



wwPDB X-ray Structure Validation Summary Report ⓘ

Sep 14, 2023 – 11:26 AM EDT

PDB ID : 4V5Y
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with paromomycin and ribosome recycling factor (RRF).
Authors : Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on : 2007-06-19
Resolution : 4.45 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 : 2.35.1
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35.1

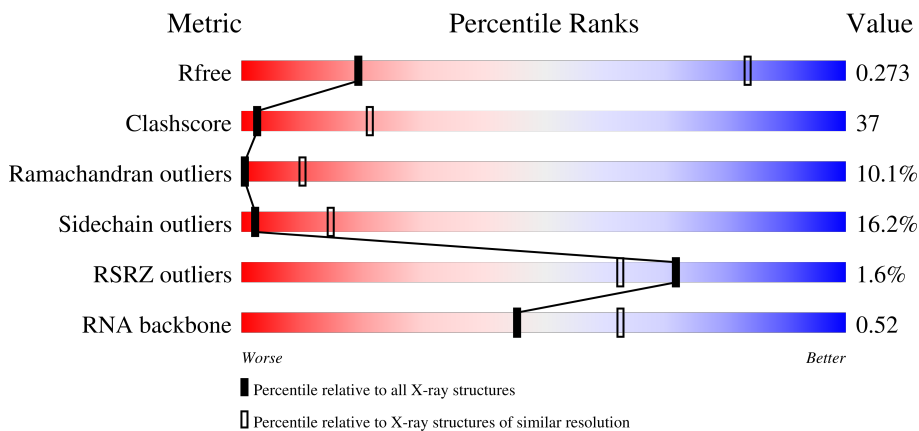
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.45 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.



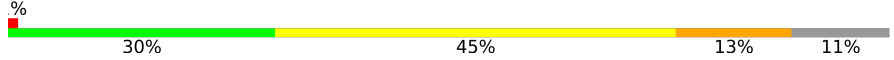


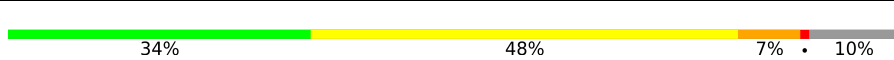
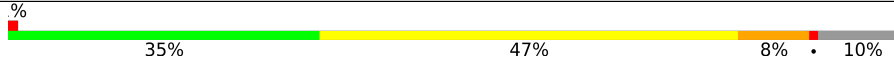
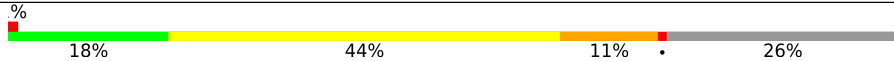
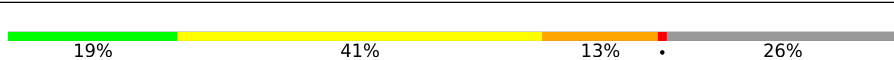
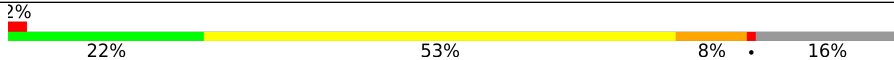
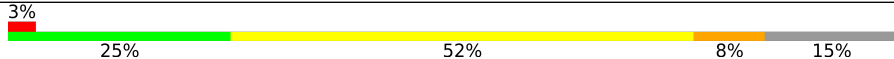
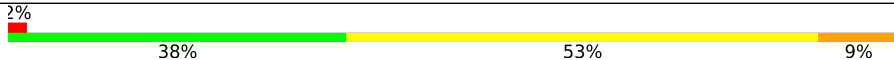
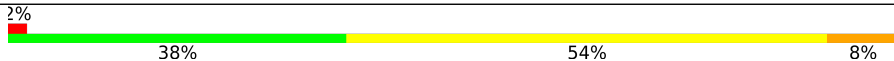
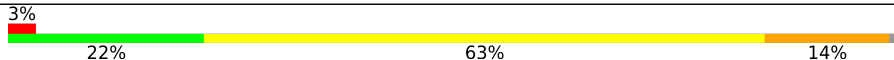
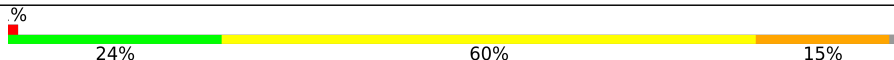
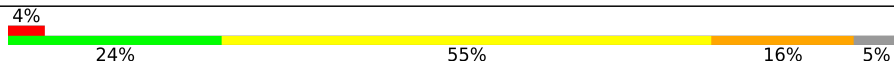
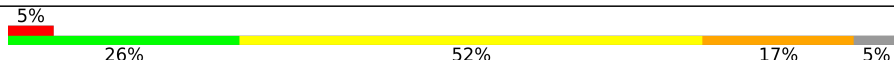
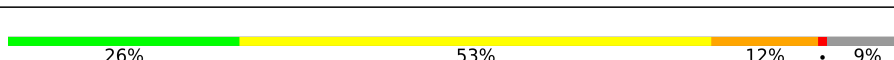
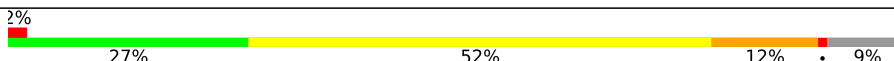
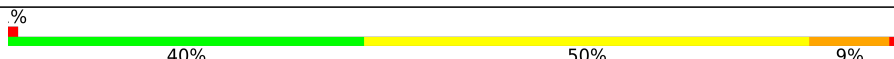
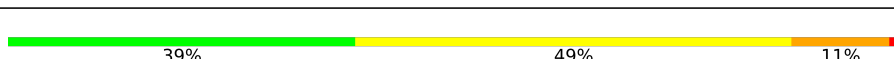
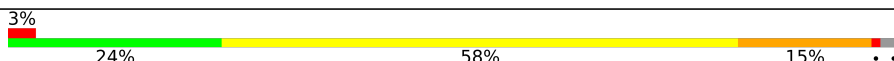
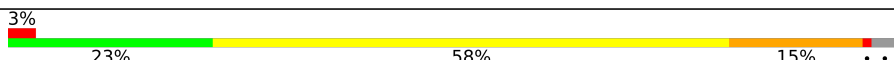
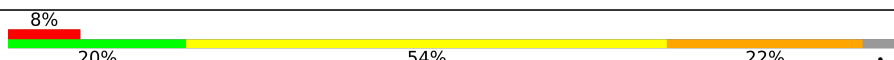
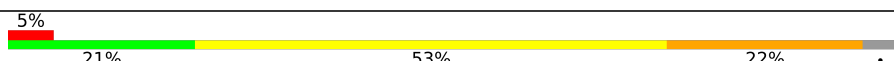
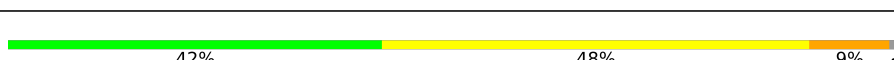
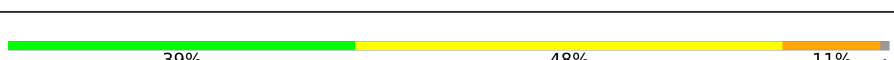
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1051 (5.12-3.80)
Clashscore	141614	1119 (5.12-3.80)
Ramachandran outliers	138981	1065 (5.12-3.80)
Sidechain outliers	138945	1047 (5.12-3.80)
RSRZ outliers	127900	1099 (5.20-3.70)
RNA backbone	3102	1060 (5.90-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	1542	 2% 23% 64% 12%
1	CA	1542	 2% 24% 63% 11%
2	AC	232	 2% 28% 47% 13% 11%

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Mol	Chain	Length	Quality of chain
2	CC	232	
3	AD	205	
3	CD	205	
4	AE	166	
4	CE	166	
5	AF	135	
5	CF	135	
6	AG	178	
6	CG	178	
7	AH	129	
7	CH	129	
8	AI	129	
8	CI	129	
9	AJ	103	
9	CJ	103	
10	AK	128	
10	CK	128	
11	AL	123	
11	CL	123	
12	AM	117	
12	CM	117	
13	AN	100	
13	CN	100	
14	AO	89	
14	CO	89	

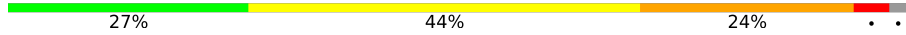


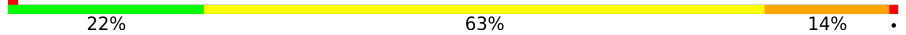
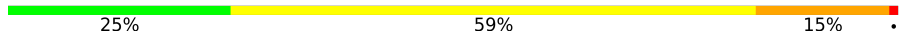
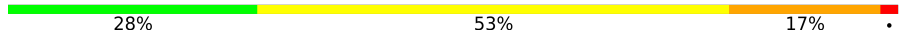
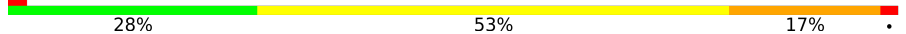
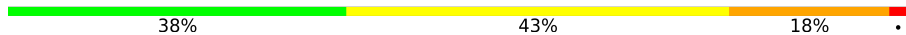
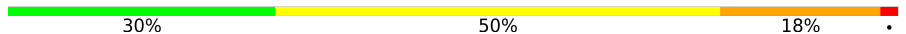

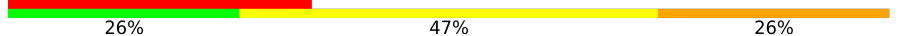
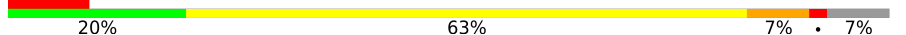
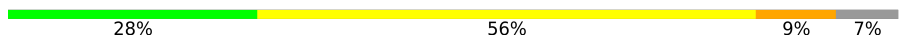
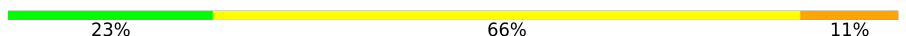





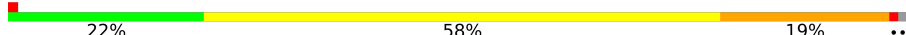
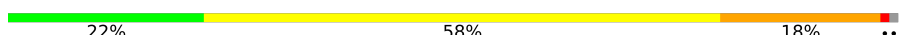
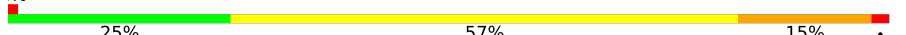
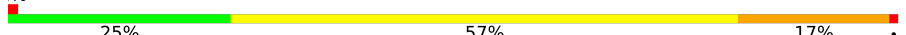


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Mol	Chain	Length	Quality of chain
15	AP	82	4% 38% 55% 7%
15	CP	82	6% 35% 55% 7%
16	AQ	83	39% 47% 11%
16	CQ	83	35% 51% 12%
17	AR	74	24% 47% 26%
17	CR	74	3% 23% 49% 26%
18	AS	91	4% 19% 54% 13% 13%
18	CS	91	21% 53% 12% 12%
19	AT	86	36% 53% 8% 2%
19	CT	86	38% 51% 8% 2%
20	AB	240	2% 23% 52% 15% 9%
20	CB	240	4% 22% 52% 16% 9%
21	AU	70	19% 34% 17% 27%
21	CU	70	3% 17% 36% 17% 27%
22	BA	120	19% 62% 14% 2%
22	DA	120	2% 20% 62% 13% 2%
23	BB	2904	23% 63% 11% 2%
23	DB	2904	22% 63% 12% 2%
24	BI	141	6% 35% 60% 5%
24	DI	141	9% 33% 60% 7%
25	BC	272	25% 54% 19% 2%
25	DC	272	25% 54% 18% 2%
26	BD	209	3% 26% 54% 18% 2%
26	DD	209	25% 55% 17% 2%
27	BK	123	31% 41% 22% 2%

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Mol	Chain	Length	Quality of chain
27	DK	123	 27% 44% 24% . .
28	BP	114	 25% 58% 13% . .
28	DP	114	 25% 59% 12% . .
29	BE	201	 22% 63% 14% . .
29	DE	201	 25% 59% 15% . .
30	BY	58	 28% 53% 17% . .
30	DY	58	 2% 28% 53% 17% . .
31	B0	56	 38% 43% 18% . .
31	D0	56	 30% 50% 18% . .
32	B4	38	 32% 32% 42% 26%
32	D4	38	 34% 26% 47% 26%
33	B1	54	 9% 20% 63% 7% . . 7%
33	D1	54	 28% 56% 9% 7%
34	B3	64	 23% 66% 11%
34	D3	64	 23% 64% 12%
35	BV	94	 28% 62% 10% . .
35	DV	94	 27% 64% 9% . .
36	B2	46	 41% 48% 11%
36	D2	46	 33% 59% 9%
37	BL	144	 22% 58% 19% . .
37	DL	144	 22% 58% 18% . .
38	BM	136	 25% 57% 15% . .
38	DM	136	 25% 57% 17% . .
39	BX	63	 8% 14% 59% 27%
39	DX	63	 3% 14% 60% 25%

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Mol	Chain	Length	Quality of chain
40	BH	149	
40	DH	149	
41	BJ	142	
41	DJ	142	
42	BN	127	
42	DN	127	
43	BO	117	
43	DO	117	
44	BQ	117	
44	DQ	117	
45	BS	110	
45	DS	110	
46	BU	103	
46	DU	103	
47	BF	178	
47	DF	178	
48	BG	176	
48	DG	176	
49	BR	103	
49	DR	103	
50	BT	100	
50	DT	100	
51	BZ	78	
51	DZ	78	
52	BW	84	

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Mol	Chain	Length	Quality of chain
52	DW	84	
53	B6	185	
53	D6	185	

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	MG	AA	1608	-	-	-	X
54	MG	AA	1626	-	-	-	X
54	MG	AA	1632	-	-	-	X
54	MG	AA	1639	-	-	-	X
54	MG	AA	1657	-	-	-	X
54	MG	AA	1659	-	-	-	X
54	MG	CA	1608	-	-	-	X
54	MG	CA	1657	-	-	-	X
54	MG	CE	201	-	-	-	X
54	MG	DB	3052	-	-	-	X
55	PAR	BB	3111	-	-	-	X

2 Entry composition [i](#)

There are 57 unique types of molecules in this entry. The entry contains 287128 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	1530	Total 32831	C 14642	N 6024	O 10635	P 1530	0	0	0
1	CA	1530	Total 32831	C 14642	N 6024	O 10635	P 1530	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AC	206	Total 1624	C 1028	N 305	O 288	S 3	0	0	0
2	CC	206	Total 1624	C 1028	N 305	O 288	S 3	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S4.

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

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	AE	150	Total 1105	C 687	N 211	O 201	S 6	0	0	0
4	CE	150	Total 1105	C 687	N 211	O 201	S 6	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
5	CF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			
6	CG	152	Total	C	N	O	S	0	0	0
			1196	745	230	217	4			

- Molecule 7 is a protein called 30S ribosomal protein S8.

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

- Molecule 8 is a protein called 30S ribosomal protein S9.

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

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
9	CJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
11	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
12	CM	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

- Molecule 13 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
13	CN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

- Molecule 14 is a protein called 30S ribosomal protein S15.

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

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
15	CP	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
16	CQ	81	Total	C	N	O	S	0	0	0
			657	417	122	115	3			

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AR	55	Total	C	N	O	0	0	0
			455	288	86	81			
17	CR	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
18	CS	80	Total	C	N	O	S	0	0	0
			644	413	121	108	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
19	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 20 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
20	CB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- 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
			425	265	86	73	1			
21	CU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 22 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			
22	DA	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			
23	DB	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 24 is a protein called 50S ribosomal protein L11.

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

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
25	DC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 26 is a protein called 50S ribosomal protein L3.

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

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

- Molecule 27 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BK	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			
27	DK	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			

- Molecule 28 is a protein called 50S ribosomal protein L19.

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

- Molecule 29 is a protein called 50S ribosomal protein L4.

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

- Molecule 30 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BY	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
30	DY	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 31 is a protein called 50S ribosomal protein L32.

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

- Molecule 32 is a protein called 50S ribosomal protein L36.

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

- Molecule 33 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
33	B1	50	Total	C	N	O	0	0	0
			409	263	75	71			
33	D1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 34 is a protein called 50S ribosomal protein L35.

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

- Molecule 35 is a protein called 50S ribosomal protein L25.

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

- Molecule 36 is a protein called 50S ribosomal protein L34.

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

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

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

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

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

- Molecule 39 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BX	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
39	DX	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 40 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
40	DH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 41 is a protein called 50S ribosomal protein L13.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	DN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

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

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

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

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

- Molecule 45 is a protein called 50S ribosomal protein L22.

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
46	BU	102	Total	C	N	O	0	0	0
			779	492	146	141			
46	DU	102	Total	C	N	O	0	0	0
			779	492	146	141			

- Molecule 47 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			
47	DF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 48 is a protein called 50S ribosomal protein L6.

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

- Molecule 49 is a protein called 50S ribosomal protein L21.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
50	DT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BZ	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
51	DZ	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			
52	DW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

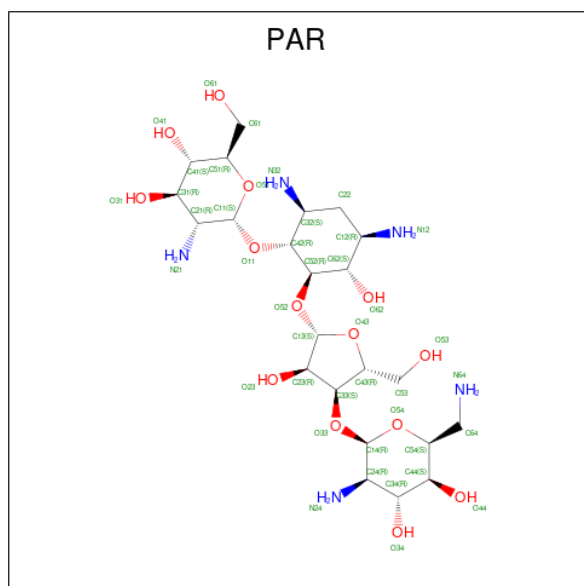
- Molecule 53 is a protein called 50S ribosomal protein RRF.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
53	B6	185	Total 1478	C 924	N 270	O 282	S 2	0	0	0
53	D6	185	Total 1478	C 924	N 270	O 282	S 2	0	0	0

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
54	AA	60	Total 60	Mg 60	0	0
54	BB	110	Total 110	Mg 110	0	0
54	CA	61	Total 61	Mg 61	0	0
54	CE	1	Total 1	Mg 1	0	0
54	DB	111	Total 111	Mg 111	0	0

- Molecule 55 is PAROMOMYCIN (three-letter code: PAR) (formula: C₂₃H₄₅N₅O₁₄).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
55	AA	1	Total 42	C 23	N 5	O 14	0	0
55	BB	1	Total 42	C 23	N 5	O 14	0	0
55	CA	1	Total 42	C 23	N 5	O 14	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
55	DB	1	42	23	5	14	0	0

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

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
57	AA	291	291	291	0	0
57	AL	3	3	3	0	0
57	AN	4	4	4	0	0
57	AT	2	2	2	0	0
57	BB	495	495	495	0	0
57	BC	6	6	6	0	0
57	BD	1	1	1	0	0
57	BE	2	2	2	0	0
57	BL	1	1	1	0	0
57	BT	1	1	1	0	0
57	CA	296	296	296	0	0
57	CE	3	3	3	0	0
57	CL	4	4	4	0	0
57	CN	4	4	4	0	0

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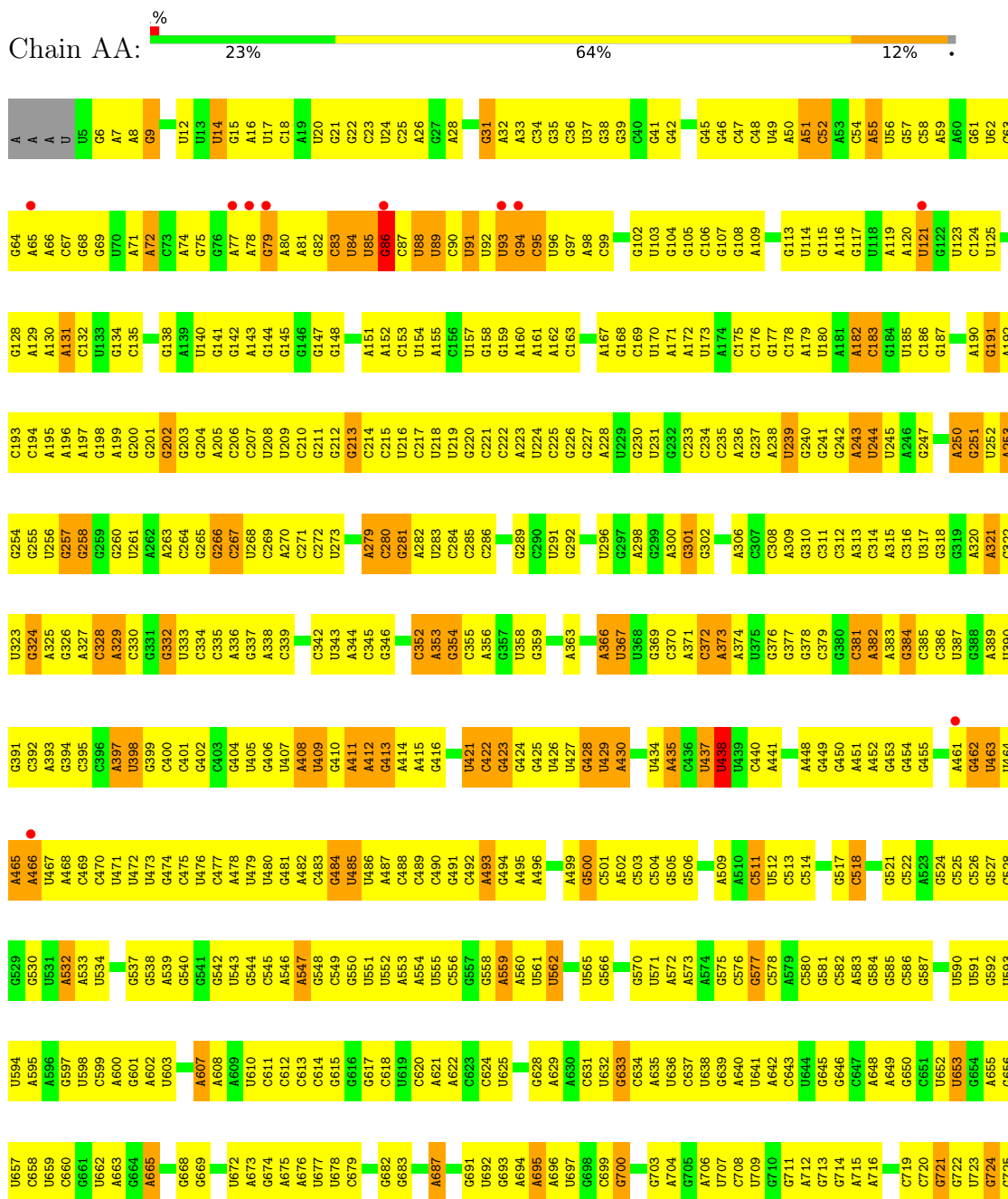
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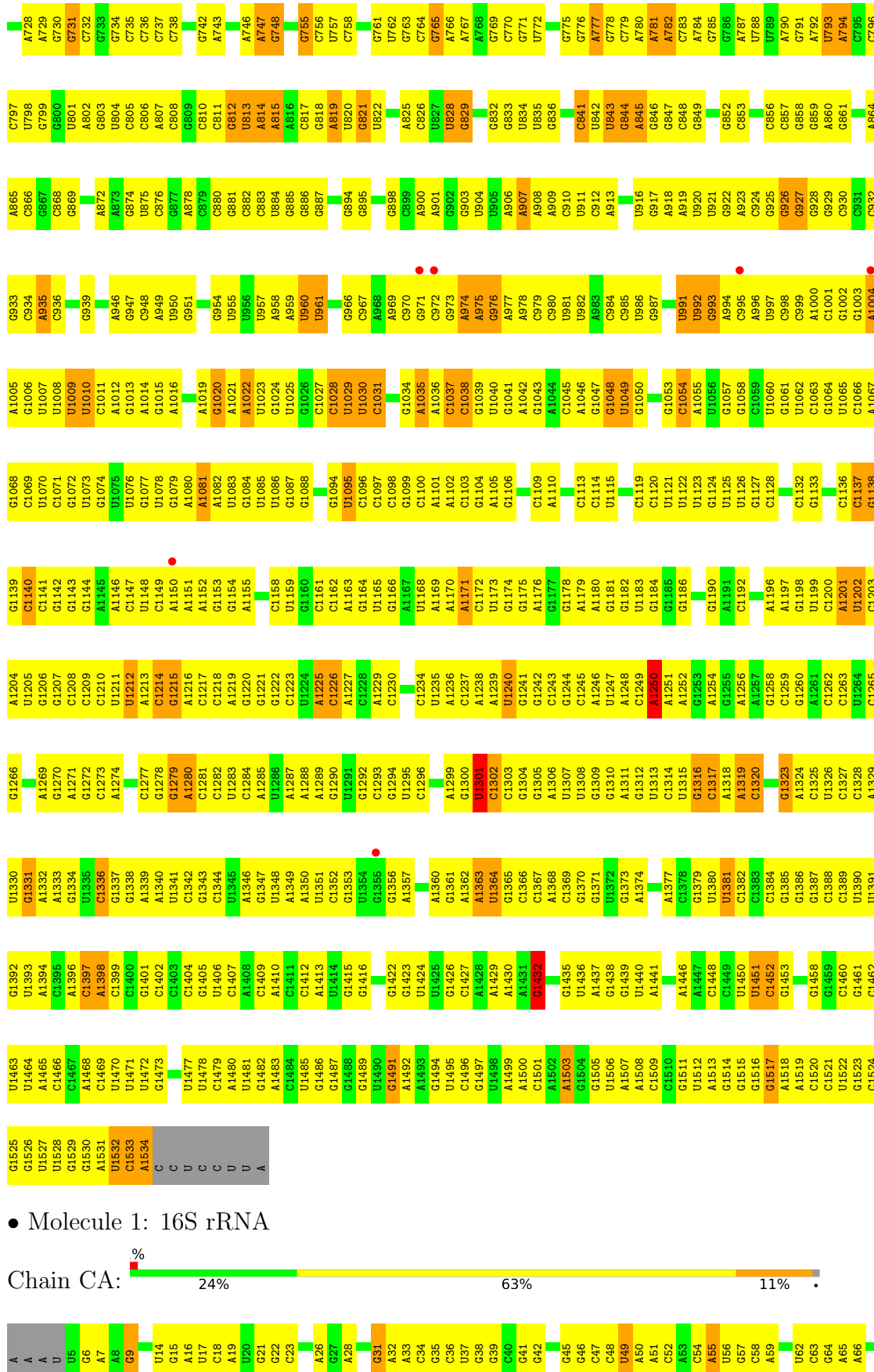
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	CP	1	Total O 1 1	0	0
57	CT	1	Total O 1 1	0	0
57	DB	502	Total O 502 502	0	0
57	DC	4	Total O 4 4	0	0
57	DD	1	Total O 1 1	0	0
57	DE	1	Total O 1 1	0	0
57	DL	2	Total O 2 2	0	0
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57	DR	1	Total O 1 1	0	0

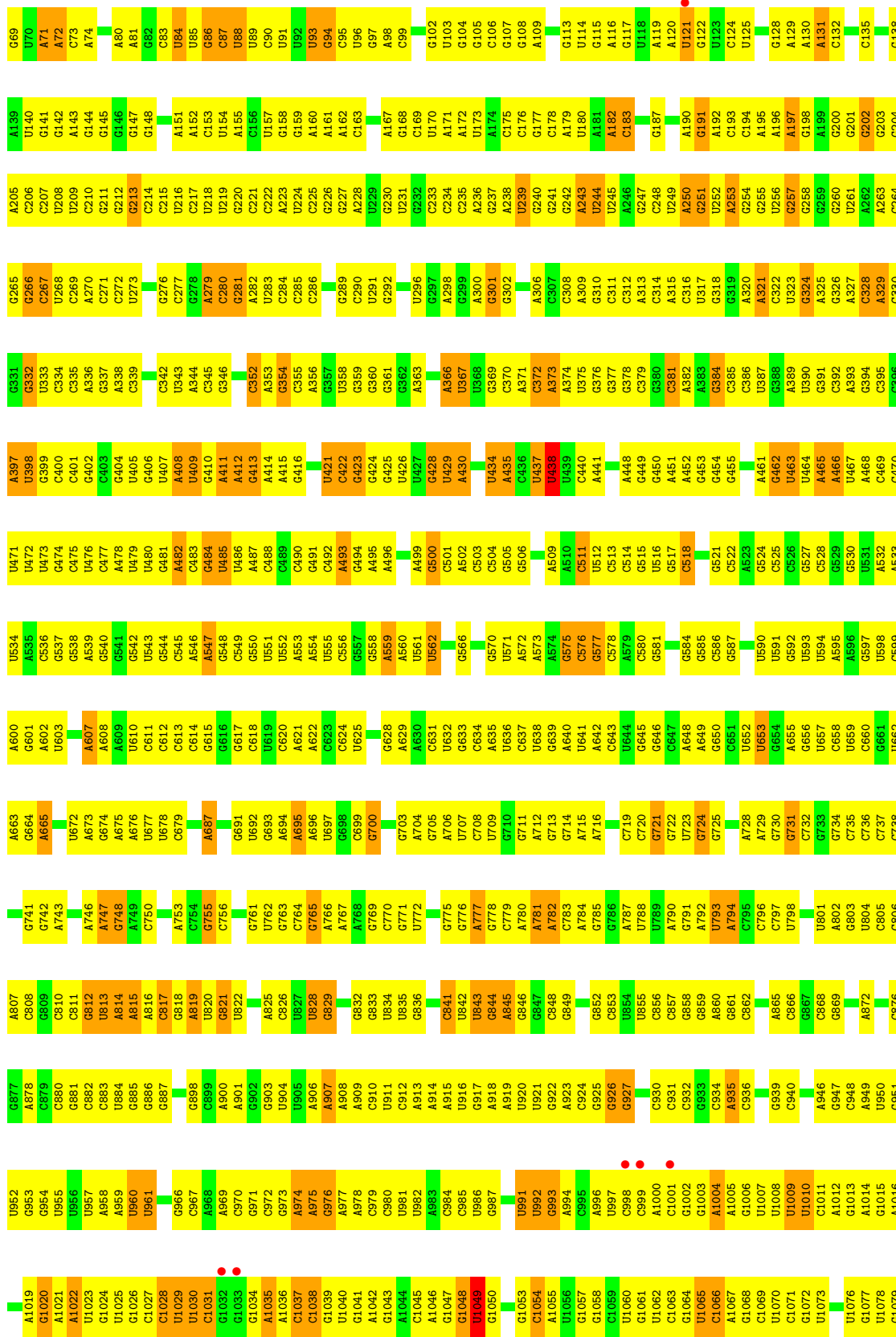
3 Residue-property plots

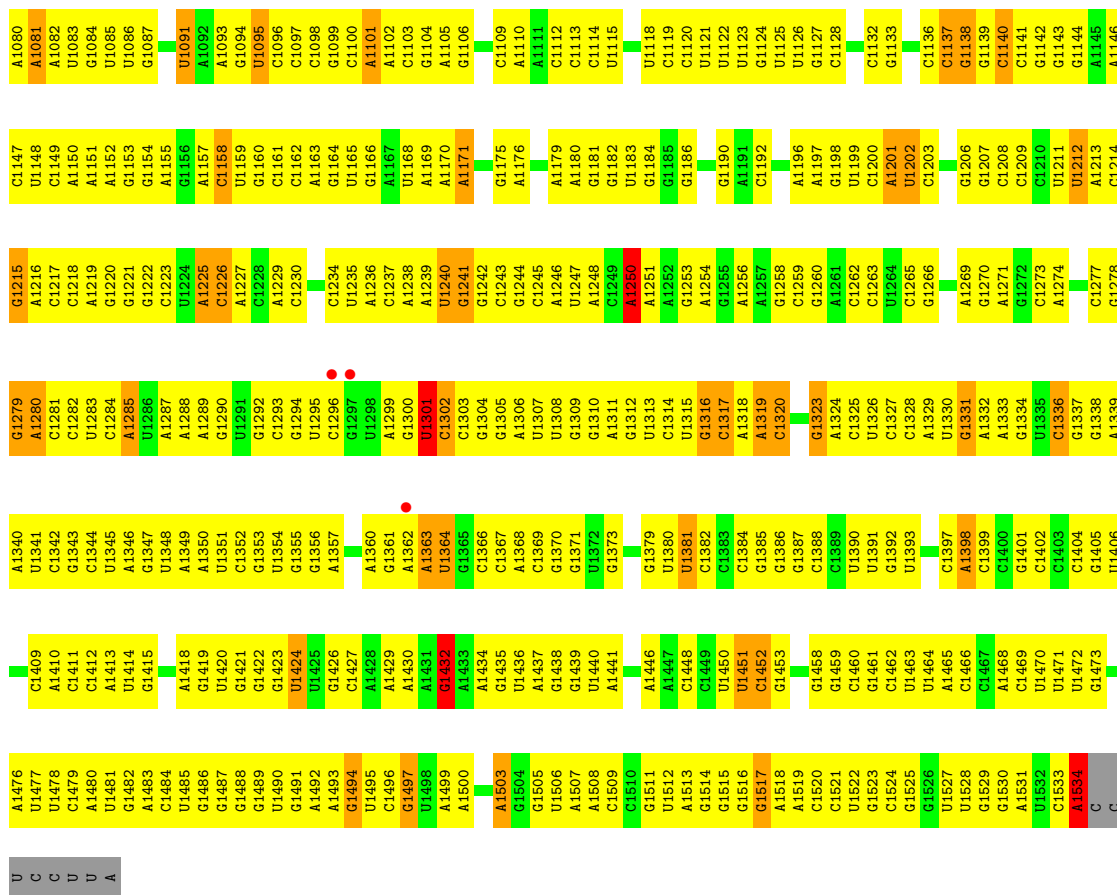
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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

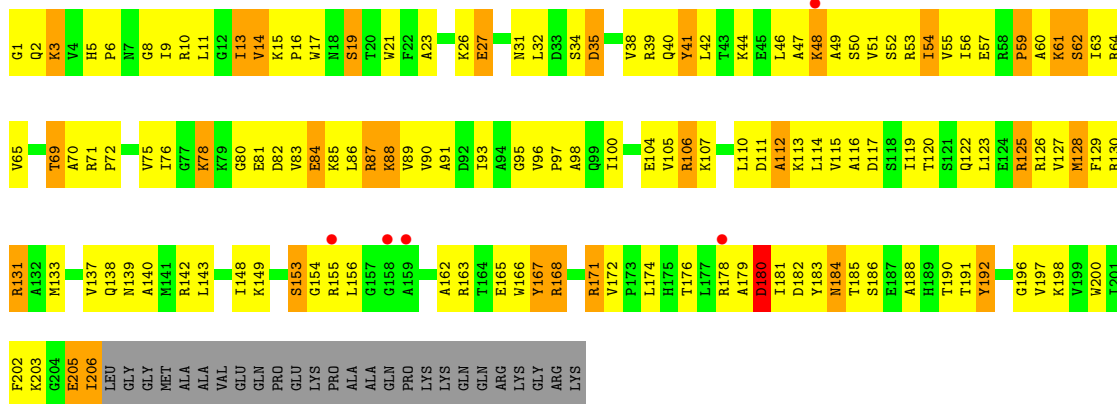




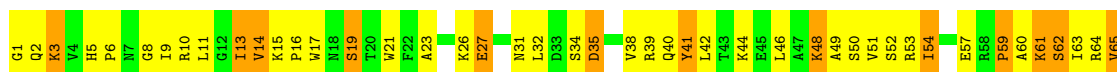


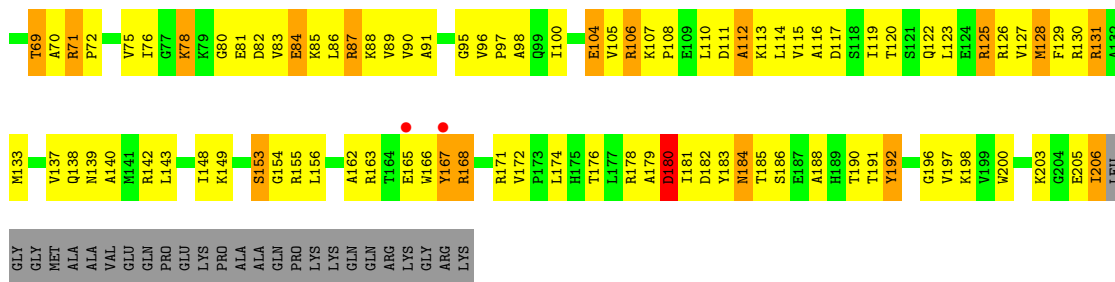


• Molecule 2: 30S ribosomal protein S3

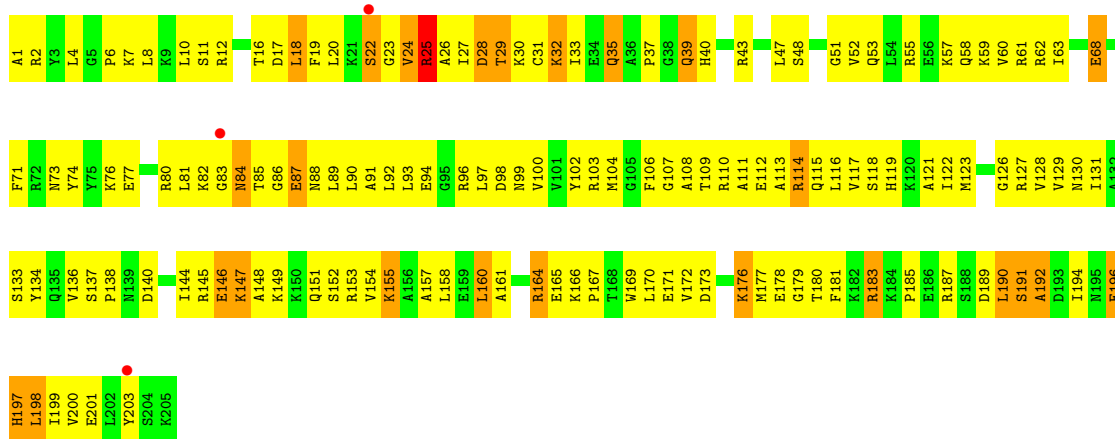
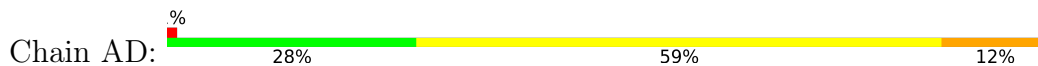


• Molecule 2: 30S ribosomal protein S3

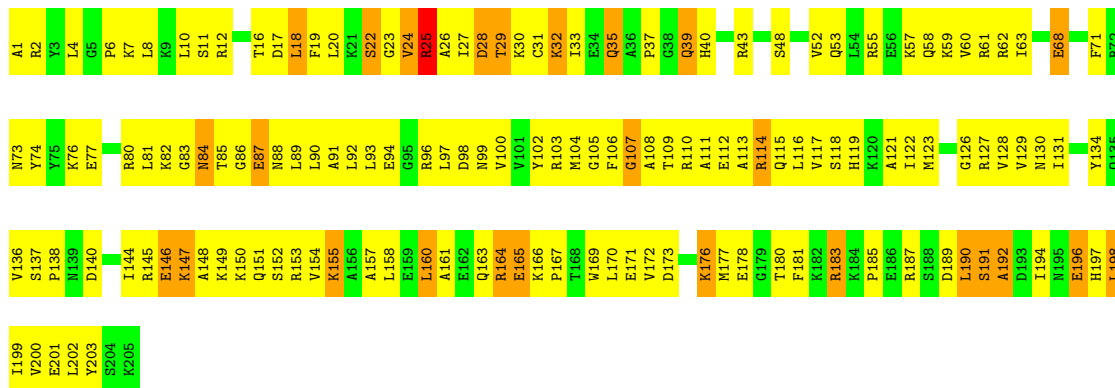




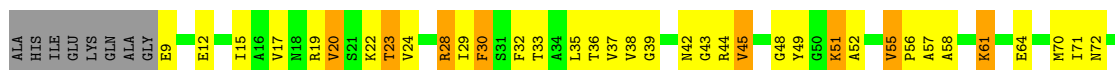
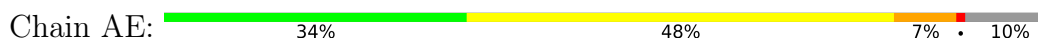
- Molecule 3: 30S ribosomal protein S4



- Molecule 3: 30S ribosomal protein S4

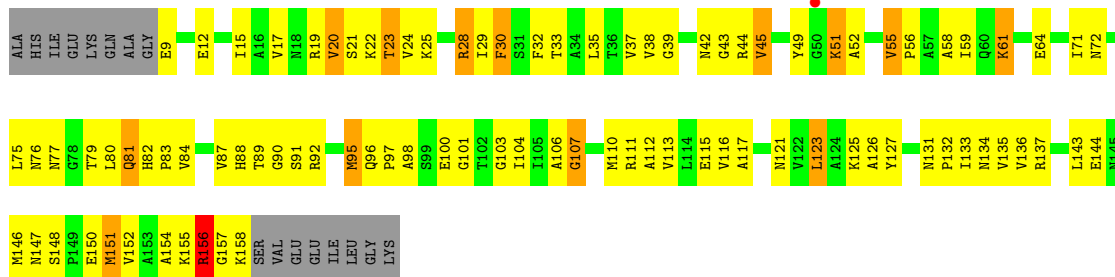


- Molecule 4: 30S ribosomal protein S5

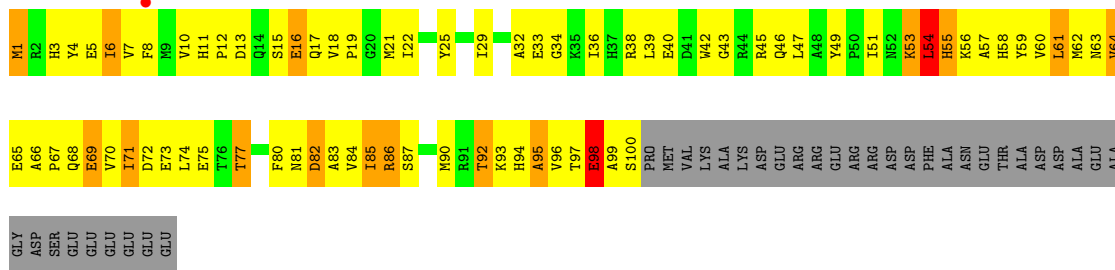
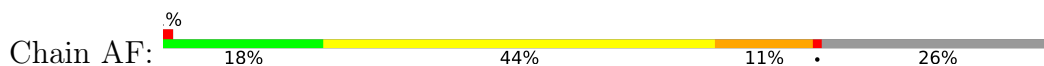




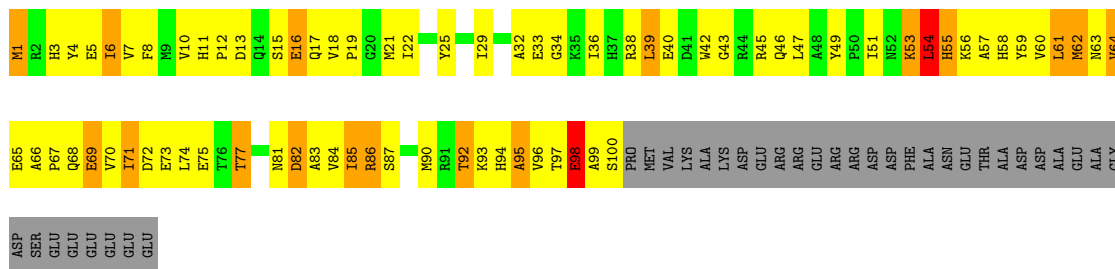
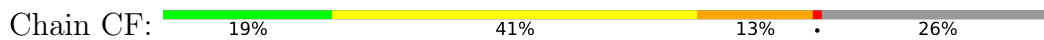
- Molecule 4: 30S ribosomal protein S5



- Molecule 5: 30S ribosomal protein S6

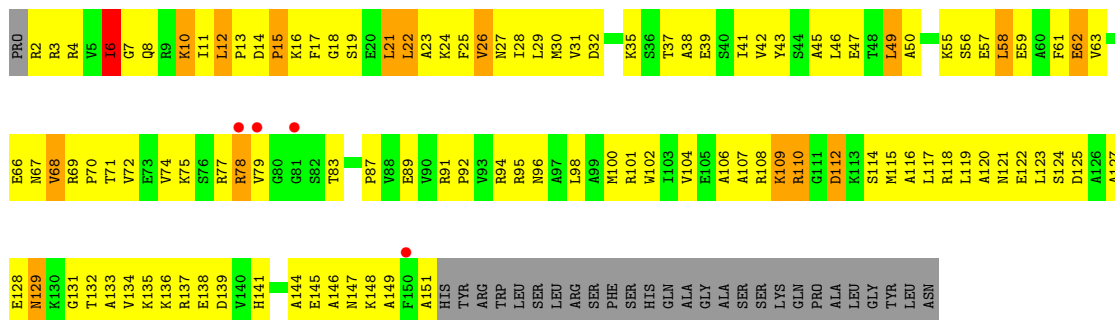


- Molecule 5: 30S ribosomal protein S6

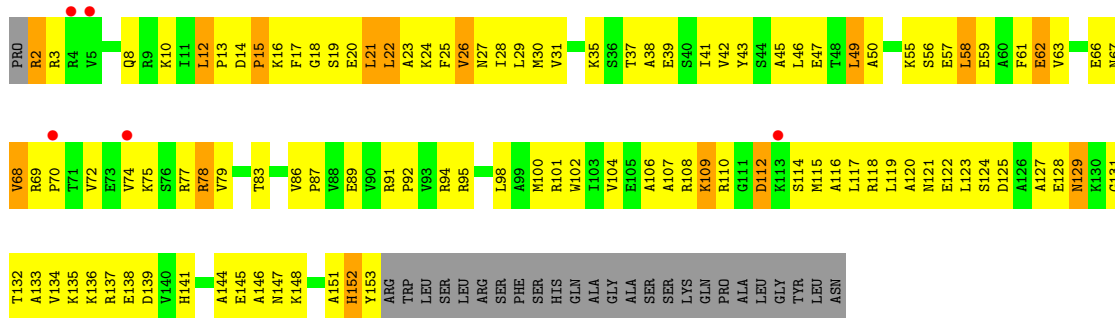


- Molecule 6: 30S ribosomal protein S7

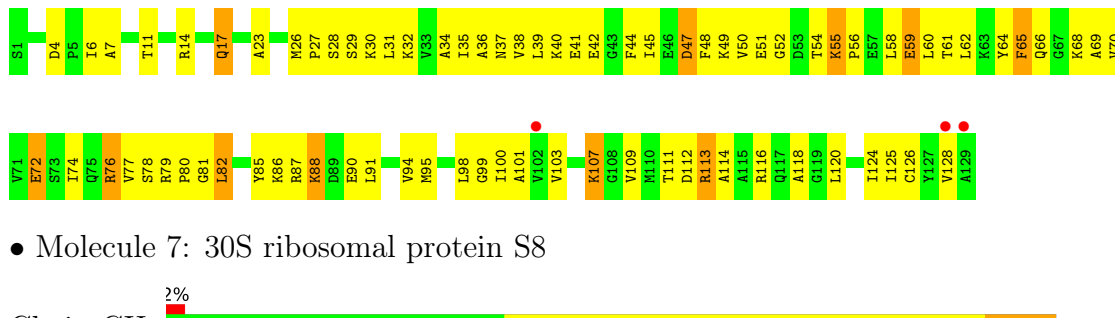
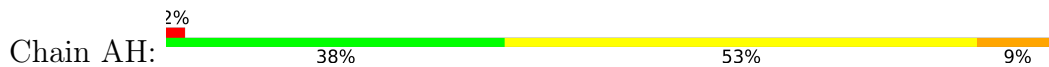




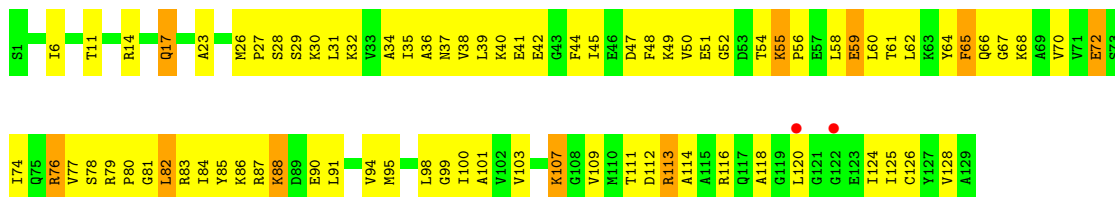
• Molecule 6: 30S ribosomal protein S7



• Molecule 7: 30S ribosomal protein S8

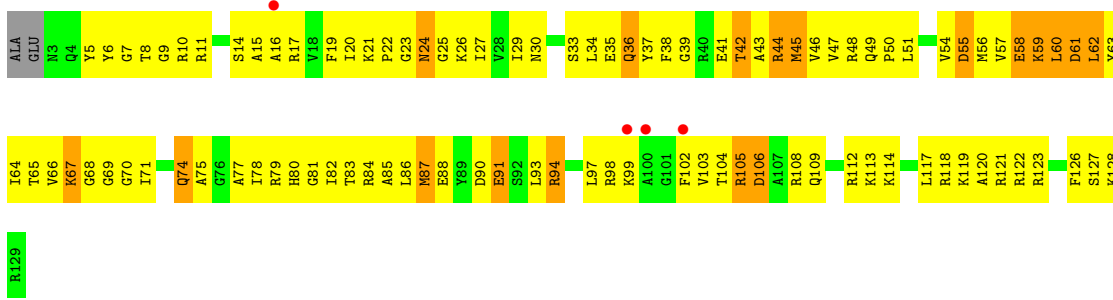


• Molecule 7: 30S ribosomal protein S8

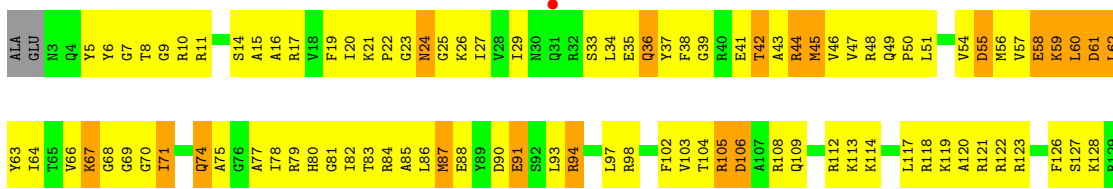


• Molecule 8: 30S ribosomal protein S9

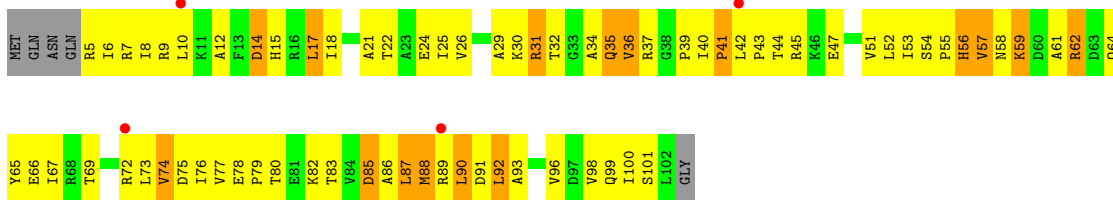




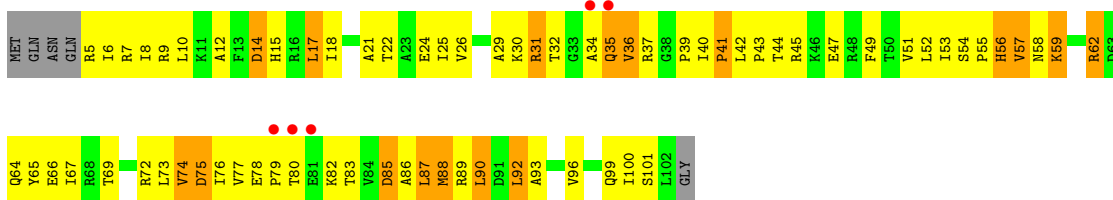
- Molecule 8: 30S ribosomal protein S9



- Molecule 9: 30S ribosomal protein S10

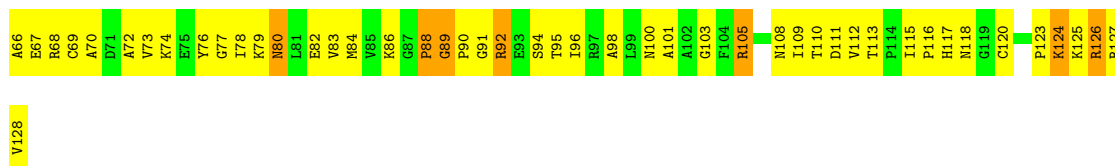


- Molecule 9: 30S ribosomal protein S10



- Molecule 10: 30S ribosomal protein S11

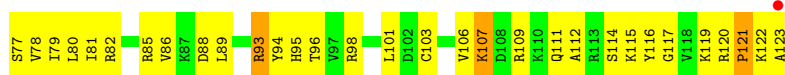




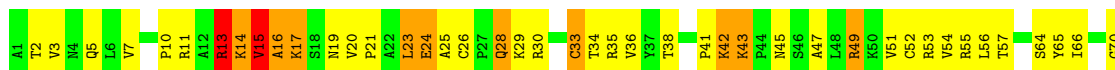
• Molecule 10: 30S ribosomal protein S11



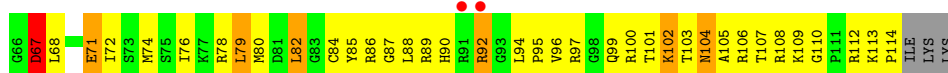
• Molecule 11: 30S ribosomal protein S12



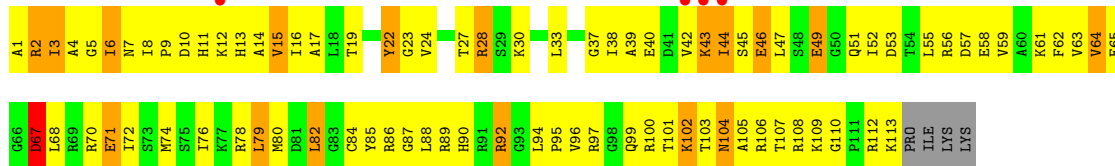
• Molecule 11: 30S ribosomal protein S12



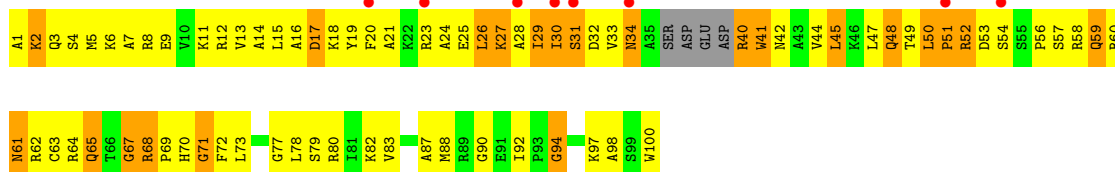
• Molecule 12: 30S ribosomal protein S13



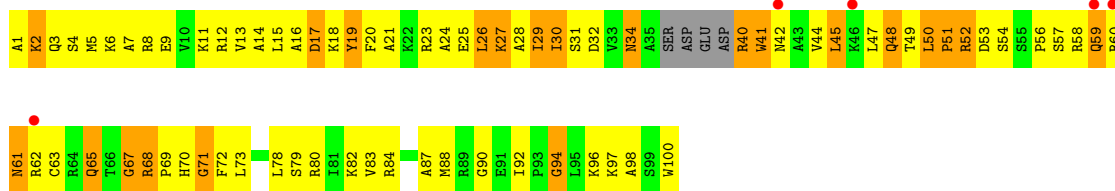
• Molecule 12: 30S ribosomal protein S13



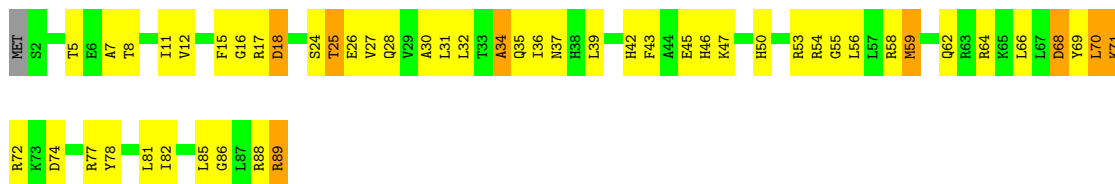
• Molecule 13: 30S ribosomal protein S14



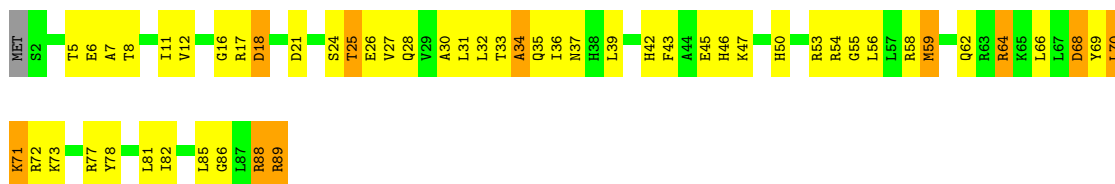
• Molecule 13: 30S ribosomal protein S14



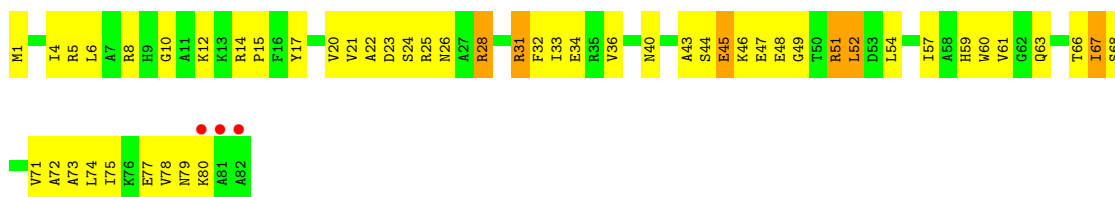
• Molecule 14: 30S ribosomal protein S15



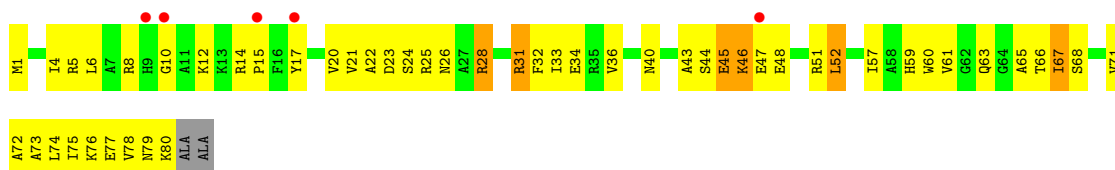
• Molecule 14: 30S ribosomal protein S15



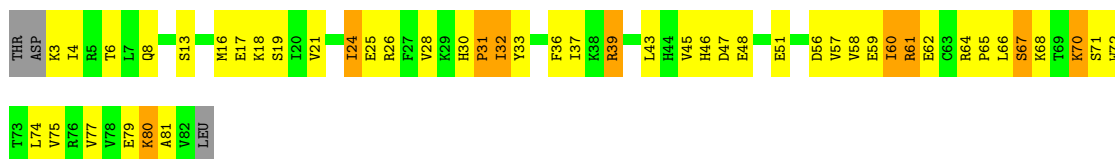
- Molecule 15: 30S ribosomal protein S16



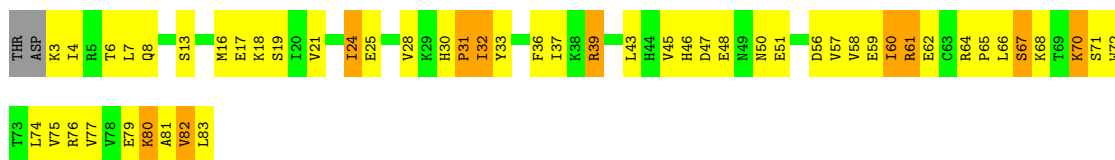
- Molecule 15: 30S ribosomal protein S16



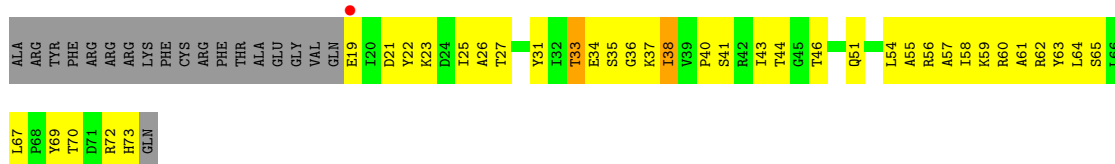
- Molecule 16: 30S ribosomal protein S17



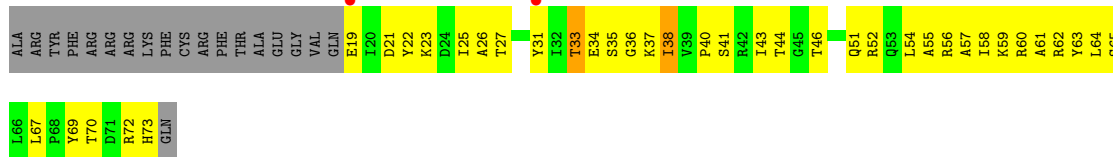
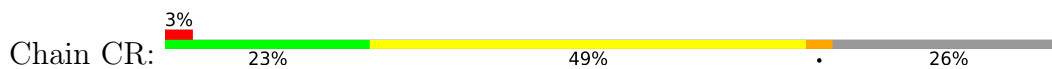
- Molecule 16: 30S ribosomal protein S17



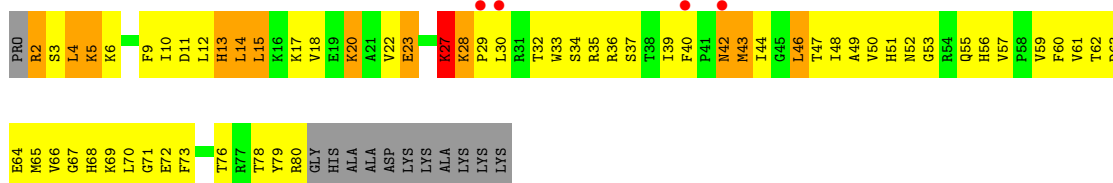
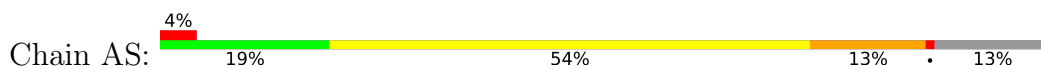
- Molecule 17: 30S ribosomal protein S18



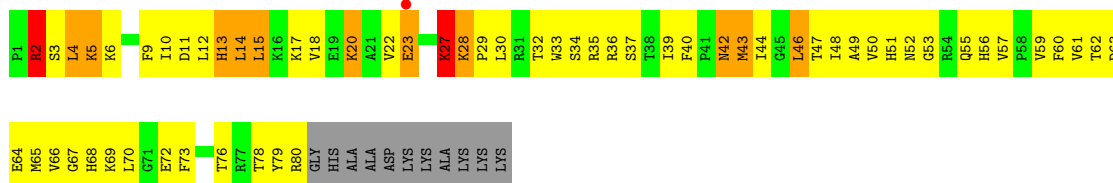
- Molecule 17: 30S ribosomal protein S18



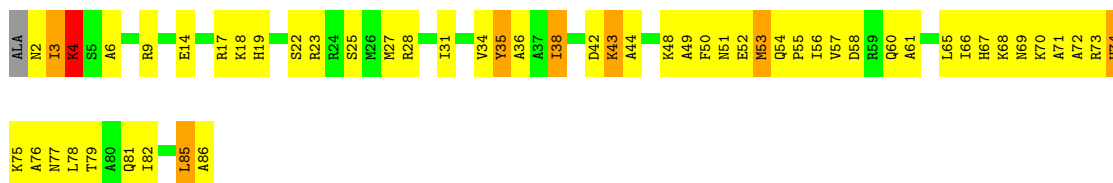
- Molecule 18: 30S ribosomal protein S19



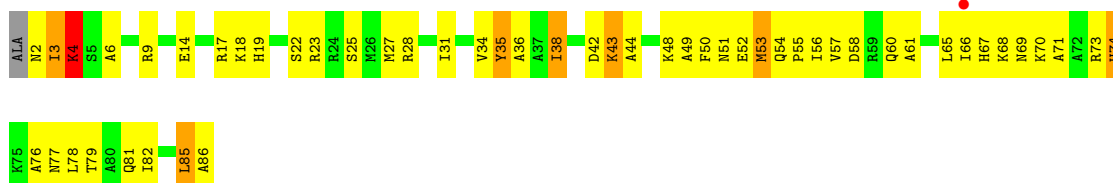
- Molecule 18: 30S ribosomal protein S19



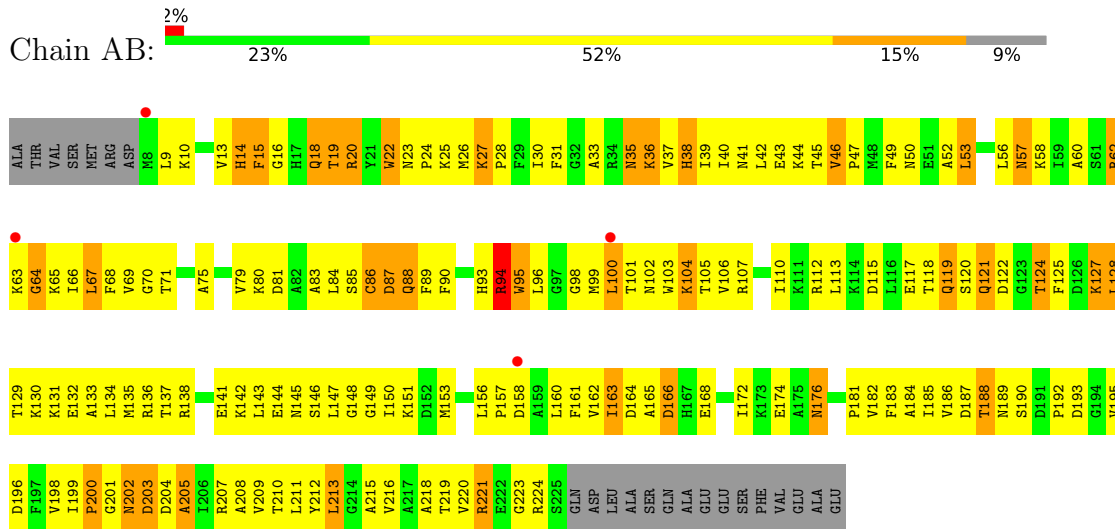
- Molecule 19: 30S ribosomal protein S20



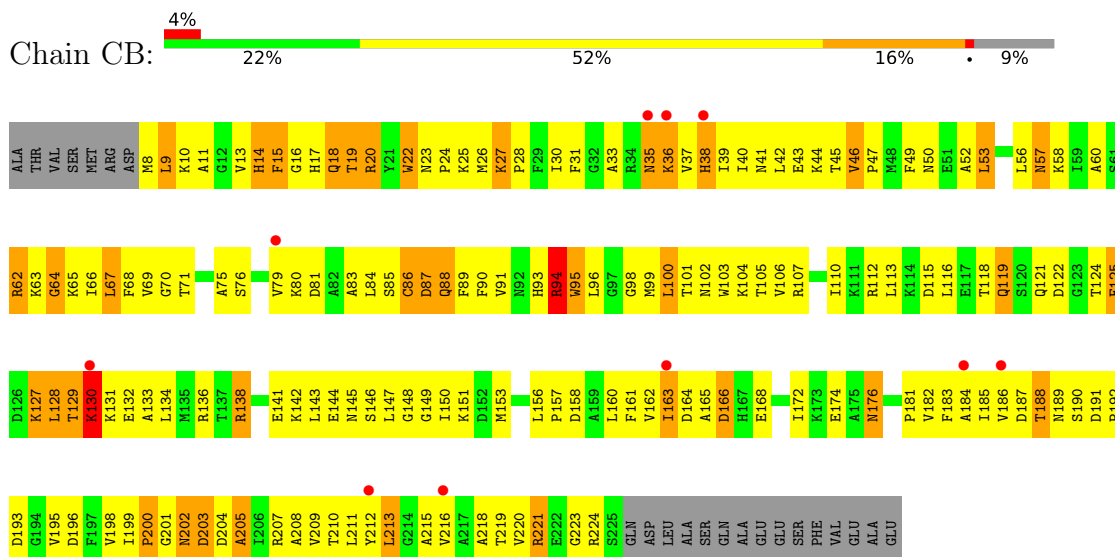
- Molecule 19: 30S ribosomal protein S20



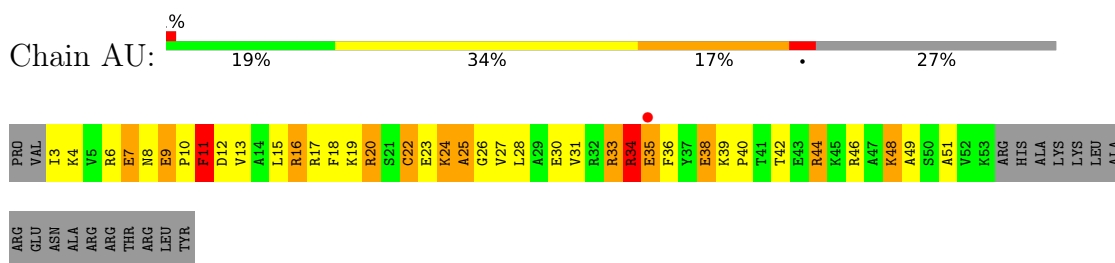
• Molecule 20: 30S ribosomal protein S2



• Molecule 20: 30S ribosomal protein S2

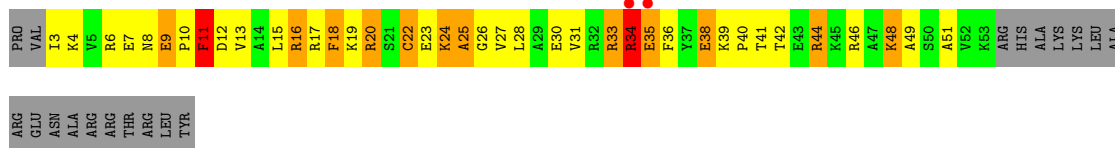


• Molecule 21: 30S ribosomal protein S21

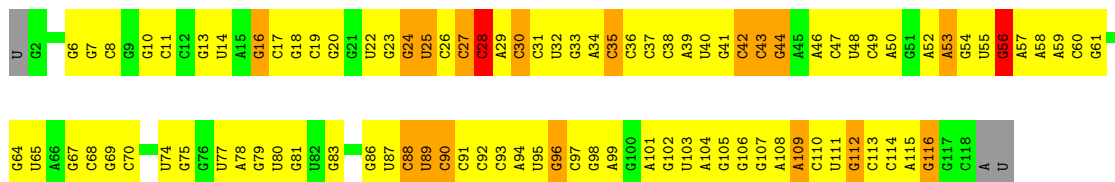


• Molecule 21: 30S ribosomal protein S21

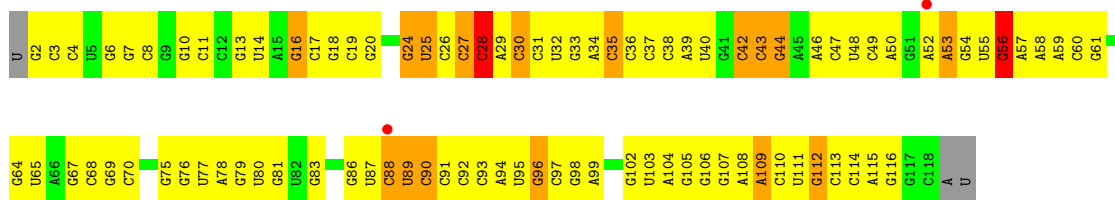




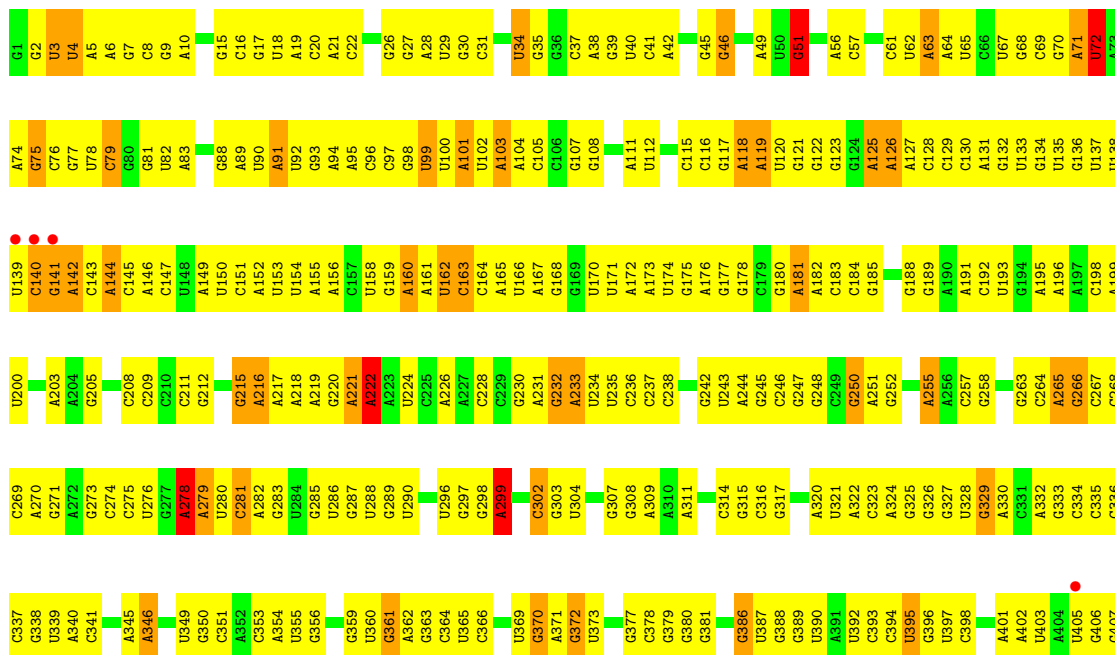
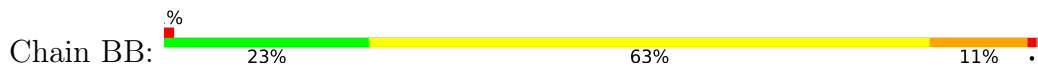
• Molecule 22: 5S rRNA



• Molecule 22: 5S rRNA

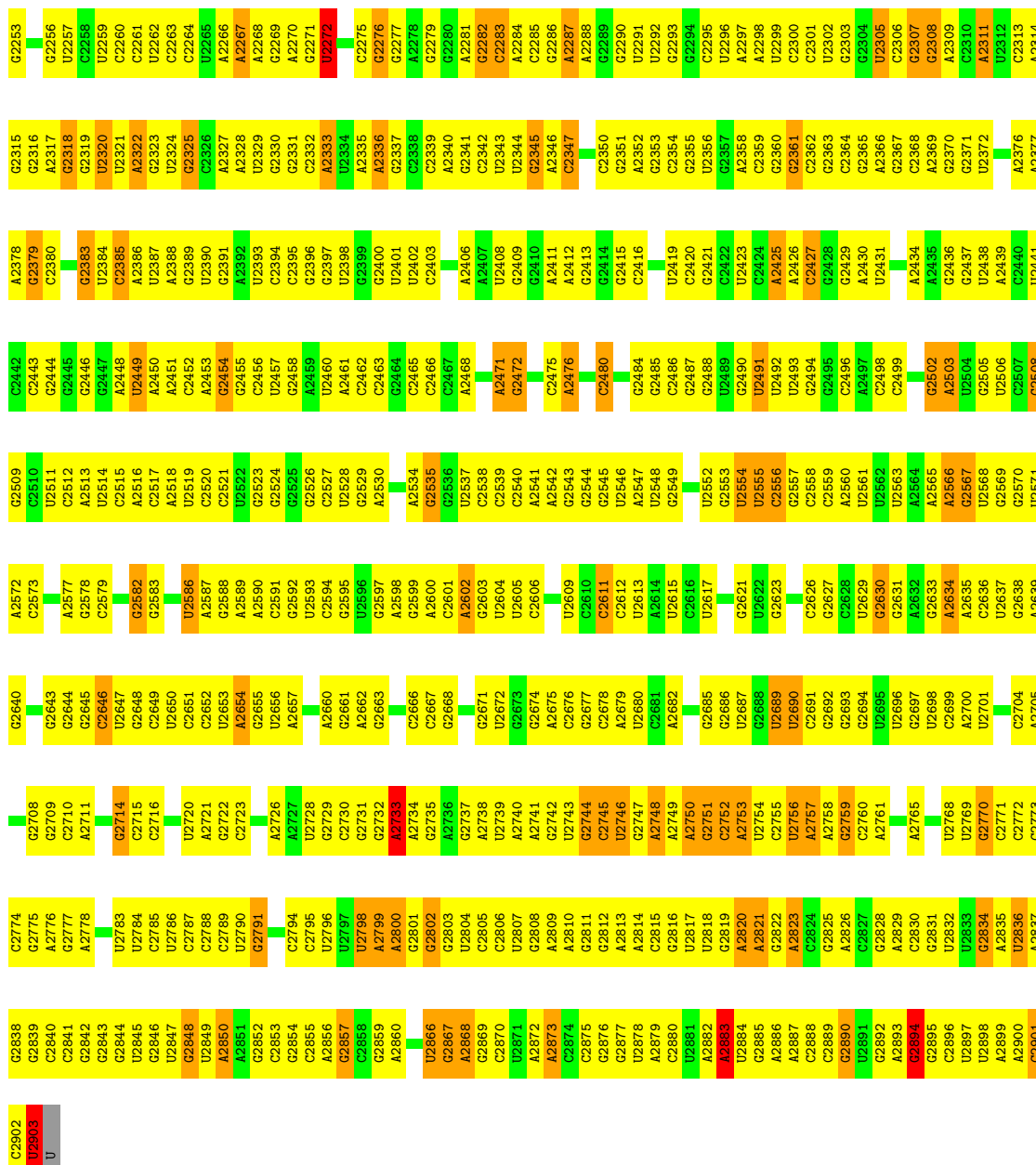


• Molecule 23: 23S rRNA

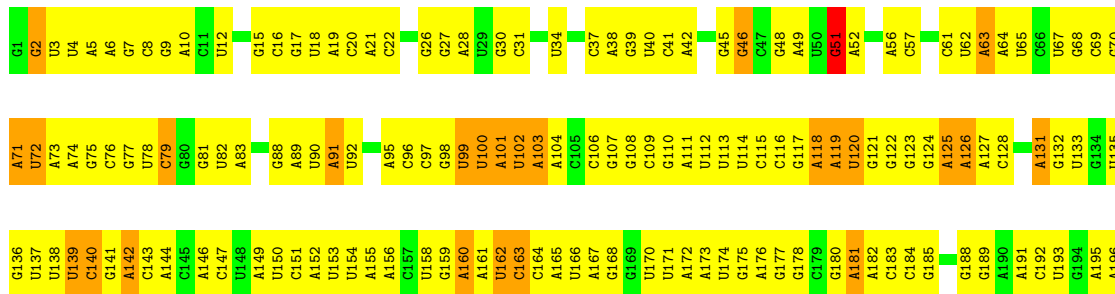


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C1261	A1070	A1135	A1195	A1135	A941	U813	U741	C880	A616	C550	A482	G410
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A1273	U1081	U1081	U1081	U1081	C948	A821	U754	U688	C624	C558	A493	C418
A1274	U1082	U1082	U1082	U1082	C949	G822	U755	A689	G625	C559	A494	U419
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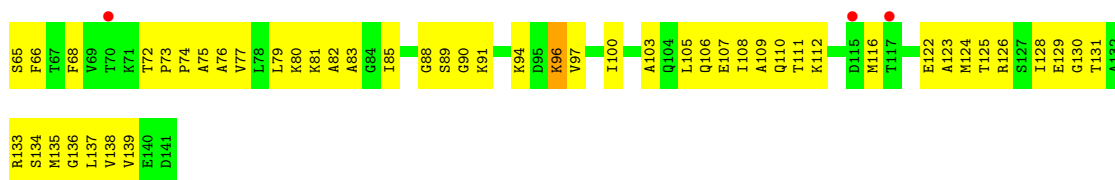
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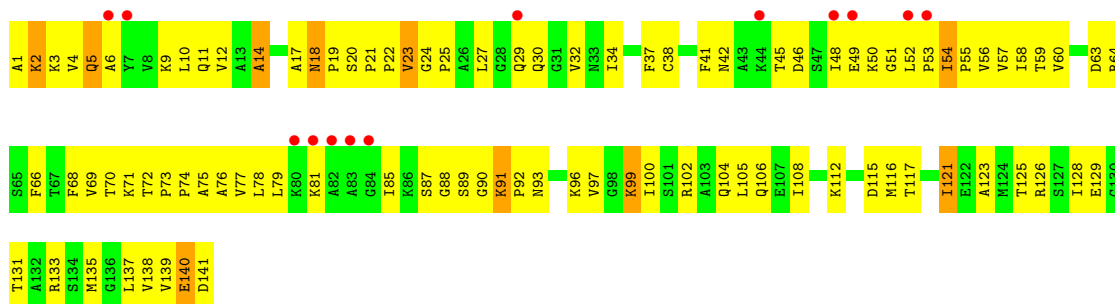
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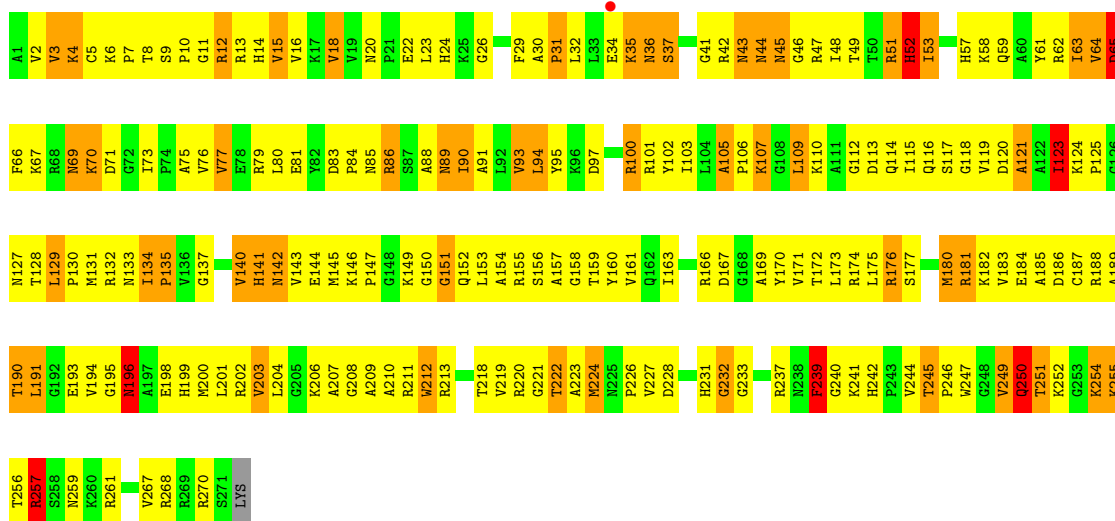
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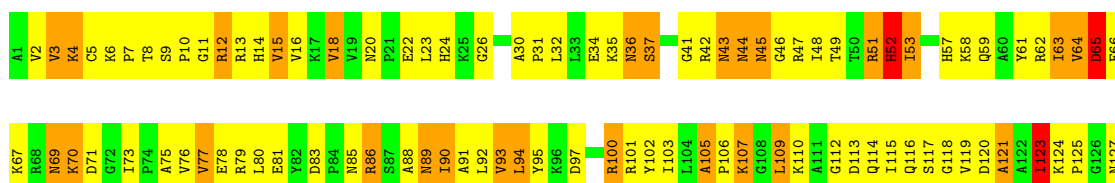
• Molecule 24: 50S ribosomal protein L11

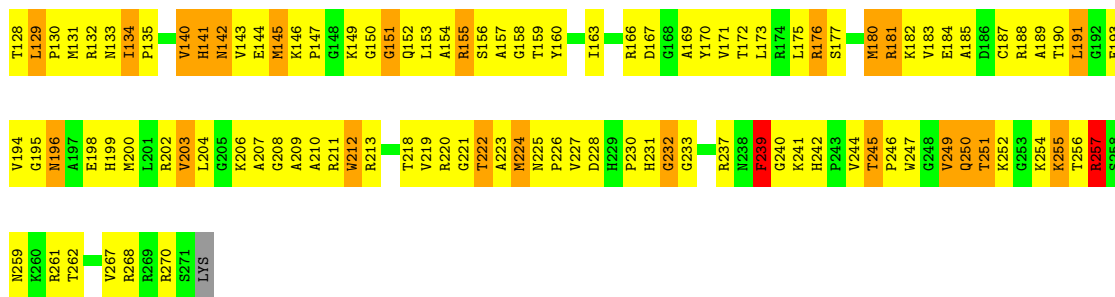


• Molecule 25: 50S ribosomal protein L2

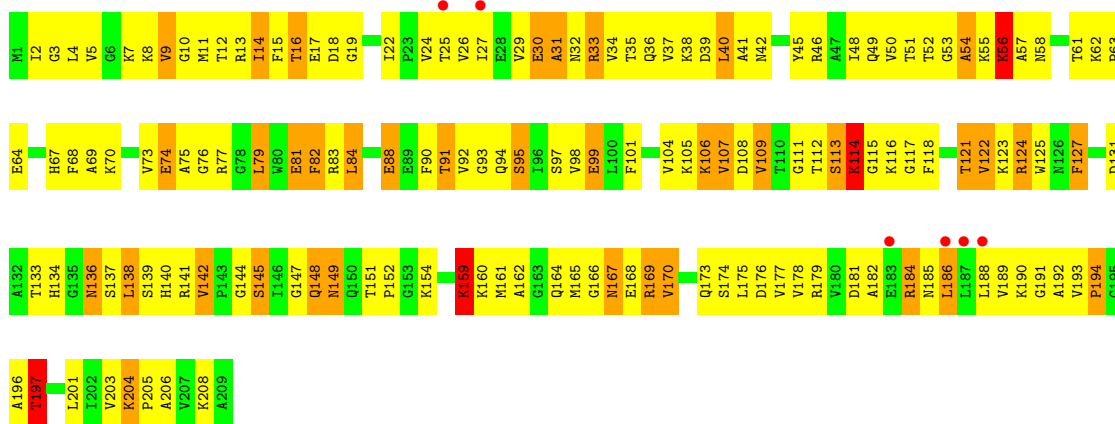


• Molecule 25: 50S ribosomal protein L2

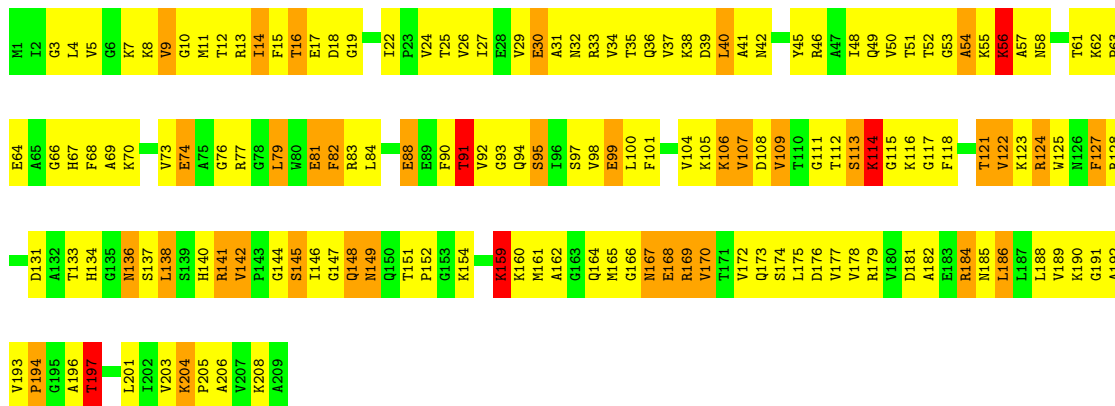




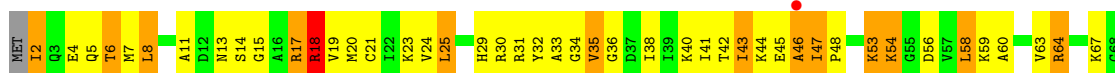
• Molecule 26: 50S ribosomal protein L3



• Molecule 26: 50S ribosomal protein L3

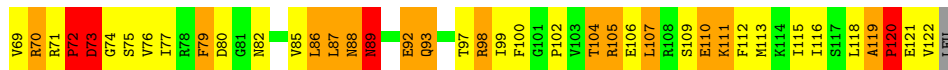
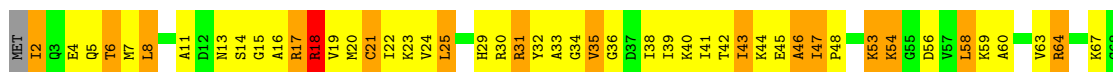


• Molecule 27: 50S ribosomal protein L14

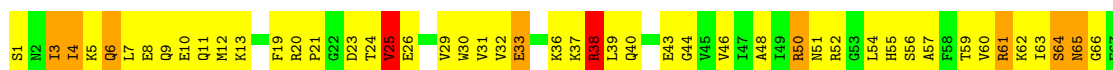




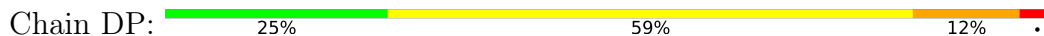
• Molecule 27: 50S ribosomal protein L14



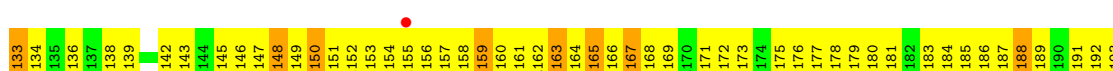
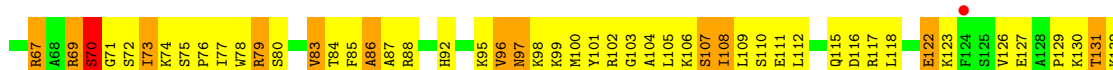
• Molecule 28: 50S ribosomal protein L19



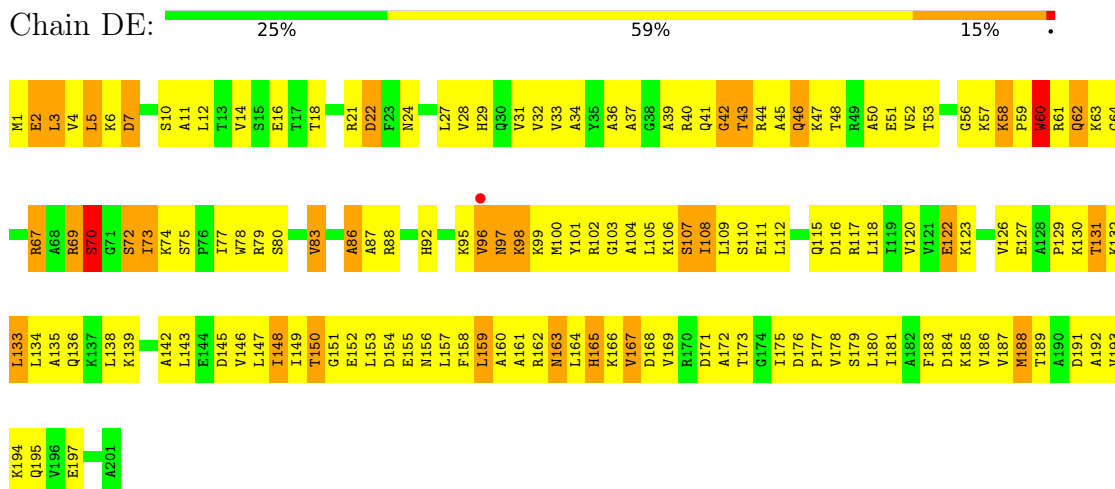
• Molecule 28: 50S ribosomal protein L19



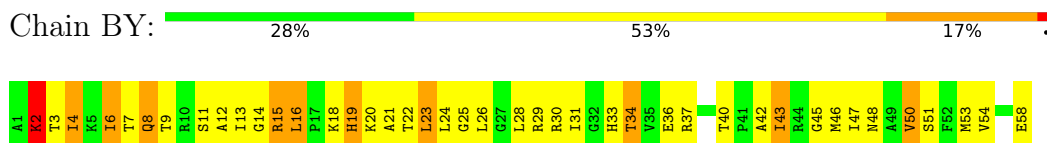
• Molecule 29: 50S ribosomal protein L4



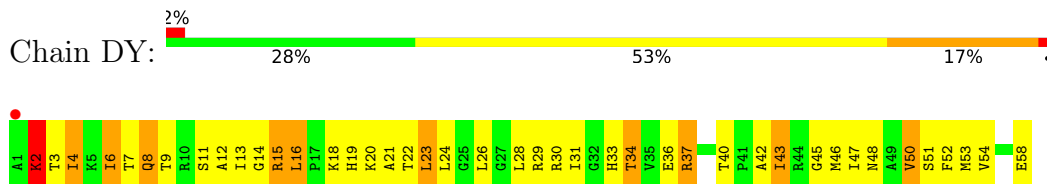
- Molecule 29: 50S ribosomal protein L4



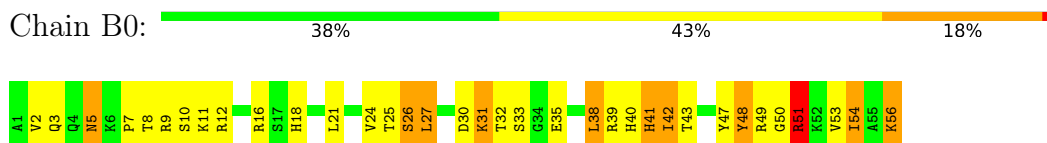
- Molecule 30: 50S ribosomal protein L30



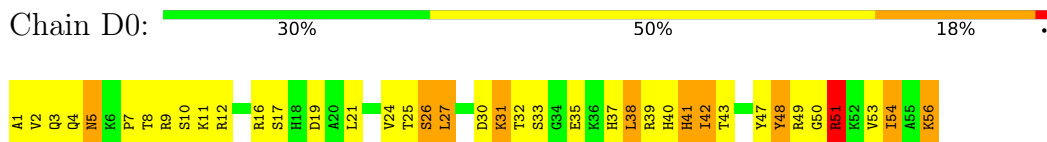
- Molecule 30: 50S ribosomal protein L30



- Molecule 31: 50S ribosomal protein L32



- Molecule 31: 50S ribosomal protein L32



- Molecule 32: 50S ribosomal protein L36

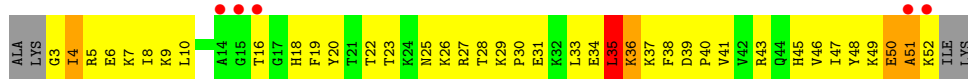




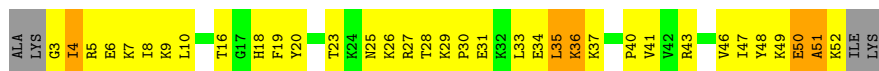
• Molecule 32: 50S ribosomal protein L36



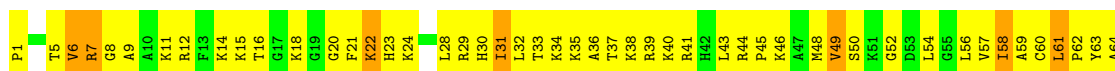
• Molecule 33: 50S ribosomal protein L33



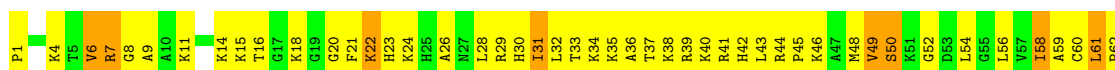
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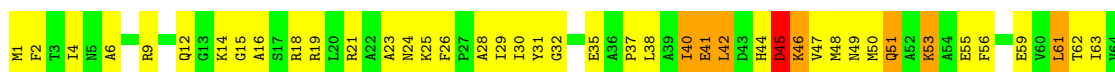
• Molecule 34: 50S ribosomal protein L35



• Molecule 34: 50S ribosomal protein L35

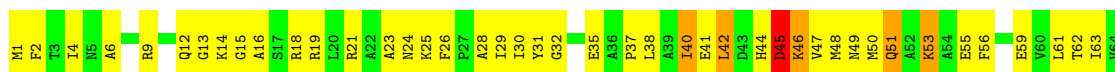
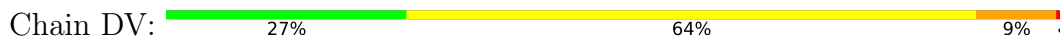


• Molecule 35: 50S ribosomal protein L25





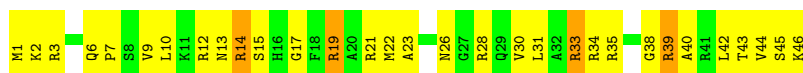
• Molecule 35: 50S ribosomal protein L25



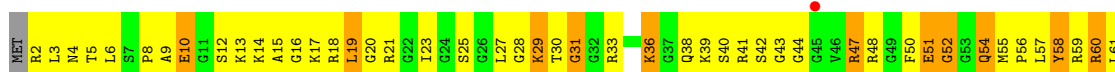
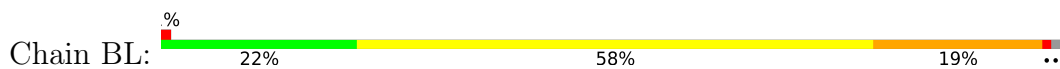
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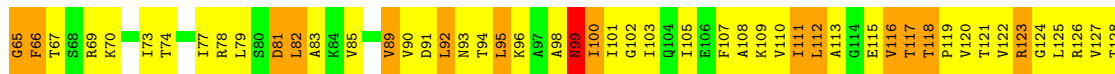
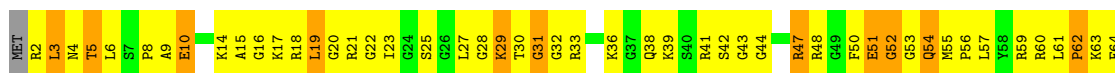
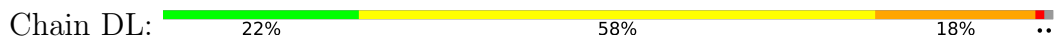
• Molecule 36: 50S ribosomal protein L34



• Molecule 37: 50S ribosomal protein L15

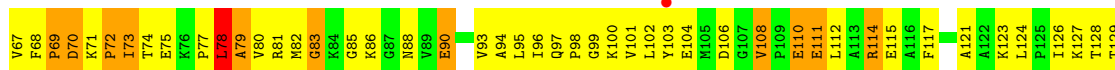
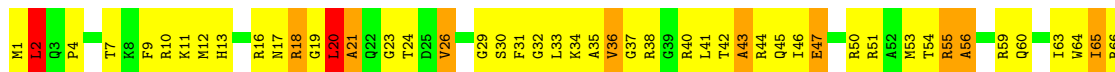


• Molecule 37: 50S ribosomal protein L15

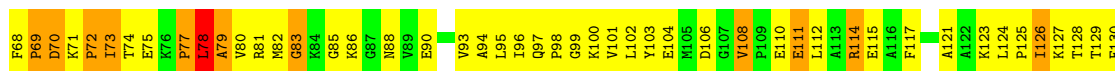
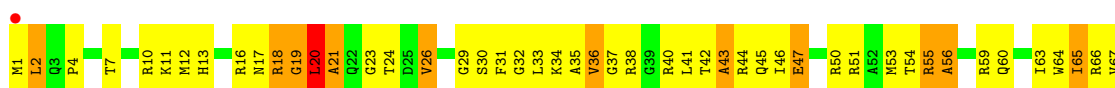




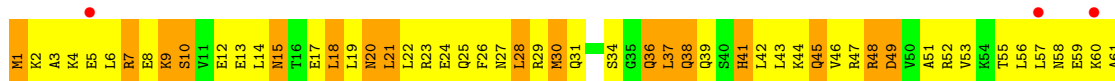
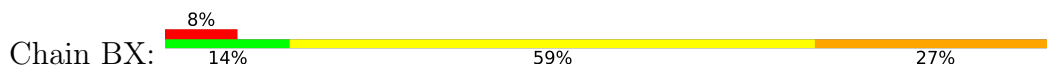
- Molecule 38: 50S ribosomal protein L16



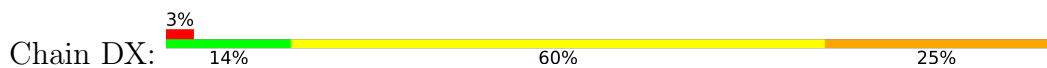
- Molecule 38: 50S ribosomal protein L16



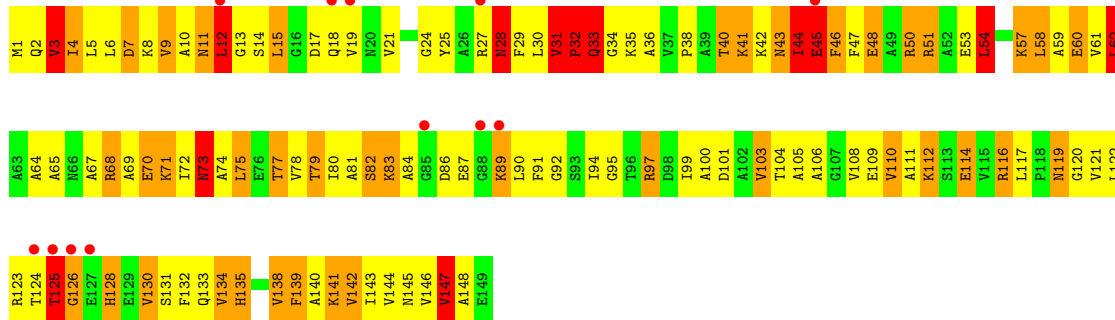
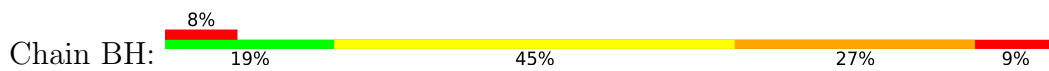
- Molecule 39: 50S ribosomal protein L29



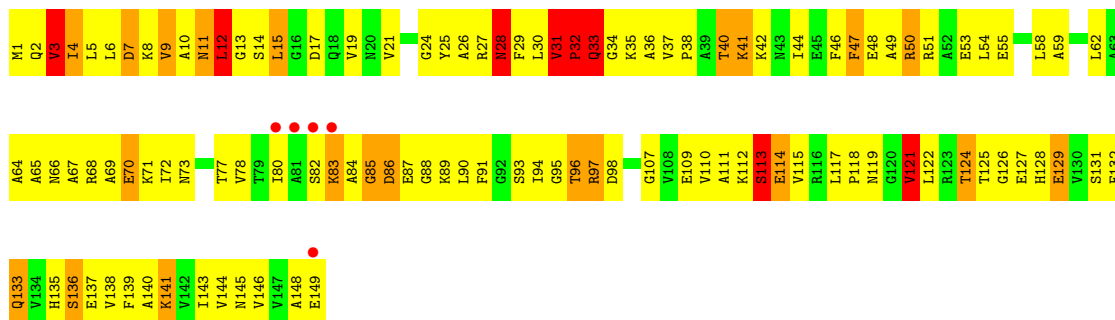
- Molecule 39: 50S ribosomal protein L29



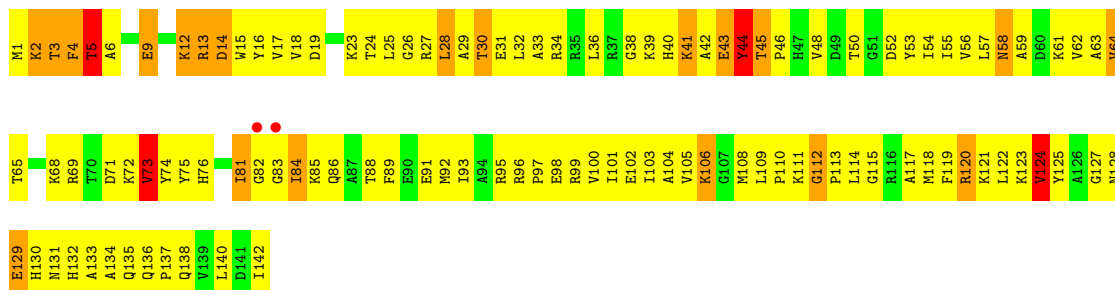
- Molecule 40: 50S ribosomal protein L9



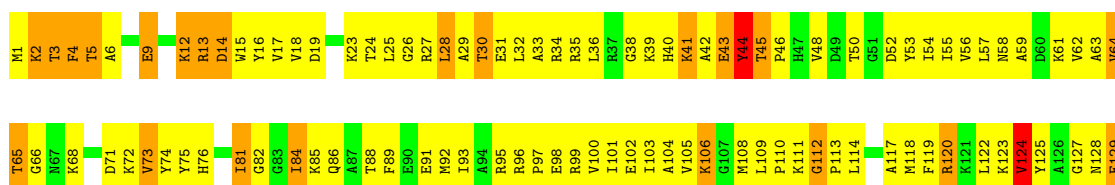
• Molecule 40: 50S ribosomal protein L9

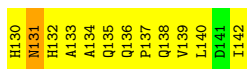


• Molecule 41: 50S ribosomal protein L13

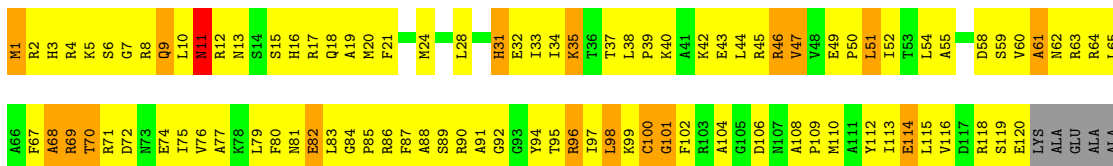


• Molecule 41: 50S ribosomal protein L13

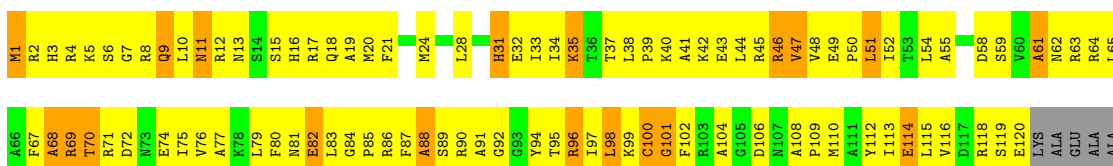




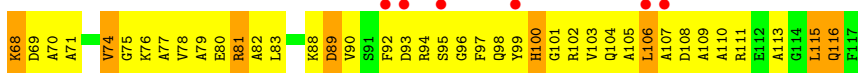
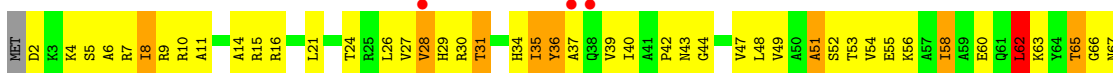
• Molecule 42: 50S ribosomal protein L17



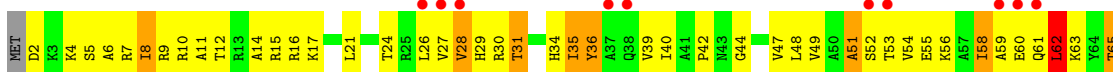
• Molecule 42: 50S ribosomal protein L17



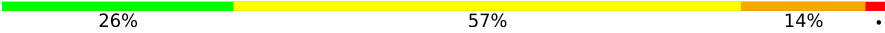
• Molecule 43: 50S ribosomal protein L18

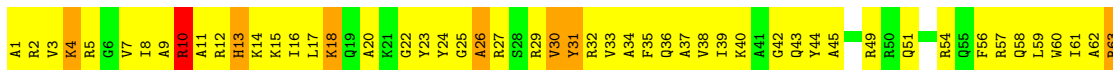


• Molecule 43: 50S ribosomal protein L18



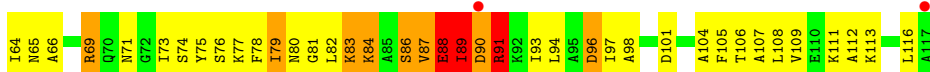
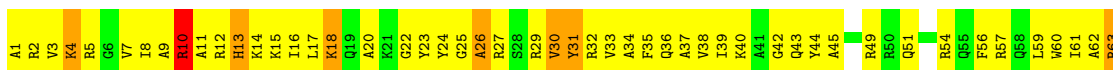
• Molecule 44: 50S ribosomal protein L20

Chain BQ:  26% 57% 14%



• Molecule 44: 50S ribosomal protein L20

Chain DQ:  2% 24% 60% 13%



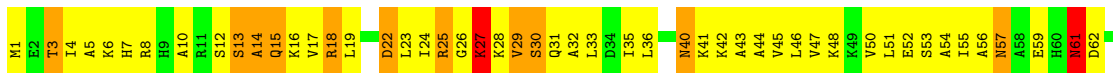
• Molecule 45: 50S ribosomal protein L22

Chain BS:  24% 58% 16%

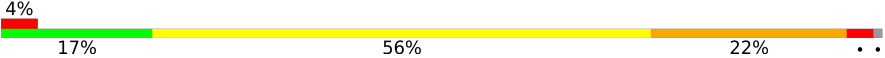


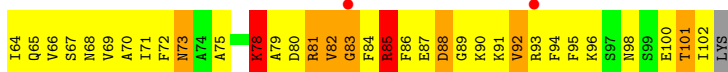
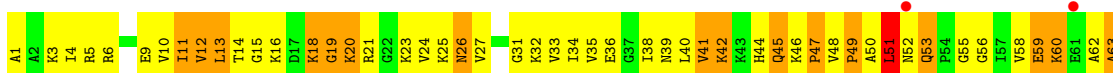
• Molecule 45: 50S ribosomal protein L22

Chain DS:  24% 58% 16%

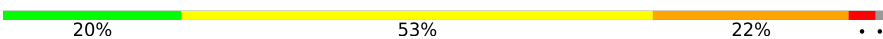


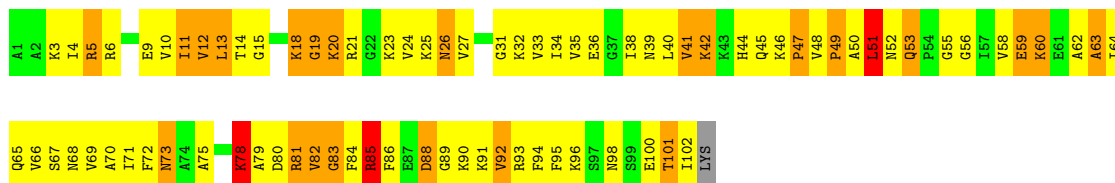
• Molecule 46: 50S ribosomal protein L24

Chain BU:  4% 17% 56% 22%

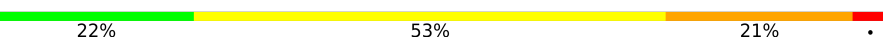


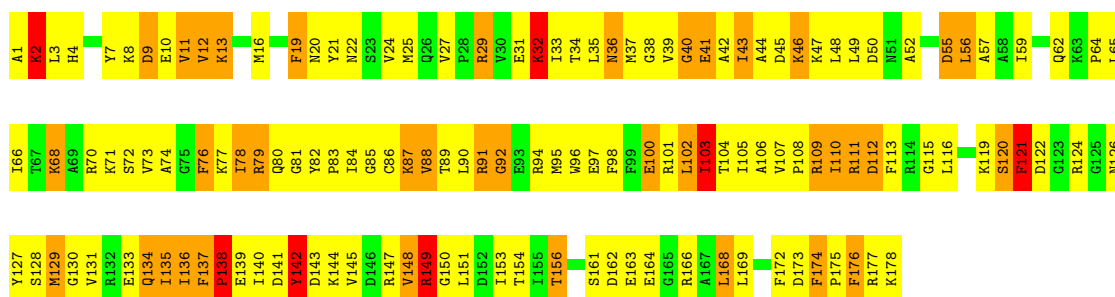
- Molecule 46: 50S ribosomal protein L24

Chain DU:  20% 53% 22% ..



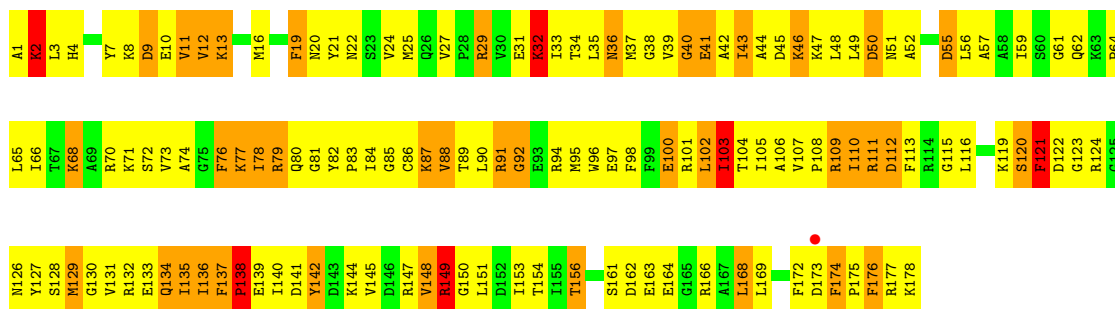
- Molecule 47: 50S ribosomal protein L5

Chain BF:  22% 53% 21% .



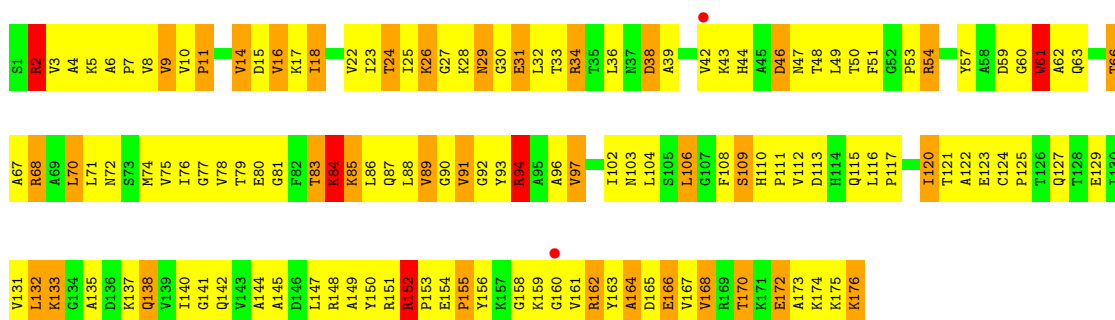
- Molecule 47: 50S ribosomal protein L5

Chain DF:  % 20% 54% 22% .

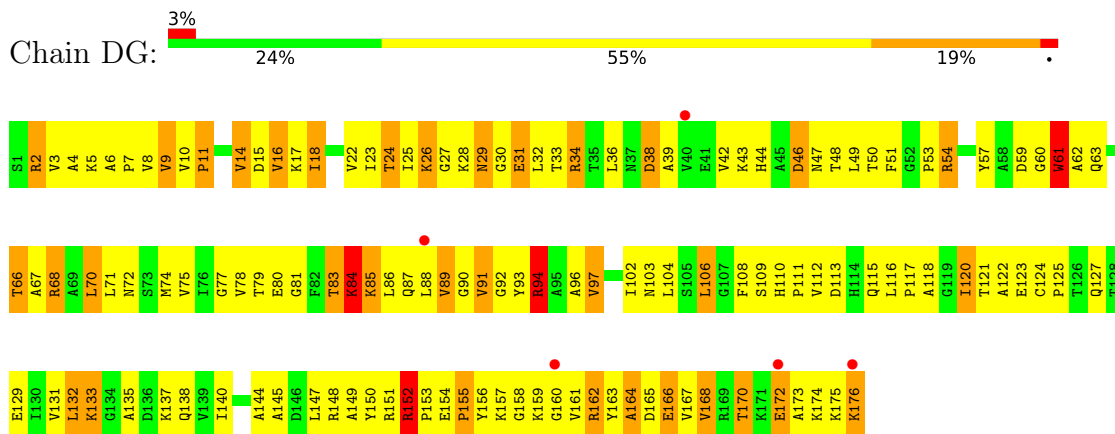


- Molecule 48: 50S ribosomal protein L6

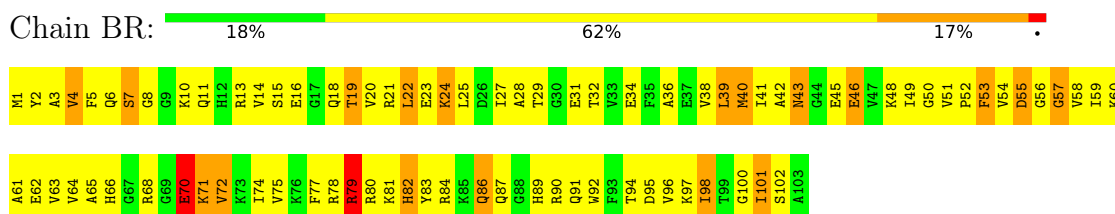
Chain BG:  % 23% 54% 20% .



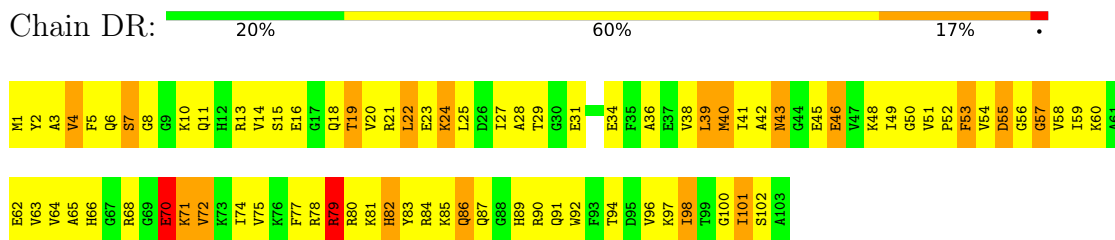
- Molecule 48: 50S ribosomal protein L6



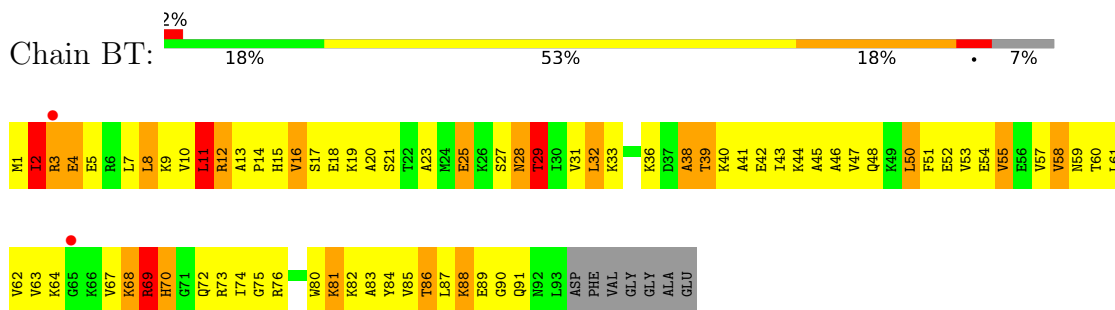
- Molecule 49: 50S ribosomal protein L21



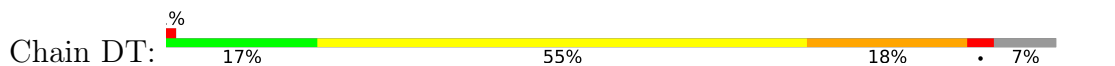
- Molecule 49: 50S ribosomal protein L21

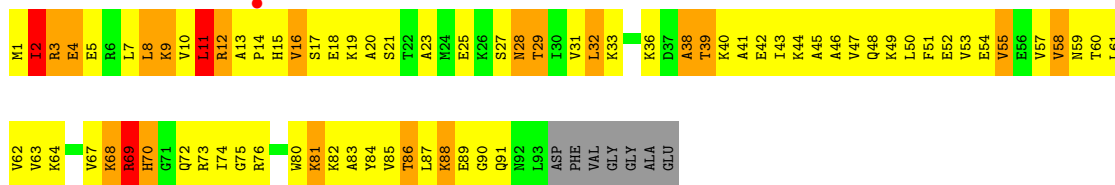


- Molecule 50: 50S ribosomal protein L23

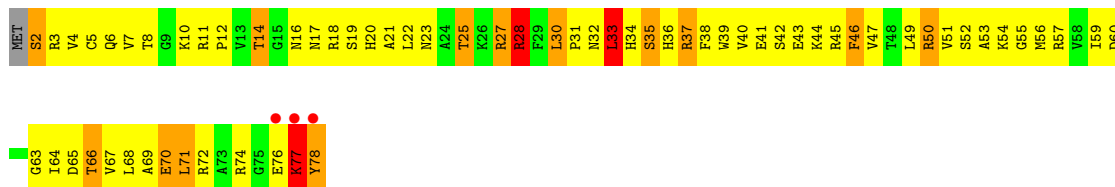


- Molecule 50: 50S ribosomal protein L23

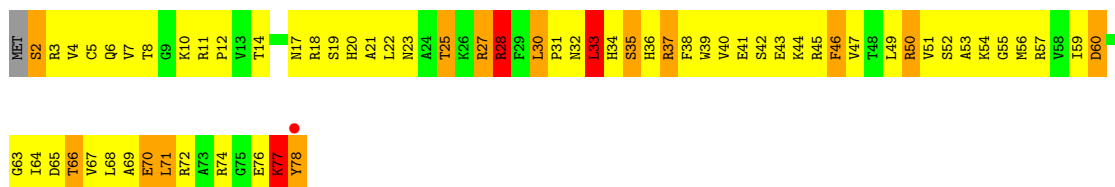




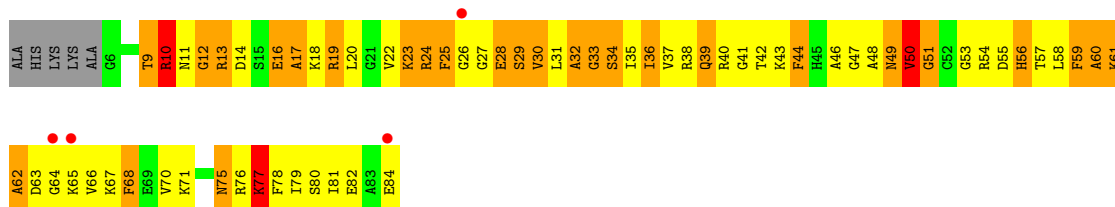
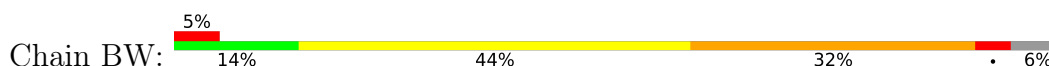
• Molecule 51: 50S ribosomal protein L28



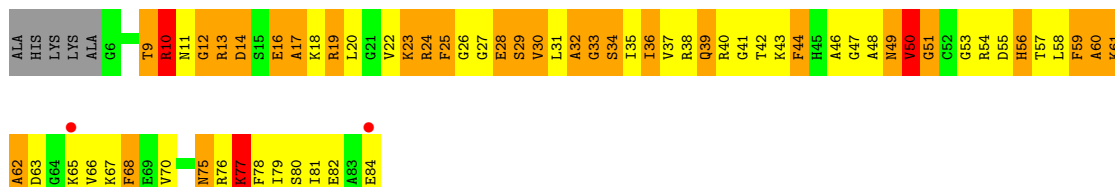
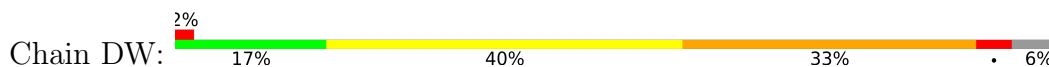
• Molecule 51: 50S ribosomal protein L28



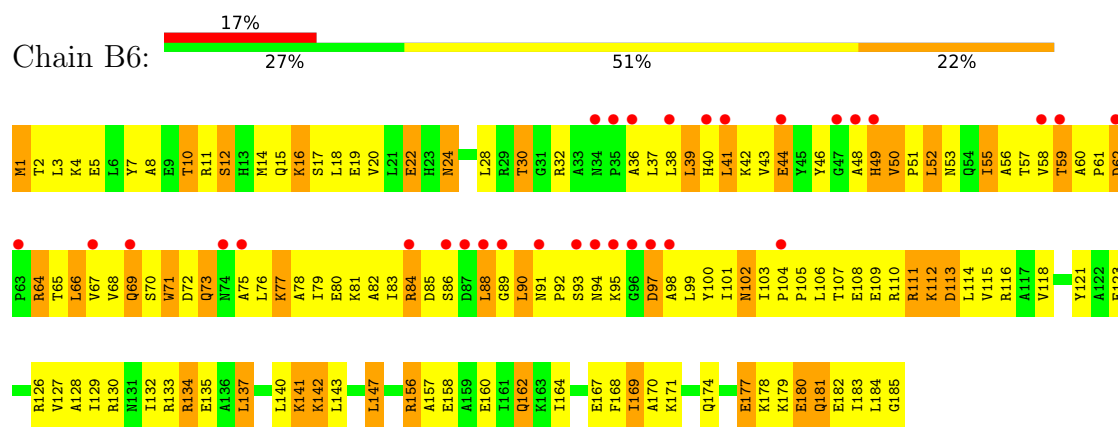
• Molecule 52: 50S ribosomal protein L27



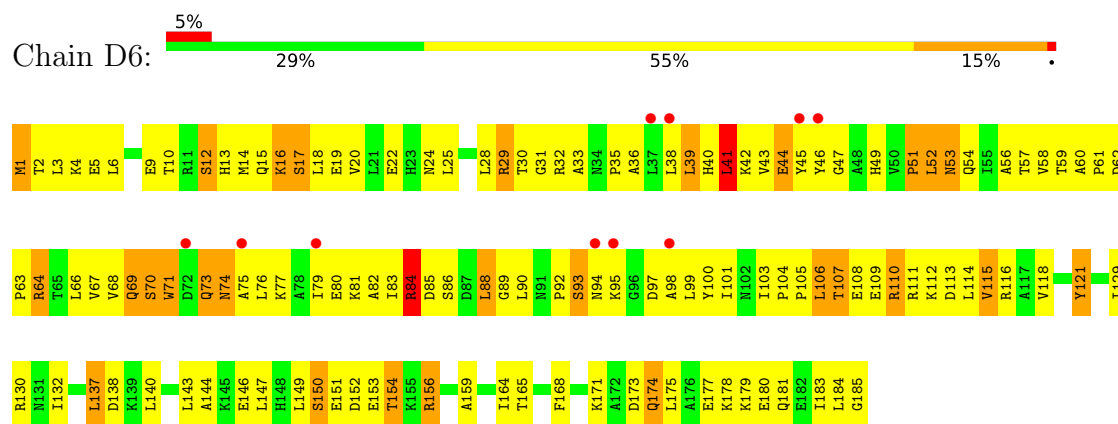
• Molecule 52: 50S ribosomal protein L27



• Molecule 53: 50S ribosomal protein RRF



- Molecule 53: 50S ribosomal protein RRF



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.87Å 378.75Å 738.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 4.45 69.15 – 4.45	Depositor EDS
% Data completeness (in resolution range)	95.7 (40.00-4.45) 95.6 (69.15-4.45)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.39 (at 4.46Å)	Xtrriage
Refinement program	CNS	Depositor
R, R_{free}	0.263 , 0.309 0.235 , 0.273	Depositor DCC
R_{free} test set	16978 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å ²)	150.5	Xtrriage
Anisotropy	0.297	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.17 , 59.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	287128	wwPDB-VP
Average B, all atoms (Å ²)	72.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.03% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PAR, MG, ZN

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	0.28	1/36762 (0.0%)	0.76	6/57350 (0.0%)
1	CA	0.28	1/36762 (0.0%)	0.76	10/57350 (0.0%)
2	AC	0.23	0/1651	0.44	0/2225
2	CC	0.23	0/1651	0.44	0/2225
3	AD	0.23	0/1665	0.44	0/2227
3	CD	0.23	0/1665	0.44	0/2227
4	AE	0.23	0/1118	0.45	0/1504
4	CE	0.24	0/1118	0.45	0/1504
5	AF	0.24	0/835	0.45	0/1128
5	CF	0.24	0/835	0.45	0/1128
6	AG	0.23	0/1187	0.45	0/1591
6	CG	0.23	0/1211	0.45	0/1624
7	AH	0.23	0/989	0.44	0/1326
7	CH	0.23	0/989	0.44	0/1326
8	AI	0.24	0/1034	0.45	0/1375
8	CI	0.24	0/1034	0.45	0/1375
9	AJ	0.22	0/796	0.49	0/1077
9	CJ	0.22	0/796	0.48	0/1077
10	AK	0.24	0/893	0.46	0/1205
10	CK	0.24	0/893	0.46	0/1205
11	AL	0.22	0/969	0.48	0/1300
11	CL	0.22	0/969	0.48	0/1300
12	AM	0.21	0/892	0.45	0/1193
12	CM	0.21	0/884	0.45	0/1181
13	AN	0.24	0/785	0.46	0/1043
13	CN	0.24	0/785	0.46	0/1043
14	AO	0.23	0/722	0.47	0/964
14	CO	0.23	0/722	0.47	0/964
15	AP	0.25	0/659	0.46	0/884
15	CP	0.25	0/648	0.46	0/870
16	AQ	0.23	0/657	0.47	0/881
16	CQ	0.24	0/666	0.47	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.23	0/462	0.45	0/621
17	CR	0.23	0/462	0.45	0/621
18	AS	0.25	0/652	0.46	0/877
18	CS	0.25	0/660	0.47	0/888
19	AT	0.24	0/671	0.40	0/888
19	CT	0.24	0/671	0.40	0/888
20	AB	0.25	0/1735	0.45	0/2338
20	CB	0.25	0/1735	0.45	0/2338
21	AU	0.26	0/430	0.48	0/570
21	CU	0.26	0/430	0.47	0/570
22	BA	0.55	6/2803 (0.2%)	0.83	7/4371 (0.2%)
22	DA	0.56	6/2803 (0.2%)	0.83	7/4371 (0.2%)
23	BB	0.31	8/68314 (0.0%)	0.79	41/106569 (0.0%)
23	DB	0.31	7/68314 (0.0%)	0.79	38/106569 (0.0%)
24	BI	0.24	0/1046	0.47	0/1410
24	DI	0.25	0/1046	0.48	0/1410
25	BC	0.22	0/2121	0.48	0/2852
25	DC	0.22	0/2121	0.48	0/2852
26	BD	0.24	0/1586	0.48	0/2134
26	DD	0.24	0/1586	0.48	0/2134
27	BK	0.24	0/939	0.55	0/1258
27	DK	0.24	0/939	0.55	0/1258
28	BP	0.24	0/929	0.51	0/1242
28	DP	0.24	0/929	0.51	0/1242
29	BE	0.24	0/1571	0.50	0/2113
29	DE	0.24	0/1571	0.50	0/2113
30	BY	0.23	0/453	0.49	0/605
30	DY	0.23	0/453	0.49	0/605
31	B0	0.22	0/450	0.55	0/599
31	D0	0.22	0/450	0.55	0/599
32	B4	0.23	0/303	0.47	0/397
32	D4	0.23	0/303	0.47	0/397
33	B1	0.27	0/416	0.49	0/554
33	D1	0.27	0/416	0.49	0/554
34	B3	0.24	0/513	0.48	0/676
34	D3	0.24	0/513	0.48	0/676
35	BV	0.25	0/766	0.43	0/1025
35	DV	0.25	0/766	0.42	0/1025
36	B2	0.26	0/380	0.46	0/498
36	D2	0.26	0/380	0.46	0/498
37	BL	0.24	0/1054	0.48	0/1403
37	DL	0.23	0/1054	0.48	0/1403
38	BM	0.25	0/1093	0.48	0/1460

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DM	0.25	0/1093	0.48	0/1460
39	BX	0.24	0/510	0.54	0/677
39	DX	0.24	0/510	0.54	0/677
40	BH	0.25	0/1122	0.47	0/1515
40	DH	0.25	0/1122	0.49	0/1515
41	BJ	0.24	0/1152	0.48	0/1551
41	DJ	0.24	0/1152	0.48	0/1551
42	BN	0.24	0/973	0.52	0/1301
42	DN	0.24	0/973	0.52	0/1301
43	BO	0.23	0/902	0.48	0/1209
43	DO	0.23	0/902	0.48	0/1209
44	BQ	0.25	0/960	0.49	0/1278
44	DQ	0.25	0/960	0.49	0/1278
45	BS	0.22	0/864	0.52	0/1156
45	DS	0.22	0/864	0.52	0/1156
46	BU	0.25	0/787	0.47	0/1051
46	DU	0.25	0/787	0.47	0/1051
47	BF	0.26	0/1444	0.51	0/1937
47	DF	0.26	0/1444	0.52	0/1937
48	BG	0.23	0/1343	0.46	0/1816
48	DG	0.23	0/1343	0.46	0/1816
49	BR	0.25	0/829	0.48	0/1107
49	DR	0.25	0/829	0.48	0/1107
50	BT	0.23	0/744	0.55	0/994
50	DT	0.23	0/744	0.55	0/994
51	BZ	0.25	0/635	0.52	0/848
51	DZ	0.25	0/635	0.52	0/848
52	BW	0.28	0/603	0.51	0/797
52	DW	0.27	0/603	0.51	0/797
53	B6	0.23	0/1497	0.48	0/2017
53	D6	0.24	0/1497	0.47	0/2017
All	All	0.29	29/309354 (0.0%)	0.71	109/462003 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	14
1	CA	0	12
22	BA	0	2

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
22	DA	0	2
23	BB	0	50
23	DB	0	48
All	All	0	128

The worst 5 of 29 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-16.24	1.26	1.41
23	DB	1086	A	C5-C6	-16.14	1.26	1.41
22	DA	28	C	C2-O2	-14.83	1.11	1.24
22	BA	28	C	C2-O2	-14.74	1.11	1.24
23	DB	2276	G	O3'-P	-14.11	1.44	1.61

The worst 5 of 109 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	2204	G	O5'-P-OP1	-29.74	75.02	110.70
23	BB	2204	G	O5'-P-OP2	-28.61	76.37	110.70
23	BB	2791	G	O5'-P-OP1	-27.22	78.03	110.70
23	DB	2791	G	O5'-P-OP2	-26.58	78.80	110.70
23	BB	2791	G	O5'-P-OP2	18.87	133.34	110.70

There are no chirality outliers.

5 of 128 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	324	G	Sidechain
1	AA	78	A	Sidechain
1	AA	86	G	Sidechain

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32831	0	16521	1250	0
1	CA	32831	0	16521	1242	0
2	AC	1624	0	1699	139	0
2	CC	1624	0	1699	141	0
3	AD	1643	0	1710	173	0
3	CD	1643	0	1710	170	0
4	AE	1105	0	1148	99	0
4	CE	1105	0	1148	104	0
5	AF	817	0	808	83	0
5	CF	817	0	808	80	0
6	AG	1174	0	1230	115	0
6	CG	1196	0	1246	98	0
7	AH	979	0	1034	94	0
7	CH	979	0	1034	90	0
8	AI	1022	0	1070	142	0
8	CI	1022	0	1070	134	0
9	AJ	786	0	828	79	0
9	CJ	786	0	828	85	0
10	AK	877	0	887	108	0
10	CK	877	0	887	99	0
11	AL	955	0	1019	82	0
11	CL	955	0	1019	82	0
12	AM	883	0	944	105	0
12	CM	876	0	937	108	0
13	AN	774	0	827	113	0
13	CN	774	0	827	117	0
14	AO	714	0	734	47	0
14	CO	714	0	734	48	0
15	AP	649	0	666	51	0
15	CP	638	0	656	53	0
16	AQ	648	0	691	58	0
16	CQ	657	0	702	61	0
17	AR	455	0	478	45	0
17	CR	455	0	478	49	0
18	AS	637	0	665	89	0
18	CS	644	0	675	88	0
19	AT	665	0	714	58	0
19	CT	665	0	714	55	0
20	AB	1704	0	1732	189	0
20	CB	1704	0	1732	206	0
21	AU	425	0	449	77	0
21	CU	425	0	449	70	0
22	BA	2507	0	1270	119	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	DA	2507	0	1270	119	1
23	BB	60995	0	30679	2401	0
23	DB	60995	0	30677	2528	1
24	BI	1032	0	1088	117	0
24	DI	1032	0	1088	185	0
25	BC	2082	0	2157	254	0
25	DC	2082	0	2157	253	0
26	BD	1565	0	1616	196	0
26	DD	1565	0	1616	200	0
27	BK	930	0	1000	107	0
27	DK	930	0	1000	114	0
28	BP	917	0	965	102	0
28	DP	917	0	965	99	0
29	BE	1552	0	1619	211	0
29	DE	1552	0	1619	196	0
30	BY	449	0	491	51	0
30	DY	449	0	491	51	0
31	B0	444	0	461	56	0
31	D0	444	0	461	53	0
32	B4	302	0	340	34	0
32	D4	302	0	341	40	0
33	B1	409	0	440	48	0
33	D1	409	0	440	44	0
34	B3	504	0	574	51	0
34	D3	504	0	574	52	0
35	BV	753	0	780	90	0
35	DV	753	0	780	101	0
36	B2	377	0	418	36	0
36	D2	377	0	418	38	0
37	BL	1045	0	1117	163	0
37	DL	1045	0	1117	163	0
38	BM	1074	0	1157	117	0
38	DM	1074	0	1157	121	0
39	BX	509	0	543	70	0
39	DX	509	0	543	66	0
40	BH	1111	0	1148	207	0
40	DH	1111	0	1148	144	0
41	BJ	1129	0	1162	144	0
41	DJ	1129	0	1162	146	0
42	BN	960	0	1000	123	0
42	DN	960	0	1000	121	0
43	BO	892	0	923	104	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	DO	892	0	923	113	0
44	BQ	947	0	1022	156	0
44	DQ	947	0	1022	160	0
45	BS	857	0	922	106	0
45	DS	857	0	922	109	0
46	BU	779	0	834	117	0
46	DU	779	0	834	116	0
47	BF	1420	0	1460	236	0
47	DF	1420	0	1460	248	0
48	BG	1323	0	1374	200	0
48	DG	1323	0	1374	195	0
49	BR	816	0	839	124	0
49	DR	816	0	839	127	0
50	BT	738	0	807	120	0
50	DT	738	0	807	116	0
51	BZ	625	0	652	77	0
51	DZ	625	0	652	71	0
52	BW	596	0	610	124	0
52	DW	596	0	610	130	0
53	B6	1478	0	1526	187	0
53	D6	1478	0	1526	166	0
54	AA	60	0	0	0	0
54	BB	110	0	0	0	0
54	CA	61	0	0	0	0
54	CE	1	0	0	0	0
54	DB	111	0	0	0	0
55	AA	42	0	45	3	0
55	BB	42	0	45	1	0
55	CA	42	0	45	2	0
55	DB	42	0	45	1	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	291	0	0	5	0
57	AL	3	0	0	0	0
57	AN	4	0	0	0	0
57	AT	2	0	0	0	0
57	BB	495	0	0	8	0
57	BC	6	0	0	0	0
57	BD	1	0	0	0	0
57	BE	2	0	0	0	0
57	BL	1	0	0	0	0
57	BT	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	CA	296	0	0	1	0
57	CE	3	0	0	0	0
57	CL	4	0	0	0	0
57	CN	4	0	0	0	0
57	CP	1	0	0	0	0
57	CT	1	0	0	0	0
57	DB	502	0	0	15	0
57	DC	4	0	0	0	0
57	DD	1	0	0	0	0
57	DE	1	0	0	0	0
57	DL	2	0	0	0	0
57	DQ	1	0	0	0	0
57	DR	1	0	0	0	0
All	All	287128	0	193895	17520	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 37.

The worst 5 of 17520 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)
23:DB:1099:G:H8	24:DI:3:LYS:N	1.37	1.19
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.28	1.15
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.08	1.15
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.09	1.14
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.08	1.13

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:53:A:OP1	23:DB:1592:C:O2'[1_655]	2.08	0.12

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	AC	204/232 (88%)	150 (74%)	41 (20%)	13 (6%)	1	19
2	CC	204/232 (88%)	154 (76%)	36 (18%)	14 (7%)	1	17
3	AD	203/205 (99%)	151 (74%)	41 (20%)	11 (5%)	2	22
3	CD	203/205 (99%)	150 (74%)	41 (20%)	12 (6%)	1	20
4	AE	148/166 (89%)	113 (76%)	32 (22%)	3 (2%)	7	40
4	CE	148/166 (89%)	116 (78%)	28 (19%)	4 (3%)	5	34
5	AF	98/135 (73%)	66 (67%)	25 (26%)	7 (7%)	1	16
5	CF	98/135 (73%)	67 (68%)	24 (24%)	7 (7%)	1	16
6	AG	148/178 (83%)	121 (82%)	23 (16%)	4 (3%)	5	34
6	CG	150/178 (84%)	123 (82%)	23 (15%)	4 (3%)	5	34
7	AH	127/129 (98%)	96 (76%)	27 (21%)	4 (3%)	4	31
7	CH	127/129 (98%)	96 (76%)	28 (22%)	3 (2%)	6	36
8	AI	125/129 (97%)	96 (77%)	23 (18%)	6 (5%)	2	23
8	CI	125/129 (97%)	96 (77%)	22 (18%)	7 (6%)	2	21
9	AJ	96/103 (93%)	72 (75%)	16 (17%)	8 (8%)	1	13
9	CJ	96/103 (93%)	71 (74%)	17 (18%)	8 (8%)	1	13
10	AK	115/128 (90%)	86 (75%)	22 (19%)	7 (6%)	1	19
10	CK	115/128 (90%)	85 (74%)	23 (20%)	7 (6%)	1	19
11	AL	121/123 (98%)	76 (63%)	34 (28%)	11 (9%)	1	12
11	CL	121/123 (98%)	74 (61%)	36 (30%)	11 (9%)	1	12
12	AM	112/117 (96%)	77 (69%)	28 (25%)	7 (6%)	1	19
12	CM	111/117 (95%)	79 (71%)	25 (22%)	7 (6%)	1	19
13	AN	92/100 (92%)	58 (63%)	21 (23%)	13 (14%)	0	4
13	CN	92/100 (92%)	59 (64%)	21 (23%)	12 (13%)	0	5
14	AO	86/89 (97%)	66 (77%)	17 (20%)	3 (4%)	3	29
14	CO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	3	29
15	AP	80/82 (98%)	58 (72%)	18 (22%)	4 (5%)	2	23
15	CP	78/82 (95%)	56 (72%)	17 (22%)	5 (6%)	1	19
16	AQ	78/83 (94%)	58 (74%)	16 (20%)	4 (5%)	2	22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	CQ	79/83 (95%)	59 (75%)	15 (19%)	5 (6%)	1	19
17	AR	53/74 (72%)	45 (85%)	8 (15%)	0	100	100
17	CR	53/74 (72%)	44 (83%)	9 (17%)	0	100	100
18	AS	77/91 (85%)	52 (68%)	24 (31%)	1 (1%)	12	48
18	CS	78/91 (86%)	53 (68%)	23 (30%)	2 (3%)	5	34
19	AT	83/86 (96%)	67 (81%)	13 (16%)	3 (4%)	3	28
19	CT	83/86 (96%)	67 (81%)	13 (16%)	3 (4%)	3	28
20	AB	216/240 (90%)	159 (74%)	36 (17%)	21 (10%)	0	11
20	CB	216/240 (90%)	156 (72%)	37 (17%)	23 (11%)	0	8
21	AU	49/70 (70%)	27 (55%)	14 (29%)	8 (16%)	0	3
21	CU	49/70 (70%)	26 (53%)	14 (29%)	9 (18%)	0	2
24	BI	139/141 (99%)	119 (86%)	15 (11%)	5 (4%)	3	28
24	DI	139/141 (99%)	114 (82%)	21 (15%)	4 (3%)	4	32
25	BC	269/272 (99%)	164 (61%)	63 (23%)	42 (16%)	0	4
25	DC	269/272 (99%)	161 (60%)	68 (25%)	40 (15%)	0	4
26	BD	207/209 (99%)	118 (57%)	55 (27%)	34 (16%)	0	3
26	DD	207/209 (99%)	115 (56%)	59 (28%)	33 (16%)	0	3
27	BK	119/123 (97%)	72 (60%)	30 (25%)	17 (14%)	0	4
27	DK	119/123 (97%)	71 (60%)	30 (25%)	18 (15%)	0	4
28	BP	112/114 (98%)	62 (55%)	37 (33%)	13 (12%)	0	6
28	DP	112/114 (98%)	63 (56%)	35 (31%)	14 (12%)	0	5
29	BE	199/201 (99%)	124 (62%)	56 (28%)	19 (10%)	0	11
29	DE	199/201 (99%)	121 (61%)	58 (29%)	20 (10%)	0	10
30	BY	56/58 (97%)	36 (64%)	15 (27%)	5 (9%)	1	13
30	DY	56/58 (97%)	37 (66%)	14 (25%)	5 (9%)	1	13
31	B0	54/56 (96%)	35 (65%)	13 (24%)	6 (11%)	0	8
31	D0	54/56 (96%)	36 (67%)	11 (20%)	7 (13%)	0	5
32	B4	36/38 (95%)	18 (50%)	11 (31%)	7 (19%)	0	2
32	D4	36/38 (95%)	18 (50%)	11 (31%)	7 (19%)	0	2
33	B1	48/54 (89%)	36 (75%)	7 (15%)	5 (10%)	0	9
33	D1	48/54 (89%)	36 (75%)	7 (15%)	5 (10%)	0	9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	B3	62/64 (97%)	40 (64%)	16 (26%)	6 (10%)	0	11
34	D3	62/64 (97%)	41 (66%)	14 (23%)	7 (11%)	0	7
35	BV	92/94 (98%)	70 (76%)	16 (17%)	6 (6%)	1	18
35	DV	92/94 (98%)	69 (75%)	18 (20%)	5 (5%)	2	22
36	B2	44/46 (96%)	26 (59%)	15 (34%)	3 (7%)	1	17
36	D2	44/46 (96%)	26 (59%)	15 (34%)	3 (7%)	1	17
37	BL	141/144 (98%)	76 (54%)	42 (30%)	23 (16%)	0	3
37	DL	141/144 (98%)	76 (54%)	40 (28%)	25 (18%)	0	2
38	BM	134/136 (98%)	88 (66%)	31 (23%)	15 (11%)	0	8
38	DM	134/136 (98%)	89 (66%)	29 (22%)	16 (12%)	0	6
39	BX	61/63 (97%)	36 (59%)	18 (30%)	7 (12%)	0	7
39	DX	61/63 (97%)	37 (61%)	17 (28%)	7 (12%)	0	7
40	BH	147/149 (99%)	71 (48%)	49 (33%)	27 (18%)	0	2
40	DH	147/149 (99%)	96 (65%)	28 (19%)	23 (16%)	0	4
41	BJ	140/142 (99%)	89 (64%)	34 (24%)	17 (12%)	0	6
41	DJ	140/142 (99%)	88 (63%)	36 (26%)	16 (11%)	0	7
42	BN	118/127 (93%)	73 (62%)	34 (29%)	11 (9%)	0	12
42	DN	118/127 (93%)	71 (60%)	35 (30%)	12 (10%)	0	10
43	BO	114/117 (97%)	80 (70%)	25 (22%)	9 (8%)	1	14
43	DO	114/117 (97%)	79 (69%)	26 (23%)	9 (8%)	1	14
44	BQ	115/117 (98%)	70 (61%)	34 (30%)	11 (10%)	0	11
44	DQ	115/117 (98%)	69 (60%)	35 (30%)	11 (10%)	0	11
45	BS	108/110 (98%)	72 (67%)	22 (20%)	14 (13%)	0	5
45	DS	108/110 (98%)	70 (65%)	24 (22%)	14 (13%)	0	5
46	BU	100/103 (97%)	52 (52%)	28 (28%)	20 (20%)	0	2
46	DU	100/103 (97%)	50 (50%)	29 (29%)	21 (21%)	0	2
47	BF	176/178 (99%)	106 (60%)	43 (24%)	27 (15%)	0	4
47	DF	176/178 (99%)	107 (61%)	42 (24%)	27 (15%)	0	4
48	BG	174/176 (99%)	100 (58%)	49 (28%)	25 (14%)	0	4
48	DG	174/176 (99%)	99 (57%)	49 (28%)	26 (15%)	0	4
49	BR	101/103 (98%)	67 (66%)	21 (21%)	13 (13%)	0	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	DR	101/103 (98%)	68 (67%)	20 (20%)	13 (13%)	0	5
50	BT	91/100 (91%)	51 (56%)	26 (29%)	14 (15%)	0	4
50	DT	91/100 (91%)	50 (55%)	27 (30%)	14 (15%)	0	4
51	BZ	75/78 (96%)	51 (68%)	18 (24%)	6 (8%)	1	14
51	DZ	75/78 (96%)	51 (68%)	18 (24%)	6 (8%)	1	14
52	BW	77/84 (92%)	31 (40%)	21 (27%)	25 (32%)	0	0
52	DW	77/84 (92%)	31 (40%)	21 (27%)	25 (32%)	0	0
53	B6	183/185 (99%)	151 (82%)	25 (14%)	7 (4%)	3	27
53	D6	183/185 (99%)	132 (72%)	40 (22%)	11 (6%)	1	19
All	All	11607/12284 (94%)	7747 (67%)	2693 (23%)	1167 (10%)	0	10

5 of 1167 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	54	ILE
2	AC	205	GLU
6	AG	6	ILE
8	AI	8	THR
9	AJ	36	VAL

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AC	170/189 (90%)	142 (84%)	28 (16%)	2	14
2	CC	170/189 (90%)	142 (84%)	28 (16%)	2	14
3	AD	172/172 (100%)	147 (86%)	25 (14%)	3	17
3	CD	172/172 (100%)	148 (86%)	24 (14%)	3	19
4	AE	113/125 (90%)	96 (85%)	17 (15%)	3	17
4	CE	113/125 (90%)	96 (85%)	17 (15%)	3	17
5	AF	87/116 (75%)	71 (82%)	16 (18%)	1	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	CF	87/116 (75%)	70 (80%)	17 (20%)	1	9
6	AG	123/146 (84%)	106 (86%)	17 (14%)	3	19
6	CG	125/146 (86%)	109 (87%)	16 (13%)	4	21
7	AH	104/104 (100%)	96 (92%)	8 (8%)	13	39
7	CH	104/104 (100%)	96 (92%)	8 (8%)	13	39
8	AI	105/106 (99%)	88 (84%)	17 (16%)	2	15
8	CI	105/106 (99%)	88 (84%)	17 (16%)	2	15
9	AJ	86/90 (96%)	73 (85%)	13 (15%)	3	16
9	CJ	86/90 (96%)	73 (85%)	13 (15%)	3	16
10	AK	90/98 (92%)	76 (84%)	14 (16%)	2	16
10	CK	90/98 (92%)	76 (84%)	14 (16%)	2	16
11	AL	103/103 (100%)	92 (89%)	11 (11%)	6	26
11	CL	103/103 (100%)	91 (88%)	12 (12%)	5	23
12	AM	92/95 (97%)	78 (85%)	14 (15%)	3	16
12	CM	91/95 (96%)	77 (85%)	14 (15%)	2	16
13	AN	79/83 (95%)	66 (84%)	13 (16%)	2	14
13	CN	79/83 (95%)	66 (84%)	13 (16%)	2	14
14	AO	76/77 (99%)	64 (84%)	12 (16%)	2	15
14	CO	76/77 (99%)	64 (84%)	12 (16%)	2	15
15	AP	65/65 (100%)	60 (92%)	5 (8%)	13	39
15	CP	65/65 (100%)	60 (92%)	5 (8%)	13	39
16	AQ	74/77 (96%)	66 (89%)	8 (11%)	6	26
16	CQ	75/77 (97%)	67 (89%)	8 (11%)	6	26
17	AR	48/64 (75%)	45 (94%)	3 (6%)	18	44
17	CR	48/64 (75%)	45 (94%)	3 (6%)	18	44
18	AS	70/78 (90%)	54 (77%)	16 (23%)	1	5
18	CS	71/78 (91%)	55 (78%)	16 (22%)	1	6
19	AT	65/65 (100%)	56 (86%)	9 (14%)	3	19
19	CT	65/65 (100%)	56 (86%)	9 (14%)	3	19
20	AB	180/198 (91%)	150 (83%)	30 (17%)	2	14
20	CB	180/198 (91%)	149 (83%)	31 (17%)	2	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	AU	44/60 (73%)	31 (70%)	13 (30%)	0	2
21	CU	44/60 (73%)	31 (70%)	13 (30%)	0	2
24	BI	109/109 (100%)	107 (98%)	2 (2%)	59	77
24	DI	109/109 (100%)	103 (94%)	6 (6%)	21	49
25	BC	216/217 (100%)	178 (82%)	38 (18%)	2	12
25	DC	216/217 (100%)	179 (83%)	37 (17%)	2	13
26	BD	164/164 (100%)	142 (87%)	22 (13%)	4	20
26	DD	164/164 (100%)	140 (85%)	24 (15%)	3	17
27	BK	102/104 (98%)	75 (74%)	27 (26%)	0	4
27	DK	102/104 (98%)	75 (74%)	27 (26%)	0	4
28	BP	99/99 (100%)	82 (83%)	17 (17%)	2	13
28	DP	99/99 (100%)	82 (83%)	17 (17%)	2	13
29	BE	165/165 (100%)	141 (86%)	24 (14%)	3	17
29	DE	165/165 (100%)	140 (85%)	25 (15%)	3	16
30	BY	48/48 (100%)	38 (79%)	10 (21%)	1	7
30	DY	48/48 (100%)	38 (79%)	10 (21%)	1	7
31	B0	47/47 (100%)	39 (83%)	8 (17%)	2	13
31	D0	47/47 (100%)	39 (83%)	8 (17%)	2	13
32	B4	34/34 (100%)	28 (82%)	6 (18%)	2	12
32	D4	34/34 (100%)	28 (82%)	6 (18%)	2	12
33	B1	45/48 (94%)	42 (93%)	3 (7%)	16	43
33	D1	45/48 (94%)	42 (93%)	3 (7%)	16	43
34	B3	51/51 (100%)	47 (92%)	4 (8%)	12	38
34	D3	51/51 (100%)	47 (92%)	4 (8%)	12	38
35	BV	78/78 (100%)	66 (85%)	12 (15%)	2	16
35	DV	78/78 (100%)	67 (86%)	11 (14%)	3	19
36	B2	38/38 (100%)	34 (90%)	4 (10%)	7	26
36	D2	38/38 (100%)	34 (90%)	4 (10%)	7	26
37	BL	102/103 (99%)	87 (85%)	15 (15%)	3	17
37	DL	102/103 (99%)	88 (86%)	14 (14%)	3	19
38	BM	109/109 (100%)	88 (81%)	21 (19%)	1	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	DM	109/109 (100%)	89 (82%)	20 (18%)	1	11
39	BX	55/55 (100%)	40 (73%)	15 (27%)	0	3
39	DX	55/55 (100%)	42 (76%)	13 (24%)	1	5
40	BH	114/114 (100%)	68 (60%)	46 (40%)	0	0
40	DH	114/114 (100%)	91 (80%)	23 (20%)	1	8
41	BJ	116/116 (100%)	99 (85%)	17 (15%)	3	17
41	DJ	116/116 (100%)	99 (85%)	17 (15%)	3	17
42	BN	100/103 (97%)	86 (86%)	14 (14%)	3	19
42	DN	100/103 (97%)	86 (86%)	14 (14%)	3	19
43	BO	86/87 (99%)	73 (85%)	13 (15%)	3	16
43	DO	86/87 (99%)	74 (86%)	12 (14%)	3	19
44	BQ	89/89 (100%)	76 (85%)	13 (15%)	3	17
44	DQ	89/89 (100%)	75 (84%)	14 (16%)	2	16
45	BS	93/93 (100%)	79 (85%)	14 (15%)	3	16
45	DS	93/93 (100%)	80 (86%)	13 (14%)	3	19
46	BU	83/84 (99%)	69 (83%)	14 (17%)	2	13
46	DU	83/84 (99%)	69 (83%)	14 (17%)	2	13
47	BF	149/149 (100%)	114 (76%)	35 (24%)	1	5
47	DF	149/149 (100%)	116 (78%)	33 (22%)	1	6
48	BG	137/137 (100%)	114 (83%)	23 (17%)	2	13
48	DG	137/137 (100%)	115 (84%)	22 (16%)	2	15
49	BR	84/84 (100%)	72 (86%)	12 (14%)	3	18
49	DR	84/84 (100%)	72 (86%)	12 (14%)	3	18
50	BT	80/84 (95%)	65 (81%)	15 (19%)	1	10
50	DT	80/84 (95%)	68 (85%)	12 (15%)	3	17
51	BZ	67/68 (98%)	53 (79%)	14 (21%)	1	7
51	DZ	67/68 (98%)	54 (81%)	13 (19%)	1	9
52	BW	59/62 (95%)	47 (80%)	12 (20%)	1	8
52	DW	59/62 (95%)	46 (78%)	13 (22%)	1	6
53	B6	157/157 (100%)	119 (76%)	38 (24%)	0	5
53	D6	157/157 (100%)	123 (78%)	34 (22%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	9647/10014 (96%)	8085 (84%)	1562 (16%)	2 15

5 of 1562 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
9	CJ	31	ARG
26	DD	141	ARG
11	CL	15	VAL
9	CJ	17	LEU
19	CT	69	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 336 such sidechains are listed below:

Mol	Chain	Res	Type
20	CB	41	ASN
39	DX	41	HIS
24	DI	5	GLN
28	DP	114	ASN
43	DO	61	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	246 (16%)	16 (1%)
1	CA	1529/1542 (99%)	244 (15%)	16 (1%)
22	BA	116/120 (96%)	18 (15%)	0
22	DA	116/120 (96%)	18 (15%)	0
23	BB	2837/2904 (97%)	446 (15%)	14 (0%)
23	DB	2837/2904 (97%)	447 (15%)	16 (0%)
All	All	8964/9132 (98%)	1419 (15%)	62 (0%)

5 of 1419 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	9	G
1	AA	14	U
1	AA	31	G
1	AA	32	A

5 of 62 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
23	BB	2832	U
23	DB	1509	A
1	CA	366	A
23	DB	1419	A
23	DB	2756	U

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 349 ligands modelled in this entry, 345 are monoatomic - leaving 4 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
55	PAR	DB	3112	-	45,45,45	1.98	12 (26%)	64,67,67	1.18	6 (9%)
55	PAR	CA	1662	-	45,45,45	1.94	11 (24%)	64,67,67	1.16	5 (7%)
55	PAR	BB	3111	-	45,45,45	1.94	11 (24%)	64,67,67	1.13	6 (9%)
55	PAR	AA	1661	-	45,45,45	1.85	10 (22%)	64,67,67	1.14	5 (7%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	PAR	DB	3112	-	-	3/18/94/94	0/4/4/4
55	PAR	CA	1662	-	-	4/18/94/94	0/4/4/4
55	PAR	BB	3111	-	-	4/18/94/94	0/4/4/4
55	PAR	AA	1661	-	-	6/18/94/94	0/4/4/4

The worst 5 of 44 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DB	3112	PAR	C64-C54	5.26	1.59	1.52
55	BB	3111	PAR	C64-C54	5.25	1.59	1.52
55	AA	1661	PAR	C64-C54	5.07	1.58	1.52
55	CA	1662	PAR	C64-C54	5.00	1.58	1.52
55	CA	1662	PAR	C31-C21	4.73	1.59	1.53

The worst 5 of 22 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	DB	3112	PAR	O33-C14-C24	3.65	114.50	108.22
55	BB	3111	PAR	O33-C14-C24	3.49	114.23	108.22
55	DB	3112	PAR	O52-C13-O43	3.33	115.04	111.43
55	CA	1662	PAR	O33-C14-C24	3.27	113.85	108.22
55	DB	3112	PAR	O54-C54-C64	3.23	112.02	106.01

There are no chirality outliers.

5 of 17 torsion outliers are listed below:

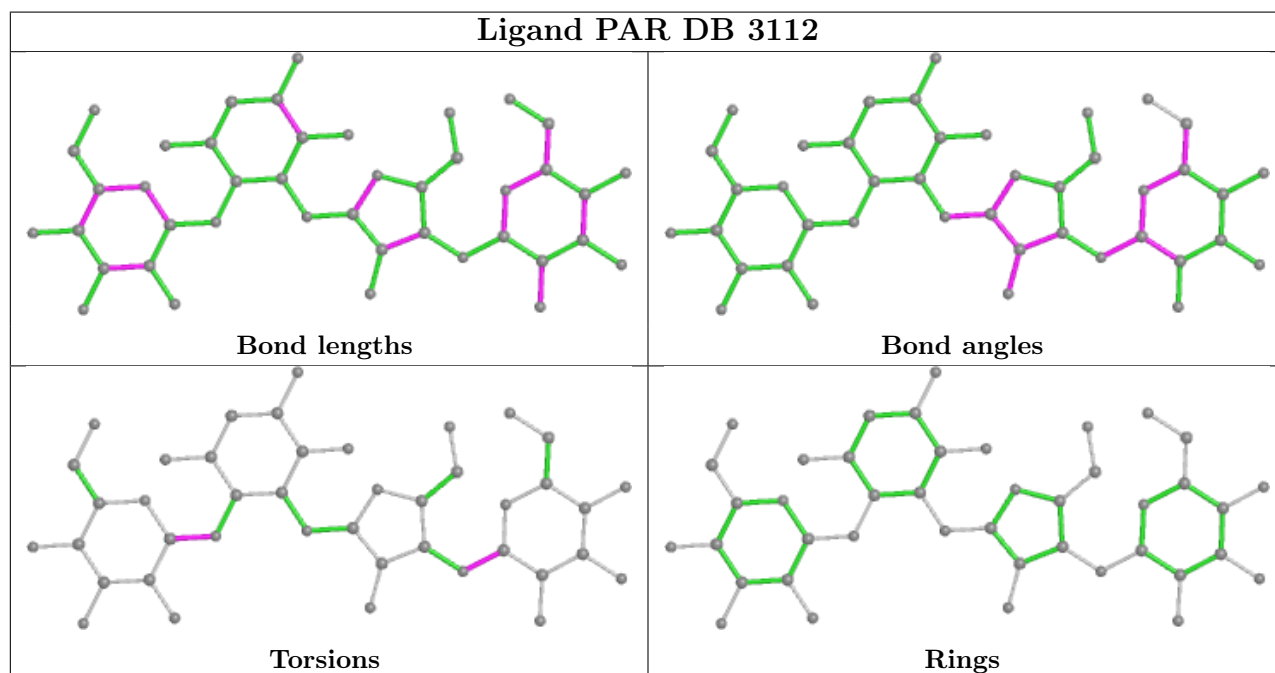
Mol	Chain	Res	Type	Atoms
55	AA	1661	PAR	C23-C13-O52-C52
55	BB	3111	PAR	C24-C14-O33-C33
55	CA	1662	PAR	C23-C13-O52-C52
55	CA	1662	PAR	O43-C13-O52-C52
55	DB	3112	PAR	C24-C14-O33-C33

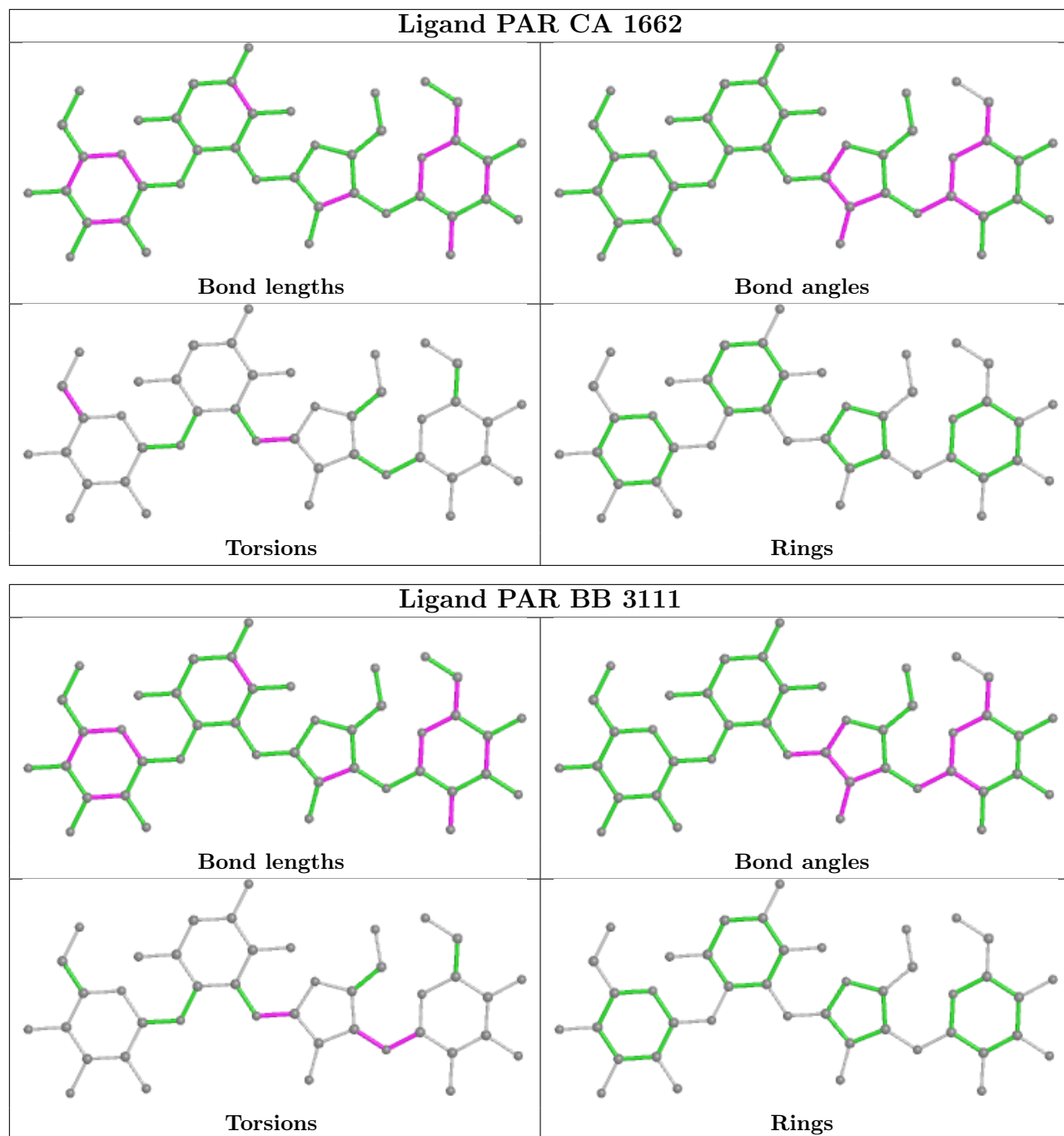
There are no ring outliers.

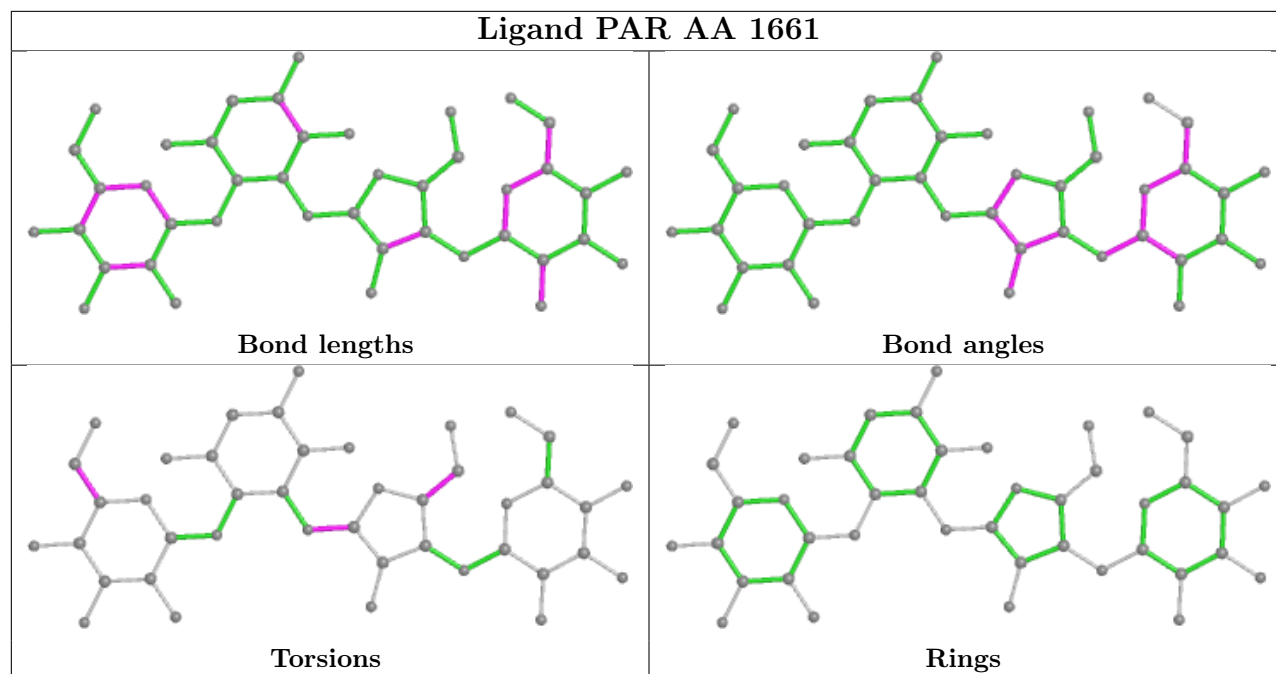
4 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	DB	3112	PAR	1	0
55	CA	1662	PAR	2	0
55	BB	3111	PAR	1	0
55	AA	1661	PAR	3	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.







5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1530/1542 (99%)	0.03	16 (1%) 82 74	8, 88, 162, 180	0
1	CA	1530/1542 (99%)	-0.12	9 (0%) 89 84	5, 54, 146, 180	0
2	AC	206/232 (88%)	-0.03	5 (2%) 59 49	9, 89, 158, 180	0
2	CC	206/232 (88%)	-0.33	2 (0%) 82 74	9, 83, 141, 180	0
3	AD	205/205 (100%)	-0.10	3 (1%) 73 64	5, 97, 172, 180	0
3	CD	205/205 (100%)	-0.39	0 100 100	5, 59, 151, 180	0
4	AE	150/166 (90%)	-0.17	0 100 100	5, 85, 159, 180	0
4	CE	150/166 (90%)	-0.14	1 (0%) 87 82	5, 52, 137, 180	0
5	AF	100/135 (74%)	-0.15	1 (1%) 82 74	8, 73, 146, 172	0
5	CF	100/135 (74%)	-0.35	0 100 100	5, 84, 153, 180	0
6	AG	150/178 (84%)	-0.20	4 (2%) 54 45	10, 110, 170, 180	0
6	CG	152/178 (85%)	0.08	5 (3%) 46 37	28, 93, 162, 180	0
7	AH	129/129 (100%)	-0.04	3 (2%) 60 51	15, 85, 159, 180	0
7	CH	129/129 (100%)	-0.23	2 (1%) 72 63	5, 50, 128, 175	0
8	AI	127/129 (98%)	0.06	4 (3%) 49 39	5, 98, 163, 180	0
8	CI	127/129 (98%)	-0.22	1 (0%) 86 79	5, 102, 180, 180	0
9	AJ	98/103 (95%)	0.21	4 (4%) 37 30	5, 105, 174, 180	0
9	CJ	98/103 (95%)	0.30	5 (5%) 28 24	10, 93, 158, 180	0
10	AK	117/128 (91%)	-0.27	0 100 100	9, 67, 129, 146	0
10	CK	117/128 (91%)	-0.41	2 (1%) 70 61	5, 63, 134, 180	0
11	AL	123/123 (100%)	-0.01	1 (0%) 86 79	19, 84, 158, 180	0
11	CL	123/123 (100%)	-0.43	0 100 100	5, 54, 113, 180	0
12	AM	114/117 (97%)	0.08	3 (2%) 56 46	55, 122, 180, 180	0
12	CM	113/117 (96%)	0.15	4 (3%) 44 35	31, 114, 180, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AN	96/100 (96%)	0.32	8 (8%) 11 10	5, 108, 170, 180	0
13	CN	96/100 (96%)	0.16	5 (5%) 27 24	6, 99, 162, 180	0
14	AO	88/89 (98%)	-0.26	0 100 100	7, 86, 156, 180	0
14	CO	88/89 (98%)	-0.52	0 100 100	5, 60, 132, 175	0
15	AP	82/82 (100%)	0.26	3 (3%) 41 33	35, 106, 173, 180	0
15	CP	80/82 (97%)	0.27	5 (6%) 20 16	5, 47, 142, 180	0
16	AQ	80/83 (96%)	-0.13	0 100 100	48, 104, 180, 180	0
16	CQ	81/83 (97%)	-0.22	0 100 100	5, 53, 140, 173	0
17	AR	55/74 (74%)	-0.14	1 (1%) 68 59	5, 65, 143, 180	0
17	CR	55/74 (74%)	0.28	2 (3%) 42 34	13, 68, 130, 180	0
18	AS	79/91 (86%)	0.35	4 (5%) 28 24	55, 129, 180, 180	0
18	CS	80/91 (87%)	0.11	1 (1%) 77 68	46, 108, 180, 180	0
19	AT	85/86 (98%)	-0.19	0 100 100	44, 105, 154, 180	0
19	CT	85/86 (98%)	-0.20	1 (1%) 79 70	5, 56, 117, 161	0
20	AB	218/240 (90%)	-0.15	4 (1%) 68 59	7, 105, 171, 180	0
20	CB	218/240 (90%)	0.33	10 (4%) 32 27	23, 111, 172, 180	0
21	AU	51/70 (72%)	-0.03	1 (1%) 65 56	23, 104, 180, 180	0
21	CU	51/70 (72%)	-0.08	2 (3%) 39 31	24, 96, 173, 180	0
22	BA	117/120 (97%)	-0.27	0 100 100	37, 82, 145, 178	0
22	DA	117/120 (97%)	-0.02	2 (1%) 70 61	18, 84, 143, 180	0
23	BB	2841/2904 (97%)	-0.05	26 (0%) 84 77	6, 58, 150, 180	0
23	DB	2841/2904 (97%)	-0.15	9 (0%) 94 90	5, 38, 149, 180	0
24	BI	141/141 (100%)	0.61	9 (6%) 19 16	63, 161, 180, 180	0
24	DI	141/141 (100%)	0.48	13 (9%) 9 8	65, 157, 180, 180	0
25	BC	271/272 (99%)	-0.28	1 (0%) 92 87	5, 48, 108, 166	0
25	DC	271/272 (99%)	-0.26	0 100 100	5, 30, 102, 180	0
26	BD	209/209 (100%)	0.07	6 (2%) 51 41	5, 79, 148, 180	0
26	DD	209/209 (100%)	-0.38	0 100 100	5, 51, 123, 180	0
27	BK	121/123 (98%)	0.07	1 (0%) 86 79	5, 74, 149, 180	0
27	DK	121/123 (98%)	-0.32	0 100 100	5, 33, 106, 180	0
28	BP	114/114 (100%)	-0.08	0 100 100	18, 89, 153, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DP	114/114 (100%)	-0.32	0 100 100	5, 48, 124, 180	0
29	BE	201/201 (100%)	-0.35	2 (0%) 82 74	5, 67, 146, 180	0
29	DE	201/201 (100%)	-0.28	1 (0%) 91 85	5, 67, 142, 177	0
30	BY	58/58 (100%)	-0.05	0 100 100	18, 82, 151, 171	0
30	DY	58/58 (100%)	-0.27	1 (1%) 70 61	5, 68, 126, 162	0
31	B0	56/56 (100%)	-0.21	0 100 100	5, 73, 153, 164	0
31	D0	56/56 (100%)	-0.22	0 100 100	5, 56, 147, 180	0
32	B4	38/38 (100%)	1.71	12 (31%) 0 1	45, 115, 169, 180	0
32	D4	38/38 (100%)	1.82	13 (34%) 0 0	36, 110, 169, 180	0
33	B1	50/54 (92%)	0.40	5 (10%) 7 7	22, 95, 157, 180	0
33	D1	50/54 (92%)	0.32	0 100 100	19, 73, 122, 161	0
34	B3	64/64 (100%)	-0.19	0 100 100	20, 63, 125, 145	0
34	D3	64/64 (100%)	-0.09	0 100 100	5, 35, 88, 129	0
35	BV	94/94 (100%)	-0.19	0 100 100	24, 96, 156, 180	0
35	DV	94/94 (100%)	-0.18	0 100 100	11, 93, 151, 180	0
36	B2	46/46 (100%)	-0.10	0 100 100	5, 75, 137, 180	0
36	D2	46/46 (100%)	-0.19	0 100 100	5, 44, 101, 180	0
37	BL	143/144 (99%)	-0.15	1 (0%) 87 82	5, 71, 133, 180	0
37	DL	143/144 (99%)	-0.25	0 100 100	5, 51, 116, 180	0
38	BM	136/136 (100%)	-0.12	1 (0%) 87 82	9, 70, 149, 180	0
38	DM	136/136 (100%)	-0.20	1 (0%) 87 82	5, 50, 131, 176	0
39	BX	63/63 (100%)	0.06	5 (7%) 12 11	7, 84, 165, 180	0
39	DX	63/63 (100%)	-0.03	2 (3%) 47 37	47, 108, 173, 180	0
40	BH	149/149 (100%)	0.49	12 (8%) 12 11	5, 130, 180, 180	0
40	DH	149/149 (100%)	0.08	5 (3%) 45 36	12, 97, 172, 180	0
41	BJ	142/142 (100%)	-0.14	2 (1%) 75 66	6, 81, 147, 180	0
41	DJ	142/142 (100%)	-0.26	0 100 100	5, 58, 135, 180	0
42	BN	120/127 (94%)	-0.15	0 100 100	5, 68, 139, 178	0
42	DN	120/127 (94%)	-0.46	0 100 100	5, 38, 101, 180	0
43	BO	116/117 (99%)	0.23	9 (7%) 13 11	21, 91, 147, 180	0
43	DO	116/117 (99%)	0.34	12 (10%) 6 7	8, 86, 164, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BQ	117/117 (100%)	-0.40	0 100 100	5, 66, 135, 176	0
44	DQ	117/117 (100%)	-0.19	2 (1%) 70 61	5, 48, 134, 180	0
45	BS	110/110 (100%)	-0.11	0 100 100	6, 58, 139, 180	0
45	DS	110/110 (100%)	-0.33	0 100 100	5, 50, 121, 180	0
46	BU	102/103 (99%)	0.28	4 (3%) 39 31	5, 89, 144, 180	0
46	DU	102/103 (99%)	0.06	0 100 100	24, 99, 159, 180	0
47	BF	178/178 (100%)	-0.28	0 100 100	36, 111, 174, 180	0
47	DF	178/178 (100%)	-0.08	1 (0%) 89 84	8, 103, 177, 180	0
48	BG	176/176 (100%)	0.19	2 (1%) 80 72	9, 114, 179, 180	0
48	DG	176/176 (100%)	0.00	5 (2%) 53 43	15, 91, 167, 180	0
49	BR	103/103 (100%)	0.12	0 100 100	16, 93, 157, 180	0
49	DR	103/103 (100%)	0.07	0 100 100	5, 88, 145, 180	0
50	BT	93/100 (93%)	-0.10	2 (2%) 62 52	5, 88, 180, 180	0
50	DT	93/100 (93%)	0.07	1 (1%) 80 72	7, 90, 180, 180	0
51	BZ	77/78 (98%)	-0.03	3 (3%) 39 31	5, 52, 127, 154	0
51	DZ	77/78 (98%)	-0.21	1 (1%) 77 68	5, 43, 95, 135	0
52	BW	79/84 (94%)	0.25	4 (5%) 28 24	10, 85, 145, 179	0
52	DW	79/84 (94%)	0.26	2 (2%) 57 48	5, 66, 152, 180	0
53	B6	185/185 (100%)	0.56	31 (16%) 1 2	5, 125, 180, 180	0
53	D6	185/185 (100%)	0.03	10 (5%) 25 22	5, 90, 180, 180	0
All	All	20787/21416 (97%)	-0.07	341 (1%) 72 63	5, 70, 162, 180	0

The worst 5 of 341 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
39	DX	63	ALA	10.6
23	BB	2147	A	10.0
24	BI	1	ALA	7.5
24	BI	2	LYS	6.9
23	DB	1175	A	6.0

6.2 Non-standard residues in protein, DNA, RNA chains

There are no non-standard protein/DNA/RNA residues in this entry.

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
54	MG	AA	1625	1/1	0.01	0.18	144,144,144,144	1
54	MG	DB	3060	1/1	0.24	0.12	160,160,160,160	0
54	MG	DB	3059	1/1	0.41	0.13	152,152,152,152	0
54	MG	AA	1659	1/1	0.41	0.55	127,127,127,127	0
54	MG	AA	1608	1/1	0.55	0.52	136,136,136,136	0
54	MG	AA	1657	1/1	0.57	1.78	155,155,155,155	0
54	MG	AA	1626	1/1	0.57	0.63	28,28,28,28	1
54	MG	CE	201	1/1	0.61	0.91	145,145,145,145	0
54	MG	DB	3045	1/1	0.65	0.12	108,108,108,108	0
54	MG	AA	1639	1/1	0.66	1.94	126,126,126,126	0
54	MG	CA	1608	1/1	0.66	0.57	178,178,178,178	0
54	MG	CA	1657	1/1	0.68	0.57	97,97,97,97	0
54	MG	AA	1632	1/1	0.69	0.43	80,80,80,80	0
54	MG	CA	1616	1/1	0.70	0.24	94,94,94,94	0
54	MG	BB	3079	1/1	0.71	0.19	43,43,43,43	0
55	PAR	BB	3111	42/42	0.71	0.41	100,100,100,100	42
54	MG	AA	1650	1/1	0.73	0.17	116,116,116,116	0
54	MG	BB	3042	1/1	0.74	0.06	100,100,100,100	0
54	MG	AA	1613	1/1	0.75	0.30	82,82,82,82	0
54	MG	BB	3053	1/1	0.76	0.12	38,38,38,38	0
54	MG	CA	1660	1/1	0.77	0.22	58,58,58,58	0
54	MG	CA	1623	1/1	0.77	0.36	180,180,180,180	0
54	MG	AA	1658	1/1	0.77	0.11	97,97,97,97	0
54	MG	DB	3052	1/1	0.78	0.56	166,166,166,166	0
54	MG	BB	3064	1/1	0.78	0.19	78,78,78,78	0
55	PAR	DB	3112	42/42	0.78	0.40	55,55,55,55	42
54	MG	AA	1656	1/1	0.79	0.26	50,50,50,50	0
54	MG	AA	1617	1/1	0.80	0.22	138,138,138,138	0
54	MG	AA	1603	1/1	0.80	0.17	38,38,38,38	0
54	MG	CA	1649	1/1	0.81	0.34	134,134,134,134	0
54	MG	DB	3037	1/1	0.81	0.14	45,45,45,45	0
54	MG	BB	3108	1/1	0.81	0.30	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	AA	1647	1/1	0.81	1.42	180,180,180,180	0
54	MG	CA	1619	1/1	0.82	0.24	78,78,78,78	0
54	MG	AA	1660	1/1	0.83	0.21	75,75,75,75	0
54	MG	DB	3083	1/1	0.83	0.33	72,72,72,72	0
54	MG	AA	1637	1/1	0.83	1.21	146,146,146,146	0
54	MG	AA	1627	1/1	0.83	0.29	46,46,46,46	0
54	MG	CA	1622	1/1	0.84	0.18	38,38,38,38	0
54	MG	CA	1614	1/1	0.84	0.19	85,85,85,85	0
54	MG	CA	1629	1/1	0.84	0.49	96,96,96,96	1
54	MG	BB	3031	1/1	0.84	0.19	44,44,44,44	0
54	MG	BB	3033	1/1	0.84	0.55	125,125,125,125	0
54	MG	CA	1648	1/1	0.85	0.20	17,17,17,17	0
54	MG	BB	3093	1/1	0.85	0.44	98,98,98,98	0
54	MG	BB	3077	1/1	0.85	0.17	64,64,64,64	0
54	MG	CA	1606	1/1	0.85	0.22	103,103,103,103	0
54	MG	AA	1601	1/1	0.85	0.22	10,10,10,10	0
54	MG	DB	3013	1/1	0.85	0.21	35,35,35,35	0
54	MG	BB	3081	1/1	0.85	0.16	31,31,31,31	0
54	MG	DB	3072	1/1	0.86	0.09	48,48,48,48	0
54	MG	BB	3097	1/1	0.86	0.33	95,95,95,95	0
54	MG	AA	1615	1/1	0.86	0.46	171,171,171,171	0
54	MG	AA	1635	1/1	0.86	0.20	120,120,120,120	0
54	MG	BB	3047	1/1	0.87	0.18	92,92,92,92	0
54	MG	AA	1633	1/1	0.87	0.41	56,56,56,56	0
54	MG	BB	3099	1/1	0.87	0.11	40,40,40,40	0
54	MG	AA	1651	1/1	0.87	0.19	55,55,55,55	0
54	MG	CA	1634	1/1	0.87	0.17	30,30,30,30	0
54	MG	BB	3080	1/1	0.88	0.59	131,131,131,131	0
54	MG	AA	1619	1/1	0.88	1.61	180,180,180,180	0
54	MG	BB	3010	1/1	0.88	0.12	38,38,38,38	0
54	MG	CA	1658	1/1	0.88	0.37	70,70,70,70	0
54	MG	CA	1626	1/1	0.88	0.31	23,23,23,23	1
54	MG	DB	3064	1/1	0.88	0.12	23,23,23,23	0
54	MG	AA	1602	1/1	0.88	0.18	105,105,105,105	0
54	MG	BB	3049	1/1	0.88	0.27	25,25,25,25	0
54	MG	DB	3026	1/1	0.88	0.20	54,54,54,54	0
54	MG	DB	3035	1/1	0.88	0.23	52,52,52,52	0
54	MG	BB	3012	1/1	0.89	0.16	71,71,71,71	0
54	MG	BB	3019	1/1	0.89	0.17	56,56,56,56	0
54	MG	AA	1622	1/1	0.89	0.34	111,111,111,111	0
54	MG	BB	3051	1/1	0.89	0.37	75,75,75,75	0
54	MG	DB	3080	1/1	0.89	0.11	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	AA	1652	1/1	0.89	0.22	126,126,126,126	0
55	PAR	AA	1661	42/42	0.89	0.22	62,62,62,62	0
54	MG	DB	3003	1/1	0.89	0.19	5,5,5,5	0
54	MG	DB	3058	1/1	0.89	0.56	157,157,157,157	0
54	MG	AA	1620	1/1	0.90	0.06	95,95,95,95	0
54	MG	AA	1621	1/1	0.90	0.26	27,27,27,27	0
54	MG	CA	1625	1/1	0.90	0.31	46,46,46,46	0
54	MG	AA	1610	1/1	0.90	0.32	82,82,82,82	0
54	MG	CA	1609	1/1	0.90	0.16	81,81,81,81	0
54	MG	CA	1630	1/1	0.90	0.23	65,65,65,65	0
54	MG	BB	3095	1/1	0.90	0.11	65,65,65,65	0
54	MG	BB	3013	1/1	0.90	0.28	86,86,86,86	0
54	MG	AA	1623	1/1	0.90	0.63	33,33,33,33	1
55	PAR	CA	1662	42/42	0.90	0.21	45,45,45,45	0
54	MG	CA	1620	1/1	0.90	0.26	104,104,104,104	0
54	MG	DB	3054	1/1	0.91	0.12	69,69,69,69	0
54	MG	CA	1654	1/1	0.91	0.13	72,72,72,72	0
54	MG	BB	3043	1/1	0.91	0.23	97,97,97,97	0
54	MG	BB	3063	1/1	0.91	0.09	5,5,5,5	0
54	MG	DB	3050	1/1	0.91	0.11	118,118,118,118	0
54	MG	CA	1615	1/1	0.91	0.25	180,180,180,180	0
56	ZN	D4	101	1/1	0.91	0.30	96,96,96,96	0
54	MG	DB	3022	1/1	0.92	0.17	85,85,85,85	0
54	MG	DB	3053	1/1	0.92	0.26	65,65,65,65	0
54	MG	BB	3006	1/1	0.92	0.09	37,37,37,37	0
54	MG	DB	3094	1/1	0.92	0.10	81,81,81,81	0
54	MG	DB	3100	1/1	0.92	0.13	22,22,22,22	0
54	MG	BB	3004	1/1	0.92	0.31	44,44,44,44	0
54	MG	CA	1643	1/1	0.92	0.13	11,11,11,11	0
54	MG	CA	1624	1/1	0.92	0.20	48,48,48,48	0
54	MG	DB	3016	1/1	0.92	0.12	5,5,5,5	0
54	MG	DB	3066	1/1	0.92	0.18	123,123,123,123	0
54	MG	DB	3061	1/1	0.93	0.17	95,95,95,95	0
54	MG	CA	1652	1/1	0.93	0.22	58,58,58,58	0
54	MG	DB	3027	1/1	0.93	0.17	11,11,11,11	0
54	MG	CA	1621	1/1	0.93	0.56	67,67,67,67	0
54	MG	DB	3073	1/1	0.93	0.12	25,25,25,25	0
54	MG	AA	1606	1/1	0.93	0.04	73,73,73,73	0
54	MG	CA	1632	1/1	0.93	0.14	34,34,34,34	0
54	MG	BB	3071	1/1	0.93	0.21	63,63,63,63	0
54	MG	CA	1635	1/1	0.93	0.16	105,105,105,105	0
54	MG	CA	1637	1/1	0.93	0.13	116,116,116,116	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	BB	3026	1/1	0.93	0.23	44,44,44,44	0
54	MG	DB	3015	1/1	0.93	0.10	39,39,39,39	0
54	MG	BB	3078	1/1	0.93	0.33	92,92,92,92	0
54	MG	BB	3027	1/1	0.93	0.18	83,83,83,83	0
54	MG	BB	3046	1/1	0.94	0.19	64,64,64,64	0
54	MG	DB	3049	1/1	0.94	0.12	11,11,11,11	0
54	MG	AA	1638	1/1	0.94	0.10	45,45,45,45	0
54	MG	DB	3051	1/1	0.94	0.15	20,20,20,20	0
54	MG	BB	3020	1/1	0.94	0.48	23,23,23,23	0
54	MG	BB	3083	1/1	0.94	0.14	51,51,51,51	0
54	MG	BB	3091	1/1	0.94	0.11	81,81,81,81	0
54	MG	AA	1634	1/1	0.94	0.11	79,79,79,79	0
54	MG	AA	1644	1/1	0.94	0.22	69,69,69,69	0
54	MG	CA	1659	1/1	0.94	0.13	70,70,70,70	0
54	MG	BB	3054	1/1	0.94	0.10	55,55,55,55	0
54	MG	CA	1661	1/1	0.94	0.12	40,40,40,40	0
54	MG	DB	3065	1/1	0.94	0.32	68,68,68,68	0
54	MG	AA	1646	1/1	0.94	0.12	98,98,98,98	0
54	MG	DB	3067	1/1	0.94	0.15	13,13,13,13	0
54	MG	BB	3100	1/1	0.94	0.20	109,109,109,109	0
54	MG	DB	3008	1/1	0.94	0.19	11,11,11,11	0
54	MG	AA	1624	1/1	0.94	0.20	76,76,76,76	0
54	MG	BB	3066	1/1	0.94	0.05	34,34,34,34	0
54	MG	DB	3090	1/1	0.94	0.22	35,35,35,35	0
54	MG	CA	1607	1/1	0.94	0.11	20,20,20,20	0
54	MG	DB	3097	1/1	0.94	0.14	32,32,32,32	0
54	MG	BB	3037	1/1	0.94	0.15	63,63,63,63	0
54	MG	AA	1612	1/1	0.94	0.15	96,96,96,96	0
54	MG	CA	1636	1/1	0.94	0.21	90,90,90,90	0
54	MG	DB	3030	1/1	0.94	0.23	30,30,30,30	0
54	MG	BB	3017	1/1	0.94	0.15	46,46,46,46	0
56	ZN	B4	101	1/1	0.94	0.20	68,68,68,68	0
54	MG	CA	1640	1/1	0.94	0.11	35,35,35,35	0
54	MG	AA	1642	1/1	0.95	0.20	63,63,63,63	0
54	MG	BB	3041	1/1	0.95	0.12	15,15,15,15	0
54	MG	BB	3011	1/1	0.95	0.16	68,68,68,68	0
54	MG	AA	1648	1/1	0.95	0.10	5,5,5,5	0
54	MG	AA	1649	1/1	0.95	0.09	93,93,93,93	0
54	MG	AA	1605	1/1	0.95	0.09	54,54,54,54	0
54	MG	BB	3088	1/1	0.95	0.08	11,11,11,11	0
54	MG	BB	3090	1/1	0.95	0.17	115,115,115,115	0
54	MG	BB	3018	1/1	0.95	0.25	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	AA	1645	1/1	0.95	0.17	138,138,138,138	0
54	MG	DB	3010	1/1	0.95	0.14	5,5,5,5	0
54	MG	BB	3002	1/1	0.95	0.09	18,18,18,18	0
54	MG	AA	1604	1/1	0.95	0.12	37,37,37,37	0
54	MG	BB	3059	1/1	0.95	0.16	39,39,39,39	0
54	MG	DB	3075	1/1	0.95	0.16	10,10,10,10	0
54	MG	DB	3017	1/1	0.95	0.13	23,23,23,23	0
54	MG	BB	3061	1/1	0.95	0.14	46,46,46,46	0
54	MG	AA	1655	1/1	0.95	0.22	83,83,83,83	0
54	MG	CA	1604	1/1	0.95	0.28	11,11,11,11	0
54	MG	DB	3029	1/1	0.95	0.16	70,70,70,70	0
54	MG	BB	3029	1/1	0.95	0.10	12,12,12,12	0
54	MG	DB	3108	1/1	0.95	0.24	13,13,13,13	0
54	MG	BB	3065	1/1	0.95	0.10	30,30,30,30	0
54	MG	DB	3036	1/1	0.95	0.31	51,51,51,51	0
54	MG	BB	3008	1/1	0.95	0.13	81,81,81,81	0
54	MG	CA	1646	1/1	0.95	0.34	78,78,78,78	0
54	MG	BB	3070	1/1	0.95	0.18	40,40,40,40	0
54	MG	BB	3009	1/1	0.95	0.11	76,76,76,76	0
54	MG	DB	3048	1/1	0.96	0.24	8,8,8,8	0
54	MG	BB	3069	1/1	0.96	0.11	5,5,5,5	0
54	MG	AA	1611	1/1	0.96	0.09	75,75,75,75	0
54	MG	AA	1630	1/1	0.96	0.11	118,118,118,118	0
54	MG	BB	3072	1/1	0.96	0.18	64,64,64,64	0
54	MG	CA	1627	1/1	0.96	0.20	35,35,35,35	1
54	MG	CA	1628	1/1	0.96	0.21	82,82,82,82	0
54	MG	BB	3001	1/1	0.96	0.08	14,14,14,14	0
54	MG	DB	3006	1/1	0.96	0.07	15,15,15,15	0
54	MG	DB	3007	1/1	0.96	0.15	27,27,27,27	0
54	MG	AA	1636	1/1	0.96	0.16	38,38,38,38	0
54	MG	DB	3009	1/1	0.96	0.09	22,22,22,22	0
54	MG	BB	3035	1/1	0.96	0.14	60,60,60,60	0
54	MG	DB	3011	1/1	0.96	0.12	22,22,22,22	0
54	MG	BB	3057	1/1	0.96	0.72	65,65,65,65	0
54	MG	DB	3014	1/1	0.96	0.33	39,39,39,39	0
54	MG	BB	3003	1/1	0.96	0.21	60,60,60,60	0
54	MG	BB	3040	1/1	0.96	0.12	47,47,47,47	0
54	MG	AA	1631	1/1	0.96	0.08	61,61,61,61	0
54	MG	DB	3082	1/1	0.96	0.07	37,37,37,37	0
54	MG	CA	1638	1/1	0.96	0.06	56,56,56,56	0
54	MG	DB	3088	1/1	0.96	0.07	31,31,31,31	0
54	MG	DB	3023	1/1	0.96	0.07	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DB	3092	1/1	0.96	0.14	60,60,60,60	0
54	MG	DB	3093	1/1	0.96	0.12	9,9,9,9	0
54	MG	AA	1614	1/1	0.96	0.54	131,131,131,131	0
54	MG	DB	3095	1/1	0.96	0.24	62,62,62,62	0
54	MG	CA	1617	1/1	0.96	0.11	12,12,12,12	0
54	MG	CA	1645	1/1	0.96	0.07	82,82,82,82	0
54	MG	DB	3102	1/1	0.96	0.17	20,20,20,20	0
54	MG	CA	1618	1/1	0.96	0.12	23,23,23,23	0
54	MG	DB	3110	1/1	0.96	0.14	44,44,44,44	0
54	MG	DB	3111	1/1	0.96	0.23	68,68,68,68	0
54	MG	AA	1607	1/1	0.96	0.10	35,35,35,35	0
54	MG	BB	3092	1/1	0.96	0.08	60,60,60,60	0
54	MG	AA	1640	1/1	0.96	0.09	77,77,77,77	0
54	MG	DB	3041	1/1	0.96	0.12	9,9,9,9	0
54	MG	BB	3068	1/1	0.96	0.14	102,102,102,102	0
54	MG	DB	3046	1/1	0.96	0.14	38,38,38,38	0
54	MG	AA	1654	1/1	0.97	0.08	52,52,52,52	0
54	MG	DB	3002	1/1	0.97	0.09	14,14,14,14	0
54	MG	BB	3109	1/1	0.97	0.12	49,49,49,49	0
54	MG	DB	3055	1/1	0.97	0.16	26,26,26,26	0
54	MG	BB	3110	1/1	0.97	0.17	41,41,41,41	0
54	MG	CA	1601	1/1	0.97	0.15	9,9,9,9	0
54	MG	BB	3032	1/1	0.97	0.12	31,31,31,31	0
54	MG	CA	1605	1/1	0.97	0.12	5,5,5,5	0
54	MG	DB	3063	1/1	0.97	0.06	23,23,23,23	0
54	MG	CA	1633	1/1	0.97	0.17	106,106,106,106	0
54	MG	BB	3044	1/1	0.97	0.09	29,29,29,29	0
54	MG	AA	1618	1/1	0.97	0.04	105,105,105,105	0
54	MG	BB	3086	1/1	0.97	0.13	5,5,5,5	0
54	MG	DB	3068	1/1	0.97	0.19	16,16,16,16	0
54	MG	DB	3069	1/1	0.97	0.19	5,5,5,5	0
54	MG	DB	3070	1/1	0.97	0.08	28,28,28,28	0
54	MG	DB	3071	1/1	0.97	0.09	41,41,41,41	0
54	MG	BB	3034	1/1	0.97	0.18	41,41,41,41	0
54	MG	CA	1610	1/1	0.97	0.11	65,65,65,65	0
54	MG	CA	1611	1/1	0.97	0.09	114,114,114,114	0
54	MG	DB	3076	1/1	0.97	0.15	27,27,27,27	0
54	MG	DB	3078	1/1	0.97	0.11	31,31,31,31	0
54	MG	CA	1641	1/1	0.97	0.12	76,76,76,76	0
54	MG	DB	3081	1/1	0.97	0.09	20,20,20,20	0
54	MG	CA	1642	1/1	0.97	0.08	85,85,85,85	0
54	MG	BB	3048	1/1	0.97	0.18	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DB	3085	1/1	0.97	0.20	49,49,49,49	0
54	MG	CA	1644	1/1	0.97	0.11	69,69,69,69	0
54	MG	BB	3024	1/1	0.97	0.08	76,76,76,76	0
54	MG	AA	1609	1/1	0.97	0.06	11,11,11,11	0
54	MG	DB	3031	1/1	0.97	0.10	29,29,29,29	0
54	MG	DB	3032	1/1	0.97	0.18	21,21,21,21	0
54	MG	DB	3034	1/1	0.97	0.11	52,52,52,52	0
54	MG	BB	3038	1/1	0.97	0.12	157,157,157,157	0
54	MG	BB	3039	1/1	0.97	0.12	12,12,12,12	0
54	MG	BB	3073	1/1	0.97	0.14	70,70,70,70	0
54	MG	DB	3103	1/1	0.97	0.10	37,37,37,37	0
54	MG	DB	3038	1/1	0.97	0.09	23,23,23,23	0
54	MG	CA	1653	1/1	0.97	0.05	43,43,43,43	0
54	MG	DB	3043	1/1	0.97	0.12	7,7,7,7	0
54	MG	BB	3098	1/1	0.97	0.14	10,10,10,10	0
54	MG	AA	1629	1/1	0.97	0.09	44,44,44,44	0
54	MG	AA	1653	1/1	0.97	0.10	51,51,51,51	0
54	MG	BB	3103	1/1	0.97	0.08	20,20,20,20	0
54	MG	BB	3106	1/1	0.97	0.10	45,45,45,45	0
54	MG	BB	3107	1/1	0.97	0.06	13,13,13,13	0
54	MG	AA	1616	1/1	0.98	0.12	15,15,15,15	0
54	MG	BB	3030	1/1	0.98	0.05	83,83,83,83	0
54	MG	BB	3075	1/1	0.98	0.12	55,55,55,55	0
54	MG	BB	3102	1/1	0.98	0.13	76,76,76,76	0
54	MG	DB	3062	1/1	0.98	0.04	44,44,44,44	0
54	MG	BB	3076	1/1	0.98	0.09	48,48,48,48	0
54	MG	DB	3018	1/1	0.98	0.15	17,17,17,17	0
54	MG	DB	3019	1/1	0.98	0.07	8,8,8,8	0
54	MG	DB	3020	1/1	0.98	0.14	5,5,5,5	0
54	MG	BB	3105	1/1	0.98	0.10	21,21,21,21	0
54	MG	CA	1647	1/1	0.98	0.12	58,58,58,58	0
54	MG	DB	3024	1/1	0.98	0.14	47,47,47,47	0
54	MG	DB	3025	1/1	0.98	0.09	18,18,18,18	0
54	MG	BB	3055	1/1	0.98	0.26	78,78,78,78	0
54	MG	BB	3005	1/1	0.98	0.11	9,9,9,9	0
54	MG	DB	3028	1/1	0.98	0.30	33,33,33,33	0
54	MG	CA	1651	1/1	0.98	0.09	37,37,37,37	0
54	MG	AA	1628	1/1	0.98	0.22	49,49,49,49	0
54	MG	BB	3060	1/1	0.98	0.15	43,43,43,43	0
54	MG	BB	3007	1/1	0.98	0.21	103,103,103,103	0
54	MG	DB	3033	1/1	0.98	0.16	20,20,20,20	0
54	MG	BB	3045	1/1	0.98	0.12	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1602	1/1	0.98	0.21	16,16,16,16	0
54	MG	BB	3023	1/1	0.98	0.11	6,6,6,6	0
54	MG	DB	3086	1/1	0.98	0.19	25,25,25,25	0
54	MG	BB	3087	1/1	0.98	0.18	102,102,102,102	0
54	MG	DB	3089	1/1	0.98	0.22	75,75,75,75	0
54	MG	CA	1631	1/1	0.98	0.14	55,55,55,55	0
54	MG	DB	3039	1/1	0.98	0.09	34,34,34,34	0
54	MG	AA	1641	1/1	0.98	0.05	32,32,32,32	0
54	MG	DB	3042	1/1	0.98	0.10	36,36,36,36	0
54	MG	BB	3014	1/1	0.98	0.19	46,46,46,46	0
54	MG	DB	3096	1/1	0.98	0.15	37,37,37,37	0
54	MG	DB	3044	1/1	0.98	0.10	16,16,16,16	0
54	MG	DB	3098	1/1	0.98	0.07	69,69,69,69	0
54	MG	DB	3099	1/1	0.98	0.15	21,21,21,21	0
54	MG	BB	3067	1/1	0.98	0.07	25,25,25,25	0
54	MG	DB	3101	1/1	0.98	0.25	7,7,7,7	0
54	MG	DB	3004	1/1	0.98	0.26	40,40,40,40	0
54	MG	DB	3047	1/1	0.98	0.17	31,31,31,31	0
54	MG	DB	3104	1/1	0.98	0.11	21,21,21,21	0
54	MG	DB	3105	1/1	0.98	0.06	24,24,24,24	0
54	MG	DB	3106	1/1	0.98	0.11	17,17,17,17	0
54	MG	DB	3107	1/1	0.98	0.08	51,51,51,51	0
54	MG	DB	3005	1/1	0.98	0.06	52,52,52,52	0
54	MG	BB	3016	1/1	0.98	0.17	94,94,94,94	0
54	MG	BB	3050	1/1	0.98	0.09	16,16,16,16	0
54	MG	BB	3028	1/1	0.98	0.23	95,95,95,95	0
54	MG	BB	3096	1/1	0.98	0.13	69,69,69,69	0
54	MG	CA	1639	1/1	0.98	0.15	5,5,5,5	0
54	MG	BB	3052	1/1	0.98	0.09	59,59,59,59	0
54	MG	DB	3012	1/1	0.98	0.12	8,8,8,8	0
54	MG	DB	3057	1/1	0.98	0.05	17,17,17,17	0
54	MG	DB	3056	1/1	0.99	0.16	16,16,16,16	0
54	MG	DB	3087	1/1	0.99	0.22	67,67,67,67	0
54	MG	BB	3085	1/1	0.99	0.10	76,76,76,76	0
54	MG	BB	3021	1/1	0.99	0.12	62,62,62,62	0
54	MG	BB	3074	1/1	0.99	0.08	7,7,7,7	0
54	MG	DB	3091	1/1	0.99	0.09	11,11,11,11	0
54	MG	BB	3104	1/1	0.99	0.13	43,43,43,43	0
54	MG	CA	1650	1/1	0.99	0.05	5,5,5,5	0
54	MG	CA	1612	1/1	0.99	0.11	97,97,97,97	0
54	MG	CA	1613	1/1	0.99	0.12	24,24,24,24	0
54	MG	BB	3056	1/1	0.99	0.05	61,61,61,61	0

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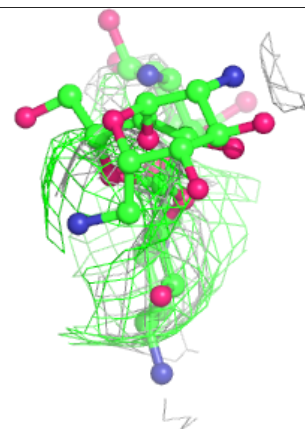
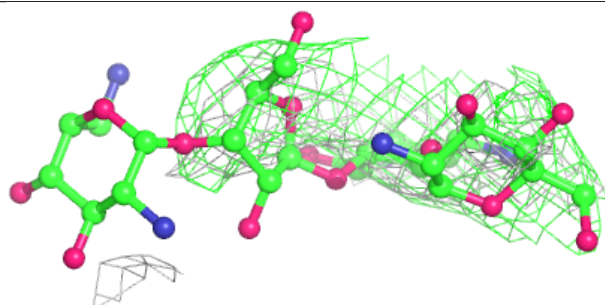
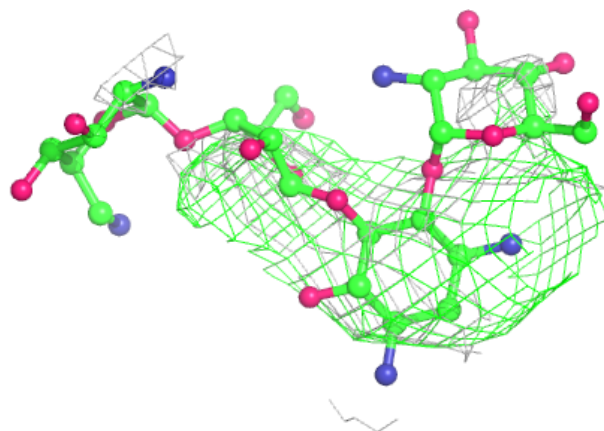
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BB	3089	1/1	0.99	0.06	30,30,30,30	0
54	MG	DB	3040	1/1	0.99	0.10	5,5,5,5	0
54	MG	CA	1655	1/1	0.99	0.06	22,22,22,22	0
54	MG	CA	1656	1/1	0.99	0.06	7,7,7,7	0
54	MG	BB	3022	1/1	0.99	0.03	34,34,34,34	0
54	MG	BB	3058	1/1	0.99	0.09	17,17,17,17	0
54	MG	BB	3015	1/1	0.99	0.05	9,9,9,9	0
54	MG	DB	3021	1/1	0.99	0.11	18,18,18,18	0
54	MG	AA	1643	1/1	0.99	0.18	118,118,118,118	0
54	MG	DB	3074	1/1	0.99	0.15	17,17,17,17	0
54	MG	BB	3094	1/1	0.99	0.12	55,55,55,55	0
54	MG	BB	3025	1/1	0.99	0.07	22,22,22,22	0
54	MG	DB	3109	1/1	0.99	0.20	27,27,27,27	0
54	MG	DB	3077	1/1	0.99	0.11	17,17,17,17	0
54	MG	DB	3001	1/1	0.99	0.10	5,5,5,5	0
54	MG	DB	3079	1/1	0.99	0.16	30,30,30,30	0
54	MG	CA	1603	1/1	0.99	0.12	37,37,37,37	0
54	MG	BB	3062	1/1	0.99	0.15	5,5,5,5	0
54	MG	BB	3082	1/1	0.99	0.33	22,22,22,22	0
54	MG	BB	3036	1/1	0.99	0.22	68,68,68,68	0
54	MG	BB	3084	1/1	0.99	0.14	60,60,60,60	0
54	MG	DB	3084	1/1	1.00	0.16	14,14,14,14	0
54	MG	BB	3101	1/1	1.00	0.23	64,64,64,64	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

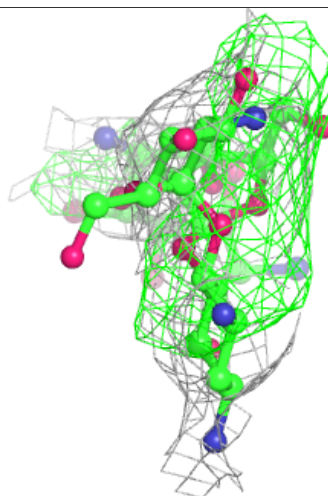
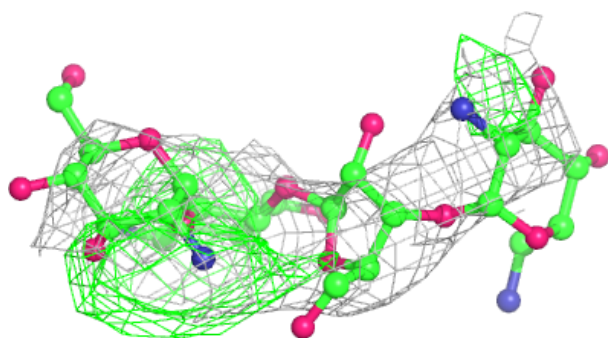
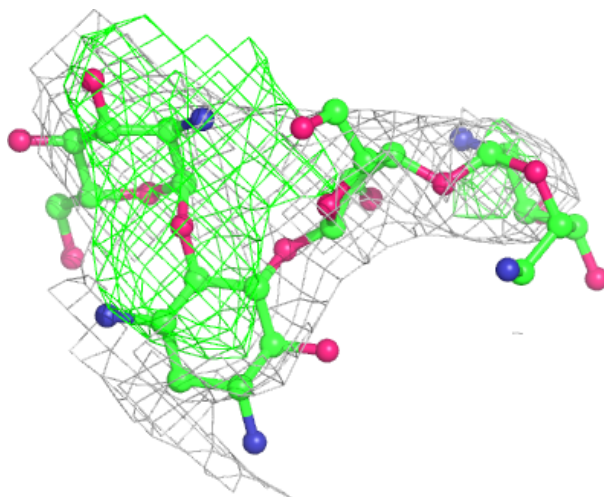
Electron density around PAR BB 3111:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



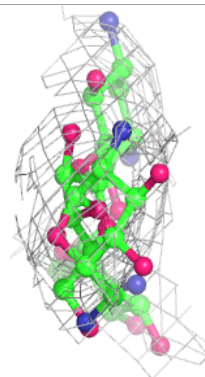
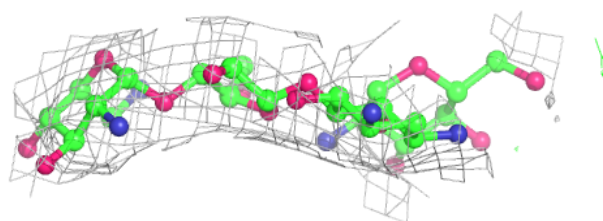
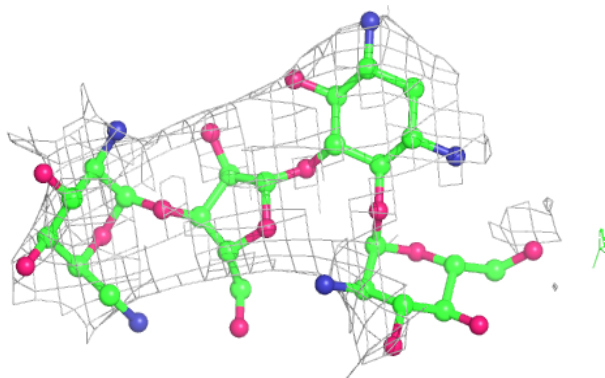
Electron density around PAR DB 3112:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

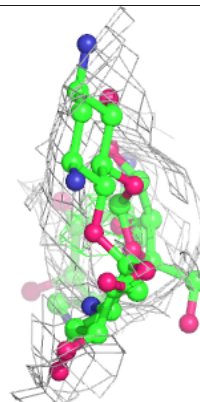
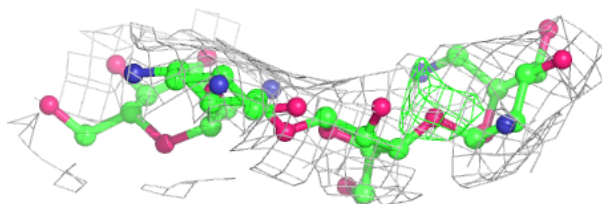
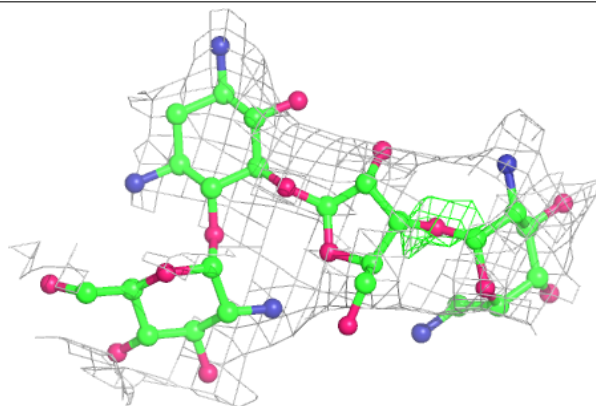


Electron density around PAR AA 1661:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around PAR CA 1662:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers [i](#)

There are no such residues in this entry.