wwPDB X-ray Structure Validation Summary Report (i)

Oct 10, 2023 – 03:37 AM EDT

PDB ID	:	5JC9
Title	:	Structure of the Escherichia coli ribosome with the U1052G mutation in the 16S rRNA
Authors	:	Cocozaki, A.; Ferguson, A.
Deposited on	:	2016-04-14
Resolution	:	3.03 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*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

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

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

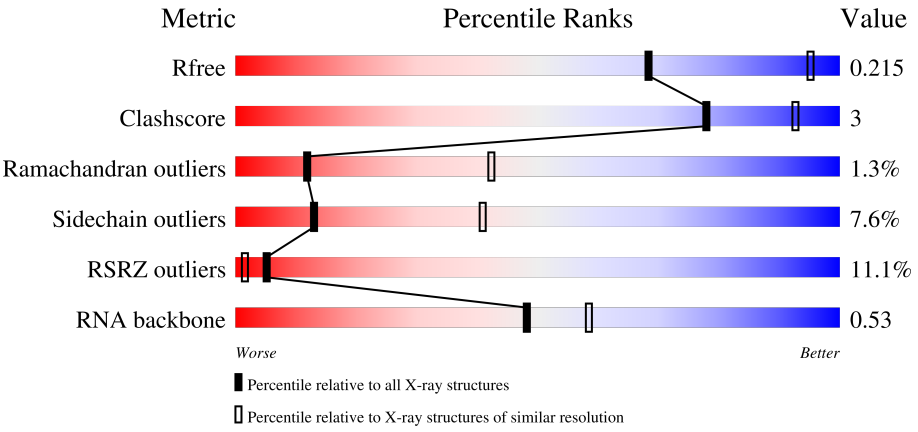
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.03 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	2752 (3.08-3.00)
Clashscore	141614	3096 (3.08-3.00)
Ramachandran outliers	138981	2986 (3.08-3.00)
Sidechain outliers	138945	2988 (3.08-3.00)
RSRZ outliers	127900	2636 (3.08-3.00)
RNA backbone	3102	1034 (3.30-2.78)

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

Mol	Chain	Length	Quality of chain
1	AA	1534	2% 74% 23%
1	BA	1534	10% 74% 23%
2	AB	224	7% 82% 17%
2	BB	224	15% 82% 17%

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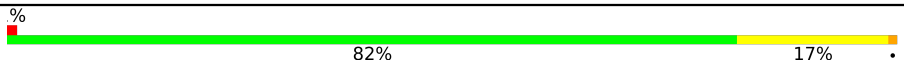
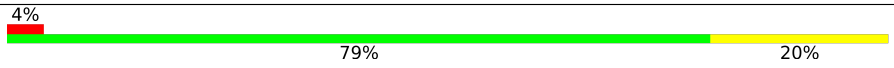
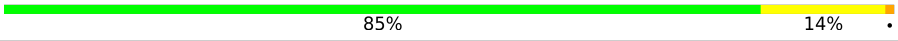
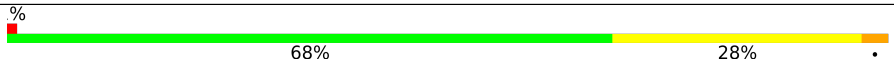
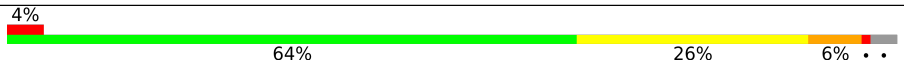
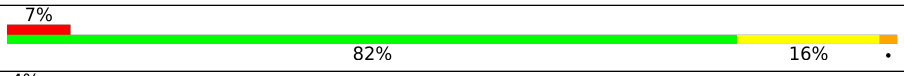
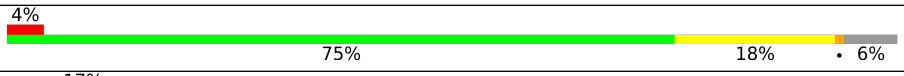
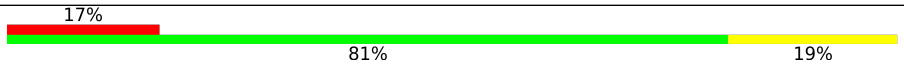
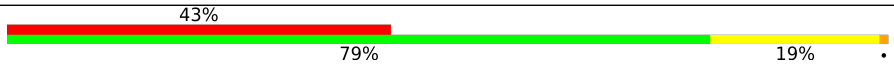
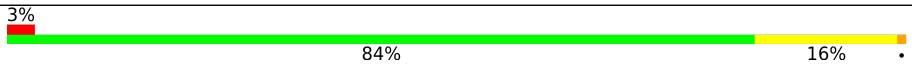
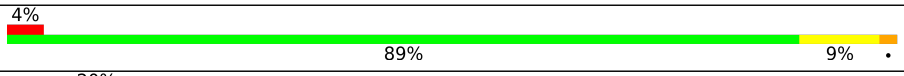
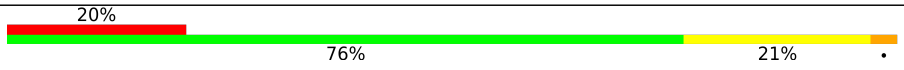
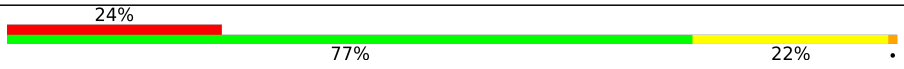
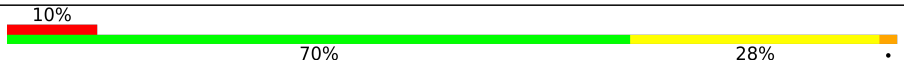
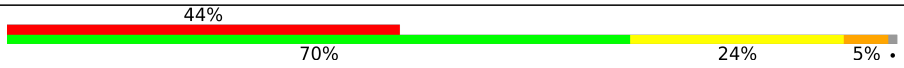
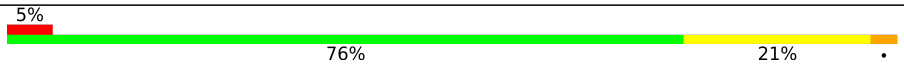
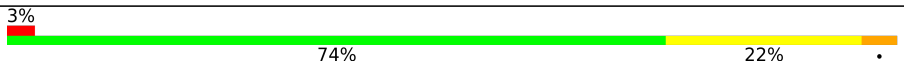
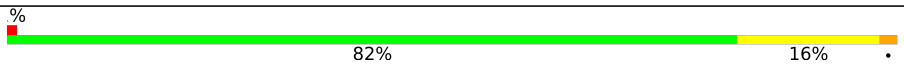
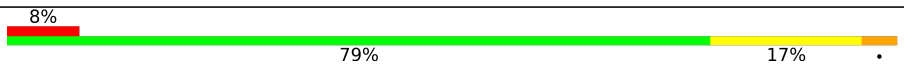
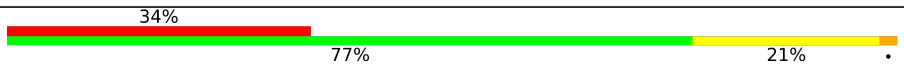
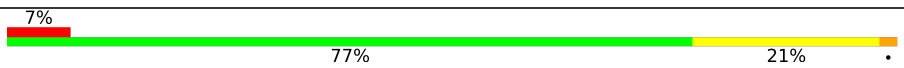
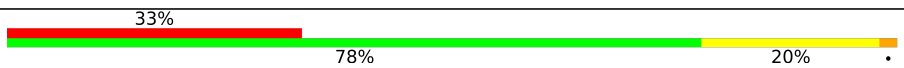
Mol	Chain	Length	Quality of chain
3	AC	206	
3	BC	206	
4	AD	205	
4	BD	205	
5	AE	155	
5	BE	155	
6	AF	106	
6	BF	106	
7	AG	151	
7	BG	151	
8	AH	129	
8	BH	129	
9	AI	127	
9	BI	127	
10	AJ	99	
10	BJ	99	
11	AK	117	
11	BK	117	
12	AL	123	
12	BL	123	
13	AM	114	
13	BM	114	
14	AN	100	
14	BN	100	
15	AO	88	

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Mol	Chain	Length	Quality of chain
15	BO	88	11% 86% 10%
16	AP	82	9% 84% 13%
16	BP	82	34% 80% 17%
17	AQ	80	2% 81% 15%
17	BQ	80	26% 68% 25% 6%
18	AR	55	16% 78% 20%
18	BR	55	4% 80% 18%
19	AS	79	22% 68% 28%
19	BS	79	49% 73% 22%
20	AT	86	% 83% 13% 5%
20	BT	86	43% 84% 12%
21	AU	56	2% 89% 11%
21	BU	56	2% 93% 7%
22	C1	56	29% 75% 23%
22	D1	56	77% 21%
23	C2	51	43% 75% 20%
23	D2	51	78% 20%
24	C3	46	39% 85% 15%
24	D3	46	87% 13%
25	C4	64	9% 91% 9%
25	D4	64	88% 12%
26	C5	38	11% 79% 21%
26	D5	38	84% 13%
27	C0	58	34% 83% 16%
27	D0	58	81% 16%

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Mol	Chain	Length	Quality of chain
28	CB	120	13% 85% 12%
28	DB	120	87% 12%
29	CC	271	3% 82% 15%
29	DC	271	89% 10%
30	CD	209	24% 86% 13%
31	CA	2904	10% 73% 23%
32	DD	209	86% 14%
33	CE	201	20% 85% 12%
33	DE	201	95% 5%
34	CF	177	60% 83% 15%
34	DF	177	76% 22%
35	CG	176	52% 82% 18%
35	DG	176	% 82% 18%
36	CH	149	21% 77% 19%
36	DH	149	19% 82% 17%
37	CJ	134	79% 86% 12%
37	DJ	134	63% 85% 13%
38	CK	142	4% 92% 6%
38	DK	142	93% 6%
39	CL	123	7% 83% 13%
39	DL	123	86% 12%
40	CM	144	34% 78% 20%
40	DM	144	94% 6%
41	CN	136	6% 86% 13%
41	DN	136	82% 17%

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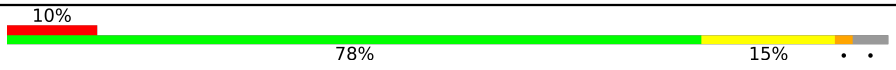
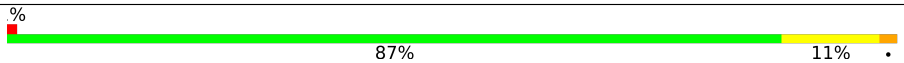
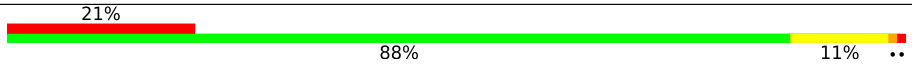
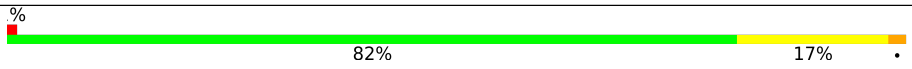
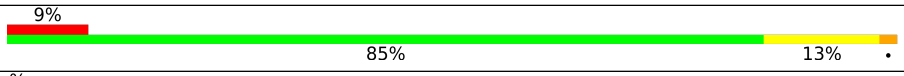
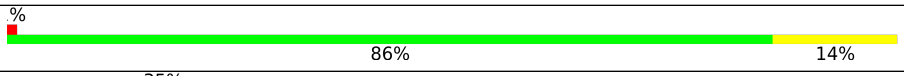
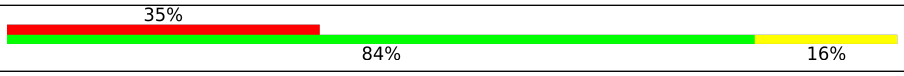
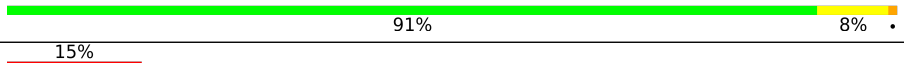
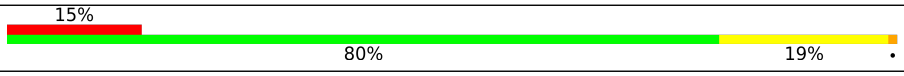
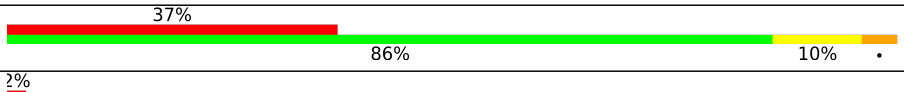
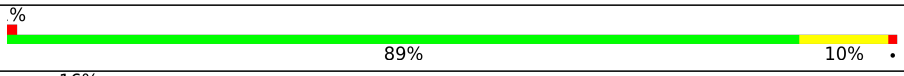
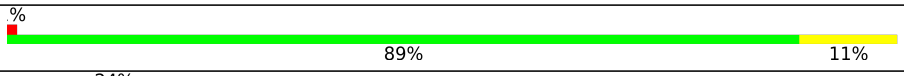
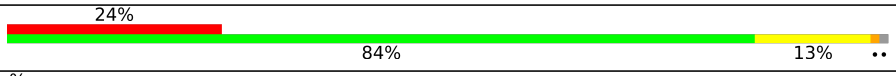
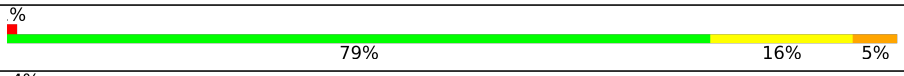
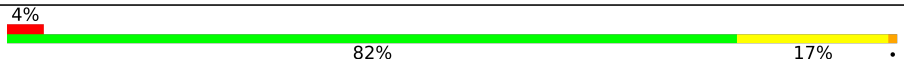
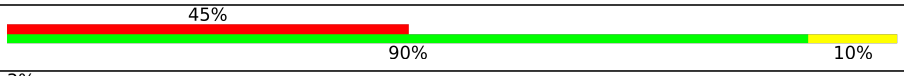
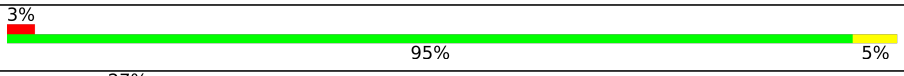
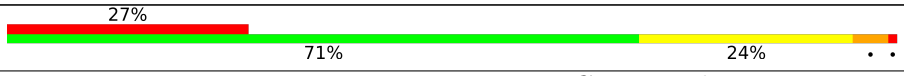
Mol	Chain	Length	Quality of chain
42	CO	125	
42	DO	125	
43	CP	117	
43	DP	117	
44	CQ	114	
44	DQ	114	
45	CR	117	
45	DR	117	
46	CS	103	
46	DS	103	
47	CT	110	
47	DT	110	
48	CU	93	
48	DU	93	
49	CV	102	
49	DV	102	
50	CW	94	
50	DW	94	
51	CX	76	
51	DX	76	
52	CY	77	
52	DY	77	
53	CZ	62	
53	DZ	62	
54	DI	135	

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Mol	Chain	Length	Quality of chain
55	DA	2904	3% 75% 21%

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
56	MG	AA	1603	-	-	-	X
56	MG	AA	1606	-	-	-	X
56	MG	AA	1614	-	-	-	X
56	MG	AA	1619	-	-	-	X
56	MG	AA	1622	-	-	-	X
56	MG	AA	1623	-	-	-	X
56	MG	AA	1625	-	-	-	X
56	MG	AA	1626	-	-	-	X
56	MG	AA	1664	-	-	-	X
56	MG	BA	1604	-	-	-	X
56	MG	BA	1638	-	-	-	X
56	MG	CA	3021	-	-	-	X
56	MG	CA	3022	-	-	-	X
56	MG	CA	3047	-	-	-	X
56	MG	CA	3060	-	-	-	X
56	MG	CA	3075	-	-	-	X
56	MG	CA	3105	-	-	-	X
56	MG	CA	3113	-	-	-	X
56	MG	CA	3116	-	-	-	X
56	MG	CA	3122	-	-	-	X
56	MG	CA	3132	-	-	-	X
56	MG	CA	3134	-	-	-	X
56	MG	CA	3139	-	-	-	X
56	MG	CA	3140	-	-	-	X
56	MG	CA	3154	-	-	-	X
56	MG	DA	3158	-	-	-	X
56	MG	DA	3168	-	-	-	X
56	MG	DA	3170	-	-	-	X
56	MG	DA	3171	-	-	-	X
56	MG	DA	3175	-	-	-	X
56	MG	DA	3179	-	-	-	X
56	MG	DA	3181	-	-	-	X
56	MG	DA	3183	-	-	-	X
57	PG4	DR	202	-	-	-	X
58	MPD	DE	301	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MPD	DN	201	-	-	-	X
59	PUT	AA	1674	-	-	-	X
59	PUT	AA	1675	-	-	-	X
59	PUT	DA	3198	-	-	-	X
59	PUT	DA	3207	-	-	-	X
59	PUT	DA	3215	-	-	-	X
61	PEG	D1	103	-	-	-	X
61	PEG	D3	102	-	-	-	X
61	PEG	DP	201	-	-	-	X
61	PEG	DQ	201	-	-	-	X
63	PGE	D1	102	-	-	-	X
63	PGE	D3	101	-	-	-	X
63	PGE	DS	201	-	-	-	X
66	ACY	DA	3199	-	X	-	X
68	TRS	DA	3222	-	-	-	X

2 Entry composition (i)

There are 69 unique types of molecules in this entry. The entry contains 295130 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 rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1534	Total	C	N	O	P	0	0	0
			32933	14695	6044	10660	1534			
1	BA	1533	Total	C	N	O	P	0	0	0
			32911	14685	6039	10654	1533			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AA	1052	G	U	engineered mutation	GB 731469900
BA	1052	G	U	engineered mutation	GB 731469900

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	224	Total	C	N	O	S	0	0	0
			1753	1109	315	321	8			
2	BB	224	Total	C	N	O	S	0	0	0
			1753	1109	315	321	8			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			
3	BC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	BD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	155	Total	C	N	O	S	0	0	0
			1144	711	216	211	6			
5	BE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	106	Total	C	N	O	S	0	0	0
			862	545	156	154	7			
6	BF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			
7	BG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
8	BH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
9	BI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	99	Total	C	N	O	S	0	0	0
			796	498	152	145	1			
10	BJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
11	BK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	123	Total	C	N	O	S	0	0	0
			957	591	196	165	5			
12	BL	123	Total	C	N	O	S	0	0	0
			957	591	196	165	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			
13	BM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	100	Total	C	N	O	S	0	0	0
			805	499	164	139	3			
14	BN	100	Total	C	N	O	S	0	0	0
			805	499	164	139	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
15	BO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
16	BP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			
17	BQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	55	Total	C	N	O	0	0	0
			456	288	86	82			
18	BR	55	Total	C	N	O	0	0	0
			456	288	86	82			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			
19	BS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	86	Total	C	N	O	S	0	0	0
			670	414	138	115	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	BT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	56	Total	C	N	O	S	0	0	0
			465	290	96	78	1			
21	BU	56	Total	C	N	O	S	0	0	0
			465	290	96	78	1			

- Molecule 22 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	C1	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
22	D1	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 23 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	C2	50	Total	C	N	O	0	0	0
			409	263	75	71			
23	D2	51	Total	C	N	O	0	0	0
			414	266	76	72			

- Molecule 24 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	C3	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
24	D3	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 25 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	C4	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
25	D4	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 26 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	C5	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
26	D5	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 27 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	C0	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
27	D0	58	Total	C	N	O	S	0	2	0
			463	290	90	81	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	CB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
28	DB	120	Total	C	N	O	P	0	0	0
			2569	1144	468	837	120			

- Molecule 29 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	CC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			
29	DC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			

- Molecule 30 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	CD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 31 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	CA	2898	Total	C	N	O	P	0	0	0
			62229	27768	11448	20115	2898			

- Molecule 32 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	DD	209	Total	C	N	O	S	0	1	0
			1576	986	290	296	4			

- Molecule 33 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	CE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
33	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 34 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	CF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			
34	DF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			

- Molecule 35 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	CG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
35	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 36 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	CH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			
36	DH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			

- Molecule 37 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	CJ	134	Total	C	N	O	S	0	0	0
			979	619	169	185	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	DJ	134	Total	C	N	O	S	0	0	0
			979	619	169	185	6			

- Molecule 38 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	CK	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
38	DK	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 39 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	CL	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
39	DL	123	Total	C	N	O	S	0	0	0
			946	593	181	166	6			

- Molecule 40 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	CM	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			
40	DM	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			

- Molecule 41 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	CN	136	Total	C	N	O	S	0	0	0
			1075	686	205	178	6			
41	DN	136	Total	C	N	O	S	0	2	0
			1092	696	211	179	6			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CN	81	4D4	ARG	conflict	UNP P0ADY7
DN	81	4D4	ARG	conflict	UNP P0ADY7

- Molecule 42 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	CO	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
42	DO	125	Total	C	N	O	S	0	0	0
			993	613	202	173	5			

- Molecule 43 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	CP	116	Total	C	N	O		0	0	0
			892	552	178	162				
43	DP	117	Total	C	N	O	S	0	0	0
			900	557	179	163	1			

- Molecule 44 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	CQ	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
44	DQ	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 45 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
45	CR	117	Total	C	N	O	0	0	0
			947	604	192	151			
45	DR	117	Total	C	N	O	0	0	0
			947	604	192	151			

- Molecule 46 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	CS	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
46	DS	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 47 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	CT	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	DT	110	Total 857	C 532	N 166	O 156	S 3	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	CU	93	Total 739	C 466	N 139	O 132	S 2	0	0	0
48	DU	93	Total 739	C 466	N 139	O 132	S 2	0	0	0

- Molecule 49 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	CV	102	Total 780	C 492	N 146	O 142	0	0	0
49	DV	102	Total 780	C 492	N 146	O 142	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	CW	94	Total 753	C 479	N 137	O 134	S 3	0	0	0
50	DW	94	Total 753	C 479	N 137	O 134	S 3	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	CX	75	Total 569	C 353	N 113	O 102	S 1	0	0	0
51	DX	76	Total 591	C 365	N 121	O 104	S 1	0	1	0

- Molecule 52 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	CY	77	Total 625	C 388	N 129	O 106	S 2	0	0	0
52	DY	77	Total 625	C 388	N 129	O 106	S 2	0	0	0

- Molecule 53 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	CZ	62	Total	C	N	O	S	0	0	0
			501	308	98	94	1			
53	DZ	62	Total	C	N	O	S	0	0	0
			501	308	98	94	1			

- Molecule 54 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	DI	135	Total	C	N	O	S	0	0	0
			1023	649	179	192	3			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DI	85	VAL	SER	conflict	UNP P0A7J3
DI	86	THR	MET	conflict	UNP P0A7J3

- Molecule 55 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	DA	2897	Total	C	N	O	P	0	11	0
			62423	27855	11485	20176	2907			

- Molecule 56 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	71	Total	Mg	0	0
			71	71		
56	BA	43	Total	Mg	0	0
			43	43		
56	CB	3	Total	Mg	0	0
			3	3		
56	CA	156	Total	Mg	0	0
			156	156		
56	DD	1	Total	Mg	0	0
			1	1		
56	DM	1	Total	Mg	0	0
			1	1		
56	DR	1	Total	Mg	0	0
			1	1		

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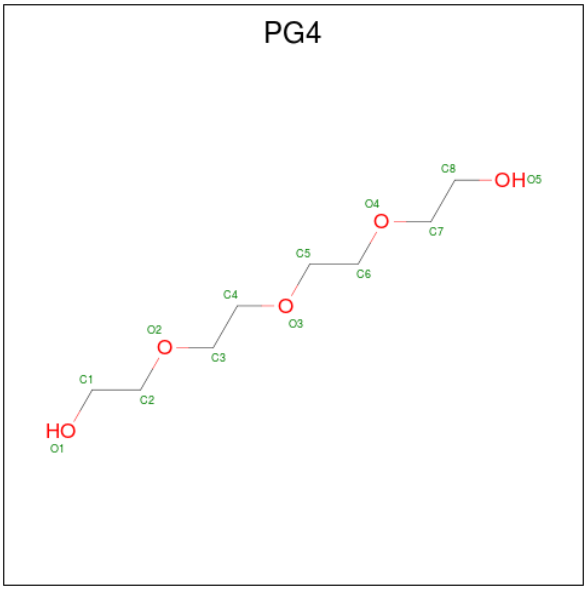
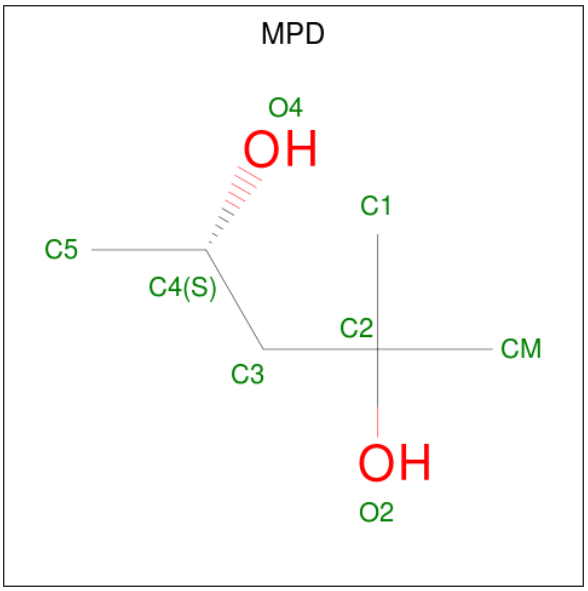
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DB	9	Total Mg 9 9	0	0
56	DA	184	Total Mg 184 184	0	0

- Molecule 57 is TETRAETHYLENE GLYCOL (three-letter code: PG4) (formula: $C_8H_{18}O_5$).



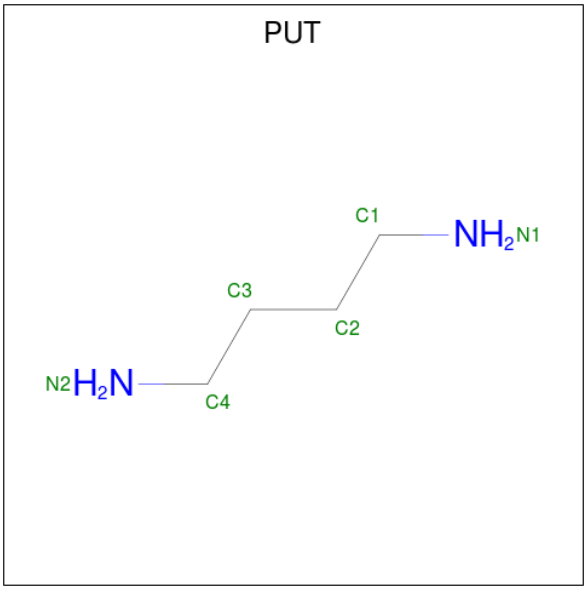
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	1	Total C O 13 8 5	0	0
57	BA	1	Total C O 13 8 5	0	0
57	DQ	1	Total C O 13 8 5	0	0
57	DR	1	Total C O 13 8 5	0	0
57	DS	1	Total C O 13 8 5	0	0
57	DA	1	Total C O 13 8 5	0	0
57	DA	1	Total C O 13 8 5	0	0

- Molecule 58 is (4S)-2-METHYL-2,4-PENTANEDIOL (three-letter code: MPD) (formula: $C_6H_{14}O_2$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
58	AA	1	Total	C	O	0	0
			8	6	2		
58	AA	1	Total	C	O	0	0
			8	6	2		
58	DE	1	Total	C	O	0	0
			8	6	2		
58	DE	1	Total	C	O	0	0
			8	6	2		
58	DK	1	Total	C	O	0	0
			8	6	2		
58	DN	1	Total	C	O	0	0
			8	6	2		
58	DS	1	Total	C	O	0	0
			8	6	2		
58	DT	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		

- Molecule 59 is 1,4-DIAMINOBUTANE (three-letter code: PUT) (formula: $C_4H_{12}N_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AA	1	Total C N 6 4 2	0	0
59	AA	1	Total C N 6 4 2	0	0
59	AA	1	Total C N 6 4 2	0	0
59	AA	1	Total C N 6 4 2	0	0
59	DM	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0

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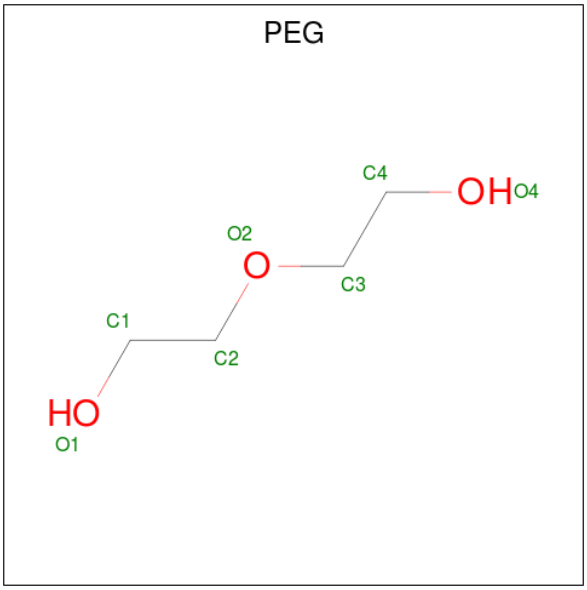
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0

- Molecule 60 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	AB	1	Total Zn 1 1	0	0
60	C5	1	Total Zn 1 1	0	0
60	D5	1	Total Zn 1 1	0	0

- Molecule 61 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: $C_4H_{10}O_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AL	1	Total C O 7 4 3	0	0
61	D1	1	Total C O 7 4 3	0	0
61	D3	1	Total C O 7 4 3	0	0

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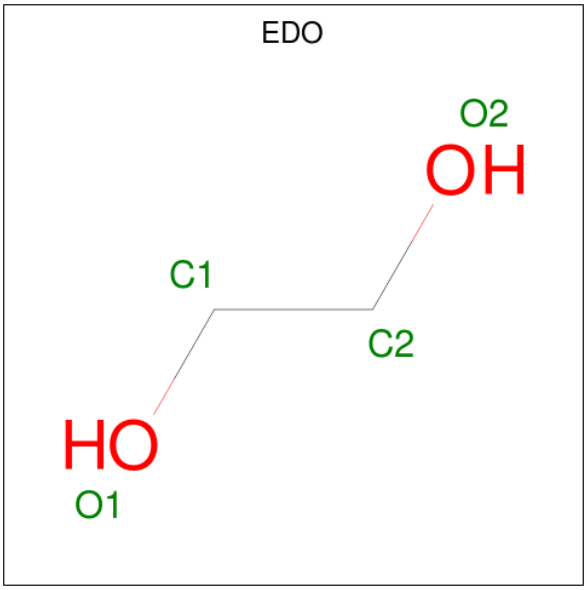
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	DL	1	Total C O 7 4 3	0	0
61	DP	1	Total C O 7 4 3	0	0
61	DQ	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0

- Molecule 62 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	D1	1	Total C O 4 2 2	0	0
62	DB	1	Total C O 4 2 2	0	0
62	DB	1	Total C O 4 2 2	0	0

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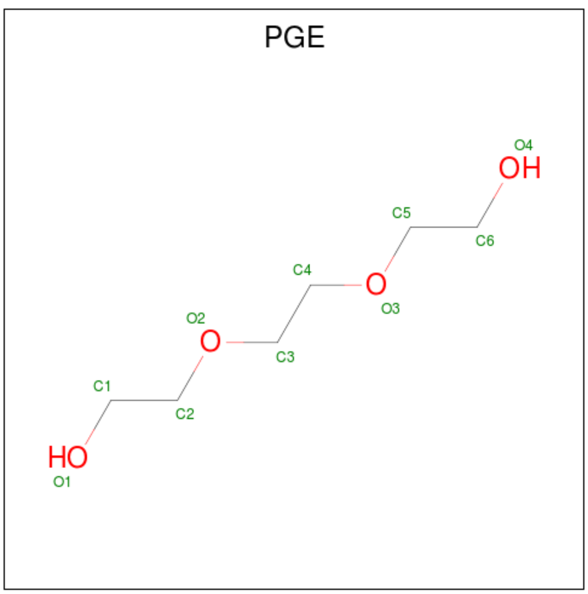
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0
62	DA	1	Total C O 4 2 2	0	0

- Molecule 63 is TRIETHYLENE GLYCOL (three-letter code: PGE) (formula: $C_6H_{14}O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	D1	1	Total C O 10 6 4	0	0
63	D3	1	Total C O 10 6 4	0	0

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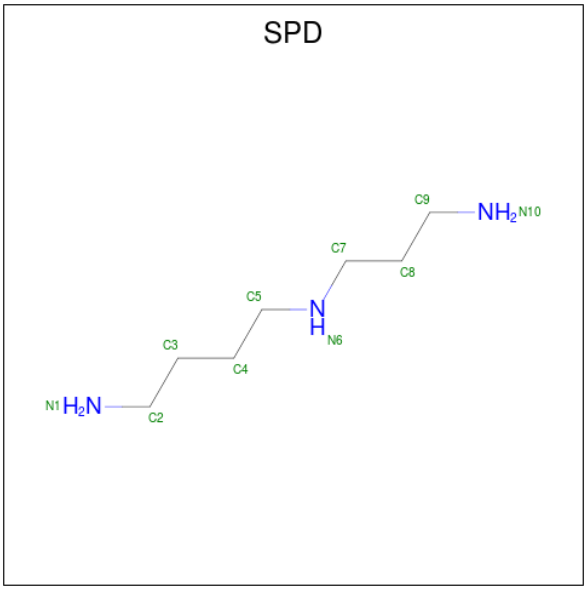
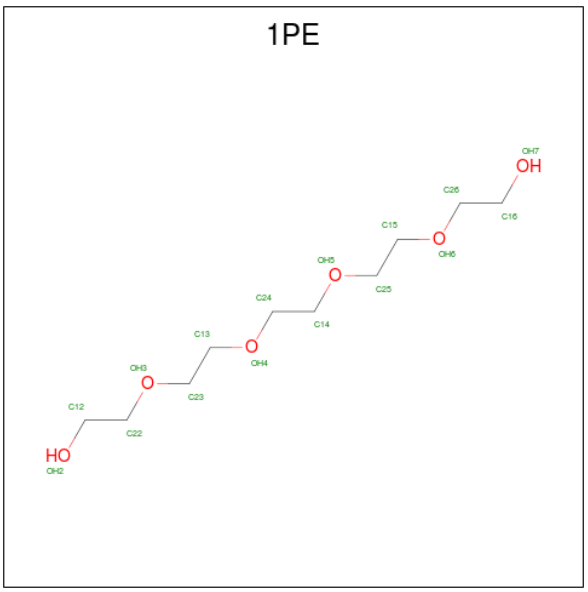
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	DD	1	Total C O 10 6 4	0	0
63	DS	1	Total C O 10 6 4	0	0
63	DU	1	Total C O 10 6 4	0	0
63	DA	1	Total C O 10 6 4	0	0
63	DA	1	Total C O 10 6 4	0	0
63	DA	1	Total C O 10 6 4	0	0
63	DA	1	Total C O 10 6 4	0	0

- Molecule 64 is SPERMIDINE (three-letter code: SPD) (formula: $C_7H_{19}N_3$).



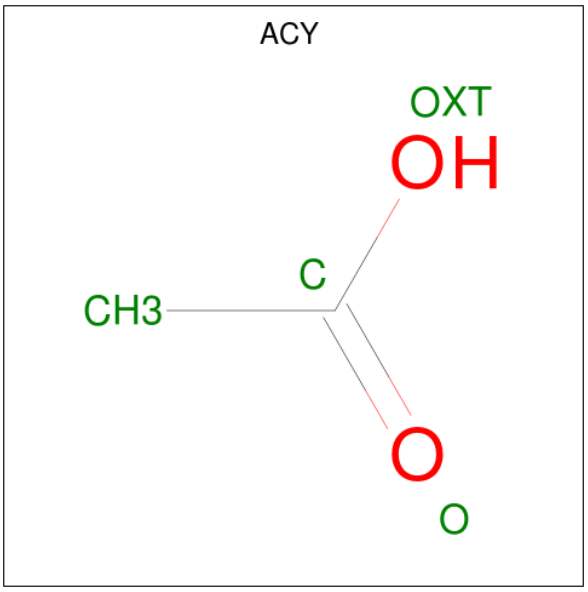
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
64	DA	1	Total C N 10 7 3	0	0
64	DA	1	Total C N 10 7 3	0	0
64	DA	1	Total C N 10 7 3	0	0
64	DA	1	Total C N 10 7 3	0	0

- Molecule 65 is PENTAETHYLENE GLYCOL (three-letter code: 1PE) (formula: $C_{10}H_{22}O_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	DA	1	Total C O 16 10 6	0	0
65	DA	1	Total C O 16 10 6	0	0

- Molecule 66 is ACETIC ACID (three-letter code: ACY) (formula: $C_2H_4O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
66	DA	1	Total C O 4 2 2	0	0

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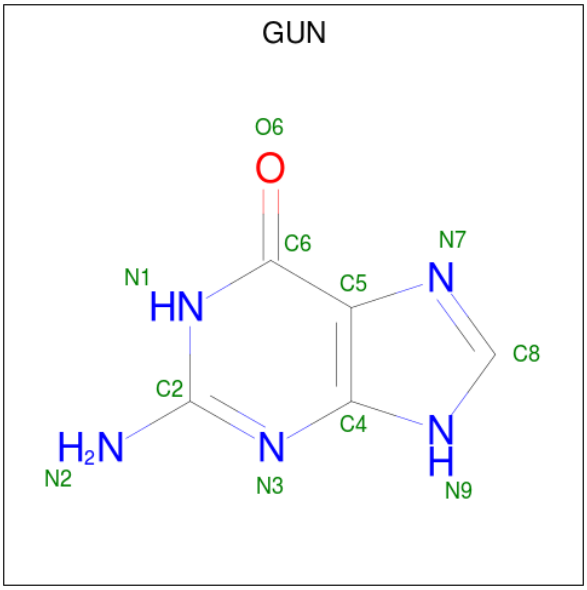
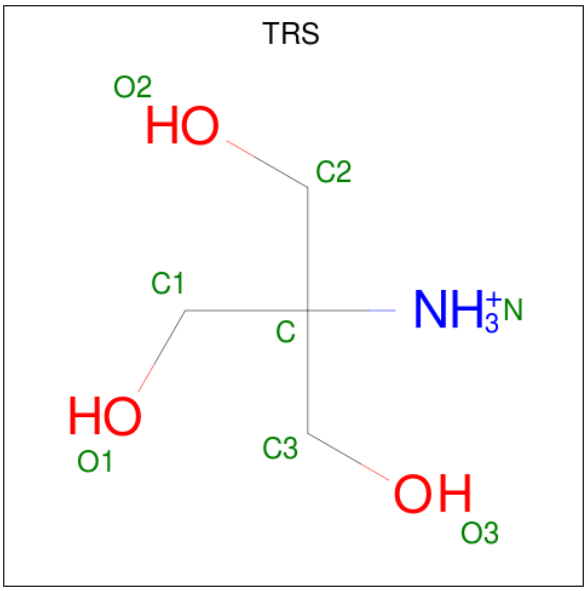
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
66	DA	1	Total C O 4 2 2	0	0
66	DA	1	Total C O 4 2 2	0	0

- Molecule 67 is GUANINE (three-letter code: GUN) (formula: $C_5H_5N_5O$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
67	DA	1	Total C N O 11 5 5 1	0	0

- Molecule 68 is 2-AMINO-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (three-letter code: TRS) (formula: $C_4H_{12}NO_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
68	DA	1	Total C N O 8 4 1 3	0	0

- Molecule 69 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AA	508	Total O 508 508	0	0
69	AC	5	Total O 5 5	0	0
69	AD	1	Total O 1 1	0	0
69	AE	5	Total O 5 5	0	0
69	AF	1	Total O 1 1	0	0
69	AG	1	Total O 1 1	0	0
69	AJ	3	Total O 3 3	0	0
69	AK	6	Total O 6 6	0	0
69	AL	10	Total O 10 10	0	0
69	AM	4	Total O 4 4	0	0
69	AN	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AO	2	Total O 2 2	0	0
69	AP	2	Total O 2 2	0	0
69	AT	4	Total O 4 4	0	0
69	AU	2	Total O 2 2	0	0
69	C3	2	Total O 2 2	0	0
69	C4	1	Total O 1 1	0	0
69	C5	1	Total O 1 1	0	0
69	BA	282	Total O 282 282	0	0
69	BD	12	Total O 12 12	0	0
69	BE	1	Total O 1 1	0	0
69	BF	1	Total O 1 1	0	0
69	BK	3	Total O 3 3	0	0
69	BL	6	Total O 6 6	0	0
69	BN	2	Total O 2 2	0	0
69	BO	1	Total O 1 1	0	0
69	BP	3	Total O 3 3	0	0
69	BR	1	Total O 1 1	0	0
69	BT	3	Total O 3 3	0	0
69	BU	3	Total O 3 3	0	0
69	D1	46	Total O 46 46	0	0
69	D2	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	D3	28	Total O 28 28	0	0
69	D4	33	Total O 33 33	0	0
69	D5	11	Total O 11 11	0	0
69	D0	26	Total O 26 26	0	0
69	CB	13	Total O 13 13	0	0
69	CC	8	Total O 8 8	0	0
69	CD	7	Total O 7 7	0	0
69	CA	693	Total O 693 693	0	0
69	DC	102	Total O 102 102	0	0
69	DD	95	Total O 95 95	0	0
69	CE	4	Total O 4 4	0	0
69	CL	1	Total O 1 1	0	0
69	CM	4	Total O 4 4	0	0
69	CO	2	Total O 2 2	0	0
69	CQ	1	Total O 1 1	0	0
69	CU	3	Total O 3 3	0	0
69	CV	1	Total O 1 1	0	0
69	CW	1	Total O 1 1	0	0
69	CY	1	Total O 1 1	0	0
69	DE	63	Total O 63 63	0	0
69	DF	16	Total O 16 16	0	0

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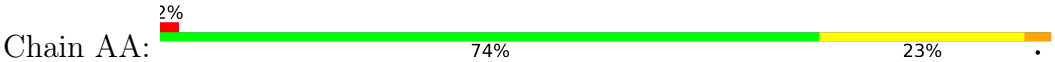
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	DG	7	Total O 7 7	0	0
69	DH	2	Total O 2 2	0	0
69	DK	60	Total O 60 60	0	0
69	DL	51	Total O 51 51	0	0
69	DM	68	Total O 68 68	0	0
69	DN	73	Total O 73 73	0	0
69	DO	49	Total O 49 49	0	0
69	DP	38	Total O 38 38	0	0
69	DQ	29	Total O 29 29	0	0
69	DR	61	Total O 61 61	0	0
69	DS	50	Total O 50 50	0	0
69	DT	66	Total O 66 66	0	0
69	DU	19	Total O 19 19	0	0
69	DV	21	Total O 21 21	0	0
69	DW	32	Total O 32 32	0	0
69	DX	25	Total O 25 25	0	0
69	DY	10	Total O 10 10	0	0
69	DZ	6	Total O 6 6	0	0
69	DB	203	Total O 203 203	0	0
69	DA	4830	Total O 4830 4830	0	0

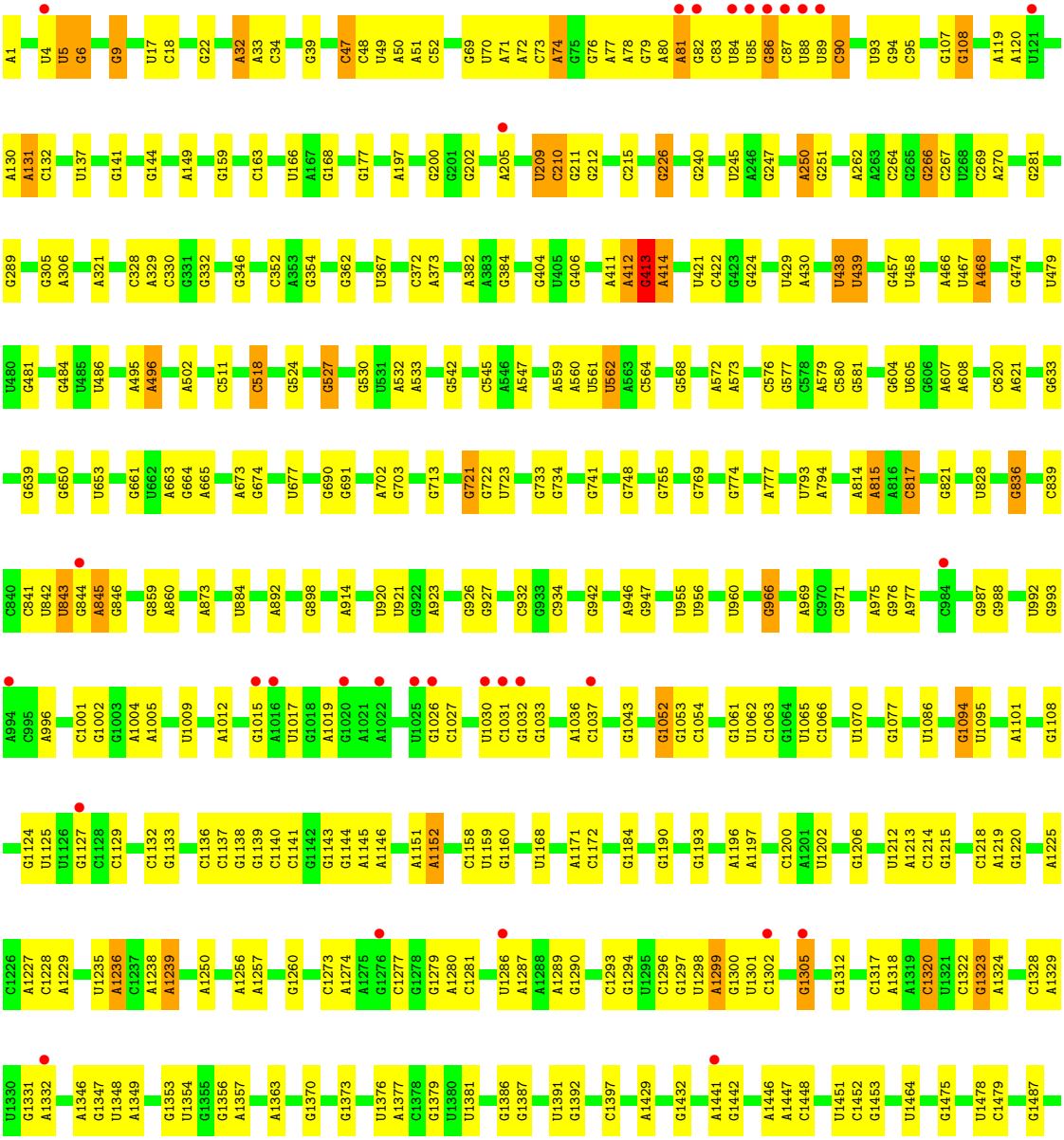
3 Residue-property plots (i)

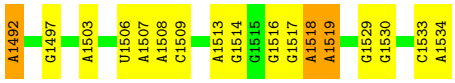
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: 16S rRNA

Chain AA:

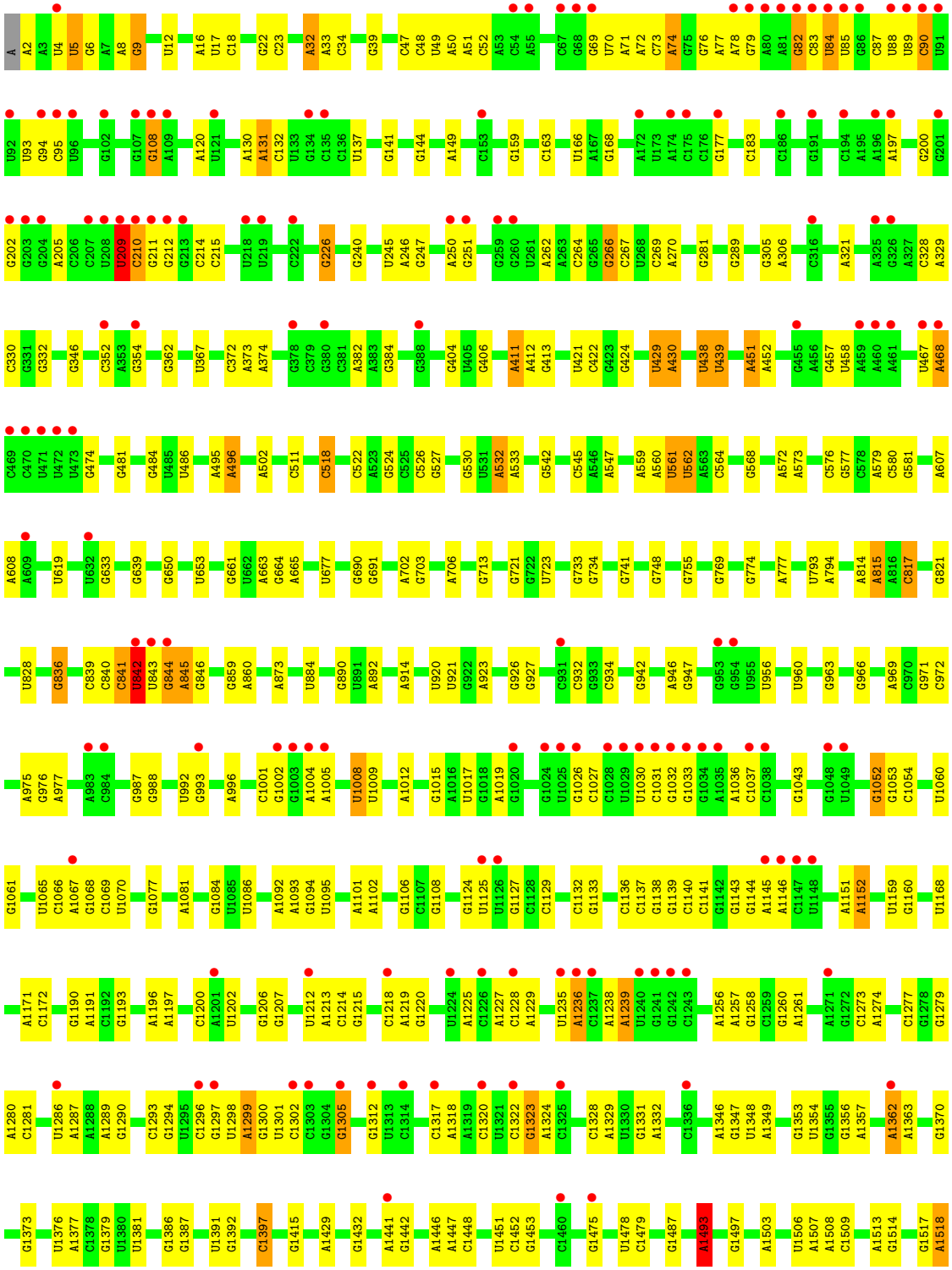






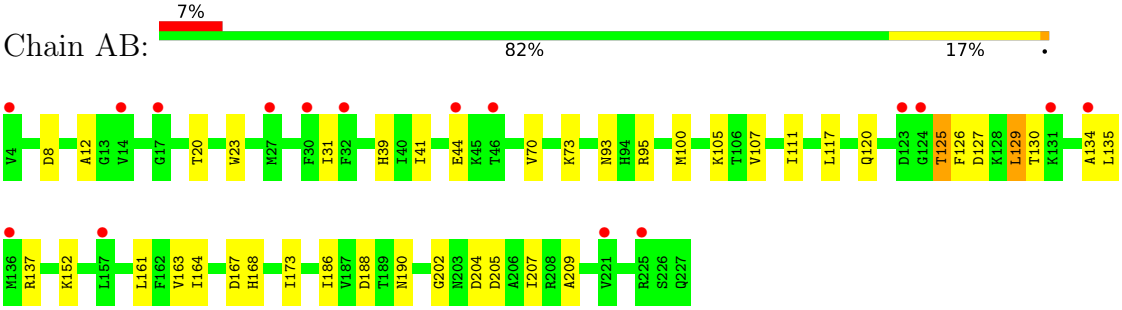
• Molecule 1: 16S rRNA

Chain BA:



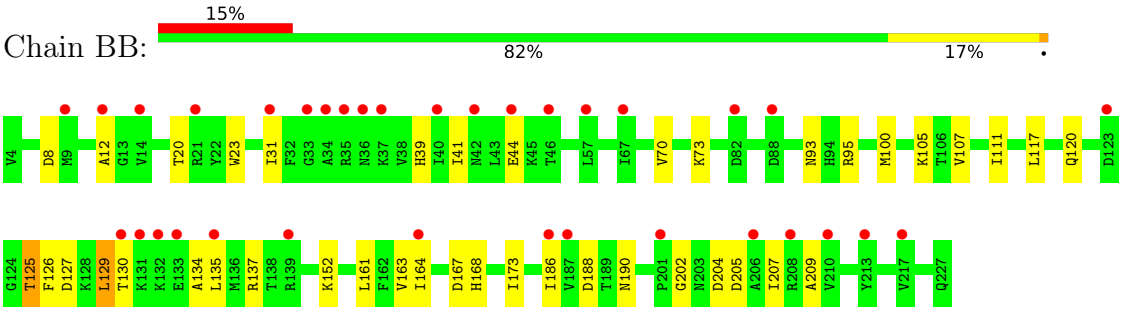
• Molecule 2: 30S ribosomal protein S2

Chain AB:



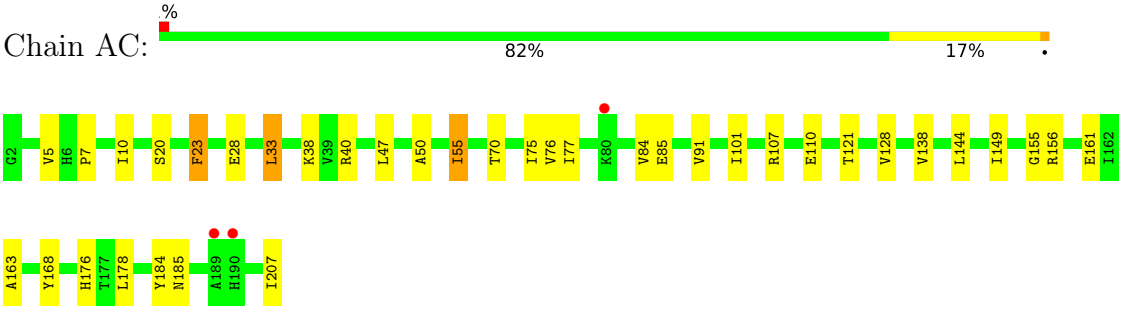
• Molecule 2: 30S ribosomal protein S2

Chain BB:



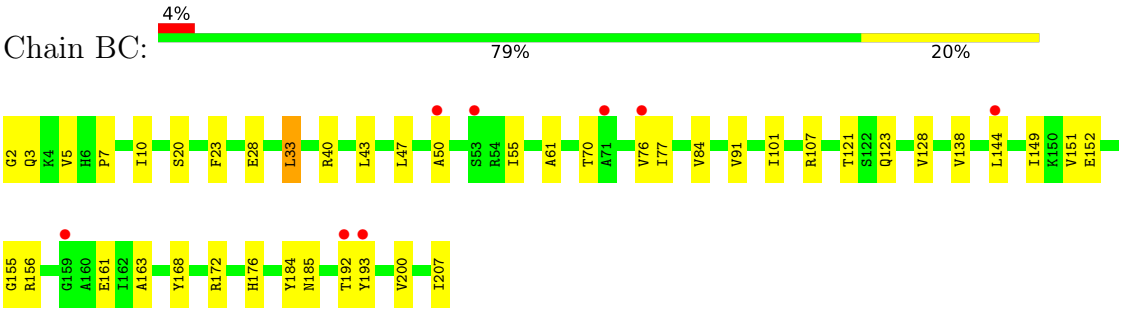
• Molecule 3: 30S ribosomal protein S3

Chain AC:



• Molecule 3: 30S ribosomal protein S3

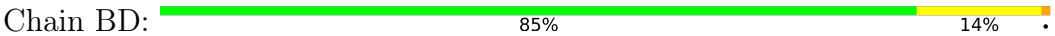
Chain BC:



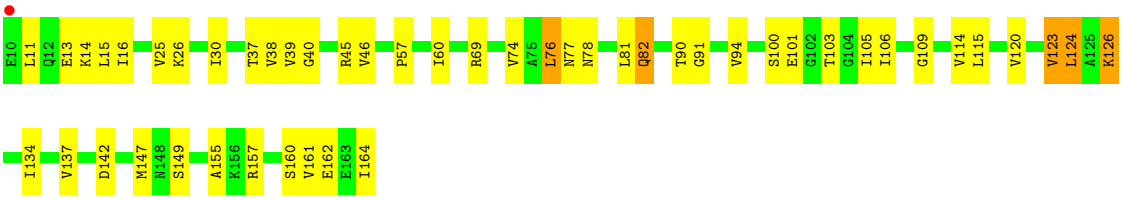
• Molecule 4: 30S ribosomal protein S4

Chain AD:

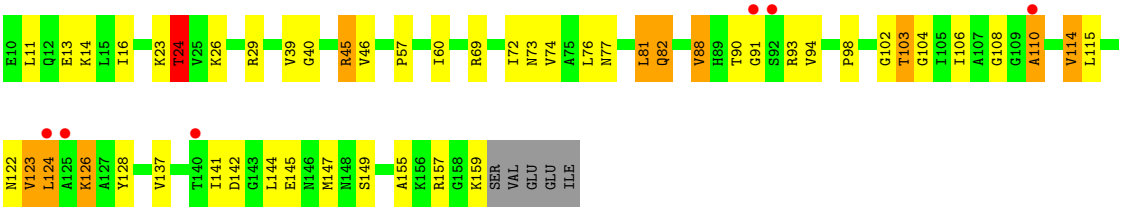
• Molecule 4: 30S ribosomal protein S4



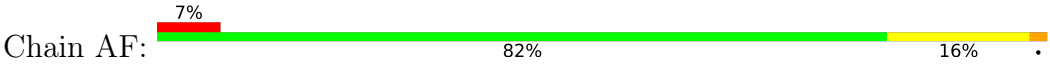
• Molecule 5: 30S ribosomal protein S5

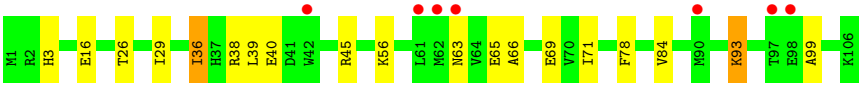


• Molecule 5: 30S ribosomal protein S5

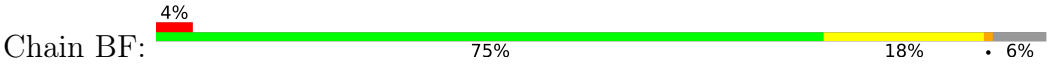


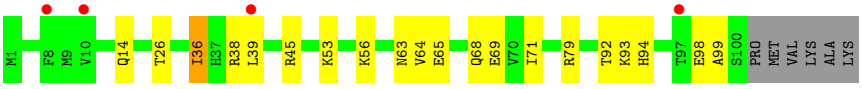
• Molecule 6: 30S ribosomal protein S6



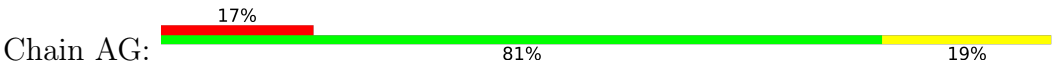


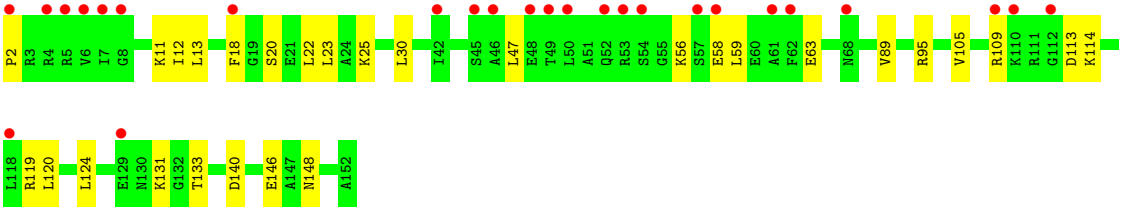
• Molecule 6: 30S ribosomal protein S6





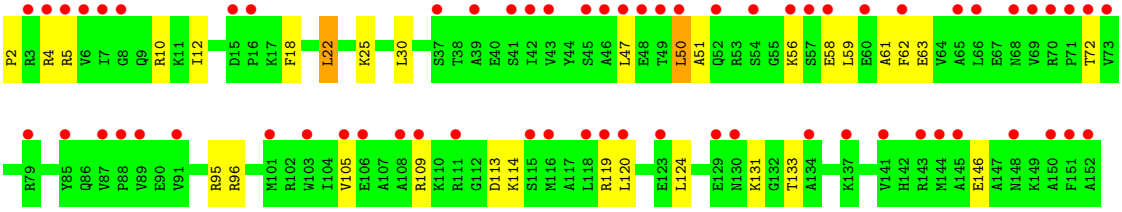
• Molecule 7: 30S ribosomal protein S7





• Molecule 7: 30S ribosomal protein S7

Chain BG:

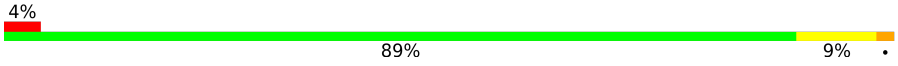


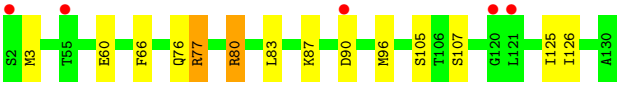
• Molecule 8: 30S ribosomal protein S8

Chain AH:

• Molecule 8: 30S ribosomal protein S8

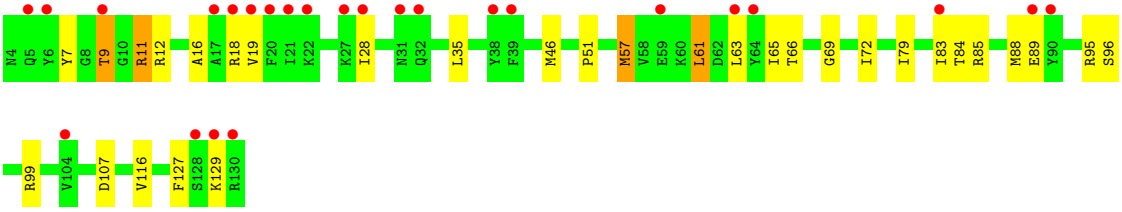
Chain BH:





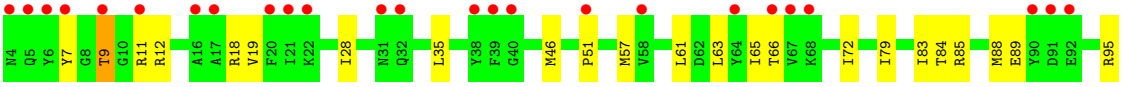
• Molecule 9: 30S ribosomal protein S9

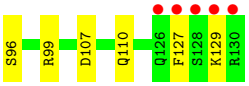
Chain AI:



• Molecule 9: 30S ribosomal protein S9

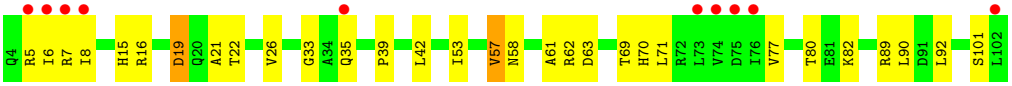
Chain BI:





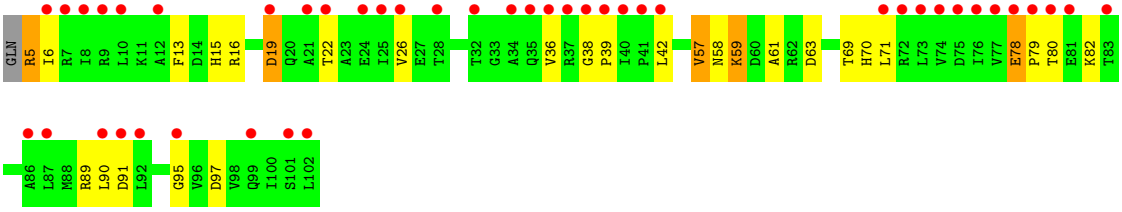
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



• Molecule 10: 30S ribosomal protein S10

Chain BJ:

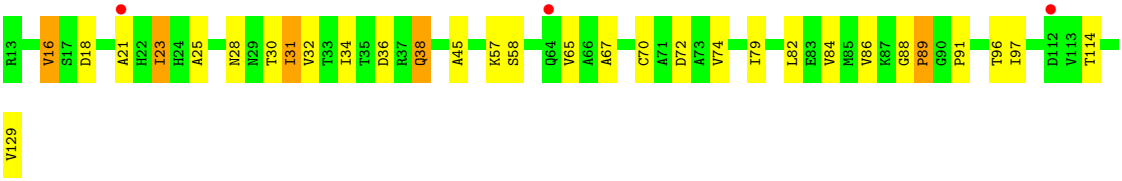


• Molecule 11: 30S ribosomal protein S11

Chain AK:

• Molecule 11: 30S ribosomal protein S11

Chain BK:

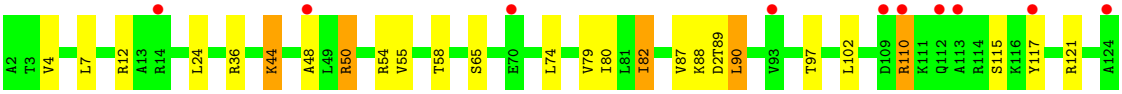


• Molecule 12: 30S ribosomal protein S12

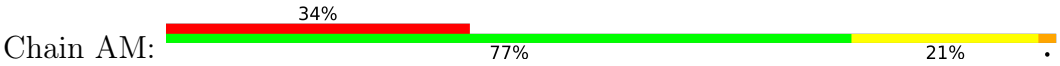
Chain AL:

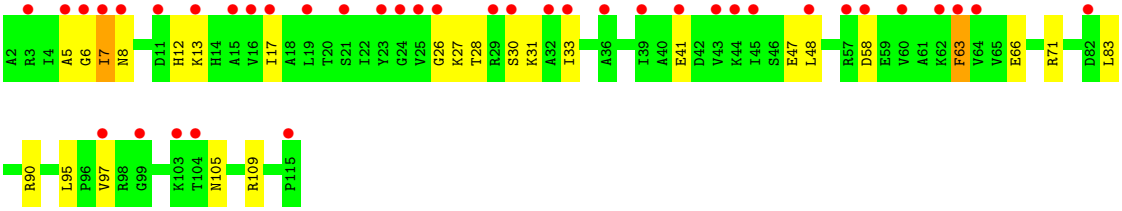
• Molecule 12: 30S ribosomal protein S12

Chain BL:

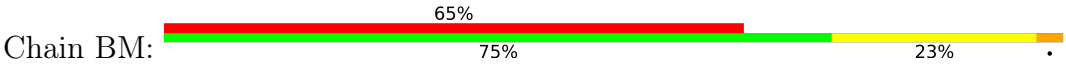


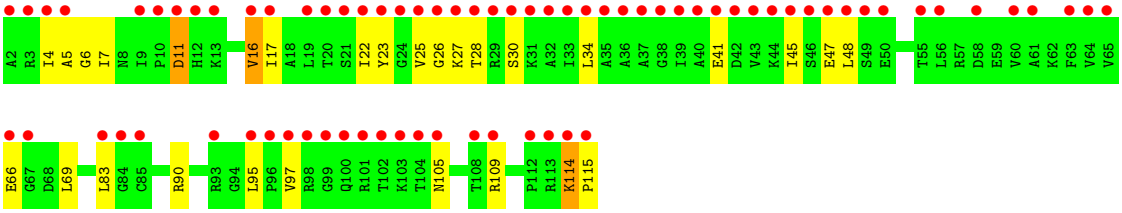
• Molecule 13: 30S ribosomal protein S13



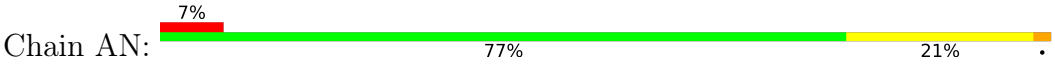


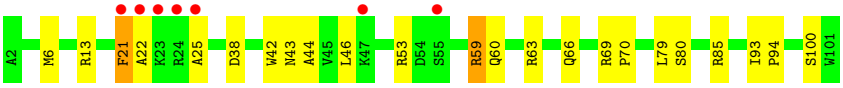
• Molecule 13: 30S ribosomal protein S13



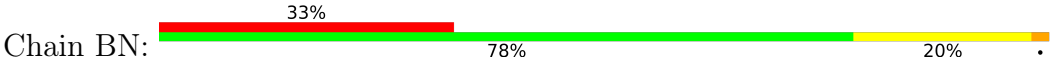


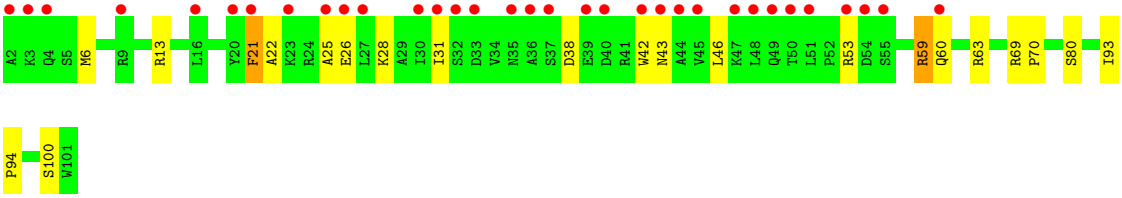
• Molecule 14: 30S ribosomal protein S14



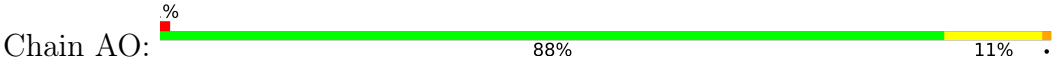


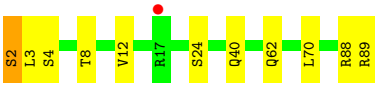
• Molecule 14: 30S ribosomal protein S14





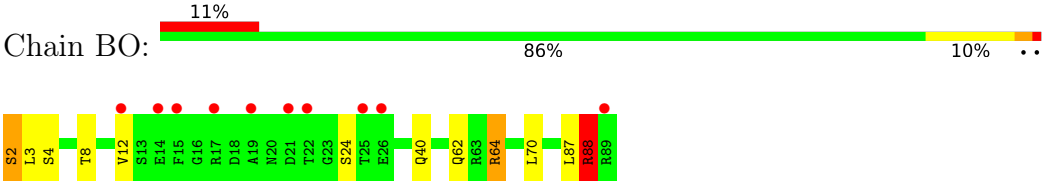
• Molecule 15: 30S ribosomal protein S15





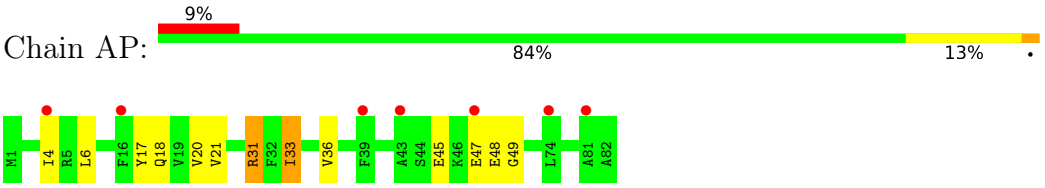
• Molecule 15: 30S ribosomal protein S15

Chain BO:



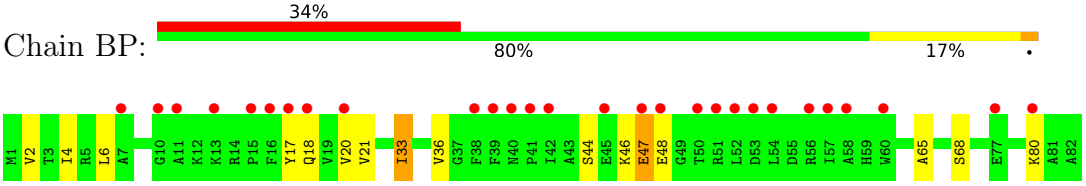
• Molecule 16: 30S ribosomal protein S16

Chain AP:



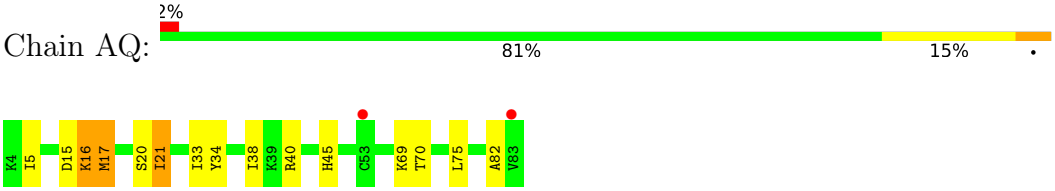
• Molecule 16: 30S ribosomal protein S16

Chain BP:



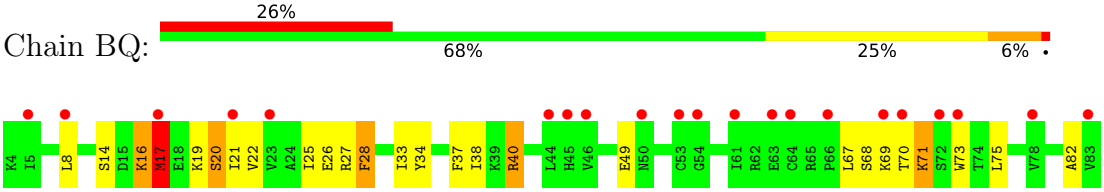
• Molecule 17: 30S ribosomal protein S17

Chain AQ:



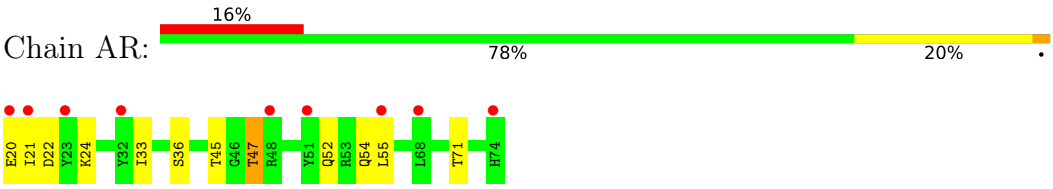
• Molecule 17: 30S ribosomal protein S17

Chain BQ:



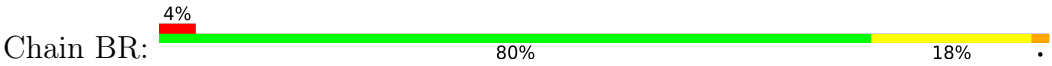
• Molecule 18: 30S ribosomal protein S18

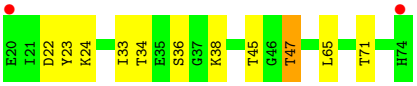
Chain AR:



• Molecule 18: 30S ribosomal protein S18

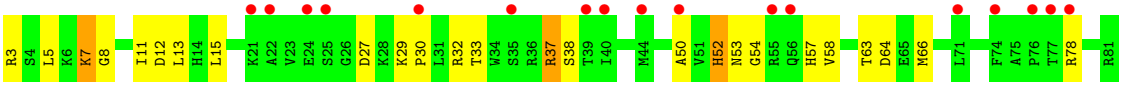
Chain BR:





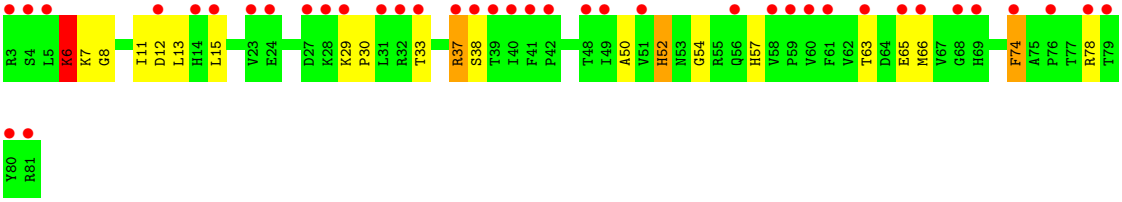
• Molecule 19: 30S ribosomal protein S19

Chain AS:



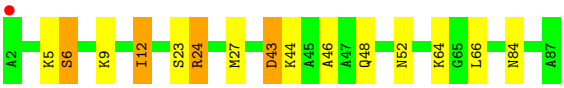
• Molecule 19: 30S ribosomal protein S19

Chain BS:



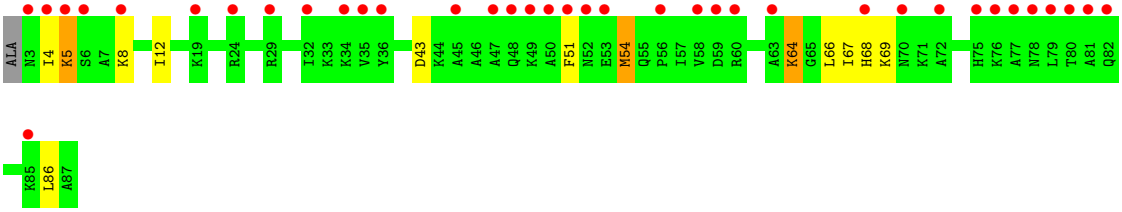
• Molecule 20: 30S ribosomal protein S20

Chain AT:



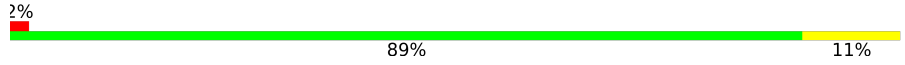
• Molecule 20: 30S ribosomal protein S20

Chain BT:



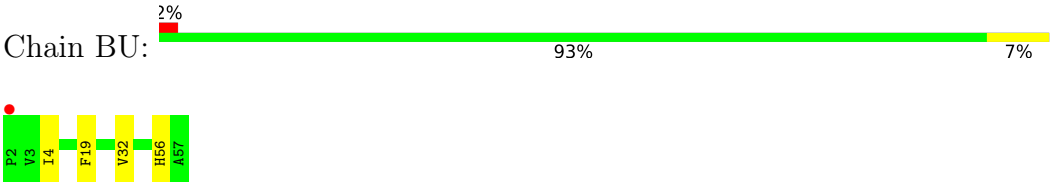
• Molecule 21: 30S ribosomal protein S21

Chain AU:



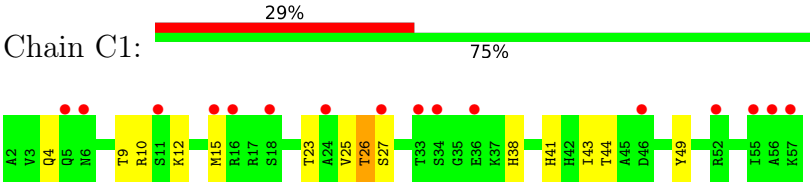
• Molecule 21: 30S ribosomal protein S21

Chain BU:



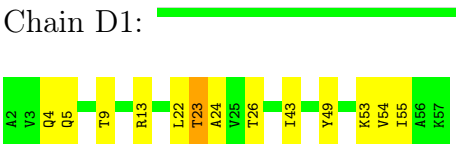
• Molecule 22: 50S ribosomal protein L32

Chain C1:



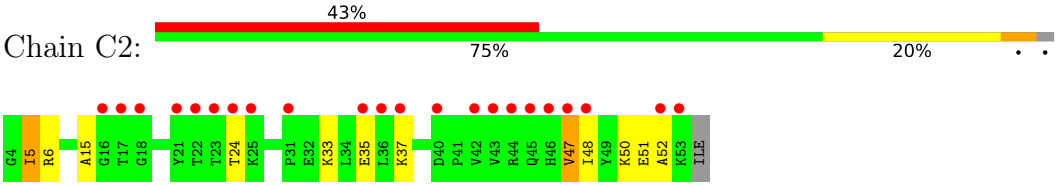
• Molecule 22: 50S ribosomal protein L32

Chain D1:



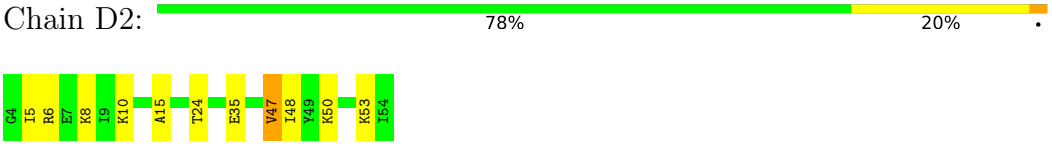
• Molecule 23: 50S ribosomal protein L33

Chain C2:



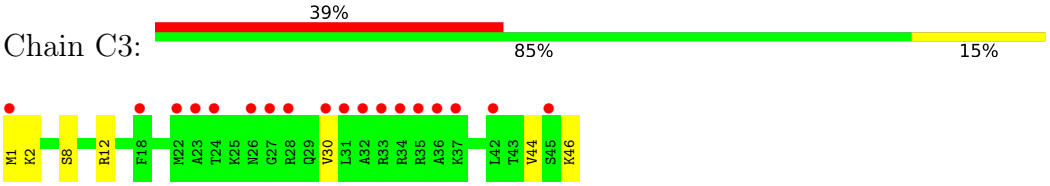
• Molecule 23: 50S ribosomal protein L33

Chain D2:



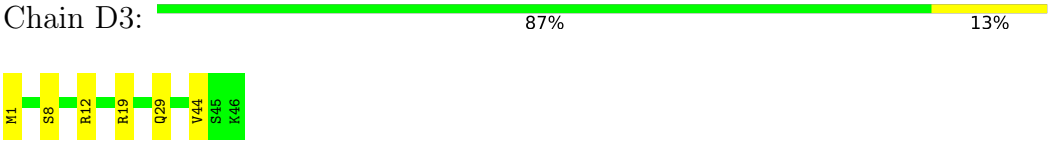
• Molecule 24: 50S ribosomal protein L34

Chain C3:



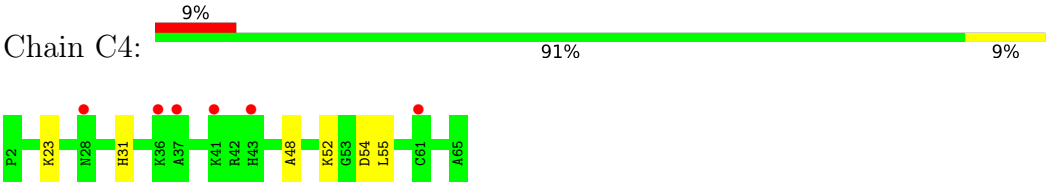
• Molecule 24: 50S ribosomal protein L34

Chain D3:



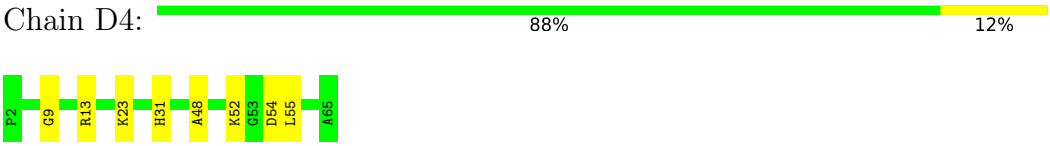
• Molecule 25: 50S ribosomal protein L35

Chain C4:



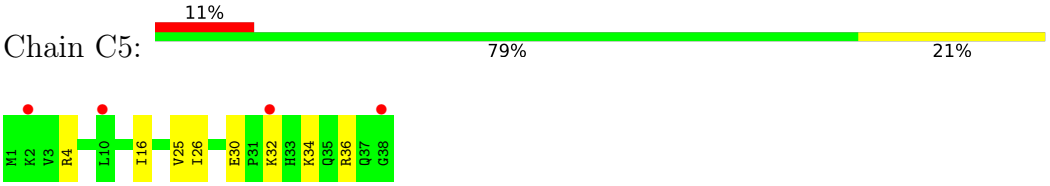
• Molecule 25: 50S ribosomal protein L35

Chain D4:



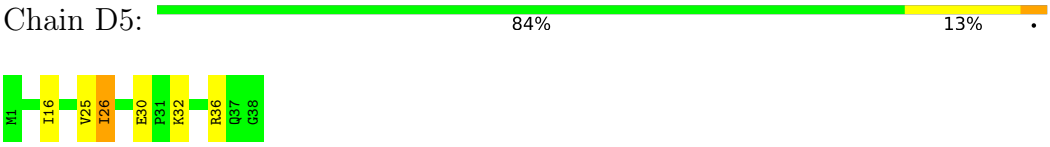
• Molecule 26: 50S ribosomal protein L36

Chain C5:



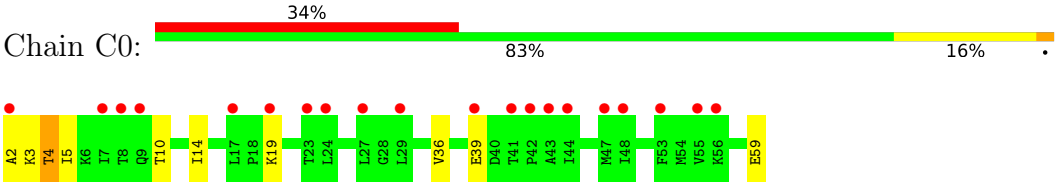
• Molecule 26: 50S ribosomal protein L36

Chain D5:



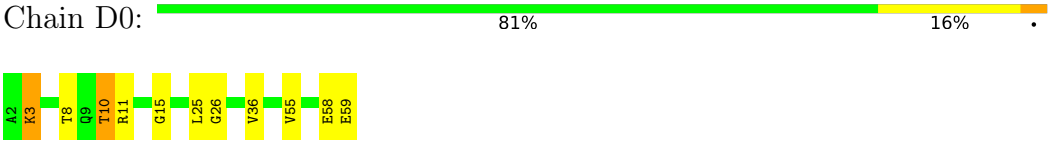
• Molecule 27: 50S ribosomal protein L30

Chain C0:



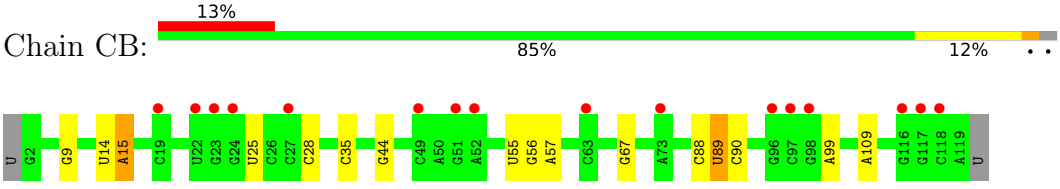
• Molecule 27: 50S ribosomal protein L30

Chain D0:



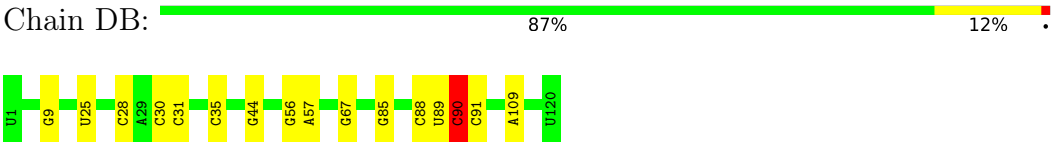
• Molecule 28: 5S rRNA

Chain CB:



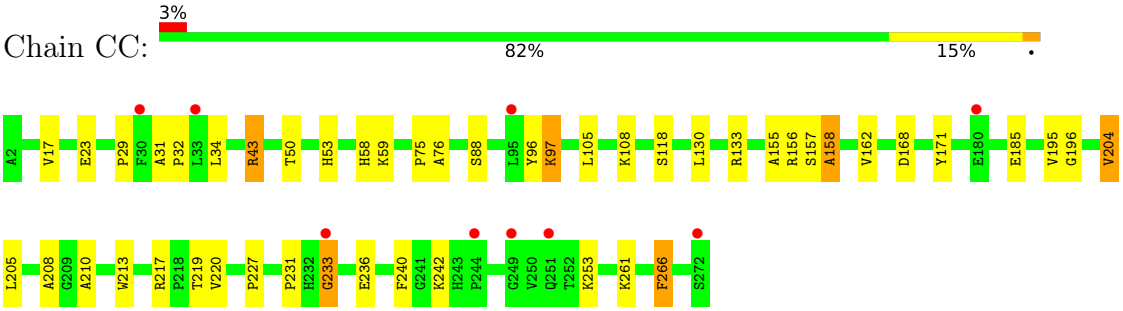
• Molecule 28: 5S rRNA

Chain DB:



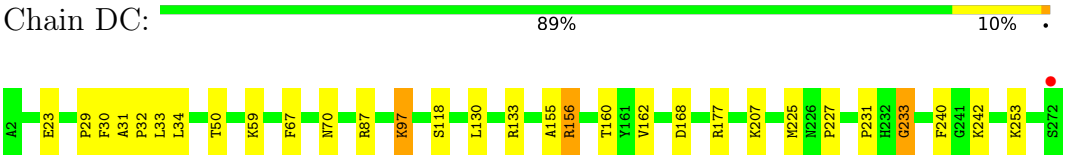
• Molecule 29: 50S ribosomal protein L2

Chain CC:



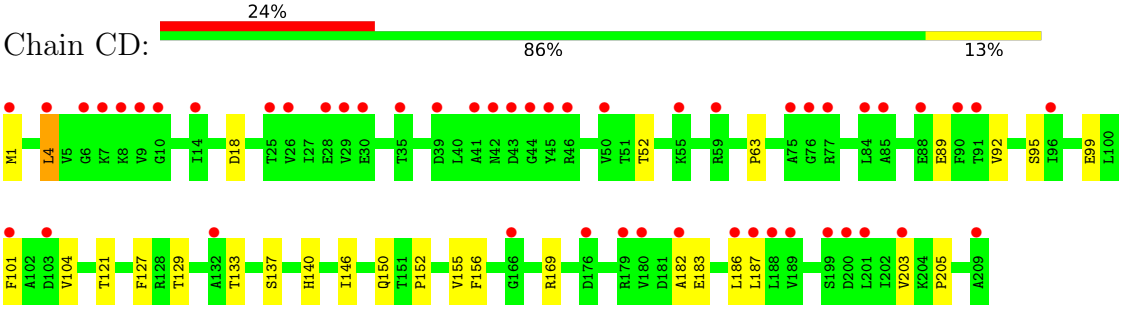
• Molecule 29: 50S ribosomal protein L2

Chain DC:



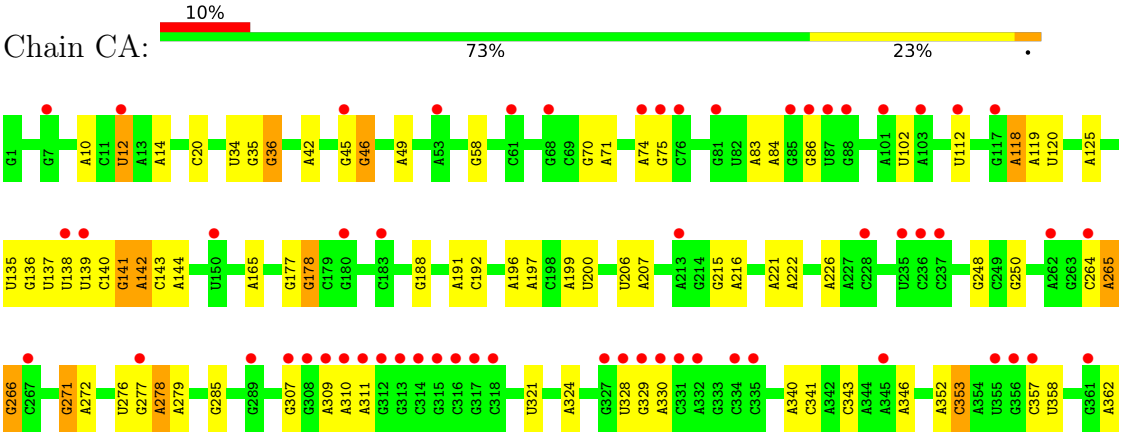
• Molecule 30: 50S ribosomal protein L3

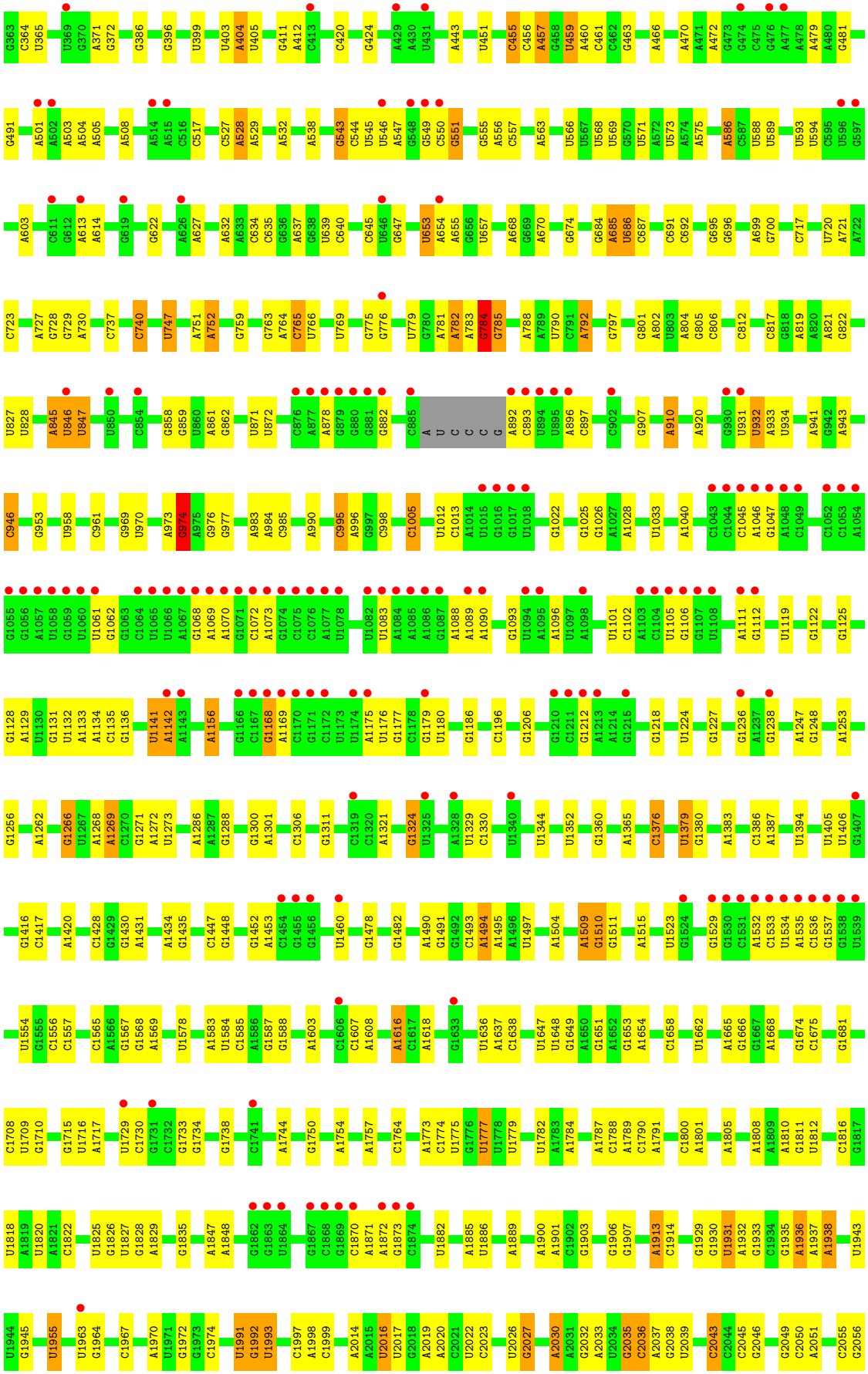
Chain CD:

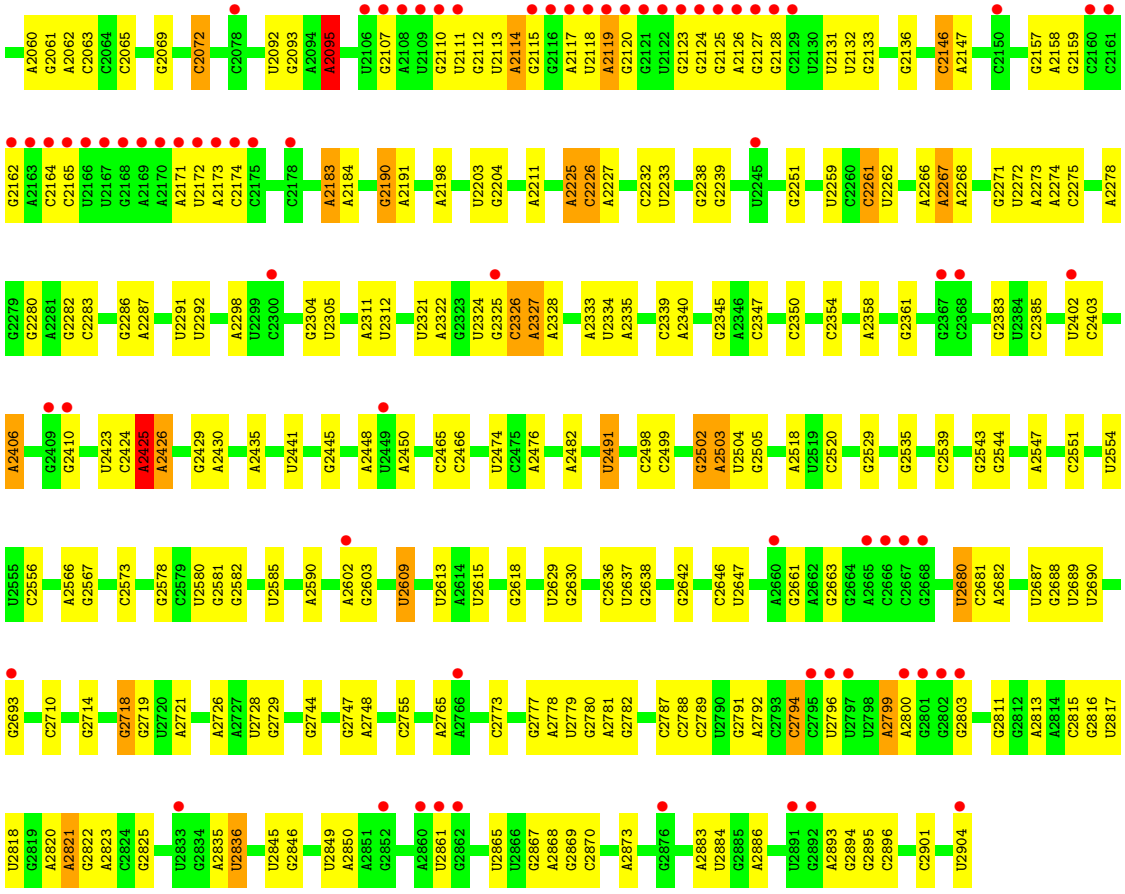


• Molecule 31: 23S rRNA

Chain CA:





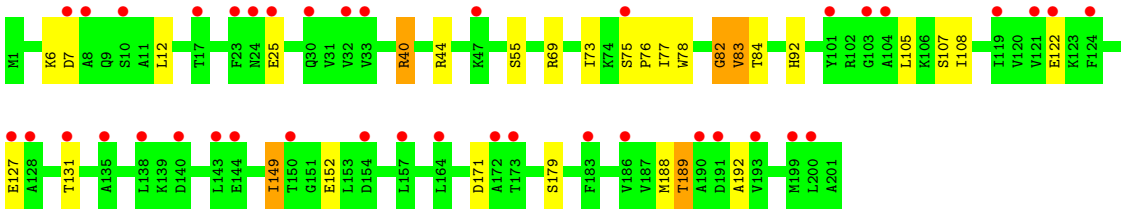


• Molecule 32: 50S ribosomal protein L3

Chain DD:

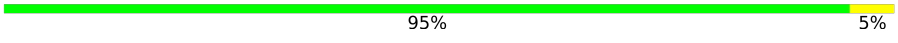
• Molecule 33: 50S ribosomal protein L4

Chain CE:



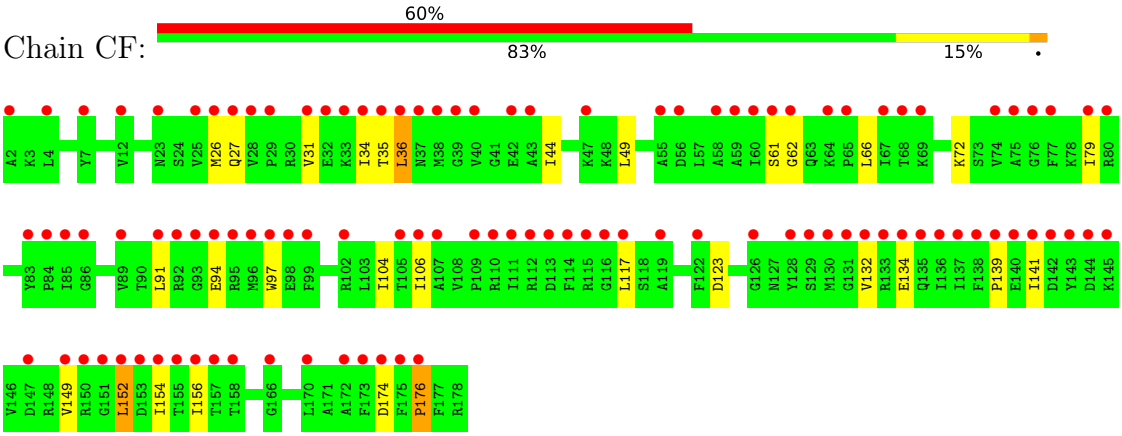
• Molecule 33: 50S ribosomal protein L4

Chain DE:



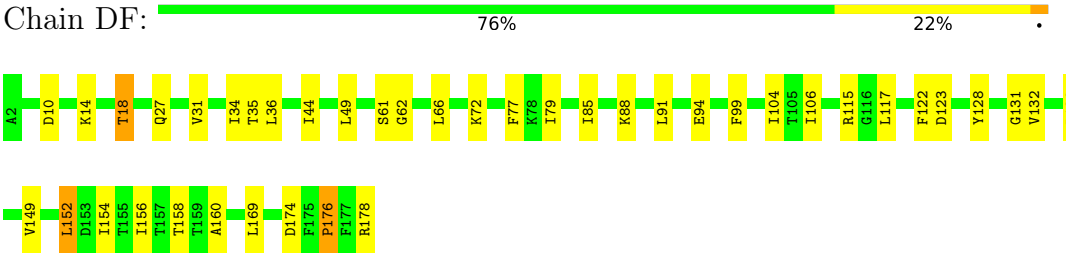
• Molecule 34: 50S ribosomal protein L5

Chain CF:



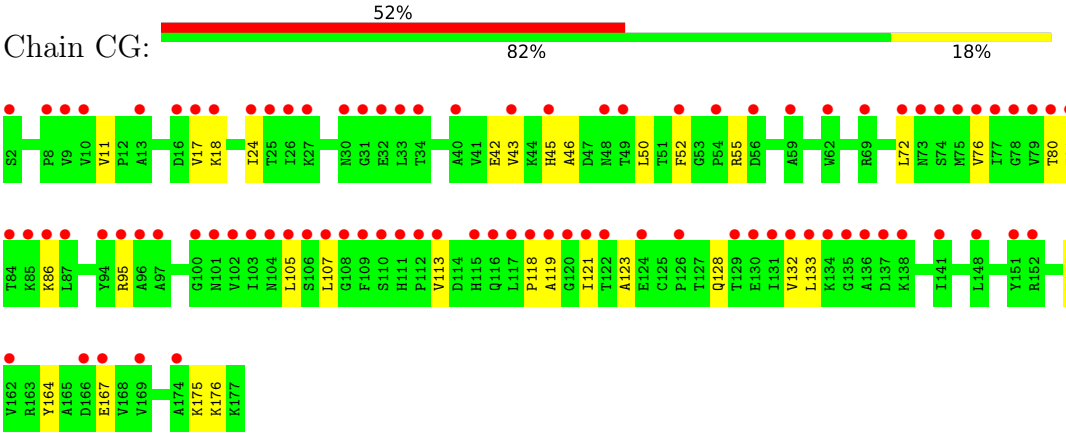
• Molecule 34: 50S ribosomal protein L5

Chain DF:



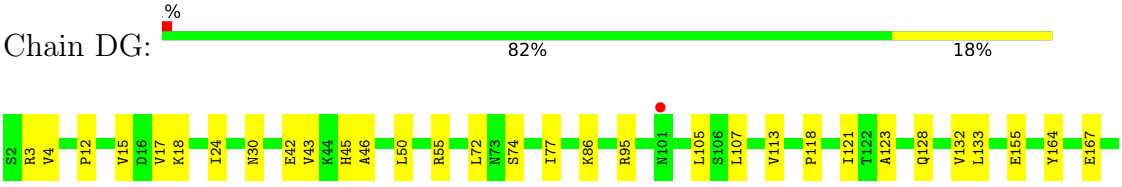
• Molecule 35: 50S ribosomal protein L6

Chain CG:



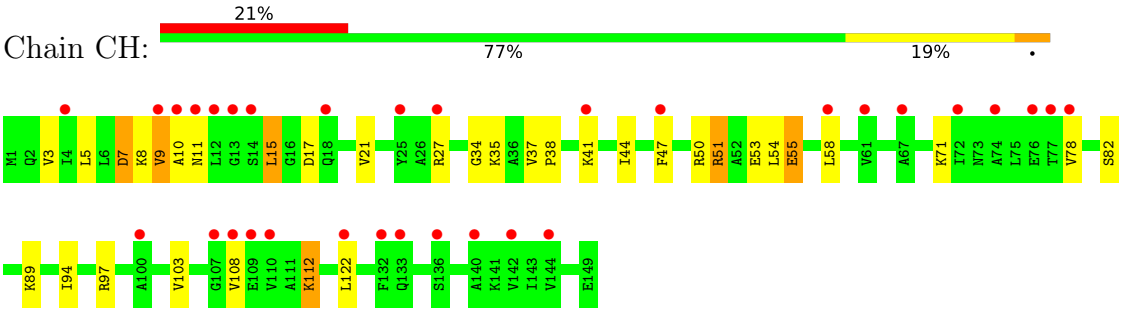
• Molecule 35: 50S ribosomal protein L6

Chain DG:



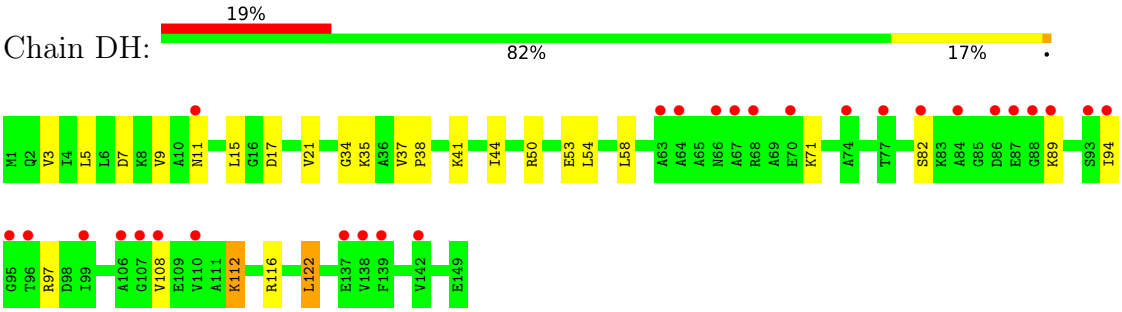
• Molecule 36: 50S ribosomal protein L9

Chain CH:



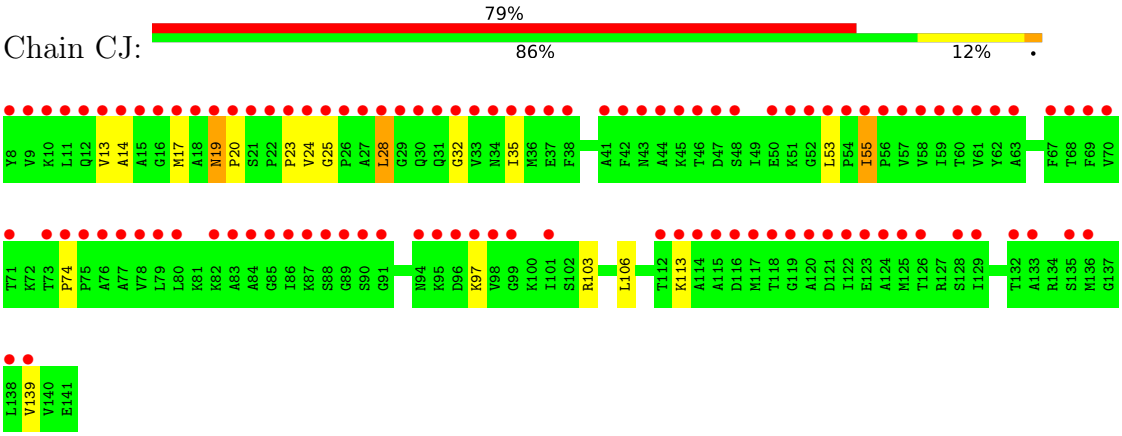
• Molecule 36: 50S ribosomal protein L9

Chain DH:



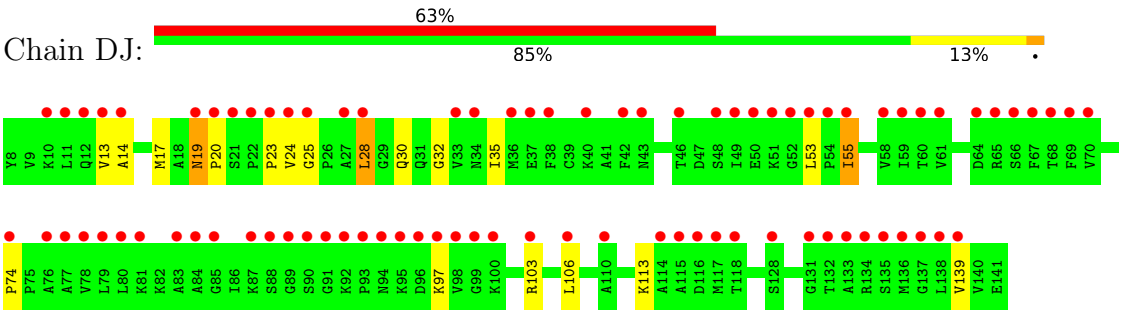
• Molecule 37: 50S ribosomal protein L11

Chain CJ:



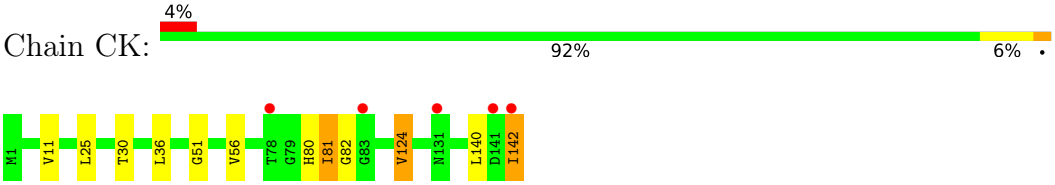
• Molecule 37: 50S ribosomal protein L11

Chain DJ:



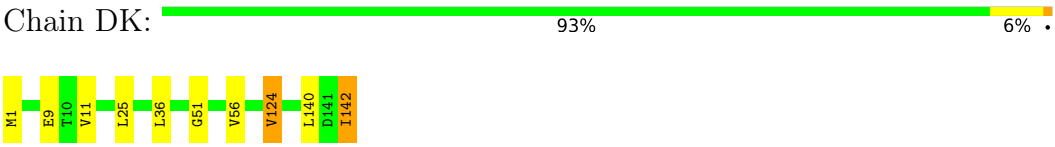
• Molecule 38: 50S ribosomal protein L13

Chain CK:



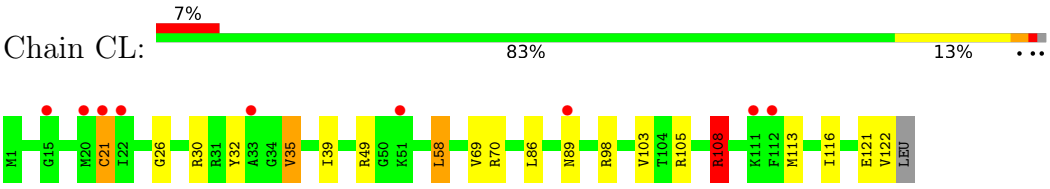
• Molecule 38: 50S ribosomal protein L13

Chain DK:



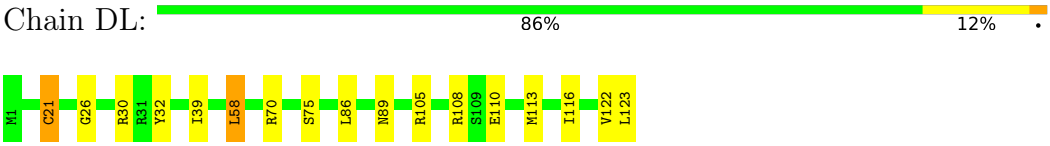
• Molecule 39: 50S ribosomal protein L14

Chain CL:



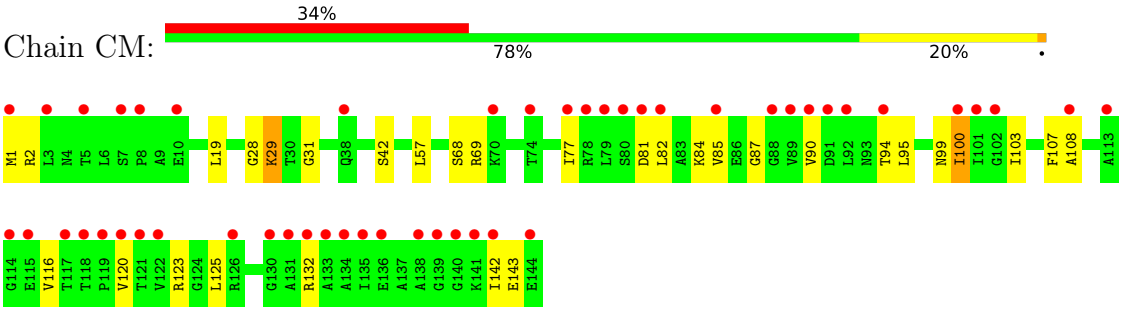
• Molecule 39: 50S ribosomal protein L14

Chain DL:



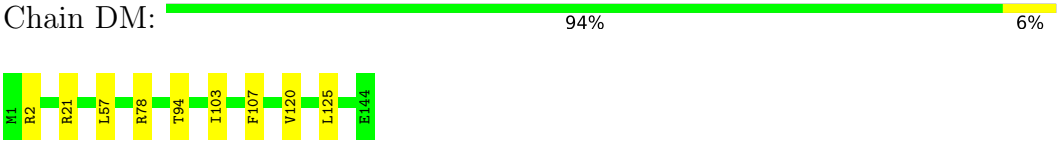
• Molecule 40: 50S ribosomal protein L15

Chain CM:



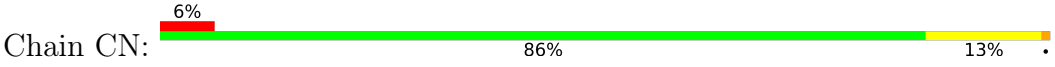
• Molecule 40: 50S ribosomal protein L15

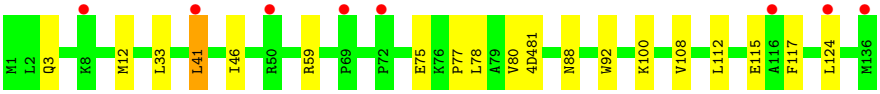
Chain DM:



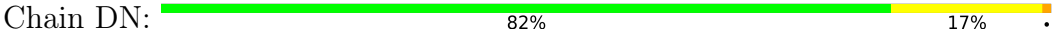
• Molecule 41: 50S ribosomal protein L16

Chain CN:

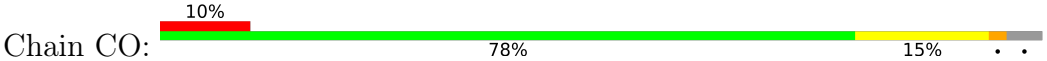


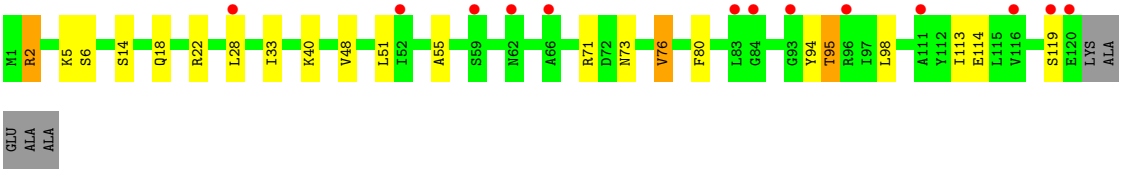


• Molecule 41: 50S ribosomal protein L16



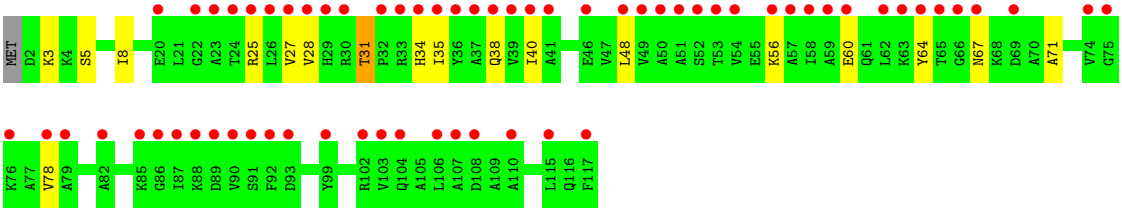
• Molecule 42: 50S ribosomal protein L17



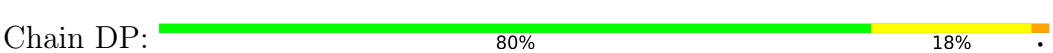


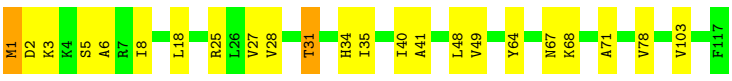
• Molecule 42: 50S ribosomal protein L17

• Molecule 43: 50S ribosomal protein L18

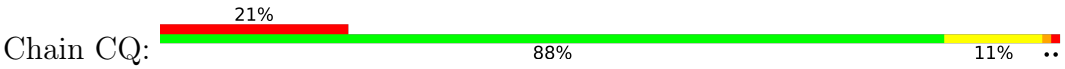


• Molecule 43: 50S ribosomal protein L18

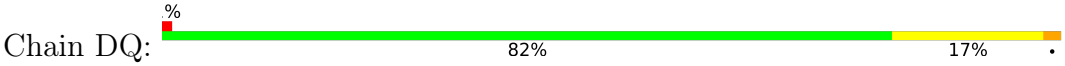


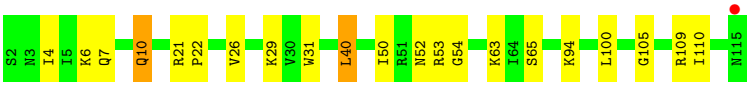


• Molecule 44: 50S ribosomal protein L19

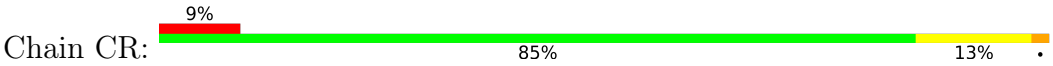


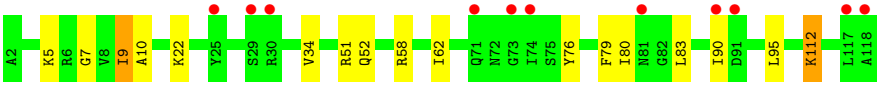
• Molecule 44: 50S ribosomal protein L19



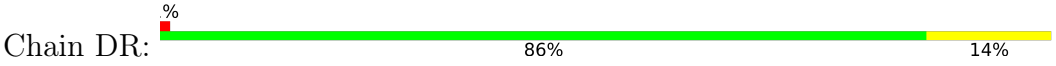


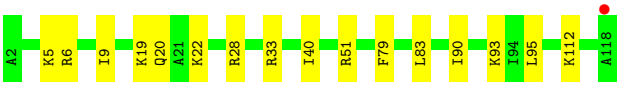
• Molecule 45: 50S ribosomal protein L20



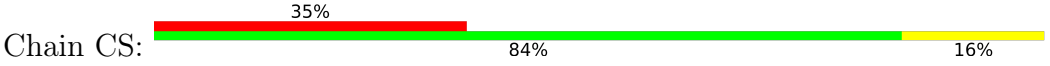


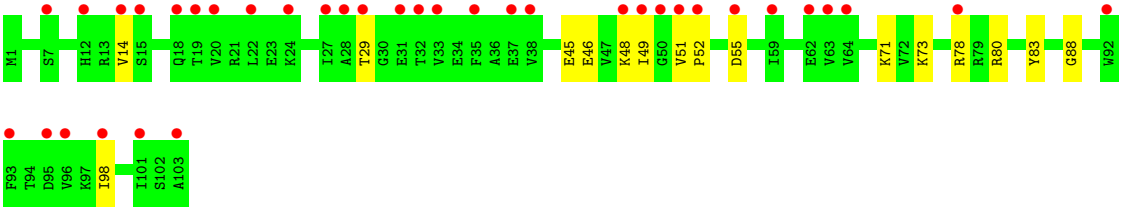
• Molecule 45: 50S ribosomal protein L20



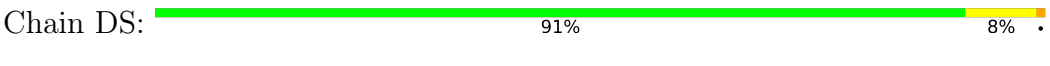


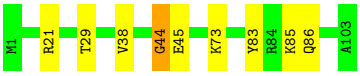
• Molecule 46: 50S ribosomal protein L21



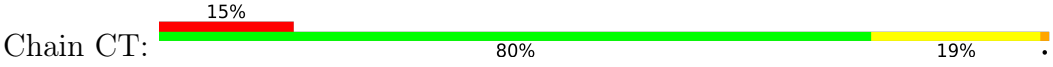


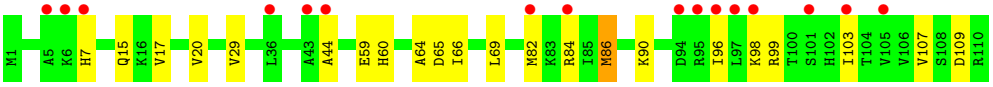
• Molecule 46: 50S ribosomal protein L21





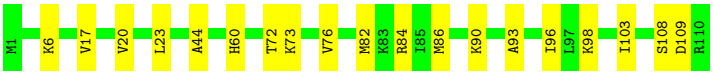
• Molecule 47: 50S ribosomal protein L22





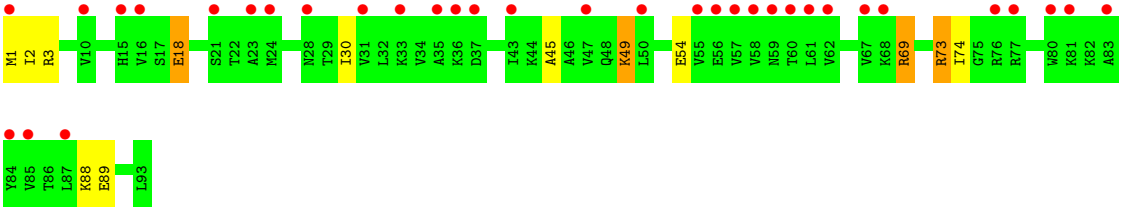
• Molecule 47: 50S ribosomal protein L22

Chain DT:



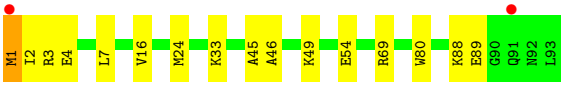
• Molecule 48: 50S ribosomal protein L23

Chain CU:



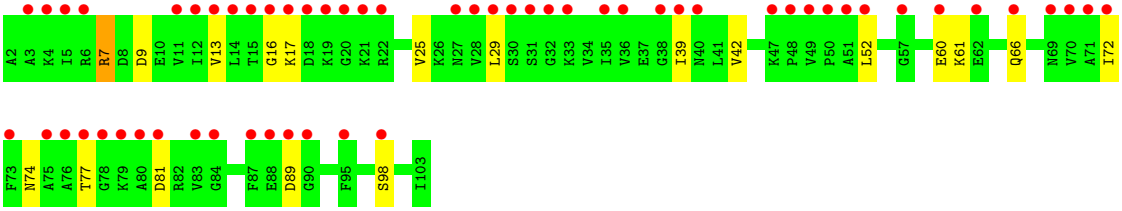
• Molecule 48: 50S ribosomal protein L23

Chain DU:



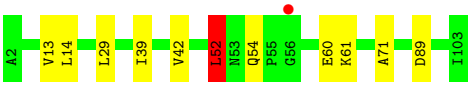
• Molecule 49: 50S ribosomal protein L24

Chain CV:



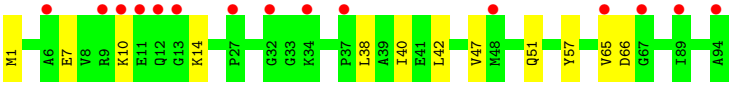
• Molecule 49: 50S ribosomal protein L24

Chain DV:



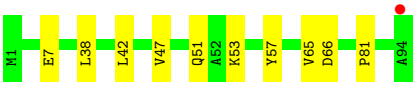
• Molecule 50: 50S ribosomal protein L25

Chain CW:



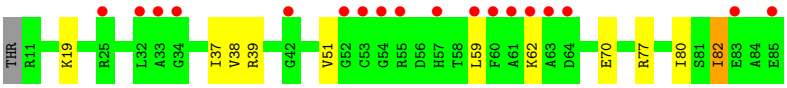
• Molecule 50: 50S ribosomal protein L25

Chain DW:



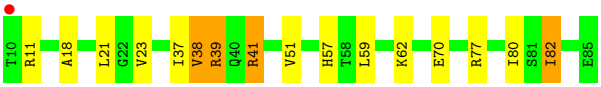
• Molecule 51: 50S ribosomal protein L27

Chain CX:



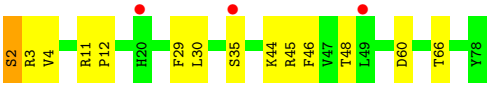
• Molecule 51: 50S ribosomal protein L27

Chain DX:



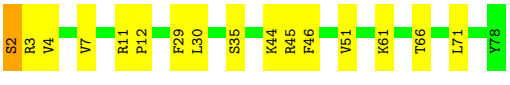
• Molecule 52: 50S ribosomal protein L28

Chain CY:



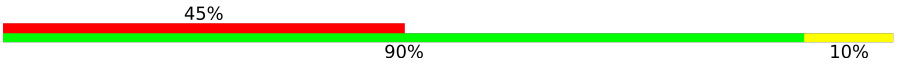
• Molecule 52: 50S ribosomal protein L28

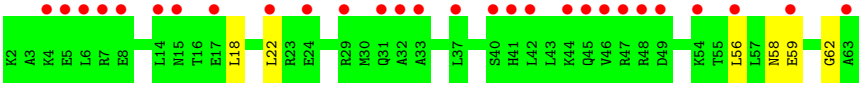
Chain DY:



• Molecule 53: 50S ribosomal protein L29

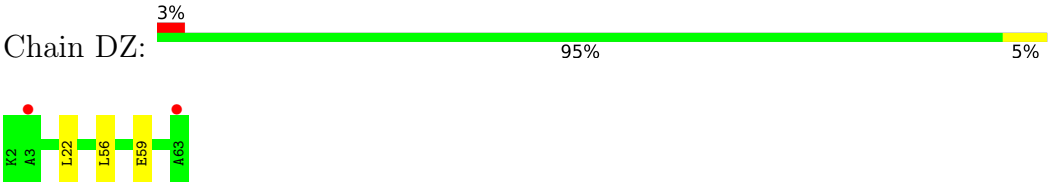
Chain CZ:





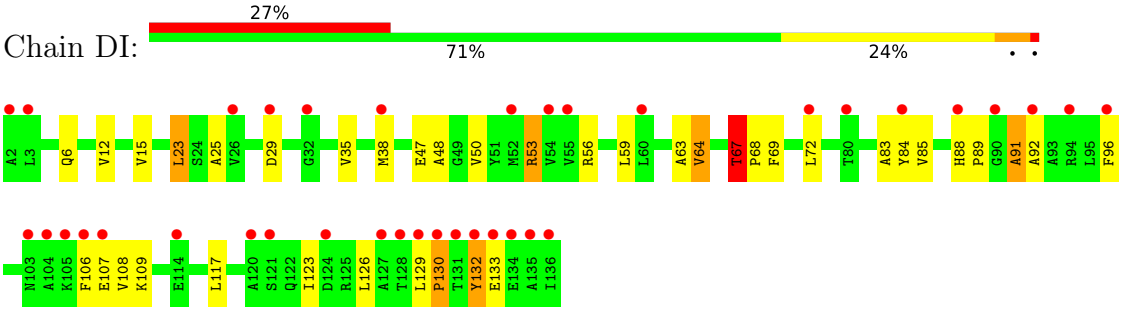
• Molecule 53: 50S ribosomal protein L29

Chain DZ:



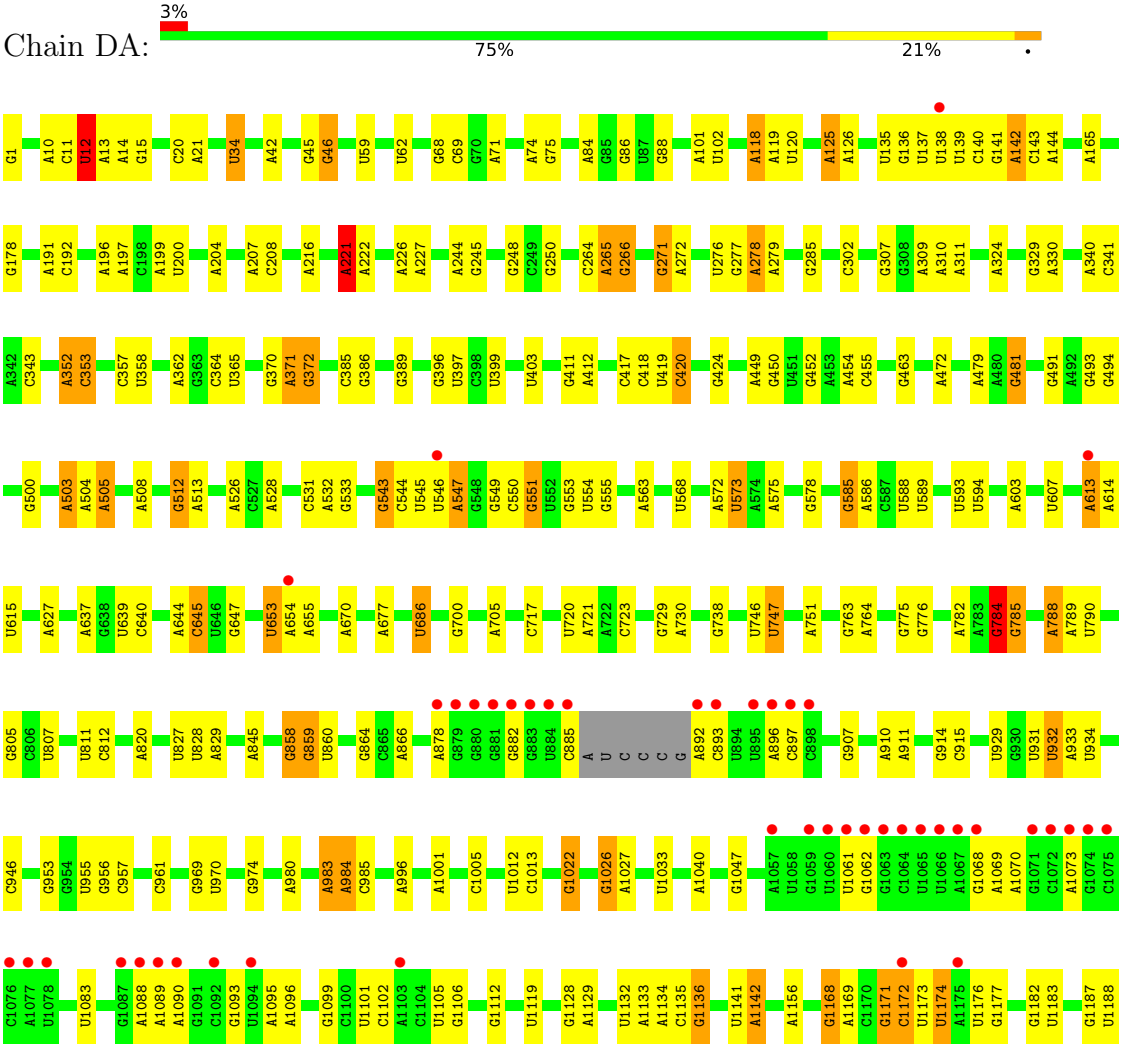
• Molecule 54: 50S ribosomal protein L10

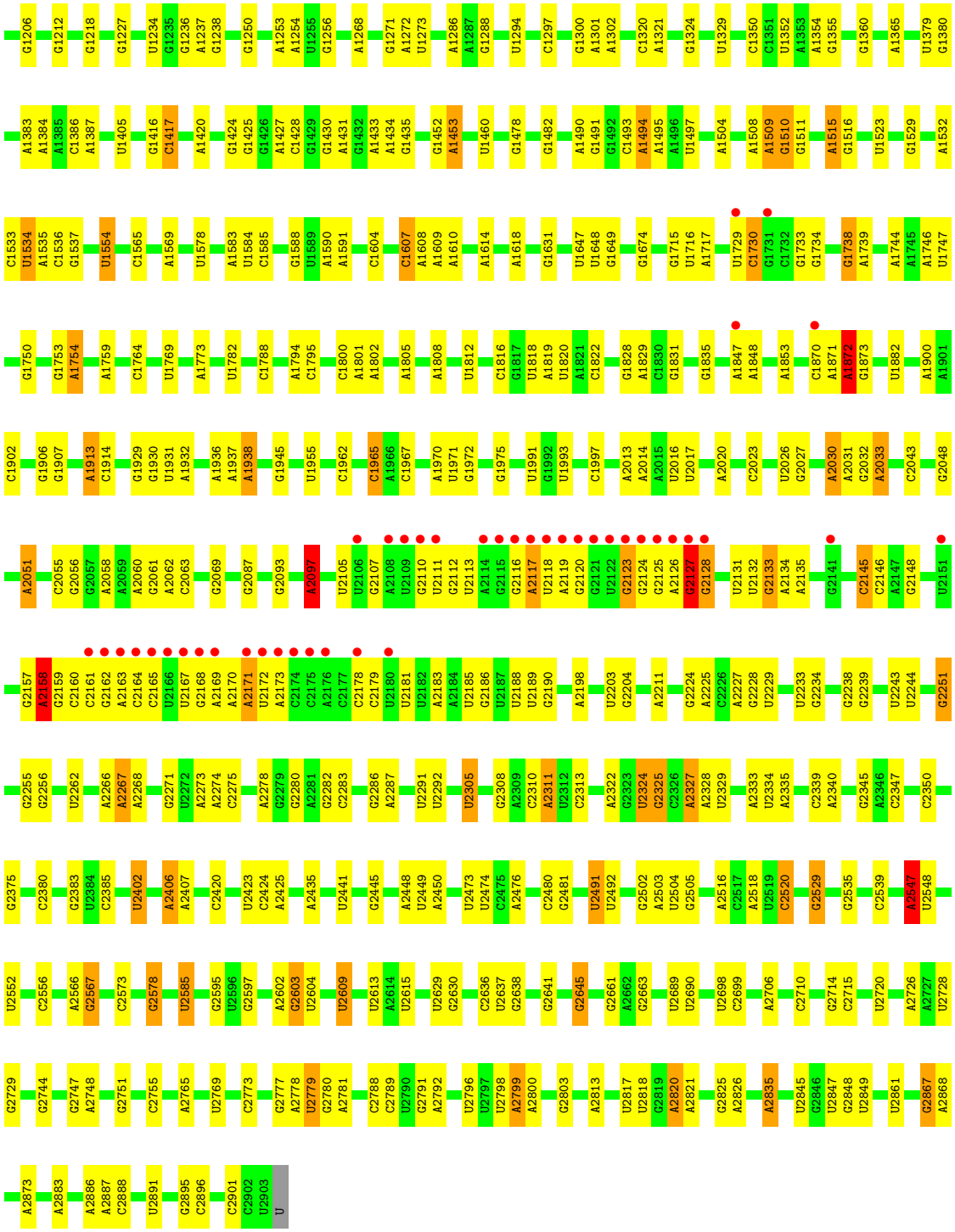
Chain DI:



• Molecule 55: 23S rRNA

Chain DA:




G1206 G1212 G1218 G1227 U1234 G1235 G1236 A1237 G1238 G1250 A1253 A1254 U1255 G1256 A1268 G1271 A1272 U1273 A1286 A1287 G1288 U1294 C1297 G1300 A1301 A1302 C1320 A1321 G1324 U1329 C1350 C1351 U1352 A1353 A1354 G1355 G1360 A1365 U1379 G1380
A1383 A1384 A1385 C1386 A1387 U1405 G1416 C1417 A1420 G1424 G1425 G1426 A1427 C1428 G1429 G1430 A1431 G1432 A1433 A1434 G1435 G1452 A1453 U1460 G1478 G1482 A1490 G1491 G1492 C1493 A1494 A1495 A1496 U1497 A1504 A1508 A1509 G1510 G1511 A1515 G1516 U1523 G1529 A1532
C1533 U1534 A1535 C1536 G1537 U1584 C1565 A1569 U1578 A1583 U1584 C1585 G1588 U1589 A1590 A1591 C1604 C1607 A1608 A1609 A1610 A1614 A1618 G1631 U1647 U1648 G1649 G1674 G1715 U1716 A1717 U1729 C1730 G1731 C1732 G1733 G1734 G1738 A1739 A1744 A1745 A1746 U1747
G1750 G1753 A1754 A1759 C1764 U1769 A1773 U1782 C1788 A1794 C1795 C1800 A1801 A1802 A1805 A1808 U1812 C1816 G1817 U1818 A1819 U1820 A1821 C1822 G1828 A1829 C1830 G1831 G1835 A1847 A1848 A1853 C1870 A1871 A1872 G1873 U1882 A1900 A1901
C1902 G1906 G1907 A1913 C1914 G1929 G1930 U1931 A1932 A1936 A1937 A1938 G1945 U1955 C1962 C1965 A1966 C1967 A1970 U1971 G1972 G1975 U1991 G1992 U1993 C1997 A2013 A2014 A2015 U2016 U2017 A2020 C2023 U2026 G2027 A2030 A2031 G2032 A2033 C2043 G2048
A2051 C2055 G2056 G2057 A2058 A2059 A2060 G2061 A2062 C2063 G2069 G2087 G2093 A2097 U2105 U2106 G2107 A2108 U2109 G2110 U2111 G2112 U2113 A2114 G2115 G2116 A2117 U2118 A2119 G2120 G2121 U2122 G2123 G2124 G2125 A2126 G2127 G2128 U2131 U2132 G2133 A2134 A2135 G2141 C2145 C2146 A2147 G2148 U2151
G2157 A2158 G2159 C2160 C2161 G2162 A2163 C2164 C2165 U2166 U2167 G2168 A2169 A2170 A2171 U2172 A2173 C2174 C2175 A2176 C2177 C2178 C2179 U2180 U2181 U2182 A2183 A2184 U2185 G2186 U2187 U2188 U2189 G2190 A2198 U2203 G2204 A2211 G2224 A2225 C2226 A2227 G2228 U2229 U2233 G2234 G2238 G2239 U2243 U2244 G2251
G2255 G2256 U2262 A2266 A2267 A2268 G2271 U2272 A2273 A2274 C2275 A2278 G2279 G2280 A2281 G2282 C2283 G2286 A2287 U2291 U2292 U2305 G2308 A2309 C2310 A2311 U2312 C2313 A2322 G2323 U2324 G2325 C2326 A2327 A2328 U2329 A2333 U2334 A2335 C2339 A2340 G2345 A2346 C2347 C2350
G2375 C2380 G2383 U2384 C2385 U2402 A2406 A2407 C2420 U2423 C2424 A2425 A2435 U2441 G2445 A2448 U2449 A2450 U2473 U2474 C2475 A2476 C2480 G2481 U2491 U2492 G2502 A2503 U2504 G2505 A2516 C2517 A2518 U2519 C2520 G2529 G2535 C2539 A2547 U2548
U2552 C2556 A2566 G2567 C2573 G2578 U2585 G2595 U2596 G2597 A2602 G2603 U2604 U2609 U2613 A2614 U2615 U2629 G2630 C2636 U2637 C2638 G2641 G2645 C2661 A2662 G2663 U2689 U2690 U2698 C2699 A2706 C2710 G2714 C2715 U2720 A2726 A2727 U2728
G2729 G2744 G2747 A2748 G2751 C2755 A2765 U2769 C2773 G2777 A2778 U2779 G2780 A2781 C2788 C2789 U2790 G2791 A2792 U2796 U2797 U2798 A2799 A2800 G2803 A2813 U2817 U2818 G2819 A2820 A2821 G2825 A2826 A2835 U2845 G2846 U2847 C2848 U2849 U2861 G2867 A2868
A2873 A2883 A2886 A2887 C2888 U2891 G2895 C2896 C2901 C2902 U2903 U

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	213.04Å 436.85Å 628.03Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.39 – 3.03 48.02 – 3.03	Depositor EDS
% Data completeness (in resolution range)	96.7 (48.39-3.03) 96.8 (48.02-3.03)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.13 (at 3.01Å)	Xtriage
Refinement program	BUSTER-TNT 2.11.6	Depositor
R, R_{free}	0.172 , 0.200 0.186 , 0.215	Depositor DCC
R_{free} test set	4333 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å^2)	60.4	Xtriage
Anisotropy	0.410	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 92.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	295130	wwPDB-VP
Average B, all atoms (Å^2)	112.0	wwPDB-VP

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

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: MPD, 4OC, MA6, 5MC, EDO, PEG, GUN, D2T, 5MU, TRS, 4D4, PGE, UR3, G7M, SPD, 3TD, H2U, PSU, PG4, OMG, ACY, 2MG, MG, PUT, 1PE, OMU, 6MZ, ZN, MEQ, 2MA, OMC, 1MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.98	10/36597 (0.0%)	0.86	2/57088 (0.0%)
1	BA	0.98	10/36572 (0.0%)	0.86	3/57049 (0.0%)
2	AB	0.47	0/1784	0.66	0/2403
2	BB	0.47	0/1784	0.66	0/2403
3	AC	0.44	0/1652	0.67	0/2225
3	BC	0.44	0/1652	0.67	0/2225
4	AD	0.46	0/1665	0.68	0/2227
4	BD	0.44	0/1665	0.69	0/2227
5	AE	0.47	0/1157	0.76	0/1557
5	BE	0.48	0/1118	0.78	0/1504
6	AF	0.46	0/881	0.70	0/1189
6	BF	0.47	0/835	0.80	0/1128
7	AG	0.46	0/1196	0.63	0/1602
7	BG	0.45	0/1196	0.62	0/1602
8	AH	0.44	0/989	0.71	0/1326
8	BH	0.43	0/989	0.69	0/1326
9	AI	0.45	0/1034	0.69	0/1375
9	BI	0.45	0/1034	0.67	0/1375
10	AJ	0.43	0/806	0.67	0/1089
10	BJ	0.47	0/797	0.70	0/1077
11	AK	0.44	0/893	0.65	0/1205
11	BK	0.45	0/893	0.69	0/1205
12	AL	0.45	0/960	0.71	0/1286
12	BL	0.42	0/960	0.72	0/1286
13	AM	0.52	0/893	0.77	0/1193
13	BM	0.51	0/893	0.74	0/1193
14	AN	0.45	0/817	0.65	0/1088
14	BN	0.44	0/817	0.63	0/1088
15	AO	0.46	0/722	0.63	0/964
15	BO	0.44	0/722	0.62	0/964
16	AP	0.46	0/659	0.70	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
16	BP	0.48	0/659	0.74	0/884
17	AQ	0.48	0/658	0.75	0/881
17	BQ	0.50	0/658	0.76	0/881
18	AR	0.51	0/463	0.66	0/621
18	BR	0.49	0/463	0.65	0/621
19	AS	0.47	0/653	0.61	0/877
19	BS	0.47	0/653	0.63	0/877
20	AT	0.49	0/676	0.70	0/895
20	BT	0.52	0/671	0.67	0/888
21	AU	0.40	0/472	0.60	0/627
21	BU	0.39	0/472	0.61	0/627
22	C1	0.48	0/450	0.70	0/599
22	D1	0.59	0/450	0.73	0/599
23	C2	0.48	0/416	0.73	0/554
23	D2	0.49	0/421	0.74	0/561
24	C3	0.45	0/380	0.71	0/498
24	D3	0.58	0/380	0.73	0/498
25	C4	0.44	0/513	0.64	0/676
25	D4	0.51	0/513	0.68	0/676
26	C5	0.44	0/303	0.69	0/397
26	D5	0.59	0/303	0.73	0/397
27	C0	0.51	0/453	0.76	0/605
27	D0	0.66	0/467	0.77	0/623
28	CB	0.94	0/2828	0.89	2/4410 (0.0%)
28	DB	1.08	1/2872 (0.0%)	0.90	0/4478
29	CC	0.46	0/2122	0.75	0/2852
29	DC	0.52	0/2122	0.76	0/2852
30	CD	0.44	0/1586	0.70	0/2134
31	CA	1.02	45/69165 (0.1%)	0.88	19/107896 (0.0%)
32	DD	0.51	0/1576	0.70	0/2119
33	CE	0.43	0/1571	0.72	0/2113
33	DE	0.51	0/1571	0.70	0/2113
34	CF	0.43	0/1435	0.69	0/1926
34	DF	0.52	0/1435	0.73	0/1926
35	CG	0.41	0/1343	0.67	0/1816
35	DG	0.45	0/1343	0.66	0/1816
36	CH	0.47	0/1121	0.68	0/1515
36	DH	0.47	0/1121	0.68	0/1515
37	CJ	0.51	0/993	0.64	0/1341
37	DJ	0.51	0/993	0.64	0/1341
38	CK	0.42	0/1152	0.68	0/1551
38	DK	0.56	0/1152	0.71	0/1551
39	CL	0.44	0/947	0.69	0/1268

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	DL	0.53	0/955	0.70	0/1279
40	CM	0.45	0/1062	0.74	1/1413 (0.1%)
40	DM	0.49	0/1062	0.72	0/1413
41	CN	0.45	0/1081	0.70	0/1443
41	DN	0.57	0/1092	0.76	1/1457 (0.1%)
42	CO	0.45	0/973	0.72	1/1301 (0.1%)
42	DO	0.58	0/1006	0.78	0/1345
43	CP	0.44	0/902	0.72	0/1209
43	DP	0.53	0/910	0.73	0/1219
44	CQ	0.44	0/929	0.73	1/1242 (0.1%)
44	DQ	0.51	0/929	0.72	0/1242
45	CR	0.48	0/960	0.68	0/1278
45	DR	0.58	0/960	0.70	0/1278
46	CS	0.43	0/829	0.74	0/1107
46	DS	0.52	0/829	0.75	0/1107
47	CT	0.41	0/864	0.73	0/1156
47	DT	0.60	0/864	0.72	0/1156
48	CU	0.47	0/745	0.73	0/994
48	DU	0.54	0/745	0.75	0/994
49	CV	0.45	0/788	0.76	0/1051
49	DV	0.51	0/788	0.76	0/1051
50	CW	0.41	0/766	0.66	0/1025
50	DW	0.52	0/766	0.71	0/1025
51	CX	0.40	0/576	0.64	0/762
51	DX	0.54	0/598	0.70	0/790
52	CY	0.45	0/635	0.70	0/848
52	DY	0.51	0/635	0.73	1/848 (0.1%)
53	CZ	0.41	0/502	0.63	0/667
53	DZ	0.48	0/502	0.62	0/667
54	DI	0.54	0/1037	0.78	1/1402 (0.1%)
55	DA	1.19	63/69364 (0.1%)	0.93	15/108207 (0.0%)
All	All	0.93	129/309281 (0.0%)	0.84	47/462224 (0.0%)

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
1	AA	0	3
1	BA	0	1
20	AT	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
31	CA	0	3
55	DA	0	37
All	All	0	45

The worst 5 of 129 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	CA	2095	A	O5'-C5'	-9.10	1.28	1.42
31	CA	12	U	C1'-N1	8.94	1.62	1.48
55	DA	1237	A	C3'-O3'	-8.70	1.29	1.42
31	CA	1936	A	N9-C4	-8.66	1.32	1.37
31	CA	2225	A	C3'-O3'	8.52	1.54	1.42

The worst 5 of 47 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	CB	15	A	O4'-C1'-N9	10.42	116.54	108.20
31	CA	752	A	O4'-C1'-N9	10.40	116.52	108.20
55	DA	1936	A	O4'-C1'-N9	9.02	115.41	108.20
55	DA	2406	A	C5'-C4'-O4'	-7.61	99.97	109.10
54	DI	132	TYR	C-N-CA	7.10	139.44	121.70

There are no chirality outliers.

5 of 45 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1077	G	Sidechain
1	AA	1094	G	Sidechain
1	AA	898	G	Sidechain
20	AT	24	ARG	Sidechain
1	BA	1077	G	Sidechain

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	AA	32933	0	16592	102	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	BA	32911	0	16581	118	0
2	AB	1753	0	1780	14	0
2	BB	1753	0	1780	13	0
3	AC	1625	0	1696	17	0
3	BC	1625	0	1696	29	0
4	AD	1643	0	1707	12	0
4	BD	1643	0	1707	18	0
5	AE	1144	0	1185	24	0
5	BE	1105	0	1148	29	0
6	AF	862	0	864	10	0
6	BF	817	0	808	4	0
7	AG	1182	0	1238	7	0
7	BG	1182	0	1238	11	0
8	AH	979	0	1031	6	0
8	BH	979	0	1031	4	0
9	AI	1022	0	1070	14	0
9	BI	1022	0	1070	10	0
10	AJ	796	0	836	13	0
10	BJ	787	0	828	13	0
11	AK	877	0	887	15	0
11	BK	877	0	887	19	0
12	AL	957	0	1017	9	0
12	BL	957	0	1017	14	0
13	AM	884	0	941	11	0
13	BM	884	0	941	13	0
14	AN	805	0	844	14	0
14	BN	805	0	844	12	0
15	AO	714	0	734	2	0
15	BO	714	0	734	3	0
16	AP	649	0	666	4	0
16	BP	649	0	666	5	0
17	AQ	649	0	691	6	0
17	BQ	649	0	691	14	0
18	AR	456	0	478	5	0
18	BR	456	0	478	4	0
19	AS	638	0	665	13	0
19	BS	638	0	665	11	0
20	AT	670	0	719	6	0
20	BT	665	0	714	3	0
21	AU	465	0	491	3	0
21	BU	465	0	491	2	0
22	C1	444	0	458	9	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	D1	444	0	458	13	0
23	C2	409	0	440	5	0
23	D2	414	0	442	5	0
24	C3	377	0	418	3	0
24	D3	377	0	418	6	0
25	C4	504	0	572	2	0
25	D4	504	0	572	3	0
26	C5	302	0	340	4	0
26	D5	302	0	340	4	0
27	C0	449	0	488	2	0
27	D0	463	0	504	5	0
28	CB	2529	0	1281	5	0
28	DB	2569	0	1301	7	0
29	CC	2083	0	2154	27	0
29	DC	2083	0	2154	19	0
30	CD	1565	0	1616	18	0
31	CA	62229	0	31318	216	0
32	DD	1576	0	1627	17	0
33	CE	1552	0	1619	13	0
33	DE	1552	0	1619	4	0
34	CF	1411	0	1444	12	0
34	DF	1411	0	1444	18	0
35	CG	1323	0	1371	13	0
35	DG	1323	0	1371	13	0
36	CH	1110	0	1148	17	0
36	DH	1110	0	1148	9	0
37	CJ	979	0	1028	7	0
37	DJ	979	0	1028	8	0
38	CK	1129	0	1162	10	0
38	DK	1129	0	1162	4	0
39	CL	938	0	1012	10	0
39	DL	946	0	1023	6	0
40	CM	1053	0	1129	13	0
40	DM	1053	0	1129	3	0
41	CN	1075	0	1154	7	0
41	DN	1092	0	1177	14	0
42	CO	960	0	1000	9	0
42	DO	993	0	1034	7	0
43	CP	892	0	923	9	0
43	DP	900	0	935	13	0
44	CQ	917	0	962	9	0
44	DQ	917	0	962	17	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
45	CR	947	0	1019	10	0
45	DR	947	0	1019	12	0
46	CS	816	0	839	11	0
46	DS	816	0	839	7	0
47	CT	857	0	922	10	0
47	DT	857	0	922	11	0
48	CU	739	0	807	5	0
48	DU	739	0	807	7	0
49	CV	780	0	831	6	0
49	DV	780	0	831	4	0
50	CW	753	0	780	4	0
50	DW	753	0	780	4	0
51	CX	569	0	581	4	0
51	DX	591	0	606	10	0
52	CY	625	0	652	8	0
52	DY	625	0	652	8	0
53	CZ	501	0	531	1	0
53	DZ	501	0	531	1	0
54	DI	1023	0	1052	19	0
55	DA	62423	0	31411	199	0
56	AA	71	0	0	0	0
56	BA	43	0	0	0	0
56	CA	156	0	0	0	0
56	CB	3	0	0	0	0
56	DA	184	0	0	0	0
56	DB	9	0	0	0	0
56	DD	1	0	0	0	0
56	DM	1	0	0	0	0
56	DR	1	0	0	0	0
57	AA	13	0	18	1	0
57	BA	13	0	18	1	0
57	DA	26	0	36	2	0
57	DQ	13	0	18	1	0
57	DR	13	0	18	3	0
57	DS	13	0	18	1	0
58	AA	16	0	28	2	0
58	DA	48	0	84	4	0
58	DE	16	0	28	0	0
58	DK	8	0	14	0	0
58	DN	8	0	14	0	0
58	DS	8	0	14	3	0
58	DT	8	0	14	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	AA	24	0	48	0	0
59	DA	66	0	132	4	0
59	DM	6	0	12	0	0
60	AB	1	0	0	0	0
60	C5	1	0	0	0	0
60	D5	1	0	0	0	0
61	AL	7	0	10	0	0
61	D1	7	0	10	1	0
61	D3	7	0	10	2	0
61	DA	35	0	50	0	0
61	DL	7	0	10	0	0
61	DP	7	0	10	1	0
61	DQ	7	0	10	1	0
62	D1	4	0	6	0	0
62	DA	36	0	54	3	0
62	DB	8	0	12	1	0
63	D1	10	0	14	3	0
63	D3	10	0	14	0	0
63	DA	40	0	56	4	0
63	DD	10	0	14	0	0
63	DS	10	0	14	0	0
63	DU	10	0	14	1	0
64	DA	40	0	76	2	0
65	DA	32	0	44	1	0
66	DA	12	0	9	0	0
67	DA	11	0	5	0	0
68	DA	8	0	12	2	0
69	AA	508	0	0	1	0
69	AC	5	0	0	0	0
69	AD	1	0	0	0	0
69	AE	5	0	0	0	0
69	AF	1	0	0	0	0
69	AG	1	0	0	0	0
69	AJ	3	0	0	0	0
69	AK	6	0	0	0	0
69	AL	10	0	0	0	0
69	AM	4	0	0	1	0
69	AN	5	0	0	2	0
69	AO	2	0	0	0	0
69	AP	2	0	0	1	0
69	AT	4	0	0	0	0
69	AU	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	BA	282	0	0	1	0
69	BD	12	0	0	0	0
69	BE	1	0	0	0	0
69	BF	1	0	0	0	0
69	BK	3	0	0	0	0
69	BL	6	0	0	0	0
69	BN	2	0	0	0	0
69	BO	1	0	0	0	0
69	BP	3	0	0	1	0
69	BR	1	0	0	0	0
69	BT	3	0	0	0	0
69	BU	3	0	0	0	0
69	C3	2	0	0	0	0
69	C4	1	0	0	0	0
69	C5	1	0	0	0	0
69	CA	693	0	0	4	0
69	CB	13	0	0	0	0
69	CC	8	0	0	0	0
69	CD	7	0	0	0	0
69	CE	4	0	0	0	0
69	CL	1	0	0	0	0
69	CM	4	0	0	0	0
69	CO	2	0	0	0	0
69	CQ	1	0	0	0	0
69	CU	3	0	0	0	0
69	CV	1	0	0	0	0
69	CW	1	0	0	0	0
69	CY	1	0	0	0	0
69	D0	26	0	0	0	0
69	D1	46	0	0	1	0
69	D2	6	0	0	0	0
69	D3	28	0	0	1	0
69	D4	33	0	0	0	0
69	D5	11	0	0	0	0
69	DA	4830	0	0	20	0
69	DB	203	0	0	1	0
69	DC	102	0	0	1	0
69	DD	95	0	0	1	0
69	DE	63	0	0	2	0
69	DF	16	0	0	0	0
69	DG	7	0	0	0	0
69	DH	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	DK	60	0	0	1	0
69	DL	51	0	0	0	0
69	DM	68	0	0	1	0
69	DN	73	0	0	1	0
69	DO	49	0	0	0	0
69	DP	38	0	0	0	0
69	DQ	29	0	0	0	0
69	DR	61	0	0	1	0
69	DS	50	0	0	0	0
69	DT	66	0	0	1	0
69	DU	19	0	0	0	0
69	DV	21	0	0	0	0
69	DW	32	0	0	0	0
69	DX	25	0	0	1	0
69	DY	10	0	0	0	0
69	DZ	6	0	0	0	0
All	All	295130	0	194412	1415	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 3.

The worst 5 of 1415 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)
26:D5:26:ILE:CD1	26:D5:26:ILE:CG1	1.82	1.56
46:CS:14:VAL:HG21	46:CS:98:ILE:HG13	1.28	1.11
31:CA:1005:C:O2'	38:CK:30:THR:HG21	1.60	1.01
18:AR:21:ILE:HG21	18:AR:54:GLN:HB3	1.39	1.00
40:CM:77:ILE:HD11	40:CM:108:ALA:HB1	1.46	0.96

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	222/224 (99%)	204 (92%)	14 (6%)	4 (2%)	8 34
2	BB	222/224 (99%)	202 (91%)	16 (7%)	4 (2%)	8 34
3	AC	204/206 (99%)	195 (96%)	8 (4%)	1 (0%)	29 65
3	BC	204/206 (99%)	194 (95%)	8 (4%)	2 (1%)	15 49
4	AD	203/205 (99%)	193 (95%)	10 (5%)	0	100 100
4	BD	203/205 (99%)	192 (95%)	11 (5%)	0	100 100
5	AE	153/155 (99%)	143 (94%)	9 (6%)	1 (1%)	22 57
5	BE	148/155 (96%)	135 (91%)	10 (7%)	3 (2%)	7 31
6	AF	104/106 (98%)	92 (88%)	12 (12%)	0	100 100
6	BF	98/106 (92%)	82 (84%)	12 (12%)	4 (4%)	3 14
7	AG	149/151 (99%)	135 (91%)	12 (8%)	2 (1%)	12 42
7	BG	149/151 (99%)	138 (93%)	10 (7%)	1 (1%)	22 57
8	AH	127/129 (98%)	120 (94%)	7 (6%)	0	100 100
8	BH	127/129 (98%)	119 (94%)	8 (6%)	0	100 100
9	AI	125/127 (98%)	112 (90%)	12 (10%)	1 (1%)	19 54
9	BI	125/127 (98%)	112 (90%)	12 (10%)	1 (1%)	19 54
10	AJ	97/99 (98%)	90 (93%)	5 (5%)	2 (2%)	7 30
10	BJ	96/99 (97%)	80 (83%)	11 (12%)	5 (5%)	2 10
11	AK	115/117 (98%)	105 (91%)	9 (8%)	1 (1%)	17 52
11	BK	115/117 (98%)	102 (89%)	12 (10%)	1 (1%)	17 52
12	AL	120/123 (98%)	115 (96%)	5 (4%)	0	100 100
12	BL	120/123 (98%)	115 (96%)	4 (3%)	1 (1%)	19 54
13	AM	112/114 (98%)	97 (87%)	11 (10%)	4 (4%)	3 17
13	BM	112/114 (98%)	95 (85%)	11 (10%)	6 (5%)	2 10
14	AN	98/100 (98%)	91 (93%)	4 (4%)	3 (3%)	4 20
14	BN	98/100 (98%)	93 (95%)	2 (2%)	3 (3%)	4 20
15	AO	86/88 (98%)	84 (98%)	2 (2%)	0	100 100
15	BO	86/88 (98%)	83 (96%)	2 (2%)	1 (1%)	13 44
16	AP	80/82 (98%)	67 (84%)	10 (12%)	3 (4%)	3 16
16	BP	80/82 (98%)	63 (79%)	14 (18%)	3 (4%)	3 16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
17	AQ	78/80 (98%)	70 (90%)	5 (6%)	3 (4%)	3 16
17	BQ	78/80 (98%)	67 (86%)	7 (9%)	4 (5%)	2 11
18	AR	53/55 (96%)	52 (98%)	1 (2%)	0	100 100
18	BR	53/55 (96%)	52 (98%)	1 (2%)	0	100 100
19	AS	77/79 (98%)	66 (86%)	9 (12%)	2 (3%)	5 24
19	BS	77/79 (98%)	64 (83%)	11 (14%)	2 (3%)	5 24
20	AT	84/86 (98%)	82 (98%)	2 (2%)	0	100 100
20	BT	83/86 (96%)	79 (95%)	2 (2%)	2 (2%)	6 26
21	AU	54/56 (96%)	51 (94%)	3 (6%)	0	100 100
21	BU	54/56 (96%)	51 (94%)	3 (6%)	0	100 100
22	C1	54/56 (96%)	47 (87%)	3 (6%)	4 (7%)	1 4
22	D1	54/56 (96%)	52 (96%)	2 (4%)	0	100 100
23	C2	48/51 (94%)	44 (92%)	2 (4%)	2 (4%)	3 14
23	D2	49/51 (96%)	47 (96%)	2 (4%)	0	100 100
24	C3	44/46 (96%)	42 (96%)	2 (4%)	0	100 100
24	D3	44/46 (96%)	43 (98%)	1 (2%)	0	100 100
25	C4	62/64 (97%)	59 (95%)	3 (5%)	0	100 100
25	D4	62/64 (97%)	59 (95%)	3 (5%)	0	100 100
26	C5	36/38 (95%)	36 (100%)	0	0	100 100
26	D5	36/38 (95%)	36 (100%)	0	0	100 100
27	C0	56/58 (97%)	53 (95%)	1 (2%)	2 (4%)	3 17
27	D0	57/58 (98%)	53 (93%)	4 (7%)	0	100 100
29	CC	269/271 (99%)	242 (90%)	21 (8%)	6 (2%)	6 28
29	DC	269/271 (99%)	249 (93%)	18 (7%)	2 (1%)	22 57
30	CD	207/209 (99%)	191 (92%)	16 (8%)	0	100 100
32	DD	206/209 (99%)	197 (96%)	9 (4%)	0	100 100
33	CE	199/201 (99%)	186 (94%)	10 (5%)	3 (2%)	10 39
33	DE	199/201 (99%)	189 (95%)	9 (4%)	1 (0%)	29 65
34	CF	175/177 (99%)	161 (92%)	12 (7%)	2 (1%)	14 47
34	DF	175/177 (99%)	160 (91%)	12 (7%)	3 (2%)	9 35
35	CG	174/176 (99%)	160 (92%)	9 (5%)	5 (3%)	4 22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
35	DG	174/176 (99%)	159 (91%)	13 (8%)	2 (1%)	14 47
36	CH	147/149 (99%)	127 (86%)	15 (10%)	5 (3%)	3 18
36	DH	147/149 (99%)	131 (89%)	13 (9%)	3 (2%)	7 31
37	CJ	132/134 (98%)	125 (95%)	3 (2%)	4 (3%)	4 21
37	DJ	132/134 (98%)	126 (96%)	2 (2%)	4 (3%)	4 21
38	CK	140/142 (99%)	133 (95%)	5 (4%)	2 (1%)	11 40
38	DK	140/142 (99%)	136 (97%)	3 (2%)	1 (1%)	22 57
39	CL	120/123 (98%)	112 (93%)	6 (5%)	2 (2%)	9 35
39	DL	121/123 (98%)	115 (95%)	5 (4%)	1 (1%)	19 54
40	CM	142/144 (99%)	131 (92%)	8 (6%)	3 (2%)	7 30
40	DM	142/144 (99%)	135 (95%)	7 (5%)	0	100 100
41	CN	133/136 (98%)	125 (94%)	8 (6%)	0	100 100
41	DN	134/136 (98%)	127 (95%)	7 (5%)	0	100 100
42	CO	118/125 (94%)	110 (93%)	7 (6%)	1 (1%)	19 54
42	DO	123/125 (98%)	115 (94%)	8 (6%)	0	100 100
43	CP	114/117 (97%)	111 (97%)	3 (3%)	0	100 100
43	DP	115/117 (98%)	112 (97%)	3 (3%)	0	100 100
44	CQ	112/114 (98%)	108 (96%)	3 (3%)	1 (1%)	17 52
44	DQ	112/114 (98%)	108 (96%)	3 (3%)	1 (1%)	17 52
45	CR	115/117 (98%)	112 (97%)	2 (2%)	1 (1%)	17 52
45	DR	115/117 (98%)	112 (97%)	3 (3%)	0	100 100
46	CS	101/103 (98%)	90 (89%)	10 (10%)	1 (1%)	15 49
46	DS	101/103 (98%)	95 (94%)	5 (5%)	1 (1%)	15 49
47	CT	108/110 (98%)	102 (94%)	4 (4%)	2 (2%)	8 33
47	DT	108/110 (98%)	106 (98%)	1 (1%)	1 (1%)	17 52
48	CU	91/93 (98%)	85 (93%)	5 (6%)	1 (1%)	14 47
48	DU	91/93 (98%)	85 (93%)	5 (6%)	1 (1%)	14 47
49	CV	100/102 (98%)	86 (86%)	10 (10%)	4 (4%)	3 15
49	DV	100/102 (98%)	92 (92%)	6 (6%)	2 (2%)	7 31
50	CW	92/94 (98%)	90 (98%)	2 (2%)	0	100 100
50	DW	92/94 (98%)	91 (99%)	1 (1%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
51	CX	73/76 (96%)	70 (96%)	3 (4%)	0	100 100
51	DX	75/76 (99%)	72 (96%)	3 (4%)	0	100 100
52	CY	75/77 (97%)	72 (96%)	3 (4%)	0	100 100
52	DY	75/77 (97%)	73 (97%)	2 (3%)	0	100 100
53	CZ	60/62 (97%)	58 (97%)	1 (2%)	1 (2%)	9 35
53	DZ	60/62 (97%)	58 (97%)	2 (3%)	0	100 100
54	DI	133/135 (98%)	112 (84%)	15 (11%)	6 (4%)	2 13
All	All	11407/11629 (98%)	10595 (93%)	661 (6%)	151 (1%)	12 42

5 of 151 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	126	PHE
5	AE	109	GLY
7	AG	56	LYS
10	AJ	57	VAL
13	AM	5	ALA

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	AB	186/186 (100%)	168 (90%)	18 (10%)	8 29
2	BB	186/186 (100%)	168 (90%)	18 (10%)	8 29
3	AC	170/170 (100%)	153 (90%)	17 (10%)	7 27
3	BC	170/170 (100%)	160 (94%)	10 (6%)	19 51
4	AD	172/172 (100%)	166 (96%)	6 (4%)	36 69
4	BD	172/172 (100%)	163 (95%)	9 (5%)	23 57
5	AE	118/118 (100%)	100 (85%)	18 (15%)	2 12
5	BE	113/118 (96%)	93 (82%)	20 (18%)	2 8
6	AF	92/92 (100%)	87 (95%)	5 (5%)	22 55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	BF	87/92 (95%)	78 (90%)	9 (10%)	7 26
7	AG	124/124 (100%)	109 (88%)	15 (12%)	5 20
7	BG	124/124 (100%)	109 (88%)	15 (12%)	5 20
8	AH	104/104 (100%)	92 (88%)	12 (12%)	5 22
8	BH	104/104 (100%)	95 (91%)	9 (9%)	10 34
9	AI	105/105 (100%)	95 (90%)	10 (10%)	8 30
9	BI	105/105 (100%)	94 (90%)	11 (10%)	7 25
10	AJ	87/87 (100%)	79 (91%)	8 (9%)	9 31
10	BJ	86/87 (99%)	76 (88%)	10 (12%)	5 21
11	AK	90/90 (100%)	84 (93%)	6 (7%)	16 46
11	BK	90/90 (100%)	82 (91%)	8 (9%)	9 33
12	AL	102/102 (100%)	94 (92%)	8 (8%)	12 39
12	BL	102/102 (100%)	91 (89%)	11 (11%)	6 24
13	AM	92/92 (100%)	81 (88%)	11 (12%)	5 20
13	BM	92/92 (100%)	84 (91%)	8 (9%)	10 34
14	AN	83/83 (100%)	80 (96%)	3 (4%)	35 68
14	BN	83/83 (100%)	79 (95%)	4 (5%)	25 60
15	AO	76/76 (100%)	68 (90%)	8 (10%)	7 25
15	BO	76/76 (100%)	67 (88%)	9 (12%)	5 20
16	AP	65/65 (100%)	59 (91%)	6 (9%)	9 31
16	BP	65/65 (100%)	58 (89%)	7 (11%)	6 24
17	AQ	74/74 (100%)	68 (92%)	6 (8%)	11 37
17	BQ	74/74 (100%)	63 (85%)	11 (15%)	3 13
18	AR	48/48 (100%)	43 (90%)	5 (10%)	7 25
18	BR	48/48 (100%)	44 (92%)	4 (8%)	11 37
19	AS	70/70 (100%)	62 (89%)	8 (11%)	5 22
19	BS	70/70 (100%)	63 (90%)	7 (10%)	7 27
20	AT	65/65 (100%)	55 (85%)	10 (15%)	2 12
20	BT	65/65 (100%)	56 (86%)	9 (14%)	3 15
21	AU	48/48 (100%)	47 (98%)	1 (2%)	53 80
21	BU	48/48 (100%)	47 (98%)	1 (2%)	53 80

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
22	C1	47/47 (100%)	44 (94%)	3 (6%)	17 48
22	D1	47/47 (100%)	46 (98%)	1 (2%)	53 80
23	C2	45/46 (98%)	43 (96%)	2 (4%)	28 63
23	D2	45/46 (98%)	42 (93%)	3 (7%)	16 46
24	C3	38/38 (100%)	35 (92%)	3 (8%)	12 39
24	D3	38/38 (100%)	36 (95%)	2 (5%)	22 56
25	C4	51/51 (100%)	48 (94%)	3 (6%)	19 51
25	D4	51/51 (100%)	48 (94%)	3 (6%)	19 51
26	C5	34/34 (100%)	32 (94%)	2 (6%)	19 51
26	D5	34/34 (100%)	33 (97%)	1 (3%)	42 74
27	C0	48/48 (100%)	42 (88%)	6 (12%)	4 18
27	D0	49/48 (102%)	42 (86%)	7 (14%)	3 14
29	CC	216/216 (100%)	201 (93%)	15 (7%)	15 45
29	DC	216/216 (100%)	207 (96%)	9 (4%)	30 64
30	CD	164/164 (100%)	156 (95%)	8 (5%)	25 59
32	DD	163/163 (100%)	156 (96%)	7 (4%)	29 63
33	CE	165/165 (100%)	149 (90%)	16 (10%)	8 29
33	DE	165/165 (100%)	158 (96%)	7 (4%)	30 64
34	CF	148/148 (100%)	134 (90%)	14 (10%)	8 30
34	DF	148/148 (100%)	134 (90%)	14 (10%)	8 30
35	CG	137/137 (100%)	133 (97%)	4 (3%)	42 74
35	DG	137/137 (100%)	132 (96%)	5 (4%)	35 68
36	CH	114/114 (100%)	103 (90%)	11 (10%)	8 29
36	DH	114/114 (100%)	104 (91%)	10 (9%)	10 34
37	CJ	104/104 (100%)	98 (94%)	6 (6%)	20 52
37	DJ	104/104 (100%)	98 (94%)	6 (6%)	20 52
38	CK	116/116 (100%)	113 (97%)	3 (3%)	46 76
38	DK	116/116 (100%)	112 (97%)	4 (3%)	37 70
39	CL	103/104 (99%)	96 (93%)	7 (7%)	16 46
39	DL	104/104 (100%)	96 (92%)	8 (8%)	13 40
40	CM	103/103 (100%)	94 (91%)	9 (9%)	10 34

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
40	DM	103/103 (100%)	97 (94%)	6 (6%)	20 52
41	CN	108/108 (100%)	101 (94%)	7 (6%)	17 47
41	DN	109/108 (101%)	103 (94%)	6 (6%)	21 54
42	CO	100/102 (98%)	91 (91%)	9 (9%)	9 33
42	DO	102/102 (100%)	95 (93%)	7 (7%)	15 45
43	CP	86/87 (99%)	79 (92%)	7 (8%)	11 37
43	DP	87/87 (100%)	79 (91%)	8 (9%)	9 31
44	CQ	99/99 (100%)	91 (92%)	8 (8%)	11 37
44	DQ	99/99 (100%)	93 (94%)	6 (6%)	18 50
45	CR	89/89 (100%)	83 (93%)	6 (7%)	16 46
45	DR	89/89 (100%)	85 (96%)	4 (4%)	27 62
46	CS	84/84 (100%)	81 (96%)	3 (4%)	35 68
46	DS	84/84 (100%)	82 (98%)	2 (2%)	49 78
47	CT	93/93 (100%)	88 (95%)	5 (5%)	22 55
47	DT	93/93 (100%)	91 (98%)	2 (2%)	52 79
48	CU	80/80 (100%)	72 (90%)	8 (10%)	7 27
48	DU	80/80 (100%)	74 (92%)	6 (8%)	13 41
49	CV	83/83 (100%)	77 (93%)	6 (7%)	14 43
49	DV	83/83 (100%)	80 (96%)	3 (4%)	35 68
50	CW	78/78 (100%)	73 (94%)	5 (6%)	17 48
50	DW	78/78 (100%)	75 (96%)	3 (4%)	33 67
51	CX	56/58 (97%)	50 (89%)	6 (11%)	6 24
51	DX	58/58 (100%)	49 (84%)	9 (16%)	2 12
52	CY	67/67 (100%)	62 (92%)	5 (8%)	13 41
52	DY	67/67 (100%)	62 (92%)	5 (8%)	13 41
53	CZ	54/54 (100%)	51 (94%)	3 (6%)	21 54
53	DZ	54/54 (100%)	53 (98%)	1 (2%)	57 82
54	DI	103/103 (100%)	94 (91%)	9 (9%)	10 34
All	All	9461/9478 (100%)	8736 (92%)	725 (8%)	13 40

5 of 725 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
34	CF	35	THR
49	CV	81	ASP
35	CG	11	VAL
34	CF	27	GLN
41	CN	88	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 50 such sidechains are listed below:

Mol	Chain	Res	Type
20	BT	48	GLN
37	CJ	43	ASN
54	DI	122	GLN
20	BT	52	ASN
34	CF	27	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1530/1534 (99%)	256 (16%)	35 (2%)
1	BA	1529/1534 (99%)	259 (16%)	39 (2%)
28	CB	117/120 (97%)	12 (10%)	0
28	DB	119/120 (99%)	11 (9%)	0
31	CA	2892/2904 (99%)	488 (16%)	79 (2%)
55	DA	2880/2904 (99%)	423 (14%)	63 (2%)
All	All	9067/9116 (99%)	1449 (15%)	216 (2%)

5 of 1449 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	22	G

5 of 216 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
31	CA	1452	G
31	CA	2423	U
55	DA	2157	G

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Mol	Chain	Res	Type
31	CA	1535	A
31	CA	2095	A

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

75 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	$\#\|Z\| > 2$
32	MEQ	DD	150[A]	32	8,9,10	0.53	0	5,10,12	0.46	0
55	OMC	DA	2498	55,56	19,22,23	0.52	0	26,31,34	0.60	0
1	5MC	AA	1407	1	18,22,23	0.47	0	26,32,35	0.53	0
1	2MG	AA	966	1	18,26,27	0.86	1 (5%)	16,38,41	0.46	0
31	3TD	CA	1915	31	18,22,23	0.54	0	22,32,35	0.53	0
55	5MU	DA	747	55	19,22,23	0.32	0	28,32,35	0.35	0
55	OMU	DA	2552	55	19,22,23	0.62	1 (5%)	26,31,34	0.24	0
31	1MG	CA	745	31	18,26,27	0.82	0	19,39,42	0.50	0
31	PSU	CA	1911	31	18,21,22	0.33	0	22,30,33	0.43	0
55	PSU	DA	955	55	18,21,22	0.73	1 (5%)	22,30,33	0.53	0
31	2MA	CA	2503	31	17,25,26	1.00	2 (11%)	17,37,40	0.38	0
31	G7M	CA	2069	31	20,26,27	0.50	0	17,39,42	0.52	0
12	D2T	BL	89	12	7,9,10	2.03	2 (28%)	6,11,13	0.79	0
55	PSU	DA	2457	55	18,21,22	0.53	0	22,30,33	0.49	0
1	PSU	AA	516	1,56	18,21,22	0.46	0	22,30,33	0.50	0
31	OMG	CA	2251	31	18,26,27	0.85	0	19,38,41	0.58	0
1	2MG	BA	1516	1	18,26,27	0.77	0	16,38,41	0.54	0
31	PSU	CA	2504	31	18,21,22	0.55	0	22,30,33	0.42	0
55	1MG	DA	745	55	18,26,27	1.04	0	19,39,42	0.44	0
55	PSU	DA	2605	55	18,21,22	0.69	0	22,30,33	0.66	0
55	PSU	DA	746	55,56	18,21,22	1.08	1 (5%)	22,30,33	0.34	0
1	2MG	BA	1207	1	18,26,27	0.84	1 (5%)	16,38,41	0.53	0
31	PSU	CA	1917	31	18,21,22	0.31	0	22,30,33	0.46	0
1	5MC	BA	1407	1	18,22,23	0.52	0	26,32,35	0.52	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
55	5MC	DA	1962	55	18,22,23	0.74	1 (5%)	26,32,35	0.45	0
55	H2U	DA	2449	55	18,21,22	0.40	0	21,30,33	0.59	1 (4%)
32	MEQ	DD	150[B]	32	8,9,10	1.15	1 (12%)	5,10,12	0.89	0
55	PSU	DA	2604	55	18,21,22	0.95	1 (5%)	22,30,33	0.57	0
55	PSU	DA	2580	55	18,21,22	0.76	0	22,30,33	0.69	0
31	OMC	CA	2498	31,56	19,22,23	0.45	0	26,31,34	0.38	0
1	4OC	BA	1402	1	20,23,24	0.36	0	26,32,35	0.41	0
1	4OC	AA	1402	1	20,23,24	0.31	0	26,32,35	0.40	0
1	2MG	AA	1516	1	18,26,27	0.84	1 (5%)	16,38,41	0.57	0
1	G7M	AA	527	1	20,26,27	0.82	1 (5%)	17,39,42	0.89	1 (5%)
1	UR3	BA	1498	1	19,22,23	0.37	0	26,32,35	0.38	0
31	5MU	CA	1939	31	19,22,23	0.40	0	28,32,35	0.33	0
31	PSU	CA	2605	31	18,21,22	0.44	0	22,30,33	0.58	0
55	2MG	DA	2445	55	18,26,27	1.35	4 (22%)	16,38,41	0.67	0
31	OMU	CA	2552	31	19,22,23	0.39	0	26,31,34	0.28	0
31	PSU	CA	955	31	18,21,22	0.33	0	22,30,33	0.53	0
31	2MG	CA	2445	31	18,26,27	0.96	1 (5%)	16,38,41	0.58	0
1	2MG	BA	966	1	18,26,27	0.81	0	16,38,41	0.51	0
41	4D4	DN	81[A]	-	9,11,12	1.92	2 (22%)	8,13,15	2.27	2 (25%)
55	PSU	DA	1917	55	18,21,22	0.46	0	22,30,33	0.46	0
1	MA6	AA	1518	1	19,26,27	0.85	0	18,38,41	0.95	1 (5%)
31	6MZ	CA	2030	31	18,25,26	0.91	0	16,36,39	1.02	2 (12%)
31	PSU	CA	2580	31	18,21,22	0.57	0	22,30,33	0.77	2 (9%)
55	3TD	DA	1915	55	18,22,23	0.52	0	22,32,35	0.55	0
55	G7M	DA	2069	55	20,26,27	0.66	0	17,39,42	0.69	0
1	UR3	AA	1498	1	19,22,23	0.65	0	26,32,35	0.29	0
31	6MZ	CA	1618	31	18,25,26	0.87	1 (5%)	16,36,39	0.87	0
31	PSU	CA	746	31,56	18,21,22	0.57	0	22,30,33	0.35	0
31	5MC	CA	1962	31	18,22,23	0.42	0	26,32,35	0.38	0
1	5MC	BA	967	1	18,22,23	0.26	0	26,32,35	0.38	0
1	5MC	AA	967	1	18,22,23	0.31	0	26,32,35	0.37	0
55	PSU	DA	1911	55	18,21,22	0.30	0	22,30,33	0.42	0
55	6MZ	DA	2030	55	18,25,26	1.38	3 (16%)	16,36,39	0.96	2 (12%)
55	2MA	DA	2503	55,56	17,25,26	1.10	3 (17%)	17,37,40	0.44	0
41	4D4	CN	81	41	9,11,12	2.05	2 (22%)	8,13,15	2.45	2 (25%)
31	2MG	CA	1835	31	18,26,27	0.90	1 (5%)	16,38,41	0.47	0
31	PSU	CA	2457	31	18,21,22	0.70	0	22,30,33	0.48	0
55	6MZ	DA	1618	55	18,25,26	0.95	1 (5%)	16,36,39	1.37	1 (6%)
55	5MU	DA	1939	55	19,22,23	0.57	0	28,32,35	0.39	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	PSU	BA	516	1	18,21,22	0.46	0	22,30,33	0.46	0
55	OMG	DA	2251	55	18,26,27	0.89	2 (11%)	19,38,41	0.52	0
55	PSU	DA	2504	55	18,21,22	0.53	0	22,30,33	0.48	0
1	MA6	BA	1519	1	19,26,27	1.01	0	18,38,41	1.09	1 (5%)
1	MA6	AA	1519	1	19,26,27	1.03	1 (5%)	18,38,41	1.12	1 (5%)
1	G7M	BA	527	1	20,26,27	0.72	0	17,39,42	0.44	0
31	5MU	CA	747	31	19,22,23	0.33	0	28,32,35	0.27	0
41	4D4	DN	81[B]	-	9,11,12	1.62	2 (22%)	8,13,15	2.65	2 (25%)
55	2MG	DA	1835	55	18,26,27	0.91	1 (5%)	16,38,41	0.63	0
1	MA6	BA	1518	1	19,26,27	0.84	0	18,38,41	0.90	1 (5%)
1	2MG	AA	1207	1	18,26,27	0.84	0	16,38,41	0.50	0
12	D2T	AL	89	12	7,9,10	1.63	2 (28%)	6,11,13	0.96	0

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
32	MEQ	DD	150[A]	32	-	3/8/9/11	-
55	OMC	DA	2498	55,56	-	0/9/27/28	0/2/2/2
1	5MC	AA	1407	1	-	0/7/25/26	0/2/2/2
1	2MG	AA	966	1	-	0/5/27/28	0/3/3/3
31	3TD	CA	1915	31	-	0/7/25/26	0/2/2/2
55	5MU	DA	747	55	-	1/7/25/26	0/2/2/2
55	OMU	DA	2552	55	-	0/9/27/28	0/2/2/2
31	1MG	CA	745	31	-	0/3/25/26	0/3/3/3
31	PSU	CA	1911	31	-	0/7/25/26	0/2/2/2
55	PSU	DA	955	55	-	0/7/25/26	0/2/2/2
31	2MA	CA	2503	31	-	2/3/25/26	0/3/3/3
31	G7M	CA	2069	31	-	1/3/25/26	0/3/3/3
12	D2T	BL	89	12	-	4/7/12/14	-
55	PSU	DA	2457	55	-	0/7/25/26	0/2/2/2
1	PSU	AA	516	1,56	-	0/7/25/26	0/2/2/2
31	OMG	CA	2251	31	-	0/5/27/28	0/3/3/3
1	2MG	BA	1516	1	-	0/5/27/28	0/3/3/3
31	PSU	CA	2504	31	-	2/7/25/26	0/2/2/2
55	1MG	DA	745	55	-	0/3/25/26	0/3/3/3
55	PSU	DA	2605	55	-	0/7/25/26	0/2/2/2
55	PSU	DA	746	55,56	-	4/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	2MG	BA	1207	1	-	0/5/27/28	0/3/3/3
31	PSU	CA	1917	31	-	0/7/25/26	0/2/2/2
1	5MC	BA	1407	1	-	0/7/25/26	0/2/2/2
55	5MC	DA	1962	55	-	2/7/25/26	0/2/2/2
55	H2U	DA	2449	55	-	0/7/38/39	0/2/2/2
32	MEQ	DD	150[B]	32	-	6/8/9/11	-
55	PSU	DA	2604	55	-	0/7/25/26	0/2/2/2
55	PSU	DA	2580	55	-	0/7/25/26	0/2/2/2
31	OMC	CA	2498	31,56	-	0/9/27/28	0/2/2/2
1	4OC	BA	1402	1	-	1/9/29/30	0/2/2/2
1	4OC	AA	1402	1	-	0/9/29/30	0/2/2/2
1	2MG	AA	1516	1	-	0/5/27/28	0/3/3/3
1	G7M	AA	527	1	-	2/3/25/26	0/3/3/3
1	UR3	BA	1498	1	-	0/7/25/26	0/2/2/2
31	5MU	CA	1939	31	-	0/7/25/26	0/2/2/2
31	PSU	CA	2605	31	-	0/7/25/26	0/2/2/2
55	2MG	DA	2445	55	-	0/5/27/28	0/3/3/3
31	OMU	CA	2552	31	-	0/9/27/28	0/2/2/2
31	PSU	CA	955	31	-	0/7/25/26	0/2/2/2
31	2MG	CA	2445	31	-	1/5/27/28	0/3/3/3
1	2MG	BA	966	1	-	0/5/27/28	0/3/3/3
41	4D4	DN	81[A]	-	-	2/11/12/14	-
55	PSU	DA	1917	55	-	0/7/25/26	0/2/2/2
1	MA6	AA	1518	1	-	0/7/29/30	0/3/3/3
31	6MZ	CA	2030	31	-	2/5/27/28	0/3/3/3
31	PSU	CA	2580	31	-	0/7/25/26	0/2/2/2
55	3TD	DA	1915	55	-	0/7/25/26	0/2/2/2
55	G7M	DA	2069	55	-	1/3/25/26	0/3/3/3
1	UR3	AA	1498	1	-	0/7/25/26	0/2/2/2
31	6MZ	CA	1618	31	-	0/5/27/28	0/3/3/3
31	PSU	CA	746	31,56	-	4/7/25/26	0/2/2/2
31	5MC	CA	1962	31	-	0/7/25/26	0/2/2/2
1	5MC	BA	967	1	-	0/7/25/26	0/2/2/2
1	5MC	AA	967	1	-	0/7/25/26	0/2/2/2
55	PSU	DA	1911	55	-	0/7/25/26	0/2/2/2
55	6MZ	DA	2030	55	-	1/5/27/28	0/3/3/3
55	2MA	DA	2503	55,56	-	2/3/25/26	0/3/3/3
41	4D4	CN	81	41	-	2/11/12/14	-
31	2MG	CA	1835	31	-	1/5/27/28	0/3/3/3
31	PSU	CA	2457	31	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	6MZ	DA	1618	55	-	0/5/27/28	0/3/3/3
55	5MU	DA	1939	55	-	0/7/25/26	0/2/2/2
1	PSU	BA	516	1	-	0/7/25/26	0/2/2/2
55	OMG	DA	2251	55	-	1/5/27/28	0/3/3/3
55	PSU	DA	2504	55	-	2/7/25/26	0/2/2/2
1	MA6	BA	1519	1	-	2/7/29/30	0/3/3/3
1	MA6	AA	1519	1	-	2/7/29/30	0/3/3/3
1	G7M	BA	527	1	-	2/3/25/26	0/3/3/3
31	5MU	CA	747	31	-	1/7/25/26	0/2/2/2
41	4D4	DN	81[B]	-	-	3/11/12/14	-
55	2MG	DA	1835	55	-	2/5/27/28	0/3/3/3
1	MA6	BA	1518	1	-	0/7/29/30	0/3/3/3
1	2MG	AA	1207	1	-	0/5/27/28	0/3/3/3
12	D2T	AL	89	12	-	2/7/12/14	-

The worst 5 of 40 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	CN	81	4D4	CZ-NE	5.64	1.44	1.33
41	DN	81[A]	4D4	CZ-NE	4.79	1.42	1.33
41	DN	81[B]	4D4	CZ-NE	4.14	1.41	1.33
12	BL	89	D2T	CB-SB	3.89	1.86	1.82
55	DA	746	PSU	O4'-C1'	-3.72	1.38	1.43

The worst 5 of 19 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	DN	81[B]	4D4	NE-CZ-NH2	5.85	130.98	120.70
41	CN	81	4D4	NE-CZ-NH2	5.80	130.89	120.70
41	DN	81[A]	4D4	NE-CZ-NH2	5.08	129.62	120.70
55	DA	1618	6MZ	C9-N6-C6	-4.89	118.66	122.87
41	DN	81[B]	4D4	NH1-CZ-NE	-4.33	109.20	119.19

There are no chirality outliers.

5 of 61 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	AL	89	D2T	SB-CB-CG-OD2
1	BA	527	G7M	O4'-C4'-C5'-O5'
1	BA	527	G7M	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
12	BL	89	D2T	CA-CB-CG-OD1
12	BL	89	D2T	CA-CB-CG-OD2

There are no ring outliers.

14 monomers are involved in 17 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	DD	150[A]	MEQ	2	0
55	DA	747	5MU	1	0
31	CA	2503	2MA	1	0
31	CA	2251	OMG	1	0
32	DD	150[B]	MEQ	1	0
31	CA	2498	OMC	1	0
1	AA	1518	MA6	2	0
31	CA	2030	6MZ	2	0
55	DA	2030	6MZ	2	0
55	DA	2251	OMG	1	0
1	BA	1519	MA6	2	0
1	AA	1519	MA6	2	0
31	CA	747	5MU	1	0
1	BA	1518	MA6	2	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 552 ligands modelled in this entry, 472 are monoatomic - leaving 80 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	$\#\|Z\| > 2$
61	PEG	D1	103	-	6,6,6	0.28	0	5,5,5	0.17	0
67	GUN	DA	3213	-	7,12,12	0.43	0	8,17,17	0.69	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
62	EDO	DA	3211	-	3,3,3	0.69	0	2,2,2	0.19	0
58	MPD	DA	3004	-	7,7,7	0.64	0	9,10,10	0.26	0
61	PEG	DA	3203	-	6,6,6	0.30	0	5,5,5	0.19	0
59	PUT	DA	3187	-	5,5,5	0.46	0	4,4,4	0.28	0
58	MPD	DA	3209	-	7,7,7	0.73	0	9,10,10	0.52	0
64	SPD	DA	3208	-	9,9,9	0.20	0	8,8,8	0.18	0
63	PGE	DD	301	-	9,9,9	0.18	0	8,8,8	0.17	0
62	EDO	D1	101	-	3,3,3	0.62	0	2,2,2	0.21	0
58	MPD	DT	201	-	7,7,7	0.81	0	9,10,10	0.47	0
61	PEG	AL	201	-	6,6,6	0.26	0	5,5,5	0.24	0
61	PEG	DP	201	-	6,6,6	0.29	0	5,5,5	0.16	0
59	PUT	AA	1672	-	5,5,5	0.25	0	4,4,4	0.15	0
64	SPD	DA	3190	-	9,9,9	0.13	0	8,8,8	0.18	0
59	PUT	DA	3224	-	5,5,5	0.45	0	4,4,4	0.68	0
58	MPD	DA	3212	-	7,7,7	0.83	0	9,10,10	0.42	0
59	PUT	DA	3221	-	5,5,5	0.15	0	4,4,4	0.11	0
62	EDO	DB	210	-	3,3,3	0.69	0	2,2,2	0.06	0
59	PUT	AA	1673	-	5,5,5	0.14	0	4,4,4	0.12	0
61	PEG	DA	3202	-	6,6,6	0.21	0	5,5,5	0.15	0
58	MPD	DE	301	-	7,7,7	0.73	0	9,10,10	0.49	0
58	MPD	AA	1671	-	7,7,7	0.72	0	9,10,10	0.41	0
57	PG4	DS	202	-	12,12,12	0.38	0	11,11,11	0.33	0
61	PEG	DQ	201	-	6,6,6	0.33	0	5,5,5	0.29	0
58	MPD	DS	203	-	7,7,7	0.50	0	9,10,10	0.44	0
63	PGE	D3	101	-	9,9,9	0.30	0	8,8,8	0.29	0
59	PUT	DA	3215	-	5,5,5	0.27	0	4,4,4	0.19	0
59	PUT	DA	3191	-	5,5,5	0.11	0	4,4,4	0.19	0
61	PEG	DA	3220	-	6,6,6	0.20	0	5,5,5	0.08	0
64	SPD	DA	3186	-	9,9,9	0.19	0	8,8,8	0.15	0
59	PUT	AA	1675	-	5,5,5	0.21	0	4,4,4	0.10	0
64	SPD	DA	3226	-	9,9,9	0.34	0	8,8,8	0.44	0
66	ACY	DA	3204	-	3,3,3	0.63	0	3,3,3	1.13	0
62	EDO	DA	3005	-	3,3,3	0.58	0	2,2,2	0.30	0
59	PUT	DA	3223	-	5,5,5	0.27	0	4,4,4	0.21	0
59	PUT	DA	3214	-	5,5,5	0.23	0	4,4,4	0.08	0
59	PUT	AA	1674	-	5,5,5	0.18	0	4,4,4	0.11	0
57	PG4	DR	202	-	12,12,12	0.31	0	11,11,11	0.35	0
63	PGE	DA	3219	-	9,9,9	0.22	0	8,8,8	0.27	0
68	TRS	DA	3222	-	7,7,7	0.29	0	9,9,9	0.31	0
59	PUT	DA	3198	-	5,5,5	0.24	0	4,4,4	0.21	0
58	MPD	DA	3195	-	7,7,7	0.66	0	9,10,10	0.64	0
57	PG4	BA	1642	-	12,12,12	0.34	0	11,11,11	0.27	0
58	MPD	DE	302	-	7,7,7	1.07	1 (14%)	9,10,10	0.49	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
57	PG4	AA	1670	-	12,12,12	0.36	0	11,11,11	0.35	0
61	PEG	DA	3229	-	6,6,6	0.38	0	5,5,5	0.24	0
57	PG4	DA	3218	-	12,12,12	0.20	0	11,11,11	0.25	0
58	MPD	DK	201	-	7,7,7	0.67	0	9,10,10	0.39	0
63	PGE	D1	102	-	9,9,9	0.27	0	8,8,8	0.25	0
65	1PE	DA	3205	-	15,15,15	0.41	0	14,14,14	0.49	0
58	MPD	DN	201	-	7,7,7	1.15	1 (14%)	9,10,10	0.63	0
62	EDO	DA	3197	-	3,3,3	1.08	0	2,2,2	0.35	0
61	PEG	D3	102	-	6,6,6	0.50	0	5,5,5	0.39	0
57	PG4	DA	3196	-	12,12,12	0.38	0	11,11,11	0.30	0
62	EDO	DA	3003	-	3,3,3	0.64	0	2,2,2	0.27	0
58	MPD	AA	1676	-	7,7,7	0.69	0	9,10,10	0.31	0
59	PUT	DA	3225	-	5,5,5	0.26	0	4,4,4	0.19	0
59	PUT	DA	3192	-	5,5,5	0.37	0	4,4,4	0.42	0
65	1PE	DA	3188	-	15,15,15	0.19	0	14,14,14	0.29	0
62	EDO	DA	3002	-	3,3,3	0.69	0	2,2,2	0.15	0
61	PEG	DA	3228	-	6,6,6	0.40	0	5,5,5	0.32	0
61	PEG	DL	201	-	6,6,6	0.18	0	5,5,5	0.13	0
62	EDO	DA	3201	-	3,3,3	0.52	0	2,2,2	0.45	0
63	PGE	DA	3216	-	9,9,9	0.30	0	8,8,8	0.34	0
59	PUT	DA	3207	-	5,5,5	0.21	0	4,4,4	0.16	0
62	EDO	DA	3217	-	3,3,3	0.64	0	2,2,2	0.27	0
63	PGE	DA	3227	-	9,9,9	0.18	0	8,8,8	0.23	0
63	PGE	DU	101	-	9,9,9	0.29	0	8,8,8	0.21	0
62	EDO	DA	3200	-	3,3,3	0.75	0	2,2,2	0.10	0
63	PGE	DA	3189	-	9,9,9	0.42	0	8,8,8	0.30	0
66	ACY	DA	3194	-	3,3,3	0.60	0	3,3,3	1.10	0
59	PUT	DM	201	-	5,5,5	0.17	0	4,4,4	0.17	0
62	EDO	DA	3210	-	3,3,3	0.67	0	2,2,2	0.26	0
58	MPD	DA	3193	-	7,7,7	0.31	0	9,10,10	0.46	0
57	PG4	DQ	202	-	12,12,12	0.28	0	11,11,11	0.25	0
58	MPD	DA	3206	-	7,7,7	0.95	0	9,10,10	0.72	0
63	PGE	DS	201	-	9,9,9	0.39	0	8,8,8	0.31	0
66	ACY	DA	3199	-	3,3,3	2.13	1 (33%)	3,3,3	2.28	2 (66%)
62	EDO	DB	211	-	3,3,3	0.73	0	2,2,2	0.13	0

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
61	PEG	D1	103	-	-	0/4/4/4	-
67	GUN	DA	3213	-	-	-	0/2/2/2
62	EDO	DA	3211	-	-	0/1/1/1	-
58	MPD	DA	3004	-	-	3/5/5/5	-
61	PEG	DA	3203	-	-	3/4/4/4	-
59	PUT	DA	3187	-	-	0/3/3/3	-
58	MPD	DA	3209	-	-	3/5/5/5	-
64	SPD	DA	3208	-	-	2/7/7/7	-
63	PGE	DD	301	-	-	4/7/7/7	-
62	EDO	D1	101	-	-	0/1/1/1	-
58	MPD	DT	201	-	-	1/5/5/5	-
61	PEG	AL	201	-	-	2/4/4/4	-
61	PEG	DP	201	-	-	2/4/4/4	-
59	PUT	AA	1672	-	-	1/3/3/3	-
64	SPD	DA	3190	-	-	2/7/7/7	-
59	PUT	DA	3224	-	-	0/3/3/3	-
58	MPD	DA	3212	-	-	0/5/5/5	-
59	PUT	DA	3221	-	-	0/3/3/3	-
62	EDO	DB	210	-	-	0/1/1/1	-
59	PUT	AA	1673	-	-	0/3/3/3	-
61	PEG	DA	3202	-	-	2/4/4/4	-
58	MPD	DE	301	-	-	2/5/5/5	-
58	MPD	AA	1671	-	-	0/5/5/5	-
57	PG4	DS	202	-	-	6/10/10/10	-
61	PEG	DQ	201	-	-	0/4/4/4	-
58	MPD	DS	203	-	-	1/5/5/5	-
63	PGE	D3	101	-	-	3/7/7/7	-
59	PUT	DA	3215	-	-	0/3/3/3	-
59	PUT	DA	3191	-	-	0/3/3/3	-
61	PEG	DA	3220	-	-	2/4/4/4	-
64	SPD	DA	3186	-	-	1/7/7/7	-
59	PUT	AA	1675	-	-	1/3/3/3	-
64	SPD	DA	3226	-	-	4/7/7/7	-
62	EDO	DA	3005	-	-	0/1/1/1	-
59	PUT	DA	3223	-	-	0/3/3/3	-
59	PUT	DA	3214	-	-	1/3/3/3	-
59	PUT	AA	1674	-	-	0/3/3/3	-
57	PG4	DR	202	-	-	6/10/10/10	-
63	PGE	DA	3219	-	-	3/7/7/7	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
68	TRS	DA	3222	-	-	1/9/9/9	-
59	PUT	DA	3198	-	-	1/3/3/3	-
58	MPD	DA	3195	-	-	2/5/5/5	-
57	PG4	BA	1642	-	-	3/10/10/10	-
58	MPD	DE	302	-	-	1/5/5/5	-
57	PG4	AA	1670	-	-	6/10/10/10	-
61	PEG	DA	3229	-	-	1/4/4/4	-
57	PG4	DA	3218	-	-	4/10/10/10	-
58	MPD	DK	201	-	-	0/5/5/5	-
63	PGE	D1	102	-	-	3/7/7/7	-
65	1PE	DA	3205	-	-	4/13/13/13	-
58	MPD	DN	201	-	-	1/5/5/5	-
62	EDO	DA	3197	-	-	0/1/1/1	-
61	PEG	D3	102	-	-	2/4/4/4	-
57	PG4	DA	3196	-	-	5/10/10/10	-
62	EDO	DA	3003	-	-	0/1/1/1	-
58	MPD	AA	1676	-	-	0/5/5/5	-
59	PUT	DA	3225	-	-	1/3/3/3	-
59	PUT	DA	3192	-	-	0/3/3/3	-
65	1PE	DA	3188	-	-	4/13/13/13	-
62	EDO	DA	3002	-	-	0/1/1/1	-
61	PEG	DA	3228	-	-	3/4/4/4	-
61	PEG	DL	201	-	-	2/4/4/4	-
62	EDO	DA	3201	-	-	0/1/1/1	-
63	PGE	DA	3216	-	-	2/7/7/7	-
59	PUT	DA	3207	-	-	0/3/3/3	-
62	EDO	DA	3217	-	-	0/1/1/1	-
63	PGE	DA	3227	-	-	3/7/7/7	-
63	PGE	DU	101	-	-	2/7/7/7	-
62	EDO	DA	3200	-	-	1/1/1/1	-
63	PGE	DA	3189	-	-	1/7/7/7	-
59	PUT	DM	201	-	-	0/3/3/3	-
62	EDO	DA	3210	-	-	1/1/1/1	-
58	MPD	DA	3193	-	-	2/5/5/5	-
57	PG4	DQ	202	-	-	3/10/10/10	-
58	MPD	DA	3206	-	-	1/5/5/5	-
63	PGE	DS	201	-	-	2/7/7/7	-
62	EDO	DB	211	-	-	0/1/1/1	-

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	DA	3199	ACY	O-C	3.44	1.38	1.22
58	DN	201	MPD	C3-C2	2.58	1.60	1.53
58	DE	302	MPD	C3-C2	2.48	1.60	1.53

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	DA	3199	ACY	OXT-C-CH3	2.97	127.47	115.18
66	DA	3199	ACY	O-C-CH3	-2.56	112.36	122.33

There are no chirality outliers.

5 of 117 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
58	DA	3209	MPD	C2-C3-C4-O4
57	DR	202	PG4	O2-C3-C4-O3
65	DA	3205	1PE	OH5-C14-C24-OH4
61	D3	102	PEG	O1-C1-C2-O2
65	DA	3205	1PE	OH4-C13-C23-OH3

There are no ring outliers.

30 monomers are involved in 44 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	D1	103	PEG	1	0
59	DA	3187	PUT	1	0
58	DA	3209	MPD	1	0
64	DA	3208	SPD	1	0
61	DP	201	PEG	1	0
59	DA	3224	PUT	2	0
59	DA	3221	PUT	1	0
58	AA	1671	MPD	2	0
57	DS	202	PG4	1	0
61	DQ	201	PEG	1	0
58	DS	203	MPD	3	0
64	DA	3226	SPD	1	0
57	DR	202	PG4	3	0
68	DA	3222	TRS	2	0
58	DA	3195	MPD	1	0
57	BA	1642	PG4	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	AA	1670	PG4	1	0
57	DA	3218	PG4	1	0
63	D1	102	PGE	3	0
62	DA	3197	EDO	2	0
61	D3	102	PEG	2	0
57	DA	3196	PG4	1	0
65	DA	3188	1PE	1	0
62	DA	3201	EDO	1	0
63	DA	3216	PGE	1	0
63	DA	3227	PGE	3	0
63	DU	101	PGE	1	0
57	DQ	202	PG4	1	0
58	DA	3206	MPD	2	0
62	DB	211	EDO	1	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1523/1534 (99%)	-0.00	31 (2%) 65 36	37, 95, 237, 293	0
1	BA	1522/1534 (99%)	0.48	146 (9%) 8 2	58, 133, 255, 272	0
2	AB	224/224 (100%)	0.49	16 (7%) 16 5	76, 123, 192, 236	0
2	BB	224/224 (100%)	0.71	34 (15%) 2 0	101, 145, 205, 239	0
3	AC	206/206 (100%)	-0.12	3 (1%) 73 46	65, 93, 121, 147	0
3	BC	206/206 (100%)	0.19	8 (3%) 39 16	86, 121, 150, 169	0
4	AD	205/205 (100%)	-0.20	1 (0%) 91 75	69, 97, 128, 136	0
4	BD	205/205 (100%)	-0.19	0 100 100	68, 101, 127, 138	0
5	AE	155/155 (100%)	-0.19	1 (0%) 89 72	60, 84, 120, 175	0
5	BE	150/155 (96%)	0.28	6 (4%) 38 16	72, 106, 138, 202	0
6	AF	106/106 (100%)	0.11	7 (6%) 18 5	69, 103, 126, 144	0
6	BF	100/106 (94%)	0.46	4 (4%) 38 16	82, 115, 140, 149	0
7	AG	151/151 (100%)	0.92	26 (17%) 1 0	106, 150, 177, 189	0
7	BG	151/151 (100%)	1.89	65 (43%) 0 0	137, 190, 215, 221	0
8	AH	129/129 (100%)	0.04	4 (3%) 49 22	68, 91, 119, 130	0
8	BH	129/129 (100%)	0.11	5 (3%) 39 16	98, 126, 151, 161	0
9	AI	127/127 (100%)	1.07	25 (19%) 1 0	75, 144, 180, 187	0
9	BI	127/127 (100%)	1.20	30 (23%) 0 0	111, 162, 195, 202	0
10	AJ	99/99 (100%)	0.46	10 (10%) 7 2	82, 112, 142, 147	0
10	BJ	98/99 (98%)	2.21	44 (44%) 0 0	111, 152, 181, 187	0
11	AK	117/117 (100%)	0.38	6 (5%) 28 10	54, 104, 138, 152	0
11	BK	117/117 (100%)	0.12	3 (2%) 56 27	62, 97, 134, 165	0
12	AL	122/123 (99%)	-0.05	1 (0%) 86 65	48, 65, 106, 141	0
12	BL	122/123 (99%)	0.65	10 (8%) 11 3	82, 102, 129, 158	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	1.82	39 (34%) 0 0	126, 159, 182, 189	0
13	BM	114/114 (100%)	2.77	74 (64%) 0 0	187, 224, 236, 244	0
14	AN	100/100 (100%)	0.60	7 (7%) 16 5	72, 110, 177, 184	0
14	BN	100/100 (100%)	1.49	33 (33%) 0 0	107, 167, 215, 218	0
15	AO	88/88 (100%)	0.04	1 (1%) 80 56	63, 91, 115, 142	0
15	BO	88/88 (100%)	0.68	10 (11%) 5 1	84, 114, 143, 156	0
16	AP	82/82 (100%)	0.54	7 (8%) 10 3	68, 85, 126, 145	0
16	BP	82/82 (100%)	1.78	28 (34%) 0 0	100, 125, 161, 175	0
17	AQ	80/80 (100%)	0.02	2 (2%) 57 28	63, 87, 116, 138	0
17	BQ	80/80 (100%)	1.11	21 (26%) 0 0	101, 142, 165, 173	0
18	AR	55/55 (100%)	0.93	9 (16%) 1 0	73, 97, 142, 174	0
18	BR	55/55 (100%)	0.10	2 (3%) 42 18	67, 90, 125, 166	0
19	AS	79/79 (100%)	1.24	17 (21%) 0 0	138, 162, 179, 182	0
19	BS	79/79 (100%)	2.25	39 (49%) 0 0	197, 221, 238, 243	0
20	AT	86/86 (100%)	-0.04	1 (1%) 79 53	63, 85, 116, 128	0
20	BT	85/86 (98%)	2.02	37 (43%) 0 0	110, 143, 164, 169	0
21	AU	56/56 (100%)	0.13	1 (1%) 68 40	75, 113, 153, 163	0
21	BU	56/56 (100%)	0.25	1 (1%) 68 40	69, 94, 123, 138	0
22	C1	56/56 (100%)	1.45	16 (28%) 0 0	93, 155, 176, 188	0
22	D1	56/56 (100%)	-0.48	0 100 100	21, 45, 74, 114	0
23	C2	50/51 (98%)	2.22	22 (44%) 0 0	150, 178, 190, 205	0
23	D2	51/51 (100%)	0.02	0 100 100	47, 63, 89, 108	0
24	C3	46/46 (100%)	1.80	18 (39%) 0 0	100, 132, 149, 173	0
24	D3	46/46 (100%)	-0.28	0 100 100	25, 35, 54, 118	0
25	C4	64/64 (100%)	0.69	6 (9%) 8 2	95, 116, 139, 151	0
25	D4	64/64 (100%)	-0.33	0 100 100	29, 39, 57, 68	0
26	C5	38/38 (100%)	0.57	4 (10%) 6 2	97, 115, 133, 149	0
26	D5	38/38 (100%)	-0.28	0 100 100	32, 45, 71, 83	0
27	C0	58/58 (100%)	1.46	20 (34%) 0 0	99, 121, 149, 157	0
27	D0	58/58 (100%)	-0.51	0 100 100	23, 34, 54, 88	0
28	CB	118/120 (98%)	0.75	16 (13%) 3 1	104, 167, 221, 231	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DB	120/120 (100%)	-0.31	0 100 100	28, 53, 86, 134	0
29	CC	271/271 (100%)	0.25	9 (3%) 46 20	76, 98, 120, 132	0
29	DC	271/271 (100%)	-0.36	1 (0%) 92 79	23, 52, 80, 100	0
30	CD	209/209 (100%)	1.10	50 (23%) 0 0	88, 118, 149, 165	0
31	CA	2876/2904 (99%)	0.62	285 (9%) 7 2	65, 132, 252, 292	0
32	DD	208/209 (99%)	-0.48	0 100 100	18, 38, 71, 100	0
33	CE	201/201 (100%)	1.06	40 (19%) 1 0	88, 159, 186, 195	0
33	DE	201/201 (100%)	-0.41	1 (0%) 91 75	20, 52, 98, 127	0
34	CF	177/177 (100%)	2.65	107 (60%) 0 0	186, 212, 225, 231	0
34	DF	177/177 (100%)	-0.11	0 100 100	45, 78, 126, 139	0
35	CG	176/176 (100%)	2.46	92 (52%) 0 0	138, 164, 187, 198	0
35	DG	176/176 (100%)	-0.13	2 (1%) 80 56	45, 74, 105, 131	0
36	CH	149/149 (100%)	1.15	32 (21%) 0 0	81, 148, 176, 186	0
36	DH	149/149 (100%)	0.92	28 (18%) 1 0	60, 158, 195, 208	0
37	CJ	134/134 (100%)	4.61	106 (79%) 0 0	237, 258, 270, 275	0
37	DJ	134/134 (100%)	3.61	84 (62%) 0 0	204, 238, 246, 254	0
38	CK	142/142 (100%)	0.38	5 (3%) 44 19	91, 108, 135, 150	0
38	DK	142/142 (100%)	-0.50	0 100 100	18, 36, 58, 94	0
39	CL	122/123 (99%)	0.42	9 (7%) 14 4	91, 114, 148, 163	0
39	DL	123/123 (100%)	-0.48	0 100 100	29, 43, 72, 106	0
40	CM	144/144 (100%)	1.63	49 (34%) 0 0	87, 146, 186, 214	0
40	DM	144/144 (100%)	-0.37	0 100 100	19, 50, 81, 115	0
41	CN	135/136 (99%)	0.46	8 (5%) 22 7	75, 113, 134, 162	0
41	DN	135/136 (99%)	-0.58	0 100 100	25, 39, 68, 99	0
42	CO	120/125 (96%)	0.77	13 (10%) 5 2	107, 124, 146, 197	0
42	DO	125/125 (100%)	-0.37	1 (0%) 86 65	23, 37, 73, 145	0
43	CP	116/117 (99%)	2.38	65 (56%) 0 0	132, 154, 173, 181	0
43	DP	117/117 (100%)	-0.22	0 100 100	36, 54, 81, 96	0
44	CQ	114/114 (100%)	1.27	24 (21%) 1 0	110, 127, 146, 168	0
44	DQ	114/114 (100%)	-0.38	1 (0%) 84 62	28, 50, 84, 119	0
45	CR	117/117 (100%)	0.57	11 (9%) 8 2	76, 107, 129, 153	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
45	DR	117/117 (100%)	-0.43	1 (0%) 84 62	15, 30, 49, 85	0
46	CS	103/103 (100%)	1.62	36 (34%) 0 0	94, 127, 152, 164	0
46	DS	103/103 (100%)	-0.56	0 100 100	21, 41, 70, 99	0
47	CT	110/110 (100%)	0.71	16 (14%) 2 1	99, 123, 157, 176	0
47	DT	110/110 (100%)	-0.50	0 100 100	17, 32, 61, 114	0
48	CU	93/93 (100%)	1.67	34 (36%) 0 0	129, 147, 176, 181	0
48	DU	93/93 (100%)	-0.05	2 (2%) 62 33	31, 52, 115, 130	0
49	CV	102/102 (100%)	2.88	58 (56%) 0 0	148, 166, 201, 204	0
49	DV	102/102 (100%)	-0.27	1 (0%) 82 59	40, 62, 97, 129	0
50	CW	94/94 (100%)	0.98	15 (15%) 1 0	114, 140, 159, 164	0
50	DW	94/94 (100%)	-0.49	1 (1%) 80 56	31, 52, 84, 96	0
51	CX	75/76 (98%)	1.07	18 (24%) 0 0	92, 120, 134, 183	0
51	DX	76/76 (100%)	-0.50	1 (1%) 77 51	24, 39, 67, 116	0
52	CY	77/77 (100%)	0.39	3 (3%) 39 16	78, 117, 147, 166	0
52	DY	77/77 (100%)	-0.35	0 100 100	32, 53, 93, 111	0
53	CZ	62/62 (100%)	1.92	28 (45%) 0 0	133, 169, 183, 190	0
53	DZ	62/62 (100%)	0.17	2 (3%) 47 21	42, 70, 110, 138	0
54	DI	135/135 (100%)	1.57	37 (27%) 0 0	81, 152, 215, 229	1 (0%)
55	DA	2873/2904 (98%)	-0.02	89 (3%) 49 22	19, 44, 227, 299	0
All	All	20634/20745 (99%)	0.48	2282 (11%) 5 1	15, 106, 233, 299	1 (0%)

The worst 5 of 2282 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
37	DJ	135	SER	21.4
37	DJ	54	PRO	17.3
37	CJ	13	VAL	17.0
31	CA	2172	U	16.1
37	CJ	59	ILE	15.3

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, 95th percentile and maximum values of B factors of atoms in the group. The column

labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
31	PSU	CA	1917	20/21	0.89	0.24	120,123,132,132	0
31	2MA	CA	2503	23/24	0.89	0.20	90,100,103,104	0
1	2MG	BA	1207	24/25	0.90	0.20	140,147,149,151	0
12	D2T	BL	89	10/11	0.90	0.30	92,99,108,108	0
31	3TD	CA	1915	21/22	0.92	0.21	142,145,154,156	0
1	5MC	BA	967	21/22	0.93	0.24	115,124,127,128	0
31	2MG	CA	1835	24/25	0.93	0.18	76,80,83,83	0
31	PSU	CA	1911	20/21	0.93	0.21	104,121,124,125	0
1	2MG	BA	966	24/25	0.93	0.19	119,123,135,135	0
1	5MC	BA	1407	21/22	0.93	0.18	86,95,98,102	0
31	6MZ	CA	2030	23/24	0.93	0.18	81,86,89,90	0
31	2MG	CA	2445	24/25	0.93	0.27	74,80,84,85	0
1	2MG	BA	1516	24/25	0.93	0.16	66,73,79,81	0
55	3TD	DA	1915	21/22	0.93	0.17	91,98,111,112	0
12	D2T	AL	89	10/11	0.94	0.20	59,64,75,78	0
1	PSU	BA	516	20/21	0.94	0.17	100,101,104,104	0
31	1MG	CA	745	24/25	0.94	0.22	90,92,94,96	0
31	PSU	CA	2504	20/21	0.94	0.17	76,87,89,93	0
31	PSU	CA	2605	20/21	0.94	0.18	82,84,87,88	0
31	6MZ	CA	1618	23/24	0.94	0.22	109,114,116,117	0
41	4D4	CN	81	12/13	0.94	0.22	90,96,114,114	0
31	G7M	CA	2069	24/25	0.95	0.18	80,84,87,88	0
1	MA6	BA	1519	24/25	0.95	0.22	76,78,81,82	0
31	PSU	CA	2457	20/21	0.95	0.18	87,89,92,92	0
1	2MG	AA	1207	24/25	0.95	0.13	89,100,106,109	0
1	MA6	BA	1518	24/25	0.95	0.20	74,80,82,83	0
31	PSU	CA	746	20/21	0.95	0.13	86,98,100,101	0
31	5MU	CA	747	21/22	0.95	0.17	97,103,106,106	0
31	PSU	CA	955	20/21	0.95	0.17	85,87,92,92	0
1	2MG	AA	966	24/25	0.96	0.15	76,84,94,94	0
31	OMC	CA	2498	21/22	0.96	0.22	84,87,93,97	0
31	5MC	CA	1962	21/22	0.96	0.25	81,88,89,92	0
1	G7M	BA	527	24/25	0.96	0.19	93,95,98,99	0
31	OMU	CA	2552	21/22	0.96	0.33	83,84,98,101	0
31	PSU	CA	2580	20/21	0.96	0.16	83,91,93,93	0
1	4OC	BA	1402	22/23	0.96	0.16	78,79,81,82	0
31	OMG	CA	2251	24/25	0.96	0.22	82,83,85,86	0
1	5MC	AA	967	21/22	0.96	0.17	80,86,94,96	0
1	G7M	AA	527	24/25	0.97	0.14	58,70,72,74	0
1	5MC	AA	1407	21/22	0.97	0.14	50,55,58,61	0
1	UR3	AA	1498	21/22	0.97	0.16	55,59,62,66	0
31	5MU	CA	1939	21/22	0.97	0.15	74,76,85,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	2MG	DA	1835	24/25	0.97	0.19	43,49,53,53	0
55	PSU	DA	1911	20/21	0.97	0.14	66,80,82,83	0
1	2MG	AA	1516	24/25	0.97	0.16	50,54,57,58	0
55	PSU	DA	1917	20/21	0.97	0.15	77,81,87,88	0
1	UR3	BA	1498	21/22	0.97	0.11	80,82,84,88	0
1	4OC	AA	1402	22/23	0.98	0.15	60,61,63,64	0
1	PSU	AA	516	20/21	0.98	0.13	75,79,82,82	0
1	MA6	AA	1518	24/25	0.98	0.17	41,46,49,51	0
55	5MC	DA	1962	21/22	0.98	0.18	33,44,47,50	0
55	PSU	DA	2604	20/21	0.98	0.17	33,39,50,51	0
1	MA6	AA	1519	24/25	0.98	0.17	44,48,49,50	0
41	4D4	DN	81[A]	12/13	0.98	0.19	29,40,50,51	9
41	4D4	DN	81[B]	12/13	0.98	0.19	21,29,35,36	9
55	1MG	DA	745	24/25	0.99	0.17	18,25,33,38	0
55	PSU	DA	746	20/21	0.99	0.16	18,24,29,33	0
55	5MU	DA	1939	21/22	0.99	0.21	31,36,39,44	0
55	5MU	DA	747	21/22	0.99	0.16	24,31,35,40	0
55	6MZ	DA	2030	23/24	0.99	0.19	13,20,24,33	0
55	G7M	DA	2069	24/25	0.99	0.17	30,33,35,38	0
55	OMG	DA	2251	24/25	0.99	0.17	22,27,45,51	0
55	2MG	DA	2445	24/25	0.99	0.18	17,23,27,29	0
55	H2U	DA	2449	20/21	0.99	0.18	25,28,29,32	0
55	PSU	DA	2457	20/21	0.99	0.16	23,26,31,32	0
55	OMC	DA	2498	21/22	0.99	0.18	15,24,25,29	0
55	2MA	DA	2503	23/24	0.99	0.20	17,29,37,40	0
55	PSU	DA	2504	20/21	0.99	0.18	33,36,37,40	0
55	OMU	DA	2552	21/22	0.99	0.18	30,32,35,44	0
55	PSU	DA	2580	20/21	0.99	0.17	20,24,29,32	0
55	PSU	DA	955	20/21	0.99	0.18	24,25,28,28	0
55	PSU	DA	2605	20/21	0.99	0.16	30,35,41,44	0
55	6MZ	DA	1618	23/24	0.99	0.15	24,29,32,37	0
32	MEQ	DD	150[A]	10/11	0.99	0.19	7,12,22,24	10
32	MEQ	DD	150[B]	10/11	0.99	0.19	18,24,29,30	10

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3154	1/1	0.16	0.70	152,152,152,152	0
56	MG	CA	3139	1/1	0.21	0.72	114,114,114,114	0
56	MG	CA	3060	1/1	0.24	0.40	194,194,194,194	0
56	MG	DA	3183	1/1	0.28	2.52	97,97,97,97	0
56	MG	DA	3179	1/1	0.36	0.62	102,102,102,102	0
56	MG	CA	3126	1/1	0.38	0.39	107,107,107,107	0
56	MG	CA	3038	1/1	0.41	0.13	234,234,234,234	0
56	MG	BA	1630	1/1	0.42	0.15	271,271,271,271	0
56	MG	AA	1606	1/1	0.46	0.84	125,125,125,125	0
56	MG	CA	3134	1/1	0.50	0.61	107,107,107,107	0
56	MG	AA	1603	1/1	0.51	0.50	108,108,108,108	0
56	MG	CA	3140	1/1	0.53	0.46	88,88,88,88	0
56	MG	CA	3110	1/1	0.54	0.24	92,92,92,92	0
56	MG	CA	3075	1/1	0.54	2.38	238,238,238,238	0
56	MG	BA	1604	1/1	0.55	0.51	272,272,272,272	0
56	MG	CA	3113	1/1	0.58	0.56	90,90,90,90	0
56	MG	DA	3166	1/1	0.58	0.27	81,81,81,81	0
56	MG	AA	1614	1/1	0.59	0.85	117,117,117,117	0
56	MG	CA	3132	1/1	0.59	0.50	102,102,102,102	0
56	MG	CA	3105	1/1	0.59	1.37	250,250,250,250	0
56	MG	CA	3055	1/1	0.60	0.16	260,260,260,260	0
56	MG	AA	1626	1/1	0.61	0.94	111,111,111,111	0
56	MG	AA	1625	1/1	0.62	0.66	90,90,90,90	0
56	MG	AA	1619	1/1	0.63	0.61	90,90,90,90	0
59	PUT	AA	1675	6/6	0.63	0.70	101,102,103,103	0
56	MG	CA	3021	1/1	0.64	0.79	260,260,260,260	0
56	MG	BA	1609	1/1	0.64	0.22	270,270,270,270	0
56	MG	CA	3014	1/1	0.64	0.16	161,161,161,161	0
56	MG	BA	1638	1/1	0.65	0.70	109,109,109,109	0
58	MPD	DE	301	8/8	0.65	0.84	153,155,156,156	0
56	MG	CA	3047	1/1	0.65	0.69	272,272,272,272	0
63	PGE	D3	101	10/10	0.65	0.81	105,111,114,114	0
56	MG	CA	3129	1/1	0.67	0.40	125,125,125,125	0
56	MG	CA	3152	1/1	0.67	0.39	158,158,158,158	0
56	MG	CA	3007	1/1	0.67	0.31	216,216,216,216	0
56	MG	AA	1617	1/1	0.68	0.39	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3135	1/1	0.68	0.29	81,81,81,81	0
59	PUT	AA	1674	6/6	0.69	0.63	112,117,121,123	0
56	MG	CA	3124	1/1	0.69	0.31	156,156,156,156	0
56	MG	CA	3106	1/1	0.69	0.28	84,84,84,84	0
56	MG	CA	3001	1/1	0.70	0.22	291,291,291,291	0
56	MG	BA	1616	1/1	0.70	0.27	185,185,185,185	0
61	PEG	D3	102	7/7	0.70	1.26	88,94,99,99	0
63	PGE	D1	102	10/10	0.70	0.68	113,119,122,122	0
56	MG	BA	1641	1/1	0.70	0.14	94,94,94,94	0
56	MG	CA	3022	1/1	0.71	0.41	170,170,170,170	0
59	PUT	DA	3198	6/6	0.71	0.61	102,102,104,105	0
56	MG	DA	3154	1/1	0.71	0.17	80,80,80,80	0
56	MG	CA	3111	1/1	0.71	0.39	83,83,83,83	0
56	MG	DA	3171	1/1	0.71	0.68	111,111,111,111	0
56	MG	CA	3116	1/1	0.72	0.51	79,79,79,79	0
56	MG	DA	3170	1/1	0.72	0.53	106,106,106,106	0
58	MPD	DN	201	8/8	0.72	0.45	91,96,102,102	0
68	TRS	DA	3222	8/8	0.72	0.68	107,112,117,117	0
56	MG	CA	3028	1/1	0.73	0.21	277,277,277,277	0
56	MG	DA	3158	1/1	0.73	0.61	75,75,75,75	0
56	MG	CA	3023	1/1	0.73	0.18	245,245,245,245	0
59	PUT	DA	3207	6/6	0.73	0.45	95,100,104,105	0
56	MG	CA	3131	1/1	0.74	0.31	56,56,56,56	0
56	MG	DB	206	1/1	0.74	0.33	129,129,129,129	0
61	PEG	DP	201	7/7	0.74	0.72	108,109,109,110	0
61	PEG	DQ	201	7/7	0.75	0.78	92,94,96,97	0
56	MG	CA	3061	1/1	0.75	0.16	250,250,250,250	0
56	MG	CA	3133	1/1	0.75	0.30	88,88,88,88	0
56	MG	DA	3168	1/1	0.75	0.49	65,65,65,65	0
56	MG	CA	3031	1/1	0.76	0.09	87,87,87,87	0
61	PEG	D1	103	7/7	0.76	0.45	81,87,93,95	0
56	MG	AA	1623	1/1	0.76	0.41	77,77,77,77	0
66	ACY	DA	3199	4/4	0.76	0.41	108,109,109,109	0
56	MG	AA	1622	1/1	0.76	1.23	112,112,112,112	0
56	MG	CA	3136	1/1	0.77	0.34	82,82,82,82	0
56	MG	AA	1604	1/1	0.77	0.35	66,66,66,66	0
56	MG	CA	3122	1/1	0.77	1.02	100,100,100,100	0
56	MG	CA	3127	1/1	0.77	0.14	87,87,87,87	0
56	MG	DA	3181	1/1	0.78	0.44	85,85,85,85	0
59	PUT	DA	3224	6/6	0.78	0.37	50,53,55,56	0
56	MG	DA	3175	1/1	0.78	0.42	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	PG4	DR	202	13/13	0.78	0.40	98,111,116,116	0
56	MG	AA	1602	1/1	0.78	0.39	81,81,81,81	0
56	MG	CA	3130	1/1	0.79	0.23	72,72,72,72	0
58	MPD	DT	201	8/8	0.79	0.39	111,114,115,115	0
59	PUT	DA	3215	6/6	0.79	0.42	83,90,96,98	0
58	MPD	DA	3004	8/8	0.79	0.37	106,109,119,121	0
63	PGE	DS	201	10/10	0.79	0.46	87,98,101,102	0
56	MG	AA	1664	1/1	0.79	0.45	225,225,225,225	0
56	MG	AA	1660	1/1	0.79	0.22	277,277,277,277	0
56	MG	CA	3076	1/1	0.80	0.15	163,163,163,163	0
56	MG	BA	1614	1/1	0.80	0.11	136,136,136,136	0
56	MG	AA	1621	1/1	0.80	0.34	69,69,69,69	0
61	PEG	DA	3220	7/7	0.80	0.35	136,137,139,139	0
62	EDO	DA	3003	4/4	0.80	0.51	97,98,98,98	0
56	MG	CA	3039	1/1	0.80	1.17	252,252,252,252	0
56	MG	DA	3133	1/1	0.80	0.29	68,68,68,68	0
59	PUT	DA	3223	6/6	0.80	0.66	118,122,122,123	0
56	MG	DA	3148	1/1	0.80	0.30	84,84,84,84	0
56	MG	CA	3006	1/1	0.80	0.10	144,144,144,144	0
56	MG	DA	3156	1/1	0.81	0.44	83,83,83,83	0
56	MG	BA	1602	1/1	0.81	0.07	90,90,90,90	0
56	MG	BA	1637	1/1	0.81	0.77	87,87,87,87	0
56	MG	CA	3149	1/1	0.81	0.46	76,76,76,76	0
61	PEG	DA	3202	7/7	0.81	0.56	87,88,91,91	0
56	MG	AA	1628	1/1	0.81	0.38	118,118,118,118	0
56	MG	AA	1609	1/1	0.81	0.30	84,84,84,84	0
56	MG	BA	1612	1/1	0.81	0.45	201,201,201,201	0
56	MG	DA	3132	1/1	0.81	0.24	78,78,78,78	0
56	MG	CA	3002	1/1	0.81	0.31	265,265,265,265	0
56	MG	AA	1627	1/1	0.81	0.40	83,83,83,83	0
56	MG	AA	1678	1/1	0.81	0.14	59,59,59,59	0
59	PUT	AA	1672	6/6	0.82	0.36	79,82,85,85	0
56	MG	BA	1639	1/1	0.82	0.28	103,103,103,103	0
56	MG	CA	3114	1/1	0.82	0.29	51,51,51,51	0
56	MG	AA	1612	1/1	0.82	0.33	78,78,78,78	0
57	PG4	DS	202	13/13	0.82	0.43	67,78,83,83	0
56	MG	CB	201	1/1	0.83	0.07	157,157,157,157	0
61	PEG	DA	3203	7/7	0.83	0.62	84,88,95,96	0
56	MG	DA	3173	1/1	0.83	0.26	69,69,69,69	0
56	MG	DA	3157	1/1	0.83	0.15	69,69,69,69	0
62	EDO	DA	3005	4/4	0.83	0.30	104,105,107,110	0
62	EDO	DA	3217	4/4	0.83	0.28	84,85,86,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3077	1/1	0.83	0.32	206,206,206,206	0
56	MG	CA	3092	1/1	0.83	0.14	195,195,195,195	0
56	MG	CA	3123	1/1	0.83	0.26	104,104,104,104	0
56	MG	DA	3169	1/1	0.83	0.94	95,95,95,95	0
56	MG	BA	1603	1/1	0.83	0.64	276,276,276,276	0
56	MG	BA	1640	1/1	0.84	0.32	118,118,118,118	0
56	MG	AA	1616	1/1	0.84	0.53	75,75,75,75	0
58	MPD	DA	3206	8/8	0.84	0.64	85,88,99,101	0
56	MG	CA	3019	1/1	0.84	0.16	62,62,62,62	0
59	PUT	AA	1673	6/6	0.84	0.50	110,110,112,112	0
56	MG	CA	3026	1/1	0.84	0.67	129,129,129,129	0
56	MG	DA	3185	1/1	0.84	0.33	70,70,70,70	0
57	PG4	AA	1670	13/13	0.84	0.32	74,86,104,104	0
56	MG	DA	3139	1/1	0.84	0.27	86,86,86,86	0
59	PUT	DA	3214	6/6	0.84	0.30	71,79,82,85	0
56	MG	CA	3063	1/1	0.84	0.13	103,103,103,103	0
56	MG	CA	3068	1/1	0.84	0.24	185,185,185,185	0
64	SPD	DA	3208	10/10	0.84	0.23	112,117,118,119	0
58	MPD	DE	302	8/8	0.84	0.68	91,94,97,97	0
56	MG	CA	3070	1/1	0.84	0.08	79,79,79,79	0
61	PEG	DA	3228	7/7	0.85	0.28	64,78,90,90	0
62	EDO	DB	210	4/4	0.85	0.29	95,95,96,97	0
56	MG	CA	3119	1/1	0.85	0.22	76,76,76,76	0
56	MG	CA	3120	1/1	0.85	0.41	168,168,168,168	0
62	EDO	DA	3211	4/4	0.85	0.39	103,104,104,106	0
56	MG	CA	3005	1/1	0.85	1.22	235,235,235,235	0
56	MG	CA	3057	1/1	0.85	0.16	121,121,121,121	0
56	MG	CA	3069	1/1	0.85	0.18	135,135,135,135	0
56	MG	BA	1606	1/1	0.85	0.22	273,273,273,273	0
64	SPD	DA	3186	10/10	0.85	0.49	84,87,91,91	0
56	MG	CA	3048	1/1	0.85	0.09	97,97,97,97	0
56	MG	DA	3124	1/1	0.85	1.08	49,49,49,49	0
67	GUN	DA	3213	11/11	0.85	0.58	119,121,122,122	0
56	MG	DA	3125	1/1	0.85	0.45	81,81,81,81	0
56	MG	CA	3043	1/1	0.86	0.07	90,90,90,90	0
56	MG	DA	3136	1/1	0.86	0.33	87,87,87,87	0
56	MG	DA	3178	1/1	0.86	0.69	89,89,89,89	0
56	MG	CA	3137	1/1	0.86	0.48	117,117,117,117	0
56	MG	CA	3067	1/1	0.86	0.77	278,278,278,278	0
56	MG	CA	3045	1/1	0.86	0.12	110,110,110,110	0
62	EDO	DA	3210	4/4	0.86	0.27	88,88,89,89	0
56	MG	AA	1642	1/1	0.86	0.31	126,126,126,126	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3150	1/1	0.86	0.97	89,89,89,89	0
57	PG4	BA	1642	13/13	0.86	0.42	77,87,100,100	0
56	MG	BA	1607	1/1	0.86	0.38	195,195,195,195	0
56	MG	CA	3054	1/1	0.86	0.09	105,105,105,105	0
56	MG	DA	3167	1/1	0.86	0.41	63,63,63,63	0
56	MG	BA	1634	1/1	0.86	0.07	199,199,199,199	0
56	MG	AA	1658	1/1	0.86	0.10	65,65,65,65	0
56	MG	AA	1620	1/1	0.86	0.30	67,67,67,67	0
56	MG	AA	1601	1/1	0.86	1.10	86,86,86,86	0
56	MG	AA	1608	1/1	0.87	0.48	87,87,87,87	0
57	PG4	DA	3196	13/13	0.87	0.93	90,94,96,97	0
65	1PE	DA	3205	16/16	0.87	0.33	77,84,87,88	0
56	MG	CA	3151	1/1	0.87	0.31	72,72,72,72	0
56	MG	DA	3174	1/1	0.87	0.49	90,90,90,90	0
56	MG	CA	3009	1/1	0.87	0.17	222,222,222,222	0
56	MG	DB	205	1/1	0.88	0.47	73,73,73,73	0
62	EDO	DB	211	4/4	0.88	0.31	98,99,99,100	0
56	MG	CA	3065	1/1	0.88	0.09	107,107,107,107	0
59	PUT	DA	3221	6/6	0.88	0.38	65,71,74,75	0
62	EDO	DA	3201	4/4	0.88	0.23	91,92,93,94	0
58	MPD	DA	3195	8/8	0.88	0.55	92,97,98,98	0
56	MG	CA	3128	1/1	0.88	0.23	81,81,81,81	0
58	MPD	DA	3209	8/8	0.88	0.42	90,94,98,98	0
58	MPD	DA	3212	8/8	0.88	0.28	83,85,86,90	0
61	PEG	DL	201	7/7	0.88	0.25	73,79,80,80	0
56	MG	CA	3062	1/1	0.88	0.28	232,232,232,232	0
63	PGE	DU	101	10/10	0.88	0.36	71,82,92,93	0
58	MPD	AA	1671	8/8	0.88	0.61	109,110,113,114	0
56	MG	CA	3115	1/1	0.88	0.23	77,77,77,77	0
56	MG	BA	1626	1/1	0.88	0.06	92,92,92,92	0
58	MPD	DK	201	8/8	0.88	0.29	104,107,110,111	0
56	MG	CA	3104	1/1	0.88	0.10	196,196,196,196	0
61	PEG	DA	3229	7/7	0.88	0.33	79,83,88,88	0
56	MG	CA	3032	1/1	0.89	0.15	236,236,236,236	0
56	MG	DA	3127	1/1	0.89	0.24	60,60,60,60	0
56	MG	CA	3156	1/1	0.89	0.22	210,210,210,210	0
61	PEG	AL	201	7/7	0.89	0.29	87,91,98,100	0
56	MG	AA	1636	1/1	0.89	0.17	110,110,110,110	0
56	MG	AA	1655	1/1	0.89	0.20	214,214,214,214	0
56	MG	DB	209	1/1	0.89	0.53	71,71,71,71	0
56	MG	CA	3141	1/1	0.89	0.14	53,53,53,53	0
56	MG	AA	1624	1/1	0.90	0.61	107,107,107,107	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3147	1/1	0.90	0.39	25,25,25,25	1
56	MG	AA	1666	1/1	0.90	0.06	97,97,97,97	0
58	MPD	DA	3193	8/8	0.90	0.33	89,91,93,93	0
56	MG	CA	3093	1/1	0.90	0.09	72,72,72,72	0
56	MG	AA	1613	1/1	0.90	0.90	64,64,64,64	0
56	MG	DA	3177	1/1	0.90	0.47	80,80,80,80	0
57	PG4	DA	3218	13/13	0.90	0.35	90,94,98,99	0
56	MG	CA	3073	1/1	0.90	0.21	175,175,175,175	0
56	MG	BA	1625	1/1	0.90	0.07	235,235,235,235	0
56	MG	CA	3108	1/1	0.90	0.18	65,65,65,65	0
56	MG	CA	3034	1/1	0.90	0.10	235,235,235,235	0
62	EDO	D1	101	4/4	0.91	0.18	61,62,64,66	0
56	MG	DA	3165	1/1	0.91	0.14	72,72,72,72	0
56	MG	DA	3143	1/1	0.91	0.39	51,51,51,51	0
62	EDO	DA	3002	4/4	0.91	0.30	78,79,79,79	0
63	PGE	DA	3219	10/10	0.91	0.35	85,88,91,91	0
56	MG	DA	3130	1/1	0.91	1.05	68,68,68,68	0
56	MG	DA	3149	1/1	0.91	0.09	123,123,123,123	0
56	MG	CA	3010	1/1	0.91	0.84	270,270,270,270	0
56	MG	CA	3145	1/1	0.91	0.18	60,60,60,60	0
56	MG	DA	3126	1/1	0.91	0.22	83,83,83,83	0
56	MG	AA	1654	1/1	0.91	0.20	244,244,244,244	0
56	MG	DA	3135	1/1	0.92	0.21	56,56,56,56	0
56	MG	AA	1605	1/1	0.92	0.73	91,91,91,91	0
56	MG	DA	3138	1/1	0.92	0.21	72,72,72,72	0
56	MG	CA	3112	1/1	0.92	0.24	65,65,65,65	0
56	MG	AA	1615	1/1	0.92	0.45	81,81,81,81	0
56	MG	DA	3145	1/1	0.92	0.22	63,63,63,63	0
56	MG	DA	3184	1/1	0.92	0.26	74,74,74,74	0
56	MG	CA	3044	1/1	0.92	0.07	49,49,49,49	0
59	PUT	DA	3191	6/6	0.92	0.24	48,54,57,59	0
59	PUT	DA	3192	6/6	0.92	0.26	44,49,50,50	0
56	MG	CA	3079	1/1	0.92	0.11	110,110,110,110	0
56	MG	CA	3080	1/1	0.92	0.27	143,143,143,143	0
56	MG	AA	1633	1/1	0.92	0.15	225,225,225,225	0
56	MG	CA	3046	1/1	0.92	0.13	116,116,116,116	0
56	MG	DB	208	1/1	0.92	0.29	56,56,56,56	0
56	MG	CA	3099	1/1	0.92	0.25	129,129,129,129	0
63	PGE	DD	301	10/10	0.92	0.24	86,89,95,96	0
56	MG	DA	3064	1/1	0.92	0.20	243,243,243,243	0
60	ZN	C5	101	1/1	0.92	0.09	155,155,155,155	0
63	PGE	DA	3216	10/10	0.92	0.41	68,72,83,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	1633	1/1	0.92	0.38	163,163,163,163	0
56	MG	BA	1605	1/1	0.92	0.08	206,206,206,206	0
56	MG	CB	203	1/1	0.92	0.06	125,125,125,125	0
56	MG	CA	3142	1/1	0.92	0.14	69,69,69,69	0
56	MG	BA	1636	1/1	0.92	0.44	97,97,97,97	0
56	MG	CA	3146	1/1	0.92	0.24	149,149,149,149	0
56	MG	AA	1610	1/1	0.92	0.28	85,85,85,85	0
56	MG	DR	201	1/1	0.93	0.30	30,30,30,30	0
56	MG	DA	3146	1/1	0.93	0.80	80,80,80,80	0
56	MG	CA	3121	1/1	0.93	0.15	60,60,60,60	0
56	MG	CA	3008	1/1	0.93	0.07	131,131,131,131	0
56	MG	AA	1640	1/1	0.93	0.10	60,60,60,60	0
59	PUT	DA	3187	6/6	0.93	0.22	49,51,53,54	0
56	MG	AA	1632	1/1	0.93	0.06	94,94,94,94	0
56	MG	CA	3125	1/1	0.93	0.23	97,97,97,97	0
56	MG	CA	3109	1/1	0.93	0.24	63,63,63,63	0
57	PG4	DQ	202	13/13	0.93	0.29	66,71,76,78	0
56	MG	DA	3161	1/1	0.93	0.16	119,119,119,119	0
56	MG	DA	3163	1/1	0.93	0.44	78,78,78,78	0
56	MG	DA	3164	1/1	0.93	0.24	62,62,62,62	0
56	MG	CA	3143	1/1	0.93	0.22	104,104,104,104	0
56	MG	AA	1611	1/1	0.93	0.12	91,91,91,91	0
56	MG	AA	1618	1/1	0.93	0.82	83,83,83,83	0
56	MG	CA	3049	1/1	0.93	0.13	56,56,56,56	0
56	MG	AA	1638	1/1	0.93	0.06	100,100,100,100	0
56	MG	BA	1631	1/1	0.93	0.07	63,63,63,63	0
56	MG	CA	3094	1/1	0.93	0.08	68,68,68,68	0
56	MG	AA	1659	1/1	0.93	0.09	61,61,61,61	0
56	MG	CA	3102	1/1	0.93	0.14	107,107,107,107	0
56	MG	CA	3155	1/1	0.93	0.23	126,126,126,126	0
56	MG	DA	3176	1/1	0.93	0.41	92,92,92,92	0
56	MG	CA	3071	1/1	0.93	0.21	146,146,146,146	0
56	MG	CA	3148	1/1	0.94	0.44	50,50,50,50	1
56	MG	CA	3012	1/1	0.94	0.10	89,89,89,89	0
56	MG	DA	3087	1/1	0.94	0.14	49,49,49,49	0
56	MG	AA	1669	1/1	0.94	0.13	89,89,89,89	0
56	MG	BA	1627	1/1	0.94	0.39	142,142,142,142	0
56	MG	BA	1617	1/1	0.94	0.12	130,130,130,130	0
56	MG	BA	1610	1/1	0.94	0.08	130,130,130,130	0
58	MPD	AA	1676	8/8	0.94	0.42	87,90,96,97	0
56	MG	CA	3036	1/1	0.94	0.09	102,102,102,102	0
63	PGE	DA	3189	10/10	0.94	0.18	42,45,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3064	1/1	0.94	0.48	274,274,274,274	0
56	MG	DA	3160	1/1	0.94	0.55	57,57,57,57	0
63	PGE	DA	3227	10/10	0.94	0.28	81,90,107,109	0
56	MG	BA	1644	1/1	0.94	0.13	64,64,64,64	0
56	MG	DA	3134	1/1	0.94	0.15	68,68,68,68	0
64	SPD	DA	3226	10/10	0.94	0.23	37,46,63,65	0
56	MG	DB	204	1/1	0.94	0.11	48,48,48,48	0
66	ACY	DA	3194	4/4	0.94	0.20	92,93,94,94	0
56	MG	CA	3066	1/1	0.94	0.09	129,129,129,129	0
56	MG	CA	3024	1/1	0.94	0.07	75,75,75,75	0
56	MG	CA	3090	1/1	0.94	0.15	118,118,118,118	0
62	EDO	DA	3197	4/4	0.95	0.27	52,57,59,60	0
62	EDO	DA	3200	4/4	0.95	0.20	53,54,54,55	0
56	MG	DA	3150	1/1	0.95	0.34	63,63,63,63	0
56	MG	CA	3072	1/1	0.95	0.66	274,274,274,274	0
59	PUT	DA	3225	6/6	0.95	0.21	61,62,70,72	0
56	MG	CA	3095	1/1	0.95	0.11	68,68,68,68	0
56	MG	BA	1611	1/1	0.95	0.09	80,80,80,80	0
56	MG	DA	3128	1/1	0.95	0.35	54,54,54,54	0
56	MG	CA	3074	1/1	0.95	0.24	131,131,131,131	0
56	MG	BA	1618	1/1	0.95	0.10	106,106,106,106	0
56	MG	BA	1623	1/1	0.95	0.14	166,166,166,166	0
56	MG	BA	1643	1/1	0.95	0.21	105,105,105,105	0
56	MG	BA	1624	1/1	0.95	0.14	157,157,157,157	0
56	MG	AA	1665	1/1	0.95	0.27	123,123,123,123	0
56	MG	DA	3054	1/1	0.95	0.18	190,190,190,190	0
56	MG	AA	1639	1/1	0.95	0.13	122,122,122,122	0
56	MG	DA	3072	1/1	0.95	0.08	86,86,86,86	0
56	MG	CA	3011	1/1	0.95	0.15	72,72,72,72	0
65	1PE	DA	3188	16/16	0.95	0.18	47,60,87,91	0
56	MG	DA	3100	1/1	0.95	0.22	207,207,207,207	0
56	MG	DA	3172	1/1	0.95	0.22	57,57,57,57	0
56	MG	DA	3147	1/1	0.95	0.25	95,95,95,95	0
66	ACY	DA	3204	4/4	0.95	0.24	75,76,77,77	0
56	MG	DA	3122	1/1	0.95	0.29	76,76,76,76	0
56	MG	AA	1644	1/1	0.95	0.20	115,115,115,115	0
56	MG	DA	3113	1/1	0.96	0.16	280,280,280,280	0
56	MG	AA	1663	1/1	0.96	0.17	99,99,99,99	0
56	MG	DA	3123	1/1	0.96	0.13	78,78,78,78	0
56	MG	CA	3025	1/1	0.96	0.08	88,88,88,88	0
56	MG	AA	1645	1/1	0.96	0.11	61,61,61,61	0
56	MG	BA	1632	1/1	0.96	0.10	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3003	1/1	0.96	0.85	258,258,258,258	0
56	MG	CA	3082	1/1	0.96	0.14	90,90,90,90	0
56	MG	CA	3153	1/1	0.96	0.21	58,58,58,58	0
56	MG	DA	3131	1/1	0.96	0.23	79,79,79,79	0
56	MG	CA	3084	1/1	0.96	0.24	181,181,181,181	0
56	MG	CA	3087	1/1	0.96	0.08	65,65,65,65	0
56	MG	CA	3089	1/1	0.96	0.19	54,54,54,54	0
56	MG	CA	3004	1/1	0.96	0.07	83,83,83,83	0
59	PUT	DM	201	6/6	0.96	0.24	49,50,53,56	0
56	MG	CA	3091	1/1	0.96	0.11	71,71,71,71	0
56	MG	CA	3017	1/1	0.96	0.08	97,97,97,97	0
56	MG	CA	3138	1/1	0.96	0.05	74,74,74,74	0
56	MG	DA	3140	1/1	0.96	0.33	43,43,43,43	1
56	MG	DA	3180	1/1	0.96	0.51	54,54,54,54	0
56	MG	DB	207	1/1	0.96	0.66	84,84,84,84	0
56	MG	BA	1613	1/1	0.96	0.21	112,112,112,112	0
56	MG	CA	3037	1/1	0.96	0.15	107,107,107,107	0
56	MG	DA	3014	1/1	0.96	0.17	122,122,122,122	0
56	MG	DA	3017	1/1	0.96	0.12	60,60,60,60	0
56	MG	AA	1641	1/1	0.96	0.07	65,65,65,65	0
60	ZN	AB	301	1/1	0.96	0.07	141,141,141,141	0
56	MG	AA	1661	1/1	0.96	0.17	178,178,178,178	0
56	MG	CA	3100	1/1	0.96	0.17	90,90,90,90	0
56	MG	DA	3155	1/1	0.96	0.43	73,73,73,73	0
56	MG	AA	1667	1/1	0.96	0.09	42,42,42,42	0
56	MG	DA	3094	1/1	0.96	0.14	36,36,36,36	0
56	MG	DA	3099	1/1	0.96	0.09	31,31,31,31	0
56	MG	DA	3159	1/1	0.96	0.14	70,70,70,70	0
56	MG	CA	3103	1/1	0.96	0.11	82,82,82,82	0
56	MG	DA	3065	1/1	0.97	0.12	120,120,120,120	0
56	MG	DA	3067	1/1	0.97	0.16	26,26,26,26	0
56	MG	AA	1656	1/1	0.97	0.12	95,95,95,95	0
56	MG	DA	3076	1/1	0.97	0.09	39,39,39,39	0
56	MG	DA	3082	1/1	0.97	0.13	173,173,173,173	0
56	MG	DA	3083	1/1	0.97	0.10	46,46,46,46	0
56	MG	DA	3084	1/1	0.97	0.04	75,75,75,75	0
56	MG	CA	3097	1/1	0.97	0.09	109,109,109,109	0
56	MG	CA	3056	1/1	0.97	0.13	66,66,66,66	0
56	MG	DA	3096	1/1	0.97	0.13	19,19,19,19	0
56	MG	BA	1608	1/1	0.97	0.17	114,114,114,114	0
56	MG	AA	1647	1/1	0.97	0.12	157,157,157,157	0
56	MG	DA	3109	1/1	0.97	0.17	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	1630	1/1	0.97	0.11	102,102,102,102	0
56	MG	DA	3121	1/1	0.97	0.30	64,64,64,64	0
56	MG	CA	3078	1/1	0.97	0.08	133,133,133,133	0
56	MG	CA	3040	1/1	0.97	0.07	85,85,85,85	0
56	MG	CA	3015	1/1	0.97	0.17	48,48,48,48	0
56	MG	CA	3107	1/1	0.97	0.29	65,65,65,65	0
56	MG	CA	3016	1/1	0.97	0.54	150,150,150,150	0
56	MG	CA	3083	1/1	0.97	0.09	136,136,136,136	0
56	MG	DD	302	1/1	0.97	0.22	41,41,41,41	0
56	MG	DA	3129	1/1	0.97	0.28	64,64,64,64	0
56	MG	CA	3029	1/1	0.97	0.14	166,166,166,166	0
56	MG	DB	201	1/1	0.97	0.10	56,56,56,56	0
56	MG	CA	3085	1/1	0.97	0.07	56,56,56,56	0
56	MG	AA	1634	1/1	0.97	0.22	163,163,163,163	0
56	MG	BA	1621	1/1	0.97	0.18	29,29,29,29	0
56	MG	CA	3033	1/1	0.97	0.07	79,79,79,79	0
56	MG	BA	1601	1/1	0.97	0.24	158,158,158,158	0
56	MG	DA	3137	1/1	0.97	0.06	96,96,96,96	0
56	MG	CA	3052	1/1	0.97	0.11	60,60,60,60	0
56	MG	CA	3117	1/1	0.97	0.35	76,76,76,76	0
56	MG	CA	3118	1/1	0.97	0.23	47,47,47,47	0
56	MG	DA	3032	1/1	0.97	0.20	47,47,47,47	0
56	MG	DA	3144	1/1	0.97	0.26	72,72,72,72	0
56	MG	CA	3053	1/1	0.97	0.12	58,58,58,58	0
56	MG	CA	3035	1/1	0.97	0.17	83,83,83,83	0
56	MG	DA	3070	1/1	0.98	0.17	37,37,37,37	0
56	MG	DA	3153	1/1	0.98	0.19	33,33,33,33	0
56	MG	AA	1635	1/1	0.98	0.14	119,119,119,119	0
56	MG	DA	3074	1/1	0.98	0.25	53,53,53,53	0
56	MG	AA	1657	1/1	0.98	0.18	116,116,116,116	0
56	MG	DA	3078	1/1	0.98	0.11	32,32,32,32	0
56	MG	DA	3081	1/1	0.98	0.25	130,130,130,130	0
56	MG	AA	1629	1/1	0.98	0.17	99,99,99,99	0
56	MG	CA	3096	1/1	0.98	0.05	97,97,97,97	0
56	MG	BA	1619	1/1	0.98	0.12	70,70,70,70	0
56	MG	DA	3162	1/1	0.98	0.11	67,67,67,67	0
56	MG	CA	3098	1/1	0.98	0.07	91,91,91,91	0
56	MG	DA	3089	1/1	0.98	0.17	32,32,32,32	0
56	MG	DA	3091	1/1	0.98	0.20	30,30,30,30	0
56	MG	BA	1620	1/1	0.98	0.10	115,115,115,115	0
56	MG	CA	3027	1/1	0.98	0.15	61,61,61,61	0
56	MG	DA	3097	1/1	0.98	0.15	106,106,106,106	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3101	1/1	0.98	0.09	71,71,71,71	0
56	MG	CA	3050	1/1	0.98	0.07	51,51,51,51	0
56	MG	DA	3102	1/1	0.98	0.16	29,29,29,29	0
56	MG	DA	3103	1/1	0.98	0.15	50,50,50,50	0
56	MG	AA	1648	1/1	0.98	0.05	77,77,77,77	0
56	MG	AA	1677	1/1	0.98	0.08	155,155,155,155	0
56	MG	DA	3116	1/1	0.98	0.09	40,40,40,40	0
56	MG	DA	3119	1/1	0.98	0.14	82,82,82,82	0
56	MG	DA	3120	1/1	0.98	0.10	48,48,48,48	0
56	MG	CA	3030	1/1	0.98	0.07	84,84,84,84	0
56	MG	AA	1650	1/1	0.98	0.10	87,87,87,87	0
56	MG	AA	1651	1/1	0.98	0.05	68,68,68,68	0
56	MG	AA	1662	1/1	0.98	0.20	89,89,89,89	0
56	MG	DA	3182	1/1	0.98	0.46	109,109,109,109	0
56	MG	CA	3058	1/1	0.98	0.09	87,87,87,87	0
56	MG	CA	3013	1/1	0.98	0.17	123,123,123,123	0
56	MG	AA	1607	1/1	0.98	0.63	90,90,90,90	0
56	MG	DA	3232	1/1	0.98	0.23	30,30,30,30	0
56	MG	BA	1628	1/1	0.98	0.06	70,70,70,70	0
56	MG	DA	3007	1/1	0.98	0.13	77,77,77,77	0
56	MG	DA	3009	1/1	0.98	0.07	82,82,82,82	0
56	MG	CA	3086	1/1	0.98	0.05	74,74,74,74	0
56	MG	CB	202	1/1	0.98	0.05	100,100,100,100	0
56	MG	DA	3025	1/1	0.98	0.19	26,26,26,26	0
56	MG	DA	3028	1/1	0.98	0.07	83,83,83,83	0
56	MG	BA	1629	1/1	0.98	0.55	144,144,144,144	0
56	MG	DA	3035	1/1	0.98	0.14	22,22,22,22	0
56	MG	DA	3039	1/1	0.98	0.23	21,21,21,21	0
56	MG	DA	3045	1/1	0.98	0.14	41,41,41,41	0
56	MG	DA	3046	1/1	0.98	0.04	61,61,61,61	0
56	MG	DA	3049	1/1	0.98	0.12	48,48,48,48	0
58	MPD	DS	203	8/8	0.98	0.23	55,56,58,61	0
64	SPD	DA	3190	10/10	0.98	0.22	38,46,49,53	0
56	MG	DA	3141	1/1	0.98	0.19	57,57,57,57	0
56	MG	DA	3142	1/1	0.98	0.21	74,74,74,74	0
56	MG	DA	3051	1/1	0.98	0.14	46,46,46,46	0
56	MG	CA	3018	1/1	0.98	0.11	125,125,125,125	0
56	MG	DA	3056	1/1	0.98	0.13	151,151,151,151	0
56	MG	AA	1631	1/1	0.98	0.06	43,43,43,43	0
56	MG	CA	3144	1/1	0.98	0.05	60,60,60,60	0
56	MG	BA	1615	1/1	0.98	0.10	65,65,65,65	0
56	MG	DA	3069	1/1	0.98	0.15	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	1646	1/1	0.99	0.06	57,57,57,57	0
56	MG	DM	202	1/1	0.99	0.05	43,43,43,43	0
56	MG	DA	3040	1/1	0.99	0.11	20,20,20,20	0
56	MG	DA	3042	1/1	0.99	0.06	56,56,56,56	0
56	MG	DA	3043	1/1	0.99	0.18	13,13,13,13	0
56	MG	DA	3044	1/1	0.99	0.13	29,29,29,29	0
56	MG	AA	1637	1/1	0.99	0.08	43,43,43,43	0
56	MG	CA	3051	1/1	0.99	0.08	52,52,52,52	0
56	MG	DA	3047	1/1	0.99	0.07	61,61,61,61	0
56	MG	DA	3048	1/1	0.99	0.12	36,36,36,36	0
56	MG	DB	203	1/1	0.99	0.12	34,34,34,34	0
56	MG	AA	1652	1/1	0.99	0.22	30,30,30,30	0
56	MG	DA	3052	1/1	0.99	0.14	29,29,29,29	0
56	MG	DA	3053	1/1	0.99	0.13	22,22,22,22	0
56	MG	CA	3081	1/1	0.99	0.12	82,82,82,82	0
56	MG	DA	3055	1/1	0.99	0.09	40,40,40,40	0
56	MG	CA	3020	1/1	0.99	0.16	60,60,60,60	0
56	MG	DA	3057	1/1	0.99	0.23	30,30,30,30	0
56	MG	DA	3058	1/1	0.99	0.14	38,38,38,38	0
56	MG	DA	3059	1/1	0.99	0.13	27,27,27,27	0
56	MG	DA	3060	1/1	0.99	0.10	31,31,31,31	0
56	MG	DA	3061	1/1	0.99	0.08	33,33,33,33	0
56	MG	DA	3063	1/1	0.99	0.16	36,36,36,36	0
56	MG	CA	3041	1/1	0.99	0.08	62,62,62,62	0
56	MG	CA	3042	1/1	0.99	0.12	87,87,87,87	0
56	MG	DA	3066	1/1	0.99	0.08	44,44,44,44	0
56	MG	BA	1622	1/1	0.99	0.07	104,104,104,104	0
56	MG	DA	3068	1/1	0.99	0.16	37,37,37,37	0
56	MG	DA	3001	1/1	0.99	0.13	25,25,25,25	0
56	MG	DA	3006	1/1	0.99	0.09	75,75,75,75	0
56	MG	AA	1653	1/1	0.99	0.08	67,67,67,67	0
56	MG	DA	3151	1/1	0.99	0.09	41,41,41,41	0
60	ZN	D5	101	1/1	0.99	0.15	56,56,56,56	0
56	MG	DA	3073	1/1	0.99	0.06	49,49,49,49	0
56	MG	DA	3008	1/1	0.99	0.10	77,77,77,77	0
56	MG	DA	3075	1/1	0.99	0.10	23,23,23,23	0
56	MG	AA	1643	1/1	0.99	0.17	69,69,69,69	0
56	MG	DA	3010	1/1	0.99	0.05	74,74,74,74	0
56	MG	DA	3079	1/1	0.99	0.06	31,31,31,31	0
56	MG	DA	3080	1/1	0.99	0.06	50,50,50,50	0
56	MG	DA	3011	1/1	0.99	0.12	20,20,20,20	0
56	MG	DA	3013	1/1	0.99	0.09	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3088	1/1	0.99	0.06	78,78,78,78	0
56	MG	CA	3059	1/1	0.99	0.09	70,70,70,70	0
56	MG	DA	3085	1/1	0.99	0.06	52,52,52,52	0
56	MG	DA	3018	1/1	0.99	0.10	69,69,69,69	0
56	MG	DA	3088	1/1	0.99	0.11	36,36,36,36	0
56	MG	DA	3020	1/1	0.99	0.10	42,42,42,42	0
56	MG	DA	3090	1/1	0.99	0.06	52,52,52,52	0
56	MG	DA	3021	1/1	0.99	0.24	9,9,9,9	0
56	MG	DA	3092	1/1	0.99	0.13	23,23,23,23	0
56	MG	DA	3093	1/1	0.99	0.15	23,23,23,23	0
56	MG	DA	3022	1/1	0.99	0.10	43,43,43,43	0
56	MG	DA	3095	1/1	0.99	0.19	26,26,26,26	0
56	MG	DA	3023	1/1	0.99	0.13	22,22,22,22	0
56	MG	DA	3024	1/1	0.99	0.14	28,28,28,28	0
56	MG	AA	1649	1/1	0.99	0.05	57,57,57,57	0
56	MG	DA	3026	1/1	0.99	0.20	33,33,33,33	0
56	MG	DA	3101	1/1	0.99	0.16	22,22,22,22	0
56	MG	AA	1668	1/1	0.99	0.11	58,58,58,58	0
56	MG	DA	3029	1/1	0.99	0.20	48,48,48,48	0
56	MG	DA	3104	1/1	0.99	0.10	37,37,37,37	0
56	MG	DA	3105	1/1	0.99	0.13	38,38,38,38	0
56	MG	DA	3107	1/1	0.99	0.17	25,25,25,25	0
56	MG	DA	3108	1/1	0.99	0.17	37,37,37,37	0
56	MG	DA	3030	1/1	0.99	0.10	55,55,55,55	0
56	MG	DA	3230	1/1	0.99	0.05	53,53,53,53	0
56	MG	DA	3231	1/1	0.99	0.06	46,46,46,46	0
56	MG	DA	3110	1/1	0.99	0.09	32,32,32,32	0
56	MG	DA	3111	1/1	0.99	0.14	32,32,32,32	0
56	MG	DA	3112	1/1	0.99	0.15	35,35,35,35	0
56	MG	DA	3031	1/1	0.99	0.16	23,23,23,23	0
56	MG	DA	3115	1/1	0.99	0.10	81,81,81,81	0
56	MG	BA	1635	1/1	0.99	0.09	106,106,106,106	0
56	MG	DA	3117	1/1	0.99	0.17	36,36,36,36	0
56	MG	DA	3034	1/1	0.99	0.16	22,22,22,22	0
56	MG	DA	3106	1/1	1.00	0.17	25,25,25,25	0
56	MG	DA	3036	1/1	1.00	0.12	28,28,28,28	0
56	MG	DA	3037	1/1	1.00	0.17	29,29,29,29	0
56	MG	DA	3038	1/1	1.00	0.17	20,20,20,20	0
56	MG	DA	3062	1/1	1.00	0.14	28,28,28,28	0
56	MG	DA	3077	1/1	1.00	0.15	42,42,42,42	0
56	MG	DA	3152	1/1	1.00	0.12	53,53,53,53	0
56	MG	DA	3050	1/1	1.00	0.12	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3012	1/1	1.00	0.14	31,31,31,31	0
56	MG	DA	3114	1/1	1.00	0.17	27,27,27,27	0
56	MG	DA	3019	1/1	1.00	0.17	17,17,17,17	0
56	MG	DA	3041	1/1	1.00	0.12	23,23,23,23	0
56	MG	DA	3098	1/1	1.00	0.13	32,32,32,32	0
56	MG	DA	3118	1/1	1.00	0.12	45,45,45,45	0
56	MG	DA	3015	1/1	1.00	0.21	22,22,22,22	0
56	MG	DA	3016	1/1	1.00	0.13	13,13,13,13	0
56	MG	DA	3033	1/1	1.00	0.17	26,26,26,26	0
56	MG	DA	3027	1/1	1.00	0.10	43,43,43,43	0
56	MG	DA	3086	1/1	1.00	0.11	30,30,30,30	0
56	MG	DA	3071	1/1	1.00	0.11	50,50,50,50	0
56	MG	DB	202	1/1	1.00	0.08	30,30,30,30	0

6.5 Other polymers (i)

There are no such residues in this entry.