wwPDB EM Validation Summary Report ⓘ

Dec 29, 2024 – 11:44 PM EST

PDB ID : 7Z34
EMDB ID : EMD-14471
Title : Structure of pre-60S particle bound to DRG1(AFG2).
Authors : Prattes, M.; Grishkovskaya, I.; Bergler, H.; Haselbach, D.
Deposited on : 2022-03-01
Resolution : 3.80 Å(reported)
Based on initial model : 6N8K

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

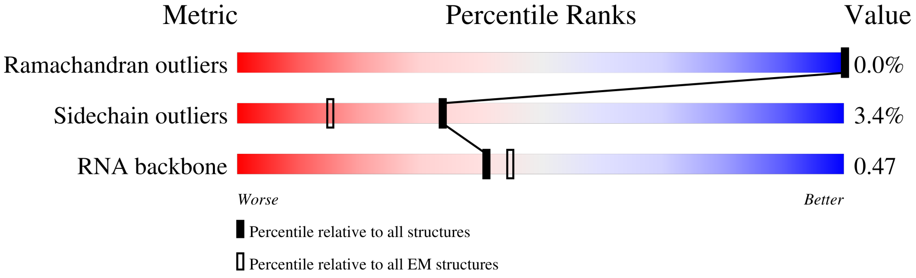
EMDB validation analysis : 0.0.1.dev113
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.40

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

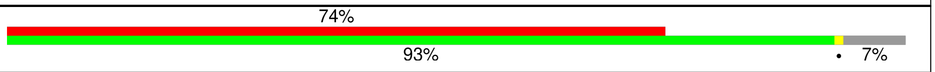
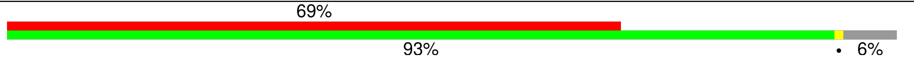
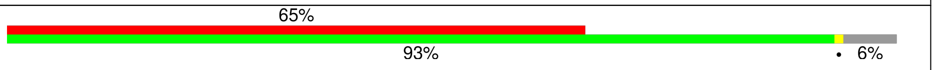
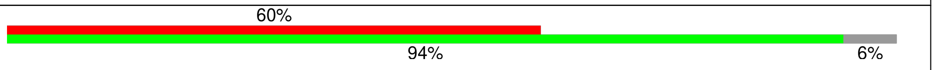
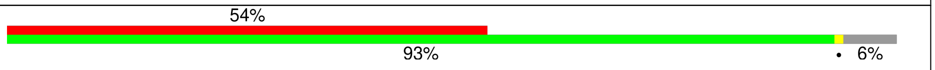
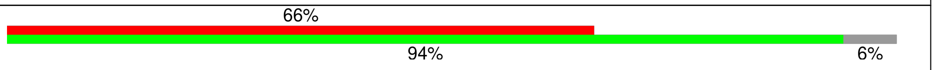
The reported resolution of this entry is 3.80 Å.

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.



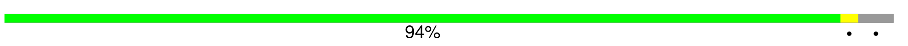
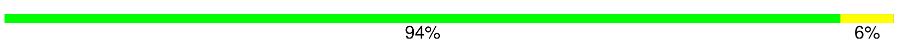
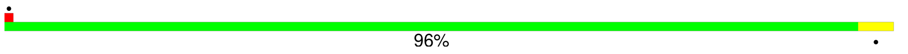
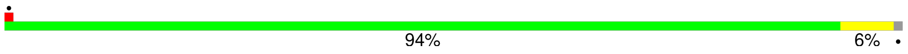
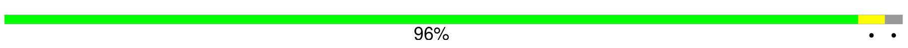
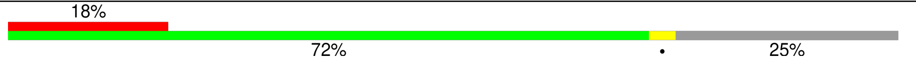
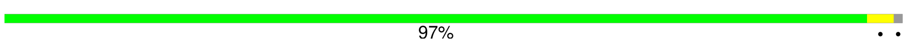
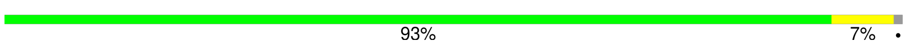
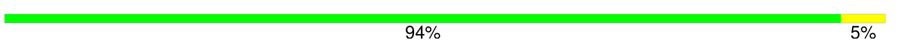
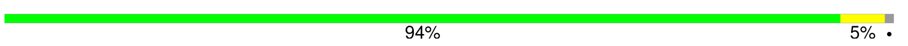
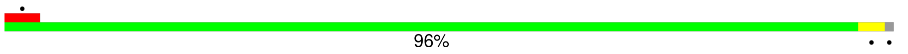
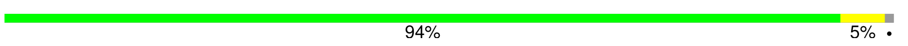
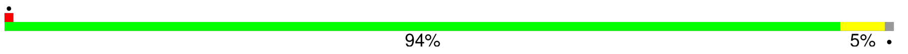
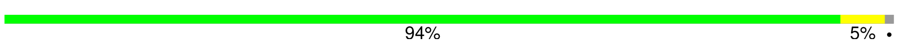
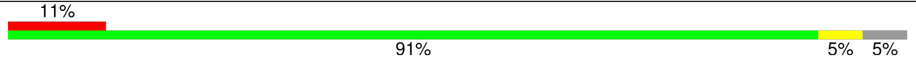
Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	Aa	780	
1	m	780	
1	n	780	
1	t	780	
1	w	780	
1	x	780	
2	1	3396	
3	2	121	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	3	158	
5	4	593	
6	A	254	
7	B	387	
8	C	362	
9	D	297	
10	E	176	
11	F	244	
12	G	256	
13	H	191	
14	I	166	
15	J	174	
16	K	149	
17	L	199	
18	M	138	
19	N	204	
20	O	199	
21	P	184	
22	Q	186	
23	R	189	
24	S	172	
25	T	160	
26	U	121	
27	V	137	
28	W	236	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	X	142	• 81% • 15%
30	Y	127	• 96% • •
31	Z	136	• 93% 7% •
32	a	165	25% 93% • •
33	b	647	7% 93% • •
34	c	105	90% • 8%
35	d	113	• 90% • 5%
36	e	130	• 94% 5% •
37	f	107	93% 6% •
38	g	121	88% • 7%
39	h	120	• 93% 6% •
40	i	100	92% • •
41	j	88	• 93% • •
42	k	78	94% 5% •
43	l	51	• 94% • •
44	o	59	• 88% • 8%
45	p	92	• 96% • •
46	q	106	10% 94% 5% •
47	r	261	7% 21% 79%
48	u	199	73% • 25%
49	v	518	• 47% • 53%
50	y	245	• 87% 6% 7%
51	z	106	48% • 48%
52	0	19	63% 100%
53	oC	170	• 100%

2 Entry composition ⓘ

There are 55 unique types of molecules in this entry. The entry contains 177847 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called ATPase family gene 2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	Aa	728	5590	3536	954	1078	22	0	0
1	m	730	5594	3533	958	1081	22	0	0
1	n	730	5602	3541	958	1081	22	0	0
1	t	731	5611	3547	960	1082	22	0	0
1	w	734	5630	3556	963	1089	22	0	0
1	x	734	5630	3556	963	1089	22	0	0

- Molecule 2 is a RNA chain called 35S pre-ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	1	3347	71573	31964	12868	23394	3347	0	0

- Molecule 3 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	2	121	2579	1152	461	845	121	0	0

- Molecule 4 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	3	157	3333	1491	584	1101	157	0	0

- Molecule 5 is a protein called Probable metalloprotease ARX1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	4	560	4331	2732	747	837	15	0	0

- Molecule 6 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	A	245	1863	1162	376	324	1	0	0

- Molecule 7 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	B	386	3082	1956	584	534	8	0	0

- Molecule 8 is a protein called 60S ribosomal protein L4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	C	361	2750	1730	522	495	3	0	0

- Molecule 9 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	D	273	2204	1391	382	429	2	0	0

- Molecule 10 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	E	175	1401	902	251	247	1	0	0

- Molecule 11 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	F	222	1785	1151	324	309	1	0	0

- Molecule 12 is a protein called 60S ribosomal protein L8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	G	230	1798	1149	323	323	3	0	0

- Molecule 13 is a protein called 60S ribosomal protein L9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	H	188	1493	948	271	270	4	0	0

- Molecule 14 is a protein called Bud site selection protein 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	I	124	1003	628	186	185	4	0	0

- Molecule 15 is a protein called 60S ribosomal protein L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	J	164	1312	822	245	242	3	0	0

- Molecule 16 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	K	148	1173	749	231	190	3	0	0

- Molecule 17 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
17	L	193	1543	962	315	266	0	0

- Molecule 18 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	M	137	1060	678	200	180	2	0	0

- Molecule 19 is a protein called 60S ribosomal protein L15-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	N	203	1721	1077	361	282	1	0	0

- Molecule 20 is a protein called 60S ribosomal protein L16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	O	197	1556	1003	289	263	1	0	0

- Molecule 21 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
21	P	183	1443	896	287	260	0	0

- Molecule 22 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	Q	154	1191	753	231	205	2	0	0

- Molecule 23 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
23	R	154	1241	772	262	207	0	0

- Molecule 24 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	S	170	1425	916	265	241	3	0	0

- Molecule 25 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	T	159	1276	805	246	221	4	0	0

- Molecule 26 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
26	U	104	Total 826	C 535	N 136	O 155	0	0

- Molecule 27 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	V	136	Total 1004	C 628	N 189	O 180	S 7	0	0

- Molecule 28 is a protein called Ribosome assembly factor MRT4.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	W	225	Total 1810	C 1148	N 306	O 351	S 5	0	0

- Molecule 29 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	X	120	Total 960	C 617	N 168	O 173	S 2	0	0

- Molecule 30 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
30	Y	126	Total 994	C 625	N 192	O 177	0	0

- Molecule 31 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
31	Z	135	Total 1093	C 710	N 202	O 181	0	0

- Molecule 32 is a protein called 60S ribosomal protein L12-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	a	158	Total 1196	C 750	N 216	O 228	S 2	0	0

- Molecule 33 is a protein called Nucleolar GTP-binding protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	b	630	5087	3185	914	962	26	0	0

- Molecule 34 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	c	97	743	479	124	139	1	0	0

- Molecule 35 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	d	107	873	553	165	154	1	0	0

- Molecule 36 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	e	128	1029	652	206	170	1	0	0

- Molecule 37 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	f	106	851	540	165	145	1	0	0

- Molecule 38 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	g	112	881	546	179	152	4	0	0

- Molecule 39 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	h	119	970	615	186	168	1	0	0

- Molecule 40 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	i	96	Total	C	N	O	S	0	0
			743	465	148	128	2		

- Molecule 41 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	j	85	Total	C	N	O	S	0	0
			670	408	146	111	5		

- Molecule 42 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	k	77	Total	C	N	O	0	0
			613	391	115	107		

- Molecule 43 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	l	50	Total	C	N	O	S	0	0
			437	272	97	66	2		

- Molecule 44 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
44	o	54	Total	C	N	O	0	0
			434	271	94	69		

- Molecule 45 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	p	91	Total	C	N	O	S	0	0
			695	429	138	122	6		

- Molecule 46 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	q	105	Total	C	N	O	S	0	0
			848	534	170	139	5		

- Molecule 47 is a protein called Ribosome biogenesis protein NSA2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
47	r	55	470	291	100	78	1	0	0

- Molecule 48 is a protein called Ribosome biogenesis protein RLP24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	u	149	1256	788	252	207	9	0	0

- Molecule 49 is a protein called 60S ribosomal export protein NMD3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
49	v	245	1946	1250	329	360	7	0	0

- Molecule 50 is a protein called Eukaryotic translation initiation factor 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
50	y	228	1722	1068	299	349	6	0	0

- Molecule 51 is a protein called UPF0642 protein YBL028C.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
51	z	55	444	273	88	83	0	0

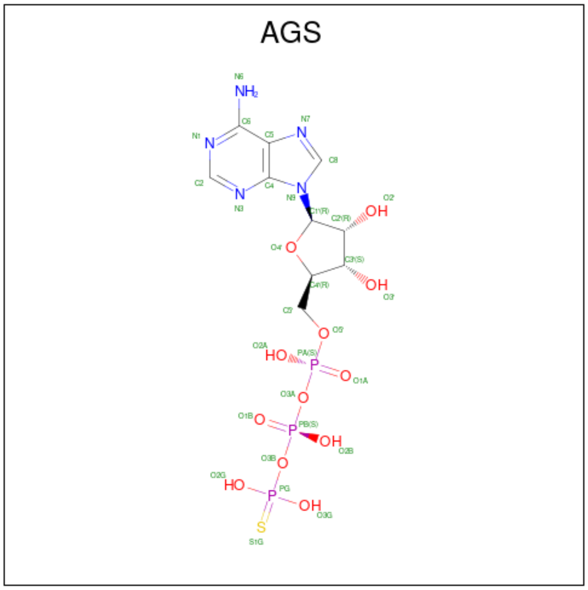
- Molecule 52 is a protein called Unknown peptide.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
52	0	19	96	57	19	20	0	0

- Molecule 53 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
53	oC	170	1021	680	170	171	0	0

- Molecule 54 is PHOSPHOTHIOPHOSPHORIC ACID-ADENYLATE ESTER (three-letter code: AGS) (formula: $C_{10}H_{16}N_5O_{12}P_3S$).



Mol	Chain	Residues	Atoms	AltConf
54	Aa	1	Total C N O P S 31 10 5 12 3 1	0
54	Aa	1	Total C N O P S 31 10 5 12 3 1	0
54	m	1	Total C N O P S 31 10 5 12 3 1	0
54	m	1	Total C N O P S 31 10 5 12 3 1	0
54	n	1	Total C N O P S 31 10 5 12 3 1	0
54	n	1	Total C N O P S 31 10 5 12 3 1	0
54	t	1	Total C N O P S 31 10 5 12 3 1	0
54	w	1	Total C N O P S 31 10 5 12 3 1	0
54	w	1	Total C N O P S 31 10 5 12 3 1	0
54	w	1	Total C N O P S 31 10 5 12 3 1	0
54	x	1	Total C N O P S 31 10 5 12 3 1	0

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

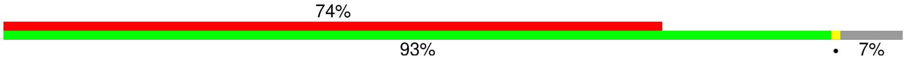
Mol	Chain	Residues	Atoms	AltConf
55	b	1	Total Mg 1 1	0

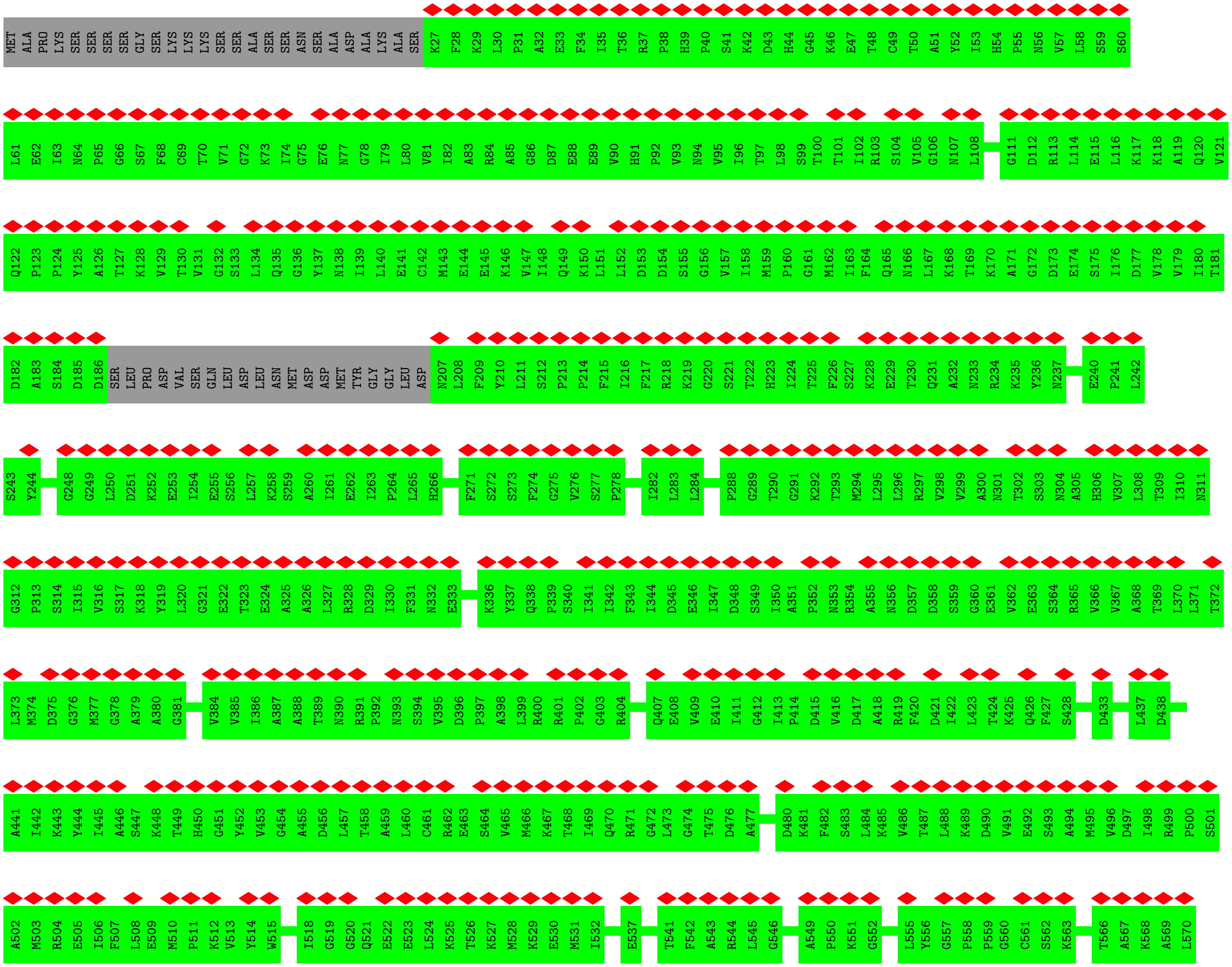
3 Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: ATPase family gene 2 protein

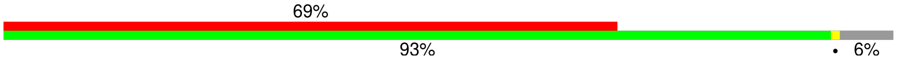
Chain Aa:

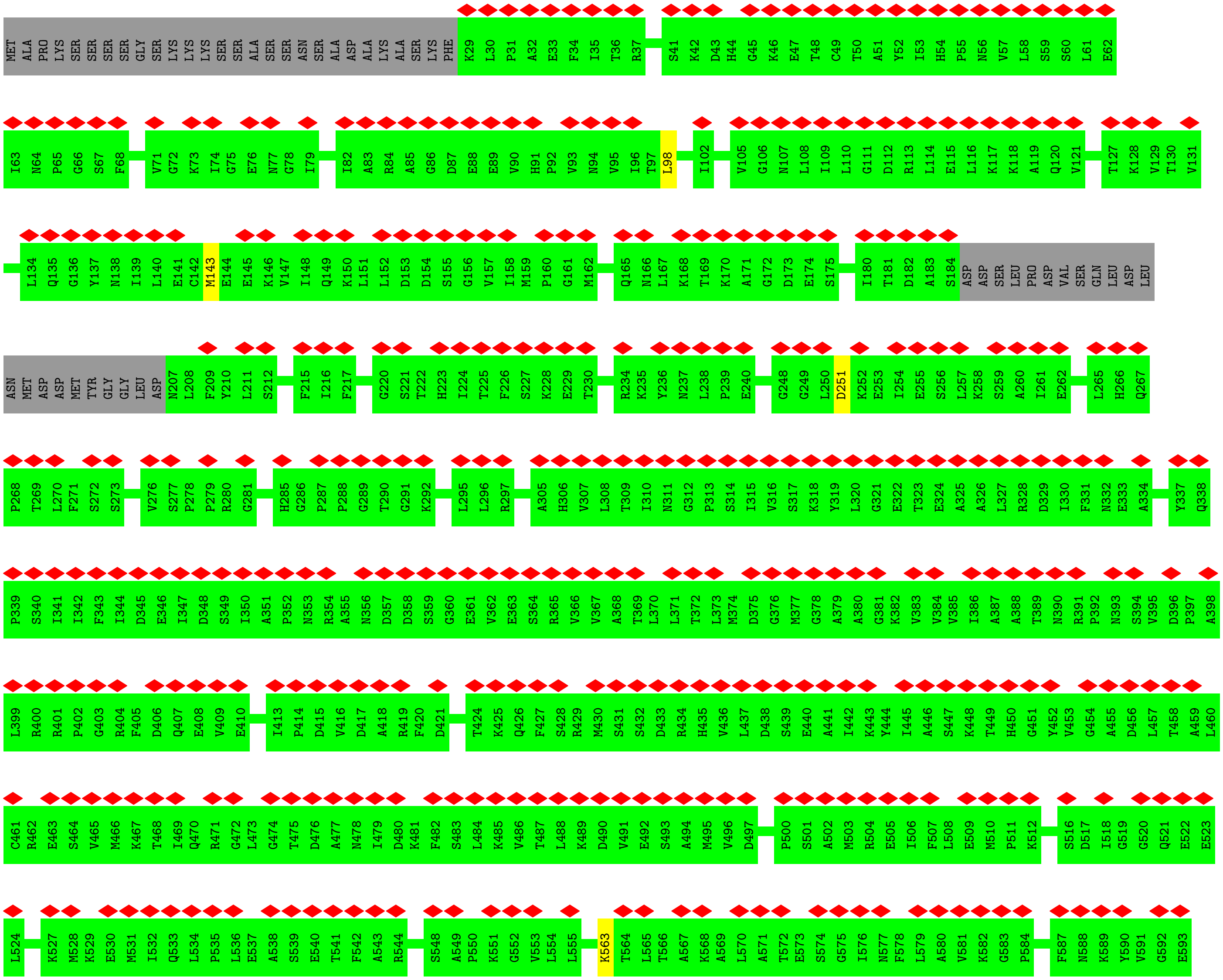


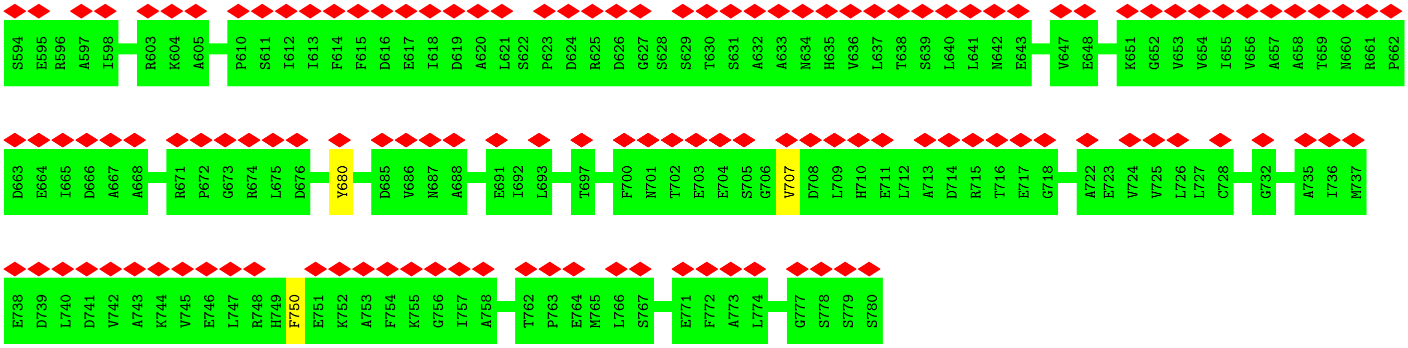


- Molecule 1: ATPase family gene 2 protein

Chain m:

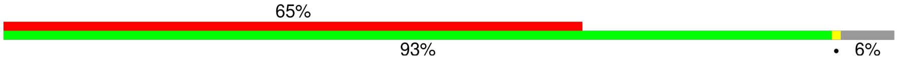


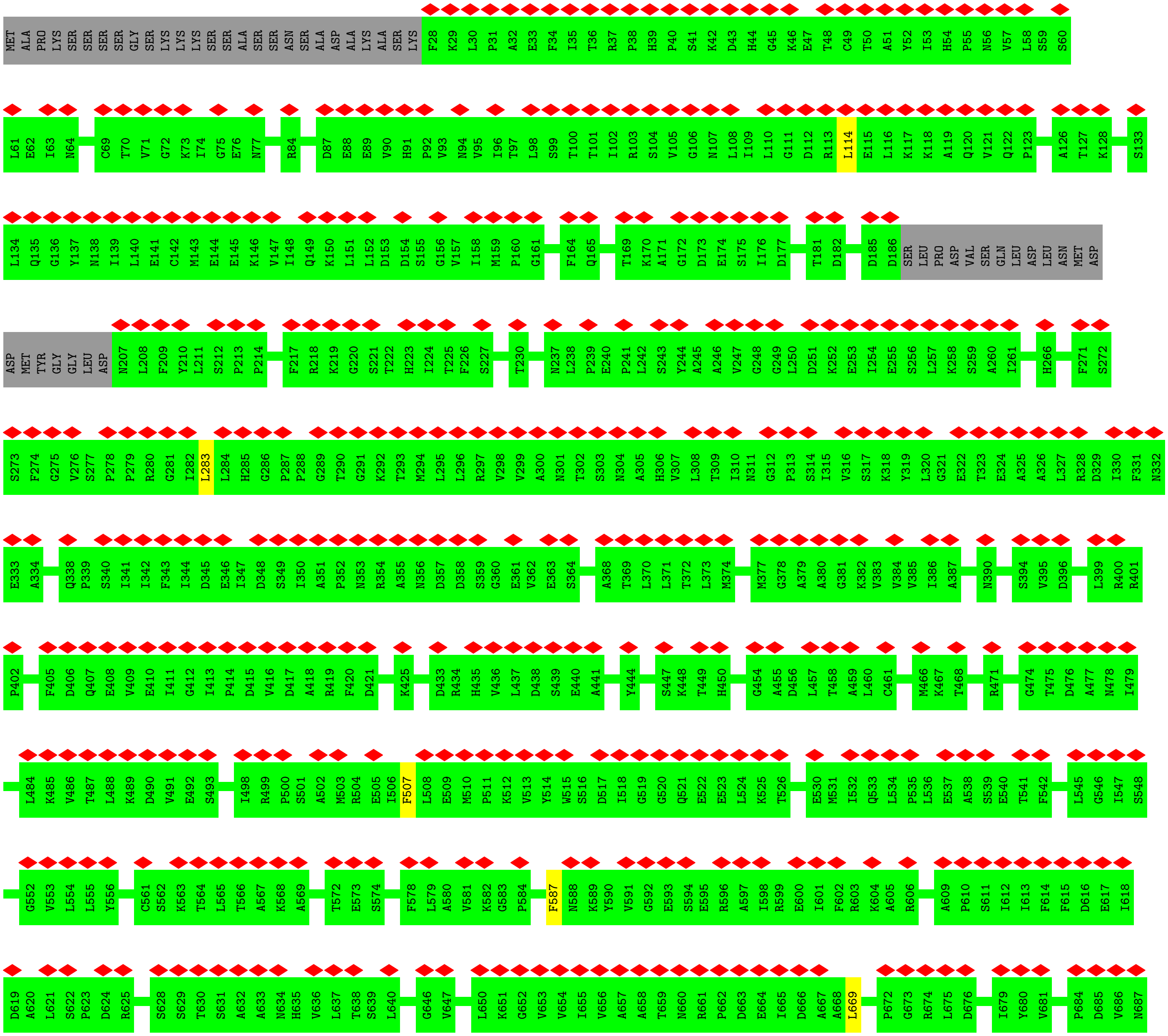


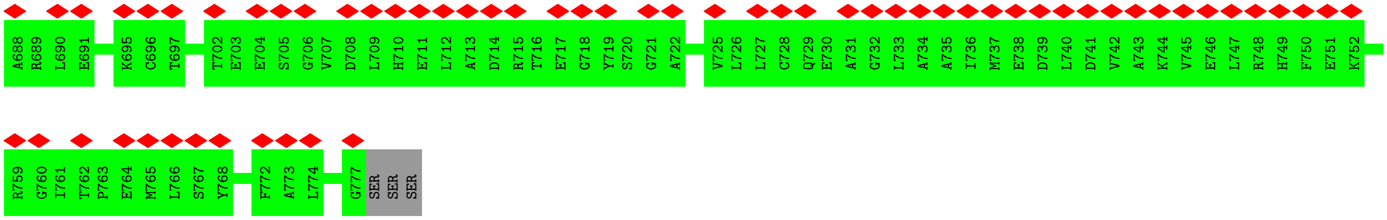


- Molecule 1: ATPase family gene 2 protein

Chain n:

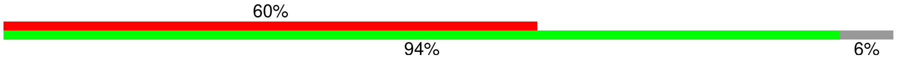


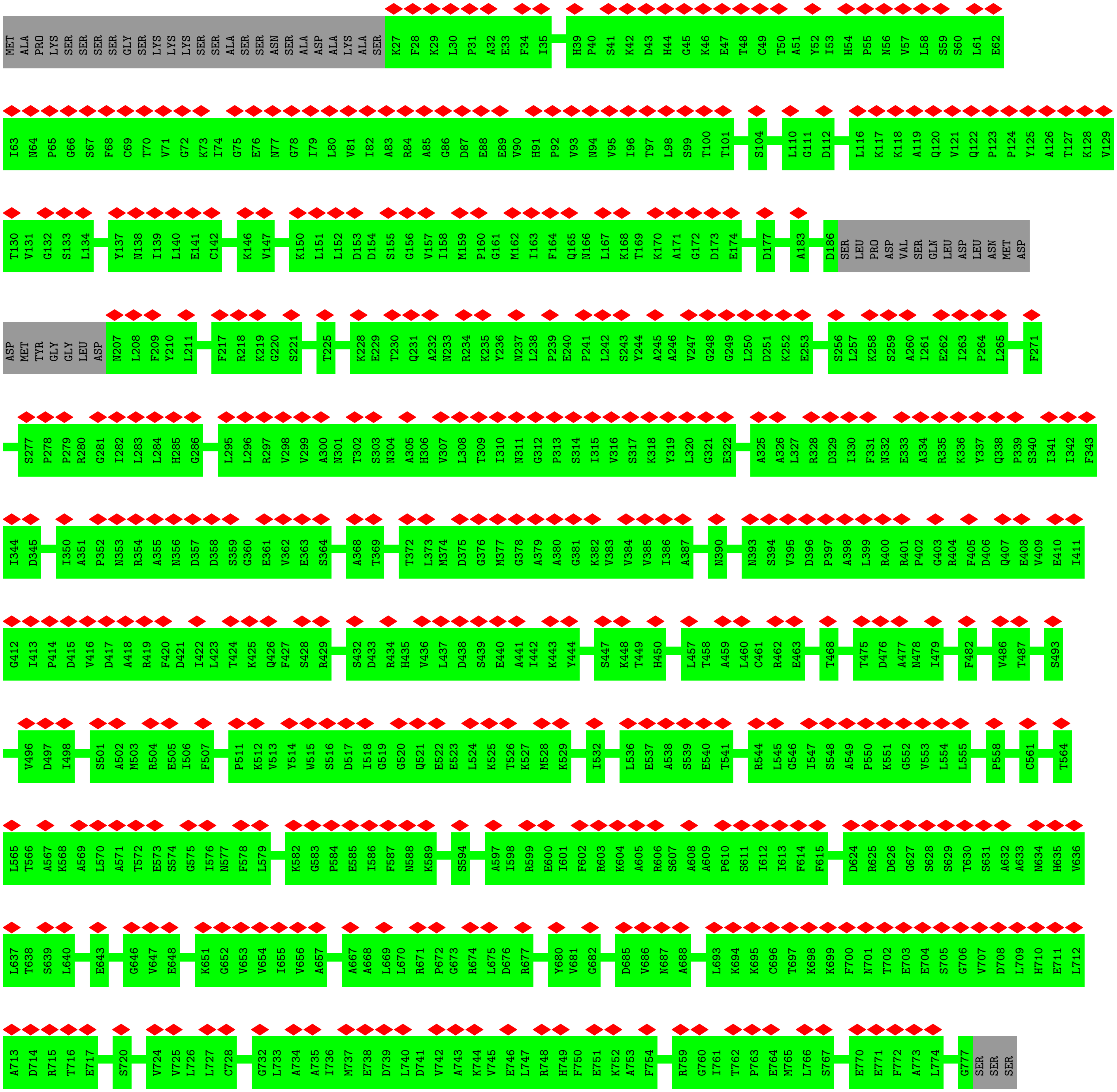




- Molecule 1: ATPase family gene 2 protein

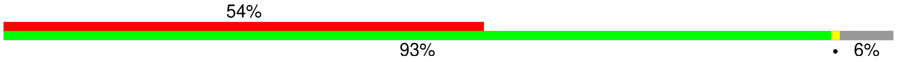
Chain t:

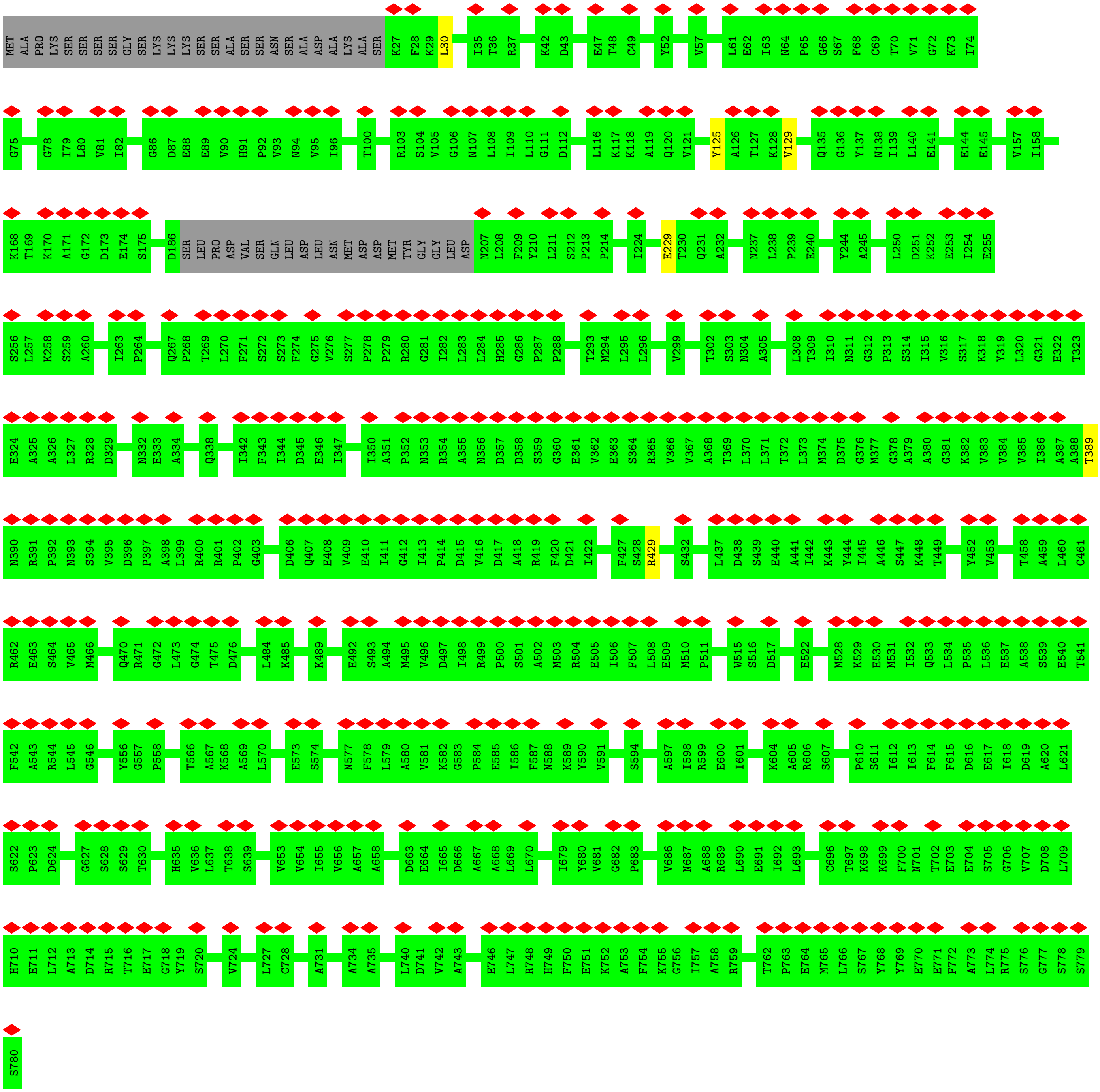




- Molecule 1: ATPase family gene 2 protein

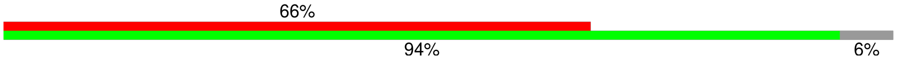
Chain w:

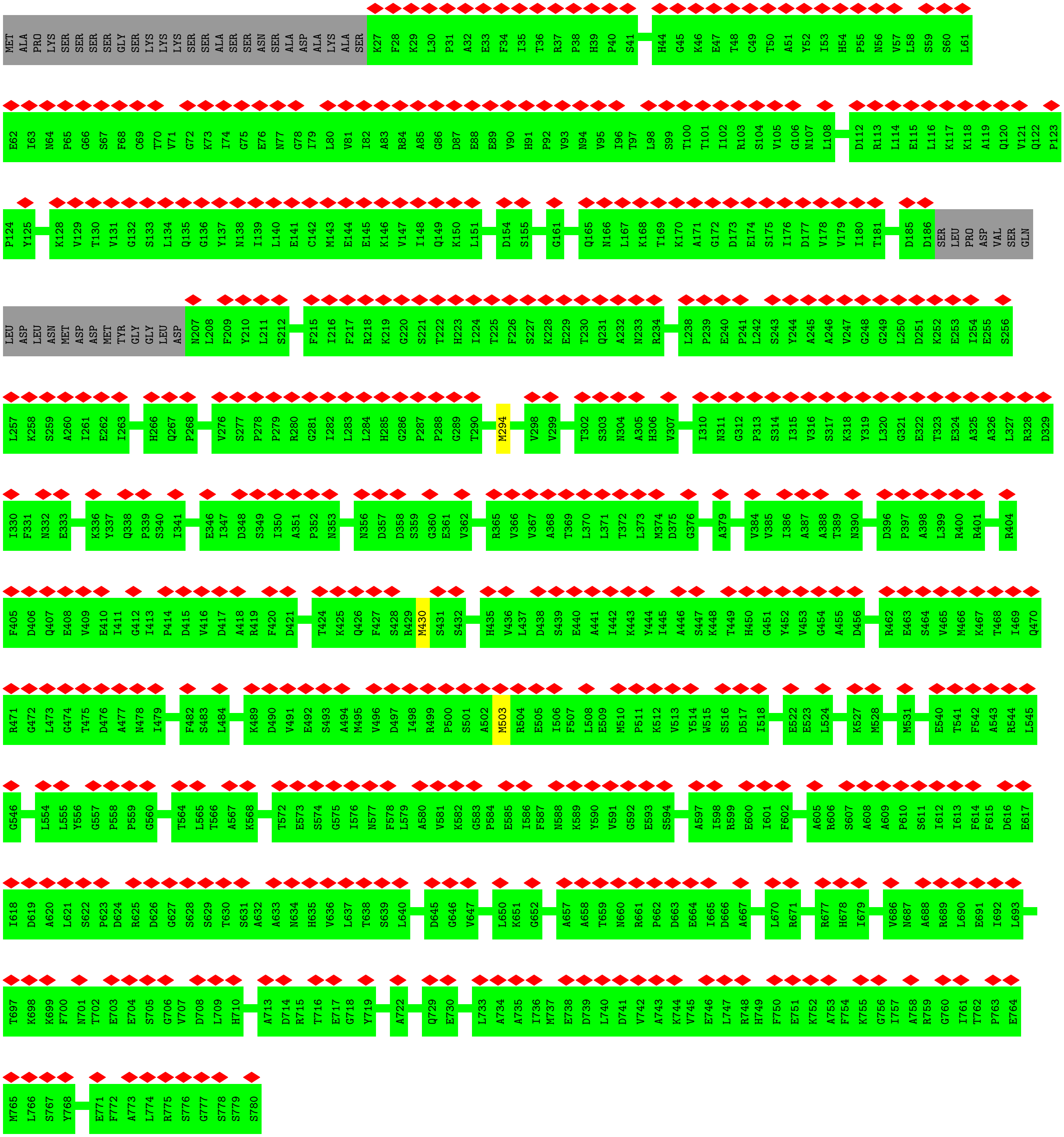




- Molecule 1: ATPase family gene 2 protein

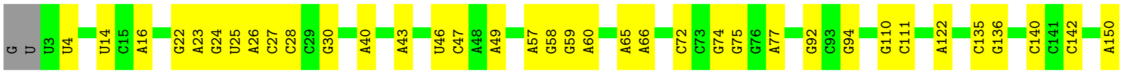
Chain x:

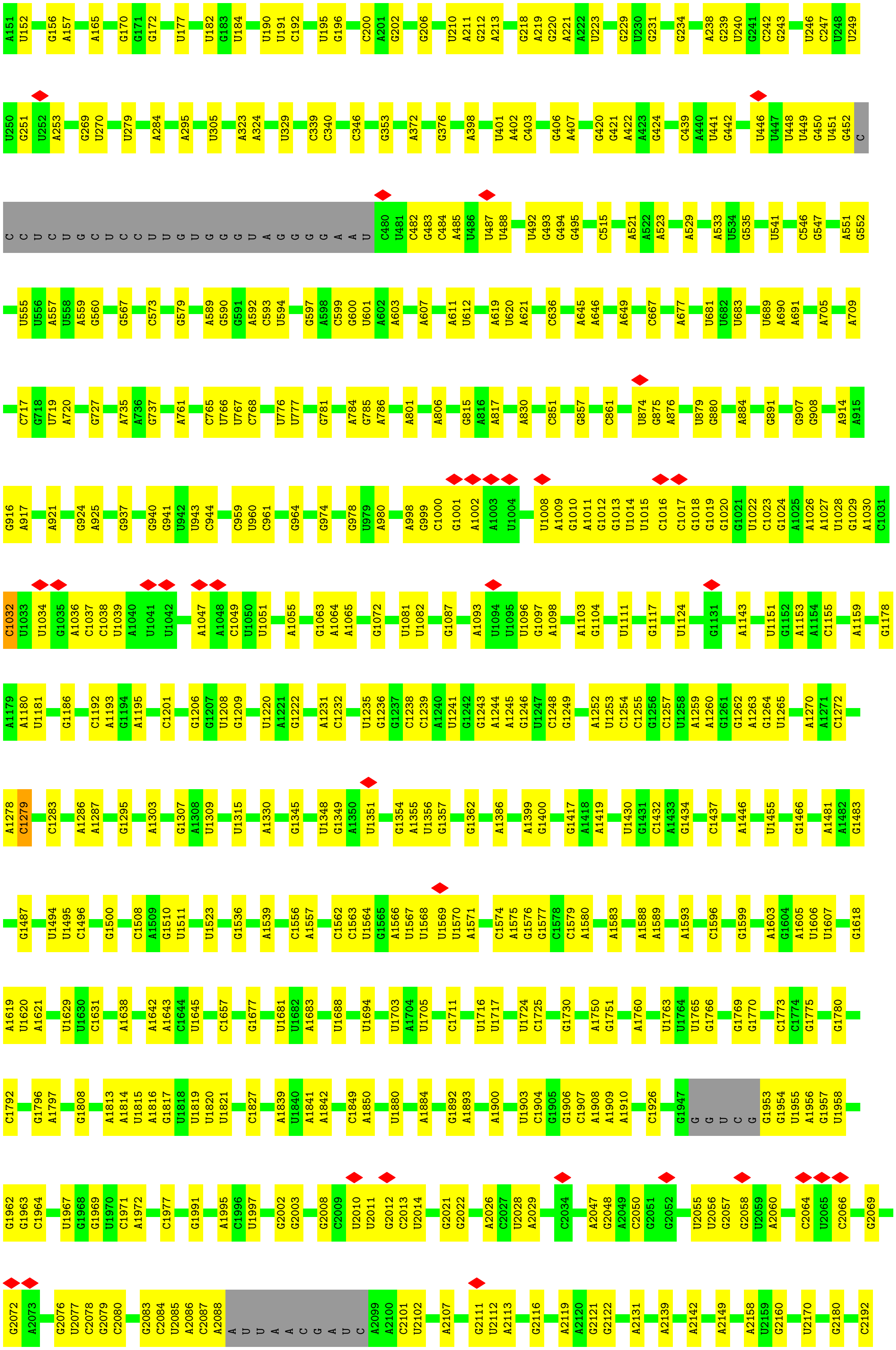


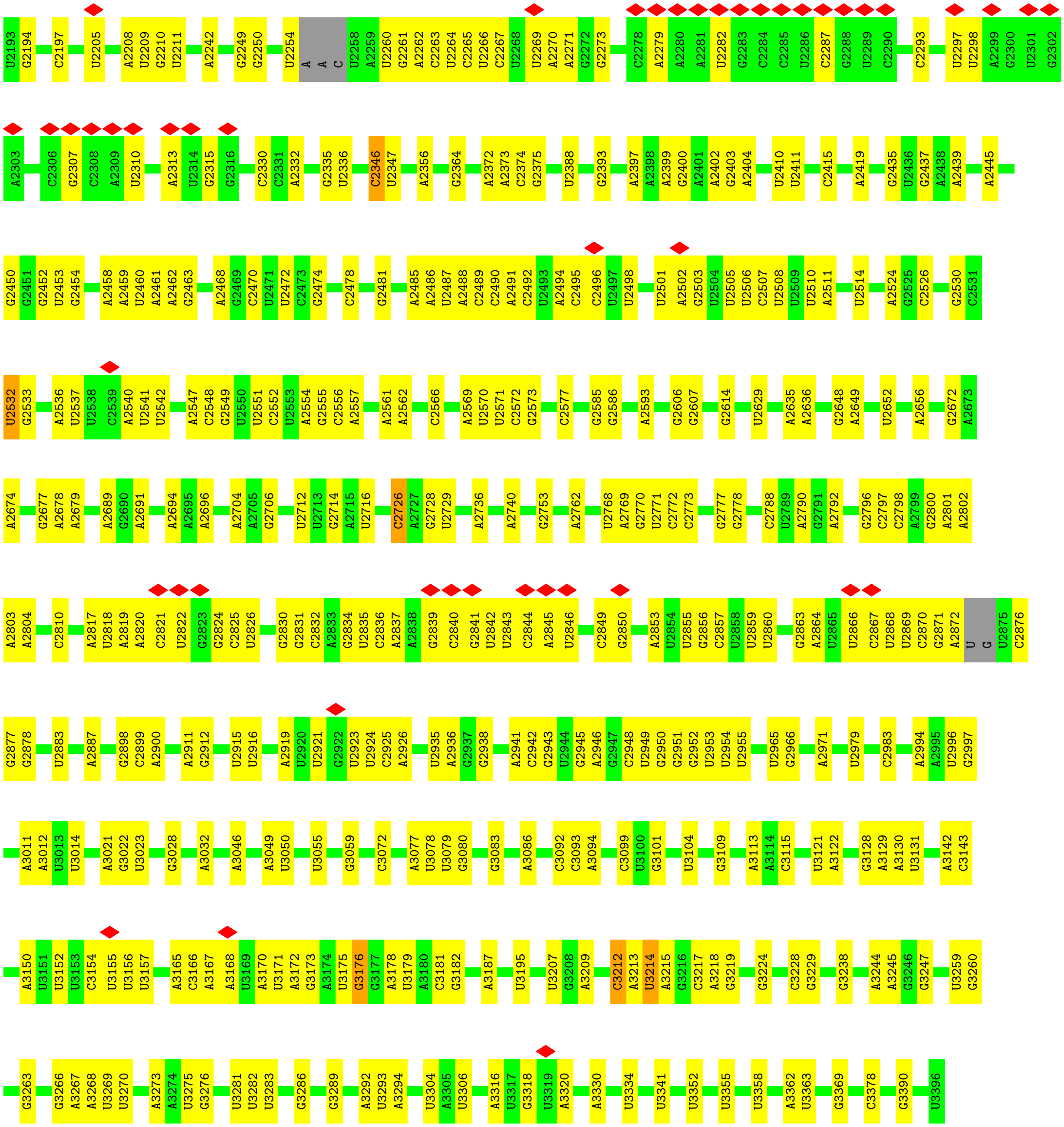


- Molecule 2: 35S pre-ribosomal RNA

Chain 1:

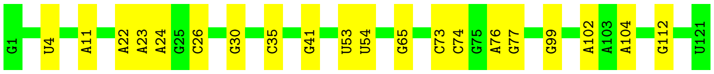



A151
U152
G156
A157
A165
G170
G171
G172
U177
U182
G183
U184
U190
U191
C192
U195
G196
C200
A201
G202
G206
U210
A211
G212
A213
G218
A219
G220
A221
A222
U223
G229
U230
G231
G234
A238
G239
U240
G241
C242
G243
U246
C247
U248
U249
U250
G251
U252
A253
G269
U270
U279
A284
A295
U305
A323
A324
U329
C339
C340
C346
G353
A372
G376
A398
U401
A402
C403
G406
A407
G420
G421
A422
A423
G424
C439
A440
U441
G442
U446
U447
U448
U449
G450
U451
G452
C
C
C
U
C
U
G
C
U
C
C
U
U
G
U
G
G
G
U
A
G
G
G
G
A
A
U
C480
U481
C482
G483
C484
A485
U486
U487
U488
U492
G493
G494
G495
C515
A521
A522
A523
A529
A533
U534
G535
U541
C546
G547
A551
G552
U555
U556
A557
U558
A559
G560
G567
C573
G579
A589
G590
G591
A592
C593
U594
G597
A598
C599
G600
U601
A602
A603
A607
A611
U612
A619
U620
A621
C636
A645
A646
A649
C667
A677
U681
U682
G683
U689
A690
A691
A705
A709
C717
G718
U719
A720
G727
A735
A736
G737
A761
C765
U766
U767
C768
U776
U777
G781
A784
G785
A786
A801
A806
G815
A816
A817
A830
C851
G857
C861
U874
G875
A876
U879
G880
A884
G891
G907
G908
A914
A915
G916
A917
A921
G924
A925
G937
G940
G941
U942
U943
C944
C959
U960
C961
G964
G974
G978
U979
A980
A998
G999
C1000
G1001
A1002
A1003
U1004
U1008
A1009
G1010
A1011
G1012
G1013
U1014
U1015
C1016
C1017
G1018
G1019
G1020
G1021
U1022
C1023
G1024
A1025
A1026
A1027
U1028
G1029
A1030
C1031
C1032
U1033
U1034
G1035
A1036
C1037
C1038
U1039
A1040
U1041
U1042
A1047
A1048
C1049
U1050
U1051
A1055
G1063
A1064
A1065
G1072
U1081
U1082
G1087
A1093
U1094
U1095
U1096
G1097
A1098
A1103
G1104
U1111
G1117
U1124
G1131
A1143
U1151
G1152
A1153
A1154
C1155
A1159
G1178
A1179
A1180
U1181
G1186
C1192
A1193
G1194
A1195
C1201
G1206
G1207
U1208
G1209
U1220
A1221
G1222
A1231
C1232
U1235
G1236
G1237
C1238
C1239
A1240
U1241
G1242
G1243
A1244
A1245
G1246
U1247
C1248
G1249
A1252
U1253
C1254
C1255
G1256
C1257
U1258
A1259
A1260
G1261
G1262
A1263
G1264
U1265
A1270
A1271
C1272
A1278
C1279
C1283
A1286
A1287
G1295
A1303
G1307
A1308
U1309
U1315
A1330
G1345
U1348
G1349
A1350
U1351
G1354
A1355
U1356
G1357
G1362
A1386
A1399
G1400
G1417
A1418
A1419
U1430
G1431
C1432
A1433
G1434
C1437
A1446
U1455
G1466
A1481
A1482
G1483
G1487
U1494
U1495
C1496
G1500
C1508
A1509
G1510
U1511
U1523
G1536
A1539
C1556
A1557
C1562
C1563
U1564
G1565
A1566
U1567
U1568
U1569
U1570
A1571
C1574
A1575
G1576
G1577
C1578
C1579
A1580
A1583
A1588
A1589
A1593
C1596
G1599
A1603
G1604
A1605
U1606
U1607
G1618
A1619
U1620
A1621
U1629
U1630
C1631
A1638
A1642
A1643
C1644
U1645
C1657
G1677
U1681
U1682
A1683
U1688
U1694
U1703
A1704
U1705
C1711
U1716
U1717
U1724
C1725
G1730
A1750
G1751
A1760
U1763
U1764
U1765
G1766
G1769
G1770
C1773
C1774
G1775
G1780
C1792
G1796
A1797
G1808
A1813
A1814
U1815
A1816
G1817
U1818
U1819
U1820
U1821
C1827
A1839
U1840
A1841
A1842
C1849
A1850
U1880
A1884
G1892
A1893
A1900
U1903
C1904
G1905
G1906
C1907
A1908
A1909
A1910
C1926
G1947
G
G
U
C
G
G1953
G1954
U1955
U1956
A1957
U1958
G1962
G1963
C1964
U1967
G1968
G1969
U1970
C1971
A1972
C1977
G1991
A1995
C1996
U1997
G2002
G2003
G2008
C2009
U2010
U2011
G2012
C2013
U2014
G2021
G2022
A2026
C2027
U2028
A2029
C2034
A2047
G2048
A2049
C2050
G2051
G2052
U2055
U2056
G2057
G2058
U2059
A2060
C2064
U2065
C2066
G2069
G2072
A2073
G2076
U2077
C2078
G2079
C2080
G2083
C2084
U2085
A2086
C2087
A2088
A
U
U
A
A
C
G
A
U
C
A2099
A2100
C2101
U2102
A2107
G2111
U2112
A2113
G2116
A2119
A2120
G2121
G2122
A2131
A2139
A2142
A2149
A2158
U2159
G2160
U2170
G2180
C2192



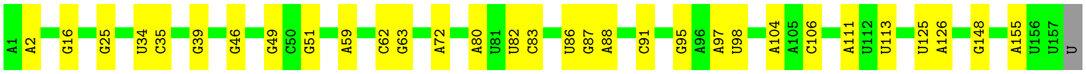
- Molecule 3: 5S rRNA

Chain 2:



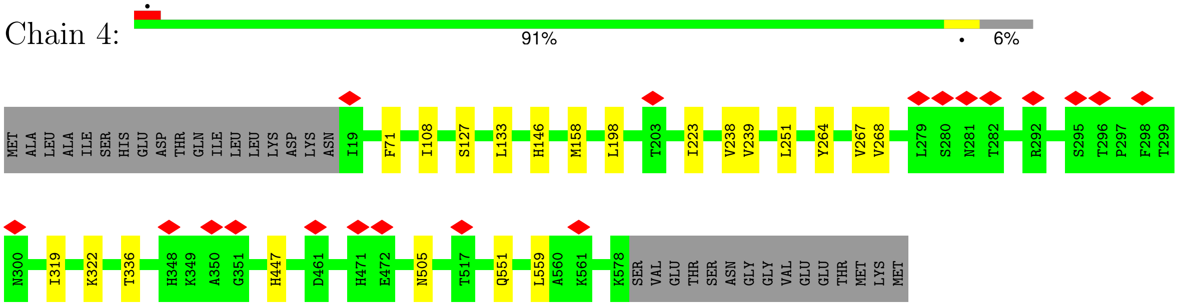
- Molecule 4: 5.8S rRNA

Chain 3:



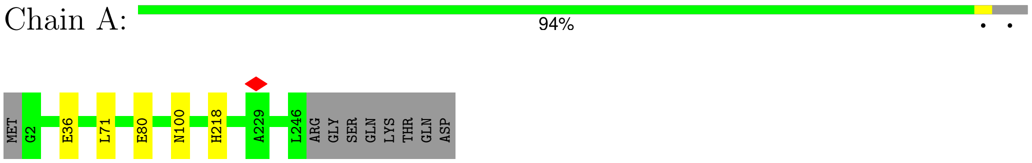
- Molecule 5: Probable metalloprotease ARX1

Chain 4:



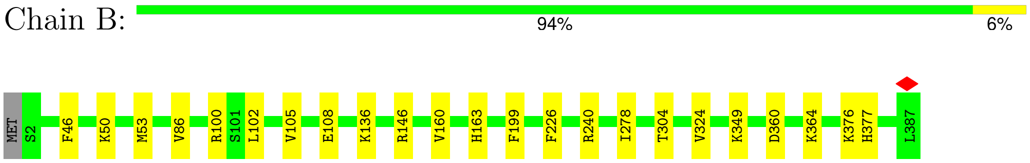
- Molecule 6: 60S ribosomal protein L2-A

Chain A:



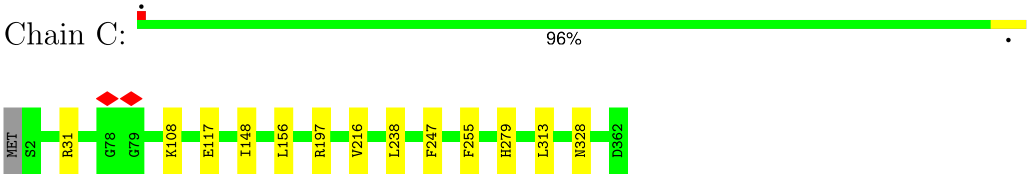
- Molecule 7: 60S ribosomal protein L3

Chain B:



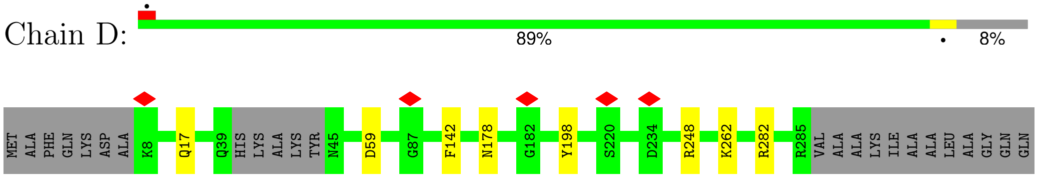
- Molecule 8: 60S ribosomal protein L4-A

Chain C:



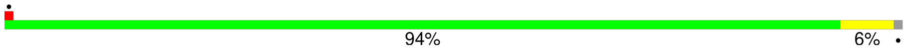
- Molecule 9: 60S ribosomal protein L5

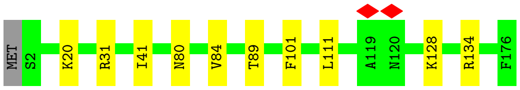
Chain D:



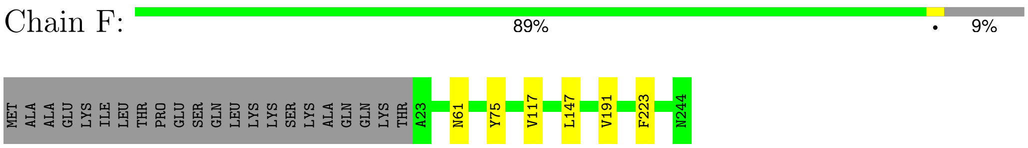
- Molecule 10: 60S ribosomal protein L6-A

Chain E:

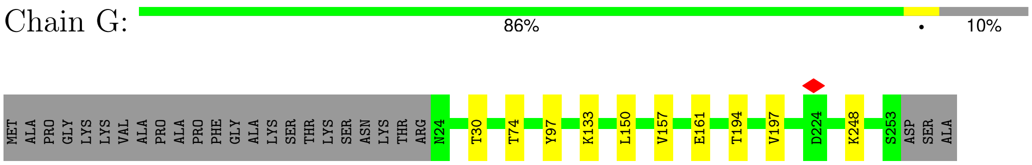




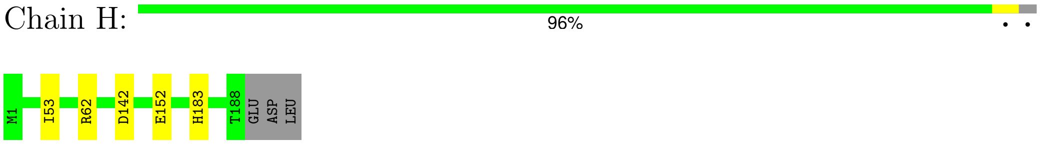
- Molecule 11: 60S ribosomal protein L7-A



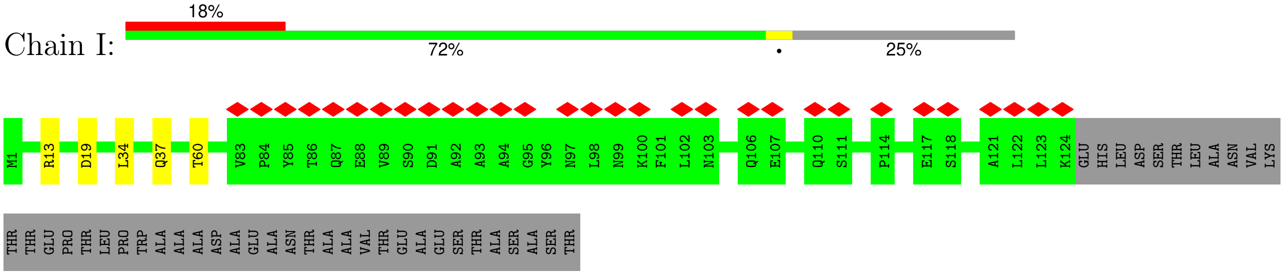
- Molecule 12: 60S ribosomal protein L8-A



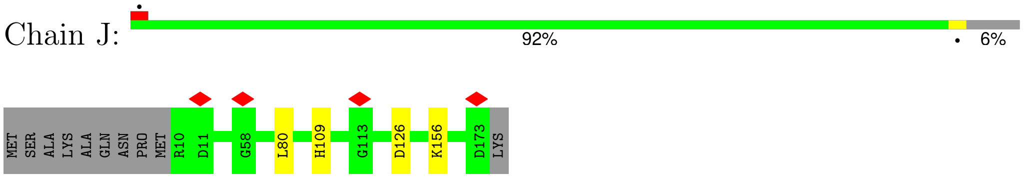
- Molecule 13: 60S ribosomal protein L9-A



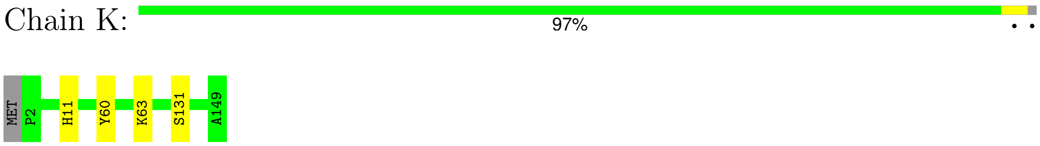
- Molecule 14: Bud site selection protein 20



- Molecule 15: 60S ribosomal protein L11-A

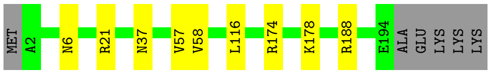


- Molecule 16: 60S ribosomal protein L28



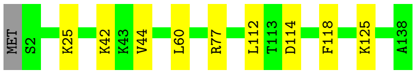
- Molecule 17: 60S ribosomal protein L13-A

Chain L:



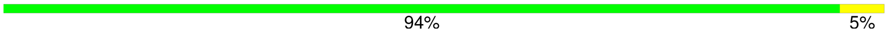
- Molecule 18: 60S ribosomal protein L14-A

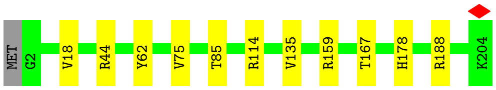
Chain M:



- Molecule 19: 60S ribosomal protein L15-A

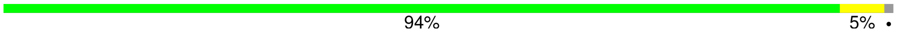
Chain N:

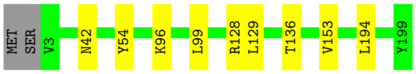




- Molecule 20: 60S ribosomal protein L16-A

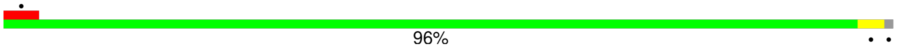
Chain O:

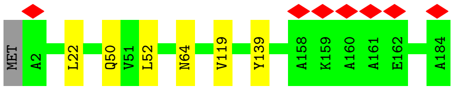




- Molecule 21: 60S ribosomal protein L17-A

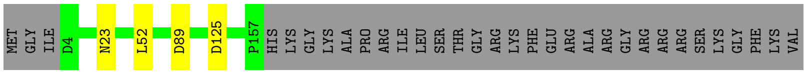
Chain P:





- Molecule 22: 60S ribosomal protein L18-A

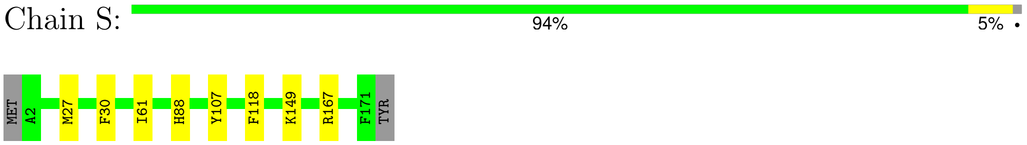
Chain Q:



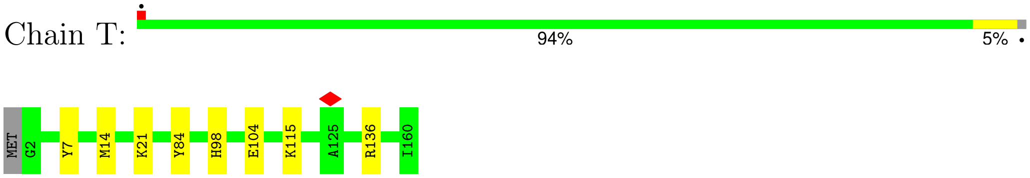
- Molecule 23: 60S ribosomal protein L19-A

Chain R:

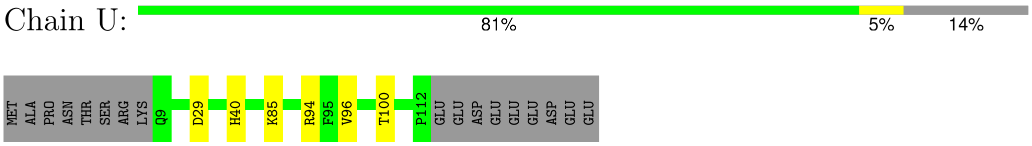
- Molecule 24: 60S ribosomal protein L20-A



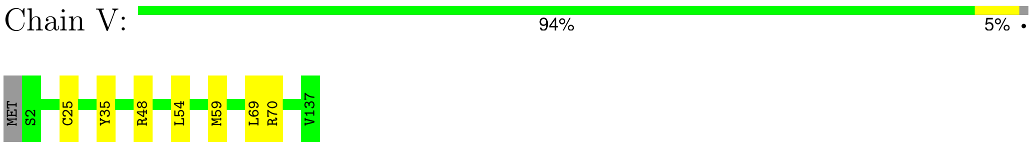
- Molecule 25: 60S ribosomal protein L21-A



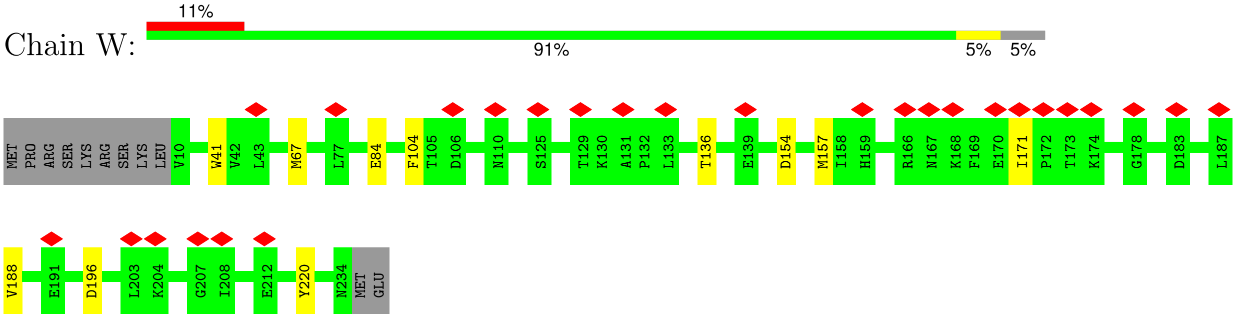
- Molecule 26: 60S ribosomal protein L22-A



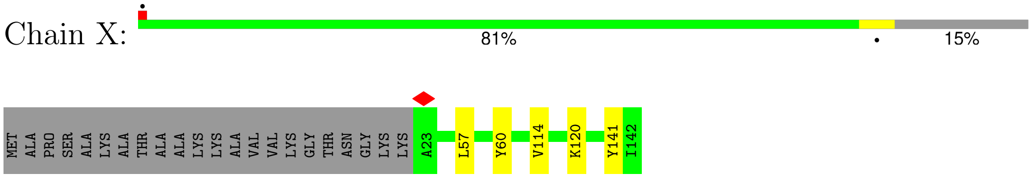
- Molecule 27: 60S ribosomal protein L23-A



- Molecule 28: Ribosome assembly factor MRT4

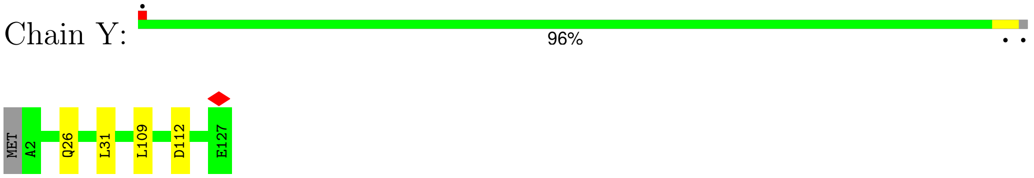


- Molecule 29: 60S ribosomal protein L25



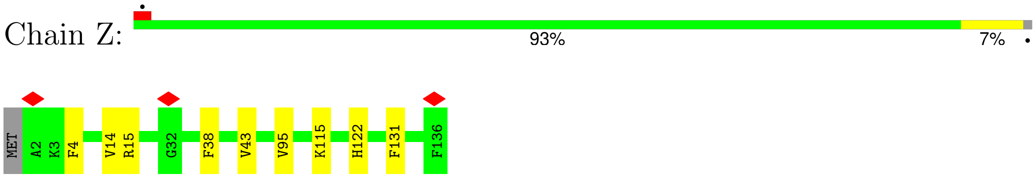
- Molecule 30: 60S ribosomal protein L26-A

Chain Y:



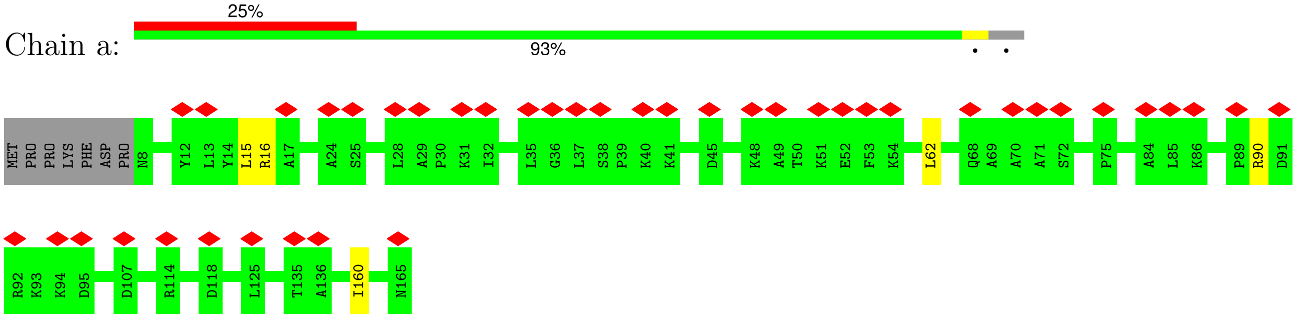
- Molecule 31: 60S ribosomal protein L27-A

Chain Z:



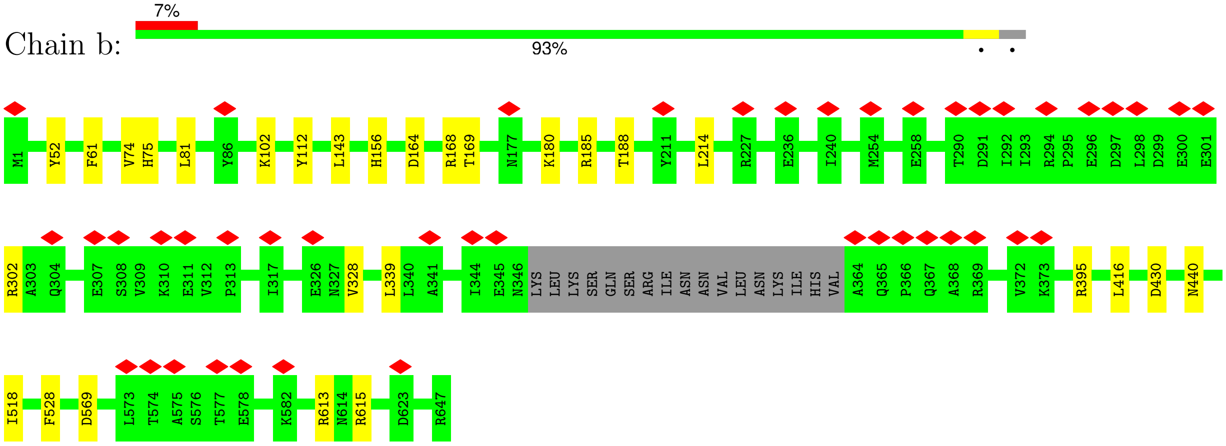
- Molecule 32: 60S ribosomal protein L12-A

Chain a:



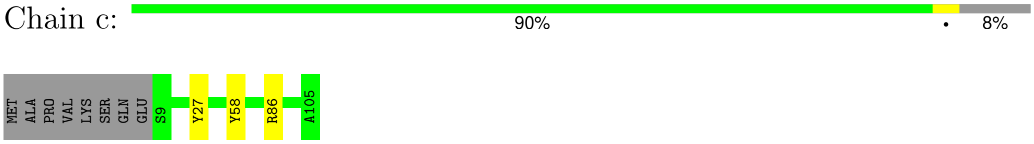
- Molecule 33: Nucleolar GTP-binding protein 1

Chain b:



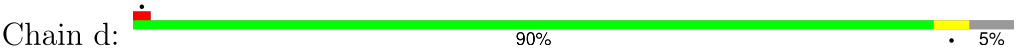
- Molecule 34: 60S ribosomal protein L30

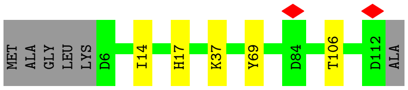
Chain c:



- Molecule 35: 60S ribosomal protein L31-A

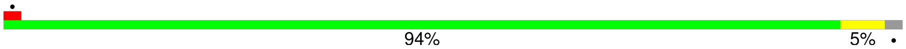
Chain d:

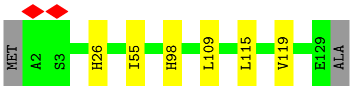




- Molecule 36: 60S ribosomal protein L32

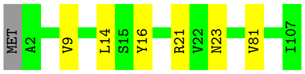
Chain e:





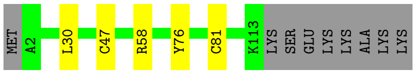
- Molecule 37: 60S ribosomal protein L33-A

Chain f:



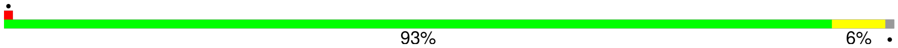
- Molecule 38: 60S ribosomal protein L34-A

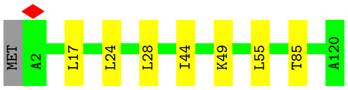
Chain g:



- Molecule 39: 60S ribosomal protein L35-A

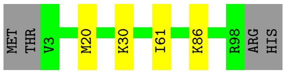
Chain h:





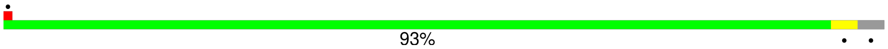
- Molecule 40: 60S ribosomal protein L36-A

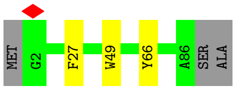
Chain i:



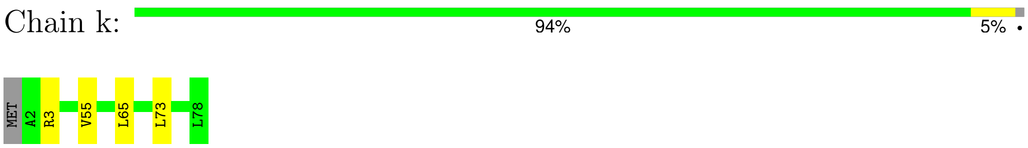
- Molecule 41: 60S ribosomal protein L37-A

Chain j:

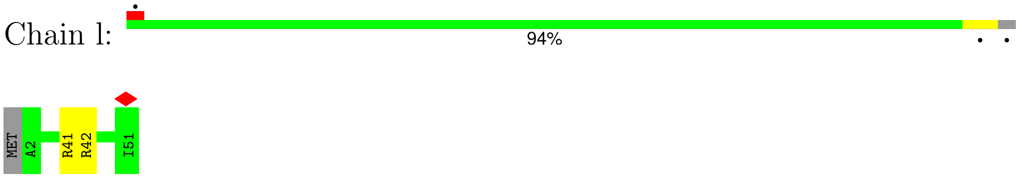




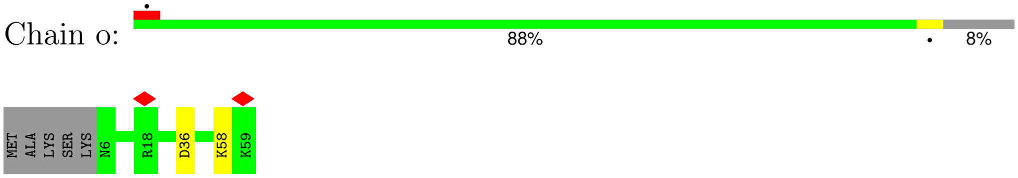
- Molecule 42: 60S ribosomal protein L38



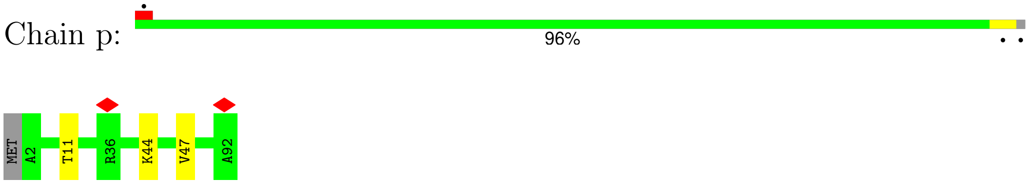
- Molecule 43: 60S ribosomal protein L39



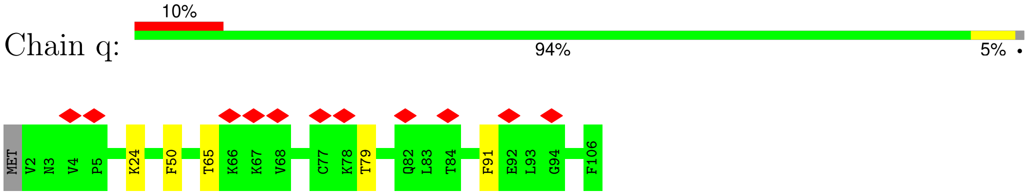
- Molecule 44: 60S ribosomal protein L29



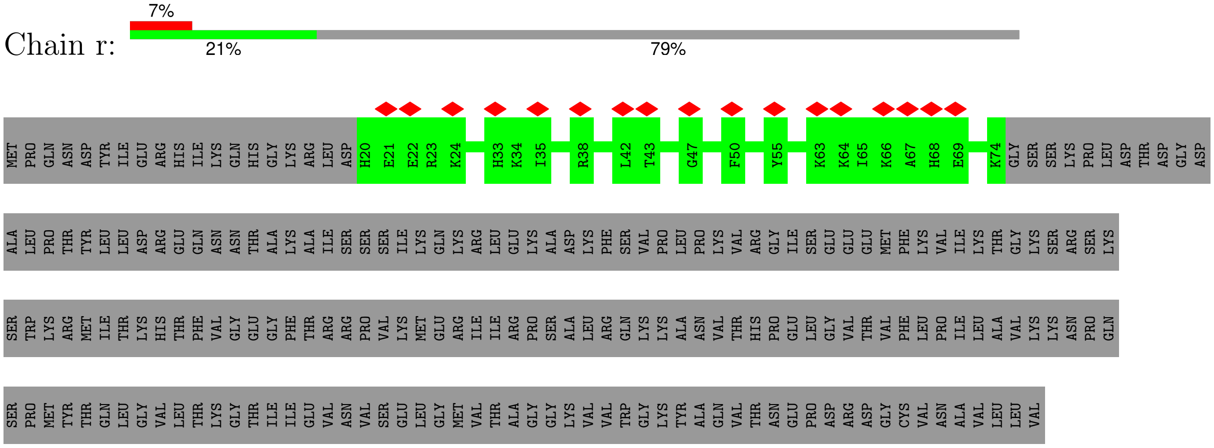
- Molecule 45: 60S ribosomal protein L43-A



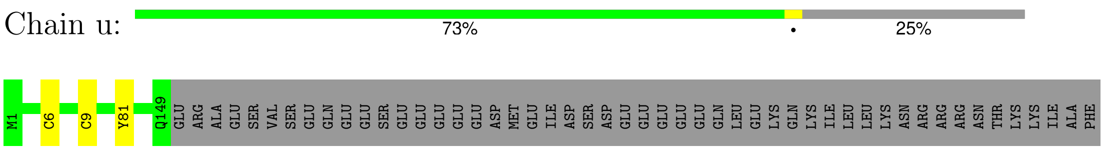
- Molecule 46: 60S ribosomal protein L42-A



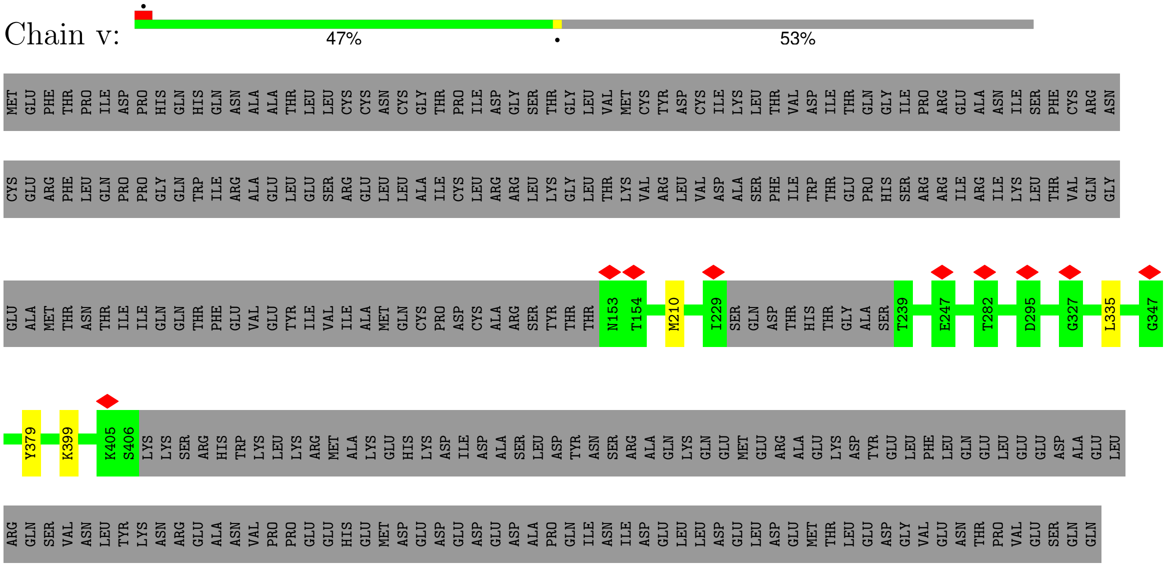
- Molecule 47: Ribosome biogenesis protein NSA2



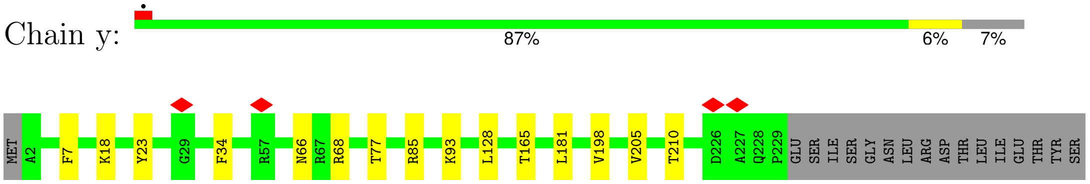
- Molecule 48: Ribosome biogenesis protein RLP24



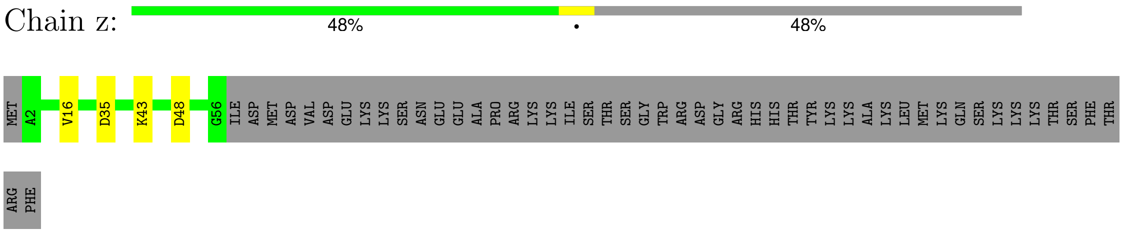
- Molecule 49: 60S ribosomal export protein NMD3



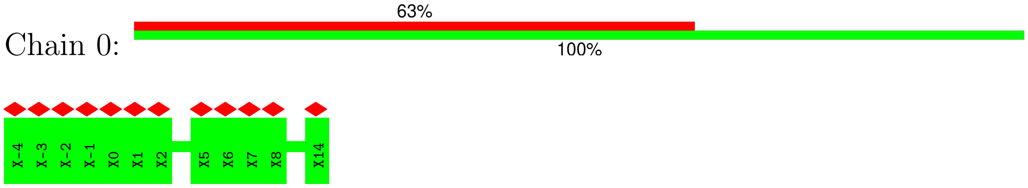
- Molecule 50: Eukaryotic translation initiation factor 6



- Molecule 51: UPF0642 protein YBL028C

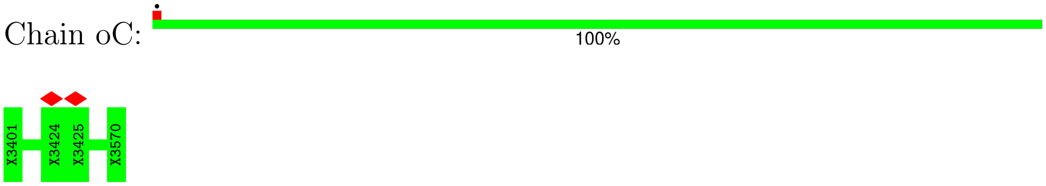


- Molecule 52: Unknown peptide



- Molecule 53: Unknown protein

Chain oC:



4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	1782014	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose $(e^-/\AA^2)$	60	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.047	Depositor
Minimum map value	-0.001	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.039	Depositor
Recommended contour level	0.05	Depositor
Map size (Å)	642.0, 642.0, 642.0	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.3375, 1.3375, 1.3375	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.24	0/5688	0.46	0/7700
1	m	0.24	0/5691	0.45	0/7702
1	n	0.24	0/5700	0.45	0/7716
1	t	0.24	0/5709	0.45	0/7727
1	w	0.24	0/5728	0.45	0/7751
1	x	0.24	0/5728	0.46	0/7751
2	1	0.29	0/80102	0.79	30/124881 (0.0%)
3	2	0.26	0/2883	0.77	0/4491
4	3	0.30	0/3724	0.76	0/5798
5	4	0.25	0/4410	0.49	0/5990
6	A	0.26	0/1897	0.55	0/2550
7	B	0.27	0/3153	0.53	0/4239
8	C	0.26	0/2802	0.51	0/3792
9	D	0.26	0/2250	0.50	0/3035
10	E	0.26	0/1425	0.49	0/1912
11	F	0.27	0/1822	0.49	0/2451
12	G	0.26	0/1830	0.48	0/2469
13	H	0.26	0/1514	0.49	0/2039
14	I	0.24	0/1018	0.47	0/1365
15	J	0.24	0/1332	0.53	0/1786
16	K	0.26	0/1204	0.50	0/1612
17	L	0.26	0/1568	0.55	0/2106
18	M	0.25	0/1075	0.50	0/1446
19	N	0.27	0/1758	0.56	0/2354
20	O	0.26	0/1586	0.49	0/2128
21	P	0.26	0/1466	0.53	0/1968
22	Q	0.25	0/1211	0.52	0/1633
23	R	0.24	0/1258	0.56	0/1679
24	S	0.27	0/1460	0.51	0/1962
25	T	0.26	0/1300	0.51	0/1743
26	U	0.26	0/843	0.46	0/1143
27	V	0.27	0/1019	0.52	0/1369

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
28	W	0.25	0/1842	0.48	0/2487
29	X	0.27	0/975	0.49	0/1314
30	Y	0.26	0/1005	0.51	0/1341
31	Z	0.27	0/1119	0.48	0/1497
32	a	0.24	0/1210	0.46	0/1627
33	b	0.25	0/5171	0.50	0/6947
34	c	0.25	0/751	0.45	0/1008
35	d	0.26	0/887	0.51	0/1191
36	e	0.25	0/1050	0.50	0/1406
37	f	0.28	0/869	0.54	0/1168
38	g	0.26	0/891	0.55	0/1191
39	h	0.25	0/979	0.51	0/1301
40	i	0.24	0/749	0.53	0/995
41	j	0.27	0/685	0.56	0/908
42	k	0.25	0/619	0.51	0/826
43	l	0.25	0/444	0.55	0/588
44	o	0.24	0/445	0.51	0/592
45	p	0.25	0/702	0.55	0/934
46	q	0.25	0/861	0.53	0/1136
47	r	0.23	0/476	0.46	0/621
48	u	0.26	0/1278	0.55	0/1699
49	v	0.25	0/1985	0.46	0/2692
50	y	0.25	0/1744	0.51	0/2375
51	z	0.23	0/445	0.46	0/585
All	All	0.27	0/187336	0.66	30/270717 (0.0%)

There are no bond length outliers.

The worst 5 of 30 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	1	3212	C	N1-C2-O2	12.89	126.63	118.90
2	1	3212	C	N3-C2-O2	-9.12	115.52	121.90
2	1	1827	C	N3-C2-O2	-8.53	115.93	121.90
2	1	2948	C	N3-C2-O2	-7.82	116.43	121.90
2	1	27	C	N1-C2-O2	7.59	123.45	118.90

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	Aa	724/780 (93%)	680 (94%)	42 (6%)	2 (0%)	37	69
1	m	726/780 (93%)	707 (97%)	17 (2%)	2 (0%)	37	69
1	n	726/780 (93%)	703 (97%)	23 (3%)	0	100	100
1	t	727/780 (93%)	706 (97%)	21 (3%)	0	100	100
1	w	730/780 (94%)	702 (96%)	28 (4%)	0	100	100
1	x	730/780 (94%)	709 (97%)	21 (3%)	0	100	100
5	4	558/593 (94%)	502 (90%)	56 (10%)	0	100	100
6	A	243/254 (96%)	226 (93%)	17 (7%)	0	100	100
7	B	384/387 (99%)	345 (90%)	39 (10%)	0	100	100
8	C	359/362 (99%)	329 (92%)	30 (8%)	0	100	100
9	D	269/297 (91%)	257 (96%)	12 (4%)	0	100	100
10	E	173/176 (98%)	159 (92%)	14 (8%)	0	100	100
11	F	220/244 (90%)	211 (96%)	9 (4%)	0	100	100
12	G	228/256 (89%)	215 (94%)	13 (6%)	0	100	100
13	H	186/191 (97%)	180 (97%)	6 (3%)	0	100	100
14	I	122/166 (74%)	114 (93%)	8 (7%)	0	100	100
15	J	162/174 (93%)	150 (93%)	12 (7%)	0	100	100
16	K	146/149 (98%)	132 (90%)	14 (10%)	0	100	100
17	L	191/199 (96%)	176 (92%)	15 (8%)	0	100	100
18	M	135/138 (98%)	130 (96%)	5 (4%)	0	100	100
19	N	201/204 (98%)	189 (94%)	12 (6%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	O	195/199 (98%)	191 (98%)	4 (2%)	0	100	100
21	P	181/184 (98%)	170 (94%)	11 (6%)	0	100	100
22	Q	152/186 (82%)	145 (95%)	7 (5%)	0	100	100
23	R	152/189 (80%)	146 (96%)	6 (4%)	0	100	100
24	S	168/172 (98%)	154 (92%)	14 (8%)	0	100	100
25	T	157/160 (98%)	154 (98%)	3 (2%)	0	100	100
26	U	102/121 (84%)	91 (89%)	11 (11%)	0	100	100
27	V	134/137 (98%)	128 (96%)	6 (4%)	0	100	100
28	W	223/236 (94%)	209 (94%)	14 (6%)	0	100	100
29	X	118/142 (83%)	114 (97%)	4 (3%)	0	100	100
30	Y	124/127 (98%)	119 (96%)	5 (4%)	0	100	100
31	Z	133/136 (98%)	120 (90%)	13 (10%)	0	100	100
32	a	156/165 (94%)	153 (98%)	3 (2%)	0	100	100
33	b	626/647 (97%)	569 (91%)	57 (9%)	0	100	100
34	c	95/105 (90%)	94 (99%)	1 (1%)	0	100	100
35	d	105/113 (93%)	98 (93%)	7 (7%)	0	100	100
36	e	126/130 (97%)	120 (95%)	6 (5%)	0	100	100
37	f	104/107 (97%)	96 (92%)	8 (8%)	0	100	100
38	g	110/121 (91%)	105 (96%)	5 (4%)	0	100	100
39	h	117/120 (98%)	113 (97%)	4 (3%)	0	100	100
40	i	94/100 (94%)	92 (98%)	2 (2%)	0	100	100
41	j	83/88 (94%)	80 (96%)	3 (4%)	0	100	100
42	k	75/78 (96%)	70 (93%)	5 (7%)	0	100	100
43	l	48/51 (94%)	44 (92%)	4 (8%)	0	100	100
44	o	52/59 (88%)	48 (92%)	4 (8%)	0	100	100
45	p	89/92 (97%)	85 (96%)	4 (4%)	0	100	100
46	q	103/106 (97%)	88 (85%)	15 (15%)	0	100	100
47	r	53/261 (20%)	51 (96%)	2 (4%)	0	100	100
48	u	147/199 (74%)	140 (95%)	7 (5%)	0	100	100
49	v	241/518 (46%)	225 (93%)	16 (7%)	0	100	100
50	y	226/245 (92%)	208 (92%)	18 (8%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	z	53/106 (50%)	53 (100%)	0	0	100	100
All	All	12482/13870 (90%)	11795 (94%)	683 (6%)	4 (0%)	100	100

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	m	563	LYS
1	Aa	589	LYS
1	Aa	702	THR
1	m	707	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	Aa	614/657 (94%)	610 (99%)	4 (1%)	81	86
1	m	615/657 (94%)	610 (99%)	5 (1%)	79	84
1	n	615/657 (94%)	610 (99%)	5 (1%)	79	84
1	t	616/657 (94%)	616 (100%)	0	100	100
1	w	619/657 (94%)	613 (99%)	6 (1%)	73	80
1	x	619/657 (94%)	616 (100%)	3 (0%)	86	90
5	4	491/520 (94%)	470 (96%)	21 (4%)	25	49
6	A	188/196 (96%)	183 (97%)	5 (3%)	40	60
7	B	322/323 (100%)	299 (93%)	23 (7%)	12	36
8	C	288/289 (100%)	275 (96%)	13 (4%)	23	47
9	D	230/245 (94%)	222 (96%)	8 (4%)	31	54
10	E	152/153 (99%)	142 (93%)	10 (7%)	14	38
11	F	186/205 (91%)	180 (97%)	6 (3%)	34	56
12	G	189/208 (91%)	179 (95%)	10 (5%)	19	44
13	H	168/171 (98%)	163 (97%)	5 (3%)	36	58

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	I	110/141 (78%)	105 (96%)	5 (4%)	23	47
15	J	142/150 (95%)	138 (97%)	4 (3%)	38	59
16	K	118/119 (99%)	114 (97%)	4 (3%)	32	55
17	L	154/159 (97%)	145 (94%)	9 (6%)	17	42
18	M	108/109 (99%)	99 (92%)	9 (8%)	9	32
19	N	175/176 (99%)	164 (94%)	11 (6%)	15	40
20	O	160/162 (99%)	151 (94%)	9 (6%)	17	43
21	P	145/146 (99%)	139 (96%)	6 (4%)	26	50
22	Q	126/151 (83%)	122 (97%)	4 (3%)	34	56
23	R	127/154 (82%)	124 (98%)	3 (2%)	44	62
24	S	154/156 (99%)	146 (95%)	8 (5%)	19	44
25	T	136/137 (99%)	128 (94%)	8 (6%)	16	41
26	U	91/107 (85%)	85 (93%)	6 (7%)	14	38
27	V	104/105 (99%)	97 (93%)	7 (7%)	13	38
28	W	202/213 (95%)	191 (95%)	11 (5%)	18	43
29	X	104/118 (88%)	99 (95%)	5 (5%)	21	46
30	Y	109/110 (99%)	105 (96%)	4 (4%)	29	53
31	Z	115/116 (99%)	106 (92%)	9 (8%)	10	34
32	a	129/136 (95%)	124 (96%)	5 (4%)	27	51
33	b	556/573 (97%)	528 (95%)	28 (5%)	20	45
34	c	81/88 (92%)	78 (96%)	3 (4%)	29	53
35	d	94/97 (97%)	89 (95%)	5 (5%)	19	44
36	e	110/111 (99%)	104 (94%)	6 (6%)	18	43
37	f	90/91 (99%)	84 (93%)	6 (7%)	13	38
38	g	95/103 (92%)	90 (95%)	5 (5%)	19	44
39	h	104/105 (99%)	97 (93%)	7 (7%)	13	38
40	i	78/82 (95%)	74 (95%)	4 (5%)	20	45
41	j	69/71 (97%)	66 (96%)	3 (4%)	25	49
42	k	68/69 (99%)	64 (94%)	4 (6%)	16	41
43	l	45/46 (98%)	43 (96%)	2 (4%)	24	48
44	o	43/47 (92%)	41 (95%)	2 (5%)	22	46

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	p	71/72 (99%)	68 (96%)	3 (4%)	25	49
46	q	90/91 (99%)	85 (94%)	5 (6%)	17	43
47	r	48/229 (21%)	48 (100%)	0	100	100
48	u	132/180 (73%)	129 (98%)	3 (2%)	45	63
49	v	220/467 (47%)	216 (98%)	4 (2%)	54	71
50	y	195/211 (92%)	180 (92%)	15 (8%)	10	34
51	z	48/95 (50%)	44 (92%)	4 (8%)	9	32
All	All	10658/11745 (91%)	10298 (97%)	360 (3%)	34	55

5 of 360 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
32	a	160	ILE
39	h	24	LEU
33	b	112	TYR
34	c	27	TYR
42	k	55	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 115 such sidechains are listed below:

Mol	Chain	Res	Type
28	W	232	ASN
1	w	588	ASN
33	b	413	ASN
1	w	311	ASN
44	o	48	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	1	3342/3396 (98%)	870 (26%)	38 (1%)
3	2	120/121 (99%)	20 (16%)	0
4	3	156/158 (98%)	31 (19%)	0
All	All	3618/3675 (98%)	921 (25%)	38 (1%)

5 of 921 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	1	4	U
2	1	14	U
2	1	16	A
2	1	22	G
2	1	23	A

5 of 38 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	1	2547	A
2	1	3228	C
2	1	2845	A
2	1	2965	U
2	1	3292	A

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 12 ligands modelled in this entry, 1 is monoatomic - leaving 11 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	$\#\lvert Z\rvert > 2$	Counts	RMSZ	$\#\lvert Z\rvert > 2$
54	AGS	Aa	902	-	28,33,33	0.74	1 (3%)	31,52,52	0.98	2 (6%)
54	AGS	w	903	-	28,33,33	0.73	1 (3%)	31,52,52	0.93	2 (6%)
54	AGS	n	901	-	28,33,33	0.72	1 (3%)	31,52,52	0.97	2 (6%)
54	AGS	x	901	-	28,33,33	0.73	1 (3%)	31,52,52	1.06	3 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
54	AGS	Aa	901	-	28,33,33	0.72	1 (3%)	31,52,52	0.95	2 (6%)
54	AGS	n	902	-	28,33,33	0.74	1 (3%)	31,52,52	0.95	2 (6%)
54	AGS	w	902	-	28,33,33	0.73	1 (3%)	31,52,52	0.97	2 (6%)
54	AGS	m	902	-	28,33,33	0.74	1 (3%)	31,52,52	0.93	2 (6%)
54	AGS	t	801	-	28,33,33	0.73	1 (3%)	31,52,52	0.95	2 (6%)
54	AGS	m	901	-	28,33,33	0.73	1 (3%)	31,52,52	0.94	2 (6%)
54	AGS	w	901	-	28,33,33	0.72	1 (3%)	31,52,52	0.95	2 (6%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	AGS	Aa	902	-	-	1/17/38/38	0/3/3/3
54	AGS	w	903	-	-	4/17/38/38	0/3/3/3
54	AGS	n	901	-	-	5/17/38/38	0/3/3/3
54	AGS	x	901	-	-	2/17/38/38	0/3/3/3
54	AGS	Aa	901	-	-	3/17/38/38	0/3/3/3
54	AGS	n	902	-	-	4/17/38/38	0/3/3/3
54	AGS	w	902	-	-	3/17/38/38	0/3/3/3
54	AGS	m	902	-	-	2/17/38/38	0/3/3/3
54	AGS	t	801	-	-	6/17/38/38	0/3/3/3
54	AGS	m	901	-	-	4/17/38/38	0/3/3/3
54	AGS	w	901	-	-	7/17/38/38	0/3/3/3

The worst 5 of 11 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	m	902	AGS	PG-S1G	2.17	1.95	1.90
54	w	902	AGS	PG-S1G	2.17	1.95	1.90
54	n	902	AGS	PG-S1G	2.16	1.95	1.90
54	x	901	AGS	PG-S1G	2.16	1.95	1.90
54	Aa	901	AGS	PG-S1G	2.15	1.95	1.90

The worst 5 of 23 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	w	902	AGS	PB-O3B-PG	-3.73	119.53	133.17
54	w	901	AGS	PB-O3B-PG	-3.63	119.90	133.17
54	n	902	AGS	PB-O3B-PG	-3.55	120.16	133.17
54	n	901	AGS	PB-O3B-PG	-3.55	120.19	133.17
54	x	901	AGS	PB-O3B-PG	-3.53	120.23	133.17

There are no chirality outliers.

5 of 41 torsion outliers are listed below:

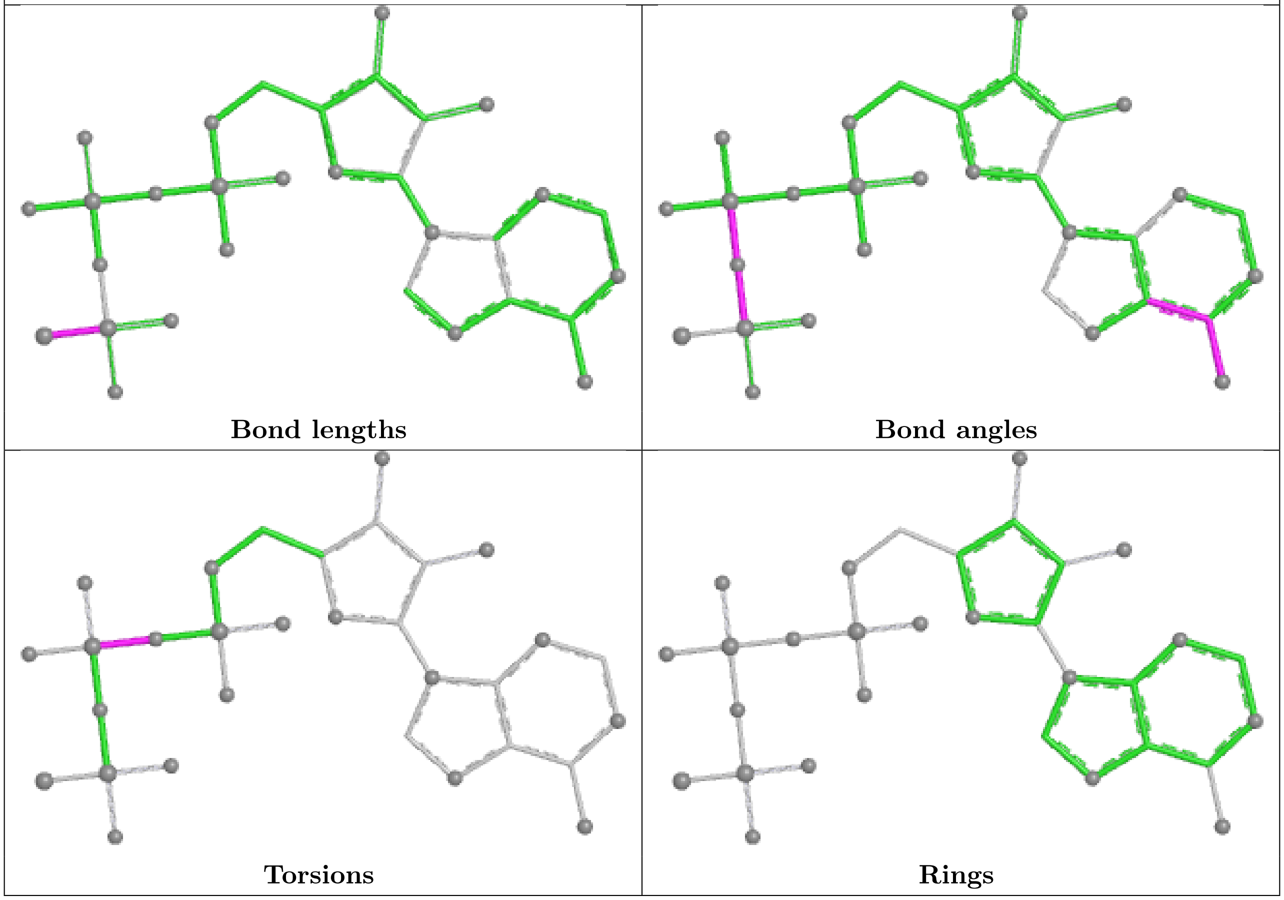
Mol	Chain	Res	Type	Atoms
54	m	902	AGS	PB-O3B-PG-O3G
54	n	901	AGS	PB-O3B-PG-O2G
54	n	901	AGS	PB-O3B-PG-O3G
54	n	902	AGS	C5’-O5’-PA-O2A
54	t	801	AGS	PB-O3B-PG-O2G

There are no ring outliers.

No monomer is involved in short contacts.

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 AGS Aa 902



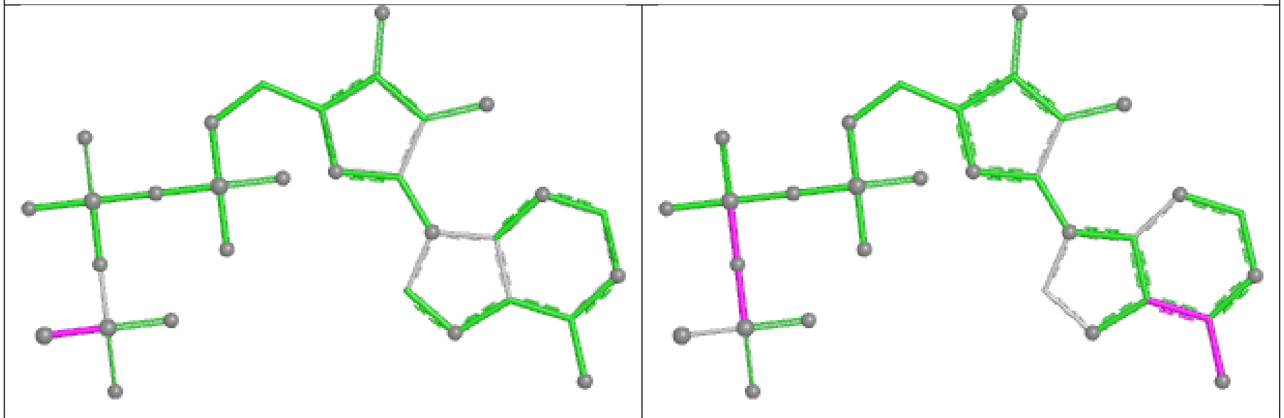
Bond lengths

Bond angles

Torsions

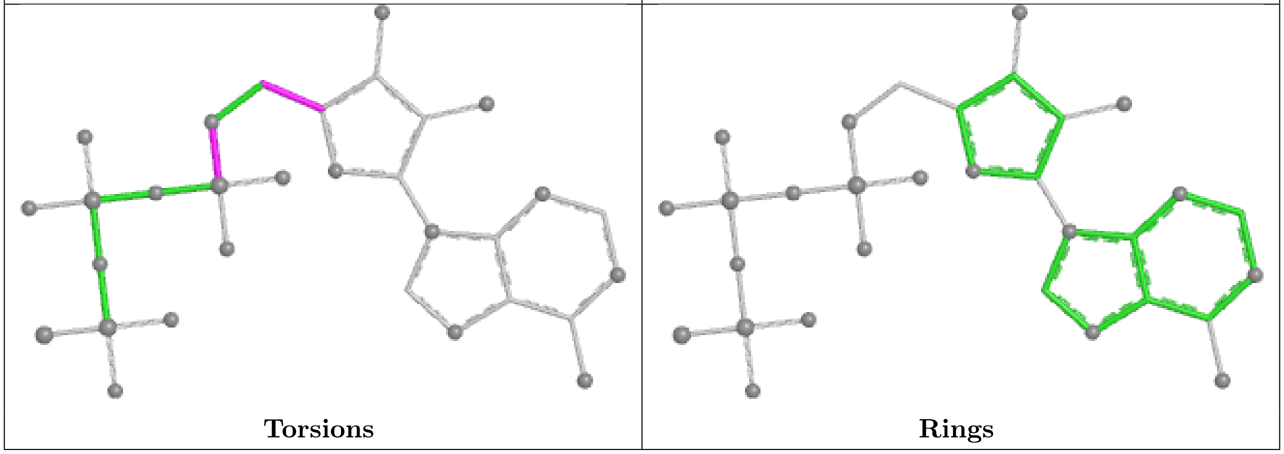
Rings

Ligand AGS w 903



Bond lengths

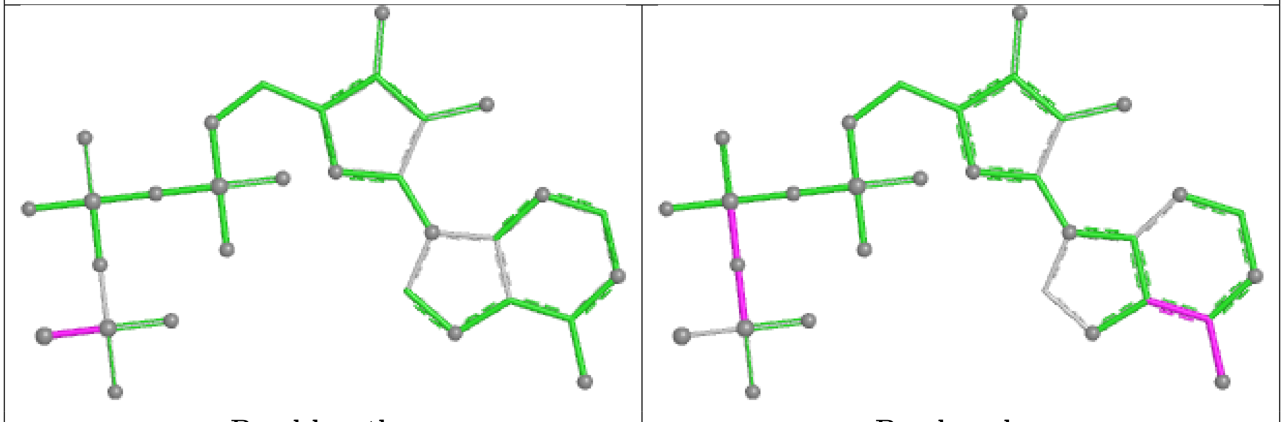
Bond angles



Torsions

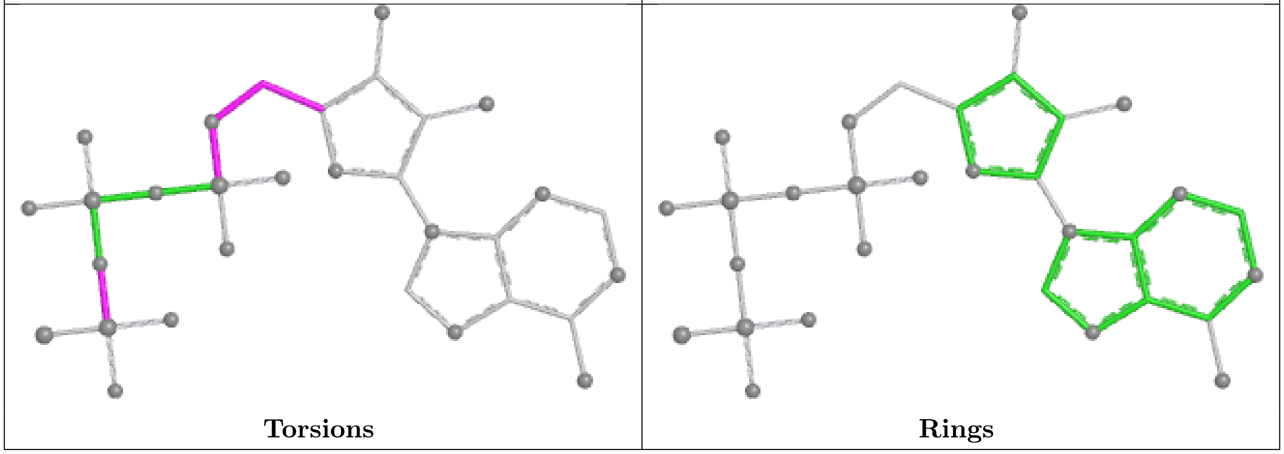
Rings

Ligand AGS n 901



Bond lengths

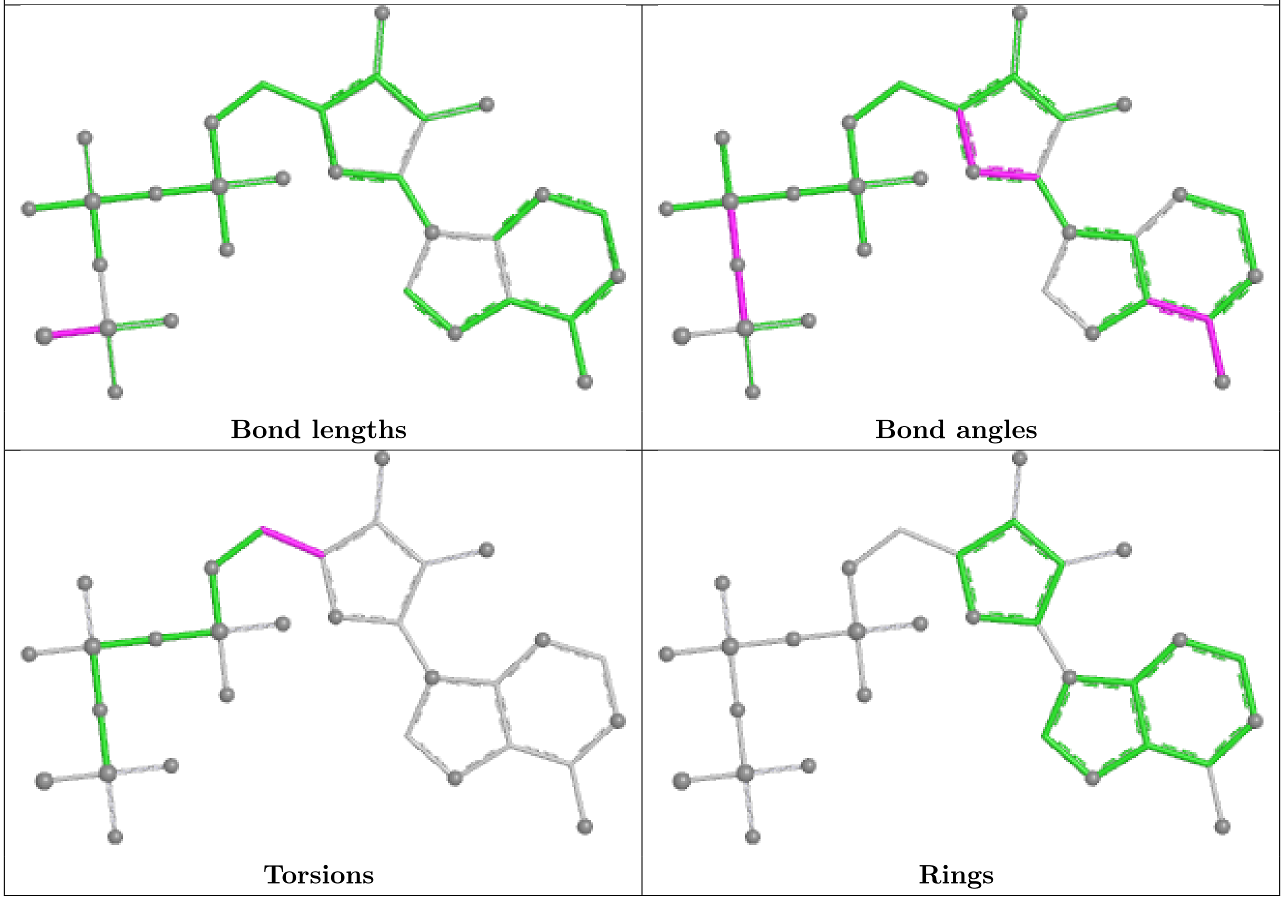
Bond angles



Torsions

Rings

Ligand AGS x 901



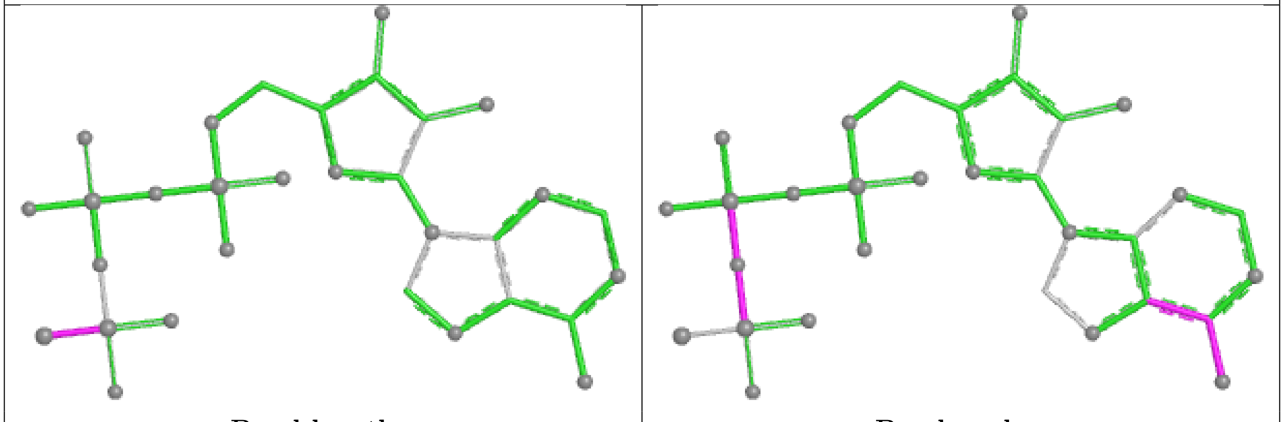
Bond lengths

Bond angles

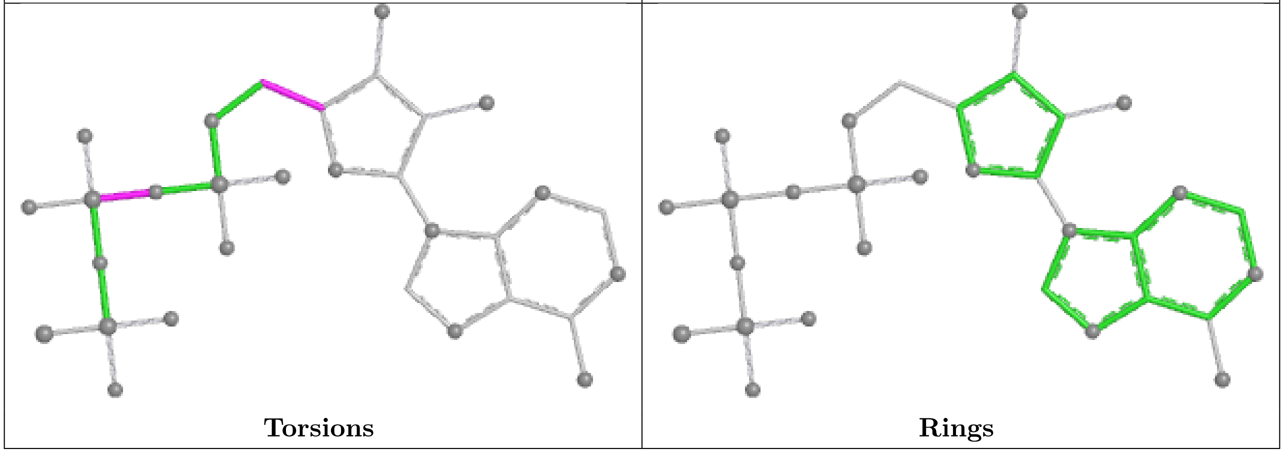
Torsions

Rings

Ligand AGS Aa 901

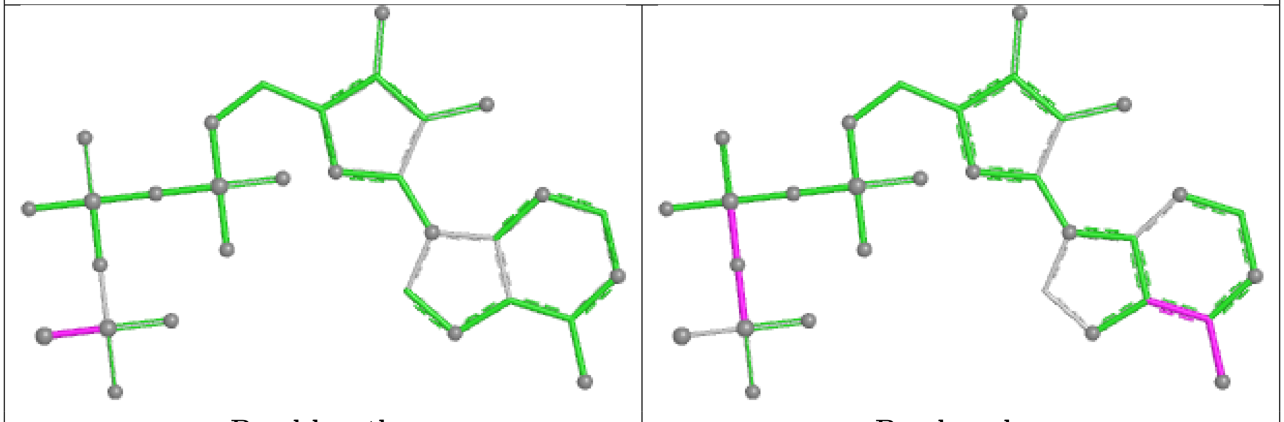


Bond lengths **Bond angles**



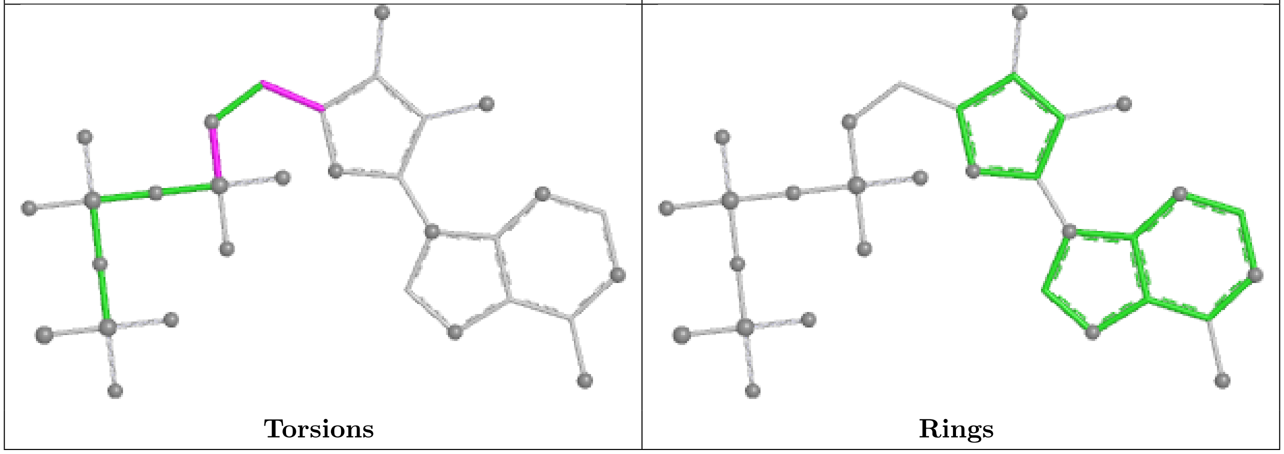
Torsions **Rings**

Ligand AGS n 902



Bond lengths

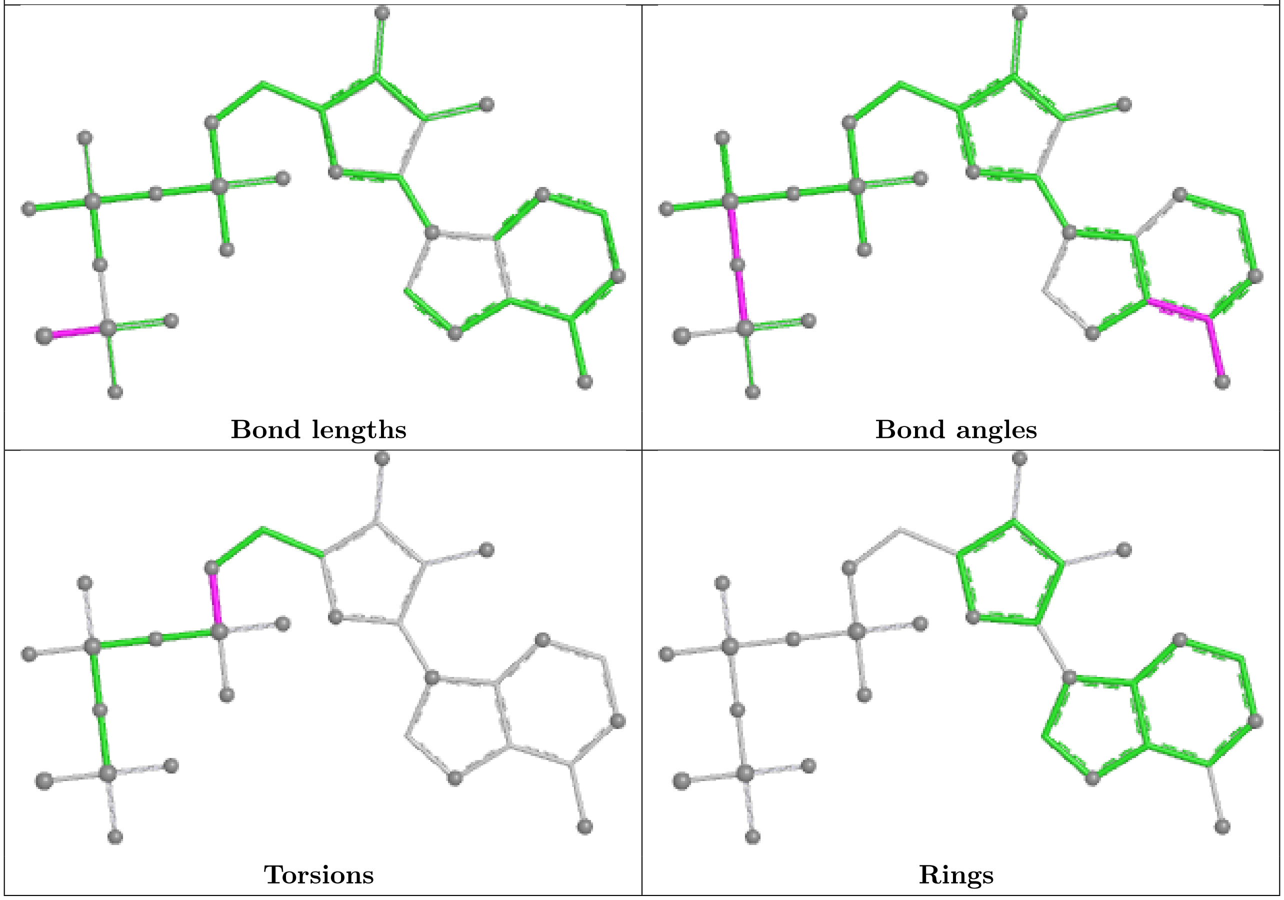
Bond angles



Torsions

Rings

Ligand AGS w 902



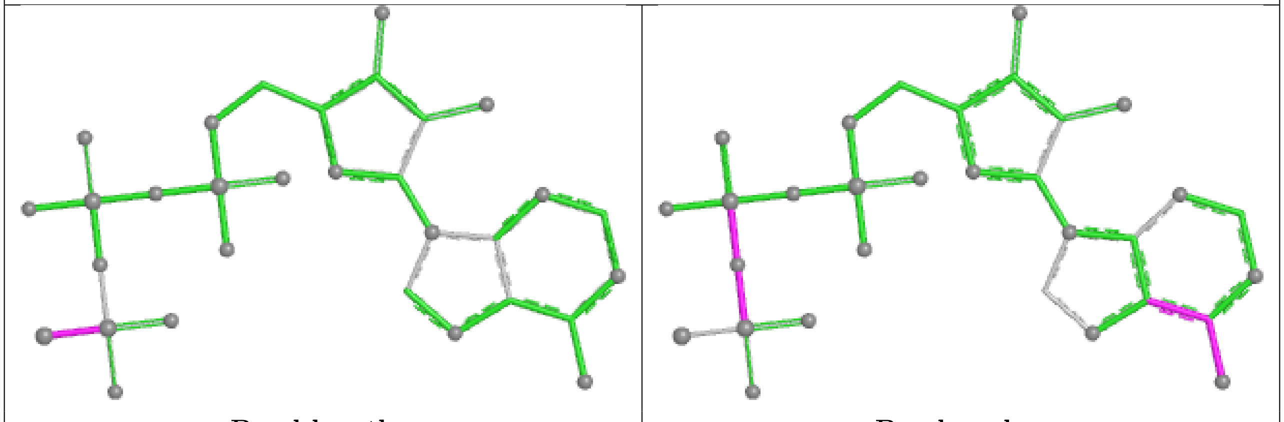
Bond lengths

Bond angles

Torsions

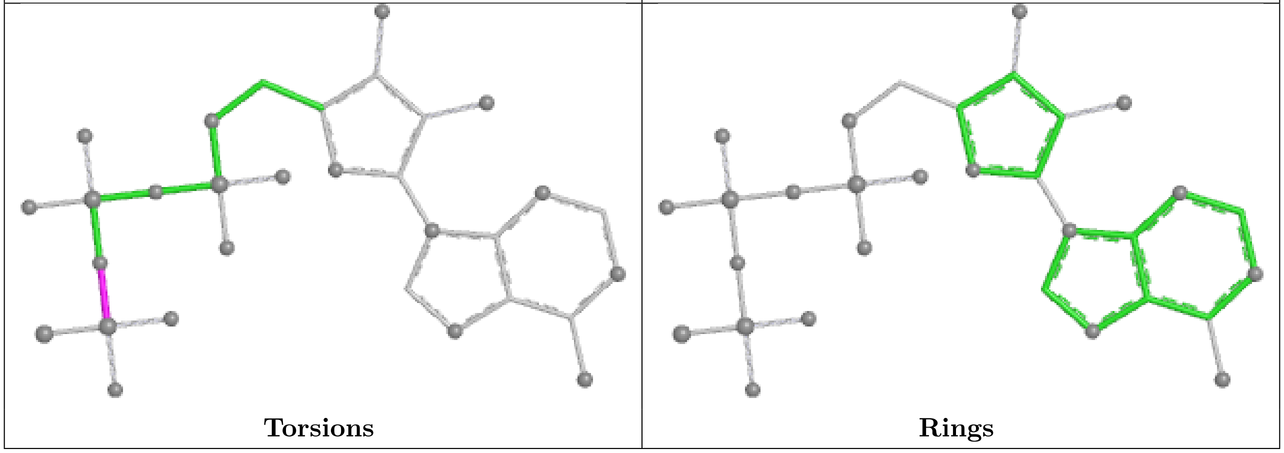
Rings

Ligand AGS m 902



Bond lengths

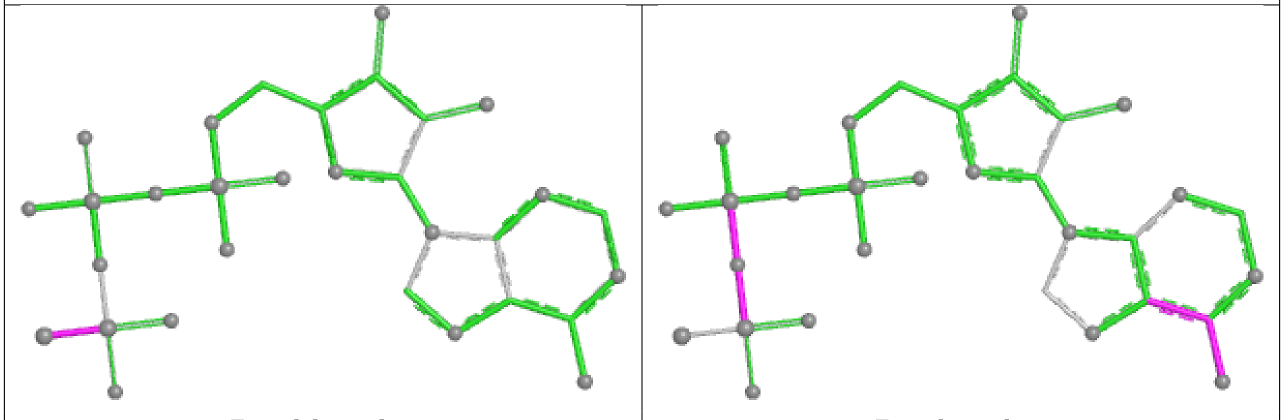
Bond angles



Torsions

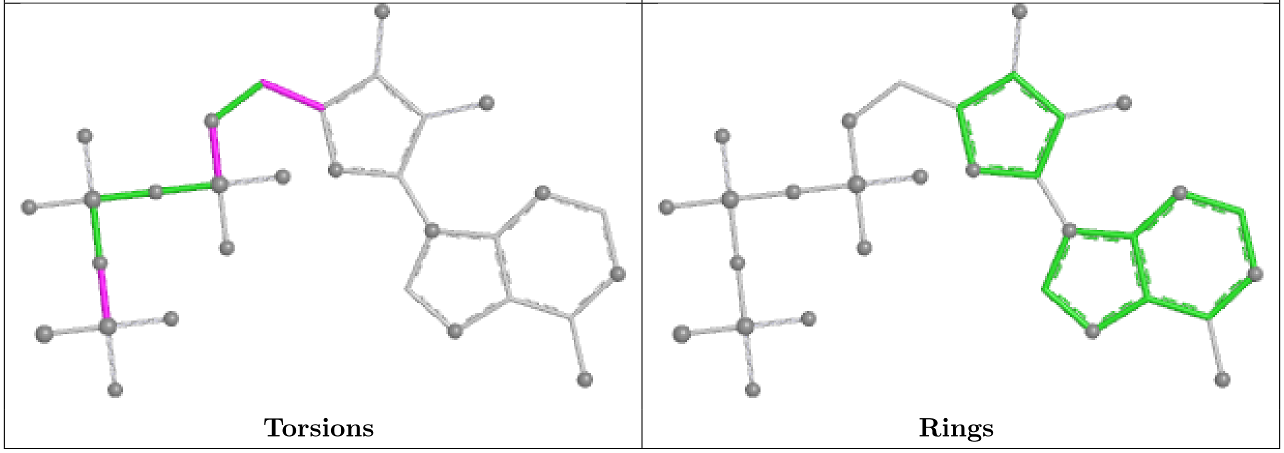
Rings

Ligand AGS t 801



Bond lengths

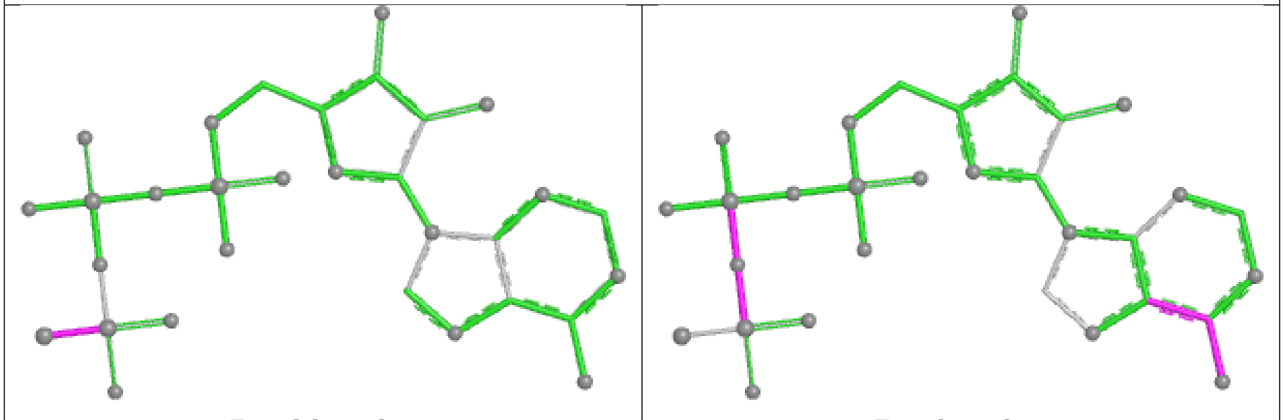
Bond angles



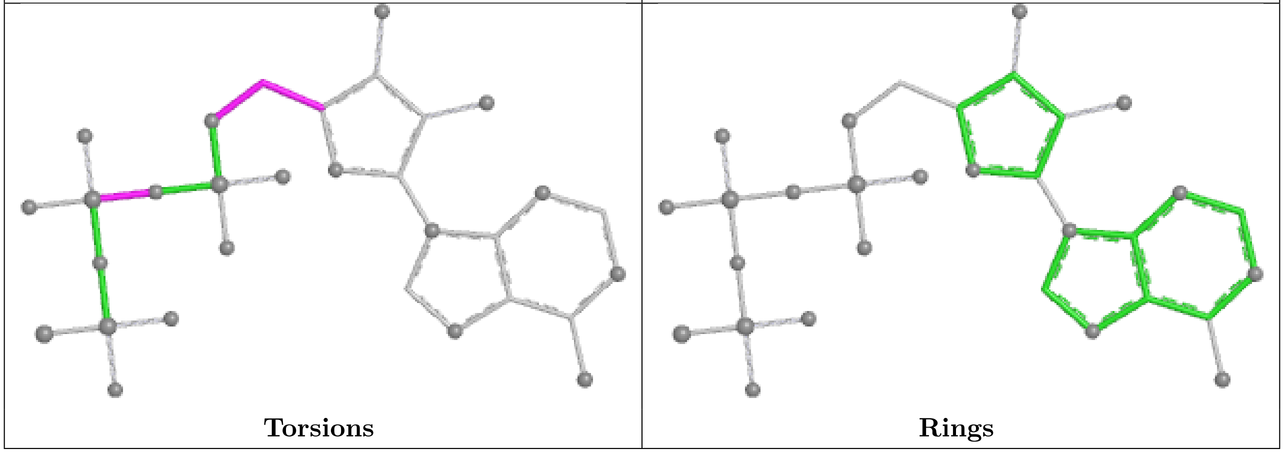
Torsions

Rings

Ligand AGS m 901

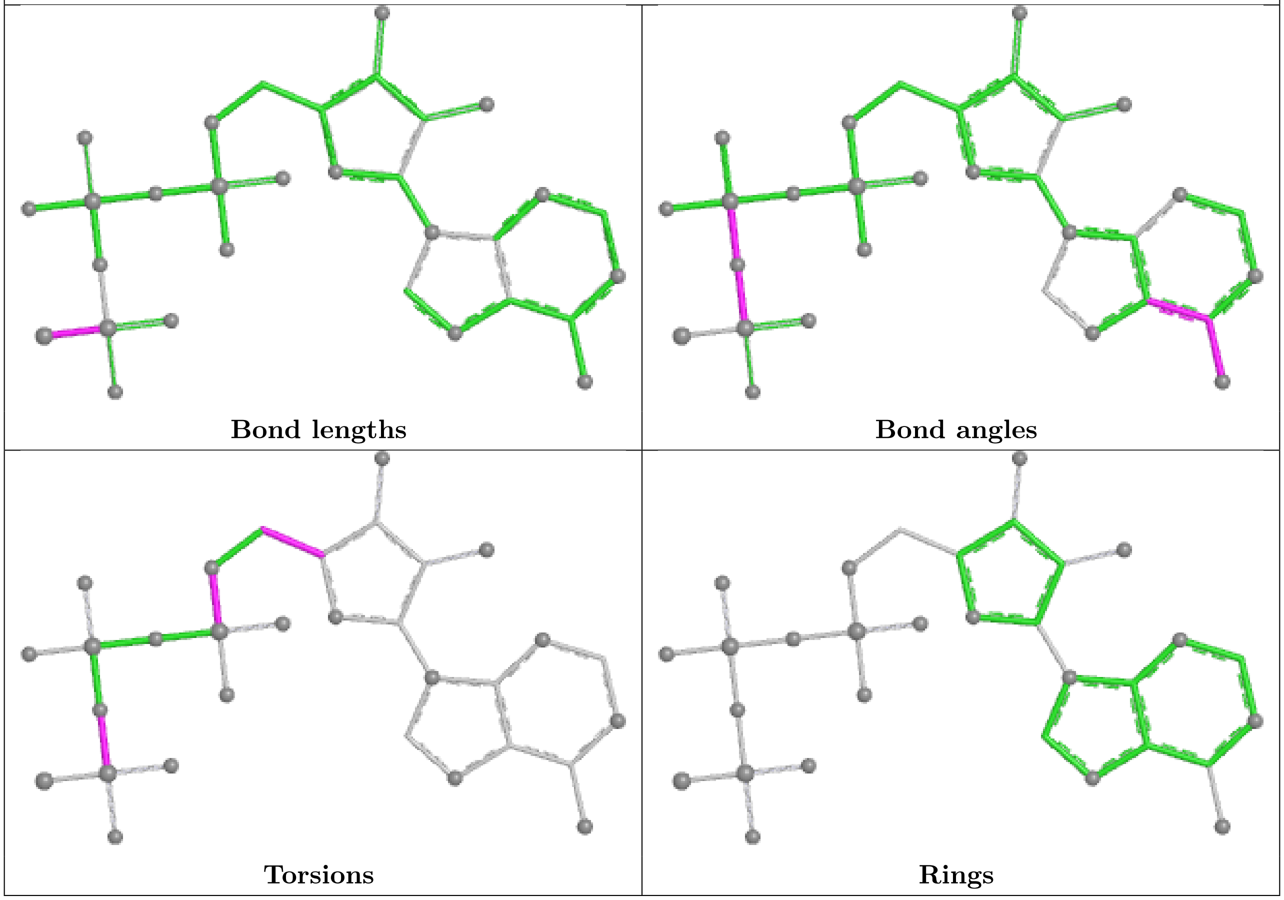


Bond lengths **Bond angles**



Torsions **Rings**

Ligand AGS w 901



Bond lengths

Bond angles

Torsions

Rings

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

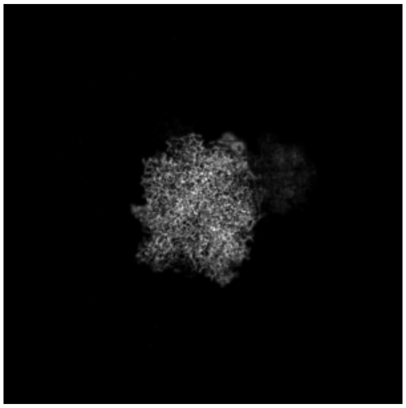
6 Map visualisation ⓘ

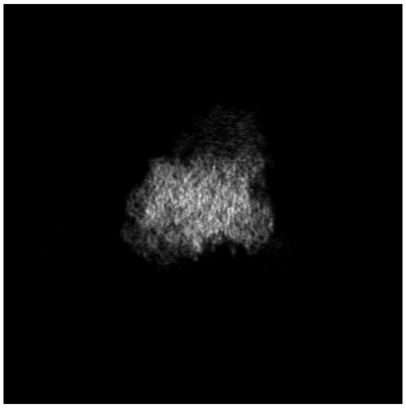
This section contains visualisations of the EMDB entry EMD-14471. These allow visual inspection of the internal detail of the map and identification of artifacts.

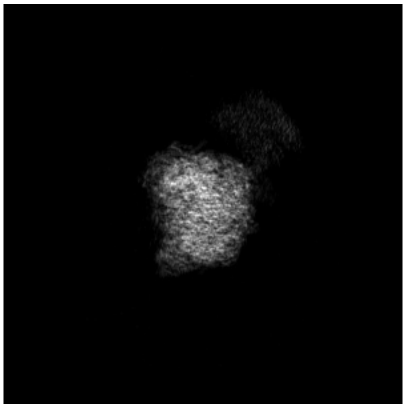
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections ⓘ

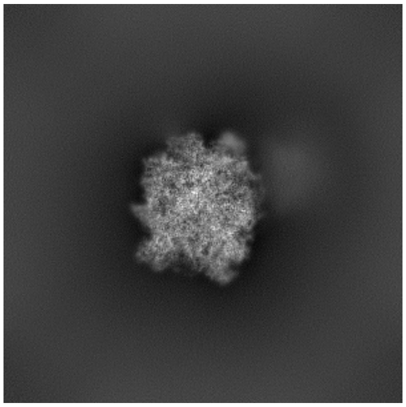
6.1.1 Primary map

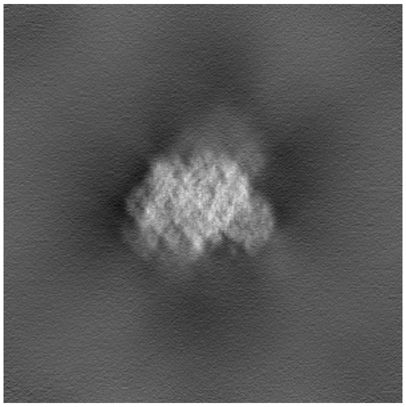

X

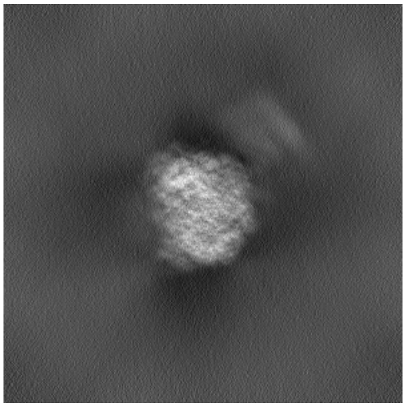

Y


Z

6.1.2 Raw map


X

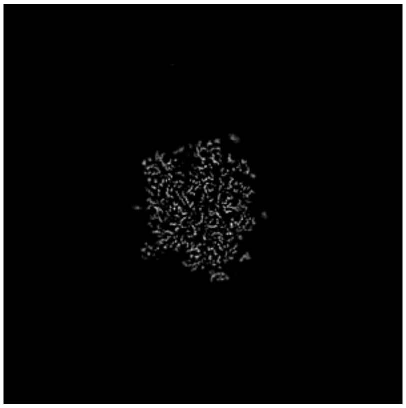

Y


Z

The images above show the map projected in three orthogonal directions.

6.2 Central slices

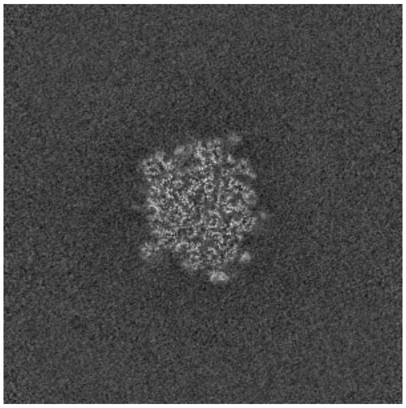
6.2.1 Primary map

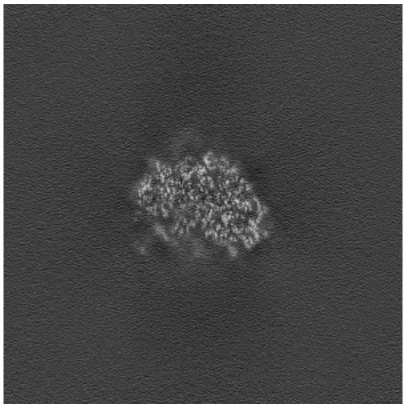

X Index: 240

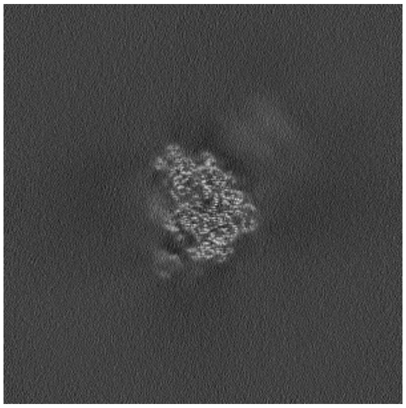

Y Index: 240


Z Index: 240

6.2.2 Raw map


X Index: 240


Y Index: 240

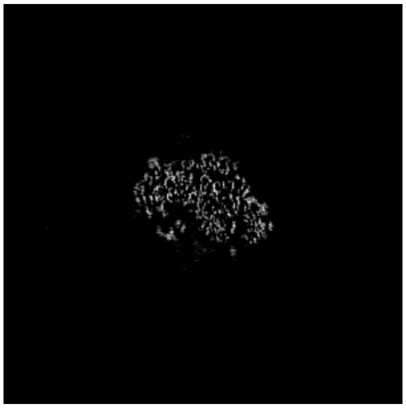

Z Index: 240

The images above show central slices of the map in three orthogonal directions.

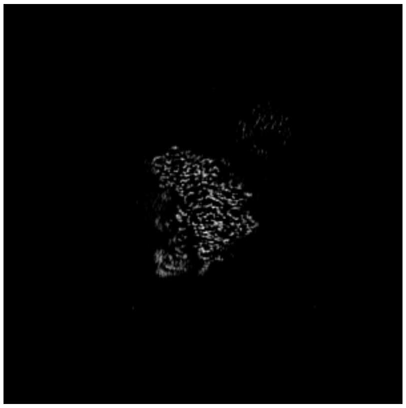
6.3 Largest variance slices (i)

6.3.1 Primary map

X Index: 241

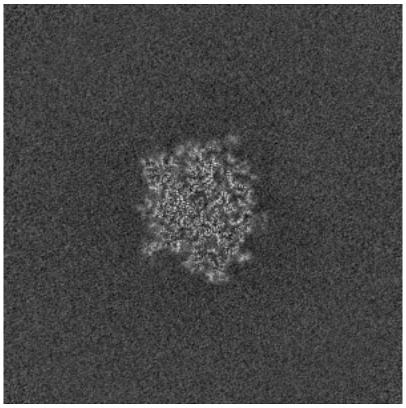


Y Index: 237

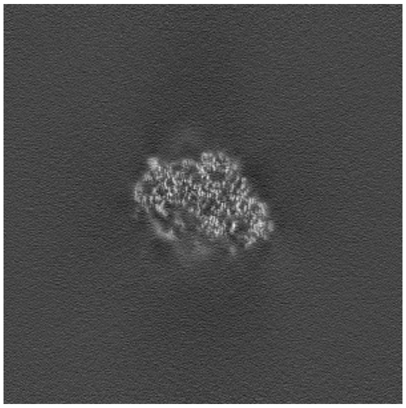


Z Index: 235

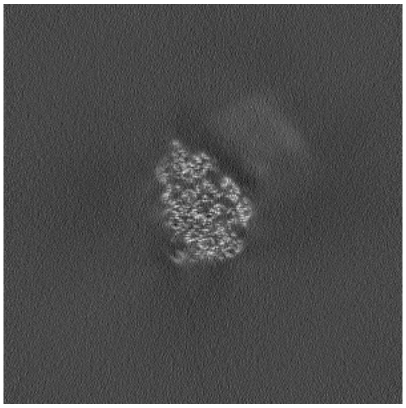
6.3.2 Raw map



X Index: 243



Y Index: 236

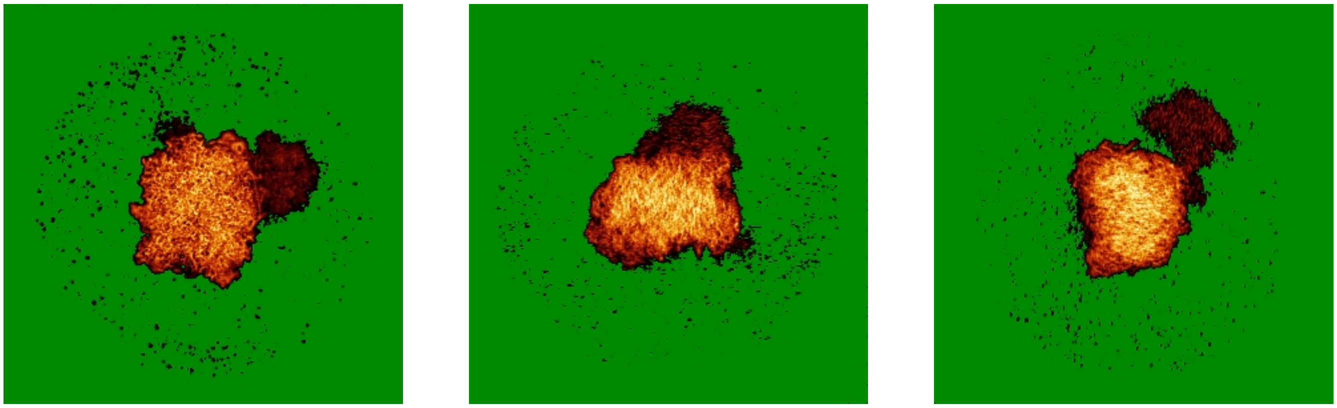


Z Index: 254

The images above show the largest variance slices of the map in three orthogonal directions.

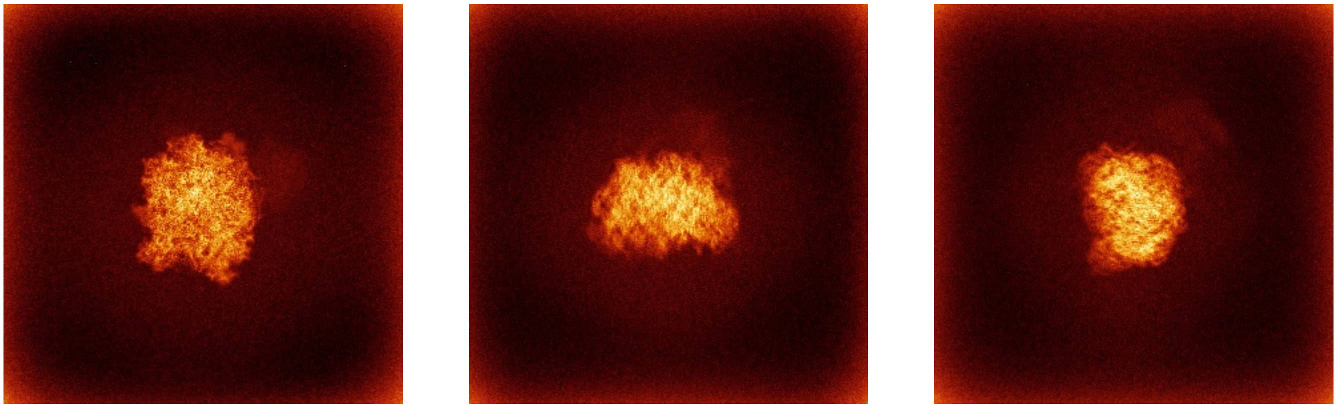
6.4 Orthogonal standard-deviation projections (False-color)

6.4.1 Primary map



X Y Z

6.4.2 Raw map



X Y Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views

6.5.1 Primary map

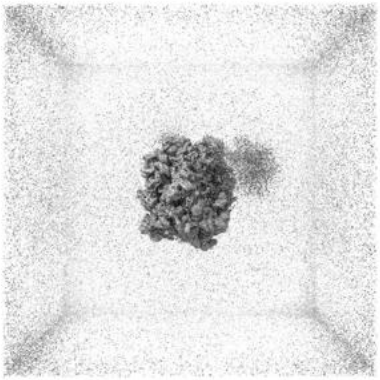
X

Y

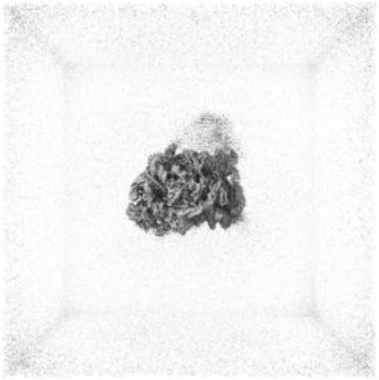
Z

The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X



Y

Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

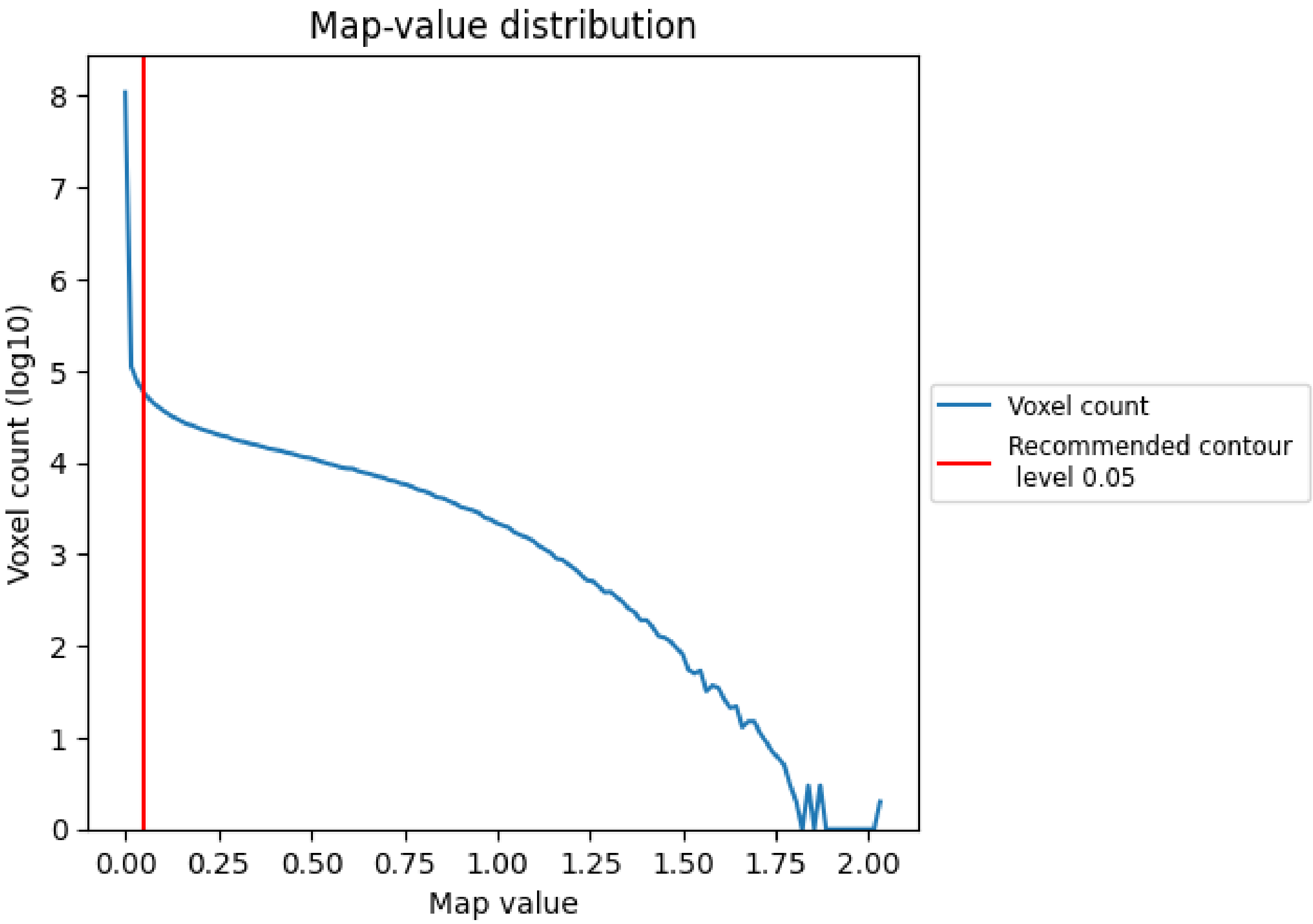
6.6 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis ⓘ

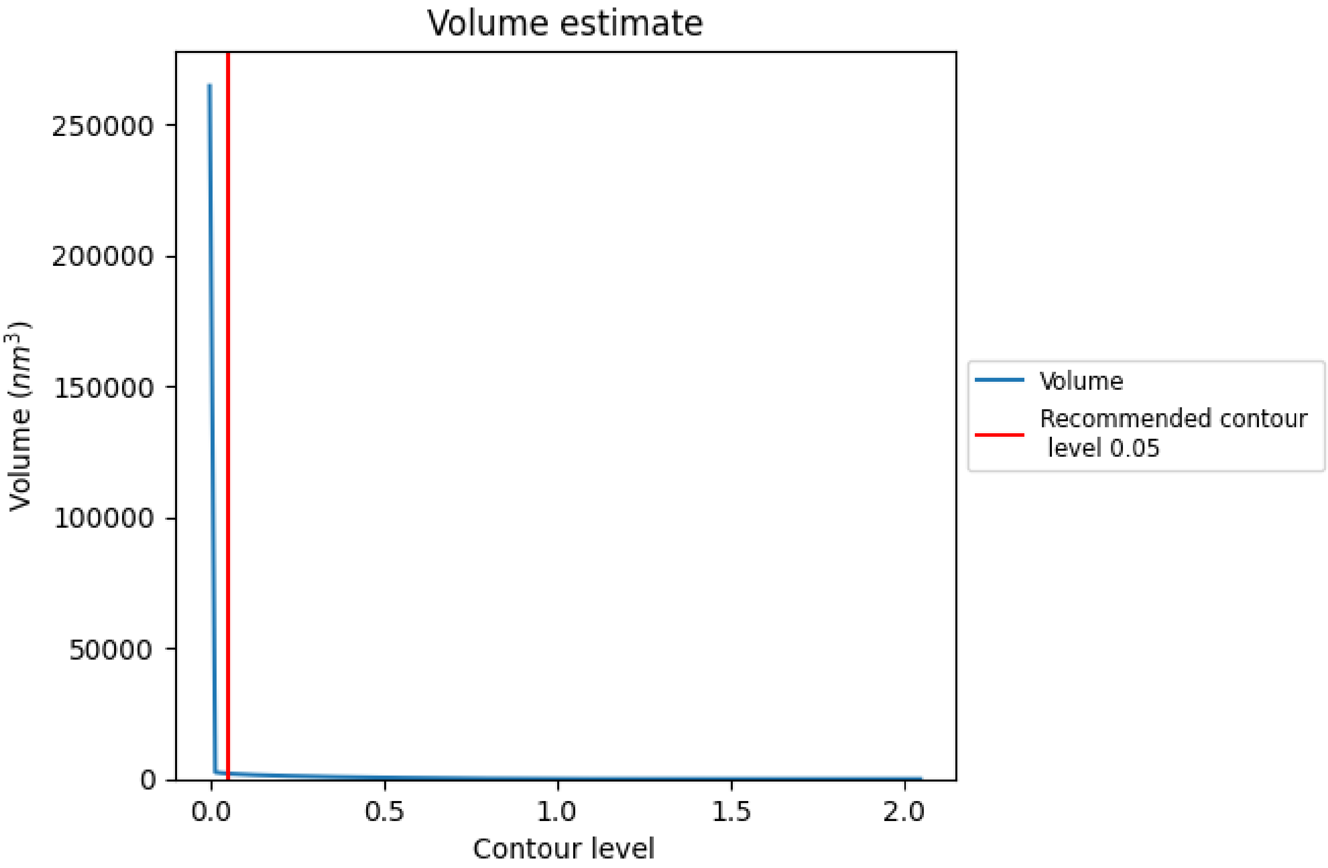
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution ⓘ



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

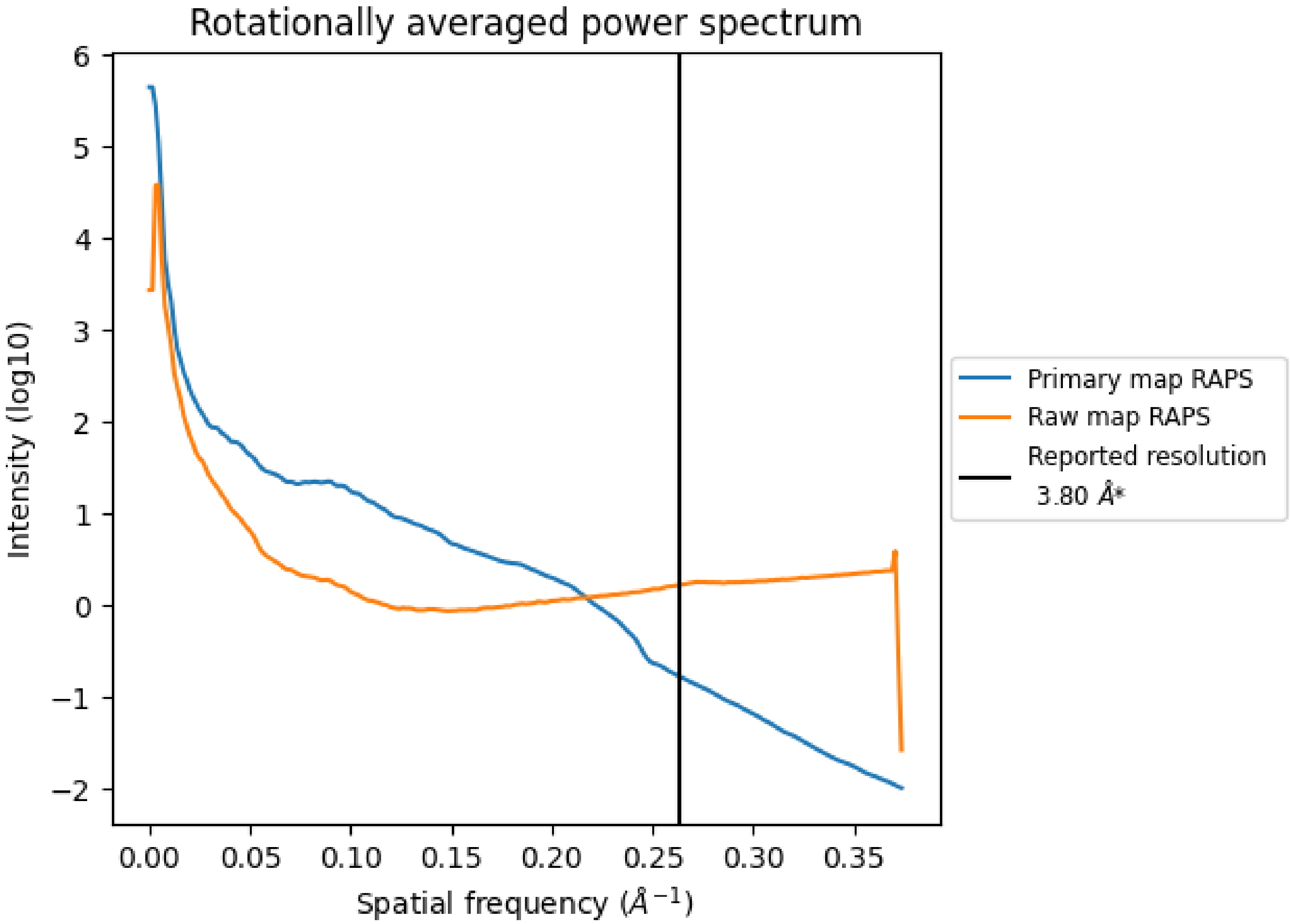
7.2 Volume estimate (i)



The volume at the recommended contour level is 2056 nm^3; this corresponds to an approximate mass of 1857 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

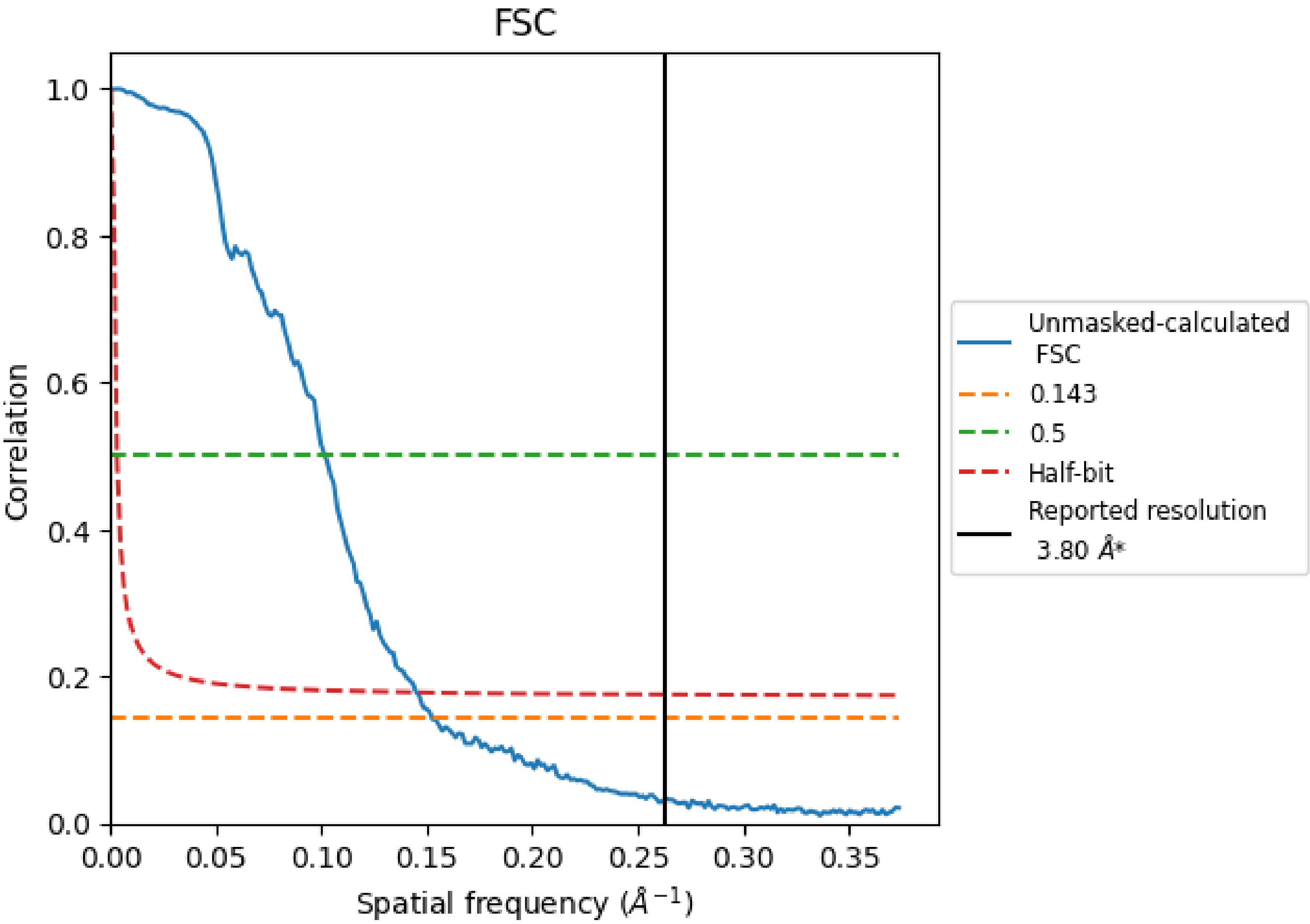


*Reported resolution corresponds to spatial frequency of 0.263 $Å^{-1}$

8 Fourier-Shell correlation ⓘ

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC ⓘ



*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

8.2 Resolution estimates ⓘ

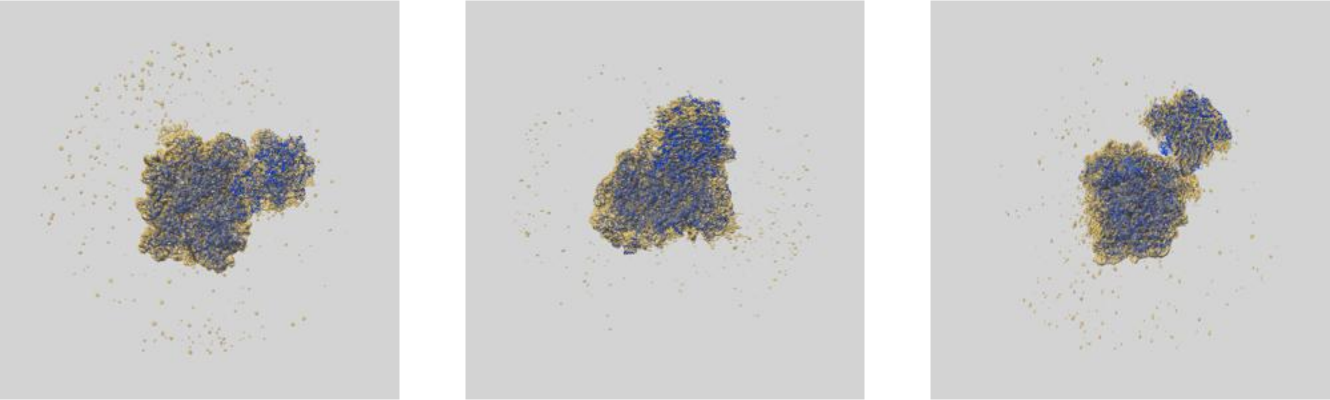
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.80	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.56	9.83	6.90

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.56 differs from the reported value 3.8 by more than 10 %

9 Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-14471 and PDB model 7Z34. Per-residue inclusion information can be found in section 3 on page 14.

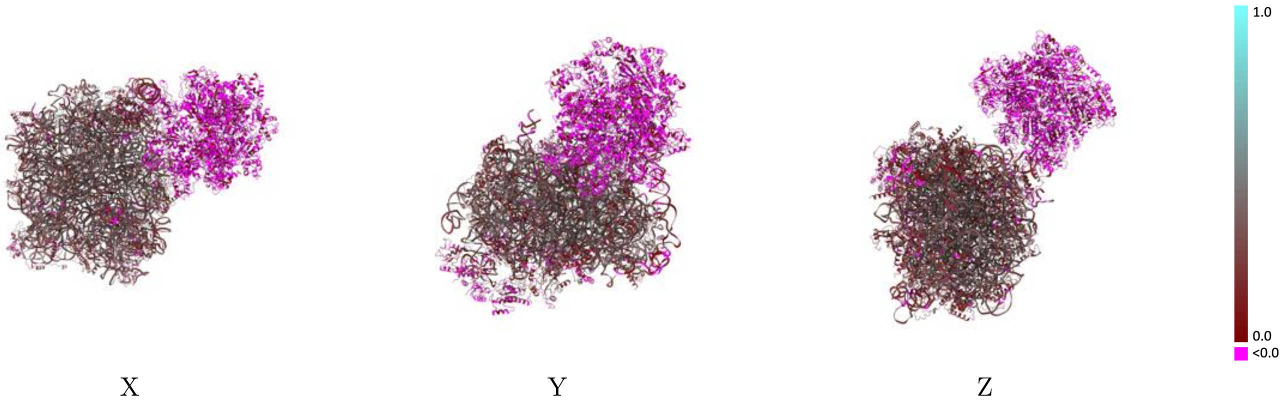
9.1 Map-model overlay ⓘ



X Y Z

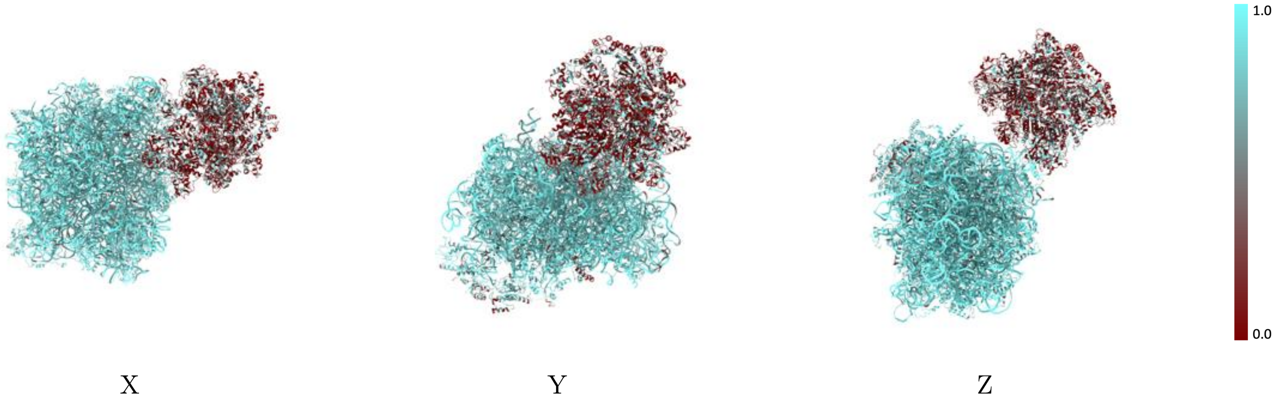
The images above show the 3D surface view of the map at the recommended contour level 0.05 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ



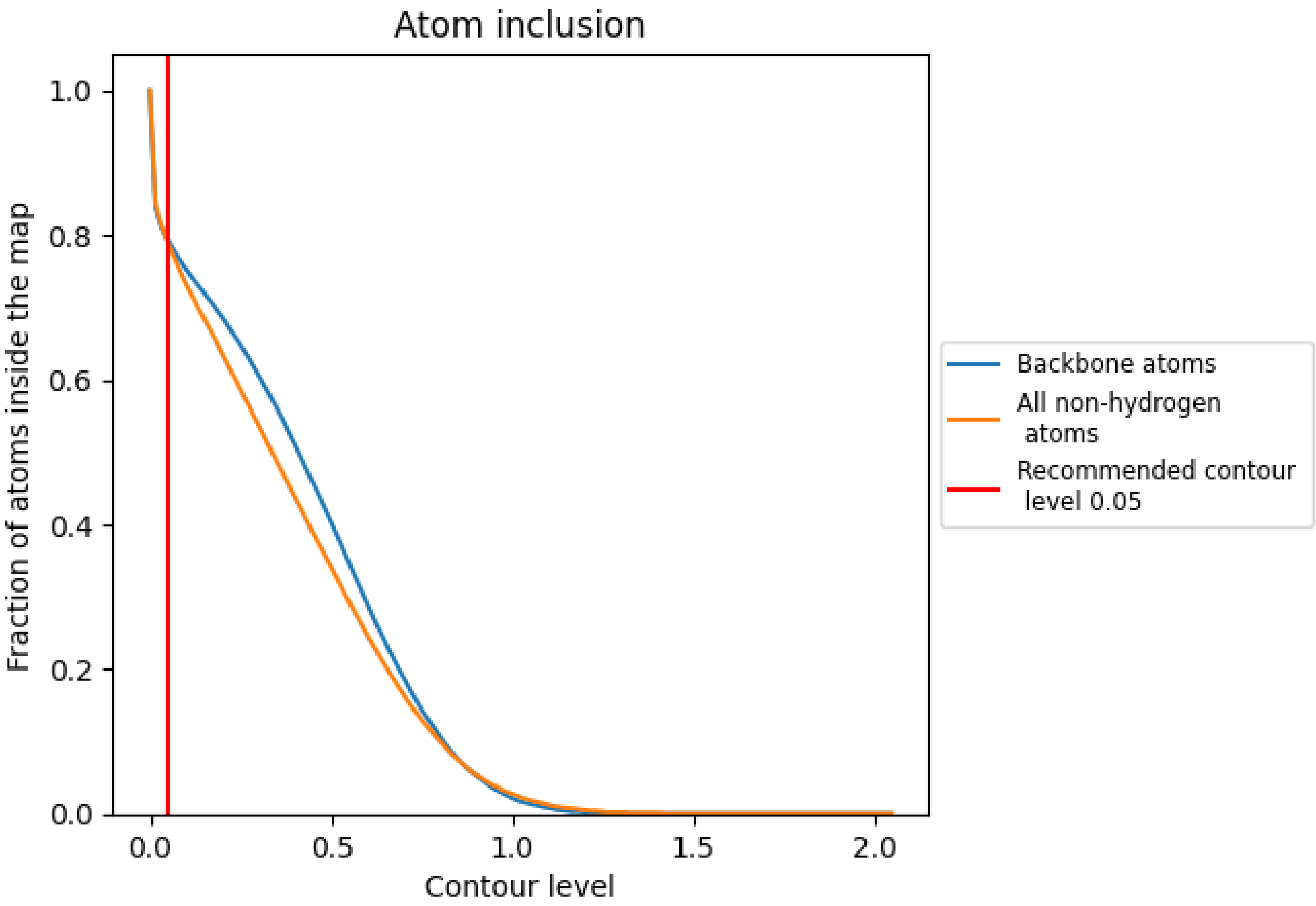
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model ⓘ



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

9.4 Atom inclusion ⓘ



At the recommended contour level, 79% of all backbone atoms, 79% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7880	0.2270
0	0.2810	0.0450
1	0.9430	0.3120
2	0.9590	0.3070
3	0.9770	0.3520
4	0.8610	0.2430
A	0.8920	0.3020
Aa	0.1900	-0.0320
B	0.9010	0.3070
C	0.9040	0.3030
D	0.8520	0.2130
E	0.8710	0.2760
F	0.9050	0.2810
G	0.8930	0.2610
H	0.8970	0.2800
I	0.6590	0.1650
J	0.8450	0.2000
K	0.8960	0.3040
L	0.9040	0.3000
M	0.8740	0.2670
N	0.8910	0.3110
O	0.8970	0.2890
P	0.8680	0.2840
Q	0.8870	0.2900
R	0.8780	0.2610
S	0.8840	0.3010
T	0.8850	0.2880
U	0.8990	0.2720
V	0.8870	0.2950
W	0.7970	0.1140
X	0.8790	0.3020
Y	0.8920	0.3040
Z	0.8760	0.2510
a	0.6300	0.0470
b	0.7880	0.1820

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
c	0.8840	0.2590
d	0.8500	0.2850
e	0.8980	0.3200
f	0.9070	0.3350
g	0.8620	0.2720
h	0.8890	0.2880
i	0.8690	0.2390
j	0.9180	0.3350
k	0.8630	0.2390
l	0.8800	0.2800
m	0.2600	-0.0330
n	0.2820	-0.0240
o	0.8630	0.2480
oC	0.9470	0.2780
p	0.8720	0.2350
q	0.7740	0.1850
r	0.5150	0.0500
t	0.3220	-0.0230
u	0.8770	0.2460
v	0.8090	0.2320
w	0.3860	0.0020
x	0.2680	-0.0230
y	0.8940	0.2390
z	0.8890	0.2650