



# wwPDB X-ray Structure Validation Summary Report ⓘ

Jan 14, 2024 – 04:56 am GMT

PDB ID : 6QNR  
Title : 70S ribosome elongation complex (EC) with experimentally assigned potassium ions  
Authors : Rozov, A.; Khusainov, I.; Yusupov, M.; Yusupova, G.  
Deposited on : 2019-02-11  
Resolution : 3.10 Å (reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.4, CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
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) : 2.36

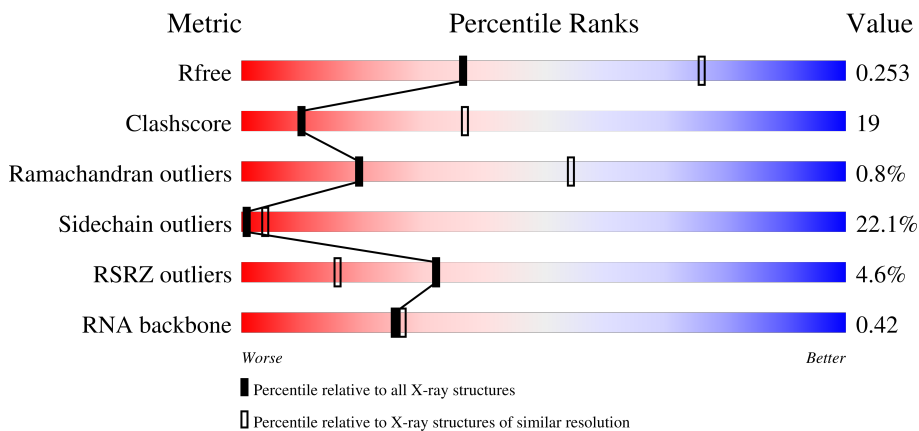
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.10 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	13	1522	 29% 46% 20% .
1	1G	1522	 31% 45% 20% . .
2	12	256	 10% 39% 40% 13% 7%
2	1E	256	 2% 44% 38% 11% 7%

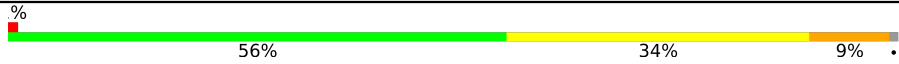
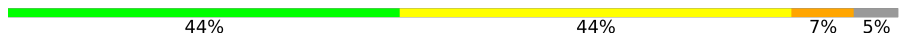

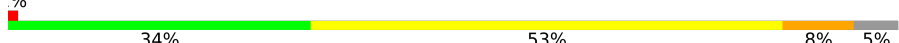

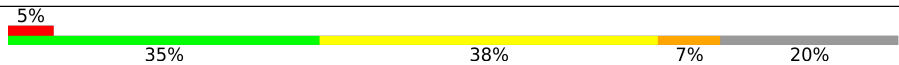
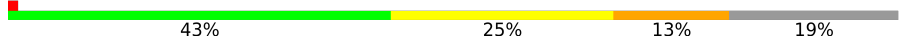
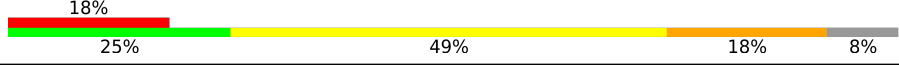
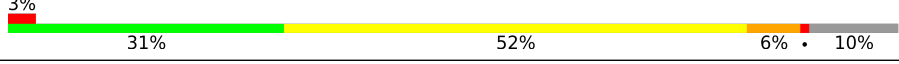


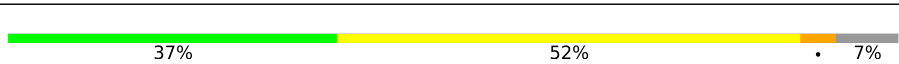
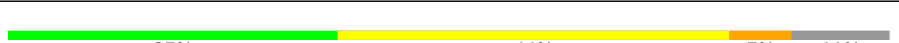
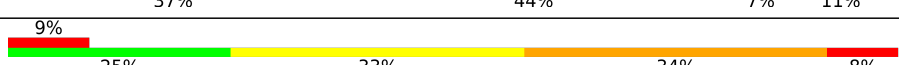
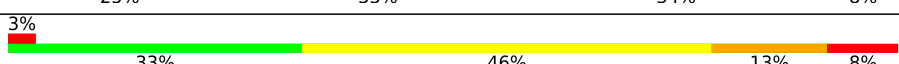
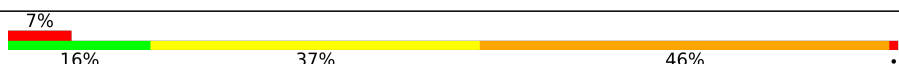
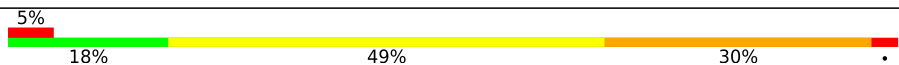
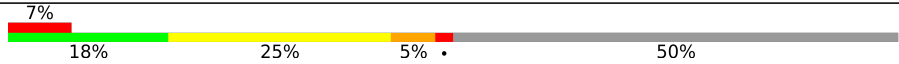

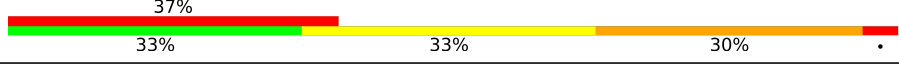
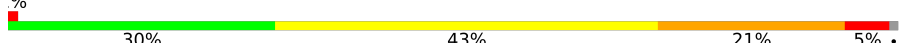
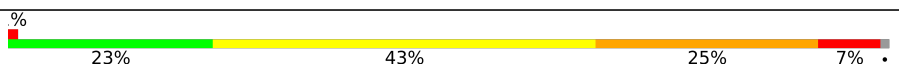
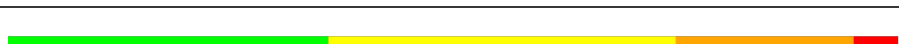
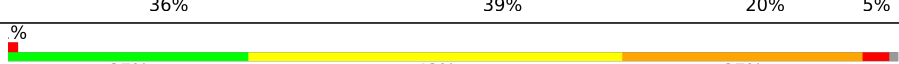
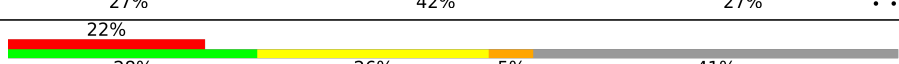
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Mol	Chain	Length	Quality of chain
3	22	239	
3	2E	239	
4	32	209	
4	3E	209	
5	42	162	
5	4E	162	
6	52	101	
6	5E	101	
7	62	156	
7	6E	156	
8	72	138	
8	7E	138	
9	82	128	
9	8E	128	
10	1A	105	
10	1I	105	
11	2A	129	
11	2I	129	
12	3A	132	
12	3I	132	
13	4A	126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

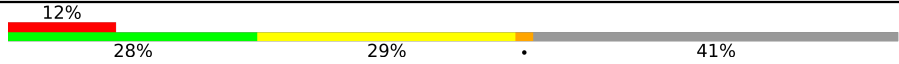

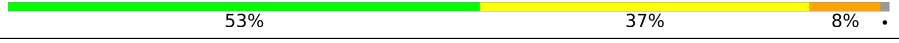


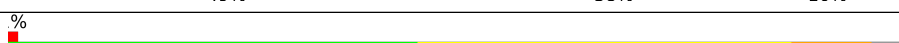
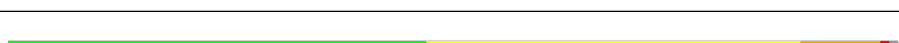
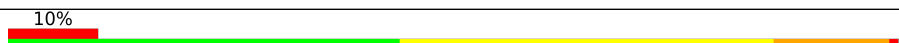
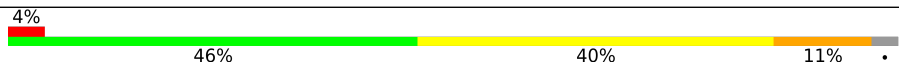

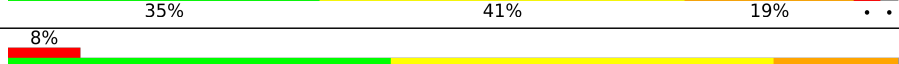
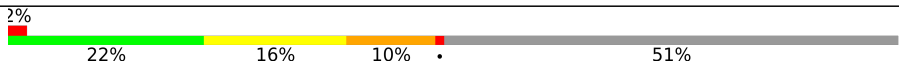
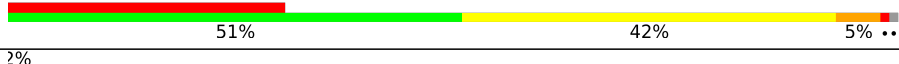

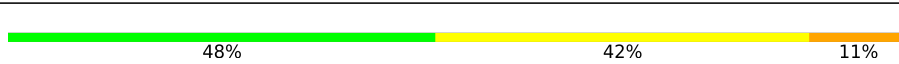
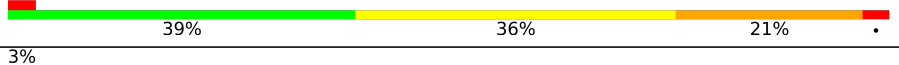

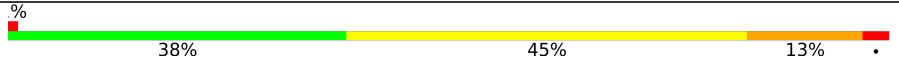

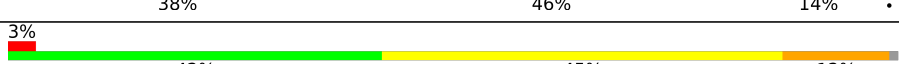



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Mol	Chain	Length	Quality of chain
15	6I	89	
16	7A	88	
16	7I	88	
17	8A	105	
17	8I	105	
18	9A	88	
18	9I	88	
19	AA	93	
19	AI	93	
20	BA	106	
20	BI	106	
21	1B	27	
21	1F	27	
22	1K	76	
23	2K	76	
24	3K	76	
24	3L	76	
25	4K	60	
25	4L	60	
26	5K	76	
27	14	2917	
27	1H	2917	
28	16	122	
28	1J	122	
29	7I	229	




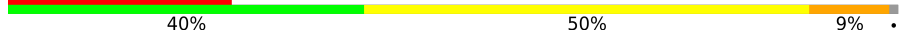

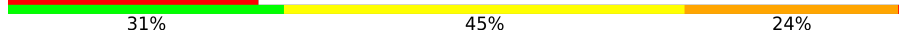
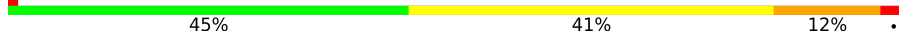


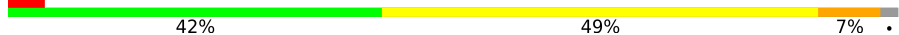


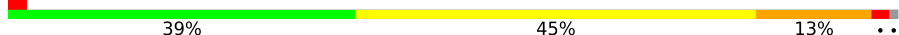
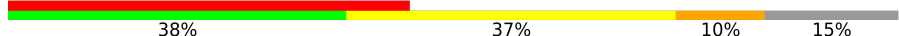











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Mol	Chain	Length	Quality of chain
29	79	229	
30	11	276	
30	19	276	
31	21	206	
31	29	206	
32	31	210	
32	39	210	
33	41	182	
33	49	182	
34	51	180	
34	59	180	
35	61	148	
35	69	148	
36	38	173	
37	15	140	
37	58	140	
38	25	122	
38	68	122	
39	35	150	
39	78	150	
40	45	141	
40	88	141	
41	55	118	
41	98	118	
42	65	112	



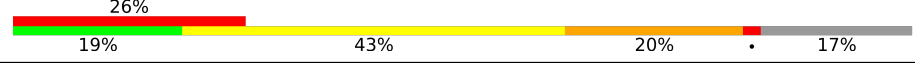
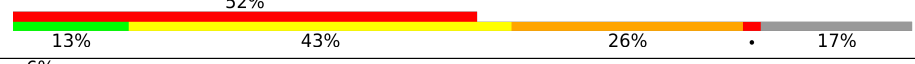
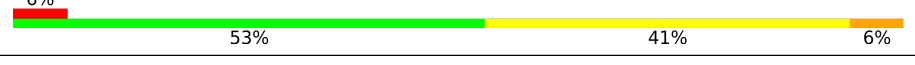
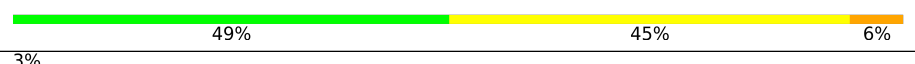
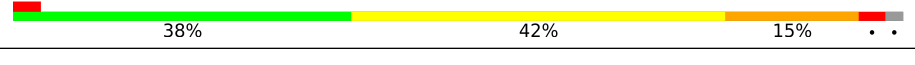

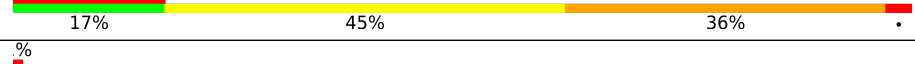
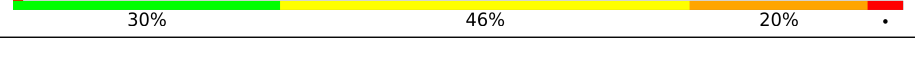
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Mol	Chain	Length	Quality of chain
42	A8	112	
43	75	146	
43	B8	146	
44	85	118	
44	C8	118	
45	95	101	
45	D8	101	
46	A5	113	
46	E8	113	
47	B5	96	
47	F8	96	
48	C5	110	
48	G8	110	
49	D5	206	
49	H8	206	
50	E5	85	
50	I8	85	
51	F5	98	
51	J8	98	
52	G5	72	
52	K8	72	
53	H5	60	
53	L8	60	
54	I5	71	
54	M8	71	

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Mol	Chain	Length	Quality of chain
55	J5	60	
55	N8	60	
56	K5	54	
56	O8	54	
57	L5	49	
57	P8	49	
58	M5	65	
58	Q8	65	
59	1L	76	
60	2L	76	

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
26	PSU	5K	32	-	-	-	X
62	MG	1H	3343[A]	-	-	-	X
62	MG	1H	3343[B]	-	-	-	X
63	SF4	3E	302	-	-	X	-

## 2 Entry composition

There are 65 unique types of molecules in this entry. The entry contains 305753 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	13	1516	Total 32589	C 14514	N 6024	O 10535	P 1516	0	0	0
1	1G	1513	Total 32526	C 14487	N 6018	O 10509	P 1512	0	0	0

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

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

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

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

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

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

- 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	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	8E	127	Total	C	N	O	0	0	0
			1004	636	195	173			
9	82	127	Total	C	N	O	0	0	0
			1004	636	195	173			

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	2I	116	864	537	164	160	3	0	0	0
11	2A	117	873	543	166	161	3	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	3I	125	977	615	196	164	2	0	0	0
12	3A	125	977	615	196	164	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	4I	119	946	585	195	164	2	0	0	0
13	4A	121	964	597	199	166	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	5I	60	491	312	104	71	4	0	0	0
14	5A	60	491	312	104	71	4	0	0	0

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

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

- 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	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			
19	AA	86	Total	C	N	O	S	0	0	0
			684	436	126	120	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	24	Total	C	N	O	0	0	0
			208	128	50	30			
21	1B	25	Total	C	N	O	0	0	0
			217	134	52	31			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
22	1K	76	Total	C	N	O	P	S	0	0	0
			1628	731	290	530	75	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
23	2K	76	Total	C	N	O	P	S	0	0	0
			1635	735	291	532	75	2			

- Molecule 24 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
24	3K	76	Total	C	N	O	P	S	0	0	0
			1626	729	290	531	75	1			
24	3L	76	Total	C	N	O	P	S	0	0	0
			1626	729	290	531	75	1			

- Molecule 25 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace	
25	4K	30	Total	C	N	O	P	0	0	0
			621	279	88	225	29			
25	4L	30	Total	C	N	O	P	0	0	0
			621	279	88	225	29			

- Molecule 26 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
26	5K	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			

- Molecule 27 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
27	1H	2890	Total 62245	C 27709	N 11634	O 20013	P 2889	0	0	0
27	14	2876	Total 61946	C 27576	N 11583	O 19912	P 2875	0	0	0

- Molecule 28 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
28	16	122	Total 2617	C 1166	N 486	O 844	P 121	0	0	0
28	1J	121	Total 2598	C 1156	N 481	O 840	P 121	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	71	135	Total 1049	C 662	N 197	O 189	S 1	0	0	0
29	79	135	Total 1049	C 662	N 197	O 189	S 1	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	11	272	Total 2115	C 1335	N 420	O 357	S 3	0	0	0
30	19	272	Total 2115	C 1335	N 420	O 357	S 3	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	21	204	Total 1559	C 985	N 298	O 270	S 6	0	0	0
31	29	204	Total 1559	C 985	N 298	O 270	S 6	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	31	202	Total 1585	C 1011	N 297	O 275	S 2	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	39	202	1585	1011	297	275	2	0	0	0

- Molecule 33 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	41	181	1473	942	268	259	4	0	0	0
33	49	181	1473	942	268	259	4	0	0	0

- Molecule 34 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
34	51	174	1336	848	251	236	1	0	0	0
34	59	173	1327	842	249	235	1	0	0	0

- Molecule 35 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	61	145	1131	723	200	207	1	0	0	0
35	69	146	1136	726	201	208	1	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace	
			Total	C	N	O				
36	38	84	635	399	118	118		0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
37	58	138	1104	712	206	182	4	0	0	0
37	15	138	1104	712	206	182	4	0	0	0

- Molecule 38 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
38	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

- Molecule 39 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	78	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			
39	35	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

- Molecule 40 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	88	141	Total	C	N	O	S	0	5	0
			1150	732	218	193	7			
40	45	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			

- Molecule 41 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
41	55	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			

- Molecule 42 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	A8	112	Total	C	N	O	S	0	0	0
			889	561	177	150	1			
42	65	111	Total	C	N	O		0	0	0
			881	556	176	149				

- Molecule 43 is a protein called 50S ribosomal protein L19.

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
43	75	137	1141	710	234	196	1	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	C8	117	963	610	202	150	1	0	0	0
44	85	117	963	610	202	150	1	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	D8	101	778	501	142	134	1	0	0	0
45	95	101	778	501	142	134	1	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L22.

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

- Molecule 47 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	F8	95	747	485	135	126	1	0	0	0
47	B5	94	742	482	134	125	1	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
48	G8	109	825	528	153	139	5	0	0	0
48	C5	107	776	494	147	130	5	0	0	0



- Molecule 49 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
49	H8	179	Total 1428	C 911	N 255	O 259	S 3	0	0	0
49	D5	176	Total 1404	C 897	N 252	O 252	S 3	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
50	I8	84	Total 661	C 410	N 140	O 110	S 1	0	0	0
50	E5	84	Total 657	C 407	N 139	O 110	S 1	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	J8	97	Total 762	C 481	N 150	O 130	S 1	0	0	0
51	F5	97	Total 762	C 481	N 150	O 130	S 1	0	0	0

- Molecule 52 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
52	K8	72	Total 598	C 372	N 120	O 104	S 2	0	0	0
52	G5	71	Total 590	C 367	N 119	O 103	S 1	0	0	0

- Molecule 53 is a protein called 50S ribosomal protein L30.

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

- Molecule 54 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	M8	71	Total	C	N	O	S	0	0	0
			580	364	108	103	5			
54	I5	71	Total	C	N	O	S	0	0	0
			580	364	108	103	5			

- Molecule 55 is a protein called 50S ribosomal protein L32.

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

- Molecule 56 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	O8	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			
56	K5	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			

- Molecule 57 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	P8	49	Total	C	N	O	S	0	0	0
			419	257	104	56	2			
57	L5	49	Total	C	N	O	S	0	0	0
			429	263	108	56	2			

- Molecule 58 is a protein called 50S ribosomal protein L35.

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

- Molecule 59 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
59	1L	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	531	75	1			

- Molecule 60 is a RNA chain called E. coli tRNAPhe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
			Total	C	N	O	P				S
60	2L	76	1635	735	291	532	75	2	0	0	0

- Molecule 61 is POTASSIUM ION (three-letter code: K) (formula: K) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	13	51	Total 51	K 51	0	0
61	5E	1	Total 1	K 1	0	0
61	4I	1	Total 1	K 1	0	0
61	BI	1	Total 1	K 1	0	0
61	1K	1	Total 1	K 1	0	0
61	2K	3	Total 3	K 3	0	0
61	1H	144	Total 145	K 145	0	1
61	16	3	Total 3	K 3	0	0
61	11	1	Total 1	K 1	0	0
61	21	1	Total 1	K 1	0	0
61	31	2	Total 2	K 2	0	0
61	41	1	Total 1	K 1	0	0
61	88	1	Total 1	K 1	0	0
61	1G	36	Total 36	K 36	0	0
61	32	1	Total 1	K 1	0	0
61	52	1	Total 1	K 1	0	0
61	2A	1	Total 1	K 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	4A	1	Total K 1 1	0	0
61	5A	1	Total K 1 1	0	0
61	BA	1	Total K 1 1	0	0
61	14	106	Total K 106 106	0	0
61	1J	1	Total K 1 1	0	0
61	19	1	Total K 1 1	0	0
61	29	1	Total K 1 1	0	0
61	39	2	Total K 2 2	0	0
61	49	1	Total K 1 1	0	0
61	45	1	Total K 1 1	0	0

- Molecule 62 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	13	119	Total Mg 120 120	0	1
62	3E	1	Total Mg 1 1	0	0
62	6E	1	Total Mg 1 1	0	0
62	7I	1	Total Mg 1 1	0	0
62	2K	2	Total Mg 2 2	0	0
62	1H	433	Total Mg 439 439	0	6
62	16	12	Total Mg 12 12	0	0
62	11	1	Total Mg 1 1	0	0
62	21	2	Total Mg 2 2	0	0

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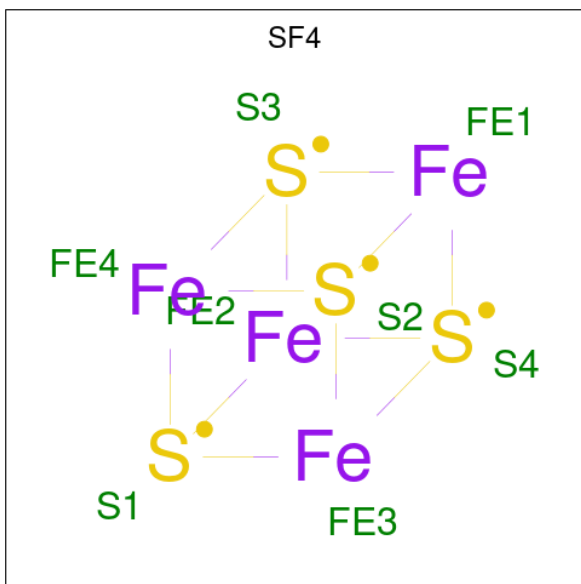
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	31	1	Total Mg 1 1	0	0
62	41	1	Total Mg 1 1	0	0
62	78	2	Total Mg 2 2	0	0
62	C8	1	Total Mg 1 1	0	0
62	F8	1	Total Mg 1 1	0	0
62	I8	1	Total Mg 1 1	0	0
62	J8	1	Total Mg 1 1	0	0
62	L8	1	Total Mg 1 1	0	0
62	N8	1	Total Mg 1 1	0	0
62	O8	1	Total Mg 1 1	0	0
62	P8	1	Total Mg 1 1	0	0
62	Q8	1	Total Mg 2 2	0	1
62	1G	100	Total Mg 102 102	0	2
62	32	1	Total Mg 1 1	0	0
62	42	1	Total Mg 1 1	0	0
62	2L	3	Total Mg 3 3	0	0
62	4L	1	Total Mg 1 1	0	0
62	14	294	Total Mg 295 295	0	1
62	1J	4	Total Mg 4 4	0	0
62	29	2	Total Mg 2 2	0	0
62	39	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	M5	2	Total Mg 2 2	0	0

- Molecule 63 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe<sub>4</sub>S<sub>4</sub>).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	3E	1	Total Fe S 8 4 4	0	0
63	32	1	Total Fe S 8 4 4	0	0

- Molecule 64 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
64	5I	1	Total Zn 1 1	0	0
64	5A	1	Total Zn 1 1	0	0

- Molecule 65 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	13	233	Total O 233 233	0	0
65	3E	2	Total O 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	4E	1	Total O 1 1	0	0
65	3I	3	Total O 3 3	0	0
65	4I	1	Total O 1 1	0	0
65	5I	1	Total O 1 1	0	0
65	7I	1	Total O 1 1	0	0
65	BI	1	Total O 1 1	0	0
65	1F	3	Total O 3 3	0	0
65	2K	8	Total O 8 8	0	0
65	3K	1	Total O 1 1	0	0
65	4K	2	Total O 2 2	0	0
65	1H	1009	Total O 1009 1009	0	0
65	16	26	Total O 26 26	0	0
65	11	11	Total O 11 11	0	0
65	21	10	Total O 10 10	0	0
65	31	10	Total O 10 10	0	0
65	78	9	Total O 9 9	0	0
65	88	1	Total O 1 1	0	0
65	A8	2	Total O 2 2	0	0
65	B8	2	Total O 2 2	0	0
65	D8	1	Total O 1 1	0	0
65	F8	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	I8	2	Total O 2 2	0	0
65	L8	2	Total O 2 2	0	0
65	P8	1	Total O 1 1	0	0
65	Q8	1	Total O 1 1	0	0
65	1G	194	Total O 194 194	0	0
65	32	4	Total O 4 4	0	0
65	82	1	Total O 1 1	0	0
65	3A	2	Total O 2 2	0	0
65	5A	1	Total O 1 1	0	0
65	4L	4	Total O 4 4	0	0
65	14	602	Total O 602 602	0	0
65	1J	5	Total O 5 5	0	0
65	19	12	Total O 12 12	0	0
65	29	7	Total O 7 7	0	0
65	39	2	Total O 2 2	0	0
65	35	7	Total O 7 7	0	0
65	75	2	Total O 2 2	0	0
65	C5	1	Total O 1 1	0	0
65	E5	1	Total O 1 1	0	0
65	H5	2	Total O 2 2	0	0
65	L5	1	Total O 1 1	0	0

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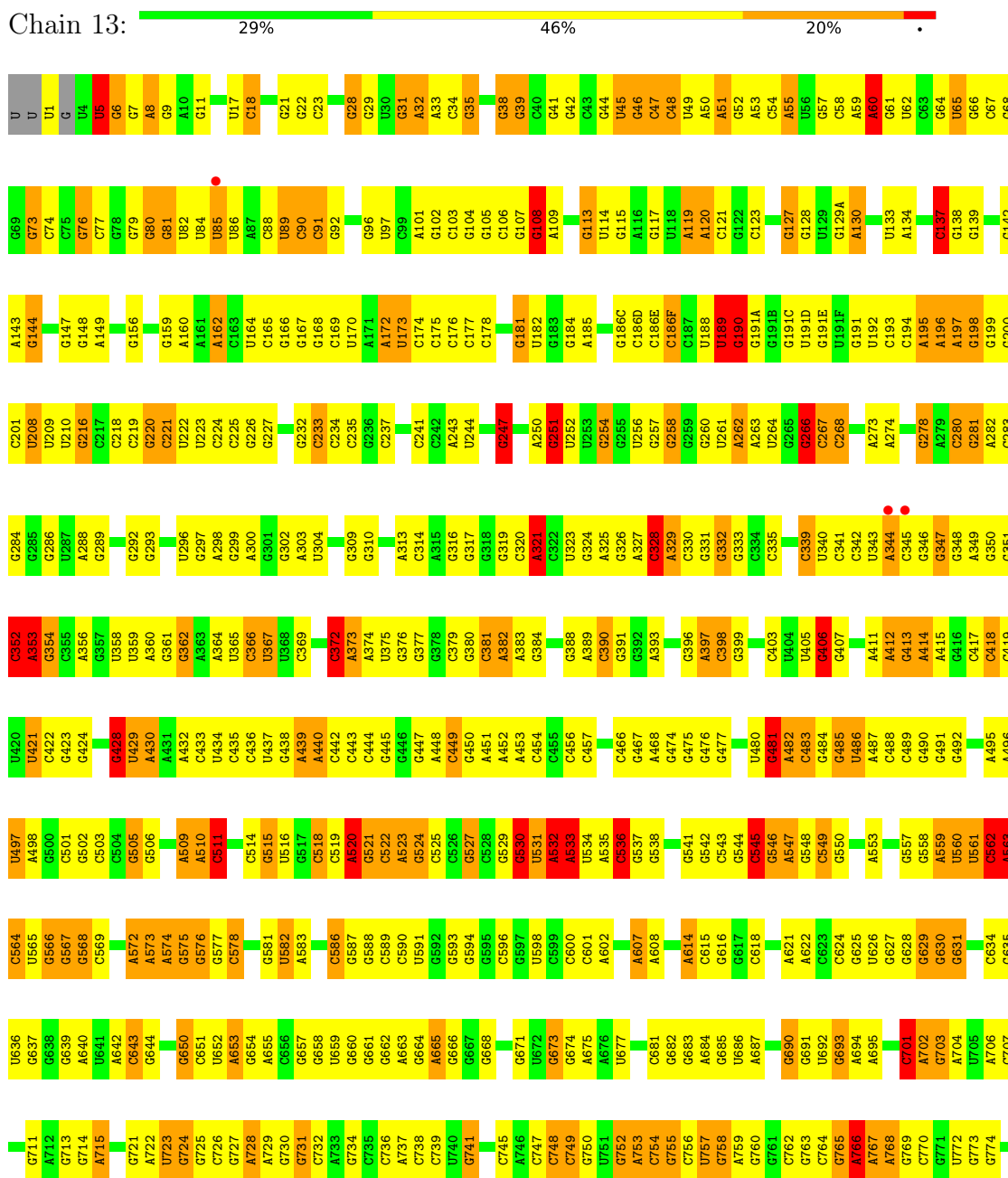
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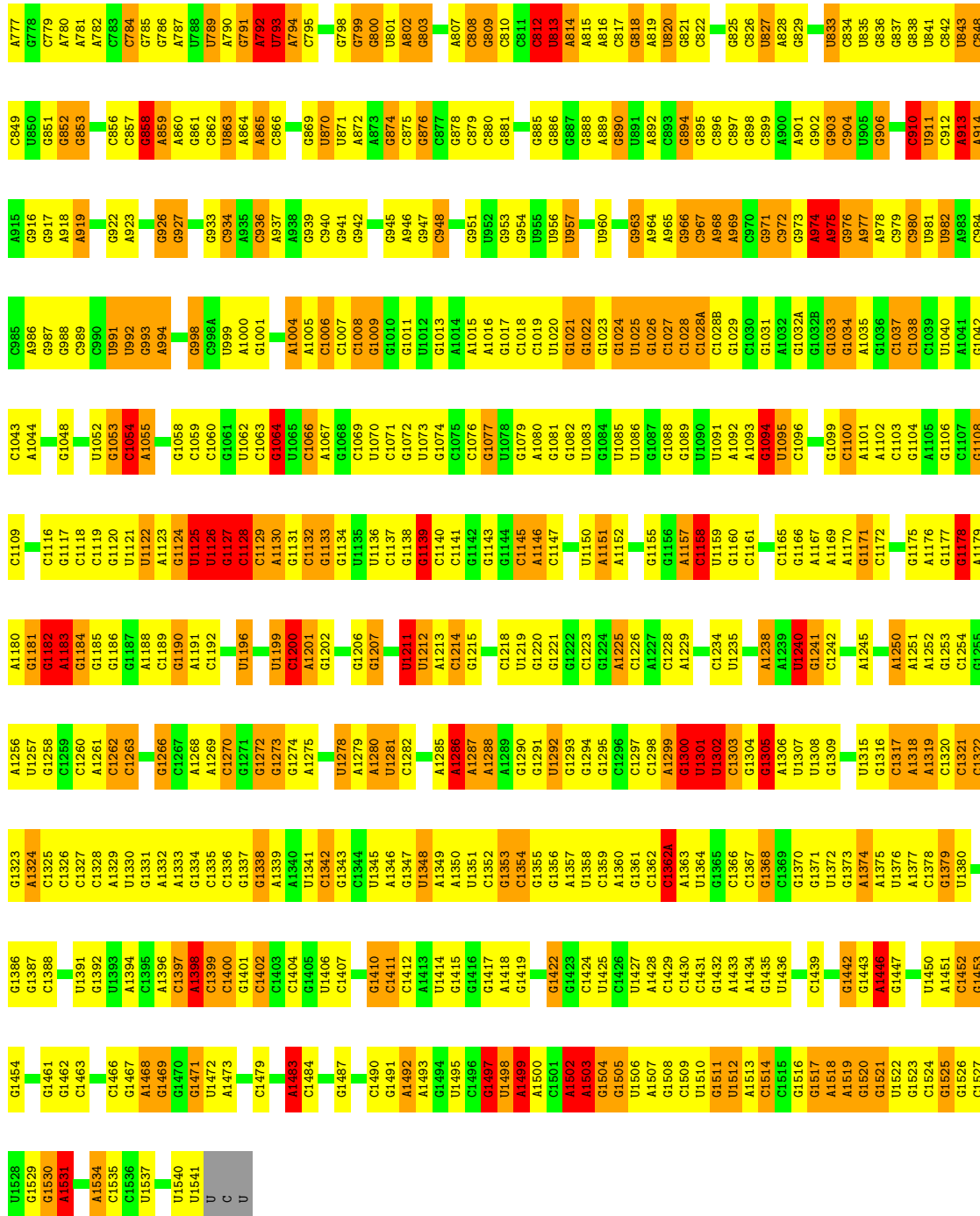
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			6	6		

### 3 Residue-property plots

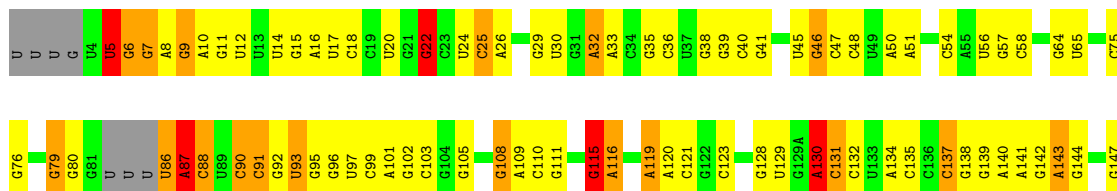
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: 16S ribosomal RNA

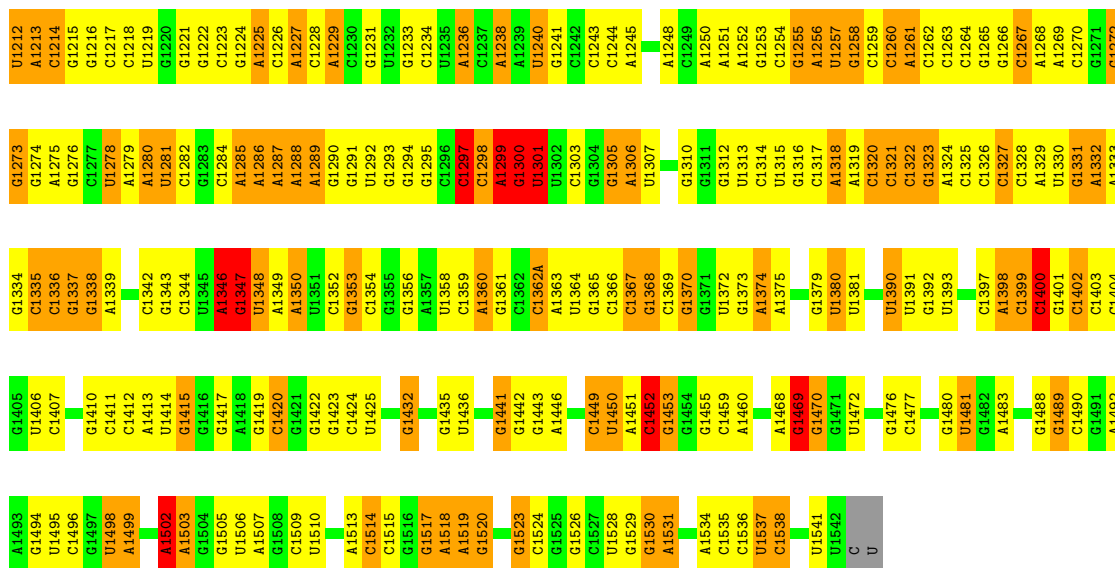




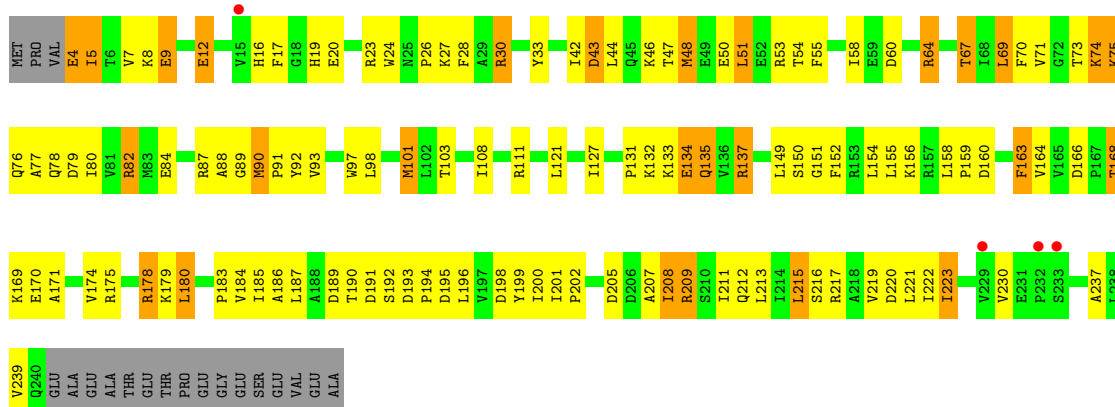
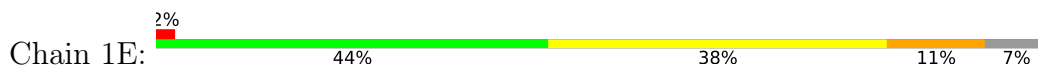
● Molecule 1: 16S ribosomal RNA



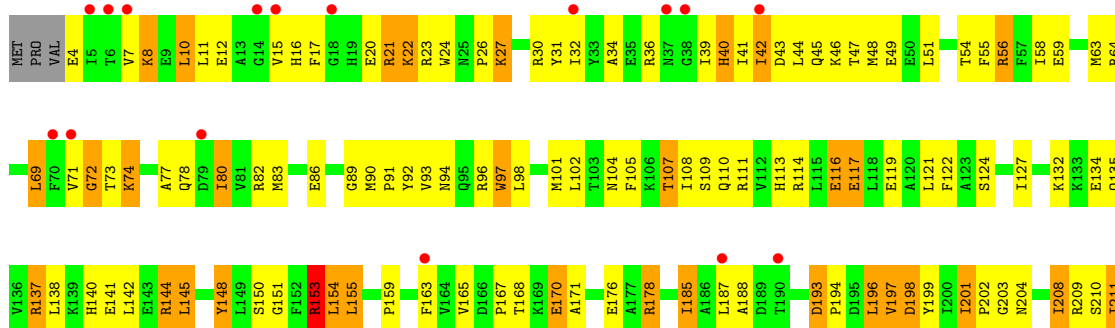
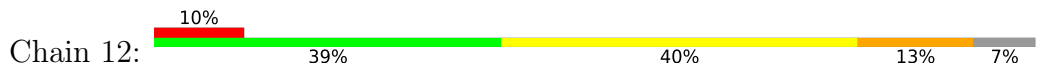
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• Molecule 2: 30S ribosomal protein S2

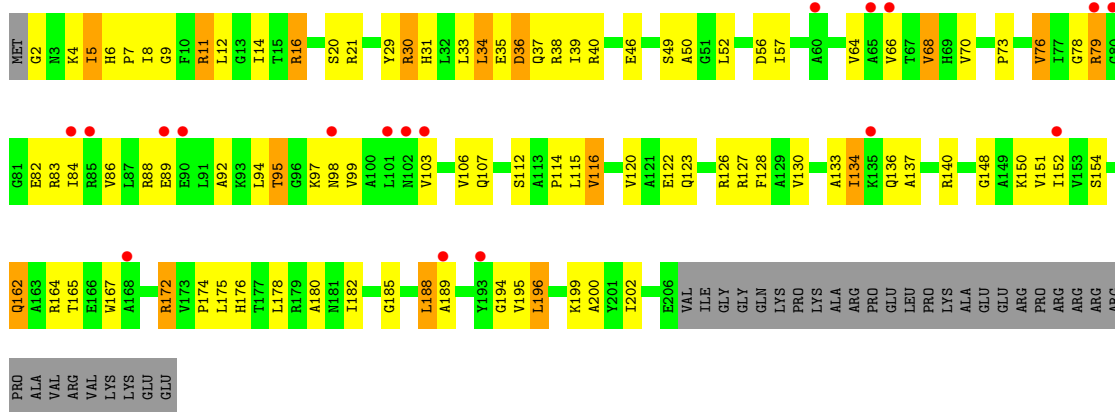


• Molecule 2: 30S ribosomal protein S2

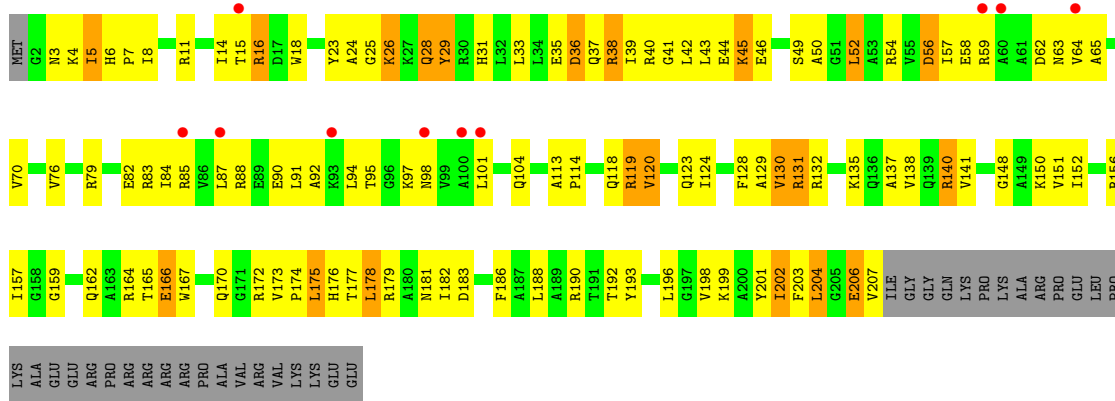




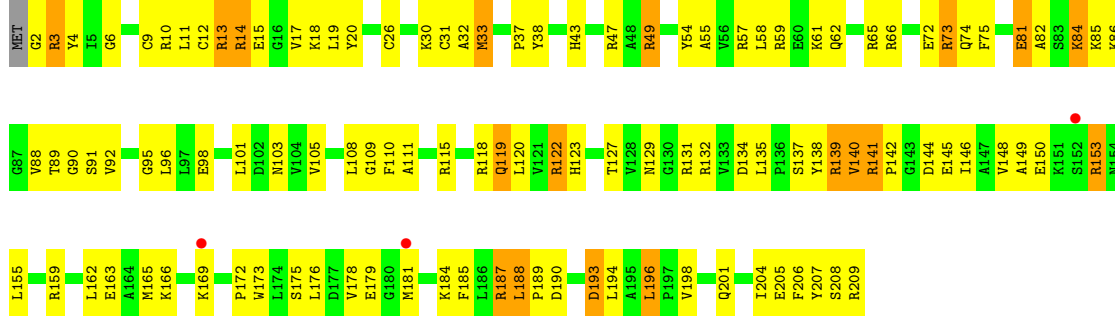
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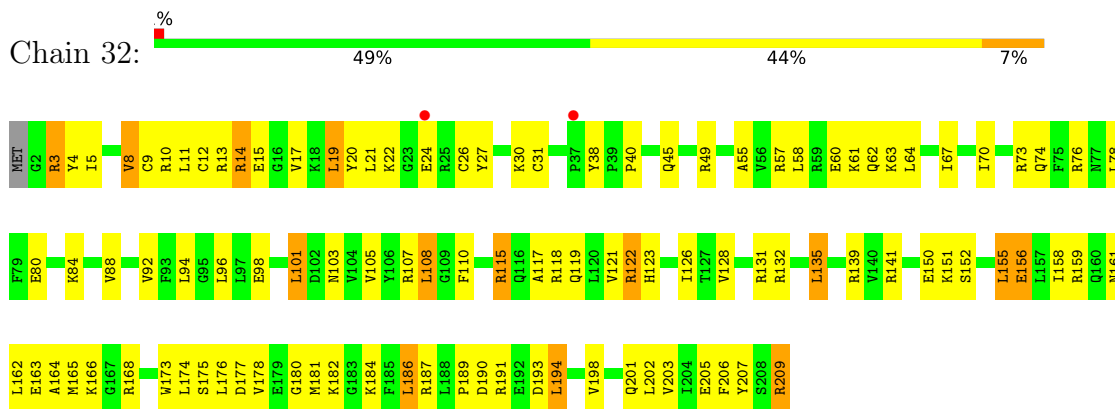
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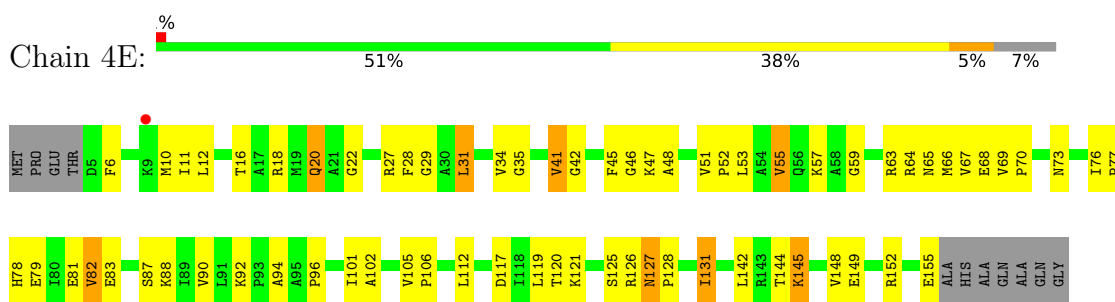
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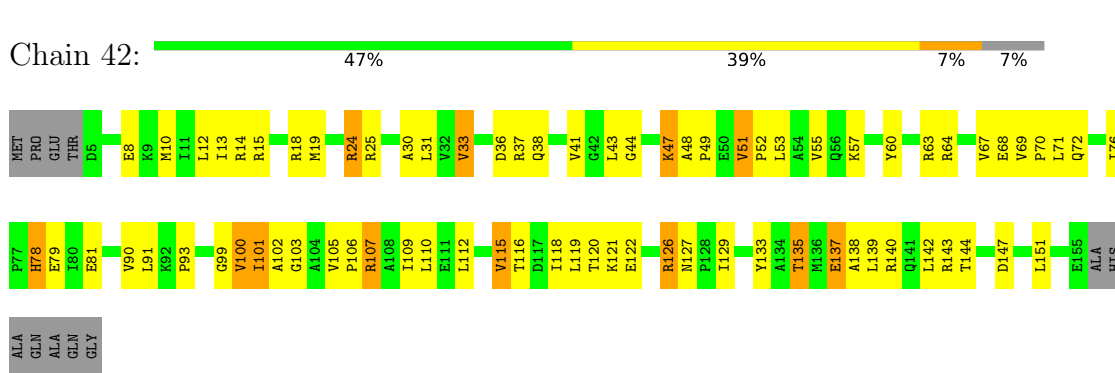
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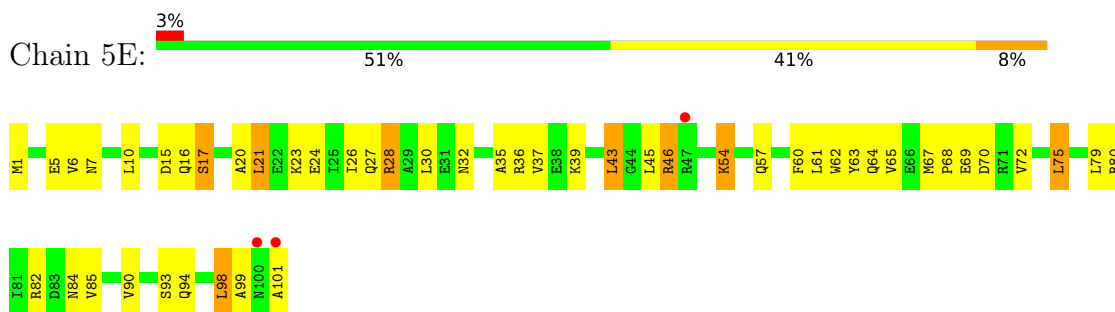
- Molecule 5: 30S ribosomal protein S5



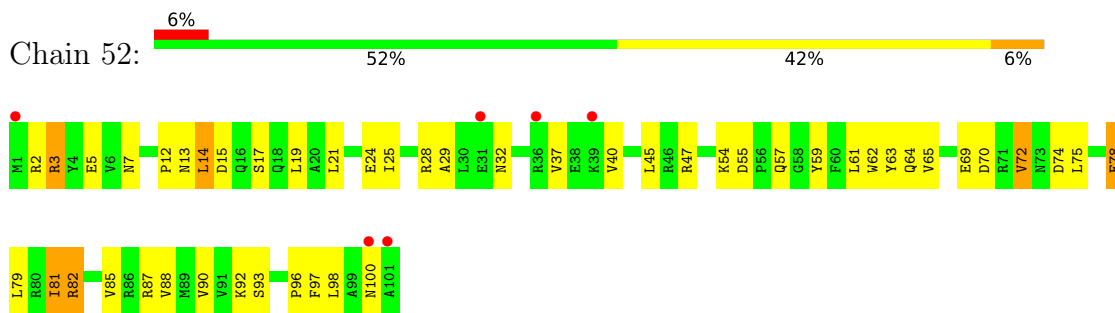
- Molecule 5: 30S ribosomal protein S5



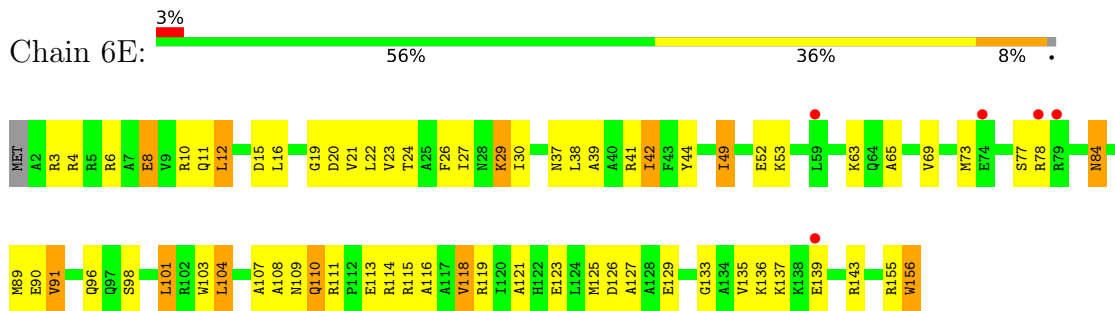
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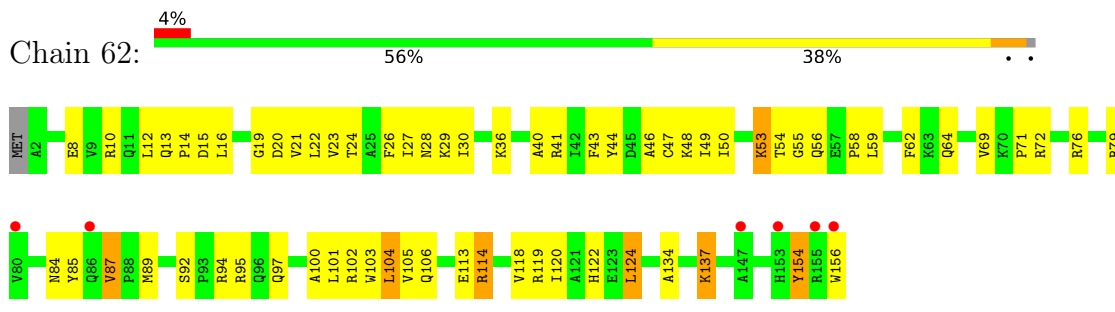
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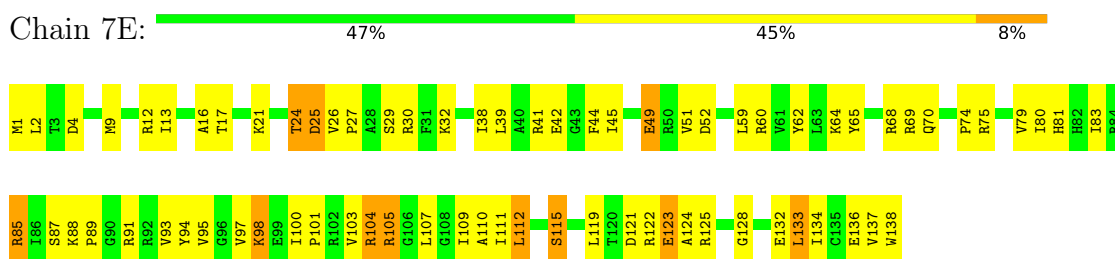
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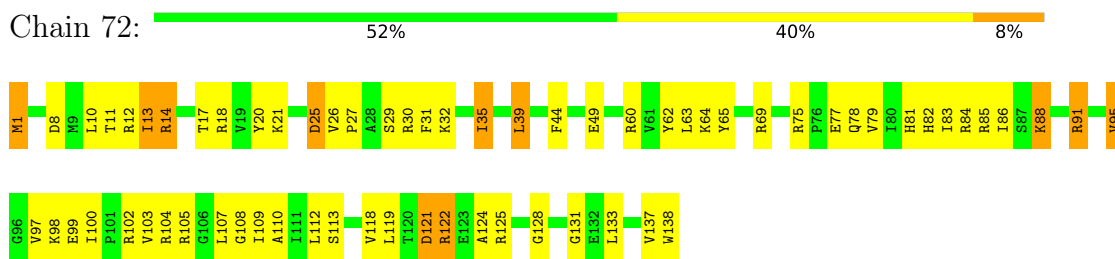
• Molecule 7: 30S ribosomal protein S7



• Molecule 8: 30S ribosomal protein S8

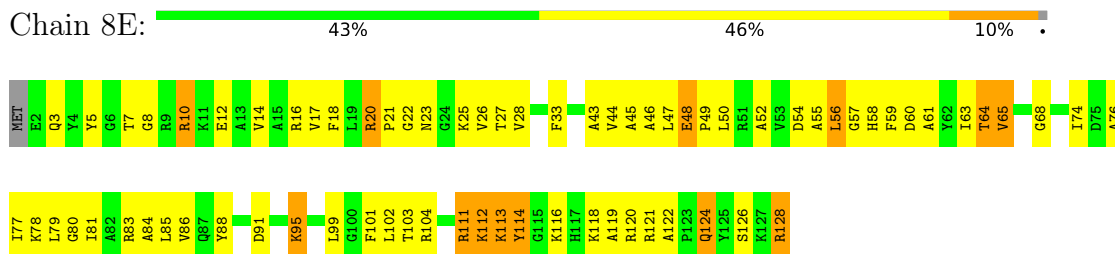


• Molecule 8: 30S ribosomal protein S8

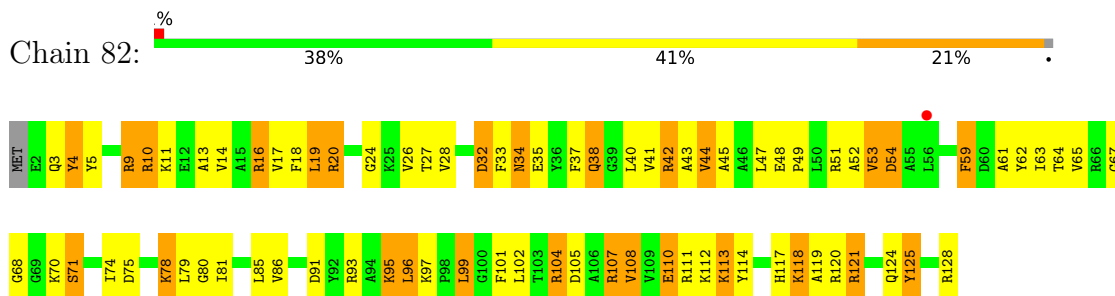




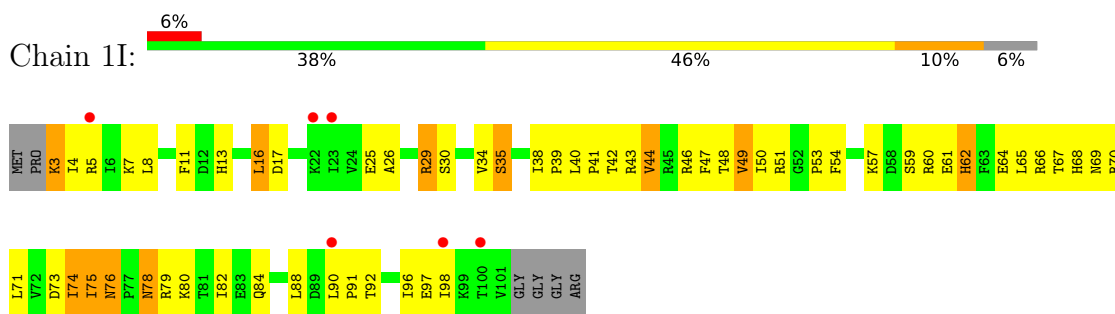
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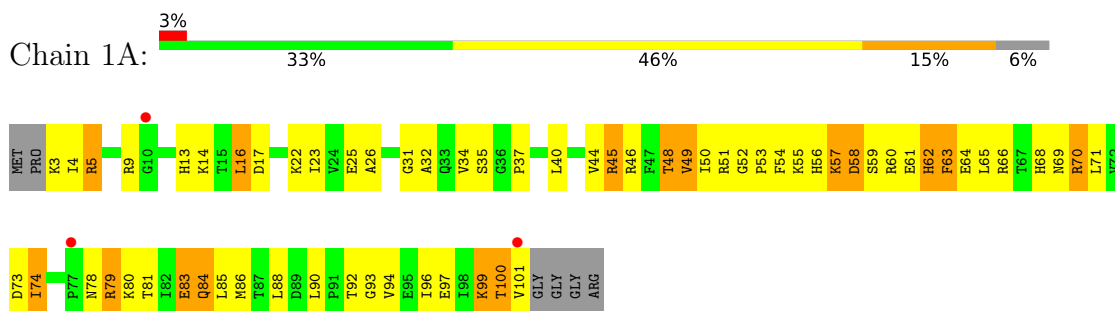
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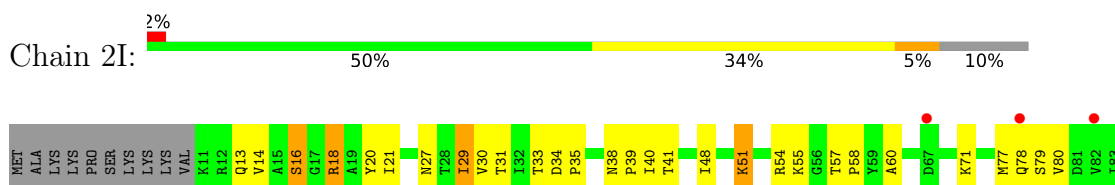
- Molecule 10: 30S ribosomal protein S10



- Molecule 10: 30S ribosomal protein S10

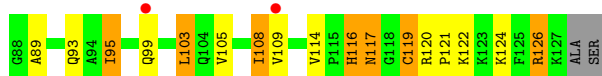


- Molecule 11: 30S ribosomal protein S11

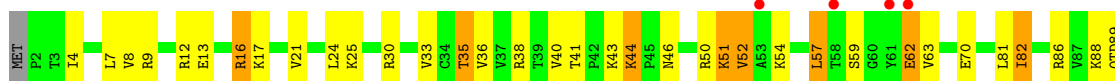




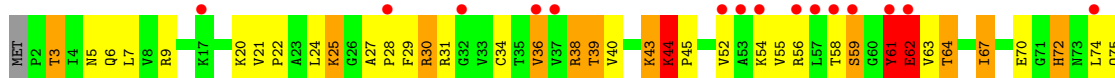
- Molecule 11: 30S ribosomal protein S11



- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12

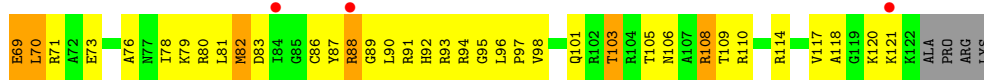


- Molecule 13: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S13

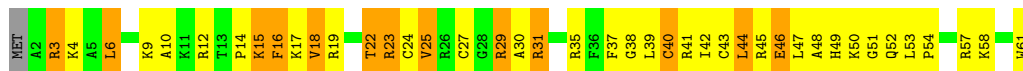
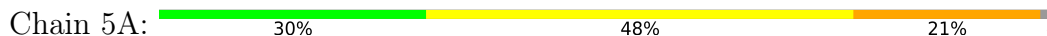




• Molecule 14: 30S ribosomal protein S14 type Z



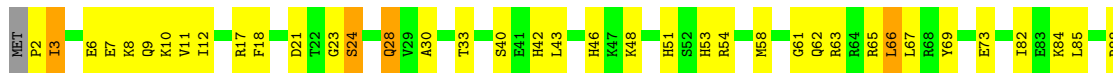
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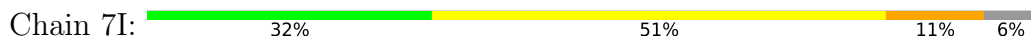
• Molecule 15: 30S ribosomal protein S15



• Molecule 15: 30S ribosomal protein S15

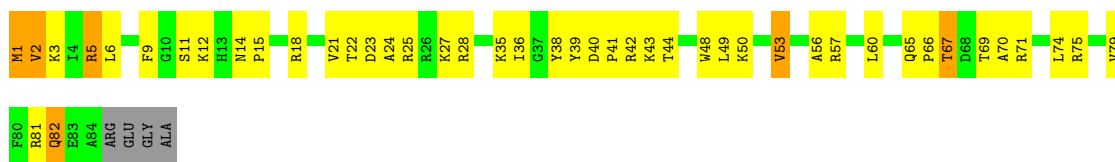


• Molecule 16: 30S ribosomal protein S16



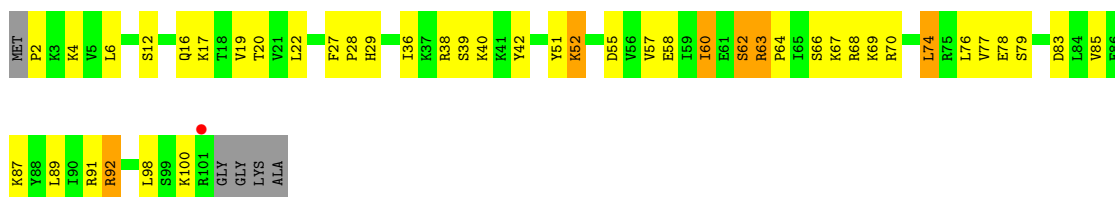
- Molecule 16: 30S ribosomal protein S16

Chain 7A:  44% 44% 7% 5%



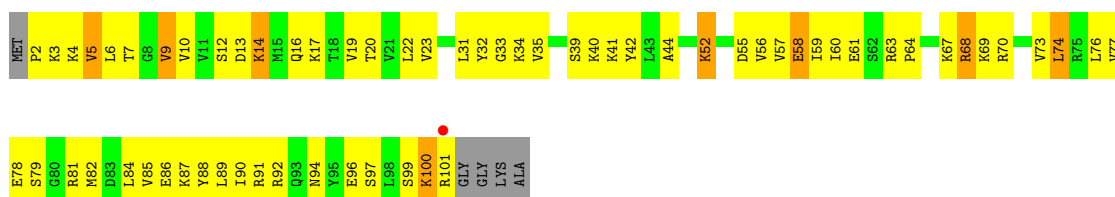
- Molecule 17: 30S ribosomal protein S17

Chain 8I:  53% 36% 6% 5%

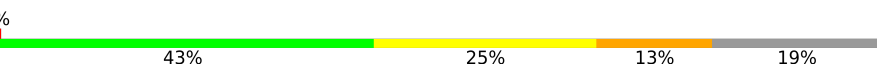


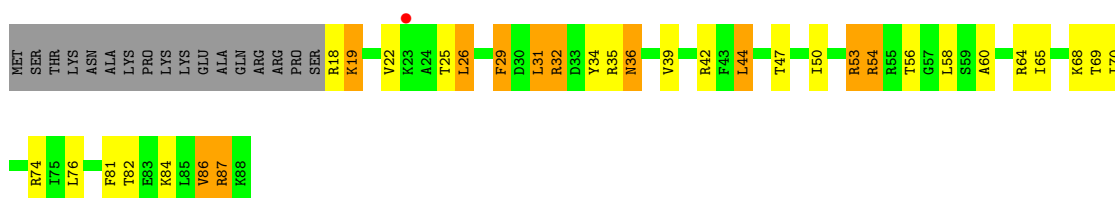
- Molecule 17: 30S ribosomal protein S17

Chain 8A:  34% 53% 8% 5%



- Molecule 18: 30S ribosomal protein S18

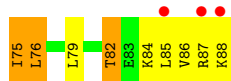
Chain 9I:  43% 25% 13% 19%



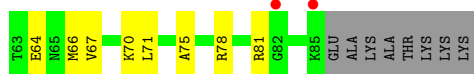
- Molecule 18: 30S ribosomal protein S18

Chain 9A:  5% 35% 38% 20%

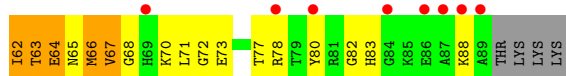
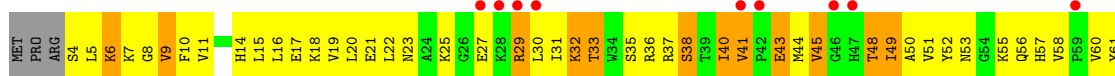




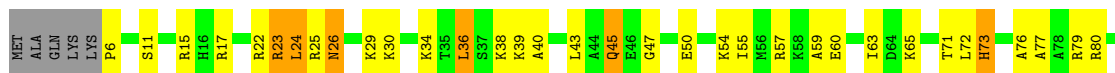
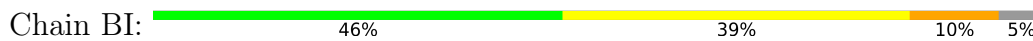
• Molecule 19: 30S ribosomal protein S19



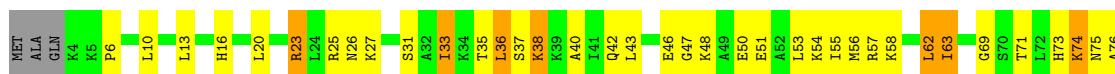
• Molecule 19: 30S ribosomal protein S19



• Molecule 20: 30S ribosomal protein S20

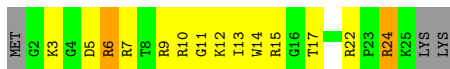


• Molecule 20: 30S ribosomal protein S20

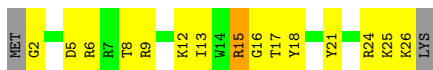
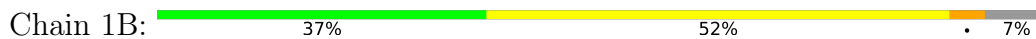


• Molecule 21: 30S ribosomal protein Thx

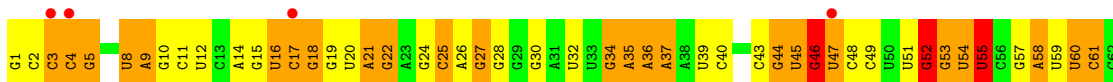
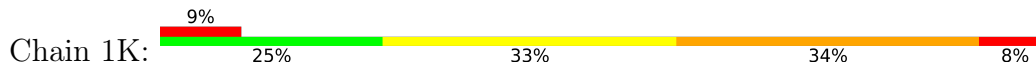




- Molecule 21: 30S ribosomal protein Thx



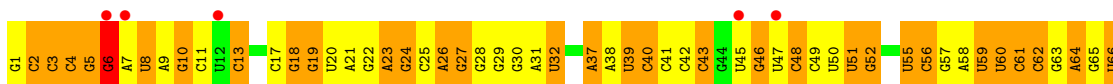
- Molecule 22: E. coli tRNAPhe



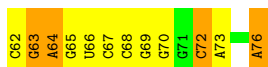
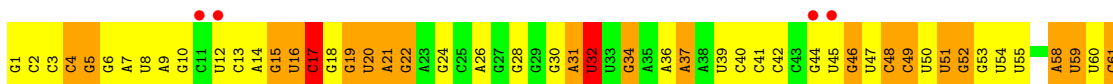
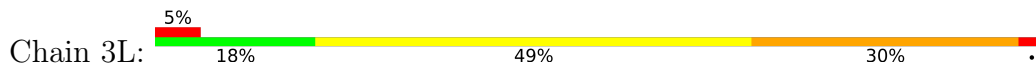
- Molecule 23: E. coli tRNAPhe



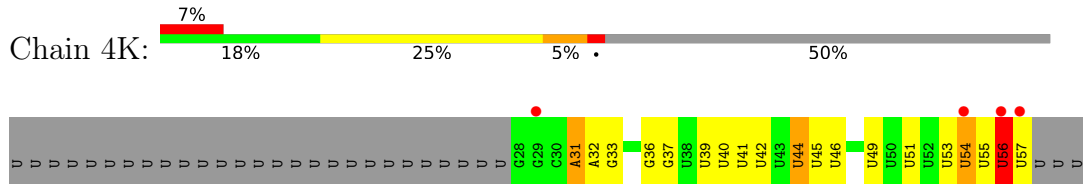
- Molecule 24: E. coli tRNAPhe



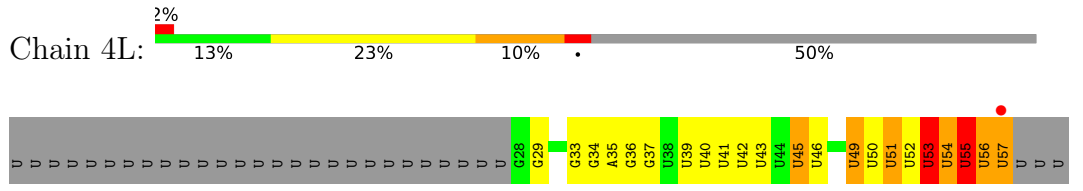
- Molecule 24: E. coli tRNAPhe



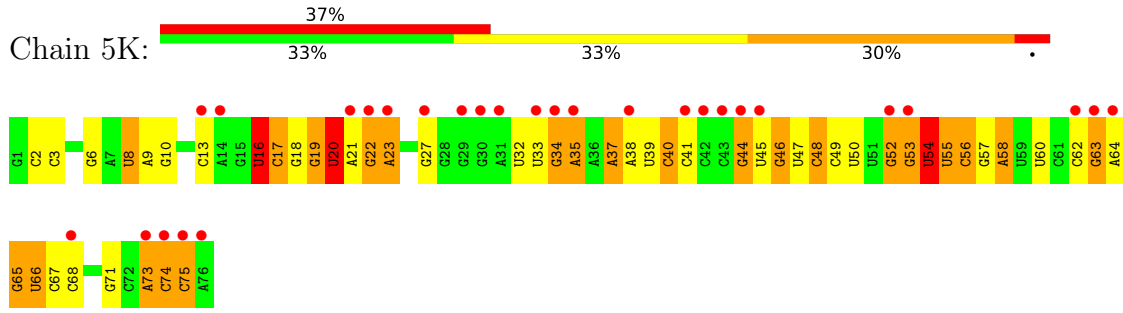
• Molecule 25: mRNA



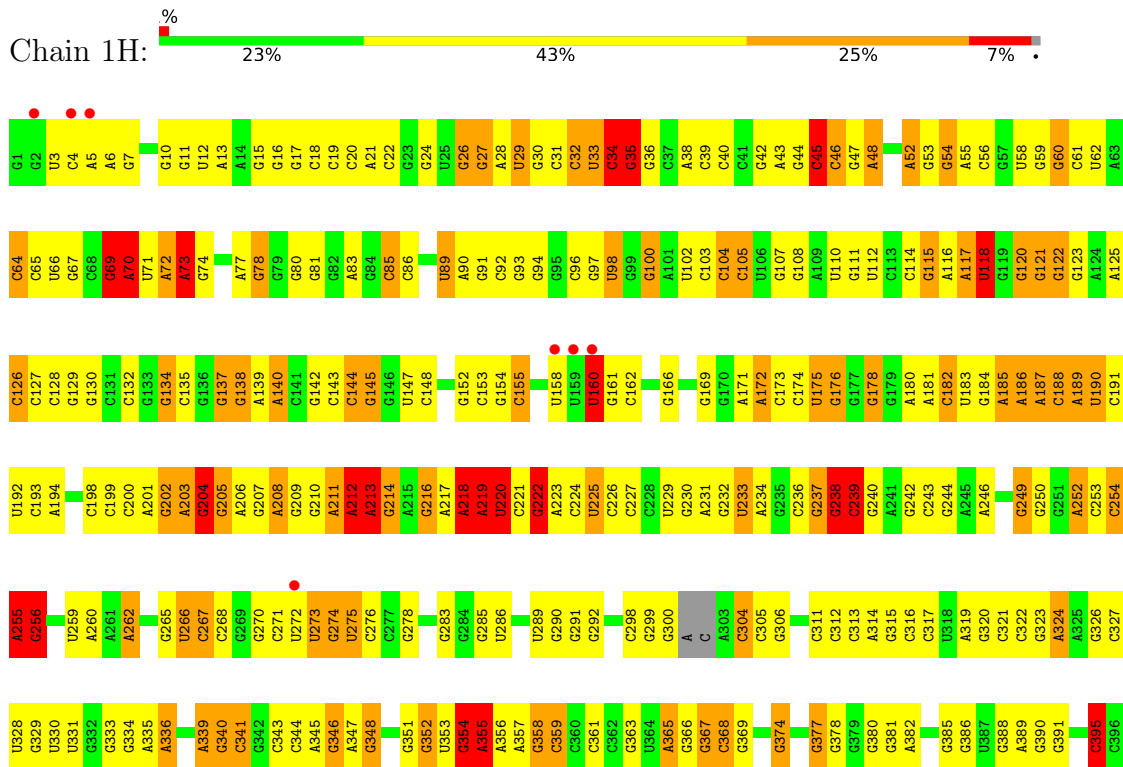
• Molecule 25: mRNA



• Molecule 26: E. coli tRNAPhe



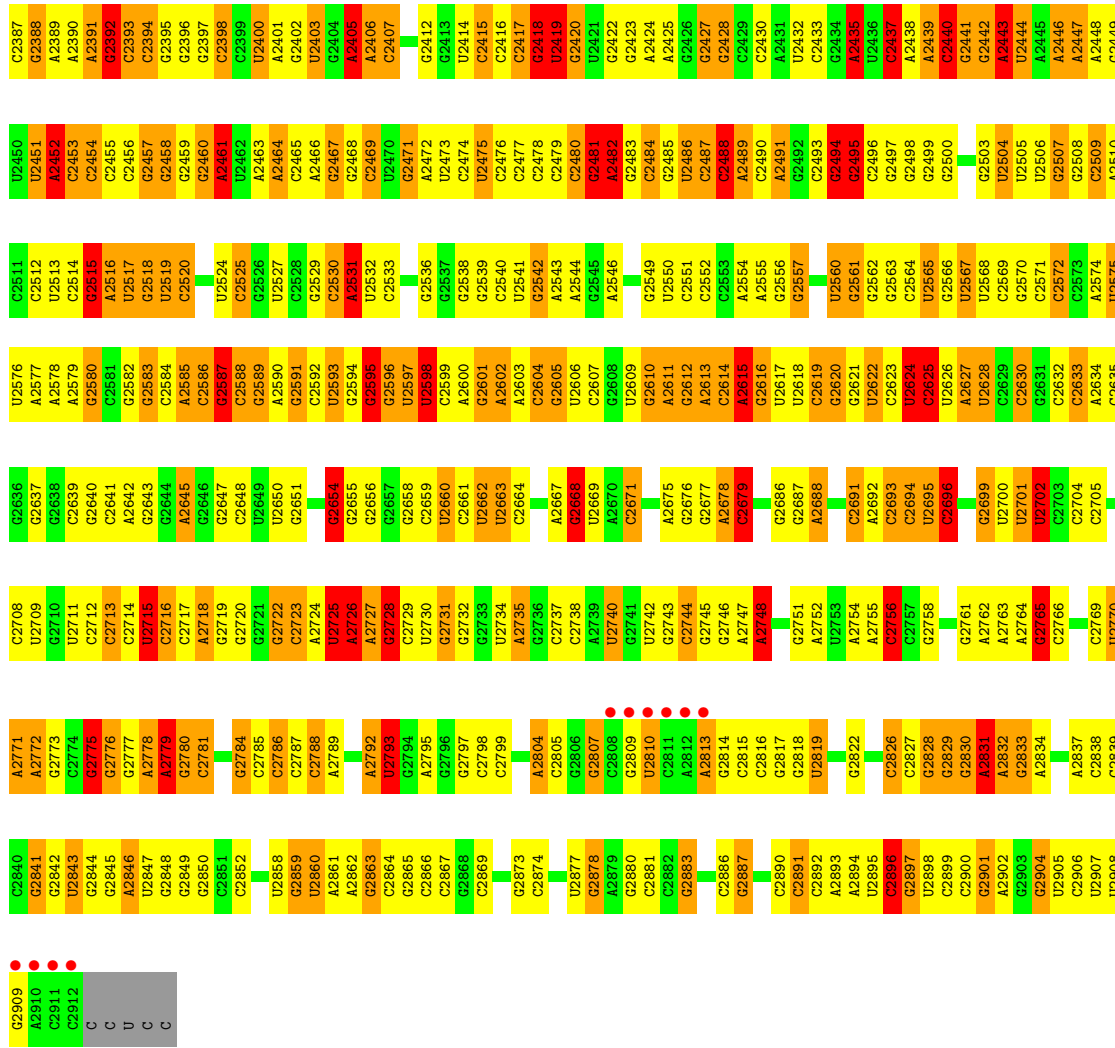
• Molecule 27: 23S ribosomal RNA



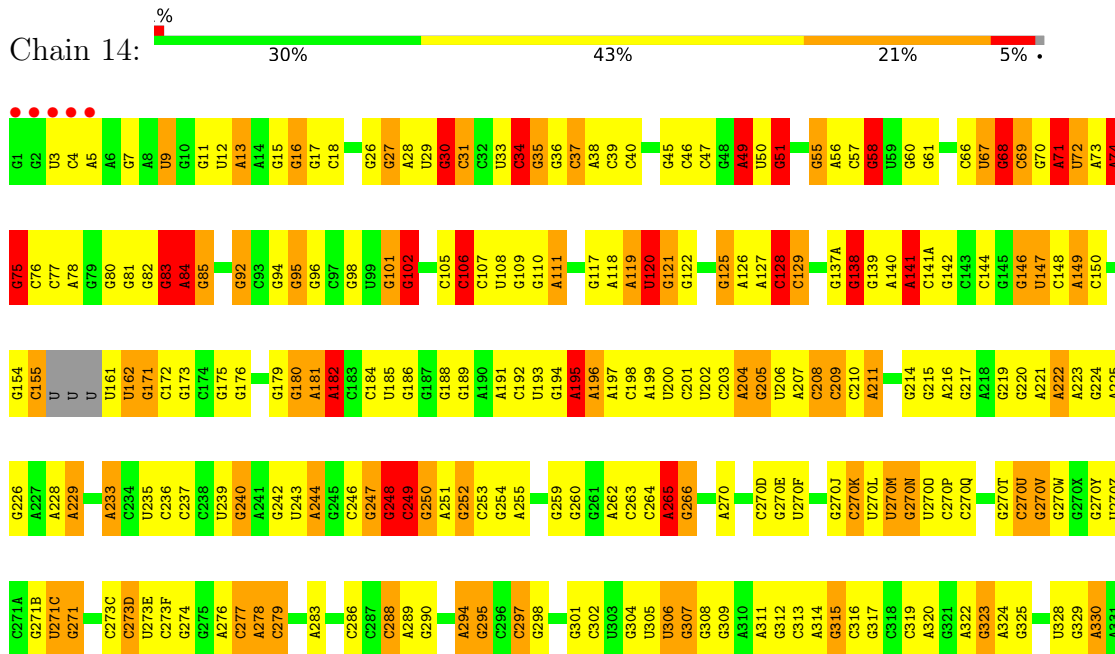
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G2363	G2235	G2110	G2170	A2100	U2040	G1978	A1908	A1846	A1718	C1658	G1526	G1461
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G2367	A2238	C2104	G2172	C2104	A2042	U1979	C1910	A1848	C1720	G1660	G1528	G1463
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C2382	G2252	U2115	C2183	U2115	A2053	A1992	G1926	A1859	C1799	G1671	A1543	G1473
C2383	C2253	G2116	G2184	G2116	A2054	A1993	G1927	G1860	U1900	G1672	A1544	A1474
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G2386	U2256	U2122	C2187	U2122	G2058	G1996	C1930	A1863	C1803	G1675	C1548	U1478
G2387	G2257	G2123	G2188	G2123	C2059	U1999	C1931	A1864	G1804	U1676	A1614	U1479
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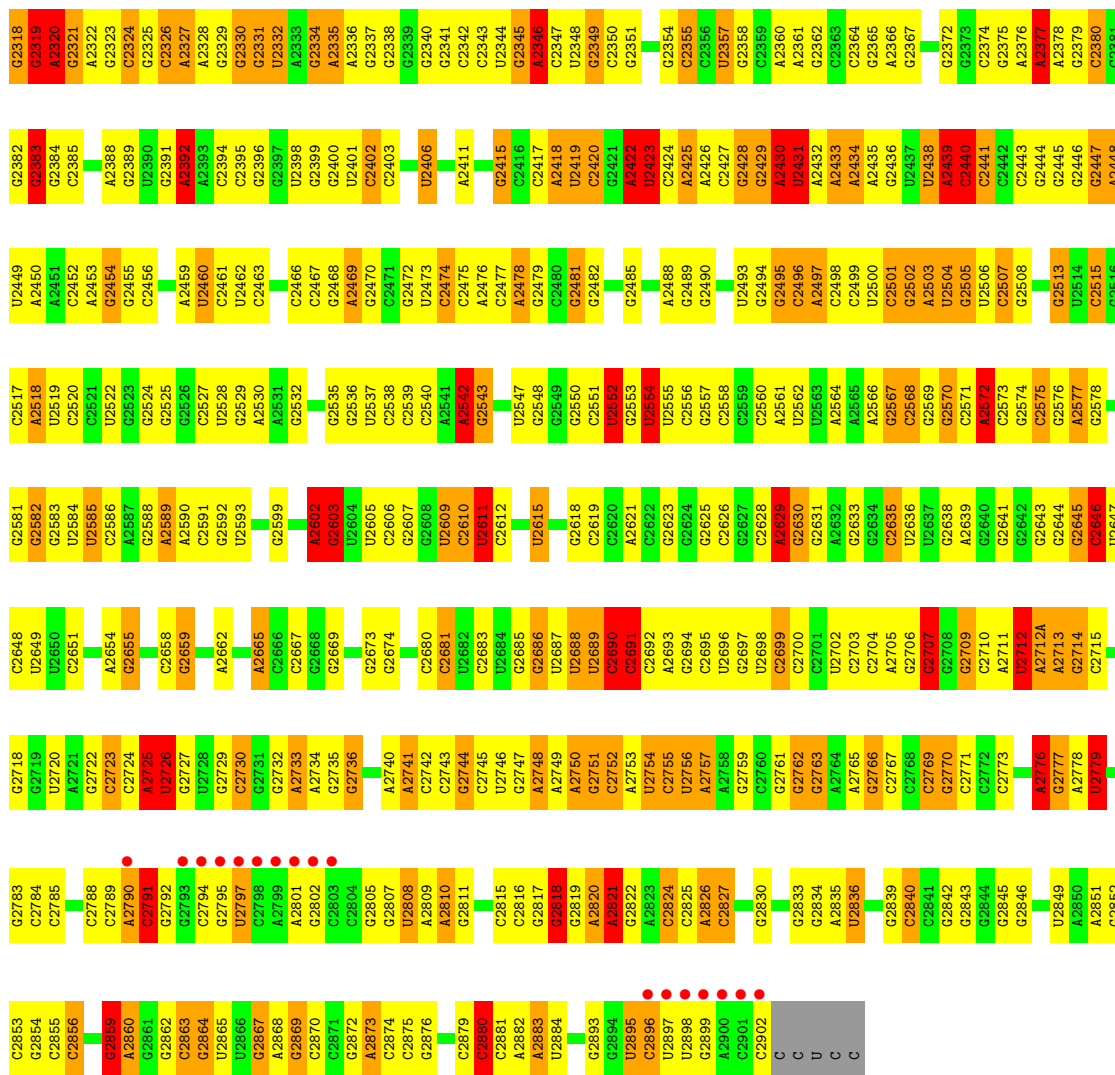


- Molecule 27: 23S ribosomal RNA

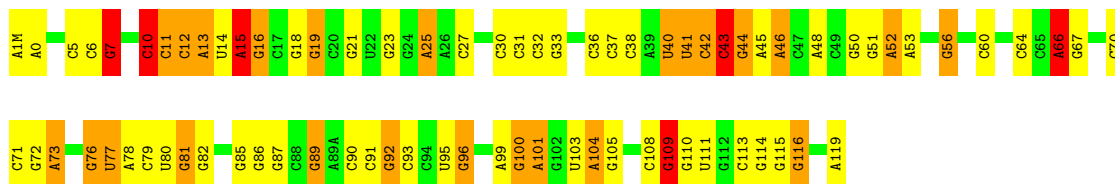


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G1283	G1212	G1144	A945	A878	U811	A750	G669	U626	U562	C488	C420	A340
A1284	A1213	C1145	G947	G879	C812	A751	C671	A627	C489	C489	C423	A345
A1285	G1216	C1146	G948	G880	U813	A752	C672	G628	C491	C492	A424	A346
A1287	A1220	G1149	G952	G881	C814	C753	G673	G629	A492	C424	C425	A347
A1288	C1221	G1150	G953	G882	C815	C754	G674	U566	C493	C426	G352	A347
G1291	G1222	U1018	G954	G883	C816	C755	G675	A630	C494	A567	C427	G353
U1292	C1223	U1019	G955	C884	C817	C756	A677	A633	C495	G495	A428	G354
C1293	G1224	A1020	G956	C885	G818	U757	A678	A634	U568	G496	A429	G355
G1294	A1225	A1021	G957	C886	A819	G759	C678	C634	G570	A497	A429	G356
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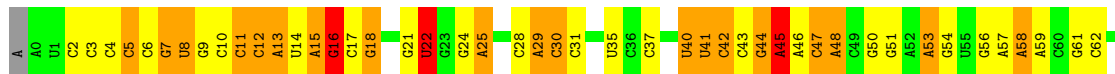
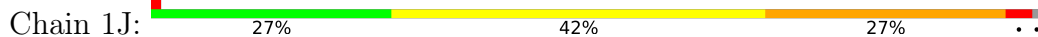
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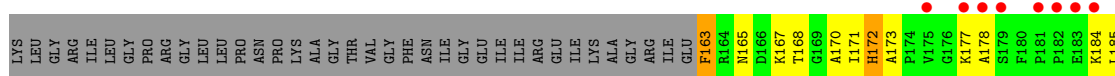
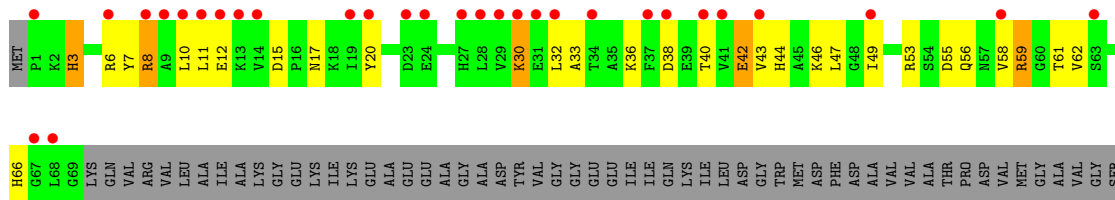
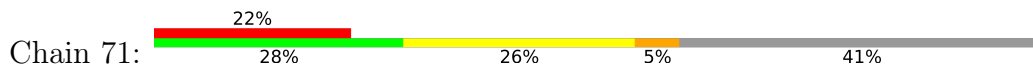


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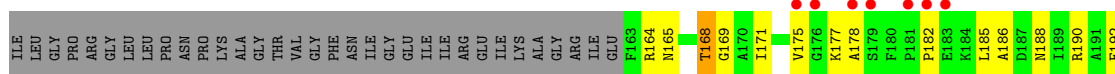
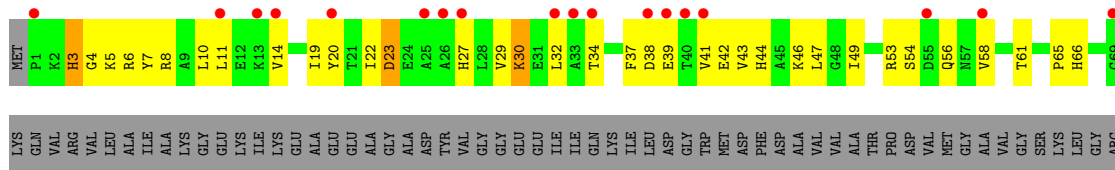
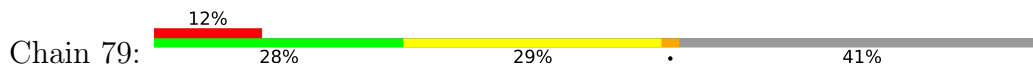




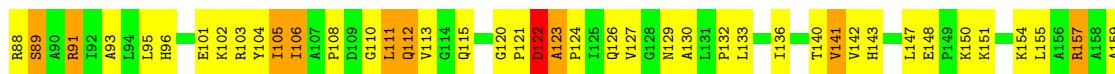
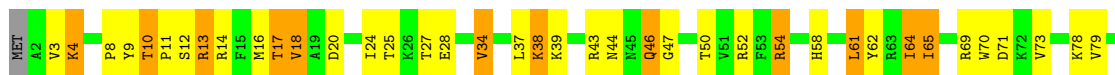
● Molecule 29: 50S ribosomal protein L1

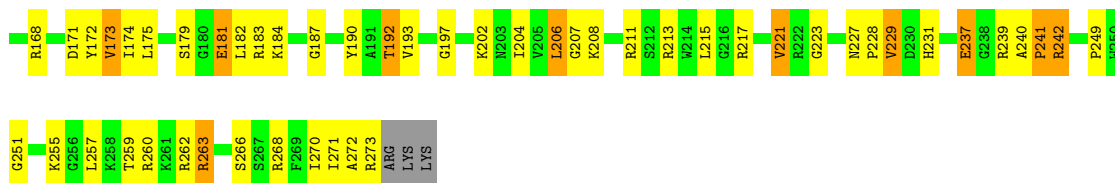


● Molecule 29: 50S ribosomal protein L1

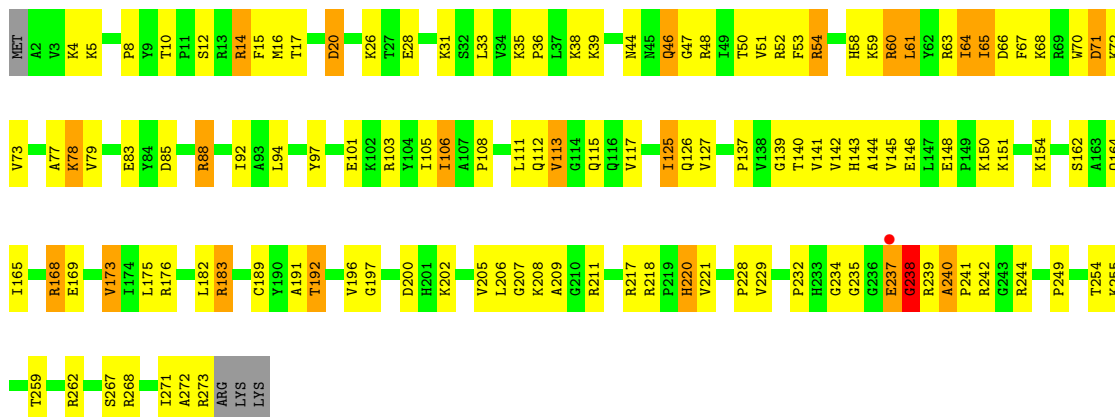


● Molecule 30: 50S ribosomal protein L2

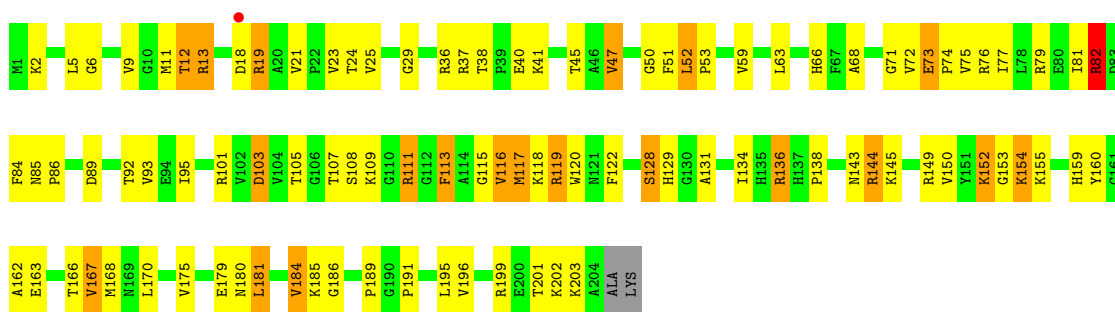




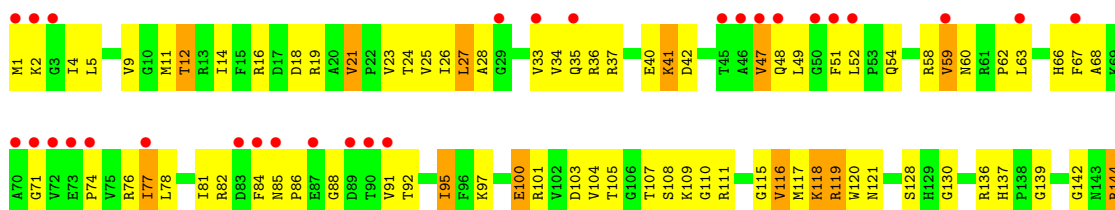
• Molecule 30: 50S ribosomal protein L2



• Molecule 31: 50S ribosomal protein L3



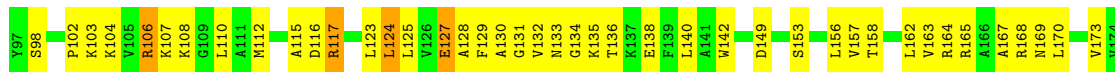
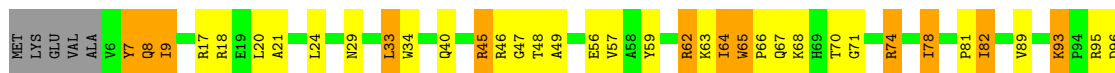
• Molecule 31: 50S ribosomal protein L3





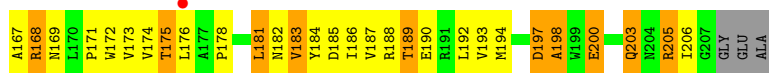
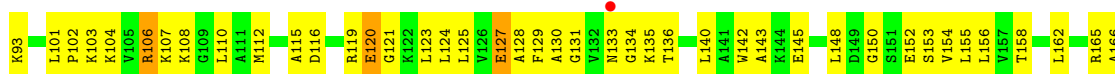
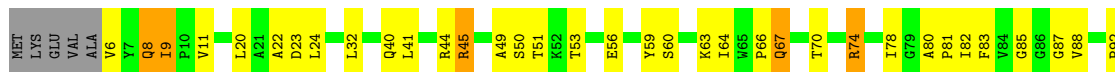
- Molecule 32: 50S ribosomal protein L4

Chain 31: 49% 38% 10%



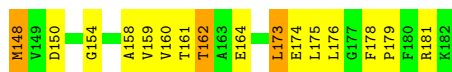
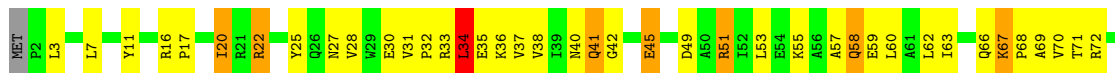
- Molecule 32: 50S ribosomal protein L4

Chain 39: 46% 42% 9%



- Molecule 33: 50S ribosomal protein L5

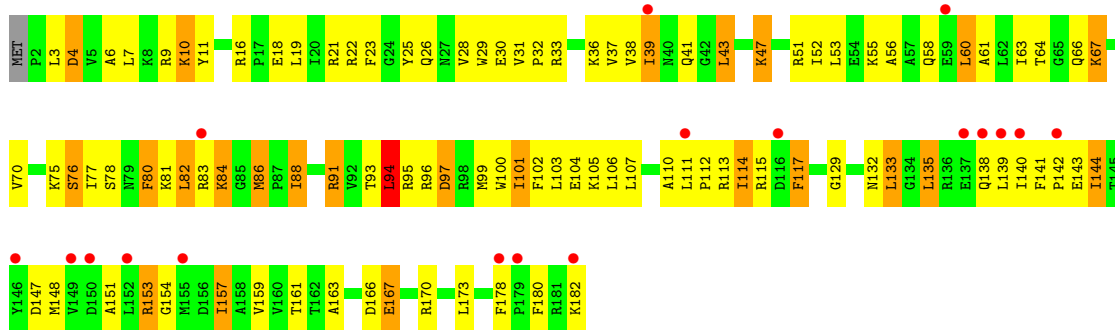
Chain 41: 47% 42% 9%



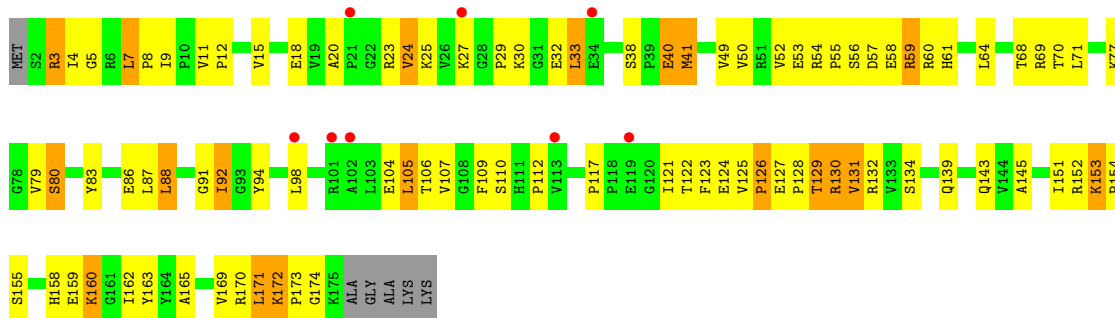
- Molecule 33: 50S ribosomal protein L5

Chain 49: 10% 44% 42% 13%

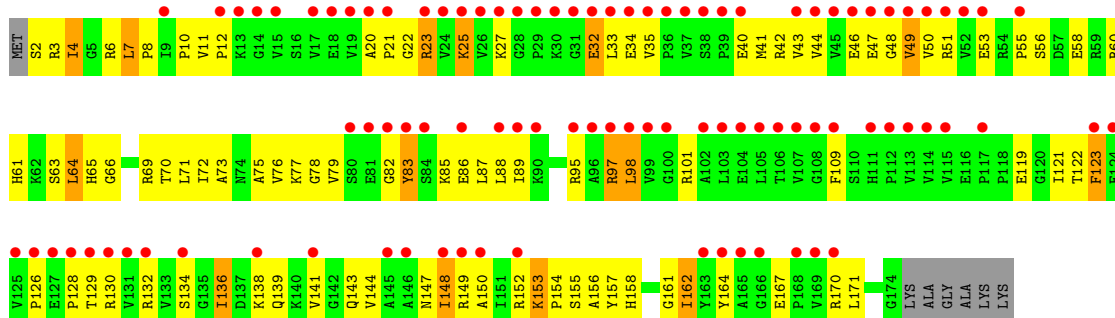
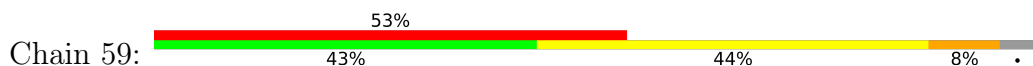




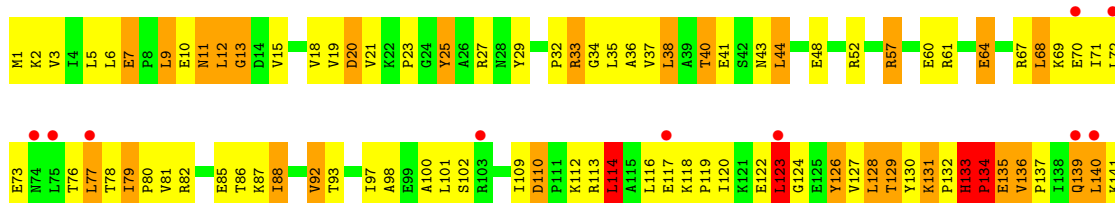
• Molecule 34: 50S ribosomal protein L6



• Molecule 34: 50S ribosomal protein L6

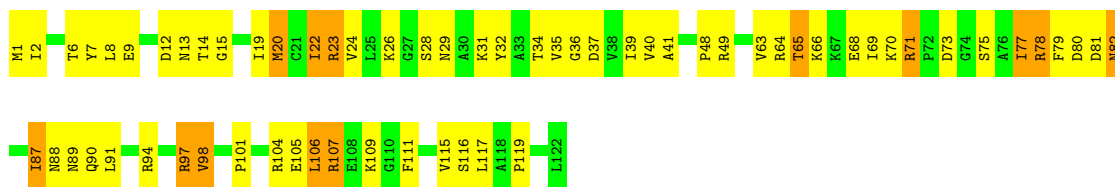


• Molecule 35: 50S ribosomal protein L9



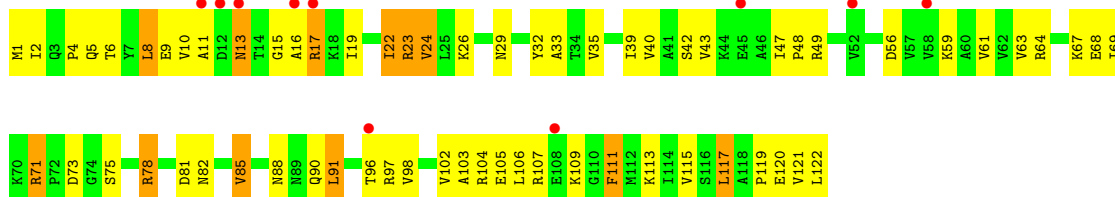


Chain 68:  48% 42% 11%



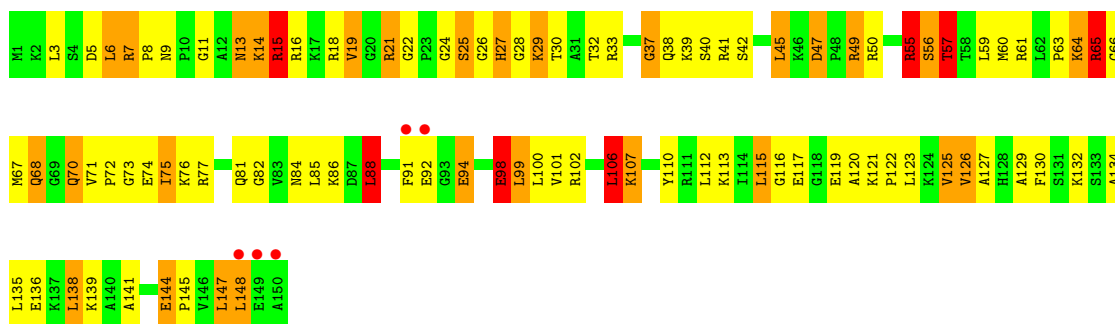
• Molecule 38: 50S ribosomal protein L14

Chain 25:  8% 47% 43% 10%



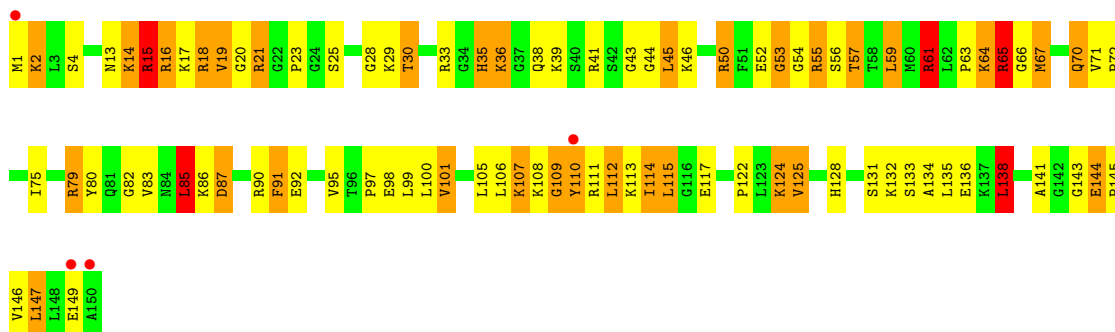
• Molecule 39: 50S ribosomal protein L15

Chain 78:  3% 35% 41% 19% 5%

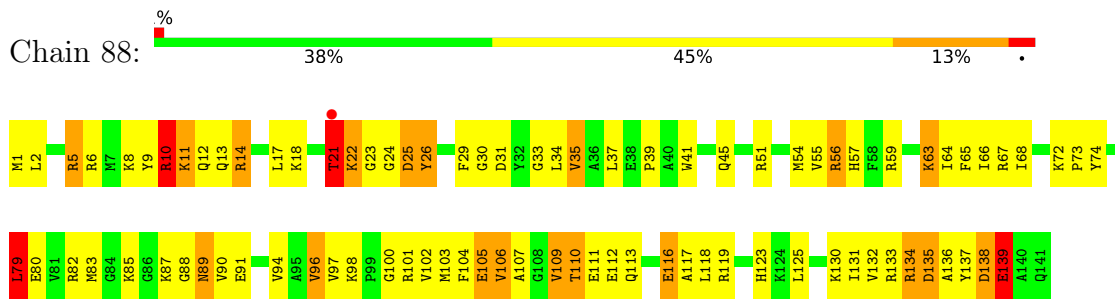


• Molecule 39: 50S ribosomal protein L15

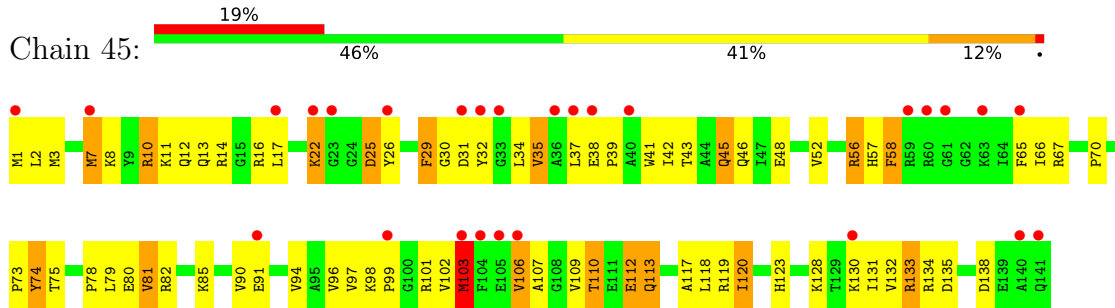
Chain 35:  3% 39% 36% 21%



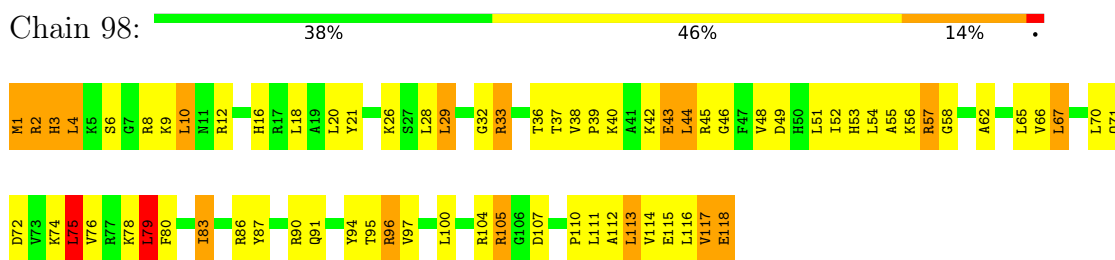
• Molecule 40: 50S ribosomal protein L16



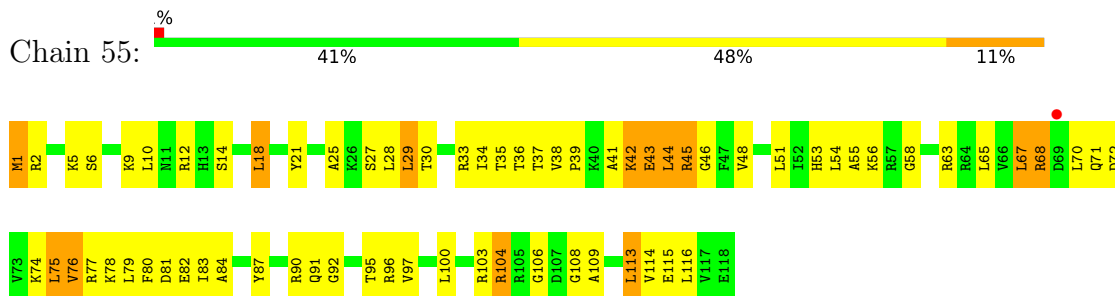
• Molecule 40: 50S ribosomal protein L16



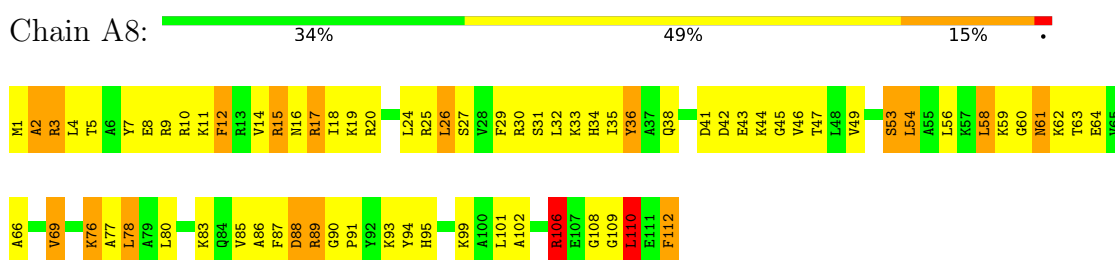
• Molecule 41: 50S ribosomal protein L17



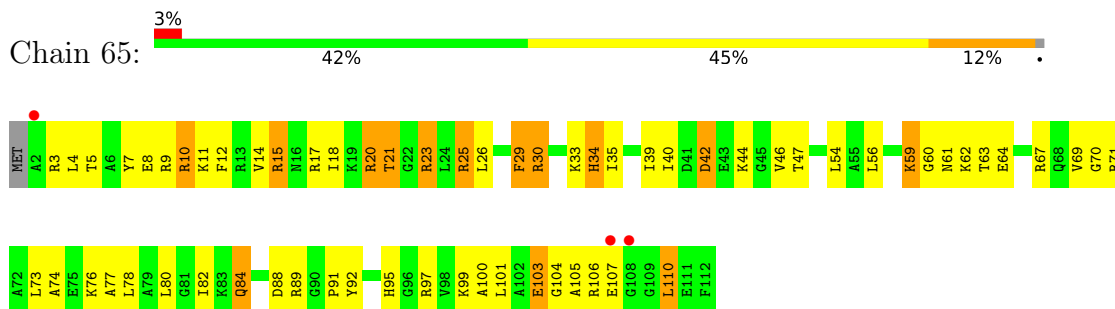
• Molecule 41: 50S ribosomal protein L17



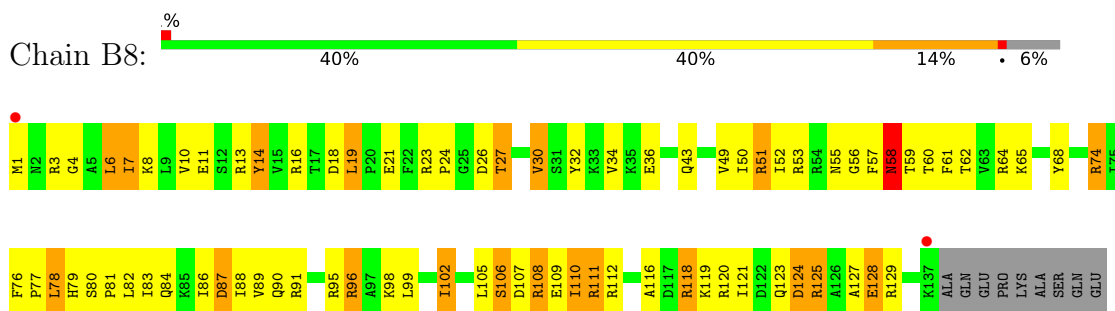
• Molecule 42: 50S ribosomal protein L18



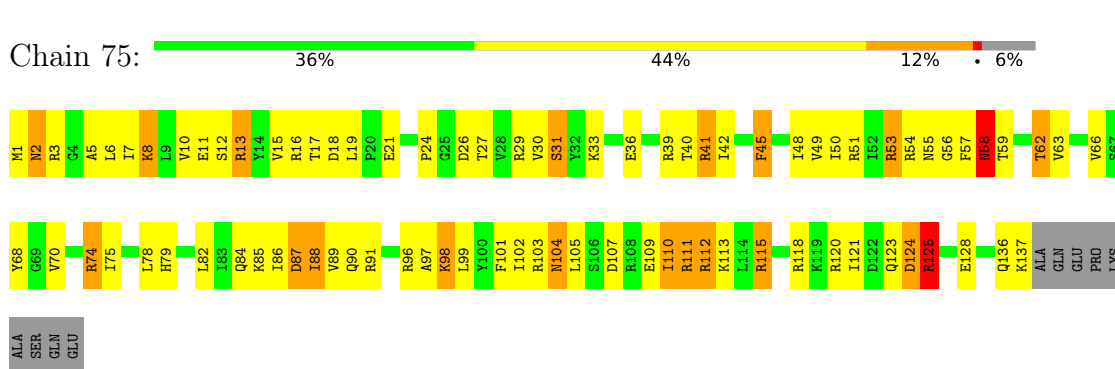
- Molecule 42: 50S ribosomal protein L18



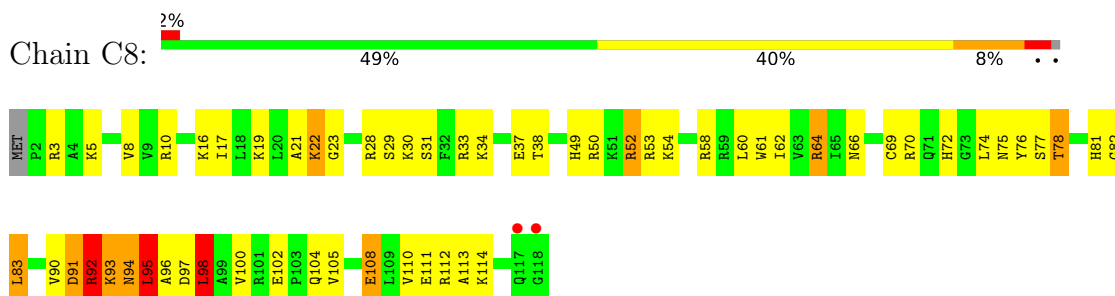
- Molecule 43: 50S ribosomal protein L19



- Molecule 43: 50S ribosomal protein L19

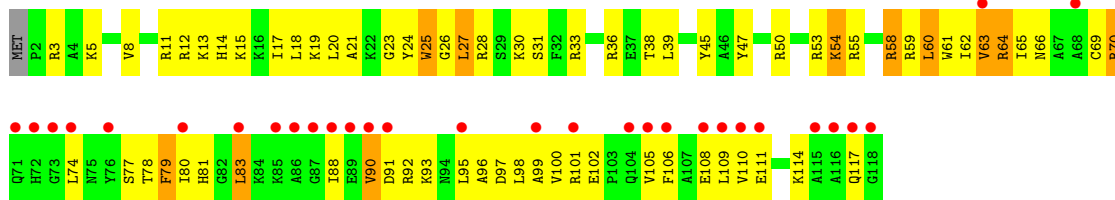


- Molecule 44: 50S ribosomal protein L20

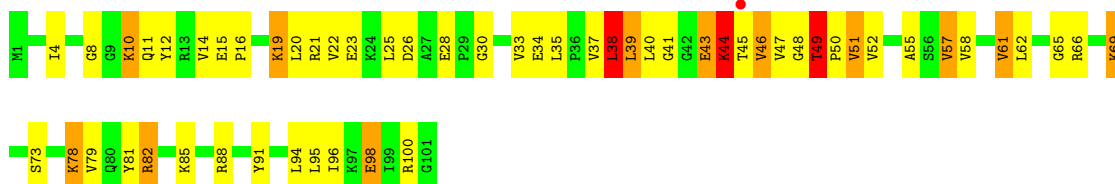


- Molecule 44: 50S ribosomal protein L20

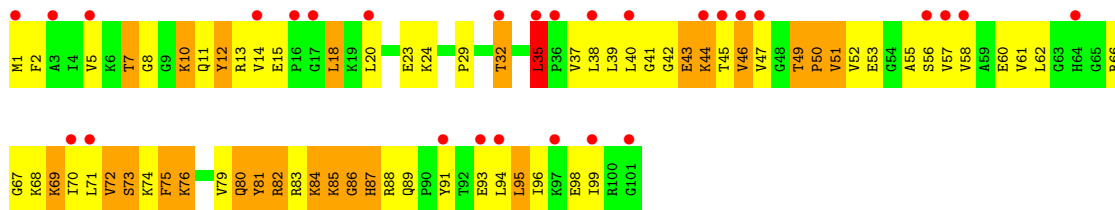




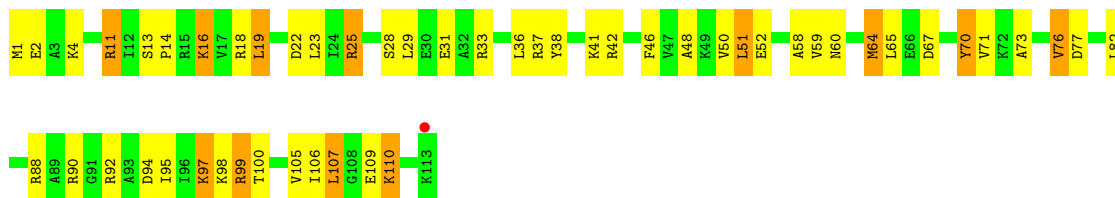
• Molecule 45: 50S ribosomal protein L21



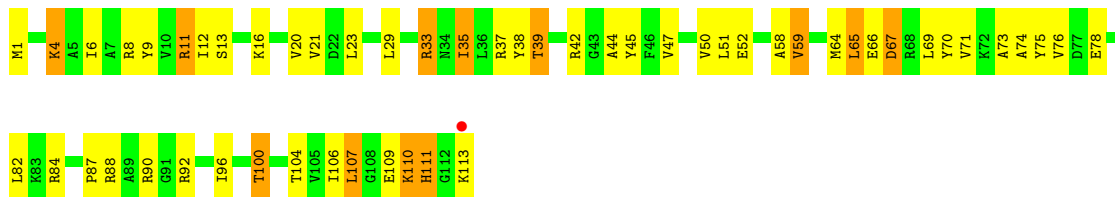
• Molecule 45: 50S ribosomal protein L21



• Molecule 46: 50S ribosomal protein L22

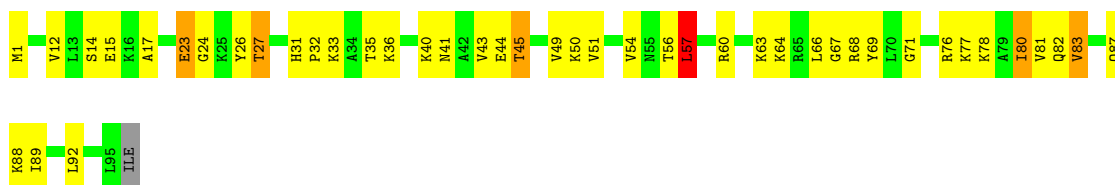


• Molecule 46: 50S ribosomal protein L22




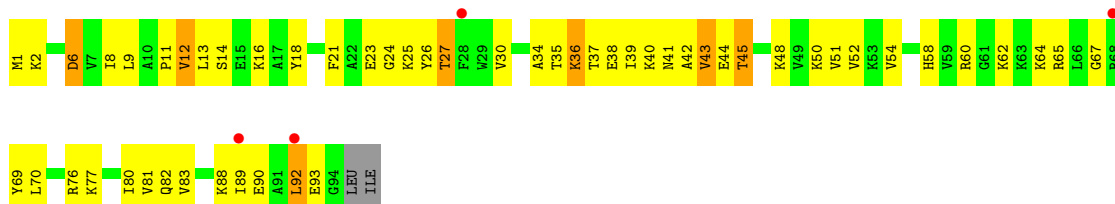
- Molecule 47: 50S ribosomal protein L23

Chain F8:  53% 40% 5% ..



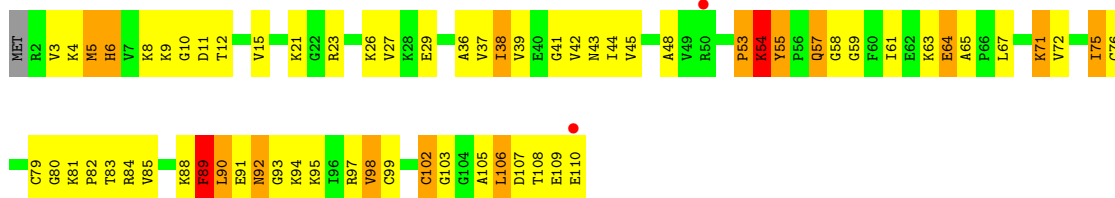
- Molecule 47: 50S ribosomal protein L23

Chain B5:  42% 49% 7% .



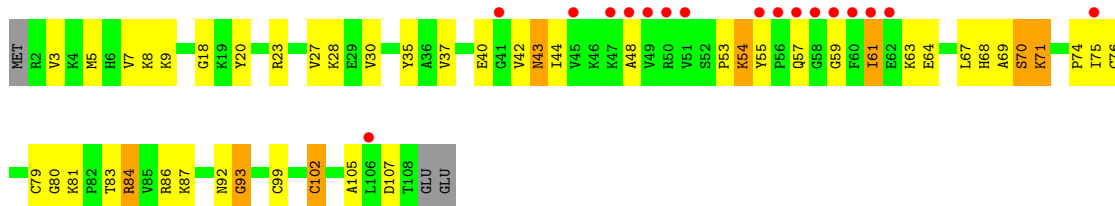
- Molecule 48: 50S ribosomal protein L24

Chain G8:  39% 45% 13% ..




- Molecule 48: 50S ribosomal protein L24

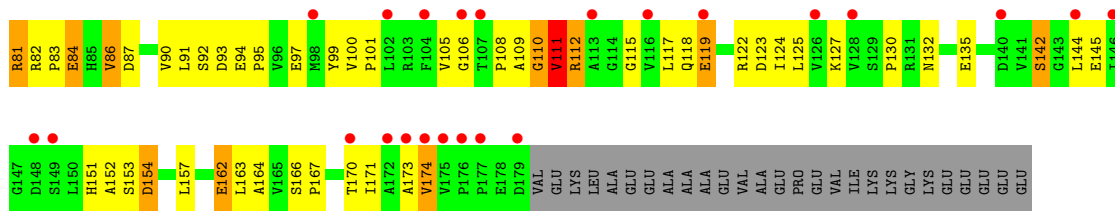
Chain C5:  55% 35% 7% .



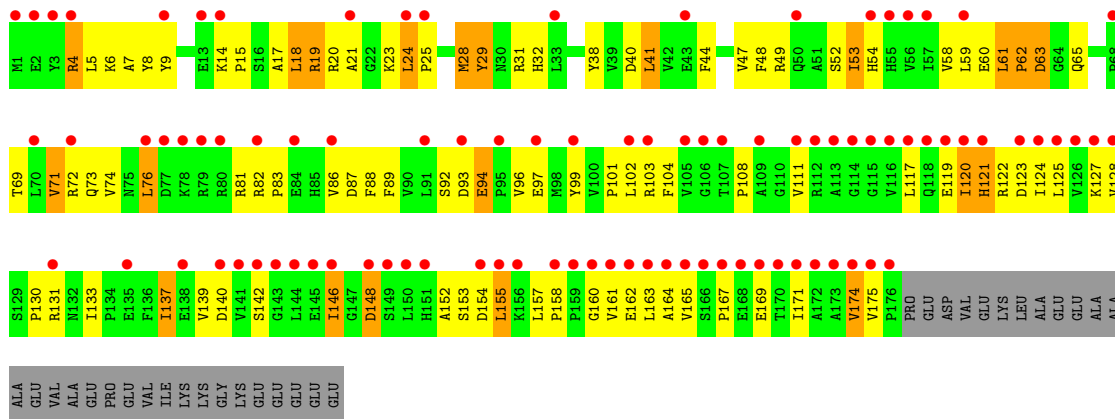
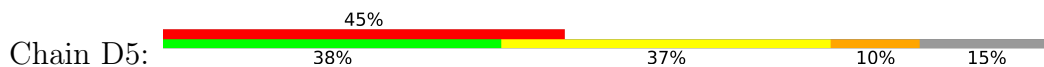
- Molecule 49: 50S ribosomal protein L25

Chain H8:  42% 33% 12% 13%





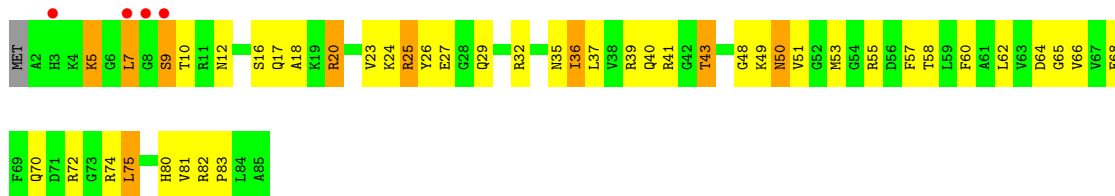
• Molecule 49: 50S ribosomal protein L25



• Molecule 50: 50S ribosomal protein L27



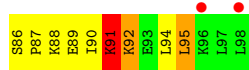
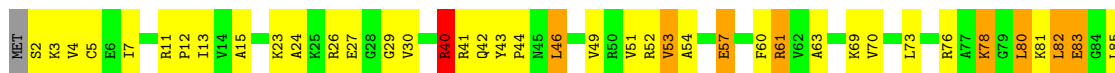
• Molecule 50: 50S ribosomal protein L27



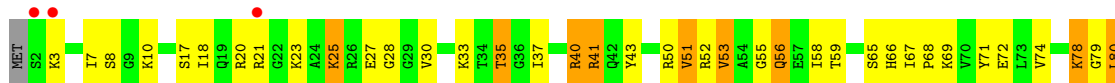
• Molecule 51: 50S ribosomal protein L28







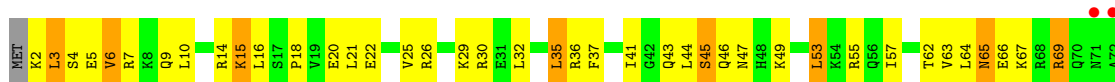
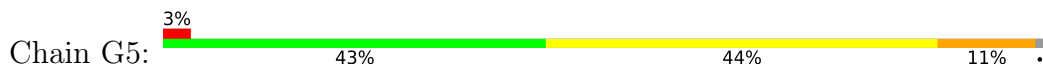
- Molecule 51: 50S ribosomal protein L28



- Molecule 52: 50S ribosomal protein L29



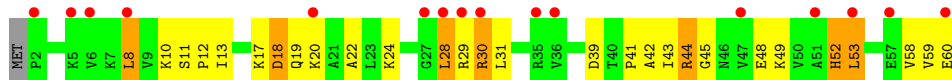
- Molecule 52: 50S ribosomal protein L29



- Molecule 53: 50S ribosomal protein L30

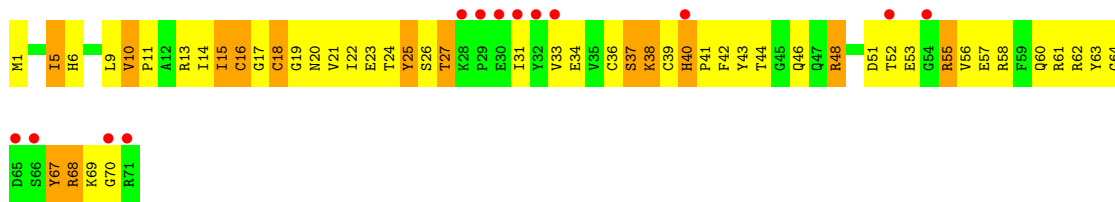


- Molecule 53: 50S ribosomal protein L30

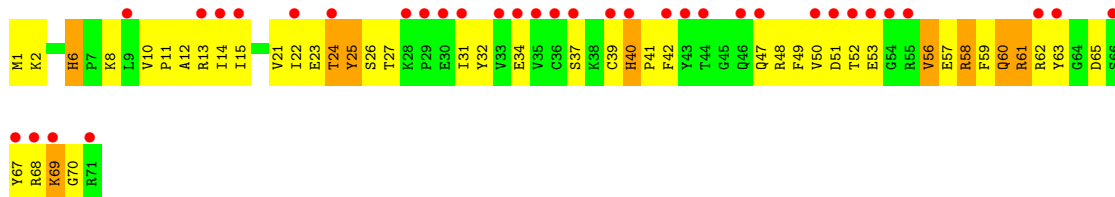


- Molecule 54: 50S ribosomal protein L31

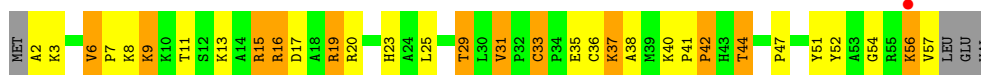
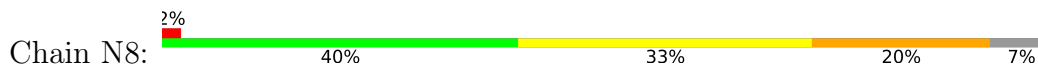




• Molecule 54: 50S ribosomal protein L31



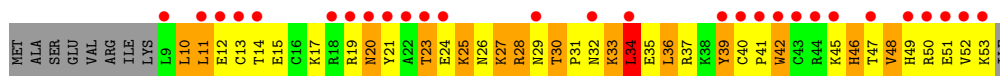
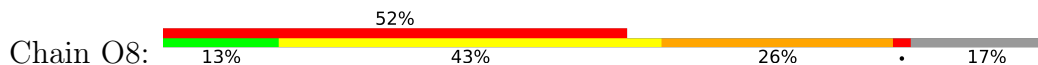
• Molecule 55: 50S ribosomal protein L32



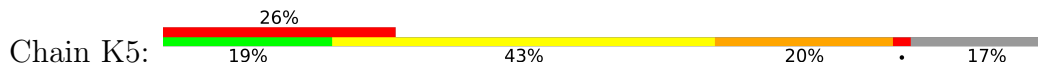
• Molecule 55: 50S ribosomal protein L32



• Molecule 56: 50S ribosomal protein L33



• Molecule 56: 50S ribosomal protein L33

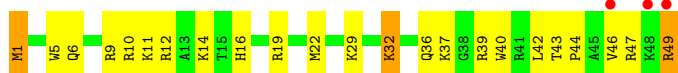


• Molecule 57: 50S ribosomal protein L34

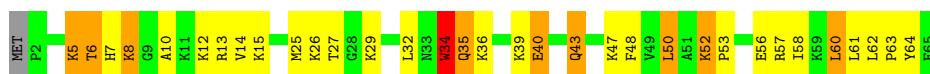




- Molecule 57: 50S ribosomal protein L34



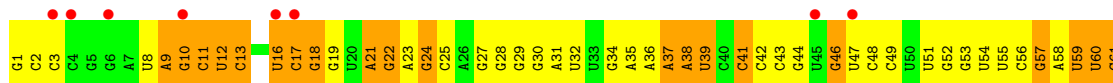
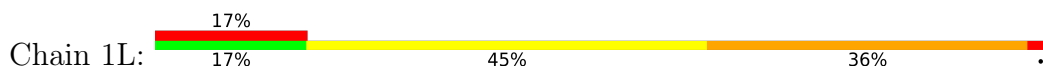
- Molecule 58: 50S ribosomal protein L35



- Molecule 58: 50S ribosomal protein L35



- Molecule 59: E. coli tRNAPhe



- Molecule 60: E. coli tRNAPhe



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	209.46Å 446.20Å 623.05Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	223.10 – 3.10 223.10 – 3.00	Depositor EDS
% Data completeness (in resolution range)	99.7 (223.10-3.10) 99.8 (223.10-3.00)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.72 (at 3.01Å)	Xtrriage
Refinement program	PHENIX 1.13_2998	Depositor
R, $R_{free}$	0.196 , 0.253 0.196 , 0.253	Depositor DCC
$R_{free}$ test set	34306 reflections (2.99%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	61.5	Xtrriage
Anisotropy	0.212	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.27 , 67.8	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.43$ , $\langle L^2 \rangle = 0.25$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	305753	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	75.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.45% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 2MA, OMU, 2MG, 4OC, 5MC, UR3, MG, 0TD, ZN, 3AU, 7MG, OMC, M2G, OMG, K, PSU, H2U, SF4, MA6, 5MU, 4SU, MIA

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	0.79	8/36175 (0.0%)	1.40	445/56452 (0.8%)
1	1G	0.69	1/36106 (0.0%)	1.30	264/56346 (0.5%)
2	12	0.36	0/1959	0.61	1/2642 (0.0%)
2	1E	0.38	0/1959	0.59	1/2642 (0.0%)
3	22	0.37	0/1636	0.60	0/2205
3	2E	0.44	0/1629	0.61	0/2195
4	32	0.48	0/1732	0.62	1/2318 (0.0%)
4	3E	0.49	0/1732	0.64	0/2318
5	42	0.46	0/1171	0.64	0/1576
5	4E	0.54	1/1171 (0.1%)	0.64	0/1576
6	52	0.47	0/855	0.65	0/1154
6	5E	0.49	0/855	0.62	0/1154
7	62	0.43	0/1275	0.54	0/1709
7	6E	0.47	0/1275	0.57	0/1709
8	72	0.39	0/1135	0.62	0/1527
8	7E	0.49	0/1135	0.67	0/1527
9	82	0.36	0/1022	0.56	0/1371
9	8E	0.44	0/1022	0.58	0/1371
10	1A	0.41	0/814	0.63	0/1095
10	1I	0.43	0/814	0.64	0/1095
11	2A	0.42	0/888	0.58	0/1198
11	2I	0.48	0/879	0.62	0/1187
12	3A	0.50	0/982	0.71	1/1313 (0.1%)
12	3I	0.61	0/982	0.80	1/1313 (0.1%)
13	4A	0.38	0/974	0.59	0/1303
13	4I	0.44	0/956	0.65	0/1281
14	5A	0.43	0/500	0.65	0/664
14	5I	0.51	0/500	0.66	0/664
15	6A	0.44	0/744	0.56	0/992
15	6I	0.49	0/744	0.65	0/992
16	7A	0.50	0/721	0.63	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
16	7I	0.43	0/716	0.66	0/963
17	8A	0.46	0/847	0.62	0/1131
17	8I	0.49	0/847	0.65	0/1131
18	9A	0.47	0/578	0.72	0/768
18	9I	0.48	0/589	0.73	0/782
19	AA	0.38	0/698	0.60	0/938
19	AI	0.44	0/689	0.71	0/926
20	BA	0.43	0/778	0.62	1/1028 (0.1%)
20	BI	0.38	0/768	0.61	1/1014 (0.1%)
21	1B	0.36	0/221	0.52	0/288
21	1F	0.37	0/212	0.57	0/277
22	1K	0.60	1/1647 (0.1%)	1.23	10/2565 (0.4%)
23	2K	0.90	0/1580	1.61	29/2459 (1.2%)
24	3K	0.53	1/1739 (0.1%)	1.20	10/2708 (0.4%)
24	3L	0.52	0/1739	1.17	12/2708 (0.4%)
25	4K	0.63	0/689	1.18	4/1069 (0.4%)
25	4L	0.59	0/689	1.25	9/1069 (0.8%)
26	5K	0.47	0/1629	1.05	1/2538 (0.0%)
27	14	0.87	47/69120 (0.1%)	1.52	1139/107900 (1.1%)
27	1H	1.18	189/69453 (0.3%)	1.87	2698/108417 (2.5%)
28	16	0.90	1/2928 (0.0%)	1.60	59/4568 (1.3%)
28	1J	0.65	0/2906	1.29	15/4533 (0.3%)
29	71	0.27	0/1072	0.51	0/1447
29	79	0.30	0/1072	0.51	0/1447
30	11	0.75	2/2165 (0.1%)	0.95	4/2919 (0.1%)
30	19	0.64	1/2165 (0.0%)	0.81	3/2919 (0.1%)
31	21	0.65	0/1592	0.77	2/2149 (0.1%)
31	29	0.46	0/1592	0.66	0/2149
32	31	0.75	1/1620 (0.1%)	0.84	0/2194
32	39	0.53	0/1620	0.72	1/2194 (0.0%)
33	41	0.51	0/1498	0.71	1/2016 (0.0%)
33	49	0.38	0/1498	0.61	1/2016 (0.0%)
34	51	0.49	0/1362	0.69	0/1841
34	59	0.32	0/1353	0.56	0/1830
35	61	0.47	0/1146	0.80	5/1551 (0.3%)
35	69	0.45	0/1151	0.64	0/1558
36	38	0.36	0/636	0.75	2/847 (0.2%)
37	15	0.41	0/1131	0.63	0/1525
37	58	0.65	0/1131	0.84	1/1525 (0.1%)
38	25	0.54	0/942	0.72	2/1269 (0.2%)
38	68	0.66	0/942	0.78	0/1269
39	35	0.54	0/1161	0.92	5/1544 (0.3%)
39	78	0.65	0/1161	0.99	2/1544 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
40	45	0.49	0/1142	0.66	0/1527
40	88	0.69	0/1171	0.85	3/1565 (0.2%)
41	55	0.47	0/981	0.69	0/1312
41	98	0.56	0/981	0.88	2/1312 (0.2%)
42	65	0.47	0/891	0.71	0/1187
42	A8	0.57	0/899	0.89	2/1197 (0.2%)
43	75	0.47	0/1155	0.63	0/1542
43	B8	0.63	0/1155	0.77	1/1542 (0.1%)
44	85	0.48	0/981	0.65	0/1306
44	C8	0.67	0/981	0.85	1/1306 (0.1%)
45	95	0.50	0/789	0.76	1/1057 (0.1%)
45	D8	0.61	0/789	0.84	3/1057 (0.3%)
46	A5	0.55	0/910	0.66	0/1220
46	E8	0.68	0/910	0.84	2/1220 (0.2%)
47	B5	0.60	0/756	0.71	1/1014 (0.1%)
47	F8	0.76	1/761 (0.1%)	0.88	3/1021 (0.3%)
48	C5	0.49	0/788	0.77	0/1059
48	G8	0.58	0/838	0.77	1/1121 (0.1%)
49	D5	0.35	0/1435	0.59	0/1947
49	H8	0.48	0/1460	0.68	1/1982 (0.1%)
50	E5	0.49	0/666	0.69	0/888
50	I8	0.75	1/670 (0.1%)	0.88	0/892
51	F5	0.55	0/769	0.76	0/1022
51	J8	0.69	0/769	0.89	1/1022 (0.1%)
52	G5	0.53	0/592	0.66	0/784
52	K8	0.65	0/600	0.73	0/794
53	H5	0.40	0/473	0.61	0/635
53	L8	0.58	0/473	0.79	0/635
54	I5	0.39	0/593	0.64	0/795
54	M8	0.46	0/593	0.66	0/795
55	J5	0.52	0/448	0.76	0/606
55	N8	0.56	0/448	0.81	1/606 (0.2%)
56	K5	0.45	0/396	0.76	0/529
56	O8	0.64	0/396	0.80	1/529 (0.2%)
57	L5	0.59	0/437	0.75	0/575
57	P8	0.76	0/427	0.99	2/564 (0.4%)
58	M5	0.52	0/514	0.79	1/679 (0.1%)
58	Q8	0.66	0/514	0.86	1/679 (0.1%)
59	1L	0.43	0/1717	1.06	3/2674 (0.1%)
60	2L	0.67	0/1602	1.28	8/2493 (0.3%)
All	All	0.83	255/326284 (0.1%)	1.39	4770/488082 (1.0%)

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	2
3	22	0	1
3	2E	0	1
5	4E	0	1
9	82	0	1
12	3A	0	2
12	3I	0	3
13	4A	0	1
13	4I	0	1
14	5I	0	1
19	AA	0	2
19	AI	0	1
20	BI	0	1
30	11	0	1
30	19	0	2
32	31	0	3
32	39	0	2
33	41	0	2
34	51	0	2
34	59	0	1
35	61	0	4
36	38	0	3
37	58	0	2
39	35	0	4
39	78	0	10
40	45	0	2
40	88	0	2
41	55	0	1
41	98	0	1
42	A8	0	2
43	75	0	3
43	B8	0	1
44	85	0	1
44	C8	0	2
45	95	0	3
45	D8	0	3
46	E8	0	1
48	C5	0	5
48	G8	0	4
49	D5	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
49	H8	0	3
50	E5	0	1
50	I8	0	1
51	F5	0	2
51	J8	0	1
52	G5	0	1
52	K8	0	1
54	M8	0	1
56	K5	0	3
56	O8	0	1
58	M5	0	3
58	Q8	0	1
All	All	0	105

The worst 5 of 255 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	1H	831	A	N9-C4	-14.30	1.29	1.37
27	1H	1818	A	N9-C4	-12.52	1.30	1.37
27	1H	822	A	N9-C4	-12.46	1.30	1.37
27	1H	1189	A	N9-C4	-11.38	1.31	1.37
27	1H	70	A	N9-C4	-11.34	1.31	1.37

The worst 5 of 4770 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	2150	G	O5'-P-OP2	-30.77	73.78	110.70
27	1H	2150	G	OP1-P-OP2	-27.63	78.15	119.60
27	1H	991	A	N1-C6-N6	23.99	133.00	118.60
27	1H	991	A	C6-C5-N7	-22.83	116.32	132.30
27	1H	1922	G	N3-C4-N9	-22.27	112.64	126.00

There are no chirality outliers.

5 of 105 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	2E	11	ARG	Peptide
12	3I	101	VAL	Peptide
12	3I	115	SER	Peptide
12	3I	44	LYS	Peptide
5	4E	20	GLN	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	32589	0	16470	898	0
1	1G	32526	0	16442	922	0
2	12	1924	0	1975	99	0
2	1E	1924	0	1975	96	0
3	22	1612	0	1677	92	0
3	2E	1605	0	1668	59	0
4	32	1702	0	1762	71	0
4	3E	1702	0	1764	89	0
5	42	1155	0	1212	55	0
5	4E	1155	0	1213	40	0
6	52	842	0	857	33	0
6	5E	842	0	857	33	0
7	62	1256	0	1296	48	0
7	6E	1256	0	1296	54	0
8	72	1115	0	1177	49	0
8	7E	1115	0	1177	53	0
9	82	1004	0	1032	80	0
9	8E	1004	0	1032	55	0
10	1A	801	0	849	59	0
10	1I	801	0	849	47	0
11	2A	873	0	894	38	0
11	2I	864	0	881	32	0
12	3A	977	0	1064	49	0
12	3I	977	0	1061	40	0
13	4A	964	0	1034	61	0
13	4I	946	0	1008	75	0
14	5A	491	0	530	50	0
14	5I	491	0	529	33	0
15	6A	733	0	771	26	0
15	6I	733	0	771	28	0
16	7A	705	0	725	37	0
16	7I	700	0	720	57	0
17	8A	834	0	904	53	0
17	8I	834	0	904	36	0
18	9A	573	0	644	30	0
18	9I	584	0	657	31	0
19	AA	684	0	707	64	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	AI	674	0	699	32	0
20	BA	776	0	856	48	0
20	BI	766	0	854	44	0
21	1B	217	0	234	12	0
21	1F	208	0	221	14	0
22	1K	1628	0	839	53	0
23	2K	1635	0	850	32	0
24	3K	1626	0	832	68	0
24	3L	1626	0	834	48	0
25	4K	621	0	311	15	0
25	4L	621	0	311	20	0
26	5K	1627	0	840	34	1
27	14	61946	0	31226	1510	0
27	1H	62245	0	31354	1477	1
28	16	2617	0	1327	63	0
28	1J	2598	0	1316	81	0
29	71	1049	0	1071	61	0
29	79	1049	0	1071	59	0
30	11	2115	0	2195	106	0
30	19	2115	0	2195	94	0
31	21	1559	0	1618	78	0
31	29	1559	0	1618	92	0
32	31	1585	0	1632	89	0
32	39	1585	0	1632	85	0
33	41	1473	0	1535	75	0
33	49	1473	0	1535	75	0
34	51	1336	0	1418	69	0
34	59	1327	0	1405	71	0
35	61	1131	0	1218	72	0
35	69	1136	0	1223	60	0
36	38	635	0	677	26	0
37	15	1104	0	1180	46	0
37	58	1104	0	1180	58	0
38	25	932	0	996	50	0
38	68	932	0	996	46	0
39	35	1144	0	1228	80	0
39	78	1144	0	1228	111	0
40	45	1121	0	1179	71	0
40	88	1150	0	1209	87	0
41	55	967	0	1033	62	0
41	98	967	0	1033	63	0
42	65	881	0	943	63	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	A8	889	0	955	63	0
43	75	1141	0	1202	67	0
43	B8	1141	0	1202	64	0
44	85	963	0	1022	65	0
44	C8	963	0	1022	55	0
45	95	778	0	852	65	0
45	D8	778	0	852	39	0
46	A5	899	0	964	34	0
46	E8	899	0	964	37	0
47	B5	742	0	803	39	0
47	F8	747	0	805	33	0
48	C5	776	0	820	29	0
48	G8	825	0	898	39	0
49	D5	1404	0	1437	75	0
49	H8	1428	0	1454	72	0
50	E5	657	0	677	40	0
50	I8	661	0	688	36	0
51	F5	762	0	848	37	0
51	J8	762	0	848	42	0
52	G5	590	0	643	35	0
52	K8	598	0	655	35	0
53	H5	468	0	518	31	0
53	L8	468	0	518	16	0
54	I5	580	0	577	41	0
54	M8	580	0	577	50	0
55	J5	434	0	454	25	0
55	N8	434	0	454	29	0
56	K5	389	0	404	31	0
56	O8	389	0	404	33	0
57	L5	429	0	480	17	0
57	P8	419	0	458	17	0
58	M5	506	0	567	50	0
58	Q8	506	0	567	34	0
59	1L	1627	0	836	63	0
60	2L	1635	0	847	34	0
61	11	1	0	0	0	0
61	13	51	0	0	0	0
61	14	106	0	0	0	0
61	16	3	0	0	0	0
61	19	1	0	0	0	0
61	1G	36	0	0	0	0
61	1H	145	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	1J	1	0	0	0	0
61	1K	1	0	0	0	0
61	2I	1	0	0	0	0
61	29	1	0	0	0	0
61	2A	1	0	0	0	0
61	2K	3	0	0	0	0
61	3I	2	0	0	0	0
61	32	1	0	0	0	0
61	39	2	0	0	0	0
61	4I	1	0	0	0	0
61	45	1	0	0	0	0
61	49	1	0	0	0	0
61	4A	1	0	0	0	0
61	4I	1	0	0	0	0
61	52	1	0	0	0	0
61	5A	1	0	0	0	0
61	5E	1	0	0	0	0
61	88	1	0	0	0	0
61	BA	1	0	0	0	0
61	BI	1	0	0	0	0
62	1I	1	0	0	0	0
62	13	120	0	0	0	0
62	14	295	0	0	0	0
62	16	12	0	0	0	0
62	1G	102	0	0	0	0
62	1H	439	0	0	0	0
62	1J	4	0	0	0	0
62	2I	2	0	0	0	0
62	29	2	0	0	0	0
62	2K	2	0	0	0	0
62	2L	3	0	0	0	0
62	3I	1	0	0	0	0
62	32	1	0	0	0	0
62	39	1	0	0	0	0
62	3E	1	0	0	0	0
62	4I	1	0	0	0	0
62	42	1	0	0	0	0
62	4L	1	0	0	0	0
62	6E	1	0	0	0	0
62	78	2	0	0	0	0
62	7I	1	0	0	0	0
62	C8	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	F8	1	0	0	0	0
62	I8	1	0	0	0	0
62	J8	1	0	0	0	0
62	L8	1	0	0	0	0
62	M5	2	0	0	0	0
62	N8	1	0	0	0	0
62	O8	1	0	0	0	0
62	P8	1	0	0	0	0
62	Q8	2	0	0	0	0
63	32	8	0	0	1	0
63	3E	8	0	0	3	0
64	5A	1	0	0	0	0
64	5I	1	0	0	0	0
65	11	11	0	0	1	0
65	13	233	0	0	31	0
65	14	602	0	0	66	0
65	16	26	0	0	4	0
65	19	12	0	0	2	0
65	1F	3	0	0	0	0
65	1G	194	0	0	21	0
65	1H	1009	0	0	134	0
65	1J	5	0	0	1	0
65	21	10	0	0	0	0
65	29	7	0	0	0	0
65	2K	8	0	0	1	0
65	31	10	0	0	0	0
65	32	4	0	0	1	0
65	35	7	0	0	1	0
65	39	2	0	0	0	0
65	3A	2	0	0	0	0
65	3E	2	0	0	0	0
65	3I	3	0	0	0	0
65	3K	1	0	0	0	0
65	4E	1	0	0	0	0
65	4I	1	0	0	0	0
65	4K	2	0	0	0	0
65	4L	4	0	0	0	0
65	5A	1	0	0	0	0
65	5I	1	0	0	0	0
65	75	2	0	0	1	0
65	78	9	0	0	1	0
65	7I	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
65	82	1	0	0	0	0
65	88	1	0	0	0	0
65	A8	2	0	0	1	0
65	B8	2	0	0	0	0
65	BI	1	0	0	0	0
65	C5	1	0	0	0	0
65	D8	1	0	0	0	0
65	E5	1	0	0	0	0
65	F8	1	0	0	0	0
65	H5	2	0	0	0	0
65	I8	2	0	0	0	0
65	L5	1	0	0	0	0
65	L8	2	0	0	0	0
65	M5	6	0	0	1	0
65	P8	1	0	0	0	0
65	Q8	1	0	0	0	0
All	All	305753	0	204808	9273	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 19.

The worst 5 of 9273 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)
27:14:1780:A:OP1	65:14:3511:HOH:O	1.75	1.02
27:14:676:A:H8	27:14:2069:G:H21	1.08	1.02
27:1H:1066:U:HO2'	27:1H:1068:A:H2	1.07	1.00
27:14:249:C:OP1	65:14:3512:HOH:O	1.80	1.00
1:13:1422:G:H5''	38:68:48:PRO:HB3	1.43	0.99

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:5K:75:C:O2'	27:1H:100:G:O6[1_455]	1.97	0.23

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	12	235/256 (92%)	188 (80%)	45 (19%)	2 (1%)	17	52
2	1E	235/256 (92%)	176 (75%)	58 (25%)	1 (0%)	34	69
3	22	204/239 (85%)	166 (81%)	38 (19%)	0	100	100
3	2E	203/239 (85%)	167 (82%)	36 (18%)	0	100	100
4	32	206/209 (99%)	180 (87%)	26 (13%)	0	100	100
4	3E	206/209 (99%)	176 (85%)	30 (15%)	0	100	100
5	42	149/162 (92%)	131 (88%)	18 (12%)	0	100	100
5	4E	149/162 (92%)	131 (88%)	18 (12%)	0	100	100
6	52	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
6	5E	99/101 (98%)	84 (85%)	15 (15%)	0	100	100
7	62	153/156 (98%)	127 (83%)	25 (16%)	1 (1%)	22	57
7	6E	153/156 (98%)	139 (91%)	14 (9%)	0	100	100
8	72	136/138 (99%)	121 (89%)	15 (11%)	0	100	100
8	7E	136/138 (99%)	115 (85%)	21 (15%)	0	100	100
9	82	125/128 (98%)	102 (82%)	22 (18%)	1 (1%)	19	54
9	8E	125/128 (98%)	106 (85%)	18 (14%)	1 (1%)	19	54
10	1A	97/105 (92%)	79 (81%)	18 (19%)	0	100	100
10	1I	97/105 (92%)	86 (89%)	11 (11%)	0	100	100
11	2A	115/129 (89%)	104 (90%)	11 (10%)	0	100	100
11	2I	114/129 (88%)	103 (90%)	11 (10%)	0	100	100
12	3A	122/132 (92%)	93 (76%)	24 (20%)	5 (4%)	3	16
12	3I	122/132 (92%)	100 (82%)	22 (18%)	0	100	100
13	4A	119/126 (94%)	88 (74%)	31 (26%)	0	100	100
13	4I	117/126 (93%)	94 (80%)	22 (19%)	1 (1%)	17	52
14	5A	58/61 (95%)	44 (76%)	13 (22%)	1 (2%)	9	36

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	5I	58/61 (95%)	46 (79%)	11 (19%)	1 (2%)	9	36
15	6A	86/89 (97%)	81 (94%)	5 (6%)	0	100	100
15	6I	86/89 (97%)	73 (85%)	13 (15%)	0	100	100
16	7A	82/88 (93%)	73 (89%)	9 (11%)	0	100	100
16	7I	81/88 (92%)	71 (88%)	10 (12%)	0	100	100
17	8A	98/105 (93%)	87 (89%)	11 (11%)	0	100	100
17	8I	98/105 (93%)	82 (84%)	16 (16%)	0	100	100
18	9A	68/88 (77%)	52 (76%)	16 (24%)	0	100	100
18	9I	69/88 (78%)	57 (83%)	12 (17%)	0	100	100
19	AA	84/93 (90%)	56 (67%)	28 (33%)	0	100	100
19	AI	82/93 (88%)	65 (79%)	16 (20%)	1 (1%)	13	44
20	BA	101/106 (95%)	80 (79%)	20 (20%)	1 (1%)	15	49
20	BI	99/106 (93%)	81 (82%)	17 (17%)	1 (1%)	15	49
21	1B	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
21	1F	22/27 (82%)	21 (96%)	1 (4%)	0	100	100
29	7I	131/229 (57%)	111 (85%)	20 (15%)	0	100	100
29	79	131/229 (57%)	115 (88%)	16 (12%)	0	100	100
30	11	270/276 (98%)	234 (87%)	31 (12%)	5 (2%)	8	33
30	19	270/276 (98%)	237 (88%)	29 (11%)	4 (2%)	10	39
31	21	202/206 (98%)	185 (92%)	16 (8%)	1 (0%)	29	64
31	29	202/206 (98%)	171 (85%)	31 (15%)	0	100	100
32	31	200/210 (95%)	177 (88%)	20 (10%)	3 (2%)	10	39
32	39	200/210 (95%)	168 (84%)	30 (15%)	2 (1%)	15	49
33	41	179/182 (98%)	145 (81%)	34 (19%)	0	100	100
33	49	179/182 (98%)	149 (83%)	30 (17%)	0	100	100
34	51	172/180 (96%)	133 (77%)	37 (22%)	2 (1%)	13	44
34	59	171/180 (95%)	122 (71%)	48 (28%)	1 (1%)	25	59
35	61	143/148 (97%)	105 (73%)	34 (24%)	4 (3%)	5	25
35	69	144/148 (97%)	109 (76%)	35 (24%)	0	100	100
36	38	74/173 (43%)	43 (58%)	29 (39%)	2 (3%)	5	25
37	15	136/140 (97%)	113 (83%)	22 (16%)	1 (1%)	22	57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
37	58	136/140 (97%)	108 (79%)	25 (18%)	3 (2%)	6	29
38	25	120/122 (98%)	107 (89%)	13 (11%)	0	100	100
38	68	120/122 (98%)	106 (88%)	13 (11%)	1 (1%)	19	54
39	35	148/150 (99%)	104 (70%)	38 (26%)	6 (4%)	3	16
39	78	148/150 (99%)	113 (76%)	29 (20%)	6 (4%)	3	16
40	45	139/141 (99%)	105 (76%)	32 (23%)	2 (1%)	11	40
40	88	144/141 (102%)	109 (76%)	30 (21%)	5 (4%)	3	20
41	55	116/118 (98%)	98 (84%)	17 (15%)	1 (1%)	17	52
41	98	116/118 (98%)	97 (84%)	19 (16%)	0	100	100
42	65	109/112 (97%)	82 (75%)	27 (25%)	0	100	100
42	A8	110/112 (98%)	86 (78%)	22 (20%)	2 (2%)	8	34
43	75	135/146 (92%)	112 (83%)	23 (17%)	0	100	100
43	B8	135/146 (92%)	117 (87%)	18 (13%)	0	100	100
44	85	115/118 (98%)	97 (84%)	18 (16%)	0	100	100
44	C8	115/118 (98%)	98 (85%)	15 (13%)	2 (2%)	9	36
45	95	99/101 (98%)	70 (71%)	26 (26%)	3 (3%)	4	23
45	D8	99/101 (98%)	82 (83%)	15 (15%)	2 (2%)	7	31
46	A5	111/113 (98%)	98 (88%)	13 (12%)	0	100	100
46	E8	111/113 (98%)	97 (87%)	14 (13%)	0	100	100
47	B5	92/96 (96%)	78 (85%)	14 (15%)	0	100	100
47	F8	93/96 (97%)	83 (89%)	10 (11%)	0	100	100
48	C5	105/110 (96%)	76 (72%)	27 (26%)	2 (2%)	8	33
48	G8	107/110 (97%)	80 (75%)	22 (21%)	5 (5%)	2	14
49	D5	174/206 (84%)	125 (72%)	47 (27%)	2 (1%)	14	46
49	H8	177/206 (86%)	127 (72%)	48 (27%)	2 (1%)	14	46
50	E5	82/85 (96%)	70 (85%)	12 (15%)	0	100	100
50	I8	82/85 (96%)	72 (88%)	10 (12%)	0	100	100
51	F5	95/98 (97%)	78 (82%)	16 (17%)	1 (1%)	14	46
51	J8	95/98 (97%)	74 (78%)	20 (21%)	1 (1%)	14	46
52	G5	69/72 (96%)	60 (87%)	8 (12%)	1 (1%)	11	40
52	K8	70/72 (97%)	61 (87%)	8 (11%)	1 (1%)	11	40

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
53	H5	57/60 (95%)	51 (90%)	6 (10%)	0	100	100
53	L8	57/60 (95%)	49 (86%)	8 (14%)	0	100	100
54	I5	69/71 (97%)	41 (59%)	26 (38%)	2 (3%)	4	24
54	M8	69/71 (97%)	38 (55%)	28 (41%)	3 (4%)	2	16
55	J5	54/60 (90%)	45 (83%)	8 (15%)	1 (2%)	8	33
55	N8	54/60 (90%)	44 (82%)	9 (17%)	1 (2%)	8	33
56	K5	43/54 (80%)	22 (51%)	21 (49%)	0	100	100
56	O8	43/54 (80%)	28 (65%)	13 (30%)	2 (5%)	2	14
57	L5	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
57	P8	47/49 (96%)	41 (87%)	6 (13%)	0	100	100
58	M5	62/65 (95%)	52 (84%)	10 (16%)	0	100	100
58	Q8	62/65 (95%)	54 (87%)	8 (13%)	0	100	100
All	All	11746/12685 (93%)	9634 (82%)	2013 (17%)	99 (1%)	19	54

5 of 99 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
35	61	134	PRO
37	58	137	LYS
40	88	22[A]	LYS
40	88	22[B]	LYS
2	12	154	LEU

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	12	205/220 (93%)	156 (76%)	49 (24%)	0	2
2	1E	205/220 (93%)	162 (79%)	43 (21%)	1	5
3	22	160/188 (85%)	124 (78%)	36 (22%)	1	3
3	2E	159/188 (85%)	122 (77%)	37 (23%)	1	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	32	180/181 (99%)	146 (81%)	34 (19%)	1	6
4	3E	180/181 (99%)	141 (78%)	39 (22%)	1	4
5	42	116/123 (94%)	96 (83%)	20 (17%)	2	9
5	4E	116/123 (94%)	95 (82%)	21 (18%)	1	7
6	52	90/90 (100%)	76 (84%)	14 (16%)	2	11
6	5E	90/90 (100%)	76 (84%)	14 (16%)	2	11
7	62	126/127 (99%)	105 (83%)	21 (17%)	2	9
7	6E	126/127 (99%)	99 (79%)	27 (21%)	1	4
8	72	119/119 (100%)	98 (82%)	21 (18%)	2	8
8	7E	119/119 (100%)	101 (85%)	18 (15%)	3	12
9	82	97/99 (98%)	67 (69%)	30 (31%)	0	0
9	8E	97/99 (98%)	73 (75%)	24 (25%)	0	2
10	1A	89/92 (97%)	69 (78%)	20 (22%)	1	3
10	1I	89/92 (97%)	68 (76%)	21 (24%)	1	2
11	2A	89/99 (90%)	69 (78%)	20 (22%)	1	3
11	2I	88/99 (89%)	74 (84%)	14 (16%)	2	11
12	3A	103/108 (95%)	77 (75%)	26 (25%)	0	1
12	3I	103/108 (95%)	83 (81%)	20 (19%)	1	6
13	4A	97/101 (96%)	77 (79%)	20 (21%)	1	5
13	4I	95/101 (94%)	70 (74%)	25 (26%)	0	1
14	5A	49/50 (98%)	35 (71%)	14 (29%)	0	1
14	5I	49/50 (98%)	37 (76%)	12 (24%)	0	2
15	6A	79/80 (99%)	73 (92%)	6 (8%)	13	41
15	6I	79/80 (99%)	64 (81%)	15 (19%)	1	6
16	7A	72/74 (97%)	59 (82%)	13 (18%)	1	7
16	7I	72/74 (97%)	58 (81%)	14 (19%)	1	6
17	8A	95/97 (98%)	80 (84%)	15 (16%)	2	11
17	8I	95/97 (98%)	83 (87%)	12 (13%)	4	18
18	9A	61/77 (79%)	47 (77%)	14 (23%)	1	3
18	9I	62/77 (80%)	47 (76%)	15 (24%)	0	2
19	AA	73/80 (91%)	50 (68%)	23 (32%)	0	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	AI	73/80 (91%)	52 (71%)	21 (29%)	0	1
20	BA	75/82 (92%)	65 (87%)	10 (13%)	4	16
20	BI	75/82 (92%)	63 (84%)	12 (16%)	2	11
21	1B	20/22 (91%)	17 (85%)	3 (15%)	3	12
21	1F	19/22 (86%)	17 (90%)	2 (10%)	7	26
29	71	111/181 (61%)	95 (86%)	16 (14%)	3	14
29	79	111/181 (61%)	97 (87%)	14 (13%)	4	18
30	11	214/218 (98%)	171 (80%)	43 (20%)	1	5
30	19	214/218 (98%)	172 (80%)	42 (20%)	1	6
31	21	164/166 (99%)	133 (81%)	31 (19%)	1	6
31	29	164/166 (99%)	132 (80%)	32 (20%)	1	6
32	31	161/166 (97%)	130 (81%)	31 (19%)	1	6
32	39	161/166 (97%)	130 (81%)	31 (19%)	1	6
33	41	155/156 (99%)	119 (77%)	36 (23%)	1	3
33	49	155/156 (99%)	114 (74%)	41 (26%)	0	1
34	51	145/148 (98%)	113 (78%)	32 (22%)	1	4
34	59	144/148 (97%)	115 (80%)	29 (20%)	1	5
35	61	122/124 (98%)	86 (70%)	36 (30%)	0	1
35	69	122/124 (98%)	88 (72%)	34 (28%)	0	1
36	38	66/135 (49%)	39 (59%)	27 (41%)	0	0
37	15	117/119 (98%)	94 (80%)	23 (20%)	1	6
37	58	117/119 (98%)	83 (71%)	34 (29%)	0	1
38	25	100/100 (100%)	79 (79%)	21 (21%)	1	5
38	68	100/100 (100%)	76 (76%)	24 (24%)	0	2
39	35	116/116 (100%)	71 (61%)	45 (39%)	0	0
39	78	116/116 (100%)	83 (72%)	33 (28%)	0	1
40	45	111/111 (100%)	88 (79%)	23 (21%)	1	5
40	88	113/111 (102%)	88 (78%)	25 (22%)	1	4
41	55	101/101 (100%)	80 (79%)	21 (21%)	1	5
41	98	101/101 (100%)	74 (73%)	27 (27%)	0	1
42	65	87/88 (99%)	68 (78%)	19 (22%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	A8	88/88 (100%)	62 (70%)	26 (30%)	0	1
43	75	120/127 (94%)	88 (73%)	32 (27%)	0	1
43	B8	120/127 (94%)	87 (72%)	33 (28%)	0	1
44	85	93/94 (99%)	73 (78%)	20 (22%)	1	4
44	C8	93/94 (99%)	69 (74%)	24 (26%)	0	1
45	95	82/82 (100%)	54 (66%)	28 (34%)	0	0
45	D8	82/82 (100%)	56 (68%)	26 (32%)	0	0
46	A5	92/92 (100%)	70 (76%)	22 (24%)	0	2
46	E8	92/92 (100%)	75 (82%)	17 (18%)	1	7
47	B5	76/78 (97%)	58 (76%)	18 (24%)	1	2
47	F8	76/78 (97%)	63 (83%)	13 (17%)	2	9
48	C5	78/91 (86%)	62 (80%)	16 (20%)	1	5
48	G8	88/91 (97%)	64 (73%)	24 (27%)	0	1
49	D5	155/179 (87%)	122 (79%)	33 (21%)	1	4
49	H8	158/179 (88%)	122 (77%)	36 (23%)	1	3
50	E5	65/67 (97%)	50 (77%)	15 (23%)	1	3
50	I8	66/67 (98%)	52 (79%)	14 (21%)	1	5
51	F5	82/83 (99%)	63 (77%)	19 (23%)	1	3
51	J8	82/83 (99%)	64 (78%)	18 (22%)	1	4
52	G5	64/67 (96%)	52 (81%)	12 (19%)	1	6
52	K8	65/67 (97%)	45 (69%)	20 (31%)	0	0
53	H5	51/52 (98%)	41 (80%)	10 (20%)	1	6
53	L8	51/52 (98%)	42 (82%)	9 (18%)	2	8
54	I5	63/63 (100%)	49 (78%)	14 (22%)	1	4
54	M8	63/63 (100%)	47 (75%)	16 (25%)	0	1
55	J5	48/52 (92%)	40 (83%)	8 (17%)	2	9
55	N8	48/52 (92%)	35 (73%)	13 (27%)	0	1
56	K5	44/52 (85%)	31 (70%)	13 (30%)	0	1
56	O8	44/52 (85%)	27 (61%)	17 (39%)	0	0
57	L5	42/42 (100%)	33 (79%)	9 (21%)	1	4
57	P8	40/42 (95%)	32 (80%)	8 (20%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
58	M5	52/55 (94%)	42 (81%)	10 (19%)	1	6
58	Q8	52/55 (94%)	41 (79%)	11 (21%)	1	5
All	All	9889/10493 (94%)	7700 (78%)	2189 (22%)	1	4

5 of 2189 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
40	45	22	LYS
42	65	101	LEU
40	45	10	ARG
50	E5	7	LEU
41	98	6	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 30 such sidechains are listed below:

Mol	Chain	Res	Type
7	62	97	GLN
52	G5	46	GLN
32	39	169	ASN
56	K5	49	HIS
50	E5	35	ASN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1511/1522 (99%)	364 (24%)	51 (3%)
1	1G	1509/1522 (99%)	385 (25%)	48 (3%)
22	1K	74/76 (97%)	38 (51%)	0
23	2K	73/76 (96%)	20 (27%)	2 (2%)
24	3K	74/76 (97%)	39 (52%)	3 (4%)
24	3L	74/76 (97%)	37 (50%)	1 (1%)
25	4K	29/60 (48%)	8 (27%)	2 (6%)
25	4L	29/60 (48%)	12 (41%)	2 (6%)
26	5K	74/76 (97%)	35 (47%)	5 (6%)
27	14	2871/2917 (98%)	785 (27%)	65 (2%)
27	1H	2884/2917 (98%)	724 (25%)	77 (2%)
28	16	121/122 (99%)	27 (22%)	1 (0%)
28	1J	120/122 (98%)	39 (32%)	4 (3%)
59	1L	74/76 (97%)	35 (47%)	1 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
60	2L	73/76 (96%)	23 (31%)	0
All	All	9590/9774 (98%)	2571 (26%)	262 (2%)

5 of 2571 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	8	A
1	13	9	G
1	13	28	G

5 of 262 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
27	14	1762	A
27	14	2032	G
28	1J	66	A
27	1H	1256	A
27	1H	1156	C

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

92 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
27	OMU	14	2552	62,27	19,22,23	2.43	6 (31%)	26,31,34	1.91	6 (23%)
60	H2U	2L	16	60	18,21,22	2.10	4 (22%)	21,30,33	1.94	5 (23%)
22	PSU	1K	55	22	18,21,22	1.13	1 (5%)	22,30,33	1.84	6 (27%)
59	PSU	1L	32	59	18,21,22	0.99	1 (5%)	22,30,33	1.43	3 (13%)
60	4SU	2L	8	60	18,21,22	1.77	3 (16%)	26,30,33	2.20	6 (23%)
1	PSU	1G	516	62,1	18,21,22	1.16	1 (5%)	22,30,33	1.45	2 (9%)



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	3.62	7 (38%)	26,32,35	1.11	2 (7%)
22	7MG	1K	46	22	22,26,27	3.09	6 (27%)	29,39,42	2.81	10 (34%)
1	5MC	1G	1404	1	18,22,23	3.44	7 (38%)	26,32,35	1.51	3 (11%)
1	4OC	13	1402	62,1	20,23,24	2.86	8 (40%)	26,32,35	1.45	4 (15%)
27	OMC	1H	1943	61,27	19,22,23	1.73	3 (15%)	26,31,34	1.31	4 (15%)
60	3AU	2L	47	60	24,28,29	2.80	8 (33%)	33,40,43	1.90	8 (24%)
12	0TD	3A	89	1,12	7,9,10	1.40	1 (14%)	6,11,13	1.74	2 (33%)
27	5MU	1H	1938	27	19,22,23	4.22	5 (26%)	28,32,35	3.87	10 (35%)
27	5MC	14	1942	27	18,22,23	3.76	7 (38%)	26,32,35	1.32	5 (19%)
27	OMU	1H	2565	62,27	19,22,23	2.11	6 (31%)	26,31,34	2.36	9 (34%)
23	PSU	2K	39	23	18,21,22	1.32	2 (11%)	22,30,33	1.88	5 (22%)
24	MIA	3L	37	24	24,31,32	2.55	4 (16%)	26,44,47	3.40	11 (42%)
1	5MC	1G	1407	1	18,22,23	3.42	7 (38%)	26,32,35	1.21	3 (11%)
27	OMG	14	2251	61,60,27	18,26,27	5.21	8 (44%)	19,38,41	3.84	6 (31%)
60	PSU	2L	39	60	18,21,22	1.16	1 (5%)	22,30,33	1.65	4 (18%)
1	PSU	13	516	62,1	18,21,22	0.91	1 (5%)	22,30,33	1.55	4 (18%)
27	2MA	14	2503	61,62,27	17,25,26	2.08	4 (23%)	17,37,40	1.22	2 (11%)
1	MA6	1G	1518	1	19,26,27	1.14	2 (10%)	18,38,41	2.56	2 (11%)
23	MIA	2K	37	23	24,31,32	2.37	4 (16%)	26,44,47	2.56	10 (38%)
22	PSU	1K	39	22	18,21,22	1.04	1 (5%)	22,30,33	2.00	4 (18%)
1	MA6	13	1518	1	19,26,27	0.95	0	18,38,41	2.75	2 (11%)
23	H2U	2K	16	23	18,21,22	1.88	4 (22%)	21,30,33	1.90	5 (23%)
1	M2G	1G	966	1	20,27,28	3.80	7 (35%)	22,40,43	1.30	4 (18%)
1	5MC	13	1404	1	18,22,23	3.19	7 (38%)	26,32,35	1.22	1 (3%)
1	2MG	1G	1207	1	18,26,27	2.59	7 (38%)	16,38,41	1.33	3 (18%)
26	5MU	5K	54	26	19,22,23	3.98	5 (26%)	28,32,35	3.12	9 (32%)
27	PSU	1H	1940	27	18,21,22	0.93	1 (5%)	22,30,33	1.58	4 (18%)
24	MIA	3K	37	25,24	24,31,32	2.51	4 (16%)	26,44,47	3.26	11 (42%)
27	5MC	1H	1965	27	18,22,23	3.32	7 (38%)	26,32,35	1.47	5 (19%)
24	PSU	3K	39	24	18,21,22	1.15	1 (5%)	22,30,33	1.61	4 (18%)
27	PSU	1H	1934	27	18,21,22	1.11	2 (11%)	22,30,33	1.77	6 (27%)
22	MIA	1K	37	22	24,31,32	2.23	3 (12%)	26,44,47	3.01	8 (30%)
1	5MC	13	967	1	18,22,23	3.70	7 (38%)	26,32,35	1.09	1 (3%)
27	5MU	1H	1962	61,27	19,22,23	3.37	5 (26%)	28,32,35	4.32	9 (32%)
27	5MU	14	1915	27	19,22,23	3.95	5 (26%)	28,32,35	3.43	9 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
27	2MA	1H	2516	61,27	17,25,26	1.85	5 (29%)	17,37,40	1.39	3 (17%)
59	MIA	1L	37	59	24,31,32	2.29	3 (12%)	26,44,47	3.02	9 (34%)
26	4SU	5K	8	26	18,21,22	1.73	3 (16%)	26,30,33	2.42	5 (19%)
27	OMG	1H	2264	61,23,27	18,26,27	5.00	8 (44%)	19,38,41	3.70	8 (42%)
23	H2U	2K	20	23	18,21,22	2.11	4 (22%)	21,30,33	1.98	4 (19%)
59	5MU	1L	54	59	19,22,23	3.86	5 (26%)	28,32,35	3.21	8 (28%)
27	PSU	14	2605	27	18,21,22	1.32	3 (16%)	22,30,33	2.05	7 (31%)
1	MA6	1G	1519	1	19,26,27	1.08	2 (10%)	18,38,41	2.87	2 (11%)
26	PSU	5K	32	26	18,21,22	1.12	1 (5%)	22,30,33	1.68	3 (13%)
22	4SU	1K	8	22	18,21,22	1.77	3 (16%)	26,30,33	2.30	6 (23%)
1	M2G	13	966	1	20,27,28	3.39	7 (35%)	22,40,43	1.53	6 (27%)
1	MA6	13	1519	1	19,26,27	0.95	1 (5%)	18,38,41	3.24	3 (16%)
60	PSU	2L	32	60	18,21,22	1.02	1 (5%)	22,30,33	2.00	5 (22%)
26	PSU	5K	39	26	18,21,22	1.20	1 (5%)	22,30,33	1.75	5 (22%)
27	PSU	14	1917	27	18,21,22	1.11	2 (11%)	22,30,33	1.65	5 (22%)
1	5MC	1G	967	1	18,22,23	3.57	7 (38%)	26,32,35	1.16	2 (7%)
22	PSU	1K	32	22,61	18,21,22	1.08	1 (5%)	22,30,33	1.22	2 (9%)
60	5MU	2L	54	60	19,22,23	3.81	5 (26%)	28,32,35	3.10	10 (35%)
27	5MC	14	1962	61,27	18,22,23	3.42	7 (38%)	26,32,35	1.29	3 (11%)
60	7MG	2L	46	60	22,26,27	3.24	5 (22%)	29,39,42	2.76	11 (37%)
23	7MG	2K	46	23	22,26,27	3.02	6 (27%)	29,39,42	2.76	10 (34%)
1	UR3	1G	1498	1	19,22,23	2.64	6 (31%)	26,32,35	1.72	4 (15%)
22	5MU	1K	54	22	19,22,23	3.86	5 (26%)	28,32,35	3.20	9 (32%)
23	4SU	2K	8	23	18,21,22	1.74	4 (22%)	26,30,33	2.44	6 (23%)
26	PSU	5K	55	26	18,21,22	1.13	1 (5%)	22,30,33	1.61	4 (18%)
23	PSU	2K	55	23	18,21,22	1.24	1 (5%)	22,30,33	1.64	3 (13%)
1	2MG	13	1207	1,61	18,26,27	2.46	7 (38%)	16,38,41	1.69	3 (18%)
23	5MU	2K	54	23	19,22,23	3.74	5 (26%)	28,32,35	3.26	7 (25%)
27	OMC	14	1920	27	19,22,23	1.75	3 (15%)	26,31,34	1.08	1 (3%)
1	7MG	1G	527	1,61	22,26,27	3.06	6 (27%)	29,39,42	2.86	10 (34%)
26	H2U	5K	20	26,28	18,21,22	2.32	4 (22%)	21,30,33	1.88	5 (23%)
1	5MC	1G	1400	1	18,22,23	3.78	7 (38%)	26,32,35	1.47	5 (19%)
60	PSU	2L	55	60	18,21,22	1.33	2 (11%)	22,30,33	1.69	4 (18%)
23	3AU	2K	47	23	24,28,29	2.94	7 (29%)	33,40,43	1.71	8 (24%)
27	5MU	14	1939	61,27	19,22,23	3.79	5 (26%)	28,32,35	3.43	9 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
27	PSU	1H	2618	27	18,21,22	1.29	3 (16%)	22,30,33	1.88	6 (27%)
26	MIA	5K	37	26	24,31,32	2.56	4 (16%)	26,44,47	3.34	11 (42%)
1	5MC	13	1407	1	18,22,23	3.34	7 (38%)	26,32,35	1.12	2 (7%)
60	MIA	2L	37	60	24,31,32	2.30	3 (12%)	26,44,47	2.80	8 (30%)
26	H2U	5K	16	26	18,21,22	2.15	4 (22%)	21,30,33	1.97	5 (23%)
27	5MC	1H	1985	61,27	18,22,23	3.68	6 (33%)	26,32,35	1.44	3 (11%)
23	PSU	2K	32	23	18,21,22	1.07	2 (11%)	22,30,33	1.84	4 (18%)
1	UR3	13	1498	1	19,22,23	2.72	6 (31%)	26,32,35	1.93	6 (23%)
24	PSU	3L	39	24	18,21,22	1.15	1 (5%)	22,30,33	1.61	3 (13%)
1	4OC	1G	1402	62,1	20,23,24	2.62	7 (35%)	26,32,35	1.58	4 (15%)
1	7MG	13	527	1,61	22,26,27	2.99	8 (36%)	29,39,42	2.75	9 (31%)
27	PSU	14	1911	27	18,21,22	1.10	1 (5%)	22,30,33	1.51	4 (18%)
24	PSU	3K	32	24	18,21,22	1.03	1 (5%)	22,30,33	1.61	4 (18%)
24	PSU	3L	32	24	18,21,22	1.14	1 (5%)	22,30,33	1.73	4 (18%)
59	PSU	1L	39	59	18,21,22	1.13	3 (16%)	22,30,33	2.02	7 (31%)
12	0TD	3I	89	12	7,9,10	1.32	0	6,11,13	3.46	3 (50%)

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. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	OMU	14	2552	62,27	-	4/9/27/28	0/2/2/2
60	H2U	2L	16	60	-	0/7/38/39	0/2/2/2
22	PSU	1K	55	22	-	4/7/25/26	0/2/2/2
59	PSU	1L	32	59	-	0/7/25/26	0/2/2/2
60	4SU	2L	8	60	-	2/7/25/26	0/2/2/2
1	PSU	1G	516	62,1	-	0/7/25/26	0/2/2/2
1	5MC	13	1400	1	-	0/7/25/26	0/2/2/2
22	7MG	1K	46	22	-	2/7/37/38	0/3/3/3
1	5MC	1G	1404	1	-	0/7/25/26	0/2/2/2
1	4OC	13	1402	62,1	-	2/9/29/30	0/2/2/2
27	OMC	1H	1943	61,27	-	0/9/27/28	0/2/2/2
60	3AU	2L	47	60	-	7/16/34/35	0/2/2/2
12	0TD	3A	89	1,12	-	4/7/12/14	-
27	5MU	1H	1938	27	-	3/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	5MC	14	1942	27	-	0/7/25/26	0/2/2/2
27	OMU	1H	2565	62,27	-	0/9/27/28	0/2/2/2
23	PSU	2K	39	23	-	0/7/25/26	0/2/2/2
24	MIA	3L	37	24	-	4/11/33/34	0/3/3/3
1	5MC	1G	1407	1	-	0/7/25/26	0/2/2/2
27	OMG	14	2251	61,60,27	-	0/5/27/28	0/3/3/3
60	PSU	2L	39	60	-	0/7/25/26	0/2/2/2
1	PSU	13	516	62,1	-	0/7/25/26	0/2/2/2
27	2MA	14	2503	61,62,27	-	1/3/25/26	0/3/3/3
1	MA6	1G	1518	1	-	5/7/29/30	0/3/3/3
23	MIA	2K	37	23	-	3/11/33/34	0/3/3/3
22	PSU	1K	39	22	-	0/7/25/26	0/2/2/2
1	MA6	13	1518	1	-	0/7/29/30	0/3/3/3
23	H2U	2K	16	23	-	0/7/38/39	0/2/2/2
1	M2G	1G	966	1	-	0/7/29/30	0/3/3/3
1	5MC	13	1404	1	-	0/7/25/26	0/2/2/2
1	2MG	1G	1207	1	-	2/5/27/28	0/3/3/3
26	5MU	5K	54	26	-	2/7/25/26	0/2/2/2
27	PSU	1H	1940	27	-	0/7/25/26	0/2/2/2
24	MIA	3K	37	25,24	-	8/11/33/34	0/3/3/3
27	5MC	1H	1965	27	-	0/7/25/26	0/2/2/2
24	PSU	3K	39	24	-	0/7/25/26	0/2/2/2
27	PSU	1H	1934	27	-	0/7/25/26	0/2/2/2
22	MIA	1K	37	22	-	4/11/33/34	0/3/3/3
1	5MC	13	967	1	-	0/7/25/26	0/2/2/2
27	5MU	1H	1962	61,27	-	2/7/25/26	0/2/2/2
27	5MU	14	1915	27	-	0/7/25/26	0/2/2/2
27	2MA	1H	2516	61,27	-	1/3/25/26	0/3/3/3
59	MIA	1L	37	59	-	2/11/33/34	0/3/3/3
26	4SU	5K	8	26	-	2/7/25/26	0/2/2/2
27	OMG	1H	2264	61,23,27	-	0/5/27/28	0/3/3/3
23	H2U	2K	20	23	-	5/7/38/39	0/2/2/2
59	5MU	1L	54	59	-	0/7/25/26	0/2/2/2
27	PSU	14	2605	27	-	0/7/25/26	0/2/2/2
1	MA6	1G	1519	1	-	2/7/29/30	0/3/3/3
26	PSU	5K	32	26	-	0/7/25/26	0/2/2/2
22	4SU	1K	8	22	-	1/7/25/26	0/2/2/2
1	M2G	13	966	1	-	0/7/29/30	0/3/3/3
1	MA6	13	1519	1	-	3/7/29/30	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	PSU	2L	32	60	-	0/7/25/26	0/2/2/2
26	PSU	5K	39	26	-	1/7/25/26	0/2/2/2
27	PSU	14	1917	27	-	0/7/25/26	0/2/2/2
1	5MC	1G	967	1	-	0/7/25/26	0/2/2/2
22	PSU	1K	32	22,61	-	0/7/25/26	0/2/2/2
60	5MU	2L	54	60	-	2/7/25/26	0/2/2/2
27	5MC	14	1962	61,27	-	2/7/25/26	0/2/2/2
60	7MG	2L	46	60	-	2/7/37/38	0/3/3/3
23	7MG	2K	46	23	-	0/7/37/38	0/3/3/3
1	UR3	1G	1498	1	-	0/7/25/26	0/2/2/2
22	5MU	1K	54	22	-	0/7/25/26	0/2/2/2
23	4SU	2K	8	23	-	0/7/25/26	0/2/2/2
26	PSU	5K	55	26	-	2/7/25/26	0/2/2/2
23	PSU	2K	55	23	-	2/7/25/26	0/2/2/2
1	2MG	13	1207	1,61	-	0/5/27/28	0/3/3/3
23	5MU	2K	54	23	-	0/7/25/26	0/2/2/2
27	OMC	14	1920	27	-	2/9/27/28	0/2/2/2
1	7MG	1G	527	1,61	-	2/7/37/38	0/3/3/3
26	H2U	5K	20	26,28	-	5/7/38/39	0/2/2/2
1	5MC	1G	1400	1	-	2/7/25/26	0/2/2/2
60	PSU	2L	55	60	-	0/7/25/26	0/2/2/2
23	3AU	2K	47	23	-	7/16/34/35	0/2/2/2
27	5MU	14	1939	61,27	-	0/7/25/26	0/2/2/2
27	PSU	1H	2618	27	-	0/7/25/26	0/2/2/2
26	MIA	5K	37	26	-	6/11/33/34	0/3/3/3
1	5MC	13	1407	1	-	0/7/25/26	0/2/2/2
60	MIA	2L	37	60	-	4/11/33/34	0/3/3/3
26	H2U	5K	16	26	-	3/7/38/39	0/2/2/2
27	5MC	1H	1985	61,27	-	0/7/25/26	0/2/2/2
23	PSU	2K	32	23	-	0/7/25/26	0/2/2/2
1	UR3	13	1498	1	-	2/7/25/26	0/2/2/2
24	PSU	3L	39	24	-	0/7/25/26	0/2/2/2
1	4OC	1G	1402	62,1	-	2/9/29/30	0/2/2/2
1	7MG	13	527	1,61	-	2/7/37/38	0/3/3/3
27	PSU	14	1911	27	-	0/7/25/26	0/2/2/2
24	PSU	3K	32	24	-	2/7/25/26	0/2/2/2
24	PSU	3L	32	24	-	6/7/25/26	0/2/2/2
59	PSU	1L	39	59	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
12	0TD	3I	89	12	-	3/7/12/14	-

The worst 5 of 373 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	14	2251	OMG	C8-N7	-14.81	1.09	1.35
27	1H	1938	5MU	C2-N1	14.31	1.61	1.38
27	1H	2264	OMG	C8-N7	-13.83	1.11	1.35
26	5K	54	5MU	C2-N1	12.92	1.59	1.38
27	14	1915	5MU	C2-N1	12.72	1.58	1.38

The worst 5 of 495 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	1H	1962	5MU	C5-C4-N3	13.97	127.23	115.31
1	13	1519	MA6	N1-C6-N6	-12.51	103.89	117.06
27	1H	1938	5MU	C5-C4-N3	12.45	125.94	115.31
24	3L	37	MIA	C11-S10-C2	11.84	111.11	102.27
26	5K	37	MIA	C11-S10-C2	11.46	110.83	102.27

There are no chirality outliers.

5 of 134 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	13	527	7MG	O4'-C4'-C5'-O5'
1	13	527	7MG	C3'-C4'-C5'-O5'
1	1G	1207	2MG	O4'-C4'-C5'-O5'
1	1G	1207	2MG	C3'-C4'-C5'-O5'
1	13	1402	4OC	O4'-C4'-C5'-O5'

There are no ring outliers.

55 monomers are involved in 98 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
27	14	2552	OMU	4	0
22	1K	55	PSU	4	0
60	2L	8	4SU	2	0
1	1G	516	PSU	1	0
1	13	1400	5MC	1	0
22	1K	46	7MG	4	0
1	13	1402	4OC	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
27	1H	1943	OMC	2	0
12	3A	89	0TD	3	0
27	1H	1938	5MU	1	0
27	14	1942	5MC	1	0
27	1H	2565	OMU	3	0
24	3L	37	MIA	2	0
27	14	2251	OMG	2	0
27	14	2503	2MA	2	0
1	1G	1518	MA6	2	0
1	13	1518	MA6	2	0
1	1G	1207	2MG	3	0
26	5K	54	5MU	1	0
27	1H	1940	PSU	1	0
24	3K	37	MIA	2	0
24	3K	39	PSU	1	0
22	1K	37	MIA	1	0
1	13	967	5MC	1	0
27	1H	1962	5MU	1	0
27	14	1915	5MU	1	0
27	1H	2516	2MA	3	0
59	1L	37	MIA	2	0
27	1H	2264	OMG	1	0
23	2K	20	H2U	1	0
1	1G	1519	MA6	4	0
1	13	966	M2G	1	0
1	13	1519	MA6	2	0
60	2L	32	PSU	1	0
1	1G	967	5MC	2	0
60	2L	54	5MU	4	0
27	14	1962	5MC	2	0
23	2K	46	7MG	1	0
1	1G	1498	UR3	3	0
22	1K	54	5MU	1	0
26	5K	55	PSU	1	0
23	2K	55	PSU	1	0
1	13	1207	2MG	1	0
23	2K	54	5MU	2	0
26	5K	20	H2U	1	0
1	1G	1400	5MC	1	0
27	14	1939	5MU	3	0
26	5K	37	MIA	1	0
26	5K	16	H2U	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
27	1H	1985	5MC	1	0
1	13	1498	UR3	4	0
1	1G	1402	4OC	2	0
27	14	1911	PSU	1	0
24	3L	32	PSU	1	0
59	1L	39	PSU	1	0

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 1376 ligands modelled in this entry, 1374 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
63	SF4	32	303	4	0,12,12	-	-	-		
63	SF4	3E	302	4	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
63	SF4	32	303	4	-	-	0/6/5/5
63	SF4	3E	302	4	-	-	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 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
63	32	303	SF4	1	0
63	3E	302	SF4	3	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 i

### 6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	13	1504/1522 (98%)	-0.60	3 (0%) 95 90	28, 69, 150, 240	0
1	1G	1501/1522 (98%)	-0.63	1 (0%) 95 92	38, 81, 144, 248	0
2	12	237/256 (92%)	0.60	26 (10%) 5 2	85, 134, 165, 184	0
2	1E	237/256 (92%)	0.16	4 (1%) 70 49	67, 105, 146, 160	0
3	22	206/239 (86%)	0.24	10 (4%) 29 14	81, 109, 137, 144	0
3	2E	205/239 (85%)	0.62	18 (8%) 10 4	62, 81, 122, 145	0
4	32	208/209 (99%)	-0.05	2 (0%) 82 67	58, 74, 95, 120	0
4	3E	208/209 (99%)	0.01	3 (1%) 75 56	58, 77, 99, 108	0
5	42	151/162 (93%)	-0.14	0 100 100	67, 84, 102, 133	0
5	4E	151/162 (93%)	-0.11	1 (0%) 87 75	50, 67, 90, 113	0
6	52	101/101 (100%)	0.58	6 (5%) 22 10	53, 74, 90, 111	0
6	5E	101/101 (100%)	0.36	3 (2%) 50 27	50, 73, 89, 106	0
7	62	155/156 (99%)	0.42	6 (3%) 39 20	78, 93, 131, 152	0
7	6E	155/156 (99%)	0.17	5 (3%) 47 25	66, 85, 109, 117	0
8	72	138/138 (100%)	-0.27	0 100 100	64, 85, 96, 105	0
8	7E	138/138 (100%)	-0.45	0 100 100	55, 72, 85, 97	0
9	82	127/128 (99%)	-0.43	1 (0%) 86 72	78, 115, 132, 137	0
9	8E	127/128 (99%)	-0.37	0 100 100	57, 102, 119, 123	0
10	1A	99/105 (94%)	-0.11	3 (3%) 50 27	86, 123, 142, 144	0
10	1I	99/105 (94%)	0.28	6 (6%) 21 9	52, 105, 131, 135	0
11	2A	117/129 (90%)	0.60	7 (5%) 21 10	50, 77, 104, 140	0
11	2I	116/129 (89%)	0.41	3 (2%) 56 33	42, 69, 94, 119	0
12	3A	124/132 (93%)	0.84	20 (16%) 1 1	49, 69, 95, 149	0
12	3I	124/132 (93%)	0.44	6 (4%) 30 14	37, 47, 77, 139	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	4A	121/126 (96%)	0.36	9 (7%) 14 5	81, 118, 131, 141	0
13	4I	119/126 (94%)	-0.14	2 (1%) 70 49	57, 92, 109, 118	0
14	5A	60/61 (98%)	-0.19	0 100 100	83, 97, 121, 126	0
14	5I	60/61 (98%)	-0.31	0 100 100	61, 71, 85, 99	0
15	6A	88/89 (98%)	-0.05	0 100 100	53, 75, 94, 100	0
15	6I	88/89 (98%)	-0.20	1 (1%) 80 64	44, 66, 90, 98	0
16	7A	84/88 (95%)	-0.71	0 100 100	59, 68, 86, 124	0
16	7I	83/88 (94%)	-0.67	0 100 100	63, 76, 99, 127	0
17	8A	100/105 (95%)	-0.06	1 (1%) 82 67	57, 77, 94, 110	0
17	8I	100/105 (95%)	-0.26	1 (1%) 82 67	53, 69, 81, 87	0
18	9A	70/88 (79%)	0.54	4 (5%) 23 11	60, 75, 104, 126	0
18	9I	71/88 (80%)	0.23	1 (1%) 75 56	54, 69, 110, 127	0
19	AA	86/93 (92%)	0.92	17 (19%) 1 0	105, 131, 158, 170	0
19	AI	84/93 (90%)	0.16	3 (3%) 42 22	72, 96, 114, 119	0
20	BA	103/106 (97%)	-0.49	0 100 100	65, 84, 109, 116	0
20	BI	101/106 (95%)	-0.45	0 100 100	65, 83, 111, 123	0
21	1B	25/27 (92%)	-0.54	0 100 100	94, 109, 123, 127	0
21	1F	24/27 (88%)	-0.62	0 100 100	74, 85, 99, 110	0
22	1K	69/76 (90%)	0.65	7 (10%) 7 2	51, 163, 204, 219	0
23	2K	66/76 (86%)	-0.14	2 (3%) 50 27	33, 59, 81, 131	0
24	3K	73/76 (96%)	0.44	5 (6%) 17 7	35, 200, 222, 230	0
24	3L	73/76 (96%)	0.19	4 (5%) 25 11	49, 197, 229, 238	0
25	4K	30/60 (50%)	0.53	4 (13%) 3 1	43, 130, 219, 232	0
25	4L	30/60 (50%)	-0.04	1 (3%) 46 24	61, 148, 218, 223	0
26	5K	68/76 (89%)	1.84	28 (41%) 0 0	80, 154, 180, 197	0
27	14	2865/2917 (98%)	-0.38	29 (1%) 82 67	27, 59, 194, 252	0
27	1H	2879/2917 (98%)	-0.32	28 (0%) 82 67	13, 37, 171, 243	0
28	16	122/122 (100%)	-0.53	0 100 100	37, 55, 74, 146	0
28	1J	121/122 (99%)	-0.50	1 (0%) 86 72	65, 90, 118, 175	0
29	71	135/229 (58%)	1.92	50 (37%) 0 0	113, 202, 228, 236	0
29	79	135/229 (58%)	0.91	27 (20%) 1 0	131, 194, 215, 220	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
30	11	272/276 (98%)	-0.12	0 100 100	14, 32, 47, 68	0
30	19	272/276 (98%)	0.07	1 (0%) 92 84	25, 45, 61, 73	0
31	21	204/206 (99%)	0.23	1 (0%) 91 81	16, 46, 74, 97	0
31	29	204/206 (99%)	0.78	32 (15%) 2 1	38, 72, 98, 111	0
32	31	202/210 (96%)	-0.26	0 100 100	13, 42, 72, 99	0
32	39	202/210 (96%)	0.09	2 (0%) 82 67	30, 64, 95, 109	0
33	41	181/182 (99%)	-0.04	0 100 100	50, 66, 95, 111	0
33	49	181/182 (99%)	0.76	18 (9%) 7 2	82, 99, 124, 132	0
34	51	174/180 (96%)	0.27	8 (4%) 32 16	53, 76, 96, 117	0
34	59	173/180 (96%)	2.84	95 (54%) 0 0	135, 183, 220, 240	0
35	61	145/148 (97%)	0.60	10 (6%) 16 7	43, 96, 112, 126	0
35	69	146/148 (98%)	0.39	12 (8%) 11 4	52, 93, 116, 129	0
36	38	84/173 (48%)	-0.09	3 (3%) 42 22	116, 159, 172, 180	0
37	15	138/140 (98%)	1.52	44 (31%) 0 0	51, 84, 109, 119	0
37	58	138/140 (98%)	-0.03	3 (2%) 62 41	29, 46, 80, 92	0
38	25	122/122 (100%)	0.81	10 (8%) 11 4	43, 65, 83, 95	0
38	68	122/122 (100%)	0.25	0 100 100	21, 40, 54, 64	0
39	35	150/150 (100%)	0.15	4 (2%) 54 31	35, 77, 106, 122	0
39	78	150/150 (100%)	-0.02	5 (3%) 46 24	19, 46, 81, 121	0
40	45	141/141 (100%)	1.13	27 (19%) 1 0	47, 85, 114, 163	0
40	88	141/141 (100%)	-0.15	1 (0%) 87 75	25, 45, 68, 91	0
41	55	118/118 (100%)	-0.06	1 (0%) 86 72	38, 57, 78, 93	0
41	98	118/118 (100%)	-0.48	0 100 100	24, 42, 61, 73	0
42	65	111/112 (99%)	-0.16	3 (2%) 54 31	63, 89, 122, 132	0
42	A8	112/112 (100%)	-0.11	0 100 100	41, 55, 75, 94	0
43	75	137/146 (93%)	-0.24	0 100 100	57, 73, 145, 164	0
43	B8	137/146 (93%)	0.01	2 (1%) 73 54	32, 53, 104, 138	0
44	85	117/118 (99%)	0.96	30 (25%) 0 0	41, 78, 120, 134	0
44	C8	117/118 (99%)	-0.43	2 (1%) 70 49	20, 36, 63, 93	0
45	95	101/101 (100%)	1.44	28 (27%) 0 0	41, 94, 109, 125	0
45	D8	101/101 (100%)	-0.17	1 (0%) 82 67	23, 57, 73, 89	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
46	A5	113/113 (100%)	0.15	1 (0%) 84 69	37, 50, 93, 124	0
46	E8	113/113 (100%)	-0.40	1 (0%) 84 69	25, 35, 63, 104	0
47	B5	94/96 (97%)	0.20	4 (4%) 35 17	40, 58, 79, 106	0
47	F8	95/96 (98%)	-0.47	0 100 100	23, 36, 54, 74	0
48	C5	107/110 (97%)	0.98	17 (15%) 1 1	61, 81, 130, 140	0
48	G8	109/110 (99%)	-0.20	2 (1%) 68 47	44, 71, 118, 137	0
49	D5	176/206 (85%)	2.55	93 (52%) 0 0	89, 130, 206, 210	0
49	H8	179/206 (86%)	0.81	26 (14%) 2 1	47, 85, 160, 171	0
50	E5	84/85 (98%)	0.27	4 (4%) 30 14	44, 65, 88, 110	0
50	I8	84/85 (98%)	-0.24	1 (1%) 79 61	21, 38, 63, 81	0
51	F5	97/98 (98%)	0.40	7 (7%) 15 6	37, 57, 98, 111	0
51	J8	97/98 (98%)	0.16	2 (2%) 63 43	20, 41, 88, 114	0
52	G5	71/72 (98%)	0.01	2 (2%) 53 30	49, 69, 96, 122	0
52	K8	72/72 (100%)	-0.31	0 100 100	30, 47, 64, 82	0
53	H5	59/60 (98%)	1.33	16 (27%) 0 0	57, 76, 119, 122	0
53	L8	59/60 (98%)	-0.10	1 (1%) 70 49	30, 44, 74, 93	0
54	I5	71/71 (100%)	2.26	35 (49%) 0 0	104, 142, 169, 174	0
54	M8	71/71 (100%)	1.03	13 (18%) 1 0	72, 115, 152, 158	0
55	J5	56/60 (93%)	0.33	1 (1%) 68 47	35, 63, 121, 129	0
55	N8	56/60 (93%)	-0.28	1 (1%) 68 47	18, 47, 108, 114	0
56	K5	45/54 (83%)	1.51	14 (31%) 0 0	103, 136, 163, 169	0
56	O8	45/54 (83%)	2.85	28 (62%) 0 0	73, 103, 134, 144	0
57	L5	49/49 (100%)	0.02	3 (6%) 21 9	28, 35, 77, 88	0
57	P8	49/49 (100%)	-0.45	0 100 100	15, 20, 50, 71	0
58	M5	64/65 (98%)	0.10	2 (3%) 49 26	41, 51, 76, 94	0
58	Q8	64/65 (98%)	-0.39	0 100 100	21, 31, 41, 62	0
59	1L	72/76 (94%)	0.74	13 (18%) 1 0	80, 196, 235, 239	0
60	2L	67/76 (88%)	-0.12	1 (1%) 73 54	52, 82, 113, 145	0
All	All	21491/22459 (95%)	-0.01	990 (4%) 32 16	13, 69, 169, 252	0

The worst 5 of 990 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
49	D5	106	GLY	15.3
34	59	124	GLU	12.2
27	14	2798	C	12.2
27	14	2797	U	11.7
27	14	2799	A	10.7

## 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<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
22	4SU	1K	8	20/21	0.73	0.22	181,183,191,193	0
26	PSU	5K	32	20/21	0.73	0.55	152,165,171,173	0
26	H2U	5K	16	20/21	0.78	0.30	121,137,151,153	0
26	PSU	5K	39	20/21	0.79	0.32	116,146,158,158	0
26	H2U	5K	20	20/21	0.80	0.18	119,139,156,163	0
22	PSU	1K	55	20/21	0.81	0.17	123,134,149,150	0
26	PSU	5K	55	20/21	0.81	0.32	115,127,149,152	0
26	5MU	5K	54	21/22	0.85	0.36	129,137,141,145	0
22	7MG	1K	46	24/25	0.85	0.22	180,185,193,198	0
59	5MU	1L	54	21/22	0.85	0.22	139,160,167,169	0
26	4SU	5K	8	20/21	0.86	0.28	147,151,156,157	0
24	PSU	3K	32	20/21	0.86	0.20	111,117,123,125	0
60	H2U	2L	16	20/21	0.86	0.22	100,112,131,139	0
24	PSU	3K	39	20/21	0.88	0.23	100,112,118,119	0
24	PSU	3L	32	20/21	0.88	0.23	116,119,126,129	0
26	MIA	5K	37	29/30	0.89	0.42	89,114,142,145	0
23	H2U	2K	16	20/21	0.89	0.25	67,90,114,126	0
60	3AU	2L	47	27/28	0.91	0.20	95,125,138,141	0
24	PSU	3L	39	20/21	0.92	0.17	97,111,120,122	0
59	PSU	1L	32	20/21	0.92	0.11	96,104,118,121	0
22	5MU	1K	54	21/22	0.92	0.25	94,115,123,126	0
24	MIA	3L	37	29/30	0.92	0.26	81,113,120,124	0
60	7MG	2L	46	24/25	0.92	0.15	89,104,121,126	0
1	2MG	1G	1207	24/25	0.92	0.13	91,101,104,108	0
60	5MU	2L	54	21/22	0.92	0.26	75,85,99,108	0
60	PSU	2L	55	20/21	0.92	0.14	77,82,88,89	0
23	H2U	2K	20	20/21	0.93	0.18	88,97,110,111	0
24	MIA	3K	37	29/30	0.93	0.25	95,112,116,117	0
23	PSU	2K	55	20/21	0.94	0.13	60,67,80,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	4SU	2L	8	20/21	0.94	0.13	70,83,90,90	0
12	0TD	3A	89	10/11	0.94	0.20	65,69,72,77	0
1	PSU	1G	516	20/21	0.94	0.12	71,76,78,79	0
27	5MU	14	1915	21/22	0.94	0.17	63,72,80,88	0
12	0TD	3I	89	10/11	0.94	0.26	44,46,56,71	0
59	MIA	1L	37	29/30	0.94	0.17	68,80,95,96	0
27	PSU	1H	1940	20/21	0.95	0.18	35,44,54,54	0
60	PSU	2L	39	20/21	0.95	0.15	59,68,72,72	0
1	7MG	1G	527	24/25	0.95	0.17	60,65,70,73	0
23	7MG	2K	46	24/25	0.95	0.20	56,62,98,99	0
23	3AU	2K	47	27/28	0.95	0.18	62,95,113,114	0
23	5MU	2K	54	21/22	0.95	0.14	64,68,76,78	0
27	OMC	14	1920	21/22	0.96	0.17	54,60,62,64	0
27	5MC	1H	1965	21/22	0.96	0.17	27,33,36,42	0
1	5MC	1G	1400	21/22	0.96	0.16	52,64,70,72	0
1	4OC	1G	1402	22/23	0.96	0.13	46,57,61,71	0
59	PSU	1L	39	20/21	0.96	0.11	77,98,110,110	0
1	5MC	1G	1404	21/22	0.96	0.16	44,49,55,59	0
1	MA6	1G	1519	24/25	0.96	0.20	44,54,57,58	0
1	5MC	1G	967	21/22	0.96	0.12	61,68,76,86	0
60	PSU	2L	32	20/21	0.96	0.14	68,73,80,80	0
60	MIA	2L	37	29/30	0.96	0.14	64,69,80,85	0
22	PSU	1K	32	20/21	0.96	0.14	65,70,79,85	0
27	5MU	1H	1938	21/22	0.96	0.14	45,48,54,64	0
22	PSU	1K	39	20/21	0.96	0.16	50,67,75,75	0
1	PSU	13	516	20/21	0.96	0.13	50,55,58,60	0
27	PSU	14	1917	20/21	0.96	0.11	53,60,67,70	0
1	5MC	13	1404	21/22	0.97	0.18	26,29,41,43	0
1	7MG	13	527	24/25	0.97	0.17	42,50,56,63	0
1	5MC	1G	1407	21/22	0.97	0.17	43,49,53,60	0
27	5MC	14	1942	21/22	0.97	0.19	47,57,61,71	0
27	OMG	14	2251	24/25	0.97	0.18	35,40,44,46	0
27	OMU	1H	2565	21/22	0.97	0.20	19,22,26,36	0
27	PSU	1H	2618	20/21	0.97	0.17	17,19,24,24	0
27	PSU	14	2605	20/21	0.97	0.21	29,33,41,51	0
1	UR3	1G	1498	21/22	0.97	0.17	40,49,53,55	0
23	PSU	2K	32	20/21	0.97	0.16	45,50,57,58	0
23	MIA	2K	37	29/30	0.97	0.20	41,47,63,67	0
23	PSU	2K	39	20/21	0.97	0.20	39,48,57,59	0
1	MA6	1G	1518	24/25	0.97	0.15	52,57,60,62	0
1	2MG	13	1207	24/25	0.97	0.13	57,64,68,69	0
1	M2G	13	966	25/26	0.97	0.19	40,46,57,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
1	5MC	13	1400	21/22	0.97	0.20	38,45,51,56	0
27	PSU	1H	1934	20/21	0.97	0.16	36,42,47,51	0
27	PSU	14	1911	20/21	0.97	0.13	51,59,64,64	0
22	MIA	1K	37	29/30	0.97	0.19	43,49,58,62	0
1	M2G	1G	966	25/26	0.97	0.13	59,67,76,77	0
1	5MC	13	967	21/22	0.97	0.18	43,50,56,59	0
1	MA6	13	1518	24/25	0.98	0.17	27,32,35,38	0
27	OMC	1H	1943	21/22	0.98	0.17	34,37,43,46	0
23	4SU	2K	8	20/21	0.98	0.16	42,48,57,62	0
27	5MU	1H	1962	21/22	0.98	0.17	20,23,30,41	0
27	5MU	14	1939	21/22	0.98	0.18	34,40,44,51	0
1	4OC	13	1402	22/23	0.98	0.18	29,37,42,46	0
1	MA6	13	1519	24/25	0.98	0.18	28,31,33,33	0
27	5MC	1H	1985	21/22	0.98	0.17	24,30,34,37	0
27	5MC	14	1962	21/22	0.98	0.20	38,45,53,58	0
27	OMG	1H	2264	24/25	0.98	0.17	19,23,25,26	0
1	UR3	13	1498	21/22	0.98	0.20	29,33,42,43	0
27	2MA	1H	2516	23/24	0.98	0.19	13,17,24,26	0
27	2MA	14	2503	23/24	0.98	0.19	28,32,36,41	0
1	5MC	13	1407	21/22	0.98	0.20	29,32,37,40	0
27	OMU	14	2552	21/22	0.98	0.19	37,42,47,58	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, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	13	1764	1/1	0.59	0.07	86,86,86,86	0
62	MG	1H	3555	1/1	0.61	0.10	56,56,56,56	0
62	MG	1H	3576	1/1	0.65	0.07	69,69,69,69	0
62	MG	1H	3343[A]	1/1	0.66	0.88	55,55,55,55	1
62	MG	1H	3343[B]	1/1	0.66	0.88	68,68,68,68	1
62	MG	14	3336	1/1	0.66	0.15	78,78,78,78	0
62	MG	1H	3569	1/1	0.70	0.06	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
61	K	13	1611	1/1	0.70	0.12	114,114,114,114	0
62	MG	1G	1714	1/1	0.70	0.08	88,88,88,88	0
62	MG	13	1722	1/1	0.70	0.12	52,52,52,52	0
62	MG	O8	101	1/1	0.71	0.21	60,60,60,60	0
62	MG	1G	1698	1/1	0.71	0.29	66,66,66,66	0
62	MG	14	3221	1/1	0.72	0.16	52,52,52,52	0
61	K	14	3097	1/1	0.73	0.11	91,91,91,91	0
61	K	14	3012	1/1	0.73	0.20	117,117,117,117	0
61	K	14	3053	1/1	0.73	0.12	102,102,102,102	0
62	MG	1G	1661	1/1	0.73	0.38	79,79,79,79	0
62	MG	13	1690	1/1	0.74	0.11	51,51,51,51	0
62	MG	1H	3364	1/1	0.74	0.24	58,58,58,58	0
62	MG	1H	3549	1/1	0.74	0.08	60,60,60,60	0
62	MG	1H	3282	1/1	0.74	0.21	49,49,49,49	0
62	MG	1G	1733	1/1	0.74	0.07	81,81,81,81	0
62	MG	1H	3331	1/1	0.74	0.21	54,54,54,54	0
62	MG	14	3260	1/1	0.74	0.25	84,84,84,84	0
62	MG	13	1662	1/1	0.74	0.21	54,54,54,54	0
62	MG	1H	3211	1/1	0.75	0.16	56,56,56,56	0
61	K	1H	3005	1/1	0.75	0.17	100,100,100,100	0
62	MG	M5	101	1/1	0.75	0.11	84,84,84,84	0
62	MG	1H	3340	1/1	0.76	0.24	48,48,48,48	0
62	MG	14	3125	1/1	0.76	0.17	60,60,60,60	0
62	MG	1H	3305	1/1	0.76	0.32	41,41,41,41	0
62	MG	14	3173	1/1	0.77	0.18	66,66,66,66	0
62	MG	14	3187	1/1	0.77	0.31	51,51,51,51	0
62	MG	1H	3312	1/1	0.77	0.28	39,39,39,39	0
61	K	32	301	1/1	0.77	0.09	104,104,104,104	0
62	MG	14	3317	1/1	0.77	0.11	40,40,40,40	0
62	MG	1H	3391	1/1	0.77	0.14	20,20,20,20	0
62	MG	14	3375	1/1	0.77	0.09	84,84,84,84	0
62	MG	1G	1678	1/1	0.77	0.30	54,54,54,54	0
62	MG	14	3249	1/1	0.78	0.17	62,62,62,62	0
62	MG	13	1698	1/1	0.78	0.32	84,84,84,84	0
62	MG	1H	3294	1/1	0.78	0.14	59,59,59,59	0
61	K	13	1608	1/1	0.78	0.11	89,89,89,89	0
62	MG	1G	1711	1/1	0.78	0.11	97,97,97,97	0
62	MG	1G	1653	1/1	0.78	0.18	53,53,53,53	0
62	MG	1H	3272	1/1	0.79	0.37	55,55,55,55	0
61	K	1H	3140	1/1	0.79	0.14	62,62,62,62	0
62	MG	14	3280	1/1	0.79	0.09	45,45,45,45	0
62	MG	1H	3290	1/1	0.79	0.13	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	13	1692	1/1	0.79	0.24	51,51,51,51	0
61	K	1H	3020	1/1	0.79	0.14	65,65,65,65	0
62	MG	1H	3359	1/1	0.79	0.28	62,62,62,62	0
61	K	49	201	1/1	0.80	0.18	108,108,108,108	0
62	MG	1H	3541	1/1	0.80	0.07	66,66,66,66	0
62	MG	1H	3285	1/1	0.80	0.30	43,43,43,43	0
62	MG	14	3309	1/1	0.80	0.11	26,26,26,26	0
62	MG	1H	3550	1/1	0.80	0.06	64,64,64,64	0
61	K	1G	1605	1/1	0.80	0.07	92,92,92,92	0
62	MG	1G	1690	1/1	0.80	0.35	74,74,74,74	0
61	K	1G	1631	1/1	0.80	0.26	86,86,86,86	0
62	MG	13	1679	1/1	0.81	0.28	45,45,45,45	0
62	MG	14	3149	1/1	0.81	0.27	37,37,37,37	0
62	MG	1G	1707	1/1	0.81	0.12	62,62,62,62	0
61	K	1G	1602	1/1	0.81	0.19	104,104,104,104	0
61	K	39	302	1/1	0.81	0.20	74,74,74,74	0
62	MG	14	3244	1/1	0.81	0.19	64,64,64,64	0
62	MG	13	1672	1/1	0.81	0.24	49,49,49,49	0
61	K	29	301	1/1	0.82	0.09	86,86,86,86	0
62	MG	14	3230	1/1	0.82	0.11	54,54,54,54	0
62	MG	1H	3563	1/1	0.82	0.10	75,75,75,75	0
62	MG	13	1770	1/1	0.82	0.12	71,71,71,71	0
62	MG	1H	3512	1/1	0.82	0.15	39,39,39,39	0
62	MG	14	3268	1/1	0.82	0.16	36,36,36,36	0
62	MG	1H	3539	1/1	0.82	0.12	66,66,66,66	0
61	K	14	3065	1/1	0.82	0.17	55,55,55,55	0
62	MG	1H	3544	1/1	0.82	0.06	63,63,63,63	0
62	MG	14	3332	1/1	0.82	0.09	54,54,54,54	0
62	MG	13	1738	1/1	0.82	0.09	86,86,86,86	0
62	MG	14	3181	1/1	0.82	0.22	49,49,49,49	0
62	MG	14	3391	1/1	0.82	0.06	81,81,81,81	0
62	MG	14	3399	1/1	0.82	0.07	106,106,106,106	0
62	MG	13	1755	1/1	0.82	0.07	83,83,83,83	0
62	MG	1H	3551	1/1	0.83	0.07	45,45,45,45	0
62	MG	1H	3281	1/1	0.83	0.36	49,49,49,49	0
62	MG	13	1665	1/1	0.83	0.22	51,51,51,51	0
61	K	5A	101	1/1	0.83	0.08	82,82,82,82	0
61	K	1G	1627	1/1	0.83	0.11	92,92,92,92	0
61	K	1G	1609	1/1	0.83	0.08	91,91,91,91	0
62	MG	1H	3453	1/1	0.83	0.14	20,20,20,20	0
62	MG	1H	3461	1/1	0.83	0.14	20,20,20,20	0
62	MG	1H	3493	1/1	0.83	0.08	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1G	1688	1/1	0.83	0.21	65,65,65,65	0
62	MG	14	3278	1/1	0.83	0.22	49,49,49,49	0
62	MG	1H	3500	1/1	0.83	0.11	63,63,63,63	0
62	MG	1H	3295	1/1	0.83	0.17	29,29,29,29	0
61	K	14	3064	1/1	0.83	0.11	87,87,87,87	0
61	K	1G	1614	1/1	0.83	0.09	86,86,86,86	0
62	MG	1H	3330	1/1	0.83	0.20	45,45,45,45	0
62	MG	1G	1718	1/1	0.83	0.07	39,39,39,39	0
62	MG	13	1707	1/1	0.83	0.27	58,58,58,58	0
62	MG	1G	1736	1/1	0.83	0.11	62,62,62,62	0
62	MG	1H	3279	1/1	0.83	0.24	32,32,32,32	0
62	MG	1H	3450	1/1	0.84	0.07	52,52,52,52	0
62	MG	14	3310	1/1	0.84	0.10	25,25,25,25	0
62	MG	13	1741	1/1	0.84	0.09	109,109,109,109	0
62	MG	1H	3242	1/1	0.84	0.14	37,37,37,37	0
61	K	14	3034	1/1	0.84	0.13	86,86,86,86	0
62	MG	14	3360	1/1	0.84	0.16	37,37,37,37	0
61	K	13	1648	1/1	0.84	0.09	71,71,71,71	0
62	MG	14	3275	1/1	0.84	0.14	42,42,42,42	0
62	MG	14	3394	1/1	0.84	0.13	61,61,61,61	0
62	MG	1H	3372	1/1	0.84	0.17	31,31,31,31	0
61	K	1H	3002	1/1	0.84	0.12	73,73,73,73	0
62	MG	1H	3311	1/1	0.85	0.16	47,47,47,47	0
62	MG	14	3122	1/1	0.85	0.22	49,49,49,49	0
62	MG	14	3124	1/1	0.85	0.13	58,58,58,58	0
62	MG	1H	3496	1/1	0.85	0.08	48,48,48,48	0
62	MG	1G	1689	1/1	0.85	0.21	57,57,57,57	0
62	MG	13	1715	1/1	0.85	0.24	60,60,60,60	0
61	K	1H	3004	1/1	0.85	0.15	88,88,88,88	0
62	MG	1H	3517	1/1	0.85	0.16	26,26,26,26	0
62	MG	1G	1709	1/1	0.85	0.07	73,73,73,73	0
61	K	1G	1632	1/1	0.85	0.07	78,78,78,78	0
62	MG	14	3231	1/1	0.85	0.14	39,39,39,39	0
62	MG	14	3380	1/1	0.85	0.14	76,76,76,76	0
61	K	14	3040	1/1	0.85	0.10	93,93,93,93	0
62	MG	13	1709[A]	1/1	0.85	0.41	40,40,40,40	1
62	MG	13	1709[B]	1/1	0.85	0.41	45,45,45,45	1
62	MG	14	3267	1/1	0.85	0.13	44,44,44,44	0
62	MG	13	1766	1/1	0.86	0.06	64,64,64,64	0
61	K	14	3088	1/1	0.86	0.09	98,98,98,98	0
62	MG	1H	3153	1/1	0.86	0.19	45,45,45,45	0
62	MG	14	3164	1/1	0.86	0.17	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3166	1/1	0.86	0.13	58,58,58,58	0
62	MG	1H	3174	1/1	0.86	0.29	60,60,60,60	0
62	MG	1H	3553	1/1	0.86	0.08	60,60,60,60	0
61	K	14	3013	1/1	0.86	0.28	84,84,84,84	0
62	MG	1H	3213	1/1	0.86	0.17	25,25,25,25	0
62	MG	1H	3227	1/1	0.86	0.19	29,29,29,29	0
61	K	1H	3044	1/1	0.86	0.22	92,92,92,92	0
62	MG	1H	3245	1/1	0.86	0.31	50,50,50,50	0
62	MG	1H	3254	1/1	0.86	0.20	29,29,29,29	0
62	MG	1H	3429	1/1	0.86	0.18	29,29,29,29	0
62	MG	1H	3431	1/1	0.86	0.07	46,46,46,46	0
62	MG	1G	1687	1/1	0.86	0.10	67,67,67,67	0
61	K	14	3038	1/1	0.86	0.12	92,92,92,92	0
61	K	1G	1607	1/1	0.86	0.14	87,87,87,87	0
62	MG	1H	3457	1/1	0.86	0.20	25,25,25,25	0
62	MG	1G	1691	1/1	0.86	0.29	64,64,64,64	0
61	K	14	3052	1/1	0.86	0.09	76,76,76,76	0
61	K	13	1649	1/1	0.86	0.10	81,81,81,81	0
62	MG	14	3326	1/1	0.86	0.11	40,40,40,40	0
61	K	1G	1601	1/1	0.86	0.13	115,115,115,115	0
62	MG	13	1677	1/1	0.86	0.21	42,42,42,42	0
62	MG	14	3341	1/1	0.86	0.14	35,35,35,35	0
62	MG	13	1750	1/1	0.86	0.10	52,52,52,52	0
62	MG	1G	1716	1/1	0.86	0.06	70,70,70,70	0
62	MG	1H	3514	1/1	0.86	0.14	53,53,53,53	0
62	MG	13	1753	1/1	0.86	0.08	69,69,69,69	0
61	K	1H	3032	1/1	0.86	0.15	54,54,54,54	0
62	MG	14	3120	1/1	0.86	0.15	44,44,44,44	0
61	K	14	3067	1/1	0.86	0.21	70,70,70,70	0
62	MG	1H	3190	1/1	0.87	0.28	32,32,32,32	0
62	MG	14	3176	1/1	0.87	0.27	69,69,69,69	0
62	MG	1G	1679	1/1	0.87	0.10	62,62,62,62	0
62	MG	1H	3209	1/1	0.87	0.31	52,52,52,52	0
62	MG	14	3201	1/1	0.87	0.22	49,49,49,49	0
62	MG	14	3215	1/1	0.87	0.22	45,45,45,45	0
61	K	13	1603	1/1	0.87	0.08	75,75,75,75	0
62	MG	14	3228	1/1	0.87	0.15	58,58,58,58	0
61	K	1H	3036	1/1	0.87	0.20	60,60,60,60	0
62	MG	1H	3516	1/1	0.87	0.13	21,21,21,21	0
62	MG	14	3242	1/1	0.87	0.18	65,65,65,65	0
61	K	13	1615	1/1	0.87	0.09	90,90,90,90	0
62	MG	1H	3376	1/1	0.87	0.19	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	14	3256	1/1	0.87	0.18	67,67,67,67	0
62	MG	1H	3300	1/1	0.87	0.41	59,59,59,59	0
62	MG	14	3263	1/1	0.87	0.25	60,60,60,60	0
62	MG	1H	3417	1/1	0.87	0.08	61,61,61,61	0
62	MG	1H	3422	1/1	0.87	0.13	29,29,29,29	0
62	MG	14	3270	1/1	0.87	0.14	66,66,66,66	0
62	MG	13	1761	1/1	0.87	0.08	86,86,86,86	0
61	K	1G	1623	1/1	0.87	0.10	95,95,95,95	0
62	MG	1H	3552	1/1	0.87	0.15	85,85,85,85	0
62	MG	14	3305	1/1	0.87	0.06	40,40,40,40	0
62	MG	1G	1724	1/1	0.87	0.08	82,82,82,82	0
62	MG	1G	1731	1/1	0.87	0.09	81,81,81,81	0
61	K	1H	3091	1/1	0.87	0.09	64,64,64,64	0
62	MG	1G	1734	1/1	0.87	0.12	94,94,94,94	0
62	MG	14	3327	1/1	0.87	0.07	36,36,36,36	0
62	MG	1H	3452	1/1	0.87	0.07	68,68,68,68	0
62	MG	14	3118	1/1	0.87	0.23	58,58,58,58	0
62	MG	1H	3325	1/1	0.87	0.27	50,50,50,50	0
62	MG	14	3354	1/1	0.87	0.12	30,30,30,30	0
62	MG	13	1725	1/1	0.87	0.30	58,58,58,58	0
61	K	14	3091	1/1	0.87	0.15	78,78,78,78	0
62	MG	1H	3466	1/1	0.87	0.14	22,22,22,22	0
62	MG	1H	3489	1/1	0.87	0.11	57,57,57,57	0
62	MG	14	3161	1/1	0.87	0.14	47,47,47,47	0
62	MG	1G	1659	1/1	0.87	0.38	64,64,64,64	0
62	MG	13	1702	1/1	0.87	0.21	60,60,60,60	0
62	MG	1H	3328[B]	1/1	0.88	0.44	27,27,27,27	1
62	MG	1H	3186	1/1	0.88	0.38	55,55,55,55	0
61	K	1H	3131	1/1	0.88	0.14	63,63,63,63	0
62	MG	1H	3334	1/1	0.88	0.18	43,43,43,43	0
62	MG	1H	3202	1/1	0.88	0.23	45,45,45,45	0
61	K	13	1605	1/1	0.88	0.08	81,81,81,81	0
61	K	14	3037	1/1	0.88	0.06	60,60,60,60	0
61	K	1H	3142	1/1	0.88	0.22	78,78,78,78	0
62	MG	1H	3561	1/1	0.88	0.08	38,38,38,38	0
62	MG	14	3182	1/1	0.88	0.23	62,62,62,62	0
62	MG	14	3186	1/1	0.88	0.27	49,49,49,49	0
62	MG	1H	3361	1/1	0.88	0.28	57,57,57,57	0
62	MG	14	3188	1/1	0.88	0.15	56,56,56,56	0
62	MG	14	3195	1/1	0.88	0.20	53,53,53,53	0
62	MG	1H	3567	1/1	0.88	0.10	24,24,24,24	0
62	MG	13	1720	1/1	0.88	0.24	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3217	1/1	0.88	0.14	69,69,69,69	0
62	MG	13	1655	1/1	0.88	0.28	51,51,51,51	0
62	MG	14	3225	1/1	0.88	0.13	47,47,47,47	0
62	MG	1H	3373	1/1	0.88	0.29	43,43,43,43	0
62	MG	1G	1644	1/1	0.88	0.17	59,59,59,59	0
61	K	13	1609	1/1	0.88	0.10	57,57,57,57	0
62	MG	14	3233	1/1	0.88	0.21	52,52,52,52	0
62	MG	1G	1657	1/1	0.88	0.30	53,53,53,53	0
61	K	1H	3040[A]	1/1	0.88	0.31	46,46,46,46	1
62	MG	1H	3413	1/1	0.88	0.08	49,49,49,49	0
62	MG	1G	1674	1/1	0.88	0.24	122,122,122,122	0
62	MG	1G	1677	1/1	0.88	0.20	57,57,57,57	0
62	MG	1H	3259	1/1	0.88	0.20	46,46,46,46	0
62	MG	1H	3264	1/1	0.88	0.32	55,55,55,55	0
61	K	1H	3040[B]	1/1	0.88	0.31	43,43,43,43	1
62	MG	13	1673	1/1	0.88	0.28	55,55,55,55	0
62	MG	1H	3437	1/1	0.88	0.08	51,51,51,51	0
61	K	13	1650	1/1	0.88	0.16	97,97,97,97	0
61	K	14	3004	1/1	0.88	0.14	81,81,81,81	0
62	MG	14	3303	1/1	0.88	0.06	58,58,58,58	0
62	MG	13	1680	1/1	0.88	0.31	49,49,49,49	0
62	MG	13	1684	1/1	0.88	0.34	73,73,73,73	0
61	K	14	3006	1/1	0.88	0.14	106,106,106,106	0
61	K	14	3080	1/1	0.88	0.10	79,79,79,79	0
62	MG	1H	3474	1/1	0.88	0.17	24,24,24,24	0
62	MG	1G	1715	1/1	0.88	0.12	39,39,39,39	0
62	MG	14	3331	1/1	0.88	0.10	51,51,51,51	0
62	MG	1H	3481	1/1	0.88	0.11	21,21,21,21	0
62	MG	1H	3298	1/1	0.88	0.15	28,28,28,28	0
61	K	14	3007	1/1	0.88	0.12	64,64,64,64	0
62	MG	1G	1730	1/1	0.88	0.09	78,78,78,78	0
62	MG	1H	3161	1/1	0.88	0.31	55,55,55,55	0
62	MG	1H	3162	1/1	0.88	0.32	58,58,58,58	0
61	K	1K	101	1/1	0.88	0.09	83,83,83,83	0
62	MG	14	3387	1/1	0.88	0.11	45,45,45,45	0
62	MG	1H	3179	1/1	0.88	0.21	30,30,30,30	0
62	MG	1H	3326	1/1	0.88	0.30	60,60,60,60	0
62	MG	1H	3327	1/1	0.88	0.15	40,40,40,40	0
62	MG	1H	3328[A]	1/1	0.88	0.44	22,22,22,22	1
62	MG	14	3240	1/1	0.89	0.29	57,57,57,57	0
62	MG	13	1678	1/1	0.89	0.28	38,38,38,38	0
62	MG	1H	3165	1/1	0.89	0.21	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3221	1/1	0.89	0.18	34,34,34,34	0
62	MG	1G	1669	1/1	0.89	0.42	60,60,60,60	0
62	MG	1H	3424	1/1	0.89	0.18	42,42,42,42	0
62	MG	14	3261	1/1	0.89	0.13	43,43,43,43	0
62	MG	1H	3329	1/1	0.89	0.31	63,63,63,63	0
62	MG	1H	3287	1/1	0.89	0.17	37,37,37,37	0
61	K	14	3098	1/1	0.89	0.13	67,67,67,67	0
62	MG	14	3148	1/1	0.89	0.13	43,43,43,43	0
62	MG	1H	3238	1/1	0.89	0.16	39,39,39,39	0
62	MG	13	1704	1/1	0.89	0.29	56,56,56,56	0
62	MG	1H	3183	1/1	0.89	0.17	47,47,47,47	0
62	MG	14	3290	1/1	0.89	0.08	36,36,36,36	0
62	MG	14	3291	1/1	0.89	0.07	58,58,58,58	0
62	MG	14	3294	1/1	0.89	0.09	51,51,51,51	0
62	MG	14	3295	1/1	0.89	0.11	50,50,50,50	0
62	MG	1H	3299	1/1	0.89	0.12	47,47,47,47	0
61	K	14	3086	1/1	0.89	0.10	65,65,65,65	0
62	MG	1G	1692	1/1	0.89	0.36	72,72,72,72	0
62	MG	1G	1696	1/1	0.89	0.37	52,52,52,52	0
62	MG	14	3312	1/1	0.89	0.12	38,38,38,38	0
62	MG	1G	1697	1/1	0.89	0.29	63,63,63,63	0
62	MG	14	3325	1/1	0.89	0.10	30,30,30,30	0
62	MG	1H	3303	1/1	0.89	0.17	46,46,46,46	0
62	MG	1H	3473	1/1	0.89	0.15	19,19,19,19	0
61	K	1H	3072	1/1	0.89	0.14	53,53,53,53	0
62	MG	14	3190	1/1	0.89	0.14	77,77,77,77	0
62	MG	1H	3477	1/1	0.89	0.15	28,28,28,28	0
62	MG	14	3337	1/1	0.89	0.03	83,83,83,83	0
62	MG	1H	3366	1/1	0.89	0.12	40,40,40,40	0
62	MG	1H	3199	1/1	0.89	0.26	34,34,34,34	0
62	MG	16	214	1/1	0.89	0.06	57,57,57,57	0
62	MG	78	201	1/1	0.89	0.24	38,38,38,38	0
62	MG	1G	1720	1/1	0.89	0.16	73,73,73,73	0
62	MG	14	3381	1/1	0.89	0.10	56,56,56,56	0
62	MG	14	3383	1/1	0.89	0.09	51,51,51,51	0
62	MG	14	3384	1/1	0.89	0.05	47,47,47,47	0
62	MG	14	3386	1/1	0.89	0.15	61,61,61,61	0
61	K	14	3079	1/1	0.89	0.17	81,81,81,81	0
62	MG	14	3388	1/1	0.89	0.07	91,91,91,91	0
62	MG	1G	1728	1/1	0.89	0.06	50,50,50,50	0
62	MG	1H	3275	1/1	0.89	0.30	44,44,44,44	0
62	MG	14	3396	1/1	0.89	0.09	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	13	1643	1/1	0.89	0.07	76,76,76,76	0
62	MG	14	3239	1/1	0.89	0.28	66,66,66,66	0
61	K	16	202	1/1	0.90	0.08	74,74,74,74	0
62	MG	1H	3451	1/1	0.90	0.05	82,82,82,82	0
62	MG	14	3194	1/1	0.90	0.21	54,54,54,54	0
62	MG	1G	1660	1/1	0.90	0.32	46,46,46,46	0
62	MG	14	3197	1/1	0.90	0.20	48,48,48,48	0
62	MG	1H	3239	1/1	0.90	0.15	26,26,26,26	0
62	MG	14	3208	1/1	0.90	0.25	58,58,58,58	0
61	K	14	3045	1/1	0.90	0.18	83,83,83,83	0
62	MG	1G	1671	1/1	0.90	0.35	46,46,46,46	0
62	MG	6E	201	1/1	0.90	0.34	62,62,62,62	0
62	MG	1H	3151	1/1	0.90	0.26	41,41,41,41	0
62	MG	1H	3255	1/1	0.90	0.24	47,47,47,47	0
62	MG	13	1710	1/1	0.90	0.16	52,52,52,52	0
62	MG	1G	1683[A]	1/1	0.90	0.58	51,51,51,51	1
62	MG	1G	1683[B]	1/1	0.90	0.58	45,45,45,45	1
62	MG	14	3235	1/1	0.90	0.17	50,50,50,50	0
62	MG	1H	3263	1/1	0.90	0.11	36,36,36,36	0
61	K	1G	1634	1/1	0.90	0.10	62,62,62,62	0
62	MG	14	3241	1/1	0.90	0.14	59,59,59,59	0
62	MG	1H	3336	1/1	0.90	0.40	45,45,45,45	0
62	MG	13	1719	1/1	0.90	0.34	63,63,63,63	0
62	MG	14	3248	1/1	0.90	0.31	60,60,60,60	0
61	K	1H	3129	1/1	0.90	0.22	60,60,60,60	0
62	MG	14	3250	1/1	0.90	0.12	38,38,38,38	0
61	K	13	1651	1/1	0.90	0.15	81,81,81,81	0
62	MG	1G	1695	1/1	0.90	0.23	72,72,72,72	0
62	MG	1H	3497	1/1	0.90	0.08	55,55,55,55	0
62	MG	1H	3345[A]	1/1	0.90	0.48	23,23,23,23	1
62	MG	1H	3345[B]	1/1	0.90	0.48	24,24,24,24	1
62	MG	1H	3352	1/1	0.90	0.19	43,43,43,43	0
62	MG	13	1695	1/1	0.90	0.14	66,66,66,66	0
62	MG	1H	3180	1/1	0.90	0.17	43,43,43,43	0
62	MG	1H	3522	1/1	0.90	0.09	49,49,49,49	0
62	MG	1H	3535	1/1	0.90	0.07	64,64,64,64	0
62	MG	1H	3363	1/1	0.90	0.13	56,56,56,56	0
62	MG	13	1727	1/1	0.90	0.13	60,60,60,60	0
62	MG	1H	3542	1/1	0.90	0.08	33,33,33,33	0
62	MG	1G	1721	1/1	0.90	0.08	45,45,45,45	0
62	MG	13	1732	1/1	0.90	0.07	51,51,51,51	0
62	MG	1G	1725	1/1	0.90	0.08	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3548	1/1	0.90	0.12	32,32,32,32	0
62	MG	1H	3367	1/1	0.90	0.18	35,35,35,35	0
62	MG	13	1734	1/1	0.90	0.06	41,41,41,41	0
61	K	1H	3027	1/1	0.90	0.10	63,63,63,63	0
62	MG	1H	3375	1/1	0.90	0.30	36,36,36,36	0
62	MG	13	1699	1/1	0.90	0.12	43,43,43,43	0
62	MG	1H	3554	1/1	0.90	0.06	77,77,77,77	0
62	MG	1H	3380	1/1	0.90	0.32	44,44,44,44	0
62	MG	1H	3556	1/1	0.90	0.12	47,47,47,47	0
61	K	1H	3041	1/1	0.90	0.15	68,68,68,68	0
62	MG	13	1703	1/1	0.90	0.22	49,49,49,49	0
62	MG	14	3137	1/1	0.90	0.15	49,49,49,49	0
62	MG	14	3350	1/1	0.90	0.10	39,39,39,39	0
62	MG	14	3352	1/1	0.90	0.13	63,63,63,63	0
62	MG	14	3142	1/1	0.90	0.25	51,51,51,51	0
62	MG	14	3145	1/1	0.90	0.18	49,49,49,49	0
62	MG	14	3362	1/1	0.90	0.05	68,68,68,68	0
61	K	14	3102	1/1	0.90	0.07	76,76,76,76	0
62	MG	1H	3419	1/1	0.90	0.10	27,27,27,27	0
62	MG	14	3154	1/1	0.90	0.18	50,50,50,50	0
62	MG	14	3382	1/1	0.90	0.06	52,52,52,52	0
62	MG	1H	3572	1/1	0.90	0.11	25,25,25,25	0
62	MG	1H	3220	1/1	0.90	0.35	50,50,50,50	0
62	MG	16	210	1/1	0.90	0.26	62,62,62,62	0
62	MG	14	3167	1/1	0.90	0.18	38,38,38,38	0
61	K	14	3072	1/1	0.90	0.08	85,85,85,85	0
62	MG	14	3389	1/1	0.90	0.07	45,45,45,45	0
62	MG	21	303	1/1	0.90	0.10	33,33,33,33	0
62	MG	13	1708	1/1	0.90	0.26	60,60,60,60	0
62	MG	1H	3237	1/1	0.90	0.18	38,38,38,38	0
62	MG	1H	3323	1/1	0.90	0.29	52,52,52,52	0
62	MG	1H	3438	1/1	0.90	0.13	74,74,74,74	0
61	K	1J	201	1/1	0.91	0.10	81,81,81,81	0
62	MG	1H	3482	1/1	0.91	0.10	45,45,45,45	0
62	MG	1H	3488	1/1	0.91	0.10	35,35,35,35	0
62	MG	14	3116	1/1	0.91	0.22	32,32,32,32	0
62	MG	13	1701	1/1	0.91	0.21	69,69,69,69	0
61	K	1H	3138	1/1	0.91	0.10	62,62,62,62	0
62	MG	13	1756	1/1	0.91	0.08	63,63,63,63	0
62	MG	13	1757	1/1	0.91	0.12	50,50,50,50	0
62	MG	14	3264	1/1	0.91	0.13	45,45,45,45	0
62	MG	14	3265	1/1	0.91	0.16	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3370	1/1	0.91	0.41	61,61,61,61	0
62	MG	1G	1666	1/1	0.91	0.33	46,46,46,46	0
62	MG	13	1758	1/1	0.91	0.07	76,76,76,76	0
62	MG	14	3272	1/1	0.91	0.20	61,61,61,61	0
62	MG	14	3143	1/1	0.91	0.12	39,39,39,39	0
62	MG	14	3277	1/1	0.91	0.14	61,61,61,61	0
61	K	13	1619	1/1	0.91	0.29	58,58,58,58	0
62	MG	13	1763	1/1	0.91	0.06	64,64,64,64	0
62	MG	1H	3320[A]	1/1	0.91	0.38	8,8,8,8	1
62	MG	1H	3320[B]	1/1	0.91	0.38	9,9,9,9	1
62	MG	1H	3528	1/1	0.91	0.10	50,50,50,50	0
62	MG	1H	3321	1/1	0.91	0.24	36,36,36,36	0
62	MG	14	3299	1/1	0.91	0.05	48,48,48,48	0
61	K	13	1645	1/1	0.91	0.10	72,72,72,72	0
62	MG	1G	1686	1/1	0.91	0.40	75,75,75,75	0
62	MG	14	3308	1/1	0.91	0.06	77,77,77,77	0
62	MG	1H	3540	1/1	0.91	0.06	50,50,50,50	0
61	K	1H	3023	1/1	0.91	0.12	63,63,63,63	0
62	MG	14	3178	1/1	0.91	0.30	53,53,53,53	0
61	K	2A	201	1/1	0.91	0.07	70,70,70,70	0
61	K	1H	3051	1/1	0.91	0.07	49,49,49,49	0
62	MG	1H	3148	1/1	0.91	0.30	35,35,35,35	0
62	MG	1H	3428	1/1	0.91	0.09	23,23,23,23	0
62	MG	13	1671	1/1	0.91	0.24	49,49,49,49	0
61	K	BI	201	1/1	0.91	0.08	108,108,108,108	0
61	K	13	1646	1/1	0.91	0.16	63,63,63,63	0
61	K	1H	3095	1/1	0.91	0.09	58,58,58,58	0
62	MG	1G	1699	1/1	0.91	0.25	62,62,62,62	0
62	MG	1G	1705	1/1	0.91	0.10	73,73,73,73	0
62	MG	14	3202	1/1	0.91	0.21	42,42,42,42	0
62	MG	1H	3440	1/1	0.91	0.10	62,62,62,62	0
62	MG	14	3209	1/1	0.91	0.13	53,53,53,53	0
61	K	1H	3099	1/1	0.91	0.10	59,59,59,59	0
62	MG	14	3369	1/1	0.91	0.08	76,76,76,76	0
62	MG	14	3372	1/1	0.91	0.11	64,64,64,64	0
62	MG	14	3216	1/1	0.91	0.18	51,51,51,51	0
62	MG	1H	3335	1/1	0.91	0.28	40,40,40,40	0
61	K	13	1623	1/1	0.91	0.09	56,56,56,56	0
62	MG	14	3223	1/1	0.91	0.16	40,40,40,40	0
61	K	14	3014	1/1	0.91	0.20	80,80,80,80	0
62	MG	14	3226	1/1	0.91	0.16	55,55,55,55	0
62	MG	1H	3454	1/1	0.91	0.12	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
61	K	1G	1618	1/1	0.91	0.14	79,79,79,79	0
61	K	14	3035	1/1	0.91	0.12	83,83,83,83	0
61	K	13	1631	1/1	0.91	0.12	58,58,58,58	0
62	MG	16	207	1/1	0.91	0.21	43,43,43,43	0
62	MG	16	209	1/1	0.91	0.40	59,59,59,59	0
61	K	14	3099	1/1	0.91	0.06	67,67,67,67	0
61	K	1H	3134	1/1	0.91	0.17	54,54,54,54	0
62	MG	1H	3201	1/1	0.91	0.18	45,45,45,45	0
61	K	1H	3126	1/1	0.92	0.13	86,86,86,86	0
62	MG	1G	1647	1/1	0.92	0.29	55,55,55,55	0
62	MG	1G	1649	1/1	0.92	0.29	74,74,74,74	0
62	MG	13	1717	1/1	0.92	0.33	62,62,62,62	0
61	K	1H	3050	1/1	0.92	0.29	53,53,53,53	0
61	K	1G	1608	1/1	0.92	0.08	80,80,80,80	0
62	MG	1H	3185	1/1	0.92	0.20	40,40,40,40	0
61	K	13	1638	1/1	0.92	0.09	56,56,56,56	0
62	MG	14	3212	1/1	0.92	0.23	44,44,44,44	0
62	MG	1G	1663[A]	1/1	0.92	0.45	29,29,29,29	1
62	MG	1G	1663[B]	1/1	0.92	0.45	30,30,30,30	1
62	MG	1H	3189	1/1	0.92	0.20	41,41,41,41	0
61	K	13	1642	1/1	0.92	0.12	93,93,93,93	0
61	K	1G	1616	1/1	0.92	0.15	86,86,86,86	0
61	K	1H	3135	1/1	0.92	0.15	82,82,82,82	0
61	K	14	3024	1/1	0.92	0.08	52,52,52,52	0
62	MG	1H	3207	1/1	0.92	0.24	38,38,38,38	0
61	K	1H	3081	1/1	0.92	0.17	49,49,49,49	0
62	MG	1H	3475	1/1	0.92	0.11	40,40,40,40	0
62	MG	14	3232	1/1	0.92	0.16	63,63,63,63	0
61	K	1G	1625	1/1	0.92	0.06	108,108,108,108	0
62	MG	1H	3480	1/1	0.92	0.15	18,18,18,18	0
62	MG	13	1742	1/1	0.92	0.06	60,60,60,60	0
62	MG	13	1749	1/1	0.92	0.15	52,52,52,52	0
62	MG	1H	3485	1/1	0.92	0.05	29,29,29,29	0
62	MG	1H	3332	1/1	0.92	0.38	48,48,48,48	0
62	MG	1H	3333	1/1	0.92	0.27	50,50,50,50	0
61	K	13	1610	1/1	0.92	0.15	103,103,103,103	0
62	MG	1H	3495	1/1	0.92	0.06	48,48,48,48	0
62	MG	1H	3225	1/1	0.92	0.24	37,37,37,37	0
62	MG	13	1751	1/1	0.92	0.13	75,75,75,75	0
62	MG	13	1694	1/1	0.92	0.30	57,57,57,57	0
62	MG	1H	3506	1/1	0.92	0.16	15,15,15,15	0
62	MG	14	3262	1/1	0.92	0.19	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3508	1/1	0.92	0.12	22,22,22,22	0
61	K	1H	3022	1/1	0.92	0.10	66,66,66,66	0
62	MG	1G	1708	1/1	0.92	0.09	101,101,101,101	0
61	K	1H	3048	1/1	0.92	0.11	72,72,72,72	0
62	MG	1H	3240	1/1	0.92	0.21	39,39,39,39	0
61	K	14	3105	1/1	0.92	0.11	91,91,91,91	0
62	MG	1H	3520	1/1	0.92	0.08	37,37,37,37	0
62	MG	14	3274	1/1	0.92	0.15	54,54,54,54	0
62	MG	1H	3346	1/1	0.92	0.24	55,55,55,55	0
62	MG	13	1700	1/1	0.92	0.15	47,47,47,47	0
62	MG	1H	3529	1/1	0.92	0.19	54,54,54,54	0
62	MG	14	3279	1/1	0.92	0.13	22,22,22,22	0
62	MG	1H	3358	1/1	0.92	0.26	41,41,41,41	0
62	MG	14	3281	1/1	0.92	0.15	25,25,25,25	0
62	MG	14	3282	1/1	0.92	0.09	48,48,48,48	0
61	K	14	3041	1/1	0.92	0.14	66,66,66,66	0
61	K	1H	3110	1/1	0.92	0.09	60,60,60,60	0
62	MG	1G	1727	1/1	0.92	0.08	59,59,59,59	0
62	MG	1H	3362	1/1	0.92	0.27	64,64,64,64	0
61	K	14	3048	1/1	0.92	0.16	67,67,67,67	0
61	K	1H	3123	1/1	0.92	0.08	50,50,50,50	0
62	MG	1H	3547	1/1	0.92	0.06	52,52,52,52	0
62	MG	13	1767	1/1	0.92	0.12	70,70,70,70	0
62	MG	1H	3266	1/1	0.92	0.16	39,39,39,39	0
62	MG	4L	101	1/1	0.92	0.25	79,79,79,79	0
62	MG	14	3109	1/1	0.92	0.17	41,41,41,41	0
62	MG	14	3314	1/1	0.92	0.12	28,28,28,28	0
62	MG	13	1768	1/1	0.92	0.07	78,78,78,78	0
62	MG	14	3321	1/1	0.92	0.12	26,26,26,26	0
62	MG	13	1705	1/1	0.92	0.21	56,56,56,56	0
62	MG	14	3119	1/1	0.92	0.22	49,49,49,49	0
62	MG	1H	3276	1/1	0.92	0.20	44,44,44,44	0
62	MG	13	1706	1/1	0.92	0.16	46,46,46,46	0
62	MG	2K	104	1/1	0.92	0.35	48,48,48,48	0
62	MG	14	3334	1/1	0.92	0.08	33,33,33,33	0
62	MG	1H	3377	1/1	0.92	0.24	26,26,26,26	0
62	MG	14	3136	1/1	0.92	0.18	59,59,59,59	0
62	MG	13	1654	1/1	0.92	0.23	42,42,42,42	0
62	MG	14	3349	1/1	0.92	0.08	48,48,48,48	0
62	MG	1H	3558	1/1	0.92	0.07	56,56,56,56	0
62	MG	1H	3381	1/1	0.92	0.23	39,39,39,39	0
62	MG	1H	3390	1/1	0.92	0.10	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3564	1/1	0.92	0.16	25,25,25,25	0
61	K	1G	1604	1/1	0.92	0.07	91,91,91,91	0
62	MG	1H	3394	1/1	0.92	0.14	11,11,11,11	0
62	MG	14	3370	1/1	0.92	0.11	44,44,44,44	0
62	MG	13	1658	1/1	0.92	0.21	36,36,36,36	0
62	MG	14	3373	1/1	0.92	0.10	68,68,68,68	0
62	MG	1H	3416	1/1	0.92	0.04	69,69,69,69	0
62	MG	14	3165	1/1	0.92	0.20	45,45,45,45	0
62	MG	16	205	1/1	0.92	0.23	46,46,46,46	0
62	MG	16	206	1/1	0.92	0.15	52,52,52,52	0
62	MG	1H	3157	1/1	0.92	0.22	49,49,49,49	0
62	MG	1H	3159	1/1	0.92	0.25	44,44,44,44	0
61	K	14	3061	1/1	0.92	0.08	63,63,63,63	0
62	MG	14	3180	1/1	0.92	0.15	59,59,59,59	0
62	MG	16	213	1/1	0.92	0.08	41,41,41,41	0
62	MG	13	1664	1/1	0.92	0.25	57,57,57,57	0
62	MG	14	3185	1/1	0.92	0.21	51,51,51,51	0
62	MG	1H	3164	1/1	0.92	0.17	58,58,58,58	0
62	MG	13	1714	1/1	0.92	0.29	83,83,83,83	0
62	MG	1H	3302	1/1	0.92	0.13	29,29,29,29	0
62	MG	39	303	1/1	0.92	0.26	54,54,54,54	0
62	MG	14	3189	1/1	0.92	0.10	50,50,50,50	0
62	MG	1H	3313	1/1	0.93	0.09	44,44,44,44	0
62	MG	1H	3315	1/1	0.93	0.32	43,43,43,43	0
62	MG	1H	3455	1/1	0.93	0.17	11,11,11,11	0
62	MG	1H	3318	1/1	0.93	0.10	56,56,56,56	0
62	MG	1H	3192	1/1	0.93	0.21	37,37,37,37	0
62	MG	13	1747	1/1	0.93	0.13	32,32,32,32	0
62	MG	1G	1667	1/1	0.93	0.23	42,42,42,42	0
61	K	1H	3105	1/1	0.93	0.12	50,50,50,50	0
61	K	1H	3107	1/1	0.93	0.12	44,44,44,44	0
62	MG	1H	3204	1/1	0.93	0.21	29,29,29,29	0
62	MG	1H	3205	1/1	0.93	0.27	33,33,33,33	0
62	MG	1H	3479	1/1	0.93	0.13	18,18,18,18	0
61	K	1H	3108	1/1	0.93	0.16	76,76,76,76	0
61	K	2K	103	1/1	0.93	0.07	79,79,79,79	0
61	K	1H	3111	1/1	0.93	0.08	51,51,51,51	0
61	K	1H	3119	1/1	0.93	0.15	46,46,46,46	0
61	K	14	3033	1/1	0.93	0.10	52,52,52,52	0
61	K	1G	1612	1/1	0.93	0.07	58,58,58,58	0
61	K	1H	3026	1/1	0.93	0.17	88,88,88,88	0
61	K	1H	3125	1/1	0.93	0.15	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3233	1/1	0.93	0.17	51,51,51,51	0
61	K	1G	1617	1/1	0.93	0.08	63,63,63,63	0
62	MG	1H	3499	1/1	0.93	0.10	32,32,32,32	0
61	K	14	3039	1/1	0.93	0.14	61,61,61,61	0
62	MG	1H	3339	1/1	0.93	0.14	55,55,55,55	0
61	K	13	1602	1/1	0.93	0.14	72,72,72,72	0
61	K	1H	3030	1/1	0.93	0.08	73,73,73,73	0
62	MG	1G	1702	1/1	0.93	0.09	64,64,64,64	0
61	K	1H	3070	1/1	0.93	0.07	46,46,46,46	0
62	MG	1H	3515	1/1	0.93	0.12	40,40,40,40	0
62	MG	1H	3243	1/1	0.93	0.32	41,41,41,41	0
62	MG	3E	301	1/1	0.93	0.06	82,82,82,82	0
62	MG	1H	3246	1/1	0.93	0.24	35,35,35,35	0
62	MG	14	3269	1/1	0.93	0.26	68,68,68,68	0
62	MG	1G	1712	1/1	0.93	0.04	81,81,81,81	0
62	MG	1H	3248	1/1	0.93	0.34	34,34,34,34	0
62	MG	1H	3523	1/1	0.93	0.10	32,32,32,32	0
62	MG	1H	3355	1/1	0.93	0.17	57,57,57,57	0
61	K	13	1606	1/1	0.93	0.12	57,57,57,57	0
61	K	1H	3073	1/1	0.93	0.09	56,56,56,56	0
62	MG	1H	3537	1/1	0.93	0.07	54,54,54,54	0
62	MG	1H	3258	1/1	0.93	0.41	52,52,52,52	0
62	MG	13	1711	1/1	0.93	0.28	55,55,55,55	0
62	MG	1G	1726	1/1	0.93	0.14	49,49,49,49	0
61	K	5E	201	1/1	0.93	0.08	76,76,76,76	0
61	K	1H	3082	1/1	0.93	0.11	46,46,46,46	0
62	MG	1H	3543	1/1	0.93	0.12	48,48,48,48	0
62	MG	1H	3265	1/1	0.93	0.11	48,48,48,48	0
62	MG	1H	3545	1/1	0.93	0.07	45,45,45,45	0
62	MG	1H	3546	1/1	0.93	0.06	61,61,61,61	0
62	MG	1H	3155[A]	1/1	0.93	0.43	19,19,19,19	1
62	MG	1H	3269	1/1	0.93	0.13	33,33,33,33	0
62	MG	1H	3271	1/1	0.93	0.20	47,47,47,47	0
62	MG	1H	3155[B]	1/1	0.93	0.43	22,22,22,22	1
61	K	1G	1635	1/1	0.93	0.27	91,91,91,91	0
62	MG	14	3313	1/1	0.93	0.08	33,33,33,33	0
61	K	1H	3006	1/1	0.93	0.11	44,44,44,44	0
62	MG	1H	3278	1/1	0.93	0.25	28,28,28,28	0
62	MG	1H	3160	1/1	0.93	0.24	29,29,29,29	0
61	K	13	1620	1/1	0.93	0.07	87,87,87,87	0
62	MG	1H	3383	1/1	0.93	0.20	18,18,18,18	0
61	K	14	3070	1/1	0.93	0.06	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3163	1/1	0.93	0.39	55,55,55,55	0
62	MG	14	3138	1/1	0.93	0.17	31,31,31,31	0
62	MG	1H	3562	1/1	0.93	0.13	31,31,31,31	0
62	MG	1H	3392	1/1	0.93	0.07	51,51,51,51	0
62	MG	1H	3286	1/1	0.93	0.32	48,48,48,48	0
62	MG	1H	3565	1/1	0.93	0.14	25,25,25,25	0
62	MG	14	3343	1/1	0.93	0.10	50,50,50,50	0
62	MG	1H	3566	1/1	0.93	0.16	37,37,37,37	0
62	MG	1H	3409	1/1	0.93	0.21	14,14,14,14	0
62	MG	14	3159	1/1	0.93	0.33	56,56,56,56	0
62	MG	14	3353	1/1	0.93	0.10	62,62,62,62	0
62	MG	13	1723	1/1	0.93	0.36	60,60,60,60	0
61	K	21	301	1/1	0.93	0.10	62,62,62,62	0
62	MG	1H	3293	1/1	0.93	0.37	40,40,40,40	0
62	MG	14	3365	1/1	0.93	0.10	28,28,28,28	0
62	MG	14	3366	1/1	0.93	0.09	55,55,55,55	0
62	MG	16	204	1/1	0.93	0.26	39,39,39,39	0
62	MG	1H	3169	1/1	0.93	0.26	15,15,15,15	0
62	MG	1H	3421	1/1	0.93	0.06	36,36,36,36	0
62	MG	14	3174	1/1	0.93	0.20	38,38,38,38	0
62	MG	14	3374	1/1	0.93	0.11	30,30,30,30	0
62	MG	1H	3171	1/1	0.93	0.29	30,30,30,30	0
62	MG	1H	3296	1/1	0.93	0.15	32,32,32,32	0
61	K	14	3076	1/1	0.93	0.09	86,86,86,86	0
62	MG	13	1681	1/1	0.93	0.26	44,44,44,44	0
62	MG	13	1733	1/1	0.93	0.08	62,62,62,62	0
62	MG	1H	3434	1/1	0.93	0.06	46,46,46,46	0
62	MG	31	303	1/1	0.93	0.16	37,37,37,37	0
61	K	14	3003	1/1	0.93	0.13	100,100,100,100	0
62	MG	C8	201	1/1	0.93	0.20	44,44,44,44	0
62	MG	13	1736	1/1	0.93	0.11	44,44,44,44	0
62	MG	14	3390	1/1	0.93	0.07	79,79,79,79	0
62	MG	13	1686	1/1	0.93	0.10	34,34,34,34	0
62	MG	1H	3449	1/1	0.93	0.16	15,15,15,15	0
62	MG	1H	3308	1/1	0.93	0.11	27,27,27,27	0
62	MG	14	3397	1/1	0.93	0.18	75,75,75,75	0
62	MG	13	1687	1/1	0.93	0.27	50,50,50,50	0
62	MG	14	3400	1/1	0.93	0.06	63,63,63,63	0
62	MG	1J	203	1/1	0.93	0.20	48,48,48,48	0
61	K	13	1614	1/1	0.93	0.23	71,71,71,71	0
62	MG	1G	1658	1/1	0.93	0.27	46,46,46,46	0
62	MG	14	3213	1/1	0.94	0.11	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3046	1/1	0.94	0.20	72,72,72,72	0
61	K	1H	3122	1/1	0.94	0.07	65,65,65,65	0
62	MG	13	1721	1/1	0.94	0.13	99,99,99,99	0
62	MG	14	3220	1/1	0.94	0.09	46,46,46,46	0
62	MG	1H	3513	1/1	0.94	0.06	30,30,30,30	0
62	MG	1G	1685	1/1	0.94	0.13	51,51,51,51	0
62	MG	14	3224	1/1	0.94	0.12	36,36,36,36	0
61	K	1H	3047	1/1	0.94	0.15	74,74,74,74	0
61	K	1H	3011	1/1	0.94	0.10	59,59,59,59	0
62	MG	1H	3365	1/1	0.94	0.17	58,58,58,58	0
62	MG	13	1666	1/1	0.94	0.34	46,46,46,46	0
61	K	14	3047	1/1	0.94	0.11	74,74,74,74	0
62	MG	1H	3369	1/1	0.94	0.31	46,46,46,46	0
62	MG	13	1729	1/1	0.94	0.05	61,61,61,61	0
62	MG	14	3234	1/1	0.94	0.21	55,55,55,55	0
62	MG	1H	3526	1/1	0.94	0.11	21,21,21,21	0
62	MG	14	3237	1/1	0.94	0.09	96,96,96,96	0
62	MG	1H	3527	1/1	0.94	0.06	26,26,26,26	0
62	MG	13	1730	1/1	0.94	0.09	76,76,76,76	0
62	MG	1H	3181	1/1	0.94	0.23	36,36,36,36	0
62	MG	1H	3532	1/1	0.94	0.05	56,56,56,56	0
62	MG	1G	1700	1/1	0.94	0.28	52,52,52,52	0
62	MG	1G	1701	1/1	0.94	0.10	45,45,45,45	0
61	K	13	1622	1/1	0.94	0.06	61,61,61,61	0
62	MG	1H	3184	1/1	0.94	0.26	40,40,40,40	0
61	K	13	1604	1/1	0.94	0.09	82,82,82,82	0
61	K	1H	3058	1/1	0.94	0.11	43,43,43,43	0
61	K	13	1644	1/1	0.94	0.14	74,74,74,74	0
62	MG	1G	1710	1/1	0.94	0.06	59,59,59,59	0
61	K	1H	3024	1/1	0.94	0.11	59,59,59,59	0
61	K	13	1630	1/1	0.94	0.07	66,66,66,66	0
61	K	2K	101	1/1	0.94	0.20	62,62,62,62	0
62	MG	1H	3200	1/1	0.94	0.25	36,36,36,36	0
61	K	2K	102	1/1	0.94	0.15	58,58,58,58	0
62	MG	1H	3398	1/1	0.94	0.05	52,52,52,52	0
61	K	4A	201	1/1	0.94	0.09	96,96,96,96	0
62	MG	14	3271	1/1	0.94	0.21	51,51,51,51	0
61	K	1H	3144	1/1	0.94	0.21	56,56,56,56	0
62	MG	1G	1723	1/1	0.94	0.14	59,59,59,59	0
62	MG	1H	3307	1/1	0.94	0.12	25,25,25,25	0
62	MG	14	3276	1/1	0.94	0.13	52,52,52,52	0
61	K	1H	3088	1/1	0.94	0.06	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	13	1691	1/1	0.94	0.26	50,50,50,50	0
61	K	13	1607	1/1	0.94	0.08	65,65,65,65	0
61	K	14	3081	1/1	0.94	0.09	54,54,54,54	0
62	MG	1H	3314	1/1	0.94	0.19	41,41,41,41	0
62	MG	1H	3426	1/1	0.94	0.20	12,12,12,12	0
62	MG	14	3284	1/1	0.94	0.06	34,34,34,34	0
61	K	14	3083	1/1	0.94	0.08	70,70,70,70	0
62	MG	1H	3214	1/1	0.94	0.32	41,41,41,41	0
62	MG	14	3293	1/1	0.94	0.10	60,60,60,60	0
62	MG	1G	1735	1/1	0.94	0.06	88,88,88,88	0
61	K	88	201	1/1	0.94	0.14	57,57,57,57	0
62	MG	32	302	1/1	0.94	0.09	79,79,79,79	0
62	MG	2L	101	1/1	0.94	0.08	58,58,58,58	0
62	MG	1H	3433	1/1	0.94	0.15	51,51,51,51	0
62	MG	14	3306	1/1	0.94	0.10	32,32,32,32	0
62	MG	14	3107	1/1	0.94	0.17	33,33,33,33	0
62	MG	13	1760	1/1	0.94	0.05	65,65,65,65	0
62	MG	1H	3222	1/1	0.94	0.27	32,32,32,32	0
62	MG	1H	3224	1/1	0.94	0.23	35,35,35,35	0
61	K	14	3087	1/1	0.94	0.11	74,74,74,74	0
62	MG	1H	3443	1/1	0.94	0.08	42,42,42,42	0
62	MG	14	3315	1/1	0.94	0.09	39,39,39,39	0
61	K	13	1647	1/1	0.94	0.13	50,50,50,50	0
62	MG	14	3318	1/1	0.94	0.12	35,35,35,35	0
61	K	14	3009	1/1	0.94	0.18	64,64,64,64	0
61	K	1H	3038	1/1	0.94	0.24	56,56,56,56	0
62	MG	14	3131	1/1	0.94	0.15	43,43,43,43	0
61	K	13	1635	1/1	0.94	0.11	95,95,95,95	0
62	MG	14	3330	1/1	0.94	0.10	39,39,39,39	0
61	K	13	1621	1/1	0.94	0.07	61,61,61,61	0
62	MG	13	1769	1/1	0.94	0.13	54,54,54,54	0
61	K	14	3020	1/1	0.94	0.08	64,64,64,64	0
61	K	14	3104	1/1	0.94	0.08	75,75,75,75	0
61	K	14	3022	1/1	0.94	0.10	50,50,50,50	0
62	MG	14	3340	1/1	0.94	0.11	26,26,26,26	0
62	MG	1H	3465	1/1	0.94	0.10	21,21,21,21	0
62	MG	16	215	1/1	0.94	0.09	52,52,52,52	0
62	MG	14	3348	1/1	0.94	0.10	30,30,30,30	0
62	MG	7I	101	1/1	0.94	0.15	71,71,71,71	0
61	K	13	1640	1/1	0.94	0.07	60,60,60,60	0
62	MG	14	3351	1/1	0.94	0.11	55,55,55,55	0
62	MG	41	202	1/1	0.94	0.15	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3252	1/1	0.94	0.29	42,42,42,42	0
61	K	1H	3109	1/1	0.94	0.10	57,57,57,57	0
62	MG	14	3357	1/1	0.94	0.08	48,48,48,48	0
62	MG	14	3359	1/1	0.94	0.10	33,33,33,33	0
62	MG	N8	101	1/1	0.94	0.19	41,41,41,41	0
62	MG	14	3361	1/1	0.94	0.10	48,48,48,48	0
62	MG	1H	3476	1/1	0.94	0.15	15,15,15,15	0
62	MG	14	3364	1/1	0.94	0.10	36,36,36,36	0
62	MG	14	3170	1/1	0.94	0.23	54,54,54,54	0
62	MG	P8	101	1/1	0.94	0.19	35,35,35,35	0
61	K	1H	3010	1/1	0.94	0.11	66,66,66,66	0
62	MG	14	3175[A]	1/1	0.94	0.25	39,39,39,39	1
62	MG	14	3175[B]	1/1	0.94	0.25	36,36,36,36	1
62	MG	1H	3478	1/1	0.94	0.07	44,44,44,44	0
62	MG	1H	3341	1/1	0.94	0.19	24,24,24,24	0
62	MG	1G	1651	1/1	0.94	0.18	43,43,43,43	0
62	MG	14	3376	1/1	0.94	0.07	54,54,54,54	0
62	MG	14	3377	1/1	0.94	0.05	59,59,59,59	0
62	MG	14	3379	1/1	0.94	0.07	43,43,43,43	0
61	K	1G	1611	1/1	0.94	0.10	86,86,86,86	0
61	K	45	201	1/1	0.94	0.22	90,90,90,90	0
62	MG	14	3184	1/1	0.94	0.19	48,48,48,48	0
62	MG	1H	3344	1/1	0.94	0.24	39,39,39,39	0
62	MG	13	1713	1/1	0.94	0.28	46,46,46,46	0
61	K	1H	3045	1/1	0.94	0.10	59,59,59,59	0
61	K	1H	3114	1/1	0.94	0.16	55,55,55,55	0
62	MG	1H	3490	1/1	0.94	0.08	32,32,32,32	0
62	MG	1H	3348	1/1	0.94	0.18	30,30,30,30	0
62	MG	1H	3349	1/1	0.94	0.23	48,48,48,48	0
62	MG	1H	3351	1/1	0.94	0.38	79,79,79,79	0
62	MG	14	3392	1/1	0.94	0.16	75,75,75,75	0
62	MG	13	1657	1/1	0.94	0.24	38,38,38,38	0
62	MG	14	3199	1/1	0.94	0.22	66,66,66,66	0
62	MG	1G	1670	1/1	0.94	0.15	57,57,57,57	0
62	MG	13	1718	1/1	0.94	0.30	55,55,55,55	0
62	MG	14	3207	1/1	0.94	0.30	62,62,62,62	0
62	MG	1J	202	1/1	0.94	0.08	83,83,83,83	0
62	MG	1H	3270	1/1	0.94	0.12	42,42,42,42	0
62	MG	1G	1676	1/1	0.94	0.18	71,71,71,71	0
62	MG	1H	3503	1/1	0.94	0.12	29,29,29,29	0
62	MG	1H	3357	1/1	0.95	0.19	28,28,28,28	0
61	K	14	3106	1/1	0.95	0.29	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3120	1/1	0.95	0.12	60,60,60,60	0
61	K	1H	3121	1/1	0.95	0.12	62,62,62,62	0
61	K	13	1636	1/1	0.95	0.08	70,70,70,70	0
62	MG	14	3229	1/1	0.95	0.12	48,48,48,48	0
61	K	1H	3080	1/1	0.95	0.11	45,45,45,45	0
62	MG	1G	1694	1/1	0.95	0.15	43,43,43,43	0
61	K	1H	3124	1/1	0.95	0.08	64,64,64,64	0
62	MG	13	1716	1/1	0.95	0.13	37,37,37,37	0
62	MG	13	1652	1/1	0.95	0.23	43,43,43,43	0
62	MG	1H	3274	1/1	0.95	0.10	31,31,31,31	0
62	MG	1H	3524	1/1	0.95	0.13	16,16,16,16	0
61	K	1G	1622	1/1	0.95	0.08	74,74,74,74	0
61	K	13	1627	1/1	0.95	0.14	46,46,46,46	0
61	K	13	1639	1/1	0.95	0.08	66,66,66,66	0
62	MG	1G	1703	1/1	0.95	0.09	81,81,81,81	0
61	K	1H	3084	1/1	0.95	0.14	47,47,47,47	0
62	MG	14	3247	1/1	0.95	0.09	47,47,47,47	0
62	MG	1H	3280	1/1	0.95	0.12	86,86,86,86	0
62	MG	1H	3533	1/1	0.95	0.07	49,49,49,49	0
61	K	13	1616	1/1	0.95	0.09	75,75,75,75	0
62	MG	1H	3177	1/1	0.95	0.30	29,29,29,29	0
62	MG	14	3257	1/1	0.95	0.34	65,65,65,65	0
62	MG	14	3259	1/1	0.95	0.18	42,42,42,42	0
61	K	14	3049	1/1	0.95	0.06	49,49,49,49	0
61	K	14	3051	1/1	0.95	0.09	65,65,65,65	0
62	MG	1G	1713	1/1	0.95	0.07	120,120,120,120	0
62	MG	1H	3382	1/1	0.95	0.17	13,13,13,13	0
61	K	1H	3009	1/1	0.95	0.12	64,64,64,64	0
62	MG	1H	3289	1/1	0.95	0.30	35,35,35,35	0
62	MG	1H	3182	1/1	0.95	0.24	49,49,49,49	0
62	MG	1G	1719	1/1	0.95	0.25	66,66,66,66	0
62	MG	1H	3292	1/1	0.95	0.10	32,32,32,32	0
62	MG	13	1728	1/1	0.95	0.10	60,60,60,60	0
62	MG	13	1667	1/1	0.95	0.20	29,29,29,29	0
62	MG	1H	3399	1/1	0.95	0.11	24,24,24,24	0
61	K	1H	3094	1/1	0.95	0.17	51,51,51,51	0
61	K	14	3055	1/1	0.95	0.39	65,65,65,65	0
61	K	1H	3136	1/1	0.95	0.12	54,54,54,54	0
62	MG	13	1674	1/1	0.95	0.21	75,75,75,75	0
62	MG	1G	1729	1/1	0.95	0.09	67,67,67,67	0
61	K	1H	3137	1/1	0.95	0.15	63,63,63,63	0
62	MG	1H	3420	1/1	0.95	0.16	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3196	1/1	0.95	0.20	40,40,40,40	0
62	MG	1H	3197	1/1	0.95	0.14	30,30,30,30	0
62	MG	1H	3557	1/1	0.95	0.11	22,22,22,22	0
62	MG	14	3289	1/1	0.95	0.14	51,51,51,51	0
61	K	52	201	1/1	0.95	0.05	76,76,76,76	0
62	MG	1H	3425	1/1	0.95	0.11	16,16,16,16	0
62	MG	14	3292	1/1	0.95	0.15	29,29,29,29	0
61	K	13	1641	1/1	0.95	0.08	84,84,84,84	0
62	MG	2L	102	1/1	0.95	0.27	56,56,56,56	0
62	MG	2L	103	1/1	0.95	0.21	45,45,45,45	0
62	MG	14	3298	1/1	0.95	0.12	32,32,32,32	0
61	K	14	3069	1/1	0.95	0.09	56,56,56,56	0
62	MG	1H	3310	1/1	0.95	0.14	18,18,18,18	0
62	MG	14	3304	1/1	0.95	0.05	63,63,63,63	0
62	MG	13	1744	1/1	0.95	0.13	19,19,19,19	0
62	MG	14	3111	1/1	0.95	0.16	32,32,32,32	0
62	MG	14	3115	1/1	0.95	0.14	42,42,42,42	0
61	K	1H	3096	1/1	0.95	0.19	52,52,52,52	0
62	MG	14	3117	1/1	0.95	0.10	49,49,49,49	0
62	MG	14	3311	1/1	0.95	0.13	31,31,31,31	0
61	K	1H	3097	1/1	0.95	0.09	25,25,25,25	0
62	MG	1H	3436	1/1	0.95	0.06	57,57,57,57	0
61	K	14	3073	1/1	0.95	0.07	60,60,60,60	0
62	MG	14	3121	1/1	0.95	0.31	47,47,47,47	0
62	MG	1H	3573	1/1	0.95	0.09	40,40,40,40	0
61	K	1H	3098	1/1	0.95	0.10	41,41,41,41	0
62	MG	14	3319	1/1	0.95	0.07	27,27,27,27	0
62	MG	14	3320	1/1	0.95	0.11	25,25,25,25	0
62	MG	1H	3316	1/1	0.95	0.18	60,60,60,60	0
62	MG	14	3324	1/1	0.95	0.09	43,43,43,43	0
62	MG	13	1688	1/1	0.95	0.28	56,56,56,56	0
62	MG	1H	3445	1/1	0.95	0.09	50,50,50,50	0
62	MG	1H	3448	1/1	0.95	0.09	57,57,57,57	0
62	MG	14	3329	1/1	0.95	0.08	28,28,28,28	0
62	MG	16	208	1/1	0.95	0.20	44,44,44,44	0
62	MG	14	3140	1/1	0.95	0.13	47,47,47,47	0
62	MG	1H	3212	1/1	0.95	0.13	44,44,44,44	0
62	MG	13	1689	1/1	0.95	0.29	53,53,53,53	0
62	MG	14	3335	1/1	0.95	0.05	70,70,70,70	0
61	K	13	1601	1/1	0.95	0.10	67,67,67,67	0
62	MG	14	3146	1/1	0.95	0.21	49,49,49,49	0
62	MG	14	3339	1/1	0.95	0.11	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3322	1/1	0.95	0.17	23,23,23,23	0
62	MG	1H	3219	1/1	0.95	0.33	31,31,31,31	0
62	MG	14	3342	1/1	0.95	0.10	32,32,32,32	0
61	K	1H	3101	1/1	0.95	0.08	49,49,49,49	0
61	K	1H	3049	1/1	0.95	0.12	55,55,55,55	0
62	MG	13	1759	1/1	0.95	0.06	52,52,52,52	0
62	MG	14	3162	1/1	0.95	0.13	46,46,46,46	0
62	MG	14	3163	1/1	0.95	0.19	31,31,31,31	0
62	MG	1H	3223	1/1	0.95	0.20	30,30,30,30	0
62	MG	1H	3463	1/1	0.95	0.12	17,17,17,17	0
62	MG	J8	101	1/1	0.95	0.24	32,32,32,32	0
62	MG	14	3356	1/1	0.95	0.09	36,36,36,36	0
61	K	14	3082	1/1	0.95	0.08	80,80,80,80	0
62	MG	14	3168	1/1	0.95	0.24	37,37,37,37	0
61	K	1H	3035	1/1	0.95	0.25	52,52,52,52	0
62	MG	14	3171	1/1	0.95	0.21	55,55,55,55	0
62	MG	13	1696	1/1	0.95	0.30	64,64,64,64	0
62	MG	Q8	101[A]	1/1	0.95	0.37	13,13,13,13	1
62	MG	Q8	101[B]	1/1	0.95	0.37	11,11,11,11	1
62	MG	1G	1643	1/1	0.95	0.20	62,62,62,62	0
62	MG	14	3367	1/1	0.95	0.05	70,70,70,70	0
62	MG	13	1697	1/1	0.95	0.31	45,45,45,45	0
62	MG	1H	3235	1/1	0.95	0.13	42,42,42,42	0
61	K	14	3085	1/1	0.95	0.10	62,62,62,62	0
61	K	1H	3012	1/1	0.95	0.07	51,51,51,51	0
61	K	1H	3052	1/1	0.95	0.15	52,52,52,52	0
62	MG	14	3183	1/1	0.95	0.25	30,30,30,30	0
61	K	1H	3015	1/1	0.95	0.14	44,44,44,44	0
61	K	14	3017	1/1	0.95	0.21	52,52,52,52	0
61	K	14	3096	1/1	0.95	0.07	70,70,70,70	0
62	MG	1H	3244	1/1	0.95	0.23	34,34,34,34	0
62	MG	1H	3483	1/1	0.95	0.07	36,36,36,36	0
61	K	14	3018	1/1	0.95	0.07	65,65,65,65	0
61	K	1H	3061	1/1	0.95	0.08	43,43,43,43	0
62	MG	14	3191	1/1	0.95	0.10	34,34,34,34	0
62	MG	14	3385	1/1	0.95	0.06	58,58,58,58	0
62	MG	1G	1664	1/1	0.95	0.26	40,40,40,40	0
61	K	1H	3112	1/1	0.95	0.14	48,48,48,48	0
62	MG	1H	3251	1/1	0.95	0.28	39,39,39,39	0
62	MG	1H	3491	1/1	0.95	0.12	42,42,42,42	0
61	K	1H	3039	1/1	0.95	0.15	54,54,54,54	0
62	MG	1H	3494	1/1	0.95	0.06	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3253	1/1	0.95	0.39	41,41,41,41	0
62	MG	14	3393	1/1	0.95	0.11	63,63,63,63	0
62	MG	1H	3149	1/1	0.95	0.30	40,40,40,40	0
62	MG	14	3395	1/1	0.95	0.09	25,25,25,25	0
61	K	14	3029	1/1	0.95	0.14	81,81,81,81	0
62	MG	1H	3152	1/1	0.95	0.10	36,36,36,36	0
61	K	13	1625	1/1	0.95	0.09	77,77,77,77	0
62	MG	1G	1682	1/1	0.95	0.31	41,41,41,41	0
62	MG	1H	3501	1/1	0.95	0.17	57,57,57,57	0
62	MG	1H	3353	1/1	0.95	0.30	33,33,33,33	0
62	MG	1J	204	1/1	0.95	0.27	64,64,64,64	0
62	MG	1H	3505	1/1	0.95	0.10	16,16,16,16	0
62	MG	1H	3262	1/1	0.95	0.42	46,46,46,46	0
62	MG	1H	3560	1/1	0.96	0.16	13,13,13,13	0
62	MG	14	3246	1/1	0.96	0.10	35,35,35,35	0
61	K	14	3066	1/1	0.96	0.07	64,64,64,64	0
61	K	1H	3079	1/1	0.96	0.17	37,37,37,37	0
61	K	13	1634	1/1	0.96	0.07	90,90,90,90	0
61	K	1H	3029	1/1	0.96	0.08	85,85,85,85	0
62	MG	14	3251	1/1	0.96	0.19	45,45,45,45	0
62	MG	14	3252	1/1	0.96	0.17	42,42,42,42	0
62	MG	14	3254	1/1	0.96	0.18	62,62,62,62	0
61	K	14	3015	1/1	0.96	0.07	47,47,47,47	0
62	MG	1H	3256	1/1	0.96	0.19	40,40,40,40	0
62	MG	1H	3173	1/1	0.96	0.20	28,28,28,28	0
62	MG	1H	3568	1/1	0.96	0.06	34,34,34,34	0
62	MG	1G	1732	1/1	0.96	0.07	83,83,83,83	0
62	MG	13	1731	1/1	0.96	0.14	38,38,38,38	0
62	MG	1H	3456	1/1	0.96	0.24	14,14,14,14	0
62	MG	1H	3261	1/1	0.96	0.07	44,44,44,44	0
62	MG	1H	3459	1/1	0.96	0.10	15,15,15,15	0
62	MG	1H	3577	1/1	0.96	0.10	37,37,37,37	0
62	MG	42	201	1/1	0.96	0.18	70,70,70,70	0
62	MG	1H	3176[A]	1/1	0.96	0.26	21,21,21,21	1
62	MG	1H	3462	1/1	0.96	0.09	27,27,27,27	0
62	MG	1H	3176[B]	1/1	0.96	0.26	20,20,20,20	1
61	K	14	3016	1/1	0.96	0.08	44,44,44,44	0
61	K	14	3074	1/1	0.96	0.13	73,73,73,73	0
62	MG	14	3108	1/1	0.96	0.19	59,59,59,59	0
62	MG	1H	3468	1/1	0.96	0.11	24,24,24,24	0
62	MG	14	3110	1/1	0.96	0.17	35,35,35,35	0
62	MG	1H	3470	1/1	0.96	0.14	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	14	3113	1/1	0.96	0.19	36,36,36,36	0
62	MG	1H	3471	1/1	0.96	0.07	56,56,56,56	0
61	K	13	1624	1/1	0.96	0.10	59,59,59,59	0
61	K	14	3078	1/1	0.96	0.08	81,81,81,81	0
61	K	1G	1620	1/1	0.96	0.10	83,83,83,83	0
62	MG	14	3288	1/1	0.96	0.12	39,39,39,39	0
61	K	1H	3031	1/1	0.96	0.07	39,39,39,39	0
61	K	1H	3085	1/1	0.96	0.07	39,39,39,39	0
62	MG	1H	3273	1/1	0.96	0.25	61,61,61,61	0
61	K	1H	3113	1/1	0.96	0.12	30,30,30,30	0
61	K	14	3026	1/1	0.96	0.09	35,35,35,35	0
62	MG	1H	3356	1/1	0.96	0.17	43,43,43,43	0
61	K	14	3084	1/1	0.96	0.07	73,73,73,73	0
62	MG	14	3296	1/1	0.96	0.09	35,35,35,35	0
62	MG	1H	3277	1/1	0.96	0.25	42,42,42,42	0
61	K	14	3027	1/1	0.96	0.18	54,54,54,54	0
62	MG	14	3300	1/1	0.96	0.07	61,61,61,61	0
62	MG	14	3301	1/1	0.96	0.12	38,38,38,38	0
62	MG	14	3302	1/1	0.96	0.13	29,29,29,29	0
62	MG	1H	3360	1/1	0.96	0.11	28,28,28,28	0
62	MG	14	3139	1/1	0.96	0.15	41,41,41,41	0
62	MG	1G	1638	1/1	0.96	0.21	46,46,46,46	0
62	MG	14	3141	1/1	0.96	0.16	26,26,26,26	0
62	MG	1G	1640	1/1	0.96	0.39	51,51,51,51	0
61	K	14	3028	1/1	0.96	0.10	45,45,45,45	0
62	MG	14	3144	1/1	0.96	0.13	36,36,36,36	0
62	MG	1H	3195	1/1	0.96	0.25	37,37,37,37	0
62	MG	1G	1645	1/1	0.96	0.19	62,62,62,62	0
62	MG	1G	1646	1/1	0.96	0.22	66,66,66,66	0
61	K	1H	3143	1/1	0.96	0.09	71,71,71,71	0
62	MG	14	3152	1/1	0.96	0.18	32,32,32,32	0
62	MG	1G	1648	1/1	0.96	0.25	67,67,67,67	0
61	K	14	3030	1/1	0.96	0.07	63,63,63,63	0
62	MG	1H	3283	1/1	0.96	0.31	44,44,44,44	0
62	MG	1G	1652	1/1	0.96	0.20	17,17,17,17	0
61	K	1G	1628	1/1	0.96	0.14	76,76,76,76	0
62	MG	14	3322	1/1	0.96	0.09	41,41,41,41	0
61	K	14	3093	1/1	0.96	0.05	53,53,53,53	0
61	K	14	3095	1/1	0.96	0.06	64,64,64,64	0
61	K	13	1618	1/1	0.96	0.07	85,85,85,85	0
61	K	1H	3115	1/1	0.96	0.07	52,52,52,52	0
62	MG	1H	3291	1/1	0.96	0.20	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	14	3169	1/1	0.96	0.18	33,33,33,33	0
62	MG	1H	3502	1/1	0.96	0.09	25,25,25,25	0
61	K	1G	1633	1/1	0.96	0.05	76,76,76,76	0
62	MG	1H	3206	1/1	0.96	0.20	25,25,25,25	0
61	K	1H	3054	1/1	0.96	0.10	27,27,27,27	0
62	MG	1H	3208	1/1	0.96	0.12	37,37,37,37	0
62	MG	1G	1668	1/1	0.96	0.33	69,69,69,69	0
62	MG	1H	3509	1/1	0.96	0.13	27,27,27,27	0
62	MG	1H	3511	1/1	0.96	0.11	26,26,26,26	0
61	K	14	3100	1/1	0.96	0.13	71,71,71,71	0
62	MG	1G	1673	1/1	0.96	0.13	50,50,50,50	0
62	MG	13	1765	1/1	0.96	0.09	73,73,73,73	0
61	K	1H	3042	1/1	0.96	0.10	54,54,54,54	0
62	MG	1H	3387	1/1	0.96	0.09	16,16,16,16	0
61	K	14	3103	1/1	0.96	0.10	70,70,70,70	0
61	K	1G	1636	1/1	0.96	0.10	78,78,78,78	0
62	MG	1G	1680	1/1	0.96	0.26	50,50,50,50	0
62	MG	1G	1681	1/1	0.96	0.28	45,45,45,45	0
61	K	1H	3034	1/1	0.96	0.16	66,66,66,66	0
61	K	14	3043	1/1	0.96	0.11	80,80,80,80	0
62	MG	1H	3395	1/1	0.96	0.14	23,23,23,23	0
61	K	1H	3063	1/1	0.96	0.15	47,47,47,47	0
62	MG	1H	3525	1/1	0.96	0.09	15,15,15,15	0
61	K	19	301	1/1	0.96	0.15	52,52,52,52	0
62	MG	14	3198	1/1	0.96	0.14	33,33,33,33	0
61	K	1G	1603	1/1	0.96	0.21	62,62,62,62	0
61	K	1H	3064	1/1	0.96	0.10	34,34,34,34	0
61	K	1H	3067	1/1	0.96	0.10	53,53,53,53	0
62	MG	14	3204	1/1	0.96	0.17	38,38,38,38	0
62	MG	14	3205	1/1	0.96	0.28	51,51,51,51	0
62	MG	1H	3530	1/1	0.96	0.10	21,21,21,21	0
62	MG	1H	3531	1/1	0.96	0.07	21,21,21,21	0
62	MG	1H	3226	1/1	0.96	0.40	40,40,40,40	0
62	MG	14	3211	1/1	0.96	0.23	58,58,58,58	0
61	K	14	3002	1/1	0.96	0.06	69,69,69,69	0
62	MG	1H	3228	1/1	0.96	0.27	31,31,31,31	0
62	MG	1H	3231	1/1	0.96	0.29	43,43,43,43	0
62	MG	1H	3538	1/1	0.96	0.14	27,27,27,27	0
62	MG	1H	3317	1/1	0.96	0.34	52,52,52,52	0
62	MG	14	3218	1/1	0.96	0.13	60,60,60,60	0
61	K	13	1626	1/1	0.96	0.09	73,73,73,73	0
62	MG	1H	3319	1/1	0.96	0.21	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	14	3222	1/1	0.96	0.20	57,57,57,57	0
61	K	1H	3016	1/1	0.96	0.08	63,63,63,63	0
62	MG	1H	3427	1/1	0.96	0.04	36,36,36,36	0
61	K	1H	3128	1/1	0.96	0.08	64,64,64,64	0
61	K	14	3056	1/1	0.96	0.13	56,56,56,56	0
62	MG	14	3227	1/1	0.96	0.14	38,38,38,38	0
62	MG	1H	3430	1/1	0.96	0.10	54,54,54,54	0
61	K	14	3060	1/1	0.96	0.08	45,45,45,45	0
62	MG	1H	3156	1/1	0.96	0.39	33,33,33,33	0
62	MG	13	1661	1/1	0.96	0.23	39,39,39,39	0
62	MG	1H	3435	1/1	0.96	0.05	46,46,46,46	0
62	MG	1H	3158	1/1	0.96	0.22	57,57,57,57	0
61	K	1H	3104	1/1	0.96	0.09	42,42,42,42	0
61	K	14	3062	1/1	0.96	0.13	76,76,76,76	0
62	MG	14	3236	1/1	0.96	0.30	50,50,50,50	0
61	K	1H	3037	1/1	0.96	0.24	70,70,70,70	0
62	MG	14	3238	1/1	0.96	0.14	44,44,44,44	0
62	MG	1H	3441	1/1	0.96	0.07	61,61,61,61	0
62	MG	1H	3247	1/1	0.96	0.26	21,21,21,21	0
62	MG	1J	205	1/1	0.96	0.10	68,68,68,68	0
62	MG	1H	3444	1/1	0.96	0.12	23,23,23,23	0
61	K	14	3010	1/1	0.96	0.08	58,58,58,58	0
62	MG	M5	102	1/1	0.96	0.12	58,58,58,58	0
62	MG	13	1675	1/1	0.97	0.24	49,49,49,49	0
62	MG	1H	3374	1/1	0.97	0.10	28,28,28,28	0
61	K	1H	3139	1/1	0.97	0.14	64,64,64,64	0
62	MG	1H	3518	1/1	0.97	0.09	37,37,37,37	0
62	MG	1H	3519	1/1	0.97	0.25	25,25,25,25	0
61	K	14	3077	1/1	0.97	0.12	73,73,73,73	0
62	MG	1H	3187	1/1	0.97	0.19	30,30,30,30	0
62	MG	1H	3379	1/1	0.97	0.38	47,47,47,47	0
61	K	1G	1624	1/1	0.97	0.07	60,60,60,60	0
62	MG	13	1743	1/1	0.97	0.10	54,54,54,54	0
62	MG	1H	3284	1/1	0.97	0.15	36,36,36,36	0
61	K	14	3025	1/1	0.97	0.05	50,50,50,50	0
62	MG	1H	3193	1/1	0.97	0.21	40,40,40,40	0
62	MG	13	1745	1/1	0.97	0.07	39,39,39,39	0
62	MG	1G	1706	1/1	0.97	0.11	43,43,43,43	0
62	MG	1H	3288	1/1	0.97	0.17	44,44,44,44	0
62	MG	13	1746	1/1	0.97	0.12	37,37,37,37	0
62	MG	1H	3393	1/1	0.97	0.11	17,17,17,17	0
62	MG	14	3245	1/1	0.97	0.22	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
61	K	1H	3025	1/1	0.97	0.10	53,53,53,53	0
62	MG	13	1748	1/1	0.97	0.14	38,38,38,38	0
62	MG	1H	3397	1/1	0.97	0.14	17,17,17,17	0
62	MG	13	1682	1/1	0.97	0.33	33,33,33,33	0
62	MG	13	1683	1/1	0.97	0.17	39,39,39,39	0
62	MG	1H	3400	1/1	0.97	0.15	20,20,20,20	0
62	MG	1H	3403	1/1	0.97	0.14	27,27,27,27	0
62	MG	1H	3405	1/1	0.97	0.07	16,16,16,16	0
62	MG	14	3255	1/1	0.97	0.14	63,63,63,63	0
62	MG	1H	3407	1/1	0.97	0.14	16,16,16,16	0
61	K	1G	1626	1/1	0.97	0.07	67,67,67,67	0
62	MG	1H	3411	1/1	0.97	0.12	20,20,20,20	0
62	MG	1H	3412	1/1	0.97	0.15	16,16,16,16	0
62	MG	13	1752	1/1	0.97	0.08	47,47,47,47	0
62	MG	1H	3414	1/1	0.97	0.13	39,39,39,39	0
62	MG	13	1685	1/1	0.97	0.27	45,45,45,45	0
62	MG	1H	3297	1/1	0.97	0.17	40,40,40,40	0
62	MG	13	1754	1/1	0.97	0.09	35,35,35,35	0
61	K	1H	3014	1/1	0.97	0.11	60,60,60,60	0
61	K	1H	3117	1/1	0.97	0.17	57,57,57,57	0
62	MG	1H	3301	1/1	0.97	0.20	41,41,41,41	0
61	K	1G	1630	1/1	0.97	0.10	80,80,80,80	0
62	MG	1H	3210	1/1	0.97	0.23	38,38,38,38	0
62	MG	1H	3304	1/1	0.97	0.25	38,38,38,38	0
61	K	14	3031	1/1	0.97	0.10	29,29,29,29	0
62	MG	1H	3559	1/1	0.97	0.17	15,15,15,15	0
62	MG	1H	3306	1/1	0.97	0.12	34,34,34,34	0
61	K	14	3032	1/1	0.97	0.14	53,53,53,53	0
61	K	1H	3118	1/1	0.97	0.15	56,56,56,56	0
62	MG	1H	3309	1/1	0.97	0.07	52,52,52,52	0
62	MG	1H	3432	1/1	0.97	0.09	55,55,55,55	0
61	K	1H	3007	1/1	0.97	0.07	55,55,55,55	0
62	MG	1H	3215	1/1	0.97	0.20	40,40,40,40	0
62	MG	1H	3216	1/1	0.97	0.27	34,34,34,34	0
62	MG	1H	3217	1/1	0.97	0.34	31,31,31,31	0
62	MG	13	1693	1/1	0.97	0.31	61,61,61,61	0
62	MG	1H	3570	1/1	0.97	0.06	50,50,50,50	0
62	MG	14	3112	1/1	0.97	0.14	44,44,44,44	0
62	MG	1H	3571	1/1	0.97	0.15	26,26,26,26	0
62	MG	14	3114	1/1	0.97	0.08	33,33,33,33	0
61	K	14	3089	1/1	0.97	0.04	64,64,64,64	0
61	K	1H	3071	1/1	0.97	0.10	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3575	1/1	0.97	0.14	17,17,17,17	0
61	K	3I	301	1/1	0.97	0.09	48,48,48,48	0
61	K	14	3094	1/1	0.97	0.11	86,86,86,86	0
61	K	1H	3028	1/1	0.97	0.09	87,87,87,87	0
61	K	13	1633	1/1	0.97	0.13	55,55,55,55	0
61	K	1H	3100	1/1	0.97	0.10	44,44,44,44	0
61	K	13	1613	1/1	0.97	0.10	76,76,76,76	0
61	K	14	3042	1/1	0.97	0.09	51,51,51,51	0
62	MG	14	3129	1/1	0.97	0.15	34,34,34,34	0
62	MG	14	3130	1/1	0.97	0.07	38,38,38,38	0
62	MG	1H	3229	1/1	0.97	0.33	43,43,43,43	0
62	MG	14	3132	1/1	0.97	0.20	53,53,53,53	0
62	MG	14	3133	1/1	0.97	0.22	39,39,39,39	0
62	MG	14	3134	1/1	0.97	0.22	34,34,34,34	0
62	MG	1H	3324	1/1	0.97	0.24	12,12,12,12	0
62	MG	16	211	1/1	0.97	0.08	57,57,57,57	0
62	MG	1H	3230	1/1	0.97	0.34	39,39,39,39	0
61	K	1H	3103	1/1	0.97	0.14	33,33,33,33	0
62	MG	14	3316	1/1	0.97	0.08	34,34,34,34	0
62	MG	1H	3232	1/1	0.97	0.22	43,43,43,43	0
61	K	1H	3021	1/1	0.97	0.23	78,78,78,78	0
62	MG	2K	105	1/1	0.97	0.06	45,45,45,45	0
62	MG	1H	3236	1/1	0.97	0.32	43,43,43,43	0
62	MG	1H	3460	1/1	0.97	0.14	11,11,11,11	0
62	MG	78	202	1/1	0.97	0.10	30,30,30,30	0
62	MG	1H	3146	1/1	0.97	0.22	38,38,38,38	0
62	MG	I8	101	1/1	0.97	0.18	26,26,26,26	0
62	MG	1H	3147	1/1	0.97	0.23	54,54,54,54	0
62	MG	14	3150	1/1	0.97	0.17	29,29,29,29	0
62	MG	L8	101	1/1	0.97	0.18	38,38,38,38	0
62	MG	14	3153	1/1	0.97	0.21	51,51,51,51	0
61	K	1G	1606	1/1	0.97	0.21	61,61,61,61	0
62	MG	14	3156	1/1	0.97	0.21	34,34,34,34	0
62	MG	14	3333	1/1	0.97	0.07	62,62,62,62	0
62	MG	14	3158	1/1	0.97	0.26	49,49,49,49	0
62	MG	1H	3464	1/1	0.97	0.15	23,23,23,23	0
61	K	BA	201	1/1	0.97	0.06	72,72,72,72	0
61	K	1H	3127	1/1	0.97	0.07	47,47,47,47	0
62	MG	14	3338	1/1	0.97	0.07	34,34,34,34	0
61	K	1H	3053	1/1	0.97	0.13	25,25,25,25	0
61	K	13	1629	1/1	0.97	0.08	50,50,50,50	0
62	MG	1G	1639	1/1	0.97	0.25	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
62	MG	1H	3338	1/1	0.97	0.13	43,43,43,43	0
62	MG	1G	1642	1/1	0.97	0.18	45,45,45,45	0
62	MG	14	3345	1/1	0.97	0.07	48,48,48,48	0
62	MG	14	3346	1/1	0.97	0.12	52,52,52,52	0
62	MG	14	3347	1/1	0.97	0.12	27,27,27,27	0
61	K	14	3005	1/1	0.97	0.12	82,82,82,82	0
61	K	1G	1610	1/1	0.97	0.10	68,68,68,68	0
61	K	1H	3130	1/1	0.97	0.13	61,61,61,61	0
62	MG	1H	3342	1/1	0.97	0.29	27,27,27,27	0
62	MG	13	1712	1/1	0.97	0.24	43,43,43,43	0
61	K	14	3057	1/1	0.97	0.07	54,54,54,54	0
61	K	14	3058	1/1	0.97	0.09	85,85,85,85	0
62	MG	14	3355	1/1	0.97	0.08	39,39,39,39	0
61	K	1H	3057	1/1	0.97	0.08	23,23,23,23	0
62	MG	13	1653	1/1	0.97	0.23	67,67,67,67	0
62	MG	14	3358	1/1	0.97	0.14	51,51,51,51	0
61	K	1G	1613	1/1	0.97	0.06	63,63,63,63	0
62	MG	14	3179	1/1	0.97	0.20	32,32,32,32	0
62	MG	1G	1654	1/1	0.97	0.30	50,50,50,50	0
62	MG	1G	1655	1/1	0.97	0.16	58,58,58,58	0
62	MG	14	3363	1/1	0.97	0.10	26,26,26,26	0
62	MG	1G	1656	1/1	0.97	0.32	58,58,58,58	0
61	K	14	3011	1/1	0.97	0.13	80,80,80,80	0
62	MG	1H	3484	1/1	0.97	0.16	16,16,16,16	0
62	MG	1H	3257	1/1	0.97	0.20	40,40,40,40	0
62	MG	1H	3487	1/1	0.97	0.07	41,41,41,41	0
62	MG	1H	3350	1/1	0.97	0.22	25,25,25,25	0
62	MG	14	3371	1/1	0.97	0.10	32,32,32,32	0
61	K	1H	3132	1/1	0.97	0.19	87,87,87,87	0
61	K	1G	1615	1/1	0.97	0.07	60,60,60,60	0
62	MG	1H	3260	1/1	0.97	0.09	24,24,24,24	0
62	MG	1G	1665	1/1	0.97	0.09	50,50,50,50	0
62	MG	14	3193	1/1	0.97	0.16	40,40,40,40	0
62	MG	1H	3492	1/1	0.97	0.08	63,63,63,63	0
62	MG	14	3378	1/1	0.97	0.03	57,57,57,57	0
62	MG	1H	3354	1/1	0.97	0.18	29,29,29,29	0
62	MG	14	3196	1/1	0.97	0.12	59,59,59,59	0
62	MG	1H	3166	1/1	0.97	0.14	41,41,41,41	0
62	MG	1H	3167	1/1	0.97	0.24	20,20,20,20	0
62	MG	13	1659	1/1	0.97	0.12	56,56,56,56	0
62	MG	13	1660	1/1	0.97	0.16	39,39,39,39	0
62	MG	1G	1672	1/1	0.97	0.21	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	14	3203	1/1	0.97	0.30	45,45,45,45	0
61	K	1H	3043	1/1	0.97	0.12	58,58,58,58	0
61	K	1H	3086	1/1	0.97	0.06	66,66,66,66	0
62	MG	14	3206	1/1	0.97	0.12	55,55,55,55	0
62	MG	1G	1675	1/1	0.97	0.15	65,65,65,65	0
62	MG	1H	3267	1/1	0.97	0.13	53,53,53,53	0
61	K	14	3068	1/1	0.97	0.07	61,61,61,61	0
62	MG	14	3210	1/1	0.97	0.15	47,47,47,47	0
61	K	13	1632	1/1	0.97	0.12	79,79,79,79	0
62	MG	1H	3504	1/1	0.97	0.17	20,20,20,20	0
61	K	1H	3013	1/1	0.97	0.20	81,81,81,81	0
62	MG	1H	3178	1/1	0.97	0.18	17,17,17,17	0
62	MG	14	3398	1/1	0.97	0.09	47,47,47,47	0
62	MG	1H	3507	1/1	0.97	0.11	17,17,17,17	0
61	K	14	3071	1/1	0.97	0.09	77,77,77,77	0
61	K	1G	1621	1/1	0.97	0.05	76,76,76,76	0
62	MG	1G	1684	1/1	0.97	0.15	79,79,79,79	0
62	MG	1H	3510	1/1	0.97	0.11	19,19,19,19	0
62	MG	1H	3368	1/1	0.97	0.28	44,44,44,44	0
62	MG	29	303	1/1	0.97	0.08	28,28,28,28	0
61	K	1H	3093	1/1	0.97	0.09	42,42,42,42	0
61	K	14	3021	1/1	0.97	0.11	41,41,41,41	0
61	K	14	3075	1/1	0.97	0.06	36,36,36,36	0
62	MG	1H	3521	1/1	0.98	0.17	14,14,14,14	0
62	MG	14	3273	1/1	0.98	0.14	37,37,37,37	0
61	K	1H	3133	1/1	0.98	0.14	61,61,61,61	0
62	MG	1H	3423	1/1	0.98	0.11	35,35,35,35	0
61	K	1H	3106	1/1	0.98	0.18	59,59,59,59	0
61	K	13	1612	1/1	0.98	0.11	50,50,50,50	0
62	MG	14	3147	1/1	0.98	0.25	40,40,40,40	0
62	MG	1H	3188	1/1	0.98	0.28	20,20,20,20	0
61	K	4I	201	1/1	0.98	0.10	71,71,71,71	0
62	MG	1H	3337	1/1	0.98	0.12	23,23,23,23	0
61	K	14	3059	1/1	0.98	0.09	48,48,48,48	0
62	MG	14	3283	1/1	0.98	0.08	21,21,21,21	0
62	MG	1H	3191	1/1	0.98	0.19	24,24,24,24	0
62	MG	14	3285	1/1	0.98	0.05	30,30,30,30	0
62	MG	14	3286	1/1	0.98	0.12	25,25,25,25	0
61	K	1H	3059	1/1	0.98	0.08	19,19,19,19	0
62	MG	14	3155	1/1	0.98	0.23	38,38,38,38	0
62	MG	1H	3268	1/1	0.98	0.11	34,34,34,34	0
62	MG	14	3157	1/1	0.98	0.18	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
61	K	1G	1619	1/1	0.98	0.10	74,74,74,74	0
62	MG	1H	3534	1/1	0.98	0.10	27,27,27,27	0
62	MG	1H	3194	1/1	0.98	0.14	14,14,14,14	0
62	MG	1H	3536	1/1	0.98	0.11	23,23,23,23	0
61	K	1H	3060	1/1	0.98	0.09	34,34,34,34	0
61	K	39	301	1/1	0.98	0.05	75,75,75,75	0
61	K	14	3063	1/1	0.98	0.09	57,57,57,57	0
61	K	1H	3017	1/1	0.98	0.26	56,56,56,56	0
62	MG	1H	3439	1/1	0.98	0.12	53,53,53,53	0
62	MG	13	1762	1/1	0.98	0.08	52,52,52,52	0
62	MG	1H	3347	1/1	0.98	0.16	38,38,38,38	0
62	MG	1H	3442	1/1	0.98	0.12	56,56,56,56	0
61	K	1H	3062	1/1	0.98	0.12	27,27,27,27	0
62	MG	14	3172	1/1	0.98	0.23	26,26,26,26	0
61	K	14	3019	1/1	0.98	0.09	40,40,40,40	0
62	MG	1H	3203	1/1	0.98	0.20	26,26,26,26	0
62	MG	1H	3446	1/1	0.98	0.06	48,48,48,48	0
62	MG	1H	3447	1/1	0.98	0.07	19,19,19,19	0
61	K	1H	3141	1/1	0.98	0.19	41,41,41,41	0
62	MG	14	3177	1/1	0.98	0.05	45,45,45,45	0
61	K	1H	3018	1/1	0.98	0.16	51,51,51,51	0
61	K	1H	3087	1/1	0.98	0.09	31,31,31,31	0
62	MG	13	1656	1/1	0.98	0.14	49,49,49,49	0
62	MG	1G	1693	1/1	0.98	0.17	40,40,40,40	0
61	K	14	3023	1/1	0.98	0.07	60,60,60,60	0
61	K	1H	3019	1/1	0.98	0.07	60,60,60,60	0
61	K	16	201	1/1	0.98	0.06	55,55,55,55	0
61	K	1H	3116	1/1	0.98	0.04	61,61,61,61	0
61	K	1G	1629	1/1	0.98	0.11	88,88,88,88	0
62	MG	14	3323	1/1	0.98	0.08	56,56,56,56	0
61	K	16	203	1/1	0.98	0.07	44,44,44,44	0
62	MG	1H	3458	1/1	0.98	0.16	21,21,21,21	0
62	MG	13	1663	1/1	0.98	0.24	47,47,47,47	0
62	MG	1H	3145	1/1	0.98	0.23	17,17,17,17	0
62	MG	14	3328	1/1	0.98	0.11	25,25,25,25	0
61	K	11	301	1/1	0.98	0.08	31,31,31,31	0
62	MG	1G	1704	1/1	0.98	0.05	66,66,66,66	0
61	K	1H	3090	1/1	0.98	0.10	55,55,55,55	0
62	MG	1H	3218	1/1	0.98	0.24	28,28,28,28	0
61	K	1H	3066	1/1	0.98	0.18	27,27,27,27	0
61	K	31	302	1/1	0.98	0.03	45,45,45,45	0
62	MG	1H	3150	1/1	0.98	0.27	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	1H	3467	1/1	0.98	0.12	44,44,44,44	0
62	MG	14	3200	1/1	0.98	0.26	52,52,52,52	0
62	MG	13	1668	1/1	0.98	0.18	31,31,31,31	0
62	MG	1H	3469	1/1	0.98	0.15	13,13,13,13	0
62	MG	13	1669	1/1	0.98	0.18	34,34,34,34	0
62	MG	1H	3371	1/1	0.98	0.06	31,31,31,31	0
62	MG	1H	3574	1/1	0.98	0.17	24,24,24,24	0
62	MG	1H	3472	1/1	0.98	0.11	17,17,17,17	0
62	MG	13	1670	1/1	0.98	0.13	42,42,42,42	0
61	K	41	201	1/1	0.98	0.14	67,67,67,67	0
62	MG	13	1724	1/1	0.98	0.25	43,43,43,43	0
61	K	1H	3092	1/1	0.98	0.09	37,37,37,37	0
62	MG	1G	1722	1/1	0.98	0.10	46,46,46,46	0
62	MG	13	1726	1/1	0.98	0.20	46,46,46,46	0
61	K	1H	3003	1/1	0.98	0.10	56,56,56,56	0
62	MG	14	3214	1/1	0.98	0.33	66,66,66,66	0
62	MG	1H	3378	1/1	0.98	0.10	28,28,28,28	0
61	K	1H	3068	1/1	0.98	0.18	29,29,29,29	0
61	K	1H	3069	1/1	0.98	0.11	16,16,16,16	0
62	MG	13	1676	1/1	0.98	0.28	53,53,53,53	0
62	MG	16	212	1/1	0.98	0.11	36,36,36,36	0
61	K	1H	3008	1/1	0.98	0.08	65,65,65,65	0
62	MG	1H	3234	1/1	0.98	0.32	39,39,39,39	0
62	MG	1H	3384	1/1	0.98	0.14	11,11,11,11	0
62	MG	21	302	1/1	0.98	0.08	14,14,14,14	0
62	MG	1H	3486	1/1	0.98	0.11	36,36,36,36	0
62	MG	1H	3385	1/1	0.98	0.14	20,20,20,20	0
61	K	13	1637	1/1	0.98	0.17	64,64,64,64	0
62	MG	1H	3388	1/1	0.98	0.11	15,15,15,15	0
62	MG	1H	3389	1/1	0.98	0.07	13,13,13,13	0
61	K	1H	3055	1/1	0.98	0.08	31,31,31,31	0
62	MG	F8	101	1/1	0.98	0.11	32,32,32,32	0
61	K	14	3001	1/1	0.98	0.06	76,76,76,76	0
62	MG	13	1735	1/1	0.98	0.10	35,35,35,35	0
61	K	1H	3056	1/1	0.98	0.08	37,37,37,37	0
62	MG	1H	3168	1/1	0.98	0.24	15,15,15,15	0
62	MG	13	1737	1/1	0.98	0.12	65,65,65,65	0
62	MG	1H	3396	1/1	0.98	0.15	16,16,16,16	0
62	MG	1H	3498	1/1	0.98	0.09	24,24,24,24	0
62	MG	1H	3170	1/1	0.98	0.24	18,18,18,18	0
62	MG	1G	1637	1/1	0.98	0.19	55,55,55,55	0
61	K	14	3044	1/1	0.98	0.14	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	13	1739	1/1	0.98	0.13	30,30,30,30	0
62	MG	14	3243	1/1	0.98	0.18	54,54,54,54	0
62	MG	13	1740	1/1	0.98	0.08	33,33,33,33	0
62	MG	1G	1641	1/1	0.98	0.30	64,64,64,64	0
62	MG	1H	3175	1/1	0.98	0.23	31,31,31,31	0
62	MG	1H	3404	1/1	0.98	0.09	43,43,43,43	0
61	K	14	3092	1/1	0.98	0.09	106,106,106,106	0
62	MG	1H	3406	1/1	0.98	0.09	14,14,14,14	0
62	MG	1H	3249	1/1	0.98	0.20	31,31,31,31	0
62	MG	14	3123	1/1	0.98	0.04	36,36,36,36	0
62	MG	1H	3250	1/1	0.98	0.25	38,38,38,38	0
62	MG	14	3253	1/1	0.98	0.14	47,47,47,47	0
62	MG	1H	3410	1/1	0.98	0.12	16,16,16,16	0
62	MG	14	3126	1/1	0.98	0.18	27,27,27,27	0
62	MG	14	3127	1/1	0.98	0.16	30,30,30,30	0
61	K	1H	3074	1/1	0.98	0.09	34,34,34,34	0
62	MG	14	3258	1/1	0.98	0.16	34,34,34,34	0
62	MG	1G	1650	1/1	0.98	0.30	68,68,68,68	0
61	K	14	3046	1/1	0.98	0.09	54,54,54,54	0
61	K	1H	3075	1/1	0.98	0.09	28,28,28,28	0
61	K	1H	3102	1/1	0.98	0.08	51,51,51,51	0
62	MG	1H	3415	1/1	0.98	0.18	16,16,16,16	0
62	MG	14	3135	1/1	0.98	0.16	47,47,47,47	0
61	K	1H	3076	1/1	0.98	0.16	50,50,50,50	0
61	K	1H	3077	1/1	0.98	0.12	47,47,47,47	0
62	MG	29	302	1/1	0.98	0.18	38,38,38,38	0
62	MG	1H	3418	1/1	0.98	0.10	29,29,29,29	0
61	K	14	3008	1/1	0.98	0.18	47,47,47,47	0
61	K	1H	3078	1/1	0.98	0.08	45,45,45,45	0
61	K	14	3101	1/1	0.98	0.07	76,76,76,76	0
61	K	13	1628	1/1	0.99	0.09	51,51,51,51	0
62	MG	1H	3401	1/1	0.99	0.09	16,16,16,16	0
62	MG	14	3287	1/1	0.99	0.06	39,39,39,39	0
62	MG	14	3160	1/1	0.99	0.12	38,38,38,38	0
62	MG	1H	3172	1/1	0.99	0.30	31,31,31,31	0
62	MG	1H	3386	1/1	0.99	0.10	31,31,31,31	0
62	MG	1H	3198	1/1	0.99	0.12	20,20,20,20	0
62	MG	1H	3241	1/1	0.99	0.28	30,30,30,30	0
61	K	1H	3001	1/1	0.99	0.07	48,48,48,48	0
62	MG	14	3266	1/1	0.99	0.11	38,38,38,38	0
62	MG	1H	3408	1/1	0.99	0.09	29,29,29,29	0
61	K	14	3090	1/1	0.99	0.07	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
62	MG	14	3297	1/1	0.99	0.09	28,28,28,28	0
62	MG	11	302	1/1	0.99	0.08	14,14,14,14	0
62	MG	14	3192	1/1	0.99	0.20	41,41,41,41	0
62	MG	1G	1717	1/1	0.99	0.09	67,67,67,67	0
62	MG	14	3219	1/1	0.99	0.14	33,33,33,33	0
61	K	14	3050	1/1	0.99	0.05	63,63,63,63	0
61	K	1H	3089	1/1	0.99	0.12	36,36,36,36	0
61	K	1H	3083	1/1	0.99	0.11	54,54,54,54	0
62	MG	1G	1662	1/1	0.99	0.27	51,51,51,51	0
62	MG	14	3128	1/1	0.99	0.26	28,28,28,28	0
62	MG	14	3368	1/1	0.99	0.12	29,29,29,29	0
62	MG	14	3307	1/1	0.99	0.11	36,36,36,36	0
62	MG	14	3151	1/1	0.99	0.15	26,26,26,26	0
62	MG	1H	3154	1/1	0.99	0.23	26,26,26,26	0
61	K	14	3036	1/1	0.99	0.14	41,41,41,41	0
61	K	14	3054	1/1	0.99	0.06	58,58,58,58	0
61	K	13	1617	1/1	0.99	0.17	50,50,50,50	0
61	K	1H	3033	1/1	0.99	0.17	36,36,36,36	0
62	MG	14	3344	1/1	0.99	0.08	31,31,31,31	0
61	K	1H	3065	1/1	0.99	0.11	30,30,30,30	0
63	SF4	3E	302	8/8	0.99	0.16	56,57,68,71	0
63	SF4	32	303	8/8	0.99	0.14	57,68,76,85	0
64	ZN	5I	101	1/1	0.99	0.12	70,70,70,70	0
64	ZN	5A	102	1/1	0.99	0.12	82,82,82,82	0
62	MG	1H	3402	1/1	1.00	0.09	23,23,23,23	0

## 6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.