wwPDB X-ray Structure Validation Summary Report (i)

Jun 3, 2020 – 12:26 pm BST

PDB ID	:	4V9C
Title	:	Allosteric control of the ribosome by small-molecule antibiotics
Authors	:	Cate, J.H.D.; Pulk, A.; Blanchard, S.C.; Wang, L.; Feldman, M.B.; Wasserman, M.R.; Altman, R.
Deposited on	:	2012-07-25
Resolution	:	3.30 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

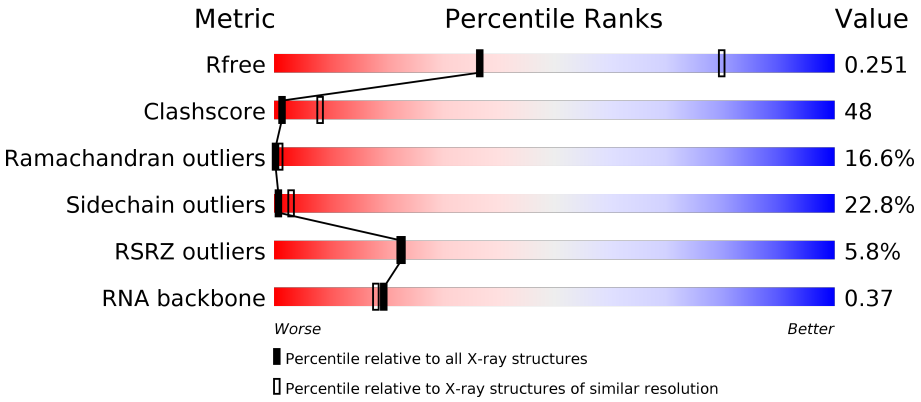
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.11
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.30 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	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)
RNA backbone	3102	1117 (3.70-2.90)

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

Mol	Chain	Length	Quality of chain
1	AA	1542	11% 59% 29%
1	CA	1542	14% 57% 29%
2	AB	241	12% 11% 46% 27% 6% 10%
2	CB	241	13% 17% 43% 26% 5% 10%

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Mol	Chain	Length	Quality of chain
3	AC	233	8% 24% 44% 19% 12%
3	CC	233	4% 25% 38% 22% 12%
4	AD	206	14% 10% 51% 30% 8%
4	CD	206	11% 14% 41% 38% 6%
5	AE	167	2% 20% 41% 27% 10%
5	CE	167	4% 22% 53% 14% 10%
6	AF	135	3% 19% 36% 17% 26%
6	CF	135	5% 12% 33% 25% 26%
7	AG	179	7% 26% 40% 15% 16%
7	CG	179	15% 18% 44% 19% 16%
8	AH	130	7% 23% 42% 27% 7%
8	CH	130	10% 31% 45% 22%
9	AI	130	12% 20% 47% 28%
9	CI	130	21% 25% 40% 31%
10	AJ	103	12% 27% 49% 18% 5%
10	CJ	103	20% 28% 41% 22% 5%
11	AK	129	5% 24% 46% 19% 9%
11	CK	129	22% 19% 46% 21% 5% 9%
12	AL	124	10% 15% 41% 35% 8%
12	CL	124	5% 18% 52% 26%
13	AM	118	8% 19% 50% 24%
13	CM	118	25% 13% 43% 34% 7%
14	AN	101	4% 20% 47% 25% 5%
14	CN	101	11% 15% 52% 24% 5%
15	AO	89	7% 29% 39% 26%

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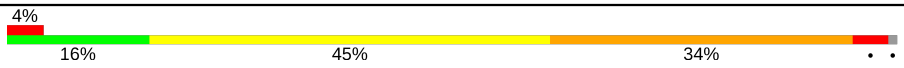
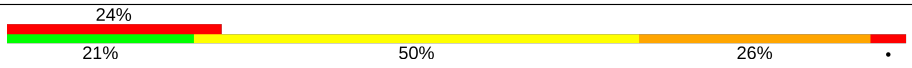
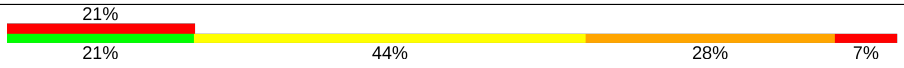
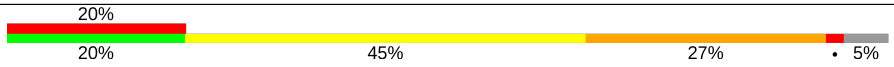
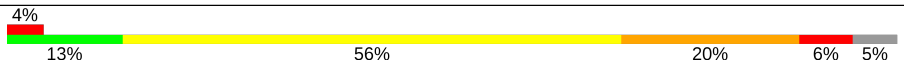
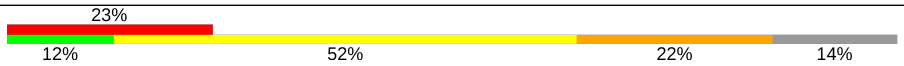
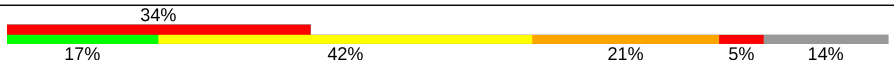
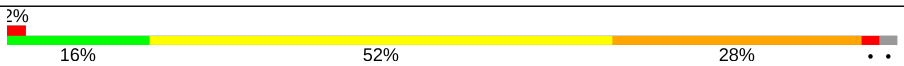
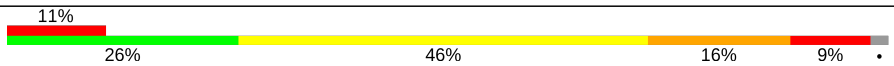
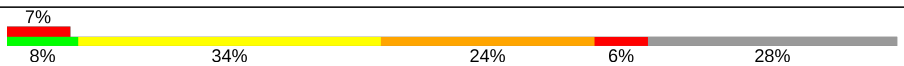
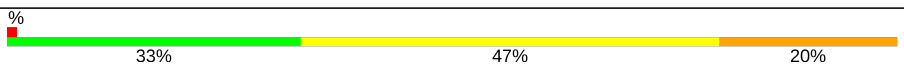
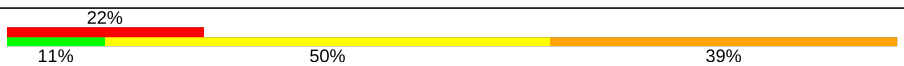
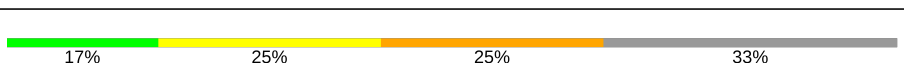
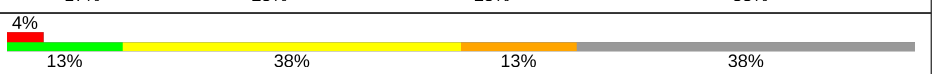
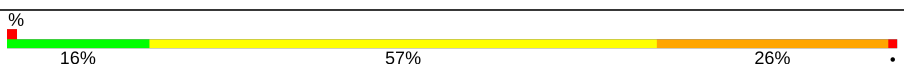
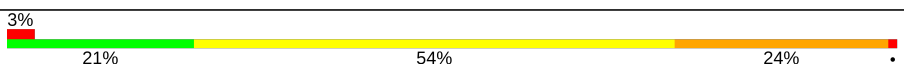
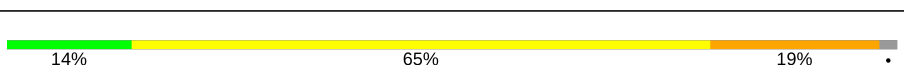
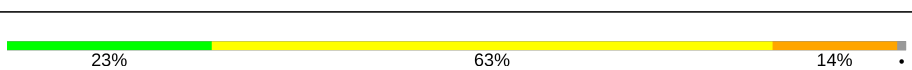
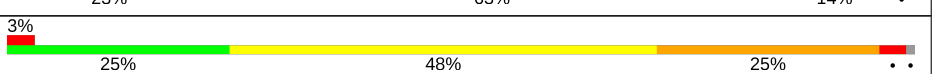
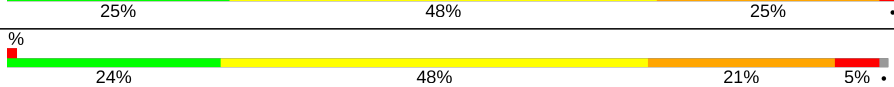
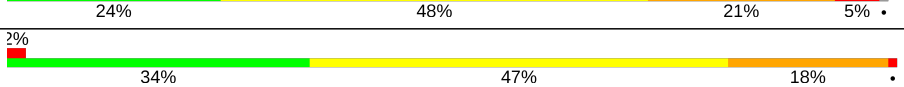
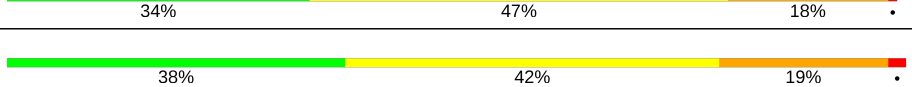
Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	82	
16	CP	82	
17	AQ	84	
17	CQ	84	
18	AR	75	
18	CR	75	
19	AS	92	
19	CS	92	
20	AT	87	
20	CT	87	
21	AU	71	
21	CU	71	
22	AV	76	
22	CV	76	
23	AX	24	
23	CX	24	
24	BA	2904	
24	DA	2904	
25	BB	120	
25	DB	120	
26	BC	273	
26	DC	273	
27	BD	209	
27	DD	209	

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Mol	Chain	Length	Quality of chain
28	BE	201	9% 40% 40% 17%
28	DE	201	34% 50% 16%
29	BF	179	21% 32% 42% 21%
29	DF	179	12% 26% 42% 26% 5%
30	BG	177	14% 37% 44% 17%
30	DG	177	5% 36% 49% 14%
31	BH	149	15% 26% 49% 21% 5%
31	DH	149	12% 19% 48% 28% 5%
32	BI	142	63% 54% 38% 7%
32	DI	142	55% 36% 38% 23%
33	BJ	142	% 30% 48% 21%
33	DJ	142	31% 54% 14%
34	BK	123	4% 25% 51% 21%
34	DK	123	% 36% 43% 20%
35	BL	144	% 33% 43% 18% 5%
35	DL	144	31% 49% 18%
36	BM	136	12% 31% 49% 18%
36	DM	136	% 28% 52% 18%
37	BN	127	2% 22% 52% 17% 6%
37	DN	127	39% 39% 13% 6%
38	BO	117	12% 32% 41% 21%
38	DO	117	4% 18% 50% 25% 6%
39	BP	115	2% 34% 45% 17%
39	DP	115	44% 39% 12%
40	BQ	118	31% 49% 19%

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Mol	Chain	Length	Quality of chain
40	DQ	118	29% 52% 16%
41	BR	103	% 43% 43% 12%
41	DR	103	31% 49% 20%
42	BS	110	3% 22% 46% 32%
42	DS	110	% 32% 45% 21%
43	BT	100	12% 29% 40% 21% 7%
43	DT	100	3% 34% 42% 13% 7%
44	BU	104	13% 21% 50% 24%
44	DU	104	38% 39% 16%
45	BV	94	9% 37% 35% 26%
45	DV	94	3% 41% 41% 17%
46	BW	85	5% 42% 31% 14% 12%
46	DW	85	% 36% 35% 16% 11%
47	BX	78	32% 42% 22%
47	DX	78	4% 21% 63% 13%
48	BY	63	10% 35% 52% 10%
48	DY	63	8% 17% 57% 19% 6%
49	BZ	59	3% 37% 46% 15%
49	DZ	59	2% 44% 46% 7%
50	B0	57	4% 39% 42% 12% 5%
50	D0	57	33% 39% 26%
51	B1	55	47% 31% 49% 11% 9%
51	D1	55	40% 29% 38% 20% 9%
52	B2	46	30% 35% 30%
52	D2	46	2% 26% 61% 13%

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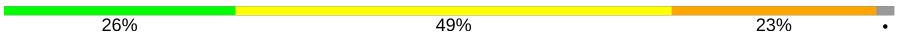
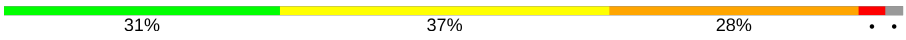
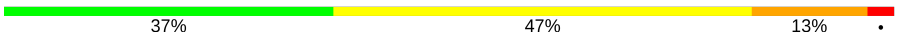
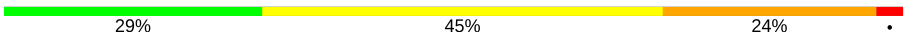
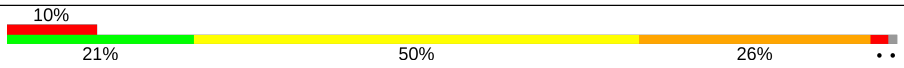
Mol	Chain	Length	Quality of chain
53	B3	65	
53	D3	65	
54	B4	38	
54	D4	38	
55	CY	185	

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
56	MG	AA	1602	-	-	-	X
56	MG	AA	1614	-	-	-	X
56	MG	AA	1616	-	-	-	X
56	MG	AA	1617	-	-	-	X
56	MG	AA	1623	-	-	-	X
56	MG	AA	1625	-	-	-	X
56	MG	AA	1626	-	-	-	X
56	MG	AA	1627	-	-	-	X
56	MG	AA	1629	-	-	-	X
56	MG	AA	1631	-	-	-	X
56	MG	AA	1639	-	-	-	X
56	MG	AA	1640	-	-	-	X
56	MG	AA	1641	-	-	-	X
56	MG	AA	1644	-	-	-	X
56	MG	AA	1646	-	-	-	X
56	MG	AA	1648	-	-	-	X
56	MG	AA	1649	-	-	-	X
56	MG	AA	1650	-	-	-	X
56	MG	AA	1653	-	-	-	X
56	MG	AA	1654	-	-	-	X
56	MG	AD	301	-	-	-	X
56	MG	AN	201	-	-	-	X
56	MG	BA	3007	-	-	-	X
56	MG	BA	3012	-	-	-	X
56	MG	BA	3013	-	-	-	X
56	MG	BA	3018	-	-	-	X
56	MG	BA	3022	-	-	-	X
56	MG	BA	3025	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	BA	3026	-	-	-	X
56	MG	BA	3027	-	-	-	X
56	MG	BA	3032	-	-	-	X
56	MG	BA	3053	-	-	-	X
56	MG	BA	3054	-	-	-	X
56	MG	BA	3058	-	-	-	X
56	MG	BA	3059	-	-	-	X
56	MG	BA	3069	-	-	-	X
56	MG	BA	3079	-	-	-	X
56	MG	BA	3082	-	-	-	X
56	MG	BA	3087	-	-	-	X
56	MG	BA	3090	-	-	-	X
56	MG	BA	3096	-	-	-	X
56	MG	BA	3102	-	-	-	X
56	MG	BA	3107	-	-	-	X
56	MG	BA	3110	-	-	-	X
56	MG	BA	3118	-	-	-	X
56	MG	BA	3123	-	-	-	X
56	MG	BA	3125	-	-	-	X
56	MG	BA	3129	-	-	-	X
56	MG	BA	3138	-	-	-	X
56	MG	BA	3142	-	-	-	X
56	MG	BA	3143	-	-	-	X
56	MG	BA	3145	-	-	-	X
56	MG	BA	3148	-	-	-	X
56	MG	BA	3149	-	-	-	X
56	MG	BA	3152	-	-	-	X
56	MG	BA	3153	-	-	-	X
56	MG	BA	3154	-	-	-	X
56	MG	BA	3155	-	-	-	X
56	MG	BA	3156	-	-	-	X
56	MG	BA	3157	-	-	-	X
56	MG	BA	3158	-	-	-	X
56	MG	BA	3159	-	-	-	X
56	MG	BA	3160	-	-	-	X
56	MG	BA	3168	-	-	-	X
56	MG	BC	301	-	-	-	X
56	MG	BQ	201	-	-	-	X
56	MG	CA	1601	-	-	-	X
56	MG	CA	1602	-	-	-	X
56	MG	CA	1607	-	-	-	X
56	MG	CA	1608	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	CA	1623	-	-	-	X
56	MG	CA	1629	-	-	-	X
56	MG	CA	1631	-	-	-	X
56	MG	CA	1632	-	-	-	X
56	MG	CA	1633	-	-	-	X
56	MG	CA	1636	-	-	-	X
56	MG	CA	1637	-	-	-	X
56	MG	CA	1638	-	-	-	X
56	MG	CA	1645	-	-	-	X
56	MG	CA	1647	-	-	-	X
56	MG	CA	1649	-	-	-	X
56	MG	CA	1651	-	-	-	X
56	MG	CA	1652	-	-	-	X
56	MG	CA	1653	-	-	-	X
56	MG	CA	1654	-	-	-	X
56	MG	CA	1656	-	-	-	X
56	MG	CA	1657	-	-	-	X
56	MG	CA	1659	-	-	-	X
56	MG	CA	1660	-	-	-	X
56	MG	CA	1661	-	-	-	X
56	MG	CA	1668	-	-	-	X
56	MG	CA	1670	-	-	-	X
56	MG	CX	101	-	-	-	X
56	MG	DA	3011	-	-	-	X
56	MG	DA	3018	-	-	-	X
56	MG	DA	3023	-	-	-	X
56	MG	DA	3025	-	-	-	X
56	MG	DA	3026	-	-	-	X
56	MG	DA	3052	-	-	-	X
56	MG	DA	3057	-	-	-	X
56	MG	DA	3059	-	-	-	X
56	MG	DA	3061	-	-	-	X
56	MG	DA	3068	-	-	-	X
56	MG	DA	3071	-	-	-	X
56	MG	DA	3079	-	-	-	X
56	MG	DA	3081	-	-	-	X
56	MG	DA	3095	-	-	-	X
56	MG	DA	3097	-	-	-	X
56	MG	DA	3102	-	-	-	X
56	MG	DA	3107	-	-	-	X
56	MG	DA	3129	-	-	-	X
56	MG	DA	3131	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	DA	3137	-	-	-	X
56	MG	DA	3138	-	-	-	X
56	MG	DA	3139	-	-	-	X
56	MG	DA	3150	-	-	-	X
56	MG	DA	3151	-	-	-	X
56	MG	DA	3152	-	-	-	X
56	MG	DA	3156	-	-	-	X
56	MG	DA	3164	-	-	-	X
56	MG	DA	3165	-	-	-	X
56	MG	DA	3166	-	-	-	X
56	MG	DA	3167	-	-	-	X
56	MG	DA	3169	-	-	-	X
56	MG	DA	3170	-	-	-	X
56	MG	DA	3172	-	-	-	X
56	MG	DA	3173	-	-	-	X
56	MG	DA	3174	-	-	-	X
56	MG	DA	3176	-	-	-	X
56	MG	DA	3180	-	-	-	X
56	MG	DA	3192	-	-	-	X
56	MG	DA	3193	-	-	-	X
56	MG	DA	3194	-	-	-	X
56	MG	DB	202	-	-	-	X
56	MG	DB	204	-	-	-	X
56	MG	DO	201	-	-	-	X
57	NMY	AA	1655	-	-	X	-
57	NMY	BA	3165	-	-	X	-
57	NMY	DA	3190	-	-	X	X

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 293103 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			
1	CA	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
7	CG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
13	CM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
17	CQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
19	CS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	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 Phenylalanine specific transfer RNA, tRNA-Phe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total	C	N	O	P	0	0	0
			1623	723	290	534	76			
22	CV	76	Total	C	N	O	P	0	0	0
			1623	723	290	534	76			

- Molecule 23 is a RNA chain called Messenger RNA, mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	16	Total	C	N	O	P	0	0	0
			346	155	66	109	16			
23	CX	15	Total	C	N	O	P	0	0	0
			324	145	61	103	15			

- Molecule 24 is a RNA chain called 23S ribosomal RNA.

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

- Molecule 25 is a RNA chain called 5S ribosomal RNA.

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BB	12	C	A	SEE REMARK 999	GB AP012306
DB	12	C	A	SEE REMARK 999	GB AP012306

- Molecule 26 is a protein called 50S ribosomal protein L2.

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

- Molecule 27 is a protein called 50S ribosomal protein L3.

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

- Molecule 28 is a protein called 50S ribosomal protein L4.

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

- Molecule 29 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
29	DF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			

- Molecule 30 is a protein called 50S ribosomal protein L6.

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

- Molecule 31 is a protein called 50S ribosomal protein L9.

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

- Molecule 32 is a protein called 50S ribosomal protein L11.

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

- Molecule 33 is a protein called 50S ribosomal protein L13.

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

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
34	DK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			

- Molecule 35 is a protein called 50S ribosomal protein L15.

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

- Molecule 36 is a protein called 50S ribosomal protein L16.

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

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

- Molecule 37 is a protein called 50S ribosomal protein L17.

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

- Molecule 38 is a protein called 50S ribosomal protein L18.

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

- Molecule 39 is a protein called 50S ribosomal protein L19.

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

- Molecule 40 is a protein called 50S ribosomal protein L20.

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

- Molecule 41 is a protein called 50S ribosomal protein L21.

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

- Molecule 42 is a protein called 50S ribosomal protein L22.

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

- Molecule 43 is a protein called 50S ribosomal protein L23.

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

- Molecule 44 is a protein called 50S ribosomal protein L24.

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

- Molecule 45 is a protein called 50S ribosomal protein L25.

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

- Molecule 46 is a protein called 50S ribosomal protein L27.

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

- Molecule 47 is a protein called 50S ribosomal protein L28.

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

- Molecule 48 is a protein called 50S ribosomal protein L29.

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

- Molecule 49 is a protein called 50S ribosomal protein L30.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L33.

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

- Molecule 52 is a protein called 50S ribosomal protein L34.

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

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

- Molecule 53 is a protein called 50S ribosomal protein L35.

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

- Molecule 54 is a protein called 50S ribosomal protein L36.

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

- Molecule 55 is a protein called Ribosome recycling factor, RRF.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	CY	183	Total	C	N	O	S	0	0	0
			1423	874	260	283	6			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	BB	3	Total	Mg	0	0
			3	3		
56	DE	1	Total	Mg	0	0
			1	1		
56	BA	163	Total	Mg	0	0
			163	163		
56	CA	71	Total	Mg	0	0
			71	71		
56	DO	1	Total	Mg	0	0
			1	1		
56	DL	1	Total	Mg	0	0
			1	1		
56	DA	187	Total	Mg	0	0
			187	187		

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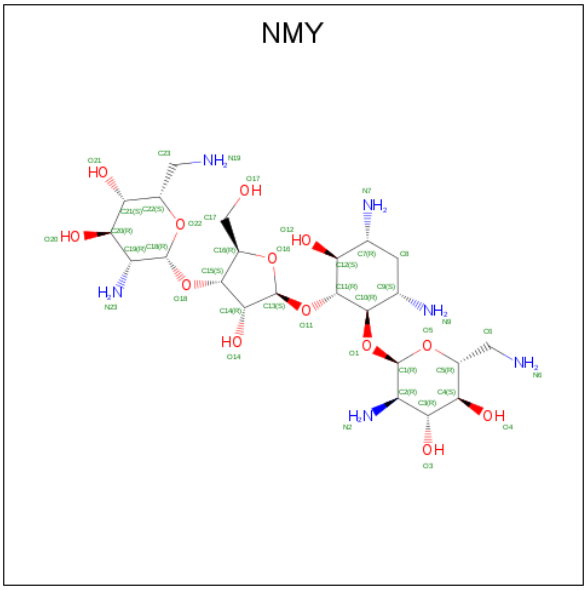
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AA	54	Total Mg 54 54	0	0
56	BQ	1	Total Mg 1 1	0	0
56	AN	1	Total Mg 1 1	0	0
56	AD	1	Total Mg 1 1	0	0
56	CX	1	Total Mg 1 1	0	0
56	BC	1	Total Mg 1 1	0	0
56	DB	4	Total Mg 4 4	0	0

- Molecule 57 is NEOMYCIN (three-letter code: NMY) (formula: $C_{23}H_{46}N_6O_{13}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	1	Total C N O 42 23 6 13	0	0
57	AA	1	Total C N O 42 23 6 13	0	0
57	AA	1	Total C N O 42 23 6 13	0	0
57	BA	1	Total C N O 42 23 6 13	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	BA	1	Total C N O 42 23 6 13	0	0
57	BA	1	Total C N O 42 23 6 13	0	0
57	BA	1	Total C N O 42 23 6 13	0	0
57	BA	1	Total C N O 42 23 6 13	0	0
57	BA	1	Total C N O 42 23 6 13	0	0
57	BA	1	Total C N O 42 23 6 13	0	0
57	CA	1	Total C N O 42 23 6 13	0	0
57	DA	1	Total C N O 42 23 6 13	0	0
57	DA	1	Total C N O 42 23 6 13	0	0
57	DA	1	Total C N O 42 23 6 13	0	0
57	DA	1	Total C N O 42 23 6 13	0	0
57	DA	1	Total C N O 42 23 6 13	0	0
57	DA	1	Total C N O 42 23 6 13	0	0
57	DA	1	Total C N O 42 23 6 13	0	0

- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 59 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AA	188	Total O 188 188	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AD	2	Total O 2 2	0	0
59	AK	1	Total O 1 1	0	0
59	AN	4	Total O 4 4	0	0
59	AT	2	Total O 2 2	0	0
59	AU	1	Total O 1 1	0	0
59	BA	616	Total O 616 616	0	0
59	BB	13	Total O 13 13	0	0
59	BC	10	Total O 10 10	0	0
59	BD	4	Total O 4 4	0	0
59	BL	4	Total O 4 4	0	0
59	BN	1	Total O 1 1	0	0
59	BT	3	Total O 3 3	0	0
59	BU	3	Total O 3 3	0	0
59	BV	1	Total O 1 1	0	0
59	B0	1	Total O 1 1	0	0
59	B3	1	Total O 1 1	0	0
59	B4	1	Total O 1 1	0	0
59	CA	192	Total O 192 192	0	0
59	CC	1	Total O 1 1	0	0
59	CE	1	Total O 1 1	0	0
59	CL	1	Total O 1 1	0	0

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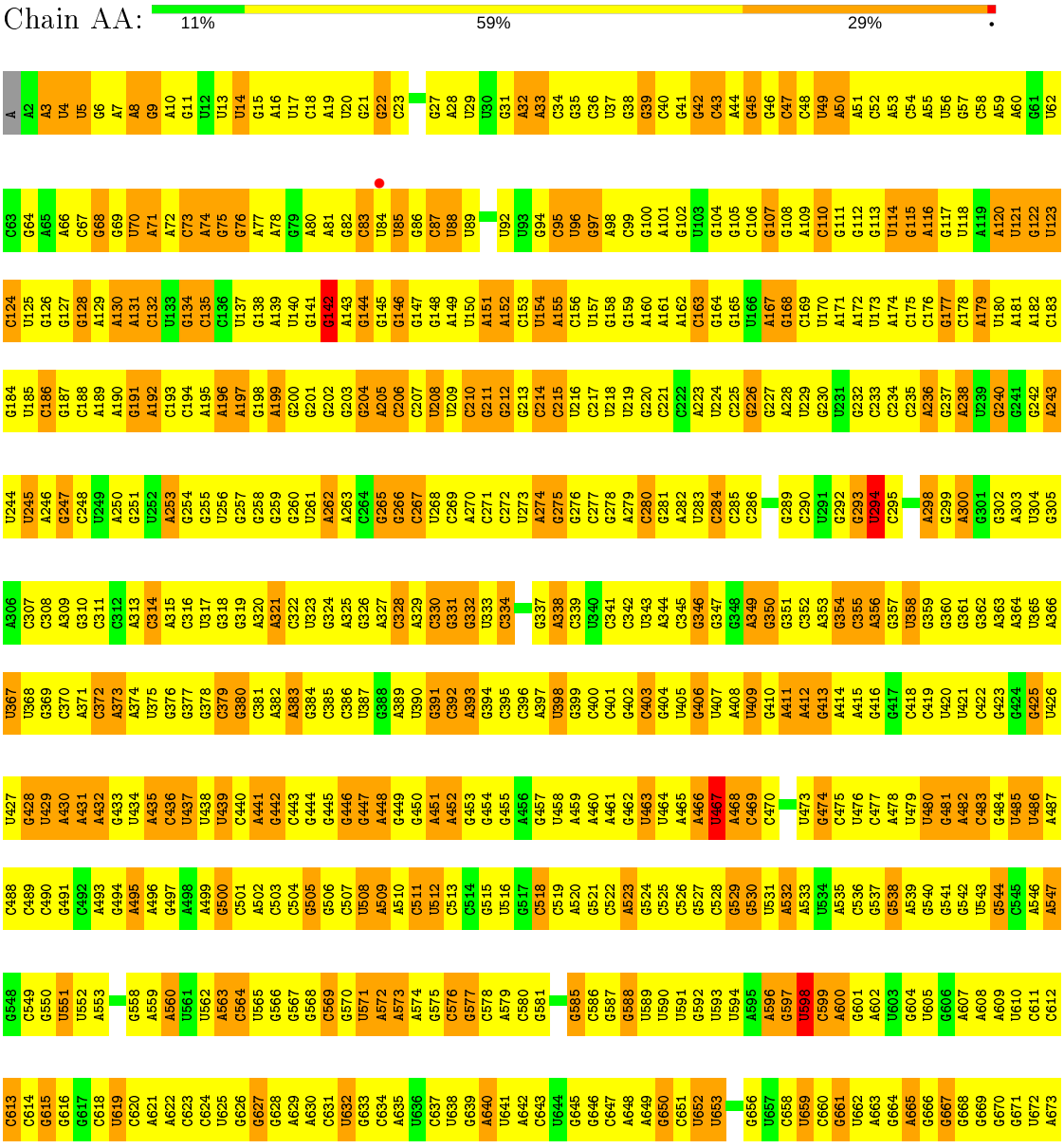
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	CN	6	Total O 6 6	0	0
59	CT	2	Total O 2 2	0	0
59	DA	627	Total O 627 627	0	0
59	DB	13	Total O 13 13	0	0
59	DC	4	Total O 4 4	0	0
59	DD	2	Total O 2 2	0	0
59	DE	4	Total O 4 4	0	0
59	DF	1	Total O 1 1	0	0
59	DL	7	Total O 7 7	0	0
59	DN	2	Total O 2 2	0	0
59	DQ	1	Total O 1 1	0	0
59	DS	1	Total O 1 1	0	0
59	DT	1	Total O 1 1	0	0
59	DU	1	Total O 1 1	0	0
59	DV	1	Total O 1 1	0	0
59	D3	2	Total O 2 2	0	0
59	D4	1	Total O 1 1	0	0

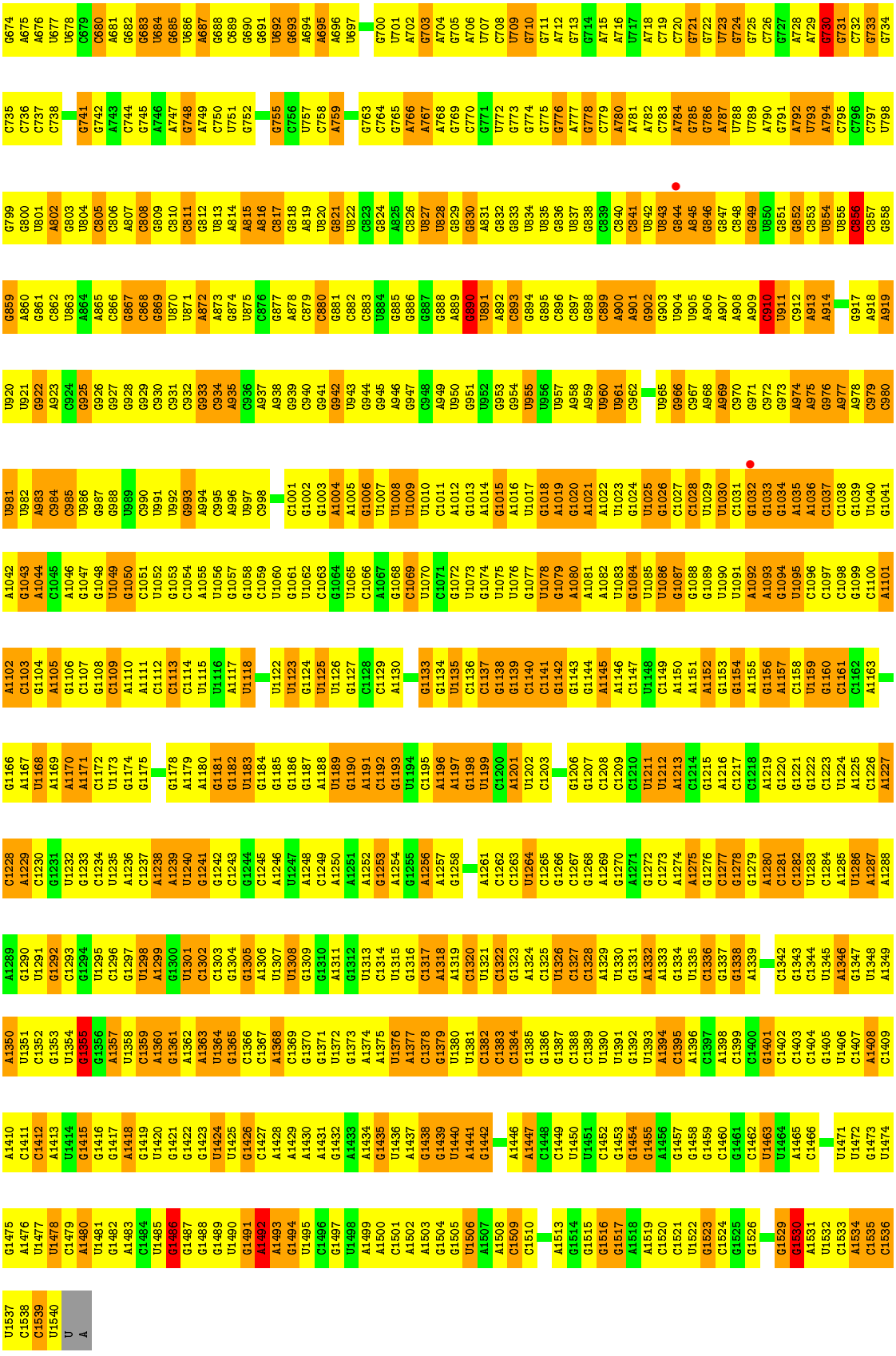
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

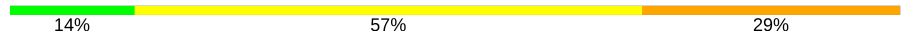
Chain AA:

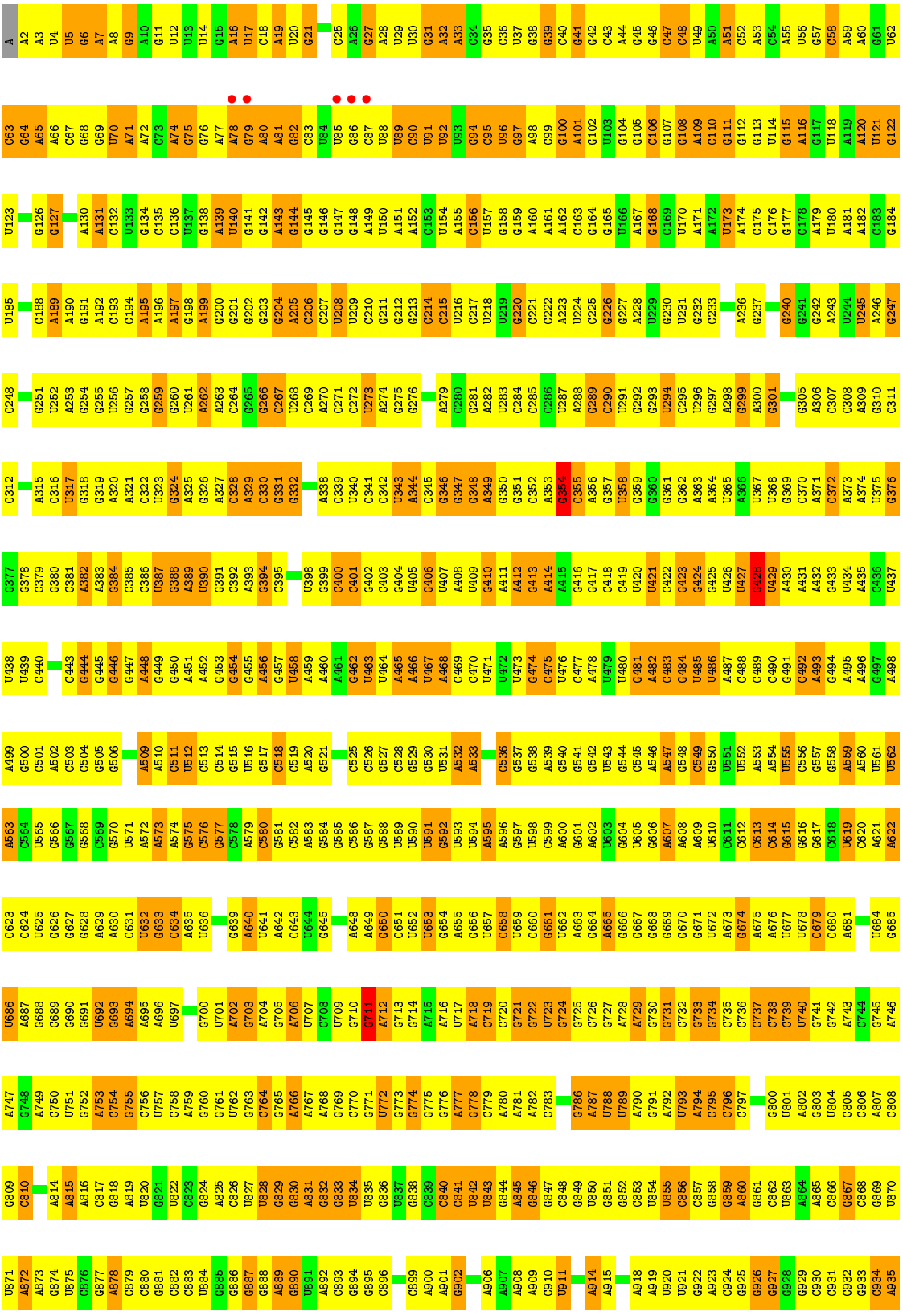


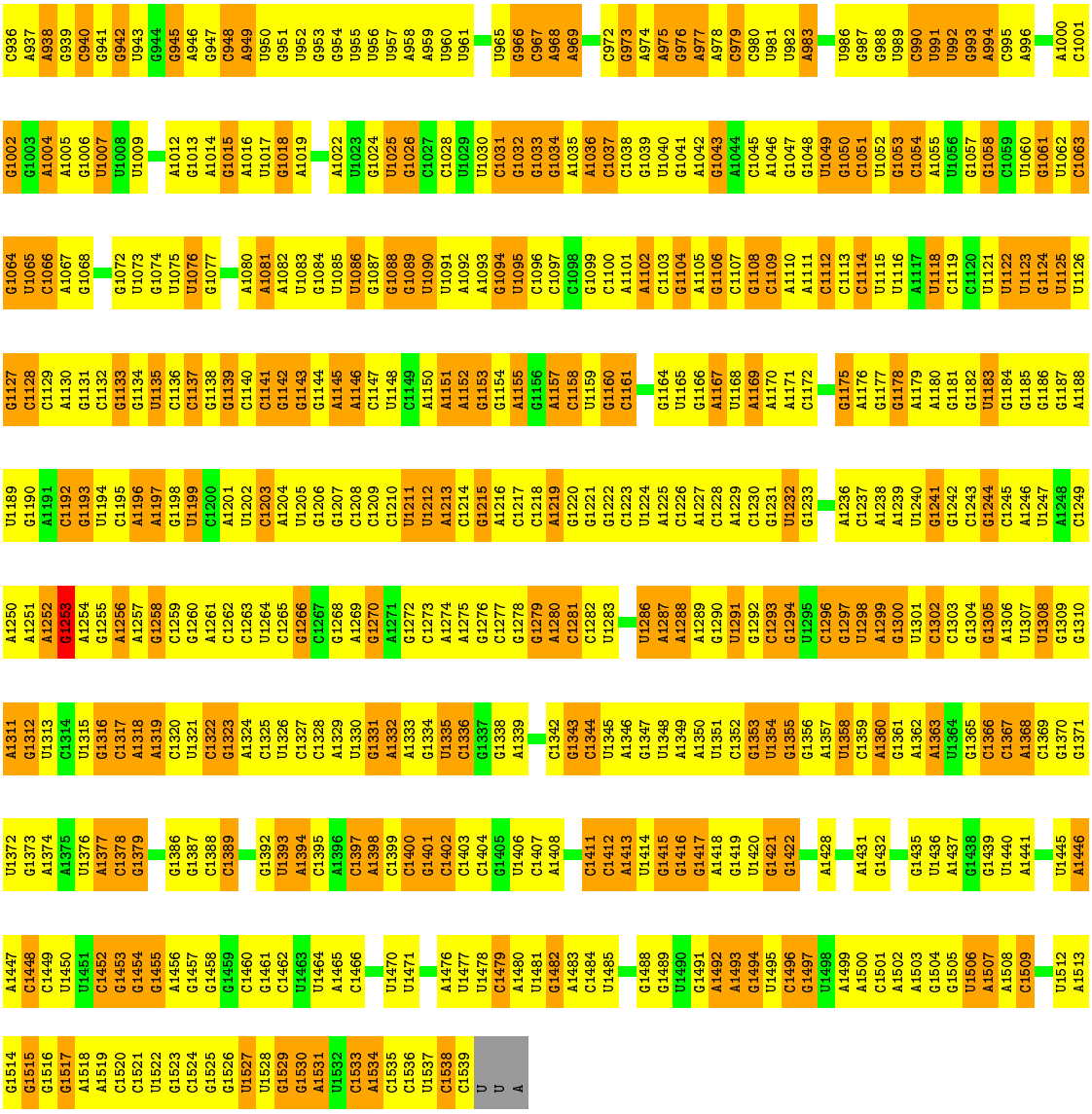


• Molecule 1: 16S ribosomal RNA

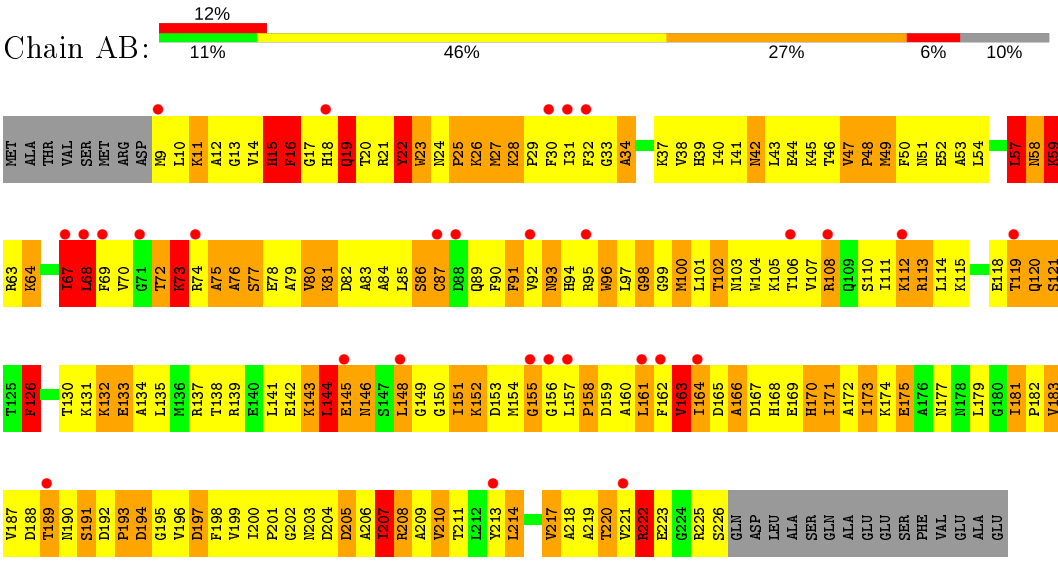
Chain CA:





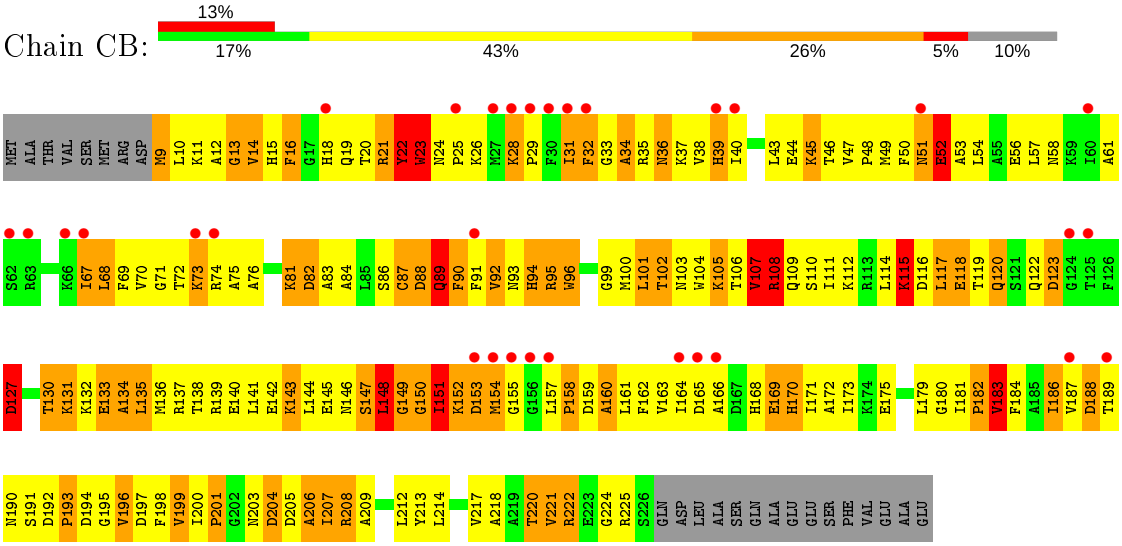


- Molecule 2: 30S ribosomal protein S2



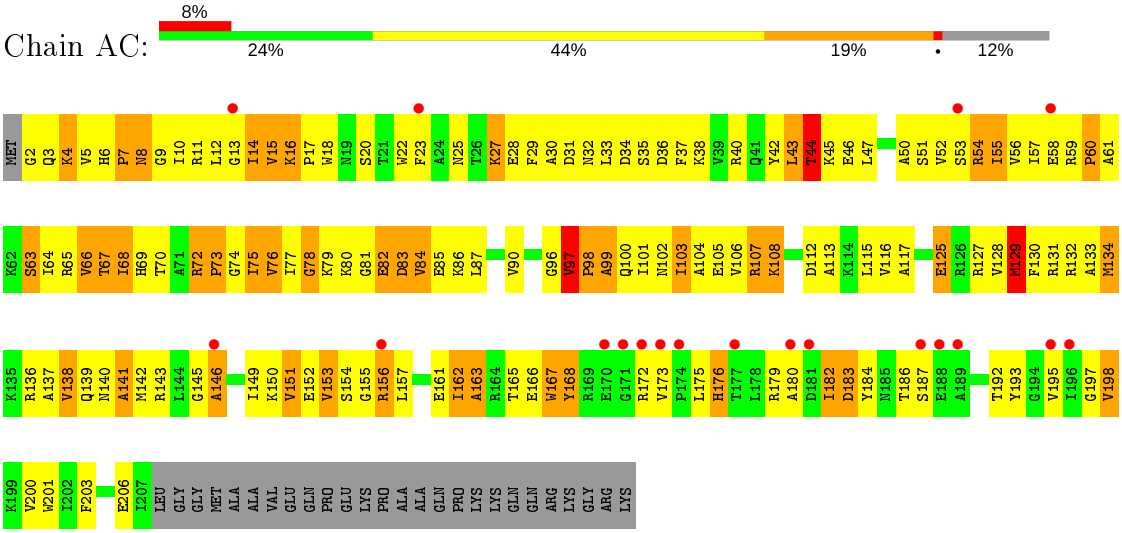
- Molecule 2: 30S ribosomal protein S2

Chain CB:



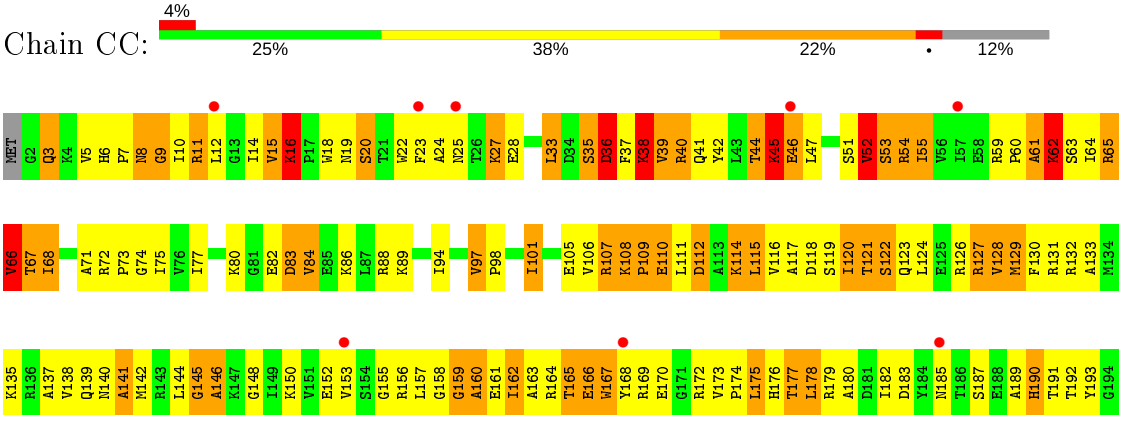
- Molecule 3: 30S ribosomal protein S3

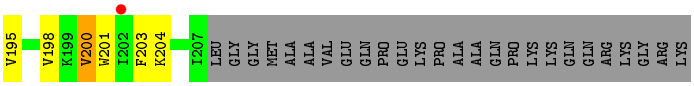
Chain AC:



- Molecule 3: 30S ribosomal protein S3

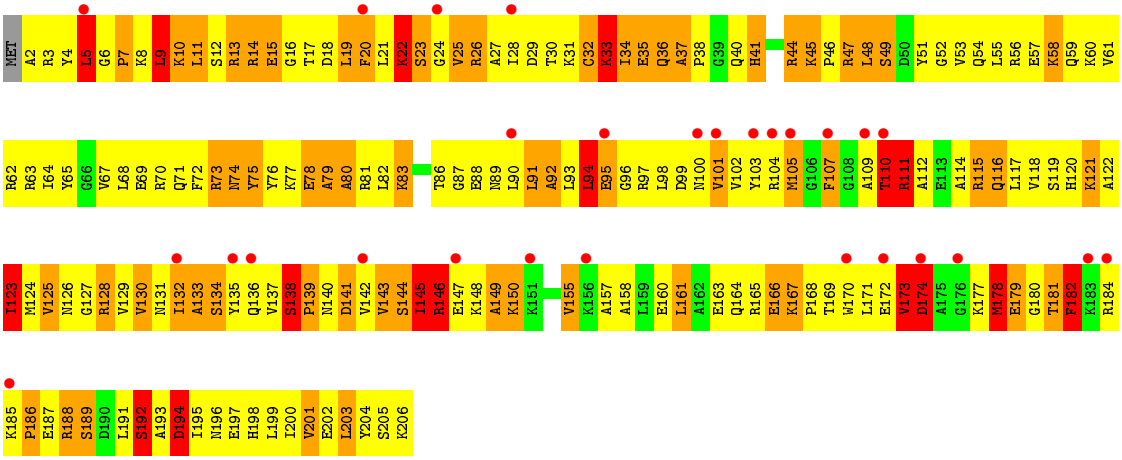
Chain CC:





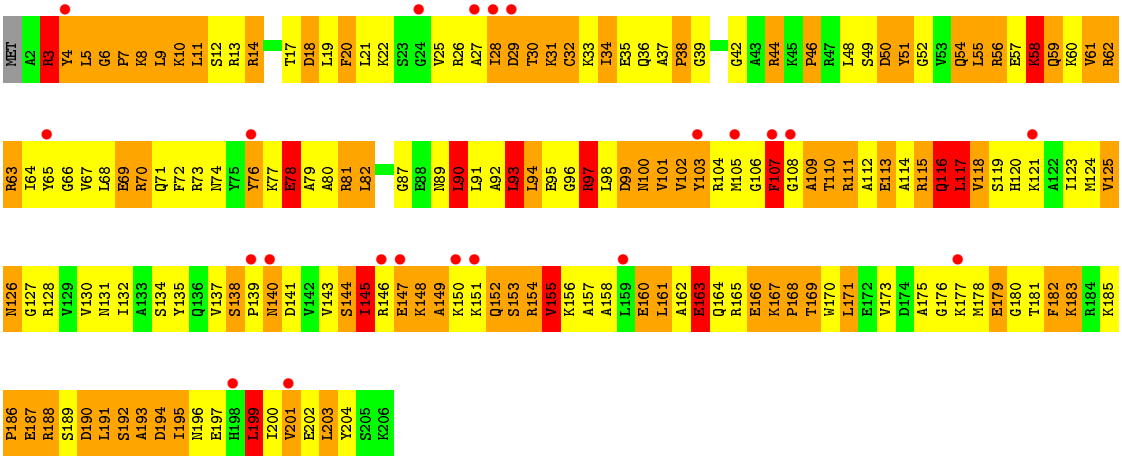
- Molecule 4: 30S ribosomal protein S4

Chain AD:



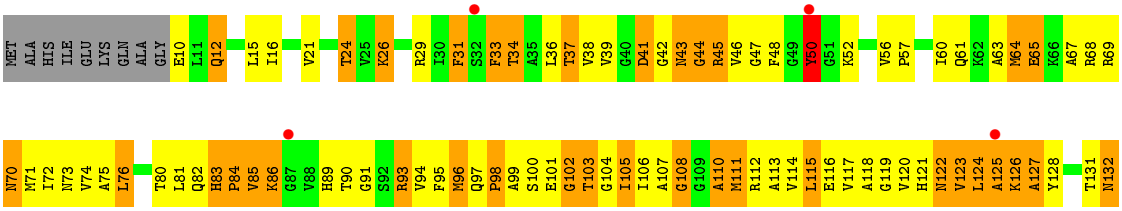
- Molecule 4: 30S ribosomal protein S4

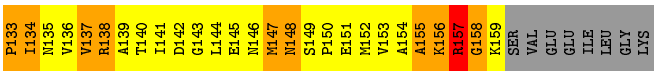
Chain CD:



- Molecule 5: 30S ribosomal protein S5

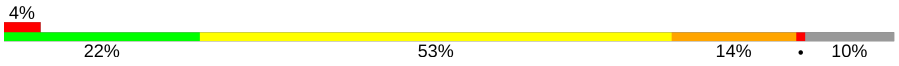
Chain AE:

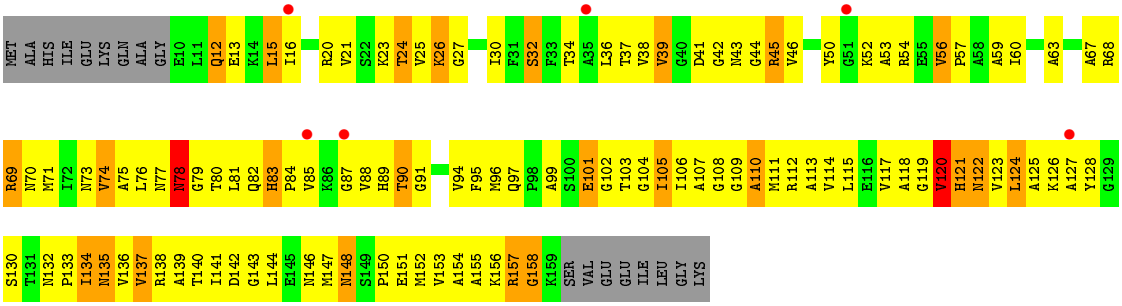




- Molecule 5: 30S ribosomal protein S5

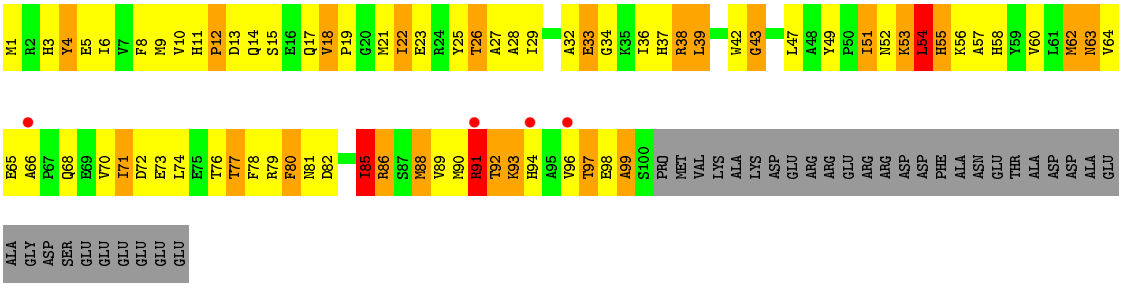
Chain CE:





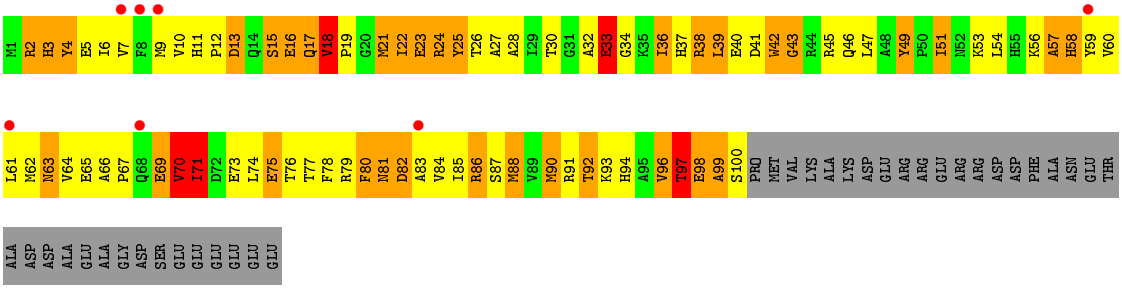
- Molecule 6: 30S ribosomal protein S6

Chain AF:



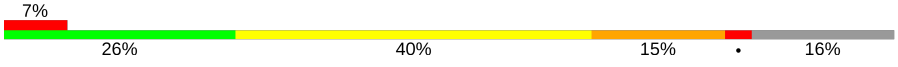
- Molecule 6: 30S ribosomal protein S6

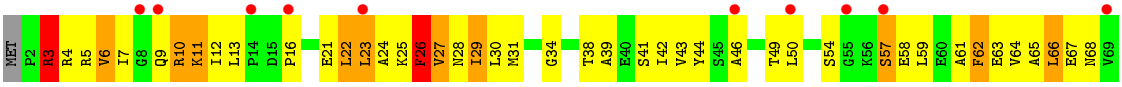
Chain CF:

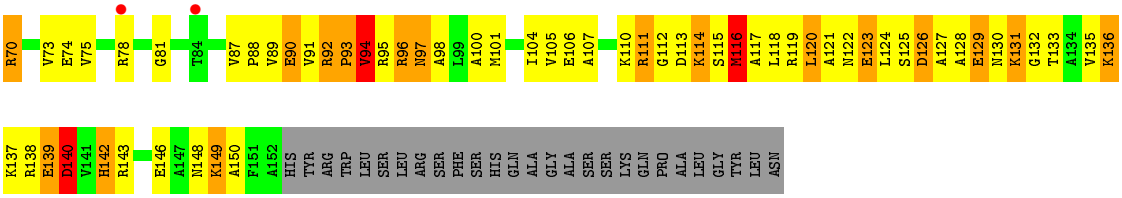


- Molecule 7: 30S ribosomal protein S7

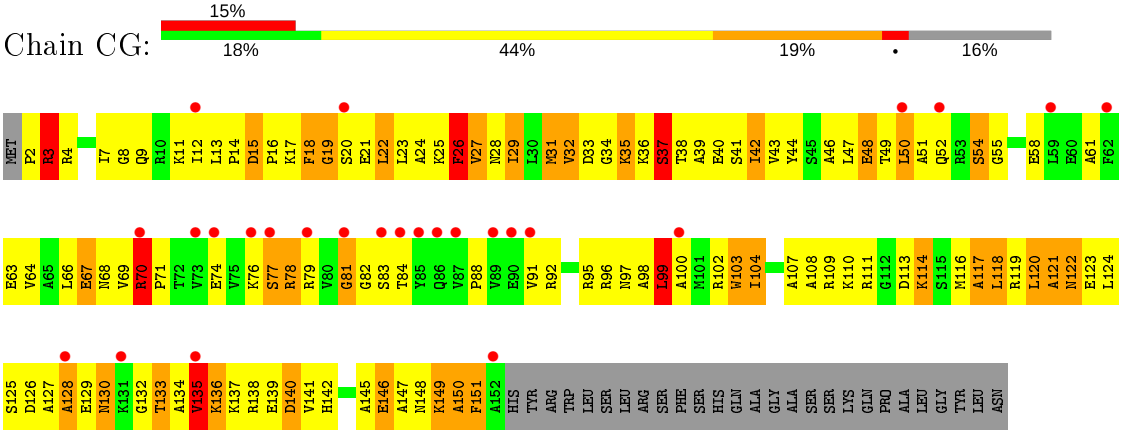
Chain AG:



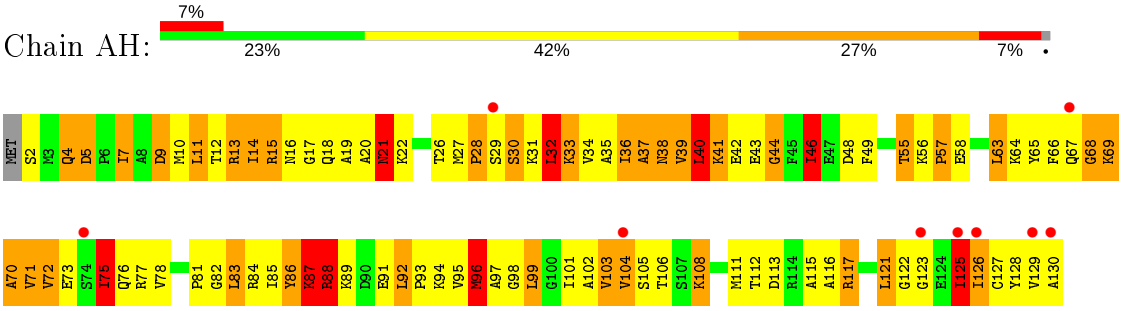




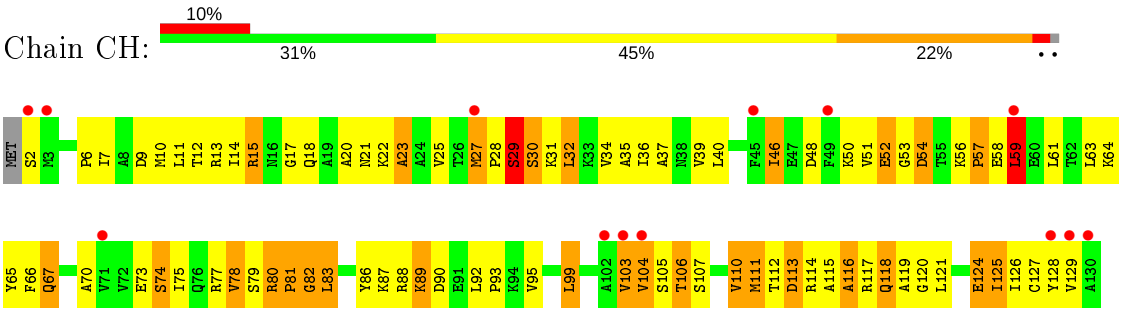
- Molecule 7: 30S ribosomal protein S7



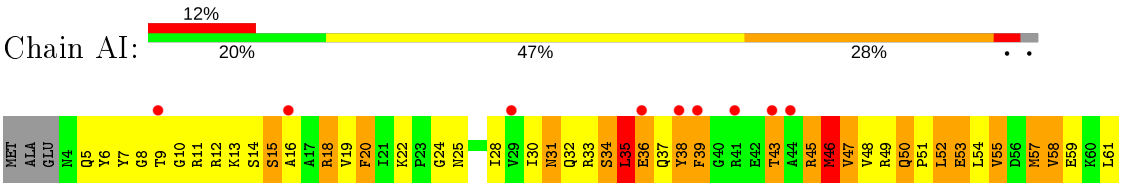
- Molecule 8: 30S ribosomal protein S8

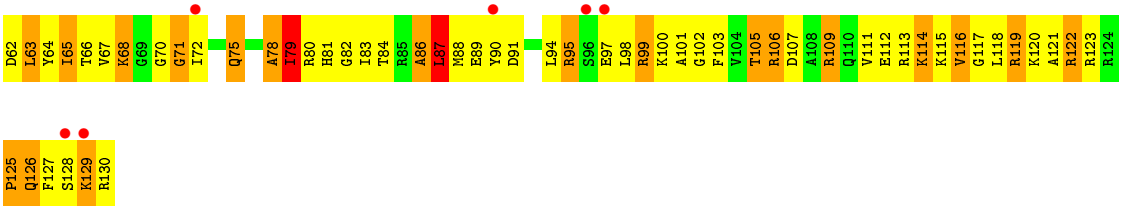


- Molecule 8: 30S ribosomal protein S8

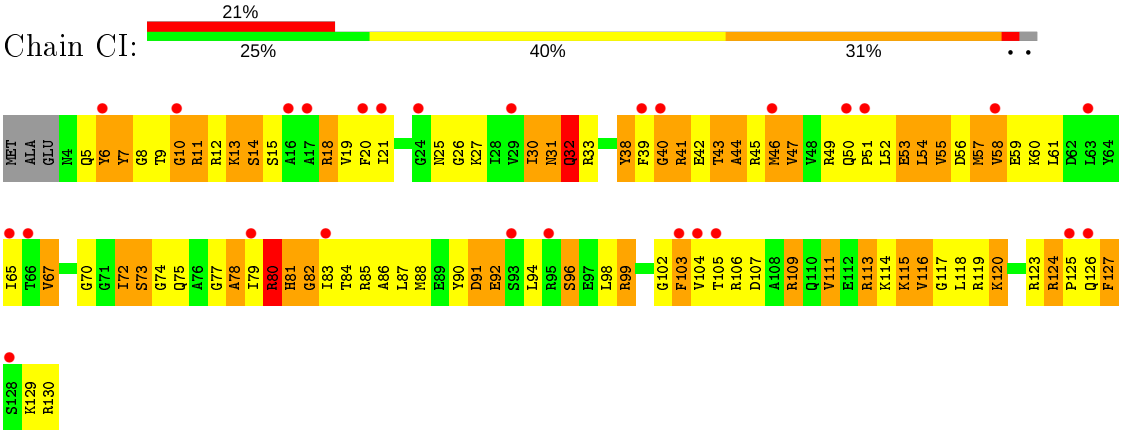


- Molecule 9: 30S ribosomal protein S9

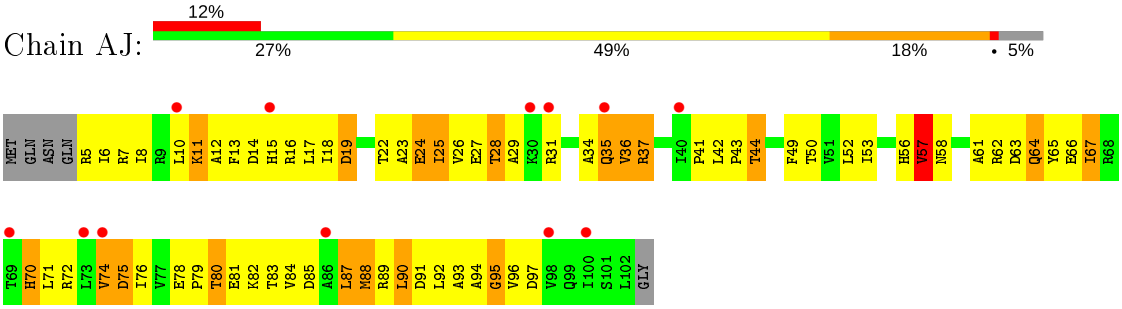




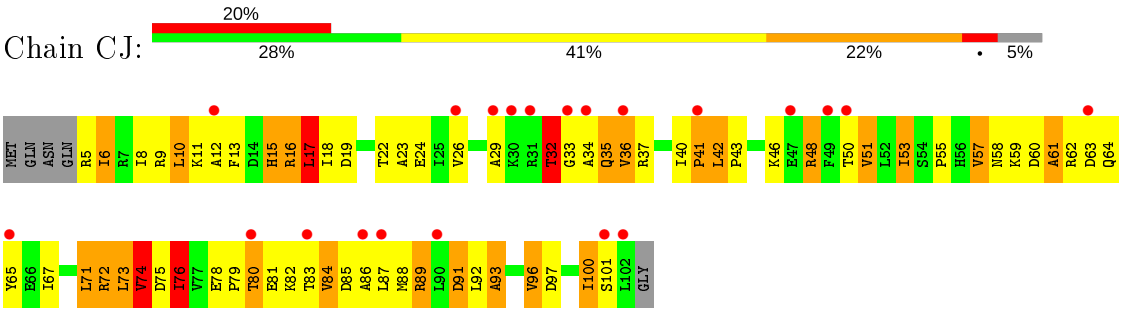
• Molecule 9: 30S ribosomal protein S9



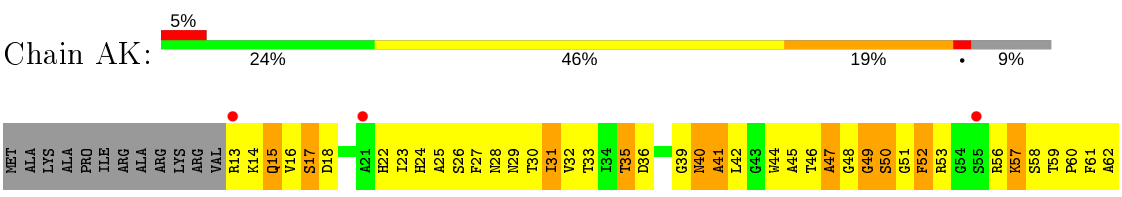
• Molecule 10: 30S ribosomal protein S10

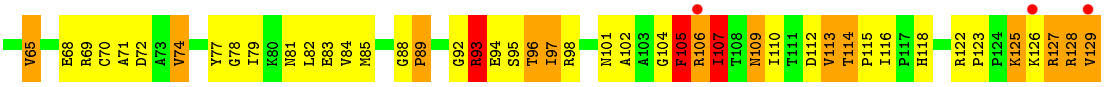


• Molecule 10: 30S ribosomal protein S10



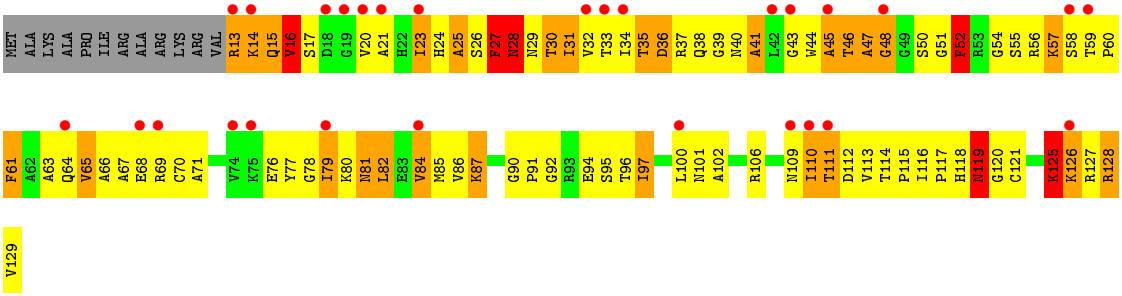
• Molecule 11: 30S ribosomal protein S11





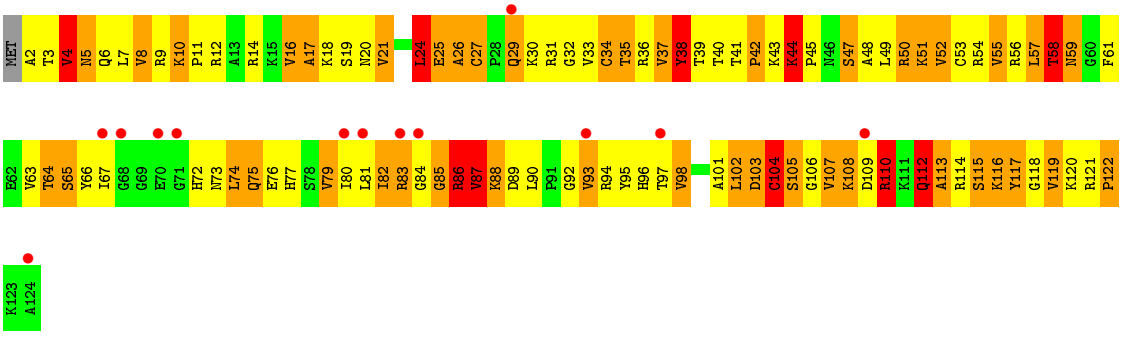
- Molecule 11: 30S ribosomal protein S11

Chain CK:



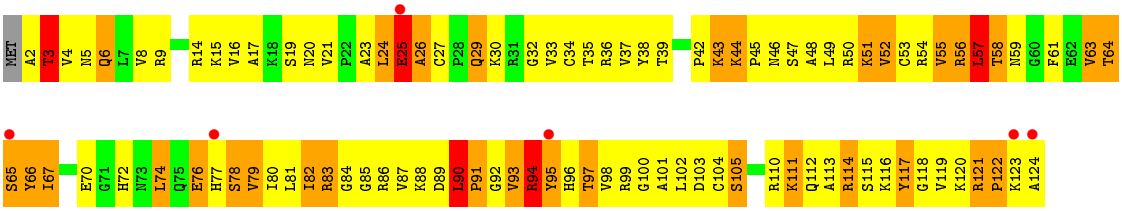
- Molecule 12: 30S ribosomal protein S12

Chain AL:



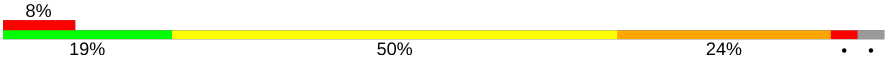
- Molecule 12: 30S ribosomal protein S12

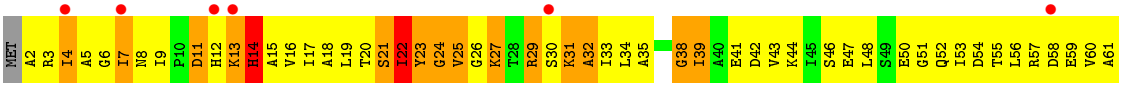
Chain CL:

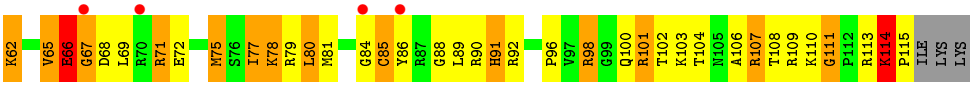


- Molecule 13: 30S ribosomal protein S13

Chain AM:

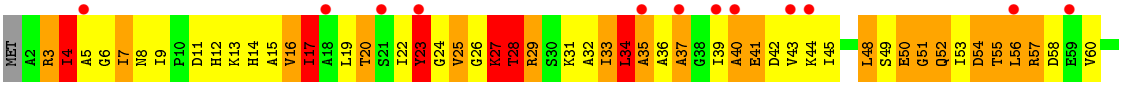


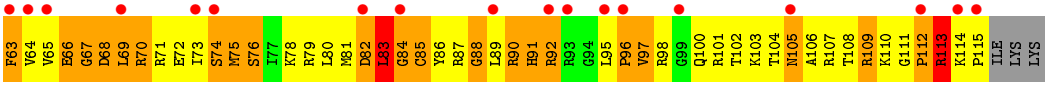




- Molecule 13: 30S ribosomal protein S13

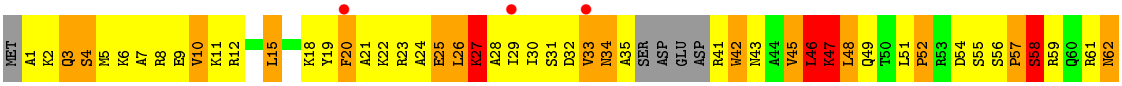
Chain CM:

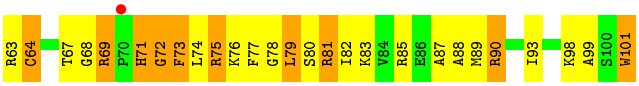




- Molecule 14: 30S ribosomal protein S14

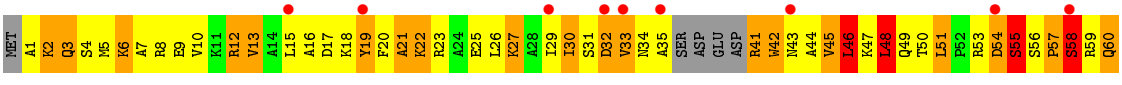
Chain AN:

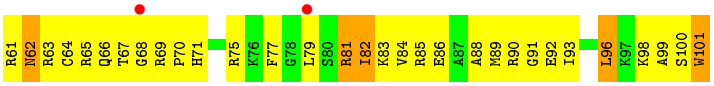




- Molecule 14: 30S ribosomal protein S14

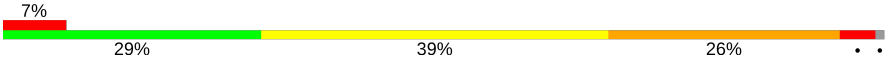
Chain CN:

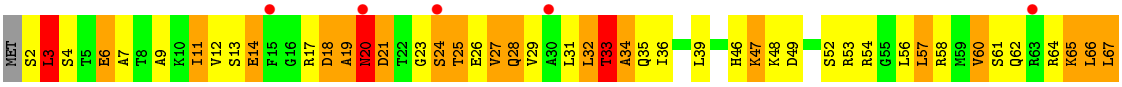


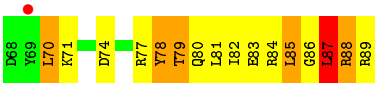


- Molecule 15: 30S ribosomal protein S15

Chain AO:

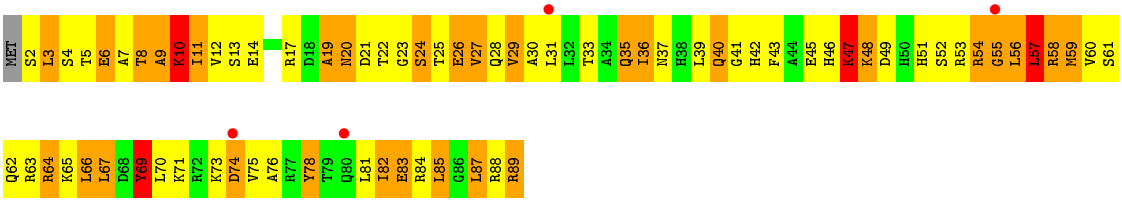




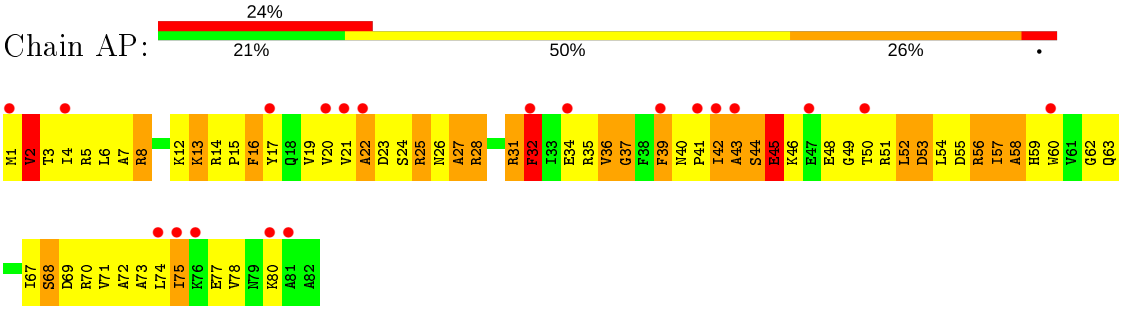


- Molecule 15: 30S ribosomal protein S15

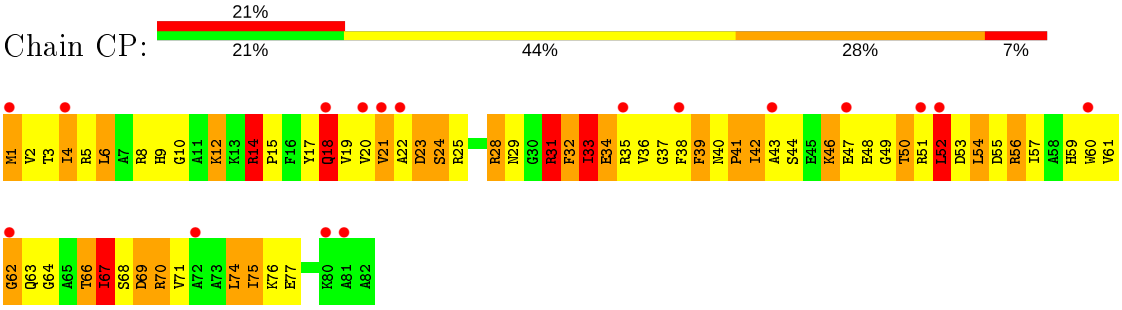
Chain CO:



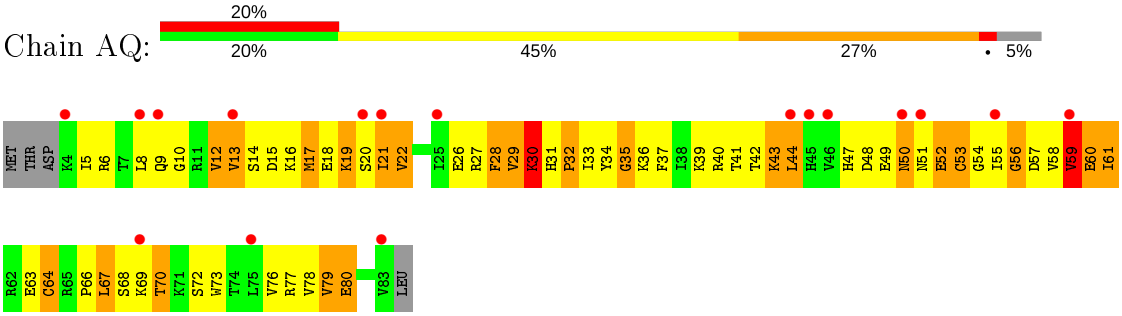
- Molecule 16: 30S ribosomal protein S16



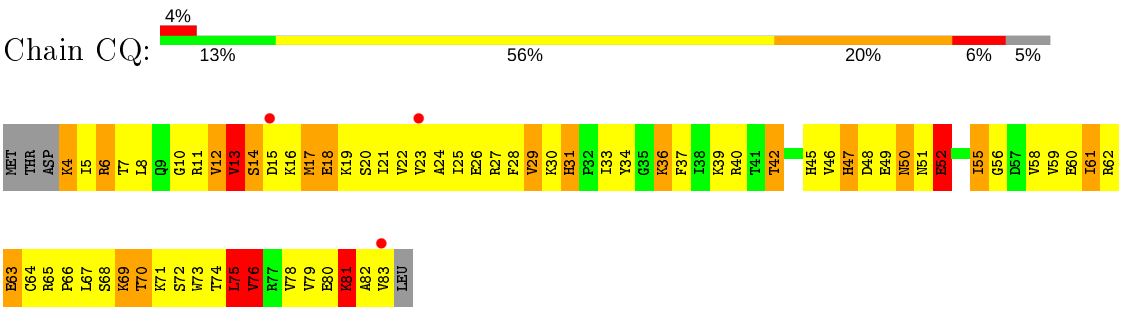
- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17

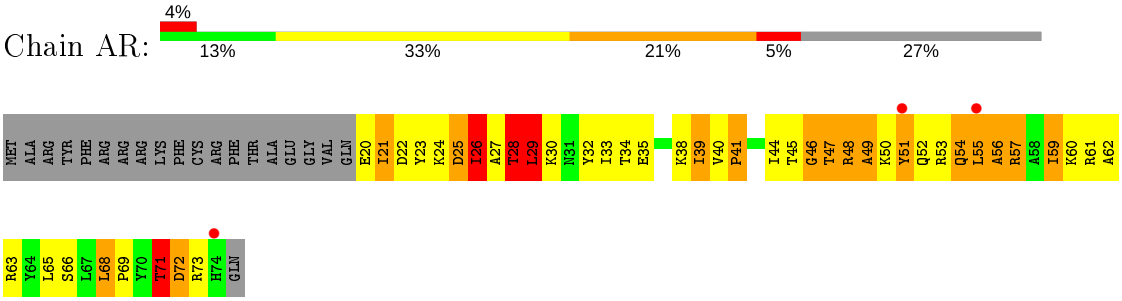


- Molecule 17: 30S ribosomal protein S17



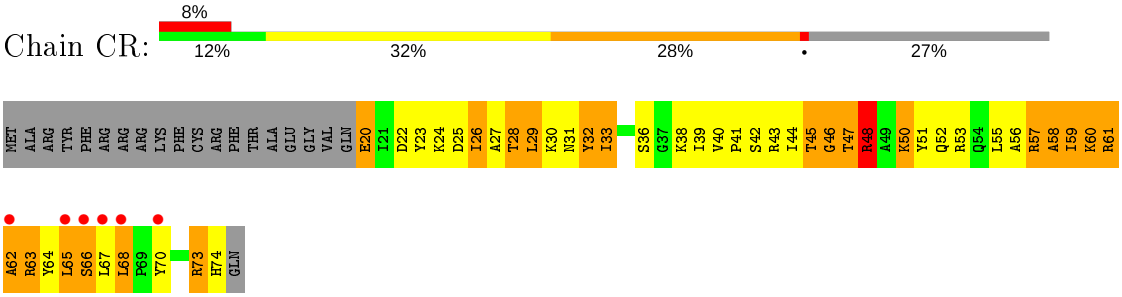
• Molecule 18: 30S ribosomal protein S18

Chain AR:



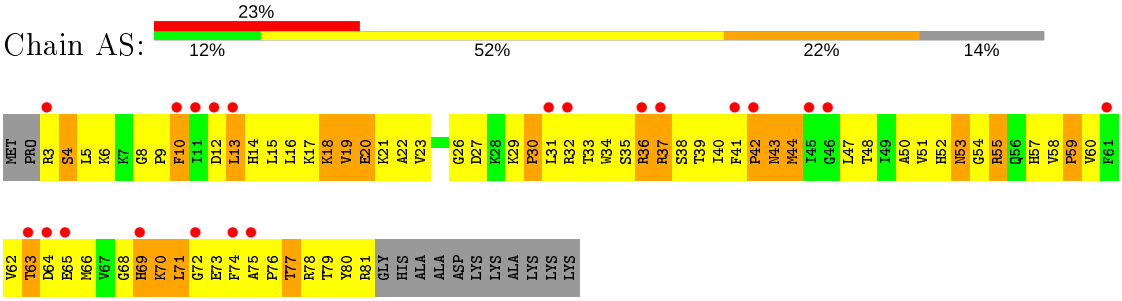
• Molecule 18: 30S ribosomal protein S18

Chain CR:



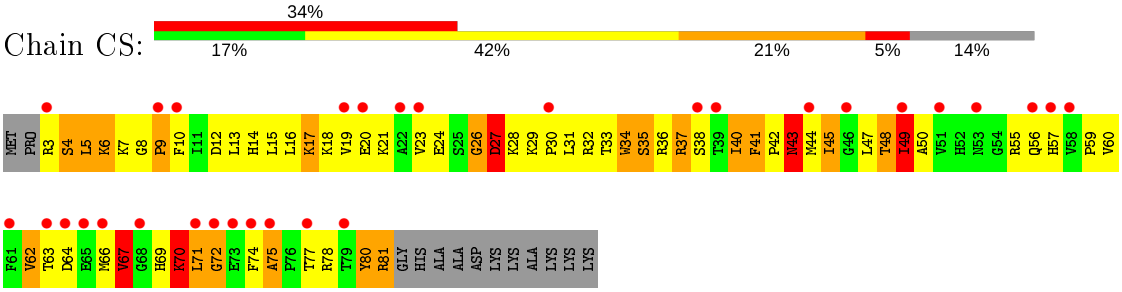
• Molecule 19: 30S ribosomal protein S19

Chain AS:



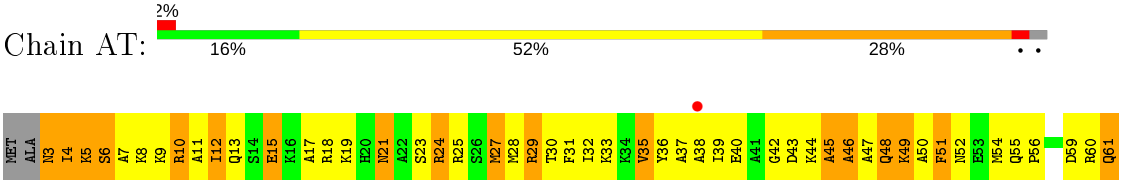
• Molecule 19: 30S ribosomal protein S19

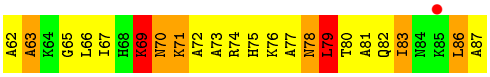
Chain CS:



• Molecule 20: 30S ribosomal protein S20

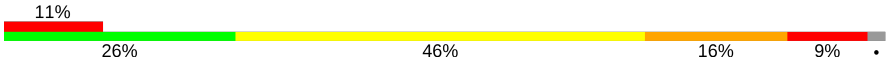
Chain AT:

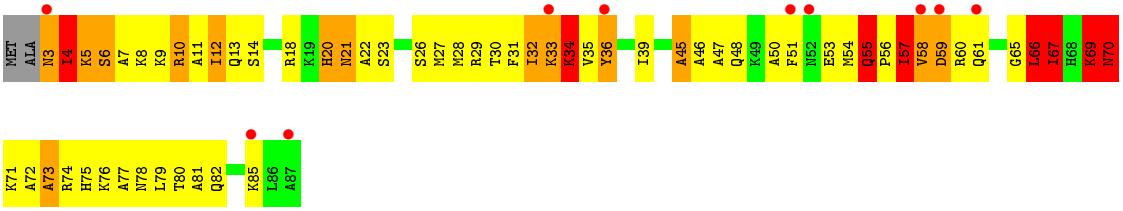




• Molecule 20: 30S ribosomal protein S20

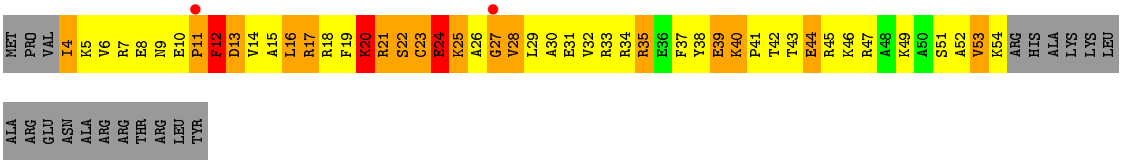
Chain CT:





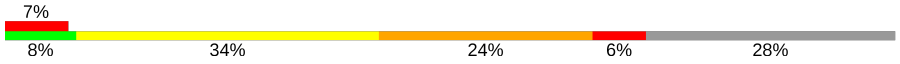
• Molecule 21: 30S ribosomal protein S21

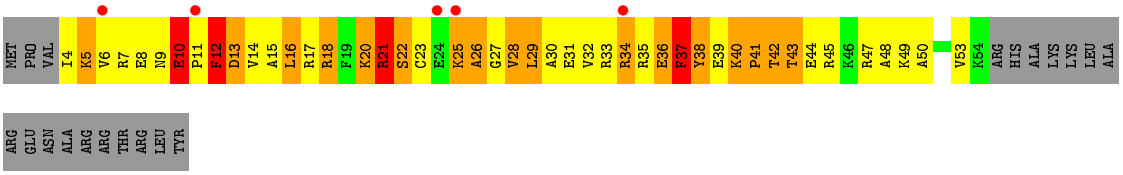
Chain AU:



• Molecule 21: 30S ribosomal protein S21

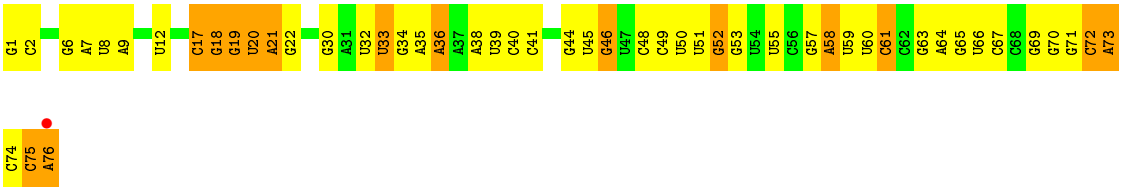
Chain CU:





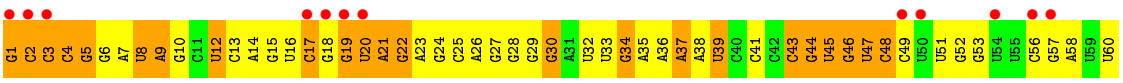
• Molecule 22: Phenylalanine specific transfer RNA, tRNA-Phe

Chain AV:



• Molecule 22: Phenylalanine specific transfer RNA, tRNA-Phe

Chain CV:

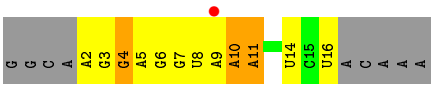


• Molecule 23: Messenger RNA, mRNA

Chain AX:

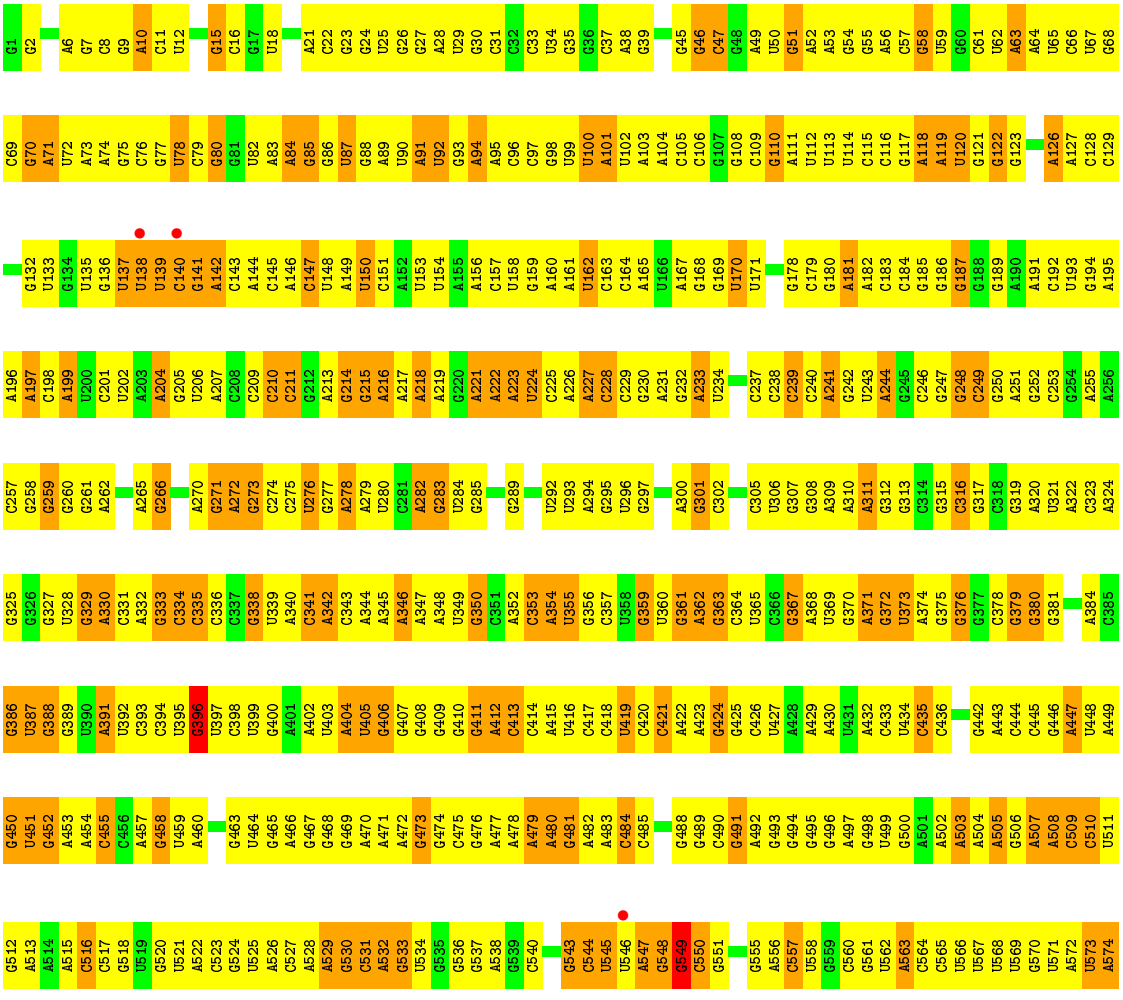
• Molecule 23: Messenger RNA, mRNA

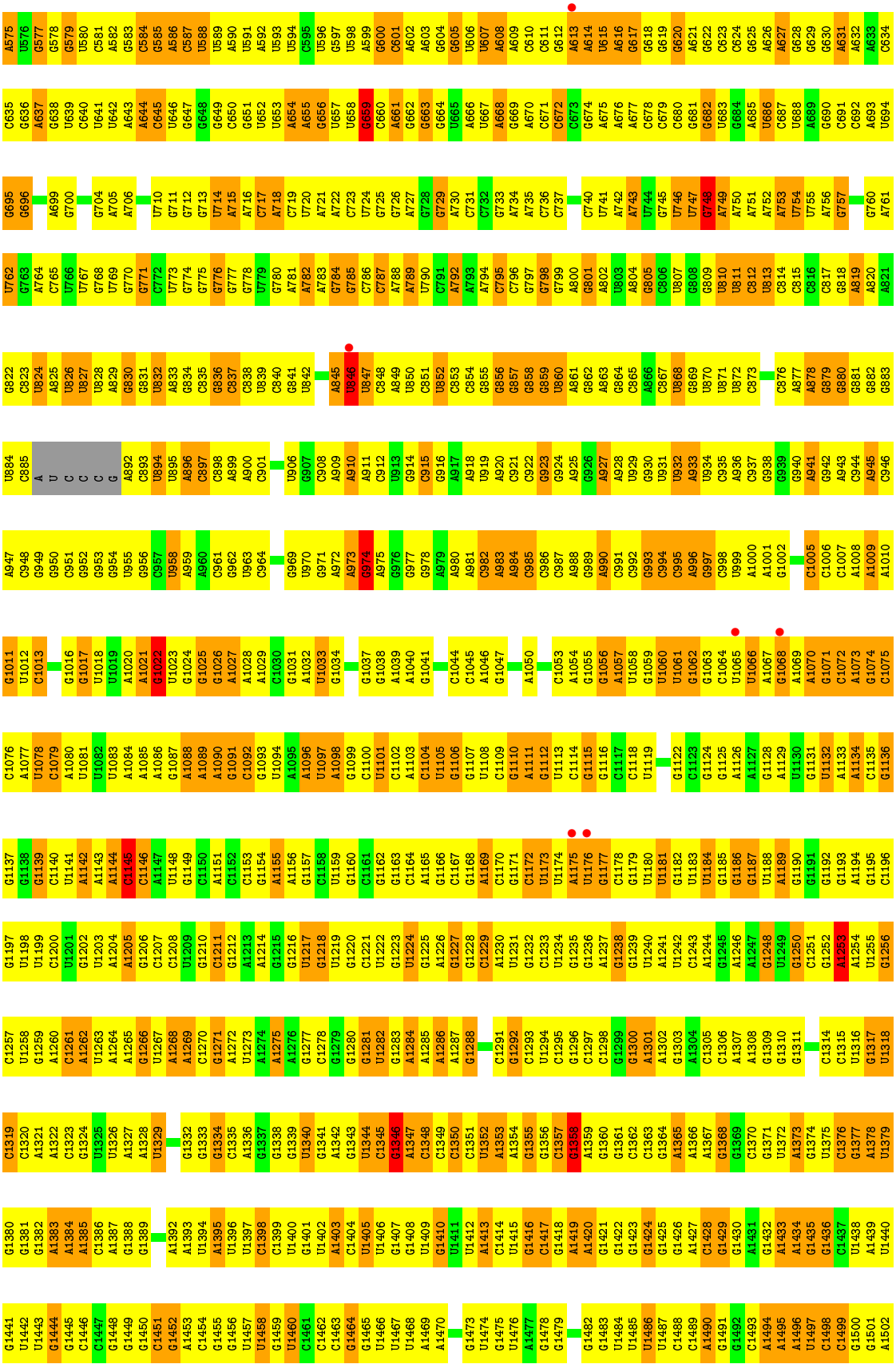
Chain CX:

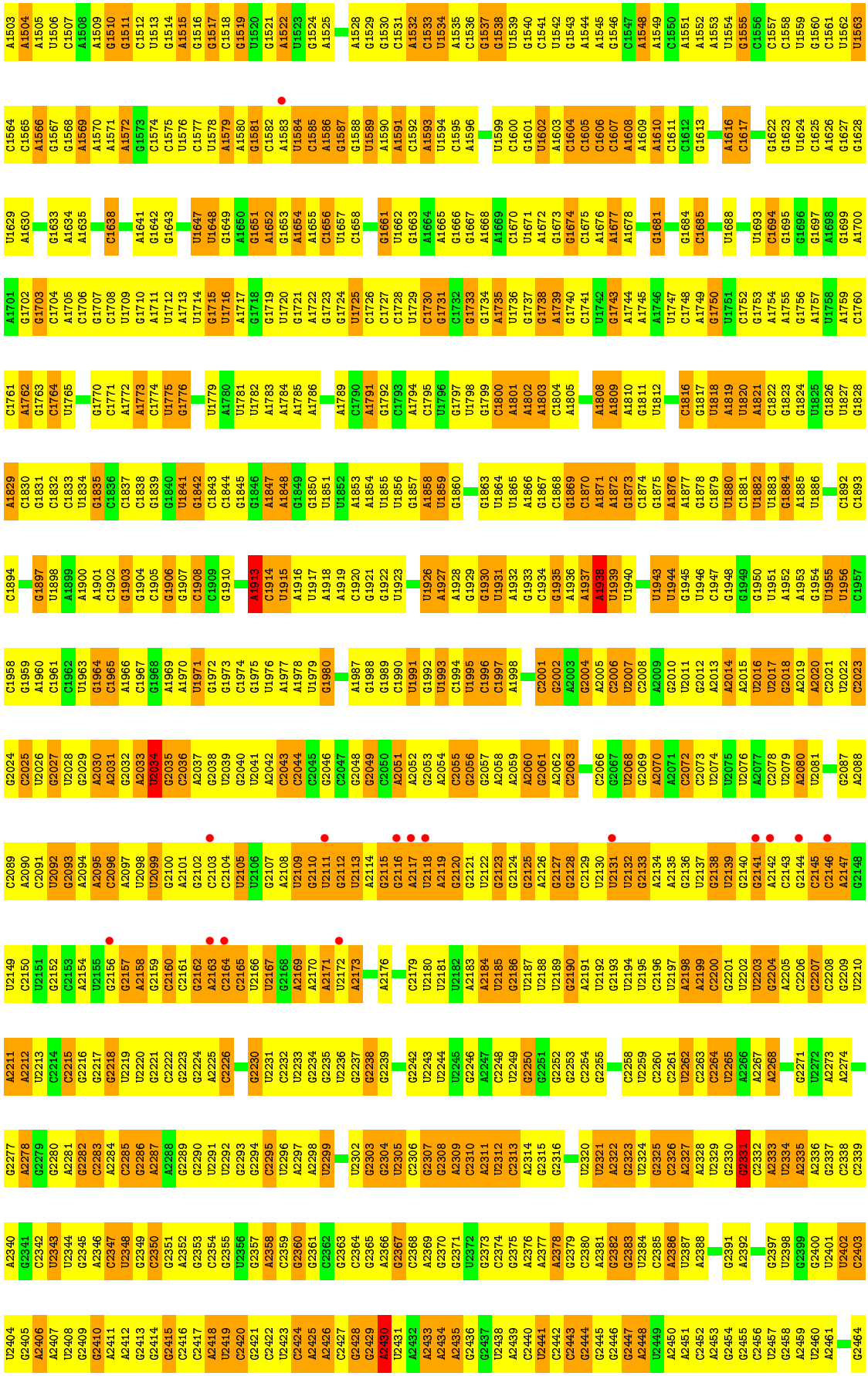


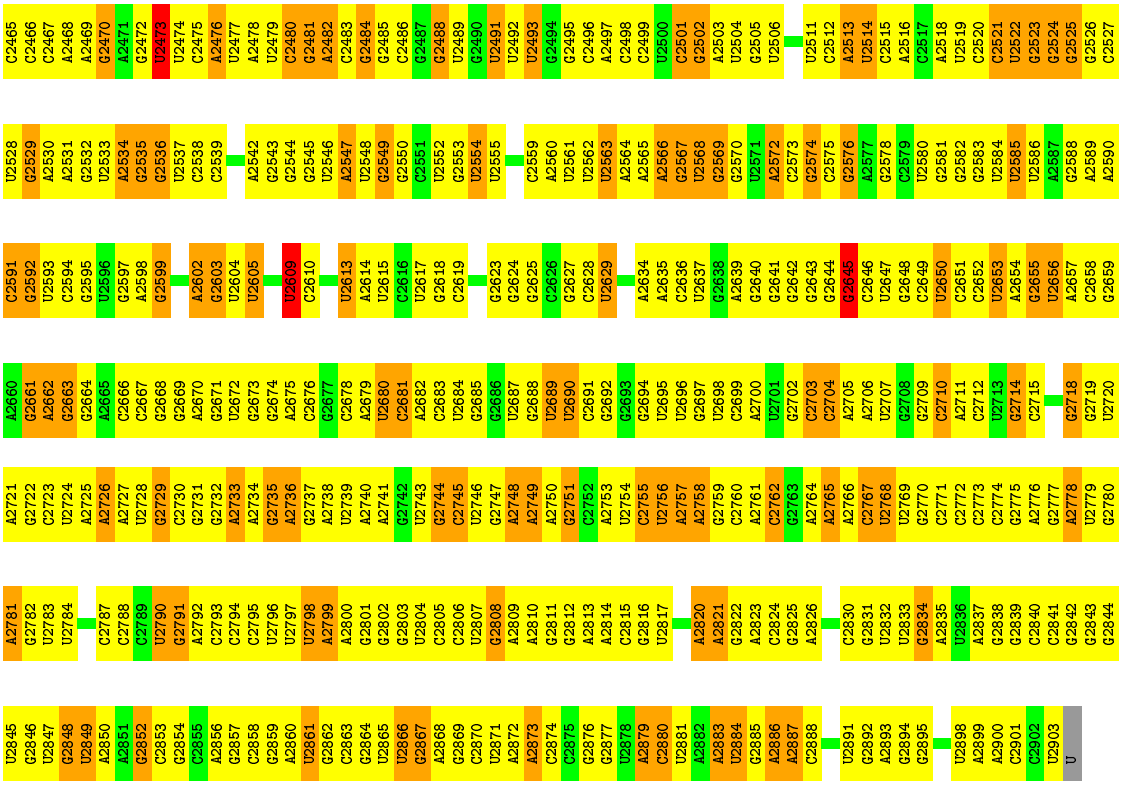
• Molecule 24: 23S ribosomal RNA

Chain BA:



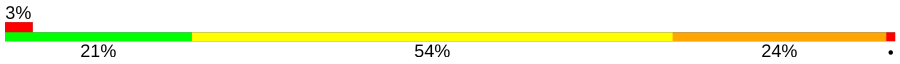


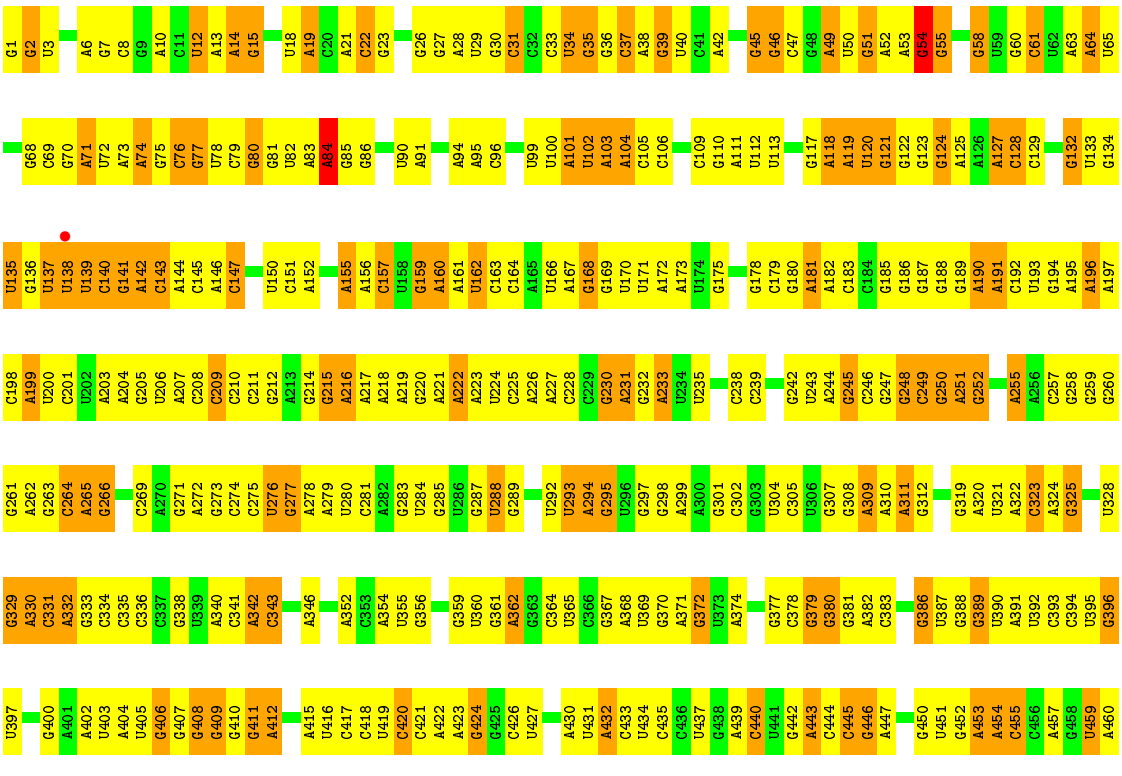


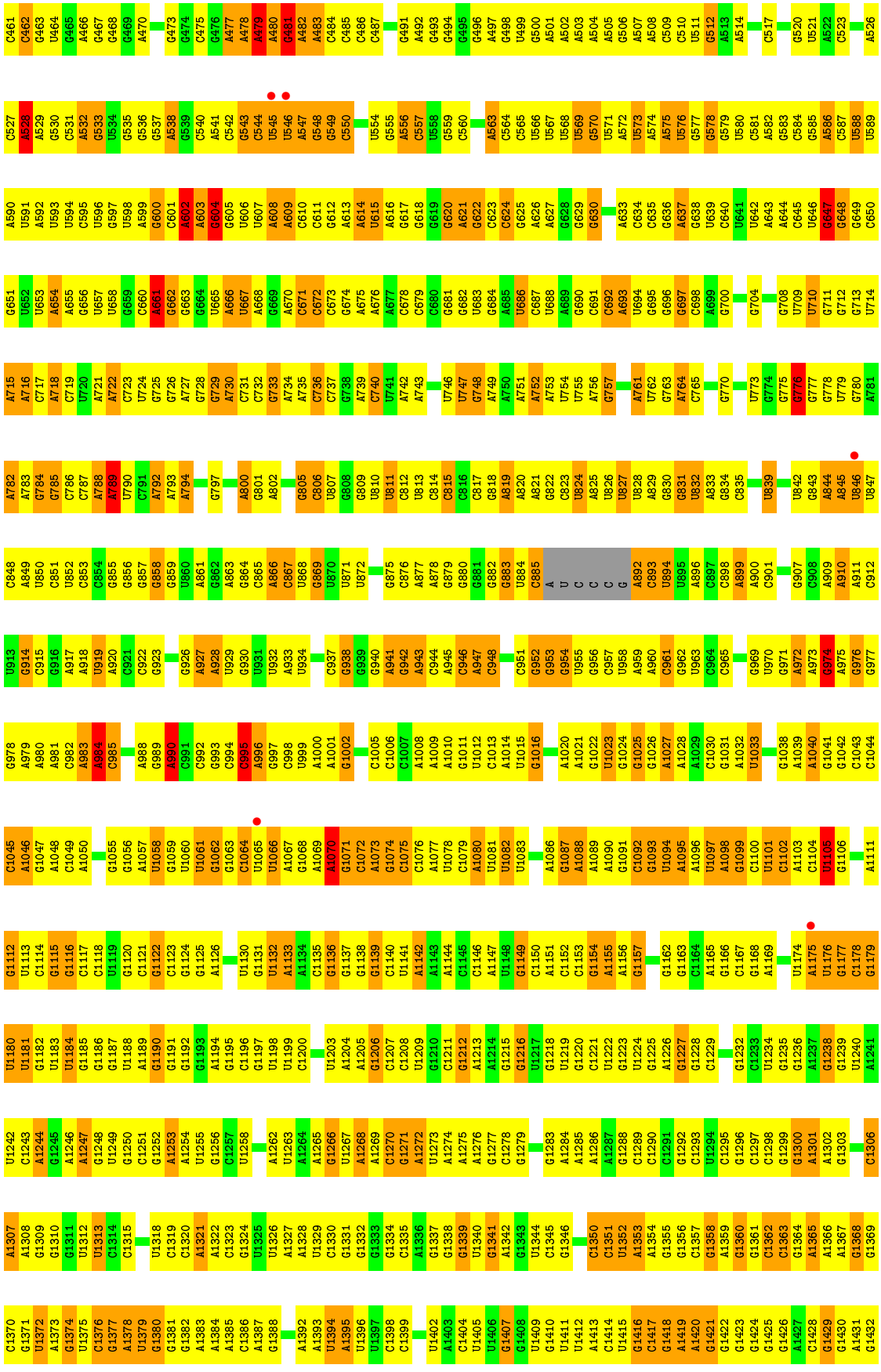


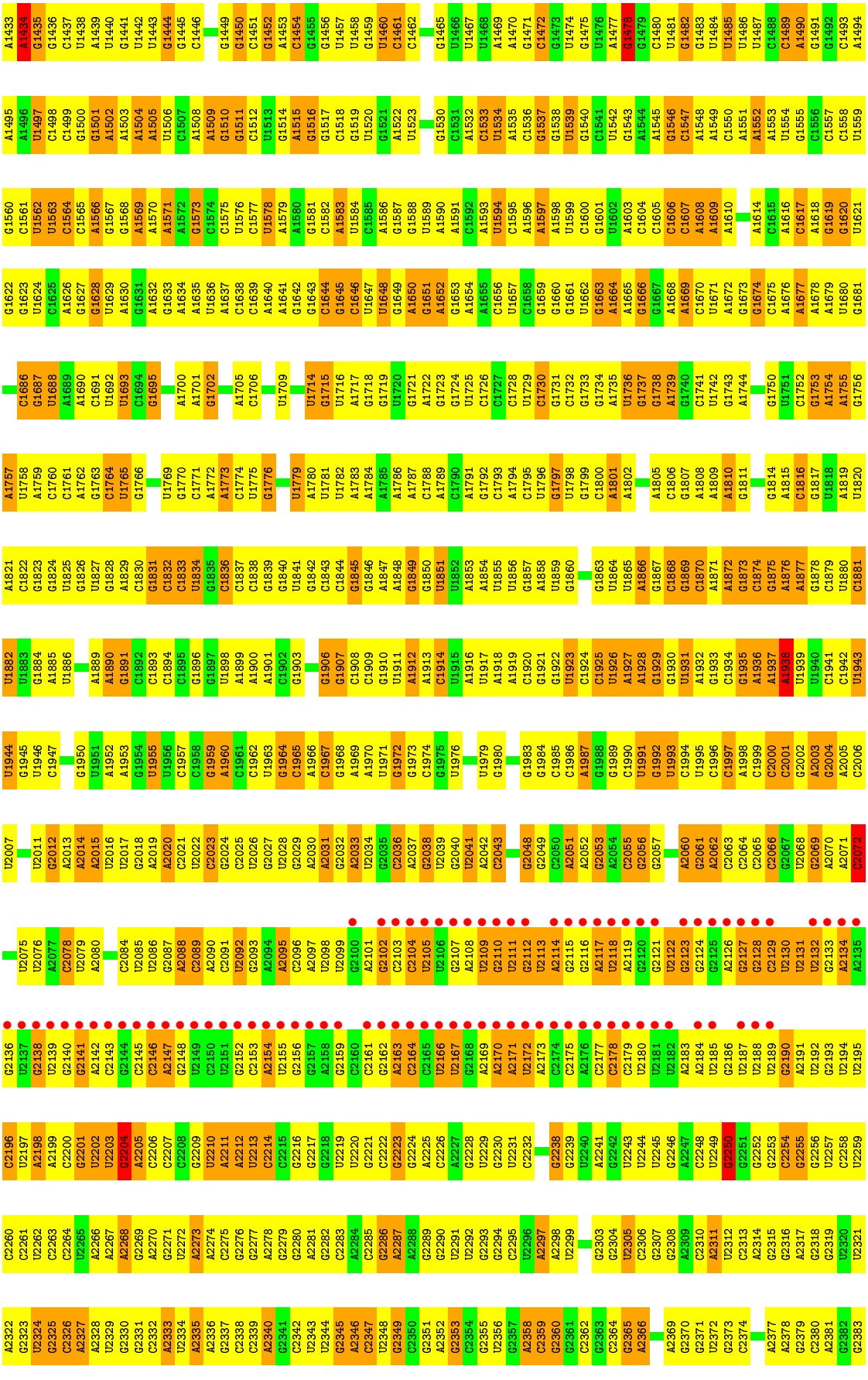
- Molecule 24: 23S ribosomal RNA

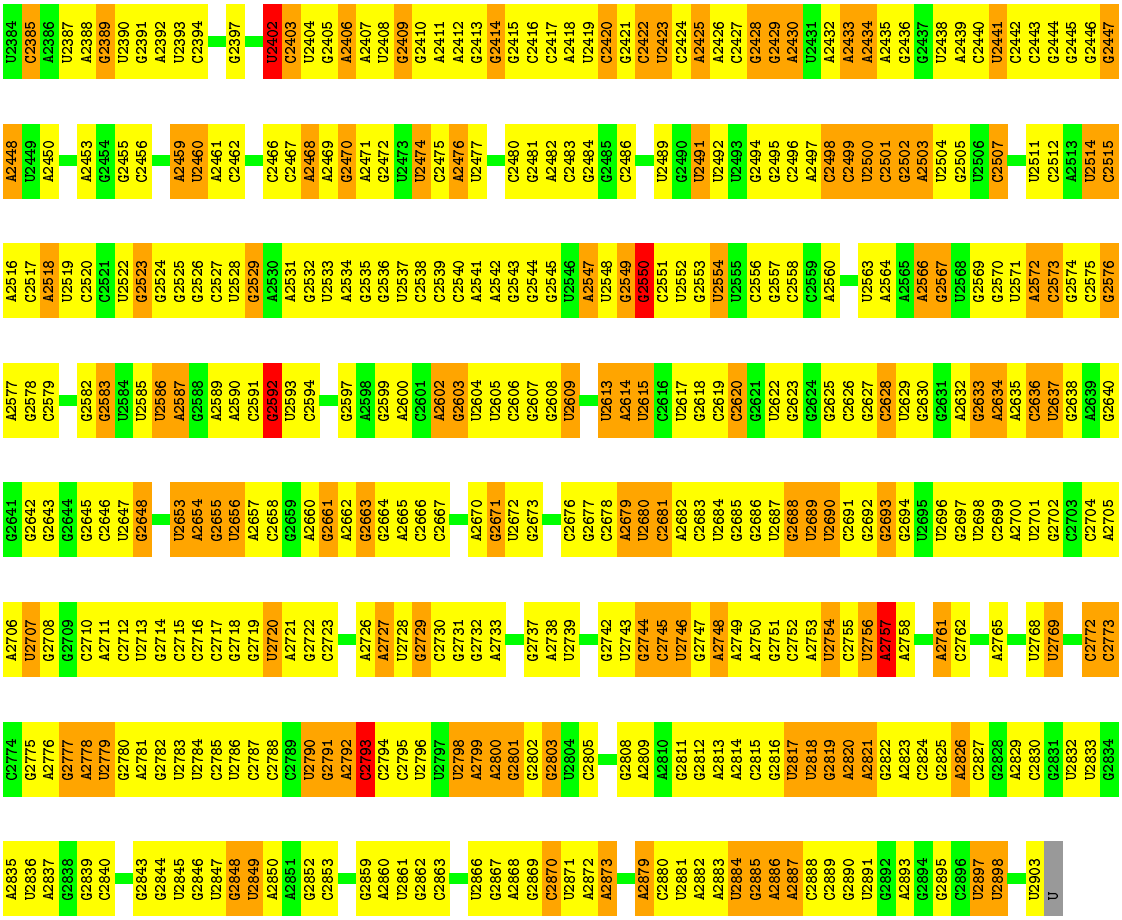
Chain DA:





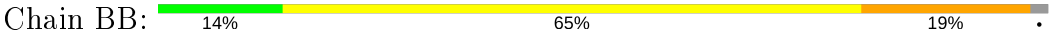


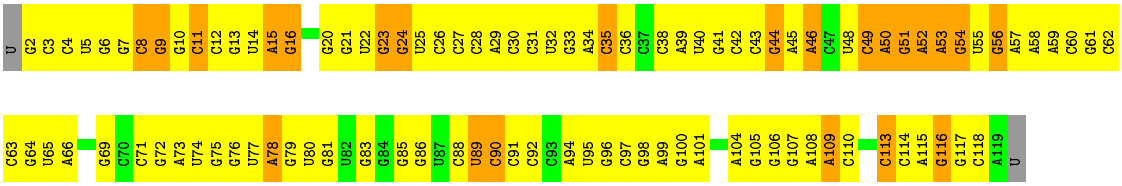




• Molecule 25: 5S ribosomal RNA

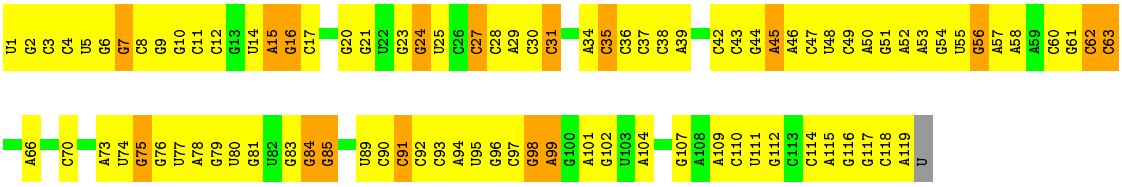
Chain BB:





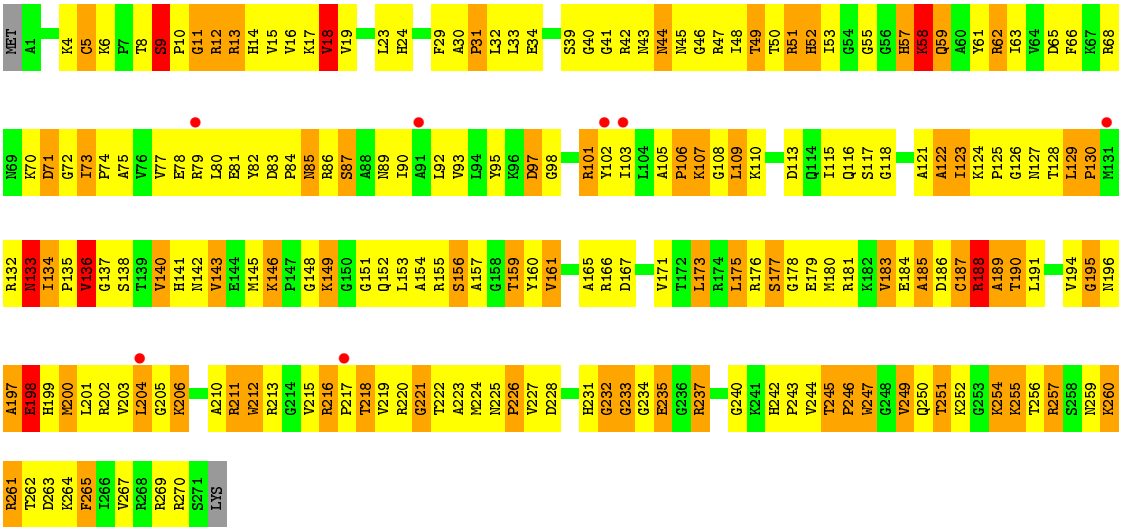
• Molecule 25: 5S ribosomal RNA

Chain DB:



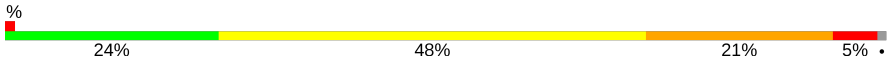
• Molecule 26: 50S ribosomal protein L2

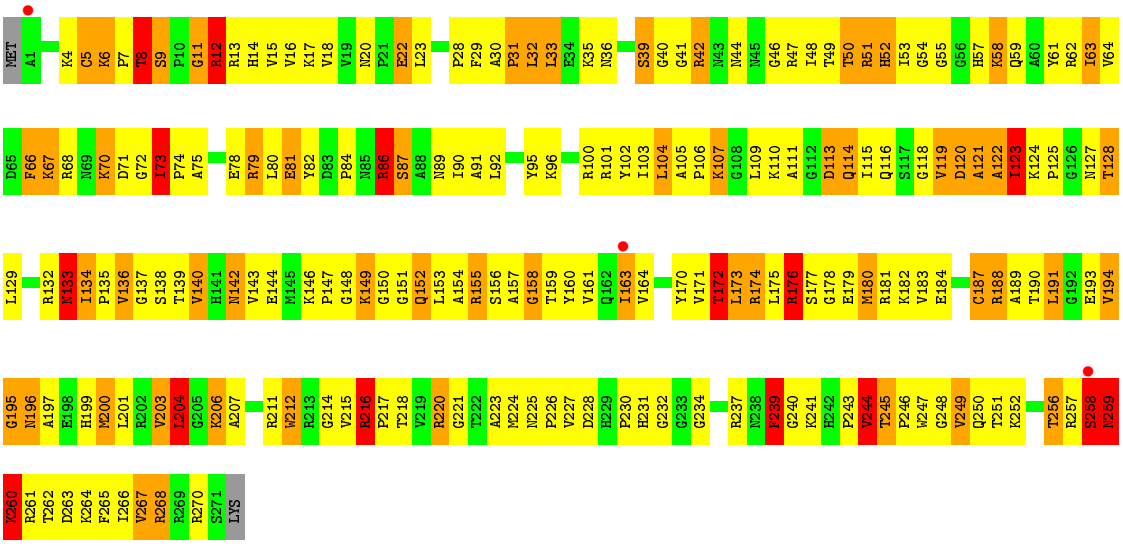
Chain BC:



• Molecule 26: 50S ribosomal protein L2

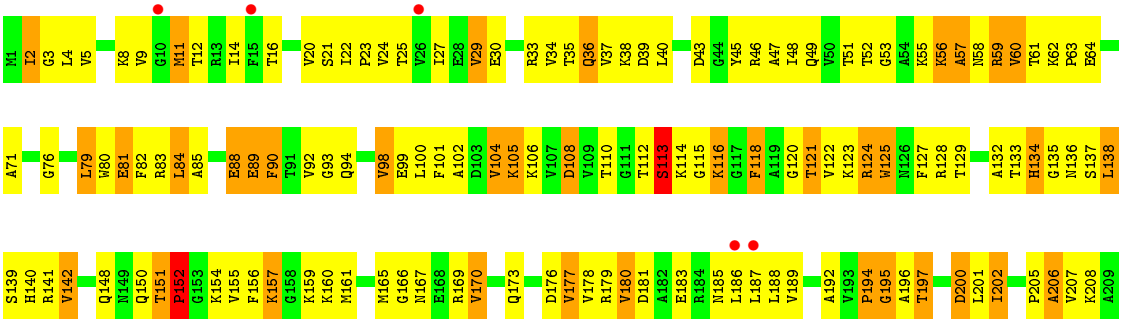
Chain DC:





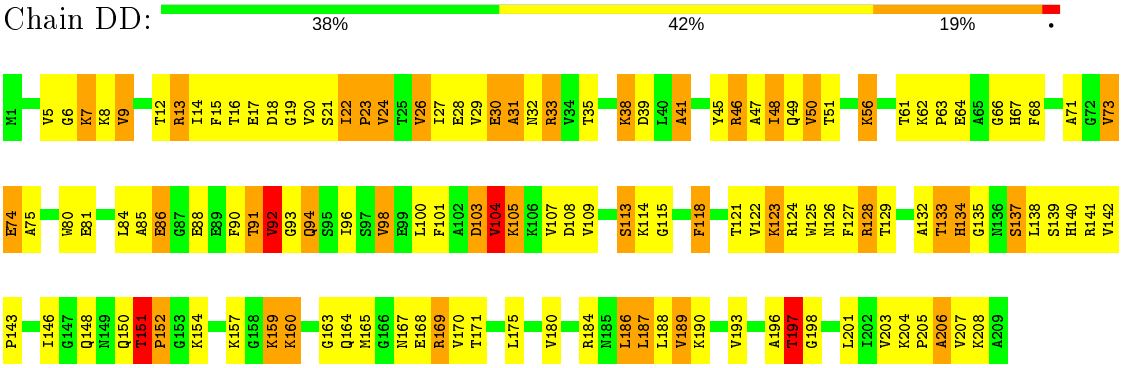
• Molecule 27: 50S ribosomal protein L3

Chain BD:



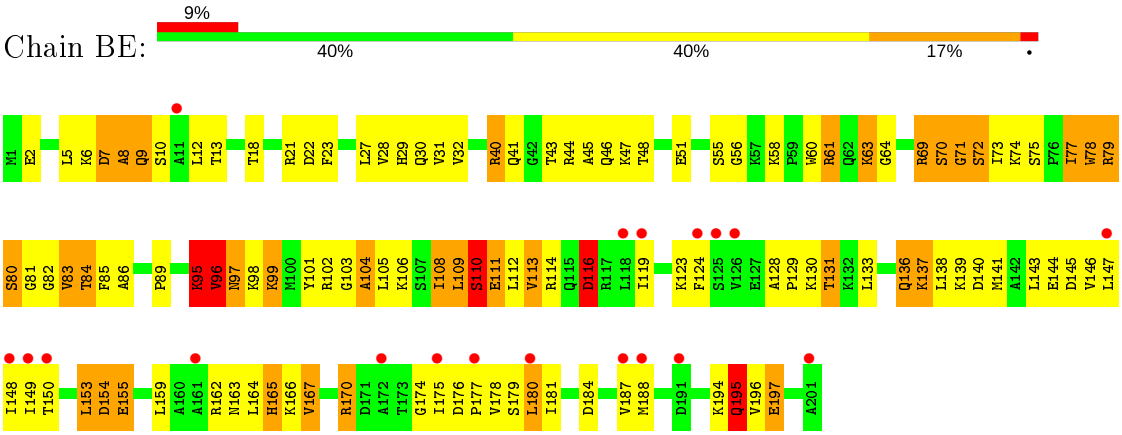
- Molecule 27: 50S ribosomal protein L3

Chain DD:



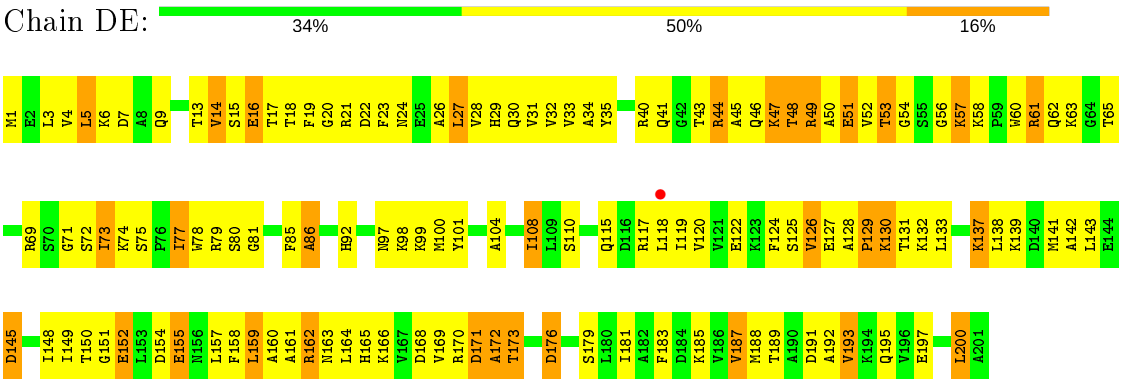
- Molecule 28: 50S ribosomal protein L4

Chain BE:



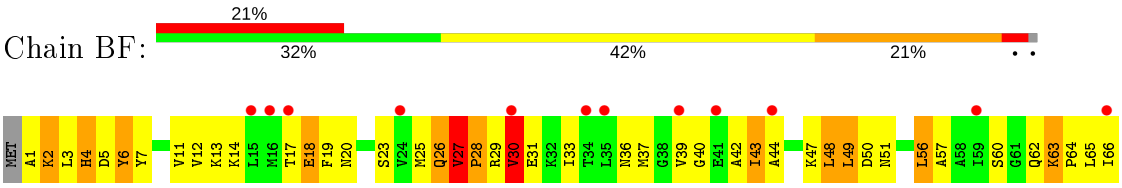
- Molecule 28: 50S ribosomal protein L4

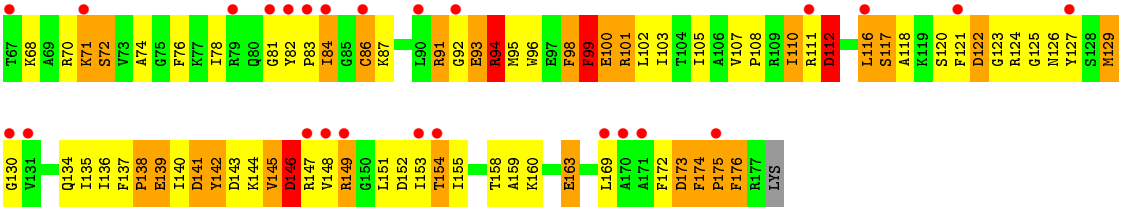
Chain DE:



- Molecule 29: 50S ribosomal protein L5

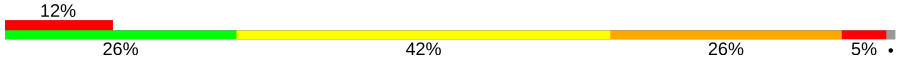
Chain BF:

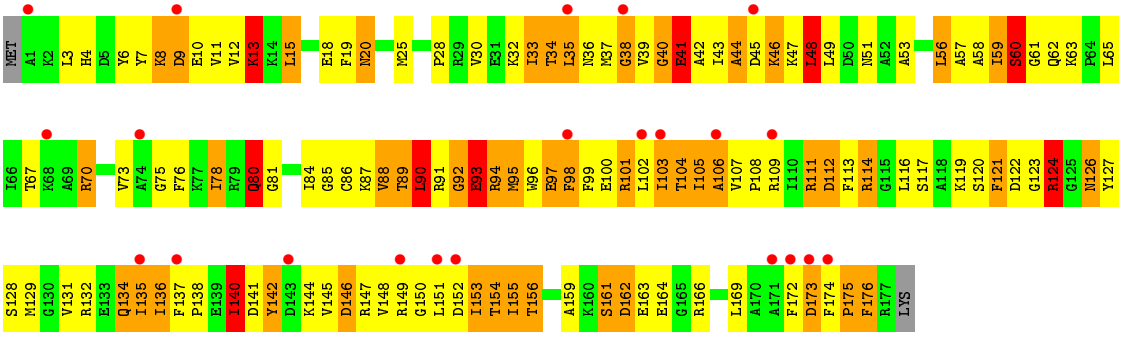




• Molecule 29: 50S ribosomal protein L5

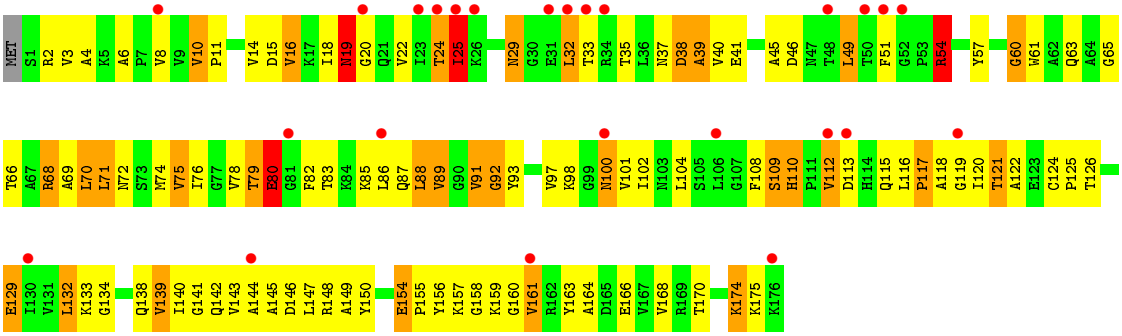
Chain DF:





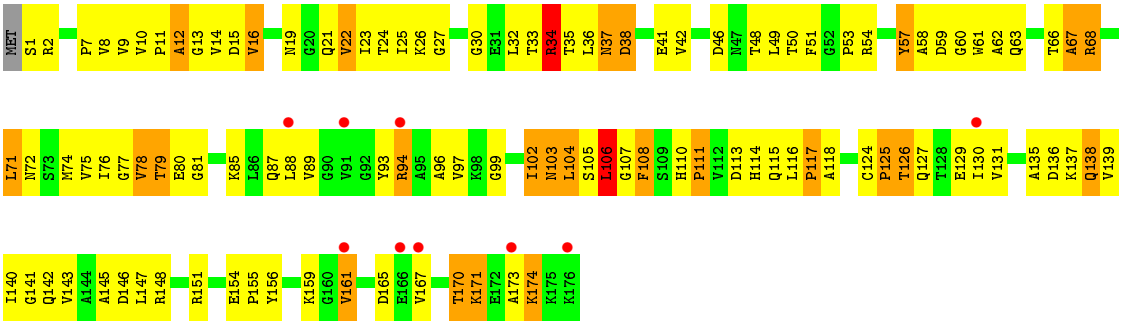
• Molecule 30: 50S ribosomal protein L6

Chain BG:



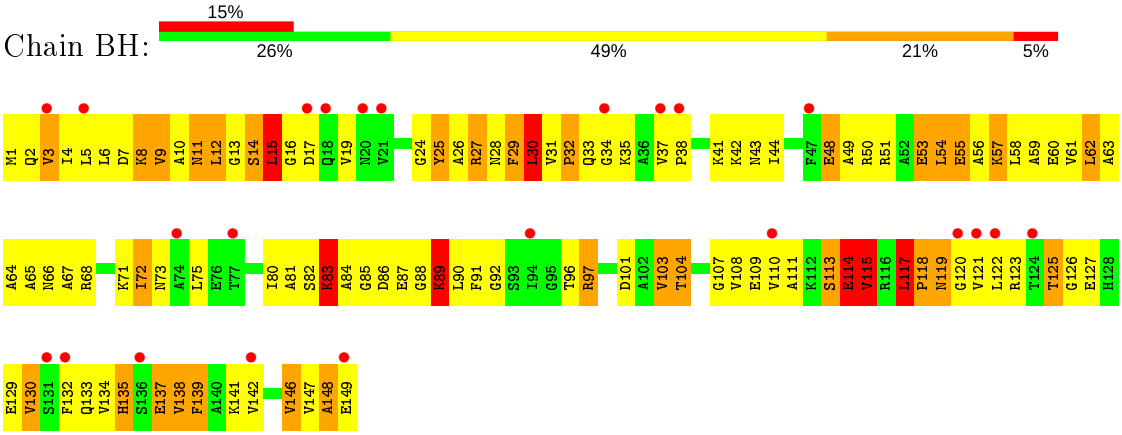
• Molecule 30: 50S ribosomal protein L6

Chain DG:



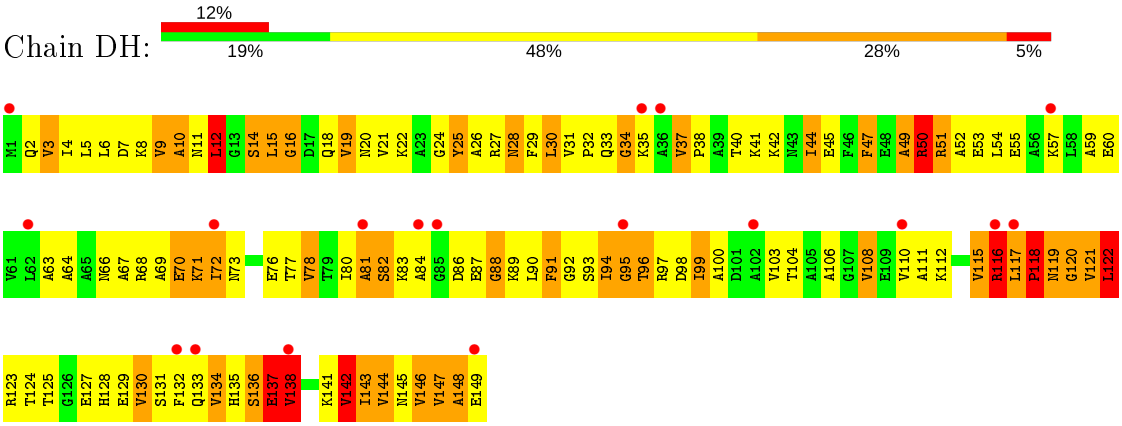
• Molecule 31: 50S ribosomal protein L9

Chain BH:



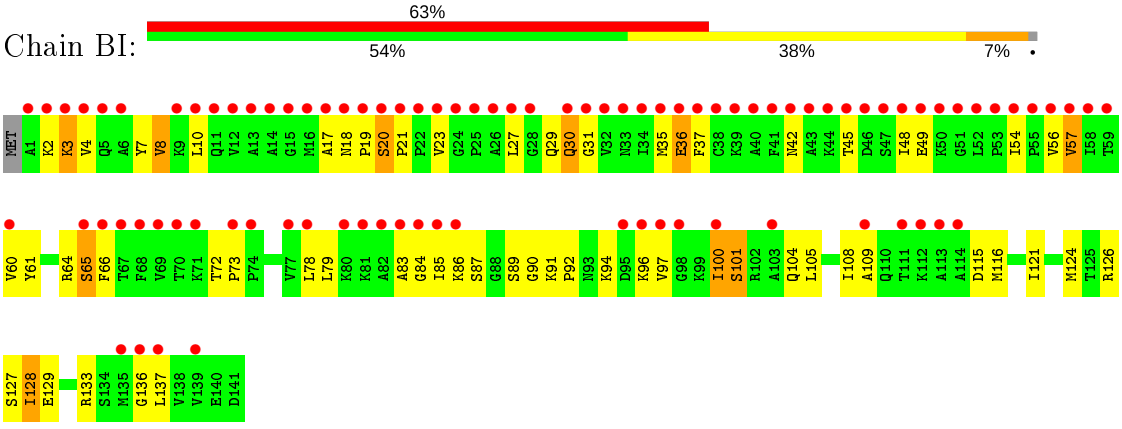
• Molecule 31: 50S ribosomal protein L9

Chain DH:



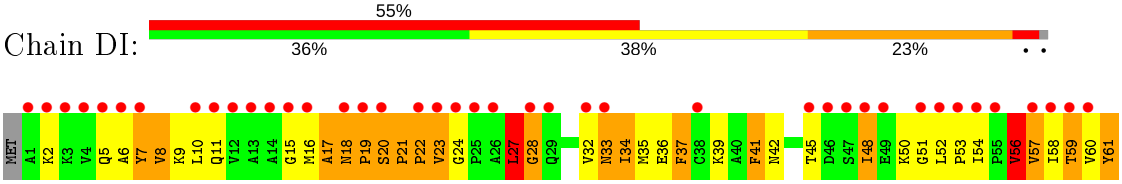
• Molecule 32: 50S ribosomal protein L11

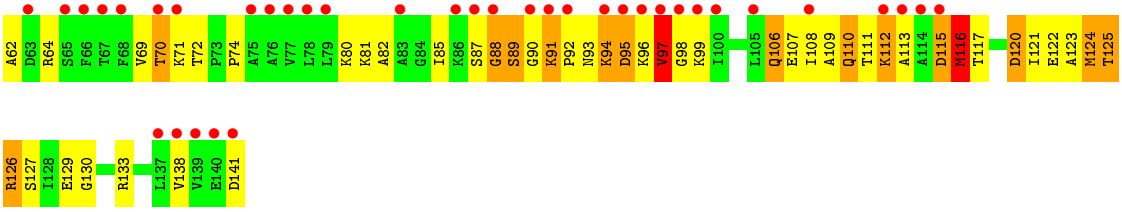
Chain BI:



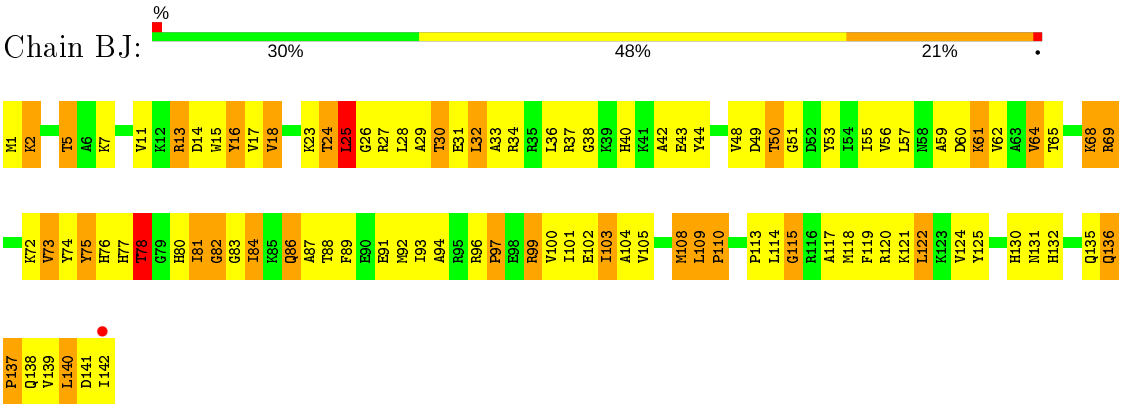
• Molecule 32: 50S ribosomal protein L11

Chain DI:

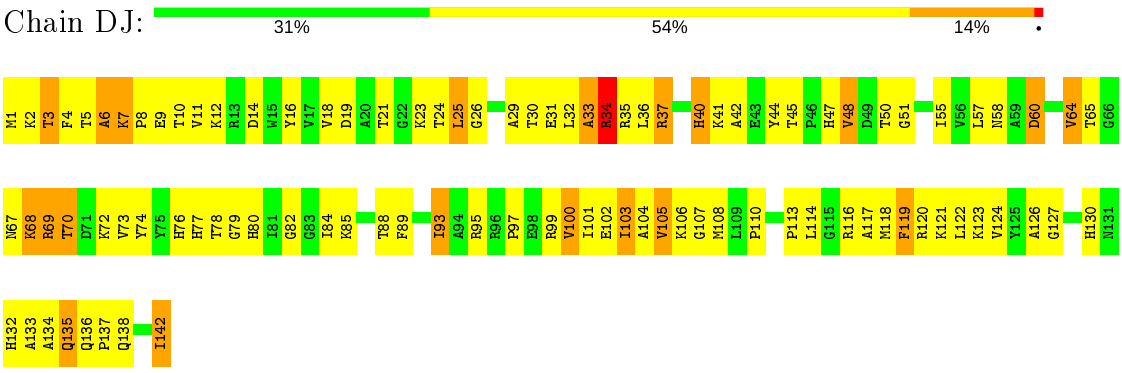




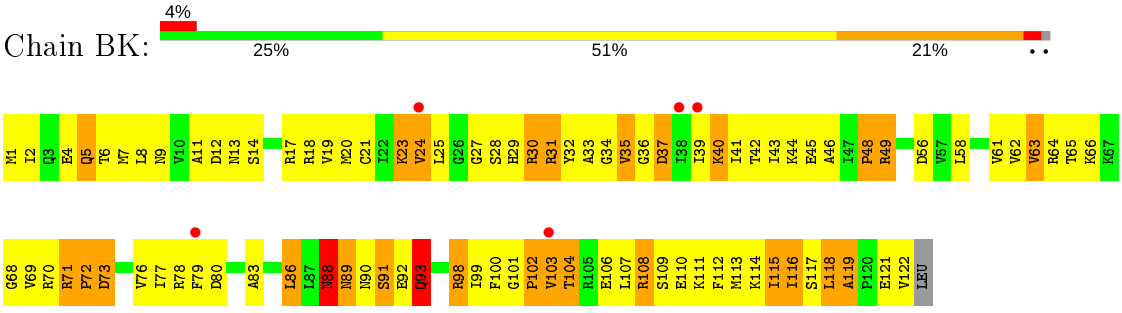
• Molecule 33: 50S ribosomal protein L13



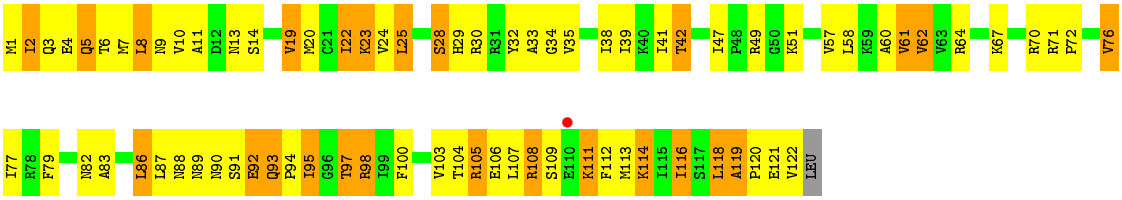
• Molecule 33: 50S ribosomal protein L13



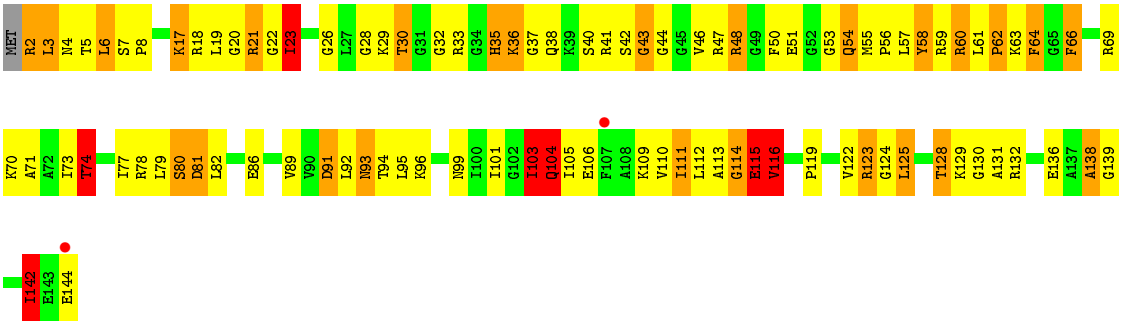
• Molecule 34: 50S ribosomal protein L14



• Molecule 34: 50S ribosomal protein L14

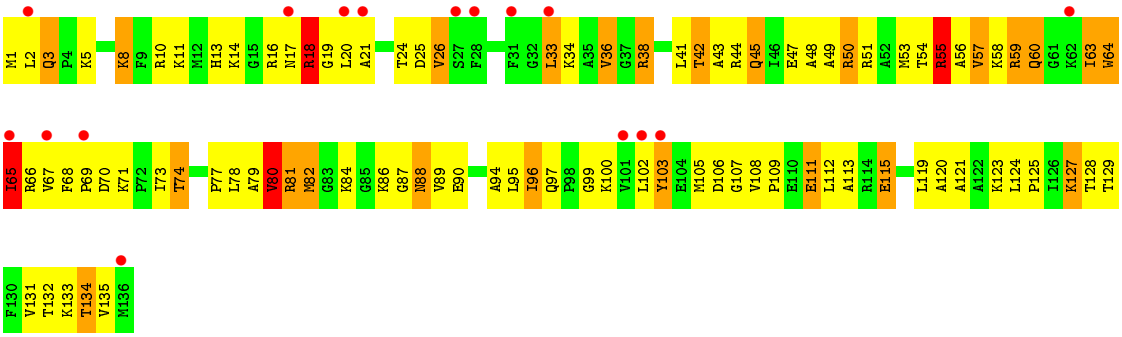


• Molecule 35: 50S ribosomal protein L15



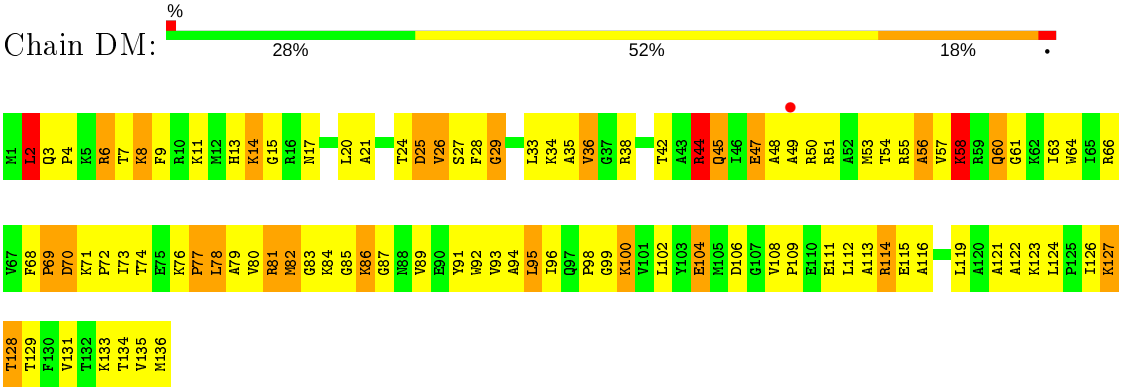
• Molecule 35: 50S ribosomal protein L15

• Molecule 36: 50S ribosomal protein L16



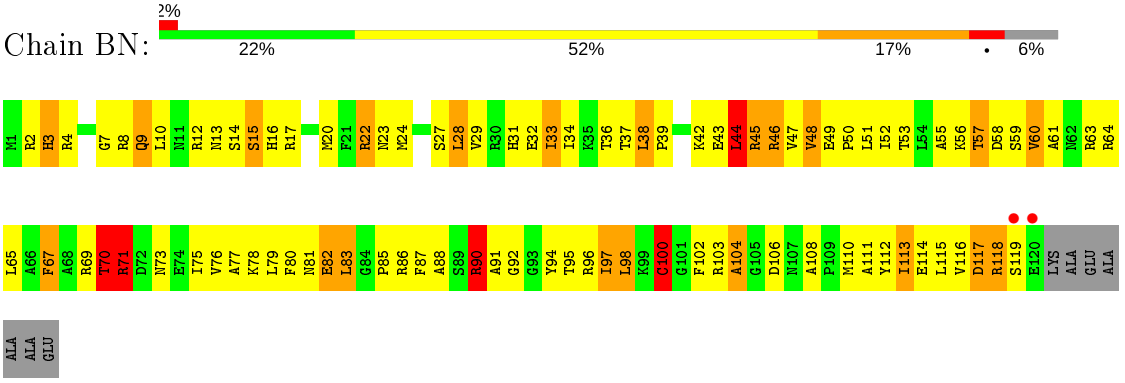
• Molecule 36: 50S ribosomal protein L16

Chain DM:



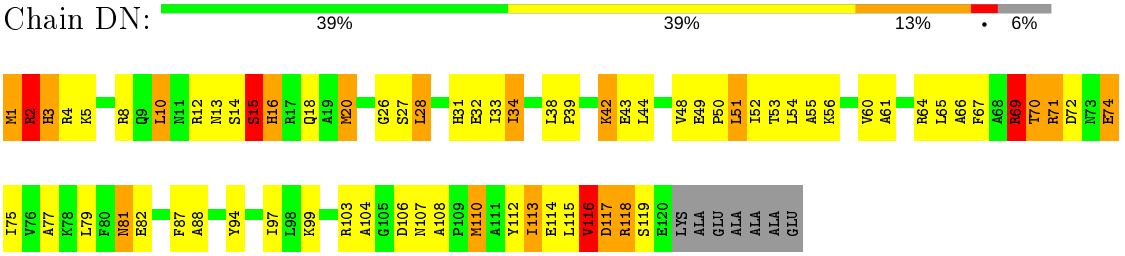
- Molecule 37: 50S ribosomal protein L17

Chain BN:



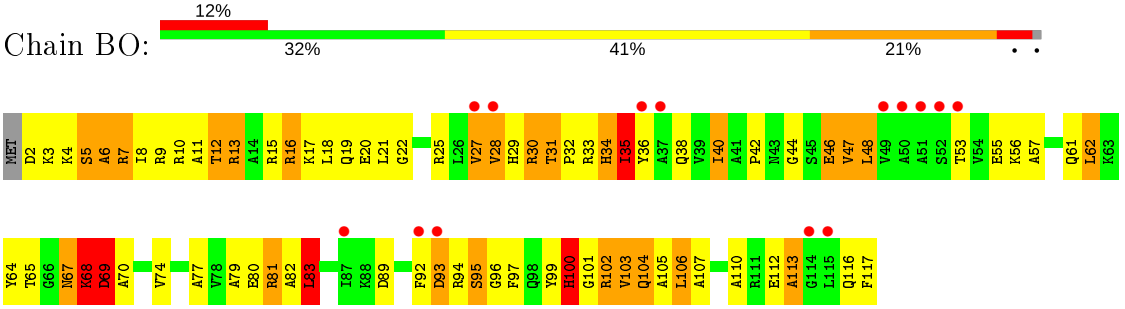
- Molecule 37: 50S ribosomal protein L17

Chain DN:



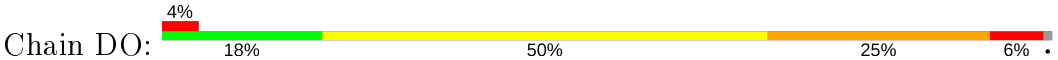
- Molecule 38: 50S ribosomal protein L18

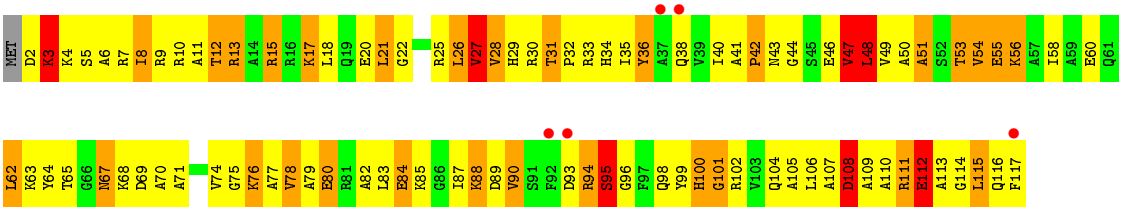
Chain BO:



- Molecule 38: 50S ribosomal protein L18

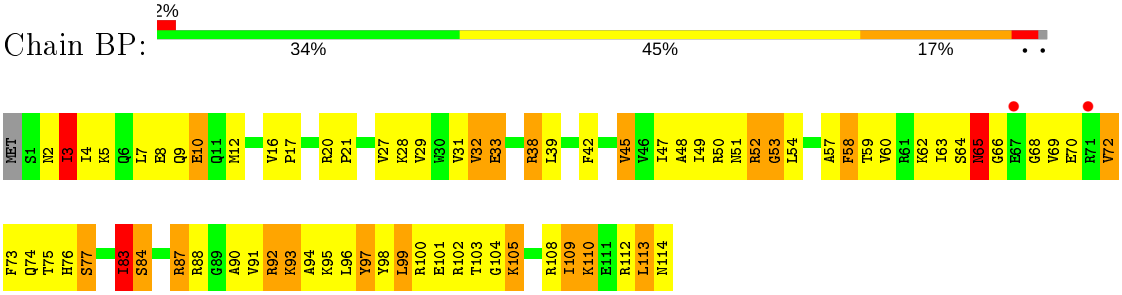
Chain DO:





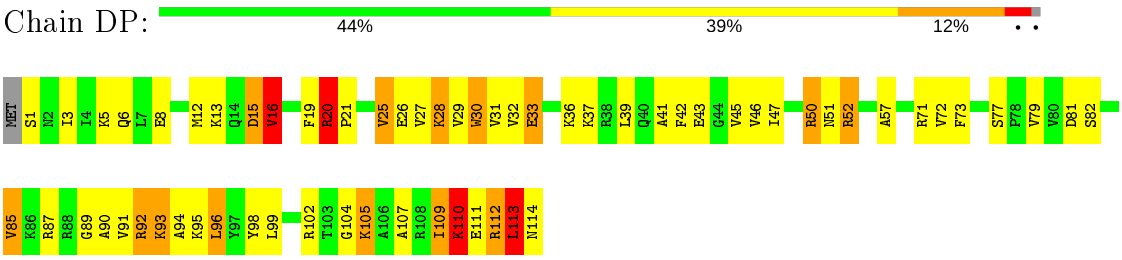
• Molecule 39: 50S ribosomal protein L19

Chain BP:



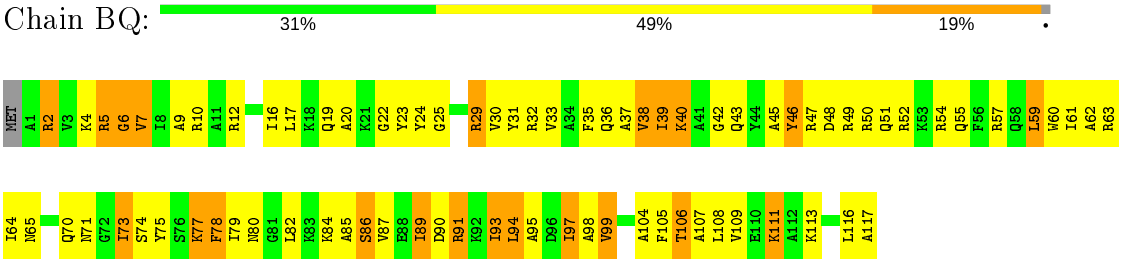
• Molecule 39: 50S ribosomal protein L19

Chain DP:



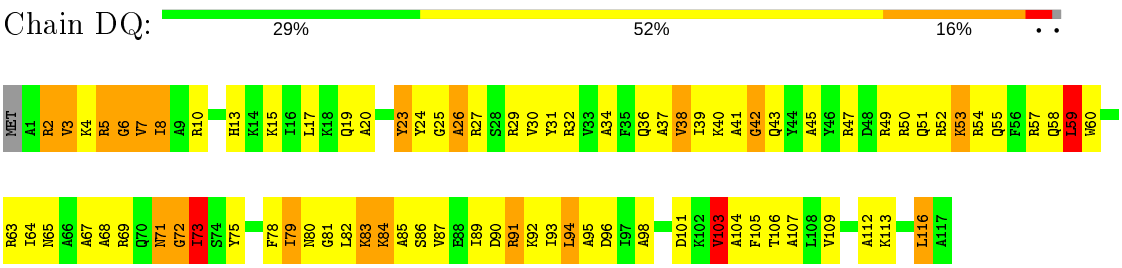
• Molecule 40: 50S ribosomal protein L20

Chain BQ:



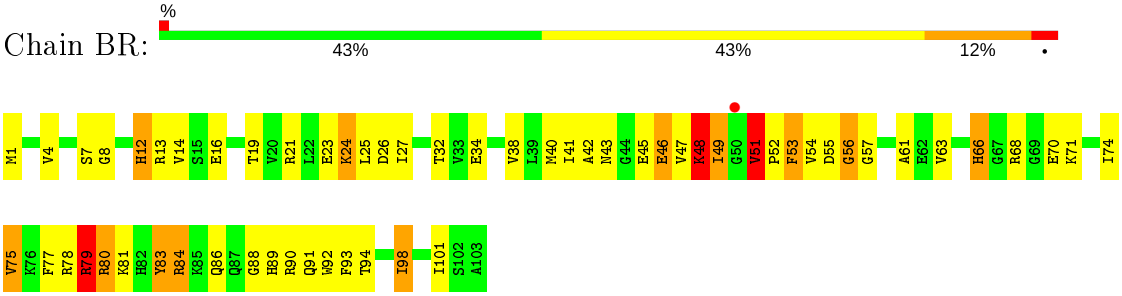
• Molecule 40: 50S ribosomal protein L20

Chain DQ:



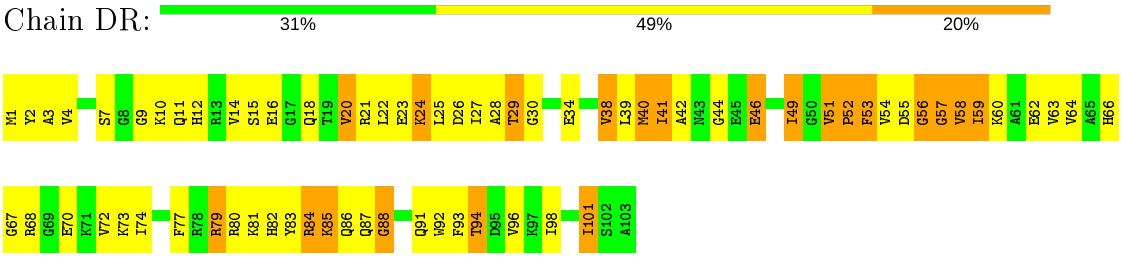
• Molecule 41: 50S ribosomal protein L21

Chain BR:



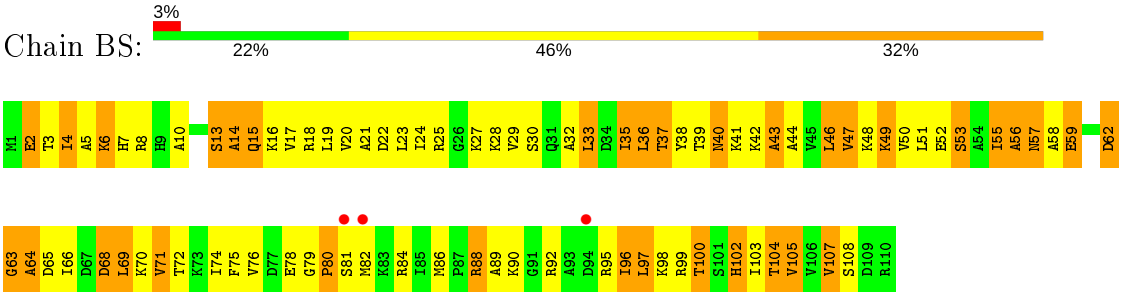
- Molecule 41: 50S ribosomal protein L21

Chain DR:



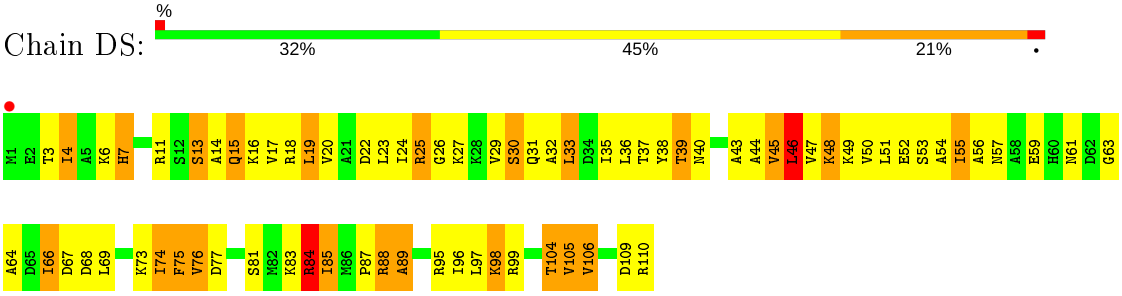
- Molecule 42: 50S ribosomal protein L22

Chain BS:



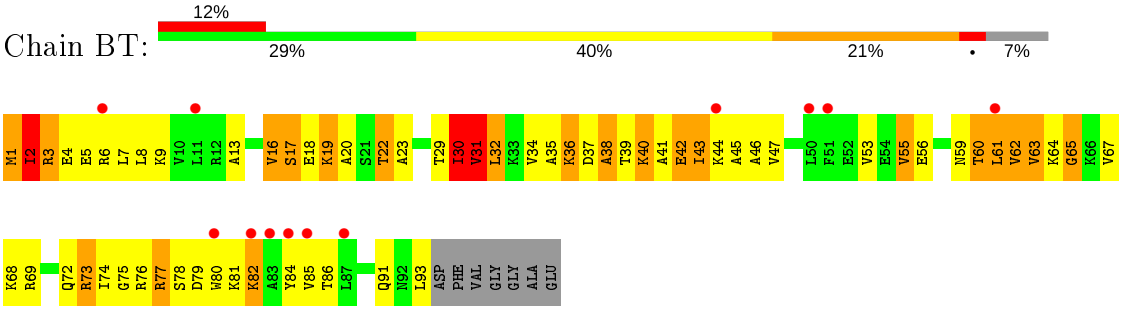
- Molecule 42: 50S ribosomal protein L22

Chain DS:



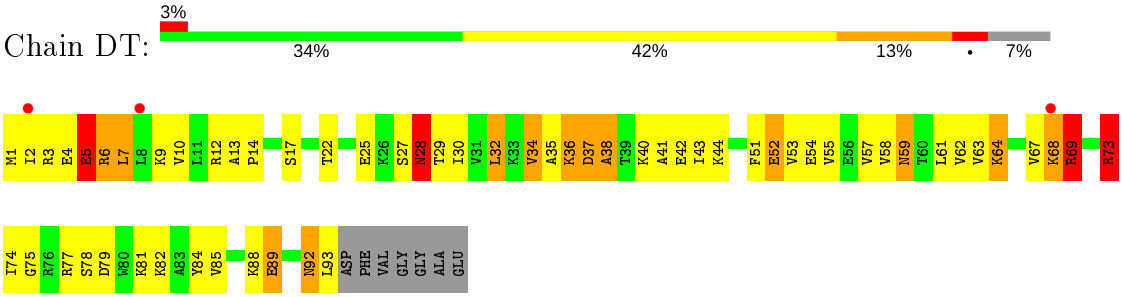
- Molecule 43: 50S ribosomal protein L23

Chain BT:



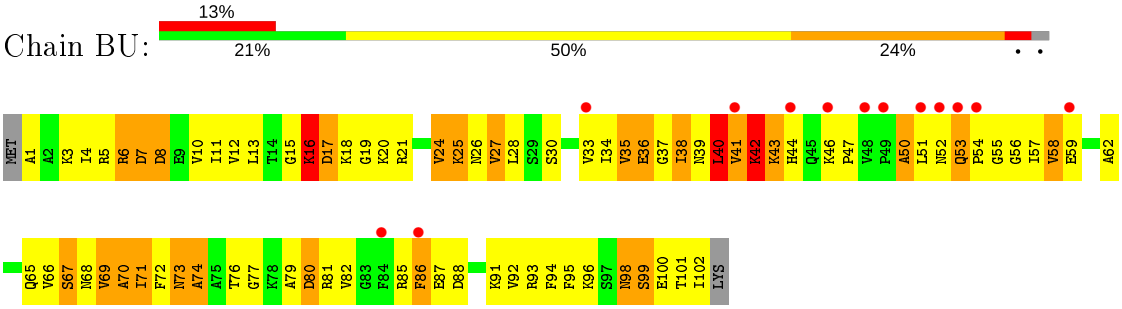
• Molecule 43: 50S ribosomal protein L23

Chain DT:



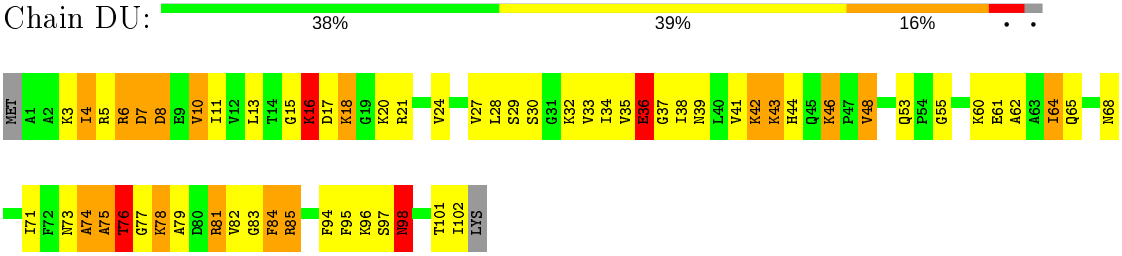
• Molecule 44: 50S ribosomal protein L24

Chain BU:



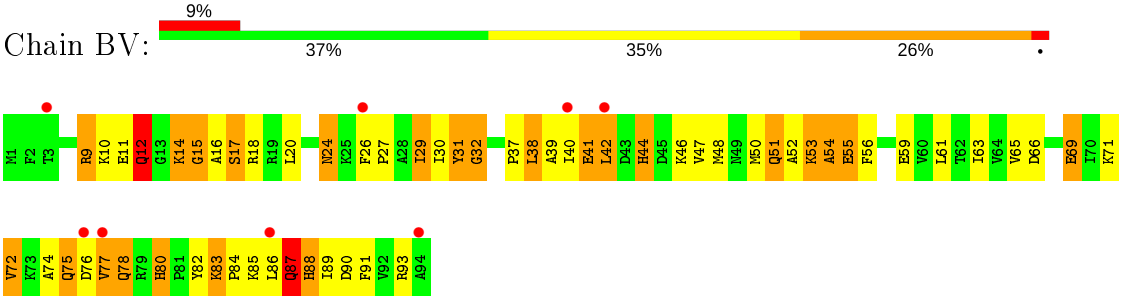
• Molecule 44: 50S ribosomal protein L24

Chain DU:



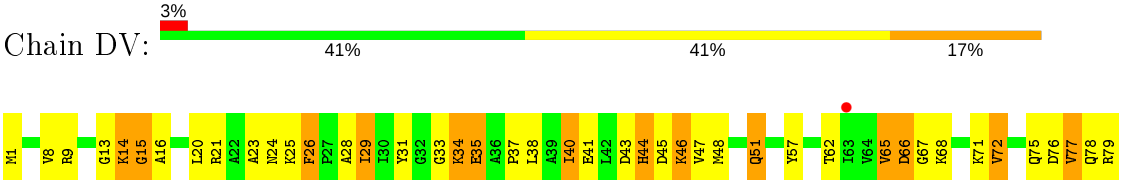
• Molecule 45: 50S ribosomal protein L25

Chain BV:



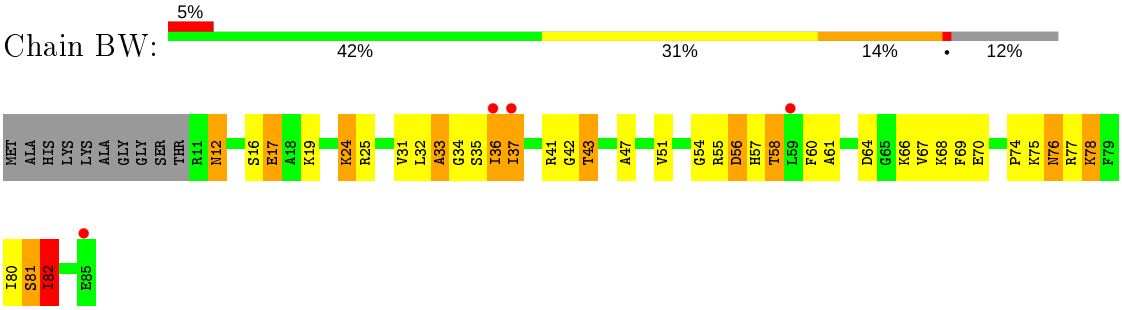
• Molecule 45: 50S ribosomal protein L25

Chain DV:



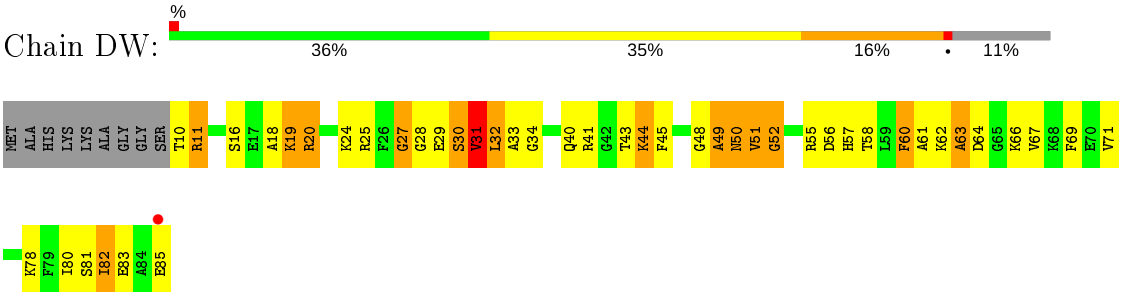
- Molecule 46: 50S ribosomal protein L27

Chain BW:



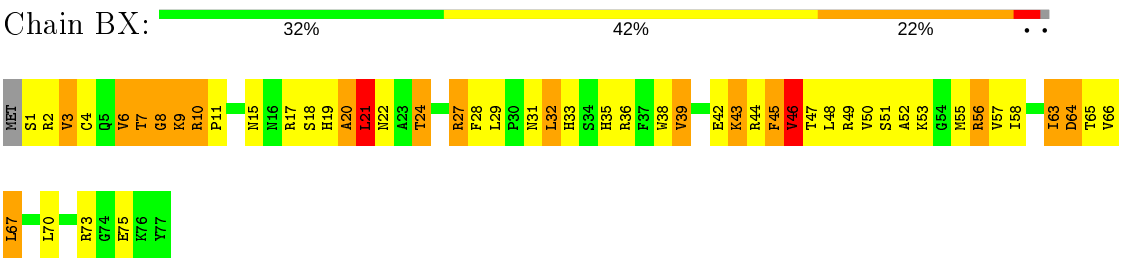
- Molecule 46: 50S ribosomal protein L27

Chain DW:



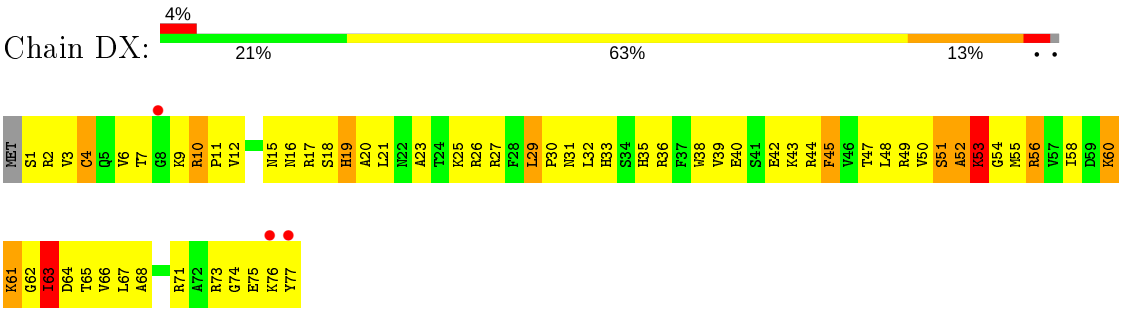
- Molecule 47: 50S ribosomal protein L28

Chain BX:



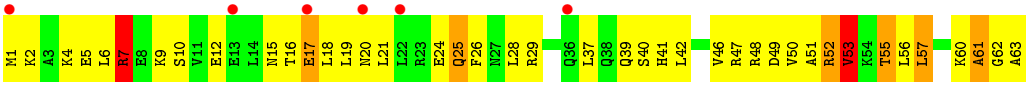
- Molecule 47: 50S ribosomal protein L28

Chain DX:

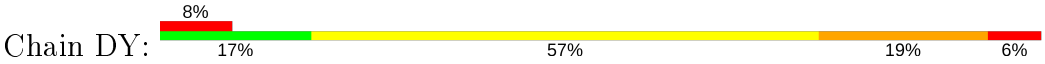


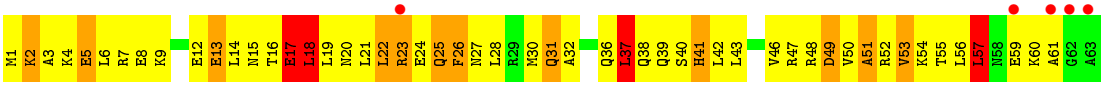
- Molecule 48: 50S ribosomal protein L29

Chain BY:

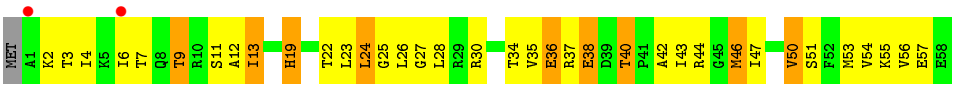


• Molecule 48: 50S ribosomal protein L29

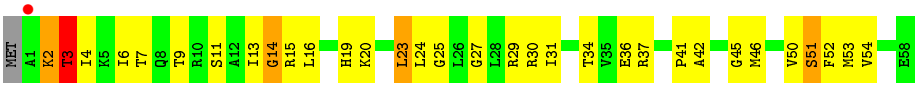




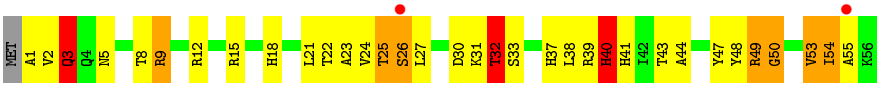
• Molecule 49: 50S ribosomal protein L30



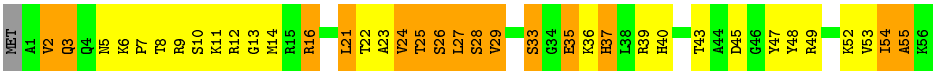
• Molecule 49: 50S ribosomal protein L30



• Molecule 50: 50S ribosomal protein L32



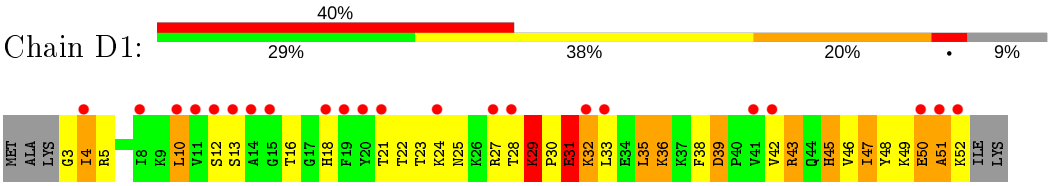
• Molecule 50: 50S ribosomal protein L32



• Molecule 51: 50S ribosomal protein L33

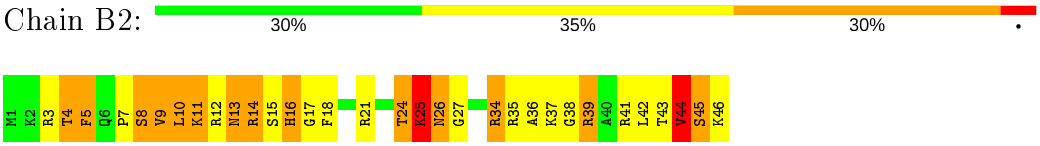
• Molecule 51: 50S ribosomal protein L33

Chain D1:



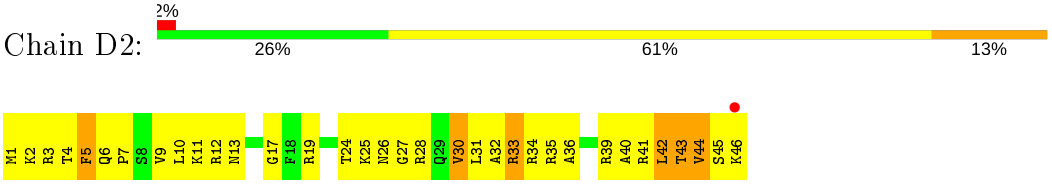
• Molecule 52: 50S ribosomal protein L34

Chain B2:



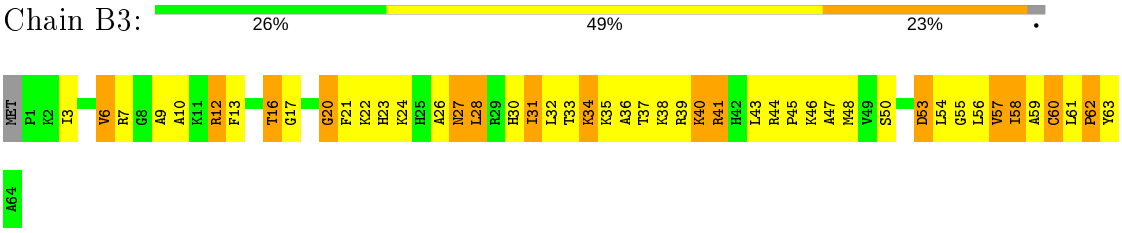
• Molecule 52: 50S ribosomal protein L34

Chain D2:



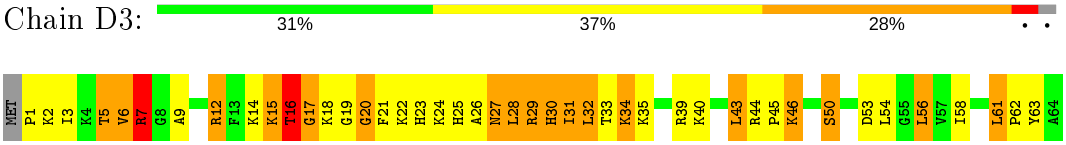
• Molecule 53: 50S ribosomal protein L35

Chain B3:



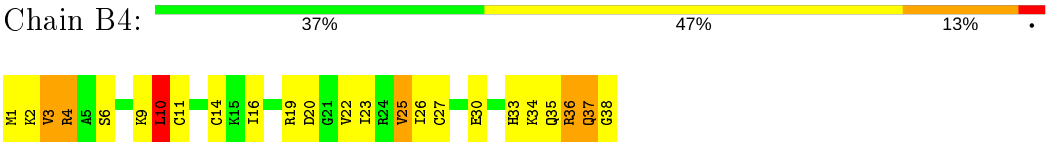
• Molecule 53: 50S ribosomal protein L35

Chain D3:



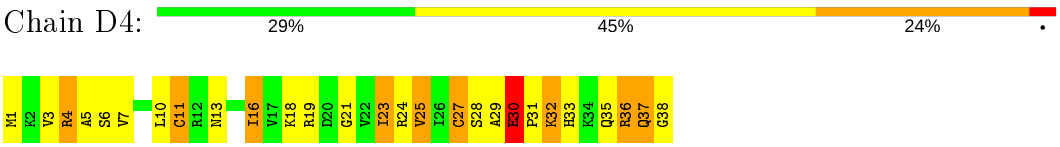
• Molecule 54: 50S ribosomal protein L36

Chain B4:



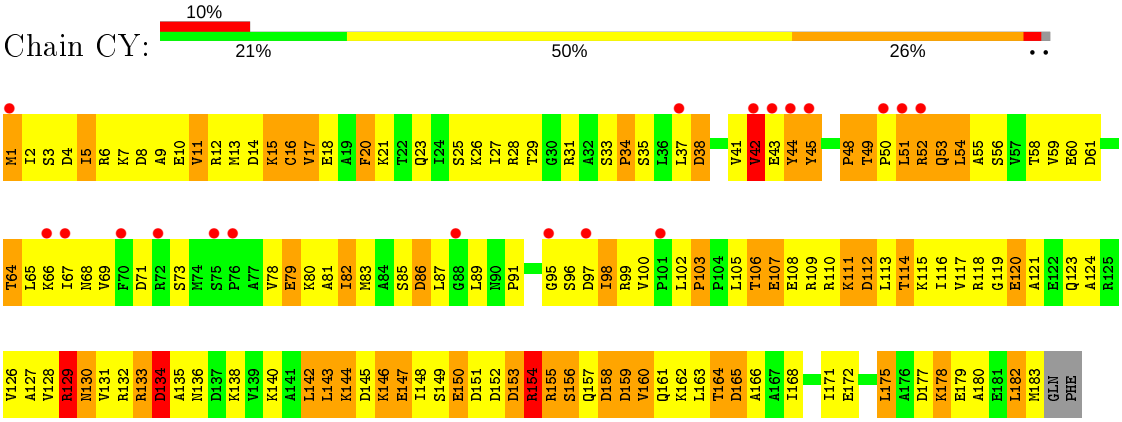
• Molecule 54: 50S ribosomal protein L36

Chain D4:



• Molecule 55: Ribosome recycling factor, RRF

Chain CY:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	212.18Å 433.90Å 608.03Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.30 69.81 – 3.30	Depositor EDS
% Data completeness (in resolution range)	(Not available) (70.00-3.30) 94.9 (69.81-3.30)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.71 (at 3.33Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.206 , 0.255 0.203 , 0.251	Depositor DCC
R_{free} test set	2000 reflections (0.25%)	wwPDB-VP
Wilson B-factor (Å^2)	96.3	Xtriage
Anisotropy	0.202	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.24 , 110.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.43$, $< L^2 > = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	293103	wwPDB-VP
Average B, all atoms (Å^2)	129.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.61% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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	0.34	0/36966	0.95	39/57666 (0.1%)
1	CA	0.33	0/36944	0.93	15/57632 (0.0%)
2	AB	0.28	0/1735	0.61	0/2338
2	CB	0.26	0/1735	0.57	0/2338
3	AC	0.29	0/1651	0.61	0/2225
3	CC	0.30	0/1651	0.58	0/2225
4	AD	0.35	0/1665	0.69	0/2227
4	CD	0.29	0/1665	0.65	0/2227
5	AE	0.28	0/1118	0.66	0/1504
5	CE	0.30	0/1118	0.63	0/1504
6	AF	0.33	0/835	0.67	0/1128
6	CF	0.32	0/835	0.62	0/1128
7	AG	0.25	0/1195	0.52	0/1602
7	CG	0.27	0/1195	0.56	0/1602
8	AH	0.30	0/989	0.66	0/1326
8	CH	0.29	0/989	0.60	0/1326
9	AI	0.25	0/1034	0.59	0/1375
9	CI	0.27	0/1034	0.58	0/1375
10	AJ	0.26	0/796	0.60	0/1077
10	CJ	0.24	0/796	0.53	0/1077
11	AK	0.33	0/893	0.68	0/1205
11	CK	0.30	0/893	0.63	0/1205
12	AL	0.30	0/969	0.71	0/1300
12	CL	0.35	0/969	0.71	1/1300 (0.1%)
13	AM	0.25	0/892	0.57	0/1193
13	CM	0.26	0/892	0.64	0/1193
14	AN	0.26	0/785	0.55	0/1043
14	CN	0.25	0/785	0.56	0/1043
15	AO	0.35	0/722	0.58	0/964
15	CO	0.27	0/722	0.60	0/964
16	AP	0.32	0/659	0.74	2/884 (0.2%)
16	CP	0.29	0/659	0.63	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.28	0/657	0.61	0/881
17	CQ	0.34	0/657	0.71	0/881
18	AR	0.31	0/462	0.69	0/621
18	CR	0.30	0/462	0.60	0/621
19	AS	0.26	0/652	0.57	0/877
19	CS	0.27	0/652	0.65	0/877
20	AT	0.27	0/671	0.59	0/888
20	CT	0.25	0/671	0.58	0/888
21	AU	0.37	0/430	0.76	0/570
21	CU	0.30	0/430	0.61	0/570
22	AV	0.40	1/1813 (0.1%)	0.89	0/2823
22	CV	0.32	1/1813 (0.1%)	0.77	0/2823
23	AX	0.32	0/388	0.88	0/603
23	CX	0.28	0/363	0.85	0/564
24	BA	0.36	0/69659	0.97	72/108672 (0.1%)
24	DA	0.43	3/69659 (0.0%)	1.07	120/108672 (0.1%)
25	BB	0.28	0/2828	0.84	0/4410
25	DB	0.36	0/2850	0.96	2/4444 (0.0%)
26	BC	0.29	0/2121	0.67	0/2852
26	DC	0.34	0/2121	0.75	2/2852 (0.1%)
27	BD	0.31	0/1586	0.66	0/2134
27	DD	0.36	0/1586	0.68	0/2134
28	BE	0.29	0/1571	0.59	0/2113
28	DE	0.32	0/1571	0.67	1/2113 (0.0%)
29	BF	0.26	0/1434	0.53	0/1926
29	DF	0.29	0/1434	0.66	0/1926
30	BG	0.27	0/1343	0.57	0/1816
30	DG	0.31	0/1343	0.67	1/1816 (0.1%)
31	BH	0.31	0/1121	0.57	1/1515 (0.1%)
31	DH	0.34	1/1121 (0.1%)	0.60	1/1515 (0.1%)
32	BI	0.23	0/1046	0.47	0/1410
32	DI	0.24	0/1046	0.56	0/1410
33	BJ	0.32	0/1152	0.66	0/1551
33	DJ	0.35	0/1152	0.67	0/1551
34	BK	0.32	0/947	0.68	0/1268
34	DK	0.37	0/947	0.71	0/1268
35	BL	0.29	0/1054	0.66	0/1403
35	DL	0.33	0/1054	0.73	0/1403
36	BM	0.28	0/1093	0.61	0/1460
36	DM	0.36	0/1093	0.77	2/1460 (0.1%)
37	BN	0.28	0/973	0.63	0/1301
37	DN	0.36	0/973	0.70	0/1301
38	BO	0.27	0/902	0.55	0/1209

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DO	0.33	0/902	0.62	0/1209
39	BP	0.33	0/929	0.67	0/1242
39	DP	0.37	0/929	0.74	1/1242 (0.1%)
40	BQ	0.32	0/960	0.60	0/1278
40	DQ	0.34	0/960	0.69	0/1278
41	BR	0.32	0/829	0.66	0/1107
41	DR	0.38	0/829	0.75	0/1107
42	BS	0.31	0/864	0.69	0/1156
42	DS	0.35	0/864	0.70	0/1156
43	BT	0.30	0/744	0.63	1/994 (0.1%)
43	DT	0.34	0/744	0.70	2/994 (0.2%)
44	BU	0.29	0/787	0.59	0/1051
44	DU	0.32	0/787	0.68	0/1051
45	BV	0.26	0/766	0.57	0/1025
45	DV	0.32	0/766	0.68	0/1025
46	BW	0.30	0/576	0.58	0/762
46	DW	0.35	0/587	0.72	0/776
47	BX	0.33	0/635	0.65	0/848
47	DX	0.32	0/635	0.65	0/848
48	BY	0.25	0/510	0.59	0/677
48	DY	0.28	0/510	0.70	0/677
49	BZ	0.29	0/453	0.59	0/605
49	DZ	0.29	0/453	0.73	0/605
50	B0	0.29	0/450	0.62	0/599
50	D0	0.32	0/450	0.67	0/599
51	B1	0.33	0/416	0.57	0/554
51	D1	0.29	0/416	0.63	0/554
52	B2	0.28	0/380	0.58	0/498
52	D2	0.31	0/380	0.67	0/498
53	B3	0.29	0/513	0.63	0/676
53	D3	0.33	0/513	0.71	0/676
54	B4	0.31	0/303	0.62	0/397
54	D4	0.34	0/303	0.75	0/397
55	CY	0.28	0/1434	0.66	1/1929 (0.1%)
All	All	0.36	6/315264 (0.0%)	0.91	264/471562 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	AB	0	1

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
2	CB	0	1
3	CC	0	1
4	CD	0	2
5	AE	0	1
8	AH	0	3
9	CI	0	1
12	AL	0	1
13	CM	0	1
16	AP	0	1
16	CP	0	1
26	BC	0	1
26	DC	0	3
27	BD	0	1
27	DD	0	1
31	BH	0	1
31	DH	0	2
33	DJ	0	1
37	BN	0	1
37	DN	0	1
39	DP	0	1
42	DS	0	1
50	D0	0	1
All	All	0	29

The worst 5 of 6 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	CV	1	G	OP3-P	-10.55	1.48	1.61
22	AV	1	G	OP3-P	-10.36	1.48	1.61
24	DA	2204	G	N9-C8	7.67	1.43	1.37
24	DA	733	G	N3-C4	-5.30	1.31	1.35
31	DH	118	PRO	N-CD	5.25	1.55	1.47

The worst 5 of 264 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	DA	2204	G	C8-N9-C4	-13.18	101.13	106.40
24	DA	733	G	N3-C4-N9	-11.80	118.92	126.00
24	DA	733	G	C6-C5-N7	10.61	136.76	130.40
24	DA	733	G	N9-C4-C5	10.19	109.47	105.40
1	AA	890	G	O4'-C1'-N9	9.65	115.92	108.20

There are no chirality outliers.

5 of 29 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	162	PHE	Peptide
5	AE	157	ARG	Peptide
8	AH	125	ILE	Peptide
8	AH	87	LYS	Peptide
8	AH	88	ARG	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	33015	0	16617	2761	0
1	CA	32995	0	16607	2603	2
2	AB	1704	0	1732	275	0
2	CB	1704	0	1732	227	0
3	AC	1624	0	1696	188	0
3	CC	1624	0	1696	185	0
4	AD	1643	0	1707	369	0
4	CD	1643	0	1707	356	0
5	AE	1105	0	1148	164	0
5	CE	1105	0	1148	126	0
6	AF	817	0	808	119	0
6	CF	817	0	808	113	0
7	AG	1181	0	1238	102	0
7	CG	1181	0	1238	150	0
8	AH	979	0	1031	209	0
8	CH	979	0	1031	127	0
9	AI	1022	0	1070	143	0
9	CI	1022	0	1070	161	0
10	AJ	786	0	828	71	0
10	CJ	786	0	828	89	0
11	AK	877	0	887	145	0
11	CK	877	0	887	203	0
12	AL	955	0	1016	153	0
12	CL	955	0	1016	179	0
13	AM	883	0	941	137	0
13	CM	883	0	941	173	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	AN	774	0	827	114	0
14	CN	774	0	827	142	0
15	AO	714	0	734	72	0
15	CO	714	0	734	128	0
16	AP	649	0	666	101	0
16	CP	649	0	666	96	0
17	AQ	648	0	691	78	0
17	CQ	648	0	691	97	0
18	AR	455	0	478	67	0
18	CR	455	0	478	65	0
19	AS	637	0	665	116	0
19	CS	637	0	665	130	0
20	AT	665	0	714	125	0
20	CT	665	0	714	103	0
21	AU	425	0	449	95	0
21	CU	425	0	449	88	0
22	AV	1623	0	821	70	0
22	CV	1623	0	821	171	0
23	AX	346	0	173	39	0
23	CX	324	0	162	15	0
24	BA	62195	0	31280	4102	1
24	DA	62195	0	31280	3371	1
25	BB	2529	0	1281	202	0
25	DB	2549	0	1291	111	0
26	BC	2082	0	2157	284	0
26	DC	2082	0	2157	277	0
27	BD	1565	0	1616	178	0
27	DD	1565	0	1616	153	0
28	BE	1552	0	1619	176	0
28	DE	1552	0	1619	153	0
29	BF	1410	0	1447	208	0
29	DF	1410	0	1447	252	0
30	BG	1323	0	1374	137	0
30	DG	1323	0	1374	105	0
31	BH	1110	0	1148	131	1
31	DH	1110	0	1148	237	0
32	BI	1032	0	1088	42	0
32	DI	1032	0	1088	87	0
33	BJ	1129	0	1162	133	0
33	DJ	1129	0	1162	105	0
34	BK	938	0	1012	122	0
34	DK	938	0	1012	99	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	BL	1045	0	1117	138	0
35	DL	1045	0	1117	115	0
36	BM	1074	0	1157	117	0
36	DM	1074	0	1157	116	0
37	BN	960	0	1000	133	0
37	DN	960	0	1000	98	0
38	BO	892	0	923	147	0
38	DO	892	0	923	123	0
39	BP	917	0	965	102	0
39	DP	917	0	965	72	0
40	BQ	947	0	1022	96	0
40	DQ	947	0	1022	128	0
41	BR	816	0	839	82	0
41	DR	816	0	839	121	0
42	BS	857	0	922	116	0
42	DS	857	0	922	89	0
43	BT	738	0	807	89	0
43	DT	738	0	807	74	0
44	BU	779	0	834	108	0
44	DU	779	0	834	106	0
45	BV	753	0	780	77	0
45	DV	753	0	780	63	1
46	BW	569	0	581	55	0
46	DW	580	0	594	78	0
47	BX	625	0	655	76	0
47	DX	625	0	655	82	0
48	BY	509	0	543	59	0
48	DY	509	0	543	75	0
49	BZ	449	0	491	53	0
49	DZ	449	0	491	32	0
50	B0	444	0	461	43	0
50	D0	444	0	461	39	0
51	B1	409	0	440	50	0
51	D1	409	0	440	38	0
52	B2	377	0	418	52	0
52	D2	377	0	418	40	0
53	B3	504	0	574	66	0
53	D3	504	0	574	69	0
54	B4	302	0	340	33	0
54	D4	302	0	340	39	0
55	CY	1423	0	1476	166	0
56	AA	54	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	AD	1	0	0	0	0
56	AN	1	0	0	0	0
56	BA	163	0	0	0	0
56	BB	3	0	0	0	0
56	BC	1	0	0	0	0
56	BQ	1	0	0	0	0
56	CA	71	0	0	0	0
56	CX	1	0	0	0	0
56	DA	187	0	0	0	0
56	DB	4	0	0	0	0
56	DE	1	0	0	0	0
56	DL	1	0	0	0	0
56	DO	1	0	0	0	0
57	AA	126	0	135	48	0
57	BA	294	0	317	87	0
57	CA	42	0	46	6	0
57	DA	294	0	311	107	0
58	B4	1	0	0	0	0
58	D4	1	0	0	0	0
59	AA	188	0	0	29	0
59	AD	2	0	0	2	0
59	AK	1	0	0	1	0
59	AN	4	0	0	1	0
59	AT	2	0	0	0	0
59	AU	1	0	0	0	0
59	B0	1	0	0	0	0
59	B3	1	0	0	0	0
59	B4	1	0	0	0	0
59	BA	616	0	0	116	0
59	BB	13	0	0	2	0
59	BC	10	0	0	6	0
59	BD	4	0	0	0	0
59	BL	4	0	0	2	0
59	BN	1	0	0	0	0
59	BT	3	0	0	2	0
59	BU	3	0	0	0	0
59	BV	1	0	0	0	0
59	CA	192	0	0	32	0
59	CC	1	0	0	1	0
59	CE	1	0	0	0	0
59	CL	1	0	0	1	0
59	CN	6	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	CT	2	0	0	1	0
59	D3	2	0	0	0	0
59	D4	1	0	0	0	0
59	DA	627	0	0	120	0
59	DB	13	0	0	4	0
59	DC	4	0	0	0	0
59	DD	2	0	0	1	0
59	DE	4	0	0	2	0
59	DF	1	0	0	0	0
59	DL	7	0	0	4	0
59	DN	2	0	0	0	0
59	DQ	1	0	0	0	0
59	DS	1	0	0	0	0
59	DT	1	0	0	0	0
59	DU	1	0	0	0	0
59	DV	1	0	0	0	0
All	All	293103	0	196267	22971	3

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 48.

The worst 5 of 22971 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)
29:BF:96:TRP:CE3	29:BF:99:PHE:CE2	1.79	1.66
29:BF:96:TRP:CZ3	29:BF:99:PHE:HE2	1.31	1.48
31:BH:121:VAL:HB	31:BH:122:LEU:CD2	1.41	1.47
29:BF:96:TRP:CD2	29:BF:99:PHE:CZ	2.03	1.47
31:BH:121:VAL:CB	31:BH:122:LEU:HD23	1.49	1.42

All (3) 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)
31:BH:123:ARG:NH2	1:CA:358:U:OP1[4_555]	2.07	0.13
24:BA:2152:G:N2	1:CA:416:G:OP1[4_555]	2.15	0.05
24:DA:544:C:OP2	45:DV:34:LYS:NZ[4_545]	2.16	0.04

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/241 (90%)	106 (49%)	51 (24%)	59 (27%)	0	0
2	CB	216/241 (90%)	110 (51%)	51 (24%)	55 (26%)	0	0
3	AC	204/233 (88%)	124 (61%)	46 (22%)	34 (17%)	0	1
3	CC	204/233 (88%)	122 (60%)	48 (24%)	34 (17%)	0	1
4	AD	203/206 (98%)	100 (49%)	48 (24%)	55 (27%)	0	0
4	CD	203/206 (98%)	92 (45%)	49 (24%)	62 (30%)	0	0
5	AE	148/167 (89%)	86 (58%)	30 (20%)	32 (22%)	0	0
5	CE	148/167 (89%)	106 (72%)	22 (15%)	20 (14%)	0	1
6	AF	98/135 (73%)	53 (54%)	27 (28%)	18 (18%)	0	1
6	CF	98/135 (73%)	47 (48%)	22 (22%)	29 (30%)	0	0
7	AG	149/179 (83%)	92 (62%)	33 (22%)	24 (16%)	0	1
7	CG	149/179 (83%)	65 (44%)	46 (31%)	38 (26%)	0	0
8	AH	127/130 (98%)	62 (49%)	37 (29%)	28 (22%)	0	0
8	CH	127/130 (98%)	80 (63%)	28 (22%)	19 (15%)	0	1
9	AI	125/130 (96%)	60 (48%)	36 (29%)	29 (23%)	0	0
9	CI	125/130 (96%)	61 (49%)	36 (29%)	28 (22%)	0	0
10	AJ	96/103 (93%)	62 (65%)	22 (23%)	12 (12%)	0	1
10	CJ	96/103 (93%)	55 (57%)	21 (22%)	20 (21%)	0	0
11	AK	115/129 (89%)	76 (66%)	19 (16%)	20 (17%)	0	1
11	CK	115/129 (89%)	52 (45%)	40 (35%)	23 (20%)	0	0
12	AL	121/124 (98%)	58 (48%)	28 (23%)	35 (29%)	0	0
12	CL	121/124 (98%)	72 (60%)	26 (22%)	23 (19%)	0	1
13	AM	112/118 (95%)	65 (58%)	19 (17%)	28 (25%)	0	0
13	CM	112/118 (95%)	55 (49%)	22 (20%)	35 (31%)	0	0
14	AN	92/101 (91%)	50 (54%)	21 (23%)	21 (23%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	92/101 (91%)	64 (70%)	11 (12%)	17 (18%)	0	1
15	AO	86/89 (97%)	52 (60%)	20 (23%)	14 (16%)	0	1
15	CO	86/89 (97%)	42 (49%)	23 (27%)	21 (24%)	0	0
16	AP	80/82 (98%)	35 (44%)	27 (34%)	18 (22%)	0	0
16	CP	80/82 (98%)	39 (49%)	23 (29%)	18 (22%)	0	0
17	AQ	78/84 (93%)	40 (51%)	20 (26%)	18 (23%)	0	0
17	CQ	78/84 (93%)	51 (65%)	12 (15%)	15 (19%)	0	1
18	AR	53/75 (71%)	31 (58%)	8 (15%)	14 (26%)	0	0
18	CR	53/75 (71%)	28 (53%)	12 (23%)	13 (24%)	0	0
19	AS	77/92 (84%)	43 (56%)	23 (30%)	11 (14%)	0	1
19	CS	77/92 (84%)	35 (46%)	23 (30%)	19 (25%)	0	0
20	AT	83/87 (95%)	45 (54%)	23 (28%)	15 (18%)	0	1
20	CT	83/87 (95%)	42 (51%)	22 (26%)	19 (23%)	0	0
21	AU	49/71 (69%)	18 (37%)	16 (33%)	15 (31%)	0	0
21	CU	49/71 (69%)	23 (47%)	14 (29%)	12 (24%)	0	0
26	BC	269/273 (98%)	171 (64%)	48 (18%)	50 (19%)	0	1
26	DC	269/273 (98%)	187 (70%)	51 (19%)	31 (12%)	0	2
27	BD	207/209 (99%)	159 (77%)	29 (14%)	19 (9%)	1	4
27	DD	207/209 (99%)	159 (77%)	33 (16%)	15 (7%)	1	7
28	BE	199/201 (99%)	126 (63%)	49 (25%)	24 (12%)	0	2
28	DE	199/201 (99%)	131 (66%)	53 (27%)	15 (8%)	1	7
29	BF	175/179 (98%)	104 (59%)	44 (25%)	27 (15%)	0	1
29	DF	175/179 (98%)	96 (55%)	39 (22%)	40 (23%)	0	0
30	BG	174/177 (98%)	107 (62%)	43 (25%)	24 (14%)	0	1
30	DG	174/177 (98%)	127 (73%)	27 (16%)	20 (12%)	0	2
31	BH	147/149 (99%)	82 (56%)	39 (26%)	26 (18%)	0	1
31	DH	147/149 (99%)	67 (46%)	37 (25%)	43 (29%)	0	0
32	BI	139/142 (98%)	77 (55%)	45 (32%)	17 (12%)	0	1
32	DI	139/142 (98%)	65 (47%)	39 (28%)	35 (25%)	0	0
33	BJ	140/142 (99%)	108 (77%)	19 (14%)	13 (9%)	0	4
33	DJ	140/142 (99%)	110 (79%)	25 (18%)	5 (4%)	3	20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
34	BK	120/123 (98%)	77 (64%)	29 (24%)	14 (12%)	0 2
34	DK	120/123 (98%)	95 (79%)	18 (15%)	7 (6%)	1 11
35	BL	141/144 (98%)	84 (60%)	35 (25%)	22 (16%)	0 1
35	DL	141/144 (98%)	98 (70%)	29 (21%)	14 (10%)	0 3
36	BM	134/136 (98%)	94 (70%)	27 (20%)	13 (10%)	0 3
36	DM	134/136 (98%)	94 (70%)	28 (21%)	12 (9%)	1 4
37	BN	118/127 (93%)	72 (61%)	30 (25%)	16 (14%)	0 1
37	DN	118/127 (93%)	84 (71%)	22 (19%)	12 (10%)	0 3
38	BO	114/117 (97%)	65 (57%)	30 (26%)	19 (17%)	0 1
38	DO	114/117 (97%)	64 (56%)	25 (22%)	25 (22%)	0 0
39	BP	112/115 (97%)	80 (71%)	18 (16%)	14 (12%)	0 1
39	DP	112/115 (97%)	92 (82%)	12 (11%)	8 (7%)	1 7
40	BQ	115/118 (98%)	98 (85%)	13 (11%)	4 (4%)	3 21
40	DQ	115/118 (98%)	89 (77%)	16 (14%)	10 (9%)	1 5
41	BR	101/103 (98%)	76 (75%)	18 (18%)	7 (7%)	1 8
41	DR	101/103 (98%)	67 (66%)	23 (23%)	11 (11%)	0 2
42	BS	108/110 (98%)	68 (63%)	22 (20%)	18 (17%)	0 1
42	DS	108/110 (98%)	77 (71%)	21 (19%)	10 (9%)	0 4
43	BT	91/100 (91%)	54 (59%)	26 (29%)	11 (12%)	0 2
43	DT	91/100 (91%)	60 (66%)	18 (20%)	13 (14%)	0 1
44	BU	100/104 (96%)	55 (55%)	21 (21%)	24 (24%)	0 0
44	DU	100/104 (96%)	73 (73%)	12 (12%)	15 (15%)	0 1
45	BV	92/94 (98%)	50 (54%)	26 (28%)	16 (17%)	0 1
45	DV	92/94 (98%)	79 (86%)	4 (4%)	9 (10%)	0 3
46	BW	73/85 (86%)	56 (77%)	9 (12%)	8 (11%)	0 2
46	DW	74/85 (87%)	51 (69%)	14 (19%)	9 (12%)	0 1
47	BX	75/78 (96%)	55 (73%)	10 (13%)	10 (13%)	0 1
47	DX	75/78 (96%)	51 (68%)	14 (19%)	10 (13%)	0 1
48	BY	61/63 (97%)	38 (62%)	17 (28%)	6 (10%)	0 3
48	DY	61/63 (97%)	31 (51%)	19 (31%)	11 (18%)	0 1
49	BZ	56/59 (95%)	42 (75%)	12 (21%)	2 (4%)	3 20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
49	DZ	56/59 (95%)	37 (66%)	16 (29%)	3 (5%)	2 12
50	B0	54/57 (95%)	34 (63%)	9 (17%)	11 (20%)	0 0
50	D0	54/57 (95%)	36 (67%)	10 (18%)	8 (15%)	0 1
51	B1	48/55 (87%)	29 (60%)	15 (31%)	4 (8%)	1 5
51	D1	48/55 (87%)	28 (58%)	10 (21%)	10 (21%)	0 0
52	B2	44/46 (96%)	29 (66%)	8 (18%)	7 (16%)	0 1
52	D2	44/46 (96%)	31 (70%)	10 (23%)	3 (7%)	1 8
53	B3	62/65 (95%)	47 (76%)	9 (14%)	6 (10%)	0 3
53	D3	62/65 (95%)	47 (76%)	7 (11%)	8 (13%)	0 1
54	B4	36/38 (95%)	27 (75%)	7 (19%)	2 (6%)	2 11
54	D4	36/38 (95%)	26 (72%)	7 (19%)	3 (8%)	1 5
55	CY	181/185 (98%)	99 (55%)	52 (29%)	30 (17%)	0 1
All	All	11416/12155 (94%)	7014 (61%)	2503 (22%)	1899 (17%)	0 1

5 of 1899 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	11	LYS
2	AB	16	PHE
2	AB	23	TRP
2	AB	58	ASN
2	AB	64	LYS

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	180/199 (90%)	128 (71%)	52 (29%)	0 1
2	CB	180/199 (90%)	137 (76%)	43 (24%)	0 2
3	AC	170/190 (90%)	138 (81%)	32 (19%)	1 6
3	CC	170/190 (90%)	130 (76%)	40 (24%)	1 3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	AD	172/173 (99%)	116 (67%)	56 (33%)	0 1
4	CD	172/173 (99%)	125 (73%)	47 (27%)	0 1
5	AE	113/126 (90%)	91 (80%)	22 (20%)	1 5
5	CE	113/126 (90%)	94 (83%)	19 (17%)	2 9
6	AF	87/116 (75%)	72 (83%)	15 (17%)	2 9
6	CF	87/116 (75%)	65 (75%)	22 (25%)	0 2
7	AG	124/147 (84%)	96 (77%)	28 (23%)	1 3
7	CG	124/147 (84%)	101 (82%)	23 (18%)	1 7
8	AH	104/105 (99%)	81 (78%)	23 (22%)	1 3
8	CH	104/105 (99%)	87 (84%)	17 (16%)	2 10
9	AI	105/107 (98%)	81 (77%)	24 (23%)	1 3
9	CI	105/107 (98%)	84 (80%)	21 (20%)	1 5
10	AJ	86/90 (96%)	73 (85%)	13 (15%)	3 13
10	CJ	86/90 (96%)	67 (78%)	19 (22%)	1 3
11	AK	90/99 (91%)	74 (82%)	16 (18%)	2 8
11	CK	90/99 (91%)	67 (74%)	23 (26%)	0 2
12	AL	103/104 (99%)	69 (67%)	34 (33%)	0 1
12	CL	103/104 (99%)	77 (75%)	26 (25%)	0 2
13	AM	92/96 (96%)	77 (84%)	15 (16%)	2 10
13	CM	92/96 (96%)	63 (68%)	29 (32%)	0 1
14	AN	79/84 (94%)	64 (81%)	15 (19%)	1 6
14	CN	79/84 (94%)	60 (76%)	19 (24%)	0 2
15	AO	76/77 (99%)	55 (72%)	21 (28%)	0 1
15	CO	76/77 (99%)	57 (75%)	19 (25%)	0 2
16	AP	65/65 (100%)	51 (78%)	14 (22%)	1 4
16	CP	65/65 (100%)	41 (63%)	24 (37%)	0 0
17	AQ	74/78 (95%)	59 (80%)	15 (20%)	1 5
17	CQ	74/78 (95%)	54 (73%)	20 (27%)	0 1
18	AR	48/65 (74%)	36 (75%)	12 (25%)	0 2
18	CR	48/65 (74%)	36 (75%)	12 (25%)	0 2
19	AS	70/79 (89%)	53 (76%)	17 (24%)	0 2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	CS	70/79 (89%)	53 (76%)	17 (24%)	0	2
20	AT	65/66 (98%)	50 (77%)	15 (23%)	1	3
20	CT	65/66 (98%)	50 (77%)	15 (23%)	1	3
21	AU	44/61 (72%)	30 (68%)	14 (32%)	0	1
21	CU	44/61 (72%)	29 (66%)	15 (34%)	0	1
26	BC	216/218 (99%)	164 (76%)	52 (24%)	0	2
26	DC	216/218 (99%)	147 (68%)	69 (32%)	0	1
27	BD	164/164 (100%)	131 (80%)	33 (20%)	1	5
27	DD	164/164 (100%)	125 (76%)	39 (24%)	0	2
28	BE	165/165 (100%)	133 (81%)	32 (19%)	1	5
28	DE	165/165 (100%)	130 (79%)	35 (21%)	1	4
29	BF	148/150 (99%)	115 (78%)	33 (22%)	1	3
29	DF	148/150 (99%)	114 (77%)	34 (23%)	1	3
30	BG	137/138 (99%)	108 (79%)	29 (21%)	1	4
30	DG	137/138 (99%)	111 (81%)	26 (19%)	1	6
31	BH	114/114 (100%)	83 (73%)	31 (27%)	0	1
31	DH	114/114 (100%)	92 (81%)	22 (19%)	1	6
32	BI	109/110 (99%)	101 (93%)	8 (7%)	14	41
32	DI	109/110 (99%)	89 (82%)	20 (18%)	1	7
33	BJ	116/116 (100%)	90 (78%)	26 (22%)	1	3
33	DJ	116/116 (100%)	95 (82%)	21 (18%)	1	7
34	BK	103/104 (99%)	81 (79%)	22 (21%)	1	4
34	DK	103/104 (99%)	77 (75%)	26 (25%)	0	2
35	BL	102/103 (99%)	76 (74%)	26 (26%)	0	2
35	DL	102/103 (99%)	74 (72%)	28 (28%)	0	1
36	BM	109/109 (100%)	80 (73%)	29 (27%)	0	1
36	DM	109/109 (100%)	86 (79%)	23 (21%)	1	4
37	BN	100/103 (97%)	81 (81%)	19 (19%)	1	6
37	DN	100/103 (97%)	83 (83%)	17 (17%)	2	9
38	BO	86/87 (99%)	67 (78%)	19 (22%)	1	3
38	DO	86/87 (99%)	61 (71%)	25 (29%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
39	BP	99/100 (99%)	81 (82%)	18 (18%)	1 7
39	DP	99/100 (99%)	80 (81%)	19 (19%)	1 6
40	BQ	89/90 (99%)	66 (74%)	23 (26%)	0 2
40	DQ	89/90 (99%)	69 (78%)	20 (22%)	1 3
41	BR	84/84 (100%)	66 (79%)	18 (21%)	1 4
41	DR	84/84 (100%)	70 (83%)	14 (17%)	2 10
42	BS	93/93 (100%)	70 (75%)	23 (25%)	0 2
42	DS	93/93 (100%)	68 (73%)	25 (27%)	0 1
43	BT	80/84 (95%)	57 (71%)	23 (29%)	0 1
43	DT	80/84 (95%)	62 (78%)	18 (22%)	1 3
44	BU	83/85 (98%)	61 (74%)	22 (26%)	0 1
44	DU	83/85 (98%)	63 (76%)	20 (24%)	0 2
45	BV	78/78 (100%)	60 (77%)	18 (23%)	1 3
45	DV	78/78 (100%)	63 (81%)	15 (19%)	1 6
46	BW	56/63 (89%)	45 (80%)	11 (20%)	1 5
46	DW	57/63 (90%)	48 (84%)	9 (16%)	2 11
47	BX	67/68 (98%)	47 (70%)	20 (30%)	0 1
47	DX	67/68 (98%)	56 (84%)	11 (16%)	2 10
48	BY	55/55 (100%)	47 (86%)	8 (14%)	3 14
48	DY	55/55 (100%)	43 (78%)	12 (22%)	1 4
49	BZ	48/49 (98%)	40 (83%)	8 (17%)	2 10
49	DZ	48/49 (98%)	42 (88%)	6 (12%)	4 19
50	B0	47/48 (98%)	39 (83%)	8 (17%)	2 9
50	D0	47/48 (98%)	38 (81%)	9 (19%)	1 6
51	B1	45/49 (92%)	39 (87%)	6 (13%)	4 17
51	D1	45/49 (92%)	36 (80%)	9 (20%)	1 5
52	B2	38/38 (100%)	26 (68%)	12 (32%)	0 1
52	D2	38/38 (100%)	33 (87%)	5 (13%)	4 17
53	B3	51/52 (98%)	37 (72%)	14 (28%)	0 1
53	D3	51/52 (98%)	36 (71%)	15 (29%)	0 1
54	B4	34/34 (100%)	27 (79%)	7 (21%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
54	D4	34/34 (100%)	23 (68%)	11 (32%)	0 1
55	CY	158/160 (99%)	122 (77%)	36 (23%)	1 3
All	All	9485/9916 (96%)	7325 (77%)	2160 (23%)	1 3

5 of 2160 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
47	BX	45	PHE
6	CF	42	TRP
42	DS	4	ILE
50	B0	5	ASN
3	CC	16	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 84 such sidechains are listed below:

Mol	Chain	Res	Type
50	B0	37	HIS
5	CE	121	HIS
40	DQ	43	GLN
51	B1	25	ASN
3	CC	176	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1538/1542 (99%)	503 (32%)	31 (2%)
1	CA	1537/1542 (99%)	498 (32%)	37 (2%)
22	AV	75/76 (98%)	19 (25%)	1 (1%)
22	CV	75/76 (98%)	27 (36%)	6 (8%)
23	AX	15/24 (62%)	7 (46%)	0
23	CX	14/24 (58%)	6 (42%)	1 (7%)
24	BA	2896/2904 (99%)	884 (30%)	70 (2%)
24	DA	2896/2904 (99%)	826 (28%)	71 (2%)
25	BB	117/120 (97%)	29 (24%)	1 (0%)
25	DB	118/120 (98%)	24 (20%)	0
All	All	9281/9332 (99%)	2823 (30%)	218 (2%)

5 of 2823 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	3	A
1	AA	4	U
1	AA	5	U
1	AA	8	A
1	AA	9	G

5 of 218 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
24	BA	2756	U
1	CA	793	U
24	DA	2326	C
24	BA	2849	U
1	CA	251	G

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 carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 510 ligands modelled in this entry, 492 are monoatomic - leaving 18 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	$\#\|Z\| > 2$
57	NMY	AA	1655	-	45,45,45	0.58	0	63,67,67	0.98	4 (6%)
57	NMY	BA	3163	-	45,45,45	2.30	10 (22%)	63,67,67	2.41	27 (42%)
57	NMY	BA	3167	-	45,45,45	2.28	11 (24%)	63,67,67	1.93	14 (22%)
57	NMY	DA	3188	-	45,45,45	2.20	13 (28%)	63,67,67	2.00	24 (38%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
57	NMY	DA	3186	-	45,45,45	2.36	12 (26%)	63,67,67	2.32	16 (25%)
57	NMY	DA	3190	-	45,45,45	2.29	11 (24%)	63,67,67	2.54	26 (41%)
57	NMY	BA	3164	-	45,45,45	2.25	11 (24%)	63,67,67	2.38	26 (41%)
57	NMY	DA	3189	-	45,45,45	2.20	12 (26%)	63,67,67	2.30	24 (38%)
57	NMY	CA	1672	-	45,45,45	0.54	0	63,67,67	0.91	2 (3%)
57	NMY	AA	1657	-	45,45,45	2.32	13 (28%)	63,67,67	1.83	18 (28%)
57	NMY	BA	3165	-	45,45,45	0.54	0	63,67,67	1.11	5 (7%)
57	NMY	DA	3184	-	45,45,45	0.58	0	63,67,67	1.24	5 (7%)
57	NMY	BA	3161	-	45,45,45	0.51	0	63,67,67	1.01	4 (6%)
57	NMY	AA	1656	-	45,45,45	2.27	12 (26%)	63,67,67	1.86	20 (31%)
57	NMY	BA	3166	-	45,45,45	2.18	10 (22%)	63,67,67	2.32	17 (26%)
57	NMY	BA	3162	-	45,45,45	0.51	0	63,67,67	1.04	5 (7%)
57	NMY	DA	3185	-	45,45,45	2.32	13 (28%)	63,67,67	1.73	16 (25%)
57	NMY	DA	3187	-	45,45,45	2.30	11 (24%)	63,67,67	1.51	14 (22%)

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
57	NMY	AA	1655	-	-	12/18/94/94	0/4/4/4
57	NMY	BA	3163	-	-	5/18/94/94	0/4/4/4
57	NMY	BA	3167	-	-	5/18/94/94	0/4/4/4
57	NMY	DA	3188	-	-	8/18/94/94	0/4/4/4
57	NMY	DA	3186	-	-	11/18/94/94	0/4/4/4
57	NMY	DA	3190	-	-	10/18/94/94	0/4/4/4
57	NMY	BA	3164	-	-	5/18/94/94	0/4/4/4
57	NMY	DA	3189	-	-	5/18/94/94	0/4/4/4
57	NMY	CA	1672	-	-	4/18/94/94	0/4/4/4
57	NMY	AA	1657	-	-	9/18/94/94	0/4/4/4
57	NMY	BA	3165	-	-	6/18/94/94	0/4/4/4
57	NMY	DA	3184	-	-	4/18/94/94	0/4/4/4
57	NMY	BA	3161	-	-	4/18/94/94	0/4/4/4
57	NMY	AA	1656	-	-	6/18/94/94	0/4/4/4
57	NMY	BA	3166	-	-	7/18/94/94	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	NMY	BA	3162	-	-	1/18/94/94	0/4/4/4
57	NMY	DA	3185	-	-	5/18/94/94	0/4/4/4
57	NMY	DA	3187	-	-	8/18/94/94	0/4/4/4

The worst 5 of 139 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	DA	3187	NMY	C20-C19	-10.09	1.40	1.53
57	DA	3186	NMY	C20-C19	-9.91	1.41	1.53
57	AA	1657	NMY	C20-C19	-9.88	1.41	1.53
57	DA	3190	NMY	C20-C19	-9.82	1.41	1.53
57	DA	3185	NMY	C20-C19	-9.78	1.41	1.53

The worst 5 of 267 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	DA	3186	NMY	O11-C13-O16	10.12	122.39	111.43
57	BA	3166	NMY	O11-C13-C14	6.98	122.43	107.96
57	DA	3190	NMY	C13-C14-C15	6.50	109.92	102.10
57	DA	3186	NMY	C8-C7-C12	6.50	119.85	110.04
57	BA	3163	NMY	C1-O1-C10	-6.28	102.42	117.96

There are no chirality outliers.

5 of 115 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
57	DA	3189	NMY	C14-C13-O11-C11
57	DA	3189	NMY	C21-C22-C23-N19
57	BA	3163	NMY	C4-C5-C6-N6
57	BA	3163	NMY	C16-C15-O18-C18
57	BA	3163	NMY	C19-C18-O18-C15

There are no ring outliers.

18 monomers are involved in 248 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	AA	1655	NMY	26	0
57	BA	3163	NMY	11	0
57	BA	3167	NMY	5	0
57	DA	3188	NMY	12	0

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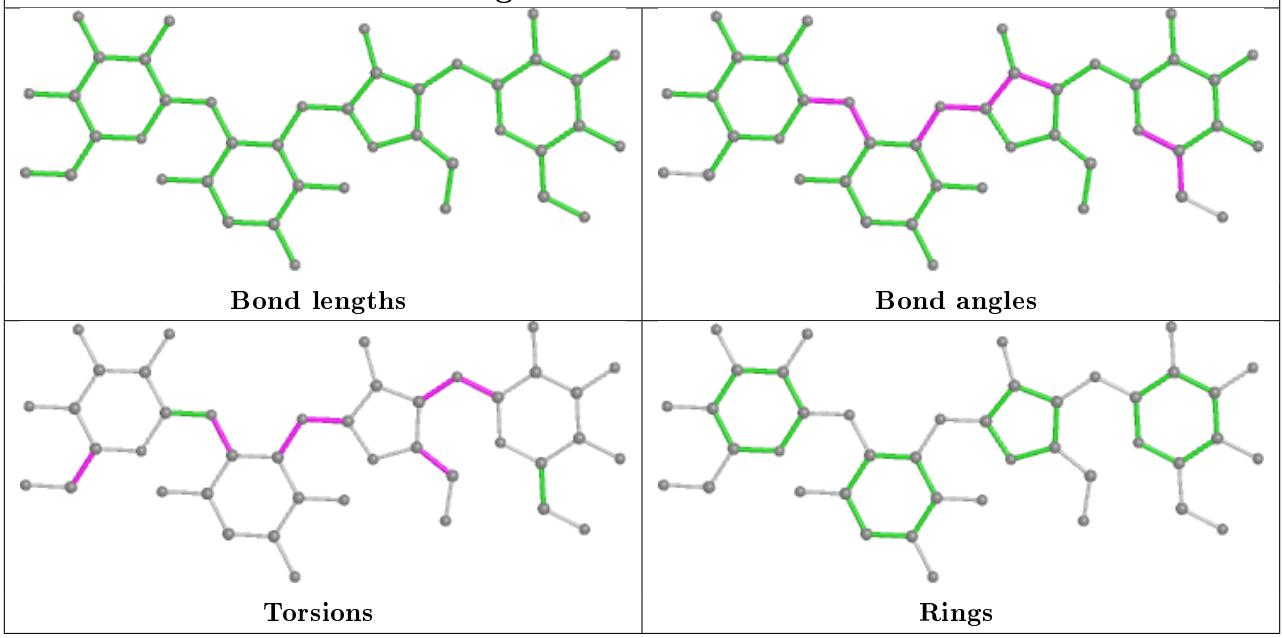
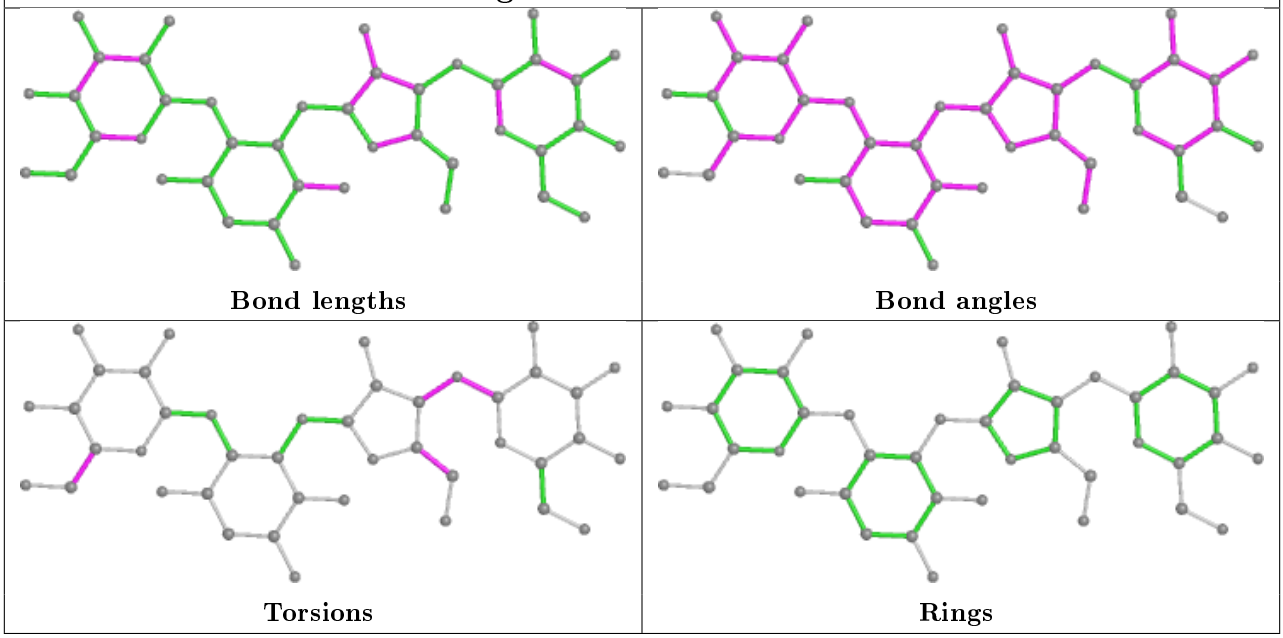
Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	DA	3186	NMY	19	0
57	DA	3190	NMY	32	0
57	BA	3164	NMY	3	0
57	DA	3189	NMY	10	0
57	CA	1672	NMY	6	0
57	AA	1657	NMY	10	0
57	BA	3165	NMY	25	0
57	DA	3184	NMY	17	0
57	BA	3161	NMY	14	0
57	AA	1656	NMY	12	0
57	BA	3166	NMY	13	0
57	BA	3162	NMY	16	0
57	DA	3185	NMY	13	0
57	DA	3187	NMY	4	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 then 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.

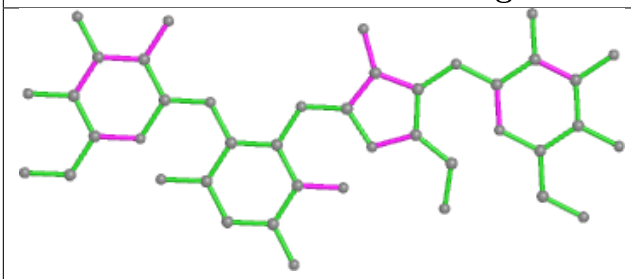
Ligand NMY AA 1655



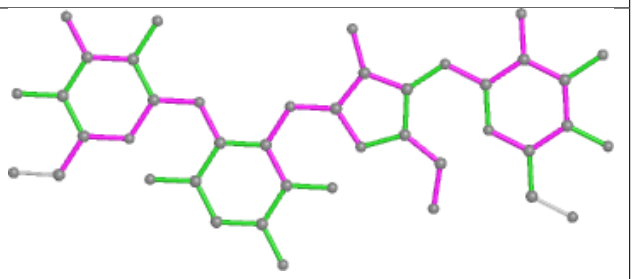
Ligand NMY BA 3163



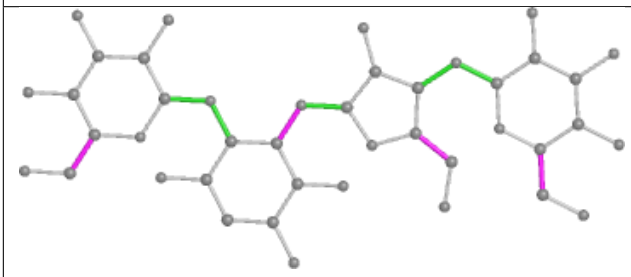
Ligand NMY BA 3167



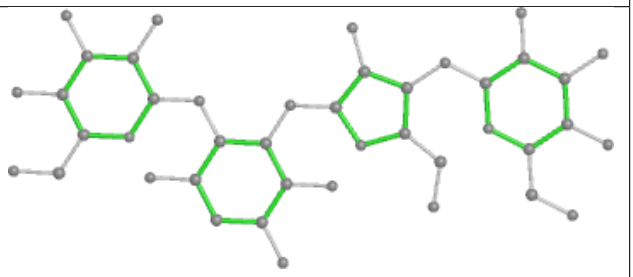
Bond lengths



Bond angles

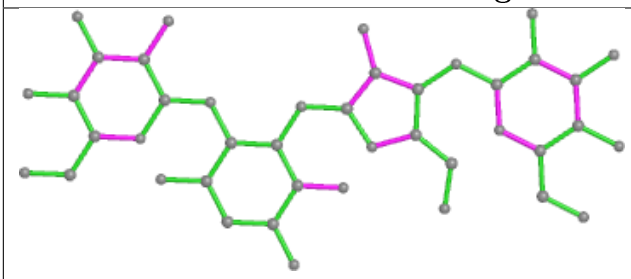


Torsions

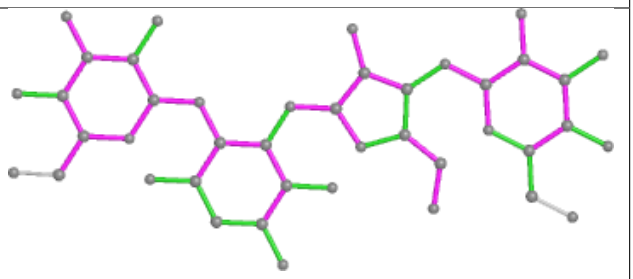


Rings

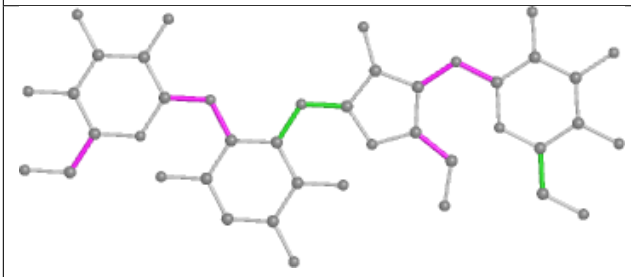
Ligand NMY DA 3188



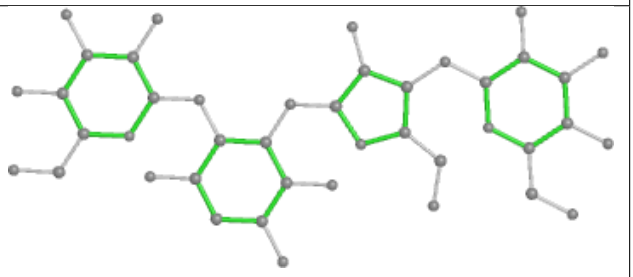
Bond lengths



Bond angles

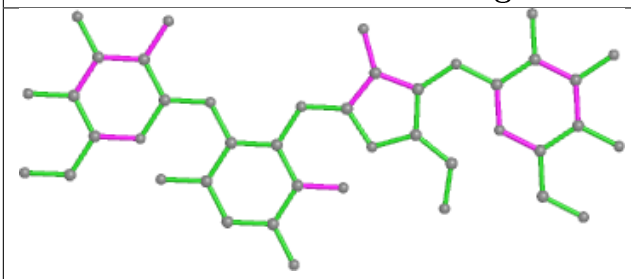


Torsions

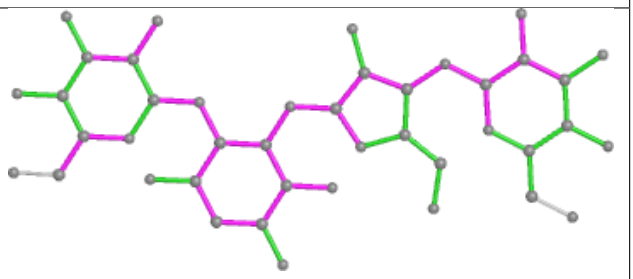


Rings

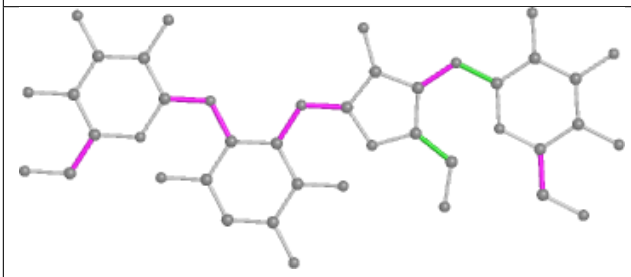
Ligand NMY DA 3186



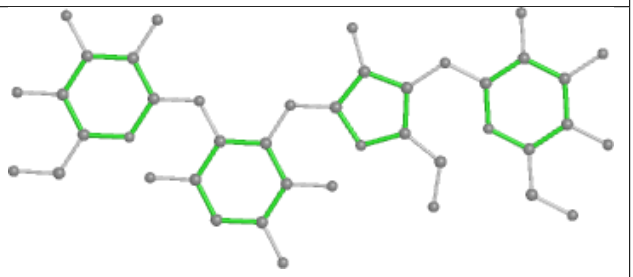
Bond lengths



Bond angles

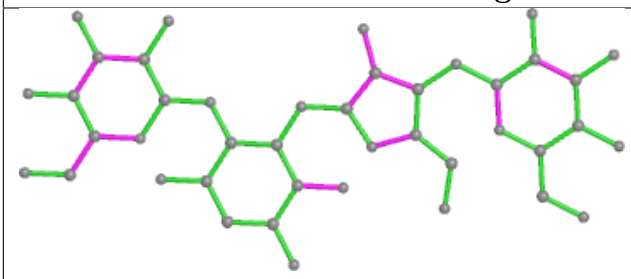


Torsions

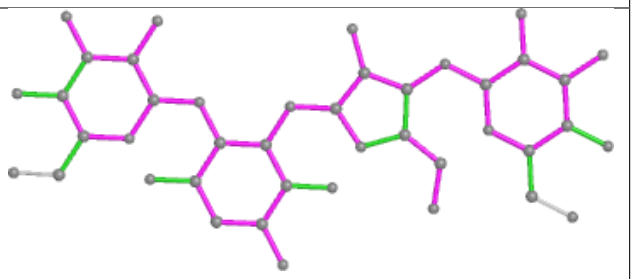


Rings

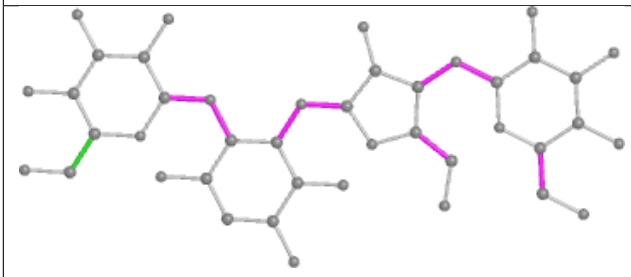
Ligand NMY DA 3190



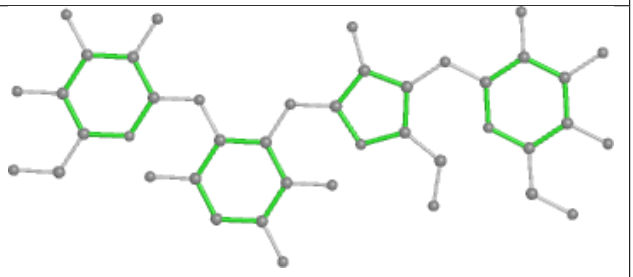
Bond lengths



Bond angles

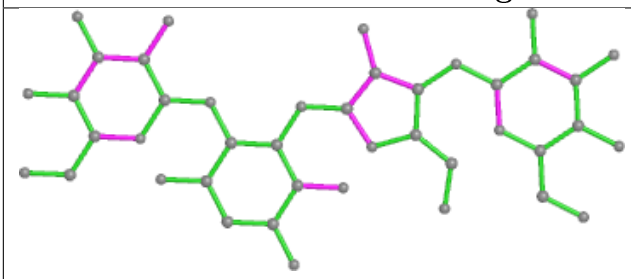


Torsions

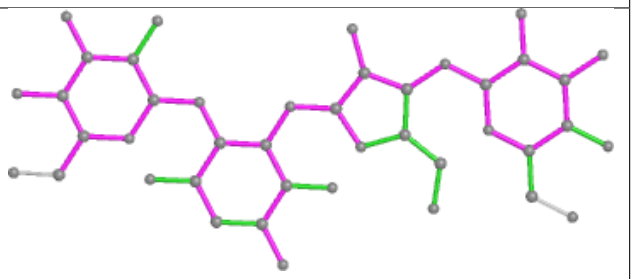


Rings

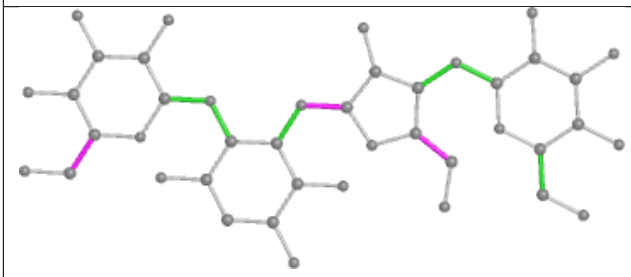
Ligand NMY BA 3164



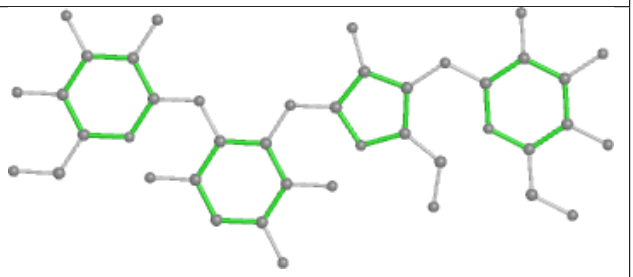
Bond lengths



Bond angles

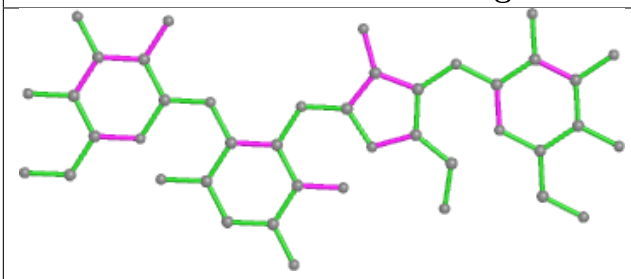


Torsions

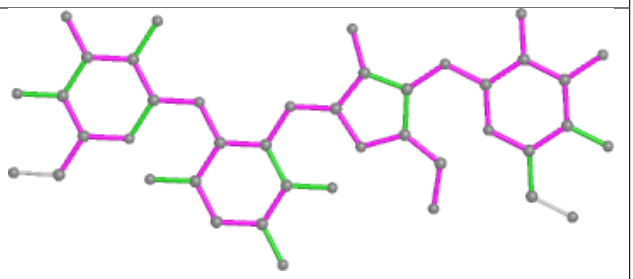


Rings

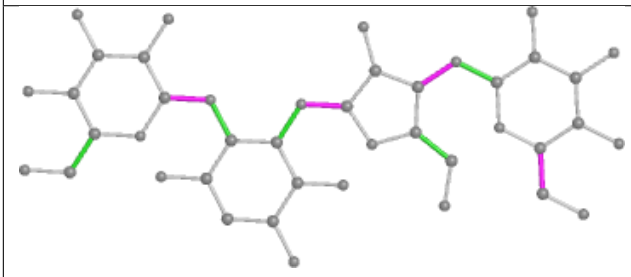
Ligand NMY DA 3189



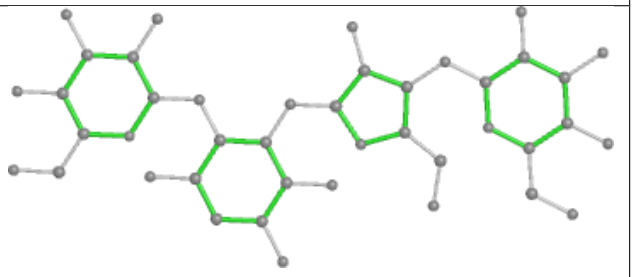
Bond lengths



Bond angles

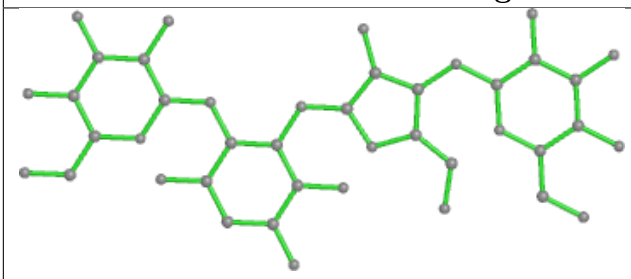


Torsions

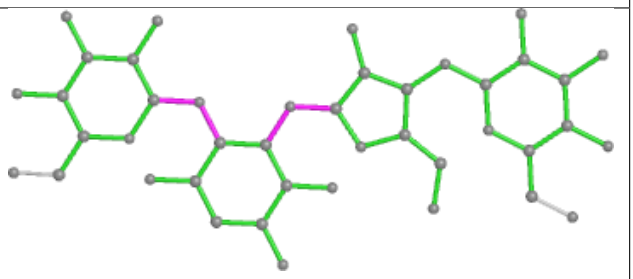


Rings

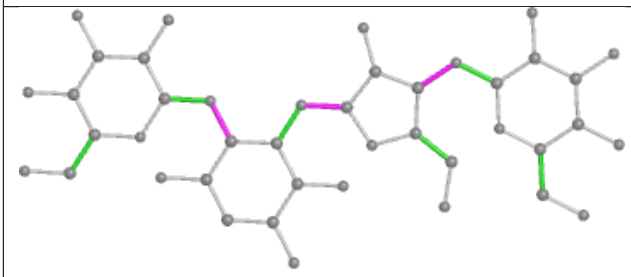
Ligand NMY CA 1672



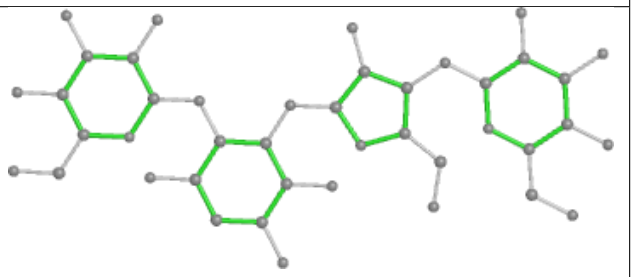
Bond lengths



Bond angles

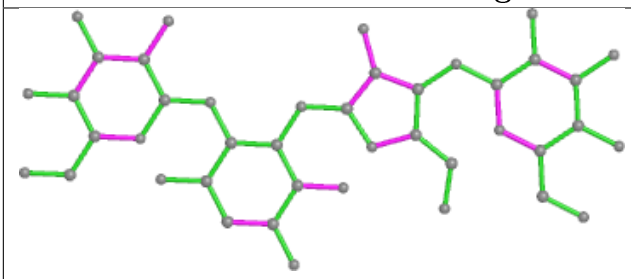


Torsions

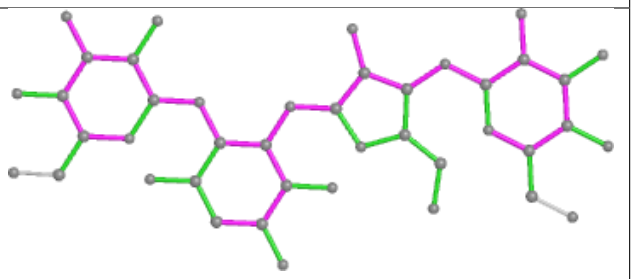


Rings

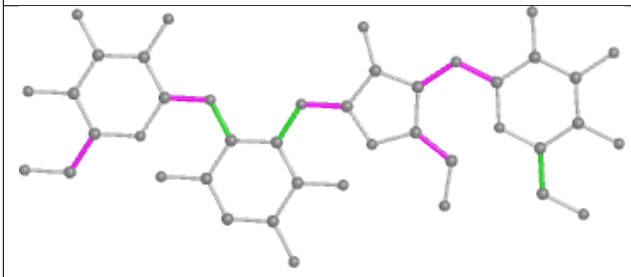
Ligand NMY AA 1657



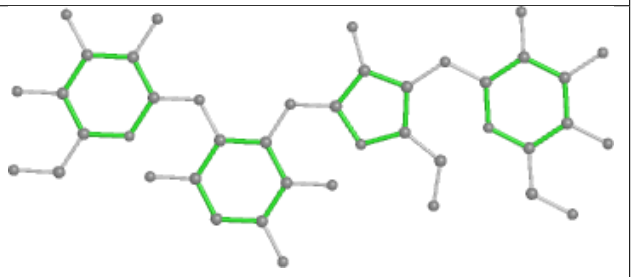
Bond lengths



Bond angles

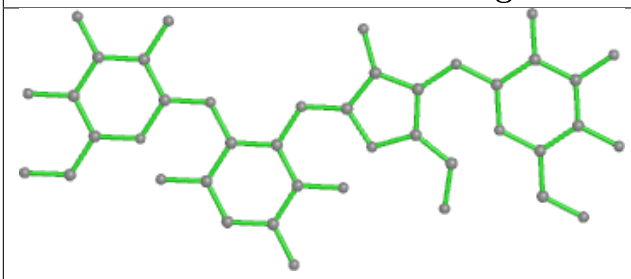


Torsions

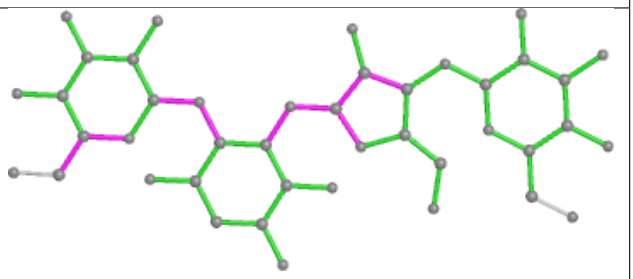


Rings

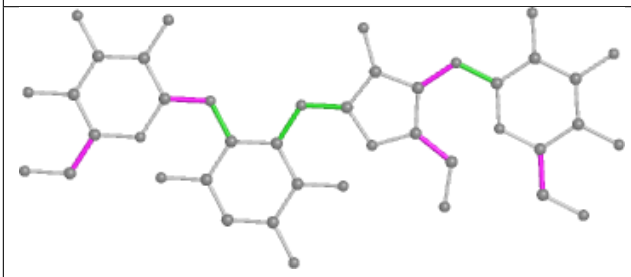
Ligand NMY BA 3165



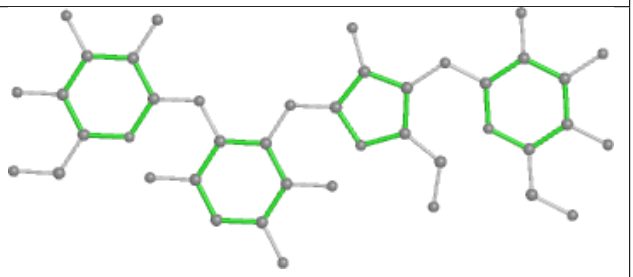
Bond lengths



Bond angles

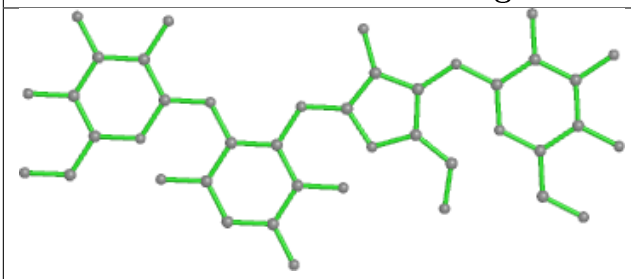


Torsions

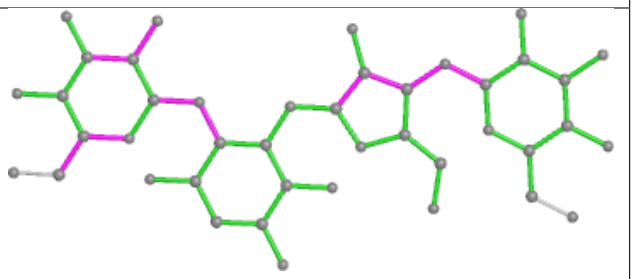


Rings

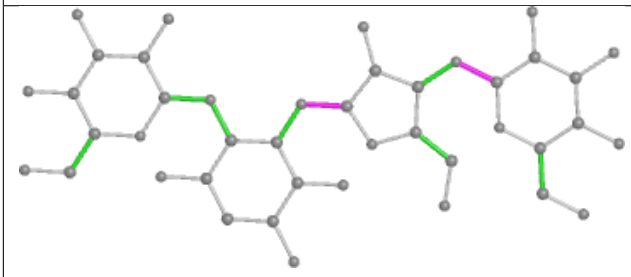
Ligand NMY DA 3184



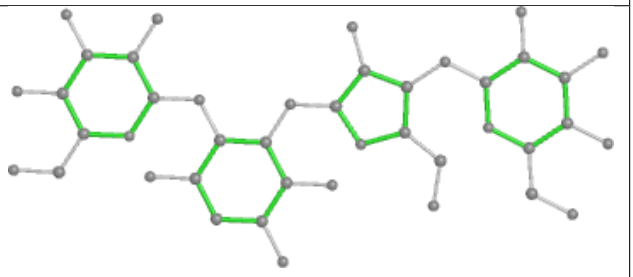
Bond lengths



Bond angles

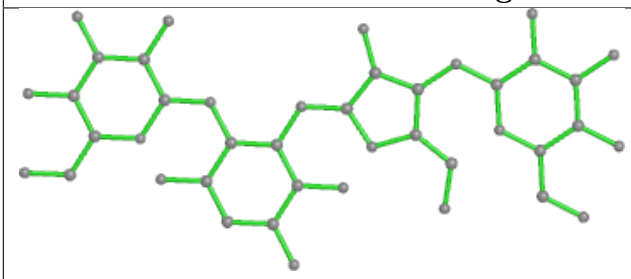


Torsions

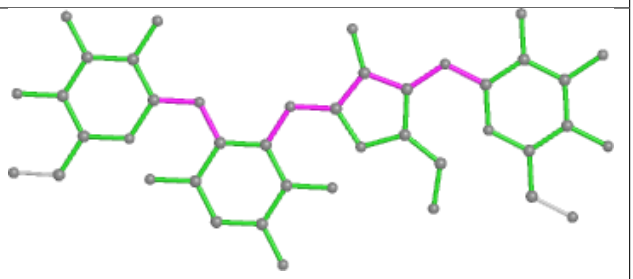


Rings

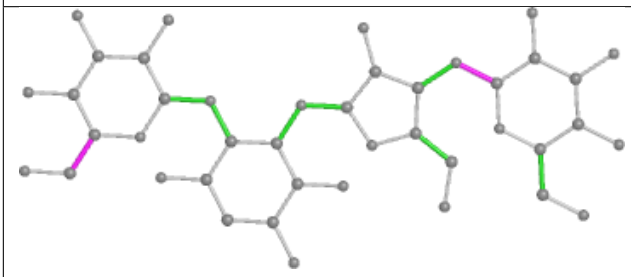
Ligand NMY BA 3161



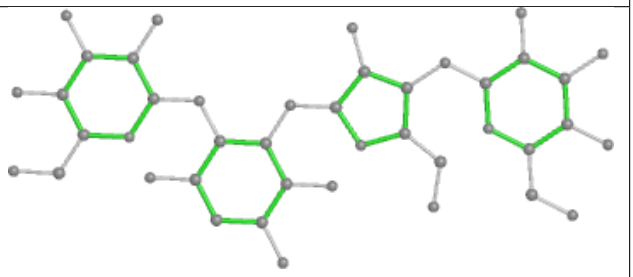
Bond lengths



Bond angles

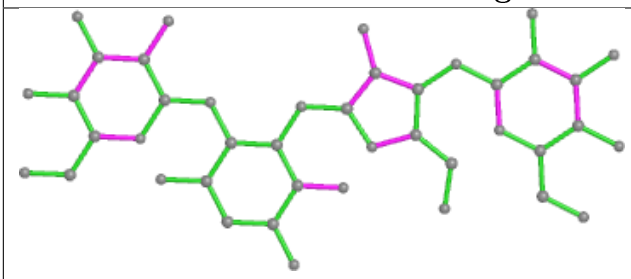


Torsions

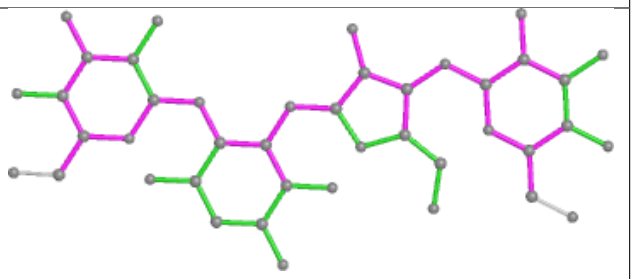


Rings

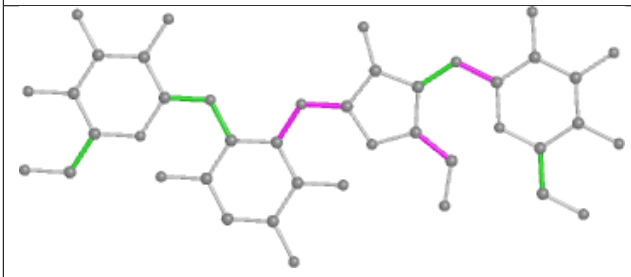
Ligand NMY AA 1656



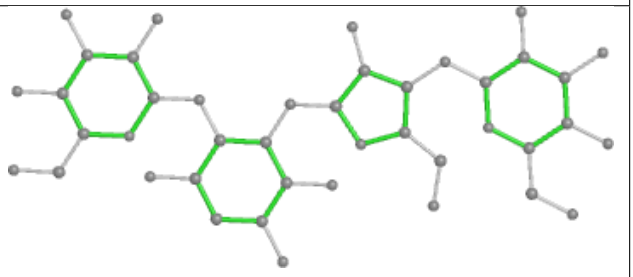
Bond lengths



Bond angles

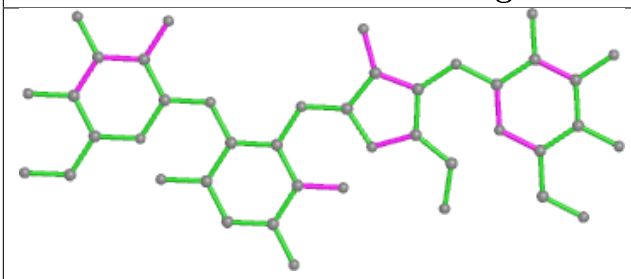


Torsions

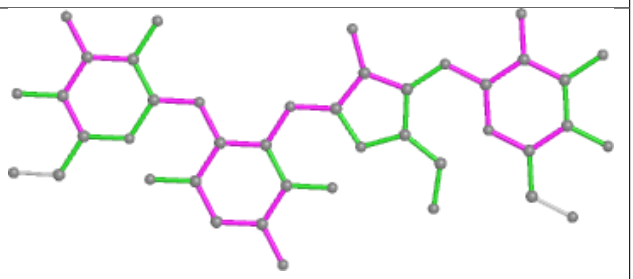


Rings

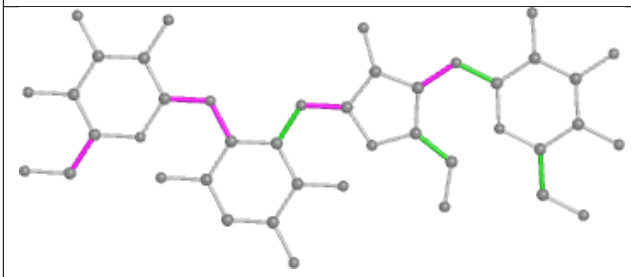
Ligand NMY BA 3166



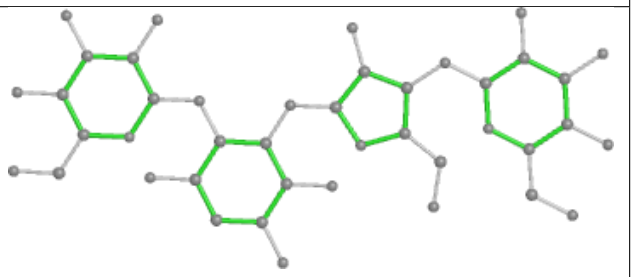
Bond lengths



Bond angles

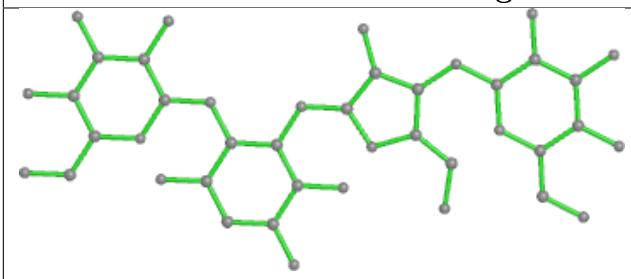


Torsions

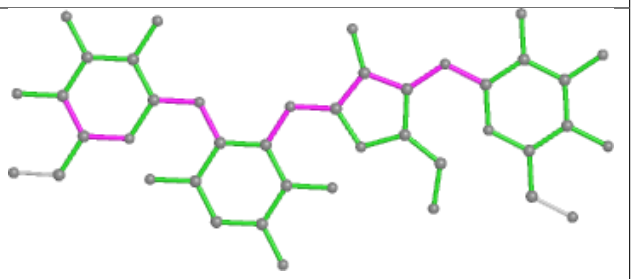


Rings

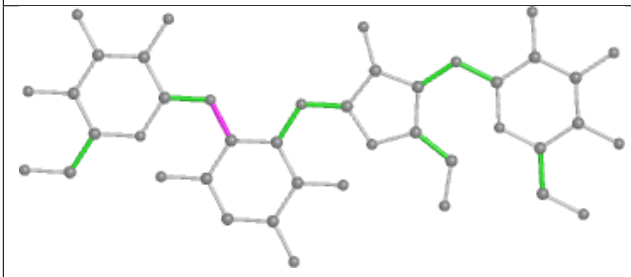
Ligand NMY BA 3162



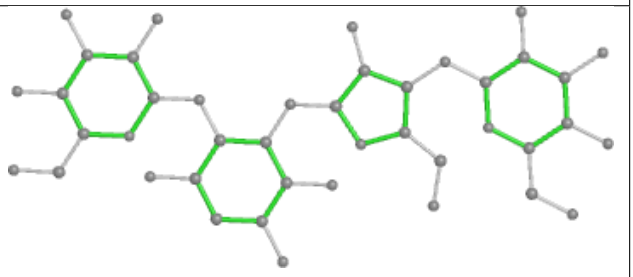
Bond lengths



Bond angles

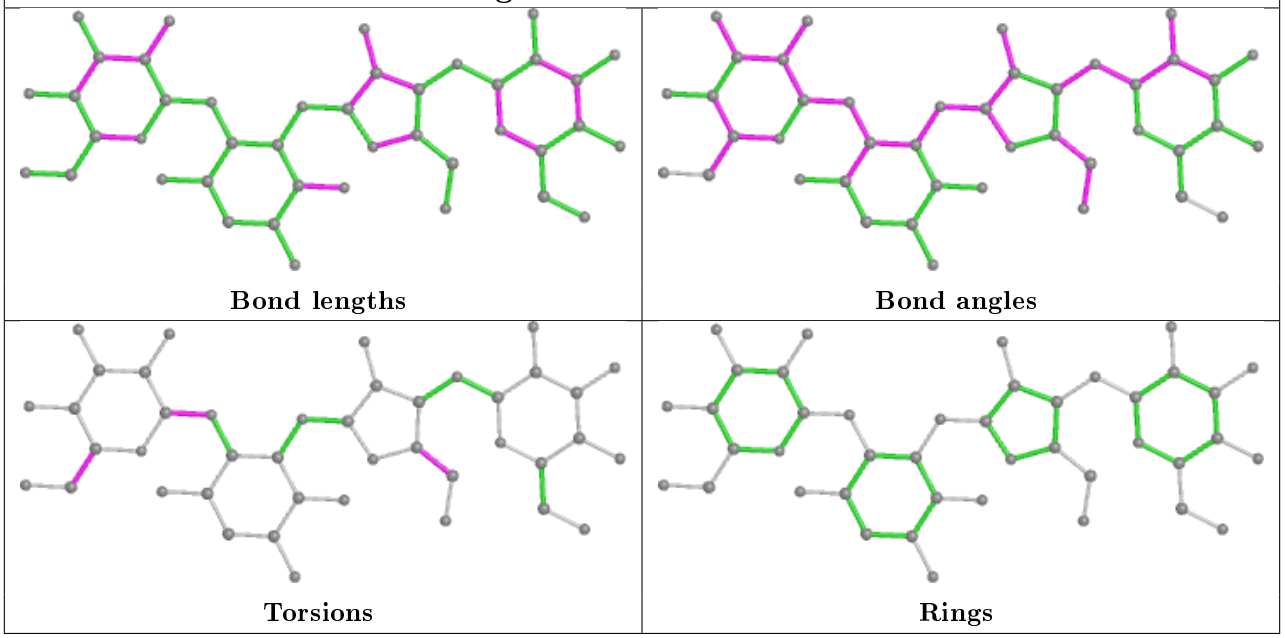


Torsions

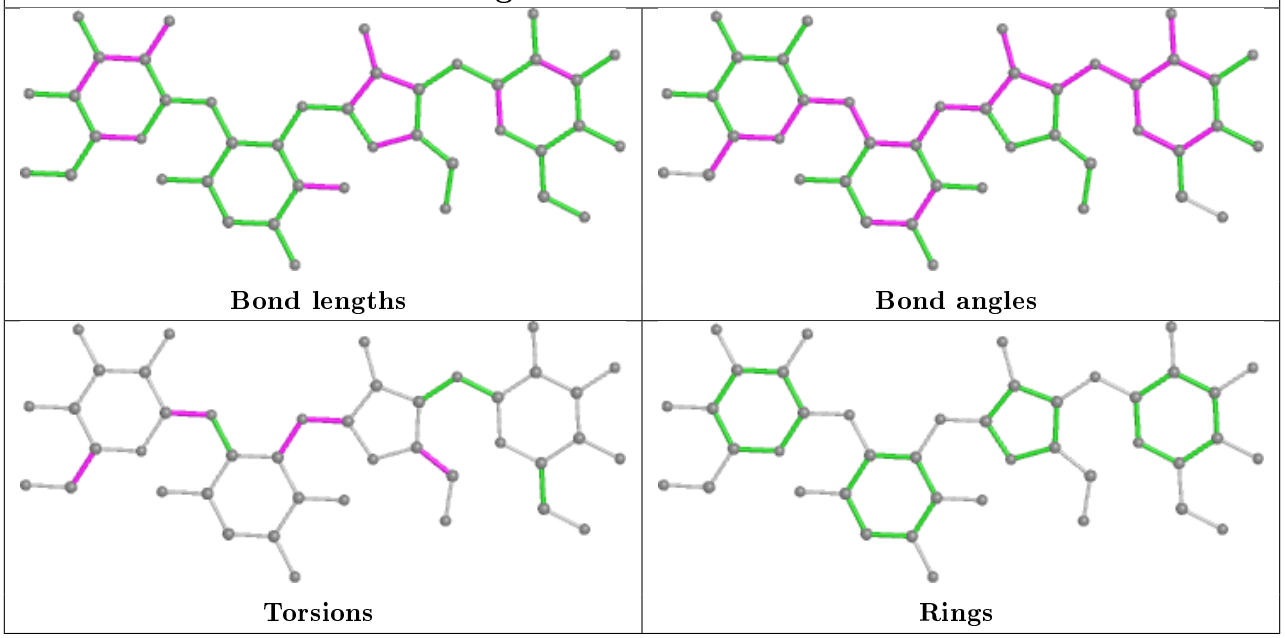


Rings

Ligand NMY DA 3185



Ligand NMY DA 3187



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1539/1542 (99%)	-0.49	3 (0%) 95 96	67, 121, 207, 543	0
1	CA	1538/1542 (99%)	-0.50	5 (0%) 94 94	63, 120, 240, 527	0
2	AB	218/241 (90%)	0.70	30 (13%) 2 2	86, 172, 404, 542	0
2	CB	218/241 (90%)	0.62	31 (14%) 2 2	96, 215, 508, 545	0
3	AC	206/233 (88%)	0.47	19 (9%) 9 9	81, 139, 325, 514	0
3	CC	206/233 (88%)	0.25	9 (4%) 34 33	80, 120, 286, 513	0
4	AD	205/206 (99%)	0.64	28 (13%) 3 2	83, 161, 372, 537	0
4	CD	205/206 (99%)	0.40	22 (10%) 6 5	81, 148, 442, 537	0
5	AE	150/167 (89%)	0.02	4 (2%) 54 52	79, 130, 272, 478	0
5	CE	150/167 (89%)	0.29	6 (4%) 38 36	68, 114, 292, 527	0
6	AF	100/135 (74%)	0.04	4 (4%) 38 36	85, 142, 331, 528	0
6	CF	100/135 (74%)	0.51	7 (7%) 16 16	87, 178, 386, 531	0
7	AG	151/179 (84%)	0.21	12 (7%) 12 12	93, 161, 365, 539	0
7	CG	151/179 (84%)	0.79	26 (17%) 1 1	112, 234, 452, 540	0
8	AH	129/130 (99%)	0.26	9 (6%) 16 16	79, 145, 341, 424	0
8	CH	129/130 (99%)	0.54	13 (10%) 7 6	81, 121, 307, 437	0
9	AI	127/130 (97%)	0.50	15 (11%) 4 4	101, 180, 459, 535	0
9	CI	127/130 (97%)	0.93	27 (21%) 0 1	97, 216, 478, 540	0
10	AJ	98/103 (95%)	0.70	12 (12%) 4 3	95, 165, 363, 543	0
10	CJ	98/103 (95%)	1.38	21 (21%) 0 1	101, 202, 530, 543	0
11	AK	117/129 (90%)	0.33	6 (5%) 28 26	75, 112, 337, 492	0
11	CK	117/129 (90%)	1.14	28 (23%) 0 0	83, 243, 494, 531	0
12	AL	123/124 (99%)	0.58	13 (10%) 6 6	75, 109, 299, 403	0
12	CL	123/124 (99%)	-0.03	6 (4%) 29 27	62, 93, 294, 386	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/118 (96%)	0.41	10 (8%) 10 10	106, 239, 498, 530	0
13	CM	114/118 (96%)	1.21	30 (26%) 0 0	122, 312, 536, 547	0
14	AN	96/101 (95%)	0.29	4 (4%) 36 34	89, 175, 381, 527	0
14	CN	96/101 (95%)	0.62	11 (11%) 4 4	95, 183, 535, 545	0
15	AO	88/89 (98%)	0.29	6 (6%) 17 17	90, 136, 315, 374	0
15	CO	88/89 (98%)	0.31	4 (4%) 33 32	94, 176, 350, 510	0
16	AP	82/82 (100%)	1.14	20 (24%) 0 0	76, 125, 380, 528	0
16	CP	82/82 (100%)	1.14	17 (20%) 1 1	75, 115, 387, 524	0
17	AQ	80/84 (95%)	1.29	17 (21%) 0 1	88, 162, 370, 434	0
17	CQ	80/84 (95%)	0.30	3 (3%) 40 37	75, 141, 337, 496	0
18	AR	55/75 (73%)	0.32	3 (5%) 25 23	84, 115, 320, 391	0
18	CR	55/75 (73%)	0.34	6 (10%) 5 5	107, 159, 370, 440	0
19	AS	79/92 (85%)	1.50	21 (26%) 0 0	118, 215, 454, 530	0
19	CS	79/92 (85%)	1.79	31 (39%) 0 0	133, 302, 496, 542	0
20	AT	85/87 (97%)	0.32	2 (2%) 59 56	93, 158, 363, 497	0
20	CT	85/87 (97%)	0.58	10 (11%) 4 4	82, 128, 351, 491	0
21	AU	51/71 (71%)	0.21	2 (3%) 39 37	83, 133, 326, 395	0
21	CU	51/71 (71%)	0.31	5 (9%) 7 7	108, 193, 374, 512	0
22	AV	76/76 (100%)	-0.20	1 (1%) 77 77	63, 117, 160, 255	0
22	CV	76/76 (100%)	1.24	17 (22%) 0 1	61, 257, 424, 542	0
23	AX	16/24 (66%)	-0.21	0 100 100	76, 139, 214, 261	0
23	CX	15/24 (62%)	-0.05	1 (6%) 17 17	83, 191, 269, 339	0
24	BA	2897/2904 (99%)	-0.43	24 (0%) 86 86	54, 96, 294, 544	0
24	DA	2897/2904 (99%)	-0.30	88 (3%) 50 49	37, 67, 231, 547	0
25	BB	118/120 (98%)	-0.81	0 100 100	78, 151, 201, 231	0
25	DB	119/120 (99%)	-0.68	0 100 100	47, 88, 129, 188	0
26	BC	271/273 (99%)	0.25	7 (2%) 56 53	56, 106, 196, 362	0
26	DC	271/273 (99%)	0.04	3 (1%) 80 81	46, 81, 188, 348	0
27	BD	209/209 (100%)	0.00	5 (2%) 59 56	58, 88, 195, 401	0
27	DD	209/209 (100%)	-0.16	0 100 100	38, 57, 129, 253	0
28	BE	201/201 (100%)	0.35	19 (9%) 8 8	59, 105, 224, 424	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DE	201/201 (100%)	0.04	1 (0%) 91 91	40, 72, 155, 487	0
29	BF	177/179 (98%)	1.06	37 (20%) 1 1	125, 257, 446, 539	0
29	DF	177/179 (98%)	0.78	22 (12%) 4 3	76, 147, 367, 520	0
30	BG	176/177 (99%)	0.79	25 (14%) 2 2	93, 155, 360, 507	0
30	DG	176/177 (99%)	0.28	9 (5%) 28 26	54, 94, 190, 439	0
31	BH	149/149 (100%)	0.83	23 (15%) 2 2	15, 223, 436, 532	0
31	DH	149/149 (100%)	0.61	18 (12%) 4 3	25, 213, 475, 538	0
32	BI	141/142 (99%)	3.66	90 (63%) 0 0	126, 471, 546, 549	0
32	DI	141/142 (99%)	3.08	78 (55%) 0 0	123, 380, 542, 548	0
33	BJ	142/142 (100%)	0.17	1 (0%) 87 88	56, 83, 169, 348	0
33	DJ	142/142 (100%)	-0.13	0 100 100	38, 60, 146, 265	0
34	BK	122/123 (99%)	0.33	5 (4%) 37 35	65, 93, 197, 357	0
34	DK	122/123 (99%)	0.02	1 (0%) 86 86	43, 63, 112, 229	0
35	BL	143/144 (99%)	0.04	2 (1%) 75 75	55, 110, 265, 507	0
35	DL	143/144 (99%)	-0.29	0 100 100	41, 68, 170, 291	0
36	BM	136/136 (100%)	0.67	16 (11%) 4 4	65, 99, 208, 340	0
36	DM	136/136 (100%)	0.05	1 (0%) 87 88	47, 67, 153, 262	0
37	BN	120/127 (94%)	0.21	2 (1%) 70 68	66, 107, 190, 466	0
37	DN	120/127 (94%)	-0.16	0 100 100	40, 61, 151, 420	0
38	BO	116/117 (99%)	0.61	14 (12%) 4 3	96, 193, 363, 537	0
38	DO	116/117 (99%)	0.28	5 (4%) 35 34	66, 94, 183, 322	0
39	BP	114/115 (99%)	0.17	2 (1%) 68 67	71, 109, 288, 356	0
39	DP	114/115 (99%)	-0.21	0 100 100	47, 69, 178, 330	0
40	BQ	117/118 (99%)	0.00	0 100 100	55, 76, 170, 304	0
40	DQ	117/118 (99%)	-0.32	0 100 100	38, 54, 156, 310	0
41	BR	103/103 (100%)	0.07	1 (0%) 82 82	57, 92, 180, 286	0
41	DR	103/103 (100%)	-0.06	0 100 100	42, 68, 152, 458	0
42	BS	110/110 (100%)	0.12	3 (2%) 54 52	60, 92, 175, 299	0
42	DS	110/110 (100%)	-0.01	1 (0%) 84 84	38, 56, 115, 161	0
43	BT	93/100 (93%)	0.85	12 (12%) 3 3	93, 155, 337, 441	0
43	DT	93/100 (93%)	0.36	3 (3%) 47 46	56, 90, 192, 530	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BU	102/104 (98%)	0.62	13 (12%) 3 3	78, 133, 337, 443	0
44	DU	102/104 (98%)	-0.13	0 100 100	52, 82, 226, 299	0
45	BV	94/94 (100%)	0.64	8 (8%) 10 10	86, 144, 310, 421	0
45	DV	94/94 (100%)	0.32	3 (3%) 47 46	60, 94, 183, 336	0
46	BW	75/85 (88%)	0.53	4 (5%) 26 24	70, 113, 202, 321	0
46	DW	76/85 (89%)	0.09	1 (1%) 77 77	46, 70, 156, 244	0
47	BX	77/78 (98%)	0.03	0 100 100	62, 110, 268, 318	0
47	DX	77/78 (98%)	0.27	3 (3%) 39 37	48, 83, 165, 320	0
48	BY	63/63 (100%)	0.52	6 (9%) 8 8	95, 176, 353, 521	0
48	DY	63/63 (100%)	0.31	5 (7%) 12 12	58, 106, 283, 388	0
49	BZ	58/59 (98%)	0.39	2 (3%) 45 43	67, 93, 170, 515	0
49	DZ	58/59 (98%)	-0.08	1 (1%) 70 68	44, 59, 141, 198	0
50	B0	56/57 (98%)	0.01	2 (3%) 42 40	59, 98, 294, 405	0
50	D0	56/57 (98%)	-0.38	0 100 100	33, 64, 166, 282	0
51	B1	50/55 (90%)	2.29	26 (52%) 0 0	88, 147, 326, 377	0
51	D1	50/55 (90%)	1.93	22 (44%) 0 0	78, 120, 326, 532	0
52	B2	46/46 (100%)	0.19	0 100 100	70, 95, 239, 293	0
52	D2	46/46 (100%)	0.10	1 (2%) 62 60	54, 67, 171, 292	0
53	B3	64/65 (98%)	-0.03	0 100 100	67, 91, 201, 286	0
53	D3	64/65 (98%)	-0.06	0 100 100	47, 61, 161, 254	0
54	B4	38/38 (100%)	0.06	0 100 100	78, 108, 174, 322	0
54	D4	38/38 (100%)	0.19	0 100 100	53, 67, 150, 295	0
55	CY	183/185 (98%)	0.36	19 (10%) 6 6	53, 148, 442, 539	0
All	All	20909/21487 (97%)	0.07	1211 (5%) 23 22	15, 110, 357, 549	0

The worst 5 of 1211 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
32	BI	66	PHE	15.7
49	BZ	1	ALA	14.3
32	DI	53	PRO	14.1
32	DI	1	ALA	13.8
51	B1	17	GLY	13.4

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

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

6.3 Carbohydrates (i)

There are no carbohydrates in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	1654	1/1	-0.38	0.66	110,110,110,110	0
56	MG	AA	1653	1/1	-0.29	0.63	106,106,106,106	0
56	MG	AA	1648	1/1	-0.09	1.12	116,116,116,116	0
56	MG	DA	3151	1/1	-0.06	1.03	101,101,101,101	0
56	MG	CA	1649	1/1	-0.01	1.11	107,107,107,107	0
56	MG	AA	1650	1/1	-0.01	3.09	118,118,118,118	0
56	MG	DA	3095	1/1	0.01	2.08	116,116,116,116	0
56	MG	DB	204	1/1	0.02	0.88	109,109,109,109	0
56	MG	CA	1617	1/1	0.03	0.39	115,115,115,115	0
56	MG	BA	3007	1/1	0.05	0.67	127,127,127,127	0
56	MG	DA	3192	1/1	0.06	0.48	95,95,95,95	0
56	MG	CA	1651	1/1	0.08	1.06	103,103,103,103	0
56	MG	AA	1633	1/1	0.09	0.37	128,128,128,128	0
56	MG	DB	203	1/1	0.12	0.27	100,100,100,100	0
56	MG	CA	1661	1/1	0.13	0.76	101,101,101,101	0
56	MG	DA	3137	1/1	0.15	0.55	93,93,93,93	0
56	MG	CA	1652	1/1	0.15	0.43	106,106,106,106	0
56	MG	CA	1606	1/1	0.18	0.16	99,99,99,99	0
56	MG	CA	1668	1/1	0.18	0.85	107,107,107,107	0
56	MG	CA	1601	1/1	0.20	0.43	140,140,140,140	0
56	MG	BA	3066	1/1	0.21	0.23	96,96,96,96	0
56	MG	BA	3105	1/1	0.23	0.28	91,91,91,91	0
56	MG	BA	3040	1/1	0.23	0.23	112,112,112,112	0
56	MG	DB	202	1/1	0.23	0.78	122,122,122,122	0
56	MG	BA	3096	1/1	0.24	0.76	118,118,118,118	0
56	MG	CA	1653	1/1	0.24	0.55	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3025	1/1	0.25	0.46	103,103,103,103	0
56	MG	BA	3125	1/1	0.27	0.43	100,100,100,100	0
56	MG	CA	1654	1/1	0.28	1.25	116,116,116,116	0
56	MG	DA	3167	1/1	0.29	0.73	84,84,84,84	0
56	MG	BA	3070	1/1	0.30	0.35	90,90,90,90	0
56	MG	CA	1624	1/1	0.31	0.27	106,106,106,106	0
56	MG	CA	1657	1/1	0.31	1.34	119,119,119,119	0
56	MG	DA	3152	1/1	0.31	0.78	105,105,105,105	0
56	MG	BA	3015	1/1	0.32	0.25	115,115,115,115	0
56	MG	DA	3161	1/1	0.33	0.30	103,103,103,103	0
56	MG	BA	3081	1/1	0.33	0.33	109,109,109,109	0
56	MG	DA	3022	1/1	0.33	0.28	81,81,81,81	0
56	MG	DA	3087	1/1	0.34	0.31	113,113,113,113	0
56	MG	BA	3152	1/1	0.35	0.83	115,115,115,115	0
56	MG	BA	3131	1/1	0.36	0.40	114,114,114,114	0
56	MG	BA	3159	1/1	0.36	0.75	109,109,109,109	0
56	MG	AN	201	1/1	0.37	0.58	133,133,133,133	0
56	MG	CA	1647	1/1	0.38	0.58	112,112,112,112	0
56	MG	DA	3179	1/1	0.38	0.36	113,113,113,113	0
56	MG	BA	3087	1/1	0.38	0.58	112,112,112,112	0
56	MG	CA	1623	1/1	0.38	0.75	117,117,117,117	0
56	MG	DA	3059	1/1	0.38	0.47	92,92,92,92	0
56	MG	AA	1629	1/1	0.39	0.53	118,118,118,118	0
56	MG	CA	1659	1/1	0.39	0.65	110,110,110,110	0
56	MG	DA	3045	1/1	0.39	0.12	95,95,95,95	0
56	MG	DB	201	1/1	0.40	0.22	113,113,113,113	0
56	MG	BA	3156	1/1	0.40	0.68	106,106,106,106	0
56	MG	CA	1615	1/1	0.40	0.18	112,112,112,112	0
56	MG	BC	301	1/1	0.41	0.75	122,122,122,122	0
56	MG	CA	1603	1/1	0.41	0.27	120,120,120,120	0
56	MG	DA	3100	1/1	0.43	0.40	96,96,96,96	0
56	MG	DA	3081	1/1	0.43	1.05	110,110,110,110	0
56	MG	CA	1660	1/1	0.43	0.49	104,104,104,104	0
56	MG	BA	3026	1/1	0.44	0.80	134,134,134,134	0
56	MG	DA	3169	1/1	0.44	0.72	94,94,94,94	0
56	MG	DA	3064	1/1	0.45	0.32	95,95,95,95	0
56	MG	DA	3083	1/1	0.45	0.33	82,82,82,82	0
56	MG	BA	3099	1/1	0.45	0.38	112,112,112,112	0
56	MG	AA	1604	1/1	0.46	0.12	102,102,102,102	0
56	MG	DA	3115	1/1	0.46	0.17	95,95,95,95	0
56	MG	CA	1608	1/1	0.47	0.41	115,115,115,115	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	1609	1/1	0.47	0.32	117,117,117,117	0
56	MG	DA	3097	1/1	0.47	0.64	105,105,105,105	0
56	MG	DA	3171	1/1	0.47	0.38	108,108,108,108	0
56	MG	DA	3018	1/1	0.47	0.76	102,102,102,102	0
56	MG	AA	1623	1/1	0.47	1.08	119,119,119,119	0
56	MG	BA	3126	1/1	0.48	0.30	110,110,110,110	0
56	MG	CA	1633	1/1	0.48	0.80	116,116,116,116	0
56	MG	BA	3069	1/1	0.48	0.58	129,129,129,129	0
56	MG	AA	1603	1/1	0.49	0.20	117,117,117,117	0
56	MG	DA	3057	1/1	0.49	0.84	114,114,114,114	0
56	MG	DA	3076	1/1	0.49	0.26	100,100,100,100	0
56	MG	BA	3124	1/1	0.49	0.19	114,114,114,114	0
56	MG	DA	3102	1/1	0.49	0.63	94,94,94,94	0
56	MG	DA	3012	1/1	0.49	0.26	83,83,83,83	0
56	MG	CA	1629	1/1	0.49	1.02	123,123,123,123	0
56	MG	BA	3110	1/1	0.49	0.44	110,110,110,110	0
56	MG	BA	3123	1/1	0.50	0.49	88,88,88,88	0
56	MG	DA	3073	1/1	0.50	0.27	99,99,99,99	0
56	MG	DA	3172	1/1	0.50	0.45	109,109,109,109	0
56	MG	BA	3095	1/1	0.50	0.35	107,107,107,107	0
56	MG	CA	1620	1/1	0.50	0.26	118,118,118,118	0
56	MG	DA	3134	1/1	0.50	0.35	77,77,77,77	0
56	MG	AA	1646	1/1	0.51	0.63	95,95,95,95	0
56	MG	DA	3003	1/1	0.51	0.15	105,105,105,105	0
56	MG	BA	3022	1/1	0.51	0.73	110,110,110,110	0
56	MG	BA	3068	1/1	0.51	0.23	126,126,126,126	0
56	MG	BA	3071	1/1	0.51	0.31	104,104,104,104	0
56	MG	BA	3149	1/1	0.52	0.67	85,85,85,85	0
56	MG	CA	1665	1/1	0.52	0.40	112,112,112,112	0
56	MG	BA	3075	1/1	0.52	0.40	104,104,104,104	0
56	MG	DA	3069	1/1	0.52	0.31	81,81,81,81	0
56	MG	CA	1616	1/1	0.52	0.14	98,98,98,98	0
56	MG	DA	3061	1/1	0.53	0.63	106,106,106,106	0
56	MG	DA	3060	1/1	0.53	0.27	89,89,89,89	0
56	MG	BA	3013	1/1	0.53	0.54	114,114,114,114	0
56	MG	BA	3006	1/1	0.53	0.10	101,101,101,101	0
56	MG	DA	3055	1/1	0.54	0.36	94,94,94,94	0
56	MG	DA	3182	1/1	0.54	0.34	96,96,96,96	0
56	MG	CA	1631	1/1	0.55	0.47	120,120,120,120	0
56	MG	CA	1670	1/1	0.55	0.69	102,102,102,102	0
56	MG	BA	3116	1/1	0.56	0.18	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3058	1/1	0.56	0.95	108,108,108,108	0
56	MG	BA	3107	1/1	0.56	0.45	106,106,106,106	0
56	MG	DO	201	1/1	0.56	0.54	109,109,109,109	0
56	MG	AA	1622	1/1	0.57	0.36	107,107,107,107	0
56	MG	CA	1655	1/1	0.57	0.31	117,117,117,117	0
56	MG	BA	3047	1/1	0.57	0.29	103,103,103,103	0
56	MG	DA	3193	1/1	0.57	0.52	95,95,95,95	0
56	MG	CA	1634	1/1	0.57	0.33	120,120,120,120	0
56	MG	DA	3008	1/1	0.58	0.24	88,88,88,88	0
56	MG	CA	1627	1/1	0.58	0.32	111,111,111,111	0
56	MG	BA	3052	1/1	0.58	0.20	97,97,97,97	0
56	MG	BB	201	1/1	0.58	0.21	137,137,137,137	0
56	MG	DA	3123	1/1	0.59	0.33	102,102,102,102	0
56	MG	BA	3092	1/1	0.59	0.25	119,119,119,119	0
56	MG	AA	1632	1/1	0.59	0.20	114,114,114,114	0
56	MG	DA	3127	1/1	0.60	0.32	77,77,77,77	0
56	MG	DA	3088	1/1	0.60	0.19	115,115,115,115	0
56	MG	AD	301	1/1	0.60	0.82	119,119,119,119	0
56	MG	AA	1610	1/1	0.60	0.25	120,120,120,120	0
56	MG	CA	1605	1/1	0.60	0.17	97,97,97,97	0
56	MG	BA	3083	1/1	0.61	0.21	110,110,110,110	0
56	MG	BA	3157	1/1	0.61	1.00	97,97,97,97	0
56	MG	AA	1631	1/1	0.61	0.67	126,126,126,126	0
56	MG	AA	1649	1/1	0.61	1.03	90,90,90,90	0
56	MG	DA	3026	1/1	0.62	0.55	98,98,98,98	0
56	MG	BQ	201	1/1	0.62	1.42	93,93,93,93	0
56	MG	DA	3006	1/1	0.62	0.20	92,92,92,92	0
56	MG	DA	3174	1/1	0.62	0.58	105,105,105,105	0
56	MG	DA	3065	1/1	0.62	0.28	81,81,81,81	0
56	MG	DA	3176	1/1	0.62	0.54	78,78,78,78	0
56	MG	DA	3084	1/1	0.62	0.25	104,104,104,104	0
56	MG	DA	3052	1/1	0.62	0.68	95,95,95,95	0
56	MG	BA	3001	1/1	0.63	0.18	99,99,99,99	0
56	MG	BA	3085	1/1	0.63	0.16	95,95,95,95	0
56	MG	BA	3005	1/1	0.63	0.26	106,106,106,106	0
56	MG	CA	1602	1/1	0.63	0.49	105,105,105,105	0
56	MG	BA	3168	1/1	0.63	0.91	114,114,114,114	0
56	MG	AA	1601	1/1	0.63	0.36	132,132,132,132	0
56	MG	BA	3158	1/1	0.64	0.51	106,106,106,106	0
56	MG	BA	3120	1/1	0.64	0.27	94,94,94,94	0
56	MG	DA	3074	1/1	0.64	0.13	95,95,95,95	0
56	MG	BA	3055	1/1	0.64	0.23	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3054	1/1	0.64	1.62	119,119,119,119	0
56	MG	AA	1640	1/1	0.64	0.45	110,110,110,110	0
56	MG	BA	3154	1/1	0.64	0.69	97,97,97,97	0
56	MG	DA	3011	1/1	0.65	0.52	103,103,103,103	0
56	MG	DA	3068	1/1	0.65	0.88	117,117,117,117	0
56	MG	DA	3079	1/1	0.65	0.50	99,99,99,99	0
56	MG	BA	3088	1/1	0.65	0.31	101,101,101,101	0
56	MG	BA	3153	1/1	0.65	0.57	112,112,112,112	0
56	MG	BA	3078	1/1	0.65	0.23	119,119,119,119	0
56	MG	DA	3010	1/1	0.65	0.39	106,106,106,106	0
56	MG	AA	1607	1/1	0.65	0.24	116,116,116,116	0
56	MG	BA	3148	1/1	0.66	0.47	101,101,101,101	0
56	MG	BA	3143	1/1	0.66	0.53	103,103,103,103	0
56	MG	CA	1656	1/1	0.66	0.56	106,106,106,106	0
56	MG	DA	3094	1/1	0.66	0.35	87,87,87,87	0
56	MG	DA	3131	1/1	0.66	0.65	118,118,118,118	0
56	MG	BA	3146	1/1	0.66	0.36	98,98,98,98	0
56	MG	BA	3009	1/1	0.66	0.30	95,95,95,95	0
56	MG	BA	3155	1/1	0.66	0.88	114,114,114,114	0
56	MG	DA	3142	1/1	0.67	0.19	86,86,86,86	0
56	MG	AA	1641	1/1	0.67	0.42	105,105,105,105	0
56	MG	BA	3019	1/1	0.67	0.22	101,101,101,101	0
56	MG	BA	3012	1/1	0.67	0.99	118,118,118,118	0
56	MG	BA	3114	1/1	0.67	0.28	120,120,120,120	0
56	MG	CA	1638	1/1	0.67	0.70	113,113,113,113	0
56	MG	AA	1626	1/1	0.67	0.58	111,111,111,111	0
56	MG	DA	3023	1/1	0.68	0.69	120,120,120,120	0
56	MG	BA	3041	1/1	0.68	0.16	96,96,96,96	0
56	MG	CA	1632	1/1	0.68	1.22	128,128,128,128	0
56	MG	DA	3072	1/1	0.68	0.36	93,93,93,93	0
56	MG	BA	3142	1/1	0.68	0.49	103,103,103,103	0
56	MG	AA	1647	1/1	0.68	0.23	109,109,109,109	0
56	MG	DA	3139	1/1	0.68	0.56	77,77,77,77	0
56	MG	BA	3003	1/1	0.68	0.23	115,115,115,115	0
56	MG	AA	1628	1/1	0.69	0.36	116,116,116,116	0
56	MG	CX	101	1/1	0.69	1.13	112,112,112,112	0
56	MG	CA	1645	1/1	0.69	0.42	96,96,96,96	0
56	MG	DA	3035	1/1	0.70	0.24	94,94,94,94	0
56	MG	BA	3129	1/1	0.70	0.63	107,107,107,107	0
56	MG	BA	3018	1/1	0.70	0.77	118,118,118,118	0
56	MG	BA	3160	1/1	0.70	0.50	102,102,102,102	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3129	1/1	0.70	1.85	124,124,124,124	0
56	MG	CA	1626	1/1	0.70	0.40	99,99,99,99	0
56	MG	AA	1613	1/1	0.70	0.25	115,115,115,115	0
56	MG	AA	1614	1/1	0.70	0.47	123,123,123,123	0
56	MG	BA	3072	1/1	0.70	0.30	103,103,103,103	0
56	MG	AA	1617	1/1	0.70	0.46	112,112,112,112	0
56	MG	DA	3150	1/1	0.70	0.70	78,78,78,78	0
56	MG	DA	3166	1/1	0.70	0.83	87,87,87,87	0
56	MG	DA	3025	1/1	0.71	0.77	118,118,118,118	0
56	MG	DA	3170	1/1	0.71	0.42	94,94,94,94	0
56	MG	CA	1639	1/1	0.71	0.12	94,94,94,94	0
56	MG	CA	1637	1/1	0.71	0.97	139,139,139,139	0
56	MG	CA	1628	1/1	0.71	0.34	116,116,116,116	0
56	MG	AA	1651	1/1	0.71	0.22	119,119,119,119	0
56	MG	DA	3156	1/1	0.71	0.40	101,101,101,101	0
56	MG	DA	3066	1/1	0.71	0.23	90,90,90,90	0
56	MG	AA	1627	1/1	0.71	0.48	121,121,121,121	0
56	MG	DA	3062	1/1	0.71	0.18	76,76,76,76	0
56	MG	BA	3032	1/1	0.71	0.67	110,110,110,110	0
57	NMY	DA	3190	42/42	0.72	0.42	57,66,70,74	42
56	MG	BA	3004	1/1	0.72	0.20	120,120,120,120	0
56	MG	BA	3030	1/1	0.72	0.32	94,94,94,94	0
56	MG	DA	3040	1/1	0.72	0.21	91,91,91,91	0
56	MG	CA	1613	1/1	0.72	0.16	103,103,103,103	0
56	MG	AA	1616	1/1	0.72	0.49	113,113,113,113	0
56	MG	DA	3098	1/1	0.73	0.24	99,99,99,99	0
56	MG	DA	3046	1/1	0.73	0.15	86,86,86,86	0
56	MG	BA	3021	1/1	0.73	0.29	108,108,108,108	0
56	MG	BA	3100	1/1	0.73	0.36	107,107,107,107	0
56	MG	BA	3098	1/1	0.73	0.36	100,100,100,100	0
56	MG	CA	1611	1/1	0.73	0.17	110,110,110,110	0
56	MG	DA	3140	1/1	0.73	0.32	98,98,98,98	0
56	MG	BA	3059	1/1	0.73	1.36	122,122,122,122	0
56	MG	DA	3007	1/1	0.73	0.23	103,103,103,103	0
56	MG	BA	3090	1/1	0.73	0.68	130,130,130,130	0
56	MG	BA	3027	1/1	0.73	1.53	108,108,108,108	0
56	MG	BA	3057	1/1	0.73	0.19	98,98,98,98	0
56	MG	CA	1607	1/1	0.73	0.58	110,110,110,110	0
56	MG	DA	3020	1/1	0.73	0.27	93,93,93,93	0
56	MG	DA	3130	1/1	0.73	0.27	96,96,96,96	0
56	MG	BA	3122	1/1	0.73	0.30	112,112,112,112	0
56	MG	BA	3118	1/1	0.73	0.45	109,109,109,109	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3108	1/1	0.74	0.29	100,100,100,100	0
56	MG	BA	3108	1/1	0.74	0.31	99,99,99,99	0
56	MG	AA	1619	1/1	0.74	0.22	95,95,95,95	0
56	MG	DA	3004	1/1	0.74	0.38	99,99,99,99	0
56	MG	BA	3050	1/1	0.74	0.38	101,101,101,101	0
56	MG	BA	3061	1/1	0.74	0.29	85,85,85,85	0
56	MG	BA	3115	1/1	0.74	0.30	105,105,105,105	0
56	MG	DA	3155	1/1	0.74	0.22	115,115,115,115	0
56	MG	BA	3121	1/1	0.74	0.34	110,110,110,110	0
56	MG	CA	1610	1/1	0.74	0.26	102,102,102,102	0
56	MG	AA	1644	1/1	0.74	0.41	106,106,106,106	0
56	MG	DA	3034	1/1	0.75	0.17	84,84,84,84	0
56	MG	CA	1612	1/1	0.75	0.40	116,116,116,116	0
56	MG	DA	3194	1/1	0.75	0.56	90,90,90,90	0
56	MG	DA	3092	1/1	0.76	0.33	95,95,95,95	0
56	MG	BA	3017	1/1	0.76	0.14	107,107,107,107	0
56	MG	BA	3102	1/1	0.76	0.54	119,119,119,119	0
56	MG	AA	1625	1/1	0.76	0.79	117,117,117,117	0
56	MG	CA	1621	1/1	0.76	0.18	111,111,111,111	0
56	MG	DA	3071	1/1	0.76	0.42	97,97,97,97	0
56	MG	DA	3119	1/1	0.76	0.23	82,82,82,82	0
56	MG	BA	3034	1/1	0.76	0.16	88,88,88,88	0
56	MG	BA	3117	1/1	0.76	0.15	89,89,89,89	0
56	MG	AA	1609	1/1	0.76	0.34	111,111,111,111	0
56	MG	DA	3138	1/1	0.76	0.73	81,81,81,81	0
56	MG	BA	3053	1/1	0.76	0.65	98,98,98,98	0
56	MG	DA	3030	1/1	0.77	0.20	76,76,76,76	0
56	MG	DA	3024	1/1	0.77	0.24	73,73,73,73	0
56	MG	BA	3091	1/1	0.77	0.36	115,115,115,115	0
56	MG	CA	1636	1/1	0.77	1.24	134,134,134,134	0
56	MG	DA	3110	1/1	0.77	0.26	93,93,93,93	0
56	MG	DA	3164	1/1	0.77	0.67	94,94,94,94	0
56	MG	DA	3116	1/1	0.77	0.20	107,107,107,107	0
56	MG	BA	3138	1/1	0.77	0.71	88,88,88,88	0
56	MG	DA	3050	1/1	0.78	0.23	86,86,86,86	0
56	MG	DA	3128	1/1	0.78	0.20	92,92,92,92	0
56	MG	DA	3107	1/1	0.78	0.44	98,98,98,98	0
56	MG	CA	1635	1/1	0.78	0.20	113,113,113,113	0
56	MG	CA	1618	1/1	0.78	0.39	83,83,83,83	0
56	MG	DA	3180	1/1	0.78	0.41	93,93,93,93	0
56	MG	DA	3148	1/1	0.78	0.38	60,60,60,60	0
56	MG	DA	3082	1/1	0.78	0.26	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	3082	1/1	0.78	0.43	126,126,126,126	0
56	MG	BA	3056	1/1	0.79	0.18	99,99,99,99	0
56	MG	BA	3079	1/1	0.79	0.60	103,103,103,103	0
56	MG	DA	3096	1/1	0.79	0.25	75,75,75,75	0
56	MG	DA	3173	1/1	0.79	0.47	90,90,90,90	0
56	MG	DA	3121	1/1	0.79	0.27	86,86,86,86	0
56	MG	AA	1645	1/1	0.79	0.34	93,93,93,93	0
56	MG	AA	1639	1/1	0.79	0.94	113,113,113,113	0
56	MG	AA	1606	1/1	0.79	0.34	111,111,111,111	0
56	MG	BA	3134	1/1	0.80	0.26	109,109,109,109	0
56	MG	BA	3145	1/1	0.80	0.42	99,99,99,99	0
56	MG	DA	3165	1/1	0.80	0.67	78,78,78,78	0
56	MG	AA	1602	1/1	0.80	0.51	106,106,106,106	0
56	MG	CA	1622	1/1	0.80	0.29	108,108,108,108	0
56	MG	DA	3039	1/1	0.80	0.33	117,117,117,117	0
56	MG	DA	3056	1/1	0.80	0.16	86,86,86,86	0
57	NMY	AA	1657	42/42	0.80	0.28	81,84,88,90	42
57	NMY	BA	3167	42/42	0.80	0.31	117,120,124,125	42
56	MG	DA	3191	1/1	0.80	0.14	80,80,80,80	0
56	MG	BA	3112	1/1	0.80	0.36	101,101,101,101	0
56	MG	DA	3109	1/1	0.80	0.24	102,102,102,102	0
56	MG	BA	3133	1/1	0.80	0.36	106,106,106,106	0
56	MG	AA	1605	1/1	0.80	0.36	121,121,121,121	0
56	MG	BA	3023	1/1	0.80	0.37	108,108,108,108	0
56	MG	DA	3021	1/1	0.80	0.37	108,108,108,108	0
56	MG	BA	3024	1/1	0.80	0.60	114,114,114,114	0
56	MG	AA	1630	1/1	0.81	0.31	105,105,105,105	0
56	MG	AA	1618	1/1	0.81	0.27	96,96,96,96	0
56	MG	DA	3111	1/1	0.81	0.44	102,102,102,102	0
56	MG	BA	3151	1/1	0.81	0.66	92,92,92,92	0
57	NMY	BA	3163	42/42	0.81	0.29	89,98,100,101	42
56	MG	BA	3109	1/1	0.81	0.38	106,106,106,106	0
56	MG	CA	1643	1/1	0.81	0.41	103,103,103,103	0
56	MG	DA	3162	1/1	0.81	0.34	95,95,95,95	0
56	MG	BA	3020	1/1	0.81	0.28	95,95,95,95	0
56	MG	AA	1612	1/1	0.81	0.13	107,107,107,107	0
56	MG	AA	1638	1/1	0.81	0.75	104,104,104,104	0
56	MG	BA	3011	1/1	0.81	0.43	81,81,81,81	0
56	MG	DA	3122	1/1	0.81	0.28	97,97,97,97	0
56	MG	DA	3042	1/1	0.81	0.71	105,105,105,105	0
56	MG	CA	1663	1/1	0.81	0.43	82,82,82,82	0
56	MG	CA	1667	1/1	0.81	0.65	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DL	201	1/1	0.82	0.81	110,110,110,110	0
56	MG	DA	3051	1/1	0.82	0.27	86,86,86,86	0
57	NMY	BA	3165	42/42	0.82	0.30	79,84,87,90	42
56	MG	BA	3060	1/1	0.82	0.41	106,106,106,106	0
56	MG	DA	3177	1/1	0.82	0.51	96,96,96,96	0
56	MG	DA	3085	1/1	0.82	0.48	108,108,108,108	0
56	MG	BA	3086	1/1	0.82	0.12	109,109,109,109	0
56	MG	CA	1648	1/1	0.82	0.41	103,103,103,103	0
56	MG	DA	3090	1/1	0.82	0.23	107,107,107,107	0
56	MG	AA	1642	1/1	0.82	0.23	94,94,94,94	0
56	MG	AA	1636	1/1	0.82	0.37	103,103,103,103	0
56	MG	DA	3077	1/1	0.82	0.41	98,98,98,98	0
56	MG	DA	3086	1/1	0.82	0.11	97,97,97,97	0
56	MG	DA	3036	1/1	0.83	0.30	90,90,90,90	0
56	MG	BA	3139	1/1	0.83	0.77	83,83,83,83	0
56	MG	AA	1615	1/1	0.83	0.14	112,112,112,112	0
56	MG	DA	3112	1/1	0.83	0.26	108,108,108,108	0
56	MG	BA	3073	1/1	0.83	0.15	101,101,101,101	0
56	MG	BA	3106	1/1	0.83	0.36	100,100,100,100	0
56	MG	DA	3118	1/1	0.83	0.28	88,88,88,88	0
56	MG	DA	3053	1/1	0.83	0.19	93,93,93,93	0
56	MG	CA	1658	1/1	0.83	0.64	115,115,115,115	0
56	MG	CA	1619	1/1	0.83	0.13	93,93,93,93	0
56	MG	BA	3062	1/1	0.83	0.47	91,91,91,91	0
56	MG	AA	1652	1/1	0.83	0.37	101,101,101,101	0
56	MG	DA	3043	1/1	0.83	0.14	90,90,90,90	0
56	MG	BA	3077	1/1	0.83	0.52	121,121,121,121	0
56	MG	BA	3048	1/1	0.83	0.09	93,93,93,93	0
56	MG	BB	202	1/1	0.83	0.69	123,123,123,123	0
56	MG	DA	3105	1/1	0.83	0.40	90,90,90,90	0
56	MG	DA	3044	1/1	0.83	0.36	105,105,105,105	0
57	NMY	BA	3164	42/42	0.83	0.33	90,100,104,105	42
56	MG	BA	3067	1/1	0.84	0.11	89,89,89,89	0
56	MG	CA	1625	1/1	0.84	0.20	107,107,107,107	0
56	MG	BA	3044	1/1	0.84	0.32	114,114,114,114	0
56	MG	DA	3153	1/1	0.84	0.21	95,95,95,95	0
56	MG	CA	1669	1/1	0.84	0.35	107,107,107,107	0
56	MG	BA	3016	1/1	0.84	0.17	83,83,83,83	0
56	MG	DA	3029	1/1	0.84	0.24	84,84,84,84	0
56	MG	BA	3132	1/1	0.84	0.18	96,96,96,96	0
56	MG	DE	301	1/1	0.84	0.12	100,100,100,100	0
57	NMY	AA	1656	42/42	0.84	0.30	94,99,103,104	42

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3104	1/1	0.84	0.20	81,81,81,81	0
56	MG	BA	3051	1/1	0.85	0.38	106,106,106,106	0
56	MG	DA	3032	1/1	0.85	0.52	97,97,97,97	0
56	MG	AA	1624	1/1	0.85	0.40	110,110,110,110	0
56	MG	DA	3101	1/1	0.85	0.36	86,86,86,86	0
56	MG	BA	3103	1/1	0.85	0.94	105,105,105,105	0
56	MG	AA	1643	1/1	0.85	0.18	110,110,110,110	0
56	MG	BA	3089	1/1	0.85	0.19	109,109,109,109	0
57	NMY	BA	3162	42/42	0.85	0.26	65,79,86,93	42
56	MG	DA	3145	1/1	0.85	0.41	91,91,91,91	0
56	MG	CA	1646	1/1	0.85	0.32	95,95,95,95	0
56	MG	BA	3049	1/1	0.85	0.28	88,88,88,88	0
56	MG	BA	3144	1/1	0.85	0.40	87,87,87,87	0
56	MG	DA	3028	1/1	0.85	0.31	85,85,85,85	0
56	MG	DA	3103	1/1	0.85	0.35	81,81,81,81	0
56	MG	CA	1642	1/1	0.85	0.29	106,106,106,106	0
56	MG	AA	1621	1/1	0.85	0.40	116,116,116,116	0
56	MG	DA	3067	1/1	0.85	0.38	120,120,120,120	0
56	MG	CA	1650	1/1	0.85	0.50	102,102,102,102	0
56	MG	DA	3132	1/1	0.85	0.15	96,96,96,96	0
56	MG	DA	3049	1/1	0.85	0.31	97,97,97,97	0
56	MG	BA	3147	1/1	0.85	0.52	95,95,95,95	0
56	MG	DA	3070	1/1	0.85	0.23	56,56,56,56	0
57	NMY	BA	3166	42/42	0.86	0.25	68,77,83,90	42
56	MG	DA	3154	1/1	0.86	0.67	86,86,86,86	0
56	MG	CA	1666	1/1	0.86	0.24	112,112,112,112	0
56	MG	BA	3031	1/1	0.86	0.24	87,87,87,87	0
56	MG	CA	1664	1/1	0.86	0.30	112,112,112,112	0
57	NMY	BA	3161	42/42	0.86	0.25	61,70,77,82	42
56	MG	DA	3015	1/1	0.86	0.76	124,124,124,124	0
56	MG	BA	3127	1/1	0.86	0.42	95,95,95,95	0
56	MG	BA	3111	1/1	0.86	0.25	98,98,98,98	0
56	MG	DA	3157	1/1	0.86	0.38	96,96,96,96	0
56	MG	DA	3014	1/1	0.86	0.23	90,90,90,90	0
56	MG	BA	3064	1/1	0.86	0.18	96,96,96,96	0
56	MG	BA	3169	1/1	0.86	0.29	101,101,101,101	0
56	MG	DA	3031	1/1	0.86	0.28	108,108,108,108	0
56	MG	DA	3078	1/1	0.86	0.19	84,84,84,84	0
56	MG	DA	3146	1/1	0.86	0.37	76,76,76,76	0
56	MG	DA	3117	1/1	0.86	0.18	93,93,93,93	0
56	MG	DA	3017	1/1	0.87	0.25	76,76,76,76	0
56	MG	DA	3002	1/1	0.87	0.08	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3135	1/1	0.87	0.21	71,71,71,71	0
56	MG	DA	3009	1/1	0.87	0.36	102,102,102,102	0
56	MG	DA	3016	1/1	0.87	0.21	103,103,103,103	0
56	MG	BA	3074	1/1	0.87	0.36	115,115,115,115	0
56	MG	DA	3113	1/1	0.87	0.48	106,106,106,106	0
56	MG	BA	3170	1/1	0.88	0.39	88,88,88,88	0
56	MG	BA	3097	1/1	0.88	1.23	111,111,111,111	0
56	MG	BA	3014	1/1	0.88	0.63	106,106,106,106	0
56	MG	DA	3037	1/1	0.88	0.25	72,72,72,72	0
56	MG	BA	3136	1/1	0.88	0.49	94,94,94,94	0
56	MG	DA	3159	1/1	0.88	0.53	90,90,90,90	0
56	MG	DA	3048	1/1	0.88	0.35	96,96,96,96	0
56	MG	BA	3043	1/1	0.88	0.19	108,108,108,108	0
56	MG	DA	3163	1/1	0.88	0.26	99,99,99,99	0
56	MG	DA	3047	1/1	0.88	0.20	76,76,76,76	0
56	MG	BA	3093	1/1	0.88	0.51	109,109,109,109	0
56	MG	BA	3076	1/1	0.88	0.37	120,120,120,120	0
56	MG	CA	1614	1/1	0.88	0.21	120,120,120,120	0
57	NMY	DA	3184	42/42	0.88	0.25	57,71,80,89	42
56	MG	DA	3136	1/1	0.89	0.55	74,74,74,74	0
56	MG	BA	3036	1/1	0.89	0.14	95,95,95,95	0
56	MG	BA	3065	1/1	0.89	0.31	101,101,101,101	0
56	MG	DA	3120	1/1	0.89	0.22	98,98,98,98	0
56	MG	DA	3149	1/1	0.89	0.33	107,107,107,107	0
56	MG	BB	203	1/1	0.89	0.13	107,107,107,107	0
56	MG	BA	3135	1/1	0.89	0.72	74,74,74,74	0
56	MG	AA	1620	1/1	0.89	0.25	118,118,118,118	0
56	MG	BA	3029	1/1	0.89	0.23	99,99,99,99	0
56	MG	DA	3160	1/1	0.89	0.77	92,92,92,92	0
56	MG	BA	3010	1/1	0.89	0.12	85,85,85,85	0
56	MG	DA	3001	1/1	0.89	0.12	91,91,91,91	0
57	NMY	AA	1655	42/42	0.89	0.21	61,73,90,121	0
56	MG	DA	3106	1/1	0.89	0.52	100,100,100,100	0
56	MG	BA	3119	1/1	0.89	0.20	106,106,106,106	0
56	MG	BA	3141	1/1	0.89	0.13	114,114,114,114	0
56	MG	BA	3063	1/1	0.89	0.64	106,106,106,106	0
57	NMY	DA	3187	42/42	0.90	0.32	106,109,112,114	42
56	MG	DA	3183	1/1	0.90	0.53	87,87,87,87	0
56	MG	DA	3054	1/1	0.90	0.25	93,93,93,93	0
56	MG	BA	3137	1/1	0.90	0.39	82,82,82,82	0
56	MG	DA	3005	1/1	0.90	0.16	88,88,88,88	0
56	MG	AA	1637	1/1	0.90	0.23	103,103,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3075	1/1	0.90	0.42	106,106,106,106	0
56	MG	CA	1641	1/1	0.90	0.22	85,85,85,85	0
56	MG	BA	3128	1/1	0.90	0.12	94,94,94,94	0
56	MG	AA	1635	1/1	0.90	0.25	105,105,105,105	0
56	MG	BA	3008	1/1	0.90	0.30	107,107,107,107	0
56	MG	DA	3019	1/1	0.91	0.29	78,78,78,78	0
56	MG	CA	1640	1/1	0.91	0.99	114,114,114,114	0
56	MG	DA	3041	1/1	0.91	0.11	81,81,81,81	0
56	MG	BA	3033	1/1	0.91	0.51	98,98,98,98	0
57	NMY	DA	3186	42/42	0.91	0.27	53,58,64,71	42
56	MG	DA	3147	1/1	0.91	0.82	107,107,107,107	0
56	MG	DA	3033	1/1	0.91	0.15	91,91,91,91	0
56	MG	CA	1630	1/1	0.91	0.24	118,118,118,118	0
56	MG	DA	3124	1/1	0.91	0.26	78,78,78,78	0
57	NMY	DA	3185	42/42	0.91	0.22	46,58,63,67	42
57	NMY	DA	3189	42/42	0.91	0.23	55,63,70,72	42
56	MG	BA	3130	1/1	0.91	0.59	103,103,103,103	0
56	MG	DA	3114	1/1	0.91	0.18	77,77,77,77	0
56	MG	DA	3013	1/1	0.91	0.47	107,107,107,107	0
56	MG	BA	3046	1/1	0.91	0.18	109,109,109,109	0
56	MG	BA	3084	1/1	0.92	0.19	95,95,95,95	0
56	MG	CA	1671	1/1	0.92	0.28	96,96,96,96	0
56	MG	DA	3027	1/1	0.92	0.17	79,79,79,79	0
56	MG	AA	1608	1/1	0.92	0.38	114,114,114,114	0
56	MG	BA	3035	1/1	0.92	0.19	94,94,94,94	0
57	NMY	CA	1672	42/42	0.92	0.24	54,65,74,77	42
56	MG	BA	3038	1/1	0.92	0.21	104,104,104,104	0
56	MG	CA	1644	1/1	0.92	1.24	118,118,118,118	0
56	MG	BA	3045	1/1	0.92	0.16	118,118,118,118	0
56	MG	BA	3150	1/1	0.92	0.62	95,95,95,95	0
56	MG	BA	3094	1/1	0.92	0.23	92,92,92,92	0
56	MG	DA	3091	1/1	0.92	0.23	104,104,104,104	0
56	MG	DA	3093	1/1	0.92	0.62	105,105,105,105	0
56	MG	BA	3080	1/1	0.93	0.15	73,73,73,73	0
56	MG	BA	3140	1/1	0.93	0.22	101,101,101,101	0
56	MG	DA	3133	1/1	0.93	0.22	100,100,100,100	0
56	MG	BA	3101	1/1	0.93	0.54	102,102,102,102	0
56	MG	DA	3158	1/1	0.93	0.29	91,91,91,91	0
56	MG	BA	3104	1/1	0.93	0.59	106,106,106,106	0
56	MG	DA	3181	1/1	0.93	0.39	77,77,77,77	0
56	MG	BA	3113	1/1	0.94	0.41	121,121,121,121	0
56	MG	CA	1604	1/1	0.94	0.10	86,86,86,86	0

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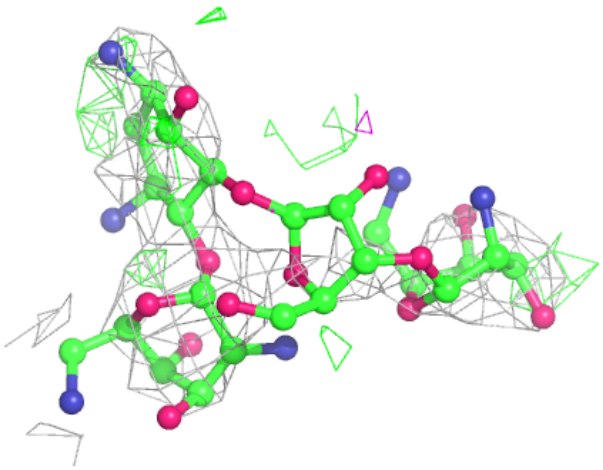
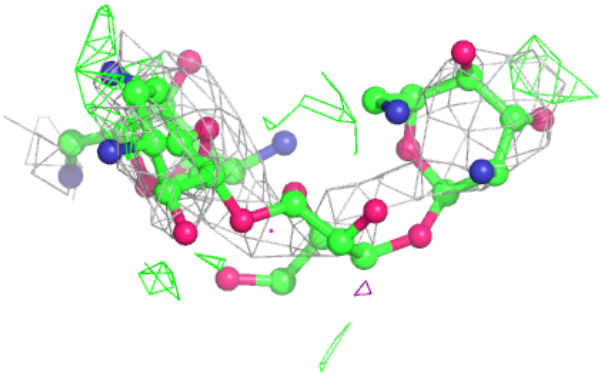
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	ZN	D4	101	1/1	0.94	0.44	162,162,162,162	0
56	MG	DA	3168	1/1	0.94	0.20	89,89,89,89	0
56	MG	DA	3125	1/1	0.94	0.19	113,113,113,113	0
57	NMY	DA	3188	42/42	0.94	0.21	45,60,66,70	42
56	MG	DA	3175	1/1	0.94	0.71	75,75,75,75	0
56	MG	DA	3080	1/1	0.94	0.31	100,100,100,100	0
56	MG	AA	1611	1/1	0.94	0.07	104,104,104,104	0
56	MG	DA	3144	1/1	0.95	0.19	108,108,108,108	0
56	MG	DA	3038	1/1	0.95	0.25	81,81,81,81	0
58	ZN	B4	101	1/1	0.95	0.19	186,186,186,186	0
56	MG	AA	1634	1/1	0.95	0.51	120,120,120,120	0
56	MG	BA	3042	1/1	0.95	0.10	97,97,97,97	0
56	MG	DA	3058	1/1	0.95	0.43	96,96,96,96	0
56	MG	DA	3126	1/1	0.95	0.14	60,60,60,60	0
56	MG	DA	3143	1/1	0.95	1.31	79,79,79,79	0
56	MG	BA	3037	1/1	0.95	0.75	97,97,97,97	0
56	MG	DA	3178	1/1	0.96	0.23	88,88,88,88	0
56	MG	BA	3039	1/1	0.96	0.15	96,96,96,96	0
56	MG	DA	3141	1/1	0.96	0.73	73,73,73,73	0
56	MG	BA	3028	1/1	0.96	0.28	89,89,89,89	0
56	MG	DA	3089	1/1	0.96	0.12	97,97,97,97	0
56	MG	DA	3099	1/1	0.96	0.17	90,90,90,90	0
56	MG	DA	3063	1/1	0.97	0.10	69,69,69,69	0
56	MG	CA	1662	1/1	0.97	0.12	114,114,114,114	0
56	MG	BA	3002	1/1	0.97	0.16	89,89,89,89	0

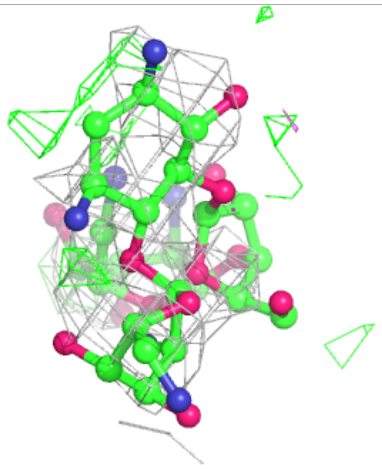
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around NMY DA 3190:

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

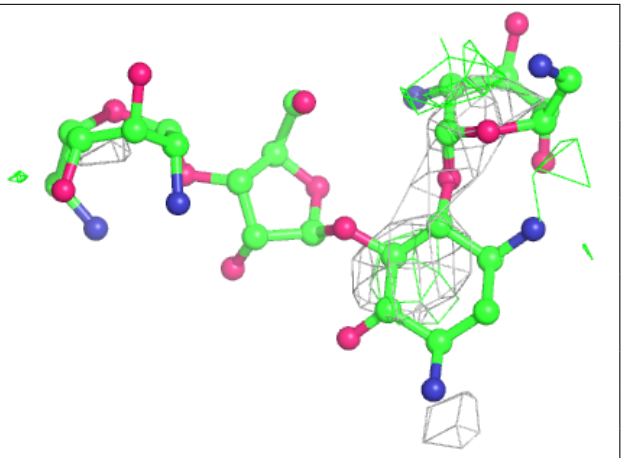


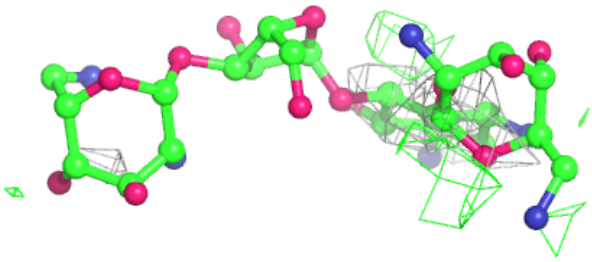


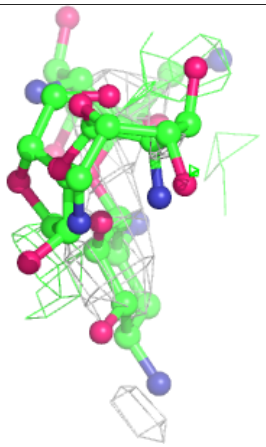


Electron density around NMY AA 1657:

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

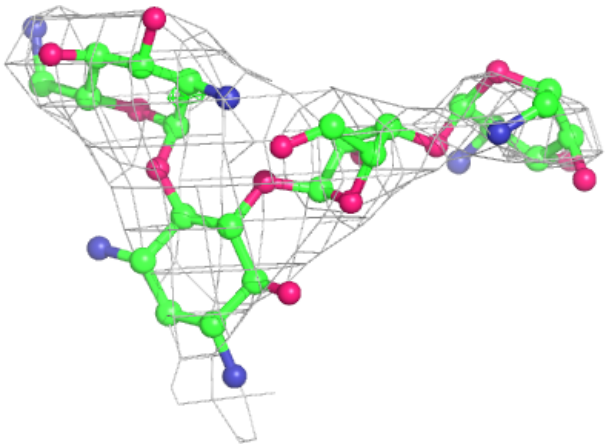


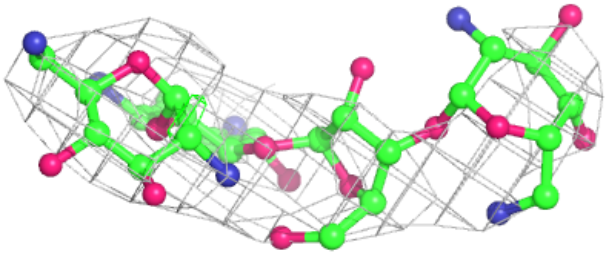


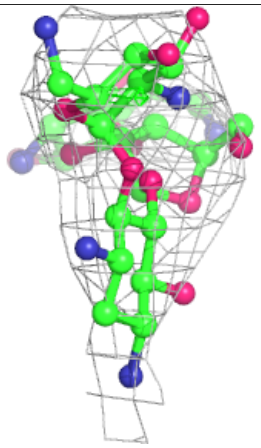


Electron density around NMY BA 3167:

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

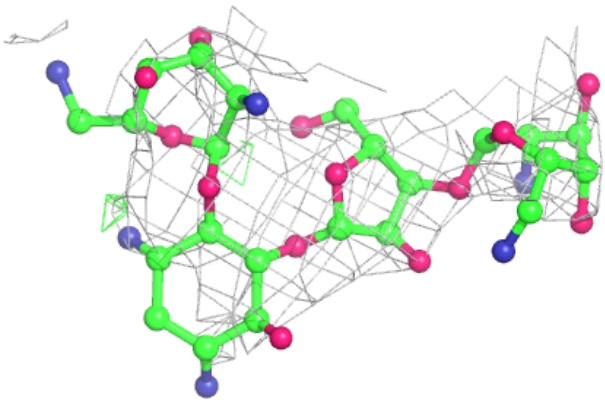


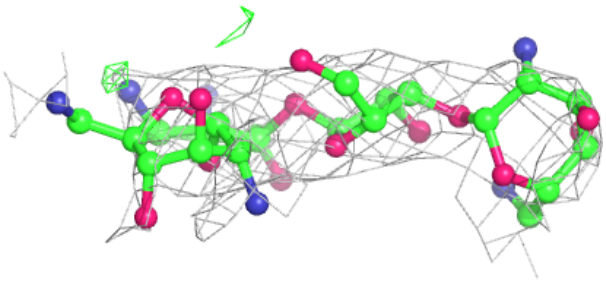


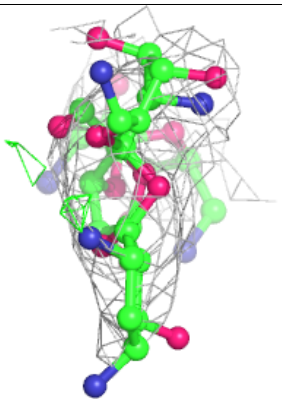


Electron density around NMY BA 3163:

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

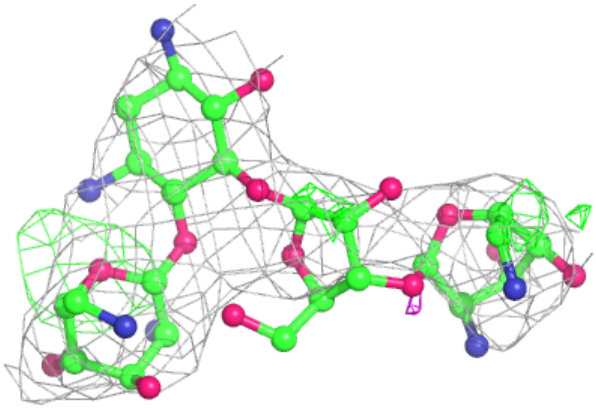


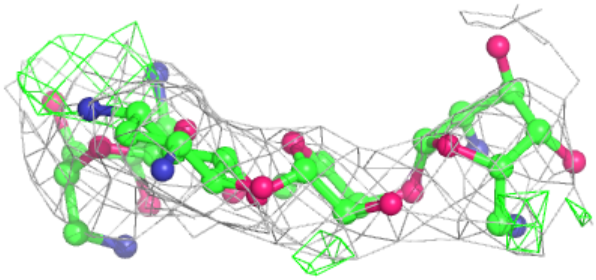


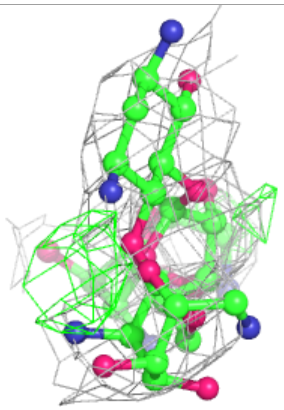


Electron density around NMY BA 3165:

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

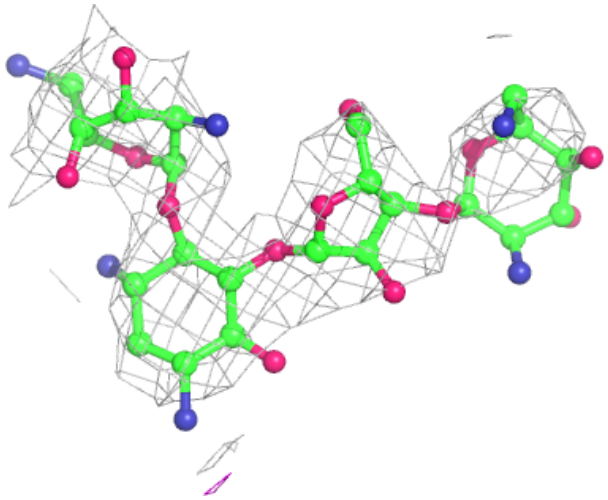


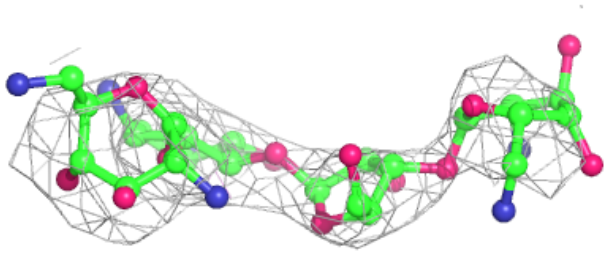


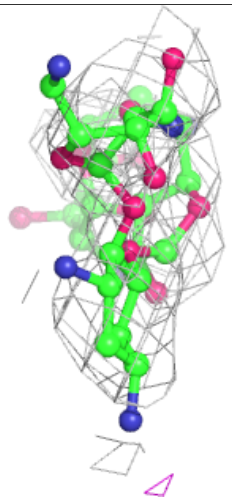


Electron density around NMY BA 3164:

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

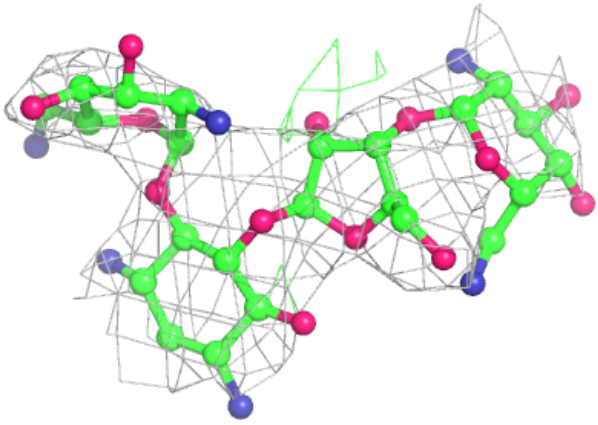


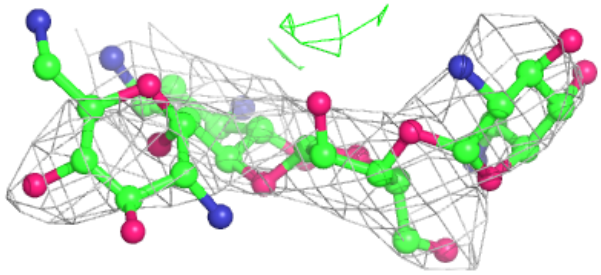


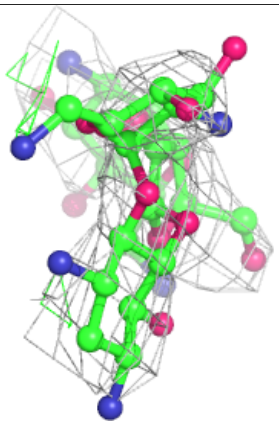


Electron density around NMY AA 1656:

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

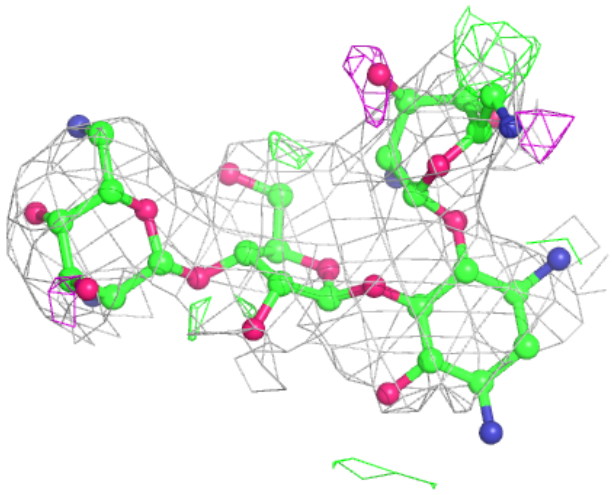


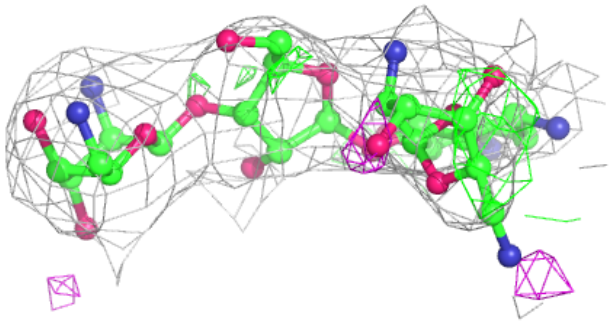


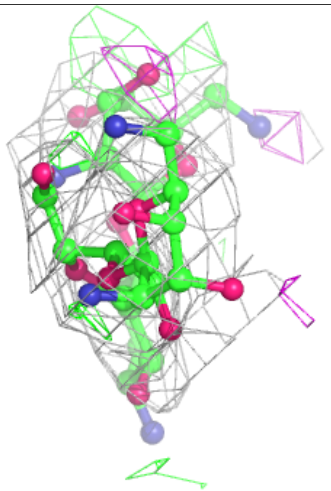


Electron density around NMY BA 3162:

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

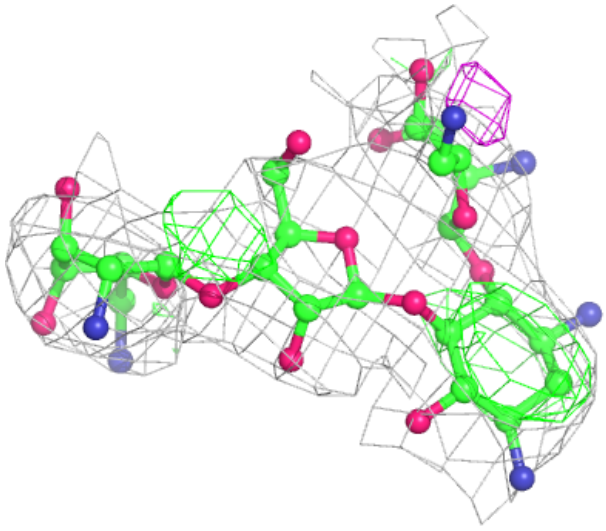


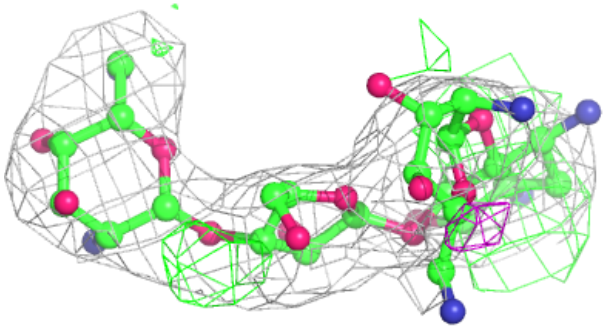


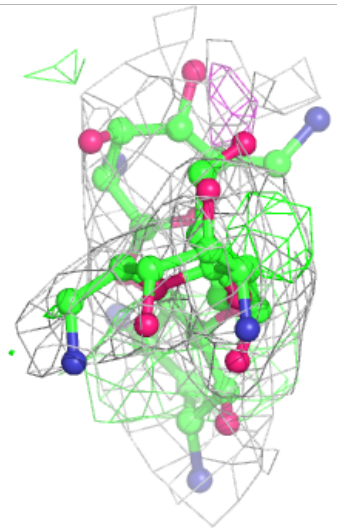


Electron density around NMY BA 3166:

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

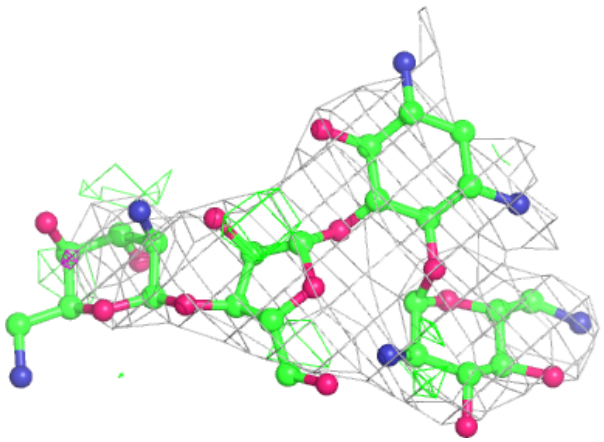


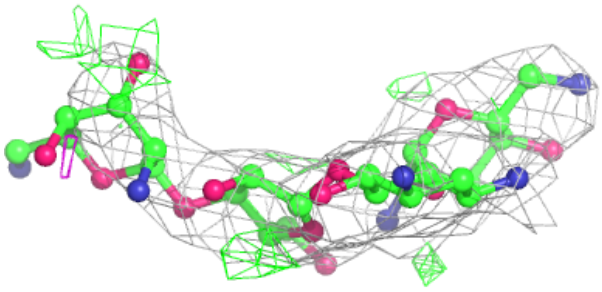


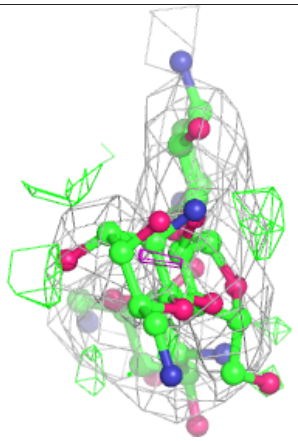


Electron density around NMY BA 3161:

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

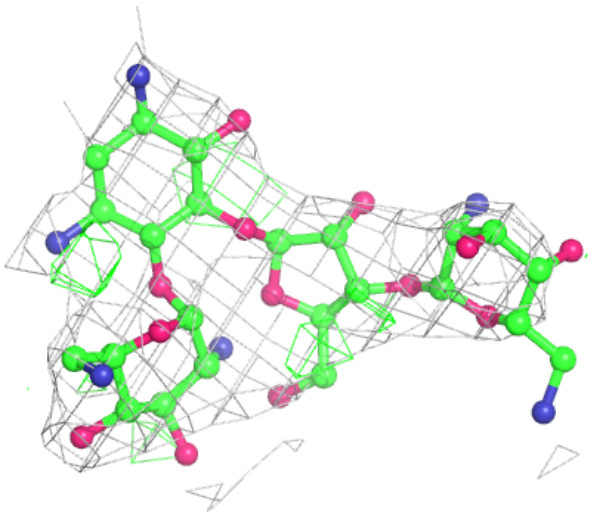


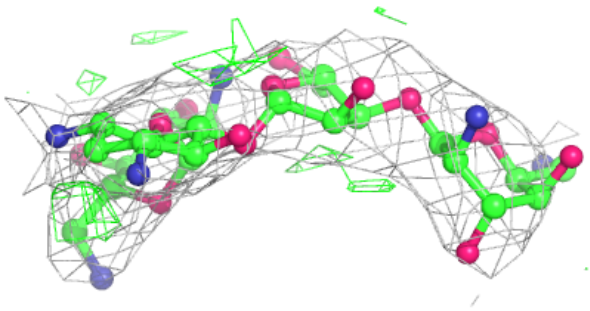


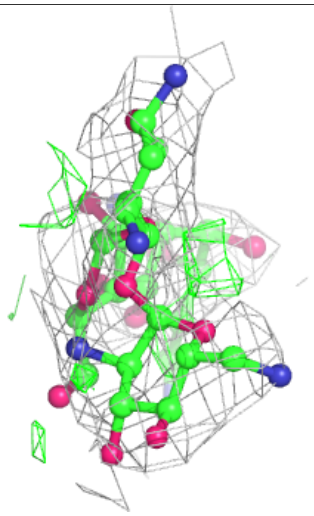


Electron density around NMY DA 3184:

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

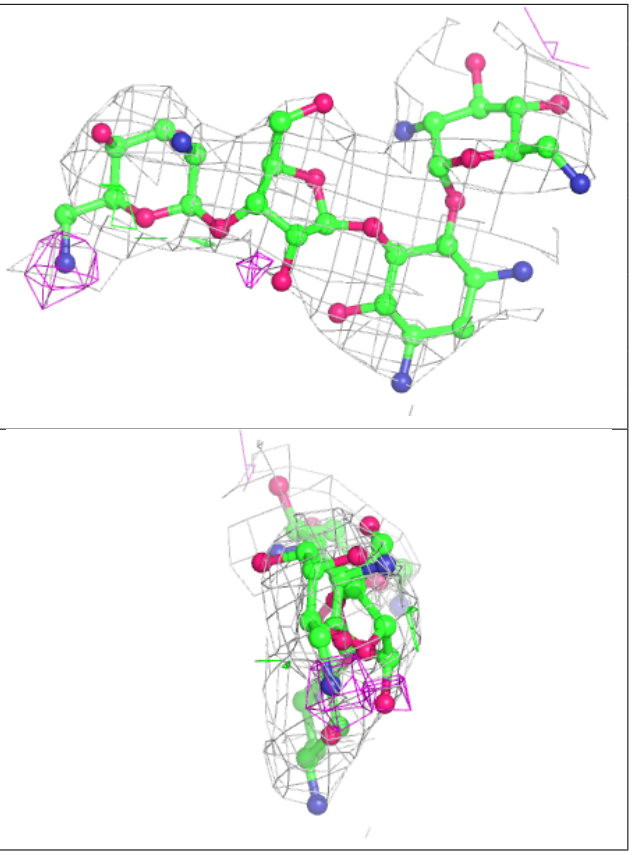






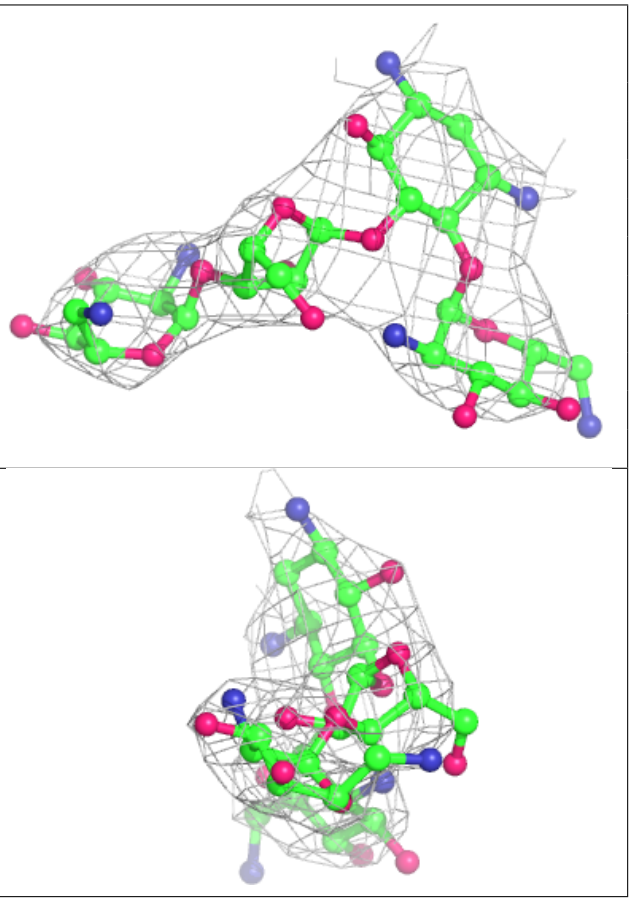
Electron density around NMY AA 1655:

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



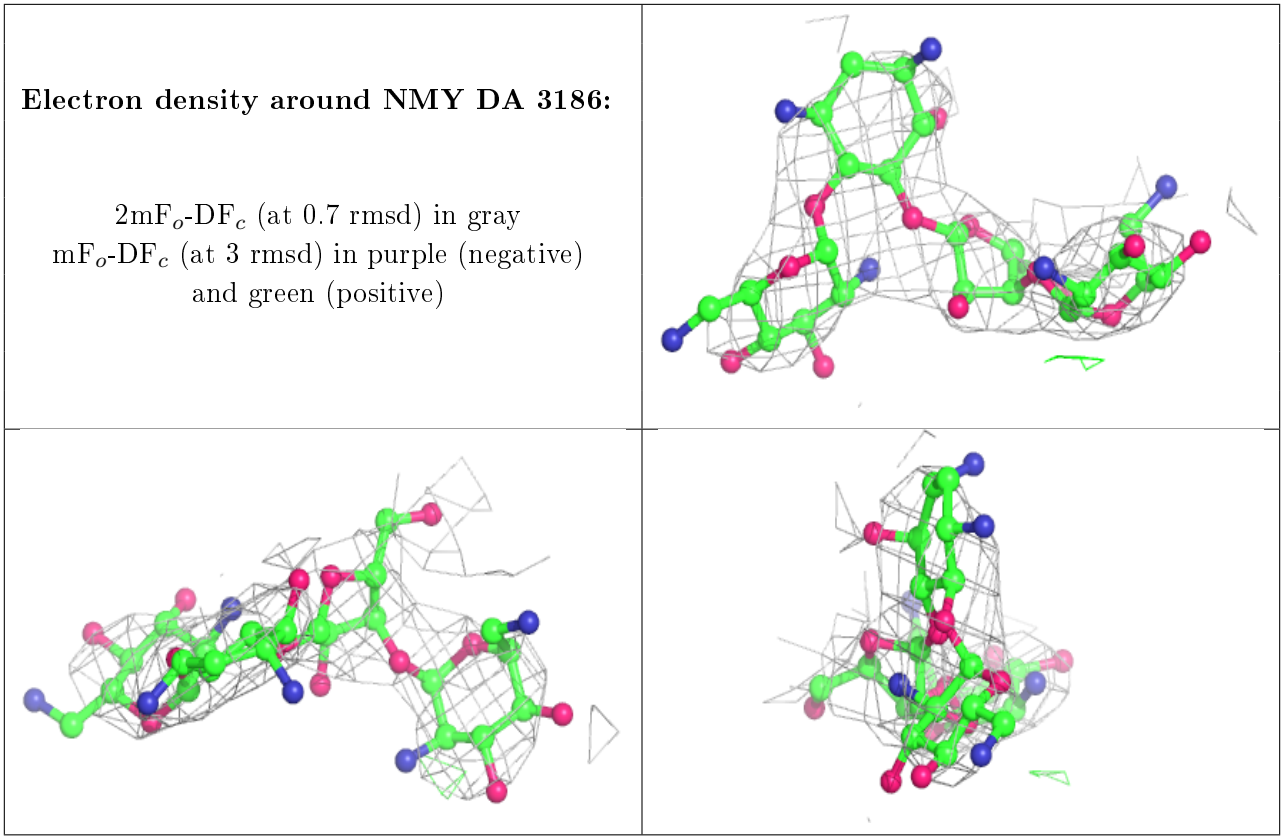
Electron density around NMY DA 3187:

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



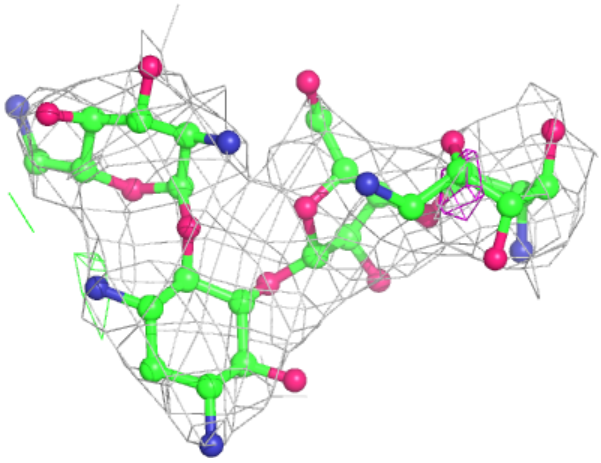
Electron density around NMY DA 3186:

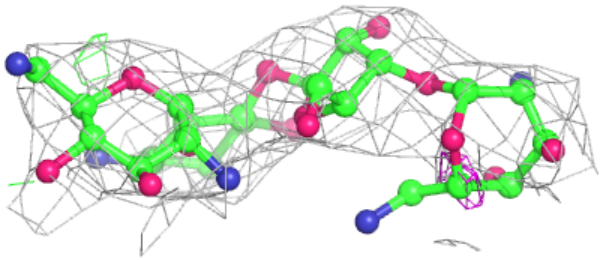
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

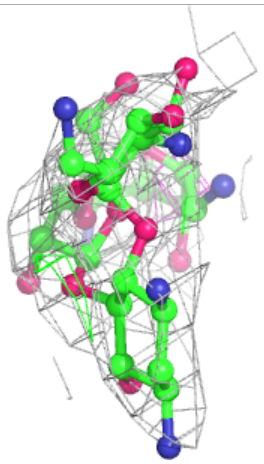


Electron density around NMY DA 3185:

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

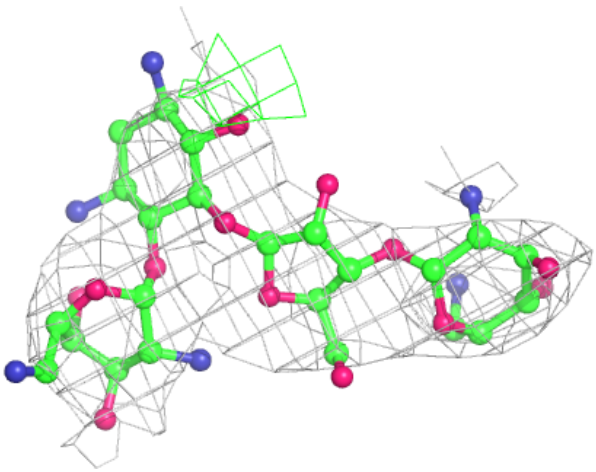


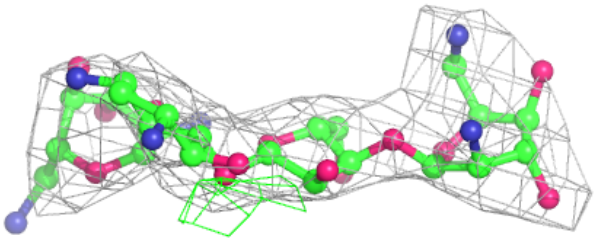


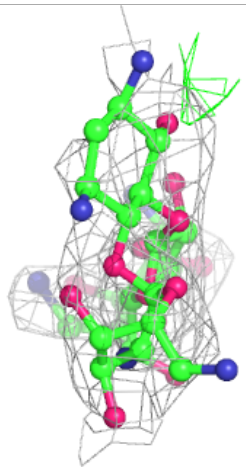


Electron density around NMY DA 3189:

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

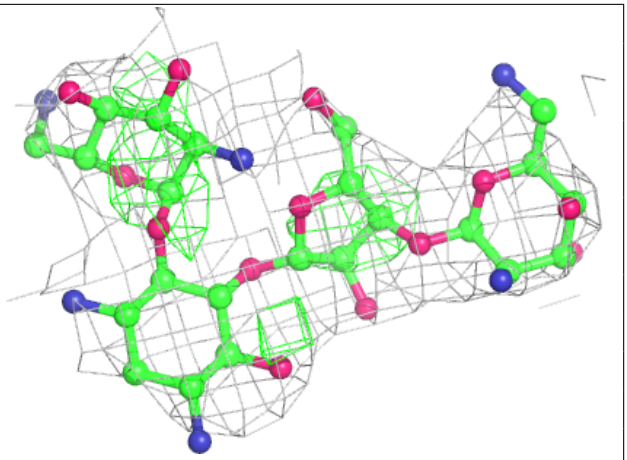


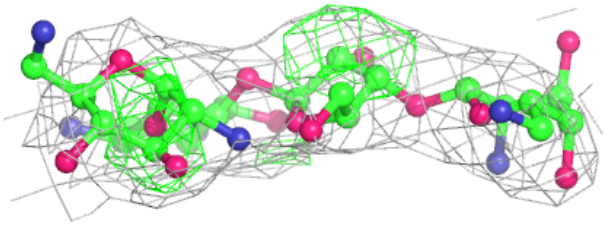


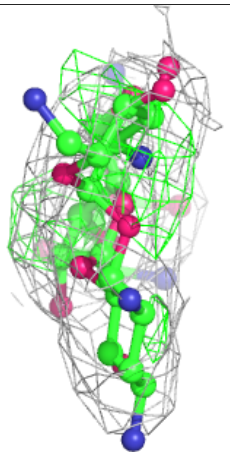


Electron density around NMY CA 1672:

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

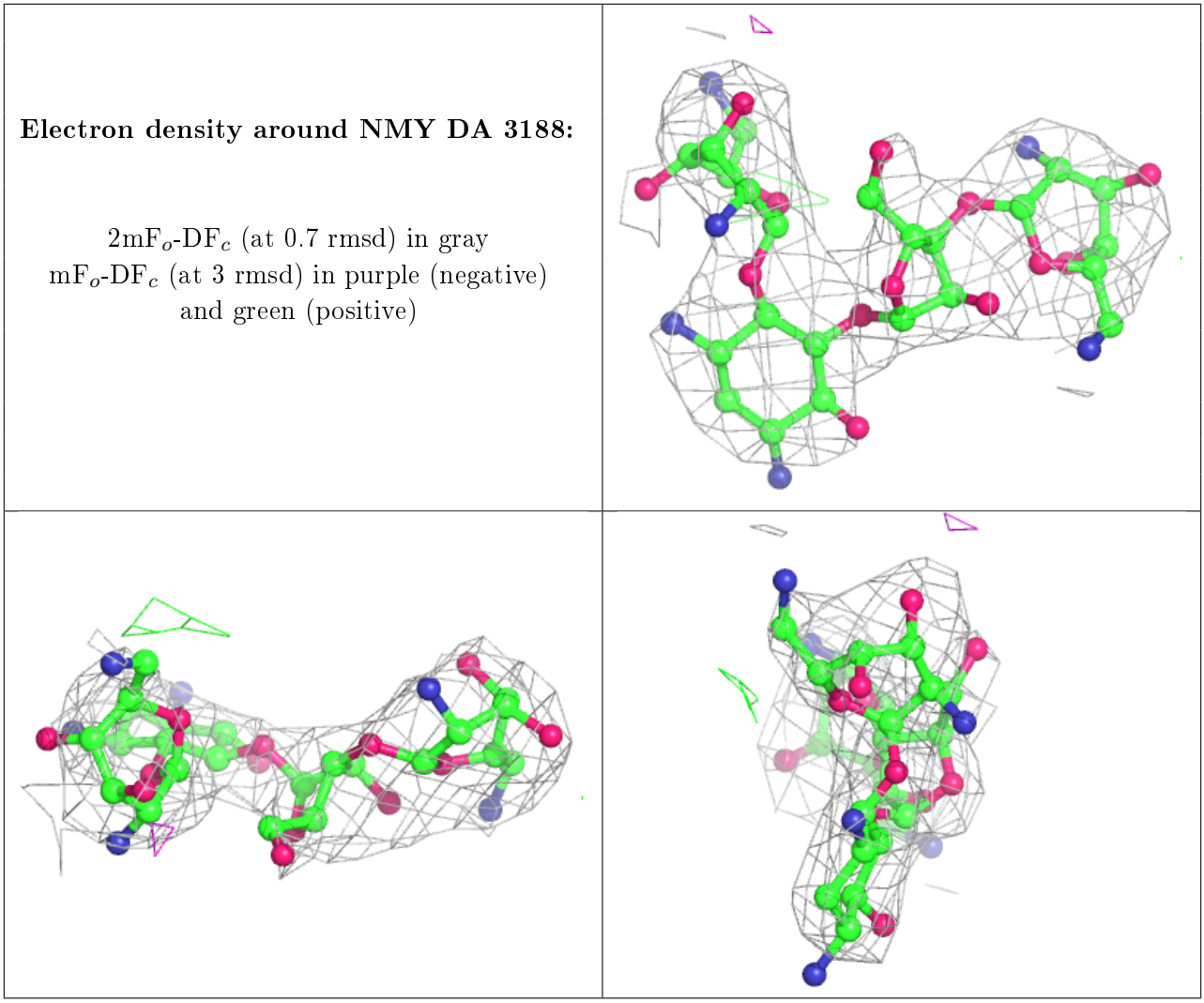






Electron density around NMY DA 3188:

$2mF_o$-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

There are no such residues in this entry.