



wwPDB X-ray Structure Validation Summary Report ⓘ

Nov 6, 2023 – 05:55 AM EST

PDB ID : 5IT8
Title : High-resolution structure of the Escherichia coli ribosome
Authors : Cocozaki, A.; Ferguson, A.
Deposited on : 2016-03-16
Resolution : 3.12 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 ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

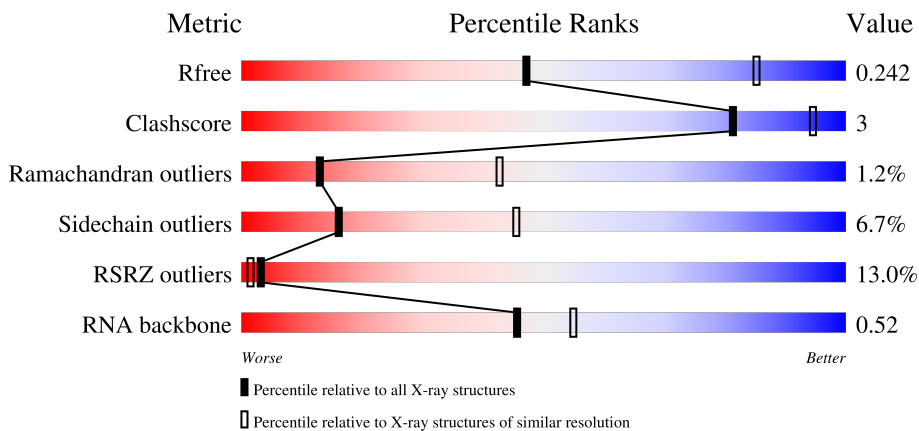
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.12 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.

























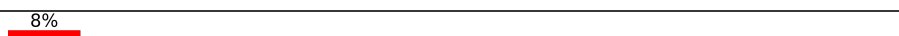
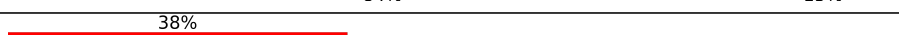

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1292 (3.14-3.10)
Clashscore	141614	1389 (3.14-3.10)
Ramachandran outliers	138981	1337 (3.14-3.10)
Sidechain outliers	138945	1337 (3.14-3.10)
RSRZ outliers	127900	1260 (3.14-3.10)
RNA backbone	3102	1134 (3.44-2.80)

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

Mol	Chain	Length	Quality of chain
1	AA	1534	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 75%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 22%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">9% 75% 22% •</p>
1	BA	1534	<div style="display: flex; align-items: center;"> <div style="width: 9%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 74%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 23%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">9% 74% 23% •</p>
2	AB	224	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 83%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 16%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">2% 83% 16% •</p>
2	BB	224	<div style="display: flex; align-items: center;"> <div style="width: 7%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 82%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 17%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">7% 82% 17% •</p>

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Mol	Chain	Length	Quality of chain
3	AC	206	 86% 12%
3	BC	206	 82% 18% 8%
4	AD	205	 90% 10%
4	BD	205	 87% 12%
5	AE	155	 75% 21%
5	BE	155	 68% 24% 8%
6	AF	106	 87% 12%
6	BF	106	 74% 20% 6%
7	AG	151	 77% 22% 6%
7	BG	151	 80% 20% 42%
8	AH	129	 81% 17%
8	BH	129	 85% 15% 8%
9	AI	127	 87% 13% 2%
9	BI	127	 87% 13% 18%
10	AJ	99	 79% 17% 4%
10	BJ	99	 76% 17% 49%
11	AK	117	 83% 16% 6%
11	BK	117	 81% 18% 3%
12	AL	123	 85% 15%
12	BL	123	 80% 18% 2%
13	AM	114	 80% 19% 4%
13	BM	114	 76% 20% 71%
14	AN	100	 84% 15% 8%
14	BN	100	 85% 14% 38%
15	AO	88	 92% 8%

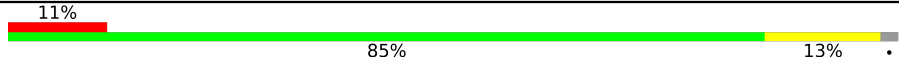
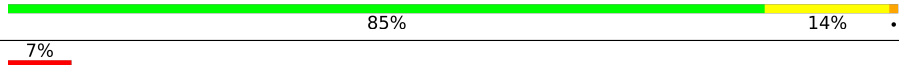


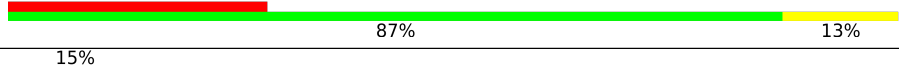
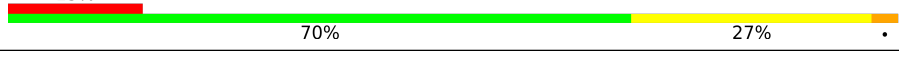
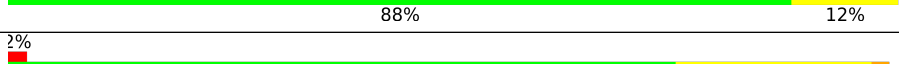

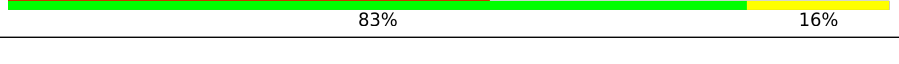
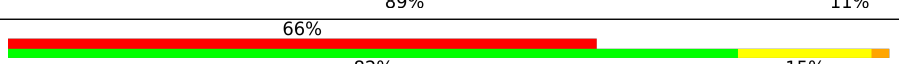
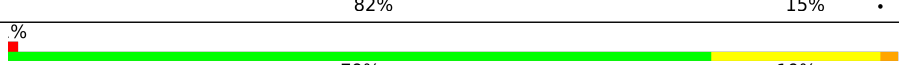

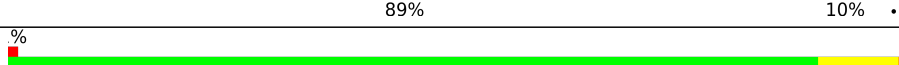
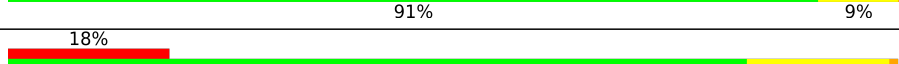

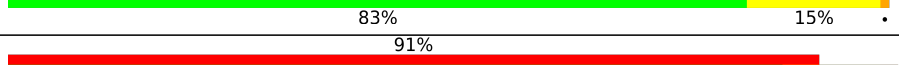

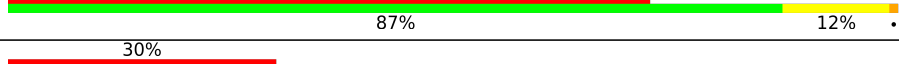

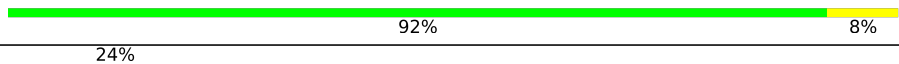
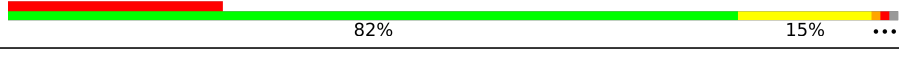

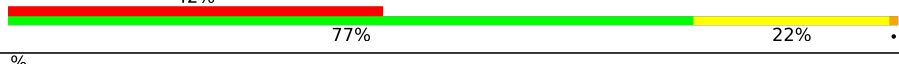
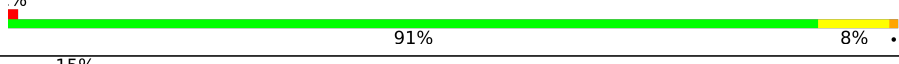

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Mol	Chain	Length	Quality of chain
15	BO	88	2% 86% 13%
16	AP	82	6% 91% 9%
16	BP	82	21% 82% 17%
17	AQ	80	6% 82% 18%
17	BQ	80	21% 74% 25%
18	AR	55	89% 11%
18	BR	55	7% 96%
19	AS	79	5% 80% 18%
19	BS	79	71% 80% 16%
20	AT	86	% 88% 9%
20	BT	86	35% 74% 19% 6%
21	AU	56	16% 80% 20%
21	BU	56	2% 80% 20%
22	C1	56	45% 80% 16%
22	D1	56	77% 21%
23	C2	51	67% 76% 22%
23	D2	51	82% 18%
24	C3	46	46% 83% 15%
24	D3	46	93% 7%
25	C4	64	27% 92% 8%
25	D4	64	89% 11%
26	C5	38	42% 89% 11%
26	D5	38	97%
27	C0	58	29% 78% 21%
27	D0	58	86% 14%

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Mol	Chain	Length	Quality of chain
28	CB	120	 11% 85% 13%
28	DB	120	 85% 14%
29	CC	271	 7% 84% 14%
29	DC	271	 87% 13%
30	CD	209	 29% 87% 13%
31	CA	2904	 15% 70% 27%
32	DD	209	 88% 12%
33	DA	2903	 2% 75% 22%
34	CE	201	 54% 83% 16%
34	DE	201	 89% 11%
35	CF	177	 66% 82% 15%
35	DF	177	 % 79% 19%
36	CG	176	 55% 89% 10%
36	DG	176	 % 91% 9%
37	CH	149	 18% 83% 16%
37	DH	149	 11% 83% 15%
38	CJ	134	 91% 87% 11%
38	DJ	134	 72% 87% 12%
39	CK	142	 30% 87% 13%
39	DK	142	 92% 8%
40	CL	123	 24% 82% 15% ...
40	DL	123	 82% 16%
41	CM	144	 42% 77% 22%
41	DM	144	 % 91% 8%
42	CN	136	 15% 87% 12%

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Mol	Chain	Length	Quality of chain
42	DN	136	88% 12%
43	CO	125	43% 79% 14% . .
43	DO	125	% 88% 10% .
44	CP	117	48% 87% 11% ..
44	DP	117	88% 10% .
45	CQ	114	23% 89% 10% .
45	DQ	114	90% 9% .
46	CR	117	32% 89% 11%
46	DR	117	89% 11%
47	CS	103	51% 83% 15% .
47	DS	103	% 89% 10% .
48	CT	110	50% 78% 21% .
48	DT	110	82% 18%
49	CU	93	45% 82% 16% .
49	DU	93	2% 88% 12%
50	CV	102	72% 82% 16% .
50	DV	102	% 85% 14% .
51	CW	94	26% 86% 14%
51	DW	94	% 87% 13%
52	CX	76	57% 92% 7% .
52	DX	76	% 86% 12% .
53	CY	77	26% 82% 18%
53	DY	77	90% 10%
54	CZ	62	52% 87% 11% .
54	DZ	62	2% 90% 10%

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Mol	Chain	Length	Quality of chain
55	DI	135	

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	1605	-	-	-	X
56	MG	AA	1606	-	-	-	X
56	MG	AA	1615	-	-	-	X
56	MG	AA	1618	-	-	-	X
56	MG	AA	1619	-	-	-	X
56	MG	AA	1620	-	-	-	X
56	MG	AA	1622	-	-	-	X
56	MG	AA	1626	-	-	-	X
56	MG	AA	1628	-	-	-	X
56	MG	BA	1624	-	-	-	X
56	MG	CA	3003	-	-	-	X
56	MG	CA	3005	-	-	-	X
56	MG	CA	3007	-	-	-	X
56	MG	CA	3008	-	-	-	X
56	MG	CA	3023	-	-	-	X
56	MG	CA	3026	-	-	-	X
56	MG	CA	3032	-	-	-	X
56	MG	CA	3060	-	-	-	X
56	MG	CA	3064	-	-	-	X
56	MG	CA	3075	-	-	-	X
56	MG	CA	3077	-	-	-	X
56	MG	CA	3104	-	-	-	X
56	MG	CA	3110	-	-	-	X
56	MG	CA	3111	-	-	-	X
56	MG	CA	3123	-	-	-	X
56	MG	CA	3124	-	-	-	X
56	MG	CA	3125	-	-	-	X
56	MG	CA	3133	-	-	-	X
56	MG	CA	3135	-	-	-	X
56	MG	CA	3139	-	-	-	X
56	MG	CA	3154	-	-	-	X
56	MG	DA	3130	-	-	-	X
56	MG	DA	3136	-	-	-	X
56	MG	DA	3143	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	DA	3169	-	-	-	X
56	MG	DA	3170	-	-	-	X
57	PG4	DA	3213	-	-	-	X
58	MPD	DA	3201	-	-	-	X
58	MPD	DE	301	-	-	-	X
58	MPD	DK	201	-	-	-	X
59	PUT	AA	1672	-	-	-	X
59	PUT	AA	1674	-	-	-	X
59	PUT	AA	1675	-	-	-	X
59	PUT	DA	3193	-	-	-	X
59	PUT	DA	3210	-	-	-	X
61	PEG	D3	102	-	-	-	X
61	PEG	DA	3197	-	-	-	X
61	PEG	DA	3198	-	-	-	X
61	PEG	DP	201	-	-	-	X
61	PEG	DQ	201	-	-	-	X
62	EDO	DA	3196	-	-	-	X
62	EDO	DA	3206	-	-	-	X
62	EDO	DA	3227	-	-	-	X
63	PGE	DT	201	-	-	-	X
66	ACY	DA	3194	-	X	-	-
68	TRS	DA	3217	-	-	-	X

2 Entry composition [i](#)

There are 69 unique types of molecules in this entry. The entry contains 295125 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
			Total	C	N	O	P			
1	AA	1534	Total 32930	C 14694	N 6041	O 10661	P 1534	0	0	0
1	BA	1533	Total 32908	C 14684	N 6036	O 10655	P 1533	0	0	0

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

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

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

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

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

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

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	BJ	98	787	493	150	143	1	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
20	AT	86	Total 670	C 414	N 138	O 115	S 3	0	0	0
20	BT	85	Total 665	C 411	N 137	O 114	S 3	0	0	0

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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 RNA chain called 23S rRNA.

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

- Molecule 34 is a protein called 50S ribosomal protein L4.

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

- Molecule 35 is a protein called 50S ribosomal protein L5.

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

- Molecule 36 is a protein called 50S ribosomal protein L6.

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

- Molecule 37 is a protein called 50S ribosomal protein L9.

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

- Molecule 38 is a protein called 50S ribosomal protein L11.

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

- Molecule 39 is a protein called 50S ribosomal protein L13.

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

- Molecule 40 is a protein called 50S ribosomal protein L14.

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

- Molecule 41 is a protein called 50S ribosomal protein L15.

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

- Molecule 42 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	CN	136	Total	C	N	O	S	0	0	0
			1075	686	205	178	6			
42	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 43 is a protein called 50S ribosomal protein L17.

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

- Molecule 44 is a protein called 50S ribosomal protein L18.

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

- Molecule 45 is a protein called 50S ribosomal protein L19.

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

- Molecule 46 is a protein called 50S ribosomal protein L20.

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

- Molecule 47 is a protein called 50S ribosomal protein L21.

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

- Molecule 48 is a protein called 50S ribosomal protein L22.

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

- Molecule 49 is a protein called 50S ribosomal protein L23.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L25.

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

- Molecule 52 is a protein called 50S ribosomal protein L27.

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

- Molecule 53 is a protein called 50S ribosomal protein L28.

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

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

- Molecule 54 is a protein called 50S ribosomal protein L29.

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

- Molecule 55 is a protein called 50S ribosomal protein L10.

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

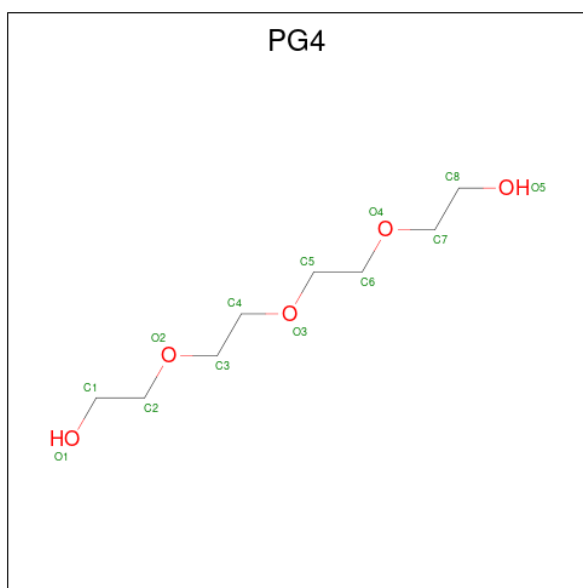
There are 2 discrepancies between the modelled and reference sequences:

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	70	Total	Mg	0	0
			70	70		
56	BA	41	Total	Mg	0	0
			41	41		
56	CB	3	Total	Mg	0	0
			3	3		
56	CA	156	Total	Mg	0	0
			156	156		
56	DB	9	Total	Mg	0	0
			9	9		
56	DD	2	Total	Mg	0	0
			2	2		
56	DA	183	Total	Mg	0	0
			183	183		
56	DR	2	Total	Mg	0	0
			2	2		

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



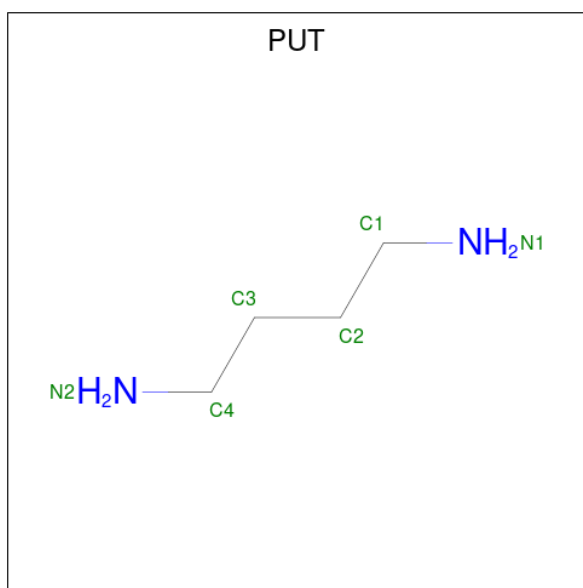
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	1	Total C O 13 8 5	0	0
57	BA	1	Total C O 13 8 5	0	0
57	DA	1	Total C O 13 8 5	0	0
57	DA	1	Total C O 13 8 5	0	0
57	DQ	1	Total C O 13 8 5	0	0
57	DR	1	Total C O 13 8 5	0	0
57	DS	1	Total C O 13 8 5	0	0

- 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 8 6 2	0	0
58	AA	1	Total C O 8 6 2	0	0
58	DA	1	Total C O 8 6 2	0	0
58	DA	1	Total C O 8 6 2	0	0
58	DA	1	Total C O 8 6 2	0	0
58	DA	1	Total C O 8 6 2	0	0
58	DA	1	Total C O 8 6 2	0	0
58	DA	1	Total C O 8 6 2	0	0
58	DA	1	Total C O 8 6 2	0	0
58	DE	1	Total C O 8 6 2	0	0
58	DE	1	Total C O 8 6 2	0	0
58	DK	1	Total C O 8 6 2	0	0
58	DN	1	Total C O 8 6 2	0	0
58	DS	1	Total C O 8 6 2	0	0
58	DT	1	Total C O 8 6 2	0	0

- Molecule 59 is 1,4-DIAMINOBTUTANE (three-letter code: PUT) (formula: C₄H₁₂N₂).



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	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
59	DA	1	Total C N 6 4 2	0	0

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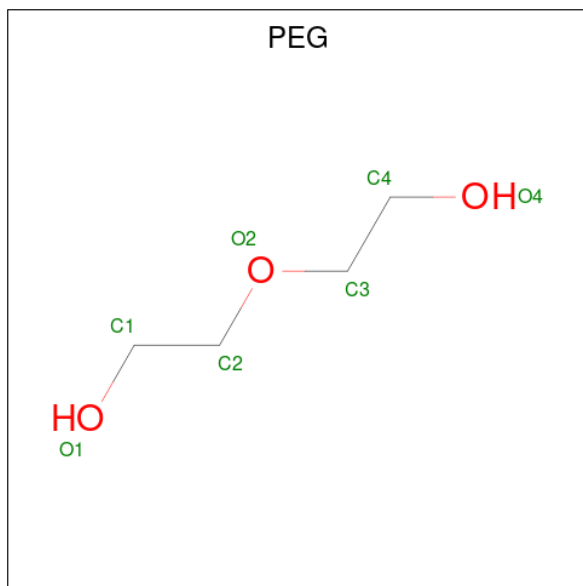
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
59	DA	1	Total	C	N	0	0
			6	4	2		
59	DA	1	Total	C	N	0	0
			6	4	2		
59	DA	1	Total	C	N	0	0
			6	4	2		

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

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

- Molecule 61 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: C₄H₁₀O₃).



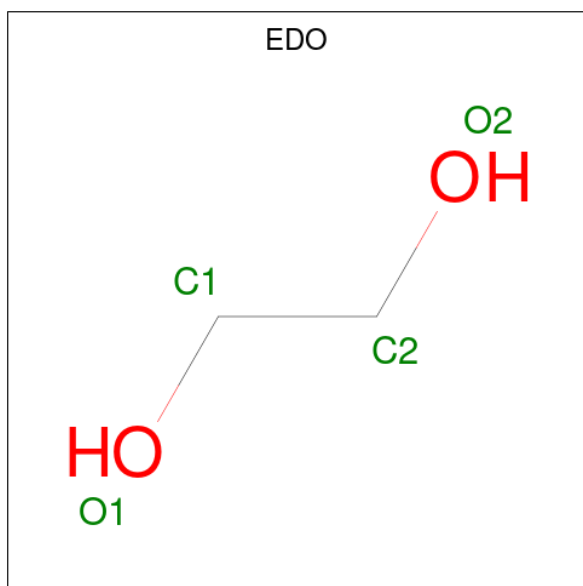
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
61	AL	1	Total	C	O	0	0
			7	4	3		
61	D1	1	Total	C	O	0	0
			7	4	3		
61	D3	1	Total	C	O	0	0
			7	4	3		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
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
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

- Molecule 62 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C₂H₆O₂).



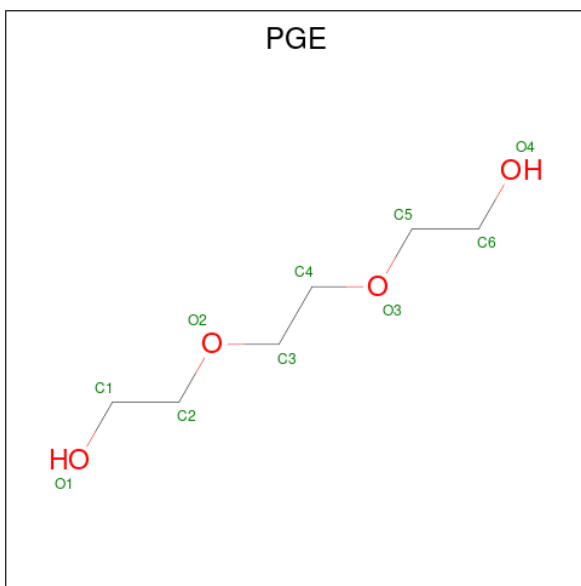
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	D1	1	Total C O 4 2 2	0	0
62	D0	1	Total C O 4 2 2	0	0
62	DB	1	Total C O 4 2 2	0	0

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

- Molecule 63 is TRIETHYLENE GLYCOL (three-letter code: PGE) (formula: C₆H₁₄O₄).



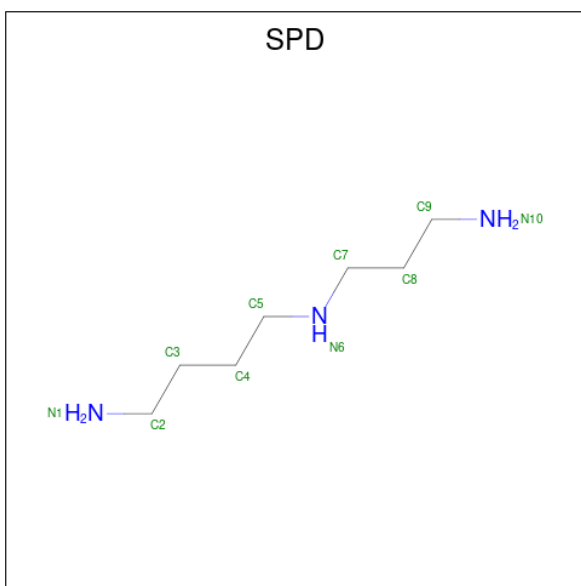
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
63	D3	1	Total	C	O	0	0
			10	6	4		
63	DD	1	Total	C	O	0	0
			10	6	4		

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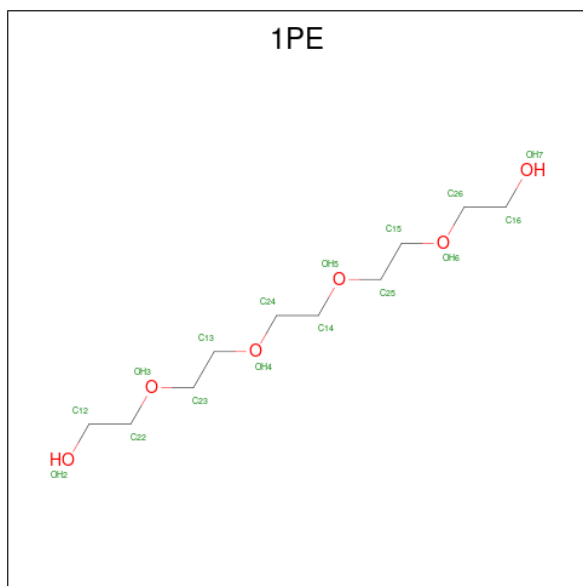
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
63	DA	1	Total	C	O	0	0
			10	6	4		
63	DA	1	Total	C	O	0	0
			10	6	4		
63	DA	1	Total	C	O	0	0
			10	6	4		
63	DA	1	Total	C	O	0	0
			10	6	4		
63	DS	1	Total	C	O	0	0
			10	6	4		
63	DT	1	Total	C	O	0	0
			10	6	4		
63	DU	1	Total	C	O	0	0
			10	6	4		

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



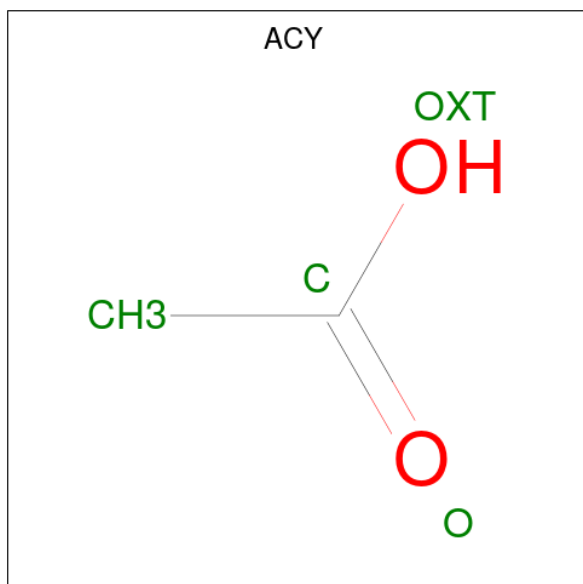
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
64	DA	1	Total	C	N	0	0
			10	7	3		
64	DA	1	Total	C	N	0	0
			10	7	3		
64	DA	1	Total	C	N	0	0
			10	7	3		
64	DA	1	Total	C	N	0	0
			10	7	3		

- 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	0	0
			16	10 6		
65	DA	1	Total	C O	0	0
			16	10 6		

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



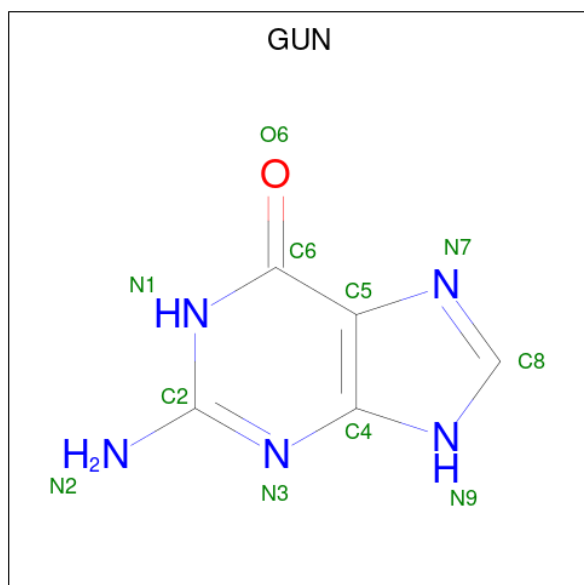
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
66	DA	1	Total	C O	0	0
			4	2 2		

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

- 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	0	0
			11	5	5	1		

- 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
			Total	C	N	O		
68	DA	1	8	4	1	3	0	0

- Molecule 69 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
69	AA	507	Total	O	0	0
			507	507		
69	AC	4	Total	O	0	0
			4	4		
69	AD	3	Total	O	0	0
			3	3		
69	AE	5	Total	O	0	0
			5	5		
69	AF	1	Total	O	0	0
			1	1		
69	AG	1	Total	O	0	0
			1	1		
69	AJ	2	Total	O	0	0
			2	2		
69	AK	7	Total	O	0	0
			7	7		
69	AL	10	Total	O	0	0
			10	10		
69	AM	4	Total	O	0	0
			4	4		
69	AN	7	Total	O	0	0
			7	7		

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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	AR	1	Total O 1 1	0	0
69	AS	1	Total O 1 1	0	0
69	AT	3	Total O 3 3	0	0
69	AU	3	Total O 3 3	0	0
69	C3	3	Total O 3 3	0	0
69	C4	1	Total O 1 1	0	0
69	C5	1	Total O 1 1	0	0
69	BA	291	Total O 291 291	0	0
69	BD	11	Total O 11 11	0	0
69	BE	1	Total O 1 1	0	0
69	BF	1	Total O 1 1	0	0
69	BK	2	Total O 2 2	0	0
69	BL	2	Total O 2 2	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	4	Total O 4 4	0	0
69	BU	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
69	D1	42	Total 42	O 42	0	0
69	D2	7	Total 7	O 7	0	0
69	D3	28	Total 28	O 28	0	0
69	D4	39	Total 39	O 39	0	0
69	D5	9	Total 9	O 9	0	0
69	D0	21	Total 21	O 21	0	0
69	CB	13	Total 13	O 13	0	0
69	CC	10	Total 10	O 10	0	0
69	CD	6	Total 6	O 6	0	0
69	CA	692	Total 692	O 692	0	0
69	DB	199	Total 199	O 199	0	0
69	DC	98	Total 98	O 98	0	0
69	DD	95	Total 95	O 95	0	0
69	DA	4834	Total 4834	O 4834	0	0
69	CE	7	Total 7	O 7	0	0
69	CL	1	Total 1	O 1	0	0
69	CM	3	Total 3	O 3	0	0
69	CO	1	Total 1	O 1	0	0
69	CU	2	Total 2	O 2	0	0
69	CV	1	Total 1	O 1	0	0
69	CW	1	Total 1	O 1	0	0

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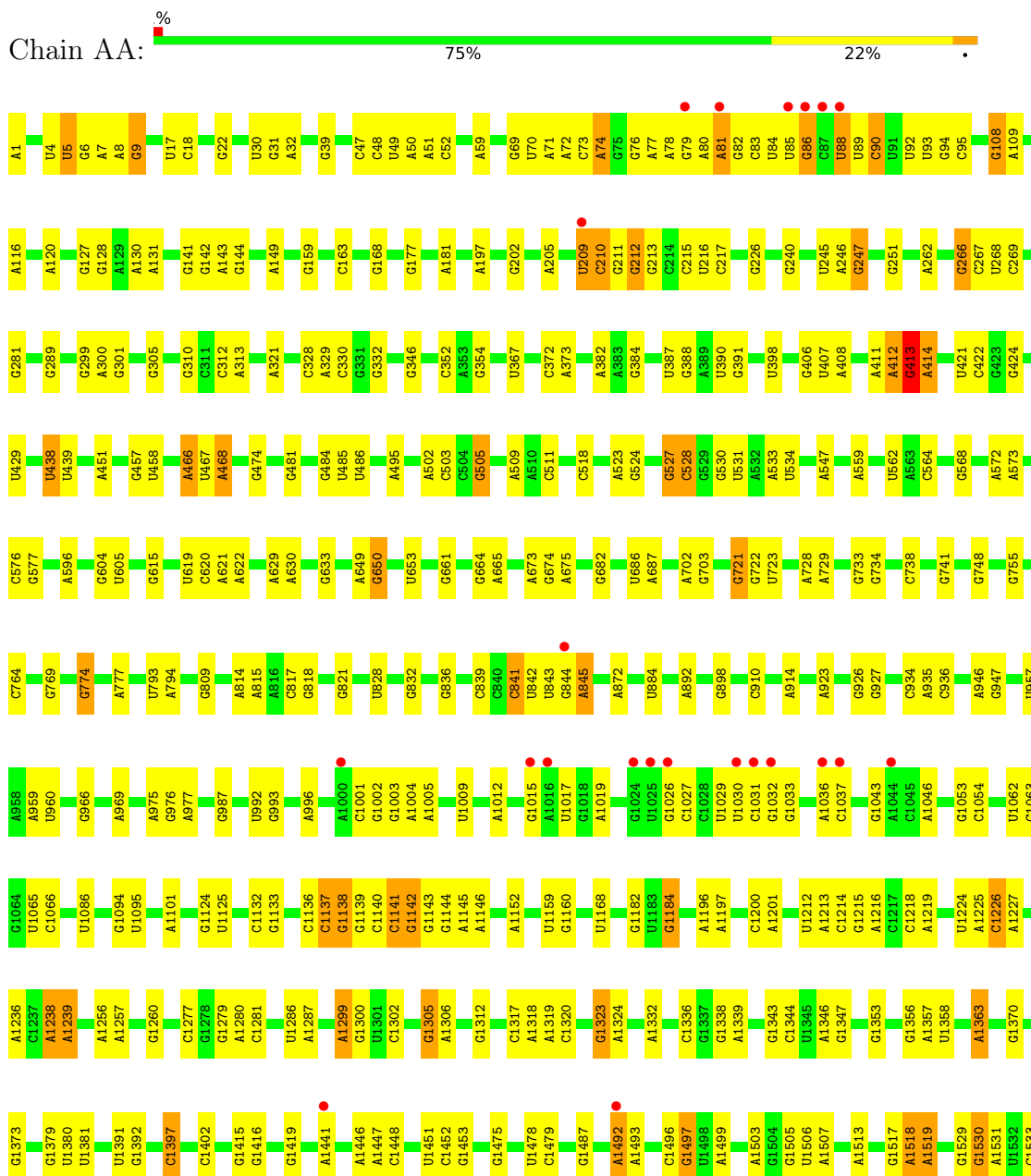
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
69	CY	1	Total 1	O 1	0	0
69	DE	63	Total 63	O 63	0	0
69	DF	15	Total 15	O 15	0	0
69	DG	7	Total 7	O 7	0	0
69	DH	1	Total 1	O 1	0	0
69	DK	65	Total 65	O 65	0	0
69	DL	52	Total 52	O 52	0	0
69	DM	62	Total 62	O 62	0	0
69	DN	64	Total 64	O 64	0	0
69	DO	48	Total 48	O 48	0	0
69	DP	44	Total 44	O 44	0	0
69	DQ	33	Total 33	O 33	0	0
69	DR	68	Total 68	O 68	0	0
69	DS	48	Total 48	O 48	0	0
69	DT	62	Total 62	O 62	0	0
69	DU	22	Total 22	O 22	0	0
69	DV	18	Total 18	O 18	0	0
69	DW	34	Total 34	O 34	0	0
69	DX	31	Total 31	O 31	0	0
69	DY	10	Total 10	O 10	0	0
69	DZ	5	Total 5	O 5	0	0

3 Residue-property plots

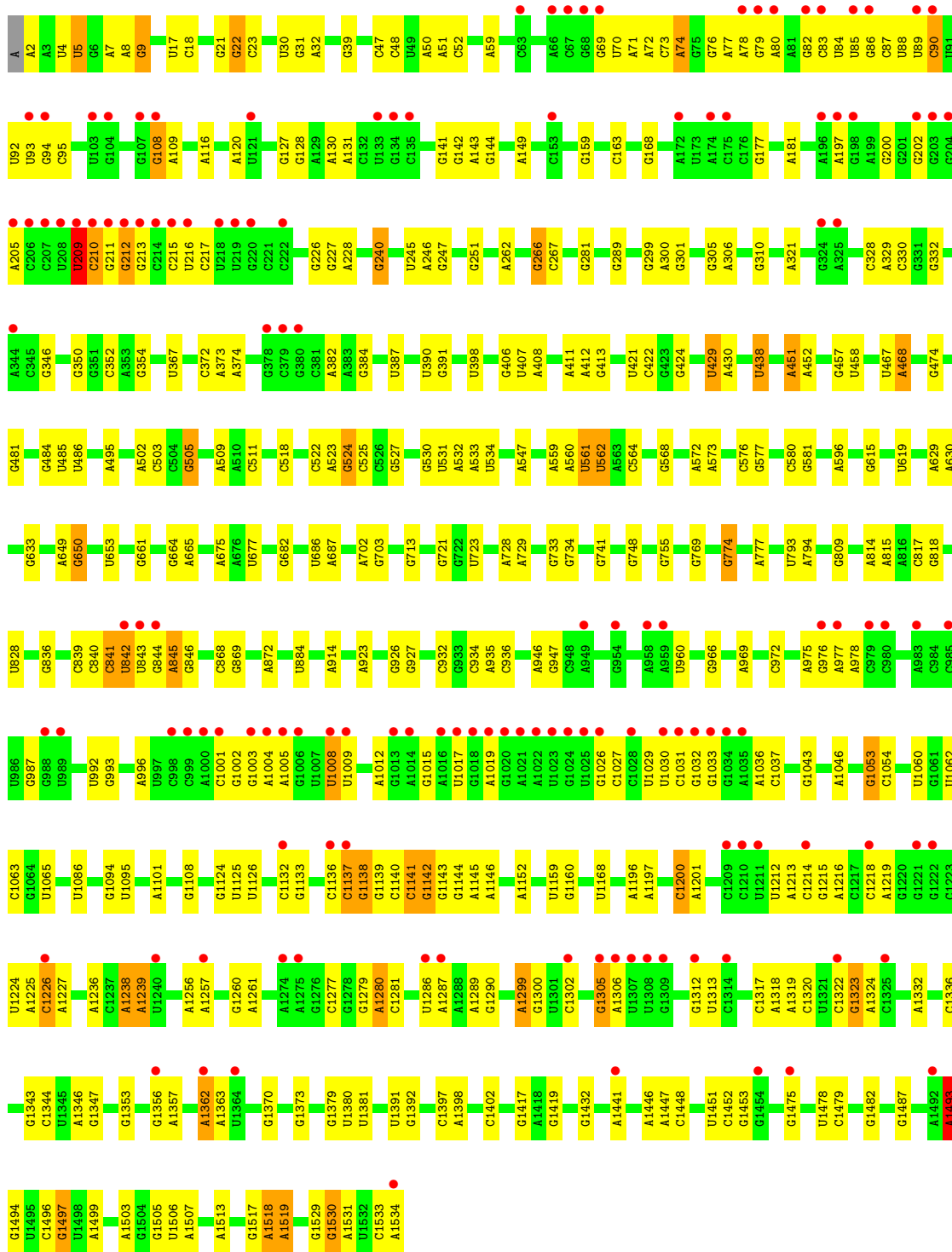
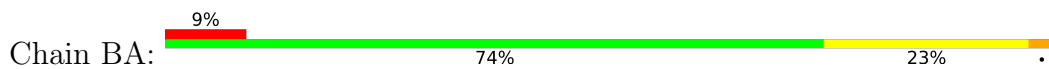
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: 16S rRNA

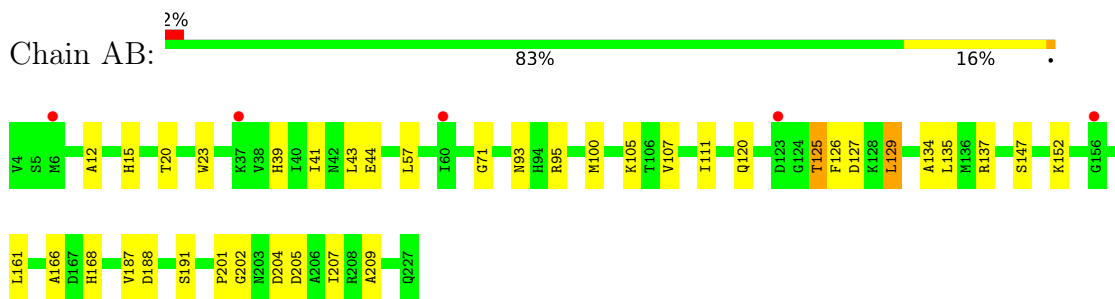


A1534

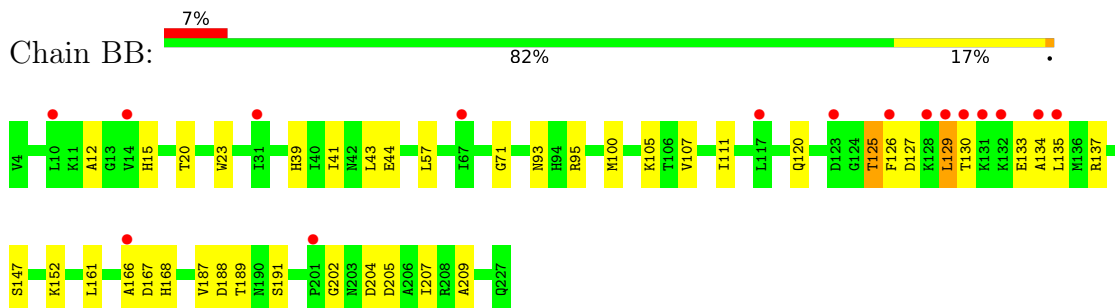
• Molecule 1: 16S rRNA



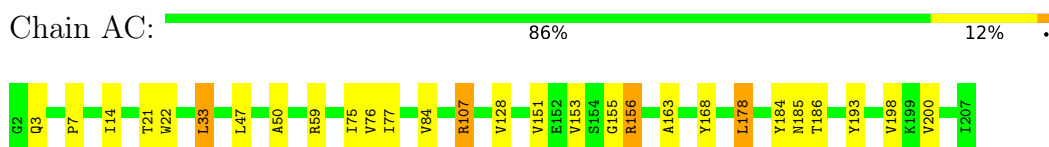
• Molecule 2: 30S ribosomal protein S2



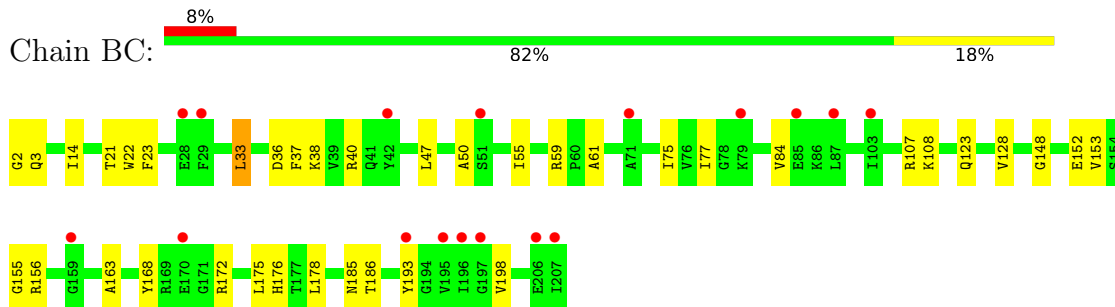
- Molecule 2: 30S ribosomal protein S2



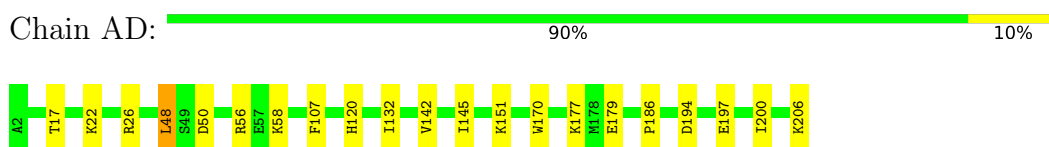
- Molecule 3: 30S ribosomal protein S3



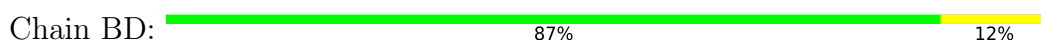
- Molecule 3: 30S ribosomal protein S3



- Molecule 4: 30S ribosomal protein S4

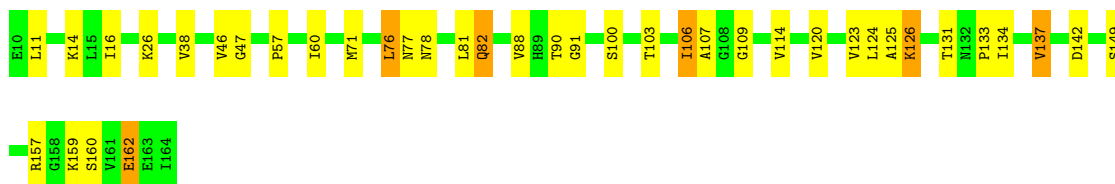
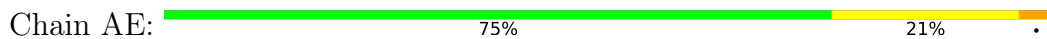


- Molecule 4: 30S ribosomal protein S4

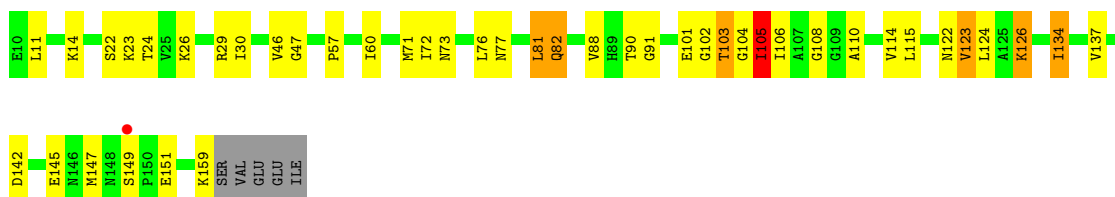




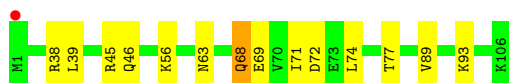
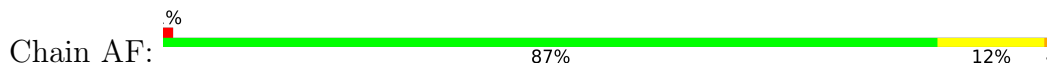
- Molecule 5: 30S ribosomal protein S5



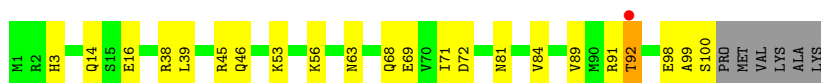
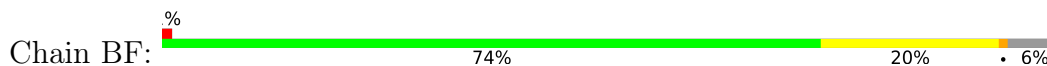
- Molecule 5: 30S ribosomal protein S5



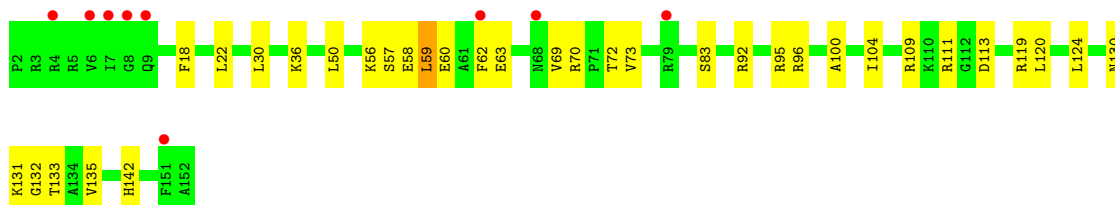
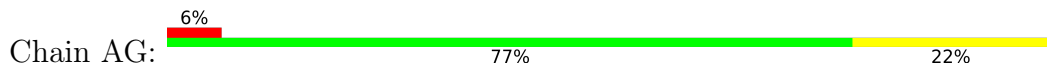
- Molecule 6: 30S ribosomal protein S6



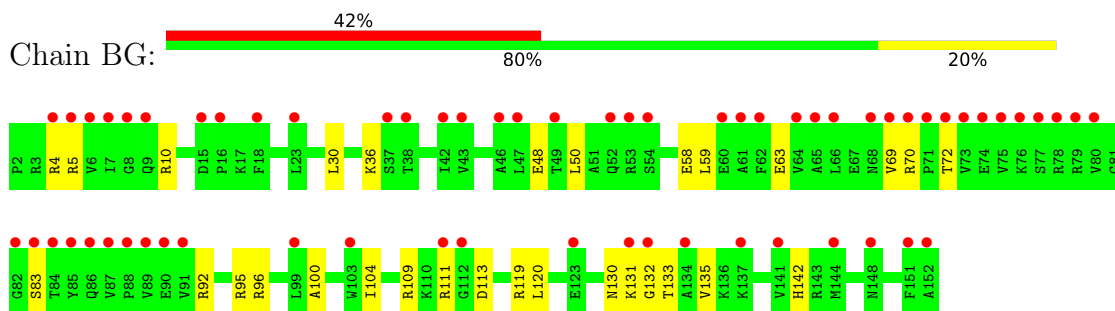
- Molecule 6: 30S ribosomal protein S6



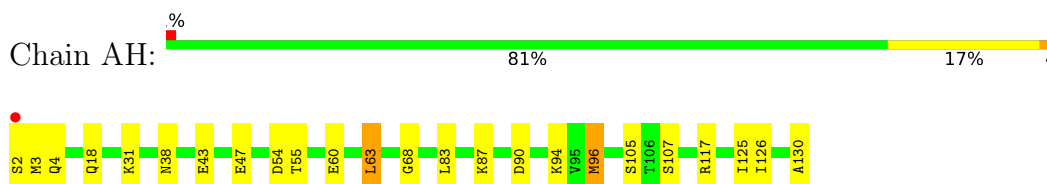
- Molecule 7: 30S ribosomal protein S7



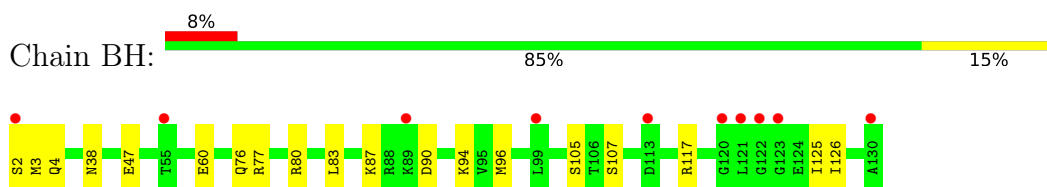
- Molecule 7: 30S ribosomal protein S7



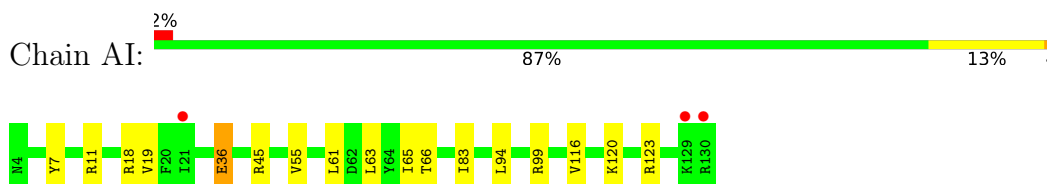
- Molecule 8: 30S ribosomal protein S8



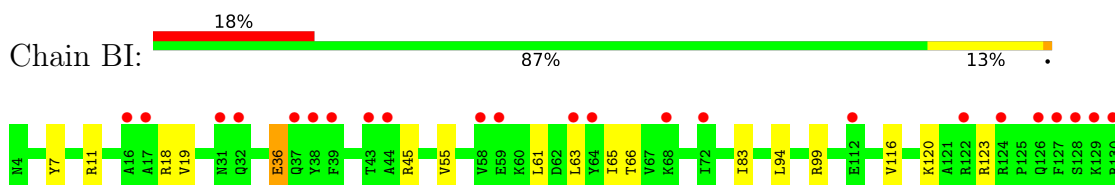
- Molecule 8: 30S ribosomal protein S8



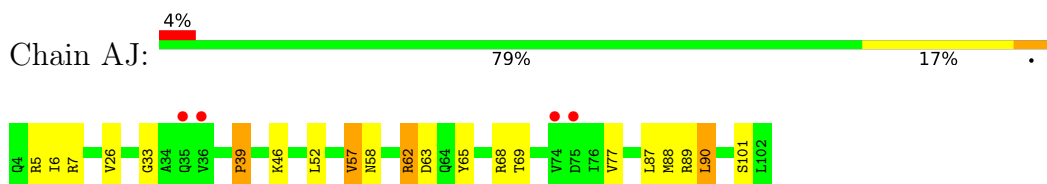
- Molecule 9: 30S ribosomal protein S9



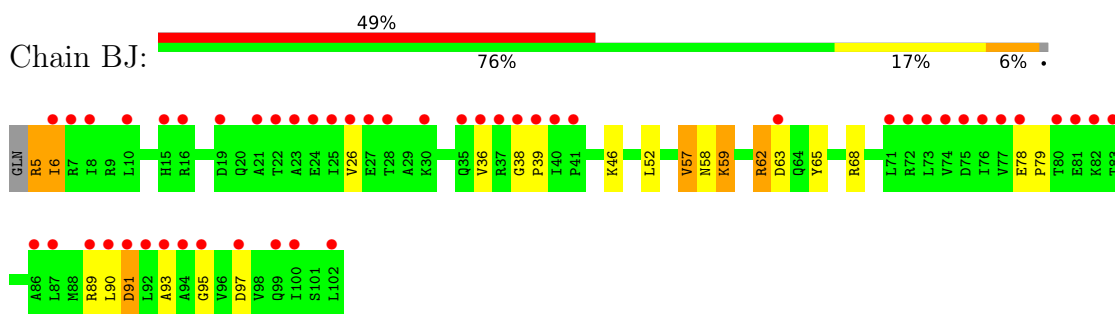
- Molecule 9: 30S ribosomal protein S9



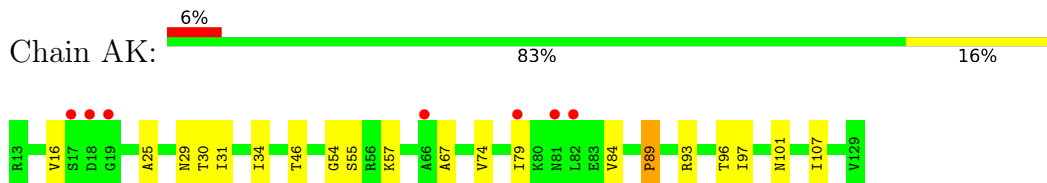
- Molecule 10: 30S ribosomal protein S10



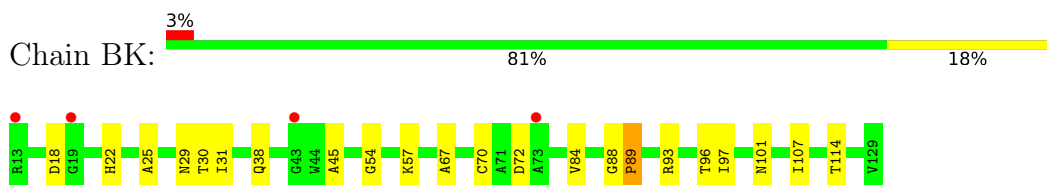
- Molecule 10: 30S ribosomal protein S10



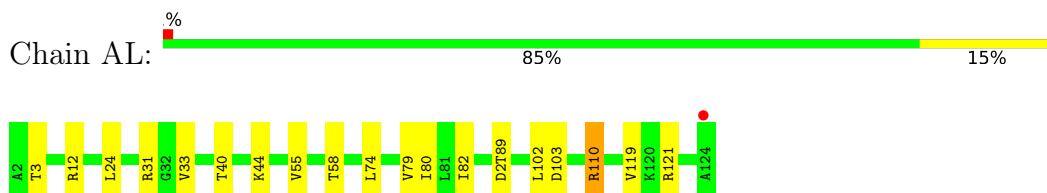
- Molecule 11: 30S ribosomal protein S11



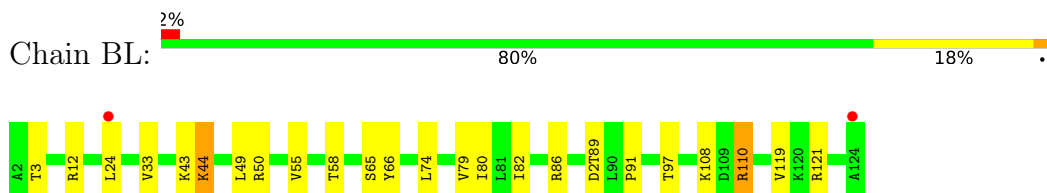
- Molecule 11: 30S ribosomal protein S11



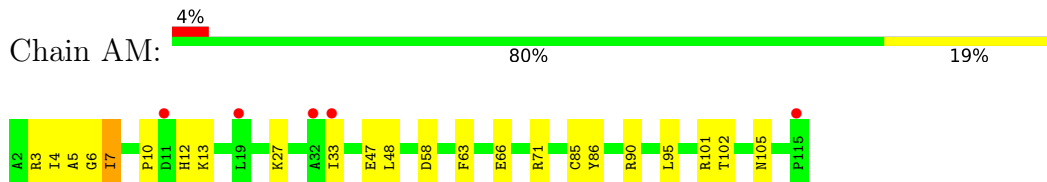
- Molecule 12: 30S ribosomal protein S12



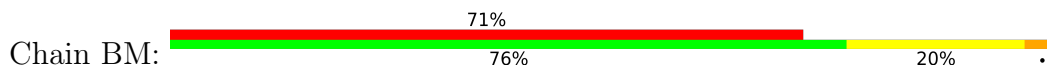
- Molecule 12: 30S ribosomal protein S12

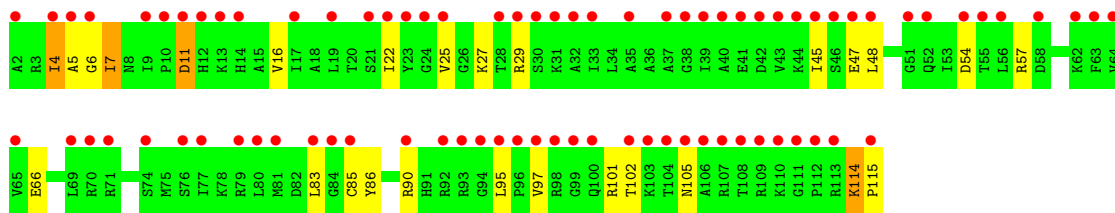


- Molecule 13: 30S ribosomal protein S13

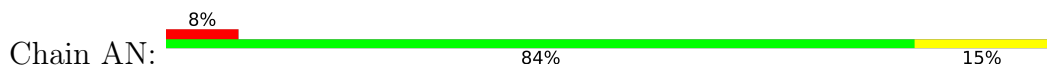


- Molecule 13: 30S ribosomal protein S13

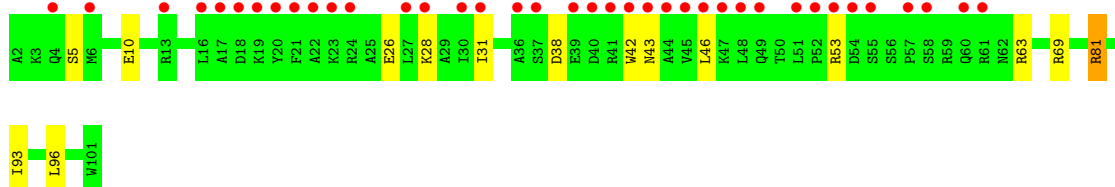
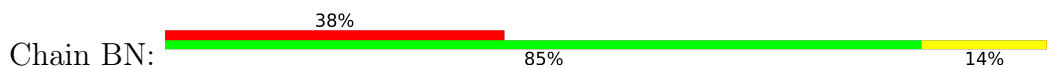




- Molecule 14: 30S ribosomal protein S14



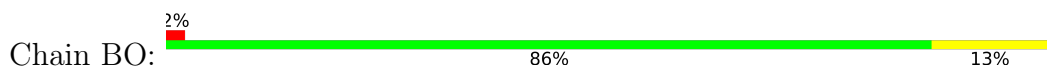
- Molecule 14: 30S ribosomal protein S14



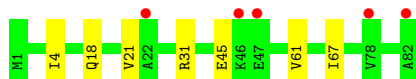
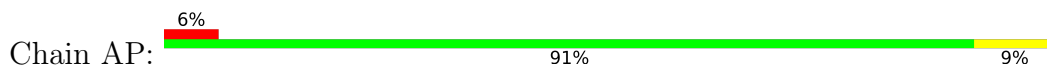
- Molecule 15: 30S ribosomal protein S15



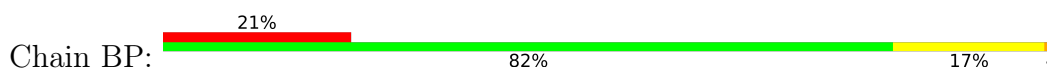
- Molecule 15: 30S ribosomal protein S15

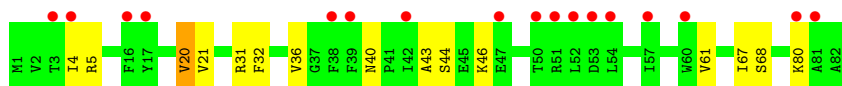


- Molecule 16: 30S ribosomal protein S16

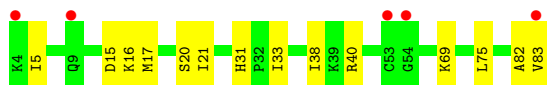
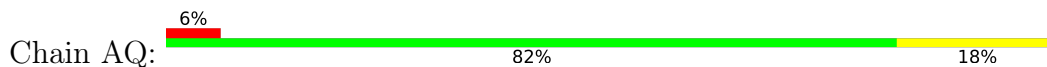


- Molecule 16: 30S ribosomal protein S16

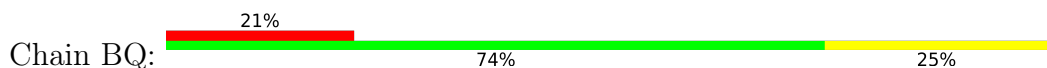




- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17



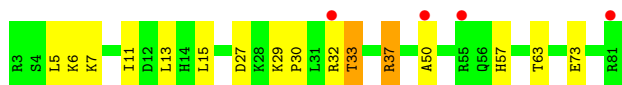
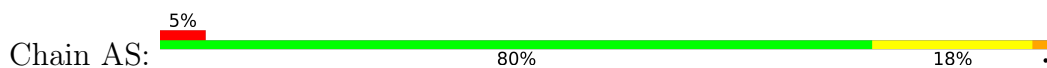
- Molecule 18: 30S ribosomal protein S18



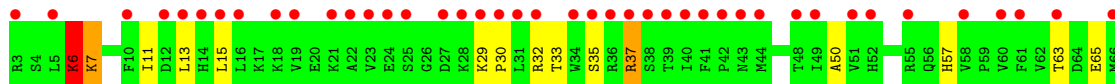
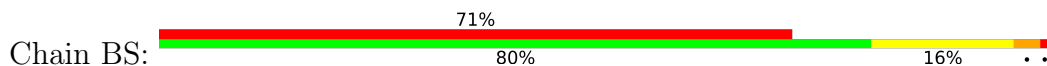
- Molecule 18: 30S ribosomal protein S18

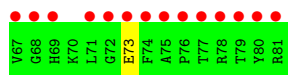


- Molecule 19: 30S ribosomal protein S19

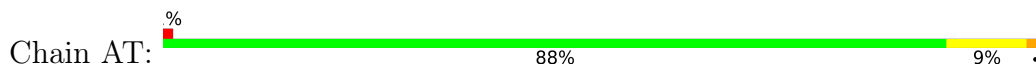


- Molecule 19: 30S ribosomal protein S19

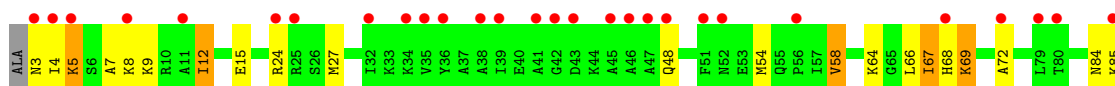
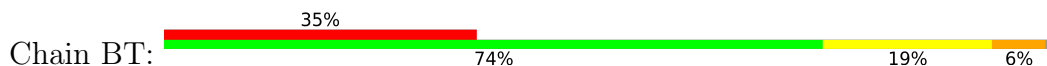




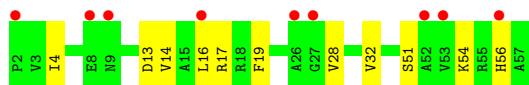
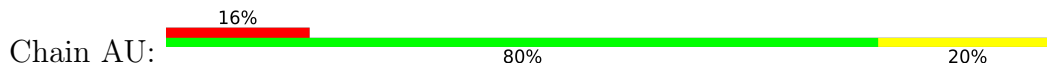
- Molecule 20: 30S ribosomal protein S20



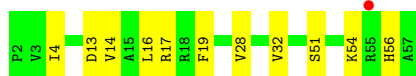
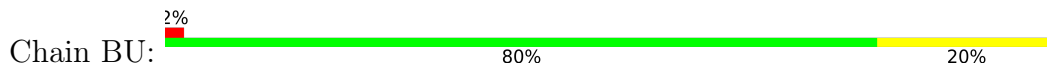
- Molecule 20: 30S ribosomal protein S20



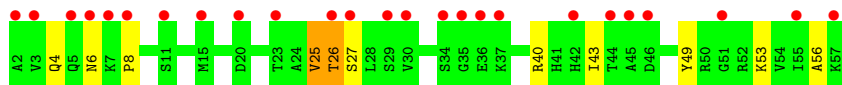
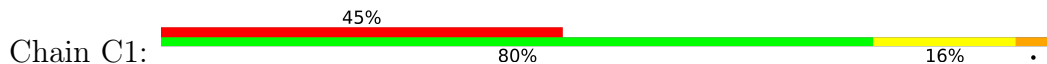
- Molecule 21: 30S ribosomal protein S21



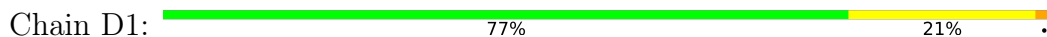
- Molecule 21: 30S ribosomal protein S21



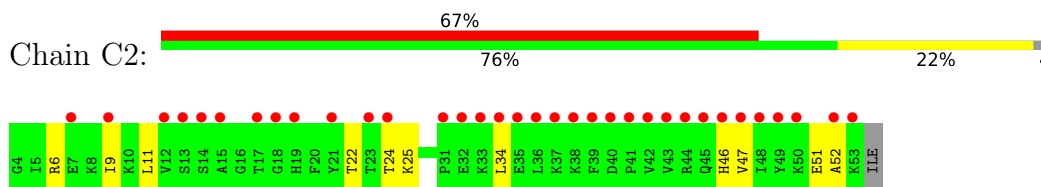
- Molecule 22: 50S ribosomal protein L32



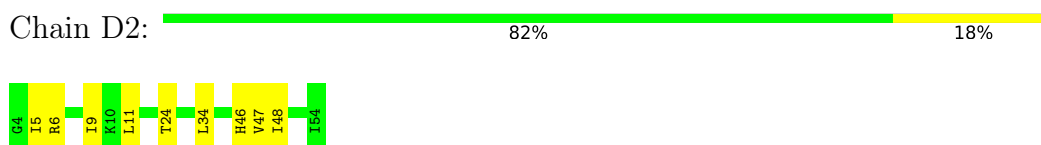
- Molecule 22: 50S ribosomal protein L32



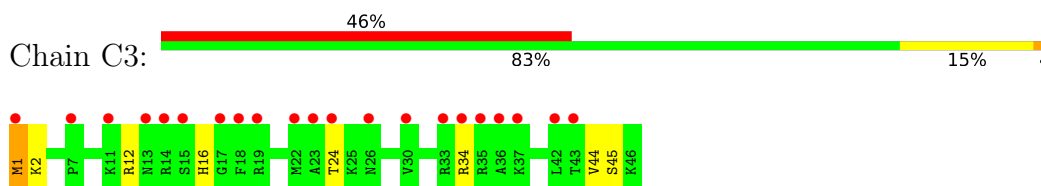
- Molecule 23: 50S ribosomal protein L33



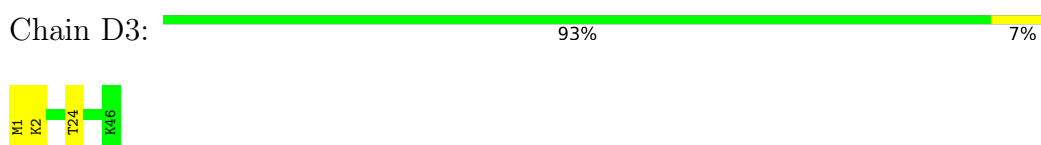
- Molecule 23: 50S ribosomal protein L33



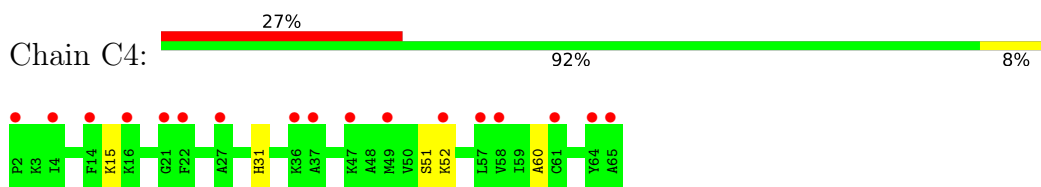
- Molecule 24: 50S ribosomal protein L34



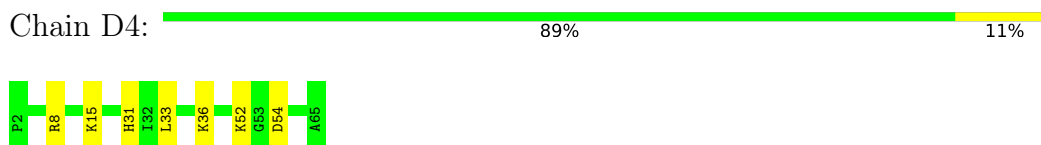
- Molecule 24: 50S ribosomal protein L34



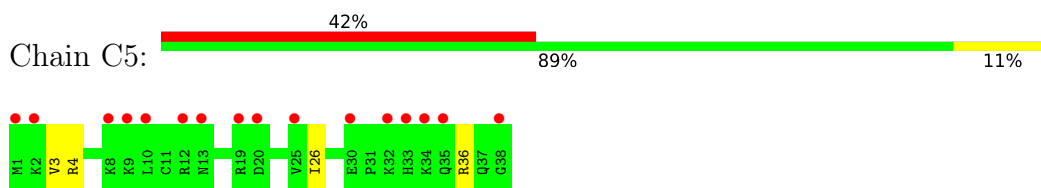
- Molecule 25: 50S ribosomal protein L35



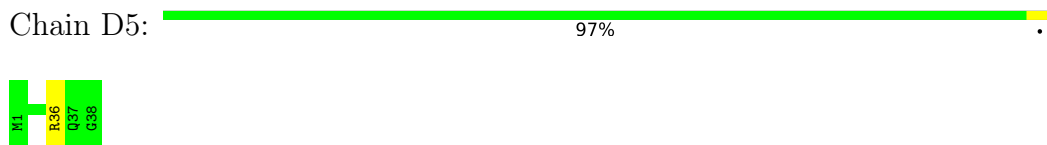
- Molecule 25: 50S ribosomal protein L35



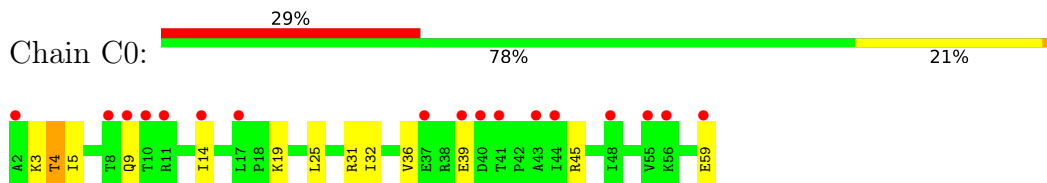
- Molecule 26: 50S ribosomal protein L36



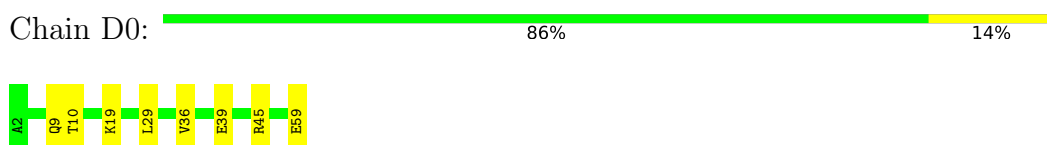
- Molecule 26: 50S ribosomal protein L36



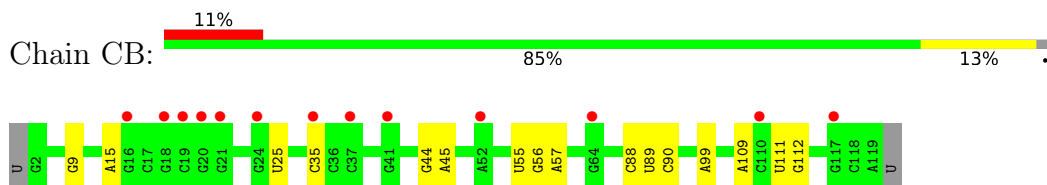
- Molecule 27: 50S ribosomal protein L30



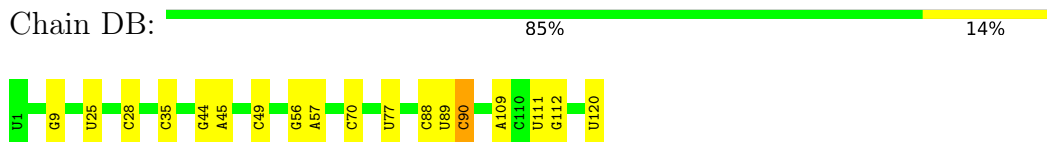
- Molecule 27: 50S ribosomal protein L30



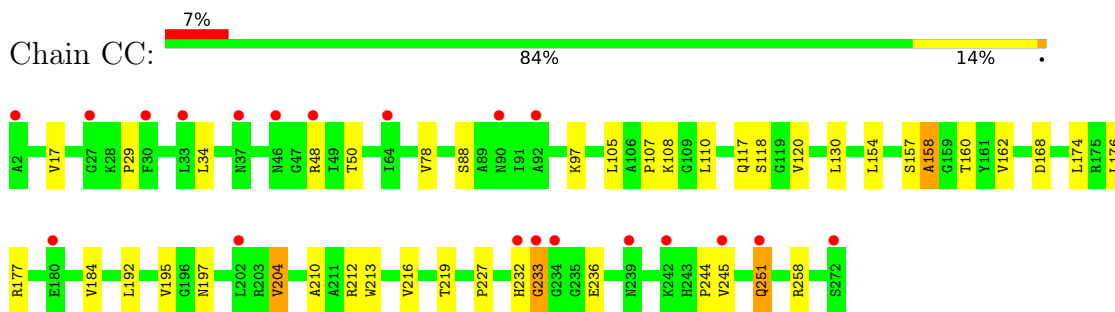
- Molecule 28: 5S rRNA



- Molecule 28: 5S rRNA

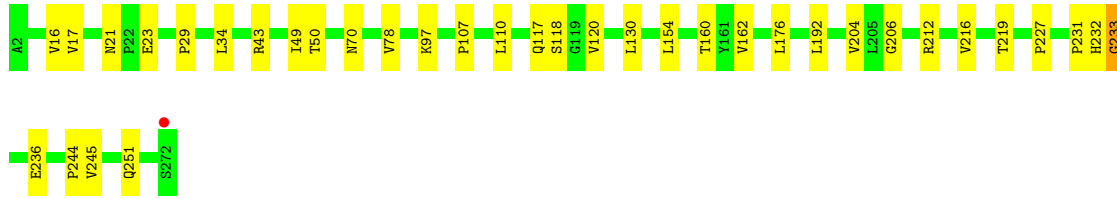


- Molecule 29: 50S ribosomal protein L2

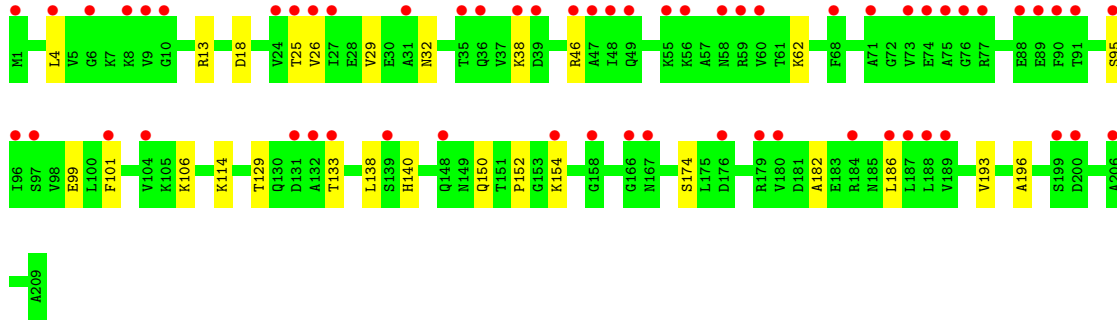


- Molecule 29: 50S ribosomal protein L2

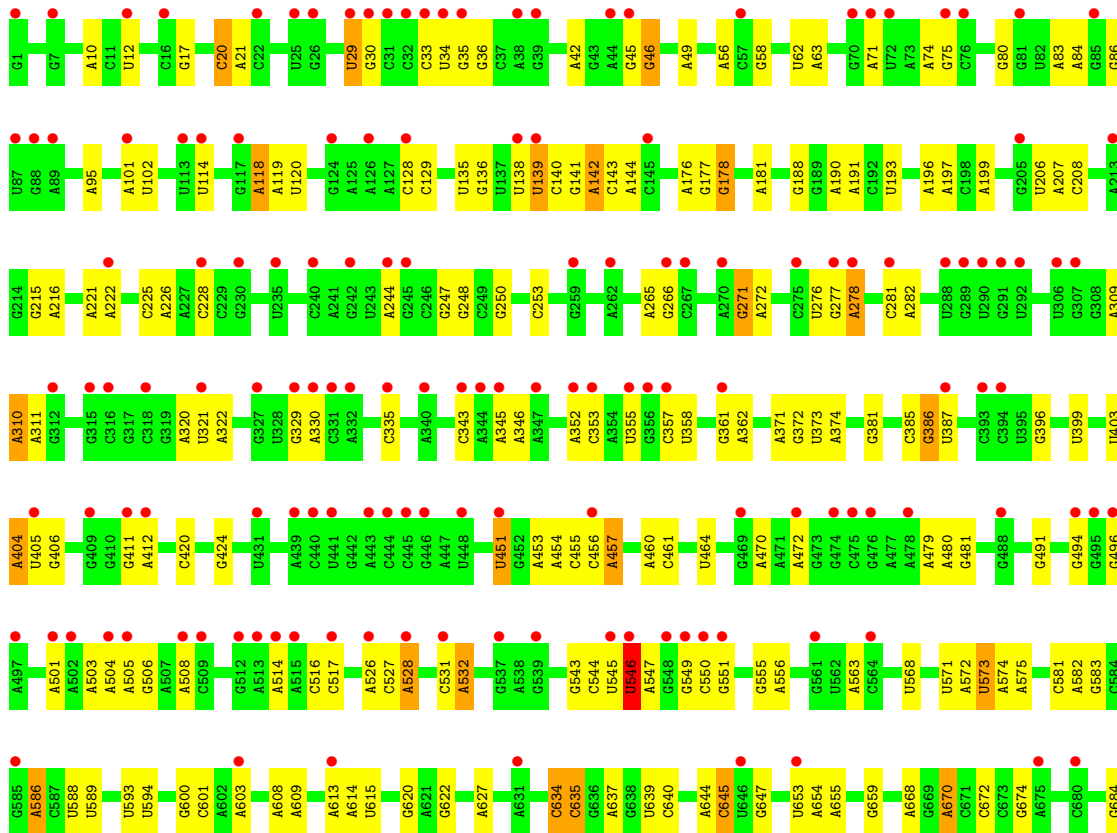
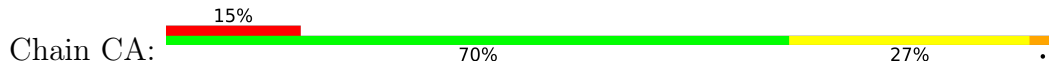


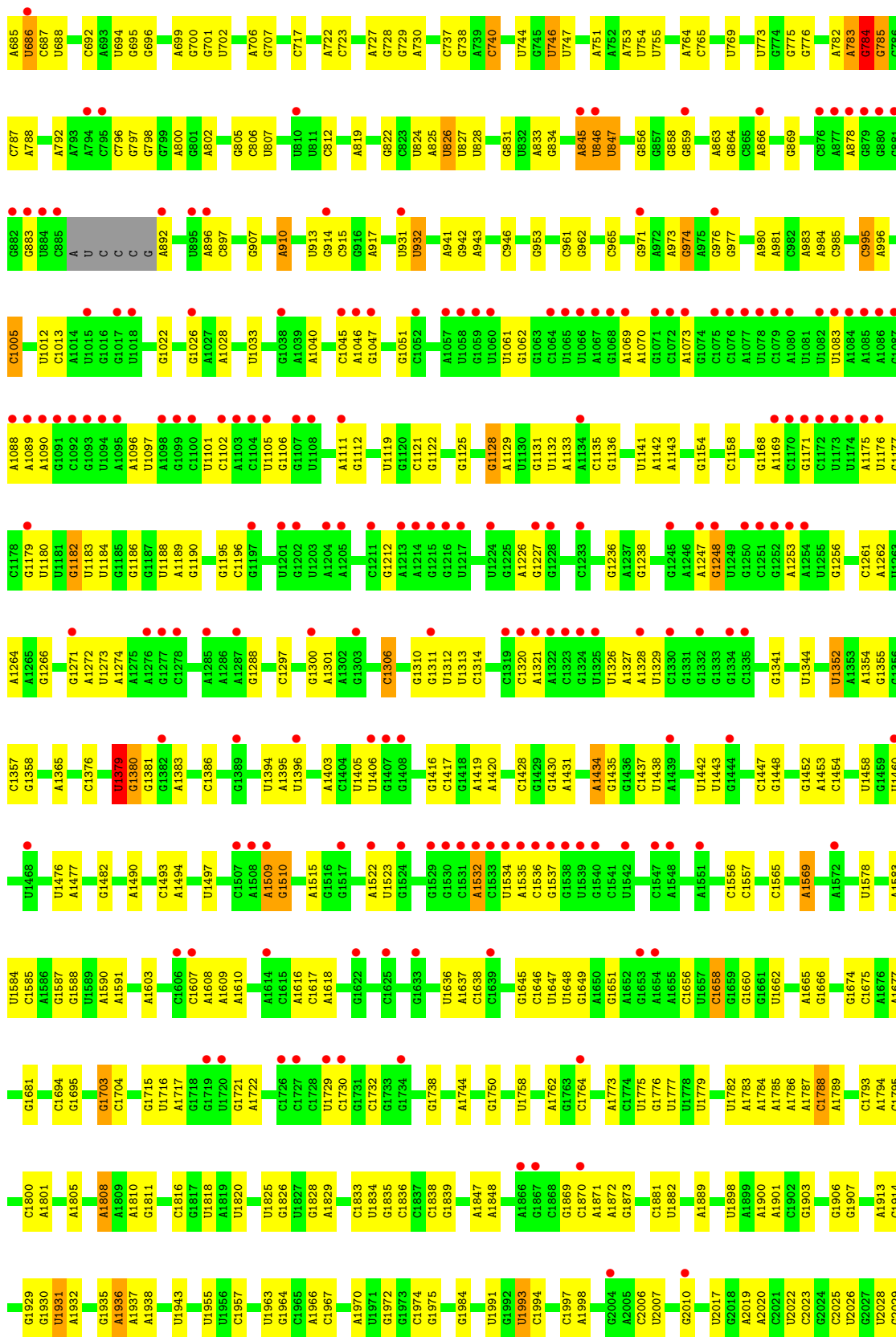


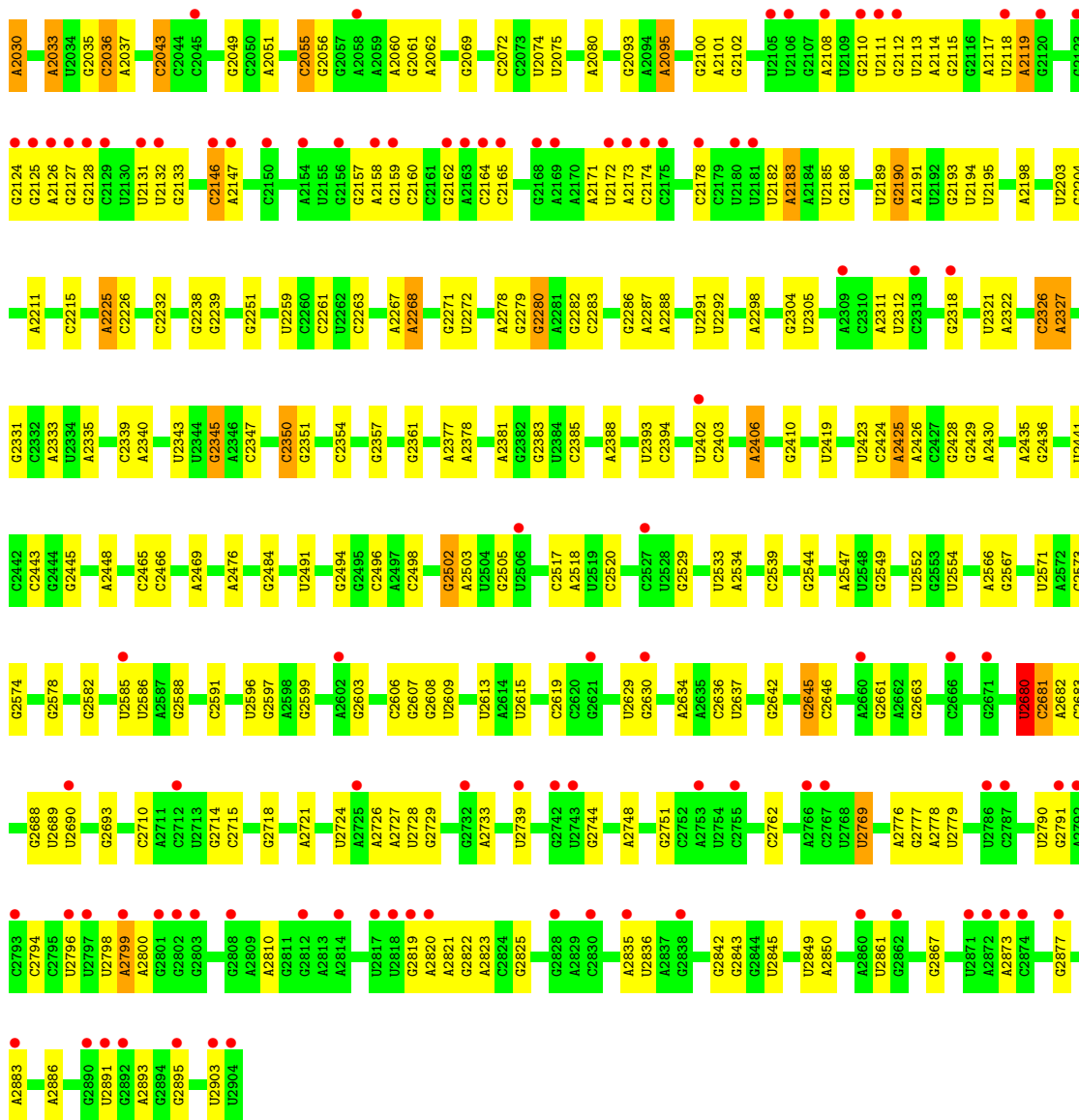
• Molecule 30: 50S ribosomal protein L3



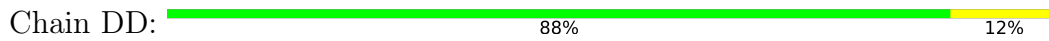
• Molecule 31: 23S rRNA



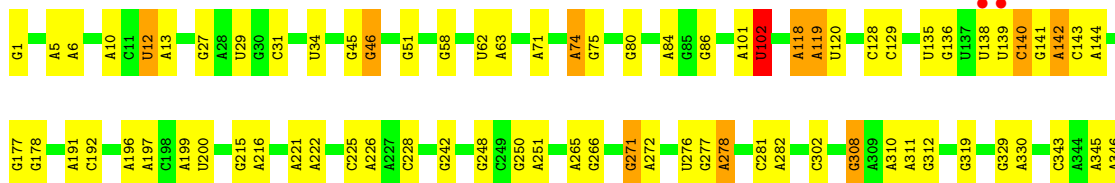
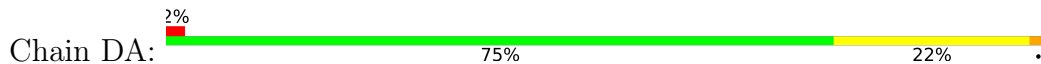




• Molecule 32: 50S ribosomal protein L3



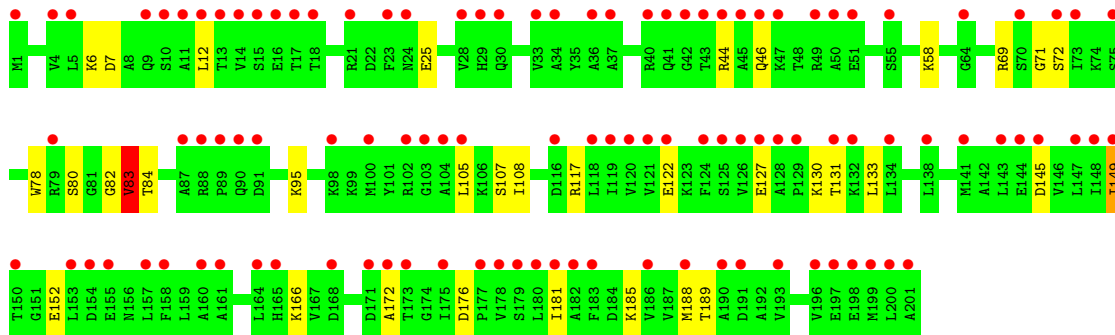
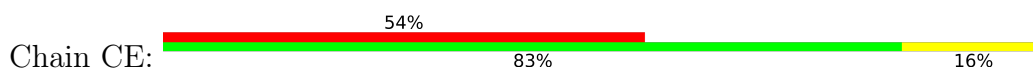
• Molecule 33: 23S rRNA



A352	A502	A624	A782	A927	U1083	G1210	U1394	A1571	A1744	G1907	A2083	C2145	G2250
C353	A503	A627	A783	A928	A1088	G1223	A1395	U1578	A1745	A1913	C2043	C2146	G2251
U357	A504	C634	G784	U931	A1089	G1227	U1396	U1584	A1746	C1914	C2049	A2147	G2252
U358	A505	C635	G785	U932	A1090	G1238	A1403	C1585	U1747	A1928	G2055	G2153	G2253
A362	A508	G638	U790	C946	G1093	G1250	G1416	A1590	G1753	A1929	G2056	A2154	G2254
G370	G512	G639	A792	G956	U1094	A1250	C1417	A1591	A1754	G1930	G2060	U2155	G2255
A371	A513	G640	A802	G957	A1095	G1253	A1420	A1592	G1755	G1931	A2060	G2156	U2262
G372	A514	G641	U803	C961	A1096	A1253	G1425	A1603	A1756	G1935	A2062	A2158	C2263
G386	A518	G644	A804	G974	A1097	G1256	G1426	C1604	U1758	A1936	G2069	C2160	A2268
U387	C531	G645	G905	A979	A1098	G1266	A1426	U1607	C1760	A1937	G2080	C2161	A2274
G388	C532	G646	C806	A980	C1102	U1267	C1428	A1608	C1764	U1939	A2080	A2162	A2273
G389	C533	G647	C812	A981	U1105	G1268	U1429	A1609	A1773	G1954	A2081	C2163	A2274
U390	G543	G653	A819	A982	U1106	A1269	G1430	A1610	A1774	G1955	U2086	C2164	G2279
G396	C544	G654	U827	C985	G1112	G1271	A1431	A1616	U1782	U1956	G2087	U2166	G2280
U399	C545	G655	U828	C986	G1125	G1272	A1434	C1617	U1783	C1957	G2093	U2167	A2281
U403	C547	G656	U832	A996	U1126	U1273	U1442	A1618	A1789	C1962	A2097	G2168	G2282
G406	C548	G659	A833	A997	A1127	U1278	U1443	C1639	A1794	G1963	A2098	A2169	C2283
G411	C550	U686	G834	C1005	G1128	G1279	U1452	G1645	C1795	G1964	G2100	U2171	G2286
A412	C551	C687	G839	G1011	A1129	A1284	U1453	C1646	A1801	C1967	A2101	A2173	A2288
C413	A563	G690	C940	U1012	U1130	U1130	U1454	U1647	A1802	G1967	G2102	G2174	U2291
C414	A568	G691	C941	C1013	U1131	A1285	U1455	U1648	A1805	G1968	G2103	C2175	U2292
A415	U568	U702	G858	A1014	U1132	G1286	U1456	G1649	A1806	G1969	C2104	A2177	G2287
U419	U571	C717	G859	G1022	A1133	G1287	U1457	A1650	A1808	G1972	U2105	C2178	A2298
C420	U572	C723	A866	U1023	U1134	G1288	G1482	A1651	A1816	G1975	A2108	C2179	U2306
G424	A574	A575	U870	G1026	C1136	G1300	A1490	G1660	C1816	G1984	G2110	U2181	G2308
U451	U580	U589	A878	A1028	G1136	A1301	U1493	G1675	A1819	U1991	G2111	U2182	G2311
G452	G585	G586	G879	A1033	U1141	C1306	U1494	A1676	G1826	G1992	U2112	A2183	U2312
A453	G586	G587	A735	U1040	A1142	A1321	U1497	G1680	G1831	U1993	C2116	U2184	G2313
A454	A586	C587	A742	A1046	G1168	U1329	A1508	G1681	G1835	C1997	A2117	G2118	G2314
C455	C587	U588	A743	A1047	G1171	U1379	A1509	G1682	G1847	A1998	A2118	A2119	G2318
C456	U588	U589	A743	G1047	U1173	G1341	G1510	C1694	A1847	C1999	C2008	C2120	A2322
U459	U589	U476	A885	U1061	U1174	U1352	A1515	G1715	A1848	G2008	G2121	G2121	G2325
A460	U593	U747	A885	U1062	A1175	U1357	A1516	A1716	A1853	U2017	U2122	U2122	C2326
G476	U594	U754	A885	G1063	U1176	G1358	U1523	A1717	A1853	G2018	G2123	G2123	A2327
A479	G600	U755	A885	U1064	G1178	G1365	U1532	U1720	G1869	A2019	G2124	G2124	A2328
A480	C601	U755	A885	U1065	U1179	A1365	A1532	G1721	C1870	A2020	G2125	G2125	U2329
G481	A602	C758	A885	U1066	U1180	A1365	A1533	G1726	A1871	G2023	G2126	G2126	G2330
A491	A603	A764	A885	A1067	U1181	C1376	U1534	C1727	A1872	C2023	G2127	G2127	G2331
G493	A603	C765	A885	G1068	U1182	U1379	A1535	C1728	G1873	U2026	U2129	U2129	C2332
G494	A614	A909	A885	U1069	U1183	G1380	C1536	C1729	A1881	G2027	U2130	U2130	A2333
G496	U615	G776	A885	A1070	U1187	G1381	G1537	C1730	U1882	U2028	U2131	U2131	U2334
	G620	U779	A885	G1072	U1188	G1382	C1565	C1731	U1882	G2029	G2133	G2133	A2335
			C915	A1073	A1189	A1383	A1569	C1732	A1900	A2030	A2134	A2134	C2339
				A1077	G1190	A1383	A1570	G1738	A1906	G2032	A2135	A2135	G2239



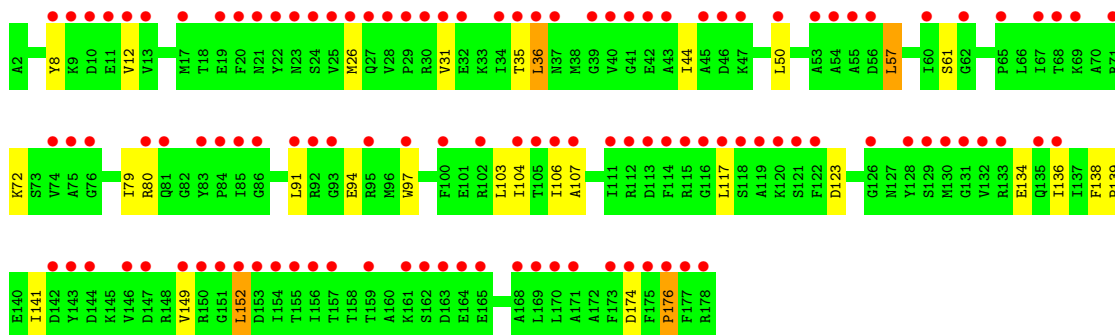
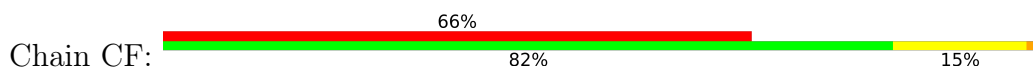
• Molecule 34: 50S ribosomal protein L4



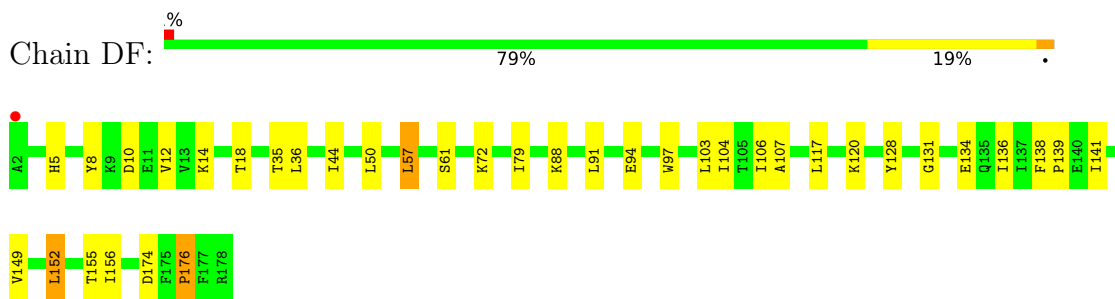
• Molecule 34: 50S ribosomal protein L4



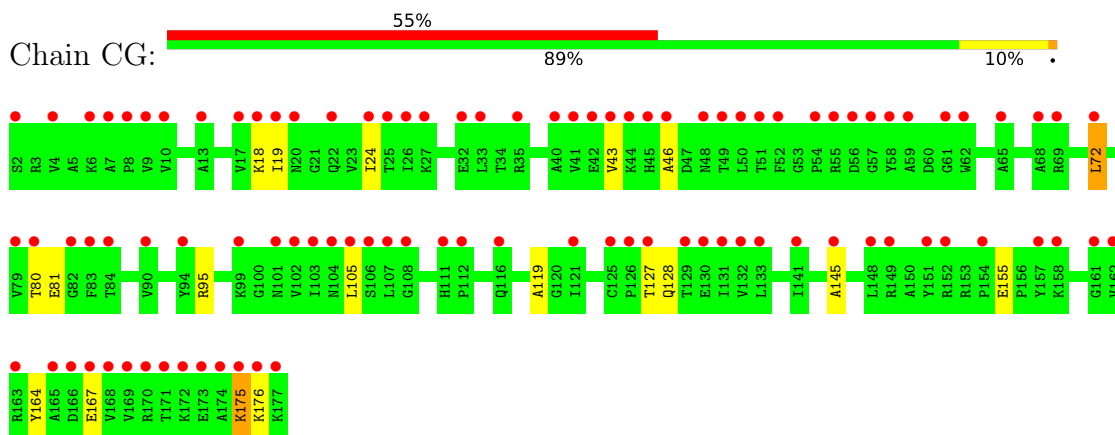
• Molecule 35: 50S ribosomal protein L5



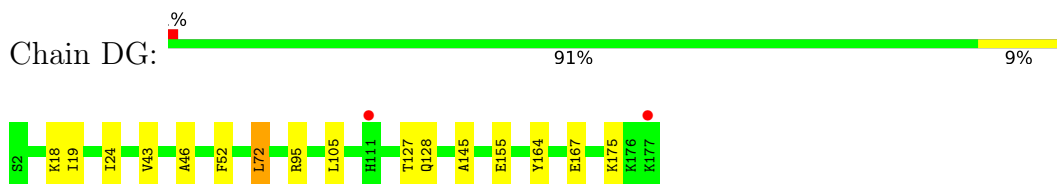
• Molecule 35: 50S ribosomal protein L5



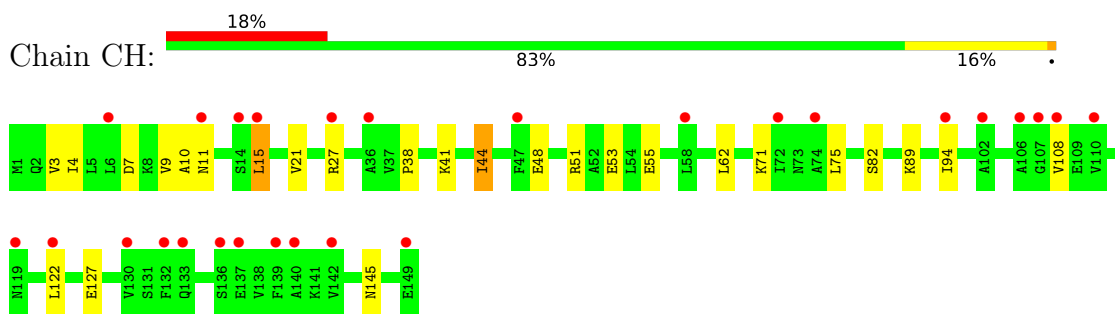
- Molecule 36: 50S ribosomal protein L6



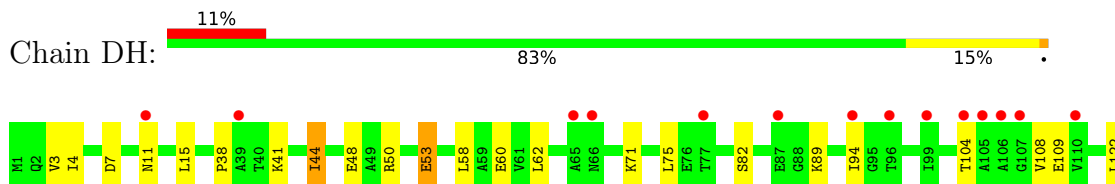
- Molecule 36: 50S ribosomal protein L6

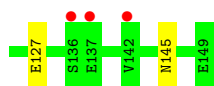


- Molecule 37: 50S ribosomal protein L9

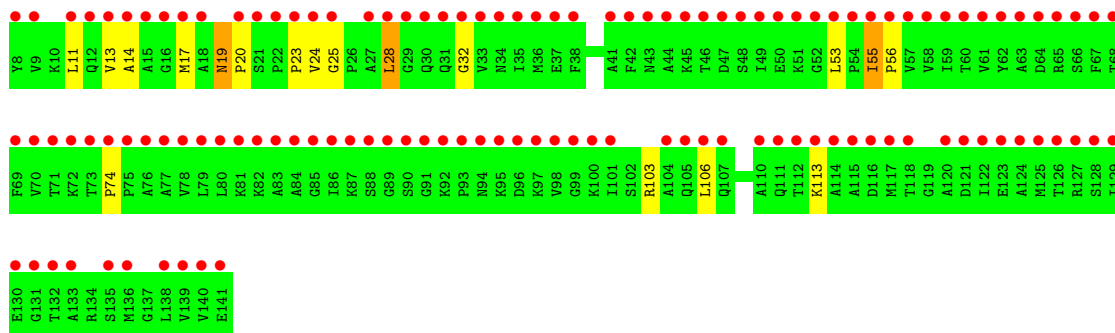
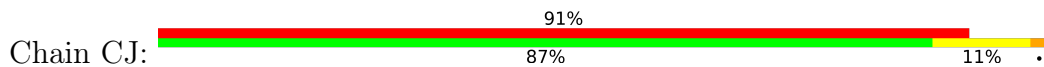


- Molecule 37: 50S ribosomal protein L9

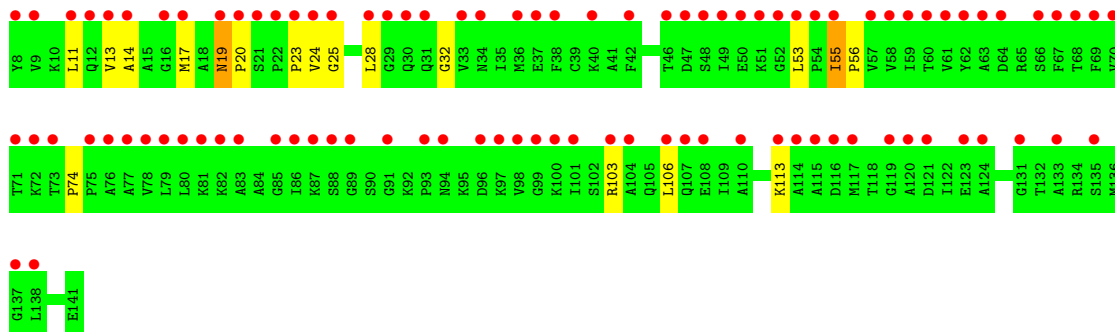
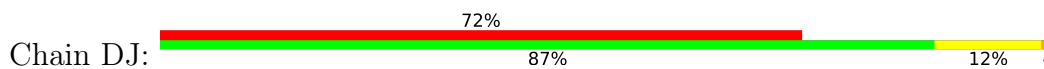




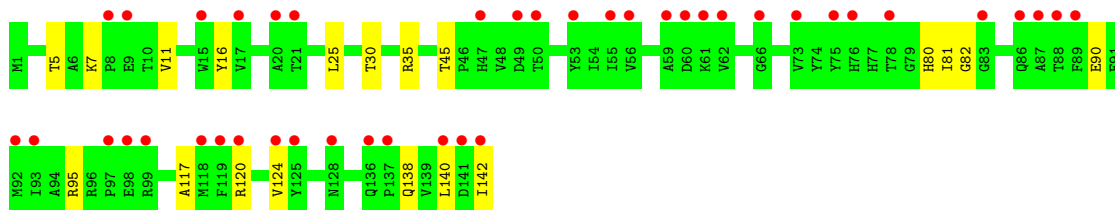
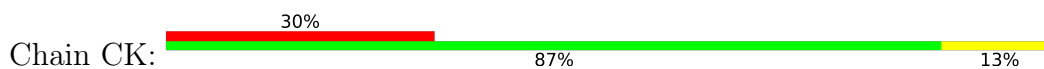
• Molecule 38: 50S ribosomal protein L11



• Molecule 38: 50S ribosomal protein L11



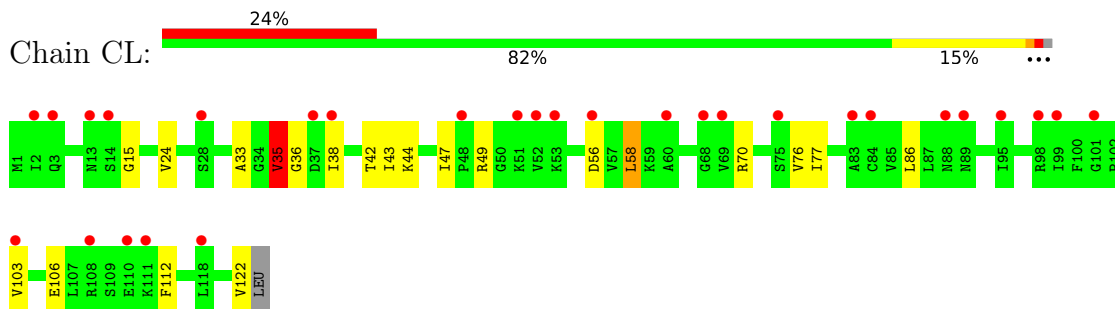
• Molecule 39: 50S ribosomal protein L13



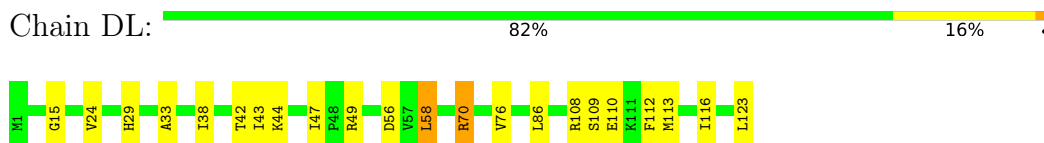
• Molecule 39: 50S ribosomal protein L13



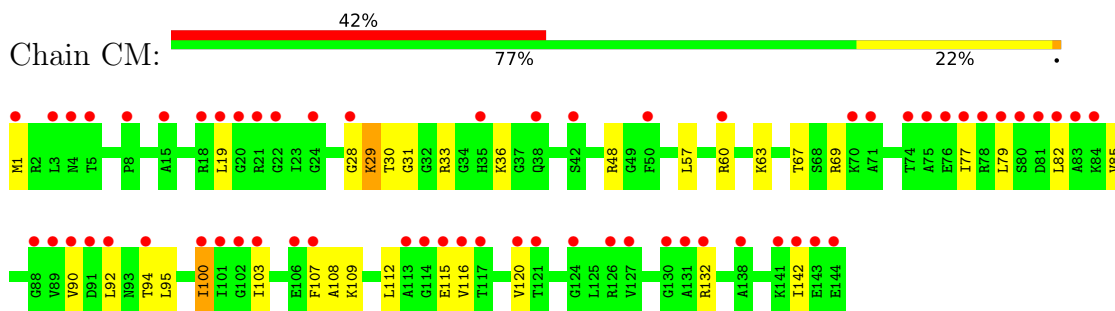
- Molecule 40: 50S ribosomal protein L14



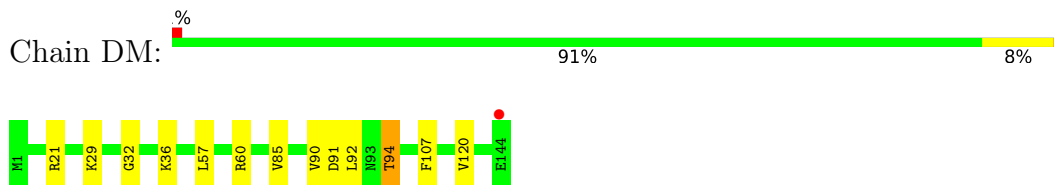
- Molecule 40: 50S ribosomal protein L14



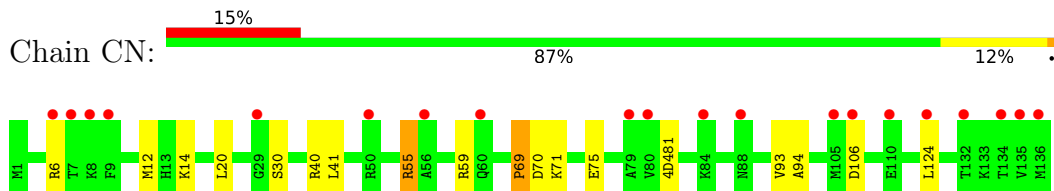
- Molecule 41: 50S ribosomal protein L15



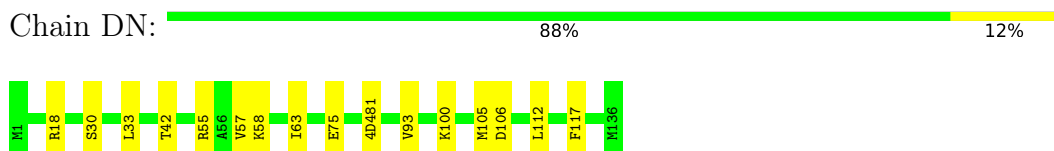
- Molecule 41: 50S ribosomal protein L15



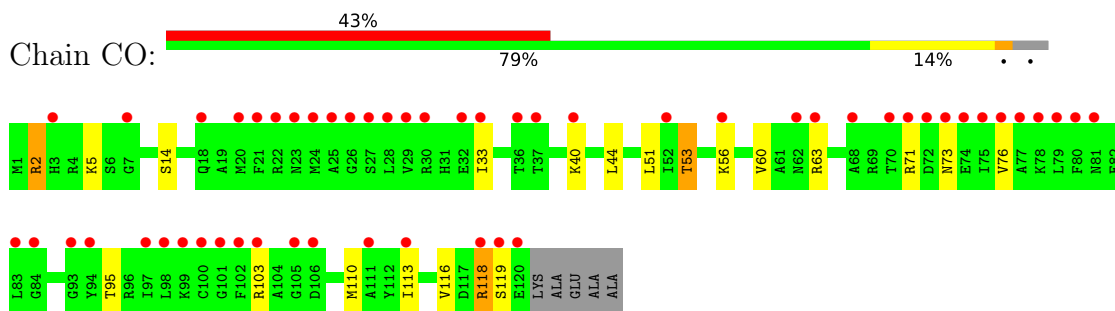
- Molecule 42: 50S ribosomal protein L16



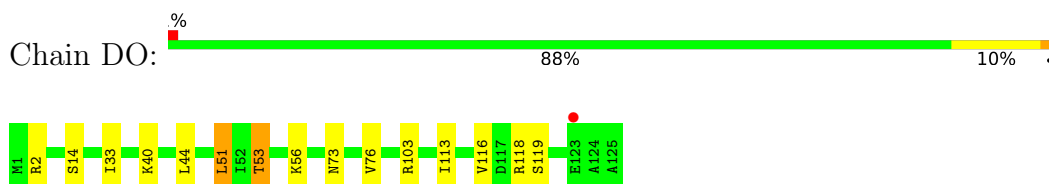
- Molecule 42: 50S ribosomal protein L16



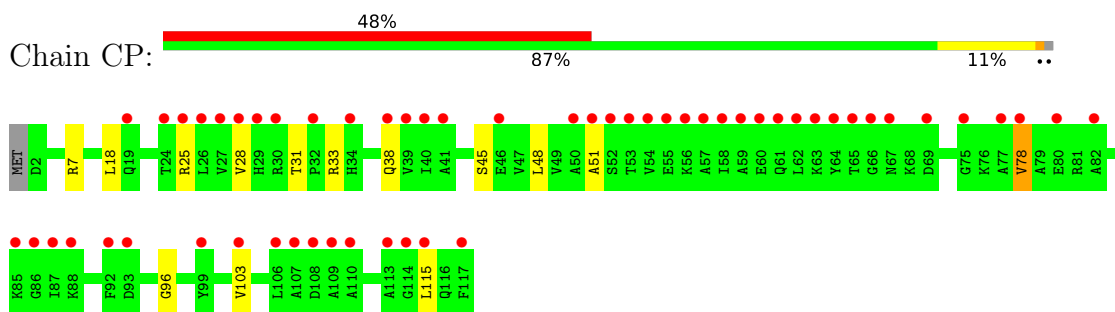
- Molecule 43: 50S ribosomal protein L17



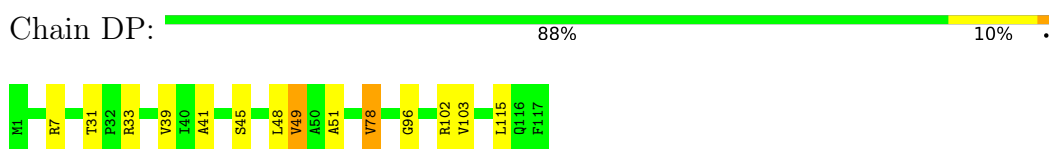
- Molecule 43: 50S ribosomal protein L17



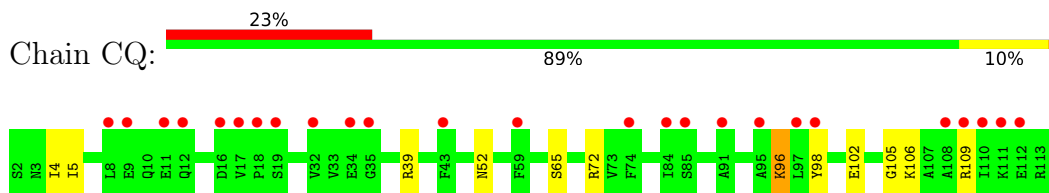
- Molecule 44: 50S ribosomal protein L18



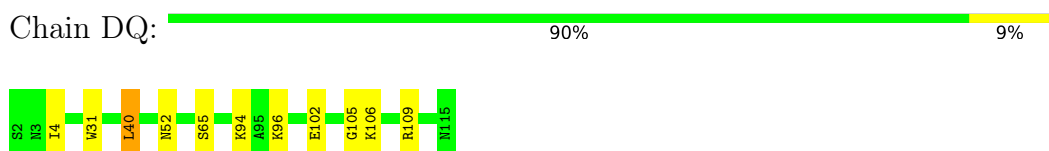
- Molecule 44: 50S ribosomal protein L18



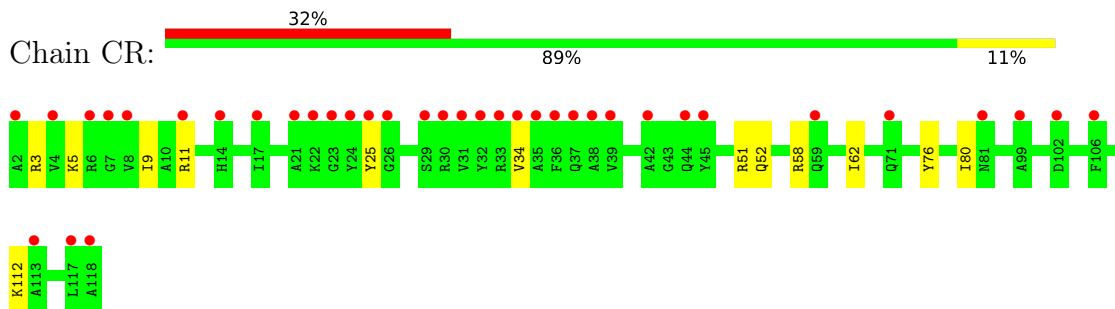
- Molecule 45: 50S ribosomal protein L19



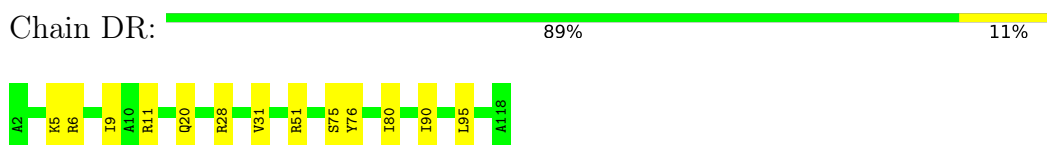
- Molecule 45: 50S ribosomal protein L19



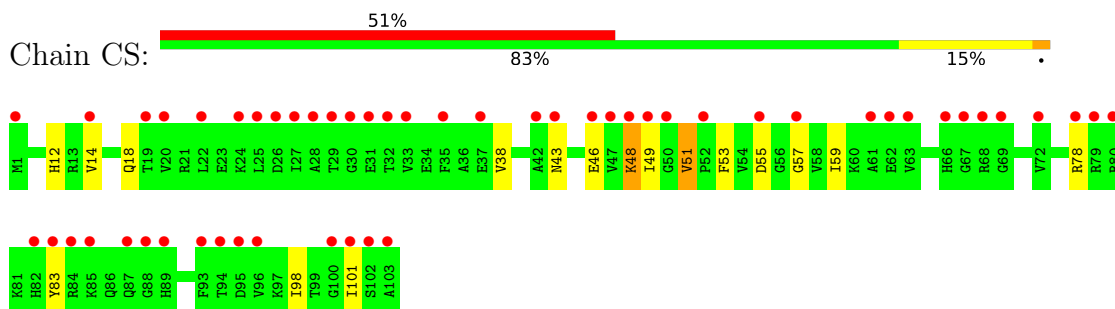
- Molecule 46: 50S ribosomal protein L20



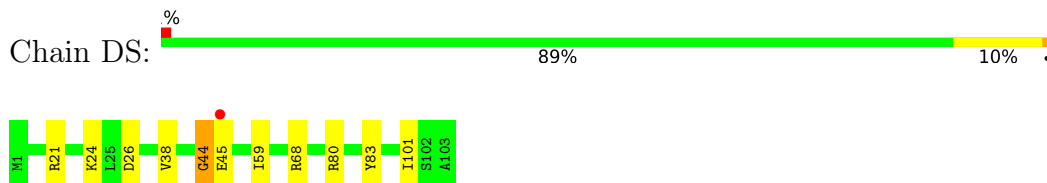
- Molecule 46: 50S ribosomal protein L20



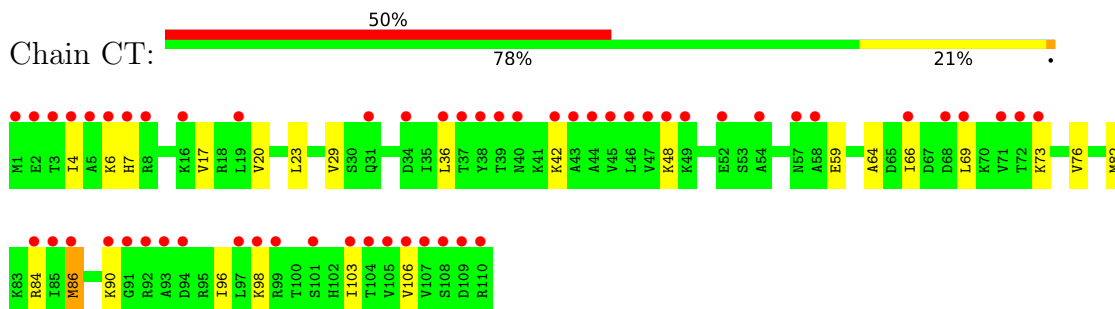
- Molecule 47: 50S ribosomal protein L21



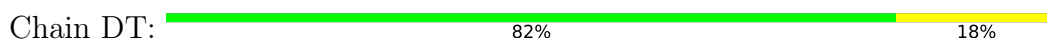
- Molecule 47: 50S ribosomal protein L21



- Molecule 48: 50S ribosomal protein L22

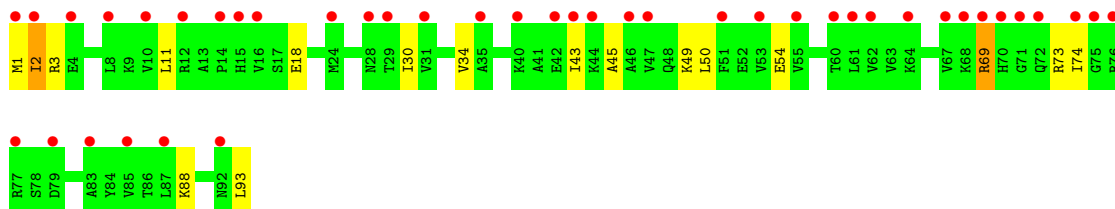
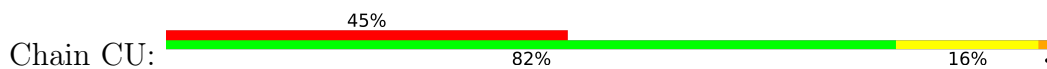


- Molecule 48: 50S ribosomal protein L22

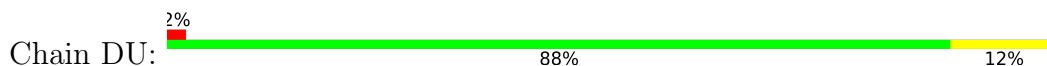




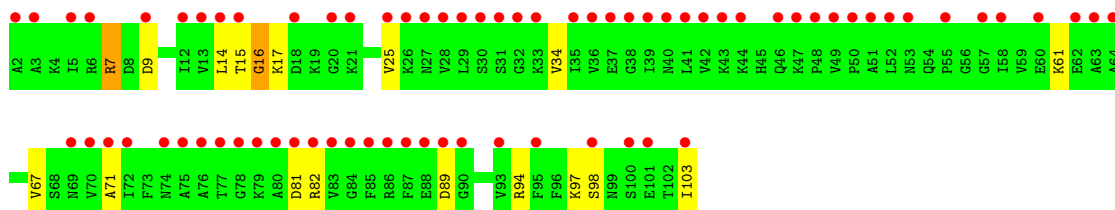
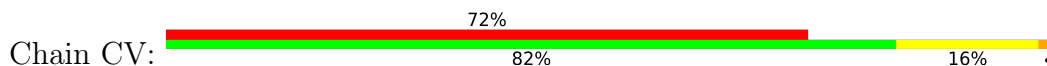
- Molecule 49: 50S ribosomal protein L23



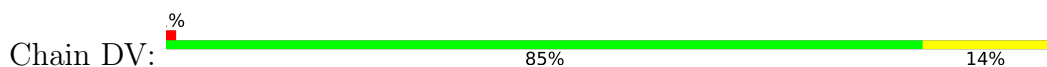
- Molecule 49: 50S ribosomal protein L23



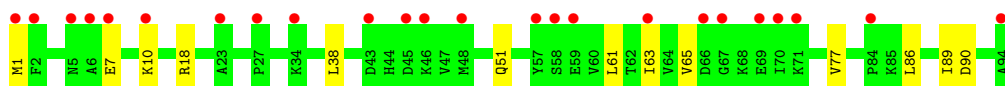
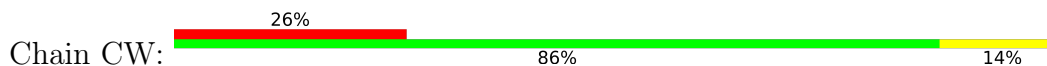
- Molecule 50: 50S ribosomal protein L24



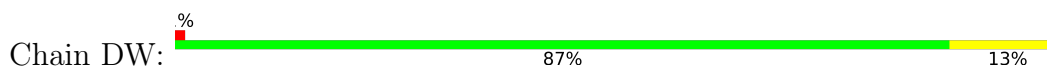
- Molecule 50: 50S ribosomal protein L24

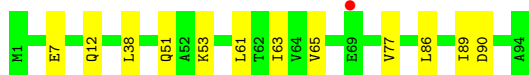


- Molecule 51: 50S ribosomal protein L25

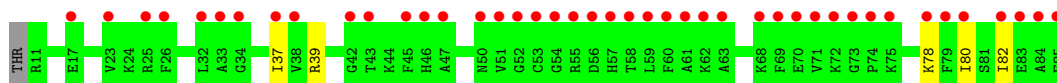


- Molecule 51: 50S ribosomal protein L25

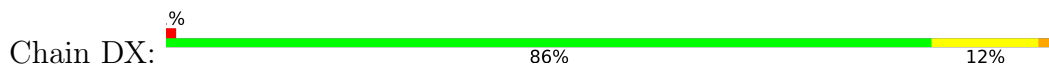




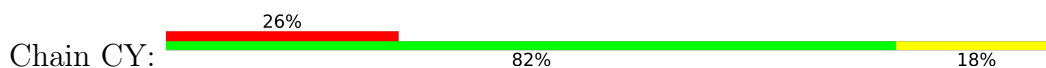
- Molecule 52: 50S ribosomal protein L27



- Molecule 52: 50S ribosomal protein L27



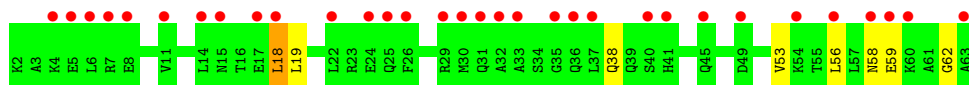
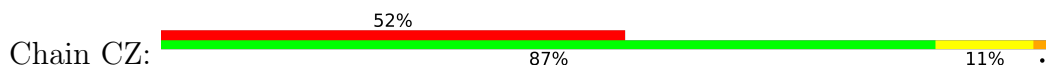
- Molecule 53: 50S ribosomal protein L28



- Molecule 53: 50S ribosomal protein L28




- Molecule 54: 50S ribosomal protein L29

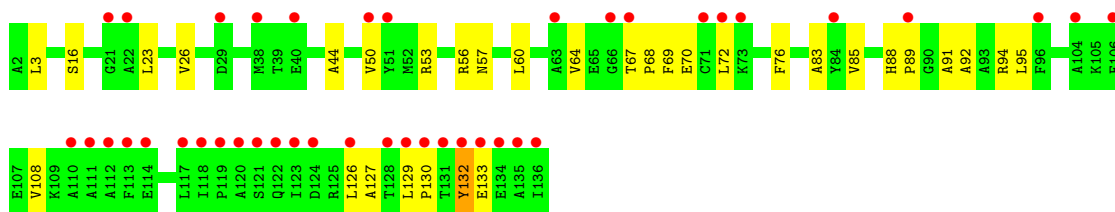


- Molecule 54: 50S ribosomal protein L29



- Molecule 55: 50S ribosomal protein L10

Chain DI:  30% 76% 23%



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.92Å 434.36Å 623.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	47.19 – 3.12 47.14 – 3.12	Depositor EDS
% Data completeness (in resolution range)	82.3 (47.19-3.12) 82.3 (47.14-3.12)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	22.94 (at 3.12Å)	Xtrriage
Refinement program	BUSTER 2.11.6	Depositor
R, R_{free}	0.190 , 0.220 0.208 , 0.242	Depositor DCC
R_{free} test set	3316 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å ²)	59.9	Xtrriage
Anisotropy	0.346	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 101.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.26$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	295125	wwPDB-VP
Average B, all atoms (Å ²)	119.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.17% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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	0.96	3/36593 (0.0%)	0.85	4/57081 (0.0%)
1	BA	0.96	7/36568 (0.0%)	0.84	3/57042 (0.0%)
2	AB	0.44	0/1784	0.63	0/2403
2	BB	0.43	0/1784	0.64	0/2403
3	AC	0.42	0/1652	0.64	0/2225
3	BC	0.42	0/1652	0.64	0/2225
4	AD	0.40	0/1665	0.63	0/2227
4	BD	0.40	0/1665	0.64	0/2227
5	AE	0.44	0/1157	0.72	0/1557
5	BE	0.44	0/1118	0.75	0/1504
6	AF	0.41	0/881	0.66	0/1189
6	BF	0.44	0/835	0.73	0/1128
7	AG	0.42	0/1196	0.61	0/1602
7	BG	0.43	0/1196	0.62	0/1602
8	AH	0.40	0/989	0.66	0/1326
8	BH	0.40	0/989	0.65	0/1326
9	AI	0.40	0/1034	0.65	0/1375
9	BI	0.40	0/1034	0.64	0/1375
10	AJ	0.41	0/806	0.65	0/1089
10	BJ	0.46	0/797	0.68	0/1077
11	AK	0.40	0/893	0.62	0/1205
11	BK	0.40	0/893	0.65	0/1205
12	AL	0.41	0/960	0.68	0/1286
12	BL	0.40	0/960	0.69	0/1286
13	AM	0.45	0/893	0.69	0/1193
13	BM	0.46	0/893	0.70	0/1193
14	AN	0.43	0/817	0.62	0/1088
14	BN	0.41	0/817	0.62	0/1088
15	AO	0.43	0/722	0.60	0/964
15	BO	0.40	0/722	0.62	0/964
16	AP	0.45	0/659	0.68	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
16	BP	0.46	0/659	0.72	0/884
17	AQ	0.45	0/658	0.69	0/881
17	BQ	0.46	0/658	0.72	0/881
18	AR	0.46	0/463	0.65	0/621
18	BR	0.47	0/463	0.63	0/621
19	AS	0.44	0/653	0.59	0/877
19	BS	0.43	0/653	0.59	0/877
20	AT	0.42	0/676	0.64	0/895
20	BT	0.45	0/671	0.66	0/888
21	AU	0.42	0/472	0.59	0/627
21	BU	0.39	0/472	0.59	0/627
22	C1	0.44	0/450	0.66	0/599
22	D1	0.48	0/450	0.72	0/599
23	C2	0.46	0/416	0.71	0/554
23	D2	0.46	0/421	0.68	0/561
24	C3	0.45	0/380	0.70	0/498
24	D3	0.53	0/380	0.74	0/498
25	C4	0.42	0/513	0.62	0/676
25	D4	0.48	0/513	0.65	0/676
26	C5	0.41	0/303	0.72	0/397
26	D5	0.47	0/303	0.74	0/397
27	C0	0.51	0/453	0.74	0/605
27	D0	0.52	0/467	0.71	0/623
28	CB	0.96	0/2828	0.86	1/4410 (0.0%)
28	DB	0.99	1/2872 (0.0%)	0.86	0/4478
29	CC	0.40	0/2122	0.69	0/2852
29	DC	0.42	0/2122	0.69	0/2852
30	CD	0.40	0/1586	0.66	0/2134
31	CA	0.99	42/69165 (0.1%)	0.86	10/107896 (0.0%)
32	DD	0.46	0/1576	0.67	0/2119
33	DA	1.03	26/69364 (0.0%)	0.89	14/108207 (0.0%)
34	CE	0.42	0/1571	0.67	0/2113
34	DE	0.44	0/1571	0.66	0/2113
35	CF	0.40	0/1435	0.65	0/1926
35	DF	0.41	0/1435	0.66	0/1926
36	CG	0.39	0/1343	0.63	1/1816 (0.1%)
36	DG	0.40	0/1343	0.60	0/1816
37	CH	0.44	0/1121	0.67	0/1515
37	DH	0.44	0/1121	0.66	0/1515
38	CJ	0.50	0/993	0.63	0/1341
38	DJ	0.50	0/993	0.63	0/1341
39	CK	0.38	0/1152	0.67	0/1551
39	DK	0.45	0/1152	0.66	0/1551

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
40	CL	0.44	0/947	0.67	0/1268
40	DL	0.47	0/955	0.68	0/1279
41	CM	0.43	0/1062	0.68	0/1413
41	DM	0.42	0/1062	0.67	0/1413
42	CN	0.42	0/1081	0.71	0/1443
42	DN	0.47	0/1092	0.72	0/1457
43	CO	0.41	0/973	0.67	0/1301
43	DO	0.47	0/1006	0.70	0/1345
44	CP	0.41	0/902	0.70	0/1209
44	DP	0.42	0/910	0.69	0/1219
45	CQ	0.39	0/929	0.67	1/1242 (0.1%)
45	DQ	0.43	0/929	0.65	0/1242
46	CR	0.43	0/960	0.64	0/1278
46	DR	0.51	0/960	0.65	0/1278
47	CS	0.41	0/829	0.69	0/1107
47	DS	0.45	0/829	0.72	0/1107
48	CT	0.41	0/864	0.70	0/1156
48	DT	0.46	0/864	0.69	0/1156
49	CU	0.42	0/745	0.65	0/994
49	DU	0.43	0/745	0.66	0/994
50	CV	0.47	0/788	0.73	0/1051
50	DV	0.44	0/788	0.70	0/1051
51	CW	0.39	0/766	0.62	0/1025
51	DW	0.44	0/766	0.63	0/1025
52	CX	0.37	0/576	0.60	0/762
52	DX	0.44	0/598	0.64	0/790
53	CY	0.39	0/635	0.68	0/848
53	DY	0.42	0/635	0.69	0/848
54	CZ	0.42	0/502	0.63	0/667
54	DZ	0.42	0/502	0.61	0/667
55	DI	0.49	0/1037	0.72	1/1402 (0.1%)
All	All	0.87	79/309273 (0.0%)	0.82	35/462210 (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	1
33	DA	0	15
42	CN	0	1
All	All	0	17

The worst 5 of 79 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	CA	1936	A	N9-C4	-9.27	1.32	1.37
31	CA	2095	A	O5'-C5'	-8.23	1.29	1.42
31	CA	769	U	C1'-N1	7.39	1.59	1.48
1	BA	5	U	C1'-N1	7.39	1.59	1.48
31	CA	2225	A	C3'-O3'	7.31	1.52	1.42

The worst 5 of 35 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	CB	15	A	O4'-C1'-N9	9.17	115.54	108.20
33	DA	271	G	P-O3'-C3'	7.52	128.73	119.70
1	AA	1	A	OP1-P-OP2	-7.09	108.97	119.60
55	DI	132	TYR	C-N-CA	7.06	139.35	121.70
31	CA	892	A	OP1-P-OP2	-7.01	109.08	119.60

There are no chirality outliers.

5 of 17 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	898	G	Sidechain
33	DA	27	G	Sidechain
33	DA	308	G	Sidechain
33	DA	452	G	Sidechain
33	DA	512	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	32930	0	16591	89	0
1	BA	32908	0	16580	91	0
2	AB	1753	0	1780	12	0
2	BB	1753	0	1780	16	0
3	AC	1625	0	1696	12	0
3	BC	1625	0	1696	15	0
4	AD	1643	0	1707	9	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	BD	1643	0	1707	12	0
5	AE	1144	0	1185	15	0
5	BE	1105	0	1148	19	0
6	AF	862	0	864	6	0
6	BF	817	0	808	9	0
7	AG	1182	0	1238	12	0
7	BG	1182	0	1238	7	0
8	AH	979	0	1031	7	0
8	BH	979	0	1031	5	0
9	AI	1022	0	1070	7	0
9	BI	1022	0	1070	7	0
10	AJ	796	0	836	9	0
10	BJ	787	0	828	10	0
11	AK	877	0	887	11	0
11	BK	877	0	887	10	0
12	AL	957	0	1017	9	0
12	BL	957	0	1017	11	0
13	AM	884	0	941	8	0
13	BM	884	0	941	13	0
14	AN	805	0	844	10	0
14	BN	805	0	844	10	0
15	AO	714	0	734	0	0
15	BO	714	0	734	1	0
16	AP	649	0	666	3	0
16	BP	649	0	666	7	0
17	AQ	649	0	691	4	0
17	BQ	649	0	691	7	0
18	AR	456	0	478	2	0
18	BR	456	0	478	1	0
19	AS	638	0	665	6	0
19	BS	638	0	665	10	0
20	AT	670	0	719	3	0
20	BT	665	0	714	8	0
21	AU	465	0	491	5	0
21	BU	465	0	491	5	0
22	C1	444	0	458	6	0
22	D1	444	0	458	9	0
23	C2	409	0	440	4	0
23	D2	414	0	442	2	0
24	C3	377	0	418	4	0
24	D3	377	0	418	1	0
25	C4	504	0	572	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	D4	504	0	572	2	0
26	C5	302	0	340	5	0
26	D5	302	0	340	1	0
27	C0	449	0	488	2	0
27	D0	463	0	504	2	0
28	CB	2529	0	1281	2	0
28	DB	2569	0	1301	5	0
29	CC	2083	0	2154	20	0
29	DC	2083	0	2154	17	0
30	CD	1565	0	1616	14	0
31	CA	62229	0	31318	254	0
32	DD	1576	0	1627	16	0
33	DA	62423	0	31410	187	0
34	CE	1552	0	1619	15	0
34	DE	1552	0	1619	11	0
35	CF	1411	0	1444	12	0
35	DF	1411	0	1444	14	0
36	CG	1323	0	1371	8	0
36	DG	1323	0	1371	9	0
37	CH	1110	0	1148	9	0
37	DH	1110	0	1148	7	0
38	CJ	979	0	1028	7	0
38	DJ	979	0	1028	6	0
39	CK	1129	0	1162	8	0
39	DK	1129	0	1162	3	0
40	CL	938	0	1012	10	0
40	DL	946	0	1023	9	0
41	CM	1053	0	1129	21	0
41	DM	1053	0	1129	11	0
42	CN	1075	0	1154	7	0
42	DN	1092	0	1177	7	0
43	CO	960	0	1000	9	0
43	DO	993	0	1034	7	0
44	CP	892	0	923	5	0
44	DP	900	0	935	8	0
45	CQ	917	0	962	8	0
45	DQ	917	0	962	5	0
46	CR	947	0	1019	10	0
46	DR	947	0	1019	13	0
47	CS	816	0	839	8	0
47	DS	816	0	839	8	0
48	CT	857	0	922	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	DT	857	0	922	13	0
49	CU	739	0	807	7	0
49	DU	739	0	807	3	0
50	CV	780	0	831	8	0
50	DV	780	0	831	5	0
51	CW	753	0	780	4	0
51	DW	753	0	780	5	0
52	CX	569	0	581	1	0
52	DX	591	0	606	7	0
53	CY	625	0	652	7	0
53	DY	625	0	652	2	0
54	CZ	501	0	531	3	0
54	DZ	501	0	531	3	0
55	DI	1023	0	1052	14	0
56	AA	70	0	0	0	0
56	BA	41	0	0	0	0
56	CA	156	0	0	0	0
56	CB	3	0	0	0	0
56	DA	183	0	0	0	0
56	DB	9	0	0	0	0
56	DD	2	0	0	0	0
56	DR	2	0	0	0	0
57	AA	13	0	18	1	0
57	BA	13	0	18	1	0
57	DA	26	0	36	1	0
57	DQ	13	0	18	0	0
57	DR	13	0	18	3	0
57	DS	13	0	18	1	0
58	AA	16	0	28	1	0
58	DA	48	0	84	1	0
58	DE	16	0	28	1	0
58	DK	8	0	14	0	0
58	DN	8	0	14	0	0
58	DS	8	0	14	0	0
58	DT	8	0	14	0	0
59	AA	24	0	48	0	0
59	DA	72	0	144	2	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	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	D3	7	0	10	0	0
61	DA	35	0	50	0	0
61	DL	7	0	10	0	0
61	DP	7	0	10	0	0
61	DQ	7	0	10	0	0
62	D0	4	0	6	0	0
62	D1	4	0	6	0	0
62	DA	32	0	48	1	0
62	DB	8	0	12	0	0
63	D3	10	0	14	0	0
63	DA	40	0	56	2	0
63	DD	10	0	14	0	0
63	DS	10	0	14	2	0
63	DT	10	0	14	0	0
63	DU	10	0	14	0	0
64	DA	40	0	76	0	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	1	0
69	AA	507	0	0	1	0
69	AC	4	0	0	0	0
69	AD	3	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	2	0	0	0	0
69	AK	7	0	0	0	0
69	AL	10	0	0	0	0
69	AM	4	0	0	1	0
69	AN	7	0	0	2	0
69	AO	2	0	0	0	0
69	AP	2	0	0	0	0
69	AR	1	0	0	0	0
69	AS	1	0	0	0	0
69	AT	3	0	0	0	0
69	AU	3	0	0	0	0
69	BA	291	0	0	1	0
69	BD	11	0	0	0	0
69	BE	1	0	0	0	0
69	BF	1	0	0	0	0
69	BK	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	BL	2	0	0	0	0
69	BN	2	0	0	0	0
69	BO	1	0	0	0	0
69	BP	3	0	0	2	0
69	BR	1	0	0	0	0
69	BT	4	0	0	0	0
69	BU	1	0	0	0	0
69	C3	3	0	0	0	0
69	C4	1	0	0	0	0
69	C5	1	0	0	0	0
69	CA	692	0	0	5	0
69	CB	13	0	0	0	0
69	CC	10	0	0	0	0
69	CD	6	0	0	0	0
69	CE	7	0	0	0	0
69	CL	1	0	0	0	0
69	CM	3	0	0	0	0
69	CO	1	0	0	0	0
69	CU	2	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	21	0	0	0	0
69	D1	42	0	0	0	0
69	D2	7	0	0	0	0
69	D3	28	0	0	0	0
69	D4	39	0	0	0	0
69	D5	9	0	0	0	0
69	DA	4834	0	0	14	0
69	DB	199	0	0	2	0
69	DC	98	0	0	1	0
69	DD	95	0	0	0	0
69	DE	63	0	0	1	0
69	DF	15	0	0	0	0
69	DG	7	0	0	0	0
69	DH	1	0	0	0	0
69	DK	65	0	0	1	0
69	DL	52	0	0	0	0
69	DM	62	0	0	0	0
69	DN	64	0	0	0	0
69	DO	48	0	0	0	0
69	DP	44	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	DQ	33	0	0	0	0
69	DR	68	0	0	1	0
69	DS	48	0	0	0	0
69	DT	62	0	0	1	0
69	DU	22	0	0	0	0
69	DV	18	0	0	0	0
69	DW	34	0	0	2	0
69	DX	31	0	0	0	0
69	DY	10	0	0	0	0
69	DZ	5	0	0	1	0
All	All	295125	0	194409	1246	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 1246 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)
47:CS:14:VAL:HG21	47:CS:98:ILE:HG13	1.20	1.10
33:DA:1847:A:HO2'	33:DA:1848:A:H8	1.02	0.98
2:BB:20:THR:HA	2:BB:39:HIS:CE1	1.98	0.98
47:CS:14:VAL:CG2	47:CS:98:ILE:HG13	1.96	0.96
31:CA:1847:A:HO2'	31:CA:1848:A:H8	1.04	0.94

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%)	209 (94%)	8 (4%)	5 (2%)	6	28
2	BB	222/224 (99%)	209 (94%)	8 (4%)	5 (2%)	6	28

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	AC	204/206 (99%)	194 (95%)	8 (4%)	2 (1%)	15	48
3	BC	204/206 (99%)	193 (95%)	8 (4%)	3 (2%)	10	38
4	AD	203/205 (99%)	192 (95%)	11 (5%)	0	100	100
4	BD	203/205 (99%)	193 (95%)	10 (5%)	0	100	100
5	AE	153/155 (99%)	144 (94%)	7 (5%)	2 (1%)	12	41
5	BE	148/155 (96%)	130 (88%)	15 (10%)	3 (2%)	7	30
6	AF	104/106 (98%)	101 (97%)	3 (3%)	0	100	100
6	BF	98/106 (92%)	89 (91%)	7 (7%)	2 (2%)	7	30
7	AG	149/151 (99%)	135 (91%)	13 (9%)	1 (1%)	22	56
7	BG	149/151 (99%)	139 (93%)	10 (7%)	0	100	100
8	AH	127/129 (98%)	119 (94%)	7 (6%)	1 (1%)	19	53
8	BH	127/129 (98%)	118 (93%)	9 (7%)	0	100	100
9	AI	125/127 (98%)	111 (89%)	14 (11%)	0	100	100
9	BI	125/127 (98%)	111 (89%)	14 (11%)	0	100	100
10	AJ	97/99 (98%)	89 (92%)	5 (5%)	3 (3%)	4	22
10	BJ	96/99 (97%)	76 (79%)	14 (15%)	6 (6%)	1	8
11	AK	115/117 (98%)	103 (90%)	10 (9%)	2 (2%)	9	35
11	BK	115/117 (98%)	103 (90%)	10 (9%)	2 (2%)	9	35
12	AL	120/123 (98%)	116 (97%)	3 (2%)	1 (1%)	19	53
12	BL	120/123 (98%)	114 (95%)	4 (3%)	2 (2%)	9	35
13	AM	112/114 (98%)	101 (90%)	7 (6%)	4 (4%)	3	19
13	BM	112/114 (98%)	100 (89%)	6 (5%)	6 (5%)	2	11
14	AN	98/100 (98%)	88 (90%)	8 (8%)	2 (2%)	7	30
14	BN	98/100 (98%)	90 (92%)	6 (6%)	2 (2%)	7	30
15	AO	86/88 (98%)	83 (96%)	3 (4%)	0	100	100
15	BO	86/88 (98%)	82 (95%)	3 (4%)	1 (1%)	13	43
16	AP	80/82 (98%)	70 (88%)	9 (11%)	1 (1%)	12	41
16	BP	80/82 (98%)	68 (85%)	10 (12%)	2 (2%)	5	26
17	AQ	78/80 (98%)	73 (94%)	4 (5%)	1 (1%)	12	41
17	BQ	78/80 (98%)	73 (94%)	2 (3%)	3 (4%)	3	18
18	AR	53/55 (96%)	53 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	BR	53/55 (96%)	51 (96%)	1 (2%)	1 (2%)	8	32
19	AS	77/79 (98%)	68 (88%)	8 (10%)	1 (1%)	12	41
19	BS	77/79 (98%)	65 (84%)	11 (14%)	1 (1%)	12	41
20	AT	84/86 (98%)	83 (99%)	1 (1%)	0	100	100
20	BT	83/86 (96%)	79 (95%)	3 (4%)	1 (1%)	13	43
21	AU	54/56 (96%)	52 (96%)	2 (4%)	0	100	100
21	BU	54/56 (96%)	52 (96%)	2 (4%)	0	100	100
22	C1	54/56 (96%)	48 (89%)	3 (6%)	3 (6%)	2	10
22	D1	54/56 (96%)	52 (96%)	2 (4%)	0	100	100
23	C2	48/51 (94%)	42 (88%)	5 (10%)	1 (2%)	7	29
23	D2	49/51 (96%)	47 (96%)	2 (4%)	0	100	100
24	C3	44/46 (96%)	42 (96%)	1 (2%)	1 (2%)	6	28
24	D3	44/46 (96%)	42 (96%)	2 (4%)	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	19
27	D0	57/58 (98%)	55 (96%)	2 (4%)	0	100	100
29	CC	269/271 (99%)	250 (93%)	14 (5%)	5 (2%)	8	32
29	DC	269/271 (99%)	253 (94%)	15 (6%)	1 (0%)	34	68
30	CD	207/209 (99%)	193 (93%)	14 (7%)	0	100	100
32	DD	206/209 (99%)	195 (95%)	11 (5%)	0	100	100
34	CE	199/201 (99%)	187 (94%)	9 (4%)	3 (2%)	10	38
34	DE	199/201 (99%)	191 (96%)	7 (4%)	1 (0%)	29	63
35	CF	175/177 (99%)	165 (94%)	9 (5%)	1 (1%)	25	59
35	DF	175/177 (99%)	164 (94%)	10 (6%)	1 (1%)	25	59
36	CG	174/176 (99%)	158 (91%)	12 (7%)	4 (2%)	6	28
36	DG	174/176 (99%)	160 (92%)	13 (8%)	1 (1%)	25	59
37	CH	147/149 (99%)	132 (90%)	11 (8%)	4 (3%)	5	24
37	DH	147/149 (99%)	135 (92%)	10 (7%)	2 (1%)	11	39

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	CJ	132/134 (98%)	125 (95%)	3 (2%)	4 (3%)	4	23
38	DJ	132/134 (98%)	125 (95%)	3 (2%)	4 (3%)	4	23
39	CK	140/142 (99%)	132 (94%)	5 (4%)	3 (2%)	7	29
39	DK	140/142 (99%)	134 (96%)	4 (3%)	2 (1%)	11	39
40	CL	120/123 (98%)	112 (93%)	7 (6%)	1 (1%)	19	53
40	DL	121/123 (98%)	116 (96%)	5 (4%)	0	100	100
41	CM	142/144 (99%)	130 (92%)	8 (6%)	4 (3%)	5	24
41	DM	142/144 (99%)	136 (96%)	4 (3%)	2 (1%)	11	39
42	CN	133/136 (98%)	123 (92%)	9 (7%)	1 (1%)	19	53
42	DN	134/136 (98%)	127 (95%)	7 (5%)	0	100	100
43	CO	118/125 (94%)	107 (91%)	8 (7%)	3 (2%)	5	26
43	DO	123/125 (98%)	113 (92%)	9 (7%)	1 (1%)	19	53
44	CP	114/117 (97%)	108 (95%)	6 (5%)	0	100	100
44	DP	115/117 (98%)	110 (96%)	5 (4%)	0	100	100
45	CQ	112/114 (98%)	104 (93%)	7 (6%)	1 (1%)	17	51
45	DQ	112/114 (98%)	103 (92%)	8 (7%)	1 (1%)	17	51
46	CR	115/117 (98%)	112 (97%)	3 (3%)	0	100	100
46	DR	115/117 (98%)	111 (96%)	4 (4%)	0	100	100
47	CS	101/103 (98%)	93 (92%)	5 (5%)	3 (3%)	4	23
47	DS	101/103 (98%)	95 (94%)	5 (5%)	1 (1%)	15	48
48	CT	108/110 (98%)	100 (93%)	8 (7%)	0	100	100
48	DT	108/110 (98%)	102 (94%)	6 (6%)	0	100	100
49	CU	91/93 (98%)	87 (96%)	4 (4%)	0	100	100
49	DU	91/93 (98%)	86 (94%)	5 (6%)	0	100	100
50	CV	100/102 (98%)	86 (86%)	10 (10%)	4 (4%)	3	16
50	DV	100/102 (98%)	95 (95%)	3 (3%)	2 (2%)	7	30
51	CW	92/94 (98%)	88 (96%)	4 (4%)	0	100	100
51	DW	92/94 (98%)	88 (96%)	4 (4%)	0	100	100
52	CX	73/76 (96%)	70 (96%)	3 (4%)	0	100	100
52	DX	75/76 (99%)	72 (96%)	3 (4%)	0	100	100
53	CY	75/77 (97%)	71 (95%)	4 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
53	DY	75/77 (97%)	71 (95%)	4 (5%)	0	100	100
54	CZ	60/62 (97%)	58 (97%)	1 (2%)	1 (2%)	9	35
54	DZ	60/62 (97%)	58 (97%)	2 (3%)	0	100	100
55	DI	133/135 (98%)	114 (86%)	14 (10%)	5 (4%)	3	18
All	All	11407/11629 (98%)	10635 (93%)	633 (6%)	139 (1%)	13	43

5 of 139 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	126	PHE
3	AC	156	ARG
5	AE	162	GLU
13	AM	5	ALA
22	C1	25	VAL

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%)	172 (92%)	14 (8%)	13	41
2	BB	186/186 (100%)	173 (93%)	13 (7%)	15	44
3	AC	170/170 (100%)	160 (94%)	10 (6%)	19	50
3	BC	170/170 (100%)	156 (92%)	14 (8%)	11	38
4	AD	172/172 (100%)	164 (95%)	8 (5%)	26	58
4	BD	172/172 (100%)	162 (94%)	10 (6%)	20	50
5	AE	118/118 (100%)	98 (83%)	20 (17%)	2	9
5	BE	113/118 (96%)	92 (81%)	21 (19%)	1	7
6	AF	92/92 (100%)	85 (92%)	7 (8%)	13	41
6	BF	87/92 (95%)	78 (90%)	9 (10%)	7	26
7	AG	124/124 (100%)	110 (89%)	14 (11%)	6	23
7	BG	124/124 (100%)	105 (85%)	19 (15%)	2	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	AH	104/104 (100%)	92 (88%)	12 (12%)	5	22
8	BH	104/104 (100%)	93 (89%)	11 (11%)	6	25
9	AI	105/105 (100%)	99 (94%)	6 (6%)	20	51
9	BI	105/105 (100%)	99 (94%)	6 (6%)	20	51
10	AJ	87/87 (100%)	80 (92%)	7 (8%)	12	39
10	BJ	86/87 (99%)	77 (90%)	9 (10%)	7	26
11	AK	90/90 (100%)	89 (99%)	1 (1%)	73	88
11	BK	90/90 (100%)	85 (94%)	5 (6%)	21	51
12	AL	102/102 (100%)	96 (94%)	6 (6%)	19	50
12	BL	102/102 (100%)	93 (91%)	9 (9%)	10	35
13	AM	92/92 (100%)	84 (91%)	8 (9%)	10	35
13	BM	92/92 (100%)	85 (92%)	7 (8%)	13	41
14	AN	83/83 (100%)	80 (96%)	3 (4%)	35	66
14	BN	83/83 (100%)	81 (98%)	2 (2%)	49	75
15	AO	76/76 (100%)	69 (91%)	7 (9%)	9	32
15	BO	76/76 (100%)	66 (87%)	10 (13%)	4	17
16	AP	65/65 (100%)	64 (98%)	1 (2%)	65	85
16	BP	65/65 (100%)	62 (95%)	3 (5%)	27	59
17	AQ	74/74 (100%)	68 (92%)	6 (8%)	11	38
17	BQ	74/74 (100%)	67 (90%)	7 (10%)	8	31
18	AR	48/48 (100%)	46 (96%)	2 (4%)	30	62
18	BR	48/48 (100%)	48 (100%)	0	100	100
19	AS	70/70 (100%)	62 (89%)	8 (11%)	5	23
19	BS	70/70 (100%)	64 (91%)	6 (9%)	10	36
20	AT	65/65 (100%)	57 (88%)	8 (12%)	4	19
20	BT	65/65 (100%)	54 (83%)	11 (17%)	2	9
21	AU	48/48 (100%)	45 (94%)	3 (6%)	18	47
21	BU	48/48 (100%)	45 (94%)	3 (6%)	18	47
22	C1	47/47 (100%)	46 (98%)	1 (2%)	53	78
22	D1	47/47 (100%)	45 (96%)	2 (4%)	29	61
23	C2	45/46 (98%)	42 (93%)	3 (7%)	16	45

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	D2	45/46 (98%)	40 (89%)	5 (11%)	6	24
24	C3	38/38 (100%)	35 (92%)	3 (8%)	12	39
24	D3	38/38 (100%)	36 (95%)	2 (5%)	22	53
25	C4	51/51 (100%)	47 (92%)	4 (8%)	12	40
25	D4	51/51 (100%)	47 (92%)	4 (8%)	12	40
26	C5	34/34 (100%)	33 (97%)	1 (3%)	42	71
26	D5	34/34 (100%)	34 (100%)	0	100	100
27	C0	48/48 (100%)	39 (81%)	9 (19%)	1	7
27	D0	49/48 (102%)	45 (92%)	4 (8%)	11	38
29	CC	216/216 (100%)	204 (94%)	12 (6%)	21	51
29	DC	216/216 (100%)	207 (96%)	9 (4%)	30	62
30	CD	164/164 (100%)	159 (97%)	5 (3%)	41	70
32	DD	163/163 (100%)	159 (98%)	4 (2%)	47	75
34	CE	165/165 (100%)	150 (91%)	15 (9%)	9	33
34	DE	165/165 (100%)	159 (96%)	6 (4%)	35	66
35	CF	148/148 (100%)	133 (90%)	15 (10%)	7	27
35	DF	148/148 (100%)	134 (90%)	14 (10%)	8	31
36	CG	137/137 (100%)	132 (96%)	5 (4%)	35	66
36	DG	137/137 (100%)	132 (96%)	5 (4%)	35	66
37	CH	114/114 (100%)	101 (89%)	13 (11%)	5	23
37	DH	114/114 (100%)	102 (90%)	12 (10%)	7	26
38	CJ	104/104 (100%)	99 (95%)	5 (5%)	25	57
38	DJ	104/104 (100%)	99 (95%)	5 (5%)	25	57
39	CK	116/116 (100%)	111 (96%)	5 (4%)	29	61
39	DK	116/116 (100%)	112 (97%)	4 (3%)	37	68
40	CL	103/104 (99%)	98 (95%)	5 (5%)	25	57
40	DL	104/104 (100%)	97 (93%)	7 (7%)	16	45
41	CM	103/103 (100%)	95 (92%)	8 (8%)	12	40
41	DM	103/103 (100%)	98 (95%)	5 (5%)	25	57
42	CN	108/108 (100%)	102 (94%)	6 (6%)	21	51
42	DN	109/108 (101%)	106 (97%)	3 (3%)	43	72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
43	CO	100/102 (98%)	94 (94%)	6 (6%)	19	49
43	DO	102/102 (100%)	97 (95%)	5 (5%)	25	57
44	CP	86/87 (99%)	81 (94%)	5 (6%)	20	50
44	DP	87/87 (100%)	83 (95%)	4 (5%)	27	59
45	CQ	99/99 (100%)	94 (95%)	5 (5%)	24	55
45	DQ	99/99 (100%)	95 (96%)	4 (4%)	31	64
46	CR	89/89 (100%)	85 (96%)	4 (4%)	27	59
46	DR	89/89 (100%)	86 (97%)	3 (3%)	37	68
47	CS	84/84 (100%)	79 (94%)	5 (6%)	19	49
47	DS	84/84 (100%)	83 (99%)	1 (1%)	71	87
48	CT	93/93 (100%)	90 (97%)	3 (3%)	39	69
48	DT	93/93 (100%)	92 (99%)	1 (1%)	73	88
49	CU	80/80 (100%)	73 (91%)	7 (9%)	10	35
49	DU	80/80 (100%)	75 (94%)	5 (6%)	18	47
50	CV	83/83 (100%)	77 (93%)	6 (7%)	14	43
50	DV	83/83 (100%)	77 (93%)	6 (7%)	14	43
51	CW	78/78 (100%)	72 (92%)	6 (8%)	13	40
51	DW	78/78 (100%)	74 (95%)	4 (5%)	24	55
52	CX	56/58 (97%)	53 (95%)	3 (5%)	22	53
52	DX	58/58 (100%)	53 (91%)	5 (9%)	10	36
53	CY	67/67 (100%)	63 (94%)	4 (6%)	19	49
53	DY	67/67 (100%)	62 (92%)	5 (8%)	13	41
54	CZ	54/54 (100%)	51 (94%)	3 (6%)	21	51
54	DZ	54/54 (100%)	53 (98%)	1 (2%)	57	80
55	DI	103/103 (100%)	100 (97%)	3 (3%)	42	71
All	All	9461/9478 (100%)	8825 (93%)	636 (7%)	16	45

5 of 636 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
41	CM	115	GLU
39	DK	142	ILE
43	CO	95	THR

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Mol	Chain	Res	Type
41	CM	107	PHE
52	CX	82	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 45 such sidechains are listed below:

Mol	Chain	Res	Type
20	BT	3	ASN
43	CO	107	ASN
20	BT	78	ASN
35	CF	27	GLN
54	CZ	45	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1530/1534 (99%)	265 (17%)	38 (2%)
1	BA	1529/1534 (99%)	263 (17%)	44 (2%)
28	CB	117/120 (97%)	12 (10%)	0
28	DB	119/120 (99%)	12 (10%)	0
31	CA	2892/2904 (99%)	511 (17%)	94 (3%)
33	DA	2880/2903 (99%)	441 (15%)	72 (2%)
All	All	9067/9115 (99%)	1504 (16%)	248 (2%)

5 of 1504 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	9	G
1	AA	22	G
1	AA	31	G

5 of 248 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
31	CA	973	A
33	DA	1607	C
31	CA	1647	U
33	DA	1536	C
33	DA	2282	G

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
31	G7M	CA	2069	31	20,26,27	0.50	0	17,39,42	0.36	0
31	2MA	CA	2503	31	17,25,26	0.79	0	17,37,40	0.45	0
31	5MC	CA	1962	31	18,22,23	0.27	0	26,32,35	0.38	0
32	MEQ	DD	150[B]	32	8,9,10	1.28	1 (12%)	5,10,12	0.91	0
33	PSU	DA	2580	33	18,21,22	0.63	0	22,30,33	0.56	0
33	5MU	DA	1939	33	19,22,23	0.71	1 (5%)	28,32,35	0.42	0
33	6MZ	DA	2030	33	18,25,26	0.97	1 (5%)	16,36,39	0.96	1 (6%)
33	5MU	DA	747	33	19,22,23	0.32	0	28,32,35	0.36	0
33	2MG	DA	1835	33	18,26,27	0.91	2 (11%)	16,38,41	0.57	0
1	2MG	BA	966	1	18,26,27	0.74	0	16,38,41	0.59	0
31	PSU	CA	1917	31	18,21,22	0.32	0	22,30,33	0.43	0
31	PSU	CA	955	31	18,21,22	0.33	0	22,30,33	0.44	0
31	6MZ	CA	1618	31	18,25,26	0.85	0	16,36,39	1.18	1 (6%)
33	OMG	DA	2251	33	18,26,27	0.90	1 (5%)	19,38,41	0.55	0
1	2MG	BA	1207	1	18,26,27	0.81	0	16,38,41	0.60	0
1	PSU	BA	516	1	18,21,22	0.37	0	22,30,33	0.42	0
33	PSU	DA	2457	33	18,21,22	0.57	0	22,30,33	0.44	0
33	OMU	DA	2552	33	19,22,23	0.50	0	26,31,34	0.26	0
33	2MG	DA	2445	33	18,26,27	1.08	1 (5%)	16,38,41	0.56	0
1	5MC	AA	1407	1	18,22,23	0.34	0	26,32,35	0.48	0
31	OMG	CA	2251	31	18,26,27	0.70	0	19,38,41	0.72	0
12	D2T	BL	89	12	7,9,10	0.61	0	6,11,13	0.73	0
31	PSU	CA	2504	31	18,21,22	0.43	0	22,30,33	0.38	0
1	UR3	AA	1498	1	19,22,23	0.50	0	26,32,35	0.39	0
33	PSU	DA	2604	33	18,21,22	0.50	0	22,30,33	0.48	0
1	MA6	AA	1519	1	19,26,27	0.85	0	18,38,41	1.02	1 (5%)
12	D2T	AL	89	12	7,9,10	0.88	0	6,11,13	0.98	0
33	6MZ	DA	1618	33	18,25,26	0.78	0	16,36,39	0.81	1 (6%)
33	PSU	DA	1911	33	18,21,22	0.36	0	22,30,33	0.41	0
1	MA6	BA	1518	1	19,26,27	0.76	0	18,38,41	1.14	1 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	3TD	CA	1915	31	18,22,23	0.48	0	22,32,35	0.49	0
1	2MG	AA	966	1	18,26,27	0.69	0	16,38,41	0.61	0
1	G7M	AA	527	1	20,26,27	0.64	0	17,39,42	0.76	1 (5%)
31	PSU	CA	2580	31	18,21,22	0.50	0	22,30,33	0.55	0
31	2MG	CA	2445	31	18,26,27	0.94	1 (5%)	16,38,41	0.59	0
33	PSU	DA	746	33,56	18,21,22	1.02	2 (11%)	22,30,33	0.37	0
31	PSU	CA	2457	31	18,21,22	0.60	0	22,30,33	0.51	0
31	PSU	CA	2605	31	18,21,22	0.38	0	22,30,33	0.50	0
33	3TD	DA	1915	33	18,22,23	0.44	0	22,32,35	0.49	0
31	OMU	CA	2552	31	19,22,23	0.34	0	26,31,34	0.28	0
31	6MZ	CA	2030	31	18,25,26	0.82	0	16,36,39	0.76	1 (6%)
31	OMC	CA	2498	31,56	19,22,23	0.44	0	26,31,34	0.37	0
1	UR3	BA	1498	1	19,22,23	0.38	0	26,32,35	0.39	0
1	5MC	AA	967	1	18,22,23	0.30	0	26,32,35	0.36	0
31	5MU	CA	747	31	19,22,23	0.22	0	28,32,35	0.32	0
1	5MC	BA	1407	1	18,22,23	0.42	0	26,32,35	0.47	0
1	2MG	AA	1207	1	18,26,27	0.80	0	16,38,41	0.64	0
33	1MG	DA	745	33	18,26,27	0.70	0	19,39,42	0.41	0
33	PSU	DA	1917	33	18,21,22	0.44	0	22,30,33	0.45	0
33	5MC	DA	1962	33	18,22,23	0.54	1 (5%)	26,32,35	0.44	0
31	PSU	CA	746	31,56	18,21,22	0.71	1 (5%)	22,30,33	0.58	0
42	4D4	DN	81[A]	-	9,11,12	1.49	1 (11%)	8,13,15	2.51	2 (25%)
33	G7M	DA	2069	33	20,26,27	0.68	0	17,39,42	0.65	0
1	PSU	AA	516	56,1	18,21,22	0.34	0	22,30,33	0.42	0
32	MEQ	DD	150[A]	32	8,9,10	0.43	0	5,10,12	0.67	0
1	2MG	AA	1516	1	18,26,27	0.87	0	16,38,41	0.50	0
1	MA6	BA	1519	1	19,26,27	0.84	0	18,38,41	1.01	1 (5%)
33	H2U	DA	2449	33	18,21,22	0.82	0	21,30,33	0.43	0
31	5MU	CA	1939	31	19,22,23	0.41	0	28,32,35	0.33	0
33	PSU	DA	2605	33	18,21,22	0.47	0	22,30,33	0.58	0
1	5MC	BA	967	1	18,22,23	0.35	0	26,32,35	0.37	0
31	PSU	CA	1911	31	18,21,22	0.35	0	22,30,33	0.42	0
42	4D4	CN	81	42	9,11,12	2.07	2 (22%)	8,13,15	2.17	2 (25%)
42	4D4	DN	81[B]	-	9,11,12	1.68	1 (11%)	8,13,15	2.63	2 (25%)
31	2MG	CA	1835	31	18,26,27	0.87	0	16,38,41	0.47	0
33	2MA	DA	2503	33,56	17,25,26	0.86	0	17,37,40	0.53	0
33	OMC	DA	2498	33,56	19,22,23	0.60	1 (5%)	26,31,34	0.43	0
1	MA6	AA	1518	1	19,26,27	0.79	0	18,38,41	1.04	1 (5%)
1	2MG	BA	1516	1	18,26,27	0.83	0	16,38,41	0.50	0
1	G7M	BA	527	1	20,26,27	0.69	0	17,39,42	0.45	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	PSU	DA	2504	33	18,21,22	0.59	0	22,30,33	0.33	0
1	4OC	AA	1402	1	20,23,24	0.32	0	26,32,35	0.57	1 (3%)
1	4OC	BA	1402	1	20,23,24	0.37	0	26,32,35	0.55	1 (3%)
33	PSU	DA	955	33	18,21,22	0.53	0	22,30,33	0.43	0
31	1MG	CA	745	31	18,26,27	0.77	0	19,39,42	0.59	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
31	G7M	CA	2069	31	-	1/3/25/26	0/3/3/3
31	2MA	CA	2503	31	-	1/3/25/26	0/3/3/3
31	5MC	CA	1962	31	-	0/7/25/26	0/2/2/2
32	MEQ	DD	150[B]	32	-	4/8/9/11	-
33	PSU	DA	2580	33	-	0/7/25/26	0/2/2/2
33	5MU	DA	1939	33	-	1/7/25/26	0/2/2/2
33	6MZ	DA	2030	33	-	1/5/27/28	0/3/3/3
33	5MU	DA	747	33	-	0/7/25/26	0/2/2/2
33	2MG	DA	1835	33	-	0/5/27/28	0/3/3/3
1	2MG	BA	966	1	-	0/5/27/28	0/3/3/3
31	PSU	CA	1917	31	-	0/7/25/26	0/2/2/2
31	PSU	CA	955	31	-	0/7/25/26	0/2/2/2
31	6MZ	CA	1618	31	-	1/5/27/28	0/3/3/3
33	OMG	DA	2251	33	-	1/5/27/28	0/3/3/3
1	2MG	BA	1207	1	-	0/5/27/28	0/3/3/3
1	PSU	BA	516	1	-	0/7/25/26	0/2/2/2
33	PSU	DA	2457	33	-	0/7/25/26	0/2/2/2
33	OMU	DA	2552	33	-	1/9/27/28	0/2/2/2
33	2MG	DA	2445	33	-	2/5/27/28	0/3/3/3
1	5MC	AA	1407	1	-	0/7/25/26	0/2/2/2
31	OMG	CA	2251	31	-	1/5/27/28	0/3/3/3
12	D2T	BL	89	12	-	6/7/12/14	-
31	PSU	CA	2504	31	-	0/7/25/26	0/2/2/2
1	UR3	AA	1498	1	-	0/7/25/26	0/2/2/2
33	PSU	DA	2604	33	-	0/7/25/26	0/2/2/2
1	MA6	AA	1519	1	-	3/7/29/30	0/3/3/3
12	D2T	AL	89	12	-	3/7/12/14	-
33	6MZ	DA	1618	33	-	0/5/27/28	0/3/3/3
33	PSU	DA	1911	33	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MA6	BA	1518	1	-	0/7/29/30	0/3/3/3
31	3TD	CA	1915	31	-	0/7/25/26	0/2/2/2
1	2MG	AA	966	1	-	0/5/27/28	0/3/3/3
1	G7M	AA	527	1	-	2/3/25/26	0/3/3/3
31	PSU	CA	2580	31	-	0/7/25/26	0/2/2/2
31	2MG	CA	2445	31	-	1/5/27/28	0/3/3/3
33	PSU	DA	746	33,56	-	1/7/25/26	0/2/2/2
31	PSU	CA	2457	31	-	0/7/25/26	0/2/2/2
31	PSU	CA	2605	31	-	0/7/25/26	0/2/2/2
33	3TD	DA	1915	33	-	0/7/25/26	0/2/2/2
31	OMU	CA	2552	31	-	1/9/27/28	0/2/2/2
31	6MZ	CA	2030	31	-	2/5/27/28	0/3/3/3
31	OMC	CA	2498	31,56	-	1/9/27/28	0/2/2/2
1	UR3	BA	1498	1	-	0/7/25/26	0/2/2/2
1	5MC	AA	967	1	-	0/7/25/26	0/2/2/2
31	5MU	CA	747	31	-	0/7/25/26	0/2/2/2
1	5MC	BA	1407	1	-	0/7/25/26	0/2/2/2
1	2MG	AA	1207	1	-	0/5/27/28	0/3/3/3
33	1MG	DA	745	33	-	0/3/25/26	0/3/3/3
33	PSU	DA	1917	33	-	0/7/25/26	0/2/2/2
33	5MC	DA	1962	33	-	0/7/25/26	0/2/2/2
31	PSU	CA	746	31,56	-	4/7/25/26	0/2/2/2
42	4D4	DN	81[A]	-	-	1/11/12/14	-
33	G7M	DA	2069	33	-	2/3/25/26	0/3/3/3
1	PSU	AA	516	56,1	-	0/7/25/26	0/2/2/2
32	MEQ	DD	150[A]	32	-	4/8/9/11	-
1	2MG	AA	1516	1	-	0/5/27/28	0/3/3/3
1	MA6	BA	1519	1	-	3/7/29/30	0/3/3/3
33	H2U	DA	2449	33	-	0/7/38/39	0/2/2/2
31	5MU	CA	1939	31	-	0/7/25/26	0/2/2/2
33	PSU	DA	2605	33	-	0/7/25/26	0/2/2/2
1	5MC	BA	967	1	-	0/7/25/26	0/2/2/2
31	PSU	CA	1911	31	-	0/7/25/26	0/2/2/2
42	4D4	CN	81	42	-	1/11/12/14	-
42	4D4	DN	81[B]	-	-	3/11/12/14	-
31	2MG	CA	1835	31	-	0/5/27/28	0/3/3/3
33	2MA	DA	2503	33,56	-	1/3/25/26	0/3/3/3
33	OMC	DA	2498	33,56	-	0/9/27/28	0/2/2/2
1	MA6	AA	1518	1	-	0/7/29/30	0/3/3/3
1	2MG	BA	1516	1	-	0/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	G7M	BA	527	1	-	2/3/25/26	0/3/3/3
33	PSU	DA	2504	33	-	0/7/25/26	0/2/2/2
1	4OC	AA	1402	1	-	0/9/29/30	0/2/2/2
1	4OC	BA	1402	1	-	0/9/29/30	0/2/2/2
33	PSU	DA	955	33	-	0/7/25/26	0/2/2/2
31	1MG	CA	745	31	-	0/3/25/26	0/3/3/3

The worst 5 of 17 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	CN	81	4D4	CZ-NE	5.63	1.44	1.33
42	DN	81[B]	4D4	CZ-NE	4.65	1.42	1.33
42	DN	81[A]	4D4	CZ-NE	3.89	1.41	1.33
32	DD	150[B]	MEQ	CB-CA	3.47	1.58	1.53
33	DA	746	PSU	O4'-C1'	-3.36	1.39	1.43

The worst 5 of 17 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	DN	81[B]	4D4	NE-CZ-NH2	6.34	131.84	120.70
42	DN	81[A]	4D4	NE-CZ-NH2	5.62	130.58	120.70
42	CN	81	4D4	NE-CZ-NH2	5.13	129.71	120.70
1	BA	1518	MA6	N1-C6-N6	-3.65	113.22	117.06
31	CA	1618	6MZ	C9-N6-C6	3.58	125.96	122.87

There are no chirality outliers.

5 of 55 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	AA	527	G7M	C3'-C4'-C5'-O5'
12	AL	89	D2T	O-C-CA-CB
12	AL	89	D2T	CG-CB-SB-CB1
1	BA	527	G7M	O4'-C4'-C5'-O5'
1	BA	527	G7M	C3'-C4'-C5'-O5'

There are no ring outliers.

15 monomers are involved in 14 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
31	CA	2503	2MA	1	0
32	DD	150[B]	MEQ	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
33	DA	2030	6MZ	1	0
31	CA	2251	OMG	1	0
12	BL	89	D2T	1	0
1	AA	1519	MA6	1	0
12	AL	89	D2T	1	0
1	BA	1518	MA6	1	0
31	CA	2552	OMU	1	0
31	CA	2030	6MZ	1	0
32	DD	150[A]	MEQ	2	0
1	BA	1519	MA6	1	0
31	CA	1835	2MG	1	0
33	DA	2503	2MA	1	0
1	AA	1518	MA6	1	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 549 ligands modelled in this entry, 469 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	$\# Z > 2$
58	MPD	AA	1676	-	7,7,7	0.61	0	9,10,10	0.52	0
63	PGE	DU	101	-	9,9,9	0.25	0	8,8,8	0.19	0
61	PEG	DQ	201	-	6,6,6	0.11	0	5,5,5	0.08	0
66	ACY	DA	3199	-	3,3,3	0.66	0	3,3,3	1.03	0
63	PGE	DA	3214	-	9,9,9	0.16	0	8,8,8	0.14	0
65	1PE	DA	3200	-	15,15,15	0.30	0	14,14,14	0.38	0
67	GUN	DA	3208	-	7,12,12	0.48	0	8,17,17	0.66	0
62	EDO	D1	101	-	3,3,3	0.65	0	2,2,2	0.04	0
62	EDO	DB	211	-	3,3,3	0.60	0	2,2,2	0.26	0
58	MPD	DA	3201	-	7,7,7	0.61	0	9,10,10	0.51	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
59	PUT	AA	1674	-	5,5,5	0.15	0	4,4,4	0.09	0
61	PEG	AL	201	-	6,6,6	0.19	0	5,5,5	0.10	0
57	PG4	DQ	202	-	12,12,12	0.18	0	11,11,11	0.12	0
63	PGE	DT	201	-	9,9,9	0.14	0	8,8,8	0.13	0
58	MPD	DS	203	-	7,7,7	0.28	0	9,10,10	0.39	0
62	EDO	D0	101	-	3,3,3	0.65	0	2,2,2	0.26	0
59	PUT	DA	3218	-	5,5,5	0.17	0	4,4,4	0.12	0
58	MPD	DK	201	-	7,7,7	0.84	0	9,10,10	0.34	0
61	PEG	DA	3198	-	6,6,6	0.21	0	5,5,5	0.15	0
58	MPD	DA	3188	-	7,7,7	0.59	0	9,10,10	0.48	0
63	PGE	D3	101	-	9,9,9	0.17	0	8,8,8	0.09	0
65	1PE	DA	3183	-	15,15,15	0.18	0	14,14,14	0.14	0
63	PGE	DA	3222	-	9,9,9	0.14	0	8,8,8	0.27	0
58	MPD	DN	201	-	7,7,7	0.90	1 (14%)	9,10,10	0.48	0
58	MPD	DA	3204	-	7,7,7	0.62	0	9,10,10	0.52	0
57	PG4	DS	202	-	12,12,12	0.29	0	11,11,11	0.23	0
63	PGE	DS	201	-	9,9,9	0.29	0	8,8,8	0.21	0
58	MPD	DE	302	-	7,7,7	0.70	0	9,10,10	0.47	0
68	TRS	DA	3217	-	7,7,7	0.22	0	9,9,9	0.22	0
59	PUT	DA	3202	-	5,5,5	0.10	0	4,4,4	0.12	0
62	EDO	DA	3195	-	3,3,3	0.64	0	2,2,2	0.27	0
61	PEG	D3	102	-	6,6,6	0.24	0	5,5,5	0.18	0
64	SPD	DA	3181	-	9,9,9	0.09	0	8,8,8	0.14	0
66	ACY	DA	3194	-	3,3,3	2.23	1 (33%)	3,3,3	2.18	2 (66%)
58	MPD	AA	1671	-	7,7,7	0.69	0	9,10,10	0.41	0
61	PEG	DA	3224	-	6,6,6	0.28	0	5,5,5	0.20	0
57	PG4	DA	3213	-	12,12,12	0.14	0	11,11,11	0.16	0
66	ACY	DA	3189	-	3,3,3	0.59	0	3,3,3	1.05	0
59	PUT	DA	3193	-	5,5,5	0.33	0	4,4,4	0.34	0
61	PEG	DP	201	-	6,6,6	0.12	0	5,5,5	0.04	0
62	EDO	DA	3192	-	3,3,3	0.55	0	2,2,2	0.30	0
59	PUT	DA	3226	-	5,5,5	0.12	0	4,4,4	0.10	0
62	EDO	DA	3205	-	3,3,3	0.79	0	2,2,2	0.04	0
58	MPD	DT	202	-	7,7,7	0.66	0	9,10,10	0.42	0
62	EDO	DA	3206	-	3,3,3	0.65	0	2,2,2	0.23	0
62	EDO	DB	210	-	3,3,3	0.60	0	2,2,2	0.19	0
64	SPD	DA	3185	-	9,9,9	0.13	0	8,8,8	0.14	0
59	PUT	DA	3209	-	5,5,5	0.20	0	4,4,4	0.06	0
59	PUT	AA	1672	-	5,5,5	0.19	0	4,4,4	0.11	0
59	PUT	DA	3216	-	5,5,5	0.21	0	4,4,4	0.18	0
59	PUT	AA	1675	-	5,5,5	0.22	0	4,4,4	0.09	0
58	MPD	DA	3207	-	7,7,7	0.76	0	9,10,10	0.43	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
63	PGE	DA	3211	-	9,9,9	0.10	0	8,8,8	0.08	0
64	SPD	DA	3221	-	9,9,9	0.12	0	8,8,8	0.31	0
57	PG4	DR	203	-	12,12,12	0.20	0	11,11,11	0.21	0
63	PGE	DD	302	-	9,9,9	0.16	0	8,8,8	0.11	0
64	SPD	DA	3203	-	9,9,9	0.19	0	8,8,8	0.21	0
62	EDO	DA	3196	-	3,3,3	0.63	0	2,2,2	0.11	0
61	PEG	DA	3197	-	6,6,6	0.16	0	5,5,5	0.08	0
62	EDO	DA	3212	-	3,3,3	0.64	0	2,2,2	0.35	0
58	MPD	DA	3228	-	7,7,7	0.62	0	9,10,10	0.30	0
61	PEG	D1	102	-	6,6,6	0.24	0	5,5,5	0.08	0
58	MPD	DE	301	-	7,7,7	0.79	0	9,10,10	0.45	0
57	PG4	BA	1642	-	12,12,12	0.17	0	11,11,11	0.17	0
57	PG4	DA	3191	-	12,12,12	0.19	0	11,11,11	0.21	0
62	EDO	DA	3227	-	3,3,3	0.60	0	2,2,2	0.31	0
59	PUT	DA	3210	-	5,5,5	0.20	0	4,4,4	0.09	0
62	EDO	DA	3001	-	3,3,3	0.58	0	2,2,2	0.41	0
58	MPD	DA	3190	-	7,7,7	0.57	0	9,10,10	0.61	0
61	PEG	DA	3215	-	6,6,6	0.14	0	5,5,5	0.04	0
59	PUT	DA	3187	-	5,5,5	0.27	0	4,4,4	0.11	0
63	PGE	DA	3184	-	9,9,9	0.25	0	8,8,8	0.32	0
59	PUT	AA	1673	-	5,5,5	0.11	0	4,4,4	0.12	0
59	PUT	DA	3186	-	5,5,5	0.31	0	4,4,4	0.18	0
59	PUT	DA	3219	-	5,5,5	0.21	0	4,4,4	0.26	0
61	PEG	DL	201	-	6,6,6	0.17	0	5,5,5	0.08	0
61	PEG	DA	3223	-	6,6,6	0.19	0	5,5,5	0.07	0
59	PUT	DA	3220	-	5,5,5	0.15	0	4,4,4	0.09	0
57	PG4	AA	1670	-	12,12,12	0.25	0	11,11,11	0.22	0
59	PUT	DA	3182	-	5,5,5	0.14	0	4,4,4	0.14	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
58	MPD	AA	1676	-	-	2/5/5/5	-
63	PGE	DU	101	-	-	3/7/7/7	-
61	PEG	DQ	201	-	-	1/4/4/4	-
63	PGE	DA	3214	-	-	3/7/7/7	-
65	1PE	DA	3200	-	-	5/13/13/13	-
67	GUN	DA	3208	-	-	-	0/2/2/2
62	EDO	D1	101	-	-	0/1/1/1	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
62	EDO	DB	211	-	-	0/1/1/1	-
58	MPD	DA	3201	-	-	3/5/5/5	-
59	PUT	AA	1674	-	-	1/3/3/3	-
61	PEG	AL	201	-	-	2/4/4/4	-
57	PG4	DQ	202	-	-	3/10/10/10	-
63	PGE	DT	201	-	-	5/7/7/7	-
58	MPD	DS	203	-	-	0/5/5/5	-
62	EDO	D0	101	-	-	1/1/1/1	-
59	PUT	DA	3218	-	-	0/3/3/3	-
58	MPD	DK	201	-	-	1/5/5/5	-
61	PEG	DA	3198	-	-	1/4/4/4	-
58	MPD	DA	3188	-	-	2/5/5/5	-
63	PGE	D3	101	-	-	2/7/7/7	-
65	1PE	DA	3183	-	-	5/13/13/13	-
63	PGE	DA	3222	-	-	3/7/7/7	-
58	MPD	DN	201	-	-	2/5/5/5	-
58	MPD	DA	3204	-	-	2/5/5/5	-
57	PG4	DS	202	-	-	2/10/10/10	-
63	PGE	DS	201	-	-	3/7/7/7	-
58	MPD	DE	302	-	-	2/5/5/5	-
68	TRS	DA	3217	-	-	0/9/9/9	-
59	PUT	DA	3202	-	-	1/3/3/3	-
62	EDO	DA	3195	-	-	0/1/1/1	-
61	PEG	D3	102	-	-	1/4/4/4	-
64	SPD	DA	3181	-	-	4/7/7/7	-
58	MPD	AA	1671	-	-	0/5/5/5	-
61	PEG	DA	3224	-	-	0/4/4/4	-
57	PG4	DA	3213	-	-	4/10/10/10	-
59	PUT	DA	3193	-	-	0/3/3/3	-
61	PEG	DP	201	-	-	2/4/4/4	-
62	EDO	DA	3192	-	-	0/1/1/1	-
59	PUT	DA	3226	-	-	0/3/3/3	-
62	EDO	DA	3205	-	-	0/1/1/1	-
58	MPD	DT	202	-	-	1/5/5/5	-
62	EDO	DA	3206	-	-	0/1/1/1	-
62	EDO	DB	210	-	-	0/1/1/1	-
64	SPD	DA	3185	-	-	1/7/7/7	-
59	PUT	DA	3209	-	-	0/3/3/3	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	PUT	AA	1672	-	-	0/3/3/3	-
59	PUT	DA	3216	-	-	0/3/3/3	-
59	PUT	AA	1675	-	-	1/3/3/3	-
58	MPD	DA	3207	-	-	0/5/5/5	-
63	PGE	DA	3211	-	-	3/7/7/7	-
64	SPD	DA	3221	-	-	2/7/7/7	-
57	PG4	DR	203	-	-	5/10/10/10	-
63	PGE	DD	302	-	-	4/7/7/7	-
64	SPD	DA	3203	-	-	1/7/7/7	-
62	EDO	DA	3196	-	-	0/1/1/1	-
61	PEG	DA	3197	-	-	1/4/4/4	-
62	EDO	DA	3212	-	-	0/1/1/1	-
58	MPD	DA	3228	-	-	1/5/5/5	-
61	PEG	D1	102	-	-	2/4/4/4	-
58	MPD	DE	301	-	-	1/5/5/5	-
57	PG4	BA	1642	-	-	1/10/10/10	-
57	PG4	DA	3191	-	-	4/10/10/10	-
62	EDO	DA	3227	-	-	0/1/1/1	-
59	PUT	DA	3210	-	-	0/3/3/3	-
62	EDO	DA	3001	-	-	0/1/1/1	-
58	MPD	DA	3190	-	-	2/5/5/5	-
61	PEG	DA	3215	-	-	2/4/4/4	-
59	PUT	DA	3187	-	-	0/3/3/3	-
63	PGE	DA	3184	-	-	3/7/7/7	-
59	PUT	AA	1673	-	-	0/3/3/3	-
59	PUT	DA	3186	-	-	0/3/3/3	-
59	PUT	DA	3219	-	-	1/3/3/3	-
61	PEG	DL	201	-	-	1/4/4/4	-
61	PEG	DA	3223	-	-	2/4/4/4	-
59	PUT	DA	3220	-	-	1/3/3/3	-
57	PG4	AA	1670	-	-	5/10/10/10	-
59	PUT	DA	3182	-	-	0/3/3/3	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	DA	3194	ACY	O-C	3.56	1.38	1.22
58	DN	201	MPD	C3-C2	2.03	1.59	1.53

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
66	DA	3194	ACY	OXT-C-CH3	2.94	127.32	115.18
66	DA	3194	ACY	O-C-CH3	-2.24	113.59	122.33

There are no chirality outliers.

5 of 111 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
58	AA	1676	MPD	C2-C3-C4-O4
58	DA	3201	MPD	C2-C3-C4-O4
58	DE	302	MPD	C2-C3-C4-O4
64	DA	3181	SPD	C3-C4-C5-N6
57	DR	203	PG4	O2-C3-C4-O3

There are no ring outliers.

16 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
65	DA	3183	1PE	1	0
63	DA	3222	PGE	2	0
57	DS	202	PG4	1	0
63	DS	201	PGE	2	0
68	DA	3217	TRS	1	0
58	AA	1671	MPD	1	0
59	DA	3193	PUT	1	0
62	DA	3206	EDO	1	0
57	DR	203	PG4	3	0
61	D1	102	PEG	2	0
58	DE	301	MPD	1	0
57	BA	1642	PG4	1	0
57	DA	3191	PG4	1	0
59	DA	3210	PUT	1	0
58	DA	3190	MPD	1	0
57	AA	1670	PG4	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 i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th 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%)	-0.13	22 (1%) 75 58	40, 90, 219, 296	0
1	BA	1522/1534 (99%)	0.45	136 (8%) 9 3	46, 131, 271, 279	0
2	AB	224/224 (100%)	0.27	5 (2%) 62 41	65, 116, 194, 247	0
2	BB	224/224 (100%)	0.57	16 (7%) 16 6	91, 129, 190, 236	0
3	AC	206/206 (100%)	-0.07	0 100 100	67, 95, 126, 146	0
3	BC	206/206 (100%)	0.64	17 (8%) 11 4	86, 134, 172, 196	0
4	AD	205/205 (100%)	-0.04	0 100 100	63, 99, 125, 146	0
4	BD	205/205 (100%)	-0.35	0 100 100	42, 72, 104, 134	0
5	AE	155/155 (100%)	-0.05	0 100 100	48, 82, 118, 155	0
5	BE	150/155 (96%)	-0.04	1 (0%) 87 77	60, 83, 132, 206	0
6	AF	106/106 (100%)	-0.01	1 (0%) 84 71	68, 94, 118, 143	0
6	BF	100/106 (94%)	0.23	1 (1%) 82 69	79, 114, 141, 155	0
7	AG	151/151 (100%)	0.39	9 (5%) 21 10	81, 116, 143, 156	0
7	BG	151/151 (100%)	1.85	63 (41%) 0 0	125, 189, 206, 220	0
8	AH	129/129 (100%)	-0.13	1 (0%) 86 74	54, 84, 111, 121	0
8	BH	129/129 (100%)	0.38	10 (7%) 13 5	76, 108, 142, 160	0
9	AI	127/127 (100%)	0.39	3 (2%) 59 37	76, 114, 149, 158	0
9	BI	127/127 (100%)	1.20	23 (18%) 1 0	125, 158, 188, 202	0
10	AJ	99/99 (100%)	0.37	4 (4%) 38 19	70, 106, 135, 146	0
10	BJ	98/99 (98%)	2.21	49 (50%) 0 0	121, 165, 189, 199	0
11	AK	117/117 (100%)	0.52	7 (5%) 21 10	54, 106, 141, 153	0
11	BK	117/117 (100%)	0.44	4 (3%) 45 24	80, 117, 144, 170	0
12	AL	122/123 (99%)	-0.12	1 (0%) 86 74	49, 69, 99, 124	0
12	BL	122/123 (99%)	0.25	2 (1%) 72 52	62, 90, 116, 145	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	114/114 (100%)	0.60	5 (4%) 34 17	89, 118, 154, 171	0
13	BM	114/114 (100%)	3.08	81 (71%) 0 0	195, 227, 238, 248	0
14	AN	100/100 (100%)	0.41	8 (8%) 12 5	71, 104, 179, 192	0
14	BN	100/100 (100%)	1.75	38 (38%) 0 0	114, 173, 217, 228	0
15	AO	88/88 (100%)	-0.03	1 (1%) 80 65	58, 81, 108, 136	0
15	BO	88/88 (100%)	0.37	2 (2%) 60 39	70, 111, 132, 159	0
16	AP	82/82 (100%)	0.29	5 (6%) 21 9	62, 82, 127, 146	0
16	BP	82/82 (100%)	1.18	17 (20%) 1 0	95, 114, 151, 162	0
17	AQ	80/80 (100%)	0.31	5 (6%) 20 8	54, 79, 116, 139	0
17	BQ	80/80 (100%)	1.21	17 (21%) 0 0	82, 125, 147, 160	0
18	AR	55/55 (100%)	0.03	0 100 100	53, 87, 117, 153	0
18	BR	55/55 (100%)	0.41	4 (7%) 15 6	60, 88, 124, 154	0
19	AS	79/79 (100%)	0.58	4 (5%) 28 13	90, 114, 145, 152	0
19	BS	79/79 (100%)	2.95	56 (70%) 0 0	200, 222, 234, 239	0
20	AT	86/86 (100%)	0.19	1 (1%) 79 63	64, 83, 113, 136	0
20	BT	85/86 (98%)	1.66	30 (35%) 0 0	108, 138, 167, 180	0
21	AU	56/56 (100%)	1.18	9 (16%) 1 1	93, 124, 166, 180	0
21	BU	56/56 (100%)	0.38	1 (1%) 68 48	81, 107, 154, 167	0
22	C1	56/56 (100%)	2.23	25 (44%) 0 0	124, 162, 181, 184	0
22	D1	56/56 (100%)	-0.41	0 100 100	14, 39, 71, 99	0
23	C2	50/51 (98%)	3.30	34 (68%) 0 0	139, 161, 173, 186	0
23	D2	51/51 (100%)	0.29	0 100 100	54, 67, 101, 110	0
24	C3	46/46 (100%)	1.97	21 (45%) 0 0	119, 143, 157, 165	0
24	D3	46/46 (100%)	-0.41	0 100 100	29, 40, 64, 112	0
25	C4	64/64 (100%)	1.59	17 (26%) 0 0	116, 138, 155, 161	0
25	D4	64/64 (100%)	-0.38	0 100 100	26, 41, 53, 73	0
26	C5	38/38 (100%)	1.72	16 (42%) 0 0	108, 126, 139, 143	0
26	D5	38/38 (100%)	-0.35	0 100 100	33, 45, 69, 87	0
27	C0	58/58 (100%)	1.36	17 (29%) 0 0	115, 135, 151, 156	0
27	D0	58/58 (100%)	-0.38	0 100 100	17, 33, 61, 94	0
28	CB	118/120 (98%)	0.97	13 (11%) 5 2	135, 190, 241, 251	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DB	120/120 (100%)	-0.25	0 100 100	28, 57, 87, 143	0
29	CC	271/271 (100%)	0.49	20 (7%) 14 5	80, 113, 143, 167	0
29	DC	271/271 (100%)	-0.38	1 (0%) 92 85	23, 53, 84, 113	0
30	CD	209/209 (100%)	1.52	60 (28%) 0 0	102, 136, 165, 177	0
31	CA	2876/2904 (99%)	1.06	433 (15%) 2 1	69, 185, 272, 290	0
32	DD	208/209 (99%)	-0.45	0 100 100	15, 40, 73, 98	0
33	DA	2873/2903 (98%)	-0.14	70 (2%) 59 37	13, 46, 203, 298	0
34	CE	201/201 (100%)	2.38	108 (53%) 0 0	121, 176, 206, 224	0
34	DE	201/201 (100%)	-0.26	0 100 100	17, 57, 103, 139	0
35	CF	177/177 (100%)	2.87	116 (65%) 0 0	194, 215, 226, 232	0
35	DF	177/177 (100%)	-0.15	1 (0%) 89 79	52, 80, 120, 145	0
36	CG	176/176 (100%)	2.56	97 (55%) 0 0	146, 178, 208, 222	0
36	DG	176/176 (100%)	-0.10	2 (1%) 80 65	33, 70, 99, 136	0
37	CH	149/149 (100%)	1.05	27 (18%) 1 0	89, 149, 170, 178	0
37	DH	149/149 (100%)	0.85	17 (11%) 5 2	73, 154, 190, 203	0
38	CJ	134/134 (100%)	5.27	122 (91%) 0 0	236, 254, 265, 273	0
38	DJ	134/134 (100%)	3.51	96 (71%) 0 0	193, 222, 235, 242	0
39	CK	142/142 (100%)	1.40	42 (29%) 0 0	106, 132, 169, 195	0
39	DK	142/142 (100%)	-0.44	0 100 100	18, 35, 66, 88	0
40	CL	122/123 (99%)	1.10	29 (23%) 0 0	96, 118, 151, 168	0
40	DL	123/123 (100%)	-0.45	0 100 100	26, 44, 70, 112	0
41	CM	144/144 (100%)	2.14	61 (42%) 0 0	117, 169, 227, 247	0
41	DM	144/144 (100%)	-0.34	1 (0%) 87 77	14, 54, 87, 128	0
42	CN	135/136 (99%)	0.98	20 (14%) 2 1	92, 125, 151, 178	0
42	DN	135/136 (99%)	-0.46	0 100 100	20, 41, 73, 89	0
43	CO	120/125 (96%)	2.19	54 (45%) 0 0	110, 141, 163, 197	0
43	DO	125/125 (100%)	-0.34	1 (0%) 86 74	18, 36, 84, 137	0
44	CP	116/117 (99%)	2.10	56 (48%) 0 0	140, 171, 187, 195	0
44	DP	117/117 (100%)	-0.31	0 100 100	34, 55, 88, 95	0
45	CQ	114/114 (100%)	1.45	26 (22%) 0 0	113, 131, 157, 180	0
45	DQ	114/114 (100%)	-0.41	0 100 100	29, 51, 80, 116	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
46	CR	117/117 (100%)	1.53	37 (31%) 0 0	108, 137, 166, 175	0
46	DR	117/117 (100%)	-0.42	0 100 100	14, 30, 50, 80	0
47	CS	103/103 (100%)	2.36	53 (51%) 0 0	124, 149, 173, 187	0
47	DS	103/103 (100%)	-0.42	1 (0%) 82 69	19, 43, 76, 103	0
48	CT	110/110 (100%)	2.28	55 (50%) 0 0	123, 155, 177, 188	0
48	DT	110/110 (100%)	-0.48	0 100 100	19, 33, 66, 126	0
49	CU	93/93 (100%)	2.41	42 (45%) 0 0	136, 168, 193, 201	0
49	DU	93/93 (100%)	0.02	2 (2%) 62 41	26, 55, 126, 141	0
50	CV	102/102 (100%)	3.49	73 (71%) 0 0	147, 176, 207, 219	0
50	DV	102/102 (100%)	-0.12	1 (0%) 82 69	41, 62, 104, 139	0
51	CW	94/94 (100%)	1.29	24 (25%) 0 0	128, 153, 165, 173	0
51	DW	94/94 (100%)	-0.31	1 (1%) 80 65	29, 54, 86, 99	0
52	CX	75/76 (98%)	2.32	43 (57%) 0 0	109, 140, 152, 186	0
52	DX	76/76 (100%)	-0.33	1 (1%) 77 60	22, 40, 74, 114	0
53	CY	77/77 (100%)	1.42	20 (25%) 0 0	108, 123, 156, 170	0
53	DY	77/77 (100%)	-0.22	0 100 100	32, 55, 88, 98	0
54	CZ	62/62 (100%)	2.35	32 (51%) 0 0	161, 179, 190, 196	0
54	DZ	62/62 (100%)	-0.12	1 (1%) 72 52	44, 74, 108, 140	0
55	DI	135/135 (100%)	1.46	41 (30%) 0 0	78, 153, 204, 224	1 (0%)
All	All	20634/20744 (99%)	0.60	2689 (13%) 3 1	13, 111, 241, 298	1 (0%)

The worst 5 of 2689 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
38	DJ	54	PRO	19.7
38	CJ	76	ALA	16.9
38	DJ	53	LEU	15.4
38	CJ	69	PHE	15.0
38	CJ	54	PRO	12.1

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	955	20/21	0.74	0.24	108,113,117,117	0
31	6MZ	CA	2030	23/24	0.80	0.26	117,125,129,130	0
31	6MZ	CA	1618	23/24	0.84	0.26	165,167,172,173	0
31	PSU	CA	746	20/21	0.84	0.28	127,129,130,130	0
31	PSU	CA	1917	20/21	0.85	0.15	120,122,127,127	0
31	3TD	CA	1915	21/22	0.86	0.18	139,145,147,148	0
1	2MG	BA	1207	24/25	0.86	0.24	154,155,158,161	0
31	5MU	CA	747	21/22	0.86	0.27	129,137,142,144	0
31	G7M	CA	2069	24/25	0.86	0.21	105,111,117,118	0
31	2MA	CA	2503	23/24	0.86	0.26	101,104,114,114	0
31	1MG	CA	745	24/25	0.87	0.35	117,123,124,126	0
1	5MC	BA	967	21/22	0.87	0.26	135,141,145,145	0
31	PSU	CA	2457	20/21	0.88	0.21	109,112,117,118	0
31	OMU	CA	2552	21/22	0.88	0.31	100,103,113,115	0
31	PSU	CA	2580	20/21	0.88	0.27	105,112,116,117	0
31	OMG	CA	2251	24/25	0.89	0.24	95,101,105,106	0
31	PSU	CA	2504	20/21	0.89	0.27	91,98,101,102	0
31	2MG	CA	2445	24/25	0.89	0.27	79,94,103,104	0
31	PSU	CA	1911	20/21	0.89	0.17	128,136,137,138	0
42	4D4	CN	81	12/13	0.89	0.32	99,103,115,116	0
1	5MC	BA	1407	21/22	0.90	0.20	93,96,104,107	0
1	2MG	BA	966	24/25	0.91	0.25	140,144,153,153	0
31	PSU	CA	2605	20/21	0.91	0.22	81,87,95,96	0
1	2MG	BA	1516	24/25	0.91	0.18	82,87,93,93	0
12	D2T	BL	89	10/11	0.92	0.25	79,85,97,98	0
1	MA6	BA	1518	24/25	0.93	0.24	71,77,85,86	0
1	PSU	BA	516	20/21	0.93	0.17	78,85,90,91	0
33	3TD	DA	1915	21/22	0.93	0.16	110,116,120,122	0
1	2MG	AA	1207	24/25	0.93	0.13	90,100,107,107	0
1	MA6	BA	1519	24/25	0.94	0.23	78,82,85,85	0
12	D2T	AL	89	10/11	0.94	0.23	59,63,78,81	0
31	5MU	CA	1939	21/22	0.94	0.14	79,86,88,89	0
31	2MG	CA	1835	24/25	0.95	0.15	76,80,82,83	0
1	G7M	BA	527	24/25	0.95	0.15	69,73,78,78	0
1	5MC	AA	967	21/22	0.95	0.16	84,88,89,89	0
1	UR3	BA	1498	21/22	0.95	0.20	83,84,89,89	0
1	2MG	AA	966	24/25	0.95	0.13	83,86,88,88	0
33	PSU	DA	1917	20/21	0.95	0.12	83,86,95,95	0
31	5MC	CA	1962	21/22	0.95	0.15	76,79,80,85	0
1	4OC	AA	1402	22/23	0.96	0.16	60,63,64,65	0
33	PSU	DA	1911	20/21	0.96	0.13	86,90,91,92	0
1	4OC	BA	1402	22/23	0.96	0.19	72,74,77,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
1	PSU	AA	516	20/21	0.96	0.13	77,81,84,85	0
31	OMC	CA	2498	21/22	0.96	0.22	98,104,108,109	0
1	2MG	AA	1516	24/25	0.97	0.14	51,53,55,57	0
1	MA6	AA	1518	24/25	0.97	0.16	45,48,54,54	0
33	2MG	DA	1835	24/25	0.97	0.18	44,48,54,61	0
1	MA6	AA	1519	24/25	0.97	0.20	46,51,55,59	0
1	G7M	AA	527	24/25	0.97	0.14	57,62,67,70	0
1	5MC	AA	1407	21/22	0.97	0.15	54,55,57,58	0
33	5MU	DA	1939	21/22	0.97	0.21	38,40,48,50	0
1	UR3	AA	1498	21/22	0.97	0.18	54,58,62,64	0
42	4D4	DN	81[A]	12/13	0.97	0.26	29,36,47,49	9
42	4D4	DN	81[B]	12/13	0.97	0.26	13,22,30,31	9
33	2MG	DA	2445	24/25	0.98	0.19	16,25,30,31	0
33	PSU	DA	2457	20/21	0.98	0.15	24,25,30,32	0
33	2MA	DA	2503	23/24	0.98	0.18	16,28,36,40	0
33	OMU	DA	2552	21/22	0.98	0.18	25,30,35,42	0
33	PSU	DA	2604	20/21	0.98	0.16	31,43,54,56	0
32	MEQ	DD	150[B]	10/11	0.98	0.20	26,31,38,40	10
32	MEQ	DD	150[A]	10/11	0.98	0.20	9,14,29,29	10
33	5MC	DA	1962	21/22	0.98	0.18	40,46,48,48	0
33	PSU	DA	746	20/21	0.99	0.15	16,22,31,32	0
33	H2U	DA	2449	20/21	0.99	0.17	12,22,32,33	0
33	5MU	DA	747	21/22	0.99	0.17	26,28,35,37	0
33	OMC	DA	2498	21/22	0.99	0.17	15,20,26,33	0
33	PSU	DA	955	20/21	0.99	0.17	17,22,24,25	0
33	PSU	DA	2504	20/21	0.99	0.17	29,34,37,41	0
33	6MZ	DA	1618	23/24	0.99	0.15	17,28,32,32	0
33	PSU	DA	2580	20/21	0.99	0.17	18,26,29,31	0
33	1MG	DA	745	24/25	0.99	0.16	26,32,36,38	0
33	PSU	DA	2605	20/21	0.99	0.15	33,40,41,41	0
33	6MZ	DA	2030	23/24	0.99	0.17	16,20,26,27	0
33	G7M	DA	2069	24/25	0.99	0.15	34,37,43,45	0
33	OMG	DA	2251	24/25	0.99	0.16	28,30,40,44	0

6.3 Carbohydrates i

There are no monosaccharides in this entry.

6.4 Ligands i

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	CA	3038	1/1	-0.46	0.32	250,250,250,250	0
56	MG	CA	3007	1/1	-0.19	0.84	256,256,256,256	0
56	MG	AA	1628	1/1	-0.10	0.89	177,177,177,177	0
56	MG	DA	3166	1/1	-0.04	0.32	141,141,141,141	0
56	MG	CA	3032	1/1	-0.01	0.48	257,257,257,257	0
56	MG	CA	3060	1/1	0.18	0.57	259,259,259,259	0
56	MG	AA	1606	1/1	0.26	0.52	106,106,106,106	0
56	MG	CA	3110	1/1	0.27	1.10	168,168,168,168	0
56	MG	CA	3129	1/1	0.29	0.21	109,109,109,109	0
56	MG	CA	3123	1/1	0.30	0.55	200,200,200,200	0
56	MG	CA	3124	1/1	0.37	0.69	165,165,165,165	0
56	MG	CA	3154	1/1	0.38	0.69	132,132,132,132	0
56	MG	CA	3061	1/1	0.38	0.13	264,264,264,264	0
56	MG	CA	3077	1/1	0.41	0.78	240,240,240,240	0
56	MG	BA	1606	1/1	0.42	0.17	249,249,249,249	0
61	PEG	DP	201	7/7	0.47	1.69	136,137,140,141	0
56	MG	AA	1619	1/1	0.51	0.56	98,98,98,98	0
56	MG	CA	3026	1/1	0.52	0.57	201,201,201,201	0
56	MG	CA	3104	1/1	0.55	0.42	234,234,234,234	0
56	MG	CA	3076	1/1	0.55	0.23	214,214,214,214	0
56	MG	AA	1603	1/1	0.56	0.63	91,91,91,91	0
59	PUT	AA	1675	6/6	0.56	0.61	111,112,113,113	0
56	MG	CA	3006	1/1	0.56	0.19	240,240,240,240	0
62	EDO	DA	3227	4/4	0.57	0.52	123,124,125,126	0
58	MPD	DE	301	8/8	0.58	1.02	151,152,153,153	0
56	MG	CA	3012	1/1	0.58	0.29	130,130,130,130	0
56	MG	AA	1615	1/1	0.58	0.44	110,110,110,110	0
56	MG	CA	3125	1/1	0.58	0.45	85,85,85,85	0
61	PEG	DQ	201	7/7	0.59	0.73	118,119,121,121	0
62	EDO	DA	3206	4/4	0.59	0.55	104,104,105,105	0
56	MG	CA	3156	1/1	0.59	0.24	252,252,252,252	0
56	MG	DR	201	1/1	0.60	0.35	228,228,228,228	0
56	MG	CA	3094	1/1	0.61	0.21	139,139,139,139	0
56	MG	BA	1624	1/1	0.61	0.56	274,274,274,274	0
56	MG	CA	3005	1/1	0.61	0.72	250,250,250,250	0
56	MG	DA	3143	1/1	0.61	1.40	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
59	PUT	AA	1674	6/6	0.62	0.65	108,109,110,110	0
56	MG	CA	3008	1/1	0.62	0.55	251,251,251,251	0
56	MG	CA	3034	1/1	0.64	0.33	239,239,239,239	0
56	MG	DA	3136	1/1	0.64	0.52	91,91,91,91	0
56	MG	CA	3133	1/1	0.64	0.63	112,112,112,112	0
56	MG	CA	3019	1/1	0.64	0.16	71,71,71,71	0
56	MG	BA	1604	1/1	0.65	0.18	218,218,218,218	0
56	MG	AA	1626	1/1	0.65	0.84	77,77,77,77	0
56	MG	CA	3142	1/1	0.66	0.22	73,73,73,73	0
56	MG	CA	3092	1/1	0.67	0.17	210,210,210,210	0
56	MG	CA	3003	1/1	0.67	1.66	280,280,280,280	0
56	MG	DA	3129	1/1	0.67	0.29	46,46,46,46	0
56	MG	DA	3169	1/1	0.67	0.49	86,86,86,86	0
56	MG	AA	1614	1/1	0.68	0.13	81,81,81,81	0
56	MG	CA	3139	1/1	0.68	0.56	100,100,100,100	0
56	MG	CA	3087	1/1	0.68	0.18	196,196,196,196	0
56	MG	CA	3115	1/1	0.69	0.25	85,85,85,85	0
56	MG	CA	3027	1/1	0.70	0.17	118,118,118,118	0
56	MG	CA	3071	1/1	0.70	0.13	230,230,230,230	0
68	TRS	DA	3217	8/8	0.70	0.77	149,150,153,155	0
56	MG	DA	3130	1/1	0.71	0.52	76,76,76,76	0
58	MPD	DK	201	8/8	0.71	0.47	138,140,140,141	0
56	MG	AA	1605	1/1	0.71	0.89	98,98,98,98	0
56	MG	CA	3132	1/1	0.71	0.38	116,116,116,116	0
61	PEG	D3	102	7/7	0.71	0.86	105,109,110,111	0
56	MG	CA	3135	1/1	0.72	0.76	96,96,96,96	0
59	PUT	DA	3209	6/6	0.72	0.37	80,83,87,88	0
56	MG	BA	1639	1/1	0.72	0.28	70,70,70,70	0
56	MG	AA	1612	1/1	0.72	0.39	59,59,59,59	0
59	PUT	DA	3193	6/6	0.73	0.48	88,90,92,92	0
56	MG	DA	3122	1/1	0.73	0.40	86,86,86,86	0
56	MG	CA	3131	1/1	0.73	0.35	75,75,75,75	0
56	MG	CA	3014	1/1	0.73	0.24	256,256,256,256	0
56	MG	DA	3165	1/1	0.74	0.31	118,118,118,118	0
56	MG	CB	203	1/1	0.74	0.08	106,106,106,106	0
56	MG	CA	3075	1/1	0.74	0.79	241,241,241,241	0
56	MG	BA	1609	1/1	0.74	0.15	203,203,203,203	0
56	MG	CA	3146	1/1	0.75	0.30	220,220,220,220	0
56	MG	DA	3177	1/1	0.75	0.33	118,118,118,118	0
56	MG	AA	1625	1/1	0.75	0.36	61,61,61,61	0
56	MG	DA	3128	1/1	0.76	0.15	52,52,52,52	0
62	EDO	DA	3001	4/4	0.76	0.34	95,95,95,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	PUT	AA	1672	6/6	0.76	0.42	88,89,89,90	0
56	MG	CA	3010	1/1	0.76	0.29	250,250,250,250	0
56	MG	DA	3170	1/1	0.76	0.50	79,79,79,79	0
56	MG	CA	3064	1/1	0.77	0.41	283,283,283,283	0
56	MG	CA	3111	1/1	0.77	0.69	121,121,121,121	0
56	MG	AA	1622	1/1	0.77	0.58	70,70,70,70	0
56	MG	AA	1621	1/1	0.77	0.30	59,59,59,59	0
56	MG	DB	209	1/1	0.77	0.37	105,105,105,105	0
63	PGE	DT	201	10/10	0.77	0.56	137,138,140,140	0
61	PEG	DA	3198	7/7	0.77	0.52	118,120,124,124	0
58	MPD	DA	3201	8/8	0.78	0.95	125,126,127,128	0
56	MG	CA	3043	1/1	0.78	0.10	72,72,72,72	0
56	MG	CA	3101	1/1	0.78	0.19	164,164,164,164	0
56	MG	DA	3163	1/1	0.78	0.27	70,70,70,70	0
62	EDO	DB	210	4/4	0.78	0.39	87,88,89,90	0
56	MG	CA	3002	1/1	0.79	0.27	273,273,273,273	0
61	PEG	DA	3197	7/7	0.79	0.46	91,99,102,102	0
57	PG4	DA	3213	13/13	0.79	0.43	101,107,112,112	0
56	MG	CA	3023	1/1	0.79	0.41	206,206,206,206	0
56	MG	AA	1620	1/1	0.79	0.43	79,79,79,79	0
56	MG	CA	3098	1/1	0.79	0.14	101,101,101,101	0
56	MG	AA	1618	1/1	0.79	0.51	57,57,57,57	0
56	MG	CA	3054	1/1	0.79	0.18	180,180,180,180	0
56	MG	CA	3105	1/1	0.79	0.36	254,254,254,254	0
63	PGE	DS	201	10/10	0.79	0.39	68,74,77,77	0
56	MG	CA	3028	1/1	0.79	0.10	263,263,263,263	0
56	MG	CA	3078	1/1	0.79	0.09	128,128,128,128	0
56	MG	CA	3086	1/1	0.80	0.11	67,67,67,67	0
56	MG	CA	3057	1/1	0.80	0.15	143,143,143,143	0
58	MPD	DE	302	8/8	0.80	0.40	116,118,121,121	0
59	PUT	DA	3210	6/6	0.80	0.41	108,110,112,113	0
62	EDO	DA	3196	4/4	0.80	0.41	86,88,89,89	0
59	PUT	DA	3216	6/6	0.80	0.38	71,72,72,72	0
59	PUT	DA	3218	6/6	0.80	0.39	122,122,123,123	0
56	MG	BA	1602	1/1	0.80	0.07	79,79,79,79	0
56	MG	CA	3093	1/1	0.80	0.14	140,140,140,140	0
56	MG	AA	1661	1/1	0.80	0.17	166,166,166,166	0
58	MPD	DT	202	8/8	0.81	0.28	117,118,119,119	0
56	MG	DB	207	1/1	0.81	0.26	74,74,74,74	0
56	MG	AA	1616	1/1	0.81	0.44	55,55,55,55	0
56	MG	CA	3013	1/1	0.81	0.22	91,91,91,91	0
56	MG	CA	3140	1/1	0.81	0.50	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	BA	1617	1/1	0.81	0.07	160,160,160,160	0
56	MG	AA	1656	1/1	0.81	0.12	132,132,132,132	0
56	MG	CA	3151	1/1	0.81	0.33	81,81,81,81	0
56	MG	CA	3116	1/1	0.81	0.41	62,62,62,62	0
56	MG	CA	3155	1/1	0.81	0.31	196,196,196,196	0
56	MG	AA	1609	1/1	0.81	0.36	72,72,72,72	0
56	MG	CA	3152	1/1	0.82	0.22	167,167,167,167	0
56	MG	CA	3036	1/1	0.82	0.26	194,194,194,194	0
56	MG	CB	201	1/1	0.82	0.09	169,169,169,169	0
56	MG	CA	3022	1/1	0.82	0.57	235,235,235,235	0
61	PEG	AL	201	7/7	0.82	0.31	78,79,84,85	0
56	MG	CA	3083	1/1	0.82	0.28	263,263,263,263	0
56	MG	AA	1664	1/1	0.82	0.15	147,147,147,147	0
57	PG4	DR	203	13/13	0.82	0.40	151,153,155,155	0
56	MG	AA	1602	1/1	0.82	0.51	80,80,80,80	0
56	MG	CA	3067	1/1	0.83	0.55	283,283,283,283	0
56	MG	CA	3084	1/1	0.83	0.12	196,196,196,196	0
56	MG	CA	3047	1/1	0.83	0.26	230,230,230,230	0
56	MG	CA	3118	1/1	0.83	0.40	52,52,52,52	0
56	MG	DB	205	1/1	0.83	0.29	64,64,64,64	0
56	MG	DA	3142	1/1	0.83	0.31	58,58,58,58	0
56	MG	CA	3120	1/1	0.83	0.35	135,135,135,135	0
57	PG4	DQ	202	13/13	0.83	0.24	65,68,81,81	0
56	MG	AA	1617	1/1	0.83	0.34	63,63,63,63	0
59	PUT	AA	1673	6/6	0.84	0.36	91,92,94,95	0
59	PUT	DA	3219	6/6	0.84	0.37	55,57,61,62	0
56	MG	AA	1640	1/1	0.84	0.10	80,80,80,80	0
56	MG	CA	3001	1/1	0.84	0.21	294,294,294,294	0
56	MG	CA	3050	1/1	0.84	0.12	58,58,58,58	0
63	PGE	DA	3222	10/10	0.84	0.41	79,90,99,99	0
58	MPD	DN	201	8/8	0.84	0.50	90,95,96,96	0
56	MG	DA	3155	1/1	0.84	0.32	47,47,47,47	0
56	MG	CA	3051	1/1	0.84	0.16	183,183,183,183	0
59	PUT	DA	3202	6/6	0.85	0.39	95,96,96,96	0
56	MG	CA	3048	1/1	0.85	0.23	112,112,112,112	0
56	MG	AA	1642	1/1	0.85	0.24	173,173,173,173	0
56	MG	DA	3157	1/1	0.85	0.30	67,67,67,67	0
57	PG4	BA	1642	13/13	0.85	0.32	94,97,106,107	0
56	MG	CA	3143	1/1	0.85	0.18	54,54,54,54	0
56	MG	CA	3029	1/1	0.85	0.21	181,181,181,181	0
63	PGE	D3	101	10/10	0.85	0.31	93,97,100,100	0
56	MG	BA	1635	1/1	0.85	0.14	96,96,96,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	DA	3168	1/1	0.85	0.34	47,47,47,47	0
56	MG	AA	1644	1/1	0.85	0.11	123,123,123,123	0
61	PEG	DA	3215	7/7	0.85	0.36	126,128,134,135	0
56	MG	AA	1604	1/1	0.86	0.37	57,57,57,57	0
56	MG	DA	3180	1/1	0.86	0.45	72,72,72,72	0
56	MG	CA	3059	1/1	0.86	0.17	120,120,120,120	0
56	MG	CA	3024	1/1	0.86	0.14	153,153,153,153	0
56	MG	CA	3126	1/1	0.86	0.13	74,74,74,74	0
56	MG	DA	3110	1/1	0.86	0.36	273,273,273,273	0
56	MG	BA	1612	1/1	0.86	0.45	200,200,200,200	0
58	MPD	AA	1671	8/8	0.86	0.67	110,112,114,115	0
56	MG	CA	3063	1/1	0.86	0.19	181,181,181,181	0
56	MG	CA	3097	1/1	0.86	0.21	123,123,123,123	0
56	MG	BA	1641	1/1	0.86	0.15	72,72,72,72	0
56	MG	CA	3055	1/1	0.86	0.13	145,145,145,145	0
56	MG	DA	3171	1/1	0.86	0.71	106,106,106,106	0
56	MG	DA	3176	1/1	0.86	0.19	59,59,59,59	0
56	MG	CA	3017	1/1	0.87	0.08	87,87,87,87	0
56	MG	DA	3179	1/1	0.87	0.35	56,56,56,56	0
56	MG	DA	3159	1/1	0.87	0.63	60,60,60,60	0
56	MG	DA	3124	1/1	0.87	0.24	59,59,59,59	0
56	MG	CA	3031	1/1	0.87	0.06	102,102,102,102	0
57	PG4	DA	3191	13/13	0.87	0.55	76,87,103,103	0
56	MG	BA	1608	1/1	0.87	0.09	122,122,122,122	0
59	PUT	DA	3182	6/6	0.87	0.29	77,78,80,80	0
56	MG	CA	3141	1/1	0.87	0.31	72,72,72,72	0
56	MG	CA	3130	1/1	0.87	0.19	75,75,75,75	0
57	PG4	DS	202	13/13	0.87	0.29	73,75,77,77	0
56	MG	CA	3056	1/1	0.87	0.30	48,48,48,48	0
56	MG	BA	1633	1/1	0.87	0.25	248,248,248,248	0
58	MPD	DA	3204	8/8	0.87	0.39	93,94,97,97	0
56	MG	DA	3174	1/1	0.87	0.43	99,99,99,99	0
64	SPD	DA	3203	10/10	0.87	0.24	93,98,105,106	0
56	MG	AA	1627	1/1	0.87	0.25	55,55,55,55	0
56	MG	CA	3082	1/1	0.88	0.20	152,152,152,152	0
56	MG	CA	3065	1/1	0.88	0.25	151,151,151,151	0
56	MG	CA	3066	1/1	0.88	0.24	133,133,133,133	0
56	MG	CA	3145	1/1	0.88	0.15	50,50,50,50	0
56	MG	CA	3109	1/1	0.88	0.25	80,80,80,80	0
61	PEG	DA	3224	7/7	0.88	0.28	75,76,78,79	0
56	MG	CA	3147	1/1	0.88	0.24	50,50,50,50	1
56	MG	CA	3011	1/1	0.88	0.17	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	BA	1640	1/1	0.88	0.16	131,131,131,131	0
57	PG4	AA	1670	13/13	0.88	0.25	77,84,91,92	0
56	MG	AA	1657	1/1	0.88	0.08	152,152,152,152	0
56	MG	CA	3041	1/1	0.88	0.07	47,47,47,47	0
62	EDO	DA	3212	4/4	0.88	0.29	72,73,74,75	0
56	MG	BA	1638	1/1	0.88	0.41	64,64,64,64	0
56	MG	CA	3137	1/1	0.88	0.34	137,137,137,137	0
63	PGE	DA	3211	10/10	0.88	0.34	81,82,90,93	0
56	MG	CA	3138	1/1	0.88	0.14	67,67,67,67	0
56	MG	AA	1613	1/1	0.88	0.35	52,52,52,52	0
56	MG	DA	3010	1/1	0.88	0.25	145,145,145,145	0
58	MPD	DA	3188	8/8	0.88	0.29	91,94,96,98	0
56	MG	CA	3079	1/1	0.88	0.16	156,156,156,156	0
56	MG	DR	202	1/1	0.89	0.40	29,29,29,29	0
56	MG	CA	3040	1/1	0.89	0.10	134,134,134,134	0
56	MG	BA	1623	1/1	0.89	0.30	193,193,193,193	0
56	MG	CA	3049	1/1	0.89	0.14	53,53,53,53	0
56	MG	CA	3088	1/1	0.89	0.14	75,75,75,75	0
56	MG	CA	3089	1/1	0.89	0.16	69,69,69,69	0
56	MG	DA	3178	1/1	0.89	0.74	105,105,105,105	0
56	MG	CA	3149	1/1	0.89	0.49	52,52,52,52	0
56	MG	CA	3039	1/1	0.89	0.54	203,203,203,203	0
65	1PE	DA	3200	16/16	0.89	0.39	62,67,77,77	0
56	MG	CA	3046	1/1	0.89	0.12	123,123,123,123	0
56	MG	AA	1611	1/1	0.90	0.12	50,50,50,50	0
61	PEG	DA	3223	7/7	0.90	0.26	82,82,84,85	0
56	MG	DB	208	1/1	0.90	0.20	60,60,60,60	0
61	PEG	DL	201	7/7	0.90	0.31	78,80,83,84	0
56	MG	BA	1607	1/1	0.90	0.20	203,203,203,203	0
56	MG	CA	3096	1/1	0.90	0.17	105,105,105,105	0
56	MG	CA	3117	1/1	0.90	0.42	64,64,64,64	0
56	MG	CA	3068	1/1	0.90	0.34	266,266,266,266	0
56	MG	AA	1610	1/1	0.90	0.47	76,76,76,76	0
56	MG	CA	3074	1/1	0.90	0.09	142,142,142,142	0
56	MG	BA	1603	1/1	0.90	0.17	254,254,254,254	0
56	MG	AA	1634	1/1	0.90	0.07	141,141,141,141	0
56	MG	DA	3173	1/1	0.90	0.30	73,73,73,73	0
56	MG	DA	3132	1/1	0.90	0.27	57,57,57,57	0
56	MG	CA	3035	1/1	0.90	0.18	102,102,102,102	0
56	MG	BA	1614	1/1	0.90	0.13	127,127,127,127	0
61	PEG	D1	102	7/7	0.90	0.23	61,65,68,69	0
56	MG	DB	206	1/1	0.90	0.23	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3147	1/1	0.90	0.17	46,46,46,46	0
56	MG	DA	3151	1/1	0.90	0.36	82,82,82,82	0
56	MG	CA	3108	1/1	0.91	0.20	74,74,74,74	0
56	MG	CA	3033	1/1	0.91	0.23	154,154,154,154	0
56	MG	AA	1635	1/1	0.91	0.19	209,209,209,209	0
56	MG	BA	1625	1/1	0.91	0.36	269,269,269,269	0
56	MG	CA	3112	1/1	0.91	0.36	85,85,85,85	0
56	MG	CA	3134	1/1	0.91	0.18	134,134,134,134	0
56	MG	BA	1626	1/1	0.91	0.15	138,138,138,138	0
56	MG	DA	3154	1/1	0.91	0.13	62,62,62,62	0
62	EDO	DB	211	4/4	0.91	0.45	96,96,96,96	0
56	MG	BA	1630	1/1	0.91	0.09	165,165,165,165	0
56	MG	BA	1616	1/1	0.91	0.12	169,169,169,169	0
56	MG	CA	3053	1/1	0.91	0.09	84,84,84,84	0
56	MG	CA	3081	1/1	0.91	0.10	117,117,117,117	0
56	MG	CA	3122	1/1	0.91	0.55	81,81,81,81	0
56	MG	DA	3026	1/1	0.91	0.14	39,39,39,39	0
56	MG	CA	3030	1/1	0.91	0.06	76,76,76,76	0
56	MG	AA	1608	1/1	0.91	0.28	83,83,83,83	0
56	MG	AA	1655	1/1	0.91	0.10	101,101,101,101	0
56	MG	CA	3069	1/1	0.91	0.10	81,81,81,81	0
56	MG	CA	3127	1/1	0.91	0.17	71,71,71,71	0
64	SPD	DA	3221	10/10	0.91	0.29	47,58,65,68	0
58	MPD	DA	3207	8/8	0.91	0.35	64,70,73,78	0
58	MPD	DA	3228	8/8	0.91	0.23	92,96,99,99	0
56	MG	CA	3073	1/1	0.92	0.26	212,212,212,212	0
56	MG	BA	1632	1/1	0.92	0.11	72,72,72,72	0
56	MG	DD	301	1/1	0.92	0.22	53,53,53,53	0
56	MG	AA	1665	1/1	0.92	0.17	153,153,153,153	0
56	MG	DA	3153	1/1	0.92	0.22	47,47,47,47	0
56	MG	BA	1634	1/1	0.92	0.08	133,133,133,133	0
56	MG	CA	3106	1/1	0.92	0.18	81,81,81,81	0
56	MG	AA	1601	1/1	0.92	0.32	48,48,48,48	0
56	MG	CA	3044	1/1	0.92	0.10	102,102,102,102	0
63	PGE	DD	302	10/10	0.92	0.29	75,77,78,79	0
56	MG	BA	1637	1/1	0.92	0.23	63,63,63,63	0
56	MG	BA	1610	1/1	0.92	0.06	97,97,97,97	0
56	MG	AA	1623	1/1	0.92	0.20	60,60,60,60	0
56	MG	CA	3114	1/1	0.92	0.28	40,40,40,40	0
64	SPD	DA	3181	10/10	0.92	0.28	66,69,73,73	0
56	MG	DA	3133	1/1	0.92	0.25	55,55,55,55	0
56	MG	BA	1631	1/1	0.92	0.08	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3141	1/1	0.92	0.24	46,46,46,46	0
67	GUN	DA	3208	11/11	0.92	0.23	111,112,113,113	0
59	PUT	DA	3187	6/6	0.92	0.20	36,42,42,42	0
62	EDO	D1	101	4/4	0.93	0.16	53,53,53,54	0
56	MG	CA	3052	1/1	0.93	0.07	80,80,80,80	0
56	MG	AA	1645	1/1	0.93	0.12	54,54,54,54	0
56	MG	DA	3003	1/1	0.93	0.09	93,93,93,93	0
62	EDO	DA	3195	4/4	0.93	0.29	71,73,74,75	0
56	MG	CA	3148	1/1	0.93	0.14	27,27,27,27	1
62	EDO	DA	3205	4/4	0.93	0.24	79,82,83,83	0
56	MG	BA	1627	1/1	0.93	0.32	109,109,109,109	0
56	MG	DA	3050	1/1	0.93	0.17	44,44,44,44	0
59	PUT	DA	3226	6/6	0.93	0.23	74,74,75,75	0
60	ZN	C5	101	1/1	0.93	0.07	149,149,149,149	0
56	MG	CA	3150	1/1	0.93	0.13	50,50,50,50	0
63	PGE	DA	3184	10/10	0.93	0.19	39,51,60,63	0
56	MG	AA	1629	1/1	0.93	0.07	100,100,100,100	0
56	MG	BA	1621	1/1	0.93	0.17	13,13,13,13	0
56	MG	DA	3160	1/1	0.93	0.48	87,87,87,87	0
56	MG	AA	1658	1/1	0.93	0.06	58,58,58,58	0
56	MG	CA	3037	1/1	0.93	0.28	206,206,206,206	0
56	MG	AA	1669	1/1	0.93	0.23	91,91,91,91	0
56	MG	CA	3085	1/1	0.93	0.14	67,67,67,67	0
56	MG	BA	1601	1/1	0.93	0.10	140,140,140,140	0
56	MG	CA	3144	1/1	0.93	0.06	54,54,54,54	0
56	MG	CB	202	1/1	0.93	0.09	123,123,123,123	0
59	PUT	DA	3186	6/6	0.94	0.20	44,49,50,51	0
56	MG	BA	1628	1/1	0.94	0.10	80,80,80,80	0
56	MG	DA	3134	1/1	0.94	0.10	120,120,120,120	0
56	MG	AA	1630	1/1	0.94	0.16	124,124,124,124	0
62	EDO	DA	3192	4/4	0.94	0.24	92,92,93,94	0
56	MG	DA	3138	1/1	0.94	0.14	43,43,43,43	0
58	MPD	AA	1676	8/8	0.94	0.39	96,98,102,102	0
56	MG	CA	3004	1/1	0.94	0.17	203,203,203,203	0
58	MPD	DA	3190	8/8	0.94	0.47	99,100,101,101	0
56	MG	BA	1636	1/1	0.94	0.64	91,91,91,91	0
56	MG	CA	3072	1/1	0.94	1.10	273,273,273,273	0
60	ZN	AB	301	1/1	0.94	0.06	125,125,125,125	0
56	MG	DA	3145	1/1	0.94	0.24	58,58,58,58	0
56	MG	DA	3071	1/1	0.94	0.23	102,102,102,102	0
56	MG	DA	3102	1/1	0.94	0.11	38,38,38,38	0
63	PGE	DA	3214	10/10	0.94	0.25	81,82,84,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	BA	1619	1/1	0.94	0.17	198,198,198,198	0
56	MG	DA	3118	1/1	0.94	0.20	62,62,62,62	0
56	MG	DA	3229	1/1	0.94	0.06	45,45,45,45	0
56	MG	DB	204	1/1	0.94	0.12	56,56,56,56	0
64	SPD	DA	3185	10/10	0.94	0.20	52,53,57,58	0
56	MG	CA	3121	1/1	0.94	0.26	63,63,63,63	0
56	MG	AA	1660	1/1	0.94	0.56	278,278,278,278	0
65	1PE	DA	3183	16/16	0.94	0.24	46,56,86,87	0
56	MG	AA	1624	1/1	0.94	0.23	85,85,85,85	0
66	ACY	DA	3194	4/4	0.94	0.20	52,56,56,58	0
66	ACY	DA	3199	4/4	0.94	0.21	83,84,85,85	0
56	MG	CA	3021	1/1	0.94	0.49	272,272,272,272	0
56	MG	CA	3113	1/1	0.94	0.30	50,50,50,50	0
56	MG	CA	3128	1/1	0.95	0.21	65,65,65,65	0
56	MG	CA	3102	1/1	0.95	0.16	92,92,92,92	0
56	MG	CA	3103	1/1	0.95	0.13	93,93,93,93	0
62	EDO	D0	101	4/4	0.95	0.38	67,67,68,69	0
56	MG	DA	3172	1/1	0.95	0.19	48,48,48,48	0
56	MG	CA	3090	1/1	0.95	0.28	222,222,222,222	0
56	MG	CA	3009	1/1	0.95	0.14	271,271,271,271	0
56	MG	CA	3119	1/1	0.95	0.17	68,68,68,68	0
56	MG	AA	1663	1/1	0.95	0.23	65,65,65,65	0
56	MG	CA	3062	1/1	0.95	0.03	191,191,191,191	0
56	MG	DA	3014	1/1	0.95	0.13	56,56,56,56	0
56	MG	DA	3140	1/1	0.95	0.27	54,54,54,54	0
56	MG	CA	3095	1/1	0.95	0.13	80,80,80,80	0
56	MG	CA	3015	1/1	0.95	0.19	59,59,59,59	0
56	MG	DA	3060	1/1	0.95	0.17	32,32,32,32	0
56	MG	DA	3066	1/1	0.95	0.09	49,49,49,49	0
56	MG	CA	3153	1/1	0.95	0.23	49,49,49,49	0
56	MG	DA	3084	1/1	0.95	0.11	56,56,56,56	0
56	MG	DA	3152	1/1	0.95	0.18	59,59,59,59	0
59	PUT	DA	3220	6/6	0.95	0.23	77,80,81,81	0
56	MG	DA	3086	1/1	0.95	0.16	17,17,17,17	0
56	MG	DA	3093	1/1	0.95	0.17	17,17,17,17	0
63	PGE	DU	101	10/10	0.95	0.23	79,83,88,88	0
56	MG	DA	3097	1/1	0.95	0.16	187,187,187,187	0
56	MG	DA	3156	1/1	0.95	0.09	45,45,45,45	0
56	MG	BA	1613	1/1	0.95	0.12	86,86,86,86	0
56	MG	CA	3058	1/1	0.95	0.23	203,203,203,203	0
56	MG	DA	3111	1/1	0.95	0.15	21,21,21,21	0
56	MG	DA	3112	1/1	0.95	0.10	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	CA	3099	1/1	0.95	0.26	189,189,189,189	0
56	MG	AA	1666	1/1	0.95	0.07	56,56,56,56	0
56	MG	DA	3167	1/1	0.95	0.13	23,23,23,23	0
56	MG	DA	3123	1/1	0.95	0.23	66,66,66,66	0
56	MG	DA	3125	1/1	0.96	0.38	48,48,48,48	0
56	MG	BA	1622	1/1	0.96	0.14	150,150,150,150	0
56	MG	AA	1659	1/1	0.96	0.10	94,94,94,94	0
56	MG	DA	3016	1/1	0.96	0.06	32,32,32,32	0
56	MG	DA	3131	1/1	0.96	0.15	43,43,43,43	0
56	MG	DA	3025	1/1	0.96	0.08	74,74,74,74	0
56	MG	AA	1631	1/1	0.96	0.10	42,42,42,42	0
56	MG	DA	3042	1/1	0.96	0.16	24,24,24,24	0
56	MG	DA	3135	1/1	0.96	0.16	25,25,25,25	0
56	MG	DA	3043	1/1	0.96	0.07	84,84,84,84	0
56	MG	AA	1641	1/1	0.96	0.06	44,44,44,44	0
56	MG	DA	3051	1/1	0.96	0.10	52,52,52,52	0
56	MG	DA	3053	1/1	0.96	0.12	68,68,68,68	0
56	MG	CA	3070	1/1	0.96	0.10	94,94,94,94	0
56	MG	CA	3136	1/1	0.96	0.29	66,66,66,66	0
56	MG	DA	3067	1/1	0.96	0.14	43,43,43,43	0
56	MG	DA	3146	1/1	0.96	0.12	117,117,117,117	0
56	MG	DA	3068	1/1	0.96	0.15	52,52,52,52	0
56	MG	DA	3148	1/1	0.96	0.23	34,34,34,34	0
56	MG	DA	3149	1/1	0.96	0.06	38,38,38,38	0
56	MG	DA	3150	1/1	0.96	0.20	41,41,41,41	0
56	MG	DA	3070	1/1	0.96	0.11	58,58,58,58	0
56	MG	BA	1605	1/1	0.96	0.07	58,58,58,58	0
56	MG	DA	3073	1/1	0.96	0.06	37,37,37,37	0
56	MG	DA	3081	1/1	0.96	0.05	80,80,80,80	0
56	MG	CA	3045	1/1	0.96	0.14	78,78,78,78	0
56	MG	CA	3018	1/1	0.96	0.36	131,131,131,131	0
56	MG	DA	3088	1/1	0.96	0.16	13,13,13,13	0
56	MG	DA	3158	1/1	0.96	0.15	61,61,61,61	0
56	MG	DB	201	1/1	0.96	0.12	66,66,66,66	0
56	MG	AA	1668	1/1	0.96	0.09	62,62,62,62	0
56	MG	DA	3161	1/1	0.96	0.11	48,48,48,48	0
56	MG	AA	1662	1/1	0.96	0.14	66,66,66,66	0
56	MG	DA	3164	1/1	0.96	0.43	78,78,78,78	0
56	MG	CA	3091	1/1	0.96	0.11	137,137,137,137	0
56	MG	BA	1618	1/1	0.96	0.18	91,91,91,91	0
56	MG	AA	1677	1/1	0.96	0.15	121,121,121,121	0
56	MG	DA	3115	1/1	0.96	0.11	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	1620	1/1	0.96	0.08	90,90,90,90	0
56	MG	DA	3119	1/1	0.96	0.28	56,56,56,56	0
56	MG	DA	3121	1/1	0.96	0.47	51,51,51,51	0
56	MG	AA	1636	1/1	0.96	0.13	89,89,89,89	0
56	MG	CA	3080	1/1	0.96	0.37	160,160,160,160	0
56	MG	DA	3006	1/1	0.96	0.08	118,118,118,118	0
56	MG	DA	3065	1/1	0.97	0.12	24,24,24,24	0
56	MG	CA	3016	1/1	0.97	0.17	107,107,107,107	0
56	MG	CA	3107	1/1	0.97	0.36	67,67,67,67	0
56	MG	AA	1633	1/1	0.97	0.07	76,76,76,76	0
56	MG	DA	3015	1/1	0.97	0.14	28,28,28,28	0
56	MG	AA	1648	1/1	0.97	0.07	55,55,55,55	0
56	MG	DA	3072	1/1	0.97	0.14	26,26,26,26	0
56	MG	AA	1650	1/1	0.97	0.07	149,149,149,149	0
56	MG	DA	3078	1/1	0.97	0.14	127,127,127,127	0
56	MG	AA	1653	1/1	0.97	0.07	32,32,32,32	0
56	MG	DA	3139	1/1	0.97	0.17	73,73,73,73	0
56	MG	DA	3027	1/1	0.97	0.09	136,136,136,136	0
56	MG	DA	3175	1/1	0.97	0.19	47,47,47,47	0
56	MG	DA	3028	1/1	0.97	0.18	21,21,21,21	0
56	MG	DA	3030	1/1	0.97	0.15	26,26,26,26	0
56	MG	DA	3031	1/1	0.97	0.15	16,16,16,16	0
56	MG	DA	3034	1/1	0.97	0.18	28,28,28,28	0
56	MG	DA	3098	1/1	0.97	0.17	19,19,19,19	0
56	MG	DA	3225	1/1	0.97	0.12	14,14,14,14	0
56	MG	DA	3035	1/1	0.97	0.17	15,15,15,15	0
56	MG	DA	3106	1/1	0.97	0.13	32,32,32,32	0
56	MG	DA	3107	1/1	0.97	0.06	26,26,26,26	0
56	MG	CA	3100	1/1	0.97	0.18	104,104,104,104	0
56	MG	BA	1629	1/1	0.97	0.40	195,195,195,195	0
56	MG	DA	3044	1/1	0.97	0.12	73,73,73,73	0
56	MG	DA	3045	1/1	0.97	0.11	25,25,25,25	0
56	MG	AA	1654	1/1	0.97	0.14	200,200,200,200	0
56	MG	CA	3042	1/1	0.97	0.07	93,93,93,93	0
56	MG	AA	1637	1/1	0.97	0.06	47,47,47,47	0
56	MG	DA	3057	1/1	0.97	0.09	33,33,33,33	0
66	ACY	DA	3189	4/4	0.97	0.18	65,66,66,67	0
56	MG	DA	3059	1/1	0.97	0.15	25,25,25,25	0
56	MG	CA	3025	1/1	0.97	0.20	109,109,109,109	0
56	MG	DA	3061	1/1	0.97	0.07	209,209,209,209	0
56	MG	DA	3127	1/1	0.97	0.54	24,24,24,24	0
56	MG	DA	3012	1/1	0.98	0.14	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3013	1/1	0.98	0.21	92,92,92,92	0
56	MG	DA	3049	1/1	0.98	0.17	10,10,10,10	0
56	MG	DA	3230	1/1	0.98	0.05	60,60,60,60	0
56	MG	DA	3089	1/1	0.98	0.15	16,16,16,16	0
56	MG	AA	1632	1/1	0.98	0.05	88,88,88,88	0
56	MG	DA	3096	1/1	0.98	0.09	36,36,36,36	0
56	MG	DA	3144	1/1	0.98	0.18	65,65,65,65	0
56	MG	AA	1638	1/1	0.98	0.12	105,105,105,105	0
56	MG	BA	1611	1/1	0.98	0.10	31,31,31,31	0
56	MG	DA	3099	1/1	0.98	0.19	9,9,9,9	0
56	MG	DA	3101	1/1	0.98	0.12	26,26,26,26	0
56	MG	DA	3056	1/1	0.98	0.12	7,7,7,7	0
56	MG	DA	3105	1/1	0.98	0.12	11,11,11,11	0
56	MG	DA	3017	1/1	0.98	0.07	53,53,53,53	0
56	MG	AA	1667	1/1	0.98	0.12	33,33,33,33	0
56	MG	AA	1647	1/1	0.98	0.28	217,217,217,217	0
56	MG	AA	1639	1/1	0.98	0.04	82,82,82,82	0
56	MG	DA	3062	1/1	0.98	0.16	110,110,110,110	0
56	MG	DA	3063	1/1	0.98	0.08	83,83,83,83	0
56	MG	DA	3116	1/1	0.98	0.14	33,33,33,33	0
56	MG	DA	3117	1/1	0.98	0.07	43,43,43,43	0
56	MG	CA	3020	1/1	0.98	0.04	73,73,73,73	0
56	MG	DA	3002	1/1	0.98	0.08	77,77,77,77	0
56	MG	DA	3120	1/1	0.98	0.15	64,64,64,64	0
58	MPD	DS	203	8/8	0.98	0.19	59,60,62,64	0
56	MG	DA	3162	1/1	0.98	0.23	50,50,50,50	0
56	MG	AA	1649	1/1	0.98	0.05	62,62,62,62	0
56	MG	DA	3032	1/1	0.98	0.19	21,21,21,21	0
56	MG	DA	3069	1/1	0.98	0.13	65,65,65,65	0
56	MG	DA	3004	1/1	0.98	0.09	107,107,107,107	0
56	MG	AA	1643	1/1	0.98	0.10	65,65,65,65	0
56	MG	DA	3126	1/1	0.98	0.20	55,55,55,55	0
56	MG	DA	3036	1/1	0.98	0.17	16,16,16,16	0
56	MG	DA	3040	1/1	0.98	0.25	10,10,10,10	0
56	MG	DA	3074	1/1	0.98	0.10	26,26,26,26	0
56	MG	DA	3075	1/1	0.98	0.15	26,26,26,26	0
56	MG	DA	3076	1/1	0.98	0.09	34,34,34,34	0
56	MG	DA	3009	1/1	0.98	0.11	29,29,29,29	0
56	MG	DA	3079	1/1	0.98	0.07	44,44,44,44	0
56	MG	DA	3080	1/1	0.98	0.09	28,28,28,28	0
56	MG	DB	203	1/1	0.98	0.10	27,27,27,27	0
56	MG	DA	3083	1/1	0.98	0.10	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3137	1/1	0.98	0.36	29,29,29,29	1
56	MG	DA	3048	1/1	0.99	0.13	67,67,67,67	0
56	MG	DA	3022	1/1	0.99	0.14	21,21,21,21	0
56	MG	DA	3023	1/1	0.99	0.14	29,29,29,29	0
56	MG	DA	3085	1/1	0.99	0.10	27,27,27,27	0
56	MG	DA	3024	1/1	0.99	0.11	45,45,45,45	0
56	MG	DA	3052	1/1	0.99	0.07	53,53,53,53	0
56	MG	DA	3007	1/1	0.99	0.09	19,19,19,19	0
56	MG	DA	3090	1/1	0.99	0.11	11,11,11,11	0
56	MG	DA	3091	1/1	0.99	0.11	24,24,24,24	0
56	MG	DA	3231	1/1	0.99	0.22	43,43,43,43	0
56	MG	DA	3092	1/1	0.99	0.12	11,11,11,11	0
56	MG	DA	3054	1/1	0.99	0.20	27,27,27,27	0
56	MG	DA	3094	1/1	0.99	0.10	54,54,54,54	0
56	MG	DA	3095	1/1	0.99	0.15	14,14,14,14	0
56	MG	DA	3055	1/1	0.99	0.17	19,19,19,19	0
56	MG	DA	3008	1/1	0.99	0.09	15,15,15,15	0
56	MG	AA	1646	1/1	0.99	0.07	50,50,50,50	0
56	MG	DA	3058	1/1	0.99	0.11	22,22,22,22	0
56	MG	DA	3100	1/1	0.99	0.18	53,53,53,53	0
56	MG	AA	1651	1/1	0.99	0.07	61,61,61,61	0
56	MG	DA	3029	1/1	0.99	0.20	68,68,68,68	0
56	MG	DA	3103	1/1	0.99	0.16	22,22,22,22	0
56	MG	DA	3104	1/1	0.99	0.12	20,20,20,20	0
56	MG	DA	3011	1/1	0.99	0.19	9,9,9,9	0
56	MG	DD	303	1/1	0.99	0.19	37,37,37,37	0
56	MG	AA	1652	1/1	0.99	0.20	18,18,18,18	0
56	MG	DA	3108	1/1	0.99	0.12	36,36,36,36	0
56	MG	DA	3109	1/1	0.99	0.16	13,13,13,13	0
56	MG	DA	3064	1/1	0.99	0.12	24,24,24,24	0
56	MG	DA	3033	1/1	0.99	0.11	10,10,10,10	0
56	MG	BA	1615	1/1	0.99	0.08	44,44,44,44	0
56	MG	DA	3113	1/1	0.99	0.11	30,30,30,30	0
56	MG	DA	3114	1/1	0.99	0.17	7,7,7,7	0
56	MG	AA	1607	1/1	0.99	0.26	52,52,52,52	0
56	MG	DA	3005	1/1	0.99	0.13	78,78,78,78	0
56	MG	DA	3037	1/1	0.99	0.11	26,26,26,26	0
56	MG	DA	3038	1/1	0.99	0.07	29,29,29,29	0
56	MG	DA	3039	1/1	0.99	0.07	43,43,43,43	0
56	MG	DB	202	1/1	0.99	0.12	60,60,60,60	0
56	MG	DA	3041	1/1	0.99	0.07	25,25,25,25	0
56	MG	DA	3018	1/1	0.99	0.28	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3019	1/1	0.99	0.08	54,54,54,54	0
56	MG	DA	3020	1/1	0.99	0.13	23,23,23,23	0
56	MG	DA	3077	1/1	0.99	0.05	34,34,34,34	0
56	MG	DA	3021	1/1	0.99	0.11	9,9,9,9	0
56	MG	DA	3046	1/1	0.99	0.14	46,46,46,46	0
56	MG	DA	3047	1/1	0.99	0.14	47,47,47,47	0
56	MG	DA	3087	1/1	1.00	0.09	58,58,58,58	0
60	ZN	D5	101	1/1	1.00	0.11	55,55,55,55	0
56	MG	DA	3082	1/1	1.00	0.05	64,64,64,64	0

6.5 Other polymers [i](#)

There are no such residues in this entry.