Full wwPDB X-ray Structure Validation Report (i)

Jun 24, 2024 – 09:41 PM EDT

PDB ID	:	6QNQ
Title	:	70S ribosome initiation complex (IC) with experimentally assigned potassium ions
Authors	:	Rozov, A.; Khusainov, I.; Yusupov, M.; Yusupova, G.
Deposited on	:	2019-02-11
Resolution	:	3.50 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 (i) 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 (i)) were used in the production of this report:

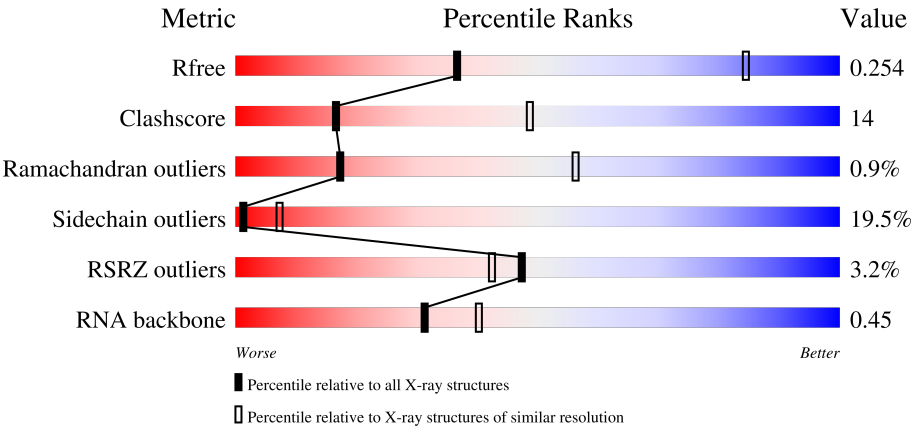
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1659 (3.60-3.40)
Clashscore	141614	1036 (3.58-3.42)
Ramachandran outliers	138981	1005 (3.58-3.42)
Sidechain outliers	138945	1006 (3.58-3.42)
RSRZ outliers	127900	1559 (3.60-3.40)
RNA backbone	3102	1002 (4.00-3.00)

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	40% 46% 12%
1	1G	1522	40% 43% 16%
2	12	256	7% 42% 40% 9% 8%
2	1E	256	13% 45% 39% 9% 7%

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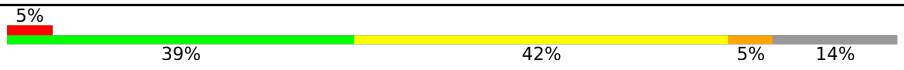
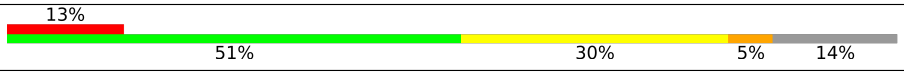
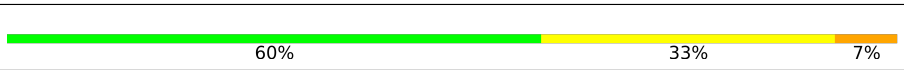
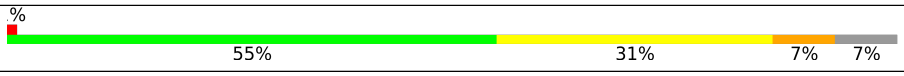
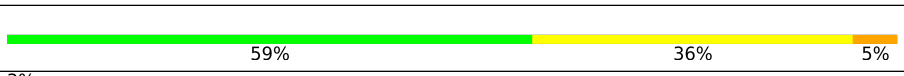
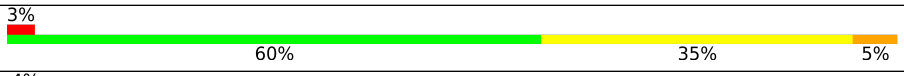
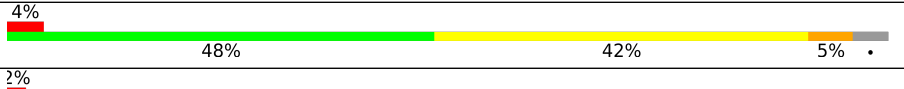
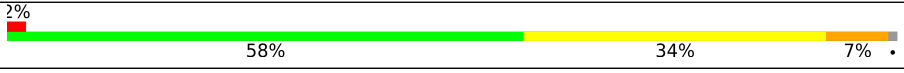
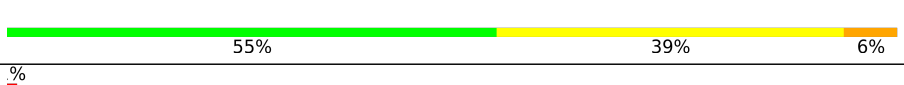
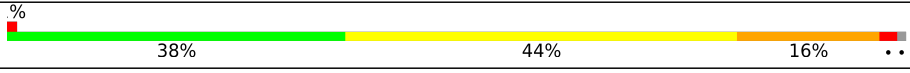
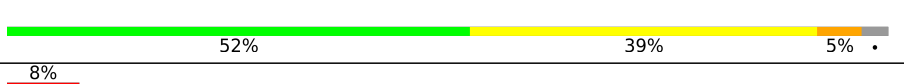
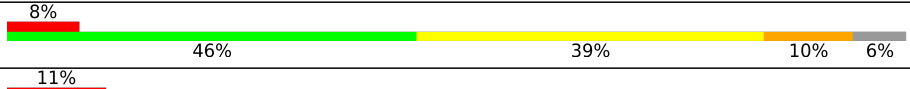
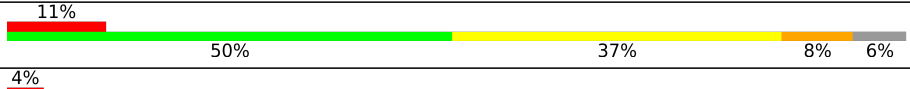
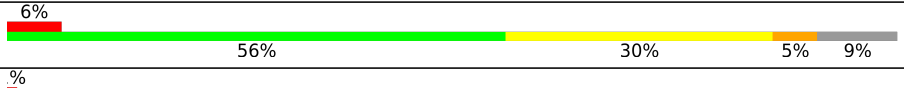
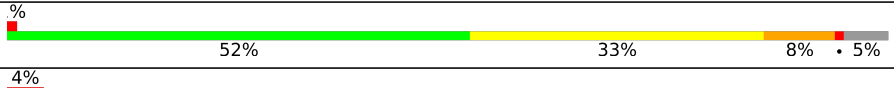
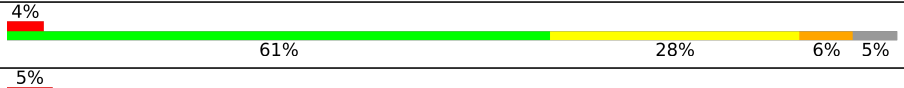
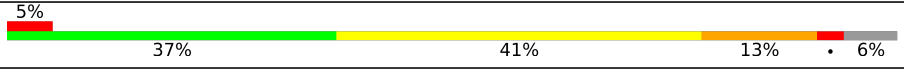
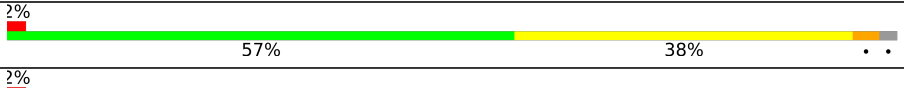
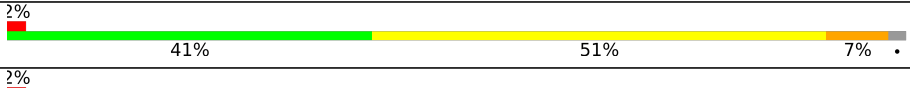
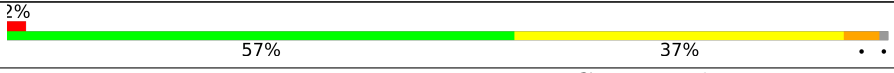
Mol	Chain	Length	Quality of chain
3	22	239	
3	2E	239	
4	32	209	
4	3E	209	
5	42	162	
5	4E	162	
6	52	101	
6	5E	101	
7	62	156	
7	6E	156	
8	72	138	
8	7E	138	
9	82	128	
9	8E	128	
10	1A	105	
10	1I	105	
11	2A	129	
11	2I	129	
12	3A	132	
12	3I	132	
13	4A	126	
13	4I	126	
14	5A	61	
14	5I	61	
15	6A	89	

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Mol	Chain	Length	Quality of chain
15	6I	89	62% 30% 7%
16	7A	88	61% 25% 9% 5%
16	7I	88	53% 33% 8% 6%
17	8A	105	53% 35% 6% 6%
17	8I	105	59% 30% 6% 5%
18	9A	88	7% 41% 34% 6% 19%
18	9I	88	9% 42% 30% 8% 20%
19	AA	93	6% 32% 45% 11% 11%
19	AI	93	43% 35% 11% 8%
20	BA	106	51% 39% 8%
20	BI	106	53% 39% 5%
21	1B	27	48% 33% 11% 7%
21	1F	27	41% 52% 7%
22	1K	77	39% 18% 49% 16% 16%
22	3K	77	5% 32% 53% 14%
22	3L	77	3% 30% 48% 21%
23	2K	77	62% 30% 6%
24	4K	27	7% 7% 33% 22% 37%
24	4L	27	4% 33% 33% 11% 22%
25	14	2917	43% 41% 14%
25	1H	2917	47% 38% 12%
26	16	122	49% 36% 13%
26	1J	122	24% 53% 23%
27	71	229	10% 30% 25% 41%
28	11	276	64% 29% 7%

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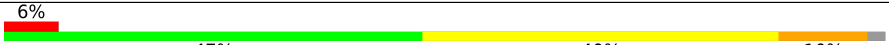
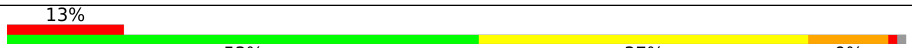
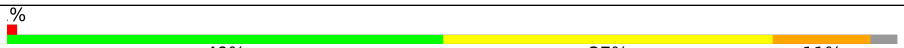
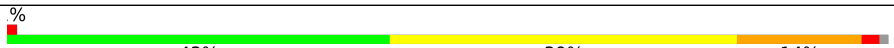
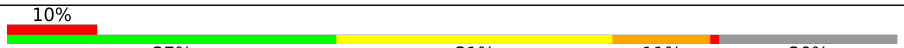
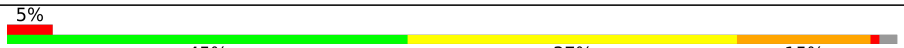
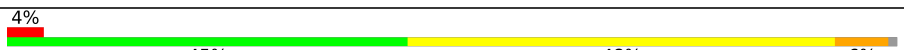
Mol	Chain	Length	Quality of chain
28	19	276	
29	21	206	
29	29	206	
30	31	210	
30	39	210	
31	41	182	
31	49	182	
32	51	180	
32	59	180	
33	61	148	
33	69	148	
34	38	173	
35	15	140	
35	58	140	
36	25	122	
36	68	122	
37	35	150	
37	78	150	
38	45	141	
38	88	141	
39	55	118	
39	98	118	
40	65	112	
40	A8	112	
41	75	146	

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Mol	Chain	Length	Quality of chain
41	B8	146	29% 47% 18% 6%
42	85	118	19% 58% 36%
42	C8	118	53% 36% 9%
43	95	101	50% 45% 42% 14%
43	D8	101	2% 56% 33% 10%
44	A5	113	% 63% 31% 5%
44	E8	113	2% 60% 33% 7%
45	B5	96	2% 58% 27% 11%
45	F8	96	57% 38%
46	C5	110	5% 49% 38% 10%
46	G8	110	56% 33% 7%
47	D5	206	21% 32% 36% 16% 15%
47	H8	206	7% 42% 32% 10% 16%
48	E5	85	6% 47% 39% 6% 7%
48	I8	85	% 61% 21% 8% 9%
49	F5	96	61% 22% 12%
49	J8	96	% 61% 29% 7%
50	G5	72	% 51% 38% 7%
50	K8	72	% 42% 43% 11%
51	H5	60	22% 63% 30% 5%
51	L8	60	3% 50% 42% 7%
52	I5	71	39% 48% 37% 14%
52	M8	71	35% 45% 11% 7%
53	J5	60	60% 25% 5% 7%
53	N8	60	7% 45% 40% 5% 7%

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Mol	Chain	Length	Quality of chain
54	K5	54	57% 33% 31% 22% 11%
54	O8	54	80% 19% 41% 28% 9%
55	L5	49	57% 35% 6%
55	P8	49	63% 35%
56	M5	65	2% 71% 20% 8%
56	Q8	65	63% 29% 6%
57	2L	77	% 51% 40% 8%

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	K	13	1635	-	-	-	X
59	MG	1G	1648	-	-	-	X
60	SF4	32	303	-	-	X	-

2 Entry composition (i)

There are 62 unique types of molecules in this entry. The entry contains 300507 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	13	1506	Total	C	N	O	P	0	0	0
			32387	14423	5999	10459	1506			
1	1G	1510	Total	C	N	O	P	0	0	0
			32470	14460	6012	10488	1510			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	1E	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
2	12	236	Total	C	N	O	S	0	0	0
			1915	1223	343	344	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	2E	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
3	22	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	3E	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			
4	32	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	4E	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	42	154	Total	C	N	O	S	0	0	0
			1178	743	221	210	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	149	Total	C	N	O	S	0	0	0
			1217	759	242	210	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	124	Total	C	N	O		0	0	0
			983	624	190	169				
9	82	127	Total	C	N	O	S	0	0	0
			1002	635	193	173	1			

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	117	Total	C	N	O	S	0	0	0
			864	537	162	162	3			
11	2A	119	Total	C	N	O	S	0	0	0
			889	554	169	163	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
			977	615	196	164	2			
12	3A	125	Total	C	N	O	S	0	0	0
			977	615	196	164	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	4I	119	Total	C	N	O	S	0	0	0
			946	585	195	164	2			
13	4A	118	Total	C	N	O	S	0	0	0
			937	579	193	163	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			
14	5A	60	Total	C	N	O	S	0	0	0
			485	309	101	71	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	83	Total	C	N	O	S	0	0	0
			700	443	139	117	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	99	Total	C	N	O	S	0	0	0
			819	525	150	142	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	9I	70	Total	C	N	O	0	0	0
			573	367	112	94			
18	9A	71	Total	C	N	O	0	0	0
			584	373	116	95			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	86	Total	C	N	O	S	0	0	0
			688	438	128	120	2			
19	AA	83	Total	C	N	O	S	0	0	0
			665	424	122	117	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	BI	101	Total	C	N	O	S	0	0	0
			766	473	161	130	2			
20	BA	103	Total	C	N	O	S	0	0	0
			776	479	163	132	2			

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

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

- Molecule 22 is a RNA chain called E. coli tRNAfMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	1K	65	Total	C	N	O	P	0	0	0
			1385	618	249	454	64			
22	3K	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
22	3L	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 23 is a RNA chain called E. coli tRNAfMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
23	2K	77	Total	C	N	O	P	S	0	0	0
			1643	735	297	534	76	1			

- Molecule 24 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	4K	17	Total	C	N	O	P	0	0	0
			373	168	79	109	17			
24	4L	21	Total	C	N	O	P	0	0	0
			463	208	99	135	21			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	1H	2879	Total	C	N	O	P	0	0	0
			62010	27605	11592	19935	2878			
25	14	2879	Total	C	N	O	P	0	0	0
			62013	27604	11596	19934	2879			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	16	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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 L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	71	135	Total	C	N	O	S	0	0	0
			1049	662	197	189	1			

- Molecule 28 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	11	274	Total	C	N	O	S	0	0	0
			2125	1341	422	359	3			
28	19	274	Total	C	N	O	S	0	0	0
			2124	1341	421	359	3			

- Molecule 29 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	21	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			
29	29	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 30 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
30	39	206	Total	C	N	O	S	0	0	0
			1619	1033	302	281	3			

- Molecule 31 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			
31	49	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

- Molecule 32 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
32	59	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			

- Molecule 33 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
33	69	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 34 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	38	139	Total	C	N	O	S	0	0	0
			1056	672	187	195	2			

- Molecule 35 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
35	15	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 36 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
36	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	78	148	Total	C	N	O	S	0	0	0
			1130	704	230	193	3			
37	35	147	Total	C	N	O	S	0	0	0
			1122	698	229	192	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	88	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			
38	45	140	Total	C	N	O	S	0	0	0
			1112	710	210	185	7			

- Molecule 39 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
39	55	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			

- Molecule 40 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
40	A8	111	Total	C	N	O	0	0	0
			881	556	176	149			
40	65	111	Total	C	N	O	0	0	0
			881	556	176	149			

- Molecule 41 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	B8	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
41	75	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 42 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			
42	85	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

- Molecule 43 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	D8	100	Total	C	N	O	S	0	0	0
			774	499	141	133	1			
43	95	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 44 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	E8	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			
44	A5	112	Total	C	N	O	S	0	0	0
			890	560	175	153	2			

- Molecule 45 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	F8	95	Total	C	N	O	S	0	0	0
			747	485	135	126	1			
45	B5	93	Total	C	N	O		0	0	0
			730	474	132	124				

- Molecule 46 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	G8	107	Total	C	N	O	S	0	0	0
			805	517	151	132	5			
46	C5	109	Total	C	N	O	S	0	0	0
			825	528	153	139	5			

- Molecule 47 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	H8	174	Total	C	N	O	S	0	0	0
			1390	887	250	250	3			
47	D5	176	Total	C	N	O	S	0	0	0
			1404	897	252	252	3			

- Molecule 48 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	I8	77	Total	C	N	O	S	0	0	0
			611	378	129	103	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	E5	79	Total	C	N	O	S	0	0	0
			623	386	131	105	1			

- Molecule 49 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	J8	96	Total	C	N	O	S	0	0	0
			754	474	149	129	2			
49	F5	92	Total	C	N	O	S	0	0	0
			721	451	144	125	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	K8	71	Total	C	N	O	S	0	0	0
			590	367	119	103	1			
50	G5	69	Total	C	N	O	S	0	0	0
			580	358	118	103	1			

- Molecule 51 is a protein called 50S ribosomal protein L30.

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

- Molecule 52 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	M8	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			
52	I5	71	Total	C	N	O	S	0	0	0
			580	364	108	103	5			

- Molecule 53 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	N8	56	Total	C	N	O	S	0	0	0
			434	272	87	70	5			
53	J5	56	Total	C	N	O	S	0	0	0
			434	272	87	70	5			

- Molecule 54 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	O8	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			
54	K5	48	Total	C	N	O	S	0	0	0
			417	259	86	68	4			

- Molecule 55 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	P8	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
55	L5	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 56 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	Q8	64	Total	C	N	O	S	0	0	0
			506	326	99	79	2			
56	M5	64	Total	C	N	O	S	0	0	0
			506	326	99	79	2			

- Molecule 57 is a RNA chain called E. coli tRNAfMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
57	2L	77	Total	C	N	O	P	S	0	0	0
			1643	735	297	534	76	1			

- Molecule 58 is POTASSIUM ION (three-letter code: K) (formula: K) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	13	37	Total	K	0	1
			38	38		
58	5E	1	Total	K	0	0
			1	1		
58	5I	1	Total	K	0	0
			1	1		
58	8I	1	Total	K	0	0
			1	1		
58	1H	121	Total	K	0	1
			122	122		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	16	2	Total K 2 2	0	0
58	11	1	Total K 1 1	0	0
58	21	1	Total K 1 1	0	0
58	31	2	Total K 2 2	0	0
58	41	2	Total K 2 2	0	0
58	1G	25	Total K 25 25	0	0
58	32	1	Total K 1 1	0	0
58	52	1	Total K 1 1	0	0
58	3A	1	Total K 1 1	0	0
58	BA	1	Total K 1 1	0	0
58	14	94	Total K 94 94	0	0
58	19	1	Total K 1 1	0	0
58	29	2	Total K 2 2	0	0
58	39	1	Total K 1 1	0	0

- Molecule 59 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	13	111	Total Mg 111 111	0	0
59	3E	1	Total Mg 1 1	0	0
59	8E	1	Total Mg 1 1	0	0
59	4I	1	Total Mg 1 1	0	0
59	7I	1	Total Mg 1 1	0	0

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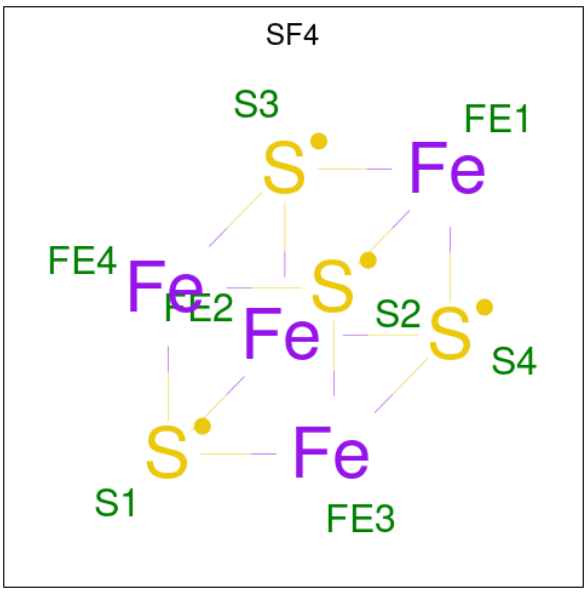
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	BI	2	Total Mg 2 2	0	0
59	2K	1	Total Mg 1 1	0	0
59	1H	404	Total Mg 405 405	0	1
59	16	8	Total Mg 8 8	0	0
59	21	2	Total Mg 2 2	0	0
59	41	1	Total Mg 1 1	0	0
59	78	1	Total Mg 1 1	0	0
59	D8	3	Total Mg 3 3	0	0
59	G8	1	Total Mg 1 1	0	0
59	I8	2	Total Mg 2 2	0	0
59	J8	1	Total Mg 1 1	0	0
59	N8	1	Total Mg 1 1	0	0
59	Q8	1	Total Mg 1 1	0	0
59	1G	102	Total Mg 102 102	0	0
59	32	1	Total Mg 1 1	0	0
59	2L	2	Total Mg 2 2	0	0
59	14	312	Total Mg 312 312	0	0
59	1J	5	Total Mg 5 5	0	0
59	29	2	Total Mg 2 2	0	0
59	55	1	Total Mg 1 1	0	0
59	E5	1	Total Mg 1 1	0	0

- Molecule 60 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	3E	1	Total Fe S 8 4 4	0	0
60	32	1	Total Fe S 8 4 4	0	0

- Molecule 61 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	5I	1	Total Zn 1 1	0	0
61	5A	1	Total Zn 1 1	0	0

- Molecule 62 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	13	190	Total O 190 190	0	0
62	3E	2	Total O 2 2	0	0
62	3I	1	Total O 1 1	0	0
62	4I	2	Total O 2 2	0	0
62	5I	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	6I	1	Total O 1 1	0	0
62	7I	3	Total O 3 3	0	0
62	BI	4	Total O 4 4	0	0
62	3K	1	Total O 1 1	0	0
62	4K	2	Total O 2 2	0	0
62	1H	983	Total O 983 983	0	0
62	16	12	Total O 12 12	0	0
62	11	10	Total O 10 10	0	0
62	21	5	Total O 5 5	0	0
62	31	6	Total O 6 6	0	0
62	58	1	Total O 1 1	0	0
62	78	6	Total O 6 6	0	0
62	98	1	Total O 1 1	0	0
62	B8	2	Total O 2 2	0	0
62	C8	2	Total O 2 2	0	0
62	F8	2	Total O 2 2	0	0
62	G8	1	Total O 1 1	0	0
62	I8	5	Total O 5 5	0	0
62	J8	3	Total O 3 3	0	0
62	Q8	1	Total O 1 1	0	0
62	1G	268	Total O 268 268	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	32	4	Total O 4 4	0	0
62	42	1	Total O 1 1	0	0
62	3A	1	Total O 1 1	0	0
62	7A	5	Total O 5 5	0	0
62	BA	1	Total O 1 1	0	0
62	2L	6	Total O 6 6	0	0
62	4L	4	Total O 4 4	0	0
62	14	681	Total O 681 681	0	0
62	1J	16	Total O 16 16	0	0
62	19	12	Total O 12 12	0	0
62	29	3	Total O 3 3	0	0
62	39	3	Total O 3 3	0	0
62	35	3	Total O 3 3	0	0
62	55	2	Total O 2 2	0	0
62	75	1	Total O 1 1	0	0
62	85	1	Total O 1 1	0	0
62	B5	2	Total O 2 2	0	0
62	C5	2	Total O 2 2	0	0
62	F5	1	Total O 1 1	0	0
62	G5	1	Total O 1 1	0	0
62	L5	1	Total O 1 1	0	0

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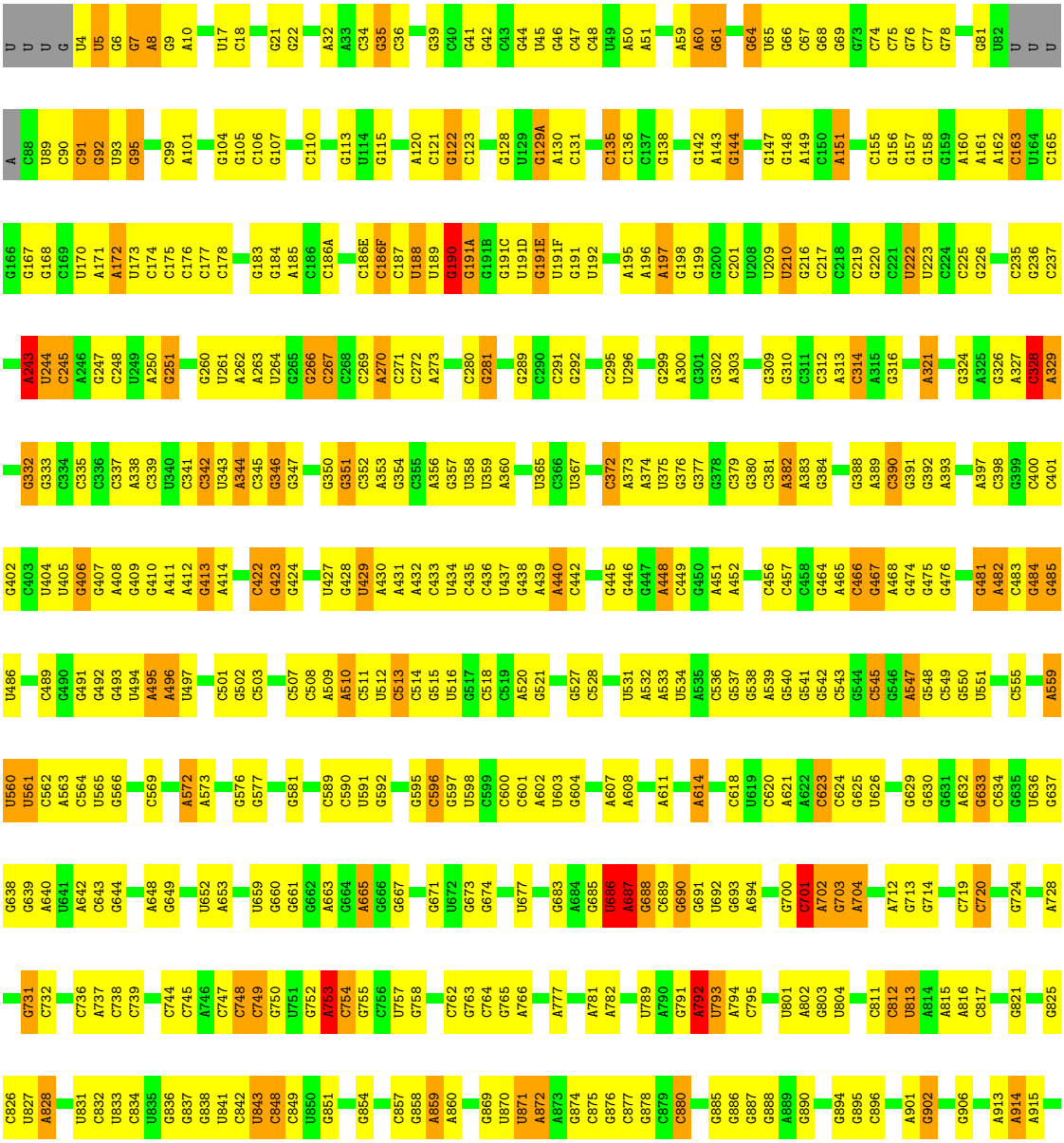
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	M5	1	Total O 1 1	0	0

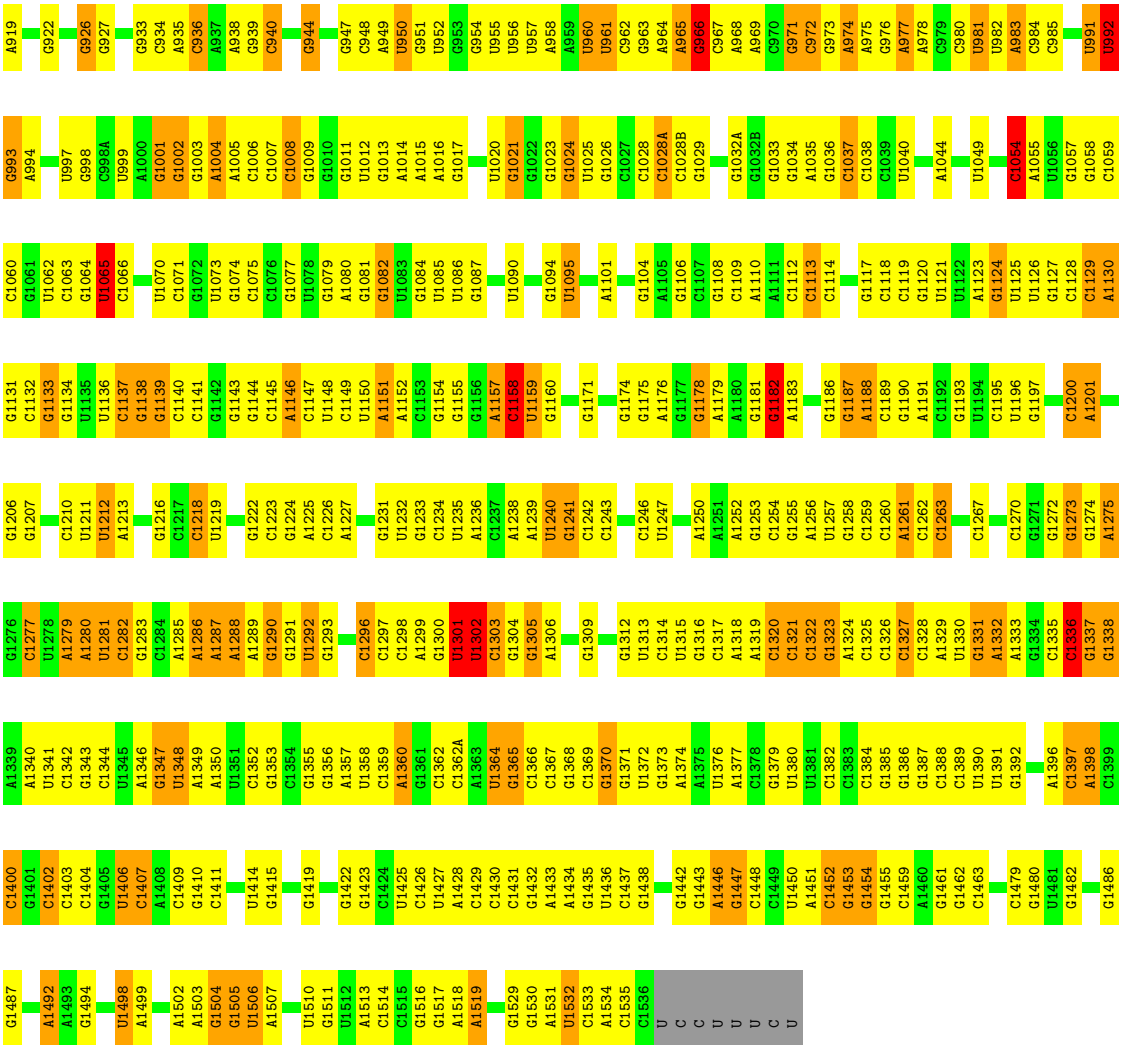
3 Residue-property plots (i)

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

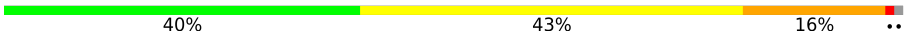
Chain 13: 40% 46% 12%

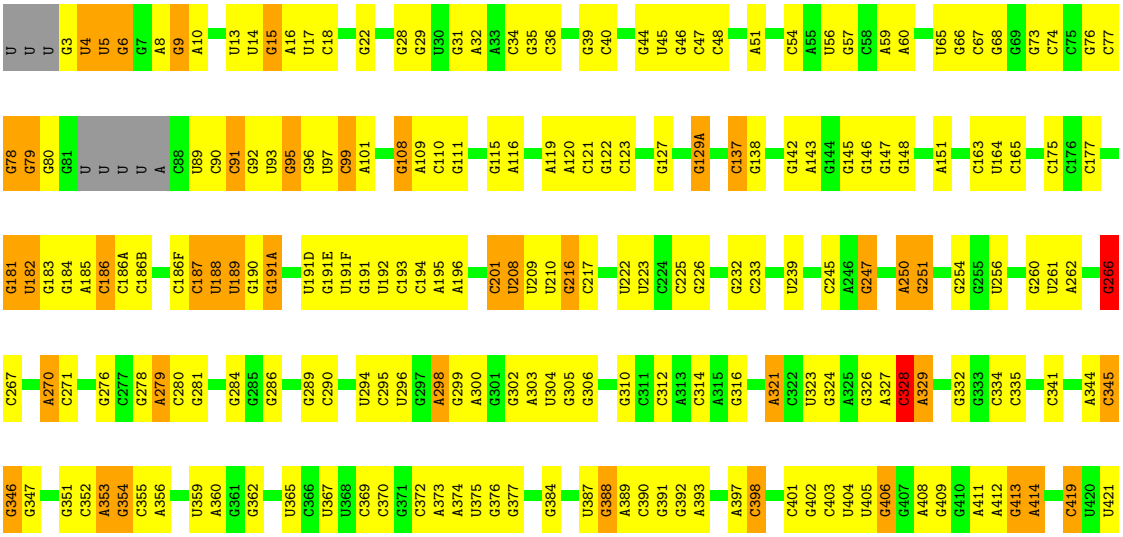


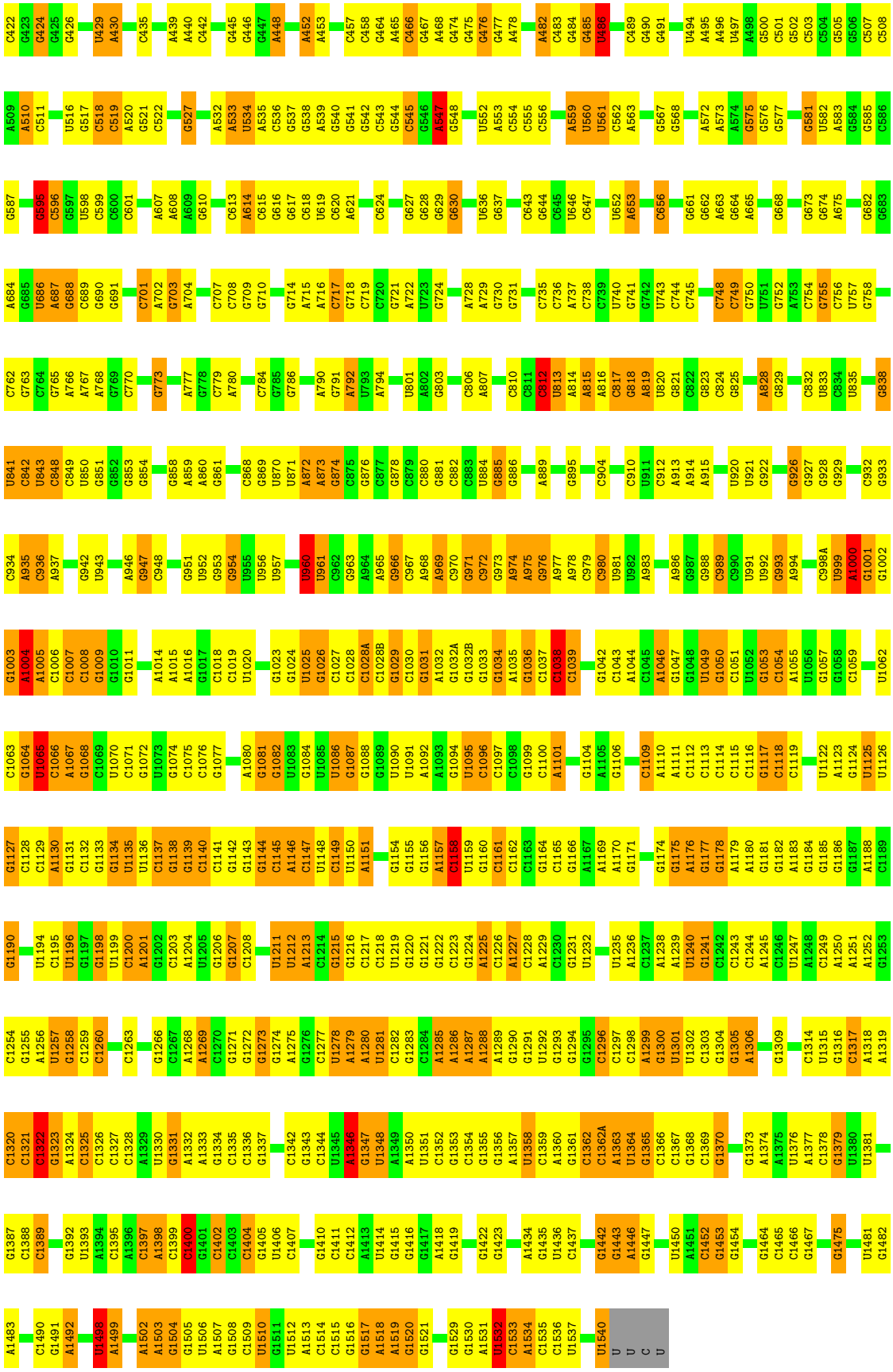


• Molecule 1: 16S ribosomal RNA

Chain 1G:

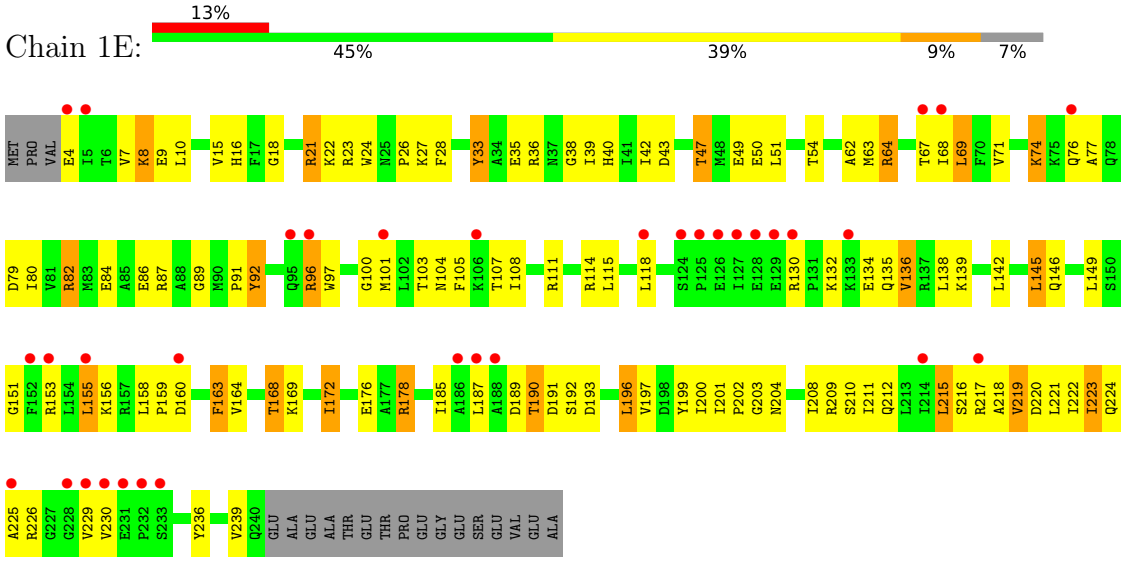






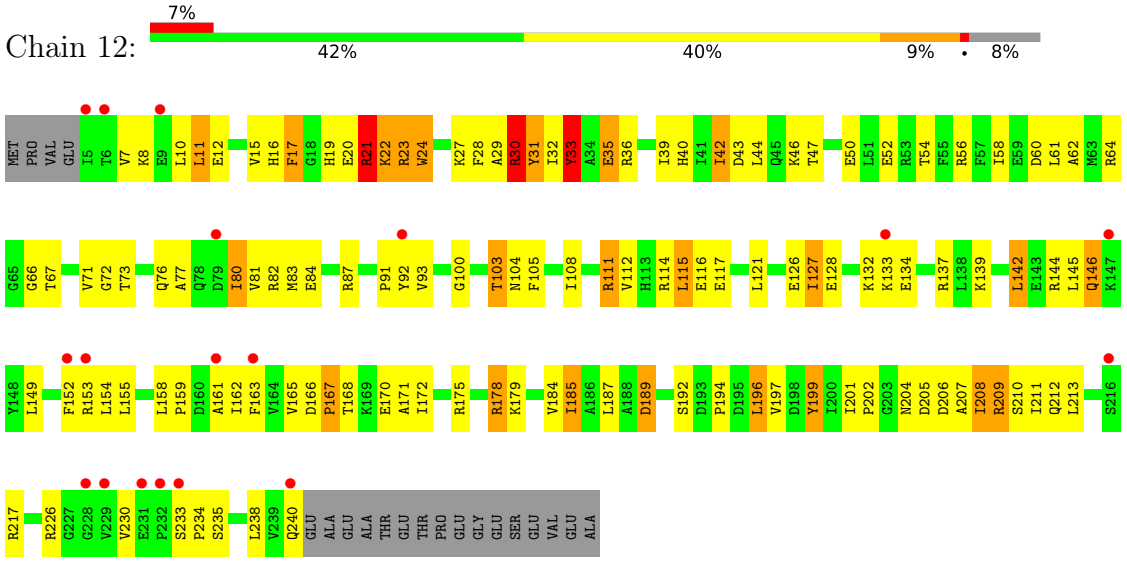
• Molecule 2: 30S ribosomal protein S2

Chain 1E:



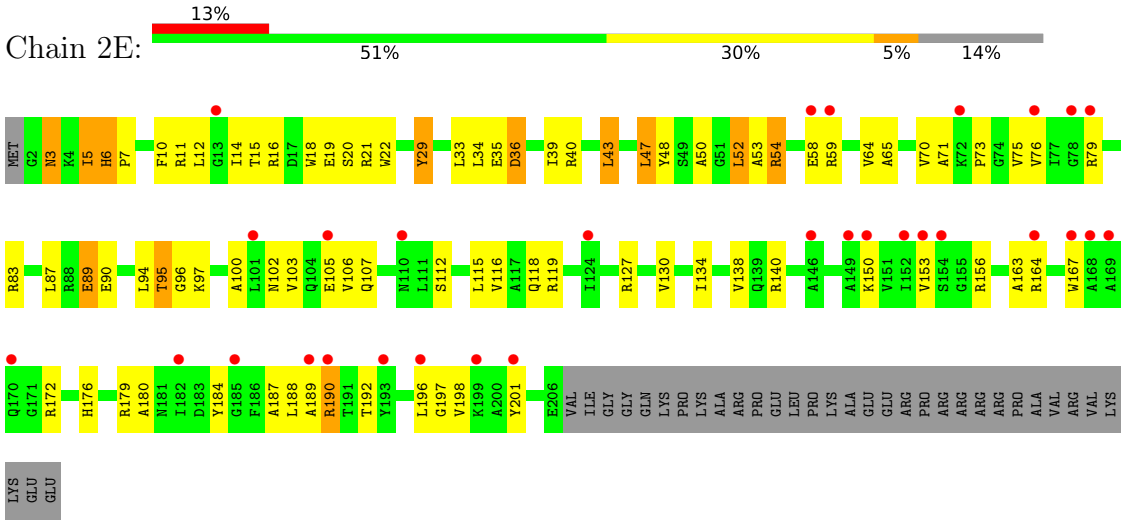
• Molecule 2: 30S ribosomal protein S2

Chain 12:



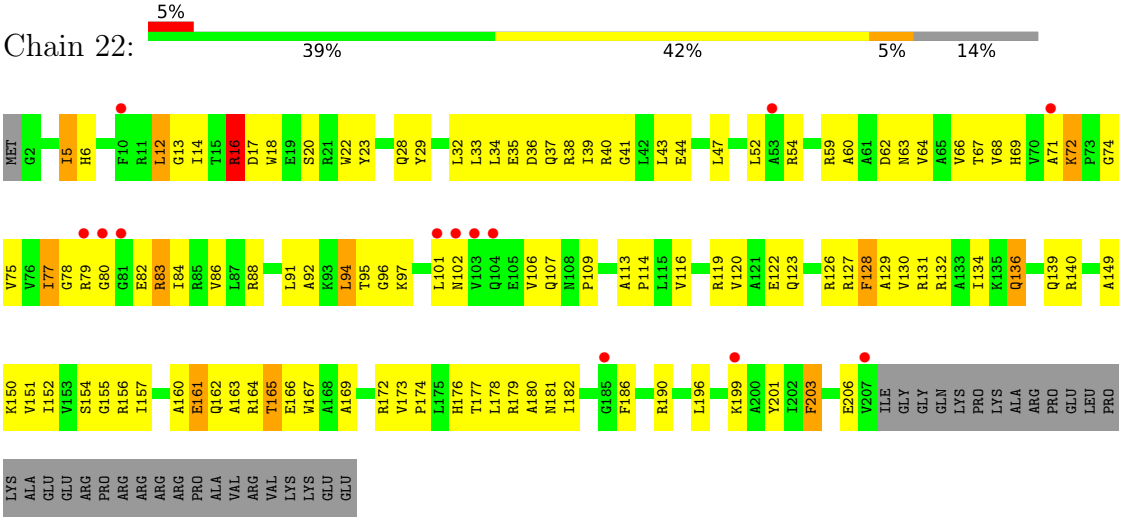
• Molecule 3: 30S ribosomal protein S3

Chain 2E:



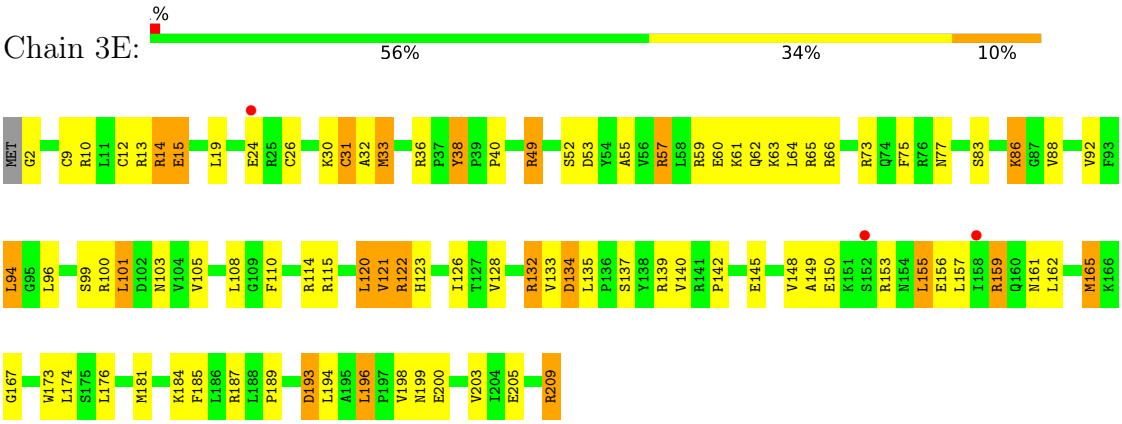
• Molecule 3: 30S ribosomal protein S3

Chain 22:



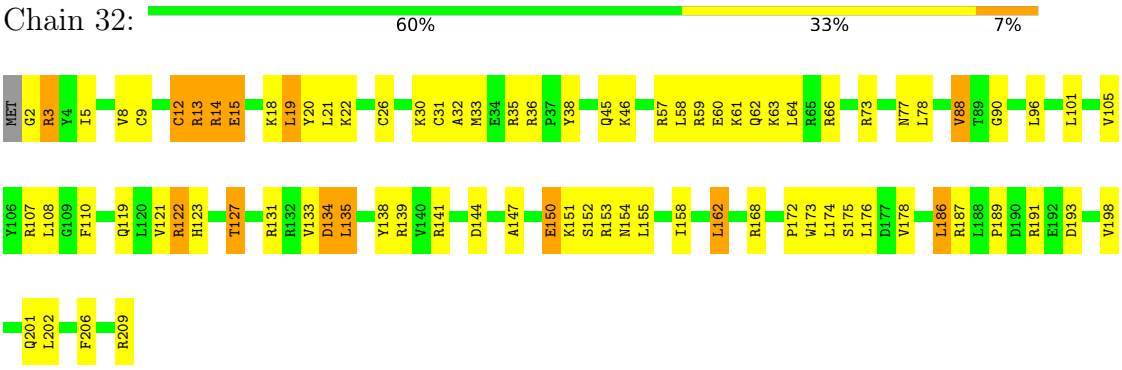
• Molecule 4: 30S ribosomal protein S4

Chain 3E:



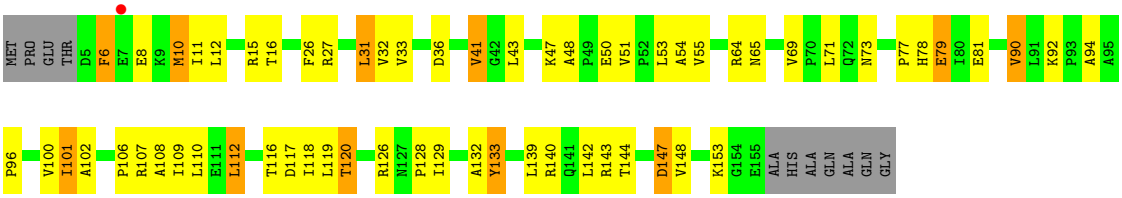
• Molecule 4: 30S ribosomal protein S4

Chain 32:



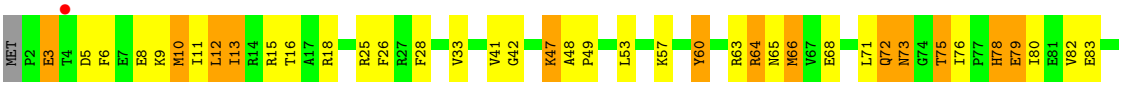
• Molecule 5: 30S ribosomal protein S5

Chain 4E:



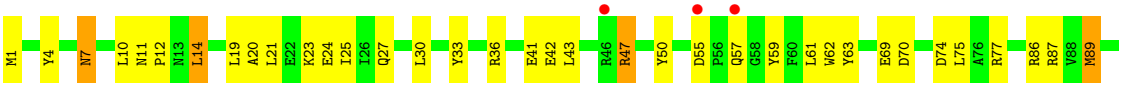
• Molecule 5: 30S ribosomal protein S5

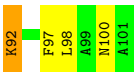
Chain 42:



• Molecule 6: 30S ribosomal protein S6

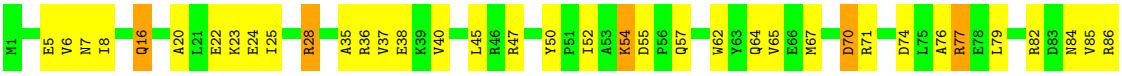
Chain 5E:

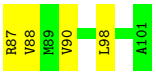




• Molecule 6: 30S ribosomal protein S6

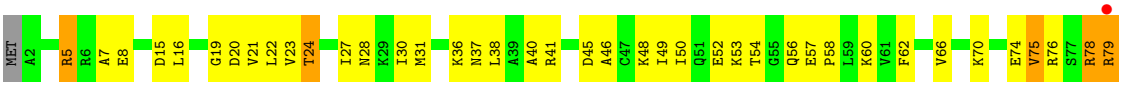
Chain 52:

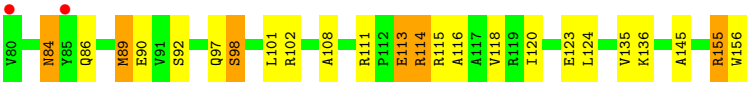




• Molecule 7: 30S ribosomal protein S7

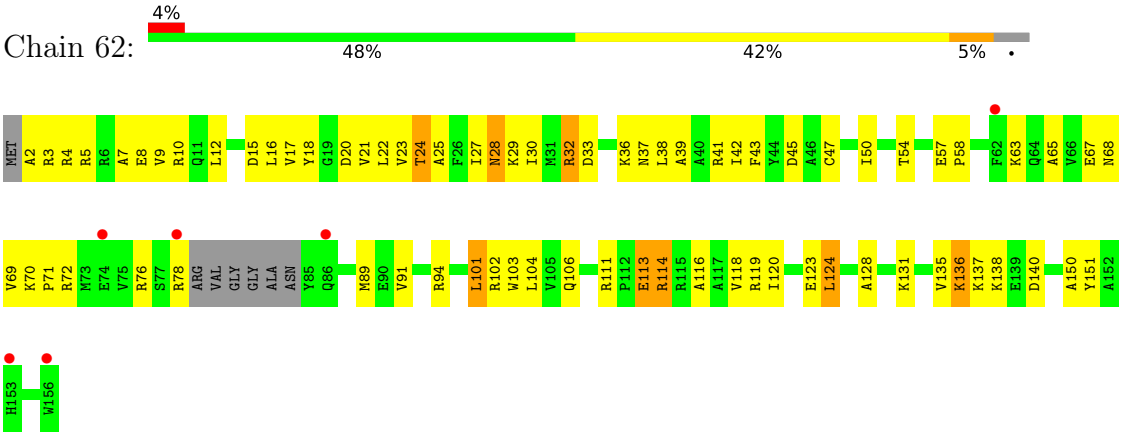
Chain 6E:





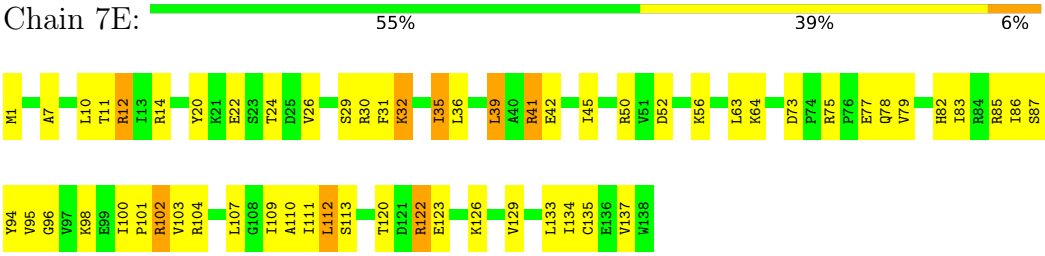
• Molecule 7: 30S ribosomal protein S7

Chain 62:



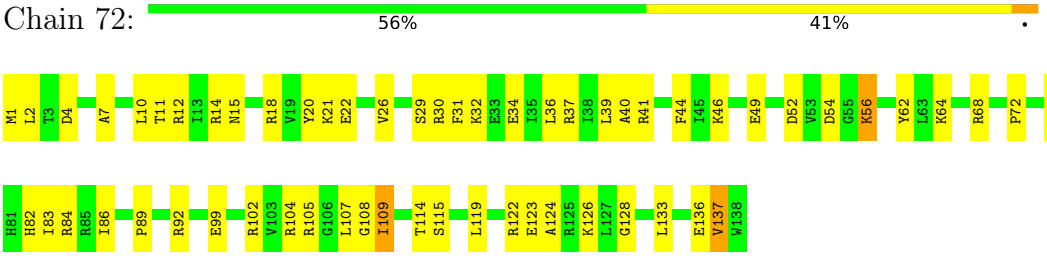
• Molecule 8: 30S ribosomal protein S8

Chain 7E:



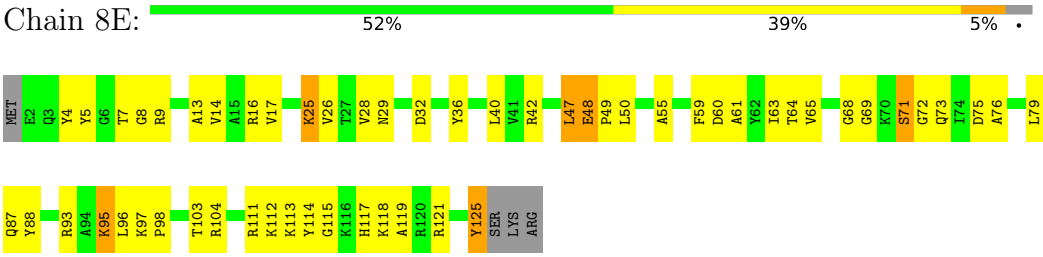
• Molecule 8: 30S ribosomal protein S8

Chain 72:



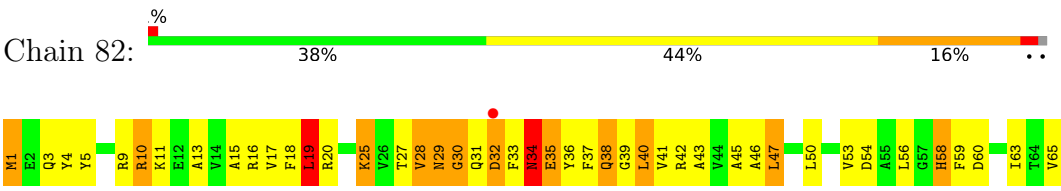
• Molecule 9: 30S ribosomal protein S9

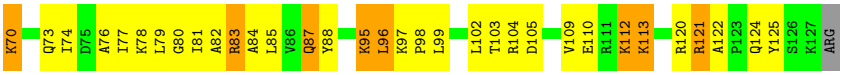
Chain 8E:



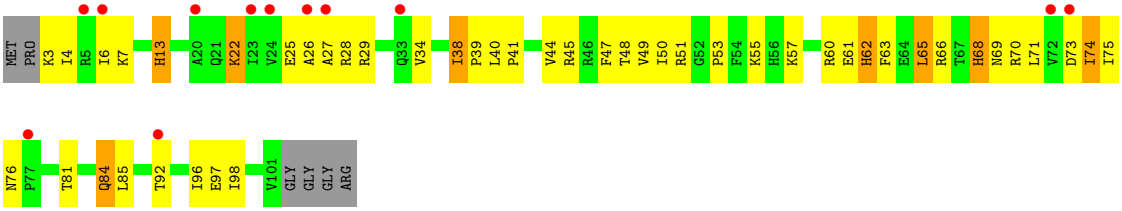
• Molecule 9: 30S ribosomal protein S9

Chain 82:

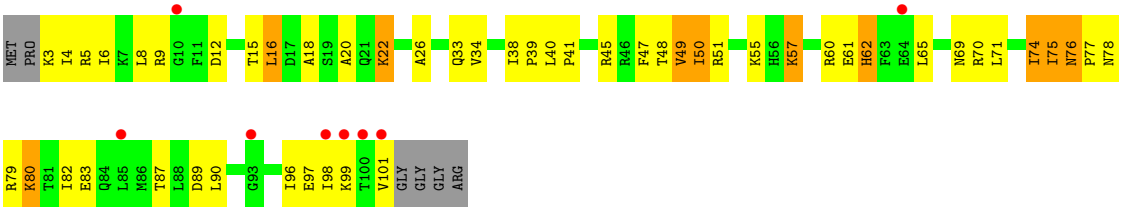




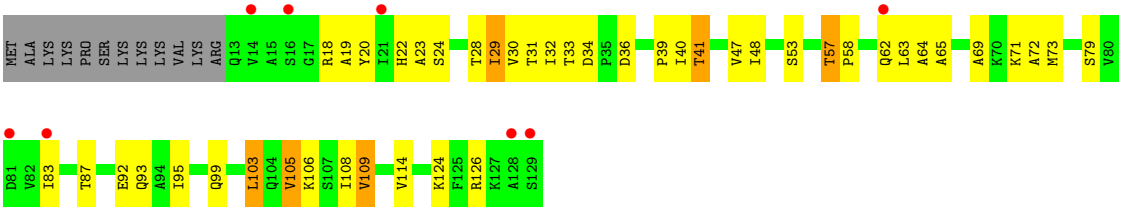
• Molecule 10: 30S ribosomal protein S10



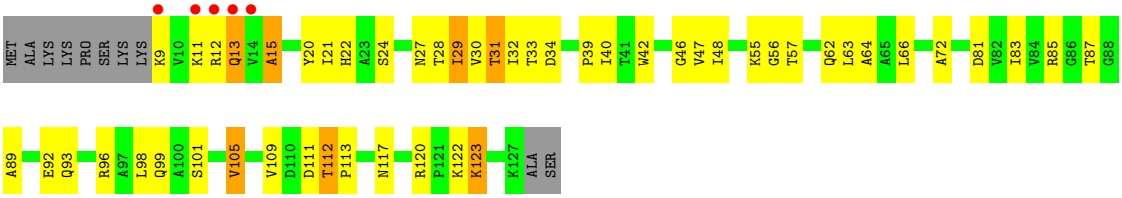
• Molecule 10: 30S ribosomal protein S10



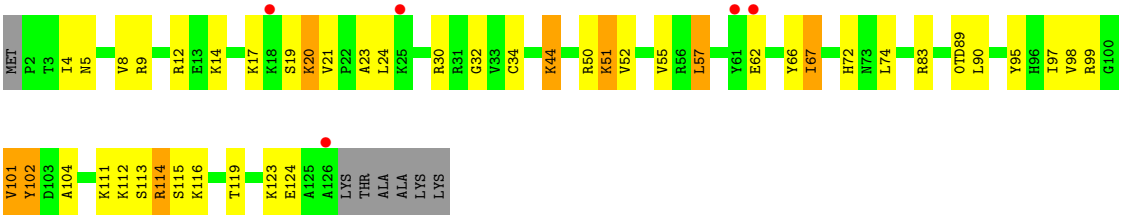
• Molecule 11: 30S ribosomal protein S11



• Molecule 11: 30S ribosomal protein S11

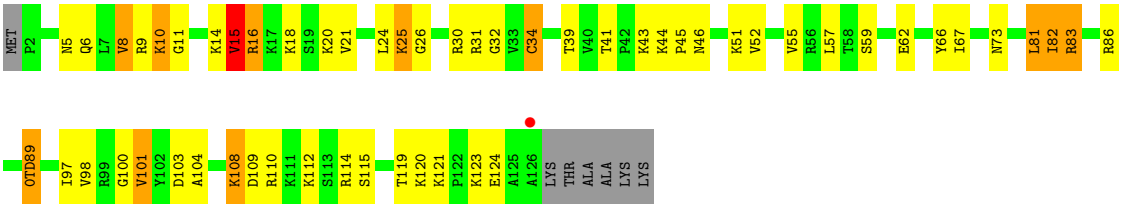


• Molecule 12: 30S ribosomal protein S12



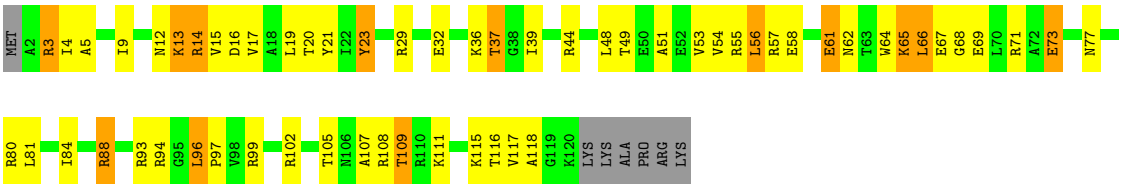
• Molecule 12: 30S ribosomal protein S12

Chain 3A:



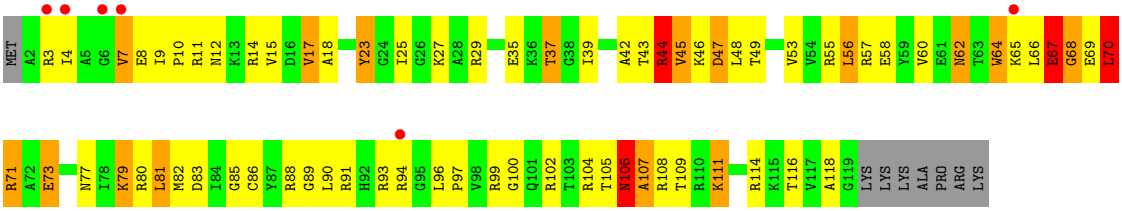
• Molecule 13: 30S ribosomal protein S13

Chain 4I:



• Molecule 13: 30S ribosomal protein S13

Chain 4A:

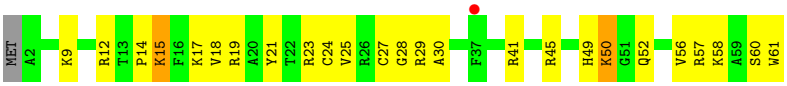


• Molecule 14: 30S ribosomal protein S14 type Z

Chain 5I:

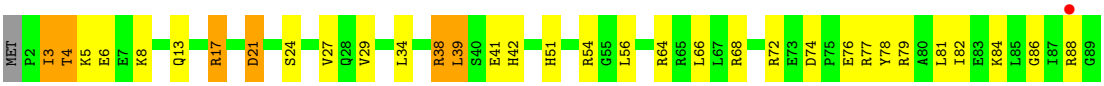
• Molecule 14: 30S ribosomal protein S14 type Z

Chain 5A:



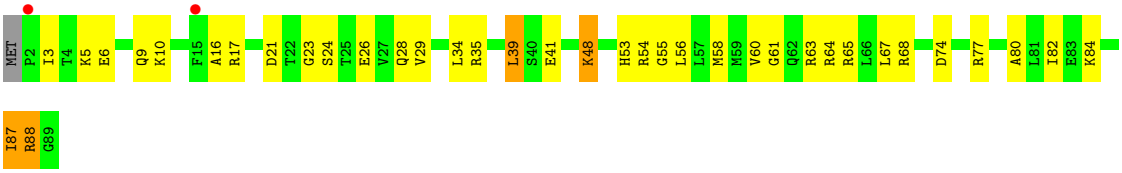
• Molecule 15: 30S ribosomal protein S15

Chain 6I:



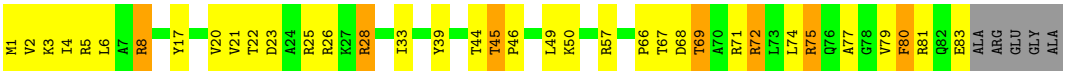
• Molecule 15: 30S ribosomal protein S15

Chain 6A:



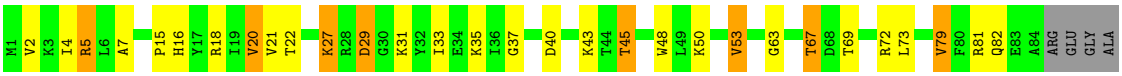
• Molecule 16: 30S ribosomal protein S16

Chain 7I:



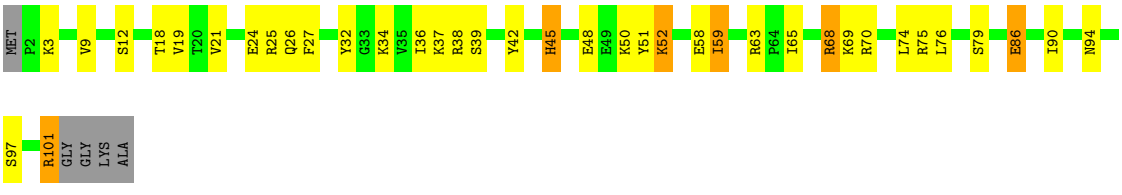
• Molecule 16: 30S ribosomal protein S16

Chain 7A:



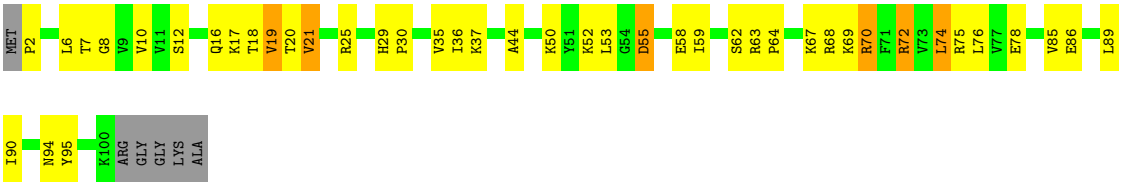
• Molecule 17: 30S ribosomal protein S17

Chain 8I:



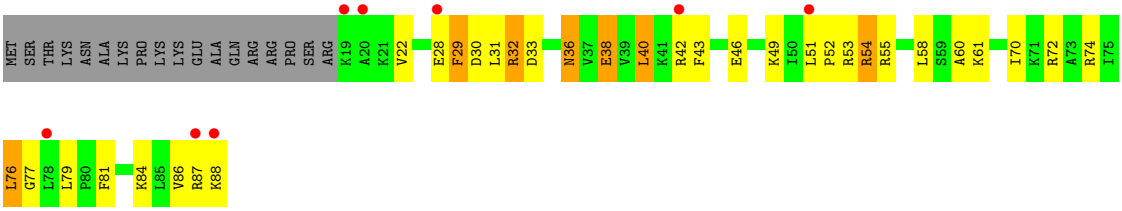
• Molecule 17: 30S ribosomal protein S17

Chain 8A:



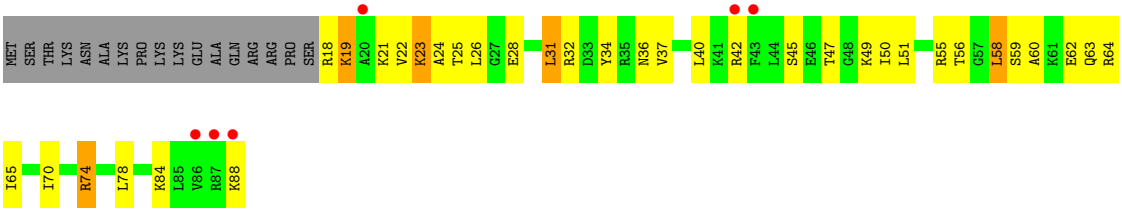
• Molecule 18: 30S ribosomal protein S18

Chain 9I:



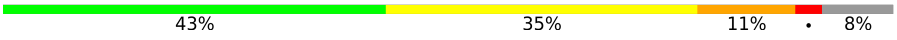
• Molecule 18: 30S ribosomal protein S18

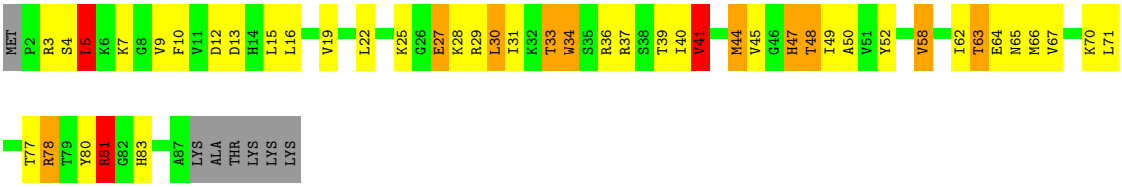
Chain 9A:



• Molecule 19: 30S ribosomal protein S19

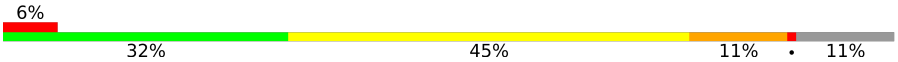
Chain AI:

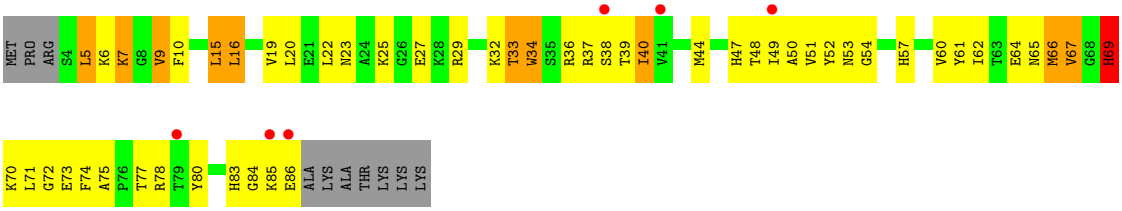




• Molecule 19: 30S ribosomal protein S19

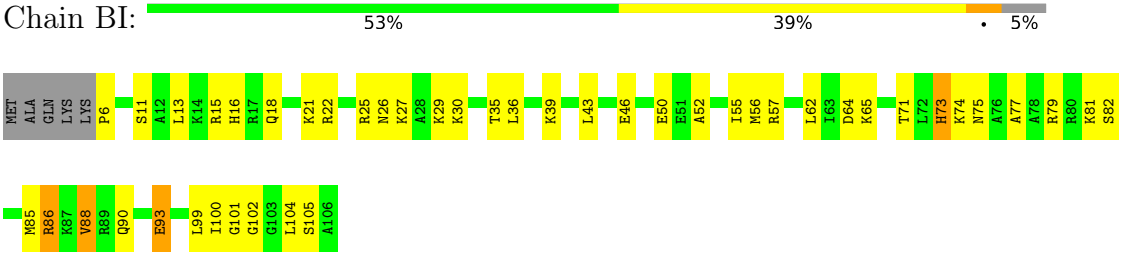
Chain AA:





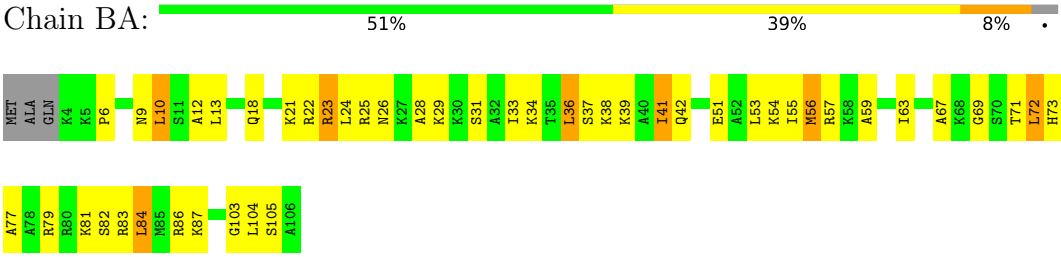
• Molecule 20: 30S ribosomal protein S20

Chain BI:



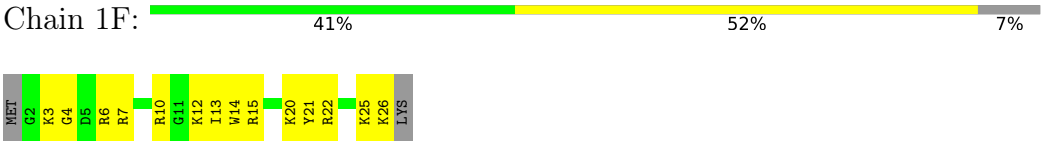
• Molecule 20: 30S ribosomal protein S20

Chain BA:



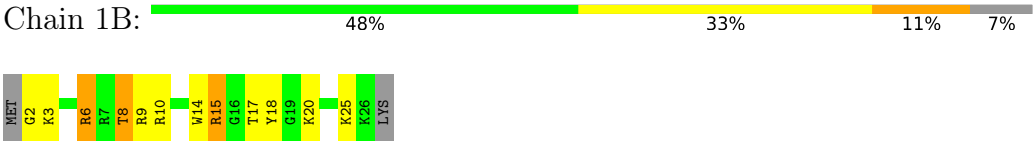
• Molecule 21: 30S ribosomal protein Thx

Chain 1F:



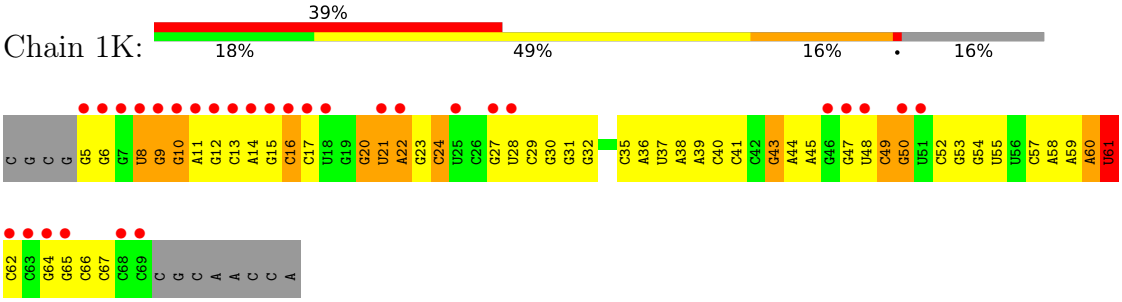
• Molecule 21: 30S ribosomal protein Thx

Chain 1B:



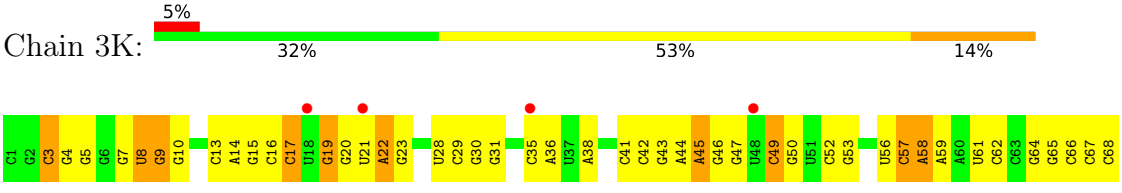
• Molecule 22: E. coli tRNAfMet

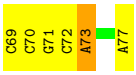
Chain 1K:



• Molecule 22: E. coli tRNAfMet

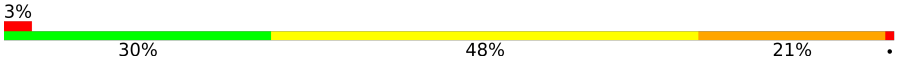
Chain 3K:

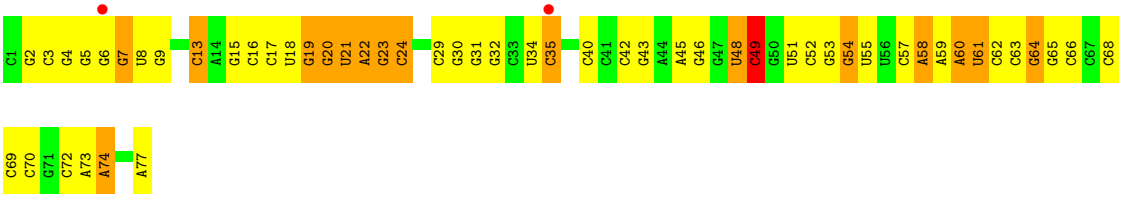




• Molecule 22: E. coli tRNAfMet

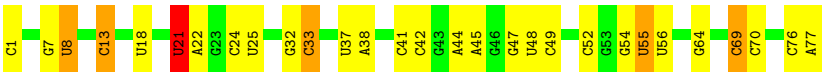
Chain 3L:





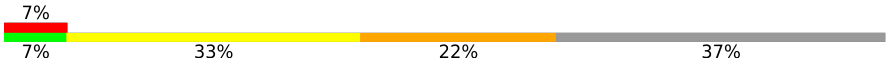
• Molecule 23: E. coli tRNAfMet

Chain 2K:



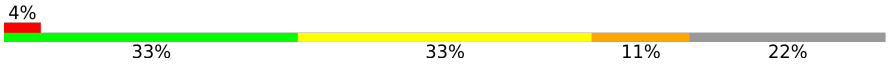
• Molecule 24: mRNA

Chain 4K:



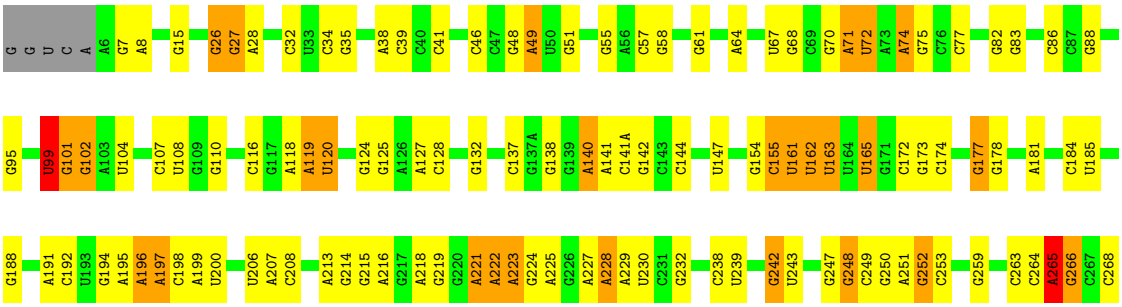
• Molecule 24: mRNA

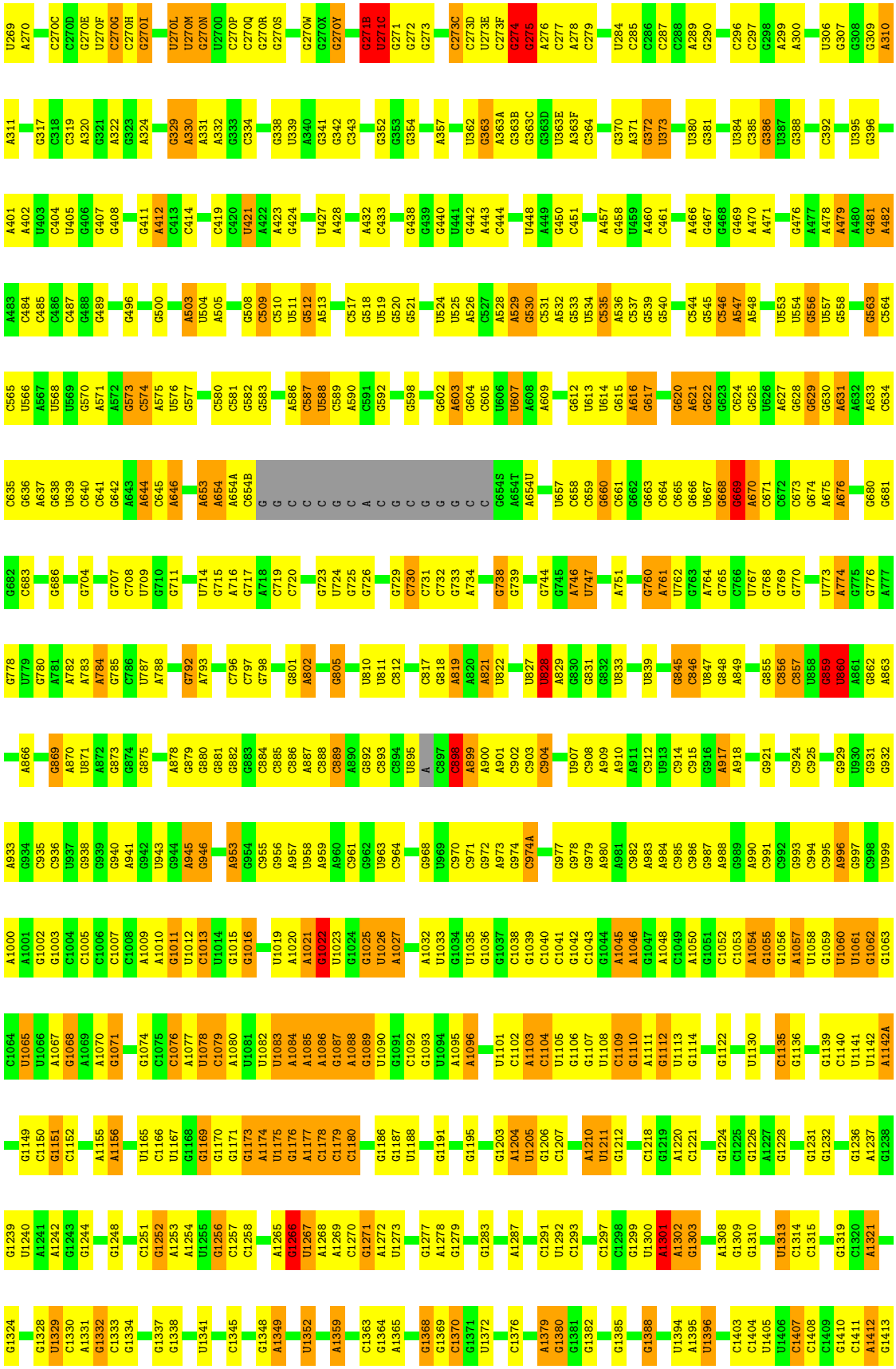
Chain 4L:

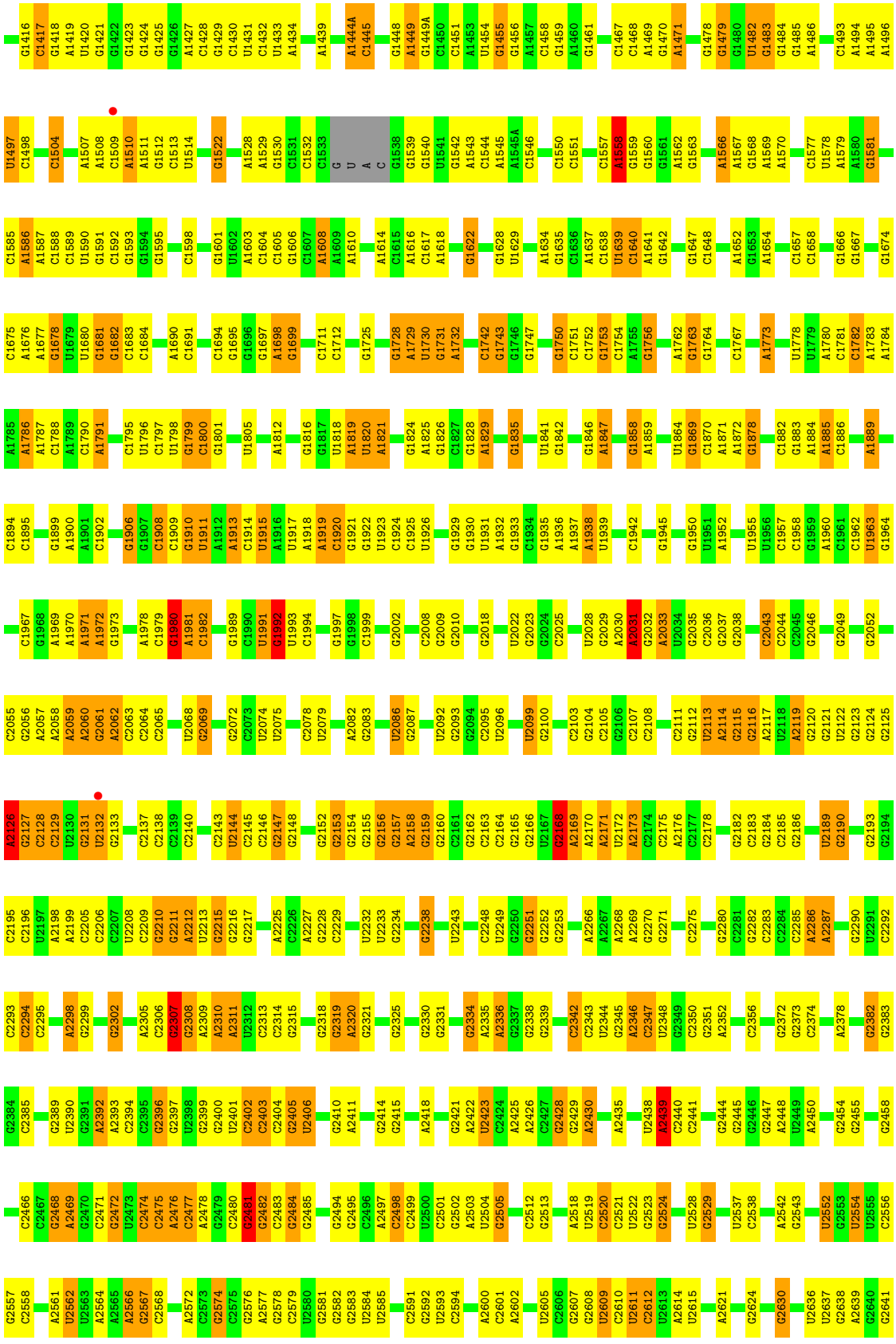


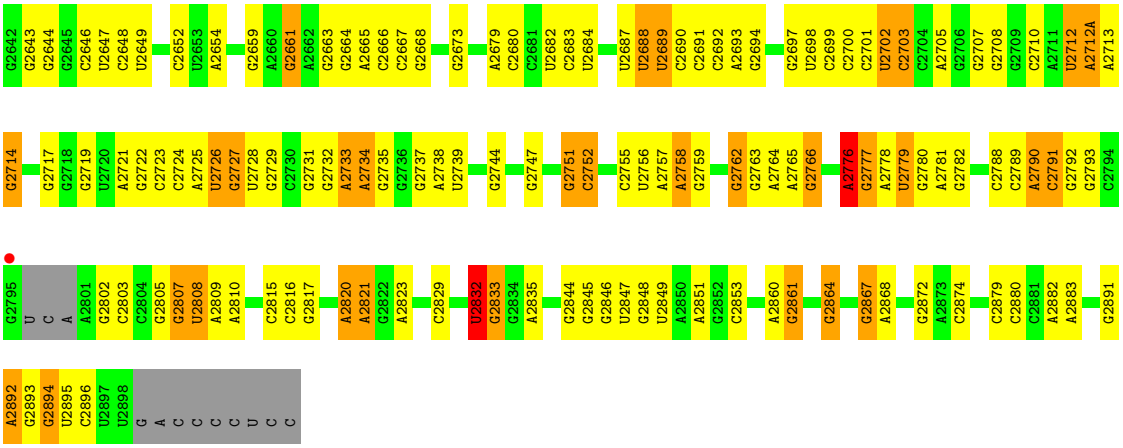
• Molecule 25: 23S ribosomal RNA

Chain 1H:



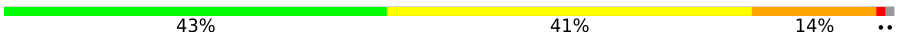


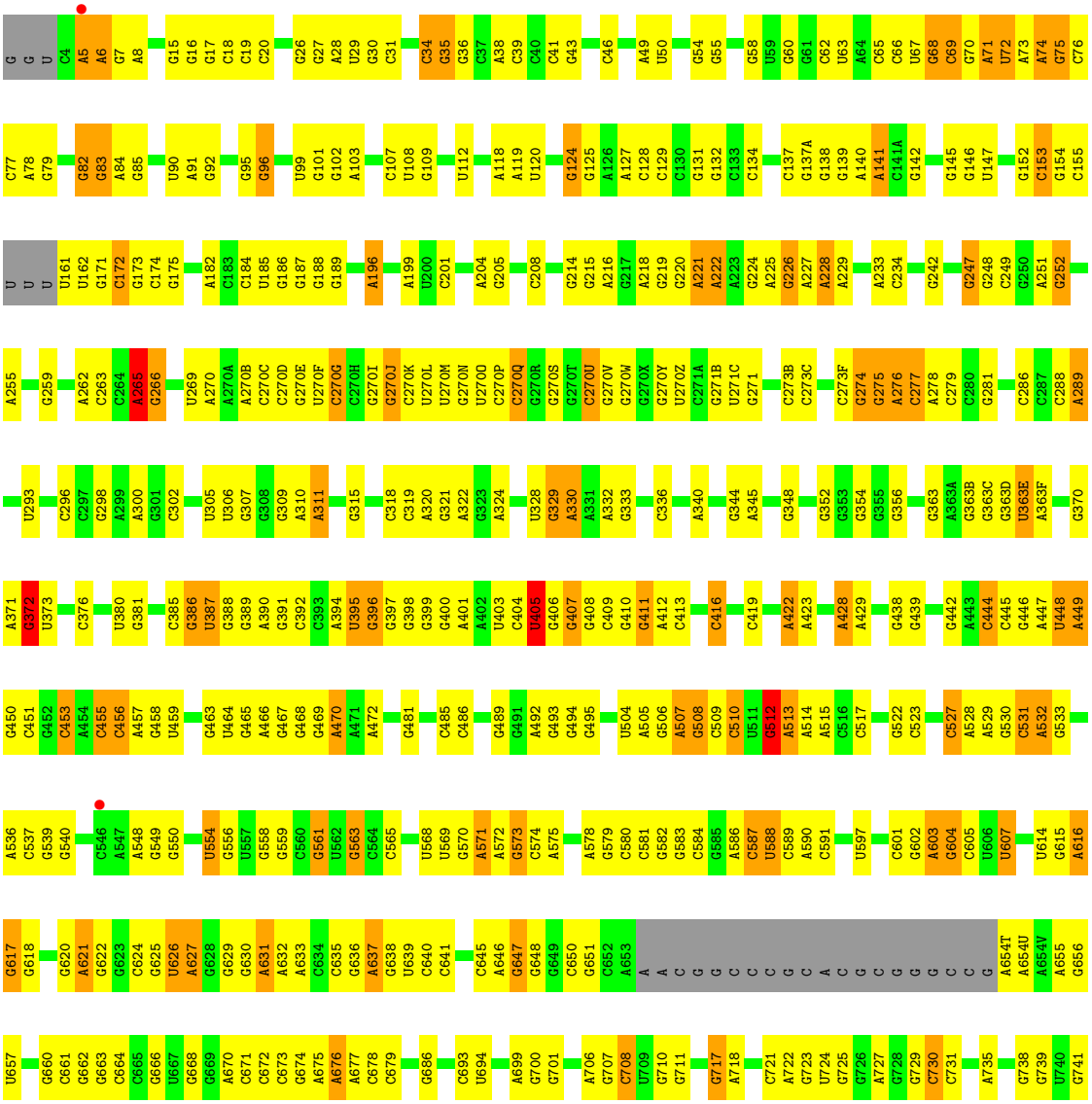


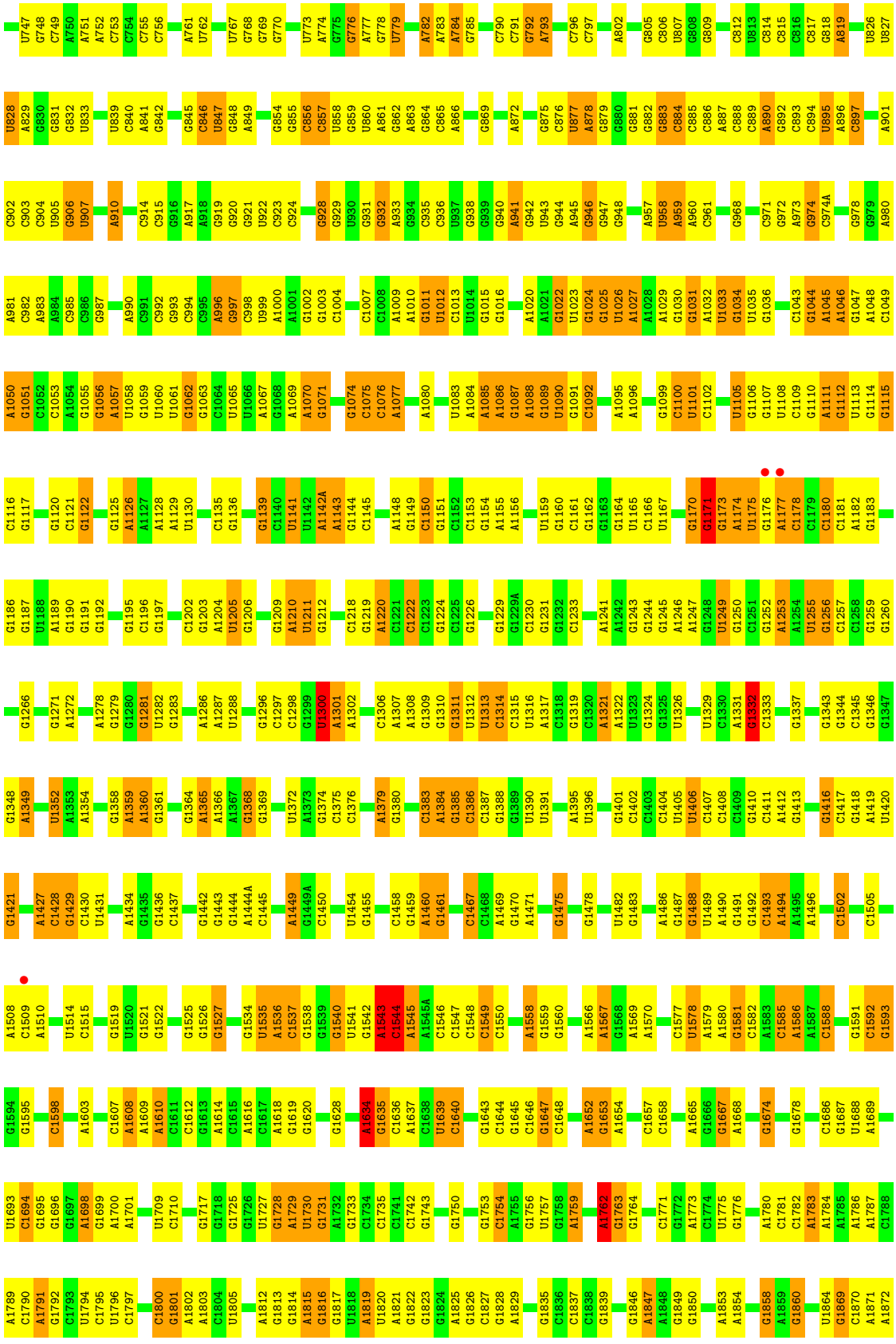


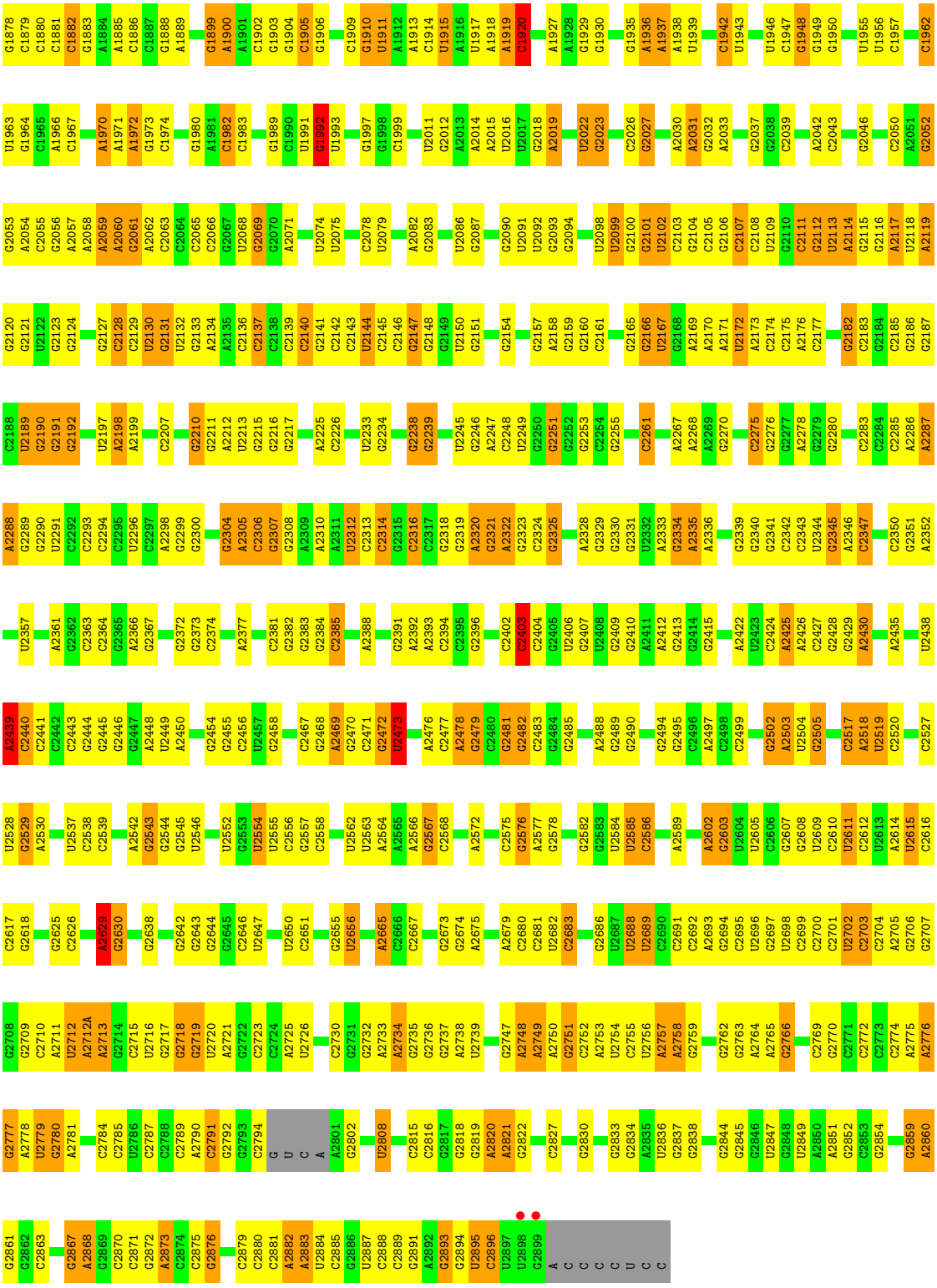
• Molecule 25: 23S ribosomal RNA

Chain 14:



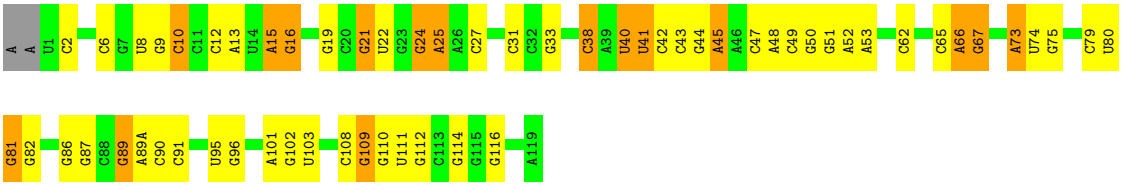


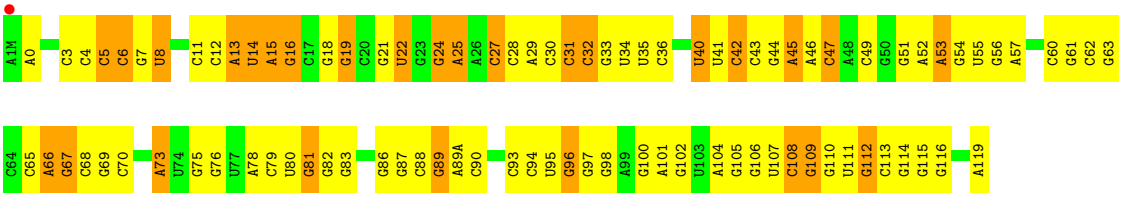




• Molecule 26: 5S ribosomal RNA

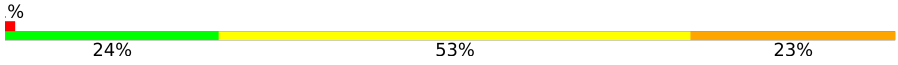
Chain 16: 49% 36% 13%





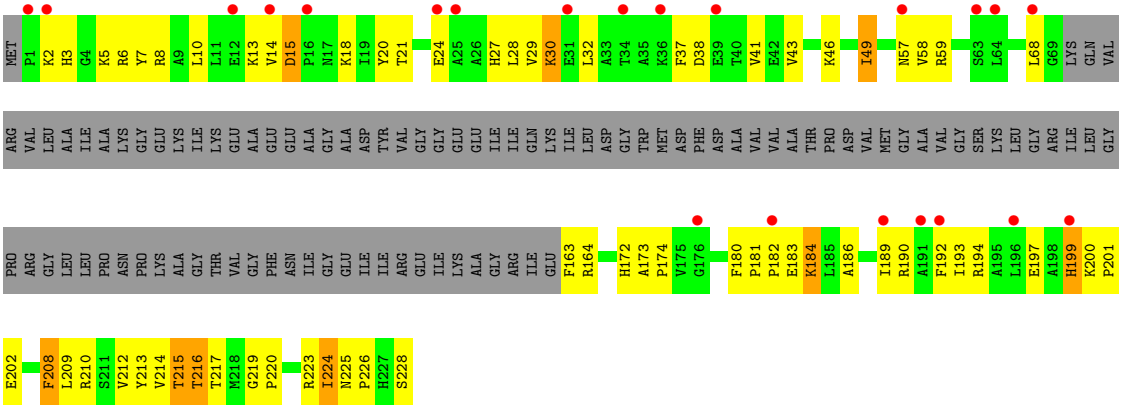
• Molecule 26: 5S ribosomal RNA

Chain 1J:



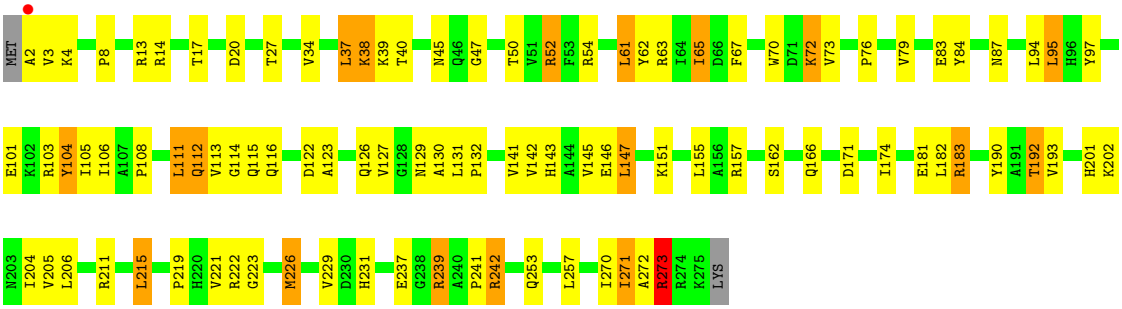
• Molecule 27: 50S ribosomal protein L1

Chain 71:



• Molecule 28: 50S ribosomal protein L2

Chain 11:

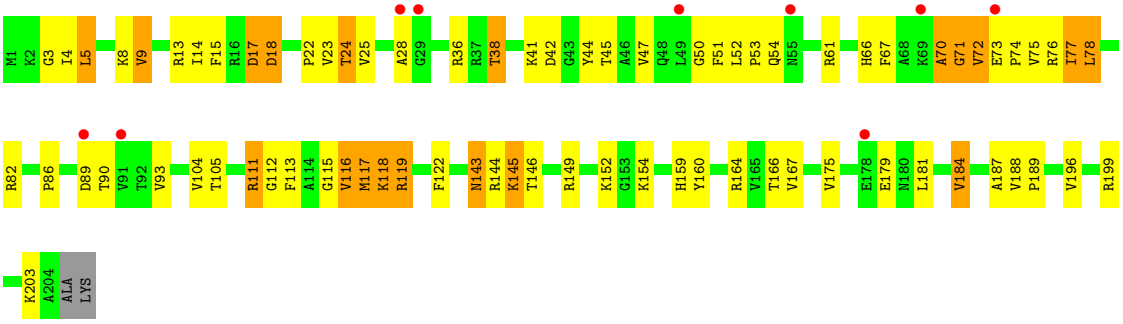


• Molecule 28: 50S ribosomal protein L2

Chain 19:

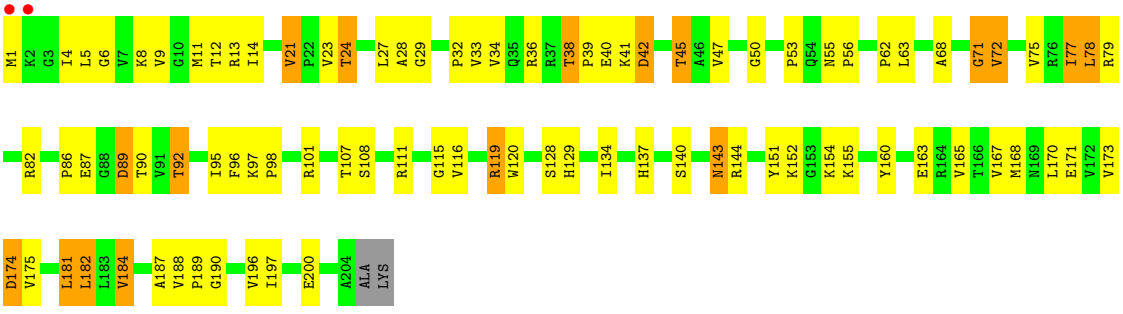
• Molecule 29: 50S ribosomal protein L3

Chain 21:



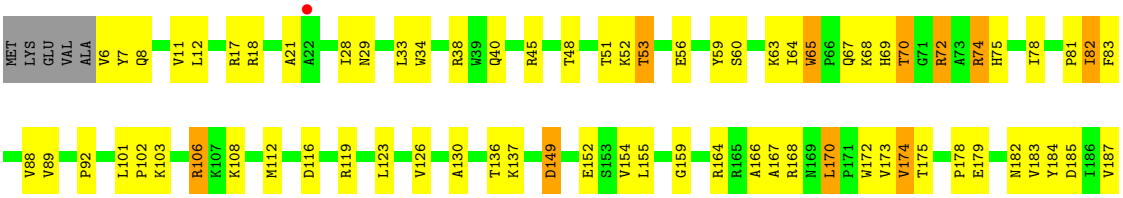
• Molecule 29: 50S ribosomal protein L3

Chain 29:



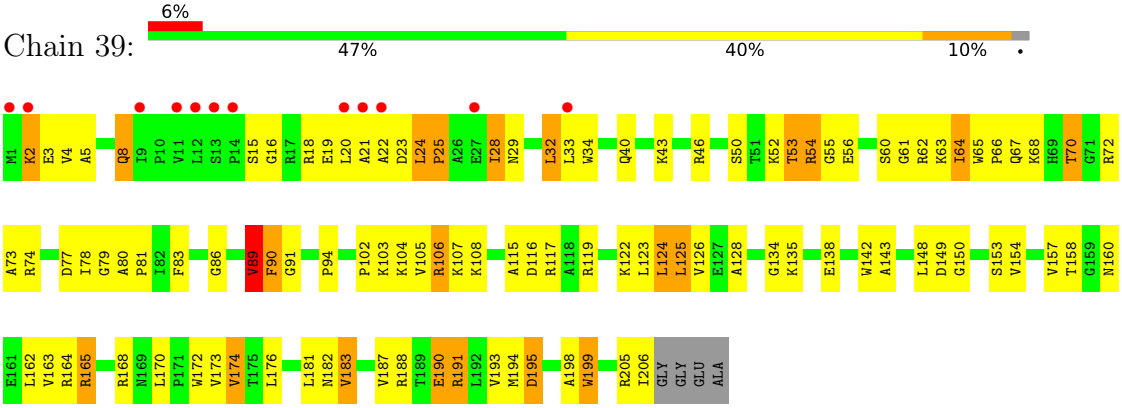
• Molecule 30: 50S ribosomal protein L4

Chain 31:



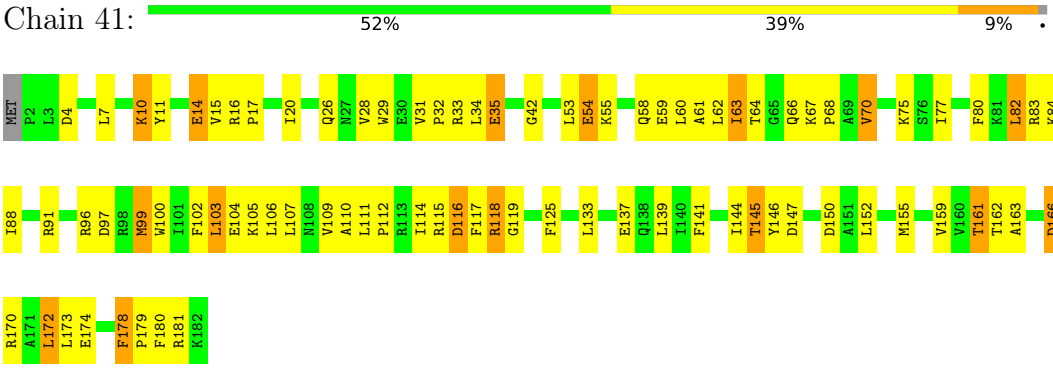
• Molecule 30: 50S ribosomal protein L4

Chain 39:



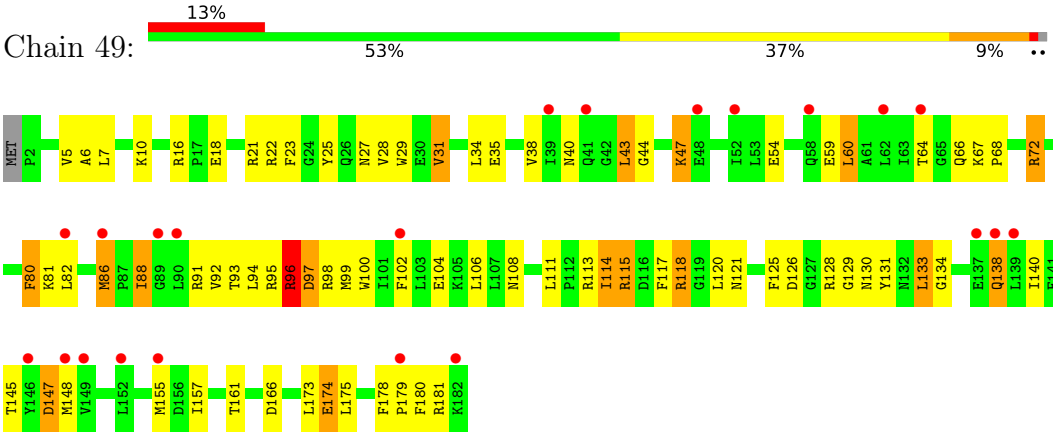
• Molecule 31: 50S ribosomal protein L5

Chain 41:



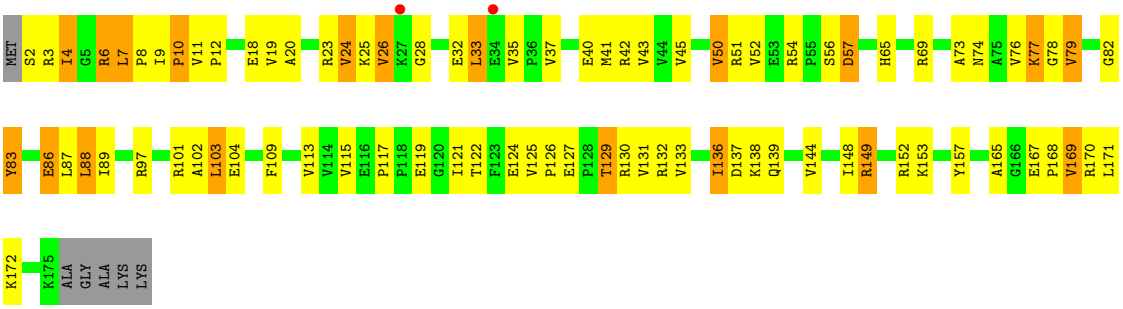
• Molecule 31: 50S ribosomal protein L5

Chain 49:

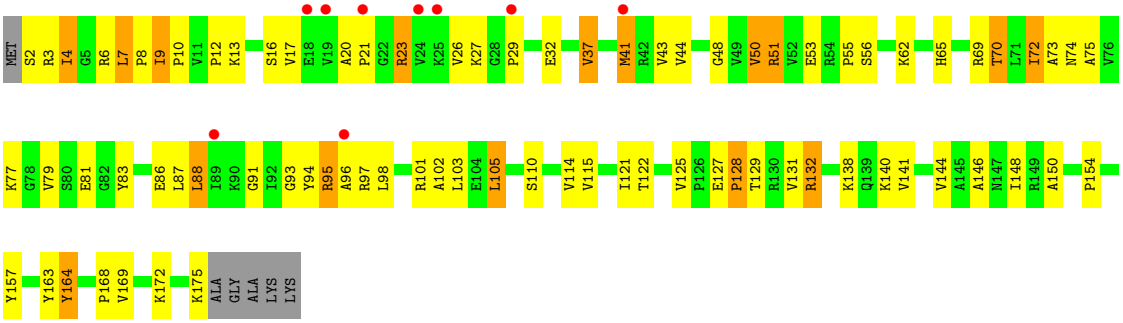


• Molecule 32: 50S ribosomal protein L6

Chain 51:

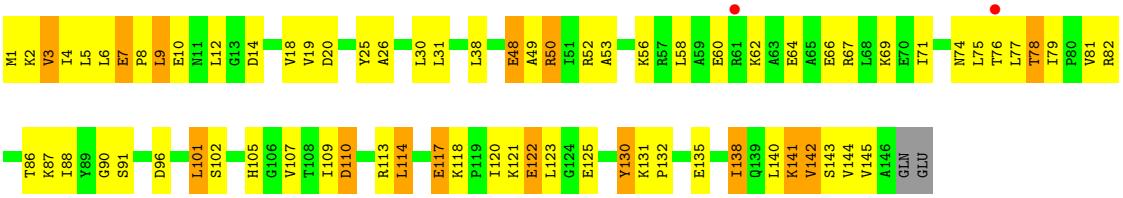


• Molecule 32: 50S ribosomal protein L6



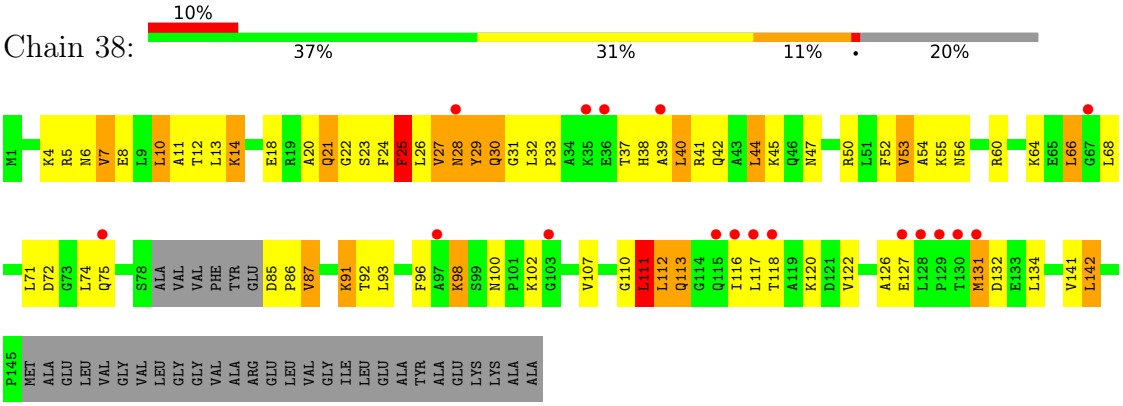
• Molecule 33: 50S ribosomal protein L9

• Molecule 33: 50S ribosomal protein L9



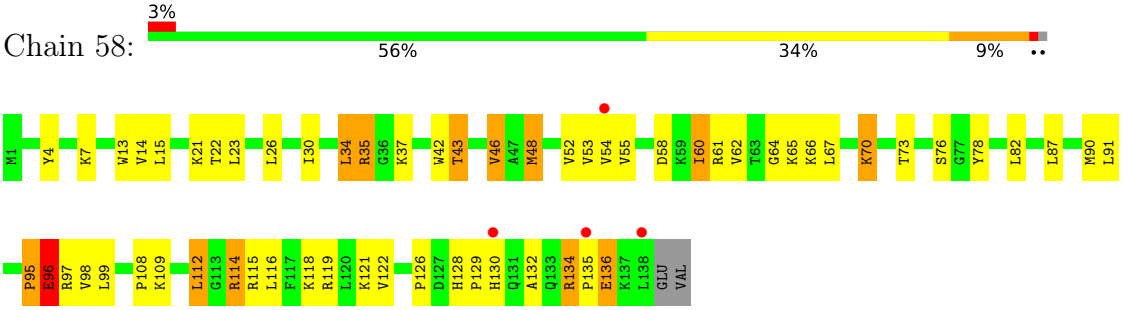
• Molecule 34: 50S ribosomal protein L10

Chain 38:



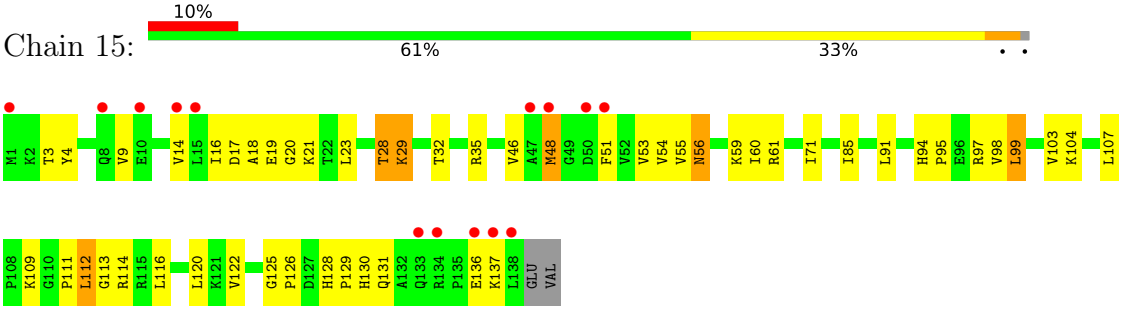
• Molecule 35: 50S ribosomal protein L13

Chain 58:



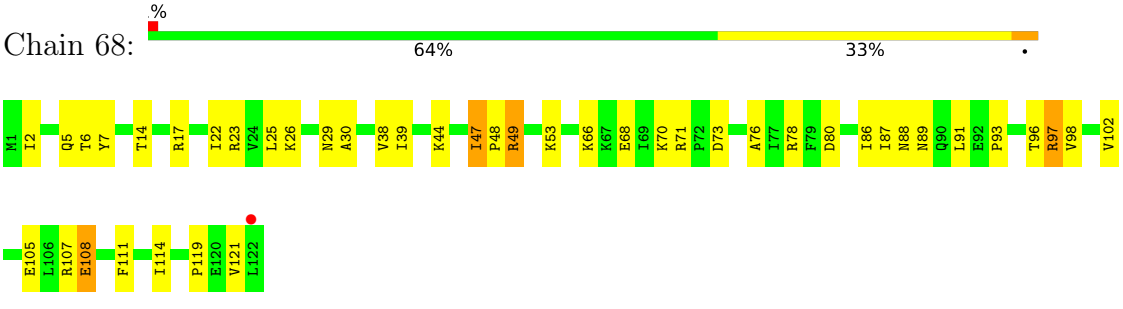
• Molecule 35: 50S ribosomal protein L13

Chain 15:



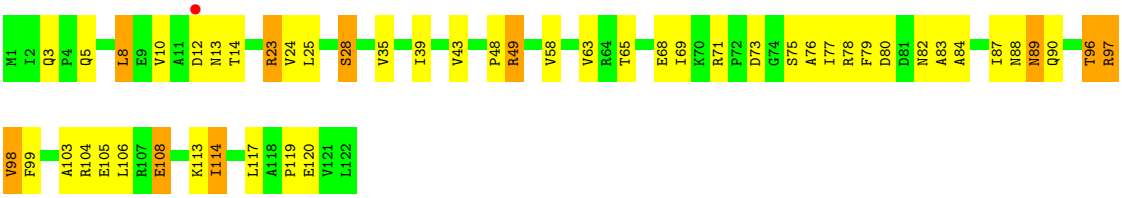
• Molecule 36: 50S ribosomal protein L14

Chain 68:



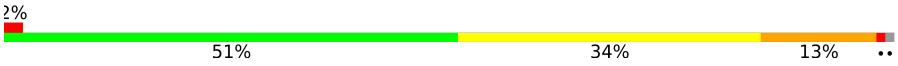
• Molecule 36: 50S ribosomal protein L14

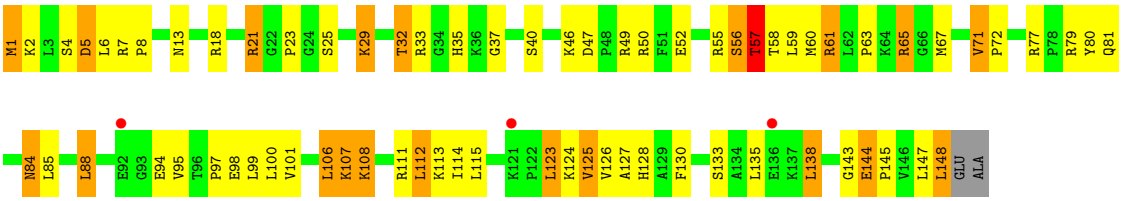
Chain 25:



• Molecule 37: 50S ribosomal protein L15

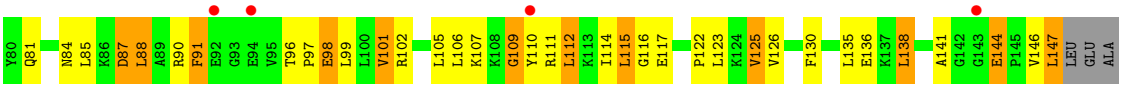
Chain 78:





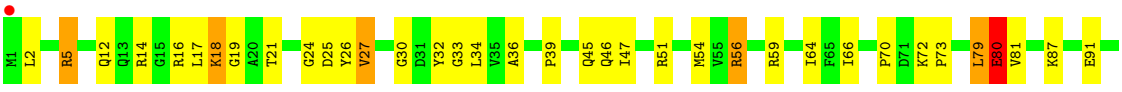
• Molecule 37: 50S ribosomal protein L15

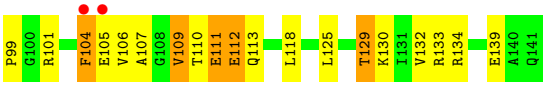
Chain 35:



• Molecule 38: 50S ribosomal protein L16

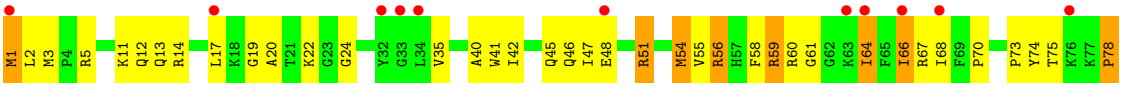
Chain 88:

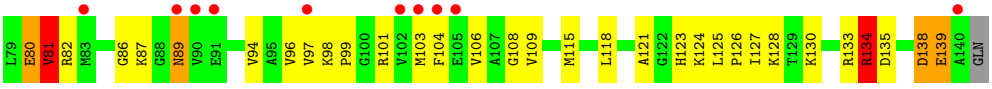




• Molecule 38: 50S ribosomal protein L16

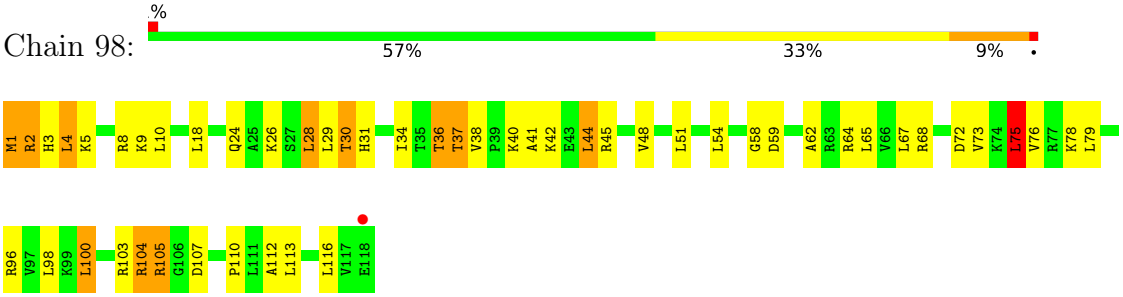
Chain 45:





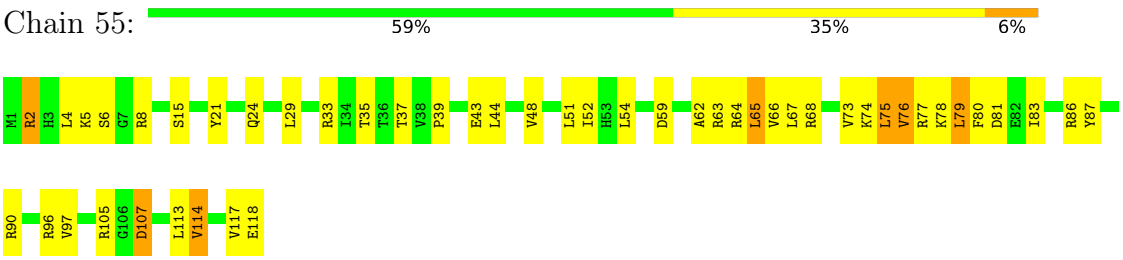
• Molecule 39: 50S ribosomal protein L17

Chain 98:



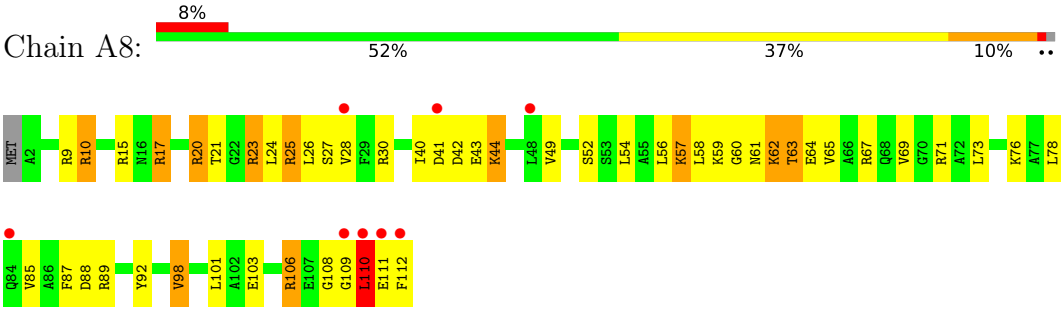
• Molecule 39: 50S ribosomal protein L17

Chain 55:



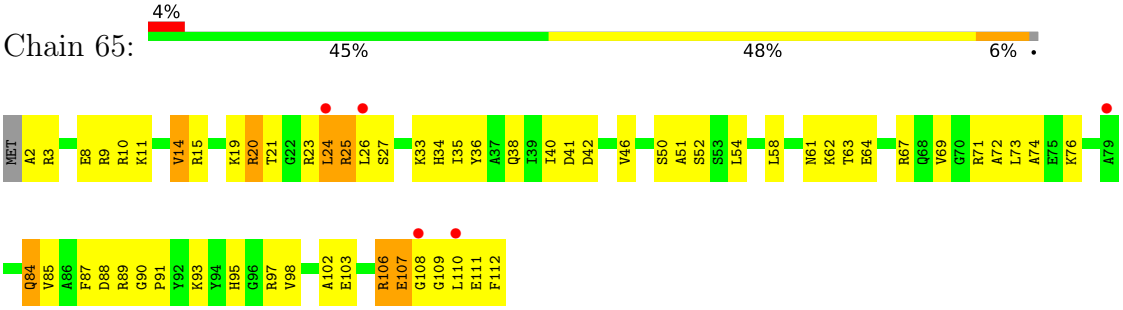
• Molecule 40: 50S ribosomal protein L18

Chain A8:



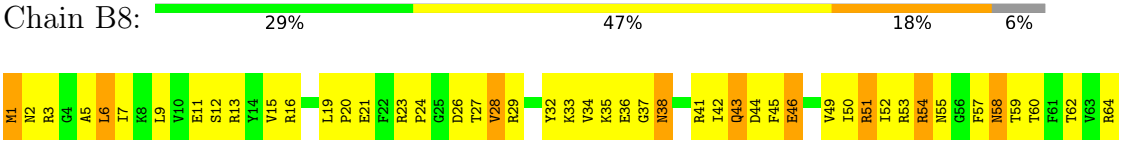
• Molecule 40: 50S ribosomal protein L18

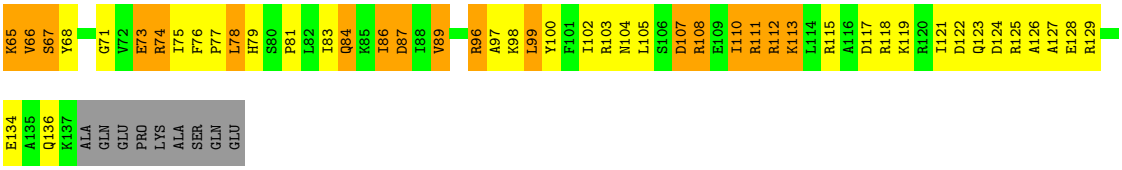
Chain 65:



• Molecule 41: 50S ribosomal protein L19

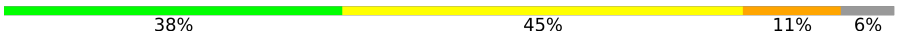
Chain B8:

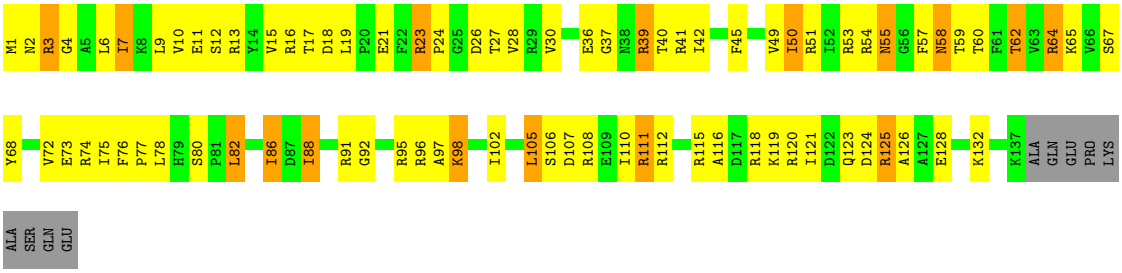




• Molecule 41: 50S ribosomal protein L19

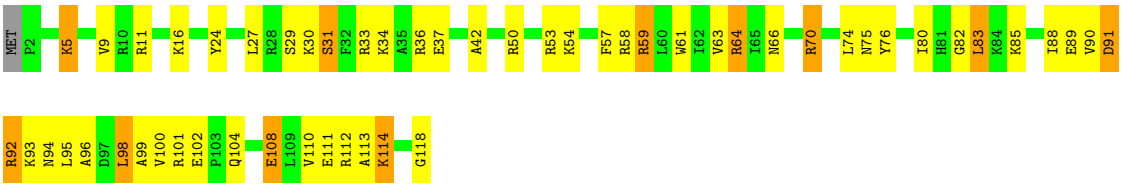
Chain 75:





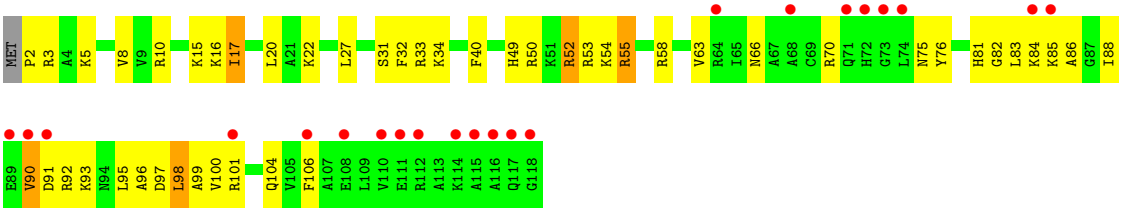
• Molecule 42: 50S ribosomal protein L20

Chain C8:



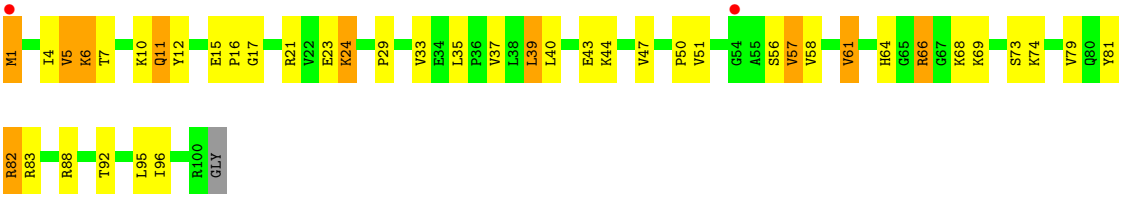
• Molecule 42: 50S ribosomal protein L20

Chain 85:



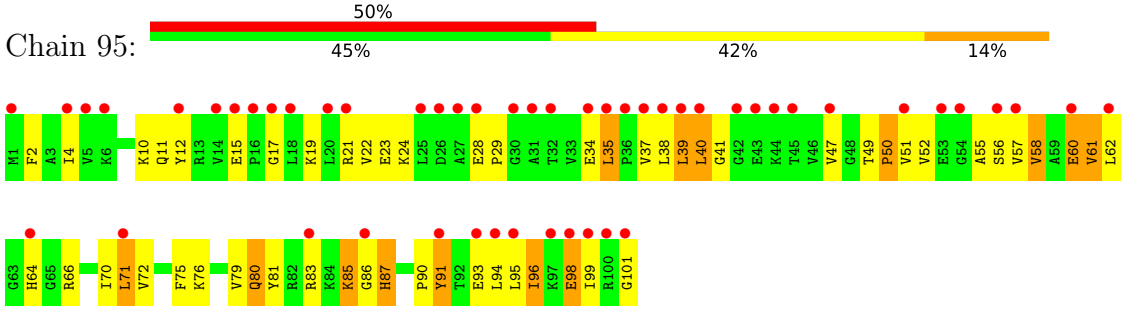
• Molecule 43: 50S ribosomal protein L21

Chain D8:



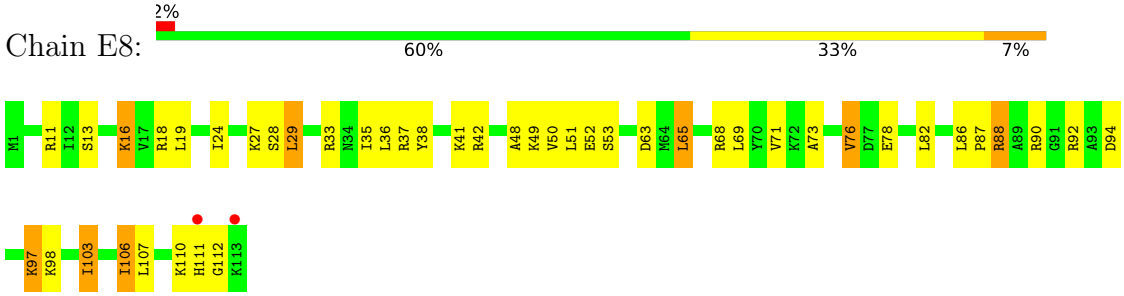
• Molecule 43: 50S ribosomal protein L21

Chain 95:



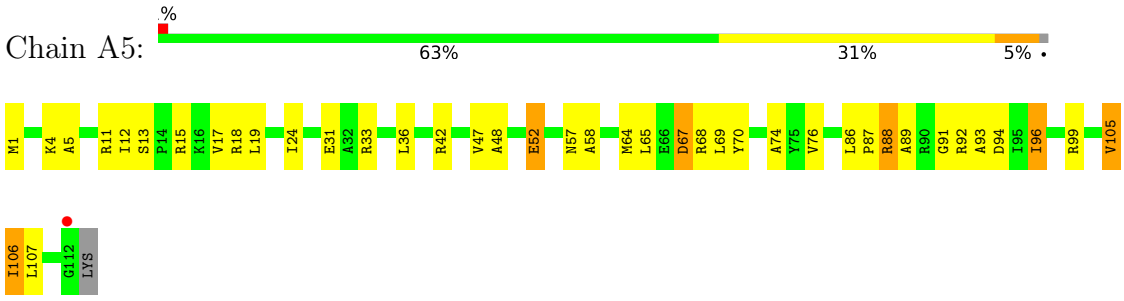
• Molecule 44: 50S ribosomal protein L22

Chain E8:



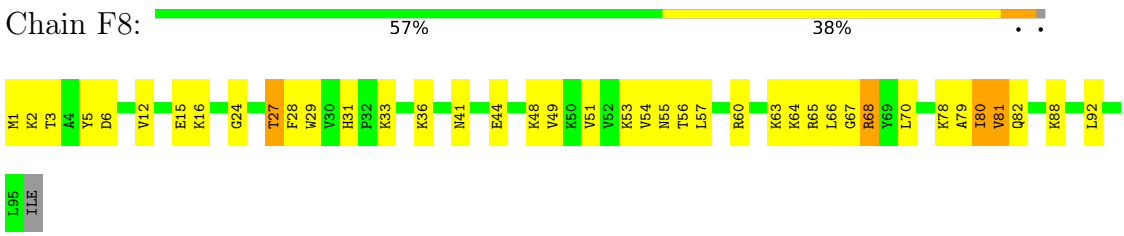
• Molecule 44: 50S ribosomal protein L22

Chain A5:



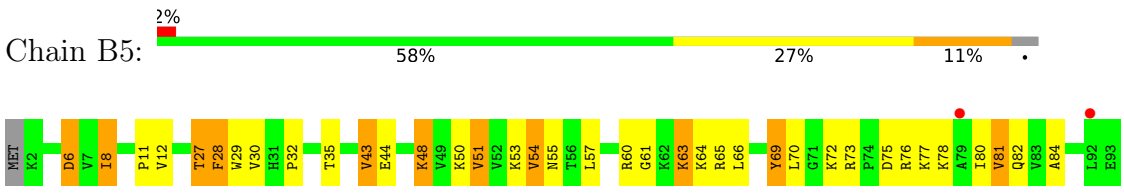
• Molecule 45: 50S ribosomal protein L23

Chain F8:



• Molecule 45: 50S ribosomal protein L23

Chain B5:

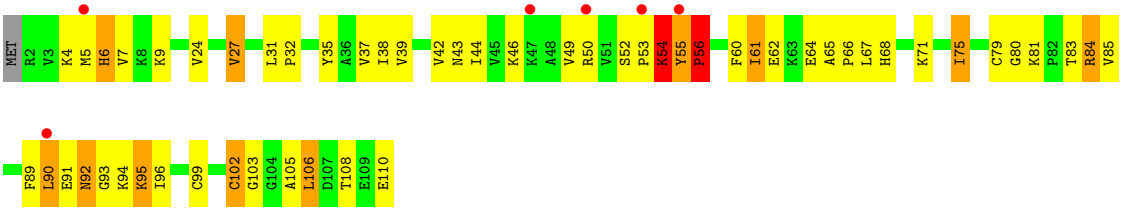


• Molecule 46: 50S ribosomal protein L24

Chain G8:

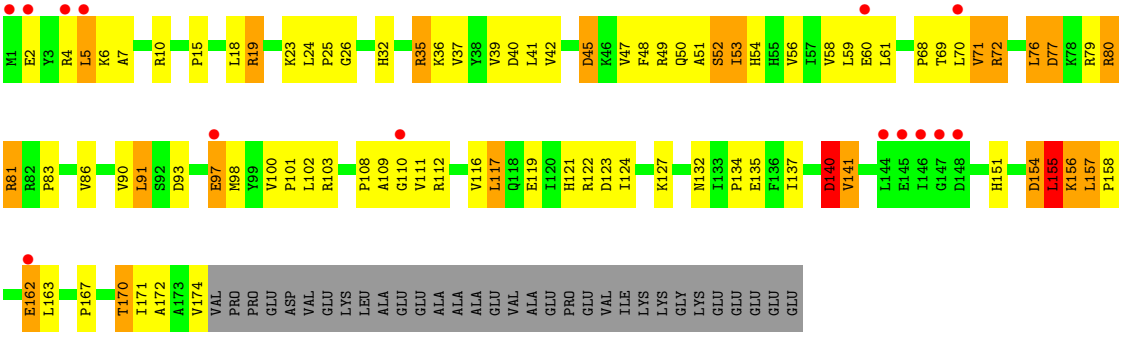
• Molecule 46: 50S ribosomal protein L24

Chain C5:



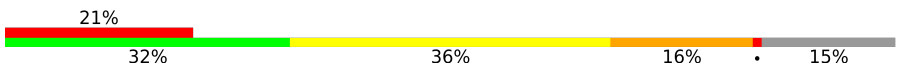
• Molecule 47: 50S ribosomal protein L25

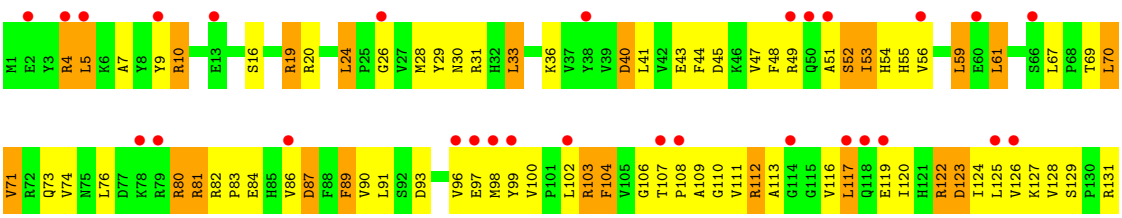
Chain H8:

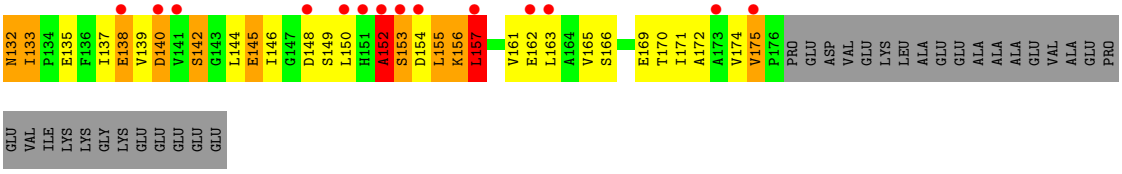


• Molecule 47: 50S ribosomal protein L25

Chain D5:

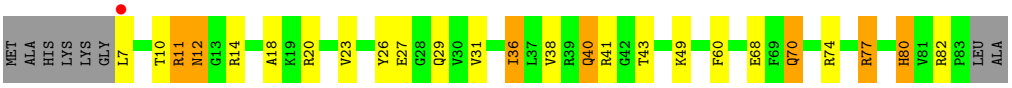






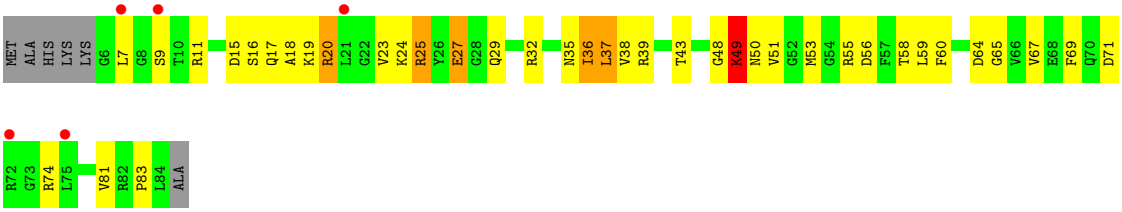
• Molecule 48: 50S ribosomal protein L27

Chain I8:



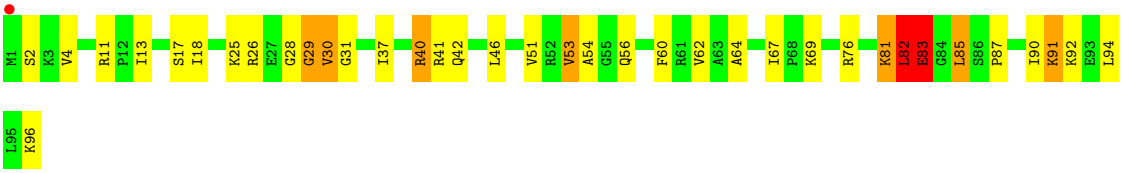
• Molecule 48: 50S ribosomal protein L27

Chain E5:



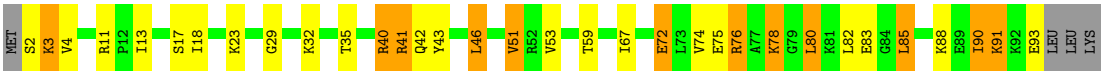
• Molecule 49: 50S ribosomal protein L28

Chain J8:



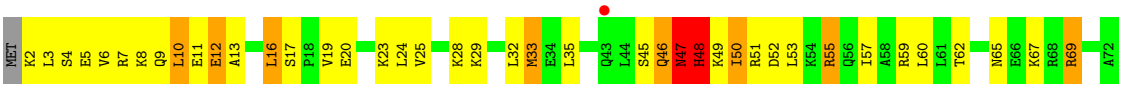
• Molecule 49: 50S ribosomal protein L28

Chain F5:



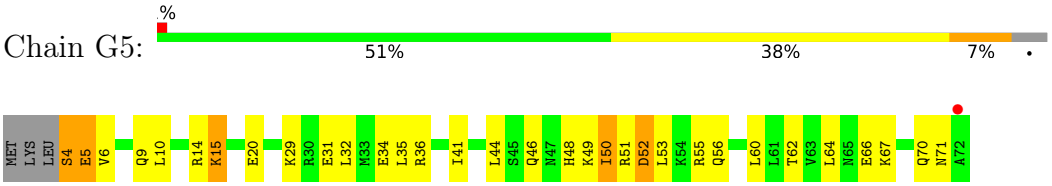
• Molecule 50: 50S ribosomal protein L29

Chain K8:



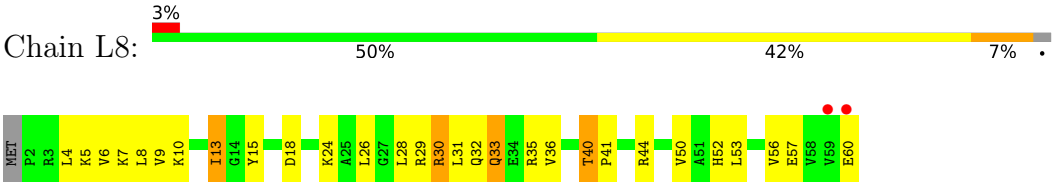
• Molecule 50: 50S ribosomal protein L29

Chain G5:



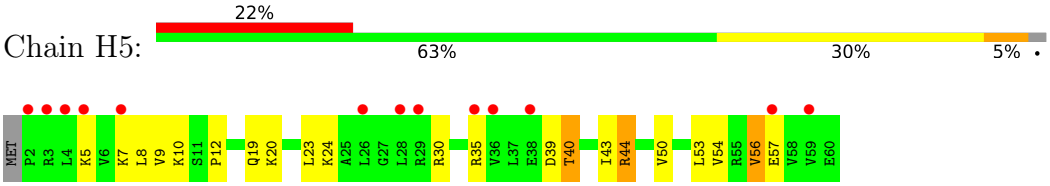
• Molecule 51: 50S ribosomal protein L30

Chain L8:



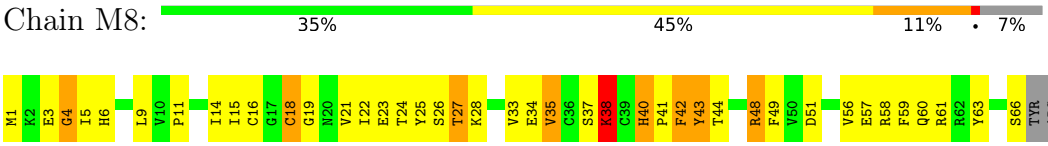
• Molecule 51: 50S ribosomal protein L30

Chain H5:



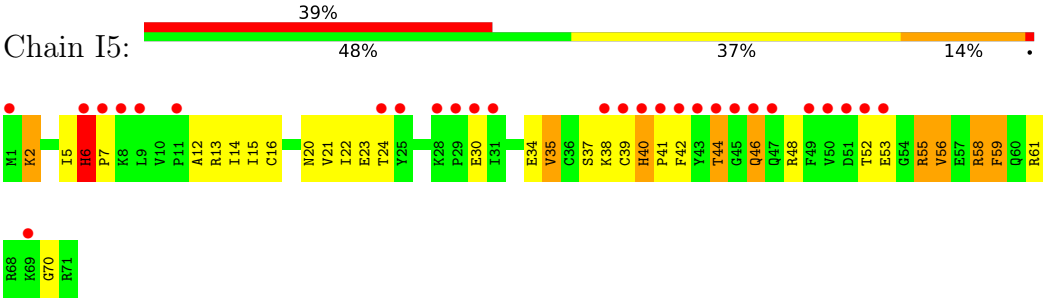
• Molecule 52: 50S ribosomal protein L31

Chain M8:



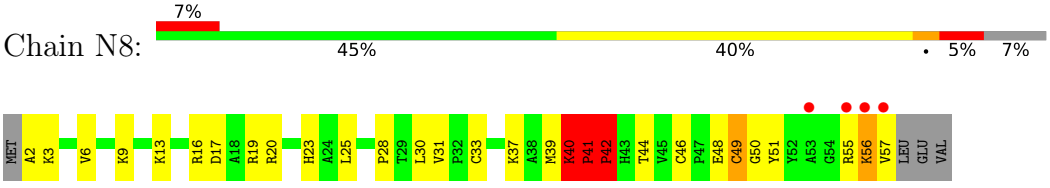
• Molecule 52: 50S ribosomal protein L31

Chain I5:



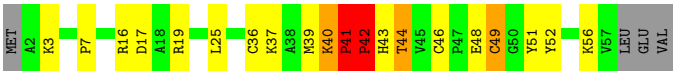
• Molecule 53: 50S ribosomal protein L32

Chain N8:



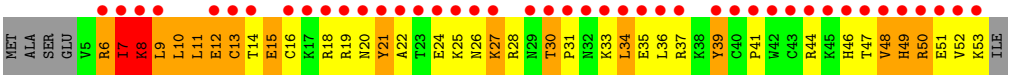
• Molecule 53: 50S ribosomal protein L32

Chain J5:



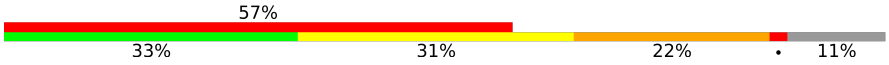
• Molecule 54: 50S ribosomal protein L33

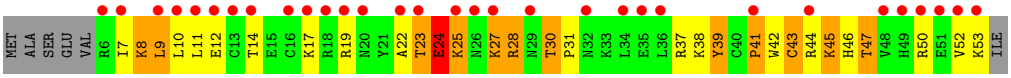
Chain O8:



• Molecule 54: 50S ribosomal protein L33

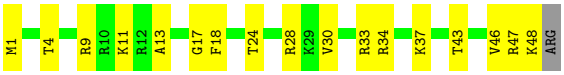
Chain K5:





• Molecule 55: 50S ribosomal protein L34

Chain P8:

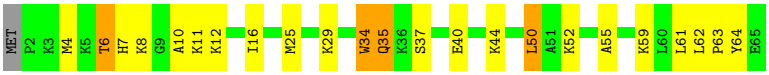


• Molecule 55: 50S ribosomal protein L34

Chain L5:

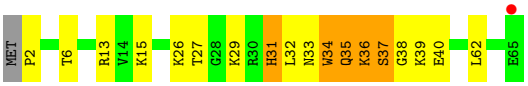
• Molecule 56: 50S ribosomal protein L35

Chain Q8:



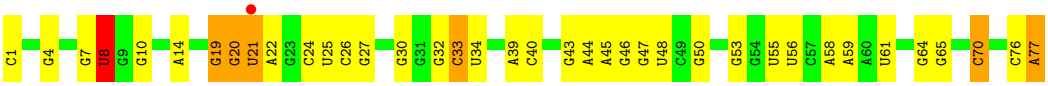
• Molecule 56: 50S ribosomal protein L35

Chain M5:



• Molecule 57: E. coli tRNAfMet

Chain 2L:


C1
G4
G7
U8
G9
G10
A14
G19
G20
U21
A22
G23
C24
U25
C26
G27
G30
G31
G32
C33
U34
A39
C40
G43
A44
A45
G46
G47
U48
C49
G50
G53
G54
U55
U56
C57
A58
A59
A60
U61
G64
G65
C70
C76
A77

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.46Å 452.18Å 626.12Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	226.09 – 3.50 226.09 – 3.00	Depositor EDS
% Data completeness (in resolution range)	100.0 (226.09-3.50) 100.0 (226.09-3.00)	Depositor EDS
R_{merge}	0.28	Depositor
R_{sym}	0.18	Depositor
$< I/\sigma(I) >$ [1]	1.34 (at 3.01Å)	Xtriage
Refinement program	PHENIX 1.13_2998	Depositor
R, R_{free}	0.187 , 0.251 0.196 , 0.254	Depositor DCC
R_{free} test set	22133 reflections (1.88%)	wwPDB-VP
Wilson B-factor (Å^2)	71.7	Xtriage
Anisotropy	0.113	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.23 , 62.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.40$, $< L^2 > = 0.22$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	300507	wwPDB-VP
Average B, all atoms (Å^2)	96.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.33% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 7MG, 2MA, 0TD, H2U, PSU, OMU, MA6, 5MC, K, 4OC, 5MU, OMC, SF4, OMG, ZN, M2G, UR3, MG, 2MG, 4SU

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	0.28	0/35952	0.86	45/56107 (0.1%)
1	1G	0.27	0/36044	0.85	42/56250 (0.1%)
2	12	0.26	0/1950	0.50	0/2630
2	1E	0.27	0/1959	0.47	0/2642
3	22	0.26	0/1636	0.50	0/2205
3	2E	0.27	0/1629	0.47	0/2195
4	32	0.27	0/1732	0.46	0/2318
4	3E	0.28	0/1732	0.46	0/2318
5	42	0.29	0/1195	0.49	0/1609
5	4E	0.26	0/1171	0.46	0/1576
6	52	0.27	0/855	0.47	0/1154
6	5E	0.26	0/855	0.46	0/1154
7	62	0.26	0/1235	0.42	0/1654
7	6E	0.25	0/1275	0.43	0/1709
8	72	0.26	0/1135	0.45	0/1527
8	7E	0.26	0/1135	0.47	0/1527
9	82	0.29	0/1021	0.59	0/1371
9	8E	0.27	0/1002	0.48	0/1346
10	1A	0.26	0/814	0.53	0/1095
10	1I	0.25	0/814	0.48	0/1095
11	2A	0.27	0/904	0.49	0/1219
11	2I	0.27	0/879	0.47	0/1188
12	3A	0.27	0/982	0.53	0/1313
12	3I	0.27	0/982	0.56	0/1313
13	4A	0.25	0/947	0.57	1/1270 (0.1%)
13	4I	0.27	0/956	0.52	0/1281
14	5A	0.26	0/494	0.50	0/657
14	5I	0.29	0/500	0.55	0/664
15	6A	0.24	0/744	0.39	0/992
15	6I	0.25	0/744	0.41	0/992
16	7A	0.27	0/721	0.49	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
16	7I	0.27	0/716	0.48	0/963
17	8A	0.27	0/832	0.45	0/1113
17	8I	0.26	0/847	0.47	0/1131
18	9A	0.27	0/589	0.50	0/782
18	9I	0.27	0/578	0.48	0/768
19	AA	0.26	0/679	0.54	0/913
19	AI	0.27	0/703	0.62	0/945
20	BA	0.25	0/778	0.50	1/1028 (0.1%)
20	BI	0.27	0/768	0.55	1/1014 (0.1%)
21	1B	0.26	0/221	0.47	0/288
21	1F	0.24	0/221	0.45	0/288
22	1K	0.23	0/1547	0.85	1/2411 (0.0%)
22	3K	0.21	0/1832	0.79	0/2855
22	3L	0.23	0/1832	0.86	3/2855 (0.1%)
23	2K	0.27	0/1696	0.82	1/2644 (0.0%)
24	4K	0.26	0/421	0.81	0/655
24	4L	0.23	0/523	0.76	0/815
25	14	0.32	0/69194	0.88	63/108015 (0.1%)
25	1H	0.36	0/69191	0.90	76/108008 (0.1%)
26	16	0.29	0/2878	0.84	0/4490
26	1J	0.25	0/2928	0.83	0/4568
27	71	0.26	0/1072	0.50	0/1447
28	11	0.31	0/2175	0.57	1/2933 (0.0%)
28	19	0.30	0/2173	0.52	0/2928
29	21	0.30	0/1592	0.50	0/2149
29	29	0.28	0/1592	0.53	0/2149
30	31	0.31	0/1620	0.51	0/2194
30	39	0.29	0/1654	0.54	0/2239
31	41	0.27	0/1498	0.51	0/2016
31	49	0.26	0/1498	0.51	0/2016
32	51	0.28	0/1362	0.55	0/1841
32	59	0.27	0/1362	0.49	0/1841
33	61	0.28	0/1151	0.64	0/1558
33	69	0.28	0/1151	0.55	0/1558
34	38	0.28	0/1069	0.65	1/1444 (0.1%)
35	15	0.26	0/1131	0.50	0/1525
35	58	0.30	0/1131	0.53	0/1525
36	25	0.30	0/942	0.55	0/1269
36	68	0.30	0/942	0.53	0/1269
37	35	0.31	0/1139	0.67	0/1514
37	78	0.32	0/1147	0.65	0/1525
38	45	0.29	0/1133	0.54	0/1515
38	88	0.31	0/1142	0.56	0/1527

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	55	0.27	0/981	0.52	0/1312
39	98	0.27	0/981	0.53	1/1312 (0.1%)
40	65	0.28	0/891	0.57	0/1187
40	A8	0.29	0/891	0.63	1/1187 (0.1%)
41	75	0.49	0/1155	0.68	0/1542
41	B8	0.52	0/1155	0.67	0/1542
42	85	0.29	0/981	0.49	0/1306
42	C8	0.29	0/981	0.48	0/1306
43	95	0.29	0/789	0.56	0/1057
43	D8	0.29	0/785	0.55	0/1052
44	A5	0.28	0/901	0.51	0/1209
44	E8	0.30	0/910	0.52	0/1220
45	B5	0.30	0/744	0.52	0/1000
45	F8	0.32	0/761	0.53	0/1021
46	C5	0.33	0/838	0.61	0/1121
46	G8	0.30	0/818	0.58	0/1094
47	D5	0.30	0/1435	0.62	2/1947 (0.1%)
47	H8	0.28	0/1420	0.58	0/1925
48	E5	0.28	0/631	0.53	0/841
48	I8	0.29	0/619	0.50	0/825
49	F5	0.29	0/728	0.56	0/967
49	J8	0.35	0/761	0.58	0/1010
50	G5	0.27	0/582	0.47	0/771
50	K8	0.27	0/592	0.54	0/784
51	H5	0.25	0/473	0.49	0/635
51	L8	0.27	0/473	0.49	0/635
52	I5	0.29	0/593	0.63	0/795
52	M8	0.28	0/545	0.61	0/733
53	J5	0.28	0/448	0.50	0/606
53	N8	0.31	0/448	0.52	0/606
54	K5	0.29	0/424	0.82	2/565 (0.4%)
54	O8	0.32	0/431	0.65	0/575
55	L5	0.28	0/426	0.44	0/561
55	P8	0.30	0/426	0.47	0/561
56	M5	0.27	0/514	0.50	0/679
56	Q8	0.28	0/514	0.48	0/679
57	2L	0.24	0/1718	0.78	0/2678
All	All	0.31	0/321407	0.80	242/480718 (0.1%)

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	12	0	4
4	32	0	1
7	6E	0	1
12	3A	0	1
12	3I	0	2
13	4A	0	4
19	AA	0	1
19	AI	0	3
20	BA	0	1
20	BI	0	1
28	11	0	1
29	21	0	2
29	29	0	1
31	41	0	1
31	49	0	1
32	51	0	2
33	61	0	4
33	69	0	1
34	38	0	4
37	35	0	3
37	78	0	3
38	45	0	3
38	88	0	1
41	B8	0	1
42	85	0	1
43	95	0	1
45	B5	0	1
46	G8	0	2
47	D5	0	6
47	H8	0	4
48	E5	0	1
49	J8	0	2
50	K8	0	1
52	I5	0	1
52	M8	0	4
53	J5	0	2
53	N8	0	3
54	K5	0	4
54	O8	0	1
All	All	0	81

There are no bond length outliers.

All (242) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2403	C	C2-N3-C4	16.20	128.00	119.90
25	14	247	G	C2-N3-C4	16.16	119.98	111.90
25	14	2403	C	N1-C2-N3	10.27	126.39	119.20
1	13	1054	C	N1-C2-O2	9.19	124.42	118.90
1	1G	1322	C	N1-C2-O2	9.15	124.39	118.90
1	1G	328	C	N1-C2-O2	8.83	124.20	118.90
1	1G	1158	C	C2-N1-C1'	8.40	128.04	118.80
1	13	1302	U	C2-N1-C1'	8.25	127.60	117.70
1	1G	960	U	C2-N1-C1'	8.17	127.51	117.70
1	13	1054	C	C2-N1-C1'	8.11	127.72	118.80
1	13	1301	U	C2-N1-C1'	8.08	127.39	117.70
25	1H	271(C)	U	C2-N1-C1'	7.96	127.25	117.70
1	1G	1301	U	C2-N1-C1'	7.92	127.20	117.70
25	14	2403	C	C6-N1-C2	7.87	123.45	120.30
25	1H	945	A	C5-C6-N1	7.87	121.63	117.70
54	K5	30	THR	C-N-CD	-7.70	103.66	120.60
1	1G	1322	C	C2-N1-C1'	7.67	127.23	118.80
1	1G	1322	C	N3-C2-O2	-7.59	116.59	121.90
1	1G	1301	U	N1-C2-O2	7.56	128.09	122.80
25	1H	271(C)	U	N1-C2-O2	7.52	128.06	122.80
40	A8	110	LEU	CA-CB-CG	7.47	132.48	115.30
25	1H	265	A	O4'-C1'-N9	7.36	114.09	108.20
1	13	690	G	O4'-C1'-N9	7.29	114.03	108.20
25	14	1899	G	C4-N9-C1'	-7.28	117.04	126.50
1	1G	328	C	C2-N1-C1'	7.13	126.64	118.80
1	1G	1301	U	N3-C2-O2	-7.10	117.23	122.20
25	14	247	G	N1-C2-N3	7.08	128.15	123.90
1	1G	328	C	N3-C2-O2	-7.08	116.95	121.90
25	14	405	U	C2-N1-C1'	7.07	126.19	117.70
1	13	1054	C	N3-C2-O2	-7.07	116.95	121.90
25	14	405	U	N1-C2-O2	7.03	127.72	122.80
25	1H	774	A	C2-N3-C4	-7.03	107.08	110.60
25	1H	945	A	C5-C6-N6	-7.02	118.08	123.70
1	1G	1158	C	N1-C2-O2	6.98	123.09	118.90
1	1G	1158	C	C6-N1-C2	-6.95	117.52	120.30
1	1G	1004	A	P-O3'-C3'	6.91	127.99	119.70
25	1H	1266	G	P-O3'-C3'	6.90	127.98	119.70
25	14	1899	G	C8-N9-C1'	6.89	135.95	127.00
47	D5	157	LEU	CA-CB-CG	6.86	131.09	115.30
1	13	690	G	C4-N9-C1'	6.84	135.40	126.50
25	1H	828	U	N1-C2-O2	6.80	127.56	122.80
25	14	1899	G	N3-C4-N9	-6.80	121.92	126.00
1	13	1302	U	N1-C2-O2	6.73	127.51	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	190	G	C4-N9-C1'	6.73	135.25	126.50
25	14	1694	C	P-O3'-C3'	6.70	127.74	119.70
25	14	2312	U	C2-N1-C1'	6.67	125.71	117.70
1	13	328	C	C2-N1-C1'	6.63	126.09	118.80
1	13	686	U	OP1-P-O3'	6.59	119.70	105.20
1	13	1158	C	C2-N1-C1'	6.56	126.01	118.80
25	14	1332	G	C6-C5-N7	-6.55	126.47	130.40
25	1H	1301	A	P-O3'-C3'	6.54	127.55	119.70
25	14	405	U	N3-C2-O2	-6.52	117.63	122.20
25	14	1396	U	C2-N1-C1'	6.50	125.50	117.70
1	13	753	A	P-O3'-C3'	6.46	127.46	119.70
25	14	1300	U	P-O3'-C3'	6.46	127.46	119.70
1	1G	960	U	N1-C2-O2	6.37	127.26	122.80
1	13	1158	C	N1-C2-O2	6.35	122.71	118.90
25	1H	271(C)	U	N3-C2-O2	-6.33	117.77	122.20
25	14	1544	C	C2-N1-C1'	6.29	125.72	118.80
1	13	190	G	C8-N9-C1'	-6.28	118.84	127.00
25	1H	275	G	OP1-P-O3'	6.25	118.94	105.20
25	14	603	A	O4'-C1'-N9	6.23	113.18	108.20
25	1H	1786	A	N7-C8-N9	6.21	116.91	113.80
1	1G	1158	C	N3-C2-O2	-6.21	117.56	121.90
25	1H	828	U	N3-C2-O2	-6.17	117.88	122.20
25	14	1992	G	P-O3'-C3'	6.16	127.09	119.70
25	1H	2318	G	O4'-C1'-N9	6.15	113.12	108.20
25	1H	1950	G	C4-N9-C1'	6.14	134.49	126.50
25	14	141	A	O4'-C1'-N9	6.13	113.10	108.20
1	1G	812	C	P-O3'-C3'	6.12	127.05	119.70
25	1H	761	A	N1-C6-N6	6.08	122.25	118.60
25	1H	1950	G	O4'-C1'-N9	6.06	113.05	108.20
25	14	2688	U	N3-C2-O2	-6.06	117.96	122.20
25	1H	945	A	C2-N3-C4	6.05	113.62	110.60
25	14	2403	C	N1-C2-O2	-6.04	115.28	118.90
25	14	2473	U	C2-N1-C1'	6.03	124.93	117.70
25	1H	1396	U	C2-N1-C1'	6.01	124.92	117.70
22	1K	61	U	O4'-C1'-N1	6.01	113.01	108.20
1	1G	960	U	C6-N1-C1'	-6.01	112.79	121.20
1	13	1301	U	N1-C2-O2	6.00	127.00	122.80
25	1H	1252	G	C4-N9-C1'	-6.00	118.70	126.50
1	13	1301	U	C6-N1-C1'	-5.97	112.84	121.20
1	1G	1004	A	OP2-P-O3'	5.97	118.34	105.20
25	1H	1544	C	N1-C2-O2	5.97	122.48	118.90
20	BA	6	PRO	N-CA-CB	5.97	110.46	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	4A	70	LEU	CA-CB-CG	5.95	128.98	115.30
22	3L	49	C	N1-C2-O2	5.92	122.45	118.90
25	1H	2439	A	P-O3'-C3'	5.91	126.79	119.70
25	1H	761	A	N9-C4-C5	-5.88	103.45	105.80
25	14	247	G	N3-C4-C5	5.87	131.54	128.60
25	1H	1992	G	P-O3'-C3'	5.87	126.74	119.70
1	1G	717	C	C2-N1-C1'	5.87	125.25	118.80
25	1H	2779	U	C2-N1-C1'	5.86	124.73	117.70
25	1H	1931	U	N3-C2-O2	-5.85	118.11	122.20
25	14	1332	G	C4-N9-C1'	5.83	134.08	126.50
20	BI	6	PRO	N-CA-CB	5.83	110.29	103.30
25	14	2439	A	P-O3'-C3'	5.82	126.68	119.70
25	1H	828	U	C2-N1-C1'	5.81	124.68	117.70
1	1G	1031	G	C4-N9-C1'	5.81	134.05	126.50
25	14	2873	A	N7-C8-N9	5.80	116.70	113.80
25	1H	774	A	N1-C2-N3	5.78	132.19	129.30
25	1H	898	C	N1-C2-O2	5.78	122.36	118.90
54	K5	30	THR	C-N-CA	5.77	146.22	122.00
25	14	1950	G	O4'-C1'-N9	5.75	112.80	108.20
1	1G	1038	C	P-O3'-C3'	5.75	126.59	119.70
1	13	449	C	C2-N1-C1'	5.74	125.11	118.80
25	14	1781	C	C2-N1-C1'	5.73	125.10	118.80
1	13	701	C	OP2-P-O3'	5.73	117.80	105.20
1	13	1054	C	C6-N1-C1'	-5.72	113.93	120.80
1	13	1302	U	C6-N1-C1'	-5.72	113.19	121.20
25	14	1644	C	N1-C2-O2	5.72	122.33	118.90
1	13	328	C	N1-C2-O2	5.71	122.33	118.90
25	14	1899	G	N3-C4-C5	5.71	131.45	128.60
22	3L	49	C	C2-N1-C1'	5.69	125.06	118.80
1	13	1302	U	O5'-P-OP2	5.66	117.49	110.70
25	1H	1076	C	N1-C2-O2	5.65	122.29	118.90
1	1G	486	U	C2-N1-C1'	5.64	124.47	117.70
25	14	1311	G	C4-N9-C1'	5.63	133.82	126.50
25	1H	1021	A	N7-C8-N9	5.62	116.61	113.80
25	1H	99	U	P-O3'-C3'	5.61	126.44	119.70
25	14	1332	G	N7-C8-N9	5.61	115.91	113.10
25	1H	2468	G	O4'-C1'-N9	5.61	112.69	108.20
1	13	792	A	P-O3'-C3'	5.61	126.43	119.70
1	13	1158	C	C6-N1-C2	-5.60	118.06	120.30
25	1H	1396	U	N1-C2-O2	5.59	126.72	122.80
1	1G	812	C	OP2-P-O3'	5.59	117.50	105.20
25	1H	2318	G	C4-N9-C1'	5.58	133.75	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	690	G	C8-N9-C1'	-5.57	119.76	127.00
25	14	265	A	O4'-C1'-N9	5.57	112.65	108.20
25	1H	676	A	O4'-C1'-N9	5.55	112.64	108.20
1	13	1336	C	C6-N1-C2	-5.55	118.08	120.30
25	14	828	U	C2-N1-C1'	5.52	124.33	117.70
25	1H	99	U	OP2-P-O3'	5.52	117.35	105.20
1	13	1336	C	N1-C2-O2	5.52	122.21	118.90
25	1H	898	C	C2-N1-C1'	5.51	124.87	118.80
1	1G	1301	U	C5-C6-N1	5.51	125.46	122.70
25	14	654(T)	A	N7-C8-N9	5.49	116.55	113.80
1	1G	701	C	P-O3'-C3'	5.49	126.29	119.70
25	14	1950	G	C4-N9-C1'	5.49	133.63	126.50
1	13	1341	U	N1-C2-O2	-5.48	118.96	122.80
1	13	328	C	C6-N1-C2	-5.48	118.11	120.30
25	1H	801	G	O5'-P-OP2	-5.47	100.77	105.70
1	1G	1000	A	OP1-P-O3'	5.47	117.23	105.20
23	2K	1	C	C2-N1-C1'	5.46	124.81	118.80
25	14	2473	U	N1-C2-O2	5.44	126.61	122.80
1	13	1182	G	C4-N9-C1'	-5.44	119.42	126.50
25	1H	1332	G	C4-N9-C1'	5.43	133.56	126.50
1	1G	1158	C	C6-N1-C1'	-5.43	114.29	120.80
1	13	1302	U	N3-C2-O2	-5.42	118.41	122.20
25	14	512	G	C4-N9-C1'	-5.41	119.47	126.50
25	14	2321	G	C4-N9-C1'	5.41	133.53	126.50
25	1H	2468	G	C4-N9-C1'	5.41	133.53	126.50
25	14	1585	C	N1-C2-O2	5.41	122.14	118.90
1	13	701	C	P-O3'-C3'	5.40	126.18	119.70
1	1G	1322	C	C6-N1-C2	-5.39	118.14	120.30
1	1G	1498	UR3	P-O3'-C3'	5.39	126.16	119.70
25	1H	165	U	C2-N1-C1'	5.38	124.16	117.70
25	14	387	U	P-O3'-C3'	5.37	126.14	119.70
25	1H	2688	U	N3-C2-O2	-5.36	118.44	122.20
25	1H	860	U	N3-C2-O2	-5.35	118.45	122.20
1	1G	266	G	P-O3'-C3'	5.35	126.12	119.70
25	1H	271(C)	U	C6-N1-C1'	-5.35	113.72	121.20
25	1H	2832	U	P-O3'-C3'	5.35	126.11	119.70
22	3L	49	C	N3-C2-O2	-5.34	118.16	121.90
25	14	1634	A	P-O3'-C3'	5.34	126.11	119.70
1	1G	686	U	N1-C2-O2	5.33	126.53	122.80
25	14	676	A	O4'-C1'-N9	5.33	112.46	108.20
25	1H	1252	G	C8-N9-C1'	5.31	133.91	127.00
1	13	1158	C	N3-C2-O2	-5.30	118.19	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	98	75	LEU	CA-CB-CG	5.29	127.48	115.30
1	1G	1322	C	C6-N1-C1'	-5.29	114.45	120.80
25	1H	2032	G	C8-N9-C1'	-5.28	120.13	127.00
47	D5	156	LYS	C-N-CA	5.28	134.89	121.70
25	1H	2307	G	O4'-C1'-N9	5.27	112.41	108.20
25	14	1171	G	P-O3'-C3'	5.26	126.02	119.70
1	13	1302	U	C5-C6-N1	5.26	125.33	122.70
25	14	1543	A	O4'-C1'-N9	5.25	112.40	108.20
25	1H	2126	A	P-O3'-C3'	5.25	126.00	119.70
1	1G	595	G	P-O3'-C3'	5.25	126.00	119.70
25	14	1585	C	C2-N1-C1'	5.24	124.56	118.80
1	13	992	U	P-O3'-C3'	5.23	125.98	119.70
28	11	37	LEU	CA-CB-CG	5.23	127.33	115.30
1	1G	1532	U	P-O3'-C3'	5.23	125.98	119.70
1	1G	1065	U	P-O3'-C3'	5.22	125.97	119.70
1	13	328	C	N3-C2-O2	-5.22	118.24	121.90
25	1H	669	G	C4-N9-C1'	5.22	133.28	126.50
25	14	2335	A	O4'-C1'-N9	5.22	112.38	108.20
1	13	243	A	P-O3'-C3'	5.22	125.96	119.70
25	1H	1021	A	C8-N9-C4	-5.22	103.71	105.80
25	1H	945	A	C6-N1-C2	-5.21	115.47	118.60
25	1H	271(B)	G	P-O3'-C3'	5.21	125.95	119.70
25	14	1544	C	O4'-C1'-N1	5.21	112.37	108.20
25	1H	1544	C	C2-N1-C1'	5.20	124.52	118.80
25	1H	1558	A	P-O3'-C3'	5.20	125.94	119.70
25	14	512	G	C8-N9-C1'	5.20	133.76	127.00
25	1H	2168	G	C4-N9-C1'	5.19	133.25	126.50
25	1H	2566	A	P-O3'-C3'	5.19	125.93	119.70
25	1H	1616	A	O4'-C1'-N9	5.19	112.35	108.20
25	14	1781	C	O4'-C1'-N1	5.19	112.35	108.20
1	13	1336	C	C2-N1-C1'	5.19	124.51	118.80
1	1G	328	C	P-O3'-C3'	5.18	125.92	119.70
25	14	1992	G	C8-N9-C4	-5.18	104.33	106.40
25	14	1644	C	C2-N1-C1'	5.18	124.50	118.80
25	1H	1076	C	C2-N1-C1'	5.17	124.48	118.80
25	1H	859	G	P-O3'-C3'	5.16	125.89	119.70
25	14	275	G	C4-N9-C1'	5.15	133.20	126.50
25	14	2629	A	O4'-C1'-N9	5.14	112.31	108.20
25	1H	1980	G	P-O3'-C3'	5.14	125.86	119.70
1	13	1065	U	P-O3'-C3'	5.13	125.86	119.70
25	1H	676	A	C5-N7-C8	-5.13	101.33	103.90
1	13	1182	G	C8-N9-C1'	5.13	133.67	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1313	U	O4'-C1'-N1	5.12	112.30	108.20
25	14	828	U	N1-C2-O2	5.12	126.38	122.80
1	13	328	C	P-O3'-C3'	5.12	125.84	119.70
25	14	2726	U	O4'-C1'-N1	5.11	112.29	108.20
25	14	372	G	OP2-P-O3'	5.11	116.44	105.20
1	13	1054	C	C6-N1-C2	-5.10	118.26	120.30
25	1H	2481	G	C4-N9-C1'	5.10	133.13	126.50
25	1H	1963	U	N1-C2-O2	5.10	126.37	122.80
25	1H	2776	A	P-O3'-C3'	5.10	125.82	119.70
25	14	2403	C	N3-C2-O2	-5.09	118.33	121.90
1	1G	687	A	P-O3'-C3'	5.08	125.80	119.70
25	1H	1022	G	P-O3'-C3'	5.08	125.80	119.70
1	13	687	A	P-O3'-C3'	5.07	125.79	119.70
25	1H	2031	A	O4'-C1'-N9	5.07	112.25	108.20
25	1H	1396	U	N3-C2-O2	-5.06	118.66	122.20
25	1H	945	A	OP2-P-O3'	5.05	116.32	105.20
1	1G	1346	A	P-O3'-C3'	5.05	125.76	119.70
25	1H	274	G	C4-N9-C1'	5.05	133.06	126.50
1	13	5	U	P-O3'-C3'	5.05	125.76	119.70
1	1G	1532	U	OP2-P-O3'	5.04	116.30	105.20
25	14	512	G	O4'-C1'-N9	5.04	112.23	108.20
25	1H	275	G	P-O3'-C3'	5.04	125.74	119.70
25	14	1762	A	OP2-P-O3'	5.03	116.26	105.20
25	1H	27	G	N3-C4-N9	-5.02	122.99	126.00
25	1H	1950	G	C8-N9-C1'	-5.02	120.47	127.00
25	1H	228	A	O4'-C1'-N9	5.01	112.21	108.20
1	1G	1158	C	C5-C6-N1	5.01	123.51	121.00
25	14	654(T)	A	C5-N7-C8	-5.01	101.39	103.90
25	14	2312	U	N1-C2-O2	5.01	126.31	122.80
1	1G	547	A	P-O3'-C3'	5.00	125.70	119.70
34	38	111	LEU	CA-CB-CG	5.00	126.80	115.30

There are no chirality outliers.

All (81) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
28	11	239	ARG	Peptide
2	12	16	HIS	Peptide
2	12	199	TYR	Peptide
2	12	21	ARG	Peptide
2	12	230	VAL	Peptide
29	21	70	ALA	Peptide

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Mol	Chain	Res	Type	Group
29	21	72	VAL	Peptide
29	29	72	VAL	Peptide
4	32	88	VAL	Peptide
37	35	109	GLY	Peptide
37	35	115	LEU	Peptide
37	35	57	THR	Peptide
34	38	107	VAL	Peptide
34	38	25	PHE	Peptide
34	38	28	ASN	Peptide
34	38	53	VAL	Peptide
12	3A	101	VAL	Peptide
12	3I	23	ALA	Peptide
12	3I	44	LYS	Peptide
31	41	116	ASP	Peptide
38	45	134	ARG	Peptide
38	45	80	GLU	Peptide
38	45	81	VAL	Peptide
31	49	96	ARG	Peptide
13	4A	106	ASN	Peptide
13	4A	43	THR	Peptide
13	4A	62	ASN	Peptide
13	4A	67	GLU	Peptide
32	51	10	PRO	Peptide
32	51	82	GLY	Peptide
33	61	11	ASN	Peptide
33	61	13	GLY	Peptide
33	61	133	HIS	Peptide
33	61	14	ASP	Peptide
33	69	142	VAL	Peptide
7	6E	5	ARG	Peptide
37	78	35	HIS	Peptide
37	78	56	SER	Peptide
37	78	57	THR	Peptide
42	85	90	VAL	Peptide
38	88	79	LEU	Peptide
43	95	98	GLU	Peptide
19	AA	69	HIS	Peptide
19	AI	41	VAL	Peptide
19	AI	5	LEU	Peptide
19	AI	81	ARG	Peptide
45	B5	60	ARG	Peptide
41	B8	113	LYS	Peptide

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Mol	Chain	Res	Type	Group
20	BA	69	GLY	Peptide
20	BI	73	HIS	Peptide
47	D5	140	ASP	Peptide
47	D5	145	GLU	Peptide
47	D5	152	ALA	Peptide
47	D5	155	LEU	Peptide
47	D5	170	THR	Peptide
47	D5	52	SER	Peptide
48	E5	49	LYS	Peptide
46	G8	53	PRO	Peptide
46	G8	54	LYS	Peptide
47	H8	109	ALA	Peptide
47	H8	140	ASP	Peptide
47	H8	155	LEU	Peptide
47	H8	52	SER	Peptide
52	I5	39	CYS	Peptide
53	J5	41	PRO	Peptide
53	J5	42	PRO	Peptide
49	J8	29	GLY	Peptide
49	J8	53	VAL	Peptide
54	K5	24	GLU	Peptide
54	K5	27	LYS	Peptide
54	K5	30	THR	Peptide
54	K5	46	HIS	Peptide
50	K8	46	GLN	Peptide
52	M8	22	ILE	Peptide
52	M8	38	LYS	Peptide
52	M8	4	GLY	Peptide
52	M8	40	HIS	Peptide
53	N8	40	LYS	Peptide
53	N8	41	PRO	Peptide
53	N8	42	PRO	Peptide
54	O8	8	LYS	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	32387	0	16370	691	0
1	1G	32470	0	16411	750	0
2	12	1915	0	1969	84	0
2	1E	1924	0	1975	69	0
3	22	1612	0	1677	60	0
3	2E	1605	0	1668	52	0
4	32	1702	0	1766	64	0
4	3E	1702	0	1766	65	0
5	42	1178	0	1234	42	0
5	4E	1155	0	1213	36	0
6	52	842	0	857	27	0
6	5E	842	0	857	19	0
7	62	1217	0	1256	51	0
7	6E	1256	0	1296	38	0
8	72	1115	0	1177	42	0
8	7E	1115	0	1177	40	0
9	82	1002	0	1025	77	0
9	8E	983	0	1006	48	0
10	1A	801	0	849	35	0
10	1I	801	0	849	43	0
11	2A	889	0	916	34	0
11	2I	864	0	878	23	0
12	3A	977	0	1061	36	0
12	3I	977	0	1061	28	0
13	4A	937	0	995	58	0
13	4I	946	0	1008	42	0
14	5A	485	0	519	25	0
14	5I	491	0	530	32	0
15	6A	733	0	771	23	0
15	6I	733	0	771	19	0
16	7A	705	0	725	20	0
16	7I	700	0	720	25	0
17	8A	819	0	880	27	0
17	8I	834	0	904	27	0
18	9A	584	0	657	28	0
18	9I	573	0	644	29	0
19	AA	665	0	684	57	0
19	AI	688	0	710	43	0
20	BA	776	0	857	32	0
20	BI	766	0	854	31	0
21	1B	217	0	234	14	0
21	1F	217	0	234	13	0
22	1K	1385	0	705	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	3K	1640	0	837	30	0
22	3L	1640	0	837	36	0
23	2K	1643	0	847	17	0
24	4K	373	0	186	8	0
24	4L	463	0	230	8	0
25	14	62013	0	31255	1102	0
25	1H	62010	0	31252	1054	0
26	16	2573	0	1305	35	0
26	1J	2617	0	1328	78	0
27	71	1049	0	1071	51	0
28	11	2125	0	2199	62	0
28	19	2124	0	2197	90	0
29	21	1559	0	1618	50	0
29	29	1559	0	1617	55	0
30	31	1585	0	1632	70	0
30	39	1619	0	1674	74	0
31	41	1473	0	1535	59	0
31	49	1473	0	1535	63	0
32	51	1336	0	1418	56	0
32	59	1336	0	1418	46	0
33	61	1136	0	1223	42	0
33	69	1136	0	1223	40	0
34	38	1056	0	1119	49	0
35	15	1104	0	1180	29	0
35	58	1104	0	1180	39	0
36	25	932	0	996	33	0
36	68	932	0	996	31	0
37	35	1122	0	1206	71	0
37	78	1130	0	1217	66	0
38	45	1112	0	1171	55	0
38	88	1121	0	1179	32	0
39	55	967	0	1033	41	0
39	98	967	0	1033	30	0
40	65	881	0	943	46	0
40	A8	881	0	943	36	0
41	75	1141	0	1202	73	0
41	B8	1141	0	1202	85	0
42	85	963	0	1022	48	0
42	C8	963	0	1021	42	0
43	95	778	0	852	46	0
43	D8	774	0	849	29	0
44	A5	890	0	951	23	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	E8	899	0	964	27	0
45	B5	730	0	780	27	0
45	F8	747	0	805	26	0
46	C5	825	0	898	46	0
46	G8	805	0	881	25	0
47	D5	1404	0	1437	74	0
47	H8	1390	0	1421	58	0
48	E5	623	0	645	31	0
48	I8	611	0	631	23	0
49	F5	721	0	791	23	0
49	J8	754	0	838	25	0
50	G5	580	0	629	17	0
50	K8	590	0	643	25	0
51	H5	468	0	518	12	0
51	L8	468	0	518	14	0
52	I5	580	0	577	29	0
52	M8	533	0	526	30	0
53	J5	434	0	454	15	0
53	N8	434	0	454	29	0
54	K5	417	0	441	19	0
54	O8	424	0	450	35	0
55	L5	418	0	467	17	0
55	P8	418	0	467	10	0
56	M5	506	0	567	14	0
56	Q8	506	0	567	19	0
57	2L	1643	0	845	25	0
58	11	1	0	0	0	0
58	13	38	0	0	0	0
58	14	94	0	0	0	0
58	16	2	0	0	0	0
58	19	1	0	0	0	0
58	1G	25	0	0	0	0
58	1H	122	0	0	0	0
58	21	1	0	0	0	0
58	29	2	0	0	0	0
58	31	2	0	0	0	0
58	32	1	0	0	0	0
58	39	1	0	0	0	0
58	3A	1	0	0	0	0
58	41	2	0	0	0	0
58	52	1	0	0	0	0
58	5E	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	5I	1	0	0	0	0
58	8I	1	0	0	0	0
58	BA	1	0	0	0	0
59	13	111	0	0	0	0
59	14	312	0	0	0	0
59	16	8	0	0	0	0
59	1G	102	0	0	0	0
59	1H	405	0	0	0	0
59	1J	5	0	0	0	0
59	21	2	0	0	0	0
59	29	2	0	0	0	0
59	2K	1	0	0	0	0
59	2L	2	0	0	0	0
59	32	1	0	0	0	0
59	3E	1	0	0	0	0
59	41	1	0	0	0	0
59	4I	1	0	0	0	0
59	55	1	0	0	0	0
59	78	1	0	0	0	0
59	7I	1	0	0	0	0
59	8E	1	0	0	0	0
59	BI	2	0	0	0	0
59	D8	3	0	0	0	0
59	E5	1	0	0	0	0
59	G8	1	0	0	0	0
59	I8	2	0	0	0	0
59	J8	1	0	0	0	0
59	N8	1	0	0	0	0
59	Q8	1	0	0	0	0
60	32	8	0	0	2	0
60	3E	8	0	0	1	0
61	5A	1	0	0	0	0
61	5I	1	0	0	0	0
62	11	10	0	0	1	0
62	13	190	0	0	11	0
62	14	681	0	0	72	0
62	16	12	0	0	2	0
62	19	12	0	0	4	0
62	1G	268	0	0	18	0
62	1H	983	0	0	113	0
62	1J	16	0	0	4	0
62	21	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	29	3	0	0	0	0
62	2L	6	0	0	0	0
62	31	6	0	0	0	0
62	32	4	0	0	0	0
62	35	3	0	0	1	0
62	39	3	0	0	0	0
62	3A	1	0	0	0	0
62	3E	2	0	0	0	0
62	3I	1	0	0	0	0
62	3K	1	0	0	0	0
62	42	1	0	0	0	0
62	4I	2	0	0	0	0
62	4K	2	0	0	0	0
62	4L	4	0	0	0	0
62	55	2	0	0	0	0
62	58	1	0	0	0	0
62	5I	1	0	0	0	0
62	6I	1	0	0	0	0
62	75	1	0	0	0	0
62	78	6	0	0	1	0
62	7A	5	0	0	0	0
62	7I	3	0	0	1	0
62	85	1	0	0	0	0
62	98	1	0	0	0	0
62	B5	2	0	0	0	0
62	B8	2	0	0	0	0
62	BA	1	0	0	0	0
62	BI	4	0	0	1	0
62	C5	2	0	0	0	0
62	C8	2	0	0	0	0
62	F5	1	0	0	0	0
62	F8	2	0	0	0	0
62	G5	1	0	0	0	0
62	G8	1	0	0	0	0
62	I8	5	0	0	0	0
62	J8	3	0	0	0	0
62	L5	1	0	0	0	0
62	M5	1	0	0	0	0
62	Q8	1	0	0	0	0
All	All	300507	0	201662	6768	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 14.

All (6768) 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)
28:19:182:LEU:H	28:19:272:ALA:HB3	1.30	0.97
1:13:1129:C:H5'	1:13:1130:A:H5'	1.47	0.96
25:1H:1053:C:H42	25:1H:1106:G:H1	1.12	0.95
25:14:2245:U:H5'	25:14:2246:G:H5'	1.47	0.95
1:1G:73:G:H1	1:1G:97:U:H3	1.10	0.94
25:14:1899:G:H22	25:14:1902:C:H41	1.12	0.93
25:1H:307:G:N2	25:1H:310:A:OP2	2.01	0.93
25:1H:2415:G:H4'	37:78:67:MET:H	1.34	0.93
25:1H:2701:C:H3'	25:1H:2702:U:H5"	1.52	0.92
57:2L:8:4SU:HN3	57:2L:14:A:H62	1.18	0.91
25:14:2720:U:H3	25:14:2873:A:H2	1.12	0.90
25:14:945:A:OP1	62:14:3510:HOH:O	1.91	0.89
1:1G:664:G:H22	1:1G:741:G:H1	1.20	0.89
25:1H:2068:U:H3	25:1H:2430:A:H2	1.22	0.88
25:1H:875:G:H4'	47:H8:170:THR:HG21	1.55	0.88
28:11:182:LEU:H	28:11:272:ALA:HB3	1.40	0.87
34:38:10:LEU:HB3	34:38:53:VAL:HG11	1.56	0.87
1:13:1139:G:N1	1:13:1143:G:O6	2.07	0.87
25:14:2701:C:H3'	25:14:2702:U:H5"	1.55	0.86
25:1H:993:G:OP1	42:C8:50:ARG:NH2	2.09	0.86
34:38:98:LYS:H	34:38:102:LYS:HD3	1.40	0.86
25:1H:219:G:OP2	62:1H:3614:HOH:O	1.92	0.86
57:2L:10:G:H22	57:2L:27:G:H1'	1.40	0.86
25:14:676:A:H8	25:14:2069:G:H21	1.23	0.86
25:14:2068:U:H3	25:14:2430:A:H2	1.21	0.86
1:1G:1109:C:OP1	3:22:176:HIS:ND1	2.09	0.85
28:19:8:PRO:HB3	28:19:14:ARG:HB3	1.57	0.85
47:H8:140:ASP:H	47:H8:155:LEU:HG	1.40	0.85
42:85:50:ARG:HH12	43:95:72:VAL:HG11	1.41	0.85
25:14:397:G:N7	62:14:3523:HOH:O	2.09	0.85
25:1H:761:A:N7	62:1H:3638:HOH:O	2.09	0.85
53:N8:40:LYS:HG2	53:N8:46:CYS:HA	1.57	0.84
25:1H:1103:A:H5'	25:1H:1104:C:H5	1.43	0.84
4:3E:156:GLU:HB2	4:3E:159:ARG:HH11	1.43	0.84
26:16:73:A:OP2	62:16:301:HOH:O	1.96	0.84
33:69:79:ILE:H	33:69:142:VAL:HG21	1.42	0.84
1:1G:928:G:H1	1:1G:1389:C:H42	1.25	0.84
25:1H:987:G:O2'	25:1H:1000:A:N3	2.11	0.83
1:13:1502:A:H2	1:13:1505:G:H1	1.26	0.83
25:1H:2112:G:H21	25:1H:2113:U:H3	1.25	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:35:19:VAL:HG13	37:35:21:ARG:H	1.43	0.83
25:14:815:C:H42	25:14:1192:G:H1	1.23	0.83
25:1H:563:G:OP2	62:1H:3616:HOH:O	1.97	0.83
25:1H:1170:G:H1	25:1H:1179:C:H42	1.26	0.82
1:1G:448:A:H62	1:1G:486:U:H3	1.23	0.82
25:1H:2615:U:OP1	62:1H:3615:HOH:O	1.96	0.82
22:3L:13:C:O2	22:3L:23:G:N2	2.12	0.82
25:14:784:A:OP2	62:14:3511:HOH:O	1.96	0.82
25:14:819:A:OP2	25:14:1187:G:N2	2.12	0.82
25:14:660:G:H21	37:35:12:ALA:HB2	1.44	0.82
25:14:1783:A:OP1	62:14:3512:HOH:O	1.97	0.82
26:16:6:C:H42	26:16:114:G:H1	1.27	0.82
22:3L:3:C:H2'	22:3L:4:G:H8	1.45	0.82
1:13:1299:A:H2'	1:13:1301:U:H1'	1.61	0.81
31:41:97:ASP:H	31:41:100:TRP:HD1	1.27	0.81
25:1H:265:A:N6	25:1H:427:U:O2'	2.13	0.81
1:1G:40:C:H42	1:1G:402:G:H1	1.27	0.81
29:29:47:VAL:HG11	29:29:86:PRO:HD2	1.61	0.81
49:F5:75:GLU:HB3	49:F5:76:ARG:HH21	1.45	0.81
1:13:559:A:H4'	1:13:560:U:H3'	1.63	0.81
38:88:12:GLN:HB2	38:88:73:PRO:HD2	1.63	0.81
25:1H:1332:G:OP1	62:1H:3617:HOH:O	1.98	0.81
41:75:118:ARG:HA	41:75:121:ILE:HB	1.61	0.81
42:C8:95:LEU:HD13	43:D8:4:ILE:HG23	1.63	0.81
25:14:273(B):C:H42	25:14:363(D):G:H1	1.29	0.80
26:16:31:C:O2	26:16:53:A:N6	2.13	0.80
1:1G:1352:C:H42	1:1G:1370:G:H1	1.28	0.80
42:C8:92:ARG:HG3	42:C8:94:ASN:HB3	1.64	0.80
16:7I:72:ARG:HA	16:7I:75:ARG:HB3	1.62	0.80
1:1G:1149:C:OP2	9:82:9:ARG:NH1	2.14	0.80
1:13:1133:G:H1	1:13:1141:C:H42	1.28	0.80
2:1E:168:THR:HG22	2:1E:192:SER:HB2	1.62	0.80
25:1H:1359:A:H62	25:1H:1372:U:H3	1.27	0.80
1:1G:1359:C:O2'	1:1G:1361:G:N7	2.13	0.80
30:39:157:VAL:HB	30:39:194:MET:HB3	1.62	0.80
30:31:101:LEU:O	30:31:106:ARG:NH1	2.14	0.80
1:13:75:C:N4	1:13:95:G:O6	2.15	0.80
25:1H:676:A:H8	25:1H:2069:G:H21	1.24	0.79
42:85:92:ARG:HH22	43:95:10:LYS:HA	1.46	0.79
47:H8:48:PHE:HA	47:H8:51:ALA:HB3	1.65	0.79
4:3E:101:LEU:HD21	4:3E:121:VAL:HG11	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1252:A:H61	1:1G:1285:A:H61	1.29	0.79
25:14:768:G:O2'	25:14:1379:A:N6	2.15	0.79
25:1H:1439:A:OP1	62:1H:3618:HOH:O	1.98	0.79
33:61:62:LYS:HE3	33:61:134:PRO:HG2	1.65	0.79
50:G5:52:ASP:N	50:G5:52:ASP:OD1	2.14	0.79
52:M8:18:CYS:SG	52:M8:19:GLY:N	2.56	0.79
25:14:1062:G:H22	25:14:1076:C:H42	1.30	0.79
40:65:62:LYS:HB3	40:65:97:ARG:HD3	1.62	0.79
26:1J:36:C:N4	26:1J:49:C:O2	2.15	0.79
25:1H:1009:A:OP2	35:58:37:LYS:NZ	2.16	0.79
26:16:101:A:OP2	62:16:302:HOH:O	1.99	0.79
25:1H:769:G:N7	62:1H:3661:HOH:O	2.15	0.79
45:B5:63:LYS:H	45:B5:63:LYS:HE3	1.48	0.78
42:85:92:ARG:HG2	43:95:11:GLN:HB2	1.64	0.78
25:1H:2712(A):A:OP1	62:1H:3621:HOH:O	2.02	0.78
49:J8:29:GLY:O	49:J8:31:GLY:N	2.16	0.78
1:1G:582:U:OP1	15:6A:68:ARG:NH2	2.15	0.78
1:1G:1119:C:OP2	9:82:9:ARG:NH2	2.17	0.78
26:1J:76:G:N7	62:1J:304:HOH:O	2.16	0.78
33:69:79:ILE:HB	33:69:142:VAL:HG11	1.65	0.78
4:3E:15:GLU:HG2	4:3E:63:LYS:HB3	1.65	0.78
25:14:2121:G:H22	25:14:2177:C:H42	1.31	0.78
39:98:2:ARG:O	39:98:4:LEU:N	2.15	0.78
1:1G:595:G:O2'	1:1G:596:C:OP2	2.00	0.78
1:1G:1324:A:OP2	13:4A:99:ARG:NH2	2.17	0.78
25:14:1310:G:OP2	55:L5:9:ARG:NH1	2.17	0.78
1:13:1023:G:H3'	1:13:1024:G:H5"	1.64	0.78
2:1E:101:MET:HA	2:1E:108:ILE:HG13	1.63	0.78
31:41:102:PHE:HA	31:41:105:LYS:HE2	1.65	0.78
1:1G:1200:C:O2'	1:1G:1201:A:OP2	2.00	0.78
25:14:7:G:H1	25:14:2896:C:H42	1.32	0.78
37:35:55:ARG:HH22	37:35:58:THR:HG22	1.48	0.78
25:1H:1252:G:N2	42:C8:37:GLU:OE2	2.12	0.77
25:1H:746:A:O2'	25:1H:747:U:OP2	2.01	0.77
25:1H:973:A:OP2	62:1H:3620:HOH:O	2.02	0.77
41:B8:60:THR:HG22	41:B8:77:PRO:HA	1.66	0.77
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.66	0.77
46:C5:55:TYR:H	46:C5:55:TYR:HD1	1.31	0.77
25:1H:427:U:OP2	62:1H:3619:HOH:O	2.01	0.77
25:1H:819:A:OP2	25:1H:1187:G:N2	2.18	0.77
13:4A:3:ARG:HH12	31:49:113:ARG:HB3	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:259:G:H21	25:14:621:A:H8	1.28	0.77
47:D5:152:ALA:O	47:D5:154:ASP:N	2.16	0.77
25:1H:731:C:OP2	62:1H:3622:HOH:O	2.02	0.77
25:1H:2131:G:H4'	25:1H:2132:U:H4'	1.64	0.77
25:1H:2168:G:H21	25:1H:2169:A:H3'	1.48	0.77
25:14:2364:C:OP1	48:E5:55:ARG:NH1	2.18	0.77
1:1G:971:G:N2	1:1G:1363:A:OP2	2.17	0.77
25:14:517:C:OP1	53:J5:16:ARG:NH2	2.17	0.77
25:14:2377:A:H4'	40:65:111:GLU:HB3	1.66	0.77
11:2I:41:THR:HG21	11:2I:71:LYS:HD3	1.65	0.77
14:5A:9:LYS:HA	14:5A:12:ARG:HB3	1.67	0.77
4:3E:105:VAL:HG21	4:3E:126:ILE:HD13	1.65	0.77
22:1K:49:C:O2'	22:1K:50:G:OP2	2.01	0.77
25:1H:607:U:H3	25:1H:621:A:H2	1.32	0.77
1:1G:1118:C:OP1	9:82:104:ARG:NH1	2.17	0.77
47:D5:52:SER:O	47:D5:54:HIS:N	2.18	0.77
5:42:88:LYS:HB3	5:42:123:LEU:HB2	1.65	0.77
25:14:641:C:H42	25:14:647:G:H1	1.31	0.77
46:C5:91:GLU:O	46:C5:92:ASN:ND2	2.18	0.77
13:4I:39:ILE:HD12	13:4I:56:LEU:HD23	1.65	0.77
22:3L:52:C:H2'	22:3L:53:G:H8	1.50	0.77
30:39:5:ALA:HB1	30:39:125:LEU:HD21	1.67	0.77
46:C5:60:PHE:HD2	46:C5:62:GLU:H	1.30	0.76
25:14:154:G:O6	25:14:172:C:N4	2.18	0.76
28:19:255:LYS:HE3	28:19:255:LYS:H	1.50	0.76
35:58:95:PRO:O	35:58:97:ARG:N	2.18	0.76
25:1H:943:U:OP2	62:1H:3623:HOH:O	2.02	0.76
25:1H:1186:G:OP1	62:1H:3624:HOH:O	2.04	0.76
25:14:958:U:OP2	38:45:14:ARG:NH1	2.18	0.76
31:49:47:LYS:HA	31:49:82:LEU:HD21	1.68	0.76
1:13:380:G:N2	1:13:383:A:OP2	2.19	0.76
1:13:501:C:OP1	12:3I:114:ARG:NH2	2.19	0.76
31:41:114:ILE:HB	31:41:117:PHE:HB2	1.67	0.76
25:14:2106:G:H1	25:14:2183:C:H42	1.30	0.76
25:1H:2405:G:O2'	25:1H:2411:A:N6	2.19	0.76
1:1G:1221:G:OP1	1:1G:1320:C:N4	2.15	0.76
25:1H:774:A:H2	25:1H:787:U:HO2'	1.34	0.76
25:1H:2584:U:H2'	25:1H:2585:U:H2'	1.67	0.76
37:35:57:THR:HG21	37:35:60:MET:HB2	1.68	0.76
1:13:914:A:H2'	1:13:915:A:H8	1.51	0.76
1:1G:1321:C:H5"	1:1G:1322:C:H5"	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1A:61:GLU:HB2	14:5A:58:LYS:HE2	1.66	0.75
31:49:16:ARG:HE	31:49:31:VAL:HG11	1.50	0.75
36:25:104:ARG:NH1	41:75:36:GLU:OE2	2.20	0.75
1:13:1026:G:O6	1:13:1036:G:N2	2.16	0.75
25:1H:881:G:H22	25:1H:895:U:H3	1.33	0.75
25:1H:1601:G:N7	62:1H:3686:HOH:O	2.19	0.75
25:14:741:G:OP1	62:14:3515:HOH:O	2.04	0.75
54:K5:11:LEU:HG	54:K5:53:LYS:HG3	1.69	0.75
1:13:1189:C:OP1	10:1I:51:ARG:NH2	2.20	0.75
1:13:1309:G:O6	1:13:1328:C:N4	2.18	0.75
25:1H:2624:G:N7	62:1H:3682:HOH:O	2.18	0.75
48:I8:27:GLU:HG3	48:I8:68:GLU:HA	1.68	0.75
1:13:448:A:OP2	1:13:485:G:N2	2.18	0.75
25:1H:1333:C:OP2	62:1H:3627:HOH:O	2.05	0.75
25:1H:1388:G:N7	62:1H:3685:HOH:O	2.19	0.75
1:1G:1196:U:O4	24:4L:22:A:N6	2.20	0.75
1:13:251:G:O6	1:13:271:C:N4	2.17	0.75
12:3I:34:CYS:HA	12:3I:55:VAL:HA	1.69	0.75
25:14:783:A:OP2	62:14:3511:HOH:O	2.03	0.75
25:14:2102:U:H3	25:14:2187:G:H1	1.32	0.75
25:14:2819:G:OP1	62:14:3513:HOH:O	2.04	0.75
39:55:29:LEU:HB3	39:55:75:LEU:HD11	1.67	0.75
25:1H:1496:A:H8	25:1H:1577:C:HO2'	1.35	0.75
26:16:21:G:H1	26:16:62:C:H42	1.35	0.75
46:G8:91:GLU:O	46:G8:92:ASN:ND2	2.19	0.75
35:15:23:LEU:HB3	35:15:60:ILE:HG21	1.67	0.75
48:E5:48:GLY:H	48:E5:51:VAL:HB	1.51	0.75
25:1H:489:G:N7	44:E8:49:LYS:NZ	2.33	0.75
25:14:2867:G:OP2	41:75:119:LYS:NZ	2.18	0.75
1:13:1255:G:OP2	10:1I:45:ARG:NH2	2.20	0.74
47:H8:52:SER:O	47:H8:54:HIS:N	2.20	0.74
1:1G:1286:A:H8	1:1G:1287:A:H4'	1.51	0.74
1:13:64:G:O6	1:13:99:C:N4	2.20	0.74
25:1H:805:G:OP1	62:1H:3626:HOH:O	2.04	0.74
1:1G:77:C:H42	1:1G:92:G:H1	1.35	0.74
40:65:25:ARG:HG3	40:65:88:ASP:HB2	1.68	0.74
25:1H:963:U:OP1	62:1H:3625:HOH:O	2.04	0.74
1:1G:1114:C:H1'	14:5A:60:SER:HB2	1.70	0.74
25:14:770:G:OP2	62:14:3514:HOH:O	2.04	0.74
25:14:1619:G:N7	62:14:3550:HOH:O	2.19	0.74
32:51:77:LYS:HE2	32:51:138:LYS:HB2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:2L:76:C:H3'	57:2L:77:A:H5"	1.69	0.74
19:AA:80:TYR:HE1	19:AA:83:HIS:HB2	1.50	0.74
25:14:2343:C:HO2'	25:14:2373:G:HO2'	1.27	0.74
1:13:358:U:OP1	33:69:87:LYS:NZ	2.18	0.74
2:1E:40:HIS:HB2	2:1E:190:THR:HG21	1.68	0.74
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.67	0.74
28:11:142:VAL:HG23	28:11:193:VAL:HA	1.70	0.74
25:14:994:C:OP1	42:85:53:ARG:NH2	2.20	0.74
33:69:71:ILE:O	33:69:74:ASN:ND2	2.20	0.74
25:1H:2062:A:OP1	62:1H:3629:HOH:O	2.06	0.74
18:9A:51:LEU:HB2	18:9A:56:THR:HG23	1.70	0.74
1:13:963:G:N3	10:1I:55:LYS:NZ	2.34	0.74
25:1H:1299:G:N7	62:1H:3692:HOH:O	2.20	0.74
25:1H:1980:G:O2'	25:1H:1982:C:OP2	2.05	0.74
1:1G:895:G:H1	1:1G:904:C:H42	1.36	0.74
25:14:1728:G:N1	25:14:1730:U:OP2	2.21	0.74
25:14:2469:A:H8	38:45:56:ARG:HH21	1.35	0.74
1:13:951:G:OP2	13:4I:102:ARG:NH2	2.21	0.74
25:1H:2287:A:H62	25:1H:2344:U:H3	1.36	0.74
1:1G:1115:C:H1'	14:5A:61:TRP:HB2	1.69	0.73
15:6A:16:ALA:HB1	15:6A:21:ASP:HB3	1.67	0.73
1:13:1321:C:H5"	1:13:1322:C:H5"	1.70	0.73
25:1H:270:A:OP1	62:1H:3628:HOH:O	2.05	0.73
1:1G:1076:C:N4	1:1G:1081:G:O6	2.17	0.73
9:82:20:ARG:HB3	9:82:60:ASP:HB2	1.68	0.73
9:82:50:LEU:HA	9:82:53:VAL:HG22	1.70	0.73
25:14:1918:A:O2'	25:14:1920:OMC:N4	2.20	0.73
36:25:75:SER:OG	41:75:74:ARG:NH1	2.21	0.73
40:65:74:ALA:HB1	40:65:107:GLU:HB2	1.70	0.73
25:1H:2343:C:O2'	25:1H:2373:G:O2'	2.06	0.73
1:13:639:G:H2'	1:13:640:A:H8	1.54	0.73
25:1H:878:A:N6	25:1H:899:A:O2'	2.21	0.73
30:39:61:GLY:HA2	30:39:77:ASP:HB3	1.70	0.73
13:4A:44:ARG:HG2	13:4A:45:VAL:H	1.52	0.73
25:14:558:G:H5"	35:15:112:LEU:HD22	1.69	0.73
25:14:1997:G:OP2	62:14:3518:HOH:O	2.06	0.73
41:B8:55:ASN:H	41:B8:59:THR:HB	1.53	0.73
51:L8:10:LYS:NZ	51:L8:15:TYR:OH	2.22	0.73
1:1G:147:G:H2'	1:1G:148:G:H8	1.51	0.73
5:42:9:LYS:HB2	5:42:112:LEU:HD11	1.70	0.73
25:14:2777:G:OP2	25:14:2781:A:O2'	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:745:C:OP1	1:13:851:G:O2'	2.07	0.73
25:1H:563:G:OP2	62:1H:3630:HOH:O	2.06	0.73
25:1H:2306:C:N4	31:41:42:GLY:O	2.22	0.73
41:B8:24:PRO:HB2	41:B8:99:LEU:HD21	1.70	0.73
1:1G:1324:A:H4'	1:1G:1362:C:H4'	1.70	0.73
1:1G:1343:G:H4'	9:82:122:ALA:HB3	1.71	0.73
1:1G:1422:G:H5"	36:25:48:PRO:HB3	1.69	0.73
25:14:708:C:H42	25:14:723:G:H1	1.33	0.73
54:K5:8:LYS:HB2	54:K5:27:LYS:HA	1.69	0.73
25:14:583:G:N7	62:14:3557:HOH:O	2.20	0.73
1:13:1452:C:H4'	1:13:1453:G:H5'	1.71	0.73
25:1H:2159:G:H2'	25:1H:2160:G:H8	1.54	0.73
38:88:30:GLY:HA2	38:88:107:ALA:HB2	1.70	0.73
9:82:46:ALA:HB2	9:82:74:ILE:HG23	1.69	0.73
25:14:2719:G:OP2	62:14:3517:HOH:O	2.06	0.73
25:1H:2832:U:H4'	25:1H:2833:G:H5"	1.70	0.73
51:L8:5:LYS:HB3	51:L8:57:GLU:HB3	1.69	0.73
1:1G:1162:C:H42	1:1G:1174:G:H1	1.35	0.73
25:14:640:C:H42	25:14:648:G:H1	1.36	0.73
25:14:1283:G:N2	25:14:1286:A:OP2	2.21	0.73
25:14:1800:C:OP2	28:19:183:ARG:NH2	2.21	0.73
25:1H:511:U:OP2	62:1H:3631:HOH:O	2.07	0.72
25:1H:2346:A:O2'	54:O8:24:GLU:OE2	2.07	0.72
25:14:450:G:O6	62:14:3516:HOH:O	2.05	0.72
41:75:16:ARG:NH1	41:75:80:SER:O	2.21	0.72
1:13:1002:G:H2'	1:13:1003:G:H8	1.54	0.72
3:2E:20:SER:OG	3:2E:40:ARG:NH2	2.22	0.72
25:14:2589:A:OP1	62:14:3511:HOH:O	2.07	0.72
35:58:4:TYR:O	42:C8:64:ARG:NH1	2.21	0.72
41:B8:57:PHE:O	41:B8:58:ASN:ND2	2.22	0.72
10:1A:3:LYS:N	10:1A:74:ILE:O	2.22	0.72
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.71	0.72
25:14:273(C):C:H42	25:14:363(C):G:H1	1.36	0.72
26:1J:4:C:H42	26:1J:116:G:H1	1.35	0.72
25:1H:1728:G:H8	25:1H:1732:A:H62	1.38	0.72
25:14:1582:C:HO2'	25:14:1586:A:H8	1.38	0.72
25:14:2285:C:OP2	54:K5:27:LYS:NZ	2.23	0.72
47:D5:80:ARG:HB2	47:D5:82:ARG:HG2	1.72	0.72
25:1H:565:C:OP1	43:D8:82:ARG:NH2	2.22	0.72
25:1H:1016:G:N7	62:1H:3695:HOH:O	2.20	0.72
40:A8:26:LEU:HB3	40:A8:87:PHE:HA	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2119:A:N6	25:14:2170:A:N7	2.37	0.72
25:1H:2524:G:N7	62:1H:3705:HOH:O	2.23	0.72
1:1G:536:C:OP1	62:1G:1804:HOH:O	2.08	0.72
1:1G:1437:C:H42	1:1G:1464:G:H1	1.34	0.72
4:32:191:ARG:NH1	4:32:191:ARG:O	2.22	0.72
25:14:729:G:OP2	28:19:13:ARG:NH1	2.22	0.72
41:B8:20:PRO:HD2	41:B8:86:ILE:HG23	1.71	0.72
1:1G:1256:A:N6	1:1G:1278:U:OP2	2.22	0.72
25:14:2472:G:N2	25:14:2529:G:O6	2.23	0.72
1:13:198:G:H1	1:13:219:C:H42	1.36	0.72
25:14:2239:G:OP2	62:14:3519:HOH:O	2.07	0.72
4:3E:120:LEU:HB3	4:3E:126:ILE:HD11	1.71	0.72
30:31:101:LEU:HD12	30:31:102:PRO:HD2	1.72	0.72
45:B5:43:VAL:HG23	45:B5:51:VAL:HG21	1.70	0.72
25:14:67:U:H3	25:14:74:A:H2	1.38	0.71
25:14:530:G:O2'	25:14:532:A:N7	2.23	0.71
25:14:2357:U:OP1	48:E5:20:ARG:NH1	2.23	0.71
25:1H:1352:U:O5'	62:1H:3635:HOH:O	2.09	0.71
1:1G:833:U:H3	1:1G:853:G:H1	1.38	0.71
47:D5:48:PHE:HA	47:D5:51:ALA:HB3	1.71	0.71
14:5I:21:TYR:HE2	14:5I:23:ARG:HE	1.36	0.71
25:1H:1828:G:OP2	62:1H:3633:HOH:O	2.07	0.71
11:2I:33:THR:HA	11:2I:39:PRO:HA	1.72	0.71
1:1G:1498:UR3:O2'	1:1G:1499:A:OP2	2.08	0.71
42:85:90:VAL:HG13	43:95:39:LEU:HB2	1.73	0.71
25:1H:958:U:OP2	38:88:14:ARG:NH1	2.22	0.71
25:1H:1042:G:N2	25:1H:1113:U:O2	2.24	0.71
38:88:79:LEU:O	38:88:81:VAL:N	2.22	0.71
25:14:456:C:H2'	45:B5:69:TYR:HE2	1.55	0.71
25:14:2706:G:N7	62:14:3567:HOH:O	2.23	0.71
46:C5:102:CYS:SG	46:C5:103:GLY:N	2.62	0.71
1:13:1320:C:H5'	19:AI:70:LYS:HG3	1.73	0.71
25:1H:467:G:OP1	55:P8:33:ARG:NH1	2.24	0.71
29:21:54:GLN:HB2	29:21:76:ARG:HB3	1.70	0.71
1:1G:1125:U:OP2	1:1G:1145:C:N4	2.23	0.71
1:1G:1268:A:N3	1:1G:1326:C:O2'	2.24	0.71
28:19:242:ARG:HG3	28:19:246:PRO:HG3	1.72	0.71
1:13:1347:G:N2	1:13:1374:A:OP2	2.19	0.71
2:1E:77:ALA:HB2	2:1E:211:ILE:HD13	1.72	0.71
25:1H:372:G:N2	25:1H:401:A:OP2	2.22	0.71
25:1H:2126:A:H2	25:1H:2162:G:H21	1.39	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:149:ARG:NH2	32:51:167:GLU:OE2	2.22	0.71
25:14:536:A:OP1	42:85:53:ARG:NH1	2.23	0.71
56:M5:37:SER:O	56:M5:40:GLU:N	2.20	0.71
1:13:184:G:H2'	1:13:185:A:H8	1.55	0.71
1:1G:736:C:H2'	1:1G:737:A:C8	2.26	0.71
25:14:1332:G:OP1	62:14:3522:HOH:O	2.09	0.71
38:45:59:ARG:HG2	38:45:61:GLY:H	1.54	0.71
25:1H:2249:U:O4	62:1H:3632:HOH:O	2.07	0.71
26:16:44:G:H1'	26:16:47:C:H42	1.55	0.71
1:13:766:A:OP2	62:13:1804:HOH:O	2.08	0.70
2:12:167:PRO:O	2:12:171:ALA:N	2.24	0.70
22:3K:22:A:H61	22:3K:47:G:H2'	1.56	0.70
25:1H:1171:G:N2	25:1H:1178:C:O2	2.24	0.70
25:1H:1899:G:H21	25:1H:1902:C:N4	1.89	0.70
31:41:141:PHE:HB2	31:41:144:ILE:HG12	1.73	0.70
1:1G:673:G:H2'	1:1G:674:G:C8	2.26	0.70
25:14:2499:C:OP2	62:14:3521:HOH:O	2.08	0.70
46:C5:55:TYR:CG	46:C5:56:PRO:HD3	2.26	0.70
40:A8:87:PHE:HB2	40:A8:112:PHE:CZ	2.26	0.70
25:14:584:C:OP2	42:85:10:ARG:NH2	2.23	0.70
25:14:1643:G:O6	62:14:3520:HOH:O	2.08	0.70
25:14:1900:A:H1'	25:14:1970:A:H2'	1.71	0.70
30:39:79:GLY:HA2	30:39:86:GLY:HA2	1.71	0.70
25:14:1487:G:H1	25:14:1502:C:H42	1.38	0.70
26:1J:15:A:H5'	26:1J:16:G:C8	2.26	0.70
1:13:210:U:O2'	1:13:216:G:N7	2.25	0.70
25:1H:1997:G:OP2	62:1H:3634:HOH:O	2.08	0.70
25:1H:2033:A:OP1	62:1H:3636:HOH:O	2.09	0.70
1:1G:376:G:H5"	16:7A:5:ARG:HB2	1.73	0.70
1:1G:728:A:H2'	1:1G:729:A:C8	2.26	0.70
2:12:54:THR:HG21	2:12:201:ILE:HD11	1.73	0.70
2:12:142:LEU:O	2:12:146:GLN:NE2	2.24	0.70
40:65:26:LEU:HB3	40:65:87:PHE:HA	1.73	0.70
15:6I:3:ILE:HG23	15:6I:38:ARG:HG3	1.72	0.70
20:BI:35:THR:HG22	62:BI:301:HOH:O	1.90	0.70
25:1H:1604:C:OP2	62:1H:3641:HOH:O	2.10	0.70
25:1H:2334:G:O6	48:I8:74:ARG:NH1	2.24	0.70
41:B8:124:ASP:H	41:B8:127:ALA:HB3	1.56	0.70
2:12:115:LEU:HG	2:12:153:ARG:HH21	1.57	0.70
25:14:2207:C:O2	28:19:151:LYS:NZ	2.25	0.70
39:55:78:LYS:HE2	39:55:83:ILE:HD11	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:17:THR:HB	28:11:205:VAL:H	1.57	0.70
30:31:185:ASP:OD1	30:31:188:ARG:NH1	2.23	0.70
3:22:60:ALA:O	3:22:63:ASN:ND2	2.24	0.70
25:14:761:A:N7	62:14:3571:HOH:O	2.23	0.70
25:14:2680:C:OP2	29:29:111:ARG:NH2	2.25	0.70
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.74	0.70
25:1H:1043:C:H42	25:1H:1112:G:H1	1.40	0.70
31:49:82:LEU:HD23	31:49:86:MET:HB3	1.74	0.70
1:13:1200:C:O2'	1:13:1201:A:OP2	2.07	0.70
24:4L:7:G:H2'	24:4L:8:A:H8	1.56	0.70
25:14:1057:A:N6	25:14:1088:A:OP2	2.25	0.70
25:14:1542:G:O6	25:14:1543:A:N6	2.24	0.70
25:1H:138:G:N2	45:F8:44:GLU:OE2	2.24	0.70
25:1H:587:C:OP2	37:78:21:ARG:NH2	2.24	0.70
36:68:14:THR:HG21	36:68:86:ILE:HB	1.73	0.70
11:2A:22:HIS:HB3	11:2A:29:ILE:HG23	1.72	0.70
13:4A:67:GLU:O	13:4A:69:GLU:N	2.25	0.70
25:14:1817:G:OP1	28:19:88:ARG:NH2	2.25	0.70
25:14:2107:C:H42	25:14:2182:G:H1	1.38	0.70
1:13:158:G:N2	1:13:163:C:O2	2.22	0.69
1:13:346:G:OP2	41:B8:41:ARG:NH1	2.25	0.69
1:13:1054:C:N4	22:1K:35:C:O2	2.25	0.69
52:M8:1:MET:SD	52:M8:6:HIS:NE2	2.63	0.69
25:14:1771:C:OP1	62:14:3525:HOH:O	2.10	0.69
1:13:837:G:H1	1:13:849:C:H42	1.40	0.69
1:13:1329:A:N7	21:1F:7:ARG:NH2	2.39	0.69
2:1E:69:LEU:HD23	2:1E:159:PRO:HG3	1.74	0.69
25:1H:265:A:O2'	25:1H:266:G:H4'	1.92	0.69
25:1H:2104:G:O3'	27:71:223:ARG:NH2	2.25	0.69
29:21:24:THR:HG23	29:21:184:VAL:HG23	1.72	0.69
11:2I:34:ASP:HB3	11:2I:40:ILE:HD11	1.73	0.69
25:1H:1479:G:H1	25:1H:1514:U:H3	1.41	0.69
1:1G:971:G:OP2	1:1G:1231:G:N2	2.23	0.69
25:14:1314:C:OP1	62:14:3522:HOH:O	2.11	0.69
1:13:1402:4OC:HM22	1:13:1403:C:H5'	1.74	0.69
25:1H:1530:G:O6	25:1H:1542:G:N2	2.25	0.69
25:1H:2705:A:OP2	62:1H:3644:HOH:O	2.11	0.69
25:1H:2788:C:O2'	25:1H:2809:A:N3	2.24	0.69
27:71:32:LEU:HD13	27:71:220:PRO:HD2	1.75	0.69
52:I5:2:LYS:HD3	52:I5:5:ILE:HG23	1.75	0.69
1:13:501:C:H2'	1:13:502:G:H8	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:45:VAL:HA	32:51:50:VAL:HG23	1.75	0.69
44:E8:18:ARG:HG2	44:E8:76:VAL:HG13	1.73	0.69
16:7A:40:ASP:HB3	16:7A:48:TRP:HB2	1.75	0.69
10:1I:38:ILE:HG23	10:1I:71:LEU:HB3	1.75	0.69
25:1H:77:C:H5"	50:K8:10:LEU:HD11	1.74	0.69
13:4I:107:ALA:HB3	13:4I:111:LYS:HD2	1.75	0.69
25:1H:450:G:OP2	62:1H:3637:HOH:O	2.09	0.69
25:1H:1310:G:OP2	55:P8:9:ARG:NH1	2.26	0.69
34:38:40:LEU:HD13	34:38:41:ARG:HG2	1.73	0.69
1:1G:448:A:OP2	1:1G:485:G:N2	2.26	0.69
25:14:1012:U:H3	25:14:1143:A:H2	1.39	0.69
25:14:2485:G:H5"	38:45:46:GLN:HE21	1.57	0.69
51:H5:10:LYS:HB3	51:H5:53:LEU:HD23	1.73	0.69
1:13:1216:G:OP2	14:5I:3:ARG:NH2	2.26	0.69
25:1H:1603:A:OP1	62:1H:3641:HOH:O	2.10	0.69
25:1H:2037:G:N7	62:1H:3718:HOH:O	2.26	0.69
1:1G:1104:G:O2'	2:12:111:ARG:NH2	2.26	0.69
25:14:1300:U:O2'	25:14:1635:G:OP1	2.10	0.69
26:1J:70:C:H42	26:1J:106:G:H1	1.41	0.69
28:19:242:ARG:O	62:19:402:HOH:O	2.11	0.69
31:49:77:ILE:HG22	31:49:80:PHE:H	1.58	0.69
31:49:97:ASP:HA	31:49:100:TRP:HD1	1.57	0.69
1:13:1422:G:H5"	36:68:48:PRO:HB3	1.74	0.69
11:2I:32:ILE:HD12	11:2I:72:ALA:HB2	1.75	0.69
25:1H:1370:C:OP2	62:1H:3643:HOH:O	2.10	0.69
29:21:47:VAL:HG11	29:21:86:PRO:HD2	1.74	0.69
6:5E:12:PRO:HB2	6:5E:57:GLN:HE21	1.57	0.69
28:11:181:GLU:HB2	28:11:273:ARG:HG2	1.75	0.69
1:13:107:G:N7	20:BI:15:ARG:NH1	2.41	0.68
1:13:1247:U:H3	1:13:1290:G:H1	1.41	0.68
13:4I:80:ARG:NH1	19:AI:65:ASN:O	2.25	0.68
25:1H:27:G:H22	25:1H:512:G:H2'	1.57	0.68
25:1H:2290:G:H1	25:1H:2342:C:H42	1.40	0.68
1:1G:276:G:O2'	17:8A:68:ARG:NH1	2.26	0.68
6:52:5:GLU:HB3	6:52:62:TRP:HE1	1.57	0.68
25:14:842:G:N7	62:14:3583:HOH:O	2.26	0.68
26:1J:73:A:OP2	62:1J:301:HOH:O	2.11	0.68
25:1H:509:C:OP1	62:1H:3646:HOH:O	2.11	0.68
25:1H:1754:C:OP1	41:B8:96:ARG:NH1	2.26	0.68
32:51:101:ARG:HH12	32:51:122:THR:HG23	1.57	0.68
47:H8:108:PRO:HG2	47:H8:112:ARG:HB2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:101:LEU:HB2	4:32:138:TYR:HB3	1.75	0.68
19:AA:49:ILE:HG21	19:AA:71:LEU:HD22	1.75	0.68
1:13:648:A:H2'	1:13:649:G:H8	1.57	0.68
1:13:1121:U:H3	1:13:1151:A:H61	1.40	0.68
25:1H:2002:G:OP2	62:1H:3639:HOH:O	2.10	0.68
33:61:127:VAL:HG22	33:61:139:GLN:HB3	1.74	0.68
1:1G:1057:G:H1	1:1G:1203:C:H42	1.40	0.68
25:14:1784:A:OP2	62:14:3528:HOH:O	2.11	0.68
25:1H:392:C:OP1	62:1H:3642:HOH:O	2.10	0.68
19:AA:39:THR:HG22	19:AA:40:ILE:H	1.58	0.68
25:14:2037:G:N7	62:14:3596:HOH:O	2.27	0.68
13:4I:13:LYS:HA	13:4I:44:ARG:HD2	1.75	0.68
19:AI:19:VAL:HG11	19:AI:44:MET:HB3	1.75	0.68
25:1H:487:C:O2	44:E8:53:SER:OG	2.11	0.68
25:1H:674:G:H1'	30:31:74:ARG:HD3	1.76	0.68
1:1G:186(B):C:H1'	20:BA:105:SER:HB2	1.74	0.68
1:1G:474:G:H2'	1:1G:475:G:H8	1.59	0.68
1:1G:1321:C:H41	1:1G:1322:C:H41	1.38	0.68
4:32:175:SER:HB3	4:32:186:LEU:HD21	1.74	0.68
22:3L:9:G:N2	22:3L:46:G:N7	2.42	0.68
26:1J:116:G:H4'	40:65:54:LEU:HB3	1.75	0.68
32:59:125:VAL:HG12	32:59:128:PRO:HA	1.75	0.68
25:1H:1359:A:N6	25:1H:1372:U:H3	1.92	0.68
25:14:389:G:H22	37:35:72:PRO:HD3	1.57	0.68
25:14:1997:G:OP2	62:14:3524:HOH:O	2.10	0.68
26:1J:102:G:N3	47:D5:73:GLN:NE2	2.40	0.68
1:1G:147:G:H1	1:1G:175:C:H42	1.42	0.68
25:14:731:C:OP2	62:14:3527:HOH:O	2.11	0.68
45:B5:6:ASP:OD2	50:G5:29:LYS:NZ	2.24	0.68
25:1H:243:U:OP1	56:Q8:6:THR:OG1	2.12	0.68
25:1H:2270:G:OP2	62:1H:3645:HOH:O	2.11	0.68
31:41:109:VAL:HG21	52:M8:14:ILE:HD13	1.76	0.68
33:61:79:ILE:HG22	33:61:81:VAL:HG22	1.76	0.68
38:88:33:GLY:HA2	38:88:105:GLU:HA	1.74	0.68
40:A8:59:LYS:HD3	40:A8:60:GLY:H	1.59	0.68
25:14:370:G:OP2	62:14:3526:HOH:O	2.11	0.68
25:14:831:G:N7	62:14:3582:HOH:O	2.25	0.68
2:1E:132:LYS:HA	2:1E:135:GLN:HB2	1.76	0.68
25:1H:1221:C:OP1	43:D8:68:LYS:NZ	2.27	0.68
47:H8:4:ARG:NH1	47:H8:60:GLU:OE2	2.27	0.68
3:22:32:LEU:O	3:22:59:ARG:NH1	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:45:55:VAL:HG13	38:45:60:ARG:HA	1.75	0.68
1:13:1210:C:H2'	1:13:1211:U:H5"	1.74	0.68
1:13:1286:A:H5"	21:1F:26:LYS:HD2	1.75	0.68
30:31:198:ALA:HA	30:31:201:VAL:HG12	1.76	0.68
41:B8:28:VAL:HB	41:B8:86:ILE:HD11	1.76	0.68
1:1G:186(A):C:OP1	20:BA:86:ARG:NH1	2.27	0.68
1:1G:1016:A:HO2'	1:1G:1217:C:HO2'	1.41	0.68
5:42:88:LYS:HD3	5:42:123:LEU:HD12	1.76	0.68
1:13:113:G:H1	1:13:314:C:H42	1.42	0.67
1:13:997:U:H2'	1:13:998:G:C8	2.29	0.67
25:1H:2751:G:O2'	25:1H:2752:C:O5'	2.12	0.67
25:1H:2882:A:OP1	39:98:96:ARG:NH1	2.27	0.67
1:1G:1227:A:OP1	19:AA:80:TYR:OH	2.07	0.67
25:14:1828:G:OP2	62:14:3532:HOH:O	2.12	0.67
38:45:64:ILE:HG22	38:45:106:VAL:HG12	1.75	0.67
40:65:106:ARG:NH2	40:65:107:GLU:OE1	2.27	0.67
46:C5:55:TYR:HE2	46:C5:60:PHE:HE1	1.40	0.67
47:D5:107:THR:HB	47:D5:108:PRO:HD3	1.75	0.67
25:1H:1606:G:OP1	62:1H:3653:HOH:O	2.13	0.67
25:1H:2154:G:H2'	25:1H:2155:G:H8	1.58	0.67
37:78:125:VAL:HG13	37:78:144:GLU:HB3	1.75	0.67
38:45:11:LYS:NZ	38:45:86:GLY:O	2.27	0.67
20:BI:62:LEU:HA	20:BI:65:LYS:HB2	1.76	0.67
25:1H:2683:C:OP1	41:B8:53:ARG:NH2	2.27	0.67
25:1H:2844:G:O6	62:1H:3640:HOH:O	2.10	0.67
34:38:50:ARG:HB2	34:38:50:ARG:HH11	1.58	0.67
17:8A:62:SER:HB3	17:8A:72:ARG:HH11	1.59	0.67
25:14:2820:A:OP1	39:55:2:ARG:NH2	2.19	0.67
1:13:183:G:N2	1:13:223:U:O2'	2.27	0.67
19:AI:28:LYS:HA	19:AI:47:HIS:HE1	1.60	0.67
25:1H:2499:C:N3	62:1H:3731:HOH:O	2.27	0.67
30:31:28:ILE:HG22	30:31:112:MET:HB3	1.77	0.67
4:32:15:GLU:OE1	4:32:66:ARG:NH1	2.27	0.67
22:3L:19:G:O2'	22:3L:61:U:N3	2.28	0.67
22:3L:29:C:H2'	22:3L:30:G:H8	1.59	0.67
25:14:411:G:OP1	62:14:3533:HOH:O	2.12	0.67
25:1H:1021:A:H8	25:1H:1022:G:H5"	1.60	0.67
25:1H:2680:C:H5'	29:21:189:PRO:HA	1.74	0.67
25:1H:2701:C:H3'	25:1H:2702:U:C5'	2.24	0.67
49:J8:83:GLU:HG2	49:J8:85:LEU:H	1.58	0.67
54:O8:47:THR:HG22	54:O8:48:VAL:HG12	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:616:G:H1	1:1G:624:C:H42	1.40	0.67
1:1G:976:G:N2	1:1G:1362(A):C:OP2	2.19	0.67
1:1G:1127:G:H2'	1:1G:1128:C:H6	1.59	0.67
1:1G:1240:U:H2'	7:62:32:ARG:HD2	1.77	0.67
1:1G:1315:U:HO2'	1:1G:1360:A:HO2'	1.42	0.67
12:3A:34:CYS:HA	12:3A:55:VAL:HA	1.75	0.67
25:14:1024:G:H3'	25:14:1025:G:H5"	1.76	0.67
30:39:116:ASP:OD1	30:39:119:ARG:NH2	2.28	0.67
31:49:64:THR:HG23	31:49:66:GLN:H	1.59	0.67
4:3E:157:LEU:O	4:3E:161:ASN:ND2	2.25	0.67
25:1H:617:G:OP1	30:31:40:GLN:NE2	2.27	0.67
4:3E:53:ASP:OD1	4:3E:57:ARG:NH2	2.28	0.67
25:1H:946:G:OP1	62:1H:3651:HOH:O	2.12	0.67
39:98:72:ASP:HB3	39:98:75:LEU:HD12	1.75	0.67
47:H8:15:PRO:HA	47:H8:18:LEU:HD13	1.76	0.67
1:1G:189:U:O2	17:8A:63:ARG:NH1	2.27	0.67
25:14:1297:C:O2'	25:14:1302:A:N1	2.26	0.67
25:14:1315:C:OP2	62:14:3522:HOH:O	2.11	0.67
22:1K:12:G:H1	22:1K:24:C:H42	1.43	0.67
25:1H:49:A:N7	25:1H:120:U:H5	1.93	0.67
1:1G:93:U:H2'	1:1G:95:G:C8	2.30	0.67
1:1G:1281:U:O4	10:1A:5:ARG:NH2	2.28	0.67
25:14:2415:G:H4'	37:35:67:MET:H	1.59	0.67
25:14:2881:C:H2'	39:55:96:ARG:CZ	2.24	0.67
31:49:68:PRO:HA	31:49:92:VAL:HB	1.77	0.67
33:69:76:THR:HG21	33:69:138:ILE:HD11	1.77	0.67
1:13:1124:G:H3'	1:13:1145:C:H41	1.59	0.67
25:1H:1083:U:H2'	25:1H:1085:A:H5"	1.75	0.67
25:1H:2175:C:O2'	27:71:219:GLY:O	2.12	0.67
1:1G:1038:C:O2'	1:1G:1039:C:O5'	2.13	0.67
2:12:11:LEU:HD13	2:12:11:LEU:H	1.59	0.67
11:2A:13:GLN:HE21	11:2A:15:ALA:HB2	1.60	0.67
15:6A:80:ALA:O	15:6A:84:LYS:NZ	2.24	0.67
25:14:997:G:OP2	42:85:58:ARG:NH1	2.28	0.67
25:14:2060:A:O2'	25:14:2502:G:O4'	2.11	0.67
32:59:26:VAL:HG21	32:59:75:ALA:HB1	1.76	0.67
36:25:80:ASP:OD1	41:75:64:ARG:NH2	2.27	0.67
53:J5:16:ARG:NH1	53:J5:17:ASP:OD1	2.28	0.67
5:4E:11:ILE:HD11	5:4E:31:LEU:HD12	1.76	0.67
25:1H:730:C:OP2	62:1H:3622:HOH:O	2.13	0.67
47:H8:7:ALA:HB2	47:H8:59:LEU:HD22	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:63:C:N4	22:3L:64:G:O6	2.28	0.67
25:14:883:G:H22	25:14:893:C:H42	1.43	0.67
1:13:1386:G:N7	62:13:1816:HOH:O	2.28	0.66
7:6E:20:ASP:HB3	7:6E:23:VAL:HG22	1.76	0.66
25:1H:833:U:O2	37:78:55:ARG:NH1	2.28	0.66
25:1H:996:A:OP2	42:C8:92:ARG:NH2	2.28	0.66
25:1H:1906:G:H1	25:1H:1924:C:H42	1.42	0.66
34:38:93:LEU:HD22	34:38:127:GLU:HA	1.75	0.66
52:M8:9:LEU:H	52:M8:27:THR:HG23	1.59	0.66
9:82:103:THR:HG22	9:82:105:ASP:H	1.59	0.66
25:14:1110:G:O2'	25:14:1111:A:O4'	2.13	0.66
25:14:2575:C:O3'	62:14:3530:HOH:O	2.11	0.66
30:39:63:LYS:HE3	30:39:67:GLN:HB3	1.75	0.66
1:13:105:G:OP2	20:BI:18:GLN:NE2	2.27	0.66
1:1G:476:G:H2'	1:1G:477:G:H8	1.60	0.66
13:4A:73:GLU:HG3	52:I5:52:THR:HG21	1.76	0.66
25:14:2873:A:H8	39:55:6:SER:H	1.43	0.66
30:39:125:LEU:HD23	30:39:125:LEU:H	1.59	0.66
42:85:88:ILE:HG22	43:95:49:THR:HA	1.76	0.66
25:1H:602:G:O2'	25:1H:604:G:O2'	2.14	0.66
25:1H:778:G:OP2	62:1H:3652:HOH:O	2.12	0.66
25:14:95:G:HO2'	50:G5:48:HIS:HD1	1.43	0.66
28:19:206:LEU:HD22	28:19:211:ARG:HG2	1.76	0.66
29:21:9:VAL:HG23	41:B8:3:ARG:HG2	1.77	0.66
1:1G:610:G:OP1	62:1G:1805:HOH:O	2.12	0.66
2:12:100:GLY:O	2:12:104:ASN:N	2.28	0.66
25:14:1226:G:H5'	43:95:85:LYS:HB3	1.77	0.66
11:2I:79:SER:HB2	11:2I:106:LYS:HD2	1.77	0.66
25:1H:945:A:C8	62:1H:3826:HOH:O	2.48	0.66
25:1H:1485:G:H1	25:1H:1504:C:H42	1.42	0.66
25:1H:2421:G:OP1	54:O8:6:ARG:NH1	2.29	0.66
46:G8:14:LEU:HD23	46:G8:82:PRO:HG3	1.78	0.66
1:1G:947:G:HO2'	1:1G:1306:A:HO2'	1.42	0.66
2:12:161:ALA:HB1	2:12:185:ILE:HD11	1.77	0.66
57:2L:8:4SU:HN3	57:2L:14:A:N6	1.92	0.66
25:14:2016:U:OP1	62:14:3536:HOH:O	2.14	0.66
28:19:16:MET:HG2	28:19:211:ARG:HH21	1.61	0.66
36:25:24:VAL:HA	36:25:39:ILE:HG22	1.75	0.66
42:85:92:ARG:O	42:85:95:LEU:N	2.29	0.66
1:13:1319:A:OP1	19:AI:70:LYS:NZ	2.29	0.66
1:13:1391:U:H2'	1:13:1392:G:C8	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1113:U:H5'	32:51:2:SER:HB2	1.78	0.66
25:14:1899:G:H22	25:14:1902:C:N4	1.90	0.66
30:39:40:GLN:HE22	30:39:182:ASN:HB2	1.60	0.66
12:3I:50:ARG:HB3	12:3I:66:TYR:HE1	1.61	0.66
25:1H:860:U:OP1	62:1H:3650:HOH:O	2.12	0.66
25:1H:1434:A:H61	25:1H:1558:A:N6	1.94	0.66
57:2L:21:U:H3'	57:2L:22:A:H5'	1.77	0.66
26:1J:18:G:H1	26:1J:65:C:H42	1.42	0.66
41:75:30:VAL:HG12	41:75:86:ILE:HD13	1.78	0.66
1:13:186(A):C:H5"	20:BI:86:ARG:HD2	1.78	0.66
1:13:1077:G:N2	1:13:1080:A:OP2	2.23	0.66
25:1H:1469:A:OP2	62:1H:3649:HOH:O	2.11	0.66
25:1H:2156:G:H2'	25:1H:2157:G:C2	2.31	0.66
30:31:155:LEU:HB2	30:31:189:THR:HG21	1.77	0.66
25:14:2392:A:H2	25:14:2424:C:H42	1.44	0.66
41:75:58:ASN:C	41:75:58:ASN:HD22	1.99	0.66
47:D5:146:ILE:HG23	47:D5:175:VAL:HG12	1.77	0.66
25:1H:2159:G:H2'	25:1H:2160:G:C8	2.31	0.66
16:7A:37:GLY:HA2	16:7A:50:LYS:HD3	1.77	0.66
1:13:138:G:H1	1:13:225:C:H42	1.42	0.66
1:13:1147:C:O2	9:8E:16:ARG:NH1	2.29	0.66
1:13:1206:G:O2'	3:2E:192:THR:O	2.12	0.66
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.78	0.66
5:4E:148:VAL:HG21	8:7E:107:LEU:HD22	1.78	0.66
25:1H:1899:G:H21	25:1H:1902:C:H41	1.42	0.66
27:71:194:ARG:HA	27:71:197:GLU:HB2	1.77	0.66
42:C8:92:ARG:HD2	43:D8:11:GLN:HB2	1.78	0.66
1:1G:881:G:P	12:3A:9:ARG:HH22	2.19	0.66
25:14:1156:A:OP2	62:14:3531:HOH:O	2.12	0.66
1:13:894:G:N7	62:13:1817:HOH:O	2.29	0.65
26:16:51:G:OP2	40:A8:59:LYS:NZ	2.29	0.65
43:D8:5:VAL:HG11	43:D8:57:VAL:HG11	1.77	0.65
1:1G:1071:C:H2'	1:1G:1072:G:H8	1.61	0.65
1:1G:1540:U:H3	24:4L:5:A:H61	1.44	0.65
25:14:512:G:N7	62:14:3541:HOH:O	2.28	0.65
25:14:586:A:H5'	30:39:89:VAL:HG21	1.77	0.65
25:14:2392:A:OP2	56:M5:31:HIS:NE2	2.29	0.65
30:39:143:ALA:HB1	30:39:148:LEU:HB2	1.78	0.65
1:13:1246:C:O2	1:13:1291:G:N2	2.25	0.65
3:2E:35:GLU:OE2	3:2E:97:LYS:NZ	2.30	0.65
12:3I:83:ARG:HB2	12:3I:98:VAL:HG23	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1019:U:H3	25:1H:1142(A):A:H62	1.44	0.65
25:1H:2287:A:N6	25:1H:2344:U:H3	1.94	0.65
10:1A:99:LYS:HE2	10:1A:101:VAL:HB	1.78	0.65
25:14:2873:A:H8	39:55:6:SER:N	1.93	0.65
37:35:87:ASP:OD1	37:35:87:ASP:N	2.18	0.65
7:6E:27:ILE:HD11	7:6E:40:ALA:HA	1.79	0.65
25:1H:739:G:OP1	62:1H:3654:HOH:O	2.13	0.65
25:1H:1265:A:OP2	62:1H:3657:HOH:O	2.14	0.65
25:14:311:A:OP2	62:14:3535:HOH:O	2.14	0.65
25:14:2712:U:H1'	25:14:2712(A):A:C8	2.32	0.65
33:69:7:GLU:HG3	33:69:8:PRO:HD2	1.77	0.65
4:3E:96:LEU:HD21	4:3E:139:ARG:HH12	1.61	0.65
25:1H:1972:A:H2'	25:1H:1973:G:H8	1.60	0.65
10:1A:40:LEU:HG	10:1A:41:PRO:HD2	1.76	0.65
25:14:392:C:H5"	25:14:409:C:H5"	1.78	0.65
25:14:528:A:C2	25:14:2042:A:H2'	2.32	0.65
25:14:1754:C:OP1	41:75:96:ARG:NH1	2.29	0.65
25:14:2821:A:OP2	62:14:3534:HOH:O	2.14	0.65
1:13:871:U:OP1	62:13:1805:HOH:O	2.15	0.65
11:2I:48:ILE:HD11	11:2I:64:ALA:HA	1.79	0.65
25:1H:2472:G:H22	25:1H:2477:C:H5'	1.62	0.65
1:1G:74:C:H42	1:1G:96:G:H1	1.45	0.65
1:1G:491:G:N7	62:1G:1826:HOH:O	2.28	0.65
25:14:252:G:OP2	37:35:50:ARG:NH2	2.26	0.65
48:E5:65:GLY:HA3	48:E5:83:PRO:HA	1.77	0.65
1:13:1312:G:H1	1:13:1325:C:H42	1.43	0.65
2:1E:84:GLU:HB3	2:1E:219:VAL:HG21	1.78	0.65
25:1H:1728:G:N1	25:1H:1730:U:OP2	2.29	0.65
25:1H:2334:G:H5'	40:A8:9:ARG:HG3	1.77	0.65
26:16:15:A:H1'	26:16:109:G:C4	2.30	0.65
26:16:40:U:O2'	26:16:45:A:N6	2.28	0.65
34:38:27:VAL:HG12	34:38:28:ASN:HB2	1.79	0.65
45:F8:6:ASP:OD2	50:K8:29:LYS:NZ	2.23	0.65
1:1G:860:A:OP2	62:1G:1807:HOH:O	2.15	0.65
25:14:1071:G:H1'	25:14:1089:G:H2'	1.77	0.65
1:13:1227:A:OP1	19:AI:80:TYR:OH	2.12	0.65
26:16:50:G:OP1	40:A8:63:THR:OG1	2.13	0.65
50:K8:47:ASN:O	50:K8:49:LYS:N	2.29	0.65
53:N8:49:CYS:HA	53:N8:56:LYS:HB2	1.79	0.65
11:2I:30:VAL:HG21	11:2I:65:ALA:HA	1.79	0.65
22:1K:31:G:H1	22:1K:41:C:H42	1.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:33:LEU:HD12	3:22:36:ASP:HB3	1.77	0.65
25:14:587:C:OP2	37:35:21:ARG:NH2	2.29	0.65
25:14:1962:5MC:O2'	25:14:1964:G:OP2	2.15	0.65
25:14:2895:U:H2'	25:14:2896:C:O4'	1.97	0.65
47:D5:87:ASP:N	47:D5:87:ASP:OD1	2.29	0.65
10:1I:7:LYS:HB3	10:1I:97:GLU:HB2	1.78	0.65
25:1H:2582:G:OP1	62:1H:3656:HOH:O	2.14	0.65
25:1H:2659:G:O2'	25:1H:2661:G:N7	2.27	0.65
27:71:181:PRO:HB2	27:71:184:LYS:HB2	1.79	0.65
1:1G:971:G:C5	1:1G:1365:G:H5'	2.32	0.65
13:4A:37:THR:O	13:4A:55:ARG:NH1	2.27	0.65
25:14:1069:A:H5"	25:14:1070:A:H5"	1.78	0.65
29:29:24:THR:HG23	29:29:184:VAL:HG23	1.79	0.65
25:1H:310:A:O2'	25:1H:311:A:H2'	1.97	0.65
25:1H:1103:A:H5'	25:1H:1104:C:C5	2.29	0.65
25:1H:1622:G:OP2	62:1H:3655:HOH:O	2.14	0.65
25:1H:2314:C:H2'	25:1H:2315:G:H8	1.62	0.65
37:78:147:LEU:O	37:78:148:LEU:HB2	1.96	0.65
1:1G:973:G:O6	1:1G:974:A:N6	2.29	0.65
1:1G:1059:C:OP1	3:22:199:LYS:NZ	2.30	0.65
3:22:92:ALA:HA	3:22:96:GLY:H	1.62	0.65
25:14:2270:G:OP2	62:14:3539:HOH:O	2.15	0.65
25:14:2702:U:H1'	25:14:2703:C:H5	1.62	0.65
41:75:92:GLY:HA2	41:75:116:ALA:HA	1.79	0.65
43:95:29:PRO:HA	43:95:61:VAL:HG22	1.78	0.65
19:AI:40:ILE:HG12	19:AI:41:VAL:H	1.62	0.64
25:1H:863:A:N7	62:1H:3757:HOH:O	2.30	0.64
25:1H:2723:C:H5"	39:98:1:MET:HE2	1.79	0.64
41:B8:16:ARG:HE	41:B8:19:LEU:HD21	1.61	0.64
1:1G:346:G:OP1	41:75:41:ARG:NH2	2.30	0.64
1:1G:1026:G:N1	1:1G:1036:G:N3	2.45	0.64
2:12:8:LYS:HG2	2:12:11:LEU:HD11	1.79	0.64
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.78	0.64
25:14:1365:A:O2'	49:F5:11:ARG:NH2	2.24	0.64
33:69:8:PRO:HA	33:69:14:ASP:HA	1.79	0.64
12:3A:34:CYS:HB3	12:3A:55:VAL:HG22	1.80	0.64
33:69:88:ILE:HG22	33:69:90:GLY:H	1.62	0.64
25:1H:964:C:OP1	62:1H:3658:HOH:O	2.15	0.64
40:A8:24:LEU:HB2	40:A8:85:VAL:HG12	1.79	0.64
1:1G:1127:G:N2	1:1G:1145:C:O2	2.26	0.64
2:12:32:ILE:O	2:12:43:ASP:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2A:62:GLN:HB2	11:2A:93:GLN:HG3	1.79	0.64
25:14:221:A:H4'	25:14:222:A:O5'	1.98	0.64
25:14:467:G:OP1	55:L5:33:ARG:NH1	2.29	0.64
25:14:1980:G:O2'	25:14:1982:C:OP2	2.15	0.64
25:14:2875:C:OP1	41:75:3:ARG:NH1	2.29	0.64
1:13:405:U:O4	4:3E:2:GLY:N	2.30	0.64
5:4E:10:MET:HB3	5:4E:32:VAL:HG22	1.79	0.64
22:3K:57:C:H2'	22:3K:58:A:H8	1.60	0.64
25:14:2495:G:O3'	38:45:81:VAL:HG11	1.97	0.64
25:14:2702:U:H1'	25:14:2703:C:C5	2.33	0.64
54:K5:23:THR:OG1	54:K5:24:GLU:N	2.29	0.64
1:13:513:C:H42	1:13:538:G:H1	1.45	0.64
1:1G:260:G:OP2	20:BA:83:ARG:NH1	2.30	0.64
1:1G:321:A:H62	1:1G:328:C:H1'	1.62	0.64
1:1G:1321:C:H41	1:1G:1322:C:N4	1.94	0.64
1:1G:1325:C:H4'	21:1B:17:THR:HG21	1.80	0.64
25:14:2330:G:H1	25:14:2385:C:H42	1.45	0.64
25:14:2335:A:O2'	25:14:2336:A:O5'	2.13	0.64
25:1H:1654:A:OP2	39:98:1:MET:N	2.23	0.64
47:H8:151:HIS:HD2	47:H8:170:THR:HA	1.63	0.64
1:1G:817:C:OP2	62:1G:1806:HOH:O	2.14	0.64
1:1G:986:A:N3	19:AA:52:TYR:OH	2.30	0.64
25:14:2314:C:H5'	31:49:38:VAL:HG11	1.79	0.64
44:A5:13:SER:HA	44:A5:99:ARG:HB2	1.79	0.64
1:13:160:A:H1'	1:13:344:A:N7	2.13	0.64
1:13:451:A:OP1	1:13:481:G:N2	2.31	0.64
3:2E:47:LEU:HD11	3:2E:52:LEU:HB3	1.78	0.64
19:AI:40:ILE:HG12	19:AI:41:VAL:HG13	1.80	0.64
25:1H:760:G:OP1	62:1H:3662:HOH:O	2.15	0.64
25:1H:2125:G:N2	25:1H:2172:U:OP1	2.29	0.64
25:1H:2401:U:H2'	25:1H:2402:C:H5"	1.80	0.64
39:98:1:MET:O	39:98:2:ARG:HD3	1.97	0.64
1:1G:585:G:OP1	17:8A:37:LYS:NZ	2.30	0.64
1:1G:1244:C:H2'	1:1G:1245:A:H8	1.61	0.64
2:12:32:ILE:HD11	2:12:40:HIS:HB3	1.78	0.64
25:14:132:G:H1	25:14:147:U:H3	1.46	0.64
25:14:2881:C:H2'	39:55:96:ARG:NE	2.13	0.64
49:F5:40:ARG:HH21	49:F5:42:GLN:HG2	1.62	0.64
10:1I:50:ILE:HB	14:5I:41:ARG:HE	1.62	0.64
25:1H:2196:C:OP2	62:1H:3660:HOH:O	2.15	0.64
25:1H:2552:OMU:H2'	25:1H:2554:U:OP2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:41:29:TRP:O	31:41:33:ARG:NH1	2.30	0.64
25:14:730:C:OP2	62:14:3527:HOH:O	2.14	0.64
25:14:987:G:O2'	25:14:1000:A:N3	2.29	0.64
25:14:1346:G:OP2	62:14:3540:HOH:O	2.15	0.64
36:25:89:ASN:OD1	36:25:89:ASN:N	2.31	0.64
12:3I:67:ILE:HG23	12:3I:97:ILE:HD12	1.80	0.64
25:1H:2438:U:O3'	25:1H:2439:A:H3'	1.98	0.64
1:1G:286:G:N7	62:1G:1830:HOH:O	2.30	0.64
1:1G:947:G:O3'	13:4A:109:THR:OG1	2.16	0.64
25:14:674:G:H1'	30:39:74:ARG:HD3	1.78	0.64
25:1H:1364:G:N7	49:J8:2:SER:HB3	2.13	0.64
1:1G:452:A:OP1	16:7A:43:LYS:NZ	2.30	0.64
25:14:162:U:H4'	25:14:171:G:C4	2.33	0.64
1:13:838:G:H1	1:13:848:C:N4	1.95	0.63
17:8I:51:TYR:HE1	17:8I:76:LEU:HB2	1.63	0.63
30:31:185:ASP:HA	30:31:188:ARG:HD3	1.80	0.63
47:H8:76:LEU:HA	47:H8:83:PRO:HA	1.78	0.63
13:4A:44:ARG:HH21	13:4A:48:LEU:HD21	1.63	0.63
15:6A:39:LEU:HD12	15:6A:56:LEU:HB2	1.80	0.63
25:14:569:U:OP2	62:14:3537:HOH:O	2.14	0.63
33:69:48:GLU:OE1	33:69:49:ALA:N	2.31	0.63
44:A5:65:LEU:HD13	44:A5:68:ARG:HD2	1.80	0.63
1:13:372:C:H42	1:13:389:A:H62	1.46	0.63
1:13:376:G:H2'	1:13:377:G:C8	2.33	0.63
25:1H:1187:G:O6	62:1H:3648:HOH:O	2.11	0.63
25:1H:2574:G:OP1	62:1H:3663:HOH:O	2.16	0.63
1:1G:54:C:N4	1:1G:353:A:OP2	2.31	0.63
3:22:134:ILE:HD12	3:22:151:VAL:HG11	1.79	0.63
25:14:2103:C:H42	25:14:2186:G:H1	1.46	0.63
1:13:1002:G:H2'	1:13:1003:G:C8	2.32	0.63
16:7I:17:TYR:HB2	16:7I:39:TYR:HB3	1.80	0.63
25:1H:191:A:N1	62:1H:3759:HOH:O	2.30	0.63
1:1G:501:C:H2'	1:1G:502:G:C8	2.32	0.63
1:1G:686:U:O4	1:1G:703:G:O2'	2.10	0.63
37:35:85:LEU:HA	37:35:88:LEU:HD22	1.80	0.63
25:1H:484:C:H2'	25:1H:485:C:C6	2.34	0.63
25:1H:1588:C:H2'	25:1H:1589:C:H6	1.63	0.63
25:1H:1920:OMC:HM22	25:1H:1921:G:H5'	1.80	0.63
52:M8:48:ARG:HD3	52:M8:51:ASP:H	1.62	0.63
19:AA:48:THR:HG22	19:AA:61:TYR:HA	1.79	0.63
57:2L:32:G:H1	57:2L:40:C:H42	1.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:B5:65:ARG:HB3	45:B5:70:LEU:HA	1.79	0.63
50:G5:50:ILE:HD12	50:G5:51:ARG:H	1.63	0.63
1:13:422:C:O2'	1:13:423:G:N2	2.31	0.63
22:1K:31:G:H2'	22:1K:32:G:H8	1.63	0.63
25:1H:2471:C:N4	25:1H:2476:A:O2'	2.31	0.63
32:51:41:MET:HG3	32:51:54:ARG:HA	1.80	0.63
36:68:26:LYS:HB2	36:68:30:ALA:HB2	1.81	0.63
36:68:111:PHE:HB3	36:68:114:ILE:HG13	1.80	0.63
1:1G:946:A:O2'	1:1G:1333:A:N3	2.24	0.63
25:14:2059:A:H5'	25:14:2060:A:OP2	1.99	0.63
25:14:2116:G:OP2	25:14:2166:G:N2	2.31	0.63
32:59:146:ALA:O	32:59:150:ALA:N	2.30	0.63
25:1H:247:G:O6	56:Q8:12:LYS:NZ	2.30	0.63
25:1H:1972:A:H2'	25:1H:1973:G:C8	2.33	0.63
40:A8:20:ARG:HE	40:A8:21:THR:HG22	1.63	0.63
41:B8:111:ARG:HD3	41:B8:111:ARG:H	1.62	0.63
16:7A:53:VAL:HG12	16:7A:79:VAL:HG22	1.79	0.63
39:55:97:VAL:HA	39:55:113:LEU:O	1.98	0.63
43:95:58:VAL:HG12	43:95:98:GLU:HB2	1.80	0.63
47:D5:138:GLU:HG3	47:D5:156:LYS:HG3	1.79	0.63
1:13:560:U:H4'	1:13:561:U:H5"	1.81	0.63
1:13:1366:C:O3'	10:1I:60:ARG:NH2	2.32	0.63
4:3E:167:GLY:HA2	28:19:135:PHE:HE2	1.62	0.63
18:9I:74:ARG:HG2	18:9I:79:LEU:HB2	1.81	0.63
33:61:124:GLY:H	33:61:142:VAL:HG23	1.64	0.63
36:68:25:LEU:HB2	36:68:38:VAL:HG13	1.80	0.63
53:N8:41:PRO:HB2	53:N8:42:PRO:HD3	1.80	0.63
1:1G:1512:U:H2'	1:1G:1513:A:C8	2.34	0.63
4:3E:73:ARG:O	4:3E:77:ASN:ND2	2.26	0.63
6:5E:97:PHE:HB3	18:9I:32:ARG:HD3	1.80	0.63
18:9I:86:VAL:HG12	18:9I:87:ARG:HG2	1.80	0.63
1:1G:735:C:H2'	1:1G:736:C:H6	1.63	0.63
1:1G:779:C:H5"	11:2A:122:LYS:HG2	1.80	0.63
13:4A:79:LYS:NZ	13:4A:82:MET:SD	2.67	0.63
25:14:2585:U:O2'	25:14:2586:C:O5'	2.16	0.63
1:13:936:C:H42	1:13:1379:G:H1	1.47	0.63
1:13:1152:A:H5"	10:1I:13:HIS:CD2	2.33	0.63
25:1H:99:U:H4'	25:1H:101:G:H5'	1.81	0.63
25:1H:2692:C:O2	25:1H:2847:U:O2'	2.17	0.63
39:98:26:LYS:O	39:98:30:THR:OG1	2.17	0.63
44:E8:68:ARG:HE	44:E8:112:GLY:HA2	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:762:C:H2'	1:1G:763:G:H8	1.64	0.63
1:1G:963:G:N3	10:1A:55:LYS:NZ	2.46	0.63
7:62:16:LEU:O	7:62:18:TYR:N	2.32	0.63
9:82:29:ASN:O	9:82:31:GLN:N	2.32	0.63
9:82:121:ARG:NH1	9:82:122:ALA:O	2.32	0.63
25:14:783:A:H8	25:14:784:A:H4'	1.63	0.63
25:14:2394:C:H5"	37:35:64:LYS:HD2	1.81	0.63
47:D5:97:GLU:HB3	47:D5:125:LEU:HD11	1.80	0.63
25:1H:273(F):C:H3'	25:1H:274:G:H5"	1.79	0.62
44:E8:88:ARG:HB3	44:E8:92:ARG:HB2	1.80	0.62
49:J8:4:VAL:HG23	49:J8:11:ARG:HB3	1.81	0.62
1:1G:445:G:H2'	1:1G:446:G:H8	1.63	0.62
1:1G:1175:G:H2'	1:1G:1176:A:H8	1.64	0.62
19:AA:36:ARG:HG3	19:AA:72:GLY:H	1.62	0.62
25:14:62:C:H42	25:14:92:G:H1	1.47	0.62
35:15:56:ASN:H	35:15:125:GLY:H	1.47	0.62
39:55:44:LEU:HD12	39:55:114:VAL:HG11	1.78	0.62
1:13:243:A:H4'	1:13:244:U:O5'	1.99	0.62
1:13:688:G:H2'	1:13:689:C:H6	1.64	0.62
25:1H:2103:C:H2'	25:1H:2104:G:C8	2.33	0.62
33:61:5:LEU:HD11	33:61:19:VAL:HG12	1.80	0.62
33:61:96:ASP:OD1	33:61:96:ASP:N	2.32	0.62
1:1G:5:U:H4'	1:1G:6:G:O5'	1.99	0.62
1:1G:370:C:H42	1:1G:391:G:H1	1.46	0.62
1:1G:595:G:H4'	1:1G:596:C:H5'	1.81	0.62
1:1G:1298:C:H41	7:62:114:ARG:HA	1.63	0.62
3:22:77:ILE:HG23	3:22:83:ARG:HB2	1.81	0.62
19:AA:52:TYR:HB2	19:AA:57:HIS:CE1	2.34	0.62
25:14:1430:C:H2'	25:14:1431:U:C6	2.34	0.62
25:14:2844:G:H3'	25:14:2845:G:H8	1.64	0.62
36:25:71:ARG:HH21	36:25:77:ILE:HG21	1.63	0.62
1:13:1004:A:H2	1:13:1024:G:C8	2.18	0.62
2:1E:8:LYS:HD3	2:1E:8:LYS:H	1.65	0.62
2:1E:185:ILE:HG22	2:1E:199:TYR:HB2	1.81	0.62
6:5E:7:ASN:N	6:5E:7:ASN:OD1	2.31	0.62
25:1H:732:C:H3'	62:1H:3714:HOH:O	1.99	0.62
25:1H:857:C:H4'	48:I8:23:VAL:HG21	1.80	0.62
52:M8:37:SER:HA	52:M8:41:PRO:HD2	1.80	0.62
1:1G:1127:G:H2'	1:1G:1128:C:C6	2.34	0.62
25:14:451:C:OP2	62:14:3538:HOH:O	2.15	0.62
25:14:510:C:OP1	62:14:3541:HOH:O	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:662:G:H5”	37:35:17:LYS:HG2	1.81	0.62
28:19:101:GLU:OE2	28:19:103:ARG:NH1	2.31	0.62
32:59:41:MET:HG3	32:59:55:PRO:HD3	1.81	0.62
25:1H:1301:A:HO2’	25:1H:1302:A:H3’	1.63	0.62
37:78:52:GLU:HB3	37:78:55:ARG:HE	1.63	0.62
42:C8:92:ARG:NH1	43:D8:11:GLN:O	2.32	0.62
1:1G:359:U:H2’	1:1G:360:A:C8	2.34	0.62
13:4A:68:GLY:HA2	13:4A:71:ARG:HB2	1.81	0.62
25:14:631:A:OP1	37:35:65:ARG:NH2	2.31	0.62
25:14:994:C:O2’	25:14:996:A:OP1	2.17	0.62
25:14:1091:G:N2	25:14:1101:U:O2	2.28	0.62
25:14:2454:G:H1’	62:14:3757:HOH:O	1.99	0.62
30:39:160:ASN:OD1	30:39:163:VAL:N	2.25	0.62
41:75:26:ASP:O	41:75:49:VAL:HG12	2.00	0.62
48:E5:38:VAL:HB	48:E5:59:LEU:HB2	1.81	0.62
1:13:1001:G:H2’	1:13:1002:G:O4’	2.00	0.62
17:8I:24:GLU:OE2	17:8I:37:LYS:NZ	2.32	0.62
25:1H:309:G:N3	25:1H:329:G:O2’	2.32	0.62
25:1H:860:U:H5	25:1H:917:A:C2	2.16	0.62
43:D8:6:LYS:HA	43:D8:11:GLN:HA	1.81	0.62
1:1G:1309:G:OP1	13:4A:88:ARG:NH1	2.29	0.62
1:1G:1318:A:H4’	19:AA:10:PHE:CD2	2.34	0.62
13:4A:81:LEU:HD13	13:4A:89:GLY:HA2	1.80	0.62
25:14:773:U:H4’	28:19:47:GLY:HA3	1.82	0.62
25:14:2111:C:H42	25:14:2147:G:H21	1.46	0.62
37:35:36:LYS:O	62:35:201:HOH:O	2.15	0.62
41:75:45:PHE:CD2	41:75:74:ARG:HD2	2.35	0.62
46:C5:55:TYR:CD2	46:C5:56:PRO:HD3	2.34	0.62
4:3E:122:ARG:HD3	4:3E:134:ASP:HB2	1.80	0.62
20:BI:85:MET:HA	20:BI:88:VAL:HG12	1.81	0.62
23:2K:32:G:H2’	23:2K:33:OMC:H6	1.64	0.62
22:3K:77:A:O2’	25:1H:2394:C:N3	2.26	0.62
40:A8:28:VAL:HG11	40:A8:98:VAL:HG13	1.82	0.62
7:62:111:ARG:NH1	7:62:123:GLU:OE1	2.32	0.62
28:19:10:THR:HG23	28:19:13:ARG:HB2	1.82	0.62
28:19:108:PRO:HG2	28:19:111:LEU:HD23	1.81	0.62
32:59:103:LEU:HG	32:59:105:LEU:HB3	1.79	0.62
1:13:501:C:H2’	1:13:502:G:C8	2.34	0.62
1:13:545:C:OP2	4:3E:62:GLN:NE2	2.33	0.62
1:13:1369:C:H2’	1:13:1370:G:C8	2.34	0.62
25:1H:1178:C:O2’	25:1H:1179:C:O5’	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2712:U:HO2'	25:1H:2712(A):A:H8	1.46	0.62
33:61:110:ASP:HB3	33:61:112:LYS:HG2	1.82	0.62
1:1G:646:U:H2'	1:1G:647:C:C6	2.35	0.62
5:42:76:ILE:HG12	5:42:118:ILE:HD11	1.81	0.62
7:62:41:ARG:NH2	9:82:39:GLY:O	2.32	0.62
25:14:998:C:OP2	42:85:58:ARG:NH2	2.33	0.62
25:14:2336:A:H61	48:E5:43:THR:HG21	1.63	0.62
25:14:2468:G:O2'	25:14:2469:A:O4'	2.16	0.62
47:D5:137:ILE:HG23	47:D5:157:LEU:HD11	1.80	0.62
1:13:184:G:H2'	1:13:185:A:C8	2.35	0.62
1:13:243:A:N6	1:13:281:G:O2'	2.33	0.62
1:13:642:A:N3	8:7E:113:SER:OG	2.28	0.62
10:1I:40:LEU:HB2	10:1I:69:ASN:HB3	1.82	0.62
25:1H:443:A:H3'	30:31:45:ARG:HH12	1.64	0.62
40:A8:83:LYS:HG2	40:A8:109:GLY:HA2	1.81	0.62
22:3L:3:C:H2'	22:3L:4:G:C8	2.33	0.62
25:14:1202:C:H42	25:14:1243:G:H1	1.45	0.62
26:1J:102:G:O6	62:1J:302:HOH:O	2.14	0.62
47:D5:61:LEU:HD11	47:D5:67:LEU:HD12	1.81	0.62
1:13:376:G:H2'	1:13:377:G:H8	1.64	0.62
1:13:457:C:O2	1:13:476:G:N2	2.33	0.62
21:1F:10:ARG:HG2	21:1F:13:ILE:HD12	1.82	0.62
1:1G:401:C:H2'	1:1G:402:G:H8	1.64	0.62
1:1G:929:G:H1	1:1G:1388:C:H42	1.48	0.62
6:52:22:GLU:OE1	6:52:84:ASN:ND2	2.32	0.62
38:45:108:GLY:HA3	47:D5:116:VAL:HG13	1.81	0.62
1:13:1328:C:OP1	21:1F:21:TYR:OH	2.14	0.62
5:4E:100:VAL:O	5:4E:107:ARG:NH2	2.33	0.62
9:8E:29:ASN:N	9:8E:63:ILE:O	2.30	0.62
25:1H:1171:G:N7	25:1H:1174:A:N6	2.48	0.62
25:1H:2731:G:O3'	29:21:203:LYS:NZ	2.33	0.62
27:71:58:VAL:HG22	27:71:199:HIS:HB3	1.80	0.62
1:1G:28:G:O2'	1:1G:296:U:OP1	2.15	0.62
1:1G:1001:G:O6	1:1G:1038:C:N4	2.33	0.62
2:12:121:LEU:HB3	2:12:127:ILE:HG12	1.82	0.62
13:4A:37:THR:HG22	13:4A:55:ARG:HD2	1.82	0.62
25:14:1620:G:O4'	55:L5:1:MET:N	2.32	0.62
25:14:2296:U:OP2	40:65:9:ARG:NH1	2.25	0.62
30:39:53:THR:HG23	30:39:55:GLY:H	1.63	0.62
22:1K:10:G:H2'	22:1K:11:A:H8	1.65	0.61
25:1H:535:C:H42	25:1H:558:G:H1	1.46	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2347:C:OP1	54:O8:39:TYR:OH	2.06	0.61
25:1H:2389:G:H5"	25:1H:2390:U:H5'	1.82	0.61
30:31:155:LEU:HD13	30:31:174:VAL:HG12	1.81	0.61
33:61:6:LEU:HD22	33:61:35:LEU:HA	1.80	0.61
34:38:18:GLU:HB3	34:38:66:LEU:HD22	1.81	0.61
2:12:185:ILE:HG22	2:12:199:TYR:HB2	1.81	0.61
9:82:29:ASN:OD1	9:82:30:GLY:N	2.29	0.61
25:14:2816:C:O2	25:14:2883:A:O2'	2.17	0.61
25:14:2830:G:O6	62:14:3529:HOH:O	2.11	0.61
1:13:67:C:H2'	1:13:68:G:C8	2.34	0.61
1:13:1448:C:H42	1:13:1455:G:H1	1.47	0.61
25:1H:547:A:H2'	25:1H:548:A:C8	2.35	0.61
28:11:166:GLN:HB2	28:11:174:ILE:HG22	1.81	0.61
25:14:2467:C:H4'	38:45:123:HIS:ND1	2.15	0.61
45:B5:27:THR:HB	45:B5:80:ILE:HG22	1.81	0.61
1:13:877:C:H5"	8:7E:88:LYS:HD3	1.81	0.61
19:AI:3:ARG:HE	19:AI:7:LYS:HD2	1.63	0.61
22:1K:20:G:N7	25:1H:881:G:O2'	2.29	0.61
25:1H:784:A:OP2	62:1H:3665:HOH:O	2.16	0.61
25:1H:1634:A:OP2	62:1H:3664:HOH:O	2.16	0.61
31:41:166:ASP:N	31:41:166:ASP:OD1	2.32	0.61
33:61:2:LYS:NZ	33:61:20:ASP:OD2	2.30	0.61
7:62:16:LEU:HD11	9:82:42:ARG:HA	1.81	0.61
8:72:123:GLU:HA	8:72:126:LYS:HD3	1.81	0.61
25:14:571:A:H5'	25:14:2030:A:H62	1.65	0.61
25:14:1973:G:OP2	62:14:3543:HOH:O	2.16	0.61
25:14:2129:C:O2	25:14:2159:G:N1	2.33	0.61
25:14:2425:A:H5'	25:14:2427:C:O4'	2.00	0.61
25:14:2471:C:H3'	25:14:2472:G:H8	1.65	0.61
38:45:138:ASP:N	38:45:138:ASP:OD1	2.33	0.61
1:13:263:A:OP2	20:BI:79:ARG:NH1	2.33	0.61
1:13:427:U:OP2	4:3E:36:ARG:NH1	2.34	0.61
5:4E:102:ALA:HB1	5:4E:106:PRO:HG2	1.82	0.61
12:3I:112:LYS:O	12:3I:114:ARG:HG2	2.01	0.61
25:1H:995:C:OP2	42:C8:54:LYS:NZ	2.34	0.61
39:98:104:ARG:HB3	39:98:107:ASP:HB3	1.81	0.61
25:14:1246:A:P	37:35:15:ARG:HH12	2.24	0.61
25:14:2111:C:C2	25:14:2118:U:H1'	2.36	0.61
26:1J:28:C:H2'	26:1J:29:A:H8	1.66	0.61
37:35:138:LEU:HD21	37:35:144:GLU:HG3	1.82	0.61
38:45:12:GLN:HG2	38:45:73:PRO:HD2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:95:22:VAL:HG22	43:95:23:GLU:H	1.65	0.61
1:13:339:C:OP2	36:68:97:ARG:NH1	2.33	0.61
1:13:1179:A:H4'	9:8E:103:THR:HA	1.81	0.61
1:13:1317:C:N3	19:AI:37:ARG:NH2	2.47	0.61
52:M8:37:SER:HB3	52:M8:42:PHE:CD1	2.36	0.61
1:1G:489:C:H2'	1:1G:490:G:H8	1.65	0.61
1:1G:643:C:H2'	1:1G:644:G:C8	2.36	0.61
2:12:47:THR:HG23	2:12:202:PRO:HD2	1.83	0.61
4:32:168:ARG:HB3	4:32:168:ARG:HH11	1.65	0.61
25:14:391:G:O2'	25:14:410:G:OP1	2.16	0.61
46:C5:38:ILE:HD11	46:C5:64:GLU:HB2	1.83	0.61
49:F5:72:GLU:O	49:F5:76:ARG:NH2	2.33	0.61
25:1H:1742:C:H5'	25:1H:1743:G:OP2	2.01	0.61
25:1H:2777:G:OP2	25:1H:2781:A:O2'	2.19	0.61
52:M8:56:VAL:HA	52:M8:60:GLN:HB3	1.82	0.61
1:1G:841:U:H5'	1:1G:842:C:H5	1.65	0.61
1:1G:1286:A:C8	1:1G:1287:A:H4'	2.35	0.61
2:12:17:PHE:CG	2:12:42:ILE:HG12	2.36	0.61
18:9A:31:LEU:HD13	18:9A:65:ILE:HD13	1.83	0.61
25:14:20:C:OP1	42:85:22:LYS:NZ	2.31	0.61
39:55:51:LEU:HD23	39:55:66:VAL:HG22	1.83	0.61
50:G5:32:LEU:HB2	50:G5:53:LEU:HD22	1.81	0.61
1:13:677:U:H3	1:13:713:G:H22	1.47	0.61
1:13:811:C:N3	62:13:1820:HOH:O	2.31	0.61
5:4E:50:GLU:HB3	5:4E:53:LEU:HD13	1.82	0.61
9:8E:5:TYR:HE1	9:8E:16:ARG:HG2	1.65	0.61
11:2I:62:GLN:NE2	11:2I:93:GLN:OE1	2.32	0.61
25:1H:1101:U:H2'	25:1H:1102:C:C6	2.35	0.61
25:1H:1382:G:O6	62:1H:3647:HOH:O	2.11	0.61
37:78:100:LEU:HB2	37:78:106:LEU:HB2	1.81	0.61
1:1G:1114:C:O2'	14:5A:60:SER:O	2.10	0.61
25:14:1645:G:H5"	25:14:1646:C:H5'	1.83	0.61
25:14:2103:C:H2'	25:14:2104:G:C8	2.35	0.61
30:39:89:VAL:O	30:39:91:GLY:N	2.33	0.61
54:K5:39:TYR:HD1	54:K5:41:PRO:HD3	1.66	0.61
3:2E:65:ALA:HA	3:2E:100:ALA:HB3	1.81	0.61
10:1I:28:ARG:NH1	10:1I:34:VAL:O	2.34	0.61
14:5I:9:LYS:HG2	14:5I:12:ARG:HH11	1.66	0.61
29:21:115:GLY:O	29:21:119:ARG:HB2	2.00	0.61
1:1G:401:C:OP1	4:32:77:ASN:ND2	2.33	0.61
2:12:189:ASP:OD1	2:12:189:ASP:N	2.27	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:212:GLN:NE2	2:12:234:PRO:O	2.34	0.61
15:6A:29:VAL:HG13	15:6A:63:ARG:HG3	1.83	0.61
25:14:127:A:H5"	25:14:128:C:O4'	2.00	0.61
25:14:797:C:OP2	30:39:62:ARG:HG3	2.01	0.61
25:14:1300:U:H4'	25:14:1301:A:C5'	2.31	0.61
25:14:1614:A:N6	44:A5:91:GLY:HA2	2.16	0.61
25:14:2749:A:H5'	32:59:6:ARG:HD3	1.82	0.61
30:39:4:VAL:HA	30:39:19:GLU:HB3	1.83	0.61
32:59:127:GLU:O	32:59:129:THR:N	2.34	0.61
1:13:589:C:H5"	8:7E:29:SER:HB2	1.81	0.61
1:13:1002:G:H1	1:13:1038:C:H42	1.49	0.61
1:13:1024:G:H4'	1:13:1024:G:OP1	1.99	0.61
1:13:1296:C:OP1	13:4I:44:ARG:NH2	2.34	0.61
5:4E:139:LEU:HA	5:4E:142:LEU:HD12	1.83	0.61
9:8E:50:LEU:HD22	9:8E:55:ALA:HB3	1.83	0.61
16:7I:45:THR:HG22	16:7I:46:PRO:HD2	1.83	0.61
25:1H:259:G:O2'	25:1H:621:A:O2'	2.05	0.61
41:B8:50:ILE:HD11	41:B8:102:ILE:HD11	1.81	0.61
50:K8:16:LEU:H	50:K8:67:LYS:HZ1	1.48	0.61
1:1G:310:G:H4'	16:7A:31:LYS:HE3	1.81	0.61
1:1G:1279:A:O2'	1:1G:1281:U:OP2	2.16	0.61
1:1G:1315:U:O2'	1:1G:1360:A:O2'	2.17	0.61
5:42:57:LYS:HA	5:42:60:TYR:HB2	1.83	0.61
19:AA:20:LEU:HA	19:AA:44:MET:HE1	1.82	0.61
25:14:309:G:N3	25:14:329:G:O2'	2.34	0.61
28:19:168:ARG:HA	28:19:173:VAL:HA	1.83	0.61
19:AI:40:ILE:HD11	19:AI:62:ILE:HD13	1.83	0.61
25:1H:64:A:C4	45:F8:66:LEU:HD22	2.36	0.61
25:1H:1228:G:OP2	42:C8:16:LYS:NZ	2.29	0.61
33:61:29:TYR:O	33:61:33:ARG:HB2	2.00	0.61
37:78:57:THR:HG22	37:78:59:LEU:H	1.65	0.61
1:1G:60:A:N6	1:1G:110:C:N3	2.49	0.61
11:2A:11:LYS:HG3	11:2A:12:ARG:HG2	1.83	0.61
22:3L:51:U:O2	22:3L:65:G:N2	2.34	0.61
25:14:270(N):G:H5"	33:69:53:ALA:HB1	1.81	0.61
25:14:1871:A:H2'	25:14:1872:A:C8	2.36	0.61
25:14:2086:U:H2'	25:14:2087:G:C8	2.36	0.61
25:14:2748:A:N1	25:14:2749:A:N6	2.49	0.61
26:1J:101:A:OP2	62:1J:303:HOH:O	2.16	0.61
42:85:50:ARG:NH1	43:95:72:VAL:HG11	2.12	0.61
1:13:1070:U:H2'	1:13:1071:C:H6	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:M8:37:SER:HB3	52:M8:42:PHE:CG	2.36	0.60
1:1G:458:C:H42	1:1G:474:G:H1	1.47	0.60
1:1G:975:A:H5'	1:1G:1363:A:N6	2.16	0.60
2:12:8:LYS:HG2	2:12:11:LEU:HD21	1.82	0.60
14:5A:21:TYR:OH	14:5A:23:ARG:NH2	2.33	0.60
25:14:751:A:OP1	62:14:3544:HOH:O	2.16	0.60
25:14:2293:C:H42	25:14:2339:G:H1	1.49	0.60
7:6E:5:ARG:HB3	7:6E:7:ALA:H	1.64	0.60
25:1H:811:U:H2'	37:78:21:ARG:HA	1.83	0.60
27:71:10:LEU:HA	27:71:13:LYS:HD2	1.84	0.60
29:21:28:ALA:HB3	29:21:93:VAL:HG12	1.82	0.60
1:1G:1077:G:N2	1:1G:1080:A:OP2	2.31	0.60
2:12:21:ARG:HA	2:12:39:ILE:HA	1.83	0.60
20:BA:73:HIS:ND1	20:BA:75:ASN:HB2	2.15	0.60
22:3L:19:G:HO2'	22:3L:61:U:H3	1.47	0.60
25:14:70:G:H21	25:14:71:A:H62	1.49	0.60
25:14:1647:G:H3'	25:14:1647:G:OP2	2.01	0.60
46:C5:84:ARG:HB2	46:C5:84:ARG:HH11	1.65	0.60
1:13:148:G:H1	1:13:174:C:H42	1.49	0.60
9:8E:42:ARG:NH1	9:8E:75:ASP:OD1	2.32	0.60
1:1G:728:A:H2'	1:1G:729:A:H8	1.66	0.60
25:14:2068:U:N3	25:14:2430:A:H2	1.96	0.60
3:2E:11:ARG:HH21	3:2E:180:ALA:HB3	1.65	0.60
25:1H:1605:C:O3'	62:1H:3668:HOH:O	2.16	0.60
37:78:56:SER:O	37:78:57:THR:OG1	2.18	0.60
1:1G:1157:A:H61	1:1G:1178:G:H21	1.48	0.60
3:22:71:ALA:HA	3:22:106:VAL:HB	1.84	0.60
57:2L:44:A:H2'	57:2L:45:A:H8	1.65	0.60
25:14:1634:A:OP1	62:14:3545:HOH:O	2.17	0.60
41:75:36:GLU:HB3	41:75:39:ARG:HH22	1.66	0.60
1:13:327:A:O2'	1:13:328:C:O4'	2.18	0.60
1:13:377:G:OP1	16:7I:3:LYS:NZ	2.30	0.60
25:1H:2178:C:H5"	27:71:46:LYS:HD3	1.83	0.60
1:1G:67:C:H2'	1:1G:68:G:C8	2.37	0.60
1:1G:323:U:H5'	20:BA:23:ARG:HB2	1.83	0.60
1:1G:1157:A:O2'	1:1G:1158:C:O5'	2.16	0.60
8:72:82:HIS:NE2	8:72:136:GLU:OE2	2.34	0.60
25:14:2287:A:H62	25:14:2344:U:H3	1.47	0.60
25:14:2680:C:H1'	29:29:187:ALA:HB1	1.84	0.60
26:1J:95:U:H2'	26:1J:96:G:C8	2.36	0.60
28:19:175:LEU:HD12	28:19:185:VAL:HG21	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:29:12:THR:HG22	29:29:13:ARG:H	1.66	0.60
30:39:20:LEU:HD22	30:39:199:TRP:HZ3	1.66	0.60
43:95:71:LEU:HA	43:95:86:GLY:H	1.66	0.60
1:13:110:C:O2'	16:7I:25:ARG:O	2.20	0.60
1:13:1259:C:N4	1:13:1260:C:O2	2.34	0.60
5:4E:77:PRO:HG3	5:4E:144:THR:HG22	1.84	0.60
15:6I:76:GLU:OE1	15:6I:79:ARG:NH1	2.35	0.60
25:1H:1169:G:H1	25:1H:1180:C:H42	1.50	0.60
27:71:5:LYS:HZ1	27:71:8:ARG:HH22	1.50	0.60
33:61:2:LYS:HG3	33:61:20:ASP:HB3	1.82	0.60
33:61:57:ARG:HA	33:61:60:GLU:HB3	1.84	0.60
1:1G:976:G:O5'	1:1G:1358:U:O2'	2.19	0.60
36:25:105:GLU:OE1	36:25:105:GLU:N	2.32	0.60
1:13:1004:A:H8	1:13:1026:G:C5	2.19	0.60
14:5I:24:CYS:SG	14:5I:25:VAL:N	2.75	0.60
22:3K:28:U:H3	22:3K:45:A:H61	1.47	0.60
41:B8:29:ARG:HB2	41:B8:46:GLU:HB2	1.82	0.60
2:12:142:LEU:HD23	2:12:145:LEU:HB2	1.83	0.60
10:1A:38:ILE:HB	10:1A:71:LEU:HB3	1.83	0.60
25:14:271(B):G:H1	25:14:404:C:H42	1.48	0.60
28:19:16:MET:HG3	28:19:207:GLY:HA3	1.83	0.60
31:49:113:ARG:HG2	52:I5:35:VAL:HG23	1.84	0.60
1:13:1124:G:H3'	1:13:1145:C:N4	2.17	0.60
8:7E:85:ARG:NE	8:7E:87:SER:O	2.35	0.60
29:21:38:THR:N	29:21:42:ASP:OD2	2.32	0.60
16:7A:4:ILE:HG12	16:7A:21:VAL:HG12	1.84	0.60
25:14:2324:C:H5"	25:14:2325:G:H5'	1.83	0.60
44:A5:18:ARG:NH1	44:A5:76:VAL:O	2.35	0.60
1:13:346:G:H5"	41:B8:41:ARG:HH11	1.66	0.60
1:13:673:G:H2'	1:13:674:G:C8	2.36	0.60
25:1H:1448:G:O2'	25:1H:1529:A:N1	2.31	0.60
25:1H:2494:G:O2'	38:88:80:GLU:HB3	2.02	0.60
1:1G:1066:C:H3'	1:1G:1067:A:C8	2.37	0.60
1:1G:1290:G:H5'	7:62:38:LEU:HD11	1.83	0.60
17:8A:19:VAL:HG22	17:8A:44:ALA:HB3	1.84	0.60
25:14:1011:G:OP2	42:85:66:ASN:ND2	2.35	0.60
35:15:113:GLY:HA2	35:15:116:LEU:HD12	1.84	0.60
38:45:75:THR:HA	38:45:89:ASN:H	1.67	0.60
1:13:1028(A):C:H2'	1:13:1028(B):C:C5	2.37	0.60
1:13:1392:G:H21	1:13:1502:A:H8	1.49	0.60
22:3K:72:C:H2'	22:3K:73:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1191:G:OP1	37:78:32:THR:OG1	2.20	0.60
25:1H:2216:G:H2'	25:1H:2217:G:H8	1.67	0.60
25:1H:2637:U:H5"	29:21:82:ARG:HH21	1.67	0.60
29:21:181:LEU:HD11	41:B8:6:LEU:HD21	1.83	0.60
1:1G:457:C:H2'	1:1G:458:C:C6	2.37	0.60
25:14:815:C:N4	25:14:1192:G:H1	1.99	0.60
25:14:833:U:H1'	37:35:55:ARG:HH11	1.65	0.60
25:14:1603:A:OP1	62:14:3542:HOH:O	2.15	0.60
1:13:1298:C:H4'	1:13:1299:A:C4	2.37	0.59
5:4E:110:LEU:HD13	5:4E:118:ILE:HG21	1.84	0.59
14:5I:9:LYS:HA	14:5I:12:ARG:HD3	1.83	0.59
17:8I:76:LEU:HD11	17:8I:79:SER:HB2	1.84	0.59
25:1H:2168:G:N2	25:1H:2169:A:H3'	2.16	0.59
44:E8:86:LEU:HD12	44:E8:87:PRO:HD2	1.83	0.59
47:H8:127:LYS:HB3	47:H8:162:GLU:HB3	1.83	0.59
54:O8:9:LEU:HD12	54:O8:26:ASN:HB3	1.83	0.59
4:32:187:ARG:NH2	4:32:193:ASP:OD2	2.36	0.59
9:82:43:ALA:HA	9:82:74:ILE:HD13	1.83	0.59
14:5A:12:ARG:HG2	14:5A:14:PRO:HD3	1.84	0.59
25:14:69:C:O2	25:14:73:A:O2'	2.17	0.59
25:14:247:G:N1	25:14:247:G:O6	2.35	0.59
31:49:60:LEU:HD13	31:49:68:PRO:HB3	1.82	0.59
1:13:390:C:H2'	1:13:391:G:C8	2.37	0.59
25:1H:110:G:O6	62:1H:3666:HOH:O	2.16	0.59
25:1H:271(B):G:H4'	25:1H:271(C):U:OP1	2.02	0.59
52:M8:38:LYS:HA	52:M8:44:THR:HB	1.84	0.59
1:1G:78:G:O6	1:1G:91:C:N4	2.36	0.59
1:1G:1001:G:H4'	1:1G:1001:G:OP1	2.02	0.59
1:1G:1289:A:OP1	21:1B:9:ARG:NH2	2.35	0.59
25:14:1316:U:H2'	25:14:1317:A:H8	1.65	0.59
25:14:1443:G:H1	25:14:1548:C:H42	1.49	0.59
25:14:2129:C:H3'	25:14:2130:U:H5"	1.83	0.59
46:C5:83:THR:OG1	46:C5:84:ARG:N	2.35	0.59
1:13:1023:G:H3'	1:13:1024:G:C5'	2.31	0.59
10:1I:27:ALA:HB2	10:1I:85:LEU:HD11	1.84	0.59
25:1H:529:A:H4'	25:1H:530:G:H5'	1.84	0.59
25:1H:581:C:H2'	25:1H:582:G:C8	2.37	0.59
25:1H:848:G:H2'	25:1H:849:A:C8	2.37	0.59
25:1H:1532:C:N3	25:1H:1539:G:N2	2.49	0.59
25:1H:2030:A:H4'	25:1H:2031:A:H8	1.66	0.59
46:G8:84:ARG:HH11	46:G8:84:ARG:HB2	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:72:GLY:HA3	2:12:81:VAL:HG11	1.84	0.59
25:14:2403:C:C4	25:14:2403:C:C6	2.90	0.59
41:75:28:VAL:HB	41:75:86:ILE:HD11	1.84	0.59
42:85:98:LEU:HB2	42:85:106:PHE:HD2	1.67	0.59
1:13:312:C:H2'	1:13:313:A:H8	1.67	0.59
1:13:1113:C:H2'	1:13:1114:C:H6	1.67	0.59
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.83	0.59
25:1H:330:A:H2	25:1H:1210:A:H2'	1.68	0.59
25:1H:821:A:H5'	25:1H:822:U:H6	1.66	0.59
25:1H:1301:A:H2'	25:1H:1302:A:H3'	1.84	0.59
44:E8:76:VAL:HB	44:E8:103:ILE:HG23	1.84	0.59
1:1G:1051:C:N3	1:1G:1207:2MG:N1	2.41	0.59
7:62:15:ASP:HB3	7:62:24:THR:HB	1.84	0.59
13:4A:45:VAL:O	13:4A:47:ASP:N	2.35	0.59
17:8A:90:ILE:O	17:8A:94:ASN:ND2	2.36	0.59
25:14:300:A:H1'	25:14:319:C:H1'	1.85	0.59
25:14:1636:C:H2'	25:14:1637:A:C8	2.38	0.59
1:13:831:U:H2'	1:13:832:C:H6	1.66	0.59
1:13:1008:C:N4	1:13:1021:G:O6	2.33	0.59
25:1H:1057:A:H62	25:1H:1086:A:H2'	1.66	0.59
27:71:20:TYR:HB2	27:71:224:ILE:HA	1.82	0.59
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.85	0.59
41:75:120:ARG:HA	41:75:123:GLN:HG2	1.84	0.59
46:C5:44:ILE:HA	46:C5:64:GLU:HA	1.85	0.59
51:H5:5:LYS:HE3	51:H5:7:LYS:HE3	1.85	0.59
1:13:1133:G:N2	1:13:1141:C:N3	2.43	0.59
2:1E:21:ARG:HB2	2:1E:39:ILE:HG13	1.85	0.59
3:2E:53:ALA:HB2	3:2E:115:LEU:HD21	1.85	0.59
4:3E:173:TRP:CD2	4:3E:189:PRO:HB3	2.37	0.59
17:8I:86:GLU:O	17:8I:90:ILE:HG12	2.02	0.59
32:51:54:ARG:NH2	32:51:57:ASP:OD2	2.36	0.59
1:1G:186(A):C:H5"	20:BA:86:ARG:HG3	1.85	0.59
1:1G:662:G:H1	1:1G:743:U:H3	1.49	0.59
10:1A:8:LEU:HB2	10:1A:16:LEU:HD11	1.85	0.59
25:14:458:G:N2	25:14:470:A:OP2	2.36	0.59
25:14:670:A:H5"	37:35:42:SER:OG	2.02	0.59
25:14:2787:C:H1'	29:29:62:PRO:HG3	1.84	0.59
51:H5:12:PRO:O	51:H5:20:LYS:NZ	2.35	0.59
1:13:191:G:H1'	20:BI:105:SER:HB3	1.85	0.59
1:13:661:G:H1	1:13:744:C:H42	1.50	0.59
2:1E:47:THR:HG23	2:1E:202:PRO:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:573:G:N1	25:1H:2031:A:OP2	2.29	0.59
25:1H:1981:A:OP2	62:1H:3669:HOH:O	2.16	0.59
34:38:25:PHE:HD1	34:38:26:LEU:HG	1.68	0.59
1:1G:553:A:O2'	12:3A:26:GLY:O	2.20	0.59
1:1G:971:G:H4'	1:1G:972:C:H5"	1.83	0.59
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.84	0.59
28:19:264:LYS:HG2	28:19:266:SER:H	1.68	0.59
40:65:34:HIS:O	40:65:97:ARG:NH2	2.36	0.59
1:13:281:G:H8	1:13:281:G:OP2	1.84	0.59
1:13:321:A:N6	1:13:329:A:OP2	2.35	0.59
1:13:1255:G:H21	1:13:1259:C:H1'	1.66	0.59
1:13:1427:U:H2'	1:13:1428:A:H8	1.68	0.59
5:4E:12:LEU:HD13	5:4E:128:PRO:HG2	1.85	0.59
13:4I:96:LEU:HD13	13:4I:97:PRO:HD2	1.84	0.59
25:1H:2698:U:H2'	25:1H:2699:C:C6	2.37	0.59
30:31:178:PRO:HB2	30:31:201:VAL:HG11	1.85	0.59
50:K8:50:ILE:HD12	50:K8:51:ARG:H	1.68	0.59
1:1G:500:G:H1	1:1G:545:C:H42	1.50	0.59
1:1G:974:A:OP2	14:5A:29:ARG:NH2	2.36	0.59
25:14:662:G:H5'	37:35:15:ARG:HB2	1.84	0.59
38:45:1:MET:SD	38:45:1:MET:N	2.75	0.59
8:7E:83:ILE:HB	8:7E:137:VAL:HG13	1.85	0.59
22:1K:38:A:O2'	25:1H:1913:A:N1	2.35	0.59
25:1H:1257:C:H4'	30:31:83:PHE:CD1	2.38	0.59
25:1H:1900:A:OP2	62:1H:3671:HOH:O	2.17	0.59
26:16:10:C:H42	26:16:110:G:H1	1.51	0.59
33:61:129:THR:HA	33:61:137:PRO:HA	1.85	0.59
41:B8:58:ASN:C	41:B8:58:ASN:HD22	2.07	0.59
47:H8:155:LEU:H	47:H8:155:LEU:HD22	1.67	0.59
1:1G:250:A:H4'	1:1G:251:G:O5'	2.02	0.59
1:1G:1070:U:OP1	5:42:18:ARG:NH2	2.35	0.59
13:4A:23:TYR:HB3	13:4A:71:ARG:HD2	1.84	0.59
25:14:273(C):C:N4	25:14:363(C):G:H1	2.00	0.59
25:14:708:C:N4	25:14:723:G:H1	2.00	0.59
25:14:848:G:H2'	25:14:849:A:C8	2.38	0.59
25:14:1689:A:H62	25:14:1698:A:H2	1.51	0.59
1:13:328:C:H4'	1:13:329:A:H5'	1.85	0.59
1:13:406:G:N2	1:13:437:U:O2	2.36	0.59
1:13:1459:C:OP1	20:BI:27:LYS:NZ	2.34	0.59
1:13:1504:G:H4'	1:13:1505:G:O5'	2.02	0.59
25:1H:860:U:H5	25:1H:917:A:H2	1.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:71:21:THR:H	27:71:24:GLU:HB2	1.68	0.59
1:1G:261:U:OP2	20:BA:79:ARG:NH2	2.35	0.59
1:1G:328:C:H4'	1:1G:329:A:H5'	1.84	0.59
1:1G:1049:U:H4'	1:1G:1050:G:C5'	2.33	0.59
2:12:80:ILE:HD13	2:12:212:GLN:HG2	1.85	0.59
2:12:82:ARG:NH2	2:12:92:TYR:OH	2.35	0.59
9:82:28:VAL:HG22	9:82:29:ASN:H	1.68	0.59
26:1J:45:A:O5'	31:49:95:ARG:NH1	2.36	0.59
25:1H:1407:C:H42	25:1H:1595:G:H1	1.49	0.58
25:1H:2002:G:OP2	39:98:9:LYS:NZ	2.28	0.58
25:1H:2848:G:C8	41:B8:97:ALA:HB2	2.37	0.58
27:71:186:ALA:HA	27:71:189:ILE:HD12	1.85	0.58
33:61:91:SER:HB3	33:61:121:LYS:HE2	1.84	0.58
54:O8:7:ILE:O	54:O8:8:LYS:HB3	2.02	0.58
9:82:82:ALA:HA	9:82:85:LEU:HG	1.85	0.58
1:13:596:C:H2'	1:13:597:G:H8	1.68	0.58
25:1H:2114:A:H2'	25:1H:2168:G:H8	1.68	0.58
39:98:103:ARG:HH21	39:98:110:PRO:HB3	1.68	0.58
56:Q8:11:LYS:HB2	56:Q8:62:LEU:HD21	1.84	0.58
1:1G:145:G:H2'	1:1G:146:G:C8	2.38	0.58
1:1G:1239:A:H4'	1:1G:1240:U:H5"	1.85	0.58
1:1G:1244:C:H2'	1:1G:1245:A:C8	2.38	0.58
4:32:105:VAL:HG13	4:32:110:PHE:HB2	1.84	0.58
25:14:1550:C:OP1	25:14:1727:U:O2'	2.13	0.58
25:14:2186:G:H2'	25:14:2187:G:H8	1.68	0.58
1:13:973:G:H3'	1:13:974:A:H5"	1.85	0.58
1:13:1435:G:H2'	1:13:1436:U:C6	2.39	0.58
10:1I:26:ALA:HA	10:1I:29:ARG:HH21	1.67	0.58
25:1H:270(H):C:H2'	25:1H:270(I):G:O4'	2.02	0.58
35:58:96:GLU:O	35:58:99:LEU:N	2.34	0.58
1:1G:401:C:H2'	1:1G:402:G:C8	2.39	0.58
1:1G:662:G:H2'	1:1G:663:A:H8	1.68	0.58
1:1G:737:A:H2'	1:1G:738:C:C6	2.38	0.58
25:14:1849:G:H2'	25:14:1850:G:H8	1.68	0.58
43:95:70:ILE:HB	43:95:86:GLY:HA3	1.84	0.58
47:D5:24:LEU:HB3	47:D5:41:LEU:HD12	1.84	0.58
1:13:537:G:OP2	62:13:1807:HOH:O	2.17	0.58
1:13:1292:U:OP1	7:6E:41:ARG:NH2	2.36	0.58
1:13:1314:C:OP2	19:AI:4:SER:OG	2.21	0.58
13:4I:81:LEU:HD22	13:4I:88:ARG:HB3	1.85	0.58
15:6I:74:ASP:OD1	15:6I:77:ARG:N	2.30	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:39:TYR:HD1	16:7I:49:LEU:HD13	1.66	0.58
22:3K:67:C:H2'	22:3K:68:C:C6	2.39	0.58
25:1H:620:G:H4'	25:1H:621:A:H5"	1.85	0.58
25:1H:1021:A:OP2	35:58:65:LYS:NZ	2.28	0.58
25:1H:1550:C:H2'	25:1H:1551:C:H6	1.67	0.58
37:78:71:VAL:HG13	37:78:72:PRO:HD3	1.86	0.58
38:88:34:LEU:HB2	38:88:118:LEU:HD22	1.85	0.58
7:62:69:VAL:HG22	7:62:135:VAL:HG22	1.86	0.58
25:14:2351:G:HO2'	25:14:2352:A:H8	1.50	0.58
28:19:44:ASN:ND2	28:19:46:GLN:OE1	2.37	0.58
43:95:21:ARG:HA	43:95:93:GLU:HA	1.85	0.58
1:13:1065:U:C5	1:13:1190:G:H1'	2.39	0.58
2:1E:168:THR:HG21	2:1E:191:ASP:HB3	1.84	0.58
8:7E:42:GLU:HG3	8:7E:109:ILE:HD12	1.84	0.58
25:1H:1697:G:OP2	25:1H:1698:A:O2'	2.17	0.58
25:1H:2439:A:H5'	25:1H:2439:A:C8	2.39	0.58
31:41:62:LEU:HD21	52:M8:28:LYS:HD2	1.86	0.58
33:61:66:GLU:HA	33:61:69:LYS:HB3	1.86	0.58
4:32:62:GLN:HB3	4:32:66:ARG:HD2	1.85	0.58
16:7A:22:THR:HA	16:7A:33:ILE:HG12	1.85	0.58
18:9A:62:GLU:HA	18:9A:65:ILE:HD11	1.85	0.58
25:14:1171:G:O2'	25:14:1173:G:O5'	2.21	0.58
25:14:2882:A:O5'	39:55:96:ARG:NE	2.34	0.58
29:29:14:ILE:HG13	29:29:21:VAL:HG13	1.84	0.58
29:29:115:GLY:O	29:29:119:ARG:HB2	2.03	0.58
2:1E:87:ARG:NH1	2:1E:220:ASP:OD1	2.25	0.58
25:1H:2232:U:P	49:J8:40:ARG:HH12	2.25	0.58
26:16:38:C:H42	26:16:44:G:H1	1.50	0.58
30:31:152:GLU:HB3	30:31:190:GLU:HB2	1.85	0.58
32:51:7:LEU:N	32:51:8:PRO:HD3	2.19	0.58
35:58:60:ILE:H	35:58:60:ILE:HD13	1.68	0.58
42:C8:83:LEU:HD12	42:C8:88:ILE:HD12	1.85	0.58
1:1G:1166:G:N2	1:1G:1170:A:OP2	2.34	0.58
3:22:38:ARG:HD2	3:22:94:LEU:HD22	1.86	0.58
4:32:201:GLN:NE2	5:42:116:THR:O	2.37	0.58
12:3A:124:GLU:OE1	12:3A:124:GLU:N	2.27	0.58
20:BA:18:GLN:HA	20:BA:21:LYS:HE3	1.86	0.58
25:14:1332:G:H21	25:14:1610:A:H8	1.49	0.58
25:14:1997:G:H5"	62:14:3518:HOH:O	2.04	0.58
25:14:2443:C:H2'	25:14:2444:G:H8	1.68	0.58
1:13:1139:G:H4'	1:13:1140:C:H5'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1446:A:O2'	1:13:1447:G:O5'	2.20	0.58
4:3E:142:PRO:HA	4:3E:185:PHE:HD2	1.69	0.58
18:9I:22:VAL:HG13	18:9I:42:ARG:HH11	1.68	0.58
25:1H:1187:G:H5"	43:D8:81:TYR:CE1	2.39	0.58
25:1H:2298:A:H2'	25:1H:2299:G:O4'	2.03	0.58
1:1G:147:G:H2'	1:1G:148:G:C8	2.37	0.58
19:AA:40:ILE:HG13	19:AA:66:MET:HB3	1.85	0.58
21:1B:8:THR:HG22	21:1B:10:ARG:H	1.69	0.58
29:29:68:ALA:HA	29:29:71:GLY:HA2	1.86	0.58
29:29:128:SER:OG	29:29:129:HIS:N	2.37	0.58
5:4E:142:LEU:O	5:4E:143:ARG:NH1	2.35	0.58
36:68:17:ARG:HA	36:68:17:ARG:HH11	1.69	0.58
1:1G:1049:U:H4'	1:1G:1050:G:H5"	1.86	0.58
5:42:71:LEU:HD22	5:42:115:VAL:HG13	1.85	0.58
7:62:20:ASP:O	7:62:22:LEU:N	2.36	0.58
14:5A:45:ARG:O	14:5A:49:HIS:ND1	2.32	0.58
25:14:730:C:H3'	62:14:3527:HOH:O	2.03	0.58
25:14:2129:C:O2'	25:14:2160:G:N2	2.37	0.58
25:14:2287:A:N6	25:14:2344:U:H3	2.02	0.58
29:29:120:TRP:CG	29:29:155:LYS:HB3	2.39	0.58
32:59:12:PRO:HB3	32:59:48:GLY:HA3	1.86	0.58
38:45:74:TYR:O	38:45:89:ASN:HA	2.04	0.58
1:13:1372:U:H5"	9:8E:71:SER:HB3	1.84	0.58
22:3K:29:C:H2'	22:3K:30:G:H8	1.68	0.58
22:3K:35:C:H41	24:4K:14:A:H61	1.52	0.58
25:1H:67:U:H3	25:1H:74:A:H2	1.52	0.58
25:1H:1268:A:OP1	62:1H:3672:HOH:O	2.17	0.58
47:H8:108:PRO:HD2	47:H8:111:VAL:HA	1.86	0.58
1:1G:1157:A:N6	1:1G:1178:G:H21	2.01	0.58
25:14:856:C:H1'	48:E5:27:GLU:HB3	1.85	0.58
25:14:883:G:H22	25:14:893:C:N4	2.02	0.58
25:14:2119:A:N7	25:14:2170:A:N6	2.52	0.58
30:39:128:ALA:O	30:39:142:TRP:NE1	2.36	0.58
31:49:97:ASP:HA	31:49:100:TRP:CD1	2.37	0.58
1:13:753:A:H4'	1:13:754:C:O5'	2.03	0.58
1:13:826:C:H4'	8:7E:12:ARG:HG3	1.84	0.58
1:13:1081:G:H2'	1:13:1082:G:C8	2.38	0.58
5:4E:79:GLU:HB3	5:4E:92:LYS:HA	1.86	0.58
25:1H:2860:A:C8	25:1H:2861:G:H1'	2.39	0.58
30:31:103:LYS:HA	30:31:106:ARG:HG3	1.86	0.58
35:58:35:ARG:HD3	35:58:37:LYS:HD2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:57:ARG:HB3	4:32:206:PHE:HB2	1.85	0.58
6:52:82:ARG:HB2	6:52:85:VAL:HG23	1.86	0.58
25:14:448:U:O4	25:14:583:G:H1'	2.04	0.58
25:14:2300:G:O6	25:14:2316:C:N4	2.36	0.58
25:14:2650:U:H2'	25:14:2651:C:H6	1.69	0.58
26:1J:80:U:H2'	26:1J:81:G:H21	1.67	0.58
26:1J:83:G:H1	26:1J:93:C:H42	1.51	0.58
37:35:79:ARG:HE	37:35:109:GLY:HA3	1.68	0.58
55:L5:9:ARG:HG3	55:L5:46:VAL:HG22	1.85	0.58
1:13:1292:U:H2'	1:13:1293:G:C8	2.39	0.57
25:1H:534:U:H5'	42:C8:42:ALA:HB1	1.85	0.57
25:1H:636:G:N7	37:78:113:LYS:HE2	2.19	0.57
25:1H:810:U:O4	62:1H:3667:HOH:O	2.16	0.57
31:41:112:PRO:HG3	52:M8:37:SER:O	2.04	0.57
43:D8:15:GLU:HG3	43:D8:16:PRO:HD2	1.85	0.57
1:1G:503:C:O2'	1:1G:510:A:N1	2.35	0.57
1:1G:1200:C:HO2'	1:1G:1201:A:P	2.25	0.57
38:45:17:LEU:HD21	38:45:41:TRP:HE1	1.69	0.57
1:13:324:G:O2'	1:13:326:G:N7	2.37	0.57
1:13:750:G:O2'	15:6I:21:ASP:OD1	2.22	0.57
22:3K:9:G:O2'	22:3K:10:G:N7	2.37	0.57
25:1H:70:G:H21	25:1H:71:A:H62	1.50	0.57
25:1H:1423:G:H2'	25:1H:1424:G:H8	1.69	0.57
40:A8:67:ARG:NH2	40:A8:103:GLU:OE2	2.37	0.57
1:1G:567:G:O2'	62:1G:1808:HOH:O	2.17	0.57
1:1G:729:A:H2'	1:1G:730:G:H8	1.68	0.57
1:1G:1106:G:H5"	3:22:172:ARG:HG2	1.85	0.57
1:1G:1259:C:N4	1:1G:1260:C:O2	2.37	0.57
1:1G:1327:C:H2'	1:1G:1328:C:C6	2.39	0.57
7:62:36:LYS:HA	7:62:39:ALA:HB3	1.85	0.57
19:AA:39:THR:HA	19:AA:70:LYS:HD2	1.86	0.57
25:14:792:G:O2'	25:14:2440:C:N3	2.31	0.57
25:14:2023:G:OP2	25:14:2617:C:H4'	2.04	0.57
29:29:1:MET:HA	29:29:200:GLU:HB3	1.85	0.57
22:3K:57:C:H2'	22:3K:58:A:C8	2.37	0.57
27:71:27:HIS:HE1	27:71:183:GLU:HB3	1.68	0.57
33:61:113:ARG:HB3	33:61:131:LYS:HD3	1.86	0.57
47:H8:137:ILE:HB	47:H8:156:LYS:HE3	1.85	0.57
1:1G:814:A:O2'	1:1G:815:A:H3'	2.03	0.57
1:1G:932:C:H5'	7:62:4:ARG:HG2	1.86	0.57
25:14:451:C:C5	25:14:453:C:H5"	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2121:G:H22	25:14:2177:C:N4	2.00	0.57
25:14:2577:A:H4'	53:J5:3:LYS:H	1.69	0.57
32:59:7:LEU:N	32:59:8:PRO:HD3	2.19	0.57
32:59:27:LYS:H	32:59:32:GLU:HB2	1.69	0.57
41:75:123:GLN:HA	41:75:126:ALA:HB3	1.87	0.57
42:85:90:VAL:HA	43:95:39:LEU:HD22	1.86	0.57
52:I5:15:ILE:HG13	52:I5:30:GLU:HB2	1.86	0.57
1:13:7:G:OP1	4:3E:209:ARG:NH2	2.37	0.57
1:13:342:C:H2'	1:13:343:U:O4'	2.04	0.57
25:1H:107:C:H2'	25:1H:108:U:H6	1.69	0.57
25:1H:2210:G:H3'	25:1H:2211:G:C8	2.40	0.57
33:61:116:LEU:HD11	33:61:119:PRO:HA	1.85	0.57
1:1G:390:C:H2'	1:1G:391:G:C8	2.39	0.57
1:1G:643:C:H2'	1:1G:644:G:H8	1.68	0.57
1:1G:979:C:OP1	1:1G:1223:C:N4	2.37	0.57
5:42:131:ILE:O	5:42:135:THR:OG1	2.22	0.57
7:62:9:VAL:HG22	7:62:94:ARG:HH11	1.69	0.57
22:3L:21:U:H5"	22:3L:22:A:H5"	1.86	0.57
26:1J:32:C:N3	26:1J:51:G:N2	2.52	0.57
38:45:64:ILE:H	38:45:64:ILE:HD13	1.70	0.57
1:13:280:C:N3	17:8I:39:SER:N	2.53	0.57
1:13:720:C:H5"	18:9I:52:PRO:HA	1.85	0.57
1:13:1081:G:H2'	1:13:1082:G:H8	1.70	0.57
8:7E:64:LYS:HG2	8:7E:79:VAL:HG21	1.86	0.57
19:AI:30:LEU:H	19:AI:30:LEU:HD13	1.69	0.57
22:1K:23:G:N7	22:1K:47:G:N2	2.42	0.57
25:1H:878:A:H3'	25:1H:879:G:H8	1.70	0.57
25:1H:2233:U:H2'	25:1H:2234:G:C8	2.40	0.57
31:41:32:PRO:HB2	31:41:172:LEU:HD13	1.86	0.57
34:38:53:VAL:HG13	34:38:54:ALA:HB3	1.86	0.57
1:1G:145:G:H2'	1:1G:146:G:H8	1.70	0.57
1:1G:765:G:N2	1:1G:813:U:OP2	2.37	0.57
1:1G:868:C:H2'	1:1G:869:G:O4'	2.04	0.57
1:1G:1128:C:N3	1:1G:1139:G:N2	2.53	0.57
1:1G:1305:G:OP1	21:1B:2:GLY:N	2.38	0.57
25:14:2656:U:C4	25:14:2665:A:H2	2.22	0.57
26:1J:15:A:H1'	26:1J:109:G:H1'	1.87	0.57
5:4E:43:LEU:H	5:4E:65:ASN:HB2	1.69	0.57
25:1H:1991:U:H2'	25:1H:1992:G:H5"	1.86	0.57
25:1H:2666:C:O2	32:51:152:ARG:NH2	2.37	0.57
36:68:2:ILE:HG13	36:68:6:THR:HG21	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:78:81:GLN:NE2	37:78:106:LEU:O	2.37	0.57
1:1G:1241:G:H1	1:1G:1296:C:H42	1.53	0.57
1:1G:1259:C:O2	1:1G:1283:G:O2'	2.20	0.57
13:4A:60:VAL:HG13	13:4A:64:TRP:HE1	1.70	0.57
21:1B:3:LYS:HD2	21:1B:14:TRP:HD1	1.70	0.57
29:29:8:LYS:NZ	29:29:188:VAL:O	2.34	0.57
1:13:938:A:HO2'	1:13:1376:U:HO2'	1.49	0.57
10:1I:50:ILE:HD12	10:1I:57:LYS:HA	1.85	0.57
25:1H:177:G:H3'	25:1H:178:G:C8	2.40	0.57
37:78:59:LEU:HD11	56:Q8:10:ALA:HA	1.87	0.57
40:A8:61:ASN:O	40:A8:64:GLU:N	2.34	0.57
54:O8:41:PRO:HD2	54:O8:46:HIS:H	1.70	0.57
1:1G:1071:C:H2'	1:1G:1072:G:C8	2.40	0.57
1:1G:1086:U:H3'	1:1G:1087:G:C8	2.40	0.57
2:12:184:VAL:HG12	2:12:197:VAL:HG13	1.86	0.57
12:3A:73:ASN:ND2	12:3A:103:ASP:O	2.36	0.57
13:4A:3:ARG:NH2	31:49:113:ARG:O	2.30	0.57
25:14:666:G:H5"	37:35:47:ASP:O	2.04	0.57
25:14:1204:A:O2'	25:14:1205:U:OP2	2.23	0.57
26:1J:13:A:N1	26:1J:69:G:O2'	2.38	0.57
37:35:99:LEU:HD12	37:35:102:ARG:HE	1.68	0.57
38:45:103:MET:HB2	38:45:104:PHE:HD1	1.69	0.57
42:85:98:LEU:C	42:85:100:VAL:H	2.06	0.57
46:C5:5:MET:H	46:C5:5:MET:HE2	1.70	0.57
1:13:243:A:H4'	1:13:244:U:H3'	1.87	0.57
1:13:1373:G:O3'	7:6E:36:LYS:NZ	2.37	0.57
25:1H:270:A:OP2	25:1H:270(Y):G:N1	2.33	0.57
25:1H:1013:C:H42	25:1H:1149:G:H1	1.51	0.57
25:1H:1348:G:H2'	25:1H:1349:A:H5"	1.86	0.57
25:1H:2059:A:H5'	25:1H:2060:A:OP2	2.05	0.57
25:1H:2062:A:OP2	62:1H:3673:HOH:O	2.17	0.57
25:1H:2397:G:H5"	49:J8:28:GLY:HA2	1.85	0.57
1:1G:920:U:H2'	1:1G:921:U:C6	2.40	0.57
2:12:30:ARG:O	2:12:46:LYS:NZ	2.36	0.57
15:6A:67:LEU:HD11	15:6A:87:ILE:HD12	1.85	0.57
25:14:380:U:H5'	49:F5:18:ILE:HD12	1.87	0.57
25:14:906:G:HO2'	38:45:67:ARG:HE	1.51	0.57
25:14:2667:C:N3	32:59:110:SER:OG	2.33	0.57
30:39:104:LYS:O	30:39:108:LYS:HG2	2.04	0.57
36:25:120:GLU:OE1	41:75:67:SER:OG	2.22	0.57
43:95:49:THR:HB	43:95:50:PRO:HD3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:812:C:H4'	1:13:813:U:H5'	1.86	0.57
1:13:1011:G:H2'	1:13:1012:U:O4'	2.05	0.57
25:1H:163:U:C4	49:J8:81:LYS:HE3	2.38	0.57
25:1H:370:G:OP2	62:1H:3676:HOH:O	2.18	0.57
30:31:63:LYS:NZ	30:31:75:HIS:O	2.38	0.57
1:1G:474:G:H2'	1:1G:475:G:C8	2.40	0.57
1:1G:476:G:H2'	1:1G:477:G:C8	2.40	0.57
1:1G:971:G:C6	1:1G:1365:G:H5'	2.40	0.57
5:42:12:LEU:HD13	5:42:13:ILE:H	1.70	0.57
9:82:20:ARG:O	9:82:60:ASP:N	2.37	0.57
10:1A:40:LEU:HB3	10:1A:69:ASN:HB2	1.85	0.57
22:3L:42:C:H2'	22:3L:43:G:H8	1.69	0.57
25:14:527:C:N4	25:14:2779:U:OP2	2.37	0.57
25:14:1300:U:H4'	25:14:1301:A:H5"	1.87	0.57
25:14:1762:A:H4'	25:14:1763:G:OP2	2.05	0.57
25:14:2011:U:OP1	44:A5:42:ARG:NH1	2.38	0.57
1:13:191:G:O2'	20:BI:101:GLY:O	2.15	0.57
1:13:303:A:HO2'	1:13:555:C:HO2'	1.52	0.57
1:13:1073:U:H2'	1:13:1074:G:H8	1.69	0.57
25:1H:612:G:O2'	25:1H:616:A:N1	2.35	0.57
25:1H:833:U:H1'	37:78:55:ARG:HH11	1.70	0.57
25:1H:1204:A:O2'	25:1H:1205:U:O5'	2.23	0.57
31:41:60:LEU:O	31:41:64:THR:HG22	2.04	0.57
33:61:88:ILE:HB	33:61:121:LYS:HG3	1.86	0.57
40:A8:106:ARG:O	40:A8:106:ARG:NH1	2.33	0.57
47:H8:156:LYS:HG2	47:H8:158:PRO:HD3	1.87	0.57
1:1G:501:C:OP2	12:3A:121:LYS:NZ	2.31	0.57
1:1G:1317:C:O2	19:AA:37:ARG:NH2	2.37	0.57
4:32:141:ARG:N	4:32:144:ASP:OD2	2.37	0.57
21:1B:3:LYS:HD2	21:1B:14:TRP:CD1	2.40	0.57
25:14:946:G:H2'	25:14:947:G:H8	1.69	0.57
1:13:272:C:H2'	1:13:273:A:C8	2.40	0.56
1:13:392:G:H2'	1:13:393:A:H8	1.69	0.56
1:13:538:G:H2'	1:13:539:A:H8	1.70	0.56
25:1H:270(M):U:H1'	25:1H:270(N):G:C5	2.39	0.56
25:1H:517:C:OP1	53:N8:16:ARG:NH2	2.38	0.56
25:1H:1800:C:OP2	28:11:183:ARG:NH1	2.38	0.56
34:38:4:LYS:O	34:38:7:VAL:N	2.38	0.56
47:H8:77:ASP:OD1	47:H8:80:ARG:N	2.34	0.56
1:1G:1268:A:H2'	1:1G:1269:A:C8	2.38	0.56
11:2A:92:GLU:OE2	11:2A:96:ARG:NH1	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2393:A:H5'	37:35:63:PRO:HB3	1.85	0.56
25:14:2882:A:O4'	39:55:96:ARG:NE	2.38	0.56
38:45:20:ALA:HA	38:45:99:PRO:HG2	1.86	0.56
41:75:36:GLU:O	41:75:39:ARG:NH2	2.38	0.56
52:I5:22:ILE:HG12	52:I5:23:GLU:H	1.70	0.56
25:1H:587:C:N3	37:78:33:ARG:NH1	2.53	0.56
39:98:38:VAL:HG22	39:98:112:ALA:HB2	1.87	0.56
39:98:42:LYS:HA	39:98:45:ARG:HD2	1.85	0.56
45:F8:24:GLY:O	45:F8:82:GLN:HA	2.05	0.56
51:L8:26:LEU:O	51:L8:35:ARG:NE	2.37	0.56
1:1G:750:G:N3	15:6A:23:GLY:HA3	2.20	0.56
13:4A:10:PRO:HA	13:4A:18:ALA:HB1	1.86	0.56
17:8A:55:ASP:OD1	17:8A:55:ASP:N	2.37	0.56
25:14:83:G:N2	25:14:102:G:O2'	2.37	0.56
25:14:1796:U:H2'	25:14:1797:C:C6	2.40	0.56
25:14:2347:C:OP1	54:K5:39:TYR:OH	2.21	0.56
25:14:2716:U:H2'	25:14:2717:G:H8	1.71	0.56
28:19:181:GLU:HB2	28:19:273:ARG:HB2	1.87	0.56
41:75:54:ARG:HA	41:75:59:THR:HG23	1.87	0.56
1:13:151:A:H62	1:13:170:U:H3	1.51	0.56
1:13:543:C:OP1	4:3E:14:ARG:HG3	2.05	0.56
1:13:1305:G:H21	1:13:1331:G:H2'	1.69	0.56
1:13:1367:C:OP1	9:8E:115:GLY:N	2.34	0.56
1:13:1454:G:OP1	20:BI:39:LYS:NZ	2.23	0.56
4:3E:49:ARG:H	4:3E:49:ARG:HD3	1.69	0.56
9:8E:93:ARG:HE	9:8E:97:LYS:HB2	1.70	0.56
25:1H:224:G:O6	25:1H:419:C:O2'	2.24	0.56
25:1H:535:C:O3'	42:C8:53:ARG:NH1	2.38	0.56
25:1H:1485:G:H1	25:1H:1504:C:N4	2.04	0.56
25:1H:2155:G:H2'	25:1H:2156:G:H5'	1.88	0.56
25:1H:2708:G:H5'	39:98:68:ARG:HG3	1.88	0.56
28:11:126:GLN:OE1	28:11:129:ASN:ND2	2.35	0.56
37:78:126:VAL:HG13	37:78:145:PRO:HG2	1.86	0.56
47:H8:102:LEU:HD21	47:H8:124:ILE:HG22	1.86	0.56
1:1G:256:U:H3	1:1G:270:A:H61	1.53	0.56
1:1G:876:G:H4'	8:72:14:ARG:HH12	1.69	0.56
1:1G:1235:U:O2'	1:1G:1305:G:O5'	2.23	0.56
3:22:16:ARG:HH22	3:22:181:ASN:HA	1.68	0.56
9:82:34:ASN:O	9:82:36:TYR:N	2.38	0.56
25:14:82:G:H5'	25:14:296:C:H5"	1.87	0.56
25:14:907:U:OP1	38:45:24:GLY:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:40:U:N3	26:1J:43:C:H5"	2.20	0.56
26:1J:109:G:H2'	26:1J:110:G:H8	1.71	0.56
28:19:160:GLY:H	28:19:196:VAL:HB	1.69	0.56
32:59:9:ILE:HG23	32:59:51:ARG:HG3	1.88	0.56
46:C5:5:MET:SD	46:C5:32:PRO:HA	2.45	0.56
1:13:188:U:H2'	1:13:189:U:H5"	1.86	0.56
10:1I:3:LYS:N	10:1I:74:ILE:O	2.39	0.56
25:1H:196:A:OP2	37:78:46:LYS:NZ	2.38	0.56
25:1H:598:G:H1	25:1H:659:C:H42	1.53	0.56
25:1H:2119:A:H2	25:1H:2171:A:H1'	1.71	0.56
26:16:40:U:H3	26:16:43:C:H5"	1.71	0.56
29:21:53:PRO:HA	29:21:75:VAL:HG12	1.88	0.56
34:38:122:VAL:HA	34:38:126:ALA:HB3	1.86	0.56
35:58:54:VAL:HB	35:58:122:VAL:HG22	1.87	0.56
47:H8:69:THR:HG22	47:H8:90:VAL:HA	1.86	0.56
47:H8:79:ARG:HB3	47:H8:80:ARG:HD3	1.88	0.56
1:1G:59:A:H5"	1:1G:387:U:H5"	1.87	0.56
1:1G:518:C:H4'	1:1G:519:C:O5'	2.05	0.56
1:1G:616:G:H2'	1:1G:617:G:H8	1.69	0.56
1:1G:1055:A:N7	1:1G:1200:C:N4	2.53	0.56
1:1G:1218:C:P	14:5A:9:LYS:HZ3	2.29	0.56
1:1G:1317:C:N3	19:AA:37:ARG:NH1	2.53	0.56
25:14:74:A:H5"	25:14:75:G:O4'	2.04	0.56
25:14:2503:2MA:O2'	25:14:2505:G:OP2	2.19	0.56
32:59:88:LEU:H	32:59:164:TYR:HA	1.69	0.56
1:13:1286:A:H2'	1:13:1287:A:H4'	1.88	0.56
8:7E:122:ARG:O	8:7E:126:LYS:N	2.35	0.56
25:1H:270(F):U:H2'	25:1H:270(G):C:C6	2.40	0.56
25:1H:1329:U:H5"	25:1H:1330:C:H5	1.70	0.56
25:1H:2372:G:H4'	54:O8:46:HIS:CD2	2.40	0.56
33:61:9:LEU:HB3	33:61:12:LEU:O	2.06	0.56
1:1G:595:G:H4'	1:1G:596:C:C5'	2.36	0.56
2:12:71:VAL:HA	2:12:93:VAL:HB	1.88	0.56
9:82:58:HIS:HB3	9:82:59:PHE:CD1	2.40	0.56
25:14:895:U:H3'	25:14:896:A:H5'	1.85	0.56
25:14:1281:G:H5'	25:14:1282:U:OP2	2.05	0.56
25:14:1957:C:OP1	62:14:3546:HOH:O	2.18	0.56
25:14:2123:G:H2'	25:14:2124:G:H8	1.71	0.56
26:1J:66:A:N6	26:1J:108:C:OP2	2.38	0.56
41:75:64:ARG:HB2	41:75:73:GLU:HG2	1.87	0.56
1:13:59:A:N1	62:13:1825:HOH:O	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1324:A:H4'	1:13:1362:C:H4'	1.87	0.56
3:2E:83:ARG:HD2	3:2E:87:LEU:HD11	1.85	0.56
4:3E:196:LEU:HD13	4:3E:198:VAL:HB	1.88	0.56
18:9I:53:ARG:HH21	18:9I:60:ALA:N	2.04	0.56
25:1H:124:G:O6	62:1H:3679:HOH:O	2.18	0.56
25:1H:630:G:N2	25:1H:633:A:OP2	2.26	0.56
25:1H:2638:G:HO2'	25:1H:2639:A:H8	1.52	0.56
25:1H:2788:C:OP1	29:21:61:ARG:NH2	2.38	0.56
28:11:34:VAL:HG21	28:11:61:LEU:HB3	1.87	0.56
1:1G:392:G:H2'	1:1G:393:A:C8	2.41	0.56
5:42:12:LEU:HD13	5:42:13:ILE:HD13	1.88	0.56
5:42:92:LYS:N	5:42:119:LEU:O	2.34	0.56
10:1A:78:ASN:HD22	10:1A:80:LYS:HB3	1.69	0.56
25:14:451:C:H5	25:14:453:C:H5"	1.70	0.56
25:14:2032:G:N2	25:14:2572:A:OP2	2.38	0.56
28:19:69:ARG:HD3	28:19:105:ILE:HD11	1.86	0.56
44:A5:12:ILE:HG13	44:A5:42:ARG:HH12	1.71	0.56
46:C5:46:LYS:HA	46:C5:61:ILE:O	2.05	0.56
1:13:45:U:H2'	1:13:46:G:C8	2.40	0.56
5:4E:78:HIS:CE1	5:4E:142:LEU:HD23	2.41	0.56
17:8I:58:GLU:OE1	17:8I:75:ARG:NH1	2.39	0.56
25:1H:653:A:O2'	25:1H:654:A:OP1	2.24	0.56
25:1H:1021:A:C8	25:1H:1021:A:H3'	2.41	0.56
25:1H:1301:A:C2'	25:1H:1302:A:H3'	2.36	0.56
25:1H:1301:A:O2'	25:1H:1302:A:O5'	2.19	0.56
37:78:85:LEU:HA	37:78:88:LEU:HD22	1.88	0.56
39:98:28:LEU:HD23	39:98:34:ILE:HG12	1.88	0.56
1:1G:404:U:H5'	4:32:122:ARG:HE	1.71	0.56
10:1A:22:LYS:O	10:1A:26:ALA:N	2.38	0.56
10:1A:34:VAL:HG22	10:1A:74:ILE:HA	1.87	0.56
19:AA:67:VAL:HG21	52:I5:59:PHE:CG	2.40	0.56
25:14:372:G:N2	25:14:401:A:OP2	2.34	0.56
25:14:607:U:OP1	30:39:103:LYS:N	2.35	0.56
25:14:2469:A:H2'	38:45:56:ARG:HE	1.71	0.56
33:69:38:LEU:HD12	33:69:38:LEU:H	1.70	0.56
41:75:125:ARG:HA	41:75:128:GLU:HB3	1.87	0.56
47:D5:40:ASP:OD1	47:D5:43:GLU:N	2.33	0.56
1:13:1414:U:H3	1:13:1486:G:H1	1.52	0.56
5:4E:43:LEU:HD21	5:4E:132:ALA:HB1	1.88	0.56
5:4E:147:ASP:N	5:4E:147:ASP:OD1	2.39	0.56
15:6I:4:THR:OG1	15:6I:6:GLU:OE2	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:28:A:N6	25:1H:512:G:H1'	2.21	0.56
32:51:11:VAL:HG22	32:51:76:VAL:HG11	1.88	0.56
1:1G:539:A:OP2	12:3A:112:LYS:NZ	2.37	0.56
1:1G:636:U:H2'	1:1G:637:G:C8	2.41	0.56
1:1G:762:C:H2'	1:1G:763:G:C8	2.40	0.56
1:1G:860:A:H4'	8:72:75:ARG:HH12	1.69	0.56
1:1G:953:G:H5'	1:1G:965:A:H61	1.69	0.56
2:12:58:ILE:O	2:12:62:ALA:N	2.33	0.56
25:14:1033:U:H1'	25:14:1034:G:H5"	1.88	0.56
25:14:1864:U:OP1	25:14:2410:G:O2'	2.23	0.56
41:75:39:ARG:HG2	41:75:40:THR:H	1.70	0.56
45:B5:44:GLU:HG3	45:B5:51:VAL:HG23	1.87	0.56
46:C5:91:GLU:HG3	46:C5:92:ASN:HB3	1.88	0.56
1:13:1301:U:O3'	13:4I:21:TYR:OH	2.21	0.56
6:5E:23:LYS:NZ	6:5E:42:GLU:OE2	2.39	0.56
13:4I:3:ARG:HA	13:4I:9:ILE:HG22	1.86	0.56
25:1H:221:A:O2'	25:1H:222:A:OP2	2.23	0.56
25:1H:484:C:H2'	25:1H:485:C:H6	1.70	0.56
25:1H:2189:U:H2'	25:1H:2190:G:C8	2.41	0.56
27:71:14:VAL:HG22	27:71:28:LEU:HD21	1.87	0.56
34:38:21:GLN:O	34:38:23:SER:N	2.39	0.56
1:1G:745:C:OP1	1:1G:851:G:O2'	2.17	0.56
1:1G:880:C:OP1	12:3A:5:ASN:ND2	2.38	0.56
1:1G:910:C:OP2	12:3A:18:LYS:NZ	2.35	0.56
1:1G:1346:A:H4'	1:1G:1347:G:O5'	2.06	0.56
2:12:32:ILE:HG23	2:12:33:TYR:H	1.71	0.56
2:12:166:ASP:HB2	2:12:205:ASP:HB2	1.88	0.56
13:4A:81:LEU:HA	13:4A:85:GLY:HA3	1.88	0.56
57:2L:4:G:H1	57:2L:70:C:H42	1.53	0.56
25:14:586:A:N1	25:14:809:G:O2'	2.31	0.56
25:14:773:U:C4'	28:19:47:GLY:HA3	2.35	0.56
25:14:910:A:H62	38:45:12:GLN:HA	1.70	0.56
25:14:1849:G:H2'	25:14:1850:G:C8	2.41	0.56
25:14:2646:C:OP2	25:14:2732:G:O2'	2.17	0.56
45:B5:53:LYS:HB3	45:B5:82:GLN:HB3	1.88	0.56
23:2K:52:C:H42	23:2K:64:G:H1	1.53	0.56
25:1H:1666:G:O6	62:1H:3670:HOH:O	2.16	0.56
25:1H:2494:G:H2'	25:1H:2495:G:H8	1.71	0.56
25:1H:2689:U:P	25:1H:2719:G:H22	2.29	0.56
34:38:20:ALA:HB1	34:38:86:PRO:HA	1.87	0.56
40:A8:109:GLY:O	40:A8:110:LEU:HD22	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:J8:53:VAL:HG12	49:J8:54:ALA:H	1.70	0.56
1:1G:1129:C:O2	1:1G:1143:G:N2	2.38	0.56
1:1G:1148:U:H1'	9:82:16:ARG:HH21	1.71	0.56
2:12:80:ILE:HD11	2:12:211:ILE:HG22	1.87	0.56
11:2A:21:ILE:HG12	11:2A:30:VAL:HG12	1.87	0.56
13:4A:65:LYS:HB3	13:4A:70:LEU:HB2	1.86	0.56
25:14:1218:C:H42	25:14:1231:G:H1	1.52	0.56
32:59:17:VAL:HG11	32:59:50:VAL:HG11	1.88	0.56
33:69:12:LEU:HG	33:69:19:VAL:HG11	1.86	0.56
37:35:101:VAL:HA	37:35:105:LEU:O	2.06	0.56
42:85:96:ALA:HA	42:85:98:LEU:HD12	1.87	0.56
52:I5:58:ARG:O	52:I5:62:ARG:N	2.39	0.56
1:13:643:C:H2'	1:13:644:G:C8	2.41	0.55
25:1H:363:G:H2'	25:1H:363(A):A:H8	1.71	0.55
25:1H:536:A:H61	25:1H:557:U:H3	1.54	0.55
25:1H:1292:U:H2'	25:1H:1293:C:C6	2.41	0.55
25:1H:2847:U:OP1	41:B8:98:LYS:NZ	2.33	0.55
33:61:46:ALA:HB1	33:61:50:ARG:HH21	1.71	0.55
40:A8:62:LYS:HA	40:A8:65:VAL:HB	1.88	0.55
47:H8:24:LEU:HB2	47:H8:41:LEU:HG	1.88	0.55
5:42:71:LEU:HD11	5:42:114:GLY:HA3	1.88	0.55
25:14:270(V):G:H2'	25:14:270(W):G:C8	2.41	0.55
25:14:444:C:OP2	42:85:2:PRO:HD3	2.06	0.55
25:14:582:G:H2'	25:14:583:G:C8	2.42	0.55
25:14:840:C:H2'	25:14:841:A:C8	2.41	0.55
25:14:1011:G:H1	25:14:1150:C:H42	1.52	0.55
47:D5:150:LEU:HG	47:D5:171:ILE:H	1.70	0.55
1:13:992:U:H3	1:13:1044:A:H62	1.53	0.55
1:13:1516:G:N2	1:13:1519:MA6:OP2	2.38	0.55
25:1H:1188:U:H4'	43:D8:79:VAL:HG22	1.87	0.55
27:71:59:ARG:HD2	27:71:164:ARG:HD2	1.89	0.55
41:B8:16:ARG:HD3	41:B8:19:LEU:HD11	1.86	0.55
41:B8:65:LYS:NZ	41:B8:66:VAL:O	2.38	0.55
51:L8:40:THR:HG22	51:L8:41:PRO:HD2	1.87	0.55
52:M8:16:CYS:SG	52:M8:33:VAL:HB	2.46	0.55
1:1G:812:C:N3	62:1G:1833:HOH:O	2.33	0.55
8:72:4:ASP:HB2	8:72:89:PRO:HG3	1.89	0.55
25:14:5:A:H2'	25:14:6:A:C8	2.42	0.55
25:14:242:G:N2	25:14:255:A:OP2	2.25	0.55
25:14:270(S):G:H1'	49:F5:78:LYS:HE3	1.88	0.55
25:14:946:G:H2'	25:14:947:G:C8	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:39:34:TRP:CE3	37:35:8:PRO:HB3	2.42	0.55
41:75:57:PHE:O	41:75:58:ASN:ND2	2.40	0.55
17:8I:45:HIS:HB2	17:8I:65:ILE:HD13	1.87	0.55
18:9I:52:PRO:HG2	18:9I:55:ARG:HG2	1.87	0.55
25:1H:1102:C:H2'	25:1H:1103:A:H5"	1.89	0.55
25:1H:2216:G:H2'	25:1H:2217:G:C8	2.42	0.55
30:31:167:ALA:HB1	30:31:173:VAL:HG11	1.88	0.55
55:P8:18:PHE:HA	55:P8:43:THR:HG21	1.88	0.55
1:1G:1288:A:H2'	1:1G:1289:A:H8	1.71	0.55
9:82:47:LEU:HB3	9:82:50:LEU:HB2	1.87	0.55
25:14:639:U:H2'	25:14:640:C:C6	2.42	0.55
25:14:2140:C:H2'	25:14:2141:G:C8	2.40	0.55
25:14:2537:U:H2'	25:14:2538:C:C6	2.41	0.55
1:13:332:G:H2'	1:13:333:G:H8	1.70	0.55
1:13:565:U:H5"	1:13:566:G:H2'	1.88	0.55
1:13:701:C:H1'	1:13:703:G:C4	2.42	0.55
25:1H:1303:G:OP1	62:1H:3674:HOH:O	2.18	0.55
25:1H:1315:C:OP2	62:1H:3617:HOH:O	2.18	0.55
26:16:15:A:H3'	26:16:16:G:H5'	1.88	0.55
26:16:24:G:O2'	26:16:25:A:O5'	2.25	0.55
31:41:64:THR:HG23	31:41:66:GLN:H	1.72	0.55
32:51:10:PRO:HB2	32:51:50:VAL:HG12	1.89	0.55
37:78:4:SER:OG	37:78:5:ASP:OD1	2.24	0.55
54:O8:8:LYS:O	54:O8:9:LEU:HB2	2.07	0.55
1:1G:794:A:H4'	1:1G:1521:G:O2'	2.05	0.55
1:1G:1129:C:H5'	1:1G:1130:A:H5'	1.88	0.55
1:1G:1150:U:O2'	10:1A:39:PRO:O	2.23	0.55
8:72:20:TYR:HE2	8:72:75:ARG:HD2	1.71	0.55
25:14:220:G:O2'	25:14:233:A:N3	2.38	0.55
25:14:2015:A:OP1	44:A5:92:ARG:NH2	2.39	0.55
40:65:20:ARG:HG3	48:E5:49:LYS:HE2	1.88	0.55
46:C5:83:THR:HG21	46:C5:99:CYS:SG	2.47	0.55
1:13:34:C:H2'	1:13:35:G:C8	2.41	0.55
1:13:1054:C:C4	22:1K:35:C:H1'	2.42	0.55
10:1I:13:HIS:HB2	10:1I:68:HIS:CD2	2.41	0.55
18:9I:52:PRO:HB2	18:9I:54:ARG:HG2	1.88	0.55
25:1H:1053:C:N3	25:1H:1106:G:N2	2.47	0.55
25:1H:2169:A:N6	25:1H:2170:A:N1	2.55	0.55
25:1H:2415:G:H4'	37:78:67:MET:N	2.14	0.55
32:51:8:PRO:HB2	32:51:69:ARG:HH21	1.71	0.55
44:E8:13:SER:HB3	44:E8:16:LYS:HE3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1001:G:H22	1:1G:1039:C:H42	1.54	0.55
1:1G:1145:C:H4'	1:1G:1146:A:H8	1.71	0.55
25:14:1384:A:O2'	25:14:1404:C:O2	2.22	0.55
25:14:1853:A:H2'	25:14:1854:A:C8	2.41	0.55
25:14:2456:C:H42	25:14:2495:G:H1	1.54	0.55
25:14:2629:A:H62	25:14:2895:U:H3	1.55	0.55
33:69:77:LEU:HD22	33:69:141:LYS:H	1.71	0.55
41:75:24:PRO:HA	41:75:49:VAL:HG13	1.88	0.55
41:75:108:ARG:HA	41:75:111:ARG:HE	1.71	0.55
47:D5:127:LYS:HB3	47:D5:162:GLU:HB2	1.87	0.55
52:I5:55:ARG:HH21	52:I5:56:VAL:HG12	1.71	0.55
1:13:302:G:H4'	12:3I:14:LYS:NZ	2.22	0.55
1:13:1118:C:H1'	1:13:1179:A:C5	2.42	0.55
4:3E:128:VAL:HA	4:3E:145:GLU:O	2.06	0.55
11:2I:18:ARG:O	11:2I:33:THR:N	2.40	0.55
25:1H:1019:U:HO2'	25:1H:1021:A:H2	1.55	0.55
25:1H:1824:G:OP1	28:11:52:ARG:NH1	2.40	0.55
25:1H:2751:G:H5'	32:51:4:ILE:HA	1.87	0.55
30:31:11:VAL:HB	30:31:18:ARG:HG3	1.89	0.55
33:61:39:ALA:HB1	33:61:44:LEU:HD13	1.88	0.55
34:38:87:VAL:HG11	34:38:91:LYS:HD3	1.88	0.55
1:1G:538:G:H2'	1:1G:539:A:C8	2.40	0.55
1:1G:1232:U:H5"	9:82:124:GLN:O	2.06	0.55
7:62:50:ILE:HG13	7:62:58:PRO:HB3	1.89	0.55
30:39:117:ARG:HG3	30:39:122:LYS:HB2	1.87	0.55
56:M5:35:GLN:NE2	56:M5:40:GLU:OE1	2.39	0.55
1:13:1113:C:H2'	1:13:1114:C:C6	2.41	0.55
7:6E:46:ALA:O	7:6E:50:ILE:HG12	2.07	0.55
10:1I:47:PHE:CZ	10:1I:63:PHE:HB2	2.42	0.55
25:1H:2129:C:OP1	27:71:6:ARG:NE	2.39	0.55
32:51:74:ASN:HA	32:51:77:LYS:HD3	1.88	0.55
4:32:19:LEU:HG	4:32:21:LEU:HG	1.89	0.55
4:32:150:GLU:HA	4:32:153:ARG:HG2	1.89	0.55
13:4A:39:ILE:HG13	13:4A:56:LEU:HD23	1.89	0.55
13:4A:94:ARG:HB3	13:4A:96:LEU:HG	1.87	0.55
15:6A:54:ARG:NH1	15:6A:58:MET:SD	2.79	0.55
25:14:7:G:H1	25:14:2896:C:N4	2.00	0.55
25:14:2705:A:O2'	25:14:2852:G:OP1	2.20	0.55
40:65:10:ARG:NH2	40:65:91:PRO:O	2.34	0.55
1:13:648:A:H2'	1:13:649:G:C8	2.40	0.55
8:7E:29:SER:HB3	8:7E:32:LYS:HG3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:G8:97:ARG:O	46:G8:107:ASP:HB3	2.07	0.55
1:1G:1129:C:H4'	1:1G:1130:A:C8	2.42	0.55
1:1G:1397:C:H42	24:4L:22:A:H8	1.54	0.55
2:12:162:ILE:HD11	2:12:184:VAL:HG13	1.89	0.55
3:22:161:GLU:O	3:22:162:GLN:HB3	2.07	0.55
5:42:42:GLY:HA2	5:42:65:ASN:O	2.07	0.55
9:82:77:ILE:O	9:82:81:ILE:N	2.35	0.55
10:1A:33:GLN:H	10:1A:75:ILE:HG12	1.71	0.55
12:3A:108:LYS:H	12:3A:108:LYS:HD2	1.70	0.55
17:8A:12:SER:HB3	17:8A:20:THR:HB	1.88	0.55
25:14:458:G:O2'	25:14:469:G:O6	2.17	0.55
1:13:93:U:H2'	1:13:95:G:O4'	2.07	0.55
1:13:939:G:H1	1:13:1344:C:H42	1.54	0.55
1:13:1304:G:N1	1:13:1332:A:OP2	2.33	0.55
3:2E:71:ALA:HB2	3:2E:115:LEU:HD13	1.87	0.55
25:1H:177:G:H3'	25:1H:178:G:H8	1.72	0.55
25:1H:605:C:O2	25:1H:657:U:O2'	2.24	0.55
25:1H:888:C:O2'	25:1H:889:C:H4'	2.07	0.55
25:1H:1914:C:H3'	25:1H:1915:5MU:H71	1.89	0.55
32:51:121:ILE:HG23	32:51:133:VAL:HG13	1.88	0.55
44:E8:65:LEU:HD13	44:E8:68:ARG:HD3	1.88	0.55
1:1G:1274:G:H21	1:1G:1275:A:H62	1.53	0.55
19:AA:72:GLY:HA2	19:AA:75:ALA:HB3	1.89	0.55
25:14:404:C:O2'	25:14:405:U:OP2	2.23	0.55
25:14:531:C:OP1	25:14:561:G:N1	2.40	0.55
25:14:1035:U:H3	25:14:1120:G:H1	1.54	0.55
25:14:1430:C:H2'	25:14:1431:U:H6	1.72	0.55
30:39:102:PRO:HB2	30:39:105:VAL:HG23	1.88	0.55
1:13:413:G:H2'	1:13:428:G:N2	2.21	0.55
1:13:433:C:H2'	1:13:434:U:H6	1.71	0.55
1:13:1340:A:HO2'	23:2K:32:G:HO2'	1.44	0.55
3:2E:118:GLN:HG2	3:2E:187:ALA:HB2	1.89	0.55
25:1H:845:G:H4'	25:1H:846:C:OP1	2.06	0.55
28:11:108:PRO:HD2	28:11:111:LEU:HG	1.87	0.55
31:41:66:GLN:HA	52:M8:6:HIS:CE1	2.42	0.55
41:B8:105:LEU:O	41:B8:107:ASP:N	2.40	0.55
49:J8:87:PRO:HA	49:J8:90:ILE:HB	1.89	0.55
1:1G:426:G:OP1	4:32:36:ARG:NH1	2.40	0.55
1:1G:690:G:OP2	11:2A:27:ASN:ND2	2.34	0.55
1:1G:1274:G:N2	1:1G:1275:A:H62	2.05	0.55
6:52:36:ARG:NH2	6:52:38:GLU:OE2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2191:G:O2'	25:14:2192:G:OP1	2.25	0.55
25:14:2494:G:H2'	25:14:2495:G:H8	1.72	0.55
26:1J:15:A:H5'	26:1J:16:G:H8	1.71	0.55
29:29:89:ASP:OD1	29:29:89:ASP:N	2.36	0.55
32:59:121:ILE:HD11	32:59:140:LYS:HD2	1.89	0.55
35:15:28:THR:HG22	35:15:29:LYS:HG2	1.88	0.55
37:35:79:ARG:NE	37:35:109:GLY:HA3	2.22	0.55
40:65:102:ALA:HB1	40:65:112:PHE:HB3	1.89	0.55
1:13:639:G:H2'	1:13:640:A:C8	2.38	0.54
1:13:1313:U:OP1	19:AI:5:LEU:HB2	2.07	0.54
9:8E:5:TYR:HA	9:8E:17:VAL:O	2.07	0.54
25:1H:1423:G:H2'	25:1H:1424:G:C8	2.42	0.54
25:1H:2781:A:H5"	25:1H:2782:G:H5'	1.87	0.54
36:68:102:VAL:HG23	36:68:121:VAL:HG13	1.89	0.54
44:E8:38:TYR:CE2	53:N8:41:PRO:HD3	2.42	0.54
49:J8:81:LYS:HA	49:J8:81:LYS:NZ	2.22	0.54
1:1G:1175:G:H2'	1:1G:1176:A:C8	2.42	0.54
3:22:161:GLU:CD	3:22:162:GLN:H	2.11	0.54
25:14:883:G:H1	25:14:893:C:H42	1.54	0.54
26:1J:14:U:OP2	26:1J:70:C:O2'	2.25	0.54
31:49:47:LYS:HB2	31:49:82:LEU:HD11	1.89	0.54
33:69:20:ASP:OD1	33:69:20:ASP:N	2.40	0.54
37:35:97:PRO:O	37:35:98:GLU:HG3	2.07	0.54
38:45:81:VAL:HG12	38:45:82:ARG:CZ	2.36	0.54
1:13:1273:G:H3'	1:13:1274:G:H8	1.70	0.54
1:13:1305:G:O2'	1:13:1306:A:N7	2.37	0.54
25:1H:363(F):A:N1	62:1H:3779:HOH:O	2.33	0.54
25:1H:1108:U:OP1	34:38:55:LYS:NZ	2.40	0.54
25:1H:1212:G:O2'	25:1H:1236:G:N2	2.39	0.54
27:71:43:VAL:HG22	27:71:214:VAL:HG22	1.89	0.54
32:51:88:LEU:HA	32:51:130:ARG:HA	1.87	0.54
1:1G:933:G:OP2	7:62:2:ALA:N	2.40	0.54
2:12:15:VAL:HG22	2:12:210:SER:HA	1.88	0.54
7:62:116:ALA:HA	7:62:119:ARG:HG3	1.88	0.54
8:72:44:PHE:HD1	8:72:80:ILE:HG12	1.72	0.54
8:72:64:LYS:HG2	8:72:79:VAL:HG21	1.90	0.54
9:82:65:VAL:HG21	9:82:73:GLN:HB3	1.89	0.54
12:3A:46:ASN:ND2	12:3A:89:0TD:SB	2.79	0.54
25:14:1421:G:H1	25:14:1577:C:H42	1.54	0.54
25:14:2116:G:O6	25:14:2172:U:N3	2.40	0.54
25:14:2567:G:H2'	25:14:2568:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:19:71:ASP:OD1	28:19:103:ARG:NH2	2.39	0.54
49:F5:40:ARG:NH2	49:F5:42:GLN:HE21	2.04	0.54
1:13:235:C:H5'	17:8I:70:ARG:HG2	1.88	0.54
1:13:380:G:O2'	1:13:382:A:N7	2.36	0.54
1:13:437:U:H2'	1:13:438:G:O4'	2.07	0.54
2:1E:21:ARG:HD2	2:1E:38:GLY:HA3	1.89	0.54
25:1H:2140:C:H1'	25:1H:2152:G:N2	2.22	0.54
28:11:130:ALA:HA	28:11:192:THR:HA	1.88	0.54
32:51:103:LEU:HD13	32:51:131:VAL:HG21	1.88	0.54
41:B8:66:VAL:HA	41:B8:71:GLY:HA2	1.88	0.54
1:1G:812:C:H1'	1:1G:813:U:OP2	2.08	0.54
20:BA:54:LYS:HA	20:BA:57:ARG:HH21	1.72	0.54
25:14:34:C:HO2'	25:14:35:G:P	2.30	0.54
25:14:265:A:O2'	25:14:266:G:H4'	2.07	0.54
25:14:675:A:N3	25:14:2443:C:O2'	2.40	0.54
25:14:1074:G:N2	25:14:1075:C:O2	2.40	0.54
25:14:1757:U:H3	25:14:1762:A:H2	1.54	0.54
31:49:96:ARG:O	31:49:98:ARG:N	2.40	0.54
37:35:62:LEU:O	56:M5:13:ARG:NH1	2.40	0.54
45:B5:8:ILE:O	50:G5:36:ARG:NH2	2.41	0.54
55:L5:12:ARG:HB3	55:L5:46:VAL:HG21	1.87	0.54
1:13:1274:G:N2	1:13:1275:A:H62	2.06	0.54
2:1E:80:ILE:HD11	2:1E:208:ILE:HG23	1.88	0.54
4:3E:60:GLU:OE2	4:3E:199:ASN:N	2.39	0.54
25:1H:1177:A:H4'	25:1H:1178:C:O5'	2.07	0.54
31:41:77:ILE:H	31:41:82:LEU:HB3	1.73	0.54
41:B8:57:PHE:HA	41:B8:79:HIS:CE1	2.43	0.54
1:1G:181:G:O2'	1:1G:182:U:O5'	2.26	0.54
1:1G:355:C:H1'	1:1G:388:G:H1'	1.88	0.54
1:1G:636:U:H2'	1:1G:637:G:H8	1.72	0.54
1:1G:662:G:H2'	1:1G:663:A:C8	2.42	0.54
1:1G:838:G:N2	1:1G:849:C:O2	2.40	0.54
1:1G:1086:U:H3'	1:1G:1087:G:H8	1.72	0.54
2:12:21:ARG:N	2:12:39:ILE:HG12	2.23	0.54
17:8A:74:LEU:HD12	17:8A:75:ARG:HG3	1.89	0.54
57:2L:76:C:N3	25:14:2251:OMG:N2	2.50	0.54
25:14:993:G:OP1	42:85:50:ARG:NH2	2.41	0.54
25:14:1454:U:OP1	39:55:77:ARG:NH1	2.40	0.54
25:14:1791:A:N6	25:14:1828:G:O2'	2.40	0.54
31:49:47:LYS:HE2	31:49:81:LYS:HG2	1.90	0.54
47:D5:19:ARG:NH1	47:D5:84:GLU:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:978:A:O2'	1:13:1322:C:N3	2.29	0.54
1:13:1062:U:H2'	1:13:1063:C:C6	2.43	0.54
1:13:1137:C:O2'	1:13:1138:G:N3	2.40	0.54
1:13:1277:C:HO2'	1:13:1279:A:H8	1.55	0.54
16:7I:21:VAL:O	16:7I:33:ILE:N	2.41	0.54
26:16:95:U:H2'	26:16:96:G:C8	2.43	0.54
31:41:112:PRO:HB3	52:M8:37:SER:N	2.22	0.54
36:68:78:ARG:HG2	41:B8:73:GLU:HG3	1.89	0.54
41:B8:50:ILE:HG13	41:B8:64:ARG:HB2	1.88	0.54
1:1G:601:C:H42	1:1G:637:G:H1	1.56	0.54
3:22:47:LEU:HD21	3:22:68:VAL:HG11	1.89	0.54
18:9A:50:ILE:HD11	18:9A:70:ILE:HG21	1.90	0.54
57:2L:33:OMC:HM22	57:2L:34:U:H5'	1.90	0.54
22:3L:42:C:H2'	22:3L:43:G:C8	2.43	0.54
22:3L:60:A:H2'	22:3L:61:U:H5'	1.90	0.54
25:14:270(U):C:H2'	25:14:270(V):G:C8	2.42	0.54
25:14:1313:U:H4'	25:14:1332:G:H4'	1.88	0.54
25:14:2439:A:H5'	25:14:2439:A:C8	2.41	0.54
31:49:114:ILE:HG22	31:49:117:PHE:HB2	1.90	0.54
1:13:346:G:H5"	41:B8:41:ARG:NH1	2.23	0.54
1:13:1206:G:OP1	3:2E:190:ARG:NH1	2.39	0.54
12:3I:72:HIS:HA	12:3I:99:ARG:HH22	1.73	0.54
25:1H:953:A:OP2	38:88:16:ARG:HD3	2.08	0.54
25:1H:1637:A:OP2	62:1H:3683:HOH:O	2.19	0.54
25:1H:1818:U:H2'	28:11:157:ARG:HG3	1.88	0.54
37:78:37:GLY:N	62:78:301:HOH:O	2.40	0.54
51:L8:30:ARG:HE	51:L8:33:GLN:HG3	1.72	0.54
1:1G:99:C:H2'	1:1G:101:A:C8	2.42	0.54
1:1G:303:A:H2'	1:1G:304:U:O4'	2.08	0.54
1:1G:1256:A:H5'	1:1G:1257:U:OP1	2.07	0.54
2:12:15:VAL:HG23	2:12:209:ARG:HD2	1.89	0.54
11:2A:32:ILE:HD13	11:2A:72:ALA:HB2	1.90	0.54
25:14:34:C:O2'	25:14:35:G:O5'	2.24	0.54
25:14:1860:G:H1	25:14:1882:C:H42	1.54	0.54
25:14:2299:G:C2	25:14:2318:G:H8	2.26	0.54
62:14:3519:HOH:O	28:19:244:ARG:NH2	2.41	0.54
29:29:120:TRP:CD1	29:29:155:LYS:HB3	2.43	0.54
32:59:93:GLY:O	32:59:95:ARG:NH2	2.41	0.54
1:13:812:C:O2'	1:13:813:U:O5'	2.24	0.54
1:13:1060:C:OP1	14:5I:45:ARG:NH2	2.38	0.54
1:13:1157:A:H1'	1:13:1158:C:N3	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1233:G:O2'	1:13:1365:G:OP1	2.26	0.54
1:13:1451:A:H5"	1:13:1452:C:O5'	2.07	0.54
18:9I:51:LEU:HD22	18:9I:55:ARG:HD2	1.90	0.54
19:AI:22:LEU:HA	19:AI:25:LYS:O	2.07	0.54
32:51:86:GLU:OE2	32:51:165:ALA:N	2.39	0.54
4:32:22:LYS:HB2	60:32:303:SF4:S4	2.47	0.54
22:3L:64:G:H2'	22:3L:65:G:C8	2.42	0.54
25:14:16:G:H2'	25:14:17:G:H8	1.72	0.54
25:14:814:C:OP1	43:95:83:ARG:N	2.38	0.54
25:14:1191:G:OP1	37:35:18:ARG:NH1	2.40	0.54
26:1J:5:C:O2'	26:1J:27:C:O2	2.26	0.54
26:1J:28:C:H2'	26:1J:29:A:C8	2.42	0.54
30:39:20:LEU:HD22	30:39:199:TRP:CZ3	2.43	0.54
32:59:16:SER:OG	32:59:26:VAL:O	2.24	0.54
1:13:801:U:H2'	1:13:802:A:C8	2.43	0.54
10:1I:50:ILE:HB	14:5I:41:ARG:NE	2.22	0.54
25:1H:213:A:OP2	62:1H:3677:HOH:O	2.18	0.54
25:1H:1053:C:N4	25:1H:1106:G:H1	1.93	0.54
41:B8:107:ASP:N	41:B8:107:ASP:OD1	2.38	0.54
1:1G:304:U:H2'	1:1G:305:G:C8	2.43	0.54
1:1G:445:G:H2'	1:1G:446:G:C8	2.43	0.54
1:1G:1306:A:N6	1:1G:1331:G:O2'	2.40	0.54
25:14:630:G:N2	25:14:633:A:OP2	2.34	0.54
25:14:2305:A:H5"	31:49:134:GLY:HA3	1.89	0.54
25:14:2334:G:O6	48:E5:74:ARG:NH2	2.40	0.54
25:14:2564:A:C2	25:14:2647:U:H4'	2.42	0.54
32:59:2:SER:OG	32:59:3:ARG:N	2.40	0.54
37:35:5:ASP:HA	37:35:7:ARG:NH2	2.23	0.54
40:65:88:ASP:OD1	40:65:90:GLY:N	2.41	0.54
1:13:375:U:H5"	16:7I:69:THR:HG21	1.90	0.54
6:5E:41:GLU:HB3	6:5E:62:TRP:HB3	1.90	0.54
10:1I:51:ARG:NH2	10:1I:61:GLU:OE1	2.41	0.54
25:1H:1056:G:O2'	25:1H:1086:A:O2'	2.23	0.54
25:1H:1858:G:H2'	25:1H:1883:G:H22	1.72	0.54
25:1H:2154:G:H2'	25:1H:2155:G:C8	2.40	0.54
46:G8:38:ILE:HD11	46:G8:64:GLU:HG3	1.89	0.54
1:1G:1104:G:H4'	2:12:111:ARG:NE	2.23	0.54
4:32:152:SER:HA	4:32:155:LEU:HD23	1.90	0.54
8:72:89:PRO:HA	8:72:92:ARG:HH11	1.73	0.54
25:14:1007:C:OP1	35:15:35:ARG:NH1	2.41	0.54
25:14:2502:G:H5"	25:14:2503:2MA:H5"	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2784:C:H2'	25:14:2785:C:C6	2.43	0.54
32:59:154:PRO:HB3	32:59:163:TYR:CE2	2.43	0.54
48:E5:25:ARG:HH21	48:E5:35:ASN:HB3	1.73	0.54
55:L5:8:ASN:HB3	55:L5:11:LYS:HB3	1.88	0.54
1:13:401:C:H2'	1:13:402:G:C8	2.43	0.54
1:13:1289:A:H3'	1:13:1290:G:H8	1.73	0.54
13:4I:17:VAL:O	13:4I:20:THR:OG1	2.25	0.54
25:1H:557:U:H2'	25:1H:558:G:C8	2.43	0.54
27:71:46:LYS:HE3	27:71:210:ARG:HB3	1.90	0.54
27:71:201:PRO:HD2	27:71:208:PHE:CE2	2.43	0.54
1:1G:36:C:N4	62:1G:1848:HOH:O	2.41	0.54
1:1G:951:G:OP2	13:4A:102:ARG:NH2	2.41	0.54
1:1G:1137:C:H4'	1:1G:1138:G:O5'	2.07	0.54
6:52:25:ILE:HG21	6:52:82:ARG:HD2	1.90	0.54
19:AA:38:SER:O	19:AA:70:LYS:HB3	2.08	0.54
25:14:19:C:H2'	25:14:20:C:H6	1.73	0.54
25:14:550:G:O2'	25:14:1220:A:N3	2.36	0.54
25:14:1043:C:H42	25:14:1112:G:H22	1.56	0.54
25:14:1802:A:H2'	25:14:1803:A:C8	2.42	0.54
25:14:1991:U:H2'	25:14:1992:G:H5"	1.89	0.54
25:14:2304:G:N2	25:14:2312:U:O4	2.41	0.54
25:14:2710:C:OP1	62:14:3549:HOH:O	2.19	0.54
30:39:78:ILE:HA	30:39:83:PHE:CD2	2.43	0.54
35:15:19:GLU:HG3	35:15:59:LYS:HB3	1.91	0.54
41:75:80:SER:HB2	41:75:82:LEU:HD12	1.89	0.54
43:95:34:GLU:OE2	43:95:56:SER:OG	2.17	0.54
47:D5:70:LEU:O	47:D5:89:PHE:N	2.26	0.54
53:J5:41:PRO:HD2	53:J5:44:THR:HG22	1.90	0.54
1:13:572:A:OP1	62:13:1808:HOH:O	2.18	0.53
1:13:1291:G:OP1	7:6E:37:ASN:ND2	2.41	0.53
7:6E:15:ASP:HB3	7:6E:19:GLY:H	1.74	0.53
9:8E:4:TYR:CZ	9:8E:88:TYR:HB2	2.43	0.53
9:8E:61:ALA:HB1	9:8E:63:ILE:HD11	1.90	0.53
10:1I:51:ARG:HB2	10:1I:60:ARG:HA	1.90	0.53
25:1H:2306:C:H3'	25:1H:2307:G:H5"	1.90	0.53
25:1H:2607:G:O3'	62:1H:3680:HOH:O	2.18	0.53
28:11:182:LEU:HB2	28:11:271:ILE:HG13	1.91	0.53
38:88:36:ALA:HA	38:88:129:THR:HG22	1.89	0.53
1:1G:547:A:OP1	4:32:73:ARG:NH2	2.40	0.53
1:1G:1122:U:O4	1:1G:1123:A:N6	2.42	0.53
11:2A:20:TYR:HB2	11:2A:31:THR:HG23	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:403:U:H4'	25:14:404:C:H5'	1.90	0.53
25:14:559:G:O2'	42:85:52:ARG:NH1	2.37	0.53
31:49:60:LEU:O	31:49:64:THR:HG22	2.08	0.53
37:35:106:LEU:HD13	37:35:112:LEU:HG	1.90	0.53
38:45:125:LEU:HD13	38:45:126:PRO:HD2	1.91	0.53
1:13:4:U:C5	8:7E:102:ARG:HG3	2.43	0.53
1:13:35:G:O2'	12:3I:115:SER:O	2.19	0.53
1:13:949:A:H61	1:13:1232:U:H3	1.56	0.53
3:2E:71:ALA:HA	3:2E:106:VAL:HB	1.90	0.53
25:1H:222:A:H3'	25:1H:421:U:H5'	1.90	0.53
25:1H:1109:C:O2'	25:1H:1110:G:OP1	2.27	0.53
25:1H:2099:U:H2'	25:1H:2100:G:H8	1.73	0.53
25:1H:2701:C:C3'	25:1H:2702:U:H5"	2.33	0.53
52:M8:48:ARG:CZ	52:M8:51:ASP:HA	2.38	0.53
1:1G:843:U:H3'	1:1G:848:C:O4'	2.08	0.53
19:AA:36:ARG:HD2	19:AA:72:GLY:H	1.73	0.53
25:14:782:A:N7	28:19:221:VAL:HG21	2.23	0.53
25:14:992:C:H2'	25:14:993:G:H8	1.72	0.53
25:14:1076:C:H2'	25:14:1077:A:H5'	1.89	0.53
40:65:67:ARG:O	40:65:71:ARG:HG3	2.08	0.53
50:G5:52:ASP:O	50:G5:56:GLN:N	2.36	0.53
1:13:422:C:HO2'	1:13:423:G:N2	2.06	0.53
1:13:1151:A:OP1	10:1I:41:PRO:HA	2.09	0.53
5:4E:41:VAL:HG22	5:4E:69:VAL:HG21	1.89	0.53
25:1H:184:C:H2'	25:1H:185:U:C6	2.43	0.53
25:1H:451:C:H4'	30:31:52:LYS:NZ	2.24	0.53
25:1H:2168:G:N2	25:1H:2170:A:OP2	2.41	0.53
25:1H:2310:A:H8	25:1H:2311:A:H5"	1.73	0.53
34:38:72:ASP:HB3	34:38:118:THR:O	2.08	0.53
47:H8:18:LEU:HD22	47:H8:25:PRO:HG3	1.90	0.53
3:22:165:THR:O	3:22:165:THR:OG1	2.26	0.53
6:52:35:ALA:HA	6:52:67:MET:HB3	1.89	0.53
20:BA:63:ILE:HG21	20:BA:81:LYS:HB2	1.89	0.53
25:14:5:A:H2'	25:14:6:A:H8	1.72	0.53
25:14:270(E):G:H2'	25:14:270(F):U:O4'	2.09	0.53
25:14:1343:G:H1	25:14:1404:C:H42	1.56	0.53
42:85:88:ILE:HD12	42:85:90:VAL:HB	1.90	0.53
1:13:1410:G:H2'	1:13:1411:C:C6	2.44	0.53
11:2I:22:HIS:HB3	11:2I:29:ILE:HG23	1.91	0.53
22:3K:7:G:H5"	22:3K:8:U:OP2	2.08	0.53
25:1H:1156:A:OP2	62:1H:3678:HOH:O	2.18	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1470:G:O2'	25:1H:1522:G:O6	2.19	0.53
25:1H:2172:U:H5'	25:1H:2173:A:OP2	2.09	0.53
31:41:125:PHE:HB3	31:41:166:ASP:HB3	1.90	0.53
36:68:80:ASP:OD2	41:B8:64:ARG:NH2	2.42	0.53
41:B8:108:ARG:HA	41:B8:111:ARG:NE	2.23	0.53
47:H8:23:LYS:HD3	47:H8:40:ASP:HA	1.90	0.53
47:H8:154:ASP:HB3	47:H8:155:LEU:HD22	1.89	0.53
52:M8:11:PRO:HA	52:M8:25:TYR:HA	1.90	0.53
54:O8:25:LYS:HE3	56:Q8:34:TRP:HE1	1.74	0.53
1:1G:1074:G:H4'	2:12:104:ASN:HB2	1.91	0.53
16:7A:21:VAL:HG23	16:7A:33:ILE:HB	1.89	0.53
26:1J:94:C:H2'	26:1J:95:U:O4'	2.08	0.53
40:65:63:THR:OG1	40:65:64:GLU:OE1	2.27	0.53
45:B5:8:ILE:H	45:B5:8:ILE:HD12	1.72	0.53
47:D5:4:ARG:HD3	47:D5:4:ARG:H	1.73	0.53
51:H5:39:ASP:O	51:H5:44:ARG:NH2	2.41	0.53
54:K5:14:THR:HG22	54:K5:50:ARG:O	2.08	0.53
1:13:222:U:H2'	1:13:223:U:C6	2.44	0.53
1:13:762:C:H2'	1:13:763:G:C8	2.43	0.53
1:13:1108:G:H5'	3:2E:176:HIS:ND1	2.22	0.53
1:13:1219:U:OP1	14:5I:19:ARG:NH2	2.39	0.53
9:8E:9:ARG:HG3	9:8E:14:VAL:HG22	1.91	0.53
25:1H:127:A:H5"	25:1H:128:C:C6	2.43	0.53
25:1H:661:C:O2'	37:78:13:ASN:HA	2.09	0.53
25:1H:784:A:C5	28:11:229:VAL:HG21	2.44	0.53
25:1H:945:A:N7	62:1H:3826:HOH:O	2.41	0.53
25:1H:1657:C:H2'	25:1H:1658:C:C6	2.44	0.53
30:31:183:VAL:O	30:31:187:VAL:HG23	2.08	0.53
41:B8:37:GLY:O	41:B8:38:ASN:ND2	2.26	0.53
41:B8:55:ASN:H	41:B8:59:THR:CB	2.19	0.53
1:1G:543:C:OP1	4:32:14:ARG:HG3	2.08	0.53
2:12:77:ALA:HB1	2:12:165:VAL:HG11	1.91	0.53
3:22:54:ARG:HB2	3:22:69:HIS:HB2	1.90	0.53
6:52:76:ALA:HA	6:52:79:LEU:HB2	1.91	0.53
25:14:270(U):C:H2'	25:14:270(V):G:H8	1.73	0.53
25:14:363(E):U:H5'	25:14:363(F):A:OP2	2.09	0.53
25:14:1383:C:O2	62:14:3547:HOH:O	2.18	0.53
28:19:239:ARG:NE	62:19:404:HOH:O	2.31	0.53
38:45:19:GLY:H	38:45:98:LYS:HZ3	1.57	0.53
47:D5:145:GLU:HA	47:D5:174:VAL:HG21	1.90	0.53
1:13:1302:U:C6	13:4I:17:VAL:HG21	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1314:C:H2'	1:13:1315:U:C6	2.44	0.53
1:13:1346:A:N1	1:13:1374:A:H5"	2.23	0.53
7:6E:15:ASP:HB3	7:6E:19:GLY:N	2.23	0.53
9:8E:48:GLU:OE1	9:8E:48:GLU:N	2.42	0.53
22:1K:31:G:H1	22:1K:41:C:N4	2.06	0.53
25:1H:574:C:N3	29:21:145:LYS:NZ	2.47	0.53
25:1H:1252:G:H1'	42:C8:33:ARG:HD3	1.91	0.53
25:1H:2068:U:N3	25:1H:2430:A:H2	2.00	0.53
49:J8:76:ARG:H	49:J8:76:ARG:HD2	1.73	0.53
1:1G:123:C:O2'	1:1G:290:C:O2	2.27	0.53
1:1G:137:C:H1'	16:7A:63:GLY:HA3	1.90	0.53
3:22:5:ILE:HG12	3:22:6:HIS:N	2.24	0.53
6:52:37:VAL:HA	6:52:65:VAL:HG12	1.90	0.53
9:82:4:TYR:HB3	9:82:87:GLN:HE22	1.73	0.53
19:AA:5:LEU:HD13	19:AA:9:VAL:HA	1.91	0.53
19:AA:44:MET:HB3	19:AA:47:HIS:CD2	2.44	0.53
25:14:920:G:H2'	25:14:921:G:C8	2.44	0.53
25:14:2019:A:H4'	42:85:34:LYS:HD2	1.90	0.53
26:1J:55:U:H4'	31:49:29:TRP:HE1	1.73	0.53
40:65:20:ARG:HE	40:65:21:THR:HG22	1.73	0.53
42:85:88:ILE:HA	43:95:49:THR:O	2.08	0.53
43:95:62:LEU:HD22	43:95:95:LEU:HB2	1.89	0.53
48:E5:18:ALA:HB3	48:E5:20:ARG:HH21	1.73	0.53
1:13:983:A:H5'	14:5I:3:ARG:NH1	2.23	0.53
1:13:1336:C:H1'	1:13:1337:G:C2	2.44	0.53
18:9I:70:ILE:O	18:9I:74:ARG:HG3	2.08	0.53
25:1H:640:C:H2'	25:1H:641:C:C6	2.44	0.53
25:1H:666:G:H4'	37:78:49:ARG:HH12	1.73	0.53
25:1H:997:G:OP1	42:C8:93:LYS:HB2	2.08	0.53
25:1H:1639:U:H2'	25:1H:1640:C:H5"	1.90	0.53
28:11:182:LEU:N	28:11:272:ALA:HB3	2.18	0.53
1:1G:928:G:O2'	1:1G:1533:C:O2'	2.23	0.53
1:1G:973:G:H3'	1:1G:974:A:H5"	1.91	0.53
2:12:67:THR:HG23	2:12:159:PRO:HA	1.91	0.53
4:32:45:GLN:HB2	4:32:46:LYS:HE2	1.90	0.53
7:62:68:ASN:ND2	7:62:128:ALA:O	2.42	0.53
25:14:1366:A:OP1	49:F5:2:SER:OG	2.25	0.53
25:14:1525:G:H2'	25:14:1526:G:H8	1.74	0.53
25:14:2837:G:H1	25:14:2881:C:H42	1.55	0.53
26:1J:113:C:H4'	40:65:46:VAL:HG22	1.90	0.53
31:49:18:GLU:HB3	31:49:175:LEU:HD13	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1252:A:H2'	1:13:1253:G:O4'	2.08	0.53
25:1H:64:A:H1'	45:F8:66:LEU:HB3	1.89	0.53
25:1H:363:G:H2'	25:1H:363(A):A:C8	2.44	0.53
25:1H:780:G:H21	25:1H:783:A:H62	1.55	0.53
25:1H:2638:G:O2'	25:1H:2639:A:H8	1.90	0.53
25:1H:2652:C:H42	25:1H:2668:G:H1	1.57	0.53
25:1H:2807:G:H3'	25:1H:2808:U:H5"	1.91	0.53
32:51:20:ALA:HB3	32:51:23:ARG:HG3	1.91	0.53
33:61:4:ILE:HG12	33:61:18:VAL:HG13	1.91	0.53
41:B8:2:ASN:HB3	41:B8:5:ALA:HB3	1.90	0.53
1:1G:824:C:H2'	1:1G:825:G:H8	1.73	0.53
1:1G:1001:G:H2'	1:1G:1002:G:C8	2.44	0.53
1:1G:1499:A:H1'	1:1G:1520:G:H5'	1.90	0.53
25:14:554:U:HO2'	25:14:556:G:H8	1.55	0.53
25:14:1058:U:H2'	25:14:1059:G:C8	2.43	0.53
25:14:1324:G:O2'	25:14:1326:U:OP2	2.23	0.53
25:14:1567:A:H5'	28:19:86:PRO:HB3	1.89	0.53
25:14:2749:A:H4'	32:59:62:LYS:HB3	1.91	0.53
47:D5:124:ILE:HD11	47:D5:165:VAL:HG11	1.91	0.53
52:I5:40:HIS:H	52:I5:41:PRO:HD3	1.73	0.53
55:L5:13:ALA:HB2	55:L5:46:VAL:HG11	1.90	0.53
1:13:1414:U:H2'	1:13:1415:G:H8	1.74	0.53
1:13:1427:U:H2'	1:13:1428:A:C8	2.43	0.53
2:1E:115:LEU:HA	2:1E:118:LEU:HD12	1.90	0.53
3:2E:95:THR:HG22	3:2E:96:GLY:H	1.74	0.53
25:1H:287:C:H42	25:1H:354:G:H1	1.55	0.53
25:1H:818:G:OP2	62:1H:3648:HOH:O	2.17	0.53
25:1H:1204:A:H1'	25:1H:1206:G:C8	2.44	0.53
25:1H:1971:A:C4	28:11:241:PRO:HD3	2.43	0.53
25:1H:2086:U:H2'	25:1H:2087:G:C8	2.43	0.53
25:1H:2308:G:H1	25:1H:2311:A:H2	1.52	0.53
28:11:70:TRP:O	28:11:73:VAL:HG23	2.09	0.53
41:B8:105:LEU:C	41:B8:107:ASP:H	2.12	0.53
47:H8:140:ASP:N	47:H8:155:LEU:HG	2.18	0.53
51:L8:6:VAL:HG12	51:L8:56:VAL:HG22	1.89	0.53
1:1G:1154:G:H2'	1:1G:1155:G:H8	1.72	0.53
6:52:38:GLU:OE1	6:52:64:GLN:NE2	2.41	0.53
25:14:1434:A:H61	25:14:1558:A:H62	1.57	0.53
25:14:1783:A:OP2	62:14:3528:HOH:O	2.18	0.53
25:14:2053:G:H2'	25:14:2054:A:O4'	2.09	0.53
25:14:2730:C:O2'	29:29:168:MET:O	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:I5:46:GLN:HG2	52:I5:48:ARG:H	1.74	0.53
54:K5:42:TRP:CG	54:K5:43:CYS:N	2.77	0.53
1:13:439:A:OP2	1:13:493:G:N1	2.41	0.53
1:13:540:G:H2'	1:13:541:G:O4'	2.09	0.53
1:13:659:U:H2'	1:13:660:G:C8	2.44	0.53
1:13:757:U:H2'	1:13:758:G:O4'	2.08	0.53
1:13:811:C:O2'	1:13:901:A:N1	2.41	0.53
1:13:831:U:H2'	1:13:832:C:C6	2.42	0.53
19:AI:27:GLU:OE2	19:AI:29:ARG:NH2	2.42	0.53
20:BI:90:GLN:HA	20:BI:93:GLU:HB2	1.91	0.53
25:1H:1203:G:O2'	25:1H:1242:A:N6	2.40	0.53
25:1H:1557:C:OP2	25:1H:1558:A:O2'	2.22	0.53
28:11:108:PRO:HG3	28:11:143:HIS:CE1	2.44	0.53
31:41:83:ARG:HB2	31:41:86:MET:HG3	1.90	0.53
35:58:14:VAL:HG12	35:58:15:LEU:H	1.74	0.53
1:1G:559:A:H4'	1:1G:560:U:H5"	1.91	0.53
1:1G:954:G:H21	1:1G:1227:A:N6	2.07	0.53
12:3A:67:ILE:HG12	12:3A:97:ILE:HD12	1.91	0.53
20:BA:34:LYS:O	20:BA:38:LYS:N	2.40	0.53
25:14:38:A:H2'	25:14:39:C:C6	2.44	0.53
25:14:1055:G:N2	25:14:1085:A:N3	2.52	0.53
25:14:2197:U:H1'	25:14:2198:A:C8	2.44	0.53
25:14:2294:C:OP1	40:65:89:ARG:NH2	2.37	0.53
28:19:146:GLU:HB2	28:19:189:CYS:HB3	1.90	0.53
38:45:126:PRO:HG2	38:45:127:ILE:HD12	1.91	0.53
55:L5:5:TRP:NE1	55:L5:7:PRO:HG3	2.24	0.53
1:13:316:G:OP2	1:13:351:G:O2'	2.26	0.52
1:13:1321:C:H3'	1:13:1322:C:H5"	1.91	0.52
25:1H:970:C:HO2'	25:1H:984:A:HO2'	1.56	0.52
34:38:141:VAL:HG12	34:38:142:LEU:HD23	1.90	0.52
1:1G:1502:A:H4'	1:1G:1503:A:OP2	2.09	0.52
6:52:6:VAL:HG13	6:52:90:VAL:HG22	1.90	0.52
8:72:109:ILE:HG23	8:72:137:VAL:HG23	1.90	0.52
22:3L:32:G:H1	22:3L:40:C:H42	1.57	0.52
25:14:413:C:H42	25:14:2410:G:H1	1.57	0.52
25:14:602:G:O2'	25:14:655:A:N6	2.43	0.52
25:14:928:G:H5'	25:14:929:G:OP2	2.09	0.52
25:14:1062:G:N2	25:14:1076:C:H42	2.04	0.52
25:14:2046:G:H5'	53:J5:19:ARG:HG3	1.90	0.52
25:14:2391:G:H1'	25:14:2424:C:H41	1.74	0.52
41:75:108:ARG:O	41:75:111:ARG:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:484:G:O2'	1:13:485:G:OP2	2.28	0.52
1:13:503:C:OP2	12:3I:113:SER:HB3	2.08	0.52
1:13:1106:G:H5"	3:2E:172:ARG:HG2	1.90	0.52
1:13:1241:G:H2'	1:13:1242:C:C6	2.44	0.52
1:13:1302:U:H6	13:4I:17:VAL:HG21	1.74	0.52
7:6E:75:VAL:HG13	7:6E:145:ALA:HA	1.90	0.52
9:8E:28:VAL:HG22	9:8E:63:ILE:HD13	1.91	0.52
11:2I:23:ALA:HA	11:2I:28:THR:HG23	1.91	0.52
18:9I:33:ASP:OD2	18:9I:36:ASN:ND2	2.42	0.52
19:AI:48:THR:O	19:AI:48:THR:OG1	2.26	0.52
25:1H:1175:U:H4'	25:1H:1176:G:OP1	2.08	0.52
25:1H:1314:C:OP1	62:1H:3617:HOH:O	2.19	0.52
25:1H:1567:A:OP2	28:11:84:TYR:OH	2.21	0.52
25:1H:2630:G:H1	25:1H:2788:C:H42	1.55	0.52
27:71:215:THR:OG1	27:71:220:PRO:O	2.14	0.52
32:51:18:GLU:HG3	32:51:25:LYS:HB2	1.91	0.52
41:B8:76:PHE:HB3	41:B8:83:ILE:HD11	1.90	0.52
10:1A:51:ARG:HB2	10:1A:60:ARG:HA	1.92	0.52
12:3A:44:LYS:HB2	12:3A:45:PRO:HD3	1.90	0.52
25:14:34:C:O2'	25:14:35:G:H8	1.92	0.52
25:14:328:U:H4'	46:C5:68:HIS:CE1	2.44	0.52
25:14:416:C:H42	25:14:2407:G:H1	1.56	0.52
25:14:940:G:H2'	25:14:941:A:O4'	2.09	0.52
25:14:1092:C:H42	25:14:1100:C:N4	2.07	0.52
25:14:2518:A:H4'	25:14:2519:U:OP1	2.09	0.52
25:14:2851:A:O2'	39:55:64:ARG:NH2	2.43	0.52
26:1J:42:C:H1'	31:49:92:VAL:HG23	1.91	0.52
31:49:72:ARG:HB2	31:49:72:ARG:HH11	1.75	0.52
41:75:51:ARG:HG2	41:75:98:LYS:HE3	1.92	0.52
1:13:42:G:H1	1:13:400:C:H42	1.57	0.52
1:13:737:A:H2'	1:13:738:C:C6	2.44	0.52
2:1E:153:ARG:O	2:1E:156:LYS:NZ	2.40	0.52
4:3E:162:LEU:HA	4:3E:165:MET:HB3	1.91	0.52
8:7E:20:TYR:HE2	8:7E:75:ARG:HB3	1.75	0.52
8:7E:109:ILE:HG22	8:7E:137:VAL:HB	1.92	0.52
12:3I:8:VAL:HG21	17:8I:34:LYS:HD3	1.91	0.52
25:1H:1026:U:H1'	25:1H:1027:A:O5'	2.09	0.52
27:71:216:THR:OG1	27:71:217:THR:N	2.42	0.52
30:31:149:ASP:OD1	30:31:149:ASP:N	2.40	0.52
45:F8:5:TYR:HB3	50:K8:33:MET:HB2	1.89	0.52
1:1G:1028:C:H1'	1:1G:1034:G:H1	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:2L:44:A:H2'	57:2L:45:A:C8	2.43	0.52
25:14:330:A:H2	25:14:1210:A:HO2'	1.55	0.52
25:14:1300:U:H4'	25:14:1301:A:O5'	2.10	0.52
25:14:2557:G:H2'	25:14:2558:C:C6	2.44	0.52
29:29:53:PRO:HA	29:29:75:VAL:HA	1.90	0.52
40:65:15:ARG:HH21	40:65:90:GLY:HA2	1.75	0.52
1:13:514:C:H2'	1:13:515:G:C8	2.44	0.52
1:13:1367:C:H5'	10:1I:60:ARG:CZ	2.39	0.52
3:2E:112:SER:HB3	3:2E:115:LEU:HG	1.91	0.52
7:6E:155:ARG:O	7:6E:155:ARG:NH2	2.42	0.52
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	1.91	0.52
11:2I:19:ALA:HA	11:2I:32:ILE:HA	1.92	0.52
25:1H:660:G:O3'	30:31:38:ARG:NH2	2.43	0.52
25:1H:2480:C:N4	25:1H:2481:G:O6	2.43	0.52
25:1H:2820:A:O2'	25:1H:2821:A:OP1	2.26	0.52
27:71:10:LEU:HG	27:71:32:LEU:HA	1.92	0.52
33:61:92:VAL:HG13	33:61:120:ILE:HG23	1.90	0.52
37:78:126:VAL:HG12	37:78:147:LEU:HG	1.90	0.52
40:A8:67:ARG:O	40:A8:71:ARG:HG3	2.08	0.52
48:I8:10:THR:OG1	48:I8:12:ASN:OD1	2.27	0.52
50:K8:17:SER:O	50:K8:20:GLU:HG2	2.09	0.52
53:N8:41:PRO:HB2	53:N8:42:PRO:CD	2.39	0.52
1:1G:1043:C:H2'	1:1G:1044:A:O4'	2.10	0.52
1:1G:1305:G:H22	1:1G:1331:G:H2'	1.73	0.52
1:1G:1316:G:H4'	14:5A:18:VAL:HG11	1.91	0.52
1:1G:1342:C:H1'	9:82:124:GLN:NE2	2.24	0.52
3:22:88:ARG:HA	3:22:91:LEU:HD13	1.90	0.52
9:82:27:THR:HG21	9:82:33:PHE:H	1.74	0.52
13:4A:90:LEU:HA	13:4A:93:ARG:HG2	1.91	0.52
25:14:142:G:H4'	45:B5:35:THR:HG21	1.92	0.52
25:14:262:A:H2'	25:14:263:C:O4'	2.10	0.52
25:14:729:G:H2'	25:14:1775:U:H1'	1.90	0.52
25:14:1255:U:H5"	25:14:1256:G:H5"	1.91	0.52
25:14:1368:G:H2'	25:14:1369:G:H8	1.74	0.52
25:14:1419:A:H61	25:14:1494:A:H61	1.57	0.52
25:14:1442:G:H1	25:14:1549:C:H42	1.56	0.52
25:14:2602:A:H4'	25:14:2603:G:O5'	2.09	0.52
31:49:67:LYS:HE2	52:I5:2:LYS:HG2	1.89	0.52
1:13:1306:A:H61	1:13:1331:G:H1'	1.75	0.52
22:1K:60:A:H2'	22:1K:61:U:H5'	1.91	0.52
22:3K:69:C:H2'	22:3K:70:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2636:U:H3	25:1H:2782:G:H1	1.57	0.52
28:11:8:PRO:HB3	28:11:14:ARG:HG2	1.92	0.52
33:61:43:ASN:OD1	33:61:43:ASN:N	2.42	0.52
1:1G:616:G:H2'	1:1G:617:G:C8	2.44	0.52
1:1G:684:A:N6	62:1G:1820:HOH:O	2.42	0.52
1:1G:1158:C:H2'	1:1G:1158:C:O2	2.08	0.52
1:1G:1316:G:N2	1:1G:1318:A:H3'	2.25	0.52
3:22:35:GLU:HA	3:22:38:ARG:HE	1.75	0.52
16:7A:18:ARG:HD3	16:7A:35:LYS:HD2	1.91	0.52
39:55:96:ARG:HG3	39:55:97:VAL:N	2.24	0.52
1:13:1157:A:H62	1:13:1178:G:N2	2.07	0.52
7:6E:50:ILE:HB	7:6E:58:PRO:HB3	1.92	0.52
25:1H:856:C:H42	25:1H:921:G:H1	1.57	0.52
25:1H:1434:A:H61	25:1H:1558:A:H62	1.56	0.52
27:71:213:TYR:CZ	27:71:223:ARG:HG3	2.45	0.52
29:21:70:ALA:O	29:21:72:VAL:N	2.42	0.52
36:68:29:ASN:OD1	36:68:29:ASN:N	2.43	0.52
38:88:30:GLY:CA	38:88:107:ALA:HB2	2.39	0.52
38:88:111:GLU:HG3	38:88:112:GLU:N	2.24	0.52
1:1G:279:A:OP2	17:8A:95:TYR:OH	2.17	0.52
1:1G:872:A:H4'	1:1G:873:A:OP1	2.08	0.52
11:2A:34:ASP:HB3	11:2A:40:ILE:HD11	1.92	0.52
25:14:468:G:N7	55:L5:39:ARG:NH2	2.58	0.52
25:14:589:C:H2'	25:14:590:A:C8	2.44	0.52
25:14:846:C:H4'	25:14:847:U:OP1	2.08	0.52
25:14:2123:G:H22	25:14:2176:A:H2	1.57	0.52
26:1J:75:G:H5"	47:D5:36:LYS:HE2	1.92	0.52
37:35:125:VAL:HG13	37:35:144:GLU:HB3	1.91	0.52
43:95:35:LEU:H	43:95:35:LEU:HD22	1.73	0.52
43:95:40:LEU:HD13	43:95:41:GLY:H	1.74	0.52
2:1E:8:LYS:HG2	2:1E:10:LEU:H	1.74	0.52
20:BI:50:GLU:HG3	20:BI:100:ILE:HB	1.92	0.52
25:1H:628:G:H2'	25:1H:629:G:H8	1.75	0.52
25:1H:1454:U:O2'	25:1H:1455:G:N7	2.41	0.52
43:D8:74:LYS:HB2	43:D8:83:ARG:HB2	1.90	0.52
1:1G:392:G:H2'	1:1G:393:A:H8	1.75	0.52
1:1G:411:A:C5	1:1G:413:G:H1'	2.44	0.52
1:1G:1226:C:OP1	13:4A:91:ARG:NH1	2.43	0.52
1:1G:1255:G:OP1	10:1A:45:ARG:NH2	2.42	0.52
2:12:29:ALA:C	2:12:31:TYR:N	2.63	0.52
9:82:10:ARG:HH21	9:82:11:LYS:HB2	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:95:G:O2'	50:G5:48:HIS:ND1	2.36	0.52
25:14:492:A:H2'	25:14:493:G:O4'	2.10	0.52
1:13:235:C:H2'	1:13:236:G:H8	1.73	0.52
1:13:598:U:H4'	8:7E:94:TYR:CG	2.45	0.52
1:13:1175:G:H2'	1:13:1176:A:C8	2.45	0.52
1:13:1224:G:C6	1:13:1322:C:H1'	2.45	0.52
1:13:1260:C:HO2'	1:13:1261:A:H8	1.58	0.52
1:13:1261:A:H1'	1:13:1283:G:H5"	1.92	0.52
1:13:1280:A:O2'	1:13:1281:U:OP1	2.22	0.52
2:1E:212:GLN:NE2	2:1E:216:SER:OG	2.38	0.52
25:1H:412:A:N7	25:1H:2411:A:H2	2.07	0.52
25:1H:774:A:H2	25:1H:787:U:O2'	1.92	0.52
25:1H:1635:G:OP1	62:1H:3681:HOH:O	2.18	0.52
29:21:4:ILE:HD13	29:21:28:ALA:HB1	1.92	0.52
37:78:52:GLU:OE2	37:78:58:THR:N	2.43	0.52
1:1G:328:C:O2	1:1G:328:C:H2'	2.07	0.52
1:1G:587:G:N2	1:1G:754:C:OP2	2.43	0.52
2:12:7:VAL:HG13	2:12:8:LYS:H	1.75	0.52
13:4A:86:CYS:HB2	19:AA:73:GLU:HB3	1.91	0.52
20:BA:25:ARG:HG2	20:BA:29:LYS:HE2	1.90	0.52
25:14:2646:C:H2'	25:14:2647:U:O4'	2.09	0.52
25:14:2747:G:H21	25:14:2757:A:H62	1.55	0.52
30:39:195:ASP:HB3	30:39:198:ALA:H	1.75	0.52
36:25:97:ARG:HH21	36:25:99:PHE:HE1	1.58	0.52
43:95:57:VAL:HG12	43:95:58:VAL:H	1.74	0.52
52:I5:40:HIS:N	52:I5:41:PRO:HD3	2.25	0.52
1:13:144:G:H1	1:13:178:C:H42	1.57	0.52
1:13:812:C:O2'	1:13:813:U:P	2.68	0.52
1:13:983:A:H1'	1:13:1049:U:O2	2.10	0.52
7:6E:89:MET:HE1	7:6E:156:TRP:CD2	2.44	0.52
22:3K:43:G:H2'	22:3K:44:A:C8	2.45	0.52
25:1H:1078:U:O2'	25:1H:1079:C:OP2	2.24	0.52
25:1H:1341:U:OP2	25:1H:1394:U:O2'	2.23	0.52
25:1H:2294:C:H42	25:1H:2338:G:H1	1.58	0.52
25:1H:2439:A:H5'	25:1H:2439:A:H8	1.74	0.52
25:1H:2867:G:OP2	41:B8:119:LYS:NZ	2.43	0.52
31:41:35:GLU:HA	31:41:99:MET:SD	2.49	0.52
32:51:83:TYR:HD2	32:51:132:ARG:HH22	1.58	0.52
37:78:47:ASP:OD1	37:78:49:ARG:HG2	2.09	0.52
39:98:59:ASP:H	39:98:62:ALA:HB3	1.75	0.52
54:O8:26:ASN:OD1	54:O8:27:LYS:N	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:780:A:N7	62:1G:1822:HOH:O	2.34	0.52
1:1G:790:A:OP1	57:2L:39:A:O2'	2.26	0.52
1:1G:1139:G:H4'	1:1G:1140:C:O5'	2.09	0.52
1:1G:1271:G:H2'	1:1G:1272:G:H8	1.73	0.52
1:1G:1322:C:O2	1:1G:1322:C:H2'	2.09	0.52
1:1G:1423:G:OP1	36:25:49:ARG:NH1	2.42	0.52
13:4A:23:TYR:CD1	13:4A:70:LEU:HD11	2.45	0.52
25:14:841:A:H2'	25:14:842:G:C8	2.45	0.52
25:14:1090:U:O4	25:14:1102:C:H1'	2.10	0.52
25:14:2443:C:H2'	25:14:2444:G:C8	2.45	0.52
41:75:2:ASN:O	41:75:6:LEU:HB2	2.09	0.52
45:B5:63:LYS:HA	45:B5:72:LYS:HA	1.92	0.52
1:13:244:U:H4'	1:13:245:C:O5'	2.09	0.52
25:1H:628:G:H2'	25:1H:629:G:C8	2.45	0.52
25:1H:729:G:OP2	28:11:13:ARG:NH1	2.41	0.52
25:1H:1256:G:O2'	30:31:82:ILE:HD11	2.10	0.52
31:41:170:ARG:O	31:41:174:GLU:HB2	2.10	0.52
34:38:116:ILE:HG13	34:38:117:LEU:HD13	1.92	0.52
36:68:76:ALA:HB3	41:B8:75:ILE:HB	1.92	0.52
37:78:114:ILE:HD11	37:78:130:PHE:HD2	1.75	0.52
51:L8:50:VAL:HB	51:L8:53:LEU:HD12	1.90	0.52
2:12:112:VAL:HG13	2:12:115:LEU:HD23	1.92	0.52
9:82:4:TYR:HD2	9:82:19:LEU:HB3	1.74	0.52
20:BA:51:GLU:HA	20:BA:54:LYS:HE3	1.91	0.52
25:14:451:C:H4'	30:39:52:LYS:HE2	1.91	0.52
25:14:1488:G:H5'	25:14:1489:U:OP2	2.11	0.52
25:14:1543:A:H1'	25:14:1545:A:O4'	2.10	0.52
25:14:1674:G:N1	25:14:1989:G:O6	2.43	0.52
25:14:2133:G:H2'	25:14:2157:G:H22	1.75	0.52
36:25:35:VAL:HG21	36:25:103:ALA:HB3	1.91	0.52
42:85:49:HIS:HA	42:85:52:ARG:HB2	1.92	0.52
45:B5:32:PRO:HA	45:B5:77:LYS:HD2	1.92	0.52
49:F5:23:LYS:HD3	49:F5:29:GLY:H	1.75	0.52
56:M5:35:GLN:OE1	56:M5:36:LYS:N	2.43	0.52
1:13:156:G:H1	1:13:165:C:H42	1.58	0.51
1:13:1355:G:H2'	1:13:1356:G:C8	2.44	0.51
2:1E:96:ARG:H	2:1E:96:ARG:HD2	1.75	0.51
2:1E:223:ILE:HA	2:1E:226:ARG:HB3	1.92	0.51
13:4I:58:GLU:O	13:4I:62:ASN:ND2	2.41	0.51
25:1H:27:G:HO2'	25:1H:28:A:H8	1.57	0.51
25:1H:2848:G:O2'	25:1H:2867:G:N2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:B8:29:ARG:HA	41:B8:45:PHE:O	2.11	0.51
47:H8:24:LEU:N	47:H8:39:VAL:O	2.43	0.51
53:N8:31:VAL:HB	53:N8:41:PRO:O	2.11	0.51
1:1G:403:C:O2'	4:32:122:ARG:NH2	2.43	0.51
1:1G:983:A:N1	1:1G:1222:G:N2	2.58	0.51
1:1G:1355:G:H2'	1:1G:1356:G:C8	2.45	0.51
16:7A:29:ASP:OD1	16:7A:29:ASP:N	2.42	0.51
25:14:1033:U:H4'	25:14:1034:G:OP1	2.10	0.51
25:14:1058:U:H2'	25:14:1059:G:H8	1.73	0.51
25:14:1973:G:H2'	25:14:1974:C:C6	2.45	0.51
25:14:2716:U:H2'	25:14:2717:G:C8	2.45	0.51
29:29:27:LEU:HD12	41:75:6:LEU:HD11	1.92	0.51
37:35:146:VAL:HG22	37:35:147:LEU:H	1.74	0.51
40:65:14:VAL:HG11	40:65:89:ARG:HH12	1.75	0.51
41:75:9:LEU:O	41:75:12:SER:OG	2.18	0.51
1:13:510:A:OP2	4:3E:49:ARG:NH2	2.43	0.51
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.39	0.51
2:1E:215:LEU:HD13	2:1E:218:ALA:HB3	1.91	0.51
13:4I:65:LYS:NZ	13:4I:73:GLU:OE2	2.43	0.51
25:1H:195:A:N7	62:1H:3730:HOH:O	2.34	0.51
25:1H:380:U:H2'	25:1H:381:G:H8	1.75	0.51
25:1H:1496:A:H8	25:1H:1577:C:O2'	1.92	0.51
25:1H:2428:G:N7	62:1H:3786:HOH:O	2.34	0.51
28:11:112:GLN:H	28:11:115:GLN:NE2	2.08	0.51
34:38:6:ASN:O	34:38:10:LEU:N	2.35	0.51
39:98:10:LEU:HD13	39:98:40:LYS:HG2	1.92	0.51
45:F8:67:GLY:O	45:F8:68:ARG:HG3	2.10	0.51
1:1G:429:U:H3'	4:32:9:CYS:SG	2.50	0.51
8:72:41:ARG:NH2	8:72:123:GLU:OE2	2.43	0.51
9:82:4:TYR:HB2	9:82:19:LEU:HB2	1.92	0.51
17:8A:8:GLY:HA3	17:8A:21:VAL:HG12	1.92	0.51
25:14:376:C:H42	25:14:398:G:H1	1.58	0.51
25:14:602:G:HO2'	25:14:604:G:HO2'	1.58	0.51
25:14:797:C:OP1	30:39:60:SER:OG	2.28	0.51
25:14:1460:A:H4'	25:14:1461:G:OP2	2.11	0.51
35:15:130:HIS:ND1	35:15:130:HIS:O	2.42	0.51
36:25:63:VAL:HG12	36:25:106:LEU:HD11	1.92	0.51
41:75:107:ASP:C	41:75:111:ARG:HH21	2.14	0.51
47:D5:5:LEU:O	47:D5:59:LEU:HA	2.09	0.51
1:13:381:C:H2'	1:13:382:A:O4'	2.10	0.51
4:3E:64:LEU:HD13	4:3E:198:VAL:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.28	0.51
10:1I:4:ILE:HB	10:1I:74:ILE:HD11	1.91	0.51
25:1H:242:G:H5'	56:Q8:64:TYR:CE2	2.46	0.51
25:1H:330:A:HO2'	25:1H:331:A:H8	1.53	0.51
25:1H:2127:G:HO2'	25:1H:2173:A:H2	1.58	0.51
25:1H:2466:C:H42	25:1H:2484:G:H1	1.58	0.51
29:21:15:PHE:CD2	41:B8:81:PRO:HD2	2.45	0.51
30:31:64:ILE:HG13	30:31:65:TRP:CD1	2.45	0.51
34:38:92:THR:HG21	34:38:126:ALA:HA	1.92	0.51
46:G8:89:PHE:CD1	46:G8:94:LYS:HB3	2.45	0.51
1:1G:539:A:H2'	1:1G:540:G:C8	2.45	0.51
1:1G:838:G:H1	1:1G:848:C:H42	1.57	0.51
1:1G:1435:G:H2'	1:1G:1436:U:C6	2.46	0.51
3:22:130:VAL:HG21	3:22:157:ILE:HG23	1.91	0.51
5:42:106:PRO:HA	5:42:109:ILE:HD12	1.93	0.51
25:14:270(P):C:H2'	25:14:270(Q):C:C6	2.46	0.51
25:14:626:U:H5"	25:14:627:A:H5'	1.90	0.51
25:14:1417:C:H42	25:14:1581:G:H1	1.57	0.51
25:14:2472:G:N1	25:14:2477:C:OP1	2.42	0.51
32:59:29:PRO:HD2	32:59:79:VAL:HB	1.93	0.51
39:55:37:THR:HG22	39:55:39:PRO:HD2	1.91	0.51
1:13:659:U:H2'	1:13:660:G:H8	1.75	0.51
1:13:1396:A:H4'	1:13:1397:C:H5"	1.92	0.51
20:BI:26:ASN:O	20:BI:30:LYS:HB2	2.10	0.51
25:1H:259:G:H21	25:1H:621:A:H8	1.58	0.51
25:1H:289:A:H2'	25:1H:290:G:O4'	2.10	0.51
25:1H:526:A:N3	25:1H:2044:C:H1'	2.26	0.51
25:1H:1497:U:H5"	25:1H:1498:C:H5	1.74	0.51
25:1H:2567:G:H2'	25:1H:2568:C:C6	2.46	0.51
47:H8:10:ARG:O	47:H8:36:LYS:HB2	2.10	0.51
47:H8:163:LEU:HD22	47:H8:167:PRO:HA	1.91	0.51
50:K8:24:LEU:HD22	50:K8:60:LEU:HD11	1.92	0.51
1:1G:952:U:H2'	1:1G:953:G:C8	2.45	0.51
1:1G:1062:U:H2'	1:1G:1063:C:C6	2.45	0.51
3:22:182:ILE:HG12	3:22:203:PHE:HB2	1.91	0.51
12:3A:8:VAL:HG11	17:8A:36:ILE:HG21	1.93	0.51
25:14:883:G:N2	25:14:893:C:H42	2.06	0.51
25:14:1427:A:H4'	25:14:1428:C:O5'	2.10	0.51
29:29:38:THR:H	29:29:42:ASP:HB2	1.74	0.51
31:49:6:ALA:N	52:I5:23:GLU:OE2	2.34	0.51
35:15:128:HIS:HB2	35:15:129:PRO:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:35:84:ASN:HB3	37:35:116:GLY:HA3	1.91	0.51
39:55:118:GLU:OE2	39:55:118:GLU:N	2.41	0.51
44:A5:12:ILE:HD13	44:A5:17:VAL:HG22	1.91	0.51
47:D5:150:LEU:HD21	47:D5:171:ILE:HG23	1.91	0.51
1:13:1318:A:O2'	19:AI:37:ARG:HB2	2.10	0.51
3:2E:5:ILE:HG21	10:1I:51:ARG:HH22	1.75	0.51
25:1H:1586:A:H3'	25:1H:1587:A:C8	2.45	0.51
25:1H:2356:C:O3'	48:I8:20:ARG:HD3	2.10	0.51
54:O8:13:CYS:SG	54:O8:22:ALA:HB3	2.50	0.51
56:Q8:50:LEU:HB3	56:Q8:55:ALA:HB2	1.91	0.51
1:1G:398:C:OP2	62:1G:1809:HOH:O	2.18	0.51
1:1G:969:A:H2'	1:1G:970:C:O4'	2.11	0.51
1:1G:1306:A:H1'	1:1G:1332:A:N1	2.25	0.51
1:1G:1387:G:H2'	1:1G:1388:C:C6	2.46	0.51
1:1G:1517:G:H3'	1:1G:1518:MA6:H8	1.93	0.51
5:42:3:GLU:O	5:42:5:ASP:N	2.39	0.51
12:3A:114:ARG:NE	12:3A:120:LYS:O	2.44	0.51
22:3L:64:G:H2'	22:3L:65:G:H8	1.76	0.51
25:14:536:A:H2'	25:14:537:C:O4'	2.11	0.51
25:14:591:C:HO2'	56:M5:2:PRO:N	2.09	0.51
25:14:1020:A:OP1	25:14:1034:G:N2	2.38	0.51
25:14:2776:A:OP1	25:14:2776:A:H3'	2.10	0.51
25:14:2882:A:C8	39:55:96:ARG:NH2	2.79	0.51
35:15:104:LYS:HA	35:15:107:LEU:HD12	1.92	0.51
40:65:23:ARG:NH1	40:65:84:GLN:HG2	2.26	0.51
49:F5:91:LYS:HA	49:F5:91:LYS:NZ	2.25	0.51
1:13:947:G:O3'	13:4I:109:THR:OG1	2.29	0.51
1:13:1423:G:OP1	36:68:49:ARG:NH2	2.44	0.51
4:3E:193:ASP:OD1	4:3E:193:ASP:N	2.44	0.51
25:1H:273(C):C:H42	25:1H:363(C):G:H1	1.58	0.51
25:1H:2308:G:H22	25:1H:2311:A:H2	1.59	0.51
25:1H:2313:C:H5"	31:41:91:ARG:HD2	1.93	0.51
25:1H:2336:A:H61	48:I8:43:THR:HG21	1.75	0.51
25:1H:2577:A:OP2	53:N8:3:LYS:NZ	2.43	0.51
25:1H:2737:G:H2'	25:1H:2738:A:H8	1.75	0.51
31:41:34:LEU:HB2	31:41:172:LEU:HD21	1.92	0.51
54:O8:9:LEU:HD13	54:O8:10:LEU:H	1.75	0.51
1:1G:502:G:H2'	1:1G:503:C:O4'	2.11	0.51
1:1G:1007:C:H3'	1:1G:1008:C:H5"	1.93	0.51
1:1G:1053:G:O6	1:1G:1199:U:H2'	2.11	0.51
7:62:120:ILE:O	7:62:124:LEU:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:872:A:OP1	38:45:5:ARG:NH2	2.43	0.51
25:14:1114:G:H2'	25:14:1115:G:C8	2.46	0.51
25:14:2784:C:H2'	25:14:2785:C:H6	1.76	0.51
26:1J:60:C:H2'	26:1J:61:G:H8	1.75	0.51
32:59:9:ILE:HD13	32:59:51:ARG:HE	1.75	0.51
40:65:84:GLN:HA	40:65:109:GLY:CA	2.41	0.51
42:85:81:HIS:CE1	42:85:84:LYS:HD3	2.46	0.51
46:C5:54:LYS:HD2	46:C5:55:TYR:HD1	1.76	0.51
1:13:392:G:H2'	1:13:393:A:C8	2.46	0.51
1:13:992:U:H1'	1:13:993:G:OP2	2.11	0.51
22:1K:49:C:HO2'	22:1K:50:G:P	2.33	0.51
25:1H:676:A:H2	25:1H:802:A:H61	1.59	0.51
25:1H:1301:A:O2'	25:1H:1302:A:H3'	2.10	0.51
25:1H:1484:G:O6	62:1H:3684:HOH:O	2.19	0.51
25:1H:1994:C:OP1	62:1H:3687:HOH:O	2.19	0.51
25:1H:2330:G:H2'	25:1H:2331:G:O4'	2.11	0.51
25:1H:2712:U:O2'	25:1H:2712(A):A:H8	1.93	0.51
25:1H:2816:C:O2	25:1H:2883:A:O2'	2.29	0.51
27:71:49:ILE:HG12	27:71:208:PHE:HE1	1.75	0.51
31:41:7:LEU:N	31:41:104:GLU:OE2	2.35	0.51
33:61:104:GLN:O	33:61:105:HIS:ND1	2.43	0.51
49:J8:60:PHE:HB3	49:J8:62:VAL:HG13	1.92	0.51
1:1G:1203:C:H2'	1:1G:1204:A:O4'	2.09	0.51
1:1G:1376:U:H2'	1:1G:1377:A:C8	2.45	0.51
5:42:73:ASN:OD1	5:42:73:ASN:N	2.44	0.51
13:4A:12:ASN:O	13:4A:12:ASN:ND2	2.44	0.51
16:7A:15:PRO:O	16:7A:16:HIS:ND1	2.43	0.51
25:14:1002:G:H2'	25:14:1003:G:O4'	2.11	0.51
25:14:2133:G:H2'	25:14:2157:G:N2	2.25	0.51
25:14:2328:A:H2'	25:14:2329:G:C8	2.46	0.51
31:49:128:ARG:HB2	31:49:130:ASN:HD21	1.76	0.51
33:69:26:ALA:HA	33:69:30:LEU:HB2	1.92	0.51
1:13:236:G:H5"	17:8I:42:TYR:OH	2.11	0.51
1:13:1372:U:OP1	9:8E:72:GLY:N	2.42	0.51
12:3I:34:CYS:HB3	12:3I:55:VAL:HG22	1.93	0.51
25:1H:576:U:OP1	62:1H:3675:HOH:O	2.18	0.51
25:1H:2331:G:O2'	48:I8:43:THR:HG22	2.10	0.51
25:1H:2630:G:O4'	25:1H:2894:G:H1'	2.11	0.51
27:71:7:TYR:HA	27:71:10:LEU:HD13	1.93	0.51
27:71:173:ALA:HB3	27:71:192:PHE:CE1	2.46	0.51
33:61:81:VAL:HB	33:61:83:ALA:HB2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:78:138:LEU:HD11	37:78:144:GLU:HG3	1.93	0.51
46:G8:15:VAL:HG21	46:G8:42:VAL:HG21	1.93	0.51
46:G8:35:TYR:CE2	46:G8:69:ALA:HB3	2.46	0.51
48:I8:40:GLN:HE21	48:I8:43:THR:HA	1.74	0.51
1:1G:715:A:H2'	1:1G:716:A:C8	2.46	0.51
1:1G:766:A:H2'	1:1G:767:A:O4'	2.10	0.51
1:1G:1082:G:H8	1:1G:1082:G:OP2	1.92	0.51
2:12:21:ARG:O	2:12:23:ARG:HB2	2.11	0.51
4:32:173:TRP:CZ3	4:32:193:ASP:HB3	2.46	0.51
57:2L:24:C:H2'	57:2L:25:U:C6	2.45	0.51
25:14:108:U:H2'	25:14:109:G:C8	2.45	0.51
25:14:817:C:H2'	25:14:818:G:O4'	2.11	0.51
25:14:1592:C:H2'	25:14:1593:G:C8	2.46	0.51
25:14:2052:G:H4'	29:29:143:ASN:O	2.11	0.51
25:14:2150:U:H2'	25:14:2151:G:C8	2.46	0.51
25:14:2412:A:H2'	25:14:2413:G:O4'	2.11	0.51
45:B5:65:ARG:HD3	45:B5:70:LEU:HG	1.93	0.51
47:D5:165:VAL:HG13	47:D5:166:SER:H	1.76	0.51
1:13:973:G:OP1	10:1I:57:LYS:HE3	2.10	0.51
1:13:1390:U:H2'	1:13:1391:U:C6	2.46	0.51
8:7E:112:LEU:HB3	8:7E:133:LEU:HA	1.91	0.51
13:4I:3:ARG:HD2	13:4I:9:ILE:HG21	1.92	0.51
16:7I:74:LEU:HA	16:7I:77:ALA:HB3	1.93	0.51
18:9I:31:LEU:H	18:9I:31:LEU:HD23	1.76	0.51
19:AI:9:VAL:HG23	19:AI:10:PHE:H	1.75	0.51
23:2K:54:G:H2'	23:2K:55:5MU:H6	1.75	0.51
25:1H:1224:G:OP2	43:D8:66:ARG:NH2	2.44	0.51
25:1H:1364:G:C5	49:J8:2:SER:HB3	2.46	0.51
25:1H:1586:A:H3'	25:1H:1587:A:H8	1.75	0.51
25:1H:1614:A:P	25:1H:1614:A:H8	2.33	0.51
25:1H:1683:C:H2'	25:1H:1684:C:C6	2.46	0.51
25:1H:1711:C:H42	25:1H:1747:G:H1	1.57	0.51
31:41:11:TYR:O	31:41:16:ARG:HB2	2.11	0.51
1:1G:752:G:H1'	1:1G:754:C:H41	1.75	0.51
1:1G:1288:A:H2'	1:1G:1289:A:C8	2.46	0.51
2:12:61:LEU:HD11	2:12:66:GLY:HA3	1.92	0.51
25:14:1022:G:H22	25:14:1142(A):A:H2	1.58	0.51
25:14:1608:A:H1'	25:14:1610:A:OP2	2.11	0.51
25:14:1678:G:H22	25:14:1989:G:N2	2.08	0.51
25:14:2870:C:H2'	25:14:2871:C:O4'	2.10	0.51
37:35:15:ARG:HG3	37:35:16:ARG:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D5:16:SER:O	47:D5:20:ARG:HG3	2.11	0.51
4:3E:103:ASN:OD1	4:3E:114:ARG:NH2	2.41	0.51
13:4I:54:VAL:HG12	13:4I:58:GLU:OE2	2.10	0.51
19:AI:31:ILE:HG23	19:AI:49:ILE:HA	1.93	0.51
25:1H:363(B):G:H2'	25:1H:363(C):G:H8	1.75	0.51
25:1H:1149:G:H2'	25:1H:1150:C:C6	2.45	0.51
25:1H:1412:A:H2'	25:1H:1413:G:C8	2.47	0.51
25:1H:2732:G:H3'	25:1H:2733:A:O4'	2.11	0.51
41:B8:107:ASP:O	41:B8:111:ARG:NH1	2.44	0.51
44:E8:24:ILE:HG21	44:E8:36:LEU:HD21	1.93	0.51
1:1G:1399:C:N3	1:1G:1502:A:N6	2.58	0.51
13:4A:91:ARG:NH2	13:4A:97:PRO:O	2.44	0.51
20:BA:26:ASN:HA	20:BA:29:LYS:HG2	1.93	0.51
25:14:676:A:H2	25:14:802:A:H61	1.56	0.51
25:14:1048:A:OP2	25:14:1109:C:N4	2.43	0.51
25:14:1085:A:O2'	25:14:1086:A:OP1	2.25	0.51
25:14:1245:G:OP1	37:35:13:ASN:ND2	2.43	0.51
25:14:2331:G:O2'	48:E5:43:THR:HG22	2.11	0.51
25:14:2471:C:H3'	25:14:2472:G:C8	2.45	0.51
25:14:2585:U:HO2'	25:14:2586:C:P	2.34	0.51
30:39:25:PRO:HB3	30:39:28:ILE:HG23	1.93	0.51
35:15:20:GLY:HA2	35:15:61:ARG:HG2	1.92	0.51
54:K5:19:ARG:NH2	54:K5:52:VAL:HG21	2.26	0.51
1:13:156:G:H2'	1:13:157:G:H8	1.75	0.50
1:13:404:U:H2'	1:13:405:U:C6	2.46	0.50
1:13:474:G:H2'	1:13:475:G:C8	2.46	0.50
3:2E:11:ARG:HB3	3:2E:15:THR:HB	1.93	0.50
4:3E:108:LEU:HD11	4:3E:174:LEU:HD22	1.93	0.50
7:6E:97:GLN:O	7:6E:101:LEU:HG	2.11	0.50
10:1I:45:ARG:HB2	10:1I:65:LEU:HB3	1.92	0.50
25:1H:1055:G:H22	25:1H:1104:C:N4	2.09	0.50
25:1H:1588:C:H2'	25:1H:1589:C:C6	2.45	0.50
25:1H:1652:A:OP1	39:98:8:ARG:NH1	2.40	0.50
47:H8:19:ARG:HD3	47:H8:19:ARG:H	1.76	0.50
48:I8:7:LEU:HB2	48:I8:11:ARG:HG2	1.93	0.50
2:12:142:LEU:HA	2:12:145:LEU:HD23	1.93	0.50
25:14:141:A:HO2'	25:14:1407:C:HO2'	1.56	0.50
25:14:855:G:H1	25:14:922:U:H3	1.58	0.50
26:1J:14:U:HO2'	26:1J:107:U:HO2'	1.58	0.50
39:55:48:VAL:HA	39:55:51:LEU:HD12	1.92	0.50
41:75:74:ARG:HD3	41:75:76:PHE:CZ	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:95:35:LEU:HD23	43:95:37:VAL:CG2	2.41	0.50
54:K5:23:THR:HB	56:M5:36:LYS:HD2	1.91	0.50
54:K5:39:TYR:CD1	54:K5:41:PRO:HD3	2.47	0.50
1:13:431:A:H2'	1:13:432:A:O4'	2.12	0.50
1:13:1349:A:OP2	9:8E:118:LYS:NZ	2.38	0.50
4:3E:149:ALA:O	4:3E:153:ARG:N	2.44	0.50
8:7E:83:ILE:HG13	8:7E:137:VAL:HG22	1.92	0.50
22:1K:16:C:O2'	22:1K:61:U:O3'	2.24	0.50
22:3K:29:C:H2'	22:3K:30:G:C8	2.46	0.50
25:1H:520:G:H2'	25:1H:521:G:C8	2.46	0.50
25:1H:972:G:H3'	25:1H:973:A:H2'	1.94	0.50
25:1H:1071:G:H1'	25:1H:1089:G:H2'	1.92	0.50
25:1H:1754:C:OP2	41:B8:113:LYS:HE3	2.12	0.50
25:1H:2614:A:H3'	62:1H:3838:HOH:O	2.10	0.50
27:71:212:VAL:HG21	27:71:226:PRO:HB3	1.93	0.50
46:G8:99:CYS:SG	46:G8:105:ALA:HB3	2.51	0.50
1:1G:6:G:H4'	1:1G:298:A:H4'	1.92	0.50
1:1G:620:C:H2'	1:1G:621:A:O4'	2.10	0.50
1:1G:1090:U:H2'	1:1G:1091:U:C6	2.45	0.50
1:1G:1290:G:O3'	7:62:37:ASN:ND2	2.44	0.50
1:1G:1347:G:O2'	1:1G:1348:U:O5'	2.29	0.50
18:9A:58:LEU:HD12	18:9A:63:GLN:HA	1.94	0.50
20:BA:71:THR:HG22	20:BA:72:LEU:HD23	1.92	0.50
25:14:125:G:C6	55:L5:10:ARG:HG3	2.46	0.50
25:14:1693:U:O2'	28:19:14:ARG:NH2	2.44	0.50
25:14:2074:U:OP1	62:14:3551:HOH:O	2.19	0.50
25:14:2111:C:N4	25:14:2147:G:H21	2.08	0.50
25:14:2758:A:C2	25:14:2759:G:H1'	2.46	0.50
25:14:2822:G:OP2	62:14:3552:HOH:O	2.20	0.50
39:55:59:ASP:OD1	39:55:59:ASP:N	2.40	0.50
40:65:24:LEU:HD12	40:65:41:ASP:HB2	1.93	0.50
41:75:55:ASN:O	41:75:55:ASN:ND2	2.43	0.50
1:13:1109:C:H2'	1:13:1110:A:O4'	2.11	0.50
1:13:1154:G:H2'	1:13:1155:G:O4'	2.12	0.50
1:13:1330:U:H4'	13:4I:23:TYR:HE1	1.76	0.50
8:7E:35:ILE:HG22	8:7E:111:ILE:HG21	1.93	0.50
8:7E:120:THR:OG1	8:7E:123:GLU:OE1	2.22	0.50
22:3K:3:C:H2'	22:3K:4:G:H8	1.76	0.50
25:1H:263:C:H2'	25:1H:264:C:O4'	2.12	0.50
25:1H:635:C:O2'	25:1H:639:U:OP1	2.24	0.50
25:1H:1107:G:OP1	34:38:56:ASN:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:71:209:LEU:HD13	27:71:226:PRO:HB2	1.92	0.50
32:51:10:PRO:HD2	32:51:50:VAL:O	2.11	0.50
35:58:53:VAL:HG22	35:58:121:LYS:HB2	1.93	0.50
36:68:25:LEU:HD12	36:68:38:VAL:HG22	1.93	0.50
1:1G:45:U:H2'	1:1G:46:G:C8	2.46	0.50
1:1G:828:A:H2'	1:1G:829:G:O4'	2.10	0.50
1:1G:1277:C:HO2'	1:1G:1279:A:H8	1.58	0.50
1:1G:1314:C:H2'	1:1G:1315:U:C6	2.46	0.50
1:1G:1364:U:O2'	1:1G:1365:G:OP1	2.28	0.50
2:12:8:LYS:HB3	2:12:217:ARG:CZ	2.41	0.50
2:12:162:ILE:HD11	2:12:184:VAL:HA	1.92	0.50
2:12:178:ARG:HH12	8:72:68:ARG:HH22	1.59	0.50
7:62:76:ARG:HD2	7:62:89:MET:HG3	1.92	0.50
8:72:37:ARG:O	8:72:41:ARG:N	2.32	0.50
11:2A:99:GLN:HG2	11:2A:105:VAL:HG21	1.94	0.50
11:2A:123:LYS:NZ	11:2A:123:LYS:HB3	2.25	0.50
17:8A:67:LYS:O	17:8A:69:LYS:N	2.44	0.50
25:14:26:G:C6	25:14:27:G:N1	2.79	0.50
25:14:727:A:OP1	25:14:1431:U:O2'	2.28	0.50
25:14:2698:U:H2'	25:14:2699:C:C6	2.46	0.50
37:35:122:PRO:HB3	37:35:141:ALA:HB1	1.93	0.50
42:85:17:ILE:HD12	42:85:32:PHE:HE1	1.76	0.50
48:E5:19:LYS:C	48:E5:20:ARG:HG2	2.31	0.50
49:F5:75:GLU:HB3	49:F5:76:ARG:NH2	2.21	0.50
1:13:167:G:H2'	1:13:168:G:C8	2.46	0.50
1:13:792:A:H4'	1:13:793:U:O5'	2.12	0.50
1:13:1104:G:H4'	2:1E:111:ARG:NH1	2.27	0.50
1:13:1148:U:H2'	1:13:1149:C:O4'	2.12	0.50
25:1H:363(A):A:H2'	25:1H:363(B):G:C8	2.46	0.50
25:1H:1266:G:O2'	25:1H:1267:U:OP2	2.27	0.50
32:51:101:ARG:HH22	32:51:122:THR:HA	1.77	0.50
35:58:13:TRP:O	35:58:135:PRO:HD2	2.10	0.50
36:68:26:LYS:HB2	36:68:30:ALA:CB	2.42	0.50
54:O8:11:LEU:HD11	54:O8:51:GLU:HG3	1.93	0.50
1:1G:299:G:H2'	1:1G:300:A:C8	2.47	0.50
1:1G:882:C:OP2	12:3A:10:LYS:NZ	2.45	0.50
1:1G:1053:G:H4'	1:1G:1054:C:H5'	1.94	0.50
1:1G:1137:C:H5'	1:1G:1138:G:C2	2.47	0.50
9:82:104:ARG:HG3	9:82:104:ARG:O	2.12	0.50
11:2A:11:LYS:NZ	25:14:2144:U:OP2	2.39	0.50
12:3A:100:GLY:N	12:3A:104:ALA:O	2.35	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9A:37:VAL:HG12	18:9A:40:LEU:HD12	1.93	0.50
19:AA:36:ARG:HG3	19:AA:71:LEU:HB2	1.93	0.50
22:3L:57:C:H42	25:14:2112:G:N2	2.10	0.50
25:14:141:A:C8	25:14:1408:C:H1'	2.47	0.50
25:14:186:G:H2'	25:14:187:G:C8	2.46	0.50
25:14:265:A:H2'	25:14:266:G:H4'	1.93	0.50
25:14:861:A:N3	26:1J:79:C:O2'	2.42	0.50
25:14:1161:C:H2'	25:14:1162:G:H8	1.76	0.50
25:14:1812:A:O2'	28:19:45:ASN:N	2.43	0.50
25:14:2186:G:H2'	25:14:2187:G:C8	2.46	0.50
25:14:2779:U:H1'	25:14:2781:A:C6	2.46	0.50
30:39:150:GLY:HA2	30:39:172:TRP:CD2	2.47	0.50
35:15:46:VAL:HG13	35:15:48:MET:HG3	1.93	0.50
50:G5:10:LEU:HD21	50:G5:14:ARG:HH21	1.77	0.50
51:H5:50:VAL:HB	51:H5:53:LEU:HD12	1.93	0.50
1:13:1186:G:H21	14:5I:61:TRP:HA	1.76	0.50
1:13:1320:C:N4	19:AI:36:ARG:HG3	2.27	0.50
3:2E:156:ARG:HG2	3:2E:163:ALA:HB2	1.94	0.50
23:2K:32:G:H2'	23:2K:33:OMC:C6	2.45	0.50
25:1H:2122:U:H2'	25:1H:2123:G:H8	1.76	0.50
1:1G:963:G:H21	10:1A:55:LYS:HE2	1.76	0.50
1:1G:1126:U:H5"	1:1G:1280:A:N7	2.26	0.50
1:1G:1157:A:HO2'	1:1G:1158:C:P	2.33	0.50
1:1G:1517:G:H1'	25:14:1919:A:O3'	2.11	0.50
9:82:34:ASN:O	9:82:37:PHE:N	2.32	0.50
17:8A:64:PRO:HA	17:8A:70:ARG:HG3	1.94	0.50
25:14:636:G:C6	37:35:115:LEU:HD11	2.46	0.50
25:14:1139:G:O2'	25:14:1143:A:N6	2.36	0.50
25:14:2306:C:N4	25:14:2307:G:O6	2.45	0.50
31:49:114:ILE:HG12	31:49:140:ILE:HG21	1.94	0.50
33:69:58:LEU:O	33:69:62:LYS:HG2	2.12	0.50
36:25:23:ARG:HG3	36:25:24:VAL:N	2.26	0.50
54:K5:45:LYS:HG3	54:K5:47:THR:HG23	1.93	0.50
1:13:1492:A:H4'	12:3I:44:LYS:HD3	1.93	0.50
2:1E:50:GLU:O	2:1E:54:THR:OG1	2.28	0.50
3:2E:58:GLU:O	3:2E:64:VAL:HA	2.12	0.50
13:4I:5:ALA:HB2	13:4I:61:GLU:HG2	1.93	0.50
22:3K:4:G:N2	22:3K:71:G:H1'	2.26	0.50
22:3K:19:G:O3'	22:3K:61:U:N3	2.45	0.50
25:1H:1277:G:O2'	39:98:24:GLN:OE1	2.28	0.50
25:1H:1376:C:OP2	62:1H:3691:HOH:O	2.20	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2522:U:O2'	25:1H:2647:U:OP1	2.23	0.50
31:41:114:ILE:HG22	31:41:115:ARG:H	1.77	0.50
34:38:4:LYS:HG3	34:38:6:ASN:HB2	1.94	0.50
35:58:30:ILE:HG23	35:58:52:VAL:HG11	1.94	0.50
35:58:114:ARG:O	35:58:115:ARG:HB3	2.10	0.50
38:88:112:GLU:H	38:88:112:GLU:CD	2.15	0.50
1:1G:1347:G:N2	1:1G:1374:A:OP2	2.42	0.50
2:12:60:ASP:OD1	2:12:64:ARG:NH1	2.45	0.50
25:14:310:A:O2'	62:14:3535:HOH:O	2.20	0.50
25:14:507:A:H5'	25:14:508:G:H2'	1.92	0.50
25:14:1012:U:N3	25:14:1143:A:H2	2.09	0.50
28:19:161:THR:HG22	28:19:178:PRO:HG2	1.94	0.50
29:29:98:PRO:HG3	29:29:174:ASP:HA	1.93	0.50
30:39:15:SER:OG	30:39:16:GLY:N	2.45	0.50
33:69:2:LYS:HD3	33:69:20:ASP:HB3	1.93	0.50
1:13:688:G:H2'	1:13:689:C:C6	2.45	0.50
1:13:737:A:H2'	1:13:738:C:H6	1.76	0.50
1:13:944:G:N2	1:13:1338:G:N7	2.60	0.50
3:2E:89:GLU:HG3	3:2E:90:GLU:N	2.25	0.50
22:1K:31:G:H2'	22:1K:32:G:C8	2.44	0.50
25:1H:221:A:H4'	25:1H:222:A:O5'	2.11	0.50
25:1H:489:G:N2	25:1H:1321:A:OP1	2.42	0.50
25:1H:528:A:H2	25:1H:2043:C:H5'	1.76	0.50
25:1H:1894:C:H2'	25:1H:1895:C:H6	1.76	0.50
25:1H:1999:C:OP1	25:1H:2723:C:O2'	2.25	0.50
25:1H:2114:A:H2'	25:1H:2168:G:C8	2.46	0.50
27:71:173:ALA:HB1	27:71:174:PRO:HD2	1.92	0.50
32:51:121:ILE:HG13	32:51:144:VAL:HG21	1.94	0.50
44:E8:110:LYS:HG3	44:E8:111:HIS:H	1.77	0.50
54:O8:15:GLU:HA	54:O8:49:HIS:HA	1.93	0.50
1:1G:142:G:H2'	1:1G:143:A:C8	2.47	0.50
2:12:165:VAL:HG23	2:12:166:ASP:H	1.77	0.50
3:22:152:ILE:HB	3:22:199:LYS:HB2	1.94	0.50
9:82:19:LEU:HD12	9:82:84:ALA:HB1	1.93	0.50
10:1A:4:ILE:HG22	10:1A:6:ILE:HG23	1.94	0.50
12:3A:15:VAL:O	12:3A:16:ARG:HB2	2.11	0.50
18:9A:21:LYS:HE2	18:9A:24:ALA:HB2	1.94	0.50
22:3L:51:U:H3	22:3L:65:G:H1	1.60	0.50
25:14:2425:A:H4'	25:14:2426:A:H5"	1.94	0.50
25:14:2643:G:H2'	25:14:2644:G:O4'	2.11	0.50
29:29:4:ILE:HD11	29:29:29:GLY:HA2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:29:23:VAL:HG12	29:29:173:VAL:HG21	1.93	0.50
33:69:114:LEU:HA	33:69:130:TYR:HB2	1.94	0.50
35:15:3:THR:HG22	35:15:4:TYR:H	1.77	0.50
46:C5:6:HIS:ND1	46:C5:7:VAL:HG13	2.27	0.50
47:D5:45:ASP:O	47:D5:49:ARG:HG2	2.12	0.50
1:13:636:U:H2'	1:13:637:G:H8	1.75	0.50
1:13:719:C:H1'	18:9I:49:LYS:HB3	1.93	0.50
2:1E:18:GLY:H	2:1E:42:ILE:HD12	1.76	0.50
3:2E:116:VAL:HA	3:2E:119:ARG:HB3	1.93	0.50
22:1K:29:C:H2'	22:1K:30:G:C8	2.46	0.50
22:1K:49:C:C2	22:1K:60:A:H1'	2.47	0.50
23:2K:76:C:C2	25:1H:2251:OMG:N2	2.77	0.50
25:1H:2702:U:H6	25:1H:2702:U:OP1	1.94	0.50
47:H8:45:ASP:O	47:H8:49:ARG:HG2	2.11	0.50
47:H8:54:HIS:HB3	47:H8:101:PRO:HD3	1.94	0.50
1:1G:44:G:O6	62:1G:1810:HOH:O	2.19	0.50
1:1G:298:A:OP1	4:32:209:ARG:NH2	2.45	0.50
1:1G:413:G:HO2'	1:1G:414:A:P	2.32	0.50
1:1G:719:C:O2'	18:9A:49:LYS:HB3	2.12	0.50
1:1G:1218:C:OP2	14:5A:9:LYS:NZ	2.38	0.50
5:42:60:TYR:O	5:42:64:ARG:NE	2.40	0.50
6:52:24:GLU:OE2	6:52:28:ARG:NH1	2.32	0.50
7:62:20:ASP:O	7:62:23:VAL:N	2.44	0.50
20:BA:53:LEU:HA	20:BA:56:MET:HB2	1.93	0.50
25:14:1159:U:OP1	51:H5:30:ARG:NH1	2.45	0.50
25:14:2012:G:O3'	44:A5:96:ILE:HG13	2.11	0.50
25:14:2318:G:H1	40:65:2:ALA:N	2.10	0.50
26:1J:16:G:H1	26:1J:68:C:H42	1.59	0.50
32:59:70:THR:HA	32:59:73:ALA:HB3	1.93	0.50
40:65:67:ARG:HH21	40:65:103:GLU:HG3	1.77	0.50
42:85:31:SER:HB3	42:85:34:LYS:HB2	1.93	0.50
51:H5:54:VAL:HG12	51:H5:56:VAL:HG22	1.93	0.50
1:13:235:C:H2'	1:13:236:G:C8	2.47	0.50
1:13:481:G:O2'	1:13:482:A:O5'	2.29	0.50
1:13:636:U:H2'	1:13:637:G:C8	2.46	0.50
1:13:1358:U:H5"	14:5I:33:VAL:O	2.11	0.50
2:1E:168:THR:OG1	2:1E:169:LYS:N	2.45	0.50
10:1I:49:VAL:HG22	14:5I:41:ARG:HG3	1.94	0.50
14:5I:13:THR:N	14:5I:14:PRO:HD2	2.27	0.50
15:6I:24:SER:HB2	15:6I:27:VAL:HG23	1.94	0.50
19:AI:77:THR:HG22	19:AI:78:ARG:HG2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:270(M):U:H1'	25:1H:270(N):G:C6	2.47	0.50
25:1H:528:A:C2	25:1H:2043:C:H5'	2.47	0.50
25:1H:1287:A:N7	39:98:107:ASP:HB2	2.26	0.50
25:1H:2144:U:O2'	25:1H:2147:G:O6	2.15	0.50
25:1H:2469:A:O2'	38:88:56:ARG:HG2	2.12	0.50
30:31:34:TRP:CE3	37:78:8:PRO:HB3	2.46	0.50
34:38:29:TYR:O	34:38:31:GLY:N	2.44	0.50
37:78:80:TYR:OH	37:78:111:ARG:NH1	2.45	0.50
41:B8:78:LEU:O	41:B8:78:LEU:HD13	2.12	0.50
1:1G:935:A:H2'	1:1G:936:C:C6	2.46	0.50
1:1G:1213:A:N6	1:1G:1215:G:N3	2.59	0.50
9:82:76:ALA:O	9:82:80:GLY:N	2.38	0.50
25:14:134:C:H42	25:14:145:G:H1	1.60	0.50
25:14:570:G:H2'	25:14:2030:A:C5	2.47	0.50
25:14:1252:G:N3	42:85:33:ARG:HD2	2.27	0.50
25:14:1418:G:OP1	25:14:1588:C:O2'	2.30	0.50
25:14:2815:C:H2'	25:14:2816:C:C6	2.46	0.50
35:15:112:LEU:HD23	35:15:113:GLY:N	2.26	0.50
55:L5:12:ARG:NH2	55:L5:44:PRO:HB3	2.27	0.50
1:13:1322:C:O2'	1:13:1323:G:H5'	2.12	0.49
1:13:1348:U:N3	1:13:1374:A:H2	2.09	0.49
25:1H:856:C:N4	25:1H:921:G:H1	2.10	0.49
25:1H:1429:G:H1'	25:1H:1568:G:H1'	1.94	0.49
29:21:4:ILE:HG12	29:21:5:LEU:H	1.76	0.49
32:51:4:ILE:HB	32:51:6:ARG:HD3	1.93	0.49
41:B8:33:LYS:HE3	41:B8:84:GLN:HB2	1.93	0.49
50:K8:65:ASN:CG	50:K8:69:ARG:HH22	2.15	0.49
53:N8:39:MET:C	53:N8:40:LYS:HD2	2.33	0.49
56:Q8:16:ILE:HD13	56:Q8:59:LYS:HG2	1.94	0.49
4:32:133:VAL:HG13	4:32:135:LEU:HD22	1.93	0.49
13:4A:14:ARG:HA	13:4A:44:ARG:HA	1.93	0.49
19:AA:40:ILE:HG12	19:AA:69:HIS:O	2.11	0.49
25:14:637:A:H4'	25:14:638:G:O5'	2.12	0.49
25:14:1106:G:H3'	25:14:1107:G:H8	1.77	0.49
25:14:2165:G:H5'	25:14:2166:G:OP2	2.12	0.49
25:14:2483:C:N3	38:45:124:LYS:NZ	2.58	0.49
25:14:2697:G:H2'	25:14:2698:U:O4'	2.12	0.49
29:29:101:ARG:CZ	29:29:171:GLU:HB2	2.41	0.49
30:39:124:LEU:O	30:39:126:VAL:HG13	2.11	0.49
41:75:60:THR:HG22	41:75:77:PRO:HA	1.93	0.49
46:C5:55:TYR:CD1	46:C5:55:TYR:N	2.79	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:F5:41:ARG:HB2	49:F5:43:TYR:CE1	2.47	0.49
1:13:192:U:H5'	20:BI:102:GLY:HA2	1.93	0.49
1:13:564:C:H5'	17:8I:32:TYR:CE1	2.47	0.49
1:13:859:A:H2'	1:13:860:A:O4'	2.12	0.49
2:1E:92:TYR:CE1	2:1E:151:GLY:HA3	2.47	0.49
25:1H:1301:A:HO2'	25:1H:1302:A:C3'	2.24	0.49
25:1H:1859:A:N6	25:1H:1883:G:O2'	2.46	0.49
25:1H:1925:C:H2'	25:1H:1926:U:O4'	2.12	0.49
25:1H:2737:G:H2'	25:1H:2738:A:C8	2.47	0.49
30:31:78:ILE:HA	30:31:83:PHE:CD2	2.46	0.49
36:68:71:ARG:NH1	41:B8:74:ARG:HH21	2.09	0.49
42:C8:27:LEU:HD12	42:C8:31:SER:HB3	1.93	0.49
1:1G:824:C:H2'	1:1G:825:G:C8	2.47	0.49
1:1G:993:G:H4'	1:1G:994:A:OP2	2.12	0.49
1:1G:1145:C:H4'	1:1G:1146:A:H5'	1.93	0.49
1:1G:1227:A:H4'	19:AA:85:LYS:HD2	1.93	0.49
2:12:42:ILE:HG13	2:12:43:ASP:N	2.26	0.49
6:52:55:ASP:HB2	6:52:86:ARG:HH12	1.77	0.49
11:2A:48:ILE:HG13	11:2A:64:ALA:HB2	1.93	0.49
25:14:137(A):G:H2'	25:14:139:G:N7	2.27	0.49
25:14:305:U:H2'	25:14:306:U:C6	2.46	0.49
25:14:588:U:H1'	30:39:90:PHE:HB3	1.94	0.49
25:14:1063:G:H2'	25:14:1063:G:N3	2.28	0.49
25:14:2681:C:H4'	25:14:2682:U:H5'	1.94	0.49
25:14:2707:G:H5'	39:55:68:ARG:HH21	1.77	0.49
26:1J:13:A:O2'	26:1J:15:A:O5'	2.31	0.49
41:75:55:ASN:HD22	41:75:58:ASN:HD21	1.59	0.49
43:95:35:LEU:O	43:95:37:VAL:HG22	2.12	0.49
51:H5:40:THR:HG23	51:H5:43:ILE:H	1.77	0.49
10:1I:34:VAL:HG22	10:1I:74:ILE:HG22	1.95	0.49
25:1H:86:C:H4'	25:1H:104:U:H1'	1.93	0.49
25:1H:270(G):C:H2'	25:1H:270(H):C:C6	2.47	0.49
25:1H:796:C:H2'	25:1H:797:C:C6	2.47	0.49
25:1H:958:U:O2	26:16:89(A):A:H4'	2.13	0.49
25:1H:1799:G:H4'	25:1H:1800:C:O5'	2.12	0.49
25:1H:2712:U:O2'	25:1H:2712(A):A:C8	2.62	0.49
31:41:99:MET:HG3	31:41:100:TRP:N	2.26	0.49
32:51:124:GLU:HG2	32:51:126:PRO:HD3	1.94	0.49
34:38:50:ARG:HB2	34:38:50:ARG:NH1	2.26	0.49
41:B8:74:ARG:HD3	41:B8:76:PHE:CE1	2.48	0.49
43:D8:5:VAL:O	43:D8:12:TYR:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:J8:18:ILE:HG12	49:J8:37:ILE:HG12	1.94	0.49
52:M8:23:GLU:O	52:M8:25:TYR:N	2.43	0.49
1:1G:668:G:H4'	15:6A:48:LYS:HB2	1.92	0.49
1:1G:975:A:H4'	1:1G:976:G:O5'	2.13	0.49
1:1G:1006:C:N3	1:1G:1023:G:N2	2.59	0.49
1:1G:1109:C:H2'	1:1G:1110:A:O4'	2.12	0.49
1:1G:1223:C:OP2	19:AA:78:ARG:NH2	2.44	0.49
1:1G:1227:A:N3	19:AA:84:GLY:HA3	2.28	0.49
1:1G:1443:G:C5	41:75:118:ARG:HB2	2.47	0.49
4:32:158:ILE:HG12	4:32:162:LEU:HD12	1.93	0.49
25:14:322:A:H5'	25:14:340:A:H1'	1.94	0.49
25:14:1105:U:H2'	25:14:1106:G:H8	1.77	0.49
25:14:1191:G:H2'	25:14:1192:G:O4'	2.12	0.49
25:14:1467:C:C5	25:14:1546:C:H2'	2.47	0.49
29:29:5:LEU:HD21	29:29:79:ARG:HB2	1.94	0.49
37:35:96:THR:HG22	37:35:126:VAL:HB	1.93	0.49
46:C5:43:ASN:OD1	46:C5:65:ALA:HB3	2.12	0.49
1:13:489:C:OP1	4:3E:132:ARG:NH2	2.44	0.49
10:1I:61:GLU:HG3	14:5I:58:LYS:HE2	1.92	0.49
25:1H:177:G:N3	25:1H:177:G:H5"	2.27	0.49
25:1H:666:G:H4'	37:78:49:ARG:NH1	2.27	0.49
25:1H:1952:A:OP1	36:68:44:LYS:NZ	2.27	0.49
25:1H:2611:U:H2'	53:N8:2:ALA:O	2.11	0.49
25:1H:2776:A:H4'	25:1H:2777:G:O5'	2.12	0.49
27:71:193:ILE:HG22	27:71:194:ARG:HG3	1.94	0.49
28:11:145:VAL:HG12	28:11:146:GLU:O	2.12	0.49
31:41:54:GLU:O	31:41:58:GLN:N	2.42	0.49
33:61:77:LEU:HD11	33:61:140:LEU:HD12	1.94	0.49
36:68:107:ARG:NH1	41:B8:36:GLU:HG2	2.28	0.49
45:F8:31:HIS:CE1	45:F8:33:LYS:HB2	2.47	0.49
1:1G:266:G:H2'	1:1G:266:G:N3	2.27	0.49
1:1G:390:C:H2'	1:1G:391:G:H8	1.78	0.49
1:1G:552:U:H4'	12:3A:83:ARG:HG2	1.95	0.49
1:1G:613:C:H2'	1:1G:614:A:O4'	2.12	0.49
1:1G:929:G:H1	1:1G:1388:C:N4	2.10	0.49
1:1G:1300:G:O2'	1:1G:1301:U:O5'	2.28	0.49
1:1G:1350:A:O2'	7:62:33:ASP:OD1	2.23	0.49
1:1G:1378:C:H5'	7:62:94:ARG:NH2	2.27	0.49
2:12:8:LYS:HD3	2:12:217:ARG:NH1	2.28	0.49
2:12:23:ARG:NH1	2:12:23:ARG:O	2.45	0.49
3:22:22:TRP:HZ2	3:22:33:LEU:HD13	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:104:ARG:HB3	8:72:108:GLY:N	2.27	0.49
25:14:251:A:C5	25:14:252:G:H1'	2.47	0.49
25:14:1428:C:N4	25:14:1570:A:OP2	2.43	0.49
25:14:1678:G:H22	25:14:1989:G:H22	1.61	0.49
25:14:1784:A:OP1	62:14:3555:HOH:O	2.20	0.49
25:14:2680:C:H5'	29:29:189:PRO:HA	1.94	0.49
25:14:2849:U:H4'	25:14:2868:A:C2	2.47	0.49
26:1J:78:A:H2'	26:1J:79:C:O4'	2.12	0.49
44:A5:74:ALA:HB2	44:A5:105:VAL:HG13	1.93	0.49
1:13:965:A:O2'	1:13:966:M2G:OP2	2.21	0.49
1:13:1128:C:H4'	9:8E:16:ARG:HH12	1.78	0.49
1:13:1342:C:H4'	9:8E:125:TYR:HB3	1.95	0.49
3:2E:14:ILE:HG12	3:2E:15:THR:N	2.28	0.49
8:7E:32:LYS:O	8:7E:36:LEU:HG	2.12	0.49
14:5I:48:ALA:HB2	14:5I:53:LEU:HD12	1.94	0.49
23:2K:13:C:O2'	25:1H:1924:C:H4'	2.12	0.49
25:1H:658:C:H2'	25:1H:659:C:C6	2.47	0.49
25:1H:1368:G:OP1	55:P8:28:ARG:NH2	2.44	0.49
28:11:95:LEU:HD13	28:11:97:TYR:HE1	1.77	0.49
30:31:116:ASP:OD1	30:31:119:ARG:NH2	2.45	0.49
40:A8:43:GLU:HG3	48:I8:49:LYS:HE2	1.93	0.49
54:O8:12:GLU:OE1	54:O8:12:GLU:N	2.46	0.49
1:1G:1155:G:H2'	1:1G:1156:G:H5'	1.94	0.49
1:1G:1194:U:H2'	1:1G:1195:C:C6	2.47	0.49
1:1G:1323:G:O5'	13:4A:99:ARG:NH2	2.46	0.49
8:72:30:ARG:O	8:72:34:GLU:HG2	2.11	0.49
9:82:40:LEU:HD11	9:82:70:LYS:HB3	1.93	0.49
15:6A:55:GLY:HA2	15:6A:58:MET:HG3	1.94	0.49
19:AA:16:LEU:HA	19:AA:19:VAL:HB	1.94	0.49
22:3L:31:G:H2'	22:3L:32:G:C8	2.48	0.49
25:14:65:C:H2'	25:14:66:C:C6	2.47	0.49
25:14:265:A:C2'	25:14:266:G:H4'	2.42	0.49
25:14:935:C:H2'	25:14:936:C:C6	2.47	0.49
25:14:1332:G:N2	25:14:1609:A:HO2'	2.10	0.49
25:14:1492:G:H3'	25:14:1493:C:H5'	1.95	0.49
25:14:2836:U:H2'	25:14:2837:G:C8	2.46	0.49
26:1J:7:G:H3'	26:1J:8:U:H5"	1.95	0.49
26:1J:18:G:H2'	26:1J:19:G:C8	2.47	0.49
48:E5:36:ILE:HG13	48:E5:58:THR:HG23	1.93	0.49
52:I5:6:HIS:HB2	52:I5:7:PRO:HA	1.94	0.49
52:I5:67:TYR:CD2	52:I5:70:GLY:HA3	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:128:G:O2'	17:8I:3:LYS:NZ	2.30	0.49
1:13:559:A:OP1	5:4E:126:ARG:NH1	2.37	0.49
1:13:749:C:H2'	1:13:750:G:H8	1.76	0.49
1:13:833:U:H2'	1:13:834:C:C6	2.48	0.49
2:1E:209:ARG:HH11	2:1E:236:TYR:HE1	1.59	0.49
3:2E:10:PHE:HD2	3:2E:11:ARG:HD3	1.77	0.49
19:AI:36:ARG:NH1	19:AI:52:TYR:O	2.44	0.49
22:3K:8:U:O4'	22:3K:49:C:O2'	2.31	0.49
25:1H:1052:C:H42	25:1H:1107:G:H1	1.61	0.49
25:1H:1210:A:H4'	25:1H:1211:U:O5'	2.12	0.49
25:1H:1788:C:OP1	28:11:222:ARG:NH2	2.43	0.49
25:1H:2747:G:O6	25:1H:2755:C:H5"	2.12	0.49
32:51:115:VAL:HG11	32:51:148:ILE:HD11	1.95	0.49
38:88:32:TYR:CD1	38:88:133:ARG:HA	2.47	0.49
41:B8:41:ARG:HE	41:B8:43:GLN:HB2	1.77	0.49
42:C8:114:LYS:HA	42:C8:118:GLY:HA3	1.94	0.49
47:H8:5:LEU:HD23	47:H8:47:VAL:HG21	1.94	0.49
53:N8:30:LEU:HA	53:N8:41:PRO:HA	1.94	0.49
55:P8:24:THR:O	55:P8:28:ARG:HG3	2.12	0.49
1:1G:79:G:H2'	1:1G:79:G:N3	2.28	0.49
1:1G:539:A:H2'	1:1G:540:G:H8	1.78	0.49
1:1G:860:A:H2'	1:1G:861:G:O4'	2.13	0.49
1:1G:1227:A:C2	19:AA:84:GLY:HA3	2.46	0.49
11:2A:33:THR:HG22	11:2A:39:PRO:HA	1.92	0.49
19:AA:10:PHE:O	19:AA:39:THR:OG1	2.31	0.49
19:AA:33:THR:HG23	19:AA:51:VAL:HA	1.95	0.49
57:2L:26:C:H2'	57:2L:27:G:O4'	2.12	0.49
25:14:587:C:H4'	25:14:588:U:O5'	2.12	0.49
25:14:903:C:H2'	25:14:904:C:C6	2.47	0.49
25:14:1790:C:H5"	25:14:1791:A:OP1	2.12	0.49
25:14:1821:A:H2'	25:14:1822:G:H8	1.78	0.49
25:14:2867:G:O2'	25:14:2868:A:P	2.70	0.49
30:39:8:GLN:HG3	30:39:126:VAL:HA	1.95	0.49
30:39:61:GLY:CA	30:39:77:ASP:HB3	2.39	0.49
45:B5:6:ASP:OD1	45:B5:6:ASP:N	2.45	0.49
48:E5:32:ARG:N	48:E5:35:ASN:OD1	2.31	0.49
1:13:309:G:H2'	1:13:310:G:H8	1.77	0.49
1:13:445:G:H1	1:13:489:C:H42	1.59	0.49
1:13:1152:A:H5"	10:1I:13:HIS:NE2	2.28	0.49
1:13:1188:A:H5"	14:5I:58:LYS:NZ	2.27	0.49
3:2E:189:ALA:HB3	3:2E:196:LEU:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:11:ILE:HG13	5:4E:31:LEU:HB3	1.95	0.49
16:7I:4:ILE:O	16:7I:66:PRO:HA	2.13	0.49
25:1H:95:G:H4'	50:K8:46:GLN:HB3	1.95	0.49
25:1H:248:G:H5'	25:1H:250:G:N7	2.28	0.49
25:1H:719:C:H2'	25:1H:720:C:H6	1.77	0.49
30:31:63:LYS:NZ	30:31:67:GLN:HB3	2.27	0.49
37:78:50:ARG:HD3	56:Q8:7:HIS:CD2	2.47	0.49
43:D8:10:LYS:NZ	43:D8:23:GLU:OE1	2.44	0.49
1:1G:278:G:N2	17:8A:95:TYR:HB3	2.27	0.49
1:1G:500:G:H2'	1:1G:501:C:C6	2.47	0.49
1:1G:1117:G:O3'	9:82:104:ARG:HD3	2.13	0.49
1:1G:1320:C:C5	19:AA:36:ARG:HD3	2.48	0.49
1:1G:1418:A:N6	1:1G:1482:G:O2'	2.45	0.49
6:52:20:ALA:HA	6:52:23:LYS:HB3	1.94	0.49
7:62:57:GLU:OE1	7:62:57:GLU:N	2.42	0.49
25:14:678:C:H2'	25:14:679:C:C6	2.48	0.49
25:14:996:A:O2'	42:85:92:ARG:NH2	2.46	0.49
25:14:1027:A:C2	25:14:2488:A:H5'	2.47	0.49
25:14:1314:C:OP1	25:14:1332:G:H5"	2.13	0.49
25:14:1358:G:N1	25:14:1372:U:OP2	2.25	0.49
25:14:1827:C:OP2	28:19:222:ARG:NH1	2.46	0.49
25:14:2718:G:H5'	62:14:3517:HOH:O	2.11	0.49
25:14:2720:U:N3	25:14:2873:A:H2	1.94	0.49
28:19:79:VAL:HG12	28:19:113:VAL:HA	1.95	0.49
1:13:495:A:H4'	1:13:496:A:OP1	2.11	0.49
1:13:939:G:H2'	1:13:940:C:C6	2.48	0.49
7:6E:22:LEU:HG	7:6E:62:PHE:HE1	1.78	0.49
15:6I:78:TYR:OH	15:6I:88:ARG:NE	2.46	0.49
19:AI:80:TYR:CG	19:AI:80:TYR:O	2.66	0.49
25:1H:458:G:O2'	25:1H:469:G:O6	2.22	0.49
25:1H:519:U:H2'	25:1H:520:G:C8	2.47	0.49
25:1H:1417:C:H2'	25:1H:1418:G:O4'	2.12	0.49
27:71:10:LEU:HB3	27:71:220:PRO:HD3	1.95	0.49
28:11:226:MET:O	62:11:401:HOH:O	2.20	0.49
31:41:63:ILE:HG13	31:41:141:PHE:CG	2.47	0.49
45:F8:55:ASN:HB2	45:F8:80:ILE:HG12	1.94	0.49
1:1G:552:U:O2'	12:3A:83:ARG:O	2.26	0.49
2:12:179:LYS:HA	8:72:72:PRO:HG3	1.93	0.49
3:22:18:TRP:HH2	14:5A:57:ARG:HD2	1.78	0.49
13:4A:25:ILE:O	13:4A:29:ARG:HB2	2.12	0.49
17:8A:17:LYS:C	17:8A:18:THR:HG1	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.78	0.49
22:3L:6:G:H1	22:3L:69:C:H42	1.61	0.49
25:14:71:A:H4'	25:14:72:U:O5'	2.13	0.49
25:14:1222:C:H42	25:14:1229:G:H1	1.60	0.49
25:14:1278:A:H2'	25:14:1279:G:C8	2.48	0.49
25:14:1306:C:H2'	25:14:1307:A:C8	2.48	0.49
25:14:1364:G:OP2	49:F5:2:SER:N	2.46	0.49
25:14:2099:U:H3	25:14:2190:G:H1	1.60	0.49
25:14:2287:A:O2'	25:14:2288:A:H5"	2.13	0.49
35:15:112:LEU:HD23	35:15:113:GLY:H	1.78	0.49
37:35:144:GLU:OE1	37:35:144:GLU:N	2.46	0.49
45:B5:64:LYS:HE2	45:B5:73:ARG:CZ	2.43	0.49
49:F5:90:ILE:HG23	49:F5:90:ILE:O	2.12	0.49
1:13:148:G:H2'	1:13:149:A:C8	2.47	0.49
7:6E:49:ILE:O	7:6E:53:LYS:HB3	2.12	0.49
25:1H:140:A:H8	25:1H:1408:C:HO2'	1.61	0.49
25:1H:1677:A:N7	62:1H:3789:HOH:O	2.35	0.49
25:1H:2612:C:OP2	53:N8:2:ALA:HA	2.12	0.49
31:41:106:LEU:HD12	31:41:110:ALA:HB3	1.93	0.49
35:58:96:GLU:HB2	35:58:122:VAL:HG12	1.95	0.49
42:C8:91:ASP:O	42:C8:93:LYS:N	2.46	0.49
1:1G:545:C:OP2	4:32:62:GLN:NE2	2.46	0.49
2:12:103:THR:OG1	2:12:104:ASN:N	2.45	0.49
25:14:307:G:N1	25:14:310:A:OP2	2.46	0.49
25:14:455:C:N3	25:14:472:A:H2'	2.28	0.49
25:14:635:C:O2'	25:14:639:U:OP1	2.17	0.49
30:39:60:SER:OG	30:39:60:SER:O	2.31	0.49
31:49:59:GLU:OE1	31:49:138:GLN:NE2	2.45	0.49
38:45:135:ASP:OD2	47:D5:81:ARG:NH1	2.45	0.49
47:D5:111:VAL:O	47:D5:113:ALA:N	2.46	0.49
2:1E:67:THR:HG21	2:1E:155:LEU:HG	1.95	0.49
11:2I:83:ILE:HG12	11:2I:109:VAL:HG23	1.94	0.49
25:1H:221:A:H5"	25:1H:221:A:H8	1.78	0.49
25:1H:1257:C:H4'	30:31:83:PHE:CE1	2.48	0.49
27:71:201:PRO:HD2	27:71:208:PHE:HE2	1.76	0.49
28:11:123:ALA:CB	28:11:131:LEU:HG	2.43	0.49
33:61:67:ARG:HE	33:61:67:ARG:HB3	1.41	0.49
38:88:64:ILE:HA	38:88:106:VAL:HG12	1.95	0.49
41:B8:46:GLU:O	41:B8:46:GLU:HG2	2.12	0.49
48:I8:36:ILE:HA	48:I8:60:PHE:HA	1.94	0.49
1:1G:543:C:H5"	4:32:14:ARG:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:575:G:O4'	1:1G:881:G:N2	2.46	0.49
1:1G:1491:G:H5"	1:1G:1492:A:OP2	2.12	0.49
3:22:123:GLN:HA	3:22:126:ARG:HD2	1.95	0.49
19:AA:36:ARG:HG2	19:AA:36:ARG:O	2.12	0.49
25:14:1359:A:N6	25:14:1372:U:H3	2.11	0.49
25:14:1374:G:H2'	25:14:1375:C:C6	2.48	0.49
28:19:10:THR:OG1	28:19:11:PRO:O	2.30	0.49
29:29:36:ARG:HG2	29:29:47:VAL:HG12	1.95	0.49
29:29:77:ILE:HA	29:29:77:ILE:HD13	1.70	0.49
36:25:119:PRO:HB2	41:75:68:TYR:CZ	2.48	0.49
1:13:842:C:H5'	1:13:843:U:OP1	2.13	0.48
1:13:1119:C:H2'	1:13:1120:G:C8	2.47	0.48
1:13:1431:C:H2'	1:13:1432:G:O4'	2.13	0.48
2:1E:105:PHE:HZ	2:1E:156:LYS:HA	1.77	0.48
25:1H:57:C:H2'	25:1H:58:G:O4'	2.13	0.48
25:1H:64:A:C8	45:F8:66:LEU:HD13	2.48	0.48
25:1H:247:G:H4'	25:1H:386:G:C5	2.48	0.48
25:1H:2182:G:H2'	25:1H:2183:C:C6	2.48	0.48
25:1H:2712:U:O2'	25:1H:2712(A):A:OP1	2.31	0.48
25:1H:2734:A:H3'	25:1H:2735:G:H8	1.77	0.48
31:41:119:GLY:HA3	31:41:181:ARG:HG3	1.94	0.48
32:51:127:GLU:O	32:51:129:THR:N	2.46	0.48
40:A8:61:ASN:OD1	40:A8:63:THR:OG1	2.23	0.48
43:D8:66:ARG:HD2	43:D8:88:ARG:HB2	1.94	0.48
49:J8:87:PRO:O	49:J8:91:LYS:HB2	2.13	0.48
1:1G:1319:A:H2'	1:1G:1323:G:C8	2.48	0.48
3:22:150:LYS:HG3	3:22:169:ALA:HB2	1.95	0.48
25:14:247:G:H4'	25:14:386:G:C5	2.48	0.48
25:14:247:G:H4'	25:14:386:G:C6	2.48	0.48
25:14:663:G:H2'	25:14:664:C:C6	2.48	0.48
25:14:1322:A:N1	25:14:1333:C:O2'	2.38	0.48
25:14:2291:U:O2'	25:14:2374:C:O2	2.28	0.48
25:14:2747:G:O6	25:14:2755:C:H5"	2.13	0.48
31:49:38:VAL:HG23	31:49:93:THR:HA	1.95	0.48
35:15:55:VAL:HB	35:15:126:PRO:HA	1.95	0.48
36:25:98:VAL:HG21	36:25:114:ILE:HG22	1.95	0.48
40:65:84:GLN:HA	40:65:109:GLY:HA3	1.95	0.48
44:A5:36:LEU:HD11	44:A5:47:VAL:HG12	1.95	0.48
46:C5:55:TYR:HE2	46:C5:60:PHE:CE1	2.27	0.48
1:13:600:C:H2'	1:13:601:C:H6	1.77	0.48
1:13:1037:C:H2'	1:13:1038:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1132:C:H2'	1:13:1133:G:C8	2.47	0.48
5:4E:140:ARG:O	5:4E:143:ARG:NH1	2.43	0.48
8:7E:120:THR:H	8:7E:123:GLU:HB2	1.77	0.48
11:2I:95:ILE:O	11:2I:99:GLN:HG3	2.12	0.48
25:1H:1291:C:H2'	25:1H:1292:U:C6	2.49	0.48
26:16:15:A:H1'	26:16:109:G:C5	2.47	0.48
35:58:43:THR:HB	35:58:46:VAL:HG12	1.95	0.48
41:B8:24:PRO:HA	41:B8:49:VAL:HG13	1.94	0.48
41:B8:124:ASP:N	41:B8:127:ALA:HB3	2.26	0.48
50:K8:29:LYS:HG2	50:K8:57:ILE:HD13	1.95	0.48
1:1G:8:A:H4'	1:1G:9:G:OP1	2.13	0.48
1:1G:1266:G:N2	1:1G:1269:A:OP2	2.45	0.48
25:14:372:G:O2'	25:14:400:G:N1	2.42	0.48
25:14:1259:G:H2'	25:14:1260:G:C8	2.47	0.48
26:1J:7:G:N2	40:65:38:GLN:OE1	2.31	0.48
46:C5:106:LEU:C	46:C5:108:THR:H	2.16	0.48
47:D5:103:ARG:O	47:D5:139:VAL:HG11	2.12	0.48
1:13:643:C:H2'	1:13:644:G:H8	1.77	0.48
17:8I:90:ILE:O	17:8I:94:ASN:ND2	2.45	0.48
22:1K:10:G:H2'	22:1K:11:A:C8	2.47	0.48
25:1H:7:G:H1	25:1H:2896:C:H42	1.61	0.48
25:1H:195:A:C8	25:1H:197:A:OP1	2.67	0.48
25:1H:196:A:H5"	37:78:46:LYS:HZ3	1.79	0.48
25:1H:319:C:OP1	30:31:137:LYS:NZ	2.43	0.48
25:1H:583:G:O6	62:1H:3688:HOH:O	2.20	0.48
25:1H:862:G:H2'	25:1H:863:A:O4'	2.14	0.48
25:1H:1678:G:N2	25:1H:1989:G:H22	2.11	0.48
25:1H:2348:U:O4	25:1H:2382:G:N2	2.46	0.48
31:41:10:LYS:HG2	31:41:14:GLU:HG2	1.95	0.48
32:51:19:VAL:HA	32:51:24:VAL:HG12	1.95	0.48
33:61:110:ASP:N	33:61:130:TYR:OH	2.35	0.48
34:38:25:PHE:CD1	34:38:26:LEU:HG	2.47	0.48
35:58:132:ALA:O	35:58:134:ARG:NH1	2.46	0.48
37:78:18:ARG:NH2	37:78:21:ARG:HD2	2.29	0.48
43:D8:29:PRO:HA	43:D8:61:VAL:HG22	1.95	0.48
44:E8:19:LEU:HB3	53:N8:25:LEU:HD12	1.95	0.48
47:H8:151:HIS:CD2	47:H8:170:THR:HA	2.46	0.48
1:1G:232:G:H2'	1:1G:233:C:O4'	2.13	0.48
1:1G:302:G:H5"	12:3A:14:LYS:HE2	1.95	0.48
1:1G:353:A:H5'	1:1G:353:A:H8	1.77	0.48
1:1G:501:C:H2'	1:1G:502:G:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:554:C:H2'	1:1G:555:C:C6	2.48	0.48
1:1G:784:C:H4'	25:14:1837:C:OP1	2.12	0.48
1:1G:1226:C:H42	13:4A:104:ARG:HD2	1.78	0.48
1:1G:1352:C:N3	1:1G:1370:G:N2	2.53	0.48
25:14:1085:A:HO2'	25:14:1086:A:P	2.35	0.48
25:14:2061:G:H5"	25:14:2503:2MA:N7	2.28	0.48
25:14:2392:A:H8	37:35:61:ARG:HB3	1.77	0.48
25:14:2503:2MA:H5'	25:14:2503:2MA:H8	1.94	0.48
28:19:77:ALA:HB2	28:19:97:TYR:CD1	2.48	0.48
46:C5:90:LEU:HD12	46:C5:91:GLU:H	1.79	0.48
1:13:148:G:H2'	1:13:149:A:H8	1.78	0.48
1:13:156:G:H2'	1:13:157:G:C8	2.49	0.48
1:13:591:U:H2'	1:13:592:G:C8	2.48	0.48
1:13:701:C:O2	1:13:703:G:N1	2.46	0.48
1:13:1498:UR3:H6	1:13:1498:UR3:O5'	2.12	0.48
23:2K:76:C:N3	25:1H:2251:OMG:N2	2.45	0.48
25:1H:2057:A:H2'	25:1H:2058:A:O4'	2.12	0.48
28:11:65:ILE:HD11	28:11:67:PHE:CE1	2.48	0.48
29:21:111:ARG:HG3	29:21:160:TYR:HD2	1.78	0.48
31:41:10:LYS:O	31:41:14:GLU:HB3	2.14	0.48
41:B8:11:GLU:OE1	41:B8:57:PHE:HB3	2.13	0.48
50:K8:25:VAL:HG23	50:K8:57:ILE:HG23	1.95	0.48
53:N8:46:CYS:H	53:N8:50:GLY:HA3	1.78	0.48
1:1G:145:G:H1	1:1G:177:C:N4	2.11	0.48
1:1G:189:U:O2'	17:8A:63:ARG:NH2	2.46	0.48
1:1G:408:A:H2'	1:1G:409:G:O4'	2.13	0.48
8:72:7:ALA:O	8:72:11:THR:OG1	2.22	0.48
25:14:17:G:H2'	25:14:18:C:C6	2.48	0.48
25:14:184:C:H2'	25:14:185:U:C6	2.49	0.48
25:14:2505:G:O6	25:14:2576:G:H2'	2.14	0.48
32:59:8:PRO:HD2	32:59:69:ARG:HE	1.78	0.48
33:69:88:ILE:HG22	33:69:90:GLY:N	2.26	0.48
33:69:109:ILE:HG22	33:69:110:ASP:H	1.78	0.48
41:75:18:ASP:OD1	41:75:18:ASP:N	2.47	0.48
48:E5:27:GLU:HB2	48:E5:69:PHE:HD2	1.78	0.48
54:K5:12:GLU:OE1	54:K5:12:GLU:N	2.45	0.48
1:13:581:G:O3'	15:6I:64:ARG:NH2	2.47	0.48
1:13:789:U:H1'	1:13:792:A:H2	1.79	0.48
14:5I:39:LEU:HD11	14:5I:47:LEU:HD12	1.95	0.48
18:9I:43:PHE:CE1	18:9I:58:LEU:HD11	2.49	0.48
25:1H:102:G:OP1	50:K8:7:ARG:NH2	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:708:C:H42	25:1H:723:G:H1	1.60	0.48
31:41:16:ARG:NH2	31:41:31:VAL:HG11	2.28	0.48
31:41:152:LEU:H	31:41:152:LEU:HD12	1.79	0.48
54:O8:34:LEU:H	54:O8:34:LEU:HD22	1.78	0.48
1:1G:405:U:O4	4:32:2:GLY:N	2.46	0.48
1:1G:1255:G:O2'	1:1G:1258:G:O2'	2.14	0.48
2:12:19:HIS:NE2	2:12:20:GLU:HG2	2.28	0.48
5:42:28:PHE:O	5:42:47:LYS:HA	2.14	0.48
20:BA:74:LYS:HA	20:BA:77:ALA:HB3	1.93	0.48
25:14:1075:C:H2'	25:14:1076:C:C6	2.48	0.48
25:14:1306:C:H2'	25:14:1307:A:H8	1.79	0.48
25:14:1846:G:H5'	25:14:1847:A:OP2	2.14	0.48
25:14:2059:A:OP2	62:14:3553:HOH:O	2.20	0.48
25:14:2335:A:HO2'	25:14:2336:A:P	2.36	0.48
26:1J:16:G:H1	26:1J:68:C:N4	2.11	0.48
32:59:86:GLU:H	32:59:86:GLU:CD	2.17	0.48
37:35:130:PHE:CZ	37:35:144:GLU:HB2	2.48	0.48
45:B5:11:PRO:HA	45:B5:28:PHE:HB3	1.96	0.48
47:D5:74:VAL:HG13	47:D5:86:VAL:HG22	1.96	0.48
1:13:346:G:H5"	41:B8:41:ARG:HD2	1.96	0.48
1:13:596:C:H2'	1:13:597:G:C8	2.47	0.48
4:3E:86:LYS:H	4:3E:86:LYS:HD2	1.77	0.48
12:3I:51:LYS:HG2	12:3I:72:HIS:CD2	2.49	0.48
13:4I:5:ALA:HB1	13:4I:66:LEU:HD13	1.94	0.48
22:1K:40:C:H2'	22:1K:41:C:C6	2.48	0.48
23:2K:21:H2U:H2'	23:2K:22:A:C5'	2.43	0.48
25:1H:49:A:N7	25:1H:120:U:C5	2.80	0.48
25:1H:1174:A:H2'	25:1H:1174:A:N3	2.29	0.48
25:1H:2125:G:H21	25:1H:2173:A:H62	1.61	0.48
25:1H:2347:C:C5	25:1H:2382:G:H1'	2.49	0.48
25:1H:2528:U:O3'	25:1H:2529:G:H8	1.97	0.48
25:1H:2680:C:H1'	29:21:187:ALA:HB1	1.96	0.48
25:1H:2699:C:H2'	25:1H:2700:C:O4'	2.14	0.48
47:H8:162:GLU:HG3	47:H8:163:LEU:N	2.27	0.48
1:1G:452:A:O2'	1:1G:453:A:O5'	2.27	0.48
1:1G:988:G:H2'	1:1G:989:C:O4'	2.14	0.48
1:1G:1179:A:H2'	1:1G:1180:A:O4'	2.14	0.48
4:32:12:CYS:SG	4:32:18:LYS:HA	2.52	0.48
4:32:18:LYS:HD2	4:32:31:CYS:SG	2.53	0.48
9:82:28:VAL:HG23	9:82:63:ILE:HD13	1.96	0.48
11:2A:13:GLN:NE2	11:2A:15:ALA:HB2	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4L:7:G:O2'	24:4L:8:A:O5'	2.30	0.48
25:14:1045:A:OP1	25:14:1046:A:H5'	2.13	0.48
25:14:2630:G:H1'	25:14:2894:G:N9	2.29	0.48
30:39:53:THR:HG22	30:39:56:GLU:HG3	1.94	0.48
32:59:10:PRO:HD2	32:59:50:VAL:H	1.78	0.48
51:H5:5:LYS:HD3	51:H5:57:GLU:HB3	1.95	0.48
56:M5:29:LYS:HB3	56:M5:33:ASN:OD1	2.13	0.48
1:13:456:C:H2'	1:13:457:C:O4'	2.14	0.48
1:13:713:G:H2'	1:13:714:G:C8	2.49	0.48
25:1H:270(I):G:N2	25:1H:270(R):G:N3	2.62	0.48
25:1H:764:A:H2	28:11:219:PRO:HG3	1.78	0.48
25:1H:1021:A:H8	25:1H:1021:A:H3'	1.77	0.48
25:1H:2693:A:H2'	25:1H:2694:G:H8	1.78	0.48
44:E8:82:LEU:HB2	44:E8:98:LYS:O	2.14	0.48
1:1G:664:G:P	18:9A:64:ARG:HH21	2.36	0.48
1:1G:707:C:H2'	1:1G:708:C:C6	2.49	0.48
1:1G:1350:A:N6	1:1G:1373:G:H21	2.11	0.48
7:62:5:ARG:HH21	7:62:7:ALA:HA	1.77	0.48
8:72:29:SER:HB3	8:72:32:LYS:HG3	1.95	0.48
20:BA:36:LEU:HD13	20:BA:55:ILE:HG23	1.95	0.48
22:3L:29:C:H2'	22:3L:30:G:C8	2.43	0.48
25:14:29:U:H2'	25:14:30:G:C8	2.49	0.48
25:14:41:C:H2'	25:14:43:G:H8	1.78	0.48
25:14:906:G:O2'	38:45:67:ARG:NE	2.31	0.48
25:14:1049:C:N4	25:14:2751:G:H1	2.10	0.48
25:14:1344:G:H4'	25:14:1384:A:C5	2.48	0.48
25:14:2779:U:H5'	25:14:2780:G:OP1	2.14	0.48
25:14:2837:G:H22	39:55:96:ARG:HH12	1.61	0.48
36:25:114:ILE:O	36:25:117:LEU:N	2.47	0.48
39:55:2:ARG:HB3	39:55:2:ARG:NH1	2.29	0.48
1:13:74:C:H2'	1:13:75:C:C6	2.49	0.48
1:13:337:C:H2'	1:13:338:A:C8	2.48	0.48
2:1E:97:TRP:CZ3	2:1E:172:ILE:HB	2.49	0.48
11:2I:57:THR:HG22	11:2I:58:PRO:HD2	1.95	0.48
25:1H:1113:U:H2'	25:1H:1114:G:C8	2.49	0.48
25:1H:2105:C:H42	25:1H:2184:G:H1	1.62	0.48
26:16:90:C:H5'	38:88:18:LYS:HA	1.95	0.48
30:31:123:LEU:HD13	30:31:192:LEU:HB3	1.96	0.48
46:G8:5:MET:HE2	46:G8:5:MET:H	1.79	0.48
52:M8:3:GLU:HG3	52:M8:4:GLY:H	1.79	0.48
1:1G:740:U:H2'	1:1G:741:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:932:C:H4'	7:62:4:ARG:CZ	2.44	0.48
1:1G:1537:U:O4	24:4L:8:A:N6	2.47	0.48
10:1A:80:LYS:O	10:1A:83:GLU:HB3	2.13	0.48
17:8A:29:HIS:CG	17:8A:30:PRO:HD2	2.49	0.48
25:14:1203:G:O6	25:14:1204:A:N6	2.47	0.48
25:14:1946:U:H2'	25:14:1947:C:C6	2.48	0.48
25:14:2468:G:N2	25:14:2481:G:H2'	2.29	0.48
26:1J:113:C:H2'	26:1J:114:G:C8	2.49	0.48
28:19:172:TYR:HD1	28:19:186:HIS:HA	1.79	0.48
30:39:5:ALA:H	30:39:19:GLU:HB3	1.78	0.48
30:39:174:VAL:HG11	30:39:188:ARG:NH2	2.29	0.48
40:65:61:ASN:OD1	40:65:62:LYS:N	2.46	0.48
42:85:91:ASP:O	42:85:92:ARG:HB3	2.13	0.48
1:13:105:G:H2'	1:13:106:C:C6	2.49	0.48
1:13:895:G:H2'	1:13:896:C:C6	2.49	0.48
3:2E:50:ALA:HB1	3:2E:70:VAL:HG11	1.96	0.48
3:2E:95:THR:HG21	3:2E:97:LYS:HZ3	1.79	0.48
13:4I:14:ARG:HG3	13:4I:16:ASP:OD1	2.14	0.48
15:6I:82:ILE:O	15:6I:86:GLY:N	2.43	0.48
25:1H:466:A:N3	25:1H:683:C:H1'	2.29	0.48
25:1H:1332:G:H21	25:1H:1610:A:H8	1.58	0.48
30:31:67:GLN:HG3	30:31:67:GLN:O	2.13	0.48
47:H8:116:VAL:HB	47:H8:174:VAL:HG12	1.96	0.48
1:1G:142:G:H2'	1:1G:143:A:H8	1.79	0.48
1:1G:629:G:H2'	1:1G:630:G:O4'	2.13	0.48
1:1G:709:G:H2'	1:1G:710:G:H8	1.79	0.48
1:1G:719:C:O2	18:9A:50:ILE:HG12	2.14	0.48
1:1G:1074:G:O2'	1:1G:1101:A:N1	2.40	0.48
1:1G:1532:U:H4'	1:1G:1533:C:H5'	1.94	0.48
22:3L:53:G:N2	22:3L:54:G:N3	2.62	0.48
25:14:1166:C:H2'	25:14:1167:U:C6	2.49	0.48
25:14:2030:A:H4'	25:14:2031:A:C8	2.49	0.48
25:14:2478:A:H3'	25:14:2479:G:H8	1.78	0.48
25:14:2563:U:O2'	36:25:28:SER:HB3	2.14	0.48
25:14:2748:A:H2	25:14:2753:A:N6	2.11	0.48
47:D5:69:THR:HG22	47:D5:90:VAL:HG22	1.95	0.48
1:13:1330:U:H3'	1:13:1331:G:O4'	2.14	0.48
1:13:1350:A:H8	1:13:1350:A:O5'	1.97	0.48
3:2E:6:HIS:HB2	14:5I:49:HIS:ND1	2.28	0.48
5:4E:108:ALA:O	5:4E:112:LEU:HB2	2.14	0.48
24:4K:13:A:O2'	24:4K:14:A:H3'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:191:A:H2'	25:1H:192:C:C6	2.49	0.48
25:1H:860:U:C5	25:1H:917:A:H2	2.32	0.48
25:1H:2112:G:N2	25:1H:2113:U:H3	2.03	0.48
25:1H:2131:G:N3	25:1H:2158:A:N6	2.61	0.48
26:16:91:C:OP1	38:88:19:GLY:HA2	2.13	0.48
42:C8:110:VAL:O	42:C8:114:LYS:HG2	2.14	0.48
49:J8:92:LYS:O	49:J8:96:LYS:N	2.47	0.48
1:1G:559:A:OP1	5:42:126:ARG:NH2	2.46	0.48
1:1G:690:G:H22	11:2A:55:LYS:HE3	1.78	0.48
1:1G:817:C:O3'	1:1G:818:G:H3'	2.13	0.48
1:1G:861:G:O2'	1:1G:874:G:O2'	2.30	0.48
1:1G:1018:C:H2'	1:1G:1019:C:O4'	2.14	0.48
7:62:16:LEU:HD13	9:82:45:ALA:HB2	1.96	0.48
9:82:97:LYS:HB3	9:82:98:PRO:HD3	1.95	0.48
25:14:107:C:H2'	25:14:108:U:C6	2.48	0.48
25:14:288:C:H2'	25:14:289:A:C8	2.48	0.48
25:14:2735:G:H2'	25:14:2736:G:H8	1.79	0.48
28:19:155:LEU:HD23	28:19:177:LEU:HD22	1.96	0.48
39:55:33:ARG:HA	39:55:114:VAL:O	2.14	0.48
46:C5:55:TYR:CG	46:C5:56:PRO:CD	2.95	0.48
49:F5:4:VAL:HG11	49:F5:11:ARG:HH11	1.78	0.48
1:13:1513:A:H2'	1:13:1514:C:C6	2.49	0.47
3:2E:6:HIS:CD2	3:2E:7:PRO:HD2	2.49	0.47
4:3E:52:SER:H	4:3E:55:ALA:HB3	1.79	0.47
9:8E:5:TYR:CE1	9:8E:16:ARG:HG2	2.46	0.47
14:5I:34:TYR:O	14:5I:38:GLY:N	2.33	0.47
22:1K:58:A:C6	22:1K:59:A:H2	2.32	0.47
25:1H:715:G:H2'	25:1H:716:A:C8	2.49	0.47
28:11:123:ALA:HB3	28:11:131:LEU:HG	1.95	0.47
30:31:172:TRP:CE3	30:31:173:VAL:HG23	2.48	0.47
33:61:14:ASP:O	33:61:16:GLY:N	2.46	0.47
37:78:23:PRO:O	37:78:25:SER:N	2.46	0.47
1:1G:99:C:H2'	1:1G:101:A:H8	1.79	0.47
1:1G:792:A:H1'	1:1G:794:A:N7	2.29	0.47
1:1G:1228:C:H2'	1:1G:1229:A:H8	1.78	0.47
1:1G:1399:C:H4'	1:1G:1400:5MC:H5"	1.96	0.47
3:22:166:GLU:HG3	3:22:167:TRP:H	1.78	0.47
9:82:4:TYR:HD2	9:82:19:LEU:CB	2.27	0.47
9:82:37:PHE:HB3	9:82:43:ALA:HB1	1.95	0.47
13:4A:58:GLU:O	13:4A:62:ASN:HB2	2.13	0.47
14:5A:27:CYS:SG	14:5A:29:ARG:HB2	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:22:A:OP1	22:3L:22:A:H4'	2.13	0.47
25:14:806:C:OP2	37:35:41:ARG:HD2	2.14	0.47
25:14:1209:G:H21	25:14:1210:A:H62	1.62	0.47
25:14:2335:A:O2'	25:14:2336:A:H2'	2.14	0.47
43:95:60:GLU:H	43:95:60:GLU:HG2	1.41	0.47
47:D5:70:LEU:HD23	47:D5:70:LEU:HA	1.80	0.47
47:D5:145:GLU:HG2	47:D5:146:ILE:H	1.79	0.47
1:13:507:C:OP2	1:13:508:C:O2'	2.23	0.47
1:13:791:G:H2'	1:13:792:A:H5'	1.96	0.47
19:AI:13:ASP:HA	19:AI:16:LEU:HB3	1.95	0.47
25:1H:107:C:H2'	25:1H:108:U:C6	2.48	0.47
25:1H:132:G:H1	25:1H:147:U:H3	1.62	0.47
25:1H:528:A:C2	25:1H:2043:C:H4'	2.49	0.47
26:16:66:A:O2'	26:16:67:G:O5'	2.32	0.47
29:21:13:ARG:HA	29:21:22:PRO:HA	1.96	0.47
32:51:6:ARG:HH21	32:51:7:LEU:HD11	1.80	0.47
34:38:14:LYS:HE2	34:38:14:LYS:HA	1.96	0.47
37:78:84:ASN:HA	37:78:115:LEU:O	2.14	0.47
1:1G:108:G:H5"	1:1G:109:A:C2	2.49	0.47
1:1G:541:G:H2'	1:1G:542:G:H8	1.78	0.47
1:1G:1137:C:H5'	1:1G:1138:G:C4	2.49	0.47
1:1G:1392:G:H21	1:1G:1502:A:H8	1.61	0.47
2:12:20:GLU:HG3	2:12:23:ARG:NH2	2.29	0.47
2:12:32:ILE:O	2:12:33:TYR:HB2	2.14	0.47
2:12:91:PRO:HG3	2:12:155:LEU:HD21	1.96	0.47
25:14:363(C):G:H2'	25:14:363(D):G:H8	1.78	0.47
25:14:563:G:OP2	62:14:3556:HOH:O	2.20	0.47
25:14:1181:C:H2'	25:14:1182:A:O4'	2.14	0.47
25:14:1429:G:H2'	25:14:1430:C:C6	2.49	0.47
28:19:133:LEU:HB2	28:19:187:GLY:HA2	1.96	0.47
36:25:13:ASN:HD21	36:25:96:THR:HG23	1.80	0.47
44:A5:4:LYS:HG3	44:A5:106:ILE:HG22	1.96	0.47
1:13:266:G:O2'	1:13:267:C:OP2	2.33	0.47
1:13:335:C:O2'	1:13:1433:A:N3	2.45	0.47
3:2E:83:ARG:O	3:2E:87:LEU:HG	2.14	0.47
7:6E:113:GLU:HB2	7:6E:118:VAL:HG23	1.96	0.47
22:3K:16:C:H5"	22:3K:17:C:OP2	2.14	0.47
25:1H:207:A:H2'	25:1H:208:C:O4'	2.14	0.47
25:1H:974(A):C:OP1	62:1H:3690:HOH:O	2.20	0.47
25:1H:1061:U:H3'	25:1H:1062:G:H5"	1.96	0.47
25:1H:1239:G:H2'	25:1H:1240:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1424:G:H2'	25:1H:1425:G:O4'	2.15	0.47
25:1H:2095:C:H2'	25:1H:2096:U:O4'	2.15	0.47
25:1H:2593:U:H2'	25:1H:2594:C:C6	2.49	0.47
27:71:15:ASP:N	27:71:20:TYR:OH	2.40	0.47
47:H8:5:LEU:HB3	47:H8:59:LEU:HD23	1.96	0.47
52:M8:42:PHE:CG	52:M8:43:TYR:N	2.82	0.47
1:1G:803:G:OP1	62:1G:1812:HOH:O	2.20	0.47
1:1G:980:C:H3'	1:1G:981:U:C6	2.48	0.47
3:22:60:ALA:HB3	3:22:63:ASN:HB2	1.95	0.47
57:2L:65:G:P	48:E5:11:ARG:HH12	2.38	0.47
25:14:1141:U:H1'	25:14:1142(A):A:C2	2.49	0.47
25:14:1819:A:OP1	28:19:161:THR:HG21	2.14	0.47
25:14:2854:G:H1	25:14:2863:C:H42	1.63	0.47
31:49:125:PHE:HA	31:49:131:TYR:HD1	1.79	0.47
32:59:138:LYS:HA	32:59:141:VAL:HG12	1.96	0.47
41:75:65:LYS:HD3	41:75:67:SER:HB2	1.96	0.47
1:13:186(A):C:OP1	20:BI:86:ARG:NH1	2.48	0.47
1:13:356:A:H2'	1:13:357:G:H8	1.79	0.47
1:13:1036:G:H5'	1:13:1037:C:OP2	2.14	0.47
5:4E:96:PRO:HA	5:4E:117:ASP:OD2	2.14	0.47
9:8E:4:TYR:HE1	9:8E:87:GLN:HB2	1.78	0.47
25:1H:38:A:H2'	25:1H:39:C:C6	2.49	0.47
25:1H:792:G:N3	25:1H:2072:G:O2'	2.41	0.47
25:1H:2137:C:H42	25:1H:2154:G:H1	1.62	0.47
25:1H:2790:A:H2'	25:1H:2791:C:C5'	2.44	0.47
27:71:21:THR:HA	27:71:225:ASN:HB3	1.95	0.47
35:58:116:LEU:HD23	35:58:119:ARG:HD2	1.94	0.47
41:B8:108:ARG:O	41:B8:111:ARG:HG2	2.14	0.47
1:1G:56:U:H2'	1:1G:57:G:H8	1.79	0.47
1:1G:191(E):G:H2'	1:1G:191(F):U:C6	2.50	0.47
1:1G:963:G:H21	10:1A:55:LYS:CE	2.27	0.47
1:1G:1317:C:N4	14:5A:19:ARG:HH21	2.12	0.47
1:1G:1452:C:O2'	1:1G:1453:G:O5'	2.33	0.47
57:2L:1:C:N4	38:45:87:LYS:HE2	2.28	0.47
25:14:226:G:O2'	25:14:228:A:N1	2.46	0.47
25:14:307:G:H21	25:14:330:A:H62	1.62	0.47
25:14:605:C:H1'	25:14:657:U:O2'	2.14	0.47
25:14:1790:C:O2'	28:19:209:ALA:HB2	2.14	0.47
30:39:50:SER:HB2	30:39:94:PRO:HD3	1.95	0.47
31:49:43:LEU:HD12	31:49:43:LEU:HA	1.75	0.47
38:45:41:TRP:HB3	38:45:94:VAL:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:55:21:TYR:CZ	39:55:43:GLU:HG2	2.50	0.47
1:13:130:A:OP2	17:8I:63:ARG:NH2	2.43	0.47
1:13:312:C:H2'	1:13:313:A:C8	2.49	0.47
1:13:445:G:H2'	1:13:446:G:C8	2.50	0.47
1:13:1070:U:H2'	1:13:1071:C:C6	2.47	0.47
1:13:1298:C:H4'	1:13:1299:A:N9	2.29	0.47
4:3E:148:VAL:HG12	4:3E:149:ALA:H	1.79	0.47
6:5E:11:ASN:HD22	6:5E:14:LEU:HG	1.79	0.47
11:2I:95:ILE:HD12	11:2I:108:ILE:HD13	1.97	0.47
22:1K:9:G:H5'	22:1K:10:G:OP2	2.15	0.47
22:1K:14:A:H2'	22:1K:15:G:O4'	2.14	0.47
23:2K:44:A:H2'	23:2K:45:A:C8	2.49	0.47
25:1H:270(M):U:O2'	25:1H:270(N):G:O5'	2.26	0.47
25:1H:642:G:H21	25:1H:646:A:H2	1.63	0.47
25:1H:751:A:H5'	44:E8:90:ARG:HG2	1.95	0.47
25:1H:1483:G:N2	25:1H:1507:A:H1'	2.30	0.47
25:1H:2131:G:N2	25:1H:2158:A:H62	2.12	0.47
25:1H:2418:A:OP2	56:Q8:29:LYS:NZ	2.39	0.47
25:1H:2474:C:H5"	25:1H:2475:C:C5	2.49	0.47
25:1H:2851:A:O3'	39:98:64:ARG:NH2	2.48	0.47
32:51:101:ARG:NH2	32:51:122:THR:HA	2.29	0.47
34:38:74:LEU:HB2	34:38:110:GLY:O	2.13	0.47
41:B8:86:ILE:HD12	41:B8:87:ASP:N	2.29	0.47
42:C8:98:LEU:O	42:C8:102:GLU:N	2.33	0.47
52:M8:23:GLU:C	52:M8:25:TYR:H	2.18	0.47
1:1G:403:C:H2'	1:1G:404:U:C6	2.49	0.47
1:1G:664:G:N2	1:1G:741:G:H1	2.01	0.47
1:1G:728:A:C5	15:6A:54:ARG:HD2	2.49	0.47
5:42:41:VAL:O	5:42:66:MET:HA	2.13	0.47
17:8A:86:GLU:O	17:8A:90:ILE:HG12	2.15	0.47
25:14:270(G):C:H42	25:14:270(S):G:H1	1.62	0.47
25:14:1035:U:H2'	25:14:1036:G:C8	2.49	0.47
25:14:1667:G:H8	25:14:1667:G:OP2	1.97	0.47
25:14:1717:G:H1	25:14:1742:C:H42	1.61	0.47
25:14:1935:G:H1'	25:14:1964:G:N2	2.29	0.47
26:1J:97:G:H2'	26:1J:98:G:O4'	2.15	0.47
28:19:9:TYR:CD1	28:19:10:THR:HG22	2.50	0.47
28:19:201:HIS:O	28:19:204:ILE:HG12	2.15	0.47
30:39:65:TRP:HB3	30:39:70:THR:HG21	1.97	0.47
33:69:79:ILE:HG22	33:69:81:VAL:HG22	1.95	0.47
1:13:520:A:N1	1:13:536:C:H1'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:130:ARG:HD3	2:1E:138:LEU:HD11	1.97	0.47
25:1H:500:G:N2	25:1H:503:A:O5'	2.39	0.47
25:1H:704:G:H2'	25:1H:726:G:H22	1.79	0.47
25:1H:744:G:OP1	62:1H:3689:HOH:O	2.20	0.47
25:1H:1550:C:H2'	25:1H:1551:C:C6	2.50	0.47
25:1H:2428:G:N2	37:78:61:ARG:HH21	2.12	0.47
31:41:14:GLU:O	31:41:17:PRO:HD2	2.15	0.47
32:51:9:ILE:HG13	32:51:9:ILE:O	2.15	0.47
41:B8:98:LYS:HB3	41:B8:100:TYR:CE2	2.49	0.47
1:1G:957:U:N3	1:1G:960:U:OP2	2.34	0.47
1:1G:1003:G:N2	1:1G:1038:C:N3	2.63	0.47
1:1G:1097:C:O2'	1:1G:1169:A:N3	2.45	0.47
13:4A:97:PRO:HG3	13:4A:107:ALA:HB1	1.97	0.47
19:AA:62:ILE:HG23	19:AA:66:MET:SD	2.54	0.47
25:14:849:A:N6	25:14:929:G:O2'	2.40	0.47
25:14:1161:C:H2'	25:14:1162:G:C8	2.50	0.47
25:14:1385:G:H4'	25:14:1386:C:OP1	2.15	0.47
25:14:1543:A:C2'	25:14:1544:C:H5"	2.45	0.47
25:14:2134:A:OP2	25:14:2157:G:N2	2.48	0.47
32:59:91:GLY:HA3	32:59:94:TYR:CD2	2.49	0.47
33:69:3:VAL:HG12	33:69:38:LEU:HA	1.97	0.47
37:35:5:ASP:HA	37:35:7:ARG:HH22	1.78	0.47
38:45:54:MET:HE1	38:45:121:ALA:HB2	1.96	0.47
40:65:87:PHE:CZ	40:65:102:ALA:HB2	2.50	0.47
47:D5:99:TYR:HB3	47:D5:123:ASP:HB3	1.97	0.47
1:13:142:G:H2'	1:13:143:A:H8	1.80	0.47
1:13:190:G:HO2'	1:13:191(A):G:P	2.37	0.47
1:13:359:U:H2'	1:13:360:A:C8	2.50	0.47
1:13:405:U:H3'	1:13:406:G:H5'	1.96	0.47
1:13:991:U:O2'	1:13:992:U:O5'	2.31	0.47
1:13:1234:C:H2'	1:13:1235:U:O4'	2.15	0.47
2:1E:22:LYS:HA	2:1E:40:HIS:NE2	2.30	0.47
3:2E:153:VAL:HA	3:2E:197:GLY:O	2.14	0.47
4:3E:26:CYS:HA	60:3E:302:SF4:S1	2.55	0.47
4:3E:101:LEU:HD23	4:3E:135:LEU:O	2.14	0.47
8:7E:77:GLU:HG2	8:7E:78:GLN:H	1.80	0.47
13:4I:93:ARG:HB3	13:4I:94:ARG:HH11	1.80	0.47
22:3K:57:C:H5"	25:1H:2169:A:H1'	1.97	0.47
25:1H:581:C:H2'	25:1H:582:G:H8	1.78	0.47
25:1H:1302:A:O5'	25:1H:1302:A:H8	1.98	0.47
25:1H:2285:C:C5	54:O8:27:LYS:HD2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2372:G:H2'	25:1H:2373:G:C8	2.49	0.47
25:1H:2537:U:H2'	25:1H:2538:C:C6	2.50	0.47
25:1H:2576:G:O2'	25:1H:2579:C:OP2	2.32	0.47
27:71:200:LYS:HA	27:71:208:PHE:HE2	1.79	0.47
29:21:118:LYS:HG2	29:21:118:LYS:O	2.13	0.47
30:31:81:PRO:HB2	30:31:89:VAL:HG22	1.97	0.47
30:31:167:ALA:HA	30:31:170:LEU:HD12	1.97	0.47
32:51:101:ARG:NH2	32:51:121:ILE:O	2.47	0.47
37:78:46:LYS:HB3	37:78:46:LYS:HE2	1.81	0.47
42:C8:108:GLU:OE1	42:C8:112:ARG:NH1	2.36	0.47
1:1G:191:G:O2'	20:BA:103:GLY:HA2	2.15	0.47
1:1G:537:G:H5"	12:3A:110:ARG:NH1	2.29	0.47
1:1G:1251:A:H2'	1:1G:1252:A:C8	2.50	0.47
1:1G:1317:C:H5'	1:1G:1318:A:OP2	2.15	0.47
1:1G:1416:G:OP2	62:1G:1811:HOH:O	2.20	0.47
2:12:27:LYS:HB3	2:12:194:PRO:HD2	1.95	0.47
3:22:72:LYS:O	3:22:74:GLY:N	2.47	0.47
3:22:123:GLN:O	3:22:128:PHE:HB2	2.15	0.47
5:42:147:ASP:OD1	5:42:147:ASP:N	2.47	0.47
6:52:8:ILE:HG13	6:52:88:VAL:HG22	1.97	0.47
6:52:52:ILE:HD13	6:52:87:ARG:HG3	1.95	0.47
7:62:25:ALA:O	7:62:28:ASN:ND2	2.48	0.47
8:72:12:ARG:HH11	8:72:26:VAL:HA	1.78	0.47
8:72:39:LEU:HG	8:72:44:PHE:HB2	1.97	0.47
9:82:38:GLN:HG2	9:82:39:GLY:N	2.29	0.47
25:14:67:U:H2'	25:14:68:G:H8	1.80	0.47
25:14:71:A:OP2	25:14:71:A:H3'	2.14	0.47
25:14:445:C:OP1	42:85:2:PRO:HA	2.15	0.47
25:14:466:A:H5'	55:L5:21:ARG:NH2	2.29	0.47
25:14:971:C:H2'	25:14:972:G:O4'	2.15	0.47
25:14:1257:C:H4'	30:39:83:PHE:CD1	2.49	0.47
25:14:1364:G:OP1	49:F5:3:LYS:HD2	2.14	0.47
25:14:1616:A:H8	62:14:4024:HOH:O	1.98	0.47
25:14:1882:C:H5'	25:14:1883:G:OP2	2.14	0.47
25:14:2815:C:H2'	25:14:2816:C:H6	1.79	0.47
29:29:50:GLY:HA2	29:29:78:LEU:HD12	1.96	0.47
35:15:53:VAL:HG11	35:15:128:HIS:CD2	2.50	0.47
41:75:123:GLN:C	41:75:125:ARG:H	2.17	0.47
42:85:52:ARG:HA	42:85:55:ARG:HG3	1.97	0.47
43:95:35:LEU:HD21	43:95:57:VAL:HB	1.95	0.47
43:95:76:LYS:HD2	43:95:80:GLN:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:C5:99:CYS:SG	46:C5:105:ALA:HB3	2.54	0.47
52:I5:12:ALA:HB1	52:I5:24:THR:N	2.29	0.47
1:13:60:A:H4'	1:13:61:G:O5'	2.15	0.47
1:13:186(A):C:H5"	20:BI:86:ARG:HH11	1.79	0.47
1:13:1397:C:O2'	1:13:1398:A:OP2	2.30	0.47
5:4E:112:LEU:HD22	5:4E:112:LEU:HA	1.77	0.47
23:2K:54:G:H2'	23:2K:55:5MU:C6	2.50	0.47
25:1H:200:U:O2	25:1H:386:G:N2	2.48	0.47
25:1H:442:G:N2	30:31:48:THR:OG1	2.47	0.47
32:51:42:ARG:HG2	32:51:43:VAL:N	2.30	0.47
32:51:86:GLU:CD	32:51:87:LEU:H	2.17	0.47
32:51:131:VAL:HG22	32:51:132:ARG:H	1.80	0.47
36:68:87:ILE:HG22	36:68:93:PRO:HA	1.97	0.47
41:B8:1:MET:O	41:B8:1:MET:HG2	2.15	0.47
41:B8:105:LEU:HD12	41:B8:110:ILE:HG12	1.96	0.47
43:D8:68:LYS:HD3	43:D8:68:LYS:HA	1.57	0.47
45:F8:60:ARG:HH12	55:P8:47:ARG:HH22	1.63	0.47
50:K8:28:LYS:HD2	50:K8:53:LEU:HD21	1.97	0.47
1:1G:188:U:O2'	1:1G:189:U:H5'	2.15	0.47
1:1G:1150:U:O4	1:1G:1151:A:N6	2.48	0.47
2:12:207:ALA:O	2:12:211:ILE:HG13	2.14	0.47
8:72:12:ARG:HD2	8:72:26:VAL:HG23	1.97	0.47
13:4A:3:ARG:HH11	31:49:113:ARG:HE	1.62	0.47
13:4A:44:ARG:H	13:4A:44:ARG:NE	2.13	0.47
19:AA:19:VAL:O	19:AA:23:ASN:HB2	2.15	0.47
25:14:226:G:H2'	25:14:227:A:C8	2.50	0.47
25:14:270(I):G:H2'	25:14:270(J):G:C8	2.49	0.47
25:14:1025:G:O2'	25:14:1026:U:OP1	2.33	0.47
25:14:1105:U:H2'	25:14:1106:G:C8	2.49	0.47
25:14:1316:U:H2'	25:14:1317:A:C8	2.48	0.47
25:14:2849:U:OP2	41:75:95:ARG:NH1	2.48	0.47
25:14:2884:U:H2'	25:14:2885:C:O4'	2.15	0.47
28:19:255:LYS:HE3	28:19:255:LYS:N	2.25	0.47
30:39:54:ARG:HG3	30:39:80:ALA:HA	1.96	0.47
31:49:114:ILE:HD13	31:49:115:ARG:H	1.79	0.47
33:69:91:SER:HB2	33:69:121:LYS:HD2	1.95	0.47
50:G5:15:LYS:H	50:G5:67:LYS:NZ	2.12	0.47
1:13:130:A:H5'	17:8I:63:ARG:CZ	2.44	0.47
1:13:1343:G:H2'	1:13:1344:C:C6	2.49	0.47
5:4E:33:VAL:HG11	5:4E:109:ILE:HG12	1.97	0.47
19:AI:50:ALA:HA	19:AI:58:VAL:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:1K:27:G:H2'	22:1K:28:U:O4'	2.15	0.47
22:1K:43:G:OP2	22:1K:43:G:H8	1.98	0.47
25:1H:296:C:H2'	25:1H:297:C:H6	1.80	0.47
25:1H:517:C:OP2	53:N8:13:LYS:NZ	2.47	0.47
25:1H:558:G:H5"	35:58:112:LEU:HD22	1.97	0.47
25:1H:1083:U:OP2	34:38:47:ASN:HB2	2.14	0.47
25:1H:1092:C:H2'	25:1H:1093:G:H5'	1.97	0.47
25:1H:1265:A:H3'	53:N8:19:ARG:NH1	2.30	0.47
25:1H:1562:A:H2'	25:1H:1563:G:O4'	2.15	0.47
28:11:201:HIS:O	28:11:204:ILE:HG12	2.15	0.47
32:51:54:ARG:HD3	32:51:65:HIS:ND1	2.30	0.47
32:51:78:GLY:O	32:51:136:ILE:HG22	2.15	0.47
32:51:157:TYR:CZ	32:51:172:LYS:HG3	2.50	0.47
33:61:109:ILE:HB	33:61:130:TYR:OH	2.15	0.47
36:68:78:ARG:HH21	41:B8:103:ARG:NH2	2.13	0.47
37:78:1:MET:SD	37:78:2:LYS:N	2.84	0.47
37:78:63:PRO:HG2	56:Q8:25:MET:HB2	1.97	0.47
38:88:109:VAL:HG13	38:88:113:GLN:HB3	1.95	0.47
47:H8:35:ARG:HB3	47:H8:35:ARG:HH11	1.80	0.47
51:L8:13:ILE:HD13	51:L8:13:ILE:HA	1.70	0.47
1:1G:324:G:OP1	20:BA:22:ARG:HD2	2.14	0.47
1:1G:544:G:P	4:32:62:GLN:HE21	2.38	0.47
1:1G:885:G:H2'	1:1G:886:G:H8	1.80	0.47
1:1G:1322:C:O2'	1:1G:1323:G:H5'	2.15	0.47
2:12:50:GLU:O	2:12:54:THR:OG1	2.20	0.47
2:12:172:ILE:H	2:12:172:ILE:HD12	1.79	0.47
3:22:13:GLY:HA3	14:5A:57:ARG:NE	2.29	0.47
4:32:155:LEU:HA	4:32:155:LEU:HD13	1.67	0.47
5:42:110:LEU:HD12	5:42:118:ILE:HG21	1.97	0.47
25:14:601:C:O2	25:14:605:C:H4'	2.15	0.47
25:14:706:A:C2	25:14:707:G:H1'	2.50	0.47
25:14:1022:G:O2'	25:14:1024:G:O6	2.32	0.47
25:14:1860:G:H1	25:14:1882:C:N4	2.12	0.47
25:14:2210:G:H2'	25:14:2210:G:N3	2.28	0.47
25:14:2251:OMG:HM21	25:14:2449:U:C2	2.50	0.47
25:14:2329:G:H2'	25:14:2330:G:C8	2.50	0.47
25:14:2692:C:H2'	25:14:2693:A:H8	1.79	0.47
29:29:111:ARG:HB2	29:29:160:TYR:HB3	1.96	0.47
30:39:194:MET:HB2	30:39:198:ALA:HB3	1.97	0.47
42:85:66:ASN:O	42:85:70:ARG:HG2	2.14	0.47
47:D5:5:LEU:HD23	47:D5:47:VAL:HG21	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D5:104:PHE:O	47:D5:107:THR:OG1	2.30	0.47
1:13:129(A):G:O6	1:13:187:C:O2'	2.20	0.47
1:13:614:A:H61	1:13:626:U:H3	1.63	0.47
1:13:878:G:H5'	8:7E:89:PRO:HG2	1.97	0.47
1:13:1288:A:N1	1:13:1371:G:H1'	2.30	0.47
2:1E:76:GLN:O	2:1E:208:ILE:HG13	2.15	0.47
7:6E:20:ASP:OD1	7:6E:21:VAL:N	2.48	0.47
20:BI:77:ALA:O	20:BI:81:LYS:HB2	2.15	0.47
25:1H:38:A:N6	25:1H:440:G:O6	2.48	0.47
25:1H:1084:A:H5"	25:1H:1085:A:H8	1.79	0.47
25:1H:1085:A:HO2'	25:1H:1086:A:P	2.35	0.47
25:1H:1257:C:H2'	25:1H:1258:C:C6	2.50	0.47
25:1H:1790:C:H5"	25:1H:1791:A:OP1	2.14	0.47
25:1H:2293:C:H42	25:1H:2339:G:H1	1.62	0.47
25:1H:2396:G:H1'	49:J8:30:VAL:HG12	1.97	0.47
28:11:2:ALA:O	28:11:20:ASP:HB2	2.15	0.47
28:11:108:PRO:HG3	28:11:143:HIS:HE1	1.79	0.47
31:41:179:PRO:HB3	52:M8:38:LYS:CD	2.44	0.47
42:C8:76:TYR:CZ	42:C8:80:ILE:HG13	2.50	0.47
45:F8:60:ARG:NH2	55:P8:47:ARG:HH12	2.13	0.47
50:K8:47:ASN:C	50:K8:49:LYS:H	2.19	0.47
51:L8:4:LEU:O	51:L8:36:VAL:HA	2.15	0.47
1:1G:119:A:H4'	1:1G:120:A:C8	2.50	0.47
1:1G:452:A:O2'	1:1G:453:A:O4'	2.33	0.47
1:1G:1149:C:P	9:82:9:ARG:HH11	2.38	0.47
1:1G:1177:G:H2'	1:1G:1178:G:C4	2.50	0.47
2:12:208:ILE:HD13	2:12:211:ILE:HD12	1.96	0.47
3:22:113:ALA:HB3	3:22:114:PRO:HD3	1.97	0.47
8:72:12:ARG:NH1	8:72:26:VAL:HA	2.30	0.47
25:14:1354:A:O3'	28:19:38:LYS:NZ	2.47	0.47
26:1J:15:A:OP2	26:1J:69:G:N2	2.45	0.47
48:E5:56:ASP:OD2	48:E5:58:THR:OG1	2.30	0.47
49:F5:4:VAL:HG11	49:F5:11:ARG:HD2	1.96	0.47
51:H5:35:ARG:HD2	51:H5:35:ARG:HA	1.55	0.47
52:I5:37:SER:OG	52:I5:38:LYS:N	2.46	0.47
1:13:160:A:H2'	1:13:161:A:O4'	2.15	0.46
1:13:299:G:H2'	1:13:300:A:C8	2.50	0.46
1:13:801:U:H2'	1:13:802:A:H8	1.78	0.46
1:13:1438:G:H1	1:13:1463:C:H42	1.63	0.46
9:8E:25:LYS:N	9:8E:60:ASP:OD1	2.47	0.46
9:8E:26:VAL:HG22	9:8E:61:ALA:HB3	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9I:29:PHE:CD1	18:9I:29:PHE:N	2.83	0.46
22:3K:42:C:H2'	22:3K:43:G:C8	2.50	0.46
25:1H:500:G:N1	25:1H:503:A:OP2	2.48	0.46
25:1H:1085:A:O2'	25:1H:1086:A:OP1	2.27	0.46
25:1H:1173:G:H5"	25:1H:1174:A:OP1	2.15	0.46
25:1H:2122:U:H2'	25:1H:2123:G:C8	2.50	0.46
25:1H:2556:C:H2'	25:1H:2557:G:O4'	2.14	0.46
25:1H:2688:U:H1'	25:1H:2721:A:N6	2.30	0.46
35:58:42:TRP:HE3	35:58:48:MET:HE1	1.79	0.46
35:58:70:LYS:O	35:58:70:LYS:HG3	2.15	0.46
1:1G:1443:G:C6	41:75:118:ARG:HB2	2.51	0.46
25:14:485:C:H42	25:14:495:G:H1	1.63	0.46
25:14:774:A:OP1	28:19:48:ARG:NH2	2.47	0.46
25:14:856:C:O2'	25:14:857:C:OP1	2.31	0.46
25:14:1029:A:N6	25:14:1125:G:O2'	2.48	0.46
25:14:1639:U:H2'	25:14:1640:C:H5"	1.97	0.46
25:14:2247:A:H2'	25:14:2248:C:H6	1.80	0.46
25:14:2247:A:H2'	25:14:2248:C:C6	2.50	0.46
25:14:2712:U:O2'	25:14:2713:A:H5'	2.15	0.46
28:19:246:PRO:HD2	28:19:255:LYS:HD3	1.96	0.46
32:59:157:TYR:CE2	32:59:172:LYS:HG3	2.50	0.46
37:35:57:THR:HG21	37:35:60:MET:N	2.31	0.46
41:75:50:ILE:HD11	41:75:102:ILE:HD11	1.96	0.46
43:95:24:LYS:HB2	43:95:90:PRO:HB2	1.96	0.46
50:G5:4:SER:OG	50:G5:5:GLU:OE2	2.22	0.46
1:13:407:G:H2'	1:13:408:A:C8	2.50	0.46
1:13:465:A:N6	1:13:467:G:O6	2.44	0.46
3:2E:22:TRP:HB3	3:2E:59:ARG:HB2	1.98	0.46
5:4E:6:PHE:CE1	5:4E:36:ASP:HB3	2.50	0.46
7:6E:78:ARG:HG3	7:6E:79:ARG:N	2.30	0.46
9:8E:65:VAL:HG21	9:8E:73:GLN:HB3	1.97	0.46
14:5I:24:CYS:SG	14:5I:26:ARG:N	2.88	0.46
16:7I:22:THR:HA	16:7I:33:ILE:HG12	1.97	0.46
20:BI:43:LEU:HA	20:BI:46:GLU:HB2	1.97	0.46
23:2K:69:C:H2'	23:2K:70:C:H6	1.80	0.46
25:1H:270(H):C:H42	25:1H:270(R):G:H1	1.62	0.46
25:1H:873:G:H1	25:1H:904:C:H42	1.64	0.46
25:1H:1020:A:N6	25:1H:1141:U:O2'	2.49	0.46
25:1H:2185:C:H2'	25:1H:2186:G:C8	2.50	0.46
27:71:190:ARG:HG3	27:71:193:ILE:HD12	1.96	0.46
28:11:17:THR:HG22	28:11:204:ILE:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:17:ASP:N	29:21:17:ASP:OD1	2.46	0.46
41:B8:97:ALA:O	41:B8:98:LYS:HD2	2.16	0.46
47:H8:45:ASP:OD1	47:H8:49:ARG:NE	2.47	0.46
48:I8:68:GLU:HG3	48:I8:80:HIS:HD2	1.79	0.46
54:O8:52:VAL:HG22	54:O8:53:LYS:HG3	1.97	0.46
1:1G:1269:A:OP2	1:1G:1269:A:H8	1.97	0.46
1:1G:1279:A:OP2	10:1A:9:ARG:HD3	2.15	0.46
1:1G:1325:C:H5"	21:1B:6:ARG:HH21	1.80	0.46
1:1G:1395:C:H5'	1:1G:1402:4OC:O2'	2.16	0.46
4:32:32:ALA:N	60:32:303:SF4:S1	2.88	0.46
8:72:36:LEU:O	8:72:40:ALA:N	2.41	0.46
12:3A:25:LYS:HE3	12:3A:25:LYS:HB3	1.84	0.46
57:2L:7:G:O2'	57:2L:8:4SU:H5"	2.14	0.46
25:14:139:G:H1'	25:14:140:A:H2	1.79	0.46
25:14:618:G:OP2	30:39:106:ARG:NH2	2.36	0.46
25:14:629:G:OP2	56:M5:15:LYS:NZ	2.48	0.46
25:14:1297:C:H2'	25:14:1298:C:C6	2.50	0.46
25:14:2128:C:H2'	25:14:2129:C:O4'	2.14	0.46
25:14:2734:A:N6	25:14:2770:G:O2'	2.48	0.46
43:95:35:LEU:HB2	43:95:37:VAL:HG13	1.97	0.46
1:13:663:A:H5"	18:9I:61:LYS:HE3	1.97	0.46
1:13:1222:G:H5"	19:AI:78:ARG:NH1	2.31	0.46
2:1E:82:ARG:HB3	2:1E:82:ARG:HH11	1.80	0.46
16:7I:74:LEU:HB3	16:7I:79:VAL:HB	1.98	0.46
22:1K:16:C:O3'	22:1K:61:U:O2'	2.33	0.46
25:1H:2805:G:H2'	25:1H:2807:G:C8	2.50	0.46
25:1H:2892:A:H2'	25:1H:2893:G:O4'	2.16	0.46
26:16:111:U:H2'	26:16:112:G:C8	2.50	0.46
28:11:147:LEU:HG	28:11:155:LEU:HD21	1.97	0.46
34:38:113:GLN:O	34:38:113:GLN:NE2	2.48	0.46
35:58:15:LEU:O	35:58:136:GLU:HA	2.14	0.46
39:98:105:ARG:C	39:98:107:ASP:H	2.19	0.46
42:C8:92:ARG:C	42:C8:94:ASN:H	2.18	0.46
1:1G:707:C:H4'	11:2A:20:TYR:CD2	2.50	0.46
1:1G:718:G:H5'	11:2A:117:ASN:CG	2.35	0.46
1:1G:936:C:H2'	1:1G:937:A:O4'	2.16	0.46
1:1G:1064:G:O2'	1:1G:1065:U:O5'	2.27	0.46
8:72:86:ILE:HD11	8:72:136:GLU:HG2	1.96	0.46
14:5A:50:LYS:HB3	14:5A:52:GLN:HG3	1.97	0.46
25:14:189:G:O6	25:14:205:G:O2'	2.26	0.46
25:14:700:G:H2'	25:14:701:G:O4'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1636:C:H2'	25:14:1637:A:H8	1.79	0.46
25:14:2018:G:H2'	25:14:2019:A:O4'	2.15	0.46
25:14:2065:C:H2'	25:14:2066:C:O4'	2.15	0.46
25:14:2458:G:O2'	25:14:2489:G:O6	2.34	0.46
25:14:2557:G:H2'	25:14:2558:C:H6	1.79	0.46
25:14:2734:A:H3'	25:14:2735:G:H8	1.79	0.46
25:14:2838:G:H1	25:14:2880:C:H42	1.63	0.46
26:1J:114:G:O2'	40:65:50:SER:HB3	2.16	0.46
28:19:234:GLY:N	62:19:405:HOH:O	2.48	0.46
38:45:40:ALA:HB3	38:45:127:ILE:HD11	1.97	0.46
48:E5:24:LYS:HB2	48:E5:37:LEU:HA	1.97	0.46
48:E5:36:ILE:HA	48:E5:60:PHE:HA	1.96	0.46
53:J5:49:CYS:HA	53:J5:56:LYS:HD2	1.97	0.46
1:13:143:A:H2	1:13:220:G:H1	1.60	0.46
1:13:633:G:H5'	1:13:634:C:OP2	2.15	0.46
1:13:1020:U:H2'	1:13:1021:G:C8	2.50	0.46
1:13:1059:C:O2'	10:1I:53:PRO:HD3	2.15	0.46
1:13:1187:G:H4'	9:8E:111:ARG:HH11	1.79	0.46
1:13:1254:C:OP1	10:1I:45:ARG:NE	2.47	0.46
5:4E:10:MET:HA	5:4E:32:VAL:HA	1.97	0.46
11:2I:99:GLN:HG2	11:2I:105:VAL:HG21	1.97	0.46
19:AI:40:ILE:HG21	19:AI:66:MET:O	2.15	0.46
25:1H:586:A:H5'	30:31:89:VAL:HG21	1.97	0.46
25:1H:931:G:O3'	51:L8:24:LYS:NZ	2.49	0.46
25:1H:972:G:OP2	25:1H:973:A:O2'	2.32	0.46
25:1H:1007:C:O3'	35:58:108:PRO:HB3	2.15	0.46
25:1H:1107:G:H2'	25:1H:1108:U:C6	2.50	0.46
25:1H:1380:G:N2	25:1H:1570:A:N1	2.62	0.46
25:1H:2581:G:H3'	62:1H:4038:HOH:O	2.14	0.46
30:31:106:ARG:H	30:31:106:ARG:HG2	1.47	0.46
33:61:21:VAL:HG22	33:61:22:LYS:H	1.79	0.46
1:1G:222:U:H2'	1:1G:223:U:C6	2.50	0.46
1:1G:1320:C:H5"	19:AA:36:ARG:HH21	1.80	0.46
1:1G:1466:C:H2'	1:1G:1467:G:O4'	2.16	0.46
15:6A:74:ASP:HB2	15:6A:77:ARG:HH21	1.81	0.46
22:3L:73:A:H2'	22:3L:74:A:O4'	2.15	0.46
25:14:2117:A:H2'	25:14:2118:U:C5	2.51	0.46
25:14:2439:A:O2'	25:14:2440:C:OP2	2.29	0.46
25:14:2737:G:H2'	25:14:2738:A:C8	2.50	0.46
25:14:2776:A:H4'	25:14:2777:G:O5'	2.15	0.46
33:69:76:THR:HG23	33:69:140:LEU:HD13	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:C5:27:VAL:HA	46:C5:39:VAL:HA	1.98	0.46
47:D5:148:ASP:O	47:D5:172:ALA:HB3	2.15	0.46
48:E5:15:ASP:OD1	48:E5:16:SER:N	2.48	0.46
48:E5:23:VAL:HG22	48:E5:38:VAL:HG22	1.97	0.46
49:F5:51:VAL:HG11	49:F5:74:VAL:HG21	1.98	0.46
1:13:643:C:H5'	8:7E:31:PHE:CD1	2.51	0.46
1:13:1235:U:H5"	21:1F:3:LYS:HD2	1.96	0.46
10:1I:49:VAL:HG13	14:5I:41:ARG:HG3	1.98	0.46
14:5I:50:LYS:HE2	14:5I:50:LYS:HB3	1.79	0.46
22:1K:44:A:H2'	22:1K:45:A:C8	2.50	0.46
25:1H:1252:G:O2'	25:1H:1253:A:O5'	2.29	0.46
25:1H:1430:C:H2'	25:1H:1431:U:C6	2.51	0.46
25:1H:1497:U:H3'	25:1H:1498:C:H6	1.80	0.46
25:1H:2099:U:H2'	25:1H:2100:G:C8	2.50	0.46
25:1H:2292:C:P	40:A8:17:ARG:HH22	2.38	0.46
25:1H:2294:C:N4	25:1H:2338:G:H1	2.14	0.46
30:31:126:VAL:H	30:31:195:ASP:HA	1.79	0.46
31:41:17:PRO:HA	31:41:20:ILE:HG13	1.97	0.46
1:1G:956:U:H1'	1:1G:1225:A:H2	1.81	0.46
1:1G:1190:G:H4'	3:22:176:HIS:CE1	2.50	0.46
1:1G:1353:G:H1	1:1G:1369:C:H42	1.64	0.46
7:62:47:CYS:HB3	7:62:58:PRO:HG3	1.98	0.46
9:82:28:VAL:HG13	9:82:29:ASN:O	2.16	0.46
25:14:848:G:OP2	25:14:929:G:N2	2.39	0.46
25:14:1331:A:O2'	25:14:1332:G:H8	1.99	0.46
25:14:1801:G:OP2	28:19:154:LYS:NZ	2.38	0.46
25:14:1815:A:P	28:19:54:ARG:HH22	2.39	0.46
25:14:1902:C:H5'	28:19:246:PRO:HD3	1.97	0.46
25:14:2734:A:H5'	25:14:2735:G:OP2	2.15	0.46
29:29:11:MET:HG2	29:29:24:THR:HB	1.98	0.46
35:15:99:LEU:O	35:15:103:VAL:HG23	2.15	0.46
37:35:97:PRO:C	37:35:99:LEU:H	2.18	0.46
44:A5:4:LYS:HE2	44:A5:4:LYS:HB3	1.84	0.46
46:C5:42:VAL:HG23	46:C5:43:ASN:H	1.80	0.46
49:F5:85:LEU:HD13	49:F5:88:LYS:HB2	1.97	0.46
1:13:177:C:H2'	1:13:178:C:C6	2.51	0.46
1:13:496:A:N3	1:13:496:A:H2'	2.29	0.46
1:13:603:U:H2'	1:13:604:G:C8	2.50	0.46
1:13:690:G:H2'	1:13:691:G:O4'	2.16	0.46
1:13:956:U:H2'	1:13:957:U:O4'	2.15	0.46
1:13:973:G:O4'	10:1I:55:LYS:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1262:C:H2'	1:13:1263:C:C6	2.50	0.46
1:13:1298:C:P	7:6E:114:ARG:HH22	2.39	0.46
12:3I:102:TYR:HD1	12:3I:102:TYR:HA	1.70	0.46
19:AI:10:PHE:HE2	19:AI:12:ASP:HB3	1.80	0.46
25:1H:268:C:H42	25:1H:424:G:H1	1.62	0.46
25:1H:566:U:OP1	37:78:29:LYS:HE2	2.15	0.46
25:1H:1176:G:O2'	25:1H:1178:C:N4	2.49	0.46
29:21:77:ILE:HD13	29:21:77:ILE:HA	1.67	0.46
42:C8:66:ASN:HB2	42:C8:76:TYR:HB2	1.97	0.46
44:E8:48:ALA:O	44:E8:52:GLU:HG2	2.16	0.46
1:1G:1001:G:H22	1:1G:1039:C:N4	2.12	0.46
1:1G:1008:C:O2'	1:1G:1009:G:OP1	2.23	0.46
1:1G:1046:A:H3'	1:1G:1047:G:H8	1.81	0.46
7:62:29:LYS:HE2	7:62:101:LEU:HD12	1.97	0.46
9:82:47:LEU:HD12	9:82:50:LEU:HD12	1.98	0.46
20:BA:82:SER:HB2	20:BA:86:ARG:HD2	1.97	0.46
25:14:70:G:OP1	25:14:112:U:N3	2.40	0.46
25:14:247:G:N1	25:14:247:G:C5	2.79	0.46
25:14:489:G:N2	25:14:1321:A:OP1	2.44	0.46
25:14:806:C:OP2	37:35:41:ARG:NH2	2.36	0.46
25:14:877:U:H2'	25:14:878:A:H5"	1.97	0.46
25:14:972:G:OP2	25:14:974:G:H5"	2.14	0.46
25:14:1434:A:H61	25:14:1558:A:N6	2.13	0.46
25:14:1936:A:H4'	25:14:1937:A:O5'	2.15	0.46
28:19:95:LEU:HD11	28:19:103:ARG:HB2	1.97	0.46
31:49:67:LYS:NZ	52:I5:5:ILE:HG21	2.31	0.46
42:85:16:LYS:O	42:85:20:LEU:HD23	2.16	0.46
43:95:35:LEU:HD23	43:95:37:VAL:HG22	1.98	0.46
43:95:55:ALA:HB1	43:95:101:GLY:HA2	1.98	0.46
44:A5:88:ARG:HA	44:A5:88:ARG:HD2	1.73	0.46
47:D5:117:LEU:H	47:D5:117:LEU:HG	1.57	0.46
1:13:260:G:H2'	1:13:261:U:C6	2.50	0.46
1:13:762:C:H2'	1:13:763:G:H8	1.80	0.46
1:13:1367:C:OP2	9:8E:112:LYS:NZ	2.47	0.46
1:13:1532:U:O2	24:4K:9:G:H8	1.99	0.46
2:1E:87:ARG:CZ	2:1E:219:VAL:HB	2.46	0.46
15:6I:39:LEU:HD13	15:6I:56:LEU:HD12	1.97	0.46
18:9I:22:VAL:HG13	18:9I:42:ARG:NH1	2.30	0.46
19:AI:3:ARG:HA	19:AI:3:ARG:HD2	1.72	0.46
22:1K:54:G:O2'	38:88:51:ARG:NH2	2.49	0.46
25:1H:99:U:H1'	25:1H:101:G:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:144:C:H4'	45:F8:2:LYS:HG3	1.96	0.46
25:1H:603:A:N1	25:1H:625:G:O2'	2.41	0.46
25:1H:2143:C:H2'	25:1H:2144:U:O4'	2.16	0.46
25:1H:2314:C:H2'	25:1H:2315:G:C8	2.45	0.46
34:38:98:LYS:HD2	34:38:98:LYS:HA	1.74	0.46
35:58:130:HIS:HB3	35:58:134:ARG:HH22	1.81	0.46
36:68:68:GLU:OE2	36:68:78:ARG:NH1	2.49	0.46
41:B8:13:ARG:CZ	41:B8:13:ARG:HB3	2.46	0.46
53:N8:40:LYS:NZ	53:N8:46:CYS:HB3	2.31	0.46
1:1G:362:G:N2	1:1G:365:U:OP2	2.48	0.46
1:1G:972:C:O3'	10:1A:57:LYS:NZ	2.32	0.46
1:1G:975:A:H5'	1:1G:1363:A:H62	1.79	0.46
1:1G:1004:A:O2'	1:1G:1005:A:OP2	2.28	0.46
6:52:54:LYS:N	6:52:54:LYS:HD3	2.31	0.46
8:72:104:ARG:HB3	8:72:108:GLY:H	1.80	0.46
10:1A:22:LYS:HD2	10:1A:26:ALA:HB2	1.98	0.46
12:3A:15:VAL:HG23	12:3A:16:ARG:H	1.80	0.46
15:6A:5:LYS:O	15:6A:9:GLN:HG2	2.16	0.46
26:1J:89(A):A:C5	26:1J:90:C:H1'	2.50	0.46
30:39:29:ASN:OD1	30:39:32:LEU:HB2	2.16	0.46
31:49:118:ARG:HB3	31:49:181:ARG:HE	1.81	0.46
1:13:122:G:H2'	1:13:123:C:O4'	2.15	0.46
1:13:960:U:H4'	1:13:961:U:O5'	2.15	0.46
1:13:1235:U:H5"	21:1F:3:LYS:HB2	1.98	0.46
1:13:1368:G:H5"	9:8E:112:LYS:HB3	1.97	0.46
2:1E:16:HIS:CE1	2:1E:209:ARG:HH21	2.33	0.46
5:4E:139:LEU:O	5:4E:142:LEU:HB2	2.16	0.46
8:7E:104:ARG:HB3	8:7E:107:LEU:HB2	1.98	0.46
8:7E:112:LEU:HA	8:7E:134:ILE:HG12	1.97	0.46
13:4I:12:ASN:O	13:4I:13:LYS:HB2	2.15	0.46
25:1H:481:G:H4'	25:1H:482:A:O5'	2.14	0.46
25:1H:957:A:N1	25:1H:2458:G:H4'	2.31	0.46
25:1H:2687:U:C4	25:1H:2688:U:C5	3.04	0.46
27:71:6:ARG:HH12	27:71:7:TYR:HB2	1.81	0.46
28:11:76:PRO:HB2	28:11:116:GLN:HE21	1.81	0.46
30:31:155:LEU:HD13	30:31:174:VAL:CG1	2.46	0.46
31:41:163:ALA:HB1	31:41:168:GLU:HB2	1.98	0.46
39:98:2:ARG:HG3	39:98:5:LYS:HB2	1.98	0.46
41:B8:112:ARG:HA	41:B8:115:ARG:HH11	1.81	0.46
44:E8:37:ARG:NH2	53:N8:48:GLU:OE2	2.48	0.46
1:1G:10:A:OP2	5:42:126:ARG:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:334:C:H2'	1:1G:335:C:C6	2.51	0.46
1:1G:1000:A:C8	1:1G:1001:G:H1'	2.50	0.46
1:1G:1028(B):C:H3'	1:1G:1029:G:H4'	1.97	0.46
1:1G:1516:G:N2	1:1G:1519:MA6:OP2	2.47	0.46
2:12:121:LEU:HD23	2:12:126:GLU:HG3	1.98	0.46
3:22:136:GLN:HA	3:22:139:GLN:HB3	1.98	0.46
5:42:72:GLN:O	5:42:75:THR:HG22	2.16	0.46
10:1A:49:VAL:O	10:1A:60:ARG:HB2	2.15	0.46
19:AA:9:VAL:HG11	52:I5:63:TYR:HD1	1.81	0.46
19:AA:65:ASN:HA	52:I5:55:ARG:NH1	2.31	0.46
25:14:818:G:H5'	25:14:819:A:OP1	2.16	0.46
25:14:846:C:H42	25:14:931:G:H1	1.63	0.46
25:14:1210:A:H5"	25:14:1211:U:H3'	1.98	0.46
25:14:2481:G:HO2'	25:14:2482:G:H8	1.64	0.46
26:1J:105:G:H5"	47:D5:31:ARG:HG3	1.97	0.46
28:19:43:ARG:HG3	28:19:47:GLY:O	2.16	0.46
29:29:32:PRO:HA	29:29:90:THR:HA	1.98	0.46
38:45:139:GLU:HG2	47:D5:74:VAL:HB	1.97	0.46
2:1E:163:PHE:CD1	2:1E:185:ILE:HG13	2.50	0.46
25:1H:154:G:H2'	25:1H:155:C:O4'	2.16	0.46
25:1H:172:C:H2'	25:1H:173:G:H8	1.80	0.46
25:1H:1140:C:OP1	35:58:23:LEU:HB3	2.16	0.46
25:1H:1248:G:P	30:31:92:PRO:HG3	2.56	0.46
25:1H:2153:G:H2'	25:1H:2154:G:O4'	2.15	0.46
25:1H:2212:A:H1'	25:1H:2215:G:C4	2.51	0.46
25:1H:2520:C:H2'	25:1H:2521:C:H6	1.81	0.46
25:1H:2731:G:H8	25:1H:2731:G:O5'	1.99	0.46
32:51:8:PRO:HD2	32:51:69:ARG:NE	2.31	0.46
34:38:87:VAL:HG21	34:38:91:LYS:HD3	1.98	0.46
43:D8:35:LEU:HB3	43:D8:57:VAL:HG13	1.97	0.46
47:H8:111:VAL:HG23	47:H8:117:LEU:HB2	1.98	0.46
47:H8:156:LYS:N	47:H8:156:LYS:HE2	2.30	0.46
1:1G:93:U:H2'	1:1G:95:G:H8	1.81	0.46
1:1G:1115:C:H42	1:1G:1185:G:H1	1.64	0.46
1:1G:1157:A:H1'	1:1G:1158:C:C2	2.50	0.46
1:1G:1304:G:N1	1:1G:1332:A:OP2	2.44	0.46
1:1G:1490:C:H2'	1:1G:1491:G:O4'	2.16	0.46
9:82:32:ASP:HB3	9:82:34:ASN:H	1.81	0.46
15:6A:29:VAL:HG11	15:6A:67:LEU:HD21	1.97	0.46
20:BA:67:ALA:HB2	20:BA:77:ALA:HB2	1.97	0.46
25:14:270(I):G:H2'	25:14:270(J):G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:633:A:H1'	25:14:2403:C:H4'	1.98	0.46
25:14:673:C:H5"	30:39:81:PRO:HD2	1.97	0.46
25:14:767:U:H2'	25:14:768:G:H8	1.80	0.46
25:14:1794:U:H2'	25:14:1795:C:H6	1.80	0.46
25:14:2105:C:H2'	25:14:2106:G:O4'	2.16	0.46
25:14:2683:C:P	41:75:53:ARG:HH22	2.38	0.46
25:14:2847:U:OP1	41:75:98:LYS:HD3	2.16	0.46
26:1J:28:C:OP2	40:65:33:LYS:HE3	2.16	0.46
33:69:120:ILE:HG22	33:69:122:GLU:H	1.80	0.46
37:35:64:LYS:H	37:35:64:LYS:HG3	1.60	0.46
47:D5:48:PHE:HE1	47:D5:71:VAL:HG11	1.81	0.46
47:D5:156:LYS:O	47:D5:157:LEU:HD22	2.16	0.46
1:13:833:U:H2'	1:13:834:C:H6	1.81	0.46
1:13:885:G:H2'	1:13:886:G:C8	2.51	0.46
1:13:1216:G:P	14:5I:3:ARG:HH21	2.39	0.46
3:2E:18:TRP:CD1	14:5I:54:PRO:HA	2.51	0.46
3:2E:73:PRO:HG3	3:2E:105:GLU:HG3	1.98	0.46
13:4I:94:ARG:HH22	25:1H:887:A:P	2.39	0.46
22:1K:15:G:H21	22:1K:22:A:H1'	1.80	0.46
22:3K:22:A:N6	22:3K:47:G:H2'	2.27	0.46
25:1H:639:U:H2'	25:1H:640:C:C6	2.51	0.46
25:1H:730:C:H3'	62:1H:3622:HOH:O	2.15	0.46
25:1H:1265:A:H8	25:1H:1265:A:OP1	1.99	0.46
25:1H:1510:A:H2'	25:1H:1511:A:C8	2.51	0.46
25:1H:1819:A:H4'	25:1H:1820:U:O5'	2.16	0.46
25:1H:2028:U:O4	62:1H:3636:HOH:O	2.20	0.46
25:1H:2154:G:C2	25:1H:2155:G:C5	3.04	0.46
25:1H:2228:G:C5	25:1H:2229:C:C4	3.04	0.46
25:1H:2572:A:C8	29:21:144:ARG:HB3	2.51	0.46
30:31:7:TYR:HD2	30:31:21:ALA:HB1	1.81	0.46
36:68:68:GLU:CD	36:68:68:GLU:H	2.19	0.46
42:C8:91:ASP:OD1	42:C8:96:ALA:HB2	2.16	0.46
44:E8:29:LEU:HD21	44:E8:33:ARG:CZ	2.45	0.46
45:F8:63:LYS:O	45:F8:64:LYS:HD2	2.16	0.46
52:M8:63:TYR:HA	52:M8:66:SER:OG	2.16	0.46
1:1G:3:G:H5"	1:1G:4:U:OP2	2.16	0.46
1:1G:29:G:O2'	1:1G:295:C:H4'	2.16	0.46
1:1G:109:A:C6	1:1G:326:G:C6	3.03	0.46
1:1G:1082:G:OP1	5:42:18:ARG:HD3	2.15	0.46
6:52:7:ASN:HD21	18:9A:34:TYR:HE2	1.62	0.46
22:3L:48:U:H3'	22:3L:49:C:H4'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:910:A:C5	38:45:13:GLN:HG3	2.50	0.46
25:14:1166:C:H42	25:14:1182:A:H61	1.63	0.46
25:14:1918:A:HO2'	25:14:1920:OMC:N4	2.13	0.46
25:14:2130:U:O4	25:14:2158:A:O2'	2.30	0.46
32:59:43:VAL:HG22	32:59:44:VAL:H	1.80	0.46
36:25:88:ASN:O	36:25:90:GLN:N	2.49	0.46
42:85:88:ILE:HG13	42:85:88:ILE:O	2.15	0.46
47:D5:146:ILE:HD12	47:D5:175:VAL:HA	1.98	0.46
51:H5:8:LEU:HD12	51:H5:30:ARG:O	2.16	0.46
1:13:191:G:C1'	20:BI:105:SER:HB3	2.46	0.45
2:1E:136:VAL:HA	2:1E:139:LYS:HB2	1.97	0.45
3:2E:150:LYS:HB3	3:2E:201:TYR:HB2	1.97	0.45
4:3E:9:CYS:HB3	4:3E:32:ALA:HB2	1.99	0.45
7:6E:57:GLU:HB2	7:6E:60:LYS:HD2	1.98	0.45
20:BI:26:ASN:HB3	20:BI:71:THR:HG23	1.97	0.45
22:3K:65:G:H2'	22:3K:66:C:O4'	2.16	0.45
25:1H:675:A:H4'	30:31:67:GLN:OE1	2.15	0.45
25:1H:1297:C:OP1	25:1H:2710:C:H4'	2.16	0.45
25:1H:1795:C:H2'	25:1H:1796:U:O4'	2.15	0.45
25:1H:2114:A:O2'	25:1H:2168:G:OP2	2.33	0.45
31:41:75:LYS:HA	31:41:84:LYS:HG3	1.98	0.45
1:1G:324:G:N2	1:1G:326:G:H3'	2.30	0.45
1:1G:419:C:H42	1:1G:424:G:H1	1.63	0.45
1:1G:1281:U:HO2'	1:1G:1282:C:H6	1.59	0.45
1:1G:1414:U:H2'	1:1G:1415:G:H8	1.81	0.45
4:32:61:LYS:HD3	4:32:206:PHE:CE2	2.51	0.45
5:42:9:LYS:HD2	5:42:9:LYS:HA	1.81	0.45
9:82:18:PHE:O	9:82:19:LEU:HB2	2.15	0.45
25:14:30:G:H2'	25:14:31:C:C6	2.51	0.45
25:14:188:G:H1	25:14:208:C:H42	1.64	0.45
25:14:978:G:H1	25:14:985:C:N4	2.14	0.45
25:14:1151:G:H5"	42:85:81:HIS:CD2	2.50	0.45
25:14:1153:C:H2'	25:14:1154:G:O4'	2.16	0.45
25:14:2883:A:H5'	25:14:2884:U:H5'	1.98	0.45
30:39:164:ARG:O	30:39:168:ARG:HB2	2.15	0.45
37:35:85:LEU:HD23	37:35:85:LEU:H	1.80	0.45
48:E5:27:GLU:OE1	48:E5:69:PHE:N	2.44	0.45
1:13:376:G:H5"	16:7I:5:ARG:HB2	1.98	0.45
1:13:437:U:OP1	4:3E:155:LEU:HD21	2.17	0.45
1:13:1305:G:N2	1:13:1331:G:H2'	2.30	0.45
1:13:1389:C:H2'	1:13:1390:U:O4'	2.16	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'	2.15	0.45
5:4E:94:ALA:HB2	5:4E:119:LEU:HG	1.97	0.45
6:5E:10:LEU:HD13	6:5E:61:LEU:HD13	1.98	0.45
8:7E:39:LEU:HB3	8:7E:45:ILE:HG12	1.97	0.45
19:AI:44:MET:H	19:AI:44:MET:HG3	1.49	0.45
23:2K:24:C:H2'	23:2K:25:U:C6	2.52	0.45
24:4K:18:G:H4'	24:4K:19:A:H5'	1.98	0.45
25:1H:1313:U:OP1	62:1H:3697:HOH:O	2.21	0.45
25:1H:1568:G:P	28:11:63:ARG:HH12	2.37	0.45
25:1H:1782:C:H1'	25:1H:2609:U:H5"	1.98	0.45
25:1H:2064:C:H2'	25:1H:2065:C:C6	2.51	0.45
25:1H:2564:A:OP1	25:1H:2648:C:H4'	2.16	0.45
30:31:12:LEU:HD11	30:31:17:ARG:HE	1.81	0.45
34:38:23:SER:HB2	34:38:68:LEU:HB2	1.98	0.45
1:1G:1219:U:O2'	19:AA:34:TRP:HB3	2.16	0.45
2:12:22:LYS:O	2:12:24:TRP:N	2.49	0.45
11:2A:83:ILE:HG12	11:2A:109:VAL:HB	1.99	0.45
11:2A:98:LEU:O	11:2A:101:SER:OG	2.22	0.45
13:4A:3:ARG:HD3	31:49:113:ARG:HH21	1.80	0.45
22:3L:77:A:O2'	25:14:2394:C:N3	2.40	0.45
25:14:395:U:H2'	25:14:396:G:N7	2.32	0.45
25:14:539:G:H2'	25:14:540:G:C8	2.51	0.45
25:14:602:G:OP2	25:14:602:G:H8	1.98	0.45
25:14:661:C:H1'	37:35:12:ALA:HA	1.98	0.45
25:14:818:G:H3'	25:14:1187:G:H22	1.81	0.45
25:14:1024:G:C3'	25:14:1025:G:H5"	2.45	0.45
25:14:1469:A:H2'	25:14:1470:G:O4'	2.16	0.45
25:14:1612:C:O3'	55:L5:5:TRP:HD1	2.00	0.45
25:14:1805:U:O2	28:19:50:THR:HB	2.16	0.45
25:14:2142:C:H2'	25:14:2143:C:C6	2.51	0.45
25:14:2364:C:H4'	48:E5:56:ASP:OD1	2.16	0.45
25:14:2438:U:O3'	25:14:2439:A:H3'	2.16	0.45
26:1J:24:G:H4'	26:1J:25:A:O5'	2.16	0.45
28:19:225:ALA:O	62:19:403:HOH:O	2.21	0.45
28:19:253:GLN:HB3	28:19:255:LYS:NZ	2.31	0.45
41:75:123:GLN:HG3	41:75:124:ASP:OD1	2.16	0.45
42:85:98:LEU:O	42:85:99:ALA:HB3	2.16	0.45
1:13:262:A:H2'	1:13:263:A:C8	2.52	0.45
1:13:292:G:H21	1:13:608:A:H61	1.64	0.45
1:13:407:G:OP1	4:3E:115:ARG:NH1	2.50	0.45
1:13:736:C:H2'	1:13:737:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:812:C:O2'	1:13:813:U:H6	2.00	0.45
1:13:1298:C:N4	7:6E:114:ARG:HB3	2.32	0.45
2:1E:16:HIS:HA	2:1E:210:SER:HB2	1.98	0.45
7:6E:15:ASP:OD1	7:6E:16:LEU:N	2.47	0.45
7:6E:86:GLN:HE21	7:6E:86:GLN:HB2	1.57	0.45
25:1H:2152:G:C2	25:1H:2153:G:N7	2.85	0.45
25:1H:2378:A:H4'	40:A8:23:ARG:CZ	2.46	0.45
25:1H:2444:G:OP2	30:31:68:LYS:NZ	2.45	0.45
25:1H:2845:G:H5"	41:B8:55:ASN:HA	1.98	0.45
31:41:61:ALA:HB2	31:41:68:PRO:HD3	1.99	0.45
36:68:73:ASP:OD1	41:B8:32:TYR:OH	2.31	0.45
38:88:47:ILE:HD12	38:88:70:PRO:HG3	1.99	0.45
41:B8:49:VAL:HG21	41:B8:52:ILE:HD11	1.98	0.45
49:J8:64:ALA:HA	49:J8:67:ILE:HG13	1.97	0.45
1:1G:35:G:O2'	12:3A:115:SER:O	2.27	0.45
1:1G:560:U:H4'	1:1G:561:U:O5'	2.16	0.45
1:1G:818:G:O3'	1:1G:819:A:H4'	2.16	0.45
1:1G:1119:C:P	9:82:9:ARG:HH21	2.37	0.45
1:1G:1143:G:H2'	1:1G:1144:G:C8	2.52	0.45
9:82:58:HIS:HB3	9:82:59:PHE:HD1	1.81	0.45
10:1A:6:ILE:HG22	10:1A:98:ILE:HG12	1.98	0.45
18:9A:88:LYS:HE3	18:9A:88:LYS:HB2	1.72	0.45
25:14:276:A:O2'	25:14:277:C:O4'	2.19	0.45
25:14:755:C:H2'	25:14:756:C:C6	2.51	0.45
25:14:1015:G:H2'	25:14:1016:G:H8	1.81	0.45
26:1J:56:G:H4'	26:1J:57:A:C8	2.51	0.45
30:39:174:VAL:HG11	30:39:188:ARG:HH22	1.81	0.45
31:49:94:LEU:HD12	31:49:99:MET:HA	1.98	0.45
32:59:3:ARG:HH21	32:59:7:LEU:HD11	1.81	0.45
41:75:12:SER:O	41:75:15:VAL:HG22	2.16	0.45
41:75:21:GLU:O	41:75:91:ARG:NH1	2.41	0.45
41:75:23:ARG:HG2	41:75:26:ASP:OD2	2.17	0.45
1:13:429:U:H3'	4:3E:9:CYS:SG	2.56	0.45
1:13:692:U:H2'	1:13:694:A:OP2	2.17	0.45
2:1E:63:MET:HB3	2:1E:64:ARG:HH21	1.81	0.45
6:5E:20:ALA:O	6:5E:24:GLU:N	2.35	0.45
19:AI:33:THR:OG1	19:AI:34:TRP:N	2.46	0.45
25:1H:7:G:H2'	25:1H:8:A:C8	2.51	0.45
25:1H:510:C:H5"	62:1H:3631:HOH:O	2.16	0.45
25:1H:787:U:H5"	25:1H:788:A:H5'	1.98	0.45
25:1H:2037:G:H2'	25:1H:2038:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2126:A:H2	25:1H:2162:G:N2	2.11	0.45
25:1H:2679:A:OP2	29:21:160:TYR:OH	2.30	0.45
29:21:52:LEU:O	29:21:76:ARG:HG2	2.17	0.45
29:21:78:LEU:HD13	29:21:78:LEU:HA	1.82	0.45
29:21:104:VAL:HG11	29:21:188:VAL:HG13	1.99	0.45
36:68:47:ILE:HD12	36:68:48:PRO:HD2	1.98	0.45
41:B8:124:ASP:H	41:B8:127:ALA:CB	2.26	0.45
42:C8:85:LYS:HD3	42:C8:85:LYS:HA	1.72	0.45
47:H8:19:ARG:HD3	47:H8:19:ARG:N	2.31	0.45
47:H8:100:VAL:HG11	47:H8:134:PRO:HG2	1.99	0.45
52:M8:42:PHE:CZ	52:M8:43:TYR:HD1	2.34	0.45
1:1G:334:C:H2'	1:1G:335:C:H6	1.81	0.45
1:1G:614:A:H5'	1:1G:615:C:OP2	2.17	0.45
1:1G:1357:A:H2	1:1G:1365:G:H22	1.63	0.45
2:12:17:PHE:CD1	2:12:42:ILE:HG12	2.51	0.45
7:62:41:ARG:O	7:62:45:ASP:HB2	2.17	0.45
25:14:265:A:H2'	25:14:266:G:C4'	2.46	0.45
25:14:580:C:H2'	25:14:581:C:C6	2.52	0.45
25:14:1416:G:H2'	25:14:1417:C:C6	2.52	0.45
25:14:1536:A:C8	25:14:1537:C:H1'	2.51	0.45
25:14:1657:C:H2'	25:14:1658:C:C6	2.51	0.45
25:14:1709:U:H2'	25:14:1710:C:C6	2.51	0.45
25:14:1942:5MC:OP2	25:14:1943:U:O2'	2.25	0.45
35:15:4:TYR:CG	42:85:100:VAL:HG11	2.51	0.45
36:25:68:GLU:HB3	36:25:78:ARG:HB2	1.97	0.45
38:45:135:ASP:OD1	38:45:135:ASP:N	2.41	0.45
40:65:36:TYR:HA	40:65:52:SER:HB3	1.98	0.45
45:B5:12:VAL:HG12	45:B5:29:TRP:CD1	2.52	0.45
1:13:955:U:H1'	1:13:1227:A:H61	1.82	0.45
1:13:1055:A:H62	1:13:1200:C:H42	1.63	0.45
1:13:1086:U:H2'	1:13:1087:G:O4'	2.17	0.45
1:13:1314:C:C5	19:AI:4:SER:HB2	2.50	0.45
21:1F:3:LYS:HB3	21:1F:14:TRP:CD1	2.51	0.45
22:1K:59:A:HO2'	22:1K:61:U:H6	1.64	0.45
25:1H:988:A:H8	25:1H:988:A:O5'	1.99	0.45
25:1H:1403:C:H5"	25:1H:1471:A:H1'	1.97	0.45
25:1H:1667:G:O2'	25:1H:1991:U:O4	2.24	0.45
25:1H:2439:A:H3'	25:1H:2439:A:P	2.57	0.45
30:31:64:ILE:HG23	30:31:65:TRP:CD1	2.52	0.45
33:61:122:GLU:O	33:61:126:TYR:OH	2.27	0.45
38:88:79:LEU:HD23	38:88:79:LEU:HA	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:I8:7:LEU:HD23	48:I8:11:ARG:HG2	1.98	0.45
1:1G:225:C:H2'	1:1G:226:G:C8	2.52	0.45
1:1G:1011:G:N2	1:1G:1019:C:O2	2.50	0.45
1:1G:1075:C:H2'	1:1G:1076:C:C6	2.51	0.45
1:1G:1352:C:N4	1:1G:1370:G:H1	2.06	0.45
1:1G:1434:A:H2'	1:1G:1435:G:O4'	2.16	0.45
1:1G:1446:A:OP1	1:1G:1446:A:H4'	2.16	0.45
8:72:46:LYS:HB2	8:72:62:TYR:HB2	1.99	0.45
9:82:34:ASN:HB3	9:82:35:GLU:H	1.68	0.45
16:7A:7:ALA:HB2	16:7A:20:VAL:HG11	1.98	0.45
19:AA:15:LEU:HD13	19:AA:19:VAL:HG21	1.99	0.45
25:14:270:A:OP2	25:14:270(Y):G:N2	2.28	0.45
25:14:300:A:O2'	25:14:318:C:O2	2.35	0.45
25:14:320:A:H4'	25:14:322:A:C8	2.51	0.45
25:14:807:U:O2'	25:14:2060:A:N1	2.48	0.45
25:14:1032:A:O2'	25:14:1033:U:H5'	2.17	0.45
25:14:1386:C:H2'	25:14:1387:C:H6	1.81	0.45
25:14:1537:C:O2'	25:14:1538:G:O4'	2.14	0.45
25:14:2078:C:C4	25:14:2079:U:C4	3.04	0.45
25:14:2130:U:O3'	25:14:2131:G:H4'	2.16	0.45
25:14:2876:G:OP1	41:75:3:ARG:HG2	2.17	0.45
26:1J:56:G:OP1	31:49:27:ASN:ND2	2.49	0.45
28:19:260:ARG:CZ	28:19:264:LYS:HD3	2.46	0.45
32:59:72:ILE:H	32:59:72:ILE:HD12	1.82	0.45
32:59:96:ALA:O	32:59:125:VAL:HG11	2.17	0.45
37:35:56:SER:O	37:35:57:THR:HB	2.16	0.45
39:55:87:TYR:CE2	39:55:117:VAL:HG22	2.51	0.45
40:65:35:ILE:HG21	40:65:69:VAL:HG11	1.99	0.45
42:85:92:ARG:NH2	43:95:10:LYS:HA	2.23	0.45
50:G5:70:GLN:HG2	50:G5:71:ASN:H	1.81	0.45
52:I5:2:LYS:HB2	52:I5:5:ILE:CG2	2.46	0.45
1:13:491:G:H2'	1:13:492:G:O4'	2.16	0.45
1:13:625:G:H2'	1:13:626:U:C6	2.52	0.45
1:13:712:A:H2'	1:13:713:G:C8	2.52	0.45
1:13:1218:C:H2'	1:13:1219:U:C6	2.51	0.45
4:3E:153:ARG:HE	4:3E:153:ARG:HB3	1.64	0.45
25:1H:67:U:H2'	25:1H:68:G:H8	1.81	0.45
25:1H:1729:A:H2'	25:1H:1730:U:H5"	1.98	0.45
25:1H:2052:G:H4'	29:21:143:ASN:O	2.17	0.45
25:1H:2336:A:H61	48:I8:43:THR:CG2	2.30	0.45
30:31:68:LYS:C	30:31:70:THR:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:41:7:LEU:HB2	31:41:104:GLU:HG3	1.99	0.45
52:M8:34:GLU:HG3	52:M8:35:VAL:H	1.81	0.45
1:1G:615:C:H2'	1:1G:616:G:O4'	2.16	0.45
1:1G:1034:G:H2'	1:1G:1035:A:O4'	2.17	0.45
1:1G:1475:G:OP1	25:14:1689:A:H1'	2.16	0.45
1:1G:1540:U:H5'	18:9A:55:ARG:NH1	2.31	0.45
7:62:16:LEU:HG	9:82:41:VAL:HG12	1.98	0.45
12:3A:57:LEU:HB3	12:3A:59:SER:H	1.82	0.45
19:AA:16:LEU:HD12	19:AA:20:LEU:HG	1.98	0.45
22:3L:6:G:H4'	22:3L:7:G:OP1	2.16	0.45
25:14:83:G:H2'	46:C5:95:LYS:HD2	1.99	0.45
25:14:1050:A:H2'	25:14:1051:G:O4'	2.16	0.45
25:14:2615:U:H2'	25:14:2616:C:H6	1.82	0.45
28:19:26:LYS:HB3	28:19:83:GLU:HG2	1.98	0.45
28:19:165:ILE:HD13	28:19:175:LEU:HD21	1.98	0.45
29:29:111:ARG:HG3	29:29:160:TYR:CD2	2.52	0.45
30:39:135:LYS:HA	30:39:135:LYS:HD2	1.72	0.45
30:39:149:ASP:OD1	30:39:149:ASP:N	2.43	0.45
33:69:50:ARG:HA	33:69:53:ALA:HB3	1.98	0.45
44:A5:86:LEU:HD12	44:A5:87:PRO:HD2	1.98	0.45
1:13:236:G:H2'	1:13:237:C:C6	2.52	0.45
1:13:291:C:H42	1:13:309:G:H1	1.65	0.45
1:13:438:G:N2	1:13:495:A:C8	2.84	0.45
1:13:731:G:H2'	1:13:732:C:C6	2.51	0.45
1:13:821:G:H4'	62:13:1912:HOH:O	2.17	0.45
1:13:963:G:H1	1:13:972:C:H42	1.65	0.45
1:13:1014:A:H2	1:13:1219:U:O2	2.00	0.45
25:1H:71:A:H2	45:F8:31:HIS:HE2	1.65	0.45
25:1H:592:G:H1	25:1H:665:C:H42	1.63	0.45
25:1H:1021:A:C8	25:1H:1021:A:C3'	3.00	0.45
25:1H:1270:C:H5"	25:1H:1271:G:O5'	2.17	0.45
25:1H:1908:C:H2'	25:1H:1909:C:H6	1.82	0.45
25:1H:2402:C:H2'	25:1H:2403:C:H5'	1.98	0.45
27:71:6:ARG:NH1	27:71:7:TYR:HB2	2.32	0.45
32:51:26:VAL:HG12	32:51:32:GLU:HA	1.99	0.45
54:O8:9:LEU:HD22	54:O8:9:LEU:HA	1.71	0.45
54:O8:35:GLU:O	54:O8:51:GLU:HB2	2.16	0.45
1:1G:406:G:H5'	4:32:5:ILE:HD13	1.98	0.45
5:42:33:VAL:HG11	5:42:109:ILE:HA	1.98	0.45
6:52:98:LEU:HD22	18:9A:28:GLU:HG3	1.97	0.45
7:62:69:VAL:HG12	7:62:103:TRP:HE3	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:82:ALA:HB1	9:82:96:LEU:HD21	1.98	0.45
22:3L:19:G:N2	22:3L:58:A:H5'	2.32	0.45
25:14:196:A:OP2	37:35:46:LYS:HE2	2.15	0.45
25:14:328:U:H4'	46:C5:68:HIS:ND1	2.32	0.45
25:14:389:G:N2	37:35:72:PRO:HD3	2.30	0.45
25:14:1686:C:H2'	25:14:1687:G:O4'	2.16	0.45
25:14:1972:A:H2'	25:14:1973:G:H8	1.82	0.45
25:14:2057:A:H2'	25:14:2058:A:O4'	2.17	0.45
36:25:68:GLU:H	36:25:68:GLU:CD	2.19	0.45
37:35:52:GLU:OE1	37:35:54:GLY:N	2.49	0.45
41:75:11:GLU:O	41:75:15:VAL:HG13	2.16	0.45
1:13:269:C:H2'	1:13:270:A:C8	2.51	0.45
1:13:880:C:OP1	12:3I:5:ASN:ND2	2.49	0.45
1:13:914:A:H2'	1:13:915:A:C8	2.41	0.45
1:13:983:A:H5"	1:13:984:C:OP2	2.17	0.45
3:2E:6:HIS:HD2	3:2E:7:PRO:HD2	1.81	0.45
3:2E:52:LEU:HD23	3:2E:52:LEU:H	1.81	0.45
10:1I:39:PRO:HB3	10:1I:70:ARG:NH1	2.32	0.45
11:2I:20:TYR:N	11:2I:31:THR:O	2.48	0.45
25:1H:95:G:O2'	50:K8:48:HIS:HB3	2.17	0.45
25:1H:898:C:H2'	25:1H:899:A:H5'	1.99	0.45
25:1H:1301:A:O2'	25:1H:1302:A:P	2.75	0.45
26:16:48:A:H2'	26:16:49:C:C6	2.52	0.45
29:21:8:LYS:NZ	29:21:188:VAL:O	2.31	0.45
29:21:67:PHE:CE1	29:21:74:PRO:HA	2.52	0.45
30:31:29:ASN:HB3	30:31:112:MET:HE1	1.97	0.45
32:51:102:ALA:HA	32:51:117:PRO:HD3	1.99	0.45
35:58:55:VAL:HB	35:58:126:PRO:HA	1.98	0.45
40:A8:26:LEU:HD22	40:A8:87:PHE:CD1	2.51	0.45
41:B8:126:ALA:HA	41:B8:129:ARG:HB2	1.98	0.45
43:D8:17:GLY:N	43:D8:96:ILE:O	2.38	0.45
54:O8:6:ARG:NH1	54:O8:6:ARG:HA	2.31	0.45
1:1G:581:G:OP1	15:6A:61:GLY:HA3	2.15	0.45
1:1G:1206:G:H2'	1:1G:1207:2MG:C8	2.51	0.45
4:32:13:ARG:NH1	4:32:38:TYR:O	2.39	0.45
9:82:1:MET:N	9:82:20:ARG:HH12	2.15	0.45
21:1B:15:ARG:HB2	21:1B:15:ARG:HH11	1.81	0.45
25:14:446:G:OP1	42:85:3:ARG:NH1	2.47	0.45
25:14:464:U:H4'	55:L5:5:TRP:CZ3	2.51	0.45
25:14:1111:A:H5'	32:59:3:ARG:NH1	2.31	0.45
25:14:1869:G:H5'	25:14:1870:C:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2495:G:H5”	38:45:81:VAL:HG22	1.99	0.45
25:14:2517:C:H42	25:14:2567:G:H1	1.65	0.45
26:1J:45:A:O4’	31:49:95:ARG:NH1	2.50	0.45
28:19:215:LEU:HD23	28:19:215:LEU:HA	1.79	0.45
29:29:96:PHE:HD2	29:29:182:LEU:HD21	1.81	0.45
30:39:154:VAL:HB	30:39:173:VAL:HG22	1.98	0.45
37:35:90:ARG:HG3	37:35:91:PHE:CE2	2.51	0.45
41:75:110:ILE:HD12	41:75:110:ILE:HG23	1.72	0.45
47:D5:91:LEU:HD23	47:D5:91:LEU:H	1.82	0.45
50:G5:66:GLU:O	50:G5:70:GLN:HB2	2.17	0.45
1:13:155:C:H2’	1:13:156:G:C8	2.52	0.45
1:13:952:U:H4’	1:13:964:A:H61	1.82	0.45
1:13:1316:G:N2	1:13:1318:A:H3’	2.31	0.45
14:5I:3:ARG:HG2	14:5I:6:LEU:HD12	1.98	0.45
25:1H:264:C:C2’	25:1H:265:A:H5”	2.46	0.45
25:1H:274:G:N3	25:1H:275:G:H5”	2.32	0.45
25:1H:1308:A:H2’	25:1H:1309:G:O4’	2.17	0.45
25:1H:1796:U:H2’	25:1H:1797:C:C6	2.52	0.45
25:1H:2107:C:H5”	27:71:2:LYS:HE3	1.99	0.45
28:11:132:PRO:HG3	28:11:190:TYR:CE1	2.52	0.45
31:41:114:ILE:HG22	31:41:115:ARG:N	2.32	0.45
35:58:35:ARG:O	35:58:37:LYS:N	2.40	0.45
37:78:101:VAL:HG22	37:78:106:LEU:HB3	1.99	0.45
40:A8:24:LEU:H	40:A8:24:LEU:HD22	1.81	0.45
47:H8:98:MET:HB2	47:H8:98:MET:HE3	1.62	0.45
1:1G:294:U:OP1	1:1G:610:G:O2’	2.33	0.45
1:1G:370:C:N4	1:1G:391:G:H1	2.11	0.45
1:1G:458:C:N3	1:1G:474:G:N2	2.55	0.45
2:12:133:LYS:O	2:12:137:ARG:NH1	2.50	0.45
7:62:65:ALA:O	7:62:69:VAL:HG23	2.17	0.45
20:BA:39:LYS:HA	20:BA:42:GLN:HB3	1.98	0.45
20:BA:84:LEU:HD22	20:BA:84:LEU:HA	1.82	0.45
25:14:616:A:H4’	25:14:617:G:OP1	2.16	0.45
25:14:981:A:H8	25:14:982:C:C5	2.35	0.45
25:14:1025:G:H8	25:14:1025:G:OP1	2.00	0.45
25:14:2577:A:H2’	25:14:2614:A:N6	2.32	0.45
25:14:2679:A:OP2	29:29:160:TYR:OH	2.34	0.45
30:39:2:LYS:HG3	30:39:24:LEU:HD12	1.99	0.45
32:59:144:VAL:O	32:59:148:ILE:HG12	2.17	0.45
33:69:125:GLU:HA	33:69:141:LYS:CB	2.47	0.45
35:15:56:ASN:H	35:15:125:GLY:N	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:55:87:TYR:HD2	39:55:90:ARG:HD2	1.80	0.45
41:75:37:GLY:C	41:75:39:ARG:H	2.21	0.45
48:E5:49:LYS:HD3	48:E5:49:LYS:HA	1.30	0.45
53:J5:40:LYS:HG3	53:J5:46:CYS:HB3	1.99	0.45
4:3E:99:SER:O	4:3E:140:VAL:HG22	2.17	0.45
9:8E:32:ASP:O	9:8E:36:TYR:N	2.46	0.45
9:8E:47:LEU:H	9:8E:47:LEU:HD22	1.82	0.45
16:7I:26:ARG:NH1	62:7I:201:HOH:O	2.50	0.45
21:1F:12:LYS:HG2	21:1F:22:ARG:HB3	1.99	0.45
25:1H:300:A:H1'	25:1H:319:C:H1'	1.99	0.45
25:1H:300:A:H8	46:G8:84:ARG:HH22	1.65	0.45
25:1H:432:A:H2'	25:1H:433:C:C6	2.51	0.45
25:1H:577:G:O2'	25:1H:1254:A:OP1	2.33	0.45
25:1H:613:U:H5'	25:1H:616:A:N6	2.32	0.45
25:1H:1641:A:H2'	25:1H:1642:G:O4'	2.17	0.45
25:1H:2115:G:N1	25:1H:2116:G:O6	2.50	0.45
31:41:60:LEU:HD22	31:41:68:PRO:HB3	1.99	0.45
31:41:107:LEU:HD21	31:41:178:PHE:CE1	2.52	0.45
39:98:36:THR:OG1	39:98:37:THR:N	2.50	0.45
41:B8:26:ASP:O	41:B8:49:VAL:HG12	2.16	0.45
46:G8:30:VAL:HG22	46:G8:37:VAL:HG12	1.98	0.45
46:G8:55:TYR:CE2	46:G8:61:ILE:HD11	2.52	0.45
1:1G:619:U:N3	4:32:134:ASP:OD1	2.40	0.45
1:1G:946:A:H2'	1:1G:947:G:C8	2.51	0.45
1:1G:1134:G:C2	1:1G:1135:U:H1'	2.52	0.45
1:1G:1149:C:OP1	9:82:9:ARG:HD3	2.17	0.45
4:32:57:ARG:HG3	4:32:202:LEU:HB3	1.98	0.45
9:82:79:LEU:O	9:82:83:ARG:N	2.50	0.45
11:2A:85:ARG:HA	11:2A:112:THR:HG23	1.99	0.45
26:1J:80:U:H2'	26:1J:81:G:N2	2.31	0.45
31:49:18:GLU:OE1	31:49:22:ARG:NH1	2.50	0.45
31:49:67:LYS:HD3	52:I5:5:ILE:CG1	2.47	0.45
37:35:41:ARG:H	37:35:41:ARG:HG2	1.45	0.45
40:65:19:LYS:O	40:65:20:ARG:HD3	2.17	0.45
1:13:977:A:O2'	1:13:981:U:N3	2.36	0.44
1:13:1189:C:H5"	3:2E:5:ILE:HD12	1.97	0.44
1:13:1296:C:H5'	13:4I:14:ARG:HD3	1.99	0.44
3:2E:36:ASP:HA	3:2E:39:ILE:HD12	1.99	0.44
4:3E:9:CYS:HB3	4:3E:32:ALA:CB	2.47	0.44
16:7I:75:ARG:HA	16:7I:80:PHE:HB2	1.99	0.44
18:9I:30:ASP:OD2	18:9I:33:ASP:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:270(Q):C:H2'	25:1H:270(R):G:O4'	2.16	0.44
25:1H:1226:G:OP1	43:D8:69:LYS:NZ	2.37	0.44
25:1H:1231:G:H2'	25:1H:1232:G:C8	2.52	0.44
25:1H:2208:U:H1'	28:11:151:LYS:HE2	1.98	0.44
26:16:74:U:O4	26:16:102:G:N2	2.47	0.44
40:A8:57:LYS:H	40:A8:57:LYS:HD3	1.82	0.44
45:F8:53:LYS:H	45:F8:82:GLN:HB3	1.83	0.44
47:H8:72:ARG:NH2	47:H8:97:GLU:O	2.50	0.44
50:K8:6:VAL:O	50:K8:10:LEU:HB2	2.17	0.44
4:32:154:ASN:OD1	4:32:154:ASN:N	2.50	0.44
15:6A:61:GLY:O	15:6A:65:ARG:HG3	2.17	0.44
17:8A:55:ASP:HB3	17:8A:76:LEU:HD13	1.98	0.44
25:14:107:C:H2'	25:14:108:U:H6	1.82	0.44
25:14:363(B):G:H2'	25:14:363(C):G:C8	2.51	0.44
25:14:385:C:HO2'	25:14:390:A:H2	1.61	0.44
25:14:817:C:O2'	25:14:839:U:H5"	2.17	0.44
25:14:2249:U:N3	25:14:2253:G:OP2	2.36	0.44
28:19:223:GLY:HA2	28:19:226:MET:HG3	1.98	0.44
31:49:104:GLU:O	31:49:108:ASN:ND2	2.41	0.44
33:69:102:SER:HB3	33:69:107:VAL:O	2.17	0.44
33:69:113:ARG:HB3	33:69:131:LYS:HD3	1.99	0.44
40:65:84:GLN:HG3	40:65:109:GLY:HA2	1.99	0.44
47:D5:10:ARG:NH1	47:D5:26:GLY:O	2.37	0.44
1:13:373:A:H2'	1:13:374:A:H8	1.81	0.44
1:13:436:C:H2'	1:13:437:U:O4'	2.17	0.44
1:13:789:U:O2'	1:13:791:G:N7	2.46	0.44
1:13:827:U:C2	1:13:874:G:N2	2.85	0.44
6:5E:4:TYR:HD1	6:5E:92:LYS:HA	1.82	0.44
8:7E:20:TYR:CE2	8:7E:75:ARG:HB3	2.51	0.44
8:7E:73:ASP:OD1	8:7E:75:ARG:NH2	2.50	0.44
12:3I:21:VAL:HG13	12:3I:95:TYR:CE1	2.52	0.44
13:4I:117:VAL:HG22	13:4I:118:ALA:H	1.81	0.44
22:1K:38:A:H2'	22:1K:39:A:O4'	2.17	0.44
25:1H:902:C:H2'	25:1H:903:C:H6	1.81	0.44
25:1H:924:C:H2'	25:1H:925:C:C6	2.52	0.44
25:1H:1059:G:H3'	25:1H:1060:U:C5'	2.47	0.44
25:1H:1444(A):A:O2'	25:1H:1445:C:OP1	2.35	0.44
25:1H:2846:G:H2'	25:1H:2847:U:O4'	2.17	0.44
28:11:131:LEU:O	28:11:190:TYR:HA	2.17	0.44
29:21:52:LEU:HD23	29:21:76:ARG:HD3	1.98	0.44
50:K8:6:VAL:HA	50:K8:9:GLN:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:690:G:H2'	1:1G:691:G:O4'	2.17	0.44
1:1G:885:G:H1	1:1G:912:C:H42	1.65	0.44
1:1G:1235:U:H5"	21:1B:3:LYS:HE2	1.99	0.44
1:1G:1298:C:O5'	7:62:114:ARG:NH2	2.50	0.44
3:22:157:ILE:HD12	3:22:164:ARG:HB3	1.99	0.44
4:32:176:LEU:HG	4:32:178:VAL:HG22	1.99	0.44
9:82:112:LYS:HD2	9:82:113:LYS:N	2.32	0.44
25:14:1639:U:O2'	25:14:2699:C:H4'	2.17	0.44
25:14:2185:C:H2'	25:14:2186:G:C8	2.52	0.44
25:14:2298:A:H2'	25:14:2299:G:O4'	2.17	0.44
25:14:2340:G:H2'	25:14:2341:G:H8	1.82	0.44
25:14:2345:G:N3	25:14:2381:C:H2'	2.32	0.44
25:14:2765:A:H2	25:14:2766:G:O4'	1.99	0.44
38:45:35:VAL:N	38:45:130:LYS:O	2.46	0.44
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.52	0.44
1:13:739:C:O2'	15:6I:42:HIS:ND1	2.38	0.44
1:13:895:G:H2'	1:13:896:C:H6	1.82	0.44
1:13:1328:C:H2'	1:13:1329:A:O4'	2.17	0.44
9:8E:83:ARG:O	9:8E:86:VAL:HG12	2.18	0.44
9:8E:113:LYS:H	9:8E:119:ALA:HA	1.83	0.44
13:4I:84:ILE:HD11	19:AI:65:ASN:ND2	2.32	0.44
25:1H:451:C:H4'	30:31:52:LYS:HZ2	1.82	0.44
25:1H:1778:U:H2'	25:1H:1784:A:N6	2.32	0.44
25:1H:2481:G:O2'	25:1H:2482:G:OP2	2.28	0.44
25:1H:2646:C:H2'	25:1H:2647:U:O4'	2.16	0.44
35:58:21:LYS:HB2	35:58:26:LEU:HD22	2.00	0.44
42:C8:34:LYS:HE2	42:C8:34:LYS:HA	1.99	0.44
42:C8:89:GLU:HG2	43:D8:50:PRO:HB3	1.99	0.44
45:F8:56:THR:HG22	45:F8:79:ALA:HB2	2.00	0.44
47:H8:156:LYS:HG2	47:H8:157:LEU:N	2.32	0.44
48:I8:49:LYS:HB2	48:I8:80:HIS:HB3	1.99	0.44
1:1G:429:U:H1'	1:1G:430:A:H5"	1.99	0.44
1:1G:1118:C:N4	1:1G:1156:G:H21	2.15	0.44
1:1G:1207:2MG:H2'	1:1G:1208:C:C6	2.53	0.44
5:42:78:HIS:HB3	8:72:107:LEU:HD13	1.99	0.44
7:62:150:ALA:HB1	11:2A:57:THR:HG21	2.00	0.44
8:72:84:ARG:HG2	8:72:86:ILE:HD13	1.99	0.44
9:82:40:LEU:HB3	9:82:43:ALA:HB2	2.00	0.44
13:4A:111:LYS:H	13:4A:111:LYS:HG3	1.61	0.44
20:BA:34:LYS:O	20:BA:38:LYS:HB2	2.17	0.44
25:14:717:G:H2'	25:14:718:A:O4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1173:G:HO2'	25:14:1174:A:H2	1.65	0.44
25:14:1418:G:H8	25:14:1418:G:O5'	1.99	0.44
25:14:2108:C:H2'	25:14:2109:U:O4'	2.18	0.44
25:14:2696:U:H2'	25:14:2697:G:C8	2.52	0.44
25:14:2882:A:O5'	39:55:96:ARG:HG2	2.18	0.44
26:1J:32:C:H2'	26:1J:33:G:C8	2.52	0.44
31:49:174:GLU:HG2	31:49:180:PHE:CD2	2.53	0.44
35:15:56:ASN:O	35:15:56:ASN:ND2	2.45	0.44
52:I5:12:ALA:HB1	52:I5:24:THR:H	1.83	0.44
1:13:170:U:H2'	1:13:171:A:H8	1.83	0.44
1:13:391:G:O3'	16:7I:8:ARG:NH2	2.49	0.44
1:13:451:A:H4'	1:13:452:A:O4'	2.17	0.44
1:13:803:G:H2'	1:13:804:U:O4'	2.18	0.44
1:13:857:C:H2'	1:13:858:G:O4'	2.18	0.44
1:13:984:C:H2'	1:13:985:C:C6	2.52	0.44
1:13:1055:A:H62	1:13:1200:C:N4	2.16	0.44
1:13:1329:A:H5'	13:4I:29:ARG:HE	1.81	0.44
4:3E:12:CYS:SG	4:3E:19:LEU:HB2	2.57	0.44
5:4E:100:VAL:HG22	5:4E:118:ILE:HG22	1.98	0.44
13:4I:68:GLY:HA3	31:41:116:ASP:OD2	2.17	0.44
23:2K:24:C:H2'	23:2K:25:U:H6	1.81	0.44
25:1H:296:C:H2'	25:1H:297:C:C6	2.53	0.44
25:1H:519:U:H2'	25:1H:520:G:H8	1.82	0.44
25:1H:768:G:O2'	25:1H:1379:A:N6	2.50	0.44
25:1H:973:A:H8	25:1H:973:A:OP1	2.00	0.44
25:1H:1680:U:O2'	25:1H:1763:G:N7	2.41	0.44
25:1H:1783:A:H5'	25:1H:2608:G:H4'	2.00	0.44
25:1H:1872:A:H5'	25:1H:1878:G:OP2	2.18	0.44
25:1H:1945:G:O6	25:1H:1960:A:N6	2.50	0.44
25:1H:2078:C:H2'	25:1H:2079:U:C6	2.52	0.44
25:1H:2138:C:O2	25:1H:2153:G:N1	2.43	0.44
29:21:18:ASP:N	29:21:18:ASP:OD1	2.49	0.44
29:21:188:VAL:HG13	29:21:189:PRO:HD2	1.98	0.44
31:41:111:LEU:O	31:41:114:ILE:HG12	2.17	0.44
31:41:145:THR:O	31:41:146:TYR:HB3	2.16	0.44
40:A8:42:ASP:C	40:A8:44:LYS:H	2.21	0.44
54:O8:25:LYS:HB3	56:Q8:35:GLN:HG3	1.99	0.44
1:1G:823:G:H2'	1:1G:824:C:C6	2.52	0.44
3:22:12:LEU:HD12	14:5A:56:VAL:O	2.17	0.44
13:4A:65:LYS:HE2	52:I5:52:THR:HG22	1.99	0.44
20:BA:10:LEU:HA	20:BA:13:LEU:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:896:A:H3'	25:14:897:C:H5'	1.99	0.44
25:14:981:A:N1	25:14:2027:G:O2'	2.39	0.44
25:14:1170:G:O6	25:14:1178:C:N4	2.50	0.44
25:14:2322:A:H2'	25:14:2323:G:O4'	2.17	0.44
25:14:2686:G:H5'	62:14:3654:HOH:O	2.16	0.44
25:14:2688:U:H1'	25:14:2721:A:H61	1.81	0.44
25:14:2867:G:O2'	25:14:2868:A:C8	2.71	0.44
38:45:54:MET:HE1	38:45:118:LEU:HD23	1.98	0.44
40:65:108:GLY:H	40:65:110:LEU:HG	1.82	0.44
46:C5:102:CYS:SG	46:C5:105:ALA:HB2	2.56	0.44
47:D5:30:ASN:HB3	47:D5:90:VAL:HB	1.98	0.44
49:F5:46:LEU:HA	49:F5:46:LEU:HD12	1.67	0.44
54:K5:25:LYS:HD3	56:M5:34:TRP:HE1	1.82	0.44
1:13:1004:A:C2	1:13:1024:G:C8	3.04	0.44
1:13:1129:C:C5'	1:13:1130:A:H5'	2.35	0.44
1:13:1327:C:H2'	1:13:1328:C:C6	2.53	0.44
2:1E:115:LEU:HB2	2:1E:145:LEU:HD12	1.99	0.44
2:1E:142:LEU:O	2:1E:146:GLN:N	2.29	0.44
3:2E:16:ARG:HE	3:2E:54:ARG:HH21	1.65	0.44
8:7E:41:ARG:HB3	8:7E:41:ARG:HH11	1.82	0.44
10:1I:6:ILE:HG22	10:1I:98:ILE:HG23	1.98	0.44
20:BI:56:MET:SD	20:BI:88:VAL:HG11	2.58	0.44
25:1H:270(L):U:H2'	33:61:50:ARG:HD3	1.99	0.44
25:1H:792:G:H5"	25:1H:793:A:H5'	1.99	0.44
25:1H:970:C:H2'	25:1H:971:C:C6	2.52	0.44
25:1H:1055:G:H22	25:1H:1104:C:H42	1.64	0.44
25:1H:1404:C:O2'	25:1H:1405:U:H5'	2.18	0.44
25:1H:1711:C:H2'	25:1H:1712:C:H6	1.82	0.44
25:1H:1812:A:O4'	28:11:45:ASN:ND2	2.50	0.44
25:1H:1919:A:H5"	25:1H:1920:OMC:OP2	2.18	0.44
25:1H:2210:G:N3	25:1H:2210:G:H2'	2.32	0.44
25:1H:2396:G:O5'	49:J8:25:LYS:HE2	2.17	0.44
25:1H:2454:G:H1'	62:1H:3876:HOH:O	2.17	0.44
31:41:118:ARG:NH2	52:M8:43:TYR:HB2	2.32	0.44
40:A8:65:VAL:O	40:A8:69:VAL:HG12	2.16	0.44
48:I8:77:ARG:HB2	48:I8:77:ARG:HH11	1.82	0.44
1:1G:1004:A:C4	1:1G:1025:U:N3	2.85	0.44
3:22:130:VAL:O	3:22:134:ILE:HG12	2.16	0.44
4:32:173:TRP:CD2	4:32:189:PRO:HB3	2.53	0.44
5:42:10:MET:HE2	5:42:10:MET:HB3	1.82	0.44
9:82:15:ALA:HB2	9:82:65:VAL:HG23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:95:LYS:HE2	9:82:95:LYS:HB2	1.90	0.44
57:2L:76:C:H3'	57:2L:77:A:C5'	2.45	0.44
25:14:41:C:H2'	25:14:43:G:C8	2.52	0.44
25:14:1142(A):A:C5	25:14:1144:G:C5	3.06	0.44
25:14:1153:C:OP1	42:85:76:TYR:OH	2.34	0.44
25:14:1308:A:H2'	25:14:1309:G:O4'	2.18	0.44
25:14:1813:G:H4'	28:19:43:ARG:O	2.18	0.44
25:14:2544:G:H2'	25:14:2545:G:C8	2.53	0.44
26:1J:46:A:H2'	26:1J:47:C:O4'	2.16	0.44
31:49:43:LEU:O	31:49:88:ILE:HG13	2.18	0.44
31:49:64:THR:HG23	31:49:66:GLN:N	2.30	0.44
36:25:113:LYS:H	36:25:113:LYS:HD2	1.82	0.44
43:95:70:ILE:HG22	43:95:72:VAL:HG23	1.98	0.44
46:C5:91:GLU:O	46:C5:93:GLY:N	2.50	0.44
46:C5:91:GLU:C	46:C5:92:ASN:HD22	2.15	0.44
1:13:9:G:H2'	1:13:10:A:C8	2.53	0.44
1:13:936:C:O2	1:13:1382:C:N4	2.50	0.44
1:13:1007:C:H2'	1:13:1008:C:O4'	2.17	0.44
1:13:1133:G:H2'	1:13:1134:G:H8	1.82	0.44
1:13:1243:C:P	21:1F:10:ARG:HH22	2.41	0.44
1:13:1352:C:OP1	21:1F:3:LYS:NZ	2.28	0.44
2:1E:7:VAL:HG21	2:1E:217:ARG:NH1	2.33	0.44
9:8E:49:PRO:HB3	9:8E:96:LEU:HD11	1.99	0.44
17:8I:101:ARG:HA	17:8I:101:ARG:HE	1.82	0.44
21:1F:6:ARG:CZ	21:1F:15:ARG:HE	2.30	0.44
22:3K:31:G:H1	22:3K:41:C:H42	1.65	0.44
25:1H:161:U:H3'	25:1H:162:U:C5'	2.48	0.44
25:1H:270(E):G:H2'	25:1H:270(F):U:O4'	2.18	0.44
25:1H:533:G:H5'	42:C8:24:TYR:CE1	2.53	0.44
25:1H:732:C:OP2	62:1H:3693:HOH:O	2.20	0.44
25:1H:1932:A:H2'	25:1H:1933:G:O4'	2.17	0.44
25:1H:2046:G:O5'	53:N8:19:ARG:HA	2.17	0.44
25:1H:2208:U:O2'	28:11:151:LYS:HG2	2.17	0.44
25:1H:2567:G:H2'	25:1H:2568:C:H6	1.81	0.44
25:1H:2667:C:H1'	32:51:109:PHE:HD2	1.82	0.44
25:1H:2847:U:P	41:B8:98:LYS:HZ3	2.41	0.44
31:41:55:LYS:O	31:41:59:GLU:HB2	2.16	0.44
37:78:57:THR:HG22	37:78:58:THR:N	2.32	0.44
40:A8:25:ARG:HB3	40:A8:40:ILE:HB	1.99	0.44
41:B8:51:ARG:HG2	41:B8:52:ILE:N	2.33	0.44
43:D8:6:LYS:HE3	43:D8:6:LYS:HB2	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:D8:37:VAL:HG22	43:D8:56:SER:HA	2.00	0.44
1:1G:56:U:H2'	1:1G:57:G:C8	2.52	0.44
1:1G:446:G:O6	62:1G:1813:HOH:O	2.20	0.44
1:1G:767:A:H2'	1:1G:768:A:C8	2.53	0.44
1:1G:1092:A:O3'	7:62:4:ARG:NH1	2.50	0.44
1:1G:1165:C:N4	1:1G:1166:G:O6	2.51	0.44
1:1G:1353:G:H1	1:1G:1369:C:N4	2.14	0.44
1:1G:1410:G:H2'	1:1G:1411:C:C6	2.53	0.44
3:22:155:GLY:HA2	3:22:163:ALA:HB1	1.99	0.44
4:32:155:LEU:O	4:32:158:ILE:HG22	2.18	0.44
5:42:11:ILE:HG22	5:42:12:LEU:N	2.31	0.44
8:72:83:ILE:HB	8:72:137:VAL:HG12	2.00	0.44
9:82:81:ILE:HG22	9:82:85:LEU:HD23	1.98	0.44
13:4A:7:VAL:HG23	13:4A:9:ILE:H	1.81	0.44
25:14:296:C:OP1	46:C5:4:LYS:NZ	2.37	0.44
25:14:796:C:H2'	25:14:797:C:C6	2.52	0.44
29:29:24:THR:HG21	29:29:188:VAL:HG23	2.00	0.44
31:49:120:LEU:HD11	31:49:133:LEU:HD13	1.99	0.44
35:15:91:LEU:O	35:15:95:PRO:HB3	2.18	0.44
36:25:63:VAL:HG22	36:25:84:ALA:HA	1.99	0.44
41:75:4:GLY:O	41:75:7:ILE:HD13	2.18	0.44
43:95:40:LEU:HD22	43:95:40:LEU:HA	1.85	0.44
47:D5:161:VAL:HG22	47:D5:163:LEU:HD22	1.99	0.44
1:13:390:C:O2'	16:7I:28:ARG:NH2	2.51	0.44
1:13:890:G:O2'	1:13:906:G:O6	2.24	0.44
1:13:1015:A:H2'	1:13:1016:A:O4'	2.17	0.44
2:1E:47:THR:O	2:1E:51:LEU:N	2.50	0.44
19:AI:3:ARG:NH1	19:AI:10:PHE:HA	2.33	0.44
25:1H:935:C:H2'	25:1H:936:C:C6	2.52	0.44
25:1H:1410:G:H1	25:1H:1592:C:H42	1.66	0.44
25:1H:2721:A:H2'	25:1H:2722:G:O4'	2.17	0.44
34:38:112:LEU:HD11	34:38:118:THR:OG1	2.18	0.44
37:78:112:LEU:HD13	37:78:127:ALA:HB2	2.00	0.44
40:A8:76:LYS:HE2	40:A8:76:LYS:HB3	1.81	0.44
46:G8:39:VAL:O	46:G8:42:VAL:HG22	2.17	0.44
52:M8:40:HIS:CE1	52:M8:44:THR:HG22	2.53	0.44
1:1G:464:G:O6	1:1G:466:C:H5'	2.17	0.44
1:1G:755:G:H2'	1:1G:756:C:C6	2.53	0.44
2:12:35:GLU:HG2	2:12:36:ARG:N	2.32	0.44
3:22:47:LEU:HD23	3:22:52:LEU:HD13	2.00	0.44
3:22:120:VAL:O	3:22:123:GLN:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:92:LYS:HB3	5:42:119:LEU:HB2	1.98	0.44
12:3A:55:VAL:O	12:3A:62:GLU:HA	2.18	0.44
13:4A:53:VAL:HG12	13:4A:57:ARG:HH11	1.81	0.44
16:7A:69:THR:O	16:7A:73:LEU:HG	2.17	0.44
22:3L:23:G:HO2'	22:3L:24:C:P	2.40	0.44
25:14:27:G:N2	25:14:512:G:O2'	2.51	0.44
25:14:902:C:H2'	25:14:903:C:C6	2.52	0.44
25:14:1015:G:H2'	25:14:1016:G:C8	2.53	0.44
25:14:1024:G:H8	25:14:1024:G:O5'	2.00	0.44
25:14:1144:G:C6	25:14:1145:C:C4	3.05	0.44
25:14:1171:G:H8	25:14:1173:G:H21	1.66	0.44
25:14:1266:G:O5'	44:A5:15:ARG:NH2	2.51	0.44
25:14:1401:G:H2'	25:14:1402:C:O4'	2.17	0.44
25:14:2113:U:H3'	25:14:2114:A:H4'	1.99	0.44
25:14:2490:G:H2'	25:14:2490:G:N3	2.32	0.44
32:59:4:ILE:HD13	32:59:4:ILE:H	1.82	0.44
35:15:71:ILE:H	35:15:71:ILE:HG13	1.68	0.44
35:15:111:PRO:HA	35:15:114:ARG:NH1	2.33	0.44
38:45:66:ILE:HG12	38:45:67:ARG:N	2.32	0.44
40:65:72:ALA:O	40:65:76:LYS:HG3	2.17	0.44
1:13:693:G:H2'	1:13:694:A:C8	2.52	0.44
1:13:1321:C:C4	1:13:1322:C:C4	3.06	0.44
2:1E:27:LYS:NZ	2:1E:193:ASP:OD2	2.43	0.44
3:2E:19:GLU:OE2	3:2E:40:ARG:NE	2.46	0.44
13:4I:4:ILE:HG22	13:4I:5:ALA:H	1.83	0.44
18:9I:38:GLU:H	18:9I:38:GLU:HG2	1.52	0.44
25:1H:248:G:H5"	25:1H:386:G:N2	2.33	0.44
25:1H:306:U:H2'	25:1H:307:G:O4'	2.17	0.44
25:1H:1040:C:H2'	25:1H:1041:C:C6	2.52	0.44
25:1H:1062:G:H2'	25:1H:1063:G:H8	1.83	0.44
25:1H:1178:C:O2'	25:1H:1179:C:O4'	2.36	0.44
25:1H:2061:G:H2'	25:1H:2501:C:O2'	2.17	0.44
25:1H:2062:A:H2'	25:1H:2062:A:N3	2.32	0.44
25:1H:2414:G:H21	37:78:67:MET:HE1	1.82	0.44
29:21:116:VAL:HG13	29:21:122:PHE:HB2	1.99	0.44
32:51:51:ARG:HG2	32:51:52:VAL:H	1.83	0.44
42:C8:95:LEU:HD13	43:D8:4:ILE:CG2	2.42	0.44
47:H8:101:PRO:HA	47:H8:123:ASP:HB3	1.98	0.44
1:1G:127:G:O2'	17:8A:2:PRO:O	2.36	0.44
1:1G:192:U:H2'	1:1G:193:C:C6	2.53	0.44
1:1G:254:G:N2	17:8A:16:GLN:OE1	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:401:C:O2'	1:1G:621:A:N3	2.42	0.44
1:1G:517:G:N2	1:1G:533:A:OP2	2.39	0.44
1:1G:806:C:H2'	1:1G:807:A:C8	2.53	0.44
1:1G:1127:G:H21	1:1G:1147:C:H41	1.66	0.44
1:1G:1305:G:N2	1:1G:1331:G:H2'	2.33	0.44
3:22:150:LYS:HB3	3:22:201:TYR:HB2	2.00	0.44
21:1B:6:ARG:HG2	21:1B:15:ARG:HH22	1.83	0.44
22:3L:20:G:N1	25:14:2112:G:O4'	2.50	0.44
22:3L:23:G:O2'	22:3L:24:C:OP1	2.30	0.44
25:14:422:A:H2'	25:14:423:A:C8	2.53	0.44
25:14:438:G:H2'	25:14:439:G:C8	2.53	0.44
25:14:463:G:N2	25:14:466:A:OP2	2.30	0.44
25:14:556:G:H8	25:14:556:G:O5'	2.00	0.44
25:14:632:A:H2'	25:14:633:A:C8	2.52	0.44
25:14:1043:C:N4	25:14:1112:G:H22	2.15	0.44
25:14:1197:G:H22	25:14:1249:U:H2'	1.82	0.44
25:14:1759:A:H5"	25:14:2715:C:O2'	2.17	0.44
25:14:2082:A:H2'	25:14:2083:G:O4'	2.17	0.44
25:14:2392:A:OP2	25:14:2422:A:N6	2.51	0.44
31:49:64:THR:HA	31:49:102:PHE:HD2	1.83	0.44
32:59:102:ALA:HB1	32:59:115:VAL:N	2.33	0.44
36:25:69:ILE:HD12	36:25:77:ILE:O	2.18	0.44
40:65:27:SER:HA	40:65:88:ASP:HB3	2.00	0.44
40:65:87:PHE:HB2	40:65:112:PHE:CE2	2.53	0.44
48:E5:50:ASN:HB3	48:E5:81:VAL:HB	1.99	0.44
1:13:372:C:N4	1:13:389:A:H62	2.14	0.44
1:13:795:C:H1'	1:13:1506:U:C5	2.53	0.44
1:13:1145:C:H4'	1:13:1146:A:H8	1.83	0.44
1:13:1223:C:P	19:AI:78:ARG:HH12	2.41	0.44
1:13:1376:U:H2'	1:13:1377:A:H8	1.82	0.44
2:1E:24:TRP:HA	2:1E:190:THR:O	2.18	0.44
7:6E:89:MET:HE1	7:6E:156:TRP:H	1.82	0.44
22:1K:11:A:H2'	22:1K:12:G:O4'	2.18	0.44
25:1H:195:A:H61	25:1H:198:C:H3'	1.83	0.44
25:1H:330:A:O2'	25:1H:331:A:H8	2.01	0.44
25:1H:528:A:H8	25:1H:528:A:H3'	1.82	0.44
25:1H:1019:U:OP1	25:1H:1035:U:O2'	2.30	0.44
25:1H:1038:C:H2'	25:1H:1039:G:O4'	2.18	0.44
25:1H:1054:A:H5'	25:1H:1055:G:OP2	2.17	0.44
25:1H:1101:U:H2'	25:1H:1102:C:H6	1.83	0.44
25:1H:1510:A:H2'	25:1H:1511:A:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2295:C:OP2	40:A8:10:ARG:HG2	2.18	0.44
25:1H:2766:G:N3	25:1H:2766:G:H2'	2.32	0.44
29:21:144:ARG:O	29:21:146:THR:N	2.51	0.44
34:38:131:MET:HG3	34:38:132:ASP:N	2.33	0.44
37:78:125:VAL:O	37:78:145:PRO:HD2	2.18	0.44
38:88:132:VAL:HG11	47:H8:81:ARG:HH11	1.83	0.44
40:A8:24:LEU:HD12	40:A8:41:ASP:HB2	2.00	0.44
54:O8:9:LEU:HB3	54:O8:26:ASN:O	2.17	0.44
1:1G:67:C:H2'	1:1G:68:G:H8	1.82	0.44
1:1G:736:C:H2'	1:1G:737:A:H8	1.79	0.44
1:1G:832:C:H42	1:1G:854:G:H1	1.66	0.44
1:1G:1067:A:O2'	1:1G:1068:G:OP2	2.30	0.44
4:32:36:ARG:HD2	4:32:38:TYR:CZ	2.53	0.44
24:4L:12:A:OP1	24:4L:12:A:H4'	2.16	0.44
25:14:671:C:H2'	25:14:672:C:H6	1.82	0.44
25:14:947:G:H2'	25:14:948:G:C8	2.53	0.44
25:14:1030:G:H2'	25:14:1031:G:C8	2.53	0.44
25:14:1171:G:H1	25:14:1178:C:H42	1.64	0.44
25:14:1180:C:H5'	25:14:1181:C:OP2	2.18	0.44
25:14:1375:C:H2'	25:14:1376:C:C6	2.53	0.44
25:14:2022:U:O2'	25:14:2023:G:OP2	2.31	0.44
25:14:2079:U:O3'	49:F5:35:THR:HB	2.18	0.44
25:14:2098:U:H2'	25:14:2099:U:O4'	2.18	0.44
25:14:2385:C:OP2	25:14:2385:C:H4'	2.18	0.44
25:14:2467:C:H2'	25:14:2468:G:O4'	2.17	0.44
25:14:2844:G:H3'	25:14:2845:G:C8	2.49	0.44
30:39:64:ILE:H	30:39:64:ILE:HG13	1.48	0.44
31:49:121:ASN:HB2	31:49:181:ARG:HH22	1.83	0.44
31:49:129:GLY:O	31:49:161:THR:N	2.51	0.44
36:25:71:ARG:HB2	36:25:73:ASP:OD1	2.18	0.44
38:45:48:GLU:HA	38:45:51:ARG:HB3	1.99	0.44
41:75:39:ARG:HG2	41:75:40:THR:N	2.31	0.44
42:85:99:ALA:HB2	42:85:106:PHE:CG	2.53	0.44
46:C5:75:ILE:HD13	46:C5:75:ILE:HA	1.81	0.44
46:C5:79:CYS:HB3	46:C5:80:GLY:O	2.18	0.44
47:D5:5:LEU:HD21	47:D5:44:PHE:HA	2.00	0.44
54:K5:10:LEU:HD12	54:K5:24:GLU:HG2	1.99	0.44
1:13:21:G:H2'	1:13:22:G:C8	2.53	0.43
1:13:551:U:H5'	12:3I:116:LYS:HE2	2.00	0.43
1:13:825:G:H2'	1:13:826:C:C6	2.53	0.43
1:13:1303:C:H2'	1:13:1304:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3E:15:GLU:OE1	4:3E:59:ARG:NE	2.42	0.43
23:2K:21:H2U:H2'	23:2K:22:A:H5'	1.99	0.43
25:1H:528:A:H3'	25:1H:528:A:C8	2.53	0.43
25:1H:817:C:O2'	25:1H:839:U:H5"	2.18	0.43
25:1H:1482:U:H5'	25:1H:1483:G:OP2	2.16	0.43
25:1H:1871:A:H8	25:1H:1871:A:OP2	2.00	0.43
25:1H:2307:G:H1'	25:1H:2308:G:C2	2.52	0.43
25:1H:2494:G:H2'	25:1H:2495:G:C8	2.50	0.43
26:16:9:G:OP1	40:A8:15:ARG:NH1	2.51	0.43
32:51:73:ALA:O	32:51:77:LYS:N	2.37	0.43
40:A8:71:ARG:HH12	40:A8:106:ARG:NH2	2.16	0.43
43:D8:1:MET:HG3	43:D8:43:GLU:HG2	2.00	0.43
1:1G:688:G:H2'	1:1G:689:C:H6	1.82	0.43
1:1G:1137:C:H5'	1:1G:1138:G:N3	2.33	0.43
1:1G:1229:A:OP2	13:4A:114:ARG:HD3	2.17	0.43
1:1G:1299:A:C6	1:1G:1301:U:C2	3.06	0.43
1:1G:1327:C:OP1	21:1B:20:LYS:HB3	2.18	0.43
3:22:20:SER:HB2	3:22:40:ARG:HH21	1.83	0.43
3:22:36:ASP:HA	3:22:39:ILE:HD12	1.99	0.43
4:32:119:GLN:HG2	4:32:123:HIS:CE1	2.53	0.43
4:32:201:GLN:NE2	5:42:99:GLY:HA2	2.33	0.43
8:72:30:ARG:HG3	8:72:31:PHE:N	2.32	0.43
18:9A:45:SER:HG	18:9A:47:THR:HG1	1.62	0.43
19:AA:52:TYR:HB2	19:AA:57:HIS:HE1	1.83	0.43
25:14:78:A:H2'	25:14:79:G:C8	2.53	0.43
25:14:589:C:H2'	25:14:590:A:H8	1.82	0.43
25:14:779:U:OP1	28:19:49:ILE:HG13	2.18	0.43
25:14:858:U:O2	25:14:2268:A:H2'	2.18	0.43
25:14:1652:A:HO2'	25:14:1653:G:P	2.41	0.43
25:14:1942:5MC:HM53	25:14:1943:U:C2	2.53	0.43
25:14:2261:C:OP1	48:E5:17:GLN:HB2	2.18	0.43
25:14:2361:A:OP1	56:M5:26:LYS:HD3	2.18	0.43
26:1J:109:G:H2'	26:1J:110:G:C8	2.52	0.43
31:49:173:LEU:HB3	31:49:178:PHE:CD2	2.53	0.43
33:69:9:LEU:HD13	33:69:9:LEU:H	1.81	0.43
35:15:54:VAL:HB	35:15:122:VAL:HG22	1.99	0.43
47:D5:29:TYR:CE2	47:D5:87:ASP:HB3	2.53	0.43
47:D5:138:GLU:H	47:D5:138:GLU:HG2	1.46	0.43
1:13:160:A:N6	1:13:347:G:H1'	2.33	0.43
1:13:190:G:O2'	1:13:191(A):G:OP2	2.32	0.43
1:13:483:C:OP2	1:13:484:G:O2'	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:503:C:O2	1:13:542:G:N2	2.40	0.43
1:13:792:A:H1'	1:13:793:U:OP2	2.18	0.43
1:13:1118:C:H1'	1:13:1179:A:C8	2.53	0.43
2:1E:114:ARG:O	2:1E:118:LEU:N	2.43	0.43
2:1E:130:ARG:O	2:1E:135:GLN:HG3	2.18	0.43
5:4E:129:ILE:O	5:4E:133:TYR:HB2	2.18	0.43
7:6E:84:ASN:N	7:6E:84:ASN:OD1	2.51	0.43
8:7E:103:VAL:HG21	8:7E:110:ALA:HB2	1.99	0.43
9:8E:7:THR:H	9:8E:83:ARG:HD2	1.83	0.43
15:6I:68:ARG:O	15:6I:72:ARG:HB2	2.18	0.43
19:AI:63:THR:OG1	19:AI:64:GLU:N	2.51	0.43
20:BI:25:ARG:HG2	20:BI:29:LYS:HE3	2.00	0.43
22:3K:68:C:H2'	22:3K:69:C:C6	2.53	0.43
25:1H:41:C:H42	25:1H:438:G:H1	1.67	0.43
25:1H:407:G:H2'	25:1H:408:G:C8	2.53	0.43
25:1H:571:A:O5'	25:1H:2030:A:N6	2.47	0.43
25:1H:956:G:H2'	25:1H:957:A:H2'	2.00	0.43
25:1H:1639:U:C2'	25:1H:1640:C:H5"	2.48	0.43
25:1H:2776:A:H3'	25:1H:2776:A:OP1	2.17	0.43
62:1H:3995:HOH:O	37:78:37:GLY:HA3	2.17	0.43
33:61:85:GLU:OE1	33:61:86:THR:OG1	2.32	0.43
34:38:64:LYS:H	34:38:64:LYS:HG2	1.58	0.43
37:78:124:LYS:HA	37:78:143:GLY:O	2.17	0.43
45:F8:36:LYS:HG2	45:F8:54:VAL:HG12	2.01	0.43
1:1G:717:C:O2'	11:2A:117:ASN:HB2	2.18	0.43
1:1G:973:G:H1'	10:1A:55:LYS:HE2	1.99	0.43
1:1G:1243:C:H5"	21:1B:8:THR:HG21	1.99	0.43
1:1G:1282:C:H2'	1:1G:1283:G:O4'	2.18	0.43
1:1G:1346:A:H5"	9:82:120:ARG:HH12	1.82	0.43
1:1G:1481:U:H2'	1:1G:1482:G:C8	2.53	0.43
2:12:15:VAL:HG11	2:12:213:LEU:HD22	2.00	0.43
12:3A:81:LEU:HD22	12:3A:82:ILE:H	1.82	0.43
15:6A:87:ILE:HG22	15:6A:88:ARG:H	1.83	0.43
19:AA:29:ARG:CZ	19:AA:48:THR:HG21	2.48	0.43
57:2L:76:C:C2	25:14:2251:OMG:N2	2.81	0.43
25:14:578:A:OP1	25:14:1255:U:O2'	2.24	0.43
25:14:738:G:C6	25:14:739:G:C2	3.06	0.43
25:14:1120:G:H2'	25:14:1121:C:C6	2.53	0.43
25:14:2111:C:H1'	25:14:2118:U:O2'	2.17	0.43
25:14:2165:G:C5	25:14:2166:G:N2	2.86	0.43
25:14:2216:G:H2'	25:14:2217:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2562:U:H4'	36:25:25:LEU:HD21	2.00	0.43
26:1J:60:C:H2'	26:1J:61:G:C8	2.53	0.43
26:1J:111:U:H2'	26:1J:112:G:H8	1.83	0.43
28:19:83:GLU:OE1	28:19:104:TYR:OH	2.20	0.43
30:39:154:VAL:HA	30:39:191:ARG:O	2.18	0.43
1:13:191(E):G:H2'	1:13:191(F):U:C6	2.53	0.43
1:13:433:C:H2'	1:13:434:U:C6	2.51	0.43
1:13:538:G:H2'	1:13:539:A:C8	2.51	0.43
1:13:620:C:H2'	1:13:621:A:O4'	2.19	0.43
1:13:950:U:H1'	1:13:971:G:C5	2.53	0.43
1:13:1347:G:N2	1:13:1373:G:H2'	2.33	0.43
1:13:1376:U:OP1	7:6E:98:SER:HB3	2.18	0.43
1:13:1392:G:N2	1:13:1502:A:H8	2.15	0.43
10:1I:49:VAL:O	10:1I:60:ARG:HB3	2.18	0.43
22:3K:64:G:H2'	22:3K:65:G:C8	2.53	0.43
25:1H:273(F):C:H3'	25:1H:274:G:C5'	2.47	0.43
25:1H:589:C:H2'	25:1H:590:A:C8	2.53	0.43
25:1H:612:G:N2	25:1H:616:A:O2'	2.51	0.43
25:1H:828:U:H2'	25:1H:829:A:C8	2.53	0.43
25:1H:1019:U:O2'	25:1H:1021:A:H2	2.00	0.43
25:1H:2210:G:H5'	25:1H:2211:G:C5	2.53	0.43
25:1H:2591:C:P	28:11:239:ARG:HG3	2.59	0.43
27:71:5:LYS:HZ2	27:71:8:ARG:HH12	1.66	0.43
32:51:169:VAL:O	32:51:170:ARG:NE	2.24	0.43
33:61:8:PRO:HA	33:61:14:ASP:HA	2.00	0.43
33:61:10:GLU:O	33:61:11:ASN:HB3	2.17	0.43
36:68:119:PRO:HB2	41:B8:68:TYR:CE2	2.54	0.43
38:88:39:PRO:HB3	38:88:99:PRO:HD3	2.00	0.43
1:1G:122:G:H1	1:1G:239:U:H3	1.65	0.43
1:1G:489:C:H2'	1:1G:490:G:C8	2.48	0.43
1:1G:595:G:HO2'	1:1G:596:C:P	2.34	0.43
1:1G:607:A:H2'	1:1G:608:A:O4'	2.18	0.43
1:1G:653:A:C8	8:72:56:LYS:HE2	2.53	0.43
1:1G:748:C:H4'	1:1G:749:C:O5'	2.18	0.43
1:1G:998(A):C:H2'	1:1G:999:U:O4'	2.18	0.43
1:1G:1087:G:H2'	1:1G:1088:G:C8	2.53	0.43
3:22:79:ARG:HE	3:22:84:ILE:HG21	1.82	0.43
4:32:15:GLU:HG3	4:32:63:LYS:NZ	2.34	0.43
7:62:136:LYS:O	7:62:140:ASP:HB2	2.18	0.43
9:82:17:VAL:HG13	9:82:63:ILE:HG13	2.01	0.43
10:1A:50:ILE:HA	10:1A:60:ARG:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AA:32:LYS:HE2	19:AA:32:LYS:HB2	1.89	0.43
57:2L:59:A:O2'	57:2L:61:U:OP2	2.28	0.43
25:14:224:G:O6	25:14:419:C:O2'	2.31	0.43
25:14:1226:G:OP1	43:95:85:LYS:NZ	2.30	0.43
25:14:1309:G:H4'	55:L5:7:PRO:HB2	2.00	0.43
25:14:2255:G:H1	25:14:2275:C:H42	1.65	0.43
25:14:2363:C:O2	48:E5:39:ARG:NH2	2.52	0.43
25:14:2881:C:O2'	39:55:96:ARG:HB2	2.18	0.43
28:19:129:ASN:O	28:19:193:VAL:HG12	2.17	0.43
35:15:18:ALA:HA	35:15:21:LYS:HD2	2.00	0.43
36:25:87:ILE:HD13	36:25:87:ILE:HA	1.87	0.43
37:35:6:LEU:HA	37:35:6:LEU:HD13	1.76	0.43
46:C5:54:LYS:HD2	46:C5:55:TYR:H	1.83	0.43
1:13:8:A:N6	4:3E:205:GLU:O	2.51	0.43
1:13:271:C:H2'	1:13:272:C:C6	2.54	0.43
1:13:407:G:H5"	4:3E:115:ARG:HB3	1.99	0.43
1:13:624:C:H2'	1:13:625:G:C8	2.53	0.43
2:1E:62:ALA:HB1	2:1E:225:ALA:HB3	1.99	0.43
2:1E:215:LEU:HD22	2:1E:215:LEU:HA	1.77	0.43
4:3E:61:LYS:HA	4:3E:203:VAL:HG22	2.00	0.43
4:3E:94:LEU:H	4:3E:94:LEU:HG	1.55	0.43
9:8E:97:LYS:HB3	9:8E:98:PRO:HD3	2.01	0.43
11:2I:103:LEU:HD12	11:2I:103:LEU:HA	1.86	0.43
13:4I:23:TYR:HB3	13:4I:67:GLU:HA	1.99	0.43
13:4I:49:THR:O	13:4I:53:VAL:N	2.33	0.43
25:1H:251:A:C5	25:1H:252:G:H1'	2.54	0.43
25:1H:898:C:H3'	25:1H:899:A:H8	1.83	0.43
25:1H:1203:G:H3'	25:1H:1204:A:H5"	1.99	0.43
25:1H:1332:G:H8	25:1H:1332:G:H2'	1.65	0.43
25:1H:2030:A:H4'	25:1H:2031:A:C8	2.49	0.43
25:1H:2309:A:N6	25:1H:2310:A:H2	2.16	0.43
25:1H:2405:G:O2'	25:1H:2406:U:OP2	2.33	0.43
25:1H:2688:U:O2	25:1H:2688:U:H3'	2.18	0.43
25:1H:2758:A:C2	25:1H:2759:G:H1'	2.53	0.43
31:41:66:GLN:HA	52:M8:6:HIS:HE1	1.81	0.43
36:68:105:GLU:HA	36:68:108:GLU:HG3	2.01	0.43
1:1G:740:U:H2'	1:1G:741:G:C8	2.54	0.43
1:1G:791:G:C6	1:1G:792:A:N7	2.86	0.43
1:1G:828:A:N6	1:1G:858:G:O2'	2.48	0.43
1:1G:895:G:H1	1:1G:904:C:N4	2.09	0.43
1:1G:980:C:H5'	1:1G:981:U:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1161:C:H2'	1:1G:1162:C:H6	1.83	0.43
1:1G:1224:G:O2'	1:1G:1225:A:OP1	2.32	0.43
1:1G:1320:C:C4	19:AA:36:ARG:HD3	2.54	0.43
1:1G:1498:UR3:HO2'	1:1G:1499:A:P	2.36	0.43
3:22:174:PRO:HB2	3:22:177:THR:HG22	2.00	0.43
18:9A:19:LYS:H	18:9A:19:LYS:HE2	1.82	0.43
19:AA:39:THR:HA	19:AA:70:LYS:HB3	2.01	0.43
20:BA:36:LEU:HB3	20:BA:59:ALA:HB2	2.00	0.43
25:14:139:G:H1'	25:14:140:A:C2	2.52	0.43
25:14:329:G:N7	46:C5:71:LYS:NZ	2.66	0.43
25:14:668:G:H2'	25:14:670:A:H62	1.83	0.43
25:14:920:G:H2'	25:14:921:G:H8	1.81	0.43
25:14:1056:G:N2	25:14:1102:C:H5	2.17	0.43
25:14:1789:A:H2'	25:14:1790:C:O4'	2.19	0.43
25:14:1885:A:H3'	25:14:1886:C:C6	2.52	0.43
25:14:2233:U:H2'	25:14:2234:G:C8	2.53	0.43
25:14:2688:U:H1'	25:14:2721:A:N6	2.33	0.43
26:1J:66:A:O2'	26:1J:67:G:OP2	2.35	0.43
28:19:144:ALA:HB3	28:19:192:THR:HG23	1.99	0.43
30:39:162:LEU:HA	30:39:165:ARG:HB2	2.00	0.43
37:35:54:GLY:C	37:35:56:SER:H	2.21	0.43
38:45:2:LEU:O	38:45:70:PRO:HG2	2.18	0.43
38:45:81:VAL:HB	38:45:82:ARG:HG2	2.00	0.43
48:E5:36:ILE:HG12	48:E5:37:LEU:N	2.33	0.43
50:G5:31:GLU:O	50:G5:35:LEU:N	2.50	0.43
1:13:135:C:H2'	1:13:136:C:H5'	1.99	0.43
1:13:172:A:H8	1:13:172:A:OP2	2.01	0.43
1:13:191(D):U:H2'	1:13:191(E):G:C8	2.54	0.43
1:13:339:C:H42	1:13:350:G:H1	1.66	0.43
1:13:611:A:H61	1:13:629:G:H1	1.66	0.43
1:13:685:G:N2	1:13:686:U:O4	2.50	0.43
1:13:739:C:HO2'	15:6I:42:HIS:CE1	2.33	0.43
1:13:1301:U:O2	1:13:1301:U:H2'	2.17	0.43
1:13:1312:G:P	52:M8:58:ARG:HH22	2.41	0.43
1:13:1360:A:OP2	14:5I:35:ARG:NH2	2.46	0.43
15:6I:17:ARG:HD2	15:6I:17:ARG:HA	1.85	0.43
23:2K:37:U:H2'	23:2K:38:A:H8	1.84	0.43
25:1H:402:A:H61	25:1H:423:A:H61	1.66	0.43
25:1H:460:A:H2'	25:1H:461:C:O4'	2.17	0.43
25:1H:663:G:C6	25:1H:664:C:C4	3.06	0.43
25:1H:821:A:H5'	25:1H:822:U:C6	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1140:C:OP2	35:58:66:LYS:NZ	2.47	0.43
25:1H:2025:C:OP1	29:21:149:ARG:HD3	2.19	0.43
34:38:21:GLN:HB3	34:38:24:PHE:HE2	1.84	0.43
40:A8:78:LEU:HD12	40:A8:108:GLY:HA3	2.00	0.43
43:D8:24:LYS:HB3	43:D8:24:LYS:NZ	2.33	0.43
46:G8:89:PHE:HD1	46:G8:94:LYS:HB3	1.83	0.43
51:L8:18:ASP:OD1	51:L8:18:ASP:N	2.52	0.43
1:1G:201:C:C4	1:1G:209:U:H1'	2.53	0.43
1:1G:1129:C:C5'	1:1G:1130:A:H5'	2.48	0.43
1:1G:1326:C:H2'	1:1G:1327:C:C6	2.53	0.43
15:6A:56:LEU:O	15:6A:60:VAL:HG23	2.18	0.43
25:14:171:G:O2'	25:14:172:C:O4'	2.32	0.43
25:14:363(B):G:H2'	25:14:363(C):G:H8	1.83	0.43
25:14:1027:A:N6	25:14:1126:A:C4	2.87	0.43
25:14:1637:A:H4'	25:14:2711:A:O2'	2.18	0.43
25:14:1815:A:C5	25:14:1817:G:C6	3.07	0.43
25:14:2873:A:C8	39:55:5:LYS:HA	2.54	0.43
28:19:93:ALA:HB3	28:19:105:ILE:HG22	2.00	0.43
28:19:175:LEU:HA	28:19:175:LEU:HD23	1.69	0.43
44:A5:33:ARG:HD3	44:A5:52:GLU:OE1	2.19	0.43
48:E5:18:ALA:HB3	48:E5:20:ARG:NH2	2.34	0.43
1:13:162:A:N7	1:13:163:C:H1'	2.33	0.43
1:13:474:G:H2'	1:13:475:G:H8	1.84	0.43
2:1E:68:ILE:O	2:1E:91:PRO:HD2	2.18	0.43
4:3E:65:ARG:HB3	4:3E:75:PHE:CD1	2.54	0.43
4:3E:121:VAL:HG12	4:3E:133:VAL:O	2.19	0.43
6:5E:100:ASN:HB2	18:9I:28:GLU:HA	2.00	0.43
7:6E:108:ALA:HA	7:6E:111:ARG:HD2	2.01	0.43
12:3I:20:LYS:HD3	12:3I:21:VAL:HG23	2.01	0.43
17:8I:12:SER:O	17:8I:19:VAL:HA	2.18	0.43
17:8I:68:ARG:HG3	17:8I:68:ARG:O	2.19	0.43
22:1K:52:C:H2'	22:1K:53:G:C8	2.54	0.43
25:1H:141:A:H8	25:1H:1595:G:H21	1.66	0.43
25:1H:1151:G:C2	25:1H:1152:C:C2	3.06	0.43
25:1H:1681:G:H4'	25:1H:1682:G:OP2	2.18	0.43
25:1H:1751:C:H2'	25:1H:1752:C:C6	2.53	0.43
25:1H:1784:A:H5"	62:1H:3899:HOH:O	2.17	0.43
25:1H:2400:G:H2'	25:1H:2401:U:C6	2.54	0.43
25:1H:2726:U:O2'	25:1H:2727:G:H8	2.01	0.43
32:51:137:ASP:OD1	32:51:138:LYS:N	2.52	0.43
35:58:15:LEU:HA	35:58:53:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:I8:26:TYR:O	48:I8:29:GLN:HB2	2.19	0.43
54:O8:41:PRO:HG2	54:O8:44:ARG:HB2	2.00	0.43
1:1G:74:C:N3	1:1G:96:G:N2	2.45	0.43
1:1G:544:G:OP1	4:32:59:ARG:NH2	2.51	0.43
1:1G:1216:G:H2'	1:1G:1217:C:C6	2.53	0.43
1:1G:1309:G:P	13:4A:88:ARG:HH12	2.41	0.43
3:22:136:GLN:H	3:22:136:GLN:HG3	1.50	0.43
9:82:96:LEU:HD23	9:82:102:LEU:HD12	1.99	0.43
10:1A:76:ASN:HA	10:1A:77:PRO:HD3	1.90	0.43
15:6A:53:HIS:O	15:6A:56:LEU:HB3	2.19	0.43
18:9A:22:VAL:HG13	18:9A:56:THR:HA	2.00	0.43
22:3L:23:G:H8	22:3L:23:G:OP2	2.01	0.43
25:14:442:G:O4'	30:39:46:ARG:HD3	2.19	0.43
25:14:465:G:C6	25:14:466:A:N6	2.86	0.43
25:14:1311:G:N7	55:L5:47:ARG:NH1	2.56	0.43
25:14:2123:G:H2'	25:14:2124:G:C8	2.53	0.43
25:14:2299:G:C2	25:14:2300:G:C5	3.07	0.43
25:14:2299:G:N1	25:14:2318:G:C8	2.86	0.43
25:14:2607:G:H2'	25:14:2608:G:O4'	2.18	0.43
26:1J:8:U:O3'	40:65:25:ARG:NH2	2.51	0.43
26:1J:111:U:H2'	26:1J:112:G:C8	2.53	0.43
41:75:51:ARG:HE	41:75:62:THR:CG2	2.32	0.43
42:85:95:LEU:HD13	43:95:4:ILE:HG23	2.00	0.43
44:A5:5:ALA:HB2	44:A5:57:ASN:HD22	1.83	0.43
46:C5:42:VAL:HG23	46:C5:43:ASN:N	2.34	0.43
1:13:130:A:C8	17:8I:63:ARG:HG3	2.53	0.43
1:13:1128:C:H4'	9:8E:16:ARG:NH1	2.34	0.43
8:7E:96:GLY:O	8:7E:100:ILE:HG13	2.18	0.43
14:5I:9:LYS:HG2	14:5I:12:ARG:NH1	2.32	0.43
25:1H:32:C:OP2	62:1H:3699:HOH:O	2.21	0.43
25:1H:194:G:H2'	25:1H:195:A:O4'	2.19	0.43
25:1H:553:U:H2'	25:1H:554:U:O4'	2.19	0.43
25:1H:862:G:H5'	26:16:79:C:H4'	2.01	0.43
25:1H:2243:U:O4	62:1H:3694:HOH:O	2.20	0.43
25:1H:2404:C:O3'	37:78:77:ARG:NH2	2.51	0.43
25:1H:2712:U:O2'	25:1H:2712(A):A:P	2.76	0.43
25:1H:2726:U:HO2'	25:1H:2727:G:H8	1.67	0.43
28:11:83:GLU:OE2	28:11:104:TYR:OH	2.33	0.43
28:11:206:LEU:HD23	28:11:206:LEU:HA	1.86	0.43
30:31:59:TYR:CD2	30:31:78:ILE:HG13	2.53	0.43
31:41:118:ARG:HA	31:41:118:ARG:HD2	1.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:61:133:HIS:CG	33:61:134:PRO:HD2	2.54	0.43
35:58:132:ALA:O	35:58:134:ARG:HD3	2.18	0.43
41:B8:123:GLN:H	41:B8:123:GLN:HG3	1.60	0.43
56:Q8:8:LYS:O	56:Q8:12:LYS:HE3	2.19	0.43
1:1G:674:G:H2'	1:1G:675:A:H8	1.84	0.43
1:1G:986:A:H1'	19:AA:54:GLY:O	2.19	0.43
1:1G:1129:C:C2	1:1G:1139:G:N2	2.87	0.43
1:1G:1132:C:H2'	1:1G:1133:G:C8	2.53	0.43
1:1G:1216:G:H2'	1:1G:1217:C:H6	1.83	0.43
1:1G:1320:C:O4'	19:AA:36:ARG:NH2	2.52	0.43
9:82:27:THR:CG2	9:82:33:PHE:HB2	2.48	0.43
13:4A:80:ARG:HH12	52:I5:55:ARG:HD3	1.82	0.43
14:5A:17:LYS:HG3	14:5A:18:VAL:N	2.34	0.43
57:2L:45:A:H2'	57:2L:46:G:O4'	2.19	0.43
25:14:26:G:H1'	25:14:515:A:H61	1.84	0.43
25:14:77:C:OP2	62:14:3559:HOH:O	2.21	0.43
25:14:380:U:H2'	25:14:381:G:H8	1.83	0.43
25:14:513:A:H2'	25:14:514:A:H8	1.83	0.43
25:14:863:A:H2'	25:14:864:G:C8	2.53	0.43
25:14:876:C:H2'	25:14:877:U:O4'	2.19	0.43
25:14:942:G:O2'	25:14:1189:A:N3	2.49	0.43
26:1J:104:A:H2'	26:1J:105:G:O4'	2.19	0.43
28:19:262:ARG:O	28:19:264:LYS:N	2.51	0.43
33:69:101:LEU:HD12	33:69:107:VAL:HB	1.99	0.43
36:25:8:LEU:HB2	36:25:83:ALA:HA	2.01	0.43
38:45:68:ILE:HG22	38:45:101:ARG:HE	1.83	0.43
41:75:102:ILE:HB	41:75:110:ILE:CD1	2.49	0.43
47:D5:82:ARG:NH2	47:D5:83:PRO:O	2.51	0.43
54:K5:12:GLU:HG3	54:K5:22:ALA:HB3	2.00	0.43
54:K5:23:THR:O	54:K5:24:GLU:HB2	2.19	0.43
1:13:413:G:H2'	1:13:428:G:H22	1.83	0.43
1:13:474:G:H5"	16:7I:81:ARG:CZ	2.49	0.43
1:13:719:C:H3'	1:13:720:C:C6	2.54	0.43
1:13:765:G:H5"	1:13:766:A:OP1	2.19	0.43
1:13:872:A:C8	1:13:874:G:C8	3.07	0.43
1:13:1347:G:H2'	1:13:1373:G:H1	1.83	0.43
8:7E:86:ILE:HG12	8:7E:135:CYS:HA	2.01	0.43
9:8E:69:GLY:O	9:8E:73:GLN:HG3	2.17	0.43
13:4I:69:GLU:O	13:4I:73:GLU:HB3	2.18	0.43
19:AI:36:ARG:H	19:AI:36:ARG:HG2	1.59	0.43
20:BI:52:ALA:O	20:BI:56:MET:N	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:64:ASP:OD2	20:BI:81:LYS:NZ	2.42	0.43
25:1H:773:U:C4'	28:11:47:GLY:HA3	2.48	0.43
25:1H:859:G:H5'	25:1H:2268:A:O2'	2.18	0.43
25:1H:1417:C:H42	25:1H:1581:G:H1	1.66	0.43
25:1H:1820:U:H5"	25:1H:1821:A:C8	2.54	0.43
25:1H:2445:G:OP1	30:31:74:ARG:NH2	2.42	0.43
30:31:154:VAL:HB	30:31:173:VAL:HG22	2.00	0.43
37:78:65:ARG:HG3	37:78:65:ARG:O	2.17	0.43
41:B8:54:ARG:HA	41:B8:59:THR:OG1	2.19	0.43
42:C8:61:TRP:HB3	42:C8:93:LYS:O	2.19	0.43
45:F8:67:GLY:C	45:F8:68:ARG:HG3	2.39	0.43
46:G8:75:ILE:HD13	46:G8:75:ILE:HA	1.68	0.43
1:1G:682:G:C6	1:1G:709:G:C6	3.07	0.43
1:1G:767:A:H2'	1:1G:768:A:H8	1.83	0.43
1:1G:922:G:N3	1:1G:1398:A:H2	2.17	0.43
1:1G:1011:G:H1	1:1G:1018:C:N4	2.17	0.43
1:1G:1090:U:H2'	1:1G:1091:U:H6	1.83	0.43
1:1G:1513:A:H2'	1:1G:1514:C:C6	2.54	0.43
2:12:187:LEU:HD22	2:12:201:ILE:O	2.19	0.43
5:42:131:ILE:HD13	5:42:131:ILE:HA	1.89	0.43
14:5A:24:CYS:SG	14:5A:25:VAL:N	2.92	0.43
19:AA:16:LEU:HD22	19:AA:16:LEU:H	1.83	0.43
19:AA:66:MET:HG2	19:AA:74:PHE:CZ	2.53	0.43
25:14:204:A:O3'	25:14:205:G:H4'	2.18	0.43
25:14:724:U:H2'	25:14:725:G:O4'	2.18	0.43
25:14:826:U:H5"	25:14:2428:G:O3'	2.19	0.43
25:14:1190:G:OP1	37:35:30:THR:OG1	2.36	0.43
25:14:1332:G:N2	25:14:1609:A:O2'	2.52	0.43
25:14:2141:G:H2'	25:14:2142:C:O4'	2.19	0.43
25:14:2313:C:H2'	25:14:2314:C:C6	2.54	0.43
46:C5:39:VAL:O	46:C5:42:VAL:HG22	2.18	0.43
47:D5:153:SER:C	47:D5:155:LEU:N	2.72	0.43
1:13:343:U:HO2'	1:13:346:G:H1	1.67	0.43
1:13:590:C:H2'	1:13:591:U:H6	1.84	0.43
1:13:748:C:H4'	1:13:749:C:O5'	2.19	0.43
1:13:887:G:H2'	1:13:888:G:O4'	2.18	0.43
1:13:1004:A:C8	1:13:1026:G:C5	3.03	0.43
1:13:1124:G:OP2	1:13:1124:G:H8	2.01	0.43
1:13:1316:G:N1	1:13:1319:A:OP2	2.49	0.43
1:13:1384:C:H2'	1:13:1385:G:C8	2.54	0.43
2:1E:10:LEU:HD23	2:1E:10:LEU:HA	1.89	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:130:ARG:HB3	2:1E:134:GLU:HB2	2.00	0.43
4:3E:14:ARG:HG2	4:3E:40:PRO:HD2	2.00	0.43
5:4E:15:ARG:HD2	5:4E:26:PHE:CD2	2.54	0.43
17:8I:26:GLN:HB3	17:8I:37:LYS:HG2	2.00	0.43
22:1K:20:G:H4'	22:1K:21:U:OP2	2.15	0.43
25:1H:469:G:O6	55:P8:37:LYS:HE2	2.19	0.43
25:1H:1278:A:H2'	25:1H:1279:G:H8	1.83	0.43
25:1H:1337:G:H2'	25:1H:1338:G:O4'	2.19	0.43
25:1H:1628:G:H1	25:1H:1638:C:H42	1.67	0.43
25:1H:2031:A:N3	25:1H:2455:G:O2'	2.47	0.43
25:1H:2074:U:H2'	25:1H:2075:U:C6	2.54	0.43
25:1H:2251:OMG:H1'	25:1H:2251:OMG:HM23	1.63	0.43
25:1H:2600:A:C6	25:1H:2601:C:N4	2.87	0.43
27:71:30:LYS:HD2	27:71:182:PRO:HB3	2.00	0.43
30:31:12:LEU:HA	30:31:12:LEU:HD12	1.86	0.43
30:31:184:TYR:O	30:31:188:ARG:HG3	2.18	0.43
32:51:86:GLU:O	32:51:87:LEU:HB2	2.19	0.43
38:88:66:ILE:HA	38:88:104:PHE:HA	2.00	0.43
45:F8:31:HIS:HE1	45:F8:33:LYS:HB2	1.83	0.43
47:H8:10:ARG:HH21	47:H8:26:GLY:H	1.67	0.43
54:O8:33:LYS:HG2	54:O8:34:LEU:HD22	2.00	0.43
1:1G:186(F):C:H2'	1:1G:187:C:O4'	2.18	0.43
1:1G:474:G:H5'	16:7A:81:ARG:HD3	2.00	0.43
1:1G:1015:A:H8	1:1G:1015:A:O5'	2.02	0.43
1:1G:1028:C:H2'	1:1G:1028(A):C:O4'	2.19	0.43
1:1G:1515:C:H2'	1:1G:1516:G:C8	2.54	0.43
2:12:29:ALA:C	2:12:31:TYR:H	2.22	0.43
2:12:167:PRO:HG2	2:12:192:SER:CB	2.49	0.43
3:22:37:GLN:O	3:22:41:GLY:N	2.43	0.43
6:52:70:ASP:OD1	6:52:71:ARG:HG2	2.18	0.43
6:52:77:ARG:HH11	6:52:77:ARG:HB3	1.84	0.43
8:72:20:TYR:CE2	8:72:75:ARG:HD2	2.52	0.43
9:82:4:TYR:HE1	9:82:88:TYR:CD1	2.37	0.43
19:AA:70:LYS:O	19:AA:71:LEU:HD23	2.19	0.43
25:14:29:U:H2'	25:14:30:G:H8	1.83	0.43
25:14:572:A:H5"	25:14:573:G:OP2	2.18	0.43
25:14:839:U:H2'	25:14:840:C:C6	2.54	0.43
25:14:872:A:C6	25:14:906:G:C2	3.07	0.43
25:14:1032:A:H2	25:14:1122:G:H1	1.67	0.43
25:14:1177:A:H5'	25:14:1178:C:OP1	2.19	0.43
25:14:1582:C:O2'	25:14:1586:A:H8	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1614:A:P	25:14:1614:A:H8	2.41	0.43
25:14:2127:G:C2	25:14:2128:C:H1'	2.54	0.43
25:14:2528:U:H2'	25:14:2530:A:O5'	2.19	0.43
25:14:2689:U:P	25:14:2719:G:H22	2.41	0.43
32:59:20:ALA:HB1	32:59:21:PRO:HD2	2.00	0.43
36:25:79:PHE:CD2	41:75:72:VAL:HG22	2.54	0.43
39:55:52:ILE:HD13	39:55:79:LEU:HD21	1.99	0.43
47:D5:30:ASN:OD1	47:D5:33:LEU:N	2.48	0.43
49:F5:40:ARG:NH2	49:F5:42:GLN:HG2	2.32	0.43
1:13:295:C:H2'	1:13:296:U:O4'	2.18	0.43
1:13:341:C:O2'	1:13:342:C:H5'	2.19	0.43
1:13:375:U:O3'	16:7I:6:LEU:HB2	2.19	0.43
1:13:642:A:H5"	8:7E:30:ARG:HH21	1.83	0.43
1:13:1425:U:H2'	1:13:1426:C:C6	2.54	0.43
2:1E:21:ARG:HA	2:1E:39:ILE:HA	2.00	0.43
2:1E:22:LYS:HG3	2:1E:35:GLU:OE1	2.18	0.43
2:1E:189:ASP:HB3	2:1E:203:GLY:O	2.19	0.43
4:3E:121:VAL:HG13	4:3E:126:ILE:HD12	2.01	0.43
13:4I:57:ARG:HG3	13:4I:61:GLU:HG3	2.00	0.43
21:1F:4:GLY:HA2	21:1F:15:ARG:HH12	1.83	0.43
22:1K:5:G:N3	22:1K:5:G:H2'	2.34	0.43
25:1H:48:G:C2	25:1H:178:G:C6	3.07	0.43
25:1H:725:G:C6	25:1H:726:G:N1	2.87	0.43
25:1H:1363:C:H2'	25:1H:1364:G:H8	1.83	0.43
25:1H:1364:G:C8	49:J8:2:SER:HB3	2.54	0.43
25:1H:1957:C:H2'	25:1H:1958:C:C6	2.54	0.43
25:1H:2131:G:H4'	25:1H:2132:U:C4'	2.43	0.43
25:1H:2164:C:H2'	25:1H:2165:G:O4'	2.19	0.43
25:1H:2637:U:H2'	25:1H:2638:G:O4'	2.19	0.43
25:1H:2849:U:H4'	25:1H:2868:A:N1	2.34	0.43
27:71:3:HIS:HB2	27:71:7:TYR:CD1	2.54	0.43
32:51:121:ILE:HD13	32:51:121:ILE:HA	1.88	0.43
37:78:6:LEU:HD12	37:78:6:LEU:HA	1.69	0.43
41:B8:102:ILE:HB	41:B8:110:ILE:HD11	2.01	0.43
44:E8:73:ALA:HB3	44:E8:106:ILE:HG12	2.01	0.43
49:J8:81:LYS:HB3	49:J8:82:LEU:H	1.54	0.43
53:N8:20:ARG:HA	53:N8:23:HIS:ND1	2.33	0.43
1:1G:468:A:H2'	1:1G:474:G:O4'	2.19	0.43
1:1G:928:G:H2'	1:1G:929:G:H8	1.83	0.43
1:1G:994:A:H8	1:1G:994:A:OP1	2.02	0.43
1:1G:1092:A:H61	1:1G:1110:A:H4'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1324:A:P	13:4A:99:ARG:HH22	2.42	0.43
2:12:42:ILE:CD1	2:12:202:PRO:HB2	2.49	0.43
4:32:168:ARG:HB3	4:32:168:ARG:NH1	2.31	0.43
9:82:5:TYR:H	9:82:87:GLN:NE2	2.16	0.43
25:14:76:C:O2'	50:G5:62:THR:OG1	2.33	0.43
25:14:196:A:N3	25:14:196:A:H2'	2.34	0.43
25:14:671:C:H2'	25:14:672:C:C6	2.54	0.43
25:14:1349:A:N6	25:14:1598:C:H42	2.17	0.43
29:29:101:ARG:HA	29:29:170:LEU:O	2.19	0.43
33:69:123:LEU:HD22	33:69:143:SER:CB	2.49	0.43
39:55:90:ARG:NH2	39:55:117:VAL:HG21	2.33	0.43
47:D5:33:LEU:HD13	47:D5:33:LEU:HA	1.82	0.43
3:2E:106:VAL:HG11	3:2E:115:LEU:HD11	2.01	0.42
3:2E:130:VAL:O	3:2E:134:ILE:HG12	2.19	0.42
6:5E:86:ARG:O	6:5E:87:ARG:HG2	2.19	0.42
11:2I:99:GLN:HG2	11:2I:105:VAL:HG11	2.01	0.42
12:3I:74:LEU:HD21	12:3I:104:ALA:HB2	2.01	0.42
16:7I:71:ARG:HE	16:7I:80:PHE:HZ	1.66	0.42
22:3K:52:C:H2'	22:3K:53:G:C8	2.53	0.42
25:1H:1178:C:H4'	25:1H:1179:C:OP1	2.19	0.42
25:1H:1244:G:O5'	37:78:7:ARG:HG3	2.19	0.42
25:1H:1566:A:P	28:11:211:ARG:HH21	2.41	0.42
25:1H:1753:G:N1	25:1H:1756:G:OP2	2.51	0.42
25:1H:1858:G:H1'	25:1H:1884:A:N6	2.34	0.42
25:1H:2282:G:H4'	25:1H:2389:G:O2'	2.19	0.42
25:1H:2542:A:H4'	25:1H:2543:G:C8	2.54	0.42
25:1H:2561:A:H2'	25:1H:2562:U:O4'	2.19	0.42
27:71:225:ASN:ND2	27:71:228:SER:H	2.17	0.42
28:11:4:LYS:NZ	28:11:20:ASP:OD1	2.52	0.42
29:21:67:PHE:O	29:21:71:GLY:HA2	2.19	0.42
31:41:112:PRO:HB3	52:M8:37:SER:H	1.82	0.42
32:51:88:LEU:H	32:51:88:LEU:HG	1.66	0.42
37:78:61:ARG:HB3	37:78:61:ARG:HH11	1.83	0.42
40:A8:26:LEU:HD22	40:A8:87:PHE:HD1	1.84	0.42
40:A8:30:ARG:NH2	40:A8:92:TYR:HD1	2.16	0.42
42:C8:98:LEU:HD23	42:C8:99:ALA:N	2.34	0.42
48:I8:12:ASN:HA	48:I8:14:ARG:NH2	2.34	0.42
48:I8:29:GLN:O	48:I8:31:VAL:HG13	2.19	0.42
54:O8:36:LEU:HD22	54:O8:50:ARG:HH12	1.83	0.42
1:1G:327:A:O2'	1:1G:328:C:O4'	2.28	0.42
1:1G:596:C:N4	1:1G:644:G:H1	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:689:C:P	11:2A:46:GLY:HA3	2.59	0.42
1:1G:752:G:H1'	1:1G:754:C:N4	2.34	0.42
1:1G:860:A:H4'	8:72:75:ARG:NH1	2.34	0.42
1:1G:948:C:OP2	13:4A:106:ASN:HB2	2.19	0.42
1:1G:1035:A:H2'	1:1G:1036:G:H5"	2.01	0.42
1:1G:1437:C:N4	1:1G:1464:G:H1	2.08	0.42
9:82:54:ASP:OD1	9:82:54:ASP:N	2.51	0.42
10:1A:33:GLN:O	10:1A:75:ILE:HG12	2.19	0.42
12:3A:9:ARG:O	12:3A:11:GLY:N	2.52	0.42
17:8A:58:GLU:O	17:8A:74:LEU:N	2.50	0.42
25:14:389:G:N1	37:35:71:VAL:HG12	2.34	0.42
25:14:565:C:H4'	25:14:1253:A:C6	2.53	0.42
25:14:597:U:H3	25:14:660:G:H1	1.67	0.42
25:14:1141:U:H4'	25:14:1142(A):A:O4'	2.19	0.42
25:14:1492:G:H3'	25:14:1493:C:C5'	2.49	0.42
25:14:1776:G:O6	62:14:3548:HOH:O	2.19	0.42
25:14:1814:G:H2'	25:14:1815:A:C8	2.53	0.42
25:14:2481:G:O2'	25:14:2482:G:H8	2.01	0.42
25:14:2875:C:H2'	25:14:2876:G:O4'	2.19	0.42
26:1J:40:U:H3	26:1J:43:C:H5"	1.84	0.42
28:19:136:ILE:O	28:19:168:ARG:NH2	2.52	0.42
33:69:117:GLU:OE1	33:69:118:LYS:HG2	2.19	0.42
41:75:26:ASP:HB3	41:75:88:ILE:HD13	2.01	0.42
45:B5:61:GLY:N	45:B5:75:ASP:HB3	2.34	0.42
1:13:167:G:H2'	1:13:168:G:H8	1.83	0.42
1:13:270:A:H2'	1:13:271:C:C6	2.55	0.42
1:13:538:G:O3'	12:3I:111:LYS:HD3	2.19	0.42
1:13:601:C:H2'	1:13:602:A:C8	2.55	0.42
1:13:991:U:O2	1:13:993:G:H8	2.02	0.42
4:3E:108:LEU:HD12	4:3E:174:LEU:HD13	2.00	0.42
9:8E:7:THR:O	9:8E:83:ARG:HD2	2.19	0.42
25:1H:27:G:O2'	25:1H:28:A:H8	2.02	0.42
25:1H:71:A:H4'	25:1H:72:U:H5"	1.99	0.42
25:1H:738:G:C6	25:1H:739:G:C2	3.06	0.42
25:1H:979:G:H2'	25:1H:982:C:H42	1.84	0.42
25:1H:1786:A:H1'	25:1H:1938:A:N6	2.34	0.42
25:1H:1846:G:H5'	25:1H:1847:A:OP2	2.19	0.42
25:1H:2505:G:O6	25:1H:2576:G:H2'	2.19	0.42
25:1H:2712:U:OP1	25:1H:2714:G:H4'	2.19	0.42
29:21:9:VAL:HG13	29:21:25:VAL:HB	2.00	0.42
30:31:53:THR:HG23	30:31:56:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:58:128:HIS:ND1	35:58:129:PRO:O	2.52	0.42
39:98:44:LEU:O	39:98:48:VAL:HG22	2.19	0.42
42:C8:29:SER:OG	42:C8:30:LYS:HE2	2.19	0.42
46:G8:40:GLU:HA	46:G8:41:GLY:HA2	1.57	0.42
1:1G:183:G:H1	1:1G:194:C:H42	1.67	0.42
1:1G:225:C:H2'	1:1G:226:G:H8	1.83	0.42
1:1G:1279:A:O2'	1:1G:1282:C:N4	2.53	0.42
1:1G:1292:U:H2'	1:1G:1293:G:C8	2.55	0.42
11:2A:27:ASN:OD1	11:2A:28:THR:N	2.52	0.42
12:3A:10:LYS:H	12:3A:10:LYS:HG3	1.59	0.42
18:9A:65:ILE:H	18:9A:65:ILE:HG13	1.60	0.42
25:14:1044:G:N2	25:14:1112:G:H1'	2.34	0.42
25:14:1186:G:H2'	25:14:1187:G:O4'	2.19	0.42
25:14:1331:A:OP2	62:14:3561:HOH:O	2.21	0.42
25:14:1360:A:H5'	25:14:1361:G:OP2	2.18	0.42
25:14:1910:G:H2'	25:14:1911:PSU:H6	1.84	0.42
25:14:2031:A:N3	25:14:2455:G:O2'	2.43	0.42
25:14:2679:A:H4'	29:29:165:VAL:HG11	2.02	0.42
36:25:12:ASP:N	36:25:12:ASP:OD1	2.51	0.42
42:85:82:GLY:O	42:85:86:ALA:N	2.51	0.42
43:95:12:TYR:CZ	43:95:22:VAL:HG23	2.54	0.42
45:B5:57:LEU:HD21	45:B5:78:LYS:HG3	2.01	0.42
47:D5:144:LEU:H	47:D5:144:LEU:HD12	1.84	0.42
1:13:828:A:N6	1:13:858:G:O2'	2.47	0.42
1:13:1057:G:H2'	1:13:1058:G:O4'	2.19	0.42
1:13:1188:A:H5"	14:5I:58:LYS:HZ2	1.83	0.42
1:13:1347:G:H2'	1:13:1373:G:N1	2.34	0.42
1:13:1510:U:H2'	1:13:1511:G:C8	2.54	0.42
5:4E:118:ILE:HG12	5:4E:120:THR:HG23	2.01	0.42
16:7I:4:ILE:HG12	16:7I:21:VAL:HG12	2.02	0.42
20:BI:55:ILE:HD13	20:BI:55:ILE:HA	1.88	0.42
22:3K:20:G:C4	25:1H:2112:G:N7	2.87	0.42
22:3K:59:A:O2'	22:3K:61:U:H5	2.02	0.42
25:1H:27:G:N2	25:1H:512:G:H2'	2.31	0.42
25:1H:120:U:OP2	62:1H:3679:HOH:O	2.21	0.42
25:1H:570:G:H2'	25:1H:2030:A:C5	2.54	0.42
25:1H:582:G:H2'	25:1H:583:G:C8	2.54	0.42
25:1H:938:G:OP2	56:Q8:52:LYS:NZ	2.50	0.42
25:1H:1279:G:H4'	39:98:31:HIS:CD2	2.54	0.42
25:1H:2010:G:H5"	44:E8:42:ARG:HB2	2.01	0.42
25:1H:2157:G:H4'	25:1H:2158:A:O5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2271:G:OP1	48:I8:18:ALA:HB1	2.19	0.42
25:1H:2423:U:H6	25:1H:2423:U:H2'	1.72	0.42
25:1H:2751:G:HO2'	25:1H:2752:C:P	2.42	0.42
32:51:89:ILE:HB	32:51:129:THR:O	2.18	0.42
37:78:49:ARG:HG3	56:Q8:61:LEU:HD11	2.01	0.42
37:78:128:HIS:HA	37:78:147:LEU:HB2	2.00	0.42
38:88:125:LEU:HD23	38:88:125:LEU:HA	1.88	0.42
1:1G:452:A:HO2'	1:1G:453:A:C5'	2.33	0.42
1:1G:1112:C:O2	3:22:179:ARG:HG2	2.18	0.42
1:1G:1369:C:H2'	1:1G:1370:G:O4'	2.19	0.42
2:12:111:ARG:HD3	2:12:111:ARG:HA	1.50	0.42
3:22:35:GLU:O	3:22:39:ILE:HG13	2.19	0.42
4:32:61:LYS:HD3	4:32:206:PHE:HE2	1.83	0.42
4:32:127:THR:HG22	4:32:147:ALA:HB3	2.02	0.42
6:52:45:LEU:HD21	6:52:57:GLN:HB3	2.01	0.42
25:14:182:A:H8	25:14:182:A:OP2	2.02	0.42
25:14:693:C:H42	25:14:769:G:H1	1.68	0.42
25:14:1087:G:P	25:14:1087:G:H8	2.42	0.42
25:14:1526:G:H3'	25:14:1527:G:C8	2.53	0.42
25:14:1567:A:H5'	28:19:86:PRO:CB	2.48	0.42
25:14:1578:U:H6	25:14:1578:U:OP2	2.02	0.42
25:14:1858:G:C6	25:14:1883:G:C6	3.07	0.42
25:14:2094:G:H5'	33:69:25:TYR:CD1	2.54	0.42
25:14:2166:G:H4'	25:14:2167:U:OP1	2.20	0.42
25:14:2712(A):A:H5"	25:14:2713:A:OP2	2.18	0.42
26:1J:31:C:H42	26:1J:51:G:H1	1.67	0.42
38:45:47:ILE:O	38:45:51:ARG:N	2.43	0.42
41:75:51:ARG:HE	41:75:62:THR:HG23	1.84	0.42
1:13:197:A:H4'	1:13:198:G:O5'	2.18	0.42
1:13:198:G:H2'	1:13:199:G:C8	2.54	0.42
1:13:623:C:H2'	1:13:624:C:O4'	2.19	0.42
1:13:938:A:O2'	1:13:1376:U:O2'	2.24	0.42
1:13:1149:C:H2'	1:13:1150:U:O4'	2.18	0.42
2:1E:224:GLN:HA	2:1E:229:VAL:HG22	2.02	0.42
3:2E:11:ARG:NH2	3:2E:180:ALA:HB3	2.34	0.42
7:6E:45:ASP:O	7:6E:48:LYS:HB3	2.20	0.42
7:6E:66:VAL:O	7:6E:70:LYS:HG3	2.19	0.42
11:2I:69:ALA:O	11:2I:73:MET:HG3	2.19	0.42
13:4I:65:LYS:HE2	13:4I:65:LYS:HB3	1.83	0.42
25:1H:1587:A:H2'	25:1H:1588:C:C6	2.54	0.42
25:1H:1590:U:H2'	25:1H:1591:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2163:C:H2'	25:1H:2164:C:C6	2.53	0.42
26:16:95:U:H2'	26:16:96:G:H8	1.82	0.42
28:11:38:LYS:HE2	28:11:39:LYS:O	2.19	0.42
28:11:223:GLY:HA3	28:11:231:HIS:CE1	2.54	0.42
30:31:68:LYS:HB3	30:31:69:HIS:CD2	2.55	0.42
30:31:136:THR:HA	30:31:166:ALA:HB1	2.02	0.42
31:41:150:ASP:OD1	31:41:150:ASP:N	2.53	0.42
32:51:26:VAL:HG11	32:51:33:LEU:HD22	2.01	0.42
33:61:113:ARG:HD3	33:61:113:ARG:N	2.34	0.42
42:C8:66:ASN:O	42:C8:70:ARG:HB2	2.19	0.42
1:1G:34:C:H2'	1:1G:35:G:C8	2.54	0.42
1:1G:44:G:H1	1:1G:398:C:H42	1.67	0.42
1:1G:345:C:H4'	1:1G:346:G:C4	2.55	0.42
1:1G:686:U:H1'	11:2A:42:TRP:NE1	2.33	0.42
1:1G:849:C:H2'	1:1G:850:U:O4'	2.20	0.42
1:1G:960:U:HO2'	1:1G:961:U:P	2.43	0.42
1:1G:1465:C:H2'	1:1G:1466:C:O4'	2.20	0.42
3:22:54:ARG:HB2	3:22:69:HIS:CG	2.54	0.42
3:22:95:THR:HG22	3:22:97:LYS:H	1.85	0.42
4:32:63:LYS:HB2	4:32:63:LYS:HE2	1.79	0.42
7:62:71:PRO:HG2	7:62:91:VAL:HG21	2.01	0.42
11:2A:85:ARG:HG2	11:2A:111:ASP:O	2.19	0.42
12:3A:83:ARG:HB2	12:3A:98:VAL:HG22	2.01	0.42
17:8A:85:VAL:O	17:8A:89:LEU:HG	2.20	0.42
18:9A:50:ILE:HD12	18:9A:70:ILE:HD13	2.01	0.42
19:AA:36:ARG:CG	19:AA:72:GLY:H	2.30	0.42
25:14:640:C:N4	25:14:648:G:H1	2.11	0.42
25:14:1542:G:H5"	25:14:1543:A:OP2	2.19	0.42
25:14:2867:G:O2'	25:14:2868:A:H8	2.01	0.42
26:1J:6:C:H2'	26:1J:7:G:H8	1.84	0.42
29:29:92:THR:O	29:29:95:ILE:HG12	2.19	0.42
36:25:104:ARG:O	36:25:108:GLU:HG2	2.20	0.42
41:75:36:GLU:HB3	41:75:39:ARG:NH2	2.32	0.42
47:D5:123:ASP:OD1	47:D5:123:ASP:N	2.52	0.42
1:13:607:A:H2'	1:13:608:A:H8	1.84	0.42
1:13:1014:A:P	1:13:1014:A:H8	2.43	0.42
1:13:1239:A:H62	1:13:1299:A:H62	1.68	0.42
1:13:1281:U:OP2	1:13:1282:C:N4	2.41	0.42
1:13:1320:C:OP2	19:AI:70:LYS:HE3	2.19	0.42
2:1E:24:TRP:CE3	2:1E:26:PRO:HA	2.54	0.42
25:1H:26:G:C6	25:1H:27:G:N1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:141(A):C:H2'	25:1H:142:G:O4'	2.19	0.42
25:1H:414:C:H1'	25:1H:1864:U:O2'	2.19	0.42
25:1H:673:C:H5"	30:31:81:PRO:HD2	2.00	0.42
25:1H:711:G:H1	25:1H:720:C:H42	1.68	0.42
25:1H:1287:A:C8	39:98:107:ASP:HB2	2.54	0.42
25:1H:1291:C:H2'	25:1H:1292:U:H6	1.85	0.42
25:1H:2810:A:O3'	29:21:61:ARG:HD3	2.19	0.42
25:1H:2815:C:H2'	25:1H:2816:C:H6	1.83	0.42
26:16:80:U:H2'	26:16:81:G:H21	1.84	0.42
28:11:17:THR:CG2	28:11:204:ILE:HA	2.50	0.42
30:31:65:TRP:CZ3	30:31:72:ARG:HB3	2.54	0.42
33:61:133:HIS:ND1	33:61:133:HIS:N	2.67	0.42
34:38:7:VAL:O	34:38:11:ALA:HB2	2.19	0.42
35:58:53:VAL:HA	35:58:121:LYS:O	2.19	0.42
35:58:76:SER:O	35:58:78:TYR:N	2.53	0.42
37:78:55:ARG:O	37:78:56:SER:OG	2.31	0.42
39:98:75:LEU:HA	39:98:78:LYS:HB3	2.00	0.42
44:E8:97:LYS:H	44:E8:97:LYS:HG2	1.64	0.42
45:F8:51:VAL:HG13	45:F8:81:VAL:HG23	2.01	0.42
50:K8:50:ILE:H	50:K8:50:ILE:HG13	1.51	0.42
1:1G:765:G:H5"	1:1G:766:A:OP1	2.19	0.42
1:1G:1198:G:H2'	1:1G:1199:U:C6	2.55	0.42
1:1G:1250:A:H4'	9:82:68:GLY:N	2.34	0.42
1:1G:1263:C:N3	1:1G:1273:G:N2	2.68	0.42
8:72:11:THR:HG22	8:72:15:ASN:HD21	1.84	0.42
13:4A:70:LEU:HD13	13:4A:71:ARG:N	2.35	0.42
18:9A:56:THR:HB	18:9A:58:LEU:HG	2.00	0.42
20:BA:33:ILE:O	20:BA:37:SER:OG	2.30	0.42
25:14:298:G:OP2	62:14:3558:HOH:O	2.21	0.42
25:14:579:G:O2'	25:14:2019:A:OP1	2.30	0.42
25:14:1879:C:H2'	25:14:1880:C:O4'	2.19	0.42
25:14:1999:C:H4'	25:14:2723:C:O2	2.19	0.42
37:35:57:THR:HG21	37:35:60:MET:CB	2.43	0.42
43:95:71:LEU:CA	43:95:86:GLY:H	2.30	0.42
46:C5:31:LEU:O	46:C5:35:TYR:N	2.51	0.42
47:D5:133:ILE:H	47:D5:133:ILE:HG13	1.68	0.42
47:D5:150:LEU:HB2	47:D5:169:GLU:O	2.19	0.42
1:13:437:U:H5"	4:3E:155:LEU:HD11	2.01	0.42
1:13:565:U:H5"	1:13:566:G:C2'	2.48	0.42
1:13:936:C:N4	1:13:1379:G:H1	2.15	0.42
1:13:944:G:N2	1:13:1338:G:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1020:U:H2'	1:13:1021:G:H8	1.85	0.42
1:13:1410:G:H2'	1:13:1411:C:H6	1.84	0.42
1:13:1502:A:H2	1:13:1505:G:N1	2.05	0.42
2:1E:80:ILE:HD13	2:1E:212:GLN:HB2	2.02	0.42
7:6E:5:ARG:HB3	7:6E:7:ALA:N	2.33	0.42
12:3I:50:ARG:HB2	12:3I:90:LEU:HD11	2.02	0.42
18:9I:72:ARG:O	18:9I:76:LEU:HD22	2.20	0.42
25:1H:443:A:C3'	30:31:45:ARG:HH12	2.31	0.42
25:1H:479:A:HO2'	25:1H:481:G:H8	1.67	0.42
25:1H:625:G:O6	37:78:107:LYS:NZ	2.41	0.42
25:1H:869:G:H2'	25:1H:870:A:H8	1.85	0.42
25:1H:978:G:H1	25:1H:985:C:H42	1.67	0.42
25:1H:1011:G:OP1	42:C8:75:ASN:HB3	2.19	0.42
25:1H:1628:G:H2'	25:1H:1629:U:C6	2.54	0.42
25:1H:2107:C:H42	25:1H:2182:G:H1	1.67	0.42
25:1H:2447:G:OP2	62:1H:3696:HOH:O	2.21	0.42
25:1H:2643:G:H2'	25:1H:2644:G:O4'	2.19	0.42
27:71:46:LYS:HG2	27:71:210:ARG:HB2	2.01	0.42
28:11:62:TYR:HA	28:11:87:ASN:OD1	2.19	0.42
34:38:75:GLN:O	34:38:111:LEU:HB3	2.19	0.42
36:68:88:ASN:O	36:68:91:LEU:N	2.47	0.42
46:G8:5:MET:HE1	46:G8:32:PRO:HA	2.01	0.42
47:H8:170:THR:O	47:H8:172:ALA:N	2.52	0.42
48:I8:49:LYS:H	48:I8:80:HIS:HD1	1.67	0.42
53:N8:9:LYS:HD3	53:N8:9:LYS:HA	1.94	0.42
1:1G:735:C:H2'	1:1G:736:C:C6	2.48	0.42
1:1G:1055:A:O2'	3:22:156:ARG:NH1	2.52	0.42
1:1G:1144:G:N2	1:1G:1146:A:H62	2.18	0.42
7:62:9:VAL:HG22	7:62:94:ARG:NH1	2.35	0.42
14:5A:23:ARG:NH1	14:5A:28:GLY:O	2.48	0.42
18:9A:59:SER:OG	18:9A:60:ALA:N	2.53	0.42
25:14:300:A:C8	46:C5:84:ARG:NH2	2.87	0.42
25:14:528:A:H2	25:14:2042:A:H2'	1.81	0.42
25:14:1255:U:C5	30:39:73:ALA:HA	2.55	0.42
25:14:1412:A:H2'	25:14:1413:G:C8	2.54	0.42
25:14:1525:G:H2'	25:14:1526:G:C8	2.53	0.42
25:14:1567:A:H5'	28:19:86:PRO:HG3	2.01	0.42
25:14:2625:G:H2'	25:14:2626:C:O4'	2.20	0.42
25:14:2808:U:H5'	25:14:2891:G:O6	2.19	0.42
29:29:63:LEU:HD23	29:29:63:LEU:HA	1.93	0.42
31:49:23:PHE:HB2	31:49:25:TYR:CE1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:49:75:LYS:HG3	31:49:76:SER:H	1.85	0.42
31:49:126:ASP:OD2	31:49:130:ASN:ND2	2.42	0.42
32:59:23:ARG:HA	32:59:37:VAL:H	1.84	0.42
32:59:87:LEU:HA	32:59:163:TYR:O	2.19	0.42
47:D5:152:ALA:HA	47:D5:155:LEU:HG	2.01	0.42
1:13:637:G:H2'	1:13:638:G:C8	2.54	0.42
1:13:1359:C:H3'	14:5I:35:ARG:HH12	1.85	0.42
1:13:1367:C:H5'	10:1I:60:ARG:NH1	2.34	0.42
1:13:1387:G:H2'	1:13:1388:C:C6	2.55	0.42
4:3E:88:VAL:HG12	4:3E:92:VAL:HG22	2.01	0.42
10:1I:81:THR:HA	10:1I:84:GLN:HE22	1.84	0.42
17:8I:21:VAL:HG11	17:8I:59:ILE:HD12	2.01	0.42
18:9I:29:PHE:N	18:9I:29:PHE:HD1	2.16	0.42
25:1H:341:G:H2'	25:1H:342:G:O4'	2.20	0.42
25:1H:767:U:H2'	25:1H:768:G:H8	1.84	0.42
25:1H:1113:U:OP1	32:51:2:SER:N	2.52	0.42
25:1H:1166:C:H2'	25:1H:1167:U:C6	2.55	0.42
25:1H:1341:U:O4	45:F8:16:LYS:NZ	2.47	0.42
25:1H:1396:U:O2	25:1H:1396:U:H2'	2.19	0.42
25:1H:1468:C:H2'	25:1H:1469:A:H8	1.85	0.42
25:1H:1913:A:H4'	25:1H:1914:C:H5"	2.01	0.42
25:1H:2128:C:OP2	25:1H:2128:C:H6	2.02	0.42
25:1H:2373:G:H2'	25:1H:2374:C:C6	2.54	0.42
25:1H:2392:A:OP2	25:1H:2422:A:N6	2.51	0.42
62:1H:3862:HOH:O	49:J8:17:SER:HA	2.20	0.42
27:71:29:VAL:HG21	27:71:41:VAL:HG22	2.02	0.42
41:B8:65:LYS:NZ	41:B8:65:LYS:HB2	2.35	0.42
44:E8:38:TYR:OH	53:N8:40:LYS:HG3	2.20	0.42
46:G8:63:LYS:HD2	46:G8:63:LYS:HA	1.91	0.42
1:1G:17:U:H2'	1:1G:18:C:C6	2.55	0.42
1:1G:129(A):G:C6	1:1G:191(A):G:H1'	2.55	0.42
1:1G:686:U:H1'	11:2A:42:TRP:HE1	1.84	0.42
1:1G:928:G:H2'	1:1G:929:G:C8	2.55	0.42
1:1G:1157:A:O2'	1:1G:1158:C:P	2.78	0.42
2:12:205:ASP:OD1	2:12:206:ASP:N	2.52	0.42
9:82:27:THR:OG1	9:82:28:VAL:N	2.52	0.42
10:1A:15:THR:HA	10:1A:18:ALA:HB3	2.02	0.42
20:BA:28:ALA:HA	20:BA:31:SER:HB2	2.02	0.42
22:3L:34:U:H2'	22:3L:35:C:H3'	2.02	0.42
25:14:34:C:O2'	25:14:35:G:C8	2.71	0.42
25:14:270(D):C:H2'	25:14:270(E):G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:625:G:O6	37:35:107:LYS:HD3	2.20	0.42
25:14:833:U:O2'	37:35:55:ARG:NH1	2.53	0.42
25:14:935:C:H2'	25:14:936:C:H6	1.85	0.42
30:39:34:TRP:HD1	37:35:6:LEU:HB3	1.85	0.42
31:49:111:LEU:HD23	31:49:111:LEU:HA	1.86	0.42
35:15:14:VAL:HG12	35:15:51:PHE:O	2.20	0.42
47:D5:100:VAL:N	47:D5:124:ILE:O	2.52	0.42
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.20	0.42
1:13:674:G:HO2'	18:9I:81:PHE:HD2	1.66	0.42
1:13:1461:G:H2'	1:13:1462:G:H8	1.84	0.42
2:1E:16:HIS:HE1	2:1E:209:ARG:HH21	1.67	0.42
3:2E:39:ILE:HG22	3:2E:43:LEU:HD11	2.02	0.42
4:3E:121:VAL:HG22	4:3E:126:ILE:HD12	2.00	0.42
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.26	0.42
25:1H:933:A:OP1	51:L8:24:LYS:NZ	2.36	0.42
25:1H:1021:A:C8	25:1H:1022:G:H5"	2.48	0.42
25:1H:1035:U:H2'	25:1H:1036:G:C8	2.55	0.42
25:1H:1278:A:H2'	25:1H:1279:G:C8	2.54	0.42
25:1H:1333:C:H2'	25:1H:1334:G:H8	1.85	0.42
25:1H:1368:G:C2	25:1H:1369:G:C8	3.08	0.42
25:1H:1469:A:H2'	25:1H:1470:G:O4'	2.19	0.42
25:1H:1511:A:H2'	25:1H:1512:G:O4'	2.19	0.42
25:1H:1869:G:N2	25:1H:1872:A:OP2	2.47	0.42
25:1H:2119:A:N6	25:1H:2170:A:C6	2.88	0.42
25:1H:2688:U:H1'	25:1H:2721:A:H61	1.85	0.42
25:1H:2867:G:O2'	25:1H:2868:A:H8	2.03	0.42
27:71:190:ARG:HA	27:71:193:ILE:HB	2.01	0.42
37:78:97:PRO:C	37:78:99:LEU:H	2.23	0.42
39:98:41:ALA:O	39:98:44:LEU:N	2.53	0.42
47:H8:137:ILE:HG22	47:H8:158:PRO:HG2	2.00	0.42
50:K8:52:ASP:HA	50:K8:55:ARG:HB2	2.02	0.42
53:N8:16:ARG:HG3	53:N8:17:ASP:N	2.35	0.42
1:1G:974:A:P	14:5A:41:ARG:HH12	2.43	0.42
1:1G:1037:C:H2'	1:1G:1038:C:C6	2.53	0.42
1:1G:1142:G:H3'	1:1G:1143:G:H8	1.85	0.42
1:1G:1376:U:O4	7:62:10:ARG:NH1	2.52	0.42
1:1G:1483:A:H1'	25:14:1948:G:H1'	2.01	0.42
2:12:52:GLU:O	2:12:56:ARG:HG3	2.20	0.42
10:1A:8:LEU:HD22	10:1A:20:ALA:HB2	2.02	0.42
11:2A:56:GLY:O	11:2A:89:ALA:HB3	2.20	0.42
18:9A:23:LYS:O	18:9A:23:LYS:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:61:U:H3'	22:3L:62:C:C5	2.55	0.42
24:4L:19:A:H2'	24:4L:20:A:C8	2.55	0.42
25:14:84:A:H61	25:14:102:G:H1'	1.85	0.42
25:14:506:G:O3'	25:14:507:A:H8	2.03	0.42
25:14:848:G:H2'	25:14:849:A:H8	1.81	0.42
25:14:1535:U:C5	25:14:1536:A:H1'	2.55	0.42
25:14:1853:A:H2'	25:14:1854:A:H8	1.83	0.42
25:14:2615:U:C2	53:J5:7:PRO:HA	2.54	0.42
25:14:2820:A:C4	39:55:4:LEU:HD11	2.55	0.42
26:1J:21:G:H2'	26:1J:22:U:O4'	2.20	0.42
28:19:72:LYS:HD3	28:19:97:TYR:CE1	2.54	0.42
30:39:103:LYS:HA	30:39:106:ARG:HG3	2.01	0.42
32:59:74:ASN:HB3	32:59:138:LYS:HB2	2.02	0.42
40:65:51:ALA:HB2	40:65:76:LYS:HD3	2.01	0.42
42:85:40:PHE:HB3	43:95:75:PHE:CD2	2.55	0.42
47:D5:24:LEU:HD23	47:D5:41:LEU:HG	2.02	0.42
47:D5:81:ARG:HE	47:D5:81:ARG:HB2	1.71	0.42
47:D5:99:TYR:HA	47:D5:124:ILE:O	2.20	0.42
49:F5:80:LEU:HD22	49:F5:80:LEU:H	1.85	0.42
1:13:781:A:C8	1:13:782:A:C8	3.08	0.42
1:13:901:A:C5	1:13:902:G:H1'	2.55	0.42
1:13:947:G:H2'	1:13:948:C:O4'	2.19	0.42
1:13:991:U:O2'	1:13:992:U:P	2.78	0.42
1:13:1035:A:N6	1:13:1036:G:N3	2.68	0.42
1:13:1274:G:N2	1:13:1275:A:N7	2.58	0.42
1:13:1312:G:H1	1:13:1325:C:N4	2.13	0.42
2:1E:74:LYS:HG3	2:1E:77:ALA:HB3	2.02	0.42
3:2E:47:LEU:HG	3:2E:52:LEU:HD22	2.02	0.42
6:5E:47:ARG:NH1	6:5E:57:GLN:HB3	2.35	0.42
11:2I:32:ILE:HG12	11:2I:41:THR:O	2.20	0.42
20:BI:22:ARG:O	20:BI:26:ASN:ND2	2.53	0.42
25:1H:270(G):C:H42	25:1H:270(S):G:H1	1.67	0.42
25:1H:746:A:HO2'	25:1H:747:U:P	2.38	0.42
25:1H:1068:G:O2'	25:1H:1096:A:H1'	2.20	0.42
25:1H:1448:G:H2'	25:1H:1449:A:C8	2.55	0.42
25:1H:1750:G:O2'	25:1H:2860:A:N1	2.40	0.42
25:1H:2163:C:H2'	25:1H:2164:C:H6	1.85	0.42
29:21:3:GLY:HA2	29:21:199:ARG:HA	2.00	0.42
30:31:159:GLY:HA2	30:31:164:ARG:HH21	1.85	0.42
41:B8:111:ARG:C	41:B8:113:LYS:H	2.22	0.42
42:C8:90:VAL:HG11	43:D8:39:LEU:HD13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:G8:81:LYS:HD3	46:G8:81:LYS:HA	1.76	0.42
1:1G:270:A:C5	1:1G:271:C:C4	3.08	0.42
1:1G:1025:U:H2'	1:1G:1026:G:C8	2.54	0.42
1:1G:1038:C:O2'	1:1G:1039:C:P	2.77	0.42
1:1G:1289:A:H5"	21:1B:10:ARG:HH21	1.85	0.42
1:1G:1315:U:H2'	1:1G:1316:G:O4'	2.19	0.42
6:52:16:GLN:CD	6:52:16:GLN:H	2.22	0.42
25:14:124:G:H5'	25:14:1376:C:O2'	2.19	0.42
25:14:186:G:H2'	25:14:187:G:H8	1.84	0.42
25:14:748:G:C8	44:A5:89:ALA:HB1	2.55	0.42
25:14:829:A:C8	25:14:2248:C:H5'	2.55	0.42
25:14:840:C:H2'	25:14:841:A:H8	1.83	0.42
25:14:923:C:H2'	25:14:924:C:C6	2.55	0.42
25:14:1203:G:N1	25:14:1241:A:OP2	2.50	0.42
25:14:1839:G:C8	25:14:1927:A:H1'	2.54	0.42
25:14:2267:A:H5"	25:14:2268:A:H5'	2.01	0.42
25:14:2554:U:H2'	25:14:2555:U:C6	2.55	0.42
28:19:249:PRO:HD2	28:19:250:TRP:CZ3	2.55	0.42
29:29:33:VAL:HG12	29:29:89:ASP:O	2.19	0.42
30:39:21:ALA:O	30:39:23:ASP:N	2.53	0.42
32:59:131:VAL:HG12	32:59:132:ARG:H	1.84	0.42
38:45:17:LEU:HD22	38:45:96:VAL:HG13	2.01	0.42
39:55:73:VAL:O	39:55:76:VAL:HG12	2.20	0.42
43:95:35:LEU:HB2	43:95:37:VAL:CG1	2.50	0.42
48:E5:29:GLN:O	48:E5:67:VAL:HG23	2.20	0.42
1:13:1074:G:C2	1:13:1075:C:C2	3.08	0.42
1:13:1137:C:O2'	1:13:1138:G:H5"	2.19	0.42
6:5E:19:LEU:HD11	6:5E:59:TYR:CD2	2.54	0.42
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.35	0.42
25:1H:870:A:OP1	38:88:5:ARG:NH2	2.53	0.42
25:1H:1087:G:H2'	25:1H:1089:G:O4'	2.20	0.42
25:1H:1675:C:H2'	25:1H:1676:A:O4'	2.20	0.42
25:1H:2817:G:H1	25:1H:2829:C:H42	1.67	0.42
29:21:8:LYS:HB2	29:21:196:VAL:HG21	2.02	0.42
41:B8:86:ILE:HD12	41:B8:87:ASP:H	1.84	0.42
47:H8:48:PHE:HA	47:H8:51:ALA:CB	2.43	0.42
48:I8:70:GLN:O	48:I8:77:ARG:HG3	2.20	0.42
1:1G:520:A:N1	1:1G:536:C:H1'	2.35	0.42
1:1G:559:A:H4'	1:1G:560:U:H3'	2.01	0.42
1:1G:598:U:H2'	1:1G:599:C:C6	2.54	0.42
1:1G:729:A:H2'	1:1G:730:G:C8	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:78:GLY:O	3:22:80:GLY:N	2.52	0.42
4:32:88:VAL:O	4:32:90:GLY:N	2.53	0.42
13:4A:14:ARG:HB2	13:4A:17:VAL:HG23	2.02	0.42
13:4A:60:VAL:HA	13:4A:64:TRP:HE1	1.83	0.42
18:9A:23:LYS:HA	18:9A:26:LEU:HD13	2.02	0.42
25:14:28:A:H2'	25:14:29:U:O4'	2.20	0.42
25:14:372:G:O2'	25:14:373:U:OP2	2.38	0.42
25:14:465:G:H2'	25:14:466:A:C8	2.55	0.42
25:14:1149:G:H2'	25:14:1150:C:C6	2.55	0.42
25:14:1491:G:H2'	25:14:1492:G:H8	1.85	0.42
25:14:2642:G:H1	25:14:2772:C:H42	1.67	0.42
28:19:208:LYS:HG3	28:19:211:ARG:H	1.84	0.42
29:29:181:LEU:HD12	29:29:181:LEU:HA	1.83	0.42
30:39:25:PRO:CD	30:39:115:ALA:HB1	2.50	0.42
30:39:125:LEU:HD13	30:39:199:TRP:CD1	2.55	0.42
31:49:145:THR:C	31:49:147:ASP:H	2.23	0.42
41:75:36:GLU:HB3	41:75:39:ARG:HH12	1.84	0.42
50:G5:44:LEU:C	50:G5:46:GLN:H	2.23	0.42
1:13:177:C:H2'	1:13:178:C:H6	1.85	0.41
1:13:177:C:OP2	20:BI:65:LYS:NZ	2.42	0.41
1:13:464:G:C6	1:13:466:C:H5'	2.55	0.41
1:13:501:C:H1'	1:13:549:C:H1'	2.02	0.41
1:13:748:C:H1'	1:13:749:C:OP2	2.19	0.41
1:13:919:A:O5'	1:13:919:A:H8	2.03	0.41
1:13:991:U:C4	1:13:1212:U:H1'	2.54	0.41
1:13:1095:U:P	1:13:1108:G:H1	2.42	0.41
1:13:1316:G:H5"	14:5I:17:LYS:HE3	2.01	0.41
4:3E:148:VAL:HG23	4:3E:181:MET:HB3	2.01	0.41
15:6I:29:VAL:HB	15:6I:81:LEU:HD21	2.02	0.41
18:9I:29:PHE:HD1	18:9I:29:PHE:H	1.68	0.41
25:1H:51:G:H1'	25:1H:119:A:N1	2.34	0.41
25:1H:322:A:P	30:31:168:ARG:HH21	2.43	0.41
25:1H:669:G:H2'	25:1H:669:G:N3	2.34	0.41
25:1H:680:G:H2'	25:1H:681:G:C8	2.55	0.41
25:1H:719:C:H2'	25:1H:720:C:C6	2.54	0.41
25:1H:770:G:OP2	62:1H:3700:HOH:O	2.21	0.41
25:1H:1507:A:H2'	25:1H:1508:A:O4'	2.20	0.41
25:1H:1510:A:H2'	25:1H:1511:A:H8	1.85	0.41
30:31:34:TRP:CD1	37:78:8:PRO:HD3	2.55	0.41
35:58:115:ARG:HA	35:58:118:LYS:HB2	2.02	0.41
44:E8:38:TYR:HE2	53:N8:41:PRO:HD3	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:F8:27:THR:HB	45:F8:80:ILE:HG22	2.02	0.41
47:H8:56:VAL:HA	47:H8:70:LEU:HD12	2.02	0.41
50:K8:2:LYS:HE3	50:K8:6:VAL:HB	2.02	0.41
51:L8:7:LYS:NZ	51:L8:32:GLN:HG3	2.35	0.41
56:Q8:40:GLU:OE2	56:Q8:44:LYS:HE2	2.19	0.41
1:1G:458:C:N4	1:1G:474:G:H1	2.16	0.41
1:1G:1351:U:H2'	1:1G:1352:C:C6	2.56	0.41
2:12:167:PRO:O	2:12:170:GLU:N	2.53	0.41
3:22:180:ALA:HB1	3:22:182:ILE:HG13	2.02	0.41
4:32:31:CYS:O	4:32:35:ARG:HG3	2.20	0.41
4:32:36:ARG:HD2	4:32:38:TYR:OH	2.20	0.41
12:3A:31:ARG:HG2	12:3A:32:GLY:N	2.35	0.41
13:4A:80:ARG:NH1	52:I5:55:ARG:HD3	2.35	0.41
13:4A:83:ASP:OD1	13:4A:83:ASP:N	2.49	0.41
17:8A:68:ARG:O	17:8A:68:ARG:HG3	2.20	0.41
19:AA:66:MET:HE3	19:AA:66:MET:HB2	1.92	0.41
25:14:67:U:H2'	25:14:68:G:C8	2.55	0.41
25:14:185:U:H4'	25:14:218:A:H4'	2.02	0.41
25:14:568:U:P	37:35:36:LYS:HZ1	2.43	0.41
25:14:710:G:H2'	25:14:711:G:H8	1.84	0.41
25:14:778:G:H5"	28:19:48:ARG:HD2	2.02	0.41
25:14:1055:G:N2	25:14:1086:A:O4'	2.53	0.41
25:14:1287:A:C6	25:14:1288:U:N3	2.88	0.41
25:14:1678:G:N2	25:14:1989:G:N2	2.68	0.41
25:14:2578:G:C5	29:29:140:SER:HB2	2.55	0.41
25:14:2695:C:H2'	25:14:2696:U:C6	2.55	0.41
25:14:2859:G:H2'	25:14:2860:A:C8	2.54	0.41
26:1J:82:G:H8	26:1J:82:G:O5'	2.03	0.41
28:19:245:PRO:HA	28:19:246:PRO:HD3	1.96	0.41
29:29:5:LEU:HD23	29:29:197:ILE:HG12	2.01	0.41
29:29:39:PRO:HG3	29:29:45:THR:OG1	2.20	0.41
31:49:120:LEU:HB2	31:49:179:PRO:O	2.20	0.41
37:35:21:ARG:O	37:35:28:GLY:HA2	2.20	0.41
39:55:87:TYR:HE2	39:55:117:VAL:HG13	1.85	0.41
41:75:105:LEU:C	41:75:107:ASP:H	2.23	0.41
56:M5:37:SER:O	56:M5:39:LYS:N	2.53	0.41
1:13:35:G:OP1	12:3I:101:VAL:HG11	2.20	0.41
1:13:104:G:OP1	20:BI:21:LYS:NZ	2.49	0.41
1:13:280:C:C2	17:8I:38:ARG:HG3	2.55	0.41
1:13:876:G:H1'	8:7E:11:THR:HG21	2.02	0.41
1:13:939:G:H5"	7:6E:102:ARG:CZ	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:999:U:O2'	25:14:2137:C:H5"	2.20	0.41
1:13:1003:G:H1	1:13:1037:C:H42	1.68	0.41
1:13:1112:C:H1'	3:2E:179:ARG:HH11	1.85	0.41
1:13:1159:U:H1'	1:13:1182:G:N2	2.34	0.41
1:13:1429:C:H2'	1:13:1430:C:C6	2.55	0.41
4:3E:100:ARG:NH2	4:3E:137:SER:HB3	2.35	0.41
4:3E:173:TRP:CE3	4:3E:189:PRO:HB3	2.55	0.41
6:5E:61:LEU:HD23	6:5E:63:TYR:HE1	1.84	0.41
25:1H:270(I):G:H22	25:1H:270(R):G:H1'	1.85	0.41
25:1H:708:C:H5'	25:1H:709:U:OP2	2.20	0.41
25:1H:828:U:H4'	25:1H:831:G:N1	2.35	0.41
25:1H:2227:A:H2'	25:1H:2228:G:O4'	2.19	0.41
25:1H:2405:G:H8	25:1H:2405:G:O5'	2.03	0.41
25:1H:2846:G:OP2	41:B8:54:ARG:HB2	2.20	0.41
26:16:81:G:C2	26:16:82:G:N7	2.88	0.41
28:11:61:LEU:HD13	28:11:61:LEU:HA	1.84	0.41
28:11:112:GLN:H	28:11:115:GLN:HE22	1.68	0.41
30:31:81:PRO:CB	30:31:89:VAL:HG22	2.49	0.41
32:51:28:GLY:HA3	32:51:79:VAL:HB	2.02	0.41
35:58:34:LEU:HD13	35:58:34:LEU:HA	1.85	0.41
41:B8:108:ARG:HA	41:B8:111:ARG:CZ	2.50	0.41
41:B8:117:ASP:O	41:B8:121:ILE:HG13	2.19	0.41
42:C8:59:ARG:O	42:C8:63:VAL:HG23	2.20	0.41
47:H8:10:ARG:NH2	47:H8:37:VAL:O	2.53	0.41
47:H8:53:ILE:HG22	47:H8:71:VAL:HG13	2.02	0.41
48:I8:40:GLN:NE2	48:I8:43:THR:HA	2.35	0.41
51:L8:52:HIS:CD2	51:L8:53:LEU:HG	2.55	0.41
55:P8:30:VAL:O	55:P8:34:ARG:HG3	2.20	0.41
1:1G:201:C:O2'	1:1G:208:U:P	2.78	0.41
1:1G:256:U:OP1	17:8A:17:LYS:NZ	2.43	0.41
1:1G:374:A:C6	1:1G:375:U:C4	3.08	0.41
1:1G:559:A:H4'	1:1G:560:U:C5'	2.50	0.41
1:1G:1211:U:H4'	1:1G:1212:U:OP1	2.19	0.41
1:1G:1298:C:H5	7:62:114:ARG:HD2	1.85	0.41
1:1G:1502:A:H5"	1:1G:1504:G:C8	2.55	0.41
4:32:21:LEU:HD23	4:32:21:LEU:HA	1.89	0.41
6:52:47:ARG:HG3	6:52:57:GLN:HG2	2.02	0.41
6:52:50:TYR:OH	18:9A:74:ARG:O	2.32	0.41
15:6A:82:ILE:HD11	15:6A:88:ARG:HB2	2.01	0.41
25:14:863:A:O2'	25:14:864:G:H5'	2.20	0.41
25:14:1106:G:H3'	25:14:1107:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1442:G:H5'	25:14:1628:G:H5"	2.02	0.41
25:14:2403:C:H2'	25:14:2404:C:C6	2.55	0.41
25:14:2774:C:H2'	25:14:2775:A:O4'	2.19	0.41
33:69:3:VAL:O	33:69:18:VAL:HA	2.20	0.41
38:45:98:LYS:HB3	38:45:99:PRO:HD2	2.02	0.41
38:45:134:ARG:HH21	47:D5:122:ARG:CZ	2.33	0.41
39:55:54:LEU:HG	39:55:62:ALA:HB1	2.02	0.41
45:B5:12:VAL:HG12	45:B5:29:TRP:NE1	2.35	0.41
51:H5:19:GLN:O	51:H5:23:LEU:HD12	2.20	0.41
52:I5:40:HIS:HA	52:I5:44:THR:HB	2.02	0.41
54:K5:27:LYS:O	54:K5:28:ARG:HB2	2.20	0.41
1:13:17:U:H1'	1:13:1080:A:H1'	2.02	0.41
1:13:91:C:H2'	1:13:92:G:O4'	2.20	0.41
1:13:854:G:O6	62:13:1809:HOH:O	2.22	0.41
1:13:977:A:H4'	1:13:981:U:O2	2.20	0.41
1:13:1409:C:H2'	1:13:1410:G:C8	2.55	0.41
25:1H:275:G:H4'	25:1H:275:G:OP1	2.19	0.41
25:1H:319:C:H2'	25:1H:320:A:O4'	2.21	0.41
25:1H:580:C:H2'	25:1H:581:C:C6	2.54	0.41
25:1H:631:A:O2'	37:78:67:MET:HB3	2.19	0.41
25:1H:767:U:H2'	25:1H:768:G:C8	2.56	0.41
25:1H:869:G:H1	25:1H:908:C:H42	1.67	0.41
25:1H:1025:G:C4	25:1H:1135:C:H1'	2.56	0.41
25:1H:1497:U:H5"	25:1H:1498:C:C5	2.55	0.41
25:1H:1978:A:H2'	25:1H:1979:C:O4'	2.21	0.41
25:1H:2636:U:HO2'	29:21:44:TYR:HH	1.64	0.41
25:1H:2663:G:H3'	25:1H:2664:G:H8	1.85	0.41
25:1H:2849:U:H4'	25:1H:2868:A:C2	2.55	0.41
25:1H:2867:G:O2'	25:1H:2868:A:C8	2.73	0.41
26:16:103:U:O3'	47:H8:72:ARG:HD3	2.21	0.41
31:41:161:THR:HG21	31:41:172:LEU:HD22	2.01	0.41
31:41:174:GLU:HG2	31:41:180:PHE:CD1	2.54	0.41
32:51:24:VAL:HG23	32:51:35:VAL:HB	2.02	0.41
44:E8:35:ILE:HG23	53:N8:28:PRO:HD2	2.03	0.41
45:F8:41:ASN:OD1	45:F8:41:ASN:N	2.53	0.41
46:G8:4:LYS:HD3	46:G8:4:LYS:HA	1.71	0.41
53:N8:40:LYS:HD3	53:N8:46:CYS:SG	2.60	0.41
54:O8:6:ARG:HA	54:O8:6:ARG:HH11	1.85	0.41
1:1G:1126:U:H3'	1:1G:1280:A:C8	2.55	0.41
1:1G:1249:C:O2'	9:82:73:GLN:OE1	2.37	0.41
1:1G:1301:U:O2	1:1G:1301:U:H2'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:96:LEU:HG	4:32:139:ARG:NH1	2.34	0.41
6:52:7:ASN:OD1	6:52:62:TRP:HD1	2.04	0.41
15:6A:26:GLU:OE2	15:6A:77:ARG:HD2	2.20	0.41
16:7A:45:THR:HG23	16:7A:48:TRP:HB3	2.02	0.41
25:14:274:G:N2	25:14:363:G:C2	2.88	0.41
25:14:321:G:H5'	30:39:134:GLY:O	2.20	0.41
25:14:776:G:N7	25:14:793:A:O2'	2.53	0.41
25:14:957:A:H5"	38:45:14:ARG:HH22	1.86	0.41
25:14:1729:A:N7	25:14:1731:G:C2	2.89	0.41
25:14:2577:A:O4'	53:J5:3:LYS:HB2	2.20	0.41
25:14:2875:C:O2'	41:75:2:ASN:OD1	2.23	0.41
29:29:41:LYS:HE3	29:29:41:LYS:HB2	1.91	0.41
29:29:108:SER:HB3	29:29:165:VAL:HG21	2.02	0.41
30:39:122:LYS:HD2	30:39:191:ARG:HG2	2.01	0.41
30:39:170:LEU:HD23	30:39:170:LEU:HA	1.95	0.41
33:69:26:ALA:HB1	33:69:31:LEU:HD13	2.01	0.41
33:69:125:GLU:HA	33:69:141:LYS:HB3	2.02	0.41
37:35:77:ARG:HB2	37:35:78:PRO:HD2	2.03	0.41
39:55:65:LEU:O	39:55:68:ARG:HB2	2.20	0.41
43:95:17:GLY:N	43:95:96:ILE:O	2.48	0.41
44:A5:58:ALA:HB1	44:A5:64:MET:HE2	2.02	0.41
46:C5:54:LYS:HD2	46:C5:55:TYR:CD1	2.56	0.41
47:D5:7:ALA:HB3	47:D5:59:LEU:HD12	2.02	0.41
47:D5:102:LEU:HB3	47:D5:139:VAL:HB	2.01	0.41
1:13:468:A:H4'	16:7I:80:PHE:O	2.21	0.41
1:13:687:A:H4'	1:13:688:G:O5'	2.20	0.41
1:13:792:A:H2'	1:13:792:A:N3	2.35	0.41
1:13:859:A:OP2	1:13:869:G:N2	2.47	0.41
1:13:1187:G:H4'	9:8E:111:ARG:NH1	2.35	0.41
4:3E:13:ARG:HB2	4:3E:38:TYR:O	2.20	0.41
16:7I:6:LEU:HB3	16:7I:17:TYR:CD1	2.54	0.41
17:8I:27:PHE:CZ	17:8I:36:ILE:HD11	2.55	0.41
19:AI:80:TYR:O	19:AI:81:ARG:C	2.59	0.41
25:1H:270(R):G:H2'	25:1H:270(S):G:C8	2.56	0.41
25:1H:384:U:H2'	25:1H:385:C:H6	1.85	0.41
25:1H:476:G:N2	25:1H:478:A:H3'	2.35	0.41
25:1H:518:G:H4'	44:E8:18:ARG:NH1	2.35	0.41
25:1H:668:G:H2'	25:1H:670:A:H62	1.85	0.41
25:1H:1065:U:H1'	25:1H:1074:G:N2	2.35	0.41
25:1H:1331:A:C6	25:1H:1333:C:C2	3.09	0.41
25:1H:1512:G:H2'	25:1H:1513:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1841:U:H2'	25:1H:1842:G:C8	2.56	0.41
30:31:51:THR:HB	30:31:88:VAL:HG21	2.02	0.41
34:38:18:GLU:OE1	34:38:66:LEU:HD13	2.20	0.41
34:38:27:VAL:HG22	34:38:111:LEU:N	2.34	0.41
56:Q8:4:MET:HE3	56:Q8:4:MET:HB2	1.91	0.41
1:1G:59:A:H1'	1:1G:354:G:N2	2.34	0.41
1:1G:664:G:OP1	18:9A:64:ARG:NH2	2.37	0.41
1:1G:714:G:H2'	1:1G:715:A:C8	2.55	0.41
1:1G:757:U:H2'	1:1G:758:G:O4'	2.20	0.41
1:1G:981:U:H5'	14:5A:21:TYR:CE2	2.55	0.41
1:1G:1075:C:H4'	2:12:175:ARG:HH12	1.86	0.41
1:1G:1418:A:H2	25:14:1948:G:N3	2.18	0.41
8:72:124:ALA:O	8:72:128:GLY:N	2.52	0.41
13:4A:105:THR:OG1	13:4A:106:ASN:N	2.52	0.41
19:AA:7:LYS:HE3	19:AA:7:LYS:H	1.86	0.41
19:AA:36:ARG:HG3	19:AA:72:GLY:N	2.31	0.41
25:14:273(F):C:H2'	25:14:274:G:H5"	2.02	0.41
25:14:293:U:O2	25:14:348:G:N2	2.53	0.41
25:14:527:C:O5'	25:14:2779:U:H5	2.03	0.41
25:14:957:A:H4'	38:45:74:TYR:OH	2.20	0.41
25:14:1405:U:H2'	25:14:1406:U:C6	2.54	0.41
25:14:1449:A:H8	25:14:1449:A:OP2	2.03	0.41
25:14:1771:C:O2'	25:14:1786:A:O4'	2.38	0.41
25:14:2611:U:C5	53:J5:3:LYS:HG2	2.54	0.41
28:19:39:LYS:HE2	28:19:39:LYS:HB3	1.78	0.41
30:39:107:LYS:HA	30:39:107:LYS:HD3	1.76	0.41
39:55:63:ARG:HA	39:55:80:PHE:CZ	2.55	0.41
40:65:15:ARG:NH2	40:65:90:GLY:HA2	2.36	0.41
43:95:21:ARG:NE	43:95:91:TYR:HB3	2.35	0.41
52:I5:22:ILE:O	52:I5:23:GLU:HB2	2.20	0.41
1:13:186(E):C:H2'	1:13:186(F):C:O4'	2.20	0.41
1:13:1073:U:O2'	2:1E:104:ASN:ND2	2.53	0.41
1:13:1250:A:H2	1:13:1370:G:H1'	1.86	0.41
2:1E:103:THR:N	2:1E:176:GLU:OE1	2.40	0.41
4:3E:105:VAL:HG13	4:3E:110:PHE:HB2	2.01	0.41
6:5E:89:MET:HG3	18:9I:76:LEU:HD11	2.02	0.41
8:7E:7:ALA:HB2	8:7E:85:ARG:HD3	2.02	0.41
12:3I:19:SER:OG	12:3I:20:LYS:N	2.54	0.41
19:AI:71:LEU:HD23	19:AI:71:LEU:HA	1.91	0.41
25:1H:71:A:H2	45:F8:31:HIS:NE2	2.19	0.41
25:1H:272:G:H2'	25:1H:273:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1206:G:C6	25:1H:1207:C:C4	3.09	0.41
25:1H:1432:C:H2'	25:1H:1433:U:O4'	2.20	0.41
25:1H:1825:A:H2'	25:1H:1826:G:C8	2.55	0.41
25:1H:1885:A:H2'	25:1H:1886:C:O4'	2.20	0.41
25:1H:2195:C:H3'	62:1H:3660:HOH:O	2.19	0.41
25:1H:2285:C:H5	54:O8:27:LYS:HD2	1.85	0.41
25:1H:2466:C:N4	25:1H:2484:G:H1	2.17	0.41
27:71:163:PHE:HB3	27:71:192:PHE:HE1	1.86	0.41
28:11:79:VAL:HB	28:11:114:GLY:H	1.85	0.41
28:11:242:ARG:HE	28:11:242:ARG:H	1.69	0.41
29:21:117:MET:O	29:21:118:LYS:HB3	2.19	0.41
34:38:30:GLN:H	34:38:30:GLN:CD	2.23	0.41
41:B8:67:SER:O	41:B8:67:SER:OG	2.38	0.41
41:B8:136:GLN:H	41:B8:136:GLN:HG2	1.65	0.41
43:D8:44:LYS:HE2	43:D8:44:LYS:HB3	1.93	0.41
49:J8:82:LEU:HB2	49:J8:83:GLU:H	1.69	0.41
1:1G:164:U:H2'	1:1G:165:C:C6	2.56	0.41
1:1G:310:G:OP1	16:7A:27:LYS:HD3	2.20	0.41
1:1G:482:A:H2'	1:1G:482:A:N3	2.35	0.41
1:1G:661:G:H1	1:1G:744:C:H42	1.69	0.41
1:1G:688:G:H2'	1:1G:689:C:C6	2.55	0.41
1:1G:773:G:H1	1:1G:806:C:H42	1.68	0.41
1:1G:878:G:H5'	8:72:89:PRO:HG2	2.03	0.41
1:1G:947:G:O2'	1:1G:1306:A:O2'	2.15	0.41
1:1G:1442:G:C6	1:1G:1446:A:C5	3.08	0.41
2:12:121:LEU:HD22	2:12:127:ILE:HG12	2.02	0.41
5:42:118:ILE:HD12	5:42:118:ILE:HA	1.95	0.41
7:62:102:ARG:HG2	7:62:106:GLN:NE2	2.36	0.41
19:AA:53:ASN:HB2	19:AA:77:THR:HG22	2.03	0.41
25:14:78:A:H2'	25:14:79:G:H8	1.85	0.41
25:14:219:G:N3	25:14:234:C:O2'	2.49	0.41
25:14:747:U:O2	25:14:2014:A:H1'	2.21	0.41
25:14:997:G:OP1	42:85:93:LYS:N	2.52	0.41
25:14:1352:U:O2	25:14:1570:A:H2	2.04	0.41
25:14:2298:A:C2	25:14:2299:G:H1'	2.55	0.41
25:14:2320:A:H61	25:14:2333:A:H2'	1.85	0.41
25:14:2694:G:H2'	25:14:2695:C:H6	1.85	0.41
26:1J:6:C:H2'	26:1J:7:G:C8	2.55	0.41
26:1J:11:C:OP2	26:1J:12:C:N4	2.42	0.41
30:39:153:SER:N	30:39:190:GLU:OE2	2.35	0.41
37:35:8:PRO:HG2	37:35:13:ASN:OD1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:A5:36:LEU:HD13	44:A5:48:ALA:HA	2.02	0.41
45:B5:72:LYS:HG2	45:B5:73:ARG:O	2.21	0.41
52:I5:14:ILE:HA	52:I5:30:GLU:HA	2.01	0.41
1:13:35:G:C6	1:13:36:C:N4	2.89	0.41
1:13:438:G:H3'	1:13:493:G:H1	1.85	0.41
1:13:1077:G:N2	1:13:1079:G:H3'	2.36	0.41
9:8E:40:LEU:HD23	9:8E:40:LEU:HA	1.86	0.41
19:AI:64:GLU:H	19:AI:64:GLU:HG2	1.60	0.41
25:1H:48:G:H22	25:1H:177:G:H5'	1.85	0.41
25:1H:372:G:O2'	25:1H:373:U:P	2.79	0.41
25:1H:873:G:H1	25:1H:904:C:N4	2.17	0.41
25:1H:2035:G:H4'	25:1H:2036:C:OP2	2.20	0.41
25:1H:2286:A:P	54:O8:28:ARG:HH21	2.44	0.41
25:1H:2684:U:H3	25:1H:2725:A:H61	1.69	0.41
25:1H:2762:G:H5'	25:1H:2763:G:OP2	2.21	0.41
25:1H:2853:C:H42	25:1H:2864:G:H1	1.67	0.41
27:71:5:LYS:NZ	27:71:8:ARG:HH12	2.18	0.41
27:71:15:ASP:HB3	27:71:18:LYS:CB	2.50	0.41
31:41:173:LEU:O	31:41:178:PHE:HB2	2.21	0.41
33:61:130:TYR:C	33:61:131:LYS:HD2	2.41	0.41
41:B8:78:LEU:HD22	41:B8:78:LEU:HA	1.85	0.41
42:C8:82:GLY:HA3	42:C8:113:ALA:HB1	2.02	0.41
50:K8:8:LYS:O	50:K8:12:GLU:HB2	2.20	0.41
50:K8:13:ALA:O	50:K8:16:LEU:HB3	2.19	0.41
54:O8:27:LYS:NZ	54:O8:27:LYS:HB2	2.35	0.41
56:Q8:6:THR:HG23	56:Q8:63:PRO:HD2	2.03	0.41
1:1G:562:C:H4'	1:1G:563:A:O5'	2.21	0.41
1:1G:663:A:H2'	1:1G:664:G:O4'	2.20	0.41
1:1G:718:G:H5'	11:2A:117:ASN:ND2	2.35	0.41
1:1G:779:C:O5'	62:1G:1816:HOH:O	2.22	0.41
1:1G:980:C:O2	14:5A:19:ARG:HA	2.21	0.41
1:1G:1190:G:OP1	3:22:5:ILE:HG23	2.21	0.41
1:1G:1502:A:H2	1:1G:1505:G:N1	2.19	0.41
4:32:3:ARG:H	4:32:3:ARG:HG3	1.64	0.41
4:32:172:PRO:HB2	4:32:187:ARG:HH22	1.85	0.41
8:72:29:SER:HB3	8:72:32:LYS:CG	2.50	0.41
20:BA:9:ASN:O	20:BA:12:ALA:N	2.51	0.41
25:14:883:G:O2'	25:14:884:C:OP1	2.27	0.41
25:14:1359:A:O2'	25:14:1360:A:OP1	2.38	0.41
25:14:1536:A:H8	25:14:1537:C:H1'	1.86	0.41
25:14:1536:A:H3'	25:14:1537:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1983:C:OP1	62:14:3563:HOH:O	2.22	0.41
25:14:2101:G:N2	25:14:2189:U:O2	2.53	0.41
25:14:2119:A:C2	25:14:2172:U:H1'	2.55	0.41
25:14:2478:A:H3'	25:14:2479:G:C8	2.56	0.41
25:14:2602:A:OP2	25:14:2603:G:H5"	2.21	0.41
25:14:2688:U:H6	25:14:2721:A:H62	1.68	0.41
28:19:228:PRO:HD3	28:19:235:GLY:CA	2.51	0.41
33:69:66:GLU:HA	33:69:69:LYS:HB2	2.03	0.41
33:69:121:LYS:HB3	33:69:121:LYS:HE3	1.79	0.41
33:69:131:LYS:HB3	33:69:132:PRO:HA	2.02	0.41
37:35:97:PRO:HD3	37:35:126:VAL:O	2.20	0.41
38:45:19:GLY:O	38:45:98:LYS:HB3	2.21	0.41
41:75:55:ASN:ND2	41:75:58:ASN:HD21	2.18	0.41
43:95:61:VAL:HA	43:95:94:LEU:HD23	2.01	0.41
45:B5:50:LYS:HB3	45:B5:84:ALA:HB2	2.03	0.41
45:B5:55:ASN:HB2	45:B5:80:ILE:HG13	2.02	0.41
46:C5:37:VAL:N	46:C5:67:LEU:O	2.44	0.41
1:13:17:U:H2'	1:13:18:C:C6	2.55	0.41
1:13:244:U:H4'	1:13:245:C:C5'	2.50	0.41
1:13:694:A:H5"	11:2I:53:SER:CB	2.50	0.41
1:13:701:C:O2'	1:13:702:A:OP2	2.36	0.41
3:2E:3:ASN:OD1	3:2E:3:ASN:N	2.53	0.41
6:5E:19:LEU:HD11	6:5E:59:TYR:CE2	2.55	0.41
8:7E:100:ILE:HA	8:7E:101:PRO:HD3	1.89	0.41
9:8E:95:LYS:H	9:8E:95:LYS:HD3	1.84	0.41
10:1I:22:LYS:HB3	10:1I:22:LYS:HE3	1.71	0.41
12:3I:55:VAL:O	12:3I:62:GLU:HA	2.21	0.41
13:4I:49:THR:HG22	13:4I:51:ALA:H	1.85	0.41
25:1H:338:G:N2	25:1H:339:U:H1'	2.35	0.41
25:1H:707:G:H1	25:1H:724:U:H3	1.67	0.41
25:1H:849:A:H61	25:1H:929:G:H1'	1.85	0.41
25:1H:977:G:C4	25:1H:978:G:C8	3.09	0.41
25:1H:2592:G:H2'	25:1H:2593:U:O4'	2.20	0.41
28:11:72:LYS:HE3	28:11:72:LYS:HB3	1.77	0.41
28:11:95:LEU:HD13	28:11:97:TYR:CE1	2.54	0.41
34:38:4:LYS:O	34:38:7:VAL:HG12	2.21	0.41
34:38:6:ASN:O	34:38:8:GLU:N	2.54	0.41
35:58:115:ARG:HA	35:58:118:LYS:HD2	2.03	0.41
38:88:72:LYS:HA	38:88:73:PRO:HD3	1.94	0.41
44:E8:24:ILE:O	44:E8:27:LYS:HG3	2.21	0.41
47:H8:91:LEU:HD13	47:H8:91:LEU:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:J8:91:LYS:O	49:J8:94:LEU:N	2.45	0.41
50:K8:20:GLU:HA	50:K8:23:LYS:HB3	2.03	0.41
54:O8:13:CYS:O	54:O8:21:TYR:HA	2.20	0.41
1:1G:552:U:H5'	12:3A:83:ARG:HH21	1.85	0.41
1:1G:627:G:H2'	1:1G:628:G:H8	1.86	0.41
1:1G:1240:U:H1'	7:62:42:ILE:HD11	2.02	0.41
1:1G:1254:C:OP1	10:1A:45:ARG:HA	2.19	0.41
1:1G:1509:C:H2'	1:1G:1510:U:O4'	2.21	0.41
1:1G:1517:G:C3'	1:1G:1518:MA6:H8	2.51	0.41
6:52:62:TRP:CZ2	6:52:64:GLN:HB2	2.54	0.41
13:4A:93:ARG:HA	13:4A:93:ARG:HD3	1.95	0.41
25:14:394:A:H5'	25:14:395:U:OP2	2.21	0.41
25:14:448:U:H3'	25:14:449:A:H8	1.85	0.41
25:14:845:G:H21	25:14:933:A:H61	1.69	0.41
25:14:999:U:H3'	25:14:1154:G:O6	2.20	0.41
25:14:1296:G:OP1	25:14:2709:G:O2'	2.23	0.41
25:14:1816:G:O6	28:19:35:LYS:NZ	2.52	0.41
28:19:264:LYS:HE2	28:19:266:SER:HB3	2.03	0.41
29:29:107:THR:O	29:29:190:GLY:HA2	2.21	0.41
29:29:182:LEU:HD12	29:29:182:LEU:HA	1.83	0.41
41:75:107:ASP:O	41:75:111:ARG:NH2	2.51	0.41
43:95:57:VAL:HG13	43:95:99:ILE:HG12	2.02	0.41
44:A5:67:ASP:OD1	44:A5:67:ASP:N	2.42	0.41
47:D5:119:GLU:H	47:D5:119:GLU:HG3	1.56	0.41
1:13:106:C:O2	1:13:379:C:H4'	2.21	0.41
1:13:439:A:OP2	1:13:493:G:N2	2.53	0.41
1:13:1095:U:OP1	1:13:1108:G:N2	2.53	0.41
1:13:1137:C:H1'	1:13:1138:G:N2	2.36	0.41
1:13:1159:U:H1'	1:13:1182:G:H21	1.86	0.41
4:3E:31:CYS:SG	4:3E:33:MET:N	2.94	0.41
6:5E:33:TYR:HB2	6:5E:75:LEU:HD12	2.01	0.41
7:6E:20:ASP:O	7:6E:24:THR:OG1	2.39	0.41
22:1K:35:C:H2'	22:1K:36:A:C8	2.55	0.41
22:3K:69:C:C4	22:3K:70:C:C4	3.08	0.41
24:4K:16:A:H2'	24:4K:17:U:O4'	2.21	0.41
25:1H:218:A:H8	25:1H:218:A:O5'	2.04	0.41
25:1H:273(D):C:H2'	25:1H:273(E):U:C6	2.56	0.41
25:1H:273(F):C:C3'	25:1H:274:G:H5"	2.46	0.41
25:1H:622:G:OP2	37:78:108:LYS:HD3	2.21	0.41
25:1H:1918:A:O2'	25:1H:1920:OMC:N4	2.53	0.41
25:1H:2751:G:C6	32:51:3:ARG:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:71:10:LEU:HD23	27:71:219:GLY:HA2	2.02	0.41
29:21:51:PHE:O	29:21:75:VAL:HB	2.21	0.41
30:31:195:ASP:OD1	30:31:195:ASP:N	2.54	0.41
34:38:4:LYS:HG2	34:38:7:VAL:HB	2.03	0.41
36:68:25:LEU:HB2	36:68:38:VAL:O	2.21	0.41
37:78:60:MET:HE2	37:78:60:MET:HB3	1.93	0.41
39:98:100:LEU:HA	39:98:100:LEU:HD13	1.86	0.41
41:B8:12:SER:O	41:B8:15:VAL:HG22	2.20	0.41
46:G8:54:LYS:NZ	46:G8:54:LYS:HB3	2.35	0.41
47:H8:58:VAL:HA	47:H8:68:PRO:HA	2.02	0.41
53:N8:25:LEU:HD23	53:N8:25:LEU:HA	1.96	0.41
1:1G:186:C:H1'	20:BA:81:LYS:HZ3	1.86	0.41
1:1G:468:A:O2'	16:7A:82:GLN:HG2	2.20	0.41
1:1G:482:A:H5'	1:1G:483:C:OP2	2.21	0.41
1:1G:882:C:H41	12:3A:6:GLN:HE22	1.68	0.41
1:1G:929:G:H5'	1:1G:1534:A:OP2	2.20	0.41
1:1G:1035:A:O5'	1:1G:1035:A:H8	2.04	0.41
1:1G:1176:A:H62	1:1G:1177:G:N2	2.18	0.41
5:42:48:ALA:HB1	5:42:49:PRO:HD2	2.03	0.41
5:42:153:LYS:H	8:72:64:LYS:HZ2	1.69	0.41
7:62:70:LYS:O	7:62:138:LYS:HE3	2.21	0.41
9:82:77:ILE:O	9:82:81:ILE:HG12	2.21	0.41
10:1A:12:ASP:O	10:1A:16:LEU:HB2	2.21	0.41
13:4A:56:LEU:HD22	13:4A:56:LEU:HA	1.88	0.41
17:8A:10:VAL:HG13	17:8A:19:VAL:HB	2.01	0.41
25:14:459:U:OP2	55:L5:39:ARG:NH1	2.54	0.41
25:14:522:G:C6	25:14:523:C:C4	3.09	0.41
25:14:656:G:H2'	25:14:657:U:O4'	2.21	0.41
25:14:883:G:H1	25:14:893:C:N4	2.19	0.41
25:14:932:G:H4'	25:14:933:A:O5'	2.20	0.41
25:14:1348:G:H2'	25:14:1349:A:H5"	2.02	0.41
25:14:1791:A:H3'	25:14:1792:G:H8	1.85	0.41
25:14:2291:U:OP1	25:14:2381:C:H5'	2.21	0.41
25:14:2299:G:N1	25:14:2318:G:H8	2.18	0.41
25:14:2699:C:H2'	25:14:2700:C:O4'	2.21	0.41
26:1J:42:C:O2	31:49:93:THR:HB	2.21	0.41
26:1J:65:C:N4	26:1J:108:C:H2'	2.36	0.41
28:19:176:ARG:HA	28:19:182:LEU:HD22	2.01	0.41
29:29:107:THR:HA	29:29:163:GLU:O	2.21	0.41
29:29:163:GLU:O	29:29:165:VAL:HG23	2.21	0.41
30:39:176:LEU:HD23	30:39:181:LEU:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:39:183:VAL:O	30:39:187:VAL:HG23	2.20	0.41
31:49:133:LEU:HD23	31:49:157:ILE:HB	2.02	0.41
40:65:11:LYS:HD3	40:65:91:PRO:HG3	2.02	0.41
41:75:19:LEU:H	41:75:19:LEU:HG	1.67	0.41
41:75:96:ARG:HG3	41:75:97:ALA:H	1.86	0.41
41:75:120:ARG:HG2	41:75:123:GLN:NE2	2.36	0.41
45:B5:54:VAL:HG13	45:B5:81:VAL:HG12	2.02	0.41
47:D5:106:GLY:HA2	47:D5:109:ALA:HB3	2.03	0.41
47:D5:145:GLU:HG2	47:D5:146:ILE:N	2.35	0.41
1:13:175:C:H2'	1:13:176:C:H6	1.85	0.41
1:13:309:G:H2'	1:13:310:G:C8	2.54	0.41
1:13:548:G:OP1	4:3E:73:ARG:NH2	2.54	0.41
1:13:563:A:H2	12:3I:12:ARG:NH1	2.19	0.41
1:13:719:C:O2'	18:9I:49:LYS:HB3	2.21	0.41
1:13:765:G:H22	1:13:812:C:H2'	1.85	0.41
1:13:954:G:H2'	1:13:955:U:C6	2.56	0.41
1:13:1003:G:H2'	1:13:1004:A:H5'	2.03	0.41
1:13:1296:C:H5"	1:13:1297:C:OP2	2.21	0.41
1:13:1406:U:H3'	1:13:1407:5MC:HM51	2.01	0.41
1:13:1448:C:N3	1:13:1455:G:N2	2.62	0.41
3:2E:29:TYR:O	3:2E:33:LEU:HB3	2.20	0.41
3:2E:76:VAL:HG21	3:2E:103:VAL:HG11	2.01	0.41
3:2E:188:LEU:HD13	3:2E:188:LEU:HA	1.92	0.41
5:4E:6:PHE:HE1	5:4E:36:ASP:HB3	1.84	0.41
6:5E:41:GLU:O	6:5E:43:LEU:HG	2.20	0.41
7:6E:24:THR:HA	7:6E:27:ILE:HG22	2.03	0.41
8:7E:14:ARG:NE	8:7E:83:ILE:O	2.39	0.41
8:7E:32:LYS:O	8:7E:35:ILE:HG13	2.21	0.41
9:8E:8:GLY:HA3	9:8E:76:ALA:O	2.21	0.41
10:1I:44:VAL:HG22	10:1I:66:ARG:HG2	2.02	0.41
12:3I:114:ARG:HB3	12:3I:119:THR:HB	2.03	0.41
13:4I:37:THR:HG22	13:4I:55:ARG:NE	2.36	0.41
13:4I:81:LEU:HD21	13:4I:88:ARG:HH11	1.86	0.41
17:8I:48:GLU:HB2	17:8I:50:LYS:HD3	2.03	0.41
22:1K:8:U:H2'	22:1K:13:C:N4	2.36	0.41
22:1K:64:G:H2'	22:1K:65:G:C8	2.55	0.41
24:4K:10:G:O2'	24:4K:11:U:OP1	2.32	0.41
25:1H:173:G:H2'	25:1H:174:C:C6	2.56	0.41
25:1H:270(I):G:N2	25:1H:270(R):G:H1'	2.36	0.41
25:1H:442:G:H1'	30:31:48:THR:HG21	2.02	0.41
25:1H:546:C:H5	25:1H:547:A:C2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:644:A:H8	25:1H:644:A:OP2	2.04	0.41
25:1H:855:G:C6	25:1H:856:C:N4	2.89	0.41
25:1H:1062:G:H1'	25:1H:1088:A:C5	2.55	0.41
25:1H:1608:A:H1'	25:1H:1610:A:OP2	2.20	0.41
25:1H:1835:G:N3	25:1H:1835:G:H2'	2.35	0.41
25:1H:1889:A:N1	25:1H:2234:G:H1'	2.36	0.41
25:1H:1922:G:H2'	25:1H:1923:U:C6	2.56	0.41
25:1H:2082:A:H2'	25:1H:2083:G:O4'	2.20	0.41
25:1H:2168:G:N3	25:1H:2168:G:H2'	2.35	0.41
25:1H:2252:G:H2'	25:1H:2253:G:O4'	2.21	0.41
25:1H:2319:G:H4'	25:1H:2320:A:OP1	2.20	0.41
25:1H:2402:C:H4'	25:1H:2402:C:OP1	2.21	0.41
25:1H:2512:C:H2'	25:1H:2513:G:O4'	2.21	0.41
25:1H:2523:G:H2'	25:1H:2524:G:H5"	2.02	0.41
25:1H:2728:U:H2'	25:1H:2729:G:C8	2.56	0.41
26:16:24:G:H4'	26:16:25:A:H8	1.86	0.41
34:38:7:VAL:C	34:38:11:ALA:HB2	2.41	0.41
34:38:27:VAL:HG22	34:38:111:LEU:H	1.86	0.41
34:38:32:LEU:HB2	34:38:33:PRO:HD3	2.03	0.41
34:38:40:LEU:H	34:38:40:LEU:HD12	1.86	0.41
39:98:73:VAL:O	39:98:76:VAL:HG12	2.21	0.41
41:B8:29:ARG:HH12	41:B8:89:VAL:HG11	1.86	0.41
42:C8:58:ARG:HA	42:C8:61:TRP:CE3	2.56	0.41
47:H8:140:ASP:HB3	47:H8:141:VAL:H	1.65	0.41
54:O8:18:ARG:HB2	54:O8:44:ARG:HH12	1.85	0.41
1:1G:15:G:H2'	1:1G:16:A:C8	2.56	0.41
1:1G:110:C:H2'	1:1G:111:G:O4'	2.20	0.41
1:1G:210:U:O2'	1:1G:216:G:O5'	2.38	0.41
1:1G:302:G:O2'	1:1G:556:C:H5"	2.21	0.41
1:1G:656:C:O2	15:6A:28:GLN:NE2	2.51	0.41
1:1G:806:C:H2'	1:1G:807:A:H8	1.86	0.41
1:1G:960:U:O2'	1:1G:961:U:P	2.79	0.41
1:1G:1053:G:O2'	1:1G:1054:C:P	2.78	0.41
1:1G:1116:C:H42	1:1G:1184:G:H1	1.69	0.41
1:1G:1330:U:H4'	13:4A:23:TYR:CD1	2.56	0.41
1:1G:1402:4OC:O5'	1:1G:1402:4OC:H6	2.21	0.41
1:1G:1404:5MC:H2'	1:1G:1405:G:C8	2.56	0.41
1:1G:1411:C:H2'	1:1G:1412:C:C6	2.56	0.41
2:12:29:ALA:O	2:12:32:ILE:HG22	2.21	0.41
2:12:178:ARG:NH1	8:72:68:ARG:HH22	2.19	0.41
3:22:129:ALA:HB3	3:22:132:ARG:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:20:TYR:HA	4:32:26:CYS:SG	2.61	0.41
4:32:121:VAL:O	4:32:134:ASP:HA	2.20	0.41
7:62:27:ILE:HD11	7:62:43:PHE:CE2	2.56	0.41
7:62:113:GLU:H	7:62:113:GLU:HG2	1.69	0.41
8:72:2:LEU:HD23	8:72:2:LEU:HA	1.90	0.41
9:82:9:ARG:HB3	9:82:104:ARG:NH1	2.36	0.41
13:4A:118:ALA:HB1	57:2L:30:G:H5'	2.03	0.41
25:14:68:G:H3'	25:14:69:C:C6	2.56	0.41
25:14:302:C:H42	25:14:315:G:H1	1.68	0.41
25:14:307:G:N2	25:14:310:A:OP2	2.53	0.41
25:14:428:A:H5'	25:14:429:A:OP2	2.21	0.41
25:14:1063:G:C6	25:14:1076:C:N3	2.89	0.41
25:14:1085:A:N3	25:14:1085:A:H2'	2.35	0.41
25:14:1210:A:H4'	25:14:1211:U:O5'	2.17	0.41
25:14:1491:G:H2'	25:14:1492:G:C8	2.56	0.41
25:14:1814:G:O3'	28:19:54:ARG:NH2	2.54	0.41
25:14:1825:A:H2'	25:14:1826:G:C8	2.56	0.41
25:14:1826:G:OP1	28:19:224:ALA:N	2.52	0.41
25:14:2075:U:H2'	25:14:2238:G:N2	2.36	0.41
25:14:2090:G:C6	25:14:2091:U:C4	3.09	0.41
25:14:2538:C:H2'	25:14:2539:C:C6	2.55	0.41
25:14:2611:U:C4	53:J5:3:LYS:HG2	2.55	0.41
25:14:2617:C:C2	25:14:2618:G:C8	3.09	0.41
25:14:2704:C:H2'	25:14:2705:A:O4'	2.21	0.41
25:14:2837:G:N2	39:55:96:ARG:HH12	2.18	0.41
26:1J:21:G:H1	26:1J:62:C:H42	1.67	0.41
26:1J:86:G:H1	26:1J:90:C:H42	1.68	0.41
26:1J:87:G:C2	26:1J:89:G:H5"	2.55	0.41
40:65:20:ARG:O	40:65:20:ARG:HG2	2.20	0.41
40:65:34:HIS:CD2	40:65:54:LEU:HG	2.56	0.41
40:65:93:LYS:HD3	40:65:95:HIS:HB2	2.03	0.41
53:J5:42:PRO:HB2	53:J5:43:HIS:ND1	2.36	0.41
1:13:75:C:H2'	1:13:76:G:O4'	2.21	0.41
1:13:834:C:OP1	18:9I:60:ALA:HB2	2.20	0.41
1:13:949:A:N6	1:13:1232:U:H3	2.19	0.41
1:13:962:C:H2'	1:13:963:G:O4'	2.21	0.41
1:13:972:C:P	10:1I:57:LYS:HZ3	2.43	0.41
1:13:1356:G:H2'	1:13:1357:A:C8	2.56	0.41
1:13:1397:C:N4	24:4K:22:A:H3'	2.35	0.41
2:1E:187:LEU:HD22	2:1E:201:ILE:O	2.21	0.41
5:4E:48:ALA:HB3	5:4E:54:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:59:PHE:HZ	9:8E:88:TYR:CE2	2.39	0.41
16:7I:49:LEU:HD12	16:7I:50:LYS:H	1.86	0.41
25:1H:588:U:H2'	25:1H:589:C:C6	2.56	0.41
25:1H:1020:A:N1	25:1H:1141:U:H2'	2.36	0.41
25:1H:1048:A:P	25:1H:1110:G:H22	2.44	0.41
25:1H:1324:G:C4	25:1H:1328:G:O6	2.74	0.41
25:1H:2008:C:H2'	25:1H:2009:G:H8	1.85	0.41
25:1H:2124:G:O5'	25:1H:2124:G:H8	2.04	0.41
25:1H:2205:C:H2'	25:1H:2206:C:H6	1.86	0.41
25:1H:2238:G:H2'	25:1H:2238:G:N3	2.36	0.41
25:1H:2293:C:H2'	25:1H:2294:C:O4'	2.20	0.41
25:1H:2382:G:H8	25:1H:2382:G:OP2	2.04	0.41
25:1H:2471:C:H2'	25:1H:2472:G:O4'	2.20	0.41
25:1H:2485:G:OP1	38:88:46:GLN:NE2	2.37	0.41
29:21:105:THR:HG23	29:21:166:THR:OG1	2.20	0.41
31:41:99:MET:O	31:41:103:LEU:HB2	2.21	0.41
35:58:48:MET:SD	35:58:48:MET:N	2.90	0.41
37:78:138:LEU:HD21	37:78:144:GLU:HG2	2.03	0.41
53:N8:30:LEU:HD23	53:N8:41:PRO:HB3	2.02	0.41
54:O8:30:THR:HA	54:O8:31:PRO:HA	1.90	0.41
55:P8:13:ALA:O	55:P8:17:GLY:HA3	2.21	0.41
1:1G:184:G:H2'	1:1G:185:A:C8	2.55	0.41
1:1G:232:G:H1'	1:1G:262:A:N1	2.35	0.41
1:1G:627:G:H2'	1:1G:628:G:C8	2.55	0.41
1:1G:920:U:H2'	1:1G:921:U:H6	1.83	0.41
1:1G:1128:C:C4	1:1G:1139:G:N2	2.89	0.41
1:1G:1512:U:H2'	1:1G:1513:A:H8	1.84	0.41
6:52:20:ALA:O	6:52:24:GLU:N	2.53	0.41
18:9A:31:LEU:CD1	18:9A:65:ILE:HD13	2.50	0.41
21:1B:15:ARG:HB2	21:1B:15:ARG:NH1	2.35	0.41
25:14:84:A:N6	25:14:102:G:O2'	2.53	0.41
25:14:152:G:H2'	25:14:153:C:O4'	2.21	0.41
25:14:1164:G:H2'	25:14:1165:U:O4'	2.21	0.41
25:14:1332:G:H8	25:14:1332:G:H2'	1.66	0.41
25:14:1728:G:H5"	25:14:1728:G:N3	2.35	0.41
25:14:2313:C:O4'	31:49:40:ASN:ND2	2.54	0.41
25:14:2366:A:H2'	25:14:2367:G:O4'	2.21	0.41
25:14:2543:G:H21	25:14:2646:C:H5"	1.85	0.41
25:14:2735:G:H2'	25:14:2736:G:C8	2.56	0.41
31:49:75:LYS:O	31:49:76:SER:HB2	2.21	0.41
32:59:6:ARG:O	32:59:65:HIS:NE2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:45:78:PRO:HG3	38:45:87:LYS:HD3	2.03	0.41
47:D5:110:GLY:H	47:D5:142:SER:HB2	1.86	0.41
53:J5:37:LYS:HA	53:J5:37:LYS:HD2	1.86	0.41
1:13:328:C:H4'	1:13:329:A:C5'	2.50	0.40
1:13:438:G:H4'	4:3E:123:HIS:CG	2.56	0.40
1:13:665:A:N3	1:13:732:C:H2'	2.36	0.40
1:13:848:C:H6	1:13:848:C:H3'	1.86	0.40
1:13:1084:G:C5	1:13:1085:U:C4	3.09	0.40
1:13:1309:G:OP2	13:4I:99:ARG:NH2	2.53	0.40
1:13:1309:G:N1	1:13:1328:C:N3	2.52	0.40
1:13:1346:A:H2	1:13:1347:G:H21	1.70	0.40
7:6E:28:ASN:HA	7:6E:31:MET:HE2	2.02	0.40
8:7E:87:SER:HB2	8:7E:93:VAL:HB	2.03	0.40
9:8E:4:TYR:CE1	9:8E:87:GLN:HB2	2.57	0.40
19:AI:19:VAL:HA	19:AI:22:LEU:HD23	2.02	0.40
25:1H:300:A:H2'	25:1H:334:C:H1'	2.02	0.40
25:1H:362:U:O2'	25:1H:363:G:H5'	2.21	0.40
25:1H:734:A:O2'	25:1H:1635:G:H5'	2.21	0.40
25:1H:909:A:C6	25:1H:912:C:C2	3.09	0.40
25:1H:1690:A:H2'	25:1H:1691:C:O4'	2.21	0.40
25:1H:1773:A:N7	25:1H:1829:A:H1'	2.36	0.40
25:1H:2018:G:H21	42:C8:34:LYS:HZ2	1.68	0.40
25:1H:2577:A:H5"	25:1H:2578:G:H5'	2.04	0.40
28:11:215:LEU:H	28:11:215:LEU:HG	1.70	0.40
34:38:39:ALA:HB3	34:38:96:PHE:HE1	1.86	0.40
37:78:95:VAL:HG23	37:78:123:LEU:HD11	2.01	0.40
40:A8:42:ASP:O	40:A8:43:GLU:HB3	2.21	0.40
46:G8:79:CYS:HB2	46:G8:102:CYS:HB3	2.01	0.40
47:H8:6:LYS:HB2	47:H8:6:LYS:HE3	1.88	0.40
1:1G:507:C:H2'	1:1G:508:C:C5	2.56	0.40
1:1G:522:C:OP2	12:3A:66:TYR:OH	2.36	0.40
1:1G:582:U:H2'	1:1G:583:A:C8	2.56	0.40
1:1G:926:G:H3'	1:1G:1505:G:H21	1.85	0.40
1:1G:936:C:H42	1:1G:1379:G:H1	1.68	0.40
1:1G:1095:U:H2'	1:1G:1096:C:O4'	2.21	0.40
1:1G:1290:G:H2'	1:1G:1290:G:N3	2.37	0.40
1:1G:1347:G:O2'	1:1G:1348:U:P	2.79	0.40
1:1G:1370:G:N7	9:82:109:VAL:HG11	2.35	0.40
5:42:141:GLN:O	5:42:143:ARG:HG2	2.21	0.40
8:72:49:GLU:HB3	8:72:62:TYR:OH	2.20	0.40
57:2L:19:G:H22	57:2L:58:A:H2'	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:2L:20:G:N2	57:2L:58:A:N3	2.69	0.40
25:14:300:A:H8	46:C5:84:ARG:HH22	1.69	0.40
25:14:767:U:H2'	25:14:768:G:C8	2.56	0.40
25:14:857:C:H2'	25:14:858:U:C6	2.56	0.40
25:14:1173:G:C8	25:14:1175:U:H5"	2.56	0.40
25:14:1410:G:H2'	25:14:1411:C:C6	2.55	0.40
25:14:1475:G:C2	25:14:1519:G:C2	3.09	0.40
25:14:1496:A:H8	25:14:1577:C:O2'	2.03	0.40
25:14:2030:A:H4'	25:14:2031:A:H8	1.85	0.40
25:14:2113:U:H3'	25:14:2114:A:C4'	2.51	0.40
25:14:2473:U:O2	25:14:2473:U:H2'	2.20	0.40
25:14:2585:U:O2'	25:14:2586:C:P	2.78	0.40
25:14:2882:A:O4'	39:55:96:ARG:CZ	2.69	0.40
28:19:132:PRO:HG3	28:19:190:TYR:CE1	2.57	0.40
30:39:66:PRO:HD2	30:39:70:THR:HG23	2.04	0.40
32:59:95:ARG:HB3	32:59:95:ARG:NH1	2.36	0.40
32:59:175:LYS:HE2	32:59:175:LYS:HB3	1.90	0.40
36:25:76:ALA:HB3	41:75:75:ILE:HB	2.02	0.40
45:B5:29:TRP:CE3	45:B5:78:LYS:HB3	2.56	0.40
1:13:41:G:H2'	1:13:42:G:C8	2.56	0.40
1:13:603:U:H2'	1:13:604:G:H8	1.87	0.40
1:13:703:G:O2'	1:13:704:A:P	2.80	0.40
1:13:812:C:N3	62:13:1832:HOH:O	2.37	0.40
1:13:983:A:H2	1:13:984:C:C6	2.39	0.40
1:13:1033:G:H2'	1:13:1034:G:O4'	2.21	0.40
1:13:1348:U:H5	1:13:1373:G:N2	2.19	0.40
1:13:1364:U:O2'	1:13:1365:G:OP1	2.34	0.40
5:4E:81:GLU:HB3	5:4E:90:VAL:HG22	2.03	0.40
25:1H:524:U:H2'	25:1H:525:U:C6	2.56	0.40
25:1H:598:G:H1	25:1H:659:C:N4	2.18	0.40
25:1H:797:C:H2'	25:1H:798:G:O4'	2.21	0.40
25:1H:892:G:H2'	25:1H:892:G:N3	2.37	0.40
25:1H:1805:U:O2	28:11:50:THR:HB	2.22	0.40
25:1H:2138:C:C4	25:1H:2154:G:N2	2.89	0.40
25:1H:2176:A:H4'	27:71:215:THR:HG21	2.04	0.40
26:16:74:U:H2'	26:16:75:G:O4'	2.20	0.40
26:16:86:G:H1	26:16:90:C:H42	1.68	0.40
28:11:34:VAL:HG22	28:11:61:LEU:HD12	2.03	0.40
29:21:105:THR:HG21	29:21:164:ARG:CZ	2.51	0.40
30:31:168:ARG:H	30:31:168:ARG:HG3	1.65	0.40
35:58:26:LEU:HG	35:58:30:ILE:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:68:70:LYS:HB3	36:68:70:LYS:HE3	1.85	0.40
38:88:27:VAL:HG21	38:88:134:ARG:HA	2.02	0.40
50:K8:55:ARG:O	50:K8:59:ARG:HB2	2.21	0.40
53:N8:40:LYS:HZ3	53:N8:46:CYS:HB3	1.86	0.40
1:1G:457:C:H2'	1:1G:458:C:H6	1.84	0.40
1:1G:1366:C:H2'	1:1G:1367:C:C6	2.56	0.40
5:42:16:THR:O	5:42:16:THR:OG1	2.36	0.40
5:42:79:GLU:HG3	5:42:93:PRO:HD2	2.02	0.40
5:42:100:VAL:HG12	5:42:118:ILE:HG22	2.04	0.40
7:62:69:VAL:HG21	7:62:104:LEU:HD21	2.02	0.40
9:82:10:ARG:HB2	9:82:76:ALA:HB2	2.03	0.40
14:5A:23:ARG:NH1	14:5A:30:ALA:HB2	2.36	0.40
19:AA:84:GLY:C	19:AA:86:GLU:H	2.25	0.40
57:2L:20:G:H3'	57:2L:21:U:C6	2.57	0.40
25:14:674:G:C1'	30:39:74:ARG:HD3	2.50	0.40
25:14:863:A:O3'	26:1J:100:G:N2	2.42	0.40
25:14:890:A:H3'	25:14:892:G:C8	2.56	0.40
25:14:1114:G:N1	25:14:1115:G:O6	2.55	0.40
25:14:1419:A:H61	25:14:1494:A:N6	2.18	0.40
25:14:1614:A:C2	44:A5:93:ALA:HB2	2.56	0.40
25:14:2313:C:H2'	25:14:2314:C:C5	2.56	0.40
25:14:2692:C:H2'	25:14:2693:A:C8	2.56	0.40
25:14:2844:G:H5'	25:14:2845:G:OP2	2.21	0.40
29:29:134:ILE:HA	29:29:137:HIS:CD2	2.56	0.40
32:59:53:GLU:HA	32:59:65:HIS:CE1	2.56	0.40
37:35:11:GLY:C	37:35:13:ASN:H	2.23	0.40
1:13:614:A:N6	1:13:626:U:H3	2.19	0.40
1:13:728:A:C6	15:6I:54:ARG:HD2	2.56	0.40
1:13:926:G:C6	1:13:1505:G:C6	3.10	0.40
1:13:1073:U:H2'	1:13:1074:G:C8	2.52	0.40
1:13:1195:C:C4	1:13:1197:G:C8	3.10	0.40
1:13:1326:C:H2'	1:13:1327:C:C6	2.56	0.40
1:13:1328:C:O2'	13:4I:29:ARG:NH2	2.49	0.40
1:13:1436:U:H2'	1:13:1437:C:O4'	2.21	0.40
2:1E:86:GLU:C	2:1E:89:GLY:H	2.25	0.40
2:1E:100:GLY:N	2:1E:176:GLU:OE2	2.55	0.40
6:5E:50:TYR:CE1	18:9I:77:GLY:HA2	2.57	0.40
7:6E:111:ARG:HD2	7:6E:123:GLU:HB2	2.03	0.40
7:6E:136:LYS:HB3	7:6E:136:LYS:HE3	1.83	0.40
13:4I:3:ARG:HH22	31:41:139:LEU:HD13	1.85	0.40
17:8I:52:LYS:HD2	17:8I:52:LYS:H	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:30:LYS:HD2	20:BI:30:LYS:HA	1.92	0.40
25:1H:250:G:C6	25:1H:251:A:C6	3.09	0.40
25:1H:665:C:H2'	25:1H:666:G:H8	1.86	0.40
25:1H:994:C:O2	43:D8:10:LYS:HE2	2.22	0.40
25:1H:1087:G:O5'	25:1H:1103:A:N6	2.54	0.40
25:1H:1512:G:H2'	25:1H:1513:C:C6	2.55	0.40
25:1H:1820:U:C2	28:11:202:LYS:HB3	2.57	0.40
25:1H:1910:G:H2'	25:1H:1911:PSU:H6	1.86	0.40
25:1H:2030:A:H5"	25:1H:2031:A:OP1	2.20	0.40
25:1H:2075:U:OP2	25:1H:2238:G:O2'	2.37	0.40
25:1H:2702:U:H1'	25:1H:2703:C:C5	2.57	0.40
29:21:50:GLY:HA2	29:21:78:LEU:HD13	2.04	0.40
30:31:168:ARG:HG2	30:31:175:THR:HG21	2.03	0.40
38:88:17:LEU:HB3	38:88:39:PRO:HB2	2.02	0.40
38:88:24:GLY:C	38:88:26:TYR:H	2.24	0.40
46:G8:102:CYS:SG	46:G8:103:GLY:N	2.94	0.40
1:1G:145:G:H1	1:1G:177:C:H42	1.67	0.40
1:1G:245:C:C2	1:1G:284:G:C2	3.10	0.40
1:1G:247:G:C6	1:1G:278:G:C2	3.09	0.40
1:1G:1111:A:H2'	1:1G:1112:C:C6	2.56	0.40
1:1G:1273:G:C4	1:1G:1274:G:C8	3.09	0.40
1:1G:1354:C:H2'	1:1G:1355:G:C8	2.56	0.40
2:12:196:LEU:HD12	2:12:197:VAL:HG23	2.01	0.40
3:22:71:ALA:HB1	3:22:109:PRO:HG3	2.04	0.40
3:22:149:ALA:HA	3:22:201:TYR:O	2.21	0.40
5:42:15:ARG:HG3	5:42:26:PHE:HB3	2.03	0.40
7:62:38:LEU:O	7:62:42:ILE:HG13	2.21	0.40
11:2A:24:SER:N	11:2A:27:ASN:O	2.54	0.40
11:2A:85:ARG:HD3	11:2A:113:PRO:HD3	2.03	0.40
13:4A:14:ARG:HD2	13:4A:42:ALA:HA	2.04	0.40
20:BA:41:ILE:H	20:BA:41:ILE:HG12	1.61	0.40
22:3L:23:G:O2'	22:3L:24:C:P	2.79	0.40
25:14:68:G:H3'	25:14:69:C:H6	1.86	0.40
25:14:270(V):G:H2'	25:14:270(W):G:H8	1.86	0.40
25:14:407:G:H2'	25:14:408:G:H8	1.87	0.40
25:14:959:A:N6	25:14:960:A:N1	2.69	0.40
25:14:992:C:HO2'	43:95:87:HIS:CD2	2.39	0.40
25:14:1257:C:H4'	30:39:83:PHE:CE1	2.56	0.40
25:14:1387:C:C2	25:14:1388:G:C8	3.09	0.40
25:14:1904:G:H2'	25:14:1905:C:O4'	2.22	0.40
25:14:2093:G:H2'	25:14:2094:G:H8	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2584:U:C6	25:14:2585:U:C5	3.09	0.40
25:14:2791:C:H5	25:14:2893:G:H3'	1.87	0.40
25:14:2887:U:H2'	25:14:2888:C:H6	1.86	0.40
26:1J:53:A:H2'	26:1J:54:G:O4'	2.21	0.40
26:1J:86:G:H1	26:1J:90:C:N4	2.20	0.40
26:1J:95:U:C2	26:1J:96:G:N7	2.89	0.40
29:29:55:ASN:HA	29:29:56:PRO:HD3	1.96	0.40
29:29:96:PHE:CD2	29:29:182:LEU:HD21	2.56	0.40
31:49:143:GLU:OE1	31:49:143:GLU:N	2.53	0.40
35:15:16:ILE:HD13	35:15:16:ILE:HA	1.86	0.40
43:95:38:LEU:O	43:95:52:VAL:HB	2.21	0.40
53:J5:41:PRO:HD2	53:J5:44:THR:CG2	2.51	0.40
1:13:440:A:H8	1:13:440:A:OP2	2.04	0.40
1:13:547:A:N3	1:13:548:G:H1'	2.37	0.40
1:13:701:C:H1'	1:13:703:G:C5	2.56	0.40
1:13:960:U:O2	1:13:960:U:H2'	2.22	0.40
1:13:1195:C:N4	1:13:1197:G:N7	2.68	0.40
1:13:1240:U:OP2	7:6E:116:ALA:N	2.54	0.40
1:13:1267:C:O2	21:1F:20:LYS:HD2	2.22	0.40
4:3E:148:VAL:HG12	4:3E:149:ALA:N	2.37	0.40
10:1I:25:GLU:O	10:1I:29:ARG:HB3	2.21	0.40
15:6I:5:LYS:O	15:6I:8:LYS:HB3	2.21	0.40
17:8I:90:ILE:HG22	17:8I:94:ASN:ND2	2.36	0.40
18:9I:40:LEU:H	18:9I:40:LEU:HG	1.59	0.40
20:BI:57:ARG:NH1	20:BI:102:GLY:HA3	2.36	0.40
25:1H:270(C):C:H42	25:1H:270(W):G:H1	1.69	0.40
25:1H:307:G:H8	25:1H:307:G:O5'	2.05	0.40
25:1H:955:C:OP1	38:88:87:LYS:HE2	2.21	0.40
25:1H:978:G:C2	25:1H:986:C:N3	2.89	0.40
25:1H:1045:A:H4'	25:1H:1046:A:O5'	2.21	0.40
25:1H:1141:U:C5	35:58:64:GLY:HA3	2.56	0.40
25:1H:1728:G:H2'	25:1H:1731:G:O6	2.21	0.40
25:1H:1728:G:H5"	25:1H:1728:G:N3	2.37	0.40
25:1H:2031:A:C6	25:1H:2498:C:H1'	2.57	0.40
25:1H:2320:A:H2'	25:1H:2320:A:N3	2.37	0.40
25:1H:2520:C:H2'	25:1H:2521:C:C6	2.57	0.40
25:1H:2790:A:H2'	25:1H:2791:C:H5"	2.02	0.40
26:16:87:G:C2	26:16:89:G:H5"	2.57	0.40
29:21:112:GLY:O	29:21:159:HIS:HA	2.22	0.40
40:A8:59:LYS:HD3	40:A8:60:GLY:N	2.32	0.40
42:C8:5:LYS:H	42:C8:5:LYS:HG3	1.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:E8:18:ARG:NH1	44:E8:76:VAL:O	2.55	0.40
54:O8:7:ILE:O	54:O8:8:LYS:HE3	2.22	0.40
1:1G:109:A:C6	1:1G:327:A:C6	3.10	0.40
1:1G:123:C:OP1	1:1G:312:C:H5'	2.22	0.40
1:1G:1305:G:HO2'	1:1G:1306:A:H8	1.69	0.40
1:1G:1534:A:H2'	1:1G:1535:C:C6	2.57	0.40
2:12:87:ARG:HE	2:12:233:SER:HB2	1.85	0.40
2:12:132:LYS:HD3	2:12:132:LYS:HA	1.87	0.40
4:32:108:LEU:HD13	4:32:174:LEU:HD22	2.04	0.40
9:82:124:GLN:O	9:82:124:GLN:HG3	2.21	0.40
18:9A:37:VAL:HG11	18:9A:78:LEU:HB3	2.03	0.40
25:14:336:C:H4'	46:C5:6:HIS:CD2	2.56	0.40
25:14:1540:G:H2'	25:14:1541:U:O4'	2.21	0.40
25:14:1541:U:H2'	25:14:1542:G:O4'	2.22	0.40
25:14:1795:C:C4	25:14:1796:U:C4	3.10	0.40
25:14:2361:A:O5'	56:M5:27:THR:OG1	2.40	0.40
28:19:36:PRO:HA	28:19:61:LEU:HD12	2.04	0.40
28:19:169:GLU:HG2	28:19:174:ILE:HD11	2.04	0.40
31:49:166:ASP:OD1	31:49:166:ASP:N	2.53	0.40
35:15:19:GLU:O	35:15:21:LYS:HE3	2.22	0.40
38:45:42:ILE:HD13	38:45:97:VAL:HB	2.02	0.40
39:55:78:LYS:O	39:55:83:ILE:HG13	2.21	0.40
45:B5:48:LYS:N	45:B5:48:LYS:HD3	2.37	0.40
47:D5:126:VAL:HG12	47:D5:163:LEU:HA	2.03	0.40
47:D5:129:SER:HB2	47:D5:132:ASN:H	1.87	0.40
53:J5:16:ARG:HG3	53:J5:17:ASP:N	2.36	0.40
56:M5:32:LEU:HD23	56:M5:32:LEU:HA	1.74	0.40
1:13:46:G:O2'	1:13:365:U:H1'	2.22	0.40
1:13:537:G:H2'	1:13:538:G:C8	2.56	0.40
1:13:652:U:C4	1:13:752:G:N3	2.90	0.40
1:13:763:G:H2'	1:13:764:C:H6	1.86	0.40
1:13:1013:G:N2	1:13:1016:A:OP2	2.55	0.40
1:13:1187:G:O5'	9:8E:113:LYS:HE2	2.21	0.40
1:13:1369:C:OP1	14:5I:61:TRP:NE1	2.55	0.40
1:13:1479:C:H2'	1:13:1480:G:C8	2.56	0.40
3:2E:105:GLU:HG2	3:2E:106:VAL:N	2.36	0.40
12:3I:32:GLY:HA2	12:3I:57:LEU:HA	2.03	0.40
15:6I:3:ILE:HG21	15:6I:34:LEU:HG	2.03	0.40
16:7I:23:ASP:O	16:7I:26:ARG:HB2	2.22	0.40
22:1K:66:C:H2'	22:1K:67:C:O4'	2.21	0.40
23:2K:41:C:H2'	23:2K:42:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4K:10:G:HO2'	24:4K:11:U:P	2.44	0.40
25:1H:222:A:HO2'	25:1H:223:A:P	2.44	0.40
25:1H:556:G:H8	25:1H:556:G:O5'	2.04	0.40
25:1H:733:G:C8	25:1H:761:A:N6	2.90	0.40
25:1H:1698:A:H4'	25:1H:1699:G:OP1	2.21	0.40
25:1H:2028:U:H2'	25:1H:2029:G:O4'	2.21	0.40
25:1H:2302:G:H1	25:1H:2314:C:H42	1.69	0.40
25:1H:2472:G:N2	25:1H:2477:C:H5'	2.35	0.40
26:16:41:U:C4	31:41:70:VAL:HG23	2.56	0.40
30:31:45:ARG:HH11	30:31:45:ARG:HG2	1.87	0.40
33:61:1:MET:HG3	33:61:23:PRO:HA	2.03	0.40
36:68:7:TYR:OH	36:68:44:LYS:HG3	2.21	0.40
42:C8:90:VAL:HG12	42:C8:91:ASP:H	1.85	0.40
45:F8:12:VAL:HG22	45:F8:29:TRP:CE2	2.57	0.40
46:G8:11:ASP:O	46:G8:26:LYS:HG3	2.22	0.40
49:J8:13:ILE:HD11	49:J8:42:GLN:OE1	2.21	0.40
56:Q8:50:LEU:HD22	56:Q8:50:LEU:HA	1.85	0.40
1:1G:181:G:H1'	1:1G:182:U:H5	1.86	0.40
1:1G:201:C:HO2'	1:1G:208:U:P	2.44	0.40
1:1G:376:G:OP2	16:7A:67:THR:HG21	2.21	0.40
1:1G:377:G:O6	62:1G:1814:HOH:O	2.21	0.40
1:1G:533:A:H4'	1:1G:534:U:OP1	2.20	0.40
1:1G:668:G:H1	1:1G:738:C:H42	1.69	0.40
1:1G:709:G:H2'	1:1G:710:G:C8	2.55	0.40
1:1G:779:C:H2'	1:1G:780:A:O4'	2.22	0.40
1:1G:932:C:H5"	7:62:2:ALA:N	2.36	0.40
1:1G:1118:C:H2'	1:1G:1119:C:C6	2.56	0.40
1:1G:1363:A:H4'	1:1G:1364:U:H5"	2.04	0.40
1:1G:1367:C:H5'	10:1A:60:ARG:NH2	2.36	0.40
3:22:131:ARG:HE	3:22:166:GLU:CD	2.24	0.40
4:32:64:LEU:HB2	4:32:198:VAL:HG11	2.03	0.40
9:82:25:LYS:N	9:82:25:LYS:HD3	2.36	0.40
15:6A:17:ARG:HH12	15:6A:77:ARG:HH11	1.70	0.40
25:14:96:G:H4'	50:G5:48:HIS:CD2	2.56	0.40
25:14:861:A:H2'	25:14:862:G:O4'	2.22	0.40
25:14:998:C:N4	62:14:3710:HOH:O	2.53	0.40
25:14:1116:C:H2'	25:14:1117:G:C8	2.57	0.40
25:14:1607:C:H4'	25:14:1608:A:O5'	2.20	0.40
25:14:2889:C:H2'	25:14:2891:G:O4'	2.21	0.40
28:19:27:THR:HG22	28:19:28:GLU:HG2	2.03	0.40
29:29:6:GLY:HA2	29:29:28:ALA:HA	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:39:28:ILE:H	30:39:28:ILE:HG12	1.59	0.40
37:35:57:THR:HG21	37:35:60:MET:H	1.87	0.40
42:85:15:LYS:HE2	42:85:15:LYS:HB2	1.87	0.40
54:K5:9:LEU:O	54:K5:10:LEU:HD13	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	12	234/256 (91%)	193 (82%)	36 (15%)	5 (2%)	7 38
2	1E	235/256 (92%)	200 (85%)	35 (15%)	0	100 100
3	22	204/239 (85%)	161 (79%)	41 (20%)	2 (1%)	15 54
3	2E	203/239 (85%)	172 (85%)	31 (15%)	0	100 100
4	32	206/209 (99%)	188 (91%)	18 (9%)	0	100 100
4	3E	206/209 (99%)	190 (92%)	16 (8%)	0	100 100
5	42	152/162 (94%)	134 (88%)	18 (12%)	0	100 100
5	4E	149/162 (92%)	140 (94%)	9 (6%)	0	100 100
6	52	99/101 (98%)	94 (95%)	5 (5%)	0	100 100
6	5E	99/101 (98%)	91 (92%)	8 (8%)	0	100 100
7	62	145/156 (93%)	122 (84%)	21 (14%)	2 (1%)	11 46
7	6E	153/156 (98%)	140 (92%)	13 (8%)	0	100 100
8	72	136/138 (99%)	125 (92%)	11 (8%)	0	100 100
8	7E	136/138 (99%)	123 (90%)	13 (10%)	0	100 100
9	82	125/128 (98%)	90 (72%)	29 (23%)	6 (5%)	2 20
9	8E	122/128 (95%)	107 (88%)	15 (12%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	1A	97/105 (92%)	79 (81%)	18 (19%)	0	100	100
10	1I	97/105 (92%)	84 (87%)	13 (13%)	0	100	100
11	2A	117/129 (91%)	100 (86%)	16 (14%)	1 (1%)	17	56
11	2I	115/129 (89%)	108 (94%)	7 (6%)	0	100	100
12	3A	122/132 (92%)	101 (83%)	18 (15%)	3 (2%)	5	34
12	3I	122/132 (92%)	102 (84%)	19 (16%)	1 (1%)	19	58
13	4A	116/126 (92%)	79 (68%)	31 (27%)	6 (5%)	2	18
13	4I	117/126 (93%)	99 (85%)	16 (14%)	2 (2%)	9	42
14	5A	58/61 (95%)	49 (84%)	8 (14%)	1 (2%)	9	42
14	5I	58/61 (95%)	48 (83%)	9 (16%)	1 (2%)	9	42
15	6A	86/89 (97%)	81 (94%)	5 (6%)	0	100	100
15	6I	86/89 (97%)	77 (90%)	9 (10%)	0	100	100
16	7A	82/88 (93%)	76 (93%)	6 (7%)	0	100	100
16	7I	81/88 (92%)	73 (90%)	8 (10%)	0	100	100
17	8A	97/105 (92%)	91 (94%)	6 (6%)	0	100	100
17	8I	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
18	9A	69/88 (78%)	62 (90%)	7 (10%)	0	100	100
18	9I	68/88 (77%)	61 (90%)	7 (10%)	0	100	100
19	AA	81/93 (87%)	56 (69%)	25 (31%)	0	100	100
19	AI	84/93 (90%)	68 (81%)	15 (18%)	1 (1%)	13	50
20	BA	101/106 (95%)	89 (88%)	12 (12%)	0	100	100
20	BI	99/106 (93%)	85 (86%)	13 (13%)	1 (1%)	15	54
21	1B	23/27 (85%)	19 (83%)	4 (17%)	0	100	100
21	1F	23/27 (85%)	19 (83%)	4 (17%)	0	100	100
27	71	131/229 (57%)	118 (90%)	13 (10%)	0	100	100
28	11	272/276 (99%)	247 (91%)	24 (9%)	1 (0%)	34	72
28	19	270/276 (98%)	244 (90%)	26 (10%)	0	100	100
29	21	202/206 (98%)	177 (88%)	23 (11%)	2 (1%)	15	54
29	29	202/206 (98%)	183 (91%)	18 (9%)	1 (0%)	29	68
30	31	200/210 (95%)	174 (87%)	25 (12%)	1 (0%)	29	68
30	39	204/210 (97%)	166 (81%)	34 (17%)	4 (2%)	7	39

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
31	41	179/182 (98%)	144 (80%)	33 (18%)	2 (1%)	14 52
31	49	179/182 (98%)	141 (79%)	35 (20%)	3 (2%)	9 42
32	51	172/180 (96%)	139 (81%)	31 (18%)	2 (1%)	13 50
32	59	172/180 (96%)	131 (76%)	39 (23%)	2 (1%)	13 50
33	61	144/148 (97%)	112 (78%)	30 (21%)	2 (1%)	11 46
33	69	144/148 (97%)	113 (78%)	30 (21%)	1 (1%)	22 61
34	38	135/173 (78%)	75 (56%)	57 (42%)	3 (2%)	6 37
35	15	136/140 (97%)	121 (89%)	15 (11%)	0	100 100
35	58	136/140 (97%)	110 (81%)	23 (17%)	3 (2%)	6 37
36	25	120/122 (98%)	105 (88%)	15 (12%)	0	100 100
36	68	120/122 (98%)	110 (92%)	10 (8%)	0	100 100
37	35	145/150 (97%)	109 (75%)	35 (24%)	1 (1%)	22 61
37	78	146/150 (97%)	110 (75%)	33 (23%)	3 (2%)	7 38
38	45	138/141 (98%)	111 (80%)	26 (19%)	1 (1%)	22 61
38	88	139/141 (99%)	105 (76%)	32 (23%)	2 (1%)	11 46
39	55	116/118 (98%)	107 (92%)	8 (7%)	1 (1%)	17 56
39	98	116/118 (98%)	105 (90%)	9 (8%)	2 (2%)	9 42
40	65	109/112 (97%)	88 (81%)	21 (19%)	0	100 100
40	A8	109/112 (97%)	84 (77%)	24 (22%)	1 (1%)	17 56
41	75	135/146 (92%)	107 (79%)	27 (20%)	1 (1%)	22 61
41	B8	135/146 (92%)	113 (84%)	22 (16%)	0	100 100
42	85	115/118 (98%)	99 (86%)	15 (13%)	1 (1%)	17 56
42	C8	115/118 (98%)	106 (92%)	8 (7%)	1 (1%)	17 56
43	95	99/101 (98%)	78 (79%)	20 (20%)	1 (1%)	15 54
43	D8	98/101 (97%)	83 (85%)	15 (15%)	0	100 100
44	A5	110/113 (97%)	104 (94%)	6 (6%)	0	100 100
44	E8	111/113 (98%)	99 (89%)	12 (11%)	0	100 100
45	B5	91/96 (95%)	77 (85%)	14 (15%)	0	100 100
45	F8	93/96 (97%)	85 (91%)	8 (9%)	0	100 100
46	C5	107/110 (97%)	82 (77%)	22 (21%)	3 (3%)	5 32
46	G8	105/110 (96%)	79 (75%)	24 (23%)	2 (2%)	8 40

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
47	D5	174/206 (84%)	114 (66%)	55 (32%)	5 (3%)	4 31
47	H8	172/206 (84%)	123 (72%)	45 (26%)	4 (2%)	6 36
48	E5	77/85 (91%)	65 (84%)	12 (16%)	0	100 100
48	I8	75/85 (88%)	65 (87%)	10 (13%)	0	100 100
49	F5	90/96 (94%)	75 (83%)	15 (17%)	0	100 100
49	J8	94/96 (98%)	75 (80%)	16 (17%)	3 (3%)	4 29
50	G5	67/72 (93%)	58 (87%)	9 (13%)	0	100 100
50	K8	69/72 (96%)	56 (81%)	11 (16%)	2 (3%)	4 31
51	H5	57/60 (95%)	53 (93%)	4 (7%)	0	100 100
51	L8	57/60 (95%)	52 (91%)	5 (9%)	0	100 100
52	I5	69/71 (97%)	40 (58%)	28 (41%)	1 (1%)	11 46
52	M8	64/71 (90%)	32 (50%)	30 (47%)	2 (3%)	4 30
53	J5	54/60 (90%)	42 (78%)	10 (18%)	2 (4%)	3 26
53	N8	54/60 (90%)	45 (83%)	7 (13%)	2 (4%)	3 26
54	K5	46/54 (85%)	21 (46%)	22 (48%)	3 (6%)	1 14
54	O8	47/54 (87%)	27 (57%)	17 (36%)	3 (6%)	1 14
55	L5	46/49 (94%)	46 (100%)	0	0	100 100
55	P8	46/49 (94%)	45 (98%)	1 (2%)	0	100 100
56	M5	62/65 (95%)	53 (86%)	7 (11%)	2 (3%)	4 29
56	Q8	62/65 (95%)	58 (94%)	4 (6%)	0	100 100
All	All	11633/12452 (93%)	9754 (84%)	1771 (15%)	108 (1%)	17 56

All (108) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
14	5I	16	PHE
35	58	96	GLU
39	98	3	HIS
47	H8	53	ILE
49	J8	30	VAL
49	J8	82	LEU
50	K8	48	HIS
9	82	30	GLY
9	82	35	GLU
13	4A	68	GLY

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Mol	Chain	Res	Type
13	4A	106	ASN
30	39	22	ALA
31	49	96	ARG
31	49	97	ASP
47	D5	53	ILE
47	D5	153	SER
53	J5	41	PRO
54	K5	31	PRO
33	61	15	VAL
34	38	30	GLN
35	58	22	THR
37	78	57	THR
38	88	80	GLU
39	98	58	GLY
42	C8	92	ARG
46	G8	54	LYS
53	N8	41	PRO
7	62	21	VAL
9	82	29	ASN
11	2A	15	ALA
13	4A	107	ALA
29	29	71	GLY
30	39	90	PHE
37	35	57	THR
42	85	97	ASP
46	C5	54	LYS
47	D5	112	ARG
47	D5	140	ASP
47	D5	152	ALA
53	J5	42	PRO
13	4I	14	ARG
28	11	273	ARG
29	21	71	GLY
29	21	145	LYS
31	41	14	GLU
32	51	168	PRO
34	38	22	GLY
35	58	95	PRO
37	78	106	LEU
40	A8	62	LYS
47	H8	155	LEU
50	K8	47	ASN

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Mol	Chain	Res	Type
52	M8	24	THR
52	M8	49	PHE
53	N8	42	PRO
54	O8	15	GLU
54	O8	21	TYR
2	12	23	ARG
9	82	19	LEU
12	3A	10	LYS
13	4A	67	GLU
39	55	107	ASP
54	K5	24	GLU
31	41	15	VAL
33	61	12	LEU
37	78	107	LYS
38	88	104	PHE
2	12	22	LYS
2	12	33	TYR
3	22	16	ARG
9	82	34	ASN
12	3A	16	ARG
13	4A	44	ARG
33	69	78	THR
41	75	106	SER
46	C5	53	PRO
12	3I	102	TYR
19	AI	81	ARG
20	BI	74	LYS
30	31	130	ALA
46	G8	53	PRO
49	J8	83	GLU
30	39	25	PRO
46	C5	56	PRO
32	51	12	PRO
34	38	44	LEU
2	12	21	ARG
2	12	30	ARG
3	22	160	ALA
7	62	17	VAL
12	3A	15	VAL
14	5A	15	LYS
32	59	128	PRO
56	M5	37	SER

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Mol	Chain	Res	Type
47	H8	110	GLY
13	4A	100	GLY
52	I5	6	HIS
30	39	89	VAL
32	59	168	PRO
38	45	78	PRO
54	O8	7	ILE
9	82	28	VAL
43	95	50	PRO
54	K5	41	PRO
47	H8	141	VAL
13	4I	15	VAL
31	49	44	GLY
56	M5	38	GLY

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	12	204/220 (93%)	153 (75%)	51 (25%)	0 4
2	1E	205/220 (93%)	162 (79%)	43 (21%)	1 5
3	22	160/188 (85%)	118 (74%)	42 (26%)	0 3
3	2E	159/188 (85%)	131 (82%)	28 (18%)	2 10
4	32	180/181 (99%)	158 (88%)	22 (12%)	5 23
4	3E	180/181 (99%)	148 (82%)	32 (18%)	2 10
5	42	119/123 (97%)	90 (76%)	29 (24%)	0 4
5	4E	116/123 (94%)	94 (81%)	22 (19%)	1 8
6	52	90/90 (100%)	83 (92%)	7 (8%)	12 42
6	5E	90/90 (100%)	73 (81%)	17 (19%)	1 8
7	62	123/127 (97%)	102 (83%)	21 (17%)	2 12
7	6E	126/127 (99%)	102 (81%)	24 (19%)	1 8
8	72	119/119 (100%)	101 (85%)	18 (15%)	3 17

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
8	7E	119/119 (100%)	98 (82%)	21 (18%)	2 10
9	82	97/99 (98%)	73 (75%)	24 (25%)	0 4
9	8E	95/99 (96%)	82 (86%)	13 (14%)	3 20
10	1A	89/92 (97%)	69 (78%)	20 (22%)	1 4
10	1I	89/92 (97%)	76 (85%)	13 (15%)	3 18
11	2A	91/99 (92%)	78 (86%)	13 (14%)	3 19
11	2I	88/99 (89%)	73 (83%)	15 (17%)	2 12
12	3A	103/108 (95%)	81 (79%)	22 (21%)	1 5
12	3I	103/108 (95%)	89 (86%)	14 (14%)	3 20
13	4A	94/101 (93%)	67 (71%)	27 (29%)	0 3
13	4I	95/101 (94%)	72 (76%)	23 (24%)	0 4
14	5A	48/50 (96%)	46 (96%)	2 (4%)	30 63
14	5I	49/50 (98%)	39 (80%)	10 (20%)	1 6
15	6A	79/80 (99%)	67 (85%)	12 (15%)	3 17
15	6I	79/80 (99%)	69 (87%)	10 (13%)	4 22
16	7A	72/74 (97%)	62 (86%)	10 (14%)	3 20
16	7I	72/74 (97%)	57 (79%)	15 (21%)	1 6
17	8A	93/97 (96%)	78 (84%)	15 (16%)	2 14
17	8I	95/97 (98%)	85 (90%)	10 (10%)	7 31
18	9A	62/77 (80%)	51 (82%)	11 (18%)	2 10
18	9I	61/77 (79%)	51 (84%)	10 (16%)	2 13
19	AA	72/80 (90%)	55 (76%)	17 (24%)	1 4
19	AI	74/80 (92%)	57 (77%)	17 (23%)	1 4
20	BA	75/82 (92%)	64 (85%)	11 (15%)	3 18
20	BI	75/82 (92%)	63 (84%)	12 (16%)	2 14
21	1B	20/22 (91%)	15 (75%)	5 (25%)	0 4
21	1F	20/22 (91%)	19 (95%)	1 (5%)	24 58
27	71	111/181 (61%)	95 (86%)	16 (14%)	3 18
28	11	214/218 (98%)	176 (82%)	38 (18%)	2 10
28	19	213/218 (98%)	183 (86%)	30 (14%)	3 19
29	21	164/166 (99%)	134 (82%)	30 (18%)	1 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
29	29	164/166 (99%)	134 (82%)	30 (18%)	1 8
30	31	161/166 (97%)	143 (89%)	18 (11%)	6 27
30	39	165/166 (99%)	133 (81%)	32 (19%)	1 7
31	41	155/156 (99%)	127 (82%)	28 (18%)	1 9
31	49	155/156 (99%)	127 (82%)	28 (18%)	1 9
32	51	145/148 (98%)	116 (80%)	29 (20%)	1 7
32	59	145/148 (98%)	119 (82%)	26 (18%)	2 9
33	61	122/124 (98%)	84 (69%)	38 (31%)	0 2
33	69	122/124 (98%)	90 (74%)	32 (26%)	0 3
34	38	112/135 (83%)	80 (71%)	32 (29%)	0 3
35	15	117/119 (98%)	99 (85%)	18 (15%)	2 16
35	58	117/119 (98%)	93 (80%)	24 (20%)	1 6
36	25	100/100 (100%)	82 (82%)	18 (18%)	1 9
36	68	100/100 (100%)	87 (87%)	13 (13%)	4 21
37	35	114/116 (98%)	82 (72%)	32 (28%)	0 3
37	78	115/116 (99%)	92 (80%)	23 (20%)	1 7
38	45	110/111 (99%)	89 (81%)	21 (19%)	1 8
38	88	111/111 (100%)	91 (82%)	20 (18%)	1 9
39	55	101/101 (100%)	85 (84%)	16 (16%)	2 15
39	98	101/101 (100%)	79 (78%)	22 (22%)	1 5
40	65	87/88 (99%)	72 (83%)	15 (17%)	2 11
40	A8	87/88 (99%)	64 (74%)	23 (26%)	0 3
41	75	120/127 (94%)	94 (78%)	26 (22%)	1 5
41	B8	120/127 (94%)	78 (65%)	42 (35%)	0 1
42	85	93/94 (99%)	79 (85%)	14 (15%)	3 17
42	C8	93/94 (99%)	74 (80%)	19 (20%)	1 6
43	95	82/82 (100%)	60 (73%)	22 (27%)	0 3
43	D8	82/82 (100%)	61 (74%)	21 (26%)	0 3
44	A5	91/92 (99%)	76 (84%)	15 (16%)	2 13
44	E8	92/92 (100%)	73 (79%)	19 (21%)	1 6
45	B5	74/78 (95%)	60 (81%)	14 (19%)	1 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
45	F8	76/78 (97%)	60 (79%)	16 (21%)	1 5
46	C5	88/91 (97%)	63 (72%)	25 (28%)	0 3
46	G8	85/91 (93%)	70 (82%)	15 (18%)	2 10
47	D5	155/179 (87%)	114 (74%)	41 (26%)	0 3
47	H8	153/179 (86%)	119 (78%)	34 (22%)	1 5
48	E5	63/67 (94%)	52 (82%)	11 (18%)	2 10
48	I8	62/67 (92%)	52 (84%)	10 (16%)	2 14
49	F5	77/81 (95%)	56 (73%)	21 (27%)	0 3
49	J8	81/81 (100%)	69 (85%)	12 (15%)	3 17
50	G5	64/67 (96%)	50 (78%)	14 (22%)	1 5
50	K8	64/67 (96%)	46 (72%)	18 (28%)	0 3
51	H5	51/52 (98%)	46 (90%)	5 (10%)	8 33
51	L8	51/52 (98%)	40 (78%)	11 (22%)	1 5
52	I5	63/63 (100%)	44 (70%)	19 (30%)	0 2
52	M8	59/63 (94%)	45 (76%)	14 (24%)	1 4
53	J5	48/52 (92%)	39 (81%)	9 (19%)	1 8
53	N8	48/52 (92%)	38 (79%)	10 (21%)	1 6
54	K5	47/52 (90%)	33 (70%)	14 (30%)	0 2
54	O8	48/52 (92%)	28 (58%)	20 (42%)	0 0
55	L5	41/42 (98%)	33 (80%)	8 (20%)	1 7
55	P8	41/42 (98%)	36 (88%)	5 (12%)	5 23
56	M5	52/55 (94%)	46 (88%)	6 (12%)	5 26
56	Q8	52/55 (94%)	47 (90%)	5 (10%)	8 34
All	All	9804/10308 (95%)	7888 (80%)	1916 (20%)	1 7

All (1916) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	4	GLU
2	1E	8	LYS
2	1E	9	GLU
2	1E	15	VAL
2	1E	21	ARG
2	1E	23	ARG

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Mol	Chain	Res	Type
2	1E	28	PHE
2	1E	33	TYR
2	1E	36	ARG
2	1E	47	THR
2	1E	49	GLU
2	1E	64	ARG
2	1E	69	LEU
2	1E	71	VAL
2	1E	74	LYS
2	1E	79	ASP
2	1E	82	ARG
2	1E	92	TYR
2	1E	96	ARG
2	1E	107	THR
2	1E	136	VAL
2	1E	145	LEU
2	1E	149	LEU
2	1E	155	LEU
2	1E	158	LEU
2	1E	160	ASP
2	1E	163	PHE
2	1E	164	VAL
2	1E	168	THR
2	1E	172	ILE
2	1E	178	ARG
2	1E	190	THR
2	1E	196	LEU
2	1E	197	VAL
2	1E	200	ILE
2	1E	204	ASN
2	1E	215	LEU
2	1E	219	VAL
2	1E	221	LEU
2	1E	222	ILE
2	1E	223	ILE
2	1E	230	VAL
2	1E	239	VAL
3	2E	3	ASN
3	2E	5	ILE
3	2E	6	HIS
3	2E	12	LEU
3	2E	21	ARG

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Mol	Chain	Res	Type
3	2E	29	TYR
3	2E	34	LEU
3	2E	36	ASP
3	2E	43	LEU
3	2E	47	LEU
3	2E	48	TYR
3	2E	52	LEU
3	2E	54	ARG
3	2E	75	VAL
3	2E	79	ARG
3	2E	89	GLU
3	2E	94	LEU
3	2E	95	THR
3	2E	102	ASN
3	2E	107	GLN
3	2E	127	ARG
3	2E	138	VAL
3	2E	140	ARG
3	2E	164	ARG
3	2E	167	TRP
3	2E	184	TYR
3	2E	190	ARG
3	2E	198	VAL
4	3E	10	ARG
4	3E	14	ARG
4	3E	15	GLU
4	3E	24	GLU
4	3E	30	LYS
4	3E	31	CYS
4	3E	33	MET
4	3E	38	TYR
4	3E	49	ARG
4	3E	57	ARG
4	3E	66	ARG
4	3E	83	SER
4	3E	86	LYS
4	3E	94	LEU
4	3E	101	LEU
4	3E	120	LEU
4	3E	121	VAL
4	3E	122	ARG
4	3E	132	ARG

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Mol	Chain	Res	Type
4	3E	134	ASP
4	3E	150	GLU
4	3E	155	LEU
4	3E	159	ARG
4	3E	165	MET
4	3E	176	LEU
4	3E	184	LYS
4	3E	187	ARG
4	3E	193	ASP
4	3E	194	LEU
4	3E	196	LEU
4	3E	200	GLU
4	3E	209	ARG
5	4E	6	PHE
5	4E	8	GLU
5	4E	10	MET
5	4E	16	THR
5	4E	27	ARG
5	4E	31	LEU
5	4E	41	VAL
5	4E	47	LYS
5	4E	51	VAL
5	4E	55	VAL
5	4E	64	ARG
5	4E	71	LEU
5	4E	73	ASN
5	4E	79	GLU
5	4E	90	VAL
5	4E	101	ILE
5	4E	112	LEU
5	4E	116	THR
5	4E	120	THR
5	4E	133	TYR
5	4E	147	ASP
5	4E	153	LYS
6	5E	1	MET
6	5E	7	ASN
6	5E	14	LEU
6	5E	21	LEU
6	5E	25	ILE
6	5E	27	GLN
6	5E	30	LEU

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Mol	Chain	Res	Type
6	5E	36	ARG
6	5E	47	ARG
6	5E	55	ASP
6	5E	69	GLU
6	5E	70	ASP
6	5E	74	ASP
6	5E	77	ARG
6	5E	89	MET
6	5E	92	LYS
6	5E	98	LEU
7	6E	8	GLU
7	6E	24	THR
7	6E	30	ILE
7	6E	38	LEU
7	6E	52	GLU
7	6E	54	THR
7	6E	56	GLN
7	6E	74	GLU
7	6E	75	VAL
7	6E	76	ARG
7	6E	78	ARG
7	6E	79	ARG
7	6E	84	ASN
7	6E	89	MET
7	6E	90	GLU
7	6E	92	SER
7	6E	98	SER
7	6E	113	GLU
7	6E	114	ARG
7	6E	115	ARG
7	6E	120	ILE
7	6E	124	LEU
7	6E	135	VAL
7	6E	155	ARG
8	7E	1	MET
8	7E	10	LEU
8	7E	12	ARG
8	7E	22	GLU
8	7E	24	THR
8	7E	26	VAL
8	7E	32	LYS
8	7E	35	ILE

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Mol	Chain	Res	Type
8	7E	39	LEU
8	7E	41	ARG
8	7E	50	ARG
8	7E	52	ASP
8	7E	56	LYS
8	7E	63	LEU
8	7E	82	HIS
8	7E	95	VAL
8	7E	98	LYS
8	7E	102	ARG
8	7E	112	LEU
8	7E	122	ARG
8	7E	129	VAL
9	8E	25	LYS
9	8E	47	LEU
9	8E	48	GLU
9	8E	64	THR
9	8E	71	SER
9	8E	79	LEU
9	8E	86	VAL
9	8E	95	LYS
9	8E	104	ARG
9	8E	114	TYR
9	8E	117	HIS
9	8E	121	ARG
9	8E	125	TYR
10	1I	13	HIS
10	1I	22	LYS
10	1I	38	ILE
10	1I	62	HIS
10	1I	65	LEU
10	1I	68	HIS
10	1I	73	ASP
10	1I	74	ILE
10	1I	75	ILE
10	1I	76	ASN
10	1I	84	GLN
10	1I	92	THR
10	1I	96	ILE
11	2I	24	SER
11	2I	29	ILE
11	2I	36	ASP

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Mol	Chain	Res	Type
11	2I	41	THR
11	2I	47	VAL
11	2I	57	THR
11	2I	63	LEU
11	2I	87	THR
11	2I	92	GLU
11	2I	103	LEU
11	2I	105	VAL
11	2I	109	VAL
11	2I	114	VAL
11	2I	124	LYS
11	2I	126	ARG
12	3I	4	ILE
12	3I	9	ARG
12	3I	17	LYS
12	3I	20	LYS
12	3I	24	LEU
12	3I	30	ARG
12	3I	51	LYS
12	3I	52	VAL
12	3I	57	LEU
12	3I	67	ILE
12	3I	101	VAL
12	3I	114	ARG
12	3I	123	LYS
12	3I	124	GLU
13	4I	3	ARG
13	4I	13	LYS
13	4I	19	LEU
13	4I	23	TYR
13	4I	32	GLU
13	4I	36	LYS
13	4I	37	THR
13	4I	48	LEU
13	4I	56	LEU
13	4I	61	GLU
13	4I	64	TRP
13	4I	65	LYS
13	4I	66	LEU
13	4I	71	ARG
13	4I	73	GLU
13	4I	77	ASN

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Mol	Chain	Res	Type
13	4I	88	ARG
13	4I	96	LEU
13	4I	105	THR
13	4I	108	ARG
13	4I	109	THR
13	4I	115	LYS
13	4I	116	THR
14	5I	7	ILE
14	5I	8	GLU
14	5I	16	PHE
14	5I	18	VAL
14	5I	26	ARG
14	5I	32	SER
14	5I	41	ARG
14	5I	43	CYS
14	5I	44	LEU
14	5I	50	LYS
15	6I	3	ILE
15	6I	4	THR
15	6I	13	GLN
15	6I	17	ARG
15	6I	21	ASP
15	6I	38	ARG
15	6I	39	LEU
15	6I	41	GLU
15	6I	66	LEU
15	6I	84	LYS
16	7I	1	MET
16	7I	2	VAL
16	7I	8	ARG
16	7I	20	VAL
16	7I	28	ARG
16	7I	44	THR
16	7I	45	THR
16	7I	57	ARG
16	7I	67	THR
16	7I	68	ASP
16	7I	69	THR
16	7I	72	ARG
16	7I	75	ARG
16	7I	80	PHE
16	7I	83	GLU

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Mol	Chain	Res	Type
17	8I	9	VAL
17	8I	25	ARG
17	8I	45	HIS
17	8I	52	LYS
17	8I	59	ILE
17	8I	68	ARG
17	8I	74	LEU
17	8I	86	GLU
17	8I	97	SER
17	8I	101	ARG
18	9I	29	PHE
18	9I	32	ARG
18	9I	36	ASN
18	9I	38	GLU
18	9I	40	LEU
18	9I	46	GLU
18	9I	54	ARG
18	9I	76	LEU
18	9I	84	LYS
18	9I	88	LYS
19	AI	5	LEU
19	AI	15	LEU
19	AI	27	GLU
19	AI	30	LEU
19	AI	33	THR
19	AI	34	TRP
19	AI	39	THR
19	AI	41	VAL
19	AI	44	MET
19	AI	45	VAL
19	AI	47	HIS
19	AI	48	THR
19	AI	58	VAL
19	AI	63	THR
19	AI	67	VAL
19	AI	78	ARG
19	AI	83	HIS
20	BI	11	SER
20	BI	13	LEU
20	BI	16	HIS
20	BI	36	LEU
20	BI	73	HIS

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Mol	Chain	Res	Type
20	BI	75	ASN
20	BI	82	SER
20	BI	86	ARG
20	BI	88	VAL
20	BI	93	GLU
20	BI	99	LEU
20	BI	104	LEU
21	1F	25	LYS
27	71	15	ASP
27	71	30	LYS
27	71	37	PHE
27	71	38	ASP
27	71	49	ILE
27	71	57	ASN
27	71	68	LEU
27	71	172	HIS
27	71	180	PHE
27	71	184	LYS
27	71	199	HIS
27	71	202	GLU
27	71	208	PHE
27	71	215	THR
27	71	216	THR
27	71	224	ILE
28	11	3	VAL
28	11	27	THR
28	11	37	LEU
28	11	38	LYS
28	11	40	THR
28	11	52	ARG
28	11	54	ARG
28	11	61	LEU
28	11	65	ILE
28	11	72	LYS
28	11	94	LEU
28	11	95	LEU
28	11	101	GLU
28	11	103	ARG
28	11	104	TYR
28	11	105	ILE
28	11	106	ILE
28	11	111	LEU

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Mol	Chain	Res	Type
28	11	112	GLN
28	11	113	VAL
28	11	122	ASP
28	11	127	VAL
28	11	141	VAL
28	11	147	LEU
28	11	162	SER
28	11	171	ASP
28	11	183	ARG
28	11	192	THR
28	11	215	LEU
28	11	221	VAL
28	11	226	MET
28	11	237	GLU
28	11	242	ARG
28	11	253	GLN
28	11	257	LEU
28	11	270	ILE
28	11	271	ILE
28	11	273	ARG
29	21	5	LEU
29	21	9	VAL
29	21	14	ILE
29	21	17	ASP
29	21	18	ASP
29	21	23	VAL
29	21	24	THR
29	21	36	ARG
29	21	38	THR
29	21	41	LYS
29	21	45	THR
29	21	66	HIS
29	21	73	GLU
29	21	77	ILE
29	21	78	LEU
29	21	89	ASP
29	21	90	THR
29	21	111	ARG
29	21	113	PHE
29	21	116	VAL
29	21	117	MET
29	21	118	LYS

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Mol	Chain	Res	Type
29	21	119	ARG
29	21	143	ASN
29	21	152	LYS
29	21	154	LYS
29	21	167	VAL
29	21	175	VAL
29	21	179	GLU
29	21	184	VAL
30	31	6	VAL
30	31	8	GLN
30	31	33	LEU
30	31	53	THR
30	31	60	SER
30	31	65	TRP
30	31	70	THR
30	31	72	ARG
30	31	74	ARG
30	31	82	ILE
30	31	106	ARG
30	31	108	LYS
30	31	149	ASP
30	31	170	LEU
30	31	174	VAL
30	31	179	GLU
30	31	182	ASN
30	31	191	ARG
31	41	4	ASP
31	41	10	LYS
31	41	26	GLN
31	41	28	VAL
31	41	35	GLU
31	41	53	LEU
31	41	54	GLU
31	41	63	ILE
31	41	67	LYS
31	41	70	VAL
31	41	80	PHE
31	41	82	LEU
31	41	88	ILE
31	41	96	ARG
31	41	99	MET
31	41	103	LEU

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Mol	Chain	Res	Type
31	41	118	ARG
31	41	133	LEU
31	41	137	GLU
31	41	145	THR
31	41	147	ASP
31	41	155	MET
31	41	159	VAL
31	41	161	THR
31	41	162	THR
31	41	166	ASP
31	41	172	LEU
31	41	178	PHE
32	51	4	ILE
32	51	6	ARG
32	51	7	LEU
32	51	24	VAL
32	51	26	VAL
32	51	33	LEU
32	51	37	VAL
32	51	40	GLU
32	51	50	VAL
32	51	56	SER
32	51	57	ASP
32	51	77	LYS
32	51	79	VAL
32	51	83	TYR
32	51	86	GLU
32	51	88	LEU
32	51	97	ARG
32	51	103	LEU
32	51	104	GLU
32	51	113	VAL
32	51	119	GLU
32	51	125	VAL
32	51	129	THR
32	51	136	ILE
32	51	139	GLN
32	51	149	ARG
32	51	153	LYS
32	51	169	VAL
32	51	171	LEU
33	61	1	MET

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Mol	Chain	Res	Type
33	61	7	GLU
33	61	10	GLU
33	61	12	LEU
33	61	14	ASP
33	61	25	TYR
33	61	27	ARG
33	61	33	ARG
33	61	35	LEU
33	61	38	LEU
33	61	41	GLU
33	61	43	ASN
33	61	56	LYS
33	61	57	ARG
33	61	64	GLU
33	61	67	ARG
33	61	70	GLU
33	61	71	ILE
33	61	75	LEU
33	61	78	THR
33	61	81	VAL
33	61	82	ARG
33	61	85	GLU
33	61	86	THR
33	61	92	VAL
33	61	93	THR
33	61	96	ASP
33	61	103	ARG
33	61	112	LYS
33	61	113	ARG
33	61	129	THR
33	61	130	TYR
33	61	131	LYS
33	61	133	HIS
33	61	135	GLU
33	61	139	GLN
33	61	140	LEU
33	61	142	VAL
34	38	5	ARG
34	38	7	VAL
34	38	10	LEU
34	38	12	THR
34	38	13	LEU

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Mol	Chain	Res	Type
34	38	14	LYS
34	38	21	GLN
34	38	25	PHE
34	38	27	VAL
34	38	29	TYR
34	38	37	THR
34	38	38	HIS
34	38	40	LEU
34	38	42	GLN
34	38	44	LEU
34	38	45	LYS
34	38	52	PHE
34	38	60	ARG
34	38	66	LEU
34	38	71	LEU
34	38	85	ASP
34	38	87	VAL
34	38	91	LYS
34	38	98	LYS
34	38	100	ASN
34	38	111	LEU
34	38	112	LEU
34	38	113	GLN
34	38	120	LYS
34	38	131	MET
34	38	134	LEU
34	38	142	LEU
35	58	7	LYS
35	58	34	LEU
35	58	35	ARG
35	58	43	THR
35	58	46	VAL
35	58	48	MET
35	58	58	ASP
35	58	60	ILE
35	58	61	ARG
35	58	62	VAL
35	58	67	LEU
35	58	70	LYS
35	58	73	THR
35	58	82	LEU
35	58	87	LEU

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Mol	Chain	Res	Type
35	58	90	MET
35	58	91	LEU
35	58	96	GLU
35	58	98	VAL
35	58	109	LYS
35	58	112	LEU
35	58	114	ARG
35	58	134	ARG
35	58	136	GLU
36	68	5	GLN
36	68	22	ILE
36	68	23	ARG
36	68	39	ILE
36	68	47	ILE
36	68	49	ARG
36	68	53	LYS
36	68	66	LYS
36	68	89	ASN
36	68	96	THR
36	68	97	ARG
36	68	98	VAL
36	68	108	GLU
37	78	1	MET
37	78	5	ASP
37	78	21	ARG
37	78	29	LYS
37	78	32	THR
37	78	40	SER
37	78	61	ARG
37	78	65	ARG
37	78	71	VAL
37	78	79	ARG
37	78	84	ASN
37	78	88	LEU
37	78	94	GLU
37	78	98	GLU
37	78	108	LYS
37	78	112	LEU
37	78	123	LEU
37	78	125	VAL
37	78	133	SER
37	78	135	LEU

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Mol	Chain	Res	Type
37	78	138	LEU
37	78	144	GLU
37	78	148	LEU
38	88	2	LEU
38	88	5	ARG
38	88	18	LYS
38	88	21	THR
38	88	25	ASP
38	88	27	VAL
38	88	45	GLN
38	88	54	MET
38	88	56	ARG
38	88	59	ARG
38	88	80	GLU
38	88	91	GLU
38	88	101	ARG
38	88	109	VAL
38	88	110	THR
38	88	111	GLU
38	88	112	GLU
38	88	129	THR
38	88	130	LYS
38	88	139	GLU
39	98	1	MET
39	98	2	ARG
39	98	4	LEU
39	98	18	LEU
39	98	28	LEU
39	98	29	LEU
39	98	30	THR
39	98	36	THR
39	98	37	THR
39	98	44	LEU
39	98	51	LEU
39	98	54	LEU
39	98	65	LEU
39	98	67	LEU
39	98	75	LEU
39	98	79	LEU
39	98	98	LEU
39	98	100	LEU
39	98	104	ARG

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Mol	Chain	Res	Type
39	98	105	ARG
39	98	113	LEU
39	98	116	LEU
40	A8	10	ARG
40	A8	17	ARG
40	A8	20	ARG
40	A8	23	ARG
40	A8	25	ARG
40	A8	27	SER
40	A8	44	LYS
40	A8	49	VAL
40	A8	52	SER
40	A8	54	LEU
40	A8	56	LEU
40	A8	57	LYS
40	A8	58	LEU
40	A8	63	THR
40	A8	73	LEU
40	A8	82	ILE
40	A8	88	ASP
40	A8	89	ARG
40	A8	98	VAL
40	A8	101	LEU
40	A8	106	ARG
40	A8	110	LEU
40	A8	111	GLU
41	B8	1	MET
41	B8	6	LEU
41	B8	7	ILE
41	B8	9	LEU
41	B8	21	GLU
41	B8	23	ARG
41	B8	27	THR
41	B8	28	VAL
41	B8	34	VAL
41	B8	35	LYS
41	B8	38	ASN
41	B8	42	ILE
41	B8	43	GLN
41	B8	44	ASP
41	B8	46	GLU
41	B8	51	ARG

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Mol	Chain	Res	Type
41	B8	54	ARG
41	B8	58	ASN
41	B8	62	THR
41	B8	65	LYS
41	B8	66	VAL
41	B8	67	SER
41	B8	73	GLU
41	B8	74	ARG
41	B8	78	LEU
41	B8	84	GLN
41	B8	86	ILE
41	B8	87	ASP
41	B8	89	VAL
41	B8	96	ARG
41	B8	99	LEU
41	B8	104	ASN
41	B8	107	ASP
41	B8	108	ARG
41	B8	110	ILE
41	B8	111	ARG
41	B8	112	ARG
41	B8	118	ARG
41	B8	122	ASP
41	B8	125	ARG
41	B8	128	GLU
41	B8	134	GLU
42	C8	5	LYS
42	C8	9	VAL
42	C8	11	ARG
42	C8	31	SER
42	C8	36	ARG
42	C8	57	PHE
42	C8	59	ARG
42	C8	64	ARG
42	C8	70	ARG
42	C8	74	LEU
42	C8	83	LEU
42	C8	91	ASP
42	C8	98	LEU
42	C8	100	VAL
42	C8	101	ARG
42	C8	104	GLN

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Mol	Chain	Res	Type
42	C8	108	GLU
42	C8	111	GLU
42	C8	114	LYS
43	D8	1	MET
43	D8	5	VAL
43	D8	6	LYS
43	D8	7	THR
43	D8	11	GLN
43	D8	21	ARG
43	D8	24	LYS
43	D8	33	VAL
43	D8	39	LEU
43	D8	40	LEU
43	D8	47	VAL
43	D8	51	VAL
43	D8	57	VAL
43	D8	58	VAL
43	D8	61	VAL
43	D8	64	HIS
43	D8	66	ARG
43	D8	73	SER
43	D8	82	ARG
43	D8	92	THR
43	D8	95	LEU
44	E8	11	ARG
44	E8	16	LYS
44	E8	28	SER
44	E8	29	LEU
44	E8	41	LYS
44	E8	50	VAL
44	E8	51	LEU
44	E8	63	ASP
44	E8	65	LEU
44	E8	69	LEU
44	E8	71	VAL
44	E8	76	VAL
44	E8	78	GLU
44	E8	88	ARG
44	E8	94	ASP
44	E8	97	LYS
44	E8	103	ILE
44	E8	106	ILE

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Mol	Chain	Res	Type
44	E8	107	LEU
45	F8	1	MET
45	F8	3	THR
45	F8	15	GLU
45	F8	27	THR
45	F8	28	PHE
45	F8	48	LYS
45	F8	49	VAL
45	F8	57	LEU
45	F8	65	ARG
45	F8	68	ARG
45	F8	70	LEU
45	F8	78	LYS
45	F8	80	ILE
45	F8	81	VAL
45	F8	88	LYS
45	F8	92	LEU
46	G8	3	VAL
46	G8	5	MET
46	G8	7	VAL
46	G8	27	VAL
46	G8	57	GLN
46	G8	70	SER
46	G8	75	ILE
46	G8	84	ARG
46	G8	86	ARG
46	G8	90	LEU
46	G8	91	GLU
46	G8	92	ASN
46	G8	94	LYS
46	G8	95	LYS
46	G8	107	ASP
47	H8	2	GLU
47	H8	5	LEU
47	H8	19	ARG
47	H8	32	HIS
47	H8	35	ARG
47	H8	42	VAL
47	H8	45	ASP
47	H8	50	GLN
47	H8	61	LEU
47	H8	71	VAL

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Mol	Chain	Res	Type
47	H8	72	ARG
47	H8	76	LEU
47	H8	77	ASP
47	H8	80	ARG
47	H8	81	ARG
47	H8	86	VAL
47	H8	91	LEU
47	H8	93	ASP
47	H8	97	GLU
47	H8	103	ARG
47	H8	117	LEU
47	H8	119	GLU
47	H8	121	HIS
47	H8	122	ARG
47	H8	132	ASN
47	H8	135	GLU
47	H8	140	ASP
47	H8	154	ASP
47	H8	155	LEU
47	H8	156	LYS
47	H8	157	LEU
47	H8	162	GLU
47	H8	170	THR
47	H8	171	ILE
48	I8	11	ARG
48	I8	12	ASN
48	I8	36	ILE
48	I8	38	VAL
48	I8	40	GLN
48	I8	41	ARG
48	I8	70	GLN
48	I8	77	ARG
48	I8	80	HIS
48	I8	82	ARG
49	J8	26	ARG
49	J8	40	ARG
49	J8	41	ARG
49	J8	46	LEU
49	J8	51	VAL
49	J8	56	GLN
49	J8	69	LYS
49	J8	81	LYS

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Mol	Chain	Res	Type
49	J8	82	LEU
49	J8	83	GLU
49	J8	85	LEU
49	J8	91	LYS
50	K8	3	LEU
50	K8	4	SER
50	K8	5	GLU
50	K8	10	LEU
50	K8	11	GLU
50	K8	12	GLU
50	K8	16	LEU
50	K8	19	VAL
50	K8	32	LEU
50	K8	33	MET
50	K8	35	LEU
50	K8	45	SER
50	K8	47	ASN
50	K8	48	HIS
50	K8	50	ILE
50	K8	55	ARG
50	K8	62	THR
50	K8	69	ARG
51	L8	8	LEU
51	L8	9	VAL
51	L8	13	ILE
51	L8	28	LEU
51	L8	29	ARG
51	L8	30	ARG
51	L8	31	LEU
51	L8	33	GLN
51	L8	40	THR
51	L8	44	ARG
51	L8	60	GLU
52	M8	5	ILE
52	M8	15	ILE
52	M8	18	CYS
52	M8	21	VAL
52	M8	26	SER
52	M8	27	THR
52	M8	35	VAL
52	M8	38	LYS
52	M8	42	PHE

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Mol	Chain	Res	Type
52	M8	43	TYR
52	M8	48	ARG
52	M8	57	GLU
52	M8	59	PHE
52	M8	61	ARG
53	N8	6	VAL
53	N8	33	CYS
53	N8	37	LYS
53	N8	40	LYS
53	N8	44	THR
53	N8	49	CYS
53	N8	51	TYR
53	N8	55	ARG
53	N8	56	LYS
53	N8	57	VAL
54	O8	6	ARG
54	O8	7	ILE
54	O8	8	LYS
54	O8	9	LEU
54	O8	10	LEU
54	O8	11	LEU
54	O8	12	GLU
54	O8	13	CYS
54	O8	14	THR
54	O8	16	CYS
54	O8	19	ARG
54	O8	20	ASN
54	O8	27	LYS
54	O8	30	THR
54	O8	34	LEU
54	O8	37	ARG
54	O8	39	TYR
54	O8	48	VAL
54	O8	49	HIS
54	O8	50	ARG
55	P8	1	MET
55	P8	4	THR
55	P8	11	LYS
55	P8	46	VAL
55	P8	48	LYS
56	Q8	6	THR
56	Q8	34	TRP

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Mol	Chain	Res	Type
56	Q8	35	GLN
56	Q8	37	SER
56	Q8	50	LEU
2	12	10	LEU
2	12	11	LEU
2	12	12	GLU
2	12	17	PHE
2	12	21	ARG
2	12	24	TRP
2	12	28	PHE
2	12	30	ARG
2	12	31	TYR
2	12	33	TYR
2	12	35	GLU
2	12	42	ILE
2	12	44	LEU
2	12	73	THR
2	12	76	GLN
2	12	80	ILE
2	12	83	MET
2	12	84	GLU
2	12	103	THR
2	12	105	PHE
2	12	108	ILE
2	12	111	ARG
2	12	114	ARG
2	12	115	LEU
2	12	116	GLU
2	12	117	GLU
2	12	127	ILE
2	12	128	GLU
2	12	134	GLU
2	12	139	LYS
2	12	142	LEU
2	12	144	ARG
2	12	146	GLN
2	12	149	LEU
2	12	152	PHE
2	12	154	LEU
2	12	158	LEU
2	12	163	PHE
2	12	167	PRO

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Mol	Chain	Res	Type
2	12	168	THR
2	12	178	ARG
2	12	185	ILE
2	12	189	ASP
2	12	196	LEU
2	12	204	ASN
2	12	208	ILE
2	12	209	ARG
2	12	226	ARG
2	12	235	SER
2	12	238	LEU
2	12	240	GLN
3	22	5	ILE
3	22	12	LEU
3	22	14	ILE
3	22	16	ARG
3	22	17	ASP
3	22	23	TYR
3	22	28	GLN
3	22	29	TYR
3	22	34	LEU
3	22	43	LEU
3	22	44	GLU
3	22	62	ASP
3	22	64	VAL
3	22	66	VAL
3	22	67	THR
3	22	72	LYS
3	22	75	VAL
3	22	77	ILE
3	22	82	GLU
3	22	83	ARG
3	22	86	VAL
3	22	94	LEU
3	22	101	LEU
3	22	102	ASN
3	22	107	GLN
3	22	116	VAL
3	22	119	ARG
3	22	122	GLU
3	22	127	ARG
3	22	128	PHE

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Mol	Chain	Res	Type
3	22	136	GLN
3	22	140	ARG
3	22	154	SER
3	22	161	GLU
3	22	165	THR
3	22	173	VAL
3	22	178	LEU
3	22	186	PHE
3	22	190	ARG
3	22	196	LEU
3	22	203	PHE
3	22	206	GLU
4	32	3	ARG
4	32	8	VAL
4	32	12	CYS
4	32	13	ARG
4	32	14	ARG
4	32	15	GLU
4	32	19	LEU
4	32	30	LYS
4	32	33	MET
4	32	58	LEU
4	32	60	GLU
4	32	78	LEU
4	32	107	ARG
4	32	122	ARG
4	32	127	THR
4	32	131	ARG
4	32	134	ASP
4	32	135	LEU
4	32	150	GLU
4	32	151	LYS
4	32	162	LEU
4	32	186	LEU
5	42	3	GLU
5	42	6	PHE
5	42	8	GLU
5	42	10	MET
5	42	12	LEU
5	42	13	ILE
5	42	25	ARG
5	42	47	LYS

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Mol	Chain	Res	Type
5	42	53	LEU
5	42	60	TYR
5	42	63	ARG
5	42	64	ARG
5	42	66	MET
5	42	68	GLU
5	42	72	GLN
5	42	73	ASN
5	42	75	THR
5	42	78	HIS
5	42	79	GLU
5	42	80	ILE
5	42	82	VAL
5	42	83	GLU
5	42	89	ILE
5	42	100	VAL
5	42	116	THR
5	42	126	ARG
5	42	135	THR
5	42	144	THR
5	42	152	ARG
6	52	16	GLN
6	52	28	ARG
6	52	40	VAL
6	52	54	LYS
6	52	70	ASP
6	52	74	ASP
6	52	77	ARG
7	62	3	ARG
7	62	8	GLU
7	62	12	LEU
7	62	24	THR
7	62	28	ASN
7	62	30	ILE
7	62	32	ARG
7	62	54	THR
7	62	63	LYS
7	62	67	GLU
7	62	72	ARG
7	62	78	ARG
7	62	101	LEU
7	62	113	GLU

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Mol	Chain	Res	Type
7	62	114	ARG
7	62	118	VAL
7	62	124	LEU
7	62	131	LYS
7	62	136	LYS
7	62	137	LYS
7	62	151	TYR
8	72	1	MET
8	72	18	ARG
8	72	21	LYS
8	72	22	GLU
8	72	52	ASP
8	72	54	ASP
8	72	56	LYS
8	72	80	ILE
8	72	99	GLU
8	72	102	ARG
8	72	105	ARG
8	72	109	ILE
8	72	114	THR
8	72	115	SER
8	72	119	LEU
8	72	122	ARG
8	72	133	LEU
8	72	137	VAL
9	82	1	MET
9	82	3	GLN
9	82	10	ARG
9	82	19	LEU
9	82	25	LYS
9	82	32	ASP
9	82	34	ASN
9	82	38	GLN
9	82	40	LEU
9	82	47	LEU
9	82	56	LEU
9	82	58	HIS
9	82	70	LYS
9	82	78	LYS
9	82	83	ARG
9	82	87	GLN
9	82	95	LYS

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Mol	Chain	Res	Type
9	82	96	LEU
9	82	99	LEU
9	82	110	GLU
9	82	112	LYS
9	82	113	LYS
9	82	121	ARG
9	82	125	TYR
10	1A	16	LEU
10	1A	22	LYS
10	1A	47	PHE
10	1A	49	VAL
10	1A	50	ILE
10	1A	57	LYS
10	1A	62	HIS
10	1A	65	LEU
10	1A	70	ARG
10	1A	74	ILE
10	1A	75	ILE
10	1A	76	ASN
10	1A	79	ARG
10	1A	80	LYS
10	1A	82	ILE
10	1A	87	THR
10	1A	89	ASP
10	1A	90	LEU
10	1A	96	ILE
10	1A	97	GLU
11	2A	9	LYS
11	2A	13	GLN
11	2A	29	ILE
11	2A	31	THR
11	2A	47	VAL
11	2A	63	LEU
11	2A	66	LEU
11	2A	81	ASP
11	2A	87	THR
11	2A	105	VAL
11	2A	112	THR
11	2A	120	ARG
11	2A	123	LYS
12	3A	8	VAL
12	3A	15	VAL

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Mol	Chain	Res	Type
12	3A	20	LYS
12	3A	21	VAL
12	3A	24	LEU
12	3A	25	LYS
12	3A	30	ARG
12	3A	34	CYS
12	3A	39	THR
12	3A	41	THR
12	3A	43	LYS
12	3A	51	LYS
12	3A	52	VAL
12	3A	81	LEU
12	3A	82	ILE
12	3A	83	ARG
12	3A	86	ARG
12	3A	101	VAL
12	3A	108	LYS
12	3A	109	ASP
12	3A	119	THR
12	3A	123	LYS
13	4A	4	ILE
13	4A	7	VAL
13	4A	8	GLU
13	4A	11	ARG
13	4A	15	VAL
13	4A	17	VAL
13	4A	23	TYR
13	4A	27	LYS
13	4A	35	GLU
13	4A	37	THR
13	4A	44	ARG
13	4A	45	VAL
13	4A	46	LYS
13	4A	47	ASP
13	4A	49	THR
13	4A	56	LEU
13	4A	64	TRP
13	4A	66	LEU
13	4A	70	LEU
13	4A	71	ARG
13	4A	73	GLU
13	4A	77	ASN

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Mol	Chain	Res	Type
13	4A	79	LYS
13	4A	81	LEU
13	4A	108	ARG
13	4A	111	LYS
13	4A	116	THR
14	5A	15	LYS
14	5A	50	LYS
15	6A	3	ILE
15	6A	6	GLU
15	6A	10	LYS
15	6A	24	SER
15	6A	34	LEU
15	6A	35	ARG
15	6A	39	LEU
15	6A	41	GLU
15	6A	48	LYS
15	6A	64	ARG
15	6A	87	ILE
15	6A	88	ARG
16	7A	2	VAL
16	7A	5	ARG
16	7A	20	VAL
16	7A	27	LYS
16	7A	29	ASP
16	7A	45	THR
16	7A	53	VAL
16	7A	67	THR
16	7A	72	ARG
16	7A	79	VAL
17	8A	6	LEU
17	8A	7	THR
17	8A	19	VAL
17	8A	21	VAL
17	8A	25	ARG
17	8A	35	VAL
17	8A	50	LYS
17	8A	52	LYS
17	8A	53	LEU
17	8A	55	ASP
17	8A	59	ILE
17	8A	70	ARG
17	8A	72	ARG

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Mol	Chain	Res	Type
17	8A	74	LEU
17	8A	78	GLU
18	9A	18	ARG
18	9A	19	LYS
18	9A	23	LYS
18	9A	25	THR
18	9A	31	LEU
18	9A	32	ARG
18	9A	36	ASN
18	9A	42	ARG
18	9A	58	LEU
18	9A	74	ARG
18	9A	84	LYS
19	AA	5	LEU
19	AA	6	LYS
19	AA	7	LYS
19	AA	9	VAL
19	AA	15	LEU
19	AA	16	LEU
19	AA	22	LEU
19	AA	25	LYS
19	AA	27	GLU
19	AA	33	THR
19	AA	34	TRP
19	AA	40	ILE
19	AA	60	VAL
19	AA	64	GLU
19	AA	66	MET
19	AA	67	VAL
19	AA	69	HIS
20	BA	10	LEU
20	BA	23	ARG
20	BA	24	LEU
20	BA	36	LEU
20	BA	41	ILE
20	BA	56	MET
20	BA	72	LEU
20	BA	74	LYS
20	BA	84	LEU
20	BA	87	LYS
20	BA	104	LEU
21	1B	6	ARG

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Mol	Chain	Res	Type
21	1B	8	THR
21	1B	15	ARG
21	1B	18	TYR
21	1B	25	LYS
28	19	10	THR
28	19	14	ARG
28	19	17	THR
28	19	18	VAL
28	19	37	LEU
28	19	54	ARG
28	19	61	LEU
28	19	64	ILE
28	19	65	ILE
28	19	72	LYS
28	19	88	ARG
28	19	94	LEU
28	19	95	LEU
28	19	101	GLU
28	19	105	ILE
28	19	106	ILE
28	19	111	LEU
28	19	136	ILE
28	19	157	ARG
28	19	161	THR
28	19	166	GLN
28	19	182	LEU
28	19	192	THR
28	19	200	ASP
28	19	211	ARG
28	19	220	HIS
28	19	255	LYS
28	19	261	LYS
28	19	271	ILE
28	19	273	ARG
29	29	9	VAL
29	29	21	VAL
29	29	24	THR
29	29	34	VAL
29	29	38	THR
29	29	40	GLU
29	29	42	ASP
29	29	45	THR

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Mol	Chain	Res	Type
29	29	72	VAL
29	29	77	ILE
29	29	78	LEU
29	29	82	ARG
29	29	87	GLU
29	29	89	ASP
29	29	92	THR
29	29	97	LYS
29	29	116	VAL
29	29	119	ARG
29	29	143	ASN
29	29	144	ARG
29	29	151	TYR
29	29	152	LYS
29	29	154	LYS
29	29	167	VAL
29	29	174	ASP
29	29	175	VAL
29	29	181	LEU
29	29	182	LEU
29	29	184	VAL
29	29	196	VAL
30	39	2	LYS
30	39	3	GLU
30	39	8	GLN
30	39	18	ARG
30	39	24	LEU
30	39	28	ILE
30	39	32	LEU
30	39	33	LEU
30	39	43	LYS
30	39	53	THR
30	39	54	ARG
30	39	64	ILE
30	39	68	LYS
30	39	70	THR
30	39	72	ARG
30	39	89	VAL
30	39	106	ARG
30	39	123	LEU
30	39	124	LEU
30	39	125	LEU

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Mol	Chain	Res	Type
30	39	138	GLU
30	39	158	THR
30	39	165	ARG
30	39	174	VAL
30	39	183	VAL
30	39	190	GLU
30	39	191	ARG
30	39	193	VAL
30	39	195	ASP
30	39	199	TRP
30	39	205	ARG
30	39	206	ILE
31	49	5	VAL
31	49	7	LEU
31	49	10	LYS
31	49	21	ARG
31	49	28	VAL
31	49	31	VAL
31	49	34	LEU
31	49	35	GLU
31	49	43	LEU
31	49	47	LYS
31	49	54	GLU
31	49	60	LEU
31	49	72	ARG
31	49	80	PHE
31	49	86	MET
31	49	88	ILE
31	49	91	ARG
31	49	96	ARG
31	49	106	LEU
31	49	114	ILE
31	49	115	ARG
31	49	118	ARG
31	49	133	LEU
31	49	138	GLN
31	49	147	ASP
31	49	148	MET
31	49	155	MET
31	49	174	GLU
32	59	4	ILE
32	59	7	LEU

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Mol	Chain	Res	Type
32	59	9	ILE
32	59	13	LYS
32	59	23	ARG
32	59	37	VAL
32	59	41	MET
32	59	50	VAL
32	59	51	ARG
32	59	56	SER
32	59	70	THR
32	59	72	ILE
32	59	77	LYS
32	59	81	GLU
32	59	83	TYR
32	59	88	LEU
32	59	95	ARG
32	59	97	ARG
32	59	98	LEU
32	59	101	ARG
32	59	105	LEU
32	59	114	VAL
32	59	122	THR
32	59	132	ARG
32	59	164	TYR
32	59	169	VAL
33	69	1	MET
33	69	3	VAL
33	69	4	ILE
33	69	5	LEU
33	69	6	LEU
33	69	7	GLU
33	69	9	LEU
33	69	10	GLU
33	69	48	GLU
33	69	50	ARG
33	69	52	ARG
33	69	56	LYS
33	69	60	GLU
33	69	64	GLU
33	69	67	ARG
33	69	75	LEU
33	69	78	THR
33	69	82	ARG

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Mol	Chain	Res	Type
33	69	86	THR
33	69	96	ASP
33	69	101	LEU
33	69	105	HIS
33	69	110	ASP
33	69	114	LEU
33	69	117	GLU
33	69	122	GLU
33	69	130	TYR
33	69	135	GLU
33	69	138	ILE
33	69	141	LYS
33	69	144	VAL
33	69	145	VAL
35	15	9	VAL
35	15	17	ASP
35	15	28	THR
35	15	29	LYS
35	15	32	THR
35	15	48	MET
35	15	56	ASN
35	15	85	ILE
35	15	94	HIS
35	15	97	ARG
35	15	98	VAL
35	15	99	LEU
35	15	109	LYS
35	15	112	LEU
35	15	120	LEU
35	15	131	GLN
35	15	136	GLU
35	15	137	LYS
36	25	3	GLN
36	25	5	GLN
36	25	8	LEU
36	25	10	VAL
36	25	14	THR
36	25	23	ARG
36	25	28	SER
36	25	43	VAL
36	25	49	ARG
36	25	58	VAL

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Mol	Chain	Res	Type
36	25	65	THR
36	25	82	ASN
36	25	89	ASN
36	25	96	THR
36	25	97	ARG
36	25	98	VAL
36	25	108	GLU
36	25	114	ILE
37	35	2	LYS
37	35	5	ASP
37	35	13	ASN
37	35	14	LYS
37	35	15	ARG
37	35	21	ARG
37	35	35	HIS
37	35	41	ARG
37	35	52	GLU
37	35	58	THR
37	35	64	LYS
37	35	65	ARG
37	35	75	ILE
37	35	79	ARG
37	35	81	GLN
37	35	87	ASP
37	35	88	LEU
37	35	91	PHE
37	35	98	GLU
37	35	101	VAL
37	35	110	TYR
37	35	111	ARG
37	35	112	LEU
37	35	114	ILE
37	35	117	GLU
37	35	123	LEU
37	35	125	VAL
37	35	135	LEU
37	35	136	GLU
37	35	138	LEU
37	35	144	GLU
37	35	147	LEU
38	45	1	MET
38	45	3	MET

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Mol	Chain	Res	Type
38	45	22	LYS
38	45	45	GLN
38	45	51	ARG
38	45	54	MET
38	45	56	ARG
38	45	58	PHE
38	45	59	ARG
38	45	64	ILE
38	45	66	ILE
38	45	80	GLU
38	45	81	VAL
38	45	89	ASN
38	45	109	VAL
38	45	115	MET
38	45	128	LYS
38	45	133	ARG
38	45	134	ARG
38	45	138	ASP
38	45	139	GLU
39	55	2	ARG
39	55	8	ARG
39	55	15	SER
39	55	24	GLN
39	55	35	THR
39	55	65	LEU
39	55	67	LEU
39	55	74	LYS
39	55	75	LEU
39	55	76	VAL
39	55	79	LEU
39	55	81	ASP
39	55	86	ARG
39	55	105	ARG
39	55	107	ASP
39	55	114	VAL
40	65	3	ARG
40	65	8	GLU
40	65	14	VAL
40	65	20	ARG
40	65	24	LEU
40	65	25	ARG
40	65	40	ILE

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Mol	Chain	Res	Type
40	65	42	ASP
40	65	58	LEU
40	65	73	LEU
40	65	84	GLN
40	65	85	VAL
40	65	98	VAL
40	65	106	ARG
40	65	107	GLU
41	75	1	MET
41	75	3	ARG
41	75	7	ILE
41	75	10	VAL
41	75	13	ARG
41	75	17	THR
41	75	23	ARG
41	75	27	THR
41	75	39	ARG
41	75	42	ILE
41	75	50	ILE
41	75	55	ASN
41	75	58	ASN
41	75	62	THR
41	75	64	ARG
41	75	78	LEU
41	75	82	LEU
41	75	86	ILE
41	75	88	ILE
41	75	98	LYS
41	75	105	LEU
41	75	111	ARG
41	75	112	ARG
41	75	115	ARG
41	75	125	ARG
41	75	132	LYS
42	85	5	LYS
42	85	8	VAL
42	85	17	ILE
42	85	27	LEU
42	85	52	ARG
42	85	54	LYS
42	85	55	ARG
42	85	63	VAL

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Mol	Chain	Res	Type
42	85	75	ASN
42	85	83	LEU
42	85	85	LYS
42	85	98	LEU
42	85	101	ARG
42	85	104	GLN
43	95	2	PHE
43	95	15	GLU
43	95	19	LYS
43	95	28	GLU
43	95	35	LEU
43	95	39	LEU
43	95	40	LEU
43	95	47	VAL
43	95	51	VAL
43	95	58	VAL
43	95	60	GLU
43	95	61	VAL
43	95	64	HIS
43	95	66	ARG
43	95	71	LEU
43	95	79	VAL
43	95	80	GLN
43	95	81	TYR
43	95	85	LYS
43	95	87	HIS
43	95	91	TYR
43	95	96	ILE
44	A5	1	MET
44	A5	11	ARG
44	A5	19	LEU
44	A5	24	ILE
44	A5	31	GLU
44	A5	52	GLU
44	A5	67	ASP
44	A5	69	LEU
44	A5	70	TYR
44	A5	88	ARG
44	A5	94	ASP
44	A5	96	ILE
44	A5	105	VAL
44	A5	106	ILE

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Mol	Chain	Res	Type
44	A5	107	LEU
45	B5	6	ASP
45	B5	8	ILE
45	B5	27	THR
45	B5	28	PHE
45	B5	30	VAL
45	B5	43	VAL
45	B5	48	LYS
45	B5	51	VAL
45	B5	54	VAL
45	B5	63	LYS
45	B5	66	LEU
45	B5	69	TYR
45	B5	76	ARG
45	B5	81	VAL
46	C5	6	HIS
46	C5	9	LYS
46	C5	24	VAL
46	C5	27	VAL
46	C5	49	VAL
46	C5	50	ARG
46	C5	52	SER
46	C5	54	LYS
46	C5	55	TYR
46	C5	56	PRO
46	C5	61	ILE
46	C5	66	PRO
46	C5	75	ILE
46	C5	81	LYS
46	C5	84	ARG
46	C5	85	VAL
46	C5	89	PHE
46	C5	90	LEU
46	C5	92	ASN
46	C5	94	LYS
46	C5	95	LYS
46	C5	96	ILE
46	C5	102	CYS
46	C5	106	LEU
46	C5	110	GLU
47	D5	4	ARG
47	D5	5	LEU

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Mol	Chain	Res	Type
47	D5	9	TYR
47	D5	10	ARG
47	D5	19	ARG
47	D5	24	LEU
47	D5	28	MET
47	D5	33	LEU
47	D5	40	ASP
47	D5	53	ILE
47	D5	55	HIS
47	D5	56	VAL
47	D5	59	LEU
47	D5	61	LEU
47	D5	70	LEU
47	D5	71	VAL
47	D5	76	LEU
47	D5	80	ARG
47	D5	81	ARG
47	D5	87	ASP
47	D5	89	PHE
47	D5	93	ASP
47	D5	96	VAL
47	D5	98	MET
47	D5	103	ARG
47	D5	104	PHE
47	D5	112	ARG
47	D5	117	LEU
47	D5	120	ILE
47	D5	122	ARG
47	D5	123	ASP
47	D5	128	VAL
47	D5	131	ARG
47	D5	132	ASN
47	D5	133	ILE
47	D5	135	GLU
47	D5	138	GLU
47	D5	142	SER
47	D5	149	SER
47	D5	157	LEU
47	D5	175	VAL
48	E5	7	LEU
48	E5	9	SER
48	E5	20	ARG

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Mol	Chain	Res	Type
48	E5	25	ARG
48	E5	27	GLU
48	E5	36	ILE
48	E5	37	LEU
48	E5	49	LYS
48	E5	53	MET
48	E5	64	ASP
48	E5	71	ASP
49	F5	3	LYS
49	F5	13	ILE
49	F5	17	SER
49	F5	32	LYS
49	F5	40	ARG
49	F5	41	ARG
49	F5	46	LEU
49	F5	51	VAL
49	F5	53	VAL
49	F5	59	THR
49	F5	67	ILE
49	F5	72	GLU
49	F5	76	ARG
49	F5	78	LYS
49	F5	80	LEU
49	F5	82	LEU
49	F5	83	GLU
49	F5	85	LEU
49	F5	90	ILE
49	F5	91	LYS
49	F5	93	GLU
50	G5	4	SER
50	G5	5	GLU
50	G5	6	VAL
50	G5	9	GLN
50	G5	15	LYS
50	G5	20	GLU
50	G5	34	GLU
50	G5	41	ILE
50	G5	49	LYS
50	G5	50	ILE
50	G5	52	ASP
50	G5	55	ARG
50	G5	60	LEU

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Mol	Chain	Res	Type
50	G5	64	LEU
51	H5	9	VAL
51	H5	24	LYS
51	H5	40	THR
51	H5	44	ARG
51	H5	56	VAL
52	I5	2	LYS
52	I5	6	HIS
52	I5	13	ARG
52	I5	16	CYS
52	I5	20	ASN
52	I5	21	VAL
52	I5	34	GLU
52	I5	35	VAL
52	I5	40	HIS
52	I5	42	PHE
52	I5	44	THR
52	I5	46	GLN
52	I5	53	GLU
52	I5	55	ARG
52	I5	56	VAL
52	I5	58	ARG
52	I5	59	PHE
52	I5	61	ARG
52	I5	63	TYR
53	J5	25	LEU
53	J5	36	CYS
53	J5	39	MET
53	J5	40	LYS
53	J5	44	THR
53	J5	48	GLU
53	J5	49	CYS
53	J5	51	TYR
53	J5	52	TYR
54	K5	7	ILE
54	K5	8	LYS
54	K5	9	LEU
54	K5	17	LYS
54	K5	23	THR
54	K5	25	LYS
54	K5	28	ARG
54	K5	37	ARG

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Mol	Chain	Res	Type
54	K5	38	LYS
54	K5	39	TYR
54	K5	43	CYS
54	K5	44	ARG
54	K5	45	LYS
54	K5	47	THR
55	L5	1	MET
55	L5	4	THR
55	L5	9	ARG
55	L5	24	THR
55	L5	41	ARG
55	L5	43	THR
55	L5	46	VAL
55	L5	48	LYS
56	M5	6	THR
56	M5	31	HIS
56	M5	34	TRP
56	M5	35	GLN
56	M5	36	LYS
56	M5	62	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
5	4E	78	HIS
6	5E	57	GLN
9	8E	3	GLN
19	AI	47	HIS
28	11	115	GLN
39	98	31	HIS
41	B8	58	ASN
42	C8	117	GLN
43	D8	11	GLN
2	12	146	GLN
3	22	69	HIS
4	32	77	ASN
9	82	87	GLN
12	3A	6	GLN
19	AA	23	ASN
19	AA	56	GLN
28	19	227	ASN
30	39	40	GLN

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Mol	Chain	Res	Type
31	49	66	GLN
41	75	58	ASN
42	85	81	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1501/1522 (98%)	359 (23%)	47 (3%)
1	1G	1505/1522 (98%)	396 (26%)	53 (3%)
22	1K	64/77 (83%)	20 (31%)	2 (3%)
22	3K	76/77 (98%)	23 (30%)	0
22	3L	76/77 (98%)	31 (40%)	2 (2%)
23	2K	76/77 (98%)	9 (11%)	1 (1%)
24	4K	16/27 (59%)	10 (62%)	2 (12%)
24	4L	20/27 (74%)	8 (40%)	1 (5%)
25	14	2875/2917 (98%)	759 (26%)	50 (1%)
25	1H	2873/2917 (98%)	674 (23%)	63 (2%)
26	16	119/122 (97%)	28 (23%)	2 (1%)
26	1J	121/122 (99%)	40 (33%)	3 (2%)
57	2L	76/77 (98%)	11 (14%)	0
All	All	9398/9561 (98%)	2368 (25%)	226 (2%)

All (2368) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	7	G
1	13	8	A
1	13	32	A
1	13	35	G
1	13	39	G
1	13	44	G
1	13	47	C
1	13	48	C
1	13	50	A
1	13	51	A
1	13	61	G
1	13	64	G
1	13	65	U
1	13	66	G

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Mol	Chain	Res	Type
1	13	69	G
1	13	77	C
1	13	78	G
1	13	81	G
1	13	89	U
1	13	90	C
1	13	91	C
1	13	92	G
1	13	95	G
1	13	101	A
1	13	115	G
1	13	120	A
1	13	121	C
1	13	122	G
1	13	129(A)	G
1	13	131	C
1	13	135	C
1	13	144	G
1	13	147	G
1	13	151	A
1	13	163	C
1	13	172	A
1	13	173	U
1	13	186(F)	C
1	13	188	U
1	13	190	G
1	13	191(A)	G
1	13	191(E)	G
1	13	195	A
1	13	196	A
1	13	197	A
1	13	201	C
1	13	209	U
1	13	210	U
1	13	217	C
1	13	222	U
1	13	226	G
1	13	243	A
1	13	244	U
1	13	245	C
1	13	247	G
1	13	248	C

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Mol	Chain	Res	Type
1	13	250	A
1	13	251	G
1	13	264	U
1	13	266	G
1	13	267	C
1	13	270	A
1	13	281	G
1	13	289	G
1	13	314	C
1	13	321	A
1	13	328	C
1	13	329	A
1	13	332	G
1	13	342	C
1	13	344	A
1	13	345	C
1	13	346	G
1	13	351	G
1	13	352	C
1	13	353	A
1	13	354	G
1	13	367	U
1	13	372	C
1	13	382	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	409	G
1	13	411	A
1	13	412	A
1	13	413	G
1	13	414	A
1	13	422	C
1	13	423	G
1	13	424	G
1	13	429	U
1	13	430	A
1	13	435	C
1	13	440	A

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Mol	Chain	Res	Type
1	13	442	C
1	13	448	A
1	13	466	C
1	13	467	G
1	13	482	A
1	13	485	G
1	13	486	U
1	13	494	U
1	13	496	A
1	13	497	U
1	13	509	A
1	13	510	A
1	13	511	C
1	13	512	U
1	13	513	C
1	13	518	C
1	13	521	G
1	13	528	C
1	13	531	U
1	13	532	A
1	13	533	A
1	13	534	U
1	13	545	C
1	13	547	A
1	13	550	G
1	13	559	A
1	13	561	U
1	13	562	C
1	13	569	C
1	13	572	A
1	13	573	A
1	13	576	G
1	13	577	G
1	13	595	G
1	13	596	C
1	13	614	A
1	13	618	C
1	13	623	C
1	13	630	G
1	13	632	A
1	13	633	G
1	13	653	A

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Mol	Chain	Res	Type
1	13	665	A
1	13	671	G
1	13	683	G
1	13	687	A
1	13	688	G
1	13	700	G
1	13	701	C
1	13	702	A
1	13	703	G
1	13	704	A
1	13	720	C
1	13	724	G
1	13	731	G
1	13	747	C
1	13	749	C
1	13	753	A
1	13	754	C
1	13	755	G
1	13	777	A
1	13	792	A
1	13	793	U
1	13	794	A
1	13	813	U
1	13	815	A
1	13	816	A
1	13	817	C
1	13	828	A
1	13	836	G
1	13	841	U
1	13	843	U
1	13	848	C
1	13	859	A
1	13	870	U
1	13	871	U
1	13	872	A
1	13	875	C
1	13	880	C
1	13	902	G
1	13	913	A
1	13	914	A
1	13	922	G
1	13	926	G

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Mol	Chain	Res	Type
1	13	927	G
1	13	933	G
1	13	934	C
1	13	935	A
1	13	936	C
1	13	940	C
1	13	944	G
1	13	950	U
1	13	958	A
1	13	960	U
1	13	961	U
1	13	966	M2G
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	980	C
1	13	981	U
1	13	982	U
1	13	983	A
1	13	991	U
1	13	992	U
1	13	993	G
1	13	994	A
1	13	1001	G
1	13	1002	G
1	13	1004	A
1	13	1005	A
1	13	1006	C
1	13	1008	C
1	13	1009	G
1	13	1017	G
1	13	1021	G
1	13	1024	G
1	13	1025	U
1	13	1028	C
1	13	1028(A)	C
1	13	1029	G

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Mol	Chain	Res	Type
1	13	1032(A)	G
1	13	1037	C
1	13	1040	U
1	13	1054	C
1	13	1064	G
1	13	1065	U
1	13	1066	C
1	13	1082	G
1	13	1090	U
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1113	C
1	13	1117	G
1	13	1123	A
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	1136	U
1	13	1137	C
1	13	1138	G
1	13	1139	G
1	13	1144	G
1	13	1146	A
1	13	1151	A
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1160	G
1	13	1171	G
1	13	1174	G
1	13	1178	G
1	13	1181	G
1	13	1182	G
1	13	1183	A
1	13	1187	G
1	13	1188	A

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Mol	Chain	Res	Type
1	13	1191	A
1	13	1193	G
1	13	1196	U
1	13	1200	C
1	13	1201	A
1	13	1212	U
1	13	1213	A
1	13	1218	C
1	13	1225	A
1	13	1226	C
1	13	1231	G
1	13	1236	A
1	13	1238	A
1	13	1240	U
1	13	1241	G
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1261	A
1	13	1263	C
1	13	1270	C
1	13	1272	G
1	13	1273	G
1	13	1275	A
1	13	1277	C
1	13	1279	A
1	13	1280	A
1	13	1281	U
1	13	1282	C
1	13	1286	A
1	13	1287	A
1	13	1288	A
1	13	1290	G
1	13	1292	U
1	13	1296	C
1	13	1300	G
1	13	1301	U
1	13	1302	U
1	13	1303	C
1	13	1305	G
1	13	1320	C
1	13	1321	C

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Mol	Chain	Res	Type
1	13	1322	C
1	13	1323	G
1	13	1327	C
1	13	1331	G
1	13	1332	A
1	13	1333	A
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1338	G
1	13	1347	G
1	13	1348	U
1	13	1353	G
1	13	1360	A
1	13	1362(A)	C
1	13	1364	U
1	13	1365	G
1	13	1370	G
1	13	1380	U
1	13	1398	A
1	13	1400	5MC
1	13	1406	U
1	13	1419	G
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1447	G
1	13	1450	U
1	13	1452	C
1	13	1453	G
1	13	1454	G
1	13	1482	G
1	13	1487	G
1	13	1492	A
1	13	1494	G
1	13	1499	A
1	13	1503	A
1	13	1504	G
1	13	1505	G
1	13	1506	U
1	13	1507	A
1	13	1517	G

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Mol	Chain	Res	Type
1	13	1529	G
1	13	1530	G
1	13	1531	A
1	13	1532	U
1	13	1533	C
1	13	1534	A
1	13	1535	C
22	1K	6	G
22	1K	8	U
22	1K	9	G
22	1K	10	G
22	1K	16	C
22	1K	17	C
22	1K	20	G
22	1K	21	U
22	1K	22	A
22	1K	24	C
22	1K	37	U
22	1K	43	G
22	1K	48	U
22	1K	49	C
22	1K	50	G
22	1K	55	U
22	1K	57	C
22	1K	60	A
22	1K	61	U
22	1K	62	C
23	2K	7	G
23	2K	8	4SU
23	2K	13	C
23	2K	18	U
23	2K	21	H2U
23	2K	48	U
23	2K	49	C
23	2K	69	C
23	2K	77	A
22	3K	3	C
22	3K	5	G
22	3K	8	U
22	3K	9	G
22	3K	13	C
22	3K	14	A

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Mol	Chain	Res	Type
22	3K	15	G
22	3K	17	C
22	3K	19	G
22	3K	21	U
22	3K	22	A
22	3K	23	G
22	3K	36	A
22	3K	38	A
22	3K	45	A
22	3K	46	G
22	3K	49	C
22	3K	50	G
22	3K	56	U
22	3K	57	C
22	3K	58	A
22	3K	62	C
22	3K	73	A
24	4K	10	G
24	4K	11	U
24	4K	12	A
24	4K	13	A
24	4K	14	A
24	4K	19	A
24	4K	20	A
24	4K	23	A
24	4K	24	A
24	4K	25	A
25	1H	15	G
25	1H	26	G
25	1H	34	C
25	1H	35	G
25	1H	46	C
25	1H	49	A
25	1H	55	G
25	1H	61	G
25	1H	71	A
25	1H	72	U
25	1H	74	A
25	1H	75	G
25	1H	82	G
25	1H	83	G
25	1H	88	G

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Mol	Chain	Res	Type
25	1H	99	U
25	1H	101	G
25	1H	102	G
25	1H	116	C
25	1H	118	A
25	1H	119	A
25	1H	120	U
25	1H	125	G
25	1H	137	C
25	1H	140	A
25	1H	155	C
25	1H	161	U
25	1H	162	U
25	1H	163	U
25	1H	165	U
25	1H	177	G
25	1H	181	A
25	1H	188	G
25	1H	196	A
25	1H	197	A
25	1H	199	A
25	1H	206	U
25	1H	214	G
25	1H	215	G
25	1H	216	A
25	1H	221	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	232	G
25	1H	238	C
25	1H	239	U
25	1H	242	G
25	1H	248	G
25	1H	249	C
25	1H	252	G
25	1H	253	C
25	1H	265	A

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Mol	Chain	Res	Type
25	1H	266	G
25	1H	269	U
25	1H	270(G)	C
25	1H	270(I)	G
25	1H	270(L)	U
25	1H	270(M)	U
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(C)	C
25	1H	274	G
25	1H	275	G
25	1H	276	A
25	1H	277	C
25	1H	278	A
25	1H	279	C
25	1H	284	U
25	1H	285	C
25	1H	299	A
25	1H	310	A
25	1H	317	G
25	1H	324	A
25	1H	329	G
25	1H	330	A
25	1H	332	A
25	1H	343	C
25	1H	352	G
25	1H	357	A
25	1H	363	G
25	1H	363(E)	U
25	1H	364	C
25	1H	371	A
25	1H	372	G
25	1H	373	U
25	1H	386	G
25	1H	388	G
25	1H	395	U
25	1H	396	G
25	1H	405	U
25	1H	411	G

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Mol	Chain	Res	Type
25	1H	412	A
25	1H	421	U
25	1H	428	A
25	1H	444	C
25	1H	448	U
25	1H	457	A
25	1H	470	A
25	1H	471	A
25	1H	479	A
25	1H	481	G
25	1H	482	A
25	1H	496	G
25	1H	504	U
25	1H	505	A
25	1H	508	G
25	1H	509	C
25	1H	512	G
25	1H	513	A
25	1H	529	A
25	1H	530	G
25	1H	531	C
25	1H	532	A
25	1H	535	C
25	1H	537	C
25	1H	539	G
25	1H	540	G
25	1H	544	C
25	1H	545	G
25	1H	546	C
25	1H	547	A
25	1H	556	G
25	1H	563	G
25	1H	564	C
25	1H	568	U
25	1H	573	G
25	1H	574	C
25	1H	575	A
25	1H	588	U
25	1H	603	A
25	1H	607	U
25	1H	609	A
25	1H	614	U

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Mol	Chain	Res	Type
25	1H	615	G
25	1H	616	A
25	1H	617	G
25	1H	620	G
25	1H	621	A
25	1H	622	G
25	1H	624	C
25	1H	627	A
25	1H	629	G
25	1H	631	A
25	1H	634	C
25	1H	637	A
25	1H	638	G
25	1H	644	A
25	1H	645	C
25	1H	646	A
25	1H	654	A
25	1H	654(A)	A
25	1H	654(B)	C
25	1H	654(U)	A
25	1H	660	G
25	1H	667	U
25	1H	668	G
25	1H	669	G
25	1H	670	A
25	1H	671	C
25	1H	686	G
25	1H	714	U
25	1H	717	G
25	1H	730	C
25	1H	738	G
25	1H	747	U
25	1H	760	G
25	1H	762	U
25	1H	765	G
25	1H	776	G
25	1H	782	A
25	1H	784	A
25	1H	785	G
25	1H	792	G
25	1H	802	A
25	1H	805	G

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Mol	Chain	Res	Type
25	1H	812	C
25	1H	819	A
25	1H	821	A
25	1H	827	U
25	1H	828	U
25	1H	845	G
25	1H	846	C
25	1H	847	U
25	1H	856	C
25	1H	857	C
25	1H	859	G
25	1H	860	U
25	1H	866	A
25	1H	869	G
25	1H	871	U
25	1H	880	G
25	1H	882	G
25	1H	884	C
25	1H	885	C
25	1H	886	C
25	1H	889	C
25	1H	893	C
25	1H	898	C
25	1H	899	A
25	1H	900	A
25	1H	901	A
25	1H	904	C
25	1H	907	U
25	1H	910	A
25	1H	914	C
25	1H	915	C
25	1H	917	A
25	1H	918	A
25	1H	932	G
25	1H	940	G
25	1H	941	A
25	1H	946	G
25	1H	953	A
25	1H	959	A
25	1H	961	C
25	1H	968	G
25	1H	974	G

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Mol	Chain	Res	Type
25	1H	974(A)	C
25	1H	980	A
25	1H	983	A
25	1H	990	A
25	1H	991	C
25	1H	996	A
25	1H	999	U
25	1H	1002	G
25	1H	1003	G
25	1H	1005	C
25	1H	1010	A
25	1H	1011	G
25	1H	1012	U
25	1H	1013	C
25	1H	1015	G
25	1H	1016	G
25	1H	1023	U
25	1H	1025	G
25	1H	1026	U
25	1H	1027	A
25	1H	1032	A
25	1H	1033	U
25	1H	1045	A
25	1H	1046	A
25	1H	1050	A
25	1H	1054	A
25	1H	1055	G
25	1H	1057	A
25	1H	1058	U
25	1H	1060	U
25	1H	1061	U
25	1H	1062	G
25	1H	1065	U
25	1H	1067	A
25	1H	1068	G
25	1H	1070	A
25	1H	1071	G
25	1H	1076	C
25	1H	1077	A
25	1H	1078	U
25	1H	1079	C
25	1H	1080	A

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Mol	Chain	Res	Type
25	1H	1082	U
25	1H	1083	U
25	1H	1084	A
25	1H	1085	A
25	1H	1086	A
25	1H	1087	G
25	1H	1088	A
25	1H	1089	G
25	1H	1090	U
25	1H	1095	A
25	1H	1096	A
25	1H	1103	A
25	1H	1104	C
25	1H	1105	U
25	1H	1110	G
25	1H	1111	A
25	1H	1112	G
25	1H	1122	G
25	1H	1130	U
25	1H	1135	C
25	1H	1136	G
25	1H	1139	G
25	1H	1142	U
25	1H	1142(A)	A
25	1H	1151	G
25	1H	1155	A
25	1H	1156	A
25	1H	1165	U
25	1H	1169	G
25	1H	1173	G
25	1H	1174	A
25	1H	1175	U
25	1H	1176	G
25	1H	1178	C
25	1H	1179	C
25	1H	1180	C
25	1H	1195	G
25	1H	1204	A
25	1H	1205	U
25	1H	1210	A
25	1H	1211	U
25	1H	1218	C

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Mol	Chain	Res	Type
25	1H	1220	A
25	1H	1237	A
25	1H	1251	C
25	1H	1256	G
25	1H	1267	U
25	1H	1269	A
25	1H	1271	G
25	1H	1272	A
25	1H	1273	U
25	1H	1283	G
25	1H	1300	U
25	1H	1302	A
25	1H	1303	G
25	1H	1319	G
25	1H	1321	A
25	1H	1329	U
25	1H	1345	C
25	1H	1349	A
25	1H	1352	U
25	1H	1359	A
25	1H	1365	A
25	1H	1368	G
25	1H	1370	C
25	1H	1380	G
25	1H	1385	G
25	1H	1388	G
25	1H	1395	A
25	1H	1407	C
25	1H	1411	C
25	1H	1412	A
25	1H	1416	G
25	1H	1417	C
25	1H	1419	A
25	1H	1420	U
25	1H	1421	G
25	1H	1427	A
25	1H	1428	C
25	1H	1444(A)	A
25	1H	1445	C
25	1H	1449	A
25	1H	1449(A)	G
25	1H	1451	C

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Mol	Chain	Res	Type
25	1H	1455	G
25	1H	1456	G
25	1H	1458	C
25	1H	1459	G
25	1H	1461	G
25	1H	1467	C
25	1H	1471	A
25	1H	1478	G
25	1H	1479	G
25	1H	1482	U
25	1H	1483	G
25	1H	1486	A
25	1H	1493	C
25	1H	1494	A
25	1H	1495	A
25	1H	1497	U
25	1H	1504	C
25	1H	1509	C
25	1H	1510	A
25	1H	1522	G
25	1H	1528	A
25	1H	1540	G
25	1H	1543	A
25	1H	1545	A
25	1H	1546	C
25	1H	1558	A
25	1H	1559	G
25	1H	1560	G
25	1H	1566	A
25	1H	1569	A
25	1H	1578	U
25	1H	1579	A
25	1H	1581	G
25	1H	1585	C
25	1H	1586	A
25	1H	1593	G
25	1H	1598	C
25	1H	1608	A
25	1H	1617	C
25	1H	1618	A
25	1H	1622	G
25	1H	1639	U

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Mol	Chain	Res	Type
25	1H	1640	C
25	1H	1647	G
25	1H	1648	C
25	1H	1674	G
25	1H	1678	G
25	1H	1682	G
25	1H	1694	C
25	1H	1695	G
25	1H	1699	G
25	1H	1725	G
25	1H	1728	G
25	1H	1729	A
25	1H	1730	U
25	1H	1731	G
25	1H	1732	A
25	1H	1742	C
25	1H	1743	G
25	1H	1750	G
25	1H	1753	G
25	1H	1756	G
25	1H	1762	A
25	1H	1763	G
25	1H	1764	G
25	1H	1767	C
25	1H	1773	A
25	1H	1780	A
25	1H	1781	C
25	1H	1782	C
25	1H	1787	A
25	1H	1791	A
25	1H	1798	U
25	1H	1799	G
25	1H	1800	C
25	1H	1801	G
25	1H	1816	G
25	1H	1820	U
25	1H	1821	A
25	1H	1829	A
25	1H	1835	G
25	1H	1847	A
25	1H	1858	G
25	1H	1869	G

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Mol	Chain	Res	Type
25	1H	1870	C
25	1H	1878	G
25	1H	1882	C
25	1H	1885	A
25	1H	1889	A
25	1H	1906	G
25	1H	1908	C
25	1H	1910	G
25	1H	1913	A
25	1H	1919	A
25	1H	1929	G
25	1H	1930	G
25	1H	1935	G
25	1H	1936	A
25	1H	1937	A
25	1H	1938	A
25	1H	1955	U
25	1H	1963	U
25	1H	1964	G
25	1H	1967	C
25	1H	1969	A
25	1H	1970	A
25	1H	1971	A
25	1H	1972	A
25	1H	1981	A
25	1H	1982	C
25	1H	1991	U
25	1H	1992	G
25	1H	1993	U
25	1H	2023	G
25	1H	2031	A
25	1H	2033	A
25	1H	2043	C
25	1H	2049	G
25	1H	2055	C
25	1H	2056	G
25	1H	2059	A
25	1H	2060	A
25	1H	2061	G
25	1H	2062	A
25	1H	2063	C
25	1H	2069	G

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Mol	Chain	Res	Type
25	1H	2086	U
25	1H	2092	U
25	1H	2093	G
25	1H	2099	U
25	1H	2108	C
25	1H	2111	C
25	1H	2113	U
25	1H	2114	A
25	1H	2115	G
25	1H	2116	G
25	1H	2117	A
25	1H	2119	A
25	1H	2120	G
25	1H	2121	G
25	1H	2126	A
25	1H	2127	G
25	1H	2128	C
25	1H	2129	C
25	1H	2131	G
25	1H	2132	U
25	1H	2133	G
25	1H	2144	U
25	1H	2145	C
25	1H	2146	C
25	1H	2147	G
25	1H	2148	G
25	1H	2153	G
25	1H	2156	G
25	1H	2157	G
25	1H	2158	A
25	1H	2159	G
25	1H	2166	G
25	1H	2168	G
25	1H	2169	A
25	1H	2171	A
25	1H	2173	A
25	1H	2189	U
25	1H	2190	G
25	1H	2193	G
25	1H	2198	A
25	1H	2199	A
25	1H	2209	C

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Mol	Chain	Res	Type
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	2238	G
25	1H	2248	C
25	1H	2266	A
25	1H	2269	A
25	1H	2275	C
25	1H	2280	G
25	1H	2283	C
25	1H	2286	A
25	1H	2287	A
25	1H	2294	C
25	1H	2298	A
25	1H	2302	G
25	1H	2305	A
25	1H	2307	G
25	1H	2308	G
25	1H	2310	A
25	1H	2311	A
25	1H	2319	G
25	1H	2320	A
25	1H	2321	G
25	1H	2325	G
25	1H	2334	G
25	1H	2335	A
25	1H	2336	A
25	1H	2342	C
25	1H	2345	G
25	1H	2346	A
25	1H	2347	C
25	1H	2350	C
25	1H	2352	A
25	1H	2382	G
25	1H	2383	G
25	1H	2385	C
25	1H	2392	A
25	1H	2393	A
25	1H	2396	G

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Mol	Chain	Res	Type
25	1H	2399	G
25	1H	2402	C
25	1H	2403	C
25	1H	2406	U
25	1H	2410	G
25	1H	2423	U
25	1H	2425	A
25	1H	2426	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	2450	A
25	1H	2468	G
25	1H	2469	A
25	1H	2472	G
25	1H	2474	C
25	1H	2475	C
25	1H	2476	A
25	1H	2477	C
25	1H	2478	A
25	1H	2482	G
25	1H	2483	C
25	1H	2484	G
25	1H	2497	A
25	1H	2498	C
25	1H	2502	G
25	1H	2504	U
25	1H	2505	G
25	1H	2518	A
25	1H	2519	U
25	1H	2520	C
25	1H	2524	G
25	1H	2529	G
25	1H	2554	U
25	1H	2558	C
25	1H	2562	U
25	1H	2566	A

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Mol	Chain	Res	Type
25	1H	2567	G
25	1H	2574	G
25	1H	2583	G
25	1H	2602	A
25	1H	2609	U
25	1H	2611	U
25	1H	2612	C
25	1H	2621	A
25	1H	2630	G
25	1H	2641	G
25	1H	2649	U
25	1H	2654	A
25	1H	2661	G
25	1H	2665	A
25	1H	2673	G
25	1H	2682	U
25	1H	2689	U
25	1H	2690	C
25	1H	2691	C
25	1H	2697	G
25	1H	2702	U
25	1H	2703	C
25	1H	2707	G
25	1H	2712	U
25	1H	2712(A)	A
25	1H	2713	A
25	1H	2714	G
25	1H	2717	G
25	1H	2724	C
25	1H	2726	U
25	1H	2727	G
25	1H	2733	A
25	1H	2734	A
25	1H	2739	U
25	1H	2744	G
25	1H	2752	C
25	1H	2757	A
25	1H	2758	A
25	1H	2762	G
25	1H	2764	A
25	1H	2765	A
25	1H	2766	G

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Mol	Chain	Res	Type
25	1H	2777	G
25	1H	2778	A
25	1H	2779	U
25	1H	2780	G
25	1H	2789	C
25	1H	2790	A
25	1H	2791	C
25	1H	2792	G
25	1H	2793	G
25	1H	2802	G
25	1H	2803	C
25	1H	2807	G
25	1H	2808	U
25	1H	2820	A
25	1H	2821	A
25	1H	2823	A
25	1H	2833	G
25	1H	2835	A
25	1H	2861	G
25	1H	2864	G
25	1H	2867	G
25	1H	2872	G
25	1H	2874	C
25	1H	2879	C
25	1H	2880	C
25	1H	2891	G
25	1H	2892	A
25	1H	2894	G
25	1H	2895	U
26	16	2	C
26	16	8	U
26	16	10	C
26	16	12	C
26	16	13	A
26	16	15	A
26	16	16	G
26	16	19	G
26	16	21	G
26	16	22	U
26	16	24	G
26	16	25	A
26	16	27	C

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Mol	Chain	Res	Type
26	16	33	G
26	16	38	C
26	16	40	U
26	16	41	U
26	16	42	C
26	16	45	A
26	16	52	A
26	16	65	C
26	16	67	G
26	16	73	A
26	16	81	G
26	16	89	G
26	16	108	C
26	16	109	G
26	16	116	G
1	1G	4	U
1	1G	5	U
1	1G	6	G
1	1G	9	G
1	1G	13	U
1	1G	14	U
1	1G	15	G
1	1G	22	G
1	1G	32	A
1	1G	39	G
1	1G	47	C
1	1G	48	C
1	1G	51	A
1	1G	65	U
1	1G	66	G
1	1G	76	G
1	1G	78	G
1	1G	79	G
1	1G	80	G
1	1G	89	U
1	1G	90	C
1	1G	91	C
1	1G	95	G
1	1G	99	C
1	1G	108	G
1	1G	116	A
1	1G	121	C

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Mol	Chain	Res	Type
1	1G	129(A)	G
1	1G	137	C
1	1G	138	G
1	1G	151	A
1	1G	163	C
1	1G	182	U
1	1G	186	C
1	1G	187	C
1	1G	188	U
1	1G	189	U
1	1G	190	G
1	1G	191(A)	G
1	1G	191(D)	U
1	1G	195	A
1	1G	196	A
1	1G	208	U
1	1G	216	G
1	1G	217	C
1	1G	247	G
1	1G	251	G
1	1G	266	G
1	1G	267	C
1	1G	270	A
1	1G	279	A
1	1G	280	C
1	1G	281	G
1	1G	289	G
1	1G	298	A
1	1G	306	G
1	1G	314	C
1	1G	316	G
1	1G	321	A
1	1G	328	C
1	1G	329	A
1	1G	332	G
1	1G	341	C
1	1G	344	A
1	1G	345	C
1	1G	346	G
1	1G	347	G
1	1G	351	G
1	1G	352	C

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Mol	Chain	Res	Type
1	1G	353	A
1	1G	354	G
1	1G	356	A
1	1G	367	U
1	1G	369	C
1	1G	372	C
1	1G	373	A
1	1G	384	G
1	1G	388	G
1	1G	389	A
1	1G	397	A
1	1G	398	C
1	1G	406	G
1	1G	412	A
1	1G	413	G
1	1G	414	A
1	1G	419	C
1	1G	421	U
1	1G	422	C
1	1G	424	G
1	1G	429	U
1	1G	430	A
1	1G	435	C
1	1G	439	A
1	1G	440	A
1	1G	442	C
1	1G	448	A
1	1G	452	A
1	1G	465	A
1	1G	466	C
1	1G	467	G
1	1G	476	G
1	1G	478	A
1	1G	482	A
1	1G	484	G
1	1G	485	G
1	1G	486	U
1	1G	494	U
1	1G	495	A
1	1G	496	A
1	1G	497	U
1	1G	505	G

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Mol	Chain	Res	Type
1	1G	510	A
1	1G	511	C
1	1G	518	C
1	1G	519	C
1	1G	521	G
1	1G	527	7MG
1	1G	532	A
1	1G	533	A
1	1G	534	U
1	1G	535	A
1	1G	545	C
1	1G	547	A
1	1G	548	G
1	1G	559	A
1	1G	561	U
1	1G	568	G
1	1G	572	A
1	1G	573	A
1	1G	575	G
1	1G	576	G
1	1G	577	G
1	1G	581	G
1	1G	595	G
1	1G	596	C
1	1G	614	A
1	1G	618	C
1	1G	630	G
1	1G	652	U
1	1G	653	A
1	1G	656	C
1	1G	665	A
1	1G	688	G
1	1G	702	A
1	1G	703	G
1	1G	704	A
1	1G	721	G
1	1G	722	A
1	1G	724	G
1	1G	731	G
1	1G	749	C
1	1G	755	G
1	1G	770	C

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Mol	Chain	Res	Type
1	1G	773	G
1	1G	777	A
1	1G	786	G
1	1G	792	A
1	1G	801	U
1	1G	810	C
1	1G	813	U
1	1G	815	A
1	1G	816	A
1	1G	817	C
1	1G	818	G
1	1G	819	A
1	1G	820	U
1	1G	821	G
1	1G	828	A
1	1G	835	U
1	1G	838	G
1	1G	841	U
1	1G	842	C
1	1G	843	U
1	1G	848	C
1	1G	859	A
1	1G	870	U
1	1G	871	U
1	1G	873	A
1	1G	874	G
1	1G	884	U
1	1G	885	G
1	1G	889	A
1	1G	914	A
1	1G	915	A
1	1G	926	G
1	1G	927	G
1	1G	934	C
1	1G	935	A
1	1G	936	C
1	1G	942	G
1	1G	943	U
1	1G	947	G
1	1G	954	G
1	1G	960	U
1	1G	961	U

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Mol	Chain	Res	Type
1	1G	966	M2G
1	1G	968	A
1	1G	969	A
1	1G	971	G
1	1G	972	C
1	1G	974	A
1	1G	975	A
1	1G	976	G
1	1G	977	A
1	1G	978	A
1	1G	980	C
1	1G	989	C
1	1G	991	U
1	1G	992	U
1	1G	993	G
1	1G	999	U
1	1G	1000	A
1	1G	1001	G
1	1G	1003	G
1	1G	1005	A
1	1G	1007	C
1	1G	1008	C
1	1G	1009	G
1	1G	1014	A
1	1G	1020	U
1	1G	1024	G
1	1G	1025	U
1	1G	1026	G
1	1G	1027	C
1	1G	1028(A)	C
1	1G	1029	G
1	1G	1030	C
1	1G	1031	G
1	1G	1032	A
1	1G	1032(A)	G
1	1G	1032(B)	G
1	1G	1033	G
1	1G	1034	G
1	1G	1036	G
1	1G	1038	C
1	1G	1039	C
1	1G	1042	G

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Mol	Chain	Res	Type
1	1G	1046	A
1	1G	1050	G
1	1G	1054	C
1	1G	1064	G
1	1G	1065	U
1	1G	1066	C
1	1G	1067	A
1	1G	1068	G
1	1G	1081	G
1	1G	1082	G
1	1G	1084	G
1	1G	1086	U
1	1G	1087	G
1	1G	1094	G
1	1G	1095	U
1	1G	1096	C
1	1G	1099	G
1	1G	1100	C
1	1G	1101	A
1	1G	1109	C
1	1G	1113	C
1	1G	1117	G
1	1G	1118	C
1	1G	1124	G
1	1G	1125	U
1	1G	1127	G
1	1G	1130	A
1	1G	1131	G
1	1G	1134	G
1	1G	1135	U
1	1G	1136	U
1	1G	1137	C
1	1G	1138	G
1	1G	1139	G
1	1G	1140	C
1	1G	1141	C
1	1G	1144	G
1	1G	1145	C
1	1G	1146	A
1	1G	1147	C
1	1G	1149	C
1	1G	1151	A

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Mol	Chain	Res	Type
1	1G	1157	A
1	1G	1158	C
1	1G	1159	U
1	1G	1160	G
1	1G	1161	C
1	1G	1164	G
1	1G	1171	G
1	1G	1175	G
1	1G	1176	A
1	1G	1177	G
1	1G	1178	G
1	1G	1181	G
1	1G	1182	G
1	1G	1183	A
1	1G	1186	G
1	1G	1188	A
1	1G	1190	G
1	1G	1196	U
1	1G	1198	G
1	1G	1200	C
1	1G	1201	A
1	1G	1211	U
1	1G	1212	U
1	1G	1213	A
1	1G	1215	G
1	1G	1220	G
1	1G	1225	A
1	1G	1227	A
1	1G	1236	A
1	1G	1238	A
1	1G	1240	U
1	1G	1241	G
1	1G	1247	U
1	1G	1257	U
1	1G	1258	G
1	1G	1260	C
1	1G	1269	A
1	1G	1273	G
1	1G	1278	U
1	1G	1279	A
1	1G	1280	A
1	1G	1281	U

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Mol	Chain	Res	Type
1	1G	1285	A
1	1G	1286	A
1	1G	1287	A
1	1G	1288	A
1	1G	1291	G
1	1G	1294	G
1	1G	1296	C
1	1G	1297	C
1	1G	1299	A
1	1G	1300	G
1	1G	1302	U
1	1G	1303	C
1	1G	1305	G
1	1G	1306	A
1	1G	1317	C
1	1G	1320	C
1	1G	1321	C
1	1G	1322	C
1	1G	1323	G
1	1G	1325	C
1	1G	1331	G
1	1G	1334	G
1	1G	1335	C
1	1G	1336	C
1	1G	1337	G
1	1G	1344	C
1	1G	1346	A
1	1G	1347	G
1	1G	1348	U
1	1G	1358	U
1	1G	1362	C
1	1G	1362(A)	C
1	1G	1363	A
1	1G	1364	U
1	1G	1365	G
1	1G	1368	G
1	1G	1370	G
1	1G	1379	G
1	1G	1381	U
1	1G	1389	C
1	1G	1393	U
1	1G	1397	C

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Mol	Chain	Res	Type
1	1G	1398	A
1	1G	1400	5MC
1	1G	1406	U
1	1G	1419	G
1	1G	1442	G
1	1G	1443	G
1	1G	1446	A
1	1G	1447	G
1	1G	1450	U
1	1G	1452	C
1	1G	1453	G
1	1G	1454	G
1	1G	1475	G
1	1G	1492	A
1	1G	1498	UR3
1	1G	1499	A
1	1G	1502	A
1	1G	1503	A
1	1G	1504	G
1	1G	1506	U
1	1G	1507	A
1	1G	1508	G
1	1G	1510	U
1	1G	1517	G
1	1G	1520	G
1	1G	1529	G
1	1G	1530	G
1	1G	1531	A
1	1G	1532	U
1	1G	1533	C
1	1G	1534	A
1	1G	1536	C
1	1G	1540	U
57	2L	8	4SU
57	2L	19	G
57	2L	20	G
57	2L	21	U
57	2L	43	G
57	2L	48	U
57	2L	50	G
57	2L	53	G
57	2L	64	G

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Mol	Chain	Res	Type
57	2L	70	C
57	2L	77	A
22	3L	2	G
22	3L	5	G
22	3L	7	G
22	3L	8	U
22	3L	13	C
22	3L	15	G
22	3L	16	C
22	3L	17	C
22	3L	18	U
22	3L	19	G
22	3L	20	G
22	3L	21	U
22	3L	22	A
22	3L	23	G
22	3L	24	C
22	3L	35	C
22	3L	45	A
22	3L	48	U
22	3L	49	C
22	3L	54	G
22	3L	55	U
22	3L	58	A
22	3L	59	A
22	3L	60	A
22	3L	61	U
22	3L	64	G
22	3L	66	C
22	3L	68	C
22	3L	70	C
22	3L	72	C
22	3L	74	A
24	4L	7	G
24	4L	8	A
24	4L	10	G
24	4L	13	A
24	4L	14	A
24	4L	19	A
24	4L	23	A
24	4L	25	A
25	14	5	A

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Mol	Chain	Res	Type
25	14	6	A
25	14	8	A
25	14	15	G
25	14	34	C
25	14	35	G
25	14	36	G
25	14	46	C
25	14	50	U
25	14	54	G
25	14	55	G
25	14	58	G
25	14	60	G
25	14	63	U
25	14	68	G
25	14	69	C
25	14	71	A
25	14	72	U
25	14	74	A
25	14	75	G
25	14	82	G
25	14	83	G
25	14	85	G
25	14	90	U
25	14	91	A
25	14	96	G
25	14	99	U
25	14	101	G
25	14	103	A
25	14	118	A
25	14	120	U
25	14	124	G
25	14	129	C
25	14	131	G
25	14	137	C
25	14	138	G
25	14	146	G
25	14	153	C
25	14	155	C
25	14	161	U
25	14	172	C
25	14	173	G
25	14	174	C

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Mol	Chain	Res	Type
25	14	175	G
25	14	196	A
25	14	199	A
25	14	201	C
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	226	G
25	14	228	A
25	14	229	A
25	14	248	G
25	14	249	C
25	14	252	G
25	14	265	A
25	14	266	G
25	14	269	U
25	14	270(B)	A
25	14	270(C)	C
25	14	270(G)	C
25	14	270(J)	G
25	14	270(K)	C
25	14	270(L)	U
25	14	270(M)	U
25	14	270(O)	U
25	14	270(Q)	C
25	14	270(U)	C
25	14	270(Z)	U
25	14	271(C)	U
25	14	271	G
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	281	G
25	14	286	C
25	14	289	A
25	14	311	A

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Mol	Chain	Res	Type
25	14	324	A
25	14	329	G
25	14	330	A
25	14	332	A
25	14	333	G
25	14	344	G
25	14	345	A
25	14	352	G
25	14	354	G
25	14	356	G
25	14	363(E)	U
25	14	371	A
25	14	372	G
25	14	386	G
25	14	387	U
25	14	388	G
25	14	395	U
25	14	396	G
25	14	399	G
25	14	405	U
25	14	406	G
25	14	407	G
25	14	411	G
25	14	412	A
25	14	416	C
25	14	422	A
25	14	428	A
25	14	444	C
25	14	447	A
25	14	448	U
25	14	449	A
25	14	453	C
25	14	455	C
25	14	456	C
25	14	457	A
25	14	470	A
25	14	481	G
25	14	486	C
25	14	494	G
25	14	504	U
25	14	505	A
25	14	507	A

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Mol	Chain	Res	Type
25	14	508	G
25	14	509	C
25	14	510	C
25	14	512	G
25	14	513	A
25	14	527	C
25	14	529	A
25	14	531	C
25	14	532	A
25	14	533	G
25	14	548	A
25	14	549	G
25	14	554	U
25	14	561	G
25	14	563	G
25	14	571	A
25	14	573	G
25	14	574	C
25	14	575	A
25	14	588	U
25	14	603	A
25	14	604	G
25	14	607	U
25	14	614	U
25	14	615	G
25	14	617	G
25	14	620	G
25	14	621	A
25	14	622	G
25	14	624	C
25	14	626	U
25	14	627	A
25	14	631	A
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(U)	A
25	14	677	A
25	14	686	G

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Mol	Chain	Res	Type
25	14	694	U
25	14	699	A
25	14	708	C
25	14	717	G
25	14	721	C
25	14	722	A
25	14	730	C
25	14	735	A
25	14	749	C
25	14	752	A
25	14	753	C
25	14	762	U
25	14	776	G
25	14	777	A
25	14	779	U
25	14	782	A
25	14	784	A
25	14	785	G
25	14	790	C
25	14	791	C
25	14	792	G
25	14	793	A
25	14	805	G
25	14	812	C
25	14	819	A
25	14	827	U
25	14	828	U
25	14	832	G
25	14	846	C
25	14	847	U
25	14	854	G
25	14	856	C
25	14	857	C
25	14	859	G
25	14	860	U
25	14	865	C
25	14	866	A
25	14	869	G
25	14	875	G
25	14	878	A
25	14	879	G
25	14	881	G

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Mol	Chain	Res	Type
25	14	882	G
25	14	883	G
25	14	884	C
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	894	C
25	14	895	U
25	14	897	C
25	14	901	A
25	14	905	U
25	14	906	G
25	14	907	U
25	14	910	A
25	14	914	C
25	14	915	C
25	14	917	A
25	14	919	G
25	14	928	G
25	14	932	G
25	14	938	G
25	14	941	A
25	14	943	U
25	14	944	G
25	14	946	G
25	14	958	U
25	14	959	A
25	14	961	C
25	14	968	G
25	14	973	A
25	14	974	G
25	14	974(A)	C
25	14	980	A
25	14	983	A
25	14	990	A
25	14	996	A
25	14	997	G
25	14	1004	C
25	14	1009	A

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Mol	Chain	Res	Type
25	14	1010	A
25	14	1011	G
25	14	1012	U
25	14	1013	C
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	1031	G
25	14	1033	U
25	14	1034	G
25	14	1044	G
25	14	1045	A
25	14	1046	A
25	14	1047	G
25	14	1050	A
25	14	1051	G
25	14	1053	C
25	14	1056	G
25	14	1057	A
25	14	1060	U
25	14	1061	U
25	14	1062	G
25	14	1065	U
25	14	1067	A
25	14	1070	A
25	14	1071	G
25	14	1074	G
25	14	1075	C
25	14	1076	C
25	14	1077	A
25	14	1080	A
25	14	1083	U
25	14	1084	A
25	14	1086	A
25	14	1087	G
25	14	1088	A
25	14	1089	G
25	14	1090	U
25	14	1092	C

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Mol	Chain	Res	Type
25	14	1095	A
25	14	1096	A
25	14	1099	G
25	14	1100	C
25	14	1101	U
25	14	1105	U
25	14	1108	U
25	14	1111	A
25	14	1112	G
25	14	1113	U
25	14	1115	G
25	14	1122	G
25	14	1126	A
25	14	1128	A
25	14	1129	A
25	14	1130	U
25	14	1135	C
25	14	1136	G
25	14	1139	G
25	14	1141	U
25	14	1142(A)	A
25	14	1143	A
25	14	1148	A
25	14	1150	C
25	14	1155	A
25	14	1160	G
25	14	1170	G
25	14	1171	G
25	14	1173	G
25	14	1174	A
25	14	1175	U
25	14	1176	G
25	14	1177	A
25	14	1178	C
25	14	1180	C
25	14	1183	G
25	14	1195	G
25	14	1196	C
25	14	1205	U
25	14	1206	G
25	14	1210	A
25	14	1211	U

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Mol	Chain	Res	Type
25	14	1212	G
25	14	1219	G
25	14	1220	A
25	14	1222	C
25	14	1224	G
25	14	1230	C
25	14	1233	C
25	14	1244	G
25	14	1247	A
25	14	1249	U
25	14	1250	G
25	14	1253	A
25	14	1255	U
25	14	1256	G
25	14	1271	G
25	14	1272	A
25	14	1281	G
25	14	1300	U
25	14	1301	A
25	14	1312	U
25	14	1313	U
25	14	1314	C
25	14	1319	G
25	14	1321	A
25	14	1329	U
25	14	1332	G
25	14	1337	G
25	14	1345	C
25	14	1349	A
25	14	1352	U
25	14	1359	A
25	14	1360	A
25	14	1365	A
25	14	1368	G
25	14	1379	A
25	14	1380	G
25	14	1383	C
25	14	1384	A
25	14	1385	G
25	14	1386	C
25	14	1390	U
25	14	1391	U

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Mol	Chain	Res	Type
25	14	1395	A
25	14	1406	U
25	14	1416	G
25	14	1420	U
25	14	1421	G
25	14	1428	C
25	14	1429	G
25	14	1436	G
25	14	1437	C
25	14	1444	G
25	14	1444(A)	A
25	14	1445	C
25	14	1449	A
25	14	1450	C
25	14	1455	G
25	14	1458	C
25	14	1459	G
25	14	1460	A
25	14	1461	G
25	14	1467	C
25	14	1471	A
25	14	1475	G
25	14	1478	G
25	14	1482	U
25	14	1483	G
25	14	1486	A
25	14	1488	G
25	14	1490	A
25	14	1493	C
25	14	1494	A
25	14	1502	C
25	14	1505	C
25	14	1508	A
25	14	1509	C
25	14	1510	A
25	14	1514	U
25	14	1515	C
25	14	1521	G
25	14	1522	G
25	14	1527	G
25	14	1534	G
25	14	1535	U

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Mol	Chain	Res	Type
25	14	1536	A
25	14	1537	C
25	14	1540	G
25	14	1543	A
25	14	1544	C
25	14	1545	A
25	14	1547	C
25	14	1549	C
25	14	1558	A
25	14	1559	G
25	14	1560	G
25	14	1566	A
25	14	1567	A
25	14	1569	A
25	14	1578	U
25	14	1579	A
25	14	1580	A
25	14	1581	G
25	14	1585	C
25	14	1586	A
25	14	1588	C
25	14	1591	G
25	14	1592	C
25	14	1593	G
25	14	1595	G
25	14	1598	C
25	14	1608	A
25	14	1610	A
25	14	1618	A
25	14	1634	A
25	14	1635	G
25	14	1639	U
25	14	1640	C
25	14	1647	G
25	14	1648	C
25	14	1653	G
25	14	1654	A
25	14	1665	A
25	14	1667	G
25	14	1668	A
25	14	1674	G
25	14	1688	U

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Mol	Chain	Res	Type
25	14	1694	C
25	14	1695	G
25	14	1696	G
25	14	1699	G
25	14	1700	A
25	14	1701	A
25	14	1725	G
25	14	1728	G
25	14	1729	A
25	14	1730	U
25	14	1731	G
25	14	1733	G
25	14	1735	C
25	14	1743	G
25	14	1750	G
25	14	1753	G
25	14	1754	C
25	14	1756	G
25	14	1759	A
25	14	1762	A
25	14	1763	G
25	14	1764	G
25	14	1773	A
25	14	1780	A
25	14	1782	C
25	14	1783	A
25	14	1787	A
25	14	1791	A
25	14	1800	C
25	14	1801	G
25	14	1815	A
25	14	1816	G
25	14	1820	U
25	14	1823	G
25	14	1829	A
25	14	1835	G
25	14	1847	A
25	14	1858	G
25	14	1860	G
25	14	1869	G
25	14	1878	G
25	14	1881	C

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Mol	Chain	Res	Type
25	14	1882	C
25	14	1888	G
25	14	1889	A
25	14	1900	A
25	14	1903	G
25	14	1905	C
25	14	1906	G
25	14	1909	C
25	14	1910	G
25	14	1913	A
25	14	1914	C
25	14	1915	5MU
25	14	1919	A
25	14	1920	OMC
25	14	1929	G
25	14	1930	G
25	14	1937	A
25	14	1938	A
25	14	1948	G
25	14	1949	G
25	14	1955	U
25	14	1956	U
25	14	1963	U
25	14	1966	A
25	14	1967	C
25	14	1970	A
25	14	1971	A
25	14	1972	A
25	14	1982	C
25	14	1993	U
25	14	2019	A
25	14	2022	U
25	14	2023	G
25	14	2026	C
25	14	2027	G
25	14	2031	A
25	14	2033	A
25	14	2039	C
25	14	2043	C
25	14	2050	C
25	14	2052	G
25	14	2055	C

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Mol	Chain	Res	Type
25	14	2056	G
25	14	2059	A
25	14	2060	A
25	14	2061	G
25	14	2062	A
25	14	2063	C
25	14	2069	G
25	14	2071	A
25	14	2092	U
25	14	2099	U
25	14	2100	G
25	14	2101	G
25	14	2102	U
25	14	2107	C
25	14	2111	C
25	14	2112	G
25	14	2113	U
25	14	2114	A
25	14	2115	G
25	14	2117	A
25	14	2119	A
25	14	2120	G
25	14	2128	C
25	14	2130	U
25	14	2131	G
25	14	2132	U
25	14	2136	C
25	14	2137	C
25	14	2139	C
25	14	2140	C
25	14	2144	U
25	14	2145	C
25	14	2146	C
25	14	2147	G
25	14	2148	G
25	14	2154	G
25	14	2161	C
25	14	2167	U
25	14	2169	A
25	14	2171	A
25	14	2172	U
25	14	2173	A

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Mol	Chain	Res	Type
25	14	2174	C
25	14	2175	C
25	14	2182	G
25	14	2189	U
25	14	2190	G
25	14	2191	G
25	14	2192	G
25	14	2198	A
25	14	2199	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	2239	G
25	14	2261	C
25	14	2275	C
25	14	2276	G
25	14	2278	A
25	14	2280	G
25	14	2283	C
25	14	2286	A
25	14	2287	A
25	14	2288	A
25	14	2289	G
25	14	2290	G
25	14	2304	G
25	14	2305	A
25	14	2306	C
25	14	2307	G
25	14	2308	G
25	14	2310	A
25	14	2314	C
25	14	2316	C
25	14	2319	G
25	14	2320	A
25	14	2321	G
25	14	2322	A
25	14	2325	G

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Mol	Chain	Res	Type
25	14	2334	G
25	14	2342	C
25	14	2345	G
25	14	2346	A
25	14	2347	C
25	14	2350	C
25	14	2372	G
25	14	2382	G
25	14	2383	G
25	14	2384	G
25	14	2385	C
25	14	2388	A
25	14	2396	G
25	14	2402	C
25	14	2403	C
25	14	2406	U
25	14	2409	G
25	14	2425	A
25	14	2429	G
25	14	2430	A
25	14	2435	A
25	14	2439	A
25	14	2440	C
25	14	2441	C
25	14	2445	G
25	14	2446	G
25	14	2448	A
25	14	2450	A
25	14	2469	A
25	14	2470	G
25	14	2472	G
25	14	2473	U
25	14	2476	A
25	14	2478	A
25	14	2479	G
25	14	2482	G
25	14	2497	A
25	14	2502	G
25	14	2504	U
25	14	2505	G
25	14	2517	C
25	14	2518	A

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Mol	Chain	Res	Type
25	14	2519	U
25	14	2520	C
25	14	2527	C
25	14	2529	G
25	14	2542	A
25	14	2543	G
25	14	2546	U
25	14	2554	U
25	14	2556	C
25	14	2566	A
25	14	2567	G
25	14	2576	G
25	14	2582	G
25	14	2586	C
25	14	2602	A
25	14	2603	G
25	14	2609	U
25	14	2610	C
25	14	2611	U
25	14	2612	C
25	14	2615	U
25	14	2629	A
25	14	2630	G
25	14	2638	G
25	14	2655	G
25	14	2656	U
25	14	2665	A
25	14	2673	G
25	14	2674	G
25	14	2675	A
25	14	2683	C
25	14	2689	U
25	14	2691	C
25	14	2702	U
25	14	2703	C
25	14	2712	U
25	14	2712(A)	A
25	14	2713	A
25	14	2718	G
25	14	2719	G
25	14	2725	A
25	14	2733	A

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Mol	Chain	Res	Type
25	14	2734	A
25	14	2739	U
25	14	2748	A
25	14	2749	A
25	14	2750	A
25	14	2751	G
25	14	2752	C
25	14	2754	U
25	14	2756	U
25	14	2757	A
25	14	2758	A
25	14	2762	G
25	14	2763	G
25	14	2764	A
25	14	2766	G
25	14	2769	C
25	14	2777	G
25	14	2778	A
25	14	2779	U
25	14	2780	G
25	14	2790	A
25	14	2791	C
25	14	2792	G
25	14	2794	C
25	14	2802	G
25	14	2808	U
25	14	2818	G
25	14	2820	A
25	14	2821	A
25	14	2827	C
25	14	2833	G
25	14	2834	G
25	14	2860	A
25	14	2861	G
25	14	2867	G
25	14	2868	A
25	14	2872	G
25	14	2876	G
25	14	2879	C
25	14	2882	A
25	14	2883	A
25	14	2893	G

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Mol	Chain	Res	Type
25	14	2895	U
25	14	2896	C
26	1J	0	A
26	1J	3	C
26	1J	5	C
26	1J	6	C
26	1J	8	U
26	1J	13	A
26	1J	14	U
26	1J	15	A
26	1J	16	G
26	1J	19	G
26	1J	22	U
26	1J	24	G
26	1J	25	A
26	1J	27	C
26	1J	30	C
26	1J	31	C
26	1J	32	C
26	1J	34	U
26	1J	35	U
26	1J	40	U
26	1J	41	U
26	1J	42	C
26	1J	44	G
26	1J	45	A
26	1J	47	C
26	1J	52	A
26	1J	53	A
26	1J	63	G
26	1J	66	A
26	1J	67	G
26	1J	73	A
26	1J	81	G
26	1J	88	C
26	1J	89	G
26	1J	96	G
26	1J	108	C
26	1J	109	G
26	1J	112	G
26	1J	115	G
26	1J	119	A

All (226) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	60	A
1	13	89	U
1	13	190	G
1	13	243	A
1	13	244	U
1	13	266	G
1	13	328	C
1	13	352	C
1	13	410	G
1	13	412	A
1	13	423	G
1	13	429	U
1	13	481	G
1	13	484	G
1	13	485	G
1	13	495	A
1	13	509	A
1	13	560	U
1	13	595	G
1	13	686	U
1	13	687	A
1	13	701	C
1	13	703	G
1	13	748	C
1	13	753	A
1	13	792	A
1	13	812	C
1	13	815	A
1	13	871	U
1	13	913	A
1	13	960	U
1	13	965	A
1	13	991	U
1	13	992	U
1	13	1065	U
1	13	1126	U
1	13	1182	G
1	13	1200	C
1	13	1280	A
1	13	1285	A
1	13	1302	U

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Mol	Chain	Res	Type
1	13	1336	C
1	13	1347	G
1	13	1397	C
1	13	1503	A
1	13	1504	G
22	1K	20	G
22	1K	49	C
23	2K	48	U
24	4K	10	G
24	4K	18	G
25	1H	99	U
25	1H	221	A
25	1H	222	A
25	1H	229	A
25	1H	249	C
25	1H	271(B)	G
25	1H	275	G
25	1H	278	A
25	1H	372	G
25	1H	404	C
25	1H	481	G
25	1H	503	A
25	1H	512	G
25	1H	587	C
25	1H	614	U
25	1H	637	A
25	1H	653	A
25	1H	746	A
25	1H	845	G
25	1H	856	C
25	1H	859	G
25	1H	1012	U
25	1H	1022	G
25	1H	1026	U
25	1H	1045	A
25	1H	1078	U
25	1H	1085	A
25	1H	1109	C
25	1H	1177	A
25	1H	1178	C
25	1H	1204	A
25	1H	1210	A

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Mol	Chain	Res	Type
25	1H	1266	G
25	1H	1301	A
25	1H	1302	A
25	1H	1379	A
25	1H	1444(A)	A
25	1H	1558	A
25	1H	1608	A
25	1H	1681	G
25	1H	1694	C
25	1H	1698	A
25	1H	1799	G
25	1H	1819	A
25	1H	1980	G
25	1H	1992	G
25	1H	2022	U
25	1H	2126	A
25	1H	2146	C
25	1H	2157	G
25	1H	2351	G
25	1H	2405	G
25	1H	2439	A
25	1H	2481	G
25	1H	2518	A
25	1H	2566	A
25	1H	2610	C
25	1H	2689	U
25	1H	2712	U
25	1H	2751	G
25	1H	2756	U
25	1H	2776	A
25	1H	2832	U
26	16	24	G
26	16	66	A
1	1G	5	U
1	1G	31	G
1	1G	115	G
1	1G	181	G
1	1G	201	C
1	1G	250	A
1	1G	266	G
1	1G	279	A
1	1G	328	C

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Mol	Chain	Res	Type
1	1G	353	A
1	1G	412	A
1	1G	413	G
1	1G	429	U
1	1G	485	G
1	1G	496	A
1	1G	518	C
1	1G	547	A
1	1G	560	U
1	1G	595	G
1	1G	687	A
1	1G	701	C
1	1G	748	C
1	1G	812	C
1	1G	815	A
1	1G	818	G
1	1G	870	U
1	1G	872	A
1	1G	913	A
1	1G	960	U
1	1G	976	G
1	1G	991	U
1	1G	992	U
1	1G	1000	A
1	1G	1004	A
1	1G	1008	C
1	1G	1029	G
1	1G	1030	C
1	1G	1033	G
1	1G	1038	C
1	1G	1049	U
1	1G	1053	G
1	1G	1065	U
1	1G	1067	A
1	1G	1137	C
1	1G	1139	G
1	1G	1157	A
1	1G	1200	C
1	1G	1211	U
1	1G	1240	U
1	1G	1346	A
1	1G	1347	G

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Mol	Chain	Res	Type
1	1G	1452	C
1	1G	1532	U
22	3L	23	G
22	3L	58	A
24	4L	7	G
25	14	34	C
25	14	49	A
25	14	71	A
25	14	119	A
25	14	221	A
25	14	275	G
25	14	387	U
25	14	587	C
25	14	616	A
25	14	752	A
25	14	790	C
25	14	846	C
25	14	856	C
25	14	877	U
25	14	878	A
25	14	883	G
25	14	1033	U
25	14	1085	A
25	14	1171	G
25	14	1210	A
25	14	1300	U
25	14	1359	A
25	14	1427	A
25	14	1460	A
25	14	1558	A
25	14	1634	A
25	14	1647	G
25	14	1652	A
25	14	1694	C
25	14	1698	A
25	14	1762	A
25	14	1782	C
25	14	1819	A
25	14	1936	A
25	14	1955	U
25	14	1992	G
25	14	2144	U

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Mol	Chain	Res	Type
25	14	2166	G
25	14	2191	G
25	14	2211	G
25	14	2439	A
25	14	2481	G
25	14	2518	A
25	14	2585	U
25	14	2602	A
25	14	2610	C
25	14	2776	A
25	14	2789	C
25	14	2859	G
25	14	2867	G
26	1J	24	G
26	1J	34	U
26	1J	66	A

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

59 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	$\#\|Z\| > 2$
25	5MC	1H	1942	25	18,22,23	3.63	7 (38%)	26,32,35	1.06	2 (7%)
25	5MC	14	1962	25	18,22,23	3.82	7 (38%)	26,32,35	1.40	5 (19%)
57	4SU	2L	8	57	18,21,22	1.77	3 (16%)	26,30,33	1.94	4 (15%)
57	7MG	2L	47	57	22,26,27	3.10	6 (27%)	29,39,42	2.80	10 (34%)
12	0TD	3I	89	12	7,9,10	1.15	0	6,11,13	2.89	3 (50%)
23	5MU	2K	55	23	19,22,23	3.93	5 (26%)	28,32,35	3.17	8 (28%)
1	UR3	1G	1498	1	19,22,23	2.79	7 (36%)	26,32,35	1.56	3 (11%)
1	2MG	1G	1207	1	18,26,27	2.72	7 (38%)	16,38,41	1.30	2 (12%)
23	H2U	2K	21	23	18,21,22	2.11	4 (22%)	21,30,33	1.96	4 (19%)
57	PSU	2L	56	57	18,21,22	1.16	1 (5%)	22,30,33	1.78	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	5MC	1G	967	1	18,22,23	3.84	7 (38%)	26,32,35	1.05	2 (7%)
1	MA6	13	1519	1	18,26,27	1.06	2 (11%)	19,38,41	2.47	2 (10%)
25	5MU	14	1939	58,25	19,22,23	3.73	5 (26%)	28,32,35	3.41	9 (32%)
1	M2G	1G	966	1	20,27,28	3.86	7 (35%)	22,40,43	1.24	4 (18%)
25	5MC	14	1942	25	18,22,23	3.79	7 (38%)	26,32,35	1.08	2 (7%)
23	OMC	2K	33	23	19,22,23	1.81	4 (21%)	26,31,34	1.01	2 (7%)
25	PSU	1H	2605	25	18,21,22	1.12	2 (11%)	22,30,33	1.98	5 (22%)
25	OMU	1H	2552	59,25	19,22,23	2.91	8 (42%)	26,31,34	1.76	5 (19%)
1	5MC	1G	1400	1	18,22,23	3.82	7 (38%)	26,32,35	1.10	2 (7%)
1	PSU	13	516	1,59	18,21,22	1.14	1 (5%)	22,30,33	1.63	3 (13%)
25	PSU	14	2605	25	18,21,22	1.14	1 (5%)	22,30,33	1.69	3 (13%)
25	PSU	14	1911	25	18,21,22	1.11	1 (5%)	22,30,33	1.60	4 (18%)
25	OMU	14	2552	59,25	19,22,23	3.00	8 (42%)	26,31,34	1.90	5 (19%)
1	MA6	1G	1518	1	18,26,27	0.99	2 (11%)	19,38,41	2.45	2 (10%)
1	7MG	1G	527	1,58	22,26,27	3.11	7 (31%)	29,39,42	2.81	10 (34%)
25	PSU	1H	1917	25	18,21,22	1.14	1 (5%)	22,30,33	1.82	4 (18%)
25	PSU	1H	1911	25	18,21,22	1.11	1 (5%)	22,30,33	1.70	4 (18%)
25	5MC	1H	1962	58,25	18,22,23	3.84	7 (38%)	26,32,35	1.08	1 (3%)
1	5MC	13	1407	1	18,22,23	3.77	7 (38%)	26,32,35	1.05	1 (3%)
25	OMG	1H	2251	58,23,25	18,26,27	5.28	9 (50%)	19,38,41	3.66	6 (31%)
23	4SU	2K	8	23	18,21,22	1.78	3 (16%)	26,30,33	2.37	5 (19%)
25	OMG	14	2251	58,57,25	18,26,27	5.34	9 (50%)	19,38,41	3.68	7 (36%)
1	2MG	13	1207	1	18,26,27	2.71	7 (38%)	16,38,41	1.40	3 (18%)
25	OMC	1H	1920	25	19,22,23	1.78	4 (21%)	26,31,34	1.04	3 (11%)
12	0TD	3A	89	12	7,9,10	1.34	0	6,11,13	3.17	3 (50%)
25	5MU	1H	1939	58,25	19,22,23	3.76	5 (26%)	28,32,35	3.70	8 (28%)
1	5MC	13	1404	1	18,22,23	3.75	7 (38%)	26,32,35	1.14	2 (7%)
1	5MC	13	967	1	18,22,23	3.79	7 (38%)	26,32,35	1.05	2 (7%)
25	OMC	14	1920	25	19,22,23	1.80	4 (21%)	26,31,34	0.84	0
57	5MU	2L	55	57	19,22,23	3.92	5 (26%)	28,32,35	3.22	10 (35%)
25	2MA	1H	2503	58,59,25	17,25,26	2.24	6 (35%)	17,37,40	1.23	2 (11%)
25	PSU	14	1917	25	18,21,22	1.06	1 (5%)	22,30,33	1.81	4 (18%)
1	4OC	13	1402	1	20,23,24	3.10	8 (40%)	26,32,35	0.86	1 (3%)
23	PSU	2K	56	23	18,21,22	1.12	1 (5%)	22,30,33	1.81	5 (22%)
1	UR3	13	1498	1	19,22,23	2.79	7 (36%)	26,32,35	1.45	3 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	5MC	13	1400	1	18,22,23	3.90	7 (38%)	26,32,35	1.10	2 (7%)
1	5MC	1G	1404	1	18,22,23	3.82	7 (38%)	26,32,35	1.01	2 (7%)
25	2MA	14	2503	58,59,25	17,25,26	2.32	6 (35%)	17,37,40	1.27	3 (17%)
57	OMC	2L	33	57	19,22,23	1.83	4 (21%)	26,31,34	1.06	2 (7%)
1	M2G	13	966	1	20,27,28	3.98	7 (35%)	22,40,43	1.41	5 (22%)
1	5MC	1G	1407	1	18,22,23	3.84	7 (38%)	26,32,35	1.09	1 (3%)
25	5MU	1H	1915	25	19,22,23	3.95	5 (26%)	28,32,35	3.28	10 (35%)
1	7MG	13	527	1,58	22,26,27	3.14	6 (27%)	29,39,42	2.82	10 (34%)
1	MA6	13	1518	1	18,26,27	0.97	1 (5%)	19,38,41	2.57	2 (10%)
1	PSU	1G	516	1,59	18,21,22	1.14	1 (5%)	22,30,33	1.76	4 (18%)
25	5MU	14	1915	25	19,22,23	3.99	5 (26%)	28,32,35	3.26	9 (32%)
1	MA6	1G	1519	1	18,26,27	0.97	2 (11%)	19,38,41	2.68	2 (10%)
23	7MG	2K	47	23	22,26,27	3.16	7 (31%)	29,39,42	2.76	10 (34%)
1	4OC	1G	1402	1	20,23,24	2.95	8 (40%)	26,32,35	1.15	2 (7%)

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
25	5MC	1H	1942	25	-	0/7/25/26	0/2/2/2
25	5MC	14	1962	25	-	2/7/25/26	0/2/2/2
57	4SU	2L	8	57	-	3/7/25/26	0/2/2/2
57	7MG	2L	47	57	-	3/7/37/38	0/3/3/3
12	0TD	3I	89	12	-	3/7/12/14	-
23	5MU	2K	55	23	-	0/7/25/26	0/2/2/2
1	UR3	1G	1498	1	-	0/7/25/26	0/2/2/2
1	2MG	1G	1207	1	-	0/5/27/28	0/3/3/3
23	H2U	2K	21	23	-	4/7/38/39	0/2/2/2
57	PSU	2L	56	57	-	0/7/25/26	0/2/2/2
1	5MC	1G	967	1	-	0/7/25/26	0/2/2/2
1	MA6	13	1519	1	-	5/7/29/30	0/3/3/3
25	5MU	14	1939	58,25	-	0/7/25/26	0/2/2/2
1	M2G	1G	966	1	-	0/7/29/30	0/3/3/3
25	5MC	14	1942	25	-	0/7/25/26	0/2/2/2
23	OMC	2K	33	23	-	1/9/27/28	0/2/2/2
25	PSU	1H	2605	25	-	2/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	OMU	1H	2552	59,25	-	0/9/27/28	0/2/2/2
1	5MC	1G	1400	1	-	2/7/25/26	0/2/2/2
1	PSU	13	516	1,59	-	0/7/25/26	0/2/2/2
25	PSU	14	2605	25	-	0/7/25/26	0/2/2/2
25	PSU	14	1911	25	-	0/7/25/26	0/2/2/2
25	OMU	14	2552	59,25	-	0/9/27/28	0/2/2/2
1	MA6	1G	1518	1	-	3/7/29/30	0/3/3/3
1	7MG	1G	527	1,58	-	3/7/37/38	0/3/3/3
25	PSU	1H	1917	25	-	1/7/25/26	0/2/2/2
25	PSU	1H	1911	25	-	0/7/25/26	0/2/2/2
25	5MC	1H	1962	58,25	-	2/7/25/26	0/2/2/2
1	5MC	13	1407	1	-	0/7/25/26	0/2/2/2
25	OMG	1H	2251	58,23,25	-	1/5/27/28	0/3/3/3
23	4SU	2K	8	23	-	0/7/25/26	0/2/2/2
25	OMG	14	2251	58,57,25	-	0/5/27/28	0/3/3/3
1	2MG	13	1207	1	-	1/5/27/28	0/3/3/3
25	OMC	1H	1920	25	-	2/9/27/28	0/2/2/2
12	0TD	3A	89	12	-	3/7/12/14	-
25	5MU	1H	1939	58,25	-	0/7/25/26	0/2/2/2
1	5MC	13	1404	1	-	0/7/25/26	0/2/2/2
1	5MC	13	967	1	-	2/7/25/26	0/2/2/2
25	OMC	14	1920	25	-	2/9/27/28	0/2/2/2
57	5MU	2L	55	57	-	0/7/25/26	0/2/2/2
25	2MA	1H	2503	58,59,25	-	3/3/25/26	0/3/3/3
25	PSU	14	1917	25	-	0/7/25/26	0/2/2/2
1	4OC	13	1402	1	-	2/9/29/30	0/2/2/2
23	PSU	2K	56	23	-	2/7/25/26	0/2/2/2
1	UR3	13	1498	1	-	0/7/25/26	0/2/2/2
1	5MC	13	1400	1	-	2/7/25/26	0/2/2/2
1	5MC	1G	1404	1	-	0/7/25/26	0/2/2/2
25	2MA	14	2503	58,59,25	-	1/3/25/26	0/3/3/3
57	OMC	2L	33	57	-	3/9/27/28	0/2/2/2
1	M2G	13	966	1	-	1/7/29/30	0/3/3/3
1	5MC	1G	1407	1	-	0/7/25/26	0/2/2/2
25	5MU	1H	1915	25	-	0/7/25/26	0/2/2/2
1	7MG	13	527	1,58	-	2/7/37/38	0/3/3/3
1	MA6	13	1518	1	-	0/7/29/30	0/3/3/3
1	PSU	1G	516	1,59	-	0/7/25/26	0/2/2/2
25	5MU	14	1915	25	-	3/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MA6	1G	1519	1	-	3/7/29/30	0/3/3/3
23	7MG	2K	47	23	-	2/7/37/38	0/3/3/3
1	4OC	1G	1402	1	-	2/9/29/30	0/2/2/2

All (288) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	14	2251	OMG	C8-N7	-15.42	1.08	1.35
25	1H	2251	OMG	C8-N7	-15.11	1.09	1.35
1	13	966	M2G	C2-N3	13.12	1.46	1.30
25	14	1915	5MU	C2-N1	13.04	1.59	1.38
25	1H	1915	5MU	C2-N1	12.81	1.59	1.38
1	1G	966	M2G	C2-N3	12.80	1.46	1.30
57	2L	55	5MU	C2-N1	12.69	1.58	1.38
23	2K	55	5MU	C2-N1	12.67	1.58	1.38
25	1H	1939	5MU	C2-N1	12.05	1.57	1.38
25	14	1939	5MU	C2-N1	11.79	1.57	1.38
25	14	2251	OMG	C4-N3	9.76	1.61	1.37
1	1G	1407	5MC	C6-C5	9.74	1.50	1.34
25	1H	1962	5MC	C6-C5	9.64	1.50	1.34
1	13	1400	5MC	C6-C5	9.61	1.50	1.34
1	1G	967	5MC	C6-C5	9.54	1.50	1.34
1	1G	1400	5MC	C6-C5	9.54	1.50	1.34
25	1H	2251	OMG	C4-N3	9.50	1.60	1.37
1	13	1407	5MC	C6-C5	9.49	1.50	1.34
1	1G	1404	5MC	C6-C5	9.44	1.50	1.34
25	14	1942	5MC	C6-C5	9.36	1.50	1.34
1	13	967	5MC	C6-C5	9.35	1.50	1.34
25	1H	2251	OMG	C6-N1	-9.29	1.24	1.37
23	2K	47	7MG	C5-N7	9.26	1.46	1.35
25	14	1962	5MC	C6-C5	9.21	1.49	1.34
1	13	1404	5MC	C6-C5	9.20	1.49	1.34
25	14	2251	OMG	C6-N1	-9.02	1.24	1.37
57	2L	47	7MG	C5-N7	9.00	1.46	1.35
25	1H	1942	5MC	C6-C5	8.90	1.49	1.34
1	13	527	7MG	C5-N7	8.85	1.45	1.35
1	1G	527	7MG	C5-N7	8.79	1.45	1.35
1	13	527	7MG	C4-N9	-8.00	1.28	1.37
1	1G	527	7MG	C4-N9	-7.58	1.28	1.37
23	2K	47	7MG	C4-N9	-7.55	1.28	1.37
1	13	966	M2G	C2-N2	7.55	1.49	1.35
1	13	1400	5MC	C4-N3	7.54	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	2L	47	7MG	C4-N9	-7.52	1.29	1.37
25	14	1962	5MC	C4-N3	7.36	1.46	1.34
25	1H	2251	OMG	C5-C4	7.34	1.61	1.43
1	1G	1498	UR3	C2-N1	7.33	1.49	1.38
1	1G	967	5MC	C4-N3	7.30	1.46	1.34
1	13	967	5MC	C4-N3	7.26	1.46	1.34
25	14	1942	5MC	C4-N3	7.22	1.46	1.34
1	13	1498	UR3	C2-N1	7.22	1.48	1.38
1	1G	1404	5MC	C4-N3	7.18	1.46	1.34
25	14	2251	OMG	C5-C4	7.16	1.61	1.43
1	13	1404	5MC	C4-N3	7.14	1.46	1.34
1	1G	1400	5MC	C4-N3	7.12	1.46	1.34
1	1G	966	M2G	C2-N2	7.10	1.48	1.35
25	1H	1962	5MC	C4-N3	7.08	1.46	1.34
1	13	1402	4OC	C4-N3	7.02	1.45	1.32
25	1H	1939	5MU	C4-N3	-6.92	1.26	1.38
1	1G	1407	5MC	C4-N3	6.91	1.45	1.34
25	1H	2552	OMU	C2-N3	6.91	1.50	1.38
1	13	1407	5MC	C4-N3	6.90	1.45	1.34
25	1H	1942	5MC	C4-N3	6.87	1.45	1.34
25	14	2552	OMU	C2-N3	6.84	1.50	1.38
1	1G	1402	4OC	C4-N3	6.84	1.44	1.32
25	14	1939	5MU	C4-N3	-6.83	1.26	1.38
25	14	2552	OMU	C2-N1	6.72	1.49	1.38
1	13	1400	5MC	C2-N3	6.66	1.49	1.36
1	1G	1207	2MG	C2-N2	6.66	1.48	1.33
25	14	1942	5MC	C2-N3	6.57	1.49	1.36
25	1H	1962	5MC	C2-N3	6.54	1.49	1.36
1	1G	1404	5MC	C2-N3	6.52	1.49	1.36
1	1G	1407	5MC	C2-N3	6.50	1.49	1.36
1	1G	967	5MC	C2-N3	6.49	1.49	1.36
25	1H	1915	5MU	C4-N3	-6.48	1.26	1.38
1	13	1207	2MG	C2-N2	6.47	1.47	1.33
1	1G	1400	5MC	C2-N3	6.43	1.49	1.36
1	13	1404	5MC	C2-N3	6.42	1.49	1.36
1	13	967	5MC	C2-N3	6.41	1.49	1.36
25	14	2503	2MA	C2-N3	6.41	1.44	1.31
25	14	1962	5MC	C2-N3	6.39	1.49	1.36
1	13	1407	5MC	C2-N3	6.34	1.49	1.36
25	1H	1942	5MC	C2-N3	6.29	1.49	1.36
23	2K	21	H2U	C2-N1	6.28	1.44	1.35
25	14	1915	5MU	C4-N3	-6.27	1.27	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	2L	55	5MU	C4-N3	-6.23	1.27	1.38
1	13	1498	UR3	C6-C5	6.20	1.49	1.35
25	1H	2503	2MA	C2-N3	6.15	1.44	1.31
1	1G	1498	UR3	C6-C5	6.15	1.49	1.35
1	13	1402	4OC	C6-C5	6.13	1.49	1.35
23	2K	55	5MU	C4-N3	-6.11	1.27	1.38
1	13	1402	4OC	C2-N3	6.00	1.48	1.36
23	2K	47	7MG	C4-N3	5.91	1.48	1.34
25	1H	2552	OMU	C2-N1	5.91	1.47	1.38
57	2L	47	7MG	C4-N3	5.87	1.48	1.34
1	1G	527	7MG	C4-N3	5.86	1.48	1.34
23	2K	55	5MU	C2-N3	5.79	1.48	1.38
25	14	2552	OMU	C6-C5	5.77	1.48	1.35
1	1G	1402	4OC	C6-C5	5.75	1.48	1.35
25	1H	2552	OMU	C6-C5	5.75	1.48	1.35
1	1G	1402	4OC	C2-N3	5.75	1.48	1.36
1	1G	966	M2G	C4-N3	5.71	1.51	1.37
1	13	527	7MG	C4-N3	5.71	1.47	1.34
1	13	966	M2G	C4-N3	5.68	1.51	1.37
25	14	1915	5MU	C2-N3	5.67	1.48	1.38
25	14	1915	5MU	C6-N1	5.66	1.47	1.38
57	2L	8	4SU	C5-C4	5.66	1.49	1.42
57	2L	55	5MU	C2-N3	5.65	1.48	1.38
23	2K	55	5MU	C6-N1	5.61	1.47	1.38
25	1H	1915	5MU	C6-N1	5.56	1.47	1.38
57	2L	55	5MU	C6-N1	5.54	1.47	1.38
25	1H	1915	5MU	C2-N3	5.43	1.47	1.38
1	1G	1207	2MG	C4-N3	5.34	1.50	1.37
1	13	1498	UR3	C2-N3	5.34	1.49	1.39
25	14	1939	5MU	C6-N1	5.30	1.47	1.38
23	2K	8	4SU	C5-C4	5.26	1.49	1.42
1	13	1207	2MG	C4-N3	5.19	1.50	1.37
1	1G	1498	UR3	C2-N3	5.15	1.49	1.39
1	13	1400	5MC	C4-N4	5.03	1.47	1.34
25	14	1962	5MC	C4-N4	5.03	1.47	1.34
25	1H	1915	5MU	C4-C5	5.02	1.53	1.44
23	2K	55	5MU	C4-C5	5.02	1.53	1.44
57	2L	55	5MU	C4-C5	5.00	1.53	1.44
1	13	967	5MC	C4-N4	4.99	1.47	1.34
25	14	1939	5MU	C2-N3	4.98	1.46	1.38
25	1H	1962	5MC	C4-N4	4.96	1.47	1.34
1	1G	1404	5MC	C4-N4	4.94	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	14	1942	5MC	C4-N4	4.93	1.46	1.34
1	1G	1400	5MC	C4-N4	4.93	1.46	1.34
1	13	1404	5MC	C4-N4	4.92	1.46	1.34
1	1G	967	5MC	C4-N4	4.92	1.46	1.34
25	1H	1939	5MU	C6-N1	4.91	1.46	1.38
25	14	1915	5MU	C4-C5	4.87	1.52	1.44
1	13	1407	5MC	C4-N4	4.85	1.46	1.34
1	13	1407	5MC	C6-N1	4.84	1.46	1.38
25	14	1962	5MC	C2-N1	4.84	1.50	1.40
1	1G	1207	2MG	C2-N1	4.83	1.44	1.36
1	1G	1404	5MC	C6-N1	4.83	1.46	1.38
25	1H	1942	5MC	C4-N4	4.81	1.46	1.34
1	1G	967	5MC	C6-N1	4.81	1.46	1.38
25	1H	1962	5MC	C6-N1	4.81	1.46	1.38
1	1G	1407	5MC	C4-N4	4.80	1.46	1.34
25	1H	1939	5MU	C2-N3	4.79	1.46	1.38
25	1H	2503	2MA	C4-N3	4.77	1.48	1.37
25	14	2503	2MA	C4-N3	4.75	1.48	1.37
1	1G	1400	5MC	C6-N1	4.74	1.46	1.38
25	1H	1939	5MU	C4-C5	4.72	1.52	1.44
1	13	1400	5MC	C6-N1	4.72	1.46	1.38
1	13	967	5MC	C6-N1	4.69	1.46	1.38
1	1G	1407	5MC	C6-N1	4.69	1.46	1.38
1	13	1207	2MG	C2-N1	4.67	1.44	1.36
23	2K	33	OMC	C2-N3	4.59	1.45	1.36
1	1G	1400	5MC	C2-N1	4.59	1.49	1.40
25	14	1942	5MC	C6-N1	4.58	1.45	1.38
1	1G	1407	5MC	C2-N1	4.56	1.49	1.40
1	13	1400	5MC	C2-N1	4.56	1.49	1.40
25	14	1962	5MC	C6-N1	4.55	1.45	1.38
57	2L	33	OMC	C2-N3	4.55	1.45	1.36
1	13	1404	5MC	C6-N1	4.49	1.45	1.38
25	1H	1962	5MC	C2-N1	4.44	1.49	1.40
1	1G	1404	5MC	C2-N1	4.42	1.49	1.40
25	14	1939	5MU	C4-C5	4.40	1.52	1.44
25	14	1920	OMC	C4-N4	4.38	1.44	1.33
57	2L	33	OMC	C4-N4	4.38	1.44	1.33
25	14	1920	OMC	C2-N3	4.37	1.45	1.36
25	1H	1920	OMC	C2-N3	4.36	1.45	1.36
25	14	1942	5MC	C2-N1	4.35	1.49	1.40
1	13	527	7MG	C5-C4	-4.33	1.23	1.38
23	2K	33	OMC	C4-N4	4.33	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	1942	5MC	C2-N1	4.32	1.49	1.40
1	1G	967	5MC	C2-N1	4.32	1.49	1.40
25	1H	1942	5MC	C6-N1	4.31	1.45	1.38
25	1H	1920	OMC	C4-N4	4.31	1.44	1.33
1	13	1407	5MC	C2-N1	4.31	1.49	1.40
23	2K	47	7MG	C5-C4	-4.30	1.23	1.38
1	13	1402	4OC	C4-N4	4.29	1.44	1.35
1	1G	527	7MG	C5-C4	-4.28	1.24	1.38
1	13	1404	5MC	C2-N1	4.28	1.49	1.40
57	2L	47	7MG	C5-C4	-4.27	1.24	1.38
1	13	966	M2G	C2-N1	4.25	1.47	1.36
1	13	967	5MC	C2-N1	4.17	1.49	1.40
23	2K	21	H2U	C2-N3	4.14	1.45	1.38
1	1G	966	M2G	C2-N1	4.14	1.47	1.36
25	1H	2552	OMU	C4-N3	4.10	1.45	1.38
25	14	2251	OMG	C5-C6	-4.09	1.39	1.47
1	13	1402	4OC	C2-N1	4.06	1.48	1.40
1	1G	1402	4OC	C2-N1	4.01	1.48	1.40
25	14	2552	OMU	C4-N3	3.96	1.45	1.38
1	13	1402	4OC	C5-C4	3.93	1.49	1.40
25	14	1920	OMC	C5-C4	3.88	1.51	1.42
23	2K	8	4SU	C2-N1	3.88	1.44	1.38
57	2L	56	PSU	C6-C5	3.87	1.39	1.35
1	13	966	M2G	C6-N1	3.81	1.43	1.37
1	1G	1402	4OC	C5-C4	3.74	1.48	1.40
1	13	966	M2G	C5-C6	3.74	1.55	1.47
1	1G	1402	4OC	C4-N4	3.73	1.43	1.35
1	13	516	PSU	C6-C5	3.72	1.39	1.35
25	1H	1917	PSU	C6-C5	3.72	1.39	1.35
57	2L	33	OMC	C5-C4	3.72	1.51	1.42
23	2K	56	PSU	C6-C5	3.72	1.39	1.35
1	1G	516	PSU	C6-C5	3.71	1.39	1.35
23	2K	33	OMC	C5-C4	3.71	1.51	1.42
1	1G	966	M2G	C5-C6	3.70	1.54	1.47
25	14	1911	PSU	C6-C5	3.68	1.39	1.35
25	1H	2251	OMG	C5-C6	-3.68	1.39	1.47
25	14	2605	PSU	C6-C5	3.63	1.39	1.35
1	1G	966	M2G	C6-N1	3.62	1.43	1.37
25	1H	1911	PSU	C6-C5	3.62	1.39	1.35
25	1H	1920	OMC	C5-C4	3.60	1.51	1.42
1	13	1207	2MG	C6-N1	3.58	1.43	1.37
25	14	1917	PSU	C6-C5	3.48	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	2605	PSU	C6-C5	3.48	1.39	1.35
23	2K	21	H2U	C4-N3	3.36	1.43	1.37
1	1G	1207	2MG	C6-N1	3.35	1.42	1.37
1	13	1207	2MG	C5-C6	3.28	1.54	1.47
25	14	1962	5MC	O2-C2	-3.19	1.17	1.23
57	2L	8	4SU	C2-N1	3.18	1.43	1.38
1	1G	1407	5MC	O2-C2	-3.18	1.17	1.23
1	13	1404	5MC	O2-C2	-3.12	1.17	1.23
1	13	1402	4OC	C6-N1	3.12	1.45	1.38
1	13	967	5MC	O2-C2	-3.08	1.18	1.23
1	1G	1207	2MG	C5-C6	3.07	1.53	1.47
1	1G	1404	5MC	O2-C2	-3.06	1.18	1.23
1	1G	527	7MG	C2-N2	3.06	1.41	1.34
1	13	527	7MG	C2-N2	3.04	1.41	1.34
1	1G	967	5MC	O2-C2	-3.04	1.18	1.23
25	1H	1962	5MC	O2-C2	-3.03	1.18	1.23
1	1G	1498	UR3	C6-N1	3.02	1.45	1.38
23	2K	47	7MG	C2-N2	3.01	1.41	1.34
57	2L	47	7MG	C2-N2	3.00	1.41	1.34
25	1H	1942	5MC	O2-C2	-2.98	1.18	1.23
1	13	1498	UR3	C6-N1	2.97	1.45	1.38
25	14	2503	2MA	C2-N1	2.96	1.45	1.36
1	1G	1400	5MC	O2-C2	-2.96	1.18	1.23
25	14	2251	OMG	C2-N3	2.94	1.40	1.33
25	14	2552	OMU	O4-C4	-2.94	1.18	1.24
1	13	1407	5MC	O2-C2	-2.93	1.18	1.23
1	1G	1402	4OC	C6-N1	2.91	1.45	1.38
25	14	1942	5MC	O2-C2	-2.89	1.18	1.23
1	13	1400	5MC	O2-C2	-2.88	1.18	1.23
57	2L	8	4SU	C6-N1	2.82	1.44	1.38
1	13	1207	2MG	O6-C6	-2.81	1.17	1.23
25	14	2552	OMU	C6-N1	2.80	1.44	1.38
25	1H	2251	OMG	C2-N3	2.77	1.39	1.33
1	1G	1207	2MG	O6-C6	-2.76	1.17	1.23
25	1H	2552	OMU	O4-C4	-2.73	1.19	1.24
25	1H	2251	OMG	O6-C6	-2.73	1.17	1.23
25	1H	2552	OMU	C6-N1	2.71	1.44	1.38
1	13	1207	2MG	C5-C4	-2.69	1.36	1.43
1	13	1402	4OC	O2-C2	-2.69	1.18	1.23
25	14	2251	OMG	C2-N2	2.69	1.40	1.34
25	1H	2503	2MA	C2-N1	2.68	1.44	1.36
25	14	2251	OMG	O6-C6	-2.67	1.17	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1G	1402	4OC	O2-C2	-2.62	1.18	1.23
1	13	1518	MA6	C5-C4	-2.58	1.34	1.40
1	13	966	M2G	C5-C4	-2.51	1.36	1.43
1	1G	1207	2MG	C5-C4	-2.49	1.36	1.43
25	14	2503	2MA	C6-N1	2.49	1.43	1.38
1	1G	1518	MA6	C5-C4	-2.49	1.34	1.40
23	2K	21	H2U	C6-N1	-2.48	1.42	1.47
25	1H	2251	OMG	C2-N1	-2.47	1.31	1.37
1	13	1519	MA6	C5-C4	-2.45	1.34	1.40
25	14	2552	OMU	C5-C4	2.45	1.49	1.43
23	2K	8	4SU	C6-N1	2.45	1.43	1.38
25	1H	2251	OMG	C2-N2	2.44	1.40	1.34
25	1H	2552	OMU	C5-C4	2.38	1.48	1.43
1	13	1519	MA6	C2-N3	2.38	1.35	1.32
25	1H	2552	OMU	O2-C2	-2.37	1.18	1.23
25	14	2503	2MA	CM2-C2	2.36	1.55	1.49
25	14	2251	OMG	C2-N1	-2.36	1.31	1.37
25	1H	2503	2MA	C5-C4	-2.34	1.37	1.43
25	14	2552	OMU	O2-C2	-2.31	1.18	1.23
1	1G	966	M2G	C5-C4	-2.27	1.37	1.43
1	1G	1498	UR3	O4-C4	-2.24	1.18	1.23
1	13	1498	UR3	C5-C4	2.23	1.49	1.43
1	1G	1519	MA6	C2-N3	2.23	1.35	1.32
1	1G	1519	MA6	C5-C4	-2.23	1.35	1.40
25	1H	2503	2MA	C6-N1	2.22	1.42	1.38
25	14	2503	2MA	C5-C4	-2.22	1.37	1.43
1	1G	1498	UR3	C4-N3	2.19	1.45	1.40
57	2L	33	OMC	C6-N1	2.18	1.43	1.38
1	1G	527	7MG	C8-N9	2.17	1.47	1.46
23	2K	47	7MG	C5-C6	2.16	1.49	1.43
1	1G	1498	UR3	C5-C4	2.16	1.49	1.43
1	13	1498	UR3	C4-N3	2.15	1.45	1.40
25	1H	1920	OMC	C6-N1	2.14	1.43	1.38
1	13	1498	UR3	O4-C4	-2.13	1.18	1.23
25	1H	2503	2MA	CM2-C2	2.10	1.55	1.49
23	2K	47	7MG	C6-N1	-2.10	1.34	1.38
1	13	527	7MG	C6-N1	-2.06	1.35	1.38
25	1H	2605	PSU	C4-C5	-2.06	1.38	1.44
1	1G	1518	MA6	C2-N3	2.04	1.35	1.32
25	14	1920	OMC	C6-N1	2.04	1.42	1.38
57	2L	47	7MG	C6-N1	-2.03	1.35	1.38
1	1G	527	7MG	C5-C6	2.02	1.48	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	2K	33	OMC	C6-N1	2.01	1.42	1.38

All (243) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1939	5MU	C5-C4-N3	11.86	125.43	115.31
25	14	1939	5MU	C5-C4-N3	11.27	124.93	115.31
25	1H	1915	5MU	C5-C4-N3	10.71	124.45	115.31
25	14	1915	5MU	C5-C4-N3	10.68	124.43	115.31
57	2L	55	5MU	C5-C4-N3	10.49	124.26	115.31
23	2K	55	5MU	C5-C4-N3	10.26	124.07	115.31
1	1G	1519	MA6	N1-C6-N6	-10.05	106.48	117.06
25	1H	2251	OMG	C8-N7-C5	10.04	122.12	102.99
25	14	2251	OMG	C8-N7-C5	9.96	121.96	102.99
1	13	1518	MA6	N1-C6-N6	-9.46	107.10	117.06
25	14	2251	OMG	C5-C6-N1	9.17	130.15	113.95
25	1H	2251	OMG	C5-C6-N1	9.10	130.01	113.95
1	1G	1518	MA6	N1-C6-N6	-8.87	107.72	117.06
1	13	1519	MA6	N1-C6-N6	-8.67	107.93	117.06
25	1H	1939	5MU	C5-C6-N1	-8.17	114.93	123.34
23	2K	8	4SU	C4-N3-C2	-7.83	119.73	127.34
25	1H	1939	5MU	C4-N3-C2	-7.68	117.41	127.35
25	14	1939	5MU	C5-C6-N1	-7.04	116.10	123.34
25	14	1939	5MU	C4-N3-C2	-6.91	118.40	127.35
1	13	527	7MG	C4-C5-N7	6.75	114.89	105.53
57	2L	47	7MG	C4-C5-N7	6.67	114.79	105.53
25	1H	1939	5MU	C6-C5-C4	6.63	123.58	118.03
1	1G	527	7MG	C4-C5-N7	6.56	114.63	105.53
25	1H	1915	5MU	C4-N3-C2	-6.50	118.93	127.35
23	2K	47	7MG	C4-C5-N7	6.36	114.36	105.53
57	2L	8	4SU	C4-N3-C2	-6.34	121.19	127.34
57	2L	55	5MU	C4-N3-C2	-6.30	119.19	127.35
25	14	1915	5MU	C4-N3-C2	-6.27	119.23	127.35
1	13	527	7MG	CM7-N7-C5	6.19	142.38	126.40
23	2K	55	5MU	C4-N3-C2	-6.18	119.35	127.35
57	2L	47	7MG	CM7-N7-C5	6.06	142.03	126.40
23	2K	47	7MG	CM7-N7-C5	6.00	141.89	126.40
1	1G	527	7MG	CM7-N7-C5	5.96	141.77	126.40
25	14	1939	5MU	C6-C5-C4	5.94	123.00	118.03
25	14	2552	OMU	C4-N3-C2	-5.93	118.76	126.58
1	1G	527	7MG	C5-C4-N9	5.90	114.00	106.35
23	2K	21	H2U	C4-N3-C2	-5.86	120.93	125.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	2K	47	7MG	C5-C4-N9	5.84	113.93	106.35
25	1H	2251	OMG	O6-C6-N1	-5.79	113.81	120.65
1	13	1519	MA6	N3-C2-N1	-5.75	119.69	128.68
1	13	527	7MG	C5-C4-N9	5.74	113.80	106.35
57	2L	55	5MU	C5-C6-N1	-5.68	117.50	123.34
25	1H	1915	5MU	C5-C6-N1	-5.61	117.56	123.34
23	2K	8	4SU	C5-C4-N3	5.56	119.85	114.69
23	2K	55	5MU	C5-C6-N1	-5.55	117.63	123.34
25	14	1915	5MU	C5-C6-N1	-5.53	117.65	123.34
57	2L	55	5MU	C6-C5-C4	5.52	122.65	118.03
57	2L	47	7MG	C5-C4-N9	5.52	113.51	106.35
23	2K	55	5MU	C6-C5-C4	5.51	122.64	118.03
1	13	1518	MA6	N3-C2-N1	-5.51	120.07	128.68
1	1G	1518	MA6	N3-C2-N1	-5.47	120.12	128.68
25	1H	1915	5MU	C6-C5-C4	5.46	122.60	118.03
1	1G	1519	MA6	N3-C2-N1	-5.43	120.19	128.68
25	14	1915	5MU	C6-C5-C4	5.43	122.57	118.03
25	1H	2552	OMU	C4-N3-C2	-5.32	119.57	126.58
12	3A	89	0TD	OD2-CG-CB	5.24	124.47	113.15
23	2K	47	7MG	C5-C6-N1	5.08	119.94	110.99
25	1H	1939	5MU	O4-C4-C5	-5.00	119.10	124.90
1	13	527	7MG	C5-C6-N1	4.99	119.79	110.99
25	14	2251	OMG	O6-C6-N1	-4.99	114.76	120.65
25	14	1939	5MU	O4-C4-C5	-4.97	119.14	124.90
23	2K	55	5MU	O4-C4-C5	-4.95	119.17	124.90
57	2L	47	7MG	C5-C6-N1	4.94	119.69	110.99
25	14	1915	5MU	O4-C4-C5	-4.93	119.19	124.90
25	1H	2605	PSU	C4-N3-C2	-4.88	119.30	126.34
1	1G	527	7MG	C5-C6-N1	4.86	119.55	110.99
25	1H	1917	PSU	C4-N3-C2	-4.78	119.45	126.34
57	2L	8	4SU	C5-C4-N3	4.77	119.11	114.69
1	1G	516	PSU	C4-N3-C2	-4.75	119.49	126.34
25	14	2251	OMG	O6-C6-C5	-4.75	115.10	124.37
23	2K	56	PSU	C4-N3-C2	-4.73	119.52	126.34
25	1H	2605	PSU	N1-C2-N3	4.73	120.49	115.13
57	2L	55	5MU	C5M-C5-C6	-4.72	116.55	122.85
25	14	1917	PSU	C4-N3-C2	-4.71	119.55	126.34
25	1H	1917	PSU	N1-C2-N3	4.68	120.43	115.13
57	2L	56	PSU	C4-N3-C2	-4.64	119.66	126.34
25	1H	1915	5MU	C5M-C5-C6	-4.62	116.68	122.85
25	14	1917	PSU	N1-C2-N3	4.61	120.35	115.13
1	13	1498	UR3	C4-N3-C2	-4.58	120.25	124.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	2L	55	5MU	O4-C4-C5	-4.57	119.60	124.90
23	2K	56	PSU	N1-C2-N3	4.51	120.24	115.13
1	1G	1498	UR3	C4-N3-C2	-4.51	120.32	124.56
25	14	2605	PSU	C4-N3-C2	-4.49	119.88	126.34
57	2L	56	PSU	N1-C2-N3	4.45	120.17	115.13
25	14	2552	OMU	N3-C2-N1	4.45	120.79	114.89
25	1H	1911	PSU	N1-C2-N3	4.44	120.16	115.13
23	2K	55	5MU	C5M-C5-C6	-4.41	116.96	122.85
1	1G	527	7MG	C6-C5-N7	-4.40	124.99	131.91
25	1H	1915	5MU	O4-C4-C5	-4.38	119.83	124.90
1	13	527	7MG	C6-C5-N7	-4.36	125.06	131.91
25	14	1915	5MU	C5M-C5-C6	-4.34	117.06	122.85
1	13	516	PSU	C4-N3-C2	-4.30	120.14	126.34
57	2L	47	7MG	C2-N3-C4	4.26	119.89	112.30
12	3I	89	0TD	OD2-CG-CB	4.26	122.35	113.15
23	2K	8	4SU	C5-C4-S4	-4.25	119.00	124.47
1	1G	516	PSU	N1-C2-N3	4.25	119.94	115.13
23	2K	47	7MG	C2-N3-C4	4.24	119.86	112.30
25	1H	1911	PSU	C4-N3-C2	-4.23	120.24	126.34
57	2L	47	7MG	C6-C5-N7	-4.23	125.26	131.91
12	3I	89	0TD	CSB-SB-CB	4.21	110.05	102.44
1	1G	527	7MG	C2-N3-C4	4.20	119.79	112.30
25	1H	2251	OMG	O6-C6-C5	-4.20	116.17	124.37
1	13	527	7MG	C2-N3-C4	4.17	119.72	112.30
25	1H	1939	5MU	C5M-C5-C6	-4.15	117.30	122.85
25	14	1911	PSU	N1-C2-N3	4.15	119.83	115.13
1	1G	527	7MG	C5-C4-N3	-4.15	120.23	128.13
57	2L	47	7MG	C5-C4-N3	-4.01	120.48	128.13
25	14	2605	PSU	N1-C2-N3	4.00	119.67	115.13
12	3A	89	0TD	CSB-SB-CB	3.99	109.66	102.44
1	13	527	7MG	C5-C4-N3	-3.99	120.53	128.13
23	2K	8	4SU	N3-C2-N1	3.98	120.18	114.89
23	2K	47	7MG	C5-C4-N3	-3.97	120.56	128.13
25	14	1911	PSU	C4-N3-C2	-3.95	120.64	126.34
25	1H	2552	OMU	N3-C2-N1	3.94	120.12	114.89
1	13	516	PSU	N1-C2-N3	3.89	119.54	115.13
57	2L	8	4SU	N3-C2-N1	3.88	120.04	114.89
1	13	967	5MC	C5-C6-N1	-3.82	119.41	123.34
25	1H	1915	5MU	C6-N1-C2	-3.78	117.47	121.30
23	2K	47	7MG	C6-C5-N7	-3.78	125.97	131.91
23	2K	21	H2U	C5-C4-N3	3.73	120.84	116.65
1	13	1407	5MC	C5-C6-N1	-3.68	119.55	123.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1942	5MC	C5-C6-N1	-3.64	119.60	123.34
1	13	1404	5MC	C5-C6-N1	-3.61	119.62	123.34
1	13	1400	5MC	C5-C6-N1	-3.60	119.63	123.34
1	1G	1498	UR3	C1'-N1-C2	3.57	123.02	116.99
25	14	1915	5MU	C6-N1-C2	-3.57	117.69	121.30
1	13	966	M2G	C5-C6-N1	3.55	120.22	113.95
1	13	1207	2MG	C5-C6-N1	3.50	120.13	113.95
1	1G	1400	5MC	C5-C6-N1	-3.49	119.75	123.34
25	14	2552	OMU	C5-C4-N3	3.46	120.02	114.84
25	1H	2552	OMU	O2-C2-N1	-3.46	118.19	122.79
25	1H	1962	5MC	C5-C6-N1	-3.42	119.82	123.34
23	2K	55	5MU	C6-N1-C2	-3.40	117.85	121.30
1	1G	1402	4OC	CM4-N4-C4	-3.37	115.87	122.45
1	1G	1407	5MC	C5-C6-N1	-3.35	119.89	123.34
25	14	1939	5MU	C5M-C5-C6	-3.32	118.41	122.85
57	2L	55	5MU	C6-N1-C2	-3.31	117.94	121.30
25	14	1942	5MC	C5-C6-N1	-3.28	119.96	123.34
1	1G	1207	2MG	C5-C6-N1	3.27	119.73	113.95
1	1G	1404	5MC	C5-C6-N1	-3.26	119.98	123.34
25	14	1962	5MC	C1'-N1-C6	-3.26	115.70	121.12
23	2K	21	H2U	N3-C2-N1	3.25	120.09	116.65
25	1H	2503	2MA	C5-C6-N1	3.25	119.62	114.02
25	1H	1939	5MU	N3-C2-N1	3.22	119.16	114.89
23	2K	21	H2U	C5-C6-N1	3.21	122.18	111.61
23	2K	47	7MG	N9-C8-N7	-3.19	98.81	103.38
12	3A	89	0TD	OD2-CG-OD1	-3.18	116.87	124.09
1	1G	967	5MC	C5-C6-N1	-3.13	120.11	123.34
1	13	527	7MG	O6-C6-C5	-3.13	119.86	127.54
25	1H	2552	OMU	C5-C4-N3	3.09	119.47	114.84
25	1H	1915	5MU	N3-C2-N1	3.09	118.99	114.89
57	2L	47	7MG	N9-C8-N7	-3.07	98.98	103.38
1	1G	966	M2G	C5-C6-N1	3.07	119.37	113.95
25	14	1939	5MU	N3-C2-N1	3.04	118.92	114.89
25	1H	1911	PSU	O2-C2-N1	-3.04	119.45	122.79
57	2L	47	7MG	O6-C6-C5	-3.03	120.10	127.54
1	13	527	7MG	C2-N1-C6	-3.02	119.59	125.10
25	14	1915	5MU	C1'-N1-C2	2.99	122.99	117.57
1	1G	527	7MG	N9-C8-N7	-2.99	99.10	103.38
1	13	1404	5MC	CM5-C5-C6	-2.99	118.86	122.85
1	1G	527	7MG	O6-C6-C5	-2.98	120.24	127.54
1	1G	527	7MG	C2-N1-C6	-2.95	119.71	125.10
25	1H	2605	PSU	O2-C2-N1	-2.95	119.54	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	2K	47	7MG	C2-N1-C6	-2.93	119.75	125.10
25	14	2552	OMU	O2-C2-N1	-2.89	118.94	122.79
1	13	527	7MG	N9-C8-N7	-2.89	99.25	103.38
25	1H	2605	PSU	C6-C5-C4	2.86	120.20	118.20
25	14	2503	2MA	C5-C6-N1	2.85	118.93	114.02
23	2K	47	7MG	O6-C6-C5	-2.83	120.60	127.54
57	2L	47	7MG	C2-N1-C6	-2.82	119.96	125.10
25	14	2552	OMU	O4-C4-C5	-2.77	120.28	125.16
25	1H	2552	OMU	O4-C4-C5	-2.77	120.29	125.16
25	14	1962	5MC	C1'-N1-C2	2.76	124.59	118.42
25	14	1962	5MC	C5-C6-N1	-2.76	120.50	123.34
1	13	1207	2MG	C8-N7-C5	2.73	108.19	102.99
25	1H	2251	OMG	N2-C2-N1	2.72	122.51	116.71
25	14	1911	PSU	O2-C2-N1	-2.70	119.81	122.79
23	2K	55	5MU	N3-C2-N1	2.70	118.47	114.89
57	2L	55	5MU	N3-C2-N1	2.69	118.46	114.89
1	13	1498	UR3	C1'-N1-C2	2.68	121.51	116.99
25	14	1915	5MU	N3-C2-N1	2.67	118.43	114.89
25	14	1939	5MU	C6-N1-C2	-2.62	118.64	121.30
1	13	966	M2G	C2-N1-C6	-2.61	119.37	123.71
25	14	1911	PSU	C6-N1-C2	-2.57	120.05	122.68
25	1H	2503	2MA	C8-N7-C5	2.56	107.88	102.99
23	2K	8	4SU	C1'-N1-C2	2.56	122.21	117.57
57	2L	33	OMC	C1'-N1-C2	2.56	124.14	118.42
25	1H	1911	PSU	C6-N1-C2	-2.55	120.08	122.68
25	14	2251	OMG	N2-C2-N1	2.54	122.11	116.71
25	14	2251	OMG	C2-N1-C6	2.53	129.76	125.10
25	1H	1920	OMC	C1'-N1-C2	2.53	124.06	118.42
25	14	1942	5MC	CM5-C5-C6	-2.52	119.48	122.85
1	13	966	M2G	C8-N7-C5	2.52	107.80	102.99
1	1G	1404	5MC	CM5-C5-C6	-2.52	119.49	122.85
1	1G	966	M2G	C2-N1-C6	-2.47	119.61	123.71
1	1G	966	M2G	C8-N7-C5	2.47	107.69	102.99
57	2L	33	OMC	O2-C2-N3	-2.46	118.33	122.33
25	14	2251	OMG	N1-C2-N3	-2.44	118.77	123.32
1	13	1498	UR3	C6-N1-C2	-2.43	119.61	121.79
25	1H	1939	5MU	O4-C4-N3	-2.43	115.47	120.12
1	13	1400	5MC	CM5-C5-C6	-2.42	119.61	122.85
1	1G	1207	2MG	C8-N7-C5	2.41	107.58	102.99
25	1H	1920	OMC	O2-C2-N3	-2.41	118.42	122.33
25	14	1962	5MC	O2-C2-N3	-2.40	118.42	122.33
25	14	2503	2MA	C3'-C2'-C1'	2.38	104.56	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1917	PSU	O2-C2-N1	-2.35	120.21	122.79
25	14	1917	PSU	O2-C2-N1	-2.32	120.23	122.79
25	14	1962	5MC	CM5-C5-C6	-2.32	119.75	122.85
25	1H	1915	5MU	O4-C4-N3	-2.29	115.72	120.12
57	2L	55	5MU	C1'-N1-C2	2.28	121.70	117.57
25	14	1917	PSU	C6-C5-C4	2.27	119.79	118.20
23	2K	56	PSU	O2-C2-N1	-2.27	120.29	122.79
1	13	966	M2G	O6-C6-C5	-2.27	119.95	124.37
1	1G	1402	4OC	C5-C4-N4	-2.26	118.01	122.61
1	1G	516	PSU	O2-C2-N1	-2.26	120.31	122.79
1	13	1402	4OC	C6-C5-C4	2.25	119.72	116.96
25	1H	1915	5MU	C1'-N1-C2	2.23	121.61	117.57
1	1G	966	M2G	O6-C6-C5	-2.23	120.02	124.37
25	1H	2605	PSU	C6-N1-C2	-2.23	120.41	122.68
23	2K	33	OMC	C1'-N1-C2	2.22	123.37	118.42
57	2L	56	PSU	O2-C2-N1	-2.22	120.35	122.79
25	1H	2251	OMG	C2-N1-C6	2.22	129.18	125.10
25	1H	1917	PSU	C6-N1-C2	-2.20	120.43	122.68
1	1G	1400	5MC	CM5-C5-C6	-2.20	119.91	122.85
1	1G	516	PSU	O4'-C1'-C2'	2.20	108.24	105.14
25	14	1939	5MU	O4-C4-N3	-2.18	115.93	120.12
1	1G	967	5MC	CM5-C5-C6	-2.18	119.94	122.85
57	2L	8	4SU	S4-C4-N3	-2.16	118.08	120.21
1	13	516	PSU	O4'-C1'-C2'	2.15	108.17	105.14
12	3I	89	0TD	OD1-CG-CB	-2.13	117.99	122.44
25	14	2503	2MA	C8-N7-C5	2.12	107.03	102.99
25	14	2605	PSU	C6-C5-C4	2.11	119.67	118.20
23	2K	33	OMC	O2-C2-N3	-2.11	118.91	122.33
23	2K	56	PSU	C6-C5-C4	2.11	119.67	118.20
25	1H	1942	5MC	CM5-C5-C6	-2.10	120.04	122.85
57	2L	56	PSU	C6-N1-C2	-2.10	120.53	122.68
1	13	1207	2MG	CM2-N2-C2	-2.08	119.27	123.86
57	2L	55	5MU	O4-C4-N3	-2.08	116.14	120.12
1	1G	1498	UR3	C6-N1-C2	-2.04	119.96	121.79
1	13	967	5MC	CM5-C5-C6	-2.03	120.14	122.85
25	1H	1920	OMC	C1'-N1-C6	-2.02	116.44	120.84
1	13	966	M2G	N1-C2-N2	2.01	119.75	118.04
23	2K	56	PSU	C6-N1-C2	-2.00	120.64	122.68

There are no chirality outliers.

All (71) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	3I	89	0TD	SB-CB-CG-OD2
12	3A	89	0TD	CA-CB-SB-CSB
1	13	1402	4OC	O4'-C4'-C5'-O5'
1	1G	1402	4OC	O4'-C4'-C5'-O5'
1	1G	1402	4OC	C3'-C4'-C5'-O5'
1	1G	1518	MA6	C5-C6-N6-C10
1	13	1519	MA6	C5-C6-N6-C10
1	1G	1519	MA6	O4'-C4'-C5'-O5'
23	2K	21	H2U	O4'-C1'-N1-C2
23	2K	21	H2U	O4'-C1'-N1-C6
25	1H	2251	OMG	C1'-C2'-O2'-CM2
57	2L	47	7MG	C2'-C1'-N9-C8
1	1G	527	7MG	C3'-C4'-C5'-O5'
1	13	1400	5MC	O4'-C4'-C5'-O5'
1	1G	1400	5MC	O4'-C4'-C5'-O5'
1	1G	1400	5MC	C3'-C4'-C5'-O5'
1	13	1402	4OC	C3'-C4'-C5'-O5'
1	13	1519	MA6	O4'-C4'-C5'-O5'
1	1G	1519	MA6	C3'-C4'-C5'-O5'
25	1H	2503	2MA	O4'-C4'-C5'-O5'
57	2L	47	7MG	O4'-C4'-C5'-O5'
1	13	1400	5MC	C3'-C4'-C5'-O5'
1	13	1519	MA6	C3'-C4'-C5'-O5'
23	2K	21	H2U	C3'-C4'-C5'-O5'
23	2K	47	7MG	O4'-C4'-C5'-O5'
25	14	1920	OMC	C3'-C4'-C5'-O5'
25	14	1920	OMC	O4'-C4'-C5'-O5'
25	14	1962	5MC	O4'-C4'-C5'-O5'
25	14	1962	5MC	C3'-C4'-C5'-O5'
25	1H	2503	2MA	C3'-C4'-C5'-O5'
1	13	527	7MG	C3'-C4'-C5'-O5'
23	2K	21	H2U	O4'-C4'-C5'-O5'
1	1G	527	7MG	O4'-C4'-C5'-O5'
1	13	967	5MC	O4'-C4'-C5'-O5'
25	14	1915	5MU	C4'-C5'-O5'-P
12	3I	89	0TD	CG-CB-SB-CSB
25	1H	2503	2MA	C4'-C5'-O5'-P
12	3I	89	0TD	SB-CB-CG-OD1
1	13	527	7MG	O4'-C4'-C5'-O5'
1	1G	1518	MA6	C5-C6-N6-C9
1	13	1519	MA6	C5-C6-N6-C9
25	1H	1962	5MC	O4'-C4'-C5'-O5'
1	1G	527	7MG	C4'-C5'-O5'-P

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Mol	Chain	Res	Type	Atoms
1	1G	1519	MA6	C4'-C5'-O5'-P
57	2L	8	4SU	C4'-C5'-O5'-P
23	2K	47	7MG	C3'-C4'-C5'-O5'
25	1H	1920	OMC	C2'-C1'-N1-C2
25	1H	1920	OMC	C2'-C1'-N1-C6
23	2K	56	PSU	O4'-C1'-C5-C4
25	1H	1917	PSU	O4'-C1'-C5-C4
25	1H	2605	PSU	O4'-C1'-C5-C4
1	1G	1518	MA6	N1-C6-N6-C10
1	13	966	M2G	C4'-C5'-O5'-P
25	14	1915	5MU	C2'-C1'-N1-C6
57	2L	33	OMC	C2'-C1'-N1-C6
1	13	1207	2MG	C3'-C4'-C5'-O5'
57	2L	47	7MG	C2'-C1'-N9-C4
12	3A	89	0TD	SB-CB-CG-OD2
1	13	967	5MC	C3'-C4'-C5'-O5'
25	1H	1962	5MC	C3'-C4'-C5'-O5'
57	2L	8	4SU	C3'-C4'-C5'-O5'
23	2K	33	OMC	C2'-C1'-N1-C2
25	14	1915	5MU	C2'-C1'-N1-C2
57	2L	33	OMC	C2'-C1'-N1-C2
57	2L	8	4SU	O4'-C4'-C5'-O5'
12	3A	89	0TD	CG-CB-SB-CSB
23	2K	56	PSU	O4'-C1'-C5-C6
25	1H	2605	PSU	O4'-C1'-C5-C6
1	13	1519	MA6	N1-C6-N6-C10
57	2L	33	OMC	C3'-C2'-O2'-CM2
25	14	2503	2MA	O4'-C4'-C5'-O5'

There are no ring outliers.

29 monomers are involved in 50 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	14	1962	5MC	1	0
57	2L	8	4SU	3	0
23	2K	55	5MU	2	0
1	1G	1498	UR3	2	0
1	1G	1207	2MG	3	0
23	2K	21	H2U	2	0
1	13	1519	MA6	1	0
25	14	1942	5MC	2	0
23	2K	33	OMC	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	1H	2552	OMU	1	0
1	1G	1400	5MC	1	0
25	14	1911	PSU	1	0
1	1G	1518	MA6	2	0
25	1H	1911	PSU	1	0
1	13	1407	5MC	1	0
25	1H	2251	OMG	3	0
25	14	2251	OMG	3	0
25	1H	1920	OMC	3	0
12	3A	89	0TD	1	0
25	14	1920	OMC	2	0
1	13	1402	4OC	1	0
1	13	1498	UR3	1	0
1	1G	1404	5MC	1	0
25	14	2503	2MA	4	0
57	2L	33	OMC	1	0
1	13	966	M2G	1	0
25	1H	1915	5MU	1	0
1	1G	1519	MA6	1	0
1	1G	1402	4OC	2	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1272 ligands modelled in this entry, 1270 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
60	SF4	3E	302	-	0,12,12	-	-	-		
60	SF4	32	303	-	0,12,12	-	-	-		

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
60	SF4	3E	302	-	-	-	0/6/5/5
60	SF4	32	303	-	-	-	0/6/5/5

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.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	3E	302	SF4	1	0
60	32	303	SF4	2	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	1494/1522 (98%)	-0.89	0 100 100	40, 102, 169, 228	0
1	1G	1498/1522 (98%)	-0.88	0 100 100	53, 104, 169, 213	0
2	12	236/256 (92%)	0.62	18 (7%) 13 14	114, 155, 171, 178	0
2	1E	237/256 (92%)	0.79	34 (14%) 2 3	108, 143, 167, 181	0
3	22	206/239 (86%)	0.34	13 (6%) 20 18	110, 131, 163, 182	0
3	2E	205/239 (85%)	0.97	30 (14%) 2 3	95, 124, 157, 172	0
4	32	208/209 (99%)	-0.60	0 100 100	78, 99, 120, 133	0
4	3E	208/209 (99%)	-0.08	3 (1%) 75 69	83, 112, 134, 144	0
5	42	154/162 (95%)	-0.50	1 (0%) 89 86	86, 105, 134, 174	0
5	4E	151/162 (93%)	-0.03	1 (0%) 87 83	77, 103, 130, 152	0
6	52	101/101 (100%)	0.02	0 100 100	78, 103, 117, 125	0
6	5E	101/101 (100%)	-0.03	3 (2%) 50 44	72, 104, 117, 140	0
7	62	149/156 (95%)	0.22	6 (4%) 38 33	110, 132, 151, 159	0
7	6E	155/156 (99%)	-0.17	3 (1%) 66 61	99, 115, 145, 161	0
8	72	138/138 (100%)	-0.83	0 100 100	83, 107, 123, 128	0
8	7E	138/138 (100%)	-0.45	0 100 100	84, 106, 120, 126	0
9	82	127/128 (99%)	-0.28	1 (0%) 86 81	104, 154, 173, 185	0
9	8E	124/128 (96%)	-0.26	0 100 100	84, 139, 155, 167	0
10	1A	99/105 (94%)	0.43	8 (8%) 12 12	111, 147, 169, 180	0
10	1I	99/105 (94%)	0.56	12 (12%) 4 5	93, 151, 166, 170	0
11	2A	119/129 (92%)	0.50	5 (4%) 36 32	87, 109, 142, 171	0
11	2I	117/129 (90%)	0.60	8 (6%) 17 16	63, 94, 129, 162	0
12	3A	124/132 (93%)	-0.24	1 (0%) 86 81	71, 88, 113, 157	0
12	3I	124/132 (93%)	0.19	5 (4%) 38 33	62, 81, 111, 156	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	4A	118/126 (93%)	-0.14	6 (5%) 28 25	108, 146, 166, 175	0
13	4I	119/126 (94%)	-0.78	0 100 100	81, 123, 139, 150	0
14	5A	60/61 (98%)	-0.23	1 (1%) 70 64	114, 131, 142, 149	0
14	5I	60/61 (98%)	-0.23	1 (1%) 70 64	101, 119, 129, 135	0
15	6A	88/89 (98%)	-0.29	2 (2%) 60 54	72, 98, 121, 128	0
15	6I	88/89 (98%)	-0.67	1 (1%) 80 75	65, 98, 120, 127	0
16	7A	84/88 (95%)	-0.96	0 100 100	75, 88, 106, 142	0
16	7I	83/88 (94%)	-0.93	0 100 100	95, 107, 130, 157	0
17	8A	99/105 (94%)	-0.74	0 100 100	77, 92, 108, 114	0
17	8I	100/105 (95%)	-0.62	0 100 100	75, 98, 113, 120	0
18	9A	71/88 (80%)	0.37	6 (8%) 10 11	86, 107, 135, 146	0
18	9I	70/88 (79%)	0.69	8 (11%) 5 6	78, 100, 127, 152	0
19	AA	83/93 (89%)	0.10	6 (7%) 15 15	120, 151, 166, 171	0
19	AI	86/93 (92%)	-0.65	0 100 100	102, 130, 148, 155	0
20	BA	103/106 (97%)	-0.72	0 100 100	82, 98, 125, 137	0
20	BI	101/106 (95%)	-0.89	0 100 100	92, 110, 130, 137	0
21	1B	25/27 (92%)	-0.61	0 100 100	123, 140, 157, 165	0
21	1F	25/27 (92%)	-0.86	0 100 100	104, 117, 136, 147	0
22	1K	65/77 (84%)	1.68	30 (46%) 0 0	107, 153, 175, 184	59 (90%)
22	3K	77/77 (100%)	-0.34	4 (5%) 27 24	71, 198, 220, 236	0
22	3L	77/77 (100%)	-0.12	2 (2%) 56 49	87, 216, 245, 255	0
23	2K	71/77 (92%)	-0.76	0 100 100	54, 91, 130, 147	0
24	4K	17/27 (62%)	0.30	2 (11%) 4 5	75, 132, 206, 207	0
24	4L	21/27 (77%)	0.01	1 (4%) 30 27	88, 171, 227, 232	0
25	14	2868/2917 (98%)	-0.83	7 (0%) 95 93	40, 79, 193, 238	0
25	1H	2868/2917 (98%)	-0.72	3 (0%) 95 95	27, 61, 173, 226	0
26	16	120/122 (98%)	-0.83	0 100 100	66, 93, 111, 146	0
26	1J	122/122 (100%)	-0.82	1 (0%) 86 81	94, 132, 160, 193	0
27	71	135/229 (58%)	0.87	22 (16%) 1 2	117, 180, 198, 211	0
28	11	274/276 (99%)	-0.54	1 (0%) 92 90	29, 47, 70, 96	0
28	19	274/276 (99%)	-0.18	0 100 100	39, 66, 86, 100	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
29	21	204/206 (99%)	0.26	9 (4%) 34 30	34, 74, 110, 127	0
29	29	204/206 (99%)	-0.45	2 (0%) 82 77	47, 80, 111, 120	0
30	31	202/210 (96%)	-0.38	1 (0%) 91 88	31, 68, 110, 127	0
30	39	206/210 (98%)	0.31	12 (5%) 23 20	46, 91, 152, 177	0
31	41	181/182 (99%)	-0.54	0 100 100	82, 103, 138, 149	0
31	49	181/182 (99%)	0.92	23 (12%) 3 4	118, 146, 161, 184	0
32	51	174/180 (96%)	-0.33	2 (1%) 80 75	72, 98, 118, 136	0
32	59	174/180 (96%)	0.22	9 (5%) 27 24	115, 155, 176, 187	0
33	61	146/148 (98%)	-0.36	1 (0%) 87 83	60, 109, 130, 140	0
33	69	146/148 (98%)	0.02	2 (1%) 75 69	79, 120, 142, 156	0
34	38	139/173 (80%)	0.48	17 (12%) 4 5	156, 193, 210, 232	0
35	15	138/140 (98%)	0.71	14 (10%) 7 7	68, 102, 129, 140	0
35	58	138/140 (98%)	-0.02	4 (2%) 51 45	56, 76, 118, 127	0
36	25	122/122 (100%)	0.13	1 (0%) 86 81	53, 75, 93, 103	0
36	68	122/122 (100%)	0.03	1 (0%) 86 81	45, 65, 85, 105	0
37	35	147/150 (98%)	0.47	7 (4%) 30 27	51, 96, 127, 150	0
37	78	148/150 (98%)	-0.10	3 (2%) 65 60	32, 72, 102, 123	0
38	45	140/141 (99%)	0.88	21 (15%) 2 3	72, 99, 127, 138	0
38	88	141/141 (100%)	0.01	3 (2%) 63 58	46, 73, 106, 128	0
39	55	118/118 (100%)	-0.71	0 100 100	48, 71, 99, 122	0
39	98	118/118 (100%)	-0.18	1 (0%) 86 81	40, 69, 94, 116	0
40	65	111/112 (99%)	0.32	5 (4%) 33 29	103, 125, 139, 148	0
40	A8	111/112 (99%)	0.46	9 (8%) 12 12	75, 93, 115, 127	0
41	75	137/146 (93%)	-0.73	0 100 100	68, 84, 137, 157	0
41	B8	137/146 (93%)	-0.41	0 100 100	61, 81, 134, 164	0
42	85	117/118 (99%)	0.80	22 (18%) 1 1	57, 90, 147, 158	0
42	C8	117/118 (99%)	-0.58	0 100 100	37, 63, 101, 120	0
43	95	101/101 (100%)	2.27	51 (50%) 0 0	53, 123, 143, 159	0
43	D8	100/101 (99%)	-0.17	2 (2%) 65 60	41, 90, 118, 134	0
44	A5	112/113 (99%)	-0.42	1 (0%) 84 79	52, 66, 100, 144	0
44	E8	113/113 (100%)	-0.27	2 (1%) 68 62	40, 55, 97, 140	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
45	B5	93/96 (96%)	-0.41	2 (2%) 62 56	58, 77, 106, 124	0
45	F8	95/96 (98%)	-0.41	0 100 100	42, 56, 85, 99	0
46	C5	109/110 (99%)	0.17	6 (5%) 25 22	73, 102, 120, 128	0
46	G8	107/110 (97%)	-0.46	0 100 100	62, 87, 135, 148	0
47	D5	176/206 (85%)	1.27	43 (24%) 0 0	117, 145, 178, 186	0
47	H8	174/206 (84%)	0.60	14 (8%) 12 12	79, 118, 177, 192	0
48	E5	79/85 (92%)	0.67	5 (6%) 20 18	70, 90, 113, 160	0
48	I8	77/85 (90%)	0.06	1 (1%) 77 71	49, 67, 93, 114	0
49	F5	92/96 (95%)	0.06	0 100 100	54, 79, 115, 130	0
49	J8	96/96 (100%)	-0.34	1 (1%) 82 77	41, 66, 117, 150	0
50	G5	69/72 (95%)	-0.40	1 (1%) 75 69	69, 95, 121, 145	0
50	K8	71/72 (98%)	-0.46	1 (1%) 75 69	45, 69, 89, 110	0
51	H5	59/60 (98%)	1.24	13 (22%) 0 0	70, 97, 146, 169	0
51	L8	59/60 (98%)	0.11	2 (3%) 45 40	49, 71, 105, 114	0
52	I5	71/71 (100%)	1.66	28 (39%) 0 0	147, 178, 194, 204	0
52	M8	66/71 (92%)	-0.35	0 100 100	114, 141, 171, 192	0
53	J5	56/60 (93%)	-0.33	0 100 100	50, 76, 143, 153	0
53	N8	56/60 (93%)	0.18	4 (7%) 16 15	35, 75, 145, 151	0
54	K5	48/54 (88%)	3.56	31 (64%) 0 0	128, 165, 181, 188	0
54	O8	49/54 (90%)	4.07	43 (87%) 0 0	106, 140, 158, 162	0
55	L5	48/49 (97%)	-0.37	0 100 100	41, 51, 82, 94	0
55	P8	48/49 (97%)	-0.68	0 100 100	26, 35, 71, 76	0
56	M5	64/65 (98%)	0.41	1 (1%) 72 66	59, 73, 98, 119	0
56	Q8	64/65 (98%)	-0.25	0 100 100	38, 53, 74, 95	0
57	2L	72/77 (93%)	-0.54	1 (1%) 75 69	67, 113, 154, 178	0
All	All	21207/22013 (96%)	-0.32	678 (3%) 47 42	26, 95, 171, 255	59 (0%)

All (678) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	2I	129	SER	11.5
27	71	1	PRO	10.6
54	O8	44	ARG	10.5

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Mol	Chain	Res	Type	RSRZ
54	K5	50	ARG	10.1
54	O8	42	TRP	10.1
43	95	45	THR	9.0
54	O8	50	ARG	9.0
54	O8	20	ASN	8.9
54	K5	52	VAL	8.8
54	K5	53	LYS	8.2
54	K5	14	THR	8.1
54	K5	51	GLU	8.1
43	95	36	PRO	8.1
18	9A	88	LYS	8.1
42	85	89	GLU	8.1
54	K5	26	ASN	7.9
52	I5	40	HIS	7.9
27	71	63	SER	7.9
34	38	116	ILE	7.8
54	K5	17	LYS	7.8
54	K5	13	CYS	7.7
54	K5	36	LEU	7.5
54	O8	53	LYS	7.3
34	38	117	LEU	7.1
43	95	42	GLY	6.8
25	14	1176	G	6.7
54	O8	31	PRO	6.6
34	38	128	LEU	6.6
30	39	1	MET	6.5
11	2I	128	ALA	6.5
54	O8	49	HIS	6.4
47	D5	108	PRO	6.3
25	14	1177	A	6.2
43	95	101	GLY	6.2
42	85	118	GLY	6.2
54	K5	9	LEU	6.1
52	I5	28	LYS	6.0
51	H5	59	VAL	5.9
54	O8	14	THR	5.9
47	H8	147	GLY	5.8
34	38	129	PRO	5.8
31	49	137	GLU	5.7
22	1K	15	G	5.6
54	O8	43	CYS	5.6
31	49	182	LYS	5.6

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Mol	Chain	Res	Type	RSRZ
54	O8	19	ARG	5.6
35	15	133	GLN	5.5
3	22	79	ARG	5.5
2	12	6	THR	5.4
43	95	1	MET	5.3
52	I5	9	LEU	5.3
54	O8	47	THR	5.3
47	D5	153	SER	5.2
54	O8	34	LEU	5.1
38	45	91	GLU	5.1
52	I5	42	PHE	5.1
18	9A	87	ARG	5.0
44	E8	113	LYS	5.0
54	O8	35	GLU	5.0
54	O8	45	LYS	5.0
3	22	81	GLY	4.9
12	3A	126	ALA	4.9
52	I5	52	THR	4.9
34	38	75	GLN	4.9
47	D5	154	ASP	4.8
22	1K	21	U	4.8
47	H8	1	MET	4.8
43	95	44	LYS	4.8
51	H5	2	PRO	4.8
40	A8	84	GLN	4.8
54	O8	51	GLU	4.8
51	H5	3	ARG	4.7
54	O8	18	ARG	4.7
54	O8	26	ASN	4.7
31	49	86	MET	4.7
2	12	229	VAL	4.6
30	39	20	LEU	4.6
47	D5	163	LEU	4.6
48	E5	7	LEU	4.6
3	2E	169	ALA	4.5
2	1E	230	VAL	4.5
31	49	142	PRO	4.5
43	95	16	PRO	4.5
43	95	15	GLU	4.5
54	O8	22	ALA	4.5
11	2A	9	LYS	4.5
34	38	130	THR	4.5

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Mol	Chain	Res	Type	RSRZ
54	K5	20	ASN	4.4
2	1E	228	GLY	4.4
27	71	192	PHE	4.4
54	K5	25	LYS	4.4
52	I5	43	TYR	4.4
54	K5	35	GLU	4.4
10	1A	99	LYS	4.4
53	N8	56	LYS	4.4
31	49	39	ILE	4.4
27	71	191	ALA	4.4
54	K5	16	CYS	4.4
10	1I	5	ARG	4.3
51	H5	35	ARG	4.3
54	O8	7	ILE	4.3
24	4K	25	A	4.3
54	K5	10	LEU	4.3
43	95	17	GLY	4.3
35	15	138	LEU	4.3
54	O8	52	VAL	4.3
31	49	48	GLU	4.3
31	49	139	LEU	4.3
3	2E	79	ARG	4.2
48	E5	9	SER	4.2
11	2A	14	VAL	4.2
2	12	152	PHE	4.2
42	85	72	HIS	4.2
43	95	64	HIS	4.2
42	85	111	GLU	4.2
34	38	131	MET	4.2
3	2E	168	ALA	4.2
54	K5	27	LYS	4.2
22	1K	5	G	4.1
54	K5	48	VAL	4.1
43	95	27	ALA	4.1
2	1E	4	GLU	4.1
43	95	97	LYS	4.1
43	95	47	VAL	4.1
38	45	104	PHE	4.1
54	O8	41	PRO	4.1
42	85	85	LYS	4.0
30	39	2	LYS	4.0
34	38	127	GLU	4.0

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Mol	Chain	Res	Type	RSRZ
31	49	89	GLY	4.0
18	9I	88	LYS	4.0
25	14	2899	G	4.0
22	3K	18	U	4.0
42	85	112	ARG	4.0
43	95	34	GLU	4.0
11	2A	12	ARG	4.0
43	95	18	LEU	3.9
2	1E	232	PRO	3.9
3	2E	201	TYR	3.9
47	H8	145	GLU	3.9
32	59	24	VAL	3.9
54	O8	29	ASN	3.9
53	N8	55	ARG	3.9
37	35	1	MET	3.9
2	1E	129	GLU	3.9
2	12	5	ILE	3.9
35	15	134	ARG	3.8
52	I5	7	PRO	3.8
2	12	79	ASP	3.8
52	I5	51	ASP	3.8
11	2I	81	ASP	3.8
47	D5	138	GLU	3.8
7	62	156	TRP	3.8
46	C5	55	TYR	3.8
30	39	21	ALA	3.8
43	95	32	THR	3.8
27	71	199	HIS	3.8
38	88	1	MET	3.8
54	K5	34	LEU	3.8
47	H8	148	ASP	3.7
38	45	63	LYS	3.7
43	95	43	GLU	3.7
54	O8	17	LYS	3.7
38	45	140	ALA	3.7
52	I5	24	THR	3.7
10	1A	93	GLY	3.7
53	N8	57	VAL	3.7
22	1K	10	G	3.7
54	O8	25	LYS	3.7
22	1K	69	C	3.7
3	2E	59	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
43	95	98	GLU	3.7
22	1K	48	U	3.7
38	45	33	GLY	3.7
47	D5	107	THR	3.7
32	59	25	LYS	3.6
27	71	189	ILE	3.6
2	1E	231	GLU	3.6
3	2E	170	GLN	3.6
47	D5	175	VAL	3.6
43	95	12	TYR	3.6
54	O8	21	TYR	3.6
54	K5	41	PRO	3.6
25	1H	2795	G	3.6
22	1K	51	U	3.6
42	85	117	GLN	3.6
54	K5	7	ILE	3.6
27	71	25	ALA	3.5
43	95	4	ILE	3.5
43	95	53	GLU	3.5
2	12	133	LYS	3.5
22	1K	7	G	3.5
32	59	19	VAL	3.5
3	22	101	LEU	3.5
38	45	1	MET	3.5
2	12	9	GLU	3.4
47	D5	140	ASP	3.4
54	K5	49	HIS	3.4
47	D5	2	GLU	3.4
42	85	90	VAL	3.4
34	38	67	GLY	3.4
11	2A	13	GLN	3.4
2	12	161	ALA	3.4
29	21	89	ASP	3.4
2	1E	233	SER	3.4
54	O8	40	CYS	3.4
31	49	138	GLN	3.4
47	H8	4	ARG	3.4
52	I5	44	THR	3.4
2	12	232	PRO	3.4
27	71	64	LEU	3.3
47	D5	162	GLU	3.3
27	71	196	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
2	1E	125	PRO	3.3
54	K5	19	ARG	3.3
22	1K	18	U	3.3
12	3I	61	TYR	3.3
43	95	100	ARG	3.3
22	1K	28	U	3.3
3	2E	149	ALA	3.3
42	85	115	ALA	3.3
2	12	153	ARG	3.3
25	1H	1509	C	3.3
54	O8	30	THR	3.3
10	1A	98	ILE	3.3
52	I5	39	CYS	3.3
10	1A	101	VAL	3.3
2	1E	127	ILE	3.3
10	1I	23	ILE	3.3
42	85	91	ASP	3.3
52	I5	11	PRO	3.3
3	2E	164	ARG	3.3
52	I5	50	VAL	3.3
52	I5	45	GLY	3.3
54	O8	23	THR	3.3
40	65	79	ALA	3.2
38	45	83	MET	3.2
2	1E	68	ILE	3.2
22	1K	14	A	3.2
31	49	179	PRO	3.2
54	K5	29	ASN	3.2
42	85	114	LYS	3.2
10	1A	10	GLY	3.2
43	95	93	GLU	3.2
56	M5	65	GLU	3.2
31	49	90	LEU	3.2
47	D5	79	ARG	3.2
43	95	5	VAL	3.2
52	I5	53	GLU	3.2
10	1I	27	ALA	3.2
33	61	146	ALA	3.2
37	78	92	GLU	3.2
22	1K	62	C	3.2
3	2E	190	ARG	3.1
38	45	64	ILE	3.1

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Mol	Chain	Res	Type	RSRZ
43	95	6	LYS	3.1
52	I5	47	GLN	3.1
54	O8	13	CYS	3.1
54	O8	39	TYR	3.1
2	1E	152	PHE	3.1
46	C5	47	LYS	3.1
52	I5	49	PHE	3.1
35	58	130	HIS	3.1
24	4K	24	A	3.1
3	2E	182	ILE	3.1
43	95	91	TYR	3.1
43	95	99	ILE	3.1
18	9A	86	VAL	3.1
34	38	115	GLN	3.1
27	71	36	LYS	3.1
51	H5	38	GLU	3.1
50	G5	72	ALA	3.1
22	1K	22	A	3.1
54	K5	6	ARG	3.0
40	A8	109	GLY	3.0
47	D5	60	GLU	3.0
2	1E	229	VAL	3.0
2	12	228	GLY	3.0
47	D5	151	HIS	3.0
22	1K	17	C	3.0
25	14	546	C	3.0
54	O8	33	LYS	3.0
22	1K	47	G	3.0
35	15	8	GLN	3.0
47	D5	119	GLU	3.0
31	49	52	ILE	3.0
54	O8	9	LEU	3.0
35	15	1	MET	3.0
54	O8	37	ARG	3.0
10	1I	73	ASP	3.0
49	J8	1	MET	3.0
51	L8	60	GLU	3.0
22	1K	8	U	3.0
2	1E	153	ARG	3.0
2	1E	133	LYS	3.0
22	1K	68	C	3.0
43	95	56	SER	3.0

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Mol	Chain	Res	Type	RSRZ
3	2E	167	TRP	3.0
54	K5	11	LEU	3.0
52	I5	31	ILE	3.0
4	3E	152	SER	3.0
52	I5	25	TYR	3.0
18	9I	87	ARG	2.9
31	49	58	GLN	2.9
22	1K	16	C	2.9
54	K5	22	ALA	2.9
42	85	116	ALA	2.9
43	95	95	LEU	2.9
10	1I	77	PRO	2.9
9	82	32	ASP	2.9
35	15	50	ASP	2.9
3	2E	196	LEU	2.9
40	A8	112	PHE	2.9
22	1K	12	G	2.9
27	71	57	ASN	2.9
31	49	148	MET	2.9
51	H5	57	GLU	2.9
2	1E	96	ARG	2.9
40	65	108	GLY	2.9
34	38	35	LYS	2.9
2	12	231	GLU	2.9
12	3I	25	LYS	2.9
32	59	29	PRO	2.9
52	I5	46	GLN	2.9
47	D5	118	GLN	2.8
3	22	80	GLY	2.8
31	49	82	LEU	2.8
37	35	143	GLY	2.8
35	15	137	LYS	2.8
54	K5	12	GLU	2.8
40	65	26	LEU	2.8
47	D5	157	LEU	2.8
2	1E	160	ASP	2.8
10	1I	24	VAL	2.8
38	45	17	LEU	2.8
47	H8	146	ILE	2.8
37	35	110	TYR	2.8
46	C5	53	PRO	2.8
38	45	66	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
29	21	178	GLU	2.8
3	22	71	ALA	2.8
27	71	31	GLU	2.7
3	22	102	ASN	2.7
7	62	78	ARG	2.7
22	3K	48	U	2.7
54	O8	8	LYS	2.7
35	15	136	GLU	2.7
2	12	216	SER	2.7
52	I5	1	MET	2.7
27	71	176	GLY	2.7
43	95	40	LEU	2.7
51	H5	5	LYS	2.7
24	4L	25	A	2.7
54	O8	46	HIS	2.7
2	1E	128	GLU	2.7
3	2E	105	GLU	2.7
5	4E	7	GLU	2.7
47	D5	150	LEU	2.7
15	6A	2	PRO	2.7
42	85	73	GLY	2.7
38	45	89	ASN	2.7
38	45	102	VAL	2.7
32	51	34	GLU	2.7
2	12	92	TYR	2.7
42	85	101	ARG	2.7
22	1K	13	C	2.7
34	38	28	ASN	2.7
35	15	48	MET	2.7
54	K5	32	ASN	2.7
36	25	12	ASP	2.7
27	71	39	GLU	2.7
38	45	103	MET	2.7
47	D5	86	VAL	2.7
22	1K	64	G	2.7
30	39	13	SER	2.7
51	H5	4	LEU	2.7
54	K5	18	ARG	2.7
6	5E	55	ASP	2.7
22	1K	11	A	2.7
38	45	105	GLU	2.6
47	H8	60	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
52	I5	30	GLU	2.6
3	2E	78	GLY	2.6
43	95	38	LEU	2.6
47	D5	26	GLY	2.6
34	38	118	THR	2.6
6	5E	57	GLN	2.6
30	39	11	VAL	2.6
48	I8	7	LEU	2.6
25	14	1509	C	2.6
47	D5	51	ALA	2.6
52	I5	29	PRO	2.6
33	69	76	THR	2.6
43	95	57	VAL	2.6
54	O8	27	LYS	2.6
43	95	28	GLU	2.6
2	1E	118	LEU	2.6
10	1A	85	LEU	2.6
47	D5	9	TYR	2.6
10	1I	92	THR	2.6
43	95	21	ARG	2.6
32	51	27	LYS	2.6
54	O8	32	ASN	2.6
2	1E	67	THR	2.6
35	15	10	GLU	2.6
51	H5	7	LYS	2.6
22	1K	65	G	2.5
40	A8	48	LEU	2.5
5	42	4	THR	2.5
34	38	103	GLY	2.5
50	K8	43	GLN	2.5
27	71	2	LYS	2.5
43	95	39	LEU	2.5
3	22	103	VAL	2.5
31	49	62	LEU	2.5
3	2E	101	LEU	2.5
34	38	39	ALA	2.5
18	9I	42	ARG	2.5
44	E8	111	HIS	2.5
22	3L	35	C	2.5
7	6E	80	VAL	2.5
29	21	28	ALA	2.5
11	2I	83	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
46	C5	90	LEU	2.5
2	1E	106	LYS	2.5
22	3K	35	C	2.5
2	12	233	SER	2.5
52	I5	41	PRO	2.5
27	71	12	GLU	2.5
38	45	90	VAL	2.5
52	I5	8	LYS	2.5
2	1E	95	GLN	2.5
27	71	24	GLU	2.5
30	39	27	GLU	2.5
53	N8	53	ALA	2.5
35	58	135	PRO	2.5
54	O8	12	GLU	2.5
18	9I	78	LEU	2.5
3	22	207	VAL	2.5
7	6E	79	ARG	2.5
47	D5	152	ALA	2.5
52	I5	38	LYS	2.5
19	AA	86	GLU	2.5
13	4A	6	GLY	2.5
31	49	152	LEU	2.5
30	39	22	ALA	2.5
40	65	110	LEU	2.4
22	1K	25	U	2.4
3	2E	72	LYS	2.4
10	1I	20	ALA	2.4
42	85	106	PHE	2.4
22	1K	63	C	2.4
43	95	54	GLY	2.4
18	9I	19	LYS	2.4
38	88	105	GLU	2.4
3	2E	189	ALA	2.4
38	88	104	PHE	2.4
43	95	60	GLU	2.4
47	D5	117	LEU	2.4
47	D5	148	ASP	2.4
35	58	138	LEU	2.4
2	1E	101	MET	2.4
35	15	51	PHE	2.4
42	85	74	LEU	2.4
29	21	49	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
47	D5	78	LYS	2.4
40	A8	111	GLU	2.4
38	45	68	ILE	2.4
40	A8	110	LEU	2.4
39	98	118	GLU	2.4
3	22	104	GLN	2.4
2	1E	214	ILE	2.4
26	1J	1(M)	A	2.4
43	95	30	GLY	2.4
47	H8	110	GLY	2.4
30	39	33	LEU	2.4
47	D5	4	ARG	2.4
47	D5	5	LEU	2.4
46	C5	5	MET	2.4
19	AA	41	VAL	2.4
43	95	14	VAL	2.4
47	D5	56	VAL	2.4
47	D5	98	MET	2.3
52	I5	6	HIS	2.3
10	1I	6	ILE	2.3
10	1A	64	GLU	2.3
22	1K	46	G	2.3
43	95	26	ASP	2.3
19	AA	85	LYS	2.3
3	2E	185	GLY	2.3
32	59	96	ALA	2.3
47	D5	96	VAL	2.3
3	2E	199	LYS	2.3
29	21	73	GLU	2.3
22	3K	21	U	2.3
51	L8	59	VAL	2.3
42	85	68	ALA	2.3
10	1I	33	GLN	2.3
32	59	18	GLU	2.3
13	4A	7	VAL	2.3
35	15	15	LEU	2.3
37	78	136	GLU	2.3
47	H8	70	LEU	2.3
51	H5	28	LEU	2.3
2	1E	5	ILE	2.3
13	4A	4	ILE	2.3
31	49	64	THR	2.3

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Mol	Chain	Res	Type	RSRZ
11	2I	62	GLN	2.3
19	AA	49	ILE	2.3
3	2E	152	ILE	2.3
43	95	25	LEU	2.3
14	5A	37	PHE	2.3
22	1K	9	G	2.3
29	21	29	GLY	2.3
3	2E	153	VAL	2.3
43	95	35	LEU	2.3
43	95	51	VAL	2.3
42	85	64	ARG	2.3
47	H8	2	GLU	2.3
37	78	121	LYS	2.3
10	1I	72	VAL	2.3
31	49	146	TYR	2.3
34	38	36	GLU	2.3
29	21	55	ASN	2.3
35	58	54	VAL	2.3
25	14	2898	U	2.2
37	35	94	GLU	2.2
46	C5	50	ARG	2.2
31	49	155	MET	2.2
47	D5	114	GLY	2.2
47	H8	162	GLU	2.2
43	95	37	VAL	2.2
47	D5	126	VAL	2.2
38	45	48	GLU	2.2
35	15	14	VAL	2.2
36	68	122	LEU	2.2
54	O8	16	CYS	2.2
2	1E	76	GLN	2.2
30	39	12	LEU	2.2
13	4A	65	LYS	2.2
27	71	68	LEU	2.2
27	71	182	PRO	2.2
3	2E	58	GLU	2.2
2	1E	187	LEU	2.2
33	69	61	ARG	2.2
7	62	74	GLU	2.2
27	71	14	VAL	2.2
30	39	9	ILE	2.2
43	95	94	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
3	22	53	ALA	2.2
28	11	2	ALA	2.2
43	D8	1	MET	2.2
40	A8	82	ILE	2.2
43	95	20	LEU	2.2
43	D8	54	GLY	2.2
43	95	62	LEU	2.2
2	1E	217	ARG	2.2
3	22	199	LYS	2.2
40	65	24	LEU	2.2
42	85	110	VAL	2.2
54	O8	36	LEU	2.2
18	9A	42	ARG	2.2
44	A5	112	GLY	2.2
31	49	149	VAL	2.2
47	D5	13	GLU	2.2
47	D5	49	ARG	2.2
54	O8	48	VAL	2.2
38	45	34	LEU	2.2
47	D5	125	LEU	2.2
2	1E	124	SER	2.2
47	D5	66	SER	2.2
15	6I	88	ARG	2.2
48	E5	75	LEU	2.2
54	O8	6	ARG	2.2
2	1E	155	LEU	2.1
43	95	83	ARG	2.1
22	1K	6	G	2.1
11	2I	21	ILE	2.1
10	1I	26	ALA	2.1
27	71	16	PRO	2.1
45	B5	79	ALA	2.1
51	H5	36	VAL	2.1
3	2E	124	ILE	2.1
2	1E	126	GLU	2.1
10	1A	100	THR	2.1
7	62	86	GLN	2.1
22	3L	6	G	2.1
37	35	92	GLU	2.1
54	K5	23	THR	2.1
29	21	91	VAL	2.1
43	95	71	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
7	62	153	HIS	2.1
19	AA	38	SER	2.1
29	29	2	LYS	2.1
22	1K	50	G	2.1
37	35	52	GLU	2.1
3	2E	154	SER	2.1
27	71	34	THR	2.1
43	95	31	ALA	2.1
47	D5	50	GLN	2.1
51	H5	26	LEU	2.1
7	6E	85	TYR	2.1
38	45	32	TYR	2.1
14	5I	58	LYS	2.1
11	2I	16	SER	2.1
35	15	47	ALA	2.1
30	39	14	PRO	2.1
38	45	76	LYS	2.1
42	85	108	GLU	2.1
6	5E	46	ARG	2.1
25	14	5	A	2.1
2	12	163	PHE	2.1
31	49	41	GLN	2.1
48	E5	21	LEU	2.1
3	22	10	PHE	2.1
34	38	97	ALA	2.1
40	A8	41	ASP	2.1
2	1E	188	ALA	2.1
3	2E	193	TYR	2.1
11	2A	11	LYS	2.1
13	4A	94	ARG	2.1
45	B5	92	LEU	2.1
3	2E	150	LYS	2.1
22	1K	27	G	2.1
2	12	147	LYS	2.1
29	29	1	MET	2.1
31	49	102	PHE	2.1
52	I5	69	LYS	2.1
2	12	240	GLN	2.1
11	2I	14	VAL	2.1
47	H8	97	GLU	2.1
47	D5	102	LEU	2.1
54	O8	24	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
2	1E	225	ALA	2.1
32	59	89	ILE	2.1
3	2E	13	GLY	2.1
4	3E	24	GLU	2.1
18	9A	43	PHE	2.1
42	85	84	LYS	2.1
3	2E	110	ASN	2.1
47	D5	99	TYR	2.1
18	9I	51	LEU	2.1
29	21	69	LYS	2.0
43	95	86	GLY	2.1
4	3E	158	ILE	2.0
12	3I	126	ALA	2.0
3	22	185	GLY	2.0
12	3I	18	LYS	2.0
3	2E	146	ALA	2.0
25	1H	2132	U	2.0
51	H5	29	ARG	2.0
57	2L	21	U	2.0
3	2E	76	VAL	2.0
47	H8	5	LEU	2.0
2	1E	186	ALA	2.0
19	AA	79	THR	2.0
47	D5	141	VAL	2.0
18	9I	20	ALA	2.0
32	59	41	MET	2.0
12	3I	62	GLU	2.0
2	1E	130	ARG	2.0
42	85	71	GLN	2.0
30	31	22	ALA	2.0
47	D5	173	ALA	2.0
40	A8	28	VAL	2.0
47	H8	144	LEU	2.0
47	D5	38	TYR	2.0
15	6A	15	PHE	2.0
54	K5	44	ARG	2.0
38	45	97	VAL	2.0
7	62	62	PHE	2.0
48	E5	72	ARG	2.0
18	9A	20	ALA	2.0
37	35	5	ASP	2.0
32	59	21	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
13	4A	3	ARG	2.0
18	9I	28	GLU	2.0
47	D5	97	GLU	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
23	H2U	2K	21	20/21	0.88	0.22	117,140,147,150	0
57	4SU	2L	8	20/21	0.88	0.12	120,131,140,141	0
25	5MU	14	1915	21/22	0.89	0.11	116,128,139,153	0
57	PSU	2L	56	20/21	0.90	0.10	123,128,134,135	0
12	0TD	3A	89	10/11	0.91	0.27	89,95,100,105	0
23	5MU	2K	55	21/22	0.91	0.12	103,113,125,145	0
23	PSU	2K	56	20/21	0.91	0.11	92,104,120,124	0
57	7MG	2L	47	24/25	0.92	0.15	114,141,151,162	0
1	PSU	1G	516	20/21	0.92	0.12	98,102,108,110	0
25	2MA	14	2503	23/24	0.93	0.17	39,50,63,79	0
1	2MG	13	1207	24/25	0.93	0.14	100,112,118,119	0
12	0TD	3I	89	10/11	0.93	0.25	81,87,92,107	0
57	5MU	2L	55	21/22	0.93	0.11	119,129,134,137	0
23	7MG	2K	47	24/25	0.93	0.13	96,105,114,126	0
1	MA6	1G	1519	24/25	0.94	0.16	64,79,84,86	0
1	M2G	1G	966	25/26	0.94	0.12	87,107,115,124	0
1	5MC	1G	967	21/22	0.94	0.09	92,107,118,120	0
1	7MG	1G	527	24/25	0.94	0.13	88,99,101,102	0
1	4OC	1G	1402	22/23	0.94	0.14	71,84,91,99	0
25	PSU	14	1911	20/21	0.94	0.10	86,94,118,121	0
1	7MG	13	527	24/25	0.95	0.14	71,80,86,92	0
25	PSU	1H	1917	20/21	0.95	0.10	65,76,90,91	0
25	PSU	14	1917	20/21	0.95	0.13	87,104,109,110	0
25	OMC	14	1920	21/22	0.95	0.17	73,91,99,102	0
25	5MC	14	1962	21/22	0.95	0.13	59,67,76,83	0
25	2MA	1H	2503	23/24	0.95	0.17	30,38,48,59	0
1	2MG	1G	1207	24/25	0.95	0.12	115,120,125,127	0
1	5MC	13	967	21/22	0.95	0.16	71,82,94,99	0
1	M2G	13	966	25/26	0.95	0.15	68,77,90,94	0
23	4SU	2K	8	20/21	0.95	0.12	85,91,97,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
25	5MU	1H	1915	21/22	0.95	0.12	75,91,102,116	0
1	5MC	13	1400	21/22	0.96	0.13	58,74,79,86	0
1	5MC	1G	1400	21/22	0.96	0.12	81,92,98,102	0
25	OMC	1H	1920	21/22	0.96	0.12	60,66,70,72	0
1	PSU	13	516	20/21	0.96	0.09	84,95,98,98	0
25	5MU	1H	1939	21/22	0.96	0.15	36,41,48,50	0
25	5MU	14	1939	21/22	0.96	0.15	44,52,57,62	0
25	5MC	1H	1942	21/22	0.96	0.14	39,50,56,61	0
25	5MC	14	1942	21/22	0.96	0.18	62,71,82,90	0
25	5MC	1H	1962	21/22	0.96	0.14	50,57,61,66	0
23	OMC	2K	33	21/22	0.96	0.13	77,82,89,101	0
25	OMG	14	2251	24/25	0.96	0.12	51,57,64,69	0
1	5MC	1G	1404	21/22	0.96	0.11	77,85,89,91	0
1	5MC	13	1407	21/22	0.96	0.13	53,59,65,67	0
25	OMU	1H	2552	21/22	0.96	0.18	37,45,51,53	0
25	PSU	1H	2605	20/21	0.96	0.15	35,40,48,53	0
25	PSU	14	2605	20/21	0.96	0.12	42,52,74,77	0
1	5MC	1G	1407	21/22	0.96	0.11	75,80,85,98	0
1	UR3	13	1498	21/22	0.96	0.16	44,62,69,73	0
1	UR3	1G	1498	21/22	0.96	0.14	65,76,83,86	0
1	MA6	13	1518	24/25	0.96	0.15	50,57,61,62	0
25	OMU	14	2552	21/22	0.97	0.14	48,55,62,67	0
1	5MC	13	1404	21/22	0.97	0.12	54,59,69,79	0
25	OMG	1H	2251	24/25	0.97	0.12	36,43,49,53	0
1	MA6	1G	1518	24/25	0.97	0.13	68,78,82,84	0
57	OMC	2L	33	21/22	0.97	0.12	91,100,107,111	0
25	PSU	1H	1911	20/21	0.97	0.12	50,63,72,74	0
1	MA6	13	1519	24/25	0.97	0.14	51,56,62,64	0
1	4OC	13	1402	22/23	0.97	0.15	61,71,79,84	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	1H	3052	1/1	0.22	0.19	127,127,127,127	0
59	MG	14	3381	1/1	0.28	0.13	77,77,77,77	0
59	MG	7I	101	1/1	0.31	0.19	124,124,124,124	0
59	MG	14	3338	1/1	0.34	0.10	73,73,73,73	0
59	MG	14	3265	1/1	0.38	0.21	67,67,67,67	0
59	MG	14	3398	1/1	0.38	0.14	63,63,63,63	0
59	MG	1G	1696	1/1	0.44	0.11	129,129,129,129	0
59	MG	2L	102	1/1	0.44	0.12	132,132,132,132	0
58	K	5E	201	1/1	0.47	0.22	113,113,113,113	0
58	K	41	202	1/1	0.52	0.16	128,128,128,128	0
59	MG	14	3402	1/1	0.53	0.06	123,123,123,123	0
59	MG	1H	3310	1/1	0.55	0.26	78,78,78,78	0
59	MG	1H	3188	1/1	0.55	0.28	84,84,84,84	0
59	MG	14	3380	1/1	0.57	0.10	70,70,70,70	0
59	MG	13	1733	1/1	0.57	0.15	117,117,117,117	0
59	MG	13	1741	1/1	0.57	0.08	106,106,106,106	0
59	MG	1G	1716	1/1	0.57	0.10	107,107,107,107	0
59	MG	14	3243	1/1	0.58	0.23	74,74,74,74	0
59	MG	1H	3430	1/1	0.60	0.08	79,79,79,79	0
59	MG	14	3389	1/1	0.60	0.14	69,69,69,69	0
59	MG	1G	1704	1/1	0.61	0.07	110,110,110,110	0
58	K	1G	1604	1/1	0.62	0.19	111,111,111,111	0
59	MG	1G	1648	1/1	0.62	0.42	83,83,83,83	0
58	K	32	301	1/1	0.63	0.07	133,133,133,133	0
59	MG	16	210	1/1	0.63	0.09	98,98,98,98	0
58	K	1G	1606	1/1	0.63	0.11	102,102,102,102	0
59	MG	1G	1691	1/1	0.63	0.11	84,84,84,84	0
59	MG	14	3378	1/1	0.64	0.13	71,71,71,71	0
58	K	14	3091	1/1	0.65	0.11	103,103,103,103	0
59	MG	1H	3435	1/1	0.65	0.10	72,72,72,72	0
59	MG	1G	1725	1/1	0.66	0.08	97,97,97,97	0
59	MG	1H	3467	1/1	0.66	0.13	67,67,67,67	0
59	MG	14	3240	1/1	0.66	0.09	59,59,59,59	0
59	MG	1H	3446	1/1	0.67	0.07	92,92,92,92	0
59	MG	1H	3514	1/1	0.67	0.08	88,88,88,88	0
58	K	1H	3110	1/1	0.68	0.22	111,111,111,111	0
59	MG	14	3308	1/1	0.68	0.12	80,80,80,80	0
58	K	1H	3079	1/1	0.68	0.22	114,114,114,114	0
59	MG	1H	3513	1/1	0.69	0.06	105,105,105,105	0
59	MG	13	1699	1/1	0.69	0.21	68,68,68,68	0
59	MG	1G	1671	1/1	0.69	0.35	79,79,79,79	0
59	MG	14	3293	1/1	0.69	0.05	91,91,91,91	0
58	K	13	1634	1/1	0.70	0.12	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3350	1/1	0.70	0.18	69,69,69,69	0
59	MG	14	3356	1/1	0.70	0.14	84,84,84,84	0
59	MG	14	3175	1/1	0.70	0.24	59,59,59,59	0
59	MG	13	1738	1/1	0.70	0.10	91,91,91,91	0
59	MG	1H	3522	1/1	0.70	0.12	102,102,102,102	0
59	MG	1H	3487	1/1	0.70	0.09	85,85,85,85	0
59	MG	1H	3498	1/1	0.70	0.18	37,37,37,37	0
59	MG	1G	1661	1/1	0.70	0.24	114,114,114,114	0
59	MG	14	3277	1/1	0.71	0.14	53,53,53,53	0
58	K	14	3042	1/1	0.71	0.16	83,83,83,83	0
59	MG	14	3202	1/1	0.71	0.15	84,84,84,84	0
59	MG	1H	3509	1/1	0.71	0.08	101,101,101,101	0
58	K	1H	3099	1/1	0.71	0.21	81,81,81,81	0
59	MG	14	3172	1/1	0.71	0.13	72,72,72,72	0
59	MG	1H	3363	1/1	0.72	0.13	32,32,32,32	0
58	K	5I	101	1/1	0.72	0.09	129,129,129,129	0
59	MG	1G	1663	1/1	0.72	0.26	73,73,73,73	0
59	MG	1H	3351	1/1	0.72	0.12	33,33,33,33	0
59	MG	1H	3492	1/1	0.73	0.09	67,67,67,67	0
58	K	1G	1613	1/1	0.73	0.09	96,96,96,96	0
59	MG	14	3274	1/1	0.73	0.12	30,30,30,30	0
59	MG	14	3275	1/1	0.73	0.07	58,58,58,58	0
59	MG	14	3174	1/1	0.73	0.21	78,78,78,78	0
59	MG	14	3370	1/1	0.73	0.12	56,56,56,56	0
59	MG	1G	1693	1/1	0.74	0.06	89,89,89,89	0
59	MG	1H	3424	1/1	0.74	0.14	84,84,84,84	0
59	MG	1H	3474	1/1	0.74	0.09	47,47,47,47	0
59	MG	1G	1709	1/1	0.74	0.12	102,102,102,102	0
59	MG	14	3306	1/1	0.74	0.12	49,49,49,49	0
59	MG	13	1744	1/1	0.74	0.07	107,107,107,107	0
59	MG	14	3392	1/1	0.74	0.08	69,69,69,69	0
59	MG	1H	3450	1/1	0.74	0.05	91,91,91,91	0
59	MG	1H	3457	1/1	0.74	0.12	35,35,35,35	0
59	MG	1J	202	1/1	0.74	0.16	69,69,69,69	0
58	K	39	301	1/1	0.75	0.07	107,107,107,107	0
59	MG	1H	3419	1/1	0.75	0.13	43,43,43,43	0
58	K	14	3036	1/1	0.75	0.10	85,85,85,85	0
59	MG	3E	301	1/1	0.75	0.15	84,84,84,84	0
59	MG	1G	1695	1/1	0.75	0.05	97,97,97,97	0
59	MG	13	1723	1/1	0.75	0.08	109,109,109,109	0
59	MG	13	1731	1/1	0.75	0.07	92,92,92,92	0
59	MG	1H	3515	1/1	0.75	0.10	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	16	202	1/1	0.75	0.11	116,116,116,116	0
59	MG	1H	3327	1/1	0.75	0.33	72,72,72,72	0
59	MG	1H	3337	1/1	0.75	0.09	37,37,37,37	0
58	K	13	1605	1/1	0.75	0.17	94,94,94,94	0
59	MG	1H	3215	1/1	0.76	0.27	65,65,65,65	0
59	MG	1H	3476	1/1	0.76	0.17	42,42,42,42	0
59	MG	1G	1703	1/1	0.76	0.06	93,93,93,93	0
59	MG	1H	3244	1/1	0.76	0.17	52,52,52,52	0
59	MG	14	3250	1/1	0.76	0.27	84,84,84,84	0
59	MG	1G	1707	1/1	0.76	0.10	120,120,120,120	0
59	MG	1H	3286	1/1	0.76	0.21	52,52,52,52	0
59	MG	1H	3397	1/1	0.76	0.14	29,29,29,29	0
59	MG	1H	3508	1/1	0.76	0.22	78,78,78,78	0
59	MG	13	1740	1/1	0.76	0.09	105,105,105,105	0
58	K	1H	3030	1/1	0.76	0.26	86,86,86,86	0
59	MG	1H	3472	1/1	0.76	0.09	71,71,71,71	0
59	MG	14	3300	1/1	0.77	0.11	41,41,41,41	0
59	MG	1H	3511	1/1	0.77	0.06	93,93,93,93	0
58	K	1H	3034	1/1	0.77	0.11	83,83,83,83	0
59	MG	1H	3418	1/1	0.77	0.06	58,58,58,58	0
59	MG	1G	1664	1/1	0.77	0.31	73,73,73,73	0
59	MG	1H	3486	1/1	0.78	0.10	54,54,54,54	0
59	MG	14	3134	1/1	0.78	0.09	67,67,67,67	0
59	MG	1H	3361	1/1	0.78	0.14	32,32,32,32	0
59	MG	14	3374	1/1	0.78	0.13	96,96,96,96	0
59	MG	14	3276	1/1	0.78	0.07	44,44,44,44	0
58	K	14	3083	1/1	0.78	0.17	119,119,119,119	0
59	MG	14	3288	1/1	0.78	0.13	79,79,79,79	0
59	MG	13	1734	1/1	0.78	0.07	61,61,61,61	0
59	MG	13	1710	1/1	0.78	0.37	97,97,97,97	0
59	MG	1G	1690	1/1	0.78	0.11	109,109,109,109	0
59	MG	1H	3301	1/1	0.78	0.18	59,59,59,59	0
59	MG	D8	203	1/1	0.78	0.18	55,55,55,55	0
59	MG	1J	205	1/1	0.78	0.05	104,104,104,104	0
58	K	1H	3094	1/1	0.79	0.14	65,65,65,65	0
58	K	13	1602	1/1	0.79	0.06	113,113,113,113	0
58	K	1H	3048	1/1	0.79	0.12	67,67,67,67	0
59	MG	1G	1722	1/1	0.79	0.07	97,97,97,97	0
59	MG	1H	3461	1/1	0.79	0.16	33,33,33,33	0
58	K	1G	1619	1/1	0.79	0.06	79,79,79,79	0
59	MG	1H	3347	1/1	0.79	0.20	50,50,50,50	0
58	K	1H	3117	1/1	0.79	0.21	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3361	1/1	0.79	0.06	71,71,71,71	0
58	K	1H	3013	1/1	0.79	0.11	83,83,83,83	0
59	MG	1H	3161	1/1	0.79	0.15	32,32,32,32	0
59	MG	13	1729	1/1	0.79	0.06	68,68,68,68	0
59	MG	1G	1685	1/1	0.79	0.07	87,87,87,87	0
59	MG	1H	3402	1/1	0.79	0.13	63,63,63,63	0
59	MG	14	3386	1/1	0.79	0.10	82,82,82,82	0
59	MG	1H	3211	1/1	0.79	0.21	47,47,47,47	0
59	MG	1H	3504	1/1	0.79	0.18	85,85,85,85	0
58	K	13	1606	1/1	0.79	0.08	87,87,87,87	0
59	MG	1H	3242	1/1	0.79	0.13	57,57,57,57	0
58	K	14	3055	1/1	0.79	0.14	116,116,116,116	0
58	K	14	3067	1/1	0.79	0.09	90,90,90,90	0
59	MG	1H	3222	1/1	0.80	0.28	67,67,67,67	0
59	MG	1G	1641	1/1	0.80	0.16	53,53,53,53	0
59	MG	1H	3480	1/1	0.80	0.10	58,58,58,58	0
59	MG	1H	3423	1/1	0.80	0.12	33,33,33,33	0
59	MG	14	3102	1/1	0.80	0.10	57,57,57,57	0
58	K	1G	1605	1/1	0.80	0.10	92,92,92,92	0
59	MG	1H	3489	1/1	0.80	0.06	76,76,76,76	0
59	MG	1H	3426	1/1	0.80	0.15	68,68,68,68	0
58	K	1G	1622	1/1	0.80	0.08	118,118,118,118	0
59	MG	14	3186	1/1	0.80	0.17	48,48,48,48	0
59	MG	1H	3284	1/1	0.80	0.20	66,66,66,66	0
59	MG	14	3234	1/1	0.80	0.23	67,67,67,67	0
58	K	1H	3088	1/1	0.80	0.13	74,74,74,74	0
59	MG	1H	3288	1/1	0.80	0.12	51,51,51,51	0
59	MG	1H	3380	1/1	0.80	0.11	61,61,61,61	0
59	MG	14	3251	1/1	0.80	0.17	52,52,52,52	0
59	MG	1H	3389	1/1	0.80	0.14	38,38,38,38	0
59	MG	1H	3465	1/1	0.80	0.14	39,39,39,39	0
59	MG	13	1700	1/1	0.80	0.19	63,63,63,63	0
58	K	13	1635	1/1	0.80	0.55	104,104,104,104	0
59	MG	1H	3311	1/1	0.80	0.29	57,57,57,57	0
59	MG	29	304	1/1	0.80	0.14	62,62,62,62	0
59	MG	1H	3318	1/1	0.81	0.35	85,85,85,85	0
59	MG	1H	3322	1/1	0.81	0.16	60,60,60,60	0
59	MG	1H	3503	1/1	0.81	0.08	63,63,63,63	0
59	MG	1H	3326[A]	1/1	0.81	0.46	58,58,58,58	1
59	MG	1H	3427	1/1	0.81	0.21	41,41,41,41	0
59	MG	1H	3326[B]	1/1	0.81	0.46	55,55,55,55	1
59	MG	1H	3434	1/1	0.81	0.13	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3321	1/1	0.81	0.11	51,51,51,51	0
58	K	14	3027	1/1	0.81	0.10	97,97,97,97	0
59	MG	14	3347	1/1	0.81	0.15	57,57,57,57	0
58	K	13	1608	1/1	0.81	0.15	96,96,96,96	0
59	MG	14	3351	1/1	0.81	0.10	61,61,61,61	0
59	MG	1H	3265	1/1	0.81	0.26	63,63,63,63	0
59	MG	1H	3282	1/1	0.81	0.16	48,48,48,48	0
59	MG	1H	3459	1/1	0.81	0.17	50,50,50,50	0
59	MG	14	3372	1/1	0.81	0.07	73,73,73,73	0
58	K	1H	3061	1/1	0.81	0.17	47,47,47,47	0
59	MG	1H	3170	1/1	0.81	0.16	47,47,47,47	0
58	K	14	3052	1/1	0.81	0.13	105,105,105,105	0
59	MG	1H	3471	1/1	0.81	0.13	30,30,30,30	0
59	MG	1H	3292	1/1	0.81	0.14	54,54,54,54	0
59	MG	14	3387	1/1	0.81	0.18	45,45,45,45	0
59	MG	1H	3296	1/1	0.81	0.08	50,50,50,50	0
58	K	1G	1601	1/1	0.81	0.09	102,102,102,102	0
59	MG	1H	3477	1/1	0.81	0.11	43,43,43,43	0
59	MG	1H	3404	1/1	0.81	0.14	65,65,65,65	0
59	MG	1H	3414	1/1	0.81	0.05	89,89,89,89	0
58	K	1H	3072	1/1	0.81	0.16	100,100,100,100	0
58	K	16	201	1/1	0.81	0.08	102,102,102,102	0
59	MG	14	3252	1/1	0.82	0.24	75,75,75,75	0
59	MG	BI	202	1/1	0.82	0.10	94,94,94,94	0
58	K	1H	3113[B]	1/1	0.82	0.16	39,39,39,39	1
59	MG	14	3103	1/1	0.82	0.12	82,82,82,82	0
58	K	14	3094	1/1	0.82	0.10	111,111,111,111	0
59	MG	14	3155	1/1	0.82	0.11	57,57,57,57	0
59	MG	14	3379	1/1	0.82	0.19	42,42,42,42	0
59	MG	1H	3177	1/1	0.82	0.15	54,54,54,54	0
59	MG	D8	201	1/1	0.82	0.14	71,71,71,71	0
59	MG	1H	3180	1/1	0.82	0.28	72,72,72,72	0
59	MG	1G	1628	1/1	0.82	0.36	92,92,92,92	0
59	MG	1H	3385	1/1	0.82	0.08	69,69,69,69	0
59	MG	1H	3325	1/1	0.82	0.20	65,65,65,65	0
59	MG	14	3327	1/1	0.82	0.09	66,66,66,66	0
58	K	14	3026	1/1	0.82	0.08	109,109,109,109	0
59	MG	1J	201	1/1	0.82	0.11	131,131,131,131	0
59	MG	13	1691	1/1	0.82	0.22	88,88,88,88	0
58	K	14	3075	1/1	0.82	0.28	116,116,116,116	0
58	K	1H	3113[A]	1/1	0.82	0.16	45,45,45,45	1
59	MG	13	1730	1/1	0.83	0.09	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3278	1/1	0.83	0.29	68,68,68,68	0
59	MG	14	3323	1/1	0.83	0.09	47,47,47,47	0
58	K	1G	1609	1/1	0.83	0.12	113,113,113,113	0
59	MG	1H	3328	1/1	0.83	0.14	61,61,61,61	0
59	MG	13	1732	1/1	0.83	0.18	81,81,81,81	0
59	MG	1H	3344	1/1	0.83	0.12	21,21,21,21	0
59	MG	1G	1683	1/1	0.83	0.14	90,90,90,90	0
59	MG	1H	3285	1/1	0.83	0.28	66,66,66,66	0
59	MG	14	3233	1/1	0.83	0.14	80,80,80,80	0
59	MG	1H	3348	1/1	0.83	0.11	34,34,34,34	0
58	K	14	3079	1/1	0.83	0.08	112,112,112,112	0
59	MG	1H	3355	1/1	0.83	0.10	32,32,32,32	0
59	MG	13	1698	1/1	0.83	0.23	67,67,67,67	0
58	K	13	1625	1/1	0.83	0.06	94,94,94,94	0
59	MG	1H	3373	1/1	0.83	0.12	39,39,39,39	0
59	MG	1H	3203	1/1	0.83	0.21	52,52,52,52	0
59	MG	1H	3207	1/1	0.83	0.17	56,56,56,56	0
59	MG	1H	3520	1/1	0.83	0.14	70,70,70,70	0
58	K	14	3088	1/1	0.83	0.16	101,101,101,101	0
59	MG	13	1707	1/1	0.83	0.22	65,65,65,65	0
58	K	14	3089	1/1	0.83	0.09	97,97,97,97	0
59	MG	14	3289	1/1	0.83	0.10	53,53,53,53	0
59	MG	14	3291	1/1	0.83	0.12	64,64,64,64	0
59	MG	1G	1727	1/1	0.83	0.05	93,93,93,93	0
58	K	1H	3089	1/1	0.83	0.08	50,50,50,50	0
58	K	1H	3003	1/1	0.83	0.09	76,76,76,76	0
59	MG	14	3295	1/1	0.84	0.15	51,51,51,51	0
59	MG	1H	3523	1/1	0.84	0.10	34,34,34,34	0
58	K	1H	3008	1/1	0.84	0.15	61,61,61,61	0
58	K	31	301	1/1	0.84	0.11	60,60,60,60	0
59	MG	13	1718	1/1	0.84	0.06	89,89,89,89	0
59	MG	1H	3392	1/1	0.84	0.12	32,32,32,32	0
58	K	1H	3112	1/1	0.84	0.15	87,87,87,87	0
59	MG	14	3332	1/1	0.84	0.06	110,110,110,110	0
59	MG	1H	3231	1/1	0.84	0.40	67,67,67,67	0
59	MG	4I	201	1/1	0.84	0.21	84,84,84,84	0
58	K	1H	3009	1/1	0.84	0.17	97,97,97,97	0
59	MG	1H	3416	1/1	0.84	0.20	59,59,59,59	0
59	MG	BI	201	1/1	0.84	0.13	108,108,108,108	0
59	MG	1H	3275	1/1	0.84	0.20	60,60,60,60	0
59	MG	13	1662	1/1	0.84	0.19	67,67,67,67	0
59	MG	1G	1686	1/1	0.84	0.07	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	13	1671	1/1	0.84	0.14	65,65,65,65	0
58	K	1H	3090	1/1	0.84	0.08	65,65,65,65	0
58	K	1H	3039	1/1	0.84	0.10	81,81,81,81	0
59	MG	1H	3428	1/1	0.84	0.09	55,55,55,55	0
59	MG	14	3254	1/1	0.84	0.13	71,71,71,71	0
59	MG	14	3384	1/1	0.84	0.06	108,108,108,108	0
59	MG	1H	3350	1/1	0.84	0.12	26,26,26,26	0
59	MG	14	3270	1/1	0.84	0.10	57,57,57,57	0
59	MG	1H	3178	1/1	0.84	0.17	34,34,34,34	0
58	K	13	1601	1/1	0.84	0.09	87,87,87,87	0
58	K	1G	1607	1/1	0.84	0.07	93,93,93,93	0
59	MG	1H	3449	1/1	0.84	0.08	57,57,57,57	0
59	MG	1G	1711	1/1	0.84	0.10	104,104,104,104	0
59	MG	1H	3200	1/1	0.84	0.14	67,67,67,67	0
59	MG	13	1739	1/1	0.84	0.06	97,97,97,97	0
59	MG	1H	3375	1/1	0.84	0.08	69,69,69,69	0
59	MG	1H	3431	1/1	0.85	0.07	85,85,85,85	0
59	MG	1G	1710	1/1	0.85	0.05	70,70,70,70	0
58	K	1H	3041	1/1	0.85	0.10	66,66,66,66	0
59	MG	1G	1712	1/1	0.85	0.07	106,106,106,106	0
59	MG	13	1695	1/1	0.85	0.22	76,76,76,76	0
58	K	13	1636	1/1	0.85	0.16	136,136,136,136	0
58	K	14	3001	1/1	0.85	0.13	87,87,87,87	0
59	MG	14	3368	1/1	0.85	0.15	40,40,40,40	0
59	MG	1H	3315	1/1	0.85	0.20	70,70,70,70	0
58	K	14	3012	1/1	0.85	0.07	91,91,91,91	0
59	MG	1H	3352	1/1	0.85	0.15	59,59,59,59	0
59	MG	14	3377	1/1	0.85	0.11	70,70,70,70	0
58	K	1H	3069	1/1	0.85	0.10	74,74,74,74	0
59	MG	13	1736	1/1	0.85	0.08	100,100,100,100	0
58	K	1G	1615	1/1	0.85	0.18	106,106,106,106	0
59	MG	14	3290	1/1	0.85	0.09	48,48,48,48	0
59	MG	1H	3470	1/1	0.85	0.09	45,45,45,45	0
59	MG	14	3173	1/1	0.85	0.27	64,64,64,64	0
59	MG	1H	3369	1/1	0.85	0.11	52,52,52,52	0
59	MG	14	3297	1/1	0.85	0.05	44,44,44,44	0
59	MG	13	1670	1/1	0.85	0.25	72,72,72,72	0
58	K	1H	3121	1/1	0.85	0.14	66,66,66,66	0
59	MG	1H	3235	1/1	0.85	0.18	62,62,62,62	0
59	MG	14	3310	1/1	0.85	0.11	27,27,27,27	0
59	MG	1H	3429	1/1	0.85	0.08	63,63,63,63	0
59	MG	21	301	1/1	0.85	0.08	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3335	1/1	0.85	0.18	50,50,50,50	0
58	K	14	3082	1/1	0.86	0.20	76,76,76,76	0
59	MG	1G	1630	1/1	0.86	0.20	64,64,64,64	0
58	K	14	3031	1/1	0.86	0.05	78,78,78,78	0
58	K	1G	1624	1/1	0.86	0.12	116,116,116,116	0
59	MG	1G	1651	1/1	0.86	0.20	63,63,63,63	0
59	MG	14	3302	1/1	0.86	0.07	52,52,52,52	0
59	MG	14	3140	1/1	0.86	0.20	45,45,45,45	0
59	MG	14	3141	1/1	0.86	0.22	60,60,60,60	0
59	MG	14	3145	1/1	0.86	0.20	86,86,86,86	0
59	MG	14	3154	1/1	0.86	0.25	72,72,72,72	0
59	MG	1H	3484	1/1	0.86	0.14	47,47,47,47	0
58	K	1H	3086	1/1	0.86	0.18	79,79,79,79	0
58	K	14	3050	1/1	0.86	0.15	81,81,81,81	0
59	MG	13	1701	1/1	0.86	0.16	72,72,72,72	0
59	MG	1G	1681	1/1	0.86	0.09	49,49,49,49	0
59	MG	14	3181	1/1	0.86	0.17	46,46,46,46	0
59	MG	14	3185	1/1	0.86	0.27	76,76,76,76	0
59	MG	1H	3290	1/1	0.86	0.26	51,51,51,51	0
59	MG	14	3357	1/1	0.86	0.21	95,95,95,95	0
59	MG	14	3359	1/1	0.86	0.16	94,94,94,94	0
59	MG	14	3190	1/1	0.86	0.13	81,81,81,81	0
59	MG	1H	3496	1/1	0.86	0.08	64,64,64,64	0
59	MG	1H	3201	1/1	0.86	0.15	48,48,48,48	0
58	K	1H	3092	1/1	0.86	0.09	70,70,70,70	0
58	K	1H	3082	1/1	0.86	0.10	80,80,80,80	0
59	MG	14	3375	1/1	0.86	0.17	57,57,57,57	0
59	MG	13	1658	1/1	0.86	0.13	35,35,35,35	0
58	K	14	3013	1/1	0.86	0.08	98,98,98,98	0
59	MG	1H	3312	1/1	0.86	0.13	70,70,70,70	0
59	MG	1G	1697	1/1	0.86	0.09	81,81,81,81	0
59	MG	1H	3221	1/1	0.86	0.28	77,77,77,77	0
59	MG	14	3382	1/1	0.86	0.07	77,77,77,77	0
59	MG	14	3256	1/1	0.86	0.18	64,64,64,64	0
59	MG	13	1665	1/1	0.86	0.19	50,50,50,50	0
59	MG	14	3267	1/1	0.86	0.20	92,92,92,92	0
59	MG	1H	3319	1/1	0.86	0.11	55,55,55,55	0
59	MG	13	1669	1/1	0.86	0.13	53,53,53,53	0
59	MG	14	3394	1/1	0.86	0.10	82,82,82,82	0
59	MG	14	3395	1/1	0.86	0.12	50,50,50,50	0
58	K	1H	3084	1/1	0.86	0.11	77,77,77,77	0
59	MG	1H	3239	1/1	0.86	0.41	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3133	1/1	0.86	0.18	55,55,55,55	0
59	MG	1H	3151	1/1	0.86	0.26	54,54,54,54	0
58	K	1H	3103	1/1	0.86	0.13	65,65,65,65	0
59	MG	1H	3167	1/1	0.86	0.17	33,33,33,33	0
59	MG	1H	3506	1/1	0.87	0.08	65,65,65,65	0
59	MG	1H	3391	1/1	0.87	0.11	31,31,31,31	0
59	MG	1G	1684	1/1	0.87	0.14	75,75,75,75	0
58	K	1H	3031	1/1	0.87	0.11	96,96,96,96	0
59	MG	1H	3341	1/1	0.87	0.20	31,31,31,31	0
59	MG	1H	3398	1/1	0.87	0.05	74,74,74,74	0
59	MG	13	1656	1/1	0.87	0.24	73,73,73,73	0
59	MG	13	1688	1/1	0.87	0.25	83,83,83,83	0
59	MG	14	3376	1/1	0.87	0.21	61,61,61,61	0
59	MG	1H	3518	1/1	0.87	0.11	40,40,40,40	0
59	MG	1H	3159	1/1	0.87	0.17	68,68,68,68	0
59	MG	13	1690	1/1	0.87	0.22	77,77,77,77	0
59	MG	1G	1700	1/1	0.87	0.11	108,108,108,108	0
58	K	14	3037	1/1	0.87	0.08	60,60,60,60	0
58	K	1H	3010	1/1	0.87	0.12	93,93,93,93	0
59	MG	1H	3323	1/1	0.87	0.34	73,73,73,73	0
59	MG	1H	3360	1/1	0.87	0.12	39,39,39,39	0
59	MG	1H	3324	1/1	0.87	0.34	59,59,59,59	0
59	MG	1H	3173	1/1	0.87	0.14	57,57,57,57	0
59	MG	13	1664	1/1	0.87	0.10	53,53,53,53	0
59	MG	1H	3371	1/1	0.87	0.10	35,35,35,35	0
58	K	13	1623	1/1	0.87	0.10	121,121,121,121	0
59	MG	1H	3374	1/1	0.87	0.06	70,70,70,70	0
59	MG	14	3344	1/1	0.87	0.13	89,89,89,89	0
59	MG	13	1666	1/1	0.87	0.16	83,83,83,83	0
58	K	13	1610	1/1	0.87	0.10	114,114,114,114	0
59	MG	1H	3333	1/1	0.87	0.10	50,50,50,50	0
59	MG	1H	3243	1/1	0.87	0.35	94,94,94,94	0
59	MG	1H	3466	1/1	0.88	0.14	34,34,34,34	0
59	MG	1H	3279	1/1	0.88	0.21	74,74,74,74	0
59	MG	14	3124	1/1	0.88	0.08	63,63,63,63	0
58	K	1G	1625	1/1	0.88	0.12	106,106,106,106	0
59	MG	1H	3283	1/1	0.88	0.10	58,58,58,58	0
59	MG	1G	1639	1/1	0.88	0.29	55,55,55,55	0
59	MG	1H	3139	1/1	0.88	0.31	76,76,76,76	0
58	K	1H	3002	1/1	0.88	0.06	71,71,71,71	0
59	MG	1H	3340	1/1	0.88	0.12	29,29,29,29	0
59	MG	14	3157	1/1	0.88	0.14	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3325	1/1	0.88	0.08	81,81,81,81	0
59	MG	1G	1659	1/1	0.88	0.10	72,72,72,72	0
59	MG	1H	3406	1/1	0.88	0.08	95,95,95,95	0
59	MG	1H	3212	1/1	0.88	0.14	57,57,57,57	0
58	K	14	3054	1/1	0.88	0.06	77,77,77,77	0
58	K	14	3029	1/1	0.88	0.10	68,68,68,68	0
58	K	14	3057	1/1	0.88	0.08	68,68,68,68	0
58	K	14	3063	1/1	0.88	0.11	84,84,84,84	0
59	MG	14	3353	1/1	0.88	0.05	65,65,65,65	0
59	MG	14	3188	1/1	0.88	0.13	54,54,54,54	0
59	MG	13	1726	1/1	0.88	0.04	122,122,122,122	0
59	MG	1H	3493	1/1	0.88	0.12	63,63,63,63	0
59	MG	14	3203	1/1	0.88	0.13	85,85,85,85	0
59	MG	14	3209	1/1	0.88	0.16	72,72,72,72	0
59	MG	1H	3309	1/1	0.88	0.15	56,56,56,56	0
59	MG	1H	3236	1/1	0.88	0.09	54,54,54,54	0
59	MG	1H	3500	1/1	0.88	0.18	45,45,45,45	0
59	MG	1H	3359	1/1	0.88	0.12	55,55,55,55	0
59	MG	14	3246	1/1	0.88	0.07	76,76,76,76	0
59	MG	1H	3238	1/1	0.88	0.33	82,82,82,82	0
59	MG	13	1653	1/1	0.88	0.23	74,74,74,74	0
58	K	13	1630	1/1	0.88	0.09	82,82,82,82	0
58	K	1H	3044	1/1	0.88	0.10	82,82,82,82	0
58	K	13	1614	1/1	0.88	0.18	103,103,103,103	0
59	MG	14	3261	1/1	0.88	0.12	75,75,75,75	0
59	MG	14	3262	1/1	0.88	0.13	45,45,45,45	0
59	MG	14	3385	1/1	0.88	0.13	63,63,63,63	0
59	MG	1H	3439	1/1	0.88	0.08	55,55,55,55	0
59	MG	1H	3257	1/1	0.88	0.11	49,49,49,49	0
59	MG	1H	3198	1/1	0.88	0.21	82,82,82,82	0
59	MG	1H	3271	1/1	0.88	0.14	45,45,45,45	0
59	MG	1H	3455	1/1	0.88	0.19	55,55,55,55	0
59	MG	1H	3377	1/1	0.88	0.09	44,44,44,44	0
59	MG	14	3396	1/1	0.88	0.10	51,51,51,51	0
58	K	14	3014	1/1	0.88	0.09	82,82,82,82	0
59	MG	14	3281	1/1	0.88	0.11	45,45,45,45	0
59	MG	14	3404	1/1	0.88	0.09	34,34,34,34	0
59	MG	1H	3525	1/1	0.88	0.07	46,46,46,46	0
59	MG	16	207	1/1	0.88	0.27	88,88,88,88	0
59	MG	1J	203	1/1	0.88	0.05	105,105,105,105	0
59	MG	1H	3276	1/1	0.88	0.22	63,63,63,63	0
59	MG	1H	3122	1/1	0.88	0.22	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	55	201	1/1	0.88	0.19	59,59,59,59	0
59	MG	1H	3258	1/1	0.89	0.15	48,48,48,48	0
59	MG	13	1737	1/1	0.89	0.05	90,90,90,90	0
59	MG	N8	101	1/1	0.89	0.14	56,56,56,56	0
58	K	1H	3066	1/1	0.89	0.09	80,80,80,80	0
59	MG	1H	3329	1/1	0.89	0.17	73,73,73,73	0
59	MG	1G	1635	1/1	0.89	0.26	80,80,80,80	0
59	MG	14	3148	1/1	0.89	0.13	58,58,58,58	0
59	MG	14	3315	1/1	0.89	0.06	84,84,84,84	0
59	MG	1H	3475	1/1	0.89	0.08	91,91,91,91	0
59	MG	14	3322	1/1	0.89	0.06	93,93,93,93	0
59	MG	13	1696	1/1	0.89	0.18	80,80,80,80	0
58	K	29	301	1/1	0.89	0.08	56,56,56,56	0
59	MG	1G	1650	1/1	0.89	0.20	65,65,65,65	0
58	K	13	1607	1/1	0.89	0.08	90,90,90,90	0
59	MG	13	1742	1/1	0.89	0.07	94,94,94,94	0
58	K	14	3015	1/1	0.89	0.16	52,52,52,52	0
58	K	14	3017	1/1	0.89	0.18	107,107,107,107	0
59	MG	13	1706	1/1	0.89	0.22	63,63,63,63	0
59	MG	1H	3490	1/1	0.89	0.06	53,53,53,53	0
59	MG	1G	1676	1/1	0.89	0.24	81,81,81,81	0
58	K	1H	3016	1/1	0.89	0.14	114,114,114,114	0
59	MG	14	3195	1/1	0.89	0.16	64,64,64,64	0
59	MG	14	3358	1/1	0.89	0.07	35,35,35,35	0
59	MG	14	3200	1/1	0.89	0.22	102,102,102,102	0
58	K	13	1632	1/1	0.89	0.10	83,83,83,83	0
59	MG	1H	3219	1/1	0.89	0.15	50,50,50,50	0
59	MG	14	3369	1/1	0.89	0.17	43,43,43,43	0
59	MG	13	1715	1/1	0.89	0.09	75,75,75,75	0
59	MG	14	3371	1/1	0.89	0.06	61,61,61,61	0
59	MG	14	3225	1/1	0.89	0.12	62,62,62,62	0
58	K	14	3069	1/1	0.89	0.12	89,89,89,89	0
59	MG	1G	1688	1/1	0.89	0.06	82,82,82,82	0
59	MG	14	3239	1/1	0.89	0.15	66,66,66,66	0
59	MG	1H	3225	1/1	0.89	0.18	58,58,58,58	0
59	MG	1H	3230	1/1	0.89	0.15	38,38,38,38	0
59	MG	1H	3505	1/1	0.89	0.13	34,34,34,34	0
58	K	13	1627	1/1	0.89	0.12	91,91,91,91	0
58	K	14	3076	1/1	0.89	0.13	89,89,89,89	0
58	K	13	1629	1/1	0.89	0.07	92,92,92,92	0
58	K	14	3035	1/1	0.89	0.09	62,62,62,62	0
59	MG	1G	1702	1/1	0.89	0.08	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3512	1/1	0.89	0.14	61,61,61,61	0
58	K	1H	3038	1/1	0.89	0.11	86,86,86,86	0
59	MG	14	3263	1/1	0.89	0.26	66,66,66,66	0
59	MG	1H	3240	1/1	0.89	0.19	52,52,52,52	0
59	MG	13	1680	1/1	0.89	0.21	71,71,71,71	0
59	MG	1H	3456	1/1	0.89	0.13	38,38,38,38	0
58	K	1H	3104	1/1	0.89	0.08	53,53,53,53	0
58	K	14	3002	1/1	0.89	0.07	90,90,90,90	0
59	MG	1H	3246	1/1	0.89	0.20	58,58,58,58	0
59	MG	1H	3524	1/1	0.89	0.11	35,35,35,35	0
59	MG	1G	1723	1/1	0.89	0.06	85,85,85,85	0
59	MG	1H	3463	1/1	0.89	0.12	40,40,40,40	0
59	MG	1H	3252	1/1	0.89	0.18	72,72,72,72	0
59	MG	1J	204	1/1	0.89	0.07	115,115,115,115	0
59	MG	1H	3390	1/1	0.89	0.16	39,39,39,39	0
59	MG	14	3100	1/1	0.89	0.12	47,47,47,47	0
58	K	1G	1610	1/1	0.89	0.10	95,95,95,95	0
59	MG	14	3214	1/1	0.90	0.21	57,57,57,57	0
59	MG	14	3222	1/1	0.90	0.07	57,57,57,57	0
59	MG	1H	3372	1/1	0.90	0.15	77,77,77,77	0
59	MG	14	3231	1/1	0.90	0.09	48,48,48,48	0
59	MG	1G	1714	1/1	0.90	0.13	82,82,82,82	0
58	K	14	3028	1/1	0.90	0.07	56,56,56,56	0
59	MG	1G	1717	1/1	0.90	0.06	88,88,88,88	0
59	MG	1H	3183	1/1	0.90	0.14	49,49,49,49	0
58	K	14	3008	1/1	0.90	0.07	88,88,88,88	0
59	MG	1H	3436	1/1	0.90	0.07	33,33,33,33	0
59	MG	1H	3192	1/1	0.90	0.14	49,49,49,49	0
59	MG	1H	3502	1/1	0.90	0.05	94,94,94,94	0
59	MG	1H	3379	1/1	0.90	0.07	67,67,67,67	0
59	MG	1H	3331	1/1	0.90	0.20	55,55,55,55	0
59	MG	1H	3196	1/1	0.90	0.15	42,42,42,42	0
59	MG	1G	1668	1/1	0.90	0.25	55,55,55,55	0
58	K	13	1637	1/1	0.90	0.09	123,123,123,123	0
59	MG	1H	3241	1/1	0.90	0.15	39,39,39,39	0
58	K	1G	1608	1/1	0.90	0.17	113,113,113,113	0
58	K	14	3065	1/1	0.90	0.06	92,92,92,92	0
59	MG	1H	3304	1/1	0.90	0.29	69,69,69,69	0
59	MG	14	3273	1/1	0.90	0.10	46,46,46,46	0
59	MG	14	3151	1/1	0.90	0.19	57,57,57,57	0
59	MG	1H	3345	1/1	0.90	0.10	24,24,24,24	0
58	K	1H	3033	1/1	0.90	0.08	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3156	1/1	0.90	0.10	55,55,55,55	0
59	MG	14	3279	1/1	0.90	0.06	46,46,46,46	0
59	MG	1H	3403	1/1	0.90	0.07	59,59,59,59	0
59	MG	13	1676	1/1	0.90	0.11	53,53,53,53	0
59	MG	1H	3153	1/1	0.90	0.18	44,44,44,44	0
58	K	1H	3018	1/1	0.90	0.09	93,93,93,93	0
59	MG	13	1685	1/1	0.90	0.31	85,85,85,85	0
59	MG	14	3391	1/1	0.90	0.09	62,62,62,62	0
59	MG	1H	3417	1/1	0.90	0.12	44,44,44,44	0
59	MG	14	3183	1/1	0.90	0.11	63,63,63,63	0
58	K	1H	3102	1/1	0.90	0.09	94,94,94,94	0
59	MG	13	1689	1/1	0.90	0.11	80,80,80,80	0
58	K	14	3049	1/1	0.90	0.12	103,103,103,103	0
59	MG	14	3399	1/1	0.90	0.10	55,55,55,55	0
58	K	1H	3001	1/1	0.90	0.07	88,88,88,88	0
59	MG	1H	3482	1/1	0.90	0.11	22,22,22,22	0
59	MG	14	3309	1/1	0.90	0.09	85,85,85,85	0
59	MG	14	3197	1/1	0.90	0.14	60,60,60,60	0
59	MG	1H	3362	1/1	0.90	0.10	33,33,33,33	0
59	MG	1H	3226	1/1	0.90	0.10	42,42,42,42	0
59	MG	1H	3227	1/1	0.90	0.20	58,58,58,58	0
59	MG	14	3208	1/1	0.90	0.09	61,61,61,61	0
58	K	1G	1616	1/1	0.90	0.06	89,89,89,89	0
59	MG	1H	3447	1/1	0.91	0.05	98,98,98,98	0
59	MG	1G	1687	1/1	0.91	0.08	93,93,93,93	0
59	MG	1H	3507	1/1	0.91	0.06	45,45,45,45	0
59	MG	1H	3386	1/1	0.91	0.11	67,67,67,67	0
59	MG	13	1713	1/1	0.91	0.05	83,83,83,83	0
59	MG	14	3193	1/1	0.91	0.08	63,63,63,63	0
59	MG	1H	3204	1/1	0.91	0.24	51,51,51,51	0
59	MG	14	3196	1/1	0.91	0.14	90,90,90,90	0
58	K	13	1628	1/1	0.91	0.14	103,103,103,103	0
58	K	1H	3035	1/1	0.91	0.10	98,98,98,98	0
59	MG	14	3201	1/1	0.91	0.11	68,68,68,68	0
59	MG	14	3340	1/1	0.91	0.13	74,74,74,74	0
59	MG	14	3341	1/1	0.91	0.13	52,52,52,52	0
59	MG	1H	3394	1/1	0.91	0.09	38,38,38,38	0
58	K	14	3085	1/1	0.91	0.08	94,94,94,94	0
59	MG	14	3348	1/1	0.91	0.17	102,102,102,102	0
59	MG	14	3206	1/1	0.91	0.11	67,67,67,67	0
58	K	1H	3005	1/1	0.91	0.11	67,67,67,67	0
59	MG	1H	3519	1/1	0.91	0.06	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	1H	3118	1/1	0.91	0.38	89,89,89,89	0
59	MG	1G	1706	1/1	0.91	0.05	96,96,96,96	0
58	K	1H	3024	1/1	0.91	0.08	56,56,56,56	0
58	K	14	3093	1/1	0.91	0.10	72,72,72,72	0
59	MG	14	3360	1/1	0.91	0.09	64,64,64,64	0
59	MG	1H	3468	1/1	0.91	0.09	50,50,50,50	0
59	MG	1H	3273	1/1	0.91	0.11	49,49,49,49	0
59	MG	16	204	1/1	0.91	0.25	80,80,80,80	0
59	MG	1H	3223	1/1	0.91	0.10	64,64,64,64	0
59	MG	1H	3415	1/1	0.91	0.09	94,94,94,94	0
58	K	14	3040	1/1	0.91	0.12	72,72,72,72	0
59	MG	14	3249	1/1	0.91	0.11	54,54,54,54	0
58	K	14	3022	1/1	0.91	0.05	92,92,92,92	0
59	MG	1H	3181	1/1	0.91	0.17	41,41,41,41	0
59	MG	1G	1724	1/1	0.91	0.10	109,109,109,109	0
58	K	1H	3040	1/1	0.91	0.33	111,111,111,111	0
59	MG	1H	3479	1/1	0.91	0.12	47,47,47,47	0
59	MG	1H	3366	1/1	0.91	0.09	44,44,44,44	0
59	MG	1H	3184	1/1	0.91	0.26	65,65,65,65	0
59	MG	1H	3370	1/1	0.91	0.13	38,38,38,38	0
59	MG	13	1735	1/1	0.91	0.04	57,57,57,57	0
58	K	14	3003	1/1	0.91	0.10	86,86,86,86	0
59	MG	14	3129	1/1	0.91	0.11	44,44,44,44	0
59	MG	1G	1649	1/1	0.91	0.14	85,85,85,85	0
59	MG	1H	3134	1/1	0.91	0.20	59,59,59,59	0
59	MG	1H	3138	1/1	0.91	0.29	66,66,66,66	0
59	MG	14	3143	1/1	0.91	0.15	72,72,72,72	0
59	MG	1G	1652	1/1	0.91	0.12	94,94,94,94	0
58	K	1H	3063	1/1	0.91	0.10	55,55,55,55	0
59	MG	14	3280	1/1	0.91	0.08	48,48,48,48	0
59	MG	1H	3291	1/1	0.91	0.17	62,62,62,62	0
59	MG	1H	3495	1/1	0.91	0.10	80,80,80,80	0
59	MG	1H	3336	1/1	0.91	0.16	54,54,54,54	0
59	MG	1H	3140	1/1	0.91	0.32	82,82,82,82	0
59	MG	1H	3438	1/1	0.91	0.10	36,36,36,36	0
59	MG	14	3169	1/1	0.91	0.08	57,57,57,57	0
59	MG	1H	3501	1/1	0.91	0.05	78,78,78,78	0
59	MG	1H	3382	1/1	0.91	0.16	36,36,36,36	0
59	MG	1H	3440	1/1	0.91	0.11	63,63,63,63	0
59	MG	1H	3442	1/1	0.91	0.08	80,80,80,80	0
59	MG	1H	3339	1/1	0.91	0.11	33,33,33,33	0
59	MG	13	1712	1/1	0.92	0.11	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3237	1/1	0.92	0.29	51,51,51,51	0
58	K	14	3047	1/1	0.92	0.16	97,97,97,97	0
59	MG	13	1714	1/1	0.92	0.05	106,106,106,106	0
59	MG	1H	3332	1/1	0.92	0.20	59,59,59,59	0
58	K	14	3048	1/1	0.92	0.11	101,101,101,101	0
58	K	1H	3076	1/1	0.92	0.14	86,86,86,86	0
59	MG	14	3283	1/1	0.92	0.14	36,36,36,36	0
59	MG	1H	3516	1/1	0.92	0.07	60,60,60,60	0
59	MG	13	1721	1/1	0.92	0.06	68,68,68,68	0
58	K	1H	3020	1/1	0.92	0.19	105,105,105,105	0
59	MG	1H	3338	1/1	0.92	0.13	35,35,35,35	0
59	MG	1H	3174	1/1	0.92	0.08	71,71,71,71	0
58	K	14	3005	1/1	0.92	0.21	91,91,91,91	0
59	MG	1H	3248	1/1	0.92	0.12	47,47,47,47	0
58	K	1H	3106	1/1	0.92	0.13	92,92,92,92	0
58	K	13	1609	1/1	0.92	0.20	91,91,91,91	0
59	MG	14	3303	1/1	0.92	0.06	73,73,73,73	0
58	K	1H	3026	1/1	0.92	0.31	62,62,62,62	0
59	MG	14	3307	1/1	0.92	0.07	51,51,51,51	0
59	MG	1H	3259	1/1	0.92	0.12	59,59,59,59	0
59	MG	1H	3182	1/1	0.92	0.16	47,47,47,47	0
58	K	14	3058	1/1	0.92	0.22	84,84,84,84	0
59	MG	14	3312	1/1	0.92	0.09	87,87,87,87	0
59	MG	14	3314	1/1	0.92	0.04	91,91,91,91	0
58	K	14	3062	1/1	0.92	0.06	65,65,65,65	0
59	MG	1H	3452	1/1	0.92	0.10	48,48,48,48	0
59	MG	1H	3454	1/1	0.92	0.12	42,42,42,42	0
59	MG	1H	3186	1/1	0.92	0.20	50,50,50,50	0
59	MG	1G	1633	1/1	0.92	0.21	65,65,65,65	0
59	MG	1G	1634	1/1	0.92	0.33	110,110,110,110	0
58	K	1H	3085	1/1	0.92	0.12	64,64,64,64	0
59	MG	1H	3190	1/1	0.92	0.17	49,49,49,49	0
59	MG	1H	3191	1/1	0.92	0.41	72,72,72,72	0
59	MG	14	3176	1/1	0.92	0.21	67,67,67,67	0
58	K	13	1615	1/1	0.92	0.08	91,91,91,91	0
59	MG	14	3346	1/1	0.92	0.05	76,76,76,76	0
59	MG	1H	3194	1/1	0.92	0.21	45,45,45,45	0
59	MG	13	1679	1/1	0.92	0.13	89,89,89,89	0
58	K	13	1603	1/1	0.92	0.11	117,117,117,117	0
59	MG	1H	3199	1/1	0.92	0.16	60,60,60,60	0
59	MG	1G	1654	1/1	0.92	0.17	58,58,58,58	0
59	MG	13	1683	1/1	0.92	0.09	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3289	1/1	0.92	0.21	75,75,75,75	0
59	MG	13	1684	1/1	0.92	0.14	56,56,56,56	0
58	K	1H	3011	1/1	0.92	0.08	61,61,61,61	0
58	K	1G	1614	1/1	0.92	0.12	100,100,100,100	0
59	MG	1H	3293	1/1	0.92	0.11	55,55,55,55	0
59	MG	14	3365	1/1	0.92	0.08	80,80,80,80	0
59	MG	14	3366	1/1	0.92	0.08	77,77,77,77	0
59	MG	1G	1673	1/1	0.92	0.29	73,73,73,73	0
58	K	1H	3119	1/1	0.92	0.11	92,92,92,92	0
59	MG	1H	3208	1/1	0.92	0.18	52,52,52,52	0
59	MG	1H	3478	1/1	0.92	0.08	38,38,38,38	0
59	MG	1H	3302	1/1	0.92	0.19	41,41,41,41	0
59	MG	14	3373	1/1	0.92	0.06	84,84,84,84	0
59	MG	14	3213	1/1	0.92	0.19	58,58,58,58	0
58	K	1H	3120	1/1	0.92	0.13	79,79,79,79	0
59	MG	1H	3305	1/1	0.92	0.25	57,57,57,57	0
59	MG	1H	3483	1/1	0.92	0.14	75,75,75,75	0
59	MG	14	3226	1/1	0.92	0.08	49,49,49,49	0
59	MG	1H	3388	1/1	0.92	0.14	38,38,38,38	0
59	MG	1H	3307	1/1	0.92	0.09	39,39,39,39	0
59	MG	13	1746	1/1	0.92	0.06	93,93,93,93	0
59	MG	14	3235	1/1	0.92	0.16	61,61,61,61	0
58	K	1H	3012	1/1	0.92	0.11	80,80,80,80	0
59	MG	1G	1694	1/1	0.92	0.10	62,62,62,62	0
59	MG	14	3242	1/1	0.92	0.16	44,44,44,44	0
58	K	13	1624	1/1	0.92	0.18	83,83,83,83	0
59	MG	14	3244	1/1	0.92	0.25	46,46,46,46	0
59	MG	14	3390	1/1	0.92	0.07	78,78,78,78	0
58	K	1H	3004	1/1	0.92	0.24	66,66,66,66	0
59	MG	1H	3396	1/1	0.92	0.11	35,35,35,35	0
59	MG	14	3393	1/1	0.92	0.25	81,81,81,81	0
59	MG	1H	3313	1/1	0.92	0.14	52,52,52,52	0
58	K	1H	3071	1/1	0.92	0.13	65,65,65,65	0
59	MG	1H	3316	1/1	0.92	0.20	59,59,59,59	0
58	K	41	201	1/1	0.92	0.20	114,114,114,114	0
59	MG	1G	1705	1/1	0.92	0.03	105,105,105,105	0
58	K	52	201	1/1	0.92	0.27	116,116,116,116	0
58	K	14	3092	1/1	0.92	0.08	83,83,83,83	0
59	MG	14	3406	1/1	0.92	0.07	55,55,55,55	0
58	K	14	3041	1/1	0.92	0.12	54,54,54,54	0
59	MG	1H	3228	1/1	0.92	0.11	48,48,48,48	0
58	K	13	1613	1/1	0.92	0.09	100,100,100,100	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3269	1/1	0.92	0.10	79,79,79,79	0
59	MG	13	1709	1/1	0.92	0.21	85,85,85,85	0
59	MG	14	3272	1/1	0.92	0.13	26,26,26,26	0
58	K	14	3043	1/1	0.92	0.05	71,71,71,71	0
59	MG	E5	101	1/1	0.92	0.17	36,36,36,36	0
59	MG	1H	3233	1/1	0.93	0.22	59,59,59,59	0
59	MG	1G	1672	1/1	0.93	0.18	63,63,63,63	0
58	K	1H	3075	1/1	0.93	0.11	81,81,81,81	0
59	MG	1H	3179	1/1	0.93	0.13	51,51,51,51	0
59	MG	1H	3499	1/1	0.93	0.10	68,68,68,68	0
59	MG	13	1682	1/1	0.93	0.43	101,101,101,101	0
59	MG	14	3191	1/1	0.93	0.20	45,45,45,45	0
58	K	1H	3093	1/1	0.93	0.11	79,79,79,79	0
58	K	14	3084	1/1	0.93	0.07	75,75,75,75	0
58	K	1H	3021	1/1	0.93	0.09	78,78,78,78	0
59	MG	13	1687	1/1	0.93	0.19	75,75,75,75	0
59	MG	14	3198	1/1	0.93	0.17	63,63,63,63	0
58	K	14	3087	1/1	0.93	0.07	84,84,84,84	0
59	MG	14	3335	1/1	0.93	0.12	50,50,50,50	0
58	K	1H	3060	1/1	0.93	0.18	55,55,55,55	0
58	K	1G	1611	1/1	0.93	0.11	94,94,94,94	0
59	MG	1H	3441	1/1	0.93	0.06	51,51,51,51	0
58	K	1G	1612	1/1	0.93	0.06	101,101,101,101	0
59	MG	1H	3444	1/1	0.93	0.13	94,94,94,94	0
58	K	1H	3017	1/1	0.93	0.10	94,94,94,94	0
58	K	1H	3025	1/1	0.93	0.06	100,100,100,100	0
59	MG	1G	1698	1/1	0.93	0.12	103,103,103,103	0
59	MG	1H	3320	1/1	0.93	0.22	43,43,43,43	0
59	MG	13	1697	1/1	0.93	0.15	70,70,70,70	0
59	MG	14	3355	1/1	0.93	0.12	64,64,64,64	0
58	K	1H	3064	1/1	0.93	0.09	49,49,49,49	0
58	K	1H	3042	1/1	0.93	0.21	62,62,62,62	0
59	MG	1H	3260	1/1	0.93	0.09	43,43,43,43	0
59	MG	1H	3262	1/1	0.93	0.09	49,49,49,49	0
59	MG	1H	3521	1/1	0.93	0.07	113,113,113,113	0
58	K	1G	1617	1/1	0.93	0.09	94,94,94,94	0
59	MG	13	1642	1/1	0.93	0.27	59,59,59,59	0
58	K	1H	3109	1/1	0.93	0.12	54,54,54,54	0
59	MG	1H	3274	1/1	0.93	0.10	56,56,56,56	0
59	MG	16	203	1/1	0.93	0.13	57,57,57,57	0
59	MG	13	1655	1/1	0.93	0.14	80,80,80,80	0
59	MG	1H	3393	1/1	0.93	0.16	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	1H	3014	1/1	0.93	0.41	84,84,84,84	0
59	MG	1H	3395	1/1	0.93	0.12	56,56,56,56	0
58	K	13	1620	1/1	0.93	0.08	115,115,115,115	0
58	K	14	3030	1/1	0.93	0.07	56,56,56,56	0
59	MG	1H	3280	1/1	0.93	0.27	64,64,64,64	0
59	MG	14	3260	1/1	0.93	0.18	56,56,56,56	0
59	MG	1H	3400	1/1	0.93	0.07	46,46,46,46	0
59	MG	13	1663	1/1	0.93	0.26	68,68,68,68	0
58	K	1G	1602	1/1	0.93	0.21	70,70,70,70	0
58	K	14	3034	1/1	0.93	0.07	49,49,49,49	0
59	MG	14	3112	1/1	0.93	0.07	55,55,55,55	0
59	MG	14	3383	1/1	0.93	0.08	71,71,71,71	0
59	MG	14	3113	1/1	0.93	0.18	51,51,51,51	0
58	K	1H	3050	1/1	0.93	0.15	70,70,70,70	0
59	MG	1H	3408	1/1	0.93	0.05	60,60,60,60	0
59	MG	14	3130	1/1	0.93	0.14	45,45,45,45	0
59	MG	14	3131	1/1	0.93	0.21	66,66,66,66	0
59	MG	1H	3409	1/1	0.93	0.07	64,64,64,64	0
59	MG	14	3139	1/1	0.93	0.15	46,46,46,46	0
59	MG	1G	1644	1/1	0.93	0.23	55,55,55,55	0
59	MG	1G	1646	1/1	0.93	0.27	107,107,107,107	0
59	MG	1H	3481	1/1	0.93	0.16	43,43,43,43	0
58	K	14	3074	1/1	0.93	0.14	94,94,94,94	0
58	K	1H	3091	1/1	0.93	0.12	62,62,62,62	0
58	K	1H	3114	1/1	0.93	0.07	58,58,58,58	0
59	MG	1H	3168	1/1	0.93	0.25	46,46,46,46	0
59	MG	14	3401	1/1	0.93	0.20	89,89,89,89	0
59	MG	13	1728	1/1	0.93	0.07	106,106,106,106	0
59	MG	1G	1656	1/1	0.93	0.30	100,100,100,100	0
59	MG	1G	1658	1/1	0.93	0.27	76,76,76,76	0
59	MG	1H	3488	1/1	0.93	0.04	83,83,83,83	0
58	K	14	3077	1/1	0.93	0.17	72,72,72,72	0
59	MG	13	1678	1/1	0.93	0.26	79,79,79,79	0
58	K	14	3039	1/1	0.93	0.10	94,94,94,94	0
59	MG	1G	1665	1/1	0.93	0.27	84,84,84,84	0
59	MG	29	303	1/1	0.93	0.12	37,37,37,37	0
59	MG	14	3304	1/1	0.93	0.08	38,38,38,38	0
59	MG	14	3305	1/1	0.93	0.05	69,69,69,69	0
59	MG	1H	3354	1/1	0.93	0.06	70,70,70,70	0
59	MG	13	1692	1/1	0.94	0.16	70,70,70,70	0
58	K	1H	3059	1/1	0.94	0.06	38,38,38,38	0
58	K	1G	1620	1/1	0.94	0.10	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3399	1/1	0.94	0.15	54,54,54,54	0
58	K	13	1633	1/1	0.94	0.06	108,108,108,108	0
59	MG	1H	3224	1/1	0.94	0.13	51,51,51,51	0
59	MG	1H	3317	1/1	0.94	0.35	63,63,63,63	0
59	MG	1H	3130	1/1	0.94	0.19	28,28,28,28	0
59	MG	1H	3132	1/1	0.94	0.28	58,58,58,58	0
58	K	1G	1623	1/1	0.94	0.10	126,126,126,126	0
58	K	8I	201	1/1	0.94	0.10	104,104,104,104	0
59	MG	1H	3412	1/1	0.94	0.15	85,85,85,85	0
59	MG	1H	3136	1/1	0.94	0.25	37,37,37,37	0
58	K	1H	3019	1/1	0.94	0.07	78,78,78,78	0
59	MG	1H	3232	1/1	0.94	0.13	40,40,40,40	0
58	K	1H	3037	1/1	0.94	0.09	77,77,77,77	0
59	MG	13	1703	1/1	0.94	0.35	69,69,69,69	0
59	MG	1H	3142	1/1	0.94	0.17	71,71,71,71	0
59	MG	1H	3143	1/1	0.94	0.15	63,63,63,63	0
59	MG	1H	3147	1/1	0.94	0.12	19,19,19,19	0
59	MG	1G	1718	1/1	0.94	0.10	91,91,91,91	0
59	MG	14	3287	1/1	0.94	0.06	50,50,50,50	0
59	MG	1G	1719	1/1	0.94	0.11	101,101,101,101	0
59	MG	1H	3425	1/1	0.94	0.13	42,42,42,42	0
59	MG	1H	3149	1/1	0.94	0.16	29,29,29,29	0
59	MG	13	1704	1/1	0.94	0.15	53,53,53,53	0
59	MG	1H	3517	1/1	0.94	0.07	55,55,55,55	0
59	MG	1G	1726	1/1	0.94	0.05	98,98,98,98	0
59	MG	14	3296	1/1	0.94	0.07	44,44,44,44	0
58	K	1H	3065	1/1	0.94	0.10	43,43,43,43	0
59	MG	14	3299	1/1	0.94	0.05	57,57,57,57	0
59	MG	1H	3155	1/1	0.94	0.12	35,35,35,35	0
59	MG	1H	3156	1/1	0.94	0.20	55,55,55,55	0
59	MG	14	3101	1/1	0.94	0.09	61,61,61,61	0
59	MG	1H	3157	1/1	0.94	0.23	62,62,62,62	0
59	MG	1H	3432	1/1	0.94	0.11	73,73,73,73	0
58	K	14	3045	1/1	0.94	0.09	71,71,71,71	0
59	MG	1H	3247	1/1	0.94	0.20	44,44,44,44	0
59	MG	14	3115	1/1	0.94	0.10	46,46,46,46	0
59	MG	13	1639	1/1	0.94	0.13	62,62,62,62	0
59	MG	1H	3437	1/1	0.94	0.13	49,49,49,49	0
59	MG	13	1640	1/1	0.94	0.19	72,72,72,72	0
59	MG	14	3313	1/1	0.94	0.05	89,89,89,89	0
59	MG	16	205	1/1	0.94	0.21	84,84,84,84	0
59	MG	14	3132	1/1	0.94	0.05	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3318	1/1	0.94	0.09	68,68,68,68	0
59	MG	16	206	1/1	0.94	0.23	62,62,62,62	0
59	MG	1H	3254	1/1	0.94	0.16	50,50,50,50	0
59	MG	16	209	1/1	0.94	0.07	75,75,75,75	0
59	MG	13	1641	1/1	0.94	0.15	90,90,90,90	0
59	MG	14	3142	1/1	0.94	0.23	62,62,62,62	0
58	K	3A	201	1/1	0.94	0.13	93,93,93,93	0
59	MG	14	3334	1/1	0.94	0.07	48,48,48,48	0
59	MG	78	201	1/1	0.94	0.30	32,32,32,32	0
59	MG	14	3147	1/1	0.94	0.12	54,54,54,54	0
58	K	BA	201	1/1	0.94	0.26	96,96,96,96	0
59	MG	14	3149	1/1	0.94	0.16	46,46,46,46	0
59	MG	14	3343	1/1	0.94	0.08	76,76,76,76	0
59	MG	D8	202	1/1	0.94	0.10	52,52,52,52	0
59	MG	14	3345	1/1	0.94	0.09	89,89,89,89	0
59	MG	1H	3349	1/1	0.94	0.08	28,28,28,28	0
59	MG	I8	102	1/1	0.94	0.07	72,72,72,72	0
58	K	1H	3096	1/1	0.94	0.16	75,75,75,75	0
59	MG	Q8	101	1/1	0.94	0.14	32,32,32,32	0
59	MG	14	3162	1/1	0.94	0.20	58,58,58,58	0
59	MG	14	3166	1/1	0.94	0.12	37,37,37,37	0
59	MG	1G	1627	1/1	0.94	0.25	88,88,88,88	0
59	MG	14	3171	1/1	0.94	0.11	71,71,71,71	0
58	K	13	1604	1/1	0.94	0.11	90,90,90,90	0
59	MG	1H	3448	1/1	0.94	0.07	61,61,61,61	0
58	K	1H	3100	1/1	0.94	0.19	78,78,78,78	0
59	MG	1H	3267	1/1	0.94	0.14	60,60,60,60	0
58	K	1H	3101	1/1	0.94	0.08	60,60,60,60	0
59	MG	14	3362	1/1	0.94	0.05	69,69,69,69	0
59	MG	14	3364	1/1	0.94	0.14	71,71,71,71	0
59	MG	14	3177	1/1	0.94	0.15	64,64,64,64	0
59	MG	14	3178	1/1	0.94	0.11	36,36,36,36	0
59	MG	14	3179	1/1	0.94	0.15	66,66,66,66	0
59	MG	1H	3358	1/1	0.94	0.05	43,43,43,43	0
58	K	13	1621	1/1	0.94	0.05	59,59,59,59	0
59	MG	1G	1642	1/1	0.94	0.23	59,59,59,59	0
59	MG	1G	1643	1/1	0.94	0.10	56,56,56,56	0
59	MG	13	1727	1/1	0.94	0.08	47,47,47,47	0
58	K	14	3009	1/1	0.94	0.09	69,69,69,69	0
59	MG	1G	1647	1/1	0.94	0.21	80,80,80,80	0
58	K	1H	3023	1/1	0.94	0.10	68,68,68,68	0
58	K	14	3059	1/1	0.94	0.12	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3462	1/1	0.94	0.08	46,46,46,46	0
58	K	14	3061	1/1	0.94	0.06	103,103,103,103	0
59	MG	1H	3464	1/1	0.94	0.14	19,19,19,19	0
59	MG	14	3199	1/1	0.94	0.19	105,105,105,105	0
59	MG	1H	3367	1/1	0.94	0.10	61,61,61,61	0
58	K	13	1626	1/1	0.94	0.22	99,99,99,99	0
58	K	1H	3105	1/1	0.94	0.07	60,60,60,60	0
58	K	13	1631	1/1	0.94	0.12	93,93,93,93	0
59	MG	14	3205	1/1	0.94	0.10	37,37,37,37	0
59	MG	1G	1660	1/1	0.94	0.18	79,79,79,79	0
58	K	1H	3043	1/1	0.94	0.10	82,82,82,82	0
59	MG	1H	3193	1/1	0.94	0.23	43,43,43,43	0
59	MG	14	3210	1/1	0.94	0.16	45,45,45,45	0
58	K	14	3018	1/1	0.94	0.09	71,71,71,71	0
59	MG	1H	3195	1/1	0.94	0.19	51,51,51,51	0
59	MG	14	3221	1/1	0.94	0.19	52,52,52,52	0
58	K	13	1619	1/1	0.94	0.05	77,77,77,77	0
59	MG	1G	1670	1/1	0.94	0.10	60,60,60,60	0
58	K	14	3023	1/1	0.94	0.16	93,93,93,93	0
58	K	1H	3047	1/1	0.94	0.19	37,37,37,37	0
59	MG	14	3400	1/1	0.94	0.07	92,92,92,92	0
58	K	1H	3015	1/1	0.94	0.09	80,80,80,80	0
58	K	1H	3007	1/1	0.94	0.09	54,54,54,54	0
58	K	14	3080	1/1	0.94	0.07	94,94,94,94	0
59	MG	13	1743	1/1	0.94	0.04	105,105,105,105	0
58	K	1H	3032	1/1	0.94	0.20	58,58,58,58	0
59	MG	13	1745	1/1	0.94	0.07	78,78,78,78	0
58	K	1H	3116	1/1	0.94	0.06	80,80,80,80	0
59	MG	1H	3306	1/1	0.94	0.18	44,44,44,44	0
59	MG	14	3245	1/1	0.94	0.23	64,64,64,64	0
58	K	1H	3087	1/1	0.94	0.09	76,76,76,76	0
58	K	1H	3055	1/1	0.94	0.09	40,40,40,40	0
59	MG	1H	3216	1/1	0.94	0.11	45,45,45,45	0
59	MG	1G	1692	1/1	0.94	0.09	97,97,97,97	0
58	K	1H	3056	1/1	0.95	0.09	43,43,43,43	0
58	K	1H	3108	1/1	0.95	0.17	86,86,86,86	0
58	K	14	3020	1/1	0.95	0.05	72,72,72,72	0
59	MG	14	3150	1/1	0.95	0.25	63,63,63,63	0
58	K	14	3086	1/1	0.95	0.25	97,97,97,97	0
59	MG	14	3292	1/1	0.95	0.07	49,49,49,49	0
58	K	13	1612[B]	1/1	0.95	0.24	23,23,23,23	1
58	K	1H	3097	1/1	0.95	0.12	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	14	3064	1/1	0.95	0.17	70,70,70,70	0
59	MG	1H	3294	1/1	0.95	0.14	35,35,35,35	0
59	MG	14	3298	1/1	0.95	0.05	54,54,54,54	0
59	MG	1H	3176	1/1	0.95	0.19	32,32,32,32	0
58	K	14	3090	1/1	0.95	0.07	65,65,65,65	0
59	MG	14	3167	1/1	0.95	0.29	60,60,60,60	0
58	K	14	3004	1/1	0.95	0.12	55,55,55,55	0
59	MG	1G	1677	1/1	0.95	0.08	76,76,76,76	0
58	K	14	3066	1/1	0.95	0.18	80,80,80,80	0
59	MG	1G	1682	1/1	0.95	0.08	60,60,60,60	0
59	MG	13	1674	1/1	0.95	0.19	92,92,92,92	0
59	MG	13	1747	1/1	0.95	0.07	91,91,91,91	0
59	MG	13	1675	1/1	0.95	0.16	91,91,91,91	0
59	MG	1H	3308	1/1	0.95	0.19	55,55,55,55	0
59	MG	1H	3445	1/1	0.95	0.06	42,42,42,42	0
59	MG	8E	201	1/1	0.95	0.26	49,49,49,49	0
59	MG	1G	1689	1/1	0.95	0.06	90,90,90,90	0
59	MG	14	3182	1/1	0.95	0.09	42,42,42,42	0
59	MG	14	3317	1/1	0.95	0.08	94,94,94,94	0
58	K	1H	3045	1/1	0.95	0.07	72,72,72,72	0
59	MG	14	3184	1/1	0.95	0.14	73,73,73,73	0
59	MG	13	1711	1/1	0.95	0.25	48,48,48,48	0
59	MG	13	1677	1/1	0.95	0.07	63,63,63,63	0
59	MG	1H	3378	1/1	0.95	0.08	30,30,30,30	0
59	MG	1H	3451	1/1	0.95	0.05	63,63,63,63	0
58	K	13	1612[A]	1/1	0.95	0.24	35,35,35,35	1
59	MG	14	3192	1/1	0.95	0.20	63,63,63,63	0
59	MG	2K	101	1/1	0.95	0.23	42,42,42,42	0
59	MG	14	3337	1/1	0.95	0.08	66,66,66,66	0
58	K	1H	3029	1/1	0.95	0.07	104,104,104,104	0
59	MG	14	3339	1/1	0.95	0.03	77,77,77,77	0
59	MG	1H	3129	1/1	0.95	0.21	34,34,34,34	0
59	MG	1G	1699	1/1	0.95	0.11	101,101,101,101	0
59	MG	1H	3249	1/1	0.95	0.23	53,53,53,53	0
59	MG	1G	1701	1/1	0.95	0.08	108,108,108,108	0
59	MG	1H	3250	1/1	0.95	0.19	47,47,47,47	0
59	MG	1H	3460	1/1	0.95	0.06	62,62,62,62	0
58	K	1H	3078	1/1	0.95	0.14	61,61,61,61	0
59	MG	1H	3321	1/1	0.95	0.15	55,55,55,55	0
59	MG	14	3349	1/1	0.95	0.04	77,77,77,77	0
59	MG	14	3204	1/1	0.95	0.09	44,44,44,44	0
59	MG	16	208	1/1	0.95	0.11	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	13	1617	1/1	0.95	0.16	72,72,72,72	0
59	MG	1H	3256	1/1	0.95	0.15	47,47,47,47	0
58	K	14	3033	1/1	0.95	0.23	84,84,84,84	0
59	MG	41	203	1/1	0.95	0.12	40,40,40,40	0
59	MG	14	3212	1/1	0.95	0.12	34,34,34,34	0
59	MG	1H	3197	1/1	0.95	0.08	50,50,50,50	0
59	MG	1G	1713	1/1	0.95	0.12	80,80,80,80	0
59	MG	14	3216	1/1	0.95	0.09	42,42,42,42	0
59	MG	14	3218	1/1	0.95	0.11	66,66,66,66	0
59	MG	14	3219	1/1	0.95	0.07	45,45,45,45	0
59	MG	13	1722	1/1	0.95	0.15	77,77,77,77	0
59	MG	1G	1715	1/1	0.95	0.04	92,92,92,92	0
58	K	14	3078	1/1	0.95	0.15	98,98,98,98	0
59	MG	1H	3469	1/1	0.95	0.09	87,87,87,87	0
59	MG	14	3229	1/1	0.95	0.19	65,65,65,65	0
59	MG	1H	3261	1/1	0.95	0.34	49,49,49,49	0
59	MG	14	3232	1/1	0.95	0.07	69,69,69,69	0
59	MG	13	1724	1/1	0.95	0.09	80,80,80,80	0
59	MG	1H	3264	1/1	0.95	0.25	47,47,47,47	0
59	MG	1H	3473	1/1	0.95	0.11	27,27,27,27	0
59	MG	13	1725	1/1	0.95	0.05	116,116,116,116	0
59	MG	1G	1629	1/1	0.95	0.12	69,69,69,69	0
58	K	1H	3036	1/1	0.95	0.07	55,55,55,55	0
59	MG	1H	3269	1/1	0.95	0.13	54,54,54,54	0
59	MG	13	1686	1/1	0.95	0.22	95,95,95,95	0
59	MG	1H	3405	1/1	0.95	0.06	50,50,50,50	0
59	MG	13	1645	1/1	0.95	0.14	71,71,71,71	0
59	MG	13	1648	1/1	0.95	0.17	61,61,61,61	0
59	MG	13	1649	1/1	0.95	0.22	101,101,101,101	0
59	MG	1H	3150	1/1	0.95	0.32	76,76,76,76	0
59	MG	1H	3214	1/1	0.95	0.17	26,26,26,26	0
59	MG	1G	1645	1/1	0.95	0.12	40,40,40,40	0
59	MG	14	3255	1/1	0.95	0.18	52,52,52,52	0
59	MG	14	3119	1/1	0.95	0.15	51,51,51,51	0
59	MG	14	3257	1/1	0.95	0.13	48,48,48,48	0
59	MG	14	3258	1/1	0.95	0.07	37,37,37,37	0
59	MG	14	3120	1/1	0.95	0.08	44,44,44,44	0
59	MG	14	3121	1/1	0.95	0.12	43,43,43,43	0
58	K	13	1622	1/1	0.95	0.10	73,73,73,73	0
59	MG	14	3125	1/1	0.95	0.10	45,45,45,45	0
59	MG	14	3397	1/1	0.95	0.08	46,46,46,46	0
59	MG	14	3127	1/1	0.95	0.12	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3342	1/1	0.95	0.10	50,50,50,50	0
59	MG	1H	3343	1/1	0.95	0.12	35,35,35,35	0
59	MG	13	1654	1/1	0.95	0.15	36,36,36,36	0
59	MG	1H	3281	1/1	0.95	0.12	93,93,93,93	0
59	MG	14	3133	1/1	0.95	0.19	50,50,50,50	0
59	MG	1H	3421	1/1	0.95	0.06	80,80,80,80	0
59	MG	14	3136	1/1	0.95	0.22	77,77,77,77	0
59	MG	1H	3154	1/1	0.95	0.14	31,31,31,31	0
58	K	14	3016	1/1	0.95	0.10	72,72,72,72	0
59	MG	14	3278	1/1	0.95	0.10	43,43,43,43	0
59	MG	1H	3494	1/1	0.95	0.07	78,78,78,78	0
59	MG	1G	1657	1/1	0.95	0.17	74,74,74,74	0
59	MG	13	1693	1/1	0.95	0.16	78,78,78,78	0
59	MG	13	1694	1/1	0.95	0.09	43,43,43,43	0
59	MG	14	3286	1/1	0.95	0.09	47,47,47,47	0
59	MG	1H	3213	1/1	0.96	0.12	73,73,73,73	0
59	MG	1H	3263	1/1	0.96	0.22	33,33,33,33	0
59	MG	1H	3164	1/1	0.96	0.08	45,45,45,45	0
59	MG	13	1681	1/1	0.96	0.13	76,76,76,76	0
58	K	1G	1618	1/1	0.96	0.11	102,102,102,102	0
59	MG	13	1643	1/1	0.96	0.18	76,76,76,76	0
59	MG	32	302	1/1	0.96	0.10	92,92,92,92	0
59	MG	14	3311	1/1	0.96	0.07	56,56,56,56	0
59	MG	1H	3383	1/1	0.96	0.07	54,54,54,54	0
59	MG	14	3095	1/1	0.96	0.22	57,57,57,57	0
59	MG	14	3096	1/1	0.96	0.15	59,59,59,59	0
59	MG	14	3098	1/1	0.96	0.15	38,38,38,38	0
59	MG	14	3099	1/1	0.96	0.14	32,32,32,32	0
59	MG	1H	3270	1/1	0.96	0.10	37,37,37,37	0
59	MG	14	3320	1/1	0.96	0.12	90,90,90,90	0
59	MG	1H	3172	1/1	0.96	0.16	48,48,48,48	0
59	MG	13	1716	1/1	0.96	0.05	66,66,66,66	0
58	K	1H	3022	1/1	0.96	0.06	51,51,51,51	0
59	MG	14	3107	1/1	0.96	0.14	40,40,40,40	0
59	MG	14	3109	1/1	0.96	0.07	36,36,36,36	0
59	MG	14	3329	1/1	0.96	0.10	70,70,70,70	0
59	MG	14	3330	1/1	0.96	0.06	48,48,48,48	0
59	MG	14	3331	1/1	0.96	0.07	58,58,58,58	0
59	MG	14	3215	1/1	0.96	0.15	45,45,45,45	0
59	MG	14	3333	1/1	0.96	0.08	39,39,39,39	0
59	MG	1H	3510	1/1	0.96	0.05	80,80,80,80	0
59	MG	1G	1662	1/1	0.96	0.17	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	1H	3006	1/1	0.96	0.07	59,59,59,59	0
59	MG	14	3220	1/1	0.96	0.09	53,53,53,53	0
59	MG	14	3118	1/1	0.96	0.23	53,53,53,53	0
58	K	14	3051	1/1	0.96	0.11	93,93,93,93	0
59	MG	13	1650	1/1	0.96	0.14	73,73,73,73	0
59	MG	14	3342	1/1	0.96	0.11	54,54,54,54	0
59	MG	1G	1666	1/1	0.96	0.22	77,77,77,77	0
59	MG	14	3123	1/1	0.96	0.11	47,47,47,47	0
59	MG	14	3230	1/1	0.96	0.05	44,44,44,44	0
59	MG	1G	1667	1/1	0.96	0.22	60,60,60,60	0
59	MG	1H	3453	1/1	0.96	0.05	67,67,67,67	0
58	K	1G	1621	1/1	0.96	0.08	74,74,74,74	0
59	MG	1H	3125	1/1	0.96	0.20	41,41,41,41	0
59	MG	1H	3229	1/1	0.96	0.08	51,51,51,51	0
59	MG	14	3238	1/1	0.96	0.10	42,42,42,42	0
59	MG	1H	3334	1/1	0.96	0.27	55,55,55,55	0
59	MG	1H	3458	1/1	0.96	0.04	89,89,89,89	0
58	K	14	3010	1/1	0.96	0.12	53,53,53,53	0
59	MG	1G	1678	1/1	0.96	0.15	71,71,71,71	0
58	K	14	3032	1/1	0.96	0.07	61,61,61,61	0
59	MG	14	3137	1/1	0.96	0.10	83,83,83,83	0
58	K	14	3056	1/1	0.96	0.08	57,57,57,57	0
58	K	1H	3057	1/1	0.96	0.06	43,43,43,43	0
59	MG	1H	3401	1/1	0.96	0.03	73,73,73,73	0
59	MG	14	3363	1/1	0.96	0.07	85,85,85,85	0
59	MG	13	1660	1/1	0.96	0.14	60,60,60,60	0
59	MG	1H	3287	1/1	0.96	0.13	43,43,43,43	0
59	MG	14	3253	1/1	0.96	0.20	52,52,52,52	0
59	MG	1H	3187	1/1	0.96	0.09	37,37,37,37	0
59	MG	1H	3135	1/1	0.96	0.08	50,50,50,50	0
58	K	1H	3080	1/1	0.96	0.10	51,51,51,51	0
59	MG	1H	3407	1/1	0.96	0.04	65,65,65,65	0
58	K	21	302	1/1	0.96	0.07	66,66,66,66	0
59	MG	14	3259	1/1	0.96	0.07	45,45,45,45	0
58	K	1H	3081	1/1	0.96	0.17	66,66,66,66	0
59	MG	14	3153	1/1	0.96	0.15	68,68,68,68	0
58	K	31	302	1/1	0.96	0.12	90,90,90,90	0
59	MG	1H	3413	1/1	0.96	0.06	42,42,42,42	0
58	K	1H	3027	1/1	0.96	0.16	91,91,91,91	0
59	MG	1H	3295	1/1	0.96	0.17	46,46,46,46	0
59	MG	14	3268	1/1	0.96	0.07	79,79,79,79	0
59	MG	14	3160	1/1	0.96	0.19	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3161	1/1	0.96	0.14	44,44,44,44	0
59	MG	13	1668	1/1	0.96	0.10	41,41,41,41	0
59	MG	14	3163	1/1	0.96	0.08	48,48,48,48	0
59	MG	14	3164	1/1	0.96	0.15	70,70,70,70	0
59	MG	14	3165	1/1	0.96	0.16	70,70,70,70	0
59	MG	1H	3297	1/1	0.96	0.27	52,52,52,52	0
59	MG	1H	3298	1/1	0.96	0.13	23,23,23,23	0
59	MG	G8	201	1/1	0.96	0.08	89,89,89,89	0
58	K	1H	3028	1/1	0.96	0.13	50,50,50,50	0
59	MG	1H	3148	1/1	0.96	0.18	39,39,39,39	0
58	K	13	1618	1/1	0.96	0.14	90,90,90,90	0
59	MG	14	3282	1/1	0.96	0.09	50,50,50,50	0
58	K	1H	3095	1/1	0.96	0.06	44,44,44,44	0
59	MG	14	3284	1/1	0.96	0.08	39,39,39,39	0
58	K	1G	1603	1/1	0.96	0.17	79,79,79,79	0
58	K	14	3068	1/1	0.96	0.13	48,48,48,48	0
58	K	29	302	1/1	0.96	0.07	89,89,89,89	0
59	MG	13	1708	1/1	0.96	0.21	59,59,59,59	0
59	MG	1H	3255	1/1	0.96	0.19	36,36,36,36	0
59	MG	1H	3205	1/1	0.96	0.06	34,34,34,34	0
58	K	14	3044	1/1	0.96	0.11	95,95,95,95	0
59	MG	1H	3491	1/1	0.96	0.07	51,51,51,51	0
59	MG	14	3294	1/1	0.96	0.06	77,77,77,77	0
58	K	14	3070	1/1	0.96	0.13	95,95,95,95	0
59	MG	1H	3433	1/1	0.96	0.11	44,44,44,44	0
59	MG	1H	3314	1/1	0.96	0.10	49,49,49,49	0
59	MG	1H	3210	1/1	0.96	0.12	50,50,50,50	0
58	K	14	3025	1/1	0.96	0.09	97,97,97,97	0
58	K	1H	3054	1/1	0.96	0.20	68,68,68,68	0
59	MG	1G	1720	1/1	0.96	0.07	106,106,106,106	0
59	MG	1G	1721	1/1	0.96	0.06	88,88,88,88	0
61	ZN	5A	101	1/1	0.96	0.11	115,115,115,115	0
59	MG	14	3326	1/1	0.97	0.07	45,45,45,45	0
59	MG	14	3158	1/1	0.97	0.08	35,35,35,35	0
59	MG	14	3241	1/1	0.97	0.10	34,34,34,34	0
59	MG	14	3159	1/1	0.97	0.21	53,53,53,53	0
59	MG	1H	3141	1/1	0.97	0.17	37,37,37,37	0
58	K	1H	3049	1/1	0.97	0.11	66,66,66,66	0
59	MG	1H	3189	1/1	0.97	0.17	46,46,46,46	0
59	MG	1H	3420	1/1	0.97	0.02	95,95,95,95	0
58	K	1H	3046	1/1	0.97	0.10	50,50,50,50	0
59	MG	1H	3422	1/1	0.97	0.05	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	1H	3051	1/1	0.97	0.06	58,58,58,58	0
58	K	1H	3074	1/1	0.97	0.10	53,53,53,53	0
59	MG	14	3168	1/1	0.97	0.04	37,37,37,37	0
58	K	1H	3107	1/1	0.97	0.09	82,82,82,82	0
59	MG	14	3170	1/1	0.97	0.18	52,52,52,52	0
59	MG	1H	3376	1/1	0.97	0.12	29,29,29,29	0
58	K	14	3071	1/1	0.97	0.30	75,75,75,75	0
59	MG	13	1661	1/1	0.97	0.07	42,42,42,42	0
59	MG	1H	3152	1/1	0.97	0.15	37,37,37,37	0
59	MG	1G	1669	1/1	0.97	0.09	72,72,72,72	0
58	K	14	3072	1/1	0.97	0.05	89,89,89,89	0
59	MG	1H	3381	1/1	0.97	0.11	59,59,59,59	0
59	MG	13	1719	1/1	0.97	0.05	112,112,112,112	0
59	MG	14	3264	1/1	0.97	0.21	55,55,55,55	0
59	MG	13	1720	1/1	0.97	0.04	73,73,73,73	0
59	MG	14	3266	1/1	0.97	0.18	74,74,74,74	0
59	MG	14	3180	1/1	0.97	0.16	40,40,40,40	0
59	MG	1G	1675	1/1	0.97	0.07	54,54,54,54	0
58	K	14	3006	1/1	0.97	0.14	62,62,62,62	0
58	K	19	301	1/1	0.97	0.18	61,61,61,61	0
59	MG	1H	3202	1/1	0.97	0.17	46,46,46,46	0
59	MG	14	3105	1/1	0.97	0.25	36,36,36,36	0
59	MG	1G	1679	1/1	0.97	0.07	64,64,64,64	0
59	MG	1G	1680	1/1	0.97	0.05	90,90,90,90	0
59	MG	1H	3485	1/1	0.97	0.12	27,27,27,27	0
59	MG	1H	3245	1/1	0.97	0.16	41,41,41,41	0
58	K	14	3038	1/1	0.97	0.16	63,63,63,63	0
59	MG	14	3367	1/1	0.97	0.06	52,52,52,52	0
58	K	14	3007	1/1	0.97	0.20	52,52,52,52	0
58	K	1H	3098	1/1	0.97	0.08	67,67,67,67	0
59	MG	1H	3206	1/1	0.97	0.08	35,35,35,35	0
59	MG	13	1638	1/1	0.97	0.15	58,58,58,58	0
59	MG	14	3122	1/1	0.97	0.13	49,49,49,49	0
59	MG	J8	101	1/1	0.97	0.05	49,49,49,49	0
59	MG	14	3285	1/1	0.97	0.08	43,43,43,43	0
59	MG	1H	3443	1/1	0.97	0.02	61,61,61,61	0
58	K	13	1616	1/1	0.97	0.08	96,96,96,96	0
59	MG	14	3126	1/1	0.97	0.22	69,69,69,69	0
59	MG	1H	3300	1/1	0.97	0.21	31,31,31,31	0
59	MG	1H	3124	1/1	0.97	0.22	28,28,28,28	0
59	MG	1H	3171	1/1	0.97	0.19	28,28,28,28	0
59	MG	1H	3497	1/1	0.97	0.07	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	K	1H	3083	1/1	0.97	0.08	43,43,43,43	0
59	MG	1H	3127	1/1	0.97	0.19	54,54,54,54	0
59	MG	1H	3128	1/1	0.97	0.18	40,40,40,40	0
59	MG	14	3211	1/1	0.97	0.21	64,64,64,64	0
59	MG	1G	1636	1/1	0.97	0.22	89,89,89,89	0
59	MG	1G	1637	1/1	0.97	0.21	77,77,77,77	0
59	MG	14	3388	1/1	0.97	0.05	53,53,53,53	0
59	MG	14	3138	1/1	0.97	0.14	40,40,40,40	0
59	MG	1G	1638	1/1	0.97	0.10	43,43,43,43	0
58	K	14	3060	1/1	0.97	0.03	67,67,67,67	0
58	K	14	3081	1/1	0.97	0.14	89,89,89,89	0
59	MG	1H	3217	1/1	0.97	0.27	52,52,52,52	0
59	MG	1H	3218	1/1	0.97	0.20	53,53,53,53	0
59	MG	14	3144	1/1	0.97	0.10	50,50,50,50	0
58	K	14	3011	1/1	0.97	0.07	56,56,56,56	0
59	MG	14	3223	1/1	0.97	0.06	53,53,53,53	0
59	MG	14	3146	1/1	0.97	0.09	30,30,30,30	0
59	MG	1H	3220	1/1	0.97	0.14	45,45,45,45	0
59	MG	14	3228	1/1	0.97	0.23	88,88,88,88	0
58	K	1H	3111	1/1	0.97	0.15	75,75,75,75	0
59	MG	1G	1708	1/1	0.97	0.07	69,69,69,69	0
59	MG	14	3403	1/1	0.97	0.07	75,75,75,75	0
59	MG	13	1646	1/1	0.97	0.19	59,59,59,59	0
59	MG	14	3405	1/1	0.97	0.06	45,45,45,45	0
59	MG	1H	3410	1/1	0.97	0.05	86,86,86,86	0
59	MG	14	3316	1/1	0.97	0.07	53,53,53,53	0
59	MG	13	1705	1/1	0.97	0.21	60,60,60,60	0
59	MG	13	1647	1/1	0.97	0.20	59,59,59,59	0
59	MG	14	3319	1/1	0.97	0.07	59,59,59,59	0
58	K	13	1611	1/1	0.97	0.05	79,79,79,79	0
59	MG	14	3236	1/1	0.97	0.14	41,41,41,41	0
59	MG	14	3237	1/1	0.97	0.12	58,58,58,58	0
58	K	14	3046	1/1	0.97	0.10	68,68,68,68	0
59	MG	14	3324	1/1	0.97	0.05	62,62,62,62	0
58	K	1H	3077	1/1	0.97	0.08	49,49,49,49	0
59	MG	14	3207	1/1	0.98	0.16	58,58,58,58	0
58	K	1H	3053	1/1	0.98	0.13	63,63,63,63	0
59	MG	21	303	1/1	0.98	0.15	30,30,30,30	0
59	MG	1H	3353	1/1	0.98	0.03	53,53,53,53	0
59	MG	13	1672	1/1	0.98	0.15	24,24,24,24	0
59	MG	1H	3144	1/1	0.98	0.10	38,38,38,38	0
59	MG	14	3352	1/1	0.98	0.05	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1H	3356	1/1	0.98	0.07	31,31,31,31	0
59	MG	14	3354	1/1	0.98	0.06	70,70,70,70	0
59	MG	1H	3145	1/1	0.98	0.18	32,32,32,32	0
59	MG	13	1673	1/1	0.98	0.20	56,56,56,56	0
59	MG	14	3152	1/1	0.98	0.09	69,69,69,69	0
59	MG	14	3217	1/1	0.98	0.21	59,59,59,59	0
59	MG	1G	1674	1/1	0.98	0.20	50,50,50,50	0
59	MG	I8	101	1/1	0.98	0.13	48,48,48,48	0
58	K	14	3073	1/1	0.98	0.18	81,81,81,81	0
58	K	1H	3070	1/1	0.98	0.08	54,54,54,54	0
59	MG	2L	101	1/1	0.98	0.14	55,55,55,55	0
58	K	1H	3062	1/1	0.98	0.07	42,42,42,42	0
59	MG	1H	3123	1/1	0.98	0.15	20,20,20,20	0
59	MG	1H	3365	1/1	0.98	0.09	40,40,40,40	0
59	MG	14	3227	1/1	0.98	0.06	41,41,41,41	0
59	MG	14	3097	1/1	0.98	0.13	38,38,38,38	0
59	MG	1H	3411	1/1	0.98	0.07	28,28,28,28	0
59	MG	1H	3185	1/1	0.98	0.10	41,41,41,41	0
59	MG	13	1657	1/1	0.98	0.13	26,26,26,26	0
59	MG	1H	3251	1/1	0.98	0.07	52,52,52,52	0
59	MG	13	1717	1/1	0.98	0.07	66,66,66,66	0
59	MG	1H	3253	1/1	0.98	0.09	53,53,53,53	0
59	MG	14	3104	1/1	0.98	0.18	29,29,29,29	0
58	K	1H	3058	1/1	0.98	0.06	56,56,56,56	0
59	MG	14	3106	1/1	0.98	0.28	34,34,34,34	0
58	K	1H	3073	1/1	0.98	0.09	47,47,47,47	0
59	MG	14	3108	1/1	0.98	0.15	62,62,62,62	0
58	K	14	3053	1/1	0.98	0.08	63,63,63,63	0
59	MG	1H	3330	1/1	0.98	0.06	45,45,45,45	0
59	MG	1G	1640	1/1	0.98	0.16	53,53,53,53	0
59	MG	14	3114	1/1	0.98	0.17	57,57,57,57	0
58	K	14	3019	1/1	0.98	0.09	81,81,81,81	0
59	MG	14	3116	1/1	0.98	0.15	41,41,41,41	0
59	MG	1H	3158	1/1	0.98	0.26	89,89,89,89	0
59	MG	14	3247	1/1	0.98	0.20	60,60,60,60	0
59	MG	1H	3131	1/1	0.98	0.21	42,42,42,42	0
58	K	1H	3115	1/1	0.98	0.04	50,50,50,50	0
59	MG	1H	3162	1/1	0.98	0.23	21,21,21,21	0
59	MG	1H	3299	1/1	0.98	0.12	34,34,34,34	0
58	K	14	3021	1/1	0.98	0.06	47,47,47,47	0
59	MG	1H	3165	1/1	0.98	0.20	30,30,30,30	0
59	MG	1H	3384	1/1	0.98	0.05	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	14	3187	1/1	0.98	0.12	41,41,41,41	0
59	MG	1H	3166	1/1	0.98	0.15	17,17,17,17	0
59	MG	1H	3303	1/1	0.98	0.12	41,41,41,41	0
59	MG	1H	3387	1/1	0.98	0.07	37,37,37,37	0
59	MG	14	3328	1/1	0.98	0.06	66,66,66,66	0
59	MG	1G	1653	1/1	0.98	0.17	52,52,52,52	0
58	K	11	301	1/1	0.98	0.05	47,47,47,47	0
59	MG	14	3194	1/1	0.98	0.12	64,64,64,64	0
59	MG	1G	1655	1/1	0.98	0.27	67,67,67,67	0
58	K	1H	3067	1/1	0.98	0.13	49,49,49,49	0
59	MG	1H	3268	1/1	0.98	0.13	50,50,50,50	0
59	MG	14	3135	1/1	0.98	0.12	42,42,42,42	0
59	MG	14	3336	1/1	0.98	0.07	47,47,47,47	0
59	MG	1H	3169	1/1	0.98	0.18	43,43,43,43	0
59	MG	13	1667	1/1	0.98	0.23	39,39,39,39	0
59	MG	1H	3346	1/1	0.98	0.16	27,27,27,27	0
58	K	1H	3068	1/1	0.98	0.05	37,37,37,37	0
59	MG	14	3271	1/1	0.98	0.07	52,52,52,52	0
59	MG	1H	3272	1/1	0.98	0.17	60,60,60,60	0
59	MG	13	1748	1/1	0.98	0.08	104,104,104,104	0
59	MG	13	1651	1/1	0.98	0.19	51,51,51,51	0
61	ZN	5I	102	1/1	0.98	0.11	110,110,110,110	0
59	MG	13	1652	1/1	0.98	0.33	95,95,95,95	0
59	MG	14	3224	1/1	0.99	0.05	53,53,53,53	0
59	MG	1H	3146	1/1	0.99	0.18	24,24,24,24	0
59	MG	1H	3234	1/1	0.99	0.24	33,33,33,33	0
59	MG	14	3128	1/1	0.99	0.14	35,35,35,35	0
59	MG	13	1702	1/1	0.99	0.26	62,62,62,62	0
59	MG	1H	3163	1/1	0.99	0.23	40,40,40,40	0
59	MG	1H	3357	1/1	0.99	0.05	34,34,34,34	0
58	K	14	3024	1/1	0.99	0.07	57,57,57,57	0
59	MG	1H	3126	1/1	0.99	0.19	53,53,53,53	0
59	MG	14	3110	1/1	0.99	0.15	48,48,48,48	0
59	MG	14	3111	1/1	0.99	0.06	44,44,44,44	0
59	MG	1G	1626	1/1	0.99	0.17	72,72,72,72	0
59	MG	1H	3175	1/1	0.99	0.20	34,34,34,34	0
59	MG	1H	3277	1/1	0.99	0.13	18,18,18,18	0
59	MG	1H	3137	1/1	0.99	0.22	42,42,42,42	0
59	MG	13	1644	1/1	0.99	0.08	49,49,49,49	0
59	MG	14	3189	1/1	0.99	0.24	26,26,26,26	0
59	MG	14	3117	1/1	0.99	0.15	42,42,42,42	0
59	MG	1G	1631	1/1	0.99	0.17	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	1G	1632	1/1	0.99	0.21	109,109,109,109	0
59	MG	1H	3364	1/1	0.99	0.08	28,28,28,28	0
59	MG	1H	3266	1/1	0.99	0.31	40,40,40,40	0
59	MG	13	1659	1/1	0.99	0.22	54,54,54,54	0
59	MG	14	3301	1/1	0.99	0.04	53,53,53,53	0
59	MG	1H	3209	1/1	0.99	0.16	33,33,33,33	0
59	MG	14	3248	1/1	0.99	0.04	41,41,41,41	0
60	SF4	3E	302	8/8	0.99	0.18	78,87,103,104	0
60	SF4	32	303	8/8	0.99	0.19	73,95,102,116	0
59	MG	1H	3368	1/1	0.99	0.05	20,20,20,20	0
59	MG	1H	3160	1/1	0.99	0.26	29,29,29,29	0

6.5 Other polymers (i)

There are no such residues in this entry.