68	118.80
24	DA	49	A	C8-N9-C4	-7.15	102.94	105.80
24	DA	2518	A	C2-N3-C4	-7.15	107.03	110.60
24	BA	1313	U	C2-N1-C1'	7.14	126.27	117.70
24	BA	1931	U	C5-C4-O4	7.14	130.18	125.90
24	DA	1332	G	C8-N9-C4	-7.13	103.55	106.40
24	BA	1616	A	C5-N7-C8	-7.13	100.33	103.90
24	BA	2430	A	C2-N3-C4	-7.12	107.04	110.60
24	DA	2067	G	N9-C4-C5	7.12	108.25	105.40
24	DA	2056	G	C5-C6-O6	-7.11	124.33	128.60
24	BA	1644	C	C6-N1-C2	-7.10	117.46	120.30
24	BA	917	A	C2-N3-C4	-7.10	107.05	110.60
24	BA	2284	C	N3-C4-C5	-7.10	119.06	121.90
24	DA	140	A	C5-N7-C8	-7.10	100.35	103.90
24	BA	621	A	C2-N3-C4	-7.09	107.05	110.60
24	DA	2873	A	C5-N7-C8	-7.09	100.36	103.90
19	AV	5	LEU	CB-CG-CD2	-7.07	98.98	111.00
24	BA	1178	C	C6-N1-C2	-7.07	117.47	120.30
24	DA	828	U	N3-C2-O2	-7.07	117.25	122.20
24	BA	270(O)	U	C2-N1-C1'	7.05	126.16	117.70
24	BA	1022	G	C8-N9-C4	-7.04	103.58	106.40
24	BA	677	A	C8-N9-C4	7.03	108.61	105.80
22	CC	39	C	C6-N1-C2	-7.02	117.49	120.30
24	BA	2330	G	C8-N9-C4	7.02	109.21	106.40
24	DA	140	A	N7-C8-N9	7.02	117.31	113.80
24	DA	530	G	C5-C6-O6	-6.99	124.41	128.60
24	BA	1678	G	C2-N3-C4	-6.96	108.42	111.90
24	DA	767	U	C5-C4-O4	6.95	130.07	125.90
24	BA	654(I)	C	N3-C2-O2	-6.93	117.05	121.90
24	DA	2713	A	C5-N7-C8	-6.92	100.44	103.90
24	DA	1021	A	C2-N3-C4	-6.92	107.14	110.60
24	DA	2477	C	N3-C2-O2	-6.91	117.06	121.90
24	BA	120	U	C5-C6-N1	-6.89	119.25	122.70
24	BA	1332	G	N1-C2-N3	6.89	128.03	123.90
1	AA	192	U	C6-N1-C1'	6.89	130.84	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1698	A	C2-N3-C4	-6.88	107.16	110.60
24	BA	1989	G	N3-C2-N2	-6.87	115.09	119.90
24	BA	2575	C	N3-C2-O2	-6.86	117.10	121.90
24	BA	1799	G	N3-C4-N9	6.86	130.11	126.00
24	BA	783	A	C4-C5-N7	6.84	114.12	110.70
24	DA	2688	U	C5-C6-N1	-6.84	119.28	122.70
24	BA	2688	U	N3-C2-O2	-6.84	117.41	122.20
24	BA	1698	A	C2-N3-C4	-6.83	107.18	110.60
24	DA	530	G	N1-C6-O6	6.83	124.00	119.90
24	BA	576	U	N1-C2-O2	-6.83	118.02	122.80
24	DA	2241	A	N1-C6-N6	-6.83	114.50	118.60
24	BA	1665	A	N1-C6-N6	6.81	122.69	118.60
24	BA	1297	C	C6-N1-C2	-6.81	117.58	120.30
8	AK	30	ARG	NE-CZ-NH1	-6.80	116.90	120.30
24	DA	1899	G	C2-N3-C4	-6.78	108.51	111.90
24	BA	528	A	N3-C4-C5	6.77	131.54	126.80
1	AA	1397	C	C6-N1-C2	-6.77	117.59	120.30
24	BA	676	A	N3-C4-C5	6.77	131.54	126.80
24	DA	1332	G	C2-N3-C4	-6.76	108.52	111.90
24	DA	528	A	C2-N3-C4	-6.74	107.23	110.60
24	DA	1787	A	N9-C4-C5	-6.74	103.10	105.80
24	BA	1786	A	C2-N3-C4	-6.74	107.23	110.60
24	DA	2444	G	N3-C2-N2	-6.74	115.18	119.90
24	BA	513	A	C8-N9-C4	-6.73	103.11	105.80
24	BA	1950	G	N7-C8-N9	6.73	116.47	113.10
24	BA	1831	G	C8-N9-C4	-6.72	103.71	106.40
24	DA	2685	G	N3-C2-N2	-6.72	115.19	119.90
24	BA	2751	G	C8-N9-C1'	-6.71	118.27	127.00
24	DA	94	G	N9-C4-C5	6.71	108.09	105.40
24	BA	917	A	N1-C6-N6	6.70	122.62	118.60
24	DA	2447	G	C5-C6-O6	-6.68	124.59	128.60
24	DA	2873	A	C2-N3-C4	-6.67	107.26	110.60
24	DA	1396	U	N3-C2-O2	-6.67	117.53	122.20
2	CE	111	ARG	CA-CB-CG	-6.67	98.73	113.40
24	DA	1313	U	C2-N1-C1'	6.67	125.70	117.70
24	BA	889	C	C6-N1-C2	-6.64	117.65	120.30
24	BA	1528	A	N7-C8-N9	6.63	117.12	113.80
24	BA	1786	A	N1-C6-N6	6.63	122.58	118.60
24	DA	783	A	C2-N3-C4	-6.63	107.28	110.60
24	BA	1614	A	C5-N7-C8	-6.62	100.59	103.90
24	BA	1210	A	C5-N7-C8	-6.62	100.59	103.90
24	BA	140	A	C4-C5-N7	6.62	114.01	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	CN	124	LYS	N-CA-CB	-6.62	98.68	110.60
24	BA	140	A	N1-C6-N6	6.62	122.57	118.60
1	CA	1267	C	C6-N1-C2	-6.61	117.66	120.30
24	BA	1021	A	C2-N3-C4	-6.61	107.30	110.60
24	BA	774	A	N3-C4-C5	6.61	131.43	126.80
1	AA	827	U	N3-C2-O2	-6.59	117.59	122.20
24	BA	2455	G	C8-N9-C4	6.59	109.04	106.40
24	BA	2518	A	C5-N7-C8	-6.59	100.60	103.90
24	BA	2258	C	C6-N1-C2	-6.59	117.67	120.30
24	BA	580	C	C6-N1-C2	-6.59	117.67	120.30
1	AA	193	C	P-O5'-C5'	6.57	131.42	120.90
24	BA	2688	U	C5-C4-O4	6.57	129.84	125.90
22	AC	17(A)	C	N1-C2-N3	-6.57	114.60	119.20
24	BA	442	G	N3-C4-C5	-6.56	125.32	128.60
24	DA	1989	G	N3-C2-N2	-6.56	115.31	119.90
1	AA	449	C	C6-N1-C2	-6.55	117.68	120.30
1	CA	449	C	C6-N1-C2	-6.55	117.68	120.30
24	DA	2609	U	C5-C6-N1	-6.55	119.43	122.70
1	AA	781	A	N1-C6-N6	6.54	122.53	118.60
24	DA	1616	A	C5-N7-C8	-6.54	100.63	103.90
24	DA	330	A	C2-N3-C4	-6.54	107.33	110.60
24	BA	676	A	C5-C6-N1	-6.53	114.43	117.70
24	BA	2324	C	C6-N1-C2	6.53	122.91	120.30
24	BA	2028	U	C6-N1-C2	-6.52	117.09	121.00
24	DA	512	G	N9-C4-C5	6.52	108.01	105.40
24	BA	1786	A	C6-C5-N7	-6.52	127.74	132.30
1	CA	197	A	N7-C8-N9	6.52	117.06	113.80
1	AA	84	U	N1-C2-O2	6.51	127.36	122.80
24	DA	1899	G	N1-C2-N2	-6.51	110.34	116.20
24	BA	208	C	C6-N1-C2	6.50	122.90	120.30
1	CA	197	A	C8-N9-C4	-6.50	103.20	105.80
24	BA	2474	C	C6-N1-C2	-6.50	117.70	120.30
24	BA	71	A	C4-C5-N7	6.49	113.95	110.70
1	CA	812	C	C6-N1-C2	-6.49	117.70	120.30
1	AA	1382	C	C5-C6-N1	-6.48	117.76	121.00
24	BA	828	U	N1-C2-O2	6.48	127.33	122.80
37	DQ	110	LEU	CA-CB-CG	6.48	130.20	115.30
24	DA	1786	A	N1-C6-N6	6.46	122.47	118.60
24	DA	2779	U	N3-C2-O2	-6.45	117.68	122.20
24	DA	2401	U	C4-C5-C6	-6.45	115.83	119.70
1	CA	963	G	N3-C4-N9	6.44	129.87	126.00
24	BA	803	U	C5-C6-N1	-6.44	119.48	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	42	C	N3-C4-C5	6.43	124.47	121.90
24	BA	2438	U	N1-C2-O2	6.43	127.30	122.80
1	AA	913	A	C8-N9-C4	-6.42	103.23	105.80
24	DA	2070	G	N1-C6-O6	-6.42	116.05	119.90
24	DA	530	G	N9-C4-C5	-6.42	102.83	105.40
24	BA	1899	G	N3-C4-C5	6.41	131.81	128.60
24	BA	246	C	C6-N1-C2	6.40	122.86	120.30
24	BA	676	A	C6-C5-N7	-6.39	127.83	132.30
24	DA	805	G	C5-C6-O6	-6.39	124.77	128.60
1	AA	422	C	C6-N1-C2	-6.39	117.74	120.30
24	DA	121	G	N1-C6-O6	6.39	123.73	119.90
24	BA	1243	G	C4-N9-C1'	-6.38	118.20	126.50
1	AA	84	U	C2-N1-C1'	6.38	125.35	117.70
1	AA	193	C	O4'-C1'-N1	6.38	113.30	108.20
24	DA	1787	A	C8-N9-C4	6.38	108.35	105.80
1	CA	1301	U	C2-N1-C1'	6.37	125.35	117.70
24	BA	2345	G	C8-N9-C4	-6.37	103.85	106.40
24	DA	270(H)	C	C6-N1-C2	-6.37	117.75	120.30
30	DH	67	LEU	CB-CG-CD1	-6.36	100.19	111.00
24	BA	2575	C	C6-N1-C2	-6.34	117.76	120.30
24	BA	2712	U	C5-C4-O4	6.32	129.69	125.90
24	DA	2713	A	N1-C6-N6	6.32	122.39	118.60
24	DA	480	A	N3-C4-N9	6.31	132.45	127.40
24	BA	2401	U	C6-N1-C2	-6.31	117.21	121.00
1	CA	986	A	C5-C6-N1	-6.30	114.55	117.70
24	DA	774	A	N3-C4-C5	6.30	131.21	126.80
24	DA	1332	G	N1-C2-N3	6.30	127.68	123.90
1	AA	910	C	C6-N1-C2	6.30	122.82	120.30
24	DA	1616	A	N7-C8-N9	6.30	116.95	113.80
24	DA	2859	G	C8-N9-C4	-6.30	103.88	106.40
24	DA	792	G	N3-C4-C5	-6.29	125.45	128.60
24	BA	2261	C	N3-C4-C5	-6.29	119.38	121.90
24	BA	2544	G	N1-C6-O6	6.29	123.67	119.90
24	DA	1569	A	C8-N9-C4	-6.29	103.28	105.80
24	BA	141	A	C5-N7-C8	-6.29	100.76	103.90
1	AA	1382	C	N1-C2-O2	6.28	122.67	118.90
24	DA	613	U	N3-C2-O2	-6.28	117.81	122.20
24	DA	116	C	C6-N1-C2	-6.27	117.79	120.30
24	BA	1489	U	C5-C4-O4	6.27	129.66	125.90
24	BA	1955	U	C5-C6-N1	-6.27	119.57	122.70
24	BA	2286	A	C8-N9-C4	-6.26	103.30	105.80
24	BA	74	A	C5-N7-C8	-6.26	100.77	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1673	U	C6-N1-C2	6.26	124.76	121.00
1	CA	1060	C	C6-N1-C2	-6.26	117.80	120.30
1	AA	590	C	N3-C4-C5	-6.26	119.40	121.90
24	BA	1392	A	N1-C6-N6	-6.26	114.85	118.60
24	DA	270(C)	C	C6-N1-C2	-6.26	117.80	120.30
24	DA	767	U	N3-C2-O2	-6.25	117.82	122.20
24	BA	71	A	N1-C6-N6	6.24	122.34	118.60
24	DA	2426	A	N7-C8-N9	6.23	116.92	113.80
24	BA	528	A	N3-C4-N9	-6.22	122.42	127.40
1	CA	1267	C	N3-C2-O2	-6.22	117.55	121.90
24	BA	1254	A	C8-N9-C4	6.21	108.28	105.80
24	BA	2392	A	C5-N7-C8	-6.21	100.80	103.90
24	BA	575	A	C8-N9-C4	6.21	108.28	105.80
24	DA	94	G	C4-C5-N7	-6.21	108.32	110.80
24	DA	1158	C	C6-N1-C2	-6.20	117.82	120.30
24	DA	2286	A	C8-N9-C4	-6.20	103.32	105.80
24	BA	2388	A	N9-C4-C5	-6.20	103.32	105.80
24	BA	2713	A	N1-C6-N6	6.20	122.32	118.60
24	BA	1825	A	N1-C6-N6	-6.20	114.88	118.60
24	DA	2441	C	N3-C4-N4	-6.19	113.67	118.00
24	DA	1565	C	C6-N1-C2	-6.18	117.83	120.30
24	BA	1973	G	N1-C6-O6	-6.18	116.19	119.90
24	DA	2501	C	C2-N1-C1'	-6.18	112.01	118.80
24	BA	1021	A	C5-N7-C8	-6.17	100.81	103.90
1	CA	1104	G	C4-C5-C6	-6.17	115.10	118.80
24	BA	1775	U	C5-C6-N1	-6.16	119.62	122.70
24	DA	1569	A	N9-C4-C5	6.15	108.26	105.80
24	DA	270(Y)	G	C5-C6-O6	6.15	132.29	128.60
24	BA	2618	G	C8-N9-C4	-6.14	103.94	106.40
43	DU	46	LYS	CB-CG-CD	-6.14	95.64	111.60
1	AA	1321	C	C6-N1-C2	-6.13	117.85	120.30
1	AA	960	U	C2-N1-C1'	6.13	125.06	117.70
24	BA	860	U	C4-C5-C6	6.13	123.38	119.70
24	DA	13	A	C8-N9-C4	-6.13	103.35	105.80
8	AK	30	ARG	NE-CZ-NH2	6.13	123.36	120.30
24	BA	621	A	N7-C8-N9	6.13	116.86	113.80
24	BA	2000	G	C8-N9-C1'	6.13	134.97	127.00
24	BA	654(I)	C	C5-C6-N1	6.13	124.06	121.00
24	BA	691	C	C6-N1-C2	6.12	122.75	120.30
24	DA	2870	C	C6-N1-C2	-6.12	117.85	120.30
24	BA	1178	C	C6-N1-C1'	-6.12	113.46	120.80
24	DA	749	C	C6-N1-C2	6.12	122.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	140	A	C8-N9-C4	-6.12	103.35	105.80
1	AA	1158	C	N1-C2-O2	6.10	122.56	118.90
24	BA	2331	G	N1-C6-O6	6.10	123.56	119.90
1	CA	1502	A	N1-C2-N3	6.10	132.35	129.30
24	BA	208	C	C5-C6-N1	-6.10	117.95	121.00
24	BA	1992	G	N9-C4-C5	6.10	107.84	105.40
1	AA	474	G	N3-C2-N2	-6.09	115.64	119.90
24	DA	2441	C	N3-C2-O2	-6.08	117.64	121.90
24	BA	1799	G	C2-N3-C4	6.08	114.94	111.90
24	BA	1925	C	C6-N1-C2	-6.07	117.87	120.30
24	BA	2699	C	N3-C4-C5	6.07	124.33	121.90
24	DA	138	G	C8-N9-C4	-6.07	103.97	106.40
1	CA	84	U	N3-C2-O2	-6.07	117.95	122.20
24	BA	253	C	C6-N1-C2	6.07	122.73	120.30
24	DA	2443	C	C4-C5-C6	6.06	120.43	117.40
24	BA	2447	G	N3-C2-N2	-6.06	115.66	119.90
24	DA	140	A	N1-C6-N6	6.06	122.23	118.60
24	DA	1898	U	N3-C4-C5	-6.06	110.97	114.60
1	CA	1267	C	C5-C6-N1	6.05	124.03	121.00
24	BA	204	A	C8-N9-C4	-6.05	103.38	105.80
24	BA	2028	U	N3-C4-C5	-6.05	110.97	114.60
1	AA	827	U	C2-N1-C1'	6.03	124.94	117.70
24	BA	2392	A	C8-N9-C4	-6.03	103.39	105.80
24	BA	2751	G	C5-C6-O6	6.03	132.22	128.60
24	BA	774	A	N3-C4-N9	-6.03	122.58	127.40
24	DA	1786	A	C8-N9-C4	-6.02	103.39	105.80
24	DA	2491	U	C6-N1-C2	6.02	124.61	121.00
24	BA	206	U	N3-C2-O2	-6.01	117.99	122.20
24	BA	774	A	N1-C2-N3	6.01	132.31	129.30
49	B4	2	LYS	CD-CE-NZ	6.01	125.53	111.70
24	BA	2271	G	C5-C6-N1	6.01	114.51	111.50
1	AA	193	C	C5'-C4'-O4'	6.01	116.31	109.10
24	BA	345	A	C8-N9-C4	-6.01	103.40	105.80
22	AD	17(A)	C	N1-C2-N3	-6.01	115.00	119.20
24	BA	1157	G	C5-C6-O6	-6.00	125.00	128.60
1	CA	1147	C	C6-N1-C2	-6.00	117.90	120.30
1	AA	522	C	C6-N1-C2	6.00	122.70	120.30
24	BA	74	A	C5-C6-N1	-6.00	114.70	117.70
24	BA	546	C	C6-N1-C2	-5.99	117.90	120.30
24	DA	2231	C	C6-N1-C2	5.99	122.70	120.30
24	BA	2430	A	N1-C6-N6	5.99	122.19	118.60
1	AA	812	C	C6-N1-C2	-5.99	117.90	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	792	G	C8-N9-C4	-5.99	104.00	106.40
24	BA	385	C	C6-N1-C2	-5.99	117.91	120.30
24	BA	2880	C	C6-N1-C2	-5.98	117.91	120.30
24	BA	165	U	C2-N1-C1'	5.98	124.87	117.70
24	BA	1786	A	C5-C6-N1	-5.97	114.72	117.70
1	CA	1465	C	C6-N1-C2	-5.97	117.91	120.30
22	CC	17(A)	C	N1-C2-N3	-5.97	115.02	119.20
24	DA	205	G	N3-C4-C5	-5.97	125.62	128.60
24	BA	576	U	N3-C2-O2	5.96	126.38	122.20
24	DA	90	U	C6-N1-C2	-5.96	117.42	121.00
22	AC	1	C	C2-N1-C1'	5.96	125.36	118.80
1	AA	474	G	N3-C4-N9	-5.96	122.42	126.00
24	BA	74	A	N7-C8-N9	5.96	116.78	113.80
24	DA	2518	A	N3-C4-C5	5.95	130.97	126.80
24	BA	831	G	C8-N9-C4	5.94	108.78	106.40
24	DA	1902	C	N3-C4-C5	5.94	124.28	121.90
24	DA	2795	G	N3-C4-C5	-5.94	125.63	128.60
24	BA	2699	C	C2-N1-C1'	-5.94	112.27	118.80
1	CA	486	U	C2-N1-C1'	5.94	124.83	117.70
24	DA	1972	A	C8-N9-C4	5.94	108.17	105.80
24	BA	1559	G	N1-C6-O6	5.93	123.46	119.90
24	BA	192	C	C6-N1-C2	5.92	122.67	120.30
24	BA	270(M)	U	N1-C2-O2	5.92	126.94	122.80
53	D8	31	HIS	CB-CA-C	5.92	122.24	110.40
24	BA	1204	A	C5-C6-N1	-5.92	114.74	117.70
24	BA	1782	C	C6-N1-C2	5.91	122.67	120.30
1	CA	1158	C	C6-N1-C2	-5.91	117.94	120.30
24	DA	1673	U	C5-C6-N1	-5.91	119.74	122.70
24	BA	1799	G	C8-N9-C4	-5.91	104.04	106.40
1	CA	47	C	N1-C2-O2	-5.90	115.36	118.90
24	BA	2210	G	C8-N9-C4	-5.89	104.04	106.40
24	BA	2388	A	N7-C8-N9	-5.89	110.85	113.80
24	DA	205	G	N3-C4-N9	5.89	129.53	126.00
24	BA	2496	C	C6-N1-C2	5.88	122.65	120.30
24	BA	2430	A	C5-C6-N1	-5.88	114.76	117.70
24	BA	140	A	C6-C5-N7	-5.88	128.18	132.30
24	DA	570	G	C4-C5-N7	-5.88	108.45	110.80
1	CA	963	G	C4-N9-C1'	5.88	134.14	126.50
24	DA	2430	A	C5-C6-N1	-5.88	114.76	117.70
24	BA	2611	U	N3-C2-O2	-5.88	118.09	122.20
24	BA	786	C	N3-C4-N4	-5.87	113.89	118.00
24	DA	2726	U	C5-C4-O4	5.87	129.42	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	696	G	N1-C6-O6	-5.87	116.38	119.90
1	CA	957	U	C6-N1-C2	-5.87	117.48	121.00
24	BA	1313	U	C6-N1-C1'	-5.86	112.99	121.20
1	CA	1267	C	C6-N1-C1'	-5.86	113.76	120.80
24	BA	2507	C	N1-C2-O2	5.86	122.42	118.90
24	DA	74	A	N1-C6-N6	5.86	122.12	118.60
24	DA	2518	A	C5-N7-C8	-5.85	100.97	103.90
16	AS	81	ARG	CD-NE-CZ	-5.85	115.41	123.60
25	BB	7	G	N1-C6-O6	5.85	123.41	119.90
24	BA	774	A	C5-N7-C8	-5.85	100.98	103.90
24	DA	828	U	C2-N1-C1'	5.85	124.72	117.70
1	AA	936	C	C6-N1-C2	-5.84	117.96	120.30
24	DA	528	A	N1-C2-N3	5.84	132.22	129.30
24	BA	2713	A	C2-N3-C4	-5.84	107.68	110.60
24	BA	860	U	C2-N1-C1'	5.83	124.70	117.70
24	BA	786	C	C2-N1-C1'	-5.83	112.39	118.80
24	BA	664	C	C5-C6-N1	-5.82	118.09	121.00
13	CP	70	LEU	CA-CB-CG	5.82	128.68	115.30
24	DA	2606	C	C2-N1-C1'	-5.81	112.41	118.80
24	BA	468	G	C8-N9-C4	5.81	108.72	106.40
1	AA	1404	C	C6-N1-C2	-5.80	117.98	120.30
24	DA	776	G	C5-C6-O6	5.80	132.08	128.60
24	BA	1049	C	C4-C5-C6	-5.80	114.50	117.40
24	BA	1821	A	N1-C2-N3	5.80	132.20	129.30
24	DA	1558	A	C2-N3-C4	-5.79	107.70	110.60
24	BA	450	G	C5-C6-O6	-5.79	125.13	128.60
24	BA	2691	C	C6-N1-C2	5.79	122.62	120.30
24	DA	2401	U	N3-C4-C5	5.79	118.07	114.60
24	DA	479	A	N9-C4-C5	5.79	108.11	105.80
24	DA	140	A	C4-C5-N7	5.78	113.59	110.70
24	DA	1332	G	C5-N7-C8	-5.78	101.41	104.30
24	DA	1528	A	N7-C8-N9	5.78	116.69	113.80
24	BA	1332	G	C4-N9-C1'	5.78	134.01	126.50
24	DA	512	G	N3-C4-N9	-5.78	122.53	126.00
24	BA	889	C	C2-N1-C1'	5.78	125.15	118.80
22	CC	17(A)	C	C4-C5-C6	5.78	120.29	117.40
24	DA	1251	C	N3-C4-C5	-5.77	119.59	121.90
24	BA	1314	C	C2-N1-C1'	5.77	125.15	118.80
40	D2	37	VAL	CB-CA-C	-5.77	100.44	111.40
24	BA	654(I)	C	C6-N1-C1'	-5.77	113.88	120.80
24	BA	1673	U	C5-C6-N1	-5.77	119.82	122.70
1	CA	150	C	C6-N1-C2	-5.76	118.00	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2401	U	C6-N1-C2	-5.75	117.55	121.00
24	BA	1695	G	C8-N9-C4	-5.75	104.10	106.40
24	DA	929	G	N1-C6-O6	5.75	123.35	119.90
24	BA	133	C	C6-N1-C2	5.75	122.60	120.30
22	AD	13	C	C5-C6-N1	5.74	123.87	121.00
24	BA	784	A	N1-C6-N6	-5.74	115.15	118.60
24	BA	2392	A	C5-C6-N1	-5.74	114.83	117.70
1	AA	1381	U	C5-C6-N1	5.74	125.57	122.70
22	AC	1	C	N1-C2-O2	5.74	122.34	118.90
24	BA	2258	C	C2-N1-C1'	5.74	125.11	118.80
24	BA	2454	G	N1-C6-O6	-5.74	116.46	119.90
24	DA	1564	C	C6-N1-C2	-5.74	118.01	120.30
24	DA	621	A	C5-C6-N1	-5.73	114.83	117.70
1	CA	1126	U	C5-C4-O4	-5.73	122.46	125.90
24	DA	2447	G	C6-C5-N7	-5.73	126.96	130.40
24	BA	210	C	N3-C4-C5	5.72	124.19	121.90
24	BA	528	A	C5-C6-N1	-5.72	114.84	117.70
22	CD	6	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	990	C	C6-N1-C2	-5.72	118.01	120.30
24	BA	270(O)	U	N3-C2-O2	-5.71	118.20	122.20
24	BA	1899	G	N1-C6-O6	5.71	123.33	119.90
24	DA	1980	G	N9-C4-C5	5.71	107.69	105.40
24	BA	1313	U	N1-C2-O2	5.71	126.80	122.80
24	DA	130	C	N3-C4-C5	5.71	124.18	121.90
24	BA	1665	A	N9-C4-C5	-5.70	103.52	105.80
24	BA	2544	G	C5-C6-O6	-5.70	125.18	128.60
24	BA	914	C	C5-C4-N4	5.70	124.19	120.20
24	BA	270(M)	U	C6-N1-C1'	-5.69	113.23	121.20
24	BA	1032	A	N1-C6-N6	5.69	122.02	118.60
22	CC	20	U	C2-N1-C1'	5.69	124.53	117.70
1	CA	1301	U	N1-C2-O2	5.69	126.78	122.80
24	BA	512	G	N1-C6-O6	-5.68	116.49	119.90
24	BA	2000	G	C4-N9-C1'	-5.68	119.11	126.50
24	BA	400	G	C8-N9-C4	-5.68	104.13	106.40
24	BA	265	A	N1-C6-N6	5.68	122.01	118.60
24	DA	2371	G	C4-C5-C6	5.68	122.21	118.80
7	AJ	79	ARG	CD-NE-CZ	-5.67	115.66	123.60
24	DA	2477	C	C6-N1-C2	-5.67	118.03	120.30
24	DA	1902	C	N3-C4-N4	-5.67	114.03	118.00
24	BA	2719	G	N1-C6-O6	-5.67	116.50	119.90
24	DA	1658	C	C2-N1-C1'	5.66	125.03	118.80
24	BA	1614	A	N7-C8-N9	5.66	116.63	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1342	C	N3-C4-C5	-5.65	119.64	121.90
24	DA	71	A	C5-N7-C8	-5.65	101.07	103.90
24	BA	1616	A	N7-C8-N9	5.65	116.62	113.80
24	DA	2798	C	C6-N1-C2	-5.65	118.04	120.30
2	CE	213	LEU	CA-CB-CG	-5.64	102.32	115.30
12	CO	47	LYS	C-N-CD	5.64	140.25	128.40
24	BA	2447	G	C8-N9-C4	5.64	108.66	106.40
47	DW	17	SER	C-N-CD	-5.64	108.19	120.60
24	BA	2320	A	C8-N9-C4	-5.63	103.55	105.80
24	BA	1902	C	N3-C4-N4	-5.63	114.06	118.00
24	DA	669	G	N3-C4-C5	-5.63	125.78	128.60
24	BA	141	A	N7-C8-N9	5.63	116.61	113.80
22	AD	17(A)	C	C5-C6-N1	5.63	123.81	121.00
24	BA	381	G	C8-N9-C4	5.63	108.65	106.40
24	DA	676	A	C4-C5-N7	5.63	113.51	110.70
24	BA	585	G	N3-C4-C5	-5.62	125.79	128.60
24	BA	662	G	N1-C6-O6	-5.62	116.53	119.90
24	DA	2713	A	C4-C5-N7	5.62	113.51	110.70
24	BA	1814	G	C4-C5-N7	-5.62	108.55	110.80
24	DA	736	C	N1-C2-O2	-5.62	115.53	118.90
24	DA	405	U	N1-C2-O2	5.61	126.73	122.80
24	DA	600	G	N3-C2-N2	-5.61	115.97	119.90
24	BA	1332	G	N1-C2-N2	-5.61	111.15	116.20
24	DA	676	A	N7-C8-N9	5.61	116.60	113.80
24	DA	783	A	N7-C8-N9	5.61	116.60	113.80
24	DA	933	A	N1-C6-N6	5.60	121.96	118.60
1	AA	449	C	C2-N1-C1'	5.59	124.95	118.80
24	DA	2443	C	N3-C4-C5	-5.59	119.66	121.90
24	BA	130	C	C6-N1-C2	5.59	122.53	120.30
1	CA	328	C	C6-N1-C2	-5.59	118.06	120.30
1	CA	815	A	C8-N9-C4	5.58	108.03	105.80
30	BH	7	LEU	C-N-CD	5.58	140.12	128.40
24	BA	575	A	N9-C4-C5	-5.58	103.57	105.80
24	DA	512	G	C5-C6-O6	5.58	131.95	128.60
24	DA	1950	G	C4-N9-C1'	5.58	133.75	126.50
24	BA	120	U	N3-C2-O2	-5.58	118.30	122.20
24	DA	2688	U	C4-C5-C6	5.58	123.05	119.70
1	AA	1336	C	C6-N1-C1'	-5.57	114.11	120.80
24	BA	129	C	C2-N3-C4	-5.57	117.11	119.90
22	CD	17(A)	C	N1-C2-N3	-5.57	115.30	119.20
1	AA	1299	A	C8-N9-C4	-5.57	103.57	105.80
1	CA	799	G	C5-C6-O6	-5.56	125.26	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	783	A	C6-C5-N7	-5.56	128.41	132.30
1	AA	346	G	C4-N9-C1'	5.56	133.73	126.50
24	DA	2779	U	N1-C2-O2	5.56	126.69	122.80
1	CA	963	G	C8-N9-C1'	-5.56	119.78	127.00
24	BA	1379	A	N7-C8-N9	5.56	116.58	113.80
24	BA	442	G	N3-C4-N9	5.55	129.33	126.00
24	BA	2496	C	N3-C4-C5	5.55	124.12	121.90
40	B2	35	LEU	CA-CB-CG	5.55	128.07	115.30
24	BA	2578	G	C8-N9-C4	5.55	108.62	106.40
24	BA	664	C	C2-N3-C4	-5.54	117.13	119.90
24	BA	1241	A	C5-C6-N1	-5.54	114.93	117.70
1	CA	244	U	C5-C4-O4	-5.54	122.57	125.90
24	DA	2610	C	N1-C2-O2	5.54	122.23	118.90
24	BA	2490	G	N3-C4-N9	-5.54	122.67	126.00
24	DA	2447	G	P-O3'-C3'	5.54	126.35	119.70
24	BA	2507	C	N3-C2-O2	-5.54	118.02	121.90
24	DA	1342	A	C2-N3-C4	-5.54	107.83	110.60
24	BA	1142(A)	A	N3-C4-C5	5.53	130.67	126.80
24	DA	1396	U	N1-C2-O2	5.53	126.67	122.80
24	DA	1899	G	N1-C2-N3	5.53	127.22	123.90
24	BA	513	A	N9-C4-C5	5.53	108.01	105.80
1	CA	84	U	N1-C2-O2	5.53	126.67	122.80
24	BA	246	C	C5-C6-N1	-5.53	118.24	121.00
1	CA	421	U	C2-N1-C1'	5.53	124.33	117.70
24	BA	2571	C	C6-N1-C2	-5.53	118.09	120.30
24	BA	2712	U	N3-C4-O4	-5.53	115.53	119.40
24	BA	946	G	C8-N9-C4	5.52	108.61	106.40
1	AA	1158	C	C5-C6-N1	5.52	123.76	121.00
24	BA	137(A)	G	N9-C4-C5	5.52	107.61	105.40
24	BA	1992	G	C2-N3-C4	5.52	114.66	111.90
24	DA	74	A	N1-C2-N3	5.52	132.06	129.30
25	DB	38	C	N1-C2-O2	-5.52	115.59	118.90
24	BA	678	C	C6-N1-C2	5.51	122.51	120.30
24	BA	813	U	N3-C4-C5	-5.51	111.29	114.60
24	BA	1899	G	N1-C2-N3	5.51	127.21	123.90
24	BA	450	G	C6-C5-N7	-5.51	127.09	130.40
24	BA	1535	U	C2-N1-C1'	5.51	124.31	117.70
24	BA	2259	G	C5-C6-O6	-5.51	125.29	128.60
34	BO	138	LEU	CA-CB-CG	5.51	127.98	115.30
24	DA	1950	G	N7-C8-N9	5.51	115.86	113.10
24	BA	123	G	C5-C6-O6	-5.50	125.30	128.60
24	BA	1695	G	C5-C6-O6	5.50	131.90	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	933	A	C5-N7-C8	-5.50	101.15	103.90
24	BA	621	A	C4-C5-N7	5.49	113.45	110.70
24	BA	1602	U	C5-C6-N1	-5.49	119.95	122.70
1	CA	1267	C	C2-N3-C4	5.49	122.65	119.90
24	DA	678	C	C6-N1-C2	5.49	122.50	120.30
24	BA	677	A	N9-C4-C5	-5.49	103.60	105.80
24	BA	1022	G	N3-C4-C5	-5.49	125.86	128.60
24	BA	2490	G	C5-N7-C8	-5.49	101.56	104.30
24	DA	1088	A	C8-N9-C4	-5.49	103.61	105.80
24	BA	2401	U	C2-N1-C1'	5.48	124.28	117.70
1	AA	365	U	C2-N1-C1'	5.48	124.28	117.70
1	AA	1158	C	N3-C2-O2	-5.48	118.06	121.90
1	CA	409	G	N3-C4-C5	-5.48	125.86	128.60
1	CA	1519	A	C5-C6-N6	5.48	128.08	123.70
24	BA	463	G	C8-N9-C4	5.48	108.59	106.40
24	DA	2606	C	C5-C6-N1	-5.48	118.26	121.00
25	BB	40	U	C6-N1-C1'	-5.47	113.54	121.20
24	DA	1698	A	C5-C6-N1	-5.47	114.97	117.70
24	BA	2699	C	C2-N3-C4	-5.47	117.17	119.90
24	DA	621	A	C5-N7-C8	-5.47	101.17	103.90
24	BA	790	C	N3-C4-C5	5.47	124.09	121.90
24	BA	2284	C	C2-N3-C4	5.46	122.63	119.90
22	AD	65	C	C6-N1-C2	-5.46	118.11	120.30
24	BA	247	G	C8-N9-C4	5.46	108.58	106.40
24	DA	1900	A	C8-N9-C4	-5.46	103.62	105.80
24	BA	2779	U	C5-C6-N1	-5.45	119.97	122.70
24	DA	1675	C	C6-N1-C2	5.45	122.48	120.30
22	CD	6	G	N9-C4-C5	-5.45	103.22	105.40
16	AS	81	ARG	NH1-CZ-NH2	5.45	125.39	119.40
24	DA	570	G	C5-C6-O6	5.45	131.87	128.60
24	DA	2818	G	C8-N9-C4	5.45	108.58	106.40
24	DA	2134	A	N1-C6-N6	-5.44	115.33	118.60
24	BA	761	A	C5-N7-C8	-5.44	101.18	103.90
24	DA	2239	G	N1-C2-N2	-5.44	111.31	116.20
24	DA	790	C	C6-N1-C2	5.43	122.47	120.30
24	DA	2441	C	C5-C4-N4	5.43	124.00	120.20
24	DA	1698	A	C5-N7-C8	-5.43	101.18	103.90
24	DA	479	A	C8-N9-C4	-5.43	103.63	105.80
24	DA	2779	U	C2-N1-C1'	5.43	124.21	117.70
24	BA	1025	G	N3-C4-C5	-5.43	125.89	128.60
25	BB	7	G	C5-C6-O6	-5.43	125.34	128.60
24	DA	480	A	N1-C2-N3	5.42	132.01	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	578	A	C8-N9-C4	-5.42	103.63	105.80
24	DA	963	U	N3-C2-O2	-5.42	118.41	122.20
1	AA	191	G	N3-C4-C5	-5.42	125.89	128.60
24	BA	2059	A	C8-N9-C4	5.42	107.97	105.80
24	BA	2244	U	C5-C6-N1	-5.42	119.99	122.70
24	DA	26	G	C8-N9-C4	-5.42	104.23	106.40
24	DA	2500	U	N3-C4-O4	-5.42	115.61	119.40
24	BA	783	A	N3-C4-C5	5.41	130.59	126.80
24	DA	2609	U	C2-N3-C4	-5.41	123.76	127.00
24	BA	270(O)	U	N1-C2-O2	5.40	126.58	122.80
24	BA	2779	U	C4-C5-C6	5.40	122.94	119.70
24	DA	2286	A	N7-C8-N9	5.40	116.50	113.80
24	DA	805	G	N9-C4-C5	-5.40	103.24	105.40
24	BA	2713	A	C5-N7-C8	-5.40	101.20	103.90
24	BA	2503	A	N1-C2-N3	-5.40	126.60	129.30
1	AA	687	A	C8-N9-C4	-5.39	103.64	105.80
24	BA	2518	A	C4-C5-N7	5.39	113.40	110.70
24	BA	2345	G	N9-C4-C5	5.39	107.56	105.40
24	DA	2515	C	N3-C2-O2	-5.39	118.12	121.90
24	BA	529	A	N1-C6-N6	5.39	121.83	118.60
24	BA	814	C	C5-C6-N1	-5.39	118.31	121.00
1	CA	1053	G	C4-N9-C1'	-5.39	119.50	126.50
1	AA	866	C	N3-C4-C5	-5.38	119.75	121.90
24	DA	1956	U	N3-C2-O2	-5.38	118.43	122.20
24	DA	921	G	C8-N9-C4	-5.38	104.25	106.40
24	DA	479	A	C8-N9-C1'	5.38	137.38	127.70
24	DA	2056	G	N1-C6-O6	5.38	123.13	119.90
24	BA	678	C	N3-C4-C5	5.37	124.05	121.90
24	DA	541	C	C6-N1-C2	-5.37	118.15	120.30
1	AA	1382	C	N3-C2-O2	-5.37	118.14	121.90
1	CA	423	G	C8-N9-C4	-5.37	104.25	106.40
24	BA	2742	C	C6-N1-C2	5.37	122.45	120.30
24	BA	1063	G	C8-N9-C4	-5.37	104.25	106.40
24	BA	1427	A	C8-N9-C4	-5.37	103.65	105.80
25	DB	71	C	C6-N1-C2	-5.37	118.15	120.30
24	BA	681	G	N1-C2-N2	-5.36	111.38	116.20
1	CA	266	G	C8-N9-C4	-5.36	104.26	106.40
24	DA	2371	G	C5-N7-C8	5.36	106.98	104.30
1	AA	1108	G	C5-C6-O6	5.36	131.81	128.60
1	CA	812	C	C2-N1-C1'	5.35	124.69	118.80
24	BA	1064	C	C6-N1-C2	-5.35	118.16	120.30
24	DA	621	A	C2-N3-C4	-5.35	107.92	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	729	G	C8-N9-C4	-5.35	104.26	106.40
24	BA	1625	C	N3-C2-O2	-5.35	118.16	121.90
24	BA	2345	G	N1-C6-O6	-5.35	116.69	119.90
24	DA	1381	G	N1-C6-O6	-5.35	116.69	119.90
24	BA	2830	G	C8-N9-C4	-5.34	104.26	106.40
24	DA	965	C	C6-N1-C2	-5.34	118.16	120.30
24	DA	388	G	C8-N9-C4	-5.34	104.26	106.40
22	CD	51	C	C6-N1-C2	-5.34	118.17	120.30
24	DA	678	C	N3-C4-C5	5.34	124.03	121.90
24	BA	1427	A	N9-C4-C5	5.33	107.93	105.80
2	AE	155	LEU	CA-CB-CG	5.33	127.56	115.30
24	BA	137(A)	G	N3-C2-N2	-5.33	116.17	119.90
24	DA	1914	C	N1-C2-O2	5.32	122.09	118.90
24	BA	1931	U	N1-C2-O2	5.32	126.53	122.80
24	DA	2518	A	C4-C5-N7	5.32	113.36	110.70
1	AA	811	C	C6-N1-C2	5.32	122.43	120.30
1	AA	1322	C	C6-N1-C2	-5.32	118.17	120.30
24	BA	106	C	C6-N1-C2	-5.32	118.17	120.30
24	DA	736	C	N3-C2-O2	5.31	125.62	121.90
24	DA	676	A	N1-C6-N6	5.31	121.79	118.60
1	AA	749	C	C2-N1-C1'	5.31	124.64	118.80
24	BA	2422	A	C8-N9-C4	-5.31	103.68	105.80
24	DA	210	C	C5-C6-N1	-5.31	118.35	121.00
24	DA	383	U	C5-C6-N1	-5.31	120.05	122.70
24	BA	1787	A	N1-C6-N6	5.30	121.78	118.60
1	CA	754	C	C2-N1-C1'	5.30	124.64	118.80
24	BA	974(A)	C	N3-C2-O2	-5.30	118.19	121.90
24	BA	1259	G	C8-N9-C4	5.29	108.52	106.40
24	DA	90	U	C5-C6-N1	5.29	125.35	122.70
24	DA	828	U	C5-C4-O4	5.29	129.07	125.90
24	DA	1557	C	C6-N1-C2	5.29	122.42	120.30
24	DA	2518	A	N1-C6-N6	5.29	121.77	118.60
24	DA	619	G	C8-N9-C4	-5.29	104.28	106.40
24	BA	140	A	C2-N3-C4	-5.29	107.96	110.60
1	CA	409	G	C6-C5-N7	-5.28	127.23	130.40
24	BA	812	C	N1-C2-O2	-5.28	115.73	118.90
24	BA	1204	A	N7-C8-N9	5.28	116.44	113.80
24	BA	264	C	N1-C2-O2	5.28	122.06	118.90
1	CA	687	A	C8-N9-C4	-5.28	103.69	105.80
24	BA	1072	C	C6-N1-C2	-5.27	118.19	120.30
24	BA	482	A	C8-N9-C4	-5.27	103.69	105.80
1	CA	632	A	C5-N7-C8	5.27	106.54	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	346	G	N3-C4-C5	-5.27	125.97	128.60
24	BA	1931	U	N3-C4-O4	-5.27	115.71	119.40
24	DA	2346	A	C2-N3-C4	-5.27	107.97	110.60
24	BA	784	A	C5-C6-N6	5.27	127.91	123.70
24	BA	1616	A	C4-C5-N7	5.27	113.33	110.70
24	BA	453	C	C6-N1-C2	5.26	122.41	120.30
1	CA	1290	G	C8-N9-C1'	-5.26	120.16	127.00
24	DA	2873	A	C5-C6-N1	-5.26	115.07	117.70
24	BA	1332	G	C8-N9-C4	-5.26	104.30	106.40
24	BA	1535	U	N3-C2-O2	-5.26	118.52	122.20
24	BA	2618	G	N3-C4-C5	-5.26	125.97	128.60
24	DA	1895	C	C6-N1-C2	-5.26	118.20	120.30
24	BA	2540	C	N3-C2-O2	-5.25	118.22	121.90
24	DA	669	G	C3'-C2'-C1'	5.25	105.70	101.50
1	AA	404	U	C6-N1-C2	-5.25	117.85	121.00
24	DA	2562	U	C5-C6-N1	-5.25	120.08	122.70
24	BA	2306	C	C6-N1-C2	5.25	122.40	120.30
24	BA	783	A	C8-N9-C4	-5.24	103.70	105.80
24	BA	2785	C	C6-N1-C2	-5.24	118.20	120.30
1	CA	816	A	N1-C6-N6	-5.24	115.46	118.60
24	DA	783	A	N9-C4-C5	-5.24	103.70	105.80
24	BA	1955	U	C6-N1-C2	5.24	124.14	121.00
24	DA	1342	A	N7-C8-N9	5.24	116.42	113.80
24	BA	2422	A	C3'-C2'-C1'	5.24	105.69	101.50
24	BA	137(A)	G	C8-N9-C4	-5.23	104.31	106.40
24	BA	1992	G	C4-C5-N7	-5.23	108.71	110.80
24	BA	1314	C	N1-C2-O2	5.23	122.04	118.90
24	BA	1814	G	N1-C6-O6	-5.23	116.76	119.90
24	BA	2779	U	N3-C2-O2	-5.23	118.54	122.20
24	BA	729	G	N7-C8-N9	5.23	115.72	113.10
24	BA	1630	G	N1-C6-O6	-5.23	116.76	119.90
34	BO	37	GLY	N-CA-C	-5.23	100.03	113.10
1	CA	449	C	N3-C2-O2	-5.23	118.24	121.90
24	BA	697	C	C6-N1-C2	5.23	122.39	120.30
1	AA	591	U	C6-N1-C1'	5.22	128.51	121.20
24	BA	122	G	C6-N1-C2	-5.22	121.97	125.10
24	DA	2084	C	C6-N1-C2	5.22	122.39	120.30
24	DA	2401	U	N1-C2-O2	5.21	126.45	122.80
24	BA	202	U	N1-C2-O2	5.21	126.45	122.80
24	DA	570	G	N9-C4-C5	5.21	107.48	105.40
2	CE	11	LEU	CA-CB-CG	-5.20	103.33	115.30
24	DA	1695	G	C4-N9-C1'	5.20	133.26	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	828	U	N3-C4-O4	-5.20	115.76	119.40
1	AA	1128	C	C6-N1-C2	-5.20	118.22	120.30
24	DA	270(K)	C	N1-C2-O2	5.20	122.02	118.90
24	DA	453	C	C6-N1-C2	5.20	122.38	120.30
1	AA	781	A	C5-C6-N6	-5.20	119.54	123.70
24	BA	1026	U	C2-N1-C1'	-5.19	111.47	117.70
1	AA	474	G	N1-C2-N2	5.19	120.87	116.20
24	BA	1314	C	C6-N1-C1'	-5.19	114.57	120.80
1	CA	1290	G	C4-N9-C1'	5.19	133.25	126.50
24	BA	616	A	C8-N9-C4	-5.19	103.72	105.80
24	BA	2422	A	C4-N9-C1'	5.19	135.64	126.30
24	BA	2447	G	N9-C4-C5	-5.19	103.32	105.40
24	BA	2287	A	C2-N3-C4	-5.19	108.00	110.60
24	DA	140	A	C6-C5-N7	-5.19	128.67	132.30
1	CA	1053	G	N3-C4-C5	5.19	131.19	128.60
24	DA	2439	A	P-O3'-C3'	5.19	125.92	119.70
24	BA	330	A	N3-C4-C5	5.18	130.43	126.80
24	DA	201	C	C6-N1-C2	5.18	122.37	120.30
24	DA	2685	G	N3-C4-N9	-5.18	122.89	126.00
24	BA	1265	A	C8-N9-C4	-5.18	103.73	105.80
1	AA	191	G	C8-N9-C4	-5.18	104.33	106.40
22	CD	17(A)	C	C5-C6-N1	5.17	123.59	121.00
24	DA	1328	G	C5-C6-O6	-5.17	125.50	128.60
24	BA	2351	G	C8-N9-C4	-5.17	104.33	106.40
24	BA	460	A	C8-N9-C4	5.17	107.87	105.80
24	DA	1786	A	C5-C6-N1	-5.17	115.12	117.70
24	BA	796	C	C6-N1-C2	5.17	122.37	120.30
24	DA	2873	A	C8-N9-C4	-5.17	103.73	105.80
24	DA	933	A	C4-C5-N7	5.17	113.28	110.70
22	CD	34	C	C6-N1-C2	-5.16	118.23	120.30
24	DA	2402	C	C4-C5-C6	5.16	119.98	117.40
1	AA	827	U	C4-C5-C6	5.16	122.80	119.70
24	BA	2848	G	N3-C4-C5	-5.16	126.02	128.60
24	BA	1204	A	C5-N7-C8	-5.16	101.32	103.90
22	CD	17(A)	C	C4-C5-C6	5.16	119.98	117.40
24	BA	696	G	C5-C6-O6	5.15	131.69	128.60
24	BA	1243	G	C8-N9-C1'	5.15	133.70	127.00
24	DA	2342	C	C6-N1-C2	-5.15	118.24	120.30
24	BA	457	A	C8-N9-C4	-5.15	103.74	105.80
24	BA	1950	G	C4-N9-C1'	5.15	133.19	126.50
24	BA	2090	G	N1-C6-O6	-5.14	116.81	119.90
1	CA	1519	A	N1-C6-N6	-5.14	115.52	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	814	C	C2-N1-C1'	-5.14	113.15	118.80
24	BA	1951	U	N1-C2-O2	-5.14	119.20	122.80
24	BA	622	G	N3-C4-C5	-5.14	126.03	128.60
1	CA	409	G	C4-C5-C6	5.14	121.88	118.80
24	DA	912	C	C6-N1-C2	-5.14	118.25	120.30
24	BA	2490	G	N3-C4-C5	5.13	131.17	128.60
24	BA	1535	U	N1-C2-O2	5.13	126.39	122.80
24	BA	2056	G	N1-C2-N2	5.13	120.82	116.20
24	BA	2345	G	C5-C6-O6	5.13	131.68	128.60
24	BA	106	C	C6-N1-C1'	5.13	126.95	120.80
1	AA	880	C	C6-N1-C2	5.12	122.35	120.30
24	BA	1201	C	C6-N1-C2	5.12	122.35	120.30
24	DA	1171	G	P-O3'-C3'	5.12	125.85	119.70
24	DA	1208	C	C6-N1-C2	-5.12	118.25	120.30
24	DA	1614	A	N7-C8-N9	5.12	116.36	113.80
24	BA	1312	U	C2-N1-C1'	5.12	123.84	117.70
24	BA	1975	G	C8-N9-C4	-5.12	104.35	106.40
24	BA	2430	A	C5-N7-C8	-5.12	101.34	103.90
1	AA	346	G	N3-C4-N9	5.11	129.07	126.00
1	CA	355	C	C6-N1-C2	-5.11	118.26	120.30
24	DA	2390	U	C6-N1-C2	-5.11	117.94	121.00
1	CA	1061	G	C8-N9-C4	-5.11	104.36	106.40
1	CA	1342	C	C6-N1-C1'	5.11	126.93	120.80
24	BA	2271	G	C6-N1-C2	-5.10	122.04	125.10
1	AA	405	U	C2-N1-C1'	-5.10	111.58	117.70
24	BA	2249	U	N3-C4-C5	-5.10	111.54	114.60
1	AA	893	C	C6-N1-C2	5.10	122.34	120.30
24	BA	1978	A	N1-C6-N6	-5.10	115.54	118.60
24	BA	2626	C	N3-C4-C5	5.10	123.94	121.90
44	DV	147	GLY	N-CA-C	-5.10	100.36	113.10
24	BA	1379	A	C8-N9-C4	-5.09	103.76	105.80
24	BA	165	U	N1-C2-O2	5.09	126.36	122.80
25	DB	39	A	C8-N9-C4	-5.09	103.76	105.80
27	DE	88	GLY	N-CA-C	5.09	125.83	113.10
24	DA	1653	G	C8-N9-C4	-5.09	104.36	106.40
24	DA	691	C	N1-C2-O2	-5.08	115.85	118.90
22	AD	58	A	C2-N3-C4	5.08	113.14	110.60
24	BA	2448	A	N1-C6-N6	5.08	121.65	118.60
1	CA	899	C	C6-N1-C2	5.08	122.33	120.30
24	BA	912	C	C6-N1-C2	-5.08	118.27	120.30
24	BA	1614	A	C4-C5-N7	5.07	113.24	110.70
24	BA	1790	C	C2-N1-C1'	-5.07	113.22	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1951	U	C6-N1-C1'	5.07	128.30	121.20
24	DA	2483	C	C6-N1-C2	-5.07	118.27	120.30
24	BA	1077	A	C2-N3-C4	5.07	113.14	110.60
22	CC	20	U	N1-C2-O2	5.07	126.35	122.80
24	DA	2606	C	C6-N1-C2	5.07	122.33	120.30
24	BA	2000	G	N1-C6-O6	-5.07	116.86	119.90
24	BA	2246	G	N3-C4-N9	5.07	129.04	126.00
24	BA	813	U	C4-C5-C6	5.06	122.74	119.70
1	CA	721	G	C8-N9-C4	-5.06	104.37	106.40
24	BA	2259	G	N1-C6-O6	5.06	122.94	119.90
24	DA	74	A	C5-C6-N1	-5.06	115.17	117.70
24	DA	2070	G	C5-C6-O6	5.06	131.64	128.60
24	BA	2483	C	C6-N1-C2	-5.06	118.28	120.30
24	BA	2490	G	N7-C8-N9	5.06	115.63	113.10
24	BA	208	C	C2-N3-C4	-5.06	117.37	119.90
24	BA	2615	U	N3-C4-C5	5.06	117.64	114.60
24	DA	2490	G	N7-C8-N9	5.06	115.63	113.10
1	CA	110	C	C6-N1-C2	5.06	122.32	120.30
24	DA	1407	C	C6-N1-C2	-5.06	118.28	120.30
1	AA	1498	U	P-O3'-C3'	5.05	125.77	119.70
24	BA	2059	A	N9-C4-C5	-5.05	103.78	105.80
24	BA	680	G	N3-C2-N2	-5.05	116.36	119.90
24	BA	860	U	N3-C2-O2	-5.05	118.67	122.20
24	BA	2271	G	N3-C4-N9	5.05	129.03	126.00
1	AA	1347	G	C4-C5-N7	-5.05	108.78	110.80
24	BA	2508	G	C5-C6-O6	5.05	131.63	128.60
24	DA	611	C	C6-N1-C2	5.04	122.32	120.30
24	DA	1248	G	C8-N9-C4	5.04	108.42	106.40
24	BA	664	C	N3-C4-C5	5.04	123.92	121.90
1	CA	409	G	N1-C6-O6	5.04	122.93	119.90
1	CA	1243	C	N3-C4-C5	-5.04	119.88	121.90
24	DA	2880	C	C6-N1-C2	-5.04	118.28	120.30
1	AA	899	C	C2-N1-C1'	5.04	124.34	118.80
24	BA	75	G	N3-C4-C5	-5.04	126.08	128.60
1	CA	370	C	N3-C2-O2	-5.04	118.37	121.90
24	DA	2079	U	C4-C5-C6	5.04	122.72	119.70
24	DA	512	G	C4-C5-N7	-5.04	108.78	110.80
24	BA	815	C	C6-N1-C2	5.04	122.31	120.30
24	BA	1665	A	C5-C6-N6	-5.04	119.67	123.70
24	DA	270(K)	C	C2-N1-C1'	5.04	124.34	118.80
1	AA	1502	A	C6-C5-N7	-5.03	128.78	132.30
24	DA	792	G	C4-C5-C6	5.03	121.82	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	62	C	C5-C6-N1	-5.03	118.48	121.00
22	AC	48	C	C6-N1-C2	-5.03	118.29	120.30
24	DA	748	G	N1-C6-O6	-5.03	116.88	119.90
24	DA	1379	A	C4-C5-N7	5.03	113.22	110.70
24	DA	2688	U	N1-C2-O2	5.03	126.32	122.80
24	BA	1992	G	P-O3'-C3'	5.03	125.73	119.70
24	DA	1528	A	C8-N9-C4	-5.03	103.79	105.80
31	DK	131	LYS	C-N-CD	-5.03	109.54	120.60
24	BA	1328	G	C5-C6-O6	-5.02	125.59	128.60
24	BA	1773	A	C8-N9-C4	5.02	107.81	105.80
37	BQ	54	LEU	CA-CB-CG	5.02	126.86	115.30
24	DA	570	G	C8-N9-C4	-5.02	104.39	106.40
24	DA	2015	A	N1-C6-N6	-5.02	115.59	118.60
8	AK	30	ARG	CB-CA-C	-5.02	100.35	110.40
24	DA	1277	G	C8-N9-C4	5.02	108.41	106.40
24	BA	2447	G	C5-C6-N1	-5.02	108.99	111.50
24	BA	2596	U	N1-C2-O2	-5.02	119.28	122.80
24	DA	600	G	N1-C6-O6	5.02	122.91	119.90
24	DA	752	A	C8-N9-C4	-5.02	103.79	105.80
24	DA	2543	G	N7-C8-N9	5.02	115.61	113.10
24	BA	1831	G	N7-C8-N9	5.02	115.61	113.10
24	BA	2763	G	C8-N9-C4	5.02	108.41	106.40
1	CA	6	G	N3-C4-N9	5.02	129.01	126.00
24	BA	912	C	C2-N1-C1'	5.01	124.31	118.80
24	BA	2070	G	C8-N9-C4	5.01	108.41	106.40
24	DA	669	G	N1-C2-N2	-5.01	111.69	116.20
24	BA	2713	A	C4-C5-N7	5.01	113.21	110.70
24	BA	2391	G	N1-C6-O6	-5.01	116.89	119.90
24	DA	783	A	N3-C4-C5	5.00	130.30	126.80
24	DA	654(I)	C	C2-N1-C1'	5.00	124.30	118.80
24	DA	805	G	N1-C6-O6	5.00	122.90	119.90

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	913	10
1	CA	32372	0	16336	884	0
2	AE	1924	0	1975	117	0
2	CE	1924	0	1975	144	0
3	AF	1605	0	1668	70	0
3	CF	1612	0	1677	118	0
4	AG	1703	0	1763	112	0
4	CG	1703	0	1764	215	0
5	AH	1155	0	1213	58	0
5	CH	1155	0	1212	56	0
6	AI	843	0	857	42	0
6	CI	843	0	857	28	0
7	AJ	1257	0	1296	74	0
7	CJ	1257	0	1296	67	0
8	AK	1116	0	1177	58	0
8	CK	1116	0	1177	43	0
9	AL	1010	0	1037	91	0
9	CL	1010	0	1037	94	0
10	AM	801	0	849	57	0
10	CM	801	0	849	56	1
11	AN	885	0	904	38	0
11	CN	885	0	904	39	0
12	AO	975	0	1062	76	0
12	CO	975	0	1062	44	0
13	AP	928	0	987	62	0
13	CP	933	0	992	89	0
14	AQ	492	0	529	40	0
14	CQ	492	0	531	43	0
15	AR	734	0	771	25	0
15	CR	734	0	771	32	0
16	AS	705	0	725	37	0
16	CS	705	0	725	29	0
17	AT	834	0	904	44	0
17	CT	834	0	904	28	0
18	AU	591	0	662	23	0
18	CU	591	0	662	25	0
19	AV	665	0	686	49	0
19	CV	624	0	636	80	0
20	AW	763	0	861	57	0
20	CW	763	0	861	48	0
21	AX	217	0	234	8	0
21	CX	217	0	234	20	0
22	AC	1640	0	836	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	AD	1640	0	836	97	0
22	CC	1640	0	836	23	0
22	CD	1640	0	836	90	0
23	A1	129	0	65	0	0
23	C1	129	0	65	0	0
24	BA	62707	0	31612	1372	0
24	DA	62587	0	31554	1346	0
25	BB	2617	0	1328	59	0
25	DB	2617	0	1328	85	0
26	BD	2115	0	2195	113	0
26	DD	2115	0	2195	141	0
27	BE	1568	0	1634	101	0
27	DE	1568	0	1634	207	0
28	BF	1585	0	1632	76	0
28	DF	1627	0	1680	130	0
29	BG	1474	0	1535	88	0
29	DG	1474	0	1535	105	0
30	BH	1307	0	1382	135	0
30	DH	1307	0	1382	122	9
31	BK	1136	0	1223	49	0
31	DK	1136	0	1223	47	0
32	BM	1104	0	1180	70	0
32	DM	1104	0	1180	50	0
33	BN	933	0	996	29	0
33	DN	933	0	996	43	0
34	BO	1145	0	1227	112	0
34	DO	1145	0	1228	155	0
35	BP	1122	0	1179	86	0
35	DP	1122	0	1179	59	0
36	B0	968	0	1033	59	0
36	D0	960	0	1021	37	0
37	BQ	882	0	943	54	0
37	DQ	882	0	943	72	0
38	BR	1141	0	1202	68	0
38	DR	1141	0	1202	65	0
39	B1	964	0	1022	64	0
39	D1	964	0	1022	69	0
40	B2	779	0	852	43	1
40	D2	779	0	852	89	0
41	BS	900	0	964	27	0
41	DS	900	0	964	27	0
42	BT	725	0	778	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	DT	725	0	778	20	0
43	BU	785	0	878	79	0
43	DU	785	0	878	57	0
44	BV	1397	0	1430	79	0
44	DV	1428	0	1454	87	0
45	B3	607	0	628	40	0
45	D3	613	0	633	35	0
46	BZ	763	0	848	30	0
46	DZ	763	0	848	34	0
47	BW	558	0	610	25	0
47	DW	581	0	629	30	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	74	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	76	0
52	B7	430	0	480	16	0
52	D7	430	0	480	13	0
53	B8	488	0	559	51	0
53	D8	488	0	560	71	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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	BE	4	0	0	0	0
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	9375	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 (9375) 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: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:CG2	26:DD:35:LYS:NZ	1.76	1.45
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
4:CG:22:LYS:HG2	4:CG:26:CYS:CB	1.50	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
12:AO:46:LYS:C	12:AO:48:PRO:HD2	1.44	1.36
26:DD:35:LYS:CD	26:DD:64:ILE:HG23	1.52	1.35
34:DO:62:LEU:HD11	53:D8:25:MET:C	1.47	1.34
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
26:DD:34:VAL:CG2	26:DD:35:LYS:HZ3	1.45	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
51:D6:15:GLU:HG2	51:D6:16:CYS:N	1.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:66:HIS:NE2	27:DE:67:PHE:HD1	1.43	1.15
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
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:26:CYS:N	1.44	1.12
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
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
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
4:CG:33:MET:HE3	4:CG:37:PRO:CB	1.81	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
30:DH:127:GLU:CB	30:DH:128:PRO:CD	2.30	1.09
49:D4:39:CYS:C	49:D4:41:PRO:HD3	1.71	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
26:DD:34:VAL:C	26:DD:35:LYS:HD3	1.74	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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:CG:22:LYS:HZ2	4:CG:25:ARG:C	1.64	0.99
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
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
12:AO:46:LYS:C	12:AO:48:PRO:CD	2.30	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
4:CG:22:LYS:HZ3	4:CG:25:ARG:HG3	1.21	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
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
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
40:D2:91:TYR:HD2	40:D2:91:TYR:C	1.71	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: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: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
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
26:DD:35:LYS:HD2	26:DD:64:ILE:HG23	0.92	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:DE:78:LEU:C	27:DE:79:ARG:HD2	1.88	0.91
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
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
4:CG:33:MET:HE3	4:CG:37:PRO:HB3	0.91	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
27:BE:35:GLN:HB2	27:BE:64:LYS:HZ1	1.34	0.91
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
49:D4:39:CYS:C	49:D4:41:PRO:CD	2.40	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:22:LYS:HZ2	4:CG:26:CYS:CA	1.85	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
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
51:D6:39:TYR:C	51:D6:39:TYR:CD2	2.47	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
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
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
24:DA:617:G:OP1	28:DF:40:GLN:NE2	2.07	0.87
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D2:91:TYR:C	40:D2:91:TYR:CD2	2.47	0.86
36:B0:53:HIS:HD1	36:B0:94:TYR:HH	1.17	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
24:DA:833:U:O2	34:DO:55:ARG:NH1	2.09	0.86
26:DD:35:LYS:HD3	26:DD:35:LYS:N	1.87	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
34:DO:62:LEU:CD1	53:D8:25:MET:C	2.38	0.85
35:BP:64:ILE:O	35:BP:65:PHE:CD2	2.30	0.85
4:CG:22:LYS:HZ3	4:CG:25:ARG:CG	1.88	0.85
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
30:BH:4:ILE:HD12	30:BH:4:ILE:C	1.98	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
4:CG:22:LYS:NZ	4:CG:25:ARG:C	2.30	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:DA:2130:U:HO2'	24:DA:2133:G:HO2'	1.12	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
46:BZ:60:PHE:HE2	46:BZ:91:LYS:HZ1	1.26	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
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
34:DO:47:ASP:HB3	34:DO:48:PRO:C	1.98	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
24:BA:1138:G:H21	32:BM:106:MET:HE3	1.43	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
4:CG:9:CYS:SG	4:CG:22:LYS:CE	2.65	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:AE:12:GLU:HA	2:AE:16:HIS:CD2	2.14	0.83
24:BA:602:G:HO2'	24:BA:604:G:HO2'	1.27	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
4:CG:125:HIS:HD1	4:CG:152:SER:HG	1.23	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
26:DD:34:VAL:HG23	26:DD:35:LYS:HZ2	1.01	0.82
51:D6:39:TYR:O	51:D6:39:TYR:CD2	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
26:DD:34:VAL:HG21	26:DD:35:LYS:HZ3	1.44	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
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
19:AV:4:SER:OG	19:AV:5:LEU:N	2.12	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
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
2:AE:87:ARG:NH1	2:AE:220:ASP:OD1	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:CG:22:LYS:NZ	4:CG:26:CYS:N	2.30	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
24:DA:1069:A:H5'	24:DA:1070:A:C8	2.18	0.79
26:DD:35:LYS:HE3	26:DD:64:ILE:C	2.02	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
8:AK:25:ASP:OD1	8:AK:25:ASP:N	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:AO:46:LYS:HG2	12:AO:48:PRO:HD2	1.62	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
26:DD:35:LYS:HZ1	26:DD:64:ILE:HG12	1.50	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
44:BV:19:ARG:NH1	44:BV:84:GLU:O	2.18	0.77
27:DE:67:PHE:HE2	27:DE:69:LYS:HZ2	1.29	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
32:BM:53:VAL:HG11	32:BM:128:HIS:CD2	2.20	0.76
43:BU:80:GLY:C	43:BU:81:LYS:NZ	2.38	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
43:DU:50:ARG:C	43:DU:53:PRO:HD3	2.05	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
26:DD:34:VAL:HG23	26:DD:35:LYS:HZ3	1.07	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BB:40:U:O2	25:BB:45:A:N6	2.18	0.75
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
18:CU:45:SER:HG	18:CU:47:THR:HG1	1.32	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
43:BU:80:GLY:C	43:BU:81:LYS:HZ1	1.90	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
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
1:CA:5:U:O2'	4:CG:84:LYS:NZ	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:654(B):C:N4	24:BA:654(S):G:O6	2.20	0.74
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
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
34:DO:60:MET:C	34:DO:61:ARG:HG2	2.06	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
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:DA:774:A:H2	24:DA:787:U:HO2'	1.35	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
49:D4:39:CYS:C	49:D4:40:HIS:ND1	2.42	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:963:G:N3	10:CM:55:LYS:NZ	2.35	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
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
1:AA:1319:A:OP2	19:AV:5:LEU:HD21	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1161:C:N4	1:AA:1175:G:O6	2.19	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
24:BA:774:A:H2	24:BA:787:U:HO2'	1.38	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
31:BK:21:VAL:HG21	31:BK:25:TYR:HD2	1.55	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
26:DD:85:ASP:HB2	26:DD:92:ILE:HD13	1.72	0.71
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
6:AI:23:LYS:HZ3	6:AI:23:LYS:HB2	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:1058:U:H2'	24:DA:1059:G:C8	2.26	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
1:AA:1192:C:OP2	3:AF:4:LYS:NZ	2.22	0.70
13:AP:13:LYS:O	13:AP:44:ARG:NH1	2.24	0.70
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:BO:71:VAL:O	34:BO:72:PRO:C	2.30	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
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
27:DE:11:MET:HE3	27:DE:24:THR:CG2	2.22	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:2343:C:HO2'	24:DA:2373:G:HO2'	1.21	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:602:G:HO2'	24:DA:604:G:HO2'	1.32	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
29:BG:66:GLN:OE1	29:BG:98:ARG:NH1	2.25	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
24:DA:1225:C:HO2'	40:D2:85:LYS:H	1.37	0.69
27:DE:71:GLY:C	27:DE:73:GLU:H	1.95	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
4:CG:33:MET:HE1	4:CG:37:PRO:CB	2.20	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:1077:A:O2'	24:DA:1078:U:O4'	2.09	0.69
3:AF:35:GLU:OE2	3:AF:59:ARG:NH2	2.24	0.68
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
24:DA:2173:A:N6	24:DA:2174:C:HO2'	1.92	0.68
27:DE:36:ARG:NH1	27:DE:85:ASN:OD1	2.26	0.68
44:DV:70:LEU:HD11	44:DV:98:MET:HE3	1.75	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:AA:62:U:O2'	1:AA:379:C:O2	2.11	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
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
28:DF:63:LYS:HZ1	28:DF:67:GLN:HE21	1.43	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:DE:67:PHE:HE2	27:DE:69:LYS:NZ	1.93	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
28:DF:23:ASP:C	28:DF:24:LEU:HD22	2.15	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:AC:47:U:HO2'	22:AC:48:C:P	2.18	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
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
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
6:CI:35:ALA:HB2	6:CI:67:MET:HE3	1.76	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
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: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
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:4:ILE:C	30:BH:4:ILE:CD1	2.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:145:THR:O	29:DG:147:ASP:N	2.28	0.66
51:D6:14:THR:HB	51:D6:20:ASN:C	2.17	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
24:DA:908:C:O2'	35:DP:71:ASP:OD2	2.12	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
27:DE:67:PHE:CE2	27:DE:69:LYS:NZ	2.64	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
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
24:BA:2632:A:HO2'	24:BA:2811:G:HO2'	1.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2343:C:HO2'	24:BA:2373:G:HO2'	1.43	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:1225:C:O2	40:D2:84:LYS:NZ	2.27	0.65
24:DA:1332:G:N2	24:DA:1609:A:HO2'	1.94	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
27:BE:63:LEU:HD12	27:BE:63:LEU:C	2.16	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
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
53:B8:35:GLN:O	53:B8:36:LYS:C	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:2817:G:P	36:D0:99:LYS:HZ3	2.20	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
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
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
39:B1:92:ARG:C	39:B1:94:ASN:H	2.00	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:1394:U:O2	42:DT:16:LYS:NZ	2.29	0.64
25:DB:44:G:OP1	29:DG:98:ARG:NH2	2.30	0.64
40:D2:49:THR:O	40:D2:50:PRO:C	2.36	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
43:DU:55:TYR:O	43:DU:56:PRO:C	2.36	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
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
30:DH:129:THR:OG1	30:DH:130:ARG:N	2.27	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: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
1:CA:1202:G:HO2'	14:CQ:27:CYS:HG	1.34	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:DH:33:LEU:HD12	30:DH:75:ALA:HA	1.79	0.63
34:DO:60:MET:C	34:DO:61:ARG:CG	2.66	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
24:BA:2111:C:N3	24:BA:2118:U:O2'	2.26	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
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
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
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.43	0.63
3:AF:21:ARG:NH2	3:AF:56:ASP:OD1	2.31	0.63
13:AP:67:GLU:CD	13:AP:68:GLY:H	2.02	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
24:DA:389:G:H2	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
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
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
6:AI:20:ALA:HA	6:AI:23:LYS:HZ3	1.64	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
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
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
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
24:BA:747:U:H5	50:B5:3:LYS:HZ2	1.47	0.62
27:BE:197:ILE:HD11	27:BE:199:ARG:HE	1.63	0.62
34:BO:91:PHE:O	34:BO:121:LYS:NZ	2.32	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
19:AV:68:GLY:H	49:B4:55:ARG:NH2	1.93	0.62
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
2:AE:8:LYS:HZ1	2:AE:11:LEU:HD13	1.64	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
34:DO:30:THR:HG21	34:DO:35:HIS:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
4:CG:33:MET:HE1	4:CG:37:PRO:HB2	1.80	0.62
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:274:G:O2'	24:BA:275:G:O4'	2.18	0.62
24:BA:996:A:OP2	39:B1:92:ARG:NH2	2.33	0.62
27:BE:60:ASN:CG	27:BE:62:PRO:HD2	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D5:45:VAL:HG13	50:D5:50:GLY:HA2	1.80	0.62
1:AA:964:A:N3	1:AA:969:A:O2'	2.32	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
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
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:1139:G:HO2'	24:DA:1143:A:H62	1.48	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
24:DA:1138:G:H21	32:DM:106:MET:HE3	1.65	0.61
25:DB:38:C:O4'	37:DQ:95:HIS:NE2	2.32	0.61
28:DF:2:LYS:C	28:DF:24:LEU:HG	2.19	0.61
1:AA:591:U:H2'	1:AA:592:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:1309:G:HO2'	24:DA:1611:C:HO2'	1.46	0.61
24:DA:2228:G:OP1	26:DD:261:LYS:NZ	2.25	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
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
4:AG:31:CYS:C	4:AG:33:MET:H	2.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
35:BP:64:ILE:C	35:BP:65:PHE:CD2	2.74	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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:1141:U:H6	32:BM:63:THR:HG1	1.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:DG:39:ILE:HB	29:DG:92:VAL:HG13	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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:643:A:N1	24:DA:2369:A:O2'	2.32	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
24:BA:2646:C:OP2	24:BA:2732:G:O2'	2.18	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: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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
27:DE:23:VAL:C	27:DE:25:VAL:H	2.04	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
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
1:CA:977:A:HO2'	1:CA:981:U:H3	1.49	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
40:D2:49:THR:O	40:D2:51:VAL:N	2.35	0.60
1:AA:690:G:H22	11:AN:55:LYS:HZ2	1.48	0.59
1:AA:1319:A:H3'	19:AV:3:ARG:HH21	1.67	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
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
51:D6:43:CYS:O	51:D6:44:ARG:C	2.39	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
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
24:DA:1671:U:HO2'	24:DA:1673:U:H5	1.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2130:U:O2'	24:DA:2133:G:O2'	2.00	0.59
25:DB:51:G:N7	37:DQ:62:LYS:NZ	2.45	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
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:960:A:H61	35:DP:83:MET:CE	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:1496:A:H8	24:DA:1577:C:HO2'	1.49	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
4:CG:31:CYS:C	4:CG:33:MET:H	2.06	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
28:DF:26:ALA:C	28:DF:27:GLU:HG3	2.22	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
22:AD:17:C:OP2	22:AD:60:U:O2'	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:1175:U:O2'	24:DA:1176:G:N3	2.29	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
26:DD:25:THR:O	26:DD:27:THR:N	2.36	0.59
26:DD:70:TRP:HZ3	26:DD:146:GLU:CD	2.06	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
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
40:B2:35:LEU:C	40:B2:37:VAL:H	2.05	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
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:1138:G:H21	32:BM:106:MET:CE	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
27:DE:68:ALA:O	27:DE:69:LYS:C	2.41	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: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
16:CS:1:MET:HE1	16:CS:65:GLN:HB2	1.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:592:G:H21	53:D8:4:MET:HE1	1.66	0.58
24:DA:654(O):G:H2'	24:DA:654(P):G:C8	2.38	0.58
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
4:CG:22:LYS:HZ2	4:CG:26:CYS:HA	1.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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: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:530:G:O2'	1:CA:531:U:OP1	2.20	0.58
1:CA:1239:A:O2'	7:CJ:114:ARG:O	2.16	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:960:A:H61	35:DP:83:MET:HE2	1.68	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:69:ARG:C	26:DD:71:ASP:H	2.07	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
35:BP:65:PHE:C	35:BP:104:PHE:O	2.41	0.57
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
24:DA:270(L):U:O2'	24:DA:270(M):U:OP1	2.21	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
34:BO:6:LEU:C	34:BO:7:ARG:HG2	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
9:CL:42:ARG:NH1	9:CL:71:SER:OG	2.38	0.57
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
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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:35:ARG:C	4:CG:36:ARG:HG3	2.24	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
22:CD:76:A:O2'	24:DA:2394:C:N3	2.22	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
4:CG:23:GLY:O	4:CG:24:GLU:C	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1029:G:O2'	1:CA:1031:G:OP2	2.23	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:1068:G:O2'	24:BA:1070:A:N7	2.38	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:33:MET:O	4:CG:34:GLU:C	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:CD:65:C:H2'	22:CD:66:C:C6	2.40	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
27:DE:63:LEU:C	27:DE:64:LYS:HG2	2.25	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
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:627:A:N1	24:BA:636:G:O2'	2.35	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: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:1069:A:H5''	24:BA:1070:A:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:BE:59:VAL:CG1	27:BE:60:ASN:N	2.45	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
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
26:DD:43:ARG:HD2	26:DD:44:ASN:CG	2.26	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:D6:44:ARG:HG3	51:D6:45:LYS:N	2.20	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
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
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:11:MET:HE3	27:DE:24:THR:HG23	1.86	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:30:ASN:HA	44:BV:89:PHE:HE1	1.71	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
26:DD:34:VAL:CG2	26:DD:35:LYS:HZ2	1.79	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:523:C:O2	24:BA:553:U:O2'	2.20	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
28:BF:197:ASP:N	28:BF:197:ASP:OD1	2.39	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
24:DA:872:A:P	35:DP:5:ARG:HH22	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:33:A:O2'	1:CA:363:A:N3	2.38	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
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
24:DA:2666:C:H42	30:DH:152:ARG:HH22	1.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:DE:71:GLY:C	27:DE:73:GLU:N	2.59	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
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:817:C:O2'	24:BA:839:U:OP1	2.13	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
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
20:CW:100:ILE:C	20:CW:102:GLY:H	2.10	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
40:D2:84:LYS:HB2	40:D2:84:LYS:HZ2	1.71	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
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
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
26:DD:69:ARG:C	26:DD:71:ASP:N	2.60	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: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
35:BP:68:ILE:O	35:BP:69:PHE:HB2	2.06	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:63:LYS:HZ3	28:DF:67:GLN:HE21	1.55	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
39:B1:78:THR:OG1	39:B1:79:PHE:N	2.39	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
24:DA:1883:G:HO2'	24:DA:1884:A:H8	1.54	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
12:AO:47:LYS:O	12:AO:48:PRO:C	2.44	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: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
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
26:DD:72:LYS:NZ	26:DD:99:ASP:OD2	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:101:VAL:HG23	34:DO:106:LEU:HD23	1.88	0.55
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: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
24:DA:1771:C:HO2'	24:DA:1786:A:H8	1.55	0.55
30:DH:26:VAL:HG21	30:DH:76:VAL:HA	1.88	0.55
1:AA:131:C:HO2'	1:AA:262:A:HO2'	1.48	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
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
29:BG:41:GLN:NE2	29:BG:154:GLY:O	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:352:C:O2'	1:CA:353:A:O5'	2.20	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
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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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
4:CG:22:LYS:NZ	4:CG:25:ARG:CG	2.53	0.54
19:CV:63:THR:OG1	19:CV:65:ASN:OD1	2.24	0.54
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:67:PHE:CD2	27:DE:67:PHE:O	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
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:2798:C:OP1	24:DA:2801:A:N6	2.31	0.54
24:DA:2801:A:OP1	24:DA:2895:U:O2'	2.17	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:851:U:OP1	48:BX:49:LYS:NZ	2.39	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:AQ:12:ARG:C	14:AQ:14:PRO:HD2	2.28	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:CE:74:LYS:NZ	2:CE:205:ASP:O	2.30	0.54
4:CG:9:CYS:O	4:CG:32:ALA:CB	2.55	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
19:CV:28:LYS:HZ3	19:CV:30:LEU:HB3	1.73	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
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
17:AT:86:GLU:O	17:AT:90:ILE:HG13	2.08	0.54
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:O5'	2.26	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
4:CG:125:HIS:ND1	4:CG:152:SER:OG	2.32	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:2646:C:H2'	24:DA:2647:U:O4'	2.07	0.53
25:DB:13:A:N1	25:DB:69:G:O2'	2.29	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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
46:BZ:91:LYS:HZ3	46:BZ:91:LYS:HA	1.73	0.53
1:CA:261:U:OP2	20:CW:79:ARG:NH2	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
43:BU:63:LYS:HD2	43:BU:64:GLU:H	1.72	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
13:CP:65:LYS:HB2	13:CP:69:GLU:CD	2.28	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:1453:G:HO2'	20:AW:39:LYS:NZ	2.06	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
24:BA:2284:C:H41	51:B6:25:LYS:HZ1	1.56	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:814:C:O3'	40:D2:84:LYS:NZ	2.40	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: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
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:192:U:O2'	20:CW:60:GLU:OE2	2.17	0.53
1:CA:390:C:O3'	16:CS:28:ARG:NH2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:989:G:OP2	48:BX:11:SER:OG	2.20	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
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:1540:G:H2'	24:DA:1541:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
37:DQ:83:LYS:HZ2	37:DQ:84:GLN:H	1.57	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
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
4:CG:22:LYS:HZ3	4:CG:25:ARG:CD	2.21	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
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: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:774:A:H2	24:BA:787:U:O2'	1.90	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
27:BE:2:LYS:NZ	27:BE:100:GLU:OE2	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
35:BP:66:ILE:C	35:BP:67:ARG:HG3	2.30	0.52
36:B0:54:LEU:HD21	36:B0:65:LEU:HD23	1.91	0.52
47:BW:43:GLN:C	47:BW:45:SER:H	2.12	0.52
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:264:U:O2'	17:AT:64:PRO:O	2.19	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
42:BT:15:GLU:CD	42:BT:15:GLU:H	2.13	0.52
43:BU:35:TYR:CE2	43:BU:69:ALA:HB3	2.45	0.52
1:CA:1162:C:H42	1:CA:1174:G:H1	1.55	0.52
4:CG:32:ALA:O	4:CG:36:ARG:C	2.47	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
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
44:BV:30:ASN:OD1	44:BV:33:LEU:N	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:1218:C:OP1	14:AQ:9:LYS:NZ	2.29	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
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
34:BO:71:VAL:C	34:BO:73:GLY:N	2.60	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
1:CA:1047:G:HO2'	1:CA:1215:G:HO2'	1.55	0.52
1:CA:1300:G:HO2'	1:CA:1301:U:P	2.32	0.52
4:CG:27:TYR:HD2	4:CG:28:SER:HG	1.56	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:602:G:O2'	24:DA:604:G:O2'	2.13	0.52
24:DA:1063:G:C6	24:DA:1064:C:H1'	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:AL:5:TYR:HH	9:AL:7:THR:HG1	1.55	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:AE:9:GLU:H	2:AE:9:GLU:CD	2.12	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
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
24:DA:2638:G:HO2'	24:DA:2639:A:H8	1.56	0.52
27:DE:26:ILE:CG2	27:DE:27:LEU:H	2.19	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:AT:18:THR:OG1	17:AT:69:LYS:NZ	2.34	0.52
24:BA:960:A:H61	35:BP:83:MET:HE2	1.74	0.52
24:BA:1049:C:H2'	24:BA:1050:A:H5''	1.91	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:84:A:OP2	43:DU:8:LYS:NZ	2.26	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
26:DD:267:SER:O	26:DD:269:PHE:N	2.43	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: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
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
26:DD:70:TRP:CZ3	26:DD:146:GLU:CD	2.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:CA:790:A:OP1	22:CC:38:A:O2'	2.23	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
28:DF:164:ARG:NH1	28:DF:177:ALA:HB2	2.25	0.52
29:DG:55:LYS:NZ	29:DG:148:MET:SD	2.80	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:25:GLU:C	10:AM:27:ALA:H	2.12	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:880:G:O2'	24:BA:881:G:OP1	2.27	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
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
4:CG:36:ARG:C	4:CG:38:TYR:H	2.12	0.51
13:CP:39:ILE:HD13	13:CP:52:GLU:HB3	1.91	0.51
24:DA:1754:C:OP1	38:DR:96:ARG:NH1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:2262:U:OP2	45:D3:19:LYS:NZ	2.41	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
31:DK:76:THR:O	31:DK:78:THR:OG1	2.28	0.51
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:1347:G:C8	9:AL:11:LYS:NZ	2.73	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:AP:16:ASP:N	13:AP:16:ASP:OD1	2.44	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
51:D6:47:THR:O	51:D6:48:VAL:C	2.49	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:BH:150:ALA:O	30:BH:151:ILE:C	2.49	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
4:CG:22:LYS:NZ	4:CG:25:ARG:HH11	2.07	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:106:LEU:HA	29:DG:110:ALA:HB3	1.92	0.51
35:DP:19:GLY:H	35:DP:98:LYS:HZ3	1.57	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
10:AM:9:ARG:HG2	10:AM:69:ASN:OD1	2.10	0.51
12:AO:62:SER:C	12:AO:64:TYR:H	2.14	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:CE:74:LYS:HZ3	2:CE:166:ASP:HB2	1.76	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
2:AE:223:ILE:C	2:AE:225:ALA:H	2.14	0.51
4:AG:196:LEU:C	4:AG:198:VAL:H	2.14	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:514:A:N3	24:BA:581:C:O2'	2.37	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
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:546:C:H2'	24:DA:547:A:O4'	2.10	0.51
24:DA:1567:A:O2'	26:DD:63:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1864:U:OP1	24:DA:2410:G:O2'	2.23	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
27:DE:11:MET:HE3	27:DE:187:ALA:H	1.76	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
1:AA:1327:C:P	21:AX:12:LYS:HZ1	2.35	0.50
22:AC:25:C:H2'	22:AC:26:G:O4'	2.11	0.50
24:BA:637:A:OP2	34:BO:131:SER:OG	2.20	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: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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:D6:27:LYS:HZ3	51:D6:28:ARG:NH1	2.08	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
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
50:B5:12:SER:OG	50:B5:15:ARG:HB2	2.11	0.50
53:B8:42:ARG:C	53:B8:44:LYS:H	2.15	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: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
47:DW:38:GLN:HB3	47:DW:44:LEU:O	2.12	0.50
51:D6:27:LYS:HZ3	51:D6:28:ARG:HH12	1.60	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:BR:11:GLU:H	38:BR:11:GLU:CD	2.14	0.50
44:BV:63:ASP:C	44:BV:65:GLN:H	2.14	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
2:CE:48:MET:HE2	2:CE:49:GLU:HG3	1.93	0.50
3:CF:47:LEU:O	3:CF:49:SER:N	2.45	0.50
5:CH:63:ARG:HA	5:CH:66:MET:HE1	1.93	0.50
12:CO:103:GLY:N	12:CO:107:ALA:O	2.39	0.50
13:CP:16:ASP:OD1	13:CP:16:ASP:N	2.45	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: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: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:B1:34:LYS:NZ	39:B1:37:GLU:OE1	2.32	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:1224:G:N1	1:CA:1322:C:O2'	2.41	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:974:G:O2'	24:DA:975:G:N7	2.34	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
34:DO:71:VAL:HG13	34:DO:72:PRO:N	2.25	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:2043:C:OP1	24:BA:2777:G:O2'	2.22	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
22:CC:59:A:H2'	22:CC:60:U:H5'	1.94	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
27:DE:67:PHE:O	27:DE:68:ALA:C	2.49	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
50:D5:33:CYS:HG	50:D5:46:CYS:HG	1.59	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
28:DF:63:LYS:HZ3	28:DF:67:GLN:NE2	2.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1797:C:O2'	26:DD:259:THR:OG1	2.25	0.50
24:DA:2115:G:H4'	24:DA:2166:G:C8	2.47	0.50
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
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: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
10:CM:17:ASP:HB2	10:CM:70:ARG:HH12	1.77	0.49
10:CM:58:ASP:N	10:CM:58:ASP:OD1	2.45	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
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
24:DA:548:A:C2	24:DA:549:G:H1'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
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
34:DO:62:LEU:HD11	53:D8:25:MET:CB	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
33:BN:2:ILE:HD11	33:BN:82:ASN:HB3	1.93	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
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
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
25:BB:77:U:P	44:BV:19:ARG:HH22	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BM:131:GLN:CD	32:BM:131:GLN:H	2.15	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:20:C:OP1	39:D1:22:LYS:NZ	2.28	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
29:DG:166:ASP:OD1	29:DG:166:ASP:N	2.45	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:690:G:H1	11:AN:55:LYS:HZ1	1.61	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:1322:A:N1	24:BA:1333:C:O2'	2.39	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:6:C:HO2'	37:BQ:29:PHE:HE2	1.61	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CO:41:ARG:HD2	12:CO:42:THR:H	1.77	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
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
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: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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2212:A:O2'	24:DA:2213:U:O5'	2.31	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
12:AO:46:LYS:O	12:AO:47:LYS:C	2.51	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D3:12:ASN:HA	45:D3:14:ARG:HH21	1.77	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:991:U:O4	1:AA:1212:U:O2'	2.26	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
7:AJ:36:LYS:HB2	7:AJ:36:LYS:HZ2	1.77	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
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: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: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
30:DH:124:GLU:O	30:DH:125:VAL:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1454:U:O2'	24:BA:1455:G:N7	2.41	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:69:LYS:HA	31:DK:136:VAL:HG21	1.94	0.49
34:DO:48:PRO:O	34:DO:49:ARG:C	2.48	0.49
35:DP:74:TYR:O	35:DP:90:VAL:HA	2.12	0.49
40:D2:91:TYR:CD2	40:D2:91:TYR:O	2.62	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
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
24:BA:2134:A:O2'	24:BA:2159:G:N3	2.45	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
51:B6:31:PRO:C	51:B6:35:GLU:HG2	2.33	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:83:G:H1	24:BA:102:G:HO2'	1.61	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
44:BV:52:SER:C	44:BV:54:HIS:H	2.15	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
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
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
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
1:AA:1237:C:HO2'	1:AA:1300:G:H1	1.58	0.48
2:AE:214:ILE:HG23	2:AE:215:LEU:HD22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
28:DF:64:ILE:C	28:DF:65:TRP:CD1	2.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:CE:212:GLN:CD	2:CE:235:SER:HA	2.34	0.48
4:CG:22:LYS:HZ3	4:CG:25:ARG:HH11	1.61	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
27:DE:55:ASN:C	27:DE:57:LYS:H	2.16	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2674:G:OP1	33:DN:26:LYS:NZ	2.45	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
46:DZ:92:LYS:C	46:DZ:94:LEU:H	2.17	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: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
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
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
2:CE:82:ARG:NH1	2:CE:150:SER:OG	2.47	0.48
13:CP:3:ARG:HD2	29:DG:113:ARG:HH21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CW:14:LYS:HB2	20:CW:17:ARG:HH21	1.78	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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:856:C:HO2'	24:DA:857:C:P	2.34	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
37:DQ:14:VAL:O	37:DQ:18:ILE:HG23	2.14	0.48
43:DU:54:LYS:C	43:DU:55:TYR:HD2	2.17	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
38:DR:18:ASP:OD1	38:DR:18:ASP:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:255:G:P	17:AT:69:LYS:HZ3	2.37	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: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
35:BP:64:ILE:C	35:BP:65:PHE:CG	2.87	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
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:692:U:O2'	1:AA:694:A:N7	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
27:DE:47:VAL:O	27:DE:80:GLU:HA	2.14	0.47
27:DE:72:VAL:O	27:DE:73:GLU:C	2.52	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
50:D5:56:LYS:HZ3	50:D5:58:LEU:HD11	1.79	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: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
22:CC:1:C:HO2'	22:CC:2:G:P	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
37:DQ:67:ARG:HA	37:DQ:104:GLY:HA3	1.96	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
26:DD:34:VAL:C	26:DD:35:LYS:CD	2.56	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
28:DF:24:LEU:N	28:DF:24:LEU:CD2	2.75	0.47
31:DK:102:SER:O	31:DK:106:GLY:N	2.47	0.47
34:DO:60:MET:O	34:DO:61:ARG:HG2	2.09	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
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
1:AA:1455:G:OP1	20:AW:35:THR:OG1	2.17	0.47
7:AJ:78:ARG:NH2	7:AJ:155:ARG:O	2.46	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:250:G:C5'	34:DO:60:MET:HE1	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:2393:A:HO2'	53:D8:13:ARG:HH12	1.58	0.47
24:DA:2795:G:HO2'	24:DA:2802:G:N2	2.12	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
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
22:AC:47:U:O2'	22:AC:48:C:P	2.69	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
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:29:ASN:HB3	28:BF:112:MET:HE1	1.95	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:B0:2: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:DE:23:VAL:C	27:DE:25:VAL:N	2.66	0.47
29:DG:81:LYS:HB3	29:DG:82:LEU:H	1.49	0.47
29:DG:101:ILE:C	29:DG:105:LYS:HZ3	2.18	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
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
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
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:498:G:H21	43:BU:47:LYS:HZ2	1.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1062:G:H8	24:BA:1062:G:O5'	1.97	0.47
24:BA:1112:G:HO2'	30:BH:2:SER:HB3	1.72	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:1460:A:O2'	24:BA:1461:G:OP1	2.27	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: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:79:GLY:N	41:BS:100:THR:O	2.45	0.47
43:BU:75:ILE:HG22	43:BU:79:CYS:C	2.35	0.47
45:B3:64:ASP:OD1	45:B3:64:ASP:N	2.48	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
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
4:CG:22:LYS:O	4:CG:23:GLY:C	2.52	0.47
5:CH:16:THR:O	5:CH:16:THR:OG1	2.33	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
53:D8:37:SER:OG	53:D8:39:LYS:O	2.29	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
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
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:1192:C:OP2	3:CF:4:LYS:NZ	2.37	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
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
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
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
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: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
43:BU:4:LYS:NZ	43:BU:35:TYR:OH	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BX:4:LEU:HA	48:BX:4:LEU:HD23	1.55	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
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:2153:G:C2	24:DA:2154:G:C8	3.03	0.47
24:DA:2611:U:H2'	50:D5:3:LYS:HZ2	1.79	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: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
22:AC:9:G:O2'	22:AC:10:G:N7	2.35	0.47
24:BA:606:U:OP2	28:BF:104:LYS:NZ	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:CM:4:ILE:HD11	10:CM:77:PRO:HB3	1.96	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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:B1:92:ARG:C	39:B1:94:ASN:N	2.68	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
3:CF:20:SER:HG	3:CF:40:ARG:HH22	1.57	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
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:1374:A:P	7:AJ:36:LYS:HZ1	2.38	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
24:BA:39:C:O2	28:BF:46:ARG:NH2	2.48	0.46
24:BA:593:G:H1'	53:B8:4:MET:HE1	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
53:B8:43:GLN:C	53:B8:44:LYS:HD2	2.35	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
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: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
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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
1:CA:236:G:OP1	17:CT:40:LYS:NZ	2.41	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:1256:A:OP2	3:CF:26:LYS:NZ	2.37	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
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
4:AG:150:GLU:C	4:AG:152:SER:H	2.18	0.46
22:AD:51:C:H2'	22:AD:52:G:C8	2.50	0.46
24:BA:1174:A:N7	24:BA:1175:U:H6	2.13	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
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
1:CA:9:G:H1	1:CA:25:C:N4	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:452:A:O2'	1:AA:453:A:O5'	2.34	0.46
1:AA:981:U:H5	1:AA:982:U:HO2'	1.62	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
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
6:AI:23:LYS:HB2	6:AI:23:LYS:NZ	2.26	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B0:1:MET:HE2	36:B0:1:MET:HB2	1.80	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:5:U:C3'	4:CG:84:LYS:HZ1	2.29	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
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
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
44:DV:52:SER:O	44:DV:52:SER:OG	2.29	0.46
50:D5:3:LYS:HZ1	50:D5:4:HIS:CE1	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
14:AQ:3:ARG:C	14:AQ:3:ARG:HD3	2.35	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1:MET:HE3	6:AI:68:PRO:HD3	1.97	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
1:CA:1186:G:H21	14:CQ:61:TRP:C	2.19	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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: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
1:CA:1255:G:O2'	1:CA:1259:C:O4'	2.26	0.46
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
10:CM:12:ASP:O	10:CM:15:THR:OG1	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CC:9:G:O2'	22:CC:10:G:N7	2.40	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
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: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:8:LYS:HZ2	2:AE:8:LYS:H	1.62	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
21:AX:6:ARG:C	21:AX:8:THR:H	2.19	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:35:LYS:HE3	26:BD:63:ARG:C	2.36	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
30:BH:157:TYR:C	30:BH:158:HIS:CG	2.90	0.46
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:356:A:N3	1:CA:368:U:O2'	2.37	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
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:C1'	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:2773:C:P	27:DE:166:THR:HG1	2.39	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:81:LYS:HZ2	46:DZ:82:LEU:HB3	1.81	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
24:BA:2898:U:O2'	32:BM:131:GLN:O	2.27	0.45
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:119:ARG:HG2	27:BE:160:TYR:HB2	1.98	0.45
30:BH:3:ARG:C	30:BH:4:ILE:HG23	2.37	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
22:CD:16:C:O2'	22:CD:61:C:OP1	2.31	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
27:DE:74:PRO:O	27:DE:75:VAL:C	2.55	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
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
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
2:AE:144:ARG:HG3	2:AE:145:LEU:N	2.32	0.45
3:AF:36:ASP:HB3	3:AF:40:ARG:NH1	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
43:BU:9:LYS:HA	43:BU:27:VAL:HG22	1.97	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.16	0.45
4:AG:31:CYS:C	4:AG:33:MET:N	2.69	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
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:1371:G:P	9:CL:11:LYS:HZ2	2.39	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:84:ARG:HB3	43:DU:95:LYS:HG3	1.97	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
41:BS:3:ALA:HB2	41:BS:64:MET:HE3	1.98	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
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:2883:A:H3'	24:DA:2884:U:H5'	1.98	0.45
26:DD:35:LYS:HZ1	26:DD:64:ILE:CG1	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:1058:G:OP1	3:AF:199:LYS:NZ	2.33	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
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
1:CA:1130:A:H5''	9:CL:20:ARG:NH2	2.31	0.45
1:CA:1226:C:HO2'	13:CP:111:LYS:NZ	2.13	0.45
4:CG:101:LEU:O	4:CG:104:VAL:N	2.47	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:954:G:O2'	24:DA:2274:A:N1	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1382:C:C6	7:AJ:79:ARG:NH2	2.85	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: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:C1'	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
27:BE:63:LEU:C	27:BE:65:GLY:H	2.19	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
46:BZ:64:ALA:HA	46:BZ:67:ILE:HG13	1.98	0.45
1:CA:1198:G:HO2'	10:CM:54:PHE:HD2	1.65	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
46:BZ:83:GLU:C	46:BZ:85:LEU:H	2.20	0.45
48:BX:12:PRO:HB2	48:BX:20:LYS:HG2	1.98	0.45
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:C	31:BK:32:PRO:HD2	2.37	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
40:D2:76:LYS:HZ1	40:D2:82:ARG:HH11	1.65	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
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
12:AO:102:ARG:HG3	12:AO:120:TYR:HA	1.99	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:CG:31:CYS:C	4:CG:33:MET:N	2.70	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
31:DK:111:PRO:C	31:DK:113:ARG:H	2.20	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:52:ARG:HA	31:BK:55:ALA:HB3	1.99	0.44
35:BP:111:GLU:CD	35:BP:133:ARG:HH21	2.21	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:601:C:H4'	28:DF:104:LYS:HZ3	1.82	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
18:CU:30:ASP:C	18:CU:32:ARG:H	2.21	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: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
27:DE:116:VAL:C	27:DE:118:LYS:H	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:357:G:O2'	31:DK:89:TYR:O	2.30	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:C1'	2.30	0.44
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
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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:AK:41:ARG:HH12	8:AK:123:GLU:CD	2.20	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1063:G:H1	24:DA:1064:C:HO2'	1.63	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:13:ARG:HD2	26:DD:16:MET:HE3	2.00	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
53:D8:52:LYS:C	53:D8:54:GLU:H	2.21	0.44
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:1255:G:O2'	1:AA:1258:G:N3	2.38	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:CM:30:SER:HG	10:CM:80:LYS:HB3	1.82	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:19:C:OP2	39:D1:30:LYS:NZ	2.48	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:CA:1202:G:H22	14:CQ:46:GLU:CD	2.18	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
26:BD:121:PRO:HB3	26:BD:135:PHE:CE2	2.53	0.44
26:BD:221:VAL:HG22	26:BD:226:MET:CE	2.48	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
41:DS:111:HIS:CG	41:DS:113:LYS:HZ1	2.36	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:411:A:N7	1:AA:413:G:H1'	2.32	0.44
1:AA:631:G:HO2'	1:AA:632:A:H8	1.66	0.44
1:AA:924:C:H2'	1:AA:925:G:C8	2.53	0.44
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: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
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:1697:G:OP2	24:BA:1698:A:O2'	2.32	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
29:BG:83:ARG:H	29:BG:86:MET:HE3	1.82	0.44
30:BH:88:LEU:HG	30:BH:90:LYS:HZ3	1.82	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:76:VAL:CG2	41:BS:101:SER:HB3	2.48	0.44
42:BT:67:GLY:C	42:BT:69:TYR:H	2.17	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:530:G:HO2'	1:CA:531:U:P	2.41	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
2:CE:189:ASP:N	2:CE:189:ASP:OD1	2.51	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
7:CJ:132:GLY:C	7:CJ:134:ALA:H	2.19	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
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
37:DQ:25:ARG:HH12	37:DQ:42:ASP:CG	2.21	0.44
42:DT:25:LYS:HA	42:DT:81:VAL:O	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
51:D6:25:LYS:HE2	51:D6:27:LYS:HZ2	1.82	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: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
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
24:BA:880:G:HO2'	24:BA:881:G:P	2.41	0.43
29:BG:180:PHE:C	29:BG:182:LYS:H	2.21	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:1196:U:HO2'	1:CA:1197:G:P	2.40	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
5:AH:51:VAL:O	5:AH:55:VAL:HG23	2.18	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:105:G:C6	1:CA:106:C:C4	3.05	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: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
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
39:D1:25:TRP:CD1	39:D1:25:TRP:C	2.92	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:BR:57:PHE:CG	38:BR:58:ASN:N	2.87	0.43
38:BR:102:ILE:C	38:BR:104:ASN:H	2.21	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
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
8:CK:88:LYS:C	8:CK:92:ARG:HH21	2.21	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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: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
38:BR:57:PHE:C	38:BR:58:ASN:HD22	2.21	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:78:LYS:HZ3	9:CL:101:PHE:HA	1.83	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
20:CW:22:ARG:O	20:CW:26:ASN:ND2	2.52	0.43
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:1275:A:N1	24:DA:1295:C:O2'	2.47	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
24:DA:2773:C:OP1	27:DE:166:THR:OG1	2.36	0.43
26:DD:159:ALA:HB1	26:DD:198:ASN:O	2.18	0.43
28:DF:63:LYS:HZ1	28:DF:67:GLN:NE2	2.08	0.43
29:DG:25:TYR:OH	29:DG:168:GLU:OE2	2.34	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
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: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:1050:A:H2'	24:BA:1051:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:B0:3:HIS:O	36:B0:4:LEU:C	2.56	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
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
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
28:DF:53:THR:HG22	28:DF:56:GLU:CG	2.48	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
49:D4:39:CYS:C	49:D4:41:PRO:HD2	2.32	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:116:VAL:HG23	27:DE:120:TRP:HD1	1.83	0.43
29:DG:123:ASN:C	29:DG:125:PHE:H	2.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:443:C:H2'	1:CA:444:C:H6	1.84	0.43
1:CA:885:G:O2'	1:CA:914:A:N1	2.42	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
2:CE:180:LEU:C	2:CE:182:ILE:H	2.22	0.43
7:CJ:134:ALA:O	7:CJ:138:LYS:N	2.45	0.43
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
26:DD:37:LEU:O	26:DD:38:LYS:C	2.57	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
1:AA:52:G:H2'	1:AA:53:A:C8	2.54	0.43
1:AA:310:G:P	16:AS:27:LYS:HZ1	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
48:BX:7:LYS:HB2	48:BX:34:GLU:HG2	2.01	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
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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:193:ASP:OD1	2:AE:193:ASP:N	2.52	0.43
6:AI:1:MET:HE2	6:AI:67:MET:HA	2.00	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
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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:CC:1:C:HO2'	22:CC:2:G:C5'	2.28	0.43
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:1187:G:H5''	40:D2:76:LYS:HZ3	1.84	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
51:D6:11:LEU:HD23	51:D6:51:GLU:CD	2.40	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
8:CK:103:VAL:HG21	8:CK:109:ILE:C	2.39	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
44:DV:150:LEU:HD22	44:DV:154:ASP:CG	2.39	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
53:D8:50:LEU:O	53:D8:51:ALA:HB2	2.18	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
5:AH:62:ALA:C	5:AH:64:ARG:H	2.22	0.42
6:AI:19:LEU:O	6:AI:23:LYS:NZ	2.52	0.42
8:AK:105:ARG:C	8:AK:107:LEU:H	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AK:106:GLY:HA2	8:AK:122:ARG:HH12	1.83	0.42
9:AL:11:LYS:HZ2	9:AL:11:LYS:HG2	1.70	0.42
9:AL:11:LYS:C	9:AL:13:ALA:H	2.19	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
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:1378:A:O2'	24:BA:1380:G:N7	2.42	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
37:BQ:88:ASP:O	37:BQ:89:ARG:HB3	2.19	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: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:250:G:H5'	34:DO:60:MET:HE1	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:DE:169:ASN:HD22	27:DE:169:ASN:C	2.23	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
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
43:DU:54:LYS:C	43:DU:55:TYR:CD2	2.92	0.42
44:DV:68:PRO:O	44:DV:91:LEU:N	2.52	0.42
46:DZ:87:PRO:O	46:DZ:88:LYS:C	2.58	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
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
24:BA:2642:G:P	32:BM:76:SER:HG	2.41	0.42
28:BF:126:VAL:HG11	28:BF:142:TRP:HH2	1.84	0.42
32:BM:17:ASP:O	32:BM:56:ASN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B0:3:HIS:O	36:B0:5:LYS:HG3	2.20	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
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
5:CH:75:THR:OG1	5:CH:117:ASP:O	2.23	0.42
7:CJ:33:ASP:C	7:CJ:35:LYS:H	2.21	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
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
1:AA:17:U:H2'	1:AA:18:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
3:AF:178:LEU:HD13	3:AF:178:LEU:HA	1.77	0.42
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
26:BD:35:LYS:HZ2	26:BD:64:ILE:C	2.17	0.42
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
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
8:CK:41:ARG:HH22	8:CK:123:GLU:CD	2.22	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:71:ASP:CG	26:DD:103:ARG:HH22	2.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
37:DQ:83:LYS:HZ2	37:DQ:84:GLN:HG2	1.84	0.42
39:D1:66:ASN:ND2	39:D1:70:ARG:HE	2.14	0.42
45:D3:50:ASN:C	45:D3:62:LEU:HD12	2.39	0.42
1:AA:93:U:H2'	1:AA:95:G:C8	2.54	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: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
3:AF:46:GLU:CD	3:AF:46:GLU:H	2.22	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: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:40:GLU:HB2	30:BH:41:MET:HE1	2.01	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:491:G:C2	1:CA:492:G:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:CA:1055:A:N6	1:CA:1206:G:N7	2.67	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
2:CE:84:GLU:CD	2:CE:87:ARG:HH11	2.23	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
43:BU:44:ILE:HG13	43:BU:45:VAL:H	1.83	0.42
44:BV:118:GLN:HE22	44:BV:171:ILE:C	2.23	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: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
25:DB:15:A:O2'	25:DB:109:G:C8	2.70	0.42
27:DE:58:ARG:O	27:DE:60:ASN:ND2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:22:ALA:C	28:DF:24:LEU:H	2.23	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
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
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
49:D4:43:TYR:O	49:D4:44:THR:C	2.58	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
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
4:AG:33:MET:O	4:AG:34:GLU:C	2.58	0.42
9:AL:9:ARG:HB2	9:AL:14:VAL:HG22	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:102:G:O2'	1:CA:151:A:N3	2.38	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
10:CM:29:ARG:C	10:CM:31:GLY:H	2.22	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1227:A:O2'	13:AP:115:LYS:HE2	2.19	0.42
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: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
53:B8:36:LYS:O	53:B8:37:SER:C	2.58	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: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
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
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
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
39:D1:29:SER:C	39:D1:30:LYS:HD2	2.40	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: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
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:1268:A:N3	1:AA:1326:C:O2'	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
51:B6:14:THR:HG1	51:B6:21:TYR:H	1.65	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
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
2:CE:237:ALA:C	2:CE:239:VAL:H	2.24	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
30:DH:107:VAL:HB	30:DH:109:PHE:HE1	1.84	0.42
30:DH:122:THR:C	30:DH:123:PHE:CG	2.93	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:D1:66:ASN:CG	39:D1:76:TYR:HB2	2.40	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
50:B5:39:MET:C	50:B5:40:LYS:HD2	2.41	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:1393:U:HO2'	1:CA:1501:C:HO2'	1.50	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:22:LYS:HZ3	4:CG:25:ARG:NH1	2.16	0.42
4:CG:33:MET:C	4:CG:35:ARG:N	2.72	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:1063:G:N2	24:DA:1064:C:HO2'	2.18	0.42
24:DA:1115:G:H2'	24:DA:1116:C:C6	2.54	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:509:A:O2'	1:AA:510:A:OP1	2.33	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: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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:CP:17:VAL:O	13:CP:20:THR:OG1	2.21	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
44:DV:108:PRO:HB3	44:DV:144:LEU:HD21	2.01	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
5:AH:153:LYS:NZ	5:AH:154:GLY:O	2.50	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
9:AL:27:THR:HG1	9:AL:62:TYR:HD1	1.68	0.41
14:AQ:22:THR:O	14:AQ:23:ARG:HD3	2.20	0.41
19:AV:42:PRO:C	19:AV:44:MET:H	2.23	0.41
20:AW:71:THR:HB	20:AW:72:LEU:H	1.56	0.41
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:592:G:H21	53:B8:4:MET:HE1	1.83	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
36:B0:38:VAL:HG22	36:B0:112:ALA:HB2	2.01	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:1266:G:O2'	24:DA:2012:G:O6	2.24	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
27:DE:9:VAL:CG1	27:DE:26:ILE:O	2.68	0.41
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:101:LEU:HA	31:DK:105:HIS:HB2	2.01	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
52:D7:32:LYS:HB3	52:D7:32:LYS:HZ3	1.84	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: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:569:U:O2'	24:BA:983:A:N1	2.45	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:127:G:HO2'	17:CT:2:PRO:N	2.18	0.41
1:CA:792:A:O2'	1:CA:794:A:N6	2.37	0.41
2:CE:147:LYS:O	2:CE:147:LYS:NZ	2.45	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
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
24:DA:2747:G:O2'	24:DA:2748:A:O4'	2.38	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
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
13:AP:20:THR:C	13:AP:22:ILE:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AT:67:LYS:C	17:AT:69:LYS:H	2.23	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: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
41:BS:55:ALA:C	41:BS:57:ASN:H	2.23	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
4:CG:22:LYS:NZ	4:CG:25:ARG:O	2.52	0.41
4:CG:171:GLY:C	4:CG:173:TRP:H	2.23	0.41
8:CK:1:MET:SD	8:CK:1:MET:N	2.88	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:974:A:HO2'	1:AA:975:A:P	2.43	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
45:B3:42:GLY:C	45:B3:57:PHE:HD2	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:918:A:H2'	1:CA:919:A:O4'	2.20	0.41
1:CA:986:A:N3	19:CV:52:TYR:OH	2.32	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:1305:G:HO2'	1:CA:1306:A:H8	1.67	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: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
19:CV:66:MET:HA	19:CV:67:VAL:C	2.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
27:DE:76:ARG:C	27:DE:78:LEU:H	2.19	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: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:28:ASN:HA	7:AJ:31:MET:HE3	2.02	0.41
7:AJ:113:GLU:HB2	7:AJ:119:ARG:HG2	2.03	0.41
7:AJ:139:GLU:C	7:AJ:141:VAL:H	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2310:A:N3	29:BG:77:ILE:HD11	2.35	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
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
43:BU:57:GLN:CD	43:BU:58:GLY:H	2.24	0.41
46:BZ:87:PRO:HA	46:BZ:90:ILE:HB	2.03	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
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:196:A:O2'	24:DA:805:G:O6	2.20	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:46:GLU:CD	30:DH:51:ARG:HD2	2.41	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
46:DZ:5:CYS:HG	46:DZ:8:SER:HG	1.66	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
32:BM:15:LEU:CD2	32:BM:128:HIS:NE2	2.84	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:B1:87: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:C	4:CG:25:ARG:N	2.74	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
1:AA:667:G:H4'	15:AR:51:HIS:ND1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1273:G:C6	1:AA:1274:G:C4	3.09	0.41
1:AA:1336:C:O2'	1:AA:1337:G:N3	2.47	0.41
2:AE:27:LYS:C	2:AE:29:ALA:H	2.23	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:81:THR:O	10:AM:85:LEU:HG	2.21	0.41
17:AT:46:ASP:C	17:AT:48:GLU:H	2.24	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:270:A:N1	24:BA:366:C:O2'	2.49	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: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: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
39:D1:78:THR:OG1	39:D1:79:PHE:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:D1:91:ASP:OD2	39:D1:96:ALA:HB2	2.21	0.41
41:DS:2:GLU:OE1	41:DS:72:LYS:NZ	2.41	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:D6:44: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
30:BH:74:ASN:HA	30:BH:77:LYS:HD3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:87:LYS:HA	31:BK:87:LYS:HD3	1.96	0.41
34:BO:6:LEU:C	34:BO:7:ARG:CG	2.88	0.41
36:B0:67:LEU:HD22	36:B0:76:VAL:HG21	2.02	0.41
36:B0:70:LEU:C	36:B0:72:ASP:H	2.25	0.41
38:BR:6:LEU:O	38:BR:10:VAL:HG23	2.21	0.41
38:BR:54:ARG:HA	38:BR:59:THR:HG1	1.86	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: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
26:DD:66:ASP:CG	26:DD:68:LYS:O	2.59	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
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:D1:108: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
44:DV:43:GLU:O	44:DV:47:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
31:BK:9:LEU:O	31:BK:10:GLU:HB3	2.21	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
38:DR:85:LYS:NZ	38:DR:87:ASP:OD2	2.47	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:52:SER:C	44:DV:54:HIS:H	2.23	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DA:2867:G:OP2	38:DR:119:LYS:NZ	2.34	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
28:DF:32:LEU:HB3	28:DF:112:MET:HE1	2.03	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
43:DU:46:LYS:O	43:DU:47:LYS:C	2.59	0.40
44:DV:116:VAL:HG23	44:DV:179:ASP:OD1	2.21	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:133:U:OP1	20:AW:74:LYS:NZ	2.52	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:1245:A:H2'	1:AA:1246:C:O4'	2.21	0.40
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:AL:41:VAL:C	9:AL:43:ALA:H	2.23	0.40
9:AL:89:ASN:OD1	9:AL:89:ASN:N	2.53	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:1449:A:HO2'	24:BA:1530:G:N2	2.20	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:6:G:P	4:CG:84:LYS:HZ3	2.45	0.40
1:CA:93:U:H2'	1:CA:95:G:H5''	2.03	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
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: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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2712:U:HO2'	24:DA:2712(A):A:P	2.45	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
33:DN:7:TYR:HE1	33:DN:20:MET:HE3	1.86	0.40
34:DO:3:LEU:C	34:DO:5:ASP:H	2.25	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
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
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
10:AM:30:SER:OG	10:AM:84:GLN:NE2	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:BM:1:MET:HE3	32:BM:1:MET:HB3	1.88	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:736:C:O2'	6:CI:90:VAL:O	2.35	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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: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
33:DN:1:MET:H1	33:DN:67:LYS:HB3	1.86	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
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	3
3	CF	204/239 (85%)	135 (66%)	48 (24%)	21 (10%)	0	3
4	AG	206/208 (99%)	154 (75%)	35 (17%)	17 (8%)	1	5
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	21
5	CH	149/162 (92%)	130 (87%)	13 (9%)	6 (4%)	3	17
6	AI	99/101 (98%)	86 (87%)	9 (9%)	4 (4%)	3	17
6	CI	99/101 (98%)	87 (88%)	10 (10%)	2 (2%)	7	31
7	AJ	153/156 (98%)	127 (83%)	21 (14%)	5 (3%)	4	21
7	CJ	153/156 (98%)	120 (78%)	25 (16%)	8 (5%)	2	12
8	AK	136/138 (99%)	103 (76%)	23 (17%)	10 (7%)	1	6
8	CK	136/138 (99%)	120 (88%)	10 (7%)	6 (4%)	2	15
9	AL	125/128 (98%)	87 (70%)	26 (21%)	12 (10%)	0	3
9	CL	125/128 (98%)	90 (72%)	31 (25%)	4 (3%)	4	22
10	AM	97/105 (92%)	70 (72%)	18 (19%)	9 (9%)	0	3
10	CM	97/105 (92%)	65 (67%)	24 (25%)	8 (8%)	1	5
11	AN	117/129 (91%)	90 (77%)	19 (16%)	8 (7%)	1	7
11	CN	117/129 (91%)	96 (82%)	16 (14%)	5 (4%)	2	16
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	5
13	AP	114/126 (90%)	81 (71%)	20 (18%)	13 (11%)	0	2
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CQ	58/61 (95%)	40 (69%)	12 (21%)	6 (10%)	0	3
15	AR	86/89 (97%)	60 (70%)	20 (23%)	6 (7%)	1	7
15	CR	86/89 (97%)	73 (85%)	6 (7%)	7 (8%)	1	5
16	AS	82/88 (93%)	65 (79%)	16 (20%)	1 (1%)	13	44
16	CS	82/88 (93%)	66 (80%)	15 (18%)	1 (1%)	13	44
17	AT	98/105 (93%)	78 (80%)	14 (14%)	6 (6%)	1	9
17	CT	98/105 (93%)	85 (87%)	11 (11%)	2 (2%)	7	31
18	AU	70/88 (80%)	59 (84%)	7 (10%)	4 (6%)	1	10
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%)	1	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	14
26	DD	270/276 (98%)	217 (80%)	40 (15%)	13 (5%)	2	14
27	BE	203/206 (98%)	161 (79%)	28 (14%)	14 (7%)	1	7
27	DE	203/206 (98%)	133 (66%)	33 (16%)	37 (18%)	0	0
28	BF	200/210 (95%)	175 (88%)	20 (10%)	5 (2%)	5	27
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
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%)	1	5
32	BM	136/140 (97%)	101 (74%)	25 (18%)	10 (7%)	1	6
32	DM	136/140 (97%)	110 (81%)	22 (16%)	4 (3%)	4	24
33	BN	120/122 (98%)	113 (94%)	5 (4%)	2 (2%)	9	36
33	DN	120/122 (98%)	103 (86%)	14 (12%)	3 (2%)	5	27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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	5
36	D0	115/118 (98%)	99 (86%)	13 (11%)	3 (3%)	5	26
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	7
38	DR	135/146 (92%)	110 (82%)	19 (14%)	6 (4%)	2	15
39	B1	115/118 (98%)	101 (88%)	10 (9%)	4 (4%)	3	20
39	D1	115/118 (98%)	88 (76%)	18 (16%)	9 (8%)	1	5
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%)	5	25
41	DS	111/113 (98%)	98 (88%)	8 (7%)	5 (4%)	2	15
42	BT	90/96 (94%)	78 (87%)	10 (11%)	2 (2%)	6	29
42	DT	90/96 (94%)	69 (77%)	13 (14%)	8 (9%)	1	4
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	1
44	DV	177/206 (86%)	111 (63%)	35 (20%)	31 (18%)	0	0
45	B3	74/85 (87%)	65 (88%)	7 (10%)	2 (3%)	5	25
45	D3	75/85 (88%)	66 (88%)	7 (9%)	2 (3%)	5	25
46	BZ	95/98 (97%)	78 (82%)	10 (10%)	7 (7%)	1	6
46	DZ	95/98 (97%)	71 (75%)	14 (15%)	10 (10%)	0	3
47	BW	64/72 (89%)	52 (81%)	9 (14%)	3 (5%)	2	14
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	20
48	DX	57/60 (95%)	49 (86%)	5 (9%)	3 (5%)	2	12
49	B4	64/71 (90%)	34 (53%)	15 (23%)	15 (23%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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	7
51	B6	43/54 (80%)	24 (56%)	14 (33%)	5 (12%)	0	2
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%)	1	4

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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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Mol	Chain	Res	Type
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 [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AE	205/220 (93%)	166 (81%)	39 (19%)	<b>1</b> <b>6</b>

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	CE	205/220 (93%)	166 (81%)	39 (19%)	1	6
3	AF	159/188 (85%)	141 (89%)	18 (11%)	6	23
3	CF	160/188 (85%)	138 (86%)	22 (14%)	3	16
4	AG	180/180 (100%)	157 (87%)	23 (13%)	4	18
4	CG	180/180 (100%)	160 (89%)	20 (11%)	6	24
5	AH	116/123 (94%)	103 (89%)	13 (11%)	6	24
5	CH	116/123 (94%)	102 (88%)	14 (12%)	5	20
6	AI	90/90 (100%)	82 (91%)	8 (9%)	9	34
6	CI	90/90 (100%)	77 (86%)	13 (14%)	3	14
7	AJ	126/127 (99%)	105 (83%)	21 (17%)	2	9
7	CJ	126/127 (99%)	107 (85%)	19 (15%)	3	12
8	AK	119/119 (100%)	105 (88%)	14 (12%)	5	21
8	CK	119/119 (100%)	102 (86%)	17 (14%)	3	14
9	AL	98/99 (99%)	74 (76%)	24 (24%)	0	2
9	CL	98/99 (99%)	80 (82%)	18 (18%)	1	7
10	AM	89/92 (97%)	78 (88%)	11 (12%)	4	19
10	CM	89/92 (97%)	72 (81%)	17 (19%)	1	6
11	AN	90/99 (91%)	80 (89%)	10 (11%)	6	24
11	CN	90/99 (91%)	73 (81%)	17 (19%)	1	6
12	AO	104/107 (97%)	89 (86%)	15 (14%)	3	14
12	CO	104/107 (97%)	93 (89%)	11 (11%)	6	26
13	AP	94/101 (93%)	85 (90%)	9 (10%)	8	31
13	CP	94/101 (93%)	75 (80%)	19 (20%)	1	5
14	AQ	49/50 (98%)	39 (80%)	10 (20%)	1	5
14	CQ	49/50 (98%)	40 (82%)	9 (18%)	1	7
15	AR	79/80 (99%)	70 (89%)	9 (11%)	5	23
15	CR	79/80 (99%)	72 (91%)	7 (9%)	9	34
16	AS	72/74 (97%)	55 (76%)	17 (24%)	1	2
16	CS	72/74 (97%)	61 (85%)	11 (15%)	2	12
17	AT	95/97 (98%)	85 (90%)	10 (10%)	7	26
17	CT	95/97 (98%)	87 (92%)	8 (8%)	11	38

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	AU	63/77 (82%)	54 (86%)	9 (14%)	3	14
18	CU	63/77 (82%)	55 (87%)	8 (13%)	4	18
19	AV	72/80 (90%)	56 (78%)	16 (22%)	1	4
19	CV	67/80 (84%)	54 (81%)	13 (19%)	1	6
20	AW	76/82 (93%)	66 (87%)	10 (13%)	4	17
20	CW	76/82 (93%)	68 (90%)	8 (10%)	7	26
21	AX	20/22 (91%)	20 (100%)	0	100	100
21	CX	20/22 (91%)	19 (95%)	1 (5%)	24	57
26	BD	214/218 (98%)	178 (83%)	36 (17%)	2	9
26	DD	214/218 (98%)	183 (86%)	31 (14%)	3	13
27	BE	165/166 (99%)	144 (87%)	21 (13%)	4	18
27	DE	165/166 (99%)	143 (87%)	22 (13%)	4	16
28	BF	161/166 (97%)	142 (88%)	19 (12%)	5	21
28	DF	165/166 (99%)	138 (84%)	27 (16%)	2	10
29	BG	155/156 (99%)	138 (89%)	17 (11%)	6	25
29	DG	155/156 (99%)	132 (85%)	23 (15%)	3	13
30	BH	142/148 (96%)	123 (87%)	19 (13%)	4	16
30	DH	142/148 (96%)	109 (77%)	33 (23%)	1	3
31	BK	122/124 (98%)	103 (84%)	19 (16%)	2	11
31	DK	122/124 (98%)	92 (75%)	30 (25%)	0	2
32	BM	117/119 (98%)	95 (81%)	22 (19%)	1	6
32	DM	117/119 (98%)	96 (82%)	21 (18%)	2	8
33	BN	100/100 (100%)	90 (90%)	10 (10%)	7	28
33	DN	100/100 (100%)	87 (87%)	13 (13%)	4	18
34	BO	116/116 (100%)	91 (78%)	25 (22%)	1	4
34	DO	116/116 (100%)	84 (72%)	32 (28%)	0	1
35	BP	111/111 (100%)	100 (90%)	11 (10%)	8	29
35	DP	111/111 (100%)	94 (85%)	17 (15%)	2	12
36	B0	101/101 (100%)	87 (86%)	14 (14%)	3	15
36	D0	100/101 (99%)	89 (89%)	11 (11%)	6	25
37	BQ	87/88 (99%)	74 (85%)	13 (15%)	3	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	DQ	87/88 (99%)	69 (79%)	18 (21%)	1	5
38	BR	120/127 (94%)	105 (88%)	15 (12%)	4	18
38	DR	120/127 (94%)	98 (82%)	22 (18%)	1	7
39	B1	93/94 (99%)	79 (85%)	14 (15%)	3	12
39	D1	93/94 (99%)	79 (85%)	14 (15%)	3	12
40	B2	82/82 (100%)	69 (84%)	13 (16%)	2	11
40	D2	82/82 (100%)	62 (76%)	20 (24%)	0	2
41	BS	92/92 (100%)	80 (87%)	12 (13%)	4	18
41	DS	92/92 (100%)	75 (82%)	17 (18%)	1	7
42	BT	74/78 (95%)	63 (85%)	11 (15%)	3	13
42	DT	74/78 (95%)	66 (89%)	8 (11%)	6	25
43	BU	85/91 (93%)	62 (73%)	23 (27%)	0	1
43	DU	85/91 (93%)	59 (69%)	26 (31%)	0	0
44	BV	154/179 (86%)	126 (82%)	28 (18%)	1	7
44	DV	158/179 (88%)	136 (86%)	22 (14%)	3	15
45	B3	61/67 (91%)	54 (88%)	7 (12%)	5	22
45	D3	62/67 (92%)	58 (94%)	4 (6%)	17	47
46	BZ	82/83 (99%)	67 (82%)	15 (18%)	1	7
46	DZ	82/83 (99%)	76 (93%)	6 (7%)	14	43
47	BW	62/67 (92%)	54 (87%)	8 (13%)	4	18
47	DW	64/67 (96%)	61 (95%)	3 (5%)	26	59
48	BX	51/52 (98%)	44 (86%)	7 (14%)	3	16
48	DX	51/52 (98%)	43 (84%)	8 (16%)	2	11
49	B4	59/63 (94%)	41 (70%)	18 (30%)	0	0
49	D4	57/63 (90%)	36 (63%)	21 (37%)	0	0
50	B5	51/52 (98%)	40 (78%)	11 (22%)	1	4
50	D5	51/52 (98%)	43 (84%)	8 (16%)	2	11
51	B6	44/52 (85%)	33 (75%)	11 (25%)	0	2
51	D6	44/52 (85%)	31 (70%)	13 (30%)	0	1
52	B7	42/42 (100%)	36 (86%)	6 (14%)	3	14
52	D7	42/42 (100%)	33 (79%)	9 (21%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
53	B8	51/55 (93%)	39 (76%)	12 (24%)	1	3
53	D8	51/55 (93%)	41 (80%)	10 (20%)	1	6
All	All	9584/9992 (96%)	8081 (84%)	1503 (16%)	2	11

All (1503) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AE	7	VAL
2	AE	8	LYS
2	AE	11	LEU
2	AE	16	HIS
2	AE	21	ARG
2	AE	31	TYR
2	AE	41	ILE
2	AE	42	ILE
2	AE	44	LEU
2	AE	50	GLU
2	AE	60	ASP
2	AE	84	GLU
2	AE	90	MET
2	AE	96	ARG
2	AE	108	ILE
2	AE	122	PHE
2	AE	127	ILE
2	AE	128	GLU
2	AE	135	GLN
2	AE	144	ARG
2	AE	145	LEU
2	AE	150	SER
2	AE	155	LEU
2	AE	158	LEU
2	AE	163	PHE
2	AE	170	GLU
2	AE	172	ILE
2	AE	178	ARG
2	AE	185	ILE
2	AE	187	LEU
2	AE	191	ASP
2	AE	196	LEU
2	AE	200	ILE
2	AE	206	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	AE	214	ILE
2	AE	221	LEU
2	AE	223	ILE
2	AE	236	TYR
2	AE	240	GLN
3	AF	27	LYS
3	AF	29	TYR
3	AF	34	LEU
3	AF	38	ARG
3	AF	49	SER
3	AF	59	ARG
3	AF	62	ASP
3	AF	63	ASN
3	AF	67	THR
3	AF	102	ASN
3	AF	111	LEU
3	AF	131	ARG
3	AF	165	THR
3	AF	178	LEU
3	AF	179	ARG
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	19	LEU
4	AG	21	LEU
4	AG	27	TYR
4	AG	45	GLN
4	AG	46	LYS
4	AG	58	LEU
4	AG	84	LYS
4	AG	96	LEU
4	AG	108	LEU
4	AG	121	VAL
4	AG	122	ARG
4	AG	127	THR
4	AG	138	TYR
4	AG	146	ILE
4	AG	154	ASN
4	AG	160	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	AG	179	GLU
4	AG	188	LEU
4	AG	193	ASP
4	AG	198	VAL
5	AH	10	MET
5	AH	11	ILE
5	AH	16	THR
5	AH	31	LEU
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	112	LEU
5	AH	120	THR
5	AH	153	LYS
6	AI	14	LEU
6	AI	23	LYS
6	AI	31	GLU
6	AI	45	LEU
6	AI	74	ASP
6	AI	75	LEU
6	AI	86	ARG
6	AI	92	LYS
7	AJ	5	ARG
7	AJ	8	GLU
7	AJ	21	VAL
7	AJ	35	LYS
7	AJ	38	LEU
7	AJ	51	GLN
7	AJ	54	THR
7	AJ	75	VAL
7	AJ	79	ARG
7	AJ	89	MET
7	AJ	90	GLU
7	AJ	91	VAL
7	AJ	104	LEU
7	AJ	109	ASN
7	AJ	111	ARG
7	AJ	113	GLU
7	AJ	124	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	AJ	126	ASP
7	AJ	148	ASN
7	AJ	155	ARG
7	AJ	156	TRP
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	85	ARG
8	AK	99	GLU
8	AK	109	ILE
8	AK	112	LEU
8	AK	118	VAL
8	AK	129	VAL
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	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	112	LYS
9	AL	114	TYR
9	AL	121	ARG
9	AL	124	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
10	AM	16	LEU
10	AM	25	GLU
10	AM	45	ARG
10	AM	46	ARG
10	AM	55	LYS
10	AM	58	ASP
10	AM	62	HIS
10	AM	67	THR
10	AM	83	GLU
10	AM	95	GLU
10	AM	96	ILE
11	AN	14	VAL
11	AN	30	VAL
11	AN	53	SER
11	AN	71	LYS
11	AN	81	ASP
11	AN	87	THR
11	AN	91	ARG
11	AN	105	VAL
11	AN	109	VAL
11	AN	120	ARG
12	AO	6	THR
12	AO	21	LYS
12	AO	23	LYS
12	AO	34	ARG
12	AO	39	VAL
12	AO	54	LYS
12	AO	60	LEU
12	AO	62	SER
12	AO	66	VAL
12	AO	86	ARG
12	AO	92	ASP
12	AO	114	LYS
12	AO	119	LYS
12	AO	124	LYS
12	AO	127	GLU
13	AP	17	VAL
13	AP	47	ASP
13	AP	48	LEU
13	AP	63	THR
13	AP	64	TRP
13	AP	88	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	17	LYS
14	AQ	22	THR
14	AQ	23	ARG
14	AQ	27	CYS
14	AQ	32	SER
14	AQ	35	ARG
14	AQ	44	LEU
15	AR	5	LYS
15	AR	6	GLU
15	AR	24	SER
15	AR	35	ARG
15	AR	47	LYS
15	AR	53	HIS
15	AR	62	GLN
15	AR	83	GLU
15	AR	84	LYS
16	AS	2	VAL
16	AS	4	ILE
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	46	PRO
16	AS	47	ASP
16	AS	53	VAL
16	AS	55	ARG
16	AS	60	LEU
16	AS	62	VAL
16	AS	71	ARG
16	AS	76	GLN
16	AS	81	ARG
17	AT	14	LYS
17	AT	21	VAL
17	AT	30	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	AT	31	LEU
17	AT	38	ARG
17	AT	63	ARG
17	AT	66	SER
17	AT	74	LEU
17	AT	89	LEU
17	AT	101	ARG
18	AU	18	ARG
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
19	AV	3	ARG
19	AV	4	SER
19	AV	5	LEU
19	AV	6	LYS
19	AV	9	VAL
19	AV	13	ASP
19	AV	29	ARG
19	AV	37	ARG
19	AV	49	ILE
19	AV	51	VAL
19	AV	52	TYR
19	AV	60	VAL
19	AV	61	TYR
19	AV	67	VAL
19	AV	77	THR
19	AV	83	HIS
20	AW	9	ASN
20	AW	10	LEU
20	AW	13	LEU
20	AW	26	ASN
20	AW	34	LYS
20	AW	61	SER
20	AW	75	ASN
20	AW	99	LEU
20	AW	104	LEU
20	AW	105	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	BD	3	VAL
26	BD	13	ARG
26	BD	16	MET
26	BD	43	ARG
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	99	ASP
26	BD	103	ARG
26	BD	105	ILE
26	BD	106	ILE
26	BD	116	GLN
26	BD	117	VAL
26	BD	126	GLN
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	212	SER
26	BD	217	ARG
26	BD	219	PRO
26	BD	221	VAL
26	BD	229	VAL
26	BD	242	ARG
26	BD	257	LEU
26	BD	266	SER
26	BD	271	ILE
27	BE	12	THR
27	BE	13	ARG
27	BE	14	ILE
27	BE	23	VAL
27	BE	26	ILE
27	BE	54	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	BE	61	ARG
27	BE	66	HIS
27	BE	67	PHE
27	BE	78	LEU
27	BE	82	ARG
27	BE	87	GLU
27	BE	119	ARG
27	BE	144	ARG
27	BE	146	THR
27	BE	154	LYS
27	BE	167	VAL
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	57	VAL
28	BF	60	SER
28	BF	70	THR
28	BF	74	ARG
28	BF	77	ASP
28	BF	89	VAL
28	BF	136	THR
28	BF	145	GLU
28	BF	158	THR
28	BF	170	LEU
28	BF	174	VAL
28	BF	195	ASP
28	BF	197	ASP
28	BF	201	VAL
29	BG	28	VAL
29	BG	31	VAL
29	BG	45	GLU
29	BG	60	LEU
29	BG	67	LYS
29	BG	81	LYS
29	BG	82	LEU
29	BG	83	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	BG	90	LEU
29	BG	93	THR
29	BG	94	LEU
29	BG	96	ARG
29	BG	116	ASP
29	BG	128	ARG
29	BG	133	LEU
29	BG	140	ILE
29	BG	162	THR
30	BH	9	ILE
30	BH	24	VAL
30	BH	37	VAL
30	BH	41	MET
30	BH	45	VAL
30	BH	49	VAL
30	BH	59	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	132	ARG
30	BH	133	VAL
30	BH	134	SER
30	BH	139	GLN
31	BK	9	LEU
31	BK	11	ASN
31	BK	37	VAL
31	BK	41	GLU
31	BK	57	ARG
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	108	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BK	130	TYR
31	BK	131	LYS
31	BK	136	VAL
31	BK	140	LEU
31	BK	143	SER
32	BM	1	MET
32	BM	2	LYS
32	BM	7	LYS
32	BM	8	GLN
32	BM	10	GLU
32	BM	14	VAL
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
32	BM	87	LEU
32	BM	97	ARG
32	BM	99	LEU
32	BM	120	LEU
32	BM	134	ARG
33	BN	24	VAL
33	BN	28	SER
33	BN	38	VAL
33	BN	66	LYS
33	BN	68	GLU
33	BN	78	ARG
33	BN	94	ARG
33	BN	97	ARG
33	BN	115	VAL
33	BN	117	LEU
34	BO	6	LEU
34	BO	15	ARG
34	BO	21	ARG
34	BO	30	THR
34	BO	41	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	BO	45	LEU
34	BO	49	ARG
34	BO	58	THR
34	BO	59	LEU
34	BO	61	ARG
34	BO	62	LEU
34	BO	65	ARG
34	BO	67	MET
34	BO	70	GLN
34	BO	71	VAL
34	BO	81	GLN
34	BO	85	LEU
34	BO	96	THR
34	BO	98	GLU
34	BO	106	LEU
34	BO	112	LEU
34	BO	123	LEU
34	BO	138	LEU
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	60	ARG
35	BP	75	THR
35	BP	83	MET
35	BP	105	GLU
35	BP	110	THR
35	BP	112	GLU
35	BP	139	GLU
36	B0	2	ARG
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	35	THR
36	B0	36	THR
36	B0	37	THR
36	B0	60	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	B0	65	LEU
36	B0	74	LYS
36	B0	79	LEU
37	BQ	35	ILE
37	BQ	42	ASP
37	BQ	43	GLU
37	BQ	44	LYS
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	98	VAL
37	BQ	106	ARG
37	BQ	107	GLU
38	BR	3	ARG
38	BR	16	ARG
38	BR	18	ASP
38	BR	21	GLU
38	BR	27	THR
38	BR	30	VAL
38	BR	58	ASN
38	BR	64	ARG
38	BR	74	ARG
38	BR	78	LEU
38	BR	86	ILE
38	BR	105	LEU
38	BR	107	ASP
38	BR	113	LYS
38	BR	118	ARG
39	B1	5	LYS
39	B1	31	SER
39	B1	52	ARG
39	B1	70	ARG
39	B1	74	LEU
39	B1	79	PHE
39	B1	81	HIS
39	B1	83	LEU
39	B1	89	GLU
39	B1	90	VAL
39	B1	94	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	B1	100	VAL
39	B1	104	GLN
39	B1	108	GLU
40	B2	12	TYR
40	B2	13	ARG
40	B2	35	LEU
40	B2	39	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	71	LEU
40	B2	72	VAL
40	B2	79	VAL
41	BS	11	ARG
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	88	ARG
41	BS	96	ILE
41	BS	106	ILE
41	BS	107	LEU
42	BT	15	GLU
42	BT	23	GLU
42	BT	27	THR
42	BT	49	VAL
42	BT	57	LEU
42	BT	63	LYS
42	BT	65	ARG
42	BT	66	LEU
42	BT	70	LEU
42	BT	80	ILE
42	BT	88	LYS
43	BU	2	ARG
43	BU	4	LYS
43	BU	27	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	BU	33	LYS
43	BU	38	ILE
43	BU	40	GLU
43	BU	50	ARG
43	BU	52	SER
43	BU	54	LYS
43	BU	55	TYR
43	BU	57	GLN
43	BU	64	GLU
43	BU	70	SER
43	BU	75	ILE
43	BU	76	CYS
43	BU	81	LYS
43	BU	85	VAL
43	BU	86	ARG
43	BU	87	LYS
43	BU	89	PHE
43	BU	95	LYS
43	BU	97	ARG
43	BU	101	LYS
44	BV	5	LEU
44	BV	11	GLU
44	BV	19	ARG
44	BV	33	LEU
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	81	ARG
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	BV	129	SER
44	BV	144	LEU
44	BV	146	ILE
44	BV	154	ASP
44	BV	163	LEU
44	BV	169	GLU
45	B3	10	THR
45	B3	11	ARG
45	B3	20	ARG
45	B3	36	ILE
45	B3	64	ASP
45	B3	81	VAL
45	B3	82	ARG
46	BZ	4	VAL
46	BZ	19	GLN
46	BZ	21	ARG
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	83	GLU
46	BZ	85	LEU
46	BZ	91	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	47	ASN
47	BW	53	LEU
47	BW	62	THR
47	BW	64	LEU
48	BX	8	LEU
48	BX	11	SER
48	BX	30	ARG
48	BX	32	GLN
48	BX	40	THR
48	BX	44	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	32	TYR
49	B4	36	CYS
49	B4	39	CYS
49	B4	42	PHE
49	B4	48	ARG
49	B4	49	PHE
49	B4	52	THR
49	B4	57	GLU
49	B4	59	PHE
49	B4	61	ARG
49	B4	63	TYR
50	B5	3	LYS
50	B5	6	VAL
50	B5	11	THR
50	B5	29	THR
50	B5	33	CYS
50	B5	40	LYS
50	B5	44	THR
50	B5	46	CYS
50	B5	51	TYR
50	B5	52	TYR
50	B5	55	ARG
51	B6	9	LEU
51	B6	10	LEU
51	B6	12	GLU
51	B6	24	GLU
51	B6	32	ASN
51	B6	37	ARG
51	B6	39	TYR
51	B6	44	ARG
51	B6	48	VAL
51	B6	51	GLU
51	B6	52	VAL
52	B7	1	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
52	B7	4	THR
52	B7	10	ARG
52	B7	24	THR
52	B7	32	LYS
52	B7	46	VAL
53	B8	8	LYS
53	B8	14	VAL
53	B8	25	MET
53	B8	37	SER
53	B8	44	LYS
53	B8	47	LYS
53	B8	48	PHE
53	B8	49	VAL
53	B8	56	GLU
53	B8	60	LEU
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	24	TRP
2	CE	37	ASN
2	CE	42	ILE
2	CE	44	LEU
2	CE	45	GLN
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	87	ARG
2	CE	105	PHE
2	CE	107	THR
2	CE	116	GLU
2	CE	118	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	CE	121	LEU
2	CE	129	GLU
2	CE	137	ARG
2	CE	139	LYS
2	CE	144	ARG
2	CE	154	LEU
2	CE	169	LYS
2	CE	178	ARG
2	CE	185	ILE
2	CE	187	LEU
2	CE	195	ASP
2	CE	196	LEU
2	CE	215	LEU
2	CE	238	LEU
3	CF	14	ILE
3	CF	29	TYR
3	CF	47	LEU
3	CF	48	TYR
3	CF	59	ARG
3	CF	72	LYS
3	CF	79	ARG
3	CF	84	ILE
3	CF	85	ARG
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	119	ARG
3	CF	140	ARG
3	CF	181	ASN
3	CF	188	LEU
3	CF	192	THR
3	CF	202	ILE
4	CG	4	TYR
4	CG	12	CYS
4	CG	19	LEU
4	CG	21	LEU
4	CG	49	ARG
4	CG	58	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	CG	73	ARG
4	CG	84	LYS
4	CG	112	VAL
4	CG	121	VAL
4	CG	122	ARG
4	CG	134	ASP
4	CG	135	LEU
4	CG	141	ARG
4	CG	155	LEU
4	CG	163	GLU
4	CG	179	GLU
4	CG	191	ARG
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	120	THR
5	CH	126	ARG
5	CH	135	THR
6	CI	14	LEU
6	CI	15	ASP
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	77	ARG
6	CI	78	GLU
6	CI	83	ASP
6	CI	87	ARG
6	CI	98	LEU
7	CJ	6	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	CJ	8	GLU
7	CJ	21	VAL
7	CJ	27	ILE
7	CJ	33	ASP
7	CJ	35	LYS
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	149	ARG
7	CJ	156	TRP
8	CK	1	MET
8	CK	2	LEU
8	CK	24	THR
8	CK	25	ASP
8	CK	51	VAL
8	CK	54	ASP
8	CK	56	LYS
8	CK	60	ARG
8	CK	82	HIS
8	CK	91	ARG
8	CK	97	VAL
8	CK	103	VAL
8	CK	109	ILE
8	CK	112	LEU
8	CK	121	ASP
8	CK	137	VAL
8	CK	138	TRP
9	CL	7	THR
9	CL	9	ARG
9	CL	10	ARG
9	CL	42	ARG
9	CL	54	ASP
9	CL	77	ILE
9	CL	78	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	CL	79	LEU
9	CL	81	ILE
9	CL	86	VAL
9	CL	88	TYR
9	CL	95	LYS
9	CL	108	VAL
9	CL	109	VAL
9	CL	113	LYS
9	CL	118	LYS
9	CL	124	GLN
9	CL	125	TYR
10	CM	6	ILE
10	CM	8	LEU
10	CM	17	ASP
10	CM	22	LYS
10	CM	40	LEU
10	CM	42	THR
10	CM	43	ARG
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	24	SER
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	81	ASP
11	CN	93	GLN
11	CN	105	VAL
11	CN	106	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
11	CN	109	VAL
11	CN	124	LYS
11	CN	127	LYS
12	CO	24	VAL
12	CO	27	LEU
12	CO	33	ARG
12	CO	41	ARG
12	CO	42	THR
12	CO	64	TYR
12	CO	83	VAL
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	17	VAL
13	CP	22	ILE
13	CP	23	TYR
13	CP	35	GLU
13	CP	47	ASP
13	CP	48	LEU
13	CP	57	ARG
13	CP	62	ASN
13	CP	66	LEU
13	CP	67	GLU
13	CP	70	LEU
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
14	CQ	61	TRP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	CR	3	ILE
15	CR	10	LYS
15	CR	22	THR
15	CR	33	THR
15	CR	39	LEU
15	CR	46	HIS
15	CR	82	ILE
16	CS	2	VAL
16	CS	5	ARG
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	58	TYR
16	CS	67	THR
17	CT	12	SER
17	CT	57	VAL
17	CT	68	ARG
17	CT	70	ARG
17	CT	73	VAL
17	CT	74	LEU
17	CT	81	ARG
17	CT	87	LYS
18	CU	17	SER
18	CU	21	LYS
18	CU	26	LEU
18	CU	32	ARG
18	CU	42	ARG
18	CU	58	LEU
18	CU	83	GLU
18	CU	86	VAL
19	CV	9	VAL
19	CV	12	ASP
19	CV	13	ASP
19	CV	14	HIS
19	CV	15	LEU
19	CV	37	ARG
19	CV	40	ILE
19	CV	41	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	64	ASP
20	CW	75	ASN
20	CW	80	ARG
20	CW	83	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	94	LEU
26	DD	99	ASP
26	DD	103	ARG
26	DD	105	ILE
26	DD	106	ILE
26	DD	109	ASP
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	211	ARG
26	DD	242	ARG
26	DD	244	ARG
26	DD	255	LYS
26	DD	257	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	DD	266	SER
26	DD	270	ILE
26	DD	271	ILE
27	DE	33	VAL
27	DE	35	GLN
27	DE	40	GLU
27	DE	54	GLN
27	DE	69	LYS
27	DE	76	ARG
27	DE	78	LEU
27	DE	79	ARG
27	DE	91	VAL
27	DE	108	SER
27	DE	111	ARG
27	DE	119	ARG
27	DE	135	HIS
27	DE	144	ARG
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
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	19	GLU
28	DF	20	LEU
28	DF	23	ASP
28	DF	33	LEU
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	DF	158	THR
28	DF	181	LEU
28	DF	183	VAL
28	DF	192	LEU
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	20	ILE
29	DG	22	ARG
29	DG	26	GLN
29	DG	43	LEU
29	DG	47	LYS
29	DG	48	GLU
29	DG	53	LEU
29	DG	67	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	133	LEU
29	DG	139	LEU
29	DG	145	THR
29	DG	148	MET
29	DG	165	THR
30	DH	3	ARG
30	DH	4	ILE
30	DH	7	LEU
30	DH	11	VAL
30	DH	16	SER
30	DH	24	VAL
30	DH	30	LYS
30	DH	32	GLU
30	DH	41	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	DH	43	VAL
30	DH	49	VAL
30	DH	50	VAL
30	DH	51	ARG
30	DH	56	SER
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	101	ARG
30	DH	103	LEU
30	DH	104	GLU
30	DH	105	LEU
30	DH	121	ILE
30	DH	123	PHE
30	DH	129	THR
30	DH	139	GLN
30	DH	141	VAL
30	DH	157	TYR
30	DH	159	GLU
30	DH	164	TYR
30	DH	169	VAL
31	DK	9	LEU
31	DK	37	VAL
31	DK	44	LEU
31	DK	50	ARG
31	DK	52	ARG
31	DK	56	LYS
31	DK	61	ARG
31	DK	66	GLU
31	DK	67	ARG
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	104	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DK	109	ILE
31	DK	113	ARG
31	DK	117	GLU
31	DK	118	LYS
31	DK	125	GLU
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	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	48	MET
32	DM	58	ASP
32	DM	60	ILE
32	DM	63	THR
32	DM	65	LYS
32	DM	69	GLN
32	DM	87	LEU
32	DM	93	THR
32	DM	94	HIS
32	DM	137	LYS
33	DN	9	GLU
33	DN	21	CYS
33	DN	23	ARG
33	DN	24	VAL
33	DN	34	THR
33	DN	47	ILE
33	DN	49	ARG
33	DN	70	LYS
33	DN	78	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	DN	80	ASP
33	DN	87	ILE
33	DN	89	ASN
33	DN	94	ARG
34	DO	6	LEU
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	91	PHE
34	DO	95	VAL
34	DO	96	THR
34	DO	98	GLU
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	139	LYS
34	DO	144	GLU
34	DO	147	LEU
34	DO	148	LEU
35	DP	1	MET
35	DP	6	ARG
35	DP	26	TYR
35	DP	45	GLN
35	DP	59	ARG
35	DP	60	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	DP	64	ILE
35	DP	75	THR
35	DP	83	MET
35	DP	89	ASN
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	33	ARG
36	D0	44	LEU
36	D0	57	ARG
36	D0	75	LEU
36	D0	79	LEU
36	D0	81	ASP
36	D0	96	ARG
36	D0	105	ARG
36	D0	117	VAL
37	DQ	5	THR
37	DQ	12	PHE
37	DQ	14	VAL
37	DQ	17	ARG
37	DQ	18	ILE
37	DQ	28	VAL
37	DQ	32	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	95	HIS
37	DQ	101	LEU
37	DQ	107	GLU
37	DQ	110	LEU
38	DR	1	MET
38	DR	6	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	DR	8	LYS
38	DR	9	LEU
38	DR	23	ARG
38	DR	27	THR
38	DR	30	VAL
38	DR	36	GLU
38	DR	38	ASN
38	DR	41	ARG
38	DR	50	ILE
38	DR	62	THR
38	DR	65	LYS
38	DR	74	ARG
38	DR	85	LYS
38	DR	86	ILE
38	DR	88	ILE
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	64	ARG
39	D1	74	LEU
39	D1	84	LYS
39	D1	92	ARG
39	D1	93	LYS
39	D1	95	LEU
39	D1	97	ASP
39	D1	100	VAL
39	D1	101	ARG
39	D1	111	GLU
39	D1	112	ARG
39	D1	114	LYS
40	D2	23	GLU
40	D2	26	ASP
40	D2	28	GLU
40	D2	40	LEU
40	D2	46	VAL
40	D2	49	THR
40	D2	52	VAL
40	D2	57	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	D2	61	VAL
40	D2	68	LYS
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	89	GLN
40	D2	91	TYR
40	D2	95	LEU
40	D2	100	ARG
41	DS	11	ARG
41	DS	15	ARG
41	DS	20	VAL
41	DS	40	ASN
41	DS	51	LEU
41	DS	52	GLU
41	DS	59	VAL
41	DS	60	ASN
41	DS	65	LEU
41	DS	70	TYR
41	DS	76	VAL
41	DS	94	ASP
41	DS	98	LYS
41	DS	106	ILE
41	DS	107	LEU
41	DS	111	HIS
41	DS	113	LYS
42	DT	30	VAL
42	DT	45	THR
42	DT	63	LYS
42	DT	66	LEU
42	DT	69	TYR
42	DT	75	ASP
42	DT	80	ILE
42	DT	81	VAL
43	DU	2	ARG
43	DU	6	HIS
43	DU	8	LYS
43	DU	13	VAL
43	DU	19	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	DU	27	VAL
43	DU	29	GLU
43	DU	37	VAL
43	DU	38	ILE
43	DU	39	VAL
43	DU	46	LYS
43	DU	51	VAL
43	DU	54	LYS
43	DU	57	GLN
43	DU	60	PHE
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	84	ARG
43	DU	88	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	66	SER
44	DV	70	LEU
44	DV	71	VAL
44	DV	73	GLN
44	DV	74	VAL
44	DV	85	HIS
44	DV	87	ASP
44	DV	89	PHE
44	DV	107	THR
44	DV	117	LEU
44	DV	120	ILE
44	DV	128	VAL
44	DV	144	LEU
44	DV	146	ILE
44	DV	150	LEU
44	DV	154	ASP
44	DV	156	LYS
44	DV	170	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	DV	179	ASP
45	D3	12	ASN
45	D3	25	ARG
45	D3	36	ILE
45	D3	50	ASN
46	DZ	41	ARG
46	DZ	81	LYS
46	DZ	82	LEU
46	DZ	83	GLU
46	DZ	85	LEU
46	DZ	90	ILE
47	DW	24	LEU
47	DW	53	LEU
47	DW	65	ASN
48	DX	5	LYS
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
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	42	PHE
49	D4	50	VAL
49	D4	51	ASP
49	D4	53	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
49	D4	62	ARG
50	D5	15	ARG
50	D5	23	HIS
50	D5	29	THR
50	D5	33	CYS
50	D5	35	GLU
50	D5	48	GLU
50	D5	51	TYR
50	D5	56	LYS
51	D6	12	GLU
51	D6	14	THR
51	D6	15	GLU
51	D6	17	LYS
51	D6	23	THR
51	D6	24	GLU
51	D6	30	THR
51	D6	32	ASN
51	D6	37	ARG
51	D6	39	TYR
51	D6	46	HIS
51	D6	50	ARG
51	D6	52	VAL
52	D7	1	MET
52	D7	4	THR
52	D7	15	THR
52	D7	24	THR
52	D7	39	ARG
52	D7	43	THR
52	D7	46	VAL
52	D7	47	ARG
52	D7	49	ARG
53	D8	22	VAL
53	D8	23	VAL
53	D8	30	ARG
53	D8	32	LEU
53	D8	40	GLU
53	D8	48	PHE
53	D8	49	VAL
53	D8	52	LYS
53	D8	58	ILE
53	D8	61	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (57)

such sidechains are listed below:

Mol	Chain	Res	Type
2	AE	76	GLN
3	AF	6	HIS
3	AF	28	GLN
4	AG	74	GLN
4	AG	103	ASN
4	AG	123	HIS
5	AH	78	HIS
12	AO	49	ASN
26	BD	46	GLN
28	BF	8	GLN
31	BK	105	HIS
33	BN	3	GLN
34	BO	70	GLN
36	B0	3	HIS
39	B1	44	ASN
47	BW	56	GLN
51	B6	20	ASN
51	B6	26	ASN
51	B6	46	HIS
53	B8	33	ASN
2	CE	94	ASN
2	CE	135	GLN
3	CF	6	HIS
3	CF	69	HIS
3	CF	181	ASN
4	CG	43	HIS
4	CG	45	GLN
4	CG	119	GLN
7	CJ	28	ASN
10	CM	56	HIS
11	CN	26	ASN
12	CO	49	ASN
13	CP	77	ASN
13	CP	101	GLN
16	CS	82	GLN
17	CT	45	HIS
19	CV	23	ASN
19	CV	47	HIS
20	CW	18	GLN
26	DD	143	HIS
27	DE	35	GLN
27	DE	55	ASN

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Mol	Chain	Res	Type
27	DE	60	ASN
28	DF	67	GLN
29	DG	41	GLN
33	DN	3	GLN
34	DO	68	GLN
35	DP	45	GLN
39	D1	49	HIS
39	D1	72	HIS
39	D1	81	HIS
40	D2	89	GLN
41	DS	40	ASN
45	D3	35	ASN
48	DX	19	GLN
48	DX	52	HIS
51	D6	46	HIS

### 5.3.3 RNA [i](#)

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%)
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%)	593 (20%)	44 (1%)
24	DA	2904/2912 (99%)	645 (22%)	39 (1%)
25	BB	121/122 (99%)	27 (22%)	0
25	DB	121/122 (99%)	32 (26%)	0
All	All	9383/9400 (99%)	2016 (21%)	147 (1%)

All (2016) 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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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	199	A
24	BA	214	G
24	BA	215	G
24	BA	216	A
24	BA	222	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	5	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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Mol	Chain	Res	Type
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 monosaccharides 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	44,45,45	0.96	5 (11%)	53,72,72	1.98	12 (22%)
55	T1C	CA	1800	54	44,45,45	0.97	5 (11%)	53,72,72	1.77	13 (24%)

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	-2.70	1.36	1.41
55	AA	1837	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	C1C-C1	-2.43	1.51	1.55
55	AA	1837	T1C	C2-C3	-2.26	1.34	1.40
55	CA	1800	T1C	C1B-C12	-2.23	1.33	1.36
55	CA	1800	T1C	C93-N92	-2.23	1.45	1.49
55	CA	1800	T1C	C1C-C1	-2.15	1.52	1.55
55	CA	1800	T1C	C2-C3	-2.06	1.35	1.40
55	AA	1837	T1C	C1A-C11	2.06	1.51	1.46

All (25) 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	CA	1800	T1C	O12-C12-C1B	-4.51	117.73	123.90
55	AA	1837	T1C	O12-C12-C1B	-4.34	117.95	123.90
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	-3.87	112.97	126.57
55	CA	1800	T1C	C51-C5-C41	-3.65	104.07	110.49
55	CA	1800	T1C	C9-N9-C91	-3.59	113.95	126.57
55	CA	1800	T1C	C92-N92-C93	-3.36	111.63	115.84
55	AA	1837	T1C	C1C-C41-C4	3.35	116.22	111.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1800	T1C	O1C-C1C-C41	-3.35	105.98	110.09
55	AA	1837	T1C	C6-C61-C7	-3.16	115.89	123.52
55	CA	1800	T1C	O3-C3-C2	-3.01	117.68	122.96
55	AA	1837	T1C	C92-C91-N9	2.83	118.65	114.50
55	AA	1837	T1C	C6-C61-C1A	2.69	122.81	118.09
55	CA	1800	T1C	C41-C1C-C1	-2.55	108.12	111.05
55	AA	1837	T1C	O3-C3-C2	-2.54	118.51	122.96
55	CA	1800	T1C	O1C-C1C-C12	-2.47	106.19	110.14
55	CA	1800	T1C	C6-C61-C1A	2.41	122.32	118.09
55	AA	1837	T1C	C72-N7-C71	-2.25	108.86	116.12
55	AA	1837	T1C	C51-C5-C41	-2.24	106.55	110.49
55	CA	1800	T1C	C6-C61-C7	-2.13	118.38	123.52
55	CA	1800	T1C	O1-C1-C1C	2.01	123.00	119.08

There are no chirality outliers.

All (16) torsion outliers are listed below:

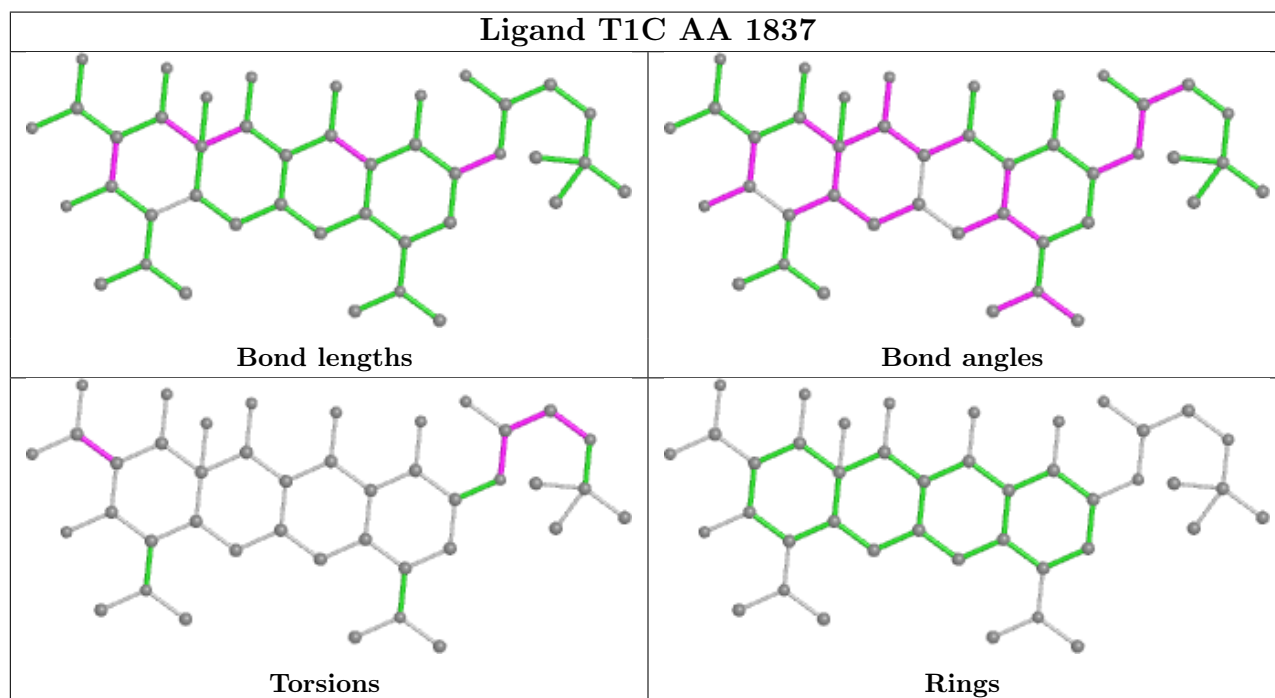
Mol	Chain	Res	Type	Atoms
55	AA	1837	T1C	C92-C91-N9-C9
55	AA	1837	T1C	O91-C91-N9-C9
55	CA	1800	T1C	C92-C91-N9-C9
55	CA	1800	T1C	O91-C91-N9-C9
55	CA	1800	T1C	C41-C4-N4-C42
55	CA	1800	T1C	C3-C2-C21-O21
55	CA	1800	T1C	C3-C2-C21-N21
55	CA	1800	T1C	C1-C2-C21-O21
55	CA	1800	T1C	C1-C2-C21-N21
55	CA	1800	T1C	O91-C91-C92-N92
55	AA	1837	T1C	O91-C91-C92-N92
55	CA	1800	T1C	N9-C91-C92-N92
55	AA	1837	T1C	N9-C91-C92-N92
55	AA	1837	T1C	C91-C92-N92-C93
55	AA	1837	T1C	C3-C2-C21-N21
55	AA	1837	T1C	C1-C2-C21-N21

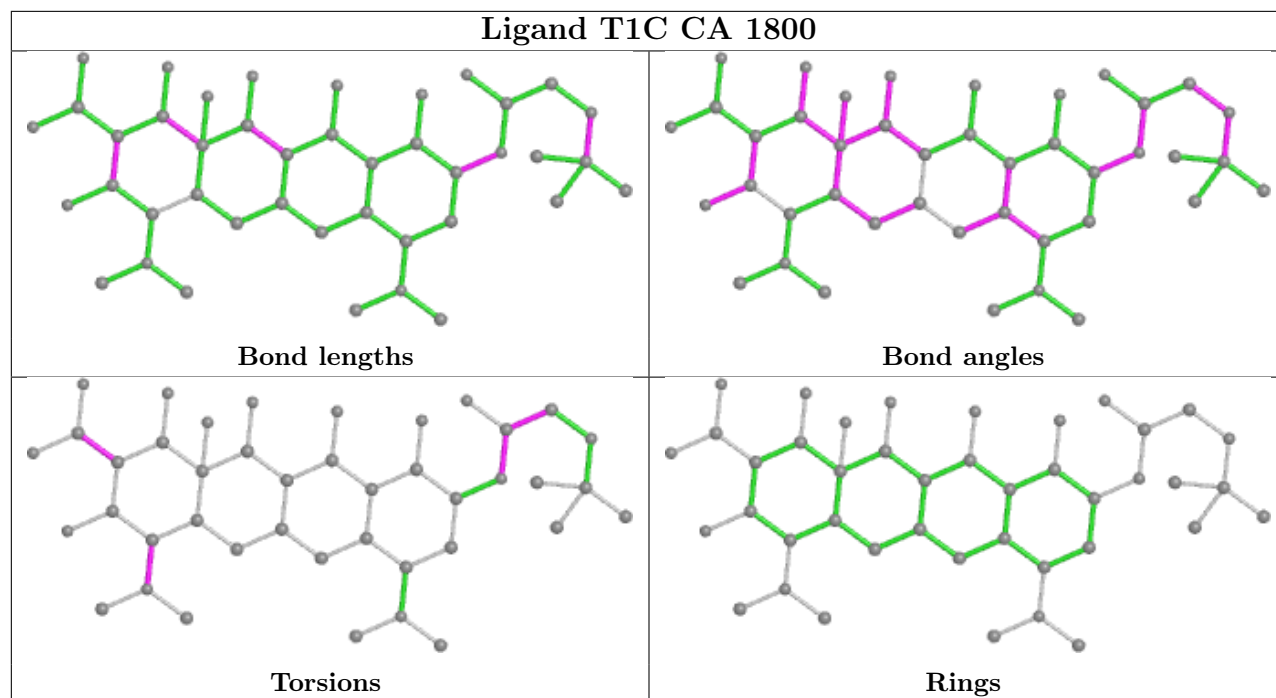
There are no ring outliers.

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 i

### 6.1 Protein, DNA and RNA chains i

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	AA	1506/1506 (100%)	-0.71	2 (0%) 95 92	66, 112, 190, 248	0
1	CA	1506/1506 (100%)	-0.73	5 (0%) 94 88	76, 117, 189, 249	0
2	AE	237/256 (92%)	0.30	17 (7%) 15 6	116, 147, 183, 192	0
2	CE	237/256 (92%)	0.91	41 (17%) 1 0	126, 162, 192, 208	0
3	AF	205/239 (85%)	0.59	20 (9%) 7 2	99, 124, 157, 164	0
3	CF	206/239 (86%)	1.33	50 (24%) 0 0	121, 145, 174, 184	0
4	AG	208/208 (100%)	-0.43	0 100 100	95, 118, 140, 145	0
4	CG	208/208 (100%)	0.58	21 (10%) 7 2	93, 113, 133, 142	0
5	AH	151/162 (93%)	-0.03	1 (0%) 87 75	90, 110, 132, 163	0
5	CH	151/162 (93%)	0.47	9 (5%) 21 10	97, 117, 139, 165	0
6	AI	101/101 (100%)	0.97	15 (14%) 2 1	91, 112, 125, 144	0
6	CI	101/101 (100%)	-0.05	1 (0%) 82 67	90, 107, 128, 148	0
7	AJ	155/156 (99%)	0.56	20 (12%) 3 1	111, 129, 157, 167	0
7	CJ	155/156 (99%)	0.06	0 100 100	116, 133, 162, 173	0
8	AK	138/138 (100%)	-0.35	0 100 100	97, 117, 127, 137	0
8	CK	138/138 (100%)	0.19	5 (3%) 42 22	105, 122, 135, 143	0
9	AL	127/128 (99%)	0.12	2 (1%) 72 51	100, 144, 163, 167	0
9	CL	127/128 (99%)	0.11	3 (2%) 59 37	114, 155, 170, 176	0
10	AM	99/105 (94%)	0.59	10 (10%) 7 2	100, 146, 171, 175	0
10	CM	99/105 (94%)	0.81	15 (15%) 2 1	117, 159, 174, 180	0
11	AN	119/129 (92%)	1.10	20 (16%) 1 0	83, 108, 138, 168	0
11	CN	119/129 (92%)	0.21	2 (1%) 70 49	91, 112, 138, 163	0
12	AO	125/128 (97%)	-0.20	1 (0%) 86 72	78, 92, 116, 168	0
12	CO	125/128 (97%)	0.73	14 (11%) 5 2	84, 104, 129, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AP	116/126 (92%)	0.08	4 (3%) 45 24	100, 133, 147, 157	0
13	CP	117/126 (92%)	-0.12	6 (5%) 28 13	121, 155, 170, 177	0
14	AQ	60/61 (98%)	-0.25	0 100 100	103, 114, 127, 135	0
14	CQ	60/61 (98%)	0.82	9 (15%) 2 1	130, 139, 155, 162	0
15	AR	88/89 (98%)	-0.21	0 100 100	89, 108, 124, 127	0
15	CR	88/89 (98%)	-0.19	0 100 100	89, 113, 131, 136	0
16	AS	84/88 (95%)	-0.58	0 100 100	107, 122, 145, 171	0
16	CS	84/88 (95%)	0.29	3 (3%) 42 22	91, 107, 126, 167	0
17	AT	100/105 (95%)	-0.40	1 (1%) 82 67	96, 114, 126, 133	0
17	CT	100/105 (95%)	0.30	2 (2%) 65 44	91, 111, 128, 149	0
18	AU	72/88 (81%)	0.79	7 (9%) 7 2	95, 112, 141, 169	0
18	CU	72/88 (81%)	-0.05	2 (2%) 53 30	96, 117, 152, 173	0
19	AV	83/93 (89%)	-0.24	2 (2%) 59 37	115, 136, 151, 157	0
19	CV	78/93 (83%)	0.34	8 (10%) 6 2	135, 166, 181, 188	0
20	AW	99/106 (93%)	-0.50	0 100 100	111, 127, 157, 162	0
20	CW	99/106 (93%)	0.04	2 (2%) 65 44	91, 116, 148, 165	0
21	AX	25/27 (92%)	-0.36	0 100 100	111, 120, 140, 160	0
21	CX	25/27 (92%)	-0.45	0 100 100	117, 138, 154, 170	0
22	AC	77/77 (100%)	-0.66	0 100 100	77, 100, 135, 151	0
22	AD	77/77 (100%)	0.16	2 (2%) 56 33	93, 214, 228, 234	0
22	CC	77/77 (100%)	-0.83	0 100 100	80, 118, 151, 171	0
22	CD	77/77 (100%)	-0.62	0 100 100	93, 220, 238, 248	0
23	A1	6/6 (100%)	-0.60	0 100 100	85, 89, 129, 143	0
23	C1	6/6 (100%)	-0.52	0 100 100	103, 111, 138, 153	0
24	BA	2912/2912 (100%)	-0.38	36 (1%) 79 61	53, 82, 212, 247	0
24	DA	2906/2912 (99%)	-0.57	31 (1%) 80 64	60, 90, 232, 251	0
25	BB	122/122 (100%)	-0.60	1 (0%) 86 72	78, 106, 126, 184	0
25	DB	122/122 (100%)	-0.79	0 100 100	91, 127, 154, 200	0
26	BD	272/276 (98%)	0.13	5 (1%) 68 47	55, 75, 94, 102	0
26	DD	272/276 (98%)	-0.28	4 (1%) 73 54	58, 81, 99, 122	0
27	BE	205/206 (99%)	0.14	8 (3%) 39 20	60, 92, 135, 153	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
27	DE	205/206 (99%)	-0.18	5 (2%) 59 37	60, 97, 142, 165	0
28	BF	202/210 (96%)	0.15	4 (1%) 65 44	54, 84, 118, 133	0
28	DF	208/210 (99%)	0.68	23 (11%) 5 2	66, 102, 156, 182	0
29	BG	181/182 (99%)	1.21	43 (23%) 0 0	95, 116, 145, 154	0
29	DG	181/182 (99%)	0.43	15 (8%) 11 4	117, 141, 165, 177	0
30	BH	170/180 (94%)	0.30	6 (3%) 44 23	88, 113, 132, 151	0
30	DH	170/180 (94%)	1.23	42 (24%) 0 0	146, 200, 223, 235	0
31	BK	146/148 (98%)	0.65	16 (10%) 5 2	87, 129, 146, 151	0
31	DK	146/148 (98%)	-0.39	0 100 100	88, 132, 151, 159	0
32	BM	138/140 (98%)	0.41	8 (5%) 23 10	78, 93, 128, 145	0
32	DM	138/140 (98%)	0.07	1 (0%) 87 75	80, 107, 137, 157	0
33	BN	122/122 (100%)	0.14	1 (0%) 86 72	69, 87, 102, 112	0
33	DN	122/122 (100%)	0.25	2 (1%) 72 51	70, 91, 109, 116	0
34	BO	150/150 (100%)	0.22	5 (3%) 46 24	60, 91, 114, 167	0
34	DO	150/150 (100%)	0.93	27 (18%) 1 0	66, 105, 140, 179	0
35	BP	141/141 (100%)	0.36	5 (3%) 44 23	68, 91, 113, 135	0
35	DP	141/141 (100%)	0.27	6 (4%) 35 17	80, 106, 130, 152	0
36	B0	118/118 (100%)	0.20	1 (0%) 86 72	72, 89, 104, 118	0
36	D0	117/118 (99%)	-0.06	0 100 100	71, 89, 108, 119	0
37	BQ	111/112 (99%)	0.71	13 (11%) 4 2	85, 104, 127, 137	0
37	DQ	111/112 (99%)	0.14	5 (4%) 33 16	98, 121, 142, 151	0
38	BR	137/146 (93%)	-0.00	5 (3%) 42 22	80, 102, 150, 169	0
38	DR	137/146 (93%)	-0.04	1 (0%) 87 75	80, 99, 159, 185	0
39	B1	117/118 (99%)	-0.03	3 (2%) 56 33	63, 83, 112, 138	0
39	D1	117/118 (99%)	-0.03	0 100 100	72, 101, 136, 154	0
40	B2	101/101 (100%)	0.43	5 (4%) 28 13	64, 102, 126, 145	0
40	D2	101/101 (100%)	0.99	16 (15%) 2 1	71, 123, 139, 148	0
41	BS	113/113 (100%)	0.19	3 (2%) 54 31	63, 80, 110, 161	0
41	DS	113/113 (100%)	0.26	2 (1%) 68 47	68, 83, 113, 161	0
42	BT	92/96 (95%)	0.50	4 (4%) 35 17	64, 78, 100, 111	0
42	DT	92/96 (95%)	0.23	5 (5%) 25 12	77, 94, 118, 128	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
43	BU	102/110 (92%)	0.62	9 (8%) 10 4	75, 99, 149, 163	0
43	DU	102/110 (92%)	1.53	30 (29%) 0 0	93, 118, 160, 182	0
44	BV	175/206 (84%)	1.89	62 (35%) 0 0	97, 131, 195, 201	0
44	DV	179/206 (86%)	1.72	57 (31%) 0 0	118, 157, 213, 219	0
45	B3	76/85 (89%)	0.30	1 (1%) 77 59	69, 85, 101, 140	0
45	D3	77/85 (90%)	0.24	2 (2%) 56 33	74, 95, 111, 151	0
46	BZ	97/98 (98%)	1.04	11 (11%) 5 2	65, 85, 132, 164	0
46	DZ	97/98 (98%)	-0.20	0 100 100	67, 91, 135, 157	0
47	BW	66/72 (91%)	0.23	1 (1%) 73 54	70, 87, 108, 132	0
47	DW	69/72 (95%)	0.51	4 (5%) 23 10	90, 112, 133, 164	0
48	BX	59/60 (98%)	0.25	4 (6%) 17 7	73, 86, 121, 137	0
48	DX	59/60 (98%)	0.74	6 (10%) 6 2	79, 102, 144, 162	0
49	B4	66/71 (92%)	2.76	42 (63%) 0 0	122, 158, 180, 186	0
49	D4	63/71 (88%)	2.48	38 (60%) 0 0	154, 187, 197, 205	0
50	B5	59/60 (98%)	0.59	9 (15%) 2 1	57, 90, 166, 172	0
50	D5	59/60 (98%)	0.62	7 (11%) 4 2	68, 91, 178, 192	0
51	B6	45/54 (83%)	9.22	45 (100%) 0 0	128, 153, 163, 164	0
51	D6	45/54 (83%)	4.96	42 (93%) 0 0	138, 164, 181, 183	0
52	B7	49/49 (100%)	0.05	2 (4%) 37 18	55, 61, 92, 120	0
52	D7	49/49 (100%)	0.12	1 (2%) 65 44	63, 70, 107, 130	0
53	B8	61/65 (93%)	0.38	3 (4%) 29 14	66, 81, 98, 124	0
53	D8	61/65 (93%)	0.42	0 100 100	73, 87, 106, 121	0
All	All	20927/21444 (97%)	-0.01	1055 (5%) 28 13	53, 106, 186, 251	0

All (1055) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
51	B6	16	CYS	21.4
44	DV	143	GLY	18.4
51	B6	15	GLU	17.4
34	DO	150	ALA	16.1
51	B6	43	CYS	15.5
24	DA	654(K)	C	15.0
51	B6	19	ARG	15.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
51	B6	50	ARG	14.4
51	B6	42	TRP	14.4
51	B6	18	ARG	13.9
51	B6	52	VAL	13.8
51	B6	49	HIS	13.8
51	B6	26	ASN	13.8
51	D6	13	CYS	13.2
24	DA	654(J)	A	13.1
51	B6	53	LYS	12.6
50	D5	60	VAL	12.2
46	BZ	98	LEU	12.1
44	DV	142	SER	11.9
51	B6	22	ALA	11.9
51	B6	21	TYR	11.8
51	B6	14	THR	11.6
51	B6	51	GLU	11.5
34	DO	149	GLU	11.3
50	D5	59	GLU	11.2
40	B2	36	PRO	11.2
51	B6	17	LYS	10.4
24	BA	2900	A	10.3
51	B6	20	ASN	10.2
51	B6	34	LEU	10.1
51	B6	13	CYS	10.0
51	D6	14	THR	10.0
51	B6	48	VAL	9.9
51	D6	9	LEU	9.8
44	BV	161	VAL	9.6
49	D4	40	HIS	9.6
24	DA	654(L)	G	9.6
51	B6	35	GLU	9.3
44	BV	1	MET	9.2
24	BA	2901	C	9.1
11	AN	11	LYS	8.9
51	D6	50	ARG	8.9
50	D5	58	LEU	8.9
51	B6	44	ARG	8.8
24	BA	654(K)	C	8.7
49	D4	42	PHE	8.7
51	D6	22	ALA	8.7
24	DA	2901	C	8.6
51	D6	18	ARG	8.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
51	B6	47	THR	8.5
51	B6	12	GLU	8.3
44	DV	107	THR	8.3
30	DH	33	LEU	8.2
24	BA	1	G	8.1
50	B5	60	VAL	8.0
24	BA	2902	C	8.0
51	D6	52	VAL	7.8
51	D6	43	CYS	7.7
28	DF	1	MET	7.7
51	B6	9	LEU	7.7
24	BA	4	C	7.6
29	BG	2	PRO	7.6
51	B6	36	LEU	7.5
41	BS	113	LYS	7.5
51	D6	21	TYR	7.5
11	AN	12	ARG	7.4
45	D3	85	ALA	7.4
49	B4	30	GLU	7.4
51	B6	41	PRO	7.4
24	BA	2899	G	7.4
51	D6	20	ASN	7.3
28	DF	208	GLY	7.2
51	B6	31	PRO	7.1
29	BG	182	LYS	7.1
24	BA	2	G	7.1
34	BO	149	GLU	7.0
41	DS	113	LYS	7.0
30	DH	43	VAL	7.0
51	B6	28	ARG	7.0
46	BZ	97	LEU	6.9
28	DF	25	PRO	6.9
28	DF	23	ASP	6.9
44	BV	142	SER	6.8
37	BQ	108	GLY	6.8
49	D4	41	PRO	6.7
44	BV	149	SER	6.7
51	B6	40	CYS	6.6
44	DV	112	ARG	6.6
24	DA	654(I)	C	6.6
24	BA	163	U	6.6
43	DU	55	TYR	6.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
45	B3	85	ALA	6.5
49	D4	24	THR	6.5
34	BO	150	ALA	6.5
51	B6	32	ASN	6.3
51	B6	29	ASN	6.3
2	CE	68	ILE	6.2
24	DA	2899	G	6.2
51	D6	12	GLU	6.2
51	B6	23	THR	6.2
44	BV	145	GLU	6.1
51	B6	46	HIS	6.1
44	BV	148	ASP	6.1
43	BU	99	CYS	6.0
2	CE	5	ILE	6.0
50	B5	59	GLU	6.0
51	B6	33	LYS	6.0
12	CO	127	GLU	6.0
46	BZ	96	LYS	6.0
51	D6	46	HIS	6.0
49	B4	28	LYS	5.9
30	BH	3	ARG	5.9
49	B4	12	ALA	5.9
7	AJ	86	GLN	5.9
44	DV	141	VAL	5.8
12	CO	128	ALA	5.8
44	DV	149	SER	5.8
30	DH	24	VAL	5.8
49	D4	63	TYR	5.7
51	B6	25	LYS	5.7
44	BV	113	ALA	5.7
49	B4	22	ILE	5.7
24	DA	654(F)	C	5.7
51	D6	26	ASN	5.7
2	CE	4	GLU	5.7
49	D4	47	GLN	5.7
24	DA	654(M)	C	5.6
49	B4	38	LYS	5.6
30	DH	25	LYS	5.6
51	D6	25	LYS	5.6
44	DV	138	GLU	5.6
40	D2	101	GLY	5.5
49	D4	10	VAL	5.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
51	B6	10	LEU	5.5
44	BV	166	SER	5.4
49	B4	34	GLU	5.4
51	D6	45	LYS	5.4
3	AF	201	TYR	5.4
12	AO	129	ALA	5.4
43	DU	53	PRO	5.4
51	D6	42	TRP	5.4
49	B4	31	ILE	5.3
44	BV	112	ARG	5.3
51	B6	11	LEU	5.3
51	B6	27	LYS	5.3
13	CP	6	GLY	5.3
49	B4	24	THR	5.3
51	D6	40	CYS	5.3
30	DH	26	VAL	5.3
4	CG	156	GLU	5.3
43	DU	86	ARG	5.3
24	DA	654(N)	G	5.3
51	B6	45	LYS	5.3
2	CE	163	PHE	5.3
51	D6	23	THR	5.2
30	DH	29	PRO	5.1
40	D2	34	GLU	5.1
44	BV	144	LEU	5.1
43	DU	79	CYS	5.1
49	B4	9	LEU	5.1
17	CT	101	ARG	5.1
51	D6	51	GLU	5.0
44	BV	2	GLU	5.0
24	BA	2799	A	4.9
12	CO	129	ALA	4.9
49	B4	25	TYR	4.9
43	DU	62	GLU	4.9
2	CE	240	GLN	4.8
44	BV	38	TYR	4.8
49	B4	64	GLY	4.8
30	DH	51	ARG	4.8
18	AU	88	LYS	4.8
24	BA	2898	U	4.8
34	DO	118	GLY	4.8
32	BM	131	GLN	4.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
51	D6	49	HIS	4.8
30	DH	96	ALA	4.8
51	D6	39	TYR	4.8
3	CF	207	VAL	4.7
40	B2	45	THR	4.7
49	B4	19	GLY	4.7
4	CG	32	ALA	4.7
4	CG	152	SER	4.7
34	DO	110	TYR	4.7
47	BW	43	GLN	4.7
44	BV	141	VAL	4.6
49	B4	13	ARG	4.6
37	BQ	110	LEU	4.6
49	B4	27	THR	4.6
30	DH	115	VAL	4.6
44	DV	151	HIS	4.6
37	BQ	59	LYS	4.6
35	DP	104	PHE	4.5
40	D2	1	MET	4.5
24	DA	4	C	4.5
2	AE	63	MET	4.5
44	BV	140	ASP	4.5
30	DH	99	VAL	4.5
24	DA	654(G)	C	4.5
29	BG	63	ILE	4.5
22	AD	17(A)	C	4.5
3	CF	65	ALA	4.5
43	DU	92	ASN	4.5
28	DF	24	LEU	4.5
24	BA	654(L)	G	4.5
24	DA	654(H)	G	4.5
43	BU	50	ARG	4.5
2	CE	232	PRO	4.5
37	DQ	108	GLY	4.5
51	D6	41	PRO	4.5
44	BV	143	GLY	4.4
49	D4	28	LYS	4.4
24	DA	2902	C	4.4
49	D4	46	GLN	4.4
49	B4	52	THR	4.4
28	DF	10	PRO	4.4
11	AN	129	SER	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	BG	118	ARG	4.4
24	DA	654(E)	C	4.4
3	AF	200	ALA	4.4
30	DH	34	GLU	4.4
24	DA	654(O)	G	4.3
24	DA	2900	A	4.3
44	DV	9	TYR	4.3
20	CW	98	PRO	4.3
49	B4	14	ILE	4.3
4	CG	166	LYS	4.3
3	CF	87	LEU	4.3
44	DV	150	LEU	4.3
27	DE	204	ALA	4.3
27	DE	205	ALA	4.3
2	AE	4	GLU	4.3
46	BZ	89	GLU	4.3
11	AN	81	ASP	4.2
44	BV	98	MET	4.2
51	D6	29	ASN	4.2
51	D6	27	LYS	4.2
10	CM	64	GLU	4.2
49	B4	29	PRO	4.2
34	DO	148	LEU	4.2
2	CE	67	THR	4.2
3	CF	53	ALA	4.2
24	DA	1535	U	4.2
2	CE	150	SER	4.2
44	DV	144	LEU	4.2
1	CA	1029	G	4.2
49	B4	32	TYR	4.2
11	AN	16	SER	4.2
44	DV	153	SER	4.2
49	D4	9	LEU	4.2
24	BA	5	A	4.2
3	CF	135	LYS	4.2
45	D3	84	LEU	4.2
51	D6	24	GLU	4.1
2	CE	70	PHE	4.1
49	B4	15	ILE	4.1
51	D6	31	PRO	4.1
2	CE	231	GLU	4.1
3	CF	199	LYS	4.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
44	DV	115	GLY	4.0
29	BG	137	GLU	4.0
24	BA	3	U	4.0
24	DA	2799	A	4.0
30	DH	42	ARG	4.0
12	CO	62	SER	4.0
44	BV	3	TYR	4.0
3	CF	143	GLU	4.0
24	BA	2798	C	4.0
34	DO	92	GLU	4.0
49	D4	29	PRO	4.0
30	DH	21	PRO	3.9
34	DO	124	LYS	3.9
31	BK	12	LEU	3.9
47	DW	43	GLN	3.9
24	DA	654(P)	G	3.9
44	BV	111	VAL	3.9
29	DG	139	LEU	3.9
43	DU	58	GLY	3.9
24	BA	654(H)	G	3.9
41	BS	111	HIS	3.8
44	BV	4	ARG	3.8
39	B1	117	GLN	3.8
14	CQ	39	LEU	3.8
44	BV	86	VAL	3.8
51	D6	53	LYS	3.8
52	B7	49	ARG	3.8
51	D6	10	LEU	3.8
3	CF	56	ASP	3.8
51	D6	16	CYS	3.8
40	D2	36	PRO	3.8
42	DT	92	LEU	3.8
49	D4	45	GLY	3.8
30	DH	18	GLU	3.8
28	DF	11	VAL	3.8
49	D4	39	CYS	3.8
44	BV	67	LEU	3.8
2	AE	232	PRO	3.8
49	B4	4	GLY	3.8
43	DU	46	LYS	3.8
50	B5	58	LEU	3.8
2	CE	6	THR	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	CF	91	LEU	3.8
39	B1	118	GLY	3.7
6	AI	55	ASP	3.7
24	DA	1177	A	3.7
44	BV	66	SER	3.7
29	BG	136	ARG	3.7
24	BA	654(J)	A	3.7
35	BP	104	PHE	3.7
24	BA	1536	A	3.7
44	BV	162	GLU	3.7
34	DO	95	VAL	3.7
50	D5	55	ARG	3.7
31	BK	73	GLU	3.7
34	DO	94	GLU	3.7
29	BG	23	PHE	3.7
44	BV	153	SER	3.7
24	DA	2797	U	3.7
44	DV	145	GLU	3.7
53	B8	34	TRP	3.7
3	CF	44	GLU	3.7
29	BG	181	ARG	3.7
2	CE	230	VAL	3.6
7	AJ	85	TYR	3.6
2	AE	231	GLU	3.6
48	BX	60	GLU	3.6
49	B4	16	CYS	3.6
44	DV	5	LEU	3.6
2	CE	220	ASP	3.6
29	DG	137	GLU	3.6
44	BV	152	ALA	3.6
34	BO	124	LYS	3.6
19	CV	49	ILE	3.6
44	BV	99	TYR	3.6
43	DU	45	VAL	3.6
44	BV	60	GLU	3.6
47	DW	72	ALA	3.6
2	CE	233	SER	3.6
38	BR	134	GLU	3.6
3	AF	60	ALA	3.6
44	DV	88	PHE	3.5
24	DA	654(Q)	C	3.5
24	DA	654(R)	C	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
44	BV	165	VAL	3.5
43	DU	29	GLU	3.5
51	B6	39	TYR	3.5
2	CE	234	PRO	3.5
43	DU	102	CYS	3.5
30	DH	84	SER	3.5
29	BG	14	GLU	3.5
44	BV	96	VAL	3.5
10	CM	10	GLY	3.5
43	DU	47	LYS	3.5
44	DV	155	LEU	3.5
35	DP	66	ILE	3.5
43	DU	5	MET	3.5
43	DU	50	ARG	3.5
44	DV	148	ASP	3.5
49	D4	7	PRO	3.5
34	BO	95	VAL	3.5
13	AP	6	GLY	3.5
50	B5	54	GLY	3.5
51	B6	24	GLU	3.5
12	CO	19	ARG	3.5
51	D6	19	ARG	3.5
3	CF	177	THR	3.4
30	DH	37	VAL	3.4
30	DH	19	VAL	3.4
51	D6	36	LEU	3.4
44	BV	70	LEU	3.4
11	AN	36	ASP	3.4
13	CP	3	ARG	3.4
44	DV	147	GLY	3.4
9	CL	102	LEU	3.4
34	DO	62	LEU	3.4
29	BG	35	GLU	3.4
44	DV	179	ASP	3.4
10	CM	4	ILE	3.4
12	CO	64	TYR	3.4
29	BG	141	PHE	3.4
43	DU	61	ILE	3.4
3	CF	104	GLN	3.4
46	BZ	92	LYS	3.4
44	BV	155	LEU	3.4
30	DH	124	GLU	3.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	AU	87	ARG	3.4
49	B4	51	ASP	3.3
40	D2	32	THR	3.3
10	CM	6	ILE	3.3
37	BQ	68	GLN	3.3
32	BM	130	HIS	3.3
4	CG	179	GLU	3.3
29	BG	65	GLY	3.3
24	BA	2797	U	3.3
33	BN	122	LEU	3.3
3	CF	103	VAL	3.3
44	BV	28	MET	3.3
30	DH	47	GLU	3.3
30	DH	126	PRO	3.3
44	BV	25	PRO	3.3
49	B4	18	CYS	3.3
10	AM	72	VAL	3.3
6	AI	46	ARG	3.3
51	B6	38	LYS	3.3
51	D6	32	ASN	3.3
7	AJ	58	PRO	3.3
51	D6	28	ARG	3.3
29	DG	108	ASN	3.3
43	DU	54	LYS	3.3
3	AF	79	ARG	3.3
29	BG	59	GLU	3.3
30	DH	31	GLY	3.3
44	DV	106	GLY	3.3
49	B4	40	HIS	3.3
44	BV	163	LEU	3.3
50	D5	51	TYR	3.3
30	DH	52	VAL	3.3
10	CM	89	ASP	3.3
44	BV	85	HIS	3.3
49	D4	13	ARG	3.3
29	BG	147	ASP	3.3
43	DU	88	LYS	3.3
2	CE	115	LEU	3.2
34	DO	126	VAL	3.2
44	DV	1	MET	3.2
37	DQ	57	LYS	3.2
7	AJ	78	ARG	3.2

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Mol	Chain	Res	Type	RSRZ
49	B4	26	SER	3.2
30	BH	27	LYS	3.2
3	AF	135	LYS	3.2
30	DH	20	ALA	3.2
49	B4	7	PRO	3.2
28	DF	176	LEU	3.2
29	BG	152	LEU	3.2
1	CA	1032	A	3.2
44	BV	8	TYR	3.2
49	B4	3	GLU	3.2
3	CF	189	ALA	3.2
51	D6	30	THR	3.2
3	AF	91	LEU	3.1
11	AN	13	GLN	3.1
5	CH	109	ILE	3.1
2	CE	155	LEU	3.1
29	BG	135	LEU	3.1
3	CF	52	LEU	3.1
44	DV	55	HIS	3.1
28	DF	14	PRO	3.1
33	DN	1	MET	3.1
3	CF	184	TYR	3.1
18	AU	19	LYS	3.1
43	BU	82	PRO	3.1
44	BV	88	PHE	3.1
28	BF	17	ARG	3.1
3	CF	39	ILE	3.1
7	AJ	55	GLY	3.1
9	CL	59	PHE	3.1
44	BV	55	HIS	3.1
3	CF	190	ARG	3.1
30	DH	45	VAL	3.1
30	DH	114	VAL	3.1
44	DV	168	GLU	3.1
51	D6	35	GLU	3.1
3	CF	60	ALA	3.1
4	CG	157	LEU	3.1
30	DH	103	LEU	3.1
11	AN	18	ARG	3.1
44	BV	110	GLY	3.1
10	CM	67	THR	3.1
29	BG	107	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
6	AI	89	MET	3.1
44	BV	117	LEU	3.1
29	BG	25	TYR	3.1
3	AF	80	GLY	3.1
2	CE	9	GLU	3.1
34	BO	94	GLU	3.1
13	AP	3	ARG	3.1
4	CG	169	LYS	3.0
49	D4	31	ILE	3.0
30	DH	46	GLU	3.0
10	CM	85	LEU	3.0
24	BA	654(F)	C	3.0
29	DG	39	ILE	3.0
29	DG	41	GLN	3.0
2	CE	152	PHE	3.0
12	CO	21	LYS	3.0
14	CQ	50	LYS	3.0
10	CM	96	ILE	3.0
44	DV	162	GLU	3.0
48	BX	56	VAL	3.0
34	DO	138	LEU	3.0
49	D4	6	HIS	3.0
3	CF	198	VAL	3.0
50	B5	57	VAL	3.0
10	CM	47	PHE	3.0
29	DG	178	PHE	3.0
10	AM	98	ILE	3.0
4	CG	170	VAL	3.0
49	D4	55	ARG	3.0
29	BG	164	GLU	3.0
12	CO	126	LYS	3.0
2	AE	96	ARG	3.0
29	BG	64	THR	3.0
30	DH	104	GLU	3.0
24	BA	654(I)	C	3.0
3	CF	200	ALA	3.0
34	DO	108	LYS	3.0
29	BG	60	LEU	3.0
1	AA	86	U	3.0
24	DA	2898	U	3.0
49	D4	32	TYR	3.0
7	AJ	62	PHE	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	AE	227	GLY	3.0
3	CF	167	TRP	3.0
24	BA	654(Q)	C	3.0
3	CF	183	ASP	3.0
3	CF	126	ARG	3.0
10	AM	6	ILE	3.0
24	DA	3	U	3.0
27	DE	54	GLN	3.0
3	CF	77	ILE	2.9
44	DV	134	PRO	2.9
46	BZ	82	LEU	2.9
24	DA	654(D)	G	2.9
44	BV	104	PHE	2.9
3	CF	13	GLY	2.9
30	DH	106	THR	2.9
44	DV	156	LYS	2.9
29	DG	92	VAL	2.9
38	DR	1	MET	2.9
30	DH	17	VAL	2.9
44	DV	28	MET	2.9
3	CF	110	ASN	2.9
44	BV	150	LEU	2.9
49	D4	8	LYS	2.9
11	AN	98	LEU	2.9
10	AM	5	ARG	2.9
28	DF	133	ASN	2.9
52	D7	49	ARG	2.9
13	CP	4	ILE	2.9
14	CQ	6	LEU	2.9
34	DO	106	LEU	2.9
49	B4	39	CYS	2.9
3	CF	187	ALA	2.9
35	DP	130	LYS	2.9
3	CF	155	GLY	2.9
28	DF	192	LEU	2.9
11	AN	19	ALA	2.9
29	BG	142	PRO	2.9
24	DA	654	A	2.9
40	D2	5	VAL	2.9
49	B4	21	VAL	2.9
49	D4	44	THR	2.9
29	BG	146	TYR	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	CF	6	HIS	2.9
29	BG	100	TRP	2.9
19	CV	43	GLU	2.9
49	D4	4	GLY	2.9
3	CF	188	LEU	2.8
24	BA	2793	G	2.8
49	B4	10	VAL	2.8
37	BQ	86	ALA	2.8
1	AA	85	U	2.8
49	B4	23	GLU	2.8
9	AL	19	LEU	2.8
4	CG	198	VAL	2.8
4	CG	25	ARG	2.8
2	AE	228	GLY	2.8
30	DH	44	VAL	2.8
29	BG	102	PHE	2.8
31	BK	79	ILE	2.8
34	DO	137	LYS	2.8
11	AN	83	ILE	2.8
40	D2	15	GLU	2.8
44	BV	32	HIS	2.8
3	CF	118	GLN	2.8
3	CF	102	ASN	2.8
35	BP	33	GLY	2.8
16	CS	19	ILE	2.8
49	D4	5	ILE	2.8
37	BQ	24	LEU	2.8
43	DU	49	VAL	2.8
41	DS	112	GLY	2.8
2	AE	122	PHE	2.8
43	DU	60	PHE	2.8
4	CG	24	GLU	2.8
29	BG	34	LEU	2.8
29	DG	28	VAL	2.8
31	BK	146	ALA	2.8
4	CG	35	ARG	2.8
34	DO	88	LEU	2.8
3	CF	186	PHE	2.8
17	CT	7	THR	2.8
37	BQ	111	GLU	2.7
6	AI	1	MET	2.7
18	CU	42	ARG	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
24	BA	546	C	2.7
44	DV	48	PHE	2.7
37	BQ	107	GLU	2.7
10	CM	8	LEU	2.7
37	BQ	60	GLY	2.7
30	DH	83	TYR	2.7
51	D6	48	VAL	2.7
19	CV	79	THR	2.7
26	DD	26	LYS	2.7
2	CE	112	VAL	2.7
3	AF	90	GLU	2.7
7	AJ	88	PRO	2.7
11	AN	104	GLN	2.7
44	BV	103	ARG	2.7
49	B4	11	PRO	2.7
40	B2	101	GLY	2.7
49	D4	25	TYR	2.7
47	DW	9	GLN	2.7
29	BG	150	ASP	2.7
44	DV	104	PHE	2.7
28	DF	26	ALA	2.7
44	DV	11	GLU	2.7
44	DV	49	ARG	2.7
7	AJ	56	GLN	2.7
50	D5	57	VAL	2.7
2	AE	127	ILE	2.7
16	CS	54	GLU	2.7
40	D2	100	ARG	2.7
44	BV	147	GLY	2.7
35	BP	32	TYR	2.7
43	DU	65	ALA	2.7
26	DD	35	LYS	2.7
44	BV	27	VAL	2.7
27	BE	205	ALA	2.7
8	CK	2	LEU	2.7
47	DW	56	GLN	2.7
34	DO	144	GLU	2.7
32	BM	15	LEU	2.7
40	D2	35	LEU	2.7
44	BV	127	LYS	2.7
2	CE	90	MET	2.7
13	CP	7	VAL	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
24	BA	654(P)	G	2.7
29	BG	149	VAL	2.7
49	D4	37	SER	2.6
49	D4	43	TYR	2.6
44	DV	140	ASP	2.6
48	DX	39	ASP	2.6
44	DV	139	VAL	2.6
44	DV	8	TYR	2.6
28	DF	194	MET	2.6
3	CF	7	PRO	2.6
24	DA	5	A	2.6
14	CQ	53	LEU	2.6
2	CE	97	TRP	2.6
7	AJ	80	VAL	2.6
7	AJ	87	VAL	2.6
37	BQ	109	GLY	2.6
51	D6	34	LEU	2.6
28	DF	172	TRP	2.6
3	CF	78	GLY	2.6
7	AJ	17	VAL	2.6
24	DA	2	G	2.6
34	DO	1	MET	2.6
30	DH	105	LEU	2.6
43	DU	35	TYR	2.6
7	AJ	153	HIS	2.6
4	CG	67	ILE	2.6
42	BT	92	LEU	2.6
51	D6	47	THR	2.6
1	CA	1450	U	2.6
7	AJ	11	GLN	2.6
40	D2	38	LEU	2.6
52	B7	48	LYS	2.6
44	DV	44	PHE	2.6
44	BV	74	VAL	2.6
10	AM	22	LYS	2.6
22	AD	47	U	2.6
38	BR	1	MET	2.6
12	CO	37	CYS	2.6
27	BE	67	PHE	2.6
29	BG	108	ASN	2.6
3	AF	151	VAL	2.6
26	BD	173	VAL	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	DH	81	GLU	2.6
30	DH	93	GLY	2.6
40	D2	14	VAL	2.6
44	DV	68	PRO	2.6
24	DA	229	A	2.6
28	DF	20	LEU	2.6
50	B5	55	ARG	2.6
11	AN	50	TYR	2.6
2	AE	81	VAL	2.6
49	D4	20	ASN	2.6
34	DO	147	LEU	2.6
48	DX	26	LEU	2.6
48	DX	44	ARG	2.6
25	BB	1(M)	A	2.6
3	CF	201	TYR	2.6
7	AJ	63	LYS	2.6
17	AT	17	LYS	2.6
28	DF	179	GLU	2.6
29	DG	37	VAL	2.6
29	DG	155	MET	2.6
37	DQ	32	LEU	2.6
3	AF	199	LYS	2.5
12	CO	28	LYS	2.5
24	BA	164	U	2.5
51	D6	44	ARG	2.5
51	D6	11	LEU	2.5
44	BV	9	TYR	2.5
4	CG	64	LEU	2.5
2	CE	200	ILE	2.5
49	B4	8	LYS	2.5
5	CH	8	GLU	2.5
30	DH	32	GLU	2.5
10	AM	10	GLY	2.5
44	DV	165	VAL	2.5
6	AI	9	VAL	2.5
34	DO	125	VAL	2.5
2	AE	59	GLU	2.5
31	BK	66	GLU	2.5
44	DV	38	TYR	2.5
24	BA	654(R)	C	2.5
18	AU	42	ARG	2.5
42	DT	90	GLU	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
44	BV	151	HIS	2.5
49	B4	43	TYR	2.5
31	BK	76	THR	2.5
49	D4	36	CYS	2.5
5	CH	133	TYR	2.5
29	DG	142	PRO	2.5
24	BA	2167	U	2.5
28	BF	156	LEU	2.5
44	DV	163	LEU	2.5
51	B6	37	ARG	2.5
3	CF	151	VAL	2.5
27	DE	59	VAL	2.5
40	D2	96	ILE	2.5
3	CF	86	VAL	2.5
11	AN	82	VAL	2.5
19	CV	31	ILE	2.5
51	B6	30	THR	2.5
34	DO	89	ALA	2.5
2	AE	234	PRO	2.5
3	AF	150	LYS	2.5
49	B4	42	PHE	2.5
7	AJ	120	ILE	2.5
24	BA	277	C	2.5
4	CG	168	ARG	2.5
44	DV	60	GLU	2.5
49	D4	30	GLU	2.5
3	CF	51	GLY	2.5
10	CM	100	THR	2.5
44	BV	170	THR	2.5
46	BZ	95	LEU	2.5
49	B4	33	VAL	2.5
3	CF	57	ILE	2.5
31	BK	125	GLU	2.5
3	CF	74	GLY	2.4
44	BV	5	LEU	2.4
44	DV	12	GLY	2.4
53	B8	23	VAL	2.4
3	AF	168	ALA	2.4
31	BK	139	GLN	2.4
13	AP	8	GLU	2.4
30	DH	30	LYS	2.4
5	CH	43	LEU	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
9	CL	115	GLY	2.4
2	CE	218	ALA	2.4
40	D2	27	ALA	2.4
28	BF	8	GLN	2.4
51	D6	15	GLU	2.4
3	CF	62	ASP	2.4
26	BD	167	GLY	2.4
31	BK	140	LEU	2.4
49	D4	35	VAL	2.4
3	AF	189	ALA	2.4
48	DX	60	GLU	2.4
5	CH	12	LEU	2.4
29	BG	168	GLU	2.4
2	CE	66	GLY	2.4
14	CQ	25	VAL	2.4
29	BG	140	ILE	2.4
43	DU	31	LEU	2.4
43	DU	90	LEU	2.4
43	DU	63	LYS	2.4
2	CE	87	ARG	2.4
6	AI	47	ARG	2.4
43	DU	85	VAL	2.4
3	AF	149	ALA	2.4
34	DO	90	ARG	2.4
44	BV	173	ALA	2.4
2	AE	148	TYR	2.4
43	BU	2	ARG	2.4
29	DG	97	ASP	2.4
2	CE	154	LEU	2.4
12	CO	27	LEU	2.4
27	BE	52	LEU	2.4
34	DO	105	LEU	2.4
40	B2	38	LEU	2.4
30	BH	17	VAL	2.4
31	BK	7	GLU	2.4
12	CO	54	LYS	2.4
31	BK	13	GLY	2.4
14	CQ	26	ARG	2.4
3	AF	166	GLU	2.4
18	CU	88	LYS	2.4
29	BG	30	GLU	2.4
31	BK	117	GLU	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	CE	201	ILE	2.4
3	AF	169	ALA	2.4
11	AN	75	TYR	2.4
30	DH	76	VAL	2.3
30	DH	125	VAL	2.3
44	BV	105	VAL	2.3
29	DG	182	LYS	2.3
28	DF	166	ALA	2.3
4	CG	21	LEU	2.3
44	BV	53	ILE	2.3
35	DP	33	GLY	2.3
37	BQ	81	GLY	2.3
31	BK	54	GLN	2.3
7	AJ	72	ARG	2.3
18	AU	28	GLU	2.3
42	BT	90	GLU	2.3
20	CW	106	ALA	2.3
43	DU	44	ILE	2.3
48	BX	2	PRO	2.3
31	BK	141	LYS	2.3
49	D4	34	GLU	2.3
28	DF	12	LEU	2.3
49	B4	5	ILE	2.3
43	BU	81	LYS	2.3
48	BX	59	VAL	2.3
48	DX	2	PRO	2.3
6	AI	3	ARG	2.3
28	DF	175	THR	2.3
43	BU	83	THR	2.3
26	DD	38	LYS	2.3
50	B5	49	CYS	2.3
44	DV	37	VAL	2.3
24	BA	2795	G	2.3
49	B4	54	GLY	2.3
8	CK	46	LYS	2.3
34	DO	120	ALA	2.3
18	AU	81	PHE	2.3
29	DG	152	LEU	2.3
35	BP	65	PHE	2.3
19	CV	35	SER	2.3
44	DV	91	LEU	2.3
11	AN	80	VAL	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
14	CQ	41	ARG	2.3
49	D4	50	VAL	2.3
6	AI	54	LYS	2.3
46	BZ	93	GLU	2.3
10	CM	59	SER	2.3
27	BE	183	LEU	2.3
41	BS	69	LEU	2.3
42	DT	13	LEU	2.3
2	CE	217	ARG	2.3
51	D6	37	ARG	2.3
44	DV	154	ASP	2.3
18	AU	31	LEU	2.3
44	DV	159	PRO	2.3
24	BA	276	A	2.3
24	BA	654(T)	A	2.3
46	BZ	90	ILE	2.3
6	AI	53	ALA	2.3
8	CK	64	LYS	2.3
28	DF	2	LYS	2.3
37	DQ	33	LYS	2.3
8	CK	22	GLU	2.3
27	BE	71	GLY	2.3
36	B0	118	GLU	2.3
49	D4	52	THR	2.3
10	CM	65	LEU	2.3
50	B5	3	LYS	2.3
2	CE	89	GLY	2.2
38	BR	130	ALA	2.3
4	CG	176	LEU	2.2
29	BG	145	THR	2.2
44	BV	123	ASP	2.2
5	CH	11	ILE	2.2
30	BH	21	PRO	2.2
35	DP	64	ILE	2.2
50	B5	56	LYS	2.2
19	AV	61	TYR	2.2
44	BV	116	VAL	2.2
40	B2	54	GLY	2.2
1	CA	85	U	2.2
29	BG	39	ILE	2.2
12	CO	26	ALA	2.2
50	D5	2	ALA	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
44	BV	146	ILE	2.2
32	DM	15	LEU	2.2
2	AE	125	PRO	2.2
2	CE	92	TYR	2.2
3	CF	96	GLY	2.2
28	DF	205	ARG	2.2
10	AM	33	GLN	2.2
40	D2	30	GLY	2.2
49	B4	60	GLN	2.2
12	CO	85	ILE	2.2
24	BA	645	C	2.2
28	BF	163	VAL	2.2
30	DH	22	GLY	2.2
2	CE	187	LEU	2.2
29	BG	52	ILE	2.2
35	DP	65	PHE	2.2
46	BZ	60	PHE	2.2
3	CF	58	GLU	2.2
49	D4	23	GLU	2.2
5	CH	65	ASN	2.2
29	BG	112	PRO	2.2
29	BG	106	LEU	2.2
44	DV	69	THR	2.2
7	AJ	156	TRP	2.2
32	BM	61	ARG	2.2
43	BU	54	LYS	2.2
2	CE	129	GLU	2.2
44	BV	160	GLY	2.2
7	AJ	18	TYR	2.2
44	BV	51	ALA	2.2
29	BG	122	PRO	2.2
10	AM	9	ARG	2.2
13	AP	43	THR	2.2
49	B4	48	ARG	2.2
14	CQ	55	GLY	2.2
19	CV	82	GLY	2.2
3	AF	188	LEU	2.2
2	CE	160	ASP	2.2
29	DG	68	PRO	2.2
4	CG	110	PHE	2.2
11	CN	31	THR	2.2
3	CF	64	VAL	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
32	BM	128	HIS	2.2
44	BV	126	VAL	2.2
43	DU	59	GLY	2.2
2	AE	114	ARG	2.2
6	AI	63	TYR	2.2
8	CK	107	LEU	2.2
11	AN	20	TYR	2.2
29	BG	66	GLN	2.2
42	BT	87	GLN	2.2
2	CE	71	VAL	2.2
3	AF	198	VAL	2.2
7	AJ	61	VAL	2.2
10	AM	61	GLU	2.2
27	BE	72	VAL	2.2
30	BH	41	MET	2.2
44	DV	160	GLY	2.2
3	CF	48	TYR	2.2
6	AI	48	LEU	2.2
6	CI	39	LYS	2.2
34	DO	135	LEU	2.2
46	BZ	91	LYS	2.2
11	AN	94	ALA	2.2
24	BA	270(O)	U	2.2
42	BT	28	PHE	2.2
5	CH	82	VAL	2.2
19	CV	27	GLU	2.2
26	BD	171	ASP	2.2
31	BK	138	ILE	2.2
32	BM	53	VAL	2.2
43	BU	52	SER	2.1
1	CA	208	U	2.1
6	AI	52	ILE	2.1
10	CM	73	ASP	2.1
2	CE	110	GLN	2.1
2	CE	162	ILE	2.1
24	DA	2798	C	2.1
29	BG	48	GLU	2.1
30	BH	16	SER	2.1
10	CM	86	MET	2.1
33	DN	36	GLY	2.1
49	B4	17	GLY	2.1
49	D4	51	ASP	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	AE	187	LEU	2.1
27	DE	66	HIS	2.1
40	D2	21	ARG	2.1
43	BU	4	LYS	2.1
3	AF	103	VAL	2.1
28	DF	7	TYR	2.1
2	CE	15	VAL	2.1
6	AI	31	GLU	2.1
30	DH	113	VAL	2.1
44	DV	52	SER	2.1
6	AI	28	ARG	2.1
11	AN	110	ASP	2.1
16	CS	84	ALA	2.1
37	BQ	112	PHE	2.1
26	BD	166	GLN	2.1
49	D4	22	ILE	2.1
3	CF	115	LEU	2.1
35	BP	1	MET	2.1
43	DU	33	LYS	2.1
44	DV	7	ALA	2.1
10	AM	95	GLU	2.1
44	DV	51	ALA	2.1
3	CF	98	ASN	2.1
4	CG	186	LEU	2.1
7	AJ	53	LYS	2.1
27	BE	3	GLY	2.1
44	DV	122	ARG	2.1
49	B4	63	TYR	2.1
2	AE	116	GLU	2.1
11	AN	14	VAL	2.1
3	AF	107	GLN	2.1
38	BR	6	LEU	2.1
40	D2	45	THR	2.1
44	DV	178	GLU	2.1
4	CG	187	ARG	2.1
5	CH	34	VAL	2.1
2	CE	41	ILE	2.1
37	DQ	109	GLY	2.1
44	BV	154	ASP	2.1
48	DX	28	LEU	2.1
4	CG	165	MET	2.1
42	DT	93	GLU	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
6	AI	88	VAL	2.1
13	CP	2	ALA	2.1
31	BK	8	PRO	2.1
34	DO	100	LEU	2.1
2	CE	146	GLN	2.0
32	BM	8	GLN	2.0
11	CN	12	ARG	2.0
27	BE	61	ARG	2.0
37	BQ	57	LYS	2.0
49	D4	18	CYS	2.0
9	AL	36	TYR	2.0
14	CQ	56	VAL	2.0
19	CV	61	TYR	2.0
29	BG	93	THR	2.0
43	DU	24	VAL	2.0
34	DO	130	PHE	2.0
44	DV	6	LYS	2.0
13	CP	5	ALA	2.0
28	DF	22	ALA	2.0
26	DD	5	LYS	2.0
29	BG	178	PHE	2.0
2	CE	216	SER	2.0
32	BM	13	TRP	2.0
44	DV	54	HIS	2.0
3	CF	152	ILE	2.0
5	AH	89	ILE	2.0
29	BG	88	ILE	2.0
49	D4	12	ALA	2.0
24	BA	1534	G	2.0
43	DU	6	HIS	2.0
44	DV	63	ASP	2.0
38	BR	135	ALA	2.0
42	DT	28	PHE	2.0
24	BA	165	U	2.0
53	B8	35	GLN	2.0
19	AV	3	ARG	2.0
30	DH	16	SER	2.0
39	B1	104	GLN	2.0
26	BD	168	ARG	2.0
44	DV	27	VAL	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 monosaccharides in this entry.

## 6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	AA	1722	1/1	0.24	0.34	96,96,96,96	0
54	MG	DA	3250	1/1	0.26	0.33	105,105,105,105	0
54	MG	CA	1798	1/1	0.31	0.21	115,115,115,115	0
54	MG	CA	1787	1/1	0.31	0.35	136,136,136,136	0
54	MG	DA	3296	1/1	0.31	0.20	104,104,104,104	0
54	MG	AC	105	1/1	0.32	0.23	100,100,100,100	0
54	MG	DA	3500	1/1	0.36	0.18	98,98,98,98	0
54	MG	DA	3446	1/1	0.39	0.19	99,99,99,99	0
54	MG	BA	3091	1/1	0.39	0.33	128,128,128,128	0
54	MG	DA	3086	1/1	0.41	0.24	109,109,109,109	0
54	MG	DA	3117	1/1	0.41	0.26	102,102,102,102	0
54	MG	B8	101	1/1	0.43	0.28	91,91,91,91	0
54	MG	AA	1675	1/1	0.46	0.37	112,112,112,112	0
54	MG	DA	3025	1/1	0.46	0.17	91,91,91,91	0
54	MG	CA	1732	1/1	0.48	0.31	108,108,108,108	0
54	MG	AA	1614	1/1	0.48	0.17	132,132,132,132	0
54	MG	BA	3510	1/1	0.49	0.51	97,97,97,97	0
54	MG	BA	3288	1/1	0.50	0.41	115,115,115,115	0
54	MG	BA	3468	1/1	0.50	0.28	99,99,99,99	0
54	MG	DA	3432	1/1	0.52	0.23	102,102,102,102	0
54	MG	CA	1755	1/1	0.52	0.23	104,104,104,104	0
54	MG	BA	3509	1/1	0.52	0.76	102,102,102,102	0
54	MG	AA	1743	1/1	0.54	0.24	100,100,100,100	0
54	MG	CA	1684	1/1	0.54	0.21	91,91,91,91	0
54	MG	CA	1709	1/1	0.54	0.24	97,97,97,97	0
54	MG	AA	1717	1/1	0.55	0.28	87,87,87,87	0
54	MG	DA	3353	1/1	0.55	0.28	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	CA	1781	1/1	0.55	0.25	148,148,148,148	0
54	MG	BA	3464	1/1	0.55	0.36	101,101,101,101	0
54	MG	CA	1658	1/1	0.55	0.24	104,104,104,104	0
54	MG	DA	3439	1/1	0.56	0.13	95,95,95,95	0
54	MG	BA	3447	1/1	0.57	0.29	83,83,83,83	0
54	MG	BA	3280	1/1	0.58	0.32	106,106,106,106	0
54	MG	BA	3438	1/1	0.58	0.22	90,90,90,90	0
54	MG	DA	3357	1/1	0.59	0.12	123,123,123,123	0
54	MG	DA	3406	1/1	0.59	0.29	113,113,113,113	0
54	MG	DA	3002	1/1	0.59	0.16	87,87,87,87	0
54	MG	DB	212	1/1	0.59	0.21	101,101,101,101	0
54	MG	DA	3042	1/1	0.60	0.19	78,78,78,78	0
54	MG	CA	1618	1/1	0.60	0.19	108,108,108,108	0
54	MG	CA	1785	1/1	0.60	0.48	101,101,101,101	0
54	MG	DA	3391	1/1	0.60	0.22	107,107,107,107	0
54	MG	BA	3418	1/1	0.60	0.39	104,104,104,104	0
54	MG	CA	1676	1/1	0.61	0.20	90,90,90,90	0
54	MG	AA	1709	1/1	0.61	0.20	106,106,106,106	0
54	MG	AA	1836	1/1	0.61	0.16	91,91,91,91	0
54	MG	BA	3231	1/1	0.61	0.21	89,89,89,89	0
54	MG	DA	3370	1/1	0.61	0.40	87,87,87,87	0
54	MG	CA	1739	1/1	0.61	0.26	120,120,120,120	0
54	MG	BA	3456	1/1	0.62	0.13	225,225,225,225	0
54	MG	AA	1818	1/1	0.62	0.53	121,121,121,121	0
54	MG	DA	3040	1/1	0.62	0.16	103,103,103,103	0
54	MG	DA	3017	1/1	0.63	0.34	105,105,105,105	0
54	MG	CA	1697	1/1	0.63	0.30	95,95,95,95	0
54	MG	AA	1816	1/1	0.64	0.36	93,93,93,93	0
54	MG	AA	1612	1/1	0.64	0.19	131,131,131,131	0
54	MG	CA	1715	1/1	0.64	0.21	102,102,102,102	0
54	MG	DA	3149	1/1	0.64	0.24	79,79,79,79	0
54	MG	BA	3289	1/1	0.64	0.32	94,94,94,94	0
54	MG	CA	1660	1/1	0.64	0.15	101,101,101,101	0
54	MG	BA	3341	1/1	0.64	0.21	67,67,67,67	0
54	MG	BA	3531	1/1	0.64	0.31	83,83,83,83	0
54	MG	DA	3517	1/1	0.65	0.39	80,80,80,80	0
54	MG	BA	3519	1/1	0.65	0.38	115,115,115,115	0
54	MG	AA	1700	1/1	0.66	0.20	84,84,84,84	0
54	MG	BA	3522	1/1	0.66	0.46	100,100,100,100	0
54	MG	AA	1637	1/1	0.66	0.33	122,122,122,122	0
54	MG	BA	3149	1/1	0.66	0.27	91,91,91,91	0
54	MG	CA	1602	1/1	0.66	0.18	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	DA	3281	1/1	0.66	0.19	92,92,92,92	0
54	MG	BA	3481	1/1	0.66	0.20	79,79,79,79	0
54	MG	BA	3163	1/1	0.66	0.29	94,94,94,94	0
54	MG	BA	3453	1/1	0.66	0.17	78,78,78,78	0
54	MG	DB	214	1/1	0.66	0.12	101,101,101,101	0
54	MG	BA	3114	1/1	0.67	0.16	98,98,98,98	0
54	MG	CA	1639	1/1	0.67	0.18	95,95,95,95	0
54	MG	AA	1773	1/1	0.67	0.42	125,125,125,125	0
54	MG	AA	1785	1/1	0.67	0.32	146,146,146,146	0
54	MG	BA	3196	1/1	0.67	0.26	85,85,85,85	0
54	MG	CA	1778	1/1	0.67	0.23	107,107,107,107	0
54	MG	AA	1788	1/1	0.67	0.25	91,91,91,91	0
54	MG	DA	3358	1/1	0.67	0.18	113,113,113,113	0
54	MG	AA	1610	1/1	0.67	0.16	102,102,102,102	0
54	MG	BA	3489	1/1	0.68	0.18	84,84,84,84	0
54	MG	BA	3408	1/1	0.68	0.30	79,79,79,79	0
54	MG	BA	3621	1/1	0.68	0.20	93,93,93,93	0
54	MG	CA	1724	1/1	0.68	0.30	94,94,94,94	0
54	MG	BA	3151	1/1	0.68	0.37	91,91,91,91	0
54	MG	AA	1714	1/1	0.68	0.21	88,88,88,88	0
54	MG	DB	206	1/1	0.68	0.32	104,104,104,104	0
54	MG	DA	3390	1/1	0.68	0.23	76,76,76,76	0
54	MG	CA	1615	1/1	0.68	0.25	113,113,113,113	0
54	MG	DA	3253	1/1	0.69	0.20	88,88,88,88	0
54	MG	DA	3460	1/1	0.69	1.04	100,100,100,100	0
54	MG	AA	1735	1/1	0.69	0.29	104,104,104,104	0
54	MG	BA	3440	1/1	0.69	0.32	73,73,73,73	0
54	MG	BA	3362	1/1	0.69	0.30	83,83,83,83	0
54	MG	BA	3039	1/1	0.69	0.29	76,76,76,76	0
54	MG	AA	1677	1/1	0.69	0.37	109,109,109,109	0
54	MG	AA	1782	1/1	0.70	0.42	124,124,124,124	0
54	MG	AA	1808	1/1	0.70	0.35	125,125,125,125	0
54	MG	BA	3599	1/1	0.70	0.35	85,85,85,85	0
54	MG	BA	3334	1/1	0.70	0.19	84,84,84,84	0
54	MG	BA	3623	1/1	0.70	0.25	93,93,93,93	0
54	MG	AD	101	1/1	0.70	0.27	114,114,114,114	0
54	MG	DA	3113	1/1	0.70	0.36	83,83,83,83	0
54	MG	AA	1740	1/1	0.70	0.42	83,83,83,83	0
54	MG	BA	3367	1/1	0.70	0.23	91,91,91,91	0
54	MG	DA	3457	1/1	0.70	0.22	84,84,84,84	0
54	MG	DA	3459	1/1	0.70	0.33	87,87,87,87	0
54	MG	BA	3090	1/1	0.70	0.26	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	AA	1786	1/1	0.70	0.11	145,145,145,145	0
54	MG	BA	3419	1/1	0.70	0.28	81,81,81,81	0
54	MG	BA	3427	1/1	0.70	0.10	160,160,160,160	0
54	MG	DA	3327	1/1	0.70	0.22	75,75,75,75	0
54	MG	BA	3099	1/1	0.70	0.14	68,68,68,68	0
54	MG	CA	1716	1/1	0.71	0.73	103,103,103,103	0
54	MG	CA	1608	1/1	0.71	0.17	94,94,94,94	0
54	MG	CA	1613	1/1	0.71	0.31	86,86,86,86	0
54	MG	BA	3450	1/1	0.71	0.11	166,166,166,166	0
54	MG	CA	1751	1/1	0.71	0.20	95,95,95,95	0
54	MG	BA	3490	1/1	0.71	0.32	102,102,102,102	0
54	MG	DA	3278	1/1	0.71	0.22	91,91,91,91	0
54	MG	DA	3392	1/1	0.71	0.12	82,82,82,82	0
54	MG	DB	211	1/1	0.71	0.39	90,90,90,90	0
54	MG	AA	1706	1/1	0.71	0.21	94,94,94,94	0
54	MG	BA	3277	1/1	0.71	0.30	89,89,89,89	0
54	MG	BA	3332	1/1	0.72	0.36	92,92,92,92	0
54	MG	AG	301	1/1	0.72	0.08	122,122,122,122	0
54	MG	AA	1765	1/1	0.72	0.39	122,122,122,122	0
54	MG	DA	3151	1/1	0.72	0.16	106,106,106,106	0
54	MG	DA	3410	1/1	0.72	0.15	67,67,67,67	0
54	MG	BA	3432	1/1	0.72	0.27	81,81,81,81	0
54	MG	CG	301	1/1	0.72	0.21	113,113,113,113	0
54	MG	CC	107	1/1	0.72	0.22	105,105,105,105	0
54	MG	BA	3543	1/1	0.72	0.30	98,98,98,98	0
54	MG	DA	3282	1/1	0.72	0.30	88,88,88,88	0
54	MG	BA	3580	1/1	0.72	0.42	68,68,68,68	0
54	MG	DA	3301	1/1	0.72	0.20	140,140,140,140	0
54	MG	BA	3222	1/1	0.72	0.25	62,62,62,62	0
54	MG	BA	3089	1/1	0.72	0.36	87,87,87,87	0
54	MG	DB	208	1/1	0.72	0.24	94,94,94,94	0
54	MG	BA	3392	1/1	0.72	0.23	91,91,91,91	0
54	MG	DA	3058	1/1	0.72	0.19	84,84,84,84	0
54	MG	BA	3316	1/1	0.72	0.30	91,91,91,91	0
54	MG	AA	1718	1/1	0.73	0.23	87,87,87,87	0
54	MG	BA	3072	1/1	0.73	0.33	81,81,81,81	0
54	MG	DA	3274	1/1	0.73	0.37	100,100,100,100	0
54	MG	BA	3130	1/1	0.73	0.29	105,105,105,105	0
54	MG	AA	1751	1/1	0.73	0.25	90,90,90,90	0
54	MG	DA	3443	1/1	0.73	0.12	85,85,85,85	0
54	MG	DA	3037	1/1	0.73	0.35	101,101,101,101	0
54	MG	AA	1759	1/1	0.73	0.18	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	CA	1768	1/1	0.73	0.21	97,97,97,97	0
54	MG	BA	3364	1/1	0.73	0.32	78,78,78,78	0
54	MG	DA	3348	1/1	0.73	0.27	90,90,90,90	0
54	MG	DA	3064	1/1	0.73	0.39	88,88,88,88	0
54	MG	BB	214	1/1	0.73	0.15	99,99,99,99	0
54	MG	BA	3157	1/1	0.73	0.21	72,72,72,72	0
54	MG	BA	3376	1/1	0.73	0.22	84,84,84,84	0
54	MG	BA	3391	1/1	0.73	0.35	85,85,85,85	0
54	MG	AA	1606	1/1	0.73	0.15	101,101,101,101	0
54	MG	DA	3111	1/1	0.74	0.35	105,105,105,105	0
54	MG	BA	3342	1/1	0.74	0.23	85,85,85,85	0
54	MG	BA	3353	1/1	0.74	0.46	95,95,95,95	0
54	MG	CA	1719	1/1	0.74	0.12	104,104,104,104	0
54	MG	AA	1647	1/1	0.74	0.37	92,92,92,92	0
54	MG	DA	3289	1/1	0.74	0.34	110,110,110,110	0
54	MG	DA	3519	1/1	0.74	0.12	81,81,81,81	0
54	MG	DA	3434	1/1	0.74	0.22	92,92,92,92	0
54	MG	BA	3301	1/1	0.74	0.32	91,91,91,91	0
54	MG	DA	3442	1/1	0.74	0.18	105,105,105,105	0
54	MG	DA	3379	1/1	0.74	0.30	88,88,88,88	0
54	MG	DA	3444	1/1	0.74	0.11	133,133,133,133	0
54	MG	DA	3324	1/1	0.75	0.45	90,90,90,90	0
54	MG	BA	3503	1/1	0.75	0.42	117,117,117,117	0
54	MG	BA	3597	1/1	0.75	0.29	103,103,103,103	0
54	MG	BA	3442	1/1	0.75	0.23	89,89,89,89	0
54	MG	BA	3230	1/1	0.75	0.19	71,71,71,71	0
54	MG	AA	1694	1/1	0.75	0.29	87,87,87,87	0
54	MG	CA	1725	1/1	0.75	0.19	115,115,115,115	0
54	MG	BA	3380	1/1	0.75	0.24	74,74,74,74	0
54	MG	DA	3382	1/1	0.75	0.34	94,94,94,94	0
54	MG	DA	3501	1/1	0.75	0.17	82,82,82,82	0
54	MG	BA	3180	1/1	0.75	0.50	92,92,92,92	0
54	MG	BA	3533	1/1	0.75	0.25	89,89,89,89	0
54	MG	CA	1695	1/1	0.75	0.12	119,119,119,119	0
54	MG	CA	1767	1/1	0.75	0.31	80,80,80,80	0
54	MG	BA	3499	1/1	0.75	0.21	82,82,82,82	0
54	MG	CA	1707	1/1	0.75	0.27	88,88,88,88	0
54	MG	CA	1708	1/1	0.75	0.19	98,98,98,98	0
54	MG	AA	1817	1/1	0.76	0.13	137,137,137,137	0
54	MG	BA	3349	1/1	0.76	0.14	64,64,64,64	0
54	MG	AA	1693	1/1	0.76	0.20	106,106,106,106	0
54	MG	DA	3304	1/1	0.76	0.21	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	DA	3309	1/1	0.76	0.14	64,64,64,64	0
54	MG	BA	3397	1/1	0.76	0.36	84,84,84,84	0
54	MG	BA	3360	1/1	0.76	0.24	85,85,85,85	0
54	MG	AA	1797	1/1	0.76	0.39	102,102,102,102	0
54	MG	CA	1603	1/1	0.76	0.33	115,115,115,115	0
54	MG	AA	1688	1/1	0.76	0.35	118,118,118,118	0
54	MG	DA	3461	1/1	0.76	0.21	93,93,93,93	0
54	MG	DA	3496	1/1	0.76	0.17	86,86,86,86	0
54	MG	CA	1795	1/1	0.76	0.11	87,87,87,87	0
54	MG	BA	3465	1/1	0.76	0.20	79,79,79,79	0
54	MG	BA	3365	1/1	0.76	0.17	86,86,86,86	0
54	MG	BA	3469	1/1	0.76	0.44	94,94,94,94	0
54	MG	CC	109	1/1	0.76	0.22	111,111,111,111	0
54	MG	BA	3566	1/1	0.76	0.44	70,70,70,70	0
54	MG	DA	3005	1/1	0.76	0.36	99,99,99,99	0
54	MG	AA	1777	1/1	0.76	0.12	117,117,117,117	0
54	MG	BA	3206	1/1	0.76	0.30	89,89,89,89	0
54	MG	AA	1730	1/1	0.77	0.23	90,90,90,90	0
54	MG	BA	3345	1/1	0.77	0.32	91,91,91,91	0
54	MG	AA	1734	1/1	0.77	0.33	135,135,135,135	0
54	MG	DA	3492	1/1	0.77	0.22	96,96,96,96	0
54	MG	AA	1679	1/1	0.77	0.33	86,86,86,86	0
54	MG	BA	3394	1/1	0.77	0.22	102,102,102,102	0
54	MG	DA	3023	1/1	0.77	0.15	76,76,76,76	0
54	MG	BA	3109	1/1	0.77	0.32	89,89,89,89	0
54	MG	BA	3404	1/1	0.77	0.29	90,90,90,90	0
54	MG	BA	3327	1/1	0.77	0.35	85,85,85,85	0
54	MG	BA	3273	1/1	0.77	0.20	80,80,80,80	0
54	MG	AA	1754	1/1	0.77	0.18	91,91,91,91	0
54	MG	AA	1755	1/1	0.77	0.21	88,88,88,88	0
54	MG	DA	3072	1/1	0.77	0.11	109,109,109,109	0
54	MG	CA	1713	1/1	0.78	0.18	109,109,109,109	0
54	MG	BA	3588	1/1	0.78	0.44	77,77,77,77	0
54	MG	BA	3594	1/1	0.78	0.66	81,81,81,81	0
54	MG	CA	1620	1/1	0.78	0.25	75,75,75,75	0
54	MG	BA	3237	1/1	0.78	0.49	64,64,64,64	0
54	MG	DA	3316	1/1	0.78	0.30	76,76,76,76	0
54	MG	BA	3245	1/1	0.78	0.32	67,67,67,67	0
54	MG	DA	3455	1/1	0.78	0.36	80,80,80,80	0
54	MG	DA	3325	1/1	0.78	0.25	92,92,92,92	0
54	MG	BA	3249	1/1	0.78	0.23	74,74,74,74	0
54	MG	DA	3329	1/1	0.78	0.46	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	3134	1/1	0.78	0.13	96,96,96,96	0
54	MG	DA	3144	1/1	0.78	0.23	79,79,79,79	0
54	MG	DA	3493	1/1	0.78	0.11	90,90,90,90	0
54	MG	BA	3393	1/1	0.78	0.51	89,89,89,89	0
54	MG	AA	1692	1/1	0.78	0.20	94,94,94,94	0
54	MG	DA	3187	1/1	0.78	0.27	83,83,83,83	0
54	MG	CA	1752	1/1	0.78	0.11	94,94,94,94	0
54	MG	AA	1829	1/1	0.78	0.19	81,81,81,81	0
54	MG	AA	1684	1/1	0.78	0.37	90,90,90,90	0
54	MG	DA	3277	1/1	0.78	0.36	76,76,76,76	0
54	MG	AA	1621	1/1	0.78	0.32	101,101,101,101	0
54	MG	BA	3493	1/1	0.78	0.27	74,74,74,74	0
54	MG	BA	3183	1/1	0.78	0.37	75,75,75,75	0
54	MG	DE	303	1/1	0.78	0.12	85,85,85,85	0
56	ZN	CG	303	1/1	0.78	0.27	139,139,139,139	0
54	MG	DA	3428	1/1	0.79	0.16	86,86,86,86	0
54	MG	DA	3056	1/1	0.79	0.24	97,97,97,97	0
54	MG	AA	1736	1/1	0.79	0.23	92,92,92,92	0
54	MG	CA	1629	1/1	0.79	0.12	107,107,107,107	0
54	MG	BA	3517	1/1	0.79	0.37	90,90,90,90	0
54	MG	DA	3084	1/1	0.79	0.15	67,67,67,67	0
54	MG	BA	3518	1/1	0.79	0.54	87,87,87,87	0
54	MG	BA	3361	1/1	0.79	0.26	76,76,76,76	0
54	MG	AA	1731	1/1	0.79	0.14	97,97,97,97	0
54	MG	AA	1758	1/1	0.79	0.22	71,71,71,71	0
54	MG	BA	3300	1/1	0.79	0.42	95,95,95,95	0
54	MG	DA	3137	1/1	0.79	0.36	86,86,86,86	0
54	MG	AA	1725	1/1	0.79	0.17	105,105,105,105	0
54	MG	CA	1698	1/1	0.79	0.19	96,96,96,96	0
54	MG	BA	3223	1/1	0.79	0.19	84,84,84,84	0
54	MG	DA	3161	1/1	0.79	0.17	84,84,84,84	0
54	MG	DA	3024	1/1	0.79	0.15	110,110,110,110	0
54	MG	DA	3214	1/1	0.79	0.25	69,69,69,69	0
54	MG	AA	1649	1/1	0.79	0.31	81,81,81,81	0
54	MG	DA	3029	1/1	0.79	0.18	96,96,96,96	0
54	MG	DA	3520	1/1	0.79	0.33	99,99,99,99	0
54	MG	DA	3254	1/1	0.79	0.26	79,79,79,79	0
54	MG	DA	3270	1/1	0.79	0.41	90,90,90,90	0
54	MG	CA	1769	1/1	0.79	0.29	101,101,101,101	0
54	MG	BA	3381	1/1	0.79	0.27	89,89,89,89	0
54	MG	BA	3423	1/1	0.79	0.40	100,100,100,100	0
54	MG	DA	3411	1/1	0.79	0.34	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	DA	3416	1/1	0.79	0.30	86,86,86,86	0
54	MG	BA	3336	1/1	0.80	0.21	72,72,72,72	0
54	MG	BB	206	1/1	0.80	0.21	84,84,84,84	0
54	MG	AA	1723	1/1	0.80	0.21	82,82,82,82	0
54	MG	DA	3258	1/1	0.80	0.37	86,86,86,86	0
54	MG	DA	3420	1/1	0.80	0.21	84,84,84,84	0
54	MG	BE	303	1/1	0.80	0.30	89,89,89,89	0
54	MG	BU	202	1/1	0.80	0.20	71,71,71,71	0
54	MG	BA	3111	1/1	0.80	0.46	85,85,85,85	0
54	MG	BA	3523	1/1	0.80	0.35	82,82,82,82	0
54	MG	AA	1814	1/1	0.80	0.16	91,91,91,91	0
54	MG	BA	3429	1/1	0.80	0.55	103,103,103,103	0
54	MG	BA	3290	1/1	0.80	0.19	82,82,82,82	0
54	MG	BA	3550	1/1	0.80	0.23	98,98,98,98	0
54	MG	BA	3555	1/1	0.80	0.15	105,105,105,105	0
54	MG	BA	3240	1/1	0.80	0.23	84,84,84,84	0
54	MG	AA	1727	1/1	0.80	0.21	88,88,88,88	0
54	MG	DA	3071	1/1	0.80	0.13	107,107,107,107	0
54	MG	CA	1765	1/1	0.80	0.19	122,122,122,122	0
54	MG	BA	3248	1/1	0.80	0.21	76,76,76,76	0
54	MG	CA	1642	1/1	0.80	0.12	116,116,116,116	0
54	MG	AC	104	1/1	0.80	0.26	100,100,100,100	0
54	MG	BA	3400	1/1	0.80	0.17	72,72,72,72	0
54	MG	AA	1732	1/1	0.80	0.11	104,104,104,104	0
54	MG	CA	1681	1/1	0.80	0.33	88,88,88,88	0
54	MG	BA	3604	1/1	0.80	0.28	92,92,92,92	0
54	MG	DA	3360	1/1	0.80	0.36	86,86,86,86	0
54	MG	CA	1689	1/1	0.80	0.15	98,98,98,98	0
54	MG	DA	3374	1/1	0.80	0.25	87,87,87,87	0
54	MG	CA	1796	1/1	0.80	0.11	81,81,81,81	0
54	MG	BA	3618	1/1	0.80	0.20	87,87,87,87	0
54	MG	BA	3619	1/1	0.80	0.32	87,87,87,87	0
54	MG	CC	105	1/1	0.80	0.38	86,86,86,86	0
54	MG	AA	1800	1/1	0.80	0.21	89,89,89,89	0
54	MG	BA	3118	1/1	0.81	0.48	83,83,83,83	0
54	MG	DA	3409	1/1	0.81	0.30	95,95,95,95	0
54	MG	DA	3007	1/1	0.81	0.34	76,76,76,76	0
54	MG	DA	3013	1/1	0.81	0.12	95,95,95,95	0
54	MG	BA	3436	1/1	0.81	0.25	75,75,75,75	0
54	MG	BA	3221	1/1	0.81	0.34	93,93,93,93	0
54	MG	DA	3424	1/1	0.81	0.47	114,114,114,114	0
54	MG	CA	1621	1/1	0.81	0.21	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	CA	1749	1/1	0.81	0.24	91,91,91,91	0
54	MG	DA	3279	1/1	0.81	0.17	70,70,70,70	0
54	MG	AA	1673	1/1	0.81	0.13	131,131,131,131	0
54	MG	BA	3603	1/1	0.81	0.23	93,93,93,93	0
54	MG	AA	1833	1/1	0.81	0.11	98,98,98,98	0
54	MG	DA	3290	1/1	0.81	0.22	75,75,75,75	0
54	MG	CA	1760	1/1	0.81	0.31	109,109,109,109	0
54	MG	BA	3228	1/1	0.81	0.17	62,62,62,62	0
54	MG	BA	3150	1/1	0.81	0.47	76,76,76,76	0
54	MG	DA	3458	1/1	0.81	0.12	91,91,91,91	0
54	MG	BA	3355	1/1	0.81	0.40	86,86,86,86	0
54	MG	AA	1674	1/1	0.81	0.24	93,93,93,93	0
54	MG	BA	3629	1/1	0.81	0.26	100,100,100,100	0
54	MG	BA	3630	1/1	0.81	0.21	93,93,93,93	0
54	MG	CA	1782	1/1	0.81	0.32	93,93,93,93	0
54	MG	BA	3462	1/1	0.81	0.27	94,94,94,94	0
54	MG	BB	212	1/1	0.81	0.34	82,82,82,82	0
54	MG	CA	1791	1/1	0.81	0.14	95,95,95,95	0
54	MG	AA	1683	1/1	0.81	0.25	97,97,97,97	0
54	MG	BA	3313	1/1	0.81	0.48	94,94,94,94	0
54	MG	AA	1616	1/1	0.81	0.33	81,81,81,81	0
54	MG	AA	1793	1/1	0.81	0.27	71,71,71,71	0
54	MG	CC	104	1/1	0.81	0.20	103,103,103,103	0
54	MG	AA	1687	1/1	0.81	0.14	137,137,137,137	0
54	MG	BA	3374	1/1	0.81	0.36	74,74,74,74	0
54	MG	DB	213	1/1	0.81	0.50	111,111,111,111	0
54	MG	AA	1828	1/1	0.81	0.24	107,107,107,107	0
54	MG	DE	302	1/1	0.81	0.22	96,96,96,96	0
54	MG	DA	3240	1/1	0.81	0.16	86,86,86,86	0
54	MG	BA	3585	1/1	0.81	0.44	77,77,77,77	0
54	MG	BA	3094	1/1	0.82	0.29	103,103,103,103	0
54	MG	DA	3085	1/1	0.82	0.41	89,89,89,89	0
54	MG	CA	1766	1/1	0.82	0.23	74,74,74,74	0
54	MG	DA	3089	1/1	0.82	0.32	81,81,81,81	0
54	MG	DA	3096	1/1	0.82	0.43	88,88,88,88	0
54	MG	BA	3573	1/1	0.82	0.19	87,87,87,87	0
54	MG	DA	3006	1/1	0.82	0.39	95,95,95,95	0
54	MG	DA	3311	1/1	0.82	0.42	74,74,74,74	0
54	MG	AA	1772	1/1	0.82	0.32	110,110,110,110	0
54	MG	BA	3100	1/1	0.82	0.21	105,105,105,105	0
54	MG	AA	1671	1/1	0.82	0.38	81,81,81,81	0
54	MG	BB	211	1/1	0.82	0.27	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3375	1/1	0.82	0.46	99,99,99,99	0
54	MG	DA	3150	1/1	0.82	0.29	91,91,91,91	0
54	MG	BB	213	1/1	0.82	0.28	103,103,103,103	0
54	MG	DA	3026	1/1	0.82	0.23	76,76,76,76	0
54	MG	DA	3488	1/1	0.82	0.14	77,77,77,77	0
54	MG	DA	3184	1/1	0.82	0.26	87,87,87,87	0
54	MG	BA	3530	1/1	0.82	0.26	85,85,85,85	0
54	MG	DA	3036	1/1	0.82	0.40	114,114,114,114	0
54	MG	AA	1812	1/1	0.82	0.51	99,99,99,99	0
54	MG	DA	3377	1/1	0.82	0.18	85,85,85,85	0
54	MG	AA	1768	1/1	0.82	0.15	89,89,89,89	0
54	MG	CA	1678	1/1	0.82	0.31	75,75,75,75	0
54	MG	DA	3387	1/1	0.82	0.18	89,89,89,89	0
54	MG	DA	3389	1/1	0.82	0.13	82,82,82,82	0
54	MG	DA	3049	1/1	0.82	0.28	92,92,92,92	0
54	MG	BA	3279	1/1	0.82	0.39	68,68,68,68	0
54	MG	BA	3614	1/1	0.82	0.21	92,92,92,92	0
54	MG	BA	3414	1/1	0.82	0.79	102,102,102,102	0
54	MG	DA	3067	1/1	0.82	0.43	93,93,93,93	0
54	MG	CA	1604	1/1	0.82	0.11	91,91,91,91	0
54	MG	BA	3516	1/1	0.82	0.49	90,90,90,90	0
54	MG	DA	3077	1/1	0.82	0.35	110,110,110,110	0
54	MG	AA	1787	1/1	0.83	0.09	89,89,89,89	0
54	MG	AA	1748	1/1	0.83	0.15	152,152,152,152	0
54	MG	BA	3622	1/1	0.83	0.24	97,97,97,97	0
54	MG	A1	101	1/1	0.83	0.19	94,94,94,94	0
54	MG	CA	1679	1/1	0.83	0.24	97,97,97,97	0
54	MG	AA	1636	1/1	0.83	0.21	76,76,76,76	0
54	MG	BA	3121	1/1	0.83	0.24	98,98,98,98	0
54	MG	DA	3429	1/1	0.83	0.27	103,103,103,103	0
54	MG	BA	3534	1/1	0.83	0.44	85,85,85,85	0
54	MG	BA	3537	1/1	0.83	0.13	65,65,65,65	0
54	MG	BA	3068	1/1	0.83	0.36	94,94,94,94	0
54	MG	DA	3082	1/1	0.83	0.15	97,97,97,97	0
54	MG	BA	3547	1/1	0.83	0.45	84,84,84,84	0
54	MG	BA	3141	1/1	0.83	0.31	76,76,76,76	0
54	MG	AA	1617	1/1	0.83	0.25	97,97,97,97	0
54	MG	BA	3308	1/1	0.83	0.18	108,108,108,108	0
54	MG	AA	1660	1/1	0.83	0.16	68,68,68,68	0
54	MG	BA	3424	1/1	0.83	0.26	86,86,86,86	0
54	MG	BA	3583	1/1	0.83	0.21	88,88,88,88	0
54	MG	BA	3426	1/1	0.83	0.36	100,100,100,100	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	AA	1638	1/1	0.83	0.19	109,109,109,109	0
54	MG	DA	3462	1/1	0.83	0.28	94,94,94,94	0
54	MG	AA	1835	1/1	0.83	0.30	100,100,100,100	0
54	MG	BA	3596	1/1	0.83	0.24	85,85,85,85	0
54	MG	AA	1811	1/1	0.83	0.63	102,102,102,102	0
54	MG	CA	1747	1/1	0.83	0.34	96,96,96,96	0
54	MG	DA	3018	1/1	0.83	0.12	90,90,90,90	0
54	MG	DA	3153	1/1	0.83	0.31	88,88,88,88	0
54	MG	DA	3154	1/1	0.83	0.17	102,102,102,102	0
54	MG	DA	3155	1/1	0.83	0.22	74,74,74,74	0
54	MG	AA	1681	1/1	0.83	0.20	101,101,101,101	0
54	MG	DA	3167	1/1	0.83	0.31	105,105,105,105	0
54	MG	DB	207	1/1	0.83	0.27	133,133,133,133	0
54	MG	DA	3168	1/1	0.83	0.11	69,69,69,69	0
54	MG	BA	3257	1/1	0.83	0.36	73,73,73,73	0
54	MG	CA	1626	1/1	0.83	0.24	115,115,115,115	0
54	MG	BA	3390	1/1	0.83	0.37	95,95,95,95	0
54	MG	BA	3270	1/1	0.83	0.41	91,91,91,91	0
54	MG	CA	1640	1/1	0.83	0.24	99,99,99,99	0
54	MG	AA	1641	1/1	0.83	0.22	74,74,74,74	0
54	MG	DA	3407	1/1	0.83	0.16	94,94,94,94	0
54	MG	BA	3191	1/1	0.84	0.26	78,78,78,78	0
54	MG	CA	1641	1/1	0.84	0.30	78,78,78,78	0
54	MG	DA	3051	1/1	0.84	0.36	78,78,78,78	0
54	MG	BA	3225	1/1	0.84	0.22	75,75,75,75	0
54	MG	BA	3347	1/1	0.84	0.40	86,86,86,86	0
54	MG	DA	3192	1/1	0.84	0.27	92,92,92,92	0
54	MG	CA	1799	1/1	0.84	0.10	115,115,115,115	0
54	MG	CA	1735	1/1	0.84	0.30	86,86,86,86	0
54	MG	BA	3227	1/1	0.84	0.10	101,101,101,101	0
54	MG	BA	3410	1/1	0.84	0.44	83,83,83,83	0
54	MG	BA	3287	1/1	0.84	0.46	70,70,70,70	0
54	MG	CC	108	1/1	0.84	0.12	120,120,120,120	0
54	MG	BA	3416	1/1	0.84	0.15	92,92,92,92	0
54	MG	BA	3417	1/1	0.84	0.41	82,82,82,82	0
54	MG	BA	3322	1/1	0.84	0.27	76,76,76,76	0
54	MG	AA	1825	1/1	0.84	0.15	92,92,92,92	0
54	MG	CA	1616	1/1	0.84	0.11	102,102,102,102	0
54	MG	AN	202	1/1	0.84	0.08	88,88,88,88	0
54	MG	AA	1767	1/1	0.84	0.21	82,82,82,82	0
54	MG	CA	1701	1/1	0.84	0.24	90,90,90,90	0
54	MG	DA	3020	1/1	0.84	0.28	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	BA	3296	1/1	0.84	0.39	81,81,81,81	0
54	MG	CA	1771	1/1	0.84	0.34	96,96,96,96	0
54	MG	CA	1622	1/1	0.84	0.40	113,113,113,113	0
54	MG	CA	1779	1/1	0.84	0.23	97,97,97,97	0
54	MG	CA	1624	1/1	0.84	0.11	92,92,92,92	0
54	MG	BA	3131	1/1	0.84	0.40	80,80,80,80	0
54	MG	BA	3525	1/1	0.84	0.30	47,47,47,47	0
54	MG	BA	3428	1/1	0.84	0.12	90,90,90,90	0
54	MG	D1	201	1/1	0.84	0.27	72,72,72,72	0
54	MG	DA	3326	1/1	0.84	0.27	82,82,82,82	0
54	MG	BA	3344	1/1	0.85	0.13	91,91,91,91	0
54	MG	BA	3217	1/1	0.85	0.29	98,98,98,98	0
54	MG	AA	1711	1/1	0.85	0.10	132,132,132,132	0
54	MG	CA	1614	1/1	0.85	0.15	100,100,100,100	0
54	MG	BA	3135	1/1	0.85	0.39	85,85,85,85	0
54	MG	AA	1790	1/1	0.85	0.26	97,97,97,97	0
54	MG	DA	3383	1/1	0.85	0.32	87,87,87,87	0
54	MG	DA	3384	1/1	0.85	0.32	81,81,81,81	0
54	MG	DA	3386	1/1	0.85	0.26	71,71,71,71	0
54	MG	BA	3092	1/1	0.85	0.37	72,72,72,72	0
54	MG	DA	3019	1/1	0.85	0.15	79,79,79,79	0
54	MG	DA	3162	1/1	0.85	0.13	81,81,81,81	0
54	MG	AA	1631	1/1	0.85	0.28	92,92,92,92	0
54	MG	AA	1715	1/1	0.85	0.35	112,112,112,112	0
54	MG	DA	3399	1/1	0.85	0.13	103,103,103,103	0
54	MG	CA	1750	1/1	0.85	0.33	97,97,97,97	0
54	MG	DA	3186	1/1	0.85	0.19	84,84,84,84	0
54	MG	AA	1634	1/1	0.85	0.22	97,97,97,97	0
54	MG	BA	3160	1/1	0.85	0.46	92,92,92,92	0
54	MG	DA	3196	1/1	0.85	0.20	72,72,72,72	0
54	MG	BA	3304	1/1	0.85	0.41	81,81,81,81	0
54	MG	DA	3418	1/1	0.85	0.16	97,97,97,97	0
54	MG	DA	3223	1/1	0.85	0.35	73,73,73,73	0
54	MG	DA	3238	1/1	0.85	0.19	65,65,65,65	0
54	MG	BA	3425	1/1	0.85	0.14	87,87,87,87	0
54	MG	AA	1801	1/1	0.85	0.28	113,113,113,113	0
54	MG	DA	3038	1/1	0.85	0.13	119,119,119,119	0
54	MG	BA	3372	1/1	0.85	0.36	81,81,81,81	0
54	MG	BA	3165	1/1	0.85	0.37	48,48,48,48	0
54	MG	BA	3167	1/1	0.85	0.23	68,68,68,68	0
54	MG	CA	1653	1/1	0.85	0.21	124,124,124,124	0
54	MG	DA	3275	1/1	0.85	0.20	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3445	1/1	0.85	0.10	96,96,96,96	0
54	MG	BA	3318	1/1	0.85	0.38	71,71,71,71	0
54	MG	DA	3449	1/1	0.85	0.22	88,88,88,88	0
54	MG	AA	1654	1/1	0.85	0.28	99,99,99,99	0
54	MG	BA	3626	1/1	0.85	0.20	87,87,87,87	0
54	MG	BA	3528	1/1	0.85	0.20	74,74,74,74	0
54	MG	BA	3529	1/1	0.85	0.24	87,87,87,87	0
54	MG	DA	3287	1/1	0.85	0.18	102,102,102,102	0
54	MG	BA	3326	1/1	0.85	0.31	89,89,89,89	0
54	MG	BA	3385	1/1	0.85	0.36	79,79,79,79	0
54	MG	BA	3388	1/1	0.85	0.49	82,82,82,82	0
54	MG	DA	3299	1/1	0.85	0.29	99,99,99,99	0
54	MG	BA	3181	1/1	0.85	0.32	64,64,64,64	0
54	MG	AA	1810	1/1	0.85	0.26	89,89,89,89	0
54	MG	BB	215	1/1	0.85	0.15	110,110,110,110	0
54	MG	BA	3540	1/1	0.85	0.20	78,78,78,78	0
54	MG	DA	3515	1/1	0.85	0.29	101,101,101,101	0
54	MG	DA	3314	1/1	0.85	0.25	91,91,91,91	0
54	MG	DA	3095	1/1	0.85	0.15	88,88,88,88	0
54	MG	CA	1704	1/1	0.85	0.32	99,99,99,99	0
54	MG	DB	202	1/1	0.85	0.18	116,116,116,116	0
54	MG	BA	3263	1/1	0.85	0.19	73,73,73,73	0
54	MG	AA	1678	1/1	0.85	0.27	87,87,87,87	0
54	MG	B8	102	1/1	0.85	0.57	107,107,107,107	0
54	MG	DB	209	1/1	0.85	0.14	97,97,97,97	0
54	MG	DA	3129	1/1	0.85	0.24	79,79,79,79	0
54	MG	DA	3330	1/1	0.85	0.38	95,95,95,95	0
54	MG	DA	3333	1/1	0.85	0.38	90,90,90,90	0
54	MG	BA	3087	1/1	0.85	0.21	72,72,72,72	0
54	MG	DB	215	1/1	0.85	0.11	120,120,120,120	0
54	MG	AA	1733	1/1	0.85	0.15	88,88,88,88	0
54	MG	DA	3356	1/1	0.85	0.12	84,84,84,84	0
54	MG	DA	3139	1/1	0.85	0.20	63,63,63,63	0
54	MG	DA	3142	1/1	0.85	0.28	83,83,83,83	0
54	MG	CA	1754	1/1	0.86	0.38	108,108,108,108	0
54	MG	DA	3039	1/1	0.86	0.35	80,80,80,80	0
54	MG	CA	1630	1/1	0.86	0.11	91,91,91,91	0
54	MG	DA	3244	1/1	0.86	0.51	89,89,89,89	0
54	MG	CA	1635	1/1	0.86	0.11	93,93,93,93	0
54	MG	DA	3045	1/1	0.86	0.30	93,93,93,93	0
54	MG	CA	1636	1/1	0.86	0.27	100,100,100,100	0
54	MG	AA	1761	1/1	0.86	0.16	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	DA	3053	1/1	0.86	0.30	70,70,70,70	0
54	MG	BA	3441	1/1	0.86	0.23	95,95,95,95	0
54	MG	AA	1698	1/1	0.86	0.21	85,85,85,85	0
54	MG	AA	1605	1/1	0.86	0.07	103,103,103,103	0
54	MG	DA	3423	1/1	0.86	0.14	83,83,83,83	0
54	MG	CA	1770	1/1	0.86	0.14	65,65,65,65	0
54	MG	BA	3359	1/1	0.86	0.24	83,83,83,83	0
54	MG	AA	1642	1/1	0.86	0.27	88,88,88,88	0
54	MG	AA	1824	1/1	0.86	0.29	93,93,93,93	0
54	MG	DA	3283	1/1	0.86	0.16	69,69,69,69	0
54	MG	DA	3078	1/1	0.86	0.20	65,65,65,65	0
54	MG	CA	1664	1/1	0.86	0.22	169,169,169,169	0
54	MG	BB	205	1/1	0.86	0.36	91,91,91,91	0
54	MG	BA	3460	1/1	0.86	0.08	189,189,189,189	0
54	MG	BA	3062	1/1	0.86	0.25	106,106,106,106	0
54	MG	DA	3300	1/1	0.86	0.26	83,83,83,83	0
54	MG	BA	3315	1/1	0.86	0.30	83,83,83,83	0
54	MG	AA	1686	1/1	0.86	0.27	88,88,88,88	0
54	MG	AA	1799	1/1	0.86	0.45	111,111,111,111	0
54	MG	BA	3076	1/1	0.86	0.41	86,86,86,86	0
54	MG	BA	3545	1/1	0.86	0.19	76,76,76,76	0
54	MG	BF	302	1/1	0.86	0.19	71,71,71,71	0
54	MG	DA	3319	1/1	0.86	0.09	97,97,97,97	0
54	MG	CL	201	1/1	0.86	0.32	104,104,104,104	0
54	MG	AA	1710	1/1	0.86	0.12	118,118,118,118	0
54	MG	DA	3490	1/1	0.86	0.06	77,77,77,77	0
54	MG	B3	101	1/1	0.86	0.46	84,84,84,84	0
54	MG	BA	3488	1/1	0.86	0.37	94,94,94,94	0
54	MG	BA	3088	1/1	0.86	0.30	84,84,84,84	0
54	MG	AA	1774	1/1	0.86	0.27	79,79,79,79	0
54	MG	BA	3377	1/1	0.86	0.17	81,81,81,81	0
54	MG	DA	3511	1/1	0.86	0.31	77,77,77,77	0
54	MG	BA	3496	1/1	0.86	0.31	97,97,97,97	0
54	MG	BA	3498	1/1	0.86	0.27	94,94,94,94	0
54	MG	AA	1643	1/1	0.86	0.17	91,91,91,91	0
54	MG	BA	3500	1/1	0.86	0.17	92,92,92,92	0
54	MG	DB	201	1/1	0.86	0.35	90,90,90,90	0
54	MG	BA	3589	1/1	0.86	0.28	66,66,66,66	0
54	MG	CA	1728	1/1	0.86	0.29	76,76,76,76	0
54	MG	DA	3366	1/1	0.86	0.30	78,78,78,78	0
54	MG	BA	3284	1/1	0.86	0.23	76,76,76,76	0
54	MG	DA	3373	1/1	0.86	0.30	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	BA	3506	1/1	0.86	0.33	74,74,74,74	0
54	MG	BA	3286	1/1	0.86	0.41	73,73,73,73	0
54	MG	AA	1757	1/1	0.86	0.14	102,102,102,102	0
54	MG	CA	1748	1/1	0.86	0.13	110,110,110,110	0
54	MG	BA	3513	1/1	0.86	0.30	78,78,78,78	0
54	MG	AA	1724	1/1	0.86	0.58	126,126,126,126	0
54	MG	AA	1713	1/1	0.86	0.42	82,82,82,82	0
54	MG	BA	3161	1/1	0.86	0.35	70,70,70,70	0
54	MG	DA	3222	1/1	0.86	0.52	82,82,82,82	0
54	MG	DA	3331	1/1	0.87	0.28	79,79,79,79	0
54	MG	BA	3570	1/1	0.87	0.13	65,65,65,65	0
54	MG	DA	3337	1/1	0.87	0.45	80,80,80,80	0
54	MG	DA	3341	1/1	0.87	0.30	68,68,68,68	0
54	MG	DA	3345	1/1	0.87	0.16	91,91,91,91	0
54	MG	DA	3127	1/1	0.87	0.08	91,91,91,91	0
54	MG	CA	1737	1/1	0.87	0.16	93,93,93,93	0
54	MG	AA	1721	1/1	0.87	0.35	95,95,95,95	0
54	MG	DA	3272	1/1	0.87	0.17	65,65,65,65	0
54	MG	DA	3451	1/1	0.87	0.32	81,81,81,81	0
54	MG	BA	3474	1/1	0.87	0.14	86,86,86,86	0
54	MG	BA	3412	1/1	0.87	0.43	78,78,78,78	0
54	MG	DA	3364	1/1	0.87	0.11	102,102,102,102	0
54	MG	BA	3413	1/1	0.87	0.32	87,87,87,87	0
54	MG	BA	3439	1/1	0.87	0.40	70,70,70,70	0
54	MG	DA	3044	1/1	0.87	0.14	78,78,78,78	0
54	MG	CG	302	1/1	0.87	0.09	114,114,114,114	0
54	MG	DA	3485	1/1	0.87	0.29	77,77,77,77	0
54	MG	BA	3030	1/1	0.87	0.35	70,70,70,70	0
54	MG	CA	1623	1/1	0.87	0.07	142,142,142,142	0
54	MG	BA	3386	1/1	0.87	0.20	76,76,76,76	0
54	MG	BA	3494	1/1	0.87	0.24	72,72,72,72	0
54	MG	DA	3495	1/1	0.87	0.16	125,125,125,125	0
54	MG	AA	1738	1/1	0.87	0.41	120,120,120,120	0
54	MG	DA	3292	1/1	0.87	0.31	78,78,78,78	0
54	MG	DA	3293	1/1	0.87	0.36	72,72,72,72	0
54	MG	CA	1761	1/1	0.87	0.18	103,103,103,103	0
54	MG	CA	1762	1/1	0.87	0.14	83,83,83,83	0
54	MG	DA	3516	1/1	0.87	0.28	76,76,76,76	0
54	MG	DA	3004	1/1	0.87	0.43	105,105,105,105	0
54	MG	CA	1705	1/1	0.87	0.11	135,135,135,135	0
54	MG	BA	3444	1/1	0.87	0.30	81,81,81,81	0
54	MG	DA	3522	1/1	0.87	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	3401	1/1	0.87	0.30	93,93,93,93	0
54	MG	DA	3306	1/1	0.87	0.14	88,88,88,88	0
54	MG	BA	3051	1/1	0.87	0.35	74,74,74,74	0
54	MG	BA	3250	1/1	0.87	0.26	61,61,61,61	0
54	MG	B3	102	1/1	0.87	0.17	80,80,80,80	0
54	MG	AA	1753	1/1	0.87	0.17	97,97,97,97	0
54	MG	DA	3221	1/1	0.87	0.32	74,74,74,74	0
54	MG	AA	1685	1/1	0.87	0.27	73,73,73,73	0
54	MG	BA	3320	1/1	0.87	0.45	82,82,82,82	0
54	MG	DA	3422	1/1	0.87	0.12	83,83,83,83	0
54	MG	BA	3124	1/1	0.87	0.34	85,85,85,85	0
54	MG	BA	3324	1/1	0.87	0.28	70,70,70,70	0
54	MG	DA	3426	1/1	0.87	0.18	95,95,95,95	0
54	MG	AA	1627	1/1	0.87	0.46	76,76,76,76	0
54	MG	AA	1822	1/1	0.87	0.17	101,101,101,101	0
54	MG	AA	1695	1/1	0.88	0.13	76,76,76,76	0
54	MG	BA	3079	1/1	0.88	0.26	103,103,103,103	0
54	MG	BA	3368	1/1	0.88	0.18	98,98,98,98	0
54	MG	DA	3332	1/1	0.88	0.20	94,94,94,94	0
54	MG	DA	3435	1/1	0.88	0.09	134,134,134,134	0
54	MG	DA	3436	1/1	0.88	0.32	92,92,92,92	0
54	MG	BA	3466	1/1	0.88	0.16	81,81,81,81	0
54	MG	AA	1620	1/1	0.88	0.07	140,140,140,140	0
54	MG	CA	1722	1/1	0.88	0.33	104,104,104,104	0
54	MG	AA	1802	1/1	0.88	0.08	100,100,100,100	0
54	MG	DA	3075	1/1	0.88	0.28	93,93,93,93	0
54	MG	DA	3350	1/1	0.88	0.37	85,85,85,85	0
54	MG	BA	3329	1/1	0.88	0.44	62,62,62,62	0
54	MG	BA	3166	1/1	0.88	0.26	72,72,72,72	0
54	MG	CS	101	1/1	0.88	0.19	95,95,95,95	0
54	MG	CA	1631	1/1	0.88	0.11	102,102,102,102	0
54	MG	BA	3229	1/1	0.88	0.39	64,64,64,64	0
54	MG	AA	1807	1/1	0.88	0.46	79,79,79,79	0
54	MG	BA	3170	1/1	0.88	0.19	57,57,57,57	0
54	MG	CA	1745	1/1	0.88	0.30	102,102,102,102	0
54	MG	BA	3232	1/1	0.88	0.21	95,95,95,95	0
54	MG	DA	3466	1/1	0.88	0.15	123,123,123,123	0
54	MG	BA	3548	1/1	0.88	0.36	76,76,76,76	0
54	MG	BA	3343	1/1	0.88	0.42	73,73,73,73	0
54	MG	AA	1624	1/1	0.88	0.14	92,92,92,92	0
54	MG	DA	3380	1/1	0.88	0.17	90,90,90,90	0
54	MG	BA	3054	1/1	0.88	0.29	100,100,100,100	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3058	1/1	0.88	0.25	68,68,68,68	0
54	MG	BA	3093	1/1	0.88	0.14	72,72,72,72	0
54	MG	BA	3352	1/1	0.88	0.27	112,112,112,112	0
54	MG	CA	1757	1/1	0.88	0.10	100,100,100,100	0
54	MG	AA	1796	1/1	0.88	0.41	76,76,76,76	0
54	MG	B7	101	1/1	0.88	0.38	69,69,69,69	0
54	MG	BA	3507	1/1	0.88	0.28	79,79,79,79	0
54	MG	CA	1764	1/1	0.88	0.21	89,89,89,89	0
54	MG	BA	3197	1/1	0.88	0.28	89,89,89,89	0
54	MG	DA	3400	1/1	0.88	0.20	95,95,95,95	0
54	MG	DA	3521	1/1	0.88	0.40	104,104,104,104	0
54	MG	BA	3358	1/1	0.88	0.33	82,82,82,82	0
54	MG	CA	1694	1/1	0.88	0.14	91,91,91,91	0
54	MG	BA	3205	1/1	0.88	0.28	51,51,51,51	0
54	MG	DA	3308	1/1	0.88	0.24	78,78,78,78	0
54	MG	BA	3065	1/1	0.88	0.46	68,68,68,68	0
54	MG	BA	3452	1/1	0.88	0.28	108,108,108,108	0
54	MG	DA	3414	1/1	0.88	0.23	92,92,92,92	0
54	MG	AA	1719	1/1	0.88	0.20	98,98,98,98	0
54	MG	DA	3417	1/1	0.88	0.25	81,81,81,81	0
54	MG	CA	1702	1/1	0.88	0.23	84,84,84,84	0
54	MG	DA	3178	1/1	0.88	0.38	70,70,70,70	0
54	MG	BA	3601	1/1	0.88	0.16	83,83,83,83	0
54	MG	BA	3319	1/1	0.88	0.25	82,82,82,82	0
54	MG	BA	3458	1/1	0.88	0.47	78,78,78,78	0
54	MG	DA	3425	1/1	0.88	0.15	82,82,82,82	0
54	MG	AA	1745	1/1	0.88	0.40	78,78,78,78	0
54	MG	DA	3242	1/1	0.89	0.44	66,66,66,66	0
54	MG	DA	3243	1/1	0.89	0.30	71,71,71,71	0
54	MG	BA	3024	1/1	0.89	0.35	56,56,56,56	0
54	MG	BA	3325	1/1	0.89	0.14	79,79,79,79	0
54	MG	BA	3616	1/1	0.89	0.22	73,73,73,73	0
54	MG	BA	3204	1/1	0.89	0.38	106,106,106,106	0
54	MG	BA	3437	1/1	0.89	0.20	81,81,81,81	0
54	MG	DA	3266	1/1	0.89	0.15	87,87,87,87	0
54	MG	DA	3268	1/1	0.89	0.36	76,76,76,76	0
54	MG	BA	3138	1/1	0.89	0.32	65,65,65,65	0
54	MG	BA	3378	1/1	0.89	0.42	80,80,80,80	0
54	MG	DA	3047	1/1	0.89	0.14	91,91,91,91	0
54	MG	CA	1643	1/1	0.89	0.24	86,86,86,86	0
54	MG	CA	1648	1/1	0.89	0.24	88,88,88,88	0
54	MG	BA	3328	1/1	0.89	0.33	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	AA	1672	1/1	0.89	0.46	86,86,86,86	0
54	MG	BA	3330	1/1	0.89	0.49	91,91,91,91	0
54	MG	BA	3331	1/1	0.89	0.19	88,88,88,88	0
54	MG	DA	3066	1/1	0.89	0.17	80,80,80,80	0
54	MG	DA	3286	1/1	0.89	0.20	63,63,63,63	0
54	MG	BA	3213	1/1	0.89	0.15	61,61,61,61	0
54	MG	BA	3389	1/1	0.89	0.26	74,74,74,74	0
54	MG	DA	3430	1/1	0.89	0.20	110,110,110,110	0
54	MG	AA	1739	1/1	0.89	0.12	191,191,191,191	0
54	MG	CA	1774	1/1	0.89	0.15	105,105,105,105	0
54	MG	CA	1775	1/1	0.89	0.14	84,84,84,84	0
54	MG	CA	1777	1/1	0.89	0.15	78,78,78,78	0
54	MG	DA	3437	1/1	0.89	0.32	101,101,101,101	0
54	MG	DA	3081	1/1	0.89	0.21	91,91,91,91	0
54	MG	BA	3219	1/1	0.89	0.21	82,82,82,82	0
54	MG	BA	3045	1/1	0.89	0.16	64,64,64,64	0
54	MG	BA	3049	1/1	0.89	0.20	59,59,59,59	0
54	MG	CA	1692	1/1	0.89	0.29	93,93,93,93	0
54	MG	BA	3536	1/1	0.89	0.29	74,74,74,74	0
54	MG	DA	3093	1/1	0.89	0.28	88,88,88,88	0
54	MG	AA	1669	1/1	0.89	0.38	76,76,76,76	0
54	MG	DA	3453	1/1	0.89	0.45	92,92,92,92	0
54	MG	BE	304	1/1	0.89	0.10	90,90,90,90	0
54	MG	DA	3101	1/1	0.89	0.32	100,100,100,100	0
54	MG	DA	3318	1/1	0.89	0.33	88,88,88,88	0
54	MG	BA	3539	1/1	0.89	0.32	59,59,59,59	0
54	MG	DA	3323	1/1	0.89	0.16	84,84,84,84	0
54	MG	CA	1699	1/1	0.89	0.36	80,80,80,80	0
54	MG	CA	1700	1/1	0.89	0.10	133,133,133,133	0
54	MG	DA	3463	1/1	0.89	0.31	75,75,75,75	0
54	MG	BA	3052	1/1	0.89	0.55	81,81,81,81	0
54	MG	DA	3477	1/1	0.89	0.14	67,67,67,67	0
54	MG	BA	3463	1/1	0.89	0.31	84,84,84,84	0
54	MG	CA	1703	1/1	0.89	0.44	85,85,85,85	0
54	MG	BA	3095	1/1	0.89	0.46	57,57,57,57	0
54	MG	AA	1645	1/1	0.89	0.29	81,81,81,81	0
54	MG	B7	102	1/1	0.89	0.29	78,78,78,78	0
54	MG	BA	3405	1/1	0.89	0.48	72,72,72,72	0
54	MG	BA	3406	1/1	0.89	0.19	88,88,88,88	0
54	MG	DA	3497	1/1	0.89	0.30	86,86,86,86	0
54	MG	DA	3498	1/1	0.89	0.11	71,71,71,71	0
54	MG	BA	3297	1/1	0.89	0.33	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3350	1/1	0.89	0.47	72,72,72,72	0
54	MG	DA	3502	1/1	0.89	0.16	67,67,67,67	0
54	MG	AA	1804	1/1	0.89	0.41	81,81,81,81	0
54	MG	DA	3349	1/1	0.89	0.23	78,78,78,78	0
54	MG	DA	3003	1/1	0.89	0.08	77,77,77,77	0
54	MG	AN	201	1/1	0.89	0.09	91,91,91,91	0
54	MG	DA	3158	1/1	0.89	0.34	71,71,71,71	0
54	MG	BA	3578	1/1	0.89	0.26	73,73,73,73	0
54	MG	AA	1819	1/1	0.89	0.17	92,92,92,92	0
54	MG	DA	3166	1/1	0.89	0.17	91,91,91,91	0
54	MG	BA	3306	1/1	0.89	0.51	94,94,94,94	0
54	MG	CA	1726	1/1	0.89	0.30	82,82,82,82	0
54	MG	DA	3171	1/1	0.89	0.38	64,64,64,64	0
54	MG	DA	3016	1/1	0.89	0.17	74,74,74,74	0
54	MG	BA	3307	1/1	0.89	0.30	75,75,75,75	0
54	MG	BA	3169	1/1	0.89	0.14	65,65,65,65	0
54	MG	AC	102	1/1	0.89	0.38	102,102,102,102	0
54	MG	BA	3171	1/1	0.89	0.52	92,92,92,92	0
54	MG	AA	1794	1/1	0.89	0.48	93,93,93,93	0
54	MG	AA	1696	1/1	0.89	0.16	80,80,80,80	0
54	MG	BA	3598	1/1	0.89	0.20	75,75,75,75	0
54	MG	AA	1697	1/1	0.89	0.18	90,90,90,90	0
54	MG	BA	3085	1/1	0.89	0.27	75,75,75,75	0
54	MG	DA	3032	1/1	0.89	0.20	79,79,79,79	0
54	MG	D5	101	1/1	0.89	0.13	63,63,63,63	0
54	MG	AA	1798	1/1	0.89	0.40	93,93,93,93	0
54	MG	AA	1795	1/1	0.90	0.33	86,86,86,86	0
54	MG	BA	3117	1/1	0.90	0.38	57,57,57,57	0
54	MG	BA	3581	1/1	0.90	0.16	59,59,59,59	0
54	MG	BA	3346	1/1	0.90	0.17	74,74,74,74	0
54	MG	DA	3088	1/1	0.90	0.29	110,110,110,110	0
54	MG	BA	3504	1/1	0.90	0.10	90,90,90,90	0
54	MG	AH	201	1/1	0.90	0.20	91,91,91,91	0
54	MG	BA	3253	1/1	0.90	0.31	82,82,82,82	0
54	MG	BA	3590	1/1	0.90	0.16	83,83,83,83	0
54	MG	CC	101	1/1	0.90	0.10	110,110,110,110	0
54	MG	DA	3104	1/1	0.90	0.14	71,71,71,71	0
54	MG	BA	3508	1/1	0.90	0.19	83,83,83,83	0
54	MG	DA	3427	1/1	0.90	0.24	74,74,74,74	0
54	MG	BA	3309	1/1	0.90	0.38	69,69,69,69	0
54	MG	CC	106	1/1	0.90	0.13	98,98,98,98	0
54	MG	DA	3125	1/1	0.90	0.30	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	AA	1805	1/1	0.90	0.41	91,91,91,91	0
54	MG	BA	3218	1/1	0.90	0.25	90,90,90,90	0
54	MG	BA	3264	1/1	0.90	0.31	78,78,78,78	0
54	MG	BA	3600	1/1	0.90	0.25	65,65,65,65	0
54	MG	DA	3310	1/1	0.90	0.35	85,85,85,85	0
54	MG	BA	3403	1/1	0.90	0.33	103,103,103,103	0
54	MG	BA	3356	1/1	0.90	0.56	81,81,81,81	0
54	MG	CA	1625	1/1	0.90	0.12	115,115,115,115	0
54	MG	AA	1613	1/1	0.90	0.34	97,97,97,97	0
54	MG	BA	3271	1/1	0.90	0.14	98,98,98,98	0
54	MG	CA	1741	1/1	0.90	0.14	114,114,114,114	0
54	MG	AA	1741	1/1	0.90	0.13	99,99,99,99	0
54	MG	BA	3274	1/1	0.90	0.24	81,81,81,81	0
54	MG	BA	3527	1/1	0.90	0.21	78,78,78,78	0
54	MG	BA	3275	1/1	0.90	0.33	90,90,90,90	0
54	MG	DA	3456	1/1	0.90	0.10	105,105,105,105	0
54	MG	AA	1726	1/1	0.90	0.17	95,95,95,95	0
54	MG	BA	3134	1/1	0.90	0.30	66,66,66,66	0
54	MG	BA	3625	1/1	0.90	0.19	113,113,113,113	0
54	MG	BA	3224	1/1	0.90	0.46	76,76,76,76	0
54	MG	AA	1827	1/1	0.90	0.12	112,112,112,112	0
54	MG	DA	3335	1/1	0.90	0.26	91,91,91,91	0
54	MG	BA	3174	1/1	0.90	0.27	63,63,63,63	0
54	MG	CA	1649	1/1	0.90	0.29	88,88,88,88	0
54	MG	DA	3182	1/1	0.90	0.33	74,74,74,74	0
54	MG	DA	3483	1/1	0.90	0.32	79,79,79,79	0
54	MG	DA	3347	1/1	0.90	0.11	79,79,79,79	0
54	MG	CA	1652	1/1	0.90	0.31	106,106,106,106	0
54	MG	AC	108	1/1	0.90	0.17	95,95,95,95	0
54	MG	BA	3470	1/1	0.90	0.26	90,90,90,90	0
54	MG	DA	3190	1/1	0.90	0.31	67,67,67,67	0
54	MG	DA	3494	1/1	0.90	0.30	72,72,72,72	0
54	MG	BB	208	1/1	0.90	0.17	89,89,89,89	0
54	MG	BB	209	1/1	0.90	0.24	112,112,112,112	0
54	MG	DA	3041	1/1	0.90	0.11	82,82,82,82	0
54	MG	DA	3216	1/1	0.90	0.14	78,78,78,78	0
54	MG	DA	3217	1/1	0.90	0.35	89,89,89,89	0
54	MG	AA	1667	1/1	0.90	0.52	82,82,82,82	0
54	MG	DA	3367	1/1	0.90	0.34	89,89,89,89	0
54	MG	DA	3369	1/1	0.90	0.28	91,91,91,91	0
54	MG	DA	3513	1/1	0.90	0.34	81,81,81,81	0
54	MG	BA	3479	1/1	0.90	0.34	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3147	1/1	0.90	0.34	73,73,73,73	0
54	MG	DA	3227	1/1	0.90	0.16	67,67,67,67	0
54	MG	BA	3487	1/1	0.90	0.17	72,72,72,72	0
54	MG	BA	3546	1/1	0.90	0.15	98,98,98,98	0
54	MG	CA	1772	1/1	0.90	0.13	128,128,128,128	0
54	MG	AA	1608	1/1	0.90	0.35	91,91,91,91	0
54	MG	DA	3523	1/1	0.90	0.18	90,90,90,90	0
54	MG	BA	3195	1/1	0.90	0.20	43,43,43,43	0
54	MG	BA	3338	1/1	0.90	0.22	77,77,77,77	0
54	MG	DB	203	1/1	0.90	0.27	81,81,81,81	0
54	MG	BO	201	1/1	0.90	0.19	79,79,79,79	0
54	MG	B1	201	1/1	0.90	0.30	68,68,68,68	0
54	MG	CA	1780	1/1	0.90	0.26	74,74,74,74	0
54	MG	DA	3261	1/1	0.90	0.38	97,97,97,97	0
54	MG	DA	3265	1/1	0.90	0.18	91,91,91,91	0
54	MG	BA	3552	1/1	0.90	0.07	79,79,79,79	0
54	MG	DA	3394	1/1	0.90	0.20	75,75,75,75	0
54	MG	DA	3398	1/1	0.90	0.19	84,84,84,84	0
54	MG	AA	1630	1/1	0.90	0.23	88,88,88,88	0
54	MG	DA	3074	1/1	0.90	0.44	102,102,102,102	0
54	MG	AA	1655	1/1	0.90	0.43	97,97,97,97	0
54	MG	DR	201	1/1	0.90	0.35	82,82,82,82	0
54	MG	CA	1786	1/1	0.90	0.25	83,83,83,83	0
54	MG	DU	201	1/1	0.90	0.24	89,89,89,89	0
54	MG	AA	1803	1/1	0.90	0.36	75,75,75,75	0
55	T1C	AA	1837	42/42	0.90	0.15	81,103,111,117	0
55	T1C	CA	1800	42/42	0.90	0.15	101,116,124,127	0
54	MG	BA	3434	1/1	0.90	0.15	86,86,86,86	0
54	MG	CA	1686	1/1	0.91	0.17	96,96,96,96	0
54	MG	CA	1687	1/1	0.91	0.19	84,84,84,84	0
54	MG	BB	216	1/1	0.91	0.07	111,111,111,111	0
54	MG	BA	3168	1/1	0.91	0.35	85,85,85,85	0
54	MG	BA	3485	1/1	0.91	0.20	79,79,79,79	0
54	MG	BA	3371	1/1	0.91	0.26	77,77,77,77	0
54	MG	BA	3283	1/1	0.91	0.34	78,78,78,78	0
54	MG	BA	3122	1/1	0.91	0.38	98,98,98,98	0
54	MG	AA	1701	1/1	0.91	0.13	96,96,96,96	0
54	MG	CA	1788	1/1	0.91	0.22	91,91,91,91	0
54	MG	BA	3492	1/1	0.91	0.17	87,87,87,87	0
54	MG	BA	3034	1/1	0.91	0.38	78,78,78,78	0
54	MG	BA	3333	1/1	0.91	0.17	83,83,83,83	0
54	MG	BA	3495	1/1	0.91	0.12	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	AA	1702	1/1	0.91	0.24	80,80,80,80	0
54	MG	BA	3431	1/1	0.91	0.11	88,88,88,88	0
54	MG	CA	1706	1/1	0.91	0.21	90,90,90,90	0
54	MG	BA	3335	1/1	0.91	0.27	75,75,75,75	0
54	MG	BA	3433	1/1	0.91	0.12	94,94,94,94	0
54	MG	BA	3177	1/1	0.91	0.20	87,87,87,87	0
54	MG	DA	3121	1/1	0.91	0.33	109,109,109,109	0
54	MG	DA	3122	1/1	0.91	0.31	84,84,84,84	0
54	MG	CA	1711	1/1	0.91	0.21	100,100,100,100	0
54	MG	BA	3382	1/1	0.91	0.47	89,89,89,89	0
54	MG	CA	1714	1/1	0.91	0.12	161,161,161,161	0
54	MG	BA	3592	1/1	0.91	0.24	73,73,73,73	0
54	MG	DA	3448	1/1	0.91	0.41	89,89,89,89	0
54	MG	DA	3136	1/1	0.91	0.24	63,63,63,63	0
54	MG	BA	3384	1/1	0.91	0.26	73,73,73,73	0
54	MG	AA	1622	1/1	0.91	0.40	70,70,70,70	0
54	MG	DA	3454	1/1	0.91	0.29	90,90,90,90	0
54	MG	CA	1721	1/1	0.91	0.27	74,74,74,74	0
54	MG	BA	3340	1/1	0.91	0.27	84,84,84,84	0
54	MG	DA	3145	1/1	0.91	0.19	86,86,86,86	0
54	MG	DA	3148	1/1	0.91	0.17	86,86,86,86	0
54	MG	AA	1682	1/1	0.91	0.29	103,103,103,103	0
54	MG	BA	3182	1/1	0.91	0.41	81,81,81,81	0
54	MG	BA	3136	1/1	0.91	0.21	60,60,60,60	0
54	MG	DA	3152	1/1	0.91	0.14	86,86,86,86	0
54	MG	AQ	101	1/1	0.91	0.29	94,94,94,94	0
54	MG	DA	3008	1/1	0.91	0.20	77,77,77,77	0
54	MG	BA	3446	1/1	0.91	0.47	94,94,94,94	0
54	MG	BA	3192	1/1	0.91	0.26	100,100,100,100	0
54	MG	CA	1736	1/1	0.91	0.10	90,90,90,90	0
54	MG	DA	3486	1/1	0.91	0.15	78,78,78,78	0
54	MG	DA	3487	1/1	0.91	0.15	95,95,95,95	0
54	MG	BA	3609	1/1	0.91	0.27	80,80,80,80	0
54	MG	DA	3489	1/1	0.91	0.15	79,79,79,79	0
54	MG	AA	1665	1/1	0.91	0.41	82,82,82,82	0
54	MG	BA	3615	1/1	0.91	0.12	83,83,83,83	0
54	MG	BA	3451	1/1	0.91	0.45	93,93,93,93	0
54	MG	BA	3617	1/1	0.91	0.20	83,83,83,83	0
54	MG	DA	3177	1/1	0.91	0.34	65,65,65,65	0
54	MG	DA	3352	1/1	0.91	0.14	71,71,71,71	0
54	MG	AC	103	1/1	0.91	0.34	83,83,83,83	0
54	MG	AA	1813	1/1	0.91	0.25	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	BA	3203	1/1	0.91	0.45	75,75,75,75	0
54	MG	BA	3312	1/1	0.91	0.49	84,84,84,84	0
54	MG	DA	3034	1/1	0.91	0.12	82,82,82,82	0
54	MG	DA	3507	1/1	0.91	0.15	117,117,117,117	0
54	MG	BA	3060	1/1	0.91	0.22	92,92,92,92	0
54	MG	DA	3365	1/1	0.91	0.25	73,73,73,73	0
54	MG	BA	3258	1/1	0.91	0.40	74,74,74,74	0
54	MG	DA	3193	1/1	0.91	0.17	76,76,76,76	0
54	MG	DA	3368	1/1	0.91	0.24	82,82,82,82	0
54	MG	DA	3194	1/1	0.91	0.43	54,54,54,54	0
54	MG	AA	1652	1/1	0.91	0.40	93,93,93,93	0
54	MG	DA	3203	1/1	0.91	0.31	73,73,73,73	0
54	MG	DA	3213	1/1	0.91	0.21	64,64,64,64	0
54	MG	CA	1644	1/1	0.91	0.27	85,85,85,85	0
54	MG	CA	1758	1/1	0.91	0.21	94,94,94,94	0
54	MG	CA	1647	1/1	0.91	0.18	84,84,84,84	0
54	MG	AA	1831	1/1	0.91	0.31	91,91,91,91	0
54	MG	BA	3207	1/1	0.91	0.33	78,78,78,78	0
54	MG	BB	203	1/1	0.91	0.36	70,70,70,70	0
54	MG	DA	3046	1/1	0.91	0.22	78,78,78,78	0
54	MG	BA	3535	1/1	0.91	0.19	79,79,79,79	0
54	MG	CA	1655	1/1	0.91	0.34	93,93,93,93	0
54	MG	AA	1712	1/1	0.91	0.36	94,94,94,94	0
54	MG	BA	3071	1/1	0.91	0.24	90,90,90,90	0
54	MG	AA	1780	1/1	0.91	0.28	90,90,90,90	0
54	MG	DA	3393	1/1	0.91	0.31	92,92,92,92	0
54	MG	DE	301	1/1	0.91	0.20	67,67,67,67	0
54	MG	DA	3246	1/1	0.91	0.28	89,89,89,89	0
54	MG	DA	3057	1/1	0.91	0.31	70,70,70,70	0
54	MG	DP	201	1/1	0.91	0.10	76,76,76,76	0
54	MG	BA	3074	1/1	0.91	0.16	76,76,76,76	0
54	MG	BA	3473	1/1	0.91	0.48	84,84,84,84	0
54	MG	BA	3544	1/1	0.91	0.17	83,83,83,83	0
54	MG	DU	202	1/1	0.91	0.10	96,96,96,96	0
54	MG	D3	101	1/1	0.91	0.34	78,78,78,78	0
54	MG	BA	3006	1/1	0.91	0.35	56,56,56,56	0
54	MG	DA	3068	1/1	0.91	0.34	86,86,86,86	0
54	MG	DA	3070	1/1	0.91	0.29	68,68,68,68	0
54	MG	AA	1763	1/1	0.91	0.41	89,89,89,89	0
54	MG	DA	3419	1/1	0.92	0.15	97,97,97,97	0
54	MG	BA	3311	1/1	0.92	0.21	73,73,73,73	0
54	MG	BA	3605	1/1	0.92	0.29	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	BA	3608	1/1	0.92	0.15	89,89,89,89	0
54	MG	BA	3046	1/1	0.92	0.28	60,60,60,60	0
54	MG	CA	1723	1/1	0.92	0.41	82,82,82,82	0
54	MG	BA	3471	1/1	0.92	0.40	78,78,78,78	0
54	MG	BA	3106	1/1	0.92	0.51	73,73,73,73	0
54	MG	BA	3272	1/1	0.92	0.19	53,53,53,53	0
54	MG	BA	3475	1/1	0.92	0.13	79,79,79,79	0
54	MG	DA	3131	1/1	0.92	0.21	77,77,77,77	0
54	MG	DA	3431	1/1	0.92	0.09	81,81,81,81	0
54	MG	AA	1670	1/1	0.92	0.22	86,86,86,86	0
54	MG	BA	3317	1/1	0.92	0.26	87,87,87,87	0
54	MG	BA	3482	1/1	0.92	0.40	84,84,84,84	0
54	MG	AA	1664	1/1	0.92	0.52	81,81,81,81	0
54	MG	DA	3012	1/1	0.92	0.35	87,87,87,87	0
54	MG	DA	3143	1/1	0.92	0.10	84,84,84,84	0
54	MG	BA	3187	1/1	0.92	0.45	71,71,71,71	0
54	MG	BA	3542	1/1	0.92	0.22	77,77,77,77	0
54	MG	BA	3112	1/1	0.92	0.46	71,71,71,71	0
54	MG	DA	3312	1/1	0.92	0.28	81,81,81,81	0
54	MG	AA	1744	1/1	0.92	0.26	81,81,81,81	0
54	MG	BA	3115	1/1	0.92	0.41	74,74,74,74	0
54	MG	AA	1648	1/1	0.92	0.10	115,115,115,115	0
54	MG	BA	3055	1/1	0.92	0.37	84,84,84,84	0
54	MG	DA	3452	1/1	0.92	0.35	95,95,95,95	0
54	MG	DA	3320	1/1	0.92	0.05	105,105,105,105	0
54	MG	DA	3322	1/1	0.92	0.23	104,104,104,104	0
54	MG	BA	3398	1/1	0.92	0.30	78,78,78,78	0
54	MG	BA	3399	1/1	0.92	0.22	77,77,77,77	0
54	MG	CA	1753	1/1	0.92	0.17	105,105,105,105	0
54	MG	BA	3233	1/1	0.92	0.08	82,82,82,82	0
54	MG	DA	3031	1/1	0.92	0.20	72,72,72,72	0
54	MG	BB	210	1/1	0.92	0.38	76,76,76,76	0
54	MG	DA	3164	1/1	0.92	0.25	84,84,84,84	0
54	MG	BA	3554	1/1	0.92	0.18	94,94,94,94	0
54	MG	CA	1659	1/1	0.92	0.17	92,92,92,92	0
54	MG	DA	3465	1/1	0.92	0.30	50,50,50,50	0
54	MG	BA	3198	1/1	0.92	0.41	71,71,71,71	0
54	MG	CA	1661	1/1	0.92	0.23	88,88,88,88	0
54	MG	DA	3336	1/1	0.92	0.47	90,90,90,90	0
54	MG	DA	3484	1/1	0.92	0.19	69,69,69,69	0
54	MG	DA	3172	1/1	0.92	0.36	66,66,66,66	0
54	MG	DA	3175	1/1	0.92	0.21	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	3342	1/1	0.92	0.28	90,90,90,90	0
54	MG	BA	3565	1/1	0.92	0.36	45,45,45,45	0
54	MG	CA	1763	1/1	0.92	0.28	80,80,80,80	0
54	MG	CA	1672	1/1	0.92	0.28	79,79,79,79	0
54	MG	CA	1674	1/1	0.92	0.22	87,87,87,87	0
54	MG	DA	3043	1/1	0.92	0.31	88,88,88,88	0
54	MG	CA	1675	1/1	0.92	0.14	96,96,96,96	0
54	MG	BA	3119	1/1	0.92	0.30	84,84,84,84	0
54	MG	DA	3191	1/1	0.92	0.34	62,62,62,62	0
54	MG	BA	3568	1/1	0.92	0.23	55,55,55,55	0
54	MG	BA	3241	1/1	0.92	0.13	70,70,70,70	0
54	MG	DA	3048	1/1	0.92	0.33	61,61,61,61	0
54	MG	DA	3362	1/1	0.92	0.39	79,79,79,79	0
54	MG	BA	3243	1/1	0.92	0.38	63,63,63,63	0
54	MG	DA	3504	1/1	0.92	0.29	79,79,79,79	0
54	MG	BA	3574	1/1	0.92	0.19	60,60,60,60	0
54	MG	BF	301	1/1	0.92	0.08	76,76,76,76	0
54	MG	DA	3055	1/1	0.92	0.21	51,51,51,51	0
54	MG	BA	3448	1/1	0.92	0.24	79,79,79,79	0
54	MG	BA	3407	1/1	0.92	0.47	85,85,85,85	0
54	MG	BA	3120	1/1	0.92	0.17	76,76,76,76	0
54	MG	BA	3582	1/1	0.92	0.39	78,78,78,78	0
54	MG	DA	3065	1/1	0.92	0.38	82,82,82,82	0
54	MG	DA	3375	1/1	0.92	0.10	96,96,96,96	0
54	MG	DA	3226	1/1	0.92	0.29	75,75,75,75	0
54	MG	AA	1791	1/1	0.92	0.23	96,96,96,96	0
54	MG	DA	3231	1/1	0.92	0.17	74,74,74,74	0
54	MG	DA	3233	1/1	0.92	0.15	75,75,75,75	0
54	MG	BA	3411	1/1	0.92	0.26	80,80,80,80	0
54	MG	DB	204	1/1	0.92	0.15	87,87,87,87	0
54	MG	DB	205	1/1	0.92	0.25	84,84,84,84	0
54	MG	BA	3586	1/1	0.92	0.39	71,71,71,71	0
54	MG	BA	3059	1/1	0.92	0.25	78,78,78,78	0
54	MG	CA	1784	1/1	0.92	0.31	95,95,95,95	0
54	MG	AA	1720	1/1	0.92	0.11	113,113,113,113	0
54	MG	DB	210	1/1	0.92	0.26	95,95,95,95	0
54	MG	DA	3073	1/1	0.92	0.17	66,66,66,66	0
54	MG	BA	3514	1/1	0.92	0.27	76,76,76,76	0
54	MG	CA	1601	1/1	0.92	0.29	95,95,95,95	0
54	MG	AA	1646	1/1	0.92	0.37	105,105,105,105	0
54	MG	DA	3255	1/1	0.92	0.32	62,62,62,62	0
54	MG	CA	1789	1/1	0.92	0.14	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3461	1/1	0.92	0.26	73,73,73,73	0
54	MG	DA	3262	1/1	0.92	0.19	95,95,95,95	0
54	MG	BA	3337	1/1	0.92	0.43	64,64,64,64	0
54	MG	AA	1815	1/1	0.92	0.41	98,98,98,98	0
54	MG	CA	1797	1/1	0.92	0.35	101,101,101,101	0
54	MG	AA	1644	1/1	0.92	0.35	68,68,68,68	0
54	MG	BA	3043	1/1	0.92	0.34	57,57,57,57	0
54	MG	BA	3524	1/1	0.92	0.26	77,77,77,77	0
54	MG	BA	3421	1/1	0.92	0.34	73,73,73,73	0
54	MG	BA	3602	1/1	0.92	0.26	71,71,71,71	0
54	MG	CA	1619	1/1	0.92	0.10	75,75,75,75	0
54	MG	AA	1716	1/1	0.92	0.28	106,106,106,106	0
54	MG	AA	1729	1/1	0.93	0.22	102,102,102,102	0
54	MG	DA	3146	1/1	0.93	0.13	86,86,86,86	0
54	MG	DA	3294	1/1	0.93	0.25	77,77,77,77	0
54	MG	DA	3147	1/1	0.93	0.26	79,79,79,79	0
54	MG	BA	3409	1/1	0.93	0.23	73,73,73,73	0
54	MG	BA	3063	1/1	0.93	0.20	67,67,67,67	0
54	MG	BA	3102	1/1	0.93	0.29	80,80,80,80	0
54	MG	DA	3303	1/1	0.93	0.07	94,94,94,94	0
54	MG	DA	3035	1/1	0.93	0.12	92,92,92,92	0
54	MG	DA	3305	1/1	0.93	0.34	78,78,78,78	0
54	MG	CA	1682	1/1	0.93	0.27	94,94,94,94	0
54	MG	AA	1769	1/1	0.93	0.27	122,122,122,122	0
54	MG	BA	3036	1/1	0.93	0.40	73,73,73,73	0
54	MG	BA	3366	1/1	0.93	0.37	65,65,65,65	0
54	MG	CA	1688	1/1	0.93	0.26	88,88,88,88	0
54	MG	DA	3438	1/1	0.93	0.25	82,82,82,82	0
54	MG	BA	3415	1/1	0.93	0.36	80,80,80,80	0
54	MG	BA	3194	1/1	0.93	0.26	64,64,64,64	0
54	MG	DA	3315	1/1	0.93	0.33	95,95,95,95	0
54	MG	CA	1693	1/1	0.93	0.50	89,89,89,89	0
54	MG	DA	3165	1/1	0.93	0.32	64,64,64,64	0
54	MG	BA	3532	1/1	0.93	0.25	82,82,82,82	0
54	MG	AA	1771	1/1	0.93	0.17	94,94,94,94	0
54	MG	DA	3321	1/1	0.93	0.31	78,78,78,78	0
54	MG	CA	1773	1/1	0.93	0.24	113,113,113,113	0
54	MG	BA	3236	1/1	0.93	0.34	74,74,74,74	0
54	MG	AA	1690	1/1	0.93	0.19	131,131,131,131	0
54	MG	BA	3373	1/1	0.93	0.24	85,85,85,85	0
54	MG	DA	3050	1/1	0.93	0.19	67,67,67,67	0
54	MG	BA	3152	1/1	0.93	0.15	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3180	1/1	0.93	0.32	68,68,68,68	0
54	MG	BA	3044	1/1	0.93	0.28	60,60,60,60	0
54	MG	AA	1703	1/1	0.93	0.27	61,61,61,61	0
54	MG	DA	3185	1/1	0.93	0.29	77,77,77,77	0
54	MG	BA	3292	1/1	0.93	0.13	78,78,78,78	0
54	MG	BA	3294	1/1	0.93	0.37	75,75,75,75	0
54	MG	AA	1705	1/1	0.93	0.10	104,104,104,104	0
54	MG	DA	3063	1/1	0.93	0.19	95,95,95,95	0
54	MG	BA	3247	1/1	0.93	0.36	59,59,59,59	0
54	MG	DA	3467	1/1	0.93	0.27	72,72,72,72	0
54	MG	DA	3474	1/1	0.93	0.22	65,65,65,65	0
54	MG	AA	1776	1/1	0.93	0.29	102,102,102,102	0
54	MG	DA	3344	1/1	0.93	0.30	82,82,82,82	0
54	MG	BA	3383	1/1	0.93	0.25	86,86,86,86	0
54	MG	DA	3195	1/1	0.93	0.23	82,82,82,82	0
54	MG	BA	3624	1/1	0.93	0.16	98,98,98,98	0
54	MG	DA	3198	1/1	0.93	0.30	57,57,57,57	0
54	MG	CA	1710	1/1	0.93	0.18	102,102,102,102	0
54	MG	CA	1627	1/1	0.93	0.07	111,111,111,111	0
54	MG	BA	3050	1/1	0.93	0.22	79,79,79,79	0
54	MG	BA	3549	1/1	0.93	0.11	74,74,74,74	0
54	MG	BA	3628	1/1	0.93	0.33	78,78,78,78	0
54	MG	CA	1632	1/1	0.93	0.20	88,88,88,88	0
54	MG	CA	1717	1/1	0.93	0.21	86,86,86,86	0
54	MG	CA	1633	1/1	0.93	0.23	85,85,85,85	0
54	MG	CA	1720	1/1	0.93	0.24	86,86,86,86	0
54	MG	DA	3080	1/1	0.93	0.21	74,74,74,74	0
54	MG	BA	3303	1/1	0.93	0.31	69,69,69,69	0
54	MG	CN	201	1/1	0.93	0.07	95,95,95,95	0
54	MG	DA	3235	1/1	0.93	0.33	74,74,74,74	0
54	MG	DA	3083	1/1	0.93	0.34	90,90,90,90	0
54	MG	DA	3239	1/1	0.93	0.28	64,64,64,64	0
54	MG	DA	3508	1/1	0.93	0.38	65,65,65,65	0
54	MG	AA	1659	1/1	0.93	0.24	56,56,56,56	0
54	MG	DA	3241	1/1	0.93	0.32	74,74,74,74	0
54	MG	AA	1707	1/1	0.93	0.10	127,127,127,127	0
54	MG	DA	3376	1/1	0.93	0.24	62,62,62,62	0
54	MG	BA	3255	1/1	0.93	0.19	69,69,69,69	0
54	MG	DA	3518	1/1	0.93	0.35	83,83,83,83	0
54	MG	AA	1762	1/1	0.93	0.39	92,92,92,92	0
54	MG	AA	1611	1/1	0.93	0.10	118,118,118,118	0
54	MG	DA	3090	1/1	0.93	0.18	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	BA	3310	1/1	0.93	0.20	70,70,70,70	0
54	MG	BA	3259	1/1	0.93	0.38	56,56,56,56	0
54	MG	CA	1734	1/1	0.93	0.25	78,78,78,78	0
54	MG	BA	3261	1/1	0.93	0.20	65,65,65,65	0
54	MG	BA	3351	1/1	0.93	0.20	62,62,62,62	0
54	MG	BA	3576	1/1	0.93	0.18	93,93,93,93	0
54	MG	DA	3112	1/1	0.93	0.30	58,58,58,58	0
54	MG	BA	3125	1/1	0.93	0.28	75,75,75,75	0
54	MG	BA	3129	1/1	0.93	0.27	84,84,84,84	0
54	MG	CA	1743	1/1	0.93	0.10	85,85,85,85	0
54	MG	CA	1744	1/1	0.93	0.10	70,70,70,70	0
54	MG	BA	3354	1/1	0.93	0.19	83,83,83,83	0
54	MG	BA	3512	1/1	0.93	0.15	87,87,87,87	0
54	MG	BA	3402	1/1	0.93	0.20	83,83,83,83	0
54	MG	BA	3056	1/1	0.93	0.34	109,109,109,109	0
54	MG	AA	1662	1/1	0.93	0.16	71,71,71,71	0
54	MG	DA	3408	1/1	0.93	0.17	76,76,76,76	0
54	MG	DA	3135	1/1	0.93	0.14	79,79,79,79	0
54	MG	BA	3357	1/1	0.93	0.48	77,77,77,77	0
54	MG	CA	1669	1/1	0.93	0.28	81,81,81,81	0
54	MG	DA	3412	1/1	0.93	0.20	89,89,89,89	0
54	MG	DA	3413	1/1	0.93	0.17	84,84,84,84	0
54	MG	BO	202	1/1	0.93	0.15	68,68,68,68	0
54	MG	DA	3415	1/1	0.93	0.25	92,92,92,92	0
54	MG	CA	1673	1/1	0.93	0.31	74,74,74,74	0
54	MG	DA	3288	1/1	0.93	0.28	77,77,77,77	0
54	MG	BA	3017	1/1	0.93	0.31	53,53,53,53	0
54	MG	AA	1628	1/1	0.93	0.32	96,96,96,96	0
54	MG	DA	3291	1/1	0.93	0.37	84,84,84,84	0
56	ZN	AG	302	1/1	0.93	0.29	115,115,115,115	0
54	MG	DA	3421	1/1	0.93	0.45	86,86,86,86	0
56	ZN	CQ	101	1/1	0.93	0.12	123,123,123,123	0
54	MG	BA	3235	1/1	0.94	0.35	79,79,79,79	0
54	MG	AA	1783	1/1	0.94	0.47	88,88,88,88	0
54	MG	BA	3520	1/1	0.94	0.15	86,86,86,86	0
54	MG	BA	3348	1/1	0.94	0.07	140,140,140,140	0
54	MG	AA	1821	1/1	0.94	0.21	96,96,96,96	0
54	MG	DA	3132	1/1	0.94	0.27	80,80,80,80	0
54	MG	BA	3455	1/1	0.94	0.17	74,74,74,74	0
54	MG	BA	3239	1/1	0.94	0.30	71,71,71,71	0
54	MG	BA	3401	1/1	0.94	0.12	73,73,73,73	0
54	MG	AA	1749	1/1	0.94	0.12	130,130,130,130	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	DA	3138	1/1	0.94	0.11	121,121,121,121	0
54	MG	CA	1718	1/1	0.94	0.12	100,100,100,100	0
54	MG	BA	3186	1/1	0.94	0.38	69,69,69,69	0
54	MG	BA	3612	1/1	0.94	0.21	67,67,67,67	0
54	MG	BA	3132	1/1	0.94	0.12	65,65,65,65	0
54	MG	BA	3190	1/1	0.94	0.32	75,75,75,75	0
54	MG	CA	1628	1/1	0.94	0.06	110,110,110,110	0
54	MG	BA	3246	1/1	0.94	0.38	62,62,62,62	0
54	MG	AA	1626	1/1	0.94	0.30	84,84,84,84	0
54	MG	AC	106	1/1	0.94	0.24	104,104,104,104	0
54	MG	AA	1708	1/1	0.94	0.13	96,96,96,96	0
54	MG	AA	1650	1/1	0.94	0.36	87,87,87,87	0
54	MG	DA	3313	1/1	0.94	0.34	54,54,54,54	0
54	MG	DA	3021	1/1	0.94	0.30	63,63,63,63	0
54	MG	BA	3057	1/1	0.94	0.36	70,70,70,70	0
54	MG	BA	3538	1/1	0.94	0.12	76,76,76,76	0
54	MG	CA	1637	1/1	0.94	0.10	97,97,97,97	0
54	MG	CA	1638	1/1	0.94	0.28	100,100,100,100	0
54	MG	DA	3028	1/1	0.94	0.28	74,74,74,74	0
54	MG	BA	3146	1/1	0.94	0.29	75,75,75,75	0
54	MG	AA	1789	1/1	0.94	0.33	109,109,109,109	0
54	MG	CA	1742	1/1	0.94	0.27	90,90,90,90	0
54	MG	DA	3033	1/1	0.94	0.21	93,93,93,93	0
54	MG	BA	3363	1/1	0.94	0.21	79,79,79,79	0
54	MG	BA	3627	1/1	0.94	0.34	69,69,69,69	0
54	MG	BA	3097	1/1	0.94	0.49	69,69,69,69	0
54	MG	BA	3477	1/1	0.94	0.21	92,92,92,92	0
54	MG	CA	1645	1/1	0.94	0.35	78,78,78,78	0
54	MG	CA	1646	1/1	0.94	0.13	92,92,92,92	0
54	MG	BA	3005	1/1	0.94	0.38	59,59,59,59	0
54	MG	DA	3464	1/1	0.94	0.14	89,89,89,89	0
54	MG	BA	3631	1/1	0.94	0.24	96,96,96,96	0
54	MG	BB	201	1/1	0.94	0.27	77,77,77,77	0
54	MG	CA	1651	1/1	0.94	0.13	114,114,114,114	0
54	MG	DA	3473	1/1	0.94	0.22	70,70,70,70	0
54	MG	BA	3480	1/1	0.94	0.32	75,75,75,75	0
54	MG	DA	3339	1/1	0.94	0.10	76,76,76,76	0
54	MG	AA	1728	1/1	0.94	0.41	70,70,70,70	0
54	MG	CA	1654	1/1	0.94	0.23	107,107,107,107	0
54	MG	AA	1756	1/1	0.94	0.33	121,121,121,121	0
54	MG	CA	1759	1/1	0.94	0.32	100,100,100,100	0
54	MG	CA	1656	1/1	0.94	0.16	127,127,127,127	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	BA	3153	1/1	0.94	0.16	76,76,76,76	0
54	MG	BA	3370	1/1	0.94	0.18	100,100,100,100	0
54	MG	BA	3265	1/1	0.94	0.39	82,82,82,82	0
54	MG	BA	3266	1/1	0.94	0.30	72,72,72,72	0
54	MG	DA	3197	1/1	0.94	0.11	82,82,82,82	0
54	MG	DA	3355	1/1	0.94	0.39	84,84,84,84	0
54	MG	AA	1832	1/1	0.94	0.27	87,87,87,87	0
54	MG	CA	1665	1/1	0.94	0.16	82,82,82,82	0
54	MG	DA	3210	1/1	0.94	0.32	57,57,57,57	0
54	MG	DA	3359	1/1	0.94	0.43	91,91,91,91	0
54	MG	DA	3499	1/1	0.94	0.12	92,92,92,92	0
54	MG	BA	3560	1/1	0.94	0.29	54,54,54,54	0
54	MG	CA	1671	1/1	0.94	0.14	77,77,77,77	0
54	MG	BA	3159	1/1	0.94	0.33	69,69,69,69	0
54	MG	DA	3503	1/1	0.94	0.29	76,76,76,76	0
54	MG	AA	1651	1/1	0.94	0.25	86,86,86,86	0
54	MG	DA	3505	1/1	0.94	0.25	73,73,73,73	0
54	MG	BA	3066	1/1	0.94	0.20	60,60,60,60	0
54	MG	BE	302	1/1	0.94	0.11	76,76,76,76	0
54	MG	DA	3510	1/1	0.94	0.15	77,77,77,77	0
54	MG	BA	3220	1/1	0.94	0.11	76,76,76,76	0
54	MG	DA	3069	1/1	0.94	0.27	85,85,85,85	0
54	MG	BA	3162	1/1	0.94	0.21	85,85,85,85	0
54	MG	BA	3379	1/1	0.94	0.21	101,101,101,101	0
54	MG	CA	1776	1/1	0.94	0.27	98,98,98,98	0
54	MG	AA	1602	1/1	0.94	0.22	82,82,82,82	0
54	MG	BA	3577	1/1	0.94	0.17	72,72,72,72	0
54	MG	AA	1775	1/1	0.94	0.15	113,113,113,113	0
54	MG	DA	3378	1/1	0.94	0.28	70,70,70,70	0
54	MG	CA	1685	1/1	0.94	0.18	82,82,82,82	0
54	MG	BA	3501	1/1	0.94	0.23	90,90,90,90	0
54	MG	DA	3079	1/1	0.94	0.07	95,95,95,95	0
54	MG	BU	201	1/1	0.94	0.11	95,95,95,95	0
54	MG	BA	3435	1/1	0.94	0.15	94,94,94,94	0
54	MG	DA	3245	1/1	0.94	0.31	76,76,76,76	0
54	MG	AA	1625	1/1	0.94	0.27	83,83,83,83	0
54	MG	DA	3388	1/1	0.94	0.25	78,78,78,78	0
54	MG	DA	3247	1/1	0.94	0.34	76,76,76,76	0
54	MG	DA	3248	1/1	0.94	0.28	93,93,93,93	0
54	MG	CA	1690	1/1	0.94	0.26	86,86,86,86	0
54	MG	AA	1666	1/1	0.94	0.40	88,88,88,88	0
54	MG	BA	3075	1/1	0.94	0.25	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	AA	1779	1/1	0.94	0.43	78,78,78,78	0
54	MG	B7	103	1/1	0.94	0.27	79,79,79,79	0
54	MG	BA	3077	1/1	0.94	0.31	82,82,82,82	0
54	MG	AA	1639	1/1	0.94	0.33	88,88,88,88	0
54	MG	DA	3264	1/1	0.94	0.16	68,68,68,68	0
54	MG	DA	3405	1/1	0.94	0.10	153,153,153,153	0
54	MG	BA	3082	1/1	0.94	0.35	80,80,80,80	0
54	MG	BA	3083	1/1	0.94	0.22	68,68,68,68	0
54	MG	AA	1668	1/1	0.94	0.40	81,81,81,81	0
54	MG	BA	3595	1/1	0.94	0.12	91,91,91,91	0
54	MG	CA	1605	1/1	0.94	0.23	87,87,87,87	0
54	MG	DA	3105	1/1	0.94	0.24	65,65,65,65	0
54	MG	DA	3107	1/1	0.94	0.18	56,56,56,56	0
54	MG	DA	3109	1/1	0.94	0.30	61,61,61,61	0
54	MG	CA	1607	1/1	0.94	0.27	81,81,81,81	0
54	MG	BA	3234	1/1	0.94	0.11	79,79,79,79	0
54	MG	CA	1609	1/1	0.94	0.14	121,121,121,121	0
54	MG	BA	3295	1/1	0.94	0.37	78,78,78,78	0
54	MG	CC	102	1/1	0.94	0.31	77,77,77,77	0
54	MG	DA	3010	1/1	0.95	0.33	74,74,74,74	0
54	MG	AA	1656	1/1	0.95	0.34	73,73,73,73	0
54	MG	BA	3035	1/1	0.95	0.32	52,52,52,52	0
54	MG	DA	3094	1/1	0.95	0.16	107,107,107,107	0
54	MG	BA	3459	1/1	0.95	0.32	78,78,78,78	0
54	MG	AA	1806	1/1	0.95	0.43	87,87,87,87	0
54	MG	DA	3334	1/1	0.95	0.24	84,84,84,84	0
54	MG	DA	3099	1/1	0.95	0.32	60,60,60,60	0
54	MG	DA	3100	1/1	0.95	0.39	64,64,64,64	0
54	MG	BA	3511	1/1	0.95	0.12	80,80,80,80	0
54	MG	DA	3450	1/1	0.95	0.07	94,94,94,94	0
54	MG	DA	3338	1/1	0.95	0.45	105,105,105,105	0
54	MG	AA	1633	1/1	0.95	0.29	90,90,90,90	0
54	MG	DA	3340	1/1	0.95	0.27	83,83,83,83	0
54	MG	DA	3228	1/1	0.95	0.23	70,70,70,70	0
54	MG	BB	204	1/1	0.95	0.40	87,87,87,87	0
54	MG	BA	3299	1/1	0.95	0.36	79,79,79,79	0
54	MG	DA	3022	1/1	0.95	0.21	61,61,61,61	0
54	MG	DA	3346	1/1	0.95	0.20	93,93,93,93	0
54	MG	AT	201	1/1	0.95	0.11	87,87,87,87	0
54	MG	BB	207	1/1	0.95	0.22	84,84,84,84	0
54	MG	AA	1629	1/1	0.95	0.08	134,134,134,134	0
54	MG	AA	1826	1/1	0.95	0.12	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3027	1/1	0.95	0.17	93,93,93,93	0
54	MG	BA	3420	1/1	0.95	0.14	65,65,65,65	0
54	MG	BA	3215	1/1	0.95	0.46	74,74,74,74	0
54	MG	BA	3305	1/1	0.95	0.45	79,79,79,79	0
54	MG	BA	3078	1/1	0.95	0.41	63,63,63,63	0
54	MG	DA	3472	1/1	0.95	0.13	88,88,88,88	0
54	MG	BA	3164	1/1	0.95	0.43	83,83,83,83	0
54	MG	BA	3587	1/1	0.95	0.12	88,88,88,88	0
54	MG	DA	3249	1/1	0.95	0.19	74,74,74,74	0
54	MG	DA	3479	1/1	0.95	0.17	68,68,68,68	0
54	MG	DA	3480	1/1	0.95	0.33	64,64,64,64	0
54	MG	DA	3361	1/1	0.95	0.31	77,77,77,77	0
54	MG	DA	3133	1/1	0.95	0.09	76,76,76,76	0
54	MG	AA	1764	1/1	0.95	0.37	111,111,111,111	0
54	MG	BD	301	1/1	0.95	0.09	91,91,91,91	0
54	MG	AA	1752	1/1	0.95	0.13	134,134,134,134	0
54	MG	BA	3526	1/1	0.95	0.10	97,97,97,97	0
54	MG	DA	3260	1/1	0.95	0.39	72,72,72,72	0
54	MG	BA	3387	1/1	0.95	0.26	90,90,90,90	0
54	MG	DA	3491	1/1	0.95	0.19	71,71,71,71	0
54	MG	BA	3476	1/1	0.95	0.20	71,71,71,71	0
54	MG	DA	3372	1/1	0.95	0.11	84,84,84,84	0
54	MG	DA	3140	1/1	0.95	0.29	80,80,80,80	0
54	MG	AA	1766	1/1	0.95	0.14	98,98,98,98	0
54	MG	AC	107	1/1	0.95	0.22	94,94,94,94	0
54	MG	DA	3267	1/1	0.95	0.29	78,78,78,78	0
54	MG	AA	1689	1/1	0.95	0.36	73,73,73,73	0
54	MG	BA	3126	1/1	0.95	0.41	73,73,73,73	0
54	MG	CA	1783	1/1	0.95	0.32	80,80,80,80	0
54	MG	DA	3273	1/1	0.95	0.25	54,54,54,54	0
54	MG	CA	1650	1/1	0.95	0.14	93,93,93,93	0
54	MG	BA	3268	1/1	0.95	0.36	86,86,86,86	0
54	MG	BA	3484	1/1	0.95	0.27	76,76,76,76	0
54	MG	DA	3385	1/1	0.95	0.30	63,63,63,63	0
54	MG	DA	3506	1/1	0.95	0.38	91,91,91,91	0
54	MG	AA	1653	1/1	0.95	0.35	89,89,89,89	0
54	MG	BA	3486	1/1	0.95	0.40	73,73,73,73	0
54	MG	DA	3509	1/1	0.95	0.26	64,64,64,64	0
54	MG	AA	1742	1/1	0.95	0.23	82,82,82,82	0
54	MG	BA	3004	1/1	0.95	0.28	72,72,72,72	0
54	MG	CA	1794	1/1	0.95	0.15	112,112,112,112	0
54	MG	DA	3284	1/1	0.95	0.27	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3285	1/1	0.95	0.24	57,57,57,57	0
54	MG	AA	1834	1/1	0.95	0.26	86,86,86,86	0
54	MG	BA	3606	1/1	0.95	0.10	81,81,81,81	0
54	MG	AA	1691	1/1	0.95	0.12	107,107,107,107	0
54	MG	DA	3059	1/1	0.95	0.29	87,87,87,87	0
54	MG	DA	3163	1/1	0.95	0.32	66,66,66,66	0
54	MG	DA	3060	1/1	0.95	0.36	78,78,78,78	0
54	MG	AA	1601	1/1	0.95	0.29	76,76,76,76	0
54	MG	CA	1662	1/1	0.95	0.10	110,110,110,110	0
54	MG	CA	1731	1/1	0.95	0.19	70,70,70,70	0
54	MG	CA	1663	1/1	0.95	0.13	90,90,90,90	0
54	MG	DA	3297	1/1	0.95	0.40	84,84,84,84	0
54	MG	DA	3169	1/1	0.95	0.29	74,74,74,74	0
54	MG	CA	1733	1/1	0.95	0.40	79,79,79,79	0
54	MG	BA	3019	1/1	0.95	0.34	48,48,48,48	0
54	MG	DA	3302	1/1	0.95	0.21	64,64,64,64	0
54	MG	DA	3174	1/1	0.95	0.21	52,52,52,52	0
54	MG	BA	3137	1/1	0.95	0.22	54,54,54,54	0
54	MG	CA	1666	1/1	0.95	0.06	76,76,76,76	0
54	MG	CA	1667	1/1	0.95	0.30	70,70,70,70	0
54	MG	DA	3179	1/1	0.95	0.24	73,73,73,73	0
54	MG	CC	103	1/1	0.95	0.27	73,73,73,73	0
54	MG	BA	3061	1/1	0.95	0.23	84,84,84,84	0
54	MG	BA	3096	1/1	0.95	0.39	56,56,56,56	0
54	MG	BA	3021	1/1	0.95	0.32	63,63,63,63	0
54	MG	AA	1619	1/1	0.95	0.23	96,96,96,96	0
54	MG	BA	3238	1/1	0.95	0.44	63,63,63,63	0
54	MG	DA	3188	1/1	0.95	0.22	82,82,82,82	0
54	MG	BA	3148	1/1	0.95	0.32	85,85,85,85	0
54	MG	BA	3551	1/1	0.95	0.17	93,93,93,93	0
54	MG	CA	1677	1/1	0.95	0.31	73,73,73,73	0
54	MG	AA	1746	1/1	0.95	0.19	110,110,110,110	0
54	MG	BA	3032	1/1	0.95	0.33	56,56,56,56	0
54	MG	D8	101	1/1	0.95	0.26	80,80,80,80	0
54	MG	BA	3505	1/1	0.95	0.20	51,51,51,51	0
54	MG	BA	3067	1/1	0.95	0.21	60,60,60,60	0
54	MG	BA	3561	1/1	0.95	0.34	57,57,57,57	0
56	ZN	AQ	102	1/1	0.95	0.08	138,138,138,138	0
54	MG	DA	3087	1/1	0.95	0.38	79,79,79,79	0
54	MG	DA	3009	1/1	0.95	0.22	71,71,71,71	0
54	MG	DA	3189	1/1	0.96	0.39	56,56,56,56	0
54	MG	BA	3293	1/1	0.96	0.22	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	BA	3454	1/1	0.96	0.38	92,92,92,92	0
54	MG	BA	3593	1/1	0.96	0.28	78,78,78,78	0
54	MG	BA	3002	1/1	0.96	0.35	58,58,58,58	0
54	MG	BA	3142	1/1	0.96	0.30	66,66,66,66	0
54	MG	BA	3143	1/1	0.96	0.41	63,63,63,63	0
54	MG	DA	3440	1/1	0.96	0.12	86,86,86,86	0
54	MG	DA	3441	1/1	0.96	0.15	111,111,111,111	0
54	MG	BA	3145	1/1	0.96	0.43	61,61,61,61	0
54	MG	DA	3091	1/1	0.96	0.29	73,73,73,73	0
54	MG	BA	3103	1/1	0.96	0.29	76,76,76,76	0
54	MG	DA	3199	1/1	0.96	0.26	63,63,63,63	0
54	MG	DA	3202	1/1	0.96	0.28	60,60,60,60	0
54	MG	DA	3447	1/1	0.96	0.12	80,80,80,80	0
54	MG	BA	3105	1/1	0.96	0.36	60,60,60,60	0
54	MG	DA	3204	1/1	0.96	0.35	71,71,71,71	0
54	MG	DA	3207	1/1	0.96	0.31	72,72,72,72	0
54	MG	AA	1618	1/1	0.96	0.26	82,82,82,82	0
54	MG	DA	3212	1/1	0.96	0.32	48,48,48,48	0
54	MG	DA	3014	1/1	0.96	0.32	67,67,67,67	0
54	MG	DA	3097	1/1	0.96	0.15	89,89,89,89	0
54	MG	DA	3215	1/1	0.96	0.29	68,68,68,68	0
54	MG	DA	3015	1/1	0.96	0.37	64,64,64,64	0
54	MG	AA	1661	1/1	0.96	0.26	81,81,81,81	0
54	MG	AA	1737	1/1	0.96	0.32	95,95,95,95	0
54	MG	DA	3103	1/1	0.96	0.21	66,66,66,66	0
54	MG	BA	3199	1/1	0.96	0.32	80,80,80,80	0
54	MG	DA	3224	1/1	0.96	0.46	49,49,49,49	0
54	MG	BA	3015	1/1	0.96	0.13	88,88,88,88	0
54	MG	DA	3106	1/1	0.96	0.24	66,66,66,66	0
54	MG	BA	3251	1/1	0.96	0.36	48,48,48,48	0
54	MG	DA	3230	1/1	0.96	0.28	64,64,64,64	0
54	MG	DA	3108	1/1	0.96	0.29	65,65,65,65	0
54	MG	AA	1658	1/1	0.96	0.25	68,68,68,68	0
54	MG	DA	3470	1/1	0.96	0.22	54,54,54,54	0
54	MG	DA	3234	1/1	0.96	0.12	94,94,94,94	0
54	MG	DA	3110	1/1	0.96	0.33	60,60,60,60	0
54	MG	DA	3351	1/1	0.96	0.15	85,85,85,85	0
54	MG	DA	3475	1/1	0.96	0.35	66,66,66,66	0
54	MG	DA	3476	1/1	0.96	0.22	66,66,66,66	0
54	MG	BA	3080	1/1	0.96	0.21	82,82,82,82	0
54	MG	CA	1611	1/1	0.96	0.40	106,106,106,106	0
54	MG	DA	3354	1/1	0.96	0.19	126,126,126,126	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	CA	1683	1/1	0.96	0.38	86,86,86,86	0
54	MG	DA	3115	1/1	0.96	0.33	66,66,66,66	0
54	MG	CA	1612	1/1	0.96	0.06	94,94,94,94	0
54	MG	BA	3256	1/1	0.96	0.53	80,80,80,80	0
54	MG	BA	3154	1/1	0.96	0.36	59,59,59,59	0
54	MG	DA	3123	1/1	0.96	0.36	92,92,92,92	0
54	MG	DA	3124	1/1	0.96	0.26	71,71,71,71	0
54	MG	AA	1778	1/1	0.96	0.47	70,70,70,70	0
54	MG	DA	3363	1/1	0.96	0.32	92,92,92,92	0
54	MG	AA	1747	1/1	0.96	0.29	88,88,88,88	0
54	MG	CA	1617	1/1	0.96	0.21	109,109,109,109	0
54	MG	DA	3130	1/1	0.96	0.31	52,52,52,52	0
54	MG	DA	3251	1/1	0.96	0.25	87,87,87,87	0
54	MG	BA	3314	1/1	0.96	0.38	81,81,81,81	0
54	MG	BA	3084	1/1	0.96	0.15	109,109,109,109	0
54	MG	BA	3478	1/1	0.96	0.41	64,64,64,64	0
54	MG	DA	3257	1/1	0.96	0.37	56,56,56,56	0
54	MG	BA	3216	1/1	0.96	0.30	62,62,62,62	0
54	MG	DA	3259	1/1	0.96	0.39	78,78,78,78	0
54	MG	BA	3023	1/1	0.96	0.30	45,45,45,45	0
54	MG	BA	3369	1/1	0.96	0.49	68,68,68,68	0
54	MG	BA	3086	1/1	0.96	0.50	73,73,73,73	0
54	MG	AA	1809	1/1	0.96	0.30	105,105,105,105	0
54	MG	BA	3267	1/1	0.96	0.34	75,75,75,75	0
54	MG	BA	3026	1/1	0.96	0.30	59,59,59,59	0
54	MG	DA	3381	1/1	0.96	0.22	93,93,93,93	0
54	MG	DA	3141	1/1	0.96	0.32	88,88,88,88	0
54	MG	BA	3269	1/1	0.96	0.20	49,49,49,49	0
54	MG	DA	3269	1/1	0.96	0.32	97,97,97,97	0
54	MG	DA	3512	1/1	0.96	0.22	63,63,63,63	0
54	MG	AA	1676	1/1	0.96	0.27	109,109,109,109	0
54	MG	DA	3514	1/1	0.96	0.22	92,92,92,92	0
54	MG	AA	1781	1/1	0.96	0.12	103,103,103,103	0
54	MG	BA	3430	1/1	0.96	0.19	93,93,93,93	0
54	MG	BA	3491	1/1	0.96	0.12	84,84,84,84	0
54	MG	BA	3632	1/1	0.96	0.13	114,114,114,114	0
54	MG	DA	3276	1/1	0.96	0.21	91,91,91,91	0
54	MG	CA	1634	1/1	0.96	0.24	87,87,87,87	0
54	MG	BA	3127	1/1	0.96	0.28	90,90,90,90	0
54	MG	BA	3033	1/1	0.96	0.35	62,62,62,62	0
54	MG	AA	1704	1/1	0.96	0.33	88,88,88,88	0
54	MG	BA	3226	1/1	0.96	0.13	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	BA	3564	1/1	0.96	0.14	71,71,71,71	0
54	MG	CA	1790	1/1	0.96	0.31	105,105,105,105	0
54	MG	AA	1830	1/1	0.96	0.12	89,89,89,89	0
54	MG	DA	3402	1/1	0.96	0.15	91,91,91,91	0
54	MG	BA	3497	1/1	0.96	0.41	72,72,72,72	0
54	MG	DA	3159	1/1	0.96	0.24	67,67,67,67	0
54	MG	BA	3278	1/1	0.96	0.43	64,64,64,64	0
54	MG	AA	1770	1/1	0.96	0.11	110,110,110,110	0
54	MG	DA	3061	1/1	0.96	0.15	67,67,67,67	0
54	MG	BA	3133	1/1	0.96	0.34	72,72,72,72	0
54	MG	AA	1784	1/1	0.96	0.13	82,82,82,82	0
54	MG	BA	3178	1/1	0.96	0.36	51,51,51,51	0
54	MG	BA	3285	1/1	0.96	0.39	67,67,67,67	0
54	MG	DA	3295	1/1	0.96	0.19	128,128,128,128	0
54	MG	AA	1760	1/1	0.96	0.19	87,87,87,87	0
54	MG	BA	3339	1/1	0.96	0.43	85,85,85,85	0
54	MG	BA	3445	1/1	0.96	0.48	64,64,64,64	0
54	MG	DE	304	1/1	0.96	0.21	66,66,66,66	0
54	MG	BE	301	1/1	0.96	0.33	59,59,59,59	0
54	MG	CX	101	1/1	0.96	0.24	101,101,101,101	0
54	MG	CA	1727	1/1	0.96	0.06	128,128,128,128	0
54	MG	BA	3069	1/1	0.96	0.25	68,68,68,68	0
54	MG	AA	1603	1/1	0.96	0.23	89,89,89,89	0
54	MG	BA	3584	1/1	0.96	0.13	66,66,66,66	0
54	MG	AA	1699	1/1	0.96	0.10	96,96,96,96	0
54	MG	DA	3307	1/1	0.96	0.15	75,75,75,75	0
54	MG	BA	3449	1/1	0.96	0.35	70,70,70,70	0
54	MG	BA	3185	1/1	0.96	0.53	62,62,62,62	0
54	MG	BA	3291	1/1	0.96	0.22	85,85,85,85	0
54	MG	BA	3139	1/1	0.96	0.45	48,48,48,48	0
54	MG	DA	3001	1/1	0.96	0.34	77,77,77,77	0
54	MG	B2	201	1/1	0.96	0.16	104,104,104,104	0
54	MG	DA	3128	1/1	0.97	0.29	56,56,56,56	0
54	MG	BA	3553	1/1	0.97	0.33	50,50,50,50	0
54	MG	BA	3210	1/1	0.97	0.29	59,59,59,59	0
54	MG	BA	3395	1/1	0.97	0.36	84,84,84,84	0
54	MG	DA	3343	1/1	0.97	0.42	72,72,72,72	0
54	MG	BA	3557	1/1	0.97	0.36	44,44,44,44	0
54	MG	BA	3396	1/1	0.97	0.18	117,117,117,117	0
54	MG	BA	3212	1/1	0.97	0.43	52,52,52,52	0
54	MG	AC	101	1/1	0.97	0.24	68,68,68,68	0
54	MG	BA	3040	1/1	0.97	0.34	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	BB	202	1/1	0.97	0.20	101,101,101,101	0
54	MG	BA	3041	1/1	0.97	0.48	66,66,66,66	0
54	MG	BA	3567	1/1	0.97	0.30	62,62,62,62	0
54	MG	BA	3070	1/1	0.97	0.15	64,64,64,64	0
54	MG	BA	3569	1/1	0.97	0.40	51,51,51,51	0
54	MG	BA	3262	1/1	0.97	0.23	61,61,61,61	0
54	MG	DA	3054	1/1	0.97	0.36	65,65,65,65	0
54	MG	BA	3571	1/1	0.97	0.35	45,45,45,45	0
54	MG	BA	3572	1/1	0.97	0.44	45,45,45,45	0
54	MG	BA	3009	1/1	0.97	0.17	66,66,66,66	0
54	MG	CA	1792	1/1	0.97	0.18	105,105,105,105	0
54	MG	BA	3010	1/1	0.97	0.34	45,45,45,45	0
54	MG	DA	3471	1/1	0.97	0.31	51,51,51,51	0
54	MG	BA	3173	1/1	0.97	0.23	60,60,60,60	0
54	MG	BA	3013	1/1	0.97	0.28	65,65,65,65	0
54	MG	AA	1680	1/1	0.97	0.13	105,105,105,105	0
54	MG	BA	3579	1/1	0.97	0.50	51,51,51,51	0
54	MG	DA	3263	1/1	0.97	0.38	62,62,62,62	0
54	MG	AA	1820	1/1	0.97	0.06	112,112,112,112	0
54	MG	BA	3179	1/1	0.97	0.52	60,60,60,60	0
54	MG	AA	1632	1/1	0.97	0.17	94,94,94,94	0
54	MG	DA	3482	1/1	0.97	0.31	54,54,54,54	0
54	MG	DA	3156	1/1	0.97	0.32	49,49,49,49	0
54	MG	BA	3515	1/1	0.97	0.33	93,93,93,93	0
54	MG	DA	3371	1/1	0.97	0.34	98,98,98,98	0
54	MG	BA	3110	1/1	0.97	0.28	58,58,58,58	0
54	MG	BA	3144	1/1	0.97	0.34	68,68,68,68	0
54	MG	AA	1609	1/1	0.97	0.30	61,61,61,61	0
54	MG	CA	1730	1/1	0.97	0.19	117,117,117,117	0
54	MG	BA	3184	1/1	0.97	0.28	66,66,66,66	0
54	MG	BA	3321	1/1	0.97	0.43	100,100,100,100	0
54	MG	BA	3521	1/1	0.97	0.40	81,81,81,81	0
54	MG	DA	3076	1/1	0.97	0.27	93,93,93,93	0
54	MG	BA	3467	1/1	0.97	0.27	62,62,62,62	0
54	MG	BA	3591	1/1	0.97	0.33	69,69,69,69	0
54	MG	DA	3280	1/1	0.97	0.27	44,44,44,44	0
54	MG	BA	3022	1/1	0.97	0.37	66,66,66,66	0
54	MG	BA	3323	1/1	0.97	0.33	87,87,87,87	0
54	MG	CA	1738	1/1	0.97	0.42	74,74,74,74	0
54	MG	BA	3276	1/1	0.97	0.45	91,91,91,91	0
54	MG	CA	1740	1/1	0.97	0.17	103,103,103,103	0
54	MG	BA	3053	1/1	0.97	0.29	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	B5	1701	1/1	0.97	0.28	60,60,60,60	0
54	MG	BA	3472	1/1	0.97	0.28	114,114,114,114	0
54	MG	BA	3081	1/1	0.97	0.20	72,72,72,72	0
54	MG	DA	3183	1/1	0.97	0.32	70,70,70,70	0
54	MG	BA	3188	1/1	0.97	0.28	47,47,47,47	0
54	MG	CA	1746	1/1	0.97	0.36	97,97,97,97	0
54	MG	DA	3396	1/1	0.97	0.26	73,73,73,73	0
54	MG	AA	1823	1/1	0.97	0.09	151,151,151,151	0
54	MG	BA	3281	1/1	0.97	0.37	72,72,72,72	0
54	MG	DA	3092	1/1	0.97	0.41	85,85,85,85	0
54	MG	DA	3011	1/1	0.97	0.15	103,103,103,103	0
54	MG	AA	1792	1/1	0.97	0.22	108,108,108,108	0
54	MG	DA	3298	1/1	0.97	0.27	73,73,73,73	0
54	MG	BA	3025	1/1	0.97	0.33	61,61,61,61	0
54	MG	BA	3193	1/1	0.97	0.39	56,56,56,56	0
54	MG	AA	1607	1/1	0.97	0.17	89,89,89,89	0
54	MG	DA	3098	1/1	0.97	0.09	112,112,112,112	0
54	MG	BA	3028	1/1	0.97	0.38	59,59,59,59	0
54	MG	CA	1606	1/1	0.97	0.21	83,83,83,83	0
54	MG	AA	1635	1/1	0.97	0.15	111,111,111,111	0
54	MG	DA	3102	1/1	0.97	0.24	68,68,68,68	0
54	MG	CA	1756	1/1	0.97	0.39	76,76,76,76	0
54	MG	DA	3200	1/1	0.97	0.36	58,58,58,58	0
54	MG	DA	3201	1/1	0.97	0.37	66,66,66,66	0
54	MG	BA	3607	1/1	0.97	0.40	62,62,62,62	0
54	MG	BA	3483	1/1	0.97	0.28	105,105,105,105	0
54	MG	CA	1610	1/1	0.97	0.17	97,97,97,97	0
54	MG	BA	3123	1/1	0.97	0.41	74,74,74,74	0
54	MG	DA	3209	1/1	0.97	0.31	61,61,61,61	0
54	MG	BA	3031	1/1	0.97	0.32	58,58,58,58	0
54	MG	DA	3211	1/1	0.97	0.27	52,52,52,52	0
54	MG	DA	3317	1/1	0.97	0.26	67,67,67,67	0
54	MG	AA	1663	1/1	0.97	0.16	72,72,72,72	0
54	MG	BA	3201	1/1	0.97	0.28	66,66,66,66	0
54	MG	AA	1750	1/1	0.97	0.09	92,92,92,92	0
54	MG	BA	3003	1/1	0.97	0.33	61,61,61,61	0
54	MG	BA	3064	1/1	0.97	0.30	63,63,63,63	0
54	MG	DA	3114	1/1	0.97	0.28	70,70,70,70	0
54	MG	DA	3219	1/1	0.97	0.33	70,70,70,70	0
54	MG	AA	1657	1/1	0.97	0.38	58,58,58,58	0
54	MG	DA	3433	1/1	0.97	0.30	91,91,91,91	0
54	MG	BA	3620	1/1	0.97	0.15	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3120	1/1	0.97	0.25	60,60,60,60	0
54	MG	DA	3328	1/1	0.97	0.14	98,98,98,98	0
54	MG	AA	1615	1/1	0.97	0.16	114,114,114,114	0
54	MG	DA	3225	1/1	0.97	0.33	57,57,57,57	0
54	MG	BA	3298	1/1	0.97	0.32	43,43,43,43	0
54	MG	BA	3252	1/1	0.97	0.49	63,63,63,63	0
54	MG	CA	1696	1/1	0.97	0.10	121,121,121,121	0
54	MG	DA	3229	1/1	0.97	0.36	57,57,57,57	0
54	MG	BA	3208	1/1	0.97	0.48	67,67,67,67	0
54	MG	DA	3126	1/1	0.97	0.25	67,67,67,67	0
54	MG	DA	3232	1/1	0.97	0.31	54,54,54,54	0
54	MG	BA	3443	1/1	0.97	0.12	116,116,116,116	0
54	MG	DA	3173	1/1	0.98	0.29	53,53,53,53	0
54	MG	DA	3236	1/1	0.98	0.30	56,56,56,56	0
54	MG	BA	3302	1/1	0.98	0.42	59,59,59,59	0
54	MG	DA	3119	1/1	0.98	0.30	58,58,58,58	0
54	MG	AA	1604	1/1	0.98	0.14	88,88,88,88	0
54	MG	BA	3018	1/1	0.98	0.36	55,55,55,55	0
54	MG	BA	3107	1/1	0.98	0.39	76,76,76,76	0
54	MG	CA	1691	1/1	0.98	0.30	89,89,89,89	0
54	MG	BA	3108	1/1	0.98	0.28	56,56,56,56	0
54	MG	BA	3556	1/1	0.98	0.38	49,49,49,49	0
54	MG	AA	1623	1/1	0.98	0.17	82,82,82,82	0
54	MG	BA	3558	1/1	0.98	0.34	58,58,58,58	0
54	MG	BA	3559	1/1	0.98	0.43	65,65,65,65	0
54	MG	BA	3027	1/1	0.98	0.28	53,53,53,53	0
54	MG	BA	3128	1/1	0.98	0.11	85,85,85,85	0
54	MG	CA	1793	1/1	0.98	0.33	82,82,82,82	0
54	MG	BA	3562	1/1	0.98	0.40	53,53,53,53	0
54	MG	BA	3563	1/1	0.98	0.40	59,59,59,59	0
54	MG	DA	3030	1/1	0.98	0.05	64,64,64,64	0
54	MG	DA	3256	1/1	0.98	0.30	60,60,60,60	0
54	MG	BA	3048	1/1	0.98	0.29	67,67,67,67	0
54	MG	CA	1657	1/1	0.98	0.24	114,114,114,114	0
54	MG	BA	3012	1/1	0.98	0.28	66,66,66,66	0
54	MG	BA	3282	1/1	0.98	0.43	60,60,60,60	0
54	MG	BA	3113	1/1	0.98	0.28	54,54,54,54	0
54	MG	BA	3254	1/1	0.98	0.31	72,72,72,72	0
54	MG	BA	3037	1/1	0.98	0.17	68,68,68,68	0
54	MG	BA	3175	1/1	0.98	0.27	61,61,61,61	0
54	MG	BA	3200	1/1	0.98	0.39	76,76,76,76	0
54	MG	BA	3613	1/1	0.98	0.18	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3502	1/1	0.98	0.21	113,113,113,113	0
54	MG	CA	1712	1/1	0.98	0.14	99,99,99,99	0
54	MG	DA	3205	1/1	0.98	0.32	80,80,80,80	0
54	MG	DA	3206	1/1	0.98	0.36	73,73,73,73	0
54	MG	DA	3271	1/1	0.98	0.16	67,67,67,67	0
54	MG	BA	3176	1/1	0.98	0.15	73,73,73,73	0
54	MG	CA	1668	1/1	0.98	0.39	61,61,61,61	0
54	MG	DA	3397	1/1	0.98	0.41	52,52,52,52	0
54	MG	BA	3202	1/1	0.98	0.28	71,71,71,71	0
54	MG	CA	1670	1/1	0.98	0.35	73,73,73,73	0
54	MG	BA	3575	1/1	0.98	0.33	52,52,52,52	0
54	MG	BA	3073	1/1	0.98	0.10	73,73,73,73	0
54	MG	BA	3116	1/1	0.98	0.25	84,84,84,84	0
54	MG	DA	3403	1/1	0.98	0.12	62,62,62,62	0
54	MG	DA	3468	1/1	0.98	0.43	47,47,47,47	0
54	MG	DA	3469	1/1	0.98	0.38	50,50,50,50	0
54	MG	BA	3029	1/1	0.98	0.33	62,62,62,62	0
54	MG	BA	3155	1/1	0.98	0.40	55,55,55,55	0
54	MG	DA	3052	1/1	0.98	0.35	60,60,60,60	0
54	MG	DA	3218	1/1	0.98	0.39	56,56,56,56	0
54	MG	BA	3541	1/1	0.98	0.33	74,74,74,74	0
54	MG	BA	3156	1/1	0.98	0.35	57,57,57,57	0
54	MG	DA	3160	1/1	0.98	0.32	69,69,69,69	0
54	MG	BA	3001	1/1	0.98	0.40	57,57,57,57	0
54	MG	AA	1640	1/1	0.98	0.33	77,77,77,77	0
54	MG	CA	1680	1/1	0.98	0.05	104,104,104,104	0
54	MG	DA	3481	1/1	0.98	0.27	55,55,55,55	0
54	MG	BA	3042	1/1	0.98	0.19	62,62,62,62	0
54	MG	BA	3104	1/1	0.98	0.34	45,45,45,45	0
54	MG	CA	1729	1/1	0.98	0.08	108,108,108,108	0
54	MG	BA	3214	1/1	0.98	0.29	56,56,56,56	0
54	MG	BA	3140	1/1	0.98	0.41	47,47,47,47	0
54	MG	BA	3242	1/1	0.98	0.32	59,59,59,59	0
54	MG	DA	3170	1/1	0.98	0.23	58,58,58,58	0
54	MG	BA	3422	1/1	0.98	0.33	52,52,52,52	0
54	MG	DA	3116	1/1	0.98	0.26	60,60,60,60	0
54	MG	BA	3011	1/1	0.99	0.35	49,49,49,49	0
54	MG	DA	3395	1/1	0.99	0.07	103,103,103,103	0
54	MG	BA	3016	1/1	0.99	0.40	57,57,57,57	0
54	MG	BA	3457	1/1	0.99	0.50	49,49,49,49	0
54	MG	DA	3118	1/1	0.99	0.15	57,57,57,57	0
54	MG	BA	3158	1/1	0.99	0.18	79,79,79,79	0

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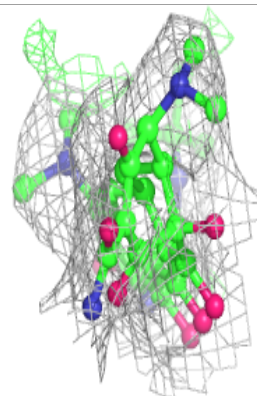
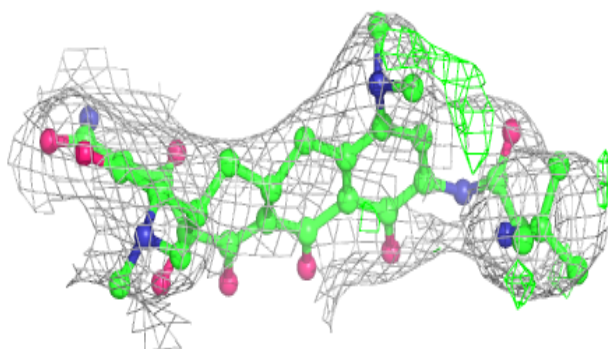
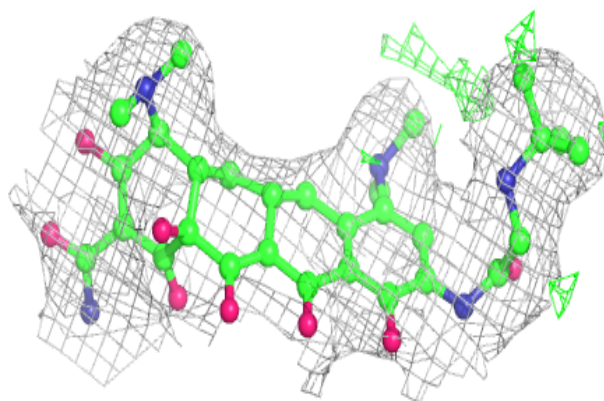
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3220	1/1	0.99	0.26	60,60,60,60	0
54	MG	BA	3098	1/1	0.99	0.37	45,45,45,45	0
54	MG	BA	3209	1/1	0.99	0.37	64,64,64,64	0
54	MG	DA	3252	1/1	0.99	0.23	67,67,67,67	0
54	MG	DA	3404	1/1	0.99	0.22	86,86,86,86	0
54	MG	BA	3007	1/1	0.99	0.39	59,59,59,59	0
54	MG	BA	3211	1/1	0.99	0.24	48,48,48,48	0
54	MG	BA	3172	1/1	0.99	0.47	62,62,62,62	0
54	MG	BA	3008	1/1	0.99	0.44	59,59,59,59	0
54	MG	BA	3260	1/1	0.99	0.38	62,62,62,62	0
54	MG	BA	3610	1/1	0.99	0.28	55,55,55,55	0
54	MG	BA	3611	1/1	0.99	0.23	55,55,55,55	0
54	MG	DA	3176	1/1	0.99	0.38	58,58,58,58	0
54	MG	DA	3062	1/1	0.99	0.31	60,60,60,60	0
54	MG	DA	3478	1/1	0.99	0.40	63,63,63,63	0
54	MG	BA	3244	1/1	0.99	0.33	53,53,53,53	0
54	MG	BA	3101	1/1	0.99	0.42	42,42,42,42	0
54	MG	BA	3014	1/1	0.99	0.36	49,49,49,49	0
54	MG	DA	3181	1/1	0.99	0.27	78,78,78,78	0
54	MG	DA	3208	1/1	0.99	0.29	57,57,57,57	0
54	MG	DA	3237	1/1	0.99	0.35	52,52,52,52	0
54	MG	BA	3038	1/1	0.99	0.30	53,53,53,53	0
54	MG	DA	3157	1/1	0.99	0.30	58,58,58,58	0
54	MG	BA	3189	1/1	0.99	0.41	52,52,52,52	0
54	MG	BA	3020	1/1	0.99	0.40	49,49,49,49	0
54	MG	B0	201	1/1	0.99	0.26	67,67,67,67	0
54	MG	BA	3047	1/1	0.99	0.31	77,77,77,77	0

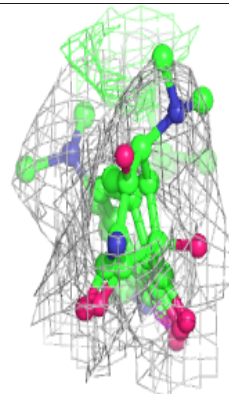
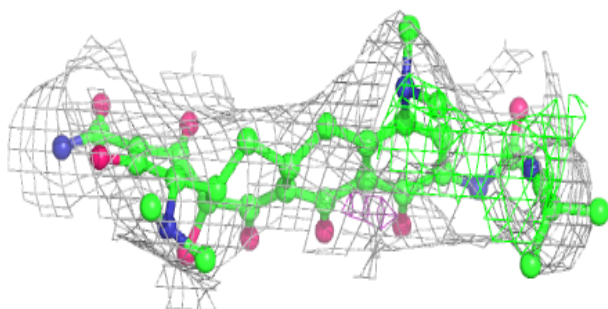
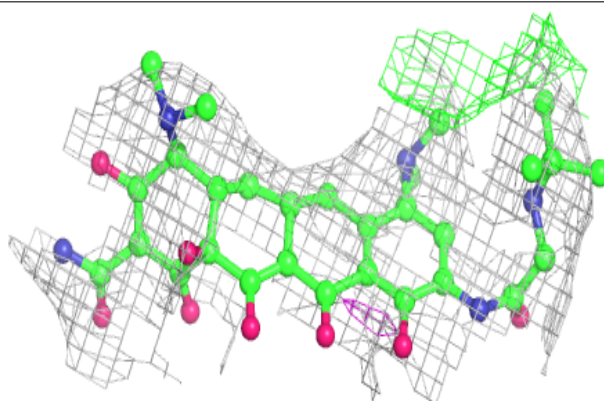
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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