Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 02:38 PM UTC

PDB ID	:	4WR6 / pdb_00004wr6
Title	:	Complex of 70S ribosome with tRNA-Tyr and mRNA with A-A mismatch in the first position in the A-site.
Authors	:	Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.
Deposited on	:	2014-10-23
Resolution	:	3.05 Å(reported)

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

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

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

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

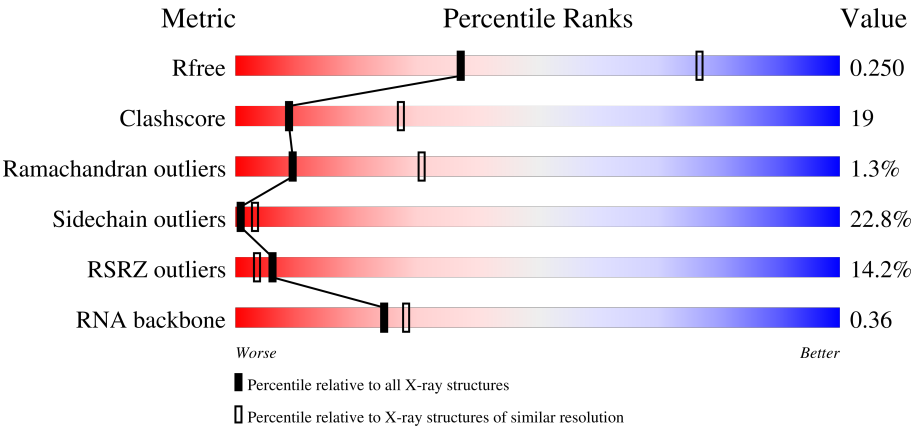
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.05 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	2469 (3.10-3.02)
Clashscore	190562	2569 (3.10-3.02)
Ramachandran outliers	187476	2424 (3.10-3.02)
Sidechain outliers	187428	2423 (3.10-3.02)
RSRZ outliers	180081	2469 (3.10-3.02)
RNA backbone	3983	1079 (3.30-2.82)

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

Mol	Chain	Length	Quality of chain
1	13	1522	13% 36% 47% 14% .
2	12	256	21% 35% 41% 16% . 7%
2	1E	256	14% 41% 39% 12% 7%
3	22	239	35% 37% 42% 7% 14%

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Mol	Chain	Length	Quality of chain
3	2E	239	8% 47% 32% 7% 14%
4	32	209	12% 45% 46% 7%
4	3E	209	11% 44% 43% 11%
5	42	162	30% 39% 41% 13% 7%
5	4E	162	11% 52% 34% 7% 7%
6	52	101	4% 57% 35% 8%
6	5E	101	8% 50% 42% 9%
7	62	156	21% 52% 37% 11%
7	6E	156	24% 49% 39% 10%
8	72	138	30% 58% 34% 8%
8	7E	138	12% 46% 43% 11%
9	82	128	23% 38% 53% 9%
9	8E	128	16% 40% 45% 14%
10	1A	105	18% 35% 47% 12% 6%
10	1I	105	20% 38% 42% 14% 6%
11	2A	129	19% 50% 29% 12% 8%
11	2I	129	13% 46% 33% 10% 10%
12	3A	132	23% 39% 45% 11% 5%
12	3I	132	20% 55% 33% 6% 5%
13	4A	126	15% 40% 40% 13% 7%
13	4I	126	9% 37% 45% 10% 8%
14	5A	61	26% 38% 52% 5% 5%
14	5I	61	11% 36% 43% 18%
15	6A	89	6% 55% 34% 10%
15	6I	89	11% 49% 42% 8%

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Mol	Chain	Length	Quality of chain
16	7A	88	11% 59% 31% 6% 5%
16	7I	88	15% 39% 41% 15% 5%
17	8A	105	20% 53% 34% 7% 5%
17	8I	105	16% 33% 45% 16% 5%
18	9A	88	5% 48% 23% 7% 22%
18	9I	88	6% 38% 38% 6% 18%
19	AA	93	12% 38% 39% 12% 12%
19	AI	93	15% 37% 42% 8% 11%
20	BA	106	37% 46% 33% 10% 7%
20	BI	106	42% 43% 42% 8% 7%
21	1B	27	7% 37% 48% 7% 7%
21	1F	27	7% 37% 37% 7% 19%
22	1K	85	18% 21% 42% 31% 6%
22	3K	85	14% 27% 44% 27%
23	2K	77	13% 44% 39% 13%
24	4K	27	7% 26% 19% 11% 44%
25	14	2917	9% 39% 46% 14%
25	1H	2917	7% 39% 45% 15%
26	16	122	% 43% 43% 13%
26	1J	122	11% 25% 56% 19%
27	11	276	5% 45% 36% 15%
27	19	276	6% 43% 42% 12%
28	21	206	11% 44% 40% 14%
28	29	206	18% 36% 43% 16%
29	31	210	10% 47% 40% 9%

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Mol	Chain	Length	Quality of chain
29	39	210	30% 33% 49% 16%
30	41	182	19% 39% 49% 10%
30	49	182	14% 40% 47% 13%
31	51	180	18% 37% 46% 11%
31	59	180	36% 32% 49% 12% 5%
32	61	148	24% 36% 43% 18%
32	69	148	45% 37% 44% 15%
33	15	140	18% 51% 34% 13%
33	58	140	9% 41% 41% 14%
34	25	122	8% 44% 43% 13%
34	68	122	12% 59% 33% 8%
35	35	150	24% 33% 39% 21% 7%
35	78	150	9% 32% 43% 21% 5%
36	45	141	14% 35% 48% 14%
36	88	141	11% 40% 45% 13%
37	55	118	16% 48% 41% 10%
37	98	118	18% 44% 42% 12%
38	65	112	8% 32% 54% 12%
38	A8	112	21% 38% 45% 16%
39	75	146	19% 32% 49% 12% 6%
39	B8	146	22% 40% 42% 10% 7%
40	85	118	25% 46% 42% 11%
40	C8	118	11% 46% 43% 8%
41	95	101	31% 49% 34% 16%
41	D8	101	24% 48% 32% 18%

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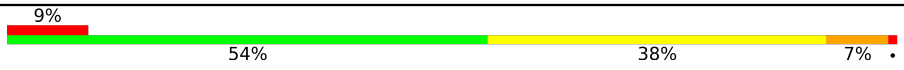
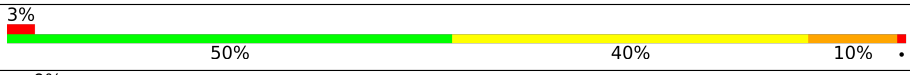
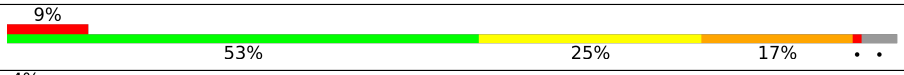
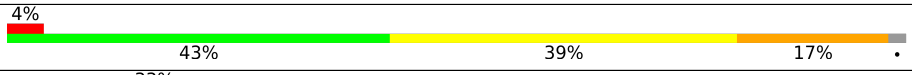
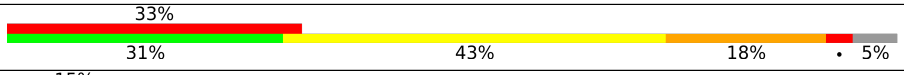
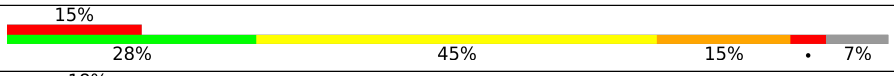
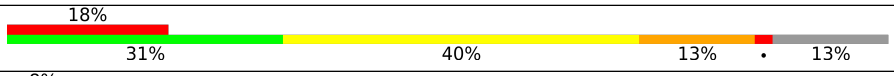
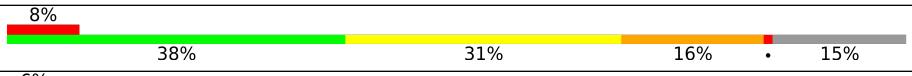
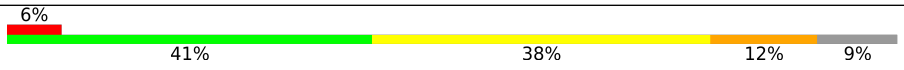
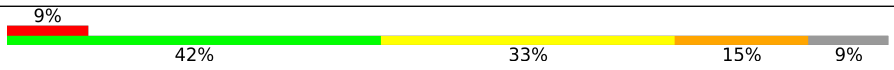
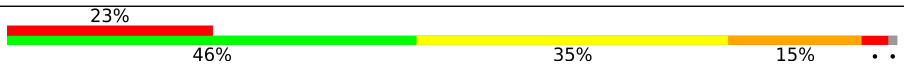
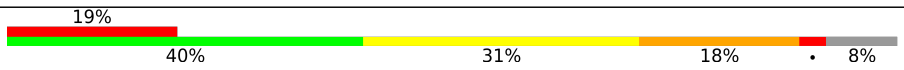
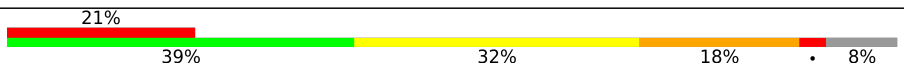
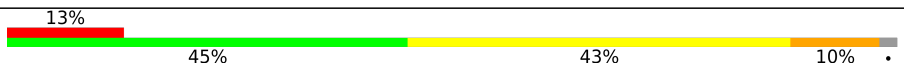
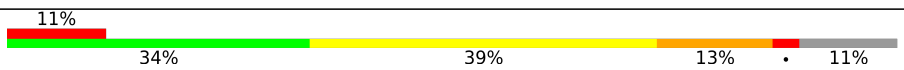
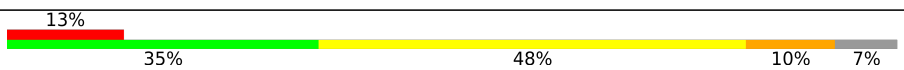
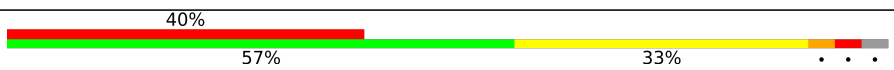
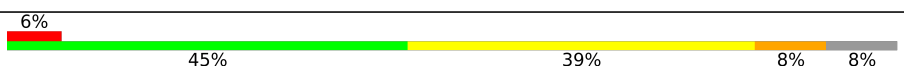
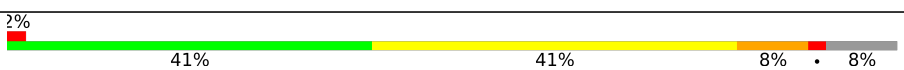
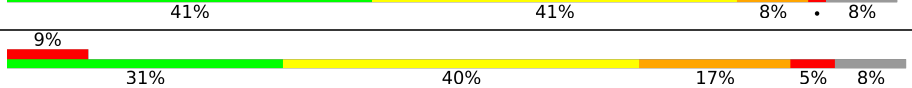
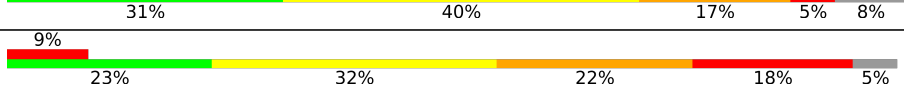
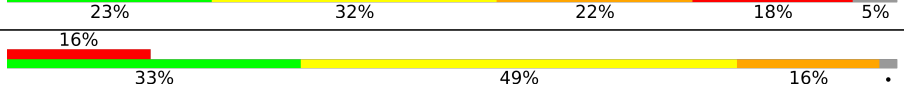
Mol	Chain	Length	Quality of chain
42	A5	113	
42	E8	113	
43	B5	96	
43	F8	96	
44	C5	110	
44	G8	110	
45	D5	206	
45	H8	206	
46	E5	85	
46	I8	85	
47	F5	98	
47	J8	98	
48	G5	72	
48	K8	72	
49	H5	60	
49	L8	60	
50	I5	71	
50	M8	71	
51	J5	60	
51	N8	60	
52	L5	49	
52	P8	49	
53	M5	65	
53	Q8	65	
54	1G	1522	

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Mol	Chain	Length	Quality of chain
55	1L	85	19% 27% 49% 24%
55	3L	85	13% 27% 49% 24%
56	2L	77	12% 38% 38% 23%
57	4L	27	11% 26% 22% 11% 41%

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
58	MG	13	1671	-	-	-	X
58	MG	13	1692	-	-	-	X
58	MG	13	1700	-	-	-	X
58	MG	14	3046	-	-	-	X
58	MG	14	3146	-	-	-	X
58	MG	14	3153	-	-	-	X
58	MG	14	3161	-	-	-	X
58	MG	14	3162	-	-	-	X
58	MG	14	3176	-	-	-	X
58	MG	14	3238	-	-	-	X
58	MG	14	3296	-	-	-	X
58	MG	14	3316	-	-	-	X
58	MG	14	3319	-	-	-	X
58	MG	1G	1633	-	-	-	X
58	MG	1G	1657	-	-	-	X
58	MG	1G	1658	-	-	-	X
58	MG	1G	1662	-	-	-	X
58	MG	1G	1666	-	-	-	X
58	MG	1G	1671	-	-	-	X
58	MG	1H	3122	-	-	-	X
58	MG	1H	3143	-	-	-	X
58	MG	1H	3171	-	-	-	X
58	MG	1H	3185	-	-	-	X
58	MG	1H	3195	-	-	-	X
58	MG	1H	3321	-	-	-	X
58	MG	1H	3338	-	-	-	X
58	MG	1H	3359	-	-	-	X
58	MG	1H	3364	-	-	-	X
58	MG	1H	3366	-	-	-	X
58	MG	1H	3370	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	1J	204	-	-	-	X
58	MG	25	201	-	-	-	X
58	MG	3E	301	-	-	-	X

2 Entry composition (i)

There are 60 unique types of molecules in this entry. The entry contains 299318 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	13	1498	32207	14334	5973	10402	1498	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	1E	237	1924	1228	344	347	5	0	0	0
			Total	C	N	O	S			
2	12	237	1924	1228	344	347	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	2E	205	1605	1011	313	280	1	0	0	0
			Total	C	N	O	S			
3	22	206	1612	1016	314	281	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	3E	208	1702	1066	339	290	7	0	0	0
			Total	C	N	O	S			
4	32	208	1702	1066	339	290	7	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S5.

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	42	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	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			
6	52	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	6E	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			
7	62	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			
8	72	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	8E	127	Total	C	N	O	0	0	0
			1009	639	197	173			
9	82	127	Total	C	N	O	0	0	0
			1009	639	197	173			

- Molecule 10 is a protein called 30S ribosomal protein S10.

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

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	2I	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			
11	2A	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	3I	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			
12	3A	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	4I	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
13	4A	117	Total	C	N	O	S	0	0	0
			933	577	192	162	2			

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	5I	61	Total	C	N	O	S	0	0	0
			498	316	105	72	5			
14	5A	58	Total	C	N	O	S	0	0	0
			475	303	99	69	4			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	6I	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			
15	6A	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	7I	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	7A	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	8I	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	8A	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	9I	72	Total	C	N	O	0	0	0
			590	376	117	97			
18	9A	69	Total	C	N	O	0	0	0
			564	361	110	93			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	AA	82	Total	C	N	O	S	0	0	0
			640	407	118	113	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	BI	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			
20	BA	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	1F	22	Total	C	N	O	0	0	0
			188	116	44	28			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	1B	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called tRNA-Tyr.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
22	1K	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			
22	3K	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			

- Molecule 23 is a RNA chain called tRNA-fMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
23	2K	77	Total	C	N	O	P	S	0	0	0
			1646	735	298	535	77	1			

- Molecule 24 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	4K	15	Total	C	N	O	P	0	1	0
			349	158	75	100	16			

- Molecule 25 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	1H	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			
25	14	2907	Total	C	N	O	P	0	0	0
			62605	27865	11708	20126	2906			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1H	161	U	-	insertion	GB 48268
1H	493	G	-	insertion	GB 48268
1H	1228	G	-	insertion	GB 48268
14	161	U	-	insertion	GB 48268
14	493	G	-	insertion	GB 48268
14	1228	G	-	insertion	GB 48268

- Molecule 26 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
26	1J	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	11	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			
27	19	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	21	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			
28	29	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
29	39	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			
30	49	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	59	171	Total	C	N	O	S	0	0	0
			1316	835	247	233	1			

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
32	69	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
33	15	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
34	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	78	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			
35	35	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	88	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			
36	45	138	Total	C	N	O	S	0	0	0
			1098	702	208	181	7			

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
37	55	117	Total	C	N	O		0	0	0
			959	599	202	158				

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	A8	111	Total	C	N	O	0	0	0
			881	556	176	149			
38	65	111	Total	C	N	O	0	0	0
			881	556	176	149			

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	B8	136	Total	C	N	O		0	0	0
			1133	705	233	195				
39	75	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			
40	85	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

- Molecule 41 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			
41	95	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	E8	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			
42	A5	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	F8	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			
43	B5	92	Total	C	N	O		0	0	0
			725	471	131	123				

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	G8	102	Total	C	N	O	S	0	0	0
			778	501	147	125	5			
44	C5	104	Total	C	N	O	S	0	0	0
			794	510	152	127	5			

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	H8	175	Total	C	N	O	S	0	0	0
			1397	892	251	251	3			
45	D5	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	I8	77	Total	C	N	O	S	0	0	0
			612	379	129	103	1			
46	E5	77	Total	C	N	O	S	0	0	0
			612	379	129	103	1			

- Molecule 47 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	J8	93	Total	C	N	O	S	0	0	0
			729	457	145	126	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	F5	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	K8	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			
48	G5	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			

- Molecule 49 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	L8	59	Total	C	N	O	0	0	0
			468	298	90	80			
49	H5	59	Total	C	N	O	0	0	0
			468	298	90	80			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	M8	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			
50	I5	63	Total	C	N	O	S	0	0	0
			515	326	93	91	5			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	N8	49	Total	C	N	O	S	0	0	0
			374	232	76	61	5			
51	J5	58	Total	C	N	O	S	0	0	0
			453	285	89	74	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	P8	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			
52	L5	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	Q8	62	Total	C	N	O	S	0	0	0
			448	284	86	76	2			
53	M5	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			

- Molecule 54 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	1G	1498	Total	C	N	O	P	0	0	0
			32204	14334	5973	10400	1497			

- Molecule 55 is a RNA chain called tRNA-Tyr.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	1L	85	Total	C	N	O	P	0	0	0
			1807	807	323	592	85			
55	3L	85	Total	C	N	O	P	0	0	0
			1807	807	323	592	85			

- Molecule 56 is a RNA chain called tRNA-fMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
56	2L	77	Total	C	N	O	P	S	0	0	0
			1645	734	298	535	77	1			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
2L	18	C	U	conflict	GB 675817920

- Molecule 57 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	4L	16	Total	C	N	O	P	0	0	0
			349	158	75	100	16			

- Molecule 58 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	13	138	Total	Mg	0	0
			138	138		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	3E	1	Total Mg 1 1	0	0
58	4E	1	Total Mg 1 1	0	0
58	8E	1	Total Mg 1 1	0	0
58	3I	1	Total Mg 1 1	0	0
58	1K	1	Total Mg 1 1	0	0
58	2K	6	Total Mg 6 6	0	0
58	1H	475	Total Mg 475 475	0	0
58	16	13	Total Mg 13 13	0	0
58	11	1	Total Mg 1 1	0	0
58	21	2	Total Mg 2 2	0	0
58	31	4	Total Mg 4 4	0	0
58	78	1	Total Mg 1 1	0	0
58	98	2	Total Mg 2 2	0	0
58	I8	2	Total Mg 2 2	0	0
58	L8	2	Total Mg 2 2	0	0
58	P8	1	Total Mg 1 1	0	0
58	1G	90	Total Mg 90 90	0	0
58	1L	1	Total Mg 1 1	0	0
58	2L	3	Total Mg 3 3	0	0
58	3L	1	Total Mg 1 1	0	0
58	14	398	Total Mg 398 398	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	1J	6	Total Mg 6 6	0	0
58	29	3	Total Mg 3 3	0	0
58	39	1	Total Mg 1 1	0	0
58	25	1	Total Mg 1 1	0	0
58	45	1	Total Mg 1 1	0	0
58	85	1	Total Mg 1 1	0	0
58	C5	1	Total Mg 1 1	0	0
58	L5	1	Total Mg 1 1	0	0

- Molecule 59 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	3E	1	Total Zn 1 1	0	0
59	5I	1	Total Zn 1 1	0	0
59	G8	1	Total Zn 1 1	0	0
59	32	1	Total Zn 1 1	0	0
59	5A	1	Total Zn 1 1	0	0
59	C5	1	Total Zn 1 1	0	0

- Molecule 60 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	13	100	Total O 100 100	0	0
60	3E	2	Total O 2 2	0	0
60	3I	2	Total O 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	5I	1	Total O 1 1	0	0
60	7I	1	Total O 1 1	0	0
60	1K	1	Total O 1 1	0	0
60	2K	6	Total O 6 6	0	0
60	4K	2	Total O 2 2	0	0
60	1H	538	Total O 538 538	0	0
60	16	11	Total O 11 11	0	0
60	11	4	Total O 4 4	0	0
60	21	2	Total O 2 2	0	0
60	31	4	Total O 4 4	0	0
60	78	4	Total O 4 4	0	0
60	D8	1	Total O 1 1	0	0
60	F8	1	Total O 1 1	0	0
60	L8	3	Total O 3 3	0	0
60	1G	51	Total O 51 51	0	0
60	32	1	Total O 1 1	0	0
60	BA	1	Total O 1 1	0	0
60	4L	1	Total O 1 1	0	0
60	14	409	Total O 409 409	0	0
60	19	7	Total O 7 7	0	0
60	29	2	Total O 2 2	0	0

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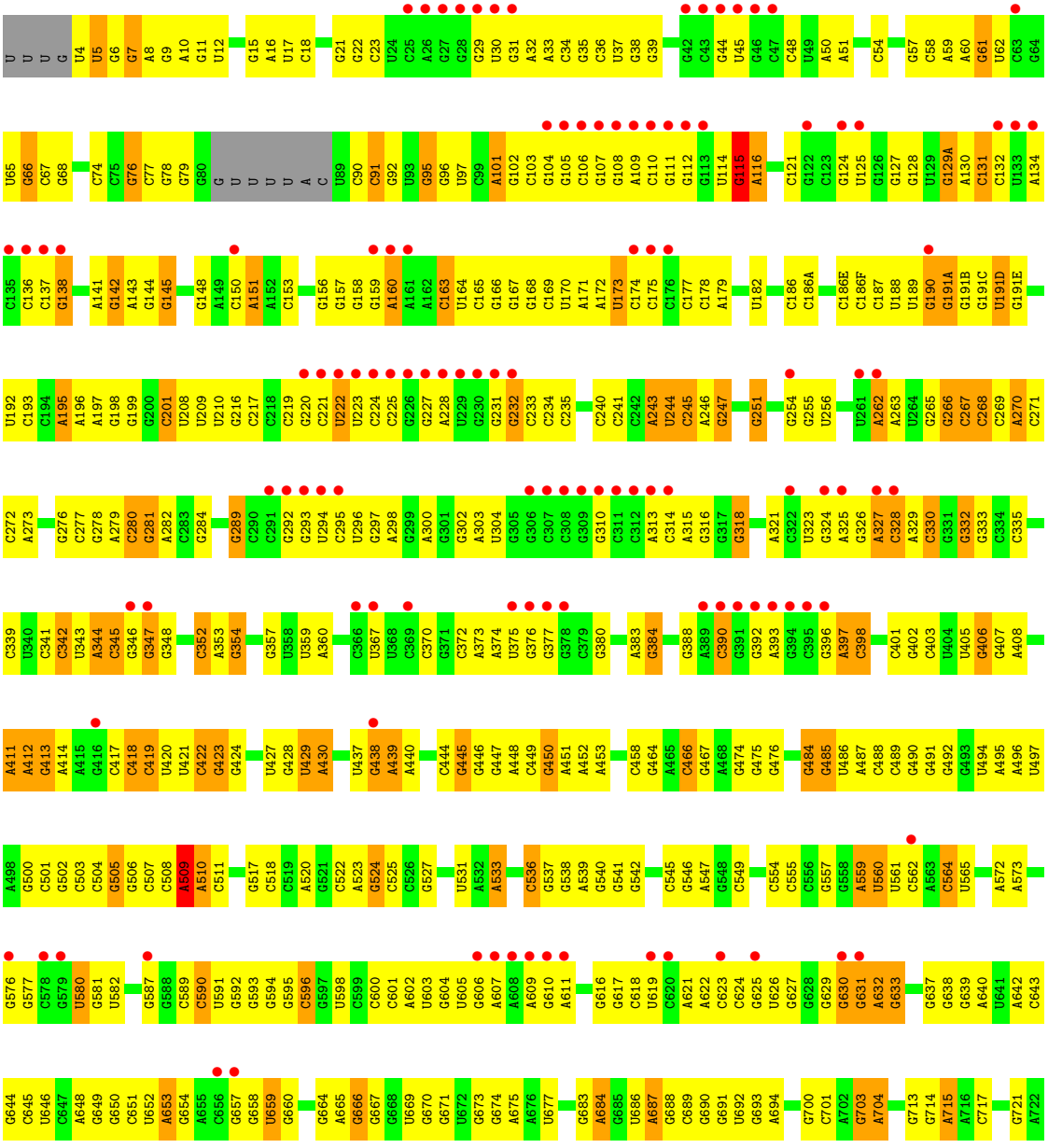
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	39	4	Total O 4 4	0	0
60	35	1	Total O 1 1	0	0
60	55	1	Total O 1 1	0	0
60	75	1	Total O 1 1	0	0
60	85	1	Total O 1 1	0	0

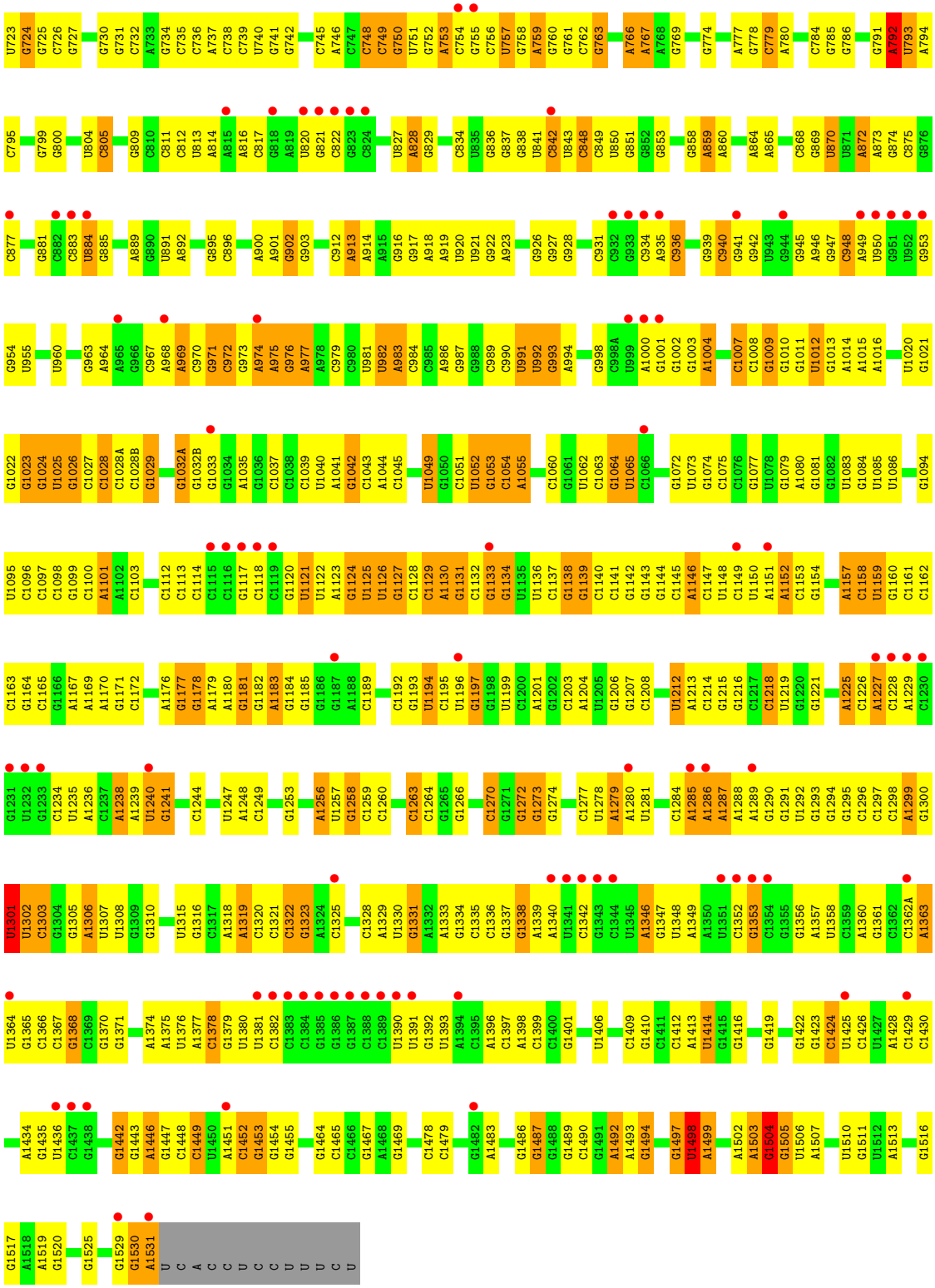
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

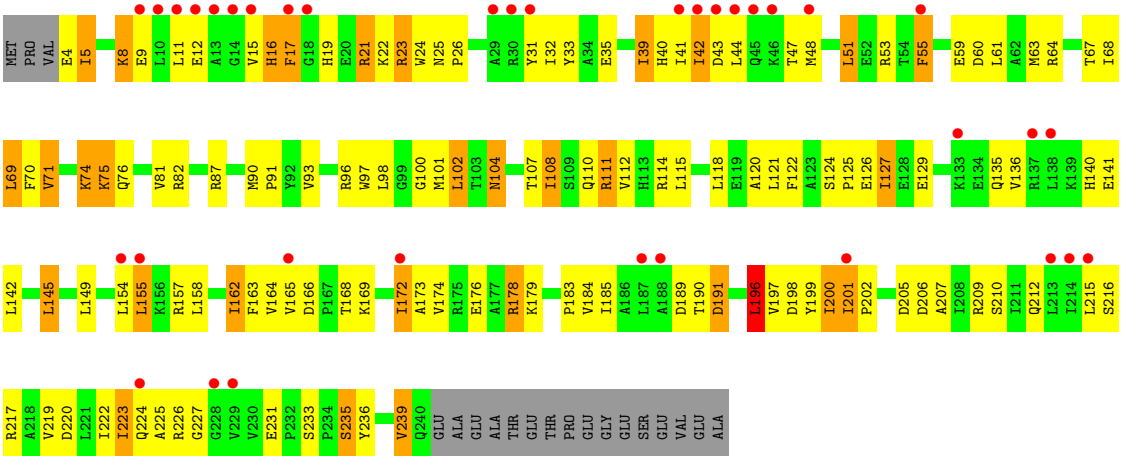
Chain 13:





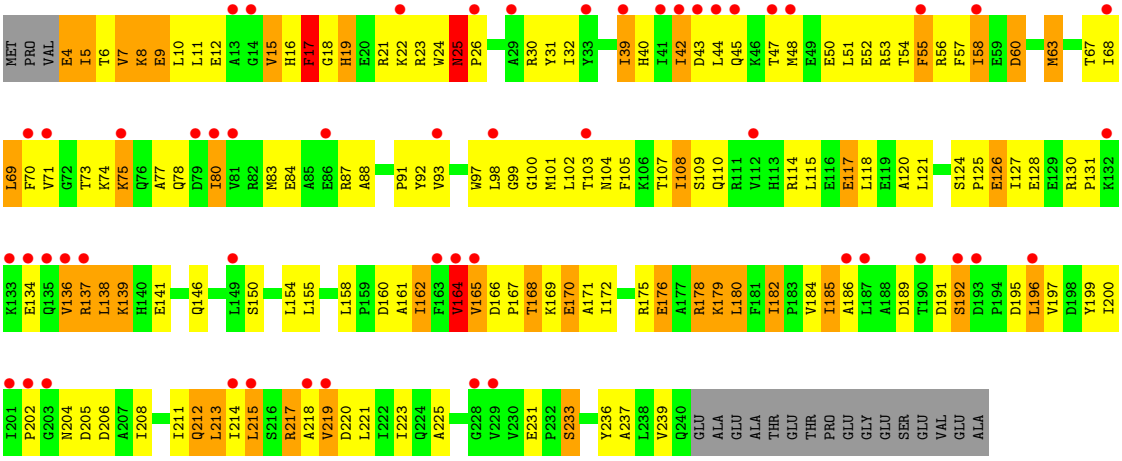
• Molecule 2: 30S ribosomal protein S2

Chain 1E:



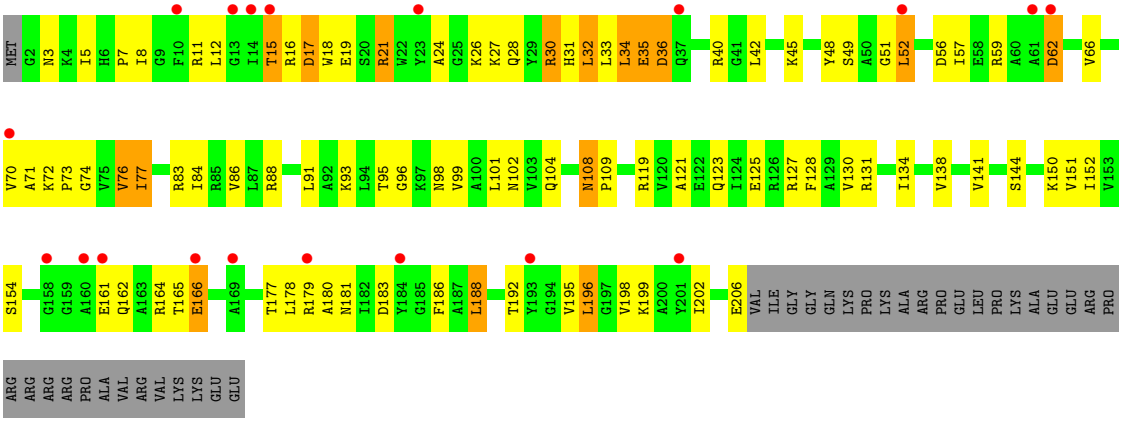
• Molecule 2: 30S ribosomal protein S2

Chain 12:



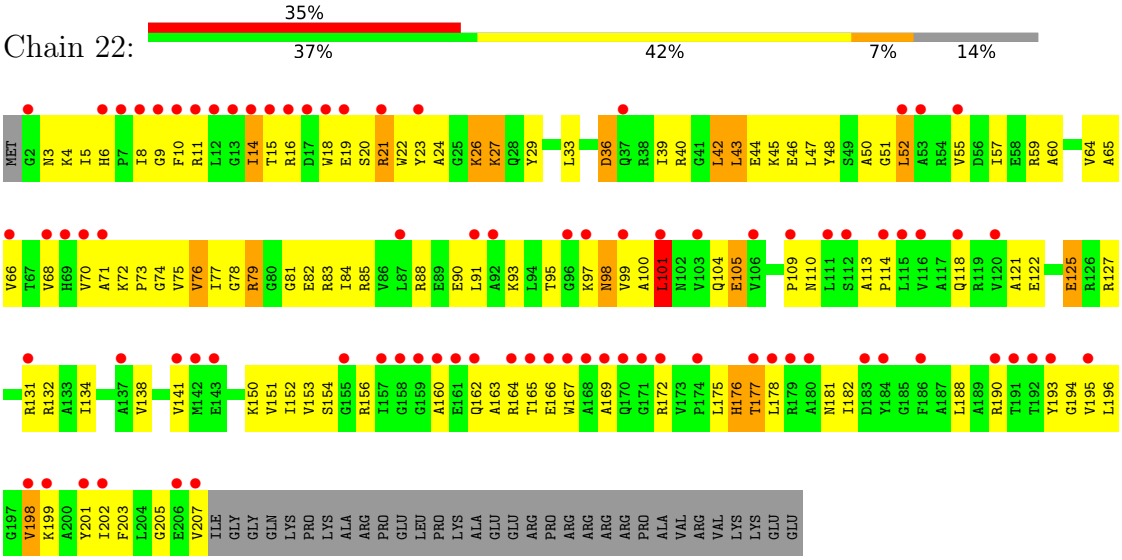
• Molecule 3: 30S ribosomal protein S3

Chain 2E:



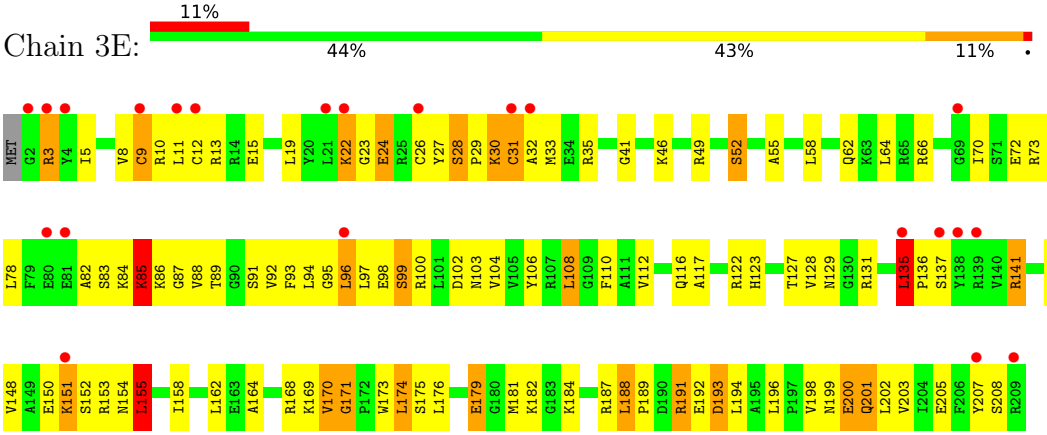
• Molecule 3: 30S ribosomal protein S3

Chain 22:



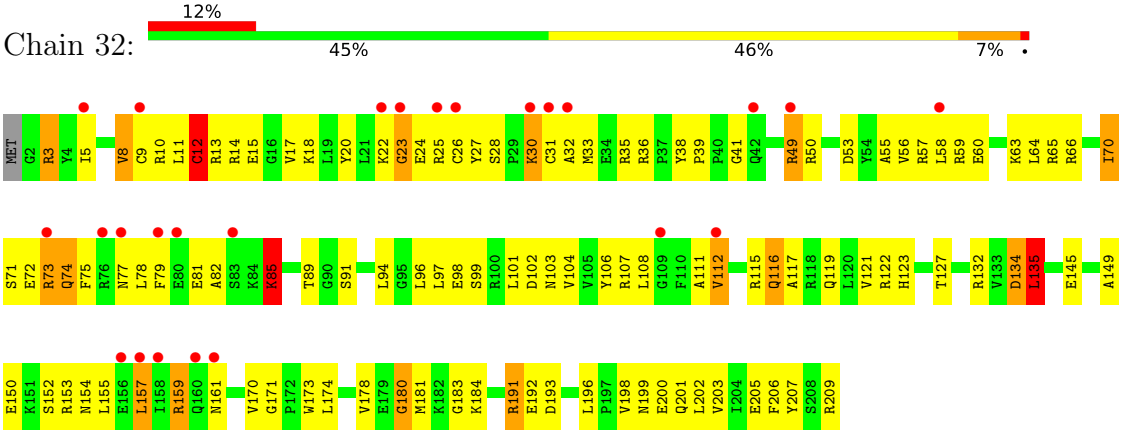
• Molecule 4: 30S ribosomal protein S4

Chain 3E:



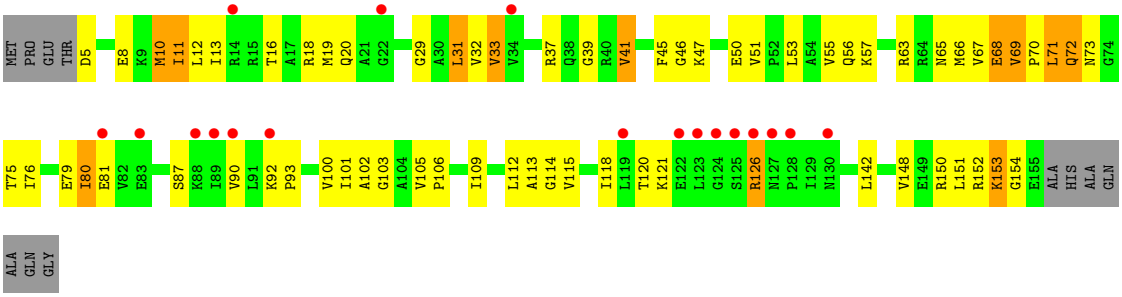
• Molecule 4: 30S ribosomal protein S4

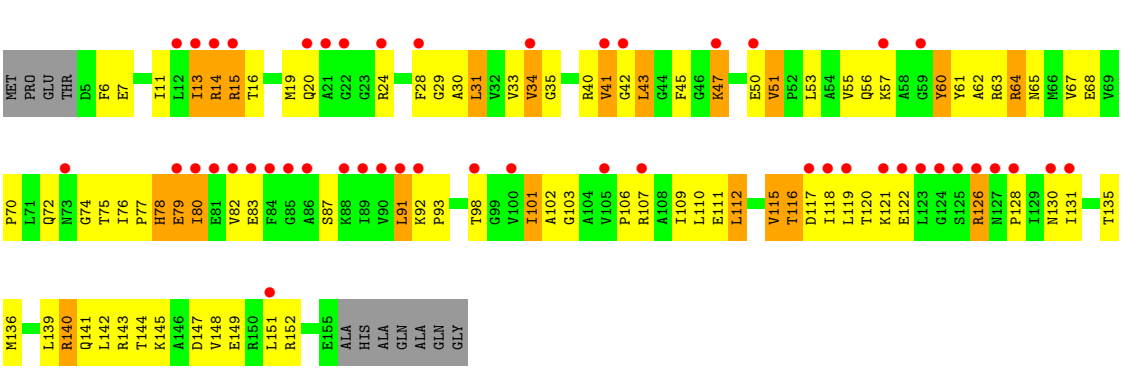
Chain 32:



• Molecule 5: 30S ribosomal protein S5

Chain 4E:





• Molecule 5: 30S ribosomal protein S5

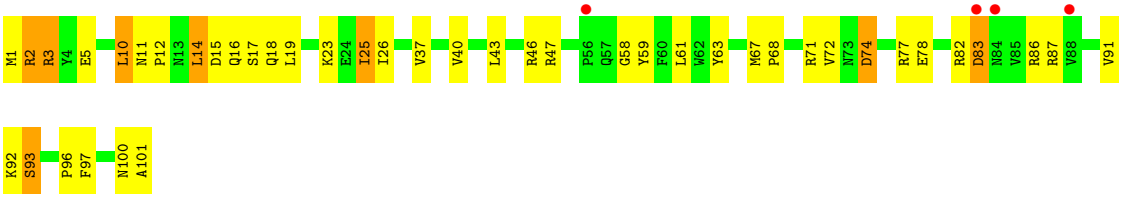
Chain 42:

• Molecule 6: 30S ribosomal protein S6

Chain 5E:

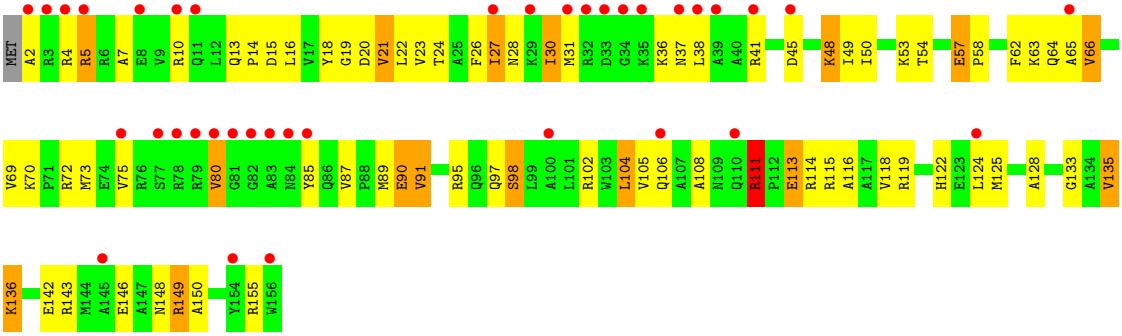
• Molecule 6: 30S ribosomal protein S6

Chain 52:



• Molecule 7: 30S ribosomal protein S7

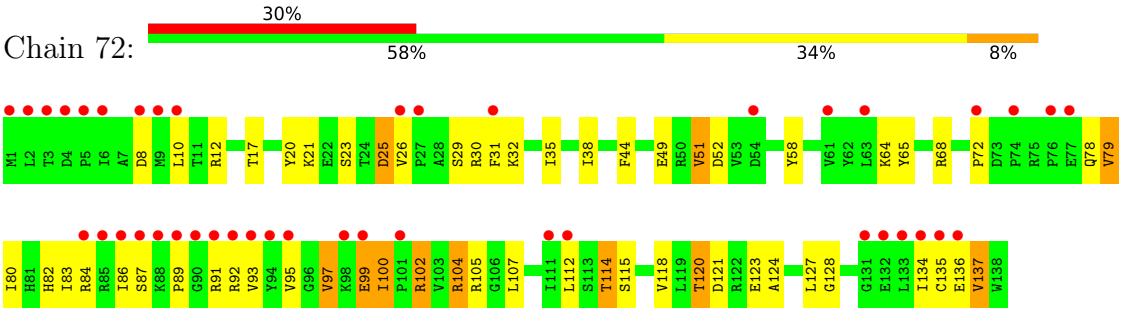
Chain 6E:



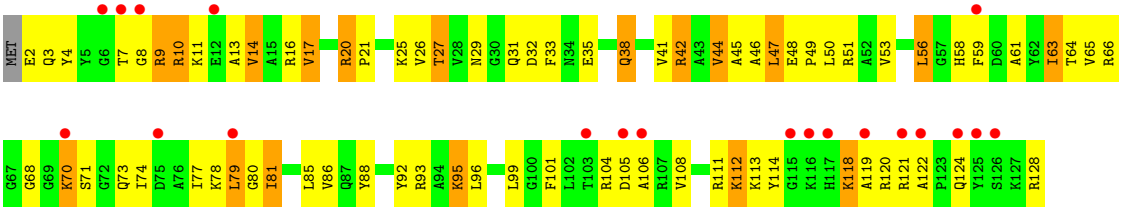
• Molecule 7: 30S ribosomal protein S7

• Molecule 8: 30S ribosomal protein S8

• Molecule 8: 30S ribosomal protein S8

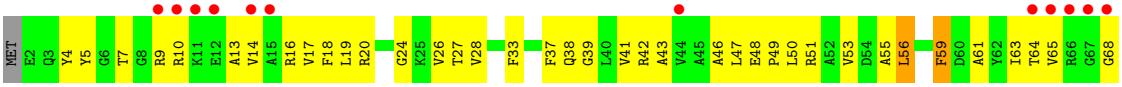


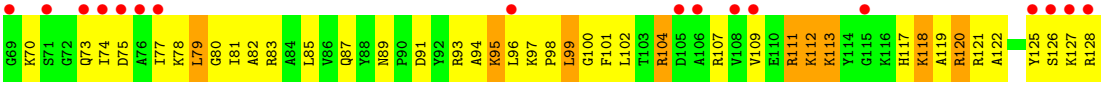
• Molecule 9: 30S ribosomal protein S9



• Molecule 9: 30S ribosomal protein S9

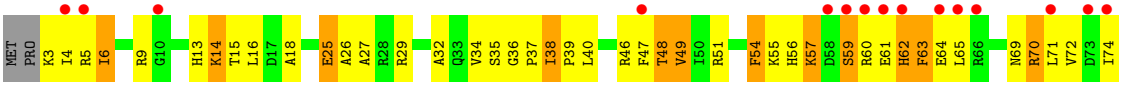
Chain 82:

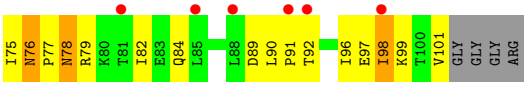




• Molecule 10: 30S ribosomal protein S10

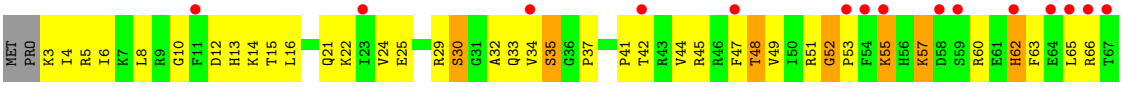
Chain 1I:

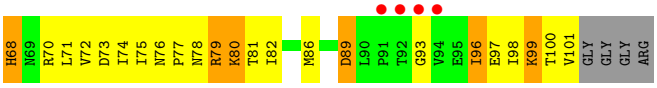




• Molecule 10: 30S ribosomal protein S10

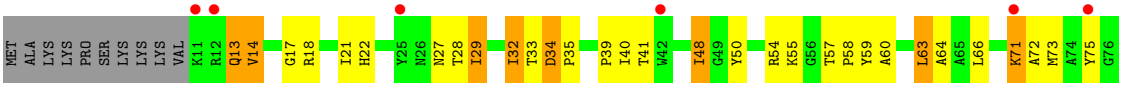
Chain 1A:

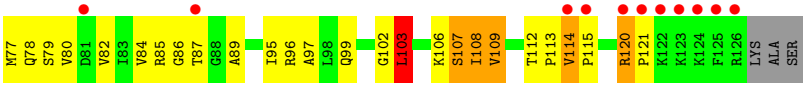




• Molecule 11: 30S ribosomal protein S11

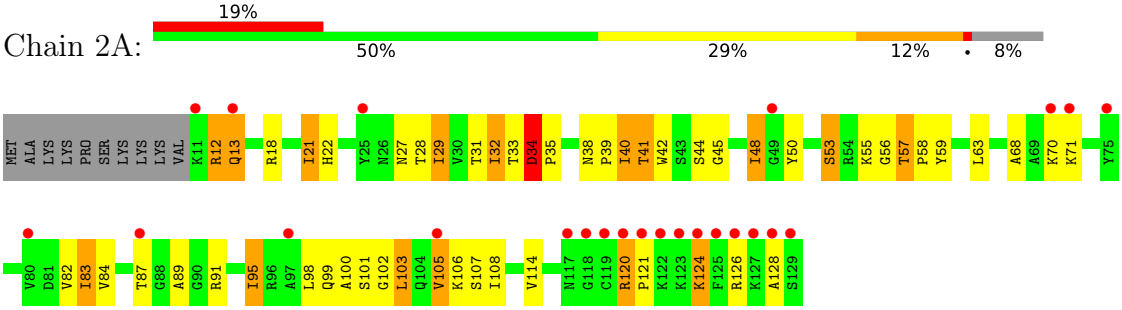
Chain 2I:





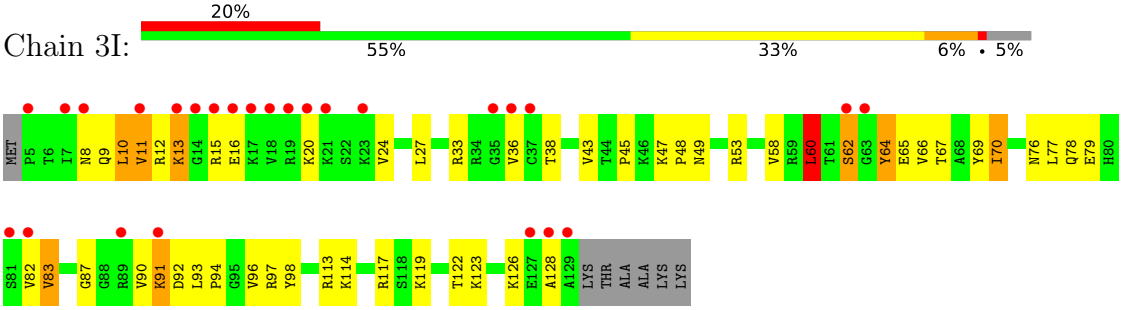
• Molecule 11: 30S ribosomal protein S11

Chain 2A:



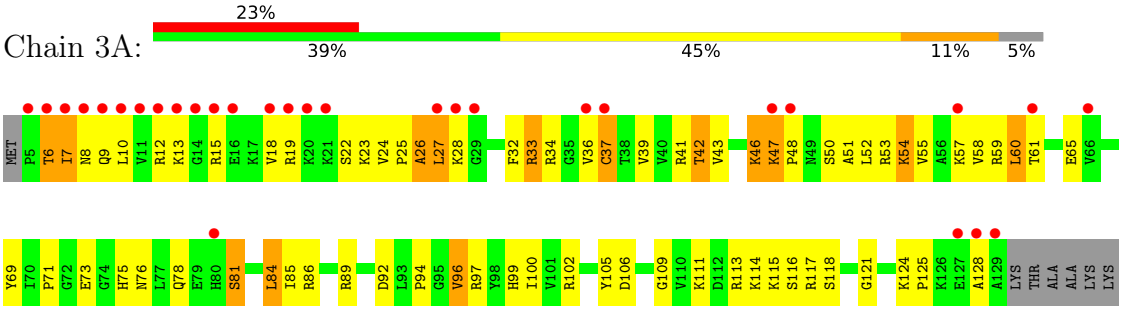
• Molecule 12: 30S ribosomal protein S12

Chain 3I:



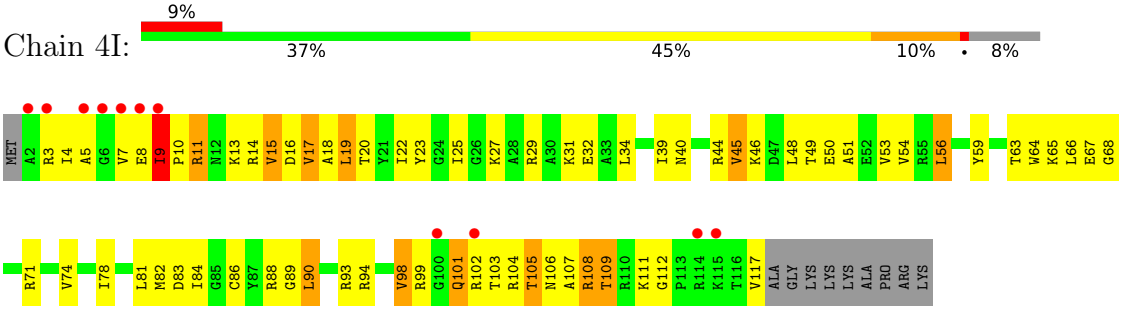
• Molecule 12: 30S ribosomal protein S12

Chain 3A:



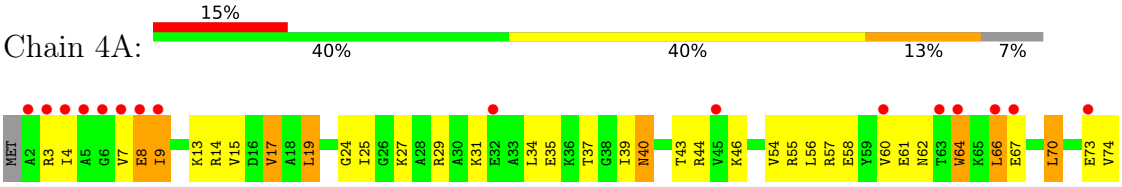
• Molecule 13: 30S ribosomal protein S13

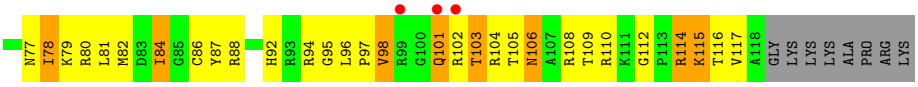
Chain 4I:



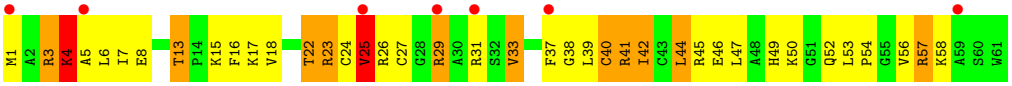
• Molecule 13: 30S ribosomal protein S13

Chain 4A:

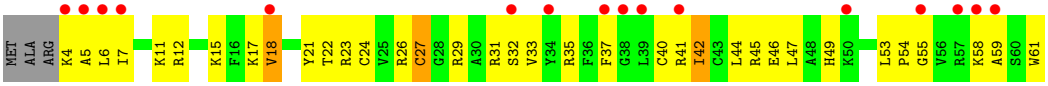




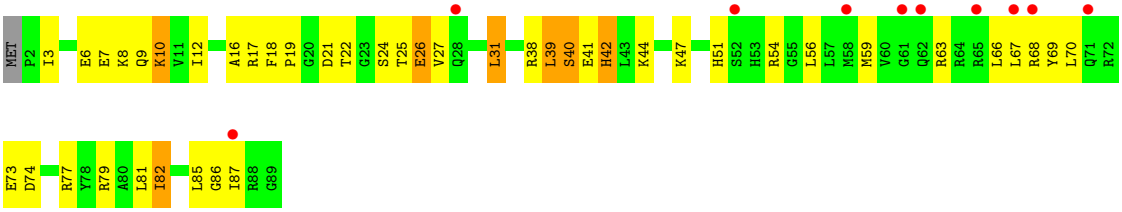
• Molecule 14: 30S ribosomal protein S14



• Molecule 14: 30S ribosomal protein S14

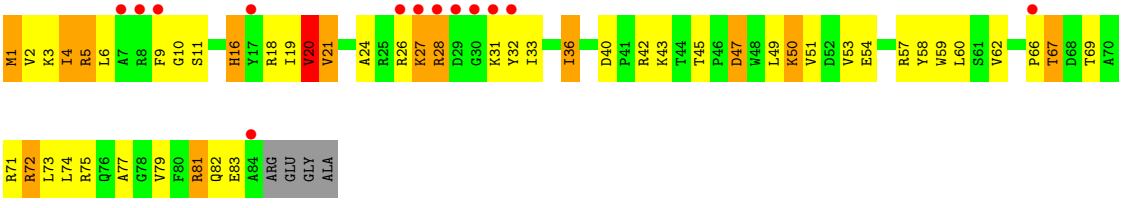


• Molecule 15: 30S ribosomal protein S15



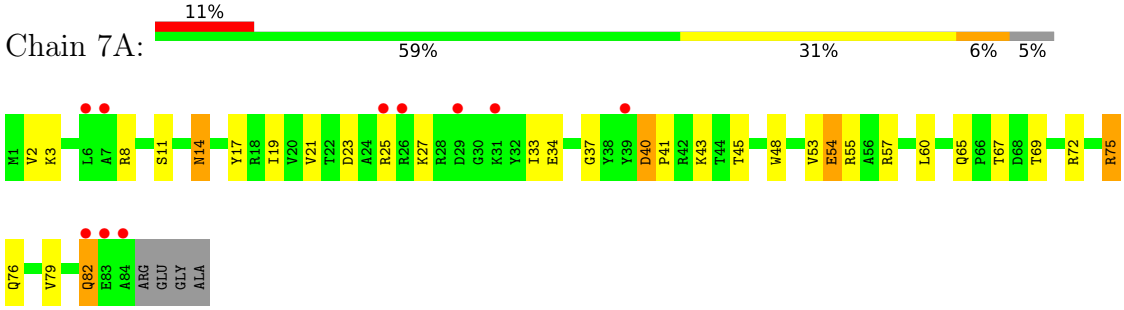
• Molecule 15: 30S ribosomal protein S15

• Molecule 16: 30S ribosomal protein S16



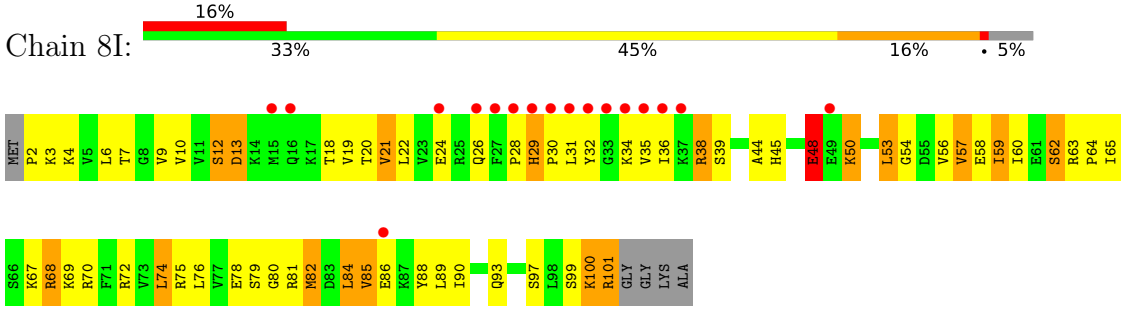
• Molecule 16: 30S ribosomal protein S16

Chain 7A:



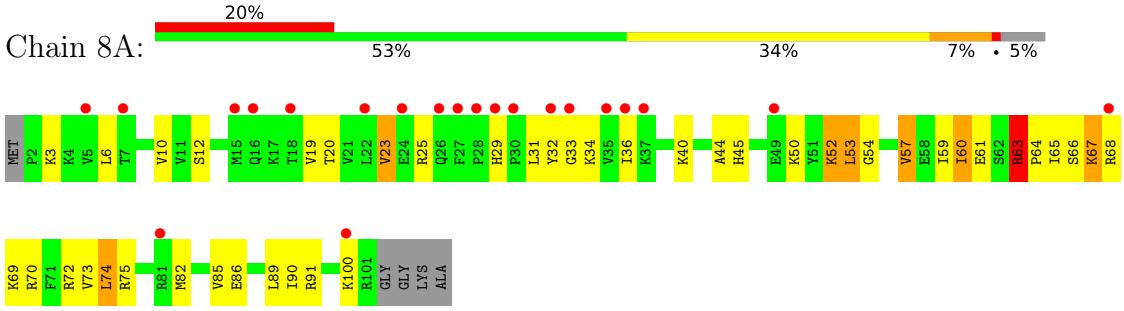
• Molecule 17: 30S ribosomal protein S17

Chain 8I:



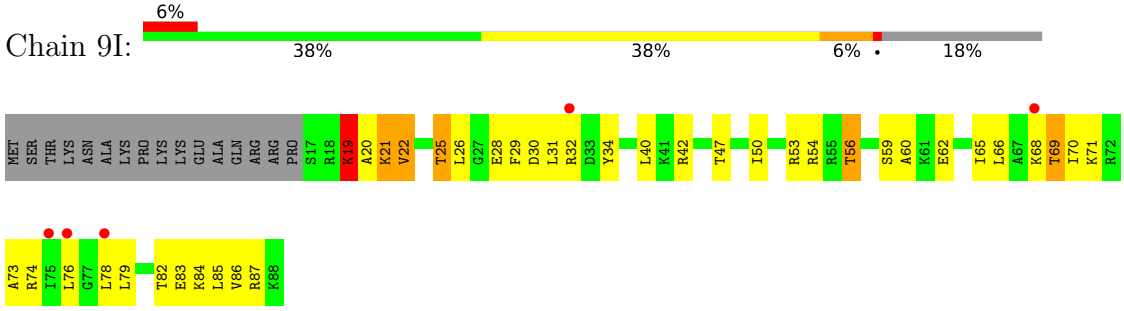
• Molecule 17: 30S ribosomal protein S17

Chain 8A:



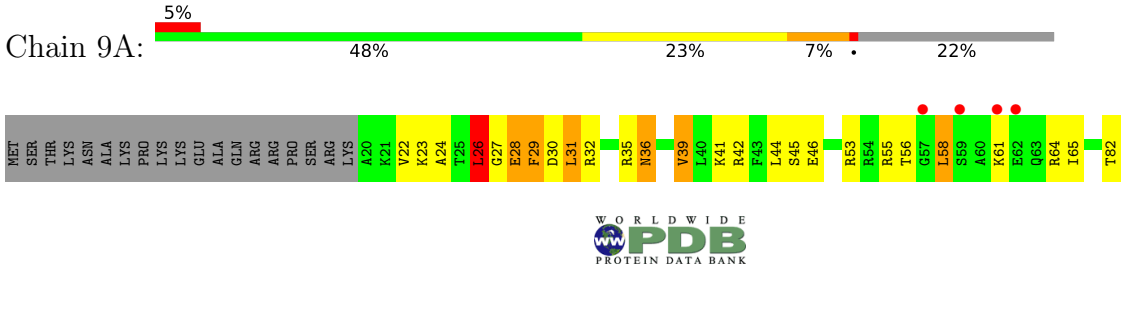
• Molecule 18: 30S ribosomal protein S18

Chain 9I:



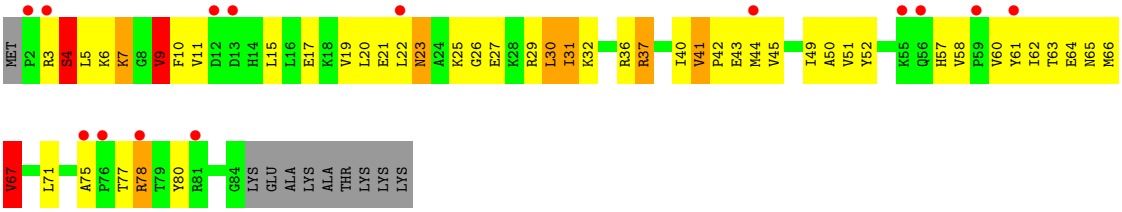
• Molecule 18: 30S ribosomal protein S18

Chain 9A:



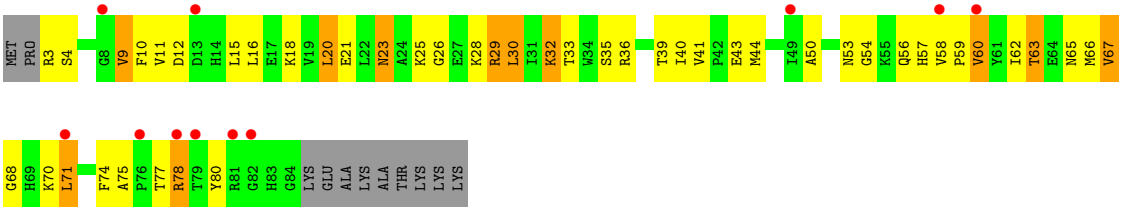
• Molecule 19: 30S ribosomal protein S19

Chain AI:



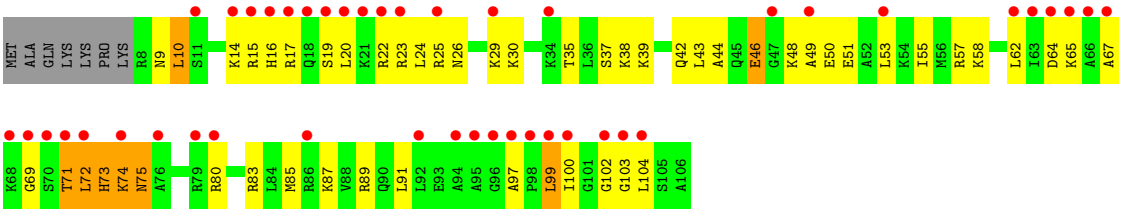
• Molecule 19: 30S ribosomal protein S19

Chain AA:



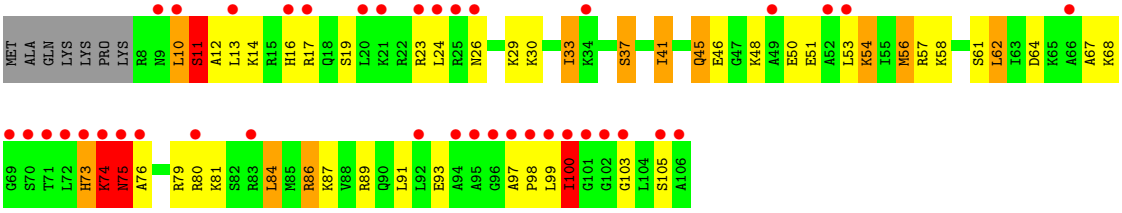
• Molecule 20: 30S ribosomal protein S20

Chain BI:



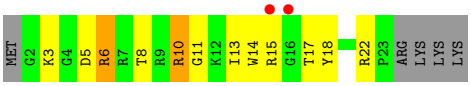
• Molecule 20: 30S ribosomal protein S20

Chain BA:

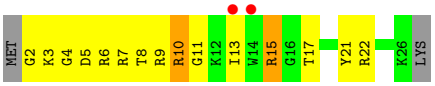


• Molecule 21: 30S ribosomal protein THX

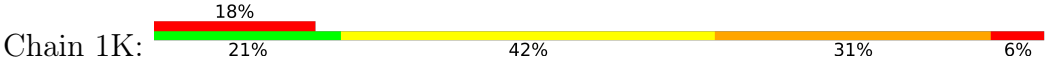
Chain 1F:

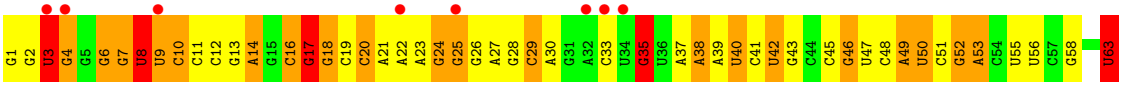


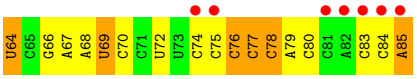
• Molecule 21: 30S ribosomal protein THX



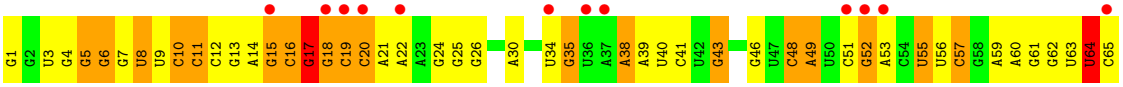
• Molecule 22: tRNA-Tyr



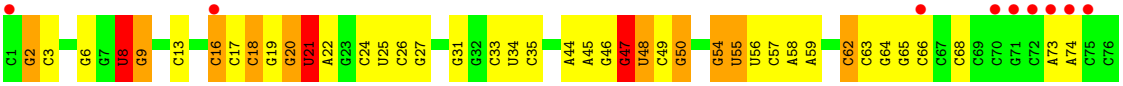




• Molecule 22: tRNA-Tyr



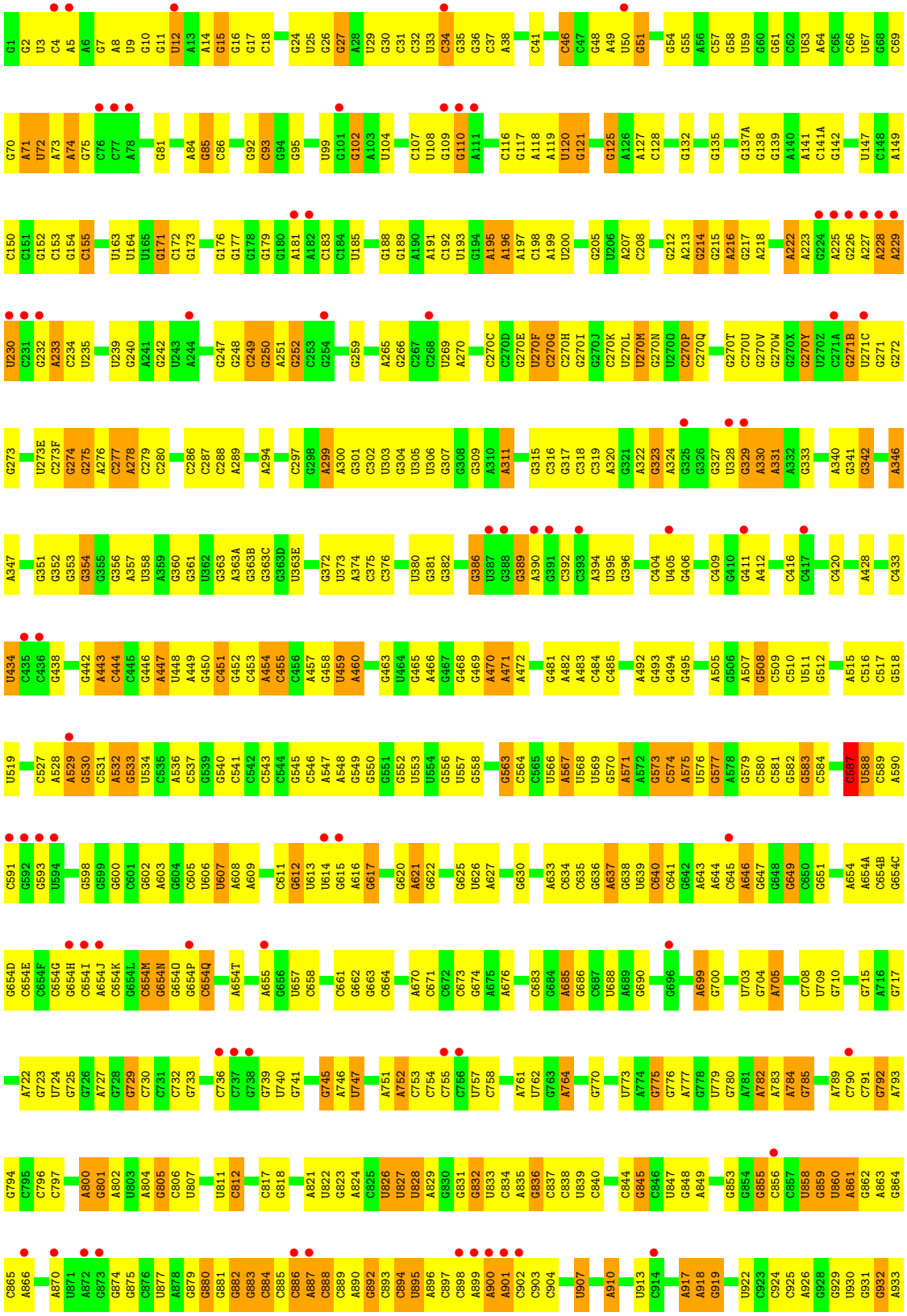
• Molecule 23: tRNA-fMet

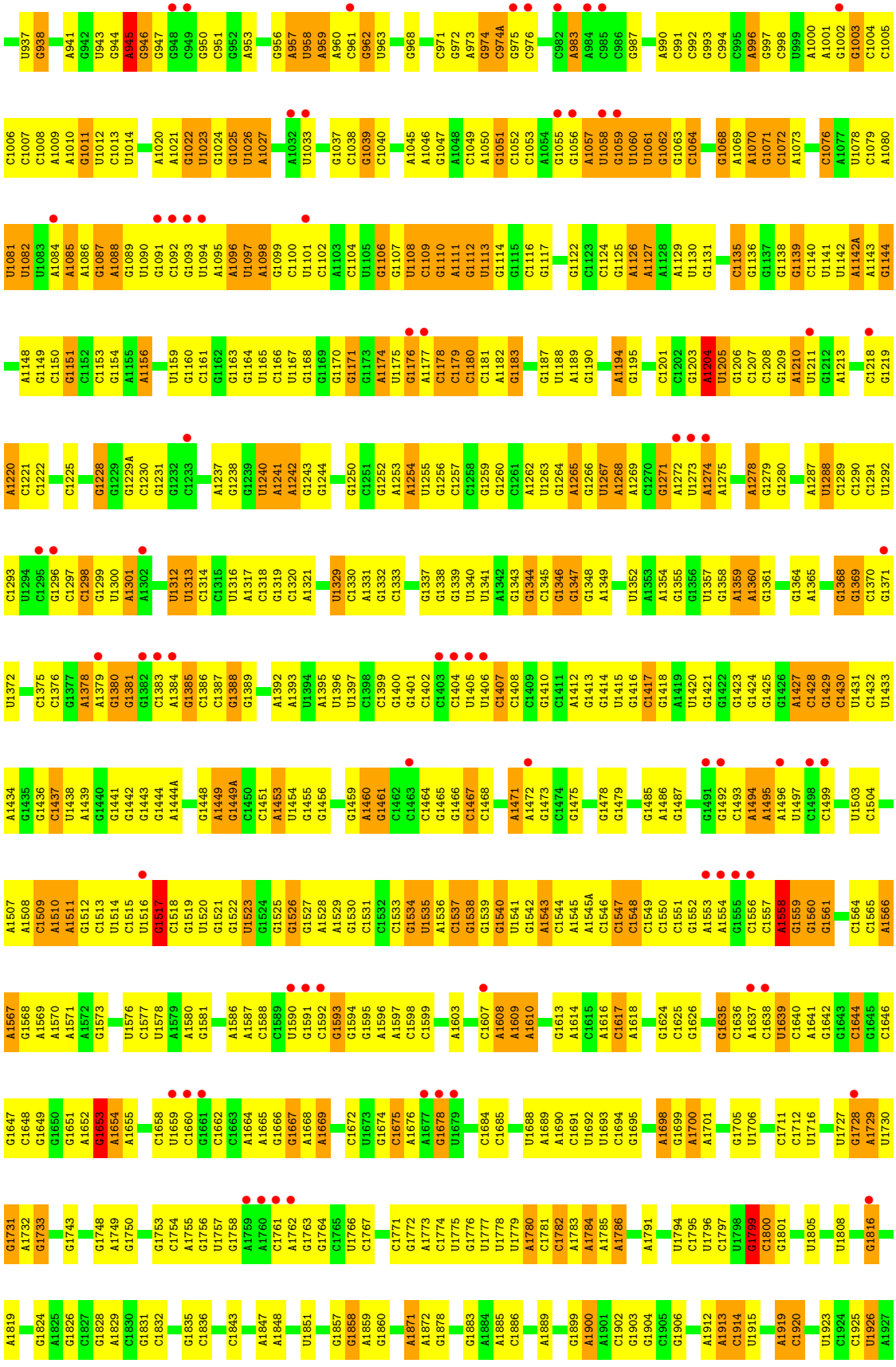


• Molecule 24: mRNA

• Molecule 25: 23S ribosomal RNA

Chain 1H:

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C1006 C1007 C1008 A1009 A1010 G1011 U1012 C1013 U1014 A1020 A1021 G1022 U1023 G1024 G1025 U1026 A1027 A1032 U1033 G1037 C1038 G1039 C1040 A1045 A1046 G1047 A1048 C1049 A1050 G1051 C1052 C1053 A1054 G1055 G1056 A1057 U1058 G1059 U1060 U1061 G1062 G1063 C1064 G1068 A1069 A1070 G1071 C1072 A1073 C1076 A1077 U1078 C1079 A1080
U1081 U1082 U1083 A1084 A1085 A1086 G1087 A1088 G1089 U1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097 A1098 G1099 C1100 U1101 C1102 A1103 C1104 U1105 G1106 G1107 U1108 C1109 G1110 A1111 G1112 U1113 G1114 G1115 C1116 G1117 G1122 C1123 C1124 G1125 A1126 A1127 A1128 A1129 U1130 G1131 C1135 G1136 G1137 G1138 G1139 C1140 U1141 U1142 A1142A A1143 G1144
A1148 G1149 C1150 G1151 C1152 C1153 G1154 A1155 A1156 U1159 G1160 C1161 G1162 G1163 G1164 U1165 C1166 U1167 G1168 G1169 G1170 G1171 G1173 A1174 U1175 G1176 A1177 C1178 C1179 C1180 C1181 A1182 G1183 G1187 U1188 A1189 G1190 A1194 G1195 C1201 C1202 G1203 A1204 U1205 G1206 C1207 C1208 G1209 A1210 U1211 G1212 A1213 C1218 G1219
A1220 C1221 C1222 C1225 G1228 G1229 G1229A C1230 G1231 G1232 C1233 A1237 G1238 G1239 U1240 A1241 A1242 G1243 G1244 G1250 C1251 G1252 A1253 A1254 U1255 G1256 C1257 C1258 G1259 G1260 C1261 A1262 U1263 G1264 A1265 G1266 U1267 A1268 A1269 C1270 G1271 A1272 U1273 A1274 A1275 A1278 G1279 G1280 A1287 U1288 C1289 C1290 C1291 U1292
C1293 U1294 C1295 G1296 C1297 C1298 G1299 U1300 A1301 A1302 U1312 U1313 C1314 C1315 U1316 A1317 C1318 G1319 C1320 A1321 U1329 C1330 A1331 G1332 C1333 G1337 G1338 G1339 U1340 U1341 A1342 G1343 G1344 C1345 G1346 G1347 G1348 A1349 U1352 A1353 A1354 G1355 G1356 U1357 G1358 A1359 A1360 G1361 G1364 A1365 G1368 G1369 C1370 G1371
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A1434 G1435 G1436 C1437 U1438 A1439 G1440 G1441 G1442 G1443 G1444 A1444A G1448 A1449 G1449A C1450 C1451 A1453 U1454 G1455 G1456 G1459 A1460 G1461 C1462 C1463 C1464 G1465 G1466 C1467 C1468 A1471 A1472 G1473 C1474 G1475 G1478 G1479 G1485 A1486 G1487 G1491 G1492 C1493 A1494 A1495 A1496 U1497 C1498 C1499 U1503 C1504
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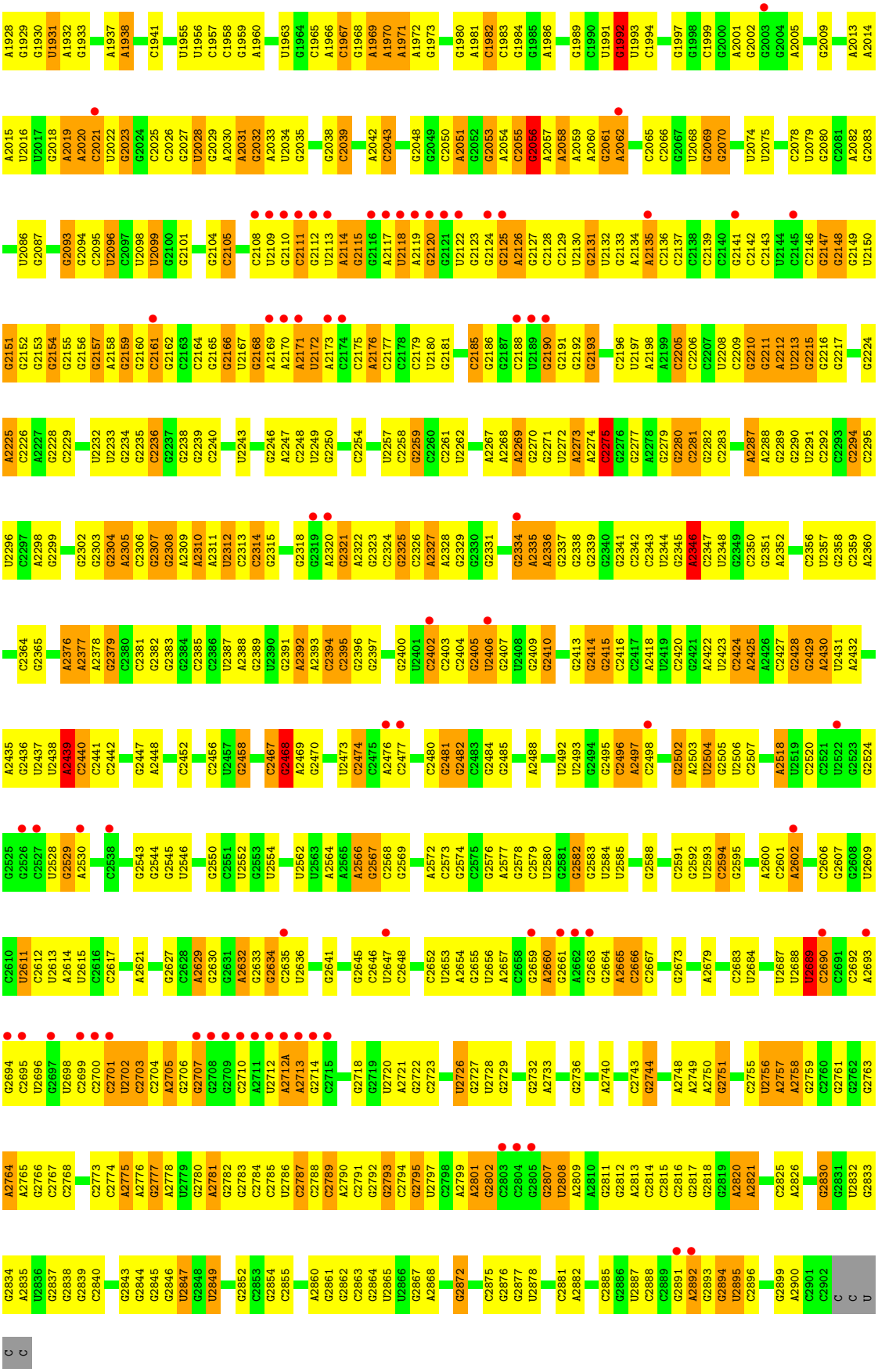
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• Molecule 25: 23S ribosomal RNA

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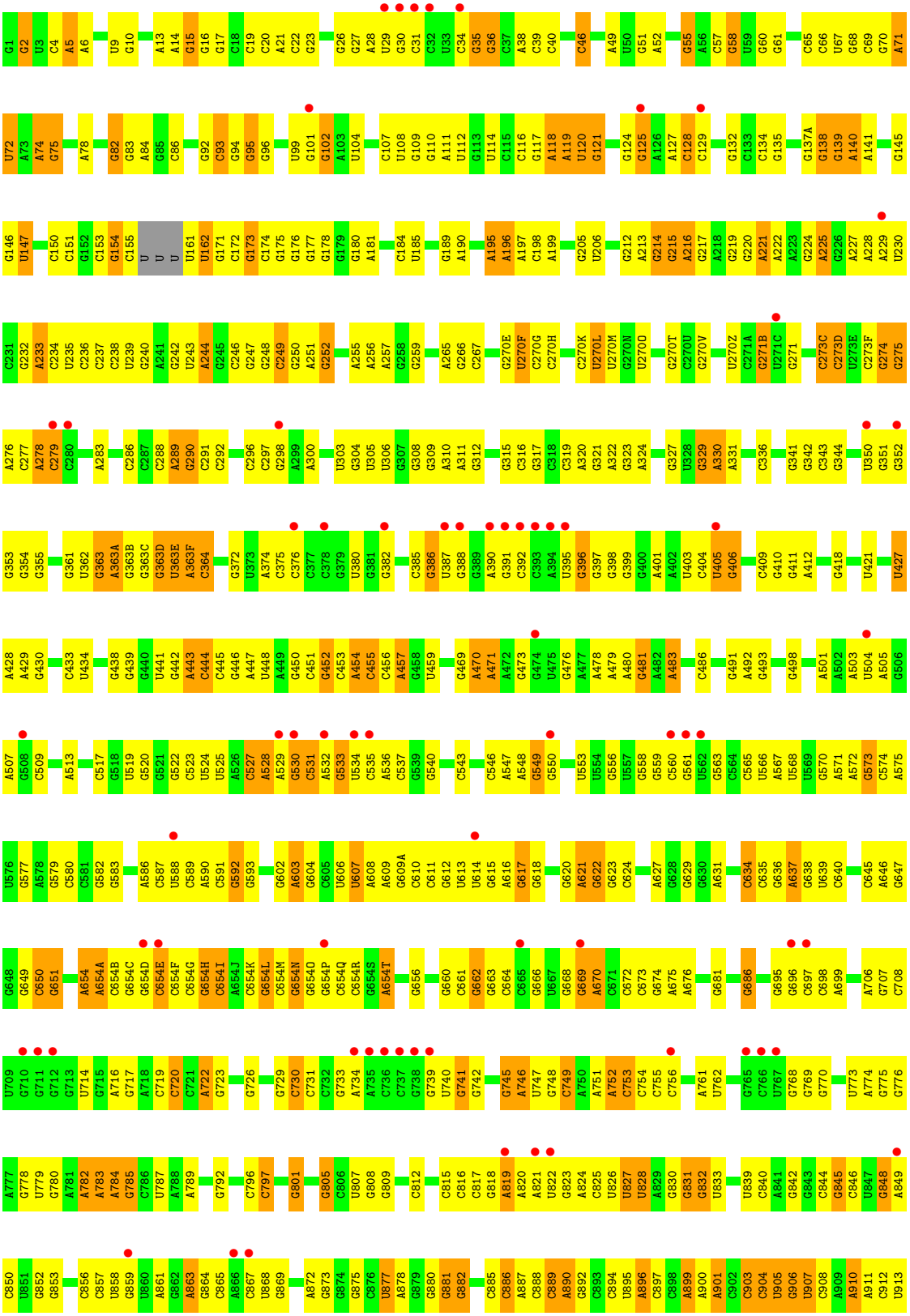

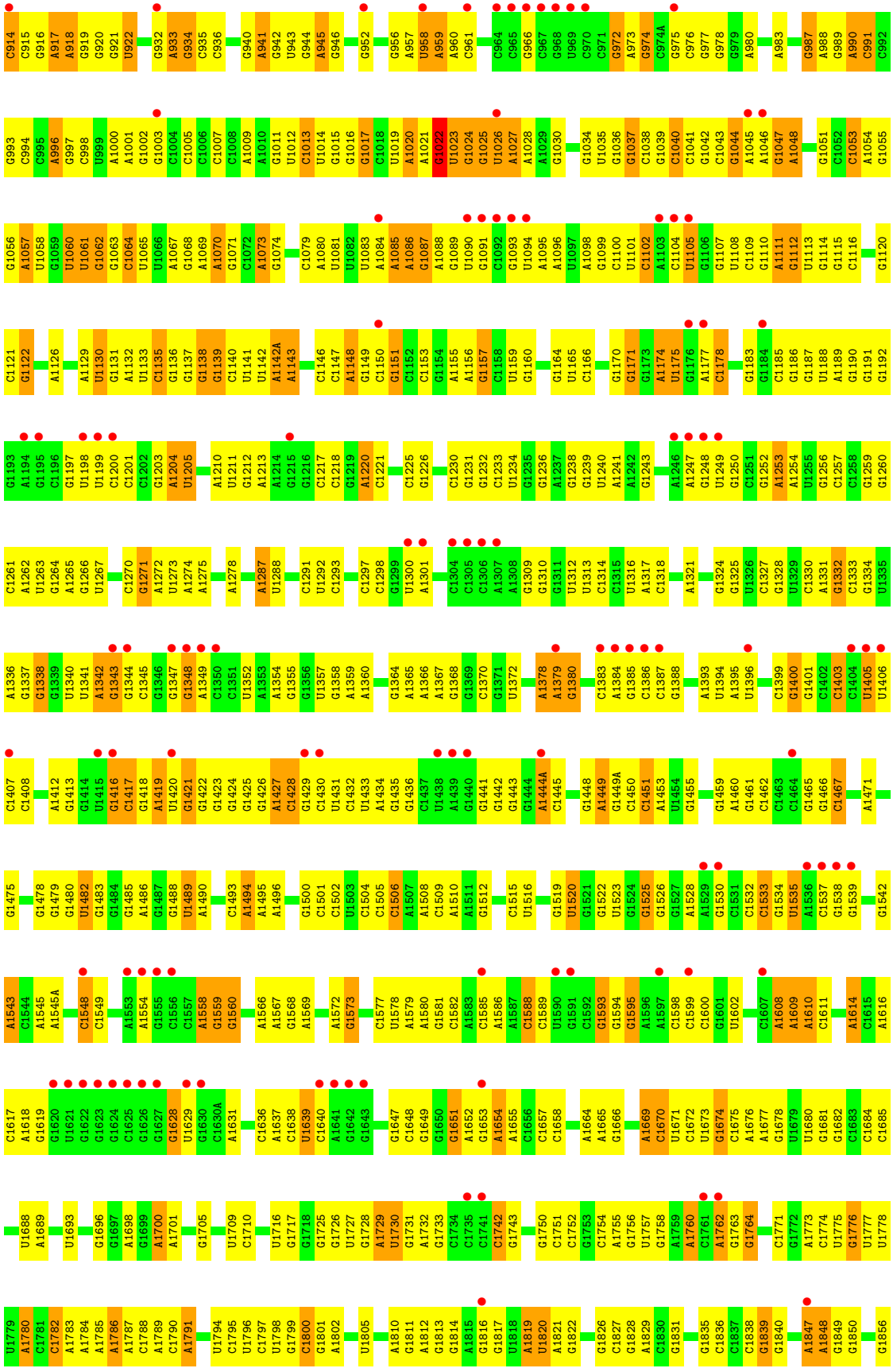

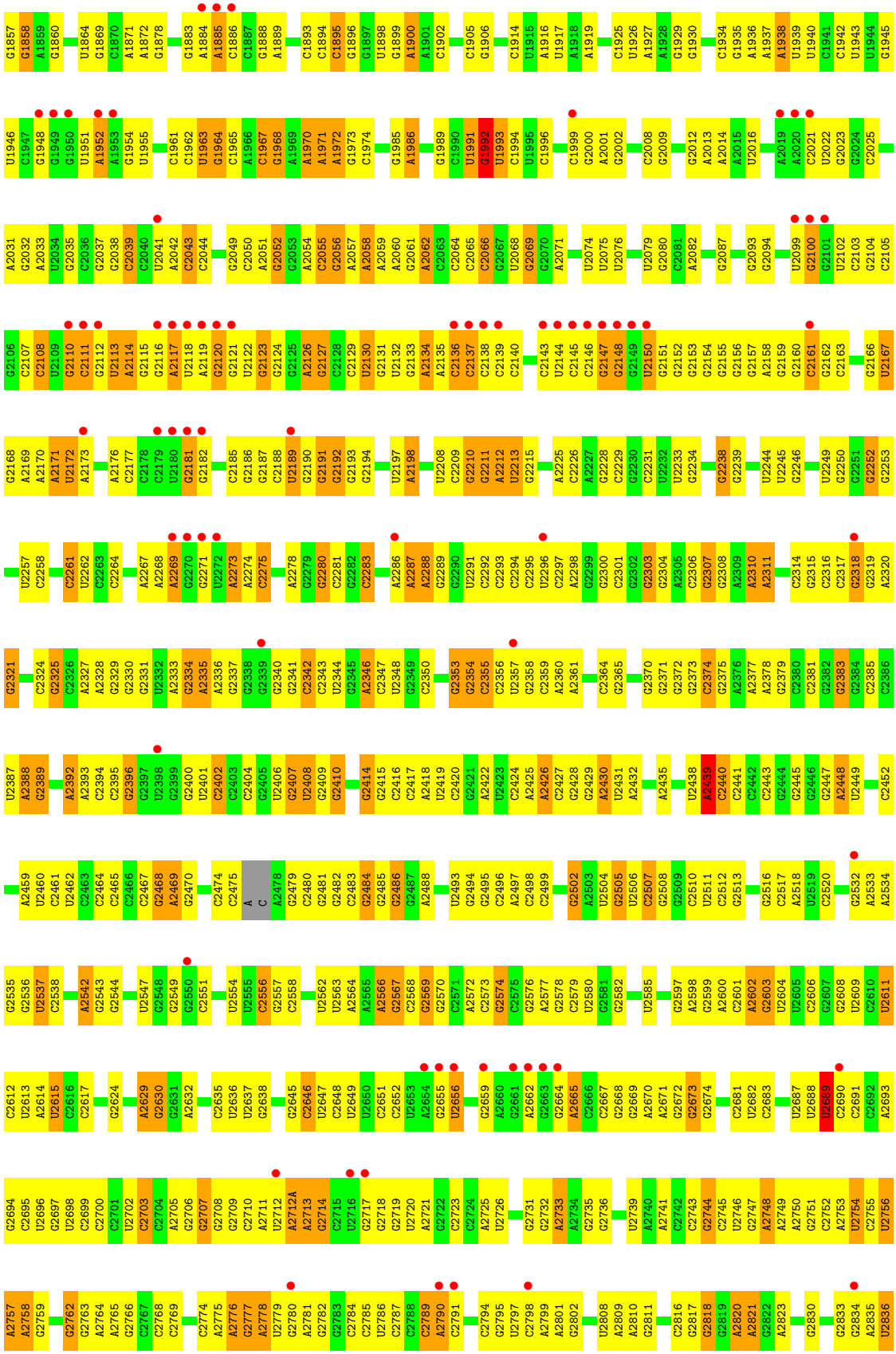
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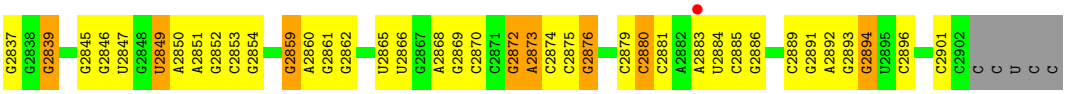

• Molecule 26: 5S ribosomal RNA

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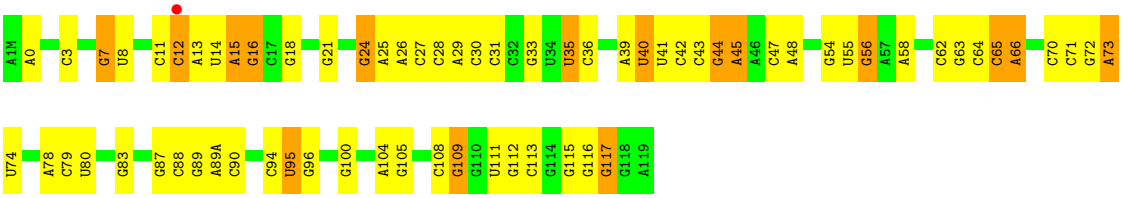

• Molecule 26: 5S ribosomal RNA

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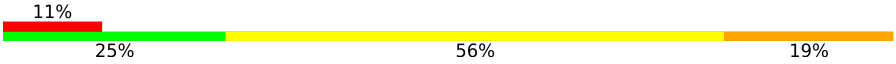

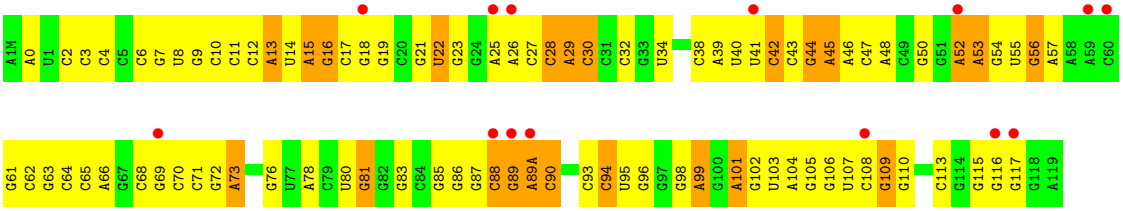

• Molecule 27: 50S ribosomal protein L2

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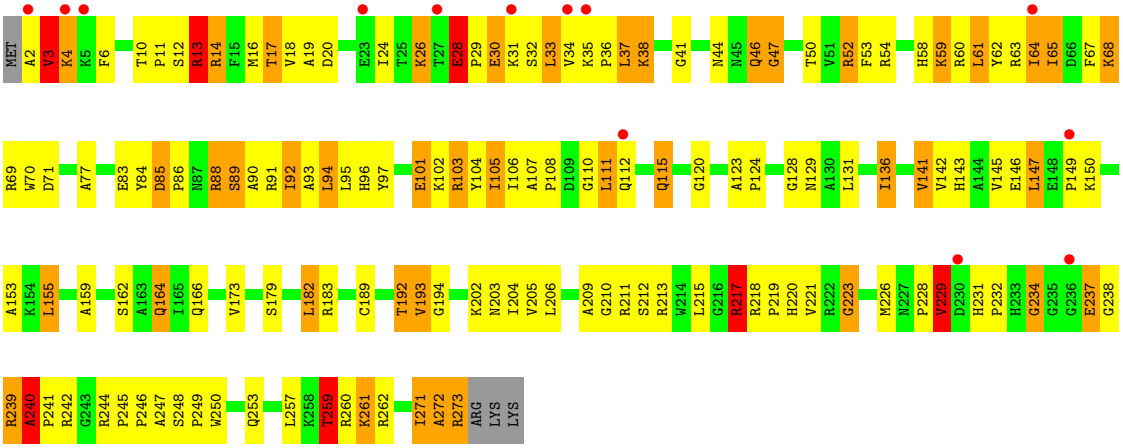

• Molecule 27: 50S ribosomal protein L2

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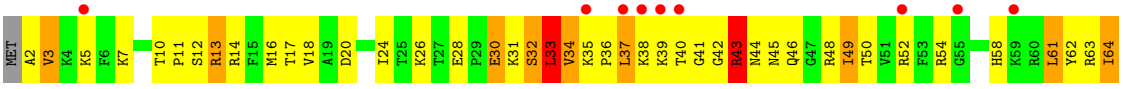

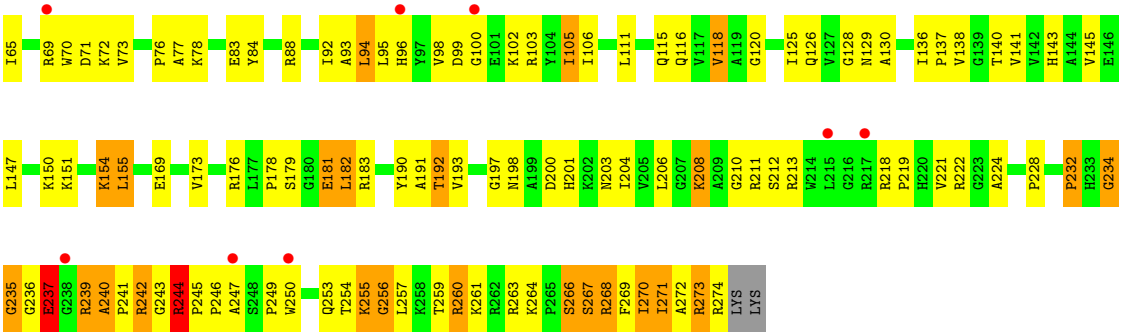

• Molecule 28: 50S ribosomal protein L3

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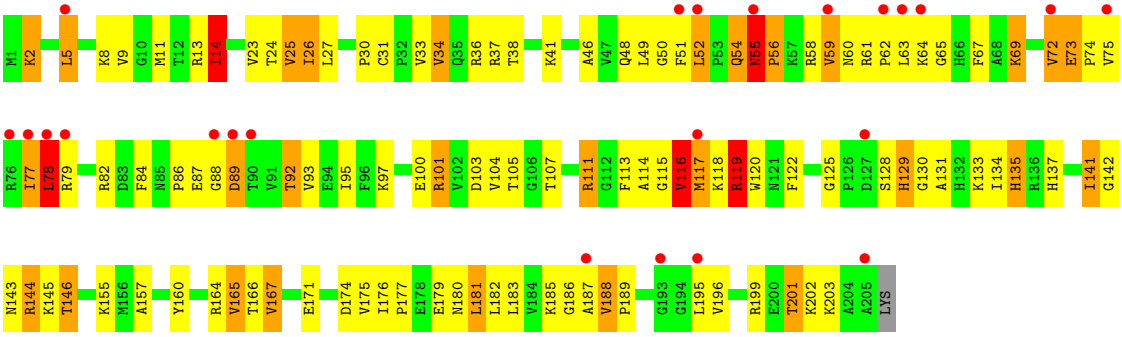

• Molecule 28: 50S ribosomal protein L3

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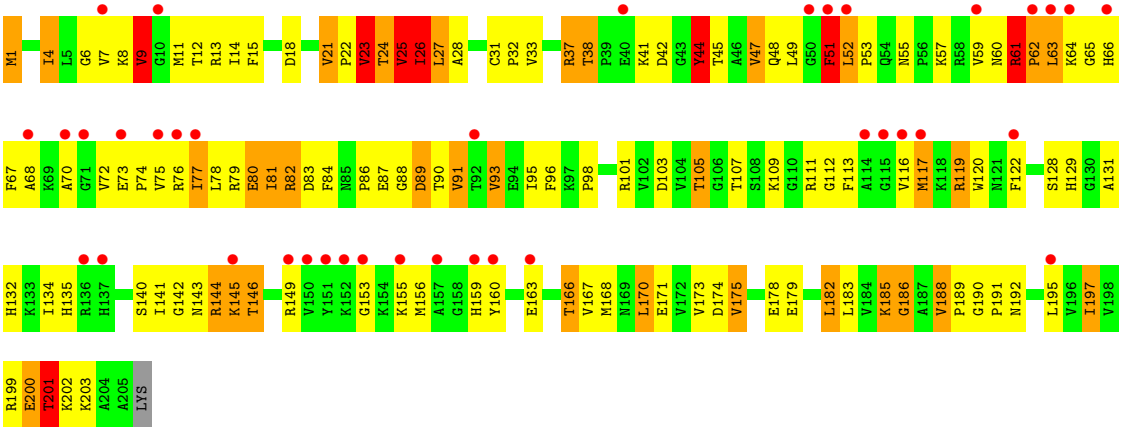

• Molecule 29: 50S ribosomal protein L4

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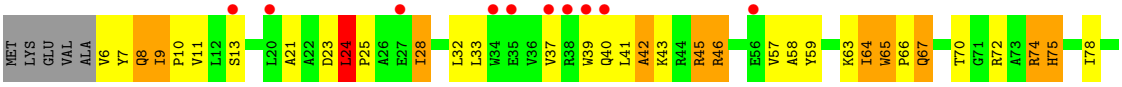

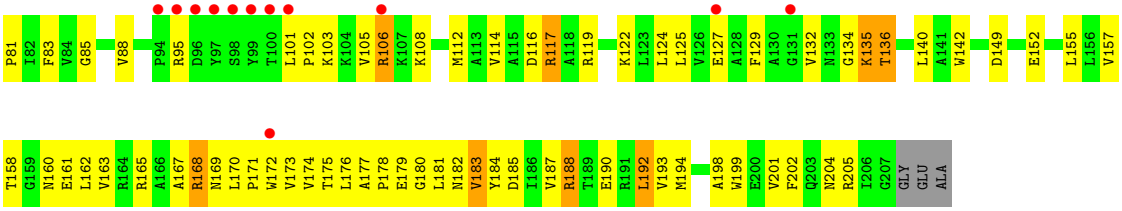

• Molecule 29: 50S ribosomal protein L4

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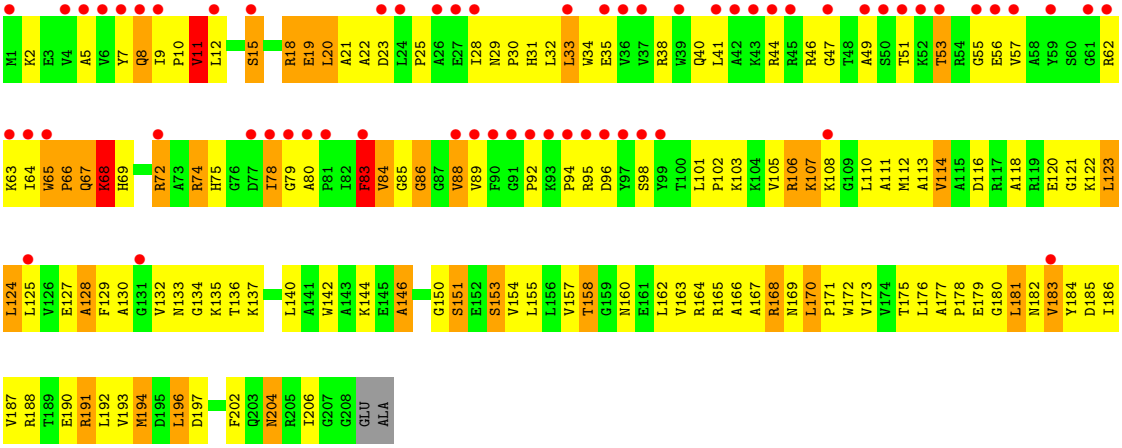

• Molecule 30: 50S ribosomal protein L5

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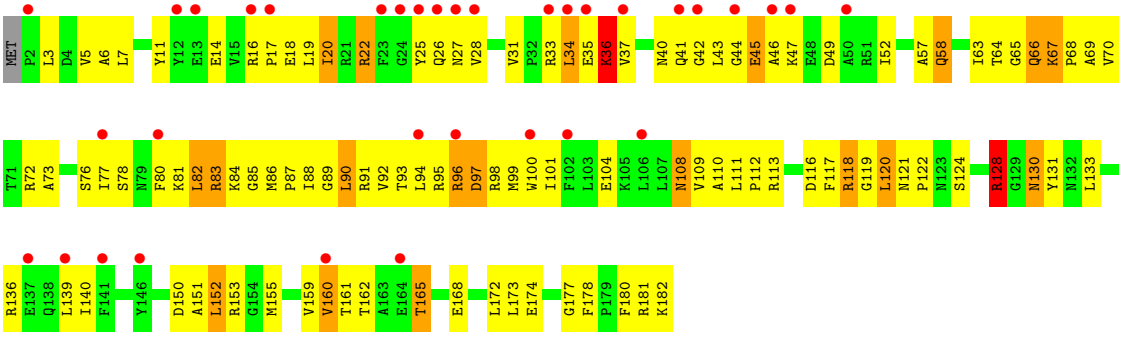

• Molecule 30: 50S ribosomal protein L5

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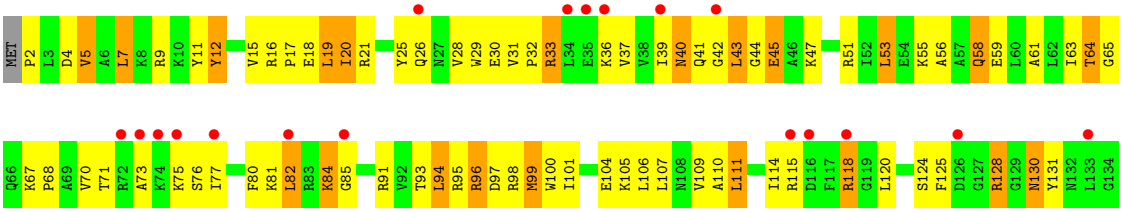

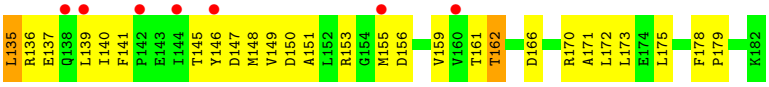

• Molecule 31: 50S ribosomal protein L6

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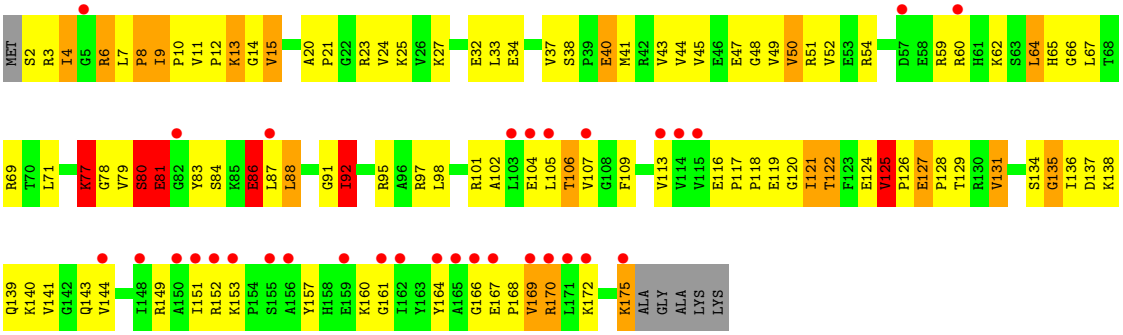

• Molecule 31: 50S ribosomal protein L6

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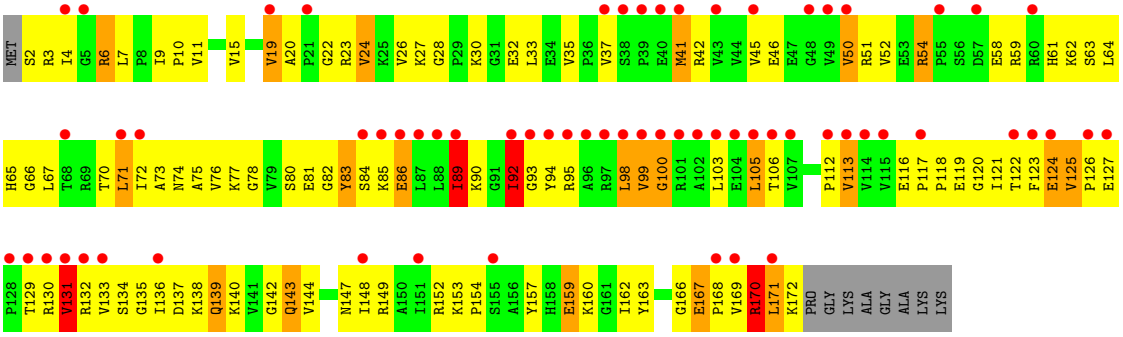
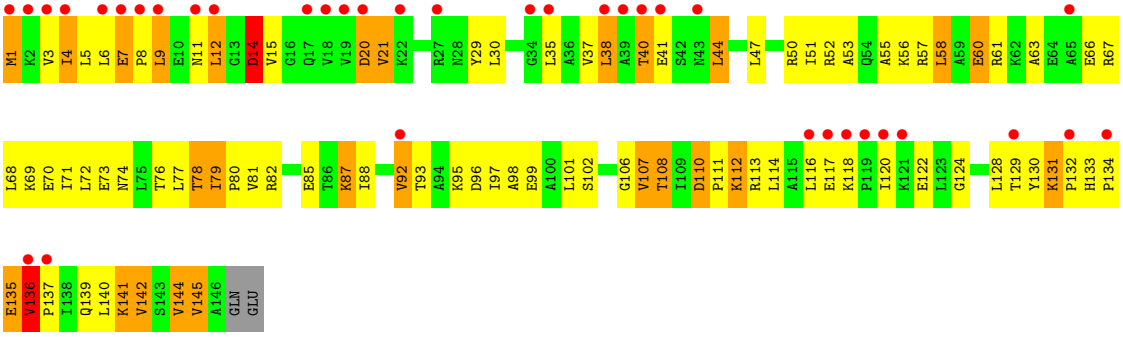


• Molecule 32: 50S ribosomal protein L9

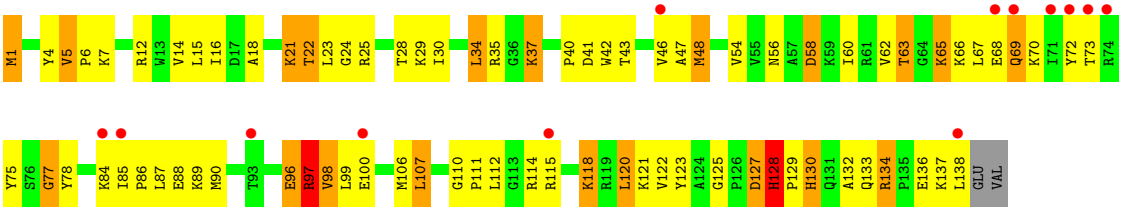
Chain 61:



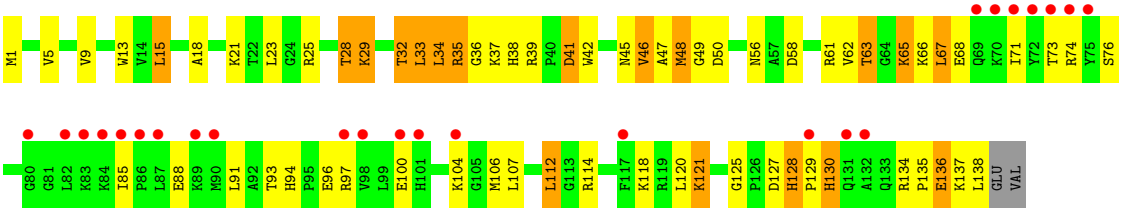
• Molecule 32: 50S ribosomal protein L9

Chain 69:

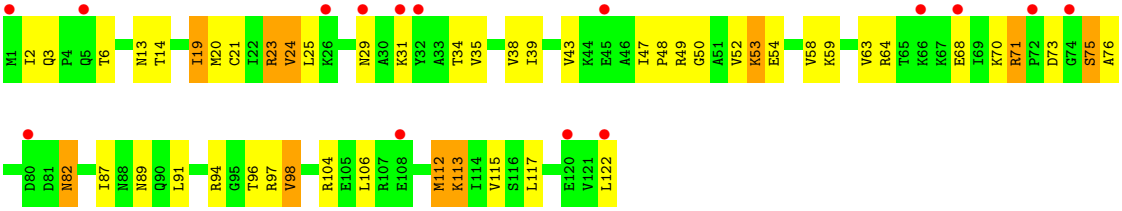
• Molecule 33: 50S ribosomal protein L13



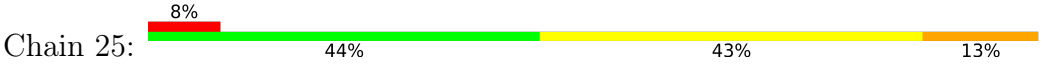
• Molecule 33: 50S ribosomal protein L13

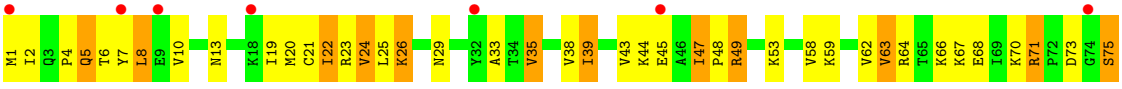


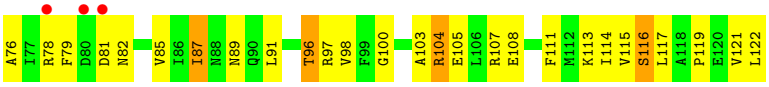
• Molecule 34: 50S ribosomal protein L14



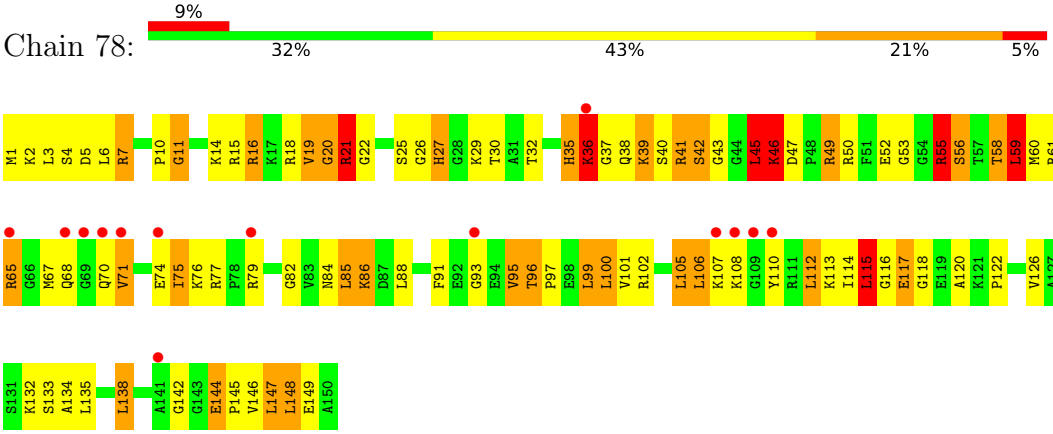
• Molecule 34: 50S ribosomal protein L14



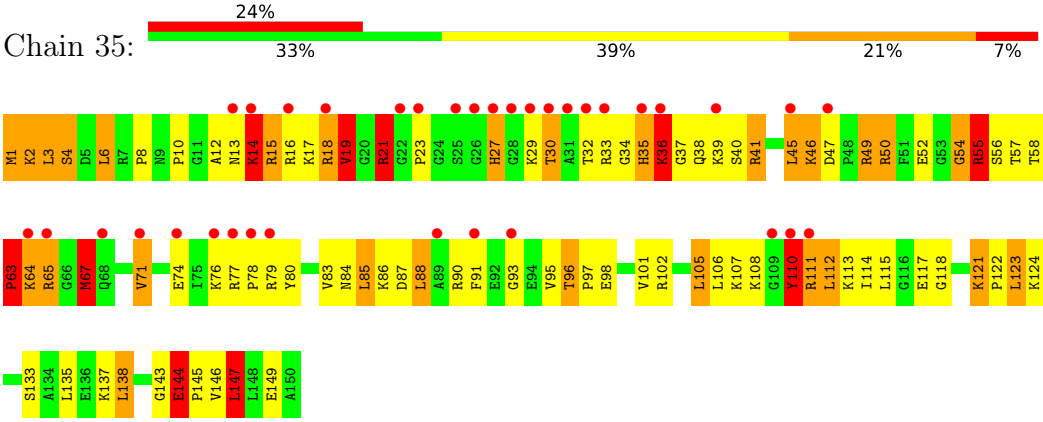




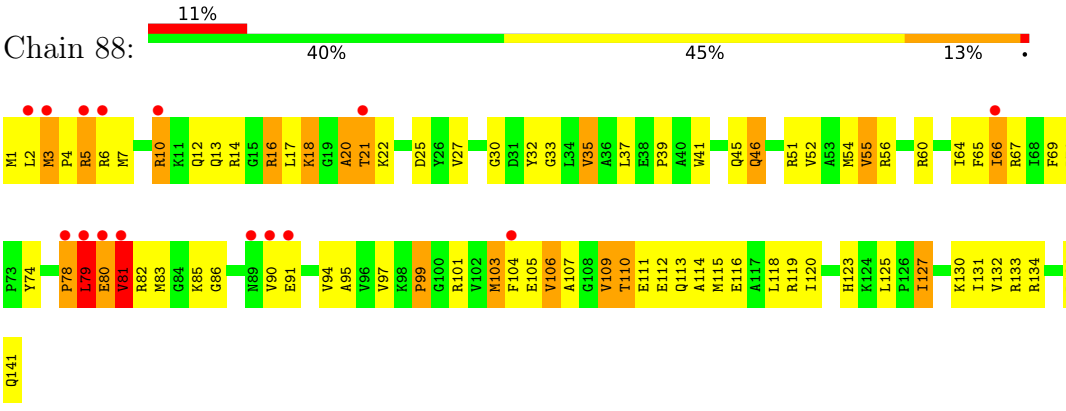
• Molecule 35: 50S ribosomal protein L15



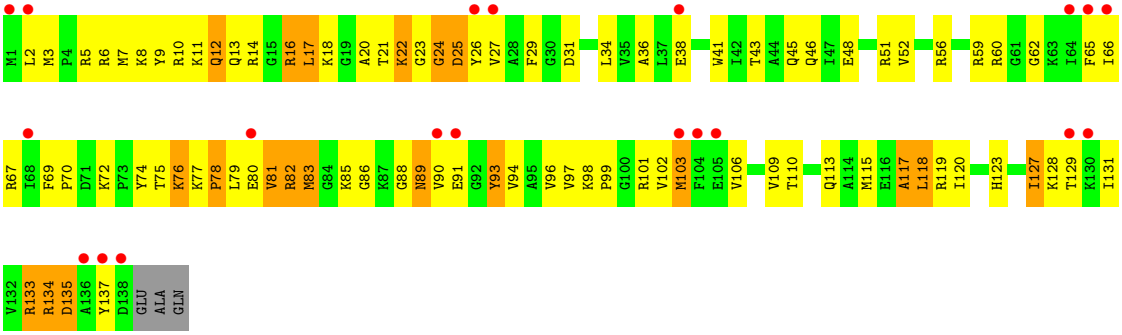
• Molecule 35: 50S ribosomal protein L15



• Molecule 36: 50S ribosomal protein L16

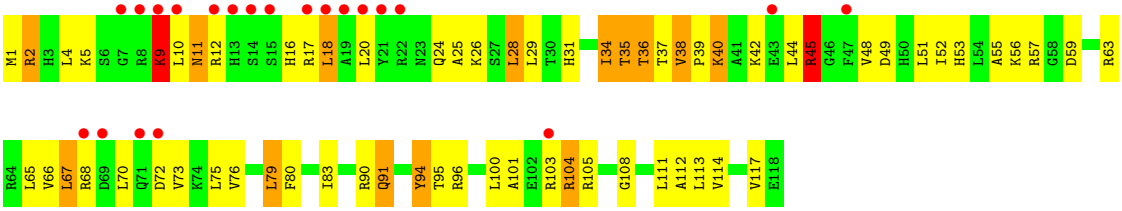


• Molecule 36: 50S ribosomal protein L16



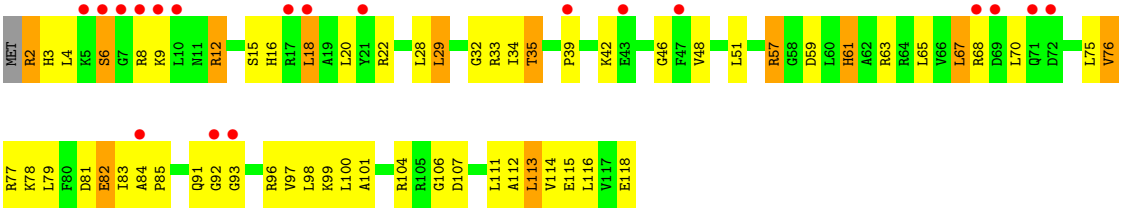
• Molecule 37: 50S ribosomal protein L17

Chain 98:



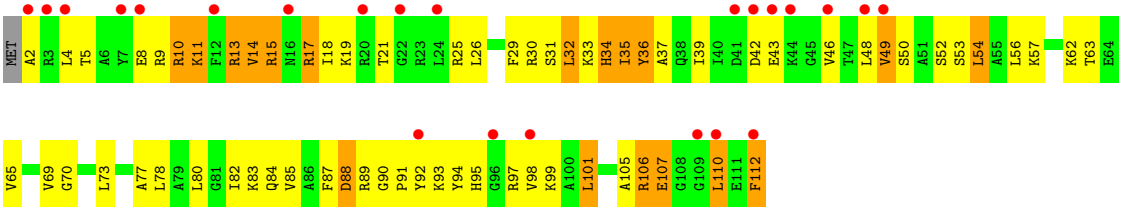
• Molecule 37: 50S ribosomal protein L17

Chain 55:



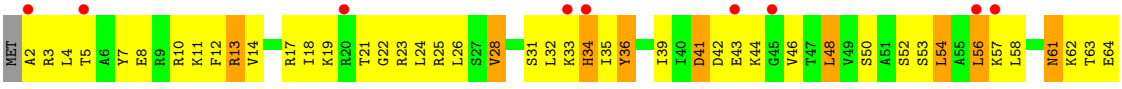
• Molecule 38: 50S ribosomal protein L18

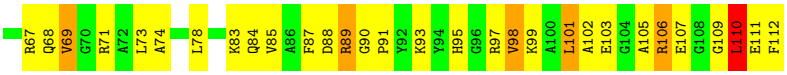
Chain A8:



• Molecule 38: 50S ribosomal protein L18

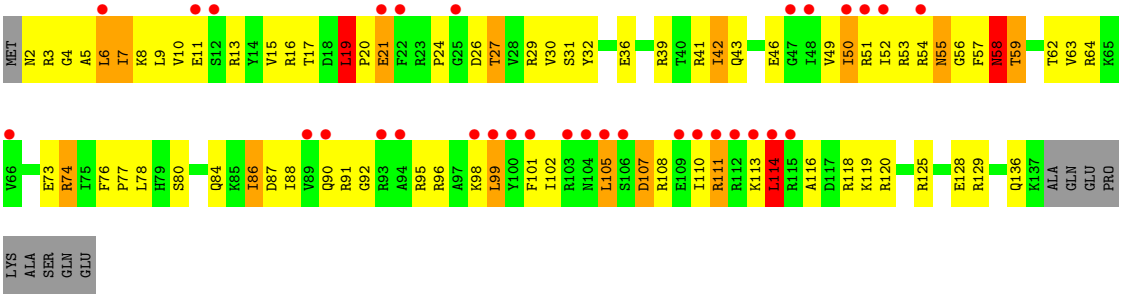
Chain 65:





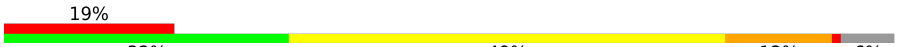
• Molecule 39: 50S ribosomal protein L19

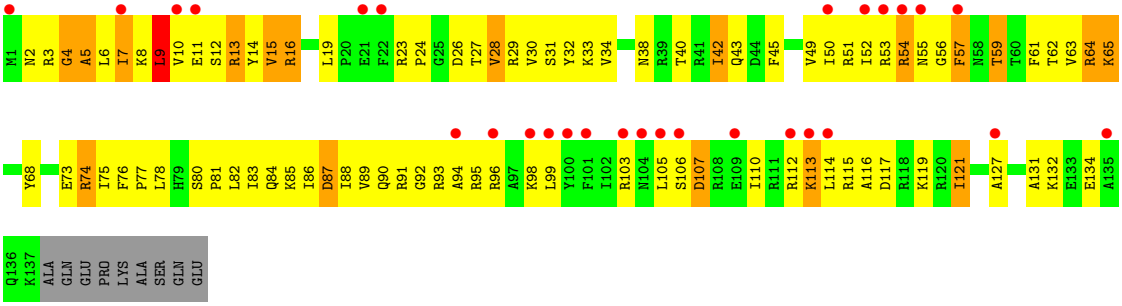
Chain B8:



• Molecule 39: 50S ribosomal protein L19

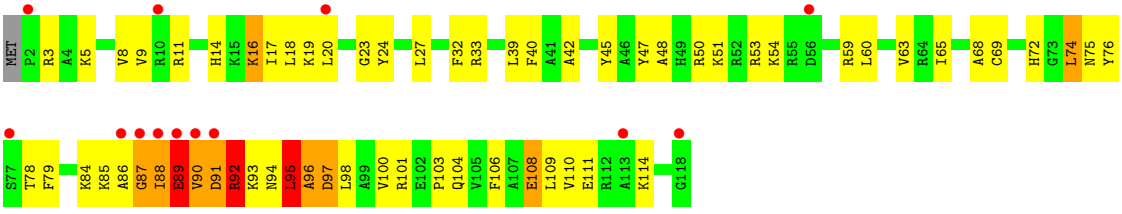
Chain 75:





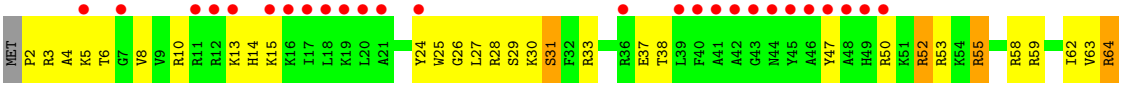
• Molecule 40: 50S ribosomal protein L20

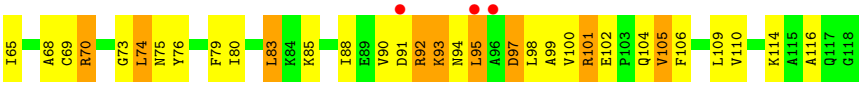
Chain C8:



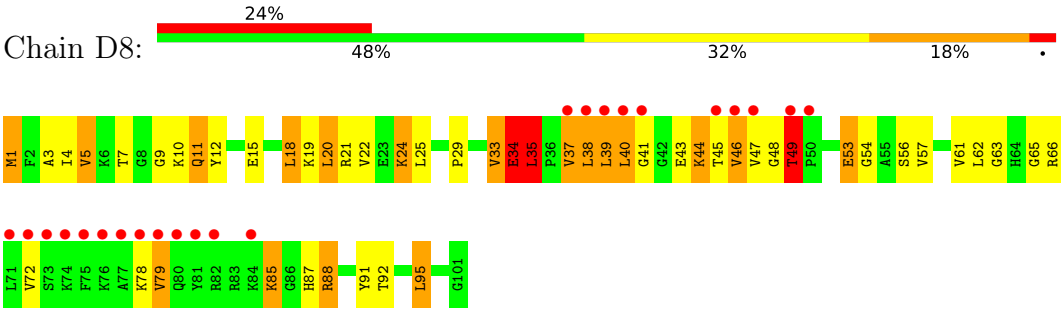
• Molecule 40: 50S ribosomal protein L20

Chain 85:

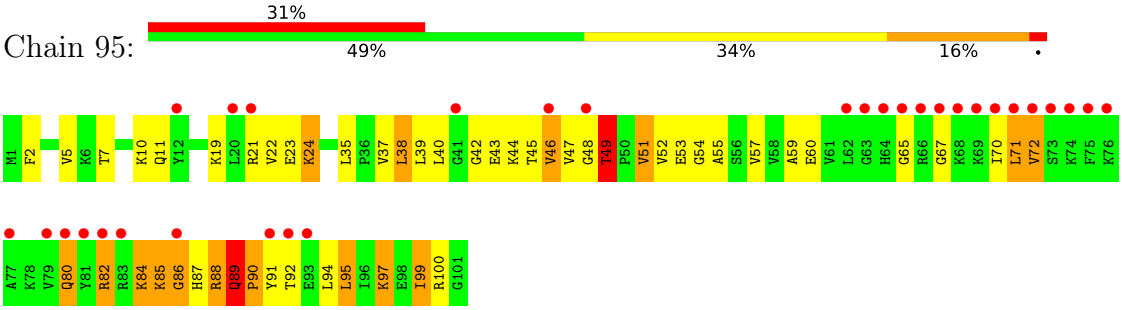




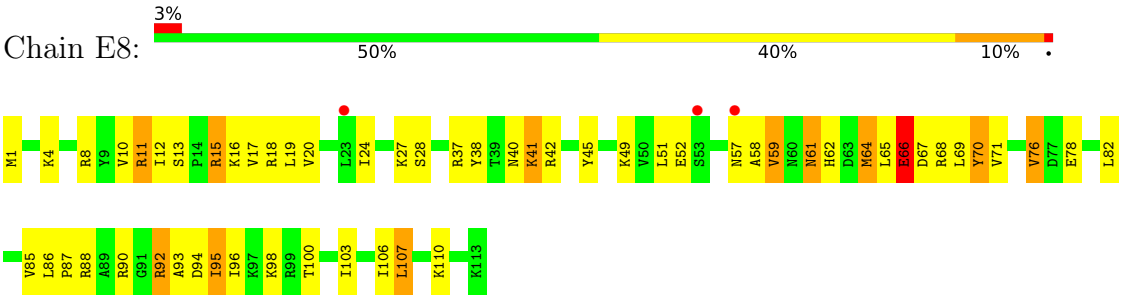
• Molecule 41: 50S ribosomal protein L21



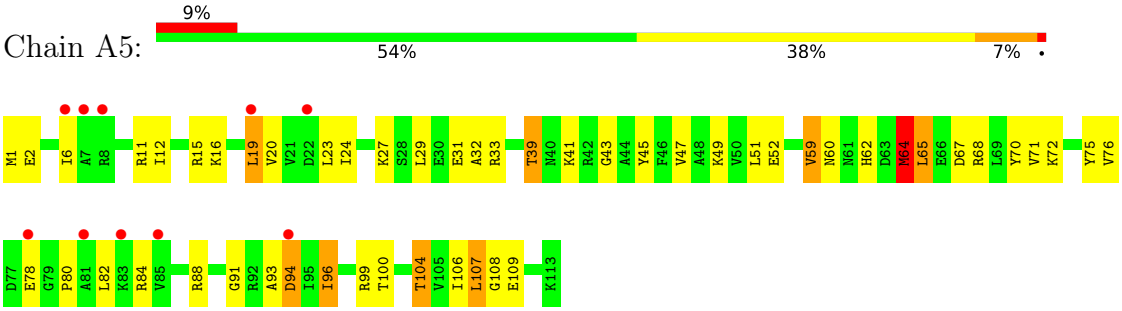
• Molecule 41: 50S ribosomal protein L21



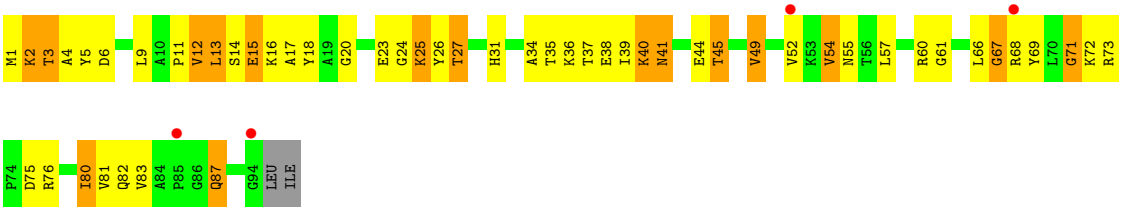
• Molecule 42: 50S ribosomal protein L22



• Molecule 42: 50S ribosomal protein L22

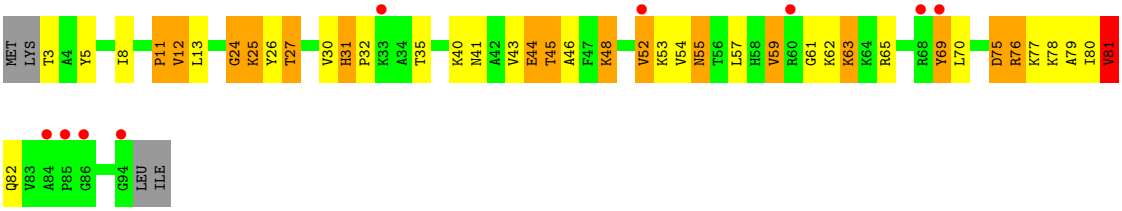


• Molecule 43: 50S ribosomal protein L23



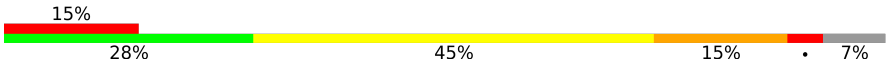
• Molecule 43: 50S ribosomal protein L23

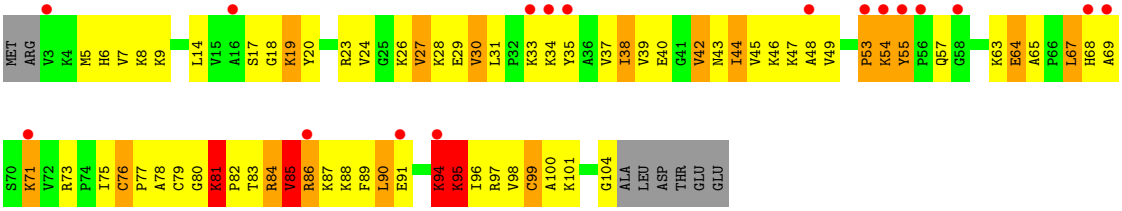
Chain B5:



• Molecule 44: 50S ribosomal protein L24

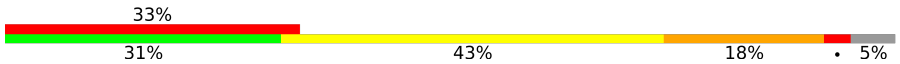
Chain G8:

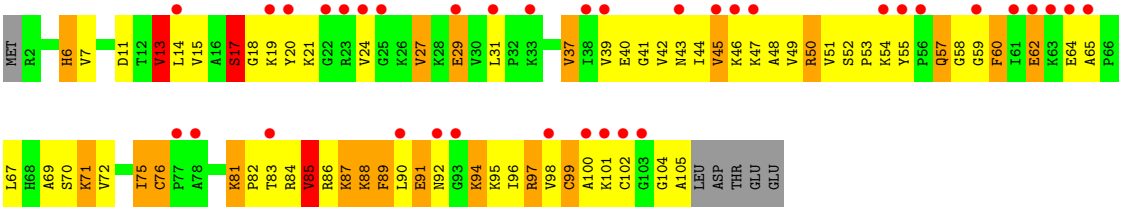




• Molecule 44: 50S ribosomal protein L24

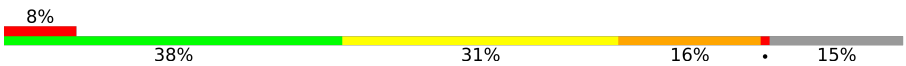
Chain C5:

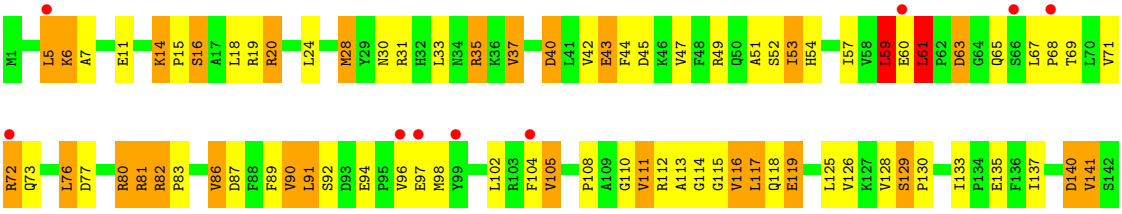


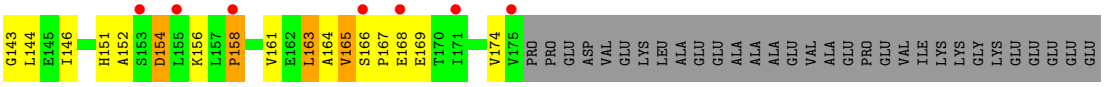


• Molecule 45: 50S ribosomal protein L25

Chain H8:

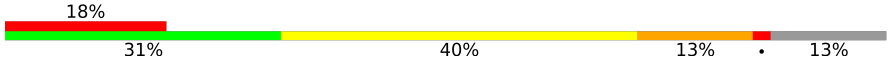


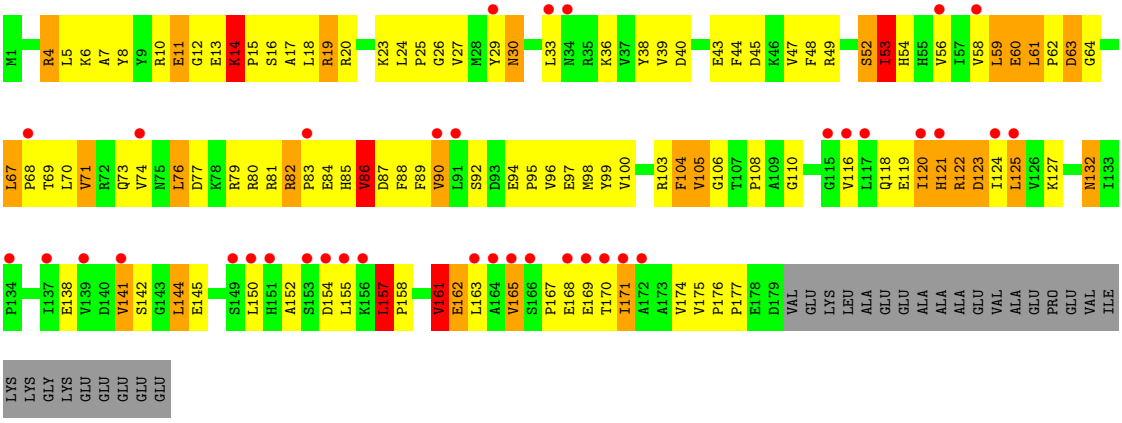




• Molecule 45: 50S ribosomal protein L25

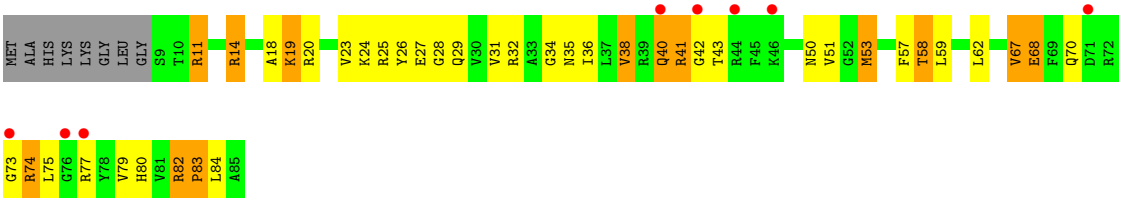
Chain D5:





• Molecule 46: 50S ribosomal protein L27

Chain I8:

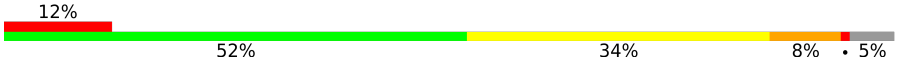


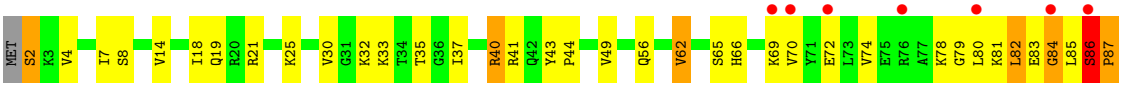
• Molecule 46: 50S ribosomal protein L27

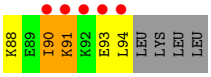
Chain E5:

• Molecule 47: 50S ribosomal protein L28

Chain J8:

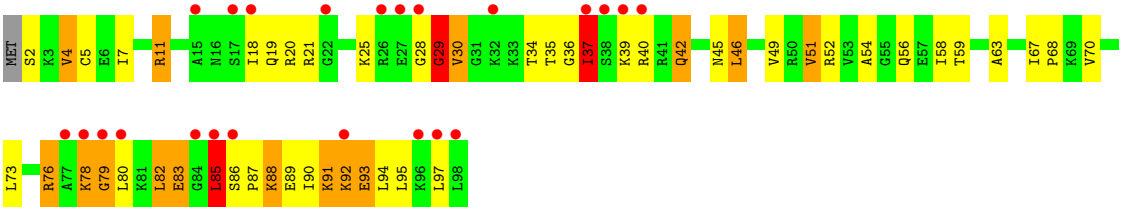






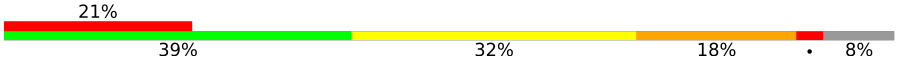
• Molecule 47: 50S ribosomal protein L28

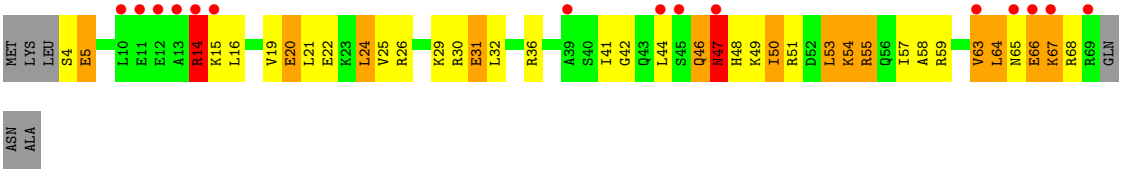
Chain F5:



• Molecule 48: 50S ribosomal protein L29

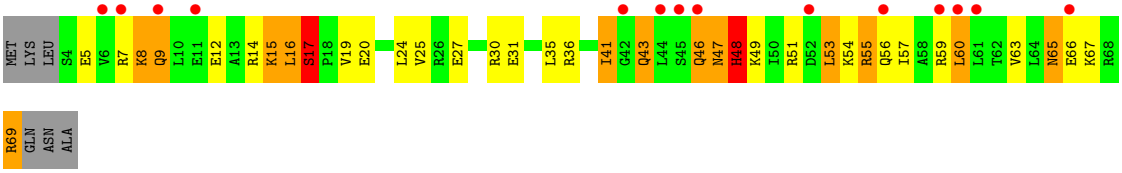
Chain K8:





• Molecule 48: 50S ribosomal protein L29

Chain G5:

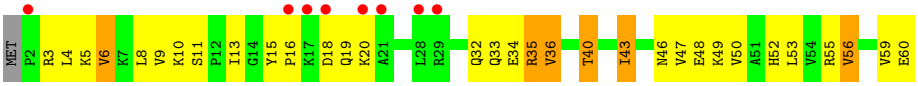


• Molecule 49: 50S ribosomal protein L30

Chain L8:

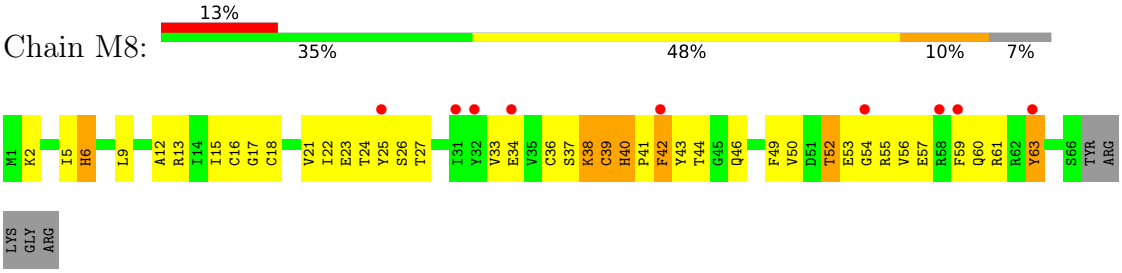
• Molecule 49: 50S ribosomal protein L30

Chain H5:



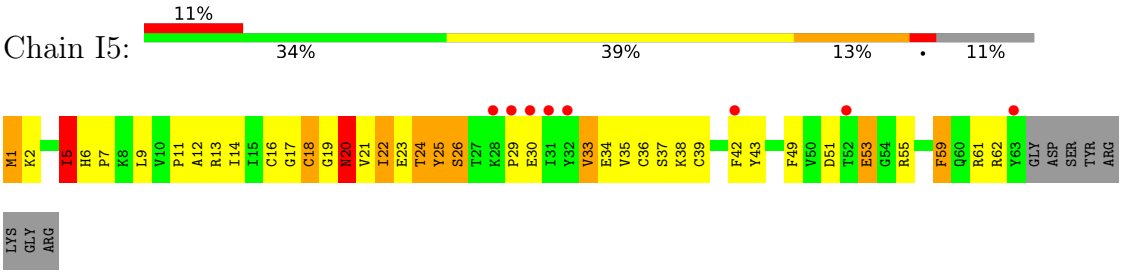
• Molecule 50: 50S ribosomal protein L31

Chain M8:



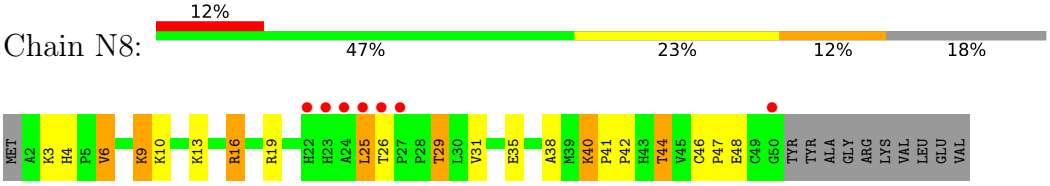
• Molecule 50: 50S ribosomal protein L31

Chain I5:



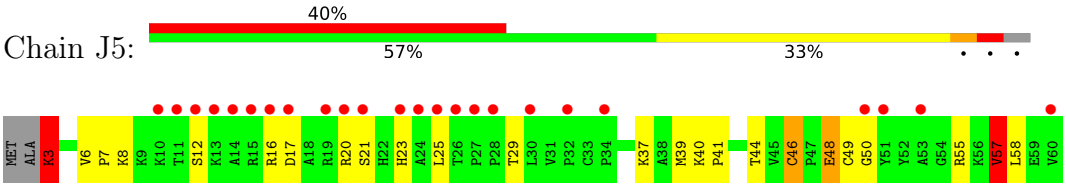
• Molecule 51: 50S ribosomal protein L32

Chain N8:



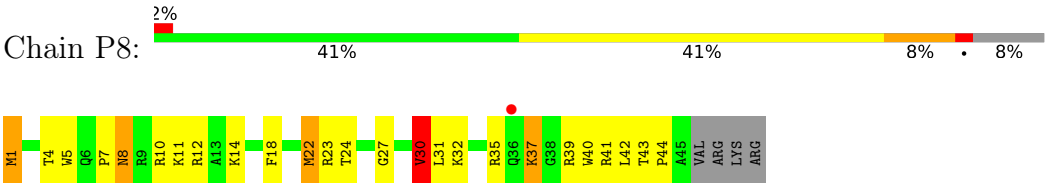
• Molecule 51: 50S ribosomal protein L32

Chain J5:



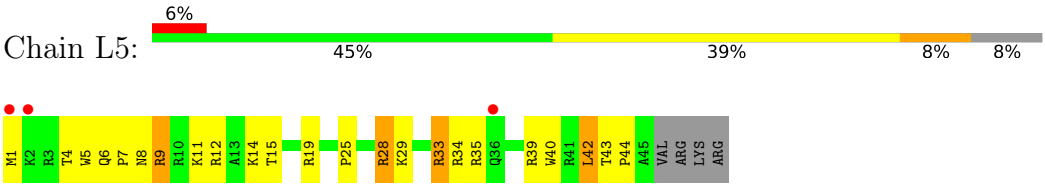
• Molecule 52: 50S ribosomal protein L34

Chain P8:



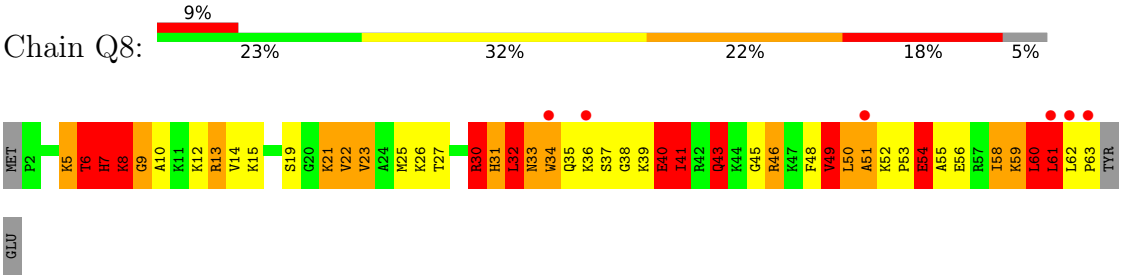
• Molecule 52: 50S ribosomal protein L34

Chain L5:



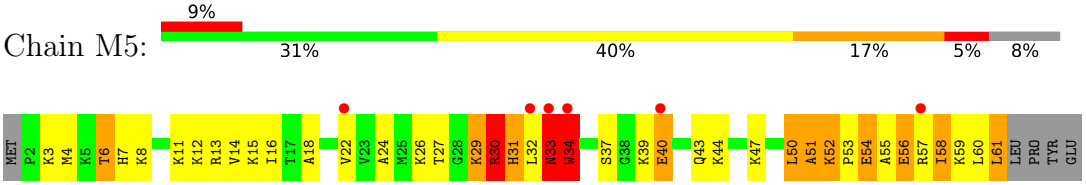
• Molecule 53: 50S ribosomal protein L35

Chain Q8:



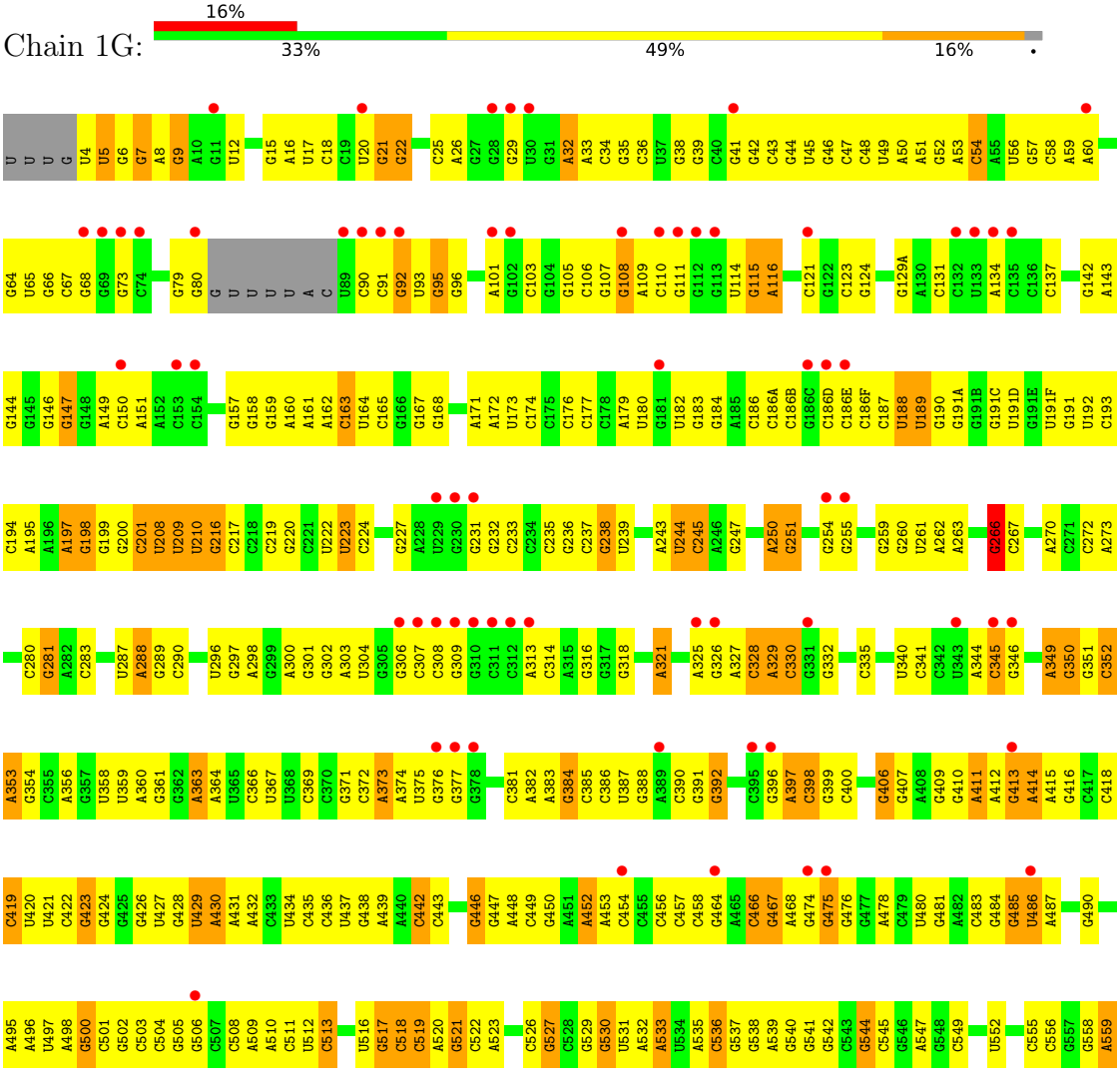
• Molecule 53: 50S ribosomal protein L35

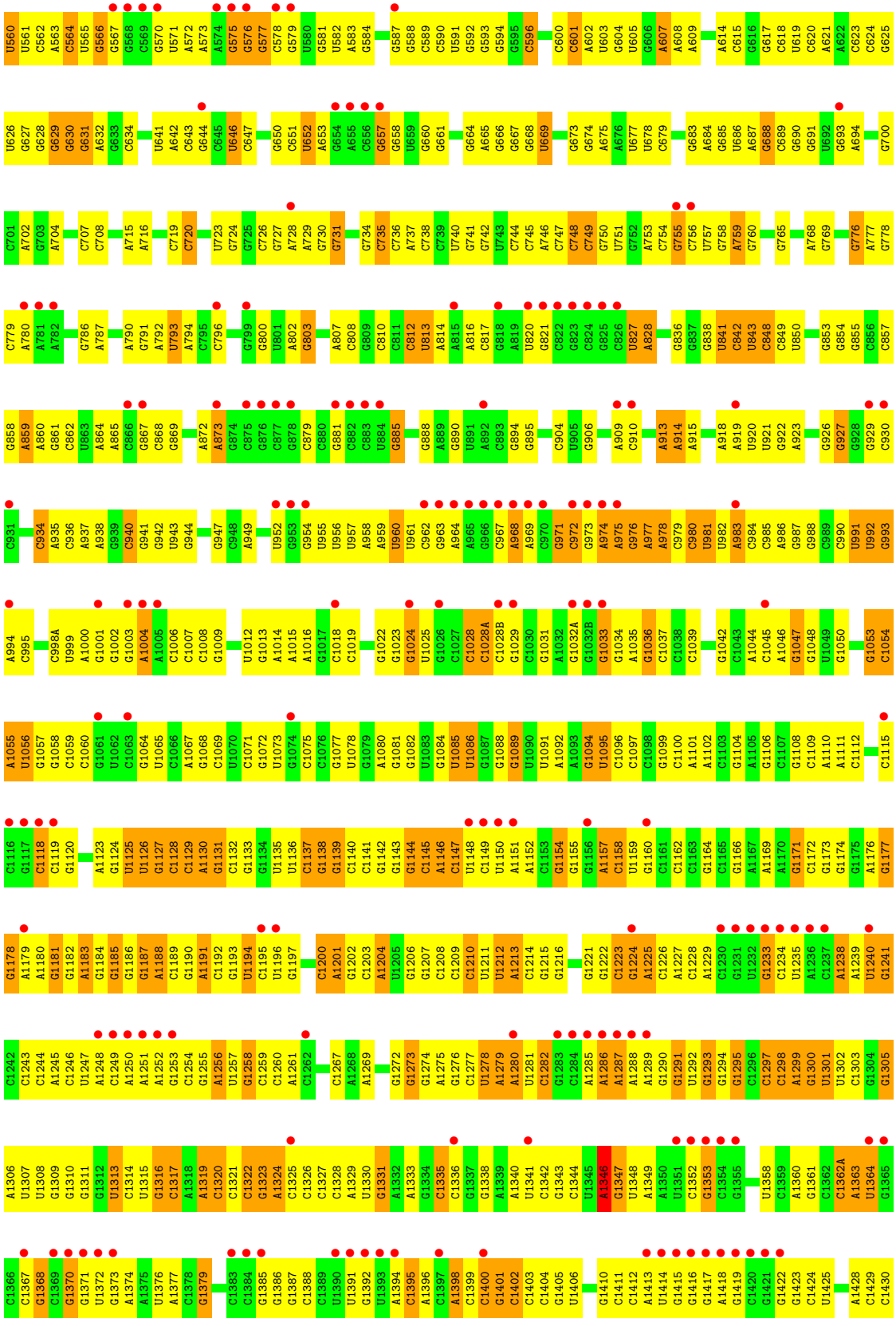
Chain M5:

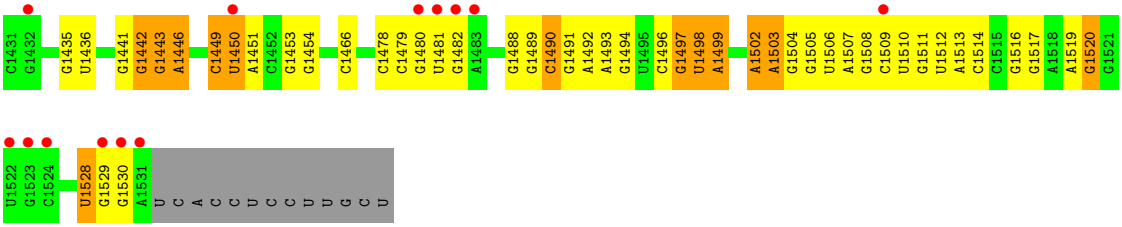


• Molecule 54: 16S ribosomal RNA

Chain 1G:

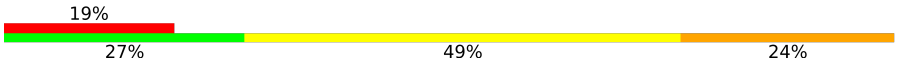


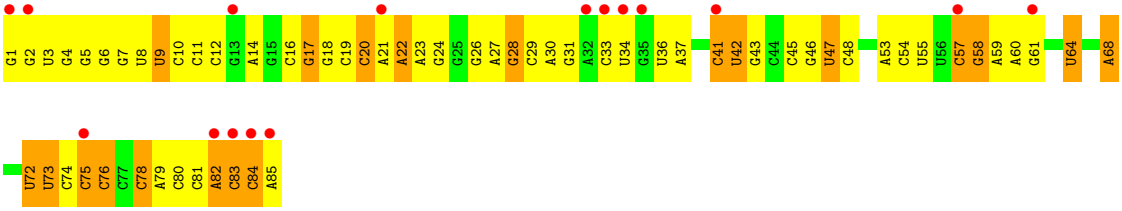




• Molecule 55: tRNA-Tyr

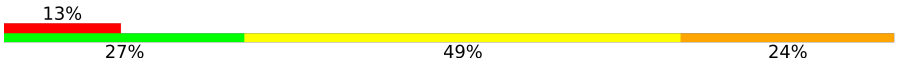
Chain 1L:

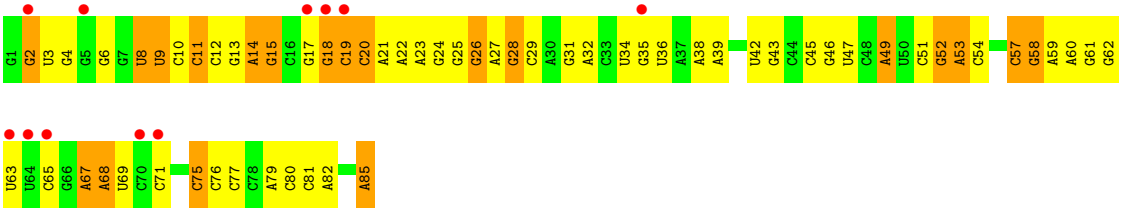




• Molecule 55: tRNA-Tyr

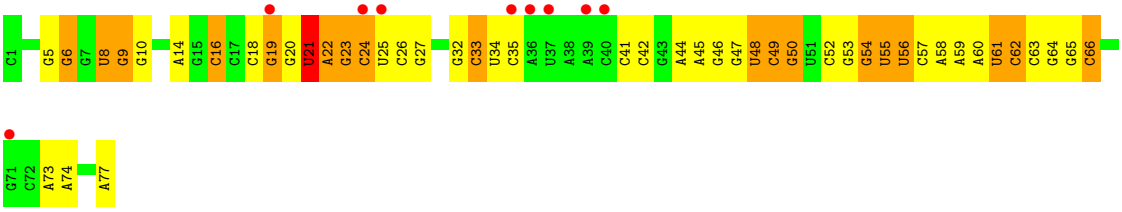
Chain 3L:





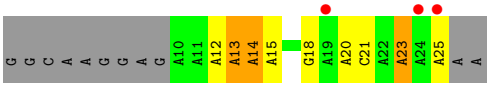
• Molecule 56: tRNA-fMet

Chain 2L:



• Molecule 57: mRNA

Chain 4L:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.90Å 450.30Å 619.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	225.15 – 3.05 225.15 – 3.05	Depositor EDS
% Data completeness (in resolution range)	99.9 (225.15-3.05) 93.6 (225.15-3.05)	Depositor EDS
R_{merge}	0.42	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.86 (at 3.07Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.205 , 0.249 0.202 , 0.250	Depositor DCC
R_{free} test set	2000 reflections (0.18%)	wwPDB-VP
Wilson B-factor (Å^2)	76.2	Xtriage
Anisotropy	0.299	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 143.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.42$, $< L^2 > = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	299318	wwPDB-VP
Average B, all atoms (Å^2)	104.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.40% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: MIA, 4SU, OMG, ZN, H2U, MG, 5MU, OMC, 7MG, PSU, QUO

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	13	0.43	0/36053	0.68	9/56270 (0.0%)
2	12	0.48	0/1959	1.07	13/2642 (0.5%)
2	1E	0.55	0/1959	1.01	5/2642 (0.2%)
3	22	0.54	0/1636	0.95	3/2205 (0.1%)
3	2E	0.63	0/1629	1.03	2/2195 (0.1%)
4	32	0.61	0/1732	1.14	15/2318 (0.6%)
4	3E	0.73	1/1732 (0.1%)	1.20	19/2318 (0.8%)
5	42	0.57	0/1171	1.08	2/1576 (0.1%)
5	4E	0.71	0/1171	1.10	7/1576 (0.4%)
6	52	0.63	0/855	1.01	0/1154
6	5E	0.71	0/855	1.06	1/1154 (0.1%)
7	62	0.55	0/1275	0.99	0/1709
7	6E	0.58	0/1275	0.99	5/1709 (0.3%)
8	72	0.53	0/1135	0.97	0/1527
8	7E	0.64	0/1135	1.07	2/1527 (0.1%)
9	82	0.53	0/1028	1.05	5/1379 (0.4%)
9	8E	0.58	0/1028	1.02	2/1379 (0.1%)
10	1A	0.50	0/814	1.06	3/1095 (0.3%)
10	1I	0.67	1/814 (0.1%)	1.10	5/1095 (0.5%)
11	2A	0.61	0/899	1.17	11/1213 (0.9%)
11	2I	0.71	0/879	1.17	9/1187 (0.8%)
12	3A	0.67	0/991	1.17	7/1327 (0.5%)
12	3I	0.89	0/991	1.27	5/1327 (0.4%)
13	4A	0.48	0/943	0.99	6/1265 (0.5%)
13	4I	0.62	0/938	1.10	6/1258 (0.5%)
14	5A	0.59	0/484	1.00	0/643
14	5I	0.73	0/507	1.22	4/672 (0.6%)
15	6A	0.57	0/744	0.97	3/992 (0.3%)
15	6I	0.75	0/744	1.01	0/992
16	7A	0.63	0/721	1.11	5/970 (0.5%)
16	7I	0.64	0/721	1.09	7/970 (0.7%)
17	8A	0.57	0/847	0.98	4/1131 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	8I	0.68	0/847	1.15	7/1131 (0.6%)
18	9A	0.62	0/569	1.05	1/757 (0.1%)
18	9I	0.65	0/595	1.07	2/790 (0.3%)
19	AA	0.62	0/654	1.09	4/884 (0.5%)
19	AI	0.65	0/680	1.19	2/915 (0.2%)
20	BA	0.62	0/764	1.15	7/1007 (0.7%)
20	BI	0.58	0/764	1.00	1/1007 (0.1%)
21	1B	0.63	0/221	1.18	2/288 (0.7%)
21	1F	0.64	0/192	0.98	0/252
22	1K	0.43	0/1851	0.64	1/2877 (0.0%)
22	3K	0.38	0/1851	0.53	0/2877
23	2K	0.51	1/1699 (0.1%)	0.73	0/2648
24	4K	0.52	0/394	0.62	0/612
25	14	0.51	0/70119	0.75	12/109464 (0.0%)
25	1H	0.60	0/70233	0.84	32/109643 (0.0%)
26	16	0.48	0/2928	0.77	0/4568
26	1J	0.43	0/2928	0.72	0/4568
27	11	1.06	1/2165 (0.0%)	1.47	35/2919 (1.2%)
27	19	0.94	2/2170 (0.1%)	1.43	24/2926 (0.8%)
28	21	0.86	0/1601	1.54	34/2160 (1.6%)
28	29	0.87	1/1601 (0.1%)	1.38	23/2160 (1.1%)
29	31	0.96	2/1620 (0.1%)	1.23	7/2194 (0.3%)
29	39	0.79	0/1662	1.26	14/2249 (0.6%)
30	41	0.69	0/1498	1.12	9/2016 (0.4%)
30	49	0.56	0/1498	1.08	9/2016 (0.4%)
31	51	0.79	0/1362	1.33	15/1841 (0.8%)
31	59	0.57	0/1341	1.16	14/1813 (0.8%)
32	61	0.67	0/1151	1.11	6/1558 (0.4%)
32	69	0.64	0/1151	1.16	9/1558 (0.6%)
33	15	0.66	0/1131	1.11	3/1525 (0.2%)
33	58	0.77	0/1131	1.32	14/1525 (0.9%)
34	25	0.80	0/942	1.24	6/1269 (0.5%)
34	68	0.88	0/942	1.25	7/1269 (0.6%)
35	35	0.85	2/1161 (0.2%)	1.58	19/1544 (1.2%)
35	78	0.93	0/1161	1.48	18/1544 (1.2%)
36	45	0.90	3/1119 (0.3%)	1.32	12/1496 (0.8%)
36	88	1.05	1/1142 (0.1%)	1.42	9/1527 (0.6%)
37	55	0.82	0/973	1.16	4/1302 (0.3%)
37	98	0.84	0/981	1.17	4/1312 (0.3%)
38	65	0.68	0/891	1.23	3/1187 (0.3%)
38	A8	0.80	0/891	1.19	4/1187 (0.3%)
39	75	0.76	0/1155	1.14	4/1542 (0.3%)
39	B8	0.82	0/1147	1.26	6/1532 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
40	85	0.76	0/981	1.09	3/1306 (0.2%)
40	C8	0.90	0/981	1.30	11/1306 (0.8%)
41	95	0.79	1/789 (0.1%)	1.30	6/1057 (0.6%)
41	D8	0.77	0/789	1.32	9/1057 (0.9%)
42	A5	0.92	0/910	1.15	2/1220 (0.2%)
42	E8	0.92	0/910	1.23	6/1220 (0.5%)
43	B5	0.93	1/739 (0.1%)	1.28	5/993 (0.5%)
43	F8	0.97	0/756	1.31	6/1014 (0.6%)
44	C5	0.75	0/807	1.23	7/1076 (0.7%)
44	G8	0.91	0/791	1.54	15/1055 (1.4%)
45	D5	0.57	0/1460	1.17	13/1982 (0.7%)
45	H8	0.67	0/1427	1.25	16/1935 (0.8%)
46	E5	0.78	0/620	1.25	8/827 (1.0%)
46	I8	1.00	0/620	1.31	3/827 (0.4%)
47	F5	0.79	0/769	1.24	8/1022 (0.8%)
47	J8	0.93	0/736	1.38	9/978 (0.9%)
48	G5	0.70	0/560	1.19	1/741 (0.1%)
48	K8	0.93	0/560	1.24	1/741 (0.1%)
49	H5	0.65	0/473	1.24	3/635 (0.5%)
49	L8	0.73	0/473	1.18	2/635 (0.3%)
50	I5	0.62	0/527	1.18	4/709 (0.6%)
50	M8	0.60	0/545	1.08	1/733 (0.1%)
51	J5	0.81	0/467	1.25	4/632 (0.6%)
51	N8	0.83	0/386	1.23	3/523 (0.6%)
52	L5	1.01	0/399	1.31	2/526 (0.4%)
52	P8	1.15	1/399 (0.3%)	1.25	1/526 (0.2%)
53	M5	1.00	0/486	1.59	8/638 (1.3%)
53	Q8	1.41	4/454 (0.9%)	1.92	17/607 (2.8%)
54	1G	0.38	0/36049	0.63	6/56262 (0.0%)
55	1L	0.48	0/2018	0.60	0/3142
55	3L	0.38	0/2018	0.56	0/3142
56	2L	0.43	1/1725 (0.1%)	0.66	0/2689
57	4L	0.45	0/394	0.58	0/612
All	All	0.59	23/322559 (0.0%)	0.88	728/483244 (0.2%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
2	1E	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
3	2E	0	1
4	3E	0	2
6	5E	0	1
11	2A	0	1
12	3I	0	1
13	4I	0	1
14	5A	0	1
14	5I	0	1
17	8I	0	1
19	AI	0	1
20	BA	0	1
20	BI	0	1
27	11	0	5
27	19	0	5
28	21	0	3
28	29	0	4
29	39	0	2
30	41	0	1
31	51	0	1
31	59	0	1
32	61	0	4
32	69	0	1
33	58	0	1
35	35	0	2
35	78	0	5
36	45	0	5
36	88	0	4
39	75	0	1
39	B8	0	1
40	85	0	2
40	C8	0	1
41	95	0	2
41	D8	0	1
43	B5	0	2
44	C5	0	2
44	G8	0	5
45	D5	0	1
45	H8	0	3
47	F5	0	2
47	J8	0	2
48	G5	0	3
50	M8	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
53	M5	0	3
53	Q8	0	4
All	All	0	95

All (23) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	45	82	ARG	CA-C	7.43	1.62	1.52
27	19	272	ALA	CA-C	7.05	1.61	1.52
53	Q8	41	ILE	CA-C	6.98	1.61	1.52
53	Q8	54	GLU	CA-C	6.57	1.60	1.52
35	35	19	VAL	CA-C	6.55	1.59	1.52
36	45	82	ARG	N-CA	6.51	1.53	1.46
10	1I	54	PHE	CA-C	-6.45	1.48	1.52
56	2L	8	4SU	O3'-P	6.01	1.62	1.56
53	Q8	32	LEU	CA-C	-5.85	1.47	1.53
35	35	61	ARG	CA-C	5.85	1.59	1.52
28	29	77	ILE	CA-CB	5.73	1.59	1.53
52	P8	30	VAL	CA-CB	-5.68	1.47	1.54
41	95	72	VAL	CA-CB	5.66	1.62	1.54
29	31	65	TRP	C-O	-5.39	1.19	1.24
53	Q8	6	THR	CA-CB	5.38	1.62	1.53
23	2K	8	4SU	O3'-P	5.34	1.61	1.56
43	B5	81	VAL	CA-CB	-5.20	1.48	1.54
27	11	271	ILE	CA-C	5.19	1.59	1.52
36	88	95	ALA	CA-CB	-5.16	1.45	1.53
36	45	78	PRO	CA-C	5.12	1.59	1.52
29	31	42	ALA	CA-CB	-5.11	1.47	1.53
4	3E	12	CYS	CB-SG	5.10	1.98	1.81
27	19	36	PRO	CA-C	5.09	1.58	1.52

All (728) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	19	272	ALA	N-CA-C	15.61	132.46	108.42
28	29	52	LEU	CA-C-N	13.09	134.25	119.32
28	29	52	LEU	C-N-CA	13.09	134.25	119.32
36	45	82	ARG	N-CA-C	13.03	132.43	113.02
35	35	62	LEU	CA-C-N	12.92	135.99	119.84
35	35	62	LEU	C-N-CA	12.92	135.99	119.84
27	11	271	ILE	N-CA-C	12.64	124.18	112.17
28	21	73	GLU	CA-C-N	12.46	132.22	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	21	73	GLU	C-N-CA	12.46	132.22	119.76
27	19	235	GLY	N-CA-C	12.38	127.55	111.70
41	95	49	THR	CA-C-N	-12.07	104.75	119.84
41	95	49	THR	C-N-CA	-12.07	104.75	119.84
40	C8	90	VAL	N-CA-C	-11.93	90.81	107.75
36	88	21	THR	N-CA-C	11.85	123.61	107.73
53	M5	33	ASN	CA-C-N	11.72	142.80	121.70
53	M5	33	ASN	C-N-CA	11.72	142.80	121.70
49	H5	11	SER	CA-C-N	11.72	132.06	119.87
49	H5	11	SER	C-N-CA	11.72	132.06	119.87
44	G8	76	CYS	CA-C-N	11.59	134.33	119.84
44	G8	76	CYS	C-N-CA	11.59	134.33	119.84
44	C5	39	VAL	N-CA-C	11.37	122.97	112.17
27	11	272	ALA	N-CA-C	11.09	122.50	108.19
41	D8	49	THR	CA-C-N	-11.00	107.80	119.24
41	D8	49	THR	C-N-CA	-11.00	107.80	119.24
35	35	144	GLU	CA-C-N	10.82	130.91	120.31
35	35	144	GLU	C-N-CA	10.82	130.91	120.31
28	21	52	LEU	CA-C-N	10.49	130.10	119.82
28	21	52	LEU	C-N-CA	10.49	130.10	119.82
49	L8	11	SER	CA-C-N	10.30	130.58	119.87
49	L8	11	SER	C-N-CA	10.30	130.58	119.87
35	35	62	LEU	N-CA-C	10.16	132.28	109.81
28	21	65	GLY	N-CA-C	-9.91	98.36	115.61
28	29	67	PHE	N-CA-C	-9.91	100.87	113.16
19	AI	4	SER	N-CA-C	9.89	123.79	108.07
10	1A	52	GLY	CA-C-N	9.80	129.16	118.97
10	1A	52	GLY	C-N-CA	9.80	129.16	118.97
31	51	125	VAL	CA-C-N	9.56	131.79	119.84
31	51	125	VAL	C-N-CA	9.56	131.79	119.84
35	35	67	MET	N-CA-C	-9.54	99.75	110.91
35	35	71	VAL	CA-C-N	-9.54	109.93	119.56
35	35	71	VAL	C-N-CA	-9.54	109.93	119.56
31	51	8	PRO	CA-C-N	-9.41	115.14	123.33
31	51	8	PRO	C-N-CA	-9.41	115.14	123.33
45	D5	67	LEU	CA-C-N	9.32	131.49	119.84
45	D5	67	LEU	C-N-CA	9.32	131.49	119.84
28	21	58	ARG	N-CA-C	-9.29	101.46	113.17
11	2A	102	GLY	N-CA-C	-9.21	102.77	114.37
27	11	240	ALA	CA-C-N	9.04	130.66	120.98
27	11	240	ALA	C-N-CA	9.04	130.66	120.98
28	29	80	GLU	N-CA-C	9.04	124.62	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	58	110	GLY	CA-C-N	9.01	129.59	119.32
33	58	110	GLY	C-N-CA	9.01	129.59	119.32
25	1H	2439	A	C2'-C3'-O3'	8.93	122.90	109.50
28	29	132	HIS	N-CA-C	8.90	122.15	111.02
20	BA	12	ALA	N-CA-C	-8.90	101.96	113.17
28	21	187	ALA	N-CA-C	8.79	123.76	112.34
27	11	194	GLY	N-CA-C	8.76	120.97	112.04
53	M5	58	ILE	N-CA-C	-8.70	100.20	113.16
39	75	28	VAL	N-CA-C	8.68	120.16	108.27
28	21	61	ARG	CA-C-N	-8.67	110.80	119.90
28	21	61	ARG	C-N-CA	-8.67	110.80	119.90
32	69	113	ARG	N-CA-C	-8.62	102.32	112.92
35	78	22	GLY	N-CA-C	8.43	122.47	112.10
25	14	1992	G	C2'-C3'-O3'	8.39	122.09	109.50
53	Q8	6	THR	CA-C-N	-8.38	111.20	122.85
53	Q8	6	THR	C-N-CA	-8.38	111.20	122.85
43	F8	2	LYS	N-CA-C	-8.32	103.64	113.21
31	59	167	GLU	CA-C-N	8.31	130.23	119.84
31	59	167	GLU	C-N-CA	8.31	130.23	119.84
28	21	31	CYS	CA-C-N	8.29	130.21	119.84
28	21	31	CYS	C-N-CA	8.29	130.21	119.84
27	19	35	LYS	CA-C-N	-8.28	112.33	120.52
27	19	35	LYS	C-N-CA	-8.28	112.33	120.52
43	B5	31	HIS	CA-C-N	8.27	127.95	119.19
43	B5	31	HIS	C-N-CA	8.27	127.95	119.19
25	1H	1992	G	C2'-C3'-O3'	8.24	121.87	109.50
36	45	118	LEU	N-CA-C	-8.21	103.04	113.72
53	Q8	36	LYS	N-CA-C	-8.19	101.91	112.23
4	32	180	GLY	N-CA-C	-8.16	104.54	114.66
33	15	46	VAL	N-CA-C	8.11	118.53	111.56
34	68	98	VAL	N-CA-C	8.06	118.84	110.05
4	3E	188	LEU	CA-C-N	8.00	128.30	119.90
4	3E	188	LEU	C-N-CA	8.00	128.30	119.90
27	11	248	SER	CA-C-N	-7.96	111.52	119.56
27	11	248	SER	C-N-CA	-7.96	111.52	119.56
32	69	120	ILE	N-CA-C	7.94	118.00	110.30
36	88	65	PHE	N-CA-C	7.93	124.03	113.72
31	51	92	ILE	N-CA-C	7.93	118.47	110.23
44	G8	81	LYS	CA-C-N	7.85	145.84	127.00
44	G8	81	LYS	C-N-CA	7.85	145.84	127.00
35	78	35	HIS	CB-CA-C	-7.84	106.56	117.23
4	32	23	GLY	N-CA-C	7.84	124.25	114.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	29	44	TYR	N-CA-C	7.84	123.92	113.72
16	7A	40	ASP	CA-C-N	7.83	127.46	119.56
16	7A	40	ASP	C-N-CA	7.83	127.46	119.56
25	1H	1653	G	P-O3'-C3'	7.81	131.91	120.20
25	14	669	G	P-O3'-C3'	7.79	131.88	120.20
36	88	106	VAL	N-CA-C	7.77	120.13	109.80
14	5I	42	ILE	N-CA-C	-7.76	103.35	111.58
21	1B	22	ARG	CA-C-N	7.72	127.88	120.31
21	1B	22	ARG	C-N-CA	7.72	127.88	120.31
27	19	245	PRO	CA-C-N	7.67	128.13	119.93
27	19	245	PRO	C-N-CA	7.67	128.13	119.93
4	3E	12	CYS	N-CA-C	-7.65	98.75	111.37
35	35	19	VAL	N-CA-C	7.64	117.02	107.70
29	39	83	PHE	N-CA-C	7.59	122.74	113.17
29	39	89	VAL	CA-C-N	-7.59	111.91	123.14
29	39	89	VAL	C-N-CA	-7.59	111.91	123.14
30	49	45	GLU	N-CA-C	-7.50	104.13	113.28
32	69	131	LYS	CA-C-N	7.48	144.94	127.00
32	69	131	LYS	C-N-CA	7.48	144.94	127.00
44	G8	94	LYS	N-CA-C	7.47	117.74	107.73
35	78	59	LEU	N-CA-C	-7.44	100.96	110.19
4	32	171	GLY	CA-C-N	7.44	127.15	119.56
4	32	171	GLY	C-N-CA	7.44	127.15	119.56
16	7I	20	VAL	N-CA-C	7.42	119.04	108.42
13	4I	101	GLN	CB-CA-C	-7.40	106.12	115.89
45	H8	14	LYS	CA-C-N	7.38	127.73	119.32
45	H8	14	LYS	C-N-CA	7.38	127.73	119.32
29	39	69	HIS	N-CA-C	7.34	122.36	112.88
51	J5	46	CYS	CA-C-N	7.34	127.50	119.87
51	J5	46	CYS	C-N-CA	7.34	127.50	119.87
39	B8	19	LEU	CA-C-N	7.33	127.29	120.03
39	B8	19	LEU	C-N-CA	7.33	127.29	120.03
53	Q8	40	GLU	N-CA-C	-7.33	98.11	109.76
25	1H	2468	G	O4'-C1'-N9	7.31	119.16	108.20
2	12	231	GLU	CA-C-N	7.31	127.35	119.89
2	12	231	GLU	C-N-CA	7.31	127.35	119.89
12	3A	26	ALA	CA-C-N	7.29	134.82	121.70
12	3A	26	ALA	C-N-CA	7.29	134.82	121.70
45	D5	14	LYS	CA-C-N	7.29	127.30	119.28
45	D5	14	LYS	C-N-CA	7.29	127.30	119.28
42	E8	24	ILE	N-CA-C	7.28	120.04	112.83
39	B8	55	ASN	N-CA-C	7.28	122.27	112.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	I8	84	LEU	N-CA-C	-7.27	101.46	111.28
45	D5	61	LEU	CA-C-N	7.27	128.93	119.84
45	D5	61	LEU	C-N-CA	7.27	128.93	119.84
4	3E	13	ARG	N-CA-C	7.24	118.86	110.97
9	82	89	ASN	CA-C-N	7.23	127.86	119.47
9	82	89	ASN	C-N-CA	7.23	127.86	119.47
47	F5	29	GLY	N-CA-C	7.22	124.24	112.84
25	14	669	G	C2'-C3'-O3'	7.21	120.32	109.50
43	F8	67	GLY	N-CA-C	-7.20	96.13	113.18
51	J5	3	LYS	CA-C-N	-7.19	114.94	122.85
51	J5	3	LYS	C-N-CA	-7.19	114.94	122.85
31	51	80	SER	N-CA-C	-7.19	95.49	110.80
29	39	170	LEU	CA-C-N	7.18	126.81	119.19
29	39	170	LEU	C-N-CA	7.18	126.81	119.19
27	11	28	GLU	CA-C-N	-7.18	112.24	119.92
27	11	28	GLU	C-N-CA	-7.18	112.24	119.92
31	59	170	ARG	N-CA-C	7.17	117.96	108.07
36	45	133	ARG	N-CA-C	7.16	122.19	113.38
45	H8	129	SER	CA-C-N	7.15	128.77	119.84
45	H8	129	SER	C-N-CA	7.15	128.77	119.84
27	11	259	THR	N-CA-C	7.14	122.29	113.50
28	21	141	ILE	N-CA-C	7.14	119.76	112.90
44	G8	73	ARG	CA-C-N	7.14	127.11	119.76
44	G8	73	ARG	C-N-CA	7.14	127.11	119.76
39	75	10	VAL	N-CA-C	-7.12	94.52	109.34
27	19	98	VAL	N-CA-C	-7.12	102.61	112.50
46	E5	65	GLY	N-CA-C	7.10	118.69	111.95
28	21	60	ASN	CB-CA-C	-7.08	107.36	115.79
52	L5	6	GLN	CA-C-N	7.08	127.47	119.83
52	L5	6	GLN	C-N-CA	7.08	127.47	119.83
17	8I	29	HIS	CA-C-N	7.07	126.59	119.24
17	8I	29	HIS	C-N-CA	7.07	126.59	119.24
50	I5	55	ARG	N-CA-C	7.07	117.60	108.34
41	95	82	ARG	N-CA-C	7.06	121.19	108.48
32	61	135	GLU	N-CA-C	7.06	117.56	108.24
2	12	164	VAL	N-CA-C	7.05	119.37	108.44
53	Q8	10	ALA	N-CA-C	-7.05	102.15	111.24
3	2E	108	ASN	CA-C-N	7.03	126.52	118.85
3	2E	108	ASN	C-N-CA	7.03	126.52	118.85
41	D8	35	LEU	CA-C-N	6.99	126.67	119.82
41	D8	35	LEU	C-N-CA	6.99	126.67	119.82
5	4E	67	VAL	N-CA-C	6.96	117.54	108.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	1E	201	ILE	CA-C-N	6.96	128.54	119.84
2	1E	201	ILE	C-N-CA	6.96	128.54	119.84
34	25	100	GLY	CA-C-N	6.95	126.98	119.89
34	25	100	GLY	C-N-CA	6.95	126.98	119.89
4	32	3	ARG	CB-CA-C	-6.95	106.62	116.34
28	21	55	ASN	CA-C-N	-6.93	111.17	119.84
28	21	55	ASN	C-N-CA	-6.93	111.17	119.84
30	41	160	VAL	N-CA-C	6.93	117.85	107.80
43	F8	3	THR	CA-C-N	6.92	134.16	121.70
43	F8	3	THR	C-N-CA	6.92	134.16	121.70
29	39	68	LYS	CA-C-N	-6.91	111.83	122.60
29	39	68	LYS	C-N-CA	-6.91	111.83	122.60
32	69	131	LYS	C-N-CD	-6.90	105.42	120.60
10	1I	38	ILE	CA-C-N	6.90	128.46	119.84
10	1I	38	ILE	C-N-CA	6.90	128.46	119.84
28	21	14	ILE	N-CA-C	6.90	121.70	113.22
11	2I	34	ASP	CA-C-N	-6.88	112.62	119.56
11	2I	34	ASP	C-N-CA	-6.88	112.62	119.56
12	3I	13	LYS	N-CA-C	6.87	119.79	111.40
40	C8	89	GLU	CA-C-N	6.87	129.80	122.11
40	C8	89	GLU	C-N-CA	6.87	129.80	122.11
4	3E	28	SER	CA-C-N	-6.87	109.07	120.88
4	3E	28	SER	C-N-CA	-6.87	109.07	120.88
27	19	244	ARG	CA-C-N	-6.86	113.31	120.38
27	19	244	ARG	C-N-CA	-6.86	113.31	120.38
45	D5	157	LEU	CA-C-N	6.86	127.45	120.38
45	D5	157	LEU	C-N-CA	6.86	127.45	120.38
35	78	71	VAL	CA-C-N	-6.85	112.75	119.87
35	78	71	VAL	C-N-CA	-6.85	112.75	119.87
35	35	65	ARG	N-CA-C	-6.82	101.98	111.39
34	68	29	ASN	N-CA-C	6.81	121.30	112.92
25	1H	271(B)	G	P-O3'-C3'	6.75	127.80	119.70
15	6A	45	VAL	N-CA-C	6.74	117.36	110.82
45	H8	65	GLN	N-CA-C	-6.74	100.25	109.95
14	5I	5	ALA	N-CA-C	-6.73	105.10	113.38
35	35	36	LYS	CB-CA-C	-6.71	107.80	115.79
2	12	19	HIS	N-CA-C	6.70	117.48	108.23
27	11	223	GLY	N-CA-C	-6.69	104.70	112.73
1	13	1498	U	C2'-C3'-O3'	6.68	119.53	109.50
53	Q8	30	ARG	N-CA-C	6.67	119.33	107.80
34	25	71	ARG	CA-C-N	6.67	126.35	119.82
34	25	71	ARG	C-N-CA	6.67	126.35	119.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	Q8	27	THR	N-CA-C	6.66	121.07	107.69
2	12	25	ASN	CA-C-N	6.66	126.28	119.56
2	12	25	ASN	C-N-CA	6.66	126.28	119.56
44	C5	101	LYS	N-CA-C	6.65	120.35	111.30
54	1G	266	G	C2'-C3'-O3'	6.65	119.47	109.50
16	7I	16	HIS	N-CA-C	-6.64	99.75	109.18
35	78	25	SER	N-CA-C	-6.64	104.65	112.89
33	58	134	ARG	N-CA-C	6.64	124.48	109.81
36	45	78	PRO	N-CA-C	6.63	126.13	112.47
25	1H	141(A)	C	OP1-P-O3'	-6.63	88.11	108.00
40	C8	95	LEU	CA-CB-CG	-6.61	93.15	116.30
25	1H	945	A	C4-N9-C1'	6.60	146.11	126.30
35	35	55	ARG	N-CA-C	-6.60	101.25	110.35
53	Q8	7	HIS	N-CA-C	6.59	120.02	107.75
31	59	159	GLU	CB-CA-C	-6.59	108.26	117.23
27	11	85	ASP	CA-C-N	6.59	126.73	119.87
27	11	85	ASP	C-N-CA	6.59	126.73	119.87
31	51	166	GLY	N-CA-C	-6.59	100.13	111.47
4	3E	12	CYS	CA-CB-SG	6.57	129.51	114.40
5	4E	69	VAL	CA-C-N	6.57	128.05	119.84
5	4E	69	VAL	C-N-CA	6.57	128.05	119.84
7	6E	57	GLU	CA-C-N	6.57	127.09	119.47
7	6E	57	GLU	C-N-CA	6.57	127.09	119.47
48	K8	14	ARG	N-CA-C	-6.56	101.87	110.53
46	I8	82	ARG	CA-C-N	6.56	128.04	119.84
46	I8	82	ARG	C-N-CA	6.56	128.04	119.84
27	11	229	VAL	CB-CA-C	-6.55	103.46	112.04
2	12	8	LYS	CB-CA-C	-6.55	109.03	116.63
38	A8	5	THR	N-CA-C	6.55	119.01	110.43
32	61	79	ILE	N-CA-C	6.55	118.05	107.71
49	H5	9	VAL	N-CA-C	6.55	118.52	111.58
36	45	83	MET	N-CA-C	6.54	119.92	107.75
29	31	24	LEU	CA-C-N	6.54	128.02	119.84
29	31	24	LEU	C-N-CA	6.54	128.02	119.84
30	41	58	GLN	N-CA-C	-6.54	104.23	111.36
20	BA	100	ILE	N-CA-C	6.54	117.18	110.05
30	49	15	VAL	N-CA-C	6.54	117.29	110.62
11	2I	102	GLY	N-CA-C	-6.53	97.71	113.18
4	32	12	CYS	N-CA-C	-6.51	103.45	111.33
28	29	31	CYS	CA-C-N	6.51	126.86	119.83
28	29	31	CYS	C-N-CA	6.51	126.86	119.83
25	14	1786	A	N9-C1'-C2'	6.50	123.75	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	51	77	LYS	N-CA-C	-6.50	104.24	111.71
33	58	128	HIS	CA-C-N	6.49	126.84	119.83
33	58	128	HIS	C-N-CA	6.49	126.84	119.83
53	Q8	21	LYS	N-CA-C	6.49	118.24	110.19
53	Q8	39	LYS	N-CA-C	-6.49	105.66	113.97
16	7A	14	ASN	CA-C-N	-6.49	113.27	119.76
16	7A	14	ASN	C-N-CA	-6.49	113.27	119.76
11	2A	57	THR	CA-C-N	6.48	126.25	119.05
11	2A	57	THR	C-N-CA	6.48	126.25	119.05
32	61	136	VAL	CA-C-N	6.48	126.99	119.99
32	61	136	VAL	C-N-CA	6.48	126.99	119.99
20	BA	74	LYS	CB-CA-C	-6.48	108.08	115.79
27	19	13	ARG	N-CA-C	-6.46	104.44	112.90
33	15	127	ASP	CB-CA-C	-6.45	108.12	115.79
18	9I	19	LYS	N-CA-C	6.45	117.54	108.00
2	1E	196	LEU	N-CA-C	-6.43	105.47	113.38
28	21	116	VAL	N-CA-C	-6.39	99.68	109.78
4	3E	9	CYS	N-CA-C	-6.38	105.36	113.01
44	G8	7	VAL	N-CA-C	6.38	117.42	110.21
33	58	24	GLY	N-CA-C	-6.36	104.84	113.37
35	35	49	ARG	N-CA-C	-6.36	105.48	113.18
20	BA	73	HIS	CB-CA-C	-6.35	108.23	115.79
25	1H	945	A	O4'-C1'-N9	6.35	117.72	108.20
27	11	217	ARG	CG-CD-NE	6.35	125.97	112.00
16	7I	83	GLU	CB-CA-C	-6.33	109.29	116.63
2	1E	16	HIS	N-CA-C	6.33	120.70	112.92
39	B8	114	LEU	N-CA-C	6.33	120.70	112.92
47	J8	43	TYR	CA-C-N	6.32	126.29	119.78
47	J8	43	TYR	C-N-CA	6.32	126.29	119.78
27	11	110	GLY	N-CA-C	6.32	122.33	114.37
35	78	27	HIS	CB-CA-C	-6.30	101.77	111.66
52	P8	11	LYS	N-CA-C	-6.30	104.50	111.36
4	3E	135	LEU	CA-C-N	6.29	125.97	119.56
4	3E	135	LEU	C-N-CA	6.29	125.97	119.56
5	4E	105	VAL	CA-C-N	-6.28	113.22	119.56
5	4E	105	VAL	C-N-CA	-6.28	113.22	119.56
7	6E	111	ARG	CA-C-N	6.27	125.89	119.56
7	6E	111	ARG	C-N-CA	6.27	125.89	119.56
31	59	95	ARG	N-CA-C	6.27	116.35	108.45
46	E5	15	ASP	N-CA-C	-6.27	99.92	108.38
44	G8	95	LYS	N-CA-C	-6.25	97.48	110.80
28	21	104	VAL	N-CA-C	6.24	117.20	107.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	29	23	VAL	N-CA-C	6.21	122.27	109.34
46	E5	22	GLY	N-CA-C	6.21	120.64	111.76
34	25	81	ASP	N-CA-C	6.21	116.47	108.34
40	C8	97	ASP	N-CA-C	-6.21	104.41	112.23
53	Q8	5	LYS	N-CA-C	6.21	120.88	112.88
35	78	93	GLY	N-CA-C	6.20	120.44	112.13
34	68	71	ARG	CA-C-N	6.20	126.10	119.28
34	68	71	ARG	C-N-CA	6.20	126.10	119.28
35	78	55	ARG	N-CA-C	-6.20	101.80	110.35
4	32	201	GLN	N-CA-C	-6.19	105.73	113.28
20	BI	74	LYS	CB-CA-C	-6.19	107.68	116.34
11	2I	107	SER	CB-CA-C	-6.18	108.43	115.79
31	59	28	GLY	CA-C-N	6.18	125.39	118.97
31	59	28	GLY	C-N-CA	6.18	125.39	118.97
2	1E	23	ARG	N-CA-C	-6.18	105.80	113.15
47	F5	28	GLY	N-CA-C	6.18	121.48	113.27
44	G8	81	LYS	C-N-CD	-6.17	107.02	120.60
12	3A	7	ILE	N-CA-C	-6.17	104.84	110.82
17	8I	48	GLU	CA-C-N	-6.16	113.36	122.41
17	8I	48	GLU	C-N-CA	-6.16	113.36	122.41
17	8A	63	ARG	CA-C-N	6.15	126.52	119.93
17	8A	63	ARG	C-N-CA	6.15	126.52	119.93
34	68	24	VAL	CA-C-N	-6.15	114.30	122.85
34	68	24	VAL	C-N-CA	-6.15	114.30	122.85
25	1H	1558	A	P-O3'-C3'	6.14	129.41	120.20
27	19	243	GLY	N-CA-C	-6.14	106.67	115.64
53	M5	34	TRP	N-CA-C	6.14	128.21	111.00
34	25	58	VAL	N-CA-C	6.14	116.02	108.53
36	88	106	VAL	CB-CA-C	-6.13	102.81	111.28
25	1H	1653	G	C4'-C3'-O3'	6.13	118.59	109.40
45	H8	110	GLY	N-CA-C	-6.13	105.07	112.48
38	65	34	HIS	N-CA-C	6.12	118.77	109.95
13	4I	101	GLN	N-CA-C	6.12	119.30	109.02
37	98	9	LYS	N-CA-C	-6.11	99.73	109.76
13	4I	40	ASN	CA-C-N	6.10	125.66	119.19
13	4I	40	ASN	C-N-CA	6.10	125.66	119.19
54	1G	913	A	C2'-C3'-O3'	6.10	118.65	109.50
47	F5	37	ILE	CB-CA-C	-6.10	102.19	110.42
53	M5	29	LYS	N-CA-C	-6.10	105.70	113.02
11	2A	120	ARG	CA-C-N	6.09	126.28	120.31
11	2A	120	ARG	C-N-CA	6.09	126.28	120.31
25	1H	2429	G	OP2-P-O3'	6.08	126.23	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1784	A	O5'-P-OP1	6.08	126.23	108.00
25	1H	2566	A	C4'-C3'-O3'	6.07	118.51	109.40
27	19	246	PRO	CA-C-O	-6.07	114.70	121.32
40	C8	91	ASP	CA-C-N	6.05	132.58	121.70
40	C8	91	ASP	C-N-CA	6.05	132.58	121.70
53	Q8	13	ARG	N-CA-C	6.04	121.40	113.30
19	AA	10	PHE	N-CA-C	6.04	121.57	113.72
35	78	46	LYS	N-CA-C	6.04	119.60	112.72
28	29	73	GLU	CA-C-N	6.03	126.05	119.90
28	29	73	GLU	C-N-CA	6.03	126.05	119.90
27	19	272	ALA	N-CA-CB	-6.03	102.40	111.56
27	11	90	ALA	N-CA-C	6.02	117.65	110.19
20	BA	10	LEU	CA-C-N	-6.01	112.73	122.34
20	BA	10	LEU	C-N-CA	-6.01	112.73	122.34
29	39	15	SER	CB-CA-C	-6.00	109.64	116.54
27	19	247	ALA	N-CA-C	6.00	118.82	109.52
1	13	1498	U	P-O3'-C3'	5.99	129.18	120.20
35	78	116	GLY	N-CA-C	5.98	122.31	110.77
39	B8	4	GLY	N-CA-C	-5.98	105.40	112.64
40	C8	72	HIS	N-CA-C	-5.98	105.85	113.02
28	21	119	ARG	N-CA-C	-5.97	103.54	111.24
32	61	14	ASP	N-CA-C	5.97	117.59	110.19
6	5E	72	VAL	N-CA-C	5.97	116.71	110.62
47	J8	56	GLN	N-CA-C	5.96	119.23	110.59
4	3E	31	CYS	CA-C-N	5.96	132.92	121.54
4	3E	31	CYS	C-N-CA	5.96	132.92	121.54
13	4A	40	ASN	CA-C-N	5.95	125.57	119.56
13	4A	40	ASN	C-N-CA	5.95	125.57	119.56
25	1H	2275	C	OP1-P-O3'	5.95	125.85	108.00
30	49	98	ARG	N-CA-C	-5.94	105.87	113.23
27	11	237	GLU	N-CA-C	5.94	118.99	109.02
19	AA	78	ARG	N-CA-C	5.92	118.98	111.69
1	13	1301	U	P-O3'-C3'	5.92	129.08	120.20
25	1H	752	A	C2'-C3'-O3'	5.92	118.38	109.50
33	58	69	GLN	N-CA-C	5.92	117.73	111.28
4	3E	87	GLY	N-CA-C	5.92	118.78	110.38
40	C8	84	LYS	N-CA-C	-5.91	104.75	111.14
42	E8	64	MET	N-CA-C	5.91	121.22	113.30
12	3A	75	HIS	N-CA-C	5.90	117.22	108.60
17	8I	99	SER	N-CA-C	5.90	117.50	110.19
27	19	234	GLY	N-CA-C	5.89	119.28	111.03
41	95	89	GLN	CA-C-N	5.89	126.22	119.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	95	89	GLN	C-N-CA	5.89	126.22	119.92
43	F8	71	GLY	N-CA-C	-5.88	101.45	111.27
35	35	36	LYS	N-CA-C	5.88	120.14	109.32
31	51	170	ARG	N-CA-C	5.88	118.22	108.99
27	19	43	ARG	CG-CD-NE	5.88	124.93	112.00
43	B5	25	LYS	N-CA-C	5.87	117.87	108.41
10	1I	36	GLY	CA-C-N	5.87	127.18	119.84
10	1I	36	GLY	C-N-CA	5.87	127.18	119.84
13	4A	112	GLY	CA-C-N	5.86	126.19	119.92
13	4A	112	GLY	C-N-CA	5.86	126.19	119.92
53	M5	33	ASN	O-C-N	-5.86	116.47	123.27
37	98	9	LYS	CA-C-N	-5.86	114.28	123.13
37	98	9	LYS	C-N-CA	-5.86	114.28	123.13
53	Q8	60	LEU	N-CA-C	5.85	115.96	108.24
28	29	21	VAL	CA-C-N	5.85	126.19	119.93
28	29	21	VAL	C-N-CA	5.85	126.19	119.93
16	7I	40	ASP	CA-C-N	5.84	127.14	119.84
16	7I	40	ASP	C-N-CA	5.84	127.14	119.84
31	59	124	GLU	N-CA-C	5.83	119.09	110.46
4	3E	171	GLY	CA-C-N	5.82	127.11	119.84
4	3E	171	GLY	C-N-CA	5.82	127.11	119.84
12	3A	105	TYR	CB-CA-C	-5.82	109.32	117.23
39	B8	13	ARG	N-CA-C	-5.82	105.84	113.17
2	12	126	GLU	N-CA-C	-5.82	106.04	113.02
38	A8	110	LEU	N-CA-C	5.81	119.06	109.94
28	29	4	ILE	N-CA-C	5.81	115.62	108.53
31	59	90	LYS	N-CA-C	5.80	118.12	109.59
29	31	58	ALA	N-CA-C	5.80	119.17	111.75
35	35	54	GLY	N-CA-C	-5.80	106.65	115.00
2	12	45	GLN	N-CA-C	5.79	117.46	111.03
27	11	107	ALA	CA-C-N	5.79	125.74	119.78
27	11	107	ALA	C-N-CA	5.79	125.74	119.78
1	13	1301	U	C2'-C3'-O3'	5.79	118.18	109.50
53	Q8	45	GLY	N-CA-C	5.78	126.88	113.18
33	15	85	ILE	N-CA-C	5.78	116.84	107.71
40	C8	74	LEU	N-CA-C	5.77	117.62	108.79
25	14	2439	A	C2'-C3'-O3'	5.77	118.15	109.50
35	35	110	TYR	CA-C-N	5.77	132.56	121.54
35	35	110	TYR	C-N-CA	5.77	132.56	121.54
44	G8	19	LYS	N-CA-C	-5.76	105.14	111.82
47	J8	44	PRO	CA-C-O	-5.76	114.88	121.56
37	55	93	GLY	N-CA-C	5.75	119.94	110.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	8A	67	LYS	N-CA-C	-5.75	102.13	110.24
36	88	10	ARG	N-CA-C	-5.75	102.94	110.53
25	1H	740	U	OP1-P-O3'	-5.74	90.77	108.00
31	51	6	ARG	N-CA-C	-5.74	98.56	110.80
42	A5	64	MET	N-CA-C	5.74	120.41	113.17
50	M8	39	CYS	N-CA-C	-5.74	106.13	113.02
5	42	80	ILE	N-CA-C	5.73	115.92	108.35
54	1G	266	G	P-O3'-C3'	5.73	128.80	120.20
25	14	1022	G	C2'-C3'-O3'	5.73	118.10	109.50
28	21	120	TRP	N-CA-C	5.73	120.39	113.17
25	1H	2439	A	P-O3'-C3'	5.72	128.78	120.20
36	88	86	GLY	N-CA-C	5.72	119.66	112.79
10	1I	6	ILE	N-CA-C	5.70	116.69	108.48
4	32	135	LEU	CA-C-N	5.70	126.08	119.47
4	32	135	LEU	C-N-CA	5.70	126.08	119.47
45	D5	82	ARG	CA-C-N	5.70	125.88	119.90
45	D5	82	ARG	C-N-CA	5.70	125.88	119.90
28	29	134	ILE	N-CA-C	5.68	117.57	112.17
45	D5	52	SER	N-CA-C	5.68	118.95	111.28
30	49	118	ARG	N-CA-C	-5.68	103.42	110.41
28	21	142	GLY	CA-C-N	-5.68	114.13	121.79
28	21	142	GLY	C-N-CA	-5.68	114.13	121.79
43	B5	11	PRO	CA-C-N	-5.67	115.06	122.37
43	B5	11	PRO	C-N-CA	-5.67	115.06	122.37
41	D8	41	GLY	N-CA-C	-5.66	102.41	112.54
29	31	75	HIS	N-CA-C	5.66	117.67	109.07
4	32	3	ARG	N-CA-C	5.66	116.38	108.00
45	H8	86	VAL	N-CA-C	5.66	116.03	108.11
53	M5	24	ALA	N-CA-C	5.65	116.73	108.14
44	C5	85	VAL	N-CA-C	5.64	116.83	108.65
25	1H	2689	U	C4'-C3'-O3'	5.64	117.86	109.40
29	31	59	TYR	N-CA-C	5.64	117.34	110.41
37	55	3	HIS	N-CA-C	5.63	118.40	110.23
27	11	237	GLU	CA-C-N	-5.62	115.92	120.98
27	11	237	GLU	C-N-CA	-5.62	115.92	120.98
35	35	21	ARG	N-CA-C	5.62	122.76	110.80
53	Q8	61	LEU	CA-CB-CG	5.61	135.93	116.30
28	21	117	MET	CA-C-N	5.60	132.24	121.54
28	21	117	MET	C-N-CA	5.60	132.24	121.54
16	7A	75	ARG	N-CA-C	-5.60	105.17	111.28
30	49	141	PHE	CA-C-N	5.60	125.27	119.05
30	49	141	PHE	C-N-CA	5.60	125.27	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	5I	4	LYS	N-CA-C	5.60	122.73	110.80
25	1H	2701	C	O3'-P-O5'	5.60	112.39	104.00
27	11	234	GLY	N-CA-C	5.59	119.69	110.97
40	C8	87	GLY	N-CA-C	-5.59	108.03	115.40
2	12	182	ILE	CA-C-N	5.58	125.60	119.90
2	12	182	ILE	C-N-CA	5.58	125.60	119.90
25	14	2439	A	P-O3'-C3'	5.58	128.58	120.20
51	N8	38	ALA	N-CA-C	5.58	117.90	110.53
28	21	8	LYS	N-CA-C	-5.58	101.79	110.10
27	19	241	PRO	CA-C-O	-5.57	114.46	122.31
14	5I	40	CYS	N-CA-C	5.56	120.18	113.17
28	29	190	GLY	CA-C-N	5.56	125.76	120.31
28	29	190	GLY	C-N-CA	5.56	125.76	120.31
42	E8	10	VAL	CA-C-N	-5.56	113.45	122.34
42	E8	10	VAL	C-N-CA	-5.56	113.45	122.34
50	I5	20	ASN	N-CA-C	5.55	115.57	108.24
25	1H	945	A	C8-N9-C1'	-5.55	111.06	127.70
51	N8	4	HIS	CA-C-N	-5.54	114.08	119.78
51	N8	4	HIS	C-N-CA	-5.54	114.08	119.78
27	19	155	LEU	N-CA-C	5.54	118.11	108.76
48	G5	43	GLN	N-CA-C	5.54	117.71	108.02
44	C5	41	GLY	N-CA-C	-5.53	103.16	112.77
4	32	39	PRO	CA-C-N	5.52	126.29	120.11
4	32	39	PRO	C-N-CA	5.52	126.29	120.11
12	3A	43	VAL	N-CA-C	5.52	116.62	108.45
25	1H	1653	G	O3'-P-O5'	5.51	112.27	104.00
31	59	89	ILE	N-CA-C	5.51	117.47	112.29
2	12	186	ALA	N-CA-C	5.51	117.22	108.79
9	82	20	ARG	CA-C-N	5.51	125.52	119.90
9	82	20	ARG	C-N-CA	5.51	125.52	119.90
11	2A	12	ARG	N-CA-C	5.51	115.39	108.45
28	29	51	PHE	N-CA-C	5.51	122.53	110.80
31	51	78	GLY	CA-C-N	-5.50	116.54	122.59
31	51	78	GLY	C-N-CA	-5.50	116.54	122.59
44	C5	81	LYS	CA-C-N	5.50	126.71	119.84
44	C5	81	LYS	C-N-CA	5.50	126.71	119.84
36	45	62	GLY	N-CA-C	5.49	120.39	112.81
50	I5	26	SER	CB-CA-C	-5.49	109.77	117.23
45	D5	104	PHE	CB-CA-C	-5.48	110.27	116.63
28	21	69	LYS	N-CA-C	-5.48	106.45	113.02
19	AI	26	GLY	N-CA-C	-5.47	106.98	114.64
30	41	128	ARG	N-CA-C	-5.47	106.19	112.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	3E	86	LYS	N-CA-C	-5.46	100.89	109.25
11	2A	21	ILE	N-CA-C	5.46	115.96	107.28
47	F5	7	ILE	N-CA-C	5.46	115.71	110.74
25	1H	2346	A	O4'-C1'-N9	5.46	116.39	108.20
13	4A	67	GLU	CB-CA-C	-5.45	110.30	116.63
41	D8	39	LEU	N-CA-C	5.45	120.04	112.90
31	59	100	GLY	N-CA-C	5.45	122.12	112.64
30	49	162	THR	N-CA-C	-5.44	106.49	113.02
46	E5	60	PHE	N-CA-C	5.44	117.34	109.07
36	45	72	LYS	CA-C-N	5.43	125.90	120.14
36	45	72	LYS	C-N-CA	5.43	125.90	120.14
3	22	6	HIS	CA-C-N	5.42	125.04	119.56
3	22	6	HIS	C-N-CA	5.42	125.04	119.56
46	E5	66	VAL	N-CA-C	5.42	116.40	109.30
5	42	118	ILE	N-CA-C	5.42	115.50	108.35
45	H8	61	LEU	CA-C-N	5.41	126.60	119.84
45	H8	61	LEU	C-N-CA	5.41	126.60	119.84
44	G8	99	CYS	N-CA-C	5.41	122.32	110.80
32	69	78	THR	N-CA-C	5.41	119.16	112.24
35	78	45	LEU	N-CA-C	5.40	117.81	110.35
16	7I	5	ARG	N-CA-C	5.39	115.66	108.38
25	1H	1517	G	OP1-P-O3'	5.39	124.18	108.00
25	14	752	A	C2'-C3'-O3'	5.39	117.59	109.50
28	29	131	ALA	N-CA-C	5.39	118.66	111.75
36	88	80	GLU	CA-C-N	-5.39	113.62	121.71
36	88	80	GLU	C-N-CA	-5.39	113.62	121.71
37	98	38	VAL	CB-CA-C	-5.39	108.58	113.70
44	C5	13	VAL	N-CA-C	5.39	116.61	108.96
30	49	44	GLY	N-CA-C	-5.39	106.34	115.34
27	11	250	TRP	N-CA-C	-5.38	106.49	113.16
12	3A	128	ALA	CB-CA-C	-5.38	109.91	117.23
11	2I	103	LEU	N-CA-C	5.37	117.20	110.91
11	2I	14	VAL	N-CA-C	5.37	115.59	107.75
44	G8	98	VAL	N-CA-C	-5.36	107.25	112.29
25	1H	587	C	P-O3'-C3'	5.36	128.24	120.20
27	11	247	ALA	N-CA-C	5.36	117.83	109.52
27	11	120	GLY	CA-C-N	5.36	126.53	119.84
27	11	120	GLY	C-N-CA	5.36	126.53	119.84
1	13	792	A	C3'-C2'-C1'	-5.35	96.15	101.50
15	6A	23	GLY	N-CA-C	5.35	125.87	113.18
9	8E	17	VAL	N-CA-C	5.35	115.60	108.11
18	9A	26	LEU	N-CA-C	5.35	115.60	108.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	4E	32	VAL	N-CA-C	5.34	115.82	108.12
20	BA	75	ASN	N-CA-C	-5.34	106.35	112.92
44	G8	75	ILE	N-CA-C	5.34	116.82	111.00
41	D8	34	GLU	N-CA-C	-5.33	102.39	110.28
2	12	17	PHE	N-CA-C	5.33	118.75	110.17
37	55	2	ARG	CA-C-N	5.33	128.28	120.71
37	55	2	ARG	C-N-CA	5.33	128.28	120.71
1	13	1504	G	C4'-C3'-O3'	5.33	117.39	109.40
30	49	155	MET	N-CA-C	5.33	116.94	108.79
33	58	130	HIS	N-CA-C	5.33	119.47	112.92
27	11	115	GLN	N-CA-C	5.32	118.36	110.48
30	41	120	LEU	N-CA-C	5.32	117.41	109.59
11	2A	34	ASP	CA-C-N	-5.31	114.61	119.82
11	2A	34	ASP	C-N-CA	-5.31	114.61	119.82
12	3I	70	ILE	CA-C-N	5.31	125.77	120.14
12	3I	70	ILE	C-N-CA	5.31	125.77	120.14
25	1H	195	A	P-O3'-C3'	5.31	128.17	120.20
46	E5	14	ARG	N-CA-C	5.31	118.29	110.59
27	11	13	ARG	N-CA-C	-5.31	105.54	112.23
45	D5	86	VAL	N-CA-C	5.31	116.37	108.46
45	H8	115	GLY	N-CA-C	-5.30	104.91	112.55
3	22	101	LEU	N-CA-C	5.30	117.11	110.91
9	82	59	PHE	N-CA-C	5.29	118.06	108.69
31	59	54	ARG	CA-C-N	5.29	124.48	118.97
31	59	54	ARG	C-N-CA	5.29	124.48	118.97
25	1H	1786	A	N9-C1'-C2'	5.29	121.94	114.00
47	F5	79	GLY	N-CA-C	5.29	119.23	110.97
47	J8	40	ARG	CA-C-N	-5.29	114.29	122.59
47	J8	40	ARG	C-N-CA	-5.29	114.29	122.59
30	41	40	ASN	N-CA-C	5.28	117.79	108.75
43	F8	25	LYS	N-CA-C	5.28	117.34	107.99
4	3E	174	LEU	N-CA-C	5.28	117.44	109.41
29	31	135	LYS	N-CA-C	-5.28	99.34	108.69
1	13	792	A	O4'-C1'-N9	5.28	116.12	108.20
31	51	86	GLU	N-CA-C	5.28	119.63	111.56
9	8E	63	ILE	N-CA-C	5.27	115.87	108.17
28	29	88	GLY	N-CA-C	-5.27	106.53	112.33
36	88	20	ALA	N-CA-C	5.27	118.20	110.30
39	75	4	GLY	N-CA-C	-5.27	100.69	113.18
47	F5	54	ALA	CB-CA-C	-5.27	110.48	116.54
54	1G	913	A	P-O3'-C3'	5.26	128.09	120.20
42	A5	6	ILE	N-CA-C	5.26	115.56	107.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	29	47	VAL	N-CA-C	5.26	115.62	107.78
30	41	36	LYS	CA-C-N	-5.26	115.81	122.43
30	41	36	LYS	C-N-CA	-5.26	115.81	122.43
13	4I	9	ILE	CA-C-N	-5.25	113.28	119.84
13	4I	9	ILE	C-N-CA	-5.25	113.28	119.84
25	1H	1616	A	O4'-C1'-N9	5.25	116.08	108.20
25	14	2502	G	O5'-P-OP1	-5.25	92.25	108.00
35	35	147	LEU	CA-CB-CG	5.25	134.68	116.30
27	19	240	ALA	CA-C-N	5.24	125.24	120.21
27	19	240	ALA	C-N-CA	5.24	125.24	120.21
4	3E	191	ARG	N-CA-C	-5.24	105.47	111.07
10	1A	89	ASP	N-CA-C	5.24	117.94	110.24
32	69	124	GLY	N-CA-C	5.24	117.81	110.38
30	41	119	GLY	N-CA-C	5.23	116.92	111.95
54	1G	1346	A	P-O3'-C3'	5.23	128.04	120.20
4	32	85	LYS	N-CA-C	-5.23	99.81	108.75
1	13	509	A	C2'-C3'-O3'	5.22	121.54	113.70
40	85	99	ALA	N-CA-C	-5.22	106.86	113.23
28	21	135	HIS	N-CA-C	5.22	117.38	111.11
4	32	70	ILE	N-CA-C	5.22	115.78	108.89
34	68	96	THR	N-CA-C	-5.21	101.61	109.85
25	1H	1799	G	C2'-C3'-O3'	5.21	117.31	109.50
33	58	75	TYR	CA-C-N	-5.21	111.60	121.54
33	58	75	TYR	C-N-CA	-5.21	111.60	121.54
25	14	741	G	O5'-P-OP1	-5.21	92.38	108.00
40	85	13	LYS	N-CA-C	-5.21	105.61	111.28
38	65	22	GLY	N-CA-C	-5.20	108.05	115.64
28	29	24	THR	CB-CA-C	-5.20	102.57	110.06
28	21	188	VAL	CA-C-N	5.20	125.93	120.11
28	21	188	VAL	C-N-CA	5.20	125.93	120.11
27	19	154	LYS	N-CA-C	5.19	120.25	113.30
16	7I	82	GLN	N-CA-C	5.19	119.71	113.17
1	13	115	G	C2'-C3'-O3'	5.19	117.28	109.50
17	8I	82	MET	N-CA-C	-5.19	106.63	113.17
41	95	54	GLY	N-CA-C	-5.18	108.56	115.40
50	I5	25	TYR	CB-CA-C	-5.18	110.62	116.63
31	51	91	GLY	N-CA-C	5.18	118.50	111.72
42	E8	93	ALA	N-CA-C	5.17	121.82	110.80
38	65	110	LEU	CA-CB-CG	5.17	134.41	116.30
18	9I	19	LYS	CB-CA-C	-5.17	109.10	116.34
33	58	98	VAL	N-CA-C	-5.17	105.36	111.00
54	1G	812	C	P-O3'-C3'	5.15	127.93	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	78	53	GLY	N-CA-C	-5.15	108.00	115.27
35	78	62	LEU	CA-C-N	-5.15	115.47	120.98
35	78	62	LEU	C-N-CA	-5.15	115.47	120.98
39	75	57	PHE	N-CA-C	-5.15	106.94	113.18
25	14	2689	U	C2'-C3'-O3'	5.15	117.23	109.50
45	H8	82	ARG	N-CA-C	-5.15	102.36	110.14
27	11	41	GLY	N-CA-C	-5.14	108.15	115.30
27	11	237	GLU	CB-CA-C	-5.14	109.10	115.89
17	8A	57	VAL	N-CA-C	5.14	117.24	108.86
53	Q8	32	LEU	N-CA-C	-5.14	104.72	111.96
7	6E	87	VAL	N-CA-C	5.13	113.49	107.89
25	14	195	A	P-O3'-C3'	5.13	127.90	120.20
45	H8	63	ASP	N-CA-C	-5.13	104.32	111.30
25	1H	1204	A	O4'-C1'-N9	5.13	115.89	108.20
29	39	9	ILE	CA-C-N	-5.13	113.64	118.97
29	39	9	ILE	C-N-CA	-5.13	113.64	118.97
32	61	9	LEU	N-CA-C	5.12	119.49	112.88
11	2A	13	GLN	N-CA-C	5.12	117.41	108.76
33	58	21	LYS	N-CA-C	-5.12	103.64	110.55
30	41	65	GLY	N-CA-C	-5.12	107.75	115.32
42	E8	66	GLU	N-CA-C	5.12	118.99	112.34
11	2I	21	ILE	N-CA-C	5.11	115.41	107.28
33	58	107	LEU	CA-C-N	-5.11	115.30	120.21
33	58	107	LEU	C-N-CA	-5.11	115.30	120.21
47	J8	2	SER	CA-C-N	-5.11	115.21	122.77
47	J8	2	SER	C-N-CA	-5.11	115.21	122.77
25	1H	48	G	OP2-P-O3'	5.10	123.31	108.00
27	11	220	HIS	CA-C-N	-5.10	115.62	122.91
27	11	220	HIS	C-N-CA	-5.10	115.62	122.91
41	D8	15	GLU	CA-C-N	-5.10	114.55	119.90
41	D8	15	GLU	C-N-CA	-5.10	114.55	119.90
4	32	135	LEU	N-CA-C	5.10	119.74	108.27
13	4A	115	LYS	N-CA-C	-5.09	99.02	107.99
35	78	36	LYS	CA-C-N	5.09	131.91	122.70
35	78	36	LYS	C-N-CA	5.09	131.91	122.70
15	6A	47	LYS	N-CA-C	-5.09	106.75	113.17
25	1H	1786	A	OP1-P-O3'	5.09	123.26	108.00
44	G8	17	SER	N-CA-C	5.09	116.57	108.79
27	11	46	GLN	CA-C-N	-5.08	111.45	121.41
27	11	46	GLN	C-N-CA	-5.08	111.45	121.41
47	J8	62	VAL	N-CA-C	5.08	117.04	108.81
32	69	75	LEU	N-CA-C	5.08	115.24	108.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	59	159	GLU	N-CA-C	5.08	117.15	108.67
31	51	135	GLY	N-CA-C	5.07	119.47	110.80
45	H8	24	LEU	CA-C-N	5.07	125.05	120.03
45	H8	24	LEU	C-N-CA	5.07	125.05	120.03
36	45	12	GLN	N-CA-C	5.07	116.78	109.07
36	45	135	ASP	CA-C-N	-5.07	115.68	122.42
36	45	135	ASP	C-N-CA	-5.07	115.68	122.42
28	21	137	HIS	CA-C-N	5.07	124.56	119.19
28	21	137	HIS	C-N-CA	5.07	124.56	119.19
45	H8	67	LEU	CA-C-N	5.07	126.17	119.84
45	H8	67	LEU	C-N-CA	5.07	126.17	119.84
29	31	165	ARG	CA-CB-CG	5.06	124.23	114.10
53	M5	39	LYS	N-CA-C	-5.06	102.36	109.96
32	69	114	LEU	N-CA-C	5.06	117.53	111.71
40	85	73	GLY	N-CA-C	5.06	120.71	114.69
5	4E	20	GLN	N-CA-C	-5.06	101.61	109.14
29	39	86	GLY	N-CA-C	5.06	119.03	112.25
38	A8	37	ALA	N-CA-C	5.05	116.55	107.80
53	Q8	43	GLN	N-CA-C	5.05	114.96	108.34
47	F5	29	GLY	CA-C-N	5.05	131.07	121.97
47	F5	29	GLY	C-N-CA	5.05	131.07	121.97
22	1K	3	U	P-O3'-C3'	5.05	127.77	120.20
4	3E	31	CYS	CA-CB-SG	-5.04	102.80	114.40
29	39	146	ALA	N-CA-C	-5.04	100.06	110.80
11	2A	128	ALA	CB-CA-C	-5.04	110.79	116.63
28	21	60	ASN	N-CA-C	5.03	118.58	109.32
12	3I	64	TYR	N-CA-C	5.03	116.45	111.07
17	8I	7	THR	N-CA-C	5.03	116.59	108.34
11	2I	120	ARG	CA-C-N	5.03	125.50	120.52
11	2I	120	ARG	C-N-CA	5.03	125.50	120.52
12	3I	60	LEU	N-CA-C	5.03	117.34	110.55
28	21	129	HIS	CA-C-N	-5.03	114.00	120.34
28	21	129	HIS	C-N-CA	-5.03	114.00	120.34
29	39	144	LYS	N-CA-C	-5.02	105.81	111.28
27	19	256	GLY	N-CA-C	5.02	121.79	115.42
19	AA	75	ALA	CA-C-N	5.01	124.78	119.76
19	AA	75	ALA	C-N-CA	5.01	124.78	119.76
36	45	26	TYR	CA-CB-CG	-5.01	104.87	113.90
46	E5	37	LEU	CA-C-N	-5.01	116.14	123.06
46	E5	37	LEU	C-N-CA	-5.01	116.14	123.06
35	78	52	GLU	N-CA-C	5.01	118.70	112.59
38	A8	34	HIS	N-CA-C	5.01	116.90	109.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	19	36	PRO	N-CA-C	5.01	118.59	111.13
8	7E	66	GLY	CA-C-N	5.00	125.44	120.14
8	7E	66	GLY	C-N-CA	5.00	125.44	120.14
25	1H	2056	G	OP1-P-O3'	5.00	123.00	108.00
27	19	254	THR	N-CA-C	5.00	119.47	113.17
28	29	153	GLY	N-CA-C	-5.00	108.35	115.30

There are no chirality outliers.

All (95) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
27	11	239	ARG	Peptide,Mainchain
27	11	28	GLU	Peptide
27	11	32	SER	Peptide
27	11	47	GLY	Peptide
27	19	197	GLY	Peptide
27	19	237	GLU	Peptide
27	19	271	ILE	Peptide
27	19	32	SER	Peptide
27	19	37	LEU	Peptide
2	1E	15	VAL	Peptide
2	1E	71	VAL	Peptide
28	21	54	GLN	Peptide
28	21	56	PRO	Peptide
28	21	78	LEU	Peptide
28	29	186	GLY	Peptide
28	29	201	THR	Peptide
28	29	26	ILE	Peptide
28	29	61	ARG	Peptide
11	2A	100	ALA	Peptide
3	2E	166	GLU	Peptide
35	35	14	LYS	Peptide
35	35	63	PRO	Peptide
29	39	127	GLU	Peptide
29	39	20	LEU	Peptide
4	3E	29	PRO	Peptide
4	3E	85	LYS	Peptide
12	3I	87	GLY	Peptide
30	41	95	ARG	Peptide
36	45	117	ALA	Peptide
36	45	134	ARG	Peptide
36	45	137	TYR	Peptide

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Mol	Chain	Res	Type	Group
36	45	24	GLY	Peptide
36	45	25	ASP	Peptide
13	4I	107	ALA	Peptide
31	51	80	SER	Peptide
33	58	77	GLY	Peptide
31	59	171	LEU	Peptide
14	5A	27	CYS	Peptide
6	5E	81	ILE	Peptide
14	5I	13	THR	Peptide
32	61	11	ASN	Peptide
32	61	114	LEU	Peptide
32	61	134	PRO	Peptide
32	61	82	ARG	Peptide
32	69	112	LYS	Peptide
39	75	9	LEU	Peptide
35	78	11	GLY	Peptide
35	78	115	LEU	Peptide
35	78	20	GLY	Peptide
35	78	65	ARG	Peptide
35	78	70	GLN	Peptide
40	85	95	LEU	Peptide
40	85	98	LEU	Peptide
36	88	21	THR	Peptide
36	88	78	PRO	Peptide
36	88	79	LEU	Peptide
36	88	81	VAL	Peptide
17	8I	13	ASP	Peptide
41	95	86	GLY	Peptide
41	95	90	PRO	Peptide
19	AI	4	SER	Peptide
43	B5	24	GLY	Peptide
43	B5	61	GLY	Peptide
39	B8	58	ASN	Peptide
20	BA	11	SER	Peptide
20	BI	73	HIS	Peptide
44	C5	81	LYS	Peptide
44	C5	82	PRO	Peptide
40	C8	92	ARG	Peptide
45	D5	61	LEU	Peptide
41	D8	44	LYS	Peptide
47	F5	29	GLY	Peptide
47	F5	85	LEU	Peptide

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Mol	Chain	Res	Type	Group
48	G5	15	LYS	Peptide
48	G5	17	SER	Peptide
48	G5	43	GLN	Peptide
44	G8	53	PRO	Peptide
44	G8	54	LYS	Peptide
44	G8	80	GLY	Peptide
44	G8	84	ARG	Peptide
44	G8	94	LYS	Peptide
45	H8	158	PRO	Peptide
45	H8	59	LEU	Peptide
45	H8	63	ASP	Peptide
47	J8	84	GLY	Peptide
47	J8	86	SER	Peptide
53	M5	30	ARG	Peptide
53	M5	40	GLU	Peptide
53	M5	52	LYS	Peptide
50	M8	40	HIS	Peptide
53	Q8	38	GLY	Peptide
53	Q8	54	GLU	Peptide
53	Q8	7	HIS	Peptide
53	Q8	9	GLY	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	13	32207	0	16254	799	0
2	12	1924	0	1975	108	0
2	1E	1924	0	1975	95	0
3	22	1612	0	1677	108	0
3	2E	1605	0	1668	47	0
4	32	1702	0	1763	106	0
4	3E	1702	0	1763	81	0
5	42	1155	0	1213	76	0
5	4E	1155	0	1213	37	0
6	52	842	0	857	28	0
6	5E	842	0	857	45	0
7	62	1256	0	1296	58	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	6E	1256	0	1296	62	0
8	72	1115	0	1177	46	0
8	7E	1115	0	1177	56	0
9	82	1009	0	1037	64	0
9	8E	1009	0	1037	64	0
10	1A	801	0	849	53	0
10	1I	801	0	849	51	0
11	2A	884	0	904	38	0
11	2I	864	0	881	35	0
12	3A	975	0	1062	57	0
12	3I	975	0	1062	39	0
13	4A	933	0	992	63	0
13	4I	928	0	987	57	0
14	5A	475	0	511	33	0
14	5I	498	0	537	38	0
15	6A	733	0	771	28	0
15	6I	733	0	771	30	0
16	7A	705	0	725	16	0
16	7I	705	0	725	47	0
17	8A	834	0	904	35	0
17	8I	834	0	904	56	0
18	9A	564	0	631	22	0
18	9I	590	0	662	33	0
19	AA	640	0	633	40	0
19	AI	665	0	686	41	0
20	BA	762	0	861	37	0
20	BI	762	0	861	41	0
21	1B	217	0	234	20	0
21	1F	188	0	195	9	0
22	1K	1825	0	946	59	0
22	3K	1825	0	946	49	0
23	2K	1646	0	847	31	0
24	4K	349	0	176	13	0
25	14	62605	0	31561	1404	0
25	1H	62707	0	31610	1467	1
26	16	2617	0	1328	69	0
26	1J	2617	0	1328	93	0
27	11	2115	0	2195	128	0
27	19	2120	0	2197	108	0
28	21	1568	0	1634	98	0
28	29	1568	0	1634	113	0
29	31	1585	0	1632	82	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	39	1627	0	1680	112	0
30	41	1473	0	1535	89	0
30	49	1473	0	1535	78	0
31	51	1336	0	1418	87	0
31	59	1316	0	1395	80	0
32	61	1136	0	1223	61	0
32	69	1136	0	1223	63	0
33	15	1104	0	1180	54	0
33	58	1104	0	1180	69	0
34	25	932	0	996	56	0
34	68	932	0	996	26	0
35	35	1144	0	1228	114	0
35	78	1144	0	1228	106	0
36	45	1098	0	1160	70	0
36	88	1121	0	1179	61	0
37	55	959	0	1021	44	0
37	98	967	0	1033	56	0
38	65	881	0	943	68	0
38	A8	881	0	943	47	0
39	75	1141	0	1202	68	0
39	B8	1133	0	1190	65	0
40	85	963	0	1022	58	0
40	C8	963	0	1022	69	0
41	95	778	0	852	63	0
41	D8	778	0	852	35	0
42	A5	899	0	964	41	0
42	E8	899	0	964	28	0
43	B5	725	0	778	29	0
43	F8	742	0	803	47	0
44	C5	794	0	883	66	0
44	G8	778	0	863	63	0
45	D5	1428	0	1454	83	0
45	H8	1397	0	1430	60	0
46	E5	612	0	633	36	0
46	I8	612	0	633	34	0
47	F5	762	0	848	42	0
47	J8	729	0	802	24	0
48	G5	558	0	610	25	0
48	K8	558	0	610	33	0
49	H5	468	0	518	16	0
49	L8	468	0	518	23	0
50	I5	515	0	514	32	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
50	M8	533	0	526	35	0
51	J5	453	0	475	18	0
51	N8	374	0	393	22	0
52	L5	391	0	432	21	0
52	P8	391	0	432	19	0
53	M5	480	0	549	46	0
53	Q8	448	0	463	61	0
54	1G	32204	0	16256	843	1
55	1L	1807	0	920	34	0
55	3L	1807	0	920	54	0
56	2L	1645	0	843	44	0
57	4L	349	0	176	10	0
58	11	1	0	0	0	0
58	13	138	0	0	0	0
58	14	398	0	0	0	0
58	16	13	0	0	0	0
58	1G	90	0	0	0	0
58	1H	475	0	0	0	0
58	1J	6	0	0	0	0
58	1K	1	0	0	0	0
58	1L	1	0	0	0	0
58	21	2	0	0	0	0
58	25	1	0	0	0	0
58	29	3	0	0	0	0
58	2K	6	0	0	0	0
58	2L	3	0	0	0	0
58	31	4	0	0	0	0
58	39	1	0	0	0	0
58	3E	1	0	0	0	0
58	3I	1	0	0	0	0
58	3L	1	0	0	0	0
58	45	1	0	0	0	0
58	4E	1	0	0	0	0
58	78	1	0	0	0	0
58	85	1	0	0	0	0
58	8E	1	0	0	0	0
58	98	2	0	0	0	0
58	C5	1	0	0	0	0
58	I8	2	0	0	0	0
58	L5	1	0	0	0	0
58	L8	2	0	0	0	0
58	P8	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	32	1	0	0	0	0
59	3E	1	0	0	0	0
59	5A	1	0	0	0	0
59	5I	1	0	0	0	0
59	C5	1	0	0	0	0
59	G8	1	0	0	0	0
60	11	4	0	0	0	0
60	13	100	0	0	20	0
60	14	409	0	0	100	0
60	16	11	0	0	1	0
60	19	7	0	0	1	0
60	1G	51	0	0	14	0
60	1H	538	0	0	157	0
60	1K	1	0	0	0	0
60	21	2	0	0	0	0
60	29	2	0	0	1	0
60	2K	6	0	0	0	0
60	31	4	0	0	0	0
60	32	1	0	0	0	0
60	35	1	0	0	0	0
60	39	4	0	0	0	0
60	3E	2	0	0	0	0
60	3I	2	0	0	1	0
60	4K	2	0	0	0	0
60	4L	1	0	0	0	0
60	55	1	0	0	2	0
60	5I	1	0	0	0	0
60	75	1	0	0	0	0
60	78	4	0	0	2	0
60	7I	1	0	0	0	0
60	85	1	0	0	0	0
60	BA	1	0	0	0	0
60	D8	1	0	0	0	0
60	F8	1	0	0	0	0
60	L8	3	0	0	0	0
All	All	299318	0	199912	8960	1

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 19.

All (8960) 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)
22:1K:35:QUO:N3	22:1K:35:QUO:C4	1.70	1.51
22:3K:35:QUO:C4	22:3K:35:QUO:N3	1.72	1.48
25:14:2057:A:OP2	60:14:3437:HOH:O	1.73	1.07
25:14:2032:G:N7	60:14:3594:HOH:O	1.91	1.04
25:14:2711:A:OP2	60:14:3464:HOH:O	1.72	1.04
25:14:1783:A:OP2	60:14:3404:HOH:O	1.77	1.03
25:1H:249:C:OP1	60:1H:3550:HOH:O	1.76	1.01
25:14:1774:C:OP1	60:14:3487:HOH:O	1.78	1.01
25:1H:620:G:H4'	25:1H:621:A:H5"	1.39	1.00
25:1H:2308:G:H1	25:1H:2311:A:H2	1.04	1.00
28:21:77:ILE:HB	28:21:79:ARG:HE	1.21	1.00
25:1H:882:G:H22	25:1H:894:C:H42	1.06	0.99
25:14:1658:C:OP1	60:14:3527:HOH:O	1.77	0.99
25:14:1970:A:OP1	60:14:3504:HOH:O	1.80	0.99
25:14:801:G:OP2	60:14:3714:HOH:O	1.81	0.98
26:1J:18:G:H1	26:1J:65:C:H42	1.10	0.98
40:85:92:ARG:HD3	40:85:94:ASN:HB3	1.47	0.97
54:1G:1223:C:H5"	54:1G:1224:G:H5"	1.46	0.97
25:1H:2576:G:OP1	60:1H:3632:HOH:O	1.83	0.97
25:14:2598:A:OP1	60:14:3518:HOH:O	1.81	0.96
53:Q8:50:LEU:O	53:Q8:52:LYS:N	1.97	0.96
25:1H:607:U:H3	25:1H:621:A:H2	1.14	0.96
25:1H:1359:A:N1	25:1H:1372:U:N3	2.14	0.96
25:14:1332:G:N2	25:14:1609:A:O2'	2.00	0.95
54:1G:1298:C:OP2	7:62:114:ARG:NH2	1.99	0.95
7:6E:15:ASP:HB3	7:6E:20:ASP:H	1.32	0.95
25:1H:1780:A:OP1	60:1H:3521:HOH:O	1.84	0.94
25:1H:862:G:OP2	60:1H:3775:HOH:O	1.85	0.94
25:14:274:G:H2'	25:14:275:G:H4'	1.48	0.94
27:19:49:ILE:HD11	27:19:52:ARG:HA	1.49	0.94
25:14:1639:U:OP1	60:14:3469:HOH:O	1.85	0.94
25:1H:1774:C:OP1	60:1H:3622:HOH:O	1.85	0.93
35:78:138:LEU:HD12	35:78:144:GLU:HG3	1.47	0.93
25:1H:1771:C:HO2'	25:1H:1786:A:H8	1.04	0.93
25:1H:2062:A:OP2	60:1H:3647:HOH:O	1.85	0.93
25:14:1664:A:OP2	60:14:3530:HOH:O	1.87	0.93
25:1H:1676:A:OP2	60:1H:3573:HOH:O	1.86	0.93
2:12:75:LYS:HA	2:12:78:GLN:HB2	1.50	0.93
2:1E:111:ARG:HG2	2:1E:111:ARG:HH11	1.31	0.92
26:1J:18:G:N2	26:1J:65:C:N3	2.17	0.92
25:1H:567:A:OP1	60:1H:3504:HOH:O	1.85	0.92
25:14:323:G:HO2'	25:14:1205:U:H3	0.97	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2056:G:OP2	60:14:3441:HOH:O	1.89	0.91
25:1H:751:A:OP1	60:1H:3710:HOH:O	1.87	0.91
25:14:2135:A:N7	25:14:2156:G:N2	2.18	0.91
4:32:23:GLY:H	4:32:26:CYS:HB2	1.36	0.91
45:D5:110:GLY:HA2	45:D5:144:LEU:H	1.34	0.90
54:1G:1127:G:H22	54:1G:1144:G:H22	1.18	0.90
25:1H:741:G:OP1	60:1H:3729:HOH:O	1.87	0.90
25:14:2714:G:OP2	60:14:3464:HOH:O	1.89	0.90
25:14:450:G:O6	60:14:3616:HOH:O	1.88	0.90
25:14:1270:C:H5"	25:14:1271:G:H5'	1.52	0.90
25:1H:2053:G:OP2	60:1H:3631:HOH:O	1.90	0.90
25:1H:192:C:N3	60:1H:3536:HOH:O	2.05	0.90
25:14:2357:U:OP1	46:E5:20:ARG:NH1	2.03	0.89
41:95:37:VAL:HG21	41:95:57:VAL:HG12	1.55	0.89
25:1H:450:G:OP2	60:1H:3694:HOH:O	1.88	0.89
54:1G:1221:G:OP1	54:1G:1321:C:N4	2.03	0.89
1:13:509:A:OP2	60:13:1818:HOH:O	1.89	0.89
2:1E:185:ILE:HG22	2:1E:199:TYR:HB2	1.52	0.89
25:1H:2593:U:O4	60:1H:3561:HOH:O	1.88	0.89
25:1H:974(A):C:OP1	60:1H:3910:HOH:O	1.90	0.89
1:13:153:C:H42	1:13:168:G:H1	1.18	0.88
25:1H:574:C:OP2	60:1H:3785:HOH:O	1.91	0.88
25:1H:1614:A:OP1	60:1H:3708:HOH:O	1.90	0.88
25:14:751:A:OP1	60:14:3421:HOH:O	1.90	0.88
22:3K:38:MIA:H5"	22:3K:38:MIA:H8	1.54	0.88
25:1H:945:A:OP1	60:1H:3872:HOH:O	1.90	0.88
25:1H:1265:A:OP2	60:1H:3507:HOH:O	1.91	0.88
3:22:152:ILE:HB	3:22:199:LYS:HB2	1.55	0.88
5:4E:153:LYS:HD3	5:4E:154:GLY:H	1.39	0.88
25:1H:2048:G:N7	60:1H:3815:HOH:O	2.06	0.88
25:1H:2312:U:H5'	30:41:88:ILE:HD12	1.55	0.88
26:1J:38:C:H42	26:1J:44:G:H1	1.19	0.88
25:1H:805:G:OP1	60:1H:3639:HOH:O	1.91	0.88
31:51:4:ILE:O	31:51:6:ARG:NH1	2.07	0.88
5:42:50:GLU:HB3	5:42:53:LEU:HD13	1.53	0.88
25:1H:142:G:H1'	43:F8:37:THR:HG21	1.53	0.87
8:7E:41:ARG:NH2	8:7E:123:GLU:OE1	2.08	0.87
25:14:2377:A:H4'	38:65:111:GLU:HG2	1.56	0.87
25:1H:376:C:OP1	60:1H:3602:HOH:O	1.93	0.87
25:14:1782:C:OP1	60:14:3406:HOH:O	1.92	0.87
25:14:1786:A:OP1	60:14:3490:HOH:O	1.92	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1133:G:N2	54:1G:1141:C:O2	2.08	0.87
20:BI:57:ARG:HH11	20:BI:102:GLY:HA2	1.40	0.86
39:75:64:ARG:HB2	39:75:73:GLU:HG2	1.53	0.86
1:13:812:C:O2	60:13:1804:HOH:O	1.92	0.86
25:1H:617:G:OP1	29:31:40:GLN:NE2	2.08	0.86
1:13:1422:G:H5"	34:68:48:PRO:HB3	1.57	0.86
54:1G:559:A:H4'	54:1G:560:U:H5"	1.57	0.86
38:A8:35:ILE:HG22	38:A8:97:ARG:HH21	1.40	0.86
19:AA:41:VAL:HG12	19:AA:43:GLU:H	1.39	0.86
3:22:182:ILE:HG22	3:22:203:PHE:HA	1.58	0.85
1:13:453:A:H4'	16:7I:72:ARG:HB2	1.56	0.85
1:13:186(E):C:N3	1:13:191(B):G:N2	2.24	0.85
1:13:1348:U:H2'	1:13:1349:A:H8	1.42	0.85
35:78:47:ASP:OD2	35:78:50:ARG:NH2	2.10	0.85
1:13:352:C:OP1	60:13:1847:HOH:O	1.93	0.85
4:3E:84:LYS:H	4:3E:85:LYS:HD3	1.42	0.85
25:1H:1782:C:OP1	60:1H:3522:HOH:O	1.94	0.85
25:1H:1857:G:O2'	25:1H:1885:A:N6	2.08	0.85
26:1J:80:U:H2'	26:1J:81:G:H21	1.41	0.85
28:29:111:ARG:HA	37:55:2:ARG:HH12	1.40	0.85
25:1H:2701:C:H3'	25:1H:2702:U:C5'	2.06	0.85
25:14:2499:C:OP2	60:14:3446:HOH:O	1.94	0.85
54:1G:330:C:O2	60:1G:1726:HOH:O	1.94	0.85
25:14:273(D):C:N4	25:14:363(B):G:O6	2.07	0.85
1:13:1182:G:H4'	1:13:1183:A:H5'	1.58	0.85
25:14:958:U:OP2	36:45:14:ARG:NH1	2.07	0.85
25:14:1022:G:H22	25:14:1142(A):A:H2	1.24	0.85
30:49:47:LYS:HD3	30:49:81:LYS:HG3	1.58	0.84
25:1H:2334:G:O6	46:I8:74:ARG:NH2	2.09	0.84
25:14:86:C:HO2'	25:14:104:U:HO2'	1.25	0.84
25:1H:907:U:O2'	36:88:101:ARG:NH2	2.11	0.84
25:14:517:C:OP1	51:J5:16:ARG:NH2	2.10	0.84
25:1H:2127:G:H22	25:1H:2162:G:H1'	1.42	0.84
5:4E:8:GLU:OE1	5:4E:63:ARG:NH2	2.11	0.84
25:14:780:G:H21	25:14:783:A:H62	1.22	0.84
44:C5:19:LYS:HG3	44:C5:20:TYR:H	1.41	0.84
1:13:664:G:H22	1:13:741:G:H1	1.24	0.83
25:1H:761:A:N7	60:1H:3828:HOH:O	2.11	0.83
25:1H:1843:C:H5'	27:11:253:GLN:OE1	1.78	0.83
25:1H:1425:G:N7	60:1H:4028:HOH:O	2.10	0.83
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:450:G:O6	60:1H:3698:HOH:O	1.94	0.83
12:3A:47:LYS:HG3	12:3A:48:PRO:HD2	1.58	0.83
1:13:766:A:OP2	60:13:1803:HOH:O	1.95	0.83
55:3L:24:G:H2'	55:3L:25:G:H8	1.41	0.83
28:21:50:GLY:HA2	28:21:77:ILE:HA	1.59	0.83
25:14:676:A:H8	25:14:2069:G:H21	1.26	0.83
25:14:2624:G:N7	60:14:3605:HOH:O	2.11	0.83
25:1H:674:G:H1'	29:31:74:ARG:HD3	1.61	0.83
25:14:2448:A:OP2	60:14:3442:HOH:O	1.95	0.83
27:11:26:LYS:HE3	27:11:84:TYR:H	1.44	0.83
54:1G:588:G:H1	54:1G:651:C:H42	1.26	0.83
25:14:2632:A:HO2'	25:14:2811:G:HO2'	1.14	0.83
25:1H:973:A:OP2	60:1H:3678:HOH:O	1.96	0.82
25:1H:1525:G:H2'	25:1H:1526:G:H8	1.43	0.82
54:1G:1503:A:O2'	57:4L:13:A:N1	2.13	0.82
27:11:182:LEU:H	27:11:272:ALA:HB3	1.44	0.82
25:14:2597:G:O3'	60:14:3517:HOH:O	1.96	0.82
25:14:1780:A:OP1	60:14:3402:HOH:O	1.97	0.82
1:13:504:C:OP1	60:13:1837:HOH:O	1.97	0.82
38:A8:34:HIS:HB2	38:A8:36:TYR:HE1	1.44	0.82
36:45:81:VAL:O	36:45:82:ARG:NE	2.11	0.82
8:7E:106:GLY:HA2	8:7E:122:ARG:HH22	1.44	0.82
25:1H:943:U:OP2	35:78:36:LYS:NZ	2.11	0.82
28:21:78:LEU:HA	28:21:79:ARG:HD2	1.60	0.82
15:6I:26:GLU:OE2	15:6I:77:ARG:NH1	2.13	0.82
25:14:631:A:OP2	53:M5:47:LYS:NZ	2.11	0.82
25:14:1899:G:N2	25:14:1902:C:H41	1.76	0.82
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.11	0.82
39:B8:50:ILE:HD11	39:B8:102:ILE:HD11	1.59	0.82
46:I8:53:MET:HB2	46:I8:59:LEU:HD23	1.62	0.82
1:13:1160:G:H1	1:13:1177:G:H22	1.24	0.82
48:K8:22:GLU:OE2	48:K8:68:ARG:NH2	2.13	0.82
29:31:46:ARG:HG2	29:31:46:ARG:HH11	1.45	0.81
25:14:1048:A:N6	25:14:1112:G:O2'	2.09	0.81
1:13:963:G:N3	10:1I:55:LYS:NZ	2.28	0.81
54:1G:838:G:N2	54:1G:848:C:N3	2.28	0.81
33:58:96:GLU:C	33:58:98:VAL:H	1.88	0.81
33:58:132:ALA:O	33:58:134:ARG:NH2	2.13	0.81
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.62	0.81
9:82:112:LYS:HA	9:82:119:ALA:HB2	1.60	0.81
26:1J:3:C:N3	26:1J:117:G:N2	2.28	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2502:G:OP2	60:1H:3528:HOH:O	1.97	0.81
26:16:12:C:O2	46:I8:74:ARG:NH1	2.13	0.81
53:Q8:49:VAL:HA	53:Q8:50:LEU:O	1.81	0.81
35:35:97:PRO:HG3	35:35:112:LEU:HD12	1.63	0.81
1:13:606:G:H1	1:13:631:G:H5"	1.46	0.81
35:78:114:ILE:HD11	35:78:130:PHE:HD2	1.46	0.81
25:14:833:U:O2	35:35:55:ARG:NH1	2.13	0.81
55:1L:61:G:H22	55:1L:72:U:H3	1.24	0.81
25:14:2393:A:H4'	35:35:62:LEU:H	1.44	0.81
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.13	0.81
8:7E:10:LEU:HD22	8:7E:83:ILE:HD11	1.61	0.81
25:1H:1676:A:OP2	60:1H:3577:HOH:O	1.98	0.81
25:1H:2168:G:H22	25:1H:2170:A:H62	1.26	0.81
54:1G:957:U:O2'	54:1G:959:A:N7	2.13	0.81
25:14:1828:G:OP1	60:14:3497:HOH:O	1.98	0.81
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.63	0.81
13:4A:66:LEU:HA	13:4A:70:LEU:HB2	1.62	0.81
25:1H:2789:C:O2	25:1H:2894:G:N2	2.14	0.81
25:14:1757:U:H3	25:14:1762:A:H2	1.26	0.81
1:13:1348:U:H3	1:13:1374:A:H2	1.29	0.81
41:D8:24:LYS:HA	41:D8:92:THR:HG23	1.63	0.81
34:25:13:ASN:HD21	34:25:97:ARG:H	1.23	0.80
1:13:186(E):C:H42	1:13:191(B):G:H1	1.30	0.80
27:11:26:LYS:HD2	27:11:83:GLU:HA	1.62	0.80
25:14:1210:A:H5"	25:14:1211:U:H3'	1.63	0.80
1:13:438:G:O2'	1:13:494:U:O4	2.00	0.80
1:13:1125:U:OP2	1:13:1145:C:N4	2.14	0.80
25:1H:946:G:OP2	60:1H:3865:HOH:O	1.97	0.80
44:G8:100:ALA:HB1	44:G8:101:LYS:HB2	1.63	0.80
13:4I:13:LYS:O	13:4I:44:ARG:NH1	2.14	0.80
25:1H:1187:G:OP2	60:1H:3685:HOH:O	1.98	0.80
54:1G:1368:G:H5'	9:82:112:LYS:HB3	1.62	0.80
25:14:593:G:H4'	53:M5:61:LEU:HD22	1.61	0.80
25:14:741:G:OP1	60:14:3484:HOH:O	1.99	0.80
25:1H:2820:A:OP1	37:98:2:ARG:NH1	2.14	0.80
25:14:453:C:OP1	60:14:3617:HOH:O	1.98	0.80
27:19:242:ARG:HH11	27:19:242:ARG:H	1.27	0.80
25:1H:2056:G:OP2	60:1H:3516:HOH:O	2.00	0.80
11:2A:29:ILE:HG22	11:2A:44:SER:HB2	1.62	0.80
25:14:1614:A:OP1	60:14:3419:HOH:O	1.98	0.80
25:14:1856:G:N2	25:14:1886:C:N3	2.28	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1899:G:H22	25:14:1902:C:H41	1.27	0.80
25:1H:1899:G:H22	25:1H:1902:C:N4	1.80	0.80
54:1G:993:G:O6	54:1G:1045:C:N4	2.14	0.80
25:14:957:A:H5'	36:45:76:LYS:HD3	1.62	0.80
25:14:2681:C:H5	25:14:2725:A:H62	1.29	0.80
22:1K:85:A:H8	25:1H:2583:G:H21	1.29	0.80
25:1H:1997:G:OP2	60:1H:3782:HOH:O	1.98	0.80
26:1J:4:C:H42	26:1J:116:G:H1	1.29	0.80
34:25:8:LEU:HD13	34:25:82:ASN:HB3	1.61	0.80
25:1H:770:G:OP2	60:1H:3993:HOH:O	2.00	0.80
25:1H:1434:A:H61	25:1H:1558:A:N6	1.79	0.80
29:31:185:ASP:HA	29:31:188:ARG:HD3	1.64	0.80
8:72:86:ILE:HG12	8:72:135:CYS:HA	1.64	0.80
5:42:60:TYR:HB3	5:42:64:ARG:HH21	1.46	0.79
8:72:17:THR:O	8:72:78:GLN:NE2	2.15	0.79
15:6A:82:ILE:HD11	15:6A:88:ARG:HB2	1.61	0.79
1:13:1128:C:H1'	1:13:1146:A:H61	1.46	0.79
25:1H:1022:G:N2	25:1H:1023:U:O4	2.15	0.79
40:C8:8:VAL:HG23	40:C8:11:ARG:HH21	1.48	0.79
54:1G:768:A:OP2	60:1G:1705:HOH:O	1.99	0.79
35:78:50:ARG:HD3	53:Q8:58:ILE:HD11	1.62	0.79
25:14:2415:G:H4'	35:35:67:MET:H	1.46	0.79
54:1G:1507:A:N6	54:1G:1528:U:O4	2.14	0.79
10:1I:77:PRO:HB2	10:1I:79:ARG:HH12	1.47	0.79
25:14:1776:G:OP2	60:14:3454:HOH:O	2.00	0.79
2:1E:178:ARG:HG3	8:7E:72:PRO:HA	1.62	0.79
25:1H:563:G:OP2	60:1H:3534:HOH:O	1.99	0.79
1:13:975:A:H4'	1:13:976:G:H5"	1.65	0.79
7:6E:62:PHE:HD1	7:6E:124:LEU:HD11	1.48	0.79
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.16	0.79
25:1H:1386:C:H2'	25:1H:1387:C:H6	1.47	0.79
33:58:43:THR:HB	33:58:46:VAL:HG12	1.63	0.79
25:1H:2701:C:H3'	25:1H:2702:U:H5"	1.63	0.79
25:14:1327:C:OP2	60:14:3558:HOH:O	1.99	0.79
9:8E:16:ARG:HB2	9:8E:64:THR:HB	1.63	0.79
54:1G:683:G:N2	54:1G:707:C:O2	2.16	0.79
54:1G:1321:C:N4	54:1G:1322:C:H41	1.79	0.79
37:55:97:VAL:HG12	37:55:114:VAL:HG22	1.65	0.79
25:1H:913:U:O4	60:1H:3766:HOH:O	2.00	0.79
25:1H:1858:G:H2'	25:1H:1883:G:H22	1.48	0.79
25:14:84:A:N6	25:14:102:G:O2'	2.12	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:63:ARG:HA	5:4E:66:MET:HE2	1.65	0.78
54:1G:1056:U:H5'	3:22:163:ALA:HB2	1.64	0.78
1:13:838:G:OP2	1:13:842:C:N4	2.16	0.78
20:BI:69:GLY:O	20:BI:73:HIS:NE2	2.17	0.78
2:12:47:THR:HG23	2:12:202:PRO:HG2	1.64	0.78
16:7I:74:LEU:HA	16:7I:77:ALA:HB2	1.63	0.78
25:1H:446:G:OP2	60:1H:3570:HOH:O	2.01	0.78
54:1G:411:A:H62	54:1G:413:G:H21	1.29	0.78
38:A8:88:ASP:OD1	38:A8:90:GLY:N	2.17	0.78
39:B8:108:ARG:HA	39:B8:111:ARG:HE	1.49	0.78
2:12:91:PRO:HG3	2:12:154:LEU:HB2	1.63	0.78
40:85:27:LEU:HD22	40:85:31:SER:HB3	1.63	0.78
1:13:74:C:H42	1:13:96:G:H1	1.27	0.78
25:1H:1381:G:N7	60:1H:3790:HOH:O	2.15	0.78
25:1H:2468:G:H5"	36:88:120:ILE:HD12	1.66	0.78
32:61:7:GLU:HA	32:61:15:VAL:HG22	1.64	0.78
35:78:59:LEU:HD22	35:78:60:MET:H	1.48	0.78
25:14:1856:G:H1	25:14:1886:C:H42	1.31	0.78
1:13:158:G:N1	1:13:163:C:O2	2.17	0.78
35:78:56:SER:HB2	35:78:61:ARG:HD2	1.63	0.78
25:14:2139:C:N4	25:14:2152:G:O6	2.16	0.78
30:41:112:PRO:HB3	50:M8:37:SER:H	1.48	0.78
13:4I:23:TYR:HD1	13:4I:67:GLU:HA	1.48	0.78
25:1H:409:C:OP1	60:1H:3597:HOH:O	2.01	0.78
25:1H:2867:G:OP2	39:B8:119:LYS:NZ	2.12	0.78
54:1G:533:A:OP1	60:1G:1739:HOH:O	2.02	0.78
56:2L:50:G:H1	56:2L:66:C:H42	1.31	0.78
25:14:279:C:H42	25:14:361:G:H1	1.30	0.78
25:1H:944:G:O3'	60:1H:3866:HOH:O	2.01	0.78
25:1H:1171:G:N2	25:1H:1178:C:N3	2.31	0.78
29:31:66:PRO:O	29:31:67:GLN:HB3	1.82	0.78
31:51:23:ARG:HH12	31:51:25:LYS:HE3	1.48	0.78
33:15:41:ASP:HB3	33:15:48:MET:HE1	1.66	0.78
25:1H:459:U:H5"	52:P8:40:TRP:CD2	2.19	0.78
25:1H:993:G:OP1	40:C8:50:ARG:NH2	2.17	0.78
25:1H:2404:C:H1'	35:78:67:MET:HE1	1.64	0.78
54:1G:1321:C:H41	54:1G:1322:C:H41	1.30	0.78
25:14:1359:A:H62	25:14:1372:U:H3	1.31	0.78
25:14:567:A:OP1	60:14:3565:HOH:O	2.02	0.77
26:1J:19:G:N2	26:1J:64:C:O2	2.15	0.77
25:14:2379:G:O2'	38:65:17:ARG:NH1	2.16	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:2:LYS:HG2	35:78:4:SER:H	1.47	0.77
36:88:54:MET:HE3	36:88:64:ILE:HD13	1.66	0.77
5:42:144:THR:HG23	5:42:147:ASP:H	1.49	0.77
25:14:1899:G:H22	25:14:1902:C:N4	1.81	0.77
43:B5:57:LEU:HD21	43:B5:78:LYS:HD2	1.66	0.77
25:1H:1782:C:H3'	60:1H:3522:HOH:O	1.84	0.77
54:1G:377:G:H1	54:1G:386:C:H42	1.29	0.77
25:1H:1243:G:O2'	35:78:7:ARG:NH2	2.17	0.77
29:31:185:ASP:OD1	29:31:188:ARG:NH1	2.18	0.77
53:Q8:30:ARG:HH11	53:Q8:30:ARG:HG3	1.48	0.77
54:1G:1129:C:N4	54:1G:1142:G:O6	2.15	0.77
4:32:26:CYS:HA	4:32:31:CYS:HA	1.64	0.77
25:14:1019:U:H2'	25:14:1020:A:C8	2.19	0.77
25:1H:1900:A:H5'	25:1H:1900:A:H8	1.48	0.77
26:16:7:G:H4'	38:A8:29:PHE:CD2	2.20	0.77
54:1G:976:G:N2	54:1G:1362(A):C:OP2	2.17	0.77
4:32:15:GLU:OE1	4:32:59:ARG:NH2	2.16	0.77
25:14:2002:G:N7	60:14:3760:HOH:O	2.18	0.77
1:13:507:C:OP2	60:13:1815:HOH:O	2.02	0.77
32:61:3:VAL:HG12	32:61:38:LEU:HA	1.66	0.77
54:1G:458:C:N3	54:1G:474:G:N2	2.33	0.77
25:14:2652:C:H42	25:14:2668:G:H1	1.33	0.77
45:D5:60:GLU:HA	45:D5:67:LEU:H	1.49	0.77
32:61:110:ASP:HB2	32:61:112:LYS:HG2	1.66	0.77
54:1G:452:A:N6	54:1G:480:U:O2	2.17	0.77
25:14:654(E):C:H42	25:14:654(P):G:H1	1.33	0.77
25:14:2035:G:OP1	60:14:3597:HOH:O	2.02	0.77
25:1H:1026:U:H1'	25:1H:1027:A:O5'	1.84	0.77
25:1H:1509:C:H2'	25:1H:1511:A:C8	2.20	0.77
25:1H:2588:G:OP2	60:1H:3555:HOH:O	2.02	0.77
31:51:83:TYR:HB3	31:51:135:GLY:H	1.49	0.77
3:22:152:ILE:HG12	3:22:167:TRP:HB2	1.66	0.77
25:14:1403:C:OP1	25:14:1522:G:N2	2.13	0.77
25:1H:2844:G:O6	60:1H:3844:HOH:O	2.03	0.77
30:41:72:ARG:HH21	30:41:87:PRO:HG3	1.48	0.77
25:14:1141:U:OP2	33:15:63:THR:OG1	2.02	0.77
39:75:54:ARG:HA	39:75:59:THR:HB	1.66	0.77
25:1H:2502:G:OP2	60:1H:3529:HOH:O	2.03	0.76
40:C8:92:ARG:NE	40:C8:96:ALA:H	1.83	0.76
11:2A:41:THR:OG1	11:2A:42:TRP:N	2.13	0.76
26:1J:40:U:O2	26:1J:45:A:N6	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:287:C:H2'	25:1H:288:C:H6	1.50	0.76
25:1H:543:C:H42	25:1H:550:G:H1	1.30	0.76
25:1H:1410:G:O6	25:1H:1592:C:N4	2.14	0.76
36:88:72:LYS:HB3	36:88:94:VAL:HG23	1.68	0.76
34:25:7:TYR:HE1	34:25:20:MET:HE3	1.48	0.76
25:1H:1778:U:H2'	25:1H:1784:A:N6	2.00	0.76
31:51:10:PRO:HB2	31:51:50:VAL:HG13	1.66	0.76
55:3L:14:A:H3'	55:3L:15:G:H5"	1.67	0.76
25:14:531:C:OP1	25:14:561:G:N2	2.18	0.76
29:39:167:ALA:HB1	29:39:173:VAL:HG11	1.67	0.76
54:1G:749:C:H2'	54:1G:750:G:H8	1.50	0.76
1:13:875:C:O2'	8:7E:14:ARG:NH1	2.18	0.76
54:1G:971:G:N2	54:1G:1363:A:OP2	2.19	0.76
28:29:9:VAL:HG21	28:29:25:VAL:HB	1.67	0.76
47:F5:92:LYS:O	47:F5:94:LEU:N	2.18	0.76
54:1G:1502:A:H2	54:1G:1505:G:H1	1.30	0.76
5:42:122:GLU:O	5:42:126:ARG:NH1	2.19	0.76
25:14:622:G:OP2	35:35:108:LYS:NZ	2.14	0.76
25:14:2074:U:OP1	60:14:3410:HOH:O	2.02	0.76
25:14:2316:C:O2'	30:49:128:ARG:NH1	2.17	0.76
1:13:272:C:H2'	1:13:273:A:H8	1.48	0.76
1:13:963:G:H1	1:13:972:C:H42	1.33	0.76
54:1G:922:G:H4'	5:42:20:GLN:HA	1.68	0.76
28:29:171:GLU:OE2	28:29:185:LYS:NZ	2.18	0.76
25:14:1416:G:H1	25:14:1582:C:H42	1.34	0.76
25:14:1614:A:OP1	60:14:3422:HOH:O	2.02	0.76
2:1E:189:ASP:HB2	2:1E:205:ASP:HB3	1.68	0.76
22:1K:12:C:O2	22:1K:25:G:N2	2.18	0.76
25:1H:1783:A:OP2	60:1H:3522:HOH:O	2.02	0.76
25:1H:2452:C:OP1	60:1H:4008:HOH:O	2.03	0.76
25:14:1780:A:OP1	60:14:3403:HOH:O	2.04	0.76
6:5E:36:ARG:NH2	6:5E:38:GLU:OE2	2.19	0.76
25:1H:2635:C:H5"	28:21:79:ARG:HD3	1.68	0.76
54:1G:571:U:O4	54:1G:864:A:N6	2.19	0.76
25:14:1689:A:H62	25:14:1698:A:H2	1.34	0.76
18:9I:47:THR:HA	18:9I:83:GLU:HB2	1.68	0.75
25:1H:732:C:H3'	60:1H:3827:HOH:O	1.86	0.75
25:1H:800:A:OP1	60:1H:3537:HOH:O	2.03	0.75
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.68	0.75
25:14:1485:G:H1	25:14:1504:C:H42	1.34	0.75
25:14:1676:A:OP2	60:14:3462:HOH:O	2.05	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:157:LEU:O	4:32:161:ASN:ND2	2.19	0.75
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.69	0.75
25:14:617:G:OP1	29:39:40:GLN:NE2	2.19	0.75
31:59:66:GLY:O	31:59:70:THR:OG1	2.04	0.75
6:5E:50:TYR:OH	18:9I:74:ARG:O	2.04	0.75
22:3K:24:G:H2'	22:3K:25:G:H8	1.49	0.75
25:1H:1210:A:H5'	25:1H:1210:A:H8	1.52	0.75
25:1H:2592:G:OP1	60:1H:3763:HOH:O	2.05	0.75
25:14:1639:U:OP2	60:14:3431:HOH:O	2.03	0.75
25:14:2499:C:N3	60:14:3592:HOH:O	2.19	0.75
45:D5:10:ARG:HB3	45:D5:36:LYS:HG3	1.68	0.75
23:2K:9:G:N2	23:2K:47:7MG:OP2	2.20	0.75
25:1H:71:A:H2	43:F8:31:HIS:HE2	1.32	0.75
25:1H:155:C:H42	25:1H:171:G:H1	1.34	0.75
33:58:34:LEU:HD21	33:58:120:LEU:HB2	1.67	0.75
25:14:587:C:OP2	35:35:21:ARG:NH2	2.19	0.75
25:14:2324:C:H5"	25:14:2325:G:H5'	1.69	0.75
47:F5:92:LYS:C	47:F5:94:LEU:H	1.95	0.75
1:13:953:G:N7	13:4I:104:ARG:NH2	2.34	0.75
54:1G:578:C:OP1	60:1G:1717:HOH:O	2.05	0.75
32:69:69:LYS:NZ	32:69:73:GLU:OE2	2.19	0.75
19:AI:9:VAL:HG21	50:M8:63:TYR:HB2	1.66	0.75
25:1H:2099:U:H3	25:1H:2190:G:H1	1.33	0.75
4:32:60:GLU:OE2	4:32:199:ASN:N	2.20	0.75
55:3L:61:G:H1	55:3L:71:C:H42	1.34	0.75
31:59:159:GLU:O	31:59:163:TYR:OH	2.04	0.75
19:AI:5:LEU:HD13	19:AI:10:PHE:H	1.52	0.75
25:1H:2502:G:N7	60:1H:3651:HOH:O	2.19	0.75
31:51:54:ARG:HD3	31:51:65:HIS:ND1	2.02	0.75
54:1G:827:U:H3	54:1G:872:A:H62	1.32	0.75
25:14:67:U:H3	25:14:74:A:H2	1.32	0.75
1:13:1026:G:O6	1:13:1035:A:N6	2.20	0.75
1:13:1321:C:H3'	1:13:1322:C:H5"	1.69	0.75
8:7E:4:ASP:OD2	8:7E:85:ARG:NH1	2.20	0.75
35:78:115:LEU:HA	35:78:134:ALA:HB2	1.68	0.75
41:D8:44:LYS:O	41:D8:46:VAL:N	2.20	0.75
38:65:106:ARG:NH1	38:65:106:ARG:O	2.20	0.75
2:1E:67:THR:HG21	2:1E:155:LEU:HG	1.69	0.74
13:4I:108:ARG:HG3	13:4I:108:ARG:HH11	1.51	0.74
25:1H:2001:A:H2'	25:1H:2002:G:C8	2.22	0.74
27:11:60:ARG:HD3	27:11:86:PRO:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:86:SER:O	47:J8:88:LYS:N	2.20	0.74
2:12:131:PRO:HG2	2:12:134:GLU:HB2	1.67	0.74
15:6A:87:ILE:HG22	15:6A:88:ARG:H	1.50	0.74
25:14:399:G:OP2	60:14:3690:HOH:O	2.05	0.74
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.68	0.74
25:14:2414:G:H21	35:35:67:MET:HE1	1.51	0.74
27:19:16:MET:HE2	27:19:208:LYS:HG2	1.67	0.74
25:1H:3:U:O4	25:1H:2900:A:N6	2.18	0.74
35:78:95:VAL:HA	35:78:99:LEU:HD23	1.69	0.74
13:4I:39:ILE:HD12	13:4I:56:LEU:HD23	1.69	0.74
25:1H:884:C:O2	25:1H:892:G:N2	2.20	0.74
47:J8:49:VAL:HG11	47:J8:70:VAL:HG11	1.69	0.74
2:12:77:ALA:HB2	2:12:211:ILE:HD13	1.69	0.74
25:1H:1113:U:H5'	31:51:2:SER:HB2	1.69	0.74
45:H8:163:LEU:HB3	45:H8:165:VAL:H	1.52	0.74
3:22:50:ALA:HB1	3:22:76:VAL:HG12	1.68	0.74
1:13:157:G:H2'	1:13:158:G:H8	1.51	0.74
1:13:1256:A:OP2	3:2E:26:LYS:NZ	2.20	0.74
5:42:43:LEU:HD22	5:42:136:MET:HG3	1.69	0.74
2:1E:236:TYR:HA	2:1E:239:VAL:HG21	1.68	0.74
54:1G:619:U:O2	4:32:135:LEU:HD22	1.87	0.74
54:1G:975:A:H4'	54:1G:976:G:H5"	1.69	0.74
25:14:2239:G:OP2	60:14:3407:HOH:O	2.05	0.74
44:C5:99:CYS:SG	44:C5:100:ALA:N	2.61	0.74
4:3E:98:GLU:O	4:3E:103:ASN:ND2	2.20	0.74
20:BI:35:THR:HA	20:BI:38:LYS:HD3	1.70	0.74
22:1K:3:U:O2'	22:1K:4:G:O5'	2.03	0.74
25:1H:49:A:N7	25:1H:120:U:H5	1.86	0.74
25:14:761:A:N7	60:14:3415:HOH:O	2.21	0.74
43:B5:8:ILE:O	48:G5:36:ARG:NH2	2.20	0.74
1:13:1305:G:N2	1:13:1331:G:H2'	2.02	0.74
25:1H:739:G:OP1	60:1H:3739:HOH:O	2.04	0.74
25:14:1417:C:OP2	60:14:3682:HOH:O	2.05	0.74
25:14:2138:C:O2	25:14:2154:G:N2	2.21	0.74
25:14:2415:G:H4'	35:35:67:MET:N	2.03	0.74
33:58:47:ALA:HB2	33:58:112:LEU:HD11	1.70	0.74
25:14:1312:U:H3'	43:B5:63:LYS:HE3	1.70	0.74
35:35:47:ASP:OD1	35:35:50:ARG:NH1	2.21	0.74
34:68:104:ARG:HD3	39:B8:36:GLU:HG2	1.68	0.73
19:AA:66:MET:HE2	50:I5:59:PHE:HD2	1.53	0.73
25:14:1225:C:O3'	41:95:85:LYS:HA	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1678:G:H22	25:14:1989:G:H22	1.32	0.73
29:39:192:LEU:HD22	29:39:194:MET:HE2	1.70	0.73
36:45:25:ASP:HB3	36:45:102:VAL:HB	1.70	0.73
40:C8:92:ARG:HH21	40:C8:98:LEU:HB2	1.52	0.73
25:14:2331:G:O3'	46:E5:43:THR:HG22	1.87	0.73
25:14:2777:G:H5"	25:14:2778:A:H5'	1.71	0.73
25:1H:1495:A:OP2	60:1H:4000:HOH:O	2.03	0.73
54:1G:353:A:H5'	54:1G:353:A:H8	1.54	0.73
54:1G:575:G:O2'	60:1G:1718:HOH:O	2.07	0.73
54:1G:591:U:OP2	8:72:30:ARG:NH1	2.21	0.73
28:29:55:ASN:O	28:29:57:LYS:NZ	2.20	0.73
25:1H:1486:A:H2'	25:1H:1487:G:H8	1.53	0.73
25:1H:2695:C:H2'	25:1H:2696:U:H6	1.52	0.73
44:G8:87:LYS:H	44:G8:94:LYS:HG2	1.52	0.73
54:1G:1258:G:H2'	54:1G:1259:C:H6	1.52	0.73
25:14:571:A:OP2	60:14:3579:HOH:O	2.04	0.73
25:14:2498:C:OP2	60:14:3442:HOH:O	2.06	0.73
1:13:1077:G:N2	1:13:1080:A:OP2	2.22	0.73
25:1H:1899:G:H22	25:1H:1902:C:H41	1.35	0.73
25:1H:2656:U:H3	25:1H:2665:A:H2	1.34	0.73
30:41:131:TYR:O	30:41:159:VAL:HG22	1.89	0.73
44:G8:76:CYS:HB3	44:G8:79:CYS:HB2	1.71	0.73
53:Q8:40:GLU:HG3	53:Q8:41:ILE:HD13	1.71	0.73
19:AA:20:LEU:O	19:AA:23:ASN:ND2	2.19	0.73
25:14:2294:C:P	38:65:89:ARG:HH22	2.11	0.73
29:39:160:ASN:HB3	29:39:163:VAL:HB	1.69	0.73
1:13:67:C:H2'	1:13:68:G:H8	1.53	0.73
1:13:677:U:H3	1:13:713:G:H22	1.35	0.73
25:1H:363(B):G:H2'	25:1H:363(C):G:H8	1.52	0.73
25:1H:1510:A:O2'	25:1H:1512:G:N7	2.21	0.73
28:21:78:LEU:HD12	28:21:79:ARG:NH2	2.04	0.73
32:61:29:TYR:HD2	32:61:30:LEU:HD23	1.51	0.73
5:42:11:ILE:HD12	5:42:31:LEU:HD12	1.69	0.73
25:14:2425:A:H4'	25:14:2426:A:H5"	1.70	0.73
1:13:601:C:H2'	1:13:602:A:H8	1.51	0.73
25:1H:676:A:H8	25:1H:2069:G:H21	1.36	0.73
25:1H:1899:G:N2	25:1H:1902:C:H41	1.87	0.73
53:Q8:9:GLY:HA2	53:Q8:12:LYS:HB2	1.70	0.73
25:14:2114:A:N6	25:14:2119:A:N7	2.37	0.73
40:85:28:ARG:NH1	40:85:38:THR:OG1	2.20	0.73
25:1H:751:A:OP1	60:1H:3709:HOH:O	2.05	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:780:G:H21	25:1H:783:A:H62	1.34	0.73
25:1H:2035:G:OP1	60:1H:3616:HOH:O	2.06	0.73
25:1H:2165:G:N7	25:1H:2166:G:N2	2.37	0.73
35:78:96:THR:HG22	35:78:97:PRO:HD2	1.70	0.73
33:15:104:LYS:HA	33:15:107:LEU:HD12	1.70	0.73
1:13:36:C:OP1	12:3I:123:LYS:NZ	2.18	0.73
1:13:1009:G:N1	1:13:1020:U:O2	2.19	0.73
1:13:1502:A:H2	1:13:1505:G:H1	1.35	0.73
25:1H:848:G:H2'	25:1H:849:A:C8	2.22	0.73
25:1H:2271:G:N7	60:1H:3946:HOH:O	2.20	0.73
25:1H:2503:A:OP1	60:1H:3899:HOH:O	2.06	0.73
25:1H:453:C:OP1	60:1H:3698:HOH:O	2.07	0.73
25:1H:1542:G:OP2	25:1H:1543:A:O2'	2.06	0.73
2:12:137:ARG:HH22	2:12:141:GLU:HB2	1.54	0.73
25:14:945:A:OP1	60:14:3650:HOH:O	2.07	0.73
31:59:6:ARG:NH1	31:59:62:LYS:O	2.17	0.73
25:14:2420:C:H41	53:M5:31:HIS:HB3	1.54	0.72
48:G5:47:ASN:O	48:G5:49:LYS:N	2.22	0.72
1:13:591:U:H2'	1:13:592:G:H8	1.54	0.72
1:13:1452:C:O2'	1:13:1453:G:OP2	2.05	0.72
4:3E:9:CYS:HB3	4:3E:32:ALA:HB2	1.71	0.72
25:1H:817:C:OP2	60:1H:3687:HOH:O	2.07	0.72
11:2A:57:THR:HG22	11:2A:59:TYR:H	1.54	0.72
25:14:486:C:O2'	42:A5:60:ASN:OD1	2.07	0.72
7:6E:133:GLY:HA2	7:6E:136:LYS:HG3	1.70	0.72
14:5I:24:CYS:SG	14:5I:40:CYS:HB3	2.28	0.72
4:32:8:VAL:O	4:32:11:LEU:N	2.22	0.72
1:13:1194:U:H2'	1:13:1195:C:C6	2.24	0.72
25:1H:416:C:N4	25:1H:2407:G:O6	2.20	0.72
25:1H:639:U:O2'	25:1H:640:C:H5'	1.89	0.72
25:1H:1313:U:OP1	60:1H:3725:HOH:O	2.07	0.72
25:1H:1557:C:OP2	25:1H:1558:A:O2'	2.06	0.72
25:1H:1664:A:OP2	60:1H:3839:HOH:O	2.07	0.72
33:58:96:GLU:O	33:58:98:VAL:N	2.21	0.72
25:14:2392:A:H2	25:14:2424:C:H42	1.38	0.72
1:13:330:C:O2	60:13:1848:HOH:O	2.06	0.72
25:1H:583:G:N7	60:1H:3605:HOH:O	2.22	0.72
25:1H:1021:A:H62	25:1H:1141:U:H3	1.38	0.72
25:1H:2392:A:OP2	53:Q8:30:ARG:NH2	2.20	0.72
31:51:77:LYS:HE2	31:51:138:LYS:HD2	1.69	0.72
54:1G:539:A:OP2	12:3A:115:LYS:NZ	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:82:ARG:HG3	6:5E:83:ASP:HA	1.69	0.72
25:1H:2577:A:OP1	60:1H:3632:HOH:O	2.07	0.72
35:78:75:ILE:HD13	35:78:75:ILE:H	1.53	0.72
37:98:2:ARG:HA	37:98:5:LYS:HE3	1.72	0.72
38:A8:62:LYS:HA	38:A8:65:VAL:HB	1.72	0.72
54:1G:631:G:O2'	54:1G:632:A:O4'	2.08	0.72
53:Q8:9:GLY:H	53:Q8:12:LYS:H	1.38	0.72
54:1G:920:U:H2'	54:1G:921:U:C6	2.24	0.72
29:39:101:LEU:O	29:39:106:ARG:NH1	2.23	0.72
5:42:101:ILE:HD11	5:42:119:LEU:HD23	1.71	0.72
11:2A:22:HIS:HB3	11:2A:29:ILE:HG12	1.71	0.72
22:3K:17:OMG:N2	22:3K:67:A:OP2	2.22	0.72
25:1H:270(I):G:H1	25:1H:270(Q):C:H42	1.36	0.72
25:1H:801:G:OP2	60:1H:3906:HOH:O	2.08	0.72
25:14:990:A:H5'	25:14:990:A:H8	1.55	0.72
25:14:2404:C:O3'	35:35:77:ARG:NH2	2.22	0.72
8:7E:95:VAL:HG12	8:7E:99:GLU:HB2	1.72	0.72
39:75:112:ARG:HD2	39:75:113:LYS:HD2	1.72	0.72
1:13:160:A:H1'	1:13:344:A:C8	2.24	0.71
25:1H:2308:G:N1	25:1H:2311:A:H2	1.84	0.71
32:61:144:VAL:HG13	32:61:145:VAL:HG22	1.70	0.71
39:B8:24:PRO:HD3	39:B8:52:ILE:HD12	1.71	0.71
44:G8:87:LYS:N	44:G8:94:LYS:HG2	2.05	0.71
54:1G:458:C:H2'	54:1G:464:G:H8	1.53	0.71
55:3L:61:G:N2	55:3L:71:C:N3	2.31	0.71
32:61:73:GLU:HG3	32:61:136:VAL:HG23	1.72	0.71
2:12:18:GLY:O	2:12:204:ASN:ND2	2.22	0.71
56:2L:24:C:H2'	56:2L:25:U:H6	1.55	0.71
25:14:1364:G:OP2	47:F5:2:SER:N	2.23	0.71
25:1H:330:A:HO2'	25:1H:331:A:H8	1.36	0.71
54:1G:673:G:H2'	54:1G:674:G:C8	2.25	0.71
25:14:1019:U:H2'	25:14:1020:A:H8	1.54	0.71
25:1H:945:A:OP2	60:1H:3863:HOH:O	2.06	0.71
25:1H:1782:C:OP1	60:1H:3523:HOH:O	2.08	0.71
2:12:42:ILE:HD11	2:12:202:PRO:HB2	1.72	0.71
25:14:1013:C:H42	25:14:1149:G:H1	1.36	0.71
25:1H:1728:G:H3'	25:1H:1729:A:H5"	1.72	0.71
25:14:141:A:H8	25:14:1595:G:H21	1.38	0.71
25:14:2393:A:H5'	35:35:62:LEU:HD13	1.72	0.71
27:19:242:ARG:O	60:19:307:HOH:O	2.06	0.71
35:35:101:VAL:HA	35:35:105:LEU:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:58:58:ASP:N	33:58:58:ASP:OD1	2.13	0.71
3:22:114:PRO:O	3:22:118:GLN:NE2	2.23	0.71
13:4A:94:ARG:HH22	19:AA:78:ARG:HH21	1.38	0.71
25:14:1019:U:H3	25:14:1142(A):A:H62	1.36	0.71
25:14:2074:U:OP1	60:14:3408:HOH:O	2.07	0.71
26:1J:66:A:N6	26:1J:108:C:OP2	2.24	0.71
14:5I:3:ARG:HD3	14:5I:6:LEU:HD12	1.72	0.71
25:1H:2123:G:H22	25:1H:2175:C:H42	1.38	0.71
27:11:108:PRO:HG3	27:11:143:HIS:CE1	2.26	0.71
45:H8:165:VAL:HB	45:H8:167:PRO:HD3	1.70	0.71
39:75:24:PRO:HD3	39:75:52:ILE:HD12	1.73	0.71
1:13:272:C:H2'	1:13:273:A:C8	2.26	0.71
1:13:1368:G:H5"	9:8E:112:LYS:HB3	1.73	0.71
25:1H:1063:G:N2	25:1H:1076:C:O2	2.23	0.71
25:1H:1405:U:H2'	25:1H:1406:U:C6	2.25	0.71
25:14:900:A:H3'	25:14:901:A:H8	1.55	0.71
25:14:1378:A:O2'	25:14:1380:G:N7	2.19	0.71
12:3I:60:LEU:HB2	12:3I:64:TYR:HB2	1.72	0.71
22:1K:47:U:H3	22:1K:53:A:H61	1.37	0.71
28:21:36:ARG:NH2	28:21:88:GLY:O	2.23	0.71
54:1G:1311:G:N2	54:1G:1326:C:O2	2.20	0.71
4:32:60:GLU:HG2	4:32:202:LEU:HB2	1.72	0.71
4:32:111:ALA:HB1	4:32:116:GLN:HG2	1.72	0.71
51:J5:49:CYS:SG	51:J5:50:GLY:N	2.63	0.71
9:8E:121:ARG:NH1	9:8E:122:ALA:O	2.24	0.70
23:2K:54:G:H2'	23:2K:55:5MU:H6	1.56	0.70
33:58:15:LEU:HB2	33:58:134:ARG:HB3	1.73	0.70
50:M8:37:SER:OG	50:M8:42:PHE:O	2.08	0.70
2:12:208:ILE:HA	2:12:211:ILE:HD12	1.73	0.70
25:14:1298:C:OP2	60:14:3434:HOH:O	2.08	0.70
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.73	0.70
18:9I:53:ARG:HA	18:9I:56:THR:HG23	1.73	0.70
54:1G:803:G:OP1	60:1G:1710:HOH:O	2.08	0.70
54:1G:888:G:O2'	54:1G:1488:G:O2'	2.07	0.70
2:12:8:LYS:HB2	2:12:217:ARG:HH21	1.56	0.70
25:14:882:G:N2	25:14:894:C:N3	2.34	0.70
25:14:1639:U:OP2	60:14:3432:HOH:O	2.09	0.70
25:14:1839:G:OP2	60:14:3700:HOH:O	2.08	0.70
34:25:7:TYR:CE1	34:25:20:MET:HE3	2.25	0.70
25:1H:1479:G:N7	25:1H:1510:A:N6	2.39	0.70
30:41:25:TYR:CD2	30:41:31:VAL:HG12	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:55:ASN:O	28:29:57:LYS:N	2.24	0.70
29:39:40:GLN:HE22	29:39:182:ASN:HB2	1.55	0.70
32:69:130:TYR:HB3	32:69:136:VAL:HG13	1.72	0.70
37:55:33:ARG:HG3	37:55:115:GLU:HG2	1.73	0.70
25:1H:900:A:H3'	25:1H:901:A:H8	1.54	0.70
25:1H:1800:C:OP2	27:11:183:ARG:NH2	2.24	0.70
42:E8:88:ARG:HB3	42:E8:92:ARG:HB3	1.72	0.70
54:1G:1157:A:N6	54:1G:1178:G:H21	1.88	0.70
25:14:1022:G:O2'	25:14:1023:U:OP2	2.07	0.70
25:14:1332:G:H22	25:14:1609:A:HO2'	1.37	0.70
43:B5:32:PRO:HA	43:B5:77:LYS:HB2	1.73	0.70
25:1H:452:G:OP2	60:1H:3692:HOH:O	2.08	0.70
54:1G:1127:G:H1	54:1G:1144:G:H1	1.38	0.70
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.73	0.70
25:1H:357:A:H2'	25:1H:358:U:H6	1.57	0.70
38:A8:26:LEU:HD12	38:A8:39:ILE:HD11	1.72	0.70
54:1G:750:G:N3	15:6A:23:GLY:HA3	2.07	0.70
6:52:2:ARG:HD2	6:52:92:LYS:HZ1	1.57	0.70
1:13:1497:G:H2'	1:13:1498:U:H5'	1.72	0.70
27:11:26:LYS:NZ	27:11:84:TYR:HB3	2.07	0.70
54:1G:1239:A:H4'	54:1G:1240:U:H5"	1.73	0.70
25:14:61:G:OP2	48:G5:54:LYS:NZ	2.24	0.70
38:65:3:ARG:HH21	38:65:4:LEU:HD12	1.56	0.70
25:1H:2655:G:O2'	25:1H:2664:G:O6	2.09	0.70
54:1G:516:U:O4	60:1G:1739:HOH:O	2.09	0.70
33:15:136:GLU:O	33:15:137:LYS:NZ	2.23	0.70
2:1E:63:MET:HB3	2:1E:225:ALA:HB1	1.74	0.70
25:1H:1828:G:OP1	60:1H:3742:HOH:O	2.10	0.70
25:1H:2439:A:O2'	25:1H:2440:C:OP2	2.10	0.70
46:I8:38:VAL:HG12	46:I8:40:GLN:HG2	1.72	0.70
54:1G:352:C:OP2	60:1G:1727:HOH:O	2.09	0.70
54:1G:1227:A:OP1	19:AA:80:TYR:OH	2.10	0.70
10:1A:34:VAL:HG22	10:1A:74:ILE:HG22	1.73	0.70
55:3L:2:G:N2	55:3L:81:C:O2	2.24	0.70
28:29:4:ILE:HD11	28:29:28:ALA:HB1	1.74	0.70
1:13:157:G:H1	1:13:164:U:H3	1.40	0.70
1:13:437:U:H5'	4:3E:155:LEU:HD11	1.73	0.70
2:1E:21:ARG:HB2	2:1E:39:ILE:HA	1.74	0.70
25:1H:945:A:OP1	60:1H:3869:HOH:O	2.10	0.70
47:J8:85:LEU:N	47:J8:86:SER:HB2	2.07	0.70
28:29:8:LYS:HG2	28:29:192:ASN:HA	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:88:ILE:HG22	41:95:49:THR:HA	1.74	0.70
51:J5:41:PRO:O	51:J5:44:THR:OG1	2.08	0.70
1:13:1062:U:H2'	1:13:1063:C:C6	2.27	0.69
25:14:1934:C:N4	25:14:1964:G:O6	2.19	0.69
42:A5:65:LEU:HD13	42:A5:68:ARG:HD3	1.74	0.69
1:13:1510:U:H2'	1:13:1511:G:C8	2.27	0.69
2:1E:115:LEU:HD13	2:1E:145:LEU:HB3	1.73	0.69
25:1H:1828:G:OP1	60:1H:3745:HOH:O	2.10	0.69
25:1H:2592:G:OP1	60:1H:3759:HOH:O	2.10	0.69
4:32:49:ARG:HH21	4:32:50:ARG:HG3	1.57	0.69
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.10	0.69
25:14:2787:C:H1'	28:29:62:PRO:HB3	1.73	0.69
1:13:1435:G:H2'	1:13:1436:U:C6	2.27	0.69
30:41:35:GLU:HG3	30:41:36:LYS:HB2	1.74	0.69
40:C8:87:GLY:C	40:C8:89:GLU:H	2.00	0.69
54:1G:564:C:O2'	8:72:91:ARG:NH2	2.21	0.69
54:1G:1288:A:O3'	21:1B:10:ARG:NH2	2.25	0.69
5:42:145:LYS:O	5:42:149:GLU:N	2.24	0.69
25:14:987:G:O2'	25:14:1000:A:N3	2.25	0.69
45:D5:53:ILE:HG22	45:D5:71:VAL:HG13	1.74	0.69
27:11:85:ASP:HB2	27:11:92:ILE:HG12	1.73	0.69
54:1G:963:G:H21	10:1A:55:LYS:NZ	1.90	0.69
2:12:103:THR:HG23	2:12:176:GLU:HB3	1.74	0.69
2:12:178:ARG:NH1	2:12:196:LEU:O	2.22	0.69
25:14:1048:A:H2	25:14:1112:G:H21	1.40	0.69
35:35:30:THR:HG21	35:35:35:HIS:N	2.07	0.69
36:45:21:THR:HG22	36:45:23:GLY:HA3	1.74	0.69
35:78:60:MET:HA	53:Q8:13:ARG:NH1	2.08	0.69
25:14:1252:G:N1	40:85:37:GLU:OE2	2.25	0.69
1:13:1263:C:H2'	1:13:1264:C:H6	1.58	0.69
22:1K:27:A:N6	22:1K:45:C:O2	2.20	0.69
25:1H:2257:U:O2'	25:1H:2258:C:H5'	1.93	0.69
25:1H:2495:G:H4'	36:88:81:VAL:HB	1.74	0.69
26:16:44:G:H1'	26:16:47:C:H42	1.56	0.69
54:1G:979:C:H3'	54:1G:980:C:H5"	1.74	0.69
29:39:7:TYR:HE2	29:39:10:PRO:HG3	1.57	0.69
33:15:96:GLU:OE1	33:15:96:GLU:N	2.21	0.69
35:35:14:LYS:O	35:35:16:ARG:N	2.25	0.69
1:13:262:A:H2'	1:13:263:A:C8	2.28	0.69
1:13:838:G:H1	1:13:848:C:N4	1.91	0.69
19:AI:40:ILE:HG12	19:AI:41:VAL:HG13	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1520:U:H2'	25:1H:1521:G:O4'	1.93	0.69
25:1H:2414:G:H21	35:78:67:MET:HE3	1.57	0.69
54:1G:664:G:H22	54:1G:741:G:H1	1.41	0.69
54:1G:738:C:OP1	6:52:92:LYS:NZ	2.24	0.69
54:1G:1226:C:H2'	13:4A:103:THR:HB	1.75	0.69
54:1G:1352:C:H42	54:1G:1370:G:H1	1.40	0.69
25:14:1579:A:H2'	25:14:1580:A:C8	2.28	0.69
41:95:21:ARG:HB3	41:95:91:TYR:HE1	1.57	0.69
1:13:1455:G:OP1	20:BI:35:THR:OG1	2.07	0.69
2:1E:19:HIS:NE2	2:1E:206:ASP:OD2	2.26	0.69
17:8I:67:LYS:HA	17:8I:70:ARG:HH12	1.56	0.69
22:3K:7:G:N2	22:3K:76:C:O2	2.25	0.69
25:1H:517:C:OP1	51:N8:16:ARG:NH2	2.26	0.69
25:1H:1780:A:OP1	60:1H:3523:HOH:O	2.10	0.69
25:1H:1784:A:H5"	60:1H:3731:HOH:O	1.92	0.69
37:98:51:LEU:HD22	37:98:66:VAL:HG13	1.74	0.69
54:1G:1095:U:OP1	54:1G:1108:G:N1	2.25	0.69
9:82:43:ALA:HA	9:82:74:ILE:HD13	1.75	0.69
25:14:2150:U:H2'	25:14:2151:G:H8	1.57	0.69
35:35:47:ASP:OD2	35:35:49:ARG:NE	2.25	0.69
43:B5:65:ARG:HB3	43:B5:70:LEU:HA	1.75	0.69
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.26	0.69
25:1H:1464:C:H2'	25:1H:1465:G:H8	1.56	0.69
25:1H:1509:C:H2'	25:1H:1511:A:H8	1.55	0.69
25:1H:1871:A:H2'	25:1H:1872:A:C8	2.27	0.69
48:K8:48:HIS:H	48:K8:50:ILE:HD11	1.56	0.69
54:1G:539:A:H2'	54:1G:540:G:C8	2.28	0.69
25:14:739:G:OP1	60:14:3630:HOH:O	2.11	0.69
26:1J:18:G:H1	26:1J:65:C:N4	1.89	0.69
44:C5:85:VAL:HG22	44:C5:98:VAL:HB	1.74	0.69
4:3E:84:LYS:N	4:3E:85:LYS:HB3	2.07	0.69
54:1G:1449:C:H3'	54:1G:1450:U:H4'	1.74	0.69
21:1B:6:ARG:HG2	21:1B:15:ARG:HH21	1.57	0.69
1:13:664:G:N2	1:13:741:G:H1	1.90	0.68
1:13:1145:C:H4'	1:13:1146:A:H8	1.57	0.68
25:1H:84:A:OP2	44:G8:8:LYS:NZ	2.23	0.68
25:1H:1496:A:H8	25:1H:1577:C:HO2'	1.39	0.68
54:1G:1238:A:H62	54:1G:1301:U:H3	1.41	0.68
4:32:119:GLN:O	4:32:123:HIS:ND1	2.23	0.68
25:14:2264:C:N4	46:E5:15:ASP:OD2	2.23	0.68
25:14:2343:C:HO2'	25:14:2373:G:HO2'	1.39	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:88:ARG:NH1	42:A5:94:ASP:OD1	2.25	0.68
1:13:376:G:O3'	16:7I:5:ARG:NH1	2.27	0.68
1:13:1292:U:H2'	1:13:1293:G:C8	2.27	0.68
25:1H:1357:U:OP2	60:1H:3803:HOH:O	2.11	0.68
27:11:93:ALA:HB3	27:11:105:ILE:HG22	1.75	0.68
43:F8:2:LYS:HD3	48:K8:26:ARG:HH21	1.58	0.68
54:1G:1401:G:OP1	57:4L:18:G:O2'	2.10	0.68
25:14:1614:A:H61	42:A5:88:ARG:H	1.39	0.68
22:1K:85:A:H1'	25:1H:2583:G:H21	1.59	0.68
25:1H:1057:A:O2'	25:1H:1058:U:O4'	2.11	0.68
25:1H:1968:G:OP1	60:1H:3762:HOH:O	2.11	0.68
36:88:14:ARG:HG2	36:88:41:TRP:HH2	1.58	0.68
54:1G:1206:G:O4'	3:22:194:GLY:HA2	1.93	0.68
6:52:23:LYS:HA	6:52:26:ILE:HD12	1.74	0.68
8:72:97:VAL:HA	8:72:100:ILE:HD11	1.75	0.68
25:14:1599:C:H2'	25:14:1600:C:H6	1.58	0.68
25:14:2468:G:N2	25:14:2481:G:O2'	2.25	0.68
40:85:83:LEU:HD12	40:85:88:ILE:HD11	1.74	0.68
46:E5:12:ASN:HA	46:E5:14:ARG:HH21	1.57	0.68
25:1H:2096:U:H3	25:1H:2193:G:H1	1.42	0.68
26:16:7:G:H4'	38:A8:29:PHE:HD2	1.55	0.68
41:D8:1:MET:HE2	41:D8:43:GLU:HG2	1.74	0.68
2:12:32:ILE:HD11	2:12:40:HIS:HB3	1.74	0.68
2:12:97:TRP:HZ3	2:12:99:GLY:HA2	1.58	0.68
55:1L:11:C:H2'	55:1L:12:C:H6	1.59	0.68
55:3L:24:G:H2'	55:3L:25:G:C8	2.27	0.68
1:13:674:G:H2'	1:13:675:A:H8	1.58	0.68
25:1H:2795:G:N2	25:1H:2799:A:OP2	2.26	0.68
30:41:67:LYS:HE2	50:M8:6:HIS:CE1	2.28	0.68
51:N8:42:PRO:O	51:N8:44:THR:OG1	2.09	0.68
54:1G:957:U:H2'	54:1G:959:A:OP2	1.94	0.68
25:14:2649:U:H3	25:14:2671:A:H61	1.41	0.68
1:13:611:A:H61	1:13:629:G:H1	1.41	0.68
5:4E:81:GLU:HG2	5:4E:90:VAL:HG23	1.76	0.68
10:1I:34:VAL:HG12	10:1I:74:ILE:HG23	1.74	0.68
25:1H:458:G:C8	52:P8:37:LYS:HD2	2.29	0.68
54:1G:538:G:H5"	12:3A:114:LYS:HB2	1.76	0.68
3:22:95:THR:HG22	3:22:97:LYS:HG2	1.74	0.68
25:14:2032:G:H21	28:29:146:THR:HG23	1.58	0.68
29:39:181:LEU:HD21	29:39:186:ILE:HD11	1.76	0.68
41:95:48:GLY:HA3	41:95:51:VAL:C	2.18	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1339:G:H21	25:1H:1603:A:H1'	1.58	0.68
49:L8:26:LEU:HB2	49:L8:28:LEU:HD12	1.75	0.68
4:32:173:TRP:CD1	4:32:174:LEU:HG	2.29	0.68
6:52:74:ASP:OD1	6:52:74:ASP:N	2.23	0.68
1:13:559:A:H4'	1:13:560:U:H5"	1.75	0.68
25:1H:1464:C:H2'	25:1H:1465:G:C8	2.29	0.68
42:E8:92:ARG:NH1	42:E8:94:ASP:OD1	2.27	0.68
55:1L:31:G:H1	55:1L:41:C:H42	1.42	0.68
25:14:154:G:O6	25:14:172:C:N4	2.25	0.68
1:13:1129:C:H4'	1:13:1130:A:H5'	1.76	0.68
1:13:1396:A:H4'	1:13:1397:C:H5"	1.75	0.68
10:1I:48:THR:HG23	10:1I:62:HIS:CD2	2.28	0.68
22:3K:51:C:H3'	22:3K:52:G:O4'	1.94	0.68
25:1H:446:G:OP2	60:1H:3572:HOH:O	2.11	0.68
29:31:6:VAL:HG21	29:31:119:ARG:HB2	1.76	0.68
35:78:144:GLU:OE2	35:78:144:GLU:N	2.27	0.68
16:7A:11:SER:HB2	16:7A:14:ASN:HB3	1.75	0.68
26:1J:44:G:H5"	26:1J:45:A:OP1	1.94	0.68
34:25:24:VAL:HA	34:25:39:ILE:HG22	1.76	0.68
44:C5:42:VAL:O	44:C5:65:ALA:N	2.26	0.68
53:M5:22:VAL:HG12	53:M5:50:LEU:HD23	1.76	0.68
10:1I:38:ILE:HG23	10:1I:71:LEU:HB3	1.75	0.68
47:J8:83:GLU:HG2	47:J8:84:GLY:O	1.93	0.68
7:62:143:ARG:NH1	55:3L:42:U:O3'	2.27	0.68
9:82:118:LYS:HB2	9:82:121:ARG:HB3	1.76	0.68
45:D5:4:ARG:HA	45:D5:58:VAL:HB	1.75	0.68
1:13:637:G:H2'	1:13:638:G:H8	1.59	0.67
1:13:1149:C:H2'	1:13:1150:U:H6	1.59	0.67
1:13:1448:C:H42	1:13:1455:G:H1	1.41	0.67
25:1H:2392:A:H2	25:1H:2424:C:H42	1.43	0.67
32:61:78:THR:HB	32:61:141:LYS:HD2	1.75	0.67
54:1G:407:G:O6	54:1G:435:C:N4	2.27	0.67
4:32:20:TYR:HA	4:32:26:CYS:HB3	1.74	0.67
46:E5:49:LYS:HG3	46:E5:80:HIS:HB3	1.74	0.67
25:1H:1055:G:H1	25:1H:1104:C:H42	1.42	0.67
25:1H:2212:A:H1'	25:1H:2215:G:C5	2.29	0.67
29:31:32:LEU:HD21	29:31:105:VAL:HG13	1.76	0.67
19:AA:11:VAL:HG22	19:AA:12:ASP:H	1.60	0.67
25:14:1024:G:H3'	25:14:1025:G:H5"	1.76	0.67
30:49:111:LEU:HD11	30:49:120:LEU:HD21	1.75	0.67
1:13:352:C:O2'	1:13:354:G:OP1	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:486:U:H2'	1:13:487:A:C8	2.30	0.67
1:13:517:G:N1	1:13:533:A:OP2	2.27	0.67
16:7I:47:ASP:N	16:7I:47:ASP:OD1	2.27	0.67
22:1K:35:QUO:O14	24:4K:19[A]:A:N1	2.27	0.67
25:1H:270(L):U:C2	32:61:50:ARG:HG3	2.29	0.67
25:1H:469:G:O6	52:P8:37:LYS:NZ	2.28	0.67
25:14:1537:C:H2'	25:14:1538:G:C8	2.29	0.67
25:1H:1525:G:H2'	25:1H:1526:G:C8	2.28	0.67
25:1H:2849:U:H4'	25:1H:2868:A:C2	2.29	0.67
41:D8:3:ALA:HB1	41:D8:38:LEU:HD11	1.75	0.67
51:N8:40:LYS:HG2	51:N8:47:PRO:HD2	1.76	0.67
54:1G:261:U:OP2	20:BA:79:ARG:NH2	2.28	0.67
16:7I:53:VAL:HG13	16:7I:79:VAL:HG22	1.77	0.67
23:2K:62:C:H2'	23:2K:63:C:H6	1.58	0.67
25:1H:176:G:O2'	25:1H:177:G:H5'	1.94	0.67
25:1H:1997:G:OP2	60:1H:3781:HOH:O	2.13	0.67
40:C8:95:LEU:C	40:C8:97:ASP:H	2.03	0.67
46:I8:23:VAL:HA	46:I8:38:VAL:HG22	1.75	0.67
47:J8:18:ILE:HG12	47:J8:37:ILE:HG12	1.77	0.67
54:1G:1435:G:H2'	54:1G:1436:U:C6	2.29	0.67
12:3A:27:LEU:HB2	12:3A:33:ARG:HB2	1.77	0.67
32:69:113:ARG:HB3	32:69:131:LYS:HB2	1.75	0.67
45:D5:174:VAL:HG13	45:D5:177:PRO:HG2	1.77	0.67
1:13:1003:G:N2	1:13:1037:C:O2	2.27	0.67
2:1E:166:ASP:HB3	2:1E:169:LYS:HB2	1.77	0.67
5:4E:45:PHE:CE2	5:4E:47:LYS:HD2	2.30	0.67
25:1H:1533:C:H2'	25:1H:1534:G:C2	2.30	0.67
25:1H:2406:U:OP1	60:1H:3594:HOH:O	2.11	0.67
25:1H:2577:A:H5"	25:1H:2578:G:H5'	1.77	0.67
26:16:15:A:H5'	26:16:16:G:C8	2.29	0.67
5:42:31:LEU:HD22	5:42:45:PHE:HB2	1.76	0.67
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.77	0.67
25:14:178:G:N7	60:14:3799:HOH:O	2.28	0.67
25:14:1900:A:OP2	60:14:3507:HOH:O	2.11	0.67
25:14:2439:A:H5'	25:14:2439:A:C8	2.30	0.67
31:59:4:ILE:HG21	31:59:54:ARG:HH12	1.59	0.67
38:65:102:ALA:HA	38:65:105:ALA:HB3	1.76	0.67
1:13:1004:A:O5'	1:13:1025:U:N3	2.25	0.67
25:1H:277:C:H3'	25:1H:278:A:O4'	1.94	0.67
25:1H:1509:C:H3'	25:1H:1510:A:H5"	1.77	0.67
27:11:17:THR:HG22	27:11:204:ILE:HA	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:33:LEU:H	27:11:33:LEU:HD12	1.59	0.67
32:61:69:LYS:HA	32:61:136:VAL:HB	1.76	0.67
45:H8:7:ALA:HB2	45:H8:59:LEU:HD22	1.76	0.67
54:1G:940:C:H2'	54:1G:941:G:H8	1.60	0.67
54:1G:1157:A:H61	54:1G:1178:G:H21	1.43	0.67
25:14:2134:A:OP2	25:14:2157:G:N2	2.25	0.67
41:95:35:LEU:O	41:95:37:VAL:HG22	1.95	0.67
5:4E:12:LEU:HB3	5:4E:31:LEU:HB2	1.77	0.67
25:1H:2147:G:H2'	25:1H:2148:G:H4'	1.77	0.67
25:1H:2287:A:N6	25:1H:2344:U:H3	1.92	0.67
25:1H:2452:C:OP1	60:1H:4006:HOH:O	2.12	0.67
4:32:18:LYS:NZ	4:32:27:TYR:O	2.27	0.67
9:82:9:ARG:HG2	9:82:14:VAL:HG22	1.76	0.67
21:1B:9:ARG:HG3	21:1B:10:ARG:N	2.08	0.67
25:14:140:A:H8	25:14:1408:C:HO2'	1.41	0.67
25:14:540:G:H1	25:14:553:U:H3	1.41	0.67
28:29:37:ARG:HE	28:29:42:ASP:CG	2.02	0.67
1:13:354:G:N7	60:13:1850:HOH:O	2.27	0.67
25:1H:994:C:OP2	40:C8:54:LYS:NZ	2.28	0.67
54:1G:1300:G:O2'	54:1G:1301:U:O5'	2.12	0.67
25:14:2647:U:H3	25:14:2673:G:H1	1.42	0.67
25:1H:1265:A:H3'	51:N8:19:ARG:NH1	2.10	0.67
26:16:25:A:OP2	60:16:301:HOH:O	2.13	0.67
33:58:12:ARG:HH21	33:58:14:VAL:HG22	1.60	0.67
19:AA:18:LYS:HA	19:AA:21:GLU:HG2	1.77	0.67
19:AA:60:VAL:HG21	19:AA:74:PHE:HB3	1.77	0.67
27:19:255:LYS:CE	27:19:255:LYS:H	2.08	0.67
31:59:27:LYS:HA	31:59:32:GLU:HB3	1.76	0.67
1:13:1160:G:H1	1:13:1177:G:N2	1.93	0.66
18:9I:59:SER:OG	18:9I:60:ALA:N	2.27	0.66
25:1H:32:C:O2'	25:1H:33:U:H5'	1.95	0.66
25:1H:2314:C:H2'	25:1H:2315:G:H8	1.60	0.66
43:F8:9:LEU:O	48:K8:36:ARG:HD2	1.94	0.66
53:Q8:53:PRO:HA	53:Q8:56:GLU:HB2	1.75	0.66
25:14:607:U:OP1	29:39:102:PRO:HA	1.94	0.66
28:29:91:VAL:HB	28:29:95:ILE:HD11	1.77	0.66
29:39:79:GLY:HA2	29:39:86:GLY:HA2	1.75	0.66
35:35:50:ARG:HB3	35:35:50:ARG:HH11	1.58	0.66
13:4I:3:ARG:HG2	13:4I:9:ILE:HG12	1.77	0.66
27:11:112:GLN:N	27:11:115:GLN:OE1	2.25	0.66
56:2L:41:C:H2'	56:2L:42:C:H6	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:974:G:O2'	25:14:975:G:N7	2.24	0.66
25:14:2287:A:H62	25:14:2344:U:H3	1.43	0.66
32:69:14:ASP:OD1	32:69:15:VAL:N	2.29	0.66
45:D5:17:ALA:HA	45:D5:20:ARG:HD2	1.75	0.66
1:13:859:A:H2'	1:13:860:A:H8	1.59	0.66
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.77	0.66
25:1H:1900:A:H5'	25:1H:1900:A:C8	2.30	0.66
26:16:7:G:O5'	38:A8:29:PHE:HE2	1.79	0.66
25:14:1111:A:H4'	31:59:3:ARG:HD3	1.77	0.66
25:14:1771:C:HO2'	25:14:1786:A:H8	1.42	0.66
25:14:1972:A:OP2	60:14:3448:HOH:O	2.13	0.66
26:1J:40:U:O4	50:I5:1:MET:N	2.28	0.66
31:59:121:ILE:HG23	31:59:133:VAL:HG13	1.77	0.66
35:35:80:TYR:HA	35:35:111:ARG:HB2	1.78	0.66
1:13:674:G:H2'	1:13:675:A:C8	2.30	0.66
25:1H:1425:G:O6	60:1H:3930:HOH:O	2.08	0.66
54:1G:1224:G:N2	54:1G:1322:C:H4'	2.10	0.66
10:1A:3:LYS:HD2	10:1A:77:PRO:HG3	1.78	0.66
25:14:2287:A:N6	25:14:2344:U:H3	1.94	0.66
6:5E:18:GLN:HA	6:5E:21:LEU:HB2	1.77	0.66
25:1H:2843:G:N7	60:1H:3848:HOH:O	2.26	0.66
54:1G:576:G:N2	54:1G:759:A:OP1	2.25	0.66
8:72:102:ARG:O	8:72:102:ARG:NE	2.29	0.66
25:14:321:G:OP1	29:39:135:LYS:NZ	2.22	0.66
1:13:352:C:OP2	60:13:1849:HOH:O	2.13	0.66
1:13:422:C:O2	1:13:423:G:N2	2.28	0.66
14:5I:6:LEU:HB3	14:5I:23:ARG:NH2	2.11	0.66
25:1H:796:C:H2'	25:1H:797:C:C6	2.29	0.66
25:1H:1189:A:OP2	60:1H:3680:HOH:O	2.13	0.66
35:78:15:ARG:HA	35:78:16:ARG:HB2	1.78	0.66
48:K8:50:ILE:HD12	48:K8:51:ARG:H	1.60	0.66
12:3A:58:VAL:O	12:3A:65:GLU:HA	1.95	0.66
25:14:2037:G:H2'	25:14:2038:G:C8	2.31	0.66
44:C5:43:ASN:HB3	44:C5:64:GLU:HA	1.77	0.66
27:11:16:MET:HE3	27:11:211:ARG:HD2	1.76	0.66
39:B8:21:GLU:OE1	39:B8:91:ARG:NH2	2.29	0.66
3:22:11:ARG:NH2	3:22:177:THR:O	2.26	0.66
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.61	0.66
25:14:39:C:H2'	25:14:40:C:C6	2.30	0.66
25:14:446:G:OP2	60:14:3686:HOH:O	2.12	0.66
26:1J:14:U:HO2'	26:1J:107:U:HO2'	1.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:35:30:THR:HG21	35:35:35:HIS:H	1.60	0.66
2:1E:219:VAL:HA	2:1E:222:ILE:HD12	1.78	0.66
25:1H:882:G:O2'	25:1H:883:G:N7	2.28	0.66
25:1H:2270:G:OP2	60:1H:3948:HOH:O	2.14	0.66
40:C8:88:ILE:HD13	41:D8:48:GLY:HA2	1.76	0.66
54:1G:587:G:N2	54:1G:754:C:OP2	2.29	0.66
54:1G:1326:C:H2'	54:1G:1327:C:H6	1.60	0.66
55:3L:8:U:H3	55:3L:14:A:H62	1.44	0.66
25:14:1796:U:H2'	25:14:1797:C:C6	2.31	0.66
27:19:69:ARG:NH2	27:19:128:GLY:O	2.28	0.66
29:39:188:ARG:HA	35:35:3:LEU:HD11	1.78	0.66
34:25:2:ILE:HD12	34:25:6:THR:HG21	1.78	0.66
35:35:85:LEU:HA	35:35:88:LEU:HB3	1.78	0.66
39:75:26:ASP:O	39:75:49:VAL:HG22	1.95	0.66
1:13:1118:C:H1'	1:13:1179:A:C4	2.31	0.66
1:13:1240:U:OP2	7:6E:116:ALA:N	2.29	0.66
25:1H:882:G:N2	25:1H:895:U:O4	2.29	0.66
31:51:79:VAL:O	31:51:80:SER:OG	2.13	0.66
43:F8:1:MET:C	43:F8:3:THR:H	2.03	0.66
26:1J:7:G:H1	26:1J:113:C:H42	1.43	0.66
1:13:318:G:H1	1:13:335:C:H42	1.42	0.66
4:3E:199:ASN:HB3	4:3E:202:LEU:HD12	1.76	0.66
25:1H:2504:U:OP2	60:1H:3903:HOH:O	2.12	0.66
39:B8:77:PRO:HG2	39:B8:80:SER:HB2	1.78	0.66
54:1G:157:G:H1	54:1G:164:U:H3	1.42	0.66
25:14:972:G:OP2	25:14:974:G:H5"	1.96	0.66
25:14:2712(A):A:OP2	60:14:3467:HOH:O	2.14	0.66
53:M5:54:GLU:HA	53:M5:54:GLU:OE2	1.95	0.66
25:1H:1059:G:O6	25:1H:1079:C:N4	2.29	0.65
25:1H:1257:C:H4'	29:31:83:PHE:CD1	2.31	0.65
25:1H:1264:G:OP1	51:N8:19:ARG:NH2	2.19	0.65
25:1H:2635:C:H5"	28:21:79:ARG:CD	2.26	0.65
54:1G:536:C:OP2	60:1G:1743:HOH:O	2.14	0.65
54:1G:728:A:H2'	54:1G:729:A:C8	2.31	0.65
20:BA:67:ALA:HA	20:BA:73:HIS:H	1.60	0.65
56:2L:10:G:N2	56:2L:27:G:H1'	2.12	0.65
55:3L:12:C:H3'	55:3L:13:G:C8	2.31	0.65
25:14:21:A:H61	25:14:519:U:H3	1.43	0.65
25:14:330:A:H2	25:14:1210:A:HO2'	1.44	0.65
25:14:1188:U:O2'	25:14:1189:A:H5'	1.95	0.65
25:14:1416:G:O2'	25:14:1417:C:O5'	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1782:C:OP1	60:14:3402:HOH:O	2.14	0.65
25:14:1942:C:OP2	25:14:1943:U:O2'	2.11	0.65
25:14:2050:C:H1'	28:29:156:MET:HE2	1.78	0.65
27:19:12:SER:HB2	27:19:208:LYS:HB3	1.78	0.65
2:1E:51:LEU:HG	2:1E:201:ILE:HD12	1.78	0.65
25:1H:2820:A:O2'	25:1H:2821:A:OP1	2.14	0.65
54:1G:452:A:H1'	16:7A:72:ARG:HH22	1.61	0.65
5:42:91:LEU:HD12	5:42:120:THR:HG22	1.76	0.65
55:3L:49:A:H1'	55:3L:52:G:H22	1.61	0.65
25:14:857:C:H4'	46:E5:23:VAL:HG21	1.78	0.65
25:14:1665:A:N7	60:14:3534:HOH:O	2.29	0.65
29:39:123:LEU:O	29:39:125:LEU:N	2.29	0.65
1:13:67:C:H2'	1:13:68:G:C8	2.31	0.65
29:31:6:VAL:N	29:31:24:LEU:O	2.29	0.65
36:88:37:LEU:HD11	36:88:130:LYS:HG3	1.77	0.65
13:4A:37:THR:HG21	13:4A:56:LEU:HD23	1.77	0.65
1:13:411:A:H62	1:13:413:G:H21	1.44	0.65
8:7E:11:THR:O	8:7E:15:ASN:ND2	2.27	0.65
22:1K:25:G:H2'	22:1K:26:G:H8	1.61	0.65
25:1H:2168:G:N2	25:1H:2170:A:H62	1.95	0.65
28:21:128:SER:OG	28:21:129:HIS:N	2.27	0.65
3:22:134:ILE:HG23	3:22:151:VAL:HB	1.77	0.65
25:14:2343:C:O2'	25:14:2373:G:O2'	2.12	0.65
48:G5:17:SER:N	48:G5:20:GLU:OE1	2.24	0.65
25:1H:654(B):C:H2'	25:1H:654(C):G:H8	1.60	0.65
25:1H:1590:U:H2'	25:1H:1591:G:C8	2.30	0.65
35:78:88:LEU:HD12	35:78:95:VAL:HG11	1.77	0.65
45:H8:143:GLY:HA2	45:H8:144:LEU:HB2	1.76	0.65
54:1G:60:A:N6	54:1G:110:C:N3	2.45	0.65
56:2L:21:H2U:O2	56:2L:21:H2U:H2'	1.96	0.65
25:14:1331:A:HO2'	25:14:1332:G:H8	1.44	0.65
1:13:446:G:O6	60:13:1891:HOH:O	2.10	0.65
1:13:450:G:OP1	16:7I:43:LYS:NZ	2.30	0.65
25:1H:567:A:OP1	60:1H:3502:HOH:O	2.14	0.65
25:1H:822:U:OP2	60:1H:3865:HOH:O	2.14	0.65
30:41:64:THR:HG23	30:41:94:LEU:HD13	1.77	0.65
37:98:42:LYS:HA	37:98:45:ARG:HD2	1.77	0.65
37:98:53:HIS:ND1	37:98:94:TYR:OH	2.28	0.65
39:B8:110:ILE:HG13	39:B8:111:ARG:HD3	1.78	0.65
54:1G:1305:G:H22	54:1G:1331:G:C2'	2.09	0.65
28:29:197:ILE:HD11	28:29:199:ARG:HE	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:E5:18:ALA:HB3	46:E5:20:ARG:HE	1.62	0.65
2:1E:87:ARG:NH2	2:1E:220:ASP:OD1	2.30	0.65
6:5E:97:PHE:HD2	18:9I:31:LEU:HD21	1.62	0.65
25:1H:568:U:O4	60:1H:3678:HOH:O	2.13	0.65
25:1H:950:G:H2'	25:1H:951:C:C6	2.32	0.65
27:11:31:LYS:HE2	27:11:94:LEU:HD11	1.79	0.65
44:G8:40:GLU:N	44:G8:40:GLU:OE2	2.30	0.65
54:1G:371:G:H1	54:1G:390:C:H42	1.43	0.65
54:1G:437:U:H5'	4:32:155:LEU:HD21	1.77	0.65
25:14:1680:U:N3	25:14:1764:G:OP2	2.26	0.65
33:15:15:LEU:HB2	33:15:134:ARG:HG2	1.77	0.65
1:13:510:A:OP2	60:13:1816:HOH:O	2.15	0.65
8:7E:49:GLU:HG2	8:7E:62:TYR:HE1	1.61	0.65
19:AI:36:ARG:NH1	19:AI:52:TYR:O	2.29	0.65
25:1H:1156:A:C8	40:C8:51:LYS:HD2	2.32	0.65
25:1H:2327:A:H2'	25:1H:2328:A:C8	2.32	0.65
29:31:157:VAL:HB	29:31:194:MET:HG2	1.78	0.65
36:88:138:ASP:OD1	45:H8:81:ARG:NH2	2.29	0.65
54:1G:297:G:N2	54:1G:300:A:OP2	2.26	0.65
10:1A:49:VAL:O	10:1A:60:ARG:HB2	1.97	0.65
34:25:63:VAL:HG11	34:25:85:VAL:HG23	1.79	0.65
41:95:85:LYS:CG	41:95:87:HIS:H	2.10	0.65
25:1H:646:A:H2'	25:1H:647:G:O4'	1.97	0.65
25:1H:1786:A:H2	25:1H:2606:C:H1'	1.61	0.65
28:21:105:THR:OG1	28:21:199:ARG:NH2	2.28	0.65
43:F8:26:TYR:O	43:F8:81:VAL:HG12	1.96	0.65
54:1G:1387:G:H2'	54:1G:1388:C:H6	1.62	0.65
13:4A:37:THR:O	13:4A:55:ARG:NE	2.30	0.65
25:14:1532:C:H42	25:14:1539:G:H1	1.43	0.65
11:2I:108:ILE:HG22	18:9I:87:ARG:HA	1.79	0.65
25:1H:1024:G:H3'	25:1H:1025:G:H5"	1.78	0.65
25:1H:2305:A:O2'	30:41:136:ARG:NH1	2.30	0.65
25:14:1614:A:N1	42:A5:91:GLY:HA2	2.12	0.65
25:14:1614:A:H62	42:A5:93:ALA:HB2	1.62	0.65
33:15:18:ALA:HA	33:15:21:LYS:HD2	1.79	0.65
35:35:65:ARG:NH1	35:35:65:ARG:HB2	2.12	0.65
22:1K:85:A:H1'	25:1H:2583:G:N2	2.12	0.64
25:1H:688:U:O4	60:1H:3892:HOH:O	2.08	0.64
25:1H:2781:A:H5"	25:1H:2782:G:H5'	1.80	0.64
39:B8:26:ASP:O	39:B8:49:VAL:HG12	1.96	0.64
45:H8:165:VAL:HB	45:H8:166:SER:HA	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:15:G:H2'	54:1G:16:A:H8	1.62	0.64
54:1G:187:C:H2'	54:1G:188:U:O4'	1.96	0.64
54:1G:438:G:H4'	4:32:123:HIS:CD2	2.33	0.64
54:1G:1115:C:N4	54:1G:1185:G:O6	2.19	0.64
25:14:336:C:H5"	44:C5:6:HIS:HD2	1.60	0.64
25:14:2340:G:O2'	25:14:2341:G:H5'	1.97	0.64
25:14:2880:C:H1'	37:55:92:GLY:HA3	1.80	0.64
28:29:116:VAL:HG23	28:29:120:TRP:HB2	1.80	0.64
34:25:19:ILE:HG22	34:25:43:VAL:HA	1.79	0.64
6:5E:80:ARG:HG3	6:5E:82:ARG:HH11	1.62	0.64
8:7E:83:ILE:HB	8:7E:137:VAL:HG13	1.80	0.64
26:16:8:U:N3	26:16:112:G:O6	2.18	0.64
42:E8:19:LEU:HB3	51:N8:25:LEU:HD11	1.78	0.64
49:L8:12:PRO:HB2	49:L8:20:LYS:HG2	1.80	0.64
50:M8:12:ALA:HB3	50:M8:24:THR:HB	1.79	0.64
3:22:70:VAL:HG12	3:22:72:LYS:H	1.62	0.64
7:62:94:ARG:H	7:62:94:ARG:HD3	1.63	0.64
12:3A:26:ALA:HB1	12:3A:27:LEU:HG	1.79	0.64
25:14:1007:C:OP1	33:15:37:LYS:NZ	2.25	0.64
31:59:10:PRO:HD2	31:59:50:VAL:HG13	1.78	0.64
1:13:964:A:N3	1:13:969:A:O2'	2.28	0.64
3:2E:71:ALA:HB2	3:2E:109:PRO:HB3	1.80	0.64
25:1H:443:A:H1'	25:1H:1201:C:O4'	1.97	0.64
25:1H:1968:G:P	60:1H:3762:HOH:O	2.54	0.64
25:1H:2058:A:N6	60:1H:3514:HOH:O	2.27	0.64
25:1H:2232:U:P	47:J8:40:ARG:HH12	2.20	0.64
33:58:73:THR:HG22	33:58:84:LYS:HG2	1.79	0.64
54:1G:1235:U:O2'	54:1G:1305:G:O5'	2.15	0.64
25:14:1416:G:N2	25:14:1582:C:N3	2.39	0.64
25:1H:729:G:OP2	27:11:13:ARG:NH1	2.30	0.64
25:1H:1359:A:H2'	25:1H:1360:A:H5'	1.80	0.64
30:41:57:ALA:HB2	30:41:90:LEU:HG	1.78	0.64
34:68:21:CYS:HB2	34:68:39:ILE:HD12	1.79	0.64
54:1G:474:G:H2'	54:1G:475:G:C8	2.31	0.64
54:1G:1387:G:H2'	54:1G:1388:C:C6	2.32	0.64
2:12:70:PHE:O	2:12:93:VAL:N	2.29	0.64
25:14:1945:G:H2'	25:14:1946:U:C6	2.32	0.64
28:29:174:ASP:HB3	28:29:183:LEU:HD13	1.80	0.64
50:I5:16:CYS:HA	50:I5:33:VAL:HG13	1.80	0.64
1:13:1029:G:O2'	1:13:1032(A):G:N2	2.31	0.64
2:1E:189:ASP:HB3	2:1E:191:ASP:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:110:PHE:HE1	4:3E:148:VAL:HG23	1.61	0.64
22:3K:18:G:H1'	22:3K:19:C:OP2	1.98	0.64
54:1G:1295:G:O2'	13:4A:14:ARG:NH1	2.30	0.64
2:12:54:THR:HG23	2:12:199:TYR:HB3	1.79	0.64
10:1A:53:PRO:HA	14:5A:42:ILE:HD12	1.79	0.64
25:14:1754:C:OP1	39:75:96:ARG:NH1	2.30	0.64
33:15:61:ARG:HA	33:15:61:ARG:NE	2.13	0.64
34:25:35:VAL:HG11	34:25:103:ALA:HB3	1.80	0.64
40:85:92:ARG:HD2	40:85:95:LEU:HD12	1.79	0.64
40:85:106:PHE:HA	40:85:109:LEU:HD12	1.78	0.64
1:13:624:C:O3'	16:7I:10:GLY:HA2	1.98	0.64
7:6E:69:VAL:HG22	7:6E:135:VAL:HG22	1.80	0.64
11:2I:34:ASP:HB3	11:2I:40:ILE:HD11	1.79	0.64
25:1H:1316:U:H2'	25:1H:1317:A:H8	1.63	0.64
25:1H:2593:U:H2'	25:1H:2594:C:C6	2.33	0.64
25:1H:2611:U:H6	25:1H:2611:U:H5'	1.62	0.64
35:78:86:LYS:HB3	35:78:118:GLY:HA3	1.80	0.64
39:B8:29:ARG:NH1	39:B8:46:GLU:OE2	2.30	0.64
12:3A:26:ALA:HA	12:3A:27:LEU:HD23	1.79	0.64
18:9A:31:LEU:HD23	18:9A:31:LEU:H	1.63	0.64
25:14:1342:A:H2	25:14:1602:U:H3	1.46	0.64
27:19:143:HIS:NE2	27:19:192:THR:OG1	2.30	0.64
31:59:137:ASP:HB3	31:59:140:LYS:HB2	1.80	0.64
43:B5:55:ASN:HB2	43:B5:80:ILE:HG12	1.78	0.64
1:13:342:C:H2'	1:13:343:U:O4'	1.97	0.64
1:13:625:G:H4'	16:7I:16:HIS:CG	2.33	0.64
1:13:1124:G:H5'	10:1I:35:SER:HB2	1.78	0.64
22:1K:13:G:H2'	22:1K:14:A:H8	1.61	0.64
25:1H:1593:G:H2'	25:1H:1594:G:C8	2.32	0.64
42:E8:18:ARG:HD3	42:E8:76:VAL:HG13	1.78	0.64
45:H8:111:VAL:HG11	45:H8:146:ILE:HG12	1.78	0.64
54:1G:411:A:C5	54:1G:413:G:H1'	2.32	0.64
54:1G:600:C:H2'	54:1G:601:C:H6	1.62	0.64
54:1G:1089:G:H1	54:1G:1096:C:H42	1.44	0.64
7:62:149:ARG:HD3	11:2A:59:TYR:CE1	2.33	0.64
31:51:4:ILE:HD12	31:51:6:ARG:HD3	1.80	0.64
44:G8:39:VAL:HB	44:G8:42:VAL:HG21	1.80	0.64
44:G8:94:LYS:HA	44:G8:94:LYS:HZ3	1.62	0.64
45:H8:116:VAL:H	45:H8:174:VAL:HG13	1.61	0.64
54:1G:359:U:H2'	54:1G:360:A:C8	2.33	0.64
54:1G:1368:G:OP1	9:82:111:ARG:NH2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:84:GLU:OE1	2:12:87:ARG:NH2	2.30	0.64
26:1J:39:A:N1	50:I5:1:MET:N	2.44	0.64
46:E5:26:TYR:HB2	46:E5:29:GLN:OE1	1.97	0.64
15:6I:39:LEU:HB3	15:6I:56:LEU:HD12	1.80	0.64
25:1H:2593:U:H2'	25:1H:2594:C:H6	1.61	0.64
30:41:73:ALA:HB3	30:41:85:GLY:H	1.63	0.64
45:H8:28:MET:HB2	45:H8:37:VAL:HG11	1.80	0.64
25:14:662:G:OP1	35:35:15:ARG:NH2	2.30	0.64
25:14:780:G:H21	25:14:783:A:N6	1.92	0.64
25:14:2656:U:H3	25:14:2665:A:H2	1.44	0.64
39:75:4:GLY:O	39:75:6:LEU:N	2.31	0.64
1:13:186(F):C:N3	1:13:191(B):G:N2	2.46	0.64
54:1G:15:G:H2'	54:1G:16:A:C8	2.33	0.64
54:1G:539:A:H2'	54:1G:540:G:H8	1.62	0.64
25:14:125:G:H5"	52:L5:19:ARG:HD3	1.79	0.64
25:14:259:G:H21	25:14:621:A:H8	1.45	0.64
25:14:996:A:H4'	40:85:92:ARG:CZ	2.28	0.64
47:F5:79:GLY:O	47:F5:80:LEU:HD13	1.98	0.64
22:1K:48:C:H42	22:1K:52:G:H1	1.45	0.63
22:3K:62:G:H1	22:3K:70:C:H42	1.46	0.63
24:4K:25:A:H5"	24:4K:26:A:H5"	1.79	0.63
25:1H:1159:U:OP1	49:L8:30:ARG:NH2	2.30	0.63
27:11:223:GLY:HA3	27:11:231:HIS:ND1	2.13	0.63
35:78:64:LYS:HB3	53:Q8:13:ARG:HB3	1.79	0.63
47:J8:85:LEU:HD12	47:J8:88:LYS:HB2	1.79	0.63
54:1G:458:C:H2'	54:1G:464:G:C8	2.34	0.63
52:L5:12:ARG:NH2	52:L5:44:PRO:HB3	2.13	0.63
1:13:1295:G:O3'	13:4I:14:ARG:NH1	2.31	0.63
5:4E:148:VAL:O	5:4E:151:LEU:HB2	1.99	0.63
15:6I:6:GLU:HA	15:6I:9:GLN:HB2	1.80	0.63
25:1H:138:G:N2	43:F8:44:GLU:OE2	2.20	0.63
25:1H:575:A:OP2	25:1H:2055:C:N4	2.31	0.63
25:1H:860:U:H5	25:1H:917:A:C2	2.15	0.63
25:1H:958:U:OP2	36:88:14:ARG:NH1	2.30	0.63
25:1H:1164:G:H2'	25:1H:1165:U:C6	2.33	0.63
25:1H:1179:C:H2'	25:1H:1180:C:C6	2.33	0.63
25:1H:2210:G:H3'	25:1H:2211:G:C8	2.33	0.63
43:F8:55:ASN:HB2	43:F8:80:ILE:HG13	1.80	0.63
54:1G:20:U:H2'	54:1G:21:G:O4'	1.98	0.63
4:32:14:ARG:HH11	4:32:14:ARG:HG3	1.63	0.63
9:82:4:TYR:HB2	9:82:19:LEU:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:9:ILE:HG22	31:59:51:ARG:HA	1.81	0.63
45:D5:45:ASP:OD1	45:D5:49:ARG:NH1	2.31	0.63
45:D5:155:LEU:HB2	45:D5:157:LEU:HD13	1.79	0.63
1:13:642:A:N3	8:7E:113:SER:OG	2.32	0.63
10:1I:26:ALA:O	10:1I:84:GLN:NE2	2.31	0.63
37:98:67:LEU:HD22	37:98:76:VAL:HG21	1.81	0.63
39:B8:57:PHE:O	39:B8:58:ASN:ND2	2.31	0.63
54:1G:410:G:H21	54:1G:432:A:H62	1.46	0.63
8:72:99:GLU:OE2	8:72:100:ILE:N	2.25	0.63
25:14:162:U:H4'	25:14:171:G:C4	2.34	0.63
25:14:528:A:C2	25:14:2042:A:H2'	2.34	0.63
25:14:910:A:C5	36:45:13:GLN:HG3	2.32	0.63
25:14:1577:C:OP2	60:14:3683:HOH:O	2.15	0.63
4:3E:173:TRP:CD1	4:3E:174:LEU:HG	2.34	0.63
25:1H:2788:C:O2'	25:1H:2809:A:N3	2.30	0.63
28:21:144:ARG:HH11	28:21:144:ARG:HG3	1.63	0.63
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.30	0.63
11:2A:48:ILE:HG13	11:2A:63:LEU:HB3	1.79	0.63
55:3L:22:A:H1'	55:3L:68:A:C6	2.34	0.63
55:3L:75:C:H2'	55:3L:76:C:C6	2.34	0.63
25:14:5:A:H2'	25:14:6:A:C8	2.32	0.63
25:14:602:G:O2'	25:14:604:G:O2'	2.16	0.63
25:14:1257:C:H4'	29:39:83:PHE:CE1	2.33	0.63
25:1H:1279:G:H4'	37:98:31:HIS:CD2	2.33	0.63
25:1H:1794:U:H2'	25:1H:1795:C:H6	1.62	0.63
25:1H:2580:U:H4'	28:21:130:GLY:HA3	1.79	0.63
28:21:77:ILE:HD12	28:21:79:ARG:HH11	1.64	0.63
42:E8:95:ILE:O	42:E8:95:ILE:HG13	1.98	0.63
43:F8:36:LYS:HG2	43:F8:54:VAL:HB	1.81	0.63
54:1G:1243:C:H5"	21:1B:8:THR:HG23	1.79	0.63
25:14:2250:G:C5	36:45:82:ARG:HD2	2.33	0.63
2:1E:111:ARG:HG2	2:1E:111:ARG:NH1	2.09	0.63
3:2E:130:VAL:O	3:2E:134:ILE:HG12	1.98	0.63
11:2I:86:GLY:N	11:2I:112:THR:OG1	2.26	0.63
25:1H:620:G:H4'	25:1H:621:A:C5'	2.23	0.63
25:1H:1188:U:H4'	41:D8:79:VAL:HG22	1.80	0.63
25:1H:2690:C:H5"	25:1H:2872:G:H21	1.64	0.63
37:98:56:LYS:NZ	37:98:90:ARG:O	2.29	0.63
40:C8:95:LEU:O	40:C8:97:ASP:N	2.31	0.63
42:E8:68:ARG:O	42:E8:110:LYS:N	2.27	0.63
54:1G:189:U:O2'	17:8A:63:ARG:NH2	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:199:G:H2'	54:1G:200:G:H8	1.64	0.63
25:14:1828:G:OP2	60:14:3448:HOH:O	2.16	0.63
25:14:2689:U:P	25:14:2719:G:H22	2.20	0.63
28:29:26:ILE:HG22	28:29:27:LEU:C	2.24	0.63
34:25:13:ASN:ND2	34:25:97:ARG:H	1.96	0.63
1:13:1503:A:O2'	24:4K:13:A:N1	2.32	0.63
25:1H:1594:G:OP1	60:1H:3501:HOH:O	2.15	0.63
25:1H:1678:G:H22	25:1H:1989:G:H22	1.47	0.63
25:1H:2467:C:C2'	25:1H:2468:G:H5'	2.29	0.63
54:1G:114:U:H2'	54:1G:115:G:C8	2.33	0.63
54:1G:363:A:OP2	12:3A:34:ARG:NH2	2.24	0.63
25:14:654(E):C:N3	25:14:654(P):G:N2	2.47	0.63
25:1H:1055:G:O2'	25:1H:1086:A:N6	2.32	0.63
25:1H:1992:G:OP2	60:1H:3838:HOH:O	2.15	0.63
2:12:236:TYR:HB2	2:12:239:VAL:HB	1.80	0.63
3:22:131:ARG:HH21	3:22:166:GLU:HG2	1.64	0.63
32:69:75:LEU:CD2	32:69:76:THR:H	2.11	0.63
25:1H:330:A:O2'	25:1H:331:A:H8	1.82	0.63
25:1H:574:C:O2	28:21:145:LYS:NZ	2.30	0.63
40:C8:92:ARG:CZ	40:C8:96:ALA:H	2.12	0.63
40:C8:92:ARG:HD3	40:C8:95:LEU:HB2	1.81	0.63
54:1G:661:G:H1	54:1G:744:C:H42	1.47	0.63
3:22:121:ALA:HB2	3:22:198:VAL:HG21	1.81	0.63
7:62:116:ALA:HA	7:62:119:ARG:HE	1.63	0.63
25:14:998:C:H42	25:14:1157:G:H1	1.45	0.63
1:13:1097:C:O2'	1:13:1169:A:N3	2.26	0.62
20:BI:89:ARG:HH21	20:BI:104:LEU:HD11	1.64	0.62
25:1H:392:C:OP1	60:1H:3597:HOH:O	2.16	0.62
25:1H:2151:G:H2'	25:1H:2152:G:H8	1.61	0.62
25:1H:2543:G:H2'	25:1H:2544:G:C8	2.34	0.62
35:78:114:ILE:HD11	35:78:130:PHE:CD2	2.31	0.62
36:88:39:PRO:HA	36:88:97:VAL:O	1.99	0.62
45:H8:152:ALA:HB3	45:H8:167:PRO:HA	1.81	0.62
2:12:5:ILE:HG12	2:12:6:THR:HG22	1.80	0.62
25:14:662:G:H5'	35:35:15:ARG:HA	1.81	0.62
25:14:2375:G:N2	25:14:2378:A:OP2	2.28	0.62
38:65:101:LEU:O	38:65:105:ALA:N	2.29	0.62
1:13:446:G:H1	1:13:488:C:H42	1.45	0.62
13:4I:99:ARG:O	13:4I:101:GLN:NE2	2.31	0.62
25:1H:1434:A:H61	25:1H:1558:A:H62	1.44	0.62
25:1H:1970:A:OP1	60:1H:3751:HOH:O	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2688:U:H5	25:1H:2720:U:OP2	1.82	0.62
27:11:147:LEU:HD22	27:11:155:LEU:HD11	1.81	0.62
35:78:18:ARG:HG3	35:78:18:ARG:O	2.00	0.62
53:Q8:41:ILE:HA	53:Q8:43:GLN:N	2.13	0.62
53:Q8:62:LEU:HB3	53:Q8:63:PRO:HD2	1.80	0.62
3:22:91:LEU:HD11	3:22:101:LEU:HD12	1.80	0.62
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.34	0.62
25:1H:193:U:H5	60:1H:3581:HOH:O	1.82	0.62
25:1H:2635:C:H5"	28:21:79:ARG:CZ	2.29	0.62
35:78:50:ARG:HD2	53:Q8:7:HIS:NE2	2.14	0.62
50:M8:36:CYS:SG	50:M8:38:LYS:HB2	2.39	0.62
54:1G:1241:G:OP1	7:62:35:LYS:NZ	2.33	0.62
3:22:47:LEU:HG	3:22:50:ALA:HB3	1.81	0.62
36:45:36:ALA:HB2	36:45:103:MET:SD	2.39	0.62
2:1E:12:GLU:HA	2:1E:16:HIS:HD1	1.64	0.62
17:8I:29:HIS:CD2	17:8I:30:PRO:HD2	2.34	0.62
21:1F:10:ARG:HG3	21:1F:13:ILE:HD12	1.80	0.62
25:1H:654(B):C:H2'	25:1H:654(C):G:C8	2.35	0.62
25:1H:1316:U:H2'	25:1H:1317:A:C8	2.34	0.62
25:1H:2632:A:HO2'	25:1H:2811:G:HO2'	1.37	0.62
25:1H:2776:A:H4'	25:1H:2777:G:H5"	1.81	0.62
27:11:164:GLN:NE2	27:11:166:GLN:OE1	2.29	0.62
54:1G:983:A:H2	54:1G:984:C:C6	2.18	0.62
54:1G:1305:G:N2	54:1G:1331:G:O2'	2.32	0.62
4:32:150:GLU:HA	4:32:153:ARG:HG2	1.80	0.62
25:14:107:C:H2'	25:14:108:U:H6	1.64	0.62
34:25:115:VAL:HG13	34:25:121:VAL:HG21	1.80	0.62
41:95:35:LEU:HB3	41:95:37:VAL:CG1	2.29	0.62
41:95:65:GLY:H	41:95:91:TYR:HB3	1.65	0.62
44:C5:47:LYS:HA	44:C5:60:PHE:HD2	1.64	0.62
1:13:974:A:OP2	14:5I:29:ARG:NH2	2.32	0.62
1:13:1120:G:H2'	1:13:1121:U:C6	2.35	0.62
11:2I:22:HIS:HB3	11:2I:29:ILE:HG23	1.79	0.62
25:1H:1967:C:O3'	60:1H:3762:HOH:O	2.16	0.62
54:1G:589:C:H42	54:1G:650:G:H1	1.47	0.62
13:4A:95:GLY:HA2	13:4A:110:ARG:HH21	1.64	0.62
56:2L:24:C:H2'	56:2L:25:U:C6	2.33	0.62
25:14:780:G:N2	25:14:783:A:H62	1.96	0.62
30:49:104:GLU:HG2	50:I5:23:GLU:HG2	1.81	0.62
35:35:65:ARG:HB2	35:35:65:ARG:HH11	1.65	0.62
43:B5:24:GLY:HA3	43:B5:82:GLN:NE2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:F5:86:SER:N	47:F5:87:PRO:HD2	2.14	0.62
2:1E:120:ALA:O	2:1E:124:SER:OG	2.11	0.62
2:1E:184:VAL:H	2:1E:198:ASP:HB2	1.65	0.62
25:1H:2296:U:OP2	38:A8:9:ARG:NH2	2.24	0.62
25:1H:2564:A:C2	25:1H:2647:U:H4'	2.35	0.62
17:8A:66:SER:O	17:8A:70:ARG:NH1	2.33	0.62
45:D5:77:ASP:OD1	45:D5:80:ARG:NH1	2.30	0.62
1:13:737:A:H2'	1:13:738:C:C6	2.35	0.62
25:1H:46:C:O2	25:1H:179:G:N2	2.26	0.62
25:1H:1466:G:N3	25:1H:1547:C:N4	2.48	0.62
25:1H:1512:G:H2'	25:1H:1513:C:C6	2.35	0.62
54:1G:1330:U:H5'	13:4A:24:GLY:H	1.65	0.62
54:1G:1443:G:H3'	54:1G:1446:A:H5"	1.82	0.62
7:62:69:VAL:HG21	7:62:104:LEU:HD11	1.80	0.62
12:3A:52:LEU:O	12:3A:54:LYS:NZ	2.32	0.62
56:2L:44:A:H2'	56:2L:45:A:H8	1.64	0.62
28:29:76:ARG:HG3	28:29:195:LEU:HD22	1.80	0.62
31:59:168:PRO:HB2	31:59:170:ARG:HD3	1.80	0.62
35:35:23:PRO:HB3	41:95:80:GLN:HG3	1.81	0.62
41:95:44:LYS:O	41:95:46:VAL:HG12	2.00	0.62
53:M5:56:GLU:H	53:M5:56:GLU:CD	2.05	0.62
3:2E:24:ALA:HB1	3:2E:28:GLN:HB2	1.80	0.62
16:7I:1:MET:SD	16:7I:1:MET:N	2.64	0.62
22:3K:24:G:H2'	22:3K:25:G:C8	2.32	0.62
25:1H:71:A:H4'	25:1H:72:U:H5"	1.81	0.62
25:1H:1386:C:H2'	25:1H:1387:C:C6	2.33	0.62
25:1H:1449:A:H5'	25:1H:1449(A):G:OP2	1.99	0.62
25:1H:2101:G:H1	25:1H:2188:C:H42	1.45	0.62
31:51:4:ILE:HG13	31:51:6:ARG:NH1	2.15	0.62
32:61:67:ARG:O	32:61:71:ILE:HG22	2.00	0.62
33:58:1:MET:HE2	41:D8:12:TYR:HA	1.82	0.62
48:K8:42:GLY:C	48:K8:44:LEU:H	2.08	0.62
54:1G:411:A:H62	54:1G:413:G:N2	1.96	0.62
54:1G:1400:C:N4	56:2L:35:C:H1'	2.15	0.62
2:12:6:THR:OG1	2:12:7:VAL:N	2.27	0.62
10:1A:4:ILE:HG12	10:1A:100:THR:HG22	1.81	0.62
25:14:882:G:H1	25:14:894:C:N4	1.98	0.62
25:14:2245:U:H5"	25:14:2246:G:H5'	1.80	0.62
25:14:2689:U:H5"	25:14:2713:A:C2	2.34	0.62
30:49:40:ASN:HB2	30:49:91:ARG:HG3	1.82	0.62
33:15:47:ALA:HB2	33:15:112:LEU:HD21	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:25:68:GLU:OE2	34:25:78:ARG:NH1	2.32	0.62
41:95:70:ILE:N	41:95:86:GLY:O	2.19	0.62
50:I5:14:ILE:HD11	50:I5:33:VAL:HG21	1.80	0.62
53:M5:30:ARG:O	53:M5:32:LEU:N	2.33	0.62
25:1H:528:A:OP2	33:58:114:ARG:NH1	2.33	0.62
25:1H:2334:G:H5'	38:A8:9:ARG:HG2	1.80	0.62
54:1G:690:G:H22	11:2A:55:LYS:HE2	1.65	0.62
11:2A:18:ARG:HD2	11:2A:83:ILE:HD11	1.80	0.62
25:14:39:C:H2'	25:14:40:C:H6	1.65	0.62
25:14:823:G:H2'	25:14:824:A:C8	2.34	0.62
25:14:895:U:H4'	25:14:896:A:C5	2.35	0.62
25:14:1021:A:H62	25:14:1141:U:H3	1.46	0.62
45:D5:30:ASN:HA	45:D5:89:PHE:HE1	1.64	0.62
1:13:445:G:H1	1:13:489:C:H42	1.48	0.62
7:6E:62:PHE:CD1	7:6E:124:LEU:HD11	2.34	0.62
25:1H:573:G:O2'	25:1H:574:C:H3'	2.00	0.62
25:1H:1437:C:HO2'	25:1H:1518:C:HO2'	1.42	0.62
25:1H:2698:U:H2'	25:1H:2699:C:C6	2.35	0.62
54:1G:410:G:N1	54:1G:431:A:OP2	2.27	0.62
54:1G:921:U:O2	5:42:19:MET:HB3	2.00	0.62
2:12:137:ARG:NH2	2:12:141:GLU:HB2	2.15	0.62
25:14:706:A:OP1	27:19:7:LYS:NZ	2.33	0.62
25:14:1496:A:H8	25:14:1577:C:O2'	1.83	0.62
38:65:36:TYR:HA	38:65:52:SER:HB3	1.82	0.62
1:13:157:G:H2'	1:13:158:G:C8	2.34	0.61
7:6E:16:LEU:HD12	9:8E:42:ARG:HA	1.82	0.61
16:7I:26:ARG:HE	16:7I:31:LYS:HB3	1.65	0.61
25:1H:259:G:HO2'	25:1H:621:A:HO2'	1.43	0.61
25:1H:2125:G:N2	25:1H:2172:U:OP1	2.32	0.61
25:1H:2392:A:P	53:Q8:30:ARG:HH22	2.23	0.61
39:B8:54:ARG:HA	39:B8:59:THR:HB	1.82	0.61
44:G8:83:THR:HG22	44:G8:84:ARG:H	1.65	0.61
54:1G:490:G:OP2	4:32:132:ARG:NH2	2.26	0.61
54:1G:1054:C:O2'	54:1G:1055:A:O5'	2.16	0.61
54:1G:1126:U:H5'	54:1G:1127:G:C8	2.34	0.61
10:1A:6:ILE:HG22	10:1A:98:ILE:HG12	1.80	0.61
25:14:2115:G:N2	25:14:2172:U:H3	1.98	0.61
25:14:2693:A:H2'	25:14:2694:G:H8	1.64	0.61
1:13:1182:G:C4'	1:13:1183:A:H5'	2.29	0.61
13:4I:82:MET:O	13:4I:84:ILE:N	2.33	0.61
15:6I:16:ALA:HB1	15:6I:21:ASP:HB3	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2321:G:H5"	25:1H:2322:A:OP2	2.00	0.61
45:H8:73:GLN:HB2	45:H8:87:ASP:HB2	1.82	0.61
49:L8:6:VAL:HG12	49:L8:54:VAL:HG21	1.79	0.61
53:Q8:21:LYS:CG	53:Q8:22:VAL:H	2.13	0.61
9:82:53:VAL:HG23	9:82:55:ALA:H	1.65	0.61
25:14:1784:A:H4'	25:14:1785:A:O5'	2.00	0.61
39:75:56:GLY:O	39:75:59:THR:HG23	1.99	0.61
45:D5:10:ARG:NH2	45:D5:26:GLY:O	2.33	0.61
1:13:412:A:H4'	1:13:413:G:O5'	2.00	0.61
25:1H:2313:C:H4'	30:41:91:ARG:HG3	1.81	0.61
27:11:112:GLN:O	27:11:115:GLN:HG3	2.00	0.61
54:1G:742:G:H5"	15:6A:58:MET:HE1	1.82	0.61
54:1G:1004:A:OP1	54:1G:1024:G:N1	2.32	0.61
5:42:79:GLU:HB3	5:42:92:LYS:HG3	1.81	0.61
11:2A:27:ASN:OD1	11:2A:28:THR:N	2.32	0.61
20:BA:75:ASN:N	20:BA:75:ASN:OD1	2.33	0.61
25:14:566:U:H5"	35:35:29:LYS:HE3	1.82	0.61
31:59:119:GLU:O	31:59:140:LYS:NZ	2.23	0.61
1:13:738:C:OP1	6:5E:2:ARG:NH1	2.33	0.61
5:4E:126:ARG:HG3	5:4E:126:ARG:HH11	1.65	0.61
11:2I:33:THR:HA	11:2I:39:PRO:HA	1.81	0.61
12:3I:117:ARG:HB3	12:3I:122:THR:HB	1.81	0.61
54:1G:209:U:H1'	54:1G:210:U:OP1	2.00	0.61
4:32:153:ARG:NH1	4:32:181:MET:SD	2.72	0.61
6:52:11:ASN:HB3	6:52:14:LEU:HD13	1.82	0.61
25:14:1297:C:H3'	60:14:3433:HOH:O	2.01	0.61
25:14:1971:A:OP1	60:14:3501:HOH:O	2.16	0.61
1:13:396:G:O2'	1:13:398:C:OP1	2.15	0.61
3:2E:177:THR:HB	3:2E:180:ALA:HB2	1.83	0.61
22:3K:18:G:O6	22:3K:65:C:N4	2.27	0.61
25:1H:2115:G:H1'	25:1H:2171:A:N1	2.14	0.61
25:1H:2151:G:H2'	25:1H:2152:G:C8	2.35	0.61
31:51:137:ASP:OD1	31:51:138:LYS:N	2.32	0.61
20:BA:64:ASP:OD1	20:BA:81:LYS:HD2	2.01	0.61
25:14:848:G:H2'	25:14:849:A:C8	2.35	0.61
25:14:2185:C:H2'	25:14:2186:G:H8	1.65	0.61
29:39:29:ASN:N	29:39:112:MET:HE3	2.15	0.61
29:39:116:ASP:OD2	35:35:1:MET:HB2	2.00	0.61
1:13:276:G:O3'	17:8I:68:ARG:NH1	2.33	0.61
1:13:474:G:H2'	1:13:475:G:C8	2.35	0.61
13:4I:23:TYR:CD1	13:4I:67:GLU:HA	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8I:22:LEU:HD11	17:8I:39:SER:HB3	1.82	0.61
25:1H:1165:U:H2'	25:1H:1166:C:C6	2.35	0.61
44:G8:82:PRO:HB3	44:G8:99:CYS:HB3	1.82	0.61
45:H8:69:THR:HG22	45:H8:90:VAL:HG22	1.82	0.61
47:J8:7:ILE:HD12	47:J8:62:VAL:HG11	1.83	0.61
54:1G:1298:C:H4'	54:1G:1299:A:C8	2.36	0.61
5:42:101:ILE:O	5:42:120:THR:OG1	2.18	0.61
20:BA:51:GLU:HA	20:BA:54:LYS:HB3	1.83	0.61
25:14:830:G:H4'	25:14:831:G:OP2	1.99	0.61
25:14:2292:C:OP1	38:65:17:ARG:NH2	2.34	0.61
26:1J:13:A:N1	26:1J:69:G:O2'	2.28	0.61
28:29:81:ILE:HG21	28:29:84:PHE:HD2	1.65	0.61
36:45:31:ASP:HA	36:45:134:ARG:HE	1.64	0.61
39:75:92:GLY:HA2	39:75:117:ASP:H	1.65	0.61
40:85:90:VAL:HG22	41:95:39:LEU:HB3	1.82	0.61
1:13:542:G:H5'	4:3E:41:GLY:HA3	1.83	0.61
1:13:1292:U:H2'	1:13:1293:G:H8	1.65	0.61
1:13:1453:G:H2'	20:BI:39:LYS:HE2	1.81	0.61
19:AI:50:ALA:HB1	19:AI:57:HIS:HB3	1.81	0.61
25:1H:297:C:OP1	44:G8:86:ARG:NH2	2.31	0.61
25:1H:1178:C:H4'	25:1H:1179:C:OP1	2.01	0.61
25:1H:1332:G:H21	25:1H:1610:A:H8	1.49	0.61
25:1H:1728:G:H8	25:1H:1732:A:H62	1.46	0.61
35:78:59:LEU:HD22	35:78:60:MET:N	2.16	0.61
42:E8:13:SER:HB3	42:E8:16:LYS:HG3	1.81	0.61
45:H8:57:ILE:HG22	45:H8:59:LEU:H	1.66	0.61
2:12:185:ILE:HG23	2:12:199:TYR:HB2	1.82	0.61
5:42:152:ARG:O	8:72:64:LYS:NZ	2.33	0.61
25:14:882:G:H1	25:14:894:C:H42	1.49	0.61
25:14:2420:C:N4	53:M5:31:HIS:HB3	2.15	0.61
27:19:10:THR:OG1	27:19:13:ARG:HB2	2.01	0.61
27:19:210:GLY:O	27:19:213:ARG:N	2.34	0.61
35:35:128:HIS:HA	35:35:147:LEU:HA	1.82	0.61
39:75:62:THR:HG22	39:75:75:ILE:HG12	1.82	0.61
25:1H:833:U:O2	35:78:55:ARG:NH2	2.30	0.61
25:1H:1221:C:H2'	25:1H:1222:C:H6	1.65	0.61
27:11:37:LEU:HD22	27:11:62:TYR:HB2	1.82	0.61
38:A8:25:ARG:NH1	38:A8:42:ASP:OD2	2.33	0.61
53:Q8:34:TRP:HE3	53:Q8:35:GLN:H	1.48	0.61
25:14:1443:G:H1	25:14:1548:C:H42	1.49	0.61
25:14:1666:G:OP1	34:25:66:LYS:HD3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2785:C:O2'	28:29:64:LYS:HE2	2.01	0.61
27:19:37:LEU:HA	27:19:38:LYS:CG	2.30	0.61
35:35:85:LEU:HA	35:35:88:LEU:HD23	1.82	0.61
36:45:27:VAL:HG13	45:D5:81:ARG:HH22	1.65	0.61
41:95:85:LYS:HG3	41:95:87:HIS:H	1.65	0.61
1:13:141:A:H1'	1:13:182:U:O2	2.01	0.61
1:13:748:C:H6	1:13:748:C:O5'	1.83	0.61
1:13:1376:U:OP1	7:6E:98:SER:OG	2.19	0.61
6:5E:81:ILE:C	6:5E:82:ARG:HG2	2.26	0.61
10:1I:6:ILE:HG22	10:1I:98:ILE:HG13	1.82	0.61
22:1K:27:A:H3'	22:1K:28:G:H8	1.65	0.61
25:1H:1805:U:O2	27:11:50:THR:HB	2.01	0.61
25:1H:2168:G:H3'	25:1H:2168:G:N3	2.15	0.61
28:21:176:ILE:HB	28:21:181:LEU:HB2	1.82	0.61
35:78:60:MET:H	53:Q8:13:ARG:HD2	1.65	0.61
54:1G:991:U:O2	54:1G:993:G:H8	1.83	0.61
4:32:24:GLU:N	4:32:24:GLU:OE2	2.34	0.61
4:32:82:ALA:HB1	4:32:89:THR:HA	1.82	0.61
15:6A:33:THR:HG21	15:6A:85:LEU:HD22	1.81	0.61
20:BA:33:ILE:O	20:BA:37:SER:OG	2.18	0.61
25:14:289:A:H3'	25:14:290:G:H8	1.65	0.61
25:14:403:U:H4'	25:14:404:C:H5'	1.82	0.61
35:35:146:VAL:HG13	35:35:147:LEU:HD22	1.82	0.61
4:3E:30:LYS:HB3	4:3E:32:ALA:H	1.66	0.61
34:68:113:LYS:O	34:68:117:LEU:HG	2.01	0.61
45:H8:33:LEU:HD11	45:H8:35:ARG:HG3	1.82	0.61
54:1G:559:A:H4'	54:1G:560:U:C5'	2.29	0.61
54:1G:998(A):C:O2	54:1G:1042:G:N2	2.22	0.61
25:14:132:G:H1	25:14:147:U:H3	1.47	0.61
25:14:213:A:OP2	60:14:3798:HOH:O	2.16	0.61
25:14:2537:U:H2'	25:14:2538:C:C6	2.36	0.61
26:1J:94:C:H2'	26:1J:95:U:C6	2.36	0.61
27:19:93:ALA:HB3	27:19:105:ILE:HG22	1.83	0.61
30:49:11:TYR:O	30:49:16:ARG:N	2.32	0.61
35:35:39:LYS:HA	35:35:45:LEU:HD13	1.83	0.61
52:L5:35:ARG:HG3	52:L5:42:LEU:HD11	1.82	0.61
1:13:872:A:C5	1:13:874:G:C8	2.89	0.60
7:6E:5:ARG:HB2	7:6E:7:ALA:H	1.65	0.60
20:BI:57:ARG:NH1	20:BI:102:GLY:HA2	2.13	0.60
22:1K:85:A:H8	25:1H:2583:G:N2	1.98	0.60
25:1H:70:G:H21	25:1H:71:A:H62	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:270:A:OP2	25:1H:270(Y):G:N2	2.30	0.60
25:1H:1799:G:H5'	25:1H:1819:A:H61	1.66	0.60
27:11:71:ASP:HB2	27:11:103:ARG:HH22	1.64	0.60
29:31:39:TRP:O	29:31:43:LYS:HG2	2.00	0.60
31:51:152:ARG:HG3	31:51:161:GLY:HA2	1.82	0.60
25:14:739:G:OP1	60:14:3628:HOH:O	2.16	0.60
25:14:1417:C:H42	25:14:1581:G:H1	1.48	0.60
25:14:2557:G:H2'	25:14:2558:C:H6	1.65	0.60
29:39:155:LEU:HD23	29:39:186:ILE:HD13	1.82	0.60
30:49:125:PHE:CZ	30:49:170:ARG:HD3	2.36	0.60
40:85:92:ARG:C	40:85:94:ASN:H	2.08	0.60
41:95:44:LYS:C	41:95:46:VAL:H	2.09	0.60
1:13:757:U:H5"	1:13:822:C:O2	2.00	0.60
1:13:1014:A:C2	1:13:1219:U:H1'	2.36	0.60
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.33	0.60
22:1K:1:G:H2'	22:1K:2:G:H8	1.66	0.60
25:1H:270(K):C:C4	25:1H:270(M):U:H5"	2.35	0.60
31:51:20:ALA:HB1	31:51:21:PRO:HD2	1.82	0.60
40:C8:91:ASP:HB3	40:C8:92:ARG:C	2.26	0.60
54:1G:827:U:H2'	54:1G:859:A:H61	1.66	0.60
54:1G:983:A:N1	54:1G:1222:G:N2	2.49	0.60
4:32:73:ARG:O	4:32:77:ASN:ND2	2.31	0.60
12:3A:46:LYS:HD2	12:3A:94:PRO:HD3	1.83	0.60
25:14:2057:A:H2'	25:14:2058:A:O4'	2.01	0.60
28:29:12:THR:HG21	39:75:11:GLU:OE2	2.01	0.60
41:95:22:VAL:HG22	41:95:23:GLU:H	1.66	0.60
1:13:1178:G:H5"	9:8E:93:ARG:HH21	1.66	0.60
2:1E:31:TYR:O	2:1E:42:ILE:HD12	2.01	0.60
10:1I:40:LEU:HB2	10:1I:69:ASN:HB2	1.82	0.60
19:AI:25:LYS:HD3	19:AI:27:GLU:HB2	1.83	0.60
22:1K:49:A:H2'	22:1K:50:U:H5"	1.84	0.60
40:C8:50:ARG:HH12	41:D8:72:VAL:HG23	1.66	0.60
53:Q8:26:LYS:HG3	53:Q8:41:ILE:HG23	1.83	0.60
54:1G:407:G:OP1	4:32:115:ARG:NE	2.34	0.60
54:1G:1111:A:H2'	54:1G:1112:C:C6	2.35	0.60
25:14:259:G:N2	25:14:621:A:H8	1.99	0.60
32:69:76:THR:HG21	32:69:140:LEU:HA	1.84	0.60
32:69:93:THR:O	32:69:97:ILE:HG13	2.01	0.60
33:15:15:LEU:HD23	33:15:134:ARG:HD2	1.83	0.60
35:35:55:ARG:HG2	35:35:56:SER:H	1.66	0.60
1:13:637:G:H2'	1:13:638:G:C8	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1346:A:H5"	9:8E:120:ARG:NH1	2.16	0.60
4:3E:150:GLU:HG3	4:3E:153:ARG:HD2	1.83	0.60
5:4E:153:LYS:HD3	5:4E:154:GLY:N	2.13	0.60
25:1H:2427:C:H5"	25:1H:2428:G:OP1	2.02	0.60
29:31:67:GLN:HG3	29:31:67:GLN:O	2.00	0.60
54:1G:1095:U:P	54:1G:1108:G:H1	2.24	0.60
7:62:15:ASP:HB3	7:62:19:GLY:H	1.66	0.60
56:2L:22:A:N6	56:2L:47:G:H2'	2.15	0.60
25:14:796:C:H2'	25:14:797:C:C6	2.37	0.60
25:14:1064:C:O2	25:14:1074:G:N2	2.34	0.60
29:39:21:ALA:C	29:39:23:ASP:H	2.09	0.60
45:D5:97:GLU:HB3	45:D5:125:LEU:HD11	1.82	0.60
47:F5:85:LEU:HA	47:F5:87:PRO:HD2	1.83	0.60
1:13:464:G:C6	1:13:466:C:H5'	2.37	0.60
1:13:591:U:H2'	1:13:592:G:C8	2.36	0.60
1:13:1044:A:C5	1:13:1045:C:H1'	2.36	0.60
25:1H:265:A:C8	25:1H:266:G:H1'	2.36	0.60
25:1H:1111:A:H5'	31:51:3:ARG:HD2	1.82	0.60
25:1H:1332:G:H5'	25:1H:1332:G:C8	2.37	0.60
25:1H:1607:C:H4'	25:1H:1608:A:O5'	2.01	0.60
25:1H:2635:C:OP1	28:21:79:ARG:NH2	2.34	0.60
29:31:64:ILE:HG23	29:31:65:TRP:CD1	2.36	0.60
53:Q8:7:HIS:CG	53:Q8:7:HIS:O	2.54	0.60
4:32:71:SER:HB3	4:32:74:GLN:HG3	1.82	0.60
25:14:1568:G:H5"	27:19:61:LEU:HD22	1.83	0.60
25:14:2331:G:H4'	46:E5:43:THR:H	1.66	0.60
27:19:37:LEU:HA	27:19:38:LYS:HG2	1.83	0.60
44:C5:19:LYS:CG	44:C5:20:TYR:H	2.13	0.60
46:E5:53:MET:HG3	46:E5:59:LEU:CD2	2.32	0.60
1:13:688:G:H2'	1:13:689:C:H6	1.65	0.60
29:31:181:LEU:HB2	29:31:205:ARG:HH12	1.66	0.60
40:C8:92:ARG:CZ	40:C8:96:ALA:HA	2.32	0.60
40:C8:108:GLU:HG3	41:D8:44:LYS:HE3	1.84	0.60
44:G8:94:LYS:HZ2	44:G8:95:LYS:H	1.48	0.60
25:14:1060:U:H4'	25:14:1061:U:H5"	1.84	0.60
25:14:2748:A:H2'	25:14:2749:A:H8	1.67	0.60
27:19:2:ALA:HB3	27:19:20:ASP:HB2	1.84	0.60
36:45:25:ASP:HB3	36:45:102:VAL:H	1.65	0.60
38:65:87:PHE:CE1	38:65:102:ALA:HB2	2.35	0.60
1:13:1366:C:H2'	1:13:1367:C:H6	1.66	0.60
17:8I:89:LEU:O	17:8I:93:GLN:N	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1568:G:OP1	27:11:63:ARG:NH1	2.27	0.60
28:21:79:ARG:HD2	28:21:79:ARG:N	2.16	0.60
30:41:130:ASN:HB3	30:41:160:VAL:HA	1.82	0.60
54:1G:318:G:H1	54:1G:335:C:H42	1.50	0.60
54:1G:1177:G:O2'	54:1G:1178:G:O4'	2.20	0.60
54:1G:1326:C:H2'	54:1G:1327:C:C6	2.36	0.60
8:72:31:PHE:HZ	8:72:134:ILE:HD11	1.67	0.60
25:14:570:G:OP1	60:14:3577:HOH:O	2.16	0.60
25:14:1939:U:OP1	25:14:2604:U:O2'	2.20	0.60
38:65:36:TYR:HE2	38:65:54:LEU:HD22	1.66	0.60
47:F5:51:VAL:HG23	47:F5:58:ILE:HB	1.82	0.60
1:13:877:C:OP1	8:7E:88:LYS:NZ	2.32	0.60
8:7E:29:SER:HB3	8:7E:32:LYS:HE3	1.84	0.60
22:3K:19:C:H2'	22:3K:20:C:H4'	1.83	0.60
31:51:101:ARG:NH1	31:51:122:THR:OG1	2.34	0.60
40:C8:98:LEU:HD11	41:D8:4:ILE:HD11	1.83	0.60
44:G8:30:VAL:HG22	44:G8:37:VAL:HG12	1.83	0.60
2:12:9:GLU:OE1	2:12:217:ARG:NH2	2.32	0.60
25:14:1030:G:OP2	36:45:128:LYS:HE2	2.02	0.60
25:14:1416:G:HO2'	25:14:1417:C:H6	1.50	0.60
29:39:63:LYS:HG3	29:39:75:HIS:O	2.02	0.60
38:65:34:HIS:ND1	38:65:53:SER:OG	2.32	0.60
48:G5:65:ASN:HB3	48:G5:69:ARG:HH21	1.66	0.60
1:13:1074:G:O2'	1:13:1101:A:N1	2.25	0.60
25:1H:1219:G:OP2	40:C8:19:LYS:NZ	2.34	0.60
54:1G:501:C:OP1	12:3A:117:ARG:NH2	2.27	0.60
54:1G:1047:G:H1	54:1G:1210:C:H42	1.47	0.60
7:62:115:ARG:HB3	7:62:118:VAL:HG13	1.83	0.60
55:1L:11:C:H2'	55:1L:12:C:C6	2.36	0.60
25:14:127:A:H5"	25:14:128:C:C6	2.36	0.60
25:14:1678:G:H22	25:14:1989:G:N2	1.99	0.60
25:14:1952:A:C6	34:25:22:ILE:HD11	2.37	0.60
34:25:119:PRO:HB2	39:75:68:TYR:CE2	2.36	0.60
38:65:74:ALA:HB1	38:65:107:GLU:CB	2.32	0.60
1:13:601:C:H2'	1:13:602:A:C8	2.36	0.60
1:13:643:C:H2'	1:13:644:G:H8	1.66	0.60
12:3I:70:ILE:HD13	12:3I:77:LEU:HD12	1.82	0.60
13:4I:3:ARG:HD3	13:4I:7:VAL:HG13	1.84	0.60
22:1K:58:G:O6	22:1K:74:C:N4	2.29	0.60
25:1H:459:U:H2'	25:1H:460:A:H8	1.67	0.60
25:1H:1786:A:H1'	25:1H:1938:A:N6	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2129:C:N3	25:1H:2160:G:N2	2.49	0.60
29:31:103:LYS:HA	29:31:106:ARG:HG3	1.84	0.60
40:C8:91:ASP:HA	40:C8:92:ARG:HB2	1.83	0.60
25:14:67:U:H2'	25:14:68:G:H8	1.66	0.60
25:14:588:U:H2'	25:14:589:C:C6	2.36	0.60
53:M5:54:GLU:HG3	53:M5:57:ARG:NH1	2.17	0.60
1:13:730:G:C5	1:13:731:G:H1'	2.37	0.59
1:13:963:G:N2	1:13:972:C:N3	2.37	0.59
1:13:1145:C:H4'	1:13:1146:A:C8	2.37	0.59
1:13:1177:G:OP1	1:13:1177:G:H4'	2.02	0.59
1:13:1259:C:N4	1:13:1260:C:O2	2.34	0.59
4:3E:91:SER:HA	4:3E:94:LEU:HD12	1.82	0.59
25:1H:2820:A:O5'	37:98:4:LEU:HD23	2.02	0.59
40:C8:69:CYS:SG	40:C8:79:PHE:HD2	2.25	0.59
54:1G:129(A):G:C6	54:1G:188:U:H4'	2.36	0.59
55:1L:9:U:H5"	55:1L:11:C:H5	1.67	0.59
55:1L:75:C:O2'	55:1L:76:C:OP1	2.20	0.59
25:14:329:G:OP2	44:C5:71:LYS:HE3	2.02	0.59
25:14:1427:A:H4'	25:14:1428:C:O4'	2.02	0.59
25:14:2557:G:H2'	25:14:2558:C:C6	2.37	0.59
25:14:2611:U:H6	25:14:2611:U:H5'	1.67	0.59
29:39:123:LEU:HA	29:39:192:LEU:O	2.00	0.59
47:F5:49:VAL:HG11	47:F5:70:VAL:HG11	1.82	0.59
1:13:4:U:O4	8:7E:105:ARG:HG2	2.01	0.59
1:13:277:C:P	17:8I:68:ARG:HH12	2.25	0.59
11:2I:18:ARG:NH2	11:2I:35:PRO:O	2.35	0.59
25:1H:818:G:H4'	25:1H:838:C:O3'	2.03	0.59
25:1H:1093:G:O2'	25:1H:1099:G:N2	2.35	0.59
25:1H:1406:U:H2'	25:1H:1407:C:C6	2.37	0.59
25:1H:1441:G:H2'	25:1H:1442:G:H8	1.67	0.59
25:1H:2593:U:O2'	25:1H:2594:C:H5'	2.02	0.59
30:41:104:GLU:CD	50:M8:23:GLU:HG3	2.28	0.59
45:H8:128:VAL:HA	45:H8:161:VAL:HG11	1.84	0.59
54:1G:790:A:H2'	54:1G:791:G:C8	2.37	0.59
4:32:13:ARG:C	4:32:15:GLU:H	2.10	0.59
21:1B:9:ARG:HG3	21:1B:10:ARG:H	1.66	0.59
25:14:498:G:H21	44:C5:47:LYS:HZ1	1.50	0.59
25:14:666:G:H5"	35:35:47:ASP:O	2.01	0.59
25:14:1482:U:H3	25:14:1512:G:H1	1.50	0.59
35:35:27:HIS:HB3	35:35:32:THR:HG23	1.84	0.59
43:B5:5:TYR:CZ	48:G5:30:ARG:HG3	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1503:A:N1	24:4K:12:A:O2'	2.35	0.59
4:3E:164:ALA:O	4:3E:168:ARG:NH2	2.35	0.59
5:4E:33:VAL:HG11	5:4E:109:ILE:HA	1.84	0.59
18:9I:47:THR:O	18:9I:83:GLU:N	2.35	0.59
25:1H:1187:G:OP2	60:1H:3688:HOH:O	2.16	0.59
25:1H:1899:G:N2	25:1H:1902:C:C5	2.70	0.59
25:1H:2057:A:OP2	60:1H:3517:HOH:O	2.17	0.59
25:1H:2406:U:OP1	60:1H:3595:HOH:O	2.16	0.59
25:1H:2646:C:OP2	25:1H:2732:G:O2'	2.19	0.59
49:L8:10:LYS:NZ	49:L8:15:TYR:OH	2.26	0.59
5:42:42:GLY:HA3	5:42:65:ASN:O	2.02	0.59
25:14:1963:U:H5"	25:14:1963:U:O2	2.03	0.59
28:29:8:LYS:O	28:29:8:LYS:HG3	2.02	0.59
43:B5:8:ILE:H	43:B5:8:ILE:HD12	1.68	0.59
45:D5:163:LEU:HD23	45:D5:163:LEU:H	1.67	0.59
1:13:1320:C:OP2	19:AI:3:ARG:NH1	2.34	0.59
25:1H:1021:A:H8	25:1H:1021:A:H3'	1.67	0.59
25:1H:1050:A:C8	25:1H:2751:G:C5	2.91	0.59
25:1H:1111:A:N3	25:1H:1112:G:H1'	2.18	0.59
25:1H:1358:G:N2	25:1H:1372:U:C5	2.71	0.59
7:62:69:VAL:HG22	7:62:135:VAL:HG22	1.85	0.59
9:82:17:VAL:HA	9:82:63:ILE:HG12	1.84	0.59
55:3L:35:G:H2'	55:3L:36:U:C6	2.37	0.59
25:14:761:A:OP2	60:14:3412:HOH:O	2.17	0.59
25:14:832:G:H5'	35:35:45:LEU:HD11	1.84	0.59
25:14:2103:C:H2'	25:14:2104:G:C8	2.38	0.59
25:14:2280:G:O2'	25:14:2388:A:N1	2.27	0.59
25:14:2287:A:C2	25:14:2346:A:H2	2.20	0.59
25:14:2689:U:OP2	25:14:2719:G:N2	2.34	0.59
29:39:31:HIS:NE2	29:39:35:GLU:OE1	2.33	0.59
1:13:138:G:H1	1:13:225:C:H42	1.50	0.59
1:13:1260:C:H3'	1:13:1260:C:H6	1.68	0.59
4:3E:108:LEU:HB3	4:3E:110:PHE:HD2	1.66	0.59
6:5E:99:ALA:O	18:9I:28:GLU:HA	2.03	0.59
23:2K:20:G:C2	23:2K:58:A:N3	2.70	0.59
22:3K:15:G:OP1	22:3K:15:G:H4'	2.02	0.59
22:3K:18:G:H4'	22:3K:19:C:O5'	2.02	0.59
25:1H:1537:C:H2'	25:1H:1538:G:O4'	2.03	0.59
25:1H:1728:G:H2'	25:1H:1731:G:O6	2.03	0.59
32:61:124:GLY:H	32:61:142:VAL:HG23	1.66	0.59
45:H8:5:LEU:HD23	45:H8:47:VAL:HG21	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:K8:50:ILE:HD12	48:K8:51:ARG:N	2.17	0.59
48:K8:55:ARG:O	48:K8:58:ALA:HB3	2.02	0.59
5:42:30:ALA:O	5:42:45:PHE:HA	2.02	0.59
9:82:42:ARG:NH1	9:82:75:ASP:OD1	2.35	0.59
56:2L:44:A:H2'	56:2L:45:A:C8	2.38	0.59
25:14:2062:A:H2'	25:14:2062:A:N3	2.18	0.59
25:14:2602:A:H4'	25:14:2603:G:O5'	2.02	0.59
28:29:116:VAL:O	28:29:117:MET:HB3	2.03	0.59
38:65:106:ARG:NH1	38:65:107:GLU:OE1	2.34	0.59
19:AI:25:LYS:HB3	19:AI:27:GLU:H	1.67	0.59
22:1K:35:QUO:C4	22:1K:35:QUO:C2	2.69	0.59
25:1H:67:U:H3	25:1H:74:A:H2	1.51	0.59
43:F8:1:MET:HE2	43:F8:2:LYS:HG2	1.84	0.59
54:1G:59:A:N1	60:1G:1729:HOH:O	2.32	0.59
38:65:74:ALA:HB1	38:65:107:GLU:HB2	1.85	0.59
45:D5:103:ARG:HB3	45:D5:138:GLU:HA	1.85	0.59
48:G5:47:ASN:C	48:G5:49:LYS:H	2.11	0.59
1:13:1291:G:O2'	9:8E:38:GLN:OE1	2.21	0.59
7:6E:73:MET:HG2	7:6E:90:GLU:HA	1.84	0.59
22:3K:75:C:H2'	22:3K:76:C:C6	2.37	0.59
25:1H:747:U:O2	25:1H:2014:A:H1'	2.01	0.59
25:1H:1140:C:OP1	33:58:23:LEU:HB3	2.02	0.59
25:1H:1496:A:H8	25:1H:1577:C:O2'	1.86	0.59
25:1H:1591:G:H2'	25:1H:1592:C:C6	2.38	0.59
25:1H:1754:C:OP1	39:B8:96:ARG:NH1	2.36	0.59
25:1H:2061:G:P	60:1H:3526:HOH:O	2.60	0.59
32:61:55:ALA:HA	32:61:58:LEU:HB3	1.85	0.59
35:78:59:LEU:O	35:78:61:ARG:N	2.35	0.59
36:88:66:ILE:O	36:88:104:PHE:N	2.36	0.59
42:E8:12:ILE:HG13	42:E8:42:ARG:HH11	1.67	0.59
48:K8:42:GLY:O	48:K8:44:LEU:N	2.36	0.59
50:M8:49:PHE:HD2	50:M8:50:VAL:HG12	1.67	0.59
54:1G:17:U:H2'	54:1G:18:C:C6	2.37	0.59
54:1G:171:A:H2'	54:1G:172:A:C8	2.37	0.59
54:1G:1228:C:H5'	13:4A:114:ARG:HB3	1.85	0.59
10:1A:45:ARG:HB3	10:1A:65:LEU:HB3	1.84	0.59
25:14:2:G:H1	25:14:2901:C:H42	1.51	0.59
28:29:103:ASP:OD1	28:29:201:THR:HG23	2.02	0.59
33:15:42:TRP:O	40:85:64:ARG:NH2	2.36	0.59
1:13:156:G:H1	1:13:165:C:H42	1.51	0.59
25:1H:1061:U:O2'	25:1H:1070:A:O4'	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1210:A:H5'	25:1H:1210:A:C8	2.36	0.59
25:1H:2439:A:H5'	25:1H:2439:A:C8	2.38	0.59
29:31:40:GLN:HE22	29:31:182:ASN:HB2	1.67	0.59
31:51:10:PRO:HD2	31:51:50:VAL:O	2.02	0.59
40:C8:87:GLY:C	40:C8:89:GLU:N	2.58	0.59
54:1G:980:C:H3'	54:1G:981:U:C6	2.38	0.59
55:3L:8:U:H3	55:3L:14:A:N6	2.01	0.59
25:14:1310:G:OP2	52:L5:9:ARG:NH1	2.36	0.59
25:14:1657:C:H2'	25:14:1658:C:C6	2.37	0.59
25:14:2111:C:H41	25:14:2147:G:N2	2.01	0.59
60:14:3407:HOH:O	27:19:244:ARG:NH2	2.36	0.59
29:39:113:ALA:HB1	29:39:186:ILE:HG21	1.83	0.59
31:59:119:GLU:HB3	31:59:140:LYS:HZ2	1.67	0.59
50:I5:16:CYS:SG	50:I5:20:ASN:ND2	2.72	0.59
2:1E:212:GLN:CD	2:1E:235:SER:HB3	2.28	0.59
9:8E:21:PRO:HA	9:8E:59:PHE:HA	1.84	0.59
13:4I:17:VAL:O	13:4I:20:THR:OG1	2.17	0.59
19:AI:5:LEU:HD13	19:AI:10:PHE:HD2	1.68	0.59
25:1H:2635:C:H5"	28:21:79:ARG:NE	2.18	0.59
33:58:130:HIS:C	33:58:134:ARG:HH12	2.10	0.59
54:1G:607:A:H2'	54:1G:608:A:O4'	2.03	0.59
54:1G:1321:C:H41	54:1G:1322:C:N4	2.00	0.59
2:12:48:MET:O	2:12:52:GLU:N	2.34	0.59
3:22:81:GLY:HA2	3:22:85:ARG:HD3	1.85	0.59
10:1A:8:LEU:HB3	10:1A:16:LEU:HD22	1.85	0.59
25:14:1061:U:H4'	25:14:1070:A:H1'	1.84	0.59
25:14:1233:C:H2'	25:14:1234:U:H6	1.68	0.59
25:14:1485:G:H1	25:14:1504:C:N4	2.01	0.59
25:14:2795:G:N2	25:14:2799:A:OP2	2.36	0.59
29:39:157:VAL:HB	29:39:194:MET:HG3	1.85	0.59
47:F5:18:ILE:HG13	47:F5:37:ILE:HG23	1.85	0.59
1:13:736:C:H2'	1:13:737:A:C8	2.38	0.59
4:3E:74:GLN:O	4:3E:78:LEU:HD13	2.03	0.59
7:6E:63:LYS:NZ	7:6E:64:GLN:OE1	2.35	0.59
32:61:1:MET:O	32:61:20:ASP:HA	2.03	0.59
34:68:122:LEU:HD23	39:B8:43:GLN:HE22	1.68	0.59
54:1G:920:U:H2'	54:1G:921:U:H6	1.66	0.59
54:1G:1095:U:H5"	54:1G:1109:C:O2	2.02	0.59
54:1G:1213:A:N6	54:1G:1215:G:N3	2.51	0.59
54:1G:1292:U:H2'	54:1G:1293:G:C8	2.38	0.59
54:1G:1478:C:H2'	54:1G:1479:C:H6	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:150:GLU:C	4:32:152:SER:H	2.10	0.59
9:82:127:LYS:NZ	56:2L:35:C:OP2	2.34	0.59
55:3L:22:A:H1'	55:3L:68:A:N6	2.18	0.59
25:14:1316:U:H2'	25:14:1317:A:H8	1.68	0.59
25:14:2637:U:H2'	25:14:2638:G:O4'	2.03	0.59
29:39:150:GLY:HA2	29:39:172:TRP:CD2	2.38	0.59
31:59:77:LYS:HE2	31:59:81:GLU:HB3	1.85	0.59
35:35:55:ARG:HG2	35:35:56:SER:N	2.18	0.59
37:55:32:GLY:HA2	37:55:116:LEU:HD12	1.85	0.59
1:13:411:A:N7	1:13:413:G:N3	2.51	0.58
19:AI:41:VAL:HB	19:AI:42:PRO:HA	1.84	0.58
26:16:44:G:O2'	26:16:47:C:N4	2.36	0.58
27:11:26:LYS:O	27:11:26:LYS:HG2	2.03	0.58
54:1G:1191:A:OP1	3:22:3:ASN:ND2	2.35	0.58
54:1G:1315:U:H2'	54:1G:1316:G:O4'	2.03	0.58
19:AA:41:VAL:HB	19:AA:44:MET:HG3	1.83	0.58
25:14:1252:G:N3	40:85:33:ARG:HD2	2.17	0.58
25:14:2875:C:OP1	39:75:3:ARG:NH2	2.36	0.58
26:1J:90:C:P	36:45:16:ARG:HH21	2.26	0.58
32:69:129:THR:HA	32:69:137:PRO:HA	1.85	0.58
33:15:42:TRP:HA	33:15:48:MET:SD	2.43	0.58
42:A5:41:LYS:HZ3	51:J5:25:LEU:HD21	1.67	0.58
48:G5:8:LYS:HG2	48:G5:9:GLN:N	2.18	0.58
11:2I:78:GLN:O	11:2I:103:LEU:HA	2.03	0.58
12:3I:47:LYS:HA	12:3I:49:ASN:H	1.67	0.58
23:2K:24:C:H2'	23:2K:25:U:C6	2.39	0.58
25:1H:1405:U:H2'	25:1H:1406:U:H6	1.65	0.58
25:1H:2023:G:H5'	25:1H:2617:C:H4'	1.84	0.58
25:1H:2750:A:H3'	31:51:4:ILE:HG21	1.84	0.58
30:41:173:LEU:HD22	30:41:178:PHE:CE2	2.38	0.58
54:1G:56:U:H2'	54:1G:57:G:C8	2.38	0.58
2:12:73:THR:HG21	2:12:97:TRP:H	1.68	0.58
25:14:404:C:O2'	25:14:405:U:OP2	2.21	0.58
25:14:1014:U:H3	25:14:1148:A:H61	1.51	0.58
25:14:2808:U:H2'	25:14:2809:A:H8	1.67	0.58
29:39:18:ARG:HE	29:39:19:GLU:N	2.01	0.58
29:39:53:THR:HG22	29:39:56:GLU:HG3	1.86	0.58
39:75:77:PRO:HG2	39:75:80:SER:HB2	1.85	0.58
1:13:504:C:OP1	60:13:1839:HOH:O	2.17	0.58
17:8I:57:VAL:HG12	17:8I:76:LEU:HD12	1.85	0.58
25:1H:528:A:C2	25:1H:2043:C:H4'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:44:G:H1'	26:16:47:C:N4	2.18	0.58
28:21:48:GLN:HG2	28:21:79:ARG:HB3	1.85	0.58
37:98:12:ARG:HD3	37:98:16:HIS:CG	2.38	0.58
44:G8:68:HIS:HB3	44:G8:71:LYS:HG2	1.84	0.58
54:1G:179:A:H2'	54:1G:180:U:H6	1.67	0.58
54:1G:1443:G:H22	39:75:119:LYS:HB2	1.66	0.58
13:4A:44:ARG:HB2	13:4A:46:LYS:HB3	1.86	0.58
56:2L:63:C:H2'	56:2L:64:G:C8	2.38	0.58
25:14:1292:U:H2'	25:14:1293:C:C6	2.38	0.58
25:14:2068:U:H3	25:14:2430:A:H2	1.49	0.58
26:1J:87:G:H3'	26:1J:88:C:C5'	2.33	0.58
30:49:4:ASP:OD1	30:49:9:ARG:NH2	2.35	0.58
35:35:63:PRO:HG3	53:M5:13:ARG:CZ	2.34	0.58
42:A5:82:LEU:HD22	42:A5:84:ARG:HH22	1.69	0.58
1:13:619:U:O2	4:3E:135:LEU:HD22	2.02	0.58
1:13:859:A:H2'	1:13:860:A:C8	2.37	0.58
6:5E:20:ALA:HA	6:5E:23:LYS:HE2	1.84	0.58
9:8E:26:VAL:HA	9:8E:61:ALA:HB3	1.85	0.58
25:1H:612:G:N2	25:1H:616:A:O2'	2.37	0.58
25:1H:674:G:C1'	29:31:74:ARG:HD3	2.32	0.58
25:1H:1590:U:H2'	25:1H:1591:G:H8	1.67	0.58
26:16:90:C:H5'	36:88:18:LYS:HA	1.84	0.58
29:31:37:VAL:HG21	35:78:6:LEU:HD21	1.86	0.58
35:78:2:LYS:HE3	35:78:4:SER:OG	2.04	0.58
35:78:36:LYS:HG3	35:78:37:GLY:H	1.67	0.58
54:1G:980:C:H3'	54:1G:981:U:H6	1.66	0.58
54:1G:1007:C:O2	54:1G:1022:G:N2	2.26	0.58
56:2L:48:U:O2'	56:2L:49:C:OP2	2.17	0.58
25:14:1665:A:H4'	34:25:67:LYS:HB2	1.85	0.58
29:39:2:LYS:HD3	29:39:2:LYS:H	1.69	0.58
30:49:115:ARG:NH2	30:49:137:GLU:OE1	2.36	0.58
44:C5:47:LYS:H	44:C5:60:PHE:HB3	1.68	0.58
53:M5:33:ASN:HA	53:M5:34:TRP:HB3	1.86	0.58
1:13:1159:U:O4'	1:13:1182:G:N2	2.36	0.58
9:8E:128:ARG:NH1	23:2K:34:U:OP2	2.22	0.58
40:C8:75:ASN:HB3	40:C8:78:THR:H	1.68	0.58
42:E8:4:LYS:HB3	42:E8:106:ILE:HG12	1.85	0.58
42:E8:40:ASN:C	42:E8:41:LYS:HG2	2.27	0.58
43:F8:3:THR:HA	43:F8:6:ASP:OD2	2.03	0.58
45:H8:30:ASN:HA	45:H8:89:PHE:HE1	1.68	0.58
54:1G:765:G:N2	54:1G:813:U:OP2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1129:C:H4'	54:1G:1130:A:H5'	1.85	0.58
54:1G:1313:U:O4	19:AA:3:ARG:N	2.36	0.58
2:12:87:ARG:NH1	2:12:220:ASP:OD1	2.36	0.58
25:14:579:G:H2'	25:14:580:C:C6	2.38	0.58
25:14:863:A:H2'	25:14:864:G:C8	2.38	0.58
25:14:2630:G:H1'	25:14:2894:G:C8	2.38	0.58
38:65:25:ARG:NH1	38:65:42:ASP:OD1	2.35	0.58
1:13:1319:A:O2'	1:13:1323:G:N7	2.20	0.58
3:2E:70:VAL:HG12	3:2E:72:LYS:H	1.68	0.58
25:1H:1221:C:H2'	25:1H:1222:C:C6	2.37	0.58
30:41:83:ARG:H	30:41:86:MET:HE2	1.68	0.58
54:1G:200:G:H1	54:1G:217:C:H42	1.51	0.58
54:1G:657:G:N2	15:6A:22:THR:OG1	2.36	0.58
3:22:44:GLU:HA	3:22:52:LEU:HD13	1.85	0.58
17:8A:53:LEU:HD23	17:8A:82:MET:HE1	1.84	0.58
55:3L:18:G:O6	55:3L:65:C:N4	2.35	0.58
25:14:2185:C:H2'	25:14:2186:G:C8	2.38	0.58
25:14:2689:U:H5"	25:14:2713:A:H2	1.67	0.58
25:14:2735:G:H2'	25:14:2736:G:H8	1.66	0.58
26:1J:70:C:H2'	26:1J:71:C:H6	1.68	0.58
28:29:57:LYS:NZ	28:29:57:LYS:H	2.01	0.58
45:D5:40:ASP:HB3	45:D5:43:GLU:HG3	1.86	0.58
4:3E:191:ARG:HH12	4:3E:196:LEU:H	1.51	0.58
25:1H:1265:A:H8	25:1H:1265:A:OP1	1.87	0.58
34:68:19:ILE:HG22	34:68:43:VAL:HA	1.85	0.58
39:B8:56:GLY:O	39:B8:59:THR:HG23	2.03	0.58
54:1G:162:A:O5'	54:1G:162:A:H8	1.87	0.58
54:1G:1309:G:O3'	13:4A:77:ASN:ND2	2.36	0.58
2:12:105:PHE:O	2:12:109:SER:N	2.25	0.58
13:4A:54:VAL:HA	13:4A:57:ARG:HB3	1.85	0.58
13:4A:58:GLU:O	13:4A:62:ASN:ND2	2.34	0.58
55:3L:26:G:H2'	55:3L:27:A:O4'	2.04	0.58
55:3L:35:G:H2'	55:3L:36:U:H6	1.69	0.58
25:14:900:A:H3'	25:14:901:A:C8	2.38	0.58
25:14:1085:A:H5'	25:14:1105:U:H1'	1.83	0.58
25:14:1210:A:H5'	25:14:1212:G:O4'	2.04	0.58
25:14:1639:U:H4'	25:14:2699:C:H4'	1.86	0.58
25:14:2016:U:O2	51:J5:7:PRO:HG2	2.02	0.58
35:35:49:ARG:O	53:M5:55:ALA:HB1	2.02	0.58
45:D5:40:ASP:OD2	45:D5:43:GLU:HG2	2.04	0.58
1:13:1263:C:H2'	1:13:1264:C:C6	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:95:GLY:O	4:3E:99:SER:OG	2.20	0.58
7:6E:65:ALA:O	7:6E:69:VAL:HG23	2.04	0.58
25:1H:3:U:OP1	25:1H:2790:A:N6	2.37	0.58
25:1H:449:A:OP2	60:1H:3699:HOH:O	2.16	0.58
25:1H:1465:G:H2'	25:1H:1466:G:H8	1.67	0.58
53:Q8:7:HIS:O	53:Q8:7:HIS:ND1	2.37	0.58
53:Q8:31:HIS:O	53:Q8:31:HIS:ND1	2.31	0.58
54:1G:1014:A:H2'	54:1G:1015:A:C8	2.39	0.58
3:22:44:GLU:O	3:22:48:TYR:N	2.36	0.58
20:BA:68:LYS:O	20:BA:73:HIS:NE2	2.36	0.58
25:14:491:G:H2'	25:14:492:A:C8	2.39	0.58
25:14:1794:U:H2'	25:14:1795:C:C6	2.39	0.58
26:1J:14:U:H5'	26:1J:71:C:H1'	1.84	0.58
26:1J:16:G:H2'	26:1J:17:C:C6	2.39	0.58
44:C5:88:LYS:O	44:C5:89:PHE:HB3	2.04	0.58
46:E5:53:MET:HG3	46:E5:59:LEU:HD21	1.85	0.58
1:13:1216:G:OP1	14:5I:3:ARG:NH2	2.36	0.58
5:4E:102:ALA:HB1	5:4E:106:PRO:HG2	1.84	0.58
8:7E:17:THR:HG21	8:7E:80:ILE:HG13	1.85	0.58
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.04	0.58
25:1H:1055:G:H1'	25:1H:1085:A:C2	2.39	0.58
25:1H:1088:A:H5'	25:1H:1089:G:H5'	1.86	0.58
25:1H:1296:G:O2'	25:1H:1297:C:H5'	2.03	0.58
25:1H:1754:C:P	39:B8:96:ARG:HH12	2.27	0.58
28:21:2:LYS:NZ	28:21:95:ILE:O	2.23	0.58
37:98:20:LEU:HD21	37:98:40:LYS:HD3	1.86	0.58
44:G8:87:LYS:HD3	44:G8:88:LYS:H	1.68	0.58
54:1G:522:C:OP2	12:3A:69:TYR:OH	2.20	0.58
54:1G:658:G:O6	54:1G:746:A:N6	2.36	0.58
54:1G:929:G:H1	54:1G:1388:C:H42	1.51	0.58
5:42:75:THR:OG1	5:42:117:ASP:O	2.13	0.58
25:14:250:G:P	35:35:60:MET:HE1	2.43	0.58
25:14:918:A:O2'	26:1J:96:G:N2	2.37	0.58
25:14:1359:A:N7	25:14:1372:U:O4	2.37	0.58
25:14:1599:C:H2'	25:14:1600:C:C6	2.38	0.58
29:39:5:ALA:H	29:39:19:GLU:HB3	1.69	0.58
33:15:28:THR:O	33:15:32:THR:OG1	2.21	0.58
45:D5:141:VAL:HG11	45:D5:150:LEU:HD13	1.86	0.58
47:F5:80:LEU:HD12	47:F5:82:LEU:HD11	1.86	0.58
49:H5:10:LYS:NZ	49:H5:15:TYR:OH	2.30	0.58
1:13:589:C:H42	1:13:650:G:H1	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:85:G:OP2	44:G8:9:LYS:HB2	2.04	0.58
25:1H:1021:A:H3'	25:1H:1021:A:C8	2.38	0.58
25:1H:1210:A:OP1	25:1H:1211:U:O2'	2.15	0.58
35:78:18:ARG:O	35:78:19:VAL:HG22	2.04	0.58
54:1G:1119:C:OP2	9:82:9:ARG:NH2	2.37	0.58
2:12:114:ARG:O	2:12:118:LEU:HG	2.03	0.58
4:32:82:ALA:HA	4:32:85:LYS:HB2	1.86	0.58
7:62:26:PHE:O	7:62:30:ILE:HG13	2.03	0.58
55:1L:28:G:H22	55:1L:45:C:H1'	1.68	0.58
25:14:868:U:N3	25:14:869:G:N7	2.52	0.58
25:14:1165:U:H2'	25:14:1166:C:C6	2.38	0.58
25:14:1864:U:OP1	25:14:2410:G:O2'	2.21	0.58
26:1J:52:A:H62	38:65:33:LYS:HG3	1.69	0.58
28:29:37:ARG:NE	28:29:42:ASP:OD2	2.33	0.58
33:15:35:ARG:HB2	33:15:42:TRP:CZ3	2.38	0.58
35:35:2:LYS:NZ	35:35:4:SER:OG	2.37	0.58
41:95:85:LYS:HE3	41:95:88:ARG:H	1.68	0.58
46:E5:36:ILE:O	46:E5:36:ILE:HD13	2.04	0.58
2:1E:59:GLU:HG3	2:1E:225:ALA:HB2	1.86	0.57
6:5E:75:LEU:HD13	6:5E:79:LEU:HG	1.86	0.57
23:2K:62:C:H2'	23:2K:63:C:C6	2.39	0.57
27:11:30:GLU:CD	27:11:63:ARG:HE	2.11	0.57
30:41:43:LEU:HB2	30:41:89:GLY:HA2	1.86	0.57
31:51:119:GLU:OE1	31:51:120:GLY:N	2.28	0.57
33:58:96:GLU:O	33:58:98:VAL:HG12	2.04	0.57
37:98:10:LEU:O	37:98:12:ARG:N	2.36	0.57
39:B8:27:THR:HG23	39:B8:90:GLN:HB3	1.86	0.57
54:1G:617:G:H1	54:1G:623:C:H42	1.51	0.57
3:22:18:TRP:NE1	14:5A:55:GLY:H	2.02	0.57
3:22:21:ARG:HB2	3:22:21:ARG:NH1	2.18	0.57
10:1A:32:ALA:HB2	10:1A:81:THR:HG21	1.86	0.57
56:2L:10:G:H22	56:2L:27:G:H1'	1.68	0.57
25:14:58:G:OP1	43:B5:75:ASP:HB2	2.04	0.57
25:14:273(C):C:H42	25:14:363(C):G:H1	1.51	0.57
25:14:1338:G:N3	25:14:1393:A:H2	2.02	0.57
25:14:2547:U:O2	34:25:23:ARG:NH2	2.36	0.57
25:14:2756:U:H1'	25:14:2757:A:H5"	1.86	0.57
47:F5:92:LYS:HG3	47:F5:95:LEU:HD12	1.86	0.57
1:13:376:G:H5"	16:7I:5:ARG:HD2	1.86	0.57
1:13:390:C:O3'	16:7I:28:ARG:NH2	2.36	0.57
22:1K:23:A:H3'	22:1K:24:G:H5"	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:987:G:O2'	25:1H:1000:A:N3	2.34	0.57
25:1H:1179:C:H2'	25:1H:1180:C:H6	1.69	0.57
25:1H:1728:G:H3'	25:1H:1729:A:C5'	2.33	0.57
25:1H:2129:C:N4	25:1H:2159:G:O6	2.37	0.57
54:1G:1018:C:H2'	54:1G:1019:C:O4'	2.04	0.57
54:1G:1172:C:H2'	54:1G:1173:G:H8	1.69	0.57
4:32:94:LEU:HA	4:32:97:LEU:HD12	1.85	0.57
13:4A:79:LYS:O	13:4A:82:MET:HB3	2.03	0.57
15:6A:54:ARG:NH1	15:6A:58:MET:SD	2.77	0.57
57:4L:15:A:H8	57:4L:15:A:O5'	1.86	0.57
25:14:303:U:H2'	25:14:304:G:C8	2.39	0.57
25:14:706:A:H2'	25:14:707:G:O4'	2.03	0.57
25:14:1678:G:N2	25:14:1989:G:H22	2.02	0.57
25:14:1717:G:H1	25:14:1742:C:H42	1.52	0.57
35:35:39:LYS:HG3	35:35:45:LEU:HD22	1.87	0.57
38:65:24:LEU:HB2	38:65:85:VAL:HG12	1.86	0.57
1:13:947:G:H2'	1:13:948:C:C6	2.39	0.57
23:2K:16:C:H5"	23:2K:17:C:C4	2.39	0.57
25:1H:836:G:H5"	25:1H:837:C:OP2	2.03	0.57
25:1H:1250:G:N7	35:78:18:ARG:NH2	2.53	0.57
25:1H:2032:G:H1'	28:21:145:LYS:HE2	1.86	0.57
25:1H:2820:A:C6	37:98:4:LEU:HD11	2.40	0.57
29:31:42:ALA:O	29:31:45:ARG:HB2	2.04	0.57
38:A8:11:LYS:HD3	38:A8:91:PRO:HD3	1.85	0.57
46:I8:51:VAL:N	46:I8:62:LEU:HD12	2.20	0.57
54:1G:690:G:H2'	54:1G:691:G:O4'	2.04	0.57
54:1G:999:U:H2'	54:1G:1000:A:C8	2.39	0.57
2:12:68:ILE:HG12	2:12:161:ALA:HB3	1.85	0.57
25:14:1771:C:O2'	25:14:1786:A:H8	1.87	0.57
33:15:67:LEU:O	33:15:88:GLU:HG3	2.03	0.57
53:M5:30:ARG:HD2	53:M5:31:HIS:HB2	1.85	0.57
11:2I:17:GLY:HA3	11:2I:77:MET:SD	2.44	0.57
25:1H:639:U:H2'	25:1H:640:C:C6	2.40	0.57
25:1H:1257:C:H4'	29:31:83:PHE:CE1	2.39	0.57
25:1H:2495:G:H5"	36:88:81:VAL:O	2.05	0.57
30:41:66:GLN:HA	50:M8:6:HIS:HE1	1.68	0.57
44:G8:9:LYS:HA	44:G8:27:VAL:HG22	1.85	0.57
18:9A:36:ASN:O	18:9A:36:ASN:ND2	2.34	0.57
25:14:1225:C:O2'	41:95:85:LYS:N	2.36	0.57
25:14:1986:A:OP1	60:14:3726:HOH:O	2.17	0.57
29:39:7:TYR:HD1	29:39:18:ARG:H	1.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:61:ALA:HB2	30:49:68:PRO:HD3	1.86	0.57
32:69:74:ASN:OD1	32:69:74:ASN:N	2.36	0.57
43:B5:25:LYS:HA	43:B5:81:VAL:O	2.04	0.57
44:C5:17:SER:OG	44:C5:18:GLY:O	2.22	0.57
1:13:1346:A:OP1	9:8E:120:ARG:NH1	2.31	0.57
25:1H:252:G:OP2	35:78:50:ARG:NH1	2.37	0.57
25:1H:654(D):G:H1	25:1H:654(Q):C:H42	1.52	0.57
25:1H:773:U:C4'	27:11:47:GLY:HA3	2.34	0.57
25:1H:2292:C:P	38:A8:17:ARG:HH22	2.26	0.57
27:11:232:PRO:HB3	27:11:244:ARG:NH1	2.19	0.57
41:D8:65:GLY:HA3	41:D8:91:TYR:CE2	2.39	0.57
54:1G:167:G:H2'	54:1G:168:G:H8	1.69	0.57
54:1G:991:U:O4	54:1G:1212:U:O2'	2.16	0.57
17:8A:19:VAL:HG22	17:8A:44:ALA:HB3	1.87	0.57
25:14:10:G:N2	25:14:2802:G:OP1	2.38	0.57
25:14:71:A:H5'	25:14:71:A:C8	2.39	0.57
25:14:973:A:OP2	60:14:3577:HOH:O	2.16	0.57
26:1J:52:A:N6	38:65:33:LYS:HG3	2.19	0.57
27:19:70:TRP:CD1	27:19:70:TRP:C	2.82	0.57
35:35:127:ALA:O	35:35:147:LEU:N	2.35	0.57
36:45:34:LEU:HB2	36:45:118:LEU:HD22	1.87	0.57
43:B5:27:THR:HB	43:B5:80:ILE:HG22	1.85	0.57
1:13:475:G:H2'	1:13:476:G:O4'	2.04	0.57
1:13:633:G:OP2	1:13:633:G:H8	1.85	0.57
6:5E:82:ARG:CG	6:5E:83:ASP:HA	2.34	0.57
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.20	0.57
25:1H:234:C:H2'	25:1H:235:U:H6	1.68	0.57
25:1H:270(V):G:H2'	25:1H:270(W):G:H8	1.70	0.57
25:1H:1534:G:H2'	25:1H:1535:U:H4'	1.86	0.57
25:1H:1794:U:H2'	25:1H:1795:C:C6	2.39	0.57
25:1H:2306:C:H3'	25:1H:2307:G:H5'	1.86	0.57
39:B8:58:ASN:C	39:B8:58:ASN:HD22	2.11	0.57
45:H8:108:PRO:HB2	45:H8:112:ARG:HA	1.87	0.57
45:H8:140:ASP:N	45:H8:140:ASP:OD1	2.38	0.57
46:I8:53:MET:HB2	46:I8:59:LEU:CD2	2.33	0.57
54:1G:688:G:H2'	54:1G:689:C:H6	1.69	0.57
54:1G:828:A:H5"	54:1G:859:A:N1	2.20	0.57
25:14:479:A:N3	25:14:481:G:H5"	2.19	0.57
27:19:73:VAL:HG13	27:19:120:GLY:HA3	1.87	0.57
30:49:124:SER:HB2	30:49:131:TYR:CE1	2.40	0.57
41:95:67:GLY:O	41:95:88:ARG:HD2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:321:A:H62	1:13:328:C:H1'	1.68	0.57
1:13:1329:A:H5'	13:4I:29:ARG:HD2	1.86	0.57
4:3E:9:CYS:HB3	4:3E:32:ALA:CB	2.33	0.57
25:1H:780:G:H21	25:1H:783:A:N6	2.03	0.57
25:1H:1061:U:H4'	25:1H:1070:A:H1'	1.87	0.57
25:1H:1970:A:P	60:1H:3751:HOH:O	2.61	0.57
27:11:26:LYS:HZ1	27:11:84:TYR:HB3	1.70	0.57
30:41:173:LEU:HB3	30:41:178:PHE:CD2	2.40	0.57
54:1G:620:C:H2'	54:1G:621:A:O4'	2.04	0.57
54:1G:940:C:H2'	54:1G:941:G:C8	2.38	0.57
54:1G:1127:G:N2	54:1G:1144:G:H22	1.95	0.57
54:1G:1513:A:H2'	54:1G:1514:C:C6	2.40	0.57
2:12:8:LYS:HE3	2:12:11:LEU:HD23	1.86	0.57
2:12:19:HIS:CE1	2:12:206:ASP:HB2	2.40	0.57
56:2L:24:C:C2	56:2L:25:U:C5	2.93	0.57
25:14:827:U:H2'	25:14:2430:A:H2	1.70	0.57
25:14:2176:A:H2'	25:14:2177:C:C6	2.39	0.57
25:14:2212:A:H4'	25:14:2213:U:H5	1.70	0.57
25:14:2304:G:O2'	30:49:156:ASP:OD1	2.21	0.57
25:14:2572:A:N7	28:29:145:LYS:HB2	2.20	0.57
31:59:59:ARG:O	31:59:63:SER:OG	2.21	0.57
45:D5:30:ASN:HA	45:D5:89:PHE:CE1	2.40	0.57
47:F5:92:LYS:C	47:F5:94:LEU:N	2.62	0.57
2:1E:97:TRP:HZ3	2:1E:172:ILE:HB	1.70	0.57
4:3E:84:LYS:N	4:3E:85:LYS:HD3	2.17	0.57
6:5E:82:ARG:CB	6:5E:83:ASP:HA	2.34	0.57
11:2I:54:ARG:O	11:2I:57:THR:HG22	2.05	0.57
14:5I:3:ARG:HG2	14:5I:3:ARG:HH11	1.70	0.57
25:1H:2001:A:H2'	25:1H:2002:G:H8	1.70	0.57
42:E8:61:ASN:N	42:E8:61:ASN:OD1	2.35	0.57
43:F8:11:PRO:HG2	43:F8:13:LEU:HD21	1.86	0.57
43:F8:24:GLY:O	43:F8:83:VAL:HG22	2.05	0.57
43:F8:67:GLY:O	43:F8:69:TYR:N	2.36	0.57
54:1G:678:U:H2'	54:1G:679:C:C6	2.39	0.57
54:1G:1490:C:H2'	54:1G:1491:G:O4'	2.05	0.57
25:14:270(F):U:H2'	25:14:270(G):C:C6	2.39	0.57
25:14:1252:G:O4'	40:85:33:ARG:HD3	2.04	0.57
25:14:2849:U:OP1	39:75:95:ARG:NH1	2.37	0.57
29:39:122:LYS:HD3	29:39:191:ARG:HH21	1.70	0.57
30:49:20:ILE:HG23	30:49:25:TYR:HB2	1.86	0.57
36:45:11:LYS:NZ	36:45:86:GLY:O	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:L5:8:ASN:HB3	52:L5:11:LYS:HB3	1.85	0.57
1:13:717:C:O2'	1:13:734:G:O4'	2.22	0.57
1:13:1178:G:N2	1:13:1181:G:H8	2.03	0.57
3:2E:62:ASP:N	3:2E:62:ASP:OD1	2.38	0.57
4:3E:110:PHE:CE1	4:3E:148:VAL:HG23	2.40	0.57
6:5E:3:ARG:NH1	6:5E:38:GLU:OE1	2.37	0.57
22:3K:25:G:H2'	22:3K:26:G:C8	2.39	0.57
25:1H:287:C:H2'	25:1H:288:C:C6	2.37	0.57
34:68:112:MET:HA	34:68:115:VAL:HG22	1.87	0.57
54:1G:452:A:O2'	54:1G:453:A:O4'	2.16	0.57
54:1G:779:C:H2'	54:1G:780:A:O4'	2.05	0.57
54:1G:1385:G:H2'	54:1G:1386:G:H8	1.70	0.57
4:32:10:ARG:HG2	4:32:11:LEU:HD23	1.87	0.57
13:4A:97:PRO:HA	13:4A:110:ARG:HD3	1.87	0.57
33:15:56:ASN:H	33:15:125:GLY:HA3	1.70	0.57
1:13:343:U:O2'	1:13:346:G:O6	2.13	0.57
11:2I:107:SER:OG	11:2I:108:ILE:N	2.35	0.57
17:8I:76:LEU:HD21	17:8I:79:SER:HB2	1.87	0.57
25:1H:529:A:H8	25:1H:530:G:C6	2.23	0.57
25:1H:918:A:N3	26:16:80:U:O2'	2.32	0.57
25:1H:1094:U:O2'	25:1H:1096:A:OP1	2.23	0.57
25:1H:1347:G:H5"	25:1H:1348:G:OP2	2.05	0.57
48:K8:63:VAL:HA	48:K8:66:GLU:HG3	1.87	0.57
53:Q8:41:ILE:HA	53:Q8:43:GLN:H	1.69	0.57
54:1G:409:G:H2'	54:1G:410:G:O4'	2.04	0.57
54:1G:503:C:OP2	12:3A:116:SER:OG	2.16	0.57
54:1G:1376:U:OP1	7:62:98:SER:OG	2.23	0.57
3:22:98:ASN:OD1	3:22:98:ASN:N	2.37	0.57
13:4A:17:VAL:HG13	13:4A:27:LYS:HZ3	1.69	0.57
13:4A:73:GLU:O	13:4A:77:ASN:HB2	2.04	0.57
18:9A:22:VAL:C	18:9A:24:ALA:H	2.11	0.57
25:14:1164:G:H1	25:14:1185:C:H42	1.53	0.57
25:14:1386:C:H2'	25:14:1387:C:H6	1.70	0.57
31:59:82:GLY:HA3	31:59:135:GLY:O	2.04	0.57
46:E5:17:GLN:HB2	46:E5:19:LYS:HZ1	1.69	0.57
50:I5:2:LYS:HB3	50:I5:6:HIS:HB2	1.86	0.57
1:13:674:G:N2	1:13:717:C:O2	2.38	0.56
1:13:1291:G:OP1	7:6E:41:ARG:NH2	2.38	0.56
4:3E:82:ALA:O	4:3E:89:THR:HG23	2.05	0.56
25:1H:630:G:N2	25:1H:633:A:OP2	2.27	0.56
25:1H:1188:U:C4'	41:D8:79:VAL:HG22	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2233:U:H2'	25:1H:2234:G:C8	2.40	0.56
25:1H:2705:A:O2'	25:1H:2852:G:OP1	2.16	0.56
26:16:43:C:OP1	30:41:67:LYS:NZ	2.38	0.56
51:N8:41:PRO:O	51:N8:44:THR:OG1	2.23	0.56
54:1G:448:A:P	54:1G:485:G:H22	2.28	0.56
54:1G:952:U:H4'	54:1G:964:A:N1	2.19	0.56
54:1G:972:C:O2	10:1A:55:LYS:HD2	2.05	0.56
54:1G:1238:A:N3	54:1G:1241:G:O2'	2.33	0.56
8:72:84:ARG:NH2	8:72:136:GLU:OE2	2.30	0.56
17:8A:86:GLU:O	17:8A:90:ILE:HG12	2.05	0.56
25:14:1417:C:OP2	60:14:3680:HOH:O	2.17	0.56
25:14:1559:G:O2'	25:14:1560:G:H5'	2.05	0.56
26:1J:50:G:OP1	38:65:62:LYS:HB2	2.05	0.56
29:39:130:ALA:H	29:39:142:TRP:CD1	2.23	0.56
36:45:22:LYS:N	36:45:23:GLY:HA3	2.20	0.56
1:13:598:U:H4'	8:7E:94:TYR:CD2	2.40	0.56
1:13:735:C:H2'	1:13:736:C:H6	1.70	0.56
25:1H:598:G:H5'	35:78:11:GLY:HA3	1.87	0.56
25:1H:991:C:H2'	25:1H:992:C:H6	1.70	0.56
25:1H:2057:A:OP2	60:1H:3516:HOH:O	2.17	0.56
32:61:8:PRO:HG3	32:61:14:ASP:HB3	1.86	0.56
37:98:55:ALA:HA	37:98:80:PHE:CE1	2.40	0.56
54:1G:222:U:H2'	54:1G:223:U:H6	1.68	0.56
54:1G:490:G:P	4:32:132:ARG:HH22	2.28	0.56
54:1G:1151:A:OP1	10:1A:42:THR:N	2.36	0.56
3:22:47:LEU:HD23	3:22:52:LEU:HB2	1.86	0.56
3:22:65:ALA:HA	3:22:100:ALA:HB3	1.87	0.56
3:22:79:ARG:H	3:22:79:ARG:NE	2.03	0.56
55:1L:57:C:O2'	55:1L:68:A:H4'	2.04	0.56
56:2L:54:G:H2'	56:2L:55:5MU:H6	1.69	0.56
25:14:2683:C:OP1	39:75:53:ARG:NH2	2.38	0.56
28:29:18:ASP:HB3	39:75:82:LEU:HD11	1.88	0.56
44:C5:87:LYS:H	44:C5:94:LYS:HB3	1.70	0.56
45:D5:132:ASN:OD1	45:D5:132:ASN:N	2.39	0.56
1:13:10:A:OP2	5:4E:126:ARG:HD3	2.06	0.56
1:13:143:A:H2	1:13:220:G:H22	1.51	0.56
1:13:1117:G:H5"	9:8E:104:ARG:NH1	2.20	0.56
8:7E:87:SER:HB2	8:7E:93:VAL:HB	1.86	0.56
25:1H:234:C:H2'	25:1H:235:U:C6	2.39	0.56
25:1H:739:G:OP1	60:1H:3736:HOH:O	2.17	0.56
25:1H:1022:G:N2	25:1H:1142(A):A:N1	2.49	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1171:G:N2	25:1H:1179:C:N3	2.54	0.56
25:1H:1177:A:H5"	25:1H:1178:C:C6	2.40	0.56
25:1H:1432:C:H2'	25:1H:1433:U:O4'	2.04	0.56
31:51:98:LEU:HD22	31:51:125:VAL:HG23	1.87	0.56
38:A8:39:ILE:HB	38:A8:49:VAL:HG23	1.86	0.56
41:D8:66:ARG:NH1	41:D8:88:ARG:HD3	2.20	0.56
47:J8:79:GLY:O	47:J8:80:LEU:HD13	2.05	0.56
54:1G:41:G:H2'	54:1G:42:G:C8	2.41	0.56
54:1G:426:G:H2'	54:1G:427:U:H6	1.71	0.56
54:1G:517:G:N2	54:1G:530:G:OP1	2.34	0.56
54:1G:857:C:H2'	54:1G:858:G:O4'	2.06	0.56
54:1G:1203:C:H2'	54:1G:1204:A:C8	2.40	0.56
54:1G:1314:C:H42	54:1G:1323:G:H1	1.54	0.56
54:1G:1423:G:H2'	54:1G:1424:C:C6	2.40	0.56
7:62:102:ARG:O	7:62:106:GLN:HG3	2.05	0.56
9:82:24:GLY:HA2	9:82:59:PHE:O	2.05	0.56
19:AA:53:ASN:OD1	19:AA:56:GLN:N	2.36	0.56
25:14:649:G:H2'	25:14:650:C:C6	2.40	0.56
25:14:2388:A:C2'	25:14:2389:G:H5'	2.34	0.56
26:1J:22:U:H3	26:1J:61:G:H1	1.54	0.56
29:39:64:ILE:HG13	29:39:65:TRP:CD1	2.39	0.56
1:13:280:C:H3'	1:13:281:G:H5'	1.87	0.56
1:13:989:C:H42	1:13:1216:G:H1	1.53	0.56
1:13:1153:C:OP1	10:1I:14:LYS:NZ	2.37	0.56
6:5E:82:ARG:HB2	6:5E:83:ASP:HA	1.88	0.56
8:7E:85:ARG:NE	8:7E:87:SER:O	2.38	0.56
19:AI:15:LEU:O	19:AI:19:VAL:HG23	2.05	0.56
25:1H:155:C:N4	25:1H:171:G:H1	2.03	0.56
25:1H:607:U:OP1	29:31:102:PRO:HA	2.05	0.56
25:1H:1665:A:N6	60:1H:3841:HOH:O	2.30	0.56
27:11:26:LYS:HG3	27:11:83:GLU:OE1	2.05	0.56
53:Q8:21:LYS:HG2	53:Q8:22:VAL:H	1.71	0.56
54:1G:54:C:N4	54:1G:353:A:OP2	2.35	0.56
54:1G:67:C:H2'	54:1G:68:G:C8	2.40	0.56
54:1G:1129:C:N3	54:1G:1132:C:N4	2.53	0.56
25:14:952:G:C6	25:14:966:G:C6	2.93	0.56
25:14:958:U:O2	26:1J:89(A):A:O2'	2.22	0.56
25:14:2306:C:H3'	25:14:2307:G:H5"	1.87	0.56
45:D5:108:PRO:HB2	45:D5:142:SER:HA	1.88	0.56
10:1I:27:ALA:HB1	10:1I:34:VAL:HG11	1.87	0.56
13:4I:67:GLU:HG2	13:4I:71:ARG:HH21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9I:66:LEU:O	18:9I:70:ILE:HG13	2.06	0.56
25:1H:1516:U:H2'	25:1H:1517:G:H8	1.70	0.56
26:16:15:A:H1'	26:16:109:G:C8	2.40	0.56
40:C8:92:ARG:HB3	40:C8:93:LYS:HA	1.87	0.56
43:F8:34:ALA:HA	43:F8:38:GLU:OE1	2.06	0.56
54:1G:158:G:H1	54:1G:163:C:H42	1.54	0.56
54:1G:745:C:H2'	54:1G:746:A:C8	2.40	0.56
2:12:84:GLU:HB3	2:12:219:VAL:HG11	1.88	0.56
55:1L:17:G:N2	55:1L:64:U:O2	2.31	0.56
25:14:1011:G:N2	25:14:1150:C:O2	2.38	0.56
25:14:2176:A:H2'	25:14:2177:C:H6	1.70	0.56
25:14:2273:A:H2'	25:14:2274:A:C8	2.40	0.56
25:14:2712:U:O2'	60:14:3466:HOH:O	2.17	0.56
26:1J:14:U:H5'	26:1J:71:C:C1'	2.35	0.56
27:19:71:ASP:CG	27:19:103:ARG:HH12	2.14	0.56
29:39:78:ILE:HA	29:39:83:PHE:CD2	2.41	0.56
30:49:97:ASP:HA	30:49:100:TRP:HD1	1.69	0.56
45:D5:8:TYR:HD1	45:D5:62:PRO:HG3	1.71	0.56
47:F5:87:PRO:O	47:F5:91:LYS:N	2.36	0.56
1:13:738:C:H2'	1:13:739:C:H6	1.70	0.56
1:13:963:G:H21	10:1I:55:LYS:CE	2.18	0.56
10:1I:15:THR:HA	10:1I:18:ALA:HB3	1.87	0.56
25:1H:1007:C:H5"	33:58:35:ARG:HH11	1.70	0.56
25:1H:1093:G:H1'	25:1H:1099:G:H22	1.71	0.56
25:1H:1412:A:H2'	25:1H:1413:G:C8	2.41	0.56
25:1H:1667:G:H8	25:1H:1667:G:OP2	1.89	0.56
25:1H:2695:C:H2'	25:1H:2696:U:C6	2.36	0.56
27:11:28:GLU:HG3	27:11:29:PRO:HD3	1.86	0.56
54:1G:345:C:H4'	54:1G:345:C:OP1	2.05	0.56
54:1G:959:A:H5"	54:1G:960:U:OP2	2.06	0.56
54:1G:1423:G:H2'	54:1G:1424:C:H6	1.70	0.56
3:22:77:ILE:HG12	3:22:84:ILE:HD12	1.88	0.56
13:4A:94:ARG:NH2	19:AA:78:ARG:HH21	2.03	0.56
25:14:660:G:H21	35:35:12:ALA:HB2	1.70	0.56
25:14:1805:U:O2	27:19:50:THR:HB	2.05	0.56
25:14:2126:A:N6	25:14:2163:C:O2'	2.39	0.56
30:49:17:PRO:HA	30:49:20:ILE:HG13	1.88	0.56
1:13:376:G:H5"	16:7I:5:ARG:HB2	1.88	0.56
7:6E:69:VAL:HA	7:6E:135:VAL:HG13	1.87	0.56
26:16:95:U:H2'	26:16:96:G:C8	2.40	0.56
28:21:5:LEU:HD12	28:21:51:PHE:HB2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1172:C:H2'	54:1G:1173:G:C8	2.39	0.56
54:1G:1245:A:H61	54:1G:1292:U:H3	1.54	0.56
54:1G:1259:C:N4	54:1G:1260:C:O2	2.39	0.56
8:72:25:ASP:OD1	8:72:25:ASP:N	2.38	0.56
55:1L:75:C:H2'	55:1L:76:C:C5	2.41	0.56
25:14:270(F):U:H3	25:14:270(T):G:H1	1.52	0.56
25:14:330:A:H2	25:14:1210:A:O2'	1.89	0.56
25:14:1729:A:H2'	25:14:1731:G:N2	2.20	0.56
25:14:2064:C:H2'	25:14:2065:C:C6	2.41	0.56
25:14:2392:A:H2	25:14:2424:C:N4	2.03	0.56
25:14:2674:G:H5'	34:25:26:LYS:HD2	1.88	0.56
47:F5:83:GLU:OE1	47:F5:83:GLU:N	2.39	0.56
1:13:74:C:N4	1:13:96:G:H1	1.98	0.56
1:13:390:C:O2'	16:7I:28:ARG:NH2	2.38	0.56
1:13:812:C:C2	60:13:1804:HOH:O	2.51	0.56
1:13:1449:C:H42	1:13:1454:G:H1	1.54	0.56
8:7E:69:ARG:NH2	8:7E:73:ASP:O	2.38	0.56
23:2K:63:C:H2'	23:2K:64:G:C8	2.41	0.56
25:1H:483:A:O4'	44:G8:48:ALA:HB1	2.05	0.56
25:1H:581:C:H2'	25:1H:582:G:H8	1.70	0.56
25:1H:1278:A:OP1	37:98:36:THR:HG22	2.05	0.56
25:1H:2328:A:H2'	25:1H:2329:G:C8	2.41	0.56
25:1H:2562:U:O2'	34:68:23:ARG:NH1	2.38	0.56
26:16:15:A:H5'	26:16:16:G:H8	1.70	0.56
30:41:34:LEU:HD13	30:41:99:MET:HE2	1.86	0.56
32:61:4:ILE:HG21	32:61:47:LEU:HD13	1.87	0.56
44:G8:43:ASN:OD1	44:G8:65:ALA:HB3	2.06	0.56
54:1G:377:G:H1	54:1G:386:C:N4	2.02	0.56
54:1G:922:G:H2'	54:1G:923:A:C8	2.40	0.56
54:1G:1347:G:O2'	54:1G:1373:G:O6	2.18	0.56
2:12:18:GLY:H	2:12:42:ILE:HG22	1.70	0.56
2:12:22:LYS:HA	2:12:40:HIS:NE2	2.21	0.56
5:42:76:ILE:O	5:42:93:PRO:HB3	2.06	0.56
25:14:733:G:N7	60:14:3413:HOH:O	2.39	0.56
25:14:1159:U:O2'	25:14:1160:G:H5'	2.06	0.56
25:14:1379:A:H1'	25:14:1380:G:OP1	2.06	0.56
25:14:1525:G:H2'	25:14:1526:G:C8	2.41	0.56
25:14:2572:A:C8	28:29:144:ARG:HD2	2.41	0.56
25:14:2849:U:O4	39:75:23:ARG:NH2	2.38	0.56
32:69:133:HIS:CD2	32:69:134:PRO:HD3	2.40	0.56
35:35:3:LEU:H	35:35:3:LEU:HD12	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:55:100:LEU:HG	37:55:112:ALA:HA	1.86	0.56
41:95:48:GLY:N	41:95:52:VAL:HG22	2.20	0.56
1:13:652:U:OP2	60:13:1898:HOH:O	2.18	0.56
1:13:1296:C:H5'	13:4I:14:ARG:HD2	1.87	0.56
2:1E:97:TRP:CZ3	2:1E:172:ILE:HB	2.40	0.56
20:BI:30:LYS:NZ	20:BI:80:ARG:HH12	2.04	0.56
25:1H:299:A:H5'	25:1H:300:A:OP2	2.05	0.56
52:P8:27:GLY:HA2	52:P8:30:VAL:HG23	1.87	0.56
53:Q8:6:THR:O	53:Q8:6:THR:OG1	2.23	0.56
54:1G:619:U:N3	4:32:134:ASP:OD1	2.39	0.56
54:1G:895:G:H1	54:1G:904:C:H42	1.54	0.56
3:22:77:ILE:HA	3:22:84:ILE:HB	1.87	0.56
12:3A:124:LYS:HD2	12:3A:125:PRO:HD2	1.88	0.56
25:14:252:G:OP2	35:35:50:ARG:NH2	2.26	0.56
25:14:1386:C:H2'	25:14:1387:C:C6	2.40	0.56
29:39:158:THR:HG23	29:39:164:ARG:HG3	1.87	0.56
38:65:34:HIS:CE1	38:65:54:LEU:HD12	2.40	0.56
39:75:107:ASP:N	39:75:107:ASP:OD1	2.38	0.56
45:D5:127:LYS:O	45:D5:162:GLU:HB2	2.06	0.56
1:13:198:G:O6	1:13:219:C:N4	2.39	0.56
1:13:375:U:O3'	16:7I:6:LEU:HB2	2.06	0.56
1:13:693:G:H2'	1:13:694:A:C8	2.41	0.56
1:13:1004:A:P	1:13:1025:U:H3	2.29	0.56
1:13:1124:G:H3'	1:13:1145:C:H41	1.71	0.56
1:13:1226:C:H4'	19:AI:80:TYR:OH	2.06	0.56
9:8E:10:ARG:HE	9:8E:105:ASP:CB	2.18	0.56
9:8E:56:LEU:C	9:8E:58:HIS:H	2.12	0.56
25:1H:919:G:N2	25:1H:2269:A:OP2	2.39	0.56
28:21:78:LEU:CA	28:21:79:ARG:HD2	2.32	0.56
44:G8:49:VAL:HG21	44:G8:55:TYR:CE1	2.41	0.56
45:H8:117:LEU:HD13	45:H8:118:GLN:H	1.71	0.56
47:J8:85:LEU:HA	47:J8:86:SER:C	2.31	0.56
54:1G:1082:G:H8	54:1G:1082:G:OP2	1.88	0.56
4:32:13:ARG:HD2	4:32:38:TYR:O	2.06	0.56
6:52:100:ASN:ND2	18:9A:26:LEU:O	2.38	0.56
10:1A:5:ARG:HD3	10:1A:73:ASP:OD1	2.06	0.56
25:14:996:A:N6	25:14:1160:G:C6	2.73	0.56
25:14:2250:G:H2'	36:45:82:ARG:HG3	1.87	0.56
28:29:25:VAL:O	28:29:26:ILE:HG12	2.06	0.56
30:49:125:PHE:HZ	30:49:170:ARG:HD3	1.71	0.56
31:59:19:VAL:HG12	31:59:20:ALA:H	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:85:LYS:HB3	40:85:116:ALA:HB1	1.87	0.56
50:I5:13:ARG:HE	50:I5:22:ILE:HG21	1.70	0.56
1:13:177:C:OP1	20:BI:65:LYS:NZ	2.28	0.55
1:13:323:U:H5'	20:BI:23:ARG:HB2	1.87	0.55
1:13:407:G:H2'	1:13:408:A:C8	2.40	0.55
2:1E:100:GLY:O	2:1E:104:ASN:N	2.35	0.55
23:2K:19:G:N2	23:2K:58:A:H2'	2.21	0.55
23:2K:50:G:O6	23:2K:66:C:N4	2.34	0.55
25:1H:994:C:OP1	40:C8:53:ARG:NH2	2.39	0.55
25:1H:1038:C:H2'	25:1H:1039:G:O4'	2.05	0.55
25:1H:1358:G:OP2	60:1H:3804:HOH:O	2.18	0.55
25:1H:1433:U:O2	25:1H:1561:G:C2	2.59	0.55
25:1H:1638:C:H2'	25:1H:1639:U:H5"	1.88	0.55
25:1H:1971:A:C4	27:11:241:PRO:HD3	2.40	0.55
28:21:77:ILE:HB	28:21:79:ARG:NE	2.05	0.55
33:58:96:GLU:HG2	33:58:97:ARG:N	2.21	0.55
44:G8:40:GLU:C	44:G8:42:VAL:H	2.11	0.55
54:1G:9:G:H1	54:1G:25:C:H42	1.54	0.55
54:1G:186:C:H1'	20:BA:81:LYS:HE2	1.88	0.55
54:1G:1081:G:N7	5:42:47:LYS:NZ	2.53	0.55
54:1G:1342:C:H4'	9:82:125:TYR:HB3	1.87	0.55
9:82:119:ALA:O	9:82:120:ARG:HB2	2.03	0.55
11:2A:12:ARG:NH2	11:2A:13:GLN:O	2.38	0.55
16:7A:57:ARG:HA	16:7A:60:LEU:HD12	1.86	0.55
55:3L:15:G:H4'	55:3L:15:G:OP1	2.05	0.55
25:14:807:U:C2	25:14:808:G:C8	2.94	0.55
25:14:881:G:O6	25:14:882:G:N1	2.39	0.55
25:14:1443:G:N2	25:14:1548:C:N3	2.44	0.55
25:14:1500:G:O2'	27:19:100:GLY:O	2.24	0.55
25:14:2745:C:O2	31:59:139:GLN:NE2	2.37	0.55
36:45:25:ASP:CB	36:45:102:VAL:H	2.19	0.55
1:13:991:U:C4	1:13:1212:U:H1'	2.41	0.55
1:13:1000:A:H2'	1:13:1001:G:C8	2.41	0.55
12:3I:49:ASN:ND2	12:3I:92:ASP:OD2	2.40	0.55
22:3K:17:OMG:N2	22:3K:64:PSU:O4	2.37	0.55
25:1H:2392:A:H8	35:78:61:ARG:HG2	1.71	0.55
33:58:15:LEU:HB3	33:58:136:GLU:HG2	1.88	0.55
45:H8:52:SER:C	45:H8:54:HIS:H	2.15	0.55
45:H8:76:LEU:HA	45:H8:83:PRO:HA	1.88	0.55
54:1G:520:A:OP2	12:3A:51:ALA:HB1	2.06	0.55
2:12:166:ASP:OD2	2:12:169:LYS:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:78:HIS:HB2	8:72:104:ARG:HG3	1.88	0.55
56:2L:20:G:C2	56:2L:58:A:C2	2.94	0.55
55:3L:19:C:H5"	55:3L:20:C:OP2	2.07	0.55
25:14:492:A:H2'	25:14:493:G:O4'	2.06	0.55
28:29:98:PRO:HD3	28:29:175:VAL:HG13	1.88	0.55
30:49:106:LEU:HA	30:49:110:ALA:HB3	1.87	0.55
32:69:14:ASP:N	32:69:17:GLN:OE1	2.28	0.55
35:35:52:GLU:O	35:35:54:GLY:N	2.35	0.55
39:75:31:SER:HG	39:75:85:LYS:HZ2	1.49	0.55
44:C5:15:VAL:HG12	44:C5:21:LYS:HA	1.87	0.55
1:13:292:G:N7	1:13:293:G:H1'	2.21	0.55
1:13:939:G:H2'	1:13:940:C:C6	2.40	0.55
1:13:1060:C:O2'	10:1I:56:HIS:ND1	2.39	0.55
15:6I:63:ARG:O	15:6I:67:LEU:HD12	2.06	0.55
25:1H:450:G:OP2	60:1H:3690:HOH:O	2.18	0.55
25:1H:2377:A:H2'	25:1H:2378:A:C8	2.41	0.55
25:1H:2807:G:H3'	25:1H:2808:U:H5"	1.88	0.55
35:78:43:GLY:N	60:78:303:HOH:O	2.35	0.55
35:78:47:ASP:OD1	35:78:49:ARG:HG2	2.06	0.55
48:K8:47:ASN:O	48:K8:48:HIS:ND1	2.39	0.55
54:1G:922:G:H1	54:1G:1395:C:H42	1.54	0.55
54:1G:1004:A:H2	54:1G:1024:G:C8	2.25	0.55
3:22:71:ALA:HB2	3:22:109:PRO:HB3	1.89	0.55
11:2A:98:LEU:O	11:2A:101:SER:HB3	2.06	0.55
25:14:172:C:H2'	25:14:173:G:H8	1.71	0.55
25:14:589:C:O3'	29:39:95:ARG:NH1	2.39	0.55
25:14:1035:U:H2'	25:14:1036:G:C8	2.42	0.55
25:14:1056:G:H4'	25:14:1086:A:H1'	1.87	0.55
25:14:1218:C:H42	25:14:1231:G:H1	1.54	0.55
25:14:2191:G:O2'	25:14:2192:G:OP1	2.21	0.55
27:19:266:SER:O	27:19:269:PHE:HB2	2.06	0.55
33:15:134:ARG:HB3	33:15:134:ARG:NH1	2.22	0.55
1:13:127:G:O2'	17:8I:2:PRO:O	2.21	0.55
1:13:280:C:C2	17:8I:38:ARG:HG3	2.42	0.55
1:13:738:C:H2'	1:13:739:C:C6	2.41	0.55
25:1H:1190:G:N7	60:1H:3681:HOH:O	2.33	0.55
26:16:27:C:O3'	38:A8:36:TYR:OH	2.24	0.55
54:1G:501:C:H2'	54:1G:502:G:C8	2.42	0.55
54:1G:973:G:OP1	10:1A:57:LYS:NZ	2.37	0.55
54:1G:1256:A:H2'	54:1G:1278:U:O2	2.07	0.55
4:32:49:ARG:NH2	4:32:50:ARG:HG3	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3A:10:LEU:HB3	17:8A:32:TYR:CE2	2.41	0.55
25:14:140:A:H8	25:14:1408:C:O2'	1.89	0.55
25:14:696:G:H2'	25:14:697:C:H6	1.72	0.55
25:14:2190:G:H2'	25:14:2191:G:O4'	2.07	0.55
26:1J:42:C:O2	30:49:93:THR:N	2.28	0.55
29:39:41:LEU:O	29:39:44:ARG:HG2	2.06	0.55
31:59:149:ARG:HA	31:59:162:ILE:HG21	1.87	0.55
45:D5:152:ALA:HB3	45:D5:167:PRO:HA	1.89	0.55
1:13:401:C:O2'	1:13:621:A:N3	2.35	0.55
1:13:610:G:H2'	1:13:611:A:O4'	2.06	0.55
1:13:1203:C:H2'	1:13:1204:A:O4'	2.07	0.55
2:1E:22:LYS:NZ	2:1E:35:GLU:OE2	2.40	0.55
2:1E:98:LEU:HB2	2:1E:101:MET:HG3	1.89	0.55
25:1H:764:A:H2	27:11:219:PRO:HG3	1.71	0.55
25:1H:2751:G:OP2	31:51:2:SER:N	2.39	0.55
25:1H:2830:G:H5"	25:1H:2830:G:H8	1.71	0.55
27:11:4:LYS:NZ	27:11:20:ASP:HA	2.21	0.55
27:11:28:GLU:HG3	27:11:29:PRO:CD	2.36	0.55
27:11:71:ASP:CB	27:11:103:ARG:HH22	2.19	0.55
28:21:46:ALA:HA	28:21:82:ARG:O	2.07	0.55
34:68:13:ASN:ND2	34:68:97:ARG:HB3	2.21	0.55
36:88:20:ALA:HB1	36:88:99:PRO:HB2	1.87	0.55
36:88:51:ARG:HH12	36:88:52:VAL:HG23	1.72	0.55
39:B8:20:PRO:HG2	39:B8:86:ILE:O	2.06	0.55
40:C8:14:HIS:O	40:C8:18:LEU:HD12	2.06	0.55
54:1G:544:G:OP1	4:32:59:ARG:NH1	2.31	0.55
54:1G:624:C:H2'	54:1G:625:G:H8	1.71	0.55
54:1G:1109:C:H2'	54:1G:1110:A:O4'	2.07	0.55
10:1A:12:ASP:OD1	10:1A:15:THR:N	2.37	0.55
55:1L:59:A:N1	55:1L:60:A:C4	2.75	0.55
25:14:747:U:O2	25:14:2014:A:H1'	2.06	0.55
25:14:2130:U:H2'	25:14:2158:A:N1	2.21	0.55
25:14:2143:C:H2'	25:14:2144:U:O4'	2.06	0.55
25:14:2787:C:C1'	28:29:62:PRO:HB3	2.36	0.55
26:1J:50:G:OP1	38:65:63:THR:HG23	2.06	0.55
28:29:49:LEU:O	28:29:78:LEU:HA	2.05	0.55
28:29:68:ALA:C	28:29:70:ALA:H	2.14	0.55
28:29:128:SER:OG	28:29:129:HIS:N	2.38	0.55
31:59:4:ILE:HG13	31:59:7:LEU:HD23	1.89	0.55
45:D5:99:TYR:HB3	45:D5:123:ASP:HB3	1.88	0.55
1:13:954:G:H2'	1:13:955:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1346:A:H5"	9:8E:120:ARG:HH12	1.72	0.55
9:8E:111:ARG:O	9:8E:113:LYS:HD2	2.07	0.55
25:1H:987:G:OP2	60:1H:3779:HOH:O	2.18	0.55
25:1H:1025:G:C4	25:1H:1135:C:H1'	2.42	0.55
25:1H:1591:G:H2'	25:1H:1592:C:H6	1.71	0.55
25:1H:2331:G:O3'	46:I8:43:THR:HG22	2.06	0.55
25:1H:2376:A:H2'	25:1H:2377:A:O4'	2.07	0.55
39:B8:6:LEU:HA	39:B8:9:LEU:HB2	1.87	0.55
39:B8:107:ASP:O	39:B8:110:ILE:HG12	2.06	0.55
40:C8:92:ARG:O	41:D8:11:GLN:NE2	2.38	0.55
54:1G:535:A:H5"	60:1G:1743:HOH:O	2.06	0.55
54:1G:549:C:OP1	4:32:73:ARG:NH1	2.40	0.55
54:1G:1352:C:N4	54:1G:1370:G:H1	2.04	0.55
9:82:49:PRO:O	9:82:53:VAL:HG22	2.07	0.55
25:14:322:A:H3'	29:39:169:ASN:OD1	2.07	0.55
25:14:637:A:OP1	35:35:133:SER:OG	2.24	0.55
52:L5:5:TRP:NE1	52:L5:7:PRO:HG3	2.22	0.55
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.05	0.55
3:2E:52:LEU:HA	3:2E:70:VAL:HG22	1.89	0.55
4:3E:150:GLU:OE1	4:3E:150:GLU:N	2.39	0.55
15:6I:12:ILE:HG23	15:6I:27:VAL:HG11	1.87	0.55
25:1H:132:G:H1	25:1H:147:U:H3	1.55	0.55
31:51:80:SER:HB2	31:51:81:GLU:OE1	2.07	0.55
33:58:56:ASN:N	33:58:125:GLY:O	2.23	0.55
51:N8:40:LYS:NZ	51:N8:46:CYS:HB2	2.22	0.55
54:1G:666:G:N2	54:1G:740:U:O2	2.38	0.55
54:1G:746:A:H2'	54:1G:747:C:C6	2.42	0.55
5:42:139:LEU:HA	5:42:142:LEU:HG	1.89	0.55
55:3L:85:A:O2'	25:14:2394:C:N3	2.40	0.55
25:14:2392:A:OP2	53:M5:32:LEU:HD12	2.07	0.55
25:14:2651:C:H42	25:14:2669:G:H1	1.54	0.55
28:29:13:ARG:NH2	39:75:77:PRO:HB3	2.22	0.55
33:15:34:LEU:HD21	33:15:120:LEU:HD13	1.89	0.55
35:35:13:ASN:C	35:35:15:ARG:H	2.13	0.55
42:A5:78:GLU:OE1	42:A5:99:ARG:HD3	2.06	0.55
1:13:114:U:O2'	1:13:115:G:H5'	2.07	0.55
25:1H:528:A:O2'	25:1H:529:A:H5"	2.07	0.55
25:1H:534:U:H5'	40:C8:42:ALA:HB1	1.89	0.55
25:1H:1021:A:H61	25:1H:1142(A):A:H61	1.54	0.55
25:1H:1290:C:H2'	25:1H:1291:C:C6	2.42	0.55
26:16:12:C:O2'	46:I8:74:ARG:HG2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:191(F):U:H2'	54:1G:191:G:C8	2.42	0.55
54:1G:853:G:H2'	54:1G:854:G:H8	1.72	0.55
5:42:98:THR:HB	5:42:117:ASP:HB3	1.89	0.55
10:1A:48:THR:OG1	10:1A:62:HIS:HB3	2.07	0.55
25:14:271(B):G:O6	25:14:404:C:N4	2.35	0.55
25:14:309:G:H4'	44:C5:18:GLY:HA3	1.89	0.55
25:14:343:C:H2'	25:14:344:G:C8	2.41	0.55
25:14:635:C:O2'	25:14:639:U:OP1	2.18	0.55
25:14:2735:G:H2'	25:14:2736:G:C8	2.41	0.55
25:14:2801:A:C5	25:14:2802:G:H1'	2.42	0.55
45:D5:13:GLU:HA	45:D5:14:LYS:HZ1	1.72	0.55
1:13:359:U:H2'	1:13:360:A:C8	2.42	0.55
1:13:580:U:OP1	15:6I:54:ARG:NH2	2.40	0.55
1:13:1399:C:C2	1:13:1502:A:N6	2.74	0.55
7:6E:16:LEU:HD11	9:8E:45:ALA:HB2	1.87	0.55
8:7E:116:LYS:HG2	8:7E:129:VAL:HG11	1.89	0.55
25:1H:49:A:N7	25:1H:120:U:C5	2.71	0.55
25:1H:1858:G:N2	25:1H:1883:G:H2'	2.20	0.55
25:1H:2544:G:H8	25:1H:2544:G:O5'	1.90	0.55
28:21:174:ASP:HB3	28:21:183:LEU:HD13	1.89	0.55
30:41:97:ASP:O	30:41:100:TRP:N	2.39	0.55
31:51:83:TYR:HB2	31:51:134:SER:HA	1.87	0.55
43:F8:3:THR:OG1	43:F8:4:ALA:HA	2.07	0.55
54:1G:191(F):U:O2	20:BA:105:SER:HB2	2.07	0.55
54:1G:600:C:H2'	54:1G:601:C:C6	2.41	0.55
25:14:1545:A:H2'	25:14:1545(A):A:O4'	2.07	0.55
25:14:1754:C:H2'	25:14:1755:A:C8	2.42	0.55
27:19:64:ILE:O	27:19:64:ILE:HG12	2.06	0.55
40:85:104:GLN:NE2	40:85:105:VAL:HG22	2.22	0.55
45:D5:110:GLY:N	45:D5:144:LEU:HD23	2.21	0.55
1:13:251:G:O6	1:13:271:C:N4	2.39	0.55
1:13:940:C:H2'	1:13:941:G:H8	1.71	0.55
1:13:963:G:H21	10:1I:55:LYS:NZ	2.05	0.55
1:13:1007:C:N4	1:13:1022:G:H1	2.05	0.55
15:6I:74:ASP:HB3	15:6I:77:ARG:HG2	1.89	0.55
23:2K:8:4SU:O5'	23:2K:8:4SU:H6	2.07	0.55
25:1H:1516:U:H2'	25:1H:1517:G:C8	2.41	0.55
25:1H:2054:A:H5"	25:1H:2055:C:O5'	2.06	0.55
26:16:95:U:H2'	26:16:96:G:H8	1.72	0.55
30:41:64:THR:HG22	30:41:66:GLN:HB2	1.87	0.55
54:1G:1410:G:H2'	54:1G:1411:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:50:ALA:HB2	3:22:83:ARG:HH21	1.72	0.55
4:32:57:ARG:NH2	4:32:205:GLU:OE2	2.40	0.55
9:82:50:LEU:HB3	9:82:56:LEU:HA	1.89	0.55
28:29:101:ARG:CZ	28:29:171:GLU:HB2	2.37	0.55
45:D5:145:GLU:HA	45:D5:174:VAL:O	2.06	0.55
1:13:1333:A:H2'	1:13:1334:G:O4'	2.07	0.54
2:1E:162:ILE:HD11	2:1E:184:VAL:HG22	1.90	0.54
7:6E:80:VAL:HG21	7:6E:85:TYR:CE2	2.42	0.54
17:8I:100:LYS:HG2	17:8I:101:ARG:HE	1.71	0.54
25:1H:1779:U:H3'	60:1H:3521:HOH:O	2.08	0.54
26:16:15:A:H1'	26:16:109:G:N9	2.22	0.54
35:78:26:GLY:HA2	60:78:304:HOH:O	2.08	0.54
44:G8:28:LYS:NZ	44:G8:40:GLU:HG3	2.22	0.54
51:N8:40:LYS:HZ3	51:N8:46:CYS:HB2	1.70	0.54
53:Q8:49:VAL:HA	53:Q8:50:LEU:C	2.31	0.54
54:1G:584:G:OP1	17:8A:91:ARG:NH1	2.39	0.54
54:1G:1320:C:H2'	54:1G:1321:C:C6	2.42	0.54
54:1G:1411:C:H2'	54:1G:1412:C:H6	1.72	0.54
3:22:3:ASN:HD22	3:22:3:ASN:H	1.52	0.54
3:22:14:ILE:HG12	3:22:15:THR:H	1.72	0.54
5:42:101:ILE:H	5:42:101:ILE:HD13	1.71	0.54
25:14:249:C:OP1	60:14:3426:HOH:O	2.17	0.54
25:14:1217:C:OP1	40:85:15:LYS:NZ	2.30	0.54
25:14:2127:G:H1	25:14:2161:C:N4	2.05	0.54
25:14:2250:G:C4	36:45:82:ARG:HG3	2.42	0.54
25:14:2745:C:H2'	25:14:2746:U:O4'	2.07	0.54
28:29:52:LEU:C	28:29:74:PRO:HB3	2.32	0.54
29:39:51:THR:HG23	29:39:92:PRO:HG2	1.89	0.54
30:49:76:SER:OG	30:49:84:LYS:N	2.40	0.54
38:65:28:VAL:HG11	38:65:98:VAL:HG13	1.88	0.54
4:3E:64:LEU:HD23	4:3E:203:VAL:HG21	1.88	0.54
20:BI:97:ALA:O	20:BI:99:LEU:N	2.40	0.54
23:2K:54:G:H2'	23:2K:55:5MU:C6	2.40	0.54
22:3K:14:A:H3'	22:3K:15:G:H5"	1.89	0.54
25:1H:1156:A:OP2	60:1H:3633:HOH:O	2.17	0.54
25:1H:1517:G:H5"	25:1H:1518:C:OP2	2.07	0.54
25:1H:1635:G:H2'	25:1H:1636:C:C6	2.42	0.54
27:11:145:VAL:HG12	27:11:146:GLU:O	2.07	0.54
32:61:69:LYS:O	32:61:73:GLU:HB2	2.07	0.54
36:88:133:ARG:O	36:88:134:ARG:HB2	2.07	0.54
38:A8:34:HIS:HB2	38:A8:36:TYR:CE1	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A8:106:ARG:NH2	38:A8:107:GLU:HB2	2.22	0.54
39:B8:51:ARG:HB2	39:B8:98:LYS:HD2	1.88	0.54
40:C8:69:CYS:HG	40:C8:79:PHE:HD2	1.55	0.54
44:G8:45:VAL:HG22	44:G8:46:LYS:H	1.72	0.54
54:1G:1289:A:OP1	21:1B:9:ARG:NH1	2.40	0.54
6:52:25:ILE:HG21	6:52:82:ARG:HD2	1.89	0.54
13:4A:3:ARG:CZ	13:4A:7:VAL:HG12	2.38	0.54
25:14:139:G:N2	25:14:141:A:N1	2.50	0.54
25:14:1025:G:O2'	25:14:1026:U:OP1	2.21	0.54
25:14:1187:G:H8	25:14:1187:G:O5'	1.90	0.54
25:14:1820:U:H4'	25:14:1821:A:OP2	2.07	0.54
25:14:2127:G:H1	25:14:2161:C:H42	1.56	0.54
27:19:70:TRP:CH2	27:19:150:LYS:HA	2.43	0.54
28:29:23:VAL:O	28:29:24:THR:OG1	2.20	0.54
41:95:48:GLY:HA3	41:95:52:VAL:N	2.22	0.54
42:A5:72:LYS:HB3	42:A5:106:ILE:HG13	1.89	0.54
51:J5:46:CYS:SG	51:J5:48:GLU:HG2	2.47	0.54
1:13:1120:G:H2'	1:13:1121:U:H6	1.73	0.54
12:3I:43:VAL:HG23	12:3I:93:LEU:HD22	1.89	0.54
13:4I:4:ILE:HG22	13:4I:5:ALA:H	1.72	0.54
25:1H:527:C:H4'	25:1H:528:A:C5'	2.37	0.54
25:1H:654(D):G:H22	25:1H:654(Q):C:H42	1.56	0.54
25:1H:2032:G:H21	28:21:146:THR:HG23	1.72	0.54
25:1H:2057:A:P	60:1H:3517:HOH:O	2.64	0.54
25:1H:2074:U:H2'	25:1H:2075:U:C6	2.43	0.54
29:31:11:VAL:HG22	29:31:125:LEU:HB2	1.89	0.54
31:51:83:TYR:CB	31:51:134:SER:HA	2.37	0.54
32:61:93:THR:H	32:61:96:ASP:CG	2.15	0.54
54:1G:56:U:H2'	54:1G:57:G:H8	1.73	0.54
5:42:57:LYS:HG2	5:42:61:TYR:HE2	1.71	0.54
25:14:271(B):G:N7	25:14:421:U:H2'	2.21	0.54
25:14:1505:C:H2'	25:14:1506:C:C6	2.42	0.54
25:14:2293:C:H5"	38:65:89:ARG:NH1	2.22	0.54
26:1J:104:A:H2'	26:1J:105:G:O4'	2.07	0.54
27:19:95:LEU:HD11	27:19:105:ILE:HD12	1.89	0.54
44:C5:76:CYS:HB2	44:C5:97:ARG:HD3	1.89	0.54
45:D5:8:TYR:CD1	45:D5:62:PRO:HG3	2.43	0.54
45:D5:175:VAL:HA	45:D5:177:PRO:HD3	1.89	0.54
50:I5:42:PHE:O	50:I5:43:TYR:HB3	2.06	0.54
1:13:673:G:H2'	1:13:674:G:C8	2.42	0.54
1:13:1099:G:H2'	1:13:1100:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1142:G:H3'	1:13:1143:G:H8	1.72	0.54
4:3E:150:GLU:HA	4:3E:153:ARG:HG3	1.88	0.54
7:6E:113:GLU:HG3	7:6E:119:ARG:HA	1.89	0.54
21:1F:5:ASP:HB3	21:1F:8:THR:HG23	1.89	0.54
25:1H:323:G:C8	29:31:171:PRO:HG3	2.42	0.54
25:1H:634:C:H2'	25:1H:635:C:C6	2.43	0.54
25:1H:1101:U:H2'	25:1H:1102:C:C6	2.42	0.54
25:1H:1400:G:H2'	25:1H:1401:G:C8	2.42	0.54
25:1H:1533:C:H3'	25:1H:1534:G:H5"	1.90	0.54
25:1H:1652:A:H2'	25:1H:1653:G:H5'	1.89	0.54
25:1H:1858:G:H2'	25:1H:1883:G:N2	2.19	0.54
27:11:67:PHE:HB3	27:11:153:ALA:H	1.70	0.54
54:1G:986:A:H1'	19:AA:54:GLY:O	2.07	0.54
2:12:128:GLU:O	2:12:130:ARG:HG2	2.07	0.54
3:22:19:GLU:HG2	3:22:55:VAL:O	2.07	0.54
25:14:107:C:H2'	25:14:108:U:C6	2.42	0.54
25:14:654(I):C:N4	25:14:654(L):G:O6	2.40	0.54
25:14:889:C:H2'	25:14:890:A:H4'	1.89	0.54
25:14:908:C:OP2	36:45:22:LYS:HD3	2.07	0.54
25:14:1899:G:O2'	25:14:1900:A:H5"	2.07	0.54
25:14:2327:A:H2'	25:14:2328:A:C8	2.42	0.54
25:14:2687:U:C4	25:14:2688:U:C5	2.96	0.54
28:29:25:VAL:HG12	28:29:26:ILE:H	1.71	0.54
29:39:182:ASN:HD21	29:39:185:ASP:CG	2.14	0.54
1:13:1315:U:H2'	1:13:1316:G:O4'	2.08	0.54
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.23	0.54
9:8E:114:TYR:CE1	10:1I:59:SER:HA	2.42	0.54
19:AI:63:THR:HG22	19:AI:66:MET:HE3	1.90	0.54
25:1H:207:A:H2'	25:1H:208:C:O4'	2.08	0.54
26:16:54:G:H2'	26:16:55:U:H6	1.71	0.54
27:11:26:LYS:CE	27:11:84:TYR:H	2.18	0.54
33:58:54:VAL:HB	33:58:122:VAL:HG22	1.89	0.54
33:58:97:ARG:HA	33:58:100:GLU:HB2	1.90	0.54
41:D8:34:GLU:HG3	41:D8:56:SER:HB2	1.88	0.54
45:H8:80:ARG:HG3	45:H8:82:ARG:HG2	1.89	0.54
54:1G:1182:G:H5'	54:1G:1183:A:H5'	1.89	0.54
54:1G:1216:G:H5"	14:5A:5:ALA:HB3	1.88	0.54
54:1G:1386:G:C2	54:1G:1387:G:N7	2.75	0.54
3:22:18:TRP:CD1	14:5A:55:GLY:H	2.25	0.54
20:BA:50:GLU:N	20:BA:100:ILE:HG12	2.21	0.54
25:14:1062:G:H2'	25:14:1063:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:8:GLN:HA	29:39:15:SER:HA	1.90	0.54
30:49:80:PHE:O	30:49:82:LEU:HB2	2.08	0.54
38:65:26:LEU:HD22	38:65:87:PHE:CD1	2.42	0.54
41:95:65:GLY:O	41:95:91:TYR:HB2	2.07	0.54
1:13:590:C:H42	1:13:649:G:H1	1.56	0.54
25:1H:1062:G:N2	25:1H:1076:C:O2	2.32	0.54
25:1H:1203:G:H3'	25:1H:1204:A:H5"	1.89	0.54
25:1H:1748:G:H2'	25:1H:1749:A:C8	2.41	0.54
32:61:107:VAL:HG12	32:61:108:THR:H	1.72	0.54
35:78:102:ARG:HB3	35:78:102:ARG:CZ	2.36	0.54
54:1G:164:U:H2'	54:1G:165:C:C6	2.42	0.54
54:1G:1148:U:H2'	54:1G:1149:C:O4'	2.07	0.54
54:1G:1154:G:H2'	54:1G:1155:G:C8	2.42	0.54
3:22:8:ILE:HG23	3:22:16:ARG:HG2	1.87	0.54
17:8A:59:ILE:HD13	17:8A:73:VAL:HA	1.90	0.54
55:3L:42:U:H2'	55:3L:43:G:C8	2.42	0.54
25:14:239:U:H2'	25:14:240:G:O4'	2.08	0.54
25:14:863:A:H2'	25:14:864:G:H8	1.72	0.54
25:14:886:C:H1'	25:14:890:A:C2	2.43	0.54
25:14:1688:U:O2	25:14:1700:A:H5'	2.08	0.54
25:14:1751:C:H2'	25:14:1752:C:H6	1.73	0.54
25:14:2126:A:N1	25:14:2162:G:N2	2.56	0.54
35:35:49:ARG:HD2	53:M5:58:ILE:HG23	1.88	0.54
41:95:35:LEU:HB3	41:95:37:VAL:HG13	1.90	0.54
50:I5:12:ALA:HB1	50:I5:29:PRO:HB3	1.89	0.54
3:2E:74:GLY:HA2	3:2E:77:ILE:HB	1.88	0.54
4:3E:187:ARG:HH22	4:3E:193:ASP:CG	2.15	0.54
25:1H:141:A:H8	25:1H:1595:G:H21	1.56	0.54
25:1H:322:A:P	29:31:168:ARG:HH21	2.31	0.54
25:1H:331:A:N3	60:1H:3881:HOH:O	2.34	0.54
26:16:44:G:C2	26:16:48:A:C2	2.95	0.54
28:21:116:VAL:O	28:21:117:MET:HB3	2.07	0.54
30:41:66:GLN:OE1	30:41:98:ARG:NH1	2.41	0.54
33:58:22:THR:HB	33:58:25:ARG:HB2	1.89	0.54
51:N8:40:LYS:HE2	51:N8:47:PRO:HG2	1.89	0.54
54:1G:976:G:H5'	54:1G:1358:U:O2'	2.08	0.54
25:14:1533:C:H42	25:14:1538:G:H1	1.56	0.54
25:14:1657:C:H2'	25:14:1658:C:H6	1.73	0.54
25:14:2574:G:N3	28:29:143:ASN:ND2	2.55	0.54
25:14:2645:G:H3'	25:14:2646:C:H5'	1.90	0.54
29:39:7:TYR:CE2	29:39:10:PRO:HG3	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:92:GLY:HA2	39:75:116:ALA:HA	1.90	0.54
1:13:405:U:OP2	4:3E:3:ARG:NH2	2.41	0.54
5:4E:39:GLY:HA2	5:4E:113:ALA:HB1	1.90	0.54
8:7E:7:ALA:HB2	8:7E:85:ARG:HG3	1.90	0.54
25:1H:972:G:OP1	25:1H:974:G:H5'	2.08	0.54
25:1H:1113:U:H2'	25:1H:1114:G:C8	2.43	0.54
25:1H:1168:G:C2	25:1H:1182:A:C2	2.96	0.54
25:1H:1430:C:H2'	25:1H:1431:U:C6	2.43	0.54
25:1H:2567:G:H2'	25:1H:2568:C:C6	2.43	0.54
29:31:8:GLN:H	29:31:8:GLN:CD	2.15	0.54
38:A8:42:ASP:O	38:A8:43:GLU:HB2	2.08	0.54
53:Q8:23:VAL:HG13	53:Q8:46:ARG:H	1.72	0.54
54:1G:192:U:H2'	54:1G:193:C:C6	2.43	0.54
14:5A:59:ALA:HB1	14:5A:61:TRP:HZ3	1.72	0.54
25:14:27:G:O2'	25:14:28:A:OP2	2.25	0.54
33:15:33:LEU:HD12	33:15:38:HIS:CD2	2.43	0.54
39:75:4:GLY:O	39:75:7:ILE:N	2.33	0.54
45:D5:7:ALA:O	45:D5:8:TYR:CG	2.60	0.54
1:13:838:G:H1	1:13:848:C:H42	1.53	0.54
7:6E:143:ARG:HD3	22:3K:43:G:OP1	2.08	0.54
16:7I:4:ILE:HD12	16:7I:66:PRO:HB3	1.90	0.54
18:9I:59:SER:H	18:9I:62:GLU:HB2	1.73	0.54
25:1H:363(B):G:H2'	25:1H:363(C):G:C8	2.38	0.54
25:1H:1478:G:H2'	25:1H:1479:G:H8	1.72	0.54
25:1H:1799:G:O6	27:11:179:SER:HB3	2.08	0.54
25:1H:2248:C:H2'	25:1H:2249:U:O4'	2.08	0.54
37:98:10:LEU:O	37:98:12:ARG:HG2	2.08	0.54
38:A8:35:ILE:HD11	38:A8:101:LEU:HD23	1.89	0.54
45:H8:30:ASN:HD22	45:H8:90:VAL:HB	1.73	0.54
54:1G:34:C:H2'	54:1G:35:G:C8	2.43	0.54
54:1G:628:G:H2'	54:1G:629:G:C8	2.43	0.54
54:1G:947:G:O3'	13:4A:109:THR:OG1	2.25	0.54
54:1G:1392:G:H21	54:1G:1502:A:H8	1.54	0.54
3:22:36:ASP:OD1	3:22:57:ILE:HG21	2.08	0.54
3:22:181:ASN:HB3	3:22:205:GLY:O	2.07	0.54
7:62:26:PHE:CE2	7:62:30:ILE:HD11	2.43	0.54
25:14:190:A:OP2	47:F5:39:LYS:HE3	2.07	0.54
25:14:1649:G:O2'	37:55:107:ASP:OD2	2.26	0.54
25:14:2542:A:N3	25:14:2542:A:H5"	2.22	0.54
25:14:2762:G:H5'	25:14:2763:G:OP2	2.08	0.54
25:14:2836:U:H2'	25:14:2837:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:3:C:H2'	26:1J:4:C:C6	2.43	0.54
44:C5:75:ILE:O	44:C5:76:CYS:HB3	2.08	0.54
45:D5:100:VAL:O	45:D5:124:ILE:HG22	2.08	0.54
50:I5:20:ASN:OD1	50:I5:36:CYS:HB2	2.07	0.54
1:13:130:A:O2'	1:13:131:C:O5'	2.26	0.54
1:13:1028(A):C:N3	1:13:1032(A):G:N1	2.49	0.54
1:13:1123:A:H4'	10:1I:37:PRO:HD2	1.89	0.54
1:13:1170:A:H8	1:13:1170:A:O5'	1.91	0.54
3:2E:138:VAL:O	3:2E:141:VAL:HB	2.08	0.54
11:2I:60:ALA:HA	11:2I:63:LEU:HD12	1.89	0.54
20:BI:26:ASN:HB2	20:BI:71:THR:OG1	2.08	0.54
20:BI:73:HIS:HB3	20:BI:74:LYS:HD2	1.90	0.54
22:1K:10:C:H2'	22:1K:11:C:H6	1.73	0.54
22:1K:76:C:H2'	22:1K:77:C:C6	2.43	0.54
25:1H:518:G:H2'	25:1H:519:U:C6	2.42	0.54
25:1H:860:U:C5	25:1H:917:A:C2	2.95	0.54
25:1H:1022:G:P	33:58:69:GLN:HE22	2.30	0.54
25:1H:1914:C:H2'	25:1H:1915:U:O4'	2.08	0.54
25:1H:2584:U:H2'	25:1H:2585:U:H2'	1.89	0.54
26:16:24:G:N7	26:16:56:G:H2'	2.23	0.54
27:11:142:VAL:HG23	27:11:193:VAL:HA	1.90	0.54
37:98:26:LYS:HE2	37:98:70:LEU:O	2.08	0.54
51:N8:40:LYS:NZ	51:N8:48:GLU:H	2.05	0.54
54:1G:186(A):C:H2'	54:1G:186(B):C:C6	2.43	0.54
54:1G:371:G:O2'	54:1G:373:A:N7	2.41	0.54
54:1G:757:U:H2'	54:1G:758:G:O4'	2.09	0.54
25:14:171:G:H2'	25:14:172:C:C6	2.43	0.54
25:14:2635:C:O2'	28:29:48:GLN:NE2	2.31	0.54
28:29:135:HIS:CD2	28:29:135:HIS:H	2.26	0.54
35:35:121:LYS:HG3	35:35:122:PRO:HD2	1.90	0.54
44:C5:48:ALA:HB3	44:C5:59:GLY:C	2.32	0.54
1:13:192:U:H4'	20:BI:57:ARG:HD2	1.91	0.53
3:2E:73:PRO:O	3:2E:76:VAL:HG13	2.08	0.53
4:3E:108:LEU:HB3	4:3E:110:PHE:CD2	2.43	0.53
6:5E:62:TRP:CH2	6:5E:64:GLN:HB2	2.43	0.53
8:7E:39:LEU:HB3	8:7E:45:ILE:HD11	1.90	0.53
23:2K:24:C:H2'	23:2K:25:U:H6	1.71	0.53
25:1H:275:G:N2	25:1H:276:A:N1	2.53	0.53
25:1H:2148:G:H2'	25:1H:2149:G:C8	2.43	0.53
25:1H:2758:A:C4	31:51:67:LEU:HD21	2.43	0.53
30:41:83:ARG:N	30:41:86:MET:HE2	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:F8:18:TYR:O	43:F8:20:GLY:N	2.41	0.53
25:14:753:C:O2'	25:14:754:C:H5'	2.08	0.53
25:14:770:G:OP2	60:14:3771:HOH:O	2.19	0.53
25:14:943:U:OP2	35:35:36:LYS:HG3	2.07	0.53
25:14:1073:A:OP2	25:14:1094:U:N3	2.41	0.53
25:14:2228:G:OP1	27:19:261:LYS:NZ	2.40	0.53
25:14:2562:U:H4'	34:25:25:LEU:HD21	1.89	0.53
29:39:28:ILE:HA	29:39:112:MET:HG2	1.90	0.53
31:59:105:LEU:HG	31:59:113:VAL:HG13	1.89	0.53
36:45:97:VAL:HG11	36:45:103:MET:HE3	1.89	0.53
42:A5:41:LYS:NZ	51:J5:25:LEU:HD21	2.23	0.53
42:A5:64:MET:HE3	42:A5:109:GLU:OE1	2.09	0.53
1:13:1014:A:H2	1:13:1219:U:H1'	1.72	0.53
1:13:1320:C:N4	19:AI:36:ARG:HG3	2.23	0.53
2:1E:61:LEU:HA	2:1E:64:ARG:HG2	1.90	0.53
4:3E:72:GLU:OE1	4:3E:207:TYR:OH	2.23	0.53
5:4E:11:ILE:HG12	5:4E:31:LEU:HB3	1.90	0.53
7:6E:5:ARG:CZ	7:6E:7:ALA:HA	2.39	0.53
25:1H:459:U:H2'	25:1H:460:A:C8	2.43	0.53
25:1H:1183:G:O2'	49:L8:29:ARG:NH1	2.41	0.53
25:1H:1312:U:H4'	25:1H:1313:U:O5'	2.08	0.53
25:1H:1664:A:OP2	60:1H:3843:HOH:O	2.18	0.53
25:1H:2689:U:H5"	25:1H:2713:A:H2	1.73	0.53
29:31:184:TYR:O	29:31:188:ARG:HG3	2.08	0.53
37:98:38:VAL:HG22	37:98:112:ALA:HB2	1.89	0.53
54:1G:540:G:H2'	54:1G:541:G:O4'	2.08	0.53
54:1G:552:U:O2'	12:3A:86:ARG:O	2.27	0.53
11:2A:21:ILE:HB	11:2A:84:VAL:HG12	1.90	0.53
55:1L:47:U:H2'	55:1L:48:C:C5	2.43	0.53
25:14:279:C:N4	25:14:361:G:H1	2.04	0.53
25:14:729:G:OP2	27:19:13:ARG:NH1	2.40	0.53
25:14:868:U:C2	25:14:869:G:C8	2.97	0.53
25:14:2261:C:O2'	25:14:2262:U:H5'	2.08	0.53
27:19:69:ARG:NE	27:19:105:ILE:HD11	2.23	0.53
29:39:5:ALA:HB3	29:39:19:GLU:HA	1.89	0.53
35:35:96:THR:OG1	35:35:97:PRO:O	2.25	0.53
47:F5:91:LYS:NZ	47:F5:92:LYS:H	2.05	0.53
49:H5:3:ARG:HD2	49:H5:60:GLU:C	2.33	0.53
53:M5:8:LYS:HB3	53:M5:12:LYS:HE3	1.90	0.53
1:13:749:C:H2'	1:13:750:G:H8	1.74	0.53
1:13:1356:G:H2'	1:13:1357:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:71:LEU:HD13	5:4E:114:GLY:HA3	1.90	0.53
6:5E:80:ARG:O	6:5E:82:ARG:NE	2.42	0.53
6:5E:86:ARG:O	6:5E:87:ARG:HG2	2.08	0.53
9:8E:50:LEU:HD23	9:8E:85:LEU:HD11	1.89	0.53
12:3I:62:SER:HB2	12:3I:64:TYR:CD1	2.44	0.53
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.42	0.53
25:1H:736:C:O5'	25:1H:736:C:H6	1.92	0.53
25:1H:818:G:H5'	25:1H:839:U:OP1	2.08	0.53
25:1H:1332:G:N2	25:1H:1610:A:C8	2.76	0.53
25:1H:1437:C:O2'	25:1H:1518:C:O2'	2.20	0.53
25:1H:1662:C:O2'	25:1H:2687:U:OP1	2.25	0.53
31:51:106:THR:O	31:51:106:THR:OG1	2.25	0.53
53:Q8:50:LEU:C	53:Q8:52:LYS:H	2.05	0.53
54:1G:179:A:H2'	54:1G:180:U:C6	2.42	0.53
54:1G:1320:C:H2'	54:1G:1321:C:H6	1.73	0.53
54:1G:1499:A:H1'	54:1G:1520:G:H5'	1.90	0.53
55:3L:25:G:H2'	55:3L:26:G:C8	2.42	0.53
25:14:1889:A:N1	25:14:2234:G:H1'	2.23	0.53
29:39:172:TRP:CD1	29:39:172:TRP:H	2.25	0.53
32:69:54:GLN:HA	32:69:57:ARG:HB3	1.90	0.53
48:G5:12:GLU:HG3	48:G5:16:LEU:HD23	1.90	0.53
1:13:377:G:OP1	16:7I:3:LYS:HD2	2.07	0.53
1:13:1023:G:H3'	1:13:1024:G:H5"	1.90	0.53
4:3E:64:LEU:HD22	4:3E:198:VAL:HG11	1.90	0.53
7:6E:27:ILE:HA	7:6E:30:ILE:HD12	1.89	0.53
14:5I:22:THR:HB	14:5I:33:VAL:HG21	1.90	0.53
25:1H:581:C:H2'	25:1H:582:G:C8	2.44	0.53
25:1H:722:A:H2'	25:1H:723:G:C8	2.43	0.53
25:1H:784:A:C5	27:11:229:VAL:HG21	2.43	0.53
25:1H:1533:C:H3'	25:1H:1534:G:C5'	2.38	0.53
25:1H:2123:G:H22	25:1H:2175:C:N4	2.03	0.53
54:1G:749:C:H2'	54:1G:750:G:C8	2.38	0.53
3:22:91:LEU:HB2	3:22:99:VAL:HG11	1.89	0.53
12:3A:26:ALA:HB1	12:3A:27:LEU:C	2.33	0.53
13:4A:13:LYS:HA	13:4A:44:ARG:NH1	2.24	0.53
15:6A:17:ARG:HD3	15:6A:26:GLU:HG3	1.90	0.53
25:14:1087:G:H2'	25:14:1089:G:H1'	1.89	0.53
25:14:1190:G:H2'	25:14:1191:G:H8	1.73	0.53
25:14:1328:G:H2'	25:14:1330:C:C5	2.42	0.53
25:14:2659:G:N2	25:14:2662:A:OP2	2.42	0.53
26:1J:78:A:H61	26:1J:98:G:H1'	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:65:TRP:CZ3	29:39:72:ARG:HB3	2.43	0.53
30:49:105:LYS:HZ3	50:I5:26:SER:HB3	1.74	0.53
31:59:76:VAL:O	31:59:80:SER:OG	2.23	0.53
45:D5:158:PRO:HG2	45:D5:161:VAL:H	1.73	0.53
1:13:109:A:N7	1:13:326:G:H2'	2.24	0.53
1:13:271:C:H2'	1:13:272:C:H6	1.73	0.53
2:1E:126:GLU:HA	2:1E:129:GLU:HG2	1.91	0.53
7:6E:49:ILE:O	7:6E:53:LYS:HB2	2.09	0.53
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.08	0.53
14:5I:39:LEU:HD11	14:5I:47:LEU:HD12	1.89	0.53
22:3K:38:MIA:H2'	22:3K:39:A:C8	2.43	0.53
25:1H:593:G:H4'	53:Q8:60:LEU:HD12	1.91	0.53
25:1H:705:A:C8	25:1H:727:A:C2	2.97	0.53
25:1H:910:A:C5	36:88:13:GLN:HG3	2.43	0.53
30:41:49:ASP:OD2	30:41:52:ILE:HG12	2.08	0.53
31:51:169:VAL:O	31:51:170:ARG:NE	2.37	0.53
37:98:38:VAL:HB	37:98:39:PRO:HD3	1.90	0.53
43:F8:49:VAL:HG11	43:F8:83:VAL:HG12	1.90	0.53
54:1G:570:G:H2'	54:1G:571:U:H6	1.73	0.53
54:1G:1343:G:H4'	9:82:122:ALA:HB3	1.89	0.53
3:22:45:LYS:HG3	3:22:46:GLU:HG2	1.90	0.53
4:32:9:CYS:HB3	4:32:32:ALA:CB	2.39	0.53
9:82:99:LEU:HB3	9:82:101:PHE:CE1	2.43	0.53
12:3A:102:ARG:HB3	12:3A:109:GLY:HA2	1.90	0.53
25:14:1027:A:C2	25:14:2488:A:H5'	2.44	0.53
26:1J:15:A:H1'	26:1J:109:G:C5	2.44	0.53
26:1J:18:G:H2'	26:1J:19:G:C8	2.44	0.53
27:19:218:ARG:HB3	27:19:219:PRO:HD2	1.89	0.53
37:55:78:LYS:O	37:55:83:ILE:HG13	2.08	0.53
40:85:100:VAL:C	40:85:102:GLU:H	2.17	0.53
47:F5:4:VAL:HG11	47:F5:11:ARG:NH1	2.24	0.53
1:13:600:C:OP1	8:7E:97:VAL:HG12	2.09	0.53
1:13:813:U:H5"	1:13:903:G:O3'	2.09	0.53
1:13:1004:A:C2	1:13:1025:U:H1'	2.43	0.53
1:13:1204:A:OP2	14:5I:1:MET:HB2	2.09	0.53
2:1E:22:LYS:H	2:1E:40:HIS:CD2	2.27	0.53
6:5E:15:ASP:O	6:5E:19:LEU:N	2.37	0.53
7:6E:62:PHE:HA	7:6E:124:LEU:HD21	1.91	0.53
25:1H:116:C:O2'	25:1H:117:G:H5'	2.09	0.53
25:1H:443:A:N6	29:31:41:LEU:O	2.41	0.53
25:1H:1301:A:H2	25:1H:1626:G:H21	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2298:A:H2'	25:1H:2299:G:O4'	2.09	0.53
27:11:3:VAL:HG12	27:11:17:THR:HG23	1.90	0.53
29:31:23:ASP:N	29:31:23:ASP:OD1	2.39	0.53
31:51:13:LYS:O	31:51:15:VAL:N	2.40	0.53
42:E8:86:LEU:HD12	42:E8:87:PRO:HD2	1.90	0.53
44:G8:76:CYS:SG	44:G8:97:ARG:HG3	2.48	0.53
54:1G:454:C:OP1	16:7A:75:ARG:NH2	2.42	0.53
54:1G:464:G:O6	54:1G:466:C:H5'	2.08	0.53
54:1G:963:G:H21	10:1A:55:LYS:HZ2	1.53	0.53
3:22:26:LYS:HG3	3:22:27:LYS:N	2.24	0.53
4:32:149:ALA:O	4:32:153:ARG:NE	2.42	0.53
10:1A:12:ASP:OD1	10:1A:14:LYS:N	2.42	0.53
25:14:96:G:H4'	48:G5:48:HIS:CD2	2.44	0.53
25:14:1430:C:H2'	25:14:1431:U:C6	2.44	0.53
25:14:1614:A:N6	42:A5:88:ARG:H	2.05	0.53
27:19:264:LYS:HE2	27:19:266:SER:HB3	1.90	0.53
31:59:74:ASN:O	31:59:78:GLY:N	2.36	0.53
33:15:38:HIS:NE2	33:15:50:ASP:OD2	2.42	0.53
37:55:29:LEU:HD23	37:55:70:LEU:HD11	1.90	0.53
41:95:38:LEU:HD22	41:95:55:ALA:HB1	1.91	0.53
47:F5:80:LEU:HD12	47:F5:82:LEU:HD21	1.90	0.53
1:13:136:C:H42	1:13:227:G:H1	1.54	0.53
1:13:271:C:H2'	1:13:272:C:C6	2.43	0.53
1:13:1060:C:H5"	10:1I:51:ARG:HG2	1.91	0.53
8:7E:7:ALA:HB2	8:7E:85:ARG:HH11	1.74	0.53
9:8E:10:ARG:HE	9:8E:105:ASP:HB2	1.74	0.53
25:1H:957:A:N1	25:1H:2458:G:H4'	2.23	0.53
27:11:85:ASP:OD2	27:11:88:ARG:HD2	2.08	0.53
27:11:141:VAL:HG12	27:11:164:GLN:HG3	1.90	0.53
31:51:9:ILE:O	31:51:11:VAL:HG13	2.08	0.53
54:1G:198:G:H2'	54:1G:199:G:C8	2.44	0.53
54:1G:865:A:O5'	54:1G:865:A:H8	1.91	0.53
4:32:24:GLU:HG2	4:32:25:ARG:H	1.73	0.53
25:14:140:A:C8	25:14:1408:C:O2'	2.61	0.53
25:14:2123:G:H2'	25:14:2124:G:H8	1.74	0.53
25:14:2708:G:H5'	37:55:68:ARG:HG2	1.90	0.53
25:14:2744:G:N2	31:59:143:GLN:OE1	2.42	0.53
26:1J:44:G:H1'	26:1J:47:C:H42	1.73	0.53
45:D5:19:ARG:NH1	45:D5:84:GLU:HB2	2.24	0.53
25:1H:1063:G:H22	25:1H:1076:C:H1'	1.73	0.53
28:21:24:THR:HG21	28:21:188:VAL:CG2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:51:PHE:CD2	28:21:52:LEU:HG	2.44	0.53
47:J8:80:LEU:HD12	47:J8:82:LEU:HD23	1.89	0.53
53:Q8:30:ARG:HH11	53:Q8:30:ARG:CG	2.20	0.53
54:1G:255:G:O6	54:1G:270:A:N6	2.41	0.53
54:1G:1316:G:H4'	14:5A:18:VAL:HG11	1.91	0.53
25:14:74:A:H4'	25:14:75:G:O5'	2.08	0.53
25:14:639:U:H2'	25:14:640:C:C6	2.43	0.53
25:14:824:A:H1'	25:14:2358:G:N7	2.23	0.53
25:14:848:G:C2	25:14:933:A:H1'	2.43	0.53
25:14:1839:G:C8	25:14:1927:A:H1'	2.44	0.53
25:14:1894:C:O2'	25:14:1895:C:H5'	2.08	0.53
1:13:1226:C:H2'	13:4I:103:THR:HB	1.91	0.53
13:4I:108:ARG:NH1	13:4I:112:GLY:O	2.42	0.53
25:1H:70:G:H21	25:1H:71:A:N6	2.05	0.53
25:1H:764:A:N3	27:11:213:ARG:NH1	2.56	0.53
25:1H:1009:A:OP1	33:58:37:LYS:HE3	2.09	0.53
25:1H:2749:A:H2'	31:51:59:ARG:HH21	1.73	0.53
30:41:68:PRO:HB3	30:41:92:VAL:HB	1.91	0.53
32:61:113:ARG:HB3	32:61:131:LYS:HD3	1.91	0.53
40:C8:92:ARG:C	40:C8:94:ASN:H	2.17	0.53
42:E8:37:ARG:HD3	42:E8:38:TYR:CE2	2.44	0.53
54:1G:909:A:H2'	54:1G:910:C:O4'	2.09	0.53
54:1G:1053:G:O2'	54:1G:1054:C:OP2	2.21	0.53
54:1G:1091:U:N3	54:1G:1094:G:OP2	2.28	0.53
54:1G:1112:C:C4	3:22:178:LEU:HD23	2.44	0.53
4:32:107:ARG:HH22	4:32:196:LEU:HD21	1.72	0.53
25:14:29:U:H2'	25:14:30:G:C8	2.44	0.53
25:14:612:G:H2'	25:14:613:U:O2	2.09	0.53
25:14:839:U:H2'	25:14:840:C:C6	2.44	0.53
25:14:861:A:C2	25:14:917:A:C4	2.97	0.53
25:14:864:G:C6	25:14:865:C:N4	2.77	0.53
25:14:910:A:N7	36:45:13:GLN:HG3	2.24	0.53
25:14:2150:U:H2'	25:14:2151:G:C8	2.41	0.53
25:14:2210:G:H3'	25:14:2211:G:C8	2.44	0.53
25:14:2316:C:HO2'	30:49:128:ARG:NH1	2.07	0.53
26:1J:88:C:O2	26:1J:88:C:H2'	2.09	0.53
27:19:267:SER:O	27:19:268:ARG:HG2	2.08	0.53
34:25:78:ARG:HH21	39:75:103:ARG:NH2	2.07	0.53
41:95:57:VAL:HG23	41:95:99:ILE:HG12	1.89	0.53
45:D5:62:PRO:O	45:D5:63:ASP:HB3	2.09	0.53
1:13:191(C):G:H2'	1:13:191(D):U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:524:G:H2'	1:13:525:C:C6	2.44	0.53
1:13:688:G:H2'	1:13:689:C:C6	2.44	0.53
1:13:881:G:OP2	12:3I:12:ARG:NH2	2.42	0.53
1:13:1178:G:H5"	9:8E:93:ARG:NH2	2.23	0.53
10:1I:47:PHE:CZ	14:5I:37:PHE:HE2	2.27	0.53
25:1H:1069:A:H4'	25:1H:1070:A:H5"	1.91	0.53
25:1H:1375:C:H2'	25:1H:1376:C:H6	1.73	0.53
25:1H:1931:U:H5	25:1H:1969:A:N7	2.07	0.53
25:1H:2171:A:O2'	25:1H:2172:U:O5'	2.26	0.53
29:31:7:TYR:O	29:31:21:ALA:HA	2.09	0.53
29:31:132:VAL:HG12	29:31:163:VAL:HG22	1.90	0.53
30:41:128:ARG:HB2	30:41:128:ARG:NH2	2.24	0.53
31:51:6:ARG:HH11	31:51:6:ARG:HG3	1.72	0.53
37:98:103:ARG:HD2	37:98:108:GLY:O	2.09	0.53
44:G8:87:LYS:HD3	44:G8:88:LYS:N	2.24	0.53
54:1G:216:G:O2'	54:1G:217:C:O4'	2.27	0.53
54:1G:1084:G:C5	54:1G:1085:U:C4	2.97	0.53
54:1G:1429:C:H2'	54:1G:1430:C:H6	1.74	0.53
16:7A:34:GLU:OE1	16:7A:55:ARG:NH1	2.42	0.53
25:14:1366:A:H2'	25:14:1367:A:O4'	2.09	0.53
25:14:2210:G:H3'	25:14:2211:G:C5	2.44	0.53
39:75:5:ALA:HA	39:75:8:LYS:HG3	1.91	0.53
41:95:85:LYS:CD	41:95:87:HIS:H	2.21	0.53
45:D5:11:GLU:OE2	45:D5:12:GLY:N	2.37	0.53
46:E5:27:GLU:HG3	46:E5:68:GLU:HA	1.90	0.53
49:H5:6:VAL:O	49:H5:34:GLU:HA	2.09	0.53
1:13:403:C:OP1	4:3E:137:SER:OG	2.24	0.52
1:13:603:U:H2'	1:13:604:G:C8	2.44	0.52
1:13:1007:C:H42	1:13:1022:G:H1	1.55	0.52
1:13:1446:A:OP1	1:13:1446:A:H4'	2.09	0.52
22:1K:51:C:C5	22:1K:52:G:H1'	2.45	0.52
22:3K:80:C:H4'	25:1H:1851:U:H4'	1.91	0.52
25:1H:1359:A:C2	25:1H:1372:U:O4	2.62	0.52
25:1H:1386:C:OP2	25:1H:1396:U:H5	1.92	0.52
25:1H:2492:U:H2'	25:1H:2493:U:C6	2.43	0.52
28:21:77:ILE:CB	28:21:79:ARG:HE	2.08	0.52
29:31:9:ILE:HG12	29:31:10:PRO:HD2	1.91	0.52
32:61:81:VAL:HG11	32:61:88:ILE:HD13	1.91	0.52
33:58:121:LYS:HB3	33:58:123:TYR:HE1	1.75	0.52
54:1G:146:G:H2'	54:1G:147:G:H8	1.73	0.52
54:1G:448:A:H2'	54:1G:449:C:O2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:512:U:H2'	54:1G:513:C:C6	2.44	0.52
54:1G:664:G:OP1	18:9A:64:ARG:NH2	2.36	0.52
2:12:165:VAL:O	2:12:167:PRO:HD3	2.09	0.52
4:32:33:MET:C	4:32:35:ARG:H	2.17	0.52
25:14:150:C:H2'	25:14:151:C:C6	2.44	0.52
25:14:1040:C:H2'	25:14:1041:C:C6	2.43	0.52
25:14:2052:G:O4'	28:29:142:GLY:HA3	2.09	0.52
25:14:2335:A:C8	25:14:2337:G:C5	2.96	0.52
26:1J:66:A:C2	26:1J:108:C:C4	2.97	0.52
41:95:35:LEU:HB3	41:95:37:VAL:HG11	1.91	0.52
53:M5:29:LYS:HB3	53:M5:44:LYS:HB3	1.91	0.52
1:13:609:A:H5'	16:7I:18:ARG:HH12	1.75	0.52
4:3E:129:ASN:ND2	4:3E:144:ASP:OD1	2.38	0.52
13:4I:39:ILE:HD12	13:4I:56:LEU:CD2	2.38	0.52
21:1F:3:LYS:HB3	21:1F:14:TRP:CD1	2.44	0.52
25:1H:638:G:C5	25:1H:651:G:C2	2.97	0.52
25:1H:1511:A:H2'	25:1H:1512:G:C8	2.44	0.52
25:1H:2176:A:H2'	25:1H:2177:C:C6	2.45	0.52
25:1H:2467:C:H4'	36:88:123:HIS:CE1	2.45	0.52
25:1H:2820:A:C5	37:98:4:LEU:HD11	2.44	0.52
29:31:129:PHE:HA	29:31:142:TRP:NE1	2.24	0.52
54:1G:426:G:OP1	4:32:38:TYR:OH	2.24	0.52
54:1G:518:C:H5"	54:1G:519:C:C6	2.44	0.52
54:1G:1057:G:H2'	54:1G:1058:G:C8	2.44	0.52
54:1G:1322:C:O2'	54:1G:1323:G:H5'	2.08	0.52
3:22:42:LEU:O	3:22:46:GLU:HG3	2.09	0.52
8:72:29:SER:HB3	8:72:32:LYS:HG3	1.92	0.52
25:14:67:U:H2'	25:14:68:G:C8	2.44	0.52
25:14:567:A:P	60:14:3565:HOH:O	2.65	0.52
25:14:912:C:H2'	25:14:913:U:H6	1.75	0.52
25:14:1669:A:H5"	25:14:1670:C:OP2	2.08	0.52
26:1J:116:G:H2'	26:1J:117:G:O4'	2.09	0.52
30:49:145:THR:OG1	30:49:148:MET:N	2.42	0.52
38:65:64:GLU:O	38:65:68:GLN:HG3	2.10	0.52
50:I5:36:CYS:SG	50:I5:37:SER:N	2.82	0.52
53:M5:56:GLU:O	53:M5:58:ILE:N	2.40	0.52
1:13:79:G:H2'	1:13:79:G:N3	2.24	0.52
1:13:221:C:H2'	1:13:222:U:H6	1.73	0.52
1:13:324:G:N1	1:13:327:A:OP2	2.42	0.52
1:13:940:C:H2'	1:13:941:G:C8	2.45	0.52
1:13:1149:C:H2'	1:13:1150:U:C6	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1316:G:H5"	14:5I:17:LYS:NZ	2.24	0.52
3:2E:33:LEU:O	3:2E:36:ASP:HB2	2.08	0.52
7:6E:72:ARG:HG3	7:6E:142:GLU:OE1	2.09	0.52
19:AI:40:ILE:HD11	19:AI:62:ILE:HD13	1.92	0.52
22:1K:77:C:O2	22:1K:78:C:N4	2.43	0.52
25:1H:527:C:H4'	25:1H:528:A:H5'	1.90	0.52
25:1H:607:U:N3	25:1H:621:A:C2	2.70	0.52
25:1H:1346:G:H2'	25:1H:1347:G:H8	1.74	0.52
25:1H:1385:G:O2'	25:1H:1396:U:C6	2.63	0.52
25:1H:2115:G:N2	25:1H:2172:U:O2	2.42	0.52
54:1G:108:G:H5'	54:1G:109:A:H5"	1.91	0.52
54:1G:677:U:H2'	54:1G:678:U:C6	2.45	0.52
54:1G:1127:G:H1'	54:1G:1148:U:H3	1.74	0.52
2:12:30:ARG:NH2	2:12:195:ASP:OD1	2.42	0.52
56:2L:54:G:H2'	56:2L:55:5MU:C6	2.44	0.52
25:14:196:A:O2'	25:14:805:G:O6	2.21	0.52
25:14:1593:G:H2'	25:14:1594:G:C8	2.45	0.52
25:14:1849:G:H2'	25:14:1850:G:H8	1.74	0.52
25:14:1993:U:H4'	28:29:128:SER:HB3	1.91	0.52
25:14:2394:C:H2'	25:14:2395:C:H6	1.75	0.52
28:29:11:MET:HE3	28:29:186:GLY:HA2	1.92	0.52
28:29:61:ARG:O	28:29:63:LEU:N	2.43	0.52
36:45:17:LEU:HD21	36:45:41:TRP:HE1	1.73	0.52
1:13:247:G:OP2	17:8I:100:LYS:N	2.38	0.52
1:13:731:G:H2'	1:13:732:C:H6	1.75	0.52
1:13:1391:U:H2'	1:13:1392:G:C8	2.44	0.52
2:1E:17:PHE:HB2	2:1E:42:ILE:HG23	1.91	0.52
6:5E:98:LEU:HB3	6:5E:101:ALA:HB3	1.91	0.52
7:6E:91:VAL:HG12	7:6E:95:ARG:HB3	1.90	0.52
22:1K:64:PSU:O5'	22:1K:64:PSU:H6	1.92	0.52
25:1H:306:U:H2'	25:1H:307:G:O4'	2.09	0.52
25:1H:1194:A:H8	25:1H:1194:A:OP2	1.92	0.52
25:1H:2394:C:H2'	25:1H:2395:C:H6	1.74	0.52
25:1H:2688:U:H1'	25:1H:2721:A:H61	1.74	0.52
28:21:78:LEU:HA	28:21:79:ARG:CD	2.36	0.52
29:31:6:VAL:HG11	29:31:119:ARG:HA	1.92	0.52
30:41:110:ALA:HA	30:41:140:ILE:O	2.09	0.52
36:88:138:ASP:CG	45:H8:81:ARG:HH22	2.17	0.52
39:B8:26:ASP:OD2	39:B8:120:ARG:NH1	2.36	0.52
39:B8:55:ASN:N	39:B8:59:THR:HG22	2.25	0.52
43:F8:67:GLY:C	43:F8:69:TYR:H	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:P8:8:ASN:OD1	52:P8:8:ASN:C	2.53	0.52
54:1G:4:U:H3'	54:1G:5:U:H5'	1.91	0.52
54:1G:66:G:N2	54:1G:103:C:O2	2.39	0.52
54:1G:562:C:H1'	12:3A:15:ARG:HB3	1.91	0.52
54:1G:1059:C:O2	10:1A:53:PRO:HG3	2.10	0.52
2:12:53:ARG:HH12	2:12:199:TYR:HA	1.73	0.52
3:22:70:VAL:O	3:22:105:GLU:HA	2.09	0.52
55:3L:49:A:N3	55:3L:49:A:H2'	2.25	0.52
25:14:548:A:C5	25:14:549:G:H1'	2.44	0.52
25:14:1063:G:H1	25:14:1074:G:H22	1.57	0.52
25:14:2310:A:H5'	25:14:2311:A:OP2	2.09	0.52
25:14:2360:A:H8	25:14:2360:A:O5'	1.92	0.52
25:14:2720:U:O2	25:14:2720:U:H2'	2.09	0.52
38:65:67:ARG:CZ	38:65:67:ARG:HB2	2.39	0.52
1:13:102:G:O2'	1:13:151:A:N3	2.41	0.52
1:13:536:C:H2'	1:13:537:G:C8	2.45	0.52
1:13:1525:G:P	11:2I:120:ARG:HH22	2.32	0.52
2:1E:174:VAL:HG13	2:1E:184:VAL:HG11	1.90	0.52
4:3E:155:LEU:O	4:3E:158:ILE:N	2.40	0.52
25:1H:273(F):C:H3'	25:1H:274:G:H5"	1.90	0.52
25:1H:1111:A:H5"	31:51:3:ARG:HH11	1.74	0.52
25:1H:1174:A:H2'	25:1H:1176:G:OP1	2.09	0.52
25:1H:1204:A:H61	25:1H:1240:U:H2'	1.74	0.52
25:1H:1511:A:H2'	25:1H:1512:G:H8	1.75	0.52
25:1H:1567:A:H5"	27:11:58:HIS:ND1	2.23	0.52
27:11:35:LYS:HG3	27:11:36:PRO:HD2	1.91	0.52
29:31:179:GLU:OE1	29:31:179:GLU:N	2.39	0.52
39:B8:42:ILE:HD12	39:B8:42:ILE:H	1.75	0.52
43:F8:12:VAL:HG13	43:F8:27:THR:O	2.09	0.52
48:K8:47:ASN:C	48:K8:49:LYS:H	2.17	0.52
54:1G:666:G:H5'	54:1G:726:C:H1'	1.91	0.52
54:1G:808:C:OP1	15:6A:48:LYS:HD3	2.09	0.52
54:1G:954:G:H2'	54:1G:955:U:C6	2.45	0.52
54:1G:991:U:O2	54:1G:993:G:C8	2.62	0.52
3:22:70:VAL:HG21	3:22:76:VAL:HG11	1.91	0.52
7:62:84:ASN:OD1	7:62:84:ASN:N	2.43	0.52
25:14:522:G:H2'	25:14:523:C:C6	2.44	0.52
25:14:1537:C:O2'	25:14:1538:G:O4'	2.13	0.52
25:14:2709:G:O2'	60:14:3472:HOH:O	2.19	0.52
27:19:12:SER:O	27:19:16:MET:HE3	2.09	0.52
30:49:109:VAL:HG13	50:I5:33:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:115:MET:HA	36:45:115:MET:HE2	1.91	0.52
37:55:101:ALA:HA	51:J5:44:THR:HG21	1.90	0.52
1:13:1133:G:H22	1:13:1141:C:H42	1.58	0.52
17:8I:100:LYS:HB3	17:8I:101:ARG:HH11	1.74	0.52
22:3K:19:C:H2'	22:3K:20:C:C4'	2.40	0.52
25:1H:1124:C:H2'	25:1H:1125:G:O4'	2.10	0.52
25:1H:1203:G:OP2	25:1H:1204:A:H2'	2.08	0.52
25:1H:2438:U:O3'	25:1H:2439:A:H3'	2.09	0.52
25:1H:2467:C:H4'	36:88:123:HIS:CG	2.45	0.52
25:1H:2485:G:OP1	36:88:46:GLN:NE2	2.43	0.52
25:1H:2815:C:H2'	25:1H:2816:C:H6	1.74	0.52
35:78:122:PRO:HA	35:78:142:GLY:HA3	1.91	0.52
36:88:112:GLU:HA	36:88:115:MET:HB2	1.92	0.52
39:B8:108:ARG:HA	39:B8:111:ARG:NE	2.23	0.52
40:C8:92:ARG:C	40:C8:94:ASN:N	2.66	0.52
44:G8:35:TYR:CD2	44:G8:69:ALA:HB3	2.44	0.52
54:1G:590:C:H2'	54:1G:591:U:C6	2.45	0.52
3:22:122:GLU:HA	3:22:125:GLU:CD	2.35	0.52
4:32:79:PHE:CD1	4:32:207:TYR:HD2	2.28	0.52
11:2A:98:LEU:C	11:2A:101:SER:HB3	2.35	0.52
25:14:1434:A:H61	25:14:1558:A:N6	2.07	0.52
25:14:1899:G:N2	25:14:1902:C:N4	2.45	0.52
25:14:2320:A:N6	25:14:2333:A:H2'	2.25	0.52
25:14:2646:C:H2'	25:14:2647:U:O4'	2.09	0.52
30:49:76:SER:O	30:49:77:ILE:HG13	2.09	0.52
36:45:25:ASP:HB3	36:45:102:VAL:CB	2.38	0.52
39:75:106:SER:HA	39:75:110:ILE:HD11	1.90	0.52
44:C5:76:CYS:SG	44:C5:102:CYS:HB2	2.48	0.52
1:13:57:G:H2'	1:13:58:C:C6	2.45	0.52
1:13:741:G:H2'	1:13:742:G:O4'	2.10	0.52
1:13:1167:A:H8	1:13:1167:A:OP1	1.93	0.52
3:2E:32:LEU:HD13	3:2E:59:ARG:HH11	1.74	0.52
23:2K:63:C:H2'	23:2K:64:G:H8	1.73	0.52
25:1H:1329:U:H5"	25:1H:1330:C:H5	1.74	0.52
25:1H:1754:C:H5	39:B8:96:ARG:NH2	2.08	0.52
25:1H:2615:U:P	60:1H:3510:HOH:O	2.66	0.52
25:1H:2690:C:H5"	25:1H:2872:G:N2	2.24	0.52
25:1H:2758:A:C2	25:1H:2759:G:H1'	2.45	0.52
32:61:57:ARG:O	32:61:61:ARG:HG2	2.09	0.52
34:68:75:SER:OG	39:B8:74:ARG:NH1	2.39	0.52
35:78:106:LEU:O	35:78:106:LEU:HD22	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:88:110:THR:HG23	36:88:113:GLN:OE1	2.10	0.52
43:F8:52:VAL:HG23	43:F8:82:GLN:HB3	1.92	0.52
48:K8:29:LYS:HG2	48:K8:57:ILE:HD13	1.91	0.52
54:1G:123:C:H2'	54:1G:124:G:C8	2.45	0.52
54:1G:1286:A:C8	54:1G:1287:A:H4'	2.44	0.52
2:12:12:GLU:HB3	2:12:213:LEU:HD22	1.91	0.52
3:22:73:PRO:O	3:22:77:ILE:N	2.42	0.52
13:4A:81:LEU:HD21	13:4A:88:ARG:CZ	2.40	0.52
25:14:1418:G:H2'	25:14:1579:A:N6	2.24	0.52
25:14:1567:A:H5'	27:19:58:HIS:CD2	2.44	0.52
25:14:1973:G:H2'	25:14:1974:C:C6	2.44	0.52
25:14:2052:G:C8	28:29:141:ILE:HD11	2.45	0.52
25:14:2294:C:OP1	38:65:89:ARG:NH2	2.43	0.52
36:45:74:TYR:O	36:45:89:ASN:HB3	2.10	0.52
1:13:1085:U:H3'	1:13:1086:U:H5	1.74	0.52
7:6E:122:HIS:HA	7:6E:125:MET:HE2	1.91	0.52
11:2I:109:VAL:HG12	18:9I:84:LYS:HB2	1.91	0.52
25:1H:192:C:P	60:1H:3581:HOH:O	2.68	0.52
27:11:273:ARG:HH21	27:11:273:ARG:HG2	1.73	0.52
30:41:17:PRO:HA	30:41:20:ILE:HG13	1.92	0.52
33:58:43:THR:HB	33:58:46:VAL:CG1	2.37	0.52
38:A8:34:HIS:CB	38:A8:36:TYR:HE1	2.19	0.52
45:H8:156:LYS:HE3	45:H8:158:PRO:HA	1.91	0.52
54:1G:674:G:O2'	54:1G:675:A:H5'	2.09	0.52
54:1G:1348:U:N3	54:1G:1374:A:H2	2.08	0.52
25:14:623:G:H2'	25:14:624:C:C6	2.45	0.52
25:14:654(A):A:H2	25:14:654(T):A:N1	2.07	0.52
25:14:910:A:N3	25:14:2264:C:O2'	2.40	0.52
25:14:1225:C:H4'	41:95:85:LYS:CG	2.40	0.52
25:14:1817:G:OP1	27:19:88:ARG:NH2	2.35	0.52
25:14:2012:G:H5"	42:A5:96:ILE:HD13	1.92	0.52
25:14:2111:C:H5	25:14:2147:G:H21	1.57	0.52
25:14:2318:G:H5'	25:14:2319:G:OP2	2.10	0.52
32:69:76:THR:HG23	32:69:77:LEU:H	1.74	0.52
32:69:97:ILE:O	32:69:100:ALA:HB3	2.09	0.52
38:65:61:ASN:OD1	38:65:62:LYS:N	2.40	0.52
53:M5:16:ILE:HD11	53:M5:57:ARG:HG3	1.92	0.52
1:13:112:G:OP2	16:7I:27:LYS:HD2	2.10	0.52
1:13:827:U:H5	1:13:872:A:N1	2.08	0.52
2:1E:12:GLU:O	2:1E:16:HIS:HB2	2.10	0.52
12:3I:53:ARG:HB3	12:3I:69:TYR:HE1	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9I:22:VAL:HA	18:9I:25:THR:OG1	2.10	0.52
25:1H:302:C:H2'	25:1H:303:U:C6	2.45	0.52
25:1H:569:U:C4	25:1H:570:G:C6	2.98	0.52
25:1H:1213:A:H1'	25:1H:1238:G:N3	2.25	0.52
25:1H:2387:U:H1'	46:I8:41:ARG:NH2	2.24	0.52
25:1H:2574:G:O2'	28:21:143:ASN:HB3	2.10	0.52
38:A8:93:LYS:HG2	38:A8:95:HIS:HB2	1.92	0.52
38:A8:106:ARG:CZ	38:A8:107:GLU:HB2	2.40	0.52
54:1G:523:A:H61	12:3A:92:ASP:HB2	1.75	0.52
54:1G:1412:C:H2'	54:1G:1413:A:C8	2.45	0.52
2:12:63:MET:HG3	2:12:225:ALA:HB1	1.90	0.52
13:4A:80:ARG:HH22	19:AA:66:MET:HG2	1.75	0.52
16:7A:43:LYS:HB3	16:7A:48:TRP:CD1	2.45	0.52
56:2L:63:C:H2'	56:2L:64:G:H8	1.75	0.52
25:14:343:C:H2'	25:14:344:G:H8	1.75	0.52
25:14:392:C:H5"	25:14:409:C:H5"	1.92	0.52
25:14:607:U:H3	25:14:621:A:H2	1.50	0.52
25:14:1857:G:O2'	25:14:1885:A:N6	2.43	0.52
25:14:2388:A:H2'	25:14:2389:G:H5'	1.90	0.52
25:14:2698:U:H2'	25:14:2699:C:C6	2.45	0.52
26:1J:6:C:C2	26:1J:115:G:N2	2.78	0.52
27:19:255:LYS:O	27:19:255:LYS:NZ	2.27	0.52
28:29:41:LYS:HG3	28:29:42:ASP:H	1.75	0.52
37:55:104:ARG:HG3	37:55:111:LEU:HD21	1.90	0.52
41:95:48:GLY:H	41:95:52:VAL:HG22	1.74	0.52
44:C5:47:LYS:HA	44:C5:60:PHE:CD2	2.45	0.52
1:13:104:G:C2	1:13:105:G:C8	2.98	0.52
1:13:1051:C:H2'	1:13:1052:U:C6	2.45	0.52
22:1K:35:QUO:H8	22:1K:35:QUO:O5'	2.09	0.52
25:1H:54:G:N7	60:1H:3923:HOH:O	2.34	0.52
25:1H:357:A:H2'	25:1H:358:U:C6	2.41	0.52
25:1H:588:U:H2'	25:1H:589:C:C6	2.45	0.52
25:1H:863:A:H2'	25:1H:864:G:H8	1.75	0.52
25:1H:2311:A:H1'	30:41:88:ILE:HD13	1.91	0.52
25:1H:2592:G:P	60:1H:3763:HOH:O	2.67	0.52
29:31:101:LEU:O	29:31:106:ARG:NH1	2.41	0.52
36:88:104:PHE:HE2	36:88:125:LEU:HD11	1.74	0.52
54:1G:32:A:C2	54:1G:33:A:C4	2.98	0.52
54:1G:255:G:P	17:8A:69:LYS:HZ3	2.33	0.52
54:1G:411:A:C6	54:1G:413:G:H1'	2.45	0.52
54:1G:593:G:H1	54:1G:646:U:H3	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1127:G:H22	54:1G:1144:G:N2	1.97	0.52
54:1G:1322:C:O2	54:1G:1322:C:H2'	2.09	0.52
3:22:88:ARG:HA	3:22:91:LEU:HG	1.91	0.52
8:72:51:VAL:HG22	8:72:58:TYR:O	2.10	0.52
12:3A:36:VAL:O	12:3A:59:ARG:N	2.39	0.52
25:14:782:A:H5'	25:14:783:A:C2	2.45	0.52
25:14:1654:A:H1'	25:14:2823:A:H5'	1.92	0.52
43:B5:45:THR:OG1	43:B5:46:ALA:N	2.42	0.52
43:B5:45:THR:O	43:B5:48:LYS:NZ	2.43	0.52
53:M5:60:LEU:O	53:M5:61:LEU:HD12	2.10	0.52
10:1I:79:ARG:HD3	10:1I:82:ILE:HD12	1.92	0.51
11:2I:48:ILE:HD11	11:2I:64:ALA:HA	1.91	0.51
18:9I:31:LEU:H	18:9I:31:LEU:HD23	1.73	0.51
22:1K:17:OMG:HM22	22:1K:66:G:H1	1.74	0.51
22:1K:20:C:O2'	22:1K:68:A:N6	2.43	0.51
25:1H:141:A:C8	25:1H:1408:C:H1'	2.45	0.51
25:1H:320:A:H2'	29:31:136:THR:HG21	1.92	0.51
25:1H:589:C:H2'	25:1H:590:A:H8	1.75	0.51
54:1G:603:U:H2'	54:1G:604:G:C8	2.44	0.51
54:1G:1130:A:N6	54:1G:1131:G:O6	2.43	0.51
54:1G:1157:A:O2'	54:1G:1158:C:O5'	2.28	0.51
54:1G:1316:G:N2	54:1G:1319:A:O5'	2.42	0.51
2:12:21:ARG:HA	2:12:39:ILE:HA	1.93	0.51
4:32:173:TRP:CZ3	4:32:193:ASP:HB3	2.45	0.51
15:6A:4:THR:HB	15:6A:7:GLU:H	1.75	0.51
56:2L:57:C:H2'	56:2L:58:A:C8	2.45	0.51
25:14:61:G:H1	25:14:93:C:H42	1.58	0.51
25:14:1478:G:H2'	25:14:1479:G:H8	1.75	0.51
25:14:2155:G:H2'	25:14:2156:G:O4'	2.09	0.51
26:1J:103:U:HO2'	45:D5:29:TYR:HH	1.52	0.51
27:19:40:THR:OG1	27:19:41:GLY:N	2.43	0.51
29:39:153:SER:HB2	29:39:190:GLU:H	1.74	0.51
32:69:128:LEU:O	32:69:138:ILE:HG22	2.09	0.51
34:25:59:LYS:HB3	34:25:87:ILE:HG22	1.90	0.51
38:65:85:VAL:HG22	38:65:110:LEU:HB2	1.92	0.51
39:75:54:ARG:HG2	39:75:59:THR:HG21	1.92	0.51
1:13:153:C:N4	1:13:168:G:H1	1.96	0.51
1:13:523:A:H61	12:3I:92:ASP:HB2	1.74	0.51
2:1E:212:GLN:O	2:1E:216:SER:OG	2.16	0.51
8:7E:73:ASP:OD1	8:7E:75:ARG:NE	2.43	0.51
9:8E:25:LYS:O	9:8E:61:ALA:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4I:88:ARG:HG2	13:4I:98:VAL:HG12	1.90	0.51
25:1H:662:G:H5'	35:78:15:ARG:H	1.76	0.51
25:1H:782:A:C2	27:11:226:MET:HG2	2.45	0.51
25:1H:2224:G:H4'	25:1H:2226:C:C2	2.46	0.51
25:1H:2273:A:H2'	25:1H:2274:A:C8	2.44	0.51
25:1H:2679:A:H4'	28:21:165:VAL:HG11	1.92	0.51
25:1H:2756:U:H4'	25:1H:2757:A:OP1	2.08	0.51
30:41:124:SER:HB2	30:41:131:TYR:CE1	2.45	0.51
33:58:65:LYS:HB3	33:58:69:GLN:HG3	1.91	0.51
40:C8:91:ASP:HB3	40:C8:92:ARG:O	2.09	0.51
54:1G:345:C:N4	34:25:116:SER:O	2.42	0.51
54:1G:625:G:H2'	54:1G:626:U:H6	1.75	0.51
54:1G:962:C:N4	54:1G:974:A:H61	2.08	0.51
54:1G:967:C:H2'	54:1G:968:A:C8	2.45	0.51
54:1G:992:U:H6	54:1G:992:U:H5"	1.76	0.51
54:1G:1187:G:H3'	54:1G:1188:A:H8	1.75	0.51
54:1G:1411:C:H2'	54:1G:1412:C:C6	2.46	0.51
57:4L:13:A:O2'	57:4L:14:A:OP1	2.24	0.51
25:14:15:G:H1	25:14:525:U:H3	1.58	0.51
25:14:921:G:C6	25:14:922:U:C4	2.98	0.51
25:14:1945:G:H2'	25:14:1946:U:H6	1.74	0.51
25:14:2306:C:H2'	25:14:2307:G:H21	1.74	0.51
27:19:11:PRO:C	27:19:13:ARG:H	2.17	0.51
29:39:80:ALA:O	29:39:83:PHE:HB2	2.10	0.51
30:49:65:GLY:HA2	50:I5:7:PRO:HB2	1.92	0.51
34:25:24:VAL:HB	34:25:33:ALA:HB2	1.92	0.51
41:95:87:HIS:NE2	41:95:89:GLN:HB2	2.25	0.51
51:J5:16:ARG:HG3	51:J5:17:ASP:N	2.26	0.51
1:13:37:U:O2'	1:13:500:G:H4'	2.10	0.51
1:13:643:C:H2'	1:13:644:G:C8	2.44	0.51
1:13:1128:C:H5	1:13:1139:G:C4	2.29	0.51
1:13:1152:A:H4'	10:1I:13:HIS:CD2	2.45	0.51
25:1H:1688:U:O2	25:1H:1700:A:H5"	2.10	0.51
25:1H:2115:G:H5'	25:1H:2168:G:OP2	2.09	0.51
25:1H:2657:A:O2'	31:51:160:LYS:NZ	2.43	0.51
33:58:35:ARG:O	33:58:42:TRP:HZ3	1.94	0.51
34:68:71:ARG:HH11	39:B8:74:ARG:HH21	1.58	0.51
42:E8:70:TYR:C	42:E8:70:TYR:CD1	2.89	0.51
44:G8:38:ILE:HD11	44:G8:64:GLU:HG3	1.92	0.51
54:1G:235:C:C5'	17:8A:70:ARG:HG2	2.40	0.51
54:1G:980:C:H5'	54:1G:981:U:C5	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:15:THR:HG21	3:22:181:ASN:HA	1.92	0.51
13:4A:29:ARG:HB3	13:4A:64:TRP:CZ2	2.45	0.51
25:14:57:C:H2'	25:14:58:G:O4'	2.11	0.51
25:14:336:C:OP1	44:C5:83:THR:HG23	2.10	0.51
25:14:341:G:H2'	25:14:342:G:O4'	2.10	0.51
25:14:531:C:C5	25:14:2035:G:C2	2.98	0.51
25:14:729:G:O5'	27:19:208:LYS:NZ	2.43	0.51
25:14:774:A:H5'	25:14:778:G:H4'	1.93	0.51
25:14:910:A:H62	36:45:12:GLN:HA	1.75	0.51
25:14:1057:A:H2'	25:14:1058:U:O4'	2.10	0.51
25:14:1435:G:H2'	25:14:1436:G:O4'	2.11	0.51
25:14:1786:A:C2	25:14:2606:C:H1'	2.45	0.51
25:14:2315:G:H2'	25:14:2316:C:C6	2.45	0.51
25:14:2346:A:H5"	25:14:2383:G:H1'	1.92	0.51
26:1J:66:A:N6	26:1J:107:U:H2'	2.25	0.51
30:49:12:TYR:HA	30:49:16:ARG:HB3	1.92	0.51
1:13:223:U:H2'	1:13:224:C:H6	1.75	0.51
7:6E:15:ASP:HB3	7:6E:20:ASP:N	2.14	0.51
13:4I:10:PRO:HB2	13:4I:18:ALA:HB1	1.93	0.51
25:1H:176:G:C2'	25:1H:177:G:H5'	2.40	0.51
25:1H:930:U:H4'	25:1H:931:G:O5'	2.10	0.51
25:1H:1859:A:N6	25:1H:1883:G:O2'	2.43	0.51
25:1H:1997:G:H5"	60:1H:3782:HOH:O	2.09	0.51
32:61:144:VAL:HG22	32:61:145:VAL:H	1.76	0.51
38:A8:84:GLN:H	38:A8:110:LEU:H	1.57	0.51
40:C8:101:ARG:O	40:C8:103:PRO:HD3	2.10	0.51
50:M8:39:CYS:SG	50:M8:41:PRO:HD3	2.51	0.51
54:1G:192:U:H2'	54:1G:193:C:H6	1.75	0.51
54:1G:581:G:OP1	15:6A:61:GLY:HA3	2.09	0.51
54:1G:1372:U:H2'	54:1G:1373:G:O4'	2.09	0.51
54:1G:1478:C:H2'	54:1G:1479:C:C6	2.44	0.51
3:22:152:ILE:HB	3:22:199:LYS:CB	2.36	0.51
4:32:91:SER:OG	4:32:191:ARG:HG3	2.11	0.51
7:62:149:ARG:HD3	11:2A:59:TYR:CZ	2.46	0.51
10:1A:51:ARG:HB2	10:1A:60:ARG:HA	1.91	0.51
25:14:444:C:H4'	29:39:49:ALA:HB2	1.93	0.51
25:14:1041:C:H42	25:14:1114:G:H1	1.59	0.51
25:14:1266:G:O4'	42:A5:15:ARG:NH2	2.44	0.51
25:14:2080:G:H5'	47:F5:35:THR:O	2.11	0.51
27:19:145:VAL:HG13	27:19:191:ALA:HB2	1.91	0.51
30:49:56:ALA:HA	30:49:59:GLU:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:115:MET:HE1	36:45:131:ILE:HG21	1.92	0.51
46:E5:51:VAL:N	46:E5:62:LEU:HD12	2.26	0.51
1:13:928:G:C2	1:13:1390:U:O2	2.64	0.51
1:13:1053:G:C4	1:13:1199:U:C5	2.98	0.51
22:3K:1:G:C2	22:3K:82:A:C2	2.99	0.51
25:1H:286:C:H2'	25:1H:287:C:H6	1.76	0.51
25:1H:1056:G:H4'	25:1H:1086:A:N7	2.25	0.51
25:1H:1980:G:H4'	60:1H:3545:HOH:O	2.10	0.51
25:1H:2212:A:O2'	25:1H:2213:U:O5'	2.27	0.51
26:16:7:G:H4'	38:A8:29:PHE:CE2	2.45	0.51
27:11:69:ARG:NH2	27:11:128:GLY:O	2.33	0.51
33:58:70:LYS:HD3	33:58:87:LEU:HD12	1.92	0.51
34:68:64:ARG:O	34:68:82:ASN:HA	2.10	0.51
36:88:30:GLY:HA2	36:88:107:ALA:HB2	1.92	0.51
39:B8:110:ILE:O	39:B8:114:LEU:HB2	2.11	0.51
46:I8:27:GLU:HG3	46:I8:68:GLU:HA	1.91	0.51
53:Q8:37:SER:HA	53:Q8:40:GLU:HB3	1.92	0.51
54:1G:464:G:C6	54:1G:466:C:H5'	2.46	0.51
54:1G:1080:A:OP1	5:42:14:ARG:NH2	2.43	0.51
54:1G:1084:G:H5'	54:1G:1102:A:OP2	2.10	0.51
54:1G:1317:C:OP1	14:5A:17:LYS:HE3	2.11	0.51
2:12:8:LYS:HD3	2:12:217:ARG:HE	1.75	0.51
18:9A:53:ARG:HA	18:9A:56:THR:OG1	2.11	0.51
55:3L:8:U:H1'	55:3L:57:C:O2	2.10	0.51
25:14:550:G:O2'	25:14:1220:A:N3	2.37	0.51
25:14:2058:A:N6	60:14:3438:HOH:O	2.43	0.51
1:13:341:C:O2'	1:13:342:C:H5'	2.11	0.51
1:13:1148:U:H2'	1:13:1149:C:O4'	2.10	0.51
1:13:1169:A:H2'	1:13:1170:A:C8	2.46	0.51
1:13:1240:U:P	7:6E:116:ALA:HB2	2.50	0.51
1:13:1306:A:H61	1:13:1331:G:H1'	1.76	0.51
2:1E:74:LYS:HD2	2:1E:169:LYS:HG3	1.91	0.51
11:2I:85:ARG:HG2	11:2I:113:PRO:HD3	1.92	0.51
25:1H:910:A:N7	36:88:13:GLN:HG3	2.26	0.51
25:1H:1141:U:H6	33:58:63:THR:OG1	1.94	0.51
25:1H:1448:G:H1'	25:1H:1528:A:H62	1.75	0.51
25:1H:2123:G:N2	25:1H:2176:A:N1	2.59	0.51
35:78:38:GLN:HG2	35:78:45:LEU:HD13	1.91	0.51
44:G8:94:LYS:HG3	44:G8:95:LYS:H	1.76	0.51
54:1G:8:A:N6	4:32:209:ARG:HB2	2.26	0.51
54:1G:111:G:H8	54:1G:111:G:O5'	1.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:429:U:H1'	54:1G:430:A:H5"	1.92	0.51
54:1G:975:A:H4'	54:1G:976:G:C5'	2.39	0.51
54:1G:1496:C:H2'	54:1G:1497:G:C8	2.46	0.51
2:12:167:PRO:O	2:12:171:ALA:N	2.43	0.51
7:62:113:GLU:O	7:62:119:ARG:HD3	2.09	0.51
12:3A:41:ARG:HG2	12:3A:42:THR:H	1.75	0.51
17:8A:3:LYS:HB3	17:8A:61:GLU:HB3	1.93	0.51
21:1B:9:ARG:O	21:1B:13:ILE:HG13	2.10	0.51
55:1L:73:U:H2'	55:1L:74:C:C5	2.46	0.51
25:14:198:C:H5'	25:14:2244:U:OP1	2.10	0.51
25:14:729:G:H2'	25:14:1775:U:H1'	1.93	0.51
25:14:1138:G:H21	33:15:106:MET:HE3	1.75	0.51
25:14:1790:C:H5"	25:14:1791:A:OP1	2.10	0.51
37:55:98:LEU:HB2	37:55:113:LEU:HD23	1.92	0.51
42:A5:60:ASN:N	42:A5:60:ASN:HD22	2.08	0.51
7:6E:22:LEU:HD23	7:6E:62:PHE:HE2	1.76	0.51
16:7I:72:ARG:HD3	16:7I:73:LEU:HG	1.93	0.51
17:8I:31:LEU:HG	17:8I:32:TYR:CE1	2.46	0.51
17:8I:65:ILE:HD13	17:8I:69:LYS:HG2	1.93	0.51
25:1H:270(F):U:H2'	25:1H:270(G):C:C6	2.45	0.51
25:1H:571:A:OP2	60:1H:3674:HOH:O	2.19	0.51
25:1H:1126:A:H4'	25:1H:1127:A:O5'	2.11	0.51
25:1H:1138:G:H21	33:58:106:MET:HE3	1.76	0.51
25:1H:1228:G:OP2	40:C8:16:LYS:NZ	2.44	0.51
25:1H:1485:G:N2	25:1H:1486:A:N3	2.59	0.51
37:98:101:ALA:HB2	51:N8:44:THR:HB	1.92	0.51
40:C8:92:ARG:HA	40:C8:95:LEU:H	1.75	0.51
54:1G:12:U:O2'	54:1G:526:C:H4'	2.11	0.51
54:1G:359:U:H2'	54:1G:360:A:H8	1.73	0.51
54:1G:508:C:H6	54:1G:508:C:OP1	1.94	0.51
54:1G:526:C:C5	54:1G:527:G:H1'	2.46	0.51
54:1G:1360:A:H8	54:1G:1360:A:OP1	1.94	0.51
4:32:55:ALA:O	4:32:59:ARG:HG2	2.10	0.51
25:14:116:C:H2'	25:14:117:G:O4'	2.10	0.51
25:14:247:G:H4'	25:14:386:G:C5	2.45	0.51
25:14:768:G:H2'	25:14:769:G:H8	1.74	0.51
25:14:1525:G:H2'	25:14:1526:G:H8	1.75	0.51
25:14:1581:G:H2'	25:14:1582:C:O4'	2.11	0.51
25:14:1727:U:H3	25:14:1733:G:H1	1.57	0.51
25:14:1871:A:H2'	25:14:1872:A:C8	2.46	0.51
25:14:2065:C:H1'	25:14:2449:U:H3	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2849:U:H4'	25:14:2868:A:C2	2.44	0.51
35:35:138:LEU:HD12	35:35:144:GLU:HG2	1.93	0.51
1:13:509:A:H3'	60:13:1814:HOH:O	2.09	0.51
1:13:1412:C:H2'	1:13:1413:A:C8	2.46	0.51
16:7I:77:ALA:HB3	16:7I:79:VAL:H	1.74	0.51
25:1H:265:A:H1'	25:1H:266:G:O4'	2.11	0.51
25:1H:805:G:H4'	25:1H:806:C:OP2	2.11	0.51
25:1H:853:G:O6	25:1H:924:C:N4	2.19	0.51
25:1H:2359:C:O2'	35:78:58:THR:HG21	2.09	0.51
25:1H:2684:U:H1'	34:68:70:LYS:HD2	1.93	0.51
32:61:110:ASP:HB2	32:61:112:LYS:H	1.76	0.51
36:88:66:ILE:HG22	36:88:67:ARG:N	2.25	0.51
52:P8:5:TRP:NE1	52:P8:7:PRO:HG3	2.26	0.51
54:1G:751:U:H4'	15:6A:24:SER:HA	1.93	0.51
7:62:16:LEU:HD12	9:82:42:ARG:HA	1.91	0.51
10:1A:30:SER:OG	10:1A:81:THR:HG22	2.11	0.51
10:1A:99:LYS:HD3	10:1A:100:THR:H	1.76	0.51
25:14:279:C:N3	25:14:361:G:N2	2.55	0.51
25:14:443:A:H5"	25:14:444:C:OP1	2.10	0.51
25:14:916:G:C2'	25:14:917:A:H5"	2.41	0.51
25:14:993:G:OP1	40:85:50:ARG:NH2	2.44	0.51
25:14:1652:A:OP1	37:55:8:ARG:NH1	2.44	0.51
26:1J:80:U:H2'	26:1J:81:G:N2	2.18	0.51
35:35:84:ASN:ND2	35:35:117:GLU:HB3	2.25	0.51
36:45:75:THR:HB	36:45:86:GLY:HA3	1.92	0.51
43:B5:11:PRO:HG2	43:B5:13:LEU:HD21	1.92	0.51
2:1E:8:LYS:HE2	2:1E:8:LYS:O	2.11	0.51
2:1E:197:VAL:O	8:7E:68:ARG:NH2	2.34	0.51
3:2E:150:LYS:HE2	3:2E:152:ILE:HD11	1.92	0.51
5:4E:53:LEU:O	5:4E:56:GLN:HB2	2.11	0.51
22:3K:3:U:H2'	22:3K:4:G:C8	2.46	0.51
25:1H:265:A:H8	25:1H:266:G:H1'	1.74	0.51
25:1H:671:C:OP1	35:78:42:SER:O	2.29	0.51
25:1H:673:C:H5"	29:31:81:PRO:HD2	1.93	0.51
25:1H:932:G:H4'	25:1H:933:A:O5'	2.11	0.51
25:1H:1110:G:O2'	25:1H:1111:A:O5'	2.29	0.51
25:1H:1378:A:OP1	52:P8:10:ARG:NH2	2.44	0.51
25:1H:2324:C:H5"	25:1H:2325:G:H5'	1.93	0.51
25:1H:2693:A:H2'	25:1H:2694:G:H8	1.76	0.51
25:1H:2707:G:O3'	37:98:68:ARG:HG2	2.10	0.51
26:16:21:G:H1	26:16:62:C:H42	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:29:A:OP2	38:A8:32:LEU:HG	2.11	0.51
31:51:149:ARG:NH1	31:51:167:GLU:OE2	2.44	0.51
32:61:92:VAL:HG13	32:61:120:ILE:HG23	1.92	0.51
54:1G:108:G:OP1	54:1G:326:G:N2	2.38	0.51
54:1G:619:U:C2	4:32:135:LEU:HD22	2.45	0.51
54:1G:1208:C:H2'	54:1G:1209:C:H6	1.75	0.51
2:12:74:LYS:NZ	2:12:205:ASP:O	2.42	0.51
5:42:50:GLU:OE2	5:42:51:VAL:HG23	2.11	0.51
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.93	0.51
12:3A:33:ARG:HG2	12:3A:61:THR:CG2	2.40	0.51
55:1L:82:A:O3'	55:1L:83:C:H4'	2.10	0.51
25:14:228:A:H2'	25:14:230:U:O4'	2.11	0.51
25:14:498:G:H21	44:C5:47:LYS:NZ	2.09	0.51
25:14:1022:G:C6	25:14:1140:C:C4	2.99	0.51
25:14:1186:G:H2'	25:14:1187:G:O4'	2.11	0.51
25:14:2208:U:H2'	25:14:2209:C:C6	2.45	0.51
25:14:2320:A:C6	25:14:2333:A:C8	2.99	0.51
25:14:2781:A:H5"	25:14:2782:G:H5'	1.91	0.51
31:59:6:ARG:NH2	31:59:62:LYS:HB2	2.25	0.51
39:75:50:ILE:HG23	39:75:99:LEU:HB2	1.93	0.51
47:F5:34:THR:HG22	47:F5:36:GLY:H	1.76	0.51
49:H5:59:VAL:HG12	49:H5:60:GLU:H	1.75	0.51
53:M5:14:VAL:CG1	53:M5:22:VAL:HG13	2.40	0.51
1:13:419:C:H5'	1:13:420:U:OP2	2.10	0.51
1:13:760:G:H2'	1:13:761:G:H5'	1.93	0.51
1:13:936:C:O2	1:13:1382:C:N4	2.38	0.51
1:13:946:A:H2'	1:13:947:G:C8	2.47	0.51
1:13:1128:C:H5'	9:8E:16:ARG:HH22	1.76	0.51
1:13:1218:C:H2'	1:13:1219:U:C6	2.45	0.51
1:13:1504:G:H3'	1:13:1504:G:P	2.51	0.51
2:1E:165:VAL:HG23	2:1E:166:ASP:N	2.25	0.51
13:4I:82:MET:C	13:4I:84:ILE:H	2.19	0.51
25:1H:661:C:O2'	35:78:14:LYS:N	2.38	0.51
25:1H:822:U:O2'	25:1H:823:G:H5'	2.10	0.51
25:1H:1021:A:OP2	33:58:65:LYS:NZ	2.44	0.51
25:1H:1175:U:H4'	25:1H:1176:G:OP1	2.10	0.51
25:1H:1339:G:N2	25:1H:1603:A:H1'	2.26	0.51
25:1H:1564:C:O2'	25:1H:1565:C:H5'	2.11	0.51
28:21:34:VAL:HG22	28:21:48:GLN:HB3	1.93	0.51
29:31:108:LYS:HE3	29:31:112:MET:HE3	1.92	0.51
30:41:41:GLN:NE2	30:41:43:LEU:HD11	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:E8:11:ARG:NH1	42:E8:98:LYS:HG2	2.26	0.51
54:1G:382:A:H2'	54:1G:383:A:C8	2.46	0.51
54:1G:545:C:OP2	4:32:65:ARG:NH2	2.44	0.51
54:1G:1261:A:H61	54:1G:1274:G:H1'	1.76	0.51
54:1G:1286:A:H8	54:1G:1286:A:H3'	1.76	0.51
2:12:185:ILE:HG23	2:12:199:TYR:CB	2.40	0.51
9:82:77:ILE:O	9:82:81:ILE:HG12	2.11	0.51
10:1A:30:SER:O	10:1A:80:LYS:NZ	2.32	0.51
15:6A:8:LYS:O	15:6A:12:ILE:HG13	2.11	0.51
56:2L:16:C:O2'	56:2L:62:C:OP1	2.22	0.51
25:14:582:G:H2'	25:14:583:G:C8	2.46	0.51
25:14:1140:C:H4'	25:14:1143:A:C6	2.47	0.51
25:14:2720:U:N3	25:14:2873:A:H2	2.09	0.51
25:14:2777:G:OP2	25:14:2781:A:O2'	2.19	0.51
27:19:200:ASP:OD1	27:19:203:ASN:ND2	2.43	0.51
27:19:255:LYS:H	27:19:255:LYS:NZ	2.09	0.51
30:49:75:LYS:HE3	30:49:77:ILE:HD11	1.92	0.51
31:59:6:ARG:HH22	31:59:62:LYS:HB2	1.75	0.51
33:15:71:ILE:HD12	33:15:71:ILE:O	2.11	0.51
39:75:107:ASP:H	39:75:110:ILE:HG13	1.75	0.51
40:85:52:ARG:HA	40:85:55:ARG:HG3	1.92	0.51
1:13:411:A:C5	1:13:413:G:H1'	2.46	0.50
1:13:1234:C:H2'	1:13:1235:U:C6	2.46	0.50
1:13:1305:G:H22	1:13:1331:G:H2'	1.75	0.50
2:1E:124:SER:HB2	2:1E:125:PRO:HD2	1.93	0.50
6:5E:82:ARG:CZ	6:5E:82:ARG:HB3	2.40	0.50
7:6E:102:ARG:O	7:6E:106:GLN:HG3	2.10	0.50
8:7E:121:ASP:OD1	8:7E:121:ASP:N	2.44	0.50
13:4I:50:GLU:HA	13:4I:53:VAL:HB	1.93	0.50
25:1H:139:G:N3	25:1H:141:A:N1	2.58	0.50
25:1H:654(D):G:H22	25:1H:654(Q):C:N4	2.09	0.50
25:1H:2156:G:H2'	25:1H:2157:G:C4	2.46	0.50
25:1H:2718:G:O2'	25:1H:2847:U:OP1	2.29	0.50
25:1H:2726:U:O2'	25:1H:2727:G:H8	1.93	0.50
26:16:3:C:H42	26:16:117:G:H1	1.58	0.50
43:F8:61:GLY:N	43:F8:75:ASP:OD1	2.35	0.50
54:1G:1126:U:H5'	54:1G:1127:G:H8	1.74	0.50
54:1G:1154:G:H2'	54:1G:1155:G:H8	1.76	0.50
54:1G:1162:C:H42	54:1G:1174:G:H1	1.59	0.50
2:12:168:THR:HG23	2:12:192:SER:HB3	1.92	0.50
5:42:78:HIS:HB3	8:72:107:LEU:HD12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:86:ILE:HD11	8:72:136:GLU:HG2	1.93	0.50
13:4A:78:ILE:HD13	13:4A:92:HIS:ND1	2.26	0.50
14:5A:24:CYS:HB2	14:5A:29:ARG:HD2	1.93	0.50
25:14:270(E):G:C2	25:14:270(V):G:C2	2.99	0.50
25:14:603:A:H8	25:14:604:G:H1'	1.75	0.50
25:14:654(B):C:H2'	25:14:654(C):G:C8	2.46	0.50
25:14:783:A:O2'	25:14:785:G:OP1	2.15	0.50
25:14:2107:C:H42	25:14:2182:G:H1	1.59	0.50
25:14:2212:A:H4'	25:14:2213:U:C5	2.47	0.50
25:14:2355:C:H4'	46:E5:36:ILE:HD11	1.92	0.50
25:14:2808:U:H5"	25:14:2891:G:O6	2.11	0.50
30:49:42:GLY:O	30:49:43:LEU:HD13	2.11	0.50
34:25:21:CYS:SG	34:25:22:ILE:N	2.83	0.50
40:85:62:ILE:HD11	40:85:93:LYS:HD3	1.93	0.50
44:C5:20:TYR:CZ	44:C5:42:VAL:HA	2.45	0.50
44:C5:76:CYS:CB	44:C5:97:ARG:HD3	2.41	0.50
1:13:717:C:H5"	1:13:717:C:H6	1.76	0.50
1:13:945:G:C2	1:13:946:A:C8	2.99	0.50
1:13:1054:C:H4'	1:13:1055:A:OP1	2.11	0.50
1:13:1226:C:H4'	19:AI:80:TYR:CZ	2.47	0.50
1:13:1288:A:N1	1:13:1371:G:H1'	2.26	0.50
1:13:1530:G:H2'	1:13:1531:A:C8	2.45	0.50
8:7E:21:LYS:O	8:7E:63:LEU:HD23	2.11	0.50
17:8I:12:SER:HB2	17:8I:20:THR:HB	1.92	0.50
22:1K:85:A:OP2	25:1H:2602:A:N6	2.44	0.50
27:11:33:LEU:O	27:11:64:ILE:HG23	2.12	0.50
28:21:116:VAL:HG13	28:21:122:PHE:CG	2.46	0.50
49:L8:8:LEU:HD13	49:L8:31:LEU:HD23	1.93	0.50
50:M8:16:CYS:SG	50:M8:36:CYS:HB3	2.51	0.50
54:1G:416:G:O5'	54:1G:416:G:H8	1.95	0.50
54:1G:521:G:O5'	12:3A:73:GLU:HG2	2.10	0.50
54:1G:570:G:H2'	54:1G:571:U:C6	2.46	0.50
54:1G:1443:G:N2	39:75:119:LYS:HB2	2.24	0.50
3:22:60:ALA:HA	10:1A:93:GLY:HA2	1.93	0.50
6:52:96:PRO:HB3	18:9A:30:ASP:CG	2.36	0.50
8:72:20:TYR:HA	8:72:65:TYR:CE1	2.46	0.50
8:72:20:TYR:HA	8:72:65:TYR:CZ	2.46	0.50
12:3A:59:ARG:NH2	12:3A:65:GLU:OE1	2.44	0.50
55:3L:61:G:H1	55:3L:71:C:N4	2.06	0.50
25:14:1317:A:H2'	25:14:1318:C:H6	1.75	0.50
25:14:1568:G:P	27:19:63:ARG:HH12	2.34	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:22:LYS:HG2	36:45:23:GLY:HA2	1.92	0.50
39:75:5:ALA:HB2	39:75:8:LYS:HE2	1.93	0.50
39:75:12:SER:OG	39:75:13:ARG:HD3	2.12	0.50
40:85:83:LEU:HB3	40:85:88:ILE:HG13	1.92	0.50
42:A5:27:LYS:O	42:A5:71:VAL:HG23	2.10	0.50
44:C5:87:LYS:N	44:C5:94:LYS:HB3	2.25	0.50
52:L5:29:LYS:O	52:L5:33:ARG:HG2	2.11	0.50
4:3E:106:TYR:HB2	4:3E:117:ALA:HB2	1.93	0.50
25:1H:2785:C:H2'	25:1H:2786:U:O4'	2.11	0.50
26:16:111:U:H2'	26:16:112:G:H8	1.76	0.50
31:51:118:PRO:HD2	31:51:121:ILE:HG21	1.93	0.50
35:78:49:ARG:HG3	53:Q8:58:ILE:HG13	1.92	0.50
54:1G:942:G:C2	54:1G:1342:C:C2	3.00	0.50
54:1G:1069:C:O2'	54:1G:1192:C:O2	2.21	0.50
54:1G:1291:G:H4'	9:82:39:GLY:HA3	1.93	0.50
54:1G:1346:A:H5"	54:1G:1348:U:H1'	1.92	0.50
2:12:16:HIS:CE1	2:12:213:LEU:HD13	2.47	0.50
4:32:9:CYS:SG	4:32:22:LYS:HD2	2.50	0.50
25:14:395:U:O2'	25:14:396:G:C8	2.60	0.50
25:14:536:A:OP1	40:85:53:ARG:NH1	2.44	0.50
25:14:1204:A:H2	25:14:1241:A:N1	2.10	0.50
25:14:1263:U:H2'	25:14:1264:G:C8	2.46	0.50
25:14:1278:A:O2'	37:55:34:ILE:HD11	2.12	0.50
25:14:2129:C:C2'	25:14:2130:U:H5'	2.40	0.50
41:95:5:VAL:HB	41:95:37:VAL:CG1	2.41	0.50
1:13:105:G:H2'	1:13:106:C:C6	2.46	0.50
1:13:401:C:OP2	4:3E:73:ARG:HD3	2.12	0.50
1:13:1320:C:H2'	1:13:1321:C:O4'	2.11	0.50
60:13:1816:HOH:O	4:3E:49:ARG:NH2	2.43	0.50
22:3K:59:A:H2'	22:3K:60:A:C8	2.47	0.50
25:1H:654(H):G:H2'	25:1H:654(H):G:N3	2.27	0.50
25:1H:1263:U:H2'	25:1H:1264:G:O4'	2.11	0.50
27:11:102:LYS:C	27:11:103:ARG:HG2	2.36	0.50
27:11:228:PRO:HG3	27:11:234:GLY:O	2.11	0.50
36:88:32:TYR:CE2	36:88:133:ARG:HG3	2.45	0.50
36:88:35:VAL:HG13	36:88:130:LYS:HB2	1.94	0.50
43:F8:3:THR:HB	43:F8:6:ASP:HB2	1.93	0.50
54:1G:186(A):C:H2'	54:1G:186(B):C:H6	1.76	0.50
54:1G:438:G:H4'	4:32:123:HIS:HD2	1.76	0.50
54:1G:452:A:O2'	54:1G:453:A:O5'	2.29	0.50
54:1G:890:G:O2'	54:1G:906:G:O6	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:71:VAL:HB	2:12:164:VAL:HG13	1.93	0.50
4:32:31:CYS:C	4:32:33:MET:H	2.18	0.50
5:42:141:GLN:O	5:42:143:ARG:HG2	2.11	0.50
14:5A:4:LYS:O	14:5A:7:ILE:HG12	2.11	0.50
55:3L:25:G:H2'	55:3L:26:G:H8	1.77	0.50
25:14:577:G:O2'	25:14:1254:A:OP1	2.25	0.50
25:14:617:G:OP1	29:39:40:GLN:HG3	2.12	0.50
25:14:2845:G:H2'	25:14:2846:G:C8	2.47	0.50
28:29:41:LYS:HG3	28:29:42:ASP:N	2.27	0.50
30:49:63:ILE:O	30:49:105:LYS:NZ	2.44	0.50
32:69:75:LEU:HD23	32:69:76:THR:H	1.75	0.50
41:95:71:LEU:O	41:95:72:VAL:HG12	2.11	0.50
1:13:10:A:H2'	1:13:11:G:H8	1.76	0.50
1:13:323:U:H4'	20:BI:22:ARG:HB3	1.93	0.50
1:13:864:A:H2'	1:13:865:A:C8	2.46	0.50
1:13:881:G:P	12:3I:12:ARG:HH22	2.34	0.50
1:13:1171:G:H8	1:13:1171:G:O5'	1.95	0.50
1:13:1366:C:H2'	1:13:1367:C:C6	2.45	0.50
2:1E:8:LYS:HD3	2:1E:8:LYS:H	1.76	0.50
6:5E:97:PHE:O	18:9I:31:LEU:HD23	2.12	0.50
11:2I:59:TYR:CE2	11:2I:63:LEU:HD11	2.47	0.50
14:5I:40:CYS:O	14:5I:41:ARG:HG2	2.12	0.50
25:1H:315:G:H2'	25:1H:316:C:C6	2.47	0.50
25:1H:729:G:O6	27:11:209:ALA:N	2.32	0.50
25:1H:817:C:O2'	25:1H:839:U:OP1	2.14	0.50
25:1H:973:A:P	60:1H:3673:HOH:O	2.69	0.50
25:1H:1337:G:H2'	25:1H:1338:G:H8	1.76	0.50
25:1H:1965:C:H3'	25:1H:1966:A:H2'	1.93	0.50
25:1H:2432:A:C8	47:J8:33:LYS:HD2	2.47	0.50
25:1H:2545:G:H2'	25:1H:2546:U:O4'	2.12	0.50
28:21:77:ILE:HD12	28:21:79:ARG:NH1	2.26	0.50
29:31:175:THR:C	29:31:176:LEU:HD12	2.36	0.50
30:41:122:PRO:HB3	30:41:180:PHE:HD1	1.77	0.50
34:68:87:ILE:HD12	34:68:91:LEU:HG	1.94	0.50
37:98:28:LEU:HD23	37:98:34:ILE:HB	1.93	0.50
54:1G:103:C:O2'	54:1G:172:A:N1	2.42	0.50
54:1G:667:G:H4'	15:6A:51:HIS:ND1	2.26	0.50
54:1G:990:C:H2'	54:1G:991:U:C6	2.47	0.50
17:8A:10:VAL:HG23	17:8A:54:GLY:N	2.26	0.50
19:AA:35:SER:O	19:AA:71:LEU:HD12	2.12	0.50
25:14:68:G:H2'	25:14:69:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:289:A:H3'	25:14:290:G:C8	2.46	0.50
25:14:751:A:P	60:14:3418:HOH:O	2.68	0.50
25:14:2065:C:H2'	25:14:2066:C:H6	1.76	0.50
29:39:183:VAL:O	29:39:187:VAL:HG23	2.11	0.50
44:C5:11:ASP:OD2	44:C5:95:LYS:NZ	2.45	0.50
1:13:130:A:OP2	17:8I:63:ARG:NH2	2.43	0.50
1:13:1124:G:H3'	1:13:1145:C:N4	2.27	0.50
1:13:1318:A:H1'	19:AI:37:ARG:HH21	1.77	0.50
12:3I:9:GLN:O	12:3I:13:LYS:HG2	2.10	0.50
27:11:146:GLU:HB2	27:11:189:CYS:HB3	1.93	0.50
32:61:71:ILE:HG23	32:61:72:LEU:HD13	1.93	0.50
40:C8:65:ILE:HG12	40:C8:92:ARG:HH12	1.77	0.50
45:H8:30:ASN:HA	45:H8:89:PHE:CE1	2.47	0.50
54:1G:186(A):C:H5"	20:BA:86:ARG:NH2	2.26	0.50
54:1G:198:G:H2'	54:1G:199:G:H8	1.74	0.50
54:1G:533:A:H2'	60:1G:1736:HOH:O	2.12	0.50
54:1G:1321:C:O2	19:AA:77:THR:OG1	2.30	0.50
7:62:153:HIS:CD2	11:2A:58:PRO:HG2	2.46	0.50
14:5A:41:ARG:O	14:5A:45:ARG:HB2	2.12	0.50
25:14:205:G:O2'	25:14:206:U:OP2	2.27	0.50
25:14:390:A:N6	35:35:71:VAL:HG21	2.27	0.50
25:14:761:A:C8	60:14:3415:HOH:O	2.63	0.50
25:14:1331:A:O2'	25:14:1332:G:H8	1.93	0.50
25:14:1778:U:H2'	25:14:1784:A:N6	2.27	0.50
25:14:2576:G:O2'	25:14:2579:C:OP2	2.26	0.50
25:14:2784:C:H1'	28:29:37:ARG:HH21	1.75	0.50
30:49:55:LYS:O	30:49:58:GLN:HG3	2.12	0.50
35:35:86:LYS:HG3	35:35:87:ASP:H	1.77	0.50
42:A5:82:LEU:HD22	42:A5:84:ARG:NH2	2.26	0.50
44:C5:47:LYS:N	44:C5:60:PHE:HB3	2.27	0.50
45:D5:69:THR:HG22	45:D5:90:VAL:HG22	1.93	0.50
1:13:917:G:H2'	1:13:918:A:C8	2.47	0.50
1:13:1013:G:N2	1:13:1016:A:OP2	2.44	0.50
1:13:1478:C:H2'	1:13:1479:C:C6	2.47	0.50
7:6E:16:LEU:HD13	9:8E:44:VAL:HG22	1.93	0.50
25:1H:270(E):G:H1	25:1H:270(U):C:H42	1.59	0.50
25:1H:533:G:H5'	40:C8:24:TYR:CE1	2.47	0.50
25:1H:754:C:H2'	25:1H:755:C:C6	2.47	0.50
25:1H:1139:G:O2'	25:1H:1143:A:N1	2.40	0.50
25:1H:1280:G:N2	25:1H:1291:C:C2	2.79	0.50
25:1H:1444:G:C2	25:1H:1548:C:N3	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1475:G:C2	25:1H:1519:G:C2	3.00	0.50
25:1H:2126:A:H8	25:1H:2127:G:N3	2.10	0.50
31:51:8:PRO:HG2	31:51:69:ARG:NH2	2.27	0.50
38:A8:26:LEU:HD22	38:A8:87:PHE:HD1	1.77	0.50
44:G8:97:ARG:NH2	44:G8:104:GLY:HA3	2.27	0.50
47:J8:87:PRO:HA	47:J8:90:ILE:HB	1.94	0.50
53:Q8:26:LYS:CG	53:Q8:41:ILE:HG23	2.42	0.50
54:1G:192:U:H4'	20:BA:103:GLY:HA2	1.92	0.50
54:1G:1258:G:H2'	54:1G:1259:C:C6	2.42	0.50
2:12:179:LYS:HA	8:72:72:PRO:HG3	1.92	0.50
56:2L:8:4SU:C2	56:2L:14:A:H62	2.23	0.50
25:14:654(B):C:H2'	25:14:654(C):G:H8	1.76	0.50
25:14:1466:G:H5'	25:14:1467:C:OP1	2.12	0.50
25:14:1820:U:O2	27:19:201:HIS:HB3	2.12	0.50
27:19:33:LEU:HD21	27:19:103:ARG:HA	1.93	0.50
28:29:47:VAL:HG21	28:29:86:PRO:HD2	1.93	0.50
34:25:49:ARG:HA	34:25:53:LYS:NZ	2.27	0.50
34:25:64:ARG:HG2	34:25:79:PHE:CG	2.46	0.50
34:25:71:ARG:HH11	39:75:74:ARG:NH2	2.09	0.50
1:13:8:A:N7	4:3E:208:SER:HB3	2.27	0.50
1:13:17:U:H2'	1:13:18:C:C6	2.47	0.50
1:13:630:G:H2'	1:13:631:G:C8	2.46	0.50
1:13:820:U:H4'	1:13:821:G:OP2	2.12	0.50
1:13:947:G:H4'	13:4I:109:THR:HG23	1.94	0.50
1:13:1128:C:H5"	1:13:1129:C:OP2	2.12	0.50
11:2I:95:ILE:O	11:2I:99:GLN:HG3	2.12	0.50
17:8I:28:PRO:HA	17:8I:34:LYS:O	2.11	0.50
20:BI:49:ALA:HB2	20:BI:99:LEU:HD23	1.94	0.50
25:1H:1517:G:H2'	25:1H:1518:C:C6	2.47	0.50
25:1H:1675:C:H5"	60:1H:3573:HOH:O	2.10	0.50
25:1H:2291:U:H2'	25:1H:2292:C:C6	2.47	0.50
25:1H:2845:G:H5"	39:B8:54:ARG:O	2.12	0.50
27:11:54:ARG:O	27:11:218:ARG:HD2	2.12	0.50
28:21:73:GLU:HG3	28:21:74:PRO:HD2	1.92	0.50
28:21:115:GLY:O	28:21:119:ARG:HB2	2.12	0.50
30:41:109:VAL:O	30:41:113:ARG:HG3	2.11	0.50
31:51:105:LEU:HD23	31:51:113:VAL:O	2.11	0.50
37:98:53:HIS:HD1	37:98:94:TYR:HH	1.49	0.50
42:E8:88:ARG:HB3	42:E8:92:ARG:CB	2.40	0.50
53:Q8:41:ILE:HG22	53:Q8:41:ILE:O	2.12	0.50
54:1G:406:G:H1	54:1G:436:C:H42	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:922:G:N3	54:1G:1398:A:H2	2.10	0.50
54:1G:979:C:C5	54:1G:980:C:C6	3.00	0.50
54:1G:1226:C:N4	13:4A:104:ARG:HD2	2.26	0.50
6:52:83:ASP:OD1	6:52:83:ASP:N	2.44	0.50
12:3A:89:ARG:O	12:3A:99:HIS:HE1	1.95	0.50
25:14:176:G:O2'	25:14:177:G:H5'	2.11	0.50
25:14:574:C:N3	28:29:145:LYS:NZ	2.40	0.50
25:14:586:A:N1	25:14:809:G:O2'	2.42	0.50
25:14:608:A:H2'	25:14:609:A:O4'	2.12	0.50
25:14:848:G:H2'	25:14:849:A:H8	1.77	0.50
25:14:1133:U:O2	25:14:1137:G:H5"	2.11	0.50
26:1J:72:G:O2'	26:1J:104:A:N6	2.45	0.50
32:69:88:ILE:O	32:69:121:LYS:NZ	2.36	0.50
52:L5:25:PRO:HA	52:L5:28:ARG:HG3	1.94	0.50
53:M5:29:LYS:HB3	53:M5:44:LYS:HD3	1.94	0.50
1:13:438:G:H5'	4:3E:123:HIS:ND1	2.27	0.50
1:13:1132:C:C2'	1:13:1133:G:H5'	2.41	0.50
1:13:1352:C:OP1	21:1F:3:LYS:NZ	2.35	0.50
19:AI:36:ARG:NH2	19:AI:75:ALA:O	2.35	0.50
25:1H:582:G:H2'	25:1H:583:G:C8	2.46	0.50
25:1H:589:C:H2'	25:1H:590:A:C8	2.46	0.50
25:1H:2053:G:OP1	28:21:144:ARG:HD3	2.12	0.50
25:1H:2391:G:O6	25:1H:2425:A:H8	1.94	0.50
37:98:79:LEU:HA	37:98:83:ILE:HD12	1.93	0.50
44:G8:81:LYS:HB3	44:G8:82:PRO:HA	1.94	0.50
54:1G:149:A:H2'	54:1G:150:C:C6	2.47	0.50
54:1G:222:U:H2'	54:1G:223:U:C6	2.46	0.50
54:1G:1251:A:H2'	54:1G:1252:A:C8	2.47	0.50
54:1G:1310:G:P	13:4A:77:ASN:HD21	2.35	0.50
3:22:134:ILE:HD11	3:22:153:VAL:HG23	1.94	0.50
5:42:74:GLY:HA3	5:42:116:THR:OG1	2.12	0.50
12:3A:76:ASN:ND2	12:3A:106:ASP:O	2.45	0.50
56:2L:20:G:N3	56:2L:58:A:C2	2.80	0.50
25:14:570:G:H5"	60:14:3582:HOH:O	2.10	0.50
25:14:1831:G:N2	25:14:1974:C:O2	2.39	0.50
25:14:1935:G:H1'	25:14:1964:G:N2	2.26	0.50
25:14:2572:A:OP1	25:14:2574:G:O2'	2.29	0.50
25:14:2682:U:O2'	28:29:13:ARG:HG2	2.12	0.50
26:1J:3:C:H2'	26:1J:4:C:H6	1.77	0.50
40:85:92:ARG:O	40:85:94:ASN:N	2.42	0.50
43:B5:80:ILE:O	43:B5:80:ILE:HG13	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:109:A:C8	1:13:326:G:H2'	2.46	0.49
1:13:545:C:O2'	1:13:549:C:OP1	2.29	0.49
1:13:1054:C:H6	1:13:1054:C:H5"	1.77	0.49
10:1I:51:ARG:HB2	10:1I:60:ARG:HA	1.94	0.49
19:AI:52:TYR:HD1	19:AI:57:HIS:CD2	2.29	0.49
22:3K:15:G:N2	22:3K:57:C:O2	2.40	0.49
25:1H:7:G:C2	25:1H:8:A:C4	3.00	0.49
25:1H:2032:G:H21	28:21:146:THR:CG2	2.24	0.49
25:1H:2646:C:H2'	25:1H:2647:U:O4'	2.11	0.49
26:16:18:G:H1	26:16:65:C:H42	1.58	0.49
33:58:96:GLU:C	33:58:98:VAL:N	2.60	0.49
36:88:106:VAL:HG21	36:88:114:ALA:HB1	1.93	0.49
54:1G:321:A:N7	54:1G:328:C:C6	2.80	0.49
54:1G:651:C:H2'	54:1G:652:U:C6	2.47	0.49
54:1G:715:A:H2'	54:1G:716:A:C8	2.47	0.49
54:1G:1059:C:O2'	10:1A:53:PRO:HD3	2.12	0.49
54:1G:1300:G:N1	54:1G:1335:C:O4'	2.44	0.49
4:32:107:ARG:NH2	4:32:196:LEU:HD21	2.27	0.49
6:52:1:MET:HB3	6:52:67:MET:O	2.12	0.49
15:6A:26:GLU:OE2	15:6A:77:ARG:NH1	2.38	0.49
19:AA:50:ALA:CB	19:AA:57:HIS:HB3	2.41	0.49
21:1B:2:GLY:O	21:1B:4:GLY:N	2.44	0.49
55:1L:73:U:H2'	55:1L:74:C:C6	2.46	0.49
25:14:579:G:H2'	25:14:580:C:H6	1.76	0.49
25:14:654(E):C:N4	25:14:654(P):G:H1	2.07	0.49
25:14:1013:C:N3	25:14:1149:G:N2	2.45	0.49
25:14:1101:U:H2'	25:14:1102:C:C6	2.47	0.49
25:14:1786:A:H1'	25:14:1938:A:N6	2.26	0.49
25:14:1794:U:H2'	25:14:1795:C:H6	1.76	0.49
25:14:1934:C:N3	25:14:1964:G:N1	2.49	0.49
25:14:2287:A:N1	25:14:2346:A:H2	2.10	0.49
25:14:2452:C:OP2	60:14:3585:HOH:O	2.19	0.49
25:14:2818:G:OP2	37:55:42:LYS:NZ	2.45	0.49
26:1J:15:A:H1'	26:1J:109:G:C4	2.47	0.49
31:59:26:VAL:HG12	31:59:33:LEU:H	1.77	0.49
32:69:124:GLY:O	32:69:142:VAL:HB	2.12	0.49
39:75:55:ASN:N	39:75:59:THR:HG22	2.27	0.49
1:13:102:G:C6	1:13:103:C:C4	3.00	0.49
1:13:657:G:C2	1:13:658:G:C8	3.00	0.49
1:13:1234:C:H2'	1:13:1235:U:H6	1.75	0.49
1:13:1240:U:OP1	7:6E:119:ARG:NH2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:24:GLU:O	4:3E:27:TYR:N	2.44	0.49
25:1H:931:G:O2'	49:L8:24:LYS:NZ	2.30	0.49
25:1H:945:A:OP2	25:1H:945:A:H4'	2.12	0.49
25:1H:1266:G:O4'	42:E8:15:ARG:NH2	2.45	0.49
25:1H:2275:C:O2	36:88:85:LYS:HB3	2.12	0.49
28:21:131:ALA:HB1	28:21:135:HIS:HE1	1.77	0.49
32:61:30:LEU:HD22	32:61:35:LEU:HD11	1.94	0.49
41:D8:5:VAL:HG12	41:D8:38:LEU:HD12	1.94	0.49
54:1G:410:G:N2	54:1G:432:A:H62	2.10	0.49
54:1G:1045:C:H2'	54:1G:1046:A:O4'	2.12	0.49
4:32:64:LEU:HB2	4:32:198:VAL:HG11	1.94	0.49
19:AA:63:THR:OG1	19:AA:65:ASN:O	2.29	0.49
25:14:363(F):A:OP2	25:14:363(F):A:H8	1.94	0.49
25:14:1138:G:C4	25:14:1139:G:H1'	2.46	0.49
25:14:1716:U:H2'	25:14:1717:G:H8	1.77	0.49
25:14:1756:G:OP2	60:14:3768:HOH:O	2.19	0.49
25:14:2889:C:H2'	25:14:2891:G:O4'	2.11	0.49
28:29:105:THR:HG23	28:29:166:THR:OG1	2.12	0.49
35:35:90:ARG:HG3	35:35:91:PHE:CD2	2.47	0.49
39:75:12:SER:O	39:75:15:VAL:HG13	2.12	0.49
42:A5:71:VAL:HA	42:A5:107:LEU:HD12	1.94	0.49
45:D5:23:LYS:HB3	45:D5:38:TYR:CD1	2.47	0.49
1:13:77:C:H2'	1:13:78:G:H8	1.77	0.49
1:13:223:U:H2'	1:13:224:C:C6	2.47	0.49
1:13:449:C:H6	16:7I:42:ARG:HH11	1.60	0.49
1:13:505:G:N7	60:13:1841:HOH:O	2.34	0.49
1:13:714:G:H2'	1:13:715:A:C8	2.46	0.49
1:13:922:G:H1'	5:4E:19:MET:HB2	1.94	0.49
1:13:1129:C:N4	1:13:1142:G:O6	2.46	0.49
1:13:1289:A:H3'	1:13:1290:G:H8	1.77	0.49
2:1E:98:LEU:HG	2:1E:101:MET:HE3	1.95	0.49
4:3E:173:TRP:HA	4:3E:187:ARG:HG2	1.93	0.49
7:6E:50:ILE:HB	7:6E:58:PRO:HG3	1.95	0.49
10:1I:3:LYS:N	10:1I:75:ILE:O	2.44	0.49
11:2I:18:ARG:HB3	11:2I:33:THR:OG1	2.12	0.49
13:4I:67:GLU:OE2	13:4I:68:GLY:N	2.45	0.49
14:5I:24:CYS:O	14:5I:25:VAL:HG22	2.12	0.49
25:1H:341:G:H2'	25:1H:342:G:O4'	2.12	0.49
25:1H:973:A:H5'	25:1H:1188:U:H1'	1.94	0.49
25:1H:1460:A:O2'	25:1H:1461:G:OP1	2.30	0.49
25:1H:1771:C:H1'	25:1H:1786:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1780:A:P	60:1H:3523:HOH:O	2.67	0.49
25:1H:2228:G:OP1	27:11:261:LYS:NZ	2.45	0.49
35:78:114:ILE:HD12	35:78:134:ALA:HB1	1.94	0.49
39:B8:26:ASP:HB3	39:B8:120:ARG:HH22	1.76	0.49
43:F8:1:MET:C	43:F8:3:THR:N	2.70	0.49
46:I8:50:ASN:ND2	46:I8:83:PRO:HD3	2.26	0.49
54:1G:841:U:H4'	54:1G:842:C:C6	2.47	0.49
54:1G:977:A:O2'	54:1G:981:U:N3	2.45	0.49
54:1G:1071:C:H2'	54:1G:1072:G:H8	1.78	0.49
54:1G:1424:C:H2'	54:1G:1425:U:O4'	2.12	0.49
2:12:178:ARG:HH21	8:72:68:ARG:HH22	1.61	0.49
4:32:14:ARG:HG3	4:32:14:ARG:NH1	2.25	0.49
25:14:221:A:C4	25:14:266:G:N7	2.81	0.49
25:14:654(C):G:H2'	25:14:654(D):G:O4'	2.13	0.49
25:14:1783:A:H5'	25:14:2608:G:H4'	1.94	0.49
25:14:2393:A:O3'	35:35:63:PRO:HD2	2.12	0.49
30:49:31:VAL:O	30:49:33:ARG:HG3	2.12	0.49
32:69:93:THR:H	32:69:96:ASP:HB2	1.78	0.49
50:I5:34:GLU:HG2	50:I5:35:VAL:N	2.27	0.49
53:M5:60:LEU:C	53:M5:61:LEU:HG	2.35	0.49
1:13:690:G:H2'	1:13:691:G:O4'	2.11	0.49
1:13:991:U:O2'	1:13:992:U:O5'	2.29	0.49
4:3E:141:ARG:HB2	4:3E:141:ARG:NH1	2.27	0.49
6:5E:22:GLU:O	6:5E:26:ILE:HG13	2.13	0.49
8:7E:120:THR:H	8:7E:123:GLU:HB2	1.78	0.49
11:2I:27:ASN:OD1	11:2I:28:THR:N	2.46	0.49
25:1H:50:U:H3'	25:1H:51:G:H5'	1.95	0.49
25:1H:81:G:O6	60:1H:3613:HOH:O	2.18	0.49
25:1H:543:C:N4	25:1H:550:G:H1	2.05	0.49
25:1H:804:A:P	60:1H:3639:HOH:O	2.71	0.49
25:1H:1177:A:H5"	25:1H:1178:C:H6	1.77	0.49
25:1H:2591:C:H2'	25:1H:2592:G:C8	2.48	0.49
27:11:142:VAL:HG23	27:11:192:THR:C	2.37	0.49
30:41:34:LEU:HD22	30:41:99:MET:HE1	1.94	0.49
30:41:77:ILE:HG22	30:41:82:LEU:HD12	1.94	0.49
31:51:59:ARG:HA	31:51:62:LYS:HD3	1.94	0.49
37:98:100:LEU:HD11	37:98:113:LEU:HD22	1.94	0.49
41:D8:38:LEU:HG	41:D8:39:LEU:N	2.24	0.49
48:K8:4:SER:OG	48:K8:5:GLU:OE2	2.21	0.49
54:1G:45:U:H2'	54:1G:46:G:C8	2.46	0.49
54:1G:667:G:O2'	15:6A:49:ASP:OD1	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:848:C:H2'	54:1G:849:C:C6	2.48	0.49
54:1G:1206:G:C6	54:1G:1207:G:C6	3.01	0.49
54:1G:1228:C:OP1	13:4A:114:ARG:HA	2.13	0.49
20:BA:86:ARG:NH1	20:BA:86:ARG:HB2	2.28	0.49
25:14:242:G:O5'	53:M5:3:LYS:HE3	2.11	0.49
25:14:1636:C:H2'	25:14:1637:A:C8	2.47	0.49
25:14:1826:G:H2'	25:14:1827:C:H6	1.76	0.49
25:14:2439:A:H5'	25:14:2439:A:H8	1.75	0.49
26:1J:88:C:H3'	26:1J:89:G:H8	1.77	0.49
27:19:255:LYS:H	27:19:255:LYS:HE3	1.77	0.49
28:29:4:ILE:HD11	28:29:28:ALA:CB	2.42	0.49
30:49:32:PRO:HB2	30:49:172:LEU:HD22	1.93	0.49
1:13:427:U:H3'	1:13:428:G:H2'	1.95	0.49
1:13:939:G:C6	1:13:940:C:N4	2.80	0.49
1:13:1083:U:H5	1:13:1084:G:C6	2.30	0.49
1:13:1298:C:H2'	7:6E:114:ARG:NH2	2.27	0.49
2:1E:163:PHE:CD1	2:1E:185:ILE:HG13	2.47	0.49
5:4E:11:ILE:HD13	5:4E:11:ILE:H	1.77	0.49
8:7E:27:PRO:O	8:7E:32:LYS:NZ	2.25	0.49
11:2I:66:LEU:HG	11:2I:97:ALA:HB1	1.95	0.49
11:2I:73:MET:HG2	11:2I:103:LEU:HD13	1.93	0.49
15:6I:25:THR:HG21	15:6I:70:LEU:HD13	1.94	0.49
25:1H:152:G:H2'	25:1H:153:C:C6	2.46	0.49
25:1H:1113:U:OP1	31:51:2:SER:HA	2.12	0.49
25:1H:1273:U:O2'	25:1H:1274:A:H5"	2.12	0.49
25:1H:2287:A:C2	25:1H:2289:G:C8	3.00	0.49
25:1H:2683:C:OP1	39:B8:53:ARG:NH2	2.41	0.49
32:61:29:TYR:CD2	32:61:30:LEU:HD23	2.41	0.49
40:C8:59:ARG:O	40:C8:63:VAL:HG23	2.12	0.49
48:K8:46:GLN:OE1	48:K8:46:GLN:HA	2.11	0.49
52:P8:35:ARG:HG3	52:P8:42:LEU:HD11	1.93	0.49
54:1G:588:G:H1	54:1G:651:C:N4	2.03	0.49
54:1G:1272:G:N3	54:1G:1273:G:H1'	2.27	0.49
5:42:19:MET:HE1	5:42:24:ARG:HE	1.76	0.49
5:42:145:LYS:HG2	5:42:149:GLU:HG2	1.94	0.49
6:52:97:PHE:O	18:9A:31:LEU:HD23	2.12	0.49
7:62:97:GLN:HE21	7:62:101:LEU:HD11	1.78	0.49
10:1A:78:ASN:OD1	10:1A:81:THR:HG23	2.12	0.49
12:3A:89:ARG:HG3	12:3A:97:ARG:HA	1.95	0.49
55:1L:57:C:C2	55:1L:68:A:H1'	2.47	0.49
25:14:120:U:H4'	25:14:121:G:H5"	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:308:G:C8	25:14:501:A:H1'	2.47	0.49
25:14:592:G:H21	53:M5:4:MET:HE2	1.77	0.49
25:14:1999:C:H4'	25:14:2723:C:O2	2.11	0.49
25:14:2747:G:O6	25:14:2754:U:H3'	2.13	0.49
26:1J:88:C:N4	26:1J:89:G:C2	2.81	0.49
30:49:130:ASN:HB3	30:49:159:VAL:O	2.12	0.49
50:I5:23:GLU:HG3	50:I5:24:THR:N	2.28	0.49
1:13:22:G:H2'	1:13:23:C:C6	2.48	0.49
1:13:323:U:H2'	1:13:324:G:O4'	2.12	0.49
1:13:1316:G:N2	1:13:1318:A:H3'	2.27	0.49
2:1E:70:PHE:HE1	2:1E:90:MET:CB	2.25	0.49
2:1E:118:LEU:HB3	2:1E:142:LEU:HG	1.94	0.49
3:2E:83:ARG:O	3:2E:86:VAL:HG22	2.12	0.49
4:3E:191:ARG:HD3	4:3E:200:GLU:OE1	2.13	0.49
5:4E:10:MET:SD	5:4E:13:ILE:HD11	2.53	0.49
7:6E:26:PHE:CD2	7:6E:30:ILE:HD11	2.46	0.49
8:7E:36:LEU:HA	8:7E:39:LEU:HB2	1.95	0.49
13:4I:23:TYR:HB3	13:4I:67:GLU:HB2	1.95	0.49
25:1H:960:A:C8	25:1H:962:G:C8	2.99	0.49
25:1H:1055:G:H1	25:1H:1104:C:N4	2.08	0.49
25:1H:1061:U:N3	25:1H:1063:G:OP1	2.45	0.49
25:1H:1207:C:H2'	25:1H:1208:C:H6	1.77	0.49
25:1H:2614:A:OP2	60:1H:3824:HOH:O	2.20	0.49
26:16:11:C:O5'	26:16:12:C:H5	1.95	0.49
29:31:134:GLY:H	29:31:162:LEU:HB3	1.77	0.49
46:I8:24:LYS:O	46:I8:25:ARG:NH1	2.45	0.49
54:1G:199:G:H2'	54:1G:200:G:C8	2.45	0.49
54:1G:501:C:H2'	54:1G:502:G:H8	1.78	0.49
54:1G:842:C:H4'	54:1G:843:U:H5	1.77	0.49
54:1G:960:U:O2	54:1G:960:U:O2'	2.27	0.49
54:1G:1179:A:H2'	54:1G:1180:A:O4'	2.13	0.49
54:1G:1289:A:N6	54:1G:1371:G:O2'	2.45	0.49
4:32:59:ARG:O	4:32:63:LYS:N	2.35	0.49
7:62:22:LEU:HD12	7:62:22:LEU:H	1.78	0.49
7:62:46:ALA:O	7:62:50:ILE:HG12	2.12	0.49
8:72:84:ARG:HG2	8:72:86:ILE:HD13	1.95	0.49
11:2A:41:THR:HG21	11:2A:71:LYS:HB3	1.94	0.49
12:3A:33:ARG:HG2	12:3A:61:THR:HG21	1.95	0.49
12:3A:39:VAL:HG23	12:3A:57:LYS:NZ	2.27	0.49
15:6A:38:ARG:HH11	15:6A:38:ARG:HB2	1.77	0.49
17:8A:63:ARG:HG2	17:8A:64:PRO:HD2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BA:33:ILE:HD11	20:BA:62:LEU:O	2.13	0.49
55:1L:20:C:H5”	55:1L:22:A:H5’	1.95	0.49
25:14:30:G:H2’	25:14:31:C:C6	2.46	0.49
25:14:661:C:H2’	25:14:662:G:C8	2.47	0.49
25:14:774:A:H5’	25:14:778:G:C4’	2.42	0.49
25:14:957:A:N6	25:14:2459:A:C8	2.81	0.49
25:14:1357:U:H2’	25:14:1358:G:O4’	2.13	0.49
25:14:1542:G:O5’	25:14:1543:A:H5”	2.12	0.49
25:14:2516:G:C6	25:14:2517:C:N4	2.81	0.49
25:14:2743:C:H2’	25:14:2744:G:O4’	2.13	0.49
26:1J:38:C:N4	26:1J:44:G:H1	1.99	0.49
27:19:37:LEU:HA	27:19:38:LYS:CB	2.43	0.49
29:39:47:GLY:O	29:39:94:PRO:HA	2.12	0.49
31:59:73:ALA:O	31:59:76:VAL:HB	2.13	0.49
40:85:88:ILE:HA	41:95:49:THR:O	2.12	0.49
43:B5:40:LYS:O	43:B5:44:GLU:HB2	2.13	0.49
45:D5:76:LEU:HA	45:D5:83:PRO:HA	1.94	0.49
51:J5:40:LYS:HE3	51:J5:44:THR:O	2.13	0.49
1:13:626:U:C2	1:13:627:G:C8	3.01	0.49
1:13:690:G:H22	11:2I:55:LYS:HE2	1.78	0.49
11:2I:32:ILE:HD12	11:2I:72:ALA:HB2	1.93	0.49
12:3I:58:VAL:O	12:3I:65:GLU:HA	2.13	0.49
13:4I:14:ARG:HB3	13:4I:16:ASP:OD1	2.12	0.49
25:1H:247:G:O2’	25:1H:250:G:N7	2.45	0.49
25:1H:309:G:H4’	44:G8:18:GLY:HA2	1.93	0.49
25:1H:1062:G:P	25:1H:1062:G:H8	2.35	0.49
25:1H:1443:G:C2	25:1H:1549:C:N3	2.81	0.49
25:1H:1919:A:H5”	25:1H:1920:C:OP2	2.12	0.49
25:1H:2845:G:O2’	25:1H:2846:G:H5’	2.12	0.49
27:11:52:ARG:HB2	27:11:53:PHE:CD2	2.48	0.49
37:98:24:GLN:OE1	37:98:36:THR:HG21	2.13	0.49
38:A8:53:SER:O	38:A8:57:LYS:N	2.45	0.49
39:B8:42:ILE:HG21	39:B8:84:GLN:OE1	2.13	0.49
40:C8:88:ILE:O	40:C8:90:VAL:N	2.46	0.49
42:E8:61:ASN:HB2	42:E8:62:HIS:CD2	2.48	0.49
45:H8:72:ARG:NH2	45:H8:97:GLU:O	2.33	0.49
54:1G:123:C:H2’	54:1G:124:G:H8	1.78	0.49
54:1G:164:U:H2’	54:1G:165:C:H6	1.75	0.49
54:1G:303:A:H2’	54:1G:304:U:O4’	2.12	0.49
54:1G:426:G:H2’	54:1G:427:U:C6	2.48	0.49
54:1G:589:C:N3	54:1G:650:G:N2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1158:C:H2'	54:1G:1158:C:O2	2.12	0.49
54:1G:1194:U:H2'	54:1G:1195:C:H6	1.77	0.49
54:1G:1325:C:OP2	21:1B:15:ARG:NH1	2.46	0.49
10:1A:44:VAL:HG22	10:1A:66:ARG:HG3	1.93	0.49
12:3A:78:GLN:HG2	12:3A:81:SER:HB2	1.94	0.49
25:14:353:G:H2'	25:14:354:G:C8	2.48	0.49
25:14:443:A:H1'	25:14:1201:C:O4'	2.12	0.49
25:14:739:G:P	60:14:3630:HOH:O	2.69	0.49
25:14:1243:G:H1'	35:35:4:SER:O	2.13	0.49
25:14:1287:A:C5	25:14:1288:U:C4	3.01	0.49
25:14:1316:U:H2'	25:14:1317:A:C8	2.46	0.49
25:14:2113:U:C5	25:14:2114:A:H1'	2.47	0.49
25:14:2298:A:H1'	25:14:2321:G:N2	2.28	0.49
25:14:2510:C:H2'	25:14:2511:U:C6	2.48	0.49
25:14:2611:U:H3'	25:14:2611:U:OP2	2.12	0.49
25:14:2820:A:O2'	25:14:2821:A:OP1	2.30	0.49
28:29:9:VAL:CG2	28:29:25:VAL:HB	2.40	0.49
29:39:66:PRO:O	29:39:67:GLN:HB3	2.13	0.49
31:59:120:GLY:O	31:59:135:GLY:HA2	2.11	0.49
33:15:13:TRP:O	33:15:135:PRO:HD2	2.13	0.49
34:25:7:TYR:CZ	34:25:44:LYS:HG3	2.47	0.49
41:95:43:GLU:O	41:95:44:LYS:HG2	2.11	0.49
44:C5:45:VAL:HG12	44:C5:60:PHE:HB2	1.95	0.49
45:D5:15:PRO:C	45:D5:19:ARG:HH21	2.20	0.49
1:13:324:G:N2	1:13:326:G:H3'	2.27	0.49
1:13:1127:G:N2	1:13:1145:C:C2	2.81	0.49
1:13:1184:G:H2'	1:13:1185:G:C8	2.48	0.49
1:13:1239:A:H62	1:13:1299:A:N6	2.10	0.49
1:13:1494:G:HO2'	25:1H:1912:A:HO2'	1.61	0.49
11:2I:58:PRO:HD3	11:2I:89:ALA:HB1	1.95	0.49
16:7I:71:ARG:HG2	16:7I:75:ARG:HH12	1.77	0.49
22:1K:42:U:H3'	22:1K:43:G:H8	1.78	0.49
25:1H:11:G:H2'	25:1H:12:U:H5'	1.94	0.49
25:1H:99:U:H1'	25:1H:102:G:C6	2.47	0.49
25:1H:125:G:C6	52:P8:10:ARG:HG3	2.48	0.49
25:1H:242:G:H3'	53:Q8:6:THR:HG21	1.95	0.49
25:1H:270(P):C:H5'	32:61:52:ARG:HH22	1.77	0.49
25:1H:853:G:N1	25:1H:924:C:N3	2.43	0.49
25:1H:1204:A:C2	25:1H:1241:A:N1	2.80	0.49
25:1H:1331:A:O2'	25:1H:1332:G:H8	1.95	0.49
25:1H:1344:G:H4'	25:1H:1384:A:C5	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1400:G:H2'	25:1H:1401:G:H8	1.78	0.49
25:1H:2272:U:H5"	25:1H:2273:A:OP1	2.13	0.49
25:1H:2528:U:O3'	25:1H:2529:G:H8	1.96	0.49
25:1H:2635:C:C5'	28:21:79:ARG:HD3	2.40	0.49
25:1H:2801:A:H2'	25:1H:2802:G:H4'	1.95	0.49
26:16:14:U:OP2	26:16:70:C:O2'	2.25	0.49
27:11:96:HIS:ND1	27:11:102:LYS:HE2	2.28	0.49
32:61:63:ALA:HA	32:61:66:GLU:OE2	2.13	0.49
33:58:40:PRO:HB3	40:C8:68:ALA:HB2	1.94	0.49
34:68:50:GLY:H	34:68:53:LYS:HZ3	1.59	0.49
36:88:79:LEU:H	36:88:80:GLU:HB2	1.77	0.49
39:B8:99:LEU:HB3	39:B8:101:PHE:CE1	2.47	0.49
45:H8:105:VAL:HG13	45:H8:140:ASP:HA	1.93	0.49
54:1G:259:G:H2'	54:1G:260:G:O4'	2.13	0.49
4:32:178:VAL:C	4:32:180:GLY:H	2.20	0.49
17:8A:10:VAL:HG23	17:8A:54:GLY:H	1.76	0.49
25:14:446:G:H5"	40:85:3:ARG:HH21	1.77	0.49
25:14:745:G:H5"	25:14:746:A:OP2	2.13	0.49
25:14:1425:G:H2'	25:14:1426:G:C8	2.48	0.49
25:14:1451:C:H3'	25:14:1453:A:H5'	1.94	0.49
29:39:103:LYS:HA	29:39:106:ARG:HG3	1.93	0.49
33:15:134:ARG:HB3	33:15:134:ARG:HH11	1.76	0.49
36:45:110:THR:HG23	36:45:113:GLN:OE1	2.12	0.49
44:C5:87:LYS:HG2	44:C5:88:LYS:H	1.78	0.49
44:C5:91:GLU:HG3	44:C5:92:ASN:N	2.27	0.49
1:13:156:G:N3	1:13:166:G:N2	2.61	0.49
1:13:1113:C:H2'	1:13:1114:C:H6	1.77	0.49
1:13:1378:C:C5	1:13:1379:G:C8	3.01	0.49
4:3E:30:LYS:C	4:3E:32:ALA:N	2.69	0.49
19:AI:67:VAL:HB	50:M8:59:PHE:HB2	1.95	0.49
25:1H:222:A:N1	25:1H:233:A:H5"	2.28	0.49
25:1H:971:C:O2'	25:1H:983:A:N3	2.37	0.49
25:1H:2404:C:O3'	35:78:77:ARG:NH2	2.44	0.49
33:58:6:PRO:HG3	33:58:41:ASP:HB2	1.93	0.49
54:1G:867:G:H2'	54:1G:868:C:H6	1.77	0.49
2:12:7:VAL:HG22	2:12:8:LYS:H	1.78	0.49
11:2A:101:SER:HB2	11:2A:103:LEU:H	1.78	0.49
19:AA:33:THR:O	19:AA:57:HIS:NE2	2.46	0.49
55:1L:42:U:H2'	55:1L:43:G:C8	2.47	0.49
25:14:93:C:H5'	25:14:94:G:OP2	2.12	0.49
25:14:827:U:H2'	25:14:2430:A:C2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1448:G:H1'	25:14:1528:A:H62	1.78	0.49
25:14:1534:G:H5'	25:14:1535:U:OP2	2.12	0.49
25:14:2811:G:P	28:29:61:ARG:HG2	2.52	0.49
27:19:30:GLU:HG3	27:19:30:GLU:O	2.12	0.49
28:29:1:MET:HG3	28:29:200:GLU:OE2	2.13	0.49
30:49:36:LYS:HD2	30:49:95:ARG:HH12	1.77	0.49
42:A5:19:LEU:HB3	51:J5:25:LEU:HD11	1.94	0.49
47:F5:87:PRO:O	47:F5:88:LYS:C	2.56	0.49
1:13:429:U:H1'	1:13:430:A:H5"	1.95	0.49
1:13:687:A:O2'	1:13:701:C:N4	2.43	0.49
7:6E:45:ASP:O	7:6E:49:ILE:HG12	2.12	0.49
15:6I:82:ILE:O	15:6I:86:GLY:N	2.44	0.49
25:1H:972:G:OP1	25:1H:974:G:H3'	2.13	0.49
25:1H:1494:A:C2'	25:1H:1495:A:H5'	2.42	0.49
25:1H:1727:U:H2'	25:1H:1728:G:O4'	2.12	0.49
25:1H:2065:C:H2'	25:1H:2066:C:C6	2.48	0.49
39:B8:50:ILE:O	39:B8:99:LEU:HD12	2.12	0.49
43:F8:15:GLU:HG3	43:F8:16:LYS:N	2.27	0.49
45:H8:45:ASP:O	45:H8:49:ARG:HG2	2.12	0.49
53:Q8:31:HIS:HB2	53:Q8:34:TRP:HD1	1.78	0.49
54:1G:1418:A:H2	25:14:1948:G:N3	2.11	0.49
2:12:217:ARG:HB2	2:12:217:ARG:HH11	1.77	0.49
7:62:65:ALA:HB1	7:62:127:ALA:HB3	1.95	0.49
18:9A:41:LYS:O	18:9A:41:LYS:HD3	2.12	0.49
25:14:270(G):C:H2'	25:14:270(H):C:H6	1.77	0.49
25:14:941:A:H2'	25:14:942:G:C8	2.48	0.49
25:14:1036:G:H2'	25:14:1037:G:O4'	2.13	0.49
25:14:2126:A:H61	25:14:2163:C:H1'	1.78	0.49
29:39:133:ASN:HA	29:39:162:LEU:HD23	1.95	0.49
31:59:106:THR:HG22	31:59:112:PRO:HB3	1.94	0.49
32:69:113:ARG:O	32:69:131:LYS:HD3	2.13	0.49
1:13:191(D):U:H2'	1:13:191(E):G:C8	2.48	0.48
1:13:600:C:H2'	1:13:601:C:C6	2.47	0.48
1:13:1157:A:H1'	1:13:1158:C:C4	2.47	0.48
5:4E:41:VAL:HG13	5:4E:113:ALA:HB2	1.95	0.48
12:3I:53:ARG:HG3	12:3I:93:LEU:HD21	1.95	0.48
25:1H:259:G:H21	25:1H:621:A:H8	1.60	0.48
25:1H:1346:G:C4	25:1H:1347:G:C8	3.01	0.48
25:1H:1899:G:N2	25:1H:1902:C:H5	2.11	0.48
25:1H:2058:A:H5"	25:1H:2059:A:OP2	2.13	0.48
25:1H:2280:G:C2'	25:1H:2281:C:H5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2392:A:C8	35:78:61:ARG:HG2	2.48	0.48
25:1H:2702:U:H1'	25:1H:2703:C:C5	2.47	0.48
32:61:1:MET:C	32:61:20:ASP:HB2	2.38	0.48
35:78:27:HIS:HD2	35:78:32:THR:HG21	1.78	0.48
37:98:104:ARG:HG3	37:98:111:LEU:HD21	1.95	0.48
38:A8:34:HIS:CE1	38:A8:54:LEU:HD23	2.48	0.48
40:C8:47:TYR:C	40:C8:47:TYR:CD2	2.90	0.48
45:H8:130:PRO:HA	45:H8:133:ILE:HD11	1.95	0.48
47:J8:8:SER:HB3	47:J8:66:HIS:CD2	2.47	0.48
54:1G:1143:G:H2'	54:1G:1144:G:C8	2.48	0.48
54:1G:1274:G:N2	54:1G:1275:A:H62	2.11	0.48
54:1G:1327:C:H2'	54:1G:1328:C:C6	2.48	0.48
3:22:84:ILE:O	3:22:88:ARG:NH2	2.39	0.48
21:1B:5:ASP:O	21:1B:11:GLY:HA3	2.14	0.48
55:1L:59:A:H2'	55:1L:60:A:H5'	1.95	0.48
56:2L:65:G:H2'	56:2L:66:C:C6	2.48	0.48
25:14:634:C:H2'	25:14:635:C:C6	2.48	0.48
25:14:1024:G:C3'	25:14:1025:G:H5"	2.43	0.48
25:14:1434:A:H61	25:14:1558:A:H62	1.60	0.48
25:14:1638:C:H3'	60:14:3432:HOH:O	2.12	0.48
25:14:1786:A:H2	25:14:2606:C:H1'	1.78	0.48
25:14:1856:G:H1	25:14:1886:C:N4	2.04	0.48
25:14:2615:U:C2	51:J5:7:PRO:HA	2.48	0.48
25:14:2837:G:H1	25:14:2881:C:H42	1.61	0.48
27:19:126:GLN:HB2	27:19:129:ASN:HD22	1.78	0.48
27:19:179:SER:OG	27:19:181:GLU:HB3	2.13	0.48
31:59:86:GLU:H	31:59:86:GLU:CD	2.21	0.48
1:13:417:C:H2'	1:13:418:C:C6	2.48	0.48
1:13:417:C:H2'	1:13:418:C:H6	1.77	0.48
1:13:703:G:H4'	1:13:704:A:O5'	2.13	0.48
1:13:1423:G:OP1	34:68:49:ARG:NH2	2.43	0.48
2:1E:5:ILE:HG23	2:1E:224:GLN:NE2	2.27	0.48
4:3E:89:THR:H	4:3E:92:VAL:HG23	1.77	0.48
16:7I:50:LYS:HD3	16:7I:51:VAL:H	1.78	0.48
25:1H:191:A:H2'	25:1H:192:C:C6	2.48	0.48
25:1H:1653:G:H4'	25:1H:1654:A:O5'	2.13	0.48
25:1H:1692:U:O2'	25:1H:1693:U:H2'	2.13	0.48
31:51:87:LEU:HB2	31:51:131:VAL:HG12	1.96	0.48
33:58:46:VAL:CG1	33:58:48:MET:HG3	2.43	0.48
37:98:91:GLN:OE1	37:98:91:GLN:N	2.42	0.48
43:F8:5:TYR:O	48:K8:36:ARG:NH2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:87:PRO:O	47:J8:91:LYS:HB2	2.13	0.48
53:Q8:62:LEU:CB	53:Q8:63:PRO:HD2	2.43	0.48
54:1G:176:C:H2'	54:1G:177:C:H6	1.77	0.48
54:1G:979:C:H5	54:1G:980:C:C6	2.31	0.48
54:1G:1118:C:OP1	9:82:104:ARG:NH1	2.45	0.48
8:72:64:LYS:O	8:72:79:VAL:HB	2.14	0.48
55:3L:76:C:H2'	55:3L:77:C:C6	2.48	0.48
25:14:26:G:C6	25:14:27:G:N1	2.81	0.48
25:14:141:A:H1'	25:14:1408:C:O4'	2.13	0.48
25:14:2493:U:H2'	25:14:2494:G:O4'	2.14	0.48
27:19:71:ASP:OD1	27:19:103:ARG:NH1	2.37	0.48
28:29:33:VAL:HG23	28:29:47:VAL:HG13	1.95	0.48
30:49:171:ALA:O	30:49:175:LEU:N	2.40	0.48
32:69:29:TYR:O	32:69:32:PRO:HD2	2.13	0.48
32:69:92:VAL:HB	32:69:120:ILE:HG13	1.95	0.48
44:C5:52:SER:HA	44:C5:55:TYR:O	2.12	0.48
1:13:939:G:H5"	7:6E:102:ARG:NH2	2.28	0.48
1:13:1171:G:O2'	1:13:1172:C:H5'	2.13	0.48
1:13:1207:G:H2'	1:13:1208:C:C6	2.48	0.48
1:13:1285:A:O5'	1:13:1285:A:H8	1.95	0.48
6:5E:16:GLN:HA	6:5E:19:LEU:HB2	1.95	0.48
9:8E:32:ASP:HB3	9:8E:35:GLU:HB3	1.94	0.48
9:8E:106:ALA:O	9:8E:108:VAL:HG22	2.13	0.48
14:5I:4:LYS:HA	14:5I:7:ILE:HG12	1.96	0.48
14:5I:24:CYS:HB2	14:5I:40:CYS:HB3	1.95	0.48
14:5I:42:ILE:O	14:5I:46:GLU:HG3	2.14	0.48
19:AI:51:VAL:O	19:AI:58:VAL:HG12	2.13	0.48
22:1K:17:OMG:N2	22:1K:64:PSU:O4	2.45	0.48
22:3K:62:G:H1	22:3K:70:C:N4	2.11	0.48
24:4K:23:A:H3'	24:4K:24:A:C8	2.47	0.48
25:1H:459:U:H5"	52:P8:40:TRP:CE2	2.48	0.48
25:1H:910:A:H62	36:88:12:GLN:HA	1.78	0.48
25:1H:1796:U:H2'	25:1H:1797:C:C6	2.48	0.48
25:1H:2061:G:OP1	60:1H:3526:HOH:O	2.20	0.48
25:1H:2629:A:O2'	25:1H:2630:G:H5"	2.12	0.48
35:78:59:LEU:HD22	53:Q8:13:ARG:HD2	1.94	0.48
43:F8:3:THR:CB	43:F8:4:ALA:HA	2.44	0.48
54:1G:503:C:H6	54:1G:503:C:O5'	1.96	0.48
54:1G:860:A:N6	54:1G:861:G:C2	2.82	0.48
3:22:9:GLY:HA3	14:5A:49:HIS:HA	1.96	0.48
10:1A:79:ARG:HA	10:1A:82:ILE:HB	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3A:37:CYS:HA	12:3A:58:VAL:HA	1.94	0.48
25:14:17:G:H4'	40:85:25:TRP:CZ3	2.49	0.48
25:14:55:G:O2'	25:14:127:A:N1	2.45	0.48
25:14:380:U:H5'	47:F5:18:ILE:CD1	2.43	0.48
25:14:445:C:O2'	25:14:446:G:H5'	2.14	0.48
25:14:610:C:H2'	25:14:611:C:C6	2.48	0.48
25:14:1291:C:H2'	25:14:1292:U:C6	2.48	0.48
25:14:1502:C:OP1	27:19:78:LYS:NZ	2.46	0.48
25:14:2295:C:OP2	38:65:10:ARG:HD3	2.12	0.48
25:14:2394:C:H2'	25:14:2395:C:C6	2.47	0.48
29:39:67:GLN:O	29:39:67:GLN:HG3	2.10	0.48
29:39:151:SER:O	29:39:151:SER:OG	2.24	0.48
31:59:9:ILE:HG21	31:59:51:ARG:HG2	1.95	0.48
32:69:138:ILE:HG12	32:69:139:GLN:N	2.28	0.48
36:45:43:THR:O	36:45:46:GLN:HB2	2.13	0.48
38:65:42:ASP:C	38:65:44:LYS:H	2.21	0.48
42:A5:75:TYR:CZ	42:A5:104:THR:HG21	2.48	0.48
1:13:453:A:C4'	16:7I:72:ARG:HB2	2.36	0.48
1:13:983:A:H1'	1:13:1049:U:O2	2.13	0.48
1:13:1164:G:C6	1:13:1165:C:C4	3.01	0.48
2:1E:8:LYS:HE3	2:1E:11:LEU:HD13	1.94	0.48
11:2I:107:SER:HB2	18:9I:87:ARG:HG2	1.95	0.48
17:8I:100:LYS:HB3	17:8I:101:ARG:NH1	2.29	0.48
19:AI:5:LEU:CD1	19:AI:10:PHE:H	2.25	0.48
19:AI:31:ILE:HG23	19:AI:49:ILE:HG23	1.94	0.48
25:1H:515:A:H1'	25:1H:581:C:H1'	1.95	0.48
25:1H:733:G:OP2	60:1H:3827:HOH:O	2.20	0.48
25:1H:864:G:O2'	25:1H:865:C:H5'	2.13	0.48
25:1H:2261:C:O2'	25:1H:2262:U:H5'	2.13	0.48
31:51:33:LEU:HD21	31:51:136:ILE:HG22	1.95	0.48
33:58:16:ILE:HB	33:58:54:VAL:HG22	1.95	0.48
37:98:10:LEU:O	37:98:11:ASN:C	2.57	0.48
54:1G:728:A:H2'	54:1G:729:A:H8	1.78	0.48
54:1G:748:C:H6	54:1G:748:C:O5'	1.95	0.48
2:12:22:LYS:HG2	2:12:40:HIS:NE2	2.28	0.48
2:12:107:THR:O	2:12:110:GLN:HB3	2.13	0.48
3:22:88:ARG:HH11	3:22:101:LEU:HD13	1.78	0.48
5:42:70:PRO:HD2	5:42:142:LEU:HB2	1.96	0.48
6:52:97:PHE:HD1	18:9A:31:LEU:HD21	1.78	0.48
7:62:72:ARG:HB2	7:62:142:GLU:OE2	2.14	0.48
10:1A:33:GLN:HB3	10:1A:75:ILE:HG12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:65:ASN:OD1	19:AA:65:ASN:N	2.46	0.48
55:3L:53:A:H2'	55:3L:54:C:O4'	2.12	0.48
25:14:273(C):C:N4	25:14:363(C):G:H1	2.12	0.48
25:14:2707:G:H5'	37:55:68:ARG:NH2	2.28	0.48
25:14:2748:A:H2'	25:14:2749:A:C8	2.48	0.48
26:1J:12:C:H6	26:1J:12:C:OP2	1.96	0.48
35:35:86:LYS:HB3	35:35:118:GLY:HA3	1.95	0.48
36:45:89:ASN:OD1	36:45:89:ASN:N	2.46	0.48
44:C5:14:LEU:HD12	44:C5:15:VAL:H	1.77	0.48
48:G5:53:LEU:HA	48:G5:56:GLN:HG3	1.95	0.48
50:I5:53:GLU:HG3	50:I5:53:GLU:O	2.13	0.48
1:13:758:G:O2'	1:13:759:A:H5'	2.14	0.48
2:1E:69:LEU:HD22	2:1E:91:PRO:HG2	1.95	0.48
2:1E:136:VAL:O	2:1E:140:HIS:N	2.42	0.48
10:1I:32:ALA:N	10:1I:78:ASN:OD1	2.35	0.48
12:3I:43:VAL:CG2	12:3I:93:LEU:HD22	2.43	0.48
19:AI:50:ALA:HA	19:AI:58:VAL:O	2.13	0.48
22:1K:76:C:H2'	22:1K:77:C:C5	2.48	0.48
25:1H:29:U:H2'	25:1H:30:G:C8	2.48	0.48
25:1H:286:C:H2'	25:1H:287:C:C6	2.48	0.48
25:1H:1209:G:N2	25:1H:1210:A:H62	2.12	0.48
25:1H:1510:A:OP1	25:1H:1511:A:H5'	2.13	0.48
25:1H:2750:A:H3'	31:51:4:ILE:CG2	2.43	0.48
26:16:8:U:OP1	38:A8:11:LYS:NZ	2.47	0.48
27:11:60:ARG:CD	27:11:86:PRO:HB2	2.40	0.48
30:41:41:GLN:O	30:41:89:GLY:HA3	2.13	0.48
32:61:68:LEU:HA	32:61:71:ILE:HG22	1.94	0.48
44:G8:87:LYS:HB2	44:G8:96:ILE:HD11	1.95	0.48
45:H8:52:SER:O	45:H8:54:HIS:N	2.46	0.48
54:1G:244:U:H6	54:1G:244:U:H5'	1.79	0.48
54:1G:266:G:N3	54:1G:266:G:H5'	2.28	0.48
54:1G:949:A:C2	54:1G:1233:G:N3	2.82	0.48
54:1G:1189:C:OP1	10:1A:51:ARG:NH1	2.43	0.48
54:1G:1249:C:O2'	9:82:73:GLN:OE1	2.32	0.48
54:1G:1275:A:H2'	54:1G:1276:G:O4'	2.13	0.48
54:1G:1293:G:H2'	54:1G:1294:G:C8	2.49	0.48
2:12:71:VAL:HG11	2:12:97:TRP:HD1	1.79	0.48
4:32:203:VAL:O	4:32:206:PHE:HB3	2.14	0.48
21:1B:7:ARG:HB3	21:1B:21:TYR:CE2	2.47	0.48
55:3L:57:C:H4'	55:3L:58:G:O5'	2.13	0.48
25:14:65:C:H4'	43:B5:69:TYR:CD1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:71:A:H4'	25:14:72:U:H5"	1.96	0.48
25:14:243:U:OP1	53:M5:6:THR:OG1	2.26	0.48
25:14:251:A:C5	25:14:252:G:H1'	2.48	0.48
25:14:696:G:H2'	25:14:697:C:C6	2.49	0.48
25:14:1104:C:H2'	25:14:1105:U:C5	2.49	0.48
25:14:1332:G:N2	25:14:1610:A:C8	2.81	0.48
25:14:1655:A:H1'	28:29:113:PHE:CD1	2.48	0.48
25:14:2556:C:H2'	25:14:2557:G:O4'	2.13	0.48
27:19:235:GLY:C	27:19:237:GLU:H	2.21	0.48
28:29:171:GLU:HB3	28:29:185:LYS:HG3	1.96	0.48
30:49:7:LEU:HD13	30:49:100:TRP:HE3	1.79	0.48
45:D5:120:ILE:HG22	45:D5:121:HIS:HB2	1.95	0.48
1:13:501:C:H2'	1:13:502:G:C8	2.48	0.48
1:13:539:A:H2'	1:13:540:G:C8	2.49	0.48
1:13:581:G:N2	1:13:582:U:O4	2.47	0.48
1:13:791:G:C6	1:13:792:A:C2	3.02	0.48
3:2E:88:ARG:HA	3:2E:91:LEU:HD12	1.96	0.48
7:6E:80:VAL:HG21	7:6E:85:TYR:CD2	2.49	0.48
9:8E:42:ARG:HH11	9:8E:71:SER:HB3	1.79	0.48
12:3I:69:TYR:HB2	12:3I:90:VAL:HG21	1.94	0.48
20:BI:71:THR:HG22	20:BI:72:LEU:H	1.79	0.48
25:1H:66:C:H2'	25:1H:67:U:H6	1.77	0.48
25:1H:1485:G:C2	25:1H:1486:A:C4	3.01	0.48
25:1H:1503:U:H2'	25:1H:1504:C:H6	1.76	0.48
25:1H:2029:G:H2'	25:1H:2031:A:OP1	2.13	0.48
26:16:71:C:C4	26:16:72:G:N7	2.81	0.48
28:21:77:ILE:O	28:21:79:ARG:HG3	2.13	0.48
31:51:122:THR:HG22	31:51:134:SER:HB2	1.96	0.48
32:61:1:MET:N	32:61:21:VAL:H	2.11	0.48
39:B8:92:GLY:HA2	39:B8:116:ALA:HA	1.95	0.48
47:J8:91:LYS:O	47:J8:93:GLU:N	2.47	0.48
53:Q8:14:VAL:O	53:Q8:15:LYS:HD3	2.14	0.48
54:1G:377:G:OP1	16:7A:3:LYS:NZ	2.39	0.48
54:1G:957:U:H1'	54:1G:960:U:C5	2.47	0.48
4:32:157:LEU:HD12	4:32:161:ASN:HD21	1.79	0.48
11:2A:101:SER:HB2	11:2A:103:LEU:HB2	1.96	0.48
18:9A:29:PHE:N	18:9A:29:PHE:CD1	2.82	0.48
25:14:2718:G:O2'	25:14:2847:U:OP1	2.25	0.48
25:14:2745:C:H4'	31:59:142:GLY:O	2.13	0.48
25:14:2753:A:H2'	25:14:2754:U:O4'	2.14	0.48
25:14:2850:A:C2	25:14:2851:A:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2876:G:O5'	39:75:2:ASN:HA	2.13	0.48
32:69:125:GLU:CD	32:69:141:LYS:HG3	2.38	0.48
45:D5:5:LEU:HD12	45:D5:47:VAL:HG21	1.95	0.48
47:F5:29:GLY:O	47:F5:30:VAL:HG22	2.13	0.48
1:13:474:G:H5"	16:7I:81:ARG:CZ	2.43	0.48
1:13:804:U:H5"	1:13:805:C:OP2	2.12	0.48
1:13:814:A:N7	1:13:816:A:C4	2.82	0.48
1:13:1226:C:O2'	13:4I:111:LYS:NZ	2.25	0.48
1:13:1342:C:O2'	9:8E:124:GLN:HG3	2.14	0.48
2:1E:157:ARG:HG2	2:1E:158:LEU:N	2.28	0.48
4:3E:70:ILE:HG23	4:3E:75:PHE:HB2	1.95	0.48
4:3E:93:PHE:HA	4:3E:96:LEU:HD22	1.96	0.48
17:8I:21:VAL:HG21	17:8I:59:ILE:HG21	1.95	0.48
18:9I:34:TYR:HB3	18:9I:69:THR:HG23	1.96	0.48
25:1H:1288:U:H4'	25:1H:1289:C:OP2	2.14	0.48
25:1H:1437:C:C2	25:1H:1438:U:C5	3.02	0.48
25:1H:1969:A:H1'	25:1H:1973:G:O4'	2.13	0.48
25:1H:2314:C:H2'	25:1H:2315:G:C8	2.47	0.48
25:1H:2895:U:O5'	25:1H:2895:U:H6	1.96	0.48
30:41:11:TYR:OH	30:41:16:ARG:NH1	2.45	0.48
45:H8:16:SER:O	45:H8:20:ARG:HD2	2.14	0.48
45:H8:113:ALA:N	45:H8:114:GLY:HA2	2.29	0.48
54:1G:107:G:C2	54:1G:108:G:H1'	2.48	0.48
54:1G:235:C:H5'	17:8A:70:ARG:HG2	1.94	0.48
54:1G:302:G:O2'	54:1G:556:C:H5"	2.14	0.48
54:1G:583:A:H2'	54:1G:584:G:O4'	2.14	0.48
54:1G:755:G:H2'	54:1G:756:C:H6	1.78	0.48
54:1G:1028(A):C:N4	54:1G:1028(B):C:H41	2.12	0.48
54:1G:1320:C:OP1	19:AA:70:LYS:HE3	2.13	0.48
54:1G:1392:G:N2	54:1G:1502:A:H8	2.11	0.48
11:2A:57:THR:HG22	11:2A:59:TYR:N	2.25	0.48
13:4A:3:ARG:HG3	13:4A:9:ILE:HD11	1.96	0.48
55:1L:20:C:O2	55:1L:20:C:H2'	2.13	0.48
56:2L:26:C:H2'	56:2L:27:G:O4'	2.13	0.48
25:14:286:C:H42	25:14:355:G:H1	1.61	0.48
25:14:1197:G:H2'	25:14:1198:U:H6	1.79	0.48
25:14:2563:U:N3	25:14:2566:A:OP2	2.40	0.48
26:1J:9:G:H5'	38:65:25:ARG:HH22	1.78	0.48
29:39:51:THR:HB	29:39:88:VAL:HG11	1.95	0.48
31:59:98:LEU:HD22	31:59:126:PRO:HB3	1.96	0.48
40:85:92:ARG:HH22	41:95:10:LYS:HA	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:167:G:H2'	1:13:168:G:O4'	2.13	0.48
1:13:701:C:O2	1:13:703:G:N1	2.47	0.48
1:13:756:C:H2'	1:13:757:U:O4'	2.14	0.48
1:13:883:C:C2'	1:13:884:U:H5'	2.44	0.48
1:13:1206:G:C6	1:13:1207:G:C5	3.02	0.48
18:9I:26:LEU:HB3	18:9I:42:ARG:HH22	1.79	0.48
25:1H:1337:G:H2'	25:1H:1338:G:C8	2.49	0.48
25:1H:1359:A:N1	25:1H:1372:U:C4	2.79	0.48
25:1H:1636:C:H2'	25:1H:1637:A:C8	2.49	0.48
25:1H:1778:U:P	60:1H:3740:HOH:O	2.71	0.48
25:1H:2345:G:H1'	25:1H:2382:G:H5'	1.96	0.48
25:1H:2864:G:H2'	25:1H:2865:U:O4'	2.13	0.48
29:31:177:ALA:HB1	29:31:178:PRO:HD2	1.95	0.48
30:41:41:GLN:HE21	30:41:43:LEU:HD11	1.79	0.48
40:C8:103:PRO:O	40:C8:106:PHE:HB3	2.14	0.48
54:1G:35:G:H2'	54:1G:36:C:C6	2.48	0.48
54:1G:668:G:O2'	15:6A:46:HIS:HB3	2.14	0.48
54:1G:693:G:H2'	54:1G:694:A:C8	2.49	0.48
54:1G:1428:A:H2'	54:1G:1429:C:C6	2.49	0.48
2:12:98:LEU:O	2:12:101:MET:HG2	2.13	0.48
2:12:105:PHE:HA	2:12:108:ILE:HB	1.95	0.48
2:12:197:VAL:HG12	2:12:200:ILE:HG13	1.95	0.48
8:72:49:GLU:O	8:72:51:VAL:HG13	2.13	0.48
13:4A:96:LEU:O	13:4A:110:ARG:NE	2.47	0.48
17:8A:31:LEU:HG	17:8A:32:TYR:CE1	2.49	0.48
17:8A:66:SER:H	17:8A:69:LYS:HB2	1.78	0.48
55:3L:59:A:H2'	55:3L:60:A:O4'	2.14	0.48
25:14:399:G:OP2	60:14:3692:HOH:O	2.19	0.48
25:14:592:G:H5"	25:14:592:G:H8	1.78	0.48
25:14:654(H):G:N7	25:14:654(N):G:N1	2.62	0.48
25:14:819:A:N3	25:14:1189:A:C2	2.82	0.48
25:14:842:G:H1	25:14:936:C:H42	1.62	0.48
25:14:1054:A:H3'	25:14:1055:G:H8	1.78	0.48
25:14:1115:G:H2'	25:14:1116:C:H6	1.78	0.48
25:14:1448:G:H2'	25:14:1449:A:C8	2.49	0.48
25:14:2419:U:H2'	25:14:2420:C:C6	2.49	0.48
25:14:2439:A:H8	25:14:2439:A:C5'	2.26	0.48
25:14:2786:U:H4'	28:29:64:LYS:C	2.39	0.48
25:14:2809:A:OP2	25:14:2891:G:N1	2.30	0.48
25:14:2869:G:H2'	25:14:2870:C:O4'	2.13	0.48
28:29:63:LEU:HG	28:29:64:LYS:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:96:ARG:HA	30:49:99:MET:HG2	1.95	0.48
30:49:131:TYR:O	30:49:159:VAL:HG22	2.13	0.48
31:59:61:HIS:O	31:59:64:LEU:N	2.46	0.48
35:35:138:LEU:HD22	35:35:138:LEU:HA	1.74	0.48
38:65:11:LYS:HG3	38:65:91:PRO:HD3	1.96	0.48
40:85:92:ARG:CZ	41:95:11:GLN:H	2.27	0.48
42:A5:43:GLY:O	42:A5:47:VAL:HG23	2.14	0.48
47:F5:91:LYS:HE2	47:F5:91:LYS:HB2	1.65	0.48
1:13:21:G:H2'	1:13:22:G:C8	2.48	0.48
1:13:22:G:C6	1:13:23:C:C4	3.02	0.48
1:13:108:G:P	1:13:326:G:H22	2.37	0.48
1:13:352:C:H6	1:13:352:C:H5"	1.78	0.48
3:2E:15:THR:CG2	3:2E:181:ASN:HA	2.43	0.48
3:2E:42:LEU:HD12	3:2E:42:LEU:HA	1.63	0.48
13:4I:13:LYS:O	13:4I:44:ARG:HD2	2.14	0.48
14:5I:53:LEU:HB3	14:5I:56:VAL:HG21	1.95	0.48
17:8I:67:LYS:O	17:8I:68:ARG:HB2	2.14	0.48
17:8I:74:LEU:HD12	17:8I:75:ARG:HG2	1.94	0.48
25:1H:855:G:H5"	25:1H:856:C:OP2	2.14	0.48
25:1H:1021:A:H3'	25:1H:1022:G:H5"	1.95	0.48
25:1H:1340:U:H4'	25:1H:1341:U:OP2	2.12	0.48
25:1H:1438:U:O2'	25:1H:1439:A:H5'	2.14	0.48
25:1H:1903:G:OP1	27:11:241:PRO:HB2	2.14	0.48
25:1H:2356:C:H2'	25:1H:2357:U:O4'	2.13	0.48
25:1H:2721:A:H2'	25:1H:2722:G:O4'	2.14	0.48
27:11:6:PHE:HE1	27:11:18:VAL:HG23	1.77	0.48
43:F8:49:VAL:HG22	43:F8:87:GLN:HG2	1.95	0.48
54:1G:371:G:H1	54:1G:390:C:N4	2.12	0.48
54:1G:730:G:C5	54:1G:731:G:H1'	2.49	0.48
54:1G:1088:G:H2'	54:1G:1089:G:O4'	2.14	0.48
54:1G:1286:A:C8	54:1G:1286:A:H3'	2.49	0.48
2:12:57:PHE:HD2	2:12:58:ILE:HD13	1.79	0.48
7:62:94:ARG:H	7:62:94:ARG:CD	2.25	0.48
9:82:99:LEU:HB3	9:82:101:PHE:CD1	2.48	0.48
18:9A:53:ARG:NH2	18:9A:58:LEU:O	2.45	0.48
25:14:380:U:H5'	47:F5:18:ILE:HD12	1.95	0.48
25:14:1042:G:H22	25:14:1113:U:H3	1.62	0.48
25:14:1796:U:H2'	25:14:1797:C:H6	1.79	0.48
25:14:1819:A:H4'	25:14:1820:U:H5"	1.96	0.48
25:14:1839:G:H2'	25:14:1839:G:N3	2.27	0.48
25:14:2108:C:O2	25:14:2181:G:N2	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:93:TYR:CD1	36:45:93:TYR:N	2.81	0.48
37:55:33:ARG:CG	37:55:115:GLU:HG2	2.43	0.48
40:85:76:TYR:CZ	40:85:80:ILE:HG13	2.49	0.48
1:13:265:G:H5'	17:8I:64:PRO:O	2.13	0.48
1:13:632:A:H3'	1:13:633:G:C8	2.48	0.48
1:13:1085:U:H3'	1:13:1086:U:C5	2.49	0.48
2:1E:53:ARG:HH12	2:1E:200:ILE:HD12	1.79	0.48
5:4E:51:VAL:O	5:4E:55:VAL:HG23	2.14	0.48
5:4E:72:GLN:O	5:4E:75:THR:HG22	2.13	0.48
7:6E:48:LYS:HD2	7:6E:49:ILE:HD13	1.95	0.48
9:8E:11:LYS:HG2	9:8E:108:VAL:HG12	1.95	0.48
13:4I:81:LEU:O	13:4I:86:CYS:HB3	2.13	0.48
20:BI:35:THR:O	20:BI:38:LYS:HB2	2.13	0.48
23:2K:57:C:O2'	30:41:78:SER:HB2	2.14	0.48
25:1H:466:A:N3	25:1H:683:C:H1'	2.29	0.48
25:1H:577:G:O2'	25:1H:1254:A:OP1	2.32	0.48
25:1H:953:A:OP2	36:88:16:ARG:HD3	2.13	0.48
25:1H:1436:G:H1	25:1H:1556:C:H42	1.62	0.48
25:1H:2055:C:H1'	28:21:145:LYS:HZ2	1.79	0.48
25:1H:2801:A:C5	25:1H:2802:G:H1'	2.48	0.48
27:11:105:ILE:HD12	27:11:105:ILE:HA	1.63	0.48
27:11:111:LEU:HD22	27:11:115:GLN:NE2	2.29	0.48
35:78:84:ASN:HB3	35:78:86:LYS:HG2	1.96	0.48
40:C8:87:GLY:O	40:C8:89:GLU:N	2.47	0.48
54:1G:4:U:O4	8:72:102:ARG:HD3	2.14	0.48
54:1G:160:A:H1'	54:1G:344:A:C5	2.49	0.48
54:1G:1048:G:O4'	54:1G:1215:G:H4'	2.14	0.48
54:1G:1125:U:OP2	54:1G:1125:U:H4'	2.14	0.48
54:1G:1255:G:OP1	10:1A:45:ARG:NH2	2.47	0.48
54:1G:1510:U:H2'	54:1G:1511:G:C8	2.49	0.48
2:12:80:ILE:HD13	2:12:212:GLN:HG2	1.95	0.48
4:32:8:VAL:HG23	4:32:22:LYS:HE2	1.95	0.48
7:62:20:ASP:HB3	7:62:23:VAL:HG23	1.96	0.48
13:4A:15:VAL:O	13:4A:19:LEU:HG	2.14	0.48
17:8A:23:VAL:HG23	17:8A:40:LYS:O	2.14	0.48
19:AA:40:ILE:HA	19:AA:44:MET:SD	2.54	0.48
56:2L:50:G:H1	56:2L:66:C:N4	2.07	0.48
25:14:108:U:H2'	25:14:109:G:C8	2.49	0.48
25:14:483:A:H1'	44:C5:60:PHE:HE2	1.79	0.48
25:14:1432:C:H2'	25:14:1433:U:O4'	2.14	0.48
25:14:2252:G:H2'	25:14:2253:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2485:G:H5”	36:45:46:GLN:HE21	1.79	0.48
25:14:2638:G:P	28:29:82:ARG:HH21	2.37	0.48
34:25:122:LEU:HD23	39:75:43:GLN:NE2	2.29	0.48
35:35:19:VAL:HG13	35:35:21:ARG:H	1.79	0.48
37:55:98:LEU:HB2	37:55:113:LEU:CD2	2.44	0.48
44:C5:17:SER:HB2	44:C5:71:LYS:HE2	1.95	0.48
46:E5:12:ASN:HA	46:E5:14:ARG:NH2	2.26	0.48
1:13:91:C:H2’	1:13:92:G:C8	2.49	0.47
1:13:245:C:C2	1:13:284:G:C2	3.02	0.47
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.94	0.47
2:1E:67:THR:CG2	2:1E:155:LEU:HG	2.40	0.47
7:6E:115:ARG:HB2	7:6E:118:VAL:HG12	1.94	0.47
22:3K:5:G:H1	22:3K:77:C:H42	1.61	0.47
25:1H:11:G:C2’	25:1H:12:U:H5’	2.44	0.47
25:1H:71:A:H2	43:F8:31:HIS:NE2	2.06	0.47
25:1H:1091:G:H2’	25:1H:1092:C:C6	2.49	0.47
25:1H:1467:C:O2’	25:1H:1468:C:H5’	2.14	0.47
25:1H:1534:G:N2	25:1H:1538:G:H22	2.11	0.47
25:1H:1900:A:N1	25:1H:1970:A:C6	2.82	0.47
25:1H:2056:G:C2	25:1H:2057:A:C8	3.02	0.47
25:1H:2156:G:H2’	25:1H:2157:G:N3	2.29	0.47
25:1H:2306:C:H3’	25:1H:2307:G:C5’	2.44	0.47
25:1H:2689:U:H4’	25:1H:2690:C:H5’	1.94	0.47
26:16:87:G:N2	26:16:89(A):A:OP2	2.36	0.47
29:31:46:ARG:HH11	29:31:46:ARG:CG	2.23	0.47
29:31:183:VAL:O	29:31:187:VAL:HG23	2.14	0.47
34:68:75:SER:OG	34:68:76:ALA:N	2.47	0.47
43:F8:1:MET:N	48:K8:29:LYS:HE3	2.29	0.47
43:F8:41:ASN:O	43:F8:45:THR:HG23	2.14	0.47
54:1G:255:G:OP1	17:8A:69:LYS:NZ	2.46	0.47
54:1G:1306:A:C6	54:1G:1307:U:C2	3.02	0.47
5:42:144:THR:O	5:42:148:VAL:HG23	2.14	0.47
7:62:90:GLU:H	7:62:90:GLU:HG2	1.41	0.47
25:14:51:G:N3	25:14:119:A:C2	2.82	0.47
25:14:654(C):G:N2	25:14:654(R):C:O2	2.41	0.47
25:14:698:C:O2’	25:14:734:A:N6	2.47	0.47
25:14:2317:C:H2’	25:14:2318:G:O4’	2.14	0.47
27:19:253:GLN:HB3	27:19:255:LYS:NZ	2.29	0.47
28:29:57:LYS:HA	28:29:57:LYS:HD3	1.69	0.47
31:59:137:ASP:CG	31:59:138:LYS:H	2.21	0.47
32:69:43:ASN:OD1	32:69:43:ASN:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:17:LEU:HD21	36:45:41:TRP:NE1	2.29	0.47
44:C5:17:SER:HB2	44:C5:71:LYS:CE	2.43	0.47
46:E5:37:LEU:HG	46:E5:60:PHE:HA	1.96	0.47
1:13:324:G:O2'	1:13:326:G:N7	2.38	0.47
1:13:619:U:C2	4:3E:135:LEU:HD22	2.49	0.47
3:2E:162:GLN:HG2	24:4K:24:A:C2	2.49	0.47
9:8E:4:TYR:CE2	9:8E:88:TYR:HB2	2.49	0.47
16:7I:77:ALA:HB1	16:7I:79:VAL:HG23	1.97	0.47
25:1H:239:U:H2'	25:1H:240:G:C8	2.50	0.47
25:1H:944:G:H5"	25:1H:945:A:H5'	1.97	0.47
25:1H:962:G:H2'	25:1H:963:U:C6	2.49	0.47
25:1H:1268:A:H2'	25:1H:1269:A:O4'	2.14	0.47
25:1H:1542:G:H8	25:1H:1543:A:H2'	1.79	0.47
25:1H:2210:G:H4'	25:1H:2211:G:OP2	2.13	0.47
25:1H:2692:C:H2'	25:1H:2693:A:H8	1.78	0.47
28:21:125:GLY:HA3	28:21:134:ILE:HD13	1.95	0.47
29:31:8:GLN:CD	29:31:8:GLN:N	2.71	0.47
35:78:21:ARG:HE	35:78:21:ARG:H	1.61	0.47
36:88:32:TYR:OH	36:88:111:GLU:OE1	2.21	0.47
50:M8:40:HIS:ND1	50:M8:44:THR:O	2.47	0.47
54:1G:29:G:H5'	54:1G:296:U:OP1	2.14	0.47
54:1G:994:A:C2	14:5A:5:ALA:HB2	2.48	0.47
54:1G:1340:A:C2	54:1G:1341:U:C2	3.01	0.47
54:1G:1400:C:H5'	57:4L:18:G:O6	2.13	0.47
2:12:182:ILE:H	2:12:182:ILE:HD12	1.78	0.47
12:3A:7:ILE:HA	12:3A:10:LEU:HD12	1.96	0.47
14:5A:41:ARG:HG3	14:5A:42:ILE:HD13	1.96	0.47
25:14:117:G:C6	25:14:119:A:C6	3.02	0.47
25:14:617:G:P	29:39:40:GLN:HE21	2.34	0.47
29:39:132:VAL:HG13	29:39:133:ASN:CG	2.40	0.47
32:69:126:TYR:O	32:69:139:GLN:HA	2.14	0.47
44:C5:42:VAL:HG13	44:C5:65:ALA:HB3	1.95	0.47
45:D5:39:VAL:HG21	45:D5:44:PHE:HD1	1.78	0.47
45:D5:43:GLU:O	45:D5:47:VAL:HG23	2.13	0.47
45:D5:152:ALA:HB2	45:D5:169:GLU:HB3	1.96	0.47
46:E5:72:ARG:HB3	46:E5:75:LEU:HB2	1.96	0.47
49:H5:46:ASN:O	49:H5:50:VAL:HG22	2.14	0.47
1:13:61:G:H2'	1:13:62:U:O4'	2.14	0.47
1:13:739:C:C4	1:13:740:U:C5	3.03	0.47
2:1E:21:ARG:C	2:1E:23:ARG:H	2.22	0.47
8:7E:87:SER:OG	8:7E:93:VAL:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:1K:16:C:H2'	22:1K:18:G:OP1	2.14	0.47
25:1H:270(G):C:H2'	25:1H:270(H):C:O4'	2.14	0.47
25:1H:304:G:H2'	25:1H:305:U:H6	1.79	0.47
25:1H:558:G:P	33:58:111:PRO:HD2	2.55	0.47
25:1H:773:U:H4'	27:11:47:GLY:HA3	1.95	0.47
25:1H:784:A:H5'	25:1H:785:G:OP1	2.14	0.47
25:1H:1242:A:N1	35:78:4:SER:OG	2.45	0.47
25:1H:1364:G:N7	47:J8:2:SER:HB3	2.29	0.47
25:1H:1925:C:C2'	25:1H:1926:U:H5'	2.44	0.47
25:1H:2261:C:H1'	25:1H:2388:A:N3	2.29	0.47
25:1H:2814:C:O2'	51:N8:29:THR:HG21	2.14	0.47
27:11:33:LEU:HD13	27:11:104:TYR:CE2	2.49	0.47
28:21:77:ILE:H	28:21:79:ARG:HH11	1.61	0.47
30:41:96:ARG:O	30:41:97:ASP:HB2	2.14	0.47
31:51:95:ARG:HB2	31:51:128:PRO:HB2	1.97	0.47
32:61:110:ASP:OD1	32:61:130:TYR:HE1	1.97	0.47
54:1G:565:U:OP2	54:1G:566:G:O2'	2.29	0.47
54:1G:1072:G:C6	54:1G:1073:U:C4	3.02	0.47
54:1G:1080:A:H5'	5:42:14:ARG:NH2	2.29	0.47
3:22:72:LYS:HG3	3:22:75:VAL:HG23	1.95	0.47
4:32:18:LYS:HB3	4:32:33:MET:HG3	1.96	0.47
5:42:67:VAL:HB	5:42:140:ARG:HH21	1.79	0.47
10:1A:32:ALA:HA	10:1A:76:ASN:HB2	1.96	0.47
11:2A:32:ILE:HD11	11:2A:68:ALA:HB1	1.95	0.47
17:8A:67:LYS:HA	17:8A:70:ARG:HH12	1.79	0.47
25:14:524:U:H2'	25:14:525:U:C6	2.50	0.47
25:14:593:G:H1'	53:M5:4:MET:HE1	1.96	0.47
25:14:933:A:C5	25:14:934:G:C8	3.02	0.47
25:14:1226:G:H5'	41:95:85:LYS:H	1.79	0.47
25:14:1992:G:N2	25:14:1996:C:O2	2.41	0.47
25:14:2037:G:H2'	25:14:2038:G:H8	1.79	0.47
25:14:2119:A:C2	25:14:2171:A:H1'	2.50	0.47
25:14:2820:A:C5	37:55:4:LEU:HD11	2.48	0.47
26:1J:53:A:H2'	26:1J:54:G:O4'	2.15	0.47
31:59:81:GLU:HG3	31:59:83:TYR:H	1.77	0.47
36:45:2:LEU:HB3	36:45:3:MET:HE2	1.95	0.47
38:65:33:LYS:HB3	38:65:34:HIS:HD2	1.79	0.47
41:95:60:GLU:OE2	41:95:97:LYS:NZ	2.47	0.47
45:D5:19:ARG:HH11	45:D5:84:GLU:HB2	1.79	0.47
1:13:539:A:OP1	12:3I:114:LYS:HE2	2.13	0.47
1:13:595:G:H1'	1:13:596:C:H5	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:659:U:H2'	1:13:660:G:C8	2.50	0.47
1:13:1305:G:H21	1:13:1331:G:H2'	1.76	0.47
13:4I:49:THR:HG22	13:4I:51:ALA:H	1.79	0.47
14:5I:46:GLU:O	14:5I:50:LYS:HG3	2.14	0.47
15:6I:3:ILE:O	15:6I:3:ILE:HG13	2.14	0.47
19:AI:40:ILE:HG23	19:AI:41:VAL:HG13	1.96	0.47
22:1K:25:G:H8	22:1K:25:G:OP2	1.98	0.47
25:1H:270(V):G:H2'	25:1H:270(W):G:C8	2.48	0.47
25:1H:859:G:H5'	25:1H:2268:A:O2'	2.14	0.47
25:1H:863:A:H2'	25:1H:864:G:C8	2.50	0.47
25:1H:922:U:H1'	46:I8:26:TYR:HD2	1.80	0.47
25:1H:1371:G:H2'	25:1H:1372:U:H5	1.79	0.47
25:1H:2035:G:P	60:1H:3616:HOH:O	2.71	0.47
25:1H:2148:G:H2'	25:1H:2149:G:H8	1.79	0.47
25:1H:2400:G:H1	25:1H:2416:C:H42	1.62	0.47
25:1H:2439:A:H3'	25:1H:2439:A:P	2.55	0.47
25:1H:2784:C:H1'	28:21:37:ARG:NH1	2.30	0.47
26:16:29:A:H2'	26:16:30:C:C6	2.49	0.47
32:61:98:ALA:HB2	32:61:111:PRO:HB3	1.96	0.47
32:61:131:LYS:HB3	32:61:132:PRO:HA	1.94	0.47
33:58:62:VAL:HG22	33:58:63:THR:N	2.29	0.47
35:78:85:LEU:HD12	35:78:85:LEU:HA	1.77	0.47
39:B8:55:ASN:H	39:B8:59:THR:HG22	1.78	0.47
50:M8:16:CYS:SG	50:M8:17:GLY:N	2.86	0.47
54:1G:1176:A:C2'	54:1G:1177:G:H5'	2.45	0.47
54:1G:1327:C:H2'	54:1G:1328:C:H6	1.79	0.47
54:1G:1512:U:H2'	54:1G:1513:A:C8	2.49	0.47
2:12:24:TRP:C	2:12:24:TRP:CD1	2.92	0.47
4:32:9:CYS:HB3	4:32:32:ALA:HB2	1.96	0.47
6:52:11:ASN:O	6:52:14:LEU:HD22	2.14	0.47
9:82:33:PHE:HE1	9:82:37:PHE:HD2	1.62	0.47
17:8A:31:LEU:HG	17:8A:32:TYR:CD1	2.49	0.47
17:8A:60:ILE:HG23	17:8A:61:GLU:O	2.14	0.47
18:9A:29:PHE:N	18:9A:29:PHE:HD1	2.13	0.47
25:14:2780:G:OP2	33:15:118:LYS:HD3	2.14	0.47
25:14:2789:C:H2'	25:14:2790:A:O4'	2.15	0.47
28:29:84:PHE:CZ	28:29:86:PRO:HB3	2.49	0.47
29:39:11:VAL:HG23	29:39:12:LEU:H	1.79	0.47
31:59:121:ILE:HA	31:59:134:SER:O	2.14	0.47
31:59:137:ASP:HB3	31:59:140:LYS:CB	2.43	0.47
31:59:152:ARG:HD2	31:59:153:LYS:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:15:67:LEU:HD23	33:15:88:GLU:HG2	1.96	0.47
34:25:10:VAL:HG22	34:25:19:ILE:HG12	1.96	0.47
36:45:117:ALA:HA	36:45:120:ILE:HB	1.96	0.47
1:13:110:C:H2'	1:13:111:G:O4'	2.14	0.47
1:13:976:G:H5'	1:13:1358:U:O2'	2.15	0.47
1:13:1032(B):G:H2'	1:13:1033:G:O4'	2.15	0.47
1:13:1348:U:H2'	1:13:1349:A:C8	2.34	0.47
1:13:1374:A:O2'	7:6E:28:ASN:HB3	2.13	0.47
5:4E:29:GLY:HA2	5:4E:46:GLY:O	2.14	0.47
9:8E:118:LYS:HB3	9:8E:118:LYS:HE2	1.40	0.47
11:2I:109:VAL:HA	18:9I:85:LEU:O	2.14	0.47
19:AI:30:LEU:HD22	19:AI:30:LEU:H	1.80	0.47
25:1H:654(E):C:H42	25:1H:654(P):G:H22	1.62	0.47
25:1H:739:G:P	60:1H:3736:HOH:O	2.72	0.47
25:1H:994:C:O2'	25:1H:996:A:OP1	2.30	0.47
25:1H:1271:G:N2	25:1H:1617:C:O4'	2.47	0.47
25:1H:1566:A:O2'	25:1H:1567:A:H5'	2.14	0.47
25:1H:2104:G:H1	25:1H:2185:C:H42	1.63	0.47
25:1H:2287:A:H62	25:1H:2344:U:H3	1.59	0.47
25:1H:2309:A:C6	25:1H:2310:A:N7	2.82	0.47
27:11:4:LYS:HZ2	27:11:20:ASP:HA	1.77	0.47
32:61:40:THR:O	32:61:44:LEU:HD22	2.15	0.47
32:61:53:ALA:O	32:61:57:ARG:HG2	2.15	0.47
36:88:109:VAL:HG13	36:88:113:GLN:HB3	1.97	0.47
37:98:100:LEU:CD1	37:98:113:LEU:HB2	2.44	0.47
39:B8:16:ARG:NH1	39:B8:19:LEU:HD21	2.29	0.47
54:1G:720:C:O5'	54:1G:720:C:H6	1.97	0.47
54:1G:1036:G:C8	54:1G:1037:C:C4	3.02	0.47
54:1G:1200:C:H5'	54:1G:1201:A:H5'	1.96	0.47
54:1G:1352:C:OP1	21:1B:3:LYS:HE2	2.14	0.47
4:32:53:ASP:O	4:32:57:ARG:HD2	2.13	0.47
5:42:34:VAL:O	5:42:41:VAL:HG12	2.14	0.47
6:52:91:VAL:HG12	6:52:92:LYS:O	2.13	0.47
12:3A:46:LYS:HG2	12:3A:47:LYS:N	2.29	0.47
14:5A:24:CYS:HB3	14:5A:27:CYS:O	2.14	0.47
19:AA:28:LYS:HA	19:AA:29:ARG:NH1	2.29	0.47
20:BA:16:HIS:O	20:BA:19:SER:N	2.47	0.47
20:BA:98:PRO:C	20:BA:100:ILE:H	2.22	0.47
21:1B:6:ARG:HG2	21:1B:15:ARG:NH2	2.28	0.47
56:2L:9:G:H21	56:2L:46:G:H3'	1.79	0.47
55:3L:51:C:H3'	55:3L:52:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:533:G:H2'	25:14:534:U:O4'	2.14	0.47
25:14:1115:G:H2'	25:14:1116:C:C6	2.49	0.47
29:39:53:THR:HG23	29:39:55:GLY:H	1.79	0.47
29:39:196:LEU:HD22	29:39:196:LEU:HA	1.79	0.47
32:69:73:GLU:HG3	32:69:136:VAL:HG23	1.96	0.47
34:25:87:ILE:HD12	34:25:87:ILE:HA	1.63	0.47
35:35:59:LEU:O	35:35:59:LEU:HD22	2.14	0.47
36:45:98:LYS:HB3	36:45:99:PRO:HD2	1.96	0.47
45:D5:67:LEU:HA	45:D5:68:PRO:HD3	1.62	0.47
1:13:510:A:P	60:13:1816:HOH:O	2.72	0.47
1:13:683:G:N7	60:13:1809:HOH:O	2.35	0.47
1:13:1319:A:OP2	19:AI:5:LEU:HD21	2.15	0.47
5:4E:37:ARG:HA	5:4E:114:GLY:H	1.80	0.47
10:1I:89:ASP:C	10:1I:91:PRO:HD3	2.39	0.47
22:1K:1:G:H2'	22:1K:2:G:C8	2.47	0.47
25:1H:470:A:H2'	25:1H:471:A:C8	2.49	0.47
25:1H:1225:C:O2'	41:D8:85:LYS:HA	2.14	0.47
25:1H:1454:U:H5	37:98:73:VAL:HG13	1.79	0.47
25:1H:1900:A:C8	25:1H:1900:A:C5'	2.96	0.47
25:1H:2142:C:H2'	25:1H:2143:C:C6	2.49	0.47
26:16:7:G:O5'	38:A8:29:PHE:CE2	2.65	0.47
31:51:135:GLY:HA3	31:51:141:VAL:HG22	1.97	0.47
33:58:127:ASP:OD1	33:58:127:ASP:N	2.48	0.47
34:68:73:ASP:OD1	34:68:75:SER:HB3	2.15	0.47
35:78:86:LYS:HD2	35:78:117:GLU:HB3	1.95	0.47
39:B8:53:ARG:O	39:B8:59:THR:HB	2.14	0.47
46:I8:50:ASN:HD22	46:I8:83:PRO:HD3	1.80	0.47
50:M8:56:VAL:O	50:M8:60:GLN:HG2	2.15	0.47
54:1G:192:U:C4'	20:BA:103:GLY:HA2	2.45	0.47
54:1G:626:U:C2	54:1G:627:G:C8	3.03	0.47
54:1G:660:G:H1	54:1G:745:C:H42	1.62	0.47
54:1G:1034:G:H2'	54:1G:1035:A:C8	2.50	0.47
54:1G:1147:C:O2	9:82:16:ARG:NH1	2.47	0.47
54:1G:1410:G:H2'	54:1G:1411:C:H6	1.80	0.47
2:12:217:ARG:HB2	2:12:217:ARG:NH1	2.29	0.47
7:62:74:GLU:N	7:62:89:MET:O	2.44	0.47
11:2A:87:THR:HA	11:2A:91:ARG:HD3	1.96	0.47
12:3A:6:THR:OG1	12:3A:9:GLN:N	2.45	0.47
12:3A:84:LEU:C	12:3A:85:ILE:HD12	2.40	0.47
55:3L:14:A:H3'	55:3L:15:G:C5'	2.39	0.47
25:14:1358:G:N1	25:14:1372:U:OP2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2210:G:H5'	25:14:2211:G:C6	2.49	0.47
25:14:2839:G:H5'	37:55:46:GLY:HA2	1.97	0.47
31:59:20:ALA:HB3	31:59:23:ARG:O	2.14	0.47
33:15:91:LEU:HA	33:15:91:LEU:HD23	1.65	0.47
35:35:57:THR:O	35:35:58:THR:C	2.58	0.47
42:A5:45:TYR:CZ	42:A5:49:LYS:HE3	2.50	0.47
42:A5:59:VAL:HG12	42:A5:60:ASN:HD22	1.79	0.47
45:D5:30:ASN:OD1	45:D5:33:LEU:HB3	2.15	0.47
45:D5:175:VAL:CA	45:D5:177:PRO:HD3	2.44	0.47
52:L5:11:LYS:HE3	52:L5:15:THR:OG1	2.15	0.47
1:13:112:G:P	16:7I:27:LYS:HD2	2.55	0.47
1:13:645:C:H2'	1:13:646:U:O4'	2.15	0.47
1:13:652:U:C4	1:13:752:G:N3	2.83	0.47
1:13:1212:U:OP2	1:13:1212:U:H6	1.98	0.47
1:13:1413:A:H2'	1:13:1414:U:O4'	2.15	0.47
2:1E:69:LEU:O	2:1E:163:PHE:N	2.41	0.47
3:2E:101:LEU:HD23	3:2E:102:ASN:N	2.30	0.47
9:8E:8:GLY:HA3	9:8E:79:LEU:HB3	1.97	0.47
9:8E:9:ARG:HB3	9:8E:14:VAL:HG13	1.97	0.47
12:3I:38:THR:O	12:3I:79:GLU:HG3	2.15	0.47
12:3I:126:LYS:HG3	12:3I:128:ALA:H	1.79	0.47
19:AI:42:PRO:O	19:AI:45:VAL:HG22	2.15	0.47
22:3K:6:G:C6	22:3K:7:G:C6	3.03	0.47
25:1H:15:G:C2	25:1H:16:G:C8	3.02	0.47
25:1H:64:A:C5	43:F8:66:LEU:HD22	2.50	0.47
25:1H:183:C:N4	25:1H:213:A:H61	2.12	0.47
25:1H:484:C:H2'	25:1H:485:C:C6	2.49	0.47
25:1H:529:A:H4'	25:1H:530:G:H5'	1.96	0.47
25:1H:616:A:C4	29:31:180:GLY:HA2	2.49	0.47
25:1H:1126:A:H8	25:1H:1126:A:O5'	1.97	0.47
25:1H:1354:A:H2'	25:1H:1355:G:O4'	2.15	0.47
25:1H:1472:A:H2'	25:1H:1473:G:O4'	2.15	0.47
25:1H:1514:U:H2'	25:1H:1515:C:C6	2.49	0.47
25:1H:1658:C:H2'	25:1H:1659:U:C6	2.49	0.47
25:1H:2104:G:H2'	25:1H:2105:C:C6	2.50	0.47
25:1H:2110:G:C6	25:1H:2120:G:C8	3.03	0.47
25:1H:2246:G:H2'	25:1H:2247:A:C8	2.49	0.47
25:1H:2793:G:H8	25:1H:2793:G:OP2	1.97	0.47
26:16:12:C:C2	46:I8:74:ARG:NH1	2.81	0.47
27:11:85:ASP:OD1	27:11:86:PRO:HD2	2.14	0.47
27:11:149:PRO:O	27:11:150:LYS:HB2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:111:ARG:HD2	28:21:160:TYR:CD2	2.49	0.47
30:41:37:VAL:HG23	30:41:99:MET:HE3	1.95	0.47
32:61:47:LEU:O	32:61:51:ILE:HG13	2.14	0.47
36:88:51:ARG:NH1	36:88:52:VAL:HG23	2.29	0.47
36:88:118:LEU:HD12	36:88:131:ILE:HG23	1.97	0.47
37:98:63:ARG:HG2	37:98:67:LEU:HD23	1.97	0.47
46:I8:68:GLU:HG3	46:I8:80:HIS:HB2	1.97	0.47
54:1G:619:U:H3	4:32:135:LEU:HD13	1.79	0.47
54:1G:1064:G:OP1	54:1G:1386:G:H4'	2.14	0.47
54:1G:1287:A:H2'	54:1G:1288:A:C8	2.49	0.47
2:12:73:THR:HG21	2:12:97:TRP:N	2.30	0.47
2:12:87:ARG:HH21	2:12:233:SER:HB3	1.79	0.47
3:22:3:ASN:ND2	3:22:3:ASN:H	2.12	0.47
3:22:39:ILE:O	3:22:43:LEU:HB2	2.15	0.47
5:42:19:MET:HE1	5:42:24:ARG:NE	2.30	0.47
5:42:103:GLY:O	5:42:106:PRO:HD2	2.14	0.47
6:52:97:PHE:CD1	18:9A:31:LEU:HD21	2.49	0.47
9:82:33:PHE:HE2	9:82:47:LEU:HD23	1.80	0.47
14:5A:32:SER:O	14:5A:32:SER:OG	2.27	0.47
55:1L:34:U:O2'	55:1L:36:U:H5	1.98	0.47
56:2L:9:G:N3	56:2L:46:G:H2'	2.30	0.47
55:3L:79:A:H2'	55:3L:80:C:O4'	2.15	0.47
25:14:13:A:N1	25:14:525:U:H2'	2.30	0.47
25:14:38:A:H2'	25:14:39:C:C6	2.50	0.47
25:14:582:G:H2'	25:14:583:G:H8	1.80	0.47
25:14:805:G:O5'	35:35:41:ARG:HG2	2.14	0.47
25:14:869:G:H5'	36:45:6:ARG:NH1	2.30	0.47
25:14:944:G:H5"	25:14:945:A:O5'	2.15	0.47
25:14:1047:G:H2'	25:14:1110:G:H1	1.80	0.47
25:14:1530:G:O6	25:14:1542:G:N2	2.43	0.47
25:14:1638:C:H1'	25:14:2698:U:O2'	2.14	0.47
25:14:1693:U:O2'	27:19:14:ARG:NH2	2.48	0.47
25:14:1791:A:H5'	27:19:206:LEU:HD12	1.95	0.47
25:14:1858:G:H1'	25:14:1884:A:N6	2.30	0.47
25:14:2051:A:H4'	28:29:141:ILE:HG23	1.97	0.47
25:14:2057:A:C2'	25:14:2058:A:H5'	2.45	0.47
25:14:2074:U:H2'	25:14:2075:U:C6	2.49	0.47
25:14:2107:C:H2'	25:14:2108:C:O4'	2.14	0.47
25:14:2212:A:O2'	25:14:2213:U:O5'	2.32	0.47
25:14:2262:U:OP1	25:14:2387:U:O2'	2.32	0.47
25:14:2353:G:H2'	25:14:2354:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2392:A:C8	35:35:61:ARG:HD2	2.49	0.47
25:14:2439:A:C8	25:14:2439:A:C5'	2.97	0.47
25:14:2459:A:C4	25:14:2460:U:C5	3.03	0.47
25:14:2536:G:C6	25:14:2537:U:C4	3.02	0.47
25:14:2567:G:H2'	25:14:2568:C:C6	2.49	0.47
25:14:2569:G:C2	25:14:2570:G:C8	3.03	0.47
30:49:2:PRO:HB2	30:49:5:VAL:HG22	1.96	0.47
38:65:62:LYS:HB3	38:65:97:ARG:HD2	1.96	0.47
40:85:26:GLY:O	40:85:30:LYS:HG3	2.14	0.47
1:13:134:A:H1'	1:13:325:A:C5	2.49	0.47
1:13:345:C:H4'	1:13:346:G:C2	2.49	0.47
1:13:992:U:O2	1:13:993:G:N2	2.47	0.47
2:1E:47:THR:HG23	2:1E:202:PRO:HG2	1.96	0.47
6:5E:82:ARG:HB2	6:5E:83:ASP:CA	2.44	0.47
8:7E:29:SER:O	8:7E:33:GLU:HG3	2.14	0.47
12:3I:60:LEU:HD13	12:3I:60:LEU:HA	1.56	0.47
12:3I:97:ARG:HB2	12:3I:98:TYR:CE1	2.50	0.47
14:5I:29:ARG:HD3	14:5I:40:CYS:HB2	1.97	0.47
15:6I:27:VAL:O	15:6I:31:LEU:HB2	2.15	0.47
15:6I:81:LEU:O	15:6I:85:LEU:HB2	2.15	0.47
22:1K:37:A:H62	22:1K:38:MIA:H122	1.79	0.47
22:3K:52:G:H2'	22:3K:53:A:C8	2.49	0.47
25:1H:654(O):G:H2'	25:1H:654(P):G:O4'	2.13	0.47
25:1H:1022:G:O6	33:58:66:LYS:NZ	2.47	0.47
25:1H:1131:G:C8	25:1H:2025:C:H4'	2.50	0.47
25:1H:2068:U:H3	25:1H:2430:A:H2	1.57	0.47
25:1H:2114:A:H2'	25:1H:2114:A:N3	2.30	0.47
26:16:40:U:C5	50:M8:2:LYS:HD3	2.49	0.47
26:16:73:A:C4	26:16:104:A:C2	3.02	0.47
28:21:101:ARG:HB3	28:21:201:THR:OG1	2.14	0.47
30:41:131:TYR:HE2	30:41:133:LEU:HD23	1.80	0.47
35:78:18:ARG:C	35:78:19:VAL:HG22	2.40	0.47
39:B8:58:ASN:ND2	39:B8:58:ASN:O	2.42	0.47
39:B8:125:ARG:HA	39:B8:128:GLU:OE1	2.14	0.47
44:G8:63:LYS:HG3	44:G8:64:GLU:H	1.80	0.47
54:1G:396:G:O2'	54:1G:398:C:OP1	2.16	0.47
54:1G:601:C:H2'	54:1G:602:A:C8	2.49	0.47
54:1G:791:G:C6	54:1G:792:A:N7	2.83	0.47
54:1G:1028:C:H2'	54:1G:1028(A):C:O4'	2.14	0.47
3:22:113:ALA:HB3	3:22:114:PRO:HD3	1.97	0.47
4:32:49:ARG:HE	4:32:50:ARG:H	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:113:LYS:H	9:82:119:ALA:HB2	1.79	0.47
13:4A:102:ARG:HH11	13:4A:105:THR:HG23	1.80	0.47
17:8A:12:SER:HB3	17:8A:20:THR:OG1	2.15	0.47
20:BA:50:GLU:H	20:BA:100:ILE:HG12	1.79	0.47
25:14:374:A:C2	25:14:401:A:C4	3.02	0.47
25:14:994:C:OP1	40:85:53:ARG:NH2	2.48	0.47
25:14:2228:G:C6	25:14:2229:C:C4	3.02	0.47
25:14:2817:G:OP1	37:55:99:LYS:NZ	2.47	0.47
26:1J:15:A:H1'	26:1J:109:G:C8	2.50	0.47
27:19:34:VAL:CG1	27:19:61:LEU:HG	2.45	0.47
30:49:125:PHE:HB3	30:49:166:ASP:OD2	2.14	0.47
32:69:29:TYR:C	32:69:32:PRO:HD2	2.40	0.47
32:69:102:SER:OG	32:69:103:ARG:N	2.48	0.47
34:25:47:ILE:HG13	34:25:48:PRO:HD2	1.96	0.47
37:55:15:SER:HB3	60:55:201:HOH:O	2.14	0.47
1:13:314:C:H2'	1:13:315:A:C8	2.50	0.47
1:13:507:C:OP2	1:13:508:C:O2'	2.27	0.47
1:13:644:G:H2'	1:13:645:C:O4'	2.15	0.47
4:3E:135:LEU:HA	4:3E:136:PRO:HD2	1.71	0.47
5:4E:76:ILE:HG13	5:4E:93:PRO:HB3	1.97	0.47
20:BI:53:LEU:HD22	20:BI:53:LEU:H	1.80	0.47
25:1H:381:G:C4	25:1H:394:A:C2	3.03	0.47
25:1H:1014:U:H3	25:1H:1148:A:H61	1.62	0.47
25:1H:1163:G:C2	25:1H:1164:G:C8	3.02	0.47
25:1H:1265:A:C8	25:1H:1267:U:C2	3.03	0.47
25:1H:1540:G:H2'	25:1H:1541:U:O4'	2.15	0.47
25:1H:1705:G:C2'	25:1H:1706:U:H5'	2.44	0.47
25:1H:2480:C:H5'	25:1H:2481:G:OP2	2.15	0.47
27:11:217:ARG:HH11	27:11:217:ARG:CG	2.28	0.47
29:31:101:LEU:HD23	29:31:101:LEU:HA	1.70	0.47
30:41:109:VAL:HG13	50:M8:33:VAL:HG22	1.96	0.47
32:61:102:SER:O	32:61:106:GLY:HA2	2.15	0.47
40:C8:92:ARG:HD3	40:C8:92:ARG:HA	1.64	0.47
41:D8:29:PRO:HG3	41:D8:63:GLY:HA2	1.97	0.47
48:K8:31:GLU:HB3	48:K8:53:LEU:HD11	1.96	0.47
54:1G:146:G:H2'	54:1G:147:G:C8	2.49	0.47
54:1G:577:G:O2'	54:1G:578:C:H5'	2.15	0.47
54:1G:1084:G:H2'	54:1G:1085:U:C6	2.50	0.47
54:1G:1095:U:H2'	54:1G:1096:C:O4'	2.15	0.47
54:1G:1329:A:H2'	54:1G:1330:U:O4'	2.15	0.47
4:32:13:ARG:NH1	4:32:38:TYR:O	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:84:ILE:C	13:4A:86:CYS:H	2.22	0.47
55:1L:81:C:H2'	55:1L:82:A:H5"	1.97	0.47
25:14:823:G:H2'	25:14:824:A:H8	1.80	0.47
25:14:877:U:O4	25:14:899:A:N6	2.48	0.47
25:14:1405:U:H2'	25:14:1406:U:C6	2.50	0.47
25:14:2467:C:H4'	36:45:123:HIS:CG	2.50	0.47
25:14:2697:G:H2'	25:14:2698:U:O4'	2.15	0.47
25:14:2714:G:P	60:14:3464:HOH:O	2.66	0.47
26:1J:101:A:OP2	26:1J:101:A:H8	1.98	0.47
27:19:26:LYS:HZ3	27:19:94:LEU:HD11	1.79	0.47
27:19:44:ASN:ND2	27:19:46:GLN:HG3	2.30	0.47
28:29:38:THR:HG23	28:29:41:LYS:HG2	1.96	0.47
29:39:102:PRO:O	29:39:105:VAL:N	2.47	0.47
30:49:39:ILE:HD12	30:49:94:LEU:HD21	1.96	0.47
31:59:98:LEU:HD13	31:59:125:VAL:HG21	1.96	0.47
39:75:113:LYS:O	39:75:114:LEU:HD23	2.15	0.47
43:B5:53:LYS:HB3	43:B5:82:GLN:HB3	1.97	0.47
1:13:564:C:C6	17:8I:31:LEU:HD11	2.49	0.47
1:13:734:G:C2	1:13:735:C:C2	3.03	0.47
1:13:757:U:H2'	1:13:758:G:O4'	2.15	0.47
1:13:1157:A:N6	1:13:1178:G:H21	2.13	0.47
1:13:1239:A:H4'	1:13:1240:U:H5"	1.97	0.47
3:2E:57:ILE:HG12	3:2E:66:VAL:HG22	1.97	0.47
4:3E:62:GLN:O	4:3E:66:ARG:HB2	2.15	0.47
4:3E:148:VAL:HG21	4:3E:158:ILE:HG21	1.96	0.47
9:8E:27:THR:O	9:8E:63:ILE:N	2.45	0.47
10:1I:49:VAL:HG23	14:5I:41:ARG:HD2	1.97	0.47
22:1K:48:C:N4	22:1K:52:G:H1	2.11	0.47
25:1H:30:G:H2'	25:1H:31:C:C6	2.50	0.47
25:1H:528:A:N1	25:1H:2042:A:H2'	2.29	0.47
25:1H:1568:G:H5"	27:11:61:LEU:HD22	1.97	0.47
25:1H:1772:G:N2	60:1H:3622:HOH:O	2.45	0.47
27:11:61:LEU:HD13	27:11:61:LEU:HA	1.58	0.47
35:78:82:GLY:HA2	35:78:113:LYS:O	2.14	0.47
36:88:2:LEU:HD23	36:88:69:PHE:CD1	2.50	0.47
44:G8:20:TYR:CE2	44:G8:43:ASN:HA	2.50	0.47
44:G8:29:GLU:HB3	44:G8:38:ILE:CG2	2.46	0.47
48:K8:5:GLU:H	48:K8:5:GLU:HG3	1.36	0.47
54:1G:223:U:H2'	54:1G:224:C:C6	2.50	0.47
54:1G:353:A:H5'	54:1G:353:A:C8	2.40	0.47
54:1G:998(A):C:H2'	54:1G:999:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1189:C:P	10:1A:51:ARG:HH22	2.38	0.47
54:1G:1279:A:O2'	54:1G:1282:C:N4	2.48	0.47
2:12:83:MET:HE2	2:12:83:MET:HA	1.97	0.47
4:32:25:ARG:CZ	4:32:30:LYS:HG3	2.44	0.47
8:72:51:VAL:HG23	8:72:52:ASP:N	2.30	0.47
12:3A:23:LYS:C	12:3A:25:PRO:HD3	2.40	0.47
13:4A:13:LYS:HG2	13:4A:14:ARG:H	1.80	0.47
19:AA:33:THR:HG22	19:AA:50:ALA:O	2.14	0.47
55:1L:8:U:O2'	55:1L:22:A:N1	2.45	0.47
25:14:108:U:H2'	25:14:109:G:H8	1.80	0.47
25:14:305:U:H2'	25:14:306:U:C6	2.50	0.47
25:14:568:U:N3	60:14:3579:HOH:O	2.19	0.47
25:14:722:A:H5'	25:14:723:G:OP2	2.15	0.47
25:14:1359:A:N6	25:14:1372:U:H3	2.05	0.47
25:14:2364:C:H2'	25:14:2365:G:O4'	2.14	0.47
25:14:2467:C:H4'	36:45:123:HIS:CD2	2.50	0.47
25:14:2655:G:N2	25:14:2665:A:OP2	2.47	0.47
25:14:2720:U:N3	25:14:2873:A:C2	2.83	0.47
25:14:2889:C:H3'	25:14:2891:G:C8	2.50	0.47
28:29:76:ARG:CG	28:29:195:LEU:HD22	2.45	0.47
30:49:114:ILE:HD13	30:49:140:ILE:HG21	1.96	0.47
1:13:919:A:O2'	1:13:920:U:H5'	2.15	0.46
1:13:1333:A:H3'	1:13:1334:G:H8	1.80	0.46
2:1E:165:VAL:HG23	2:1E:166:ASP:H	1.79	0.46
23:2K:20:G:C6	23:2K:58:A:C2	3.03	0.46
25:1H:18:C:H4'	40:C8:23:GLY:O	2.15	0.46
25:1H:99:U:H1'	25:1H:102:G:C5	2.50	0.46
25:1H:581:C:O5'	25:1H:581:C:H6	1.98	0.46
25:1H:657:U:H2'	25:1H:658:C:C6	2.49	0.46
25:1H:1053:C:N3	25:1H:1107:G:N2	2.63	0.46
25:1H:2019:A:N7	51:N8:9:LYS:HE3	2.31	0.46
25:1H:2095:C:H2'	25:1H:2096:U:O4'	2.15	0.46
29:31:65:TRP:CZ3	29:31:72:ARG:HB3	2.51	0.46
38:A8:70:GLY:O	38:A8:105:ALA:HA	2.15	0.46
48:K8:42:GLY:C	48:K8:44:LEU:N	2.73	0.46
54:1G:542:G:OP1	4:32:10:ARG:NH2	2.48	0.46
54:1G:641:U:O3'	54:1G:642:A:H8	1.98	0.46
54:1G:719:C:C5	54:1G:720:C:C4	3.03	0.46
54:1G:1086:U:H3	54:1G:1099:G:H22	1.63	0.46
54:1G:1386:G:C2	54:1G:1387:G:C8	3.02	0.46
3:22:156:ARG:HB3	3:22:160:ALA:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:116:ALA:O	7:62:120:ILE:HG12	2.15	0.46
9:82:112:LYS:HD2	9:82:113:LYS:N	2.30	0.46
56:2L:52:C:H2'	56:2L:53:G:C8	2.50	0.46
25:14:1952:A:C5	34:25:22:ILE:HD11	2.50	0.46
25:14:2360:A:H2'	25:14:2361:A:O4'	2.15	0.46
28:29:32:PRO:HG3	28:29:90:THR:HG22	1.97	0.46
28:29:57:LYS:H	28:29:57:LYS:HZ2	1.61	0.46
29:39:41:LEU:HD21	29:39:184:TYR:CD1	2.50	0.46
29:39:122:LYS:HB3	29:39:191:ARG:HB2	1.97	0.46
32:69:93:THR:HG22	32:69:119:PRO:HG3	1.97	0.46
33:15:45:ASN:OD1	33:15:46:VAL:HG23	2.15	0.46
35:35:101:VAL:HG23	35:35:107:LYS:N	2.30	0.46
40:85:100:VAL:HG12	40:85:101:ARG:HD3	1.96	0.46
40:85:102:GLU:HB3	40:85:105:VAL:HG21	1.96	0.46
41:95:70:ILE:O	41:95:72:VAL:N	2.48	0.46
44:C5:100:ALA:O	44:C5:102:CYS:SG	2.72	0.46
46:E5:18:ALA:CB	46:E5:20:ARG:HE	2.26	0.46
52:L5:34:ARG:NH1	52:L5:39:ARG:HG3	2.31	0.46
1:13:131:C:H2'	1:13:132:C:C6	2.51	0.46
1:13:187:C:O2	1:13:191(A):G:C2	2.68	0.46
1:13:280:C:H4'	1:13:281:G:OP2	2.16	0.46
1:13:321:A:C2	1:13:333:G:C2	3.04	0.46
1:13:486:U:H2'	1:13:487:A:H8	1.79	0.46
1:13:735:C:H2'	1:13:736:C:C6	2.48	0.46
2:1E:91:PRO:HG3	2:1E:155:LEU:HB2	1.96	0.46
3:2E:35:GLU:OE1	3:2E:95:THR:HG23	2.15	0.46
4:3E:11:LEU:HD13	4:3E:66:ARG:HG3	1.98	0.46
8:7E:49:GLU:HG2	8:7E:62:TYR:CE1	2.47	0.46
13:4I:102:ARG:HH21	13:4I:105:THR:CG2	2.29	0.46
19:AI:51:VAL:O	19:AI:57:HIS:HA	2.16	0.46
25:1H:331:A:H1'	60:1H:3881:HOH:O	2.15	0.46
25:1H:532:A:N7	25:1H:2021:C:O2'	2.36	0.46
25:1H:2117:A:H2'	25:1H:2118:U:C6	2.51	0.46
27:11:2:ALA:C	27:11:3:VAL:HG23	2.39	0.46
27:11:217:ARG:HH11	27:11:217:ARG:HG2	1.80	0.46
28:21:84:PHE:CZ	28:21:86:PRO:HB3	2.51	0.46
28:21:134:ILE:C	28:21:134:ILE:HD12	2.40	0.46
36:88:116:GLU:OE2	36:88:119:ARG:NH2	2.47	0.46
52:P8:1:MET:HE3	52:P8:1:MET:HB2	1.87	0.46
54:1G:281:G:H8	54:1G:281:G:OP2	1.98	0.46
54:1G:868:C:H2'	54:1G:869:G:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:180:LEU:HB2	2:12:182:ILE:CD1	2.45	0.46
19:AA:66:MET:N	19:AA:67:VAL:HB	2.30	0.46
56:2L:56:PSU:N3	56:2L:59:A:OP2	2.34	0.46
25:14:429:A:H2'	25:14:430:G:C8	2.50	0.46
25:14:994:C:O2'	25:14:996:A:OP1	2.31	0.46
25:14:1100:C:H2'	25:14:1101:U:C6	2.50	0.46
25:14:1317:A:H2'	25:14:1318:C:C6	2.49	0.46
25:14:1784:A:H5"	60:14:3485:HOH:O	2.15	0.46
25:14:2068:U:N3	25:14:2430:A:H2	2.12	0.46
25:14:2079:U:H2'	25:14:2080:G:O4'	2.15	0.46
25:14:2647:U:O2	25:14:2673:G:N2	2.39	0.46
26:1J:13:A:O2'	26:1J:15:A:O5'	2.33	0.46
27:19:43:ARG:HD2	27:19:43:ARG:N	2.30	0.46
28:29:111:ARG:HA	37:55:2:ARG:NH1	2.20	0.46
29:39:21:ALA:HB3	29:39:23:ASP:OD2	2.15	0.46
29:39:102:PRO:HB2	29:39:105:VAL:HG23	1.96	0.46
29:39:125:LEU:HD12	29:39:125:LEU:O	2.15	0.46
30:49:150:ASP:CG	30:49:151:ALA:H	2.23	0.46
36:45:34:LEU:HD11	36:45:129:THR:HB	1.97	0.46
44:C5:6:HIS:ND1	44:C5:7:VAL:HG13	2.30	0.46
45:D5:10:ARG:HH21	45:D5:26:GLY:H	1.62	0.46
47:F5:91:LYS:HZ3	47:F5:91:LYS:HA	1.80	0.46
53:M5:56:GLU:C	53:M5:58:ILE:H	2.23	0.46
1:13:11:G:C6	1:13:12:U:C4	3.03	0.46
1:13:190:G:HO2'	1:13:191(A):G:P	2.39	0.46
1:13:654:G:C2	1:13:753:A:C4	3.03	0.46
1:13:874:G:C4	1:13:875:C:C5	3.03	0.46
1:13:971:G:N2	1:13:1363:A:OP2	2.34	0.46
1:13:1133:G:H22	1:13:1141:C:N4	2.14	0.46
1:13:1260:C:H3'	1:13:1260:C:C6	2.49	0.46
1:13:1489:G:H2'	1:13:1490:C:O4'	2.15	0.46
4:3E:22:LYS:HB2	4:3E:26:CYS:SG	2.55	0.46
4:3E:31:CYS:HB3	4:3E:33:MET:HB2	1.98	0.46
5:4E:100:VAL:HG22	5:4E:118:ILE:HG22	1.96	0.46
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.49	0.46
13:4I:102:ARG:HH21	13:4I:105:THR:HG21	1.80	0.46
14:5I:6:LEU:HD23	14:5I:6:LEU:HA	1.76	0.46
19:AI:32:LYS:HG2	19:AI:50:ALA:HB3	1.96	0.46
25:1H:226:G:H21	25:1H:228:A:H2	1.64	0.46
25:1H:1174:A:H5"	25:1H:1175:U:OP2	2.15	0.46
25:1H:1567:A:H5"	27:11:58:HIS:CG	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1693:U:H1'	27:11:14:ARG:NH2	2.31	0.46
25:1H:1983:C:O2'	25:1H:1984:G:H5'	2.15	0.46
25:1H:2001:A:OP1	37:98:9:LYS:NZ	2.49	0.46
25:1H:2303:G:C2'	25:1H:2304:G:H5'	2.44	0.46
39:B8:26:ASP:HB2	39:B8:91:ARG:HA	1.98	0.46
40:C8:95:LEU:HD22	41:D8:4:ILE:CD1	2.45	0.46
42:E8:58:ALA:HB1	42:E8:64:MET:HE2	1.96	0.46
44:G8:97:ARG:HB2	44:G8:99:CYS:SG	2.56	0.46
45:H8:40:ASP:OD2	45:H8:43:GLU:HB2	2.15	0.46
46:I8:38:VAL:CG1	46:I8:40:GLN:HG2	2.42	0.46
50:M8:23:GLU:OE1	50:M8:24:THR:N	2.48	0.46
50:M8:43:TYR:HA	50:M8:46:GLN:HG3	1.98	0.46
53:Q8:50:LEU:C	53:Q8:52:LYS:N	2.66	0.46
54:1G:854:G:C2	54:1G:855:G:C8	3.03	0.46
54:1G:881:G:OP2	12:3A:9:GLN:NE2	2.48	0.46
54:1G:983:A:H3'	54:1G:983:A:N3	2.30	0.46
54:1G:1111:A:H8	54:1G:1111:A:O5'	1.99	0.46
54:1G:1137:C:H4'	54:1G:1138:G:C4	2.49	0.46
2:12:102:LEU:H	2:12:102:LEU:HD12	1.80	0.46
3:22:42:LEU:HD12	3:22:42:LEU:HA	1.76	0.46
3:22:50:ALA:HB2	3:22:83:ARG:NH2	2.30	0.46
5:42:34:VAL:HB	5:42:62:ALA:HB1	1.97	0.46
55:1L:47:U:H2'	55:1L:48:C:H5	1.80	0.46
25:14:95:G:O2'	48:G5:48:HIS:HB3	2.15	0.46
25:14:189:G:H1	25:14:205:G:HO2'	1.62	0.46
25:14:1788:C:C2	25:14:1789:A:C8	3.03	0.46
25:14:2065:C:H2'	25:14:2066:C:C6	2.50	0.46
25:14:2408:U:H2'	25:14:2409:G:C8	2.51	0.46
25:14:2784:C:H2'	25:14:2785:C:C6	2.51	0.46
29:39:177:ALA:HB1	29:39:178:PRO:HD2	1.96	0.46
35:35:79:ARG:O	35:35:111:ARG:HB2	2.16	0.46
42:A5:29:LEU:HD21	42:A5:33:ARG:HH21	1.80	0.46
42:A5:62:HIS:HB2	42:A5:64:MET:HG3	1.96	0.46
45:D5:26:GLY:HA2	45:D5:86:VAL:H	1.80	0.46
50:I5:9:LEU:HD22	50:I5:9:LEU:H	1.79	0.46
1:13:38:G:C2	1:13:397:A:C2	3.04	0.46
1:13:142:G:H1	1:13:221:C:H42	1.62	0.46
1:13:254:G:O3'	17:8I:69:LYS:NZ	2.49	0.46
1:13:377:G:H5'	16:7I:5:ARG:HH12	1.81	0.46
8:7E:81:HIS:HB2	8:7E:138:TRP:CE3	2.50	0.46
9:8E:17:VAL:HG21	9:8E:80:GLY:HA3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:54:GLU:O	16:7I:57:ARG:HB2	2.15	0.46
20:BI:26:ASN:O	20:BI:30:LYS:HB2	2.16	0.46
25:1H:340:A:H2'	25:1H:341:G:O4'	2.15	0.46
25:1H:1006:C:H1'	33:58:106:MET:HE3	1.97	0.46
25:1H:1061:U:H3'	25:1H:1062:G:C5'	2.45	0.46
25:1H:1209:G:H21	25:1H:1210:A:H62	1.62	0.46
25:1H:1635:G:H2'	25:1H:1636:C:H6	1.81	0.46
25:1H:1728:G:H5'	25:1H:1729:A:OP2	2.15	0.46
25:1H:1731:G:OP2	25:1H:1731:G:H8	1.99	0.46
25:1H:1797:C:O2'	27:11:259:THR:CG2	2.63	0.46
25:1H:2098:U:H3	25:1H:2191:G:H1	1.63	0.46
25:1H:2135:A:N6	25:1H:2156:G:O2'	2.48	0.46
25:1H:2634:G:H8	25:1H:2634:G:H5"	1.80	0.46
26:16:42:C:O2	30:41:92:VAL:HA	2.16	0.46
26:16:112:G:H2'	26:16:113:C:C6	2.50	0.46
27:11:18:VAL:HG12	27:11:19:ALA:N	2.31	0.46
29:31:119:ARG:HB3	29:31:119:ARG:CZ	2.45	0.46
30:41:46:ALA:HB1	30:41:49:ASP:O	2.15	0.46
45:H8:163:LEU:HB3	45:H8:165:VAL:N	2.27	0.46
53:Q8:60:LEU:N	53:Q8:60:LEU:CD2	2.79	0.46
54:1G:42:G:H2'	54:1G:43:C:O4'	2.16	0.46
54:1G:457:C:H2'	54:1G:458:C:C6	2.50	0.46
54:1G:974:A:OP2	14:5A:41:ARG:NH1	2.48	0.46
54:1G:1288:A:N3	54:1G:1352:C:O2'	2.42	0.46
2:12:54:THR:O	2:12:57:PHE:HB3	2.16	0.46
10:1A:25:GLU:O	10:1A:29:ARG:HB2	2.14	0.46
55:1L:84:C:H2'	55:1L:85:A:C8	2.50	0.46
25:14:5:A:H2'	25:14:6:A:H8	1.76	0.46
25:14:134:C:H2'	25:14:135:G:O4'	2.16	0.46
25:14:234:C:H2'	25:14:235:U:H6	1.79	0.46
25:14:363(F):A:H1'	25:14:364:C:H5	1.81	0.46
25:14:528:A:H2	25:14:2043:C:C5'	2.28	0.46
25:14:844:C:N4	25:14:845:G:C2	2.83	0.46
25:14:1678:G:N2	25:14:1989:G:N2	2.61	0.46
25:14:2257:U:H2'	25:14:2258:C:C6	2.51	0.46
26:1J:16:G:H2'	26:1J:17:C:H6	1.78	0.46
29:39:123:LEU:HA	29:39:192:LEU:C	2.40	0.46
29:39:136:THR:HG23	29:39:166:ALA:O	2.15	0.46
29:39:137:LYS:HB3	29:39:137:LYS:HE2	1.77	0.46
31:59:6:ARG:H	31:59:6:ARG:HD3	1.81	0.46
33:15:28:THR:HG22	33:15:106:MET:HE1	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:11:GLU:O	39:75:14:TYR:N	2.42	0.46
41:95:44:LYS:C	41:95:46:VAL:N	2.74	0.46
1:13:955:U:H1'	1:13:1227:A:H61	1.79	0.46
1:13:963:G:C2	10:1I:55:LYS:NZ	2.80	0.46
1:13:1064:G:H4'	1:13:1065:U:OP1	2.14	0.46
1:13:1279:A:O2'	1:13:1281:U:OP2	2.25	0.46
1:13:1423:G:H2'	1:13:1424:C:O4'	2.15	0.46
6:5E:61:LEU:HD23	6:5E:63:TYR:HE1	1.80	0.46
21:1F:5:ASP:O	21:1F:11:GLY:HA3	2.15	0.46
24:4K:19[A]:A:H2'	24:4K:19[A]:A:N3	2.30	0.46
25:1H:149:A:C6	25:1H:150:C:C4	3.04	0.46
25:1H:492:A:H2'	25:1H:493:G:O4'	2.15	0.46
25:1H:832:G:H5'	35:78:45:LEU:HD11	1.96	0.46
25:1H:1980:G:O2'	25:1H:1982:C:OP2	2.27	0.46
25:1H:2645:G:N2	25:1H:2767:C:OP2	2.49	0.46
25:1H:2808:U:H2'	25:1H:2809:A:H8	1.80	0.46
27:11:59:LYS:HA	27:11:59:LYS:HD2	1.45	0.46
28:21:52:LEU:O	28:21:75:VAL:HG23	2.16	0.46
31:51:25:LYS:HG2	31:51:34:GLU:HG2	1.97	0.46
31:51:32:GLU:O	31:51:33:LEU:HD23	2.14	0.46
54:1G:12:U:H4'	54:1G:526:C:O2'	2.16	0.46
54:1G:485:G:H1'	54:1G:486:U:H5	1.79	0.46
54:1G:664:G:P	18:9A:64:ARG:HH21	2.37	0.46
54:1G:1126:U:H2'	54:1G:1281:U:H5'	1.96	0.46
54:1G:1227:A:H8	54:1G:1227:A:H3'	1.81	0.46
54:1G:1404:C:H2'	54:1G:1405:G:C8	2.50	0.46
2:12:4:GLU:O	2:12:221:LEU:HD11	2.15	0.46
2:12:70:PHE:HB2	2:12:92:TYR:HB2	1.97	0.46
2:12:189:ASP:OD2	2:12:191:ASP:HB2	2.15	0.46
4:32:24:GLU:O	4:32:27:TYR:HB2	2.15	0.46
7:62:115:ARG:O	7:62:119:ARG:HG3	2.16	0.46
10:1A:99:LYS:HD3	10:1A:100:THR:N	2.30	0.46
13:4A:57:ARG:HD3	13:4A:61:GLU:OE2	2.16	0.46
19:AA:25:LYS:HG3	19:AA:26:GLY:H	1.80	0.46
55:1L:31:G:H1	55:1L:41:C:N4	2.12	0.46
56:2L:73:A:C6	56:2L:74:A:C6	3.04	0.46
55:3L:18:G:H4'	55:3L:19:C:O5'	2.16	0.46
55:3L:63:U:H3	55:3L:67:A:N6	2.13	0.46
25:14:273(F):C:H3'	25:14:274:G:H5"	1.96	0.46
25:14:363(C):G:H2'	25:14:363(D):G:H8	1.80	0.46
25:14:441:U:H2'	25:14:442:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:663:G:H2'	25:14:664:C:O4'	2.15	0.46
25:14:850:C:O3'	49:H5:49:LYS:HE2	2.15	0.46
25:14:1069:A:H4'	25:14:1070:A:H5"	1.98	0.46
25:14:1782:C:H5"	60:14:3406:HOH:O	2.15	0.46
25:14:2051:A:H5'	25:14:2578:G:O4'	2.15	0.46
25:14:2153:G:O2'	25:14:2154:G:O4'	2.28	0.46
25:14:2210:G:H3'	25:14:2211:G:N7	2.30	0.46
25:14:2695:C:H2'	25:14:2696:U:H6	1.79	0.46
30:49:67:LYS:H	50:I5:6:HIS:CE1	2.33	0.46
31:59:10:PRO:HD2	31:59:50:VAL:O	2.15	0.46
32:69:51:ILE:HG22	32:69:52:ARG:N	2.31	0.46
35:35:97:PRO:HD3	35:35:126:VAL:O	2.15	0.46
39:75:106:SER:C	39:75:107:ASP:OD1	2.59	0.46
44:C5:67:LEU:HD12	44:C5:67:LEU:HA	1.67	0.46
44:C5:104:GLY:HA2	44:C5:105:ALA:HA	1.68	0.46
45:D5:144:LEU:HG	45:D5:174:VAL:HB	1.97	0.46
47:F5:4:VAL:HG11	47:F5:11:ARG:HH12	1.81	0.46
53:M5:50:LEU:O	53:M5:51:ALA:HB2	2.15	0.46
1:13:605:U:H2'	1:13:606:G:O4'	2.15	0.46
1:13:779:C:H2'	1:13:780:A:O4'	2.16	0.46
1:13:955:U:H1'	1:13:1227:A:N6	2.29	0.46
1:13:1249:C:O2'	9:8E:73:GLN:OE1	2.31	0.46
5:4E:80:ILE:HG12	5:4E:81:GLU:N	2.31	0.46
16:7I:71:ARG:HE	16:7I:71:ARG:HB2	1.55	0.46
17:8I:56:VAL:HB	17:8I:78:GLU:HB3	1.97	0.46
20:BI:97:ALA:O	20:BI:99:LEU:HD13	2.16	0.46
25:1H:250:G:H2'	25:1H:251:A:C8	2.51	0.46
25:1H:600:G:N2	25:1H:605:C:O3'	2.49	0.46
25:1H:638:G:N2	25:1H:651:G:H1'	2.31	0.46
25:1H:879:G:H8	25:1H:879:G:OP2	1.97	0.46
25:1H:1690:A:H3'	25:1H:1691:C:H6	1.81	0.46
25:1H:2287:A:N1	25:1H:2346:A:H2	2.13	0.46
25:1H:2789:C:H1'	25:1H:2892:A:H2	1.80	0.46
28:21:9:VAL:HB	28:21:25:VAL:HG22	1.97	0.46
30:41:151:ALA:HB3	30:41:153:ARG:NH1	2.31	0.46
31:51:152:ARG:HD3	31:51:152:ARG:HA	1.58	0.46
35:78:59:LEU:C	35:78:61:ARG:H	2.22	0.46
37:98:24:GLN:O	37:98:28:LEU:N	2.47	0.46
54:1G:392:G:OP1	16:7A:8:ARG:NH2	2.48	0.46
54:1G:438:G:N1	54:1G:495:A:OP2	2.47	0.46
54:1G:575:G:OP1	54:1G:575:G:H4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:138:VAL:HG23	3:22:151:VAL:HG23	1.96	0.46
3:22:164:ARG:NH1	3:22:165:THR:O	2.49	0.46
5:42:33:VAL:HG21	5:42:109:ILE:HG12	1.96	0.46
6:52:14:LEU:HD23	6:52:14:LEU:O	2.15	0.46
7:62:94:ARG:O	7:62:97:GLN:HB3	2.16	0.46
13:4A:40:ASN:O	13:4A:43:THR:OG1	2.32	0.46
55:3L:8:U:H5"	55:3L:9:U:OP2	2.15	0.46
25:14:1399:C:O2'	25:14:1400:G:H5'	2.16	0.46
25:14:1542:G:N7	25:14:1543:A:C6	2.84	0.46
25:14:1992:G:O6	60:14:3532:HOH:O	2.20	0.46
25:14:2129:C:H2'	25:14:2130:U:H5'	1.98	0.46
25:14:2283:C:C2	25:14:2389:G:C2	3.04	0.46
25:14:2438:U:O3'	25:14:2439:A:H3'	2.16	0.46
25:14:2600:A:H2'	25:14:2601:C:C6	2.50	0.46
25:14:2693:A:H2'	25:14:2694:G:C8	2.48	0.46
28:29:135:HIS:CE1	60:29:402:HOH:O	2.68	0.46
36:45:20:ALA:HA	36:45:99:PRO:HG2	1.98	0.46
40:85:10:ARG:HG2	40:85:14:HIS:CD2	2.50	0.46
42:A5:27:LYS:HB2	42:A5:32:ALA:HB2	1.97	0.46
44:C5:75:ILE:HA	44:C5:75:ILE:HD12	1.81	0.46
45:D5:44:PHE:CE2	45:D5:48:PHE:HB2	2.50	0.46
45:D5:52:SER:C	45:D5:54:HIS:H	2.23	0.46
45:D5:59:LEU:HB3	45:D5:60:GLU:H	1.42	0.46
46:E5:25:ARG:HD2	46:E5:29:GLN:NE2	2.31	0.46
49:H5:5:LYS:HA	49:H5:35:ARG:O	2.15	0.46
1:13:201:C:H42	1:13:216:G:H1	1.64	0.46
1:13:332:G:OP2	20:BI:10:LEU:HB3	2.16	0.46
1:13:506:G:H2'	1:13:507:C:O4'	2.16	0.46
1:13:1305:G:N2	1:13:1331:G:C4	2.84	0.46
2:1E:75:LYS:HE3	2:1E:75:LYS:HB3	1.71	0.46
2:1E:121:LEU:HA	2:1E:124:SER:OG	2.16	0.46
6:5E:81:ILE:O	6:5E:82:ARG:HG2	2.16	0.46
15:6I:16:ALA:CB	15:6I:21:ASP:HB3	2.46	0.46
17:8I:56:VAL:CG2	17:8I:81:ARG:HG3	2.46	0.46
22:3K:10:C:H2'	22:3K:11:C:C6	2.51	0.46
25:1H:929:G:H8	25:1H:929:G:O5'	1.99	0.46
25:1H:1550:C:O2'	25:1H:1551:C:H5'	2.16	0.46
25:1H:1712:C:H2'	25:1H:1716:U:H6	1.81	0.46
25:1H:1781:C:H3'	60:1H:3523:HOH:O	2.15	0.46
25:1H:1816:G:H8	27:11:62:TYR:CZ	2.34	0.46
25:1H:1999:C:H5"	25:1H:2723:C:O2'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2170:A:H3'	25:1H:2171:A:H8	1.80	0.46
25:1H:2341:G:H2'	25:1H:2342:C:C6	2.51	0.46
25:1H:2529:G:H5"	25:1H:2530:A:H5"	1.97	0.46
25:1H:2688:U:H1'	25:1H:2721:A:N6	2.30	0.46
26:16:78:A:H2'	26:16:79:C:O4'	2.16	0.46
27:11:6:PHE:CE1	27:11:18:VAL:HG23	2.50	0.46
27:11:44:ASN:O	27:11:46:GLN:O	2.32	0.46
30:41:152:LEU:HD23	30:41:152:LEU:H	1.79	0.46
35:78:112:LEU:O	35:78:128:HIS:HB2	2.16	0.46
54:1G:186(A):C:H5"	20:BA:86:ARG:HH22	1.81	0.46
54:1G:1208:C:H2'	54:1G:1209:C:C6	2.50	0.46
54:1G:1305:G:H5"	21:1B:4:GLY:C	2.41	0.46
54:1G:1429:C:H2'	54:1G:1430:C:C6	2.50	0.46
2:12:100:GLY:O	2:12:104:ASN:N	2.47	0.46
4:32:104:VAL:O	4:32:108:LEU:N	2.49	0.46
8:72:124:ALA:O	8:72:128:GLY:N	2.48	0.46
9:82:70:LYS:O	9:82:74:ILE:HG13	2.16	0.46
25:14:708:C:H42	25:14:723:G:H1	1.64	0.46
25:14:875:G:H4'	45:D5:170:THR:HG21	1.98	0.46
25:14:1120:G:H2'	25:14:1121:C:O4'	2.16	0.46
25:14:1542:G:N7	25:14:1543:A:C5	2.84	0.46
44:C5:50:ARG:HB3	44:C5:53:PRO:HG3	1.96	0.46
45:D5:77:ASP:N	45:D5:82:ARG:O	2.40	0.46
1:13:540:G:H2'	1:13:541:G:O4'	2.16	0.46
1:13:1325:C:O3'	21:1F:17:THR:HG21	2.16	0.46
9:8E:46:ALA:HB3	9:8E:47:LEU:HD13	1.97	0.46
12:3I:91:LYS:O	12:3I:91:LYS:HG3	2.15	0.46
14:5I:24:CYS:CB	14:5I:40:CYS:HB3	2.46	0.46
18:9I:26:LEU:HD11	18:9I:29:PHE:CG	2.51	0.46
20:BI:14:LYS:HA	20:BI:17:ARG:HB3	1.97	0.46
25:1H:71:A:OP1	25:1H:72:U:H2'	2.16	0.46
25:1H:270(E):G:C6	25:1H:270(F):U:C4	3.04	0.46
25:1H:552:G:H2'	25:1H:553:U:O4'	2.16	0.46
25:1H:606:U:H4'	25:1H:658:C:H4'	1.98	0.46
25:1H:950:G:C5	25:1H:951:C:C4	3.04	0.46
25:1H:1055:G:H1'	25:1H:1085:A:H2	1.79	0.46
25:1H:2275:C:H5'	25:1H:2275:C:H6	1.79	0.46
25:1H:2801:A:C8	25:1H:2802:G:H1'	2.51	0.46
26:16:26:A:H2'	26:16:27:C:C6	2.51	0.46
27:11:108:PRO:HG3	27:11:143:HIS:NE2	2.31	0.46
29:31:39:TRP:CZ3	29:31:106:ARG:HD2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:122:PRO:HA	35:78:142:GLY:CA	2.46	0.46
39:B8:74:ARG:HD3	39:B8:76:PHE:CZ	2.51	0.46
50:M8:12:ALA:O	50:M8:24:THR:HG21	2.16	0.46
50:M8:37:SER:HA	50:M8:41:PRO:HD2	1.98	0.46
53:Q8:51:ALA:O	53:Q8:54:GLU:O	2.34	0.46
54:1G:57:G:C6	54:1G:58:C:C4	3.04	0.46
54:1G:373:A:C2	54:1G:374:A:C8	3.03	0.46
54:1G:523:A:H61	12:3A:53:ARG:NH1	2.14	0.46
54:1G:1240:U:H4'	54:1G:1241:G:OP2	2.15	0.46
54:1G:1307:U:H2'	54:1G:1308:U:C6	2.51	0.46
4:32:150:GLU:C	4:32:152:SER:N	2.74	0.46
5:42:145:LYS:O	5:42:149:GLU:HG2	2.16	0.46
12:3A:109:GLY:HA3	12:3A:121:GLY:O	2.15	0.46
20:BA:89:ARG:NH1	20:BA:105:SER:O	2.44	0.46
55:1L:60:A:H2	55:1L:73:U:O2	1.98	0.46
25:14:469:G:C6	52:L5:39:ARG:NH1	2.84	0.46
25:14:534:U:OP1	40:85:24:TYR:OH	2.23	0.46
25:14:548:A:C4	25:14:549:G:H1'	2.51	0.46
25:14:602:G:OP2	25:14:602:G:H8	1.99	0.46
25:14:1001:A:H2'	25:14:1002:G:O4'	2.14	0.46
25:14:1024:G:H8	25:14:1024:G:O5'	1.98	0.46
25:14:1225:C:H4'	41:95:85:LYS:HG2	1.96	0.46
25:14:1336:A:H2'	25:14:1337:G:C8	2.51	0.46
25:14:1425:G:N2	25:14:1573:G:N7	2.63	0.46
25:14:2197:U:H1'	25:14:2198:A:C8	2.51	0.46
25:14:2275:C:H6	25:14:2275:C:H5'	1.81	0.46
25:14:2461:C:H2'	25:14:2462:U:C6	2.51	0.46
28:29:63:LEU:HD23	28:29:63:LEU:H	1.80	0.46
30:49:166:ASP:OD1	30:49:166:ASP:N	2.33	0.46
33:15:61:ARG:HA	33:15:61:ARG:HE	1.81	0.46
35:35:18:ARG:O	35:35:19:VAL:HG23	2.16	0.46
35:35:36:LYS:HB3	35:35:37:GLY:H	1.33	0.46
35:35:144:GLU:HA	35:35:145:PRO:HD3	1.74	0.46
37:55:15:SER:CB	60:55:201:HOH:O	2.63	0.46
1:13:243:A:H4'	1:13:244:U:H3'	1.98	0.46
1:13:1051:C:O2'	1:13:1052:U:H5'	2.16	0.46
1:13:1226:C:OP1	19:AI:78:ARG:NH1	2.49	0.46
4:3E:153:ARG:O	4:3E:181:MET:HE1	2.16	0.46
7:6E:15:ASP:OD2	7:6E:18:TYR:N	2.45	0.46
22:1K:52:G:H2'	22:1K:53:A:C8	2.51	0.46
23:2K:62:C:O2'	23:2K:63:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4K:19[B]:A:N3	24:4K:19[B]:A:H5'	2.31	0.46
25:1H:232:G:N2	25:1H:420:C:OP1	2.38	0.46
25:1H:353:G:H2'	25:1H:354:G:H8	1.81	0.46
25:1H:516:C:OP1	51:N8:13:LYS:NZ	2.42	0.46
25:1H:1860:G:O5'	25:1H:1860:G:H8	1.98	0.46
25:1H:2048:G:C2	25:1H:2621:A:C2	3.04	0.46
25:1H:2054:A:OP1	25:1H:2055:C:O2'	2.29	0.46
25:1H:2712:U:O2'	25:1H:2713:A:H5'	2.16	0.46
27:11:10:THR:OG1	27:11:13:ARG:HB2	2.15	0.46
27:11:182:LEU:HA	27:11:182:LEU:HD23	1.66	0.46
27:11:231:HIS:CD2	27:11:249:PRO:HG3	2.50	0.46
28:21:92:THR:O	28:21:95:ILE:HG12	2.16	0.46
28:21:114:ALA:O	28:21:157:ALA:HB1	2.16	0.46
32:61:76:THR:HG23	32:61:139:GLN:O	2.16	0.46
33:58:111:PRO:HA	33:58:114:ARG:NH1	2.31	0.46
46:I8:42:GLY:C	46:I8:57:PHE:HD2	2.24	0.46
54:1G:105:G:C6	54:1G:106:C:C4	3.04	0.46
54:1G:442:C:H2'	54:1G:443:C:C6	2.51	0.46
54:1G:849:C:H2'	54:1G:850:U:O4'	2.16	0.46
54:1G:1069:C:H42	54:1G:1106:G:H1	1.64	0.46
54:1G:1498:U:O5'	54:1G:1498:U:H6	1.99	0.46
4:32:30:LYS:C	4:32:32:ALA:N	2.74	0.46
55:3L:13:G:O2'	55:3L:23:A:N6	2.49	0.46
25:14:82:G:H5'	25:14:296:C:H5"	1.98	0.46
25:14:290:G:H2'	25:14:291:C:O4'	2.15	0.46
25:14:1309:G:H4'	52:L5:7:PRO:HB2	1.98	0.46
25:14:1337:G:H2'	25:14:1338:G:H8	1.80	0.46
25:14:1412:A:H2'	25:14:1413:G:C8	2.51	0.46
25:14:1485:G:H2'	25:14:1486:A:C8	2.51	0.46
25:14:1494:A:H2'	25:14:1495:A:C8	2.51	0.46
25:14:1572:A:H2'	25:14:1573:G:O4'	2.16	0.46
25:14:1651:G:H4'	37:55:39:PRO:HG2	1.97	0.46
25:14:1826:G:H2'	25:14:1827:C:C6	2.50	0.46
25:14:2340:G:H2'	25:14:2341:G:H8	1.81	0.46
26:1J:22:U:H5'	26:1J:23:G:OP2	2.15	0.46
31:59:41:MET:HB3	31:59:42:ARG:H	1.61	0.46
34:25:35:VAL:HA	34:25:62:VAL:O	2.16	0.46
40:85:25:TRP:CD1	40:85:25:TRP:C	2.93	0.46
1:13:128:G:H4'	17:8I:3:LYS:HG2	1.98	0.46
1:13:145:G:H8	1:13:145:G:OP2	1.99	0.46
1:13:484:G:O2'	1:13:485:G:OP2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:902:G:H2'	1:13:903:G:H8	1.80	0.46
1:13:1112:C:H1'	3:2E:179:ARG:HH11	1.81	0.46
1:13:1129:C:N4	1:13:1143:G:N3	2.62	0.46
1:13:1263:C:O2'	1:13:1264:C:H5'	2.16	0.46
7:6E:28:ASN:HA	7:6E:31:MET:HE2	1.98	0.46
8:7E:64:LYS:HG2	8:7E:79:VAL:HG21	1.98	0.46
14:5I:50:LYS:HB2	14:5I:52:GLN:HG3	1.98	0.46
15:6I:26:GLU:H	15:6I:26:GLU:HG2	1.40	0.46
16:7I:74:LEU:HD22	16:7I:79:VAL:HG21	1.98	0.46
18:9I:73:ALA:HB3	18:9I:79:LEU:HD12	1.98	0.46
23:2K:45:A:H2'	23:2K:46:G:O4'	2.15	0.46
25:1H:16:G:H2'	25:1H:17:G:H8	1.81	0.46
25:1H:507:A:H5"	25:1H:508:G:H5'	1.97	0.46
25:1H:811:U:H2'	35:78:21:ARG:HA	1.98	0.46
25:1H:827:U:H5'	25:1H:828:U:O5'	2.16	0.46
25:1H:1689:A:H62	25:1H:1698:A:H2	1.63	0.46
25:1H:2666:C:H5"	25:1H:2667:C:OP2	2.15	0.46
25:1H:2712:U:H1'	25:1H:2712(A):A:C8	2.51	0.46
27:11:37:LEU:HB3	27:11:59:LYS:NZ	2.31	0.46
28:21:33:VAL:HG12	28:21:89:ASP:HA	1.98	0.46
30:41:108:ASN:OD1	30:41:108:ASN:N	2.49	0.46
31:51:8:PRO:HG2	31:51:69:ARG:NE	2.31	0.46
35:78:63:PRO:O	53:Q8:13:ARG:HB2	2.16	0.46
38:A8:89:ARG:O	38:A8:89:ARG:HG3	2.15	0.46
44:G8:20:TYR:CG	44:G8:42:VAL:O	2.69	0.46
54:1G:625:G:C4	54:1G:626:U:C5	3.04	0.46
54:1G:1071:C:H42	54:1G:1104:G:H1	1.64	0.46
54:1G:1077:G:N1	54:1G:1081:G:C6	2.84	0.46
2:12:6:THR:H	2:12:221:LEU:HD13	1.80	0.46
20:BA:45:GLN:HB2	20:BA:91:LEU:HD22	1.98	0.46
25:14:19:C:H2'	25:14:20:C:H6	1.80	0.46
25:14:433:C:C4	25:14:434:U:O4	2.69	0.46
25:14:990:A:H5'	25:14:990:A:C8	2.43	0.46
25:14:1110:G:O2'	31:59:3:ARG:NH1	2.49	0.46
25:14:1532:C:N4	25:14:1539:G:H1	2.13	0.46
25:14:1672:C:H5"	25:14:1673:U:OP2	2.16	0.46
25:14:1797:C:HO2'	27:19:259:THR:HG1	1.44	0.46
25:14:2228:G:C5	25:14:2229:C:C4	3.04	0.46
26:1J:88:C:H3'	26:1J:89:G:C8	2.50	0.46
26:1J:94:C:H2'	26:1J:95:U:H6	1.79	0.46
27:19:96:HIS:CE1	27:19:102:LYS:HD3	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:114:VAL:HG21	29:39:202:PHE:CE1	2.51	0.46
36:45:88:GLY:C	36:45:89:ASN:CG	2.83	0.46
38:65:74:ALA:HB1	38:65:107:GLU:HB3	1.98	0.46
45:D5:14:LYS:HA	45:D5:15:PRO:HD2	1.64	0.46
45:D5:52:SER:O	45:D5:54:HIS:N	2.48	0.46
1:13:501:C:H2'	1:13:502:G:H8	1.81	0.45
1:13:554:C:H2'	1:13:555:C:C6	2.51	0.45
1:13:745:C:H2'	1:13:746:A:C8	2.51	0.45
1:13:837:G:N2	1:13:850:U:C2	2.84	0.45
1:13:877:C:H5"	8:7E:88:LYS:HD3	1.98	0.45
1:13:1010:G:N2	1:13:1020:U:H1'	2.30	0.45
1:13:1266:G:N2	1:13:1270:C:N3	2.64	0.45
2:1E:114:ARG:O	2:1E:118:LEU:HD12	2.17	0.45
3:2E:27:LYS:HE2	3:2E:27:LYS:HA	1.97	0.45
4:3E:97:LEU:O	4:3E:100:ARG:HG3	2.15	0.45
5:4E:126:ARG:HG3	5:4E:126:ARG:NH1	2.30	0.45
6:5E:30:LEU:HB3	6:5E:35:ALA:HB3	1.98	0.45
10:1I:9:ARG:HG2	10:1I:69:ASN:OD1	2.16	0.45
22:3K:7:G:H5"	22:3K:8:4SU:H5	1.98	0.45
25:1H:154:G:H2'	25:1H:155:C:C6	2.50	0.45
25:1H:1027:A:C2	25:1H:2488:A:H5'	2.51	0.45
25:1H:1064:C:N4	25:1H:1070:A:OP1	2.49	0.45
25:1H:1254:A:H5"	25:1H:1255:U:H5"	1.97	0.45
25:1H:1378:A:O2'	25:1H:1380:G:N7	2.39	0.45
25:1H:1530:G:C5	25:1H:1531:C:C4	3.04	0.45
25:1H:1655:A:H1'	28:21:113:PHE:CE1	2.51	0.45
25:1H:2146:C:H4'	25:1H:2147:G:N7	2.32	0.45
25:1H:2562:U:H1'	34:68:23:ARG:HD3	1.98	0.45
25:1H:2593:U:O4	60:1H:3562:HOH:O	2.21	0.45
31:51:47:GLU:C	31:51:49:VAL:H	2.24	0.45
36:88:66:ILE:O	36:88:67:ARG:HB2	2.16	0.45
41:D8:34:GLU:HA	41:D8:57:VAL:O	2.15	0.45
54:1G:328:C:H4'	54:1G:329:A:C5'	2.46	0.45
54:1G:630:G:N2	54:1G:631:G:H21	2.13	0.45
54:1G:867:G:O2'	54:1G:868:C:H5'	2.16	0.45
54:1G:1099:G:C6	54:1G:1100:C:C2	3.04	0.45
54:1G:1423:G:H5'	34:25:49:ARG:HH22	1.80	0.45
3:22:39:ILE:HG21	3:22:57:ILE:HD11	1.97	0.45
9:82:26:VAL:HG22	9:82:61:ALA:N	2.31	0.45
9:82:111:ARG:O	9:82:113:LYS:HD3	2.16	0.45
17:8A:45:HIS:HB3	17:8A:72:ARG:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9A:61:LYS:O	18:9A:65:ILE:HG23	2.16	0.45
19:AA:66:MET:HA	19:AA:67:VAL:O	2.15	0.45
25:14:138:G:N2	43:B5:44:GLU:OE2	2.25	0.45
25:14:320:A:H4'	25:14:322:A:C8	2.51	0.45
25:14:396:G:H8	25:14:396:G:O5'	1.99	0.45
25:14:661:C:H2'	25:14:662:G:H8	1.81	0.45
25:14:675:A:N3	25:14:2443:C:O2'	2.43	0.45
25:14:1204:A:N1	25:14:1241:A:H2	2.13	0.45
25:14:1386:C:OP2	25:14:1396:U:H5	1.99	0.45
25:14:1639:U:O2'	25:14:1640:C:H5'	2.15	0.45
25:14:1729:A:C2	25:14:1730:U:H5	2.34	0.45
25:14:1962:C:O2'	25:14:1964:G:OP2	2.33	0.45
25:14:2306:C:H2'	25:14:2307:G:N2	2.31	0.45
25:14:2754:U:H5"	25:14:2754:U:H6	1.81	0.45
29:39:118:ALA:O	29:39:121:GLY:N	2.42	0.45
44:C5:40:GLU:HA	44:C5:64:GLU:HG2	1.99	0.45
53:M5:57:ARG:HA	53:M5:60:LEU:HD12	1.98	0.45
1:13:222:U:H2'	1:13:223:U:H6	1.80	0.45
1:13:667:G:H4'	15:6I:51:HIS:ND1	2.31	0.45
1:13:936:C:H42	1:13:1379:G:H1	1.63	0.45
1:13:977:A:O2'	1:13:979:C:OP2	2.31	0.45
2:1E:219:VAL:O	2:1E:223:ILE:HG13	2.15	0.45
5:4E:80:ILE:HG12	5:4E:81:GLU:H	1.81	0.45
9:8E:29:ASN:OD1	9:8E:65:VAL:N	2.48	0.45
9:8E:112:LYS:HD2	9:8E:113:LYS:N	2.31	0.45
25:1H:637:A:H2'	35:78:117:GLU:OE1	2.16	0.45
25:1H:654(N):G:H2'	25:1H:654(O):G:C8	2.51	0.45
25:1H:754:C:H2'	25:1H:755:C:H6	1.81	0.45
25:1H:1441:G:H2'	25:1H:1442:G:C8	2.48	0.45
25:1H:2168:G:H1	25:1H:2170:A:N6	2.15	0.45
25:1H:2302:G:C6	25:1H:2315:G:C6	3.04	0.45
25:1H:2875:C:H2'	25:1H:2876:G:O4'	2.16	0.45
28:21:77:ILE:H	28:21:79:ARG:NH1	2.14	0.45
33:58:121:LYS:HB3	33:58:123:TYR:CE1	2.52	0.45
43:F8:14:SER:O	43:F8:15:GLU:C	2.60	0.45
54:1G:200:G:H1	54:1G:217:C:N4	2.12	0.45
54:1G:376:G:H1	54:1G:387:U:H3	1.64	0.45
54:1G:1054:C:HO2'	54:1G:1055:A:P	2.38	0.45
54:1G:1216:G:H5"	14:5A:5:ALA:CB	2.46	0.45
2:12:175:ARG:O	2:12:179:LYS:HB2	2.16	0.45
5:42:144:THR:HG22	5:42:147:ASP:OD2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:71:A:H2	43:B5:31:HIS:HE2	1.62	0.45
25:14:662:G:H5'	35:35:15:ARG:CA	2.47	0.45
25:14:820:A:H2'	25:14:821:A:O4'	2.17	0.45
25:14:2056:G:C2	25:14:2057:A:C8	3.04	0.45
25:14:2188:C:H2'	25:14:2189:U:O4'	2.16	0.45
25:14:2820:A:C6	37:55:4:LEU:HD11	2.51	0.45
26:1J:29:A:H5"	26:1J:30:C:OP2	2.17	0.45
26:1J:55:U:O2'	30:49:29:TRP:HD1	2.00	0.45
27:19:77:ALA:O	27:19:116:GLN:HA	2.16	0.45
35:35:125:VAL:HG13	35:35:144:GLU:HB3	1.98	0.45
45:D5:71:VAL:HB	45:D5:88:PHE:CE1	2.51	0.45
48:G5:27:GLU:O	48:G5:31:GLU:HG3	2.16	0.45
48:G5:41:ILE:H	48:G5:41:ILE:HG12	1.52	0.45
49:H5:6:VAL:HG12	49:H5:56:VAL:HB	1.98	0.45
1:13:244:U:H4'	1:13:245:C:O5'	2.17	0.45
1:13:266:G:H8	1:13:266:G:H2'	1.63	0.45
1:13:267:C:H2'	1:13:268:C:O4'	2.17	0.45
1:13:447:G:H2'	1:13:485:G:N2	2.30	0.45
1:13:792:A:H4'	1:13:793:U:O5'	2.16	0.45
1:13:1032(A):G:H2'	1:13:1032(B):G:N7	2.31	0.45
1:13:1084:G:C5	1:13:1085:U:C4	3.05	0.45
1:13:1098:C:C2	1:13:1099:G:C8	3.04	0.45
1:13:1392:G:O2'	1:13:1393:U:H5'	2.15	0.45
2:1E:51:LEU:O	2:1E:55:PHE:HB2	2.17	0.45
13:4I:59:TYR:O	13:4I:63:THR:OG1	2.32	0.45
22:1K:37:A:N6	22:1K:38:MIA:H122	2.30	0.45
22:1K:38:MIA:H2'	22:1K:39:A:O4'	2.17	0.45
25:1H:37:C:O2'	25:1H:38:A:H5'	2.16	0.45
25:1H:330:A:H2	25:1H:1210:A:O2'	2.00	0.45
25:1H:886:C:H2'	25:1H:887:A:H4'	1.98	0.45
25:1H:1535:U:O2	25:1H:1535:U:H2'	2.15	0.45
25:1H:2436:G:C6	25:1H:2437:U:C4	3.05	0.45
26:16:42:C:O2'	30:41:67:LYS:HE3	2.16	0.45
26:16:42:C:O2'	30:41:67:LYS:O	2.23	0.45
26:16:63:G:C2	26:16:64:C:C2	3.05	0.45
27:11:17:THR:HG22	27:11:205:VAL:H	1.81	0.45
27:11:70:TRP:CD1	27:11:70:TRP:C	2.94	0.45
28:21:25:VAL:HA	28:21:182:LEU:O	2.16	0.45
32:61:6:LEU:O	32:61:7:GLU:HB3	2.15	0.45
38:A8:36:TYR:N	38:A8:36:TYR:CD1	2.85	0.45
40:C8:47:TYR:HD2	40:C8:48:ALA:N	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D8:4:ILE:HB	41:D8:40:LEU:HB2	1.97	0.45
52:P8:12:ARG:HH21	52:P8:44:PRO:HB3	1.80	0.45
53:Q8:43:GLN:NE2	53:Q8:43:GLN:HA	2.25	0.45
54:1G:8:A:C5	4:32:209:ARG:HA	2.51	0.45
54:1G:280:C:H3'	54:1G:281:G:H5'	1.97	0.45
54:1G:420:U:O2'	54:1G:423:G:O6	2.27	0.45
3:22:73:PRO:O	3:22:76:VAL:HG22	2.17	0.45
4:32:154:ASN:OD1	4:32:154:ASN:N	2.48	0.45
20:BA:14:LYS:HA	20:BA:17:ARG:CZ	2.46	0.45
21:1B:9:ARG:CZ	21:1B:10:ARG:HH22	2.29	0.45
56:2L:10:G:O5'	56:2L:10:G:H8	1.99	0.45
56:2L:60:A:H2'	56:2L:61:U:H5'	1.98	0.45
25:14:239:U:H5"	25:14:239:U:H6	1.81	0.45
25:14:303:U:H2'	25:14:304:G:H8	1.79	0.45
25:14:662:G:OP1	35:35:15:ARG:CZ	2.64	0.45
25:14:1011:G:C2	25:14:1013:C:C2	3.04	0.45
25:14:1344:G:H4'	25:14:1384:A:C5	2.52	0.45
25:14:1364:G:N7	47:F5:2:SER:HB2	2.30	0.45
25:14:1434:A:H2'	25:14:1435:G:C8	2.52	0.45
25:14:1480:G:C6	25:14:1482:U:C4	3.04	0.45
25:14:1799:G:O6	27:19:178:PRO:HD2	2.16	0.45
25:14:2872:G:C4	25:14:2873:A:C2	3.04	0.45
26:1J:56:G:H4'	26:1J:57:A:C8	2.52	0.45
29:39:194:MET:HB2	29:39:194:MET:HE3	1.67	0.45
34:25:75:SER:OG	34:25:76:ALA:N	2.49	0.45
35:35:50:ARG:HH11	35:35:50:ARG:CB	2.26	0.45
36:45:118:LEU:HD13	36:45:131:ILE:HG23	1.98	0.45
39:75:31:SER:OG	39:75:85:LYS:NZ	2.39	0.45
42:A5:24:ILE:HD12	42:A5:71:VAL:HG11	1.98	0.45
45:D5:4:ARG:CZ	45:D5:58:VAL:HG11	2.46	0.45
46:E5:25:ARG:HD3	46:E5:25:ARG:HA	1.67	0.45
51:J5:39:MET:HE3	51:J5:39:MET:HB3	1.83	0.45
53:M5:54:GLU:HG3	53:M5:57:ARG:CZ	2.46	0.45
1:13:128:G:O3'	17:8I:3:LYS:HE2	2.17	0.45
1:13:554:C:H2'	1:13:555:C:H6	1.82	0.45
1:13:580:U:C4	1:13:581:G:C5	3.04	0.45
1:13:828:A:H2'	1:13:829:G:O4'	2.16	0.45
1:13:1503:A:O2'	24:4K:13:A:C6	2.70	0.45
3:2E:70:VAL:HG12	3:2E:71:ALA:N	2.31	0.45
6:5E:14:LEU:HD23	6:5E:14:LEU:HA	1.80	0.45
9:8E:77:ILE:O	9:8E:81:ILE:HG12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:92:TYR:O	9:8E:96:LEU:HB2	2.16	0.45
10:1I:57:LYS:HG3	10:1I:57:LYS:O	2.16	0.45
25:1H:127:A:H5"	25:1H:128:C:C6	2.51	0.45
25:1H:189:G:H2'	25:1H:205:G:N2	2.31	0.45
25:1H:465:G:O5'	25:1H:465:G:H8	2.00	0.45
25:1H:784:A:C8	25:1H:792:G:C5	3.05	0.45
25:1H:1051:G:OP2	25:1H:1051:G:H8	2.00	0.45
25:1H:1170:G:N2	25:1H:1180:C:C2	2.85	0.45
25:1H:1274:A:N1	25:1H:1644:C:O2'	2.43	0.45
25:1H:1389:G:C2	25:1H:1399:C:O2	2.70	0.45
25:1H:1728:G:O6	25:1H:1730:U:H5"	2.16	0.45
25:1H:2323:G:H2'	25:1H:2324:C:O4'	2.17	0.45
29:31:8:GLN:N	29:31:8:GLN:OE1	2.34	0.45
30:41:43:LEU:C	30:41:45:GLU:N	2.71	0.45
31:51:157:TYR:CZ	31:51:172:LYS:HG3	2.52	0.45
35:78:79:ARG:HB3	35:78:110:TYR:CD2	2.51	0.45
40:C8:101:ARG:C	40:C8:103:PRO:HD3	2.41	0.45
54:1G:250:A:H1'	54:1G:251:G:OP2	2.16	0.45
54:1G:254:G:OP1	17:8A:67:LYS:O	2.34	0.45
54:1G:397:A:H3'	54:1G:397:A:N3	2.31	0.45
54:1G:976:G:OP1	14:5A:31:ARG:HB3	2.16	0.45
54:1G:1002:G:H2'	54:1G:1003:G:C8	2.52	0.45
54:1G:1300:G:O2'	54:1G:1301:U:H6	1.98	0.45
3:22:10:PHE:CE2	3:22:178:LEU:HD13	2.52	0.45
3:22:164:ARG:NH1	3:22:166:GLU:HG3	2.30	0.45
5:42:51:VAL:O	5:42:55:VAL:HG23	2.17	0.45
5:42:76:ILE:HG23	5:42:142:LEU:HD13	1.98	0.45
8:72:83:ILE:HB	8:72:137:VAL:HG13	1.98	0.45
9:82:48:GLU:N	9:82:49:PRO:HD2	2.31	0.45
12:3A:28:LYS:HD3	12:3A:33:ARG:NH1	2.32	0.45
12:3A:84:LEU:HD22	12:3A:85:ILE:H	1.82	0.45
13:4A:57:ARG:CZ	50:I5:34:GLU:HB2	2.47	0.45
15:6A:39:LEU:O	15:6A:39:LEU:HD22	2.16	0.45
21:1B:10:ARG:NH1	21:1B:10:ARG:HB2	2.32	0.45
55:3L:3:U:H2'	55:3L:4:G:C8	2.50	0.45
55:3L:49:A:H1'	55:3L:52:G:N2	2.29	0.45
25:14:256:A:H2'	25:14:257:A:C8	2.51	0.45
25:14:1043:C:H2'	25:14:1044:G:H5'	1.98	0.45
25:14:1174:A:N1	25:14:1175:U:O2'	2.49	0.45
25:14:1991:U:H2'	25:14:1992:G:H5"	1.98	0.45
25:14:2355:C:H5"	25:14:2356:C:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2416:C:O5'	25:14:2416:C:H6	1.99	0.45
27:19:267:SER:HA	27:19:270:ILE:HG12	1.99	0.45
30:49:67:LYS:HD2	50:I5:5:ILE:HG22	1.98	0.45
1:13:138:G:O5'	1:13:138:G:H8	1.99	0.45
1:13:246:A:C6	1:13:279:A:C2	3.04	0.45
1:13:448:A:P	1:13:485:G:H22	2.39	0.45
1:13:811:C:N3	60:13:1805:HOH:O	2.36	0.45
1:13:868:C:H2'	1:13:869:G:O4'	2.17	0.45
1:13:891:U:H2'	1:13:892:A:H8	1.81	0.45
1:13:1000:A:H4'	25:14:2137:C:OP1	2.17	0.45
1:13:1363:A:H1'	1:13:1365:G:N7	2.32	0.45
1:13:1442:G:C6	1:13:1446:A:N6	2.84	0.45
6:5E:5:GLU:HB3	6:5E:62:TRP:HE1	1.80	0.45
19:AI:41:VAL:HA	19:AI:44:MET:H	1.82	0.45
22:3K:18:G:N2	22:3K:66:G:H1'	2.32	0.45
25:1H:860:U:C5	25:1H:917:A:H2	2.34	0.45
25:1H:1523:U:O5'	25:1H:1523:U:H6	1.99	0.45
25:1H:1538:G:H2'	25:1H:1539:G:H8	1.81	0.45
25:1H:2127:G:N2	25:1H:2162:G:H1'	2.22	0.45
25:1H:2171:A:O2'	25:1H:2172:U:O4'	2.35	0.45
25:1H:2287:A:N6	25:1H:2344:U:N3	2.64	0.45
25:1H:2768:C:O2'	33:58:89:LYS:NZ	2.25	0.45
28:21:14:ILE:HA	28:21:14:ILE:HD12	1.67	0.45
29:31:125:LEU:HA	29:31:125:LEU:HD23	1.73	0.45
34:68:2:ILE:HD12	34:68:6:THR:HG21	1.98	0.45
37:98:25:ALA:O	37:98:26:LYS:C	2.60	0.45
44:G8:20:TYR:OH	44:G8:44:ILE:HG13	2.17	0.45
44:G8:67:LEU:HD12	44:G8:67:LEU:HA	1.85	0.45
45:H8:59:LEU:HD12	45:H8:69:THR:HG21	1.99	0.45
47:J8:91:LYS:O	47:J8:94:LEU:N	2.30	0.45
49:L8:12:PRO:O	49:L8:20:LYS:NZ	2.46	0.45
54:1G:578:C:OP1	60:1G:1714:HOH:O	2.20	0.45
54:1G:1127:G:N2	54:1G:1146:A:H62	2.14	0.45
54:1G:1414:U:H2'	54:1G:1415:G:C8	2.52	0.45
2:12:164:VAL:HG11	2:12:170:GLU:HG2	1.98	0.45
3:22:83:ARG:HG3	3:22:84:ILE:N	2.30	0.45
4:32:79:PHE:CE1	4:32:207:TYR:HD2	2.35	0.45
11:2A:121:PRO:HG2	11:2A:126:ARG:HG2	1.98	0.45
14:5A:29:ARG:NE	14:5A:40:CYS:SG	2.89	0.45
15:6A:78:TYR:OH	15:6A:82:ILE:HD12	2.16	0.45
25:14:651:G:H5'	53:M5:18:ALA:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:695:G:C2	25:14:768:G:C5	3.04	0.45
25:14:2303:G:C2'	25:14:2304:G:H5'	2.46	0.45
25:14:2695:C:H2'	25:14:2696:U:C6	2.50	0.45
25:14:2885:C:N3	25:14:2886:G:H1'	2.30	0.45
26:1J:61:G:C6	26:1J:62:C:C4	3.04	0.45
29:39:125:LEU:HD13	29:39:196:LEU:HD21	1.98	0.45
32:69:58:LEU:HD12	32:69:58:LEU:HA	1.75	0.45
33:15:34:LEU:HD21	33:15:120:LEU:CD1	2.46	0.45
34:25:7:TYR:CE1	34:25:20:MET:HB2	2.51	0.45
38:65:62:LYS:HB3	38:65:97:ARG:CD	2.46	0.45
45:D5:52:SER:O	45:D5:52:SER:OG	2.28	0.45
1:13:95:G:H3'	1:13:96:G:H8	1.82	0.45
1:13:111:G:H8	1:13:111:G:O5'	2.00	0.45
1:13:380:G:N2	1:13:384:G:C5	2.85	0.45
3:2E:48:TYR:O	3:2E:51:GLY:N	2.49	0.45
4:3E:188:LEU:HA	4:3E:189:PRO:HD3	1.59	0.45
7:6E:57:GLU:HA	7:6E:58:PRO:HD2	1.83	0.45
7:6E:150:ALA:HB2	11:2I:50:TYR:OH	2.17	0.45
12:3I:15:ARG:O	12:3I:16:GLU:HB3	2.16	0.45
13:4I:65:LYS:N	50:M8:50:VAL:HG11	2.32	0.45
17:8I:54:GLY:HA3	17:8I:80:GLY:HA2	1.98	0.45
23:2K:19:G:C2	23:2K:59:A:C5	3.03	0.45
22:3K:48:C:C4	22:3K:49:A:H1'	2.51	0.45
25:1H:289:A:H61	25:1H:351:G:H1'	1.82	0.45
25:1H:451:C:H5'	60:1H:3692:HOH:O	2.16	0.45
25:1H:654(M):C:H3'	25:1H:654(N):G:C8	2.52	0.45
25:1H:1142(A):A:C4	25:1H:1144:G:C8	3.04	0.45
25:1H:1639:U:C5'	25:1H:1639:U:H6	2.28	0.45
25:1H:1858:G:H8	25:1H:1858:G:OP2	2.00	0.45
25:1H:2309:A:C4	25:1H:2310:A:C8	3.05	0.45
25:1H:2592:G:C6	25:1H:2593:U:N3	2.85	0.45
25:1H:2744:G:C8	25:1H:2755:C:C6	3.05	0.45
28:21:55:ASN:HD22	28:21:59:VAL:HG23	1.81	0.45
44:G8:49:VAL:HG21	44:G8:55:TYR:HE1	1.80	0.45
54:1G:1115:C:H1'	14:5A:61:TRP:HB2	1.99	0.45
54:1G:1149:C:OP1	9:82:9:ARG:HD3	2.17	0.45
54:1G:1245:A:H2'	54:1G:1246:C:C6	2.51	0.45
54:1G:1299:A:C6	54:1G:1301:U:C2	3.05	0.45
3:22:22:TRP:HB2	3:22:59:ARG:HB2	1.98	0.45
4:32:11:LEU:HD13	4:32:66:ARG:NE	2.32	0.45
5:42:47:LYS:HE2	5:42:47:LYS:HB2	1.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:137:LYS:HB3	7:62:137:LYS:NZ	2.32	0.45
9:82:112:LYS:HD2	9:82:112:LYS:C	2.41	0.45
10:1A:47:PHE:O	10:1A:63:PHE:N	2.32	0.45
13:4A:97:PRO:HB2	13:4A:101:GLN:HG3	1.98	0.45
14:5A:46:GLU:O	14:5A:49:HIS:HB2	2.16	0.45
55:1L:29:C:H2'	55:1L:30:A:C8	2.52	0.45
25:14:74:A:C5'	25:14:74:A:H8	2.30	0.45
25:14:297:C:N4	25:14:298:G:C2	2.84	0.45
25:14:857:C:H2'	25:14:858:U:C6	2.51	0.45
25:14:918:A:C5	25:14:919:G:H1'	2.51	0.45
25:14:1063:G:H1	25:14:1074:G:N2	2.14	0.45
25:14:2512:C:H2'	25:14:2513:G:O4'	2.17	0.45
25:14:2599:G:OP2	27:19:236:GLY:N	2.49	0.45
29:39:122:LYS:HD2	29:39:191:ARG:HE	1.81	0.45
30:49:95:ARG:HG2	30:49:96:ARG:HD3	1.97	0.45
31:59:119:GLU:HB3	31:59:140:LYS:NZ	2.31	0.45
44:C5:57:GLN:HB3	44:C5:58:GLY:H	1.52	0.45
48:G5:25:VAL:HG12	48:G5:60:LEU:HD23	1.99	0.45
1:13:240:C:H2'	1:13:241:C:H6	1.82	0.45
1:13:686:U:O4	1:13:703:G:H1'	2.16	0.45
1:13:1455:G:H8	1:13:1455:G:O5'	2.00	0.45
2:1E:108:ILE:HD12	2:1E:111:ARG:HB2	1.98	0.45
4:3E:173:TRP:CG	4:3E:189:PRO:HG3	2.51	0.45
14:5I:24:CYS:C	14:5I:26:ARG:H	2.23	0.45
15:6I:18:PHE:HD1	15:6I:19:PRO:O	2.00	0.45
17:8I:19:VAL:HG23	17:8I:44:ALA:HB3	1.98	0.45
18:9I:40:LEU:HD23	18:9I:40:LEU:HA	1.77	0.45
19:AI:6:LYS:HD2	19:AI:6:LYS:N	2.32	0.45
22:3K:14:A:H3'	22:3K:15:G:C5'	2.47	0.45
25:1H:1001:A:H2'	25:1H:1002:G:O4'	2.16	0.45
25:1H:1464:C:O2'	25:1H:1528:A:H8	1.98	0.45
25:1H:1784:A:H4'	25:1H:1785:A:O5'	2.16	0.45
25:1H:2070:G:C2	25:1H:2442:C:C2	3.05	0.45
27:11:65:ILE:HD11	27:11:67:PHE:CE1	2.51	0.45
30:41:16:ARG:N	30:41:17:PRO:HD2	2.32	0.45
31:51:83:TYR:CG	31:51:84:SER:N	2.85	0.45
32:61:5:LEU:HA	32:61:5:LEU:HD23	1.69	0.45
33:58:77:GLY:H	33:58:78:TYR:HD1	1.64	0.45
38:A8:15:ARG:HD2	38:A8:88:ASP:OD2	2.17	0.45
40:C8:32:PHE:O	40:C8:32:PHE:CG	2.69	0.45
41:D8:67:GLY:O	41:D8:88:ARG:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:H8:126:VAL:HG12	45:H8:163:LEU:HD23	1.99	0.45
54:1G:446:G:H2'	54:1G:447:G:O4'	2.17	0.45
54:1G:957:U:H1'	54:1G:960:U:H5	1.82	0.45
10:1A:45:ARG:O	10:1A:65:LEU:N	2.40	0.45
13:4A:57:ARG:HH12	50:I5:17:GLY:HA3	1.81	0.45
13:4A:77:ASN:O	13:4A:80:ARG:HB2	2.16	0.45
25:14:459:U:H5"	52:L5:40:TRP:CD2	2.52	0.45
25:14:470:A:H2'	25:14:471:A:O4'	2.16	0.45
25:14:817:C:C2	25:14:818:G:C8	3.05	0.45
25:14:1324:G:H4'	25:14:1616:A:C2	2.51	0.45
25:14:1441:G:H2'	25:14:1442:G:H8	1.81	0.45
25:14:1757:U:N3	25:14:1762:A:H2	2.04	0.45
28:29:81:ILE:HG22	28:29:84:PHE:HB3	1.99	0.45
32:69:75:LEU:HD21	32:69:141:LYS:NZ	2.32	0.45
42:A5:27:LYS:HD2	42:A5:31:GLU:OE2	2.17	0.45
46:E5:36:ILE:HD13	46:E5:36:ILE:C	2.41	0.45
49:H5:40:THR:HG23	49:H5:43:ILE:HG13	1.99	0.45
1:13:116:A:H61	1:13:313:A:H1'	1.82	0.45
1:13:692:U:O2'	1:13:694:A:N7	2.47	0.45
1:13:762:C:H2'	1:13:763:G:H8	1.82	0.45
1:13:1352:C:H2'	1:13:1353:G:C8	2.52	0.45
1:13:1364:U:O2'	1:13:1365:G:H5'	2.16	0.45
6:5E:96:PRO:HB3	18:9I:30:ASP:OD2	2.16	0.45
7:6E:104:LEU:HD13	7:6E:104:LEU:HA	1.83	0.45
16:7I:3:LYS:HG3	16:7I:24:ALA:HB2	1.98	0.45
16:7I:19:ILE:HB	16:7I:36:ILE:O	2.17	0.45
17:8I:57:VAL:HG23	17:8I:58:GLU:N	2.31	0.45
22:3K:25:G:H2'	22:3K:26:G:H8	1.82	0.45
25:1H:7:G:N2	25:1H:8:A:N3	2.65	0.45
25:1H:200:U:O2	25:1H:386:G:N2	2.50	0.45
25:1H:722:A:C2	25:1H:723:G:C4	3.05	0.45
25:1H:877:U:H3	25:1H:899:A:H2	1.64	0.45
25:1H:1230:C:H2'	25:1H:1231:G:C8	2.52	0.45
25:1H:1263:U:H2'	25:1H:1264:G:C8	2.52	0.45
25:1H:1904:G:O2'	25:1H:1928:A:N1	2.47	0.45
25:1H:2053:G:H5'	28:21:144:ARG:O	2.17	0.45
25:1H:2473:U:C2'	25:1H:2474:C:H5'	2.47	0.45
25:1H:2728:U:H2'	25:1H:2729:G:C8	2.51	0.45
26:16:42:C:O2	30:41:93:THR:N	2.44	0.45
29:31:122:LYS:HD3	29:31:122:LYS:HA	1.53	0.45
30:41:43:LEU:HD12	30:41:90:LEU:HD22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:60:MET:HE2	35:78:60:MET:HB2	1.68	0.45
40:C8:86:ALA:C	40:C8:88:ILE:H	2.24	0.45
53:Q8:5:LYS:O	53:Q8:6:THR:C	2.58	0.45
54:1G:193:C:H2'	54:1G:194:C:H6	1.82	0.45
54:1G:272:C:H2'	54:1G:273:A:C8	2.52	0.45
54:1G:848:C:H2'	54:1G:849:C:H6	1.82	0.45
54:1G:1171:G:H2'	54:1G:1172:C:C6	2.52	0.45
54:1G:1239:A:H4'	54:1G:1240:U:C5'	2.45	0.45
54:1G:1244:C:OP2	21:1B:9:ARG:HG2	2.17	0.45
3:22:51:GLY:O	3:22:70:VAL:HG13	2.16	0.45
8:72:120:THR:OG1	8:72:121:ASP:N	2.49	0.45
17:8A:6:LEU:HD23	17:8A:6:LEU:HA	1.81	0.45
55:3L:26:G:C2	55:3L:27:A:H1'	2.51	0.45
25:14:26:G:OP1	42:A5:80:PRO:HB3	2.17	0.45
25:14:470:A:C5'	25:14:470:A:H8	2.30	0.45
25:14:481:G:OP2	44:C5:47:LYS:HB2	2.17	0.45
25:14:527:C:H4'	25:14:528:A:O5'	2.17	0.45
25:14:1199:U:H1'	40:85:4:ALA:HB2	1.99	0.45
25:14:1628:G:H2'	25:14:1629:U:C6	2.51	0.45
25:14:2287:A:C2	25:14:2346:A:C2	3.03	0.45
25:14:2420:C:N4	53:M5:31:HIS:O	2.50	0.45
29:39:132:VAL:HG22	29:39:133:ASN:H	1.80	0.45
31:59:59:ARG:HG2	31:59:62:LYS:HE2	1.98	0.45
32:69:11:ASN:O	32:69:12:LEU:HD12	2.16	0.45
35:35:113:LYS:HD3	35:35:115:LEU:HD21	1.99	0.45
36:45:69:PHE:CD1	36:45:70:PRO:HD2	2.51	0.45
40:85:104:GLN:HE21	41:95:44:LYS:HD2	1.82	0.45
1:13:22:G:H4'	1:13:885:G:C8	2.51	0.45
1:13:406:G:N7	1:13:495:A:O2'	2.35	0.45
1:13:834:C:C2	1:13:853:G:C2	3.05	0.45
1:13:973:G:H3'	1:13:974:A:H5"	1.99	0.45
2:1E:112:VAL:HG22	2:1E:149:LEU:HD13	1.99	0.45
8:7E:9:MET:O	8:7E:12:ARG:N	2.49	0.45
11:2I:114:VAL:HA	11:2I:115:PRO:HD2	1.80	0.45
15:6I:17:ARG:HD3	15:6I:26:GLU:HG3	1.99	0.45
22:1K:8:4SU:H5'	22:1K:9:U:OP2	2.17	0.45
22:3K:20:C:H5"	22:3K:68:A:H62	1.82	0.45
25:1H:57:C:H2'	25:1H:58:G:O4'	2.17	0.45
25:1H:468:G:N7	52:P8:39:ARG:NH2	2.64	0.45
25:1H:724:U:H2'	25:1H:725:G:O4'	2.17	0.45
25:1H:1060:U:O2	25:1H:1088:A:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1087:G:C5	25:1H:1089:G:H1'	2.52	0.45
25:1H:1387:C:C2	25:1H:1388:G:C8	3.05	0.45
25:1H:1492:G:N2	25:1H:1499:C:O2	2.50	0.45
25:1H:1899:G:N2	25:1H:1902:C:N4	2.52	0.45
25:1H:2235:G:H2'	25:1H:2236:C:C6	2.52	0.45
25:1H:2743:C:H2'	25:1H:2744:G:O4'	2.17	0.45
26:16:94:C:N4	26:16:95:U:O4	2.50	0.45
29:31:175:THR:O	29:31:176:LEU:HD12	2.17	0.45
30:41:108:ASN:HD22	50:M8:21:VAL:HG11	1.82	0.45
31:51:6:ARG:O	31:51:69:ARG:HB2	2.15	0.45
31:51:10:PRO:C	31:51:12:PRO:HD3	2.42	0.45
31:51:121:ILE:HA	31:51:121:ILE:HD13	1.71	0.45
34:68:43:VAL:HG12	34:68:54:GLU:HA	1.99	0.45
34:68:63:VAL:HG12	34:68:106:LEU:HD11	1.98	0.45
38:A8:30:ARG:HH21	38:A8:92:TYR:HD1	1.65	0.45
54:1G:1442:G:O2'	54:1G:1443:G:OP1	2.30	0.45
3:22:79:ARG:NH2	3:22:82:GLU:HB2	2.32	0.45
3:22:162:GLN:NE2	57:4L:23:A:N7	2.53	0.45
4:32:106:TYR:HE1	4:32:112:VAL:O	2.00	0.45
4:32:199:ASN:HB3	4:32:202:LEU:HG	1.99	0.45
16:7A:40:ASP:HA	16:7A:41:PRO:HD2	1.80	0.45
55:1L:58:G:H1	55:1L:74:C:H42	1.63	0.45
25:14:275:G:O6	25:14:362:U:N3	2.50	0.45
25:14:445:C:OP1	40:85:2:PRO:HA	2.17	0.45
25:14:755:C:H2'	25:14:756:C:C6	2.52	0.45
25:14:1019:U:OP1	25:14:1035:U:O2'	2.23	0.45
25:14:1288:U:O4	37:55:106:GLY:HA3	2.17	0.45
25:14:1421:G:C2	25:14:1422:G:C8	3.04	0.45
25:14:1684:C:C2	25:14:1705:G:N2	2.85	0.45
25:14:1812:A:H2'	25:14:1813:G:C8	2.51	0.45
25:14:2233:U:H2'	25:14:2234:G:C8	2.52	0.45
25:14:2758:A:C2	25:14:2759:G:H1'	2.51	0.45
28:29:112:GLY:O	28:29:159:HIS:HA	2.17	0.45
28:29:116:VAL:HG21	28:29:122:PHE:CE2	2.52	0.45
35:35:15:ARG:NH2	35:35:17:LYS:HE3	2.31	0.45
38:65:13:ARG:HG2	38:65:14:VAL:N	2.31	0.45
39:75:29:ARG:CZ	39:75:29:ARG:HB2	2.45	0.45
39:75:31:SER:HB3	39:75:42:ILE:CG2	2.47	0.45
48:G5:17:SER:O	48:G5:20:GLU:HG3	2.17	0.45
1:13:265:G:N2	1:13:267:C:H5'	2.32	0.45
1:13:1142:G:H3'	1:13:1143:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1434:A:H2'	1:13:1435:G:O4'	2.17	0.45
4:3E:112:VAL:HG12	4:3E:116:GLN:OE1	2.17	0.45
6:5E:55:ASP:HB2	6:5E:86:ARG:HH12	1.80	0.45
10:1I:4:ILE:HG23	10:1I:99:LYS:O	2.17	0.45
17:8I:68:ARG:H	17:8I:70:ARG:NH1	2.15	0.45
17:8I:75:ARG:NH1	17:8I:76:LEU:O	2.50	0.45
23:2K:17:C:OP2	23:2K:18:C:O2'	2.22	0.45
25:1H:699:A:H2'	25:1H:700:G:O4'	2.17	0.45
25:1H:858:U:O2	25:1H:2268:A:H2'	2.17	0.45
25:1H:1045:A:H2	25:1H:1111:A:N7	2.15	0.45
25:1H:1329:U:H5"	25:1H:1330:C:C5	2.52	0.45
25:1H:2104:G:O6	25:1H:2185:C:N4	2.47	0.45
25:1H:2749:A:H5"	31:51:4:ILE:HD12	1.99	0.45
29:31:188:ARG:HG3	29:31:188:ARG:H	1.60	0.45
31:51:125:VAL:HG12	31:51:127:GLU:O	2.16	0.45
36:88:79:LEU:O	36:88:81:VAL:HG22	2.17	0.45
39:B8:21:GLU:H	39:B8:21:GLU:HG3	1.56	0.45
39:B8:107:ASP:OD1	39:B8:107:ASP:N	2.31	0.45
43:F8:61:GLY:HA3	43:F8:73:ARG:O	2.17	0.45
46:I8:32:ARG:HE	46:I8:32:ARG:HB3	1.56	0.45
54:1G:201:C:H4'	54:1G:208:U:OP1	2.17	0.45
54:1G:987:G:O5'	54:1G:987:G:H8	2.00	0.45
54:1G:1108:G:H5'	3:22:176:HIS:ND1	2.32	0.45
54:1G:1248:A:N3	9:82:70:LYS:NZ	2.39	0.45
54:1G:1260:C:H3'	54:1G:1260:C:H6	1.81	0.45
54:1G:1326:C:OP1	21:1B:17:THR:OG1	2.21	0.45
4:32:78:LEU:HD23	4:32:78:LEU:HA	1.86	0.45
13:4A:31:LYS:HA	13:4A:34:LEU:HD12	1.98	0.45
19:AA:66:MET:HE3	19:AA:67:VAL:O	2.16	0.45
25:14:246:C:N4	53:M5:8:LYS:HG3	2.32	0.45
25:14:451:C:N4	25:14:454:A:H5'	2.31	0.45
25:14:686:G:OP1	52:L5:11:LYS:NZ	2.49	0.45
25:14:1677:A:H2'	25:14:1678:G:O4'	2.17	0.45
25:14:1858:G:H1'	25:14:1884:A:H62	1.81	0.45
28:29:98:PRO:HG3	28:29:174:ASP:HA	1.99	0.45
29:39:123:LEU:HB2	29:39:192:LEU:HB2	1.99	0.45
30:49:97:ASP:HA	30:49:100:TRP:CD1	2.52	0.45
31:59:35:VAL:HG22	31:59:71:LEU:HD12	1.97	0.45
35:35:146:VAL:HG22	35:35:147:LEU:HD13	1.99	0.45
36:45:101:ARG:HG3	36:45:102:VAL:N	2.32	0.45
37:55:67:LEU:HD13	37:55:76:VAL:HG21	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:J5:37:LYS:O	51:J5:37:LYS:HG2	2.16	0.45
1:13:78:G:C6	1:13:79:G:H1'	2.52	0.44
1:13:130:A:OP2	17:8I:63:ARG:NE	2.50	0.44
1:13:190:G:O2'	1:13:191(A):G:OP2	2.34	0.44
1:13:373:A:O2'	1:13:374:A:H5'	2.17	0.44
1:13:444:C:H42	1:13:490:G:H1	1.65	0.44
1:13:827:U:C5	1:13:870:U:C4	3.05	0.44
1:13:1053:G:N7	1:13:1199:U:H3'	2.33	0.44
4:3E:108:LEU:HD23	4:3E:110:PHE:CE2	2.52	0.44
6:5E:24:GLU:HG2	6:5E:28:ARG:NE	2.32	0.44
8:7E:29:SER:HG	8:7E:32:LYS:H	1.58	0.44
12:3I:77:LEU:HD23	12:3I:77:LEU:HA	1.73	0.44
25:1H:874:G:H2'	25:1H:875:G:O4'	2.17	0.44
25:1H:918:A:H8	25:1H:918:A:O5'	1.99	0.44
25:1H:956:G:N2	25:1H:959:A:H3'	2.32	0.44
25:1H:1003:G:N2	25:1H:1004:C:C2	2.85	0.44
25:1H:1167:U:C2	25:1H:1183:G:N2	2.85	0.44
25:1H:1265:A:OP1	25:1H:1265:A:C8	2.68	0.44
25:1H:1453:A:O2'	25:1H:1454:U:H2'	2.16	0.44
25:1H:1509:C:N4	25:1H:1511:A:H62	2.15	0.44
25:1H:1542:G:C8	25:1H:1543:A:H2'	2.51	0.44
25:1H:2150:U:H2'	25:1H:2151:G:C8	2.52	0.44
25:1H:2582:G:C2	25:1H:2583:G:C8	3.05	0.44
25:1H:2636:U:H3	25:1H:2782:G:H1	1.65	0.44
25:1H:2774:C:H2'	25:1H:2775:A:O4'	2.17	0.44
26:16:94:C:C4	26:16:95:U:C4	3.05	0.44
28:21:201:THR:HG22	28:21:202:LYS:N	2.32	0.44
30:41:26:GLN:HG3	30:41:27:ASN:N	2.32	0.44
33:58:5:VAL:HA	33:58:6:PRO:HD3	1.74	0.44
35:78:85:LEU:O	35:78:88:LEU:HD23	2.16	0.44
38:A8:94:TYR:CE1	38:A8:99:LYS:HG3	2.51	0.44
39:B8:31:SER:HB2	39:B8:84:GLN:HB3	1.98	0.44
41:D8:9:GLY:O	41:D8:10:LYS:HG3	2.17	0.44
44:G8:40:GLU:C	44:G8:42:VAL:HG13	2.42	0.44
44:G8:76:CYS:HA	44:G8:77:PRO:HD2	1.55	0.44
44:G8:82:PRO:HG3	44:G8:97:ARG:HB3	1.99	0.44
54:1G:66:G:C2	54:1G:67:C:C6	3.05	0.44
54:1G:358:U:H2'	54:1G:359:U:H6	1.82	0.44
54:1G:513:C:H42	54:1G:538:G:H1	1.64	0.44
54:1G:571:U:O2	54:1G:918:A:H5'	2.17	0.44
54:1G:842:C:O3'	54:1G:843:U:H6	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:90:GLU:HA	3:22:93:LYS:HB2	1.99	0.44
7:62:37:ASN:ND2	9:82:41:VAL:HG23	2.32	0.44
7:62:71:PRO:HD3	7:62:103:TRP:CZ3	2.51	0.44
8:72:44:PHE:HD1	8:72:80:ILE:HG13	1.80	0.44
8:72:87:SER:HB2	8:72:93:VAL:HB	2.00	0.44
8:72:136:GLU:HG3	8:72:136:GLU:O	2.16	0.44
12:3A:69:TYR:CE2	12:3A:71:PRO:HB3	2.52	0.44
25:14:288:C:H2'	25:14:289:A:C8	2.52	0.44
25:14:530:G:C6	25:14:2022:U:H5"	2.52	0.44
25:14:959:A:C6	25:14:960:A:N1	2.85	0.44
25:14:975:G:C5	25:14:976:C:C5	3.05	0.44
25:14:996:A:H2'	25:14:997:G:H8	1.82	0.44
25:14:1007:C:H5"	33:15:35:ARG:HH11	1.83	0.44
25:14:1131:G:C2	25:14:1132:A:C4	3.05	0.44
25:14:1342:A:H2	25:14:1602:U:N3	2.11	0.44
25:14:1387:C:C2	25:14:1388:G:C8	3.04	0.44
25:14:1810:A:H2'	25:14:1811:G:O4'	2.17	0.44
25:14:2359:C:H2'	25:14:2360:A:C8	2.52	0.44
25:14:2465:C:O2	25:14:2486:G:C2	2.70	0.44
28:29:37:ARG:HD3	28:29:44:TYR:CZ	2.52	0.44
28:29:119:ARG:HG2	28:29:160:TYR:HB2	1.99	0.44
28:29:170:LEU:HD11	28:29:185:LYS:O	2.17	0.44
29:39:32:LEU:HB3	29:39:112:MET:HE1	1.99	0.44
29:39:150:GLY:HA2	29:39:172:TRP:CE3	2.53	0.44
32:69:109:ILE:H	32:69:109:ILE:HD13	1.83	0.44
34:25:68:GLU:OE2	34:25:78:ARG:HD3	2.17	0.44
36:45:22:LYS:HG2	36:45:23:GLY:CA	2.46	0.44
40:85:100:VAL:O	40:85:102:GLU:N	2.48	0.44
42:A5:59:VAL:HA	42:A5:64:MET:H	1.81	0.44
44:C5:90:LEU:HA	44:C5:91:GLU:HA	1.72	0.44
1:13:7:G:H5'	1:13:298:A:O4'	2.16	0.44
1:13:580:U:O4	1:13:581:G:C6	2.70	0.44
1:13:730:G:C6	1:13:731:G:H1'	2.52	0.44
1:13:992:U:O2'	1:13:993:G:OP2	2.26	0.44
1:13:1193:G:C2'	1:13:1194:U:H5'	2.47	0.44
1:13:1213:A:C8	1:13:1215:G:C6	3.05	0.44
1:13:1247:U:H2'	1:13:1248:A:O4'	2.17	0.44
1:13:1256:A:H4'	1:13:1258:G:C4	2.52	0.44
4:3E:176:LEU:HD12	4:3E:182:LYS:O	2.17	0.44
23:2K:63:C:O2	23:2K:64:G:C8	2.70	0.44
22:3K:38:MIA:H153	22:3K:38:MIA:H122	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:304:G:H2'	25:1H:305:U:C6	2.52	0.44
25:1H:638:G:H2'	25:1H:639:U:O4'	2.17	0.44
25:1H:1355:G:O6	60:1H:3588:HOH:O	2.21	0.44
25:1H:1559:G:O2'	25:1H:1560:G:H5'	2.16	0.44
25:1H:1638:C:H5"	25:1H:2710:C:O2'	2.17	0.44
25:1H:1766:U:O2'	25:1H:1767:C:H5'	2.17	0.44
25:1H:2128:C:H2'	25:1H:2129:C:C6	2.52	0.44
25:1H:2379:G:H4'	38:A8:21:THR:HG21	1.99	0.44
25:1H:2439:A:H5'	25:1H:2439:A:H8	1.82	0.44
25:1H:2469:A:O2'	36:88:56:ARG:NE	2.51	0.44
25:1H:2470:G:H5'	36:88:56:ARG:NH2	2.33	0.44
25:1H:2854:G:C2	25:1H:2855:C:C2	3.05	0.44
26:16:29:A:H2'	26:16:30:C:O4'	2.18	0.44
31:51:4:ILE:HG13	31:51:6:ARG:CZ	2.47	0.44
35:78:36:LYS:HD3	35:78:39:LYS:HB3	1.99	0.44
37:98:12:ARG:HG2	37:98:12:ARG:HH11	1.83	0.44
49:L8:32:GLN:OE1	49:L8:32:GLN:N	2.50	0.44
54:1G:7:G:H5'	54:1G:298:A:O4'	2.18	0.44
54:1G:197:A:H3'	54:1G:197:A:OP2	2.17	0.44
54:1G:456:C:N4	54:1G:476:G:H1	2.14	0.44
54:1G:841:U:H4'	54:1G:842:C:C5	2.52	0.44
54:1G:992:U:H3	54:1G:1044:A:H62	1.65	0.44
54:1G:1234:C:H1'	54:1G:1364:U:O2	2.17	0.44
54:1G:1307:U:O5'	54:1G:1307:U:H6	2.00	0.44
54:1G:1324:A:C5	54:1G:1325:C:C4	3.06	0.44
54:1G:1360:A:H2'	54:1G:1361:G:O4'	2.16	0.44
5:42:80:ILE:HG22	8:72:104:ARG:NH1	2.33	0.44
12:3A:55:VAL:HG23	12:3A:69:TYR:HA	1.99	0.44
17:8A:45:HIS:HB2	17:8A:65:ILE:HD13	1.98	0.44
55:3L:20:C:O2'	55:3L:22:A:O5'	2.34	0.44
25:14:270(E):G:O2'	25:14:270(F):U:H5'	2.17	0.44
25:14:1288:U:C2	25:14:1327:C:O2	2.71	0.44
25:14:1450:C:H2'	25:14:1451:C:C6	2.52	0.44
25:14:1790:C:H2'	25:14:1791:A:C5	2.52	0.44
25:14:2191:G:HO2'	25:14:2192:G:P	2.37	0.44
25:14:2687:U:O5'	25:14:2687:U:H6	2.01	0.44
26:1J:2:C:H2'	26:1J:3:C:C6	2.52	0.44
27:19:26:LYS:NZ	27:19:30:GLU:HB2	2.32	0.44
38:65:14:VAL:O	38:65:18:ILE:HG13	2.17	0.44
38:65:35:ILE:CG2	38:65:69:VAL:HG11	2.48	0.44
39:75:28:VAL:HG12	39:75:88:ILE:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C5:50:ARG:HG2	44:C5:53:PRO:HG3	2.00	0.44
1:13:76:G:H1'	1:13:95:G:N1	2.32	0.44
1:13:77:C:C2	1:13:78:G:N7	2.85	0.44
1:13:186(E):C:N4	1:13:191(B):G:H1	2.07	0.44
1:13:639:G:H2'	1:13:640:A:H8	1.82	0.44
1:13:1192:C:C5	1:13:1193:G:C8	3.05	0.44
4:3E:128:VAL:O	4:3E:131:ARG:HB2	2.17	0.44
4:3E:150:GLU:CD	4:3E:153:ARG:HE	2.26	0.44
7:6E:15:ASP:O	7:6E:19:GLY:HA2	2.16	0.44
7:6E:142:GLU:O	7:6E:146:GLU:HG2	2.16	0.44
10:1I:16:LEU:HD11	10:1I:70:ARG:HB2	2.00	0.44
15:6I:70:LEU:HD12	15:6I:70:LEU:HA	1.75	0.44
17:8I:86:GLU:O	17:8I:90:ILE:HG12	2.16	0.44
19:AI:40:ILE:HG22	19:AI:67:VAL:O	2.17	0.44
22:1K:46:G:H2'	22:1K:47:U:O4'	2.17	0.44
25:1H:311:A:C6	25:1H:328:U:C4	3.06	0.44
25:1H:812:C:H5"	25:1H:1250:G:O2'	2.17	0.44
25:1H:1161:C:O5'	25:1H:1161:C:H6	2.01	0.44
25:1H:1243:G:C3'	35:78:7:ARG:HH21	2.30	0.44
25:1H:1567:A:C2	27:11:26:LYS:NZ	2.86	0.44
25:1H:1782:C:P	60:1H:3523:HOH:O	2.72	0.44
28:21:24:THR:OG1	28:21:186:GLY:O	2.34	0.44
30:41:121:ASN:HD22	30:41:181:ARG:HH12	1.65	0.44
32:61:79:ILE:HA	32:61:80:PRO:HD2	1.85	0.44
34:68:59:LYS:NZ	34:68:89:ASN:OD1	2.50	0.44
41:D8:1:MET:HG2	41:D8:43:GLU:OE1	2.16	0.44
41:D8:65:GLY:N	41:D8:91:TYR:O	2.50	0.44
45:H8:152:ALA:HB1	45:H8:163:LEU:HD11	1.98	0.44
47:J8:83:GLU:O	47:J8:86:SER:OG	2.29	0.44
54:1G:167:G:H2'	54:1G:168:G:C8	2.49	0.44
54:1G:188:U:O2'	54:1G:189:U:H5'	2.17	0.44
54:1G:1065:U:C5	54:1G:1190:G:H1'	2.52	0.44
3:22:131:ARG:HH21	3:22:166:GLU:CG	2.29	0.44
3:22:175:LEU:H	3:22:175:LEU:HD12	1.83	0.44
5:42:15:ARG:NH2	57:4L:25:A:C8	2.85	0.44
5:42:93:PRO:HG3	8:72:105:ARG:HG3	1.99	0.44
6:52:19:LEU:HD11	6:52:59:TYR:CE1	2.52	0.44
9:82:18:PHE:O	9:82:19:LEU:HD23	2.18	0.44
25:14:180:G:H5"	25:14:181:A:OP1	2.17	0.44
25:14:469:G:O6	52:L5:39:ARG:NH1	2.51	0.44
25:14:1053:C:H2'	25:14:1054:A:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1111:A:H4'	31:59:3:ARG:HH11	1.81	0.44
25:14:1156:A:O5'	25:14:1156:A:H8	2.01	0.44
25:14:1198:U:H2'	25:14:1199:U:C6	2.52	0.44
25:14:1774:C:O5'	25:14:1774:C:H6	1.99	0.44
25:14:2287:A:C2	25:14:2289:G:C8	3.05	0.44
25:14:2749:A:H5'	31:59:6:ARG:NH1	2.33	0.44
28:29:33:VAL:HG12	28:29:89:ASP:HA	1.99	0.44
28:29:178:GLU:H	28:29:178:GLU:CD	2.25	0.44
31:59:117:PRO:HA	31:59:118:PRO:HD2	1.93	0.44
33:15:120:LEU:C	33:15:121:LYS:HD2	2.43	0.44
33:15:128:HIS:HB2	33:15:129:PRO:HD2	1.99	0.44
34:25:87:ILE:HG13	34:25:91:LEU:HA	1.99	0.44
38:65:39:ILE:HD12	38:65:85:VAL:HG11	1.99	0.44
42:A5:106:ILE:HG13	42:A5:106:ILE:O	2.17	0.44
45:D5:5:LEU:HD23	45:D5:6:LYS:N	2.33	0.44
45:D5:11:GLU:CD	45:D5:12:GLY:H	2.25	0.44
50:I5:24:THR:HB	50:I5:25:TYR:H	1.63	0.44
1:13:95:G:H3'	1:13:96:G:C8	2.53	0.44
1:13:115:G:C2	1:13:289:G:N7	2.85	0.44
1:13:654:G:C4	1:13:753:A:C6	3.05	0.44
1:13:1176:A:H2'	1:13:1177:G:H4'	1.98	0.44
10:1I:48:THR:HG23	10:1I:62:HIS:HB3	1.99	0.44
13:4I:94:ARG:HD3	13:4I:94:ARG:HA	1.72	0.44
17:8I:9:VAL:O	17:8I:21:VAL:HA	2.17	0.44
25:1H:390:A:C6	35:78:71:VAL:HG21	2.52	0.44
25:1H:821:A:H2'	25:1H:946:G:H5"	1.99	0.44
25:1H:997:G:O2'	25:1H:998:C:H5'	2.18	0.44
25:1H:1051:G:C6	25:1H:1052:C:N3	2.86	0.44
25:1H:1063:G:P	25:1H:1063:G:H8	2.40	0.44
25:1H:1530:G:H22	25:1H:1542:G:H1'	1.83	0.44
25:1H:2294:C:H5"	38:A8:13:ARG:HH12	1.82	0.44
25:1H:2309:A:C5	25:1H:2310:A:N7	2.85	0.44
25:1H:2592:G:C6	25:1H:2593:U:C4	3.05	0.44
28:21:105:THR:HG21	28:21:164:ARG:CZ	2.48	0.44
30:41:14:GLU:O	30:41:17:PRO:HG2	2.17	0.44
38:A8:49:VAL:HG11	38:A8:77:ALA:HA	1.98	0.44
39:B8:26:ASP:HB3	39:B8:92:GLY:H	1.83	0.44
41:D8:19:LYS:HG2	41:D8:95:LEU:HD23	2.00	0.44
45:H8:44:PHE:C	45:H8:44:PHE:CD2	2.95	0.44
45:H8:98:MET:O	45:H8:125:LEU:HA	2.17	0.44
54:1G:149:A:H2'	54:1G:150:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:468:A:C5	54:1G:474:G:H1'	2.53	0.44
54:1G:977:A:H2'	54:1G:978:A:H5'	1.99	0.44
7:62:62:PHE:HD1	7:62:124:LEU:HD11	1.82	0.44
7:62:143:ARG:NH2	55:3L:43:G:H5'	2.33	0.44
7:62:153:HIS:NE2	11:2A:57:THR:HG23	2.31	0.44
13:4A:92:HIS:NE2	13:4A:98:VAL:HG11	2.32	0.44
20:BA:54:LYS:HA	20:BA:57:ARG:CZ	2.48	0.44
25:14:145:G:H2'	25:14:146:G:O4'	2.18	0.44
25:14:315:G:H2'	25:14:316:C:C6	2.52	0.44
25:14:1130:U:O2	28:29:149:ARG:NH2	2.50	0.44
25:14:2104:G:H2'	25:14:2105:C:C6	2.53	0.44
25:14:2346:A:H5"	25:14:2383:G:C1'	2.47	0.44
25:14:2484:G:C2	25:14:2485:G:C8	3.05	0.44
25:14:2776:A:OP1	25:14:2776:A:H3'	2.18	0.44
25:14:2846:G:H2'	25:14:2847:U:O4'	2.18	0.44
27:19:222:ARG:NH1	27:19:224:ALA:HB3	2.33	0.44
29:39:157:VAL:HA	29:39:176:LEU:O	2.18	0.44
32:69:77:LEU:HB3	32:69:78:THR:H	1.62	0.44
32:69:138:ILE:HG12	32:69:139:GLN:H	1.82	0.44
36:45:51:ARG:HG3	36:45:52:VAL:N	2.33	0.44
38:65:5:THR:O	38:65:8:GLU:N	2.50	0.44
38:65:36:TYR:CE2	38:65:54:LEU:HD22	2.49	0.44
38:65:110:LEU:HG	38:65:112:PHE:CZ	2.53	0.44
42:A5:2:GLU:OE1	42:A5:72:LYS:HE3	2.17	0.44
43:B5:5:TYR:CE1	48:G5:30:ARG:HG3	2.53	0.44
1:13:232:G:C5	1:13:233:C:C5	3.06	0.44
1:13:339:C:OP2	34:68:97:ARG:NH1	2.50	0.44
1:13:376:G:OP2	16:7I:67:THR:HG21	2.18	0.44
1:13:491:G:H2'	1:13:492:G:C8	2.53	0.44
1:13:659:U:H2'	1:13:660:G:H8	1.82	0.44
3:2E:119:ARG:O	3:2E:123:GLN:HG3	2.17	0.44
22:1K:17:OMG:CM2	22:1K:66:G:H22	2.31	0.44
22:3K:35:QUO:H13	22:3K:35:QUO:H102	1.57	0.44
25:1H:234:C:C2	25:1H:235:U:C5	3.06	0.44
25:1H:247:G:O6	53:Q8:8:LYS:HB3	2.17	0.44
25:1H:273(F):C:H3'	25:1H:274:G:C5'	2.48	0.44
25:1H:382:G:H1	25:1H:392:C:H42	1.65	0.44
25:1H:958:U:OP1	36:88:74:TYR:OH	2.29	0.44
25:1H:972:G:H3'	25:1H:973:A:H2'	1.99	0.44
25:1H:1045:A:H2	25:1H:1111:A:C5	2.36	0.44
25:1H:1053:C:H42	25:1H:1106:G:H1	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1116:C:H2'	25:1H:1117:G:O4'	2.17	0.44
25:1H:2313:C:C5'	30:41:91:ARG:HG3	2.47	0.44
25:1H:2331:G:H4'	46:I8:42:GLY:HA3	1.99	0.44
25:1H:2663:G:H2'	25:1H:2664:G:O4'	2.18	0.44
27:11:12:SER:O	27:11:16:MET:HB2	2.18	0.44
28:21:97:LYS:H	28:21:100:GLU:CD	2.25	0.44
30:41:35:GLU:OE1	30:41:35:GLU:HA	2.17	0.44
30:41:165:THR:OG1	30:41:168:GLU:HG3	2.17	0.44
30:41:174:GLU:O	30:41:177:GLY:N	2.39	0.44
32:61:110:ASP:OD1	32:61:111:PRO:HA	2.17	0.44
44:G8:5:MET:HE2	44:G8:5:MET:HB2	1.75	0.44
44:G8:96:ILE:HG22	44:G8:97:ARG:N	2.32	0.44
50:M8:40:HIS:CE1	50:M8:44:THR:HG22	2.52	0.44
54:1G:533:A:OP1	60:1G:1736:HOH:O	2.21	0.44
54:1G:807:A:H2'	54:1G:808:C:C6	2.53	0.44
3:22:88:ARG:HG3	3:22:101:LEU:HD12	1.99	0.44
4:32:202:LEU:O	4:32:206:PHE:N	2.50	0.44
6:52:101:ALA:C	18:9A:28:GLU:HB3	2.42	0.44
7:62:92:SER:O	7:62:95:ARG:N	2.46	0.44
11:2A:27:ASN:ND2	11:2A:55:LYS:HD2	2.33	0.44
25:14:828:U:H4'	25:14:831:G:N1	2.32	0.44
25:14:988:A:N6	49:H5:13:ILE:HG21	2.32	0.44
25:14:1443:G:N2	25:14:1549:C:N3	2.66	0.44
25:14:1812:A:H2'	25:14:1813:G:H8	1.83	0.44
25:14:2041:U:H2'	25:14:2042:A:O4'	2.18	0.44
25:14:2439:A:O2'	25:14:2440:C:OP2	2.35	0.44
25:14:2468:G:P	36:45:119:ARG:HH22	2.41	0.44
25:14:2535:G:H2'	25:14:2536:G:C8	2.53	0.44
27:19:176:ARG:HG2	27:19:176:ARG:HH11	1.82	0.44
31:59:20:ALA:HB3	31:59:23:ARG:HG3	1.99	0.44
31:59:137:ASP:OD1	31:59:138:LYS:N	2.47	0.44
33:15:67:LEU:C	33:15:88:GLU:HG3	2.43	0.44
46:E5:29:GLN:O	46:E5:31:VAL:HG13	2.17	0.44
1:13:235:C:H5'	17:8I:70:ARG:HG2	1.99	0.44
1:13:458:C:H2'	1:13:464:G:O4'	2.18	0.44
1:13:737:A:H2'	1:13:738:C:H6	1.80	0.44
1:13:920:U:H2'	1:13:921:U:C6	2.52	0.44
1:13:1199:U:H4'	10:1I:54:PHE:CE2	2.53	0.44
5:4E:31:LEU:HD23	5:4E:45:PHE:HD1	1.82	0.44
5:4E:152:ARG:HA	8:7E:64:LYS:HE2	1.98	0.44
7:6E:73:MET:HA	7:6E:90:GLU:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:105:VAL:O	7:6E:108:ALA:HB3	2.18	0.44
8:7E:129:VAL:HG23	8:7E:130:GLY:H	1.82	0.44
12:3I:8:ASN:O	12:3I:11:VAL:HG23	2.18	0.44
20:BI:89:ARG:NH2	20:BI:104:LEU:HD11	2.30	0.44
25:1H:346:A:H5"	25:1H:347:A:OP2	2.18	0.44
25:1H:511:U:C5	25:1H:512:G:C5	3.06	0.44
25:1H:1021:A:H8	25:1H:1022:G:H5"	1.83	0.44
25:1H:1252:G:N3	40:C8:33:ARG:HD2	2.31	0.44
25:1H:1360:A:H2'	25:1H:1361:G:O4'	2.17	0.44
25:1H:1467:C:C2'	25:1H:1468:C:H5'	2.48	0.44
25:1H:2280:G:H2'	25:1H:2281:C:H5'	1.99	0.44
27:11:89:SER:HB2	27:11:159:ALA:CB	2.48	0.44
27:11:206:LEU:HA	27:11:206:LEU:HD23	1.78	0.44
35:78:95:VAL:HG12	35:78:100:LEU:HD21	2.00	0.44
45:H8:102:LEU:HD23	45:H8:137:ILE:HB	1.99	0.44
48:K8:47:ASN:O	48:K8:48:HIS:CG	2.71	0.44
54:1G:243:A:C2	54:1G:245:C:C2	3.05	0.44
54:1G:1325:C:H2'	54:1G:1326:C:C6	2.52	0.44
2:12:17:PHE:CE2	2:12:44:LEU:HA	2.52	0.44
11:2A:57:THR:HA	11:2A:58:PRO:HD2	1.81	0.44
12:3A:6:THR:HG23	12:3A:9:GLN:HG3	2.00	0.44
15:6A:87:ILE:HG22	15:6A:88:ARG:N	2.26	0.44
55:3L:52:G:H2'	55:3L:53:A:O4'	2.18	0.44
25:14:616:A:C4	29:39:180:GLY:HA2	2.53	0.44
25:14:910:A:H2'	25:14:2264:C:O2'	2.18	0.44
25:14:1858:G:H8	25:14:1858:G:OP2	2.00	0.44
25:14:2001:A:H2'	25:14:2002:G:C8	2.52	0.44
25:14:2119:A:H61	25:14:2168:G:N2	2.15	0.44
25:14:2250:G:C2	36:45:82:ARG:HB3	2.52	0.44
25:14:2320:A:H1'	25:14:2321:G:C6	2.53	0.44
25:14:2756:U:H4'	25:14:2757:A:OP1	2.17	0.44
27:19:32:SER:O	27:19:33:LEU:HB2	2.17	0.44
27:19:76:PRO:HA	27:19:118:VAL:HG23	2.00	0.44
29:39:128:ALA:O	29:39:129:PHE:C	2.59	0.44
29:39:132:VAL:O	29:39:134:GLY:N	2.50	0.44
30:49:18:GLU:O	30:49:21:ARG:HB3	2.18	0.44
34:25:22:ILE:HA	34:25:22:ILE:HD13	1.44	0.44
39:75:106:SER:HA	39:75:110:ILE:CD1	2.48	0.44
41:95:22:VAL:HG22	41:95:23:GLU:N	2.32	0.44
41:95:59:ALA:HB1	41:95:94:LEU:HB3	2.00	0.44
48:G5:53:LEU:O	48:G5:57:ILE:HG13	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:M5:8:LYS:HA	53:M5:8:LYS:HD3	1.82	0.44
1:13:296:U:H2'	1:13:297:G:C8	2.53	0.44
1:13:799:G:C6	1:13:800:G:C4	3.05	0.44
1:13:1072:G:H2'	1:13:1073:U:O4'	2.18	0.44
1:13:1305:G:C2	1:13:1331:G:C2	3.06	0.44
3:2E:34:LEU:O	3:2E:34:LEU:HD22	2.18	0.44
9:8E:25:LYS:HA	9:8E:25:LYS:HD2	1.83	0.44
12:3I:113:ARG:NH2	60:3I:302:HOH:O	2.50	0.44
18:9I:59:SER:HB3	18:9I:62:GLU:HG3	1.99	0.44
25:1H:557:U:H2'	25:1H:558:G:H8	1.83	0.44
25:1H:782:A:N3	27:11:226:MET:HG2	2.33	0.44
25:1H:937:U:H2'	25:1H:938:G:O4'	2.17	0.44
25:1H:1131:G:H8	25:1H:2025:C:H4'	1.82	0.44
25:1H:1551:C:C5	25:1H:1552:G:N7	2.85	0.44
25:1H:2014:A:H2'	25:1H:2015:A:C8	2.53	0.44
25:1H:2055:C:H1'	28:21:145:LYS:NZ	2.33	0.44
25:1H:2331:G:O2'	25:1H:2336:A:N1	2.42	0.44
25:1H:2627:G:O2'	25:1H:2781:A:N1	2.48	0.44
27:11:92:ILE:HD12	27:11:104:TYR:CE1	2.53	0.44
27:11:131:LEU:HB2	27:11:136:ILE:HD11	2.00	0.44
27:11:232:PRO:HB3	27:11:244:ARG:CZ	2.46	0.44
28:21:77:ILE:C	28:21:79:ARG:NE	2.75	0.44
33:58:133:GLN:H	33:58:133:GLN:CD	2.25	0.44
35:78:144:GLU:HA	35:78:145:PRO:HD3	1.77	0.44
36:88:55:VAL:HG12	36:88:64:ILE:HD12	1.99	0.44
48:K8:44:LEU:HD23	48:K8:44:LEU:HA	1.80	0.44
54:1G:363:A:OP1	12:3A:33:ARG:HG3	2.18	0.44
54:1G:450:G:N7	54:1G:481:G:C6	2.86	0.44
54:1G:984:C:H2'	54:1G:985:C:H6	1.83	0.44
54:1G:1281:U:P	54:1G:1282:C:H41	2.41	0.44
54:1G:1282:C:O5'	54:1G:1282:C:H6	2.01	0.44
54:1G:1321:C:H4'	13:4A:87:TYR:CZ	2.53	0.44
2:12:100:GLY:HA2	2:12:103:THR:OG1	2.17	0.44
2:12:237:ALA:C	2:12:239:VAL:H	2.24	0.44
3:22:29:TYR:OH	14:5A:54:PRO:HD2	2.18	0.44
3:22:199:LYS:HB3	3:22:201:TYR:HE2	1.82	0.44
4:32:79:PHE:CD1	4:32:207:TYR:CD2	3.06	0.44
6:52:15:ASP:OD1	6:52:18:GLN:N	2.39	0.44
7:62:111:ARG:NH2	7:62:122:HIS:HB3	2.32	0.44
9:82:17:VAL:HG21	9:82:80:GLY:C	2.42	0.44
21:1B:8:THR:HB	21:1B:11:GLY:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:2L:22:A:H61	56:2L:47:G:H2'	1.81	0.44
25:14:273(F):C:H3'	25:14:274:G:C5'	2.47	0.44
25:14:350:U:H2'	25:14:351:G:O4'	2.17	0.44
25:14:590:A:H2'	25:14:591:C:C6	2.53	0.44
25:14:621:A:H3'	25:14:622:G:H8	1.83	0.44
25:14:1122:G:N3	25:14:1122:G:H2'	2.32	0.44
25:14:1925:C:O2'	25:14:1926:U:H5'	2.18	0.44
25:14:2318:G:H1	38:65:2:ALA:HB1	1.82	0.44
25:14:2505:G:H2'	25:14:2576:G:O6	2.17	0.44
25:14:2647:U:H2'	25:14:2648:C:H6	1.82	0.44
26:1J:109:G:N1	26:1J:110:G:C5	2.85	0.44
29:39:181:LEU:HD23	29:39:181:LEU:HA	1.80	0.44
31:59:149:ARG:O	31:59:154:PRO:HG3	2.18	0.44
33:15:39:ARG:HD3	33:15:41:ASP:HB2	1.99	0.44
40:85:79:PHE:CE1	40:85:83:LEU:HD21	2.52	0.44
42:A5:29:LEU:CD2	42:A5:33:ARG:HH21	2.31	0.44
46:E5:72:ARG:CB	46:E5:75:LEU:HB2	2.47	0.44
47:F5:18:ILE:HG22	47:F5:20:ARG:HG3	1.98	0.44
50:I5:2:LYS:HD2	50:I5:6:HIS:CG	2.52	0.44
53:M5:40:GLU:H	53:M5:43:GLN:HB2	1.83	0.44
1:13:131:C:O2	1:13:231:G:N2	2.35	0.44
1:13:439:A:C8	1:13:440:A:C8	3.06	0.44
1:13:520:A:N1	1:13:536:C:H1'	2.33	0.44
1:13:581:G:N2	1:13:582:U:C4	2.86	0.44
1:13:683:G:H2'	1:13:684:A:C8	2.52	0.44
1:13:784:C:H2'	1:13:785:G:O4'	2.18	0.44
1:13:1131:G:H2'	1:13:1132:C:C6	2.53	0.44
1:13:1425:U:H2'	1:13:1426:C:C6	2.53	0.44
1:13:1483:A:H2	25:1H:1959:G:N3	2.16	0.44
2:1E:172:ILE:O	2:1E:176:GLU:HG3	2.17	0.44
10:1I:65:LEU:HD13	14:5I:56:VAL:HG22	1.99	0.44
13:4I:50:GLU:O	13:4I:54:VAL:HG23	2.17	0.44
19:AI:5:LEU:HD22	19:AI:10:PHE:CE2	2.52	0.44
19:AI:6:LYS:O	19:AI:7:LYS:NZ	2.42	0.44
20:BI:83:ARG:O	20:BI:87:LYS:HB2	2.18	0.44
25:1H:303:U:H2'	25:1H:304:G:H8	1.83	0.44
25:1H:1385:G:O2'	25:1H:1396:U:H6	2.00	0.44
25:1H:1576:U:N3	25:1H:1577:C:C5	2.86	0.44
25:1H:2154:G:O2'	25:1H:2155:G:H8	2.01	0.44
25:1H:2861:G:C2	25:1H:2862:G:C5	3.05	0.44
25:1H:2862:G:C5	25:1H:2863:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:182:LEU:N	27:11:272:ALA:HB3	2.21	0.44
32:61:87:LYS:HB2	32:61:87:LYS:NZ	2.33	0.44
33:58:46:VAL:HG13	33:58:48:MET:HG3	2.00	0.44
35:78:19:VAL:HB	35:78:27:HIS:HB2	2.00	0.44
36:88:17:LEU:HD23	36:88:17:LEU:HA	1.55	0.44
54:1G:129(A):G:N1	54:1G:188:U:H4'	2.33	0.44
54:1G:418:C:H2'	54:1G:419:C:O4'	2.18	0.44
54:1G:581:G:N2	54:1G:760:G:N7	2.66	0.44
54:1G:668:G:C2'	54:1G:669:U:H5'	2.47	0.44
54:1G:1067:A:H4'	54:1G:1068:G:O5'	2.17	0.44
2:12:117:GLU:O	2:12:120:ALA:HB3	2.18	0.44
2:12:213:LEU:O	2:12:213:LEU:HD23	2.18	0.44
5:42:7:GLU:O	5:42:35:GLY:N	2.39	0.44
7:62:50:ILE:HG21	7:62:58:PRO:HA	2.00	0.44
9:82:46:ALA:HA	9:82:78:LYS:HB2	1.99	0.44
9:82:79:LEU:HD13	9:82:83:ARG:HG3	2.00	0.44
55:3L:6:G:H1	55:3L:76:C:H42	1.64	0.44
25:14:22:C:H2'	25:14:23:G:O4'	2.18	0.44
25:14:28:A:C2	25:14:513:A:C8	3.05	0.44
25:14:117:G:OP1	25:14:124:G:N1	2.39	0.44
25:14:353:G:H2'	25:14:354:G:H8	1.82	0.44
25:14:398:G:H3'	60:14:3690:HOH:O	2.17	0.44
25:14:519:U:H2'	25:14:520:G:C8	2.52	0.44
25:14:559:G:H2'	25:14:560:C:O4'	2.18	0.44
25:14:1015:G:C2	25:14:1016:G:C4	3.05	0.44
25:14:1849:G:H2'	25:14:1850:G:C8	2.52	0.44
25:14:2100:G:N2	25:14:2190:G:H1'	2.33	0.44
25:14:2136:C:N4	25:14:2137:C:N3	2.66	0.44
25:14:2757:A:C2	31:59:67:LEU:HD22	2.53	0.44
25:14:2799:A:H2'	25:14:2801:A:C8	2.53	0.44
28:29:52:LEU:HA	28:29:53:PRO:HD2	1.76	0.44
28:29:72:VAL:HG23	28:29:74:PRO:HD3	2.00	0.44
28:29:93:VAL:HG22	28:29:182:LEU:HD13	1.98	0.44
28:29:105:THR:HA	28:29:166:THR:HA	2.00	0.44
29:39:204:ASN:OD1	29:39:204:ASN:N	2.47	0.44
30:49:145:THR:O	30:49:146:TYR:HB3	2.18	0.44
31:59:26:VAL:CG1	31:59:33:LEU:H	2.30	0.44
31:59:103:LEU:HD23	31:59:103:LEU:H	1.82	0.44
37:55:84:ALA:HB3	37:55:85:PRO:HD3	2.00	0.44
43:B5:55:ASN:O	43:B5:79:ALA:HA	2.18	0.44
45:D5:99:TYR:HA	45:D5:124:ILE:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:F5:40:ARG:HH12	47:F5:42:GLN:HE21	1.66	0.44
47:F5:82:LEU:H	47:F5:82:LEU:HG	1.66	0.44
1:13:347:G:H2'	1:13:348:G:O4'	2.18	0.44
1:13:921:U:H2'	1:13:922:G:O4'	2.18	0.44
1:13:963:G:N2	10:1I:55:LYS:NZ	2.66	0.44
1:13:970:C:H42	9:8E:128:ARG:C	2.26	0.44
1:13:1041:A:H2'	1:13:1042:G:O4'	2.18	0.44
1:13:1225:A:H2'	1:13:1225:A:N3	2.33	0.44
1:13:1467:G:H8	1:13:1467:G:O5'	2.00	0.44
3:2E:12:LEU:HD23	3:2E:12:LEU:HA	1.71	0.44
3:2E:84:ILE:HG12	3:2E:88:ARG:NH2	2.33	0.44
3:2E:91:LEU:HB2	3:2E:99:VAL:HG21	2.00	0.44
8:7E:39:LEU:HD12	8:7E:39:LEU:HA	1.74	0.44
10:1I:46:ARG:NH2	10:1I:64:GLU:OE1	2.51	0.44
15:6I:8:LYS:O	15:6I:12:ILE:HG13	2.18	0.44
22:1K:29:C:H3'	22:1K:30:A:H8	1.83	0.44
23:2K:26:C:H2'	23:2K:27:G:O4'	2.18	0.44
25:1H:447:A:C6	25:1H:454:A:C8	3.06	0.44
25:1H:975:G:C2	25:1H:976:C:C6	3.06	0.44
25:1H:1100:C:H2'	25:1H:1101:U:C6	2.53	0.44
25:1H:1141:U:H6	33:58:63:THR:HG1	1.65	0.44
25:1H:1287:A:C5	25:1H:1288:U:C4	3.05	0.44
25:1H:2062:A:OP2	60:1H:3644:HOH:O	2.20	0.44
25:1H:2756:U:H1'	25:1H:2757:A:H5"	2.00	0.44
29:31:152:GLU:HA	29:31:190:GLU:OE2	2.18	0.44
31:51:10:PRO:HD3	31:51:69:ARG:NE	2.32	0.44
32:61:8:PRO:HD3	32:61:15:VAL:HG23	1.99	0.44
41:D8:53:GLU:OE2	41:D8:54:GLY:N	2.51	0.44
42:E8:45:TYR:CZ	42:E8:49:LYS:HD2	2.53	0.44
49:L8:5:LYS:HD2	49:L8:34:GLU:OE1	2.17	0.44
50:M8:52:THR:OG1	50:M8:53:GLU:N	2.50	0.44
54:1G:516:U:C4	54:1G:517:G:C6	3.06	0.44
54:1G:1129:C:C4	54:1G:1139:G:N1	2.86	0.44
54:1G:1152:A:OP1	10:1A:68:HIS:ND1	2.51	0.44
54:1G:1512:U:H2'	54:1G:1513:A:H8	1.82	0.44
5:42:41:VAL:O	5:42:67:VAL:HG12	2.18	0.44
7:62:148:ASN:HB3	7:62:151:TYR:HD2	1.82	0.44
20:BA:53:LEU:HD13	20:BA:56:MET:HE2	2.00	0.44
56:2L:14:A:C6	56:2L:23:G:C6	3.06	0.44
56:2L:25:U:H2'	56:2L:26:C:C6	2.53	0.44
25:14:572:A:H2'	25:14:573:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:589:C:H5”	29:39:95:ARG:HH12	1.82	0.44
25:14:863:A:H2	25:14:914:C:H41	1.66	0.44
25:14:956:G:H2’	25:14:957:A:H2’	2.00	0.44
25:14:997:G:O2’	25:14:998:C:H5’	2.18	0.44
25:14:1113:U:H5’	31:59:2:SER:N	2.33	0.44
25:14:1731:G:H2’	25:14:1732:A:O4’	2.18	0.44
25:14:1751:C:H2’	25:14:1752:C:C6	2.51	0.44
25:14:2370:G:H2’	25:14:2371:G:O4’	2.17	0.44
25:14:2479:G:C6	25:14:2480:C:C4	3.06	0.44
25:14:2798:C:H42	25:14:2799:A:N6	2.15	0.44
28:29:11:MET:HA	28:29:24:THR:HA	2.00	0.44
33:15:46:VAL:HG12	33:15:47:ALA:C	2.43	0.44
33:15:136:GLU:HG3	33:15:137:LYS:N	2.31	0.44
34:25:73:ASP:OD2	39:75:32:TYR:OH	2.26	0.44
38:65:23:ARG:HH12	38:65:84:GLN:HB2	1.83	0.44
40:85:95:LEU:C	40:85:97:ASP:N	2.76	0.44
1:13:5:U:O2	4:3E:85:LYS:NZ	2.51	0.43
1:13:658:G:O2’	1:13:659:U:H5’	2.18	0.43
1:13:900:A:H8	1:13:900:A:O5’	2.01	0.43
1:13:1239:A:H62	1:13:1299:A:H62	1.65	0.43
1:13:1499:A:O2’	1:13:1520:G:H5’	2.18	0.43
2:1E:17:PHE:HB2	2:1E:44:LEU:HD21	1.99	0.43
3:2E:17:ASP:HB3	3:2E:21:ARG:NH1	2.33	0.43
5:4E:68:GLU:O	5:4E:68:GLU:HG3	2.18	0.43
25:1H:563:G:OP2	60:1H:3531:HOH:O	2.21	0.43
25:1H:576:U:O5’	25:1H:576:U:H6	2.01	0.43
25:1H:625:G:O6	35:78:107:LYS:NZ	2.48	0.43
25:1H:882:G:O2’	25:1H:883:G:C8	2.70	0.43
25:1H:883:G:H2’	25:1H:884:C:H4’	2.00	0.43
25:1H:1292:U:H2’	25:1H:1293:C:C6	2.53	0.43
25:1H:1443:G:N2	25:1H:1549:C:C2	2.87	0.43
25:1H:2170:A:H3’	25:1H:2171:A:C8	2.53	0.43
25:1H:2205:C:H2’	25:1H:2206:C:H6	1.83	0.43
29:31:64:ILE:HG23	29:31:65:TRP:NE1	2.33	0.43
29:31:114:VAL:HG21	29:31:202:PHE:CE1	2.53	0.43
30:41:67:LYS:HZ3	50:M8:6:HIS:HE2	1.66	0.43
31:51:41:MET:HE3	31:51:41:MET:HB2	1.70	0.43
33:58:133:GLN:OE1	33:58:133:GLN:N	2.51	0.43
34:68:34:THR:OG1	34:68:35:VAL:N	2.51	0.43
36:88:132:VAL:HG11	45:H8:81:ARG:HD2	2.00	0.43
37:98:35:THR:HG21	37:98:100:LEU:HD22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:94:TYR:CD1	37:98:94:TYR:N	2.84	0.43
43:F8:35:THR:O	43:F8:39:ILE:HG13	2.17	0.43
46:I8:18:ALA:HB3	46:I8:20:ARG:NH1	2.33	0.43
46:I8:28:GLY:N	46:I8:67:VAL:O	2.35	0.43
48:K8:59:ARG:O	48:K8:63:VAL:HG23	2.18	0.43
51:N8:40:LYS:HZ3	51:N8:48:GLU:H	1.65	0.43
53:Q8:9:GLY:N	53:Q8:12:LYS:H	2.12	0.43
53:Q8:48:PHE:O	53:Q8:49:VAL:HG23	2.18	0.43
54:1G:683:G:H2'	54:1G:684:A:C8	2.53	0.43
54:1G:685:G:N1	54:1G:686:U:O4	2.51	0.43
54:1G:786:G:H1	54:1G:796:C:H42	1.66	0.43
54:1G:1164:G:N1	54:1G:1173:G:C6	2.86	0.43
4:32:106:TYR:HB2	4:32:117:ALA:HB2	2.00	0.43
7:62:24:THR:O	7:62:27:ILE:HG12	2.18	0.43
11:2A:95:ILE:H	11:2A:95:ILE:HG12	1.36	0.43
25:14:137(A):G:H2'	25:14:139:G:N7	2.33	0.43
25:14:195:A:OP1	35:35:46:LYS:HE2	2.17	0.43
25:14:1005:C:N3	25:14:1143:A:C4	2.86	0.43
25:14:1542:G:O6	25:14:1543:A:N6	2.51	0.43
25:14:1614:A:H2	60:14:3421:HOH:O	2.00	0.43
25:14:1651:G:H2'	25:14:1652:A:O4'	2.17	0.43
25:14:2427:C:H5"	25:14:2428:G:OP1	2.18	0.43
25:14:2798:C:H42	25:14:2799:A:H62	1.65	0.43
25:14:2873:A:H8	37:55:6:SER:N	2.16	0.43
33:15:128:HIS:NE2	33:15:130:HIS:HA	2.32	0.43
35:35:118:GLY:O	35:35:137:LYS:NZ	2.39	0.43
38:65:42:ASP:O	38:65:43:GLU:HB2	2.18	0.43
41:95:44:LYS:O	41:95:46:VAL:N	2.50	0.43
44:C5:47:LYS:HA	44:C5:60:PHE:HB3	2.00	0.43
44:C5:85:VAL:CG2	44:C5:98:VAL:HB	2.44	0.43
45:D5:76:LEU:H	45:D5:76:LEU:HD23	1.82	0.43
49:H5:59:VAL:HG12	49:H5:60:GLU:N	2.33	0.43
1:13:411:A:C4	1:13:413:G:H1'	2.53	0.43
2:1E:70:PHE:HE1	2:1E:90:MET:HB3	1.83	0.43
20:BI:42:GLN:NE2	20:BI:46:GLU:OE1	2.51	0.43
25:1H:172:C:H2'	25:1H:173:G:C8	2.53	0.43
25:1H:272:G:H2'	25:1H:273:G:O4'	2.17	0.43
25:1H:309:G:N3	25:1H:329:G:O2'	2.50	0.43
25:1H:583:G:C5	25:1H:584:C:C5	3.06	0.43
25:1H:1021:A:C8	25:1H:1021:A:C3'	2.99	0.43
25:1H:1107:G:H2'	25:1H:1108:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1142(A):A:C4	25:1H:1144:G:N7	2.85	0.43
25:1H:1423:G:C4	25:1H:1424:G:C8	3.06	0.43
25:1H:1515:C:H2'	25:1H:1516:U:C6	2.53	0.43
25:1H:2667:C:H1'	31:51:109:PHE:CD1	2.53	0.43
26:16:42:C:H4'	30:41:67:LYS:HD2	2.00	0.43
26:16:66:A:C2	26:16:108:C:C4	3.07	0.43
27:11:11:PRO:C	27:11:13:ARG:H	2.25	0.43
29:31:117:ARG:HH11	29:31:117:ARG:HG3	1.83	0.43
32:61:128:LEU:HD23	32:61:128:LEU:HA	1.82	0.43
35:78:36:LYS:CG	35:78:37:GLY:H	2.27	0.43
35:78:68:GLN:CD	53:Q8:12:LYS:HG2	2.44	0.43
38:A8:35:ILE:HD11	38:A8:101:LEU:CD2	2.49	0.43
41:D8:21:ARG:HD2	41:D8:91:TYR:CE1	2.53	0.43
47:J8:49:VAL:CG1	47:J8:70:VAL:HG11	2.43	0.43
54:1G:186(D):C:H42	54:1G:191(C):G:H1	1.66	0.43
54:1G:262:A:C6	54:1G:263:A:C6	3.06	0.43
54:1G:410:G:N1	54:1G:429:U:O2	2.51	0.43
54:1G:579:G:O3'	15:6A:54:ARG:NH2	2.51	0.43
54:1G:735:C:H2'	54:1G:736:C:C6	2.53	0.43
54:1G:1028(A):C:O2	54:1G:1033:G:N2	2.51	0.43
54:1G:1329:A:H5"	13:4A:25:ILE:C	2.43	0.43
14:5A:21:TYR:HE2	14:5A:23:ARG:HH21	1.66	0.43
19:AA:66:MET:HA	19:AA:67:VAL:C	2.43	0.43
25:14:151:C:C2	25:14:176:G:N2	2.86	0.43
25:14:783:A:H8	25:14:784:A:H4'	1.82	0.43
25:14:1225:C:H4'	41:95:85:LYS:HD3	2.00	0.43
25:14:1343:G:C2'	25:14:1344:G:H5'	2.48	0.43
25:14:1442:G:H2'	25:14:1443:G:C8	2.53	0.43
25:14:2768:C:H2'	25:14:2769:C:O4'	2.17	0.43
25:14:2816:C:O2	25:14:2883:A:O2'	2.33	0.43
27:19:61:LEU:HD13	27:19:61:LEU:HA	1.88	0.43
27:19:260:ARG:NH2	27:19:264:LYS:HD3	2.32	0.43
28:29:4:ILE:CD1	28:29:28:ALA:HB1	2.45	0.43
31:59:19:VAL:HA	31:59:24:VAL:HG12	1.99	0.43
31:59:89:ILE:HD12	31:59:130:ARG:HG2	1.99	0.43
32:69:112:LYS:HA	32:69:114:LEU:H	1.83	0.43
35:35:64:LYS:HG3	53:M5:30:ARG:NH2	2.32	0.43
35:35:85:LEU:H	35:35:85:LEU:HD22	1.82	0.43
37:55:20:LEU:HD12	37:55:20:LEU:HA	1.76	0.43
37:55:82:GLU:H	37:55:85:PRO:HG2	1.83	0.43
38:65:107:GLU:O	38:65:110:LEU:HD13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:85:LYS:HD2	39:75:87:ASP:OD1	2.18	0.43
42:A5:39:THR:O	42:A5:39:THR:HG22	2.18	0.43
43:B5:41:ASN:O	43:B5:45:THR:HG23	2.17	0.43
44:C5:97:ARG:HH11	44:C5:104:GLY:HA3	1.82	0.43
44:C5:97:ARG:HD2	44:C5:104:GLY:N	2.33	0.43
53:M5:29:LYS:HB3	53:M5:44:LYS:CB	2.47	0.43
1:13:278:G:O4'	1:13:282:A:H1'	2.18	0.43
1:13:377:G:P	16:7I:5:ARG:HH11	2.41	0.43
1:13:991:U:O4	1:13:1212:U:H1'	2.17	0.43
1:13:1011:G:H2'	1:13:1012:U:O4'	2.19	0.43
1:13:1177:G:H2'	1:13:1178:G:N9	2.33	0.43
1:13:1212:U:H4'	1:13:1213:A:O4'	2.18	0.43
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.53	0.43
3:2E:162:GLN:HG2	24:4K:24:A:N3	2.33	0.43
3:2E:195:VAL:C	3:2E:196:LEU:HD23	2.43	0.43
11:2I:79:SER:OG	11:2I:106:LYS:HD2	2.17	0.43
11:2I:112:THR:HA	11:2I:113:PRO:HD3	1.69	0.43
22:3K:12:C:H2'	22:3K:13:G:O4'	2.17	0.43
25:1H:602:G:N2	25:1H:655:A:C8	2.74	0.43
25:1H:1097:U:H2'	25:1H:1098:A:H5'	2.00	0.43
25:1H:1425:G:N2	25:1H:1573:G:N7	2.65	0.43
25:1H:2018:G:O2'	25:1H:2019:A:H5'	2.19	0.43
25:1H:2456:C:O5'	25:1H:2456:C:H6	2.01	0.43
25:1H:2690:C:OP1	37:98:17:ARG:NH1	2.51	0.43
60:1H:3693:HOH:O	29:31:85:GLY:HA2	2.19	0.43
26:16:7:G:H1	26:16:113:C:H42	1.66	0.43
27:11:77:ALA:HB2	27:11:97:TYR:HA	2.01	0.43
28:21:116:VAL:H	28:21:157:ALA:HB2	1.83	0.43
29:31:160:ASN:OD1	29:31:163:VAL:HG23	2.17	0.43
29:31:172:TRP:CE3	29:31:173:VAL:HG23	2.53	0.43
29:31:198:ALA:O	29:31:201:VAL:HG12	2.18	0.43
30:41:6:ALA:HB3	30:41:104:GLU:OE2	2.18	0.43
31:51:12:PRO:HD2	31:51:48:GLY:O	2.19	0.43
33:58:23:LEU:HD12	33:58:23:LEU:HA	1.81	0.43
35:78:45:LEU:HD13	35:78:45:LEU:HA	1.78	0.43
35:78:115:LEU:HA	35:78:134:ALA:CB	2.45	0.43
37:98:18:LEU:HD23	37:98:18:LEU:HA	1.84	0.43
37:98:57:ARG:HB3	37:98:59:ASP:OD2	2.18	0.43
44:G8:89:PHE:HD2	44:G8:90:LEU:H	1.66	0.43
44:G8:97:ARG:O	44:G8:101:LYS:HD3	2.18	0.43
49:L8:31:LEU:O	49:L8:32:GLN:HB2	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:Q8:26:LYS:HE2	53:Q8:41:ILE:CG2	2.48	0.43
54:1G:42:G:H1	54:1G:400:C:H42	1.66	0.43
54:1G:537:G:H5"	12:3A:113:ARG:NH1	2.34	0.43
54:1G:1119:C:H2'	54:1G:1120:G:C8	2.54	0.43
2:12:215:LEU:HA	2:12:218:ALA:HB3	2.00	0.43
5:42:34:VAL:HG21	5:42:63:ARG:HG3	2.00	0.43
6:52:61:LEU:HD23	6:52:63:TYR:OH	2.18	0.43
13:4A:74:VAL:O	13:4A:78:ILE:HG13	2.19	0.43
56:2L:41:C:H2'	56:2L:42:C:C6	2.47	0.43
25:14:66:C:C4	25:14:67:U:C4	3.06	0.43
25:14:848:G:C4	25:14:933:A:H8	2.37	0.43
25:14:882:G:OP2	25:14:882:G:H8	2.01	0.43
25:14:903:C:H2'	25:14:904:C:C6	2.53	0.43
25:14:1107:G:N1	25:14:1108:U:O2	2.51	0.43
25:14:2784:C:O2	28:29:37:ARG:NH2	2.52	0.43
25:14:2852:G:H2'	25:14:2853:C:O4'	2.18	0.43
27:19:118:VAL:N	27:19:129:ASN:OD1	2.51	0.43
27:19:130:ALA:HA	27:19:192:THR:HA	2.00	0.43
31:59:58:GLU:HB2	31:59:61:HIS:CE1	2.53	0.43
32:69:3:VAL:HG12	32:69:38:LEU:HA	1.99	0.43
32:69:140:LEU:HA	32:69:140:LEU:HD12	1.68	0.43
34:25:122:LEU:HD23	39:75:43:GLN:HE22	1.83	0.43
39:75:45:PHE:CE2	39:75:74:ARG:HG3	2.54	0.43
42:A5:19:LEU:HD12	42:A5:19:LEU:HA	1.84	0.43
45:D5:104:PHE:HB3	45:D5:105:VAL:H	1.57	0.43
1:13:178:C:H2'	1:13:179:A:O4'	2.19	0.43
1:13:297:G:H4'	1:13:557:G:H4'	1.99	0.43
1:13:522:C:H2'	1:13:523:A:O4'	2.18	0.43
1:13:659:U:OP1	15:6I:8:LYS:HD3	2.18	0.43
1:13:683:G:C4	1:13:684:A:C8	3.06	0.43
1:13:1015:A:H2'	1:13:1016:A:C8	2.53	0.43
1:13:1028:C:H42	1:13:1033:G:H1	1.66	0.43
1:13:1138:G:C6	1:13:1140:C:H1'	2.53	0.43
1:13:1143:G:C2	1:13:1144:G:C5	3.06	0.43
1:13:1301:U:O2'	1:13:1302:U:H3'	2.18	0.43
2:1E:97:TRP:HZ2	2:1E:102:LEU:HD13	1.83	0.43
2:1E:149:LEU:HA	2:1E:149:LEU:HD23	1.79	0.43
3:2E:16:ARG:HH12	3:2E:183:ASP:HA	1.84	0.43
6:5E:61:LEU:HD23	6:5E:63:TYR:CE1	2.53	0.43
18:9I:76:LEU:HB3	18:9I:78:LEU:HG	2.01	0.43
20:BI:55:ILE:O	20:BI:58:LYS:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:7:G:H2'	25:1H:8:A:O4'	2.17	0.43
25:1H:280:C:C2	25:1H:361:G:C2	3.06	0.43
25:1H:1011:G:C2	25:1H:1151:G:C2	3.06	0.43
25:1H:1728:G:C2	25:1H:1730:U:OP2	2.70	0.43
25:1H:1968:G:H5'	60:1H:3762:HOH:O	2.18	0.43
25:1H:2093:G:C6	25:1H:2225:A:C8	3.07	0.43
25:1H:2209:C:O2	25:1H:2216:G:C2	2.72	0.43
25:1H:2394:C:H2'	25:1H:2395:C:C6	2.53	0.43
26:16:83:G:OP1	49:L8:19:GLN:NE2	2.47	0.43
27:11:101:GLU:HG3	27:11:102:LYS:N	2.32	0.43
28:21:103:ASP:OD1	28:21:201:THR:HG23	2.18	0.43
30:41:118:ARG:O	30:41:181:ARG:HG3	2.18	0.43
31:51:83:TYR:CB	31:51:135:GLY:H	2.26	0.43
31:51:86:GLU:H	31:51:86:GLU:HG2	1.46	0.43
33:58:68:GLU:HG2	33:58:88:GLU:OE1	2.18	0.43
36:88:33:GLY:HA2	36:88:105:GLU:HA	2.00	0.43
39:B8:3:ARG:O	39:B8:7:ILE:N	2.41	0.43
44:G8:83:THR:HG22	44:G8:84:ARG:HG2	2.01	0.43
46:I8:34:GLY:O	46:I8:35:ASN:C	2.61	0.43
49:L8:37:LEU:HD12	49:L8:43:ILE:HG21	1.99	0.43
53:Q8:53:PRO:O	53:Q8:55:ALA:O	2.36	0.43
54:1G:498:A:H4'	54:1G:500:G:OP1	2.18	0.43
54:1G:707:C:H2'	54:1G:708:C:C6	2.53	0.43
54:1G:1106:G:H5"	3:22:172:ARG:HG2	2.00	0.43
54:1G:1314:C:H41	19:AA:4:SER:CB	2.32	0.43
5:42:70:PRO:O	5:42:77:PRO:HD3	2.19	0.43
10:1A:3:LYS:N	10:1A:75:ILE:HA	2.33	0.43
13:4A:27:LYS:HE3	13:4A:31:LYS:NZ	2.34	0.43
19:AA:66:MET:N	19:AA:66:MET:SD	2.91	0.43
25:14:95:G:H4'	48:G5:46:GLN:HB2	1.99	0.43
25:14:172:C:H2'	25:14:173:G:C8	2.51	0.43
25:14:991:C:O2	25:14:1164:G:C2	2.72	0.43
25:14:1021:A:H8	25:14:1021:A:H3'	1.84	0.43
25:14:1347:G:C6	25:14:1348:G:N7	2.86	0.43
25:14:2043:C:H2'	25:14:2044:C:H6	1.83	0.43
25:14:2271:G:H5"	46:E5:20:ARG:NE	2.33	0.43
25:14:2402:C:H5	25:14:2415:G:N2	2.16	0.43
26:1J:10:C:C4	26:1J:11:C:C5	3.07	0.43
27:19:26:LYS:HZ3	27:19:30:GLU:HB2	1.83	0.43
28:29:109:LYS:HE2	28:29:191:PRO:HA	2.01	0.43
32:69:123:LEU:HD22	32:69:143:SER:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:25:4:PRO:O	34:25:5:GLN:HB2	2.16	0.43
34:25:68:GLU:H	34:25:68:GLU:CD	2.26	0.43
35:35:86:LYS:HG3	35:35:87:ASP:N	2.33	0.43
38:65:7:TYR:O	38:65:11:LYS:HB2	2.18	0.43
39:75:16:ARG:HE	39:75:16:ARG:HB3	1.46	0.43
39:75:24:PRO:HA	39:75:49:VAL:HG23	2.00	0.43
45:D5:29:TYR:HA	45:D5:33:LEU:O	2.18	0.43
46:E5:26:TYR:O	46:E5:29:GLN:HB2	2.18	0.43
47:F5:46:LEU:HD12	47:F5:46:LEU:HA	1.56	0.43
53:M5:40:GLU:HA	53:M5:43:GLN:HB2	1.99	0.43
1:13:736:C:H2'	1:13:737:A:H8	1.83	0.43
1:13:778:G:H8	1:13:778:G:O5'	2.02	0.43
1:13:963:G:H1	1:13:972:C:N4	2.08	0.43
1:13:1079:G:C6	1:13:1080:A:N6	2.87	0.43
1:13:1315:U:C5	1:13:1316:G:C5	3.06	0.43
2:1E:17:PHE:CB	2:1E:44:LEU:HD21	2.48	0.43
8:7E:80:ILE:H	8:7E:80:ILE:HG12	1.65	0.43
17:8I:4:LYS:HG2	17:8I:6:LEU:HD21	2.00	0.43
23:2K:2:G:H2'	23:2K:3:C:H6	1.83	0.43
25:1H:24:G:C6	25:1H:25:U:C4	3.06	0.43
25:1H:26:G:C6	25:1H:27:G:N1	2.86	0.43
25:1H:41:C:H42	25:1H:438:G:H1	1.67	0.43
25:1H:483:A:O2'	44:G8:49:VAL:O	2.33	0.43
25:1H:574:C:H4'	25:1H:575:A:O5'	2.19	0.43
25:1H:761:A:N7	60:1H:3826:HOH:O	2.52	0.43
25:1H:826:U:H5"	25:1H:2428:G:O3'	2.19	0.43
25:1H:834:C:H2'	25:1H:835:A:O4'	2.19	0.43
25:1H:1465:G:C4	25:1H:1466:G:C8	3.06	0.43
25:1H:2016:U:H1'	51:N8:6:VAL:HG13	2.00	0.43
25:1H:2130:U:H2'	25:1H:2131:G:H5"	1.99	0.43
25:1H:2262:U:H4'	25:1H:2328:A:C2	2.53	0.43
25:1H:2395:C:H5"	25:1H:2396:G:OP2	2.18	0.43
25:1H:2701:C:H3'	25:1H:2702:U:H5'	1.95	0.43
27:11:83:GLU:HB2	27:11:92:ILE:HG13	1.99	0.43
31:51:10:PRO:O	31:51:12:PRO:HD3	2.18	0.43
31:51:164:TYR:N	31:51:167:GLU:OE1	2.48	0.43
33:58:137:LYS:HE3	33:58:138:LEU:O	2.18	0.43
36:88:103:MET:H	36:88:103:MET:HG2	1.50	0.43
39:B8:64:ARG:HB2	39:B8:73:GLU:HG2	2.00	0.43
45:H8:59:LEU:HA	45:H8:59:LEU:HD23	1.65	0.43
48:K8:14:ARG:HA	48:K8:67:LYS:NZ	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:M8:24:THR:OG1	50:M8:25:TYR:N	2.51	0.43
54:1G:537:G:H5"	12:3A:113:ARG:HH12	1.84	0.43
54:1G:885:G:O2'	54:1G:914:A:N1	2.45	0.43
54:1G:971:G:C6	54:1G:1364:U:O2'	2.71	0.43
54:1G:1097:C:H1'	54:1G:1169:A:H2	1.84	0.43
2:12:75:LYS:CA	2:12:78:GLN:HB2	2.34	0.43
3:22:57:ILE:HG12	3:22:66:VAL:HG22	2.00	0.43
5:42:148:VAL:HG21	8:72:107:LEU:HD22	1.99	0.43
9:82:95:LYS:HE2	9:82:95:LYS:HB2	1.48	0.43
12:3A:12:ARG:HE	12:3A:12:ARG:HB3	1.47	0.43
15:6A:4:THR:N	15:6A:7:GLU:OE2	2.43	0.43
56:2L:19:G:C4	56:2L:59:A:C2	3.06	0.43
25:14:574:C:H1'	25:14:2055:C:C6	2.53	0.43
25:14:686:G:H5"	52:L5:11:LYS:NZ	2.34	0.43
25:14:864:G:H1'	25:14:914:C:N4	2.34	0.43
25:14:1142(A):A:H4'	33:15:25:ARG:HH22	1.83	0.43
25:14:1309:G:O2'	25:14:1611:C:O2'	2.31	0.43
25:14:1328:G:H2'	25:14:1330:C:C4	2.53	0.43
25:14:1408:C:C2	25:14:1595:G:N2	2.87	0.43
25:14:1780:A:P	60:14:3402:HOH:O	2.71	0.43
25:14:1796:U:H4'	27:19:256:GLY:N	2.33	0.43
25:14:2134:A:C2	25:14:2159:G:H1'	2.52	0.43
25:14:2158:A:H1'	25:14:2159:G:C8	2.54	0.43
25:14:2244:U:H2'	25:14:2245:U:O4'	2.18	0.43
25:14:2408:U:H2'	25:14:2409:G:H8	1.83	0.43
26:1J:27:C:OP2	38:65:33:LYS:NZ	2.51	0.43
27:19:42:GLY:N	27:19:43:ARG:HD2	2.34	0.43
31:59:172:LYS:HB3	31:59:172:LYS:HE2	1.69	0.43
33:15:97:ARG:HA	33:15:100:GLU:HB2	2.00	0.43
33:15:121:LYS:HD2	33:15:121:LYS:N	2.33	0.43
36:45:29:PHE:HD2	36:45:65:PHE:CE1	2.37	0.43
45:D5:19:ARG:HE	45:D5:19:ARG:HB2	1.43	0.43
1:13:224:C:H2'	1:13:225:C:H6	1.82	0.43
1:13:345:C:H4'	1:13:346:G:N3	2.34	0.43
1:13:452:A:O2'	1:13:453:A:O5'	2.37	0.43
1:13:727:G:N2	1:13:730:G:OP2	2.34	0.43
1:13:1492:A:OP1	12:3I:47:LYS:N	2.45	0.43
4:3E:23:GLY:HA2	4:3E:112:VAL:HG22	2.00	0.43
18:9I:19:LYS:HA	18:9I:19:LYS:HD2	1.78	0.43
20:BI:67:ALA:HA	20:BI:72:LEU:O	2.18	0.43
23:2K:17:C:H5'	23:2K:62:C:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:38:MIA:H5"	22:3K:38:MIA:C8	2.38	0.43
25:1H:120:U:H4'	25:1H:121:G:H5"	2.00	0.43
25:1H:1050:A:H1'	25:1H:2751:G:C8	2.53	0.43
25:1H:1204:A:H2	25:1H:1241:A:N1	2.16	0.43
25:1H:2815:C:H2'	25:1H:2816:C:C6	2.52	0.43
26:16:15:A:H3'	26:16:16:G:H5'	2.00	0.43
28:21:166:THR:HG21	28:21:199:ARG:HH22	1.83	0.43
29:31:63:LYS:NZ	29:31:75:HIS:O	2.46	0.43
31:51:102:ALA:HA	31:51:117:PRO:HD3	2.01	0.43
42:E8:59:VAL:HG21	42:E8:66:GLU:HB2	2.00	0.43
43:F8:18:TYR:C	43:F8:20:GLY:N	2.75	0.43
50:M8:16:CYS:HB3	50:M8:18:CYS:SG	2.59	0.43
53:Q8:34:TRP:CE3	53:Q8:37:SER:O	2.72	0.43
54:1G:115:G:H4'	54:1G:116:A:O5'	2.18	0.43
54:1G:210:U:OP1	54:1G:210:U:O4'	2.37	0.43
54:1G:308:C:H2'	54:1G:309:G:C8	2.53	0.43
54:1G:533:A:C8	54:1G:536:C:N4	2.86	0.43
54:1G:827:U:H3	54:1G:872:A:N6	2.07	0.43
54:1G:927:G:C2	54:1G:1391:U:H1'	2.54	0.43
54:1G:1075:C:O2'	2:12:175:ARG:NH1	2.48	0.43
4:32:108:LEU:HD21	4:32:183:GLY:HA3	2.01	0.43
5:42:140:ARG:CZ	5:42:140:ARG:HB2	2.49	0.43
15:6A:24:SER:O	15:6A:28:GLN:HG3	2.18	0.43
25:14:196:A:O4'	35:35:46:LYS:HE3	2.18	0.43
25:14:375:C:H2'	25:14:376:C:C6	2.53	0.43
25:14:654(L):G:H2'	25:14:654(M):C:O4'	2.19	0.43
25:14:942:G:H4'	25:14:1190:G:H5'	2.00	0.43
25:14:2469:A:H2'	36:45:56:ARG:HE	1.84	0.43
25:14:2754:U:H3'	25:14:2755:C:H5"	1.99	0.43
27:19:13:ARG:HD2	27:19:13:ARG:HA	1.81	0.43
30:49:64:THR:OG1	30:49:94:LEU:HD22	2.19	0.43
31:59:99:VAL:HG13	31:59:100:GLY:H	1.83	0.43
32:69:59:ALA:HA	32:69:62:LYS:HB3	2.01	0.43
41:95:85:LYS:HD2	41:95:87:HIS:H	1.84	0.43
42:A5:72:LYS:HE2	42:A5:108:GLY:HA3	2.01	0.43
44:C5:62:GLU:H	44:C5:62:GLU:HG3	1.41	0.43
45:D5:71:VAL:HB	45:D5:88:PHE:HE1	1.82	0.43
1:13:57:G:C5	1:13:58:C:C4	3.05	0.43
1:13:294:U:O4	1:13:295:C:N4	2.51	0.43
1:13:593:G:H2'	1:13:594:G:H8	1.84	0.43
1:13:875:C:H1'	8:7E:15:ASN:OD1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1338:G:H2'	1:13:1339:A:C8	2.54	0.43
4:3E:92:VAL:O	4:3E:96:LEU:HD22	2.19	0.43
20:BI:74:LYS:HB3	20:BI:75:ASN:H	1.39	0.43
23:2K:9:G:N2	23:2K:47:7MG:H82	2.34	0.43
22:3K:17:OMG:HM23	22:3K:17:OMG:H1'	1.85	0.43
25:1H:485:C:H6	25:1H:485:C:O5'	2.02	0.43
25:1H:922:U:H1'	46:I8:26:TYR:CD2	2.54	0.43
25:1H:1071:G:H8	25:1H:1071:G:O5'	2.01	0.43
25:1H:1668:A:O4'	25:1H:1669:A:C2	2.72	0.43
25:1H:2481:G:O2'	25:1H:2482:G:O5'	2.34	0.43
25:1H:2633:G:H1'	28:21:62:PRO:HG2	2.00	0.43
25:1H:2635:C:O3'	28:21:79:ARG:HD3	2.18	0.43
25:1H:2881:C:H2'	25:1H:2882:A:C8	2.54	0.43
26:16:27:C:H5"	38:A8:54:LEU:HD21	2.01	0.43
27:11:240:ALA:HA	27:11:241:PRO:HD2	1.67	0.43
30:41:151:ALA:HB3	30:41:153:ARG:HH12	1.84	0.43
40:C8:92:ARG:CZ	40:C8:96:ALA:N	2.80	0.43
48:K8:48:HIS:H	48:K8:50:ILE:CD1	2.30	0.43
54:1G:634:C:H3'	54:1G:634:C:H6	1.83	0.43
54:1G:757:U:O2'	54:1G:879:C:O2	2.33	0.43
54:1G:776:G:N2	54:1G:802:A:OP2	2.52	0.43
54:1G:992:U:H4'	54:1G:993:G:O5'	2.19	0.43
54:1G:1131:G:H2'	54:1G:1132:C:H6	1.84	0.43
54:1G:1287:A:N3	54:1G:1353:G:O2'	2.44	0.43
2:12:126:GLU:C	2:12:128:GLU:N	2.77	0.43
3:22:150:LYS:HG3	3:22:169:ALA:HB2	2.00	0.43
5:42:111:GLU:HG2	5:42:112:LEU:HD23	2.00	0.43
10:1A:76:ASN:HB3	10:1A:78:ASN:HD22	1.83	0.43
11:2A:18:ARG:HB3	11:2A:33:THR:OG1	2.19	0.43
11:2A:99:GLN:HG3	11:2A:105:VAL:HG11	2.01	0.43
17:8A:82:MET:O	17:8A:85:VAL:HB	2.18	0.43
55:3L:28:G:H22	55:3L:45:C:H1'	1.84	0.43
25:14:749:C:OP2	60:14:3643:HOH:O	2.21	0.43
25:14:852:G:H2'	25:14:853:G:C8	2.53	0.43
25:14:869:G:H5'	36:45:6:ARG:HH12	1.84	0.43
25:14:1011:G:C2	25:14:1151:G:C2	3.06	0.43
25:14:2167:U:H2'	25:14:2168:G:H5'	2.00	0.43
25:14:2291:U:OP1	25:14:2381:C:H5'	2.19	0.43
25:14:2714:G:P	60:14:3468:HOH:O	2.77	0.43
25:14:2884:U:H2'	25:14:2885:C:O4'	2.18	0.43
26:1J:44:G:H1'	26:1J:47:C:N4	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:63:LEU:N	28:29:63:LEU:HD23	2.33	0.43
32:69:79:ILE:O	32:69:143:SER:N	2.52	0.43
35:35:41:ARG:N	35:35:41:ARG:HD2	2.33	0.43
36:45:97:VAL:HG21	36:45:103:MET:HE3	2.01	0.43
40:85:24:TYR:O	40:85:29:SER:HB3	2.19	0.43
47:F5:91:LYS:HZ2	47:F5:92:LYS:H	1.66	0.43
1:13:953:G:H2'	1:13:954:G:O4'	2.18	0.43
1:13:967:C:O5'	1:13:967:C:H6	2.02	0.43
1:13:1118:C:H1'	1:13:1179:A:C5	2.54	0.43
1:13:1244:C:O2	1:13:1294:G:N2	2.52	0.43
1:13:1286:A:C8	1:13:1287:A:H4'	2.53	0.43
1:13:1380:U:O4	7:6E:2:ALA:N	2.51	0.43
2:1E:76:GLN:NE2	2:1E:206:ASP:HB3	2.34	0.43
13:4I:90:LEU:HA	13:4I:93:ARG:HB2	2.00	0.43
13:4I:108:ARG:HG3	13:4I:108:ARG:NH1	2.25	0.43
14:5I:53:LEU:HA	14:5I:53:LEU:HD23	1.64	0.43
14:5I:53:LEU:HA	14:5I:54:PRO:HD3	1.84	0.43
23:2K:73:A:N6	23:2K:74:A:C6	2.87	0.43
25:1H:196:A:C8	35:78:46:LYS:HD2	2.54	0.43
25:1H:633:A:H2'	25:1H:634:C:H5'	2.01	0.43
25:1H:1981:A:OP1	60:1H:3546:HOH:O	2.21	0.43
25:1H:2111:C:C5	25:1H:2147:G:N1	2.87	0.43
25:1H:2294:C:C4	25:1H:2295:C:C5	3.06	0.43
25:1H:2345:G:N3	25:1H:2381:C:H2'	2.34	0.43
25:1H:2392:A:H2	25:1H:2424:C:N4	2.11	0.43
25:1H:2757:A:H2'	25:1H:2758:A:H5'	2.00	0.43
29:31:134:GLY:HA3	29:31:162:LEU:O	2.18	0.43
30:41:67:LYS:HE2	30:41:67:LYS:H	1.84	0.43
31:51:6:ARG:HB3	31:51:65:HIS:HB3	2.00	0.43
33:58:133:GLN:HG2	33:58:134:ARG:H	1.83	0.43
42:E8:17:VAL:C	42:E8:19:LEU:N	2.77	0.43
44:G8:34:LYS:O	44:G8:34:LYS:HG2	2.18	0.43
54:1G:591:U:H2'	54:1G:592:G:C8	2.54	0.43
54:1G:800:G:H8	54:1G:800:G:O5'	2.02	0.43
54:1G:843:U:C5	54:1G:848:C:H1'	2.54	0.43
54:1G:937:A:C2	54:1G:1379:G:O6	2.72	0.43
54:1G:1129:C:N4	54:1G:1133:G:O6	2.51	0.43
54:1G:1137:C:H4'	54:1G:1138:G:C2	2.54	0.43
2:12:55:PHE:HD1	2:12:55:PHE:HA	1.67	0.43
3:22:43:LEU:HD11	3:22:68:VAL:HG21	1.99	0.43
15:6A:43:LEU:HD11	15:6A:53:HIS:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:213:A:H5"	25:14:214:G:OP2	2.19	0.43
25:14:476:G:N1	25:14:479:A:OP2	2.52	0.43
25:14:592:G:H5"	25:14:592:G:C8	2.53	0.43
25:14:919:G:C6	25:14:920:G:C5	3.06	0.43
25:14:1462:C:H4'	25:14:2703:C:H5'	2.00	0.43
25:14:1519:G:C6	25:14:1520:U:N3	2.87	0.43
25:14:1567:A:OP2	27:19:84:TYR:OH	2.26	0.43
25:14:1638:C:OP1	25:14:2710:C:O2'	2.34	0.43
25:14:2054:A:H5"	25:14:2055:C:O5'	2.19	0.43
25:14:2075:U:H2'	25:14:2238:G:N2	2.33	0.43
25:14:2319:G:N1	25:14:2334:G:OP2	2.40	0.43
25:14:2533:A:O5'	25:14:2533:A:H8	2.01	0.43
25:14:2579:C:H2'	25:14:2580:U:O4'	2.18	0.43
25:14:2861:G:C2	25:14:2862:G:C4	3.06	0.43
26:1J:73:A:C4	26:1J:104:A:C2	3.07	0.43
26:1J:80:U:C2	26:1J:81:G:N2	2.87	0.43
27:19:43:ARG:HH11	27:19:43:ARG:CG	2.32	0.43
29:39:21:ALA:O	29:39:23:ASP:N	2.52	0.43
29:39:170:LEU:HA	29:39:171:PRO:HD3	1.71	0.43
30:49:51:ARG:O	30:49:51:ARG:HG2	2.19	0.43
31:59:30:LYS:HD2	31:59:30:LYS:HA	1.74	0.43
33:15:56:ASN:H	33:15:125:GLY:CA	2.31	0.43
35:35:39:LYS:HE2	35:35:45:LEU:HD22	2.01	0.43
38:65:88:ASP:CG	38:65:90:GLY:H	2.26	0.43
38:65:99:LYS:HG2	38:65:103:GLU:HG3	2.00	0.43
45:D5:25:PRO:O	45:D5:85:HIS:HA	2.19	0.43
1:13:753:A:H4'	1:13:754:C:H5"	2.01	0.43
1:13:895:G:H2'	1:13:896:C:C6	2.54	0.43
1:13:1176:A:N1	1:13:1177:G:C4	2.87	0.43
6:5E:18:GLN:O	6:5E:21:LEU:HB2	2.19	0.43
6:5E:82:ARG:CB	6:5E:83:ASP:CA	2.96	0.43
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	2.01	0.43
17:8I:48:GLU:O	17:8I:50:LYS:HG2	2.19	0.43
23:2K:73:A:C6	23:2K:74:A:C6	3.07	0.43
25:1H:66:C:H2'	25:1H:67:U:C6	2.53	0.43
25:1H:319:C:C2	25:1H:333:G:N2	2.87	0.43
25:1H:540:G:H2'	25:1H:541:C:C6	2.54	0.43
25:1H:611:C:C2'	25:1H:612:G:H5'	2.49	0.43
25:1H:1055:G:N2	25:1H:1104:C:N3	2.59	0.43
25:1H:1164:G:C2	25:1H:1165:U:C2	3.06	0.43
25:1H:1991:U:H2'	25:1H:1992:G:H5"	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2025:C:H2'	25:1H:2026:C:C6	2.54	0.43
25:1H:2027:G:C5	25:1H:2028:U:C5	3.07	0.43
25:1H:2141:G:H2'	25:1H:2142:C:C6	2.54	0.43
25:1H:2259:G:C2	25:1H:2282:G:N1	2.87	0.43
25:1H:2313:C:H5"	30:41:91:ARG:HG3	2.01	0.43
25:1H:2413:G:C2	25:1H:2414:G:C4	3.07	0.43
29:31:6:VAL:HG12	29:31:7:TYR:H	1.84	0.43
29:31:181:LEU:HD23	29:31:181:LEU:HA	1.88	0.43
31:51:38:SER:HB2	31:51:64:LEU:HD22	2.00	0.43
35:78:19:VAL:HG12	35:78:20:GLY:C	2.44	0.43
36:88:5:ARG:O	36:88:6:ARG:C	2.61	0.43
40:C8:47:TYR:HA	40:C8:50:ARG:CZ	2.49	0.43
45:H8:68:PRO:O	45:H8:91:LEU:HD22	2.18	0.43
45:H8:119:GLU:CD	45:H8:119:GLU:H	2.27	0.43
54:1G:34:C:H2'	54:1G:35:G:H8	1.83	0.43
54:1G:222:U:C2	54:1G:223:U:C5	3.07	0.43
54:1G:313:A:H2'	54:1G:314:C:C6	2.53	0.43
54:1G:677:U:H2'	54:1G:678:U:H6	1.81	0.43
54:1G:736:C:H2'	54:1G:737:A:C8	2.54	0.43
54:1G:738:C:H6	54:1G:738:C:O5'	2.02	0.43
54:1G:1054:C:OP1	54:1G:1197:G:P	2.77	0.43
54:1G:1080:A:OP1	5:42:47:LYS:HE3	2.19	0.43
54:1G:1402:C:H2'	54:1G:1403:C:O4'	2.18	0.43
2:12:125:PRO:HA	2:12:127:ILE:HG12	2.00	0.43
3:22:8:ILE:HD12	3:22:16:ARG:HG2	2.01	0.43
4:32:134:ASP:OD1	4:32:135:LEU:HD13	2.18	0.43
5:42:7:GLU:HB3	5:42:35:GLY:O	2.19	0.43
7:62:133:GLY:HA2	7:62:136:LYS:HB2	2.00	0.43
9:82:48:GLU:OE1	9:82:51:ARG:NH1	2.51	0.43
10:1A:35:SER:HB3	10:1A:73:ASP:HB2	2.00	0.43
11:2A:124:LYS:H	11:2A:124:LYS:HG2	1.07	0.43
14:5A:11:LYS:HD2	14:5A:11:LYS:HA	1.69	0.43
14:5A:37:PHE:CE1	14:5A:53:LEU:HD13	2.54	0.43
56:2L:62:C:H2'	56:2L:63:C:H6	1.83	0.43
55:3L:10:C:H2'	55:3L:11:C:C6	2.54	0.43
55:3L:62:G:H2'	55:3L:63:U:C6	2.54	0.43
25:14:588:U:O4	25:14:670:A:H1'	2.19	0.43
25:14:638:G:C5	25:14:651:G:C2	3.07	0.43
25:14:1007:C:H5"	33:15:35:ARG:NH1	2.33	0.43
25:14:1112:G:H2'	25:14:1113:U:C6	2.54	0.43
25:14:2748:A:C4	25:14:2749:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:46:A:H2'	26:1J:47:C:C6	2.54	0.43
29:39:78:ILE:C	29:39:80:ALA:H	2.26	0.43
30:49:19:LEU:HD13	30:49:32:PRO:HD2	2.01	0.43
30:49:41:GLN:O	30:49:43:LEU:HD22	2.18	0.43
30:49:53:LEU:HD11	30:49:70:VAL:HG12	2.01	0.43
31:59:94:TYR:N	31:59:94:TYR:CD1	2.85	0.43
32:69:7:GLU:HG3	32:69:8:PRO:N	2.34	0.43
33:15:35:ARG:HB2	33:15:42:TRP:CH2	2.54	0.43
37:55:12:ARG:HG2	37:55:16:HIS:CG	2.53	0.43
45:D5:122:ARG:HG3	45:D5:123:ASP:OD1	2.19	0.43
1:13:148:G:N2	1:13:175:C:O2	2.52	0.43
1:13:687:A:N1	1:13:700:G:O2'	2.47	0.43
2:1E:122:PHE:O	2:1E:127:ILE:HD12	2.19	0.43
6:5E:5:GLU:HB3	6:5E:62:TRP:NE1	2.33	0.43
13:4I:27:LYS:HA	13:4I:31:LYS:NZ	2.34	0.43
14:5I:15:LYS:HG2	14:5I:16:PHE:CE2	2.54	0.43
15:6I:38:ARG:HG2	15:6I:38:ARG:HH11	1.84	0.43
17:8I:13:ASP:OD1	17:8I:53:LEU:HD13	2.19	0.43
17:8I:62:SER:HB3	17:8I:72:ARG:HH21	1.84	0.43
17:8I:82:MET:O	17:8I:86:GLU:HB2	2.19	0.43
18:9I:68:LYS:HA	18:9I:71:LYS:HD2	2.01	0.43
20:BI:50:GLU:HG3	20:BI:100:ILE:HG12	2.01	0.43
25:1H:458:G:N7	52:P8:37:LYS:HD2	2.33	0.43
25:1H:518:G:H2'	25:1H:519:U:H6	1.84	0.43
25:1H:533:G:N3	40:C8:45:TYR:CE2	2.87	0.43
25:1H:773:U:H4'	27:11:47:GLY:CA	2.49	0.43
25:1H:902:C:O2'	25:1H:903:C:H5'	2.18	0.43
25:1H:1207:C:C2	25:1H:1208:C:C5	3.06	0.43
25:1H:1386:C:C2	25:1H:1387:C:C5	3.07	0.43
25:1H:1678:G:H22	25:1H:1989:G:N2	2.15	0.43
25:1H:1957:C:H2'	25:1H:1958:C:C6	2.54	0.43
25:1H:2111:C:O2'	25:1H:2119:A:OP1	2.36	0.43
25:1H:2134:A:OP2	25:1H:2157:G:N2	2.52	0.43
25:1H:2318:G:H22	38:A8:2:ALA:N	2.17	0.43
25:1H:2518:A:H8	25:1H:2518:A:H5'	1.83	0.43
26:16:28:C:O2'	26:16:29:A:H5'	2.19	0.43
29:31:199:TRP:O	29:31:202:PHE:HB3	2.19	0.43
33:58:65:LYS:HE3	33:58:65:LYS:HB2	1.59	0.43
35:78:39:LYS:HG3	35:78:45:LEU:CD2	2.48	0.43
37:98:70:LEU:HD23	37:98:70:LEU:HA	1.82	0.43
39:B8:7:ILE:O	39:B8:10:VAL:HB	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:19:LEU:HA	39:B8:20:PRO:HD3	1.76	0.43
39:B8:74:ARG:HD3	39:B8:76:PHE:CE1	2.54	0.43
39:B8:114:LEU:HA	39:B8:114:LEU:HD22	1.69	0.43
54:1G:8:A:H8	5:42:101:ILE:HB	1.83	0.43
54:1G:223:U:H2'	54:1G:224:C:H6	1.83	0.43
54:1G:428:G:C5	54:1G:430:A:C6	3.06	0.43
54:1G:593:G:H2'	54:1G:594:G:O4'	2.18	0.43
54:1G:735:C:H2'	54:1G:736:C:H6	1.83	0.43
54:1G:1001:G:H1	54:1G:1039:C:H42	1.66	0.43
54:1G:1228:C:H2'	54:1G:1229:A:H8	1.83	0.43
2:12:56:ARG:O	2:12:60:ASP:HB2	2.18	0.43
4:32:18:LYS:HB3	4:32:18:LYS:HE2	1.81	0.43
4:32:102:ASP:OD1	4:32:102:ASP:N	2.51	0.43
6:52:14:LEU:HB2	6:52:18:GLN:OE1	2.18	0.43
7:62:26:PHE:CD2	7:62:30:ILE:HD11	2.53	0.43
7:62:71:PRO:HD3	7:62:103:TRP:HZ3	1.84	0.43
15:6A:75:PRO:HA	15:6A:78:TYR:HB3	2.00	0.43
18:9A:22:VAL:HG12	18:9A:55:ARG:O	2.19	0.43
20:BA:73:HIS:HB3	20:BA:74:LYS:H	1.49	0.43
56:2L:65:G:C6	56:2L:66:C:N4	2.87	0.43
25:14:35:G:H2'	25:14:36:G:O4'	2.19	0.43
25:14:102:G:OP1	48:G5:7:ARG:NH2	2.51	0.43
25:14:233:A:H2'	25:14:234:C:H6	1.83	0.43
25:14:819:A:OP2	25:14:1187:G:N2	2.51	0.43
25:14:873:G:N2	25:14:905:U:N3	2.67	0.43
25:14:900:A:H2'	25:14:900:A:N3	2.34	0.43
25:14:1016:G:H2'	25:14:1017:G:O4'	2.19	0.43
25:14:1199:U:H2'	25:14:1200:C:C6	2.54	0.43
25:14:1588:C:H5'	25:14:1589:C:OP2	2.18	0.43
25:14:1967:C:H2'	25:14:1968:G:O4'	2.19	0.43
25:14:2208:U:H2'	25:14:2209:C:H6	1.84	0.43
25:14:2786:U:H4'	28:29:65:GLY:N	2.34	0.43
25:14:2889:C:H3'	25:14:2891:G:H8	1.84	0.43
26:1J:14:U:H5'	26:1J:71:C:O4'	2.18	0.43
27:19:16:MET:HG2	27:19:206:LEU:O	2.18	0.43
30:49:114:ILE:HD11	30:49:140:ILE:HD13	2.00	0.43
31:59:120:GLY:HA3	31:59:136:ILE:HD11	2.01	0.43
34:25:89:ASN:OD1	34:25:89:ASN:N	2.52	0.43
34:25:111:PHE:O	34:25:115:VAL:HG23	2.19	0.43
37:55:12:ARG:HG2	37:55:16:HIS:CD2	2.54	0.43
37:55:18:LEU:HD13	37:55:22:ARG:NH1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:109:GLY:O	38:65:110:LEU:HD22	2.19	0.43
40:85:92:ARG:C	40:85:94:ASN:N	2.76	0.43
43:B5:12:VAL:HG13	43:B5:27:THR:OG1	2.18	0.43
48:G5:63:VAL:HA	48:G5:66:GLU:HG2	2.00	0.43
52:L5:34:ARG:HB3	52:L5:42:LEU:HD22	1.99	0.43
1:13:34:C:H2'	1:13:35:G:C8	2.54	0.42
1:13:222:U:H2'	1:13:223:U:C6	2.54	0.42
1:13:401:C:H2'	1:13:402:G:C8	2.53	0.42
1:13:631:G:C5	1:13:632:A:H2	2.36	0.42
1:13:912:C:O2'	1:13:913:A:H5'	2.19	0.42
1:13:986:A:H2'	1:13:987:G:O4'	2.19	0.42
8:7E:105:ARG:HD3	8:7E:105:ARG:HA	1.53	0.42
13:4I:31:LYS:H	13:4I:31:LYS:HD2	1.83	0.42
13:4I:34:LEU:HD12	13:4I:39:ILE:O	2.19	0.42
25:1H:16:G:N3	25:1H:17:G:C8	2.87	0.42
25:1H:495:G:H1'	42:E8:57:ASN:OD1	2.18	0.42
25:1H:587:C:OP2	35:78:21:ARG:NH2	2.52	0.42
25:1H:639:U:H3	25:1H:649:G:H1	1.67	0.42
25:1H:674:G:O2'	29:31:74:ARG:HD3	2.19	0.42
25:1H:703:U:H2'	25:1H:704:G:O4'	2.19	0.42
25:1H:888:C:H2'	25:1H:889:C:C2	2.54	0.42
25:1H:902:C:H2'	25:1H:903:C:C6	2.54	0.42
25:1H:1007:C:H5"	33:58:35:ARG:NH1	2.34	0.42
25:1H:1153:C:C4	25:1H:1154:G:C5	3.07	0.42
25:1H:1749:A:H2'	25:1H:1750:G:O4'	2.18	0.42
25:1H:1777:U:C2'	25:1H:1778:U:H5'	2.49	0.42
25:1H:2108:C:H2'	25:1H:2109:U:O4'	2.19	0.42
25:1H:2246:G:H2'	25:1H:2247:A:H8	1.84	0.42
25:1H:2290:G:C6	25:1H:2291:U:N3	2.86	0.42
25:1H:2402:C:H5	25:1H:2415:G:H22	1.67	0.42
25:1H:2611:U:C4	51:N8:3:LYS:HG2	2.53	0.42
25:1H:2839:G:C6	25:1H:2840:C:C4	3.07	0.42
26:16:71:C:C2	26:16:72:G:C8	3.07	0.42
28:21:125:GLY:HA3	28:21:134:ILE:CD1	2.49	0.42
37:98:1:MET:O	37:98:2:ARG:HG3	2.19	0.42
41:D8:18:LEU:HD13	41:D8:20:LEU:HB2	2.00	0.42
48:K8:20:GLU:O	48:K8:24:LEU:HB2	2.18	0.42
54:1G:406:G:H1'	54:1G:495:A:N1	2.33	0.42
54:1G:673:G:O3'	6:52:87:ARG:NH2	2.52	0.42
54:1G:778:G:H2'	54:1G:779:C:O4'	2.19	0.42
54:1G:1078:U:H1'	5:42:130:ASN:HD21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1106:G:H5"	3:22:172:ARG:CG	2.49	0.42
54:1G:1293:G:H2'	54:1G:1294:G:H8	1.83	0.42
54:1G:1321:C:H4'	13:4A:87:TYR:CE1	2.53	0.42
54:1G:1329:A:H5"	13:4A:25:ILE:O	2.19	0.42
54:1G:1343:G:H2'	54:1G:1344:C:C6	2.53	0.42
2:12:178:ARG:HD3	2:12:178:ARG:HA	1.70	0.42
4:32:30:LYS:HB2	4:32:32:ALA:H	1.82	0.42
5:42:6:PHE:HB2	5:42:34:VAL:HG22	2.01	0.42
5:42:13:ILE:HA	5:42:29:GLY:O	2.19	0.42
5:42:140:ARG:HB2	5:42:140:ARG:NH1	2.34	0.42
9:82:13:ALA:HB2	9:82:68:GLY:HA3	2.01	0.42
19:AA:12:ASP:O	19:AA:16:LEU:HB2	2.19	0.42
20:BA:74:LYS:HB3	20:BA:75:ASN:H	1.59	0.42
56:2L:23:G:C6	56:2L:24:C:C4	3.06	0.42
25:14:46:C:OP2	25:14:215:G:H2'	2.19	0.42
25:14:227:A:C2	25:14:2407:G:H1'	2.54	0.42
25:14:270(L):U:O2	32:69:50:ARG:HD2	2.19	0.42
25:14:559:G:O2'	40:85:52:ARG:NH1	2.50	0.42
25:14:1798:U:H5'	27:19:259:THR:OG1	2.19	0.42
25:14:2438:U:H5"	25:14:2600:A:OP1	2.19	0.42
25:14:2774:C:H2'	25:14:2775:A:O4'	2.19	0.42
27:19:242:ARG:HH11	27:19:242:ARG:N	2.05	0.42
27:19:273:ARG:O	27:19:274:ARG:C	2.61	0.42
32:69:76:THR:HG23	32:69:77:LEU:N	2.34	0.42
39:75:2:ASN:C	39:75:4:GLY:H	2.26	0.42
39:75:61:PHE:CE1	39:75:76:PHE:HB2	2.54	0.42
41:95:71:LEU:N	41:95:86:GLY:HA3	2.34	0.42
41:95:84:LYS:HA	41:95:84:LYS:HD2	1.61	0.42
43:B5:52:VAL:N	43:B5:82:GLN:O	2.47	0.42
45:D5:4:ARG:CA	45:D5:58:VAL:HB	2.45	0.42
53:M5:14:VAL:HG12	53:M5:15:LYS:N	2.33	0.42
1:13:66:G:O4'	1:13:173:U:C4	2.72	0.42
1:13:392:G:H2'	1:13:393:A:O4'	2.18	0.42
1:13:1152:A:O3'	10:1I:13:HIS:NE2	2.51	0.42
1:13:1374:A:C2	1:13:1375:A:N7	2.87	0.42
2:1E:25:ASN:HA	2:1E:26:PRO:HD3	1.87	0.42
8:7E:25:ASP:OD2	8:7E:60:ARG:HG3	2.19	0.42
9:8E:9:ARG:HG2	9:8E:104:ARG:CZ	2.49	0.42
13:4I:25:ILE:HD11	13:4I:66:LEU:HD11	2.01	0.42
16:7I:9:PHE:CZ	16:7I:18:ARG:HD2	2.54	0.42
16:7I:53:VAL:O	16:7I:57:ARG:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8I:81:ARG:HD3	17:8I:84:LEU:HG	2.00	0.42
19:AI:21:GLU:O	19:AI:25:LYS:HB2	2.18	0.42
25:1H:571:A:O2'	41:D8:78:LYS:NZ	2.50	0.42
25:1H:654(G):C:O2	25:1H:654(N):G:N2	2.37	0.42
25:1H:1068:G:H4'	25:1H:1070:A:N6	2.34	0.42
25:1H:1166:C:H2'	25:1H:1167:U:C6	2.54	0.42
25:1H:1204:A:O2'	25:1H:1205:U:OP2	2.34	0.42
25:1H:1401:G:H2'	25:1H:1402:C:C6	2.54	0.42
25:1H:1669:A:H5"	25:1H:2550:G:OP1	2.19	0.42
25:1H:1786:A:C2	25:1H:2606:C:H1'	2.48	0.42
25:1H:2358:G:H2'	25:1H:2359:C:H6	1.83	0.42
25:1H:2692:C:O2	25:1H:2847:U:O2'	2.27	0.42
26:16:21:G:H1	26:16:62:C:N4	2.17	0.42
30:41:47:LYS:NZ	30:41:81:LYS:HB2	2.34	0.42
31:51:107:VAL:HB	31:51:152:ARG:HG2	2.01	0.42
32:61:1:MET:H2	32:61:21:VAL:H	1.67	0.42
35:78:35:HIS:HB3	35:78:36:LYS:H	1.31	0.42
36:88:3:MET:HG2	36:88:4:PRO:O	2.19	0.42
39:B8:56:GLY:N	39:B8:59:THR:HG22	2.34	0.42
40:C8:47:TYR:CD2	40:C8:48:ALA:N	2.87	0.42
43:F8:3:THR:HA	43:F8:6:ASP:CG	2.44	0.42
44:G8:87:LYS:H	44:G8:94:LYS:CG	2.28	0.42
45:H8:163:LEU:HD13	45:H8:165:VAL:HA	2.01	0.42
46:I8:53:MET:HA	46:I8:58:THR:O	2.19	0.42
52:P8:10:ARG:O	52:P8:10:ARG:HG2	2.19	0.42
52:P8:37:LYS:O	52:P8:37:LYS:HG3	2.17	0.42
54:1G:171:A:H2'	54:1G:172:A:H8	1.83	0.42
54:1G:238:G:H5"	54:1G:239:U:OP2	2.19	0.42
54:1G:1376:U:H2'	54:1G:1377:A:C8	2.54	0.42
54:1G:1441:G:H4'	54:1G:1442:G:C4	2.54	0.42
2:12:146:GLN:O	2:12:150:SER:OG	2.24	0.42
9:82:63:ILE:HD11	9:82:81:ILE:HD11	2.01	0.42
13:4A:106:ASN:OD1	13:4A:106:ASN:N	2.52	0.42
55:1L:2:G:H1	55:1L:80:C:H42	1.67	0.42
25:14:171:G:H2'	25:14:172:C:H6	1.83	0.42
25:14:270(L):U:O5'	25:14:270(L):U:H6	2.02	0.42
25:14:905:U:H5"	25:14:906:G:OP2	2.19	0.42
25:14:1213:A:N3	25:14:1238:G:O2'	2.46	0.42
25:14:1233:C:H2'	25:14:1234:U:C6	2.52	0.42
25:14:1257:C:H4'	29:39:83:PHE:CD1	2.53	0.42
25:14:2050:C:H2'	25:14:2051:A:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2359:C:H42	25:14:2428:G:H1	1.67	0.42
25:14:2712(A):A:P	60:14:3466:HOH:O	2.77	0.42
27:19:34:VAL:HG11	27:19:61:LEU:HG	2.01	0.42
29:39:179:GLU:H	29:39:179:GLU:CD	2.28	0.42
30:49:111:LEU:HD23	30:49:111:LEU:HA	1.83	0.42
38:65:3:ARG:HE	38:65:4:LEU:HB2	1.84	0.42
38:65:14:VAL:HG11	38:65:89:ARG:HE	1.83	0.42
38:65:52:SER:O	38:65:56:LEU:HG	2.19	0.42
38:65:67:ARG:HB2	38:65:67:ARG:NH1	2.34	0.42
39:75:74:ARG:HD3	39:75:76:PHE:CZ	2.54	0.42
40:85:110:VAL:O	40:85:114:LYS:HG2	2.18	0.42
41:95:72:VAL:O	41:95:72:VAL:HG13	2.19	0.42
42:A5:59:VAL:HG12	42:A5:60:ASN:ND2	2.34	0.42
48:G5:69:ARG:H	48:G5:69:ARG:HG3	1.66	0.42
51:J5:20:ARG:HA	51:J5:23:HIS:ND1	2.33	0.42
1:13:124:G:H2'	1:13:125:U:O4'	2.19	0.42
1:13:192:U:H2'	1:13:193:C:H6	1.85	0.42
1:13:412:A:OP2	4:3E:35:ARG:NH2	2.52	0.42
1:13:564:C:C5	17:8I:31:LEU:HD11	2.54	0.42
1:13:587:G:H4'	8:7E:3:THR:O	2.19	0.42
1:13:947:G:H2'	1:13:948:C:H6	1.84	0.42
1:13:1143:G:H2'	1:13:1144:G:C8	2.54	0.42
1:13:1284:C:H3'	1:13:1285:A:C8	2.54	0.42
1:13:1428:A:H2'	1:13:1429:C:C6	2.54	0.42
3:2E:30:ARG:HD2	14:5I:38:GLY:HA3	2.01	0.42
9:8E:78:LYS:HE3	9:8E:101:PHE:CD1	2.54	0.42
13:4I:14:ARG:HB2	13:4I:17:VAL:HG23	1.99	0.42
15:6I:6:GLU:HG2	15:6I:7:GLU:N	2.34	0.42
15:6I:39:LEU:O	15:6I:42:HIS:N	2.51	0.42
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.19	0.42
22:3K:14:A:N3	22:3K:14:A:H2'	2.33	0.42
25:1H:86:C:H4'	25:1H:104:U:H1'	2.02	0.42
25:1H:249:C:H5"	60:1H:3550:HOH:O	2.19	0.42
25:1H:317:G:C2	25:1H:318:C:C2	3.07	0.42
25:1H:353:G:H2'	25:1H:354:G:C8	2.53	0.42
25:1H:579:G:H2'	25:1H:580:C:C6	2.54	0.42
25:1H:643:A:C2	25:1H:644:A:C4	3.08	0.42
25:1H:987:G:P	60:1H:3778:HOH:O	2.76	0.42
25:1H:1417:C:H2'	25:1H:1418:G:O4'	2.19	0.42
25:1H:1464:C:C2	25:1H:1465:G:C8	3.07	0.42
25:1H:1639:U:H5"	25:1H:1639:U:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1754:C:H2'	25:1H:1755:A:O4'	2.20	0.42
25:1H:2287:A:N3	25:1H:2289:G:C8	2.87	0.42
25:1H:2706:G:H2'	25:1H:2707:G:O4'	2.19	0.42
25:1H:2761:G:H1'	31:51:143:GLN:OE1	2.19	0.42
27:11:13:ARG:HD2	27:11:13:ARG:HA	1.74	0.42
28:21:181:LEU:HA	28:21:181:LEU:HD13	1.65	0.42
30:41:37:VAL:HG13	30:41:159:VAL:HG12	2.01	0.42
31:51:88:LEU:H	31:51:88:LEU:HG	1.62	0.42
33:58:15:LEU:HD13	33:58:16:ILE:N	2.34	0.42
33:58:128:HIS:HD1	33:58:129:PRO:C	2.27	0.42
34:68:112:MET:H	34:68:112:MET:HG2	1.70	0.42
35:78:50:ARG:HD3	53:Q8:58:ILE:CD1	2.42	0.42
37:98:52:ILE:O	37:98:55:ALA:N	2.51	0.42
40:C8:97:ASP:O	40:C8:101:ARG:N	2.45	0.42
42:E8:71:VAL:HA	42:E8:107:LEU:HD12	2.01	0.42
43:F8:25:LYS:HA	43:F8:81:VAL:O	2.20	0.42
44:G8:83:THR:HG22	44:G8:84:ARG:N	2.31	0.42
53:Q8:61:LEU:N	53:Q8:62:LEU:HA	2.34	0.42
54:1G:374:A:C6	54:1G:375:U:C4	3.07	0.42
54:1G:392:G:O2'	54:1G:483:C:O2'	2.31	0.42
54:1G:930:C:H42	54:1G:1387:G:H1	1.67	0.42
54:1G:1014:A:H2'	54:1G:1015:A:N9	2.34	0.42
54:1G:1181:G:H2'	54:1G:1182:G:O4'	2.19	0.42
2:12:88:ALA:HB2	2:12:219:VAL:HG23	2.01	0.42
2:12:97:TRP:CZ3	2:12:99:GLY:HA2	2.47	0.42
4:32:9:CYS:HA	4:32:12:CYS:HB2	2.02	0.42
4:32:23:GLY:N	4:32:26:CYS:HB2	2.19	0.42
5:42:40:ARG:HA	5:42:67:VAL:O	2.20	0.42
8:72:20:TYR:HD1	8:72:65:TYR:CD1	2.37	0.42
13:4A:8:GLU:C	13:4A:9:ILE:HG12	2.43	0.42
17:8A:67:LYS:O	17:8A:68:ARG:HB2	2.19	0.42
25:14:410:G:C2	25:14:418:G:C2	3.07	0.42
25:14:1341:U:OP2	25:14:1394:U:O2'	2.33	0.42
25:14:1869:G:N2	25:14:1872:A:C8	2.88	0.42
25:14:2057:A:O2'	25:14:2058:A:H5'	2.19	0.42
25:14:2535:G:H2'	25:14:2536:G:H8	1.84	0.42
25:14:2859:G:C8	25:14:2859:G:H3'	2.54	0.42
26:1J:90:C:OP2	36:45:16:ARG:NH2	2.52	0.42
29:39:63:LYS:HD3	29:39:65:TRP:O	2.19	0.42
29:39:120:GLU:HG3	29:39:122:LYS:HG2	2.01	0.42
31:59:144:VAL:O	31:59:148:ILE:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:56:LYS:O	32:69:60:GLU:HB3	2.20	0.42
34:25:78:ARG:HH21	39:75:103:ARG:HH21	1.67	0.42
35:35:13:ASN:C	35:35:15:ARG:N	2.76	0.42
39:75:12:SER:OG	39:75:13:ARG:N	2.50	0.42
39:75:31:SER:HB3	39:75:42:ILE:HG23	1.99	0.42
40:85:69:CYS:O	40:85:74:LEU:HD12	2.19	0.42
41:95:53:GLU:C	41:95:55:ALA:H	2.27	0.42
44:C5:83:THR:HG22	44:C5:84:ARG:H	1.85	0.42
44:C5:88:LYS:HB2	44:C5:89:PHE:H	1.61	0.42
46:E5:53:MET:HG3	46:E5:59:LEU:HD23	2.02	0.42
1:13:11:G:C5	1:13:12:U:C5	3.07	0.42
1:13:622:A:H2'	1:13:623:C:O4'	2.19	0.42
1:13:670:G:C6	1:13:671:G:C5	3.08	0.42
1:13:1097:C:C4	1:13:1098:C:C5	3.08	0.42
1:13:1141:C:H2'	1:13:1142:G:O4'	2.20	0.42
6:5E:7:ASN:C	6:5E:8:ILE:HG13	2.45	0.42
9:8E:33:PHE:CE2	9:8E:47:LEU:HD11	2.55	0.42
10:1I:76:ASN:HA	10:1I:77:PRO:HD2	1.88	0.42
10:1I:84:GLN:HE21	10:1I:84:GLN:HB3	1.63	0.42
13:4I:34:LEU:O	13:4I:39:ILE:N	2.44	0.42
15:6I:39:LEU:HD23	15:6I:39:LEU:HA	1.83	0.42
25:1H:32:C:C2'	25:1H:33:U:H5'	2.49	0.42
25:1H:247:G:H4'	25:1H:386:G:C5	2.54	0.42
25:1H:270(P):C:H2'	25:1H:270(Q):C:C6	2.53	0.42
25:1H:493:G:H2'	25:1H:494:G:O4'	2.19	0.42
25:1H:1417:C:H42	25:1H:1581:G:H1	1.66	0.42
25:1H:1545(A):A:C2'	25:1H:1546:C:H5'	2.50	0.42
25:1H:2147:G:N7	25:1H:2148:G:H1'	2.34	0.42
25:1H:2364:C:H2'	25:1H:2365:G:O4'	2.19	0.42
25:1H:2397:G:C2	25:1H:2420:C:O2	2.72	0.42
31:51:27:LYS:HA	31:51:32:GLU:HB3	2.00	0.42
40:C8:110:VAL:O	40:C8:114:LYS:HG3	2.19	0.42
43:F8:41:ASN:OD1	43:F8:41:ASN:N	2.52	0.42
44:G8:94:LYS:NZ	44:G8:95:LYS:H	2.16	0.42
53:Q8:32:LEU:HD13	53:Q8:33:ASN:H	1.84	0.42
54:1G:52:G:H2'	54:1G:53:A:O4'	2.19	0.42
54:1G:1127:G:C6	54:1G:1145:C:C2	3.08	0.42
54:1G:1227:A:H3'	54:1G:1227:A:C8	2.54	0.42
2:12:162:ILE:HD11	2:12:184:VAL:HG22	2.01	0.42
3:22:40:ARG:HA	3:22:43:LEU:HB3	2.01	0.42
5:42:110:LEU:O	5:42:115:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:6A:12:ILE:HG12	15:6A:31:LEU:HD11	2.01	0.42
17:8A:89:LEU:HD23	17:8A:89:LEU:HA	1.76	0.42
19:AA:30:LEU:HD21	19:AA:32:LYS:HE2	2.00	0.42
55:1L:37:A:C2	57:4L:20:A:C5	3.08	0.42
25:14:565:C:H4'	25:14:1253:A:C6	2.54	0.42
25:14:741:G:H2'	25:14:742:G:C8	2.55	0.42
25:14:768:G:H2'	25:14:769:G:C8	2.53	0.42
25:14:817:C:O2'	25:14:839:U:OP1	2.30	0.42
25:14:900:A:C4	25:14:901:A:C8	3.08	0.42
25:14:997:G:OP2	40:85:58:ARG:NH1	2.53	0.42
25:14:1225:C:H1'	41:95:84:LYS:HE2	2.01	0.42
25:14:1340:U:H4'	25:14:1394:U:O2'	2.19	0.42
25:14:1709:U:H2'	25:14:1710:C:C6	2.54	0.42
25:14:2287:A:O2'	25:14:2288:A:H5"	2.20	0.42
26:1J:17:C:H2'	26:1J:18:G:O4'	2.18	0.42
26:1J:78:A:C2	26:1J:99:A:C4	3.07	0.42
27:19:120:GLY:HA2	27:19:190:TYR:OH	2.20	0.42
27:19:270:ILE:HG12	27:19:270:ILE:H	1.26	0.42
28:29:21:VAL:HA	28:29:22:PRO:HD2	1.74	0.42
28:29:64:LYS:C	28:29:66:HIS:H	2.28	0.42
28:29:103:ASP:OD2	28:29:168:MET:HE2	2.20	0.42
29:39:23:ASP:O	29:39:25:PRO:HD3	2.20	0.42
29:39:129:PHE:HA	29:39:142:TRP:NE1	2.34	0.42
31:59:9:ILE:HA	31:59:10:PRO:HD3	1.87	0.42
33:15:48:MET:HE2	33:15:48:MET:HB2	1.74	0.42
34:25:7:TYR:CD1	34:25:20:MET:HB2	2.54	0.42
44:C5:37:VAL:O	44:C5:67:LEU:N	2.48	0.42
46:E5:51:VAL:HG23	46:E5:81:VAL:HG23	2.02	0.42
48:G5:15:LYS:H	48:G5:67:LYS:HE2	1.84	0.42
1:13:345:C:O2'	1:13:346:G:N2	2.52	0.42
1:13:359:U:H2'	1:13:360:A:H8	1.82	0.42
5:4E:150:ARG:NH1	5:4E:150:ARG:HB3	2.34	0.42
7:6E:146:GLU:O	7:6E:149:ARG:HB2	2.19	0.42
10:1I:25:GLU:H	10:1I:25:GLU:HG2	1.57	0.42
16:7I:58:TYR:C	16:7I:58:TYR:CD1	2.96	0.42
17:8I:22:LEU:HD22	17:8I:88:TYR:CD1	2.55	0.42
22:3K:61:G:H1	22:3K:71:C:H42	1.68	0.42
25:1H:183:C:H42	25:1H:213:A:H61	1.67	0.42
25:1H:570:G:H2'	25:1H:2030:A:C5	2.54	0.42
25:1H:636:G:N7	35:78:113:LYS:HE2	2.34	0.42
25:1H:880:G:O6	25:1H:895:U:C4	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1598:C:H2'	25:1H:1599:C:H6	1.85	0.42
25:1H:2257:U:C2'	25:1H:2258:C:H5'	2.49	0.42
25:1H:2335:A:C8	25:1H:2337:G:C6	3.08	0.42
25:1H:2423:U:H4'	25:1H:2424:C:O5'	2.20	0.42
25:1H:2701:C:C3'	25:1H:2702:U:H5"	2.43	0.42
33:58:85:ILE:HA	33:58:86:PRO:HD3	1.92	0.42
37:98:96:ARG:NH2	37:98:117:VAL:HG23	2.34	0.42
39:B8:50:ILE:CD1	39:B8:102:ILE:HD11	2.39	0.42
40:C8:39:LEU:O	40:C8:40:PHE:C	2.63	0.42
45:H8:14:LYS:HA	45:H8:15:PRO:HD2	1.72	0.42
52:P8:18:PHE:CD2	52:P8:18:PHE:C	2.98	0.42
54:1G:44:G:N2	54:1G:399:G:C4	2.87	0.42
54:1G:604:G:H2'	54:1G:605:U:O4'	2.19	0.42
54:1G:651:C:H2'	54:1G:652:U:O4'	2.19	0.42
54:1G:728:A:C2	54:1G:729:A:C5	3.07	0.42
54:1G:918:A:H2'	54:1G:919:A:O4'	2.20	0.42
54:1G:1123:A:H4'	10:1A:37:PRO:HD2	2.01	0.42
54:1G:1277:C:O2'	54:1G:1279:A:H8	2.01	0.42
54:1G:1347:G:N2	54:1G:1373:G:H2'	2.34	0.42
54:1G:1348:U:H3	54:1G:1374:A:H2	1.65	0.42
54:1G:1422:G:H5"	34:25:48:PRO:HB3	2.00	0.42
3:22:59:ARG:HH12	3:22:97:LYS:NZ	2.18	0.42
4:32:33:MET:C	4:32:35:ARG:N	2.77	0.42
9:82:117:HIS:HB2	9:82:121:ARG:HG3	2.01	0.42
11:2A:101:SER:HB2	11:2A:103:LEU:N	2.33	0.42
13:4A:96:LEU:HD22	13:4A:103:THR:HG21	2.00	0.42
25:14:70:G:H21	25:14:71:A:H62	1.66	0.42
25:14:74:A:H8	25:14:74:A:O5'	2.02	0.42
25:14:212:G:H2'	25:14:213:A:O4'	2.19	0.42
25:14:219:G:H2'	25:14:220:G:O4'	2.20	0.42
25:14:224:G:H2'	25:14:225:A:O4'	2.19	0.42
25:14:1000:A:C6	25:14:1001:A:N1	2.87	0.42
25:14:1324:G:C5	25:14:1328:G:O6	2.73	0.42
25:14:2102:U:H3	25:14:2187:G:H1	1.66	0.42
25:14:2286:A:H4'	25:14:2287:A:O4'	2.19	0.42
25:14:2577:A:H2'	25:14:2614:A:N6	2.34	0.42
25:14:2705:A:H2'	25:14:2706:G:O4'	2.19	0.42
26:1J:43:C:O2	30:49:95:ARG:NH2	2.52	0.42
26:1J:70:C:H42	26:1J:106:G:H1	1.67	0.42
33:15:25:ARG:O	33:15:29:LYS:HG2	2.19	0.42
36:45:43:THR:HA	36:45:94:VAL:HG12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:80:SER:HA	39:75:81:PRO:HD3	1.91	0.42
40:85:92:ARG:NH2	41:95:10:LYS:HA	2.35	0.42
43:B5:48:LYS:HD3	43:B5:48:LYS:HA	1.72	0.42
43:B5:59:VAL:HG12	43:B5:76:ARG:HB2	2.02	0.42
1:13:376:G:OP1	16:7I:5:ARG:HB2	2.20	0.42
1:13:666:G:N3	1:13:666:G:H2'	2.35	0.42
1:13:1316:G:H22	1:13:1319:A:H5"	1.84	0.42
1:13:1330:U:O4	1:13:1331:G:C2	2.72	0.42
1:13:1447:G:H8	1:13:1447:G:O5'	2.03	0.42
2:1E:68:ILE:O	2:1E:91:PRO:HD2	2.18	0.42
3:2E:108:ASN:HA	3:2E:109:PRO:HD2	1.80	0.42
4:3E:83:SER:C	4:3E:85:LYS:HB3	2.44	0.42
5:4E:69:VAL:HA	5:4E:70:PRO:HD3	1.70	0.42
6:5E:67:MET:HB2	6:5E:68:PRO:HD2	2.02	0.42
9:8E:4:TYR:CZ	9:8E:88:TYR:HB2	2.54	0.42
9:8E:95:LYS:HE2	9:8E:95:LYS:HB2	1.74	0.42
16:7I:21:VAL:HG11	16:7I:59:TRP:CG	2.55	0.42
19:AI:4:SER:O	19:AI:5:LEU:HG	2.20	0.42
25:1H:73:A:OP2	48:K8:54:LYS:HD2	2.20	0.42
25:1H:356:G:H2'	25:1H:357:A:H8	1.85	0.42
25:1H:775:G:C4	25:1H:794:G:C8	3.08	0.42
25:1H:805:G:O5'	35:78:41:ARG:HG2	2.20	0.42
25:1H:1206:G:C6	25:1H:1207:C:C4	3.07	0.42
25:1H:1250:G:OP2	35:78:21:ARG:HD3	2.19	0.42
25:1H:1338:G:H2'	25:1H:1339:G:H8	1.85	0.42
25:1H:1388:G:H2'	25:1H:1389:G:C8	2.53	0.42
25:1H:2281:C:O2'	25:1H:2282:G:H5'	2.19	0.42
25:1H:2447:G:OP2	60:1H:3649:HOH:O	2.22	0.42
25:1H:2567:G:H2'	25:1H:2568:C:H6	1.83	0.42
25:1H:2663:G:H3'	25:1H:2664:G:H8	1.84	0.42
26:16:116:G:H2'	26:16:117:G:O4'	2.20	0.42
27:11:245:PRO:HA	27:11:246:PRO:HD3	1.85	0.42
28:21:26:ILE:HG12	28:21:27:LEU:N	2.32	0.42
30:41:45:GLU:H	30:41:45:GLU:HG2	1.48	0.42
53:Q8:52:LYS:O	53:Q8:56:GLU:HG2	2.18	0.42
54:1G:300:A:H2'	54:1G:301:G:O4'	2.20	0.42
54:1G:562:C:H4'	54:1G:563:A:O5'	2.18	0.42
54:1G:1297:C:H4'	54:1G:1298:C:O5'	2.19	0.42
3:22:20:SER:HB2	3:22:40:ARG:NH2	2.34	0.42
3:22:27:LYS:H	3:22:27:LYS:HG2	1.39	0.42
6:52:10:LEU:HD12	6:52:59:TYR:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:21:LYS:N	8:72:65:TYR:OH	2.51	0.42
10:1A:30:SER:CB	10:1A:81:THR:HG22	2.50	0.42
13:4A:7:VAL:HG11	30:49:115:ARG:CZ	2.50	0.42
17:8A:29:HIS:HB3	17:8A:33:GLY:N	2.35	0.42
25:14:49:A:C6	25:14:177:G:C5	3.08	0.42
25:14:309:G:N3	25:14:329:G:O2'	2.52	0.42
25:14:1022:G:C5	25:14:1140:C:N4	2.87	0.42
25:14:1109:C:C4	25:14:1110:G:C6	3.08	0.42
25:14:1423:G:C4	25:14:1424:G:C8	3.07	0.42
25:14:1847:A:C3'	25:14:1848:A:H5'	2.50	0.42
25:14:2198:A:C2	32:69:29:TYR:HB2	2.55	0.42
27:19:143:HIS:CE1	27:19:192:THR:HG1	2.38	0.42
27:19:181:GLU:HG3	27:19:182:LEU:N	2.34	0.42
30:49:25:TYR:CD1	30:49:30:GLU:HB2	2.55	0.42
30:49:96:ARG:HE	30:49:96:ARG:HB2	1.65	0.42
32:69:112:LYS:CA	32:69:114:LEU:H	2.32	0.42
33:15:36:GLY:HA2	33:15:49:GLY:HA2	2.02	0.42
35:35:101:VAL:HG21	35:35:108:LYS:N	2.34	0.42
42:A5:64:MET:HE2	42:A5:64:MET:HB3	1.90	0.42
1:13:192:U:O4'	20:BI:103:GLY:HA2	2.18	0.42
1:13:604:G:C6	1:13:605:U:N3	2.88	0.42
1:13:626:U:N3	1:13:627:G:C5	2.88	0.42
1:13:731:G:C4	1:13:732:C:C5	3.08	0.42
1:13:942:G:C2	1:13:1342:C:C2	3.07	0.42
1:13:974:A:OP1	14:5I:31:ARG:HD3	2.19	0.42
1:13:1144:G:H21	1:13:1146:A:H62	1.67	0.42
1:13:1286:A:C2	21:1F:18:TYR:OH	2.71	0.42
1:13:1365:G:H2'	1:13:1366:C:H6	1.84	0.42
3:2E:19:GLU:O	3:2E:40:ARG:NH2	2.53	0.42
9:8E:65:VAL:O	9:8E:66:ARG:HG3	2.20	0.42
13:4I:13:LYS:HD3	13:4I:13:LYS:HA	1.79	0.42
20:BI:48:LYS:HD2	20:BI:48:LYS:HA	1.90	0.42
22:1K:9:U:O2	22:1K:9:U:H2'	2.19	0.42
22:3K:16:C:H2'	22:3K:18:G:OP2	2.19	0.42
22:3K:20:C:H2'	22:3K:68:A:N6	2.35	0.42
25:1H:1125:G:C6	25:1H:1126:A:N6	2.88	0.42
25:1H:1666:G:C2'	25:1H:1667:G:H5'	2.49	0.42
25:1H:1678:G:H8	25:1H:1678:G:O5'	2.03	0.42
25:1H:2660:A:C2	25:1H:2661:G:H1'	2.54	0.42
27:11:30:GLU:HG3	27:11:83:GLU:OE1	2.20	0.42
29:31:67:GLN:HE21	29:31:67:GLN:HB2	1.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:112:PRO:HB3	50:M8:37:SER:N	2.26	0.42
39:B8:32:TYR:CE1	39:B8:76:PHE:HD1	2.37	0.42
45:H8:80:ARG:H	45:H8:80:ARG:HG2	1.45	0.42
49:L8:22:ALA:O	49:L8:25:ALA:N	2.52	0.42
52:P8:22:MET:HE3	52:P8:22:MET:HB3	1.87	0.42
54:1G:111:G:O6	54:1G:330:C:N4	2.50	0.42
54:1G:529:G:O2'	54:1G:533:A:N6	2.52	0.42
54:1G:938:A:H1'	54:1G:1376:U:O2'	2.19	0.42
54:1G:1227:A:O2'	13:4A:115:LYS:HE2	2.20	0.42
54:1G:1379:G:OP2	7:62:6:ARG:HD2	2.20	0.42
54:1G:1379:G:OP1	7:62:6:ARG:NH1	2.53	0.42
54:1G:1489:G:H2'	54:1G:1490:C:O4'	2.19	0.42
2:12:50:GLU:O	2:12:54:THR:OG1	2.29	0.42
3:22:70:VAL:HG12	3:22:72:LYS:N	2.32	0.42
4:32:57:ARG:HB3	4:32:206:PHE:HB2	2.02	0.42
8:72:31:PHE:CE2	8:72:35:ILE:HD11	2.55	0.42
10:1A:52:GLY:HA2	10:1A:53:PRO:HD2	1.79	0.42
14:5A:37:PHE:HE1	14:5A:53:LEU:HD22	1.85	0.42
16:7A:82:GLN:HE21	16:7A:82:GLN:HB3	1.64	0.42
25:14:69:C:H2'	25:14:70:G:C8	2.55	0.42
25:14:455:C:N3	25:14:473:G:H5'	2.34	0.42
25:14:782:A:N7	27:19:221:VAL:HG21	2.34	0.42
25:14:1485:G:H2'	25:14:1486:A:H8	1.84	0.42
25:14:1515:C:H2'	25:14:1516:U:H6	1.84	0.42
25:14:1916:A:H2'	25:14:1917:U:O4'	2.20	0.42
25:14:2012:G:H5"	42:A5:96:ILE:CD1	2.49	0.42
25:14:2038:G:H2'	25:14:2039:C:C6	2.54	0.42
25:14:2147:G:H2'	25:14:2148:G:H4'	2.02	0.42
25:14:2507:C:H2'	25:14:2508:G:O4'	2.20	0.42
25:14:2693:A:N1	25:14:2717:G:C6	2.88	0.42
27:19:198:ASN:C	27:19:200:ASP:H	2.27	0.42
28:29:64:LYS:HD2	28:29:64:LYS:HA	1.89	0.42
29:39:33:LEU:HD22	29:39:112:MET:HE2	2.02	0.42
30:49:107:LEU:HD11	30:49:178:PHE:CZ	2.55	0.42
31:59:148:ILE:HD13	31:59:148:ILE:HA	1.88	0.42
36:45:48:GLU:O	36:45:52:VAL:HG23	2.20	0.42
40:85:70:ARG:NH2	40:85:75:ASN:HD22	2.18	0.42
46:E5:46:LYS:HA	46:E5:47:PRO:HD3	1.88	0.42
46:E5:74:ARG:NH1	46:E5:74:ARG:HB2	2.35	0.42
48:G5:51:ARG:O	48:G5:55:ARG:HB2	2.20	0.42
53:M5:14:VAL:HG11	53:M5:22:VAL:HG13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:107:G:N7	20:BI:15:ARG:NH2	2.57	0.42
1:13:129(A):G:H4'	1:13:130:A:H5"	2.02	0.42
1:13:130:A:P	17:8I:63:ARG:HE	2.43	0.42
1:13:303:A:H2'	1:13:304:U:O4'	2.20	0.42
1:13:984:C:N4	1:13:1221:G:H1	2.18	0.42
1:13:1075:C:H5"	2:1E:179:LYS:NZ	2.35	0.42
1:13:1096:C:H2'	1:13:1097:C:C6	2.54	0.42
1:13:1162:C:H2'	1:13:1163:C:C6	2.55	0.42
1:13:1213:A:C8	1:13:1215:G:C5	3.07	0.42
1:13:1497:G:C2'	1:13:1498:U:H5'	2.43	0.42
2:1E:87:ARG:HD2	2:1E:233:SER:OG	2.20	0.42
2:1E:236:TYR:HA	2:1E:239:VAL:CG2	2.45	0.42
10:1I:90:LEU:N	10:1I:91:PRO:HD3	2.35	0.42
13:4I:82:MET:HG2	13:4I:89:GLY:O	2.18	0.42
13:4I:90:LEU:H	13:4I:90:LEU:HG	1.69	0.42
22:1K:13:G:H2'	22:1K:14:A:C8	2.48	0.42
22:1K:38:MIA:S10	24:4K:19[A]:A:H1'	2.59	0.42
24:4K:19[A]:A:C8	24:4K:19[A]:A:OP2	2.73	0.42
25:1H:59:U:O2'	25:1H:73:A:H2'	2.20	0.42
25:1H:107:C:H2'	25:1H:108:U:H6	1.85	0.42
25:1H:270(C):C:H42	25:1H:270(W):G:H1	1.67	0.42
25:1H:527:C:H4'	25:1H:528:A:O5'	2.20	0.42
25:1H:550:G:O2'	25:1H:1220:A:N3	2.48	0.42
25:1H:654(M):C:H5'	25:1H:654(N):G:N7	2.35	0.42
25:1H:806:C:C2	25:1H:807:U:C5	3.08	0.42
25:1H:996:A:C6	25:1H:1160:G:C2	3.07	0.42
25:1H:1106:G:H2'	25:1H:1107:G:O4'	2.19	0.42
25:1H:1189:A:P	60:1H:3680:HOH:O	2.76	0.42
25:1H:1749:A:C4	25:1H:1750:G:C8	3.07	0.42
28:21:167:VAL:CG1	28:21:189:PRO:HD3	2.49	0.42
28:21:171:GLU:OE1	28:21:185:LYS:HE2	2.19	0.42
38:A8:36:TYR:HB3	38:A8:52:SER:HB3	2.01	0.42
40:C8:92:ARG:NH1	40:C8:96:ALA:HA	2.35	0.42
41:D8:35:LEU:HB2	41:D8:37:VAL:HG23	2.02	0.42
41:D8:70:ILE:N	41:D8:87:HIS:O	2.40	0.42
44:G8:47:LYS:HG3	44:G8:48:ALA:N	2.34	0.42
48:K8:21:LEU:HD13	48:K8:64:LEU:HA	2.02	0.42
53:Q8:32:LEU:HD22	53:Q8:33:ASN:HB3	2.02	0.42
54:1G:49:U:C2	54:1G:361:G:N2	2.87	0.42
54:1G:95:G:H2'	54:1G:96:G:O4'	2.20	0.42
54:1G:456:C:H42	54:1G:476:G:H1	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:596:C:H42	54:1G:644:G:H1	1.68	0.42
54:1G:1072:G:H2'	54:1G:1073:U:O4'	2.20	0.42
54:1G:1280:A:H5'	54:1G:1281:U:OP2	2.20	0.42
2:12:25:ASN:HA	2:12:26:PRO:HD3	1.74	0.42
2:12:214:ILE:O	2:12:218:ALA:HB2	2.19	0.42
3:22:33:LEU:O	3:22:36:ASP:N	2.53	0.42
4:32:13:ARG:C	4:32:15:GLU:N	2.76	0.42
6:52:12:PRO:HB3	6:52:58:GLY:HA2	2.02	0.42
8:72:97:VAL:HG21	8:72:128:GLY:O	2.19	0.42
9:82:16:ARG:HH21	9:82:64:THR:HG21	1.85	0.42
12:3A:37:CYS:SG	12:3A:81:SER:HB3	2.60	0.42
13:4A:7:VAL:HG13	30:49:115:ARG:HB3	2.02	0.42
13:4A:94:ARG:HH21	19:AA:80:TYR:HD2	1.66	0.42
14:5A:27:CYS:O	14:5A:27:CYS:SG	2.77	0.42
14:5A:53:LEU:HD23	14:5A:53:LEU:HA	1.72	0.42
55:3L:67:A:H4'	55:3L:68:A:OP1	2.20	0.42
25:14:686:G:N3	52:L5:11:LYS:HE2	2.35	0.42
25:14:714:U:O2	25:14:716:A:C8	2.73	0.42
25:14:817:C:O2'	25:14:839:U:H5"	2.20	0.42
25:14:832:G:OP1	35:35:39:LYS:N	2.51	0.42
25:14:1191:G:O2'	25:14:1192:G:H5'	2.19	0.42
25:14:1265:A:O4'	25:14:1267:U:C6	2.73	0.42
25:14:1525:G:C2	25:14:1526:G:C4	3.08	0.42
25:14:2056:G:H3'	60:14:3437:HOH:O	2.19	0.42
25:14:2295:C:OP1	38:65:10:ARG:NH1	2.53	0.42
26:1J:27:C:C2'	26:1J:28:C:H5'	2.49	0.42
27:19:11:PRO:C	27:19:13:ARG:N	2.78	0.42
28:29:82:ARG:O	28:29:83:ASP:HB2	2.19	0.42
28:29:101:ARG:HG3	28:29:203:LYS:HD2	2.01	0.42
29:39:83:PHE:O	29:39:84:VAL:HB	2.20	0.42
31:59:166:GLY:O	31:59:167:GLU:HG2	2.19	0.42
37:55:35:THR:CG2	37:55:100:LEU:HD11	2.49	0.42
38:65:53:SER:O	38:65:57:LYS:HA	2.20	0.42
39:75:31:SER:HG	39:75:85:LYS:NZ	2.15	0.42
39:75:45:PHE:CE1	39:75:65:LYS:HG2	2.55	0.42
40:85:79:PHE:CZ	40:85:83:LEU:HD21	2.54	0.42
44:C5:37:VAL:HG22	44:C5:69:ALA:HA	2.01	0.42
44:C5:48:ALA:HB3	44:C5:59:GLY:HA2	2.02	0.42
49:H5:5:LYS:HE3	49:H5:5:LYS:HB3	1.61	0.42
1:13:255:G:C2	1:13:272:C:C2	3.07	0.42
1:13:600:C:H4'	8:7E:128:GLY:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:922:G:N1	1:13:923:A:C2	2.87	0.42
1:13:1133:G:H2'	1:13:1134:G:H8	1.84	0.42
1:13:1502:A:H2	1:13:1505:G:N1	2.12	0.42
2:1E:163:PHE:HA	2:1E:185:ILE:O	2.20	0.42
4:3E:173:TRP:HA	4:3E:187:ARG:CG	2.49	0.42
19:AI:20:LEU:O	19:AI:23:ASN:HB2	2.20	0.42
21:1F:6:ARG:H	21:1F:6:ARG:HG3	1.45	0.42
22:1K:16:C:H5	22:1K:68:A:H61	1.67	0.42
23:2K:65:G:H2'	23:2K:66:C:C6	2.54	0.42
25:1H:213:A:H5"	25:1H:214:G:OP2	2.20	0.42
25:1H:363(A):A:H2'	25:1H:363(B):G:H8	1.84	0.42
25:1H:494:G:OP1	42:E8:8:ARG:HD3	2.20	0.42
25:1H:662:G:O2'	25:1H:663:G:H5'	2.20	0.42
25:1H:861:A:C2	25:1H:917:A:C5	3.08	0.42
25:1H:924:C:H2'	25:1H:925:C:C6	2.54	0.42
25:1H:1171:G:C5	25:1H:1174:A:N1	2.87	0.42
25:1H:1257:C:OP1	29:31:75:HIS:HE1	2.03	0.42
25:1H:1429:G:H2'	25:1H:1430:C:C6	2.55	0.42
25:1H:1559:G:N3	25:1H:1559:G:H5'	2.35	0.42
25:1H:1753:G:OP1	39:B8:95:ARG:NE	2.44	0.42
25:1H:2254:C:O5'	25:1H:2254:C:H6	2.03	0.42
25:1H:2504:U:OP1	60:1H:3900:HOH:O	2.21	0.42
25:1H:2588:G:P	60:1H:3555:HOH:O	2.75	0.42
25:1H:2635:C:H5"	28:21:79:ARG:NH2	2.35	0.42
25:1H:2659:G:O3'	31:51:175:LYS:HD2	2.20	0.42
26:16:42:C:C6	30:41:69:ALA:HB2	2.55	0.42
27:11:209:ALA:O	27:11:210:GLY:C	2.63	0.42
31:51:8:PRO:HG2	31:51:69:ARG:HH21	1.84	0.42
32:61:38:LEU:H	32:61:38:LEU:HD12	1.84	0.42
32:61:56:LYS:O	32:61:60:GLU:HB3	2.19	0.42
39:B8:5:ALA:HA	39:B8:8:LYS:HG2	2.02	0.42
45:H8:7:ALA:HB3	45:H8:61:LEU:CB	2.50	0.42
45:H8:31:ARG:HE	45:H8:31:ARG:HB2	1.31	0.42
49:L8:31:LEU:HB3	49:L8:32:GLN:OE1	2.20	0.42
53:Q8:59:LYS:HE3	53:Q8:59:LYS:HB3	1.70	0.42
54:1G:142:G:H2'	54:1G:143:A:H8	1.85	0.42
54:1G:391:G:C6	54:1G:392:G:C5	3.08	0.42
54:1G:409:G:N2	54:1G:434:U:C2	2.88	0.42
54:1G:689:C:H2'	54:1G:690:G:H5'	2.02	0.42
54:1G:956:U:C2	54:1G:1225:A:C2	3.08	0.42
54:1G:1413:A:H2'	54:1G:1414:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1479:C:O2'	54:1G:1480:G:H5'	2.20	0.42
2:12:166:ASP:O	2:12:170:GLU:N	2.49	0.42
3:22:95:THR:C	3:22:97:LYS:H	2.28	0.42
4:32:72:GLU:OE1	4:32:207:TYR:OH	2.37	0.42
4:32:112:VAL:HG12	4:32:116:GLN:OE1	2.20	0.42
4:32:119:GLN:HE21	4:32:123:HIS:CE1	2.37	0.42
10:1A:4:ILE:HG13	10:1A:77:PRO:HB3	2.02	0.42
16:7A:17:TYR:HE2	16:7A:41:PRO:HG3	1.85	0.42
25:14:822:U:H2'	25:14:823:G:H8	1.85	0.42
25:14:867:C:C6	25:14:868:U:H5	2.36	0.42
25:14:959:A:N1	25:14:960:A:C2	2.88	0.42
25:14:1021:A:H3'	25:14:1021:A:C8	2.55	0.42
25:14:1259:G:H2'	25:14:1260:G:C8	2.55	0.42
25:14:1333:C:H2'	25:14:1334:G:H8	1.83	0.42
25:14:1838:C:N4	25:14:1898:U:H2'	2.34	0.42
25:14:1899:G:N2	25:14:1902:C:C5	2.87	0.42
25:14:2396:G:H4'	47:F5:30:VAL:H	1.85	0.42
25:14:2468:G:C2	25:14:2481:G:N3	2.88	0.42
26:1J:21:G:H2'	26:1J:22:U:O4'	2.19	0.42
27:19:43:ARG:HA	27:19:49:ILE:HA	2.01	0.42
27:19:83:GLU:HB2	27:19:92:ILE:HG13	2.02	0.42
29:39:34:TRP:CZ3	35:35:8:PRO:HB3	2.54	0.42
30:49:73:ALA:HB3	30:49:85:GLY:H	1.85	0.42
32:69:39:ALA:O	32:69:44:LEU:HB2	2.20	0.42
36:45:66:ILE:O	36:45:67:ARG:HB2	2.20	0.42
48:G5:47:ASN:C	48:G5:49:LYS:N	2.76	0.42
49:H5:4:LEU:O	49:H5:36:VAL:HA	2.20	0.42
1:13:227:G:H2'	1:13:228:A:O4'	2.20	0.42
1:13:945:G:N3	1:13:945:G:H2'	2.35	0.42
1:13:1113:C:H2'	1:13:1114:C:C6	2.54	0.42
1:13:1256:A:N3	1:13:1277:C:N4	2.68	0.42
2:1E:16:HIS:CD2	2:1E:210:SER:HA	2.55	0.42
2:1E:22:LYS:C	2:1E:24:TRP:H	2.26	0.42
2:1E:47:THR:O	2:1E:51:LEU:HB2	2.20	0.42
6:5E:18:GLN:HA	6:5E:21:LEU:HD23	2.02	0.42
8:7E:77:GLU:OE2	8:7E:81:HIS:NE2	2.51	0.42
9:8E:96:LEU:HD12	9:8E:96:LEU:HA	1.63	0.42
10:1I:48:THR:HG23	10:1I:62:HIS:CG	2.55	0.42
12:3I:24:VAL:HB	12:3I:27:LEU:HD12	2.00	0.42
14:5I:47:LEU:HD23	14:5I:47:LEU:HA	1.78	0.42
15:6I:40:SER:O	15:6I:44:LYS:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:8:4SU:C2	22:3K:14:A:H62	2.28	0.42
25:1H:16:G:C2	25:1H:17:G:C8	3.07	0.42
25:1H:443:A:N7	29:31:45:ARG:HG3	2.35	0.42
25:1H:536:A:H2'	25:1H:537:C:C6	2.54	0.42
25:1H:1088:A:H3'	25:1H:1088:A:N3	2.34	0.42
25:1H:1448:G:N3	25:1H:1529:A:H2	2.17	0.42
25:1H:1534:G:H3'	25:1H:1534:G:N3	2.35	0.42
25:1H:1596:A:C2'	25:1H:1597:A:H5'	2.50	0.42
25:1H:2038:G:H2'	25:1H:2039:C:H6	1.84	0.42
25:1H:2050:C:H2'	25:1H:2051:A:O4'	2.20	0.42
25:1H:2572:A:N7	28:21:145:LYS:HB2	2.35	0.42
25:1H:2784:C:H1'	28:21:37:ARG:HH12	1.85	0.42
30:41:111:LEU:HD12	30:41:117:PHE:CE1	2.55	0.42
32:61:101:LEU:HD12	32:61:101:LEU:HA	1.86	0.42
32:61:144:VAL:HG22	32:61:145:VAL:N	2.34	0.42
36:88:127:ILE:HD13	36:88:127:ILE:H	1.85	0.42
43:F8:5:TYR:CE1	48:K8:30:ARG:HG3	2.55	0.42
49:L8:3:ARG:HG2	49:L8:38:GLU:HA	2.02	0.42
54:1G:26:A:N6	54:1G:558:G:O2'	2.52	0.42
54:1G:38:G:C2	54:1G:397:A:C2	3.08	0.42
54:1G:934:C:O2'	54:1G:1344:C:OP2	2.24	0.42
54:1G:1112:C:N3	3:22:178:LEU:HD23	2.34	0.42
54:1G:1151:A:O2'	54:1G:1152:A:O4'	2.25	0.42
54:1G:1166:G:C2	54:1G:1171:G:O6	2.73	0.42
54:1G:1227:A:O2'	13:4A:115:LYS:HB2	2.19	0.42
54:1G:1385:G:H2'	54:1G:1386:G:C8	2.53	0.42
9:82:128:ARG:NH2	56:2L:34:U:OP2	2.53	0.42
16:7A:54:GLU:CD	16:7A:54:GLU:H	2.28	0.42
17:8A:74:LEU:HD22	17:8A:74:LEU:HA	1.73	0.42
55:1L:1:G:H8	55:1L:1:G:OP2	2.03	0.42
55:1L:33:C:H2'	55:1L:34:U:H5'	2.01	0.42
25:14:943:U:OP2	35:35:36:LYS:HE3	2.20	0.42
25:14:1637:A:H5'	25:14:1760:A:O2'	2.20	0.42
25:14:2193:G:C6	25:14:2194:G:C5	3.07	0.42
25:14:2392:A:H8	35:35:61:ARG:HD2	1.85	0.42
27:19:45:ASN:OD1	27:19:45:ASN:N	2.52	0.42
27:19:183:ARG:HG3	27:19:270:ILE:HG23	2.01	0.42
29:39:29:ASN:HA	29:39:30:PRO:HD3	1.94	0.42
29:39:83:PHE:C	29:39:85:GLY:H	2.28	0.42
29:39:132:VAL:HG22	29:39:133:ASN:N	2.35	0.42
30:49:106:LEU:O	30:49:111:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:129:THR:HG22	32:69:137:PRO:HB3	2.02	0.42
33:15:62:VAL:HG22	33:15:66:LYS:HD2	2.01	0.42
36:45:66:ILE:HG13	36:45:67:ARG:H	1.85	0.42
37:55:18:LEU:HA	37:55:18:LEU:HD23	1.79	0.42
46:E5:25:ARG:HD2	46:E5:29:GLN:HE21	1.85	0.42
1:13:247:G:OP2	17:8I:100:LYS:HB2	2.20	0.41
1:13:474:G:C6	1:13:475:G:C6	3.08	0.41
1:13:648:A:N6	1:13:649:G:O6	2.53	0.41
1:13:769:G:H4'	1:13:1513:A:H4'	2.02	0.41
1:13:1150:U:O2	10:1I:39:PRO:HG2	2.20	0.41
1:13:1291:G:H2'	1:13:1292:U:C6	2.55	0.41
6:5E:33:TYR:CD1	6:5E:75:LEU:HD23	2.54	0.41
6:5E:98:LEU:HD22	6:5E:98:LEU:HA	1.71	0.41
10:1I:32:ALA:HB2	10:1I:78:ASN:HD21	1.85	0.41
10:1I:63:PHE:HB3	14:5I:57:ARG:O	2.20	0.41
18:9I:21:LYS:HA	18:9I:21:LYS:HE3	2.02	0.41
22:1K:67:A:O2'	22:1K:69:U:OP2	2.28	0.41
25:1H:64:A:O3'	43:F8:71:GLY:HA3	2.20	0.41
25:1H:116:C:H2'	25:1H:117:G:O4'	2.19	0.41
25:1H:270(L):U:C4	32:61:50:ARG:HD2	2.55	0.41
25:1H:270(T):G:C6	25:1H:270(U):C:C4	3.08	0.41
25:1H:882:G:H22	25:1H:894:C:N4	1.90	0.41
25:1H:956:G:H2'	25:1H:957:A:H2'	2.02	0.41
25:1H:1072:C:H2'	25:1H:1093:G:O6	2.20	0.41
25:1H:1108:U:C2'	25:1H:1109:C:H5'	2.50	0.41
25:1H:1711:C:H2'	25:1H:1712:C:C6	2.55	0.41
25:1H:1750:G:O2'	25:1H:2860:A:N1	2.45	0.41
25:1H:1753:G:H2'	25:1H:1755:A:OP2	2.20	0.41
25:1H:2259:G:N1	25:1H:2282:G:O6	2.53	0.41
25:1H:2430:A:H8	25:1H:2431:U:C5	2.36	0.41
25:1H:2467:C:O2'	25:1H:2468:G:H5'	2.19	0.41
25:1H:2780:G:OP2	33:58:118:LYS:HD3	2.20	0.41
25:1H:2801:A:H2'	25:1H:2802:G:C4'	2.50	0.41
25:1H:2825:C:H6	25:1H:2825:C:O5'	2.03	0.41
25:1H:2877:G:H2'	25:1H:2878:U:O4'	2.20	0.41
27:11:96:HIS:CE1	27:11:102:LYS:HE2	2.55	0.41
28:21:131:ALA:HB1	28:21:135:HIS:CE1	2.53	0.41
29:31:155:LEU:HD11	29:31:176:LEU:HD13	2.02	0.41
30:41:18:GLU:O	30:41:22:ARG:HB2	2.19	0.41
30:41:180:PHE:HB3	30:41:182:LYS:H	1.85	0.41
31:51:79:VAL:O	31:51:79:VAL:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:92:ILE:H	31:51:92:ILE:HG13	1.25	0.41
35:78:91:PHE:N	35:78:91:PHE:CD1	2.88	0.41
38:A8:10:ARG:O	38:A8:14:VAL:HG13	2.20	0.41
40:C8:92:ARG:NH2	40:C8:96:ALA:HA	2.35	0.41
43:F8:1:MET:H3	48:K8:29:LYS:HE3	1.85	0.41
43:F8:18:TYR:C	43:F8:20:GLY:H	2.28	0.41
44:G8:35:TYR:CE2	44:G8:69:ALA:HB3	2.55	0.41
44:G8:39:VAL:HB	44:G8:42:VAL:CG2	2.47	0.41
46:I8:19:LYS:HA	46:I8:19:LYS:HD3	1.39	0.41
50:M8:49:PHE:CD2	50:M8:50:VAL:HG12	2.52	0.41
54:1G:413:G:H2'	54:1G:428:G:N2	2.34	0.41
54:1G:643:C:H5'	8:72:31:PHE:CD1	2.55	0.41
54:1G:1149:C:H2'	54:1G:1150:U:O4'	2.20	0.41
2:12:8:LYS:HB3	2:12:9:GLU:H	1.55	0.41
2:12:69:LEU:HG	2:12:91:PRO:HB2	2.00	0.41
3:22:79:ARG:HH21	3:22:82:GLU:HB2	1.85	0.41
3:22:95:THR:CG2	3:22:97:LYS:HG2	2.46	0.41
20:BA:46:GLU:HB3	20:BA:48:LYS:HG2	2.02	0.41
25:14:672:C:O2'	25:14:673:C:H5'	2.20	0.41
25:14:1110:G:O2'	25:14:1111:A:O4'	2.28	0.41
25:14:1416:G:O2'	25:14:1417:C:O4'	2.37	0.41
25:14:1501:C:O4'	27:19:100:GLY:HA2	2.19	0.41
25:14:1785:A:H2'	25:14:1787:A:N7	2.35	0.41
25:14:1889:A:O2'	25:14:2087:G:H5'	2.20	0.41
25:14:2068:U:N3	25:14:2430:A:C2	2.76	0.41
25:14:2271:G:OP1	46:E5:18:ALA:HB1	2.20	0.41
25:14:2672:G:H2'	25:14:2673:G:H5"	2.02	0.41
25:14:2732:G:H3'	25:14:2733:A:O4'	2.19	0.41
27:19:232:PRO:HD2	27:19:249:PRO:HA	2.02	0.41
30:49:29:TRP:C	30:49:31:VAL:N	2.78	0.41
41:95:85:LYS:HD2	41:95:85:LYS:C	2.44	0.41
45:D5:99:TYR:CE1	45:D5:125:LEU:HD22	2.55	0.41
47:F5:86:SER:O	47:F5:90:ILE:HG13	2.20	0.41
53:M5:15:LYS:HG2	53:M5:16:ILE:N	2.34	0.41
1:13:96:G:H2'	1:13:97:U:O4'	2.20	0.41
1:13:428:G:O4'	1:13:430:A:C8	2.72	0.41
1:13:491:G:H2'	1:13:492:G:O4'	2.18	0.41
2:1E:178:ARG:HD3	2:1E:178:ARG:HA	1.71	0.41
6:5E:14:LEU:HD22	6:5E:18:GLN:HB3	2.02	0.41
7:6E:65:ALA:HB2	7:6E:128:ALA:HB2	2.02	0.41
10:1I:54:PHE:HB3	10:1I:55:LYS:H	1.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2I:109:VAL:HG11	18:9I:84:LYS:HD2	2.02	0.41
12:3I:66:VAL:HG21	12:3I:98:TYR:CE1	2.56	0.41
13:4I:3:ARG:HE	13:4I:9:ILE:HD11	1.85	0.41
16:7I:53:VAL:HG13	16:7I:79:VAL:CG2	2.48	0.41
20:BI:48:LYS:O	20:BI:51:GLU:HB2	2.20	0.41
23:2K:47:7MG:O2'	23:2K:48:U:C6	2.72	0.41
25:1H:270(L):U:N3	32:61:50:ARG:HG3	2.35	0.41
25:1H:455:C:N3	25:1H:472:A:H2'	2.35	0.41
25:1H:558:G:OP1	33:58:111:PRO:HD2	2.20	0.41
25:1H:588:U:O4	25:1H:670:A:H1'	2.21	0.41
25:1H:822:U:C2'	25:1H:823:G:H5'	2.51	0.41
25:1H:931:G:C4	25:1H:933:A:C8	3.08	0.41
25:1H:956:G:OP2	36:88:14:ARG:NH2	2.52	0.41
25:1H:1081:U:H4'	25:1H:1082:U:OP1	2.20	0.41
25:1H:1156:A:P	60:1H:3638:HOH:O	2.79	0.41
25:1H:1417:C:H4'	25:1H:1587:A:H2	1.85	0.41
25:1H:2094:G:C2	25:1H:2196:C:C2	3.07	0.41
25:1H:2164:C:H5	25:1H:2165:G:C6	2.38	0.41
25:1H:2356:C:C5	25:1H:2357:U:C4	3.09	0.41
25:1H:2467:C:H4'	36:88:123:HIS:ND1	2.35	0.41
25:1H:2579:C:H2'	25:1H:2580:U:O4'	2.20	0.41
27:11:69:ARG:HD3	27:11:105:ILE:HD11	2.02	0.41
28:21:69:LYS:HE2	28:21:69:LYS:HB2	1.75	0.41
28:21:116:VAL:HG13	28:21:122:PHE:CD2	2.55	0.41
28:21:188:VAL:HA	28:21:189:PRO:HD3	1.91	0.41
30:41:7:LEU:N	30:41:104:GLU:OE2	2.53	0.41
30:41:97:ASP:H	30:41:100:TRP:HD1	1.67	0.41
31:51:80:SER:O	31:51:81:GLU:C	2.63	0.41
32:61:130:TYR:CG	32:61:131:LYS:N	2.83	0.41
35:78:147:LEU:O	35:78:148:LEU:HD23	2.21	0.41
36:88:69:PHE:HA	36:88:70:PRO:HD2	1.82	0.41
40:C8:79:PHE:CD1	40:C8:79:PHE:C	2.98	0.41
44:G8:85:VAL:HG23	44:G8:96:ILE:C	2.45	0.41
45:H8:152:ALA:C	45:H8:154:ASP:H	2.28	0.41
45:H8:166:SER:HA	45:H8:167:PRO:HD3	1.88	0.41
46:I8:11:ARG:H	46:I8:11:ARG:HG3	1.50	0.41
46:I8:73:GLY:C	46:I8:75:LEU:N	2.78	0.41
54:1G:57:G:C5	54:1G:58:C:C4	3.08	0.41
54:1G:452:A:O2'	16:7A:72:ARG:NH1	2.53	0.41
54:1G:552:U:H1'	12:3A:32:PHE:CE1	2.55	0.41
54:1G:582:U:H5"	15:6A:64:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1084:G:H2'	54:1G:1085:U:C5	2.55	0.41
54:1G:1246:C:C4	54:1G:1247:U:C4	3.08	0.41
3:22:11:ARG:HB2	3:22:11:ARG:HH11	1.85	0.41
5:42:101:ILE:O	5:42:101:ILE:HG12	2.21	0.41
7:62:69:VAL:HG12	7:62:103:TRP:HE3	1.85	0.41
8:72:89:PRO:HA	8:72:92:ARG:HH11	1.86	0.41
9:82:97:LYS:O	9:82:100:GLY:N	2.44	0.41
12:3A:47:LYS:CG	12:3A:48:PRO:HD2	2.41	0.41
17:8A:63:ARG:HE	17:8A:63:ARG:HB3	1.64	0.41
19:AA:40:ILE:HD13	19:AA:62:ILE:HG13	2.01	0.41
55:3L:38:A:H2'	55:3L:39:A:O4'	2.20	0.41
25:14:13:A:H61	25:14:525:U:H3'	1.85	0.41
25:14:363:G:H2'	25:14:363(A):A:H8	1.84	0.41
25:14:406:G:H1	25:14:421:U:H3	1.68	0.41
25:14:637:A:H2'	35:35:117:GLU:OE2	2.21	0.41
25:14:730:C:O2'	25:14:731:C:H5'	2.20	0.41
25:14:863:A:O2'	25:14:864:G:H5'	2.20	0.41
25:14:1060:U:H5'	25:14:1061:U:C5	2.55	0.41
25:14:1147:C:H2'	25:14:1148:A:O4'	2.21	0.41
25:14:1396:U:O2	25:14:1396:U:H2'	2.20	0.41
25:14:1488:G:H2'	25:14:1489:U:H5'	2.02	0.41
25:14:1608:A:H1'	25:14:1610:A:OP2	2.20	0.41
25:14:1680:U:H2'	25:14:1681:G:O4'	2.20	0.41
25:14:1814:G:H5"	27:19:54:ARG:NH1	2.35	0.41
25:14:1991:U:C2'	25:14:1992:G:H5"	2.50	0.41
25:14:2257:U:O2'	25:14:2258:C:H5'	2.19	0.41
25:14:2342:C:O2	25:14:2374:C:H4'	2.20	0.41
25:14:2494:G:H2'	25:14:2495:G:H8	1.85	0.41
26:1J:83:G:OP1	49:H5:19:GLN:NE2	2.50	0.41
27:19:3:VAL:HG12	27:19:17:THR:HB	2.01	0.41
28:29:33:VAL:HG12	28:29:89:ASP:HB3	2.02	0.41
30:49:107:LEU:HD21	30:49:178:PHE:CE2	2.54	0.41
31:59:6:ARG:HG3	31:59:65:HIS:CG	2.55	0.41
32:69:6:LEU:HD13	32:69:36:ALA:HA	2.01	0.41
32:69:75:LEU:HD22	32:69:76:THR:H	1.85	0.41
33:15:41:ASP:O	40:85:64:ARG:NH2	2.53	0.41
35:35:15:ARG:HH21	35:35:17:LYS:HE3	1.85	0.41
35:35:62:LEU:C	35:35:62:LEU:HD12	2.43	0.41
45:D5:105:VAL:HG13	45:D5:106:GLY:H	1.85	0.41
45:D5:110:GLY:HA2	45:D5:144:LEU:N	2.17	0.41
1:13:76:G:H1'	1:13:95:G:H1	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:186:C:O2'	20:BI:85:MET:SD	2.64	0.41
1:13:652:U:HO2'	1:13:653:A:P	2.43	0.41
1:13:726:C:C2	1:13:727:G:C8	3.08	0.41
1:13:745:C:OP1	1:13:851:G:O2'	2.37	0.41
1:13:1147:C:O2	9:8E:16:ARG:NH1	2.53	0.41
1:13:1493:A:O2'	24:4K:19[B]:A:H1'	2.20	0.41
7:6E:48:LYS:HE2	7:6E:48:LYS:HB3	1.94	0.41
18:9I:26:LEU:HD11	18:9I:29:PHE:CD1	2.54	0.41
25:1H:375:C:H2'	25:1H:376:C:C6	2.55	0.41
25:1H:910:A:N1	25:1H:2277:G:H1'	2.36	0.41
25:1H:1278:A:H4'	37:98:34:ILE:HD11	2.02	0.41
25:1H:1368:G:C2	25:1H:1369:G:C8	3.08	0.41
25:1H:1471:A:H2'	25:1H:1471:A:N3	2.35	0.41
25:1H:1486:A:H2'	25:1H:1487:G:C8	2.43	0.41
25:1H:1545(A):A:H2'	25:1H:1546:C:H5'	2.02	0.41
25:1H:2117:A:N6	25:1H:2172:U:O2	2.54	0.41
25:1H:2208:U:O2	25:1H:2217:G:C2	2.74	0.41
25:1H:2393:A:H5'	35:78:63:PRO:HB3	2.01	0.41
25:1H:2768:C:HO2'	33:58:89:LYS:HZ1	1.59	0.41
27:11:36:PRO:HA	27:11:61:LEU:CD1	2.50	0.41
28:21:82:ARG:HD3	28:21:82:ARG:HA	1.81	0.41
28:21:144:ARG:HB3	28:21:145:LYS:H	1.62	0.41
29:31:10:PRO:O	29:31:124:LEU:HD12	2.21	0.41
31:51:8:PRO:HG2	31:51:69:ARG:CZ	2.51	0.41
31:51:25:LYS:HE2	31:51:34:GLU:CD	2.46	0.41
45:H8:165:VAL:HB	45:H8:166:SER:CA	2.48	0.41
50:M8:38:LYS:HD2	50:M8:38:LYS:N	2.35	0.41
54:1G:464:G:N2	54:1G:467:G:C8	2.88	0.41
54:1G:521:G:H4'	12:3A:73:GLU:HG2	2.02	0.41
54:1G:624:C:H2'	54:1G:625:G:C8	2.52	0.41
54:1G:1071:C:C2	54:1G:1072:G:C8	3.08	0.41
54:1G:1417:G:H8	54:1G:1417:G:O5'	2.02	0.41
3:22:10:PHE:HA	14:5A:58:LYS:HD2	2.01	0.41
4:32:25:ARG:NH1	4:32:30:LYS:HB2	2.35	0.41
8:72:120:THR:HG23	8:72:123:GLU:HB2	2.02	0.41
9:82:97:LYS:HB3	9:82:98:PRO:HD3	2.02	0.41
13:4A:3:ARG:O	50:I5:34:GLU:HG3	2.20	0.41
16:7A:19:ILE:N	16:7A:37:GLY:O	2.39	0.41
20:BA:51:GLU:HB3	20:BA:54:LYS:NZ	2.36	0.41
20:BA:67:ALA:O	20:BA:73:HIS:CD2	2.73	0.41
55:3L:8:U:H4'	55:3L:9:U:OP1	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:387:U:H4'	25:14:388:G:O5'	2.21	0.41
25:14:535:C:O2'	25:14:536:A:H5'	2.20	0.41
25:14:825:C:H2'	25:14:826:U:O4'	2.20	0.41
25:14:856:C:N4	25:14:857:C:N4	2.68	0.41
25:14:890:A:H2'	25:14:892:G:H8	1.86	0.41
25:14:907:U:O5'	36:45:24:GLY:HA2	2.20	0.41
25:14:940:G:N3	25:14:1191:G:H4'	2.35	0.41
25:14:1384:A:N3	25:14:1405:U:H1'	2.34	0.41
25:14:1478:G:O2'	25:14:1479:G:H5'	2.20	0.41
25:14:1639:U:P	60:14:3469:HOH:O	2.70	0.41
34:25:64:ARG:HG2	34:25:79:PHE:CD2	2.55	0.41
36:45:38:GLU:OE1	36:45:127:ILE:HG22	2.20	0.41
39:75:11:GLU:O	39:75:12:SER:C	2.62	0.41
45:D5:62:PRO:C	45:D5:64:GLY:H	2.28	0.41
47:F5:45:ASN:O	47:F5:63:ALA:HA	2.20	0.41
47:F5:86:SER:N	47:F5:87:PRO:CD	2.81	0.41
1:13:177:C:P	20:BI:65:LYS:HZ3	2.38	0.41
1:13:345:C:H4'	1:13:346:G:C4	2.55	0.41
1:13:447:G:N1	1:13:485:G:H1'	2.35	0.41
1:13:669:U:C2	1:13:670:G:C8	3.08	0.41
1:13:1126:U:C4	1:13:1127:G:N3	2.89	0.41
1:13:1272:G:C6	1:13:1273:G:C4	3.08	0.41
2:1E:97:TRP:CH2	2:1E:173:ALA:HA	2.55	0.41
4:3E:128:VAL:HG22	4:3E:146:ILE:HG23	2.02	0.41
4:3E:179:GLU:H	4:3E:179:GLU:HG3	1.45	0.41
8:7E:23:SER:HB2	8:7E:62:TYR:CD2	2.56	0.41
8:7E:58:TYR:O	8:7E:59:LEU:HD23	2.20	0.41
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.35	0.41
12:3I:45:PRO:HG2	12:3I:49:ASN:O	2.20	0.41
14:5I:41:ARG:HA	14:5I:44:LEU:HB3	2.03	0.41
17:8I:9:VAL:HG11	17:8I:85:VAL:HG23	2.02	0.41
22:1K:35:QUO:H102	22:1K:35:QUO:H162	1.48	0.41
22:1K:51:C:H3'	22:1K:52:G:O4'	2.21	0.41
22:1K:63:5MU:C6	22:1K:63:5MU:H5'	2.56	0.41
22:3K:55:U:OP1	22:3K:55:U:H4'	2.19	0.41
25:1H:92:G:H2'	25:1H:93:C:C6	2.55	0.41
25:1H:302:C:H2'	25:1H:303:U:H6	1.83	0.41
25:1H:547:A:H2'	25:1H:548:A:C8	2.54	0.41
25:1H:902:C:H2'	25:1H:903:C:H6	1.86	0.41
25:1H:1761:C:H42	25:1H:1762:A:H62	1.68	0.41
25:1H:1824:G:OP1	27:11:52:ARG:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1932:A:H2'	25:1H:1933:G:O4'	2.21	0.41
25:1H:2086:U:H2'	25:1H:2087:G:C8	2.55	0.41
25:1H:2148:G:H2'	25:1H:2149:G:O4'	2.19	0.41
25:1H:2259:G:N1	25:1H:2282:G:C6	2.87	0.41
25:1H:2306:C:H2'	25:1H:2307:G:H21	1.85	0.41
25:1H:2452:C:H5"	60:1H:4006:HOH:O	2.21	0.41
25:1H:2773:C:OP1	28:21:164:ARG:NH1	2.48	0.41
26:16:39:A:H2'	26:16:40:U:C6	2.55	0.41
26:16:112:G:H2'	26:16:113:C:H6	1.84	0.41
43:F8:3:THR:CB	43:F8:6:ASP:HB2	2.50	0.41
43:F8:12:VAL:HG22	43:F8:17:ALA:HB2	2.01	0.41
50:M8:13:ARG:NH1	50:M8:22:ILE:HG23	2.35	0.41
54:1G:236:G:H8	54:1G:236:G:O5'	2.03	0.41
54:1G:340:U:H2'	54:1G:341:C:C6	2.55	0.41
54:1G:413:G:H2'	54:1G:428:G:H22	1.86	0.41
54:1G:513:C:N4	54:1G:538:G:H1	2.18	0.41
54:1G:894:G:C6	54:1G:895:G:C5	3.09	0.41
54:1G:1022:G:H2'	54:1G:1023:G:O4'	2.21	0.41
54:1G:1055:A:N3	3:22:156:ARG:NH1	2.68	0.41
54:1G:1178:G:O2'	54:1G:1179:A:N7	2.49	0.41
54:1G:1367:C:H4'	10:1A:48:THR:HG21	2.02	0.41
2:12:42:ILE:HD13	2:12:43:ASP:N	2.35	0.41
5:42:147:ASP:O	5:42:151:LEU:HG	2.20	0.41
6:52:3:ARG:HB3	6:52:3:ARG:CZ	2.50	0.41
9:82:10:ARG:O	9:82:13:ALA:HB3	2.20	0.41
14:5A:47:LEU:HD23	14:5A:47:LEU:HA	1.83	0.41
18:9A:39:VAL:H	18:9A:39:VAL:HG23	1.61	0.41
25:14:459:U:H4'	52:L5:40:TRP:CZ3	2.55	0.41
25:14:636:G:N7	35:35:113:LYS:NZ	2.58	0.41
25:14:1963:U:H4'	25:14:1964:G:OP2	2.20	0.41
25:14:2394:C:H5"	35:35:63:PRO:HG2	2.02	0.41
25:14:2544:G:O5'	25:14:2544:G:H8	2.02	0.41
25:14:2562:U:H1'	34:25:23:ARG:NE	2.35	0.41
25:14:2664:G:H8	25:14:2664:G:O5'	2.03	0.41
25:14:2785:C:C2'	25:14:2786:U:H5'	2.50	0.41
25:14:2817:G:C4	25:14:2830:G:N2	2.88	0.41
28:29:116:VAL:O	28:29:117:MET:CB	2.68	0.41
37:55:57:ARG:NE	37:55:59:ASP:OD2	2.44	0.41
44:C5:54:LYS:C	44:C5:55:TYR:CG	2.97	0.41
46:E5:50:ASN:O	46:E5:62:LEU:HB2	2.20	0.41
51:J5:57:VAL:O	51:J5:58:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:101:A:C5	1:13:102:G:N7	2.89	0.41
1:13:198:G:N7	1:13:220:G:N2	2.67	0.41
1:13:221:C:H2'	1:13:222:U:C6	2.53	0.41
1:13:310:G:OP2	16:7I:27:LYS:NZ	2.35	0.41
1:13:724:G:C2	1:13:725:G:C8	3.09	0.41
1:13:1285:A:H4'	1:13:1286:A:O5'	2.20	0.41
1:13:1360:A:H2'	1:13:1361:G:O4'	2.20	0.41
2:1E:141:GLU:O	2:1E:145:LEU:HB2	2.20	0.41
3:2E:141:VAL:O	3:2E:144:SER:HB3	2.21	0.41
4:3E:145:GLU:HG2	4:3E:184:LYS:HG3	2.02	0.41
9:8E:48:GLU:HG2	9:8E:51:ARG:HH21	1.86	0.41
10:1I:61:GLU:OE1	14:5I:58:LYS:NZ	2.51	0.41
13:4I:74:VAL:O	13:4I:78:ILE:HG12	2.21	0.41
19:AI:64:GLU:O	19:AI:67:VAL:HG13	2.20	0.41
20:BI:64:ASP:HA	20:BI:67:ALA:HB3	2.01	0.41
25:1H:212:G:H2'	25:1H:213:A:O4'	2.20	0.41
25:1H:301:G:C2	25:1H:302:C:C2	3.08	0.41
25:1H:389:G:H8	25:1H:389:G:O5'	2.04	0.41
25:1H:745:G:OP2	28:21:133:LYS:HE2	2.20	0.41
25:1H:821:A:N1	60:1H:3667:HOH:O	2.37	0.41
25:1H:1181:C:O2'	25:1H:1182:A:H5'	2.21	0.41
25:1H:1332:G:N2	25:1H:1609:A:O2'	2.53	0.41
25:1H:1404:C:O2'	25:1H:1405:U:H5'	2.21	0.41
25:1H:1414:G:C6	25:1H:1415:U:C4	3.08	0.41
25:1H:1525:G:N3	25:1H:1526:G:C8	2.88	0.41
25:1H:1570:A:H2'	25:1H:1571:A:C8	2.56	0.41
25:1H:2304:G:H5"	30:41:124:SER:HB3	2.02	0.41
25:1H:2467:C:H2'	25:1H:2468:G:H5'	2.02	0.41
25:1H:2572:A:N7	28:21:144:ARG:HD2	2.35	0.41
25:1H:2592:G:C5	25:1H:2593:U:C4	3.08	0.41
25:1H:2837:G:C6	25:1H:2838:G:N7	2.88	0.41
25:1H:2840:C:H42	25:1H:2877:G:H1	1.68	0.41
28:21:82:ARG:O	28:21:84:PHE:N	2.54	0.41
33:58:72:TYR:OH	33:58:98:VAL:HG23	2.21	0.41
35:78:6:LEU:HD12	35:78:6:LEU:HA	1.86	0.41
39:B8:105:LEU:HD12	39:B8:105:LEU:HA	1.81	0.41
42:E8:57:ASN:O	42:E8:62:HIS:HD2	2.03	0.41
44:G8:89:PHE:CD2	44:G8:90:LEU:N	2.89	0.41
52:P8:31:LEU:O	52:P8:32:LYS:C	2.63	0.41
54:1G:134:A:H1'	54:1G:325:A:C5	2.55	0.41
54:1G:414:A:H2'	54:1G:415:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:853:G:H2'	54:1G:854:G:C8	2.53	0.41
54:1G:943:U:H2'	54:1G:944:G:H5'	2.03	0.41
54:1G:977:A:H3'	54:1G:977:A:N3	2.36	0.41
54:1G:984:C:H2'	54:1G:985:C:C6	2.54	0.41
54:1G:1128:C:N3	54:1G:1139:G:C6	2.88	0.41
54:1G:1508:G:H2'	54:1G:1509:C:C6	2.55	0.41
3:22:110:ASN:O	3:22:141:VAL:HG22	2.20	0.41
5:42:121:LYS:HD2	5:42:122:GLU:H	1.85	0.41
7:62:73:MET:HE3	7:62:73:MET:HB2	1.98	0.41
9:82:82:ALA:HB1	9:82:96:LEU:HD21	2.03	0.41
14:5A:22:THR:HB	14:5A:33:VAL:HB	2.02	0.41
20:BA:37:SER:O	20:BA:41:ILE:HG12	2.21	0.41
20:BA:87:LYS:O	20:BA:91:LEU:HG	2.20	0.41
56:2L:32:G:C5	56:2L:33:OMC:C5	3.08	0.41
25:14:10:G:C6	25:14:2629:A:N7	2.88	0.41
25:14:249:C:H4'	25:14:250:G:O5'	2.21	0.41
25:14:719:C:O2'	25:14:720:C:H5'	2.21	0.41
25:14:733:G:C8	60:14:3413:HOH:O	2.57	0.41
25:14:753:C:H2'	25:14:754:C:H6	1.86	0.41
25:14:754:C:H2'	25:14:755:C:C6	2.55	0.41
25:14:807:U:H2'	25:14:808:G:H8	1.85	0.41
25:14:839:U:H2'	25:14:840:C:H6	1.84	0.41
25:14:1239:G:H2'	25:14:1240:U:O4'	2.20	0.41
25:14:1778:U:P	60:14:3627:HOH:O	2.78	0.41
25:14:2443:C:OP1	29:39:68:LYS:HG3	2.21	0.41
26:1J:116:G:H4'	38:65:54:LEU:HD23	2.02	0.41
29:39:21:ALA:C	29:39:23:ASP:N	2.75	0.41
29:39:111:ALA:HB2	29:39:206:ILE:HG21	2.02	0.41
29:39:168:ARG:HG3	29:39:175:THR:HG21	2.01	0.41
31:59:131:VAL:HG22	31:59:132:ARG:H	1.86	0.41
32:69:77:LEU:HD22	32:69:141:LYS:HD2	2.02	0.41
33:15:58:ASP:OD1	33:15:58:ASP:N	2.40	0.41
35:35:90:ARG:HG3	35:35:91:PHE:H	1.85	0.41
39:75:9:LEU:O	39:75:9:LEU:HD23	2.20	0.41
39:75:33:LYS:HZ2	39:75:84:GLN:HA	1.85	0.41
41:95:24:LYS:NZ	41:95:24:LYS:HB3	2.35	0.41
46:E5:53:MET:HE2	46:E5:53:MET:HB3	1.76	0.41
49:H5:43:ILE:O	49:H5:47:VAL:HG23	2.21	0.41
1:13:430:A:OP2	4:3E:8:VAL:HG12	2.21	0.41
1:13:445:G:H1	1:13:489:C:N4	2.14	0.41
1:13:981:U:C6	1:13:982:U:H2'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:76:GLN:NE2	2:1E:207:ALA:H	2.18	0.41
2:1E:87:ARG:CZ	2:1E:233:SER:HB2	2.50	0.41
5:4E:142:LEU:HD23	5:4E:142:LEU:HA	1.86	0.41
12:3I:10:LEU:HD23	17:8I:32:TYR:CZ	2.56	0.41
20:BI:16:HIS:O	20:BI:19:SER:OG	2.34	0.41
22:1K:33:C:O2	22:1K:38:MIA:H131	2.20	0.41
22:1K:39:A:H5'	25:1H:1913:A:C6	2.56	0.41
23:2K:21:H2U:O2	23:2K:21:H2U:H2'	2.20	0.41
25:1H:35:G:H2'	25:1H:36:G:O4'	2.20	0.41
25:1H:198:C:H4'	25:1H:2243:U:O2'	2.20	0.41
25:1H:433:C:H2'	25:1H:434:U:C6	2.55	0.41
25:1H:442:G:C4	25:1H:444:C:C5	3.08	0.41
25:1H:443:A:H2'	29:31:45:ARG:HH12	1.86	0.41
25:1H:1268:A:C2	25:1H:2013:A:C4	3.09	0.41
25:1H:1354:A:O3'	27:11:38:LYS:HE3	2.21	0.41
25:1H:1797:C:O2'	27:11:259:THR:HG23	2.19	0.41
25:1H:2068:U:N3	25:1H:2430:A:C2	2.80	0.41
25:1H:2160:G:C2	25:1H:2161:C:H1'	2.55	0.41
25:1H:2179:C:H2'	25:1H:2180:U:C6	2.56	0.41
25:1H:2338:G:H2'	25:1H:2339:G:H8	1.86	0.41
25:1H:2496:C:C2'	25:1H:2497:A:H5'	2.50	0.41
25:1H:2887:U:H2'	25:1H:2888:C:C6	2.56	0.41
26:16:40:U:C2'	26:16:45:A:H61	2.34	0.41
26:16:54:G:O2'	26:16:55:U:H5'	2.21	0.41
32:61:95:LYS:O	32:61:99:GLU:HG3	2.21	0.41
38:A8:33:LYS:HB3	38:A8:34:HIS:CD2	2.56	0.41
40:C8:106:PHE:HA	40:C8:109:LEU:HD12	2.02	0.41
48:K8:47:ASN:HB2	48:K8:48:HIS:H	1.77	0.41
49:L8:21:ALA:O	49:L8:24:LYS:HB2	2.20	0.41
54:1G:197:A:C8	54:1G:198:G:H1'	2.55	0.41
54:1G:486:U:H2'	54:1G:487:A:H8	1.86	0.41
54:1G:1191:A:OP1	3:22:4:LYS:HG3	2.20	0.41
54:1G:1229:A:OP1	13:4A:116:THR:HG23	2.20	0.41
54:1G:1272:G:C2	54:1G:1273:G:H1'	2.56	0.41
54:1G:1422:G:OP1	34:25:48:PRO:HA	2.21	0.41
54:1G:1442:G:C6	54:1G:1446:A:N6	2.88	0.41
2:12:15:VAL:HB	2:12:16:HIS:CE1	2.56	0.41
4:32:101:LEU:HD23	4:32:121:VAL:CG1	2.51	0.41
7:62:13:GLN:HA	7:62:14:PRO:HD3	1.81	0.41
10:1A:32:ALA:CB	10:1A:81:THR:HG21	2.49	0.41
11:2A:45:GLY:O	11:2A:50:TYR:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:84:ILE:HG23	19:AA:74:PHE:CZ	2.56	0.41
20:BA:26:ASN:O	20:BA:30:LYS:HB2	2.20	0.41
20:BA:97:ALA:O	20:BA:99:LEU:HD12	2.20	0.41
55:1L:5:G:H1	55:1L:78:C:H42	1.68	0.41
25:14:649:G:C5	25:14:650:C:C4	3.09	0.41
25:14:654:A:N3	25:14:654:A:H5"	2.34	0.41
25:14:831:G:O3'	35:35:38:GLN:HB3	2.20	0.41
25:14:977:G:N3	25:14:1001:A:H2	2.18	0.41
25:14:1378:A:O2'	25:14:1379:A:H3'	2.19	0.41
25:14:1444(A):A:N3	25:14:1444(A):A:H2'	2.36	0.41
25:14:1465:G:H2'	25:14:1466:G:O4'	2.20	0.41
25:14:1488:G:C6	25:14:1489:U:N3	2.89	0.41
25:14:1533:C:C4	25:14:1534:G:H1'	2.55	0.41
25:14:1543:A:C2	25:14:1545:A:C4	3.09	0.41
25:14:1802:A:N1	25:14:1822:G:H1'	2.36	0.41
25:14:2159:G:C6	25:14:2160:G:C2	3.09	0.41
25:14:2300:G:H2'	25:14:2301:C:C6	2.55	0.41
25:14:2425:A:H4'	25:14:2426:A:C5'	2.45	0.41
29:39:107:LYS:HA	29:39:107:LYS:HD3	1.64	0.41
30:49:104:GLU:HG2	50:I5:23:GLU:CG	2.46	0.41
32:69:77:LEU:HA	32:69:141:LYS:HB2	2.02	0.41
32:69:91:SER:HB3	32:69:119:PRO:HB3	2.03	0.41
33:15:65:LYS:HB3	33:15:65:LYS:HE2	1.58	0.41
34:25:104:ARG:HB3	34:25:104:ARG:CZ	2.49	0.41
35:35:105:LEU:O	35:35:106:LEU:HB3	2.20	0.41
36:45:16:ARG:HE	36:45:16:ARG:HB3	1.30	0.41
1:13:269:C:H2'	1:13:270:A:C8	2.55	0.41
1:13:370:C:C2	1:13:392:G:N2	2.89	0.41
1:13:874:G:C5	1:13:875:C:C5	3.08	0.41
1:13:1308:U:OP1	13:4I:98:VAL:HG23	2.21	0.41
1:13:1310:G:N2	1:13:1328:C:C2	2.88	0.41
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.55	0.41
18:9I:19:LYS:HB3	18:9I:20:ALA:H	1.54	0.41
20:BI:49:ALA:HB1	20:BI:99:LEU:HB3	2.02	0.41
25:1H:185:U:H4'	25:1H:218:A:H4'	2.02	0.41
25:1H:685:A:H1'	25:1H:688:U:O4	2.21	0.41
25:1H:709:U:H2'	25:1H:710:G:O4'	2.21	0.41
25:1H:839:U:H2'	25:1H:840:C:C6	2.55	0.41
25:1H:1287:A:H5'	37:98:104:ARG:HD3	2.03	0.41
25:1H:1649:G:C6	25:1H:2009:G:C6	3.08	0.41
25:1H:1885:A:H2'	25:1H:1886:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2051:A:H4'	28:21:141:ILE:HG12	2.01	0.41
25:1H:2235:G:H2'	25:1H:2236:C:H6	1.86	0.41
25:1H:2652:C:H2'	25:1H:2653:U:O4'	2.20	0.41
27:11:202:LYS:HG3	27:11:203:ASN:OD1	2.21	0.41
28:21:30:PRO:HD3	28:21:180:ASN:OD1	2.21	0.41
29:31:24:LEU:HA	29:31:25:PRO:HD2	1.81	0.41
30:41:43:LEU:O	30:41:46:ALA:N	2.32	0.41
31:51:40:GLU:O	31:51:41:MET:HB3	2.20	0.41
31:51:83:TYR:HB3	31:51:135:GLY:N	2.26	0.41
33:58:34:LEU:HD12	33:58:34:LEU:HA	1.89	0.41
35:78:19:VAL:HA	35:78:20:GLY:HA3	1.60	0.41
35:78:86:LYS:HB2	35:78:86:LYS:HE2	1.82	0.41
39:B8:26:ASP:CB	39:B8:91:ARG:HA	2.51	0.41
39:B8:90:GLN:HG3	39:B8:91:ARG:N	2.35	0.41
40:C8:76:TYR:CD2	40:C8:76:TYR:C	2.99	0.41
49:L8:32:GLN:N	49:L8:32:GLN:CD	2.78	0.41
53:Q8:21:LYS:CG	53:Q8:22:VAL:N	2.82	0.41
54:1G:79:G:N3	54:1G:79:G:H2'	2.35	0.41
54:1G:828:A:N6	54:1G:858:G:O2'	2.50	0.41
54:1G:1060:C:H5"	10:1A:51:ARG:HG2	2.01	0.41
54:1G:1253:G:H2'	54:1G:1254:C:C6	2.55	0.41
54:1G:1435:G:H2'	54:1G:1436:U:C5	2.55	0.41
3:22:73:PRO:HA	3:22:76:VAL:HG13	2.03	0.41
6:52:68:PRO:HG2	6:52:71:ARG:HG3	2.03	0.41
7:62:91:VAL:HB	7:62:96:GLN:HG2	2.02	0.41
9:82:5:TYR:HA	9:82:17:VAL:O	2.20	0.41
16:7A:57:ARG:NH2	16:7A:79:VAL:O	2.54	0.41
25:14:822:U:H2'	25:14:823:G:C8	2.55	0.41
25:14:875:G:C2	25:14:903:C:C2	3.09	0.41
25:14:977:G:C2	25:14:978:G:C8	3.08	0.41
25:14:1260:G:H2'	25:14:1261:C:C6	2.56	0.41
25:14:1400:G:H2'	25:14:1401:G:C8	2.56	0.41
25:14:1653:G:C6	37:55:9:LYS:HB2	2.55	0.41
25:14:1665:A:H2'	25:14:1666:G:O4'	2.20	0.41
26:1J:83:G:H4'	49:H5:52:HIS:CG	2.56	0.41
27:19:37:LEU:CD2	27:19:62:TYR:HB2	2.51	0.41
30:49:135:LEU:HD23	30:49:140:ILE:HD11	2.01	0.41
31:59:83:TYR:HD1	31:59:84:SER:H	1.67	0.41
39:75:90:GLN:OE1	39:75:121:ILE:HD11	2.20	0.41
40:85:5:LYS:O	40:85:6:THR:C	2.63	0.41
40:85:91:ASP:O	40:85:92:ARG:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:59:ALA:HA	41:95:95:LEU:O	2.20	0.41
44:C5:13:VAL:HG13	44:C5:27:VAL:HG23	2.03	0.41
47:F5:67:ILE:N	47:F5:68:PRO:HD2	2.36	0.41
50:I5:18:CYS:H	50:I5:19:GLY:HA2	1.86	0.41
53:M5:14:VAL:HG13	53:M5:22:VAL:HG13	2.01	0.41
1:13:170:U:H2'	1:13:171:A:H8	1.85	0.41
1:13:246:A:N1	1:13:279:A:C2	2.89	0.41
1:13:380:G:C2	1:13:384:G:C6	3.08	0.41
1:13:1002:G:C4	1:13:1003:G:C8	3.08	0.41
1:13:1054:C:OP2	1:13:1197:G:OP2	2.39	0.41
1:13:1486:G:H2'	1:13:1487:G:O4'	2.21	0.41
2:1E:201:ILE:HA	2:1E:202:PRO:HD2	1.86	0.41
4:3E:201:GLN:O	4:3E:205:GLU:HG3	2.21	0.41
12:3I:117:ARG:C	12:3I:119:LYS:O	2.64	0.41
13:4I:108:ARG:HH11	13:4I:108:ARG:CG	2.28	0.41
15:6I:69:TYR:CE1	15:6I:73:GLU:HG3	2.56	0.41
22:1K:14:A:H2'	22:1K:14:A:N3	2.35	0.41
22:1K:25:G:N3	22:1K:26:G:C8	2.88	0.41
25:1H:581:C:OP1	40:C8:33:ARG:HG3	2.19	0.41
25:1H:1138:G:H2'	25:1H:1139:G:O4'	2.21	0.41
25:1H:1153:C:N4	25:1H:1154:G:C6	2.89	0.41
25:1H:1654:A:OP1	37:98:1:MET:HA	2.21	0.41
25:1H:1732:A:H2'	25:1H:1733:G:O4'	2.20	0.41
25:1H:1956:U:H1'	25:1H:2552:U:OP1	2.21	0.41
25:1H:2308:G:H2'	25:1H:2308:G:N3	2.34	0.41
25:1H:2436:G:C5	25:1H:2437:U:C5	3.09	0.41
26:16:7:G:H1	26:16:113:C:N4	2.19	0.41
26:16:54:G:H2'	26:16:55:U:C6	2.54	0.41
33:58:138:LEU:HD12	33:58:138:LEU:HA	1.94	0.41
35:78:3:LEU:HD23	35:78:3:LEU:HA	1.89	0.41
36:88:7:MET:HE1	36:88:71:ASP:O	2.19	0.41
36:88:54:MET:C	36:88:56:ARG:N	2.77	0.41
37:98:63:ARG:HB2	37:98:80:PHE:CE2	2.56	0.41
40:C8:94:ASN:HD22	40:C8:94:ASN:C	2.29	0.41
45:H8:92:SER:O	45:H8:130:PRO:HG2	2.21	0.41
45:H8:126:VAL:HA	45:H8:164:ALA:H	1.86	0.41
46:I8:11:ARG:O	46:I8:14:ARG:NH2	2.54	0.41
54:1G:973:G:H3'	54:1G:974:A:H5"	2.02	0.41
54:1G:1349:A:P	9:82:118:LYS:NZ	2.93	0.41
2:12:136:VAL:O	2:12:139:LYS:HB3	2.21	0.41
4:32:26:CYS:HA	4:32:31:CYS:CA	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:92:LYS:HE2	8:72:105:ARG:HH21	1.86	0.41
7:62:57:GLU:CD	7:62:57:GLU:H	2.29	0.41
8:72:114:THR:OG1	8:72:115:SER:N	2.52	0.41
12:3A:8:ASN:OD1	17:8A:34:LYS:HE2	2.20	0.41
55:3L:3:U:H3	55:3L:79:A:H61	1.68	0.41
25:14:237:C:C2'	25:14:238:C:H5'	2.50	0.41
25:14:686:G:C2	52:L5:11:LYS:HE2	2.55	0.41
25:14:773:U:O2'	27:19:48:ARG:HD3	2.20	0.41
25:14:919:G:N2	25:14:2269:A:OP2	2.53	0.41
25:14:977:G:C4	25:14:978:G:C8	3.09	0.41
25:14:1138:G:O2'	33:15:106:MET:HG3	2.20	0.41
25:14:1332:G:C8	25:14:1332:G:H5'	2.56	0.41
25:14:1488:G:C2'	25:14:1489:U:H5'	2.50	0.41
25:14:1674:G:H1'	25:14:1676:A:N6	2.36	0.41
25:14:2293:C:H5"	38:65:89:ARG:HH12	1.86	0.41
25:14:2495:G:O3'	36:45:81:VAL:HG12	2.21	0.41
25:14:2611:U:H2'	51:J5:3:LYS:HB3	2.02	0.41
25:14:2810:A:O3'	28:29:61:ARG:HG2	2.21	0.41
25:14:2881:C:O2'	37:55:96:ARG:HA	2.20	0.41
26:1J:83:G:H1	26:1J:93:C:H42	1.69	0.41
35:35:62:LEU:HA	35:35:63:PRO:HD2	1.82	0.41
35:35:63:PRO:HB2	35:35:64:LYS:H	1.67	0.41
37:55:59:ASP:OD1	37:55:61:HIS:HB3	2.21	0.41
38:65:10:ARG:O	38:65:14:VAL:HG23	2.20	0.41
38:65:41:ASP:CB	38:65:48:LEU:HD21	2.51	0.41
41:95:2:PHE:O	41:95:42:GLY:N	2.53	0.41
47:F5:76:ARG:H	47:F5:76:ARG:HG2	1.68	0.41
47:F5:89:GLU:O	47:F5:93:GLU:HB2	2.21	0.41
1:13:77:C:H2'	1:13:78:G:C8	2.55	0.41
1:13:195:A:C5	1:13:196:A:N1	2.89	0.41
1:13:300:A:H1'	1:13:565:U:O2	2.21	0.41
1:13:458:C:H2'	1:13:464:G:H8	1.86	0.41
1:13:538:G:H5"	12:3I:114:LYS:HB2	2.02	0.41
1:13:616:G:C2	1:13:617:G:C8	3.09	0.41
1:13:767:A:O2'	1:13:1525:G:H1'	2.21	0.41
1:13:1131:G:H2'	1:13:1132:C:H6	1.84	0.41
1:13:1133:G:C2	1:13:1134:G:N7	2.89	0.41
1:13:1504:G:OP1	1:13:1507:A:H4'	2.21	0.41
2:1E:64:ARG:HE	2:1E:64:ARG:HB3	1.66	0.41
2:1E:226:ARG:HG3	2:1E:227:GLY:H	1.86	0.41
7:6E:20:ASP:HB3	7:6E:23:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7E:32:LYS:O	8:7E:36:LEU:HG	2.21	0.41
9:8E:7:THR:O	9:8E:79:LEU:HD12	2.21	0.41
9:8E:99:LEU:HB3	9:8E:101:PHE:CE2	2.56	0.41
10:1I:46:ARG:HB2	10:1I:46:ARG:CZ	2.51	0.41
11:2I:120:ARG:HA	11:2I:121:PRO:HD3	1.84	0.41
12:3I:47:LYS:HB2	12:3I:48:PRO:HA	2.02	0.41
14:5I:27:CYS:SG	14:5I:29:ARG:HB3	2.61	0.41
15:6I:10:LYS:HA	15:6I:10:LYS:HD2	1.51	0.41
17:8I:54:GLY:CA	17:8I:81:ARG:H	2.33	0.41
20:BI:44:ALA:O	20:BI:91:LEU:HB3	2.20	0.41
22:1K:63:5MU:H5'	22:1K:63:5MU:H6	1.86	0.41
22:1K:85:A:C1'	25:1H:2583:G:H21	2.31	0.41
25:1H:443:A:C5	29:31:45:ARG:HD2	2.56	0.41
25:1H:729:G:C4	25:1H:1775:U:O2	2.74	0.41
25:1H:757:U:H2'	25:1H:758:C:O4'	2.21	0.41
25:1H:806:C:H2'	25:1H:807:U:H6	1.84	0.41
25:1H:844:C:H2'	25:1H:845:G:O4'	2.20	0.41
25:1H:1298:C:C5'	25:1H:1299:G:OP2	2.68	0.41
25:1H:1319:G:C6	25:1H:1320:C:N4	2.89	0.41
25:1H:1466:G:H2'	25:1H:1547:C:N4	2.36	0.41
25:1H:1495:A:H2'	25:1H:1496:A:N3	2.36	0.41
25:1H:1515:C:H2'	25:1H:1516:U:H6	1.86	0.41
25:1H:1541:U:H2'	25:1H:1542:G:O4'	2.21	0.41
25:1H:1567:A:C8	27:11:84:TYR:CE2	3.09	0.41
25:1H:1591:G:O2'	25:1H:1592:C:H5'	2.21	0.41
25:1H:1992:G:C5	60:1H:3842:HOH:O	2.72	0.41
25:1H:2079:U:O3'	47:J8:35:THR:HB	2.21	0.41
25:1H:2082:A:H2'	25:1H:2083:G:C8	2.56	0.41
25:1H:2168:G:H22	25:1H:2170:A:N6	2.04	0.41
25:1H:2250:G:C4	36:88:83:MET:HB2	2.56	0.41
25:1H:2309:A:O5'	25:1H:2309:A:H8	2.04	0.41
25:1H:2335:A:C8	25:1H:2337:G:C5	3.09	0.41
25:1H:2358:G:C5	25:1H:2359:C:C5	3.09	0.41
25:1H:2787:C:H5'	25:1H:2788:C:OP2	2.20	0.41
27:11:17:THR:CG2	27:11:204:ILE:HA	2.47	0.41
27:11:89:SER:HB2	27:11:159:ALA:HB3	2.03	0.41
30:41:57:ALA:HB2	30:41:90:LEU:CG	2.49	0.41
30:41:150:ASP:OD1	30:41:153:ARG:NH2	2.54	0.41
31:51:65:HIS:O	31:51:66:GLY:C	2.64	0.41
32:61:52:ARG:O	32:61:56:LYS:N	2.50	0.41
35:78:120:ALA:HB1	35:78:138:LEU:HD23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:130:PHE:HE1	35:78:146:VAL:HG22	1.85	0.41
38:A8:48:LEU:HD23	38:A8:82:ILE:HD11	2.03	0.41
39:B8:2:ASN:O	39:B8:3:ARG:HG2	2.21	0.41
40:C8:92:ARG:CZ	40:C8:96:ALA:CA	2.98	0.41
40:C8:95:LEU:C	40:C8:97:ASP:N	2.71	0.41
41:D8:33:VAL:HG12	41:D8:34:GLU:O	2.21	0.41
43:F8:2:LYS:HE2	43:F8:2:LYS:HB2	1.96	0.41
43:F8:66:LEU:HD12	43:F8:66:LEU:HA	1.62	0.41
44:G8:26:LYS:O	44:G8:39:VAL:HG13	2.21	0.41
46:I8:29:GLN:H	46:I8:67:VAL:HG23	1.86	0.41
46:I8:31:VAL:HG23	46:I8:32:ARG:N	2.35	0.41
49:L8:26:LEU:HD21	49:L8:46:ASN:CB	2.51	0.41
50:M8:54:GLY:HA2	50:M8:57:GLU:HB3	2.03	0.41
51:N8:41:PRO:HA	51:N8:42:PRO:HD3	1.89	0.41
54:1G:137:C:C2	54:1G:227:G:N2	2.89	0.41
54:1G:219:C:H2'	54:1G:220:G:O4'	2.21	0.41
54:1G:363:A:H2'	54:1G:364:A:O4'	2.19	0.41
54:1G:411:A:N7	54:1G:413:G:N3	2.69	0.41
54:1G:689:C:C2'	54:1G:690:G:H5'	2.51	0.41
54:1G:694:A:H5"	11:2A:53:SER:CB	2.51	0.41
54:1G:1023:G:H3'	54:1G:1024:G:H5"	2.03	0.41
54:1G:1028:C:H42	54:1G:1033:G:H1	1.67	0.41
54:1G:1184:G:C2	54:1G:1185:G:C8	3.08	0.41
54:1G:1480:G:H2'	54:1G:1481:U:C6	2.56	0.41
2:12:134:GLU:O	2:12:138:LEU:HG	2.20	0.41
3:22:23:TYR:CE1	10:1A:10:GLY:HA2	2.56	0.41
3:22:104:GLN:CD	3:22:105:GLU:H	2.29	0.41
4:32:82:ALA:O	4:32:89:THR:OG1	2.35	0.41
5:42:135:THR:O	5:42:139:LEU:HG	2.21	0.41
7:62:13:GLN:O	7:62:24:THR:HG21	2.21	0.41
7:62:73:MET:HG3	7:62:90:GLU:HA	2.03	0.41
8:72:29:SER:O	8:72:32:LYS:HB2	2.21	0.41
9:82:16:ARG:O	9:82:63:ILE:HG23	2.21	0.41
9:82:94:ALA:O	9:82:98:PRO:HG2	2.20	0.41
11:2A:38:ASN:HA	11:2A:39:PRO:HD3	1.95	0.41
11:2A:56:GLY:O	11:2A:89:ALA:HB3	2.21	0.41
11:2A:99:GLN:HG3	11:2A:105:VAL:CG1	2.50	0.41
13:4A:3:ARG:NH2	13:4A:7:VAL:HG12	2.36	0.41
16:7A:23:ASP:OD1	16:7A:25:ARG:HG3	2.21	0.41
18:9A:45:SER:OG	18:9A:46:GLU:N	2.54	0.41
19:AA:58:VAL:HA	19:AA:59:PRO:HD2	1.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:3L:18:G:H1	55:3L:65:C:H42	1.68	0.41
25:14:19:C:H2'	25:14:20:C:C6	2.55	0.41
25:14:110:G:C2	25:14:111:A:C8	3.09	0.41
25:14:184:C:H2'	25:14:185:U:C6	2.56	0.41
25:14:300:A:H1'	25:14:319:C:H1'	2.02	0.41
25:14:363(E):U:H5'	25:14:363(F):A:OP2	2.20	0.41
25:14:459:U:H4'	52:L5:40:TRP:CH2	2.56	0.41
25:14:480:A:H1'	44:C5:44:ILE:HD13	2.03	0.41
25:14:629:G:H5"	25:14:650:C:O2'	2.21	0.41
25:14:674:G:O2'	29:39:74:ARG:HG3	2.21	0.41
25:14:872:A:H4'	36:45:66:ILE:HD11	2.02	0.41
25:14:1232:G:C6	25:14:1233:C:C4	3.08	0.41
25:14:1465:G:H5'	25:14:1528:A:O2'	2.21	0.41
25:14:2008:C:H2'	25:14:2009:G:H8	1.86	0.41
25:14:2013:A:N6	25:14:2014:A:C6	2.88	0.41
25:14:2093:G:O5'	32:69:24:GLY:HA3	2.21	0.41
25:14:2094:G:OP1	32:69:22:LYS:HD2	2.20	0.41
25:14:2116:G:H2'	25:14:2117:A:C4	2.55	0.41
25:14:2126:A:H4'	25:14:2127:G:OP1	2.20	0.41
25:14:2213:U:H5'	47:F5:52:ARG:HH12	1.86	0.41
25:14:2459:A:H5"	25:14:2460:U:OP2	2.21	0.41
25:14:2542:A:OP1	25:14:2542:A:H4'	2.20	0.41
25:14:2720:U:C2	25:14:2721:A:C8	3.09	0.41
25:14:2865:U:C4	25:14:2866:U:C4	3.08	0.41
26:1J:89(A):A:N7	26:1J:90:C:H1'	2.36	0.41
27:19:5:LYS:HG2	27:19:17:THR:HG22	2.03	0.41
27:19:228:PRO:HD3	27:19:234:GLY:O	2.21	0.41
28:29:6:GLY:HA2	28:29:51:PHE:CZ	2.56	0.41
28:29:15:PHE:CD2	39:75:81:PRO:HD3	2.55	0.41
28:29:188:VAL:HG23	28:29:189:PRO:HD2	2.03	0.41
31:59:46:GLU:CD	31:59:51:ARG:HH22	2.29	0.41
31:59:92:ILE:HB	31:59:93:GLY:H	1.58	0.41
37:55:33:ARG:HB2	37:55:115:GLU:HG2	2.03	0.41
38:65:83:LYS:HE2	38:65:83:LYS:HB2	1.78	0.41
38:65:106:ARG:H	38:65:106:ARG:HG3	1.50	0.41
38:65:106:ARG:HB3	38:65:112:PHE:O	2.21	0.41
41:95:65:GLY:C	41:95:91:TYR:HB2	2.46	0.41
41:95:89:GLN:HA	41:95:90:PRO:HD3	1.87	0.41
44:C5:14:LEU:HD12	44:C5:15:VAL:N	2.36	0.41
47:F5:78:LYS:HG2	47:F5:79:GLY:N	2.35	0.41
1:13:44:G:C2	1:13:45:U:H1'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:233:C:H2'	1:13:234:C:H6	1.85	0.41
1:13:373:A:H2'	1:13:374:A:H8	1.85	0.41
1:13:502:G:C6	1:13:503:C:C4	3.08	0.41
1:13:683:G:C6	1:13:684:A:C5	3.09	0.41
1:13:736:C:OP1	18:9I:68:LYS:HD2	2.21	0.41
1:13:949:A:C6	1:13:950:U:C4	3.09	0.41
1:13:1054:C:N3	22:1K:35:QUO:H1'	2.36	0.41
1:13:1296:C:H5'	13:4I:14:ARG:HH11	1.86	0.41
1:13:1296:C:H5"	1:13:1297:C:OP2	2.21	0.41
2:1E:162:ILE:HD13	2:1E:183:PRO:O	2.20	0.41
3:2E:188:LEU:HA	3:2E:188:LEU:HD22	1.78	0.41
4:3E:169:LYS:HE2	4:3E:169:LYS:HB3	1.97	0.41
6:5E:100:ASN:ND2	18:9I:26:LEU:O	2.54	0.41
8:7E:49:GLU:O	8:7E:51:VAL:HG13	2.21	0.41
9:8E:99:LEU:HD12	9:8E:101:PHE:CE2	2.56	0.41
11:2I:13:GLN:HG3	11:2I:75:TYR:O	2.20	0.41
12:3I:76:ASN:OD1	12:3I:76:ASN:N	2.52	0.41
13:4I:11:ARG:HD3	13:4I:46:LYS:NZ	2.36	0.41
13:4I:13:LYS:HB3	13:4I:14:ARG:H	1.61	0.41
25:1H:74:A:H5"	48:K8:51:ARG:NH2	2.36	0.41
25:1H:189:G:H1	25:1H:205:G:HO2'	1.69	0.41
25:1H:216:A:H2'	25:1H:217:G:H8	1.85	0.41
25:1H:229:A:H1'	25:1H:230:U:OP2	2.21	0.41
25:1H:373:U:H2'	25:1H:374:A:H8	1.86	0.41
25:1H:751:A:H5'	42:E8:90:ARG:HA	2.02	0.41
25:1H:1230:C:H2'	25:1H:1231:G:H8	1.85	0.41
25:1H:1259:G:H2'	25:1H:1260:G:H8	1.86	0.41
25:1H:1624:G:H2'	25:1H:1625:C:H6	1.85	0.41
25:1H:1641:A:H2'	25:1H:1642:G:O4'	2.21	0.41
25:1H:2392:A:N1	25:1H:2424:C:N3	2.68	0.41
25:1H:2632:A:O2'	25:1H:2811:G:O2'	2.13	0.41
25:1H:2740:A:C6	25:1H:2764:A:C8	3.08	0.41
27:11:68:LYS:HA	27:11:70:TRP:CZ3	2.56	0.41
29:31:168:ARG:HG3	29:31:175:THR:HG21	2.02	0.41
30:41:42:GLY:O	30:41:43:LEU:HD23	2.21	0.41
30:41:43:LEU:HD23	30:41:43:LEU:HA	1.72	0.41
31:51:124:GLU:O	31:51:126:PRO:HD3	2.21	0.41
35:78:108:LYS:C	35:78:110:TYR:H	2.28	0.41
37:98:52:ILE:HG12	37:98:79:LEU:HD21	2.03	0.41
37:98:55:ALA:HB2	37:98:79:LEU:HD13	2.02	0.41
40:C8:8:VAL:HG23	40:C8:11:ARG:NH2	2.27	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:C8:79:PHE:C	40:C8:79:PHE:HD1	2.29	0.41
42:E8:4:LYS:CB	42:E8:106:ILE:HG12	2.50	0.41
48:K8:14:ARG:H	48:K8:14:ARG:HG2	1.58	0.41
49:L8:36:VAL:C	49:L8:37:LEU:HD23	2.46	0.41
53:Q8:33:ASN:O	53:Q8:33:ASN:ND2	2.42	0.41
54:1G:21:G:N1	54:1G:22:G:C6	2.88	0.41
54:1G:1280:A:H1'	10:1A:41:PRO:HG3	2.03	0.41
54:1G:1321:C:C5	54:1G:1322:C:C5	3.09	0.41
2:12:67:THR:HG21	2:12:155:LEU:HG	2.03	0.41
3:22:132:ARG:CZ	3:22:132:ARG:HB3	2.51	0.41
4:32:22:LYS:HB2	4:32:26:CYS:SG	2.61	0.41
5:42:61:TYR:HA	5:42:64:ARG:HB2	2.02	0.41
6:52:5:GLU:HG3	6:52:93:SER:OG	2.21	0.41
7:62:15:ASP:HB3	7:62:19:GLY:N	2.36	0.41
10:1A:51:ARG:HG3	14:5A:45:ARG:NH1	2.36	0.41
13:4A:80:ARG:O	13:4A:84:ILE:HB	2.21	0.41
17:8A:10:VAL:HG21	17:8A:52:LYS:O	2.21	0.41
19:AA:40:ILE:O	19:AA:68:GLY:N	2.53	0.41
20:BA:54:LYS:HB3	20:BA:54:LYS:HE3	1.80	0.41
21:1B:7:ARG:HB3	21:1B:21:TYR:CD2	2.56	0.41
55:3L:35:G:C2	57:4L:14:A:C2	3.09	0.41
25:14:528:A:N1	25:14:2042:A:H2'	2.35	0.41
25:14:676:A:H8	25:14:2069:G:N2	2.06	0.41
25:14:815:C:OP2	41:95:82:ARG:HD3	2.21	0.41
25:14:856:C:C4	25:14:857:C:N4	2.89	0.41
25:14:1954:G:C2	25:14:2551:C:H5"	2.56	0.41
25:14:2054:A:C2	51:J5:8:LYS:HD3	2.56	0.41
25:14:2238:G:H2'	25:14:2238:G:N3	2.36	0.41
26:1J:38:C:H1'	38:65:95:HIS:CE1	2.56	0.41
26:1J:80:U:O2'	26:1J:81:G:H5'	2.21	0.41
28:29:63:LEU:H	28:29:63:LEU:CD2	2.34	0.41
30:49:37:VAL:HG23	30:49:99:MET:HE2	2.02	0.41
30:49:145:THR:C	30:49:147:ASP:H	2.29	0.41
31:59:170:ARG:HB2	31:59:171:LEU:H	1.70	0.41
32:69:100:ALA:O	32:69:104:GLN:HB3	2.21	0.41
34:25:96:THR:OG1	34:25:97:ARG:N	2.54	0.41
35:35:62:LEU:HD12	35:35:63:PRO:HD2	2.03	0.41
36:45:7:MET:HG3	36:45:9:TYR:O	2.20	0.41
36:45:109:VAL:HB	36:45:113:GLN:HB3	2.03	0.41
39:75:93:ARG:HG3	39:75:115:ARG:HG3	2.03	0.41
1:13:15:G:C4	1:13:16:A:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:22:G:C2	1:13:23:C:C2	3.09	0.40
1:13:1409:C:H2'	1:13:1410:G:H8	1.87	0.40
1:13:1516:G:N1	1:13:1519:A:OP2	2.50	0.40
2:1E:60:ASP:HB3	2:1E:64:ARG:CZ	2.51	0.40
2:1E:107:THR:HA	2:1E:110:GLN:CD	2.45	0.40
3:2E:18:TRP:H	3:2E:18:TRP:HE3	1.68	0.40
3:2E:121:ALA:O	3:2E:125:GLU:HG3	2.22	0.40
4:3E:151:LYS:HG3	4:3E:152:SER:N	2.36	0.40
5:4E:103:GLY:O	5:4E:106:PRO:HD2	2.21	0.40
7:6E:14:PRO:HG3	7:6E:21:VAL:HG13	2.03	0.40
10:1I:77:PRO:HB2	10:1I:79:ARG:NH1	2.25	0.40
13:4I:19:LEU:HA	13:4I:22:ILE:HD12	2.03	0.40
14:5I:3:ARG:HH11	14:5I:3:ARG:CG	2.32	0.40
25:1H:34:C:H4'	25:1H:35:G:OP2	2.21	0.40
25:1H:1049:C:H2'	25:1H:1050:A:H5'	2.04	0.40
25:1H:1427:A:H4'	25:1H:1428:C:O4'	2.22	0.40
25:1H:1439:A:C2	25:1H:1553:A:C4	3.09	0.40
25:1H:1831:G:H2'	25:1H:1832:C:C6	2.57	0.40
25:1H:2137:C:H42	25:1H:2154:G:N2	2.19	0.40
25:1H:2152:G:H2'	25:1H:2153:G:O4'	2.21	0.40
25:1H:2228:G:H2'	25:1H:2229:C:C6	2.55	0.40
25:1H:2405:G:OP1	35:78:77:ARG:NH2	2.47	0.40
25:1H:2409:G:H2'	25:1H:2410:G:O4'	2.21	0.40
27:11:71:ASP:HB2	27:11:103:ARG:NH2	2.33	0.40
27:11:238:GLY:O	27:11:239:ARG:C	2.61	0.40
28:21:93:VAL:HG21	28:21:177:PRO:HA	2.03	0.40
29:31:192:LEU:HD23	29:31:193:VAL:N	2.35	0.40
30:41:131:TYR:CE2	30:41:133:LEU:HD23	2.56	0.40
31:51:37:VAL:HG23	31:51:38:SER:O	2.21	0.40
32:61:71:ILE:HG23	32:61:72:LEU:N	2.37	0.40
33:58:18:ALA:HA	33:58:21:LYS:HG3	2.03	0.40
35:78:113:LYS:HA	35:78:129:ALA:O	2.21	0.40
39:B8:105:LEU:C	39:B8:107:ASP:H	2.28	0.40
39:B8:108:ARG:O	39:B8:111:ARG:HG2	2.21	0.40
41:D8:34:GLU:O	41:D8:34:GLU:HG2	2.18	0.40
44:G8:90:LEU:HG	44:G8:91:GLU:HA	2.01	0.40
49:L8:28:LEU:HA	49:L8:33:GLN:OE1	2.20	0.40
50:M8:12:ALA:C	50:M8:24:THR:HG21	2.46	0.40
51:N8:46:CYS:HA	51:N8:47:PRO:HD2	1.94	0.40
54:1G:191(F):U:H2'	54:1G:191:G:H8	1.85	0.40
54:1G:232:G:H2'	54:1G:233:C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:384:G:H2'	54:1G:385:C:C6	2.56	0.40
54:1G:555:C:H2'	54:1G:556:C:C6	2.57	0.40
54:1G:914:A:C6	54:1G:915:A:C5	3.09	0.40
54:1G:1002:G:H2'	54:1G:1003:G:H8	1.86	0.40
54:1G:1012:U:H2'	54:1G:1013:G:O4'	2.20	0.40
54:1G:1302:U:OP1	13:4A:13:LYS:NZ	2.54	0.40
2:12:130:ARG:H	2:12:130:ARG:HE	1.68	0.40
3:22:47:LEU:HB3	3:22:52:LEU:HB3	2.03	0.40
5:42:15:ARG:NH2	57:4L:25:A:N7	2.69	0.40
5:42:57:LYS:HG2	5:42:61:TYR:CE2	2.54	0.40
10:1A:8:LEU:HG	10:1A:96:ILE:HG23	2.03	0.40
11:2A:82:VAL:N	11:2A:107:SER:O	2.41	0.40
56:2L:5:G:H2'	56:2L:6:G:O4'	2.21	0.40
25:14:452:G:N3	25:14:457:A:H2	2.19	0.40
25:14:534:U:H2'	25:14:535:C:C6	2.55	0.40
25:14:587:C:O2	35:35:33:ARG:NH1	2.54	0.40
25:14:1204:A:C2	25:14:1241:A:N1	2.88	0.40
25:14:1805:U:H5"	27:19:250:TRP:CD2	2.55	0.40
25:14:2296:U:H4'	25:14:2297:C:OP1	2.21	0.40
25:14:2314:C:H2'	25:14:2315:G:H8	1.85	0.40
26:1J:85:G:C2	26:1J:86:G:C8	3.09	0.40
29:39:153:SER:OG	29:39:190:GLU:HB2	2.21	0.40
30:49:101:ILE:O	30:49:105:LYS:HG3	2.21	0.40
31:59:6:ARG:HB2	31:59:65:HIS:CD2	2.56	0.40
34:25:63:VAL:CG1	34:25:85:VAL:HG23	2.50	0.40
37:55:34:ILE:HG22	37:55:114:VAL:HB	2.03	0.40
39:75:127:ALA:O	39:75:131:ALA:HB3	2.21	0.40
44:C5:17:SER:O	44:C5:21:LYS:HB2	2.21	0.40
53:M5:53:PRO:O	53:M5:56:GLU:OE2	2.39	0.40
1:13:254:G:OP1	17:8I:67:LYS:O	2.38	0.40
1:13:751:U:H1'	15:6I:24:SER:HA	2.02	0.40
1:13:827:U:C5	1:13:872:A:N1	2.88	0.40
1:13:874:G:C6	1:13:875:C:C4	3.08	0.40
1:13:998:G:H1	1:13:1043:C:H42	1.69	0.40
1:13:1118:C:OP1	9:8E:9:ARG:HD3	2.21	0.40
1:13:1207:G:H2'	1:13:1208:C:H6	1.86	0.40
1:13:1238:A:N3	1:13:1241:G:O2'	2.41	0.40
1:13:1238:A:N7	1:13:1303:C:H1'	2.37	0.40
1:13:1273:G:C2	1:13:1274:G:H1'	2.56	0.40
4:3E:158:ILE:HG22	4:3E:162:LEU:HD12	2.03	0.40
7:6E:45:ASP:O	7:6E:48:LYS:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:66:VAL:O	7:6E:70:LYS:HG3	2.20	0.40
17:8I:53:LEU:HB3	17:8I:82:MET:HE1	2.02	0.40
20:BI:42:GLN:HG3	20:BI:43:LEU:HD23	2.03	0.40
25:1H:109:G:H2'	25:1H:110:G:O4'	2.21	0.40
25:1H:192:C:OP2	60:1H:3581:HOH:O	2.21	0.40
25:1H:315:G:C5	25:1H:316:C:C4	3.09	0.40
25:1H:590:A:P	29:31:95:ARG:HH11	2.45	0.40
25:1H:975:G:H1'	25:1H:990:A:C2	2.56	0.40
25:1H:1729:A:C8	25:1H:1731:G:C8	3.09	0.40
25:1H:2019:A:C2'	25:1H:2020:A:O5'	2.68	0.40
25:1H:2564:A:OP1	25:1H:2648:C:H4'	2.21	0.40
25:1H:2607:G:H4'	60:1H:3734:HOH:O	2.21	0.40
25:1H:2820:A:P	37:98:2:ARG:HH11	2.44	0.40
31:51:124:GLU:C	31:51:126:PRO:HD3	2.46	0.40
44:G8:23:ARG:HE	44:G8:23:ARG:HB3	1.45	0.40
47:J8:85:LEU:H	47:J8:87:PRO:HD2	1.85	0.40
47:J8:90:ILE:HD13	47:J8:90:ILE:HG21	1.83	0.40
51:N8:31:VAL:HG13	51:N8:42:PRO:HG3	2.03	0.40
54:1G:186(E):C:C2	54:1G:191(C):G:N2	2.90	0.40
54:1G:960:U:H3	54:1G:1225:A:H1'	1.87	0.40
54:1G:1179:A:OP2	9:82:93:ARG:NH2	2.54	0.40
54:1G:1250:A:H2	54:1G:1353:G:H21	1.68	0.40
3:22:74:GLY:O	3:22:78:GLY:N	2.54	0.40
4:32:98:GLU:O	4:32:103:ASN:ND2	2.54	0.40
6:52:100:ASN:HD22	18:9A:27:GLY:HA2	1.86	0.40
8:72:38:ILE:HD12	8:72:118:VAL:HG12	2.02	0.40
12:3A:60:LEU:HD12	12:3A:61:THR:H	1.87	0.40
20:BA:76:ALA:O	20:BA:80:ARG:HG3	2.21	0.40
25:14:15:G:C2	25:14:16:G:C4	3.09	0.40
25:14:52:A:C5	25:14:118:A:C2	3.10	0.40
25:14:244:A:C2	25:14:255:A:C4	3.09	0.40
25:14:250:G:OP1	35:35:60:MET:HE1	2.21	0.40
25:14:453:C:OP1	60:14:3616:HOH:O	2.20	0.40
25:14:483:A:C5'	44:C5:49:VAL:HG22	2.51	0.40
25:14:631:A:O2'	35:35:67:MET:HB3	2.21	0.40
25:14:774:A:H2	25:14:787:U:HO2'	1.65	0.40
25:14:1003:G:N2	25:14:1153:C:C2	2.89	0.40
25:14:1009:A:C4'	40:85:59:ARG:HG3	2.52	0.40
25:14:1800:C:OP2	27:19:183:ARG:NH2	2.54	0.40
25:14:1888:G:N3	25:14:1888:G:H5"	2.36	0.40
25:14:2187:G:C6	25:14:2188:C:N4	2.88	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2393:A:O3'	35:35:63:PRO:CD	2.69	0.40
28:29:120:TRP:CE3	28:29:155:LYS:HD3	2.56	0.40
29:39:132:VAL:C	29:39:134:GLY:H	2.30	0.40
32:69:9:LEU:HD11	32:69:35:LEU:HB3	2.03	0.40
32:69:54:GLN:HA	32:69:57:ARG:CB	2.50	0.40
40:85:47:TYR:HA	40:85:50:ARG:NH2	2.36	0.40
40:85:65:ILE:O	40:85:68:ALA:N	2.54	0.40
45:D5:152:ALA:HA	45:D5:171:ILE:HD11	2.03	0.40
50:I5:11:PRO:HB3	50:I5:25:TYR:CE2	2.56	0.40
50:I5:21:VAL:HG22	50:I5:22:ILE:H	1.86	0.40
1:13:29:G:O2'	1:13:30:U:H5'	2.21	0.40
1:13:232:G:C6	1:13:233:C:C4	3.09	0.40
1:13:1179:A:H2'	1:13:1180:A:O4'	2.21	0.40
1:13:1454:G:H2'	1:13:1455:G:C8	2.56	0.40
1:13:1464:G:H2'	1:13:1465:C:H6	1.86	0.40
4:3E:170:VAL:HG13	4:3E:171:GLY:O	2.22	0.40
8:7E:4:ASP:HB2	8:7E:89:PRO:HG3	2.02	0.40
8:7E:8:ASP:O	8:7E:12:ARG:HB2	2.21	0.40
17:8I:26:GLN:HA	17:8I:36:ILE:O	2.21	0.40
21:1F:18:TYR:HA	21:1F:22:ARG:HB3	2.04	0.40
22:3K:83:C:H2'	22:3K:84:C:C6	2.56	0.40
25:1H:1317:A:H2'	25:1H:1318:C:C6	2.56	0.40
25:1H:1392:A:C5	25:1H:1393:A:C6	3.09	0.40
25:1H:1418:G:OP1	25:1H:1588:C:O2'	2.29	0.40
25:1H:2392:A:H8	35:78:61:ARG:CG	2.32	0.40
27:11:150:LYS:HA	27:11:150:LYS:HD3	1.95	0.40
27:11:272:ALA:HB1	27:11:273:ARG:H	1.74	0.40
28:21:11:MET:HE2	28:21:11:MET:HB3	1.83	0.40
28:21:201:THR:HG22	28:21:203:LYS:H	1.85	0.40
29:31:167:ALA:O	29:31:169:ASN:N	2.54	0.40
31:51:40:GLU:OE1	31:51:41:MET:N	2.54	0.40
32:61:129:THR:HG22	32:61:137:PRO:HB3	2.03	0.40
32:61:130:TYR:HD1	32:61:130:TYR:HA	1.76	0.40
33:58:4:TYR:CE2	40:C8:100:VAL:HG11	2.57	0.40
33:58:107:LEU:HD23	33:58:107:LEU:HA	1.71	0.40
37:98:100:LEU:HD11	37:98:113:LEU:HB2	2.03	0.40
38:A8:85:VAL:O	38:A8:112:PHE:HE2	2.04	0.40
44:G8:81:LYS:HB3	44:G8:82:PRO:CA	2.50	0.40
45:H8:76:LEU:CD1	45:H8:76:LEU:H	2.35	0.40
45:H8:105:VAL:O	45:H8:140:ASP:HA	2.21	0.40
46:I8:41:ARG:NE	46:I8:41:ARG:HA	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:L8:37:LEU:HD12	49:L8:43:ILE:CG2	2.51	0.40
50:M8:9:LEU:HD12	50:M8:26:SER:HA	2.04	0.40
54:1G:542:G:H5'	4:32:41:GLY:HA3	2.03	0.40
54:1G:726:C:H2'	54:1G:727:G:C8	2.56	0.40
3:22:23:TYR:CD2	3:22:24:ALA:N	2.90	0.40
4:32:159:ARG:H	4:32:159:ARG:HG3	1.73	0.40
5:42:28:PHE:O	5:42:47:LYS:HA	2.20	0.40
5:42:128:PRO:O	5:42:131:ILE:HB	2.21	0.40
9:82:14:VAL:O	9:82:65:VAL:HG23	2.22	0.40
12:3A:117:ARG:NH2	12:3A:124:LYS:HA	2.35	0.40
13:4A:19:LEU:HG	13:4A:19:LEU:H	1.72	0.40
20:BA:84:LEU:HD23	20:BA:84:LEU:HA	1.82	0.40
25:14:69:C:H2'	25:14:70:G:H8	1.87	0.40
25:14:82:G:H5'	25:14:296:C:C5'	2.51	0.40
25:14:216:A:H3'	25:14:217:G:H8	1.85	0.40
25:14:278:A:H4'	25:14:279:C:OP1	2.21	0.40
25:14:390:A:C6	35:35:71:VAL:HG21	2.57	0.40
25:14:1331:A:O2'	25:14:1332:G:C8	2.71	0.40
25:14:1332:G:N2	25:14:1610:A:H8	2.19	0.40
25:14:1461:G:H2'	25:14:1462:C:C6	2.56	0.40
25:14:2110:G:C2	25:14:2120:G:H1'	2.57	0.40
25:14:2329:G:H2'	25:14:2330:G:C8	2.56	0.40
25:14:2488:A:O5'	25:14:2488:A:H8	2.04	0.40
25:14:2534:A:C5	25:14:2535:G:C8	3.08	0.40
26:1J:15:A:H3'	26:1J:16:G:H5'	2.03	0.40
26:1J:21:G:C2	26:1J:63:G:C2	3.09	0.40
28:29:105:THR:CA	28:29:166:THR:HG23	2.51	0.40
29:39:124:LEU:O	29:39:125:LEU:C	2.63	0.40
30:49:128:ARG:HA	30:49:128:ARG:HD2	1.81	0.40
31:59:22:GLY:O	31:59:37:VAL:HG12	2.21	0.40
31:59:26:VAL:HG11	31:59:75:ALA:HB1	2.04	0.40
36:45:21:THR:HG21	36:45:101:ARG:HD2	2.03	0.40
36:45:22:LYS:HG2	36:45:23:GLY:N	2.35	0.40
42:A5:47:VAL:HG23	42:A5:47:VAL:H	1.66	0.40
45:D5:79:ARG:HB2	45:D5:80:ARG:NH1	2.36	0.40
50:I5:37:SER:C	50:I5:39:CYS:H	2.29	0.40
1:13:266:G:H5"	1:13:267:C:H5	1.87	0.40
1:13:276:G:C6	1:13:277:C:C4	3.09	0.40
1:13:302:G:C6	1:13:303:A:C5	3.09	0.40
1:13:651:C:H2'	1:13:652:U:C6	2.55	0.40
1:13:683:G:C6	1:13:684:A:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:848:C:H2'	1:13:849:C:O4'	2.21	0.40
3:2E:15:THR:HG23	3:2E:181:ASN:HA	2.04	0.40
3:2E:151:VAL:HA	3:2E:199:LYS:O	2.21	0.40
4:3E:52:SER:O	4:3E:55:ALA:HB3	2.21	0.40
4:3E:102:ASP:OD1	4:3E:103:ASN:N	2.54	0.40
4:3E:141:ARG:HB2	4:3E:141:ARG:CZ	2.52	0.40
6:5E:97:PHE:O	18:9I:30:ASP:HA	2.21	0.40
7:6E:13:GLN:HA	7:6E:14:PRO:HD3	1.90	0.40
7:6E:113:GLU:H	7:6E:113:GLU:HG2	1.53	0.40
7:6E:148:ASN:C	7:6E:150:ALA:N	2.80	0.40
12:3I:82:VAL:HG12	12:3I:83:VAL:N	2.36	0.40
12:3I:93:LEU:O	12:3I:94:PRO:C	2.63	0.40
16:7I:60:LEU:HD23	16:7I:60:LEU:HA	1.84	0.40
17:8I:80:GLY:O	17:8I:81:ARG:HG2	2.22	0.40
19:AI:25:LYS:HG2	19:AI:27:GLU:OE1	2.22	0.40
22:1K:6:G:O2'	22:1K:7:G:OP1	2.34	0.40
25:1H:69:C:H2'	25:1H:70:G:C8	2.56	0.40
25:1H:120:U:C5	25:1H:149:A:N6	2.90	0.40
25:1H:1024:G:C3'	25:1H:1025:G:H5"	2.49	0.40
25:1H:1050:A:H2'	25:1H:1051:G:O4'	2.21	0.40
25:1H:1262:A:N3	51:N8:10:LYS:HE3	2.37	0.40
25:1H:2492:U:H2'	25:1H:2493:U:H6	1.87	0.40
25:1H:2600:A:N6	60:1H:3561:HOH:O	2.13	0.40
26:16:35:U:H2'	26:16:36:C:C6	2.57	0.40
27:11:124:PRO:HG2	27:11:129:ASN:HD21	1.85	0.40
28:21:77:ILE:O	28:21:78:LEU:C	2.64	0.40
29:31:28:ILE:HG21	29:31:116:ASP:HB2	2.04	0.40
32:61:118:LYS:HA	32:61:118:LYS:HD2	1.89	0.40
35:78:2:LYS:CG	35:78:4:SER:H	2.27	0.40
35:78:100:LEU:HD12	35:78:105:LEU:HD13	2.03	0.40
36:88:51:ARG:O	36:88:55:VAL:HG13	2.22	0.40
36:88:130:LYS:HB2	36:88:130:LYS:HE3	1.89	0.40
37:98:48:VAL:O	37:98:49:ASP:C	2.63	0.40
44:G8:64:GLU:H	44:G8:64:GLU:HG2	1.63	0.40
45:H8:151:HIS:HA	45:H8:169:GLU:O	2.22	0.40
46:I8:68:GLU:CD	46:I8:82:ARG:HH11	2.30	0.40
47:J8:87:PRO:O	47:J8:88:LYS:C	2.65	0.40
54:1G:92:G:H2'	54:1G:93:U:O4'	2.22	0.40
54:1G:236:G:C5	54:1G:237:C:C5	3.10	0.40
54:1G:236:G:H2'	54:1G:237:C:O4'	2.21	0.40
54:1G:287:U:O2'	54:1G:288:A:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:474:G:C2	54:1G:475:G:C5	3.09	0.40
54:1G:538:G:H2'	54:1G:539:A:C8	2.57	0.40
54:1G:793:U:O2	54:1G:1516:G:H4'	2.21	0.40
54:1G:873:A:H8	54:1G:873:A:OP1	2.05	0.40
54:1G:1187:G:O5'	9:82:113:LYS:HE2	2.22	0.40
54:1G:1347:G:C8	9:82:107:ARG:HB3	2.56	0.40
54:1G:1441:G:H8	54:1G:1441:G:O5'	2.03	0.40
2:12:12:GLU:HB2	2:12:16:HIS:ND1	2.37	0.40
2:12:87:ARG:NH2	2:12:233:SER:H	2.20	0.40
11:2A:18:ARG:NH2	11:2A:35:PRO:O	2.55	0.40
11:2A:34:ASP:N	11:2A:40:ILE:HD11	2.36	0.40
20:BA:11:SER:HA	20:BA:13:LEU:H	1.86	0.40
25:14:397:G:O2'	25:14:2231:C:H1'	2.21	0.40
25:14:1025:G:C4	25:14:1135:C:H1'	2.56	0.40
25:14:1964:G:H4'	25:14:1965:C:OP2	2.22	0.40
25:14:1971:A:H5"	60:14:3500:HOH:O	2.20	0.40
25:14:2000:G:C2'	25:14:2001:A:H5'	2.51	0.40
25:14:2417:C:C4	25:14:2418:A:N7	2.89	0.40
25:14:2776:A:C6	25:14:2778:A:C6	3.10	0.40
25:14:2853:C:O2'	25:14:2854:G:H5'	2.22	0.40
26:1J:44:G:O2'	26:1J:47:C:N4	2.54	0.40
26:1J:44:G:C2	26:1J:48:A:C2	3.10	0.40
28:29:14:ILE:HD11	28:29:173:VAL:HG11	2.03	0.40
30:49:173:LEU:O	30:49:178:PHE:HD1	2.04	0.40
32:69:47:LEU:HA	32:69:50:ARG:NE	2.36	0.40
35:35:49:ARG:HD2	53:M5:58:ILE:CG2	2.52	0.40
35:35:78:PRO:HA	35:35:110:TYR:CE2	2.56	0.40
35:35:101:VAL:HB	35:35:106:LEU:HD23	2.04	0.40
35:35:143:GLY:C	35:35:144:GLU:HG3	2.45	0.40
41:95:51:VAL:HG23	41:95:52:VAL:O	2.20	0.40
45:D5:27:VAL:N	45:D5:86:VAL:O	2.52	0.40
46:E5:27:GLU:HB2	46:E5:69:PHE:HD1	1.86	0.40
53:M5:7:HIS:O	53:M5:7:HIS:ND1	2.55	0.40
1:13:160:A:H8	1:13:160:A:P	2.44	0.40
1:13:282:A:N3	1:13:282:A:H2'	2.35	0.40
1:13:329:A:C5	1:13:332:G:C6	3.09	0.40
1:13:533:A:C2	1:13:536:C:C5	3.10	0.40
1:13:601:C:C2	1:13:602:A:C8	3.09	0.40
1:13:659:U:O2'	1:13:660:G:H5'	2.21	0.40
1:13:872:A:C4	1:13:874:G:N7	2.90	0.40
1:13:901:A:H8	1:13:901:A:O5'	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1228:C:H2'	1:13:1229:A:H8	1.86	0.40
1:13:1260:C:C6	1:13:1260:C:C3'	3.05	0.40
3:2E:95:THR:HG22	3:2E:96:GLY:H	1.85	0.40
3:2E:186:PHE:CZ	3:2E:188:LEU:HD23	2.57	0.40
4:3E:162:LEU:HD13	4:3E:181:MET:HG2	2.04	0.40
11:2I:71:LYS:H	11:2I:71:LYS:HG2	1.46	0.40
12:3I:70:ILE:HD13	12:3I:70:ILE:HG21	1.84	0.40
13:4I:15:VAL:HA	13:4I:45:VAL:HG13	2.04	0.40
16:7I:49:LEU:HD12	16:7I:50:LYS:N	2.36	0.40
22:3K:85:A:N6	25:1H:2422:A:O4'	2.54	0.40
25:1H:346:A:N3	25:1H:346:A:H2'	2.37	0.40
25:1H:566:U:P	35:78:29:LYS:HZ2	2.44	0.40
25:1H:590:A:H2'	25:1H:591:C:C6	2.57	0.40
25:1H:608:A:C4	25:1H:621:A:C6	3.10	0.40
25:1H:751:A:C6	25:1H:789:A:C5	3.09	0.40
25:1H:1465:G:N3	25:1H:1466:G:C8	2.89	0.40
25:1H:1678:G:N2	25:1H:1989:G:H22	2.16	0.40
25:1H:2104:G:N1	25:1H:2186:G:C2	2.89	0.40
25:1H:2689:U:H5"	25:1H:2713:A:C2	2.54	0.40
26:16:88:C:H2'	26:16:89:G:O4'	2.22	0.40
27:11:91:ARG:HH11	27:11:91:ARG:HD3	1.76	0.40
30:41:44:GLY:O	30:41:47:LYS:HG3	2.21	0.40
31:51:51:ARG:HG2	31:51:52:VAL:N	2.37	0.40
45:H8:129:SER:HA	45:H8:130:PRO:HD3	1.81	0.40
53:Q8:26:LYS:HE3	53:Q8:26:LYS:HB3	1.78	0.40
54:1G:306:G:H2'	54:1G:307:C:H6	1.86	0.40
54:1G:349:A:H2'	54:1G:350:G:O4'	2.22	0.40
54:1G:646:U:H2'	54:1G:647:C:C6	2.57	0.40
54:1G:741:G:H2'	54:1G:742:G:O4'	2.22	0.40
54:1G:848:C:O2'	54:1G:849:C:H5'	2.22	0.40
54:1G:1320:C:N3	19:AA:36:ARG:NH2	2.70	0.40
3:22:85:ARG:HA	3:22:88:ARG:NH2	2.37	0.40
3:22:164:ARG:CZ	3:22:166:GLU:HG3	2.52	0.40
4:32:70:ILE:HG22	4:32:75:PHE:HB2	2.03	0.40
7:62:42:ILE:H	7:62:42:ILE:HG13	1.64	0.40
9:82:79:LEU:HD21	9:82:102:LEU:HA	2.03	0.40
9:82:111:ARG:HG3	14:5A:61:TRP:CD1	2.57	0.40
25:14:220:G:C6	25:14:427:U:C5	3.10	0.40
25:14:236:C:H2'	25:14:237:C:H6	1.87	0.40
25:14:438:G:H2'	25:14:439:G:C8	2.57	0.40
25:14:480:A:OP2	44:C5:46:LYS:HE3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:639:U:H2'	25:14:640:C:H6	1.84	0.40
25:14:867:C:C5	25:14:868:U:H5	2.39	0.40
25:14:996:A:C2	25:14:997:G:C8	3.09	0.40
25:14:1171:G:H1	25:14:1178:C:N4	2.19	0.40
25:14:1359:A:N7	25:14:1372:U:C4	2.89	0.40
25:14:1419:A:N7	25:14:1421:G:C6	2.90	0.40
25:14:1628:G:H2'	25:14:1629:U:H6	1.86	0.40
25:14:2578:G:C5	28:29:140:SER:HB2	2.57	0.40
26:1J:16:G:H1	26:1J:68:C:H42	1.68	0.40
27:19:137:PRO:HB2	27:19:140:THR:HG23	2.02	0.40
28:29:80:GLU:O	28:29:82:ARG:N	2.53	0.40
28:29:96:PHE:O	28:29:175:VAL:HG11	2.22	0.40
30:49:120:LEU:N	30:49:179:PRO:O	2.46	0.40
32:69:128:LEU:HD13	32:69:128:LEU:HA	1.75	0.40
34:25:47:ILE:HD12	34:25:47:ILE:HA	1.86	0.40
35:35:93:GLY:H	35:35:123:LEU:HD13	1.86	0.40
41:95:5:VAL:HG11	41:95:57:VAL:HG11	2.04	0.40
41:95:70:ILE:O	41:95:70:ILE:HG22	2.22	0.40
43:B5:26:TYR:O	43:B5:81:VAL:HG23	2.21	0.40
44:C5:17:SER:OG	44:C5:18:GLY:N	2.52	0.40
45:D5:73:GLN:H	45:D5:87:ASP:HB2	1.86	0.40

All (1) 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)
25:1H:2137:C:OP1	54:1G:999:U:O2'[4_555]	2.16	0.04

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	12	235/256 (92%)	201 (86%)	32 (14%)	2 (1%)	14 39
2	1E	235/256 (92%)	202 (86%)	31 (13%)	2 (1%)	14 39
3	22	204/239 (85%)	187 (92%)	17 (8%)	0	100 100
3	2E	203/239 (85%)	191 (94%)	12 (6%)	0	100 100
4	32	206/209 (99%)	181 (88%)	25 (12%)	0	100 100
4	3E	206/209 (99%)	191 (93%)	14 (7%)	1 (0%)	24 52
5	42	149/162 (92%)	141 (95%)	8 (5%)	0	100 100
5	4E	149/162 (92%)	145 (97%)	3 (2%)	1 (1%)	18 45
6	52	99/101 (98%)	97 (98%)	2 (2%)	0	100 100
6	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100 100
7	62	153/156 (98%)	146 (95%)	7 (5%)	0	100 100
7	6E	153/156 (98%)	145 (95%)	8 (5%)	0	100 100
8	72	136/138 (99%)	127 (93%)	8 (6%)	1 (1%)	18 45
8	7E	136/138 (99%)	130 (96%)	6 (4%)	0	100 100
9	82	125/128 (98%)	116 (93%)	9 (7%)	0	100 100
9	8E	125/128 (98%)	109 (87%)	16 (13%)	0	100 100
10	1A	97/105 (92%)	90 (93%)	7 (7%)	0	100 100
10	1I	97/105 (92%)	86 (89%)	11 (11%)	0	100 100
11	2A	117/129 (91%)	106 (91%)	11 (9%)	0	100 100
11	2I	114/129 (88%)	98 (86%)	14 (12%)	2 (2%)	6 24
12	3A	123/132 (93%)	106 (86%)	14 (11%)	3 (2%)	4 18
12	3I	123/132 (93%)	106 (86%)	17 (14%)	0	100 100
13	4A	115/126 (91%)	99 (86%)	15 (13%)	1 (1%)	14 39
13	4I	114/126 (90%)	98 (86%)	16 (14%)	0	100 100
14	5A	56/61 (92%)	48 (86%)	8 (14%)	0	100 100
14	5I	59/61 (97%)	49 (83%)	9 (15%)	1 (2%)	7 25
15	6A	86/89 (97%)	78 (91%)	8 (9%)	0	100 100
15	6I	86/89 (97%)	77 (90%)	9 (10%)	0	100 100
16	7A	82/88 (93%)	73 (89%)	9 (11%)	0	100 100
16	7I	82/88 (93%)	78 (95%)	4 (5%)	0	100 100
17	8A	98/105 (93%)	91 (93%)	7 (7%)	0	100 100
17	8I	98/105 (93%)	92 (94%)	6 (6%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
18	9A	67/88 (76%)	61 (91%)	6 (9%)	0	100 100
18	9I	70/88 (80%)	63 (90%)	6 (9%)	1 (1%)	9 29
19	AA	80/93 (86%)	64 (80%)	14 (18%)	2 (2%)	4 17
19	AI	81/93 (87%)	69 (85%)	9 (11%)	3 (4%)	2 12
20	BA	97/106 (92%)	88 (91%)	9 (9%)	0	100 100
20	BI	97/106 (92%)	84 (87%)	13 (13%)	0	100 100
21	1B	23/27 (85%)	19 (83%)	4 (17%)	0	100 100
21	1F	20/27 (74%)	18 (90%)	2 (10%)	0	100 100
27	11	270/276 (98%)	249 (92%)	18 (7%)	3 (1%)	11 34
27	19	271/276 (98%)	249 (92%)	17 (6%)	5 (2%)	6 24
28	21	203/206 (98%)	175 (86%)	24 (12%)	4 (2%)	6 21
28	29	203/206 (98%)	162 (80%)	32 (16%)	9 (4%)	2 9
29	31	200/210 (95%)	178 (89%)	21 (10%)	1 (0%)	24 52
29	39	206/210 (98%)	171 (83%)	29 (14%)	6 (3%)	3 16
30	41	179/182 (98%)	158 (88%)	18 (10%)	3 (2%)	7 25
30	49	179/182 (98%)	160 (89%)	18 (10%)	1 (1%)	21 48
31	51	172/180 (96%)	139 (81%)	28 (16%)	5 (3%)	3 16
31	59	169/180 (94%)	137 (81%)	29 (17%)	3 (2%)	6 24
32	61	144/148 (97%)	117 (81%)	23 (16%)	4 (3%)	4 16
32	69	144/148 (97%)	120 (83%)	20 (14%)	4 (3%)	4 16
33	15	136/140 (97%)	122 (90%)	13 (10%)	1 (1%)	18 45
33	58	136/140 (97%)	118 (87%)	15 (11%)	3 (2%)	5 20
34	25	120/122 (98%)	113 (94%)	7 (6%)	0	100 100
34	68	120/122 (98%)	113 (94%)	7 (6%)	0	100 100
35	35	148/150 (99%)	110 (74%)	31 (21%)	7 (5%)	2 9
35	78	148/150 (99%)	119 (80%)	24 (16%)	5 (3%)	3 13
36	45	136/141 (96%)	114 (84%)	21 (15%)	1 (1%)	18 45
36	88	139/141 (99%)	113 (81%)	25 (18%)	1 (1%)	18 45
37	55	115/118 (98%)	107 (93%)	8 (7%)	0	100 100
37	98	116/118 (98%)	106 (91%)	8 (7%)	2 (2%)	7 25
38	65	109/112 (97%)	89 (82%)	19 (17%)	1 (1%)	14 39

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
38	A8	109/112 (97%)	89 (82%)	19 (17%)	1 (1%)	14 39
39	75	135/146 (92%)	116 (86%)	17 (13%)	2 (2%)	8 28
39	B8	134/146 (92%)	122 (91%)	12 (9%)	0	100 100
40	85	115/118 (98%)	106 (92%)	8 (7%)	1 (1%)	14 39
40	C8	115/118 (98%)	105 (91%)	8 (7%)	2 (2%)	7 25
41	95	99/101 (98%)	80 (81%)	17 (17%)	2 (2%)	6 21
41	D8	99/101 (98%)	95 (96%)	2 (2%)	2 (2%)	6 21
42	A5	111/113 (98%)	103 (93%)	7 (6%)	1 (1%)	14 39
42	E8	111/113 (98%)	105 (95%)	6 (5%)	0	100 100
43	B5	90/96 (94%)	87 (97%)	3 (3%)	0	100 100
43	F8	92/96 (96%)	83 (90%)	7 (8%)	2 (2%)	5 20
44	C5	102/110 (93%)	75 (74%)	24 (24%)	3 (3%)	3 16
44	G8	100/110 (91%)	81 (81%)	14 (14%)	5 (5%)	1 8
45	D5	177/206 (86%)	138 (78%)	30 (17%)	9 (5%)	1 8
45	H8	173/206 (84%)	143 (83%)	22 (13%)	8 (5%)	2 9
46	E5	75/85 (88%)	73 (97%)	1 (1%)	1 (1%)	9 31
46	I8	75/85 (88%)	63 (84%)	11 (15%)	1 (1%)	9 31
47	F5	95/98 (97%)	87 (92%)	6 (6%)	2 (2%)	5 21
47	J8	91/98 (93%)	85 (93%)	4 (4%)	2 (2%)	5 20
48	G5	64/72 (89%)	60 (94%)	2 (3%)	2 (3%)	3 14
48	K8	64/72 (89%)	59 (92%)	4 (6%)	1 (2%)	7 26
49	H5	57/60 (95%)	55 (96%)	2 (4%)	0	100 100
49	L8	57/60 (95%)	55 (96%)	2 (4%)	0	100 100
50	I5	61/71 (86%)	35 (57%)	24 (39%)	2 (3%)	3 13
50	M8	64/71 (90%)	44 (69%)	18 (28%)	2 (3%)	3 14
51	J5	56/60 (93%)	50 (89%)	5 (9%)	1 (2%)	6 24
51	N8	47/60 (78%)	43 (92%)	4 (8%)	0	100 100
52	L5	43/49 (88%)	41 (95%)	2 (5%)	0	100 100
52	P8	43/49 (88%)	41 (95%)	2 (5%)	0	100 100
53	M5	58/65 (89%)	46 (79%)	10 (17%)	2 (3%)	3 13
53	Q8	60/65 (92%)	41 (68%)	12 (20%)	7 (12%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	11230/11946 (94%)	9889 (88%)	1191 (11%)	150 (1%)	9 31

All (150) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
14	5I	25	VAL
18	9I	22	VAL
44	G8	81	LYS
45	H8	53	ILE
53	Q8	51	ALA
27	19	237	GLU
28	29	25	VAL
28	29	81	ILE
29	39	84	VAL
45	D5	53	ILE
45	D5	165	VAL
47	F5	30	VAL
27	11	240	ALA
31	51	14	GLY
35	78	21	ARG
37	98	11	ASN
41	D8	45	THR
43	F8	68	ARG
44	G8	54	LYS
44	G8	78	ALA
45	H8	60	GLU
45	H8	165	VAL
47	J8	86	SER
53	Q8	49	VAL
53	Q8	50	LEU
12	3A	18	VAL
19	AA	9	VAL
27	19	33	LEU
27	19	239	ARG
28	29	61	ARG
28	29	62	PRO
29	39	128	ALA
29	39	146	ALA
35	35	15	ARG
35	35	111	ARG
39	75	5	ALA
44	C5	29	GLU

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Mol	Chain	Res	Type
48	G5	48	HIS
50	I5	5	ILE
51	J5	57	VAL
53	M5	31	HIS
53	M5	51	ALA
28	21	118	LYS
31	51	80	SER
32	61	144	VAL
35	78	42	SER
36	88	66	ILE
38	A8	88	ASP
44	G8	53	PRO
45	H8	6	LYS
53	Q8	8	LYS
2	12	7	VAL
28	29	9	VAL
28	29	51	PHE
29	39	124	LEU
36	45	78	PRO
41	95	45	THR
47	F5	93	GLU
48	G5	47	ASN
30	41	96	ARG
30	41	97	ASP
32	61	12	LEU
32	61	145	VAL
33	58	22	THR
33	58	97	ARG
33	58	128	HIS
35	78	16	ARG
40	C8	96	ALA
43	F8	40	LYS
45	H8	59	LEU
47	J8	87	PRO
48	K8	47	ASN
50	M8	34	GLU
53	Q8	46	ARG
31	59	92	ILE
32	69	111	PRO
32	69	117	GLU
32	69	145	VAL
35	35	35	HIS

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Mol	Chain	Res	Type
35	35	63	PRO
39	75	94	ALA
40	85	93	LYS
45	D5	105	VAL
45	D5	116	VAL
45	D5	161	VAL
45	D5	171	ILE
4	3E	155	LEU
28	21	56	PRO
31	51	81	GLU
32	61	133	HIS
37	98	45	ARG
40	C8	89	GLU
41	D8	49	THR
44	G8	85	VAL
46	I8	83	PRO
53	Q8	6	THR
29	39	22	ALA
35	35	64	LYS
38	65	61	ASN
44	C5	17	SER
46	E5	44	ARG
2	1E	135	GLN
11	2I	108	ILE
19	AI	41	VAL
28	21	55	ASN
45	H8	51	ALA
28	29	82	ARG
35	35	6	LEU
11	2I	82	VAL
19	AI	67	VAL
29	31	24	LEU
30	41	5	VAL
28	29	26	ILE
30	49	5	VAL
42	A5	12	ILE
2	1E	239	VAL
5	4E	115	VAL
27	11	3	VAL
31	51	127	GLU
50	M8	5	ILE
2	12	39	ILE

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Mol	Chain	Res	Type
8	72	100	ILE
12	3A	47	LYS
27	19	3	VAL
28	29	59	VAL
50	I5	33	VAL
19	AI	9	VAL
35	78	7	ARG
35	78	95	VAL
53	Q8	41	ILE
13	4A	84	ILE
19	AA	67	VAL
27	19	240	ALA
31	59	131	VAL
31	59	169	VAL
32	69	144	VAL
35	35	34	GLY
45	D5	95	PRO
45	D5	141	VAL
28	21	72	VAL
31	51	168	PRO
45	H8	61	LEU
45	H8	141	VAL
33	15	128	HIS
41	95	99	ILE
44	C5	76	CYS
27	11	123	ALA
12	3A	96	VAL
29	39	11	VAL
45	D5	176	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	12	205/220 (93%)	156 (76%)	49 (24%)	1 3
2	1E	205/220 (93%)	161 (78%)	44 (22%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
3	22	160/188 (85%)	132 (82%)	28 (18%)	2 8
3	2E	159/188 (85%)	122 (77%)	37 (23%)	1 3
4	32	180/181 (99%)	149 (83%)	31 (17%)	2 8
4	3E	180/181 (99%)	146 (81%)	34 (19%)	1 6
5	42	116/123 (94%)	88 (76%)	28 (24%)	1 2
5	4E	116/123 (94%)	93 (80%)	23 (20%)	1 5
6	52	90/90 (100%)	71 (79%)	19 (21%)	1 4
6	5E	90/90 (100%)	76 (84%)	14 (16%)	2 10
7	62	126/127 (99%)	99 (79%)	27 (21%)	1 4
7	6E	126/127 (99%)	99 (79%)	27 (21%)	1 4
8	72	119/119 (100%)	101 (85%)	18 (15%)	3 11
8	7E	119/119 (100%)	93 (78%)	26 (22%)	1 4
9	82	98/99 (99%)	80 (82%)	18 (18%)	1 7
9	8E	98/99 (99%)	77 (79%)	21 (21%)	1 4
10	1A	89/92 (97%)	67 (75%)	22 (25%)	1 2
10	1I	89/92 (97%)	70 (79%)	19 (21%)	1 4
11	2A	90/99 (91%)	72 (80%)	18 (20%)	1 5
11	2I	88/99 (89%)	73 (83%)	15 (17%)	2 8
12	3A	104/109 (95%)	85 (82%)	19 (18%)	2 7
12	3I	104/109 (95%)	92 (88%)	12 (12%)	5 19
13	4A	94/101 (93%)	75 (80%)	19 (20%)	1 4
13	4I	94/101 (93%)	75 (80%)	19 (20%)	1 4
14	5A	48/50 (96%)	40 (83%)	8 (17%)	2 8
14	5I	50/50 (100%)	36 (72%)	14 (28%)	0 1
15	6A	79/80 (99%)	65 (82%)	14 (18%)	2 7
15	6I	79/80 (99%)	64 (81%)	15 (19%)	1 6
16	7A	72/74 (97%)	60 (83%)	12 (17%)	2 8
16	7I	72/74 (97%)	54 (75%)	18 (25%)	0 2
17	8A	95/97 (98%)	83 (87%)	12 (13%)	4 16
17	8I	95/97 (98%)	74 (78%)	21 (22%)	1 3
18	9A	60/77 (78%)	47 (78%)	13 (22%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
18	9I	63/77 (82%)	52 (82%)	11 (18%)	2 8
19	AA	66/80 (82%)	55 (83%)	11 (17%)	2 8
19	AI	72/80 (90%)	54 (75%)	18 (25%)	0 2
20	BA	76/82 (93%)	56 (74%)	20 (26%)	0 2
20	BI	76/82 (93%)	63 (83%)	13 (17%)	2 8
21	1B	20/22 (91%)	18 (90%)	2 (10%)	7 25
21	1F	17/22 (77%)	14 (82%)	3 (18%)	2 7
27	11	214/218 (98%)	161 (75%)	53 (25%)	1 2
27	19	214/218 (98%)	160 (75%)	54 (25%)	0 2
28	21	165/166 (99%)	126 (76%)	39 (24%)	1 3
28	29	165/166 (99%)	125 (76%)	40 (24%)	1 2
29	31	161/166 (97%)	130 (81%)	31 (19%)	1 5
29	39	165/166 (99%)	122 (74%)	43 (26%)	0 1
30	41	155/156 (99%)	121 (78%)	34 (22%)	1 4
30	49	155/156 (99%)	125 (81%)	30 (19%)	1 5
31	51	145/148 (98%)	110 (76%)	35 (24%)	1 2
31	59	143/148 (97%)	109 (76%)	34 (24%)	1 3
32	61	122/124 (98%)	86 (70%)	36 (30%)	0 1
32	69	122/124 (98%)	87 (71%)	35 (29%)	0 1
33	15	117/119 (98%)	89 (76%)	28 (24%)	1 3
33	58	117/119 (98%)	95 (81%)	22 (19%)	1 6
34	25	100/100 (100%)	73 (73%)	27 (27%)	0 1
34	68	100/100 (100%)	80 (80%)	20 (20%)	1 5
35	35	116/116 (100%)	73 (63%)	43 (37%)	0 0
35	78	116/116 (100%)	74 (64%)	42 (36%)	0 0
36	45	109/111 (98%)	82 (75%)	27 (25%)	1 2
36	88	111/111 (100%)	84 (76%)	27 (24%)	1 2
37	55	100/101 (99%)	78 (78%)	22 (22%)	1 4
37	98	101/101 (100%)	78 (77%)	23 (23%)	1 3
38	65	87/88 (99%)	62 (71%)	25 (29%)	0 1
38	A8	87/88 (99%)	57 (66%)	30 (34%)	0 0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
39	75	120/127 (94%)	87 (72%)	33 (28%)	0 1
39	B8	119/127 (94%)	88 (74%)	31 (26%)	0 1
40	85	93/94 (99%)	80 (86%)	13 (14%)	3 13
40	C8	93/94 (99%)	76 (82%)	17 (18%)	2 7
41	95	82/82 (100%)	63 (77%)	19 (23%)	1 3
41	D8	82/82 (100%)	57 (70%)	25 (30%)	0 0
42	A5	92/92 (100%)	72 (78%)	20 (22%)	1 4
42	E8	92/92 (100%)	66 (72%)	26 (28%)	0 1
43	B5	74/78 (95%)	55 (74%)	19 (26%)	0 2
43	F8	76/78 (97%)	60 (79%)	16 (21%)	1 4
44	C5	85/91 (93%)	57 (67%)	28 (33%)	0 0
44	G8	84/91 (92%)	63 (75%)	21 (25%)	0 2
45	D5	158/179 (88%)	120 (76%)	38 (24%)	1 2
45	H8	154/179 (86%)	116 (75%)	38 (25%)	1 2
46	E5	62/67 (92%)	50 (81%)	12 (19%)	1 5
46	I8	62/67 (92%)	47 (76%)	15 (24%)	1 2
47	F5	82/83 (99%)	60 (73%)	22 (27%)	0 1
47	J8	78/83 (94%)	61 (78%)	17 (22%)	1 4
48	G5	62/67 (92%)	44 (71%)	18 (29%)	0 1
48	K8	62/67 (92%)	40 (64%)	22 (36%)	0 0
49	H5	51/52 (98%)	36 (71%)	15 (29%)	0 1
49	L8	51/52 (98%)	42 (82%)	9 (18%)	2 7
50	I5	57/63 (90%)	43 (75%)	14 (25%)	1 2
50	M8	59/63 (94%)	50 (85%)	9 (15%)	3 10
51	J5	51/52 (98%)	43 (84%)	8 (16%)	2 10
51	N8	43/52 (83%)	34 (79%)	9 (21%)	1 4
52	L5	38/42 (90%)	30 (79%)	8 (21%)	1 4
52	P8	38/42 (90%)	27 (71%)	11 (29%)	0 1
53	M5	50/55 (91%)	36 (72%)	14 (28%)	0 1
53	Q8	42/55 (76%)	23 (55%)	19 (45%)	0 0
All	All	9458/9894 (96%)	7300 (77%)	2158 (23%)	1 3

All (2158) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	4	GLU
2	1E	5	ILE
2	1E	8	LYS
2	1E	9	GLU
2	1E	17	PHE
2	1E	21	ARG
2	1E	32	ILE
2	1E	39	ILE
2	1E	41	ILE
2	1E	42	ILE
2	1E	48	MET
2	1E	51	LEU
2	1E	55	PHE
2	1E	69	LEU
2	1E	71	VAL
2	1E	74	LYS
2	1E	75	LYS
2	1E	81	VAL
2	1E	82	ARG
2	1E	93	VAL
2	1E	96	ARG
2	1E	102	LEU
2	1E	104	ASN
2	1E	108	ILE
2	1E	111	ARG
2	1E	127	ILE
2	1E	145	LEU
2	1E	154	LEU
2	1E	155	LEU
2	1E	162	ILE
2	1E	164	VAL
2	1E	168	THR
2	1E	172	ILE
2	1E	178	ARG
2	1E	190	THR
2	1E	191	ASP
2	1E	196	LEU
2	1E	200	ILE
2	1E	209	ARG
2	1E	215	LEU
2	1E	217	ARG
2	1E	223	ILE

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Mol	Chain	Res	Type
2	1E	231	GLU
2	1E	235	SER
3	2E	3	ASN
3	2E	5	ILE
3	2E	8	ILE
3	2E	15	THR
3	2E	17	ASP
3	2E	21	ARG
3	2E	30	ARG
3	2E	31	HIS
3	2E	32	LEU
3	2E	34	LEU
3	2E	35	GLU
3	2E	36	ASP
3	2E	45	LYS
3	2E	49	SER
3	2E	52	LEU
3	2E	56	ASP
3	2E	62	ASP
3	2E	76	VAL
3	2E	77	ILE
3	2E	93	LYS
3	2E	98	ASN
3	2E	104	GLN
3	2E	127	ARG
3	2E	128	PHE
3	2E	131	ARG
3	2E	154	SER
3	2E	161	GLU
3	2E	164	ARG
3	2E	165	THR
3	2E	166	GLU
3	2E	178	LEU
3	2E	188	LEU
3	2E	192	THR
3	2E	196	LEU
3	2E	198	VAL
3	2E	202	ILE
3	2E	206	GLU
4	3E	3	ARG
4	3E	5	ILE
4	3E	10	ARG

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Mol	Chain	Res	Type
4	3E	15	GLU
4	3E	19	LEU
4	3E	22	LYS
4	3E	24	GLU
4	3E	28	SER
4	3E	30	LYS
4	3E	46	LYS
4	3E	52	SER
4	3E	58	LEU
4	3E	85	LYS
4	3E	88	VAL
4	3E	96	LEU
4	3E	99	SER
4	3E	104	VAL
4	3E	108	LEU
4	3E	122	ARG
4	3E	127	THR
4	3E	135	LEU
4	3E	141	ARG
4	3E	146	ILE
4	3E	151	LYS
4	3E	154	ASN
4	3E	155	LEU
4	3E	170	VAL
4	3E	175	SER
4	3E	179	GLU
4	3E	192	GLU
4	3E	193	ASP
4	3E	194	LEU
4	3E	200	GLU
4	3E	201	GLN
5	4E	5	ASP
5	4E	10	MET
5	4E	11	ILE
5	4E	16	THR
5	4E	18	ARG
5	4E	31	LEU
5	4E	33	VAL
5	4E	41	VAL
5	4E	50	GLU
5	4E	57	LYS
5	4E	65	ASN

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Mol	Chain	Res	Type
5	4E	68	GLU
5	4E	71	LEU
5	4E	72	GLN
5	4E	73	ASN
5	4E	79	GLU
5	4E	80	ILE
5	4E	87	SER
5	4E	92	LYS
5	4E	112	LEU
5	4E	121	LYS
5	4E	126	ARG
5	4E	153	LYS
6	5E	21	LEU
6	5E	23	LYS
6	5E	25	ILE
6	5E	30	LEU
6	5E	32	ASN
6	5E	55	ASP
6	5E	65	VAL
6	5E	70	ASP
6	5E	75	LEU
6	5E	79	LEU
6	5E	82	ARG
6	5E	89	MET
6	5E	91	VAL
6	5E	98	LEU
7	6E	4	ARG
7	6E	5	ARG
7	6E	10	ARG
7	6E	21	VAL
7	6E	24	THR
7	6E	27	ILE
7	6E	30	ILE
7	6E	36	LYS
7	6E	37	ASN
7	6E	38	LEU
7	6E	48	LYS
7	6E	54	THR
7	6E	66	VAL
7	6E	75	VAL
7	6E	80	VAL
7	6E	89	MET

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Mol	Chain	Res	Type
7	6E	90	GLU
7	6E	91	VAL
7	6E	97	GLN
7	6E	98	SER
7	6E	104	LEU
7	6E	111	ARG
7	6E	113	GLU
7	6E	135	VAL
7	6E	136	LYS
7	6E	149	ARG
7	6E	155	ARG
8	7E	6	ILE
8	7E	19	VAL
8	7E	24	THR
8	7E	26	VAL
8	7E	29	SER
8	7E	35	ILE
8	7E	39	LEU
8	7E	45	ILE
8	7E	51	VAL
8	7E	56	LYS
8	7E	63	LEU
8	7E	68	ARG
8	7E	77	GLU
8	7E	80	ILE
8	7E	85	ARG
8	7E	91	ARG
8	7E	95	VAL
8	7E	102	ARG
8	7E	105	ARG
8	7E	109	ILE
8	7E	112	LEU
8	7E	121	ASP
8	7E	122	ARG
8	7E	127	LEU
8	7E	129	VAL
8	7E	137	VAL
9	8E	2	GLU
9	8E	9	ARG
9	8E	10	ARG
9	8E	14	VAL
9	8E	20	ARG

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Mol	Chain	Res	Type
9	8E	27	THR
9	8E	31	GLN
9	8E	38	GLN
9	8E	41	VAL
9	8E	42	ARG
9	8E	44	VAL
9	8E	47	LEU
9	8E	53	VAL
9	8E	56	LEU
9	8E	70	LYS
9	8E	79	LEU
9	8E	81	ILE
9	8E	86	VAL
9	8E	95	LYS
9	8E	112	LYS
9	8E	118	LYS
10	1I	5	ARG
10	1I	14	LYS
10	1I	25	GLU
10	1I	29	ARG
10	1I	48	THR
10	1I	49	VAL
10	1I	57	LYS
10	1I	59	SER
10	1I	62	HIS
10	1I	63	PHE
10	1I	70	ARG
10	1I	72	VAL
10	1I	76	ASN
10	1I	78	ASN
10	1I	92	THR
10	1I	96	ILE
10	1I	97	GLU
10	1I	98	ILE
10	1I	101	VAL
11	2I	13	GLN
11	2I	14	VAL
11	2I	29	ILE
11	2I	32	ILE
11	2I	41	THR
11	2I	48	ILE
11	2I	63	LEU

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Mol	Chain	Res	Type
11	2I	71	LYS
11	2I	80	VAL
11	2I	84	VAL
11	2I	87	THR
11	2I	96	ARG
11	2I	103	LEU
11	2I	109	VAL
11	2I	114	VAL
12	3I	10	LEU
12	3I	11	VAL
12	3I	20	LYS
12	3I	33	ARG
12	3I	36	VAL
12	3I	60	LEU
12	3I	62	SER
12	3I	67	THR
12	3I	78	GLN
12	3I	83	VAL
12	3I	91	LYS
12	3I	96	VAL
13	4I	8	GLU
13	4I	9	ILE
13	4I	11	ARG
13	4I	15	VAL
13	4I	17	VAL
13	4I	19	LEU
13	4I	32	GLU
13	4I	45	VAL
13	4I	48	LEU
13	4I	56	LEU
13	4I	64	TRP
13	4I	83	ASP
13	4I	90	LEU
13	4I	98	VAL
13	4I	105	THR
13	4I	106	ASN
13	4I	108	ARG
13	4I	109	THR
13	4I	117	VAL
14	5I	3	ARG
14	5I	4	LYS
14	5I	8	GLU

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Mol	Chain	Res	Type
14	5I	13	THR
14	5I	18	VAL
14	5I	22	THR
14	5I	23	ARG
14	5I	25	VAL
14	5I	29	ARG
14	5I	33	VAL
14	5I	41	ARG
14	5I	44	LEU
14	5I	49	HIS
14	5I	57	ARG
15	6I	10	LYS
15	6I	22	THR
15	6I	26	GLU
15	6I	31	LEU
15	6I	39	LEU
15	6I	40	SER
15	6I	41	GLU
15	6I	42	HIS
15	6I	47	LYS
15	6I	59	MET
15	6I	66	LEU
15	6I	68	ARG
15	6I	79	ARG
15	6I	82	ILE
15	6I	87	ILE
16	7I	1	MET
16	7I	2	VAL
16	7I	4	ILE
16	7I	11	SER
16	7I	20	VAL
16	7I	21	VAL
16	7I	27	LYS
16	7I	28	ARG
16	7I	33	ILE
16	7I	36	ILE
16	7I	45	THR
16	7I	47	ASP
16	7I	50	LYS
16	7I	62	VAL
16	7I	67	THR
16	7I	69	THR

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Mol	Chain	Res	Type
16	7I	72	ARG
16	7I	81	ARG
17	8I	10	VAL
17	8I	12	SER
17	8I	21	VAL
17	8I	24	GLU
17	8I	35	VAL
17	8I	38	ARG
17	8I	45	HIS
17	8I	48	GLU
17	8I	50	LYS
17	8I	53	LEU
17	8I	57	VAL
17	8I	59	ILE
17	8I	60	ILE
17	8I	62	SER
17	8I	68	ARG
17	8I	74	LEU
17	8I	84	LEU
17	8I	85	VAL
17	8I	97	SER
17	8I	100	LYS
17	8I	101	ARG
18	9I	19	LYS
18	9I	21	LYS
18	9I	25	THR
18	9I	32	ARG
18	9I	50	ILE
18	9I	54	ARG
18	9I	56	THR
18	9I	65	ILE
18	9I	69	THR
18	9I	82	THR
18	9I	86	VAL
19	AI	7	LYS
19	AI	9	VAL
19	AI	11	VAL
19	AI	17	GLU
19	AI	22	LEU
19	AI	23	ASN
19	AI	29	ARG
19	AI	30	LEU

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Mol	Chain	Res	Type
19	AI	31	ILE
19	AI	37	ARG
19	AI	43	GLU
19	AI	60	VAL
19	AI	61	TYR
19	AI	65	ASN
19	AI	67	VAL
19	AI	71	LEU
19	AI	77	THR
19	AI	78	ARG
20	BI	9	ASN
20	BI	10	LEU
20	BI	20	LEU
20	BI	24	LEU
20	BI	25	ARG
20	BI	29	LYS
20	BI	37	SER
20	BI	46	GLU
20	BI	62	LEU
20	BI	71	THR
20	BI	72	LEU
20	BI	75	ASN
20	BI	99	LEU
21	1F	6	ARG
21	1F	10	ARG
21	1F	15	ARG
27	11	3	VAL
27	11	4	LYS
27	11	13	ARG
27	11	14	ARG
27	11	17	THR
27	11	24	ILE
27	11	26	LYS
27	11	28	GLU
27	11	30	GLU
27	11	33	LEU
27	11	34	VAL
27	11	37	LEU
27	11	38	LYS
27	11	52	ARG
27	11	59	LYS
27	11	61	LEU

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Mol	Chain	Res	Type
27	11	64	ILE
27	11	65	ILE
27	11	68	LYS
27	11	88	ARG
27	11	89	SER
27	11	92	ILE
27	11	94	LEU
27	11	95	LEU
27	11	101	GLU
27	11	103	ARG
27	11	105	ILE
27	11	106	ILE
27	11	111	LEU
27	11	136	ILE
27	11	141	VAL
27	11	147	LEU
27	11	155	LEU
27	11	162	SER
27	11	164	GLN
27	11	173	VAL
27	11	182	LEU
27	11	192	THR
27	11	193	VAL
27	11	212	SER
27	11	215	LEU
27	11	217	ARG
27	11	221	VAL
27	11	229	VAL
27	11	237	GLU
27	11	242	ARG
27	11	257	LEU
27	11	259	THR
27	11	260	ARG
27	11	261	LYS
27	11	262	ARG
27	11	271	ILE
27	11	273	ARG
28	21	2	LYS
28	21	5	LEU
28	21	13	ARG
28	21	14	ILE
28	21	23	VAL

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Mol	Chain	Res	Type
28	21	25	VAL
28	21	26	ILE
28	21	34	VAL
28	21	38	THR
28	21	41	LYS
28	21	49	LEU
28	21	54	GLN
28	21	55	ASN
28	21	59	VAL
28	21	63	LEU
28	21	64	LYS
28	21	67	PHE
28	21	72	VAL
28	21	77	ILE
28	21	78	LEU
28	21	87	GLU
28	21	89	ASP
28	21	92	THR
28	21	101	ARG
28	21	107	THR
28	21	111	ARG
28	21	116	VAL
28	21	119	ARG
28	21	144	ARG
28	21	146	THR
28	21	155	LYS
28	21	165	VAL
28	21	167	VAL
28	21	175	VAL
28	21	179	GLU
28	21	181	LEU
28	21	195	LEU
28	21	196	VAL
28	21	201	THR
29	31	8	GLN
29	31	9	ILE
29	31	13	SER
29	31	24	LEU
29	31	28	ILE
29	31	33	LEU
29	31	45	ARG
29	31	46	ARG

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Mol	Chain	Res	Type
29	31	57	VAL
29	31	64	ILE
29	31	67	GLN
29	31	70	THR
29	31	74	ARG
29	31	78	ILE
29	31	88	VAL
29	31	106	ARG
29	31	117	ARG
29	31	127	GLU
29	31	135	LYS
29	31	136	THR
29	31	140	LEU
29	31	149	ASP
29	31	158	THR
29	31	161	GLU
29	31	168	ARG
29	31	170	LEU
29	31	174	VAL
29	31	183	VAL
29	31	188	ARG
29	31	192	LEU
29	31	204	ASN
30	41	3	LEU
30	41	19	LEU
30	41	20	ILE
30	41	22	ARG
30	41	28	VAL
30	41	33	ARG
30	41	34	LEU
30	41	36	LYS
30	41	45	GLU
30	41	58	GLN
30	41	63	ILE
30	41	66	GLN
30	41	67	LYS
30	41	70	VAL
30	41	76	SER
30	41	80	PHE
30	41	82	LEU
30	41	83	ARG
30	41	84	LYS

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Mol	Chain	Res	Type
30	41	90	LEU
30	41	101	ILE
30	41	108	ASN
30	41	116	ASP
30	41	118	ARG
30	41	120	LEU
30	41	128	ARG
30	41	130	ASN
30	41	139	LEU
30	41	152	LEU
30	41	155	MET
30	41	161	THR
30	41	162	THR
30	41	165	THR
30	41	172	LEU
31	51	4	ILE
31	51	7	LEU
31	51	9	ILE
31	51	13	LYS
31	51	15	VAL
31	51	24	VAL
31	51	40	GLU
31	51	43	VAL
31	51	44	VAL
31	51	45	VAL
31	51	50	VAL
31	51	60	ARG
31	51	64	LEU
31	51	71	LEU
31	51	77	LYS
31	51	81	GLU
31	51	86	GLU
31	51	88	LEU
31	51	92	ILE
31	51	97	ARG
31	51	104	GLU
31	51	106	THR
31	51	116	GLU
31	51	121	ILE
31	51	122	THR
31	51	125	VAL
31	51	129	THR

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Mol	Chain	Res	Type
31	51	131	VAL
31	51	139	GLN
31	51	140	LYS
31	51	144	VAL
31	51	151	ILE
31	51	153	LYS
31	51	169	VAL
31	51	175	LYS
32	61	1	MET
32	61	4	ILE
32	61	7	GLU
32	61	9	LEU
32	61	12	LEU
32	61	14	ASP
32	61	20	ASP
32	61	21	VAL
32	61	37	VAL
32	61	38	LEU
32	61	40	THR
32	61	41	GLU
32	61	44	LEU
32	61	58	LEU
32	61	60	GLU
32	61	70	GLU
32	61	74	ASN
32	61	77	LEU
32	61	78	THR
32	61	85	GLU
32	61	87	LYS
32	61	92	VAL
32	61	97	ILE
32	61	107	VAL
32	61	108	THR
32	61	110	ASP
32	61	112	LYS
32	61	116	LEU
32	61	117	GLU
32	61	122	GLU
32	61	131	LYS
32	61	135	GLU
32	61	136	VAL
32	61	140	LEU

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Mol	Chain	Res	Type
32	61	141	LYS
32	61	142	VAL
33	58	1	MET
33	58	5	VAL
33	58	7	LYS
33	58	28	THR
33	58	29	LYS
33	58	30	ILE
33	58	34	LEU
33	58	37	LYS
33	58	48	MET
33	58	58	ASP
33	58	60	ILE
33	58	63	THR
33	58	65	LYS
33	58	67	LEU
33	58	90	MET
33	58	96	GLU
33	58	97	ARG
33	58	99	LEU
33	58	115	ARG
33	58	118	LYS
33	58	120	LEU
33	58	127	ASP
34	68	3	GLN
34	68	14	THR
34	68	19	ILE
34	68	20	MET
34	68	23	ARG
34	68	24	VAL
34	68	25	LEU
34	68	31	LYS
34	68	38	VAL
34	68	47	ILE
34	68	52	VAL
34	68	53	LYS
34	68	58	VAL
34	68	68	GLU
34	68	75	SER
34	68	82	ASN
34	68	94	ARG
34	68	98	VAL

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Mol	Chain	Res	Type
34	68	112	MET
34	68	113	LYS
35	78	1	MET
35	78	5	ASP
35	78	10	PRO
35	78	19	VAL
35	78	21	ARG
35	78	30	THR
35	78	36	LYS
35	78	39	LYS
35	78	40	SER
35	78	41	ARG
35	78	45	LEU
35	78	46	LYS
35	78	49	ARG
35	78	55	ARG
35	78	56	SER
35	78	58	THR
35	78	59	LEU
35	78	62	LEU
35	78	65	ARG
35	78	74	GLU
35	78	75	ILE
35	78	76	LYS
35	78	85	LEU
35	78	86	LYS
35	78	96	THR
35	78	99	LEU
35	78	100	LEU
35	78	101	VAL
35	78	105	LEU
35	78	106	LEU
35	78	112	LEU
35	78	115	LEU
35	78	117	GLU
35	78	126	VAL
35	78	132	LYS
35	78	133	SER
35	78	135	LEU
35	78	138	LEU
35	78	144	GLU
35	78	147	LEU

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Mol	Chain	Res	Type
35	78	148	LEU
35	78	149	GLU
36	88	1	MET
36	88	3	MET
36	88	5	ARG
36	88	10	ARG
36	88	16	ARG
36	88	18	LYS
36	88	22	LYS
36	88	25	ASP
36	88	27	VAL
36	88	35	VAL
36	88	45	GLN
36	88	46	GLN
36	88	55	VAL
36	88	60	ARG
36	88	78	PRO
36	88	79	LEU
36	88	81	VAL
36	88	82	ARG
36	88	90	VAL
36	88	91	GLU
36	88	99	PRO
36	88	103	MET
36	88	109	VAL
36	88	110	THR
36	88	127	ILE
36	88	139	GLU
36	88	141	GLN
37	98	2	ARG
37	98	9	LYS
37	98	18	LEU
37	98	28	LEU
37	98	29	LEU
37	98	34	ILE
37	98	35	THR
37	98	36	THR
37	98	37	THR
37	98	40	LYS
37	98	44	LEU
37	98	45	ARG
37	98	65	LEU

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Mol	Chain	Res	Type
37	98	67	LEU
37	98	72	ASP
37	98	75	LEU
37	98	79	LEU
37	98	91	GLN
37	98	94	TYR
37	98	95	THR
37	98	104	ARG
37	98	105	ARG
37	98	114	VAL
38	A8	4	LEU
38	A8	8	GLU
38	A8	10	ARG
38	A8	11	LYS
38	A8	13	ARG
38	A8	14	VAL
38	A8	15	ARG
38	A8	17	ARG
38	A8	18	ILE
38	A8	19	LYS
38	A8	31	SER
38	A8	32	LEU
38	A8	35	ILE
38	A8	36	TYR
38	A8	46	VAL
38	A8	49	VAL
38	A8	50	SER
38	A8	54	LEU
38	A8	56	LEU
38	A8	63	THR
38	A8	69	VAL
38	A8	73	LEU
38	A8	78	LEU
38	A8	80	LEU
38	A8	83	LYS
38	A8	98	VAL
38	A8	101	LEU
38	A8	106	ARG
38	A8	107	GLU
38	A8	112	PHE
39	B8	6	LEU
39	B8	7	ILE

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Mol	Chain	Res	Type
39	B8	11	GLU
39	B8	15	VAL
39	B8	17	THR
39	B8	19	LEU
39	B8	21	GLU
39	B8	27	THR
39	B8	30	VAL
39	B8	39	ARG
39	B8	41	ARG
39	B8	42	ILE
39	B8	50	ILE
39	B8	58	ASN
39	B8	59	THR
39	B8	62	THR
39	B8	63	VAL
39	B8	74	ARG
39	B8	78	LEU
39	B8	86	ILE
39	B8	87	ASP
39	B8	88	ILE
39	B8	99	LEU
39	B8	105	LEU
39	B8	107	ASP
39	B8	111	ARG
39	B8	113	LYS
39	B8	114	LEU
39	B8	118	ARG
39	B8	129	ARG
39	B8	136	GLN
40	C8	3	ARG
40	C8	5	LYS
40	C8	9	VAL
40	C8	16	LYS
40	C8	17	ILE
40	C8	20	LEU
40	C8	27	LEU
40	C8	60	LEU
40	C8	74	LEU
40	C8	85	LYS
40	C8	88	ILE
40	C8	89	GLU
40	C8	92	ARG

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Mol	Chain	Res	Type
40	C8	95	LEU
40	C8	104	GLN
40	C8	108	GLU
40	C8	111	GLU
41	D8	1	MET
41	D8	5	VAL
41	D8	7	THR
41	D8	11	GLN
41	D8	18	LEU
41	D8	20	LEU
41	D8	22	VAL
41	D8	24	LYS
41	D8	25	LEU
41	D8	33	VAL
41	D8	34	GLU
41	D8	35	LEU
41	D8	37	VAL
41	D8	38	LEU
41	D8	40	LEU
41	D8	46	VAL
41	D8	47	VAL
41	D8	49	THR
41	D8	53	GLU
41	D8	61	VAL
41	D8	62	LEU
41	D8	79	VAL
41	D8	85	LYS
41	D8	88	ARG
41	D8	95	LEU
42	E8	1	MET
42	E8	11	ARG
42	E8	15	ARG
42	E8	20	VAL
42	E8	27	LYS
42	E8	28	SER
42	E8	41	LYS
42	E8	51	LEU
42	E8	52	GLU
42	E8	59	VAL
42	E8	61	ASN
42	E8	65	LEU
42	E8	66	GLU

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Mol	Chain	Res	Type
42	E8	67	ASP
42	E8	69	LEU
42	E8	70	TYR
42	E8	76	VAL
42	E8	78	GLU
42	E8	82	LEU
42	E8	85	VAL
42	E8	92	ARG
42	E8	95	ILE
42	E8	96	ILE
42	E8	100	THR
42	E8	103	ILE
42	E8	107	LEU
43	F8	12	VAL
43	F8	13	LEU
43	F8	15	GLU
43	F8	23	GLU
43	F8	27	THR
43	F8	40	LYS
43	F8	41	ASN
43	F8	45	THR
43	F8	49	VAL
43	F8	54	VAL
43	F8	57	LEU
43	F8	60	ARG
43	F8	72	LYS
43	F8	76	ARG
43	F8	80	ILE
43	F8	87	GLN
44	G8	6	HIS
44	G8	14	LEU
44	G8	19	LYS
44	G8	24	VAL
44	G8	27	VAL
44	G8	30	VAL
44	G8	31	LEU
44	G8	33	LYS
44	G8	38	ILE
44	G8	42	VAL
44	G8	44	ILE
44	G8	55	TYR
44	G8	57	GLN

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Mol	Chain	Res	Type
44	G8	64	GLU
44	G8	67	LEU
44	G8	71	LYS
44	G8	85	VAL
44	G8	86	ARG
44	G8	90	LEU
44	G8	94	LYS
44	G8	95	LYS
45	H8	5	LEU
45	H8	6	LYS
45	H8	11	GLU
45	H8	16	SER
45	H8	18	LEU
45	H8	19	ARG
45	H8	20	ARG
45	H8	28	MET
45	H8	35	ARG
45	H8	37	VAL
45	H8	40	ASP
45	H8	42	VAL
45	H8	43	GLU
45	H8	53	ILE
45	H8	61	LEU
45	H8	71	VAL
45	H8	72	ARG
45	H8	76	LEU
45	H8	77	ASP
45	H8	80	ARG
45	H8	81	ARG
45	H8	86	VAL
45	H8	90	VAL
45	H8	91	LEU
45	H8	94	GLU
45	H8	96	VAL
45	H8	104	PHE
45	H8	105	VAL
45	H8	111	VAL
45	H8	116	VAL
45	H8	117	LEU
45	H8	119	GLU
45	H8	135	GLU
45	H8	140	ASP

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Mol	Chain	Res	Type
45	H8	141	VAL
45	H8	154	ASP
45	H8	163	LEU
45	H8	168	GLU
46	I8	11	ARG
46	I8	14	ARG
46	I8	19	LYS
46	I8	36	ILE
46	I8	38	VAL
46	I8	40	GLN
46	I8	41	ARG
46	I8	53	MET
46	I8	58	THR
46	I8	67	VAL
46	I8	68	GLU
46	I8	70	GLN
46	I8	74	ARG
46	I8	77	ARG
46	I8	79	VAL
47	J8	4	VAL
47	J8	14	VAL
47	J8	19	GLN
47	J8	21	ARG
47	J8	25	LYS
47	J8	30	VAL
47	J8	32	LYS
47	J8	41	ARG
47	J8	65	SER
47	J8	69	LYS
47	J8	72	GLU
47	J8	74	VAL
47	J8	78	LYS
47	J8	81	LYS
47	J8	82	LEU
47	J8	90	ILE
47	J8	91	LYS
48	K8	5	GLU
48	K8	14	ARG
48	K8	15	LYS
48	K8	16	LEU
48	K8	19	VAL
48	K8	20	GLU

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Mol	Chain	Res	Type
48	K8	24	LEU
48	K8	25	VAL
48	K8	31	GLU
48	K8	32	LEU
48	K8	41	ILE
48	K8	46	GLN
48	K8	47	ASN
48	K8	50	ILE
48	K8	53	LEU
48	K8	54	LYS
48	K8	55	ARG
48	K8	63	VAL
48	K8	64	LEU
48	K8	65	ASN
48	K8	66	GLU
48	K8	67	LYS
49	L8	6	VAL
49	L8	8	LEU
49	L8	11	SER
49	L8	17	LYS
49	L8	30	ARG
49	L8	31	LEU
49	L8	32	GLN
49	L8	37	LEU
49	L8	40	THR
50	M8	6	HIS
50	M8	15	ILE
50	M8	27	THR
50	M8	38	LYS
50	M8	42	PHE
50	M8	52	THR
50	M8	55	ARG
50	M8	61	ARG
50	M8	63	TYR
51	N8	6	VAL
51	N8	9	LYS
51	N8	16	ARG
51	N8	25	LEU
51	N8	26	THR
51	N8	29	THR
51	N8	35	GLU
51	N8	40	LYS

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Mol	Chain	Res	Type
51	N8	44	THR
52	P8	1	MET
52	P8	4	THR
52	P8	8	ASN
52	P8	14	LYS
52	P8	22	MET
52	P8	23	ARG
52	P8	24	THR
52	P8	30	VAL
52	P8	37	LYS
52	P8	41	ARG
52	P8	43	THR
53	Q8	6	THR
53	Q8	7	HIS
53	Q8	8	LYS
53	Q8	19	SER
53	Q8	22	VAL
53	Q8	23	VAL
53	Q8	25	MET
53	Q8	30	ARG
53	Q8	31	HIS
53	Q8	32	LEU
53	Q8	33	ASN
53	Q8	34	TRP
53	Q8	40	GLU
53	Q8	43	GLN
53	Q8	49	VAL
53	Q8	58	ILE
53	Q8	59	LYS
53	Q8	60	LEU
53	Q8	61	LEU
2	12	4	GLU
2	12	5	ILE
2	12	9	GLU
2	12	10	LEU
2	12	15	VAL
2	12	17	PHE
2	12	23	ARG
2	12	25	ASN
2	12	31	TYR
2	12	42	ILE
2	12	51	LEU

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Mol	Chain	Res	Type
2	12	55	PHE
2	12	58	ILE
2	12	60	ASP
2	12	63	MET
2	12	69	LEU
2	12	75	LYS
2	12	80	ILE
2	12	108	ILE
2	12	115	LEU
2	12	117	GLU
2	12	121	LEU
2	12	124	SER
2	12	136	VAL
2	12	137	ARG
2	12	138	LEU
2	12	139	LYS
2	12	158	LEU
2	12	160	ASP
2	12	162	ILE
2	12	164	VAL
2	12	165	VAL
2	12	168	THR
2	12	170	GLU
2	12	172	ILE
2	12	176	GLU
2	12	178	ARG
2	12	179	LYS
2	12	180	LEU
2	12	185	ILE
2	12	192	SER
2	12	196	LEU
2	12	212	GLN
2	12	213	LEU
2	12	215	LEU
2	12	217	ARG
2	12	219	VAL
2	12	223	ILE
2	12	233	SER
3	22	5	ILE
3	22	14	ILE
3	22	21	ARG
3	22	26	LYS

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Mol	Chain	Res	Type
3	22	27	LYS
3	22	36	ASP
3	22	42	LEU
3	22	43	LEU
3	22	52	LEU
3	22	64	VAL
3	22	76	VAL
3	22	79	ARG
3	22	98	ASN
3	22	101	LEU
3	22	105	GLU
3	22	125	GLU
3	22	127	ARG
3	22	154	SER
3	22	176	HIS
3	22	177	THR
3	22	188	LEU
3	22	190	ARG
3	22	193	TYR
3	22	195	VAL
3	22	196	LEU
3	22	198	VAL
3	22	202	ILE
3	22	207	VAL
4	32	3	ARG
4	32	5	ILE
4	32	8	VAL
4	32	12	CYS
4	32	17	VAL
4	32	28	SER
4	32	30	LYS
4	32	36	ARG
4	32	49	ARG
4	32	56	VAL
4	32	58	LEU
4	32	73	ARG
4	32	74	GLN
4	32	81	GLU
4	32	85	LYS
4	32	96	LEU
4	32	99	SER
4	32	112	VAL

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Mol	Chain	Res	Type
4	32	116	GLN
4	32	122	ARG
4	32	127	THR
4	32	134	ASP
4	32	135	LEU
4	32	145	GLU
4	32	157	LEU
4	32	159	ARG
4	32	170	VAL
4	32	184	LYS
4	32	191	ARG
4	32	192	GLU
4	32	200	GLU
5	42	13	ILE
5	42	14	ARG
5	42	15	ARG
5	42	16	THR
5	42	31	LEU
5	42	34	VAL
5	42	41	VAL
5	42	43	LEU
5	42	47	LYS
5	42	51	VAL
5	42	56	GLN
5	42	60	TYR
5	42	64	ARG
5	42	68	GLU
5	42	72	GLN
5	42	78	HIS
5	42	79	GLU
5	42	82	VAL
5	42	83	GLU
5	42	87	SER
5	42	91	LEU
5	42	101	ILE
5	42	107	ARG
5	42	112	LEU
5	42	115	VAL
5	42	116	THR
5	42	126	ARG
5	42	140	ARG
6	52	2	ARG

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Mol	Chain	Res	Type
6	52	3	ARG
6	52	10	LEU
6	52	14	LEU
6	52	16	GLN
6	52	17	SER
6	52	25	ILE
6	52	37	VAL
6	52	40	VAL
6	52	43	LEU
6	52	46	ARG
6	52	47	ARG
6	52	72	VAL
6	52	74	ASP
6	52	77	ARG
6	52	78	GLU
6	52	83	ASP
6	52	86	ARG
6	52	93	SER
7	62	8	GLU
7	62	13	GLN
7	62	27	ILE
7	62	45	ASP
7	62	49	ILE
7	62	50	ILE
7	62	51	GLN
7	62	57	GLU
7	62	61	VAL
7	62	66	VAL
7	62	72	ARG
7	62	73	MET
7	62	84	ASN
7	62	87	VAL
7	62	89	MET
7	62	90	GLU
7	62	91	VAL
7	62	94	ARG
7	62	104	LEU
7	62	118	VAL
7	62	124	LEU
7	62	129	GLU
7	62	131	LYS
7	62	135	VAL

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Mol	Chain	Res	Type
7	62	137	LYS
7	62	140	ASP
7	62	143	ARG
8	72	8	ASP
8	72	12	ARG
8	72	23	SER
8	72	25	ASP
8	72	26	VAL
8	72	51	VAL
8	72	79	VAL
8	72	82	HIS
8	72	95	VAL
8	72	97	VAL
8	72	99	GLU
8	72	102	ARG
8	72	104	ARG
8	72	112	LEU
8	72	114	THR
8	72	120	THR
8	72	127	LEU
8	72	137	VAL
9	82	7	THR
9	82	27	THR
9	82	38	GLN
9	82	56	LEU
9	82	79	LEU
9	82	85	LEU
9	82	87	GLN
9	82	91	ASP
9	82	95	LYS
9	82	99	LEU
9	82	104	ARG
9	82	109	VAL
9	82	111	ARG
9	82	112	LYS
9	82	113	LYS
9	82	118	LYS
9	82	120	ARG
9	82	126	SER
10	1A	13	HIS
10	1A	21	GLN
10	1A	22	LYS

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Mol	Chain	Res	Type
10	1A	24	VAL
10	1A	30	SER
10	1A	35	SER
10	1A	48	THR
10	1A	55	LYS
10	1A	57	LYS
10	1A	62	HIS
10	1A	68	HIS
10	1A	70	ARG
10	1A	71	LEU
10	1A	72	VAL
10	1A	79	ARG
10	1A	80	LYS
10	1A	86	MET
10	1A	89	ASP
10	1A	96	ILE
10	1A	97	GLU
10	1A	99	LYS
10	1A	101	VAL
11	2A	29	ILE
11	2A	31	THR
11	2A	32	ILE
11	2A	34	ASP
11	2A	40	ILE
11	2A	41	THR
11	2A	48	ILE
11	2A	53	SER
11	2A	70	LYS
11	2A	83	ILE
11	2A	95	ILE
11	2A	103	LEU
11	2A	105	VAL
11	2A	106	LYS
11	2A	108	ILE
11	2A	114	VAL
11	2A	120	ARG
11	2A	124	LYS
12	3A	6	THR
12	3A	13	LYS
12	3A	19	ARG
12	3A	22	SER
12	3A	24	VAL

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Mol	Chain	Res	Type
12	3A	27	LEU
12	3A	33	ARG
12	3A	37	CYS
12	3A	42	THR
12	3A	46	LYS
12	3A	50	SER
12	3A	54	LYS
12	3A	60	LEU
12	3A	81	SER
12	3A	84	LEU
12	3A	96	VAL
12	3A	100	ILE
12	3A	111	LYS
12	3A	118	SER
13	4A	4	ILE
13	4A	8	GLU
13	4A	9	ILE
13	4A	17	VAL
13	4A	19	LEU
13	4A	35	GLU
13	4A	39	ILE
13	4A	60	VAL
13	4A	64	TRP
13	4A	66	LEU
13	4A	70	LEU
13	4A	78	ILE
13	4A	98	VAL
13	4A	101	GLN
13	4A	103	THR
13	4A	106	ASN
13	4A	108	ARG
13	4A	114	ARG
13	4A	117	VAL
14	5A	6	LEU
14	5A	12	ARG
14	5A	15	LYS
14	5A	18	VAL
14	5A	26	ARG
14	5A	35	ARG
14	5A	42	ILE
14	5A	44	LEU
15	6A	3	ILE

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Mol	Chain	Res	Type
15	6A	4	THR
15	6A	29	VAL
15	6A	38	ARG
15	6A	39	LEU
15	6A	40	SER
15	6A	41	GLU
15	6A	48	LYS
15	6A	58	MET
15	6A	66	LEU
15	6A	76	GLU
15	6A	82	ILE
15	6A	87	ILE
15	6A	88	ARG
16	7A	2	VAL
16	7A	21	VAL
16	7A	27	LYS
16	7A	33	ILE
16	7A	45	THR
16	7A	53	VAL
16	7A	54	GLU
16	7A	65	GLN
16	7A	67	THR
16	7A	69	THR
16	7A	76	GLN
16	7A	82	GLN
17	8A	23	VAL
17	8A	25	ARG
17	8A	36	ILE
17	8A	50	LYS
17	8A	52	LYS
17	8A	53	LEU
17	8A	57	VAL
17	8A	60	ILE
17	8A	63	ARG
17	8A	74	LEU
17	8A	75	ARG
17	8A	100	LYS
18	9A	26	LEU
18	9A	28	GLU
18	9A	29	PHE
18	9A	31	LEU
18	9A	32	ARG

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Mol	Chain	Res	Type
18	9A	35	ARG
18	9A	36	ASN
18	9A	39	VAL
18	9A	42	ARG
18	9A	44	LEU
18	9A	58	LEU
18	9A	82	THR
18	9A	86	VAL
19	AA	9	VAL
19	AA	15	LEU
19	AA	20	LEU
19	AA	23	ASN
19	AA	29	ARG
19	AA	30	LEU
19	AA	32	LYS
19	AA	39	THR
19	AA	60	VAL
19	AA	63	THR
19	AA	71	LEU
20	BA	10	LEU
20	BA	11	SER
20	BA	23	ARG
20	BA	24	LEU
20	BA	29	LYS
20	BA	33	ILE
20	BA	37	SER
20	BA	41	ILE
20	BA	45	GLN
20	BA	54	LYS
20	BA	56	MET
20	BA	58	LYS
20	BA	61	SER
20	BA	62	LEU
20	BA	74	LYS
20	BA	75	ASN
20	BA	84	LEU
20	BA	86	ARG
20	BA	93	GLU
20	BA	100	ILE
21	1B	10	ARG
21	1B	15	ARG
27	19	18	VAL

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Mol	Chain	Res	Type
27	19	24	ILE
27	19	28	GLU
27	19	30	GLU
27	19	31	LYS
27	19	33	LEU
27	19	34	VAL
27	19	39	LYS
27	19	43	ARG
27	19	49	ILE
27	19	61	LEU
27	19	64	ILE
27	19	65	ILE
27	19	72	LYS
27	19	94	LEU
27	19	99	ASP
27	19	105	ILE
27	19	106	ILE
27	19	111	LEU
27	19	115	GLN
27	19	118	VAL
27	19	125	ILE
27	19	136	ILE
27	19	138	VAL
27	19	141	VAL
27	19	147	LEU
27	19	151	LYS
27	19	154	LYS
27	19	155	LEU
27	19	169	GLU
27	19	173	VAL
27	19	181	GLU
27	19	182	LEU
27	19	192	THR
27	19	193	VAL
27	19	204	ILE
27	19	208	LYS
27	19	211	ARG
27	19	212	SER
27	19	232	PRO
27	19	237	GLU
27	19	239	ARG
27	19	242	ARG

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Mol	Chain	Res	Type
27	19	244	ARG
27	19	255	LYS
27	19	257	LEU
27	19	260	ARG
27	19	263	ARG
27	19	266	SER
27	19	267	SER
27	19	268	ARG
27	19	270	ILE
27	19	271	ILE
27	19	273	ARG
28	29	1	MET
28	29	7	VAL
28	29	9	VAL
28	29	23	VAL
28	29	25	VAL
28	29	27	LEU
28	29	37	ARG
28	29	38	THR
28	29	44	TYR
28	29	45	THR
28	29	60	ASN
28	29	61	ARG
28	29	63	LEU
28	29	75	VAL
28	29	77	ILE
28	29	79	ARG
28	29	87	GLU
28	29	89	ASP
28	29	91	VAL
28	29	93	VAL
28	29	105	THR
28	29	107	THR
28	29	117	MET
28	29	119	ARG
28	29	144	ARG
28	29	145	LYS
28	29	146	THR
28	29	163	GLU
28	29	166	THR
28	29	167	VAL
28	29	170	LEU

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Mol	Chain	Res	Type
28	29	175	VAL
28	29	179	GLU
28	29	182	LEU
28	29	185	LYS
28	29	188	VAL
28	29	197	ILE
28	29	200	GLU
28	29	201	THR
28	29	202	LYS
29	39	8	GLN
29	39	11	VAL
29	39	18	ARG
29	39	19	GLU
29	39	20	LEU
29	39	33	LEU
29	39	38	ARG
29	39	46	ARG
29	39	53	THR
29	39	57	VAL
29	39	62	ARG
29	39	65	TRP
29	39	66	PRO
29	39	67	GLN
29	39	68	LYS
29	39	72	ARG
29	39	74	ARG
29	39	78	ILE
29	39	83	PHE
29	39	88	VAL
29	39	96	ASP
29	39	98	SER
29	39	106	ARG
29	39	107	LYS
29	39	108	LYS
29	39	110	LEU
29	39	114	VAL
29	39	123	LEU
29	39	140	LEU
29	39	151	SER
29	39	153	SER
29	39	154	VAL
29	39	158	THR

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Mol	Chain	Res	Type
29	39	165	ARG
29	39	168	ARG
29	39	181	LEU
29	39	183	VAL
29	39	191	ARG
29	39	193	VAL
29	39	194	MET
29	39	196	LEU
29	39	197	ASP
29	39	204	ASN
30	49	7	LEU
30	49	12	TYR
30	49	19	LEU
30	49	20	ILE
30	49	26	GLN
30	49	28	VAL
30	49	33	ARG
30	49	40	ASN
30	49	43	LEU
30	49	45	GLU
30	49	53	LEU
30	49	58	GLN
30	49	64	THR
30	49	71	THR
30	49	82	LEU
30	49	84	LYS
30	49	94	LEU
30	49	96	ARG
30	49	99	MET
30	49	111	LEU
30	49	118	ARG
30	49	128	ARG
30	49	130	ASN
30	49	135	LEU
30	49	136	ARG
30	49	139	LEU
30	49	149	VAL
30	49	153	ARG
30	49	161	THR
30	49	162	THR
31	59	6	ARG
31	59	11	VAL

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Mol	Chain	Res	Type
31	59	15	VAL
31	59	19	VAL
31	59	24	VAL
31	59	41	MET
31	59	45	VAL
31	59	50	VAL
31	59	52	VAL
31	59	71	LEU
31	59	72	ILE
31	59	83	TYR
31	59	85	LYS
31	59	86	GLU
31	59	89	ILE
31	59	92	ILE
31	59	98	LEU
31	59	99	VAL
31	59	105	LEU
31	59	113	VAL
31	59	116	GLU
31	59	122	THR
31	59	123	PHE
31	59	124	GLU
31	59	125	VAL
31	59	127	GLU
31	59	129	THR
31	59	131	VAL
31	59	139	GLN
31	59	143	GLN
31	59	147	ASN
31	59	157	TYR
31	59	160	LYS
31	59	170	ARG
32	69	2	LYS
32	69	4	ILE
32	69	7	GLU
32	69	15	VAL
32	69	37	VAL
32	69	40	THR
32	69	41	GLU
32	69	43	ASN
32	69	44	LEU
32	69	51	ILE

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Mol	Chain	Res	Type
32	69	56	LYS
32	69	74	ASN
32	69	75	LEU
32	69	76	THR
32	69	77	LEU
32	69	78	THR
32	69	85	GLU
32	69	86	THR
32	69	87	LYS
32	69	101	LEU
32	69	103	ARG
32	69	105	HIS
32	69	107	VAL
32	69	109	ILE
32	69	110	ASP
32	69	114	LEU
32	69	117	GLU
32	69	122	GLU
32	69	125	GLU
32	69	128	LEU
32	69	131	LYS
32	69	136	VAL
32	69	138	ILE
32	69	141	LYS
32	69	142	VAL
33	15	1	MET
33	15	5	VAL
33	15	9	VAL
33	15	15	LEU
33	15	23	LEU
33	15	28	THR
33	15	29	LYS
33	15	32	THR
33	15	33	LEU
33	15	34	LEU
33	15	35	ARG
33	15	41	ASP
33	15	48	MET
33	15	63	THR
33	15	65	LYS
33	15	67	LEU
33	15	68	GLU

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Mol	Chain	Res	Type
33	15	73	THR
33	15	74	ARG
33	15	76	SER
33	15	93	THR
33	15	94	HIS
33	15	112	LEU
33	15	114	ARG
33	15	121	LYS
33	15	130	HIS
33	15	136	GLU
33	15	138	LEU
34	25	1	MET
34	25	5	GLN
34	25	8	LEU
34	25	22	ILE
34	25	24	VAL
34	25	26	LYS
34	25	29	ASN
34	25	35	VAL
34	25	38	VAL
34	25	39	ILE
34	25	45	GLU
34	25	47	ILE
34	25	49	ARG
34	25	63	VAL
34	25	70	LYS
34	25	75	SER
34	25	87	ILE
34	25	96	THR
34	25	98	VAL
34	25	104	ARG
34	25	105	GLU
34	25	107	ARG
34	25	108	GLU
34	25	113	LYS
34	25	114	ILE
34	25	116	SER
34	25	117	LEU
35	35	1	MET
35	35	2	LYS
35	35	3	LEU
35	35	4	SER

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Mol	Chain	Res	Type
35	35	6	LEU
35	35	10	PRO
35	35	14	LYS
35	35	18	ARG
35	35	19	VAL
35	35	21	ARG
35	35	27	HIS
35	35	30	THR
35	35	36	LYS
35	35	40	SER
35	35	41	ARG
35	35	45	LEU
35	35	46	LYS
35	35	50	ARG
35	35	55	ARG
35	35	59	LEU
35	35	67	MET
35	35	74	GLU
35	35	76	LYS
35	35	83	VAL
35	35	85	LEU
35	35	88	LEU
35	35	95	VAL
35	35	96	THR
35	35	98	GLU
35	35	102	ARG
35	35	105	LEU
35	35	110	TYR
35	35	112	LEU
35	35	114	ILE
35	35	121	LYS
35	35	123	LEU
35	35	124	LYS
35	35	125	VAL
35	35	135	LEU
35	35	138	LEU
35	35	144	GLU
35	35	147	LEU
35	35	149	GLU
36	45	5	ARG
36	45	8	LYS
36	45	10	ARG

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Mol	Chain	Res	Type
36	45	16	ARG
36	45	17	LEU
36	45	18	LYS
36	45	22	LYS
36	45	45	GLN
36	45	59	ARG
36	45	60	ARG
36	45	76	LYS
36	45	77	LYS
36	45	79	LEU
36	45	80	GLU
36	45	81	VAL
36	45	83	MET
36	45	85	LYS
36	45	89	ASN
36	45	90	VAL
36	45	91	GLU
36	45	93	TYR
36	45	96	VAL
36	45	103	MET
36	45	106	VAL
36	45	127	ILE
36	45	133	ARG
36	45	135	ASP
37	55	6	SER
37	55	12	ARG
37	55	18	LEU
37	55	28	LEU
37	55	29	LEU
37	55	35	THR
37	55	48	VAL
37	55	51	LEU
37	55	57	ARG
37	55	61	HIS
37	55	63	ARG
37	55	65	LEU
37	55	67	LEU
37	55	75	LEU
37	55	76	VAL
37	55	77	ARG
37	55	79	LEU
37	55	81	ASP

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Mol	Chain	Res	Type
37	55	82	GLU
37	55	91	GLN
37	55	113	LEU
37	55	118	GLU
38	65	12	PHE
38	65	13	ARG
38	65	19	LYS
38	65	21	THR
38	65	28	VAL
38	65	31	SER
38	65	32	LEU
38	65	36	TYR
38	65	41	ASP
38	65	46	VAL
38	65	48	LEU
38	65	50	SER
38	65	54	LEU
38	65	56	LEU
38	65	58	LEU
38	65	69	VAL
38	65	71	ARG
38	65	73	LEU
38	65	78	LEU
38	65	89	ARG
38	65	93	LYS
38	65	98	VAL
38	65	101	LEU
38	65	106	ARG
38	65	110	LEU
39	75	7	ILE
39	75	9	LEU
39	75	13	ARG
39	75	15	VAL
39	75	16	ARG
39	75	19	LEU
39	75	27	THR
39	75	30	VAL
39	75	34	VAL
39	75	38	ASN
39	75	40	THR
39	75	42	ILE
39	75	51	ARG

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Mol	Chain	Res	Type
39	75	54	ARG
39	75	57	PHE
39	75	59	THR
39	75	63	VAL
39	75	64	ARG
39	75	65	LYS
39	75	74	ARG
39	75	78	LEU
39	75	83	ILE
39	75	86	ILE
39	75	87	ASP
39	75	89	VAL
39	75	91	ARG
39	75	98	LYS
39	75	105	LEU
39	75	107	ASP
39	75	113	LYS
39	75	121	ILE
39	75	132	LYS
39	75	134	GLU
40	85	8	VAL
40	85	31	SER
40	85	52	ARG
40	85	55	ARG
40	85	63	VAL
40	85	64	ARG
40	85	70	ARG
40	85	74	LEU
40	85	83	LEU
40	85	92	ARG
40	85	97	ASP
40	85	101	ARG
40	85	105	VAL
41	95	7	THR
41	95	19	LYS
41	95	24	LYS
41	95	38	LEU
41	95	40	LEU
41	95	46	VAL
41	95	47	VAL
41	95	49	THR
41	95	51	VAL

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Mol	Chain	Res	Type
41	95	71	LEU
41	95	80	GLN
41	95	84	LYS
41	95	85	LYS
41	95	88	ARG
41	95	89	GLN
41	95	92	THR
41	95	95	LEU
41	95	97	LYS
41	95	100	ARG
42	A5	1	MET
42	A5	11	ARG
42	A5	16	LYS
42	A5	19	LEU
42	A5	20	VAL
42	A5	23	LEU
42	A5	39	THR
42	A5	51	LEU
42	A5	52	GLU
42	A5	59	VAL
42	A5	64	MET
42	A5	65	LEU
42	A5	67	ASP
42	A5	70	TYR
42	A5	76	VAL
42	A5	94	ASP
42	A5	96	ILE
42	A5	100	THR
42	A5	104	THR
42	A5	107	LEU
43	B5	3	THR
43	B5	12	VAL
43	B5	27	THR
43	B5	30	VAL
43	B5	35	THR
43	B5	43	VAL
43	B5	44	GLU
43	B5	45	THR
43	B5	48	LYS
43	B5	52	VAL
43	B5	54	VAL
43	B5	55	ASN

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Mol	Chain	Res	Type
43	B5	59	VAL
43	B5	62	LYS
43	B5	63	LYS
43	B5	69	TYR
43	B5	75	ASP
43	B5	76	ARG
43	B5	81	VAL
44	C5	6	HIS
44	C5	13	VAL
44	C5	17	SER
44	C5	24	VAL
44	C5	27	VAL
44	C5	29	GLU
44	C5	31	LEU
44	C5	37	VAL
44	C5	45	VAL
44	C5	50	ARG
44	C5	51	VAL
44	C5	57	GLN
44	C5	60	PHE
44	C5	62	GLU
44	C5	70	SER
44	C5	71	LYS
44	C5	72	VAL
44	C5	75	ILE
44	C5	85	VAL
44	C5	86	ARG
44	C5	87	LYS
44	C5	88	LYS
44	C5	89	PHE
44	C5	91	GLU
44	C5	94	LYS
44	C5	96	ILE
44	C5	97	ARG
44	C5	99	CYS
45	D5	4	ARG
45	D5	11	GLU
45	D5	14	LYS
45	D5	16	SER
45	D5	18	LEU
45	D5	19	ARG
45	D5	24	LEU

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Mol	Chain	Res	Type
45	D5	30	ASN
45	D5	53	ILE
45	D5	56	VAL
45	D5	59	LEU
45	D5	60	GLU
45	D5	63	ASP
45	D5	70	LEU
45	D5	71	VAL
45	D5	74	VAL
45	D5	76	LEU
45	D5	86	VAL
45	D5	90	VAL
45	D5	92	SER
45	D5	94	GLU
45	D5	96	VAL
45	D5	98	MET
45	D5	118	GLN
45	D5	119	GLU
45	D5	120	ILE
45	D5	121	HIS
45	D5	122	ARG
45	D5	123	ASP
45	D5	125	LEU
45	D5	132	ASN
45	D5	144	LEU
45	D5	154	ASP
45	D5	157	LEU
45	D5	161	VAL
45	D5	162	GLU
45	D5	165	VAL
45	D5	168	GLU
46	E5	10	THR
46	E5	11	ARG
46	E5	12	ASN
46	E5	19	LYS
46	E5	36	ILE
46	E5	38	VAL
46	E5	43	THR
46	E5	53	MET
46	E5	67	VAL
46	E5	74	ARG
46	E5	79	VAL

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Mol	Chain	Res	Type
46	E5	84	LEU
47	F5	4	VAL
47	F5	5	CYS
47	F5	11	ARG
47	F5	19	GLN
47	F5	21	ARG
47	F5	25	LYS
47	F5	37	ILE
47	F5	42	GLN
47	F5	46	LEU
47	F5	51	VAL
47	F5	56	GLN
47	F5	59	THR
47	F5	73	LEU
47	F5	76	ARG
47	F5	78	LYS
47	F5	82	LEU
47	F5	83	GLU
47	F5	85	LEU
47	F5	88	LYS
47	F5	91	LYS
47	F5	92	LYS
47	F5	97	LEU
48	G5	5	GLU
48	G5	8	LYS
48	G5	9	GLN
48	G5	14	ARG
48	G5	16	LEU
48	G5	17	SER
48	G5	19	VAL
48	G5	24	LEU
48	G5	35	LEU
48	G5	41	ILE
48	G5	46	GLN
48	G5	48	HIS
48	G5	53	LEU
48	G5	55	ARG
48	G5	59	ARG
48	G5	60	LEU
48	G5	65	ASN
48	G5	69	ARG
49	H5	6	VAL

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Mol	Chain	Res	Type
49	H5	8	LEU
49	H5	16	PRO
49	H5	18	ASP
49	H5	20	LYS
49	H5	32	GLN
49	H5	33	GLN
49	H5	35	ARG
49	H5	36	VAL
49	H5	40	THR
49	H5	43	ILE
49	H5	48	GLU
49	H5	53	LEU
49	H5	55	ARG
49	H5	56	VAL
50	I5	1	MET
50	I5	5	ILE
50	I5	18	CYS
50	I5	20	ASN
50	I5	22	ILE
50	I5	24	THR
50	I5	30	GLU
50	I5	38	LYS
50	I5	49	PHE
50	I5	51	ASP
50	I5	53	GLU
50	I5	59	PHE
50	I5	61	ARG
50	I5	62	ARG
51	J5	3	LYS
51	J5	6	VAL
51	J5	12	SER
51	J5	21	SER
51	J5	29	THR
51	J5	48	GLU
51	J5	55	ARG
51	J5	57	VAL
52	L5	1	MET
52	L5	4	THR
52	L5	9	ARG
52	L5	14	LYS
52	L5	28	ARG
52	L5	33	ARG

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Mol	Chain	Res	Type
52	L5	42	LEU
52	L5	43	THR
53	M5	6	THR
53	M5	11	LYS
53	M5	26	LYS
53	M5	27	THR
53	M5	30	ARG
53	M5	33	ASN
53	M5	34	TRP
53	M5	37	SER
53	M5	50	LEU
53	M5	52	LYS
53	M5	54	GLU
53	M5	56	GLU
53	M5	59	LYS
53	M5	61	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (75) such sidechains are listed below:

Mol	Chain	Res	Type
4	3E	74	GLN
5	4E	72	GLN
7	6E	37	ASN
10	1I	62	HIS
11	2I	13	GLN
13	4I	77	ASN
15	6I	62	GLN
16	7I	13	HIS
20	BI	26	ASN
27	11	164	GLN
27	11	166	GLN
27	11	227	ASN
28	21	55	ASN
28	21	66	HIS
28	21	135	HIS
29	31	67	GLN
29	31	204	ASN
30	41	132	ASN
32	61	54	GLN
35	78	13	ASN
35	78	27	HIS
38	A8	68	GLN

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Mol	Chain	Res	Type
38	A8	84	GLN
39	B8	58	ASN
39	B8	84	GLN
42	E8	62	HIS
44	G8	57	GLN
45	H8	50	GLN
45	H8	85	HIS
50	M8	20	ASN
3	22	3	ASN
3	22	6	HIS
4	32	74	GLN
4	32	119	GLN
5	42	130	ASN
7	62	28	ASN
7	62	110	GLN
7	62	153	HIS
8	72	15	ASN
8	72	78	GLN
9	82	23	ASN
9	82	34	ASN
10	1A	69	ASN
10	1A	76	ASN
11	2A	116	HIS
12	3A	80	HIS
13	4A	12	ASN
13	4A	77	ASN
13	4A	101	GLN
15	6A	71	GLN
16	7A	82	GLN
27	19	201	HIS
28	29	143	ASN
29	39	40	GLN
29	39	160	ASN
30	49	27	ASN
30	49	40	ASN
31	59	65	HIS
31	59	74	ASN
32	69	104	GLN
34	25	3	GLN
34	25	5	GLN
35	35	35	HIS
37	55	31	HIS

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Mol	Chain	Res	Type
39	75	43	GLN
39	75	55	ASN
40	85	71	GLN
42	A5	61	ASN
43	B5	55	ASN
44	C5	6	HIS
45	D5	32	HIS
46	E5	17	GLN
46	E5	29	GLN
48	G5	65	ASN
50	I5	20	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1496/1522 (98%)	357 (23%)	31 (2%)
22	1K	84/85 (98%)	40 (47%)	4 (4%)
22	3K	84/85 (98%)	31 (36%)	3 (3%)
23	2K	76/77 (98%)	20 (26%)	3 (3%)
24	4K	13/27 (48%)	4 (30%)	0
25	14	2905/2917 (99%)	770 (26%)	39 (1%)
25	1H	2911/2917 (99%)	768 (26%)	56 (1%)
26	16	121/122 (99%)	26 (21%)	0
26	1J	121/122 (99%)	31 (25%)	2 (1%)
54	1G	1496/1522 (98%)	394 (26%)	37 (2%)
55	1L	84/85 (98%)	37 (44%)	4 (4%)
55	3L	84/85 (98%)	28 (33%)	3 (3%)
56	2L	76/77 (98%)	17 (22%)	2 (2%)
57	4L	15/27 (55%)	5 (33%)	1 (6%)
All	All	9566/9670 (98%)	2528 (26%)	185 (1%)

All (2528) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	7	G
1	13	9	G
1	13	31	G
1	13	32	A
1	13	33	A

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Mol	Chain	Res	Type
1	13	39	G
1	13	48	C
1	13	50	A
1	13	51	A
1	13	54	C
1	13	59	A
1	13	60	A
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	90	C
1	13	91	C
1	13	95	G
1	13	101	A
1	13	115	G
1	13	116	A
1	13	121	C
1	13	129(A)	G
1	13	131	C
1	13	137	C
1	13	138	G
1	13	142	G
1	13	144	G
1	13	145	G
1	13	150	C
1	13	151	A
1	13	159	G
1	13	160	A
1	13	163	C
1	13	169	C
1	13	172	A
1	13	173	U
1	13	174	C
1	13	186(A)	C
1	13	188	U
1	13	189	U
1	13	190	G
1	13	191(A)	G
1	13	191(D)	U
1	13	195	A
1	13	197	A

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Mol	Chain	Res	Type
1	13	199	G
1	13	201	C
1	13	208	U
1	13	209	U
1	13	210	U
1	13	217	C
1	13	222	U
1	13	232	G
1	13	243	A
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G
1	13	256	U
1	13	262	A
1	13	266	G
1	13	267	C
1	13	268	C
1	13	270	A
1	13	280	C
1	13	281	G
1	13	289	G
1	13	316	G
1	13	318	G
1	13	328	C
1	13	330	C
1	13	332	G
1	13	342	C
1	13	344	A
1	13	345	C
1	13	347	G
1	13	352	C
1	13	353	A
1	13	354	G
1	13	357	G
1	13	367	U
1	13	372	C
1	13	383	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A

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Mol	Chain	Res	Type
1	13	398	C
1	13	406	G
1	13	411	A
1	13	412	A
1	13	413	G
1	13	414	A
1	13	418	C
1	13	419	C
1	13	421	U
1	13	422	C
1	13	423	G
1	13	424	G
1	13	429	U
1	13	430	A
1	13	438	G
1	13	439	A
1	13	445	G
1	13	450	G
1	13	451	A
1	13	466	C
1	13	467	G
1	13	484	G
1	13	485	G
1	13	496	A
1	13	497	U
1	13	505	G
1	13	509	A
1	13	510	A
1	13	511	C
1	13	518	C
1	13	524	G
1	13	527	G
1	13	531	U
1	13	533	A
1	13	536	C
1	13	546	G
1	13	547	A
1	13	559	A
1	13	560	U
1	13	561	U
1	13	562	C
1	13	564	C

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Mol	Chain	Res	Type
1	13	572	A
1	13	573	A
1	13	576	G
1	13	577	G
1	13	580	U
1	13	590	C
1	13	596	C
1	13	607	A
1	13	618	C
1	13	630	G
1	13	631	G
1	13	632	A
1	13	633	G
1	13	653	A
1	13	659	U
1	13	665	A
1	13	666	G
1	13	684	A
1	13	687	A
1	13	704	A
1	13	715	A
1	13	721	G
1	13	723	U
1	13	724	G
1	13	749	C
1	13	750	G
1	13	753	A
1	13	755	G
1	13	757	U
1	13	759	A
1	13	763	G
1	13	766	A
1	13	767	A
1	13	774	G
1	13	777	A
1	13	779	C
1	13	786	G
1	13	792	A
1	13	793	U
1	13	794	A
1	13	795	C
1	13	805	C

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Mol	Chain	Res	Type
1	13	809	G
1	13	817	C
1	13	828	A
1	13	836	G
1	13	841	U
1	13	842	C
1	13	843	U
1	13	848	C
1	13	858	G
1	13	859	A
1	13	870	U
1	13	872	A
1	13	873	A
1	13	884	U
1	13	889	A
1	13	902	G
1	13	914	A
1	13	916	G
1	13	926	G
1	13	927	G
1	13	931	C
1	13	934	C
1	13	935	A
1	13	936	C
1	13	940	C
1	13	948	C
1	13	960	U
1	13	968	A
1	13	969	A
1	13	971	G
1	13	972	C
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	982	U
1	13	983	A
1	13	990	C
1	13	991	U
1	13	992	U
1	13	993	G
1	13	994	A

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Mol	Chain	Res	Type
1	13	1004	A
1	13	1007	C
1	13	1008	C
1	13	1009	G
1	13	1012	U
1	13	1021	G
1	13	1023	G
1	13	1024	G
1	13	1025	U
1	13	1026	G
1	13	1028	C
1	13	1028(B)	C
1	13	1029	G
1	13	1032(A)	G
1	13	1039	C
1	13	1040	U
1	13	1042	G
1	13	1049	U
1	13	1052	U
1	13	1053	G
1	13	1054	C
1	13	1055	A
1	13	1064	G
1	13	1065	U
1	13	1081	G
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1103	C
1	13	1121	U
1	13	1122	U
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1129	C
1	13	1130	A
1	13	1131	G
1	13	1133	G
1	13	1134	G
1	13	1136	U
1	13	1137	C

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Mol	Chain	Res	Type
1	13	1138	G
1	13	1139	G
1	13	1146	A
1	13	1151	A
1	13	1152	A
1	13	1154	G
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1161	C
1	13	1177	G
1	13	1178	G
1	13	1181	G
1	13	1183	A
1	13	1189	C
1	13	1194	U
1	13	1196	U
1	13	1197	G
1	13	1201	A
1	13	1212	U
1	13	1214	C
1	13	1218	C
1	13	1225	A
1	13	1227	A
1	13	1236	A
1	13	1238	A
1	13	1240	U
1	13	1241	G
1	13	1253	G
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1263	C
1	13	1270	C
1	13	1272	G
1	13	1273	G
1	13	1278	U
1	13	1279	A
1	13	1280	A
1	13	1285	A
1	13	1286	A
1	13	1287	A

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Mol	Chain	Res	Type
1	13	1299	A
1	13	1300	G
1	13	1301	U
1	13	1302	U
1	13	1303	C
1	13	1306	A
1	13	1307	U
1	13	1319	A
1	13	1322	C
1	13	1323	G
1	13	1331	G
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1338	G
1	13	1340	A
1	13	1346	A
1	13	1347	G
1	13	1353	G
1	13	1362(A)	C
1	13	1363	A
1	13	1368	G
1	13	1370	G
1	13	1377	A
1	13	1378	C
1	13	1381	U
1	13	1398	A
1	13	1401	G
1	13	1406	U
1	13	1414	U
1	13	1416	G
1	13	1419	G
1	13	1424	C
1	13	1430	C
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1449	C
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1469	G

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Mol	Chain	Res	Type
1	13	1487	G
1	13	1492	A
1	13	1494	G
1	13	1497	G
1	13	1498	U
1	13	1499	A
1	13	1503	A
1	13	1504	G
1	13	1505	G
1	13	1506	U
1	13	1517	G
1	13	1529	G
1	13	1530	G
1	13	1531	A
22	1K	4	G
22	1K	6	G
22	1K	7	G
22	1K	8	4SU
22	1K	9	U
22	1K	10	C
22	1K	14	A
22	1K	16	C
22	1K	17	OMG
22	1K	18	G
22	1K	19	C
22	1K	20	C
22	1K	21	A
22	1K	22	A
22	1K	24	G
22	1K	25	G
22	1K	29	C
22	1K	35	QUO
22	1K	40	PSU
22	1K	41	C
22	1K	42	U
22	1K	46	G
22	1K	49	A
22	1K	50	U
22	1K	52	G
22	1K	53	A
22	1K	55	U
22	1K	56	U

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Mol	Chain	Res	Type
22	1K	63	5MU
22	1K	70	C
22	1K	72	U
22	1K	75	C
22	1K	76	C
22	1K	77	C
22	1K	78	C
22	1K	79	A
22	1K	80	C
22	1K	83	C
22	1K	84	C
22	1K	85	A
23	2K	2	G
23	2K	6	G
23	2K	8	4SU
23	2K	9	G
23	2K	13	C
23	2K	16	C
23	2K	18	C
23	2K	21	H2U
23	2K	22	A
23	2K	31	G
23	2K	35	C
23	2K	44	A
23	2K	47	7MG
23	2K	48	U
23	2K	49	C
23	2K	50	G
23	2K	54	G
23	2K	62	C
23	2K	68	C
23	2K	77	A
22	3K	5	G
22	3K	6	G
22	3K	9	U
22	3K	10	C
22	3K	11	C
22	3K	15	G
22	3K	16	C
22	3K	17	OMG
22	3K	18	G
22	3K	19	C

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Mol	Chain	Res	Type
22	3K	20	C
22	3K	21	A
22	3K	22	A
22	3K	30	A
22	3K	34	U
22	3K	41	C
22	3K	43	G
22	3K	46	G
22	3K	48	C
22	3K	49	A
22	3K	52	G
22	3K	55	U
22	3K	56	U
22	3K	57	C
22	3K	64	PSU
22	3K	67	A
22	3K	68	A
22	3K	69	U
22	3K	70	C
22	3K	82	A
22	3K	85	A
24	4K	13	A
24	4K	14	A
24	4K	23	A
24	4K	26	A
25	1H	2	G
25	1H	4	C
25	1H	5	A
25	1H	9	U
25	1H	10	G
25	1H	12	U
25	1H	14	A
25	1H	15	G
25	1H	27	G
25	1H	34	C
25	1H	46	C
25	1H	51	G
25	1H	55	G
25	1H	61	G
25	1H	63	U
25	1H	71	A
25	1H	72	U

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Mol	Chain	Res	Type
25	1H	74	A
25	1H	75	G
25	1H	85	G
25	1H	93	C
25	1H	95	G
25	1H	102	G
25	1H	110	G
25	1H	118	A
25	1H	119	A
25	1H	120	U
25	1H	121	G
25	1H	125	G
25	1H	135	G
25	1H	137(A)	G
25	1H	155	C
25	1H	163	U
25	1H	164	U
25	1H	171	G
25	1H	181	A
25	1H	188	G
25	1H	196	A
25	1H	197	A
25	1H	199	A
25	1H	214	G
25	1H	215	G
25	1H	216	A
25	1H	222	A
25	1H	223	A
25	1H	225	A
25	1H	227	A
25	1H	228	A
25	1H	229	A
25	1H	230	U
25	1H	233	A
25	1H	248	G
25	1H	249	C
25	1H	250	G
25	1H	252	G
25	1H	269	U
25	1H	270(F)	U
25	1H	270(G)	C
25	1H	270(M)	U

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Mol	Chain	Res	Type
25	1H	270(N)	G
25	1H	270(P)	C
25	1H	270(Y)	G
25	1H	271(C)	U
25	1H	271	G
25	1H	273(E)	U
25	1H	274	G
25	1H	275	G
25	1H	277	C
25	1H	278	A
25	1H	279	C
25	1H	294	A
25	1H	299	A
25	1H	311	A
25	1H	323	G
25	1H	324	A
25	1H	327	G
25	1H	329	G
25	1H	330	A
25	1H	331	A
25	1H	342	G
25	1H	346	A
25	1H	352	G
25	1H	354	G
25	1H	360	G
25	1H	363	G
25	1H	363(E)	U
25	1H	372	G
25	1H	380	U
25	1H	386	G
25	1H	389	G
25	1H	395	U
25	1H	396	G
25	1H	405	U
25	1H	406	G
25	1H	411	G
25	1H	412	A
25	1H	428	A
25	1H	434	U
25	1H	443	A
25	1H	444	C
25	1H	447	A

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Mol	Chain	Res	Type
25	1H	448	U
25	1H	451	C
25	1H	454	A
25	1H	455	C
25	1H	457	A
25	1H	459	U
25	1H	460	A
25	1H	463	G
25	1H	470	A
25	1H	471	A
25	1H	481	G
25	1H	482	A
25	1H	505	A
25	1H	508	G
25	1H	509	C
25	1H	510	C
25	1H	529	A
25	1H	530	G
25	1H	531	C
25	1H	532	A
25	1H	533	G
25	1H	545	G
25	1H	546	C
25	1H	549	G
25	1H	556	G
25	1H	563	G
25	1H	564	C
25	1H	567	A
25	1H	571	A
25	1H	573	G
25	1H	575	A
25	1H	577	G
25	1H	583	G
25	1H	587	C
25	1H	588	U
25	1H	603	A
25	1H	607	U
25	1H	609	A
25	1H	612	G
25	1H	613	U
25	1H	614	U
25	1H	615	G

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Mol	Chain	Res	Type
25	1H	617	G
25	1H	621	A
25	1H	622	G
25	1H	626	U
25	1H	627	A
25	1H	637	A
25	1H	640	C
25	1H	641	C
25	1H	645	C
25	1H	646	A
25	1H	649	G
25	1H	654	A
25	1H	654(A)	A
25	1H	654(I)	C
25	1H	654(J)	A
25	1H	654(K)	C
25	1H	654(M)	C
25	1H	654(N)	G
25	1H	654(Q)	C
25	1H	654(T)	A
25	1H	664	C
25	1H	686	G
25	1H	690	G
25	1H	699	A
25	1H	705	A
25	1H	708	C
25	1H	715	G
25	1H	717	G
25	1H	729	G
25	1H	730	C
25	1H	745	G
25	1H	746	A
25	1H	747	U
25	1H	752	A
25	1H	753	C
25	1H	762	U
25	1H	764	A
25	1H	775	G
25	1H	776	G
25	1H	777	A
25	1H	779	U
25	1H	782	A

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Mol	Chain	Res	Type
25	1H	784	A
25	1H	785	G
25	1H	790	C
25	1H	791	C
25	1H	792	G
25	1H	793	A
25	1H	801	G
25	1H	802	A
25	1H	805	G
25	1H	812	C
25	1H	824	A
25	1H	826	U
25	1H	827	U
25	1H	828	U
25	1H	829	A
25	1H	831	G
25	1H	832	G
25	1H	836	G
25	1H	845	G
25	1H	847	U
25	1H	855	G
25	1H	859	G
25	1H	860	U
25	1H	861	A
25	1H	866	A
25	1H	870	A
25	1H	880	G
25	1H	881	G
25	1H	882	G
25	1H	883	G
25	1H	884	C
25	1H	885	C
25	1H	886	C
25	1H	887	A
25	1H	888	C
25	1H	890	A
25	1H	892	G
25	1H	893	C
25	1H	894	C
25	1H	895	U
25	1H	896	A
25	1H	897	C

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Mol	Chain	Res	Type
25	1H	898	C
25	1H	900	A
25	1H	901	A
25	1H	904	C
25	1H	907	U
25	1H	910	A
25	1H	917	A
25	1H	918	A
25	1H	919	G
25	1H	926	A
25	1H	932	G
25	1H	938	G
25	1H	941	A
25	1H	945	A
25	1H	946	G
25	1H	947	G
25	1H	957	A
25	1H	958	U
25	1H	959	A
25	1H	961	C
25	1H	962	G
25	1H	968	G
25	1H	974	G
25	1H	974(A)	C
25	1H	983	A
25	1H	996	A
25	1H	1003	G
25	1H	1005	C
25	1H	1008	C
25	1H	1010	A
25	1H	1011	G
25	1H	1012	U
25	1H	1013	C
25	1H	1020	A
25	1H	1022	G
25	1H	1023	U
25	1H	1025	G
25	1H	1026	U
25	1H	1027	A
25	1H	1033	U
25	1H	1037	G
25	1H	1039	G

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Mol	Chain	Res	Type
25	1H	1040	C
25	1H	1046	A
25	1H	1047	G
25	1H	1051	G
25	1H	1057	A
25	1H	1058	U
25	1H	1059	G
25	1H	1061	U
25	1H	1062	G
25	1H	1064	C
25	1H	1068	G
25	1H	1070	A
25	1H	1071	G
25	1H	1072	C
25	1H	1073	A
25	1H	1076	C
25	1H	1078	U
25	1H	1080	A
25	1H	1082	U
25	1H	1084	A
25	1H	1085	A
25	1H	1087	G
25	1H	1088	A
25	1H	1090	U
25	1H	1095	A
25	1H	1096	A
25	1H	1097	U
25	1H	1098	A
25	1H	1106	G
25	1H	1108	U
25	1H	1109	C
25	1H	1111	A
25	1H	1112	G
25	1H	1113	U
25	1H	1122	G
25	1H	1126	A
25	1H	1127	A
25	1H	1129	A
25	1H	1130	U
25	1H	1135	C
25	1H	1136	G
25	1H	1139	G

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Mol	Chain	Res	Type
25	1H	1142	U
25	1H	1142(A)	A
25	1H	1144	G
25	1H	1149	G
25	1H	1150	C
25	1H	1151	G
25	1H	1156	A
25	1H	1171	G
25	1H	1174	A
25	1H	1176	G
25	1H	1178	C
25	1H	1179	C
25	1H	1180	C
25	1H	1183	G
25	1H	1194	A
25	1H	1195	G
25	1H	1204	A
25	1H	1205	U
25	1H	1210	A
25	1H	1218	C
25	1H	1220	A
25	1H	1228	G
25	1H	1229(A)	G
25	1H	1237	A
25	1H	1240	U
25	1H	1241	A
25	1H	1242	A
25	1H	1244	G
25	1H	1253	A
25	1H	1254	A
25	1H	1256	G
25	1H	1265	A
25	1H	1267	U
25	1H	1268	A
25	1H	1271	G
25	1H	1272	A
25	1H	1274	A
25	1H	1275	A
25	1H	1278	A
25	1H	1288	U
25	1H	1298	C
25	1H	1300	U

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Mol	Chain	Res	Type
25	1H	1301	A
25	1H	1313	U
25	1H	1314	C
25	1H	1321	A
25	1H	1329	U
25	1H	1333	C
25	1H	1343	G
25	1H	1344	G
25	1H	1345	C
25	1H	1346	G
25	1H	1347	G
25	1H	1349	A
25	1H	1352	U
25	1H	1359	A
25	1H	1360	A
25	1H	1365	A
25	1H	1368	G
25	1H	1369	G
25	1H	1370	C
25	1H	1378	A
25	1H	1380	G
25	1H	1381	G
25	1H	1383	C
25	1H	1385	G
25	1H	1388	G
25	1H	1395	A
25	1H	1397	U
25	1H	1407	C
25	1H	1416	G
25	1H	1417	C
25	1H	1420	U
25	1H	1421	G
25	1H	1427	A
25	1H	1428	C
25	1H	1429	G
25	1H	1430	C
25	1H	1437	C
25	1H	1444(A)	A
25	1H	1449	A
25	1H	1449(A)	G
25	1H	1451	C
25	1H	1453	A

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Mol	Chain	Res	Type
25	1H	1455	G
25	1H	1456	G
25	1H	1459	G
25	1H	1460	A
25	1H	1461	G
25	1H	1467	C
25	1H	1471	A
25	1H	1493	C
25	1H	1494	A
25	1H	1495	A
25	1H	1497	U
25	1H	1507	A
25	1H	1508	A
25	1H	1509	C
25	1H	1510	A
25	1H	1511	A
25	1H	1517	G
25	1H	1522	G
25	1H	1523	U
25	1H	1526	G
25	1H	1527	G
25	1H	1534	G
25	1H	1535	U
25	1H	1536	A
25	1H	1537	C
25	1H	1538	G
25	1H	1540	G
25	1H	1543	A
25	1H	1544	C
25	1H	1545	A
25	1H	1547	C
25	1H	1548	C
25	1H	1554	A
25	1H	1558	A
25	1H	1559	G
25	1H	1560	G
25	1H	1561	G
25	1H	1566	A
25	1H	1567	A
25	1H	1569	A
25	1H	1578	U
25	1H	1580	A

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Mol	Chain	Res	Type
25	1H	1586	A
25	1H	1593	G
25	1H	1608	A
25	1H	1609	A
25	1H	1610	A
25	1H	1613	G
25	1H	1617	C
25	1H	1618	A
25	1H	1635	G
25	1H	1639	U
25	1H	1640	C
25	1H	1644	C
25	1H	1646	C
25	1H	1647	G
25	1H	1648	C
25	1H	1651	G
25	1H	1654	A
25	1H	1660	C
25	1H	1667	G
25	1H	1669	A
25	1H	1672	C
25	1H	1674	G
25	1H	1675	C
25	1H	1678	G
25	1H	1684	C
25	1H	1685	C
25	1H	1694	C
25	1H	1695	G
25	1H	1699	G
25	1H	1700	A
25	1H	1701	A
25	1H	1728	G
25	1H	1729	A
25	1H	1731	G
25	1H	1733	G
25	1H	1743	G
25	1H	1756	G
25	1H	1758	G
25	1H	1763	G
25	1H	1764	G
25	1H	1773	A
25	1H	1776	G

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Mol	Chain	Res	Type
25	1H	1780	A
25	1H	1782	C
25	1H	1791	A
25	1H	1799	G
25	1H	1800	C
25	1H	1801	G
25	1H	1808	U
25	1H	1816	G
25	1H	1826	G
25	1H	1829	A
25	1H	1835	G
25	1H	1836	C
25	1H	1847	A
25	1H	1848	A
25	1H	1858	G
25	1H	1871	A
25	1H	1878	G
25	1H	1889	A
25	1H	1900	A
25	1H	1906	G
25	1H	1913	A
25	1H	1914	C
25	1H	1919	A
25	1H	1920	C
25	1H	1923	U
25	1H	1926	U
25	1H	1929	G
25	1H	1930	G
25	1H	1931	U
25	1H	1937	A
25	1H	1938	A
25	1H	1941	C
25	1H	1955	U
25	1H	1960	A
25	1H	1963	U
25	1H	1967	C
25	1H	1969	A
25	1H	1970	A
25	1H	1971	A
25	1H	1972	A
25	1H	1982	C
25	1H	1986	A

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Mol	Chain	Res	Type
25	1H	1993	U
25	1H	1994	C
25	1H	2005	A
25	1H	2019	A
25	1H	2020	A
25	1H	2021	C
25	1H	2022	U
25	1H	2023	G
25	1H	2028	U
25	1H	2031	A
25	1H	2032	G
25	1H	2033	A
25	1H	2034	U
25	1H	2039	C
25	1H	2043	C
25	1H	2051	A
25	1H	2053	G
25	1H	2055	C
25	1H	2056	G
25	1H	2058	A
25	1H	2060	A
25	1H	2061	G
25	1H	2062	A
25	1H	2069	G
25	1H	2070	G
25	1H	2078	C
25	1H	2080	G
25	1H	2093	G
25	1H	2096	U
25	1H	2099	U
25	1H	2105	C
25	1H	2111	C
25	1H	2112	G
25	1H	2113	U
25	1H	2114	A
25	1H	2115	G
25	1H	2118	U
25	1H	2120	G
25	1H	2122	U
25	1H	2124	G
25	1H	2125	G
25	1H	2126	A

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Mol	Chain	Res	Type
25	1H	2131	G
25	1H	2132	U
25	1H	2133	G
25	1H	2135	A
25	1H	2136	C
25	1H	2139	C
25	1H	2147	G
25	1H	2148	G
25	1H	2151	G
25	1H	2154	G
25	1H	2158	A
25	1H	2159	G
25	1H	2161	C
25	1H	2166	G
25	1H	2167	U
25	1H	2168	G
25	1H	2169	A
25	1H	2172	U
25	1H	2173	A
25	1H	2176	A
25	1H	2181	G
25	1H	2185	C
25	1H	2190	G
25	1H	2192	G
25	1H	2193	G
25	1H	2197	U
25	1H	2198	A
25	1H	2205	C
25	1H	2210	G
25	1H	2211	G
25	1H	2212	A
25	1H	2213	U
25	1H	2215	G
25	1H	2225	A
25	1H	2236	C
25	1H	2238	G
25	1H	2239	G
25	1H	2240	C
25	1H	2259	G
25	1H	2267	A
25	1H	2269	A
25	1H	2273	A

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Mol	Chain	Res	Type
25	1H	2275	C
25	1H	2279	G
25	1H	2280	G
25	1H	2281	C
25	1H	2283	C
25	1H	2287	A
25	1H	2288	A
25	1H	2294	C
25	1H	2304	G
25	1H	2305	A
25	1H	2307	G
25	1H	2308	G
25	1H	2310	A
25	1H	2312	U
25	1H	2314	C
25	1H	2320	A
25	1H	2321	G
25	1H	2325	G
25	1H	2326	C
25	1H	2327	A
25	1H	2334	G
25	1H	2335	A
25	1H	2336	A
25	1H	2343	C
25	1H	2346	A
25	1H	2347	C
25	1H	2348	U
25	1H	2350	C
25	1H	2352	A
25	1H	2360	A
25	1H	2376	A
25	1H	2377	A
25	1H	2379	G
25	1H	2383	G
25	1H	2385	C
25	1H	2389	G
25	1H	2392	A
25	1H	2394	C
25	1H	2395	C
25	1H	2402	C
25	1H	2403	C
25	1H	2405	G

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Mol	Chain	Res	Type
25	1H	2406	U
25	1H	2410	G
25	1H	2414	G
25	1H	2415	G
25	1H	2418	A
25	1H	2424	C
25	1H	2425	A
25	1H	2428	G
25	1H	2429	G
25	1H	2430	A
25	1H	2435	A
25	1H	2439	A
25	1H	2440	C
25	1H	2441	C
25	1H	2448	A
25	1H	2458	G
25	1H	2467	C
25	1H	2468	G
25	1H	2474	C
25	1H	2476	A
25	1H	2477	C
25	1H	2482	G
25	1H	2484	G
25	1H	2496	C
25	1H	2497	A
25	1H	2498	C
25	1H	2502	G
25	1H	2504	U
25	1H	2505	G
25	1H	2506	U
25	1H	2507	C
25	1H	2518	A
25	1H	2520	C
25	1H	2524	G
25	1H	2529	G
25	1H	2554	U
25	1H	2566	A
25	1H	2567	G
25	1H	2569	G
25	1H	2573	C
25	1H	2582	G
25	1H	2594	C

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Mol	Chain	Res	Type
25	1H	2595	G
25	1H	2601	C
25	1H	2602	A
25	1H	2609	U
25	1H	2611	U
25	1H	2612	C
25	1H	2613	U
25	1H	2629	A
25	1H	2632	A
25	1H	2634	G
25	1H	2641	G
25	1H	2654	A
25	1H	2660	A
25	1H	2665	A
25	1H	2666	C
25	1H	2673	G
25	1H	2689	U
25	1H	2690	C
25	1H	2700	C
25	1H	2702	U
25	1H	2703	C
25	1H	2704	C
25	1H	2705	A
25	1H	2707	G
25	1H	2712(A)	A
25	1H	2713	A
25	1H	2714	G
25	1H	2726	U
25	1H	2733	A
25	1H	2736	G
25	1H	2744	G
25	1H	2748	A
25	1H	2751	G
25	1H	2757	A
25	1H	2758	A
25	1H	2763	G
25	1H	2764	A
25	1H	2765	A
25	1H	2766	G
25	1H	2775	A
25	1H	2777	G
25	1H	2778	A

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Mol	Chain	Res	Type
25	1H	2781	A
25	1H	2783	G
25	1H	2787	C
25	1H	2789	C
25	1H	2791	C
25	1H	2792	G
25	1H	2793	G
25	1H	2794	C
25	1H	2795	G
25	1H	2797	U
25	1H	2801	A
25	1H	2802	G
25	1H	2807	G
25	1H	2808	U
25	1H	2812	G
25	1H	2813	A
25	1H	2817	G
25	1H	2818	G
25	1H	2820	A
25	1H	2821	A
25	1H	2826	A
25	1H	2830	G
25	1H	2832	U
25	1H	2833	G
25	1H	2834	G
25	1H	2835	A
25	1H	2847	U
25	1H	2849	U
25	1H	2872	G
25	1H	2885	C
25	1H	2891	G
25	1H	2892	A
25	1H	2893	G
25	1H	2894	G
25	1H	2895	U
25	1H	2896	C
25	1H	2899	G
26	16	0	A
26	16	7	G
26	16	12	C
26	16	13	A
26	16	15	A

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Mol	Chain	Res	Type
26	16	16	G
26	16	24	G
26	16	31	C
26	16	33	G
26	16	35	U
26	16	40	U
26	16	41	U
26	16	44	G
26	16	45	A
26	16	56	G
26	16	58	A
26	16	65	C
26	16	66	A
26	16	73	A
26	16	74	U
26	16	95	U
26	16	100	G
26	16	105	G
26	16	109	G
26	16	115	G
26	16	117	G
54	1G	5	U
54	1G	6	G
54	1G	7	G
54	1G	9	G
54	1G	21	G
54	1G	22	G
54	1G	32	A
54	1G	39	G
54	1G	47	C
54	1G	48	C
54	1G	50	A
54	1G	51	A
54	1G	54	C
54	1G	65	U
54	1G	73	G
54	1G	80	G
54	1G	90	C
54	1G	91	C
54	1G	92	G
54	1G	95	G
54	1G	101	A

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Mol	Chain	Res	Type
54	1G	108	G
54	1G	115	G
54	1G	116	A
54	1G	121	C
54	1G	131	C
54	1G	144	G
54	1G	147	G
54	1G	151	A
54	1G	159	G
54	1G	161	A
54	1G	163	C
54	1G	173	U
54	1G	174	C
54	1G	182	U
54	1G	183	G
54	1G	184	G
54	1G	186(F)	C
54	1G	188	U
54	1G	189	U
54	1G	190	G
54	1G	191(A)	G
54	1G	191(D)	U
54	1G	195	A
54	1G	197	A
54	1G	198	G
54	1G	201	C
54	1G	208	U
54	1G	209	U
54	1G	210	U
54	1G	216	G
54	1G	223	U
54	1G	231	G
54	1G	238	G
54	1G	244	U
54	1G	245	C
54	1G	247	G
54	1G	250	A
54	1G	251	G
54	1G	266	G
54	1G	267	C
54	1G	281	G
54	1G	283	C

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Mol	Chain	Res	Type
54	1G	288	A
54	1G	289	G
54	1G	290	C
54	1G	316	G
54	1G	321	A
54	1G	328	C
54	1G	329	A
54	1G	330	C
54	1G	332	G
54	1G	345	C
54	1G	346	G
54	1G	349	A
54	1G	350	G
54	1G	351	G
54	1G	352	C
54	1G	353	A
54	1G	354	G
54	1G	356	A
54	1G	363	A
54	1G	366	C
54	1G	367	U
54	1G	369	C
54	1G	372	C
54	1G	373	A
54	1G	381	C
54	1G	384	G
54	1G	388	G
54	1G	392	G
54	1G	397	A
54	1G	398	C
54	1G	406	G
54	1G	411	A
54	1G	412	A
54	1G	413	G
54	1G	414	A
54	1G	419	C
54	1G	421	U
54	1G	422	C
54	1G	423	G
54	1G	424	G
54	1G	429	U
54	1G	430	A

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Mol	Chain	Res	Type
54	1G	439	A
54	1G	442	C
54	1G	446	G
54	1G	452	A
54	1G	466	C
54	1G	467	G
54	1G	475	G
54	1G	478	A
54	1G	484	G
54	1G	485	G
54	1G	486	U
54	1G	496	A
54	1G	497	U
54	1G	500	G
54	1G	504	C
54	1G	505	G
54	1G	506	G
54	1G	509	A
54	1G	510	A
54	1G	511	C
54	1G	513	C
54	1G	517	G
54	1G	518	C
54	1G	519	C
54	1G	521	G
54	1G	527	G
54	1G	530	G
54	1G	531	U
54	1G	532	A
54	1G	533	A
54	1G	536	C
54	1G	544	G
54	1G	547	A
54	1G	559	A
54	1G	560	U
54	1G	561	U
54	1G	564	C
54	1G	566	G
54	1G	567	G
54	1G	572	A
54	1G	573	A
54	1G	575	G

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Mol	Chain	Res	Type
54	1G	576	G
54	1G	577	G
54	1G	596	C
54	1G	601	C
54	1G	607	A
54	1G	609	A
54	1G	614	A
54	1G	615	C
54	1G	618	C
54	1G	629	G
54	1G	630	G
54	1G	631	G
54	1G	646	U
54	1G	652	U
54	1G	653	A
54	1G	657	G
54	1G	665	A
54	1G	669	U
54	1G	687	A
54	1G	688	G
54	1G	700	G
54	1G	702	A
54	1G	704	A
54	1G	720	C
54	1G	723	U
54	1G	724	G
54	1G	731	G
54	1G	734	G
54	1G	735	C
54	1G	749	C
54	1G	753	A
54	1G	755	G
54	1G	759	A
54	1G	769	G
54	1G	776	G
54	1G	777	A
54	1G	787	A
54	1G	793	U
54	1G	794	A
54	1G	803	G
54	1G	810	C
54	1G	813	U

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Mol	Chain	Res	Type
54	1G	814	A
54	1G	816	A
54	1G	817	C
54	1G	820	U
54	1G	821	G
54	1G	827	U
54	1G	828	A
54	1G	836	G
54	1G	841	U
54	1G	842	C
54	1G	843	U
54	1G	848	C
54	1G	859	A
54	1G	862	C
54	1G	873	A
54	1G	885	G
54	1G	913	A
54	1G	914	A
54	1G	926	G
54	1G	927	G
54	1G	934	C
54	1G	935	A
54	1G	936	C
54	1G	940	C
54	1G	958	A
54	1G	960	U
54	1G	961	U
54	1G	968	A
54	1G	969	A
54	1G	971	G
54	1G	972	C
54	1G	974	A
54	1G	975	A
54	1G	976	G
54	1G	977	A
54	1G	978	A
54	1G	980	C
54	1G	981	U
54	1G	982	U
54	1G	983	A
54	1G	988	G
54	1G	991	U

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Mol	Chain	Res	Type
54	1G	992	U
54	1G	993	G
54	1G	995	C
54	1G	1004	A
54	1G	1006	C
54	1G	1008	C
54	1G	1009	G
54	1G	1016	A
54	1G	1024	G
54	1G	1025	U
54	1G	1028	C
54	1G	1028(A)	C
54	1G	1029	G
54	1G	1031	G
54	1G	1032(A)	G
54	1G	1033	G
54	1G	1036	G
54	1G	1047	G
54	1G	1050	G
54	1G	1053	G
54	1G	1054	C
54	1G	1055	A
54	1G	1056	U
54	1G	1085	U
54	1G	1086	U
54	1G	1089	G
54	1G	1092	A
54	1G	1094	G
54	1G	1095	U
54	1G	1101	A
54	1G	1118	C
54	1G	1124	G
54	1G	1125	U
54	1G	1126	U
54	1G	1127	G
54	1G	1129	C
54	1G	1130	A
54	1G	1131	G
54	1G	1135	U
54	1G	1136	U
54	1G	1137	C
54	1G	1138	G

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Mol	Chain	Res	Type
54	1G	1139	G
54	1G	1140	C
54	1G	1144	G
54	1G	1145	C
54	1G	1146	A
54	1G	1147	C
54	1G	1154	G
54	1G	1157	A
54	1G	1158	C
54	1G	1159	U
54	1G	1160	G
54	1G	1171	G
54	1G	1177	G
54	1G	1178	G
54	1G	1181	G
54	1G	1183	A
54	1G	1185	G
54	1G	1186	G
54	1G	1187	G
54	1G	1188	A
54	1G	1191	A
54	1G	1193	G
54	1G	1194	U
54	1G	1196	U
54	1G	1200	C
54	1G	1201	A
54	1G	1202	G
54	1G	1204	A
54	1G	1210	C
54	1G	1211	U
54	1G	1212	U
54	1G	1213	A
54	1G	1214	C
54	1G	1223	C
54	1G	1224	G
54	1G	1225	A
54	1G	1233	G
54	1G	1238	A
54	1G	1240	U
54	1G	1241	G
54	1G	1256	A
54	1G	1257	U

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Mol	Chain	Res	Type
54	1G	1258	G
54	1G	1267	C
54	1G	1269	A
54	1G	1273	G
54	1G	1278	U
54	1G	1279	A
54	1G	1280	A
54	1G	1282	C
54	1G	1286	A
54	1G	1287	A
54	1G	1290	G
54	1G	1291	G
54	1G	1293	G
54	1G	1295	G
54	1G	1297	C
54	1G	1298	C
54	1G	1299	A
54	1G	1300	G
54	1G	1301	U
54	1G	1303	C
54	1G	1305	G
54	1G	1313	U
54	1G	1316	G
54	1G	1317	C
54	1G	1319	A
54	1G	1320	C
54	1G	1322	C
54	1G	1323	G
54	1G	1324	A
54	1G	1331	G
54	1G	1333	A
54	1G	1335	C
54	1G	1336	C
54	1G	1338	G
54	1G	1346	A
54	1G	1347	G
54	1G	1353	G
54	1G	1362(A)	C
54	1G	1363	A
54	1G	1364	U
54	1G	1368	G
54	1G	1370	G

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Mol	Chain	Res	Type
54	1G	1379	G
54	1G	1394	A
54	1G	1395	C
54	1G	1398	A
54	1G	1399	C
54	1G	1400	C
54	1G	1401	G
54	1G	1402	C
54	1G	1406	U
54	1G	1416	G
54	1G	1419	G
54	1G	1442	G
54	1G	1443	G
54	1G	1446	A
54	1G	1449	C
54	1G	1450	U
54	1G	1451	A
54	1G	1453	G
54	1G	1454	G
54	1G	1466	C
54	1G	1482	G
54	1G	1490	C
54	1G	1492	A
54	1G	1493	A
54	1G	1494	G
54	1G	1497	G
54	1G	1499	A
54	1G	1502	A
54	1G	1503	A
54	1G	1504	G
54	1G	1506	U
54	1G	1517	G
54	1G	1519	A
54	1G	1520	G
54	1G	1528	U
54	1G	1529	G
54	1G	1530	G
55	1L	4	G
55	1L	6	G
55	1L	7	G
55	1L	9	U
55	1L	10	C

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Mol	Chain	Res	Type
55	1L	14	A
55	1L	16	C
55	1L	17	G
55	1L	18	G
55	1L	19	C
55	1L	20	C
55	1L	21	A
55	1L	22	A
55	1L	23	A
55	1L	24	G
55	1L	26	G
55	1L	27	A
55	1L	28	G
55	1L	41	C
55	1L	42	U
55	1L	46	G
55	1L	47	U
55	1L	53	A
55	1L	54	C
55	1L	55	U
55	1L	57	C
55	1L	58	G
55	1L	64	U
55	1L	68	A
55	1L	72	U
55	1L	73	U
55	1L	76	C
55	1L	78	C
55	1L	79	A
55	1L	82	A
55	1L	83	C
55	1L	84	C
56	2L	6	G
56	2L	9	G
56	2L	16	C
56	2L	18	C
56	2L	19	G
56	2L	21	H2U
56	2L	22	A
56	2L	23	G
56	2L	24	C
56	2L	48	U

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Mol	Chain	Res	Type
56	2L	49	C
56	2L	50	G
56	2L	54	G
56	2L	61	U
56	2L	62	C
56	2L	66	C
56	2L	77	A
55	3L	2	G
55	3L	9	U
55	3L	11	C
55	3L	14	A
55	3L	15	G
55	3L	17	G
55	3L	18	G
55	3L	19	C
55	3L	20	C
55	3L	21	A
55	3L	26	G
55	3L	28	G
55	3L	29	C
55	3L	31	G
55	3L	32	A
55	3L	34	U
55	3L	46	G
55	3L	47	U
55	3L	49	A
55	3L	52	G
55	3L	53	A
55	3L	58	G
55	3L	67	A
55	3L	68	A
55	3L	69	U
55	3L	75	C
55	3L	82	A
55	3L	85	A
57	4L	12	A
57	4L	13	A
57	4L	14	A
57	4L	21	C
57	4L	23	A
25	14	2	G
25	14	4	C

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Mol	Chain	Res	Type
25	14	5	A
25	14	9	U
25	14	14	A
25	14	15	G
25	14	34	C
25	14	35	G
25	14	36	G
25	14	46	C
25	14	55	G
25	14	58	G
25	14	60	G
25	14	71	A
25	14	72	U
25	14	74	A
25	14	75	G
25	14	78	A
25	14	82	G
25	14	83	G
25	14	92	G
25	14	93	C
25	14	95	G
25	14	99	U
25	14	101	G
25	14	102	G
25	14	112	U
25	14	114	U
25	14	118	A
25	14	119	A
25	14	120	U
25	14	121	G
25	14	125	G
25	14	129	C
25	14	138	G
25	14	139	G
25	14	140	A
25	14	147	U
25	14	153	C
25	14	154	G
25	14	155	C
25	14	161	U
25	14	162	U
25	14	173	G

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Mol	Chain	Res	Type
25	14	174	C
25	14	175	G
25	14	196	A
25	14	197	A
25	14	199	A
25	14	214	G
25	14	215	G
25	14	216	A
25	14	221	A
25	14	222	A
25	14	225	A
25	14	229	A
25	14	232	G
25	14	233	A
25	14	244	A
25	14	248	G
25	14	249	C
25	14	252	G
25	14	265	A
25	14	267	C
25	14	270(F)	U
25	14	270(K)	C
25	14	270(L)	U
25	14	270(M)	U
25	14	270(O)	U
25	14	270(Z)	U
25	14	271(B)	G
25	14	271	G
25	14	273(C)	C
25	14	273(D)	C
25	14	274	G
25	14	275	G
25	14	276	A
25	14	277	C
25	14	278	A
25	14	279	C
25	14	283	A
25	14	289	A
25	14	290	G
25	14	292	C
25	14	311	A
25	14	312	G

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Mol	Chain	Res	Type
25	14	317	G
25	14	324	A
25	14	327	G
25	14	329	G
25	14	330	A
25	14	331	A
25	14	352	G
25	14	363	G
25	14	363(A)	A
25	14	363(D)	G
25	14	363(E)	U
25	14	363(F)	A
25	14	364	C
25	14	372	G
25	14	382	G
25	14	385	C
25	14	386	G
25	14	391	G
25	14	396	G
25	14	405	U
25	14	406	G
25	14	411	G
25	14	412	A
25	14	427	U
25	14	428	A
25	14	443	A
25	14	444	C
25	14	447	A
25	14	448	U
25	14	452	G
25	14	454	A
25	14	455	C
25	14	456	C
25	14	457	A
25	14	470	A
25	14	471	A
25	14	478	A
25	14	481	G
25	14	483	A
25	14	504	U
25	14	505	A
25	14	507	A

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Mol	Chain	Res	Type
25	14	509	C
25	14	527	C
25	14	528	A
25	14	530	G
25	14	531	C
25	14	532	A
25	14	533	G
25	14	537	C
25	14	543	C
25	14	546	C
25	14	547	A
25	14	549	G
25	14	556	G
25	14	558	G
25	14	563	G
25	14	573	G
25	14	575	A
25	14	592	G
25	14	603	A
25	14	606	U
25	14	607	U
25	14	609(A)	G
25	14	614	U
25	14	615	G
25	14	617	G
25	14	618	G
25	14	620	G
25	14	621	A
25	14	622	G
25	14	627	A
25	14	634	C
25	14	637	A
25	14	645	C
25	14	646	A
25	14	647	G
25	14	650	C
25	14	651	G
25	14	654	A
25	14	654(A)	A
25	14	654(E)	C
25	14	654(F)	C
25	14	654(G)	C

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Mol	Chain	Res	Type
25	14	654(H)	G
25	14	654(I)	C
25	14	654(K)	C
25	14	654(L)	G
25	14	654(N)	G
25	14	654(O)	G
25	14	654(Q)	C
25	14	654(T)	A
25	14	656	G
25	14	662	G
25	14	668	G
25	14	669	G
25	14	670	A
25	14	681	G
25	14	686	G
25	14	699	A
25	14	717	G
25	14	720	C
25	14	722	A
25	14	726	G
25	14	730	C
25	14	740	U
25	14	745	G
25	14	748	G
25	14	749	C
25	14	752	A
25	14	753	C
25	14	762	U
25	14	775	G
25	14	776	G
25	14	779	U
25	14	782	A
25	14	783	A
25	14	784	A
25	14	785	G
25	14	789	A
25	14	792	G
25	14	797	C
25	14	801	G
25	14	805	G
25	14	812	C
25	14	816	C

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Mol	Chain	Res	Type
25	14	819	A
25	14	827	U
25	14	828	U
25	14	831	G
25	14	832	G
25	14	845	G
25	14	846	C
25	14	848	G
25	14	859	G
25	14	863	A
25	14	878	A
25	14	880	G
25	14	881	G
25	14	882	G
25	14	885	C
25	14	886	C
25	14	887	A
25	14	888	C
25	14	889	C
25	14	890	A
25	14	896	A
25	14	897	C
25	14	899	A
25	14	901	A
25	14	903	C
25	14	904	C
25	14	905	U
25	14	906	G
25	14	907	U
25	14	910	A
25	14	911	A
25	14	914	C
25	14	915	C
25	14	917	A
25	14	918	A
25	14	922	U
25	14	932	G
25	14	933	A
25	14	934	G
25	14	935	C
25	14	941	A
25	14	945	A

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Mol	Chain	Res	Type
25	14	946	G
25	14	958	U
25	14	959	A
25	14	961	C
25	14	972	G
25	14	974	G
25	14	980	A
25	14	983	A
25	14	987	G
25	14	989	G
25	14	990	A
25	14	991	C
25	14	996	A
25	14	1012	U
25	14	1013	C
25	14	1017	G
25	14	1020	A
25	14	1022	G
25	14	1023	U
25	14	1024	G
25	14	1025	G
25	14	1026	U
25	14	1027	A
25	14	1028	A
25	14	1034	G
25	14	1037	G
25	14	1038	C
25	14	1039	G
25	14	1040	C
25	14	1044	G
25	14	1045	A
25	14	1046	A
25	14	1047	G
25	14	1048	A
25	14	1051	G
25	14	1053	C
25	14	1057	A
25	14	1060	U
25	14	1061	U
25	14	1062	G
25	14	1064	C
25	14	1065	U

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Mol	Chain	Res	Type
25	14	1067	A
25	14	1068	G
25	14	1070	A
25	14	1071	G
25	14	1073	A
25	14	1079	C
25	14	1080	A
25	14	1081	U
25	14	1083	U
25	14	1084	A
25	14	1085	A
25	14	1086	A
25	14	1087	G
25	14	1088	A
25	14	1090	U
25	14	1091	G
25	14	1093	G
25	14	1095	A
25	14	1096	A
25	14	1098	A
25	14	1099	G
25	14	1102	C
25	14	1105	U
25	14	1111	A
25	14	1112	G
25	14	1122	G
25	14	1126	A
25	14	1129	A
25	14	1130	U
25	14	1135	C
25	14	1136	G
25	14	1138	G
25	14	1139	G
25	14	1142	U
25	14	1142(A)	A
25	14	1143	A
25	14	1146	C
25	14	1148	A
25	14	1151	G
25	14	1155	A
25	14	1157	G
25	14	1170	G

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Mol	Chain	Res	Type
25	14	1171	G
25	14	1174	A
25	14	1175	U
25	14	1177	A
25	14	1178	C
25	14	1183	G
25	14	1203	G
25	14	1204	A
25	14	1205	U
25	14	1220	A
25	14	1221	C
25	14	1230	C
25	14	1236	G
25	14	1247	A
25	14	1248	G
25	14	1249	U
25	14	1250	G
25	14	1253	A
25	14	1256	G
25	14	1262	A
25	14	1271	G
25	14	1272	A
25	14	1273	U
25	14	1274	A
25	14	1275	A
25	14	1287	A
25	14	1300	U
25	14	1301	A
25	14	1313	U
25	14	1314	C
25	14	1321	A
25	14	1325	G
25	14	1332	G
25	14	1338	G
25	14	1342	A
25	14	1343	G
25	14	1345	C
25	14	1348	G
25	14	1349	A
25	14	1352	U
25	14	1354	A
25	14	1355	G

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Mol	Chain	Res	Type
25	14	1360	A
25	14	1365	A
25	14	1368	G
25	14	1370	C
25	14	1378	A
25	14	1380	G
25	14	1383	C
25	14	1385	G
25	14	1395	A
25	14	1400	G
25	14	1403	C
25	14	1405	U
25	14	1407	C
25	14	1416	G
25	14	1417	C
25	14	1419	A
25	14	1420	U
25	14	1421	G
25	14	1427	A
25	14	1428	C
25	14	1429	G
25	14	1444(A)	A
25	14	1445	C
25	14	1449	A
25	14	1449(A)	G
25	14	1451	C
25	14	1455	G
25	14	1459	G
25	14	1460	A
25	14	1467	C
25	14	1471	A
25	14	1475	G
25	14	1482	U
25	14	1483	G
25	14	1489	U
25	14	1490	A
25	14	1493	C
25	14	1494	A
25	14	1506	C
25	14	1508	A
25	14	1509	C
25	14	1510	A

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Mol	Chain	Res	Type
25	14	1520	U
25	14	1523	U
25	14	1525	G
25	14	1533	C
25	14	1535	U
25	14	1543	A
25	14	1548	C
25	14	1554	A
25	14	1558	A
25	14	1559	G
25	14	1560	G
25	14	1566	A
25	14	1569	A
25	14	1573	G
25	14	1578	U
25	14	1585	C
25	14	1586	A
25	14	1588	C
25	14	1593	G
25	14	1595	G
25	14	1598	C
25	14	1608	A
25	14	1609	A
25	14	1610	A
25	14	1614	A
25	14	1617	C
25	14	1618	A
25	14	1619	G
25	14	1628	G
25	14	1631	A
25	14	1639	U
25	14	1647	G
25	14	1648	C
25	14	1651	G
25	14	1654	A
25	14	1669	A
25	14	1670	C
25	14	1671	U
25	14	1674	G
25	14	1675	C
25	14	1682	G
25	14	1685	C

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Mol	Chain	Res	Type
25	14	1696	G
25	14	1700	A
25	14	1701	A
25	14	1725	G
25	14	1726	G
25	14	1728	G
25	14	1729	A
25	14	1730	U
25	14	1742	C
25	14	1743	G
25	14	1750	G
25	14	1758	G
25	14	1760	A
25	14	1762	A
25	14	1763	G
25	14	1764	G
25	14	1773	A
25	14	1776	G
25	14	1777	U
25	14	1780	A
25	14	1782	C
25	14	1791	A
25	14	1800	C
25	14	1801	G
25	14	1816	G
25	14	1819	A
25	14	1820	U
25	14	1829	A
25	14	1835	G
25	14	1836	C
25	14	1839	G
25	14	1840	G
25	14	1847	A
25	14	1848	A
25	14	1858	G
25	14	1860	G
25	14	1878	G
25	14	1883	G
25	14	1885	A
25	14	1893	C
25	14	1895	C
25	14	1896	G

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Mol	Chain	Res	Type
25	14	1900	A
25	14	1906	G
25	14	1914	C
25	14	1919	A
25	14	1929	G
25	14	1930	G
25	14	1936	A
25	14	1937	A
25	14	1938	A
25	14	1940	U
25	14	1951	U
25	14	1952	A
25	14	1955	U
25	14	1961	C
25	14	1963	U
25	14	1964	G
25	14	1967	C
25	14	1968	G
25	14	1970	A
25	14	1971	A
25	14	1972	A
25	14	1985	G
25	14	1986	A
25	14	1991	U
25	14	1992	G
25	14	1993	U
25	14	1994	C
25	14	2021	C
25	14	2023	G
25	14	2025	C
25	14	2031	A
25	14	2033	A
25	14	2039	C
25	14	2043	C
25	14	2049	G
25	14	2052	G
25	14	2055	C
25	14	2056	G
25	14	2058	A
25	14	2059	A
25	14	2060	A
25	14	2061	G

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Mol	Chain	Res	Type
25	14	2062	A
25	14	2066	C
25	14	2069	G
25	14	2071	A
25	14	2076	U
25	14	2082	A
25	14	2099	U
25	14	2100	G
25	14	2108	C
25	14	2110	G
25	14	2111	C
25	14	2112	G
25	14	2113	U
25	14	2114	A
25	14	2117	A
25	14	2118	U
25	14	2120	G
25	14	2121	G
25	14	2122	U
25	14	2123	G
25	14	2126	A
25	14	2127	G
25	14	2130	U
25	14	2131	G
25	14	2132	U
25	14	2133	G
25	14	2134	A
25	14	2136	C
25	14	2137	C
25	14	2140	C
25	14	2145	C
25	14	2146	C
25	14	2147	G
25	14	2148	G
25	14	2150	U
25	14	2161	C
25	14	2166	G
25	14	2167	U
25	14	2169	A
25	14	2170	A
25	14	2171	A
25	14	2172	U

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Mol	Chain	Res	Type
25	14	2173	A
25	14	2181	G
25	14	2189	U
25	14	2191	G
25	14	2192	G
25	14	2198	A
25	14	2210	G
25	14	2211	G
25	14	2212	A
25	14	2213	U
25	14	2215	G
25	14	2225	A
25	14	2226	C
25	14	2238	G
25	14	2249	U
25	14	2252	G
25	14	2261	C
25	14	2267	A
25	14	2268	A
25	14	2269	A
25	14	2273	A
25	14	2275	C
25	14	2278	A
25	14	2280	G
25	14	2281	C
25	14	2283	C
25	14	2287	A
25	14	2288	A
25	14	2303	G
25	14	2307	G
25	14	2308	G
25	14	2310	A
25	14	2311	A
25	14	2318	G
25	14	2321	G
25	14	2325	G
25	14	2334	G
25	14	2335	A
25	14	2336	A
25	14	2342	C
25	14	2346	A
25	14	2347	C

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Mol	Chain	Res	Type
25	14	2348	U
25	14	2350	C
25	14	2353	G
25	14	2354	G
25	14	2355	C
25	14	2372	G
25	14	2374	C
25	14	2383	G
25	14	2385	C
25	14	2388	A
25	14	2389	G
25	14	2392	A
25	14	2396	G
25	14	2400	G
25	14	2401	U
25	14	2402	C
25	14	2406	U
25	14	2407	G
25	14	2408	U
25	14	2410	G
25	14	2414	G
25	14	2422	A
25	14	2426	A
25	14	2429	G
25	14	2430	A
25	14	2431	U
25	14	2432	A
25	14	2435	A
25	14	2439	A
25	14	2440	C
25	14	2441	C
25	14	2445	G
25	14	2447	G
25	14	2448	A
25	14	2464	C
25	14	2468	G
25	14	2469	A
25	14	2470	G
25	14	2474	C
25	14	2475	C
25	14	2482	G
25	14	2483	C

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Mol	Chain	Res	Type
25	14	2484	G
25	14	2486	G
25	14	2496	C
25	14	2497	A
25	14	2502	G
25	14	2504	U
25	14	2505	G
25	14	2506	U
25	14	2507	C
25	14	2518	A
25	14	2520	C
25	14	2532	G
25	14	2537	U
25	14	2542	A
25	14	2543	G
25	14	2549	G
25	14	2554	U
25	14	2556	C
25	14	2564	A
25	14	2566	A
25	14	2567	G
25	14	2569	G
25	14	2573	C
25	14	2574	G
25	14	2582	G
25	14	2585	U
25	14	2602	A
25	14	2603	G
25	14	2609	U
25	14	2611	U
25	14	2612	C
25	14	2613	U
25	14	2615	U
25	14	2617	C
25	14	2630	G
25	14	2636	U
25	14	2646	C
25	14	2656	U
25	14	2665	A
25	14	2667	C
25	14	2670	A
25	14	2673	G

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Mol	Chain	Res	Type
25	14	2689	U
25	14	2690	C
25	14	2691	C
25	14	2700	C
25	14	2702	U
25	14	2703	C
25	14	2707	G
25	14	2712(A)	A
25	14	2713	A
25	14	2714	G
25	14	2726	U
25	14	2731	G
25	14	2733	A
25	14	2739	U
25	14	2741	A
25	14	2744	G
25	14	2748	A
25	14	2750	A
25	14	2751	G
25	14	2752	C
25	14	2754	U
25	14	2757	A
25	14	2758	A
25	14	2762	G
25	14	2764	A
25	14	2765	A
25	14	2766	G
25	14	2777	G
25	14	2778	A
25	14	2779	U
25	14	2789	C
25	14	2790	A
25	14	2791	C
25	14	2794	C
25	14	2797	U
25	14	2818	G
25	14	2820	A
25	14	2821	A
25	14	2833	G
25	14	2834	G
25	14	2835	A
25	14	2836	U

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Mol	Chain	Res	Type
25	14	2839	G
25	14	2849	U
25	14	2860	A
25	14	2872	G
25	14	2873	A
25	14	2874	C
25	14	2876	G
25	14	2879	C
25	14	2880	C
25	14	2892	A
25	14	2894	G
25	14	2896	C
26	1J	0	A
26	1J	8	U
26	1J	13	A
26	1J	15	A
26	1J	16	G
26	1J	22	U
26	1J	25	A
26	1J	26	A
26	1J	28	C
26	1J	29	A
26	1J	30	C
26	1J	32	C
26	1J	34	U
26	1J	41	U
26	1J	42	C
26	1J	44	G
26	1J	45	A
26	1J	52	A
26	1J	53	A
26	1J	73	A
26	1J	76	G
26	1J	81	G
26	1J	88	C
26	1J	89	G
26	1J	89(A)	A
26	1J	90	C
26	1J	94	C
26	1J	99	A
26	1J	101	A
26	1J	102	G

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Mol	Chain	Res	Type
26	1J	109	G

All (185) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	115	G
1	13	190	G
1	13	244	U
1	13	266	G
1	13	327	A
1	13	352	C
1	13	412	A
1	13	421	U
1	13	422	C
1	13	429	U
1	13	438	G
1	13	484	G
1	13	509	A
1	13	703	G
1	13	748	C
1	13	793	U
1	13	913	A
1	13	991	U
1	13	992	U
1	13	1025	U
1	13	1027	C
1	13	1054	C
1	13	1064	G
1	13	1177	G
1	13	1285	A
1	13	1301	U
1	13	1452	C
1	13	1498	U
1	13	1503	A
1	13	1504	G
1	13	1529	G
22	1K	3	U
22	1K	6	G
22	1K	69	U
22	1K	78	C
23	2K	20	G
23	2K	47	7MG

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Mol	Chain	Res	Type
23	2K	48	U
22	3K	17	OMG
22	3K	18	G
22	3K	67	A
25	1H	195	A
25	1H	196	A
25	1H	199	A
25	1H	229	A
25	1H	271(B)	G
25	1H	404	C
25	1H	508	G
25	1H	574	C
25	1H	587	C
25	1H	685	A
25	1H	746	A
25	1H	752	A
25	1H	764	A
25	1H	800	A
25	1H	858	U
25	1H	859	G
25	1H	1022	G
25	1H	1026	U
25	1H	1060	U
25	1H	1081	U
25	1H	1084	A
25	1H	1110	G
25	1H	1178	C
25	1H	1312	U
25	1H	1379	A
25	1H	1451	C
25	1H	1508	A
25	1H	1543	A
25	1H	1558	A
25	1H	1559	G
25	1H	1608	A
25	1H	1609	A
25	1H	1617	C
25	1H	1639	U
25	1H	1653	G
25	1H	1694	C
25	1H	1698	A
25	1H	1757	U

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Mol	Chain	Res	Type
25	1H	1780	A
25	1H	1799	G
25	1H	1913	A
25	1H	1929	G
25	1H	1992	G
25	1H	2019	A
25	1H	2157	G
25	1H	2171	A
25	1H	2351	G
25	1H	2428	G
25	1H	2439	A
25	1H	2448	A
25	1H	2476	A
25	1H	2481	G
25	1H	2566	A
25	1H	2611	U
25	1H	2689	U
25	1H	2756	U
54	1G	64	G
54	1G	115	G
54	1G	197	A
54	1G	209	U
54	1G	244	U
54	1G	250	A
54	1G	266	G
54	1G	327	A
54	1G	328	C
54	1G	345	C
54	1G	412	A
54	1G	413	G
54	1G	429	U
54	1G	509	A
54	1G	560	U
54	1G	630	G
54	1G	687	A
54	1G	748	C
54	1G	793	U
54	1G	812	C
54	1G	913	A
54	1G	992	U
54	1G	1053	G
54	1G	1054	C

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Mol	Chain	Res	Type
54	1G	1126	U
54	1G	1128	C
54	1G	1157	A
54	1G	1285	A
54	1G	1297	C
54	1G	1300	G
54	1G	1346	A
54	1G	1394	A
54	1G	1396	A
54	1G	1442	G
54	1G	1453	G
54	1G	1498	U
54	1G	1506	U
55	1L	3	U
55	1L	57	C
55	1L	75	C
55	1L	78	C
56	2L	21	H2U
56	2L	48	U
55	3L	8	U
55	3L	18	G
55	3L	57	C
57	4L	13	A
25	14	128	C
25	14	196	A
25	14	197	A
25	14	278	A
25	14	310	A
25	14	503	A
25	14	529	A
25	14	614	U
25	14	669	G
25	14	746	A
25	14	752	A
25	14	827	U
25	14	877	U
25	14	1022	G
25	14	1085	A
25	14	1379	A
25	14	1416	G
25	14	1420	U
25	14	1558	A

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Mol	Chain	Res	Type
25	14	1647	G
25	14	1819	A
25	14	1905	C
25	14	1963	U
25	14	1992	G
25	14	2126	A
25	14	2191	G
25	14	2212	A
25	14	2335	A
25	14	2406	U
25	14	2439	A
25	14	2506	U
25	14	2602	A
25	14	2611	U
25	14	2629	A
25	14	2689	U
25	14	2756	U
25	14	2776	A
25	14	2859	G
25	14	2893	G
26	1J	52	A
26	1J	56	G

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

25 non-standard protein/DNA/RNA residues are modelled in this entry.

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	$\#\|Z\| > 2$
23	OMC	2K	33	23	19,22,23	1.67	3 (15%)	25,31,34	0.95	1 (4%)
22	OMG	1K	17	22	23,26,27	5.02	10 (43%)	32,38,41	4.64	20 (62%)
23	4SU	2K	8	23	18,21,22	1.97	3 (16%)	25,30,33	2.92	5 (20%)
22	PSU	1K	64	22	18,21,22	1.19	1 (5%)	21,30,33	1.84	4 (19%)
22	OMG	3K	17	22	23,26,27	5.10	11 (47%)	32,38,41	4.65	18 (56%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	4SU	3K	8	22	18,21,22	1.91	5 (27%)	25,30,33	2.59	7 (28%)
22	MIA	1K	38	22	28,31,32	2.39	4 (14%)	38,44,47	2.83	14 (36%)
22	4SU	1K	8	22	18,21,22	2.05	5 (27%)	25,30,33	2.08	4 (16%)
22	5MU	1K	63	22	19,22,23	4.02	5 (26%)	27,32,35	3.29	10 (37%)
22	PSU	3K	64	22	18,21,22	1.35	1 (5%)	21,30,33	1.70	4 (19%)
23	PSU	2K	56	23	18,21,22	1.18	2 (11%)	21,30,33	2.05	5 (23%)
56	OMC	2L	33	56	19,22,23	1.79	4 (21%)	25,31,34	0.98	1 (4%)
23	5MU	2K	55	23	19,22,23	3.89	5 (26%)	27,32,35	3.41	8 (29%)
56	4SU	2L	8	56	18,21,22	2.17	5 (27%)	25,30,33	2.61	6 (24%)
56	PSU	2L	56	56	18,21,22	1.32	2 (11%)	21,30,33	1.69	2 (9%)
22	QUO	1K	35	24,22	32,35,36	4.79	12 (37%)	36,52,55	4.47	12 (33%)
23	7MG	2K	47	23	23,26,27	2.96	6 (26%)	27,39,42	2.95	9 (33%)
23	H2U	2K	21	23	18,21,22	2.65	4 (22%)	19,30,33	1.60	4 (21%)
56	H2U	2L	21	56	18,21,22	2.44	3 (16%)	19,30,33	1.62	4 (21%)
22	QUO	3K	35	22	32,35,36	4.94	13 (40%)	36,52,55	4.68	11 (30%)
22	5MU	3K	63	22	19,22,23	3.98	5 (26%)	27,32,35	3.12	9 (33%)
56	5MU	2L	55	56	19,22,23	3.76	5 (26%)	27,32,35	3.31	10 (37%)
22	PSU	3K	40	22	18,21,22	1.39	1 (5%)	21,30,33	1.64	3 (14%)
22	MIA	3K	38	22	28,31,32	2.61	5 (17%)	38,44,47	2.86	12 (31%)
22	PSU	1K	40	22	18,21,22	1.11	1 (5%)	21,30,33	1.71	4 (19%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	OMC	2K	33	23	-	0/9/27/28	0/2/2/2
22	OMG	1K	17	22	-	3/9/27/28	0/3/3/3
23	4SU	2K	8	23	-	0/7/25/26	0/2/2/2
22	PSU	1K	64	22	-	0/7/25/26	0/2/2/2
22	OMG	3K	17	22	-	4/9/27/28	0/3/3/3
22	4SU	3K	8	22	-	2/7/25/26	0/2/2/2
22	MIA	1K	38	22	-	5/15/33/34	0/3/3/3
22	4SU	1K	8	22	-	3/7/25/26	0/2/2/2
22	5MU	1K	63	22	-	4/7/25/26	0/2/2/2
22	PSU	3K	64	22	-	1/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	PSU	2K	56	23	-	0/7/25/26	0/2/2/2
56	OMC	2L	33	56	-	0/9/27/28	0/2/2/2
23	5MU	2K	55	23	-	0/7/25/26	0/2/2/2
56	4SU	2L	8	56	-	0/7/25/26	0/2/2/2
56	PSU	2L	56	56	-	0/7/25/26	0/2/2/2
22	QUO	1K	35	24,22	-	5/12/43/44	0/4/4/4
23	7MG	2K	47	23	-	4/7/37/38	0/3/3/3
23	H2U	2K	21	23	-	4/7/38/39	0/2/2/2
56	H2U	2L	21	56	-	2/7/38/39	0/2/2/2
22	QUO	3K	35	22	-	2/12/43/44	0/4/4/4
22	5MU	3K	63	22	-	0/7/25/26	0/2/2/2
56	5MU	2L	55	56	-	0/7/25/26	0/2/2/2
22	PSU	3K	40	22	-	1/7/25/26	0/2/2/2
22	MIA	3K	38	22	-	6/15/33/34	0/3/3/3
22	PSU	1K	40	22	-	2/7/25/26	0/2/2/2

All (121) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	35	QUO	C4-N3	16.84	1.72	1.34
22	1K	35	QUO	C4-N3	15.92	1.70	1.34
22	1K	63	5MU	C2-N1	13.53	1.59	1.38
22	3K	63	5MU	C2-N1	12.98	1.58	1.38
23	2K	55	5MU	C2-N1	12.58	1.58	1.38
22	1K	35	QUO	C6-N1	-12.53	1.15	1.38
22	3K	35	QUO	C6-N1	-12.29	1.15	1.38
22	3K	17	OMG	C4-N3	11.81	1.61	1.34
56	2L	55	5MU	C2-N1	11.77	1.56	1.38
22	1K	17	OMG	C4-N3	11.59	1.60	1.34
22	1K	17	OMG	C5-N7	-11.46	1.16	1.39
22	3K	17	OMG	C5-N7	-11.40	1.16	1.39
23	2K	21	H2U	C2-N1	8.76	1.47	1.35
22	3K	17	OMG	C4-N9	8.72	1.60	1.38
22	1K	17	OMG	C8-N7	-8.53	1.08	1.32
22	1K	38	MIA	C13-C14	8.52	1.57	1.32
22	3K	17	OMG	C8-N7	-8.42	1.09	1.32
22	1K	17	OMG	C4-N9	8.40	1.59	1.38
22	3K	38	MIA	C13-C14	8.37	1.57	1.32
22	3K	17	OMG	C5-C4	8.35	1.62	1.38
22	1K	35	QUO	C8-N9	-8.22	1.23	1.38
22	1K	17	OMG	C5-C4	8.20	1.61	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	35	QUO	C2-N3	8.13	1.52	1.33
22	3K	38	MIA	C6-N6	8.11	1.47	1.34
22	3K	35	QUO	C8-N9	-8.02	1.24	1.38
23	2K	47	7MG	C4-N9	-7.75	1.28	1.37
56	2L	21	H2U	C2-N1	7.73	1.46	1.35
22	3K	17	OMG	C6-N1	-7.46	1.24	1.38
22	1K	35	QUO	C4-N9	-7.32	1.19	1.38
22	1K	17	OMG	C6-N1	-7.28	1.25	1.38
22	1K	35	QUO	C2-N3	7.24	1.50	1.33
22	1K	38	MIA	C6-N6	7.10	1.45	1.34
22	3K	35	QUO	C8-C7	6.83	1.50	1.37
23	2K	47	7MG	C5-N7	6.65	1.44	1.35
22	1K	35	QUO	C5-C6	-6.64	1.29	1.44
22	3K	35	QUO	C5-C6	-6.62	1.29	1.44
56	2L	8	4SU	C5-C4	6.56	1.50	1.42
22	3K	35	QUO	C4-N9	-6.47	1.21	1.38
23	2K	8	4SU	C5-C4	6.39	1.50	1.42
22	1K	8	4SU	C5-C4	6.31	1.50	1.42
22	1K	35	QUO	C8-C7	6.24	1.49	1.37
56	2L	55	5MU	C4-N3	-6.17	1.27	1.38
22	3K	63	5MU	C4-N3	-6.04	1.27	1.38
22	1K	63	5MU	C2-N3	5.92	1.48	1.38
23	2K	55	5MU	C4-N3	-5.89	1.27	1.38
23	2K	47	7MG	C4-N3	5.88	1.47	1.34
56	2L	55	5MU	C2-N3	5.85	1.48	1.38
22	3K	63	5MU	C2-N3	5.83	1.48	1.38
22	3K	63	5MU	C6-N1	5.73	1.47	1.38
23	2K	55	5MU	C2-N3	5.69	1.47	1.38
22	1K	63	5MU	C6-N1	5.61	1.47	1.38
22	1K	63	5MU	C4-N3	-5.60	1.28	1.38
22	3K	38	MIA	C2-S10	5.60	1.80	1.75
22	3K	8	4SU	C5-C4	5.58	1.49	1.42
23	2K	55	5MU	C6-N1	5.50	1.47	1.38
23	2K	55	5MU	C4-C5	5.41	1.53	1.44
56	2L	55	5MU	C6-N1	5.20	1.46	1.38
56	2L	55	5MU	C4-C5	5.16	1.53	1.44
22	3K	35	QUO	C13-C12	-5.09	1.48	1.53
22	3K	63	5MU	C4-C5	5.05	1.53	1.44
22	3K	40	PSU	C6-C5	4.94	1.40	1.35
23	2K	21	H2U	C2-N3	4.78	1.46	1.38
23	2K	47	7MG	C8-N7	4.75	1.65	1.42
23	2K	33	OMC	C2-N3	4.72	1.45	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1K	63	5MU	C4-C5	4.69	1.52	1.44
23	2K	47	7MG	C5-C4	-4.63	1.23	1.37
56	2L	21	H2U	C2-N3	4.61	1.46	1.38
22	3K	64	PSU	C6-C5	4.57	1.40	1.35
56	2L	33	OMC	C2-N3	4.57	1.45	1.36
22	1K	35	QUO	C13-C12	-4.57	1.48	1.53
22	1K	17	OMG	C8-N9	-4.57	1.27	1.37
22	3K	17	OMG	C8-N9	-4.50	1.27	1.37
56	2L	56	PSU	C6-C5	4.48	1.40	1.35
22	3K	35	QUO	C2-N2	4.33	1.44	1.34
23	2K	21	H2U	C4-N3	4.24	1.44	1.37
23	2K	33	OMC	C4-N4	4.22	1.44	1.33
56	2L	33	OMC	C4-N4	4.19	1.44	1.33
22	1K	8	4SU	C2-N1	4.11	1.44	1.38
56	2L	21	H2U	C4-N3	4.10	1.44	1.37
22	3K	8	4SU	C2-N1	4.03	1.44	1.38
22	1K	38	MIA	C2-S10	4.00	1.79	1.75
56	2L	8	4SU	C2-N1	3.96	1.44	1.38
22	1K	64	PSU	C6-C5	3.95	1.39	1.35
23	2K	56	PSU	C6-C5	3.71	1.39	1.35
23	2K	8	4SU	C2-N1	3.64	1.44	1.38
22	1K	40	PSU	C6-C5	3.58	1.39	1.35
56	2L	33	OMC	C5-C4	3.54	1.51	1.42
22	1K	35	QUO	C2-N2	3.52	1.42	1.34
56	2L	8	4SU	C4-N3	3.31	1.41	1.37
22	3K	17	OMG	C2-N2	3.13	1.41	1.34
22	3K	17	OMG	C2-N3	3.08	1.40	1.33
22	1K	17	OMG	C2-N2	3.01	1.41	1.34
56	2L	8	4SU	C6-N1	2.90	1.45	1.38
23	2K	33	OMC	C5-C4	2.89	1.49	1.42
22	1K	8	4SU	C6-N1	2.80	1.44	1.38
23	2K	47	7MG	C2-N2	2.79	1.40	1.34
22	3K	35	QUO	C14-C13	-2.79	1.49	1.53
22	1K	17	OMG	C2-N3	2.72	1.39	1.33
22	1K	38	MIA	C5-N7	-2.71	1.34	1.39
23	2K	8	4SU	C6-N1	2.69	1.44	1.38
22	3K	35	QUO	C5-C7	2.67	1.56	1.43
22	3K	17	OMG	O6-C6	-2.67	1.18	1.23
22	3K	8	4SU	C6-N1	2.62	1.44	1.38
22	1K	35	QUO	C16-C15	2.60	1.61	1.54
22	3K	35	QUO	C16-C15	2.57	1.61	1.54
22	1K	35	QUO	C5-C7	2.50	1.55	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	2K	56	PSU	C4-C5	-2.50	1.37	1.44
22	1K	17	OMG	O6-C6	-2.48	1.18	1.23
22	3K	38	MIA	C5-C4	2.45	1.43	1.39
56	2L	56	PSU	C2-N1	2.43	1.39	1.36
22	1K	35	QUO	C2-N1	-2.33	1.32	1.37
22	1K	8	4SU	C2-N3	2.26	1.41	1.38
23	2K	21	H2U	C6-N1	-2.20	1.43	1.47
56	2L	8	4SU	C2-N3	2.19	1.41	1.38
22	3K	8	4SU	C4-N3	2.18	1.39	1.37
22	3K	8	4SU	C2-N3	2.18	1.41	1.38
56	2L	33	OMC	C6-N1	2.13	1.43	1.38
22	1K	8	4SU	C4-N3	2.09	1.39	1.37
22	3K	35	QUO	C2-N1	-2.05	1.32	1.37
22	3K	38	MIA	C15-C14	2.01	1.55	1.50
22	3K	17	OMG	C2-N1	-2.01	1.32	1.37

All (187) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	3K	35	QUO	C5-C4-N3	-18.49	106.30	127.53
22	1K	35	QUO	C5-C4-N3	-17.93	106.94	127.53
23	2K	55	5MU	C5-C4-N3	11.58	125.39	115.32
22	3K	35	QUO	N9-C4-N3	11.56	149.07	125.95
22	1K	17	OMG	C6-C5-N7	11.33	150.92	130.29
22	3K	17	OMG	C6-C5-N7	11.26	150.78	130.29
22	1K	35	QUO	N9-C4-N3	11.15	148.24	125.95
22	1K	63	5MU	C5-C4-N3	11.11	124.98	115.32
22	3K	35	QUO	C7-C8-N9	-10.42	101.35	111.08
22	3K	63	5MU	C5-C4-N3	10.20	124.19	115.32
22	3K	17	OMG	C8-N7-C5	10.05	122.16	104.26
22	1K	17	OMG	C8-N7-C5	9.97	122.03	104.26
23	2K	8	4SU	C4-N3-C2	-9.78	117.94	127.31
56	2L	55	5MU	C5-C4-N3	9.73	123.78	115.32
22	3K	17	OMG	N9-C4-N3	9.50	144.96	125.95
22	1K	35	QUO	C1'-N9-C8	-9.49	114.96	125.72
22	1K	17	OMG	N9-C4-N3	9.17	144.28	125.95
22	3K	38	MIA	C12-C13-C14	-8.59	111.60	127.01
23	2K	47	7MG	C4-C5-N7	8.58	115.52	105.38
22	1K	35	QUO	C7-C8-N9	-8.30	103.33	111.08
56	2L	8	4SU	C4-N3-C2	-8.27	119.39	127.31
22	1K	38	MIA	C12-C13-C14	-8.00	112.64	127.01
22	1K	17	OMG	C6-C5-C4	-7.97	106.83	118.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	3K	17	OMG	C6-C5-C4	-7.79	107.11	118.83
22	3K	35	QUO	C1'-N9-C8	-7.71	116.98	125.72
22	3K	17	OMG	C1'-N9-C4	7.60	148.94	126.49
22	1K	38	MIA	C11-S10-C2	7.58	107.94	102.25
22	3K	38	MIA	C5-C4-N3	-7.44	119.34	127.18
22	3K	8	4SU	C4-N3-C2	-7.35	120.27	127.31
23	2K	8	4SU	C5-C4-N3	7.08	121.34	114.75
22	1K	17	OMG	C1'-N9-C4	7.08	147.39	126.49
22	1K	8	4SU	C4-N3-C2	-6.99	120.61	127.31
22	1K	63	5MU	O4-C4-C5	-6.90	117.03	124.92
22	3K	35	QUO	C7-C5-C4	-6.63	105.08	112.68
56	2L	55	5MU	C4-N3-C2	-6.46	118.87	127.34
22	1K	38	MIA	C5-C4-N3	-6.38	120.46	127.18
23	2K	55	5MU	C4-N3-C2	-6.35	119.02	127.34
22	3K	17	OMG	C5-C6-N1	6.35	129.40	113.25
56	2L	55	5MU	C6-C5-C4	6.28	123.20	118.02
22	3K	38	MIA	C11-S10-C2	6.22	106.92	102.25
56	2L	55	5MU	C5-C6-N1	-6.20	116.58	123.31
22	1K	17	OMG	C5-C6-N1	6.15	128.90	113.25
22	1K	35	QUO	C7-C5-C4	-6.10	105.68	112.68
23	2K	55	5MU	C5-C6-N1	-6.03	116.76	123.31
23	2K	47	7MG	C5-C4-N9	5.89	113.88	106.33
23	2K	47	7MG	C6-C5-N7	-5.86	122.86	131.93
22	3K	63	5MU	C4-N3-C2	-5.76	119.78	127.34
22	1K	17	OMG	C5-C4-N9	-5.74	95.38	105.66
56	2L	8	4SU	C5-C4-S4	-5.73	117.77	124.31
22	1K	63	5MU	C4-N3-C2	-5.71	119.85	127.34
22	3K	17	OMG	C5-C4-N9	-5.69	95.47	105.66
56	2L	8	4SU	C5-C4-N3	5.63	119.99	114.75
22	3K	17	OMG	C5-C4-N3	-5.54	119.57	128.39
22	3K	38	MIA	N3-C4-N9	5.48	133.95	126.99
22	3K	8	4SU	C5-C4-S4	-5.47	118.05	124.31
22	3K	17	OMG	C4-C5-N7	-5.41	102.11	110.67
23	2K	55	5MU	O4-C4-C5	-5.38	118.76	124.92
22	1K	17	OMG	C4-C5-N7	-5.31	102.25	110.67
22	3K	63	5MU	C6-C5-C4	5.23	122.33	118.02
22	3K	63	5MU	C5-C6-N1	-5.22	117.64	123.31
22	3K	35	QUO	C5-C6-N1	5.12	129.20	115.10
23	2K	55	5MU	C5M-C5-C6	-5.10	115.95	122.85
22	1K	17	OMG	C5-C4-N3	-5.07	120.33	128.39
23	2K	8	4SU	N3-C2-N1	5.05	121.47	114.89
22	3K	8	4SU	C5-C4-N3	4.96	119.36	114.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	3K	17	OMG	C1'-N9-C8	-4.85	112.94	126.73
22	3K	63	5MU	O4-C4-C5	-4.81	119.41	124.92
22	3K	17	OMG	N9-C8-N7	4.73	122.17	113.40
23	2K	8	4SU	C5-C4-S4	-4.68	118.97	124.31
56	2L	55	5MU	C5M-C5-C6	-4.67	116.53	122.85
56	2L	56	PSU	C4-N3-C2	-4.67	119.94	126.37
23	2K	56	PSU	N1-C2-N3	4.65	120.07	115.17
22	1K	17	OMG	N9-C8-N7	4.60	121.93	113.40
22	1K	8	4SU	C5-C4-N3	4.59	119.02	114.75
22	1K	64	PSU	C4-N3-C2	-4.52	120.14	126.37
23	2K	55	5MU	C6-C5-C4	4.52	121.75	118.02
22	3K	8	4SU	C1'-N1-C2	4.48	125.64	117.59
22	1K	17	OMG	C1'-N9-C8	-4.47	114.02	126.73
22	1K	35	QUO	C5-C6-N1	4.46	127.39	115.10
22	1K	40	PSU	C4-N3-C2	-4.43	120.27	126.37
56	2L	55	5MU	O4-C4-C5	-4.30	120.00	124.92
22	1K	38	MIA	N3-C4-N9	4.30	132.45	126.99
22	3K	35	QUO	N1-C2-N3	-4.29	115.46	123.32
22	3K	63	5MU	C5M-C5-C6	-4.26	117.08	122.85
22	3K	38	MIA	C16-C14-C13	-4.26	109.87	122.66
22	1K	40	PSU	N1-C2-N3	4.26	119.66	115.17
22	1K	38	MIA	C5-N7-C8	4.25	110.12	103.45
22	3K	17	OMG	C8-N9-C4	-4.24	98.08	106.03
56	2L	8	4SU	N3-C2-N1	4.22	120.38	114.89
22	1K	64	PSU	N1-C2-N3	4.20	119.60	115.17
23	2K	56	PSU	C4-N3-C2	-4.19	120.60	126.37
23	2K	56	PSU	C6-N1-C2	-4.18	118.81	122.69
22	3K	64	PSU	C4-N3-C2	-4.15	120.65	126.37
22	3K	8	4SU	N3-C2-N1	4.13	120.27	114.89
22	1K	63	5MU	C5M-C5-C6	-4.11	117.28	122.85
22	1K	17	OMG	O6-C6-C5	-4.09	115.74	126.53
22	1K	17	OMG	C8-N9-C4	-4.08	98.38	106.03
22	1K	38	MIA	C16-C14-C13	-4.08	110.42	122.66
23	2K	47	7MG	C5-C6-N1	4.04	118.05	110.94
22	3K	17	OMG	O6-C6-C5	-4.02	115.91	126.53
22	3K	64	PSU	N1-C2-N3	4.00	119.39	115.17
22	3K	35	QUO	C1'-N9-C4	-3.99	114.70	126.49
22	1K	38	MIA	C15-C14-C13	-3.95	110.82	122.66
22	3K	40	PSU	C4-N3-C2	-3.94	120.94	126.37
56	2L	21	H2U	C5-C6-N1	3.93	123.41	111.52
22	1K	38	MIA	C4-C5-N7	-3.92	106.10	110.58
22	1K	8	4SU	N3-C2-N1	3.92	120.00	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	3K	38	MIA	C5-N7-C8	3.92	109.61	103.45
56	2L	56	PSU	N1-C2-N3	3.92	119.30	115.17
23	2K	56	PSU	O2-C2-N1	-3.92	118.75	122.79
23	2K	47	7MG	C5-C4-N3	-3.92	120.78	128.13
22	1K	63	5MU	C5-C6-N1	-3.90	119.08	123.31
22	3K	38	MIA	C15-C14-C13	-3.87	111.04	122.66
23	2K	21	H2U	C5-C4-N3	3.77	120.70	116.69
22	1K	63	5MU	C6-C5-C4	3.77	121.12	118.02
22	3K	40	PSU	N1-C2-N3	3.75	119.12	115.17
22	1K	63	5MU	C1'-N1-C2	3.73	124.29	117.59
22	3K	38	MIA	C4-C5-N7	-3.72	106.33	110.58
23	2K	47	7MG	O6-C6-C5	-3.70	118.53	127.62
23	2K	47	7MG	C2-N3-C4	3.64	118.57	112.30
56	2L	55	5MU	O2-C2-N1	-3.50	118.24	122.80
23	2K	21	H2U	C5-C6-N1	3.45	121.97	111.52
22	1K	38	MIA	N9-C8-N7	-3.44	109.06	113.94
23	2K	55	5MU	C5M-C5-C4	3.30	122.30	118.78
22	1K	17	OMG	C2-N1-C6	3.28	131.06	125.11
22	3K	38	MIA	C2-N3-C4	3.22	120.71	112.29
22	1K	63	5MU	C6-N1-C2	-3.15	118.16	121.30
22	3K	35	QUO	O6-C6-C5	-3.14	116.27	125.69
56	2L	21	H2U	C5-C4-N3	3.14	120.03	116.69
22	3K	17	OMG	C2-N1-C6	3.09	130.72	125.11
23	2K	47	7MG	N9-C8-N7	-3.04	99.07	103.37
22	1K	8	4SU	C5-C4-S4	-3.03	120.84	124.31
22	1K	35	QUO	N1-C2-N3	-3.02	117.80	123.32
23	2K	47	7MG	C2-N1-C6	-3.01	119.65	125.11
56	2L	55	5MU	N3-C2-N1	2.98	118.78	114.89
22	3K	63	5MU	C6-N1-C2	-2.98	118.34	121.30
22	3K	35	QUO	O6-C6-N1	-2.97	114.53	120.11
22	1K	35	QUO	C1'-N9-C4	-2.94	117.81	126.49
22	3K	17	OMG	O6-C6-N1	-2.89	114.69	120.11
22	3K	64	PSU	O2-C2-N1	-2.88	119.82	122.79
22	1K	64	PSU	C6-N1-C2	-2.86	120.04	122.69
22	1K	17	OMG	N2-C2-N1	2.84	122.76	116.76
22	1K	17	OMG	O2'-C2'-C1'	2.84	114.38	108.99
22	1K	35	QUO	O6-C6-C5	-2.77	117.39	125.69
22	3K	38	MIA	C6-C5-N7	2.73	135.40	132.43
22	1K	38	MIA	C4-C5-C6	2.70	119.02	116.78
23	2K	21	H2U	O2-C2-N3	-2.69	116.53	121.49
22	1K	38	MIA	C16-C14-C15	-2.68	108.42	114.59
23	2K	33	OMC	N4-C4-N3	2.67	122.68	117.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	2L	8	4SU	O2-C2-N1	-2.64	119.36	122.80
22	1K	63	5MU	C5M-C5-C4	2.63	121.59	118.78
22	3K	64	PSU	C6-N1-C2	-2.62	120.26	122.69
22	1K	35	QUO	O6-C6-N1	-2.60	115.22	120.11
22	1K	64	PSU	O2-C2-N1	-2.59	120.11	122.79
22	1K	17	OMG	N1-C2-N3	-2.59	118.59	123.32
22	1K	35	QUO	N2-C2-N1	2.59	122.22	116.76
22	3K	17	OMG	N1-C2-N3	-2.58	118.59	123.32
22	3K	35	QUO	N2-C2-N1	2.57	122.19	116.76
56	2L	55	5MU	C6-N1-C2	-2.54	118.77	121.30
22	1K	40	PSU	C6-N1-C2	-2.54	120.33	122.69
22	1K	17	OMG	O6-C6-N1	-2.53	115.36	120.11
22	1K	38	MIA	C2-N3-C4	2.47	118.77	112.29
22	3K	38	MIA	N3-C2-N1	-2.46	122.51	127.00
22	3K	8	4SU	C1'-N1-C6	-2.45	115.53	120.78
22	1K	17	OMG	C3'-C2'-C1'	-2.43	98.15	102.81
22	3K	38	MIA	N9-C8-N7	-2.41	110.52	113.94
23	2K	21	H2U	N3-C2-N1	2.40	119.06	116.65
22	3K	17	OMG	N2-C2-N1	2.40	121.82	116.76
23	2K	8	4SU	C1'-N1-C2	2.37	121.85	117.59
56	2L	21	H2U	O2-C2-N3	-2.32	117.20	121.49
22	1K	35	QUO	O14-C14-C13	2.32	116.00	111.43
22	1K	17	OMG	CM2-O2'-C2'	2.30	120.37	114.47
22	1K	40	PSU	O2-C2-N1	-2.28	120.43	122.79
22	3K	8	4SU	S4-C4-N3	2.27	122.58	120.20
22	3K	40	PSU	C6-N1-C2	-2.27	120.58	122.69
23	2K	55	5MU	O4-C4-N3	-2.27	115.85	120.11
22	1K	38	MIA	C6-C5-N7	2.25	134.88	132.43
56	2L	21	H2U	N3-C2-N1	2.21	118.87	116.65
22	1K	63	5MU	C1'-N1-C6	-2.19	117.54	121.15
22	3K	63	5MU	N3-C2-N1	2.17	117.72	114.89
56	2L	8	4SU	C1'-N1-C2	2.14	121.43	117.59
22	3K	63	5MU	C1'-N1-C2	2.13	121.41	117.59
56	2L	33	OMC	N4-C4-N3	2.09	121.65	117.91
56	2L	55	5MU	O4-C4-N3	-2.07	116.22	120.11
22	1K	38	MIA	C2-N1-C6	2.06	121.44	117.54
23	2K	56	PSU	O4-C4-C5	-2.04	118.95	124.01
22	3K	17	OMG	CM2-O2'-C2'	2.03	119.70	114.47

There are no chirality outliers.

All (48) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	1K	8	4SU	C3'-C4'-C5'-O5'
22	1K	8	4SU	O4'-C4'-C5'-O5'
22	1K	17	OMG	C1'-C2'-O2'-CM2
22	3K	17	OMG	C1'-C2'-O2'-CM2
22	1K	35	QUO	O4'-C4'-C5'-O5'
22	1K	35	QUO	C13-C12-N11-C10
22	1K	35	QUO	C16-C12-N11-C10
22	3K	35	QUO	C13-C12-N11-C10
22	1K	38	MIA	N6-C12-C13-C14
22	1K	38	MIA	C12-C13-C14-C15
22	1K	38	MIA	C12-C13-C14-C16
22	3K	38	MIA	N1-C2-S10-C11
22	3K	38	MIA	N3-C2-S10-C11
22	3K	38	MIA	C12-C13-C14-C16
22	1K	63	5MU	C3'-C4'-C5'-O5'
23	2K	21	H2U	C2'-C1'-N1-C2
56	2L	21	H2U	C2'-C1'-N1-C2
22	1K	40	PSU	C3'-C4'-C5'-O5'
22	1K	40	PSU	O4'-C4'-C5'-O5'
22	3K	17	OMG	C3'-C4'-C5'-O5'
22	1K	35	QUO	C3'-C4'-C5'-O5'
22	1K	63	5MU	O4'-C4'-C5'-O5'
23	2K	47	7MG	O4'-C4'-C5'-O5'
23	2K	47	7MG	C3'-C4'-C5'-O5'
22	3K	35	QUO	C7-C10-N11-C12
23	2K	21	H2U	C2'-C1'-N1-C6
56	2L	21	H2U	C2'-C1'-N1-C6
22	1K	38	MIA	N1-C6-N6-C12
22	1K	17	OMG	O4'-C4'-C5'-O5'
22	1K	17	OMG	C3'-C4'-C5'-O5'
22	3K	64	PSU	C4'-C5'-O5'-P
22	1K	38	MIA	C5-C6-N6-C12
22	3K	38	MIA	N1-C6-N6-C12
22	3K	17	OMG	O4'-C4'-C5'-O5'
22	3K	38	MIA	C5-C6-N6-C12
23	2K	47	7MG	C2'-C1'-N9-C8
22	3K	38	MIA	C3'-C4'-C5'-O5'
23	2K	21	H2U	C3'-C4'-C5'-O5'
23	2K	21	H2U	O4'-C4'-C5'-O5'
22	3K	40	PSU	O4'-C1'-C5-C4
22	1K	63	5MU	C4'-C5'-O5'-P
22	1K	35	QUO	C7-C10-N11-C12
23	2K	47	7MG	O4'-C1'-N9-C8

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Mol	Chain	Res	Type	Atoms
22	3K	8	4SU	C2'-C1'-N1-C6
22	1K	8	4SU	C2'-C1'-N1-C2
22	3K	17	OMG	C3'-C2'-O2'-CM2
22	3K	8	4SU	C2'-C1'-N1-C2
22	1K	63	5MU	C2'-C1'-N1-C2

There are no ring outliers.

20 monomers are involved in 42 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	1K	17	OMG	3	0
23	2K	8	4SU	1	0
22	1K	64	PSU	2	0
22	3K	17	OMG	3	0
22	3K	8	4SU	2	0
22	1K	38	MIA	5	0
22	1K	8	4SU	1	0
22	1K	63	5MU	2	0
22	3K	64	PSU	1	0
56	2L	33	OMC	1	0
23	2K	55	5MU	2	0
56	2L	8	4SU	1	0
56	2L	56	PSU	1	0
22	1K	35	QUO	6	0
23	2K	47	7MG	3	0
23	2K	21	H2U	1	0
56	2L	21	H2U	1	0
22	3K	35	QUO	2	0
56	2L	55	5MU	2	0
22	3K	38	MIA	4	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1166 ligands modelled in this entry, 1166 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
54	1G	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	1G	1530:G	O3'	1531:A	P	3.04

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	13	1498/1522 (98%)	0.69	203 (13%) 7 4	53, 97, 184, 399	0
2	12	237/256 (92%)	1.36	53 (22%) 2 1	130, 169, 209, 225	0
2	1E	237/256 (92%)	1.03	36 (15%) 5 3	106, 143, 183, 208	0
3	22	206/239 (86%)	2.05	83 (40%) 0 0	131, 148, 178, 208	0
3	2E	205/239 (85%)	0.74	19 (9%) 14 7	84, 106, 147, 160	0
4	32	208/209 (99%)	0.88	25 (12%) 9 5	94, 116, 145, 163	0
4	3E	208/209 (99%)	0.69	23 (11%) 10 5	78, 104, 133, 148	0
5	42	151/162 (93%)	1.79	48 (31%) 1 0	104, 128, 145, 174	0
5	4E	151/162 (93%)	0.80	18 (11%) 9 5	73, 99, 121, 159	0
6	52	101/101 (100%)	0.37	4 (3%) 42 23	86, 101, 124, 148	0
6	5E	101/101 (100%)	0.68	8 (7%) 18 9	82, 104, 122, 147	0
7	62	155/156 (99%)	1.54	32 (20%) 2 1	107, 125, 147, 172	0
7	6E	155/156 (99%)	1.51	37 (23%) 2 1	99, 117, 150, 172	0
8	72	138/138 (100%)	1.96	42 (30%) 1 1	103, 129, 141, 146	0
8	7E	138/138 (100%)	0.83	17 (12%) 8 5	86, 107, 122, 130	0
9	82	127/128 (99%)	1.23	29 (22%) 2 1	112, 160, 189, 195	0
9	8E	127/128 (99%)	0.87	20 (15%) 5 2	87, 138, 174, 191	0
10	1A	99/105 (94%)	1.19	19 (19%) 3 1	125, 160, 189, 204	0
10	1I	99/105 (94%)	1.38	21 (21%) 2 1	84, 135, 166, 180	0
11	2A	119/129 (92%)	1.62	24 (20%) 3 1	90, 112, 142, 222	0
11	2I	116/129 (89%)	1.07	17 (14%) 6 3	75, 106, 136, 169	0
12	3A	125/132 (94%)	1.65	30 (24%) 2 1	84, 106, 150, 179	0
12	3I	125/132 (94%)	1.30	26 (20%) 2 1	65, 74, 119, 207	0
13	4A	117/126 (92%)	1.21	19 (16%) 4 2	113, 148, 183, 198	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	4I	116/126 (92%)	0.72	11 (9%) 14 7	82, 125, 146, 160	0
14	5A	58/61 (95%)	1.58	16 (27%) 1 1	130, 150, 162, 165	0
14	5I	61/61 (100%)	0.56	7 (11%) 9 5	85, 96, 116, 139	0
15	6A	88/89 (98%)	0.33	5 (5%) 29 15	82, 113, 134, 140	0
15	6I	88/89 (98%)	0.69	10 (11%) 10 5	78, 99, 119, 132	0
16	7A	84/88 (95%)	0.80	10 (11%) 9 5	88, 105, 134, 165	0
16	7I	84/88 (95%)	1.18	13 (15%) 5 2	97, 113, 152, 171	0
17	8A	100/105 (95%)	1.28	21 (21%) 2 1	92, 111, 131, 172	0
17	8I	100/105 (95%)	0.91	17 (17%) 4 2	85, 103, 119, 129	0
18	9A	69/88 (78%)	0.55	4 (5%) 29 15	94, 116, 143, 162	0
18	9I	72/88 (81%)	0.67	5 (6%) 23 11	87, 108, 156, 177	0
19	AA	82/93 (88%)	0.94	11 (13%) 7 4	144, 164, 200, 218	0
19	AI	83/93 (89%)	1.22	14 (16%) 4 2	93, 125, 162, 185	0
20	BA	99/106 (93%)	1.56	39 (39%) 1 0	85, 108, 139, 170	0
20	BI	99/106 (93%)	2.37	44 (44%) 0 0	107, 121, 164, 171	0
21	1B	25/27 (92%)	1.00	2 (8%) 18 9	114, 135, 154, 180	0
21	1F	22/27 (81%)	1.33	2 (9%) 15 8	96, 108, 115, 122	0
22	1K	78/85 (91%)	1.42	15 (19%) 3 1	84, 149, 162, 175	0
22	3K	78/85 (91%)	1.02	12 (15%) 5 2	68, 166, 190, 197	0
23	2K	71/77 (92%)	1.00	10 (14%) 6 3	65, 89, 122, 126	0
24	4K	15/27 (55%)	1.04	2 (13%) 7 4	54, 93, 173, 180	1 (6%)
25	14	2907/2917 (99%)	0.30	253 (8%) 16 9	46, 81, 243, 482	0
25	1H	2912/2917 (99%)	0.20	218 (7%) 20 10	35, 69, 228, 380	0
26	16	122/122 (100%)	0.11	1 (0%) 82 63	64, 90, 115, 254	0
26	1J	122/122 (100%)	0.84	14 (11%) 9 5	79, 115, 142, 216	0
27	11	272/276 (98%)	0.16	13 (4%) 35 18	38, 61, 80, 92	0
27	19	273/276 (98%)	0.31	17 (6%) 26 13	43, 70, 87, 100	0
28	21	205/206 (99%)	0.64	23 (11%) 10 5	46, 86, 143, 168	0
28	29	205/206 (99%)	1.03	38 (18%) 3 2	56, 90, 162, 204	0
29	31	202/210 (96%)	0.55	22 (10%) 10 5	41, 75, 128, 144	0
29	39	208/210 (99%)	1.51	62 (29%) 1 1	56, 99, 181, 218	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
30	41	181/182 (99%)	1.07	34 (18%) 3 2	81, 107, 149, 173	0
30	49	181/182 (99%)	0.86	25 (13%) 6 4	110, 135, 175, 194	0
31	51	174/180 (96%)	1.03	32 (18%) 3 2	80, 105, 120, 146	0
31	59	171/180 (95%)	2.07	65 (38%) 1 0	138, 195, 241, 262	0
32	61	146/148 (98%)	1.50	36 (24%) 2 1	72, 128, 153, 163	0
32	69	146/148 (98%)	2.34	67 (45%) 0 0	77, 127, 159, 170	0
33	15	138/140 (98%)	1.10	25 (18%) 3 2	72, 103, 140, 162	0
33	58	138/140 (98%)	0.73	13 (9%) 14 7	62, 87, 134, 151	0
34	25	122/122 (100%)	0.57	10 (8%) 17 9	62, 84, 103, 109	0
34	68	122/122 (100%)	0.73	15 (12%) 8 5	53, 73, 90, 105	0
35	35	150/150 (100%)	1.30	36 (24%) 2 1	57, 105, 148, 199	0
35	78	150/150 (100%)	0.55	14 (9%) 14 7	43, 80, 110, 179	0
36	45	138/141 (97%)	0.91	20 (14%) 6 3	72, 104, 132, 153	0
36	88	141/141 (100%)	0.68	16 (11%) 10 5	55, 77, 101, 124	0
37	55	117/118 (99%)	0.91	19 (16%) 4 2	56, 76, 93, 114	0
37	98	118/118 (100%)	1.04	21 (17%) 4 2	56, 80, 99, 114	0
38	65	111/112 (99%)	0.61	9 (8%) 18 9	88, 112, 136, 157	0
38	A8	111/112 (99%)	0.98	23 (20%) 2 1	72, 87, 122, 145	0
39	75	137/146 (93%)	1.12	28 (20%) 3 1	75, 92, 156, 208	0
39	B8	136/146 (93%)	1.31	32 (23%) 2 1	70, 91, 146, 166	0
40	85	117/118 (99%)	1.41	29 (24%) 2 1	61, 89, 141, 183	0
40	C8	117/118 (99%)	0.71	13 (11%) 10 5	49, 77, 129, 152	0
41	95	101/101 (100%)	2.18	31 (30%) 1 1	59, 129, 145, 163	0
41	D8	101/101 (100%)	1.44	24 (23%) 2 1	52, 106, 146, 167	0
42	A5	113/113 (100%)	0.51	10 (8%) 15 8	58, 71, 109, 189	0
42	E8	113/113 (100%)	0.21	3 (2%) 56 33	51, 69, 100, 167	0
43	B5	92/96 (95%)	0.64	9 (9%) 13 6	64, 79, 106, 118	0
43	F8	94/96 (97%)	0.12	4 (4%) 40 21	52, 68, 95, 109	0
44	C5	104/110 (94%)	1.63	36 (34%) 1 0	90, 118, 184, 206	0
44	G8	102/110 (92%)	0.96	17 (16%) 4 2	64, 93, 138, 169	0
45	D5	179/206 (86%)	1.37	37 (20%) 2 1	111, 159, 253, 266	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
45	H8	175/206 (84%)	0.76	16 (9%) 15 8	83, 130, 215, 234	0
46	E5	77/85 (90%)	0.51	5 (6%) 25 12	64, 85, 108, 157	0
46	I8	77/85 (90%)	0.58	8 (10%) 11 6	53, 69, 93, 148	0
47	F5	97/98 (98%)	0.93	23 (23%) 2 1	57, 80, 139, 192	0
47	J8	93/98 (94%)	0.53	12 (12%) 7 4	48, 68, 134, 163	0
48	G5	66/72 (91%)	1.09	14 (21%) 2 1	78, 100, 122, 175	0
48	K8	66/72 (91%)	1.25	15 (22%) 2 1	54, 78, 98, 148	0
49	H5	59/60 (98%)	0.87	8 (13%) 7 4	77, 97, 153, 166	0
49	L8	59/60 (98%)	0.20	3 (5%) 33 17	58, 77, 114, 136	0
50	I5	63/71 (88%)	0.94	8 (12%) 8 4	153, 212, 237, 256	0
50	M8	66/71 (92%)	1.12	9 (13%) 7 4	111, 171, 226, 241	0
51	J5	58/60 (96%)	1.99	24 (41%) 0 0	55, 84, 168, 218	0
51	N8	49/60 (81%)	0.70	7 (14%) 6 3	45, 64, 135, 149	0
52	L5	45/49 (91%)	-0.19	3 (6%) 24 12	47, 56, 67, 77	0
52	P8	45/49 (91%)	-0.10	1 (2%) 62 39	38, 45, 58, 78	0
53	M5	60/65 (92%)	0.48	6 (10%) 12 6	66, 77, 112, 129	0
53	Q8	62/65 (95%)	0.80	6 (9%) 13 7	56, 70, 96, 108	0
54	1G	1498/1522 (98%)	0.93	240 (16%) 5 2	69, 115, 181, 370	0
55	1L	85/85 (100%)	1.64	16 (18%) 3 2	124, 157, 168, 180	0
55	3L	85/85 (100%)	0.98	11 (12%) 7 4	75, 171, 201, 208	0
56	2L	72/77 (93%)	0.68	9 (12%) 8 4	74, 105, 136, 141	0
57	4L	16/27 (59%)	0.98	3 (18%) 3 2	93, 136, 209, 217	0
All	All	20977/21616 (97%)	0.78	2984 (14%) 6 3	35, 99, 186, 482	1 (0%)

All (2984) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	2A	129	SER	28.5
7	62	81	GLY	15.5
11	2A	128	ALA	15.2
54	1G	966	G	14.3
11	2A	127	LYS	14.1
54	1G	965	A	13.3
7	62	82	GLY	12.9

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Mol	Chain	Res	Type	RSRZ
13	4A	6	GLY	12.4
12	3A	19	ARG	12.1
31	59	96	ALA	12.0
29	39	96	ASP	11.9
36	88	80	GLU	11.8
11	2A	125	PHE	11.6
39	75	104	ASN	11.6
8	72	1	MET	11.5
13	4A	4	ILE	11.4
25	14	1026	U	11.3
12	3I	127	GLU	11.3
33	15	84	LYS	11.3
11	2A	126	ARG	11.2
2	12	163	PHE	11.1
54	1G	1531	A	11.1
39	B8	104	ASN	11.0
22	3K	19	C	11.0
54	1G	1286	A	11.0
41	95	74	LYS	10.9
7	6E	5	ARG	10.8
3	22	158	GLY	10.8
31	59	100	GLY	10.8
31	51	171	LEU	10.7
41	95	73	SER	10.7
23	2K	1	C	10.6
26	1J	88	C	10.5
41	95	83	ARG	10.4
25	1H	2119	A	10.4
1	13	311	C	10.3
54	1G	1251	A	10.3
11	2I	12	ARG	10.3
2	12	133	LYS	10.2
25	1H	2476	A	10.2
8	72	87	SER	10.1
11	2I	123	LYS	10.1
32	61	118	LYS	10.0
12	3A	5	PRO	10.0
20	BI	18	GLN	10.0
8	72	2	LEU	9.9
40	85	20	LEU	9.8
7	6E	32	ARG	9.8
8	72	86	ILE	9.8

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Mol	Chain	Res	Type	RSRZ
8	72	88	LYS	9.8
8	72	92	ARG	9.7
54	1G	969	A	9.6
55	1L	33	C	9.6
10	1A	58	ASP	9.6
25	1H	2477	C	9.6
7	62	80	VAL	9.5
7	62	84	ASN	9.5
32	69	11	ASN	9.5
11	2I	124	LYS	9.5
7	62	85	TYR	9.4
48	K8	15	LYS	9.3
32	61	41	GLU	9.3
25	14	2146	C	9.2
32	69	10	GLU	9.2
41	95	93	GLU	9.1
25	14	2145	C	9.1
54	1G	1117	G	9.1
30	41	26	GLN	9.0
5	42	81	GLU	9.0
41	95	71	LEU	9.0
49	H5	17	LYS	8.9
5	42	124	GLY	8.9
32	69	34	GLY	8.9
19	AI	2	PRO	8.8
7	6E	4	ARG	8.8
1	13	308	C	8.8
12	3A	13	LYS	8.7
1	13	110	C	8.7
28	29	76	ARG	8.7
12	3I	128	ALA	8.6
40	85	40	PHE	8.6
11	2I	11	LYS	8.6
37	98	69	ASP	8.5
54	1G	968	A	8.5
11	2I	125	PHE	8.5
12	3A	16	GLU	8.5
25	1H	2116	G	8.5
1	13	111	G	8.4
40	85	17	ILE	8.4
7	62	83	ALA	8.4
41	95	75	PHE	8.4

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Mol	Chain	Res	Type	RSRZ
40	85	44	ASN	8.3
20	BI	70	SER	8.2
7	62	32	ARG	8.2
21	1F	16	GLY	8.2
5	42	126	ARG	8.2
31	59	40	GLU	8.1
1	13	309	G	8.1
13	4A	7	VAL	8.1
8	72	4	ASP	8.0
33	15	85	ILE	8.0
14	5A	6	LEU	8.0
16	7I	29	ASP	8.0
25	14	1538	G	8.0
25	14	1537	C	7.9
32	69	35	LEU	7.9
7	6E	82	GLY	7.9
39	B8	106	SER	7.9
54	1G	967	C	7.9
31	51	172	LYS	7.9
41	95	68	LYS	7.9
1	13	307	C	7.8
3	22	10	PHE	7.8
41	95	81	TYR	7.8
54	1G	824	C	7.7
1	13	230	G	7.7
31	59	89	ILE	7.7
25	1H	2113	U	7.7
22	1K	33	C	7.7
8	7E	91	ARG	7.6
8	72	91	ARG	7.6
41	95	70	ILE	7.6
20	BI	72	LEU	7.6
25	14	967	C	7.6
7	6E	33	ASP	7.5
3	22	15	THR	7.5
33	15	74	ARG	7.5
25	14	2147	G	7.5
1	13	1286	A	7.5
8	72	89	PRO	7.5
3	2E	179	ARG	7.5
7	62	77	SER	7.5
32	61	20	ASP	7.4

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Mol	Chain	Res	Type	RSRZ
54	1G	1235	U	7.4
8	72	3	THR	7.4
8	7E	4	ASP	7.4
7	6E	81	GLY	7.4
25	1H	2112	G	7.4
48	K8	66	GLU	7.4
8	72	93	VAL	7.3
40	85	43	GLY	7.3
54	1G	1285	A	7.3
51	J5	26	THR	7.3
7	6E	84	ASN	7.3
1	13	310	G	7.3
7	62	86	GLN	7.2
2	12	70	PHE	7.2
20	BI	68	LYS	7.2
32	69	1	MET	7.2
25	1H	756	C	7.2
1	13	607	A	7.2
12	3I	16	GLU	7.1
12	3A	9	GLN	7.1
54	1G	877	C	7.1
20	BA	20	LEU	7.1
1	13	112	G	7.1
29	39	93	LYS	7.1
40	85	16	LYS	7.1
7	62	79	ARG	7.1
9	8E	126	SER	7.1
12	3I	17	LYS	7.0
3	22	160	ALA	7.0
51	J5	24	ALA	7.0
31	51	170	ARG	7.0
54	1G	1116	C	7.0
39	B8	109	GLU	7.0
54	1G	825	G	7.0
4	32	156	GLU	7.0
34	68	31	LYS	7.0
3	22	13	GLY	7.0
48	K8	69	ARG	7.0
22	1K	85	A	6.9
13	4A	2	ALA	6.9
13	4A	5	ALA	6.9
37	55	8	ARG	6.9

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Mol	Chain	Res	Type	RSRZ
55	1L	85	A	6.9
50	M8	34	GLU	6.9
54	1G	1249	C	6.9
5	42	88	LYS	6.9
25	1H	1383	C	6.8
54	1G	1250	A	6.8
5	42	125	SER	6.8
25	1H	2709	G	6.8
32	69	6	LEU	6.8
37	55	69	ASP	6.8
8	72	9	MET	6.8
25	1H	2170	A	6.8
54	1G	964	A	6.8
54	1G	823	G	6.8
25	1H	2712	U	6.7
32	69	22	LYS	6.7
35	35	110	TYR	6.7
25	1H	232	G	6.7
54	1G	876	G	6.7
50	M8	32	TYR	6.7
9	82	115	GLY	6.7
10	1I	64	GLU	6.7
25	14	2119	A	6.6
37	55	43	GLU	6.6
29	39	92	PRO	6.6
56	2L	35	C	6.6
25	14	530	G	6.6
31	59	39	PRO	6.6
32	69	118	LYS	6.6
9	82	127	LYS	6.5
31	59	103	LEU	6.5
25	14	1816	G	6.5
25	14	2111	C	6.5
5	4E	122	GLU	6.5
8	72	85	ARG	6.4
11	2I	126	ARG	6.4
37	98	21	TYR	6.4
5	42	122	GLU	6.4
25	1H	2117	A	6.4
54	1G	1236	A	6.4
12	3I	20	LYS	6.4
32	69	144	VAL	6.4

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Mol	Chain	Res	Type	RSRZ
8	72	84	ARG	6.4
51	N8	26	THR	6.4
3	22	206	GLU	6.4
28	21	75	VAL	6.4
54	1G	568	G	6.3
8	72	90	GLY	6.3
11	2A	122	LYS	6.3
33	15	72	TYR	6.3
25	1H	2690	C	6.3
1	13	231	G	6.3
29	39	56	GLU	6.3
54	1G	1149	C	6.3
35	35	16	ARG	6.3
11	2A	123	LYS	6.3
25	1H	1761	C	6.3
34	25	74	GLY	6.3
41	95	80	GLN	6.3
31	59	106	THR	6.2
41	D8	74	LYS	6.2
17	8A	7	THR	6.2
1	13	312	C	6.2
1	13	1342	C	6.2
54	1G	1234	C	6.2
8	7E	1	MET	6.2
17	8A	33	GLY	6.2
8	72	133	LEU	6.2
25	1H	1404	C	6.2
41	95	76	LYS	6.2
7	62	33	ASP	6.2
12	3I	19	ARG	6.1
1	13	134	A	6.1
44	C5	22	GLY	6.1
44	C5	23	ARG	6.1
1	13	965	A	6.1
20	BI	69	GLY	6.1
25	14	561	G	6.1
25	14	2148	G	6.1
25	1H	2118	U	6.1
15	6I	65	ARG	6.0
20	BI	22	ARG	6.0
31	59	87	LEU	6.0
7	6E	8	GLU	6.0

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Mol	Chain	Res	Type	RSRZ
12	3A	20	LYS	6.0
54	1G	1354	C	6.0
7	62	13	GLN	6.0
29	39	79	GLY	6.0
30	41	25	TYR	6.0
25	1H	2712(A)	A	6.0
33	58	84	LYS	6.0
12	3A	28	LYS	6.0
54	1G	953	G	6.0
54	1G	963	G	6.0
28	21	52	LEU	6.0
55	1L	34	U	6.0
41	D8	75	PHE	5.9
3	2E	161	GLU	5.9
41	95	21	ARG	5.9
2	1E	13	ALA	5.9
11	2A	124	LYS	5.9
25	1H	2189	U	5.9
28	29	151	TYR	5.9
32	69	20	ASP	5.9
31	59	99	VAL	5.9
1	13	933	G	5.9
4	3E	80	GLU	5.9
2	1E	133	LYS	5.9
9	82	65	VAL	5.9
31	59	123	PHE	5.9
1	13	1325	C	5.9
25	1H	2145	C	5.9
37	98	7	GLY	5.9
28	21	78	LEU	5.9
32	69	7	GLU	5.9
17	8I	35	VAL	5.9
29	39	98	SER	5.9
54	1G	822	C	5.8
39	75	101	PHE	5.8
54	1G	230	G	5.8
20	BI	67	ALA	5.8
32	61	2	LYS	5.8
41	D8	71	LEU	5.8
32	69	21	VAL	5.8
37	98	17	ARG	5.8
7	6E	35	LYS	5.8

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Mol	Chain	Res	Type	RSRZ
27	19	38	LYS	5.8
1	13	822	C	5.8
54	1G	569	C	5.8
25	14	1093	G	5.8
13	4A	8	GLU	5.8
14	5A	55	GLY	5.8
44	G8	34	LYS	5.7
11	2A	120	ARG	5.7
20	BI	25	ARG	5.7
32	61	22	LYS	5.7
36	45	1	MET	5.7
25	14	2110	G	5.7
8	7E	88	LYS	5.7
31	59	131	VAL	5.7
3	22	17	ASP	5.7
33	15	100	GLU	5.7
4	3E	209	ARG	5.7
48	K8	14	ARG	5.7
1	13	45	U	5.7
54	1G	821	G	5.7
24	4K	19[A]	A	5.7
49	H5	20	LYS	5.6
5	4E	123	LEU	5.6
1	13	1343	G	5.6
31	59	104	GLU	5.6
35	35	74	GLU	5.6
1	13	135	C	5.6
26	1J	89	G	5.6
20	BI	21	LYS	5.6
4	32	160	GLN	5.6
7	62	78	ARG	5.6
1	13	390	C	5.6
1	13	389	A	5.6
5	42	82	VAL	5.5
31	59	38	SER	5.5
8	72	132	GLU	5.5
28	21	76	ARG	5.5
32	69	9	LEU	5.5
33	58	72	TYR	5.5
8	72	6	ILE	5.5
9	82	75	ASP	5.5
25	14	2118	U	5.5

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Mol	Chain	Res	Type	RSRZ
15	6I	62	GLN	5.5
37	98	15	SER	5.5
44	C5	29	GLU	5.5
3	22	9	GLY	5.5
1	13	262	A	5.5
54	1G	1115	C	5.5
7	6E	38	LEU	5.5
37	98	18	LEU	5.5
8	7E	93	VAL	5.5
45	D5	155	LEU	5.4
54	1G	1400	C	5.4
25	1H	1762	A	5.4
3	22	155	GLY	5.4
11	2A	121	PRO	5.4
12	3A	48	PRO	5.4
39	75	109	GLU	5.4
36	45	104	PHE	5.4
41	D8	81	TYR	5.4
22	1K	82	A	5.4
48	G5	9	GLN	5.4
1	13	1437	C	5.4
8	7E	90	GLY	5.4
30	49	85	GLY	5.4
5	4E	128	PRO	5.4
2	12	134	GLU	5.4
13	4I	8	GLU	5.4
20	BI	20	LEU	5.4
33	15	73	THR	5.4
1	13	137	C	5.4
5	4E	124	GLY	5.4
41	95	67	GLY	5.4
54	1G	1150	U	5.3
9	82	106	ALA	5.3
32	69	112	LYS	5.3
12	3A	14	GLY	5.3
1	13	755	G	5.3
5	4E	88	LYS	5.3
25	1H	654(I)	C	5.3
39	75	106	SER	5.3
12	3I	14	GLY	5.3
5	42	90	VAL	5.3
31	51	114	VAL	5.3

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Mol	Chain	Res	Type	RSRZ
19	AI	78	ARG	5.3
2	12	33	TYR	5.3
17	8A	32	TYR	5.3
41	95	69	LYS	5.3
37	55	6	SER	5.3
1	13	1341	U	5.3
25	1H	1272	A	5.3
54	1G	91	C	5.3
25	14	2144	U	5.3
7	6E	34	GLY	5.2
51	J5	10	LYS	5.2
25	14	1407	C	5.2
25	1H	2190	G	5.2
12	3I	91	LYS	5.2
19	AI	56	GLN	5.2
55	3L	63	U	5.2
1	13	1531	A	5.2
2	12	14	GLY	5.2
53	Q8	63	PRO	5.2
51	J5	14	ALA	5.2
23	2K	74	A	5.1
41	D8	82	ARG	5.1
30	41	102	PHE	5.1
39	B8	51	ARG	5.1
25	14	1406	U	5.1
1	13	328	C	5.1
51	J5	13	LYS	5.1
39	B8	101	PHE	5.1
54	1G	1392	G	5.1
45	H8	66	SER	5.1
5	42	83	GLU	5.1
17	8I	33	GLY	5.1
31	51	151	ILE	5.0
32	69	14	ASP	5.0
1	13	1230	C	5.0
25	14	1625	C	5.0
31	59	128	PRO	5.0
13	4A	3	ARG	5.0
39	75	112	ARG	5.0
54	1G	1196	U	5.0
54	1G	1364	U	5.0
37	98	47	PHE	5.0

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Mol	Chain	Res	Type	RSRZ
1	13	108	G	5.0
1	13	306	G	5.0
12	3I	13	LYS	5.0
32	61	117	GLU	5.0
41	95	79	VAL	5.0
47	F5	27	GLU	5.0
55	1L	35	G	5.0
25	14	229	A	5.0
20	BI	95	ALA	5.0
32	69	91	SER	5.0
45	D5	172	ALA	5.0
26	1J	41	U	5.0
19	AI	81	ARG	5.0
30	41	35	GLU	5.0
1	13	391	G	4.9
8	72	5	PRO	4.9
54	1G	1529	G	4.9
25	1H	2710	C	4.9
29	39	97	TYR	4.9
41	95	77	ALA	4.9
37	98	43	GLU	4.9
46	E5	21	LEU	4.9
47	F5	98	LEU	4.9
41	D8	50	PRO	4.9
21	1F	15	ARG	4.9
41	D8	84	LYS	4.9
35	35	13	ASN	4.9
43	B5	69	TYR	4.9
9	82	126	SER	4.9
37	98	14	SER	4.9
8	72	134	ILE	4.9
25	14	1384	A	4.9
5	4E	126	ARG	4.9
12	3I	129	ALA	4.9
54	1G	1370	G	4.9
2	1E	31	TYR	4.9
37	55	21	TYR	4.9
8	7E	2	LEU	4.9
29	39	51	THR	4.9
34	68	66	LYS	4.9
44	C5	63	LYS	4.9
40	85	41	ALA	4.9

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Mol	Chain	Res	Type	RSRZ
35	35	35	HIS	4.9
20	BA	24	LEU	4.9
1	13	105	G	4.9
25	1H	2406	U	4.9
32	69	36	ALA	4.8
53	Q8	61	LEU	4.8
12	3I	21	LYS	4.8
22	1K	84	C	4.8
55	1L	32	A	4.8
40	85	48	ALA	4.8
4	32	161	ASN	4.8
41	D8	78	LYS	4.8
28	21	193	GLY	4.8
31	59	148	ILE	4.8
54	1G	1287	A	4.8
7	6E	79	ARG	4.8
8	72	131	GLY	4.8
20	BA	97	ALA	4.8
35	78	68	GLN	4.8
41	D8	77	ALA	4.8
2	12	93	VAL	4.8
32	69	12	LEU	4.8
39	B8	115	ARG	4.8
11	2I	25	TYR	4.8
34	68	26	LYS	4.8
29	39	78	ILE	4.7
25	1H	2111	C	4.7
29	39	24	LEU	4.7
3	22	8	ILE	4.7
1	13	44	G	4.7
41	95	91	TYR	4.7
47	F5	28	GLY	4.7
41	95	72	VAL	4.7
25	14	394	A	4.7
25	14	1305	C	4.7
25	14	1735	C	4.7
41	D8	45	THR	4.7
28	29	152	LYS	4.7
45	D5	165	VAL	4.7
25	1H	1092	C	4.7
25	1H	1384	A	4.7
7	62	41	ARG	4.7

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Mol	Chain	Res	Type	RSRZ
45	D5	141	VAL	4.7
20	BI	71	THR	4.7
45	D5	120	ILE	4.7
2	1E	228	GLY	4.7
37	55	5	LYS	4.7
5	42	105	VAL	4.7
36	88	81	VAL	4.7
54	1G	90	C	4.7
54	1G	883	C	4.7
37	98	71	GLN	4.6
41	D8	80	GLN	4.6
20	BA	71	THR	4.6
16	7I	27	LYS	4.6
45	D5	156	LYS	4.6
5	42	15	ARG	4.6
34	68	80	ASP	4.6
40	C8	86	ALA	4.6
23	2K	77	A	4.6
25	1H	899	A	4.6
41	D8	70	ILE	4.6
1	13	1383	C	4.6
11	2I	122	LYS	4.6
3	22	177	THR	4.6
31	59	122	THR	4.6
20	BI	16	HIS	4.6
39	75	99	LEU	4.6
37	55	7	GLY	4.6
45	D5	154	ASP	4.6
29	39	50	SER	4.6
41	D8	73	SER	4.6
11	2A	11	LYS	4.6
35	78	70	GLN	4.6
37	55	9	LYS	4.6
25	14	968	G	4.6
25	14	2271	G	4.6
54	1G	73	G	4.6
54	1G	1289	A	4.6
1	13	1384	C	4.6
38	A8	41	ASP	4.6
3	22	131	ARG	4.6
20	BI	96	GLY	4.6
7	6E	80	VAL	4.6

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Mol	Chain	Res	Type	RSRZ
44	C5	24	VAL	4.6
50	I5	32	TYR	4.6
25	14	1536	A	4.6
18	9A	59	SER	4.6
54	1G	377	G	4.6
29	39	95	ARG	4.6
32	69	33	ARG	4.6
2	12	71	VAL	4.6
45	D5	153	SER	4.5
7	62	37	ASN	4.5
32	69	37	VAL	4.5
54	1G	1482	G	4.5
3	22	159	GLY	4.5
28	29	115	GLY	4.5
41	D8	79	VAL	4.5
39	75	94	ALA	4.5
25	14	2690	C	4.5
31	59	95	ARG	4.5
1	13	823	G	4.5
2	1E	11	LEU	4.5
3	22	7	PRO	4.5
5	42	123	LEU	4.5
54	1G	89	U	4.5
17	8A	27	PHE	4.5
41	95	63	GLY	4.5
47	F5	77	ALA	4.5
51	J5	25	LEU	4.5
53	Q8	62	LEU	4.5
38	A8	43	GLU	4.5
36	45	138	ASP	4.5
28	29	136	ARG	4.5
33	15	90	MET	4.5
41	95	65	GLY	4.5
25	14	1396	U	4.5
11	2A	71	LYS	4.5
32	61	7	GLU	4.5
12	3A	12	ARG	4.5
25	1H	1660	C	4.4
5	4E	125	SER	4.4
12	3A	7	ILE	4.4
2	12	132	LYS	4.4
7	62	4	ARG	4.4

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Mol	Chain	Res	Type	RSRZ
35	35	18	ARG	4.4
1	13	43	C	4.4
25	14	1092	C	4.4
54	1G	1352	C	4.4
36	88	78	PRO	4.4
1	13	292	G	4.4
25	1H	2334	G	4.4
12	3A	8	ASN	4.4
12	3A	15	ARG	4.4
5	4E	90	VAL	4.4
25	14	1349	A	4.4
25	1H	2527	C	4.4
31	59	105	LEU	4.4
44	C5	31	LEU	4.4
27	19	5	LYS	4.4
30	49	74	LYS	4.4
32	61	40	THR	4.4
25	14	975	G	4.4
5	42	128	PRO	4.4
31	51	159	GLU	4.4
32	61	39	ALA	4.4
5	42	20	GLN	4.4
25	1H	2711	A	4.4
32	61	12	LEU	4.4
1	13	294	U	4.4
32	61	27	ARG	4.4
19	AI	13	ASP	4.4
25	14	1539	G	4.3
25	14	1624	G	4.3
3	22	162	GLN	4.3
8	7E	92	ARG	4.3
43	B5	60	ARG	4.3
43	B5	68	ARG	4.3
25	1H	390	A	4.3
28	29	116	VAL	4.3
17	8A	28	PRO	4.3
16	7A	84	ALA	4.3
1	13	293	G	4.3
25	14	1555	G	4.3
29	39	49	ALA	4.3
43	B5	33	LYS	4.3
30	41	34	LEU	4.3

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Mol	Chain	Res	Type	RSRZ
1	13	395	C	4.3
22	1K	81	C	4.3
12	3A	6	THR	4.3
51	J5	27	PRO	4.3
28	21	195	LEU	4.3
25	1H	2714	G	4.3
25	14	859	G	4.3
25	14	2112	G	4.3
54	1G	1032(B)	G	4.3
25	1H	1177	A	4.3
22	1K	34	U	4.3
35	78	79	ARG	4.3
38	A8	2	ALA	4.3
4	3E	31	CYS	4.3
34	68	29	ASN	4.3
3	22	167	TRP	4.2
20	BA	21	LYS	4.2
32	69	136	VAL	4.3
25	1H	391	G	4.2
25	1H	1084	A	4.2
1	13	366	C	4.2
25	14	2136	C	4.2
20	BI	76	ALA	4.2
10	1I	61	GLU	4.2
43	F8	52	VAL	4.2
32	61	6	LEU	4.2
25	1H	1273	U	4.2
29	39	53	THR	4.2
1	13	935	A	4.2
25	1H	1554	A	4.2
25	14	1641	A	4.2
30	41	42	GLY	4.2
54	1G	312	C	4.2
54	1G	1353	G	4.2
10	1A	64	GLU	4.2
29	39	27	GLU	4.2
45	D5	169	GLU	4.2
9	82	14	VAL	4.2
5	42	12	LEU	4.2
33	15	86	PRO	4.2
32	69	16	GLY	4.2
35	35	30	THR	4.2

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Mol	Chain	Res	Type	RSRZ
2	1E	12	GLU	4.2
5	42	127	ASN	4.2
25	1H	887	A	4.2
35	35	47	ASP	4.2
54	1G	1394	A	4.2
32	69	17	GLN	4.2
54	1G	587	G	4.2
54	1G	818	G	4.2
8	7E	89	PRO	4.2
48	G5	66	GLU	4.2
34	68	1	MET	4.2
46	E5	9	SER	4.2
56	2L	36	A	4.2
1	13	136	C	4.2
1	13	225	C	4.2
22	3K	20	C	4.2
25	1H	2700	C	4.2
16	7I	30	GLY	4.2
25	14	1091	G	4.2
31	59	133	VAL	4.1
17	8I	86	GLU	4.1
47	J8	93	GLU	4.1
10	1I	47	PHE	4.1
31	59	93	GLY	4.1
1	13	1451	A	4.1
12	3I	89	ARG	4.1
18	9I	32	ARG	4.1
20	BA	25	ARG	4.1
7	6E	85	TYR	4.1
25	14	1046	A	4.1
25	1H	755	C	4.1
25	14	1306	C	4.1
1	13	1001	G	4.1
4	32	5	ILE	4.1
4	3E	76	ARG	4.1
20	BI	80	ARG	4.1
20	BA	23	ARG	4.1
25	14	387	U	4.1
35	78	71	VAL	4.1
31	59	94	TYR	4.1
48	K8	11	GLU	4.1
25	14	1177	A	4.1

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Mol	Chain	Res	Type	RSRZ
36	88	104	PHE	4.1
39	B8	52	ILE	4.1
54	1G	134	A	4.1
1	13	106	C	4.1
2	12	29	ALA	4.1
20	BI	66	ALA	4.1
54	1G	1063	C	4.1
3	22	18	TRP	4.1
51	N8	23	HIS	4.1
29	39	6	VAL	4.1
36	45	90	VAL	4.1
38	65	5	THR	4.1
25	14	395	U	4.1
38	A8	44	LYS	4.1
3	22	14	ILE	4.1
7	6E	78	ARG	4.1
26	1J	59	A	4.1
43	B5	86	GLY	4.1
3	22	193	TYR	4.1
8	72	94	TYR	4.1
29	39	43	LYS	4.1
35	78	110	TYR	4.1
31	59	86	GLU	4.1
25	14	2270	G	4.1
39	B8	94	ALA	4.1
54	1G	111	G	4.1
54	1G	1156	G	4.1
25	14	1405	U	4.1
30	41	2	PRO	4.1
10	1I	58	ASP	4.0
45	H8	166	SER	4.0
48	G5	52	ASP	4.0
25	14	1247	A	4.0
25	14	1597	A	4.0
36	45	103	MET	4.0
39	B8	22	PHE	4.0
5	4E	81	GLU	4.0
48	K8	12	GLU	4.0
3	22	179	ARG	4.0
17	8I	29	HIS	4.0
28	29	75	VAL	4.0
47	J8	92	LYS	4.0

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Mol	Chain	Res	Type	RSRZ
54	1G	878	G	4.0
54	1G	1421	G	4.0
6	52	83	ASP	4.0
34	25	1	MET	4.0
51	J5	11	THR	4.0
25	14	1885	A	4.0
7	62	16	LEU	4.0
3	22	6	HIS	4.0
12	3I	81	SER	4.0
29	39	90	PHE	4.0
45	D5	166	SER	4.0
35	35	32	THR	4.0
34	68	45	GLU	4.0
1	13	113	G	4.0
32	69	8	PRO	4.0
2	1E	229	VAL	4.0
28	29	150	VAL	4.0
10	1A	62	HIS	4.0
25	1H	1274	A	4.0
54	1G	1252	A	4.0
1	13	291	C	4.0
25	1H	271(A)	C	4.0
2	1E	55	PHE	4.0
17	8I	36	ILE	4.0
40	C8	91	ASP	4.0
1	13	223	U	4.0
8	72	98	LYS	4.0
3	22	68	VAL	4.0
12	3A	11	VAL	4.0
1	13	227	G	4.0
1	13	1386	G	4.0
25	14	508	G	4.0
41	95	82	ARG	4.0
22	1K	32	A	4.0
3	22	169	ALA	4.0
22	1K	83	C	4.0
54	1G	311	C	4.0
55	1L	84	C	4.0
8	7E	99	GLU	4.0
48	G5	44	LEU	4.0
29	39	89	VAL	3.9
3	22	170	GLN	3.9

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Mol	Chain	Res	Type	RSRZ
36	45	65	PHE	3.9
1	13	579	G	3.9
25	14	2149	G	3.9
54	1G	570	G	3.9
5	42	22	GLY	3.9
35	78	69	GLY	3.9
32	61	1	MET	3.9
28	29	77	ILE	3.9
1	13	30	U	3.9
54	1G	1232	U	3.9
28	29	195	LEU	3.9
13	4A	99	ARG	3.9
1	13	606	G	3.9
3	22	157	ILE	3.9
7	62	36	LYS	3.9
25	14	393	C	3.9
27	19	35	LYS	3.9
33	15	83	LYS	3.9
20	BI	49	ALA	3.9
32	61	116	LEU	3.9
40	85	39	LEU	3.9
44	C5	90	LEU	3.9
19	AI	61	TYR	3.9
32	69	25	TYR	3.9
33	15	75	TYR	3.9
30	49	75	LYS	3.9
40	85	19	LYS	3.9
8	72	135	CYS	3.9
1	13	109	A	3.9
30	49	72	ARG	3.9
1	13	124	G	3.9
14	5A	18	VAL	3.9
25	1H	961	C	3.9
25	1H	2708	G	3.9
25	14	1248	G	3.9
25	14	1304	C	3.9
25	14	1348	G	3.9
45	D5	56	VAL	3.9
39	75	100	TYR	3.9
54	1G	882	C	3.9
19	AI	76	PRO	3.9
30	41	24	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
36	88	79	LEU	3.9
7	6E	83	ALA	3.9
20	BA	95	ALA	3.9
10	1A	66	ARG	3.8
15	6I	68	ARG	3.8
31	59	130	ARG	3.8
4	3E	9	CYS	3.8
17	8A	35	VAL	3.8
3	2E	201	TYR	3.8
9	82	125	TYR	3.8
28	29	117	MET	3.8
12	3A	47	LYS	3.8
25	1H	225	A	3.8
32	61	11	ASN	3.8
25	1H	2188	C	3.8
25	14	2139	C	3.8
1	13	1385	G	3.8
1	13	1436	U	3.8
54	1G	112	G	3.8
19	AA	78	ARG	3.8
20	BI	97	ALA	3.8
27	11	35	LYS	3.8
47	J8	84	GLY	3.8
10	1A	65	LEU	3.8
20	BI	99	LEU	3.8
1	13	608	A	3.8
51	J5	19	ARG	3.8
13	4I	2	ALA	3.8
1	13	229	U	3.8
1	13	934	C	3.8
25	1H	435	C	3.8
55	1L	41	C	3.8
25	1H	1382	G	3.8
20	BA	96	GLY	3.8
10	1I	66	ARG	3.8
3	22	37	GLN	3.8
16	7I	84	ALA	3.8
45	D5	164	ALA	3.8
31	59	84	SER	3.8
29	39	77	ASP	3.8
49	H5	18	ASP	3.8
25	14	504	U	3.8

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Mol	Chain	Res	Type	RSRZ
25	14	2272	U	3.8
12	3I	7	ILE	3.8
32	69	29	TYR	3.8
54	1G	962	C	3.8
37	55	92	GLY	3.8
25	1H	2319	G	3.8
54	1G	231	G	3.8
54	1G	1233	G	3.8
4	32	83	SER	3.8
29	31	96	ASP	3.8
3	22	2	GLY	3.8
11	2A	75	TYR	3.8
20	BI	79	ARG	3.8
47	J8	72	GLU	3.8
28	29	52	LEU	3.8
25	1H	181	A	3.8
41	D8	49	THR	3.8
54	1G	873	A	3.8
25	14	737	C	3.7
42	A5	81	ALA	3.7
54	1G	110	C	3.7
54	1G	826	C	3.7
54	1G	1028(B)	C	3.7
52	P8	36	GLN	3.7
25	14	966	G	3.7
55	1L	1	G	3.7
3	22	21	ARG	3.7
10	1I	60	ARG	3.7
40	C8	118	GLY	3.7
30	49	35	GLU	3.7
25	1H	231	C	3.7
54	1G	1384	C	3.7
55	1L	83	C	3.7
33	58	71	ILE	3.7
13	4I	6	GLY	3.7
38	A8	22	GLY	3.7
1	13	46	G	3.7
12	3A	61	THR	3.7
55	3L	5	G	3.7
17	8A	15	MET	3.7
45	D5	121	HIS	3.7
4	3E	139	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
36	88	5	ARG	3.7
50	M8	58	ARG	3.7
11	2I	42	TRP	3.7
25	1H	1659	U	3.7
25	1H	900	A	3.7
25	14	1847	A	3.7
39	B8	114	LEU	3.7
25	1H	2804	C	3.7
25	14	867	C	3.7
25	14	1404	C	3.7
4	32	80	GLU	3.7
33	58	68	GLU	3.7
39	75	113	LYS	3.7
44	C5	55	TYR	3.7
12	3A	18	VAL	3.7
51	J5	23	HIS	3.7
2	1E	213	LEU	3.7
18	9I	68	LYS	3.7
31	59	5	GLY	3.7
34	25	45	GLU	3.7
39	B8	100	TYR	3.7
25	14	2790	A	3.7
3	22	103	VAL	3.7
1	13	132	C	3.7
9	82	128	ARG	3.7
25	1H	2803	C	3.7
2	1E	10	LEU	3.7
5	42	121	LYS	3.7
5	42	85	GLY	3.7
41	95	86	GLY	3.7
20	BI	98	PRO	3.6
8	72	136	GLU	3.6
1	13	42	G	3.6
9	8E	75	ASP	3.6
25	14	1626	G	3.6
31	59	50	VAL	3.6
25	1H	1405	U	3.6
56	2L	37	U	3.6
28	21	90	THR	3.6
33	58	73	THR	3.6
25	14	1554	A	3.6
31	51	153	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
44	C5	33	LYS	3.6
25	1H	737	C	3.6
25	14	280	C	3.6
41	95	41	GLY	3.6
2	12	164	VAL	3.6
4	32	32	ALA	3.6
10	1A	59	SER	3.6
28	29	73	GLU	3.6
31	59	127	GLU	3.6
31	59	169	VAL	3.6
30	49	155	MET	3.6
30	49	36	LYS	3.6
25	1H	654(H)	G	3.6
20	BI	23	ARG	3.6
29	39	62	ARG	3.6
33	15	97	ARG	3.6
1	13	824	C	3.6
25	1H	1403	C	3.6
25	14	736	C	3.6
34	68	68	GLU	3.6
36	88	91	GLU	3.6
54	1G	74	C	3.6
54	1G	150	C	3.6
38	A8	24	LEU	3.6
38	A8	42	ASP	3.6
2	1E	42	ILE	3.6
5	4E	89	ILE	3.6
30	41	77	ILE	3.6
9	8E	8	GLY	3.6
45	D5	68	PRO	3.6
33	15	98	VAL	3.6
5	42	130	ASN	3.6
25	14	739	G	3.6
30	49	133	LEU	3.6
32	61	38	LEU	3.6
10	1I	59	SER	3.6
28	21	89	ASP	3.6
4	32	23	GLY	3.6
20	BI	102	GLY	3.6
29	39	57	VAL	3.6
31	59	115	VAL	3.6
32	69	3	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
44	C5	19	LYS	3.6
4	32	157	LEU	3.6
8	72	54	ASP	3.6
20	BI	64	ASP	3.6
1	13	1231	G	3.5
3	2E	37	GLN	3.5
8	72	31	PHE	3.5
46	I8	76	GLY	3.5
23	2K	72	C	3.5
25	1H	2174	C	3.5
9	8E	106	ALA	3.5
40	85	46	ALA	3.5
20	BI	29	LYS	3.5
46	I8	46	LYS	3.5
2	1E	44	LEU	3.5
4	3E	96	LEU	3.5
37	98	20	LEU	3.5
7	62	154	TYR	3.5
11	2I	75	TYR	3.5
54	1G	1391	U	3.5
3	22	137	ALA	3.5
17	8I	34	LYS	3.5
30	41	47	LYS	3.5
25	14	2286	A	3.5
30	41	100	TRP	3.5
32	61	134	PRO	3.5
51	N8	24	ALA	3.5
20	BI	92	LEU	3.5
25	1H	592	G	3.5
9	82	12	GLU	3.5
45	H8	60	GLU	3.5
20	BA	26	ASN	3.5
30	49	146	TYR	3.5
3	22	192	THR	3.5
56	2L	25	U	3.5
14	5A	58	LYS	3.5
29	31	131	GLY	3.5
20	BI	94	ALA	3.5
38	A8	48	LEU	3.5
38	65	56	LEU	3.5
31	51	148	ILE	3.5
13	4A	32	GLU	3.5

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Mol	Chain	Res	Type	RSRZ
17	8A	24	GLU	3.5
1	13	609	A	3.5
25	1H	529	A	3.5
31	51	164	TYR	3.5
25	1H	1463	C	3.5
25	14	1383	C	3.5
4	32	31	CYS	3.5
25	1H	226	G	3.5
25	14	1440	G	3.5
25	14	1623	G	3.5
47	J8	91	LYS	3.5
20	BI	103	GLY	3.5
32	69	15	VAL	3.5
51	J5	50	GLY	3.5
20	BA	49	ALA	3.5
27	11	2	ALA	3.5
7	62	124	LEU	3.5
54	1G	1372	U	3.5
42	A5	6	ILE	3.5
20	BA	80	ARG	3.5
31	59	132	ARG	3.5
5	4E	83	GLU	3.5
20	BI	65	LYS	3.5
38	A8	12	PHE	3.5
41	D8	37	VAL	3.5
43	B5	52	VAL	3.5
31	51	156	ALA	3.5
32	69	38	LEU	3.5
40	85	42	ALA	3.5
25	1H	1607	C	3.5
25	14	352	G	3.5
25	14	711	G	3.5
27	19	250	TRP	3.5
37	98	22	ARG	3.5
48	G5	7	ARG	3.5
54	1G	799	G	3.5
25	1H	1211	U	3.5
11	2A	25	TYR	3.4
47	F5	78	LYS	3.4
37	55	47	PHE	3.4
2	1E	14	GLY	3.4
2	12	13	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
9	82	15	ALA	3.4
35	35	27	HIS	3.4
7	6E	77	SER	3.4
17	8I	30	PRO	3.4
37	98	68	ARG	3.4
50	I5	31	ILE	3.4
2	1E	43	ASP	3.4
25	1H	654(J)	A	3.4
25	1H	1032	A	3.4
53	Q8	34	TRP	3.4
25	1H	34	C	3.4
25	1H	591	C	3.4
35	35	14	LYS	3.4
1	13	29	G	3.4
1	13	631	G	3.4
12	3I	11	VAL	3.4
25	14	271(C)	U	3.4
25	14	2655	G	3.4
25	14	2664	G	3.4
28	29	59	VAL	3.4
54	1G	1029	G	3.4
54	1G	1371	G	3.4
54	1G	1373	G	3.4
32	69	5	LEU	3.4
42	A5	19	LEU	3.4
5	42	86	ALA	3.4
19	AA	79	THR	3.4
9	8E	117	HIS	3.4
16	7A	26	ARG	3.4
28	29	159	HIS	3.4
41	95	66	ARG	3.4
19	AI	59	PRO	3.4
20	BA	98	PRO	3.4
44	C5	77	PRO	3.4
31	59	155	SER	3.4
1	13	1000	A	3.4
3	22	184	TYR	3.4
4	3E	207	TYR	3.4
34	68	32	TYR	3.4
2	12	136	VAL	3.4
9	82	109	VAL	3.4
41	D8	46	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
42	A5	85	VAL	3.4
29	39	33	LEU	3.4
39	B8	99	LEU	3.4
1	13	754	C	3.4
20	BI	47	GLY	3.4
25	1H	1295	C	3.4
25	14	2161	C	3.4
26	1J	60	C	3.4
14	5I	59	ALA	3.4
28	29	114	ALA	3.4
22	3K	34	U	3.4
25	1H	405	U	3.4
25	14	1105	U	3.4
29	39	81	PRO	3.4
31	59	112	PRO	3.4
43	B5	85	PRO	3.4
18	9A	61	LYS	3.4
25	14	710	G	3.4
54	1G	1523	G	3.4
46	I8	71	ASP	3.4
3	22	166	GLU	3.4
32	69	41	GLU	3.4
2	1E	187	LEU	3.4
3	22	116	VAL	3.4
12	3A	10	LEU	3.4
20	BA	13	LEU	3.4
30	41	28	VAL	3.4
29	39	45	ARG	3.4
37	55	68	ARG	3.4
19	AI	75	ALA	3.4
5	42	131	ILE	3.4
25	1H	111	A	3.4
25	1H	229	A	3.4
25	1H	2320	A	3.4
25	14	849	A	3.4
25	14	1762	A	3.4
54	1G	1288	A	3.4
32	69	137	PRO	3.4
49	L8	17	LYS	3.4
1	13	224	C	3.4
1	13	1354	C	3.4
1	13	1389	C	3.4

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Mol	Chain	Res	Type	RSRZ
25	14	1607	C	3.4
25	14	2138	C	3.4
3	22	12	LEU	3.4
6	5E	95	GLU	3.4
12	3A	127	GLU	3.4
13	4I	7	VAL	3.4
27	11	34	VAL	3.4
40	85	12	ARG	3.4
9	8E	115	GLY	3.4
31	51	150	ALA	3.4
9	8E	116	LYS	3.4
36	45	66	ILE	3.4
44	G8	33	LYS	3.4
25	1H	78	A	3.3
25	14	1084	A	3.3
50	I5	42	PHE	3.3
3	2E	166	GLU	3.3
25	14	766	C	3.3
39	B8	112	ARG	3.3
45	D5	163	LEU	3.3
25	14	1090	U	3.3
32	69	69	LYS	3.3
2	1E	214	ILE	3.3
29	39	9	ILE	3.3
32	69	4	ILE	3.3
39	B8	110	ILE	3.3
8	72	76	PRO	3.3
31	59	129	THR	3.3
1	13	232	G	3.3
1	13	630	G	3.3
25	1H	1678	G	3.3
25	14	654(D)	G	3.3
25	14	1347	G	3.3
54	1G	255	G	3.3
3	22	16	ARG	3.3
19	AI	3	ARG	3.3
38	A8	20	ARG	3.3
51	J5	15	ARG	3.3
3	22	195	VAL	3.3
32	69	92	VAL	3.3
48	G5	60	LEU	3.3
18	9A	62	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
4	32	9	CYS	3.3
25	1H	872	A	3.3
54	1G	1151	A	3.3
35	35	28	GLY	3.3
47	F5	15	ALA	3.3
1	13	125	U	3.3
25	14	1386	C	3.3
54	1G	1195	C	3.3
35	35	33	ARG	3.3
20	BA	92	LEU	3.3
2	12	165	VAL	3.3
3	22	19	GLU	3.3
1	13	346	G	3.3
1	13	1117	G	3.3
25	1H	1093	G	3.3
47	F5	84	GLY	3.3
48	K8	13	ALA	3.3
54	1G	41	G	3.3
3	22	171	GLY	3.3
7	6E	45	ASP	3.3
44	G8	53	PRO	3.3
54	1G	974	A	3.3
1	13	261	U	3.3
3	2E	15	THR	3.3
13	4I	114	ARG	3.3
13	4A	101	GLN	3.3
31	59	97	ARG	3.3
10	1I	65	LEU	3.3
54	1G	308	C	3.3
3	22	99	VAL	3.3
38	65	2	ALA	3.3
27	19	55	GLY	3.3
30	41	146	TYR	3.3
34	25	32	TYR	3.3
11	2A	119	CYS	3.3
32	69	111	PRO	3.3
1	13	226	G	3.3
6	5E	94	GLN	3.3
17	8A	22	LEU	3.3
25	1H	110	G	3.3
25	1H	2125	G	3.3
25	14	2100	G	3.3

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Mol	Chain	Res	Type	RSRZ
54	1G	755	G	3.3
12	3I	36	VAL	3.3
28	21	59	VAL	3.3
29	39	36	VAL	3.3
54	1G	1351	U	3.3
30	41	50	ALA	3.3
31	51	104	GLU	3.3
54	1G	1325	C	3.3
12	3A	29	GLY	3.3
10	1I	5	ARG	3.2
37	55	17	ARG	3.2
12	3I	5	PRO	3.2
32	61	137	PRO	3.2
29	31	40	GLN	3.2
13	4A	60	VAL	3.2
35	35	71	VAL	3.2
44	C5	98	VAL	3.2
44	C5	43	ASN	3.2
1	13	376	G	3.2
1	13	392	G	3.2
25	1H	615	G	3.2
25	1H	2141	G	3.2
25	14	2659	G	3.2
54	1G	884	U	3.2
54	1G	1530	G	3.2
12	3I	15	ARG	3.2
25	14	1301	A	3.2
51	J5	16	ARG	3.2
25	1H	914	C	3.2
44	G8	56	PRO	3.2
30	49	138	GLN	3.2
40	C8	90	VAL	3.2
52	L5	1	MET	3.2
17	8I	24	GLU	3.2
36	88	139	GLU	3.2
43	B5	94	GLY	3.2
2	12	44	LEU	3.2
25	14	958	U	3.2
25	14	2716	U	3.2
28	29	62	PRO	3.2
29	39	94	PRO	3.2
22	3K	18	G	3.2

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Mol	Chain	Res	Type	RSRZ
25	1H	2602	A	3.2
25	14	532	A	3.2
25	14	1530	G	3.2
48	G5	6	VAL	3.2
41	95	64	HIS	3.2
30	49	116	ASP	3.2
33	15	71	ILE	3.2
7	6E	3	ARG	3.2
7	62	59	LEU	3.2
3	2E	23	TYR	3.2
3	22	186	PHE	3.2
30	41	160	VAL	3.2
31	51	113	VAL	3.2
25	14	1094	U	3.2
28	21	77	ILE	3.2
36	45	136	ALA	3.2
54	1G	1248	A	3.2
57	4L	25	A	3.2
1	13	28	G	3.2
1	13	951	G	3.2
25	14	1343	G	3.2
25	14	1642	G	3.2
28	29	153	GLY	3.2
32	69	121	LYS	3.2
34	25	18	LYS	3.2
41	D8	76	LYS	3.2
25	1H	2715	C	3.2
25	14	560	C	3.2
29	31	35	GLU	3.2
41	D8	39	LEU	3.2
53	M5	40	GLU	3.2
36	45	137	TYR	3.2
40	85	45	TYR	3.2
12	3I	18	VAL	3.2
25	1H	1406	U	3.1
37	98	9	LYS	3.1
54	1G	20	U	3.1
25	1H	2062	A	3.1
26	1J	89(A)	A	3.1
54	1G	780	A	3.1
54	1G	1005	A	3.1
17	8I	28	PRO	3.1

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Mol	Chain	Res	Type	RSRZ
51	N8	27	PRO	3.1
51	J5	51	TYR	3.1
25	1H	2526	G	3.1
25	14	1761	C	3.1
54	1G	1367	C	3.1
55	1L	57	C	3.1
13	4A	102	ARG	3.1
16	7I	28	ARG	3.1
38	65	20	ARG	3.1
2	12	214	ILE	3.1
35	35	109	GLY	3.1
51	N8	25	LEU	3.1
17	8A	49	GLU	3.1
30	41	137	GLU	3.1
30	41	164	GLU	3.1
35	78	74	GLU	3.1
25	1H	50	U	3.1
54	1G	952	U	3.1
50	M8	59	PHE	3.1
5	42	14	ARG	3.1
11	2I	121	PRO	3.1
13	4I	3	ARG	3.1
32	69	119	PRO	3.1
1	13	393	A	3.1
3	2E	14	ILE	3.1
31	59	41	MET	3.1
29	39	52	LYS	3.1
39	75	50	ILE	3.1
20	BA	16	HIS	3.1
13	4I	5	ALA	3.1
5	42	98	THR	3.1
19	AA	82	GLY	3.1
25	1H	2121	G	3.1
3	2E	62	ASP	3.1
16	7A	29	ASP	3.1
9	82	9	ARG	3.1
28	29	149	ARG	3.1
29	31	38	ARG	3.1
1	13	1196	U	3.1
11	2A	70	LYS	3.1
25	14	1198	U	3.1
25	14	2041	U	3.1

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Mol	Chain	Res	Type	RSRZ
54	1G	820	U	3.1
32	69	68	LEU	3.1
35	78	109	GLY	3.1
45	H8	153	SER	3.1
48	G5	45	SER	3.1
1	13	656	C	3.1
2	1E	137	ARG	3.1
4	3E	81	GLU	3.1
13	4I	102	ARG	3.1
20	BI	17	ARG	3.1
25	1H	77	C	3.1
37	98	8	ARG	3.1
39	B8	111	ARG	3.1
10	1I	91	PRO	3.1
28	29	155	LYS	3.1
1	13	576	G	3.1
13	4I	9	ILE	3.1
25	1H	2707	G	3.1
25	14	2780	G	3.1
31	59	151	ILE	3.1
32	61	4	ILE	3.1
40	85	47	TYR	3.1
41	95	12	TYR	3.1
54	1G	396	G	3.1
54	1G	954	G	3.1
54	1G	973	G	3.1
28	21	205	ALA	3.1
1	13	1364	U	3.1
35	35	68	GLN	3.1
50	I5	52	THR	3.1
11	2I	120	ARG	3.1
14	5I	31	ARG	3.1
32	69	27	ARG	3.1
3	22	207	VAL	3.1
32	61	3	VAL	3.1
32	69	143	SER	3.1
51	J5	12	SER	3.1
16	7I	9	PHE	3.1
17	8A	100	LYS	3.1
40	C8	89	GLU	3.1
25	14	866	A	3.1
54	1G	574	A	3.1

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Mol	Chain	Res	Type	RSRZ
2	1E	201	ILE	3.1
10	1I	98	ILE	3.1
20	BI	63	ILE	3.1
29	39	1	MET	3.1
31	59	4	ILE	3.1
4	3E	12	CYS	3.1
1	13	1119	C	3.0
1	13	1362(A)	C	3.0
54	1G	970	C	3.0
54	1G	1369	C	3.0
33	15	82	LEU	3.0
44	C5	65	ALA	3.0
3	22	190	ARG	3.0
4	32	49	ARG	3.0
9	82	66	ARG	3.0
22	3K	52	G	3.0
25	1H	411	G	3.0
25	14	30	G	3.0
25	14	1950	G	3.0
27	19	217	ARG	3.0
54	1G	1385	G	3.0
54	1G	1416	G	3.0
54	1G	1419	G	3.0
25	1H	387	U	3.0
25	14	405	U	3.0
30	49	160	VAL	3.0
33	15	104	LYS	3.0
47	F5	96	LYS	3.0
36	45	64	ILE	3.0
29	31	99	TYR	3.0
9	82	10	ARG	3.0
29	39	72	ARG	3.0
51	J5	20	ARG	3.0
25	14	279	C	3.0
25	14	1556	C	3.0
2	12	81	VAL	3.0
7	62	61	VAL	3.0
39	B8	98	LYS	3.0
17	8I	27	PHE	3.0
1	13	133	U	3.0
22	1K	3	U	3.0
25	1H	1101	U	3.0

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Mol	Chain	Res	Type	RSRZ
25	14	1300	U	3.0
31	59	55	PRO	3.0
54	1G	1148	U	3.0
25	1H	325	G	3.0
25	1H	975	G	3.0
25	1H	1176	G	3.0
25	14	738	G	3.0
54	1G	310	G	3.0
45	D5	117	LEU	3.0
3	22	201	TYR	3.0
9	82	69	GLY	3.0
17	8A	16	GLN	3.0
37	55	71	GLN	3.0
25	1H	2713	A	3.0
38	A8	46	VAL	3.0
54	1G	60	A	3.0
15	6I	58	MET	3.0
25	14	1350	C	3.0
25	14	2143	C	3.0
54	1G	121	C	3.0
2	12	202	PRO	3.0
8	72	101	PRO	3.0
12	3A	128	ALA	3.0
25	14	767	U	3.0
37	98	13	HIS	3.0
40	85	49	HIS	3.0
1	13	953	G	3.0
25	1H	1591	G	3.0
25	14	2101	G	3.0
25	14	2339	G	3.0
44	C5	39	VAL	3.0
46	I8	40	GLN	3.0
54	1G	68	G	3.0
7	62	50	ILE	3.0
1	13	26	A	3.0
3	22	87	LEU	3.0
31	59	124	GLU	3.0
25	1H	1760	A	3.0
25	1H	2173	A	3.0
25	14	2173	A	3.0
45	H8	68	PRO	3.0
17	8A	68	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
8	7E	94	TYR	3.0
16	7I	31	LYS	3.0
30	41	12	TYR	3.0
29	39	88	VAL	3.0
29	39	91	GLY	3.0
25	14	2712	U	3.0
45	D5	150	LEU	2.9
9	8E	12	GLU	2.9
29	31	172	TRP	2.9
30	41	13	GLU	2.9
39	B8	103	ARG	2.9
1	13	31	G	2.9
1	13	1233	G	2.9
25	1H	2659	G	2.9
54	1G	29	G	2.9
54	1G	69	G	2.9
54	1G	576	G	2.9
55	3L	17	G	2.9
4	3E	32	ALA	2.9
7	62	40	ALA	2.9
3	22	23	TYR	2.9
38	A8	7	TYR	2.9
1	13	313	A	2.9
54	1G	728	A	2.9
5	42	100	VAL	2.9
9	8E	105	ASP	2.9
51	N8	50	GLY	2.9
5	42	84	PHE	2.9
7	6E	106	GLN	2.9
28	21	51	PHE	2.9
29	39	83	PHE	2.9
1	13	150	C	2.9
1	13	175	C	2.9
31	59	72	ILE	2.9
39	75	1	MET	2.9
11	2I	87	THR	2.9
30	41	33	ARG	2.9
32	69	76	THR	2.9
35	78	108	LYS	2.9
35	35	25	SER	2.9
47	F5	86	SER	2.9
15	6A	89	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
1	13	1529	G	2.9
25	1H	593	G	2.9
25	1H	2805	G	2.9
26	1J	117	G	2.9
33	15	101	HIS	2.9
44	G8	68	HIS	2.9
50	M8	42	PHE	2.9
51	J5	17	ASP	2.9
5	42	89	ILE	2.9
22	3K	22	A	2.9
25	14	1884	A	2.9
31	59	98	LEU	2.9
37	55	18	LEU	2.9
39	75	53	ARG	2.9
54	1G	994	A	2.9
4	3E	151	LYS	2.9
10	1I	92	THR	2.9
27	11	31	LYS	2.9
40	85	13	LYS	2.9
50	I5	28	LYS	2.9
7	6E	39	ALA	2.9
25	1H	976	C	2.9
25	14	914	C	2.9
29	39	80	ALA	2.9
1	13	1390	U	2.9
3	22	70	VAL	2.9
3	22	106	VAL	2.9
47	J8	70	VAL	2.9
31	51	166	GLY	2.9
30	41	141	PHE	2.9
5	42	80	ILE	2.9
2	12	215	LEU	2.9
5	42	119	LEU	2.9
7	62	38	LEU	2.9
31	51	152	ARG	2.9
31	59	88	LEU	2.9
32	69	31	LEU	2.9
33	58	74	ARG	2.9
39	75	105	LEU	2.9
1	13	104	G	2.9
3	22	109	PRO	2.9
17	8A	30	PRO	2.9

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Mol	Chain	Res	Type	RSRZ
25	1H	1296	G	2.9
25	14	952	G	2.9
53	M5	34	TRP	2.9
31	51	115	VAL	2.9
32	61	92	VAL	2.9
25	14	756	C	2.9
25	14	961	C	2.9
40	C8	87	GLY	2.9
55	3L	71	C	2.9
25	1H	271(C)	U	2.9
25	1H	1058	U	2.9
45	H8	104	PHE	2.9
54	1G	133	U	2.9
21	1B	13	ILE	2.9
34	68	122	LEU	2.9
17	8A	26	GLN	2.9
33	15	131	GLN	2.9
9	82	76	ALA	2.9
29	31	100	THR	2.9
32	69	80	PRO	2.9
36	45	80	GLU	2.9
39	75	55	ASN	2.9
48	G5	11	GLU	2.9
3	22	141	VAL	2.9
4	3E	26	CYS	2.9
15	6A	15	PHE	2.9
29	39	44	ARG	2.9
32	69	13	GLY	2.9
26	1J	25	A	2.9
33	15	117	PHE	2.9
39	75	54	ARG	2.9
1	13	378	G	2.9
22	3K	37	A	2.9
2	12	187	LEU	2.9
25	1H	1555	G	2.9
25	14	669	G	2.9
25	14	1622	G	2.9
39	B8	113	LYS	2.9
47	F5	85	LEU	2.9
54	1G	1365	G	2.9
54	1G	1417	G	2.9
25	1H	949	C	2.8

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Mol	Chain	Res	Type	RSRZ
54	1G	135	C	2.8
54	1G	229	U	2.8
54	1G	578	C	2.8
54	1G	1420	C	2.8
2	12	79	ASP	2.8
3	22	114	PRO	2.8
31	51	167	GLU	2.8
34	68	108	GLU	2.8
34	68	120	GLU	2.8
39	75	21	GLU	2.8
20	BA	17	ARG	2.8
37	98	12	ARG	2.8
13	4I	100	GLY	2.8
33	15	70	LYS	2.8
30	49	82	LEU	2.8
45	D5	115	GLY	2.8
46	E5	22	GLY	2.8
2	12	48	MET	2.8
20	BA	100	ILE	2.8
39	75	52	ILE	2.8
42	E8	23	LEU	2.8
1	13	325	A	2.8
25	14	735	A	2.8
35	35	31	ALA	2.8
25	1H	1056	G	2.8
25	14	474	G	2.8
25	14	1415	U	2.8
25	14	1416	G	2.8
25	14	1420	U	2.8
54	1G	1026	G	2.8
54	1G	1393	U	2.8
8	7E	132	GLU	2.8
17	8A	5	VAL	2.8
22	3K	65	C	2.8
25	1H	645	C	2.8
25	1H	736	C	2.8
25	1H	985	C	2.8
25	1H	2108	C	2.8
25	14	1150	C	2.8
28	29	163	GLU	2.8
32	61	19	VAL	2.8
54	1G	153	C	2.8

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Mol	Chain	Res	Type	RSRZ
21	1B	14	TRP	2.8
2	1E	172	ILE	2.8
13	4A	66	LEU	2.8
20	BA	101	GLY	2.8
30	41	139	LEU	2.8
32	61	35	LEU	2.8
48	G5	56	GLN	2.8
20	BA	52	ALA	2.8
33	15	132	ALA	2.8
28	21	79	ARG	2.8
16	7A	83	GLU	2.8
31	51	175	LYS	2.8
33	58	93	THR	2.8
38	A8	8	GLU	2.8
1	13	160	A	2.8
1	13	974	A	2.8
25	14	1444(A)	A	2.8
57	4L	24	A	2.8
1	13	950	U	2.8
1	13	1351	U	2.8
3	22	178	LEU	2.8
25	1H	1516	U	2.8
25	14	1590	U	2.8
37	98	10	LEU	2.8
27	19	100	GLY	2.8
44	G8	58	GLY	2.8
50	M8	31	ILE	2.8
1	13	176	C	2.8
25	14	932	G	2.8
25	14	1591	G	2.8
25	14	2834	G	2.8
54	1G	1432	G	2.8
54	1G	1509	C	2.8
3	22	53	ALA	2.8
29	39	5	ALA	2.8
35	78	141	ALA	2.8
2	12	192	SER	2.8
45	D5	90	VAL	2.8
2	1E	9	GLU	2.8
34	25	9	GLU	2.8
40	85	18	LEU	2.8
44	C5	83	THR	2.8

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Mol	Chain	Res	Type	RSRZ
48	K8	10	LEU	2.8
32	69	110	ASP	2.8
35	78	93	GLY	2.8
20	BA	9	ASN	2.8
36	88	89	ASN	2.8
25	1H	866	A	2.8
54	1G	1240	U	2.8
2	12	137	ARG	2.8
3	22	168	ALA	2.8
28	29	157	ALA	2.8
47	F5	26	ARG	2.8
55	3L	19	C	2.8
1	13	347	G	2.8
1	13	394	G	2.8
1	13	396	G	2.8
8	72	72	PRO	2.8
23	2K	71	G	2.8
25	1H	254	G	2.8
25	1H	1491	G	2.8
25	1H	2694	G	2.8
25	14	1003	G	2.8
51	J5	28	PRO	2.8
54	1G	346	G	2.8
54	1G	1224	G	2.8
54	1G	1415	G	2.8
56	2L	19	G	2.8
10	1I	88	LEU	2.8
45	D5	125	LEU	2.8
9	82	64	THR	2.8
30	41	80	PHE	2.7
7	6E	31	MET	2.7
29	39	55	GLY	2.7
42	E8	57	ASN	2.7
9	8E	125	TYR	2.7
40	85	36	ARG	2.7
2	1E	46	LYS	2.7
12	3A	129	ALA	2.7
14	5I	5	ALA	2.7
19	AA	58	VAL	2.7
25	1H	1094	U	2.7
25	1H	1637	A	2.7
25	1H	2522	U	2.7

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Mol	Chain	Res	Type	RSRZ
25	14	529	A	2.7
34	68	5	GLN	2.7
54	1G	1179	A	2.7
54	1G	1413	A	2.7
10	1A	91	PRO	2.7
28	21	63	LEU	2.7
30	49	139	LEU	2.7
31	59	71	LEU	2.7
1	13	1116	C	2.7
25	1H	1638	C	2.7
28	29	51	PHE	2.7
29	39	35	GLU	2.7
36	45	38	GLU	2.7
54	1G	154	C	2.7
54	1G	395	C	2.7
29	31	39	TRP	2.7
25	14	1949	G	2.7
25	14	2550	G	2.7
25	14	2663	G	2.7
3	22	164	ARG	2.7
20	BA	74	LYS	2.7
28	29	145	LYS	2.7
32	61	43	ASN	2.7
10	1I	62	HIS	2.7
27	19	247	ALA	2.7
37	98	19	ALA	2.7
33	58	46	VAL	2.7
33	15	69	GLN	2.7
16	7I	66	PRO	2.7
20	BA	72	LEU	2.7
31	59	126	PRO	2.7
14	5I	1	MET	2.7
54	1G	1414	U	2.7
25	1H	1759	A	2.7
25	14	1439	A	2.7
25	14	1529	A	2.7
39	B8	12	SER	2.7
54	1G	655	A	2.7
2	1E	30	ARG	2.7
20	BA	83	ARG	2.7
17	8A	37	LYS	2.7
36	45	130	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
42	A5	22	ASP	2.7
45	D5	29	TYR	2.7
45	D5	151	HIS	2.7
4	32	112	VAL	2.7
44	C5	45	VAL	2.7
29	39	41	LEU	2.7
1	13	159	G	2.7
22	1K	4	G	2.7
25	1H	2697	G	2.7
25	14	1948	G	2.7
32	61	119	PRO	2.7
32	69	23	PRO	2.7
54	1G	326	G	2.7
54	1G	575	G	2.7
4	32	158	ILE	2.7
36	88	3	MET	2.7
5	42	107	ARG	2.7
9	8E	121	ARG	2.7
11	2A	118	GLY	2.7
29	31	56	GLU	2.7
17	8A	81	ARG	2.7
34	68	74	GLY	2.7
4	3E	22	LYS	2.7
12	3I	23	LYS	2.7
33	15	89	LYS	2.7
41	95	92	THR	2.7
25	1H	328	U	2.7
25	1H	1679	U	2.7
54	1G	1390	U	2.7
25	14	1103	A	2.7
3	2E	193	TYR	2.7
7	6E	154	TYR	2.7
7	62	66	VAL	2.7
8	7E	95	VAL	2.7
12	3A	66	VAL	2.7
5	42	73	ASN	2.7
25	14	2137	C	2.7
15	6I	87	ILE	2.7
49	H5	2	PRO	2.7
50	I5	29	PRO	2.7
14	5A	38	GLY	2.7
35	35	29	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
38	A8	109	GLY	2.7
39	B8	21	GLU	2.7
39	75	11	GLU	2.7
1	13	1033	G	2.7
25	14	1630	G	2.7
25	14	2181	G	2.7
25	14	2318	G	2.7
8	72	10	LEU	2.7
17	8I	32	TYR	2.7
25	14	562	U	2.7
25	14	2180	U	2.7
36	45	26	TYR	2.7
39	B8	6	LEU	2.7
45	H8	99	TYR	2.7
45	D5	74	VAL	2.7
48	K8	63	VAL	2.7
54	1G	1481	U	2.7
19	AI	12	ASP	2.7
1	13	1151	A	2.6
8	72	27	PRO	2.6
25	1H	1302	A	2.6
25	14	1246	A	2.6
26	1J	26	A	2.6
34	68	72	PRO	2.6
35	35	91	PHE	2.6
53	Q8	36	LYS	2.6
1	13	578	C	2.6
8	72	99	GLU	2.6
12	3I	35	GLY	2.6
20	BA	102	GLY	2.6
33	15	80	GLY	2.6
43	F8	94	GLY	2.6
22	1K	75	C	2.6
25	14	32	C	2.6
25	14	2021	C	2.6
19	AA	60	VAL	2.6
39	B8	105	LEU	2.6
53	Q8	51	ALA	2.6
1	13	610	G	2.6
2	12	43	ASP	2.6
6	5E	55	ASP	2.6
10	1I	73	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
14	5A	57	ARG	2.6
25	14	550	G	2.6
25	14	1385	G	2.6
25	14	1620	G	2.6
31	51	57	ASP	2.6
35	78	65	ARG	2.6
53	M5	57	ARG	2.6
54	1G	1074	G	2.6
25	1H	614	U	2.6
54	1G	30	U	2.6
55	3L	64	U	2.6
4	3E	69	GLY	2.6
25	1H	2171	A	2.6
54	1G	101	A	2.6
5	4E	119	LEU	2.6
13	4A	64	TRP	2.6
29	39	4	VAL	2.6
30	41	37	VAL	2.6
41	D8	40	LEU	2.6
1	13	623	C	2.6
22	1K	74	C	2.6
25	14	1640	C	2.6
54	1G	186(D)	C	2.6
3	22	69	HIS	2.6
31	59	85	LYS	2.6
32	69	133	HIS	2.6
50	I5	63	TYR	2.6
10	1I	4	ILE	2.6
20	BI	14	LYS	2.6
45	D5	137	ILE	2.6
51	N8	22	HIS	2.6
38	A8	112	PHE	2.6
12	3I	63	GLY	2.6
39	B8	25	GLY	2.6
1	13	884	U	2.6
1	13	1232	U	2.6
25	14	101	G	2.6
25	14	382	G	2.6
25	14	2182	G	2.6
54	1G	28	G	2.6
54	1G	378	G	2.6
54	1G	693	G	2.6

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Mol	Chain	Res	Type	RSRZ
54	1G	1032(A)	G	2.6
7	62	69	VAL	2.6
10	1A	92	THR	2.6
33	15	87	LEU	2.6
38	A8	110	LEU	2.6
31	59	114	VAL	2.6
16	7A	25	ARG	2.6
25	1H	901	A	2.6
32	69	2	LYS	2.6
35	35	76	LYS	2.6
44	C5	54	LYS	2.6
47	J8	76	ARG	2.6
54	1G	325	A	2.6
55	1L	21	A	2.6
2	1E	48	MET	2.6
6	5E	89	MET	2.6
10	1A	47	PHE	2.6
35	35	78	PRO	2.6
1	13	221	C	2.6
1	13	1066	C	2.6
25	14	2791	C	2.6
10	1I	10	GLY	2.6
3	22	101	LEU	2.6
27	19	37	LEU	2.6
33	58	100	GLU	2.6
40	C8	20	LEU	2.6
5	42	41	VAL	2.6
14	5A	5	ALA	2.6
32	69	146	ALA	2.6
48	K8	39	ALA	2.6
6	5E	92	LYS	2.6
25	14	969	U	2.6
27	19	59	LYS	2.6
30	41	96	ARG	2.6
40	85	15	LYS	2.6
6	5E	97	PHE	2.6
25	1H	1728	G	2.6
25	1H	1816	G	2.6
25	14	654(P)	G	2.6
28	29	122	PHE	2.6
30	41	23	PHE	2.6
25	1H	5	A	2.6

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Mol	Chain	Res	Type	RSRZ
19	AA	13	ASP	2.6
12	3A	27	LEU	2.6
15	6A	31	LEU	2.6
32	61	9	LEU	2.6
25	1H	1556	C	2.6
25	14	1430	C	2.6
28	21	72	VAL	2.6
54	1G	656	C	2.6
54	1G	1262	C	2.6
2	1E	188	ALA	2.6
4	32	76	ARG	2.6
14	5A	50	LYS	2.6
32	69	65	ALA	2.6
32	69	83	ALA	2.6
40	C8	113	ALA	2.6
45	D5	170	THR	2.6
2	12	42	ILE	2.5
33	58	85	ILE	2.5
44	C5	61	ILE	2.5
22	3K	36	U	2.5
25	14	614	U	2.5
25	14	2099	U	2.5
29	39	7	TYR	2.5
9	82	71	SER	2.5
9	82	67	GLY	2.5
33	58	69	GLN	2.5
1	13	138	G	2.5
1	13	821	G	2.5
25	1H	2110	G	2.5
25	14	2717	G	2.5
31	59	19	VAL	2.5
43	F8	68	ARG	2.5
44	G8	86	ARG	2.5
3	2E	169	ALA	2.5
16	7I	7	ALA	2.5
17	8I	49	GLU	2.5
54	1G	644	G	2.5
22	1K	22	A	2.5
25	1H	227	A	2.5
54	1G	983	A	2.5
1	13	882	C	2.5
1	13	1115	C	2.5

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Mol	Chain	Res	Type	RSRZ
1	13	1352	C	2.5
25	1H	2402	C	2.5
25	1H	2699	C	2.5
25	14	1104	C	2.5
54	1G	1284	C	2.5
6	52	56	PRO	2.5
30	41	17	PRO	2.5
37	55	39	PRO	2.5
20	BA	103	GLY	2.5
20	BA	105	SER	2.5
25	1H	2109	U	2.5
32	61	17	GLN	2.5
35	35	22	GLY	2.5
41	95	62	LEU	2.5
50	M8	54	GLY	2.5
3	22	11	ARG	2.5
3	22	199	LYS	2.5
29	39	63	LYS	2.5
46	E5	44	ARG	2.5
12	3I	82	VAL	2.5
4	32	77	ASN	2.5
5	42	21	ALA	2.5
5	42	50	GLU	2.5
31	59	57	ASP	2.5
27	19	40	THR	2.5
32	69	129	THR	2.5
5	42	28	PHE	2.5
1	13	949	A	2.5
1	13	1280	A	2.5
25	1H	182	A	2.5
54	1G	313	A	2.5
25	14	2120	G	2.5
25	14	2661	G	2.5
54	1G	1283	G	2.5
54	1G	1480	G	2.5
4	3E	138	TYR	2.5
17	8A	29	HIS	2.5
14	5A	39	LEU	2.5
33	58	115	ARG	2.5
35	35	45	LEU	2.5
35	35	64	LYS	2.5
47	J8	80	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
47	F5	97	LEU	2.5
1	13	295	C	2.5
1	13	1149	C	2.5
54	1G	796	C	2.5
54	1G	930	C	2.5
11	2A	13	GLN	2.5
16	7A	82	GLN	2.5
31	59	113	VAL	2.5
7	6E	145	ALA	2.5
43	B5	84	ALA	2.5
30	49	77	ILE	2.5
38	A8	16	ASN	2.5
2	12	190	THR	2.5
9	8E	7	THR	2.5
17	8A	18	THR	2.5
2	12	98	LEU	2.5
2	12	196	LEU	2.5
3	22	172	ARG	2.5
5	42	151	LEU	2.5
20	BI	104	LEU	2.5
28	29	64	LYS	2.5
29	31	106	ARG	2.5
32	69	101	LEU	2.5
38	A8	92	TYR	2.5
44	G8	35	TYR	2.5
44	G8	71	LYS	2.5
45	H8	72	ARG	2.5
45	D5	33	LEU	2.5
47	F5	32	LYS	2.5
9	82	68	GLY	2.5
25	1H	655	A	2.5
27	19	238	GLY	2.5
29	39	131	GLY	2.5
35	35	26	GLY	2.5
46	I8	42	GLY	2.5
2	1E	165	VAL	2.5
1	13	27	G	2.5
1	13	324	G	2.5
1	13	377	G	2.5
2	12	186	ALA	2.5
22	3K	15	G	2.5
25	1H	1492	G	2.5

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Mol	Chain	Res	Type	RSRZ
25	1H	2663	G	2.5
47	F5	17	SER	2.5
54	1G	113	G	2.5
54	1G	376	G	2.5
54	1G	474	G	2.5
13	4A	67	GLU	2.5
17	8A	36	ILE	2.5
31	59	92	ILE	2.5
45	H8	171	ILE	2.5
1	13	369	C	2.5
25	14	1200	C	2.5
54	1G	307	C	2.5
10	1A	11	PHE	2.5
1	13	1381	U	2.5
11	2A	87	THR	2.5
20	BI	74	LYS	2.5
49	L8	20	LYS	2.5
5	42	91	LEU	2.5
8	72	112	LEU	2.5
28	21	5	LEU	2.5
29	39	12	LEU	2.5
29	39	125	LEU	2.5
33	15	129	PRO	2.5
36	45	2	LEU	2.5
45	D5	91	LEU	2.5
48	K8	44	LEU	2.5
53	M5	32	LEU	2.5
28	29	137	HIS	2.5
29	31	97	TYR	2.5
38	65	45	GLY	2.5
44	C5	103	GLY	2.5
3	2E	70	VAL	2.5
11	2A	105	VAL	2.5
31	51	169	VAL	2.5
39	B8	89	VAL	2.5
27	11	112	GLN	2.5
2	12	39	ILE	2.4
31	51	162	ILE	2.4
47	J8	90	ILE	2.4
24	4K	24	A	2.4
25	1H	1472	A	2.4
45	H8	97	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
7	6E	10	ARG	2.4
13	4I	115	LYS	2.4
16	7I	26	ARG	2.4
31	51	60	ARG	2.4
1	13	107	G	2.4
1	13	1353	G	2.4
2	1E	154	LEU	2.4
10	1I	81	THR	2.4
10	1I	85	LEU	2.4
13	4A	63	THR	2.4
32	69	96	ASP	2.4
25	1H	902	C	2.4
25	1H	1002	G	2.4
25	1H	1592	C	2.4
25	14	34	C	2.4
25	14	696	G	2.4
25	14	1215	G	2.4
25	14	1464	C	2.4
31	51	87	LEU	2.4
31	59	171	LEU	2.4
32	69	72	LEU	2.4
45	H8	155	LEU	2.4
54	1G	92	G	2.4
54	1G	454	C	2.4
54	1G	866	C	2.4
1	13	619	U	2.4
25	14	1249	U	2.4
2	12	203	GLY	2.4
39	B8	47	GLY	2.4
32	69	39	ALA	2.4
2	12	41	ILE	2.4
13	4A	73	GLU	2.4
8	7E	85	ARG	2.4
12	3A	21	LYS	2.4
16	7I	8	ARG	2.4
27	19	39	LYS	2.4
30	49	118	ARG	2.4
38	A8	3	ARG	2.4
31	51	105	LEU	2.4
32	69	75	LEU	2.4
39	75	114	LEU	2.4
44	C5	14	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
45	D5	34	ASN	2.4
25	1H	2530	A	2.4
25	1H	2693	A	2.4
25	14	1045	A	2.4
34	25	81	ASP	2.4
31	59	21	PRO	2.4
54	1G	782	A	2.4
13	4A	45	VAL	2.4
28	21	88	GLY	2.4
28	29	7	VAL	2.4
28	29	160	TYR	2.4
29	39	59	TYR	2.4
39	B8	66	VAL	2.4
44	C5	20	TYR	2.4
50	M8	25	TYR	2.4
1	13	174	C	2.4
25	1H	2635	C	2.4
25	14	129	C	2.4
25	14	1886	C	2.4
1	13	657	G	2.4
1	13	1187	G	2.4
15	6I	71	GLN	2.4
25	14	1199	U	2.4
25	14	1429	G	2.4
25	14	1629	U	2.4
54	1G	486	U	2.4
54	1G	657	G	2.4
3	22	142	MET	2.4
12	3A	57	LYS	2.4
35	78	36	LYS	2.4
8	72	77	GLU	2.4
10	1A	54	PHE	2.4
47	F5	40	ARG	2.4
47	F5	38	SER	2.4
9	8E	79	LEU	2.4
20	BI	62	LEU	2.4
30	49	34	LEU	2.4
38	A8	4	LEU	2.4
44	C5	102	CYS	2.4
11	2I	115	PRO	2.4
11	2A	117	ASN	2.4
19	AA	76	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
31	59	43	VAL	2.4
9	8E	6	GLY	2.4
1	13	228	A	2.4
20	BI	100	ILE	2.4
49	L8	42	ALA	2.4
54	1G	1280	A	2.4
54	1G	1483	A	2.4
57	4L	19	A	2.4
17	8I	15	MET	2.4
20	BI	15	ARG	2.4
27	19	69	ARG	2.4
35	35	79	ARG	2.4
39	B8	93	ARG	2.4
1	13	322	C	2.4
1	13	620	C	2.4
3	22	52	LEU	2.4
4	3E	21	LEU	2.4
25	1H	2161	C	2.4
25	14	29	U	2.4
25	14	970	C	2.4
41	D8	38	LEU	2.4
44	C5	64	GLU	2.4
4	3E	137	SER	2.4
1	13	122	G	2.4
25	14	391	G	2.4
25	14	1344	G	2.4
25	14	2116	G	2.4
54	1G	654	G	2.4
54	1G	1160	G	2.4
54	1G	1422	G	2.4
5	4E	22	GLY	2.4
6	52	84	ASN	2.4
31	51	82	GLY	2.4
2	12	68	ILE	2.4
4	3E	4	TYR	2.4
7	6E	2	ALA	2.4
9	82	74	ILE	2.4
20	BA	76	ALA	2.4
20	BA	94	ALA	2.4
32	61	120	ILE	2.4
40	C8	88	ILE	2.4
42	A5	7	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
10	1A	55	LYS	2.4
11	2I	71	LYS	2.4
16	7A	31	LYS	2.4
39	75	98	LYS	2.4
44	C5	47	LYS	2.4
48	K8	67	LYS	2.4
31	59	101	ARG	2.4
17	8I	26	GLN	2.4
2	12	149	LEU	2.4
3	2E	52	LEU	2.4
20	BA	99	LEU	2.4
3	22	161	GLU	2.4
25	1H	1553	A	2.4
25	1H	2169	A	2.4
25	1H	2892	A	2.4
1	13	820	U	2.4
2	12	26	PRO	2.4
25	14	2150	U	2.4
31	59	45	VAL	2.4
35	35	23	PRO	2.4
40	C8	2	PRO	2.4
43	F8	85	PRO	2.4
54	1G	1522	U	2.4
25	1H	393	C	2.3
25	1H	1218	C	2.3
26	16	12	C	2.3
54	1G	1119	C	2.3
55	3L	65	C	2.3
11	2A	49	GLY	2.3
31	59	48	GLY	2.3
32	69	90	GLY	2.3
48	G5	42	GLY	2.3
16	7I	17	TYR	2.3
18	9I	75	ILE	2.3
20	BA	75	ASN	2.3
30	49	73	ALA	2.3
38	65	34	HIS	2.3
48	K8	65	ASN	2.3
30	49	115	ARG	2.3
39	75	103	ARG	2.3
50	M8	63	TYR	2.3
1	13	818	G	2.3

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Mol	Chain	Res	Type	RSRZ
25	1H	2120	G	2.3
25	14	298	G	2.3
19	AA	71	LEU	2.3
20	BI	53	LEU	2.3
41	95	20	LEU	2.3
45	H8	5	LEU	2.3
50	I5	30	GLU	2.3
10	1A	94	VAL	2.3
32	61	136	VAL	2.3
41	D8	72	VAL	2.3
15	6I	52	SER	2.3
25	14	734	A	2.3
25	14	2654	A	2.3
29	39	65	TRP	2.3
40	C8	77	SER	2.3
42	E8	53	SER	2.3
51	J5	21	SER	2.3
3	22	165	THR	2.3
27	11	27	THR	2.3
28	29	50	GLY	2.3
31	51	161	GLY	2.3
47	F5	22	GLY	2.3
47	F5	79	GLY	2.3
4	32	26	CYS	2.3
13	4A	9	ILE	2.3
20	BA	73	HIS	2.3
20	BA	106	ALA	2.3
29	39	42	ALA	2.3
39	75	127	ALA	2.3
1	13	375	U	2.3
1	13	952	U	2.3
25	1H	2122	U	2.3
28	21	55	ASN	2.3
1	13	842	C	2.3
4	3E	11	LEU	2.3
15	6I	67	LEU	2.3
25	1H	1498	C	2.3
25	14	378	C	2.3
25	14	535	C	2.3
26	1J	108	C	2.3
54	1G	1237	C	2.3
3	22	55	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
12	3A	36	VAL	2.3
25	1H	873	G	2.3
25	14	1627	G	2.3
25	14	1643	G	2.3
54	1G	306	G	2.3
54	1G	464	G	2.3
54	1G	579	G	2.3
54	1G	867	G	2.3
55	1L	13	G	2.3
7	62	58	PRO	2.3
8	72	74	PRO	2.3
19	AA	81	ARG	2.3
31	59	60	ARG	2.3
42	A5	8	ARG	2.3
36	45	68	ILE	2.3
39	B8	48	ILE	2.3
40	85	7	GLY	2.3
7	6E	65	ALA	2.3
44	G8	48	ALA	2.3
44	C5	100	ALA	2.3
34	25	7	TYR	2.3
4	3E	135	LEU	2.3
44	C5	92	ASN	2.3
48	G5	61	LEU	2.3
49	H5	28	LEU	2.3
1	13	968	A	2.3
25	1H	228	A	2.3
25	14	390	A	2.3
25	14	1307	A	2.3
54	1G	781	A	2.3
34	25	80	ASP	2.3
40	C8	56	ASP	2.3
1	13	1240	U	2.3
9	8E	124	GLN	2.3
25	14	2296	U	2.3
1	13	883	C	2.3
1	13	1388	C	2.3
2	12	229	VAL	2.3
8	72	26	VAL	2.3
25	1H	2701	C	2.3
32	69	87	LYS	2.3
51	J5	60	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
54	1G	345	C	2.3
54	1G	931	C	2.3
32	61	132	PRO	2.3
45	D5	124	ILE	2.3
3	22	180	ALA	2.3
7	6E	156	TRP	2.3
9	8E	119	ALA	2.3
28	29	68	ALA	2.3
51	J5	53	ALA	2.3
8	7E	3	THR	2.3
29	31	98	SER	2.3
36	88	21	THR	2.3
18	9I	76	LEU	2.3
3	2E	184	TYR	2.3
3	2E	10	PHE	2.3
25	1H	109	G	2.3
25	1H	696	G	2.3
25	14	2532	G	2.3
32	69	130	TYR	2.3
54	1G	309	G	2.3
54	1G	506	G	2.3
7	6E	37	ASN	2.3
30	41	27	ASN	2.3
9	82	105	ASP	2.3
9	8E	70	LYS	2.3
38	65	57	LYS	2.3
47	F5	92	LYS	2.3
1	13	161	A	2.3
1	13	1285	A	2.3
5	4E	14	ARG	2.3
31	59	107	VAL	2.3
35	35	111	ARG	2.3
39	B8	54	ARG	2.3
40	85	50	ARG	2.3
46	I8	44	ARG	2.3
56	2L	39	A	2.3
25	14	588	U	2.3
7	62	49	ILE	2.3
29	31	94	PRO	2.3
29	39	64	ILE	2.3
30	49	144	ILE	2.3
3	2E	158	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
44	G8	16	ALA	2.3
44	C5	78	ALA	2.3
1	13	877	C	2.3
25	1H	436	C	2.3
25	1H	790	C	2.3
29	31	34	TRP	2.3
54	1G	1045	C	2.3
56	2L	24	C	2.3
10	1A	67	THR	2.3
19	AI	22	LEU	2.3
37	55	10	LEU	2.3
2	1E	17	PHE	2.3
45	D5	149	SER	2.3
5	42	47	LYS	2.3
44	C5	101	LYS	2.3
27	19	52	ARG	2.3
2	12	193	ASP	2.3
37	98	72	ASP	2.3
28	29	40	GLU	2.2
1	13	1438	G	2.2
22	1K	25	G	2.2
25	14	1176	G	2.2
54	1G	254	G	2.2
54	1G	881	G	2.2
55	3L	18	G	2.2
30	49	39	ILE	2.2
29	39	47	GLY	2.2
30	41	44	GLY	2.2
32	69	32	PRO	2.2
32	69	134	PRO	2.2
39	75	135	ALA	2.2
1	13	222	U	2.2
25	1H	244	A	2.2
31	51	103	LEU	2.2
54	1G	389	A	2.2
54	1G	815	A	2.2
54	1G	975	A	2.2
14	5A	4	LYS	2.2
1	13	932	C	2.2
23	2K	66	C	2.2
25	14	964	C	2.2
25	14	1741	C	2.2

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Mol	Chain	Res	Type	RSRZ
54	1G	875	C	2.2
54	1G	1230	C	2.2
2	1E	45	GLN	2.2
4	32	42	GLN	2.2
12	3I	8	ASN	2.2
15	6A	9	GLN	2.2
30	41	41	GLN	2.2
32	69	19	VAL	2.2
38	A8	98	VAL	2.2
48	K8	47	ASN	2.2
12	3A	37	CYS	2.2
2	12	86	GLU	2.2
3	22	183	ASP	2.2
6	5E	83	ASP	2.2
45	H8	168	GLU	2.2
3	22	71	ALA	2.2
27	11	149	PRO	2.2
28	21	62	PRO	2.2
32	61	8	PRO	2.2
3	22	91	LEU	2.2
8	7E	10	LEU	2.2
1	13	941	G	2.2
1	13	944	G	2.2
12	3A	80	HIS	2.2
20	BA	34	LYS	2.2
25	1H	329	G	2.2
25	1H	1059	G	2.2
25	1H	2891	G	2.2
25	14	1195	G	2.2
28	29	92	THR	2.2
35	35	39	LYS	2.2
54	1G	186(C)	G	2.2
54	1G	1061	G	2.2
25	1H	230	U	2.2
25	14	534	U	2.2
25	14	822	U	2.2
25	14	1621	U	2.2
25	14	2656	U	2.2
46	I8	77	ARG	2.2
1	13	1340	A	2.2
20	BI	11	SER	2.2
20	BI	19	SER	2.2

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Mol	Chain	Res	Type	RSRZ
25	14	1952	A	2.2
25	14	1953	A	2.2
25	14	2020	A	2.2
7	6E	75	VAL	2.2
45	H8	96	VAL	2.2
3	22	118	GLN	2.2
15	6I	28	GLN	2.2
30	49	26	GLN	2.2
36	45	105	GLU	2.2
39	B8	50	ILE	2.2
47	F5	18	ILE	2.2
1	13	47	C	2.2
1	13	1344	C	2.2
1	13	1382	C	2.2
22	3K	51	C	2.2
25	1H	1233	C	2.2
25	1H	1499	C	2.2
54	1G	1018	C	2.2
2	12	218	ALA	2.2
3	22	115	LEU	2.2
7	6E	124	LEU	2.2
19	AI	44	MET	2.2
20	BA	53	LEU	2.2
30	41	106	LEU	2.2
31	51	5	GLY	2.2
35	35	93	GLY	2.2
38	A8	96	GLY	2.2
45	D5	134	PRO	2.2
47	J8	69	LYS	2.2
47	F5	39	LYS	2.2
35	35	65	ARG	2.2
3	22	191	THR	2.2
28	29	66	HIS	2.2
3	22	120	VAL	2.2
6	52	88	VAL	2.2
8	72	95	VAL	2.2
29	31	37	VAL	2.2
48	K8	45	SER	2.2
25	14	1438	U	2.2
25	14	2398	U	2.2
48	G5	46	GLN	2.2
52	L5	36	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
1	13	220	G	2.2
1	13	416	G	2.2
25	1H	654(P)	G	2.2
26	1J	18	G	2.2
26	1J	116	G	2.2
54	1G	413	G	2.2
54	1G	1004	A	2.2
54	1G	1033	G	2.2
18	9I	78	LEU	2.2
20	BA	10	LEU	2.2
33	58	138	LEU	2.2
2	12	228	GLY	2.2
16	7A	7	ALA	2.2
5	4E	92	LYS	2.2
7	6E	29	LYS	2.2
11	2I	81	ASP	2.2
20	BI	34	LYS	2.2
28	21	127	ASP	2.2
29	39	23	ASP	2.2
14	5A	37	PHE	2.2
25	1H	76	C	2.2
25	1H	856	C	2.2
25	1H	2498	C	2.2
54	1G	1383	C	2.2
29	39	37	VAL	2.2
45	D5	116	VAL	2.2
10	1I	74	ILE	2.2
14	5A	32	SER	2.2
19	AA	49	ILE	2.2
45	D5	171	ILE	2.2
2	1E	138	LEU	2.2
2	1E	155	LEU	2.2
30	41	94	LEU	2.2
3	2E	61	ALA	2.2
3	2E	160	ALA	2.2
5	4E	127	ASN	2.2
5	4E	130	ASN	2.2
7	62	39	ALA	2.2
9	8E	122	ALA	2.2
32	61	65	ALA	2.2
42	A5	78	GLU	2.2
44	G8	91	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
44	C5	62	GLU	2.2
45	D5	168	GLU	2.2
3	22	96	GLY	2.2
5	42	59	GLY	2.2
10	1A	53	PRO	2.2
10	1A	93	GLY	2.2
35	35	36	LYS	2.2
44	G8	54	LYS	2.2
44	C5	46	LYS	2.2
25	1H	12	U	2.2
45	D5	83	PRO	2.2
46	I8	73	GLY	2.2
51	J5	34	PRO	2.2
54	1G	343	U	2.2
4	3E	3	ARG	2.2
32	69	50	ARG	2.2
37	98	103	ARG	2.2
27	11	230	ASP	2.2
1	13	1229	A	2.2
1	13	1394	A	2.2
25	1H	870	A	2.2
25	1H	984	A	2.2
25	1H	1379	A	2.2
25	14	819	A	2.2
25	14	2117	A	2.2
55	1L	82	A	2.2
1	13	625	G	2.2
1	13	1482	G	2.2
25	1H	948	G	2.2
25	1H	2661	G	2.2
25	14	712	G	2.2
25	14	765	G	2.2
29	39	39	TRP	2.2
54	1G	181	G	2.2
54	1G	331	G	2.2
54	1G	929	G	2.2
56	2L	71	G	2.2
2	1E	15	VAL	2.1
8	72	61	VAL	2.1
9	8E	103	THR	2.1
45	D5	58	VAL	2.1
1	13	314	C	2.1

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Mol	Chain	Res	Type	RSRZ
1	13	1429	C	2.1
2	1E	41	ILE	2.1
2	12	58	ILE	2.1
23	2K	75	C	2.1
25	1H	886	C	2.1
25	1H	982	C	2.1
25	14	1548	C	2.1
25	14	2179	C	2.1
27	11	64	ILE	2.1
54	1G	910	C	2.1
54	1G	1397	C	2.1
16	7A	6	LEU	2.1
17	8I	16	GLN	2.1
29	31	101	LEU	2.1
2	1E	29	ALA	2.1
8	7E	87	SER	2.1
9	82	11	LYS	2.1
35	35	89	ALA	2.1
28	29	10	GLY	2.1
30	49	42	GLY	2.1
37	55	93	GLY	2.1
41	95	48	GLY	2.1
4	32	79	PHE	2.1
39	75	57	PHE	2.1
1	13	1425	U	2.1
25	1H	1033	U	2.1
25	14	2357	U	2.1
40	85	91	ASP	2.1
46	E5	71	ASP	2.1
2	12	112	VAL	2.1
10	1A	34	VAL	2.1
11	2I	114	VAL	2.1
11	2A	80	VAL	2.1
31	51	107	VAL	2.1
31	59	37	VAL	2.1
5	42	118	ILE	2.1
16	7I	32	TYR	2.1
25	14	821	A	2.1
25	14	2269	A	2.1
44	G8	55	TYR	2.1
2	12	22	LYS	2.1
3	22	111	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
9	82	96	LEU	2.1
29	39	108	LYS	2.1
38	65	33	LYS	2.1
1	13	190	G	2.1
3	22	92	ALA	2.1
5	42	24	ARG	2.1
7	6E	110	GLN	2.1
25	1H	224	G	2.1
25	1H	1371	G	2.1
28	29	70	ALA	2.1
29	39	26	ALA	2.1
34	25	78	ARG	2.1
54	1G	567	G	2.1
54	1G	1024	G	2.1
55	3L	35	G	2.1
40	85	96	ALA	2.1
3	22	174	PRO	2.1
5	42	42	GLY	2.1
29	31	27	GLU	2.1
38	65	43	GLU	2.1
25	1H	4	C	2.1
25	1H	268	C	2.1
25	1H	417	C	2.1
25	1H	2695	C	2.1
25	14	697	C	2.1
25	14	1999	C	2.1
54	1G	132	C	2.1
54	1G	1118	C	2.1
53	M5	33	ASN	2.1
2	12	103	THR	2.1
3	22	97	LYS	2.1
4	32	30	LYS	2.1
5	42	57	LYS	2.1
5	42	92	LYS	2.1
8	72	111	ILE	2.1
10	1A	42	THR	2.1
25	1H	594	U	2.1
31	59	136	ILE	2.1
36	88	2	LEU	2.1
40	85	24	TYR	2.1
47	F5	80	LEU	2.1
54	1G	1450	U	2.1

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Mol	Chain	Res	Type	RSRZ
28	21	117	MET	2.1
30	41	16	ARG	2.1
35	35	77	ARG	2.1
2	12	135	GLN	2.1
6	5E	53	ALA	2.1
7	62	127	ALA	2.1
15	6A	30	ALA	2.1
29	39	8	GLN	2.1
15	6I	61	GLY	2.1
22	3K	53	A	2.1
25	14	1379	A	2.1
27	11	236	GLY	2.1
31	59	168	PRO	2.1
32	61	34	GLY	2.1
44	C5	93	GLY	2.1
54	1G	909	A	2.1
54	1G	1418	A	2.1
2	12	55	PHE	2.1
12	3I	62	SER	2.1
29	31	13	SER	2.1
31	51	155	SER	2.1
1	13	254	G	2.1
1	13	438	G	2.1
25	1H	101	G	2.1
25	1H	738	G	2.1
25	14	125	G	2.1
25	14	388	G	2.1
25	14	1653	G	2.1
41	95	46	VAL	2.1
53	M5	22	VAL	2.1
54	1G	11	G	2.1
54	1G	80	G	2.1
54	1G	1253	G	2.1
1	13	1118	C	2.1
1	13	1228	C	2.1
25	14	31	C	2.1
25	14	654(E)	C	2.1
25	14	665	C	2.1
56	2L	40	C	2.1
2	12	75	LYS	2.1
2	1E	215	LEU	2.1
5	42	117	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
32	61	121	LYS	2.1
37	55	72	ASP	2.1
40	85	5	LYS	2.1
44	G8	94	LYS	2.1
47	J8	94	LEU	2.1
4	32	73	ARG	2.1
7	62	2	ALA	2.1
14	5A	59	ALA	2.1
28	21	187	ALA	2.1
1	13	367	U	2.1
1	13	1391	U	2.1
2	1E	224	GLN	2.1
2	12	45	GLN	2.1
7	6E	11	GLN	2.1
9	82	73	GLN	2.1
22	1K	9	U	2.1
54	1G	1341	U	2.1
4	32	109	GLY	2.1
19	AA	8	GLY	2.1
20	BA	69	GLY	2.1
28	29	71	GLY	2.1
27	11	23	GLU	2.1
29	31	127	GLU	2.1
39	B8	11	GLU	2.1
39	75	22	PHE	2.1
44	C5	56	PRO	2.1
45	H8	158	PRO	2.1
29	39	15	SER	2.1
3	22	66	VAL	2.1
1	13	815	A	2.1
1	13	1289	A	2.1
19	AI	55	LYS	2.1
23	2K	73	A	2.1
25	1H	1496	A	2.1
25	14	1553	A	2.1
25	14	2662	A	2.1
26	1J	52	A	2.1
27	11	4	LYS	2.1
54	1G	892	A	2.1
2	12	80	ILE	2.1
4	32	58	LEU	2.1
8	72	63	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
9	82	77	ILE	2.1
10	1I	71	LEU	2.1
10	1A	23	ILE	2.1
14	5A	7	ILE	2.1
36	88	10	ARG	2.1
39	75	96	ARG	2.1
40	85	95	LEU	2.1
8	72	8	ASP	2.1
29	39	99	TYR	2.1
31	59	68	THR	2.1
1	13	1133	G	2.1
1	13	1387	G	2.1
7	6E	100	ALA	2.1
11	2A	97	ALA	2.1
20	BA	66	ALA	2.1
23	2K	70	C	2.1
25	1H	898	C	2.1
25	14	376	C	2.1
25	14	1599	C	2.1
25	14	2798	C	2.1
31	51	165	ALA	2.1
44	G8	69	ALA	2.1
54	1G	1336	C	2.1
25	1H	388	G	2.1
25	1H	1091	G	2.1
25	1H	1661	G	2.1
25	1H	2003	G	2.1
25	14	1184	G	2.1
54	1G	108	G	2.1
54	1G	475	G	2.1
54	1G	1003	G	2.1
54	1G	1231	G	2.1
54	1G	1355	G	2.1
55	1L	61	G	2.1
2	1E	18	GLY	2.1
4	3E	2	GLY	2.1
3	22	143	GLU	2.1
9	8E	59	PHE	2.1
14	5I	37	PHE	2.1
36	45	91	GLU	2.1
51	J5	32	PRO	2.1
5	4E	34	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
9	82	108	VAL	2.0
14	5I	25	VAL	2.0
25	14	2189	U	2.0
27	11	5	LYS	2.0
29	39	183	VAL	2.0
52	L5	2	LYS	2.0
3	22	112	SER	2.0
20	BA	70	SER	2.0
5	42	13	ILE	2.0
7	6E	27	ILE	2.0
7	6E	41	ARG	2.0
14	5I	29	ARG	2.0
20	BI	86	ARG	2.0
27	19	215	LEU	2.0
28	29	63	LEU	2.0
29	31	95	ARG	2.0
29	39	28	ILE	2.0
36	88	6	ARG	2.0
39	75	7	ILE	2.0
40	85	11	ARG	2.0
51	J5	30	LEU	2.0
1	13	327	A	2.0
1	13	1227	A	2.0
14	5A	34	TYR	2.0
25	14	1194	A	2.0
30	41	46	ALA	2.0
30	49	126	ASP	2.0
31	59	102	ALA	2.0
32	61	129	THR	2.0
36	45	129	THR	2.0
37	55	84	ALA	2.0
42	A5	94	ASP	2.0
49	H5	21	ALA	2.0
54	1G	919	A	2.0
12	3I	37	CYS	2.0
18	9A	57	GLY	2.0
29	39	61	GLY	2.0
31	59	117	PRO	2.0
1	13	562	C	2.0
17	8I	37	LYS	2.0
28	21	64	LYS	2.0
32	69	66	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
32	69	117	GLU	2.0
3	22	198	VAL	2.0
9	82	44	VAL	2.0
25	1H	2538	C	2.0
25	14	1387	C	2.0
25	14	1585	C	2.0
35	78	107	LYS	2.0
36	88	90	VAL	2.0
36	45	27	VAL	2.0
38	A8	49	VAL	2.0
41	D8	47	VAL	2.0
44	G8	3	VAL	2.0
45	H8	175	VAL	2.0
54	1G	186(E)	C	2.0
1	13	587	G	2.0
14	5A	41	ARG	2.0
25	1H	1055	G	2.0
25	1H	2124	G	2.0
25	14	2121	G	2.0
26	1J	69	G	2.0
29	31	20	LEU	2.0
35	35	62	LEU	2.0
49	H5	29	ARG	2.0
54	1G	102	G	2.0
54	1G	1001	G	2.0
55	1L	2	G	2.0
55	3L	2	G	2.0
3	22	202	ILE	2.0
36	88	66	ILE	2.0
47	J8	86	SER	2.0
47	F5	37	ILE	2.0
1	13	999	U	2.0
25	1H	1590	U	2.0
25	1H	2647	U	2.0
25	14	350	U	2.0
27	19	96	HIS	2.0
2	12	47	THR	2.0
40	85	21	ALA	2.0
16	7A	39	TYR	2.0
3	2E	13	GLY	2.0
41	D8	41	GLY	2.0
44	C5	25	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
44	C5	59	GLY	2.0
4	32	22	LYS	2.0
30	49	142	PRO	2.0
39	B8	90	GLN	2.0
42	A5	83	LYS	2.0
49	H5	16	PRO	2.0
1	13	611	A	2.0
2	12	219	VAL	2.0
4	32	25	ARG	2.0
5	42	34	VAL	2.0
5	42	79	GLU	2.0
25	1H	1677	A	2.0
25	1H	2135	A	2.0
25	1H	2662	A	2.0
25	14	2019	A	2.0
25	14	2883	A	2.0
31	51	144	VAL	2.0
31	59	49	VAL	2.0
32	61	18	VAL	2.0
39	75	10	VAL	2.0
40	C8	10	ARG	2.0
45	D5	139	VAL	2.0
48	G5	59	ARG	2.0
17	8I	31	LEU	2.0
2	12	201	ILE	2.0
44	C5	38	ILE	2.0
1	13	25	C	2.0
1	13	63	C	2.0
23	2K	16	C	2.0
25	1H	2021	C	2.0
25	14	392	C	2.0
25	14	965	C	2.0
54	1G	756	C	2.0
54	1G	972	C	2.0
54	1G	1524	C	2.0
55	1L	75	C	2.0
55	3L	70	C	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum,

median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
22	PSU	3K	64	20/21	0.49	0.16	152,161,169,173	0
22	5MU	3K	63	21/22	0.61	0.14	141,157,163,170	0
22	OMG	1K	17	24/25	0.61	0.13	131,142,162,173	0
23	H2U	2K	21	20/21	0.62	0.13	113,120,123,125	0
22	4SU	1K	8	20/21	0.70	0.15	137,141,150,153	0
56	H2U	2L	21	20/21	0.70	0.15	126,132,139,144	0
22	OMG	3K	17	24/25	0.73	0.14	155,167,174,174	0
22	4SU	3K	8	20/21	0.74	0.13	159,163,169,172	0
56	5MU	2L	55	21/22	0.77	0.13	109,115,121,126	0
56	PSU	2L	56	20/21	0.79	0.12	110,113,122,124	0
22	MIA	3K	38	29/30	0.82	0.19	107,114,119,123	0
23	7MG	2K	47	24/25	0.82	0.15	91,98,108,113	0
23	5MU	2K	55	21/22	0.82	0.12	92,101,109,115	0
23	PSU	2K	56	20/21	0.84	0.10	92,97,108,110	0
22	5MU	1K	63	21/22	0.84	0.11	115,124,133,139	0
22	PSU	1K	64	20/21	0.86	0.10	116,128,135,140	0
56	4SU	2L	8	20/21	0.89	0.11	108,114,119,122	0
22	QUO	3K	35	32/33	0.89	0.20	107,114,128,136	0
23	4SU	2K	8	20/21	0.90	0.15	87,91,95,95	0
22	PSU	3K	40	20/21	0.92	0.07	104,112,115,117	0
22	QUO	1K	35	32/33	0.93	0.26	71,90,101,103	0
22	PSU	1K	40	20/21	0.93	0.13	75,99,107,110	0
56	OMC	2L	33	21/22	0.95	0.11	96,98,101,111	0
23	OMC	2K	33	21/22	0.95	0.17	70,76,81,84	0
22	MIA	1K	38	29/30	0.95	0.18	76,87,107,110	0

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1G	1666	1/1	0.23	0.55	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3287	1/1	0.35	0.36	112,112,112,112	0
58	MG	14	3319	1/1	0.42	0.46	96,96,96,96	0
58	MG	1H	3171	1/1	0.43	0.50	89,89,89,89	0
58	MG	1G	1679	1/1	0.43	0.25	157,157,157,157	0
58	MG	3E	301	1/1	0.46	0.43	115,115,115,115	0
58	MG	14	3153	1/1	0.50	0.41	104,104,104,104	0
58	MG	14	3162	1/1	0.51	0.43	100,100,100,100	0
58	MG	1G	1669	1/1	0.52	0.18	131,131,131,131	0
58	MG	1G	1677	1/1	0.54	0.31	99,99,99,99	0
58	MG	14	3161	1/1	0.56	0.55	88,88,88,88	0
58	MG	1G	1658	1/1	0.56	0.41	104,104,104,104	0
58	MG	13	1655	1/1	0.57	0.36	78,78,78,78	0
58	MG	1G	1639	1/1	0.58	0.27	110,110,110,110	0
58	MG	1H	3383	1/1	0.59	0.21	113,113,113,113	0
58	MG	1G	1620	1/1	0.60	0.33	91,91,91,91	0
58	MG	1H	3195	1/1	0.60	0.42	80,80,80,80	0
58	MG	1H	3231	1/1	0.60	0.32	110,110,110,110	0
58	MG	1H	3122	1/1	0.60	0.42	74,74,74,74	0
58	MG	13	1700	1/1	0.61	0.45	96,96,96,96	0
58	MG	1J	206	1/1	0.61	0.37	109,109,109,109	0
58	MG	1H	3327	1/1	0.62	0.35	80,80,80,80	0
58	MG	1H	3359	1/1	0.63	0.47	97,97,97,97	0
58	MG	13	1705	1/1	0.63	0.26	127,127,127,127	0
58	MG	1H	3338	1/1	0.63	0.42	80,80,80,80	0
58	MG	1G	1657	1/1	0.64	0.49	110,110,110,110	0
58	MG	14	3291	1/1	0.64	0.34	77,77,77,77	0
58	MG	16	211	1/1	0.64	0.32	80,80,80,80	0
58	MG	1G	1640	1/1	0.64	0.40	78,78,78,78	0
58	MG	1G	1613	1/1	0.65	0.39	81,81,81,81	0
58	MG	13	1671	1/1	0.65	0.47	138,138,138,138	0
58	MG	14	3112	1/1	0.65	0.31	86,86,86,86	0
58	MG	1H	3331	1/1	0.65	0.37	72,72,72,72	0
58	MG	13	1612	1/1	0.65	0.36	74,74,74,74	0
58	MG	1G	1671	1/1	0.66	0.43	85,85,85,85	0
58	MG	14	3302	1/1	0.66	0.26	131,131,131,131	0
58	MG	1H	3200	1/1	0.68	0.21	73,73,73,73	0
58	MG	13	1618	1/1	0.69	0.38	92,92,92,92	0
58	MG	14	3268	1/1	0.69	0.34	88,88,88,88	0
58	MG	1H	3363	1/1	0.69	0.26	98,98,98,98	0
58	MG	1H	3364	1/1	0.69	0.42	90,90,90,90	0
58	MG	14	3146	1/1	0.69	0.42	88,88,88,88	0
58	MG	1G	1646	1/1	0.69	0.32	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1G	1654	1/1	0.69	0.23	110,110,110,110	0
59	ZN	G8	201	1/1	0.69	0.20	185,185,185,185	0
58	MG	1G	1623	1/1	0.70	0.28	96,96,96,96	0
58	MG	1H	3313	1/1	0.70	0.28	82,82,82,82	0
58	MG	1J	204	1/1	0.70	0.51	88,88,88,88	0
58	MG	1H	3366	1/1	0.70	0.53	83,83,83,83	0
58	MG	1H	3341	1/1	0.70	0.32	86,86,86,86	0
58	MG	2L	103	1/1	0.71	0.28	102,102,102,102	0
58	MG	1G	1662	1/1	0.71	0.41	78,78,78,78	0
58	MG	1H	3326	1/1	0.71	0.29	92,92,92,92	0
58	MG	14	3316	1/1	0.71	0.54	96,96,96,96	0
58	MG	1H	3035	1/1	0.71	0.35	83,83,83,83	0
58	MG	1H	3081	1/1	0.71	0.38	67,67,67,67	0
58	MG	13	1684	1/1	0.71	0.36	96,96,96,96	0
58	MG	13	1670	1/1	0.71	0.34	86,86,86,86	0
58	MG	1H	3286	1/1	0.72	0.33	67,67,67,67	0
58	MG	1H	3358	1/1	0.72	0.36	92,92,92,92	0
58	MG	1H	3140	1/1	0.72	0.40	59,59,59,59	0
58	MG	1H	3361	1/1	0.72	0.32	112,112,112,112	0
58	MG	1G	1676	1/1	0.72	0.26	105,105,105,105	0
58	MG	14	3296	1/1	0.72	0.45	97,97,97,97	0
58	MG	13	1692	1/1	0.72	0.40	80,80,80,80	0
58	MG	13	1680	1/1	0.72	0.30	71,71,71,71	0
58	MG	13	1678	1/1	0.72	0.19	92,92,92,92	0
58	MG	1H	3375	1/1	0.72	0.29	94,94,94,94	0
58	MG	13	1707	1/1	0.72	0.13	83,83,83,83	0
58	MG	16	210	1/1	0.72	0.27	63,63,63,63	0
58	MG	13	1619	1/1	0.73	0.25	99,99,99,99	0
58	MG	1G	1656	1/1	0.73	0.19	92,92,92,92	0
58	MG	1H	3332	1/1	0.73	0.11	62,62,62,62	0
58	MG	13	1713	1/1	0.73	0.27	83,83,83,83	0
58	MG	13	1610	1/1	0.73	0.30	94,94,94,94	0
58	MG	14	3217	1/1	0.73	0.34	79,79,79,79	0
58	MG	2K	102	1/1	0.73	0.26	78,78,78,78	0
58	MG	14	3078	1/1	0.73	0.25	87,87,87,87	0
58	MG	14	3142	1/1	0.74	0.39	62,62,62,62	0
58	MG	1H	3047	1/1	0.74	0.32	84,84,84,84	0
58	MG	2K	105	1/1	0.74	0.30	87,87,87,87	0
58	MG	14	3160	1/1	0.74	0.29	80,80,80,80	0
58	MG	16	206	1/1	0.74	0.20	78,78,78,78	0
58	MG	1H	3191	1/1	0.74	0.13	68,68,68,68	0
58	MG	14	3216	1/1	0.74	0.27	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3099	1/1	0.74	0.34	75,75,75,75	0
58	MG	C5	201	1/1	0.74	0.29	105,105,105,105	0
58	MG	13	1687	1/1	0.74	0.16	82,82,82,82	0
58	MG	14	3238	1/1	0.75	0.41	83,83,83,83	0
58	MG	1H	3185	1/1	0.75	0.46	77,77,77,77	0
58	MG	14	3151	1/1	0.75	0.34	82,82,82,82	0
58	MG	14	3168	1/1	0.75	0.40	79,79,79,79	0
58	MG	16	205	1/1	0.75	0.30	87,87,87,87	0
58	MG	1G	1670	1/1	0.75	0.37	86,86,86,86	0
58	MG	1H	3198	1/1	0.76	0.24	79,79,79,79	0
58	MG	13	1674	1/1	0.76	0.14	81,81,81,81	0
58	MG	14	3250	1/1	0.76	0.36	70,70,70,70	0
58	MG	14	3325	1/1	0.76	0.36	86,86,86,86	0
58	MG	1J	203	1/1	0.76	0.37	75,75,75,75	0
58	MG	13	1714	1/1	0.76	0.32	95,95,95,95	0
58	MG	1H	3143	1/1	0.76	0.42	66,66,66,66	0
58	MG	1H	3192	1/1	0.76	0.29	58,58,58,58	0
58	MG	1H	3168	1/1	0.76	0.31	64,64,64,64	0
58	MG	1G	1655	1/1	0.77	0.29	112,112,112,112	0
58	MG	14	3176	1/1	0.77	0.41	71,71,71,71	0
58	MG	14	3046	1/1	0.77	0.41	73,73,73,73	0
58	MG	14	3148	1/1	0.77	0.27	79,79,79,79	0
58	MG	1H	3373	1/1	0.77	0.29	72,72,72,72	0
58	MG	14	3085	1/1	0.77	0.19	59,59,59,59	0
58	MG	14	3254	1/1	0.77	0.30	94,94,94,94	0
58	MG	1G	1633	1/1	0.77	0.49	80,80,80,80	0
58	MG	25	201	1/1	0.77	0.44	88,88,88,88	0
58	MG	L8	101	1/1	0.77	0.13	84,84,84,84	0
58	MG	14	3141	1/1	0.77	0.24	75,75,75,75	0
58	MG	14	3147	1/1	0.78	0.28	73,73,73,73	0
58	MG	1H	3316	1/1	0.78	0.27	80,80,80,80	0
58	MG	1H	3175	1/1	0.78	0.28	58,58,58,58	0
58	MG	1H	3045	1/1	0.78	0.26	90,90,90,90	0
58	MG	14	3022	1/1	0.78	0.30	80,80,80,80	0
58	MG	14	3030	1/1	0.78	0.31	91,91,91,91	0
58	MG	1G	1612	1/1	0.78	0.29	78,78,78,78	0
58	MG	1H	3220	1/1	0.78	0.38	64,64,64,64	0
58	MG	1J	201	1/1	0.78	0.23	100,100,100,100	0
58	MG	8E	201	1/1	0.78	0.15	95,95,95,95	0
58	MG	13	1682	1/1	0.78	0.18	78,78,78,78	0
58	MG	1H	3309	1/1	0.78	0.25	83,83,83,83	0
58	MG	1H	3342	1/1	0.78	0.26	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3344	1/1	0.78	0.27	71,71,71,71	0
58	MG	1H	3040	1/1	0.78	0.21	62,62,62,62	0
58	MG	14	3252	1/1	0.79	0.29	71,71,71,71	0
58	MG	1H	3370	1/1	0.79	0.46	83,83,83,83	0
58	MG	14	3036	1/1	0.79	0.31	74,74,74,74	0
58	MG	14	3204	1/1	0.79	0.31	48,48,48,48	0
58	MG	13	1706	1/1	0.79	0.14	98,98,98,98	0
58	MG	14	3048	1/1	0.79	0.32	66,66,66,66	0
58	MG	14	3301	1/1	0.79	0.32	87,87,87,87	0
58	MG	1H	3228	1/1	0.79	0.30	83,83,83,83	0
58	MG	1H	3184	1/1	0.79	0.21	87,87,87,87	0
58	MG	1H	3039	1/1	0.80	0.25	76,76,76,76	0
58	MG	14	3097	1/1	0.80	0.25	51,51,51,51	0
58	MG	16	201	1/1	0.80	0.24	75,75,75,75	0
58	MG	14	3298	1/1	0.80	0.27	80,80,80,80	0
58	MG	13	1716	1/1	0.80	0.15	80,80,80,80	0
58	MG	14	3186	1/1	0.80	0.29	65,65,65,65	0
58	MG	14	3312	1/1	0.80	0.30	89,89,89,89	0
58	MG	1H	3085	1/1	0.80	0.27	48,48,48,48	0
58	MG	1G	1634	1/1	0.80	0.19	87,87,87,87	0
58	MG	14	3324	1/1	0.80	0.21	83,83,83,83	0
58	MG	1H	3321	1/1	0.80	0.47	80,80,80,80	0
58	MG	14	3229	1/1	0.80	0.11	82,82,82,82	0
58	MG	1H	3284	1/1	0.80	0.18	72,72,72,72	0
58	MG	14	3240	1/1	0.80	0.27	71,71,71,71	0
58	MG	14	3038	1/1	0.80	0.41	71,71,71,71	0
58	MG	13	1694	1/1	0.80	0.24	82,82,82,82	0
58	MG	1H	3302	1/1	0.80	0.39	92,92,92,92	0
58	MG	1G	1673	1/1	0.80	0.47	94,94,94,94	0
58	MG	14	3109	1/1	0.81	0.28	60,60,60,60	0
58	MG	13	1664	1/1	0.81	0.33	71,71,71,71	0
58	MG	13	1679	1/1	0.81	0.27	96,96,96,96	0
58	MG	14	3321	1/1	0.81	0.52	86,86,86,86	0
58	MG	14	3322	1/1	0.81	0.18	73,73,73,73	0
58	MG	13	1710	1/1	0.81	0.17	77,77,77,77	0
58	MG	14	3263	1/1	0.81	0.21	84,84,84,84	0
58	MG	16	203	1/1	0.81	0.30	77,77,77,77	0
58	MG	1H	3257	1/1	0.81	0.20	55,55,55,55	0
58	MG	14	3208	1/1	0.81	0.26	58,58,58,58	0
58	MG	1G	1627	1/1	0.81	0.34	77,77,77,77	0
58	MG	1H	3270	1/1	0.81	0.49	76,76,76,76	0
58	MG	13	1608	1/1	0.81	0.13	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	13	1688	1/1	0.81	0.16	101,101,101,101	0
58	MG	14	3286	1/1	0.82	0.17	84,84,84,84	0
58	MG	1H	3238	1/1	0.82	0.34	67,67,67,67	0
58	MG	13	1667	1/1	0.82	0.35	59,59,59,59	0
58	MG	1H	3189	1/1	0.82	0.30	73,73,73,73	0
58	MG	1H	3272	1/1	0.82	0.39	88,88,88,88	0
58	MG	13	1617	1/1	0.82	0.33	87,87,87,87	0
58	MG	1H	3151	1/1	0.82	0.27	56,56,56,56	0
58	MG	14	3072	1/1	0.82	0.31	56,56,56,56	0
58	MG	1H	3162	1/1	0.82	0.31	57,57,57,57	0
58	MG	14	3083	1/1	0.82	0.26	58,58,58,58	0
58	MG	1H	3197	1/1	0.82	0.21	61,61,61,61	0
58	MG	1H	3164	1/1	0.82	0.25	78,78,78,78	0
58	MG	1H	3037	1/1	0.82	0.34	47,47,47,47	0
58	MG	1G	1618	1/1	0.82	0.48	86,86,86,86	0
58	MG	14	3326	1/1	0.82	0.26	90,90,90,90	0
58	MG	14	3327	1/1	0.82	0.39	86,86,86,86	0
58	MG	1H	3212	1/1	0.82	0.36	80,80,80,80	0
58	MG	14	3133	1/1	0.82	0.30	58,58,58,58	0
58	MG	1H	3367	1/1	0.82	0.40	88,88,88,88	0
58	MG	13	1660	1/1	0.82	0.26	87,87,87,87	0
58	MG	13	1639	1/1	0.82	0.22	69,69,69,69	0
58	MG	1H	3127	1/1	0.82	0.43	75,75,75,75	0
58	MG	L5	400	1/1	0.82	0.12	70,70,70,70	0
58	MG	1H	3376	1/1	0.82	0.23	78,78,78,78	0
58	MG	14	3243	1/1	0.83	0.31	68,68,68,68	0
58	MG	1G	1667	1/1	0.83	0.18	84,84,84,84	0
58	MG	14	3108	1/1	0.83	0.33	55,55,55,55	0
58	MG	1H	3292	1/1	0.83	0.23	50,50,50,50	0
58	MG	13	1635	1/1	0.83	0.38	77,77,77,77	0
58	MG	1H	3374	1/1	0.83	0.41	78,78,78,78	0
58	MG	1K	101	1/1	0.83	0.34	84,84,84,84	0
58	MG	1H	3254	1/1	0.83	0.17	73,73,73,73	0
58	MG	1H	3381	1/1	0.83	0.33	90,90,90,90	0
58	MG	14	3294	1/1	0.83	0.57	90,90,90,90	0
58	MG	1H	3348	1/1	0.83	0.39	64,64,64,64	0
58	MG	2L	101	1/1	0.83	0.27	69,69,69,69	0
58	MG	1G	1638	1/1	0.83	0.39	80,80,80,80	0
58	MG	14	3009	1/1	0.83	0.24	49,49,49,49	0
58	MG	1H	3357	1/1	0.83	0.37	86,86,86,86	0
58	MG	14	3313	1/1	0.83	0.25	81,81,81,81	0
58	MG	13	1718	1/1	0.83	0.18	113,113,113,113	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3035	1/1	0.83	0.18	76,76,76,76	0
58	MG	14	3163	1/1	0.83	0.29	71,71,71,71	0
58	MG	14	3164	1/1	0.83	0.31	76,76,76,76	0
58	MG	1H	3155	1/1	0.83	0.25	41,41,41,41	0
58	MG	1H	3324	1/1	0.83	0.34	86,86,86,86	0
58	MG	13	1677	1/1	0.83	0.21	59,59,59,59	0
58	MG	14	3195	1/1	0.83	0.25	81,81,81,81	0
58	MG	1H	3034	1/1	0.83	0.29	71,71,71,71	0
58	MG	1J	202	1/1	0.83	0.51	84,84,84,84	0
58	MG	1H	3139	1/1	0.83	0.41	48,48,48,48	0
58	MG	14	3212	1/1	0.83	0.26	68,68,68,68	0
58	MG	1G	1602	1/1	0.83	0.23	64,64,64,64	0
58	MG	1G	1661	1/1	0.83	0.13	100,100,100,100	0
58	MG	1G	1608	1/1	0.83	0.38	81,81,81,81	0
58	MG	14	3089	1/1	0.83	0.12	72,72,72,72	0
58	MG	1H	3289	1/1	0.83	0.18	63,63,63,63	0
58	MG	1H	3176	1/1	0.84	0.28	70,70,70,70	0
58	MG	13	1709	1/1	0.84	0.17	87,87,87,87	0
58	MG	1G	1636	1/1	0.84	0.30	85,85,85,85	0
58	MG	1H	3215	1/1	0.84	0.23	52,52,52,52	0
58	MG	1H	3080	1/1	0.84	0.19	67,67,67,67	0
58	MG	13	1720	1/1	0.84	0.30	89,89,89,89	0
58	MG	14	3197	1/1	0.84	0.53	85,85,85,85	0
58	MG	1G	1601	1/1	0.84	0.24	77,77,77,77	0
58	MG	1G	1650	1/1	0.84	0.27	68,68,68,68	0
58	MG	13	1661	1/1	0.84	0.36	82,82,82,82	0
58	MG	13	1690	1/1	0.84	0.18	66,66,66,66	0
58	MG	13	1669	1/1	0.84	0.30	70,70,70,70	0
58	MG	14	3025	1/1	0.84	0.27	79,79,79,79	0
58	MG	14	3144	1/1	0.84	0.25	75,75,75,75	0
58	MG	14	3029	1/1	0.84	0.25	77,77,77,77	0
58	MG	1H	3353	1/1	0.84	0.10	93,93,93,93	0
58	MG	1G	1616	1/1	0.84	0.12	56,56,56,56	0
58	MG	1G	1660	1/1	0.84	0.29	82,82,82,82	0
58	MG	13	1641	1/1	0.84	0.18	68,68,68,68	0
58	MG	14	3158	1/1	0.84	0.21	72,72,72,72	0
58	MG	1J	205	1/1	0.84	0.34	75,75,75,75	0
58	MG	1H	3261	1/1	0.84	0.20	66,66,66,66	0
58	MG	14	3270	1/1	0.84	0.10	84,84,84,84	0
58	MG	14	3273	1/1	0.84	0.34	64,64,64,64	0
58	MG	1H	3263	1/1	0.84	0.27	61,61,61,61	0
58	MG	2K	103	1/1	0.84	0.31	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3200	1/1	0.85	0.40	85,85,85,85	0
58	MG	1G	1672	1/1	0.85	0.21	91,91,91,91	0
58	MG	1H	3043	1/1	0.85	0.24	62,62,62,62	0
58	MG	14	3057	1/1	0.85	0.30	62,62,62,62	0
58	MG	16	204	1/1	0.85	0.20	75,75,75,75	0
58	MG	14	3149	1/1	0.85	0.36	69,69,69,69	0
58	MG	1H	3182	1/1	0.85	0.35	73,73,73,73	0
58	MG	14	3231	1/1	0.85	0.36	75,75,75,75	0
58	MG	14	3233	1/1	0.85	0.25	66,66,66,66	0
58	MG	1H	3271	1/1	0.85	0.31	77,77,77,77	0
58	MG	13	1701	1/1	0.85	0.26	74,74,74,74	0
58	MG	1H	3138	1/1	0.85	0.40	62,62,62,62	0
58	MG	14	3248	1/1	0.85	0.18	65,65,65,65	0
58	MG	31	303	1/1	0.85	0.24	63,63,63,63	0
58	MG	1H	3152	1/1	0.85	0.18	62,62,62,62	0
58	MG	1H	3241	1/1	0.85	0.28	65,65,65,65	0
58	MG	1H	3201	1/1	0.85	0.35	87,87,87,87	0
58	MG	1G	1668	1/1	0.85	0.26	76,76,76,76	0
58	MG	14	3170	1/1	0.85	0.14	69,69,69,69	0
58	MG	14	3122	1/1	0.85	0.28	54,54,54,54	0
58	MG	14	3283	1/1	0.85	0.36	88,88,88,88	0
58	MG	1H	3210	1/1	0.85	0.41	86,86,86,86	0
58	MG	1H	3041	1/1	0.85	0.24	51,51,51,51	0
58	MG	16	202	1/1	0.85	0.40	63,63,63,63	0
58	MG	14	3293	1/1	0.85	0.28	71,71,71,71	0
59	ZN	C5	202	1/1	0.85	0.13	194,194,194,194	0
58	MG	14	3128	1/1	0.86	0.39	79,79,79,79	0
58	MG	14	3131	1/1	0.86	0.26	71,71,71,71	0
58	MG	1H	3234	1/1	0.86	0.33	85,85,85,85	0
58	MG	14	3135	1/1	0.86	0.19	67,67,67,67	0
58	MG	13	1696	1/1	0.86	0.44	81,81,81,81	0
58	MG	1H	3018	1/1	0.86	0.25	48,48,48,48	0
58	MG	1H	3246	1/1	0.86	0.33	79,79,79,79	0
58	MG	13	1626	1/1	0.86	0.22	80,80,80,80	0
58	MG	1H	3070	1/1	0.86	0.41	55,55,55,55	0
58	MG	14	3318	1/1	0.86	0.09	81,81,81,81	0
58	MG	1H	3378	1/1	0.86	0.16	68,68,68,68	0
58	MG	13	1637	1/1	0.86	0.27	73,73,73,73	0
58	MG	1G	1647	1/1	0.86	0.39	83,83,83,83	0
58	MG	1G	1611	1/1	0.86	0.38	89,89,89,89	0
58	MG	13	1704	1/1	0.86	0.23	130,130,130,130	0
58	MG	1H	3268	1/1	0.86	0.18	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1G	1681	1/1	0.86	0.33	85,85,85,85	0
58	MG	13	1638	1/1	0.86	0.28	78,78,78,78	0
58	MG	1H	3086	1/1	0.86	0.28	52,52,52,52	0
58	MG	14	3264	1/1	0.86	0.12	69,69,69,69	0
58	MG	1G	1619	1/1	0.86	0.25	88,88,88,88	0
58	MG	14	3013	1/1	0.86	0.19	56,56,56,56	0
58	MG	14	3111	1/1	0.86	0.20	63,63,63,63	0
58	MG	39	301	1/1	0.86	0.10	60,60,60,60	0
58	MG	13	1666	1/1	0.86	0.26	81,81,81,81	0
58	MG	13	1717	1/1	0.86	0.12	93,93,93,93	0
58	MG	14	3189	1/1	0.86	0.28	71,71,71,71	0
58	MG	14	3123	1/1	0.86	0.27	59,59,59,59	0
58	MG	14	3292	1/1	0.86	0.16	109,109,109,109	0
58	MG	1H	3311	1/1	0.87	0.31	58,58,58,58	0
58	MG	14	3028	1/1	0.87	0.25	76,76,76,76	0
58	MG	13	1708	1/1	0.87	0.14	81,81,81,81	0
58	MG	1H	3166	1/1	0.87	0.28	58,58,58,58	0
58	MG	1H	3130	1/1	0.87	0.35	67,67,67,67	0
58	MG	1H	3170	1/1	0.87	0.32	65,65,65,65	0
58	MG	1H	3135	1/1	0.87	0.28	52,52,52,52	0
58	MG	1H	3207	1/1	0.87	0.13	57,57,57,57	0
58	MG	14	3306	1/1	0.87	0.20	66,66,66,66	0
58	MG	14	3309	1/1	0.87	0.16	83,83,83,83	0
58	MG	14	3310	1/1	0.87	0.24	76,76,76,76	0
58	MG	1H	3173	1/1	0.87	0.26	68,68,68,68	0
58	MG	13	1605	1/1	0.87	0.22	77,77,77,77	0
58	MG	13	1698	1/1	0.87	0.10	83,83,83,83	0
58	MG	14	3077	1/1	0.87	0.29	68,68,68,68	0
58	MG	14	3150	1/1	0.87	0.57	70,70,70,70	0
58	MG	1G	1641	1/1	0.87	0.21	94,94,94,94	0
58	MG	1G	1644	1/1	0.87	0.23	83,83,83,83	0
58	MG	1H	3084	1/1	0.87	0.26	59,59,59,59	0
58	MG	14	3251	1/1	0.87	0.16	80,80,80,80	0
58	MG	13	1631	1/1	0.87	0.20	64,64,64,64	0
58	MG	14	3091	1/1	0.87	0.32	50,50,50,50	0
58	MG	14	3359	1/1	0.87	0.13	73,73,73,73	0
58	MG	14	3259	1/1	0.87	0.20	66,66,66,66	0
58	MG	14	3261	1/1	0.87	0.18	68,68,68,68	0
58	MG	1G	1648	1/1	0.87	0.28	95,95,95,95	0
58	MG	13	1673	1/1	0.87	0.21	70,70,70,70	0
58	MG	14	3267	1/1	0.87	0.24	74,74,74,74	0
58	MG	1G	1651	1/1	0.87	0.21	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	29	302	1/1	0.87	0.12	68,68,68,68	0
58	MG	1H	3379	1/1	0.87	0.20	85,85,85,85	0
58	MG	1H	3105	1/1	0.87	0.11	59,59,59,59	0
58	MG	14	3276	1/1	0.87	0.18	75,75,75,75	0
58	MG	1H	3107	1/1	0.87	0.22	54,54,54,54	0
58	MG	14	3121	1/1	0.87	0.38	64,64,64,64	0
58	MG	1H	3069	1/1	0.87	0.26	69,69,69,69	0
58	MG	1H	3245	1/1	0.88	0.16	69,69,69,69	0
58	MG	14	3266	1/1	0.88	0.15	72,72,72,72	0
58	MG	1H	3161	1/1	0.88	0.29	68,68,68,68	0
58	MG	1H	3248	1/1	0.88	0.20	88,88,88,88	0
58	MG	13	1665	1/1	0.88	0.26	82,82,82,82	0
58	MG	1H	3256	1/1	0.88	0.19	57,57,57,57	0
58	MG	14	3156	1/1	0.88	0.08	70,70,70,70	0
58	MG	1H	3033	1/1	0.88	0.31	82,82,82,82	0
58	MG	14	3285	1/1	0.88	0.12	74,74,74,74	0
58	MG	1H	3052	1/1	0.88	0.23	63,63,63,63	0
58	MG	1H	3066	1/1	0.88	0.20	71,71,71,71	0
58	MG	14	3288	1/1	0.88	0.14	66,66,66,66	0
58	MG	14	3053	1/1	0.88	0.26	57,57,57,57	0
58	MG	1H	3346	1/1	0.88	0.18	78,78,78,78	0
58	MG	14	3064	1/1	0.88	0.20	63,63,63,63	0
58	MG	14	3068	1/1	0.88	0.13	54,54,54,54	0
58	MG	1H	3266	1/1	0.88	0.08	43,43,43,43	0
58	MG	13	1654	1/1	0.88	0.46	76,76,76,76	0
58	MG	1G	1607	1/1	0.88	0.19	92,92,92,92	0
58	MG	4E	201	1/1	0.88	0.28	76,76,76,76	0
58	MG	14	3303	1/1	0.88	0.08	73,73,73,73	0
58	MG	1G	1610	1/1	0.88	0.24	95,95,95,95	0
58	MG	1H	3209	1/1	0.88	0.22	57,57,57,57	0
58	MG	14	3198	1/1	0.88	0.14	84,84,84,84	0
58	MG	1H	3079	1/1	0.88	0.33	55,55,55,55	0
58	MG	1H	3282	1/1	0.88	0.33	85,85,85,85	0
58	MG	14	3205	1/1	0.88	0.18	44,44,44,44	0
58	MG	1H	3283	1/1	0.88	0.26	59,59,59,59	0
58	MG	14	3209	1/1	0.88	0.24	63,63,63,63	0
58	MG	14	3211	1/1	0.88	0.21	60,60,60,60	0
58	MG	13	1609	1/1	0.88	0.18	72,72,72,72	0
58	MG	13	1601	1/1	0.88	0.26	59,59,59,59	0
58	MG	1H	3181	1/1	0.88	0.17	71,71,71,71	0
58	MG	14	3220	1/1	0.88	0.20	66,66,66,66	0
58	MG	1H	3290	1/1	0.88	0.11	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3113	1/1	0.88	0.10	46,46,46,46	0
58	MG	14	3232	1/1	0.88	0.15	73,73,73,73	0
58	MG	1H	3224	1/1	0.88	0.25	79,79,79,79	0
58	MG	1H	3301	1/1	0.88	0.20	75,75,75,75	0
58	MG	13	1633	1/1	0.88	0.20	54,54,54,54	0
58	MG	1G	1685	1/1	0.88	0.08	111,111,111,111	0
58	MG	1H	3145	1/1	0.88	0.29	53,53,53,53	0
58	MG	13	1662	1/1	0.88	0.12	81,81,81,81	0
58	MG	14	3008	1/1	0.88	0.23	55,55,55,55	0
58	MG	13	1625	1/1	0.88	0.31	58,58,58,58	0
58	MG	1H	3240	1/1	0.88	0.41	86,86,86,86	0
58	MG	14	3017	1/1	0.88	0.37	49,49,49,49	0
58	MG	1H	3089	1/1	0.88	0.21	68,68,68,68	0
58	MG	1H	3243	1/1	0.88	0.27	50,50,50,50	0
58	MG	14	3152	1/1	0.89	0.25	72,72,72,72	0
58	MG	14	3039	1/1	0.89	0.18	45,45,45,45	0
58	MG	13	1649	1/1	0.89	0.28	83,83,83,83	0
58	MG	1H	3206	1/1	0.89	0.21	65,65,65,65	0
58	MG	1H	3005	1/1	0.89	0.23	53,53,53,53	0
58	MG	14	3278	1/1	0.89	0.22	67,67,67,67	0
58	MG	1H	3315	1/1	0.89	0.09	67,67,67,67	0
58	MG	1H	3172	1/1	0.89	0.29	56,56,56,56	0
58	MG	14	3066	1/1	0.89	0.17	54,54,54,54	0
58	MG	1H	3013	1/1	0.89	0.23	46,46,46,46	0
58	MG	14	3069	1/1	0.89	0.22	75,75,75,75	0
58	MG	14	3289	1/1	0.89	0.17	75,75,75,75	0
58	MG	1H	3141	1/1	0.89	0.11	70,70,70,70	0
58	MG	14	3073	1/1	0.89	0.27	37,37,37,37	0
58	MG	1H	3038	1/1	0.89	0.18	46,46,46,46	0
58	MG	1G	1622	1/1	0.89	0.14	113,113,113,113	0
58	MG	14	3079	1/1	0.89	0.20	55,55,55,55	0
58	MG	1H	3110	1/1	0.89	0.22	58,58,58,58	0
58	MG	1H	3147	1/1	0.89	0.22	57,57,57,57	0
58	MG	1H	3148	1/1	0.89	0.12	57,57,57,57	0
58	MG	1H	3276	1/1	0.89	0.48	76,76,76,76	0
58	MG	1G	1678	1/1	0.89	0.27	92,92,92,92	0
58	MG	14	3207	1/1	0.89	0.18	53,53,53,53	0
58	MG	1H	3113	1/1	0.89	0.32	37,37,37,37	0
58	MG	1H	3115	1/1	0.89	0.23	48,48,48,48	0
58	MG	1H	3119	1/1	0.89	0.08	55,55,55,55	0
58	MG	13	1607	1/1	0.89	0.25	69,69,69,69	0
58	MG	2L	102	1/1	0.89	0.28	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3082	1/1	0.89	0.22	60,60,60,60	0
58	MG	14	3119	1/1	0.89	0.20	75,75,75,75	0
58	MG	14	3225	1/1	0.89	0.10	68,68,68,68	0
58	MG	3L	101	1/1	0.89	0.23	81,81,81,81	0
58	MG	1H	3196	1/1	0.89	0.24	71,71,71,71	0
58	MG	1G	1645	1/1	0.89	0.27	78,78,78,78	0
58	MG	1H	3062	1/1	0.89	0.19	66,66,66,66	0
58	MG	14	3130	1/1	0.89	0.30	68,68,68,68	0
58	MG	14	3015	1/1	0.89	0.17	76,76,76,76	0
58	MG	11	301	1/1	0.89	0.18	39,39,39,39	0
58	MG	14	3246	1/1	0.89	0.18	76,76,76,76	0
58	MG	31	301	1/1	0.89	0.35	56,56,56,56	0
58	MG	14	3024	1/1	0.89	0.25	70,70,70,70	0
58	MG	1H	3296	1/1	0.89	0.26	66,66,66,66	0
58	MG	14	3026	1/1	0.89	0.24	76,76,76,76	0
58	MG	13	1699	1/1	0.89	0.41	71,71,71,71	0
58	MG	1H	3137	1/1	0.89	0.18	49,49,49,49	0
58	MG	1H	3303	1/1	0.89	0.30	75,75,75,75	0
58	MG	1G	1604	1/1	0.89	0.20	84,84,84,84	0
58	MG	1H	3304	1/1	0.89	0.33	77,77,77,77	0
58	MG	1H	3365	1/1	0.89	0.21	84,84,84,84	0
58	MG	13	1663	1/1	0.90	0.36	68,68,68,68	0
58	MG	14	3247	1/1	0.90	0.26	64,64,64,64	0
58	MG	1H	3114	1/1	0.90	0.35	40,40,40,40	0
58	MG	14	3126	1/1	0.90	0.27	78,78,78,78	0
58	MG	1G	1652	1/1	0.90	0.27	91,91,91,91	0
58	MG	13	1656	1/1	0.90	0.33	72,72,72,72	0
58	MG	14	3253	1/1	0.90	0.14	83,83,83,83	0
58	MG	1H	3072	1/1	0.90	0.17	62,62,62,62	0
58	MG	1H	3121	1/1	0.90	0.20	41,41,41,41	0
58	MG	13	1657	1/1	0.90	0.26	74,74,74,74	0
58	MG	14	3031	1/1	0.90	0.22	56,56,56,56	0
58	MG	14	3034	1/1	0.90	0.19	57,57,57,57	0
58	MG	13	1624	1/1	0.90	0.19	85,85,85,85	0
58	MG	13	1615	1/1	0.90	0.17	86,86,86,86	0
58	MG	14	3037	1/1	0.90	0.07	72,72,72,72	0
58	MG	1H	3016	1/1	0.90	0.51	45,45,45,45	0
58	MG	1H	3136	1/1	0.90	0.26	53,53,53,53	0
58	MG	14	3274	1/1	0.90	0.15	77,77,77,77	0
58	MG	1G	1664	1/1	0.90	0.38	88,88,88,88	0
58	MG	14	3047	1/1	0.90	0.53	71,71,71,71	0
58	MG	13	1668	1/1	0.90	0.24	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3050	1/1	0.90	0.28	55,55,55,55	0
58	MG	1G	1617	1/1	0.90	0.16	96,96,96,96	0
58	MG	1H	3320	1/1	0.90	0.18	59,59,59,59	0
58	MG	1H	3019	1/1	0.90	0.33	38,38,38,38	0
58	MG	1H	3377	1/1	0.90	0.27	68,68,68,68	0
58	MG	1H	3049	1/1	0.90	0.29	56,56,56,56	0
58	MG	1H	3269	1/1	0.90	0.23	55,55,55,55	0
58	MG	13	1703	1/1	0.90	0.23	71,71,71,71	0
58	MG	1G	1675	1/1	0.90	0.34	83,83,83,83	0
58	MG	14	3295	1/1	0.90	0.25	80,80,80,80	0
58	MG	14	3076	1/1	0.90	0.12	59,59,59,59	0
58	MG	1G	1631	1/1	0.90	0.37	73,73,73,73	0
58	MG	14	3299	1/1	0.90	0.10	53,53,53,53	0
58	MG	14	3300	1/1	0.90	0.13	81,81,81,81	0
58	MG	14	3180	1/1	0.90	0.18	75,75,75,75	0
58	MG	1H	3219	1/1	0.90	0.22	61,61,61,61	0
58	MG	14	3187	1/1	0.90	0.23	88,88,88,88	0
58	MG	1H	3179	1/1	0.90	0.25	71,71,71,71	0
58	MG	14	3082	1/1	0.90	0.16	54,54,54,54	0
58	MG	14	3196	1/1	0.90	0.20	82,82,82,82	0
58	MG	1G	1635	1/1	0.90	0.25	86,86,86,86	0
58	MG	14	3084	1/1	0.90	0.23	54,54,54,54	0
58	MG	14	3315	1/1	0.90	0.24	67,67,67,67	0
58	MG	14	3199	1/1	0.90	0.20	66,66,66,66	0
58	MG	1H	3221	1/1	0.90	0.20	69,69,69,69	0
58	MG	1G	1637	1/1	0.90	0.44	75,75,75,75	0
58	MG	1H	3280	1/1	0.90	0.20	44,44,44,44	0
58	MG	14	3093	1/1	0.90	0.23	63,63,63,63	0
58	MG	14	3094	1/1	0.90	0.20	40,40,40,40	0
58	MG	14	3095	1/1	0.90	0.21	52,52,52,52	0
58	MG	14	3210	1/1	0.90	0.25	79,79,79,79	0
58	MG	1H	3098	1/1	0.90	0.25	44,44,44,44	0
58	MG	1H	3099	1/1	0.90	0.12	37,37,37,37	0
58	MG	14	3104	1/1	0.90	0.26	42,42,42,42	0
58	MG	14	3107	1/1	0.90	0.24	64,64,64,64	0
58	MG	1H	3057	1/1	0.90	0.26	60,60,60,60	0
58	MG	14	3224	1/1	0.90	0.09	59,59,59,59	0
58	MG	1H	3347	1/1	0.90	0.17	64,64,64,64	0
58	MG	3I	201	1/1	0.90	0.18	59,59,59,59	0
58	MG	14	3012	1/1	0.90	0.24	66,66,66,66	0
58	MG	1H	3350	1/1	0.90	0.28	62,62,62,62	0
58	MG	14	3115	1/1	0.90	0.15	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3234	1/1	0.90	0.10	56,56,56,56	0
58	MG	14	3117	1/1	0.90	0.15	52,52,52,52	0
58	MG	13	1648	1/1	0.90	0.40	75,75,75,75	0
58	MG	1H	3239	1/1	0.90	0.32	76,76,76,76	0
58	MG	P8	101	1/1	0.91	0.21	70,70,70,70	0
58	MG	1H	3031	1/1	0.91	0.18	60,60,60,60	0
58	MG	1H	3095	1/1	0.91	0.33	47,47,47,47	0
58	MG	14	3139	1/1	0.91	0.31	68,68,68,68	0
58	MG	14	3140	1/1	0.91	0.12	61,61,61,61	0
58	MG	1H	3132	1/1	0.91	0.10	63,63,63,63	0
58	MG	1G	1605	1/1	0.91	0.16	78,78,78,78	0
58	MG	1G	1659	1/1	0.91	0.19	76,76,76,76	0
58	MG	14	3255	1/1	0.91	0.15	69,69,69,69	0
58	MG	14	3257	1/1	0.91	0.28	63,63,63,63	0
58	MG	14	3145	1/1	0.91	0.22	65,65,65,65	0
58	MG	1H	3068	1/1	0.91	0.18	63,63,63,63	0
58	MG	13	1650	1/1	0.91	0.33	76,76,76,76	0
58	MG	1H	3103	1/1	0.91	0.27	47,47,47,47	0
58	MG	1H	3044	1/1	0.91	0.16	50,50,50,50	0
58	MG	1G	1665	1/1	0.91	0.38	77,77,77,77	0
58	MG	14	3055	1/1	0.91	0.21	55,55,55,55	0
58	MG	13	1711	1/1	0.91	0.07	89,89,89,89	0
58	MG	13	1659	1/1	0.91	0.11	85,85,85,85	0
58	MG	1H	3267	1/1	0.91	0.18	57,57,57,57	0
58	MG	1H	3213	1/1	0.91	0.16	63,63,63,63	0
58	MG	1H	3323	1/1	0.91	0.12	61,61,61,61	0
58	MG	13	1636	1/1	0.91	0.33	65,65,65,65	0
58	MG	1H	3004	1/1	0.91	0.29	33,33,33,33	0
58	MG	1G	1621	1/1	0.91	0.08	81,81,81,81	0
58	MG	1G	1674	1/1	0.91	0.10	136,136,136,136	0
58	MG	1H	3028	1/1	0.91	0.23	51,51,51,51	0
58	MG	14	3169	1/1	0.91	0.28	91,91,91,91	0
58	MG	1H	3117	1/1	0.91	0.24	54,54,54,54	0
58	MG	14	3172	1/1	0.91	0.23	64,64,64,64	0
58	MG	14	3080	1/1	0.91	0.12	45,45,45,45	0
58	MG	1G	1624	1/1	0.91	0.31	89,89,89,89	0
58	MG	1H	3380	1/1	0.91	0.29	69,69,69,69	0
58	MG	1G	1629	1/1	0.91	0.31	85,85,85,85	0
58	MG	1H	3222	1/1	0.91	0.58	82,82,82,82	0
58	MG	14	3190	1/1	0.91	0.26	65,65,65,65	0
58	MG	14	3194	1/1	0.91	0.16	57,57,57,57	0
58	MG	14	3087	1/1	0.91	0.23	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1G	1632	1/1	0.91	0.40	64,64,64,64	0
58	MG	14	3090	1/1	0.91	0.25	65,65,65,65	0
58	MG	1G	1690	1/1	0.91	0.17	98,98,98,98	0
58	MG	14	3308	1/1	0.91	0.43	79,79,79,79	0
58	MG	14	3092	1/1	0.91	0.25	59,59,59,59	0
58	MG	1H	3382	1/1	0.91	0.14	80,80,80,80	0
58	MG	1H	3337	1/1	0.91	0.26	67,67,67,67	0
58	MG	1H	3030	1/1	0.91	0.22	40,40,40,40	0
58	MG	14	3314	1/1	0.91	0.19	59,59,59,59	0
58	MG	14	3206	1/1	0.91	0.33	56,56,56,56	0
58	MG	14	3096	1/1	0.91	0.22	61,61,61,61	0
58	MG	14	3317	1/1	0.91	0.18	65,65,65,65	0
58	MG	1H	3150	1/1	0.91	0.29	48,48,48,48	0
58	MG	1H	3064	1/1	0.91	0.16	55,55,55,55	0
58	MG	1H	3188	1/1	0.91	0.29	60,60,60,60	0
58	MG	14	3010	1/1	0.91	0.26	48,48,48,48	0
58	MG	1H	3065	1/1	0.91	0.16	72,72,72,72	0
58	MG	14	3215	1/1	0.91	0.39	60,60,60,60	0
58	MG	1H	3154	1/1	0.91	0.30	52,52,52,52	0
58	MG	16	208	1/1	0.91	0.21	80,80,80,80	0
58	MG	14	3016	1/1	0.91	0.25	53,53,53,53	0
58	MG	14	3398	1/1	0.91	0.12	107,107,107,107	0
58	MG	14	3222	1/1	0.91	0.21	58,58,58,58	0
58	MG	14	3223	1/1	0.91	0.09	44,44,44,44	0
58	MG	1H	3126	1/1	0.91	0.13	46,46,46,46	0
58	MG	1H	3157	1/1	0.91	0.19	48,48,48,48	0
58	MG	1H	3352	1/1	0.91	0.21	81,81,81,81	0
58	MG	1H	3294	1/1	0.91	0.25	70,70,70,70	0
58	MG	1H	3354	1/1	0.91	0.18	80,80,80,80	0
58	MG	29	303	1/1	0.91	0.26	63,63,63,63	0
58	MG	78	201	1/1	0.91	0.07	53,53,53,53	0
58	MG	I8	102	1/1	0.91	0.20	49,49,49,49	0
58	MG	14	3235	1/1	0.91	0.18	87,87,87,87	0
58	MG	1H	3158	1/1	0.91	0.31	69,69,69,69	0
58	MG	1G	1653	1/1	0.91	0.44	77,77,77,77	0
58	MG	14	3032	1/1	0.91	0.25	54,54,54,54	0
58	MG	14	3260	1/1	0.92	0.19	57,57,57,57	0
58	MG	1H	3146	1/1	0.92	0.24	62,62,62,62	0
58	MG	14	3262	1/1	0.92	0.14	86,86,86,86	0
58	MG	1H	3265	1/1	0.92	0.07	66,66,66,66	0
58	MG	14	3179	1/1	0.92	0.12	63,63,63,63	0
58	MG	1H	3090	1/1	0.92	0.35	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3184	1/1	0.92	0.31	60,60,60,60	0
58	MG	14	3185	1/1	0.92	0.16	63,63,63,63	0
58	MG	1H	3177	1/1	0.92	0.17	47,47,47,47	0
58	MG	14	3027	1/1	0.92	0.12	76,76,76,76	0
58	MG	14	3188	1/1	0.92	0.34	79,79,79,79	0
58	MG	1H	3178	1/1	0.92	0.17	69,69,69,69	0
58	MG	1G	1615	1/1	0.92	0.17	82,82,82,82	0
58	MG	14	3191	1/1	0.92	0.11	66,66,66,66	0
58	MG	1H	3093	1/1	0.92	0.24	38,38,38,38	0
58	MG	1H	3125	1/1	0.92	0.21	46,46,46,46	0
58	MG	13	1652	1/1	0.92	0.18	60,60,60,60	0
58	MG	1H	3014	1/1	0.92	0.20	33,33,33,33	0
58	MG	1H	3273	1/1	0.92	0.08	66,66,66,66	0
58	MG	1H	3225	1/1	0.92	0.21	68,68,68,68	0
58	MG	1H	3453	1/1	0.92	0.08	51,51,51,51	0
58	MG	14	3201	1/1	0.92	0.09	49,49,49,49	0
58	MG	14	3203	1/1	0.92	0.28	47,47,47,47	0
58	MG	1H	3153	1/1	0.92	0.36	58,58,58,58	0
58	MG	1H	3129	1/1	0.92	0.30	58,58,58,58	0
58	MG	1G	1625	1/1	0.92	0.14	90,90,90,90	0
58	MG	1G	1626	1/1	0.92	0.10	80,80,80,80	0
58	MG	1H	3036	1/1	0.92	0.14	67,67,67,67	0
58	MG	1G	1628	1/1	0.92	0.21	64,64,64,64	0
58	MG	14	3129	1/1	0.92	0.31	73,73,73,73	0
58	MG	1H	3237	1/1	0.92	0.33	44,44,44,44	0
58	MG	14	3304	1/1	0.92	0.24	63,63,63,63	0
58	MG	1H	3131	1/1	0.92	0.13	60,60,60,60	0
58	MG	14	3307	1/1	0.92	0.21	62,62,62,62	0
58	MG	14	3056	1/1	0.92	0.24	73,73,73,73	0
58	MG	1H	3288	1/1	0.92	0.26	76,76,76,76	0
58	MG	14	3062	1/1	0.92	0.11	51,51,51,51	0
58	MG	14	3311	1/1	0.92	0.08	66,66,66,66	0
58	MG	14	3218	1/1	0.92	0.13	89,89,89,89	0
58	MG	13	1643	1/1	0.92	0.19	50,50,50,50	0
58	MG	14	3221	1/1	0.92	0.16	66,66,66,66	0
58	MG	1H	3159	1/1	0.92	0.37	64,64,64,64	0
58	MG	1H	3056	1/1	0.92	0.19	59,59,59,59	0
58	MG	14	3143	1/1	0.92	0.18	64,64,64,64	0
58	MG	1G	1680	1/1	0.92	0.12	83,83,83,83	0
58	MG	16	212	1/1	0.92	0.07	78,78,78,78	0
58	MG	13	1719	1/1	0.92	0.14	89,89,89,89	0
58	MG	13	1702	1/1	0.92	0.25	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	31	302	1/1	0.92	0.06	57,57,57,57	0
58	MG	13	1691	1/1	0.92	0.17	71,71,71,71	0
58	MG	1H	3247	1/1	0.92	0.38	73,73,73,73	0
58	MG	14	3236	1/1	0.92	0.20	71,71,71,71	0
58	MG	13	1715	1/1	0.92	0.07	78,78,78,78	0
58	MG	14	3239	1/1	0.92	0.21	64,64,64,64	0
58	MG	14	3004	1/1	0.92	0.18	50,50,50,50	0
58	MG	14	3006	1/1	0.92	0.13	46,46,46,46	0
58	MG	1H	3253	1/1	0.92	0.32	47,47,47,47	0
58	MG	14	3157	1/1	0.92	0.29	63,63,63,63	0
58	MG	L8	102	1/1	0.92	0.14	67,67,67,67	0
58	MG	14	3249	1/1	0.92	0.12	49,49,49,49	0
58	MG	14	3086	1/1	0.92	0.28	69,69,69,69	0
58	MG	1H	3308	1/1	0.92	0.30	82,82,82,82	0
58	MG	14	3088	1/1	0.92	0.20	47,47,47,47	0
58	MG	13	1627	1/1	0.92	0.35	72,72,72,72	0
58	MG	1H	3087	1/1	0.92	0.19	61,61,61,61	0
58	MG	1H	3007	1/1	0.92	0.20	45,45,45,45	0
58	MG	1H	3369	1/1	0.92	0.17	54,54,54,54	0
58	MG	1H	3120	1/1	0.92	0.26	63,63,63,63	0
58	MG	14	3244	1/1	0.93	0.13	61,61,61,61	0
58	MG	1H	3199	1/1	0.93	0.42	63,63,63,63	0
58	MG	13	1634	1/1	0.93	0.17	52,52,52,52	0
58	MG	1H	3262	1/1	0.93	0.24	56,56,56,56	0
58	MG	1H	3124	1/1	0.93	0.17	43,43,43,43	0
58	MG	1H	3204	1/1	0.93	0.13	72,72,72,72	0
58	MG	13	1604	1/1	0.93	0.12	65,65,65,65	0
58	MG	1H	3051	1/1	0.93	0.30	57,57,57,57	0
58	MG	14	3052	1/1	0.93	0.23	52,52,52,52	0
58	MG	98	202	1/1	0.93	0.32	90,90,90,90	0
58	MG	1H	3339	1/1	0.93	0.31	78,78,78,78	0
58	MG	14	3155	1/1	0.93	0.24	57,57,57,57	0
58	MG	13	1614	1/1	0.93	0.20	65,65,65,65	0
58	MG	1H	3088	1/1	0.93	0.19	56,56,56,56	0
58	MG	14	3058	1/1	0.93	0.18	61,61,61,61	0
58	MG	14	3060	1/1	0.93	0.15	67,67,67,67	0
58	MG	1H	3343	1/1	0.93	0.31	62,62,62,62	0
58	MG	1H	3211	1/1	0.93	0.39	59,59,59,59	0
58	MG	1H	3345	1/1	0.93	0.42	75,75,75,75	0
58	MG	1H	3055	1/1	0.93	0.27	41,41,41,41	0
58	MG	14	3165	1/1	0.93	0.31	65,65,65,65	0
58	MG	14	3166	1/1	0.93	0.15	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3272	1/1	0.93	0.15	72,72,72,72	0
58	MG	13	1683	1/1	0.93	0.09	94,94,94,94	0
58	MG	1H	3169	1/1	0.93	0.08	58,58,58,58	0
58	MG	14	3275	1/1	0.93	0.35	70,70,70,70	0
58	MG	13	1695	1/1	0.93	0.35	75,75,75,75	0
58	MG	14	3277	1/1	0.93	0.26	73,73,73,73	0
58	MG	1G	1609	1/1	0.93	0.17	81,81,81,81	0
58	MG	1H	3277	1/1	0.93	0.12	70,70,70,70	0
58	MG	14	3284	1/1	0.93	0.17	70,70,70,70	0
58	MG	1H	3279	1/1	0.93	0.21	77,77,77,77	0
58	MG	1H	3134	1/1	0.93	0.13	45,45,45,45	0
58	MG	1H	3058	1/1	0.93	0.14	50,50,50,50	0
58	MG	1H	3002	1/1	0.93	0.15	38,38,38,38	0
58	MG	1H	3174	1/1	0.93	0.21	51,51,51,51	0
58	MG	1H	3360	1/1	0.93	0.22	73,73,73,73	0
58	MG	13	1676	1/1	0.93	0.10	76,76,76,76	0
58	MG	1H	3287	1/1	0.93	0.31	62,62,62,62	0
58	MG	1H	3226	1/1	0.93	0.29	66,66,66,66	0
58	MG	1H	3100	1/1	0.93	0.42	46,46,46,46	0
58	MG	13	1686	1/1	0.93	0.14	89,89,89,89	0
58	MG	13	1606	1/1	0.93	0.17	70,70,70,70	0
58	MG	1H	3106	1/1	0.93	0.17	78,78,78,78	0
58	MG	1H	3295	1/1	0.93	0.08	51,51,51,51	0
58	MG	1H	3372	1/1	0.93	0.23	78,78,78,78	0
58	MG	13	1723	1/1	0.93	0.08	77,77,77,77	0
58	MG	1H	3297	1/1	0.93	0.09	59,59,59,59	0
58	MG	14	3007	1/1	0.93	0.15	42,42,42,42	0
58	MG	14	3202	1/1	0.93	0.11	70,70,70,70	0
58	MG	1H	3298	1/1	0.93	0.11	94,94,94,94	0
58	MG	14	3098	1/1	0.93	0.35	67,67,67,67	0
58	MG	1H	3144	1/1	0.93	0.37	47,47,47,47	0
58	MG	1H	3108	1/1	0.93	0.38	56,56,56,56	0
58	MG	14	3105	1/1	0.93	0.25	65,65,65,65	0
58	MG	14	3011	1/1	0.93	0.18	48,48,48,48	0
58	MG	1H	3109	1/1	0.93	0.14	37,37,37,37	0
58	MG	1H	3242	1/1	0.93	0.27	66,66,66,66	0
58	MG	14	3014	1/1	0.93	0.18	61,61,61,61	0
58	MG	1H	3306	1/1	0.93	0.24	54,54,54,54	0
58	MG	13	1728	1/1	0.93	0.08	101,101,101,101	0
58	MG	1H	3244	1/1	0.93	0.40	75,75,75,75	0
58	MG	14	3018	1/1	0.93	0.29	79,79,79,79	0
58	MG	14	3020	1/1	0.93	0.10	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3021	1/1	0.93	0.21	51,51,51,51	0
58	MG	14	3323	1/1	0.93	0.10	85,85,85,85	0
58	MG	13	1644	1/1	0.93	0.24	56,56,56,56	0
58	MG	14	3023	1/1	0.93	0.21	46,46,46,46	0
58	MG	14	3124	1/1	0.93	0.31	43,43,43,43	0
58	MG	1H	3312	1/1	0.93	0.19	68,68,68,68	0
58	MG	1H	3475	1/1	0.93	0.12	95,95,95,95	0
58	MG	14	3226	1/1	0.93	0.28	74,74,74,74	0
58	MG	14	3228	1/1	0.93	0.09	79,79,79,79	0
58	MG	1H	3042	1/1	0.93	0.13	48,48,48,48	0
58	MG	14	3230	1/1	0.93	0.15	63,63,63,63	0
58	MG	1G	1643	1/1	0.93	0.09	83,83,83,83	0
58	MG	1H	3076	1/1	0.93	0.12	53,53,53,53	0
58	MG	13	1689	1/1	0.93	0.18	70,70,70,70	0
58	MG	1H	3317	1/1	0.93	0.42	73,73,73,73	0
58	MG	14	3138	1/1	0.93	0.26	69,69,69,69	0
58	MG	13	1712	1/1	0.93	0.12	74,74,74,74	0
58	MG	1H	3021	1/1	0.93	0.20	43,43,43,43	0
58	MG	85	201	1/1	0.93	0.29	64,64,64,64	0
58	MG	1G	1649	1/1	0.93	0.20	78,78,78,78	0
58	MG	1H	3322	1/1	0.93	0.15	39,39,39,39	0
58	MG	14	3241	1/1	0.93	0.18	72,72,72,72	0
58	MG	1H	3046	1/1	0.93	0.19	82,82,82,82	0
58	MG	1H	3183	1/1	0.94	0.23	56,56,56,56	0
58	MG	1H	3024	1/1	0.94	0.22	40,40,40,40	0
58	MG	1H	3165	1/1	0.94	0.22	68,68,68,68	0
58	MG	14	3265	1/1	0.94	0.24	55,55,55,55	0
58	MG	1H	3336	1/1	0.94	0.24	66,66,66,66	0
58	MG	14	3100	1/1	0.94	0.42	62,62,62,62	0
58	MG	1H	3251	1/1	0.94	0.20	33,33,33,33	0
58	MG	14	3269	1/1	0.94	0.11	78,78,78,78	0
58	MG	1H	3252	1/1	0.94	0.26	36,36,36,36	0
58	MG	14	3106	1/1	0.94	0.33	57,57,57,57	0
58	MG	1H	3186	1/1	0.94	0.35	52,52,52,52	0
58	MG	14	3033	1/1	0.94	0.10	56,56,56,56	0
58	MG	14	3192	1/1	0.94	0.37	74,74,74,74	0
58	MG	14	3193	1/1	0.94	0.12	60,60,60,60	0
58	MG	1H	3025	1/1	0.94	0.22	47,47,47,47	0
58	MG	1H	3398	1/1	0.94	0.07	50,50,50,50	0
58	MG	14	3280	1/1	0.94	0.08	51,51,51,51	0
58	MG	14	3281	1/1	0.94	0.14	67,67,67,67	0
58	MG	1H	3167	1/1	0.94	0.23	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3465	1/1	0.94	0.13	87,87,87,87	0
58	MG	1H	3474	1/1	0.94	0.07	84,84,84,84	0
58	MG	14	3116	1/1	0.94	0.12	57,57,57,57	0
58	MG	1H	3009	1/1	0.94	0.39	42,42,42,42	0
58	MG	14	3118	1/1	0.94	0.12	40,40,40,40	0
58	MG	14	3042	1/1	0.94	0.23	46,46,46,46	0
58	MG	14	3120	1/1	0.94	0.06	84,84,84,84	0
58	MG	1H	3258	1/1	0.94	0.38	55,55,55,55	0
58	MG	1H	3259	1/1	0.94	0.17	46,46,46,46	0
58	MG	1H	3054	1/1	0.94	0.17	57,57,57,57	0
58	MG	1H	3194	1/1	0.94	0.15	55,55,55,55	0
58	MG	14	3051	1/1	0.94	0.21	52,52,52,52	0
58	MG	1H	3012	1/1	0.94	0.15	58,58,58,58	0
58	MG	1H	3349	1/1	0.94	0.29	62,62,62,62	0
58	MG	1H	3073	1/1	0.94	0.12	52,52,52,52	0
58	MG	16	209	1/1	0.94	0.30	59,59,59,59	0
58	MG	14	3214	1/1	0.94	0.25	54,54,54,54	0
58	MG	1G	1689	1/1	0.94	0.15	108,108,108,108	0
58	MG	1H	3351	1/1	0.94	0.08	62,62,62,62	0
58	MG	1H	3092	1/1	0.94	0.23	65,65,65,65	0
58	MG	13	1653	1/1	0.94	0.07	84,84,84,84	0
58	MG	14	3063	1/1	0.94	0.18	51,51,51,51	0
58	MG	1H	3232	1/1	0.94	0.23	70,70,70,70	0
58	MG	14	3065	1/1	0.94	0.24	39,39,39,39	0
58	MG	1H	3233	1/1	0.94	0.23	65,65,65,65	0
58	MG	14	3067	1/1	0.94	0.21	54,54,54,54	0
58	MG	14	3001	1/1	0.94	0.19	50,50,50,50	0
58	MG	14	3003	1/1	0.94	0.21	49,49,49,49	0
58	MG	14	3070	1/1	0.94	0.12	62,62,62,62	0
58	MG	1H	3310	1/1	0.94	0.16	79,79,79,79	0
58	MG	14	3005	1/1	0.94	0.24	49,49,49,49	0
58	MG	14	3075	1/1	0.94	0.09	53,53,53,53	0
58	MG	13	1658	1/1	0.94	0.19	73,73,73,73	0
58	MG	14	3320	1/1	0.94	0.16	61,61,61,61	0
58	MG	1H	3116	1/1	0.94	0.12	52,52,52,52	0
58	MG	1H	3097	1/1	0.94	0.15	47,47,47,47	0
58	MG	I8	101	1/1	0.94	0.22	63,63,63,63	0
58	MG	1H	3202	1/1	0.94	0.20	60,60,60,60	0
58	MG	1H	3274	1/1	0.94	0.07	59,59,59,59	0
58	MG	13	1675	1/1	0.94	0.21	63,63,63,63	0
58	MG	1H	3318	1/1	0.94	0.13	50,50,50,50	0
58	MG	1H	3205	1/1	0.94	0.28	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3390	1/1	0.94	0.09	70,70,70,70	0
58	MG	1H	3368	1/1	0.94	0.10	72,72,72,72	0
58	MG	1G	1603	1/1	0.94	0.16	71,71,71,71	0
58	MG	1H	3278	1/1	0.94	0.17	75,75,75,75	0
58	MG	13	1645	1/1	0.94	0.25	65,65,65,65	0
58	MG	1G	1606	1/1	0.94	0.10	92,92,92,92	0
58	MG	14	3167	1/1	0.94	0.07	61,61,61,61	0
58	MG	1H	3371	1/1	0.94	0.40	59,59,59,59	0
58	MG	13	1681	1/1	0.94	0.08	71,71,71,71	0
58	MG	1H	3102	1/1	0.94	0.16	44,44,44,44	0
58	MG	14	3171	1/1	0.94	0.31	65,65,65,65	0
58	MG	1H	3325	1/1	0.94	0.23	67,67,67,67	0
58	MG	14	3173	1/1	0.94	0.19	78,78,78,78	0
58	MG	14	3175	1/1	0.94	0.26	64,64,64,64	0
58	MG	1H	3008	1/1	0.94	0.14	37,37,37,37	0
58	MG	14	3177	1/1	0.94	0.13	70,70,70,70	0
58	MG	14	3178	1/1	0.94	0.10	85,85,85,85	0
58	MG	13	1621	1/1	0.95	0.13	59,59,59,59	0
58	MG	13	1622	1/1	0.95	0.09	64,64,64,64	0
58	MG	13	1623	1/1	0.95	0.24	56,56,56,56	0
58	MG	13	1603	1/1	0.95	0.15	61,61,61,61	0
58	MG	14	3279	1/1	0.95	0.16	67,67,67,67	0
58	MG	16	213	1/1	0.95	0.07	82,82,82,82	0
58	MG	14	3074	1/1	0.95	0.28	41,41,41,41	0
58	MG	1H	3059	1/1	0.95	0.28	55,55,55,55	0
58	MG	21	302	1/1	0.95	0.10	69,69,69,69	0
58	MG	1H	3218	1/1	0.95	0.41	57,57,57,57	0
58	MG	14	3213	1/1	0.95	0.20	55,55,55,55	0
58	MG	1H	3061	1/1	0.95	0.21	51,51,51,51	0
58	MG	1H	3305	1/1	0.95	0.28	66,66,66,66	0
58	MG	1H	3015	1/1	0.95	0.28	46,46,46,46	0
58	MG	98	201	1/1	0.95	0.23	64,64,64,64	0
58	MG	1H	3094	1/1	0.95	0.26	53,53,53,53	0
58	MG	14	3219	1/1	0.95	0.09	68,68,68,68	0
58	MG	13	1647	1/1	0.95	0.30	47,47,47,47	0
58	MG	1H	3223	1/1	0.95	0.17	63,63,63,63	0
58	MG	1H	3187	1/1	0.95	0.27	64,64,64,64	0
58	MG	14	3297	1/1	0.95	0.09	60,60,60,60	0
58	MG	2K	104	1/1	0.95	0.24	72,72,72,72	0
58	MG	13	1721	1/1	0.95	0.07	59,59,59,59	0
58	MG	1H	3314	1/1	0.95	0.34	86,86,86,86	0
58	MG	1H	3227	1/1	0.95	0.20	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3190	1/1	0.95	0.23	50,50,50,50	0
58	MG	1H	3229	1/1	0.95	0.11	61,61,61,61	0
58	MG	1H	3230	1/1	0.95	0.23	47,47,47,47	0
58	MG	14	3305	1/1	0.95	0.33	59,59,59,59	0
58	MG	1H	3001	1/1	0.95	0.09	44,44,44,44	0
58	MG	1H	3022	1/1	0.95	0.20	39,39,39,39	0
58	MG	1H	3163	1/1	0.95	0.17	78,78,78,78	0
58	MG	1G	1663	1/1	0.95	0.12	105,105,105,105	0
58	MG	1H	3133	1/1	0.95	0.23	43,43,43,43	0
58	MG	13	1693	1/1	0.95	0.18	87,87,87,87	0
58	MG	13	1685	1/1	0.95	0.30	65,65,65,65	0
58	MG	14	3101	1/1	0.95	0.12	60,60,60,60	0
58	MG	13	1737	1/1	0.95	0.08	132,132,132,132	0
58	MG	1H	3281	1/1	0.95	0.41	65,65,65,65	0
58	MG	14	3174	1/1	0.95	0.10	78,78,78,78	0
58	MG	1G	1614	1/1	0.95	0.18	73,73,73,73	0
58	MG	14	3245	1/1	0.95	0.13	69,69,69,69	0
58	MG	1H	3329	1/1	0.95	0.35	74,74,74,74	0
58	MG	1H	3330	1/1	0.95	0.11	74,74,74,74	0
58	MG	1H	3029	1/1	0.95	0.12	50,50,50,50	0
58	MG	1H	3077	1/1	0.95	0.18	47,47,47,47	0
58	MG	1H	3333	1/1	0.95	0.13	63,63,63,63	0
58	MG	14	3182	1/1	0.95	0.33	61,61,61,61	0
58	MG	1H	3334	1/1	0.95	0.09	55,55,55,55	0
58	MG	14	3114	1/1	0.95	0.14	65,65,65,65	0
58	MG	1H	3447	1/1	0.95	0.08	47,47,47,47	0
58	MG	14	3345	1/1	0.95	0.11	63,63,63,63	0
58	MG	1H	3006	1/1	0.95	0.11	42,42,42,42	0
58	MG	14	3362	1/1	0.95	0.10	70,70,70,70	0
58	MG	14	3256	1/1	0.95	0.16	80,80,80,80	0
58	MG	14	3391	1/1	0.95	0.11	93,93,93,93	0
58	MG	1H	3456	1/1	0.95	0.10	87,87,87,87	0
58	MG	1H	3464	1/1	0.95	0.07	88,88,88,88	0
58	MG	14	3054	1/1	0.95	0.28	48,48,48,48	0
58	MG	1H	3050	1/1	0.95	0.41	59,59,59,59	0
58	MG	1H	3203	1/1	0.95	0.11	68,68,68,68	0
58	MG	13	1602	1/1	0.95	0.17	71,71,71,71	0
58	MG	1H	3032	1/1	0.95	0.31	71,71,71,71	0
58	MG	14	3059	1/1	0.95	0.41	65,65,65,65	0
58	MG	1H	3083	1/1	0.95	0.34	71,71,71,71	0
58	MG	1G	1630	1/1	0.95	0.31	71,71,71,71	0
58	MG	1H	3291	1/1	0.95	0.33	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	45	201	1/1	0.95	0.06	59,59,59,59	0
58	MG	1H	3053	1/1	0.95	0.21	33,33,33,33	0
58	MG	1H	3293	1/1	0.95	0.12	56,56,56,56	0
58	MG	14	3132	1/1	0.95	0.08	64,64,64,64	0
58	MG	1H	3249	1/1	0.95	0.11	53,53,53,53	0
58	MG	13	1640	1/1	0.95	0.29	65,65,65,65	0
58	MG	1H	3250	1/1	0.96	0.12	41,41,41,41	0
58	MG	14	3154	1/1	0.96	0.08	80,80,80,80	0
58	MG	13	1651	1/1	0.96	0.09	63,63,63,63	0
58	MG	1H	3075	1/1	0.96	0.12	41,41,41,41	0
58	MG	16	207	1/1	0.96	0.41	76,76,76,76	0
58	MG	1H	3017	1/1	0.96	0.07	52,52,52,52	0
58	MG	14	3159	1/1	0.96	0.26	63,63,63,63	0
58	MG	14	3290	1/1	0.96	0.12	74,74,74,74	0
58	MG	1H	3362	1/1	0.96	0.11	105,105,105,105	0
58	MG	1H	3142	1/1	0.96	0.15	59,59,59,59	0
58	MG	14	3040	1/1	0.96	0.34	61,61,61,61	0
58	MG	13	1629	1/1	0.96	0.31	45,45,45,45	0
58	MG	14	3043	1/1	0.96	0.31	47,47,47,47	0
58	MG	14	3102	1/1	0.96	0.06	81,81,81,81	0
58	MG	14	3103	1/1	0.96	0.29	36,36,36,36	0
58	MG	1H	3096	1/1	0.96	0.12	40,40,40,40	0
58	MG	1H	3078	1/1	0.96	0.08	41,41,41,41	0
58	MG	13	1630	1/1	0.96	0.35	70,70,70,70	0
58	MG	1G	1687	1/1	0.96	0.07	106,106,106,106	0
58	MG	21	301	1/1	0.96	0.14	46,46,46,46	0
58	MG	1H	3123	1/1	0.96	0.14	32,32,32,32	0
58	MG	14	3110	1/1	0.96	0.14	44,44,44,44	0
58	MG	14	3237	1/1	0.96	0.16	48,48,48,48	0
58	MG	1L	101	1/1	0.96	0.11	71,71,71,71	0
58	MG	1H	3020	1/1	0.96	0.15	38,38,38,38	0
58	MG	1H	3011	1/1	0.96	0.14	50,50,50,50	0
58	MG	1H	3264	1/1	0.96	0.12	47,47,47,47	0
58	MG	14	3242	1/1	0.96	0.34	55,55,55,55	0
58	MG	1H	3101	1/1	0.96	0.22	30,30,30,30	0
58	MG	1H	3300	1/1	0.96	0.26	63,63,63,63	0
58	MG	1H	3063	1/1	0.96	0.29	45,45,45,45	0
58	MG	14	3181	1/1	0.96	0.33	81,81,81,81	0
58	MG	13	1620	1/1	0.96	0.07	64,64,64,64	0
58	MG	14	3183	1/1	0.96	0.25	60,60,60,60	0
58	MG	1H	3023	1/1	0.96	0.15	40,40,40,40	0
58	MG	1H	3340	1/1	0.96	0.13	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3236	1/1	0.96	0.07	52,52,52,52	0
58	MG	1H	3180	1/1	0.96	0.15	63,63,63,63	0
58	MG	13	1632	1/1	0.96	0.13	45,45,45,45	0
58	MG	1H	3156	1/1	0.96	0.11	44,44,44,44	0
58	MG	1H	3067	1/1	0.96	0.15	53,53,53,53	0
58	MG	13	1735	1/1	0.96	0.10	93,93,93,93	0
58	MG	1H	3385	1/1	0.96	0.07	49,49,49,49	0
58	MG	14	3258	1/1	0.96	0.11	68,68,68,68	0
58	MG	1H	3026	1/1	0.96	0.12	45,45,45,45	0
58	MG	14	3335	1/1	0.96	0.07	71,71,71,71	0
58	MG	1H	3406	1/1	0.96	0.07	53,53,53,53	0
58	MG	1H	3414	1/1	0.96	0.12	50,50,50,50	0
58	MG	1H	3423	1/1	0.96	0.06	71,71,71,71	0
58	MG	14	3365	1/1	0.96	0.07	67,67,67,67	0
58	MG	14	3374	1/1	0.96	0.11	87,87,87,87	0
58	MG	14	3376	1/1	0.96	0.05	87,87,87,87	0
58	MG	14	3381	1/1	0.96	0.08	70,70,70,70	0
58	MG	14	3387	1/1	0.96	0.14	86,86,86,86	0
58	MG	14	3134	1/1	0.96	0.26	54,54,54,54	0
58	MG	1H	3429	1/1	0.96	0.07	49,49,49,49	0
58	MG	14	3136	1/1	0.96	0.26	50,50,50,50	0
58	MG	14	3019	1/1	0.96	0.08	69,69,69,69	0
58	MG	1H	3436	1/1	0.96	0.11	87,87,87,87	0
58	MG	1H	3027	1/1	0.96	0.20	36,36,36,36	0
58	MG	1H	3214	1/1	0.96	0.11	53,53,53,53	0
58	MG	14	3081	1/1	0.96	0.05	52,52,52,52	0
58	MG	1H	3112	1/1	0.96	0.20	33,33,33,33	0
58	MG	29	301	1/1	0.96	0.15	46,46,46,46	0
58	MG	1H	3461	1/1	0.96	0.15	103,103,103,103	0
58	MG	1H	3216	1/1	0.96	0.37	68,68,68,68	0
58	MG	1H	3217	1/1	0.96	0.27	77,77,77,77	0
58	MG	1H	3473	1/1	0.96	0.07	99,99,99,99	0
58	MG	13	1628	1/1	0.96	0.22	43,43,43,43	0
58	MG	1H	3091	1/1	0.96	0.14	62,62,62,62	0
58	MG	1H	3355	1/1	0.96	0.10	73,73,73,73	0
58	MG	1H	3356	1/1	0.96	0.10	55,55,55,55	0
58	MG	1H	3319	1/1	0.96	0.06	50,50,50,50	0
58	MG	14	3282	1/1	0.96	0.08	62,62,62,62	0
58	MG	1H	3451	1/1	0.97	0.06	84,84,84,84	0
58	MG	14	3045	1/1	0.97	0.28	44,44,44,44	0
58	MG	1H	3452	1/1	0.97	0.05	71,71,71,71	0
58	MG	1H	3149	1/1	0.97	0.07	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3454	1/1	0.97	0.06	65,65,65,65	0
58	MG	1H	3255	1/1	0.97	0.15	40,40,40,40	0
58	MG	14	3127	1/1	0.97	0.13	55,55,55,55	0
58	MG	1H	3193	1/1	0.97	0.11	52,52,52,52	0
58	MG	13	1736	1/1	0.97	0.06	97,97,97,97	0
58	MG	1H	3275	1/1	0.97	0.24	53,53,53,53	0
58	MG	14	3328	1/1	0.97	0.07	55,55,55,55	0
58	MG	14	3330	1/1	0.97	0.05	58,58,58,58	0
58	MG	1H	3472	1/1	0.97	0.07	75,75,75,75	0
58	MG	14	3344	1/1	0.97	0.06	60,60,60,60	0
58	MG	2K	101	1/1	0.97	0.20	55,55,55,55	0
58	MG	14	3352	1/1	0.97	0.05	73,73,73,73	0
58	MG	14	3357	1/1	0.97	0.06	48,48,48,48	0
58	MG	1H	3335	1/1	0.97	0.06	47,47,47,47	0
58	MG	1H	3071	1/1	0.97	0.10	52,52,52,52	0
58	MG	13	1611	1/1	0.97	0.44	64,64,64,64	0
58	MG	13	1725	1/1	0.97	0.04	85,85,85,85	0
58	MG	14	3137	1/1	0.97	0.08	65,65,65,65	0
58	MG	14	3377	1/1	0.97	0.13	66,66,66,66	0
58	MG	1G	1642	1/1	0.97	0.10	80,80,80,80	0
58	MG	14	3382	1/1	0.97	0.06	60,60,60,60	0
58	MG	1H	3128	1/1	0.97	0.25	46,46,46,46	0
58	MG	1H	3299	1/1	0.97	0.08	60,60,60,60	0
58	MG	1H	3104	1/1	0.97	0.13	47,47,47,47	0
58	MG	14	3397	1/1	0.97	0.05	86,86,86,86	0
58	MG	1H	3384	1/1	0.97	0.06	38,38,38,38	0
58	MG	1H	3074	1/1	0.97	0.17	58,58,58,58	0
58	MG	1H	3392	1/1	0.97	0.05	60,60,60,60	0
58	MG	1H	3393	1/1	0.97	0.07	47,47,47,47	0
58	MG	1G	1688	1/1	0.97	0.12	105,105,105,105	0
58	MG	1H	3118	1/1	0.97	0.17	36,36,36,36	0
58	MG	14	3071	1/1	0.97	0.16	38,38,38,38	0
58	MG	13	1727	1/1	0.97	0.06	69,69,69,69	0
58	MG	1H	3409	1/1	0.97	0.07	46,46,46,46	0
58	MG	1H	3285	1/1	0.97	0.11	62,62,62,62	0
58	MG	1H	3415	1/1	0.97	0.05	48,48,48,48	0
58	MG	1H	3418	1/1	0.97	0.09	52,52,52,52	0
58	MG	13	1672	1/1	0.97	0.27	56,56,56,56	0
58	MG	1H	3426	1/1	0.97	0.06	39,39,39,39	0
58	MG	13	1697	1/1	0.97	0.12	90,90,90,90	0
58	MG	1H	3432	1/1	0.97	0.07	77,77,77,77	0
59	ZN	3E	302	1/1	0.97	0.22	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3010	1/1	0.97	0.20	33,33,33,33	0
58	MG	1H	3328	1/1	0.97	0.21	63,63,63,63	0
58	MG	1H	3457	1/1	0.98	0.05	81,81,81,81	0
58	MG	1H	3458	1/1	0.98	0.07	68,68,68,68	0
58	MG	1H	3396	1/1	0.98	0.04	55,55,55,55	0
58	MG	1H	3463	1/1	0.98	0.14	92,92,92,92	0
58	MG	1H	3397	1/1	0.98	0.07	51,51,51,51	0
58	MG	1H	3060	1/1	0.98	0.26	59,59,59,59	0
58	MG	1H	3467	1/1	0.98	0.04	68,68,68,68	0
58	MG	14	3061	1/1	0.98	0.14	43,43,43,43	0
58	MG	1H	3469	1/1	0.98	0.14	106,106,106,106	0
58	MG	14	3333	1/1	0.98	0.06	54,54,54,54	0
58	MG	14	3334	1/1	0.98	0.07	48,48,48,48	0
58	MG	1H	3470	1/1	0.98	0.10	64,64,64,64	0
58	MG	14	3336	1/1	0.98	0.05	48,48,48,48	0
58	MG	14	3338	1/1	0.98	0.06	61,61,61,61	0
58	MG	14	3340	1/1	0.98	0.04	60,60,60,60	0
58	MG	14	3341	1/1	0.98	0.04	71,71,71,71	0
58	MG	1H	3399	1/1	0.98	0.04	58,58,58,58	0
58	MG	1H	3403	1/1	0.98	0.04	69,69,69,69	0
58	MG	14	3346	1/1	0.98	0.05	63,63,63,63	0
58	MG	14	3347	1/1	0.98	0.04	49,49,49,49	0
58	MG	14	3349	1/1	0.98	0.04	57,57,57,57	0
58	MG	1H	3404	1/1	0.98	0.07	56,56,56,56	0
58	MG	14	3356	1/1	0.98	0.10	78,78,78,78	0
58	MG	13	1616	1/1	0.98	0.16	59,59,59,59	0
58	MG	14	3358	1/1	0.98	0.05	51,51,51,51	0
58	MG	1H	3408	1/1	0.98	0.04	47,47,47,47	0
58	MG	1H	3208	1/1	0.98	0.34	70,70,70,70	0
58	MG	14	3363	1/1	0.98	0.08	77,77,77,77	0
58	MG	1H	3411	1/1	0.98	0.10	43,43,43,43	0
58	MG	14	3367	1/1	0.98	0.07	49,49,49,49	0
58	MG	14	3371	1/1	0.98	0.04	59,59,59,59	0
58	MG	14	3373	1/1	0.98	0.04	65,65,65,65	0
58	MG	1G	1682	1/1	0.98	0.05	75,75,75,75	0
58	MG	14	3375	1/1	0.98	0.06	65,65,65,65	0
58	MG	1G	1683	1/1	0.98	0.06	81,81,81,81	0
58	MG	1G	1684	1/1	0.98	0.04	81,81,81,81	0
58	MG	1H	3307	1/1	0.98	0.18	64,64,64,64	0
58	MG	1G	1686	1/1	0.98	0.06	83,83,83,83	0
58	MG	14	3383	1/1	0.98	0.07	70,70,70,70	0
58	MG	14	3384	1/1	0.98	0.08	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	14	3385	1/1	0.98	0.14	71,71,71,71	0
58	MG	14	3386	1/1	0.98	0.07	83,83,83,83	0
58	MG	1H	3003	1/1	0.98	0.17	30,30,30,30	0
58	MG	14	3389	1/1	0.98	0.04	73,73,73,73	0
58	MG	13	1646	1/1	0.98	0.11	63,63,63,63	0
58	MG	13	1642	1/1	0.98	0.37	59,59,59,59	0
58	MG	14	3392	1/1	0.98	0.08	61,61,61,61	0
58	MG	14	3396	1/1	0.98	0.17	75,75,75,75	0
58	MG	1H	3048	1/1	0.98	0.07	52,52,52,52	0
58	MG	1H	3427	1/1	0.98	0.06	55,55,55,55	0
58	MG	1H	3235	1/1	0.98	0.06	53,53,53,53	0
58	MG	14	3125	1/1	0.98	0.26	42,42,42,42	0
58	MG	1H	3431	1/1	0.98	0.04	57,57,57,57	0
58	MG	1H	3260	1/1	0.98	0.22	48,48,48,48	0
58	MG	1H	3111	1/1	0.98	0.12	53,53,53,53	0
58	MG	1H	3440	1/1	0.98	0.05	59,59,59,59	0
58	MG	14	3002	1/1	0.98	0.13	43,43,43,43	0
58	MG	14	3044	1/1	0.98	0.18	40,40,40,40	0
58	MG	1H	3446	1/1	0.98	0.07	60,60,60,60	0
58	MG	13	1738	1/1	0.98	0.03	112,112,112,112	0
58	MG	1H	3450	1/1	0.98	0.13	79,79,79,79	0
58	MG	1H	3386	1/1	0.98	0.05	39,39,39,39	0
58	MG	14	3049	1/1	0.98	0.10	47,47,47,47	0
58	MG	1H	3389	1/1	0.98	0.09	49,49,49,49	0
58	MG	2K	106	1/1	0.98	0.10	87,87,87,87	0
58	MG	14	3227	1/1	0.98	0.19	51,51,51,51	0
58	MG	13	1729	1/1	0.98	0.05	85,85,85,85	0
59	ZN	5A	101	1/1	0.98	0.04	132,132,132,132	0
58	MG	1H	3394	1/1	0.98	0.05	47,47,47,47	0
58	MG	14	3348	1/1	0.99	0.05	42,42,42,42	0
58	MG	1H	3468	1/1	0.99	0.07	59,59,59,59	0
58	MG	14	3350	1/1	0.99	0.06	61,61,61,61	0
58	MG	14	3351	1/1	0.99	0.04	60,60,60,60	0
58	MG	13	1722	1/1	0.99	0.12	101,101,101,101	0
58	MG	14	3354	1/1	0.99	0.03	57,57,57,57	0
58	MG	14	3355	1/1	0.99	0.05	43,43,43,43	0
58	MG	1H	3424	1/1	0.99	0.08	48,48,48,48	0
58	MG	14	3041	1/1	0.99	0.11	35,35,35,35	0
58	MG	1H	3471	1/1	0.99	0.03	54,54,54,54	0
58	MG	1H	3425	1/1	0.99	0.06	43,43,43,43	0
58	MG	14	3360	1/1	0.99	0.06	55,55,55,55	0
58	MG	14	3361	1/1	0.99	0.05	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	13	1730	1/1	0.99	0.08	88,88,88,88	0
58	MG	13	1731	1/1	0.99	0.06	85,85,85,85	0
58	MG	14	3364	1/1	0.99	0.10	45,45,45,45	0
58	MG	1H	3428	1/1	0.99	0.03	38,38,38,38	0
58	MG	14	3366	1/1	0.99	0.05	76,76,76,76	0
58	MG	1H	3160	1/1	0.99	0.08	64,64,64,64	0
58	MG	14	3368	1/1	0.99	0.04	64,64,64,64	0
58	MG	14	3369	1/1	0.99	0.13	69,69,69,69	0
58	MG	1H	3430	1/1	0.99	0.03	69,69,69,69	0
58	MG	14	3372	1/1	0.99	0.04	59,59,59,59	0
58	MG	1H	3400	1/1	0.99	0.03	58,58,58,58	0
58	MG	1H	3401	1/1	0.99	0.03	71,71,71,71	0
58	MG	1H	3433	1/1	0.99	0.04	53,53,53,53	0
58	MG	1H	3434	1/1	0.99	0.04	42,42,42,42	0
58	MG	1H	3435	1/1	0.99	0.08	70,70,70,70	0
58	MG	14	3378	1/1	0.99	0.03	73,73,73,73	0
58	MG	14	3379	1/1	0.99	0.04	51,51,51,51	0
58	MG	14	3380	1/1	0.99	0.04	90,90,90,90	0
58	MG	1H	3402	1/1	0.99	0.04	58,58,58,58	0
58	MG	1H	3437	1/1	0.99	0.07	66,66,66,66	0
58	MG	14	3271	1/1	0.99	0.16	58,58,58,58	0
58	MG	1H	3438	1/1	0.99	0.03	71,71,71,71	0
58	MG	13	1732	1/1	0.99	0.04	79,79,79,79	0
58	MG	1H	3441	1/1	0.99	0.04	40,40,40,40	0
58	MG	1H	3444	1/1	0.99	0.07	90,90,90,90	0
58	MG	14	3388	1/1	0.99	0.04	88,88,88,88	0
58	MG	1H	3445	1/1	0.99	0.03	40,40,40,40	0
58	MG	1H	3388	1/1	0.99	0.07	39,39,39,39	0
58	MG	1H	3405	1/1	0.99	0.04	41,41,41,41	0
58	MG	1H	3448	1/1	0.99	0.03	50,50,50,50	0
58	MG	14	3393	1/1	0.99	0.06	71,71,71,71	0
58	MG	14	3394	1/1	0.99	0.07	94,94,94,94	0
58	MG	14	3395	1/1	0.99	0.04	64,64,64,64	0
58	MG	1H	3449	1/1	0.99	0.04	74,74,74,74	0
58	MG	13	1733	1/1	0.99	0.03	61,61,61,61	0
58	MG	31	304	1/1	0.99	0.04	48,48,48,48	0
58	MG	1H	3407	1/1	0.99	0.03	60,60,60,60	0
58	MG	1H	3390	1/1	0.99	0.04	41,41,41,41	0
58	MG	14	3329	1/1	0.99	0.07	56,56,56,56	0
58	MG	1H	3391	1/1	0.99	0.04	47,47,47,47	0
58	MG	1H	3410	1/1	0.99	0.03	59,59,59,59	0
58	MG	13	1726	1/1	0.99	0.07	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	1H	3412	1/1	0.99	0.02	48,48,48,48	0
58	MG	1H	3413	1/1	0.99	0.05	40,40,40,40	0
58	MG	14	3337	1/1	0.99	0.03	49,49,49,49	0
58	MG	1H	3459	1/1	0.99	0.06	65,65,65,65	0
58	MG	14	3339	1/1	0.99	0.05	60,60,60,60	0
58	MG	13	1613	1/1	0.99	0.08	66,66,66,66	0
58	MG	1H	3462	1/1	0.99	0.07	76,76,76,76	0
58	MG	14	3342	1/1	0.99	0.04	51,51,51,51	0
58	MG	14	3343	1/1	0.99	0.05	49,49,49,49	0
58	MG	13	1724	1/1	0.99	0.07	87,87,87,87	0
58	MG	1H	3417	1/1	0.99	0.04	51,51,51,51	0
59	ZN	32	301	1/1	0.99	0.21	103,103,103,103	0
58	MG	1H	3395	1/1	0.99	0.12	40,40,40,40	0
58	MG	1H	3419	1/1	0.99	0.04	37,37,37,37	0
58	MG	1H	3416	1/1	1.00	0.02	51,51,51,51	0
58	MG	1H	3420	1/1	1.00	0.05	37,37,37,37	0
58	MG	1H	3439	1/1	1.00	0.02	70,70,70,70	0
58	MG	1H	3421	1/1	1.00	0.02	43,43,43,43	0
58	MG	1H	3460	1/1	1.00	0.02	53,53,53,53	0
58	MG	14	3331	1/1	1.00	0.02	53,53,53,53	0
58	MG	14	3332	1/1	1.00	0.06	62,62,62,62	0
58	MG	1H	3422	1/1	1.00	0.12	63,63,63,63	0
58	MG	1H	3442	1/1	1.00	0.03	60,60,60,60	0
58	MG	1H	3443	1/1	1.00	0.06	55,55,55,55	0
58	MG	13	1734	1/1	1.00	0.06	76,76,76,76	0
58	MG	1H	3387	1/1	1.00	0.03	38,38,38,38	0
59	ZN	5I	101	1/1	1.00	0.03	88,88,88,88	0
58	MG	1H	3466	1/1	1.00	0.05	51,51,51,51	0
58	MG	14	3353	1/1	1.00	0.05	57,57,57,57	0
58	MG	1H	3455	1/1	1.00	0.05	58,58,58,58	0
58	MG	14	3370	1/1	1.00	0.06	75,75,75,75	0

6.5 Other polymers (i)

There are no such residues in this entry.