



wwPDB X-ray Structure Validation Summary Report ⓘ

Jul 3, 2024 – 05:41 PM EDT

PDB ID : 4U1V
Title : Crystal structure of the E. coli ribosome bound to linopristin.
Authors : Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on : 2014-07-16
Resolution : 3.00 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 : 2.37.1
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.37.1

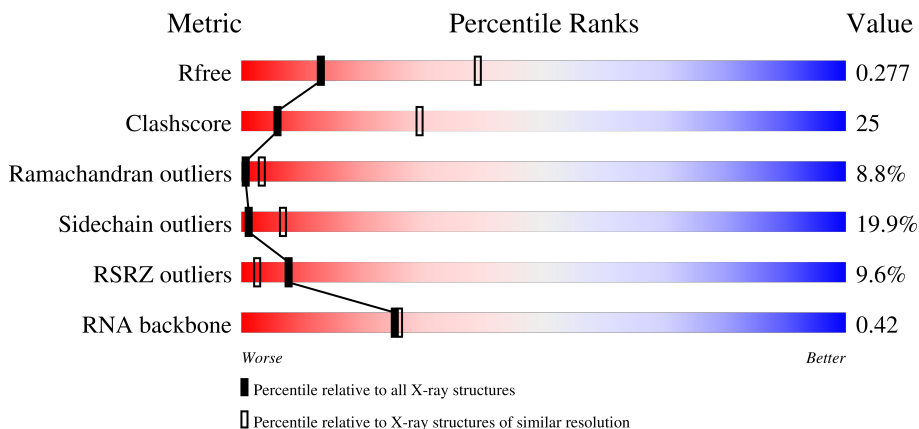
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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	2092 (3.00-3.00)
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)
RSRZ outliers	127900	1990 (3.00-3.00)
RNA backbone	3102	1173 (3.30-2.70)

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	1539	
1	CA	1539	
2	AB	218	
2	CB	218	

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Mol	Chain	Length	Quality of chain
3	AC	206	
3	CC	206	
4	AD	205	
4	CD	205	
5	AE	150	
5	CE	150	
6	AF	100	
6	CF	100	
7	AG	151	
7	CG	151	
8	AH	129	
8	CH	129	
9	AI	127	
9	CI	127	
10	AJ	98	
10	CJ	98	
11	AK	117	
11	CK	117	
12	AL	123	
12	CL	123	
13	AM	114	
13	CM	114	
14	AN	100	
14	CN	100	
15	AO	88	



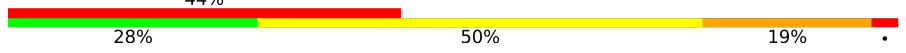

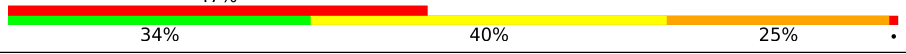





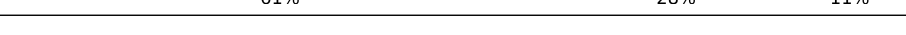






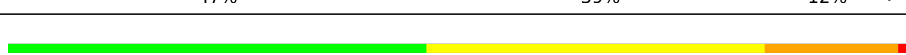



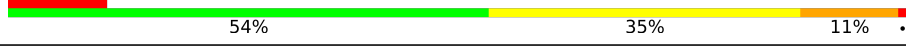



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Mol	Chain	Length	Quality of chain
15	CO	88	
16	AP	82	
16	CP	82	
17	AQ	80	
17	CQ	80	
18	AR	55	
18	CR	55	
19	AS	79	
19	CS	79	
20	AT	85	
20	CT	85	
21	AU	51	
21	CU	51	
22	BA	2903	
22	DA	2903	
23	BB	119	
23	DB	119	
24	BC	271	
24	DC	271	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	177	
27	DF	177	


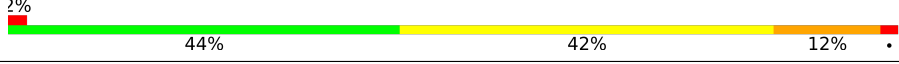
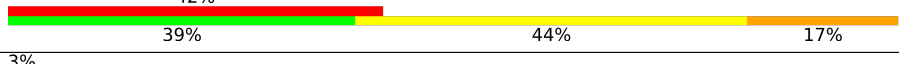
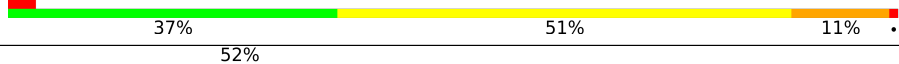
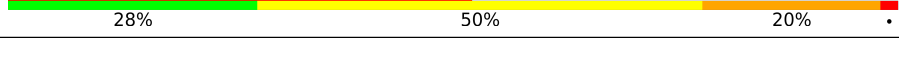

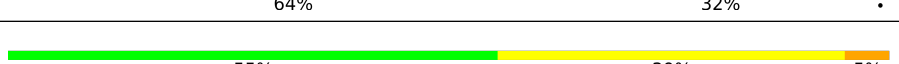
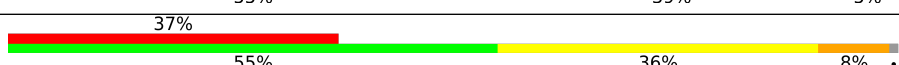
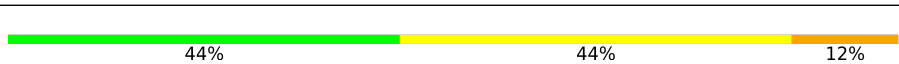

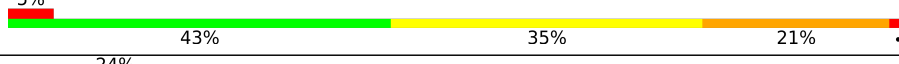
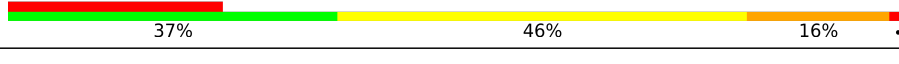


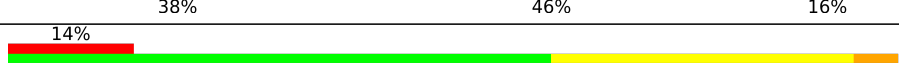
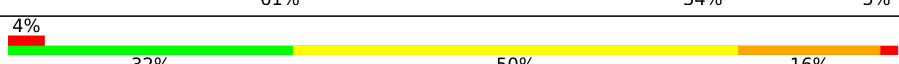


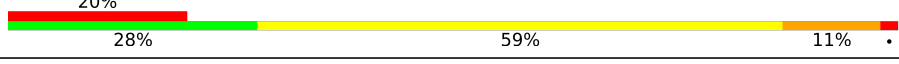






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Mol	Chain	Length	Quality of chain
28	BG	176	 55% 38% 7%
28	DG	176	 22% 54% 36% 9%
29	BH	149	 44% 28% 50% 19%
29	DH	149	 24% 35% 52% 11%
30	BI	141	 47% 34% 40% 25%
30	DI	141	 69% 42% 40% 17%
31	BJ	142	 56% 38% 6%
31	DJ	142	 8% 52% 42% 6%
32	BK	122	 35% 50% 15%
32	DK	122	 11% 61% 28% 11%
33	BL	143	 58% 30% 11%
33	DL	143	 25% 43% 41% 16%
34	BM	136	 49% 41% 8%
34	DM	136	 13% 54% 36% 10%
35	BN	120	 51% 38% 8%
35	DN	120	 14% 47% 39% 12%
36	BO	116	 47% 38% 15%
36	DO	116	 39% 53% 40% 8%
37	BP	114	 53% 39% 7%
37	DP	114	 11% 54% 35% 11%
38	BQ	117	 48% 44% 9%
38	DQ	117	 8% 52% 44%
39	BR	103	 37% 49% 14%
39	DR	103	 17% 51% 40% 9%
40	BS	110	 39% 48% 13%




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Mol	Chain	Length	Quality of chain
40	DS	110	
41	BT	93	
41	DT	93	
42	BU	102	
42	DU	102	
43	BV	94	
43	DV	94	
44	BW	76	
44	DW	76	
45	BX	77	
45	DX	77	
46	BY	63	
46	DY	63	
47	BZ	58	
47	DZ	58	
48	B0	56	
48	D0	56	
49	B1	50	
49	D1	50	
50	B2	46	
50	D2	46	
51	B3	64	
51	D3	64	
52	B4	38	
52	D4	38	

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Mol	Chain	Length	Quality of chain
53	B5	228	
54	B6	7	
54	D6	7	

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
54	MHW	B6	1	-	X	-	-
54	MHW	D6	1	-	X	X	-
55	MG	AA	1627	-	-	-	X
55	MG	AA	1644	-	-	-	X
55	MG	AA	1665	-	-	-	X
55	MG	AA	1667	-	-	-	X
55	MG	AA	1670	-	-	-	X
55	MG	BA	3015	-	-	-	X
55	MG	BA	3098	-	-	-	X
55	MG	BA	3115	-	-	-	X
55	MG	BA	3190	-	-	-	X
55	MG	CA	1655	-	-	-	X
55	MG	DA	3002	-	-	-	X
55	MG	DA	3015	-	-	-	X
55	MG	DA	3016	-	-	-	X
55	MG	DA	3028	-	-	-	X
55	MG	DA	3041	-	-	-	X
55	MG	DA	3061	-	-	-	X
55	MG	DA	3062	-	-	-	X
55	MG	DA	3071	-	-	-	X
55	MG	DA	3072	-	-	-	X
55	MG	DA	3092	-	-	-	X
55	MG	DA	3120	-	-	-	X
55	MG	DA	3132	-	-	-	X
55	MG	DA	3134	-	-	-	X
55	MG	DA	3151	-	-	-	X
55	MG	DA	3158	-	-	-	X
55	MG	DA	3164	-	-	-	X

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 288320 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	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			
1	CA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			
2	CB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			

- 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	C	N	O	S	0	0	0
			1625	1028	305	289	3			
3	CC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			
5	CE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			
6	CF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	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	CG	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	CH	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	CI	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	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	CJ	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	CK	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	955	590	196	165	4	0	0	0
12	CL	123	955	590	196	165	4	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	CM	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	96	774	483	160	128	3	0	0	0
14	CN	96	774	483	160	128	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	710	437	143	129	1	0	0	0
15	CO	88	710	437	143	129	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	CP	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	CQ	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	CR	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	CS	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	85	Total 665	C 411	N 137	O 114	S 3	0	0	0
20	CT	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	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			
21	CU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			
22	DA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	119	Total	C	N	O	P	0	0	0
			2549	1135	466	829	119			
23	DB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 24 is a protein called 50S ribosomal protein L2.

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

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
25	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 26 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

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

- Molecule 27 is a protein called 50S ribosomal protein L5.

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

- Molecule 28 is a protein called 50S ribosomal protein L6.

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

- Molecule 29 is a protein called 50S ribosomal protein L9.

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

- Molecule 30 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	BI	141	1032	651	179	196	6	0	0	0
30	DI	141	1032	651	179	196	6	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	BJ	142	1129	714	212	199	4	0	0	0
31	DJ	142	1129	714	212	199	4	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			
32	DK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
33	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 34 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
34	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			
35	DN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BO	116	Total	C	N	O	0	0	0
			892	552	178	162			
36	DO	116	Total	C	N	O	0	0	0
			892	552	178	162			

- Molecule 37 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
37	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 38 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BQ	117	Total	C	N	O	S	0	0	0
			947	604	192	151				
38	DQ	117	Total	C	N	O	S	0	0	0
			947	604	192	151				

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
39	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
40	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BU	102	Total	C	N	O	0	0	0
			780	492	146	142			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
42	DU	102	780	492	146	142	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
43	BV	94	753	479	137	134	3	0	0	0
43	DV	94	753	479	137	134	3	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	BW	76	580	359	117	103	1	0	0	0
44	DW	75	569	353	113	102	1	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	BX	77	625	388	129	106	2	0	0	0
45	DX	77	625	388	129	106	2	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	BY	63	509	313	99	95	2	0	0	0
46	DY	63	509	313	99	95	2	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	BZ	58	449	281	87	79	2	0	0	0
47	DZ	58	449	281	87	79	2	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
48	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O	0	0	0
			410	263	75	72			
49	D1	50	Total	C	N	O	0	0	0
			410	263	75	72			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
50	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
51	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
52	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 53 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
53	B5	191	1142	691	221	230	0	0	1

- Molecule 54 is a protein called Linopristin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
54	B6	7	69	50	9	10	0	0	0
54	D6	7	69	50	9	10	0	0	0

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AA	71	Total	Mg	0	0
			71	71		
55	AM	1	Total	Mg	0	0
			1	1		
55	BA	195	Total	Mg	0	0
			195	195		
55	BB	4	Total	Mg	0	0
			4	4		
55	CA	55	Total	Mg	0	0
			55	55		
55	CM	1	Total	Mg	0	0
			1	1		
55	DA	167	Total	Mg	0	0
			167	167		
55	DB	3	Total	Mg	0	0
			3	3		
55	DQ	1	Total	Mg	0	0
			1	1		

- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	B4	1	Total	Zn	0	0
			1	1		
56	D4	1	Total	Zn	0	0
			1	1		

- Molecule 57 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	194	Total O 194 194	0	0
57	AL	1	Total O 1 1	0	0
57	AN	5	Total O 5 5	0	0
57	AT	2	Total O 2 2	0	0
57	AU	1	Total O 1 1	0	0
57	BA	615	Total O 615 615	0	0
57	BB	14	Total O 14 14	0	0
57	BC	10	Total O 10 10	0	0
57	BD	4	Total O 4 4	0	0
57	BE	4	Total O 4 4	0	0
57	BF	1	Total O 1 1	0	0
57	BG	1	Total O 1 1	0	0
57	BJ	1	Total O 1 1	0	0
57	BL	6	Total O 6 6	0	0
57	BN	2	Total O 2 2	0	0
57	BS	1	Total O 1 1	0	0
57	BU	1	Total O 1 1	0	0
57	B2	1	Total O 1 1	0	0
57	B3	3	Total O 3 3	0	0
57	B4	2	Total O 2 2	0	0
57	CA	189	Total O 189 189	0	0
57	CL	1	Total O 1 1	0	0

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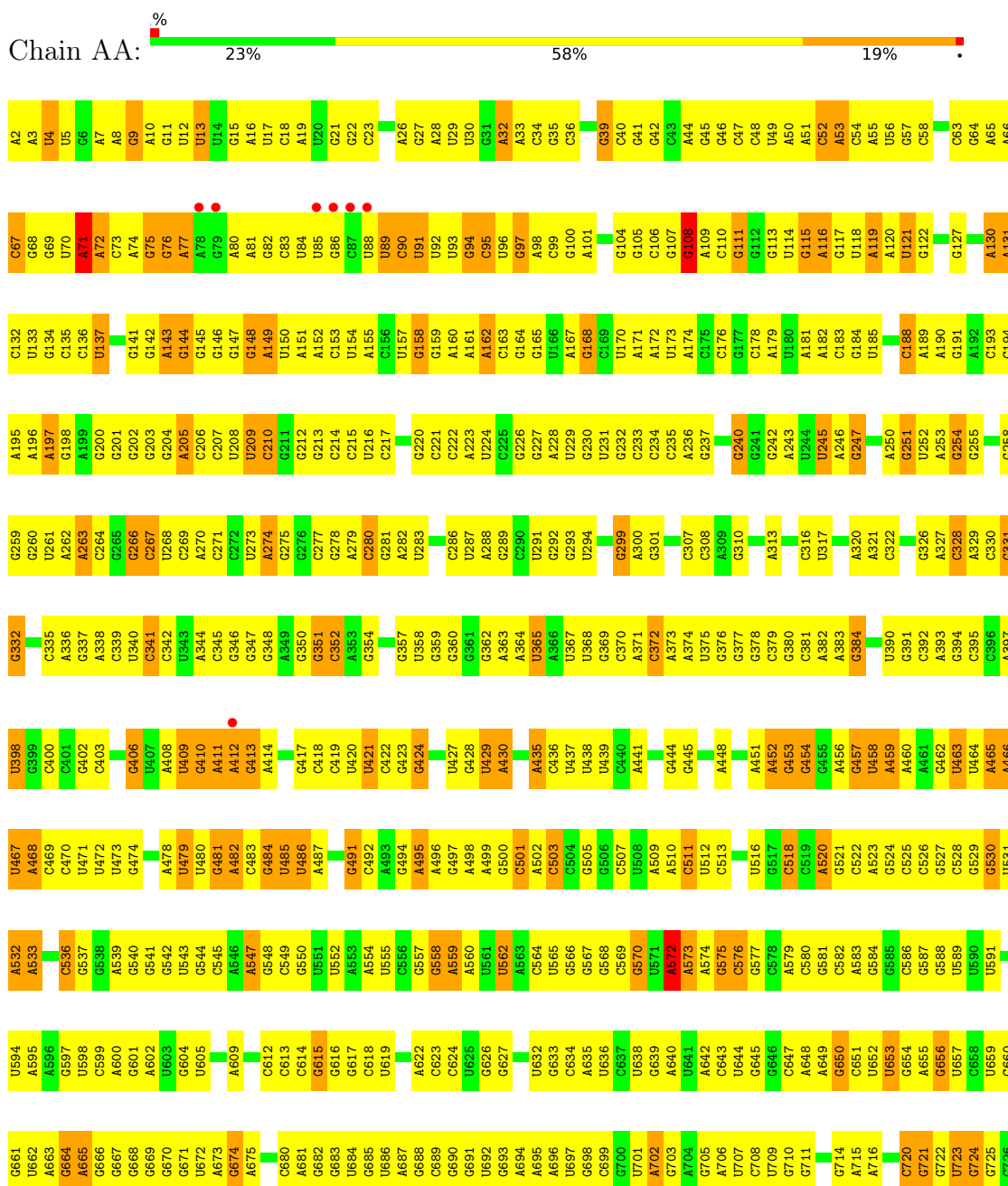
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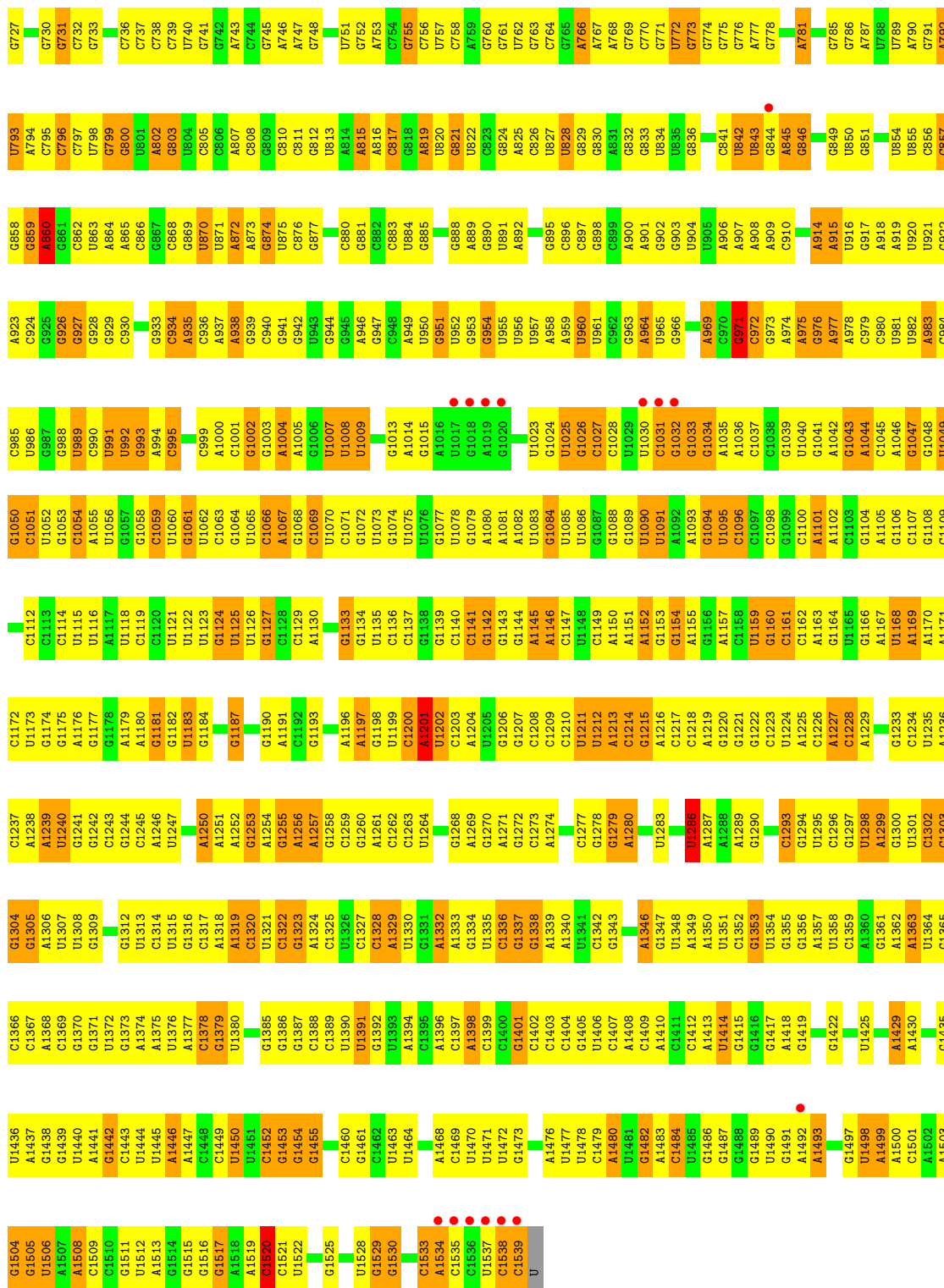
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57	CT	3	Total O 3 3	0	0
57	CU	2	Total O 2 2	0	0
57	DA	607	Total O 607 607	0	0
57	DB	13	Total O 13 13	0	0
57	DC	9	Total O 9 9	0	0
57	DD	4	Total O 4 4	0	0
57	DE	6	Total O 6 6	0	0
57	DL	5	Total O 5 5	0	0
57	DN	2	Total O 2 2	0	0
57	DT	2	Total O 2 2	0	0
57	DU	1	Total O 1 1	0	0
57	DV	1	Total O 1 1	0	0
57	D0	1	Total O 1 1	0	0
57	D2	2	Total O 2 2	0	0
57	D3	2	Total O 2 2	0	0
57	D4	1	Total O 1 1	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.

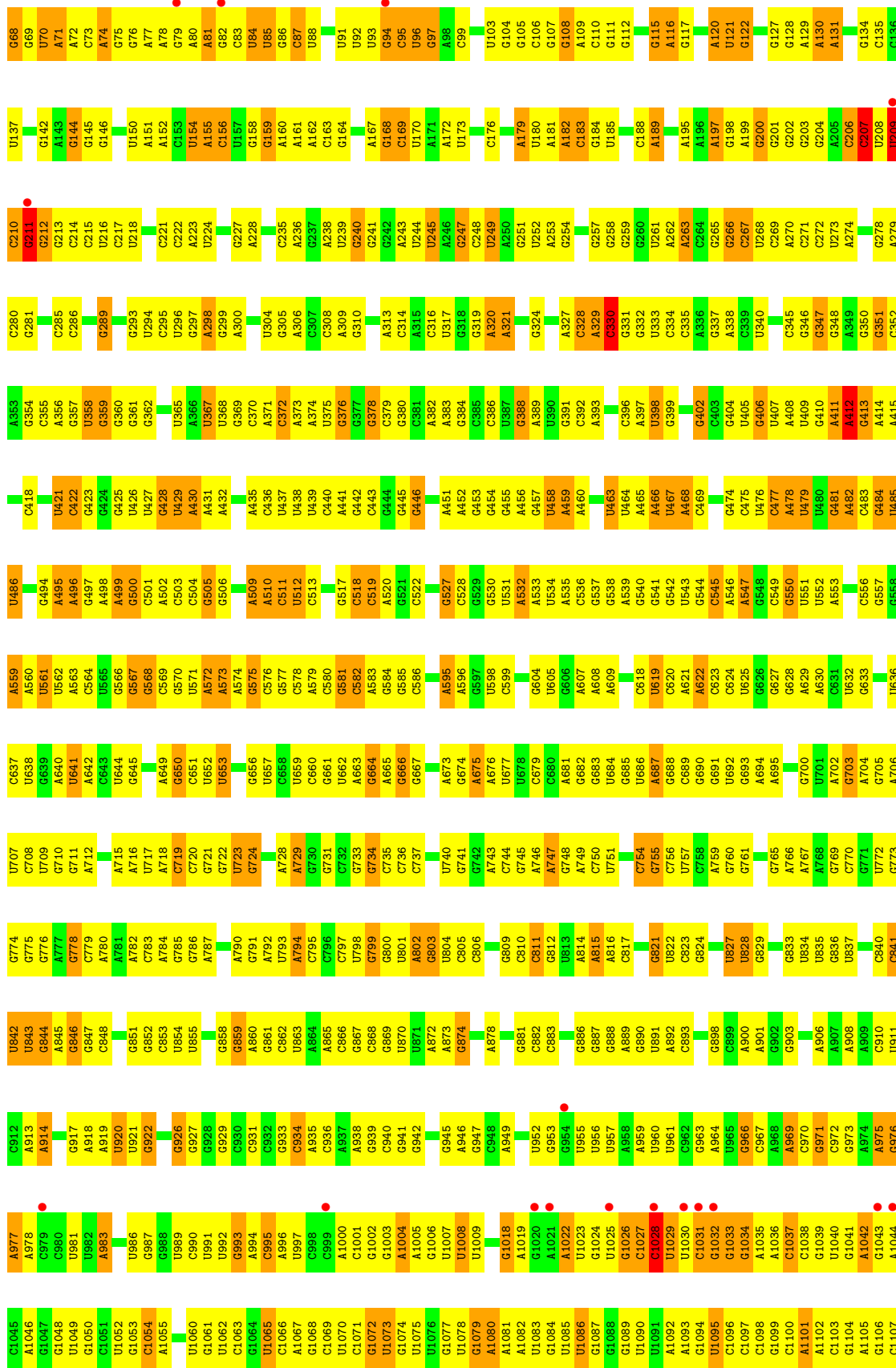
- Molecule 1: 16S rRNA

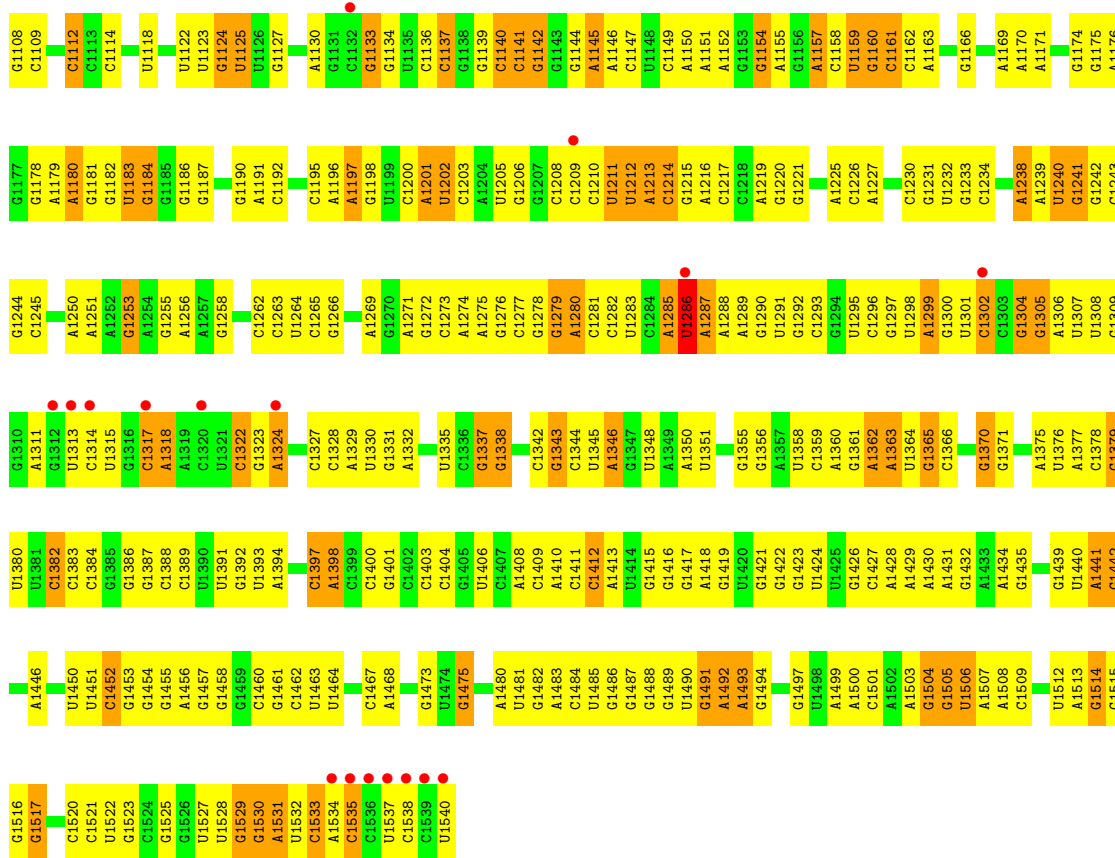




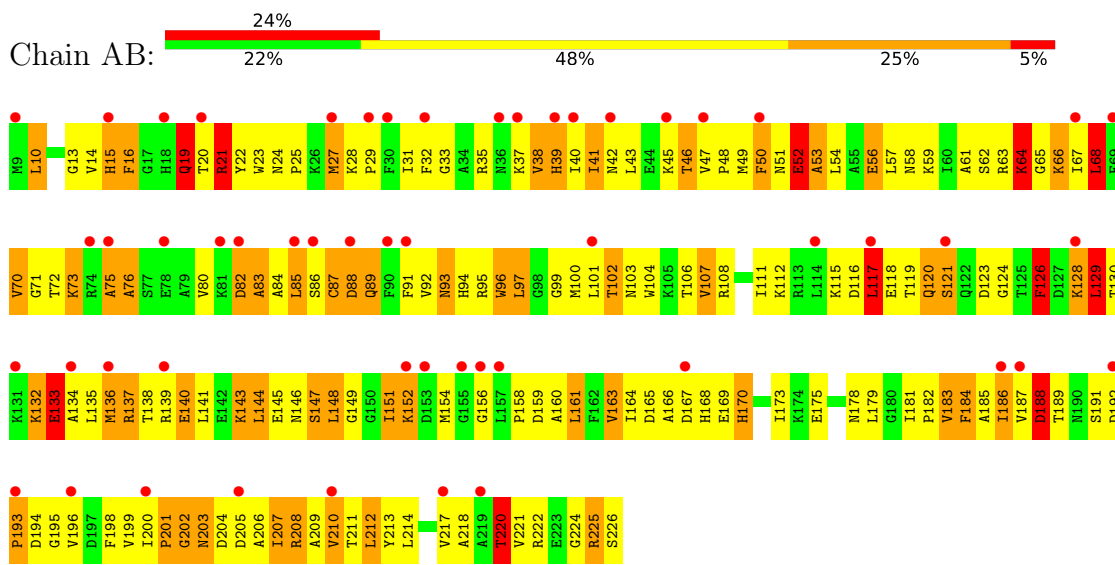
● Molecule 1: 16S rRNA



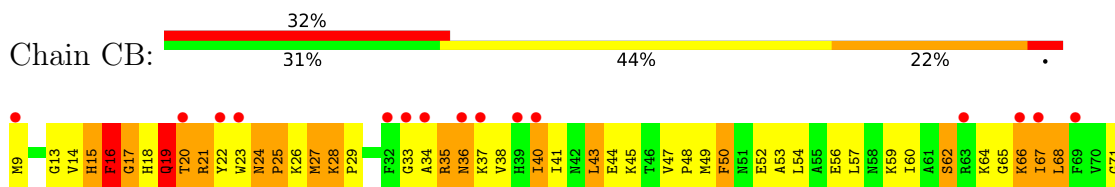


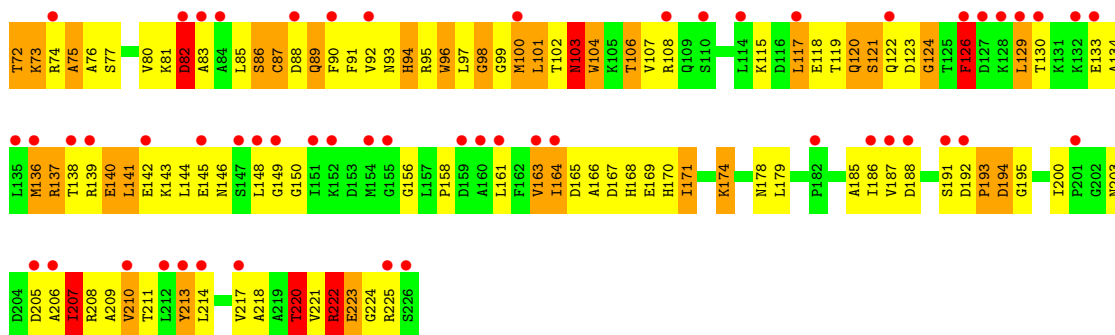


• Molecule 2: 30S ribosomal protein S2

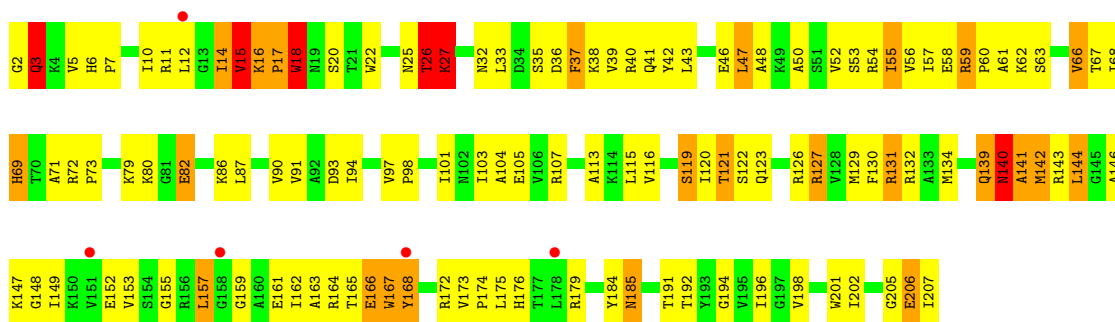
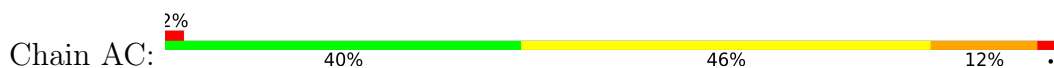


• Molecule 2: 30S ribosomal protein S2

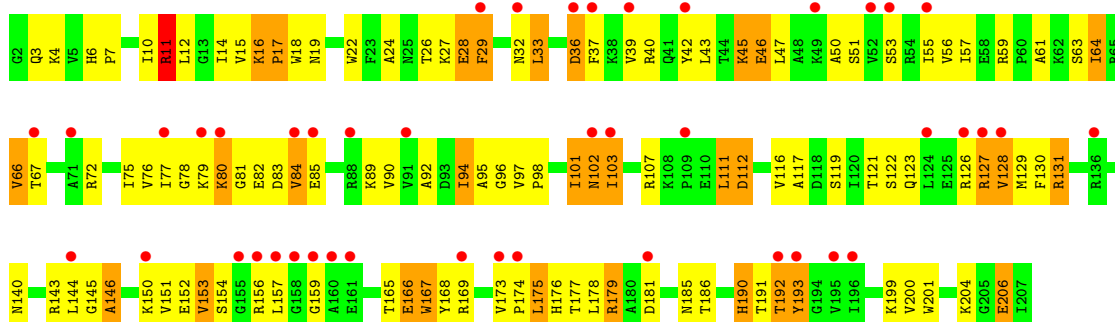
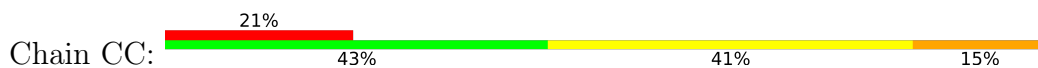




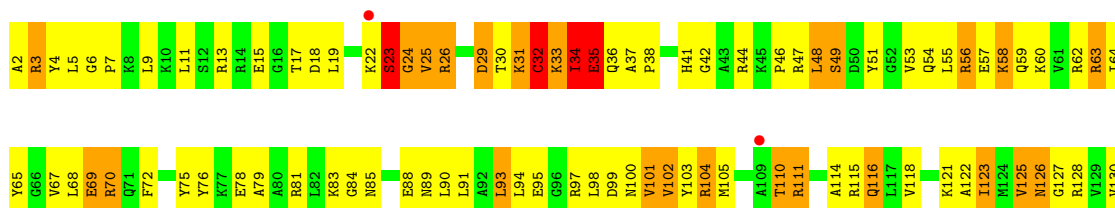
• Molecule 3: 30S ribosomal protein S3

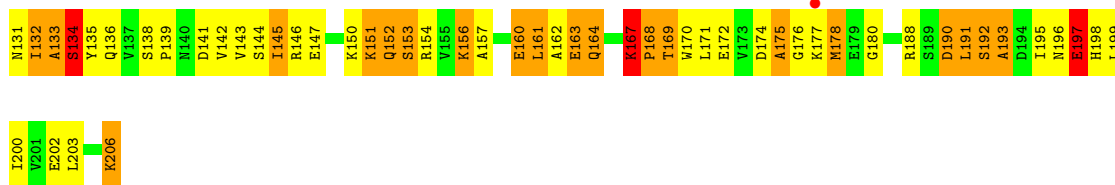


• Molecule 3: 30S ribosomal protein S3

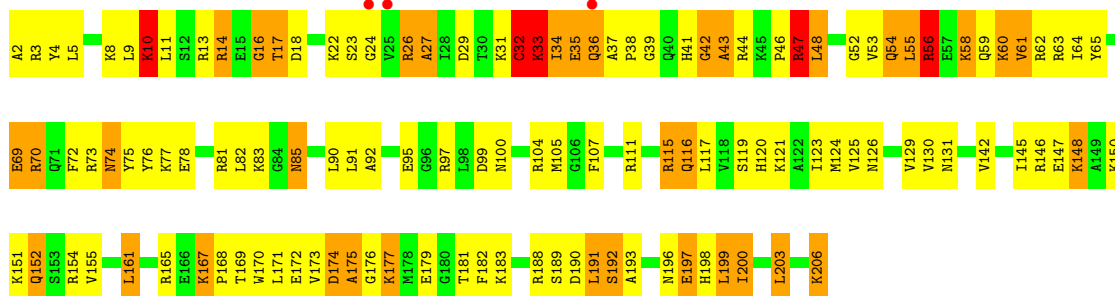


• Molecule 4: 30S ribosomal protein S4

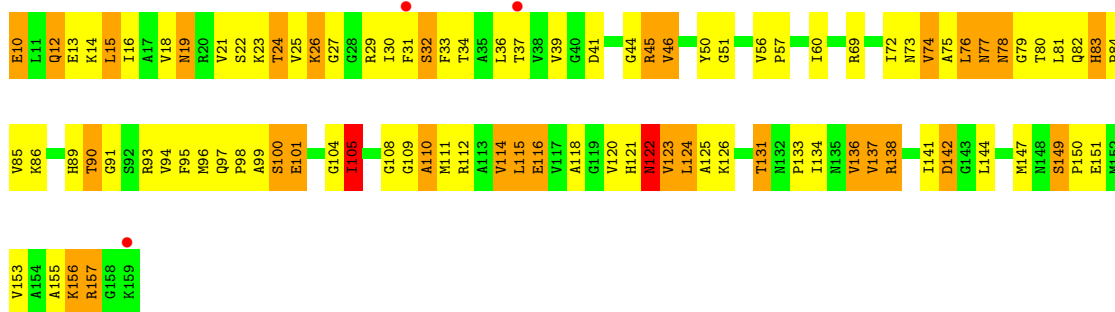




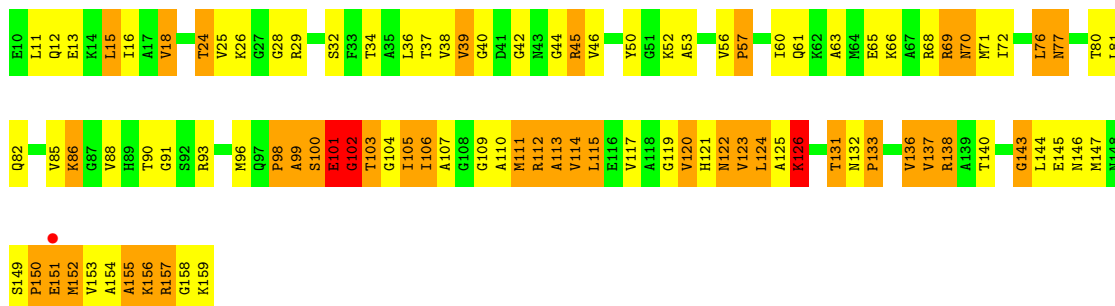
- Molecule 4: 30S ribosomal protein S4



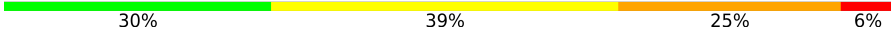
- Molecule 5: 30S ribosomal protein S5

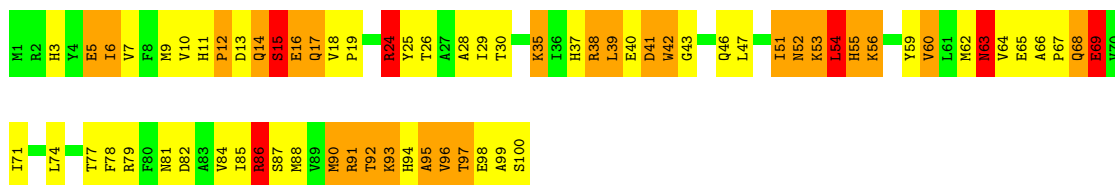


- Molecule 5: 30S ribosomal protein S5




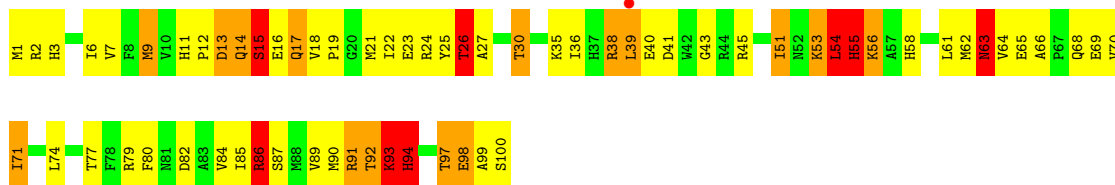
- Molecule 6: 30S ribosomal protein S6

Chain AF:  30% 39% 25% 6%



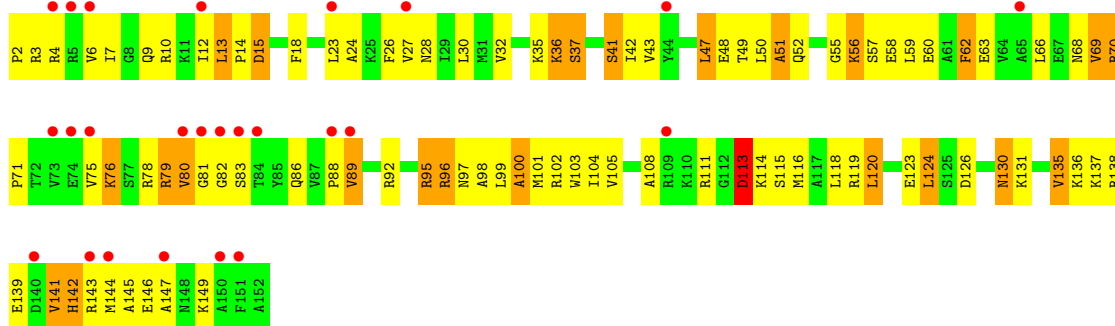
- Molecule 6: 30S ribosomal protein S6

Chain CF:  34% 43% 15% 8%



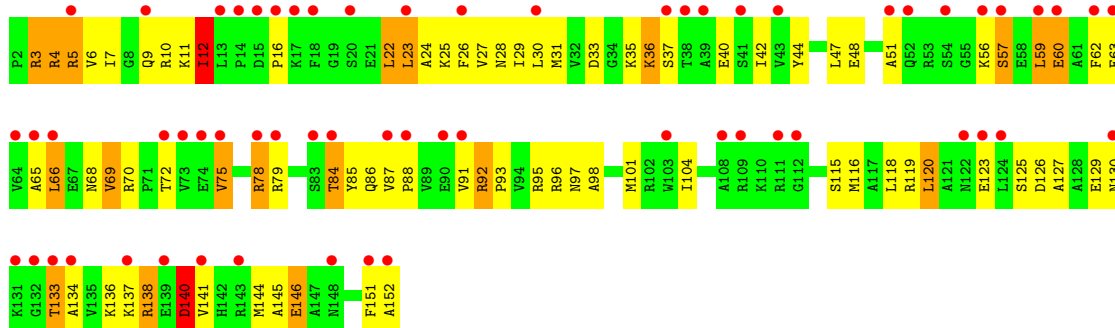
- Molecule 7: 30S ribosomal protein S7

Chain AG:  17% 38% 46% 16%

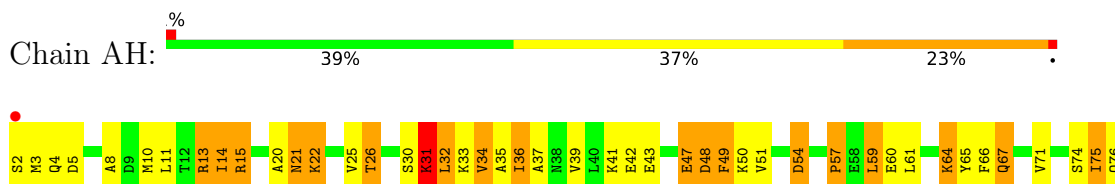


- Molecule 7: 30S ribosomal protein S7

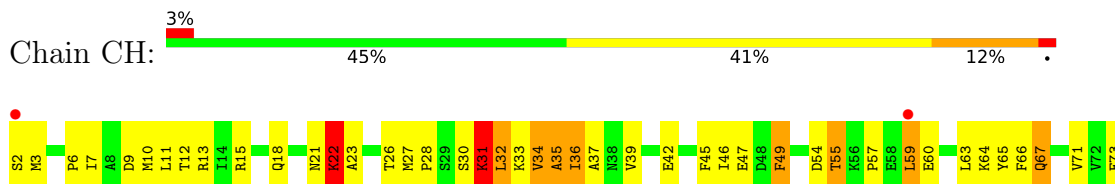
Chain CG:  40% 46% 40% 13%



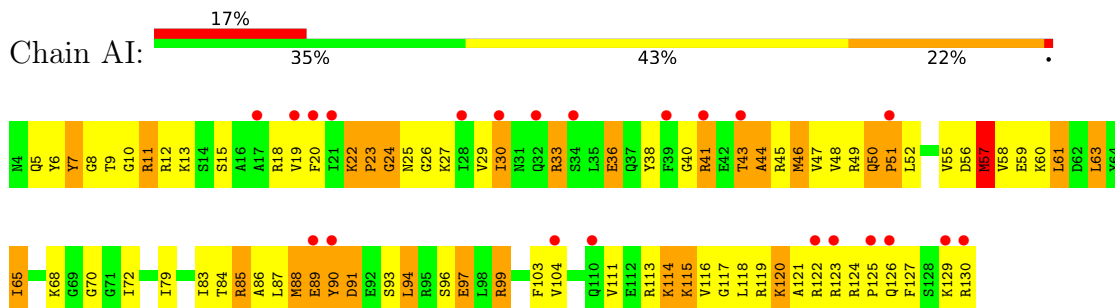
- Molecule 8: 30S ribosomal protein S8



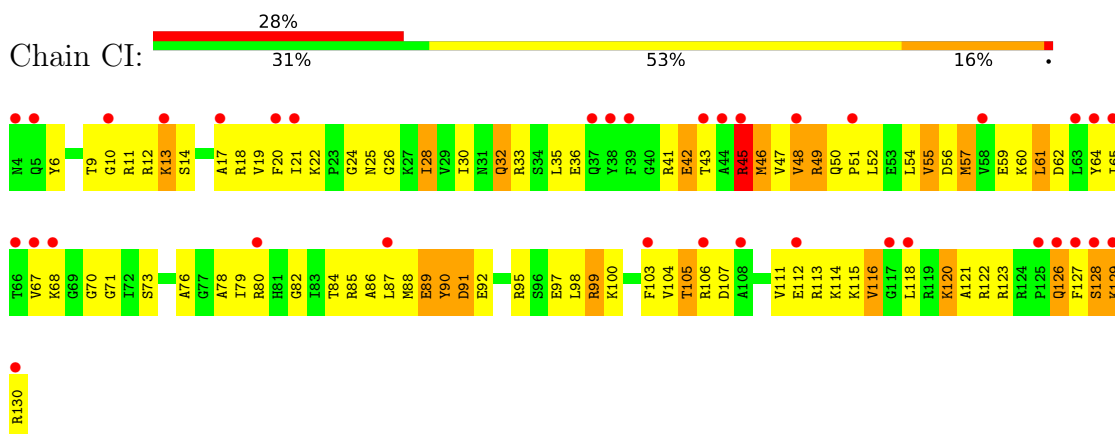
- Molecule 8: 30S ribosomal protein S8



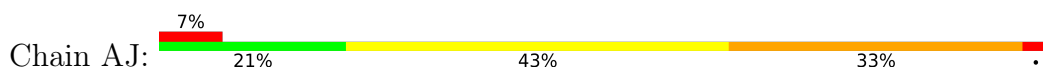
- Molecule 9: 30S ribosomal protein S9

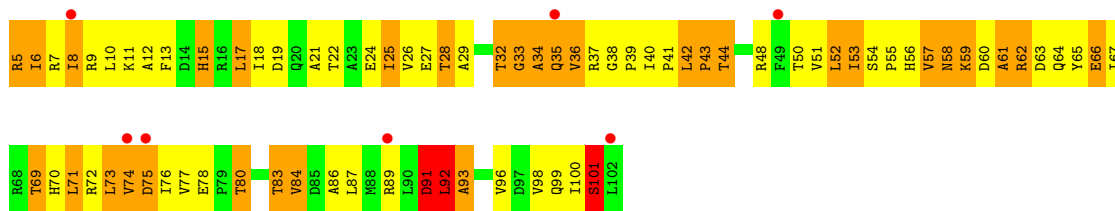


- Molecule 9: 30S ribosomal protein S9

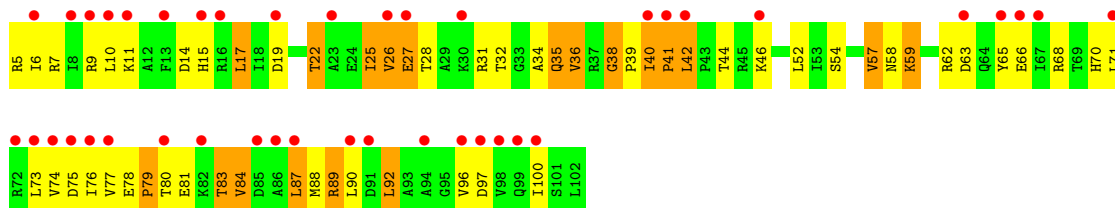
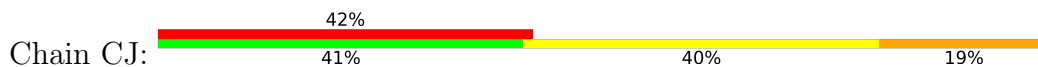


- Molecule 10: 30S ribosomal protein S10

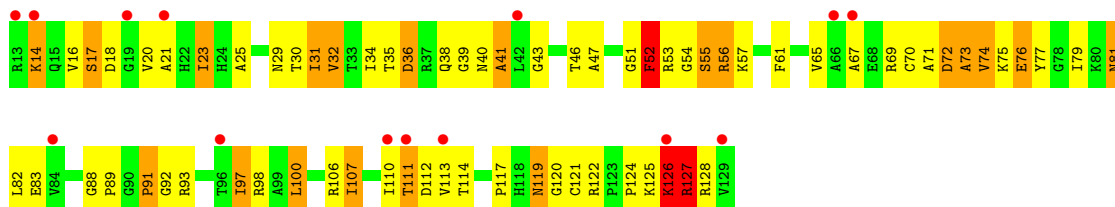




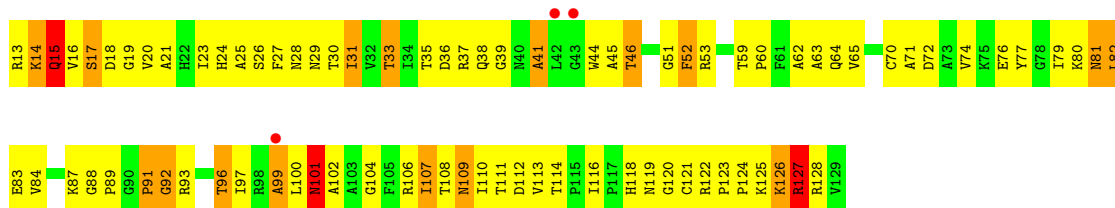
• Molecule 10: 30S ribosomal protein S10



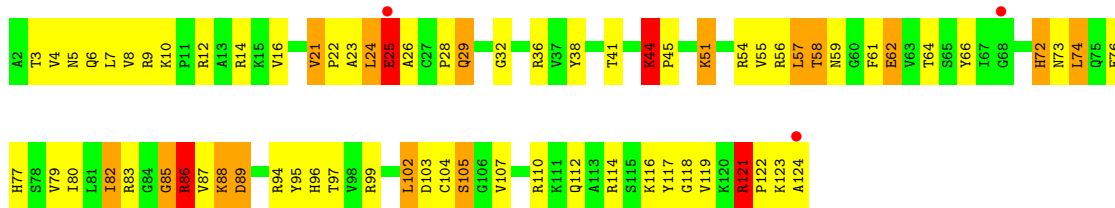
• Molecule 11: 30S ribosomal protein S11



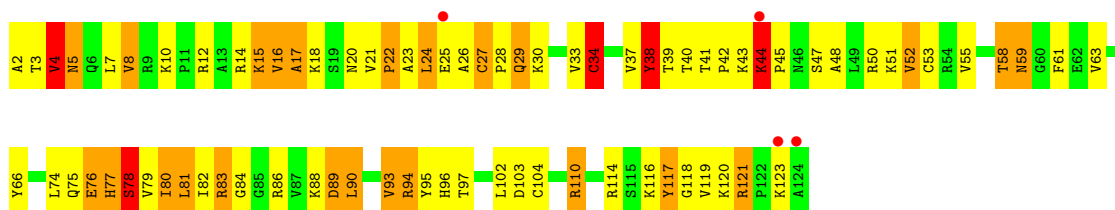
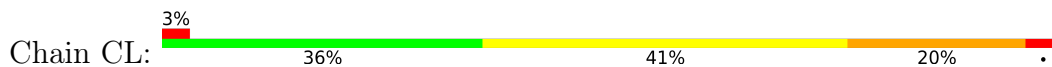
• Molecule 11: 30S ribosomal protein S11



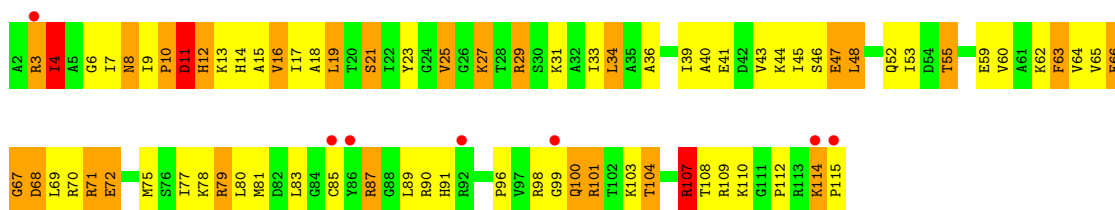
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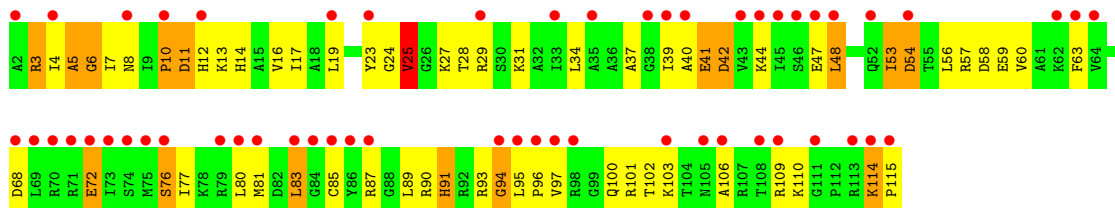
- Molecule 12: 30S ribosomal protein S12



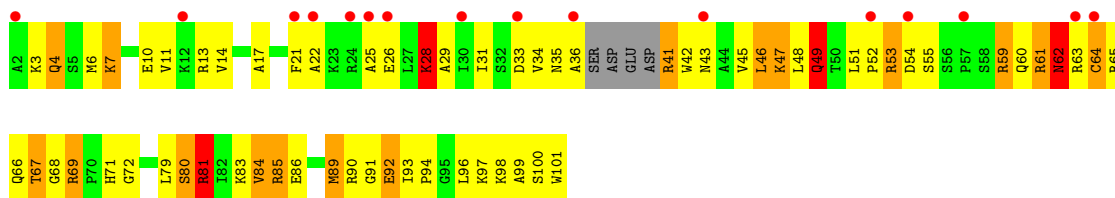
- Molecule 13: 30S ribosomal protein S13



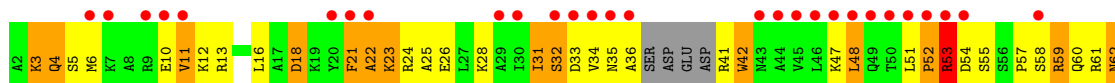
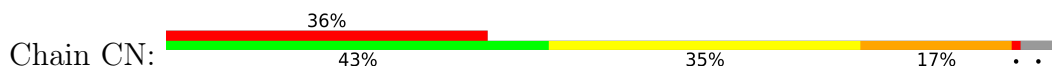
- Molecule 13: 30S ribosomal protein S13

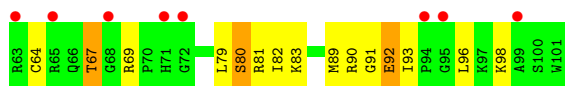


- Molecule 14: 30S ribosomal protein S14



- Molecule 14: 30S ribosomal protein S14

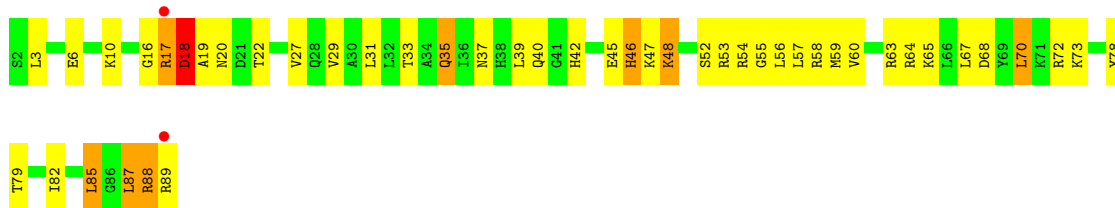




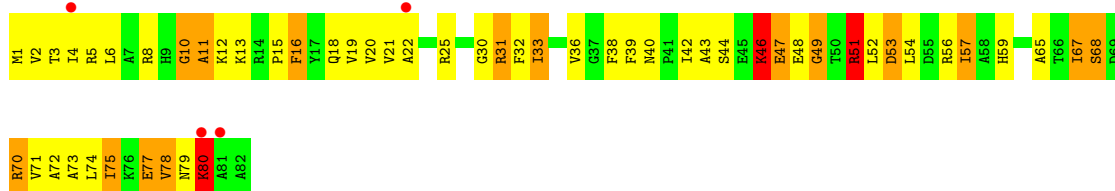
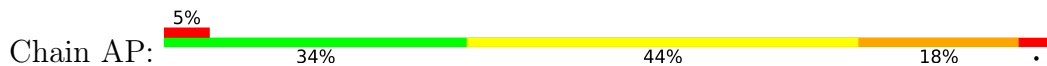
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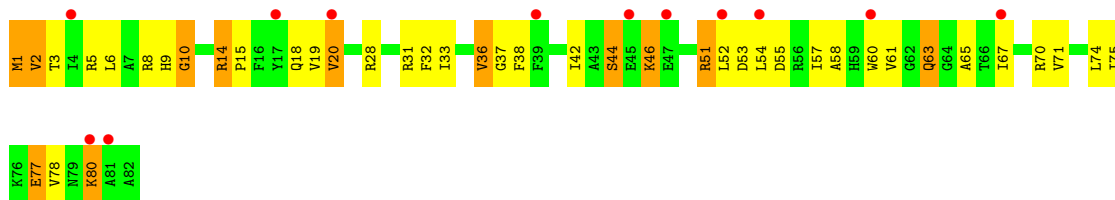
- Molecule 15: 30S ribosomal protein S15



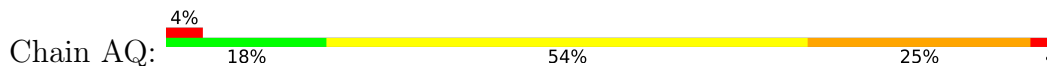
- Molecule 16: 30S ribosomal protein S16



- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17





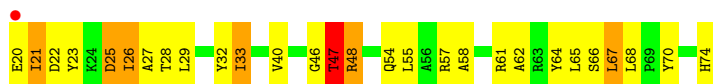
• Molecule 17: 30S ribosomal protein S17



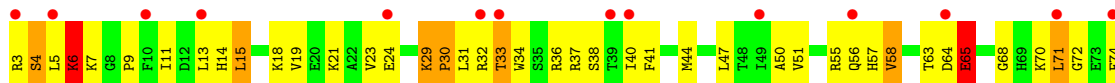
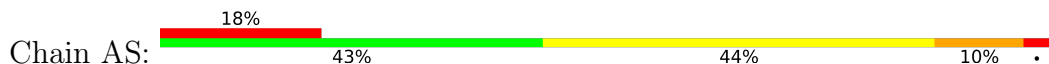
• Molecule 18: 30S ribosomal protein S18



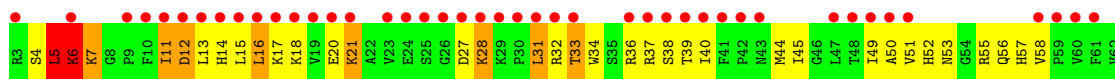
• Molecule 18: 30S ribosomal protein S18

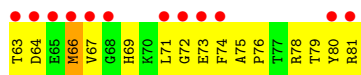


• Molecule 19: 30S ribosomal protein S19

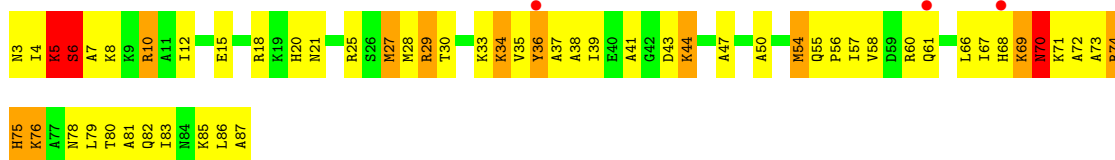
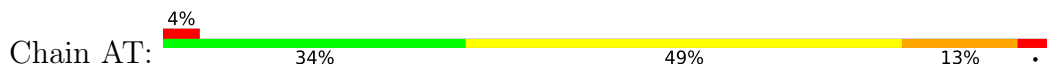


• Molecule 19: 30S ribosomal protein S19

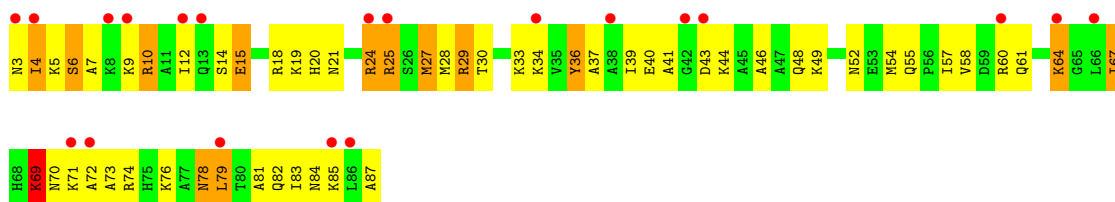




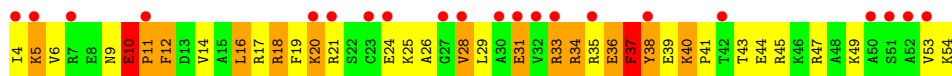
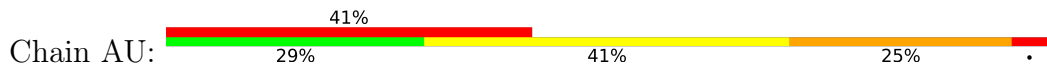
- Molecule 20: 30S ribosomal protein S20



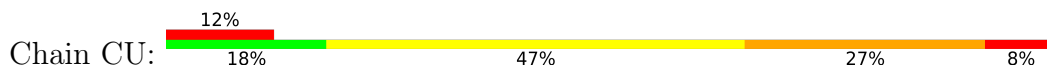
- Molecule 20: 30S ribosomal protein S20



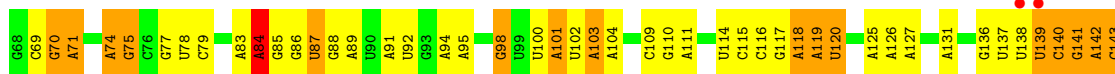
- Molecule 21: 30S ribosomal protein S21

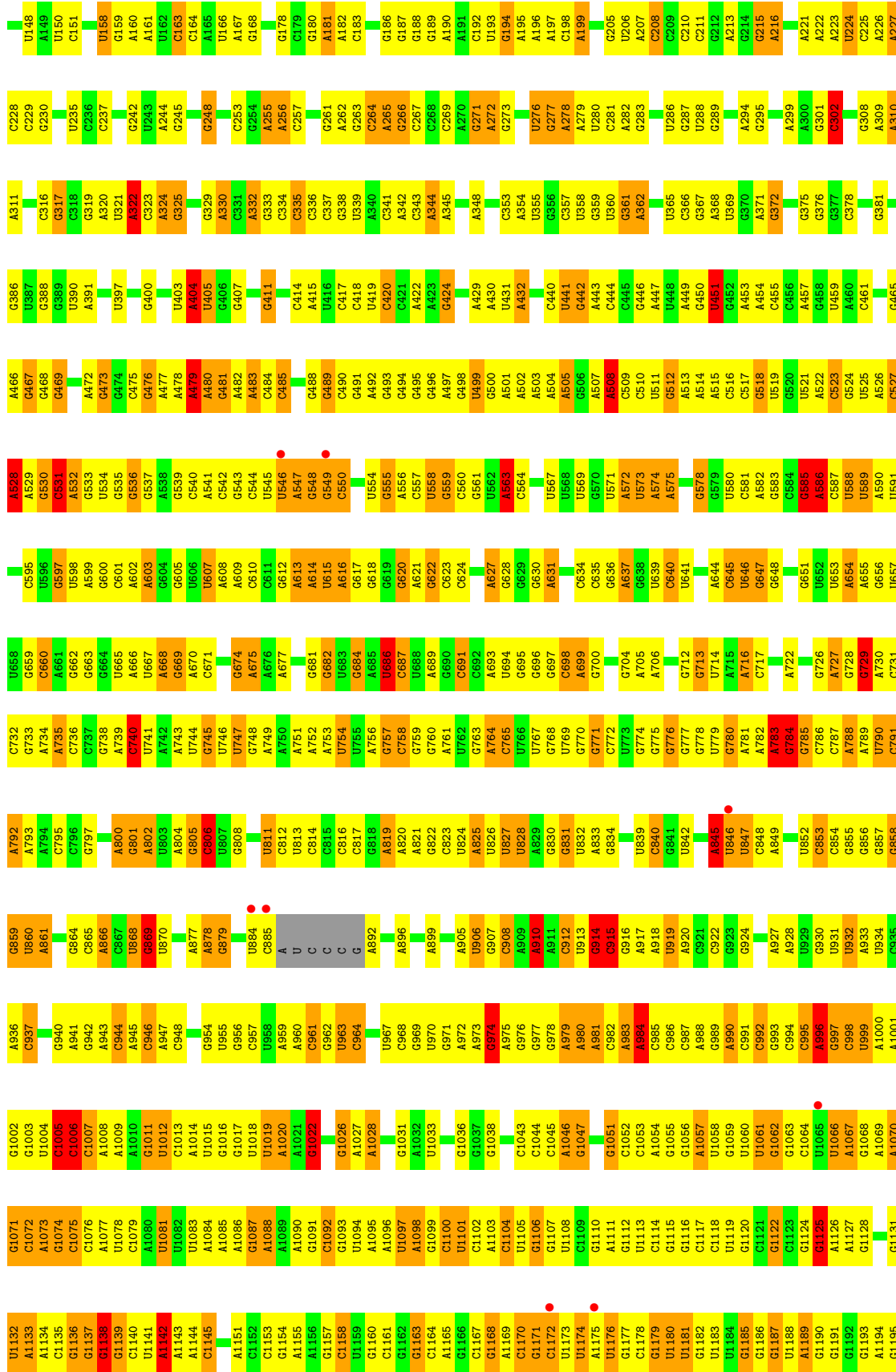


- Molecule 21: 30S ribosomal protein S21

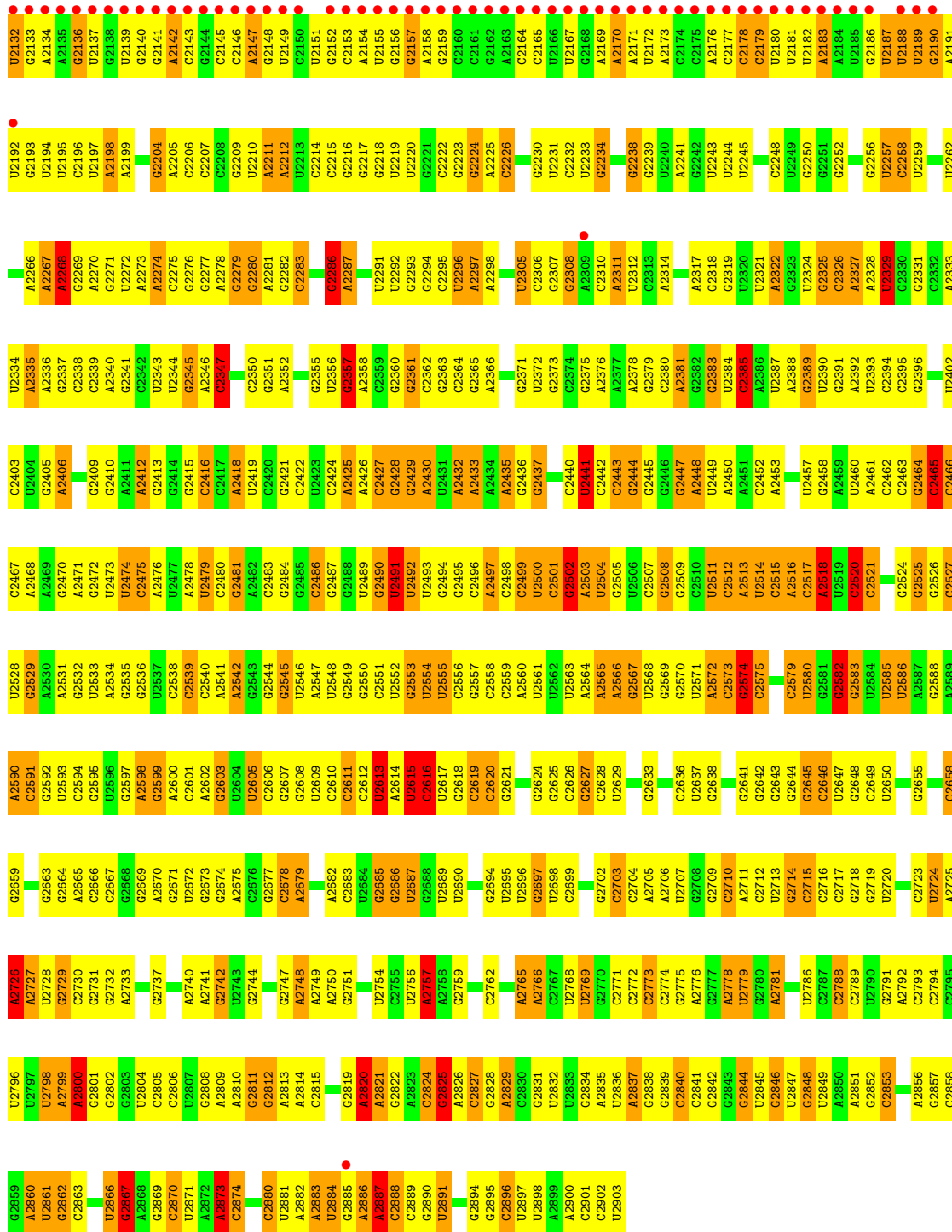


- Molecule 22: 23S rRNA

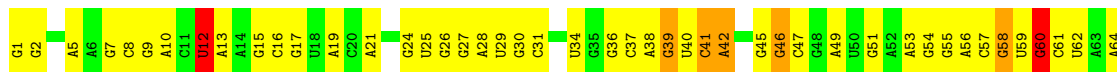


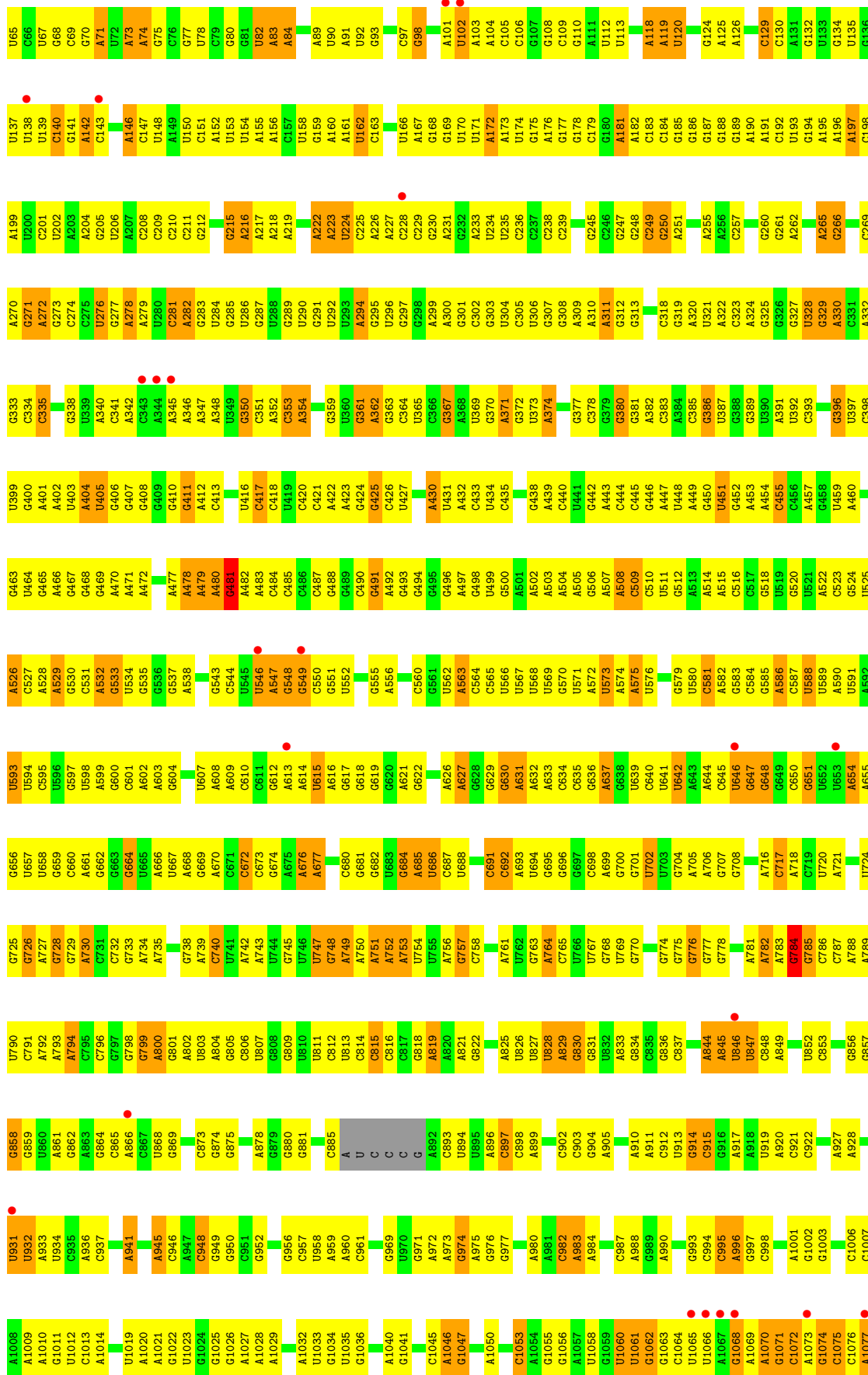


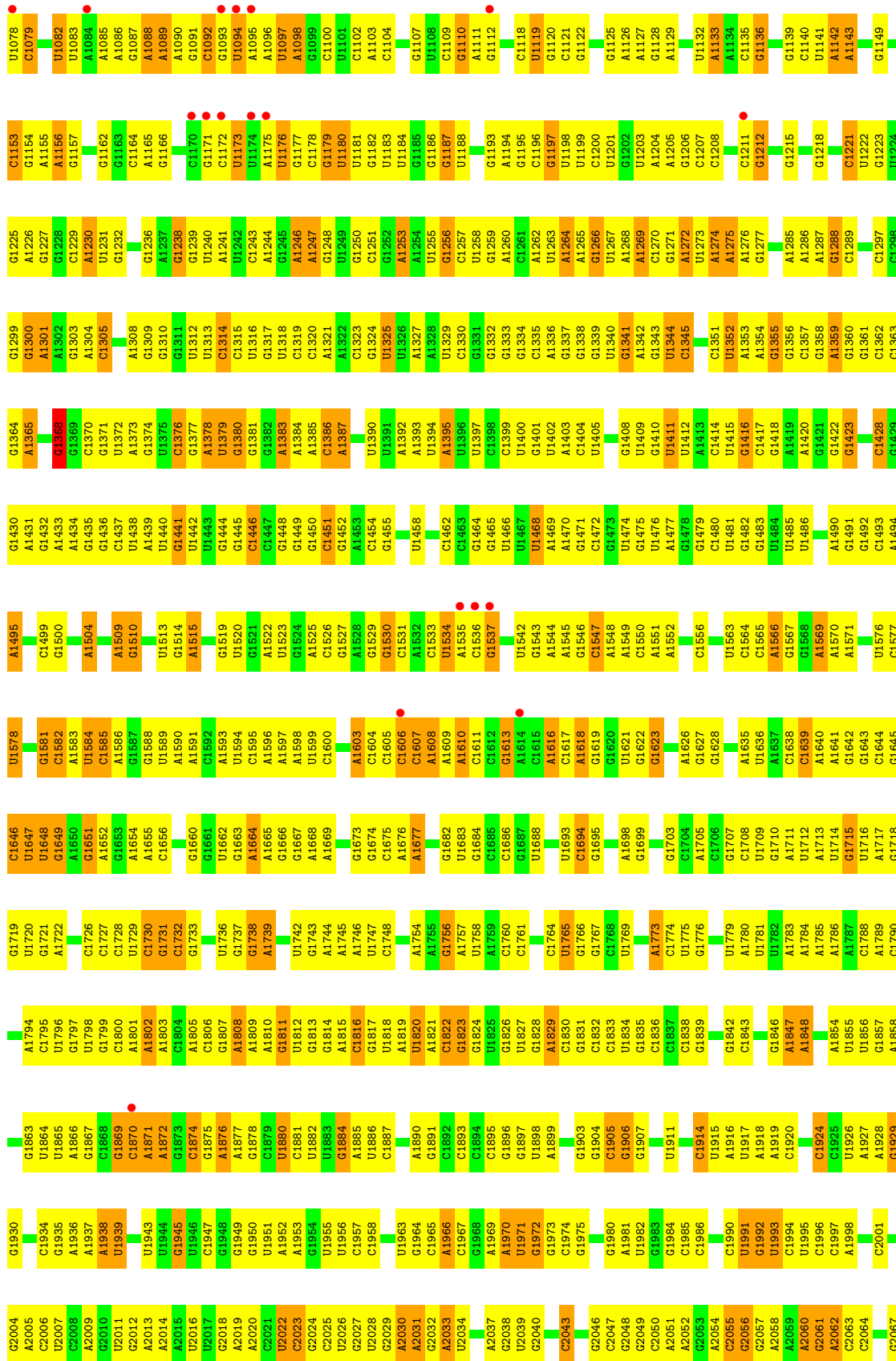
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G2068	U2075	C2006	A1952	G1867	G1799	C1732	C1856	G1587	A1515	G1449	A1383	A1322	G1197
G2069	U2076	C2007	G1933	G1868	C1800	G1733	U1857	G1588	G1516	G1450	A1384	C1323	U1198
G2070	U2077	U2007	C1934	G1869	A1801	G1734	G1658	U1589	C1451	U1263	A1385	G1324	U1199
G2071	U2078	C2008	G1935	G1870	A1802	G1735	G1659	G1590	U1520	G1452	A1386	U1325	C1200
G2072	U2079	A2009	A1936	A1871	A1805	U1736	G1660	A1591	U1523	A1453	U1326	A1265	A1204
G2073	U2080	C2009	A1937	G1872	A1806	G1737	G1661	C1592	U1524	A1454	A1327	G1266	A1205
U2074	A2012	G2012	A1938	G1873	G1807	A1738	G1662	A1593	G1524	G1455	U1267	U1267	A1206
U2075	A2013	A2013	G1939	G1874	A1808	A1739	G1663	U1594	A1525	U1328	A1328	A1268	G1207
U2076	A2014	A2014	U1939	G1875	A1809	G1740	A1664	C1595	G1526	U1457	A1329	A1269	C1208
U2077	A2015	A2015	A1940	A1876	A1809	G1741	A1664	U1599	G1527	U1458	G1331	C1270	U1209
U2078	U2016	U2016	G1942	G1879	A1810	U1742	G1667	U1599	U1542	G1459	A1332	G1271	
U2079	U2017	U2017	G1943	G1880	A1811	G1743	A1668	C1600	A1532	U1460	G1333	A1272	
A2080	G2018	G2018	U1944	U1880	U1812	A1744	A1669	G1601	C1533	C1461	G1334	U1273	G1212
U2081	A2019	A2019	G1945	U1883	G1813	A1745	U1670	A1602	U1534	U1462	C1335	A1274	A1214
A2082	A2020	A2020	A1951	U1884	C1816	A1746	U1671	A1603	A1535	U1467	C1336	A1275	G1215
U2086	U2022	U2022	A1952	G1884	G1817	U1747	A1672	U1468	C1536	U1468	G1337	A1276	G1216
G2087	C2023	C2023	A1953	A1885	U1818	C1748	G1673	A1469	U1537	U1469	G1338	G1277	G1217
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U2093	C2025	C2025	U1955	A1890	A1819	G1750	C1675	A1608	U1542	G1471	U1340	G1279	U1218
G2093	C2026	C2026	G1956	A1898	U1820	U1751	U1680	A1609	G1543	U1472	G1341	G1280	U1219
A2094	U2026	U2026	A1956	G1891	A1821	A1754	G1681	A1610	A1544	G1473	A1342	G1281	G1220
A2095	G2027	G2027	C1957	C1892	C1822	A1755	U1682	A1611	A1545	U1474	G1343	U1282	C1221
A2096	U2028	U2028	G1958	G1893	G1823	G1756	U1683	A1612	G1546	G1475	U1344	G1283	U1222
A2097	G2029	G2029	G1959	C1894	U1824	A1757	U1684	A1613	C1547	U1476	C1345	A1284	G1223
U2098	A2030	A2030	A1960	C1895	U1825	A1758	G1685	A1614	A1548	A1477	G1346	A1285	U1224
U2099	A2031	A2031	C1961	U1896	G1826	U1758	U1686	C1617	A1549	G1478	A1347	A1286	G1225
U2100	G2032	G2032	C1962	A1898	U1827	A1759	C1686	A1618	U1550	U1479	C1348	A1287	A1226
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A2101	U2034	U2034	G1964	A1900	A1829	C1761	U1688	G1620	A1552	U1481	C1350	C1289	
G2102	G2035	G2035	C1965	A1901	A1829	A1762	U1689	G1621	A1553	U1482	C1351	C1290	
C2103	C2036	C2036	A1966	G1902	C1832	G1763	U1692	G1622	U1554	G1483	U1352	G1291	A1230
C2104	A2037	A2037	C1967	G1903	C1833	C1764	U1693	G1623	G1555	U1484	U1353	G1292	U1231
U2105	G2038	G2038	A1968	G1904	U1834	U1765	C1694	A1624	C1556	U1487	A1354	C1293	C1233
U2106	U2039	U2039	G1969	G1905	U1835	G1766	G1695	A1625	C1557	U1488	G1355	U1294	U1234
G2107	G2040	G2040	A1970	G1906	C1838	G1767	U1696	A1626	C1558	G1489	G1356	G1295	G1235
A2108	U2041	U2041	G1971	G1907	G1839	G1768	G1697	A1627	U1562	A1490	G1357	G1296	G1236
U2109	A2042	A2042	G1972	C1908	G1840	U1769	A1698	G1628	U1563	U1491	G1358	C1297	A1237
G2110	C2043	C2043	U1973	G1909	U1841	G1770	G1699	G1628	U1564	G1492	A1359	G1298	G1238
C2044	C2044	C2044	G1974	G1910	G1842	A1773	A1700	G1631	C1564	U1492	G1360	G1299	G1239
C2047	C2047	C2047	G1975	U1911	C1843	C1774	C1706	A1632	C1565	C1493	G1361	G1299	U1240
A2114	U2113	U2113	A1912	A1912	G1846	C1774	G1633	A1633	C1566	A1494	C1362	A1300	A1241
G2115	C1984	C1984	G1914	G1914	A1847	U1775	G1707	A1634	A1566	A1495	C1363	A1301	U1242
G2116	C1985	C1985	U1915	U1915	A1848	G1776	C1708	A1635	G1567	A1496	G1364	G1303	C1243
A2117	C1986	C1986	U1916	U1916	U1709	U1779	U1709	U1636	A1569	C1499	A1365	A1304	A1244
U2118	G2053	G2053	A1917	A1917	U1712	A1784	C1638	A1637	A1570	G1500	A1366	G1305	G1245
A2119	A2054	A2054	U1851	U1851	A1713	C1639	C1639	A1571	A1433	G1501	A1367	A1307	A1246
G2120	C2055	C2055	U1852	U1852	U1714	A1640	A1572	A1502	A1434	G1436	G1368	G1308	G1247
G2121	G2056	G2056	A1853	A1853	G1715	G1715	G1573	A1503	G1437	U1437	G1371	U1249	U1248
U2122	G2057	G2057	A1854	A1854	U1716	G1645	U1576	A1504	U1438	U1438	G1372	G1250	G1250
G2123	A2058	A2058	U1855	U1855	A1717	C1646	C1577	A1505	A1439	A1439	A1373	C1251	C1251
A2059	U2059	U2059	U1856	U1856	C1790	U1647	U1578	A1506	A1440	A1440	G1374	G1252	G1252
A2060	G2124	G2124	G1857	G1857	G1718	A1647	A1579	U1507	U1441	U1441	U1375	A1253	A1253
G2125	A2060	A2060	U1858	U1858	G1719	A1648	A1579	C1507	G1441	G1441	U1375	A1253	A1253
A2126	G2061	G2061	A1858	A1858	U1720	G1649	A1580	A1509	U1442	U1442	G1377	A1254	A1254
A2062	U1926	U1926	U1859	U1859	G1721	G1793	A1509	A1509	U1443	U1443	G1377	U1255	U1255
C2063	A1927	A1927	U1859	U1859	A1722	G1651	G1582	G1510	G1444	G1444	A1378	G1256	G1256
C2064	A1928	A1928	G1863	G1863	A1722	A1652	A1583	A1511	G1446	G1446	U1379	G1257	G1257
C2065	G1929	G1929	U1864	U1864	U1729	A1653	A1584	A1512	G1447	G1447	U1380	U1258	U1258
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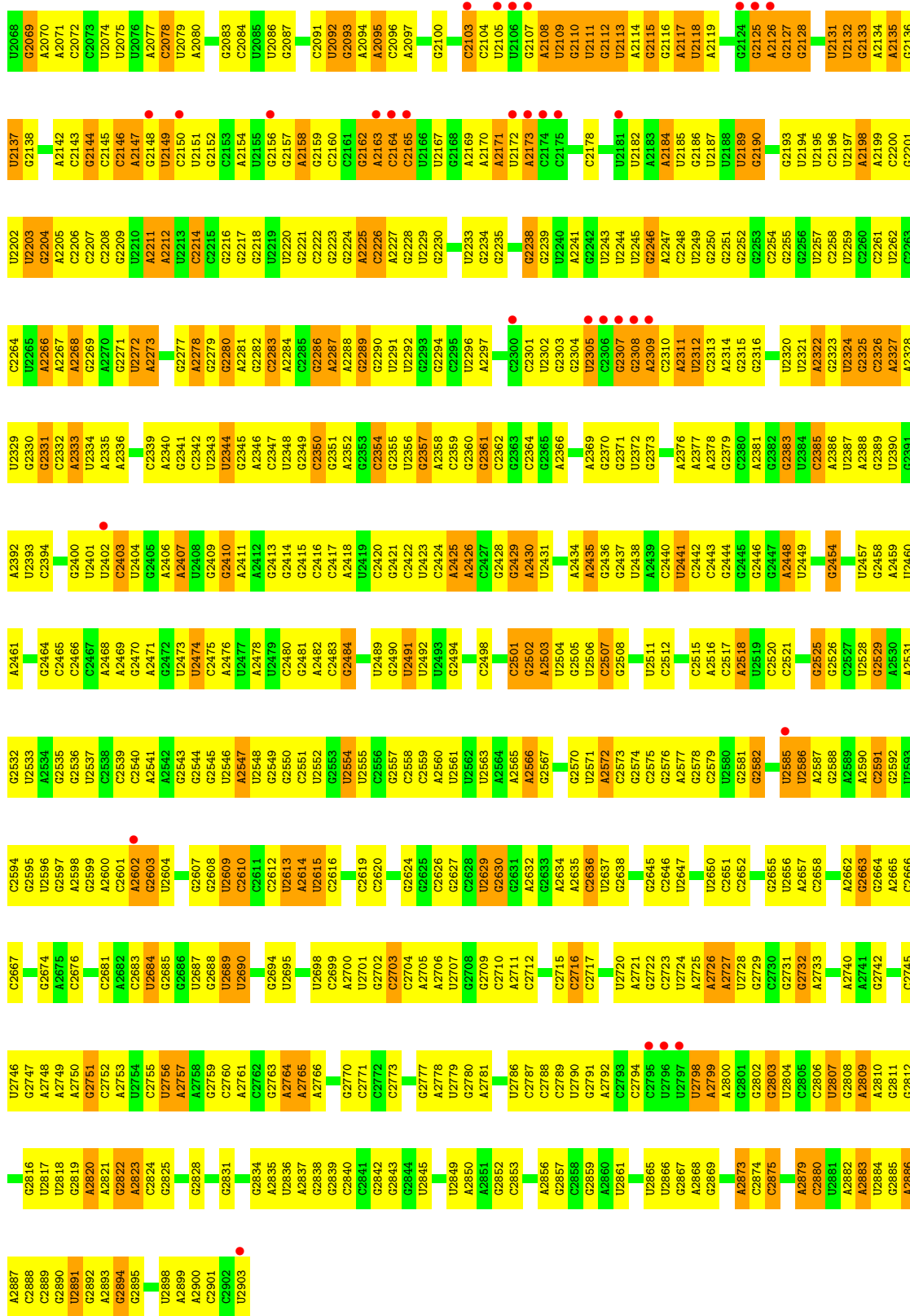


• Molecule 22: 23S rRNA



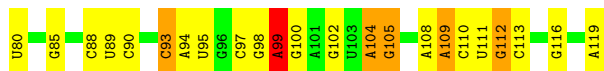
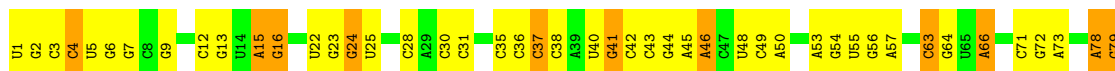




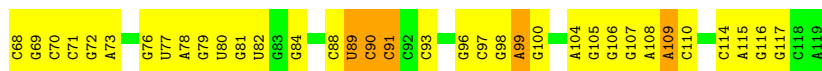
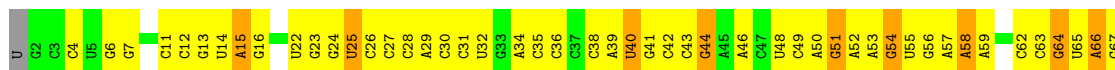


• Molecule 23: 5S rRNA

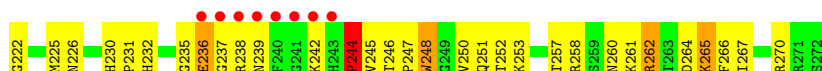
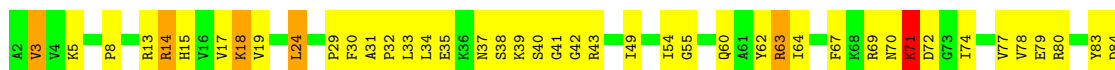




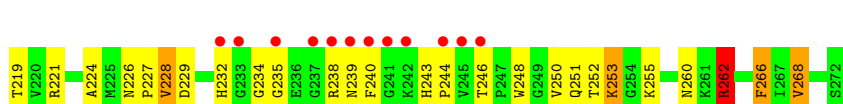
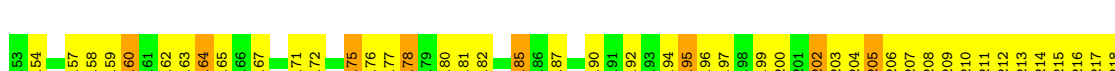
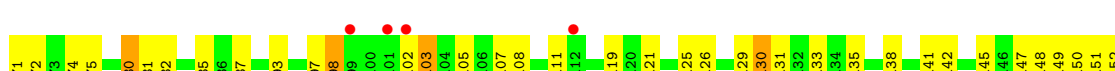
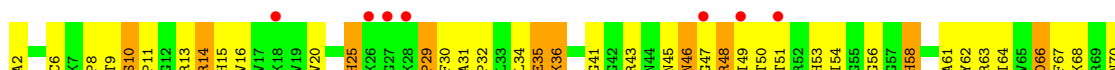
• Molecule 23: 5S rRNA



• Molecule 24: 50S ribosomal protein L2

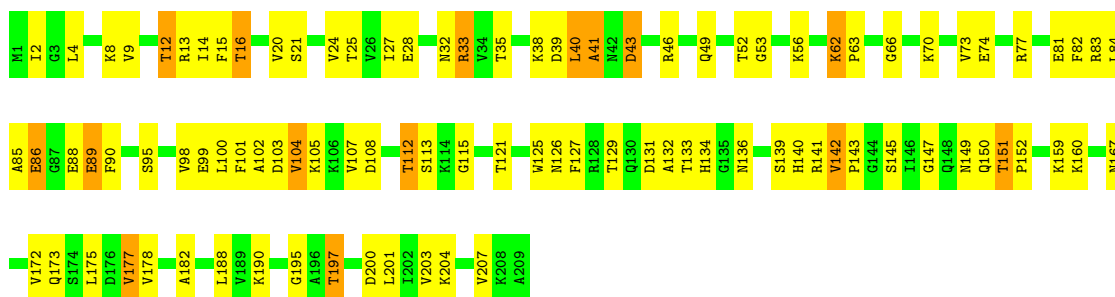


• Molecule 24: 50S ribosomal protein L2



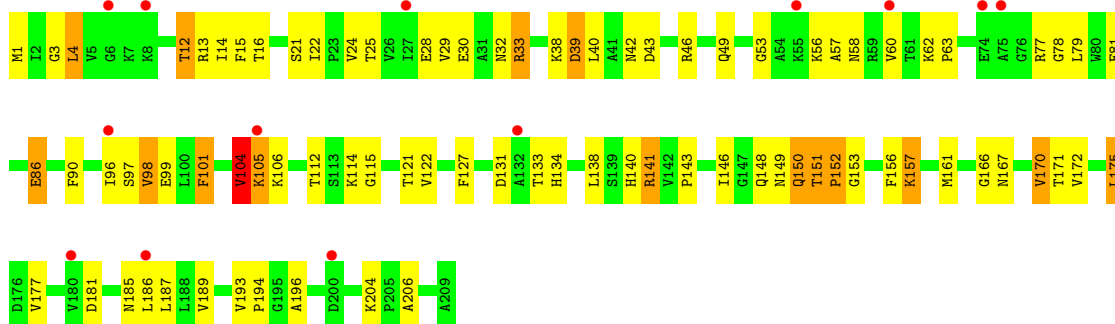
- Molecule 25: 50S ribosomal protein L3

Chain BD: 54% 39% 7%



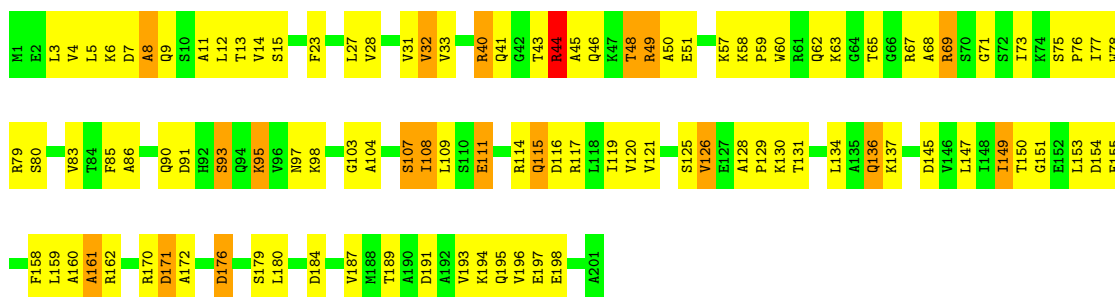
- Molecule 25: 50S ribosomal protein L3

Chain DD: 6% 59% 33% 7%



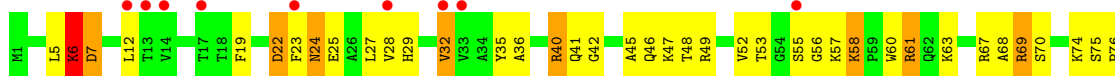
- Molecule 26: 50S ribosomal protein L4

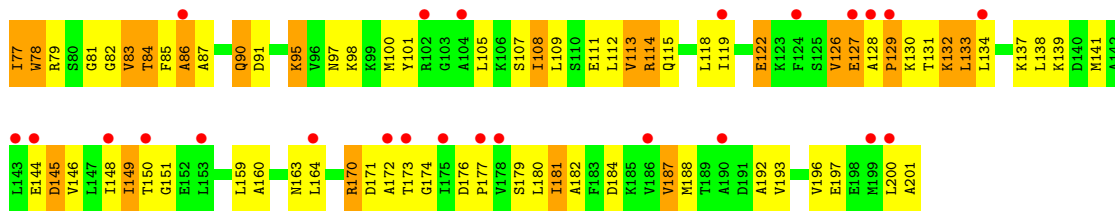
Chain BE: 47% 43% 9%



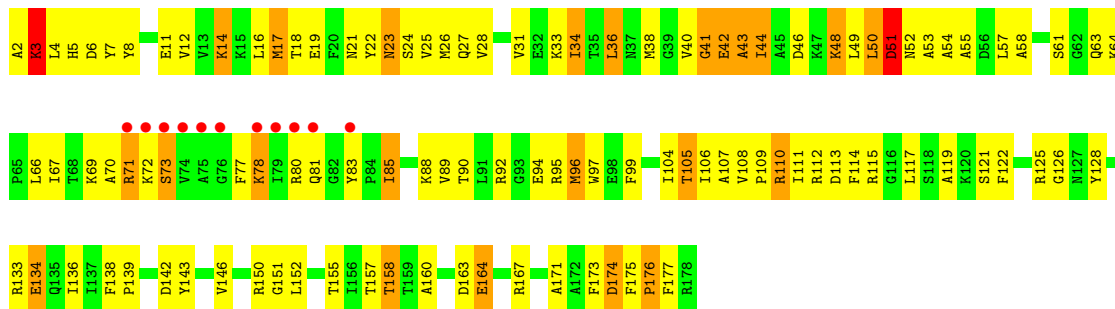
- Molecule 26: 50S ribosomal protein L4

Chain DE: 16% 44% 41% 14%

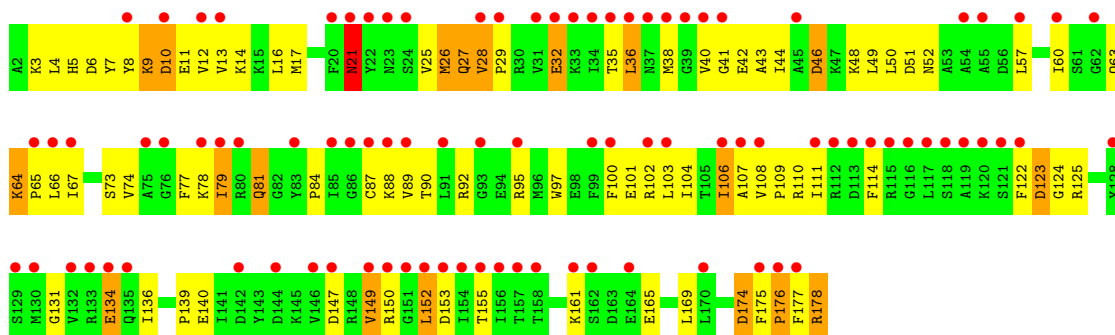




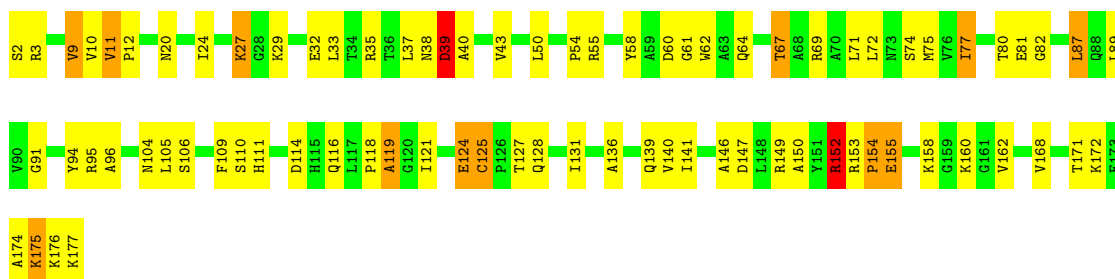
• Molecule 27: 50S ribosomal protein L5



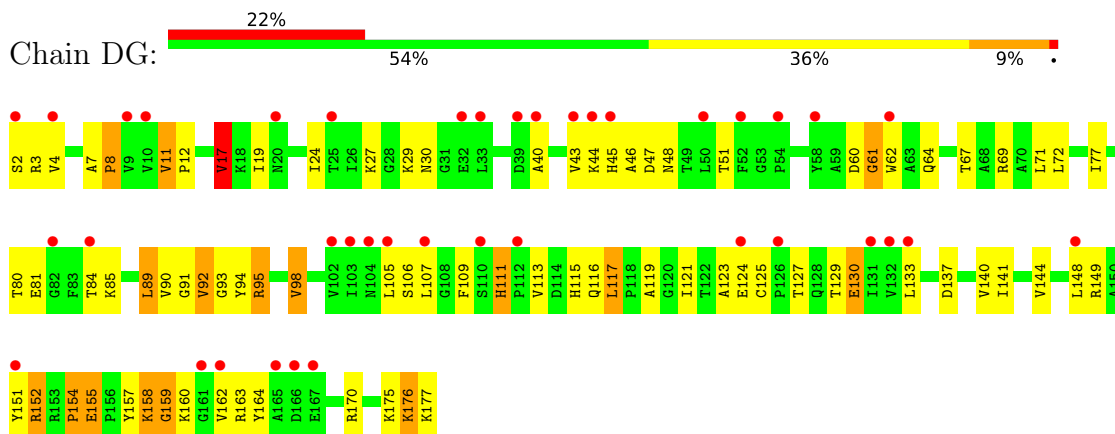
• Molecule 27: 50S ribosomal protein L5



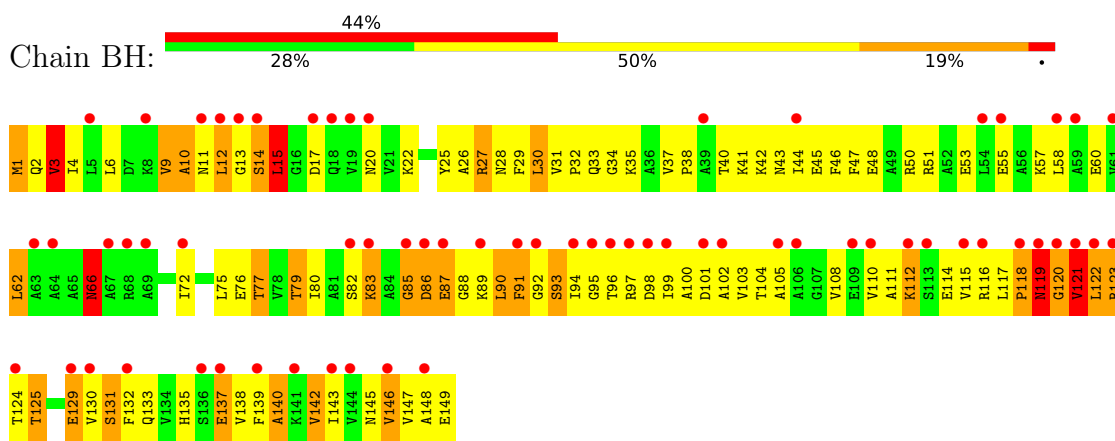
• Molecule 28: 50S ribosomal protein L6



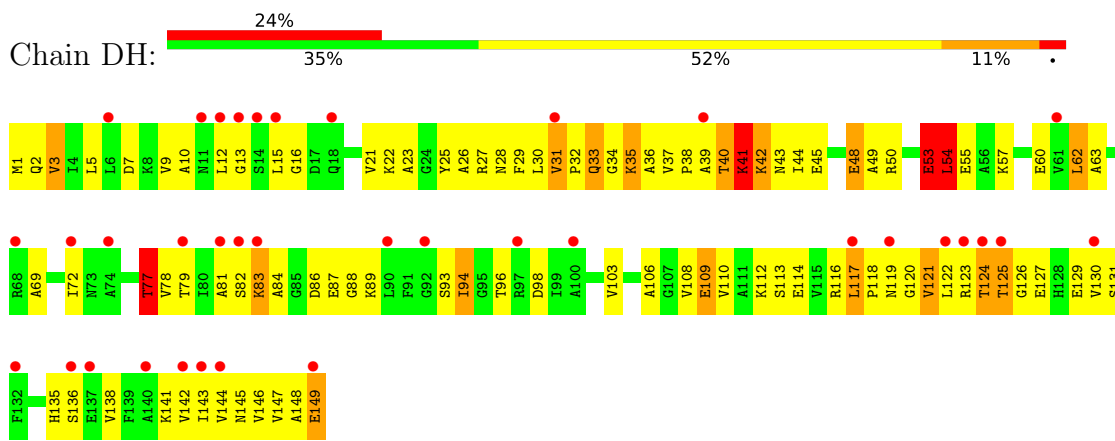
• Molecule 28: 50S ribosomal protein L6



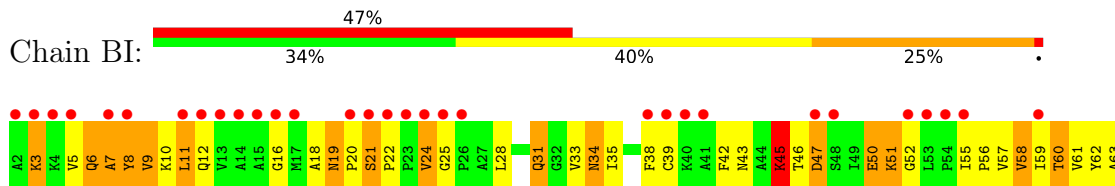
• Molecule 29: 50S ribosomal protein L9

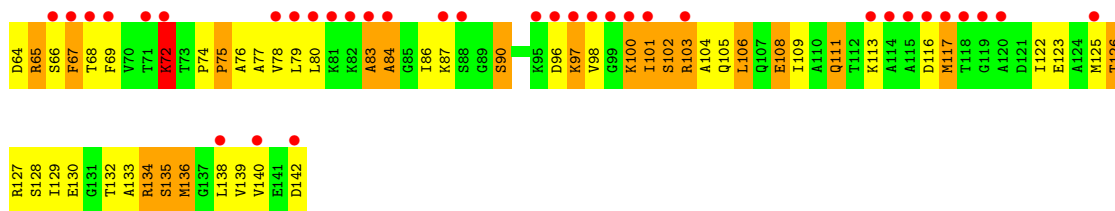


• Molecule 29: 50S ribosomal protein L9

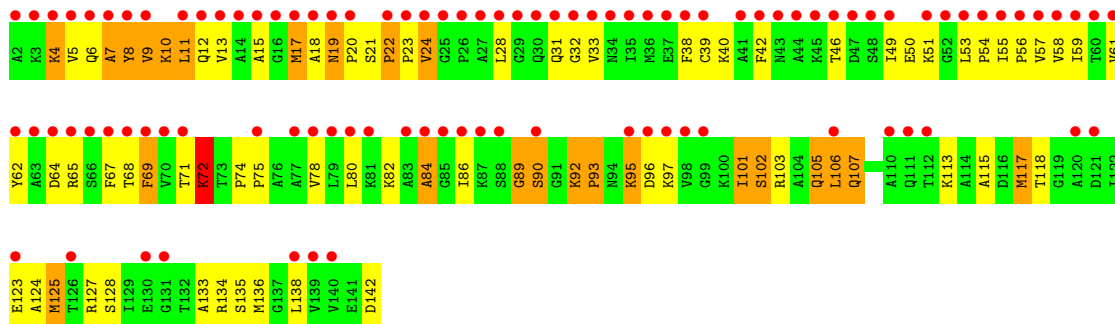
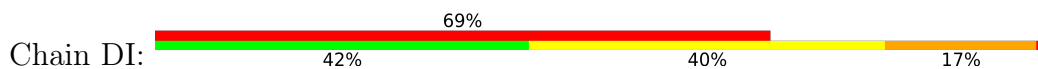


• Molecule 30: 50S ribosomal protein L11

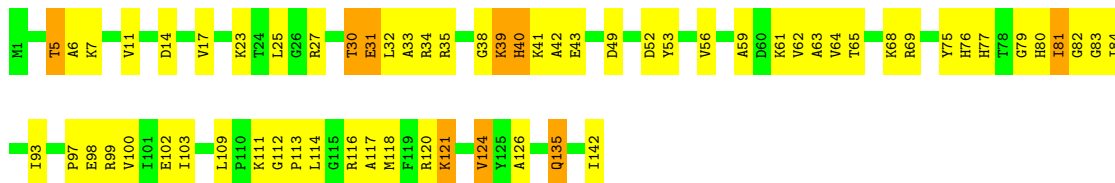




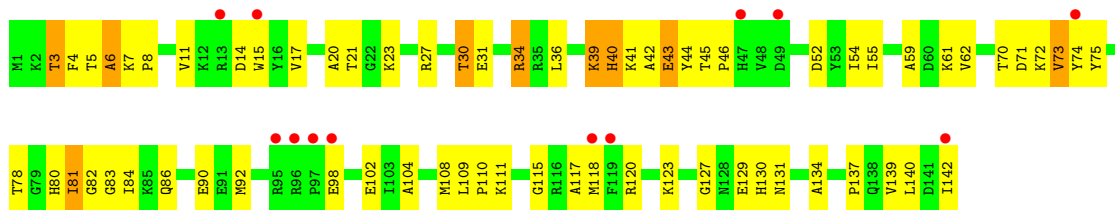
• Molecule 30: 50S ribosomal protein L11



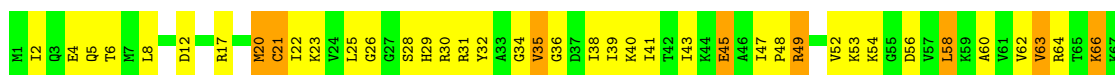
• Molecule 31: 50S ribosomal protein L13



• Molecule 31: 50S ribosomal protein L13

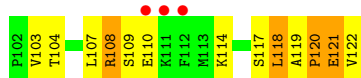


• Molecule 32: 50S ribosomal protein L14

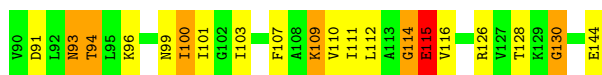




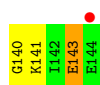
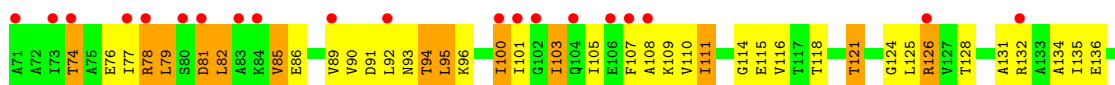
- Molecule 32: 50S ribosomal protein L14



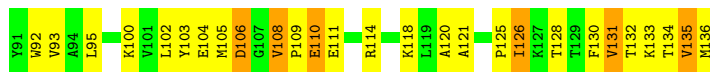
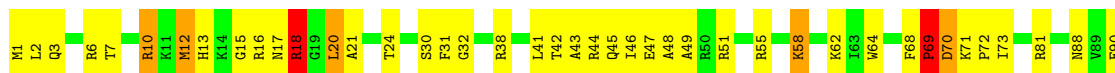
- Molecule 33: 50S ribosomal protein L15



- Molecule 33: 50S ribosomal protein L15

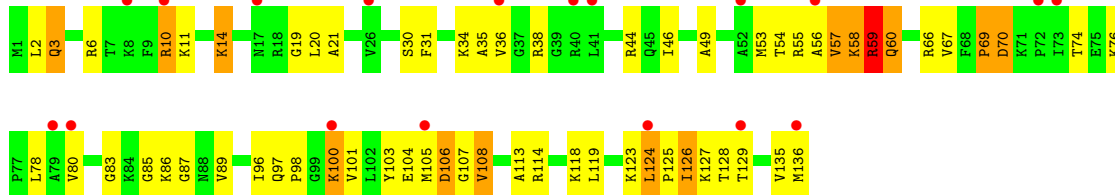


- Molecule 34: 50S ribosomal protein L16



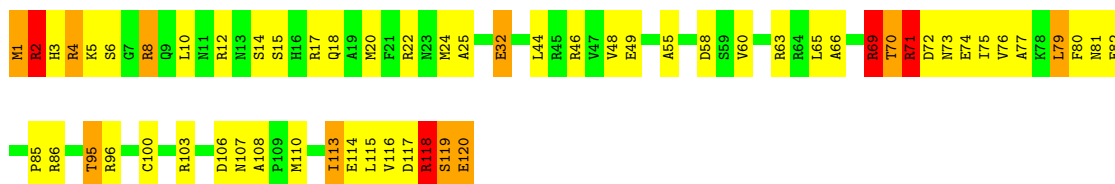
- Molecule 34: 50S ribosomal protein L16

Chain DM: 



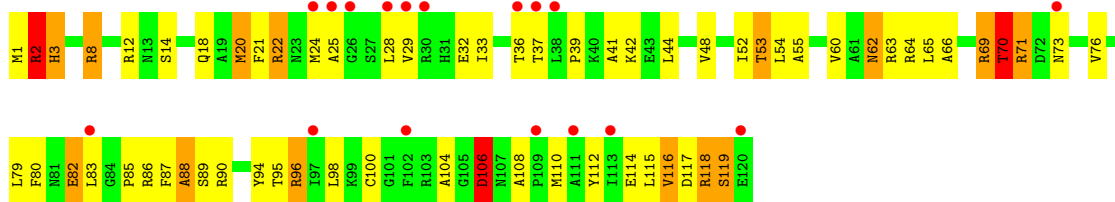
- Molecule 35: 50S ribosomal protein L17

Chain BN: 



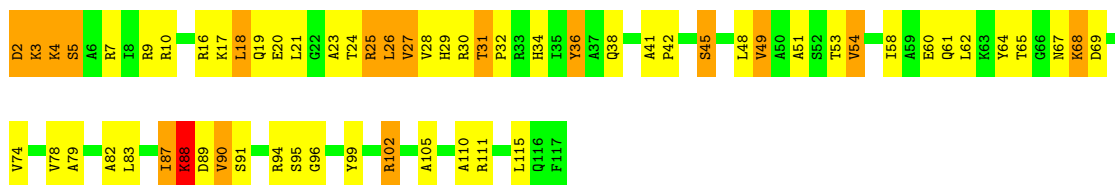
- Molecule 35: 50S ribosomal protein L17

Chain DN: 




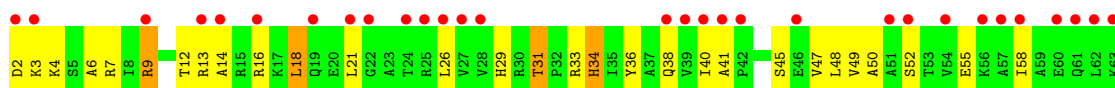
- Molecule 36: 50S ribosomal protein L18

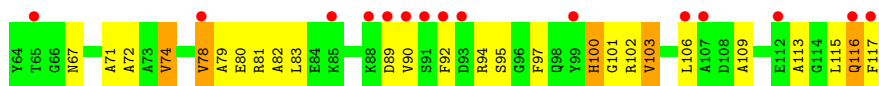
Chain BO: 



- Molecule 36: 50S ribosomal protein L18

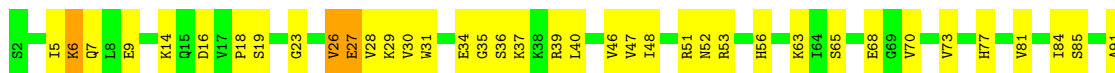
Chain DO: 





- Molecule 37: 50S ribosomal protein L19

Chain BP: 53% 39% 7%



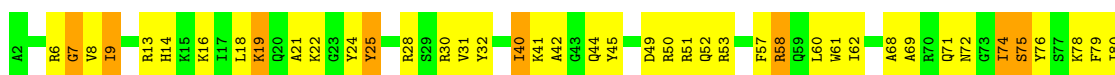
- Molecule 37: 50S ribosomal protein L19

Chain DP: 11% 54% 35% 1%



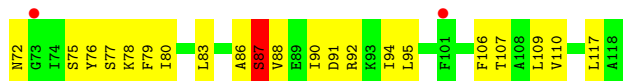
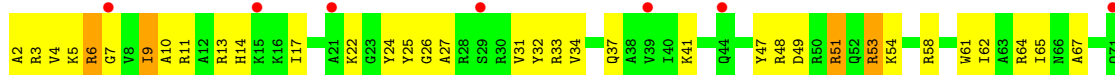
- Molecule 38: 50S ribosomal protein L20

Chain BQ: 48% 44% 9%



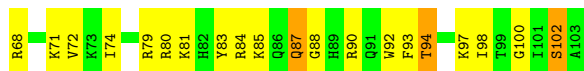
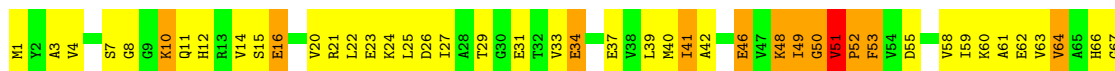
- Molecule 38: 50S ribosomal protein L20

Chain DQ: 8% 52% 44% 1%

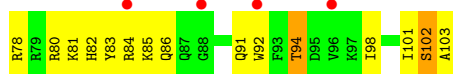


- Molecule 39: 50S ribosomal protein L21

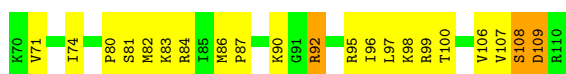
Chain BR: 37% 49% 14%



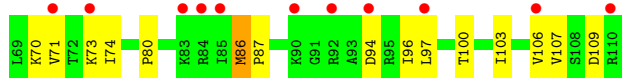
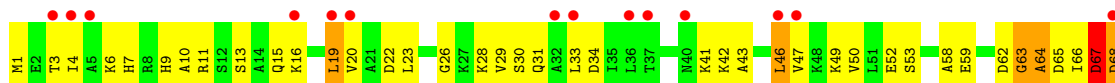
• Molecule 39: 50S ribosomal protein L21



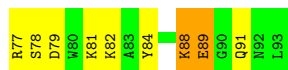
• Molecule 40: 50S ribosomal protein L22



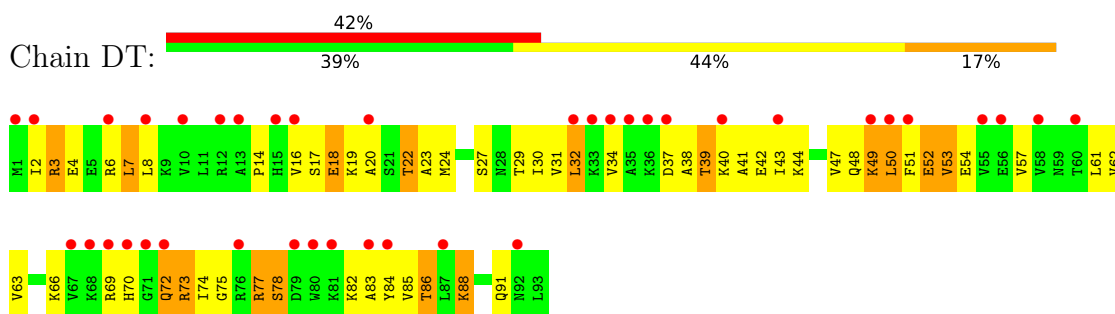
• Molecule 40: 50S ribosomal protein L22



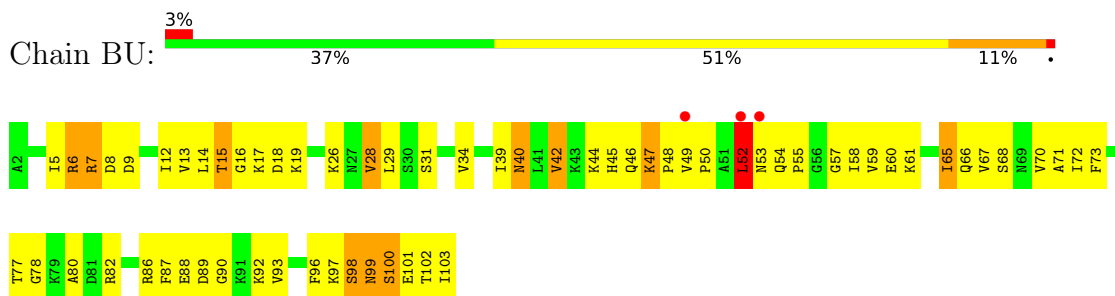
• Molecule 41: 50S ribosomal protein L23



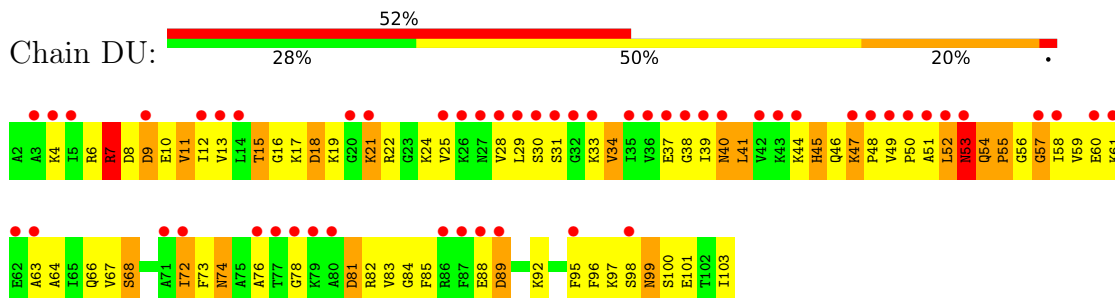
• Molecule 41: 50S ribosomal protein L23



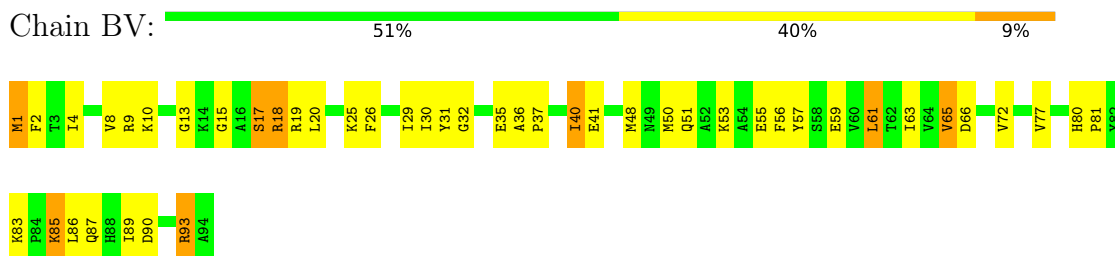
- Molecule 42: 50S ribosomal protein L24



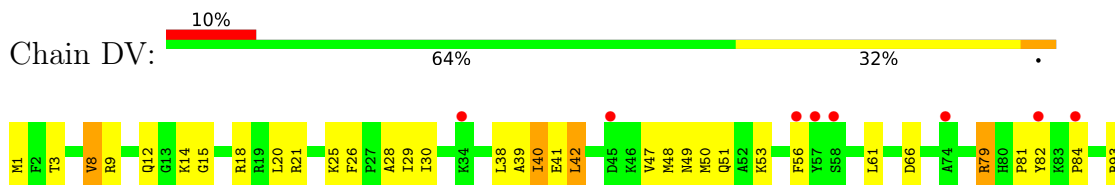
- Molecule 42: 50S ribosomal protein L24



- Molecule 43: 50S ribosomal protein L25



- Molecule 43: 50S ribosomal protein L25



A94

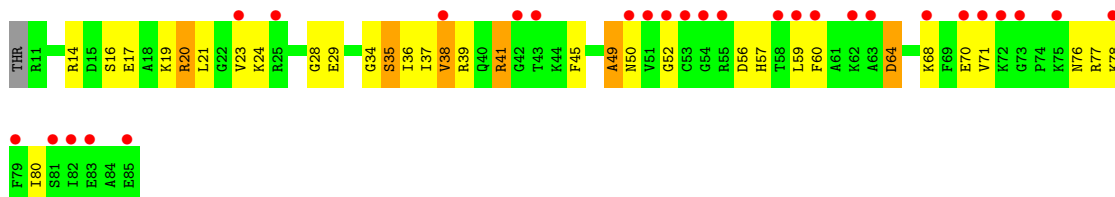
- Molecule 44: 50S ribosomal protein L27

Chain BW: 55% 39% 5%



- Molecule 44: 50S ribosomal protein L27

Chain DW: 37% 55% 36% 8%



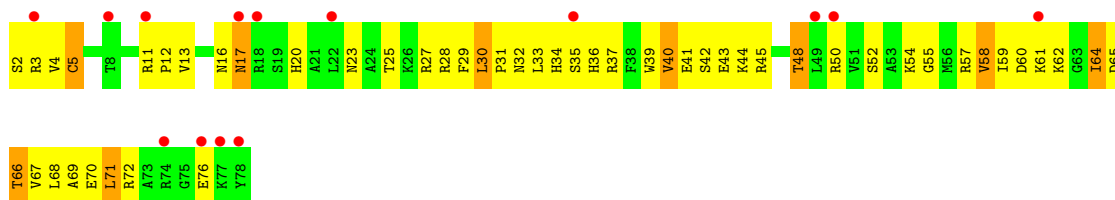
- Molecule 45: 50S ribosomal protein L28

Chain BX: 44% 44% 12%



- Molecule 45: 50S ribosomal protein L28

Chain DX: 18% 34% 55% 12%

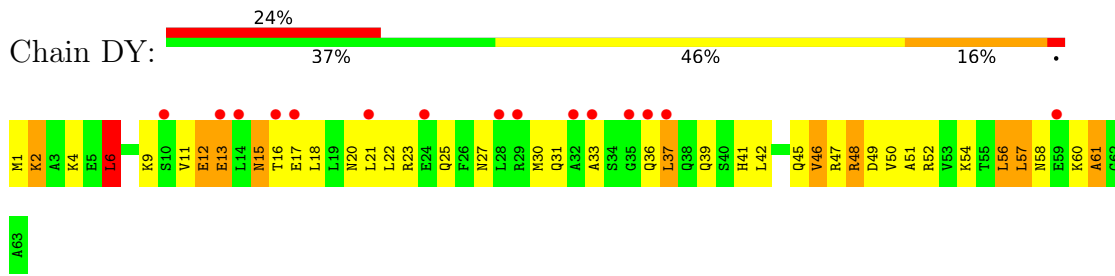


- Molecule 46: 50S ribosomal protein L29

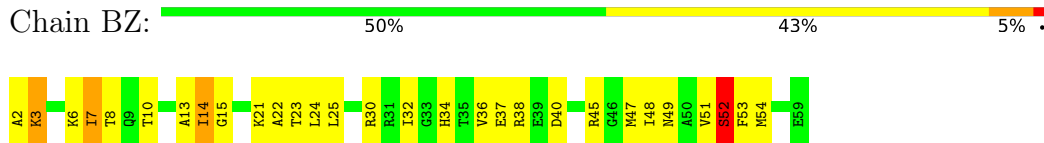
Chain BY: 5% 43% 35% 21%



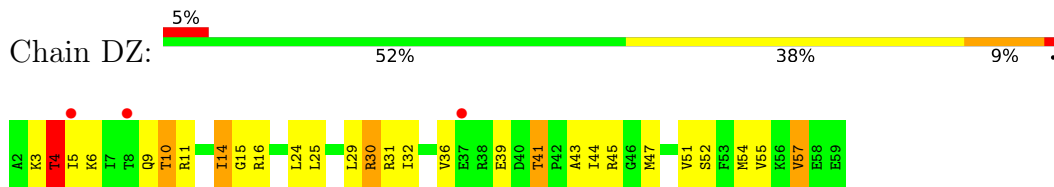
- Molecule 46: 50S ribosomal protein L29



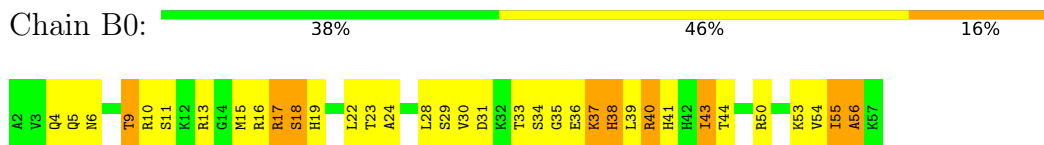
• Molecule 47: 50S ribosomal protein L30



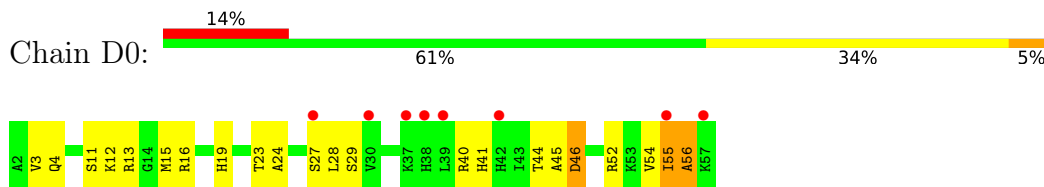
• Molecule 47: 50S ribosomal protein L30



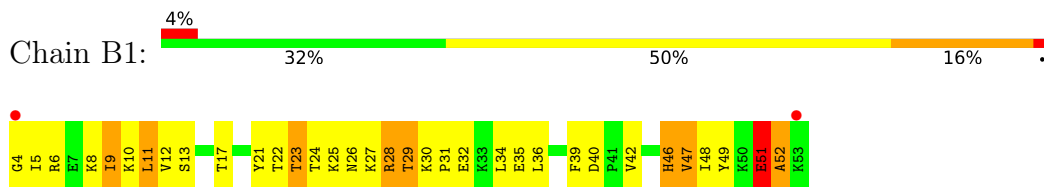
• Molecule 48: 50S ribosomal protein L32



• Molecule 48: 50S ribosomal protein L32

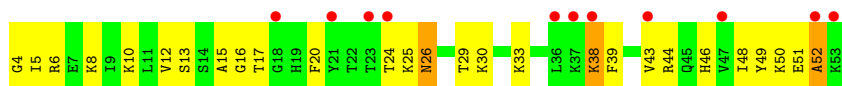


• Molecule 49: 50S ribosomal protein L33



• Molecule 49: 50S ribosomal protein L33





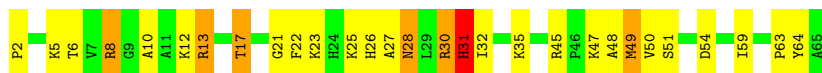
- Molecule 50: 50S ribosomal protein L34



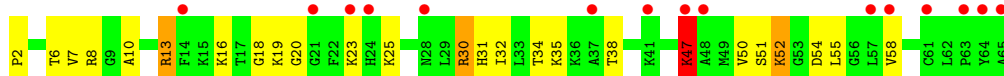
- Molecule 50: 50S ribosomal protein L34



- Molecule 51: 50S ribosomal protein L35



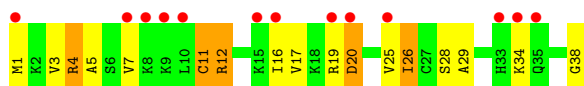
- Molecule 51: 50S ribosomal protein L35



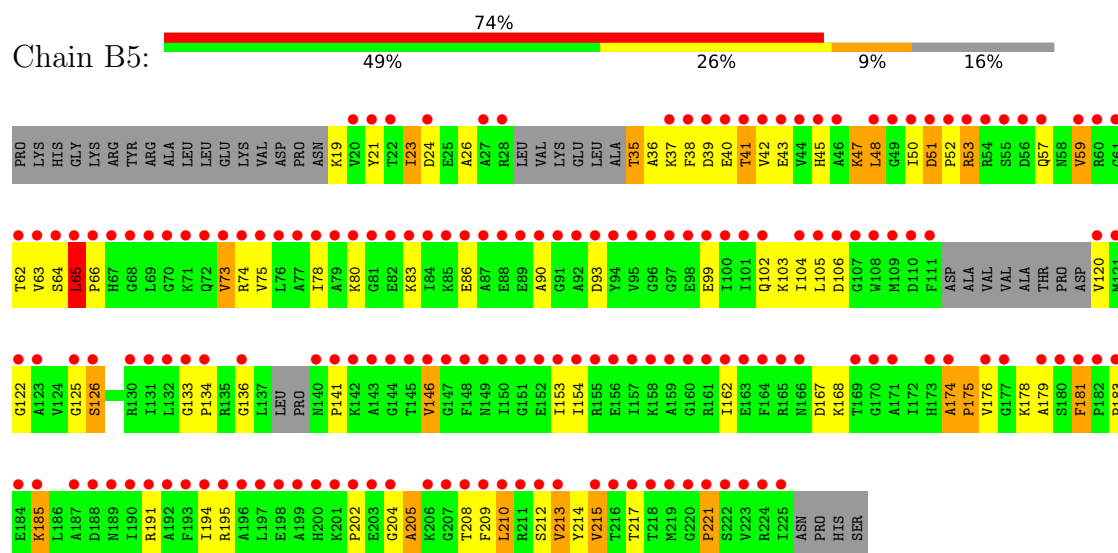
- Molecule 52: 50S ribosomal protein L36



- Molecule 52: 50S ribosomal protein L36



- Molecule 53: 50S ribosomal protein L1



- Molecule 54: Linopristin



- Molecule 54: Linopristin



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.49Å 433.90Å 621.76Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.15 – 3.00 69.15 – 3.00	Depositor EDS
% Data completeness (in resolution range)	90.2 (69.15-3.00) 90.2 (69.15-3.00)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.46 (at 3.01Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.225 , 0.274 0.228 , 0.277	Depositor DCC
R_{free} test set	4092 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å ²)	57.2	Xtriage
Anisotropy	0.316	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 49.7	EDS
L-test for twinning ²	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	288320	wwPDB-VP
Average B, all atoms (Å ²)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.64% 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 [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: MHW, MHU, DBB, ZN, MG, 004, 04X

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	0.52	0/36944	1.02	48/57632 (0.1%)
1	CA	0.45	0/36966	0.96	27/57666 (0.0%)
2	AB	0.44	0/1736	0.65	0/2338
2	CB	0.38	0/1736	0.59	0/2338
3	AC	0.39	0/1652	0.61	0/2225
3	CC	0.37	0/1652	0.58	1/2225 (0.0%)
4	AD	0.39	0/1665	0.64	0/2227
4	CD	0.43	0/1665	0.65	0/2227
5	AE	0.41	0/1119	0.75	0/1504
5	CE	0.41	0/1119	0.73	0/1504
6	AF	0.41	0/836	0.77	2/1128 (0.2%)
6	CF	0.35	0/836	0.64	1/1128 (0.1%)
7	AG	0.37	0/1196	0.60	0/1602
7	CG	0.38	0/1196	0.54	0/1602
8	AH	0.40	0/989	0.63	0/1326
8	CH	0.34	0/989	0.57	0/1326
9	AI	0.39	0/1034	0.65	0/1375
9	CI	0.36	0/1034	0.59	0/1375
10	AJ	0.37	0/797	0.62	0/1077
10	CJ	0.36	0/797	0.61	0/1077
11	AK	0.38	0/893	0.63	0/1205
11	CK	0.37	0/893	0.61	0/1205
12	AL	0.41	0/969	0.71	0/1300
12	CL	0.41	0/969	0.73	0/1300
13	AM	0.38	0/893	0.70	1/1193 (0.1%)
13	CM	0.39	0/893	0.62	0/1193
14	AN	0.38	0/785	0.61	0/1043
14	CN	0.34	0/785	0.52	0/1043
15	AO	0.34	0/718	0.59	0/959
15	CO	0.32	0/718	0.57	0/959
16	AP	0.40	0/659	0.70	1/884 (0.1%)
16	CP	0.36	0/659	0.60	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.37	0/658	0.66	0/881
17	CQ	0.39	0/658	0.61	0/881
18	AR	0.37	0/463	0.61	0/621
18	CR	0.37	0/463	0.58	0/621
19	AS	0.43	0/653	0.66	0/877
19	CS	0.38	0/653	0.58	0/877
20	AT	0.43	0/671	0.63	0/888
20	CT	0.35	0/671	0.56	0/888
21	AU	0.50	0/431	0.71	0/570
21	CU	0.44	0/431	0.66	0/570
22	BA	0.90	44/69659 (0.1%)	1.39	725/108672 (0.7%)
22	DA	0.45	0/69659	0.95	28/108672 (0.0%)
23	BB	0.78	2/2850 (0.1%)	1.29	20/4444 (0.5%)
23	DB	0.39	0/2828	0.89	0/4410
24	BC	0.56	1/2122 (0.0%)	0.75	1/2852 (0.0%)
24	DC	0.37	0/2122	0.61	0/2852
25	BD	0.62	0/1586	0.80	1/2134 (0.0%)
25	DD	0.34	0/1586	0.55	0/2134
26	BE	0.54	0/1571	0.70	0/2113
26	DE	0.38	0/1571	0.60	0/2113
27	BF	0.41	0/1435	0.62	0/1926
27	DF	0.37	0/1435	0.53	0/1926
28	BG	0.45	0/1343	0.67	0/1816
28	DG	0.34	0/1343	0.52	0/1816
29	BH	0.36	0/1121	0.66	1/1515 (0.1%)
29	DH	0.35	0/1121	0.56	0/1515
30	BI	0.44	0/1046	0.62	0/1410
30	DI	0.43	0/1046	0.59	0/1410
31	BJ	0.61	0/1152	0.75	1/1551 (0.1%)
31	DJ	0.35	0/1152	0.57	0/1551
32	BK	0.64	0/948	0.81	0/1268
32	DK	0.37	0/948	0.57	0/1268
33	BL	0.52	0/1054	0.75	0/1403
33	DL	0.38	0/1054	0.62	0/1403
34	BM	0.62	0/1093	0.80	1/1460 (0.1%)
34	DM	0.33	0/1093	0.56	0/1460
35	BN	0.61	0/974	0.88	3/1301 (0.2%)
35	DN	0.36	0/974	0.56	0/1301
36	BO	0.48	0/902	0.71	0/1209
36	DO	0.34	0/902	0.53	0/1209
37	BP	0.54	0/929	0.75	1/1242 (0.1%)
37	DP	0.37	0/929	0.58	0/1242
38	BQ	0.73	0/960	0.82	1/1278 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DQ	0.36	0/960	0.54	0/1278
39	BR	0.66	0/829	0.91	2/1107 (0.2%)
39	DR	0.36	0/829	0.59	0/1107
40	BS	0.72	0/864	0.81	0/1156
40	DS	0.36	0/864	0.63	0/1156
41	BT	0.49	0/745	0.68	0/994
41	DT	0.38	0/745	0.60	0/994
42	BU	0.48	0/788	0.72	0/1051
42	DU	0.43	0/788	0.61	0/1051
43	BV	0.52	0/766	0.70	0/1025
43	DV	0.32	0/766	0.48	0/1025
44	BW	0.64	0/587	0.79	0/776
44	DW	0.33	0/576	0.54	0/762
45	BX	0.45	0/635	0.73	0/848
45	DX	0.36	0/635	0.60	0/848
46	BY	0.46	0/510	0.71	0/677
46	DY	0.39	0/510	0.61	0/677
47	BZ	0.61	0/453	0.82	1/605 (0.2%)
47	DZ	0.32	0/453	0.58	0/605
48	B0	0.64	0/450	0.91	2/599 (0.3%)
48	D0	0.35	0/450	0.58	0/599
49	B1	0.46	0/417	0.67	0/554
49	D1	0.35	0/417	0.51	0/554
50	B2	0.55	0/380	0.83	0/498
50	D2	0.38	0/380	0.61	0/498
51	B3	0.58	0/513	0.75	0/676
51	D3	0.33	0/513	0.57	0/676
52	B4	0.60	0/303	0.71	0/397
52	D4	0.32	0/303	0.54	0/397
53	B5	0.39	0/1145	0.56	0/1556
54	B6	3.67	4/13 (30.8%)	4.12	3/15 (20.0%)
54	D6	3.86	3/13 (23.1%)	3.82	4/15 (26.7%)
All	All	0.59	54/310652 (0.0%)	1.02	876/464396 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
5	CE	0	1
6	CF	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	AK	0	1
12	CL	0	2
21	AU	0	1
25	BD	0	1
25	DD	0	1
33	BL	0	1
48	B0	0	1
All	All	0	10

The worst 5 of 54 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	1142	A	N9-C4	-12.83	1.30	1.37
22	BA	528	A	N9-C4	-10.27	1.31	1.37
22	BA	528	A	N3-C4	-8.70	1.29	1.34
22	BA	974	G	N9-C4	-8.12	1.31	1.38
22	BA	979	A	N9-C4	-7.80	1.33	1.37

The worst 5 of 876 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	974	G	C4-C5-N7	15.39	116.95	110.80
22	BA	974	G	C5-N7-C8	-15.02	96.79	104.30
22	BA	752	A	N1-C6-N6	14.90	127.54	118.60
22	BA	974	G	N1-C6-O6	14.51	128.61	119.90
22	BA	1779	U	N3-C4-O4	-13.09	110.24	119.40

There are no chirality outliers.

5 of 10 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
21	AU	39	GLU	Peptide
48	B0	24	ALA	Peptide
25	BD	151	THR	Peptide
33	BL	28	GLY	Peptide

5.2 Too-close contacts [\(i\)](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	1338	4
1	CA	33015	0	16617	1198	0
2	AB	1705	0	1732	164	0
2	CB	1705	0	1732	121	0
3	AC	1625	0	1696	89	0
3	CC	1625	0	1696	80	0
4	AD	1643	0	1707	133	0
4	CD	1643	0	1707	144	0
5	AE	1106	0	1148	83	0
5	CE	1106	0	1148	104	0
6	AF	818	0	808	62	0
6	CF	818	0	808	56	0
7	AG	1182	0	1238	65	0
7	CG	1182	0	1238	59	0
8	AH	979	0	1031	67	0
8	CH	979	0	1031	47	0
9	AI	1022	0	1070	77	0
9	CI	1022	0	1070	69	0
10	AJ	787	0	828	87	0
10	CJ	787	0	828	48	0
11	AK	877	0	887	79	0
11	CK	877	0	887	72	0
12	AL	955	0	1016	65	0
12	CL	955	0	1016	61	0
13	AM	884	0	941	80	0
13	CM	884	0	941	46	0
14	AN	774	0	824	66	0
14	CN	774	0	824	44	0
15	AO	710	0	728	35	0
15	CO	710	0	728	42	0
16	AP	649	0	666	53	0
16	CP	649	0	666	30	0
17	AQ	649	0	691	69	0
17	CQ	649	0	691	50	0
18	AR	456	0	478	22	0
18	CR	456	0	478	23	0
19	AS	638	0	665	48	0
19	CS	638	0	665	38	0
20	AT	665	0	714	54	0
20	CT	665	0	714	38	0
21	AU	426	0	449	61	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	CU	426	0	449	37	0
22	BA	62195	0	31280	2134	0
22	DA	62195	0	31280	2174	0
23	BB	2549	0	1291	56	0
23	DB	2529	0	1281	72	0
24	BC	2083	0	2154	157	0
24	DC	2083	0	2154	123	0
25	BD	1565	0	1616	92	0
25	DD	1565	0	1616	81	0
26	BE	1552	0	1619	75	0
26	DE	1552	0	1619	103	0
27	BF	1411	0	1444	105	0
27	DF	1411	0	1444	63	0
28	BG	1323	0	1371	61	0
28	DG	1323	0	1371	56	0
29	BH	1110	0	1147	154	0
29	DH	1110	0	1148	90	4
30	BI	1032	0	1085	82	0
30	DI	1032	0	1085	72	0
31	BJ	1129	0	1162	64	0
31	DJ	1129	0	1162	55	0
32	BK	939	0	1012	75	0
32	DK	939	0	1012	38	0
33	BL	1045	0	1117	51	0
33	DL	1045	0	1117	81	0
34	BM	1074	0	1157	47	0
34	DM	1074	0	1157	43	0
35	BN	961	0	1000	51	0
35	DN	961	0	1000	55	0
36	BO	892	0	923	57	0
36	DO	892	0	923	50	0
37	BP	917	0	962	48	0
37	DP	917	0	962	47	0
38	BQ	947	0	1019	61	0
38	DQ	947	0	1019	55	0
39	BR	816	0	839	84	0
39	DR	816	0	839	47	0
40	BS	857	0	922	64	0
40	DS	857	0	922	39	0
41	BT	739	0	807	46	0
41	DT	739	0	807	44	0
42	BU	780	0	831	50	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	DU	780	0	831	65	0
43	BV	753	0	780	31	0
43	DV	753	0	780	25	0
44	BW	580	0	594	23	0
44	DW	569	0	581	26	0
45	BX	625	0	652	35	0
45	DX	625	0	652	55	0
46	BY	509	0	543	29	0
46	DY	509	0	543	38	0
47	BZ	449	0	488	19	0
47	DZ	449	0	488	14	0
48	B0	444	0	458	33	0
48	D0	444	0	458	18	0
49	B1	410	0	440	32	0
49	D1	410	0	440	19	0
50	B2	377	0	418	19	0
50	D2	377	0	418	34	0
51	B3	504	0	572	22	0
51	D3	504	0	572	29	0
52	B4	302	0	340	12	0
52	D4	302	0	342	17	0
53	B5	1142	0	865	49	0
54	B6	69	0	60	5	0
54	D6	69	0	60	14	0
55	AA	71	0	0	0	0
55	AM	1	0	0	0	0
55	BA	195	0	0	0	0
55	BB	4	0	0	0	0
55	CA	55	0	0	0	0
55	CM	1	0	0	0	0
55	DA	167	0	0	0	0
55	DB	3	0	0	0	0
55	DQ	1	0	0	0	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	194	0	0	23	0
57	AL	1	0	0	0	0
57	AN	5	0	0	1	0
57	AT	2	0	0	1	0
57	AU	1	0	0	1	0
57	B2	1	0	0	0	0
57	B3	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	B4	2	0	0	0	0
57	BA	615	0	0	101	0
57	BB	14	0	0	0	0
57	BC	10	0	0	0	0
57	BD	4	0	0	2	0
57	BE	4	0	0	0	0
57	BF	1	0	0	1	0
57	BG	1	0	0	0	0
57	BJ	1	0	0	0	0
57	BL	6	0	0	0	0
57	BN	2	0	0	0	0
57	BS	1	0	0	0	0
57	BU	1	0	0	0	0
57	CA	189	0	0	20	0
57	CL	1	0	0	0	0
57	CN	3	0	0	2	0
57	CT	3	0	0	0	0
57	CU	2	0	0	0	0
57	D0	1	0	0	0	0
57	D2	2	0	0	0	0
57	D3	2	0	0	0	0
57	D4	1	0	0	0	0
57	DA	607	0	0	82	0
57	DB	13	0	0	3	0
57	DC	9	0	0	1	0
57	DD	4	0	0	2	0
57	DE	6	0	0	1	0
57	DL	5	0	0	1	0
57	DN	2	0	0	0	0
57	DT	2	0	0	0	0
57	DU	1	0	0	1	0
57	DV	1	0	0	0	0
All	All	288320	0	192909	11780	4

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 25.

The worst 5 of 11780 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1006:C:OP2	57:BA:3781:HOH:O	1.56	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
22:BA:2714:G:OP2	57:BA:3548:HOH:O	1.61	1.18
22:BA:1603:A:OP1	57:BA:3411:HOH:O	1.61	1.15
54:D6:4:PRO:HB2	54:D6:5:MHU:HM1	1.15	1.14

All (4) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:368:U:OP2	29:DH:123:ARG:NE[4_455]	1.78	0.42
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	1.93	0.27
1:AA:368:U:OP2	29:DH:123:ARG:NH2[4_455]	2.03	0.17
1:AA:368:U:OP2	29:DH:123:ARG:CZ[4_455]	2.07	0.13

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	216/218 (99%)	135 (62%)	36 (17%)	45 (21%)	0	0
2	CB	216/218 (99%)	143 (66%)	36 (17%)	37 (17%)	0	0
3	AC	204/206 (99%)	142 (70%)	42 (21%)	20 (10%)	0	2
3	CC	204/206 (99%)	145 (71%)	41 (20%)	18 (9%)	1	3
4	AD	203/205 (99%)	133 (66%)	36 (18%)	34 (17%)	0	0
4	CD	203/205 (99%)	129 (64%)	48 (24%)	26 (13%)	0	1
5	AE	148/150 (99%)	98 (66%)	33 (22%)	17 (12%)	0	2
5	CE	148/150 (99%)	96 (65%)	29 (20%)	23 (16%)	0	1
6	AF	98/100 (98%)	61 (62%)	19 (19%)	18 (18%)	0	0
6	CF	98/100 (98%)	64 (65%)	18 (18%)	16 (16%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	AG	149/151 (99%)	110 (74%)	27 (18%)	12 (8%)	1	4
7	CG	149/151 (99%)	120 (80%)	21 (14%)	8 (5%)	2	11
8	AH	127/129 (98%)	80 (63%)	29 (23%)	18 (14%)	0	1
8	CH	127/129 (98%)	100 (79%)	19 (15%)	8 (6%)	1	7
9	AI	125/127 (98%)	90 (72%)	24 (19%)	11 (9%)	1	3
9	CI	125/127 (98%)	89 (71%)	27 (22%)	9 (7%)	1	5
10	AJ	96/98 (98%)	68 (71%)	7 (7%)	21 (22%)	0	0
10	CJ	96/98 (98%)	69 (72%)	18 (19%)	9 (9%)	0	3
11	AK	115/117 (98%)	83 (72%)	17 (15%)	15 (13%)	0	1
11	CK	115/117 (98%)	77 (67%)	28 (24%)	10 (9%)	1	3
12	AL	121/123 (98%)	92 (76%)	19 (16%)	10 (8%)	1	4
12	CL	121/123 (98%)	89 (74%)	17 (14%)	15 (12%)	0	1
13	AM	112/114 (98%)	79 (70%)	22 (20%)	11 (10%)	0	2
13	CM	112/114 (98%)	86 (77%)	15 (13%)	11 (10%)	0	2
14	AN	92/100 (92%)	57 (62%)	20 (22%)	15 (16%)	0	1
14	CN	92/100 (92%)	59 (64%)	20 (22%)	13 (14%)	0	1
15	AO	86/88 (98%)	60 (70%)	21 (24%)	5 (6%)	1	10
15	CO	86/88 (98%)	65 (76%)	18 (21%)	3 (4%)	3	20
16	AP	80/82 (98%)	52 (65%)	16 (20%)	12 (15%)	0	1
16	CP	80/82 (98%)	54 (68%)	20 (25%)	6 (8%)	1	5
17	AQ	78/80 (98%)	52 (67%)	16 (20%)	10 (13%)	0	1
17	CQ	78/80 (98%)	55 (70%)	13 (17%)	10 (13%)	0	1
18	AR	53/55 (96%)	40 (76%)	12 (23%)	1 (2%)	8	36
18	CR	53/55 (96%)	45 (85%)	4 (8%)	4 (8%)	1	5
19	AS	77/79 (98%)	52 (68%)	19 (25%)	6 (8%)	1	4
19	CS	77/79 (98%)	59 (77%)	14 (18%)	4 (5%)	2	12
20	AT	83/85 (98%)	51 (61%)	23 (28%)	9 (11%)	0	2
20	CT	83/85 (98%)	66 (80%)	11 (13%)	6 (7%)	1	5
21	AU	49/51 (96%)	23 (47%)	18 (37%)	8 (16%)	0	1
21	CU	49/51 (96%)	25 (51%)	10 (20%)	14 (29%)	0	0
24	BC	269/271 (99%)	208 (77%)	49 (18%)	12 (4%)	2	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
24	DC	269/271 (99%)	206 (77%)	42 (16%)	21 (8%)	1	4
25	BD	207/209 (99%)	176 (85%)	22 (11%)	9 (4%)	2	15
25	DD	207/209 (99%)	175 (84%)	24 (12%)	8 (4%)	3	17
26	BE	199/201 (99%)	164 (82%)	26 (13%)	9 (4%)	2	14
26	DE	199/201 (99%)	160 (80%)	27 (14%)	12 (6%)	1	9
27	BF	175/177 (99%)	136 (78%)	24 (14%)	15 (9%)	1	3
27	DF	175/177 (99%)	141 (81%)	23 (13%)	11 (6%)	1	7
28	BG	174/176 (99%)	146 (84%)	20 (12%)	8 (5%)	2	14
28	DG	174/176 (99%)	132 (76%)	33 (19%)	9 (5%)	2	12
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0	1
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0	2
30	BI	139/141 (99%)	79 (57%)	34 (24%)	26 (19%)	0	0
30	DI	139/141 (99%)	79 (57%)	42 (30%)	18 (13%)	0	1
31	BJ	140/142 (99%)	120 (86%)	17 (12%)	3 (2%)	7	33
31	DJ	140/142 (99%)	116 (83%)	18 (13%)	6 (4%)	2	15
32	BK	120/122 (98%)	94 (78%)	15 (12%)	11 (9%)	1	3
32	DK	120/122 (98%)	96 (80%)	14 (12%)	10 (8%)	1	4
33	BL	141/143 (99%)	108 (77%)	23 (16%)	10 (7%)	1	5
33	DL	141/143 (99%)	104 (74%)	28 (20%)	9 (6%)	1	7
34	BM	134/136 (98%)	114 (85%)	16 (12%)	4 (3%)	4	24
34	DM	134/136 (98%)	115 (86%)	13 (10%)	6 (4%)	2	14
35	BN	118/120 (98%)	97 (82%)	18 (15%)	3 (2%)	5	28
35	DN	118/120 (98%)	94 (80%)	16 (14%)	8 (7%)	1	6
36	BO	114/116 (98%)	87 (76%)	22 (19%)	5 (4%)	2	15
36	DO	114/116 (98%)	97 (85%)	15 (13%)	2 (2%)	8	37
37	BP	112/114 (98%)	97 (87%)	10 (9%)	5 (4%)	2	14
37	DP	112/114 (98%)	86 (77%)	19 (17%)	7 (6%)	1	7
38	BQ	115/117 (98%)	96 (84%)	15 (13%)	4 (4%)	3	20
38	DQ	115/117 (98%)	105 (91%)	9 (8%)	1 (1%)	17	55
39	BR	101/103 (98%)	89 (88%)	5 (5%)	7 (7%)	1	6
39	DR	101/103 (98%)	77 (76%)	17 (17%)	7 (7%)	1	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	BS	108/110 (98%)	91 (84%)	11 (10%)	6 (6%)	2	10
40	DS	108/110 (98%)	87 (81%)	14 (13%)	7 (6%)	1	7
41	BT	91/93 (98%)	69 (76%)	13 (14%)	9 (10%)	0	2
41	DT	91/93 (98%)	62 (68%)	19 (21%)	10 (11%)	0	2
42	BU	100/102 (98%)	75 (75%)	17 (17%)	8 (8%)	1	4
42	DU	100/102 (98%)	72 (72%)	15 (15%)	13 (13%)	0	1
43	BV	92/94 (98%)	83 (90%)	9 (10%)	0	100	100
43	DV	92/94 (98%)	76 (83%)	12 (13%)	4 (4%)	2	15
44	BW	74/76 (97%)	65 (88%)	9 (12%)	0	100	100
44	DW	73/76 (96%)	58 (80%)	10 (14%)	5 (7%)	1	6
45	BX	75/77 (97%)	64 (85%)	7 (9%)	4 (5%)	2	11
45	DX	75/77 (97%)	56 (75%)	15 (20%)	4 (5%)	2	11
46	BY	61/63 (97%)	38 (62%)	13 (21%)	10 (16%)	0	1
46	DY	61/63 (97%)	44 (72%)	11 (18%)	6 (10%)	0	2
47	BZ	56/58 (97%)	49 (88%)	4 (7%)	3 (5%)	2	11
47	DZ	56/58 (97%)	48 (86%)	5 (9%)	3 (5%)	2	11
48	B0	54/56 (96%)	42 (78%)	7 (13%)	5 (9%)	0	3
48	D0	54/56 (96%)	42 (78%)	8 (15%)	4 (7%)	1	5
49	B1	48/50 (96%)	39 (81%)	4 (8%)	5 (10%)	0	2
49	D1	48/50 (96%)	39 (81%)	6 (12%)	3 (6%)	1	7
50	B2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	2	14
50	D2	44/46 (96%)	37 (84%)	4 (9%)	3 (7%)	1	6
51	B3	62/64 (97%)	51 (82%)	9 (14%)	2 (3%)	4	22
51	D3	62/64 (97%)	50 (81%)	9 (14%)	3 (5%)	2	13
52	B4	36/38 (95%)	33 (92%)	3 (8%)	0	100	100
52	D4	36/38 (95%)	29 (81%)	6 (17%)	1 (3%)	5	25
53	B5	183/228 (80%)	100 (55%)	53 (29%)	30 (16%)	0	1
54	B6	2/7 (29%)	2 (100%)	0	0	100	100
54	D6	2/7 (29%)	1 (50%)	0	1 (50%)	0	0
All	All	11422/11686 (98%)	8514 (74%)	1907 (17%)	1001 (9%)	1	3

5 of 1001 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	22	TYR
2	AB	64	LYS
2	AB	68	LEU
2	AB	73	LYS
2	AB	75	ALA

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	180/180 (100%)	125 (69%)	55 (31%)	0	1
2	CB	180/180 (100%)	126 (70%)	54 (30%)	0	1
3	AC	170/170 (100%)	137 (81%)	33 (19%)	1	7
3	CC	170/170 (100%)	130 (76%)	40 (24%)	1	3
4	AD	172/172 (100%)	128 (74%)	44 (26%)	0	3
4	CD	172/172 (100%)	140 (81%)	32 (19%)	1	8
5	AE	113/113 (100%)	85 (75%)	28 (25%)	0	3
5	CE	113/113 (100%)	83 (74%)	30 (26%)	0	2
6	AF	87/87 (100%)	63 (72%)	24 (28%)	0	2
6	CF	87/87 (100%)	58 (67%)	29 (33%)	0	1
7	AG	124/124 (100%)	88 (71%)	36 (29%)	0	2
7	CG	124/124 (100%)	92 (74%)	32 (26%)	0	2
8	AH	104/104 (100%)	80 (77%)	24 (23%)	1	4
8	CH	104/104 (100%)	79 (76%)	25 (24%)	0	3
9	AI	105/105 (100%)	73 (70%)	32 (30%)	0	1
9	CI	105/105 (100%)	73 (70%)	32 (30%)	0	1
10	AJ	86/86 (100%)	61 (71%)	25 (29%)	0	2
10	CJ	86/86 (100%)	70 (81%)	16 (19%)	1	8
11	AK	90/90 (100%)	70 (78%)	20 (22%)	1	4
11	CK	90/90 (100%)	67 (74%)	23 (26%)	0	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	AL	103/103 (100%)	78 (76%)	25 (24%)	0	3
12	CL	103/103 (100%)	78 (76%)	25 (24%)	0	3
13	AM	92/92 (100%)	65 (71%)	27 (29%)	0	2
13	CM	92/92 (100%)	69 (75%)	23 (25%)	0	3
14	AN	79/83 (95%)	63 (80%)	16 (20%)	1	6
14	CN	79/83 (95%)	69 (87%)	10 (13%)	4	19
15	AO	75/76 (99%)	61 (81%)	14 (19%)	1	8
15	CO	75/76 (99%)	64 (85%)	11 (15%)	3	15
16	AP	65/65 (100%)	50 (77%)	15 (23%)	1	4
16	CP	65/65 (100%)	52 (80%)	13 (20%)	1	7
17	AQ	74/74 (100%)	50 (68%)	24 (32%)	0	1
17	CQ	74/74 (100%)	54 (73%)	20 (27%)	0	2
18	AR	48/48 (100%)	40 (83%)	8 (17%)	2	11
18	CR	48/48 (100%)	43 (90%)	5 (10%)	7	27
19	AS	70/70 (100%)	59 (84%)	11 (16%)	2	13
19	CS	70/70 (100%)	53 (76%)	17 (24%)	0	3
20	AT	65/65 (100%)	49 (75%)	16 (25%)	0	3
20	CT	65/65 (100%)	49 (75%)	16 (25%)	0	3
21	AU	44/44 (100%)	29 (66%)	15 (34%)	0	1
21	CU	44/44 (100%)	29 (66%)	15 (34%)	0	1
24	BC	216/216 (100%)	182 (84%)	34 (16%)	2	13
24	DC	216/216 (100%)	189 (88%)	27 (12%)	4	20
25	BD	164/164 (100%)	145 (88%)	19 (12%)	5	23
25	DD	164/164 (100%)	145 (88%)	19 (12%)	5	23
26	BE	165/165 (100%)	137 (83%)	28 (17%)	2	10
26	DE	165/165 (100%)	131 (79%)	34 (21%)	1	6
27	BF	148/148 (100%)	121 (82%)	27 (18%)	1	9
27	DF	148/148 (100%)	116 (78%)	32 (22%)	1	5
28	BG	137/137 (100%)	118 (86%)	19 (14%)	3	16
28	DG	137/137 (100%)	119 (87%)	18 (13%)	4	18
29	BH	114/114 (100%)	88 (77%)	26 (23%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
29	DH	114/114 (100%)	88 (77%)	26 (23%)	1	4
30	BI	109/109 (100%)	80 (73%)	29 (27%)	0	2
30	DI	109/109 (100%)	85 (78%)	24 (22%)	1	4
31	BJ	116/116 (100%)	106 (91%)	10 (9%)	10	37
31	DJ	116/116 (100%)	103 (89%)	13 (11%)	6	24
32	BK	103/103 (100%)	90 (87%)	13 (13%)	4	20
32	DK	103/103 (100%)	93 (90%)	10 (10%)	8	31
33	BL	102/102 (100%)	86 (84%)	16 (16%)	2	13
33	DL	102/102 (100%)	80 (78%)	22 (22%)	1	5
34	BM	109/109 (100%)	92 (84%)	17 (16%)	2	13
34	DM	109/109 (100%)	93 (85%)	16 (15%)	3	15
35	BN	100/100 (100%)	83 (83%)	17 (17%)	2	10
35	DN	100/100 (100%)	77 (77%)	23 (23%)	1	4
36	BO	86/86 (100%)	63 (73%)	23 (27%)	0	2
36	DO	86/86 (100%)	71 (83%)	15 (17%)	2	10
37	BP	99/99 (100%)	84 (85%)	15 (15%)	3	14
37	DP	99/99 (100%)	83 (84%)	16 (16%)	2	12
38	BQ	89/89 (100%)	75 (84%)	14 (16%)	2	13
38	DQ	89/89 (100%)	76 (85%)	13 (15%)	3	15
39	BR	84/84 (100%)	69 (82%)	15 (18%)	2	9
39	DR	84/84 (100%)	73 (87%)	11 (13%)	4	18
40	BS	93/93 (100%)	75 (81%)	18 (19%)	1	7
40	DS	93/93 (100%)	80 (86%)	13 (14%)	3	16
41	BT	80/80 (100%)	68 (85%)	12 (15%)	3	14
41	DT	80/80 (100%)	64 (80%)	16 (20%)	1	7
42	BU	83/83 (100%)	66 (80%)	17 (20%)	1	6
42	DU	83/83 (100%)	60 (72%)	23 (28%)	0	2
43	BV	78/78 (100%)	62 (80%)	16 (20%)	1	6
43	DV	78/78 (100%)	67 (86%)	11 (14%)	3	16
44	BW	57/58 (98%)	50 (88%)	7 (12%)	4	21
44	DW	56/58 (97%)	51 (91%)	5 (9%)	9	35

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	BX	67/67 (100%)	56 (84%)	11 (16%)	2	11
45	DX	67/67 (100%)	57 (85%)	10 (15%)	3	14
46	BY	55/55 (100%)	47 (86%)	8 (14%)	3	15
46	DY	55/55 (100%)	45 (82%)	10 (18%)	1	9
47	BZ	48/48 (100%)	42 (88%)	6 (12%)	4	20
47	DZ	48/48 (100%)	35 (73%)	13 (27%)	0	2
48	B0	47/47 (100%)	40 (85%)	7 (15%)	3	14
48	D0	47/47 (100%)	43 (92%)	4 (8%)	10	38
49	B1	45/45 (100%)	37 (82%)	8 (18%)	2	9
49	D1	45/45 (100%)	39 (87%)	6 (13%)	4	17
50	B2	38/38 (100%)	33 (87%)	5 (13%)	4	18
50	D2	38/38 (100%)	32 (84%)	6 (16%)	2	12
51	B3	51/51 (100%)	40 (78%)	11 (22%)	1	5
51	D3	51/51 (100%)	47 (92%)	4 (8%)	12	42
52	B4	34/34 (100%)	29 (85%)	5 (15%)	3	15
52	D4	34/34 (100%)	29 (85%)	5 (15%)	3	15
53	B5	61/180 (34%)	47 (77%)	14 (23%)	1	4
54	B6	2/2 (100%)	2 (100%)	0	100	100
54	D6	2/2 (100%)	2 (100%)	0	100	100
All	All	9390/9522 (99%)	7518 (80%)	1872 (20%)	1	7

5 of 1872 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
50	B2	24	THR
41	DT	86	THR
7	CG	5	ARG
40	DS	68	ASP
30	DI	96	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 38 such sidechains are listed below:

Mol	Chain	Res	Type
18	CR	52	GLN

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Mol	Chain	Res	Type
37	DP	41	GLN
20	CT	68	HIS
28	DG	115	HIS
51	D3	31	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	361 (23%)	17 (1%)
1	CA	1538/1539 (99%)	335 (21%)	16 (1%)
22	BA	2895/2903 (99%)	672 (23%)	36 (1%)
22	DA	2895/2903 (99%)	609 (21%)	33 (1%)
23	BB	118/119 (99%)	27 (22%)	1 (0%)
23	DB	117/119 (98%)	25 (21%)	0
All	All	9100/9122 (99%)	2029 (22%)	103 (1%)

5 of 2029 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	9	G
1	AA	13	U
1	AA	32	A

5 of 103 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	CA	209	U
22	DA	83	A
22	DA	2501	C
1	CA	429	U
1	CA	873	A

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

10 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
54	MHU	D6	5	54	14,15,16	2.80	6 (42%)	18,19,21	2.69	4 (22%)
54	DBB	B6	3	54	4,5,6	0.86	0	1,5,7	0.96	0
54	04X	D6	6	54	14,16,17	1.14	2 (14%)	11,20,22	5.43	7 (63%)
54	MHW	D6	1	54	9,9,10	3.18	4 (44%)	10,11,13	2.22	7 (70%)
54	DBB	D6	3	54	4,5,6	0.76	0	1,5,7	0.74	0
54	MHU	B6	5	54	14,15,16	2.87	7 (50%)	18,19,21	2.71	5 (27%)
54	004	D6	7	54	9,10,11	3.28	7 (77%)	9,12,14	2.38	2 (22%)
54	MHW	B6	1	54	9,9,10	2.88	4 (44%)	10,11,13	3.44	8 (80%)
54	004	B6	7	54	9,10,11	3.36	6 (66%)	9,12,14	1.59	2 (22%)
54	04X	B6	6	54	14,16,17	1.22	1 (7%)	11,20,22	4.65	6 (54%)

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
54	MHU	D6	5	54	-	3/9/12/14	0/1/1/1
54	DBB	B6	3	54	-	1/3/4/6	-
54	04X	D6	6	54	-	3/4/24/26	0/2/2/2
54	MHW	D6	1	54	-	0/2/2/4	0/1/1/1
54	DBB	D6	3	54	-	2/3/4/6	-
54	MHU	B6	5	54	-	2/9/12/14	0/1/1/1
54	004	D6	7	54	-	2/4/6/8	0/1/1/1
54	MHW	B6	1	54	-	2/2/2/4	0/1/1/1
54	004	B6	7	54	-	3/4/6/8	0/1/1/1
54	04X	B6	6	54	-	2/4/24/26	0/2/2/2

The worst 5 of 37 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	B6	7	004	CB-CA	-6.34	1.45	1.52
54	D6	5	MHU	CE1-CD1	6.06	1.49	1.38
54	D6	7	004	CB-CA	-5.93	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	D6	1	MHW	CG2-CB	-5.61	1.29	1.39
54	B6	1	MHW	CG2-CB	-5.54	1.29	1.39

The worst 5 of 41 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	D6	6	04X	C0-N1-C1	15.71	135.46	111.09
54	B6	6	04X	C0-N1-C1	13.07	131.37	111.09
54	D6	5	MHU	CB-CA-N	7.71	122.60	110.65
54	B6	1	MHW	O-C-CA	-7.51	117.11	124.22
54	B6	5	MHU	CB-CA-N	7.43	122.16	110.65

There are no chirality outliers.

5 of 20 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	B6	1	MHW	O-C-CA-N
54	B6	3	DBB	C-CA-CB-CG
54	D6	3	DBB	O-C-CA-CB
54	D6	3	DBB	C-CA-CB-CG
54	D6	5	MHU	O-C-CA-CB

There are no ring outliers.

8 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	D6	5	MHU	5	0
54	B6	3	DBB	1	0
54	D6	6	04X	1	0
54	D6	1	MHW	4	0
54	D6	3	DBB	2	0
54	B6	5	MHU	2	0
54	D6	7	004	2	0
54	B6	7	004	1	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 500 ligands modelled in this entry, 500 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
54	B6	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B6	2:THR	C	3:DBB	N	1.61

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	1538/1539 (99%)	-0.39	22 (1%) 75 49	14, 54, 137, 179	0
1	CA	1539/1539 (100%)	-0.19	35 (2%) 60 31	27, 72, 145, 177	0
2	AB	218/218 (100%)	1.16	53 (24%) 0 0	43, 76, 100, 125	0
2	CB	218/218 (100%)	1.54	69 (31%) 0 0	63, 86, 106, 126	0
3	AC	206/206 (100%)	0.10	5 (2%) 59 30	39, 61, 83, 96	0
3	CC	206/206 (100%)	1.24	44 (21%) 0 0	57, 79, 97, 109	0
4	AD	205/205 (100%)	0.04	3 (1%) 73 46	35, 58, 79, 106	0
4	CD	205/205 (100%)	-0.20	3 (1%) 73 46	21, 40, 71, 90	0
5	AE	150/150 (100%)	0.01	3 (2%) 65 36	27, 51, 82, 106	0
5	CE	150/150 (100%)	0.02	1 (0%) 87 69	34, 59, 87, 104	0
6	AF	100/100 (100%)	-0.31	0 100 100	38, 59, 76, 84	0
6	CF	100/100 (100%)	-0.14	1 (1%) 82 59	46, 74, 96, 104	0
7	AG	151/151 (100%)	0.82	25 (16%) 1 0	54, 78, 98, 108	0
7	CG	151/151 (100%)	1.77	61 (40%) 0 0	77, 97, 107, 113	0
8	AH	129/129 (100%)	-0.07	1 (0%) 86 65	30, 50, 73, 81	0
8	CH	129/129 (100%)	0.08	4 (3%) 49 21	45, 65, 81, 90	0
9	AI	127/127 (100%)	1.01	22 (17%) 1 0	51, 73, 97, 113	0
9	CI	127/127 (100%)	1.42	36 (28%) 0 0	71, 91, 109, 126	0
10	AJ	98/98 (100%)	0.44	7 (7%) 16 5	46, 68, 92, 122	0
10	CJ	98/98 (100%)	1.87	41 (41%) 0 0	71, 93, 110, 124	0
11	AK	117/117 (100%)	0.58	14 (11%) 4 1	32, 64, 91, 110	0
11	CK	117/117 (100%)	0.11	3 (2%) 56 27	44, 68, 82, 91	0
12	AL	123/123 (100%)	0.11	3 (2%) 59 30	23, 39, 68, 94	0
12	CL	123/123 (100%)	0.07	4 (3%) 46 20	39, 52, 79, 99	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	114/114 (100%)	0.42	7 (6%) 21 7	49, 71, 92, 105	0
13	CM	114/114 (100%)	1.96	55 (48%) 0 0	90, 103, 116, 120	0
14	AN	96/100 (96%)	0.83	16 (16%) 1 0	43, 63, 94, 106	0
14	CN	96/100 (96%)	1.89	36 (37%) 0 0	69, 91, 110, 118	0
15	AO	88/88 (100%)	-0.01	1 (1%) 80 56	31, 51, 68, 98	0
15	CO	88/88 (100%)	-0.02	2 (2%) 60 31	43, 63, 81, 105	0
16	AP	82/82 (100%)	0.48	4 (4%) 29 11	35, 49, 84, 100	0
16	CP	82/82 (100%)	0.66	12 (14%) 2 1	45, 62, 88, 106	0
17	AQ	80/80 (100%)	-0.03	3 (3%) 40 16	27, 54, 81, 124	0
17	CQ	80/80 (100%)	0.49	5 (6%) 20 6	44, 72, 96, 105	0
18	AR	55/55 (100%)	-0.14	3 (5%) 25 9	39, 53, 81, 112	0
18	CR	55/55 (100%)	0.01	1 (1%) 68 40	46, 56, 82, 111	0
19	AS	79/79 (100%)	1.00	14 (17%) 1 0	55, 72, 92, 101	0
19	CS	79/79 (100%)	3.08	55 (69%) 0 0	87, 103, 114, 123	0
20	AT	85/85 (100%)	0.10	3 (3%) 44 18	35, 51, 74, 111	0
20	CT	85/85 (100%)	1.25	20 (23%) 0 0	53, 72, 93, 96	0
21	AU	51/51 (100%)	1.69	21 (41%) 0 0	56, 76, 95, 108	0
21	CU	51/51 (100%)	0.40	6 (11%) 4 1	48, 72, 94, 108	0
22	BA	2897/2903 (99%)	-0.13	105 (3%) 42 17	0, 14, 130, 195	0
22	DA	2897/2903 (99%)	-0.07	71 (2%) 57 29	42, 83, 144, 183	0
23	BB	119/119 (100%)	-0.52	0 100 100	1, 24, 54, 90	0
23	DB	118/119 (99%)	-0.35	0 100 100	66, 111, 133, 141	0
24	BC	271/271 (100%)	-0.24	8 (2%) 50 22	3, 21, 43, 55	0
24	DC	271/271 (100%)	0.42	23 (8%) 10 3	42, 62, 76, 91	0
25	BD	209/209 (100%)	-0.45	0 100 100	0, 9, 38, 71	0
25	DD	209/209 (100%)	0.38	13 (6%) 20 7	46, 66, 81, 99	0
26	BE	201/201 (100%)	-0.43	0 100 100	0, 24, 56, 91	0
26	DE	201/201 (100%)	0.93	33 (16%) 1 0	45, 81, 98, 106	0
27	BF	177/177 (100%)	0.26	11 (6%) 20 7	15, 46, 88, 97	0
27	DF	177/177 (100%)	2.38	92 (51%) 0 0	85, 102, 117, 125	0
28	BG	176/176 (100%)	-0.16	0 100 100	15, 38, 64, 88	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DG	176/176 (100%)	1.19	39 (22%) 0 0	71, 90, 104, 117	0
29	BH	149/149 (100%)	2.29	65 (43%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.15	36 (24%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	2.43	66 (46%) 0 0	84, 108, 121, 136	0
30	DI	141/141 (100%)	3.62	97 (68%) 0 0	96, 114, 123, 127	0
31	BJ	142/142 (100%)	-0.46	0 100 100	1, 5, 23, 43	0
31	DJ	142/142 (100%)	0.41	12 (8%) 10 3	48, 64, 79, 96	0
32	BK	122/122 (100%)	-0.54	0 100 100	2, 11, 37, 67	0
32	DK	122/122 (100%)	0.64	14 (11%) 4 1	48, 61, 81, 96	0
33	BL	143/143 (100%)	-0.35	0 100 100	0, 21, 48, 76	0
33	DL	143/143 (100%)	1.25	36 (25%) 0 0	42, 77, 91, 113	0
34	BM	136/136 (100%)	-0.49	0 100 100	1, 9, 30, 87	0
34	DM	136/136 (100%)	0.80	18 (13%) 3 1	42, 67, 82, 108	0
35	BN	120/120 (100%)	-0.47	0 100 100	1, 6, 17, 62	0
35	DN	120/120 (100%)	0.58	17 (14%) 2 1	54, 74, 88, 110	0
36	BO	116/116 (100%)	-0.26	0 100 100	14, 27, 46, 52	0
36	DO	116/116 (100%)	1.68	45 (38%) 0 0	74, 91, 102, 114	0
37	BP	114/114 (100%)	-0.31	0 100 100	5, 19, 48, 70	0
37	DP	114/114 (100%)	0.58	13 (11%) 5 1	56, 68, 84, 93	0
38	BQ	117/117 (100%)	-0.45	0 100 100	0, 3, 11, 42	0
38	DQ	117/117 (100%)	0.40	9 (7%) 13 4	52, 66, 77, 84	0
39	BR	103/103 (100%)	-0.48	0 100 100	0, 9, 31, 63	0
39	DR	103/103 (100%)	0.87	18 (17%) 1 0	50, 75, 87, 97	0
40	BS	110/110 (100%)	-0.38	0 100 100	1, 3, 23, 84	0
40	DS	110/110 (100%)	1.07	25 (22%) 0 0	56, 73, 89, 96	0
41	BT	93/93 (100%)	-0.02	2 (2%) 62 33	10, 27, 80, 101	0
41	DT	93/93 (100%)	1.82	39 (41%) 0 0	63, 83, 103, 110	0
42	BU	102/102 (100%)	-0.10	3 (2%) 51 23	10, 30, 61, 92	0
42	DU	102/102 (100%)	2.61	53 (51%) 0 0	70, 88, 106, 112	0
43	BV	94/94 (100%)	-0.36	0 100 100	4, 22, 43, 54	0
43	DV	94/94 (100%)	0.46	9 (9%) 8 2	65, 82, 94, 99	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BW	76/76 (100%)	-0.42	0 100 100	3, 10, 27, 48	0
44	DW	75/76 (98%)	1.49	28 (37%) 0 0	54, 79, 88, 108	0
45	BX	77/77 (100%)	-0.36	0 100 100	6, 24, 52, 77	0
45	DX	77/77 (100%)	0.61	14 (18%) 1 0	49, 69, 86, 89	0
46	BY	63/63 (100%)	0.05	3 (4%) 30 11	22, 44, 74, 96	0
46	DY	63/63 (100%)	1.28	15 (23%) 0 0	71, 90, 99, 103	0
47	BZ	58/58 (100%)	-0.38	0 100 100	2, 7, 29, 41	0
47	DZ	58/58 (100%)	0.26	3 (5%) 27 10	52, 70, 84, 89	0
48	B0	56/56 (100%)	-0.53	0 100 100	0, 8, 35, 70	0
48	D0	56/56 (100%)	0.86	8 (14%) 2 1	53, 74, 91, 104	0
49	B1	50/50 (100%)	-0.28	2 (4%) 38 15	13, 31, 54, 87	0
49	D1	50/50 (100%)	1.17	11 (22%) 0 0	68, 84, 93, 105	0
50	B2	46/46 (100%)	-0.31	1 (2%) 62 33	3, 9, 17, 90	0
50	D2	46/46 (100%)	1.18	9 (19%) 1 0	53, 66, 79, 100	0
51	B3	64/64 (100%)	-0.32	0 100 100	4, 9, 18, 31	0
51	D3	64/64 (100%)	0.94	15 (23%) 0 0	58, 71, 79, 85	0
52	B4	38/38 (100%)	-0.08	0 100 100	11, 20, 35, 52	0
52	D4	38/38 (100%)	1.59	13 (34%) 0 0	63, 74, 85, 99	0
53	B5	191/228 (83%)	4.42	168 (87%) 0 0	85, 111, 123, 134	0
54	B6	2/7 (28%)	0.27	0 100 100	5, 5, 5, 9	0
54	D6	2/7 (28%)	0.74	0 100 100	53, 53, 53, 62	0
All	All	20738/20808 (99%)	0.28	1986 (9%) 8 2	0, 64, 119, 195	0

The worst 5 of 1986 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	DI	6	GLN	16.5
30	BI	53	LEU	16.3
22	BA	2100	G	15.9
30	DI	2	ALA	15.0
22	BA	2104	C	14.5

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
54	MHU	D6	5	15/16	0.82	0.38	45,58,69,72	0
54	DBB	D6	3	6/7	0.88	0.50	45,50,65,70	0
54	04X	D6	6	15/16	0.90	0.27	47,59,67,73	0
54	MHU	B6	5	15/16	0.93	0.24	3,7,15,15	0
54	MHW	D6	1	9/10	0.94	0.18	55,59,63,66	0
54	DBB	B6	3	6/7	0.94	0.28	8,14,20,33	0
54	004	D6	7	10/11	0.95	0.23	47,52,61,64	0
54	MHW	B6	1	9/10	0.97	0.20	8,13,21,30	0
54	004	B6	7	10/11	0.97	0.28	2,4,6,6	0
54	04X	B6	6	15/16	0.97	0.19	6,11,15,20	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
55	MG	AA	1627	1/1	0.17	0.55	76,76,76,76	0
55	MG	DA	3071	1/1	0.18	0.59	93,93,93,93	0
55	MG	DA	3072	1/1	0.23	0.50	89,89,89,89	0
55	MG	AA	1644	1/1	0.24	0.69	49,49,49,49	0
55	MG	DA	3061	1/1	0.25	1.80	97,97,97,97	0
55	MG	DA	3093	1/1	0.26	0.35	99,99,99,99	0
55	MG	CA	1631	1/1	0.35	0.26	98,98,98,98	0
55	MG	DA	3011	1/1	0.41	0.30	74,74,74,74	0
55	MG	DA	3057	1/1	0.41	0.29	82,82,82,82	0
55	MG	DA	3116	1/1	0.43	0.34	92,92,92,92	0
55	MG	DA	3005	1/1	0.44	0.12	90,90,90,90	0
55	MG	DA	3041	1/1	0.46	0.42	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	CA	1629	1/1	0.49	0.10	84,84,84,84	0
55	MG	CA	1621	1/1	0.51	0.09	67,67,67,67	0
55	MG	CA	1637	1/1	0.52	0.37	80,80,80,80	0
55	MG	DA	3132	1/1	0.53	0.79	85,85,85,85	0
55	MG	DA	3027	1/1	0.55	0.12	82,82,82,82	0
55	MG	DA	3104	1/1	0.56	0.18	76,76,76,76	0
55	MG	BA	3055	1/1	0.58	0.25	50,50,50,50	0
55	MG	DA	3120	1/1	0.58	0.56	95,95,95,95	0
55	MG	DA	3085	1/1	0.58	0.19	78,78,78,78	0
55	MG	DA	3134	1/1	0.58	0.58	87,87,87,87	0
55	MG	CA	1628	1/1	0.59	0.28	100,100,100,100	0
55	MG	DA	3070	1/1	0.60	0.11	93,93,93,93	0
55	MG	DA	3016	1/1	0.60	0.42	84,84,84,84	0
55	MG	CA	1627	1/1	0.61	0.29	88,88,88,88	0
55	MG	DA	3077	1/1	0.62	0.26	76,76,76,76	0
55	MG	AA	1665	1/1	0.63	0.74	53,53,53,53	0
55	MG	AA	1635	1/1	0.63	0.27	76,76,76,76	0
55	MG	BA	3119	1/1	0.64	0.36	49,49,49,49	0
55	MG	BA	3135	1/1	0.65	0.27	48,48,48,48	0
55	MG	CA	1609	1/1	0.67	0.09	78,78,78,78	0
55	MG	DA	3032	1/1	0.67	0.20	78,78,78,78	0
55	MG	DA	3062	1/1	0.68	0.77	70,70,70,70	0
55	MG	DA	3079	1/1	0.68	0.08	94,94,94,94	0
55	MG	DA	3056	1/1	0.68	0.28	80,80,80,80	0
55	MG	DA	3028	1/1	0.69	0.56	86,86,86,86	0
55	MG	DA	3111	1/1	0.69	0.12	81,81,81,81	0
55	MG	DA	3008	1/1	0.70	0.16	80,80,80,80	0
55	MG	CA	1636	1/1	0.70	0.29	97,97,97,97	0
55	MG	BA	3016	1/1	0.70	0.22	31,31,31,31	0
55	MG	DA	3021	1/1	0.70	0.34	62,62,62,62	0
55	MG	AA	1651	1/1	0.70	0.34	55,55,55,55	0
55	MG	DA	3137	1/1	0.70	0.27	84,84,84,84	0
55	MG	DA	3153	1/1	0.70	0.12	68,68,68,68	0
55	MG	DA	3078	1/1	0.71	0.20	95,95,95,95	0
55	MG	AA	1667	1/1	0.72	0.68	54,54,54,54	0
55	MG	DA	3082	1/1	0.72	0.11	65,65,65,65	0
55	MG	BA	3011	1/1	0.72	0.16	30,30,30,30	0
55	MG	BA	3115	1/1	0.73	0.51	76,76,76,76	0
55	MG	BA	3048	1/1	0.73	0.08	26,26,26,26	0
55	MG	BA	3090	1/1	0.73	0.20	33,33,33,33	0
55	MG	BA	3098	1/1	0.73	0.59	73,73,73,73	0
55	MG	DA	3024	1/1	0.73	0.17	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	AA	1670	1/1	0.74	0.40	45,45,45,45	0
55	MG	BA	3047	1/1	0.74	0.11	40,40,40,40	0
55	MG	DA	3121	1/1	0.74	0.16	60,60,60,60	0
55	MG	DA	3122	1/1	0.74	0.08	64,64,64,64	0
55	MG	DA	3155	1/1	0.74	0.28	37,37,37,37	0
55	MG	DA	3165	1/1	0.74	0.38	43,43,43,43	0
55	MG	CA	1635	1/1	0.75	0.10	94,94,94,94	0
55	MG	AA	1634	1/1	0.75	0.09	49,49,49,49	0
55	MG	DA	3150	1/1	0.75	0.21	50,50,50,50	0
55	MG	DA	3151	1/1	0.75	0.47	40,40,40,40	0
55	MG	DA	3094	1/1	0.75	0.20	83,83,83,83	0
55	MG	BA	3154	1/1	0.75	0.23	21,21,21,21	0
55	MG	CA	1605	1/1	0.75	0.25	78,78,78,78	0
55	MG	CA	1655	1/1	0.76	1.02	67,67,67,67	0
55	MG	DA	3010	1/1	0.76	0.10	64,64,64,64	0
55	MG	AA	1601	1/1	0.76	0.11	61,61,61,61	0
55	MG	DA	3145	1/1	0.76	0.09	68,68,68,68	0
55	MG	DA	3164	1/1	0.76	0.76	56,56,56,56	0
55	MG	DA	3149	1/1	0.76	0.19	49,49,49,49	0
55	MG	DB	201	1/1	0.76	0.05	96,96,96,96	0
55	MG	AA	1646	1/1	0.77	0.21	50,50,50,50	0
55	MG	AA	1648	1/1	0.77	0.26	39,39,39,39	0
55	MG	DA	3019	1/1	0.77	0.15	84,84,84,84	0
55	MG	DA	3091	1/1	0.77	0.13	79,79,79,79	0
55	MG	DA	3029	1/1	0.77	0.37	66,66,66,66	0
55	MG	DA	3002	1/1	0.77	0.52	81,81,81,81	0
55	MG	DA	3106	1/1	0.78	0.31	70,70,70,70	0
55	MG	BA	3031	1/1	0.78	0.11	7,7,7,7	0
55	MG	DA	3038	1/1	0.78	0.14	63,63,63,63	0
55	MG	DA	3084	1/1	0.78	0.15	75,75,75,75	0
55	MG	BA	3190	1/1	0.78	0.53	42,42,42,42	0
55	MG	DA	3042	1/1	0.78	0.14	69,69,69,69	0
55	MG	DA	3158	1/1	0.78	0.46	58,58,58,58	0
55	MG	DA	3160	1/1	0.78	0.20	47,47,47,47	0
55	MG	DA	3048	1/1	0.78	0.22	93,93,93,93	0
55	MG	CA	1602	1/1	0.78	0.12	69,69,69,69	0
55	MG	CA	1626	1/1	0.78	0.26	66,66,66,66	0
55	MG	DA	3092	1/1	0.79	0.44	94,94,94,94	0
55	MG	BA	3015	1/1	0.79	0.41	61,61,61,61	0
55	MG	AA	1623	1/1	0.79	0.17	49,49,49,49	0
55	MG	DA	3161	1/1	0.79	0.33	48,48,48,48	0
55	MG	DA	3014	1/1	0.79	0.36	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
55	MG	DA	3015	1/1	0.79	0.57	77,77,77,77	0
55	MG	BA	3025	1/1	0.79	0.18	40,40,40,40	0
55	MG	DA	3126	1/1	0.80	0.17	61,61,61,61	0
55	MG	DA	3040	1/1	0.80	0.21	66,66,66,66	0
55	MG	DA	3136	1/1	0.81	0.42	81,81,81,81	0
55	MG	CA	1652	1/1	0.81	0.11	62,62,62,62	0
55	MG	DA	3044	1/1	0.81	0.21	83,83,83,83	0
55	MG	BA	3004	1/1	0.81	0.14	52,52,52,52	0
55	MG	BA	3070	1/1	0.81	0.11	37,37,37,37	0
55	MG	DA	3133	1/1	0.81	0.19	55,55,55,55	0
55	MG	BA	3019	1/1	0.81	0.26	1,1,1,1	0
55	MG	BA	3029	1/1	0.82	0.12	35,35,35,35	0
55	MG	DA	3090	1/1	0.82	0.08	59,59,59,59	0
55	MG	DA	3154	1/1	0.82	0.24	40,40,40,40	0
55	MG	DA	3033	1/1	0.82	0.09	54,54,54,54	0
55	MG	DA	3098	1/1	0.82	0.08	50,50,50,50	0
55	MG	DB	203	1/1	0.82	0.09	90,90,90,90	0
55	MG	DA	3013	1/1	0.83	0.11	64,64,64,64	0
55	MG	BA	3157	1/1	0.83	0.34	34,34,34,34	0
55	MG	AA	1652	1/1	0.83	0.13	40,40,40,40	0
55	MG	AA	1657	1/1	0.83	0.34	37,37,37,37	0
55	MG	AA	1662	1/1	0.83	0.27	49,49,49,49	0
55	MG	CA	1638	1/1	0.83	0.16	74,74,74,74	0
55	MG	DA	3058	1/1	0.83	0.16	70,70,70,70	0
55	MG	DA	3166	1/1	0.83	0.19	44,44,44,44	0
55	MG	AA	1630	1/1	0.83	0.15	67,67,67,67	0
55	MG	DA	3099	1/1	0.83	0.41	82,82,82,82	0
55	MG	DA	3009	1/1	0.84	0.09	69,69,69,69	0
55	MG	DA	3055	1/1	0.84	0.07	57,57,57,57	0
55	MG	DA	3115	1/1	0.84	0.09	79,79,79,79	0
55	MG	BA	3161	1/1	0.84	0.17	15,15,15,15	0
55	MG	BA	3168	1/1	0.84	0.24	21,21,21,21	0
55	MG	DA	3006	1/1	0.84	0.22	98,98,98,98	0
55	MG	CA	1611	1/1	0.84	0.17	69,69,69,69	0
55	MG	DA	3060	1/1	0.85	0.22	72,72,72,72	0
55	MG	BA	3113	1/1	0.85	0.12	2,2,2,2	0
55	MG	CA	1615	1/1	0.85	0.23	56,56,56,56	0
55	MG	AA	1659	1/1	0.85	0.48	32,32,32,32	0
55	MG	BA	3045	1/1	0.85	0.12	4,4,4,4	0
55	MG	DA	3046	1/1	0.85	0.11	62,62,62,62	0
55	MG	DA	3127	1/1	0.85	0.13	88,88,88,88	0
55	MG	AA	1671	1/1	0.85	0.34	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	CA	1604	1/1	0.85	0.07	78,78,78,78	0
55	MG	DA	3100	1/1	0.85	0.31	73,73,73,73	0
55	MG	CM	201	1/1	0.85	0.38	50,50,50,50	0
55	MG	AA	1617	1/1	0.85	0.11	62,62,62,62	0
55	MG	DA	3144	1/1	0.85	0.30	58,58,58,58	0
55	MG	BA	3109	1/1	0.85	0.21	1,1,1,1	0
55	MG	CA	1620	1/1	0.86	0.13	81,81,81,81	0
55	MG	BA	3076	1/1	0.86	0.28	56,56,56,56	0
55	MG	DA	3102	1/1	0.86	0.31	72,72,72,72	0
55	MG	DA	3018	1/1	0.86	0.11	68,68,68,68	0
55	MG	BA	3129	1/1	0.86	0.13	0,0,0,0	0
55	MG	DA	3004	1/1	0.86	0.48	87,87,87,87	0
55	MG	DA	3112	1/1	0.86	0.13	64,64,64,64	0
55	MG	DA	3054	1/1	0.87	0.08	62,62,62,62	0
55	MG	DA	3135	1/1	0.87	0.08	46,46,46,46	0
55	MG	AA	1624	1/1	0.87	0.10	50,50,50,50	0
55	MG	DA	3063	1/1	0.87	0.12	53,53,53,53	0
55	MG	DA	3069	1/1	0.87	0.20	77,77,77,77	0
55	MG	BA	3150	1/1	0.87	0.20	37,37,37,37	0
55	MG	BA	3093	1/1	0.87	0.10	26,26,26,26	0
55	MG	BA	3028	1/1	0.87	0.10	3,3,3,3	0
55	MG	DA	3073	1/1	0.87	0.10	35,35,35,35	0
55	MG	BA	3080	1/1	0.87	0.09	24,24,24,24	0
55	MG	BA	3003	1/1	0.88	0.10	29,29,29,29	0
55	MG	AA	1607	1/1	0.88	0.12	48,48,48,48	0
55	MG	BA	3061	1/1	0.88	0.64	66,66,66,66	0
55	MG	CA	1606	1/1	0.88	0.25	76,76,76,76	0
55	MG	BA	3160	1/1	0.88	0.20	5,5,5,5	0
55	MG	BA	3124	1/1	0.88	0.09	9,9,9,9	0
55	MG	BA	3166	1/1	0.88	0.20	37,37,37,37	0
55	MG	CA	1646	1/1	0.88	0.23	36,36,36,36	0
55	MG	DA	3103	1/1	0.88	0.28	67,67,67,67	0
55	MG	CA	1650	1/1	0.88	0.63	50,50,50,50	0
55	MG	BA	3167	1/1	0.88	0.17	22,22,22,22	0
55	MG	DA	3152	1/1	0.88	0.32	55,55,55,55	0
55	MG	CA	1654	1/1	0.88	0.20	26,26,26,26	0
55	MG	AA	1639	1/1	0.88	0.10	67,67,67,67	0
55	MG	DA	3081	1/1	0.88	0.12	62,62,62,62	0
55	MG	CA	1622	1/1	0.88	0.12	57,57,57,57	0
55	MG	DA	3118	1/1	0.88	0.11	73,73,73,73	0
55	MG	BA	3180	1/1	0.88	0.62	25,25,25,25	0
55	MG	DA	3025	1/1	0.88	0.12	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	DA	3088	1/1	0.88	0.08	69,69,69,69	0
55	MG	DA	3125	1/1	0.88	0.17	86,86,86,86	0
55	MG	DA	3089	1/1	0.88	0.62	91,91,91,91	0
55	MG	BA	3002	1/1	0.88	0.09	18,18,18,18	0
55	MG	DQ	201	1/1	0.88	0.30	40,40,40,40	0
55	MG	BA	3118	1/1	0.89	0.14	34,34,34,34	0
55	MG	AA	1636	1/1	0.89	0.18	42,42,42,42	0
55	MG	DA	3113	1/1	0.89	0.46	75,75,75,75	0
55	MG	DA	3157	1/1	0.89	0.14	29,29,29,29	0
55	MG	CA	1608	1/1	0.89	0.12	65,65,65,65	0
55	MG	CA	1648	1/1	0.89	0.14	51,51,51,51	0
55	MG	BA	3056	1/1	0.89	0.19	22,22,22,22	0
55	MG	BA	3020	1/1	0.89	0.13	5,5,5,5	0
55	MG	DA	3045	1/1	0.89	0.21	61,61,61,61	0
55	MG	BB	202	1/1	0.89	0.10	4,4,4,4	0
55	MG	CA	1633	1/1	0.89	0.80	82,82,82,82	0
55	MG	BA	3133	1/1	0.89	0.34	57,57,57,57	0
55	MG	AA	1614	1/1	0.89	0.19	66,66,66,66	0
55	MG	BA	3026	1/1	0.90	0.10	6,6,6,6	0
55	MG	AA	1658	1/1	0.90	0.16	35,35,35,35	0
55	MG	BA	3077	1/1	0.90	0.07	38,38,38,38	0
55	MG	AA	1643	1/1	0.90	0.15	23,23,23,23	0
55	MG	DA	3138	1/1	0.90	0.36	37,37,37,37	0
55	MG	DA	3139	1/1	0.90	0.56	47,47,47,47	0
55	MG	BA	3088	1/1	0.90	0.08	29,29,29,29	0
55	MG	DA	3043	1/1	0.90	0.07	67,67,67,67	0
55	MG	BA	3052	1/1	0.90	0.09	21,21,21,21	0
55	MG	BA	3091	1/1	0.90	0.05	48,48,48,48	0
55	MG	CA	1624	1/1	0.90	0.07	52,52,52,52	0
55	MG	DA	3047	1/1	0.90	0.14	71,71,71,71	0
55	MG	BA	3007	1/1	0.90	0.09	32,32,32,32	0
55	MG	DA	3049	1/1	0.90	0.10	69,69,69,69	0
55	MG	DA	3083	1/1	0.90	0.24	65,65,65,65	0
55	MG	DA	3053	1/1	0.90	0.13	39,39,39,39	0
55	MG	BB	203	1/1	0.90	0.09	7,7,7,7	0
55	MG	DA	3087	1/1	0.90	0.05	58,58,58,58	0
55	MG	BA	3145	1/1	0.90	0.16	26,26,26,26	0
55	MG	BA	3036	1/1	0.90	0.15	23,23,23,23	0
55	MG	CA	1630	1/1	0.90	0.65	102,102,102,102	0
55	MG	BA	3099	1/1	0.90	0.16	21,21,21,21	0
55	MG	DA	3130	1/1	0.90	0.19	43,43,43,43	0
55	MG	DB	202	1/1	0.90	0.13	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	CA	1632	1/1	0.90	0.07	75,75,75,75	0
55	MG	BA	3044	1/1	0.90	0.21	8,8,8,8	0
55	MG	DA	3142	1/1	0.91	0.40	39,39,39,39	0
55	MG	BA	3050	1/1	0.91	0.07	7,7,7,7	0
55	MG	AA	1631	1/1	0.91	0.16	52,52,52,52	0
55	MG	DA	3147	1/1	0.91	0.15	35,35,35,35	0
55	MG	DA	3065	1/1	0.91	0.07	41,41,41,41	0
55	MG	BA	3054	1/1	0.91	0.08	7,7,7,7	0
55	MG	CA	1645	1/1	0.91	0.12	32,32,32,32	0
55	MG	BA	3112	1/1	0.91	0.09	20,20,20,20	0
55	MG	BA	3073	1/1	0.91	0.15	9,9,9,9	0
55	MG	BA	3173	1/1	0.91	0.29	30,30,30,30	0
55	MG	BA	3075	1/1	0.91	0.14	6,6,6,6	0
55	MG	DA	3035	1/1	0.91	0.13	71,71,71,71	0
55	MG	DA	3128	1/1	0.91	0.07	74,74,74,74	0
55	MG	CA	1653	1/1	0.91	0.38	48,48,48,48	0
55	MG	DA	3101	1/1	0.91	0.08	63,63,63,63	0
55	MG	DA	3163	1/1	0.91	0.21	47,47,47,47	0
55	MG	DA	3080	1/1	0.91	0.10	91,91,91,91	0
55	MG	BA	3152	1/1	0.91	0.27	8,8,8,8	0
55	MG	CA	1618	1/1	0.91	0.21	35,35,35,35	0
55	MG	DA	3059	1/1	0.91	0.09	42,42,42,42	0
55	MG	DA	3107	1/1	0.91	0.19	56,56,56,56	0
55	MG	BA	3092	1/1	0.91	0.19	42,42,42,42	0
55	MG	BA	3040	1/1	0.91	0.39	2,2,2,2	0
55	MG	BA	3178	1/1	0.92	0.35	12,12,12,12	0
55	MG	AA	1668	1/1	0.92	0.38	33,33,33,33	0
55	MG	BA	3059	1/1	0.92	0.12	5,5,5,5	0
55	MG	DA	3108	1/1	0.92	0.14	55,55,55,55	0
55	MG	AA	1669	1/1	0.92	0.27	34,34,34,34	0
55	MG	DA	3146	1/1	0.92	0.11	41,41,41,41	0
55	MG	BA	3136	1/1	0.92	0.57	43,43,43,43	0
55	MG	DA	3148	1/1	0.92	0.22	51,51,51,51	0
55	MG	CA	1601	1/1	0.92	0.17	52,52,52,52	0
55	MG	DA	3031	1/1	0.92	0.14	59,59,59,59	0
55	MG	BA	3144	1/1	0.92	0.24	24,24,24,24	0
55	MG	BA	3095	1/1	0.92	0.08	14,14,14,14	0
55	MG	DA	3007	1/1	0.92	0.37	80,80,80,80	0
55	MG	BA	3066	1/1	0.92	0.14	2,2,2,2	0
55	MG	AA	1610	1/1	0.92	0.15	51,51,51,51	0
55	MG	DA	3064	1/1	0.92	0.19	48,48,48,48	0
55	MG	AA	1604	1/1	0.92	0.08	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	BA	3111	1/1	0.92	0.08	27,27,27,27	0
55	MG	DA	3095	1/1	0.92	0.24	69,69,69,69	0
55	MG	DA	3129	1/1	0.92	0.13	70,70,70,70	0
55	MG	DA	3096	1/1	0.92	0.09	54,54,54,54	0
55	MG	AA	1661	1/1	0.92	0.35	23,23,23,23	0
55	MG	AA	1616	1/1	0.92	0.09	62,62,62,62	0
55	MG	AA	1663	1/1	0.92	0.23	49,49,49,49	0
55	MG	AA	1602	1/1	0.92	0.38	53,53,53,53	0
55	MG	AA	1609	1/1	0.92	0.08	33,33,33,33	0
55	MG	BA	3034	1/1	0.92	0.13	5,5,5,5	0
55	MG	AA	1655	1/1	0.93	0.14	20,20,20,20	0
55	MG	BA	3179	1/1	0.93	0.34	30,30,30,30	0
55	MG	BA	3057	1/1	0.93	0.21	20,20,20,20	0
55	MG	BA	3181	1/1	0.93	0.12	26,26,26,26	0
55	MG	BA	3038	1/1	0.93	0.14	1,1,1,1	0
55	MG	BA	3023	1/1	0.93	0.17	0,0,0,0	0
55	MG	AA	1605	1/1	0.93	0.20	29,29,29,29	0
55	MG	AA	1606	1/1	0.93	0.06	58,58,58,58	0
55	MG	BA	3071	1/1	0.93	0.14	17,17,17,17	0
55	MG	BA	3102	1/1	0.93	0.18	17,17,17,17	0
55	MG	BA	3151	1/1	0.93	0.14	23,23,23,23	0
55	MG	BA	3027	1/1	0.93	0.35	36,36,36,36	0
55	MG	CA	1639	1/1	0.93	0.13	43,43,43,43	0
55	MG	CA	1640	1/1	0.93	0.15	36,36,36,36	0
55	MG	BA	3074	1/1	0.93	0.21	32,32,32,32	0
55	MG	BA	3014	1/1	0.93	0.19	26,26,26,26	0
55	MG	DA	3159	1/1	0.93	0.26	57,57,57,57	0
55	MG	BA	3001	1/1	0.93	0.05	21,21,21,21	0
55	MG	AA	1619	1/1	0.93	0.15	65,65,65,65	0
55	MG	BA	3032	1/1	0.93	0.12	2,2,2,2	0
55	MG	CA	1619	1/1	0.93	0.12	27,27,27,27	0
55	MG	AA	1629	1/1	0.93	0.17	54,54,54,54	0
55	MG	BA	3120	1/1	0.93	0.12	11,11,11,11	0
55	MG	BA	3171	1/1	0.93	0.17	20,20,20,20	0
55	MG	DA	3036	1/1	0.93	0.12	57,57,57,57	0
55	MG	CA	1623	1/1	0.93	0.17	66,66,66,66	0
55	MG	BA	3123	1/1	0.93	0.13	11,11,11,11	0
55	MG	BA	3138	1/1	0.94	0.30	0,0,0,0	0
55	MG	DA	3030	1/1	0.94	0.27	61,61,61,61	0
55	MG	BA	3140	1/1	0.94	0.15	7,7,7,7	0
55	MG	AM	201	1/1	0.94	0.61	50,50,50,50	0
55	MG	CA	1641	1/1	0.94	0.40	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
55	MG	AA	1650	1/1	0.94	0.25	20,20,20,20	0
55	MG	AA	1638	1/1	0.94	0.11	63,63,63,63	0
55	MG	BA	3108	1/1	0.94	0.16	5,5,5,5	0
55	MG	BA	3053	1/1	0.94	0.18	0,0,0,0	0
55	MG	AA	1613	1/1	0.94	0.07	23,23,23,23	0
55	MG	BA	3155	1/1	0.94	0.18	2,2,2,2	0
55	MG	CA	1610	1/1	0.94	0.07	58,58,58,58	0
55	MG	AA	1640	1/1	0.94	0.10	57,57,57,57	0
55	MG	DA	3141	1/1	0.94	0.42	45,45,45,45	0
55	MG	CA	1614	1/1	0.94	0.05	52,52,52,52	0
55	MG	DA	3001	1/1	0.94	0.08	37,37,37,37	0
55	MG	BA	3159	1/1	0.94	0.14	24,24,24,24	0
55	MG	CA	1616	1/1	0.94	0.10	38,38,38,38	0
55	MG	BA	3079	1/1	0.94	0.09	21,21,21,21	0
55	MG	AA	1608	1/1	0.94	0.15	20,20,20,20	0
55	MG	BA	3087	1/1	0.94	0.09	27,27,27,27	0
55	MG	BA	3041	1/1	0.94	0.10	11,11,11,11	0
55	MG	BA	3089	1/1	0.94	0.14	1,1,1,1	0
55	MG	BA	3122	1/1	0.94	0.17	0,0,0,0	0
55	MG	AA	1625	1/1	0.94	0.09	51,51,51,51	0
55	MG	BA	3174	1/1	0.94	0.14	5,5,5,5	0
55	MG	BA	3175	1/1	0.94	0.10	9,9,9,9	0
55	MG	BA	3177	1/1	0.94	0.10	9,9,9,9	0
55	MG	AA	1615	1/1	0.94	0.13	63,63,63,63	0
55	MG	BA	3065	1/1	0.94	0.12	1,1,1,1	0
55	MG	BA	3046	1/1	0.94	0.17	3,3,3,3	0
55	MG	AA	1620	1/1	0.94	0.06	55,55,55,55	0
55	MG	DA	3068	1/1	0.94	0.07	60,60,60,60	0
55	MG	DA	3022	1/1	0.94	0.13	43,43,43,43	0
55	MG	BA	3183	1/1	0.94	0.26	22,22,22,22	0
55	MG	DA	3119	1/1	0.94	0.07	58,58,58,58	0
55	MG	DA	3167	1/1	0.94	0.13	30,30,30,30	0
55	MG	BA	3097	1/1	0.94	0.12	0,0,0,0	0
55	MG	DA	3026	1/1	0.94	0.70	75,75,75,75	0
55	MG	BA	3193	1/1	0.94	0.17	12,12,12,12	0
55	MG	BB	201	1/1	0.94	0.08	28,28,28,28	0
55	MG	DA	3051	1/1	0.95	0.05	33,33,33,33	0
55	MG	DA	3052	1/1	0.95	0.06	47,47,47,47	0
55	MG	CA	1642	1/1	0.95	0.20	25,25,25,25	0
55	MG	BA	3182	1/1	0.95	0.22	14,14,14,14	0
55	MG	AA	1660	1/1	0.95	0.09	41,41,41,41	0
55	MG	CA	1647	1/1	0.95	0.31	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	BA	3184	1/1	0.95	0.13	8,8,8,8	0
55	MG	BA	3039	1/1	0.95	0.22	1,1,1,1	0
55	MG	DA	3097	1/1	0.95	0.15	67,67,67,67	0
55	MG	CA	1651	1/1	0.95	0.25	72,72,72,72	0
55	MG	BA	3084	1/1	0.95	0.10	7,7,7,7	0
55	MG	DA	3143	1/1	0.95	0.18	35,35,35,35	0
55	MG	BA	3194	1/1	0.95	0.19	22,22,22,22	0
55	MG	BA	3195	1/1	0.95	0.14	36,36,36,36	0
55	MG	BA	3137	1/1	0.95	0.29	2,2,2,2	0
55	MG	BA	3096	1/1	0.95	0.18	2,2,2,2	0
55	MG	AA	1666	1/1	0.95	0.25	32,32,32,32	0
55	MG	DA	3066	1/1	0.95	0.12	45,45,45,45	0
55	MG	BA	3169	1/1	0.95	0.10	4,4,4,4	0
55	MG	DA	3034	1/1	0.95	0.20	58,58,58,58	0
55	MG	BA	3064	1/1	0.95	0.15	0,0,0,0	0
55	MG	CA	1603	1/1	0.95	0.15	45,45,45,45	0
55	MG	DA	3037	1/1	0.95	0.08	76,76,76,76	0
55	MG	DA	3114	1/1	0.95	0.09	52,52,52,52	0
55	MG	BA	3024	1/1	0.95	0.07	3,3,3,3	0
55	MG	DA	3039	1/1	0.95	0.10	53,53,53,53	0
55	MG	BA	3101	1/1	0.95	0.09	11,11,11,11	0
55	MG	AA	1618	1/1	0.95	0.09	34,34,34,34	0
55	MG	BA	3176	1/1	0.95	0.27	24,24,24,24	0
55	MG	BA	3104	1/1	0.95	0.26	0,0,0,0	0
55	MG	BA	3105	1/1	0.95	0.22	0,0,0,0	0
55	MG	DA	3123	1/1	0.95	0.15	44,44,44,44	0
55	MG	DA	3124	1/1	0.95	0.16	41,41,41,41	0
55	MG	DA	3012	1/1	0.95	0.14	39,39,39,39	0
55	MG	BA	3125	1/1	0.95	0.17	2,2,2,2	0
55	MG	CA	1612	1/1	0.95	0.05	43,43,43,43	0
55	MG	BA	3156	1/1	0.95	0.15	9,9,9,9	0
55	MG	BA	3068	1/1	0.95	0.17	1,1,1,1	0
55	MG	BA	3117	1/1	0.96	0.16	1,1,1,1	0
55	MG	AA	1633	1/1	0.96	0.08	35,35,35,35	0
55	MG	DA	3003	1/1	0.96	0.13	66,66,66,66	0
55	MG	BA	3082	1/1	0.96	0.07	6,6,6,6	0
55	MG	BA	3083	1/1	0.96	0.22	34,34,34,34	0
55	MG	BA	3185	1/1	0.96	0.14	5,5,5,5	0
55	MG	BA	3186	1/1	0.96	0.23	12,12,12,12	0
55	MG	BA	3188	1/1	0.96	0.10	35,35,35,35	0
55	MG	BA	3121	1/1	0.96	0.06	14,14,14,14	0
55	MG	BA	3191	1/1	0.96	0.18	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	BA	3192	1/1	0.96	0.23	11,11,11,11	0
55	MG	BA	3069	1/1	0.96	0.15	64,64,64,64	0
55	MG	BA	3100	1/1	0.96	0.10	9,9,9,9	0
55	MG	BA	3085	1/1	0.96	0.17	11,11,11,11	0
55	MG	AA	1626	1/1	0.96	0.21	26,26,26,26	0
55	MG	CA	1634	1/1	0.96	0.06	58,58,58,58	0
55	MG	BA	3163	1/1	0.96	0.14	27,27,27,27	0
55	MG	BA	3165	1/1	0.96	0.12	3,3,3,3	0
55	MG	BA	3126	1/1	0.96	0.15	3,3,3,3	0
55	MG	BA	3103	1/1	0.96	0.07	7,7,7,7	0
55	MG	DA	3023	1/1	0.96	0.10	60,60,60,60	0
55	MG	BA	3012	1/1	0.96	0.16	0,0,0,0	0
55	MG	DA	3105	1/1	0.96	0.12	52,52,52,52	0
55	MG	BA	3049	1/1	0.96	0.14	3,3,3,3	0
55	MG	BA	3170	1/1	0.96	0.26	22,22,22,22	0
55	MG	BA	3022	1/1	0.96	0.15	0,0,0,0	0
55	MG	DA	3110	1/1	0.96	0.24	45,45,45,45	0
55	MG	CA	1644	1/1	0.96	0.38	36,36,36,36	0
55	MG	DA	3156	1/1	0.96	0.13	58,58,58,58	0
55	MG	CA	1607	1/1	0.96	0.14	55,55,55,55	0
55	MG	BA	3172	1/1	0.96	0.12	16,16,16,16	0
55	MG	BA	3013	1/1	0.96	0.17	0,0,0,0	0
55	MG	BA	3110	1/1	0.96	0.11	26,26,26,26	0
55	MG	AA	1637	1/1	0.96	0.14	16,16,16,16	0
55	MG	DA	3117	1/1	0.96	0.12	55,55,55,55	0
55	MG	BA	3143	1/1	0.96	0.32	3,3,3,3	0
55	MG	DA	3075	1/1	0.96	0.26	61,61,61,61	0
55	MG	DA	3076	1/1	0.96	0.13	59,59,59,59	0
55	MG	CA	1613	1/1	0.96	0.14	17,17,17,17	0
55	MG	BA	3005	1/1	0.96	0.17	43,43,43,43	0
55	MG	BA	3094	1/1	0.96	0.12	20,20,20,20	0
55	MG	BA	3146	1/1	0.96	0.21	22,22,22,22	0
55	MG	BA	3067	1/1	0.96	0.20	0,0,0,0	0
55	MG	BA	3127	1/1	0.97	0.10	2,2,2,2	0
55	MG	BA	3162	1/1	0.97	0.14	23,23,23,23	0
55	MG	BA	3062	1/1	0.97	0.11	4,4,4,4	0
55	MG	BB	204	1/1	0.97	0.36	0,0,0,0	0
55	MG	BA	3130	1/1	0.97	0.17	2,2,2,2	0
55	MG	DA	3020	1/1	0.97	0.19	44,44,44,44	0
55	MG	BA	3131	1/1	0.97	0.32	37,37,37,37	0
55	MG	BA	3132	1/1	0.97	0.20	32,32,32,32	0
55	MG	DA	3140	1/1	0.97	0.23	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
55	MG	BA	3043	1/1	0.97	0.06	23,23,23,23	0
55	MG	BA	3134	1/1	0.97	0.09	3,3,3,3	0
55	MG	BA	3009	1/1	0.97	0.08	2,2,2,2	0
55	MG	CA	1643	1/1	0.97	0.37	41,41,41,41	0
55	MG	AA	1649	1/1	0.97	0.12	28,28,28,28	0
55	MG	AA	1603	1/1	0.97	0.21	57,57,57,57	0
55	MG	AA	1641	1/1	0.97	0.12	7,7,7,7	0
55	MG	AA	1611	1/1	0.97	0.07	21,21,21,21	0
55	MG	DA	3109	1/1	0.97	0.19	30,30,30,30	0
55	MG	BA	3142	1/1	0.97	0.21	0,0,0,0	0
55	MG	BA	3030	1/1	0.97	0.16	3,3,3,3	0
55	MG	AA	1653	1/1	0.97	0.18	34,34,34,34	0
55	MG	BA	3116	1/1	0.97	0.19	30,30,30,30	0
55	MG	BA	3072	1/1	0.97	0.19	2,2,2,2	0
55	MG	BA	3147	1/1	0.97	0.14	11,11,11,11	0
55	MG	CA	1617	1/1	0.97	0.09	41,41,41,41	0
55	MG	BA	3148	1/1	0.97	0.14	13,13,13,13	0
55	MG	BA	3149	1/1	0.97	0.23	0,0,0,0	0
55	MG	AA	1664	1/1	0.97	0.13	51,51,51,51	0
55	MG	BA	3018	1/1	0.97	0.08	10,10,10,10	0
55	MG	AA	1654	1/1	0.97	0.14	41,41,41,41	0
55	MG	DA	3162	1/1	0.97	0.11	48,48,48,48	0
55	MG	BA	3153	1/1	0.97	0.16	2,2,2,2	0
55	MG	AA	1632	1/1	0.97	0.13	40,40,40,40	0
55	MG	BA	3189	1/1	0.97	0.20	0,0,0,0	0
55	MG	AA	1628	1/1	0.97	0.04	39,39,39,39	0
55	MG	BA	3006	1/1	0.97	0.07	13,13,13,13	0
55	MG	BA	3058	1/1	0.97	0.07	15,15,15,15	0
55	MG	BA	3158	1/1	0.97	0.12	15,15,15,15	0
55	MG	AA	1622	1/1	0.97	0.22	21,21,21,21	0
55	MG	BA	3042	1/1	0.97	0.14	1,1,1,1	0
56	ZN	D4	101	1/1	0.97	0.07	74,74,74,74	0
55	MG	CA	1625	1/1	0.98	0.17	18,18,18,18	0
55	MG	BA	3106	1/1	0.98	0.24	0,0,0,0	0
55	MG	BA	3081	1/1	0.98	0.10	0,0,0,0	0
55	MG	BA	3021	1/1	0.98	0.15	2,2,2,2	0
55	MG	BA	3139	1/1	0.98	0.27	0,0,0,0	0
55	MG	CA	1649	1/1	0.98	0.22	24,24,24,24	0
55	MG	BA	3060	1/1	0.98	0.13	29,29,29,29	0
55	MG	BA	3051	1/1	0.98	0.14	4,4,4,4	0
55	MG	DA	3131	1/1	0.98	0.13	50,50,50,50	0
55	MG	BA	3035	1/1	0.98	0.07	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
55	MG	DA	3017	1/1	0.98	0.18	39,39,39,39	0
55	MG	BA	3008	1/1	0.98	0.13	0,0,0,0	0
55	MG	DA	3086	1/1	0.98	0.12	61,61,61,61	0
55	MG	BA	3128	1/1	0.98	0.19	3,3,3,3	0
55	MG	BA	3114	1/1	0.98	0.09	28,28,28,28	0
55	MG	BA	3037	1/1	0.98	0.19	0,0,0,0	0
55	MG	BA	3164	1/1	0.98	0.30	6,6,6,6	0
55	MG	BA	3017	1/1	0.98	0.16	0,0,0,0	0
55	MG	AA	1612	1/1	0.98	0.13	38,38,38,38	0
55	MG	BA	3078	1/1	0.98	0.04	38,38,38,38	0
55	MG	BA	3010	1/1	0.98	0.09	1,1,1,1	0
55	MG	AA	1621	1/1	0.98	0.09	37,37,37,37	0
55	MG	BA	3187	1/1	0.98	0.21	3,3,3,3	0
55	MG	DA	3050	1/1	0.98	0.12	52,52,52,52	0
55	MG	DA	3074	1/1	0.98	0.08	47,47,47,47	0
55	MG	AA	1642	1/1	0.99	0.07	25,25,25,25	0
55	MG	BA	3107	1/1	0.99	0.14	3,3,3,3	0
55	MG	BA	3086	1/1	0.99	0.20	0,0,0,0	0
55	MG	BA	3141	1/1	0.99	0.40	0,0,0,0	0
55	MG	DA	3067	1/1	0.99	0.18	43,43,43,43	0
55	MG	AA	1656	1/1	0.99	0.07	32,32,32,32	0
55	MG	BA	3063	1/1	0.99	0.13	2,2,2,2	0
55	MG	BA	3033	1/1	0.99	0.20	0,0,0,0	0
55	MG	AA	1647	1/1	0.99	0.17	44,44,44,44	0
55	MG	AA	1645	1/1	0.99	0.09	42,42,42,42	0
56	ZN	B4	101	1/1	1.00	0.08	76,76,76,76	0

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

There are no such residues in this entry.