Full wwPDB EM Validation Report ⓘ

Aug 22, 2023 – 05:15 PM JST

PDB ID	:	8HKY
EMDB ID	:	EMD-34863
Title	:	Cryo-EM Structures and Translocation Mechanism of Crenarchaeota Ribosome
Authors	:	Wang, Y.H.; Zhou, J.
Deposited on	:	2022-11-28
Resolution	:	4.45 Å(reported)

This is a Full wwPDB EM Validation 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/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

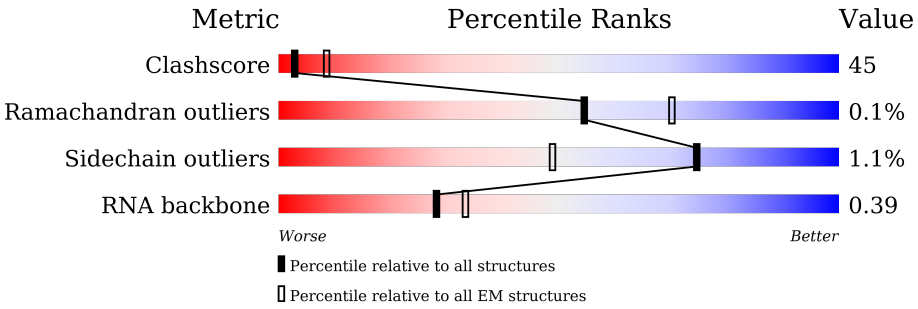
EMDB validation analysis	:	0.0.1.dev50
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

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 4.45 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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	A23S	3022	5% 59% 37%
2	A16S	1503	54% 40% 5%
3	AATN	76	25% 51% 38% 11%
3	AETN	76	89% 50% 45% 5%
3	APTN	76	9% 67% 28% 5%
4	A5S	122	7% 66% 27%
5	AL1P	216	94% 100%

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Mol	Chain	Length	Quality of chain
6	AL2P	234	33% 99%
7	AL3P	339	32% 99%
8	AL4P	251	20% 99%
9	AL5P	168	40% 99%
10	AL6P	181	38% 98%
11	ALX0	76	32% 100%
12	L10E	164	20% 99%
13	L13P	140	27% 99%
14	L141	86	33% 100%
14	L142	86	42% 100%
15	L14P	134	40% 99%
16	L15E	169	30% 99%
17	L18E	112	12% 100%
18	L18P	193	26% 99%
19	L19E	144	15% 99%
20	L22P	150	34% 99%
21	L23P	81	28% 100%
22	L24E	54	26% 100%
23	L24P	122	19% 98%
24	L29P	63	16% 97%
25	L30E	94	11% 100%
26	L30P	155	27% 100%
27	L31E	75	32% 99%
28	L32E	123	35% 100%
29	L34E	77	38% 96%

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Mol	Chain	Length	Quality of chain
30	L37A	65	25% 98%
31	L37E	54	17% 100%
32	L39E	49	16% 100%
33	L40E	55	80% 98%
34	L44E	92	18% 100%
35	L7A1	123	41% 97%
35	L7A2	123	46% 99%
35	SL7A	123	86% 98%
36	L15P	144	15% 65% 35%
37	L21E	97	28% 100%
38	L45A	101	32% 96%
39	L46A	70	59% 99%
40	L47A	80	92% 99%
41	AS2P	196	59% 99%
42	AS4E	240	30% 98%
43	AS4P	166	27% 99%
44	AS5P	204	27% 100%
45	AS6E	105	64% 100%
46	AS8E	126	37% 99%
47	AS8P	130	12% 94% 5%
48	S11P	128	38% 99%
49	S12P	143	57% 99%
50	S15P	149	18% 98%
51	S17P	111	33% 97%
52	S24E	96	48% 100%

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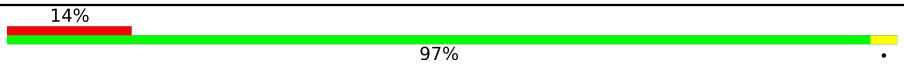
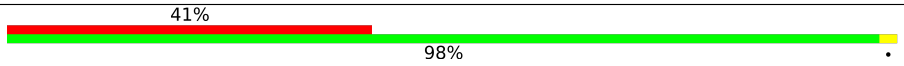
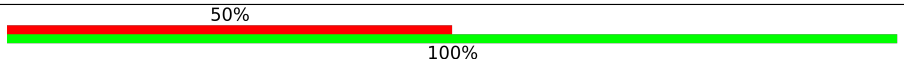
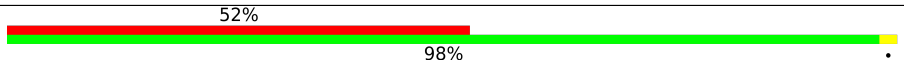
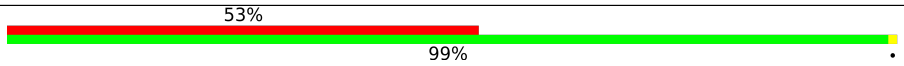
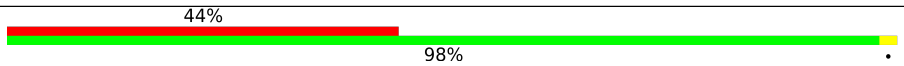
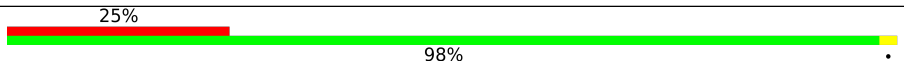
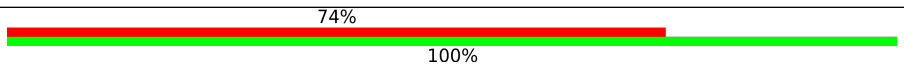
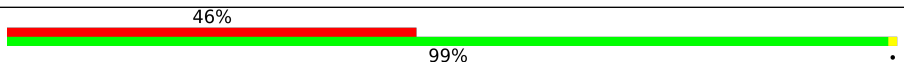
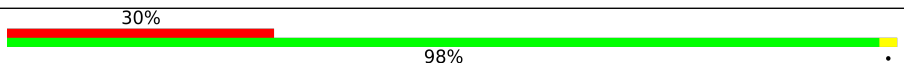
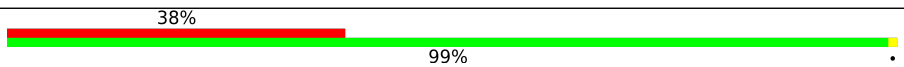
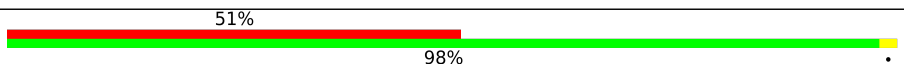
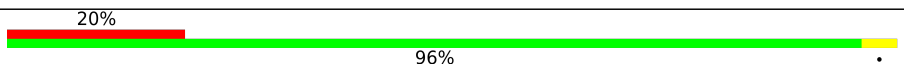
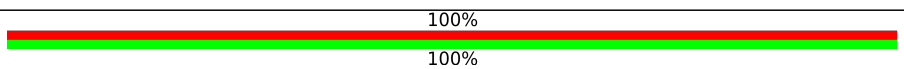
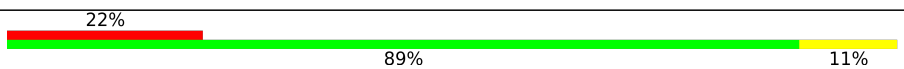
Mol	Chain	Length	Quality of chain
53	S27E	59	
54	S3AE	189	
55	AS3P	201	
56	AS7P	193	
57	S10P	100	
58	S13P	147	
59	S14P	52	
60	S17E	62	
61	S19E	150	
62	S19P	115	
63	AS9P	136	
64	S28E	63	
65	S27A	54	
66	APTP	6	
67	AMRN	9	

2 Entry composition (i)

There are 68 unique types of molecules in this entry. The entry contains 169359 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 RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A23S	2996	64357	28673	11911	20777	2996	0	0

- Molecule 2 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	A16S	1493	32063	14279	5930	10361	1493	0	0

- Molecule 3 is a RNA chain called tRNA (76-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	AATN	76	1619	723	290	531	75	0	0
3	APTN	76	1619	723	290	531	75	0	0
3	AETN	76	1619	723	290	531	75	0	0

- Molecule 4 is a RNA chain called 5S rRNA (122-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	A5S	122	2609	1163	476	849	121	0	0

- Molecule 5 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	AL1P	216	1715	1096	303	312	4	0	0

- Molecule 6 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AL2P	234	Total	C	N	O	S	0	0
			1754	1101	344	307	2		

- Molecule 7 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AL3P	339	Total	C	N	O	S	0	0
			2695	1730	484	477	4		

- Molecule 8 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AL4P	251	Total	C	N	O	S	0	0
			1926	1223	356	345	2		

- Molecule 9 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AL5P	168	Total	C	N	O	S	0	0
			1343	854	253	232	4		

- Molecule 10 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AL6P	181	Total	C	N	O	S	0	0
			1431	920	246	264	1		

- Molecule 11 is a protein called 50S ribosomal protein L18Ae.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	ALX0	76	Total	C	N	O	S	0	0
			629	403	110	115	1		

- Molecule 12 is a protein called 50S ribosomal protein L10e.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L10E	164	Total	C	N	O	S	0	0
			1310	837	239	227	7		

- Molecule 13 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	L13P	140	Total	C	N	O	S	0	0
			1109	707	208	190	4		

- Molecule 14 is a protein called 50S ribosomal protein L14e.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	L141	86	Total	C	N	O	S	0	0
			669	417	123	127	2		
14	L142	86	Total	C	N	O	S	0	0
			669	417	123	127	2		

- Molecule 15 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	L14P	134	Total	C	N	O	S	0	0
			1034	655	194	181	4		

- Molecule 16 is a protein called 50S ribosomal protein L15e.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	L15E	169	Total	C	N	O	S	0	0
			1423	899	283	236	5		

- Molecule 17 is a protein called 50S ribosomal protein L18e.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	L18E	112	Total	C	N	O	S	0	0
			895	576	163	153	3		

- Molecule 18 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	L18P	193	Total	C	N	O	S	0	0
			1539	990	274	274	1		

- Molecule 19 is a protein called 50S ribosomal protein L19e.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	L19E	144	Total	C	N	O	0	0
			1206	753	247	206		

- Molecule 20 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	L22P	150	Total	C	N	O	S	0	0
			1223	782	225	213	3		

- Molecule 21 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	L23P	81	Total	C	N	O	S	0	0
			650	419	109	121	1		

- Molecule 22 is a protein called 50S ribosomal protein L24e.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	L24E	54	Total	C	N	O	S	0	0
			441	282	80	73	6		

- Molecule 23 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	L24P	122	Total	C	N	O	S	0	0
			989	620	189	176	4		

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	L29P	63	Total	C	N	O	S	0	0
			513	319	95	96	3		

- Molecule 25 is a protein called 50S ribosomal protein L30e.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	L30E	94	Total	C	N	O	S	0	0
			729	474	116	136	3		

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	L30P	155	Total	C	N	O	S	0	0
			1254	804	222	223	5		

- Molecule 27 is a protein called 50S ribosomal protein L31e.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	L31E	75	Total	C	N	O	S	0	0
			625	398	126	97	4		

- Molecule 28 is a protein called 50S ribosomal protein L32e.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	L32E	123	Total	C	N	O	S	0	0
			1010	650	193	166	1		

- Molecule 29 is a protein called 50S ribosomal protein L34e.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	L34E	77	Total	C	N	O	S	0	0
			629	395	119	110	5		

- Molecule 30 is a protein called 50S ribosomal protein L37Ae.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	L37A	65	Total	C	N	O	S	0	0
			527	335	99	87	6		

- Molecule 31 is a protein called 50S ribosomal protein L37e.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	L37E	54	Total	C	N	O	S	0	0
			436	267	94	69	6		

- Molecule 32 is a protein called 50S ribosomal protein L39e.

Mol	Chain	Residues	Atoms				AltConf	Trace
32	L39E	49	Total	C	N	O	0	0
			414	265	88	61		

- Molecule 33 is a protein called 50S ribosomal protein L40E.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	L40E	55	Total	C	N	O	S	0	0
			439	273	89	72	5		

- Molecule 34 is a protein called 50S ribosomal protein L44e.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	L44E	92	Total	C	N	O	S	0	0
			753	474	144	129	6		

- Molecule 35 is a protein called 50S ribosomal protein L7Ae.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	L7A1	123	Total	C	N	O	S	0	0
			935	593	155	184	3		
35	L7A2	123	Total	C	N	O	S	0	0
			935	593	155	184	3		
35	SL7A	123	Total	C	N	O	S	0	0
			935	593	155	184	3		

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	L15P	94	Total	C	N	O	S	0	0
			752	487	131	133	1		

- Molecule 37 is a protein called 50S ribosomal protein L21e.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	L21E	97	Total	C	N	O	S	0	0
			785	502	152	129	2		

- Molecule 38 is a protein called DUF2280 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	L45A	101	Total	C	N	O	S	0	0
			816	515	141	156	4		

- Molecule 39 is a protein called Conserved protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	L46A	70	Total	C	N	O	S	0	0
			586	382	101	102	1		

- Molecule 40 is a protein called 50S ribosomal protein L47A.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	L47A	80	Total	C	N	O	S	0	0
			648	405	113	128	2		

- Molecule 41 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	AS2P	196	Total	C	N	O	S	0	0
			1587	1022	277	286	2		

- Molecule 42 is a protein called 30S ribosomal protein S4e.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	AS4E	240	Total	C	N	O	S	0	0
			1925	1238	335	348	4		

- Molecule 43 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	AS4P	166	Total	C	N	O	S	0	0
			1370	874	252	241	3		

- Molecule 44 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	AS5P	204	Total	C	N	O	S	0	0
			1600	1028	277	287	8		

- Molecule 45 is a protein called 30S ribosomal protein S6e.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	AS6E	105	Total	C	N	O	S	0	0
			805	506	149	147	3		

- Molecule 46 is a protein called 30S ribosomal protein S8e.

Mol	Chain	Residues	Atoms				AltConf	Trace
46	AS8E	126	Total	C	N	O	0	0
			993	619	187	187		

- Molecule 47 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	AS8P	130	Total	C	N	O	S	0	0
			1028	661	181	182	4		

- Molecule 48 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	S11P	128	Total	C	N	O	S	0	0
			960	595	190	173	2		

- Molecule 49 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S12P	143	Total	C	N	O	S	0	0
			1103	701	209	189	4		

- Molecule 50 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	S15P	149	Total	C	N	O	S	0	0
			1225	778	228	214	5		

- Molecule 51 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	S17P	111	Total	C	N	O	S	0	0
			885	557	165	160	3		

- Molecule 52 is a protein called 30S ribosomal protein S24e.

Mol	Chain	Residues	Atoms				AltConf	Trace
52	S24E	96	Total	C	N	O	0	0
			759	479	133	147		

- Molecule 53 is a protein called 30S ribosomal protein S27e.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	S27E	59	Total	C	N	O	S	0	0
			458	294	83	76	5		

- Molecule 54 is a protein called 30S ribosomal protein S3Ae.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	S3AE	189	Total	C	N	O	S	0	0
			1545	1004	264	276	1		

- Molecule 55 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	AS3P	201	Total	C	N	O	S	0	0
			1576	1020	274	278	4		

- Molecule 56 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	AS7P	193	Total	C	N	O	S	0	0
			1537	969	285	279	4		

- Molecule 57 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	S10P	100	Total	C	N	O	S	0	0
			824	522	154	142	6		

- Molecule 58 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	S13P	147	Total	C	N	O	S	0	0
			1204	753	230	217	4		

- Molecule 59 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	S14P	52	Total	C	N	O	S	0	0
			432	273	85	69	5		

- Molecule 60 is a protein called 30S ribosomal protein S17e.

Mol	Chain	Residues	Atoms				AltConf	Trace
60	S17E	62	Total	C	N	O	0	0
			517	326	92	99		

- Molecule 61 is a protein called 30S ribosomal protein S19e.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	S19E	150	Total	C	N	O	S	0	0
			1239	801	223	213	2		

- Molecule 62 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	S19P	115	Total	C	N	O	S	0	0
			968	620	181	162	5		

- Molecule 63 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	AS9P	136	Total	C	N	O	S	0	0
			1096	692	200	197	7		

- Molecule 64 is a protein called 30S ribosomal protein S28e.

Mol	Chain	Residues	Atoms				AltConf	Trace
64	S28E	63	Total	C	N	O	0	0
			498	308	99	91		

- Molecule 65 is a protein called 30S ribosomal protein S27ae.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	S27A	54	Total	C	N	O	S	0	0
			435	274	79	76	6		

- Molecule 66 is a protein called PHE-PHE-PHE-PHE-PHE-PHE.

Mol	Chain	Residues	Atoms				AltConf	Trace
66	APTP	6	Total	C	N	O	0	0
			67	54	6	7		

- Molecule 67 is a RNA chain called mRNA (5'-R(P*UP*UP*UP*UP*UP*UP*UP*UP*U)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
67	AMRN	9	Total	C	N	O	P	0	0
			180	81	18	72	9		

- Molecule 68 is UNKNOWN (three-letter code: UNK) (formula: $C_4H_9NO_2$) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms				AltConf
68	AS2P	33	Total	C	N	O	0
			166	99	33	34	
68	AS5P	20	Total	C	N	O	0
			100	60	20	20	

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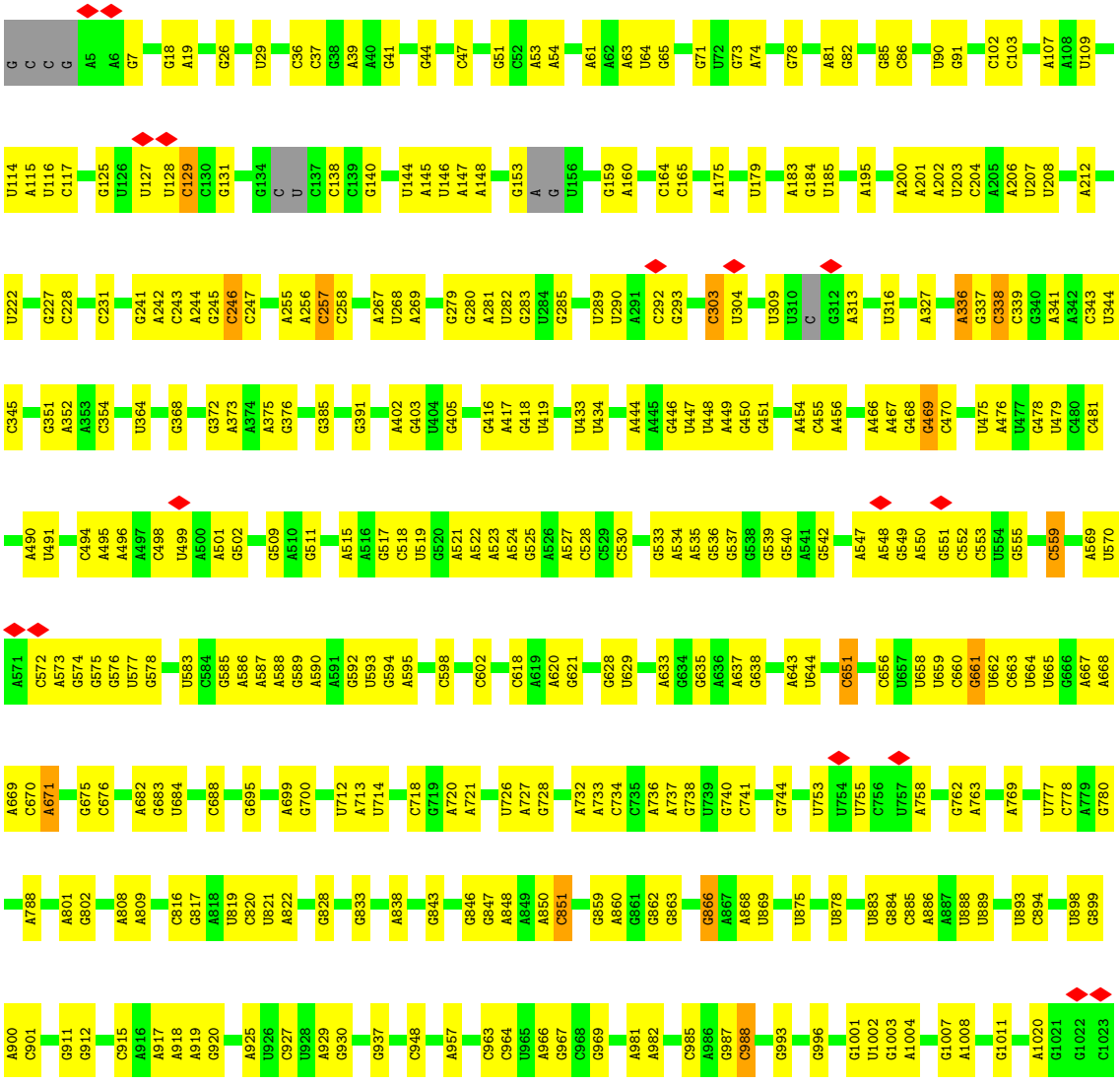
Mol	Chain	Residues	Atoms				AltConf
68	AS8P	4	Total	C	N	O	0
			20	12	4	4	

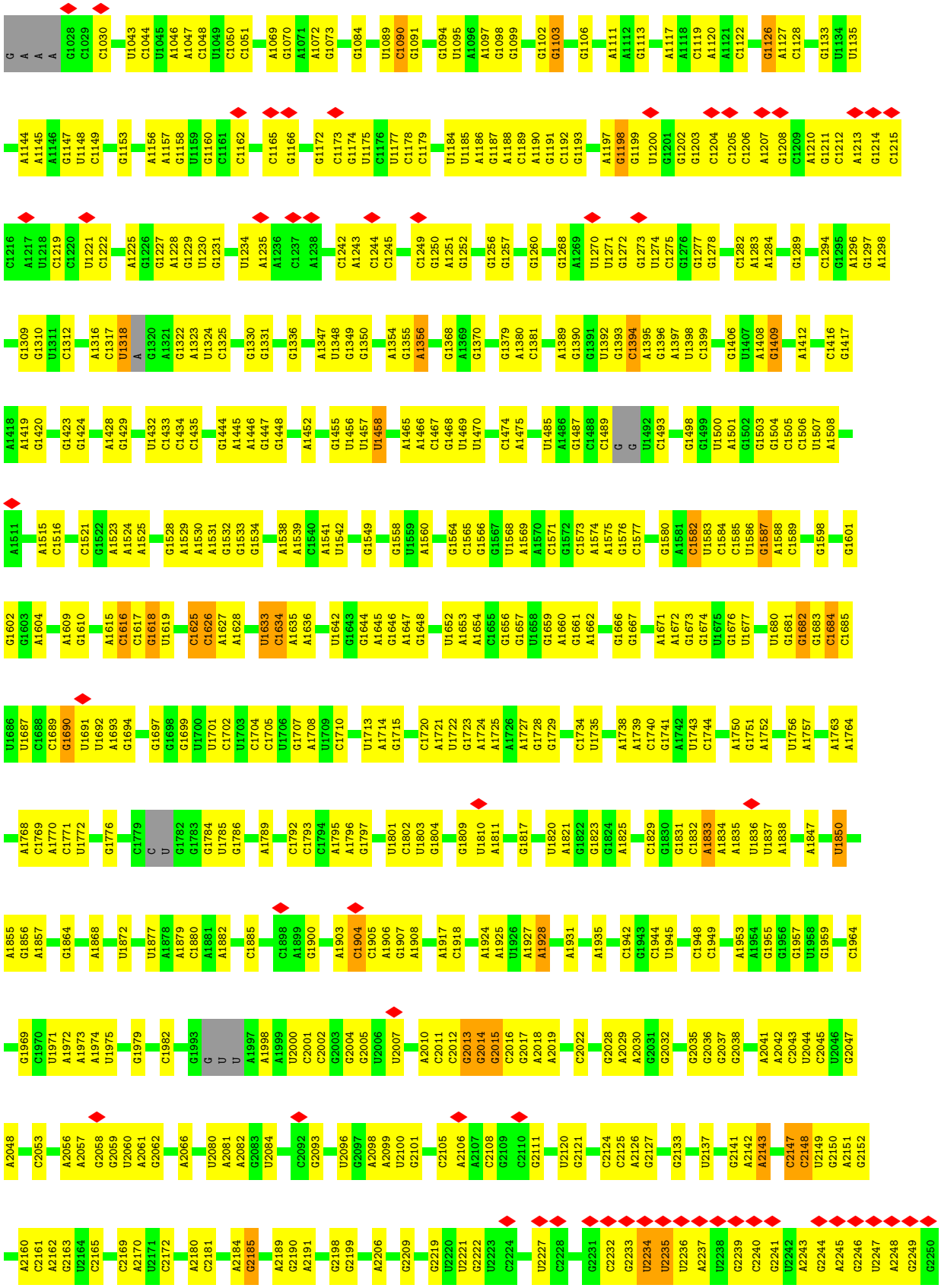
3 Residue-property plots (i)

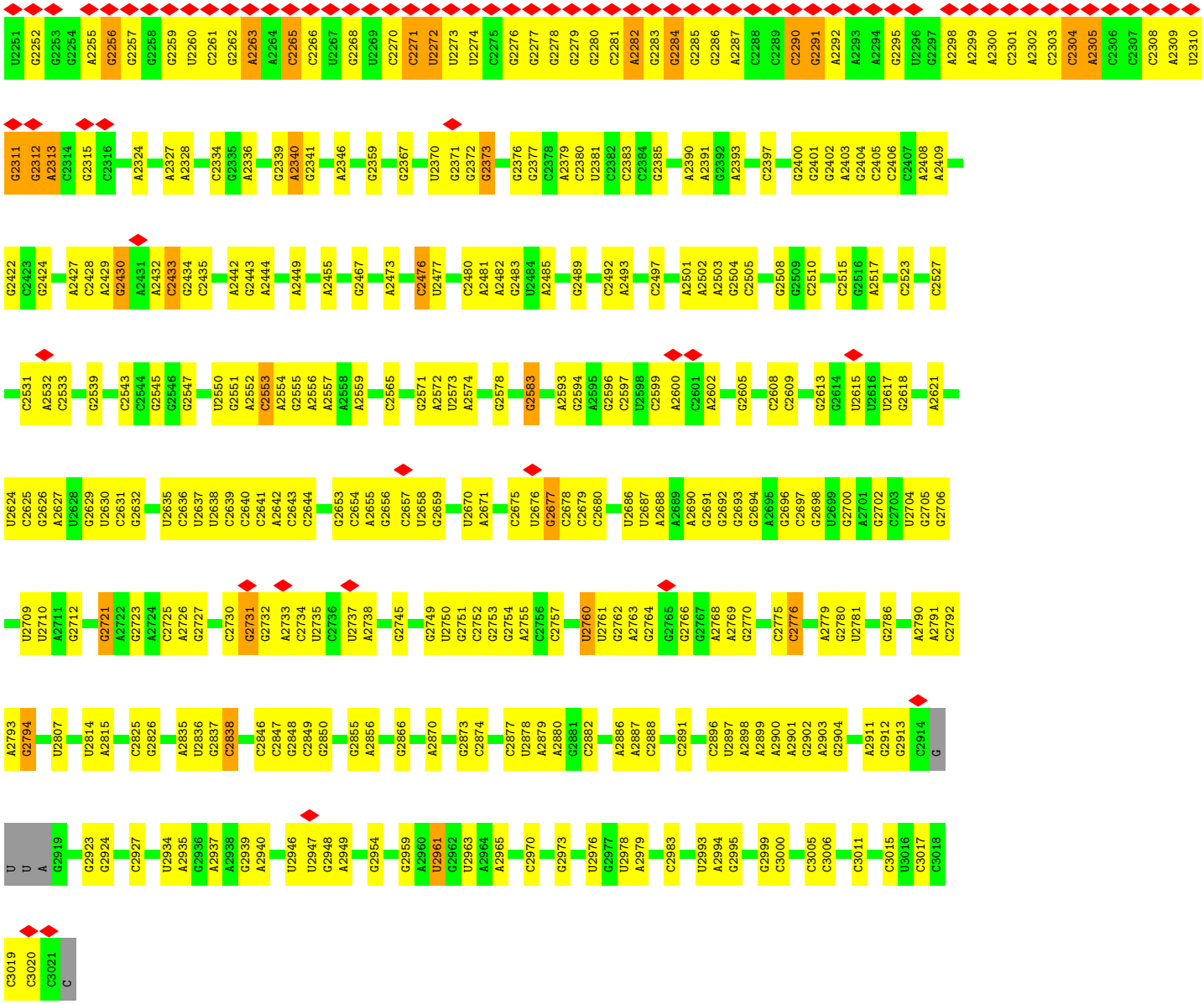
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: 23S rRNA

Chain A23S:

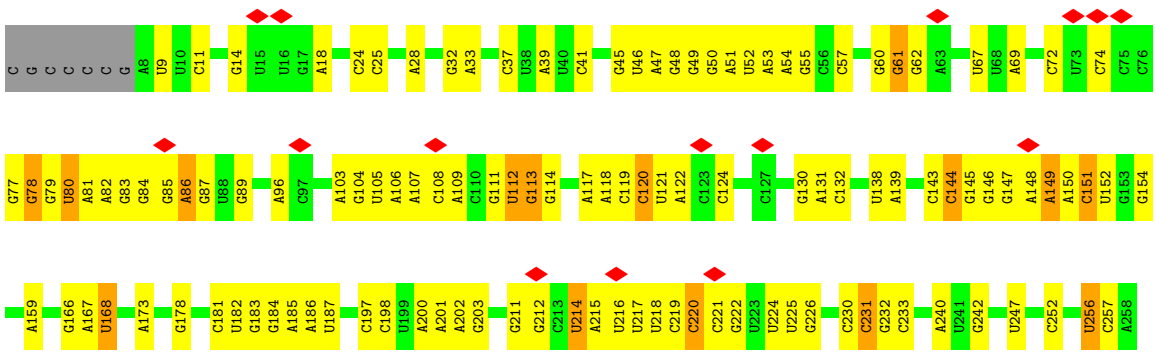


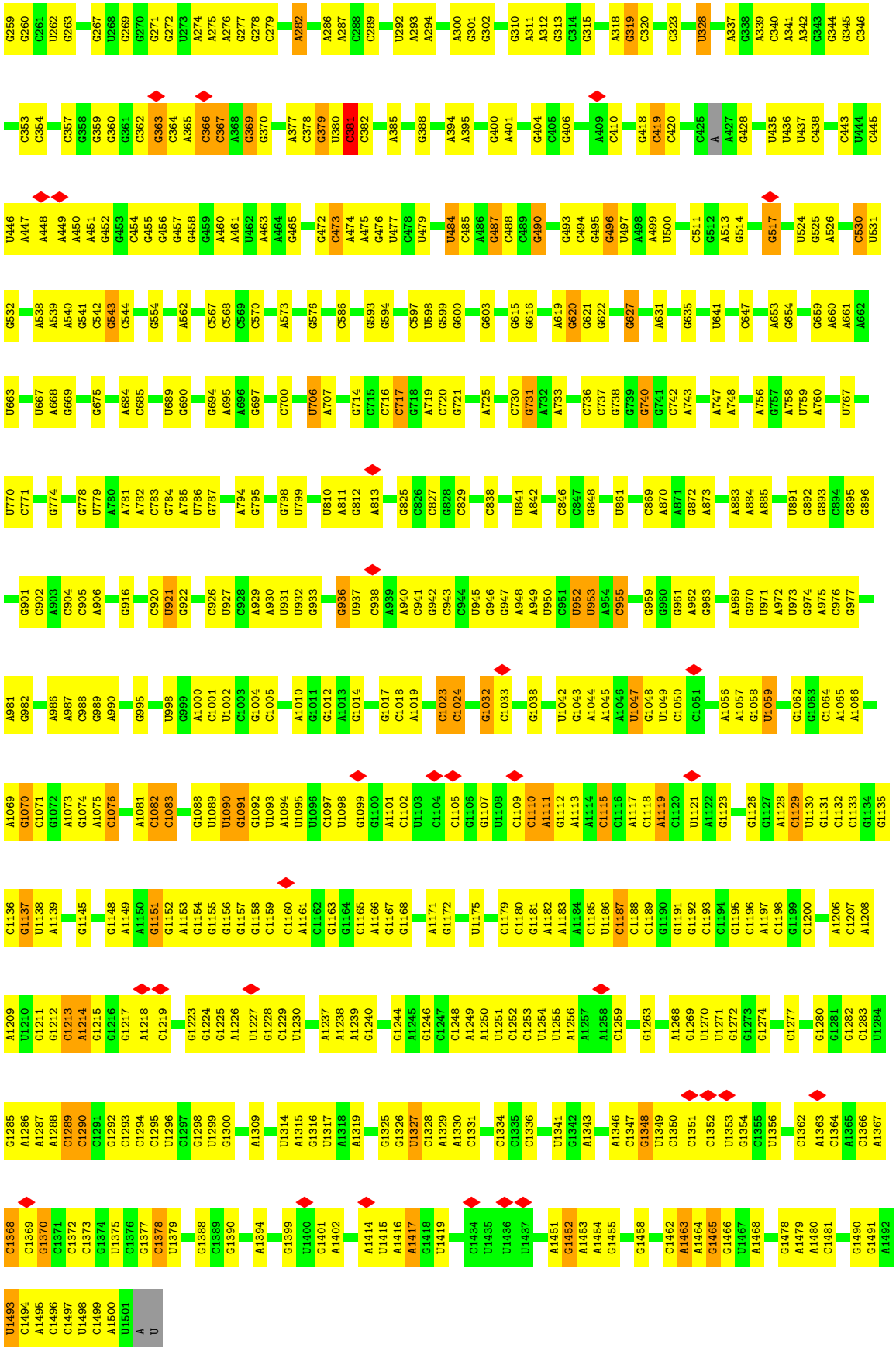




• Molecule 2: 16S rRNA

Chain A16S:

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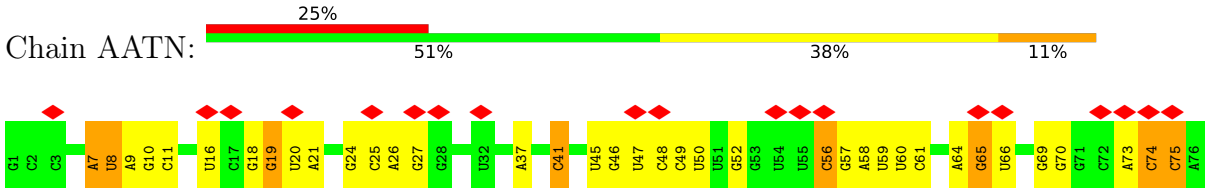
C353 C354 C357 G358 G359 G360 G361 C362 G363 C364 A365 C366 C367 A368 G369 G370 A377 C378 G379 U380 C381 C382 A385 G388 A394 A395 G400 A401 G404 C405 G406 A409 C410 G418 C419 C420 C425 A A427 G428 U435 U436 U437 C438 C443 U444 C445
U446 A447 A448 A449 A450 A451 G452 G453 C454 G455 G456 G457 G458 G459 A460 A461 U462 A463 A464 G465 G472 C473 A474 A475 G476 U477 C478 U479 U484 C485 A486 G487 C488 C489 G490 G493 C494 G495 G496 U497 A498 A499 U500 C511 G512 A513 G514 G517 U524 G525 A526 C530 U531
G532 A538 A539 A540 G541 C542 G543 C544 G554 A562 C567 C568 C569 C570 A573 G576 C586 G593 G594 C597 U598 G599 G600 G603 G615 G616 A619 G620 G621 G622 G627 A631 G635 U641 C647 A653 G654 G659 A660 A661 A662
U663 U667 A668 G669 G675 A684 C685 U689 G690 G694 A695 A696 G697 C700 U706 A707 G714 C715 C716 C717 G718 A719 C720 G721 A725 C730 G731 A732 A733 C736 C737 G738 G739 G740 G741 C742 A743 A747 A748 A756 G757 A758 U759 A760 U767
U770 C771 G774 G778 U779 A780 A781 A782 C783 G784 A785 U786 G787 A794 G795 G798 U799 U810 A811 G812 A813 G825 C826 C827 G828 C829 C838 U841 A842 C846 C847 G848 U861 C869 A870 A871 G872 A873 A883 A884 A885 U891 G892 G893 C894 G895 G896
G901 C902 A903 C904 C905 A906 G916 C920 U921 G922 C926 U927 C928 A929 A930 U931 U932 G933 G936 U937 C938 A939 A940 C941 G942 C943 C944 U945 G946 G947 A948 A949 U950 C951 U952 U953 A954 C955 G959 G960 G961 A962 G963 A969 G970 U971 A972 U973 G974 A975 C976 G977
A981 G982 A986 A987 C988 G989 A990 G995 U998 G999 A1000 C1001 U1002 C1003 G1004 C1005 A1010 G1011 G1012 A1013 G1014 G1017 C1018 A1019 C1023 C1024 G1032 C1033 G1038 U1042 G1043 A1044 A1045 A1046 U1047 G1048 U1049 C1050 C1051 A1056 A1057 G1058 U1059 G1062 G1063 C1064 A1065 A1066
A1069 G1070 C1071 G1072 A1073 G1074 A1075 C1076 A1081 C1082 C1083 G1088 U1089 U1090 G1091 G1092 U1093 A1094 U1095 U1096 C1097 U1098 G1099 C1100 A1101 C1102 U1103 C1104 C1105 G1106 G1107 U1108 C1109 C1110 A1111 G1112 A1113 A1114 C1115 C1116 A1117 C1118 A1119 C1120 U1121 A1122 G1123 G1126 G1127 A1128 C1129 G1130 U1131 C1132 C1133 G1134 G1135
C1136 G1137 U1138 A1139 G1145 G1148 A1149 A1150 G1151 G1152 A1153 G1154 G1155 G1156 G1157 G1158 C1159 C1160 A1161 C1162 G1163 G1164 C1165 A1166 G1167 G1168 A1171 G1172 U1175 C1179 C1180 G1181 A1182 A1183 A1184 C1185 U1186 C1187 C1188 C1189 G1190 G1191 G1192 C1193 C1194 G1195 C1196 A1197 C1198 G1199 C1200 A1206 C1207 A1208
A1209 U1210 G1211 G1212 C1213 A1214 G1215 G1216 G1217 A1218 C1219 G1223 G1224 G1225 A1226 U1227 G1228 C1229 U1230 A1237 A1238 A1239 G1240 G1244 A1245 G1246 C1247 C1248 A1249 A1250 U1251 C1252 C1253 U1254 U1255 A1256 A1257 A1258 C1259 G1263 A1268 G1269 U1270 U1271 G1272 G1273 G1274 C1277 G1280 G1281 G1282 C1283 U1284
G1285 A1286 A1287 A1288 C1289 C1290 C1291 G1292 C1293 C1294 C1295 U1296 C1297 G1298 U1299 G1300 A1309 U1314 A1315 G1316 U1317 A1318 A1319 G1325 G1326 U1327 C1328 A1329 A1330 C1331 C1334 C1335 C1336 U1341 G1342 A1343 A1346 C1347 G1348 U1349 C1350 C1351 C1352 U1353 G1354 C1355 U1356 C1362 A1363 C1364 A1365 C1366 A1367
C1368 C1369 G1370 C1371 C1372 C1373 G1374 U1375 C1376 G1377 C1378 U1379 G1388 C1389 G1390 A1394 G1399 U1400 G1401 A1402 A1414 U1415 A1416 A1417 G1418 U1419 C1434 U1435 U1436 U1437 A1451 G1452 A1453 A1454 G1455 G1458 C1462 A1463 A1464 G1465 G1466 U1467 A1468 G1478 A1479 A1480 C1481 G1490 G1491 A1492
U1493 C1494 A1495 C1496 C1497 U1498 C1499 A1500 U1501 A U

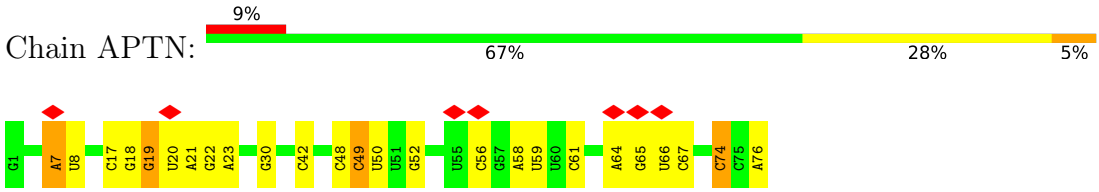
• Molecule 3: tRNA (76-MER)

Chain AATN:



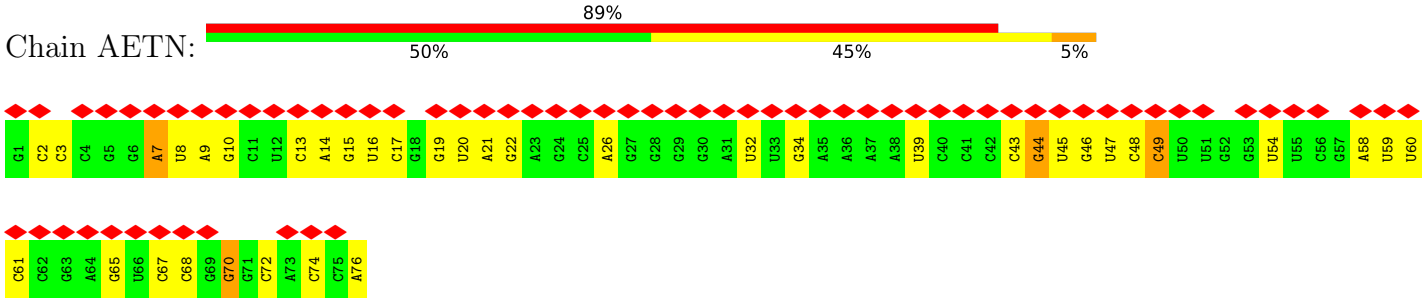
• Molecule 3: tRNA (76-MER)

Chain APTN:



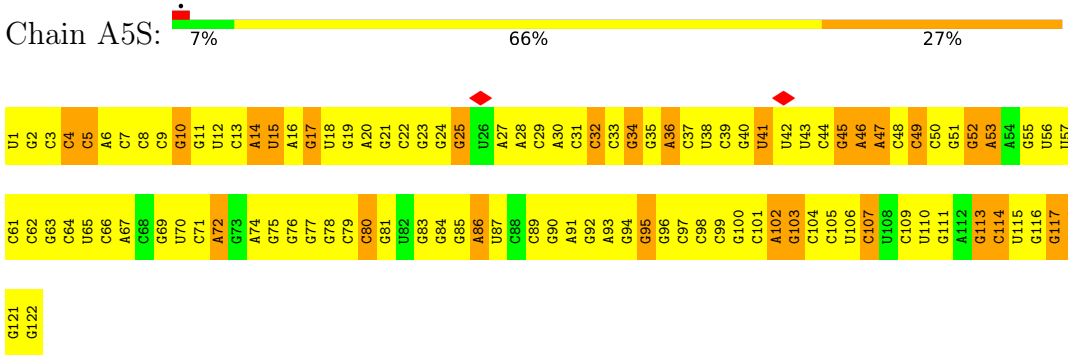
• Molecule 3: tRNA (76-MER)

Chain AETN:



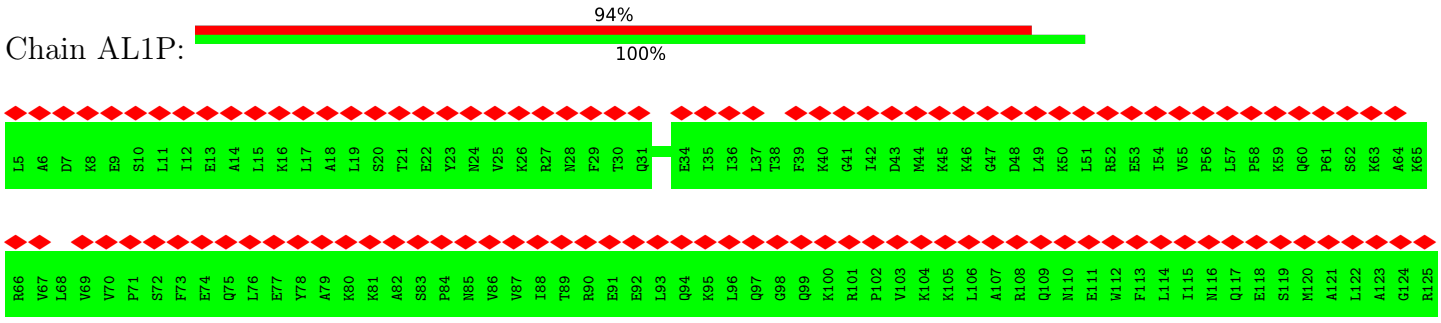
• Molecule 4: 5S rRNA (122-MER)

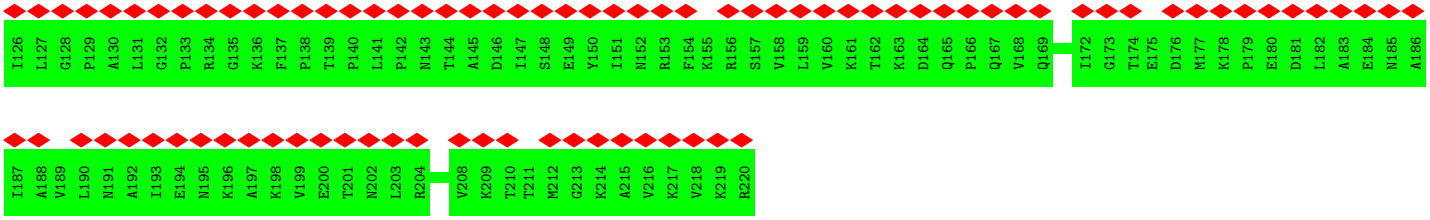
Chain A5S:



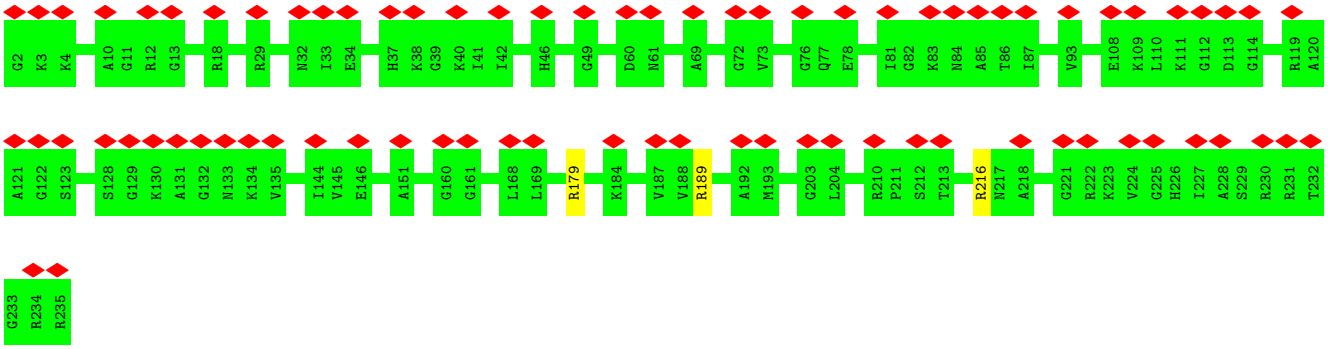
• Molecule 5: 50S ribosomal protein L1

Chain AL1P:

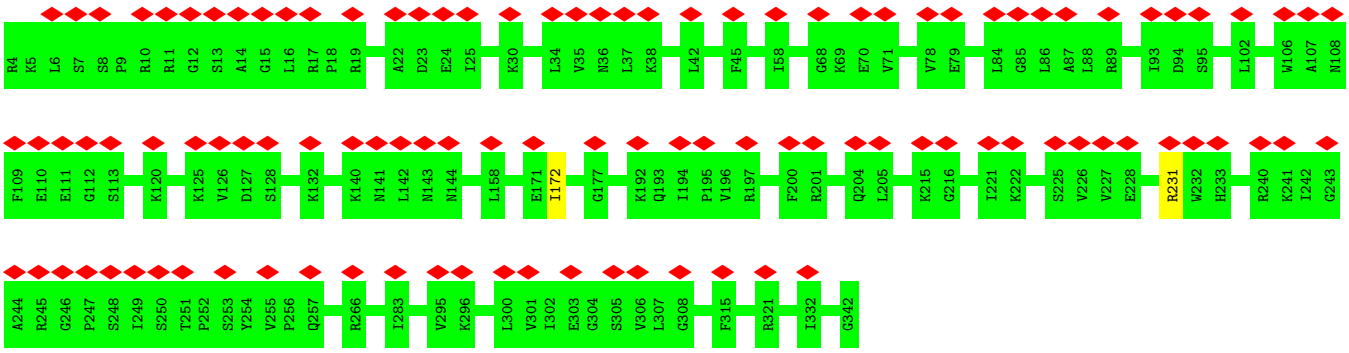




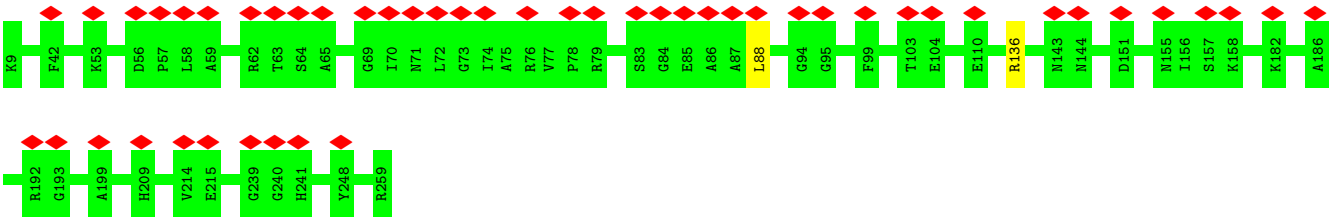
• Molecule 6: 50S ribosomal protein L2



• Molecule 7: 50S ribosomal protein L3

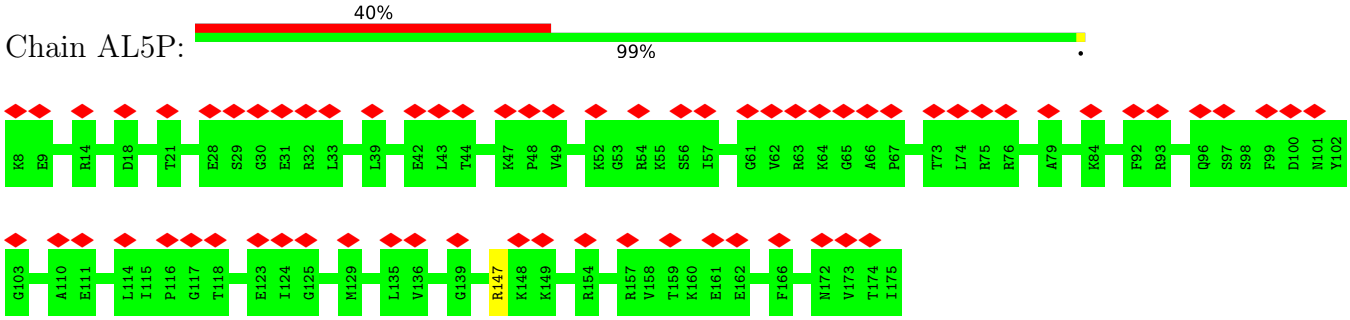


• Molecule 8: 50S ribosomal protein L4



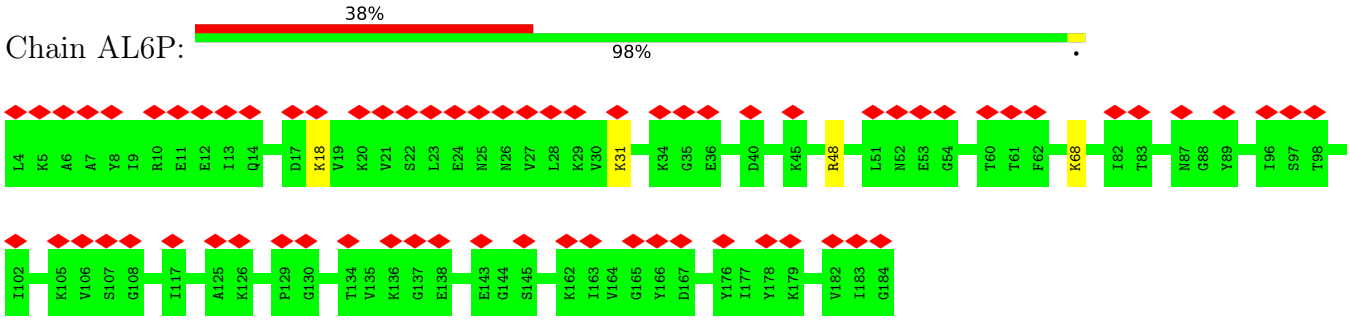
• Molecule 9: 50S ribosomal protein L5

Chain AL5P:



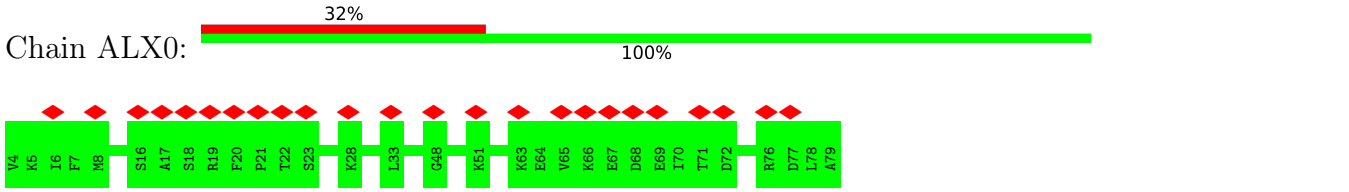
• Molecule 10: 50S ribosomal protein L6

Chain AL6P:



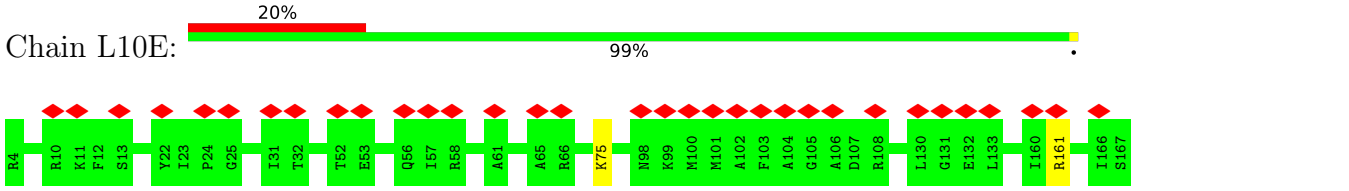
• Molecule 11: 50S ribosomal protein L18Ae

Chain ALX0:



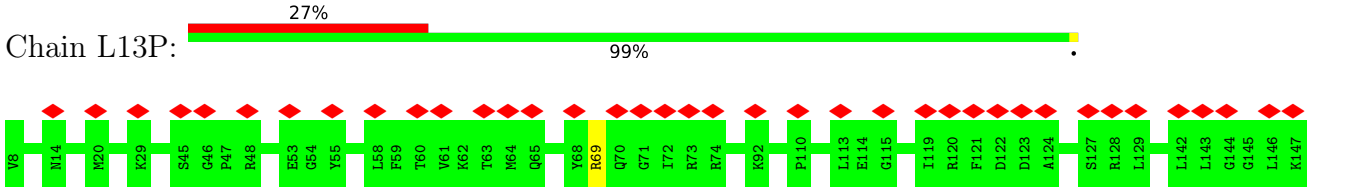
• Molecule 12: 50S ribosomal protein L10e

Chain L10E:



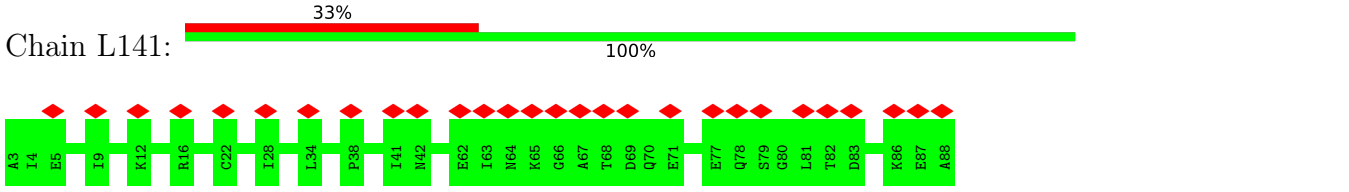
• Molecule 13: 50S ribosomal protein L13

Chain L13P:



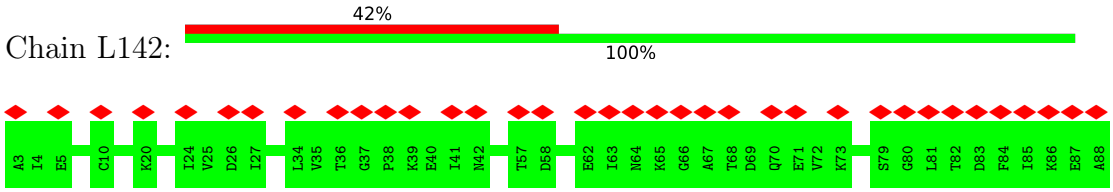
• Molecule 14: 50S ribosomal protein L14e

Chain L141:



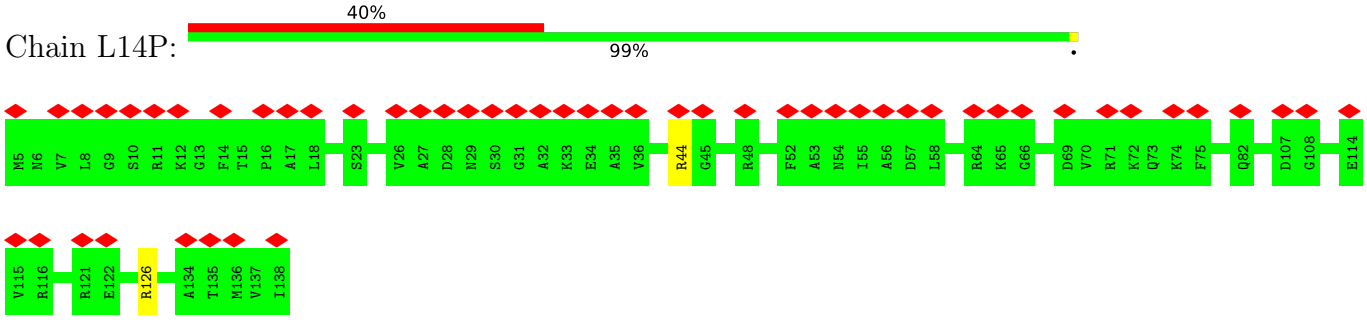
• Molecule 14: 50S ribosomal protein L14e

Chain L142:



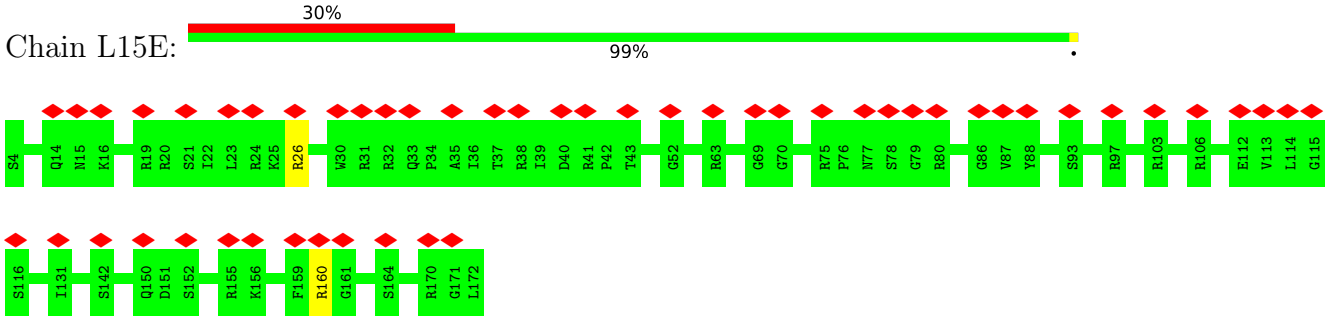
• Molecule 15: 50S ribosomal protein L14

Chain L14P:



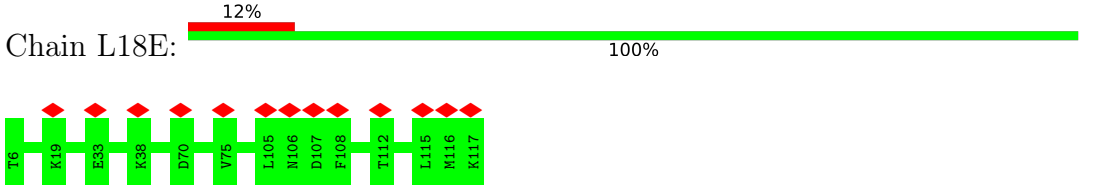
• Molecule 16: 50S ribosomal protein L15e

Chain L15E:



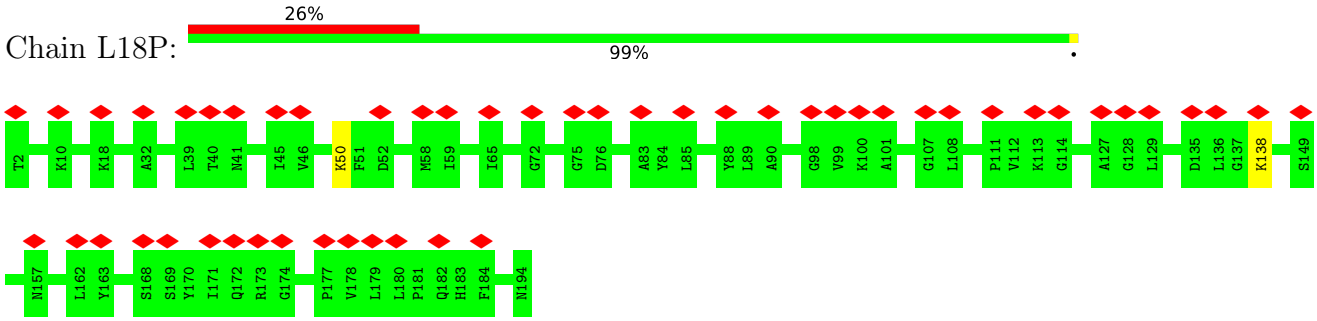
• Molecule 17: 50S ribosomal protein L18e

Chain L18E:



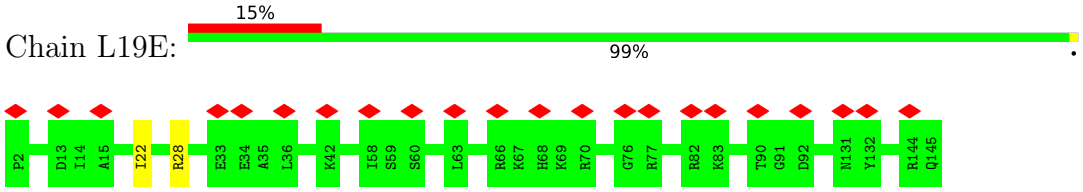
• Molecule 18: 50S ribosomal protein L18

Chain L18P:



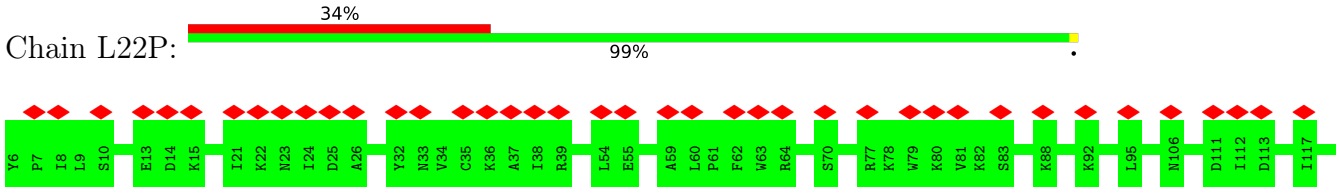
• Molecule 19: 50S ribosomal protein L19e

Chain L19E:



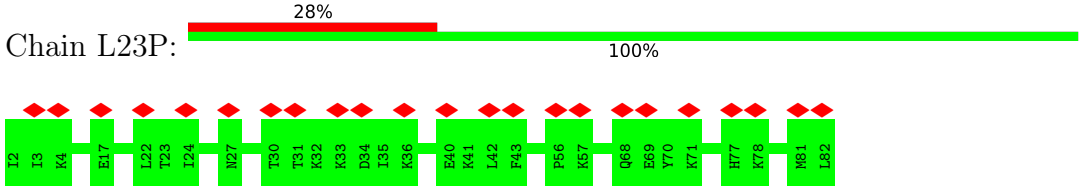
• Molecule 20: 50S ribosomal protein L22

Chain L22P:



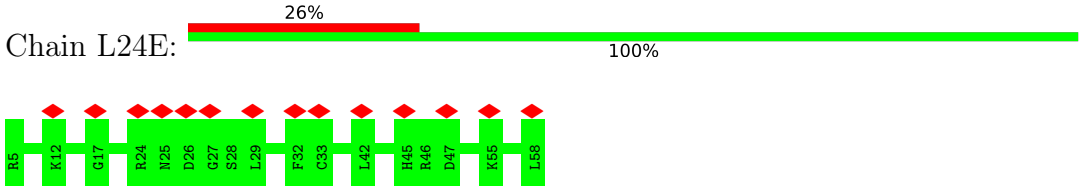
• Molecule 21: 50S ribosomal protein L23

Chain L23P:



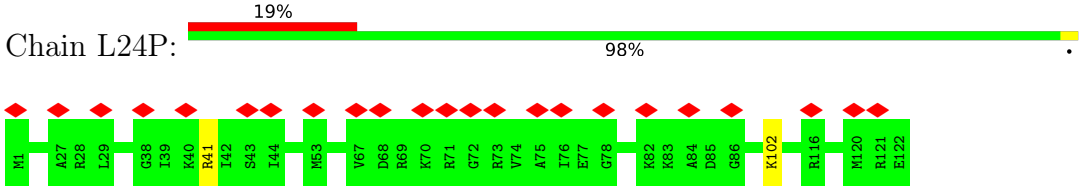
• Molecule 22: 50S ribosomal protein L24e

Chain L24E:



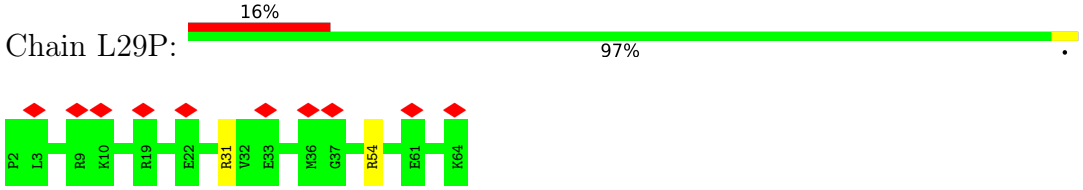
• Molecule 23: 50S ribosomal protein L24

Chain L24P:



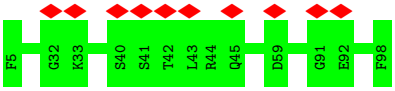
• Molecule 24: 50S ribosomal protein L29

Chain L29P:



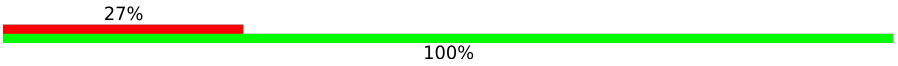
• Molecule 25: 50S ribosomal protein L30e

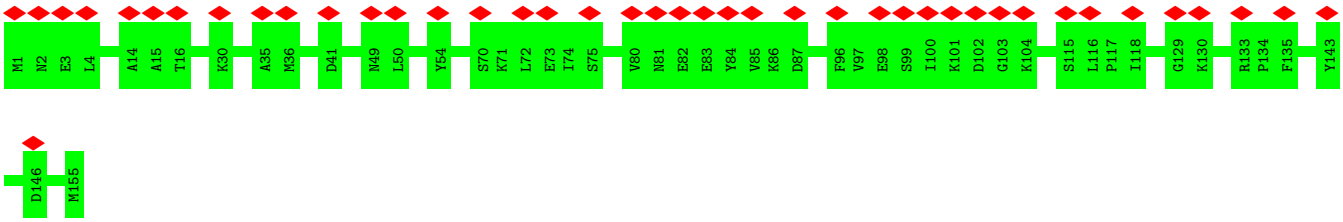
Chain L30E:



• Molecule 26: 50S ribosomal protein L30

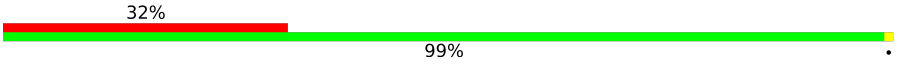
Chain L30P:

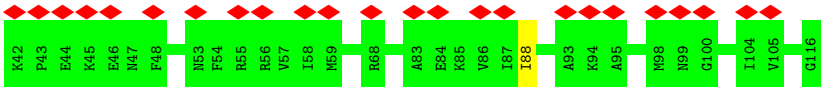




• Molecule 27: 50S ribosomal protein L31e

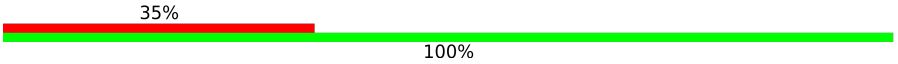
Chain L31E:

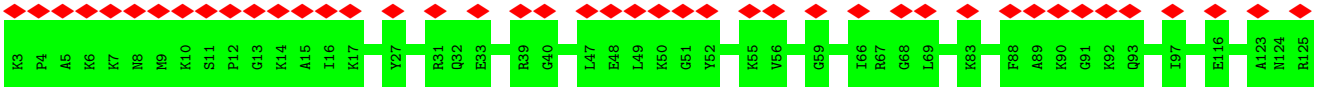




• Molecule 28: 50S ribosomal protein L32e

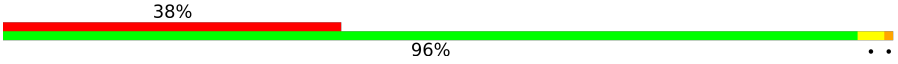
Chain L32E:

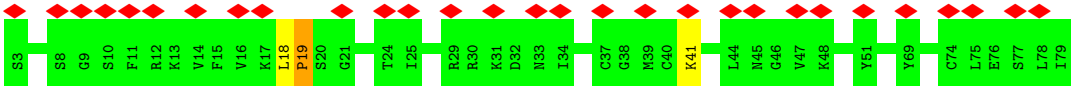




• Molecule 29: 50S ribosomal protein L34e

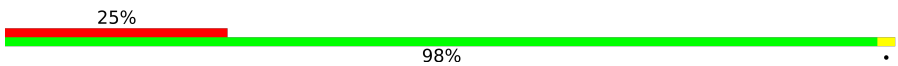
Chain L34E:

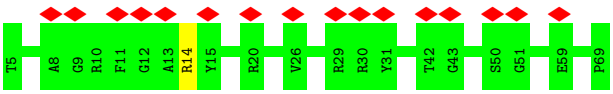




• Molecule 30: 50S ribosomal protein L37Ae

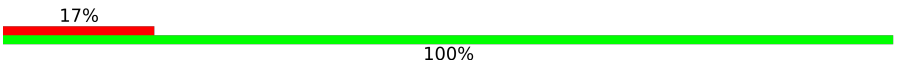
Chain L37A:

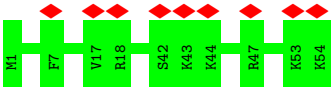




• Molecule 31: 50S ribosomal protein L37e

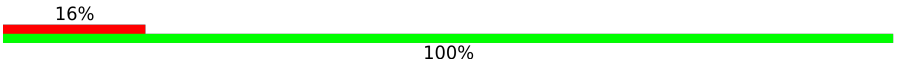
Chain L37E:

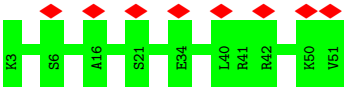




• Molecule 32: 50S ribosomal protein L39e

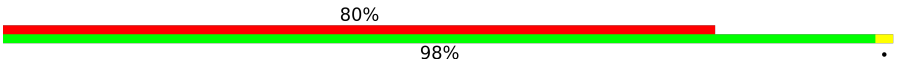
Chain L39E:

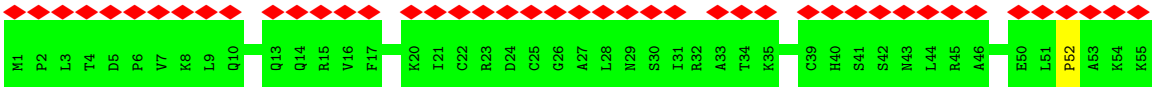




• Molecule 33: 50S ribosomal protein L40E

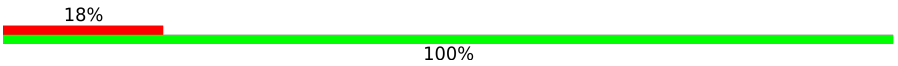
Chain L40E:

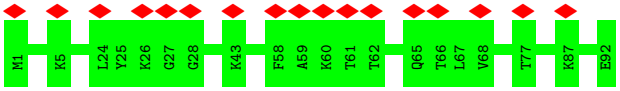




• Molecule 34: 50S ribosomal protein L44e

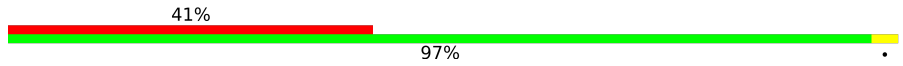
Chain L44E:

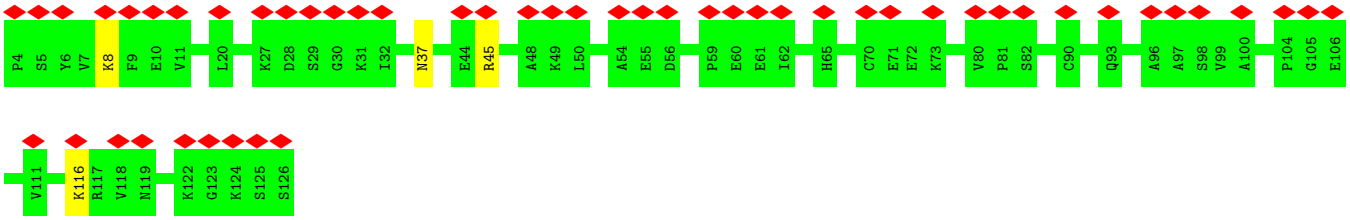




• Molecule 35: 50S ribosomal protein L7Ae

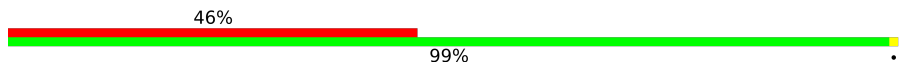
Chain L7A1:

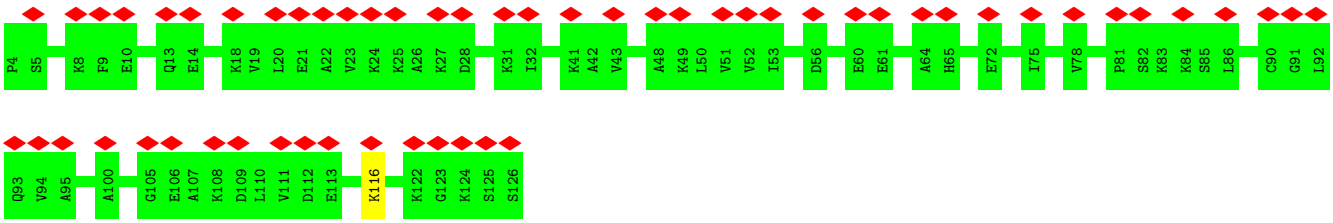




• Molecule 35: 50S ribosomal protein L7Ae

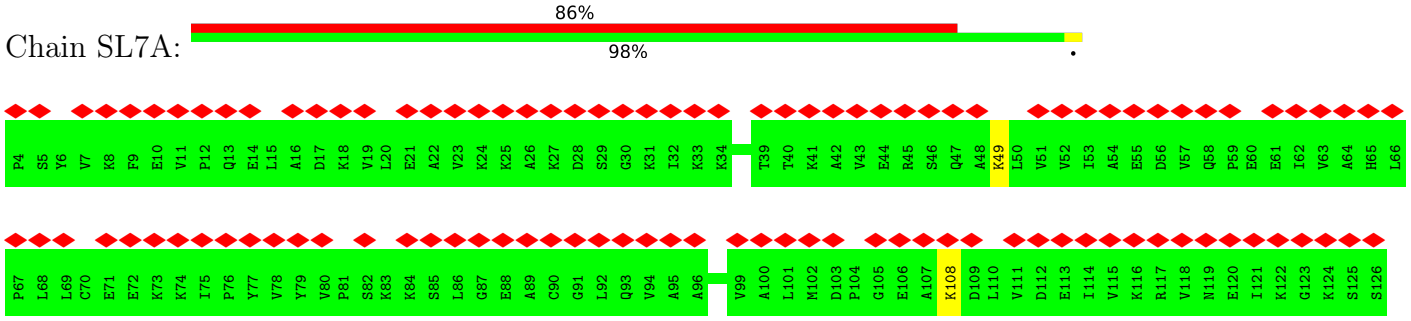
Chain L7A2:





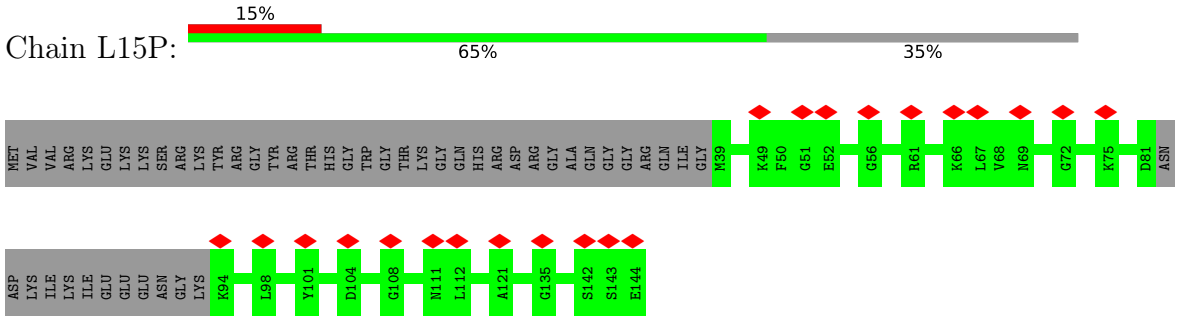
• Molecule 35: 50S ribosomal protein L7Ae

Chain SL7A:



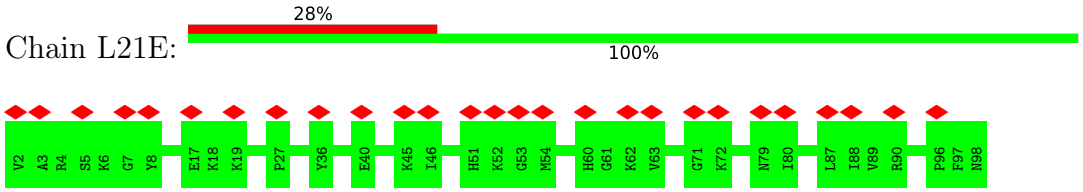
• Molecule 36: 50S ribosomal protein L15

Chain L15P:



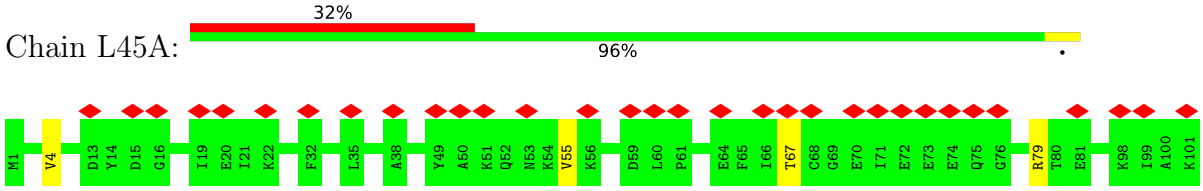
• Molecule 37: 50S ribosomal protein L21e

Chain L21E:



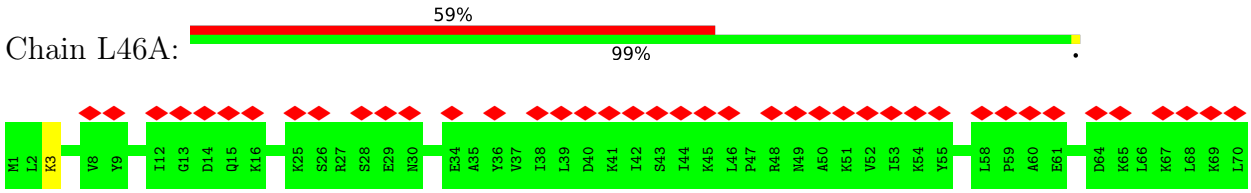
• Molecule 38: DUF2280 domain-containing protein

Chain L45A:



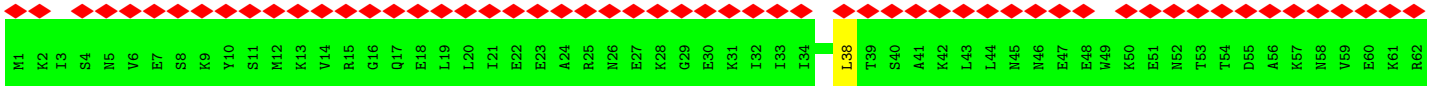
• Molecule 39: Conserved protein

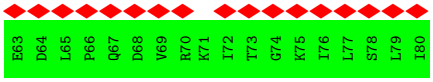
Chain L46A:



• Molecule 40: 50S ribosomal protein L47A

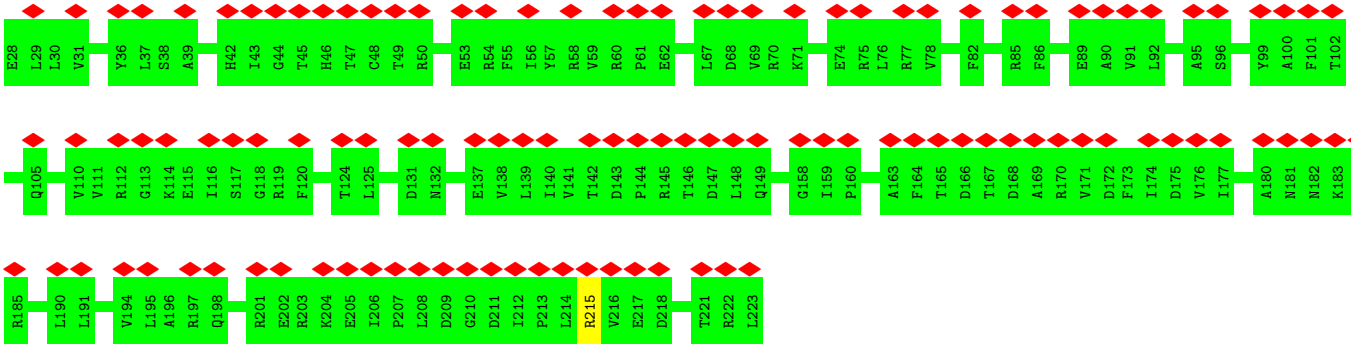
Chain L47A:





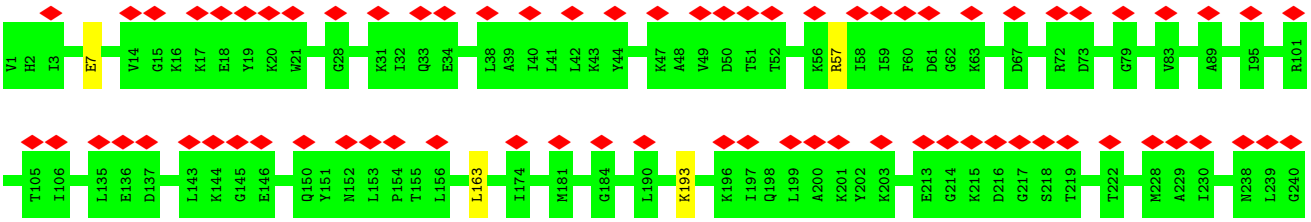
• Molecule 41: 30S ribosomal protein S2

Chain AS2P:



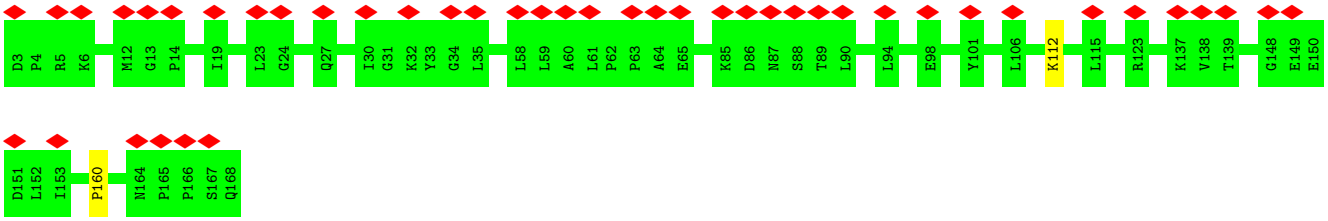
• Molecule 42: 30S ribosomal protein S4e

Chain AS4E:



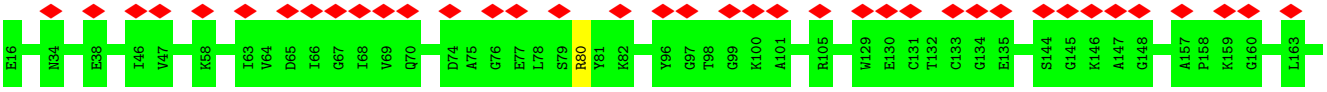
• Molecule 43: 30S ribosomal protein S4

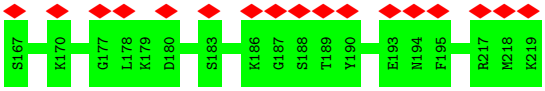
Chain AS4P:



• Molecule 44: 30S ribosomal protein S5

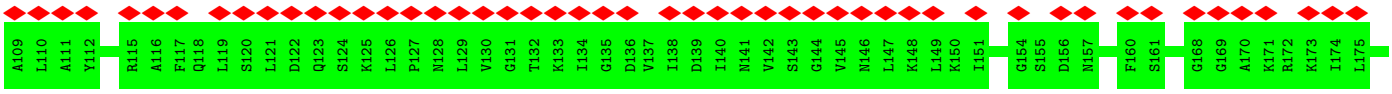
Chain AS5P:

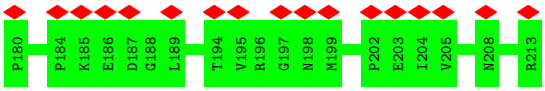




• Molecule 45: 30S ribosomal protein S6e

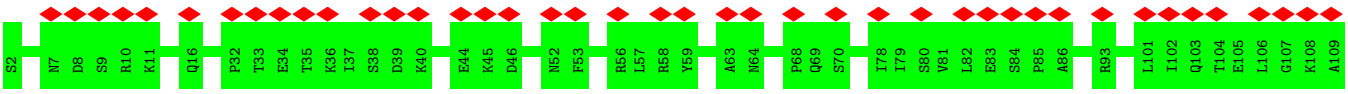
Chain AS6E:

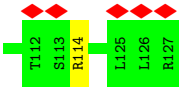




• Molecule 46: 30S ribosomal protein S8e

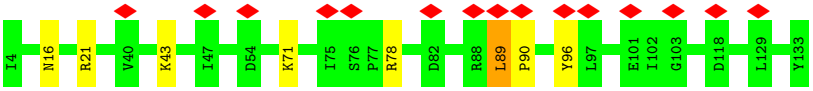
Chain AS8E:





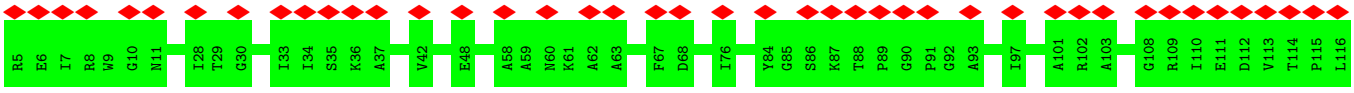
• Molecule 47: 30S ribosomal protein S8

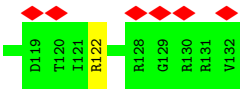
Chain AS8P:



• Molecule 48: 30S ribosomal protein S11

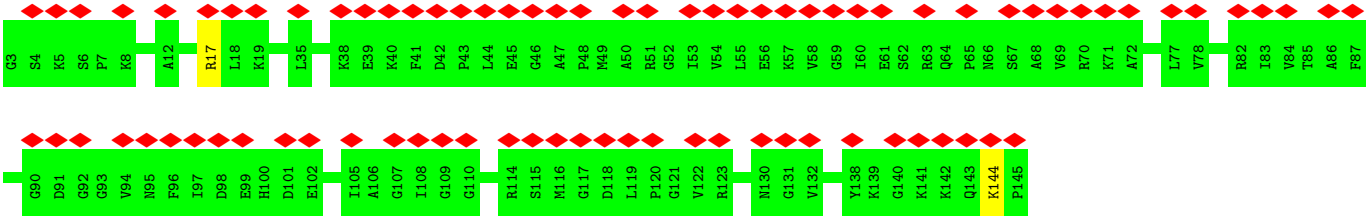
Chain S11P:





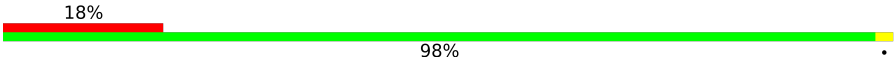
• Molecule 49: 30S ribosomal protein S12

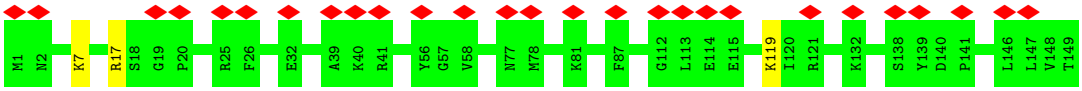
Chain S12P:



• Molecule 50: 30S ribosomal protein S15

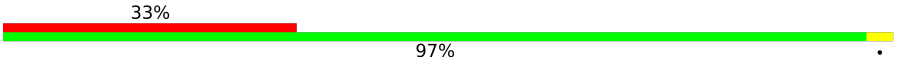
Chain S15P:

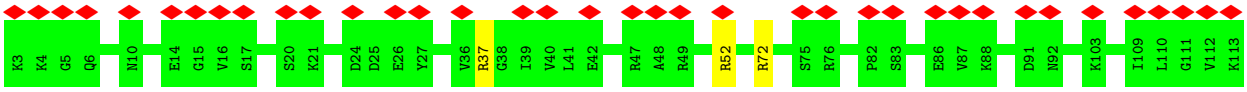




• Molecule 51: 30S ribosomal protein S17

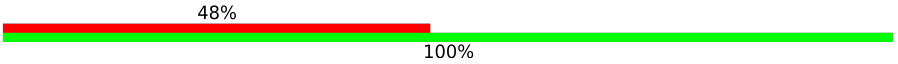
Chain S17P:

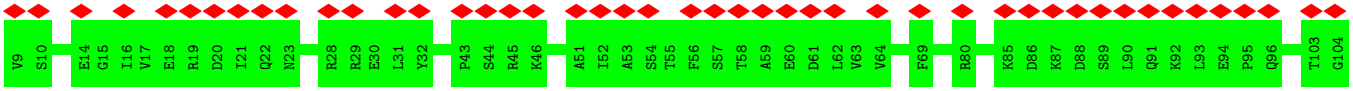




• Molecule 52: 30S ribosomal protein S24e

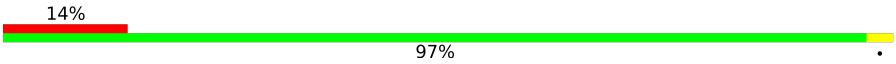
Chain S24E:

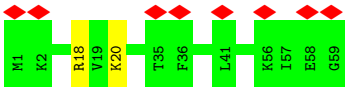




• Molecule 53: 30S ribosomal protein S27e

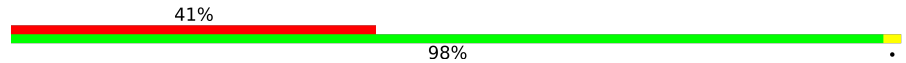
Chain S27E:

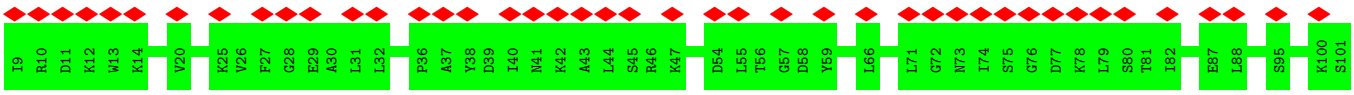


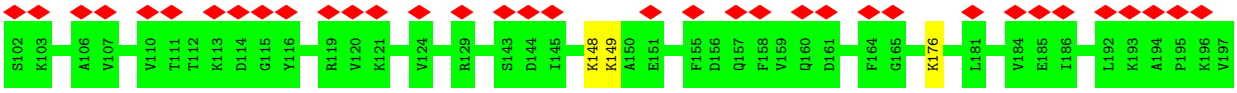


• Molecule 54: 30S ribosomal protein S3Ae

Chain S3AE:

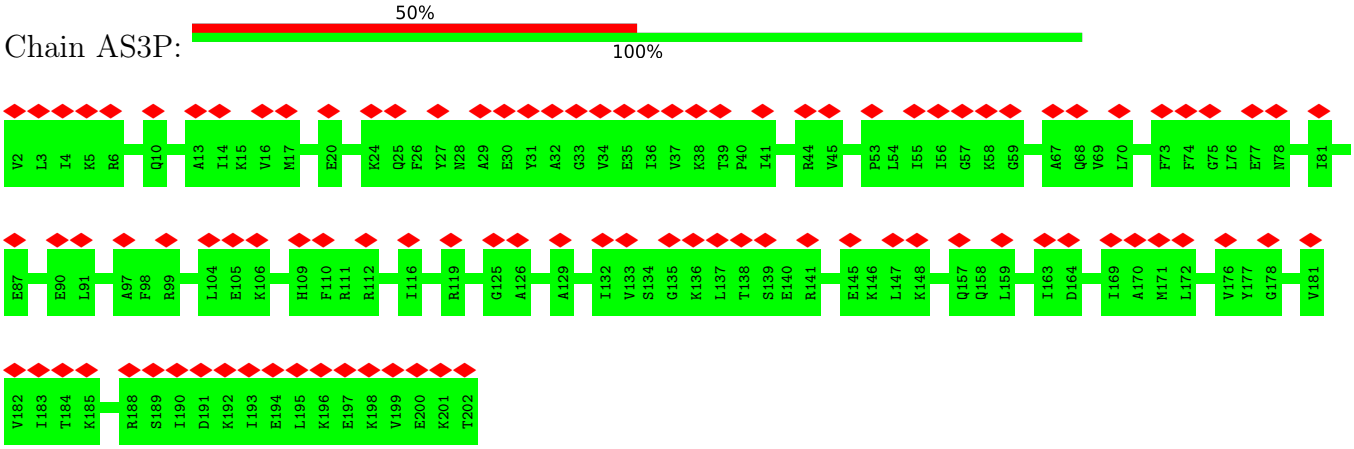






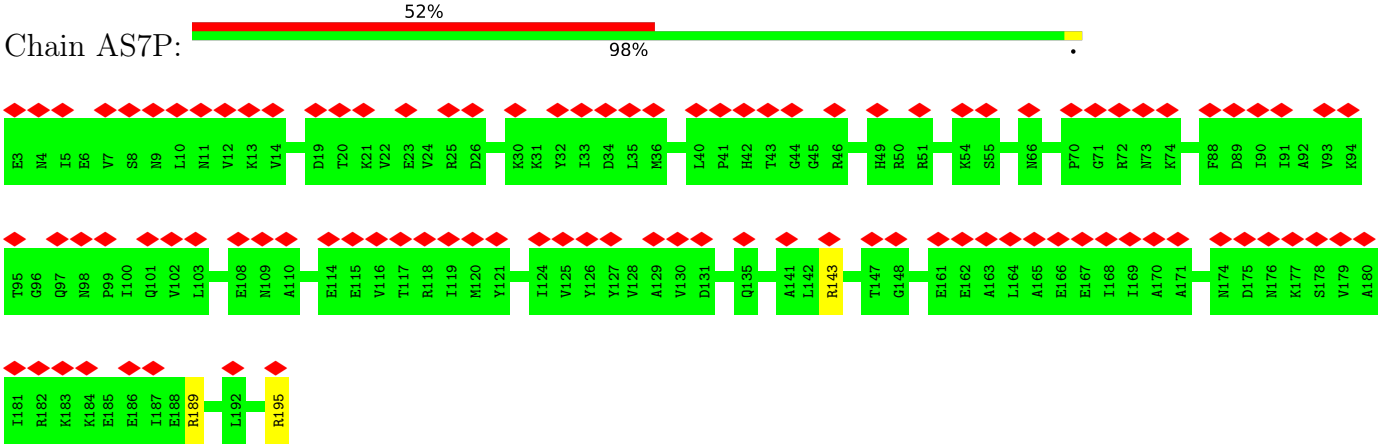
• Molecule 55: 30S ribosomal protein S3

Chain AS3P:



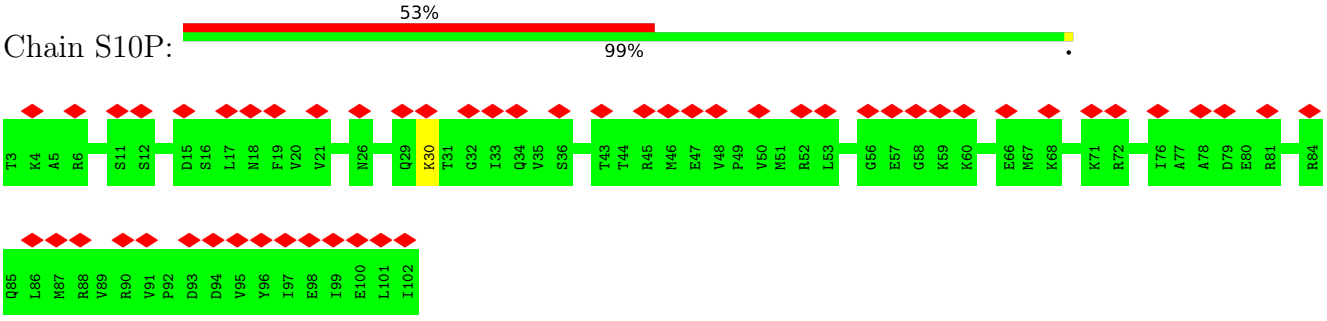
• Molecule 56: 30S ribosomal protein S7

Chain AS7P:



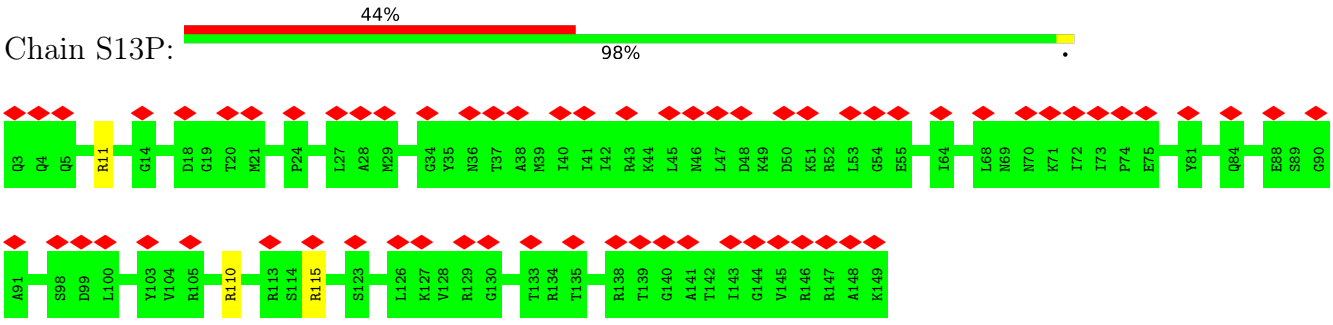
• Molecule 57: 30S ribosomal protein S10

Chain S10P:



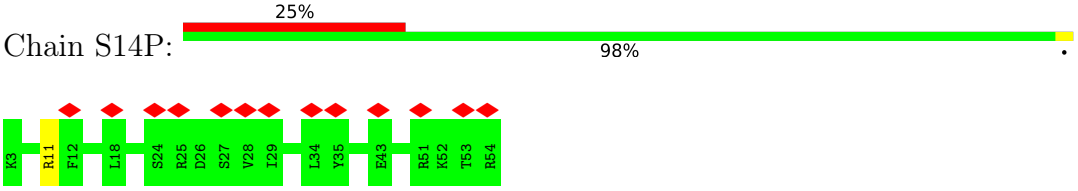
• Molecule 58: 30S ribosomal protein S13

Chain S13P:



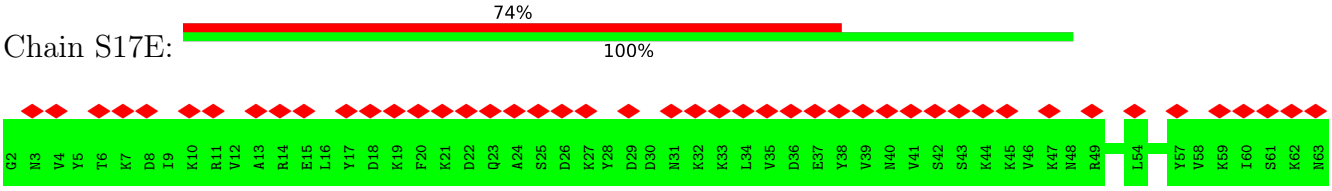
• Molecule 59: 30S ribosomal protein S14 type Z

Chain S14P:



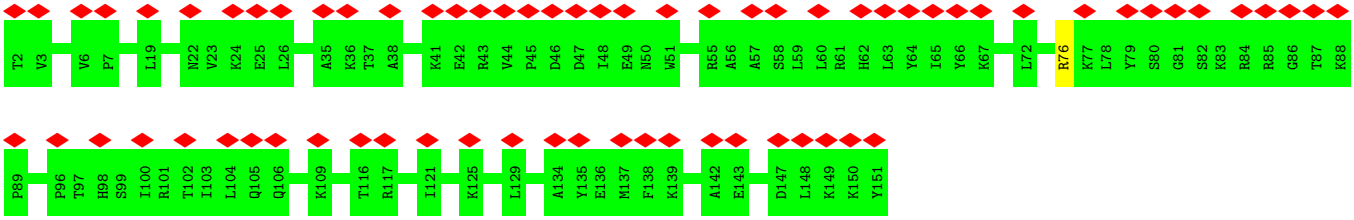
• Molecule 60: 30S ribosomal protein S17e

Chain S17E:



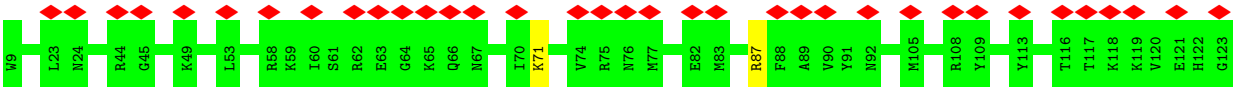
• Molecule 61: 30S ribosomal protein S19e

Chain S19E:



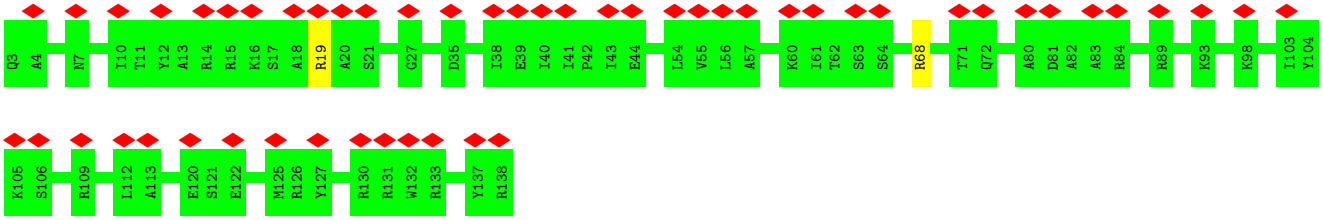
• Molecule 62: 30S ribosomal protein S19

Chain S19P:



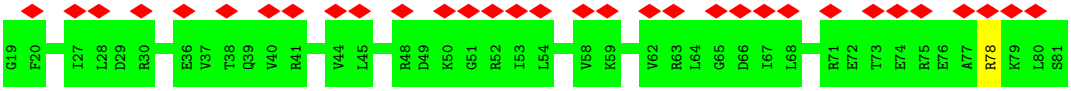
• Molecule 63: 30S ribosomal protein S9

Chain AS9P:



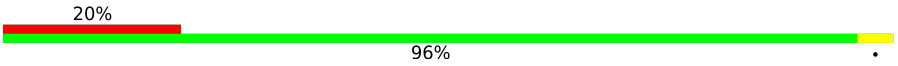
• Molecule 64: 30S ribosomal protein S28e

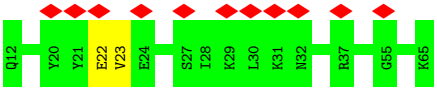
Chain S28E:



• Molecule 65: 30S ribosomal protein S27ae

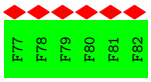
Chain S27A:





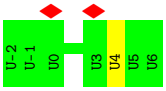
• Molecule 66: PHE-PHE-PHE-PHE-PHE-PHE

Chain APTP:



• Molecule 67: mRNA (5'-R(P*UP*UP*UP*UP*UP*UP*UP*U)-3')

Chain AMRN:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	5781	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 ($e^-/Å^2$)	26.7	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	1.201	Depositor
Minimum map value	-0.533	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.092	Depositor
Recommended contour level	0.33	Depositor
Map size (Å)	413.06, 413.06, 413.06	wwPDB
Map dimensions	380, 380, 380	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.087, 1.087, 1.087	Depositor

5 Model quality

5.1 Standard geometry

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	A23S	0.71	59/72048 (0.1%)	1.25	448/112407 (0.4%)
2	A16S	0.74	51/35889 (0.1%)	1.34	477/56002 (0.9%)
3	AATN	0.81	7/1809 (0.4%)	2.17	39/2819 (1.4%)
3	AETN	0.49	1/1809 (0.1%)	1.23	21/2819 (0.7%)
3	APTN	0.63	2/1809 (0.1%)	1.56	29/2819 (1.0%)
4	A5S	0.54	0/2917	0.88	1/4549 (0.0%)
5	AL1P	0.27	0/1739	0.54	0/2338
6	AL2P	0.35	0/1787	0.59	0/2409
7	AL3P	0.34	0/2758	0.59	0/3727
8	AL4P	0.32	0/1956	0.57	1/2635 (0.0%)
9	AL5P	0.33	0/1364	0.61	0/1827
10	AL6P	0.31	0/1450	0.53	0/1949
11	ALX0	0.35	0/638	0.62	0/851
12	L10E	0.34	0/1334	0.60	0/1787
13	L13P	0.32	0/1123	0.59	0/1502
14	L141	0.29	0/673	0.55	0/900
14	L142	0.30	0/673	0.53	0/900
15	L14P	0.36	0/1054	0.63	0/1425
16	L15E	0.36	0/1458	0.64	0/1956
17	L18E	0.31	0/907	0.57	0/1214
18	L18P	0.34	0/1570	0.56	0/2115
19	L19E	0.33	0/1223	0.59	0/1622
20	L22P	0.31	0/1246	0.57	0/1671
21	L23P	0.33	0/655	0.49	0/874
22	L24E	0.35	0/451	0.53	0/599
23	L24P	0.33	0/1000	0.59	0/1329
24	L29P	0.27	0/513	0.61	0/678
25	L30E	0.35	0/738	0.52	0/985
26	L30P	0.40	0/1278	0.61	0/1713
27	L31E	0.34	0/632	0.67	0/837
28	L32E	0.33	0/1027	0.61	0/1366
29	L34E	0.44	0/642	0.82	4/854 (0.5%)
30	L37A	0.40	0/542	0.63	0/726
31	L37E	0.39	0/445	0.69	0/585

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
32	L39E	0.32	0/422	0.69	0/562
33	L40E	0.28	0/443	0.63	0/587
34	L44E	0.32	0/763	0.57	0/1008
35	L7A1	0.30	0/946	0.46	0/1272
35	L7A2	0.29	0/946	0.45	0/1272
35	SL7A	0.28	0/946	0.48	0/1272
36	L15P	0.33	0/766	0.53	0/1023
37	L21E	0.33	0/800	0.57	0/1067
38	L45A	0.32	0/824	0.56	0/1094
39	L46A	0.30	0/595	0.57	0/793
40	L47A	0.28	0/652	0.55	0/870
41	AS2P	0.31	0/1621	0.57	0/2202
42	AS4E	0.31	0/1956	0.61	1/2635 (0.0%)
43	AS4P	0.32	0/1399	0.57	0/1883
44	AS5P	0.34	0/1631	0.57	0/2200
45	AS6E	0.30	0/815	0.62	0/1093
46	AS8E	0.30	0/1005	0.58	0/1342
47	AS8P	0.34	0/1046	0.60	0/1410
48	S11P	0.29	0/976	0.63	0/1315
49	S12P	0.32	0/1120	0.61	0/1495
50	S15P	0.33	0/1250	0.59	0/1677
51	S17P	0.31	0/899	0.57	0/1203
52	S24E	0.29	0/769	0.54	0/1034
53	S27E	0.30	0/465	0.53	0/618
54	S3AE	0.30	0/1573	0.57	0/2115
55	AS3P	0.32	0/1599	0.55	0/2147
56	AS7P	0.30	0/1561	0.59	0/2105
57	S10P	0.31	0/840	0.56	0/1132
58	S13P	0.31	0/1221	0.62	0/1634
59	S14P	0.37	0/441	0.63	0/583
60	S17E	0.30	0/523	0.49	0/696
61	S19E	0.30	0/1267	0.55	0/1705
62	S19P	0.31	0/985	0.57	0/1310
63	AS9P	0.31	0/1115	0.59	0/1496
64	S28E	0.27	0/500	0.67	0/669
65	S27A	0.36	0/444	0.66	0/590
66	APTP	0.33	0/72	0.37	0/93
67	AMRN	0.39	0/197	0.88	0/302
All	All	0.60	120/182550 (0.1%)	1.11	1021/270293 (0.4%)

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	A16S	0	1
13	L13P	0	1
42	AS4E	0	1
43	AS4P	0	1
44	AS5P	0	1
47	AS8P	0	2
50	S15P	0	1
65	S27A	0	2
All	All	0	10

All (120) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A16S	381	C	C2-O2	-16.49	1.09	1.24
2	A16S	381	C	N1-C6	-15.77	1.27	1.37
3	AATN	75	C	N3-C4	-14.54	1.23	1.33
3	AATN	75	C	C2-N3	-12.52	1.25	1.35
1	A23S	2677	G	C6-N1	-11.78	1.31	1.39
1	A23S	2677	G	N1-C2	-10.12	1.29	1.37
2	A16S	381	C	C4-C5	-9.39	1.35	1.43
1	A23S	1424	G	N9-C4	-8.95	1.30	1.38
2	A16S	379	G	N9-C4	-8.94	1.30	1.38
1	A23S	2430	G	C6-O6	-8.87	1.16	1.24
2	A16S	622	G	N9-C4	-8.83	1.30	1.38
1	A23S	1784	G	N9-C4	-8.75	1.30	1.38
2	A16S	381	C	N3-C4	-8.67	1.27	1.33
2	A16S	242	G	N9-C4	-8.61	1.31	1.38
1	A23S	1626	C	C2-O2	-8.59	1.16	1.24
2	A16S	1145	G	N9-C4	-8.52	1.31	1.38
1	A23S	385	G	N9-C4	-8.27	1.31	1.38
2	A16S	379	G	N1-C2	8.24	1.44	1.37
2	A16S	603	G	N9-C4	-8.12	1.31	1.38
2	A16S	33	A	N3-C4	-8.01	1.30	1.34
3	APTN	7	A	N9-C4	-7.99	1.33	1.37
2	A16S	14	G	N9-C4	-7.94	1.31	1.38
2	A16S	370	G	C2-N3	-7.88	1.26	1.32
1	A23S	279	G	N9-C4	-7.83	1.31	1.38
2	A16S	906	A	N9-C4	-7.82	1.33	1.37
2	A16S	1168	G	N9-C4	-7.79	1.31	1.38
2	A16S	370	G	N9-C4	-7.79	1.31	1.38
1	A23S	1626	C	C4-C5	-7.73	1.36	1.43
1	A23S	2547	G	C1'-N9	-7.72	1.36	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A23S	1699	G	N9-C4	-7.70	1.31	1.38
2	A16S	370	G	N3-C4	-7.66	1.30	1.35
2	A16S	616	G	N7-C5	-7.51	1.34	1.39
3	AATN	7	A	N9-C4	-7.41	1.33	1.37
1	A23S	469	G	C8-N7	-7.38	1.26	1.30
1	A23S	2692	G	N9-C4	-7.32	1.32	1.38
2	A16S	154	G	N9-C4	-7.25	1.32	1.38
2	A16S	1091	G	N9-C4	-7.22	1.32	1.38
2	A16S	1012	G	N9-C4	-7.21	1.32	1.38
1	A23S	2284	G	C5-C6	-7.17	1.35	1.42
2	A16S	360	G	N9-C4	-7.16	1.32	1.38
1	A23S	1957	G	N9-C4	-6.97	1.32	1.38
1	A23S	1090	C	N1-C6	-6.92	1.32	1.37
1	A23S	2794	G	N9-C4	-6.90	1.32	1.38
2	A16S	1213	C	C5-C6	-6.90	1.28	1.34
1	A23S	1626	C	P-O5'	6.87	1.66	1.59
2	A16S	61	G	N7-C5	-6.81	1.35	1.39
3	AATN	75	C	C2-O2	-6.79	1.18	1.24
1	A23S	2923	G	N9-C4	-6.73	1.32	1.38
1	A23S	1318	U	C1'-N1	6.71	1.58	1.48
1	A23S	1090	C	C5-C6	-6.52	1.29	1.34
2	A16S	603	G	C2-N3	-6.38	1.27	1.32
1	A23S	385	G	C2-N3	-6.22	1.27	1.32
1	A23S	2730	C	C5-C6	-6.20	1.29	1.34
1	A23S	1850	U	N3-C4	-6.17	1.32	1.38
2	A16S	603	G	N3-C4	-6.16	1.31	1.35
2	A16S	627	G	N9-C4	-6.08	1.33	1.38
1	A23S	469	G	C5-C6	-6.05	1.36	1.42
1	A23S	1626	C	N1-C6	-6.05	1.33	1.37
2	A16S	112	U	C5-C6	-6.03	1.28	1.34
2	A16S	622	G	N3-C4	-5.99	1.31	1.35
1	A23S	851	C	N1-C2	-5.94	1.34	1.40
1	A23S	279	G	N3-C4	-5.92	1.31	1.35
2	A16S	1319	A	C6-N1	-5.85	1.31	1.35
1	A23S	1682	G	N3-C4	-5.79	1.31	1.35
1	A23S	385	G	N3-C4	-5.77	1.31	1.35
2	A16S	906	A	N3-C4	-5.77	1.31	1.34
1	A23S	1699	G	C2-N3	-5.76	1.28	1.32
1	A23S	2290	C	C4-C5	-5.74	1.38	1.43
1	A23S	1424	G	N3-C4	-5.73	1.31	1.35
2	A16S	61	G	C5-C6	-5.73	1.36	1.42
3	AETN	7	A	N9-C4	-5.72	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A23S	1784	G	N3-C4	-5.70	1.31	1.35
1	A23S	2430	G	C6-N1	-5.69	1.35	1.39
1	A23S	1699	G	N3-C4	-5.67	1.31	1.35
1	A23S	2794	G	N3-C4	-5.66	1.31	1.35
1	A23S	1090	C	C4-C5	-5.64	1.38	1.43
1	A23S	1682	G	N9-C4	-5.64	1.33	1.38
1	A23S	1626	C	C5'-C4'	5.63	1.58	1.51
2	A16S	14	G	N3-C4	-5.63	1.31	1.35
2	A16S	1348	G	N9-C4	-5.60	1.33	1.38
1	A23S	671	A	N9-C4	-5.58	1.34	1.37
1	A23S	1424	G	C2-N3	-5.58	1.28	1.32
1	A23S	2692	G	N3-C4	-5.57	1.31	1.35
3	AATN	75	C	C4-N4	-5.57	1.28	1.33
2	A16S	151	C	N1-C2	-5.55	1.34	1.40
2	A16S	1362	C	C4-N4	-5.54	1.28	1.33
2	A16S	616	G	N3-C4	-5.54	1.31	1.35
1	A23S	279	G	C2-N3	-5.52	1.28	1.32
2	A16S	381	C	C2-N3	-5.45	1.31	1.35
2	A16S	730	C	C5-C6	-5.44	1.29	1.34
3	APTN	19	G	N1-C2	-5.44	1.33	1.37
2	A16S	1133	C	N1-C2	-5.44	1.34	1.40
2	A16S	379	G	C2-N3	-5.44	1.28	1.32
2	A16S	920	C	C5-C6	-5.43	1.30	1.34
2	A16S	1213	C	C4-C5	-5.41	1.38	1.43
1	A23S	656	C	N1-C2	-5.40	1.34	1.40
2	A16S	61	G	C8-N7	-5.40	1.27	1.30
2	A16S	1119	A	C6-N1	-5.38	1.31	1.35
3	AATN	19	G	N1-C2	-5.34	1.33	1.37
1	A23S	338	C	N1-C2	5.33	1.45	1.40
1	A23S	1626	C	C2-N3	5.28	1.40	1.35
1	A23S	1957	G	N3-C4	-5.28	1.31	1.35
2	A16S	1024	C	N1-C6	-5.26	1.33	1.37
1	A23S	2235	U	N3-C4	-5.26	1.33	1.38
2	A16S	955	C	N1-C2	-5.21	1.34	1.40
1	A23S	2677	G	C2-N2	5.21	1.39	1.34
1	A23S	1634	C	N1-C6	-5.20	1.34	1.37
1	A23S	1784	G	C2-N3	-5.20	1.28	1.32
1	A23S	671	A	N3-C4	-5.18	1.31	1.34
1	A23S	1435	C	N1-C2	-5.17	1.34	1.40
2	A16S	622	G	C2-N3	-5.16	1.28	1.32
1	A23S	257	C	N1-C2	5.16	1.45	1.40
1	A23S	2284	G	C8-N7	-5.13	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A23S	1103	G	N9-C4	-5.12	1.33	1.38
2	A16S	616	G	N9-C4	-5.12	1.33	1.38
2	A16S	1024	C	N1-C2	-5.04	1.35	1.40
2	A16S	1091	G	C5-C6	-5.04	1.37	1.42
1	A23S	661	G	N9-C4	-5.03	1.33	1.38
3	AATN	56	C	C2-O2	-5.02	1.20	1.24
1	A23S	1626	C	N3-C4	-5.02	1.30	1.33

All (1021) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	2677	G	N1-C6-O6	-107.85	55.19	119.90
1	A23S	2677	G	N1-C2-N2	-77.05	46.86	116.20
2	A16S	381	C	N1-C2-O2	-58.44	83.84	118.90
1	A23S	2677	G	C6-N1-C2	54.20	157.62	125.10
1	A23S	1626	C	C6-N1-C2	-52.23	99.41	120.30
3	AATN	56	C	N3-C2-O2	-43.22	91.65	121.90
1	A23S	2677	G	N3-C2-N2	41.25	148.78	119.90
3	AATN	56	C	N1-C2-O2	38.37	141.92	118.90
1	A23S	2677	G	C5-C6-O6	37.23	150.94	128.60
1	A23S	2677	G	N1-C2-N3	-36.48	102.01	123.90
1	A23S	1626	C	C5-C6-N1	36.32	139.16	121.00
3	AATN	75	C	N3-C4-N4	-34.20	94.06	118.00
3	AATN	75	C	N3-C2-O2	-34.16	97.98	121.90
2	A16S	381	C	N3-C2-O2	33.00	145.00	121.90
3	APTN	19	G	N3-C2-N2	32.72	142.81	119.90
1	A23S	2677	G	C5-C6-N1	-31.08	95.96	111.50
3	APTN	19	G	N1-C2-N2	-31.02	88.28	116.20
3	AATN	75	C	N1-C2-O2	29.09	136.35	118.90
1	A23S	1626	C	N3-C4-C5	-28.67	110.43	121.90
3	AATN	75	C	C5-C4-N4	27.36	139.35	120.20
2	A16S	381	C	C6-N1-C2	-24.45	110.52	120.30
1	A23S	2433	C	N3-C4-N4	-22.18	102.48	118.00
3	AATN	19	G	N1-C2-N2	-21.77	96.60	116.20
2	A16S	381	C	C5-C6-N1	21.18	131.59	121.00
1	A23S	2430	G	C6-N1-C2	-19.16	113.60	125.10
2	A16S	892	G	C6-N1-C2	-18.80	113.82	125.10
1	A23S	2433	C	C5-C4-N4	18.78	133.35	120.20
1	A23S	2284	G	C4-C5-N7	17.75	117.90	110.80
3	APTN	56	C	N1-C2-O2	17.32	129.29	118.90
2	A16S	381	C	N3-C4-C5	-16.50	115.30	121.90
2	A16S	1362	C	C2-N3-C4	-16.50	111.65	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AATN	19	G	N1-C2-N3	16.16	133.60	123.90
1	A23S	469	G	C4-C5-N7	16.00	117.20	110.80
1	A23S	469	G	C6-C5-N7	-16.00	120.80	130.40
1	A23S	469	G	N9-C4-C5	-16.00	99.00	105.40
3	APTN	19	G	C5-C6-O6	15.73	138.04	128.60
1	A23S	2430	G	C5-C6-N1	15.53	119.26	111.50
2	A16S	144	C	C6-N1-C2	-15.15	114.24	120.30
2	A16S	379	G	N3-C4-C5	15.06	136.13	128.60
2	A16S	1362	C	N3-C4-N4	-14.95	107.53	118.00
1	A23S	469	G	N1-C6-O6	14.91	128.85	119.90
1	A23S	2265	C	N1-C2-O2	14.49	127.59	118.90
1	A23S	2284	G	N9-C4-C5	-14.36	99.66	105.40
2	A16S	1362	C	N3-C4-C5	14.28	127.61	121.90
3	AATN	19	G	N3-C2-N2	14.14	129.80	119.90
1	A23S	1625	C	N3-C2-O2	-14.13	112.01	121.90
2	A16S	370	G	N3-C4-N9	-14.02	117.59	126.00
2	A16S	33	A	N1-C2-N3	13.98	136.29	129.30
3	AATN	56	C	C6-N1-C2	-13.95	114.72	120.30
2	A16S	354	C	C6-N1-C2	-13.94	114.72	120.30
1	A23S	1685	C	C6-N1-C2	-13.81	114.78	120.30
2	A16S	892	G	N1-C6-O6	-13.78	111.63	119.90
2	A16S	1023	C	C2-N1-C1'	13.72	133.89	118.80
2	A16S	892	G	N3-C2-N2	-13.45	110.48	119.90
1	A23S	1626	C	C2-N3-C4	13.27	126.53	119.90
1	A23S	469	G	N3-C4-N9	13.23	133.94	126.00
2	A16S	1024	C	C6-N1-C2	-13.20	115.02	120.30
1	A23S	2641	C	C6-N1-C2	-13.17	115.03	120.30
2	A16S	892	G	C5-C6-N1	13.13	118.07	111.50
1	A23S	258	C	C6-N1-C2	-13.11	115.05	120.30
1	A23S	1626	C	N3-C2-O2	-13.11	112.72	121.90
2	A16S	379	G	N3-C4-N9	-13.06	118.17	126.00
2	A16S	366	C	O4'-C1'-N1	13.03	118.62	108.20
1	A23S	469	G	C5-C6-O6	-12.92	120.85	128.60
1	A23S	1793	C	C6-N1-C2	-12.82	115.17	120.30
2	A16S	242	G	N3-C4-C5	12.68	134.94	128.60
1	A23S	2430	G	N1-C2-N3	12.61	131.46	123.90
3	APTN	19	G	N1-C6-O6	-12.59	112.35	119.90
2	A16S	25	C	C6-N1-C2	-12.57	115.27	120.30
1	A23S	338	C	C2-N1-C1'	12.47	132.51	118.80
1	A23S	385	G	N3-C4-N9	-12.46	118.53	126.00
1	A23S	1424	G	C2-N3-C4	-12.36	105.72	111.90
3	APTN	56	C	N3-C2-O2	-12.25	113.32	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	1023	C	C6-N1-C2	-12.15	115.44	120.30
1	A23S	339	C	C6-N1-C2	-12.05	115.48	120.30
3	AATN	75	C	C6-N1-C2	-11.96	115.51	120.30
1	A23S	246	C	C6-N1-C2	11.94	125.07	120.30
2	A16S	1090	U	N3-C2-O2	-11.90	113.87	122.20
1	A23S	279	G	N3-C4-N9	-11.89	118.86	126.00
1	A23S	1625	C	C6-N1-C2	-11.89	115.54	120.30
2	A16S	603	G	N3-C4-N9	-11.78	118.93	126.00
1	A23S	1850	U	C5-C4-O4	11.78	132.97	125.90
2	A16S	1133	C	C6-N1-C2	-11.71	115.61	120.30
1	A23S	1424	G	N3-C4-C5	11.68	134.44	128.60
1	A23S	246	C	C6-N1-C1'	-11.67	106.80	120.80
2	A16S	1180	C	C6-N1-C2	-11.66	115.64	120.30
3	APTN	19	G	C2-N3-C4	-11.63	106.08	111.90
3	AATN	75	C	N3-C4-C5	11.62	126.55	121.90
2	A16S	568	C	C6-N1-C2	-11.60	115.66	120.30
2	A16S	14	G	N3-C4-N9	-11.58	119.05	126.00
1	A23S	469	G	C8-N9-C1'	-11.56	111.98	127.00
1	A23S	1949	C	C6-N1-C2	-11.55	115.68	120.30
1	A23S	1784	G	N3-C4-N9	-11.54	119.07	126.00
2	A16S	616	G	C2-N3-C4	-11.52	106.14	111.90
2	A16S	892	G	N1-C2-N3	11.52	130.81	123.90
1	A23S	1625	C	C2-N3-C4	-11.50	114.15	119.90
2	A16S	1145	G	N3-C4-C5	11.44	134.32	128.60
1	A23S	2284	G	C5-C6-O6	-11.33	121.80	128.60
1	A23S	1089	U	N3-C2-O2	-11.20	114.36	122.20
2	A16S	717	C	C6-N1-C2	-11.11	115.86	120.30
1	A23S	1626	C	N1-C2-N3	10.97	126.88	119.20
2	A16S	14	G	C2-N3-C4	-10.88	106.46	111.90
2	A16S	61	G	C6-C5-N7	-10.86	123.89	130.40
2	A16S	370	G	C8-N9-C4	-10.86	102.06	106.40
1	A23S	1424	G	N3-C4-N9	-10.85	119.49	126.00
2	A16S	242	G	C2-N3-C4	-10.85	106.48	111.90
2	A16S	1341	U	N3-C2-O2	-10.75	114.67	122.20
2	A16S	622	G	C2-N3-C4	-10.73	106.54	111.90
1	A23S	1850	U	C4-C5-C6	10.67	126.10	119.70
2	A16S	14	G	N3-C4-C5	10.66	133.93	128.60
1	A23S	1626	C	C2-N1-C1'	10.62	130.48	118.80
2	A16S	1091	G	N3-C4-C5	10.57	133.88	128.60
2	A16S	622	G	N3-C4-C5	10.55	133.88	128.60
2	A16S	366	C	C2-N1-C1'	10.54	130.40	118.80
2	A16S	1145	G	C2-N3-C4	-10.54	106.63	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	622	G	N3-C4-N9	-10.52	119.69	126.00
2	A16S	381	C	C2-N3-C4	10.51	125.16	119.90
2	A16S	61	G	N1-C6-O6	10.50	126.20	119.90
1	A23S	1682	G	N1-C6-O6	-10.50	113.60	119.90
1	A23S	1682	G	N1-C2-N3	10.44	130.16	123.90
1	A23S	2794	G	N3-C4-N9	-10.42	119.75	126.00
2	A16S	57	C	C6-N1-C2	-10.39	116.14	120.30
2	A16S	1145	G	N3-C4-N9	-10.36	119.79	126.00
1	A23S	1784	G	N3-C4-C5	10.34	133.77	128.60
1	A23S	469	G	C4-N9-C1'	10.34	139.94	126.50
3	AATN	56	C	N1-C2-N3	10.33	126.43	119.20
2	A16S	370	G	C2-N3-C4	-10.32	106.74	111.90
3	AATN	19	G	C6-N1-C2	-10.23	118.96	125.10
1	A23S	3017	C	N1-C2-O2	10.23	125.03	118.90
1	A23S	338	C	N1-C2-O2	10.22	125.03	118.90
2	A16S	1012	G	N3-C4-N9	-10.21	119.87	126.00
1	A23S	1625	C	N1-C2-N3	10.19	126.33	119.20
3	AATN	19	G	C2-N3-C4	-10.18	106.81	111.90
2	A16S	603	G	C2-N3-C4	-10.14	106.83	111.90
2	A16S	1132	C	C2-N1-C1'	10.13	129.94	118.80
1	A23S	338	C	C6-N1-C1'	-10.12	108.66	120.80
1	A23S	2106	A	C6-N1-C2	-10.06	112.56	118.60
2	A16S	1319	A	N1-C6-N6	-10.05	112.57	118.60
2	A16S	603	G	N3-C4-C5	10.01	133.61	128.60
2	A16S	1168	G	N3-C4-N9	-10.01	120.00	126.00
1	A23S	2142	A	N9-C4-C5	-9.98	101.81	105.80
1	A23S	385	G	N3-C4-C5	9.98	133.59	128.60
2	A16S	1213	C	C2-N1-C1'	9.97	129.77	118.80
2	A16S	1213	C	N3-C4-N4	9.97	124.98	118.00
2	A16S	370	G	N9-C4-C5	9.96	109.38	105.40
1	A23S	1626	C	N3-C4-N4	9.94	124.96	118.00
1	A23S	2142	A	C8-N9-C4	9.85	109.74	105.80
1	A23S	2284	G	C5-N7-C8	-9.83	99.38	104.30
2	A16S	1082	C	C2-N1-C1'	9.82	129.60	118.80
2	A16S	242	G	N3-C4-N9	-9.79	120.13	126.00
3	AATN	65	G	N1-C6-O6	-9.75	114.05	119.90
2	A16S	1132	C	N1-C2-O2	9.71	124.72	118.90
42	AS4E	7	GLU	C-N-CA	9.65	145.82	121.70
1	A23S	2692	G	N3-C4-N9	-9.60	120.24	126.00
1	A23S	2583	G	C5-C6-O6	-9.59	122.84	128.60
2	A16S	1083	C	C6-N1-C2	-9.59	116.46	120.30
3	APTN	7	A	N3-C4-N9	-9.59	119.73	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	1784	G	C2-N3-C4	-9.55	107.13	111.90
2	A16S	61	G	C4-C5-N7	9.52	114.61	110.80
2	A16S	154	G	N3-C4-N9	-9.52	120.29	126.00
1	A23S	1904	C	N1-C2-O2	9.50	124.60	118.90
2	A16S	1012	G	N3-C4-C5	9.49	133.34	128.60
1	A23S	2794	G	C2-N3-C4	-9.47	107.17	111.90
2	A16S	1115	C	N1-C2-O2	9.43	124.56	118.90
3	AETN	7	A	N3-C4-N9	-9.43	119.86	127.40
2	A16S	144	C	C5-C6-N1	9.41	125.70	121.00
3	AETN	7	A	N9-C4-C5	9.40	109.56	105.80
1	A23S	2677	G	C2-N3-C4	9.37	116.58	111.90
1	A23S	2794	G	N3-C4-C5	9.36	133.28	128.60
1	A23S	1699	G	N3-C4-N9	-9.34	120.39	126.00
2	A16S	1179	C	C2-N1-C1'	9.34	129.08	118.80
1	A23S	656	C	C6-N1-C2	-9.33	116.57	120.30
2	A16S	1091	G	C4-C5-N7	9.30	114.52	110.80
2	A16S	616	G	C5-C6-N1	-9.22	106.89	111.50
1	A23S	1957	G	C2-N3-C4	-9.21	107.30	111.90
1	A23S	1625	C	P-O3'-C3'	9.21	130.75	119.70
3	AATN	75	C	N1-C2-N3	9.21	125.64	119.20
2	A16S	1133	C	C5-C6-N1	9.18	125.59	121.00
1	A23S	1682	G	C5-C6-O6	9.17	134.10	128.60
2	A16S	154	G	N3-C4-C5	9.16	133.18	128.60
2	A16S	1012	G	C2-N3-C4	-9.15	107.32	111.90
1	A23S	3017	C	C2-N1-C1'	9.15	128.87	118.80
2	A16S	1187	C	C2-N1-C1'	9.14	128.85	118.80
2	A16S	33	A	N9-C4-C5	9.12	109.45	105.80
2	A16S	921	U	O4'-C1'-N1	9.13	115.50	108.20
2	A16S	716	C	C2-N1-C1'	9.12	128.83	118.80
2	A16S	33	A	C8-N9-C4	-9.09	102.16	105.80
2	A16S	1289	C	N1-C2-O2	9.09	124.36	118.90
2	A16S	381	C	N3-C4-N4	9.07	124.35	118.00
1	A23S	1682	G	N3-C4-N9	-9.06	120.56	126.00
1	A23S	279	G	N3-C4-C5	9.04	133.12	128.60
1	A23S	1090	C	N3-C4-C5	-9.02	118.29	121.90
2	A16S	360	G	N3-C4-C5	9.02	133.11	128.60
1	A23S	1699	G	C2-N3-C4	-9.01	107.39	111.90
1	A23S	1633	U	O4'-C1'-N1	9.00	115.40	108.20
1	A23S	1204	C	C2-N1-C1'	8.99	128.69	118.80
1	A23S	2290	C	N3-C4-N4	8.98	124.29	118.00
2	A16S	1493	U	C2-N1-C1'	8.97	128.47	117.70
1	A23S	1957	G	N3-C4-N9	-8.97	120.62	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	484	U	C4-C5-C6	8.97	125.08	119.70
1	A23S	1699	G	N3-C4-C5	8.94	133.07	128.60
2	A16S	61	G	C2-N3-C4	-8.90	107.45	111.90
2	A16S	1213	C	N1-C2-O2	8.89	124.23	118.90
1	A23S	2923	G	N3-C4-C5	8.89	133.04	128.60
1	A23S	246	C	N1-C2-O2	8.88	124.23	118.90
1	A23S	2730	C	C2-N1-C1'	8.88	128.57	118.80
1	A23S	2583	G	C4-C5-N7	8.85	114.34	110.80
1	A23S	2692	G	C2-N3-C4	-8.84	107.48	111.90
2	A16S	370	G	N3-C4-C5	8.82	133.01	128.60
1	A23S	1792	C	C2-N1-C1'	8.81	128.49	118.80
3	AETN	70	G	N1-C6-O6	8.79	125.17	119.90
2	A16S	1319	A	C5-C6-N6	8.78	130.73	123.70
1	A23S	2291	G	O4'-C1'-N9	8.78	115.22	108.20
2	A16S	61	G	C5-N7-C8	-8.76	99.92	104.30
2	A16S	1090	U	N1-C2-O2	8.76	128.93	122.80
2	A16S	1168	G	N3-C4-C5	8.74	132.97	128.60
2	A16S	1023	C	C6-N1-C1'	-8.73	110.33	120.80
3	APTN	56	C	C2-N3-C4	8.72	124.26	119.90
2	A16S	360	G	C2-N3-C4	-8.70	107.55	111.90
3	AETN	70	G	N9-C4-C5	-8.68	101.93	105.40
1	A23S	2234	U	N1-C2-N3	8.67	120.10	114.90
2	A16S	379	G	C4-N9-C1'	-8.67	115.22	126.50
1	A23S	2272	U	N1-C2-N3	8.65	120.09	114.90
3	AETN	70	G	C6-C5-N7	-8.65	125.21	130.40
1	A23S	1948	C	C2-N1-C1'	8.64	128.31	118.80
1	A23S	1633	U	C2-N1-C1'	8.60	128.02	117.70
1	A23S	2305	A	O4'-C1'-N9	8.60	115.08	108.20
3	AATN	65	G	C5-C6-O6	8.60	133.76	128.60
3	AATN	49	C	N3-C4-N4	8.59	124.01	118.00
1	A23S	279	G	C2-N3-C4	-8.57	107.61	111.90
2	A16S	1083	C	N3-C4-C5	-8.57	118.47	121.90
2	A16S	1168	G	C2-N3-C4	-8.55	107.62	111.90
1	A23S	1633	U	N3-C2-O2	-8.53	116.23	122.20
1	A23S	1682	G	C2-N3-C4	-8.51	107.64	111.90
1	A23S	851	C	C6-N1-C1'	8.49	130.99	120.80
1	A23S	2692	G	N3-C4-C5	8.49	132.85	128.60
1	A23S	385	G	C8-N9-C1'	8.49	138.03	127.00
1	A23S	851	C	N1-C2-O2	-8.48	113.81	118.90
2	A16S	1023	C	C5-C6-N1	8.46	125.23	121.00
2	A16S	363	G	N3-C4-N9	-8.46	120.92	126.00
3	AATN	49	C	C4-C5-C6	8.46	121.63	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	851	C	C2-N1-C1'	-8.45	109.50	118.80
2	A16S	1132	C	C6-N1-C1'	-8.45	110.66	120.80
1	A23S	2265	C	C2-N1-C1'	8.45	128.09	118.80
2	A16S	112	U	N3-C4-O4	8.43	125.30	119.40
1	A23S	2291	G	N3-C2-N2	8.41	125.79	119.90
2	A16S	370	G	N3-C2-N2	-8.41	114.01	119.90
1	A23S	246	C	N1-C2-N3	-8.41	113.31	119.20
3	AETN	70	G	C4-C5-N7	8.39	114.16	110.80
1	A23S	2106	A	N1-C2-N3	8.37	133.49	129.30
1	A23S	2265	C	N3-C2-O2	-8.37	116.04	121.90
2	A16S	78	G	N3-C2-N2	-8.37	114.04	119.90
2	A16S	716	C	N1-C2-O2	8.36	123.91	118.90
3	APTN	19	G	N1-C2-N3	8.35	128.91	123.90
1	A23S	2284	G	C6-C5-N7	-8.34	125.39	130.40
1	A23S	2272	U	C6-N1-C2	-8.34	116.00	121.00
1	A23S	2233	G	N3-C4-N9	8.31	130.99	126.00
1	A23S	2617	U	C5-C6-N1	8.31	126.86	122.70
1	A23S	1103	G	N3-C4-N9	-8.29	121.03	126.00
2	A16S	1119	A	N1-C2-N3	-8.28	125.16	129.30
1	A23S	1424	G	C5-N7-C8	-8.27	100.16	104.30
2	A16S	1493	U	N1-C2-O2	8.27	128.59	122.80
2	A16S	354	C	C5-C6-N1	8.25	125.12	121.00
1	A23S	2433	C	C4-C5-C6	-8.23	113.29	117.40
2	A16S	61	G	N7-C8-N9	8.20	117.20	113.10
1	A23S	2617	U	N1-C2-O2	8.19	128.53	122.80
1	A23S	246	C	C5-C4-N4	-8.18	114.47	120.20
1	A23S	1103	G	N3-C2-N2	-8.18	114.17	119.90
3	AATN	7	A	C2-N3-C4	-8.18	106.51	110.60
1	A23S	2731	G	O4'-C1'-N9	8.17	114.74	108.20
1	A23S	1633	U	N1-C2-O2	8.17	128.52	122.80
2	A16S	370	G	C8-N9-C1'	8.17	137.62	127.00
2	A16S	366	C	C6-N1-C1'	-8.17	111.00	120.80
1	A23S	1435	C	C6-N1-C2	-8.16	117.03	120.30
2	A16S	1179	C	N1-C2-O2	8.16	123.80	118.90
1	A23S	2290	C	N1-C2-O2	8.14	123.79	118.90
3	AETN	44	G	O4'-C1'-N9	8.14	114.71	108.20
1	A23S	2290	C	C2-N1-C1'	8.13	127.75	118.80
1	A23S	1904	C	C2-N1-C1'	8.11	127.72	118.80
2	A16S	906	A	N9-C4-C5	8.11	109.04	105.80
2	A16S	1119	A	C6-N1-C2	8.10	123.46	118.60
2	A16S	1362	C	N1-C2-N3	8.10	124.87	119.20
2	A16S	627	G	N3-C4-C5	8.09	132.65	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	385	G	C2-N3-C4	-8.09	107.86	111.90
2	A16S	920	C	C2-N1-C1'	8.09	127.70	118.80
2	A16S	370	G	N7-C8-N9	8.07	117.14	113.10
2	A16S	953	U	C5-C4-O4	-8.07	121.06	125.90
2	A16S	1083	C	N1-C2-N3	8.07	124.85	119.20
3	AATN	56	C	C2-N1-C1'	8.07	127.67	118.80
2	A16S	143	C	C2-N1-C1'	8.04	127.65	118.80
2	A16S	154	G	C2-N3-C4	-8.04	107.88	111.90
1	A23S	129	C	C6-N1-C2	-8.04	117.09	120.30
1	A23S	2730	C	N3-C4-N4	8.02	123.61	118.00
2	A16S	78	G	C2-N3-C4	8.02	115.91	111.90
1	A23S	1957	G	N3-C4-C5	8.01	132.61	128.60
1	A23S	2234	U	C6-N1-C2	-8.00	116.20	121.00
2	A16S	381	C	C2-N1-C1'	8.00	127.59	118.80
2	A16S	1283	C	C6-N1-C2	-8.00	117.10	120.30
1	A23S	2233	G	C6-C5-N7	-7.99	125.61	130.40
1	A23S	1457	U	C2-N1-C1'	7.98	127.28	117.70
1	A23S	1792	C	N1-C2-O2	7.97	123.68	118.90
1	A23S	246	C	C2-N1-C1'	7.97	127.57	118.80
2	A16S	616	G	C6-C5-N7	-7.93	125.64	130.40
3	APTN	49	C	C2-N1-C1'	7.93	127.52	118.80
2	A16S	1024	C	C6-N1-C1'	7.91	130.29	120.80
1	A23S	2290	C	C5-C4-N4	-7.91	114.67	120.20
2	A16S	1023	C	N3-C2-O2	-7.87	116.39	121.90
1	A23S	1948	C	N1-C2-O2	7.87	123.62	118.90
2	A16S	353	C	N1-C2-O2	7.85	123.61	118.90
2	A16S	1319	A	C6-N1-C2	7.85	123.31	118.60
3	AETN	7	A	C5-C6-N6	7.85	129.98	123.70
2	A16S	716	C	C6-N1-C1'	-7.83	111.40	120.80
2	A16S	1289	C	C2-N1-C1'	7.83	127.41	118.80
1	A23S	1434	C	N1-C2-O2	7.82	123.59	118.90
3	APTN	7	A	C2-N3-C4	-7.80	106.70	110.60
2	A16S	906	A	N3-C4-N9	-7.80	121.16	127.40
2	A16S	1348	G	N3-C4-C5	7.80	132.50	128.60
1	A23S	2233	G	N9-C4-C5	-7.79	102.28	105.40
2	A16S	731	G	O4'-C1'-N9	7.79	114.43	108.20
1	A23S	3017	C	C6-N1-C1'	-7.78	111.46	120.80
2	A16S	1047	U	C2-N1-C1'	7.78	127.04	117.70
2	A16S	1493	U	N3-C2-O2	-7.77	116.76	122.20
2	A16S	370	G	N1-C2-N3	7.75	128.55	123.90
1	A23S	279	G	C8-N9-C1'	7.75	137.07	127.00
1	A23S	1626	C	C6-N1-C1'	7.74	130.09	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	1089	U	N1-C2-O2	7.74	128.22	122.80
2	A16S	78	G	N1-C2-N2	7.73	123.16	116.20
1	A23S	2290	C	C5-C6-N1	7.72	124.86	121.00
3	AATN	75	C	C4-C5-C6	-7.71	113.54	117.40
1	A23S	2430	G	C5-C6-O6	-7.71	123.97	128.60
3	AETN	7	A	N1-C6-N6	-7.69	113.99	118.60
2	A16S	231	C	C1'-C2'-O2'	-7.67	87.60	110.60
1	A23S	2235	U	C5-C4-O4	7.66	130.50	125.90
1	A23S	2923	G	C4-C5-N7	7.65	113.86	110.80
2	A16S	1145	G	C5-N7-C8	-7.65	100.48	104.30
2	A16S	1076	C	C2-N1-C1'	-7.63	110.41	118.80
1	A23S	2265	C	C6-N1-C1'	-7.62	111.65	120.80
2	A16S	1126	G	C5-N7-C8	-7.61	100.49	104.30
2	A16S	1213	C	C6-N1-C2	-7.61	117.25	120.30
2	A16S	151	C	C2-N1-C1'	-7.60	110.44	118.80
1	A23S	2313	A	N1-C2-N3	7.60	133.10	129.30
2	A16S	379	G	C2-N3-C4	-7.60	108.10	111.90
2	A16S	1289	C	N3-C2-O2	-7.59	116.59	121.90
2	A16S	143	C	N1-C2-O2	7.58	123.45	118.90
2	A16S	151	C	N1-C2-O2	-7.56	114.37	118.90
2	A16S	484	U	C2-N1-C1'	7.53	126.73	117.70
2	A16S	354	C	C6-N1-C1'	7.53	129.83	120.80
2	A16S	1129	C	C2-N1-C1'	7.53	127.08	118.80
2	A16S	33	A	C2-N3-C4	-7.52	106.84	110.60
2	A16S	25	C	C5-C6-N1	7.50	124.75	121.00
1	A23S	1793	C	C5-C6-N1	7.49	124.75	121.00
1	A23S	2281	C	C6-N1-C2	-7.49	117.31	120.30
1	A23S	2583	G	N9-C4-C5	-7.48	102.41	105.40
1	A23S	1090	C	C4-C5-C6	7.48	121.14	117.40
2	A16S	517	G	N9-C4-C5	-7.46	102.42	105.40
1	A23S	1616	C	N1-C2-O2	7.46	123.38	118.90
2	A16S	517	G	C4-C5-N7	7.46	113.78	110.80
1	A23S	2730	C	C6-N1-C2	-7.46	117.32	120.30
1	A23S	2730	C	N1-C2-O2	7.45	123.37	118.90
1	A23S	2148	C	C2-N1-C1'	7.44	126.99	118.80
2	A16S	1119	A	N1-C6-N6	-7.44	114.13	118.60
1	A23S	469	G	C5-N7-C8	-7.44	100.58	104.30
2	A16S	151	C	C6-N1-C1'	7.43	129.72	120.80
2	A16S	1179	C	C6-N1-C1'	-7.43	111.88	120.80
1	A23S	2640	C	N1-C2-O2	7.42	123.35	118.90
2	A16S	360	G	N3-C4-N9	-7.42	121.55	126.00
2	A16S	1180	C	C5-C6-N1	7.42	124.71	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	484	U	N3-C4-O4	7.41	124.59	119.40
2	A16S	379	G	C8-N9-C1'	7.40	136.62	127.00
1	A23S	2284	G	N1-C6-O6	7.39	124.34	119.90
1	A23S	1434	C	C2-N1-C1'	7.39	126.93	118.80
2	A16S	149	A	O4'-C1'-N9	7.39	114.11	108.20
2	A16S	220	C	N3-C4-C5	7.37	124.85	121.90
1	A23S	833	G	C4-C5-N7	7.37	113.75	110.80
2	A16S	1214	A	O4'-C1'-N9	7.37	114.09	108.20
1	A23S	1682	G	C6-N1-C2	-7.36	120.69	125.10
1	A23S	1949	C	C6-N1-C1'	7.36	129.63	120.80
3	AETN	7	A	C6-C5-N7	7.35	137.44	132.30
2	A16S	1082	C	C5-C6-N1	7.34	124.67	121.00
2	A16S	616	G	N7-C8-N9	7.33	116.77	113.10
2	A16S	936	G	C4-N9-C1'	-7.33	116.97	126.50
3	AATN	7	A	N3-C4-N9	-7.29	121.56	127.40
2	A16S	370	G	C5-C6-O6	7.29	132.97	128.60
1	A23S	2142	A	C4-C5-N7	7.27	114.33	110.70
2	A16S	720	C	C2-N1-C1'	7.27	126.80	118.80
1	A23S	2147	C	N1-C2-O2	7.27	123.26	118.90
2	A16S	1246	G	C6-C5-N7	-7.26	126.04	130.40
1	A23S	2480	C	C2-N1-C1'	7.26	126.79	118.80
1	A23S	2640	C	C2-N1-C1'	7.26	126.78	118.80
1	A23S	1690	G	N3-C2-N2	-7.25	114.83	119.90
1	A23S	1784	G	C8-N9-C1'	7.25	136.42	127.00
1	A23S	2677	G	O4'-C1'-N9	7.24	114.00	108.20
2	A16S	1319	A	N1-C2-N3	-7.24	125.68	129.30
1	A23S	1682	G	N1-C2-N2	-7.24	109.69	116.20
3	APTN	56	C	C5-C6-N1	7.23	124.62	121.00
1	A23S	1904	C	N3-C2-O2	-7.23	116.84	121.90
1	A23S	469	G	N3-C2-N2	7.22	124.95	119.90
2	A16S	113	G	O4'-C1'-N9	7.21	113.97	108.20
2	A16S	621	G	N3-C4-N9	7.21	130.33	126.00
2	A16S	731	G	C4-N9-C1'	-7.21	117.13	126.50
2	A16S	1327	U	O4'-C1'-N1	7.20	113.96	108.20
1	A23S	576	G	N3-C4-N9	-7.19	121.69	126.00
2	A16S	113	G	C4-N9-C1'	-7.19	117.15	126.50
2	A16S	1024	C	C5-C6-N1	7.19	124.59	121.00
2	A16S	1167	G	N3-C4-N9	7.18	130.31	126.00
1	A23S	1685	C	C5-C6-N1	7.17	124.59	121.00
2	A16S	616	G	N1-C6-O6	7.17	124.20	119.90
2	A16S	517	G	C5-C6-O6	-7.16	124.30	128.60
2	A16S	1082	C	C6-N1-C2	-7.16	117.44	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	1362	C	N1-C2-O2	-7.15	114.61	118.90
1	A23S	246	C	N3-C4-C5	7.14	124.76	121.90
3	APTN	56	C	N3-C4-C5	-7.13	119.05	121.90
1	A23S	258	C	C5-C6-N1	7.12	124.56	121.00
1	A23S	2235	U	C2-N3-C4	7.12	131.27	127.00
2	A16S	25	C	C6-N1-C1'	7.11	129.33	120.80
1	A23S	1684	C	C2-N1-C1'	7.09	126.60	118.80
3	APTN	7	A	N9-C4-C5	7.09	108.64	105.80
2	A16S	1187	C	C6-N1-C1'	-7.08	112.31	120.80
3	AATN	8	U	C5-C6-N1	7.07	126.23	122.70
1	A23S	338	C	N3-C2-O2	-7.06	116.96	121.90
1	A23S	2313	A	C6-N1-C2	-7.05	114.37	118.60
2	A16S	1213	C	C5-C6-N1	7.05	124.53	121.00
2	A16S	1246	G	C4-C5-N7	7.04	113.61	110.80
1	A23S	246	C	C4-C5-C6	-7.03	113.89	117.40
2	A16S	487	G	N9-C4-C5	-7.03	102.59	105.40
2	A16S	717	C	C5-C6-N1	7.03	124.51	121.00
2	A16S	567	C	C2-N1-C1'	7.01	126.51	118.80
2	A16S	1083	C	C5-C4-N4	7.00	125.10	120.20
1	A23S	257	C	N1-C2-O2	6.99	123.09	118.90
1	A23S	125	G	N3-C4-N9	-6.98	121.81	126.00
2	A16S	487	G	C4-C5-N7	6.98	113.59	110.80
2	A16S	530	C	N1-C2-O2	6.98	123.09	118.90
1	A23S	2142	A	C2-N3-C4	-6.98	107.11	110.60
2	A16S	1023	C	N1-C2-O2	6.97	123.08	118.90
1	A23S	2233	G	C4-C5-N7	6.96	113.58	110.80
2	A16S	730	C	N1-C2-O2	6.96	123.08	118.90
2	A16S	1126	G	N7-C8-N9	6.96	116.58	113.10
2	A16S	1024	C	N1-C2-N3	6.95	124.06	119.20
3	APTN	7	A	C6-C5-N7	6.94	137.16	132.30
1	A23S	339	C	N1-C2-N3	6.94	124.06	119.20
2	A16S	57	C	N1-C2-N3	6.93	124.05	119.20
1	A23S	1699	G	C5-N7-C8	-6.93	100.84	104.30
2	A16S	484	U	N3-C4-C5	-6.93	110.44	114.60
2	A16S	1368	C	N1-C2-O2	-6.91	114.75	118.90
2	A16S	517	G	N3-C4-N9	6.91	130.15	126.00
1	A23S	1850	U	N3-C4-C5	-6.91	110.45	114.60
2	A16S	1076	C	N1-C2-O2	-6.91	114.75	118.90
1	A23S	2721	G	C4-N9-C1'	-6.91	117.52	126.50
3	APTN	7	A	N3-C4-C5	6.91	131.63	126.80
2	A16S	1168	G	C8-N9-C1'	6.91	135.98	127.00
3	APTN	7	A	C4-N9-C1'	-6.89	113.90	126.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	568	C	C6-N1-C1'	6.89	129.06	120.80
2	A16S	603	G	C8-N9-C1'	6.89	135.95	127.00
2	A16S	920	C	N3-C4-C5	-6.89	119.14	121.90
1	A23S	1684	C	N1-C2-O2	6.88	123.03	118.90
2	A16S	490	G	C5-C6-O6	-6.88	124.47	128.60
1	A23S	671	A	N1-C2-N3	6.88	132.74	129.30
3	APTN	74	C	N1-C2-O2	-6.87	114.78	118.90
1	A23S	385	G	C4-N9-C1'	-6.87	117.57	126.50
1	A23S	1792	C	N3-C2-O2	-6.87	117.09	121.90
1	A23S	2233	G	C8-N9-C1'	-6.87	118.07	127.00
2	A16S	363	G	C5-C6-O6	6.87	132.72	128.60
2	A16S	363	G	C8-N9-C1'	6.85	135.91	127.00
1	A23S	2284	G	N3-C4-C5	6.85	132.03	128.60
2	A16S	363	G	N3-C4-C5	6.85	132.02	128.60
1	A23S	2284	G	C8-N9-C4	6.84	109.14	106.40
2	A16S	1246	G	N9-C4-C5	-6.83	102.67	105.40
2	A16S	731	G	N3-C2-N2	6.82	124.68	119.90
2	A16S	1119	A	C5-C6-N6	6.82	129.16	123.70
2	A16S	1133	C	C6-N1-C1'	6.80	128.96	120.80
1	A23S	2147	C	C2-N1-C1'	6.80	126.28	118.80
1	A23S	2381	U	C5-C4-O4	-6.80	121.82	125.90
2	A16S	920	C	N3-C4-N4	6.80	122.76	118.00
1	A23S	656	C	N1-C2-O2	-6.79	114.83	118.90
1	A23S	2641	C	C5-C6-N1	6.79	124.39	121.00
1	A23S	1948	C	N3-C2-O2	-6.78	117.16	121.90
1	A23S	1204	C	C6-N1-C1'	-6.75	112.70	120.80
2	A16S	214	U	C2-N1-C1'	6.75	125.80	117.70
2	A16S	1082	C	C6-N1-C1'	-6.74	112.71	120.80
2	A16S	363	G	C4-N9-C1'	-6.73	117.75	126.50
1	A23S	1435	C	C6-N1-C1'	6.73	128.88	120.80
3	AETN	70	G	C8-N9-C1'	-6.73	118.25	127.00
2	A16S	370	G	C5-N7-C8	-6.72	100.94	104.30
1	A23S	2272	U	N3-C2-O2	-6.71	117.50	122.20
2	A16S	1452	G	N3-C4-C5	6.71	131.96	128.60
1	A23S	1625	C	N1-C1'-C2'	6.71	122.72	114.00
2	A16S	1192	G	N3-C2-N2	-6.70	115.21	119.90
2	A16S	920	C	C6-N1-C2	-6.70	117.62	120.30
1	A23S	258	C	C6-N1-C1'	6.70	128.84	120.80
2	A16S	1126	G	C2-N3-C4	-6.70	108.55	111.90
2	A16S	61	G	C5-C6-N1	-6.69	108.15	111.50
2	A16S	616	G	N1-C2-N3	6.68	127.91	123.90
2	A16S	567	C	N1-C2-O2	6.68	122.91	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AETN	70	G	C5-C6-O6	-6.67	124.59	128.60
1	A23S	1434	C	C6-N1-C1'	-6.67	112.79	120.80
1	A23S	2281	C	C6-N1-C1'	6.66	128.79	120.80
1	A23S	1682	G	N9-C4-C5	6.65	108.06	105.40
2	A16S	1083	C	C6-N1-C1'	6.65	128.78	120.80
2	A16S	1465	G	N3-C4-N9	6.64	129.98	126.00
2	A16S	1180	C	C6-N1-C1'	6.64	128.76	120.80
1	A23S	2731	G	C4-N9-C1'	-6.63	117.88	126.50
2	A16S	1091	G	N9-C4-C5	-6.63	102.75	105.40
2	A16S	1115	C	C2-N1-C1'	6.63	126.09	118.80
1	A23S	1948	C	C6-N1-C1'	-6.62	112.85	120.80
2	A16S	496	G	C8-N9-C1'	-6.62	118.39	127.00
2	A16S	627	G	N3-C4-N9	-6.62	122.03	126.00
1	A23S	1685	C	C6-N1-C1'	6.62	128.74	120.80
1	A23S	2304	C	N3-C4-N4	6.62	122.63	118.00
1	A23S	1792	C	C6-N1-C1'	-6.62	112.86	120.80
1	A23S	2923	G	C2-N3-C4	-6.61	108.59	111.90
3	AATN	7	A	N3-C4-C5	6.61	131.43	126.80
1	A23S	2142	A	N3-C4-C5	6.60	131.42	126.80
2	A16S	78	G	O4'-C1'-N9	6.59	113.47	108.20
1	A23S	2677	G	N9-C4-C5	-6.59	102.77	105.40
2	A16S	1213	C	C5-C4-N4	-6.58	115.59	120.20
2	A16S	231	C	O4'-C4'-C3'	-6.58	97.42	104.00
2	A16S	1168	G	C5-N7-C8	-6.58	101.01	104.30
2	A16S	24	C	N1-C2-O2	6.58	122.85	118.90
2	A16S	622	G	C8-N9-C1'	6.58	135.56	127.00
2	A16S	282	A	N7-C8-N9	6.57	117.09	113.80
2	A16S	1246	G	N1-C6-O6	6.57	123.84	119.90
3	APTN	49	C	N1-C2-O2	6.57	122.84	118.90
1	A23S	2641	C	N1-C2-N3	6.57	123.80	119.20
3	AETN	7	A	C8-N9-C1'	6.56	139.51	127.70
1	A23S	1685	C	N1-C2-N3	6.56	123.79	119.20
1	A23S	1949	C	N1-C2-N3	6.56	123.79	119.20
3	AATN	49	C	C5-C4-N4	-6.56	115.61	120.20
2	A16S	1091	G	C2-N3-C4	-6.56	108.62	111.90
1	A23S	2480	C	N1-C2-O2	6.55	122.83	118.90
3	APTN	7	A	C8-N9-C1'	6.55	139.49	127.70
3	APTN	56	C	C6-N1-C2	-6.55	117.68	120.30
2	A16S	1213	C	C6-N1-C1'	-6.54	112.94	120.80
1	A23S	279	G	N9-C4-C5	6.53	108.01	105.40
1	A23S	2058	G	N9-C4-C5	-6.50	102.80	105.40
1	A23S	2233	G	C4-N9-C1'	6.50	134.94	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	353	C	C2-N1-C1'	6.49	125.94	118.80
2	A16S	147	G	N3-C4-N9	-6.48	122.11	126.00
1	A23S	1850	U	C5-C6-N1	-6.48	119.46	122.70
2	A16S	530	C	C2-N1-C1'	6.48	125.92	118.80
1	A23S	339	C	C6-N1-C1'	6.47	128.57	120.80
1	A23S	1179	C	N3-C4-N4	6.47	122.53	118.00
1	A23S	2312	G	C6-C5-N7	-6.45	126.53	130.40
1	A23S	2373	G	N3-C4-N9	-6.44	122.13	126.00
2	A16S	113	G	C8-N9-C1'	6.44	135.37	127.00
1	A23S	1103	G	N3-C4-C5	6.44	131.82	128.60
3	APTN	49	C	C6-N1-C1'	-6.43	113.08	120.80
2	A16S	1167	G	C4-N9-C1'	6.42	134.85	126.50
1	A23S	2058	G	C4-C5-N7	6.42	113.37	110.80
1	A23S	2015	G	N3-C4-C5	-6.41	125.39	128.60
1	A23S	2256	G	C4-C5-N7	6.41	113.36	110.80
1	A23S	2640	C	C6-N1-C1'	-6.40	113.11	120.80
2	A16S	1082	C	O4'-C1'-N1	6.39	113.31	108.20
2	A16S	33	A	C5-C6-N6	6.38	128.81	123.70
1	A23S	2233	G	N1-C6-O6	6.38	123.73	119.90
2	A16S	1229	C	C5-C6-N1	6.38	124.19	121.00
1	A23S	2263	A	N1-C6-N6	-6.37	114.78	118.60
2	A16S	57	C	N3-C2-O2	-6.37	117.44	121.90
2	A16S	616	G	C8-N9-C4	-6.36	103.85	106.40
2	A16S	366	C	C6-N1-C2	-6.35	117.76	120.30
2	A16S	1167	G	C8-N9-C1'	-6.35	118.74	127.00
2	A16S	1082	C	N3-C2-O2	-6.35	117.46	121.90
2	A16S	531	U	C2-N1-C1'	6.34	125.31	117.70
2	A16S	543	G	C4-C5-N7	6.34	113.34	110.80
1	A23S	257	C	C2-N1-C1'	6.34	125.77	118.80
1	A23S	2731	G	N3-C2-N2	6.33	124.33	119.90
2	A16S	112	U	C2-N1-C1'	6.33	125.30	117.70
2	A16S	530	C	N3-C2-O2	-6.33	117.47	121.90
2	A16S	568	C	C5-C6-N1	6.33	124.17	121.00
2	A16S	603	G	C5-N7-C8	-6.33	101.14	104.30
1	A23S	1090	C	C6-N1-C2	-6.32	117.77	120.30
1	A23S	2480	C	C6-N1-C2	-6.32	117.77	120.30
1	A23S	2252	G	N9-C4-C5	-6.32	102.87	105.40
2	A16S	57	C	C5-C4-N4	6.32	124.62	120.20
2	A16S	1091	G	C5-N7-C8	-6.32	101.14	104.30
1	A23S	1949	C	C5-C6-N1	6.31	124.16	121.00
1	A23S	1089	U	C2-N1-C1'	6.31	125.27	117.70
1	A23S	2284	G	N3-C2-N2	6.31	124.32	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	2923	G	C5-N7-C8	-6.31	101.15	104.30
1	A23S	3017	C	N3-C2-O2	-6.31	117.48	121.90
3	AETN	7	A	C4-C5-N7	-6.30	107.55	110.70
1	A23S	2234	U	N1-C2-O2	-6.30	118.39	122.80
2	A16S	740	G	N3-C4-N9	-6.30	122.22	126.00
2	A16S	14	G	C8-N9-C1'	6.30	135.19	127.00
1	A23S	2233	G	C5-C6-O6	-6.29	124.83	128.60
1	A23S	2281	C	N1-C2-O2	-6.28	115.14	118.90
3	APTN	7	A	C5-C6-N6	6.27	128.72	123.70
3	AETN	70	G	N3-C4-N9	6.27	129.76	126.00
1	A23S	2305	A	C4-N9-C1'	-6.27	115.02	126.30
2	A16S	154	G	C8-N9-C1'	6.26	135.14	127.00
2	A16S	622	G	C5-N7-C8	-6.26	101.17	104.30
2	A16S	256	U	N3-C2-O2	6.26	126.58	122.20
1	A23S	257	C	N3-C2-O2	-6.25	117.53	121.90
2	A16S	936	G	C8-N9-C1'	6.25	135.12	127.00
2	A16S	1187	C	N1-C2-O2	6.25	122.65	118.90
2	A16S	77	G	N7-C8-N9	6.24	116.22	113.10
2	A16S	568	C	N1-C2-N3	6.24	123.57	119.20
2	A16S	214	U	N3-C2-O2	-6.24	117.83	122.20
1	A23S	2290	C	C6-N1-C2	-6.24	117.81	120.30
1	A23S	1126	G	N3-C4-N9	-6.23	122.26	126.00
1	A23S	1784	G	C4-N9-C1'	-6.23	118.41	126.50
2	A16S	720	C	C6-N1-C1'	-6.22	113.33	120.80
2	A16S	1362	C	C5-C4-N4	6.22	124.56	120.20
1	A23S	866	G	N1-C6-O6	-6.22	116.17	119.90
2	A16S	366	C	N1-C2-O2	6.22	122.63	118.90
1	A23S	885	C	N1-C2-O2	6.22	122.63	118.90
1	A23S	2641	C	C6-N1-C1'	6.21	128.25	120.80
2	A16S	1012	G	C8-N9-C1'	6.21	135.07	127.00
2	A16S	1465	G	N3-C4-C5	-6.21	125.50	128.60
2	A16S	112	U	C5-C4-O4	-6.20	122.18	125.90
2	A16S	143	C	C6-N1-C1'	-6.20	113.36	120.80
1	A23S	1626	C	C5-C4-N4	6.20	124.54	120.20
1	A23S	2312	G	N1-C6-O6	6.20	123.62	119.90
1	A23S	2692	G	C8-N9-C1'	6.20	135.06	127.00
1	A23S	385	G	N9-C4-C5	6.19	107.88	105.40
2	A16S	1132	C	N3-C2-O2	-6.19	117.57	121.90
2	A16S	354	C	N1-C2-N3	6.19	123.53	119.20
1	A23S	2058	G	O4'-C1'-N9	6.19	113.15	108.20
2	A16S	920	C	N1-C2-O2	6.19	122.61	118.90
1	A23S	129	C	N1-C2-O2	-6.18	115.19	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	1690	G	N9-C4-C5	6.18	107.87	105.40
3	AETN	7	A	C4-N9-C1'	-6.18	115.17	126.30
1	A23S	2256	G	C5-C6-O6	-6.17	124.90	128.60
2	A16S	1213	C	N3-C4-C5	-6.17	119.43	121.90
1	A23S	279	G	C4-N9-C1'	-6.16	118.49	126.50
1	A23S	258	C	N1-C2-N3	6.16	123.51	119.20
2	A16S	328	U	C2-N1-C1'	6.16	125.09	117.70
1	A23S	1793	C	C6-N1-C1'	6.14	128.17	120.80
2	A16S	25	C	N1-C2-N3	6.14	123.50	119.20
2	A16S	496	G	C4-N9-C1'	6.14	134.48	126.50
2	A16S	1179	C	N3-C2-O2	-6.14	117.60	121.90
2	A16S	1214	A	C8-N9-C4	6.14	108.25	105.80
2	A16S	1341	U	N1-C2-O2	6.14	127.09	122.80
2	A16S	616	G	C5-N7-C8	-6.13	101.24	104.30
1	A23S	2583	G	N1-C6-O6	6.12	123.58	119.90
3	AETN	70	G	C4-N9-C1'	6.12	134.45	126.50
2	A16S	543	G	N9-C4-C5	-6.12	102.95	105.40
2	A16S	24	C	C2-N1-C1'	6.11	125.52	118.80
1	A23S	1625	C	N3-C4-N4	-6.11	113.72	118.00
1	A23S	833	G	N9-C4-C5	-6.09	102.96	105.40
1	A23S	2291	G	N1-C2-N2	-6.09	110.72	116.20
1	A23S	309	U	C5-C6-N1	6.08	125.74	122.70
2	A16S	1111	A	N1-C6-N6	-6.08	114.95	118.60
2	A16S	1091	G	C8-N9-C4	6.07	108.83	106.40
1	A23S	1618	G	O4'-C1'-N9	6.07	113.05	108.20
1	A23S	1793	C	N1-C2-N3	6.06	123.44	119.20
2	A16S	282	A	C8-N9-C4	-6.06	103.38	105.80
3	APTN	56	C	C2-N1-C1'	6.06	125.47	118.80
1	A23S	1904	C	C6-N1-C1'	-6.06	113.53	120.80
1	A23S	1957	G	N1-C2-N3	6.05	127.53	123.90
1	A23S	1673	G	C8-N9-C4	6.03	108.81	106.40
2	A16S	922	G	C6-C5-N7	-6.03	126.78	130.40
2	A16S	319	G	C4-N9-C1'	6.01	134.32	126.50
2	A16S	256	U	C5-C4-O4	-6.01	122.30	125.90
1	A23S	2148	C	C6-N1-C1'	-6.00	113.60	120.80
1	A23S	2015	G	O4'-C1'-N9	5.99	112.99	108.20
1	A23S	2265	C	C5-C6-N1	5.99	124.00	121.00
2	A16S	14	G	C5-N7-C8	-5.99	101.31	104.30
1	A23S	1126	G	N3-C2-N2	-5.99	115.71	119.90
1	A23S	1582	C	C2-N1-C1'	5.99	125.38	118.80
1	A23S	2305	A	C8-N9-C1'	5.98	138.46	127.70
2	A16S	906	A	N1-C2-N3	5.97	132.29	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	620	G	N3-C4-N9	5.96	129.58	126.00
2	A16S	1370	G	C4-N9-C1'	-5.95	118.76	126.50
2	A16S	1370	G	C8-N9-C1'	5.95	134.74	127.00
2	A16S	154	G	C4-N9-C1'	-5.95	118.77	126.50
2	A16S	360	G	C5-N7-C8	-5.95	101.33	104.30
1	A23S	1633	U	C6-N1-C1'	-5.94	112.88	121.20
1	A23S	2480	C	N3-C2-O2	-5.94	117.74	121.90
1	A23S	2313	A	O4'-C1'-N9	5.94	112.95	108.20
1	A23S	2252	G	N1-C6-O6	5.94	123.46	119.90
2	A16S	353	C	C6-N1-C1'	-5.93	113.69	120.80
3	AETN	7	A	C2-N3-C4	-5.92	107.64	110.60
1	A23S	1573	C	C2-N1-C1'	-5.92	112.28	118.80
2	A16S	143	C	N3-C2-O2	-5.92	117.76	121.90
2	A16S	1263	G	C4-C5-N7	5.92	113.17	110.80
2	A16S	490	G	N9-C4-C5	-5.91	103.03	105.40
2	A16S	603	G	N1-C2-N3	5.91	127.45	123.90
29	L34E	19	PRO	CA-C-N	5.91	130.20	117.20
2	A16S	622	G	C4-N9-C1'	-5.91	118.82	126.50
1	A23S	2252	G	C4-C5-N7	5.90	113.16	110.80
1	A23S	1103	G	C4-N9-C1'	-5.90	118.83	126.50
1	A23S	2143	A	N1-C6-N6	-5.89	115.06	118.60
1	A23S	2311	G	N3-C4-N9	-5.89	122.47	126.00
2	A16S	1082	C	N1-C2-O2	5.89	122.43	118.90
2	A16S	1047	U	N1-C2-O2	5.89	126.92	122.80
2	A16S	267	G	C4-C5-N7	5.87	113.15	110.80
2	A16S	1137	G	N3-C4-C5	-5.87	125.66	128.60
2	A16S	1493	U	C6-N1-C1'	-5.87	112.98	121.20
1	A23S	2775	C	C2-N1-C1'	5.86	125.25	118.80
2	A16S	893	G	C4-C5-N7	5.86	113.14	110.80
1	A23S	385	G	C5-N7-C8	-5.86	101.37	104.30
1	A23S	1424	G	N1-C2-N3	5.85	127.41	123.90
1	A23S	2256	G	N1-C6-O6	5.85	123.41	119.90
2	A16S	1370	G	C6-C5-N7	5.85	133.91	130.40
2	A16S	473	C	N1-C2-O2	5.84	122.41	118.90
2	A16S	1452	G	C8-N9-C4	5.84	108.74	106.40
2	A16S	496	G	N3-C4-N9	5.84	129.51	126.00
1	A23S	2776	C	N1-C2-O2	5.84	122.40	118.90
2	A16S	144	C	N1-C2-N3	5.84	123.29	119.20
2	A16S	1083	C	C4-C5-C6	5.84	120.32	117.40
1	A23S	1103	G	N1-C2-N2	5.83	121.45	116.20
2	A16S	120	C	C6-N1-C2	-5.83	117.97	120.30
1	A23S	2730	C	N3-C4-C5	-5.83	119.57	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	2553	C	N1-C2-O2	5.83	122.40	118.90
2	A16S	1180	C	N1-C2-N3	5.83	123.28	119.20
2	A16S	256	U	N1-C2-O2	-5.83	118.72	122.80
2	A16S	369	G	C5-C6-N1	5.82	114.41	111.50
2	A16S	622	G	N1-C2-N3	5.82	127.39	123.90
2	A16S	1263	G	N1-C6-O6	5.81	123.39	119.90
2	A16S	731	G	C8-N9-C4	5.81	108.72	106.40
2	A16S	33	A	N7-C8-N9	5.80	116.70	113.80
2	A16S	730	C	C2-N1-C1'	5.80	125.18	118.80
2	A16S	1145	G	C8-N9-C1'	5.80	134.54	127.00
1	A23S	1784	G	C5-N7-C8	-5.80	101.40	104.30
2	A16S	1126	G	C4-C5-N7	5.80	113.12	110.80
1	A23S	2266	C	C5-C6-N1	5.80	123.90	121.00
1	A23S	3017	C	C5-C6-N1	5.80	123.90	121.00
1	A23S	1322	G	C5-C6-N1	5.79	114.40	111.50
2	A16S	86	A	N9-C4-C5	-5.79	103.48	105.80
3	AATN	56	C	C2-N3-C4	-5.79	117.00	119.90
2	A16S	369	G	C6-N1-C2	-5.78	121.63	125.10
2	A16S	1370	G	O4'-C1'-N9	5.78	112.83	108.20
2	A16S	242	G	C5-N7-C8	-5.78	101.41	104.30
2	A16S	1187	C	N3-C4-N4	5.78	122.05	118.00
4	A5S	32	C	N1-C2-O2	5.78	122.37	118.90
1	A23S	2640	C	N3-C2-O2	-5.78	117.86	121.90
1	A23S	1573	C	C6-N1-C2	5.77	122.61	120.30
2	A16S	906	A	C2-N3-C4	-5.76	107.72	110.60
1	A23S	2430	G	N3-C2-N2	-5.76	115.87	119.90
1	A23S	2617	U	N1-C2-N3	-5.76	111.44	114.90
1	A23S	1103	G	C8-N9-C1'	5.75	134.47	127.00
2	A16S	906	A	C5-C6-N6	5.74	128.29	123.70
1	A23S	2794	G	C8-N9-C1'	5.74	134.46	127.00
2	A16S	89	G	C4-C5-N7	-5.74	108.50	110.80
2	A16S	1110	C	C5-C6-N1	5.73	123.87	121.00
1	A23S	1394	C	N1-C2-O2	5.73	122.34	118.90
2	A16S	282	A	C5-N7-C8	-5.73	101.04	103.90
1	A23S	1409	G	C4-N9-C1'	-5.72	119.06	126.50
1	A23S	279	G	N1-C2-N3	5.72	127.33	123.90
2	A16S	953	U	N3-C4-O4	5.71	123.40	119.40
1	A23S	2013	G	N3-C2-N2	-5.71	115.90	119.90
2	A16S	531	U	N1-C2-O2	5.70	126.79	122.80
1	A23S	2015	G	N3-C4-N9	5.70	129.42	126.00
1	A23S	2433	C	N1-C2-O2	5.70	122.32	118.90
1	A23S	1457	U	C6-N1-C1'	-5.69	113.23	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	2433	C	N3-C4-C5	5.68	124.17	121.90
2	A16S	1012	G	C5-N7-C8	-5.68	101.46	104.30
2	A16S	1214	A	C4-N9-C1'	-5.68	116.08	126.30
3	AATN	74	C	C2-N1-C1'	5.68	125.05	118.80
2	A16S	1167	G	C6-C5-N7	-5.67	127.00	130.40
29	L34E	18	LEU	C-N-CD	-5.67	108.12	120.60
1	A23S	1850	U	O4'-C1'-N1	-5.67	103.67	108.20
3	AATN	74	C	N1-C2-O2	5.66	122.30	118.90
1	A23S	1435	C	C5-C6-N1	5.66	123.83	121.00
1	A23S	1423	G	N3-C4-N9	5.65	129.39	126.00
1	A23S	2147	C	N3-C2-O2	-5.65	117.95	121.90
1	A23S	2234	U	C2-N3-C4	-5.65	123.61	127.00
1	A23S	1957	G	C5-N7-C8	-5.64	101.48	104.30
2	A16S	1370	G	N9-C4-C5	5.64	107.66	105.40
3	AATN	49	C	C2-N1-C1'	5.64	125.00	118.80
2	A16S	120	C	C2-N1-C1'	5.63	124.99	118.80
2	A16S	487	G	C5-C6-O6	-5.63	125.22	128.60
2	A16S	517	G	C6-C5-N7	-5.63	127.02	130.40
2	A16S	1214	A	N7-C8-N9	-5.62	110.99	113.80
2	A16S	936	G	N9-C1'-C2'	-5.62	105.82	112.00
1	A23S	656	C	N1-C2-N3	5.61	123.13	119.20
2	A16S	490	G	C4-C5-N7	5.61	113.04	110.80
2	A16S	1289	C	C6-N1-C2	-5.61	118.06	120.30
2	A16S	1465	G	C4-N9-C1'	5.61	133.79	126.50
2	A16S	922	G	N9-C4-C5	-5.61	103.16	105.40
1	A23S	2397	C	N1-C2-O2	-5.60	115.54	118.90
1	A23S	851	C	N1-C2-N3	5.60	123.12	119.20
1	A23S	2730	C	C6-N1-C1'	-5.60	114.08	120.80
2	A16S	1076	C	C6-N1-C1'	5.60	127.52	120.80
2	A16S	952	U	O4'-C1'-N1	5.59	112.67	108.20
8	AL4P	88	LEU	C-N-CA	-5.59	107.72	121.70
2	A16S	1462	C	C2-N1-C1'	5.59	124.94	118.80
1	A23S	661	G	N3-C4-C5	5.58	131.39	128.60
1	A23S	1616	C	N3-C2-O2	-5.58	117.99	121.90
2	A16S	1290	C	C2-N1-C1'	5.58	124.94	118.80
2	A16S	920	C	C4-C5-C6	5.58	120.19	117.40
2	A16S	1115	C	C5-C6-N1	5.58	123.79	121.00
1	A23S	885	C	C2-N1-C1'	5.57	124.93	118.80
1	A23S	1957	G	C8-N9-C1'	5.57	134.25	127.00
2	A16S	168	U	C5-C6-N1	5.57	125.49	122.70
2	A16S	1263	G	N9-C4-C5	-5.57	103.17	105.40
1	A23S	2730	C	C5-C6-N1	5.56	123.78	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	14	G	N1-C2-N3	5.56	127.24	123.90
1	A23S	2148	C	N1-C2-O2	5.56	122.24	118.90
2	A16S	1110	C	C2-N1-C1'	5.56	124.91	118.80
1	A23S	559	C	C2-N1-C1'	5.55	124.91	118.80
1	A23S	1684	C	C6-N1-C1'	-5.55	114.14	120.80
2	A16S	717	C	N1-C2-N3	5.55	123.09	119.20
2	A16S	1047	U	C6-N1-C1'	-5.55	113.43	121.20
2	A16S	1341	U	N1-C2-N3	5.55	118.23	114.90
1	A23S	866	G	O4'-C1'-N9	5.54	112.64	108.20
2	A16S	892	G	N3-C4-C5	-5.54	125.83	128.60
2	A16S	1129	C	C6-N1-C1'	-5.54	114.16	120.80
1	A23S	1682	G	N3-C4-C5	5.52	131.36	128.60
2	A16S	370	G	C5-C6-N1	-5.52	108.74	111.50
2	A16S	231	C	C5'-C4'-O4'	5.51	115.72	109.10
1	A23S	2014	G	C4-N9-C1'	5.51	133.66	126.50
2	A16S	80	U	N1-C2-O2	5.51	126.66	122.80
2	A16S	716	C	N3-C2-O2	-5.51	118.05	121.90
2	A16S	1115	C	C6-N1-C1'	-5.51	114.19	120.80
1	A23S	2304	C	C2-N1-C1'	5.50	124.86	118.80
1	A23S	2185	G	N3-C4-N9	5.50	129.30	126.00
2	A16S	353	C	N3-C2-O2	-5.50	118.05	121.90
2	A16S	1032	G	N3-C4-N9	-5.50	122.70	126.00
2	A16S	1070	G	N3-C4-N9	-5.50	122.70	126.00
1	A23S	2760	U	C2-N1-C1'	5.50	124.30	117.70
2	A16S	120	C	N3-C2-O2	-5.50	118.05	121.90
2	A16S	366	C	C5-C6-N1	5.50	123.75	121.00
1	A23S	2252	G	C5-C6-O6	-5.49	125.31	128.60
1	A23S	2721	G	N3-C4-C5	5.49	131.34	128.60
2	A16S	1465	G	C8-N9-C1'	-5.49	119.86	127.00
2	A16S	616	G	C4-C5-C6	5.48	122.09	118.80
29	L34E	19	PRO	C-N-CA	5.48	135.41	121.70
1	A23S	651	C	C2-N1-C1'	5.47	124.82	118.80
2	A16S	24	C	N3-C2-O2	-5.47	118.07	121.90
29	L34E	19	PRO	N-CA-C	5.46	126.30	112.10
3	AATN	19	G	N9-C4-C5	5.46	107.58	105.40
1	A23S	988	C	C2-N1-C1'	5.45	124.80	118.80
1	A23S	2340	A	N9-C4-C5	-5.45	103.62	105.80
1	A23S	1673	G	N9-C4-C5	-5.45	103.22	105.40
2	A16S	1091	G	C4-N9-C1'	-5.44	119.42	126.50
2	A16S	1168	G	C4-N9-C1'	-5.44	119.42	126.50
2	A16S	367	C	C6-N1-C2	-5.44	118.12	120.30
1	A23S	2961	U	N3-C2-O2	-5.44	118.39	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	1784	G	N1-C2-N3	5.43	127.16	123.90
1	A23S	2583	G	C6-C5-N7	-5.43	127.14	130.40
2	A16S	1032	G	N3-C4-C5	5.43	131.31	128.60
1	A23S	2692	G	N1-C2-N3	5.42	127.15	123.90
2	A16S	1263	G	C5-C6-O6	-5.42	125.35	128.60
2	A16S	282	A	N1-C2-N3	5.42	132.01	129.30
2	A16S	955	C	C6-N1-C2	-5.41	118.14	120.30
1	A23S	833	G	C8-N9-C4	5.41	108.56	106.40
1	A23S	1103	G	C6-C5-N7	5.41	133.64	130.40
2	A16S	731	G	C8-N9-C1'	5.40	134.03	127.00
3	AETN	7	A	N3-C4-C5	5.40	130.58	126.80
2	A16S	363	G	C6-C5-N7	5.40	133.64	130.40
1	A23S	1928	A	C2-N3-C4	-5.40	107.90	110.60
2	A16S	77	G	O4'-C1'-N9	5.39	112.52	108.20
2	A16S	620	G	N9-C4-C5	-5.39	103.24	105.40
1	A23S	2058	G	C6-C5-N7	-5.39	127.17	130.40
1	A23S	2014	G	N3-C4-N9	5.39	129.23	126.00
2	A16S	567	C	C6-N1-C1'	-5.39	114.33	120.80
1	A23S	2794	G	N1-C2-N3	5.38	127.13	123.90
1	A23S	2014	G	C8-N9-C1'	-5.38	120.00	127.00
1	A23S	1424	G	C8-N9-C1'	5.38	133.99	127.00
1	A23S	1699	G	N1-C2-N3	5.37	127.12	123.90
2	A16S	1348	G	N3-C4-N9	-5.37	122.78	126.00
1	A23S	338	C	C5-C6-N1	5.36	123.68	121.00
1	A23S	2712	G	C4-C5-N7	5.36	112.94	110.80
2	A16S	1059	U	C4-C5-C6	5.36	122.92	119.70
1	A23S	2058	G	C5-C6-O6	-5.36	125.39	128.60
1	A23S	2961	U	N1-C2-O2	5.35	126.55	122.80
2	A16S	1246	G	N3-C4-N9	5.35	129.21	126.00
2	A16S	906	A	N1-C6-N6	-5.35	115.39	118.60
2	A16S	1334	C	C2-N1-C1'	5.35	124.68	118.80
2	A16S	1126	G	N3-C4-C5	5.34	131.27	128.60
2	A16S	144	C	C6-N1-C1'	5.34	127.21	120.80
2	A16S	730	C	N3-C4-N4	5.34	121.74	118.00
2	A16S	901	G	C8-N9-C1'	5.34	133.94	127.00
2	A16S	1462	C	C6-N1-C2	-5.34	118.17	120.30
2	A16S	936	G	N3-C4-N9	-5.34	122.80	126.00
1	A23S	1684	C	N3-C2-O2	-5.33	118.17	121.90
1	A23S	2433	C	N1-C2-N3	-5.33	115.47	119.20
1	A23S	469	G	C4-C5-C6	5.33	122.00	118.80
1	A23S	661	G	C5-N7-C8	-5.33	101.63	104.30
3	APTN	74	C	N3-C2-O2	5.33	125.63	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	490	G	C5-C6-N1	5.33	114.17	111.50
1	A23S	164	C	C2-N1-C1'	5.32	124.65	118.80
1	A23S	1356	A	N1-C6-N6	5.32	121.79	118.60
3	AATN	19	G	N3-C4-N9	-5.32	122.81	126.00
1	A23S	2476	C	C2-N1-C1'	5.32	124.65	118.80
2	A16S	620	G	C6-C5-N7	-5.32	127.21	130.40
2	A16S	893	G	N9-C4-C5	-5.32	103.27	105.40
1	A23S	2290	C	C6-N1-C1'	-5.31	114.42	120.80
1	A23S	2281	C	N1-C2-N3	5.31	122.92	119.20
2	A16S	603	G	C8-N9-C4	-5.31	104.28	106.40
2	A16S	1145	G	C4-C5-N7	5.31	112.92	110.80
1	A23S	2433	C	C5-C6-N1	5.30	123.65	121.00
3	AATN	19	G	C8-N9-C1'	5.30	133.89	127.00
1	A23S	2058	G	N3-C4-N9	5.30	129.18	126.00
2	A16S	369	G	C4-C5-N7	5.30	112.92	110.80
2	A16S	922	G	N3-C4-N9	5.30	129.18	126.00
2	A16S	1289	C	C6-N1-C1'	-5.30	114.44	120.80
1	A23S	2838	C	C2-N1-C1'	5.30	124.63	118.80
1	A23S	2692	G	C5-N7-C8	-5.30	101.65	104.30
1	A23S	2282	A	N1-C2-N3	-5.29	126.65	129.30
1	A23S	1424	G	N7-C8-N9	5.29	115.75	113.10
2	A16S	921	U	C2-N1-C1'	-5.29	111.36	117.70
1	A23S	1673	G	C4-C5-N7	5.29	112.91	110.80
1	A23S	2721	G	C8-N9-C1'	5.29	133.87	127.00
3	APTN	7	A	N1-C6-N6	-5.29	115.43	118.60
2	A16S	1168	G	N1-C2-N3	5.28	127.07	123.90
1	A23S	671	A	C2-N3-C4	-5.28	107.96	110.60
1	A23S	2235	U	N3-C2-O2	5.28	125.90	122.20
2	A16S	61	G	N9-C4-C5	-5.28	103.29	105.40
1	A23S	1833	A	P-O3'-C3'	5.28	126.03	119.70
1	A23S	129	C	N1-C2-N3	5.27	122.89	119.20
2	A16S	1115	C	N3-C2-O2	-5.27	118.21	121.90
1	A23S	2677	G	C6-C5-N7	-5.27	127.24	130.40
3	APTN	7	A	N1-C2-N3	5.26	131.93	129.30
1	A23S	2677	G	C4-C5-N7	5.26	112.90	110.80
2	A16S	1168	G	N7-C8-N9	5.26	115.73	113.10
1	A23S	2381	U	O4'-C1'-N1	5.25	112.40	108.20
2	A16S	544	C	N1-C2-O2	5.25	122.05	118.90
1	A23S	2617	U	C2-N3-C4	5.25	130.15	127.00
1	A23S	2383	C	C2-N1-C1'	5.25	124.57	118.80
1	A23S	2430	G	N1-C6-O6	-5.25	116.75	119.90
1	A23S	602	C	C2-N1-C1'	5.25	124.57	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	985	C	C6-N1-C2	5.25	122.40	120.30
1	A23S	1090	C	C2-N1-C1'	5.24	124.56	118.80
1	A23S	246	C	O4'-C1'-N1	5.24	112.39	108.20
2	A16S	567	C	N3-C2-O2	-5.23	118.24	121.90
1	A23S	2014	G	O4'-C1'-N9	-5.23	104.02	108.20
2	A16S	381	C	C4-C5-C6	-5.23	114.78	117.40
3	AATN	66	U	N1-C2-O2	5.23	126.46	122.80
1	A23S	1458	U	C2-N1-C1'	5.23	123.97	117.70
2	A16S	1327	U	C2-N1-C1'	-5.23	111.43	117.70
2	A16S	214	U	N1-C2-O2	5.22	126.46	122.80
2	A16S	603	G	C4-N9-C1'	-5.22	119.71	126.50
1	A23S	1823	G	N3-C2-N2	-5.22	116.25	119.90
1	A23S	2252	G	C6-C5-N7	-5.22	127.27	130.40
1	A23S	2058	G	C8-N9-C1'	-5.21	120.22	127.00
2	A16S	530	C	C6-N1-C2	-5.21	118.22	120.30
2	A16S	901	G	C4-N9-C1'	-5.21	119.72	126.50
1	A23S	2143	A	C8-N9-C1'	-5.21	118.32	127.70
1	A23S	258	C	N3-C4-C5	-5.21	119.82	121.90
2	A16S	627	G	C2-N3-C4	-5.21	109.30	111.90
1	A23S	1198	G	P-O3'-C3'	5.20	125.94	119.70
1	A23S	125	G	N9-C4-C5	5.20	107.48	105.40
1	A23S	2142	A	N7-C8-N9	-5.20	111.20	113.80
1	A23S	2147	C	C6-N1-C1'	-5.19	114.57	120.80
1	A23S	2185	G	C8-N9-C1'	-5.19	120.25	127.00
1	A23S	2721	G	C8-N9-C4	5.19	108.47	106.40
2	A16S	1071	C	N1-C2-O2	-5.19	115.79	118.90
1	A23S	2305	A	C6-C5-N7	5.19	135.93	132.30
2	A16S	319	G	C8-N9-C1'	-5.18	120.26	127.00
1	A23S	833	G	C5-C6-O6	-5.18	125.49	128.60
1	A23S	1434	C	N3-C2-O2	-5.18	118.27	121.90
3	AETN	49	C	C2-N1-C1'	5.18	124.50	118.80
1	A23S	885	C	N3-C2-O2	-5.18	118.27	121.90
1	A23S	1699	G	C8-N9-C1'	5.18	133.73	127.00
1	A23S	2185	G	C6-C5-N7	-5.18	127.29	130.40
1	A23S	1457	U	O4'-C1'-N1	5.18	112.34	108.20
2	A16S	242	G	C4-N9-C1'	-5.18	119.77	126.50
2	A16S	1012	G	C4-N9-C1'	-5.17	119.78	126.50
2	A16S	89	G	N9-C4-C5	5.17	107.47	105.40
2	A16S	360	G	C4-C5-N7	5.16	112.86	110.80
1	A23S	1179	C	C5-C4-N4	-5.16	116.59	120.20
2	A16S	1246	G	C5-C6-O6	-5.16	125.50	128.60
2	A16S	61	G	C5-C6-O6	-5.16	125.51	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A16S	1110	C	N3-C4-N4	5.15	121.61	118.00
1	A23S	2271	C	C2-N1-C1'	5.15	124.47	118.80
2	A16S	490	G	N3-C4-N9	5.15	129.09	126.00
1	A23S	2303	C	C2-N1-C1'	5.15	124.46	118.80
1	A23S	1204	C	C5-C6-N1	5.14	123.57	121.00
2	A16S	1151	G	C8-N9-C4	5.14	108.46	106.40
3	AETN	72	C	C2-N1-C1'	5.13	124.44	118.80
1	A23S	1792	C	C6-N1-C2	-5.13	118.25	120.30
2	A16S	1047	U	C5-C6-N1	5.13	125.26	122.70
2	A16S	1370	G	N3-C4-N9	-5.13	122.92	126.00
2	A16S	920	C	C6-N1-C1'	-5.12	114.65	120.80
1	A23S	2692	G	C4-N9-C1'	-5.12	119.84	126.50
2	A16S	89	G	N3-C2-N2	-5.12	116.32	119.90
2	A16S	147	G	N3-C4-C5	5.12	131.16	128.60
2	A16S	144	C	N3-C4-C5	-5.11	119.86	121.90
2	A16S	603	G	N9-C4-C5	5.11	107.44	105.40
1	A23S	1582	C	C6-N1-C1'	-5.11	114.67	120.80
3	AATN	41	C	C5-C6-N1	5.10	123.55	121.00
1	A23S	1587	G	N1-C2-N2	-5.10	111.61	116.20
1	A23S	1616	C	C2-N1-C1'	5.10	124.41	118.80
3	AATN	19	G	C4-N9-C1'	-5.10	119.87	126.50
2	A16S	1145	G	C4-N9-C1'	-5.10	119.88	126.50
1	A23S	385	G	C8-N9-C4	-5.09	104.36	106.40
2	A16S	621	G	C8-N9-C1'	-5.09	120.38	127.00
1	A23S	1626	C	P-O5'-C5'	5.09	129.05	120.90
2	A16S	603	G	N3-C2-N2	-5.09	116.34	119.90
2	A16S	675	G	N9-C4-C5	-5.09	103.36	105.40
3	APTN	7	A	C4-C5-N7	-5.08	108.16	110.70
2	A16S	496	G	N3-C4-C5	-5.08	126.06	128.60
2	A16S	706	U	C2-N1-C1'	5.08	123.80	117.70
1	A23S	661	G	C4-C5-N7	5.08	112.83	110.80
2	A16S	621	G	N3-C4-C5	-5.08	126.06	128.60
3	AATN	49	C	C6-N1-C1'	-5.07	114.71	120.80
2	A16S	1378	C	N3-C4-C5	5.07	123.93	121.90
2	A16S	1417	A	N1-C6-N6	5.07	121.64	118.60
1	A23S	2677	G	N3-C4-N9	5.07	129.04	126.00
2	A16S	328	U	C4-C5-C6	5.07	122.74	119.70
2	A16S	901	G	C6-C5-N7	5.07	133.44	130.40
2	A16S	1213	C	C2-N3-C4	5.07	122.43	119.90
2	A16S	1463	A	N1-C6-N6	-5.07	115.56	118.60
1	A23S	303	C	C2-N1-C1'	5.06	124.37	118.80
1	A23S	336	A	C8-N9-C4	5.06	107.83	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A23S	656	C	C6-N1-C1'	5.06	126.87	120.80
2	A16S	14	G	C4-N9-C1'	-5.06	119.92	126.50
2	A16S	740	G	C8-N9-C1'	5.05	133.57	127.00
2	A16S	1290	C	N1-C2-O2	5.05	121.93	118.90
1	A23S	125	G	N1-C6-O6	-5.04	116.88	119.90
1	A23S	2760	U	N1-C2-O2	5.04	126.33	122.80
2	A16S	419	C	C2-N1-C1'	5.04	124.34	118.80
3	AATN	41	C	C2-N1-C1'	5.04	124.34	118.80
1	A23S	1625	C	N3-C4-C5	5.04	123.91	121.90
2	A16S	33	A	C4-C5-N7	-5.04	108.18	110.70
2	A16S	354	C	N1-C2-O2	-5.04	115.88	118.90
1	A23S	2775	C	C6-N1-C1'	-5.03	114.76	120.80
1	A23S	2290	C	C2-N3-C4	5.03	122.42	119.90
1	A23S	2794	G	N3-C2-N2	-5.03	116.38	119.90
2	A16S	1024	C	N1-C2-O2	-5.03	115.88	118.90
2	A16S	885	A	N1-C6-N6	-5.02	115.59	118.60
2	A16S	78	G	N3-C4-C5	-5.02	126.09	128.60
1	A23S	2731	G	C8-N9-C1'	5.02	133.52	127.00
1	A23S	1424	G	C4-C5-N7	5.01	112.81	110.80
2	A16S	354	C	N3-C4-C5	-5.01	119.89	121.90
2	A16S	1290	C	C6-N1-C1'	-5.01	114.79	120.80
2	A16S	1452	G	C4-C5-C6	-5.01	115.80	118.80
1	A23S	279	G	C8-N9-C4	-5.01	104.40	106.40
1	A23S	1672	A	C5-C6-N1	5.00	120.20	117.70

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A16S	381	C	Sidechain
42	AS4E	163	LEU	Peptide
43	AS4P	160	PRO	Peptide
44	AS5P	80	ARG	Sidechain
47	AS8P	89	LEU	Peptide
47	AS8P	96	TYR	Peptide
13	L13P	69	ARG	Sidechain
50	S15P	17	ARG	Peptide
65	S27A	22	GLU	Peptide
65	S27A	23	VAL	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	A23S	64357	0	0	0	0
2	A16S	32063	0	0	0	0
3	AATN	1619	0	0	0	0
3	AETN	1619	0	0	0	0
3	APTN	1619	0	0	0	0
4	A5S	2609	0	1324	150	0
5	AL1P	1715	0	0	0	0
6	AL2P	1754	0	0	0	0
7	AL3P	2695	0	0	0	0
8	AL4P	1926	0	0	0	0
9	AL5P	1343	0	0	0	0
10	AL6P	1431	0	0	0	0
11	ALX0	629	0	0	0	0
12	L10E	1310	0	0	0	0
13	L13P	1109	0	0	0	0
14	L141	669	0	0	0	0
14	L142	669	0	0	0	0
15	L14P	1034	0	0	0	0
16	L15E	1423	0	0	0	0
17	L18E	895	0	0	0	0
18	L18P	1539	0	0	0	0
19	L19E	1206	0	0	0	0
20	L22P	1223	0	0	0	0
21	L23P	650	0	0	0	0
22	L24E	441	0	0	0	0
23	L24P	989	0	0	0	0
24	L29P	513	0	0	0	0
25	L30E	729	0	0	0	0
26	L30P	1254	0	0	0	0
27	L31E	625	0	0	0	0
28	L32E	1010	0	0	0	0
29	L34E	629	0	0	0	0
30	L37A	527	0	0	0	0
31	L37E	436	0	0	0	0
32	L39E	414	0	0	0	0
33	L40E	439	0	0	0	0
34	L44E	753	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	L7A1	935	0	0	0	0
35	L7A2	935	0	0	0	0
35	SL7A	935	0	0	0	0
36	L15P	752	0	0	0	0
37	L21E	785	0	0	0	0
38	L45A	816	0	0	0	0
39	L46A	586	0	0	0	0
40	L47A	648	0	0	0	0
41	AS2P	1587	0	0	0	0
42	AS4E	1925	0	0	0	0
43	AS4P	1370	0	0	0	0
44	AS5P	1600	0	0	0	0
45	AS6E	805	0	0	0	0
46	AS8E	993	0	0	0	0
47	AS8P	1028	0	0	0	0
48	S11P	960	0	0	0	0
49	S12P	1103	0	0	0	0
50	S15P	1225	0	0	0	0
51	S17P	885	0	0	0	0
52	S24E	759	0	0	0	0
53	S27E	458	0	0	0	0
54	S3AE	1545	0	0	0	0
55	AS3P	1576	0	0	0	0
56	AS7P	1537	0	0	0	0
57	S10P	824	0	0	0	0
58	S13P	1204	0	0	0	0
59	S14P	432	0	0	0	0
60	S17E	517	0	0	0	0
61	S19E	1239	0	0	0	0
62	S19P	968	0	0	0	0
63	AS9P	1096	0	0	0	0
64	S28E	498	0	0	0	0
65	S27A	435	0	0	0	0
66	APTP	67	0	0	0	0
67	AMRN	180	0	0	0	0
68	AS2P	166	0	0	0	0
68	AS5P	100	0	0	0	0
68	AS8P	20	0	0	0	0
All	All	169359	0	1324	150	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 45.

All (150) 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)
4:A5S:76:G:N1	4:A5S:106:U:O2	2.06	0.89
4:A5S:32:C:N3	4:A5S:52:G:N2	2.21	0.88
4:A5S:10:G:H1	4:A5S:115:U:H3	1.14	0.87
4:A5S:35:G:N1	4:A5S:49:C:N3	2.23	0.84
4:A5S:4:C:N3	4:A5S:121:G:N1	2.24	0.84
4:A5S:31:C:N4	4:A5S:53:A:N1	2.28	0.81
4:A5S:35:G:O2'	4:A5S:36:A:N7	2.12	0.81
4:A5S:71:C:O2	4:A5S:111:G:N1	2.15	0.80
4:A5S:78:G:N1	4:A5S:104:C:N3	2.29	0.79
4:A5S:46:A:OP2	4:A5S:48:C:N4	2.19	0.75
4:A5S:38:U:H3	4:A5S:49:C:HO2'	1.32	0.75
4:A5S:77:G:H1	4:A5S:105:C:H42	1.34	0.73
4:A5S:41:U:N3	4:A5S:45:G:OP2	2.18	0.71
4:A5S:38:U:N3	4:A5S:49:C:O2'	2.23	0.70
4:A5S:72:A:N6	4:A5S:110:U:O4	2.18	0.69
4:A5S:4:C:O2	4:A5S:121:G:N2	2.16	0.69
4:A5S:115:U:H2'	4:A5S:116:G:H8	1.58	0.69
4:A5S:3:C:O2'	4:A5S:122:G:N2	2.26	0.69
4:A5S:35:G:O6	4:A5S:49:C:N4	2.26	0.68
4:A5S:89:C:H2'	4:A5S:90:G:C8	2.30	0.66
4:A5S:22:C:H2'	4:A5S:23:G:H8	1.60	0.66
4:A5S:78:G:N2	4:A5S:104:C:O2	2.20	0.66
4:A5S:2:G:H1	4:A5S:122:G:H2'	1.61	0.65
4:A5S:97:C:H2'	4:A5S:98:C:C6	2.31	0.65
4:A5S:25:G:O2'	4:A5S:28:A:N6	2.31	0.64
4:A5S:19:G:H1	4:A5S:66:C:H42	1.44	0.64
4:A5S:77:G:N2	4:A5S:105:C:N3	2.34	0.63
4:A5S:12:U:OP2	4:A5S:13:C:N4	2.22	0.62
4:A5S:35:G:N2	4:A5S:49:C:O2	2.17	0.61
4:A5S:22:C:H2'	4:A5S:23:G:C8	2.35	0.61
4:A5S:11:G:H22	4:A5S:114:C:H2'	1.64	0.61
4:A5S:85:G:H2'	4:A5S:86:A:C8	2.36	0.61
4:A5S:4:C:N4	4:A5S:121:G:O6	2.29	0.60
4:A5S:5:C:H2'	4:A5S:6:A:C8	2.36	0.60
4:A5S:19:G:H2'	4:A5S:20:A:C8	2.37	0.59
4:A5S:25:G:H2'	4:A5S:57:U:N3	2.19	0.58
4:A5S:78:G:O6	4:A5S:104:C:N4	2.31	0.58
4:A5S:31:C:H1'	4:A5S:59:A:H62	1.68	0.57
4:A5S:25:G:N7	4:A5S:57:U:O2'	2.36	0.57
4:A5S:6:A:N1	4:A5S:119:A:N6	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A5S:35:G:C6	4:A5S:45:G:C4	2.92	0.57
4:A5S:59:A:H3'	4:A5S:60:G:H8	1.69	0.57
4:A5S:117:G:H2'	4:A5S:118:G:C8	2.41	0.56
4:A5S:66:C:H2'	4:A5S:67:A:C8	2.41	0.55
4:A5S:15:U:OP2	4:A5S:70:U:O2'	2.23	0.55
4:A5S:44:C:H2'	4:A5S:46:A:C8	2.41	0.55
4:A5S:115:U:H2'	4:A5S:116:G:C8	2.40	0.55
4:A5S:18:U:H2'	4:A5S:19:G:C8	2.42	0.54
4:A5S:109:C:H2'	4:A5S:110:U:C6	2.43	0.53
4:A5S:71:C:H2'	4:A5S:72:A:C8	2.43	0.53
4:A5S:74:A:H2'	4:A5S:75:G:C8	2.44	0.53
4:A5S:70:U:H2'	4:A5S:71:C:H6	1.74	0.53
4:A5S:44:C:H2'	4:A5S:46:A:H8	1.74	0.53
4:A5S:104:C:H2'	4:A5S:105:C:H6	1.72	0.53
4:A5S:105:C:H2'	4:A5S:106:U:O4'	2.09	0.53
4:A5S:11:G:H2'	4:A5S:12:U:H6	1.74	0.52
4:A5S:91:A:H2'	4:A5S:92:G:O4'	2.09	0.52
4:A5S:28:A:H2'	4:A5S:29:C:O4'	2.10	0.52
4:A5S:95:G:C2	4:A5S:96:G:C4	2.98	0.52
4:A5S:39:C:O2	4:A5S:49:C:H1'	2.10	0.51
4:A5S:9:C:H2'	4:A5S:10:G:O4'	2.09	0.51
4:A5S:40:G:C2	4:A5S:45:G:C2	3.00	0.50
4:A5S:31:C:H2'	4:A5S:32:C:O4'	2.12	0.50
4:A5S:78:G:H2'	4:A5S:79:C:C6	2.47	0.50
4:A5S:70:U:H2'	4:A5S:71:C:C6	2.46	0.50
4:A5S:63:G:H2'	4:A5S:64:C:C6	2.46	0.49
4:A5S:94:G:H2'	4:A5S:95:G:O4'	2.12	0.49
4:A5S:25:G:OP2	4:A5S:25:G:H8	1.95	0.49
4:A5S:83:G:N1	4:A5S:99:C:O2	2.29	0.49
4:A5S:1:U:H2'	4:A5S:2:G:C8	2.47	0.49
4:A5S:47:A:C2	4:A5S:48:C:H1'	2.47	0.49
4:A5S:6:A:H2'	4:A5S:7:C:H6	1.77	0.49
4:A5S:15:U:OP2	4:A5S:71:C:H5'	2.13	0.49
4:A5S:51:G:C2	4:A5S:52:G:H1'	2.48	0.49
4:A5S:85:G:N1	4:A5S:98:C:N3	2.61	0.49
4:A5S:66:C:H2'	4:A5S:67:A:H8	1.78	0.49
4:A5S:78:G:C2	4:A5S:105:C:C2	3.00	0.48
4:A5S:1:U:H2'	4:A5S:2:G:C4	2.49	0.47
4:A5S:78:G:C6	4:A5S:79:C:C4	3.02	0.47
4:A5S:96:G:H2'	4:A5S:97:C:O4'	2.14	0.47
4:A5S:25:G:N2	4:A5S:29:C:O2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A5S:46:A:C5	4:A5S:47:A:C5	3.02	0.47
4:A5S:50:C:C2	4:A5S:51:G:C8	3.02	0.47
4:A5S:65:U:H2'	4:A5S:66:C:C6	2.49	0.47
4:A5S:4:C:HO2'	4:A5S:5:C:C5'	2.28	0.46
4:A5S:21:G:H2'	4:A5S:22:C:C6	2.51	0.46
4:A5S:23:G:H2'	4:A5S:24:G:C8	2.49	0.46
4:A5S:121:G:H2'	4:A5S:122:G:C8	2.49	0.46
4:A5S:46:A:N6	4:A5S:47:A:N1	2.63	0.46
4:A5S:80:C:O2	4:A5S:103:G:N1	2.49	0.46
4:A5S:92:G:H2'	4:A5S:93:A:O4'	2.16	0.46
4:A5S:46:A:H3'	4:A5S:47:A:H8	1.80	0.46
4:A5S:40:G:C2	4:A5S:41:U:C4	3.04	0.45
4:A5S:104:C:H2'	4:A5S:105:C:C6	2.50	0.45
4:A5S:24:G:N1	4:A5S:25:G:O6	2.49	0.45
4:A5S:62:C:H2'	4:A5S:63:G:C8	2.51	0.45
4:A5S:98:C:H2'	4:A5S:99:C:C6	2.51	0.45
4:A5S:85:G:C2	4:A5S:86:A:C5	3.05	0.45
4:A5S:4:C:N3	4:A5S:122:G:N1	2.65	0.45
4:A5S:21:G:H2'	4:A5S:22:C:H6	1.82	0.45
4:A5S:32:C:H2'	4:A5S:33:C:H5'	1.99	0.45
4:A5S:40:G:N1	4:A5S:41:U:O4	2.50	0.45
4:A5S:12:U:H3'	4:A5S:13:C:C5	2.53	0.44
4:A5S:77:G:C2	4:A5S:78:G:C5	3.05	0.44
4:A5S:109:C:H2'	4:A5S:110:U:H6	1.80	0.44
4:A5S:4:C:C4	4:A5S:122:G:N1	2.85	0.44
4:A5S:34:G:N2	4:A5S:35:G:H1'	2.31	0.44
4:A5S:40:G:N3	4:A5S:45:G:N2	2.66	0.44
4:A5S:41:U:O2'	4:A5S:46:A:N6	2.50	0.44
4:A5S:47:A:C6	4:A5S:48:C:C2	3.06	0.44
4:A5S:83:G:C5	4:A5S:100:G:C2	3.06	0.44
4:A5S:34:G:N2	4:A5S:51:G:N3	2.66	0.43
4:A5S:35:G:C2	4:A5S:45:G:C6	3.07	0.43
4:A5S:36:A:H2'	4:A5S:37:C:C6	2.53	0.43
4:A5S:17:G:C2	4:A5S:69:G:H1'	2.53	0.43
4:A5S:77:G:N2	4:A5S:106:U:H1'	2.34	0.42
4:A5S:77:G:H21	4:A5S:106:U:H1'	1.84	0.42
4:A5S:11:G:C4	4:A5S:12:U:C5	3.07	0.42
4:A5S:77:G:C2	4:A5S:78:G:N7	2.88	0.42
4:A5S:34:G:N2	4:A5S:51:G:H1'	2.33	0.42
4:A5S:60:G:H3'	4:A5S:61:C:C6	2.54	0.42
4:A5S:63:G:H2'	4:A5S:64:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A5S:23:G:C6	4:A5S:24:G:C6	3.08	0.42
4:A5S:120:U:H2'	4:A5S:121:G:H8	1.84	0.42
4:A5S:14:A:P	4:A5S:14:A:H8	2.42	0.42
4:A5S:7:C:H2'	4:A5S:8:C:O4'	2.20	0.42
4:A5S:58:A:H3'	4:A5S:58:A:OP2	2.20	0.42
4:A5S:81:G:C4	4:A5S:102:A:C6	3.08	0.42
4:A5S:17:G:C6	4:A5S:69:G:C5	3.08	0.42
4:A5S:106:U:H2'	4:A5S:107:C:C6	2.54	0.41
4:A5S:51:G:N2	4:A5S:52:G:H1'	2.35	0.41
4:A5S:4:C:C2	4:A5S:122:G:C2	3.09	0.41
4:A5S:7:C:C4	4:A5S:8:C:C4	3.08	0.41
4:A5S:7:C:C2	4:A5S:119:A:N6	2.88	0.41
4:A5S:103:G:C6	4:A5S:104:C:C4	3.09	0.41
4:A5S:5:C:H2'	4:A5S:6:A:H8	1.85	0.41
4:A5S:8:C:C2	4:A5S:118:G:N1	2.89	0.41
4:A5S:6:A:H2'	4:A5S:7:C:C6	2.55	0.41
4:A5S:76:G:C2	4:A5S:107:C:O2	2.74	0.41
4:A5S:77:G:N2	4:A5S:105:C:C2	2.86	0.41
4:A5S:16:A:H5'	4:A5S:113:G:H5"	2.02	0.41
4:A5S:50:C:H2'	4:A5S:51:G:O4'	2.21	0.41
4:A5S:83:G:C6	4:A5S:84:G:C5	3.09	0.41
4:A5S:121:G:H2'	4:A5S:122:G:H8	1.84	0.41
4:A5S:14:A:O2'	4:A5S:15:U:H5"	2.21	0.40
4:A5S:22:C:C2	4:A5S:23:G:C8	3.09	0.40
4:A5S:27:A:C2	4:A5S:28:A:H1'	2.57	0.40
4:A5S:40:G:N2	4:A5S:45:G:N3	2.70	0.40
4:A5S:11:G:C5	4:A5S:12:U:C5	3.09	0.40
4:A5S:77:G:H2'	4:A5S:78:G:H8	1.85	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
5	AL1P	214/216 (99%)	190 (89%)	24 (11%)	0	100	100
6	AL2P	232/234 (99%)	205 (88%)	27 (12%)	0	100	100
7	AL3P	337/339 (99%)	287 (85%)	49 (14%)	1 (0%)	41	76
8	AL4P	249/251 (99%)	229 (92%)	20 (8%)	0	100	100
9	AL5P	166/168 (99%)	153 (92%)	13 (8%)	0	100	100
10	AL6P	179/181 (99%)	156 (87%)	23 (13%)	0	100	100
11	ALX0	74/76 (97%)	63 (85%)	11 (15%)	0	100	100
12	L10E	162/164 (99%)	136 (84%)	26 (16%)	0	100	100
13	L13P	138/140 (99%)	127 (92%)	11 (8%)	0	100	100
14	L141	84/86 (98%)	67 (80%)	17 (20%)	0	100	100
14	L142	84/86 (98%)	75 (89%)	9 (11%)	0	100	100
15	L14P	132/134 (98%)	112 (85%)	20 (15%)	0	100	100
16	L15E	167/169 (99%)	155 (93%)	12 (7%)	0	100	100
17	L18E	110/112 (98%)	105 (96%)	5 (4%)	0	100	100
18	L18P	191/193 (99%)	165 (86%)	26 (14%)	0	100	100
19	L19E	142/144 (99%)	132 (93%)	10 (7%)	0	100	100
20	L22P	148/150 (99%)	131 (88%)	17 (12%)	0	100	100
21	L23P	79/81 (98%)	70 (89%)	9 (11%)	0	100	100
22	L24E	52/54 (96%)	44 (85%)	8 (15%)	0	100	100
23	L24P	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
24	L29P	61/63 (97%)	56 (92%)	5 (8%)	0	100	100
25	L30E	92/94 (98%)	84 (91%)	8 (9%)	0	100	100
26	L30P	153/155 (99%)	123 (80%)	30 (20%)	0	100	100
27	L31E	73/75 (97%)	65 (89%)	8 (11%)	0	100	100
28	L32E	121/123 (98%)	106 (88%)	15 (12%)	0	100	100
29	L34E	75/77 (97%)	58 (77%)	16 (21%)	1 (1%)	12	48
30	L37A	63/65 (97%)	53 (84%)	10 (16%)	0	100	100
31	L37E	52/54 (96%)	41 (79%)	11 (21%)	0	100	100
32	L39E	47/49 (96%)	39 (83%)	8 (17%)	0	100	100
33	L40E	53/55 (96%)	43 (81%)	9 (17%)	1 (2%)	8	41
34	L44E	90/92 (98%)	83 (92%)	7 (8%)	0	100	100
35	L7A1	121/123 (98%)	115 (95%)	6 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	L7A2	121/123 (98%)	116 (96%)	5 (4%)	0	100	100
35	SL7A	121/123 (98%)	109 (90%)	12 (10%)	0	100	100
36	L15P	90/144 (62%)	79 (88%)	11 (12%)	0	100	100
37	L21E	95/97 (98%)	91 (96%)	4 (4%)	0	100	100
38	L45A	99/101 (98%)	74 (75%)	22 (22%)	3 (3%)	4	31
39	L46A	68/70 (97%)	57 (84%)	11 (16%)	0	100	100
40	L47A	78/80 (98%)	70 (90%)	7 (9%)	1 (1%)	12	48
41	AS2P	194/196 (99%)	182 (94%)	12 (6%)	0	100	100
42	AS4E	238/240 (99%)	207 (87%)	31 (13%)	0	100	100
43	AS4P	164/166 (99%)	135 (82%)	29 (18%)	0	100	100
44	AS5P	202/204 (99%)	180 (89%)	22 (11%)	0	100	100
45	AS6E	103/105 (98%)	89 (86%)	14 (14%)	0	100	100
46	AS8E	124/126 (98%)	102 (82%)	22 (18%)	0	100	100
47	AS8P	128/130 (98%)	113 (88%)	13 (10%)	2 (2%)	9	45
48	S11P	126/128 (98%)	105 (83%)	21 (17%)	0	100	100
49	S12P	141/143 (99%)	117 (83%)	24 (17%)	0	100	100
50	S15P	147/149 (99%)	125 (85%)	22 (15%)	0	100	100
51	S17P	109/111 (98%)	99 (91%)	10 (9%)	0	100	100
52	S24E	94/96 (98%)	81 (86%)	13 (14%)	0	100	100
53	S27E	57/59 (97%)	46 (81%)	11 (19%)	0	100	100
54	S3AE	187/189 (99%)	157 (84%)	30 (16%)	0	100	100
55	AS3P	199/201 (99%)	185 (93%)	14 (7%)	0	100	100
56	AS7P	191/193 (99%)	154 (81%)	37 (19%)	0	100	100
57	S10P	98/100 (98%)	95 (97%)	3 (3%)	0	100	100
58	S13P	145/147 (99%)	123 (85%)	22 (15%)	0	100	100
59	S14P	50/52 (96%)	36 (72%)	14 (28%)	0	100	100
60	S17E	60/62 (97%)	54 (90%)	6 (10%)	0	100	100
61	S19E	148/150 (99%)	127 (86%)	21 (14%)	0	100	100
62	S19P	113/115 (98%)	96 (85%)	17 (15%)	0	100	100
63	AS9P	134/136 (98%)	121 (90%)	13 (10%)	0	100	100
64	S28E	61/63 (97%)	52 (85%)	9 (15%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
65	S27A	52/54 (96%)	39 (75%)	13 (25%)	0	100	100
66	APTP	4/6 (67%)	2 (50%)	2 (50%)	0	100	100
All	All	8002/8184 (98%)	6995 (87%)	998 (12%)	9 (0%)	54	85

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
38	L45A	4	VAL
38	L45A	67	THR
7	AL3P	231	ARG
38	L45A	55	VAL
29	L34E	19	PRO
40	L47A	38	LEU
47	AS8P	90	PRO
47	AS8P	89	LEU
33	L40E	52	PRO

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 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	
5	AL1P	189/190 (100%)	189 (100%)	0	100	100
6	AL2P	181/181 (100%)	178 (98%)	3 (2%)	60	78
7	AL3P	297/297 (100%)	296 (100%)	1 (0%)	92	95
8	AL4P	212/212 (100%)	211 (100%)	1 (0%)	88	93
9	AL5P	144/144 (100%)	143 (99%)	1 (1%)	84	90
10	AL6P	157/157 (100%)	153 (98%)	4 (2%)	47	68
11	ALX0	68/68 (100%)	68 (100%)	0	100	100
12	L10E	137/137 (100%)	135 (98%)	2 (2%)	65	80
13	L13P	121/121 (100%)	121 (100%)	0	100	100
14	L141	74/74 (100%)	74 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	L142	74/74 (100%)	74 (100%)	0	100	100
15	L14P	110/110 (100%)	108 (98%)	2 (2%)	59	77
16	L15E	146/146 (100%)	144 (99%)	2 (1%)	67	81
17	L18E	98/98 (100%)	98 (100%)	0	100	100
18	L18P	162/162 (100%)	160 (99%)	2 (1%)	71	84
19	L19E	126/126 (100%)	124 (98%)	2 (2%)	62	79
20	L22P	131/131 (100%)	130 (99%)	1 (1%)	81	89
21	L23P	74/74 (100%)	74 (100%)	0	100	100
22	L24E	50/50 (100%)	50 (100%)	0	100	100
23	L24P	108/108 (100%)	106 (98%)	2 (2%)	57	75
24	L29P	59/59 (100%)	57 (97%)	2 (3%)	37	61
25	L30E	83/83 (100%)	83 (100%)	0	100	100
26	L30P	136/136 (100%)	136 (100%)	0	100	100
27	L31E	66/66 (100%)	65 (98%)	1 (2%)	65	80
28	L32E	106/106 (100%)	106 (100%)	0	100	100
29	L34E	70/70 (100%)	69 (99%)	1 (1%)	67	81
30	L37A	53/53 (100%)	52 (98%)	1 (2%)	57	75
31	L37E	45/45 (100%)	45 (100%)	0	100	100
32	L39E	44/44 (100%)	44 (100%)	0	100	100
33	L40E	50/50 (100%)	50 (100%)	0	100	100
34	L44E	84/84 (100%)	84 (100%)	0	100	100
35	L7A1	104/104 (100%)	100 (96%)	4 (4%)	33	58
35	L7A2	104/104 (100%)	103 (99%)	1 (1%)	76	86
35	SL7A	104/104 (100%)	102 (98%)	2 (2%)	57	75
36	L15P	78/118 (66%)	78 (100%)	0	100	100
37	L21E	85/85 (100%)	85 (100%)	0	100	100
38	L45A	91/91 (100%)	90 (99%)	1 (1%)	73	85
39	L46A	66/66 (100%)	65 (98%)	1 (2%)	65	80
40	L47A	74/74 (100%)	74 (100%)	0	100	100
41	AS2P	174/174 (100%)	173 (99%)	1 (1%)	86	92
42	AS4E	210/210 (100%)	208 (99%)	2 (1%)	76	86

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
43	AS4P	149/149 (100%)	148 (99%)	1 (1%)	84 90
44	AS5P	174/174 (100%)	174 (100%)	0	100 100
45	AS6E	88/88 (100%)	88 (100%)	0	100 100
46	AS8E	106/106 (100%)	105 (99%)	1 (1%)	78 87
47	AS8P	111/111 (100%)	106 (96%)	5 (4%)	27 54
48	S11P	94/94 (100%)	93 (99%)	1 (1%)	73 85
49	S12P	116/116 (100%)	114 (98%)	2 (2%)	60 78
50	S15P	133/133 (100%)	131 (98%)	2 (2%)	65 80
51	S17P	97/97 (100%)	94 (97%)	3 (3%)	40 63
52	S24E	84/84 (100%)	84 (100%)	0	100 100
53	S27E	51/51 (100%)	49 (96%)	2 (4%)	32 57
54	S3AE	170/170 (100%)	167 (98%)	3 (2%)	59 77
55	AS3P	165/165 (100%)	165 (100%)	0	100 100
56	AS7P	166/166 (100%)	163 (98%)	3 (2%)	59 77
57	S10P	92/92 (100%)	91 (99%)	1 (1%)	73 85
58	S13P	129/129 (100%)	126 (98%)	3 (2%)	50 70
59	S14P	45/45 (100%)	44 (98%)	1 (2%)	52 71
60	S17E	57/57 (100%)	57 (100%)	0	100 100
61	S19E	134/134 (100%)	133 (99%)	1 (1%)	84 90
62	S19P	106/106 (100%)	104 (98%)	2 (2%)	57 75
63	AS9P	113/113 (100%)	111 (98%)	2 (2%)	59 77
64	S28E	54/54 (100%)	53 (98%)	1 (2%)	57 75
65	S27A	47/47 (100%)	47 (100%)	0	100 100
66	APTP	6/6 (100%)	6 (100%)	0	100 100
All	All	7032/7073 (99%)	6958 (99%)	74 (1%)	74 85

All (74) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	AL2P	179	ARG
6	AL2P	189	ARG
6	AL2P	216	ARG
7	AL3P	172	ILE
8	AL4P	136	ARG

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Mol	Chain	Res	Type
9	AL5P	147	ARG
10	AL6P	18	LYS
10	AL6P	31	LYS
10	AL6P	48	ARG
10	AL6P	68	LYS
12	L10E	75	LYS
12	L10E	161	ARG
15	L14P	44	ARG
15	L14P	126	ARG
16	L15E	26	ARG
16	L15E	160	ARG
18	L18P	50	LYS
18	L18P	138	LYS
19	L19E	22	ILE
19	L19E	28	ARG
20	L22P	141	ARG
23	L24P	41	ARG
23	L24P	102	LYS
24	L29P	31	ARG
24	L29P	54	ARG
27	L31E	88	ILE
29	L34E	41	LYS
30	L37A	14	ARG
35	L7A1	8	LYS
35	L7A1	37	ASN
35	L7A1	45	ARG
35	L7A1	116	LYS
35	L7A2	116	LYS
38	L45A	79	ARG
39	L46A	3	LYS
41	AS2P	215	ARG
42	AS4E	57	ARG
42	AS4E	193	LYS
43	AS4P	112	LYS
46	AS8E	114	ARG
47	AS8P	16	ASN
47	AS8P	21	ARG
47	AS8P	43	LYS
47	AS8P	71	LYS
47	AS8P	78	ARG
48	S11P	122	ARG
49	S12P	17	ARG

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Mol	Chain	Res	Type
49	S12P	144	LYS
50	S15P	7	LYS
50	S15P	119	LYS
51	S17P	37	ARG
51	S17P	52	ARG
51	S17P	72	ARG
53	S27E	18	ARG
53	S27E	20	LYS
54	S3AE	148	LYS
54	S3AE	149	LYS
54	S3AE	176	LYS
56	AS7P	143	ARG
56	AS7P	189	ARG
56	AS7P	195	ARG
57	S10P	30	LYS
58	S13P	11	ARG
58	S13P	110	ARG
58	S13P	115	ARG
59	S14P	11	ARG
61	S19E	76	ARG
62	S19P	71	LYS
62	S19P	87	ARG
63	AS9P	19	ARG
63	AS9P	68	ARG
64	S28E	78	ARG
35	SL7A	49	LYS
35	SL7A	108	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A23S	2986/3022 (98%)	1128 (37%)	61 (2%)
2	A16S	1491/1503 (99%)	606 (40%)	51 (3%)
3	AATN	75/76 (98%)	33 (44%)	4 (5%)
3	AETN	75/76 (98%)	36 (48%)	5 (6%)
3	APTN	75/76 (98%)	24 (32%)	1 (1%)
4	A5S	121/122 (99%)	38 (31%)	2 (1%)
67	AMRN	8/9 (88%)	1 (12%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
All	All	4831/4884 (98%)	1866 (38%)	124 (2%)

All (1866) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A23S	7	G
1	A23S	18	G
1	A23S	19	A
1	A23S	26	G
1	A23S	29	U
1	A23S	36	C
1	A23S	37	C
1	A23S	39	A
1	A23S	41	G
1	A23S	44	G
1	A23S	47	C
1	A23S	51	G
1	A23S	53	A
1	A23S	54	A
1	A23S	61	A
1	A23S	63	A
1	A23S	64	U
1	A23S	65	G
1	A23S	71	G
1	A23S	73	G
1	A23S	74	A
1	A23S	78	G
1	A23S	81	A
1	A23S	82	G
1	A23S	85	G
1	A23S	86	C
1	A23S	90	U
1	A23S	91	G
1	A23S	102	C
1	A23S	103	C
1	A23S	107	A
1	A23S	109	U
1	A23S	114	U
1	A23S	115	A
1	A23S	116	U
1	A23S	117	C
1	A23S	127	U

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Mol	Chain	Res	Type
1	A23S	128	U
1	A23S	129	C
1	A23S	131	G
1	A23S	138	C
1	A23S	140	G
1	A23S	144	U
1	A23S	145	A
1	A23S	146	U
1	A23S	147	A
1	A23S	148	A
1	A23S	153	G
1	A23S	159	G
1	A23S	160	A
1	A23S	165	C
1	A23S	175	A
1	A23S	179	U
1	A23S	183	A
1	A23S	184	G
1	A23S	185	U
1	A23S	195	A
1	A23S	200	A
1	A23S	201	A
1	A23S	202	A
1	A23S	203	U
1	A23S	204	C
1	A23S	206	A
1	A23S	207	U
1	A23S	208	U
1	A23S	212	A
1	A23S	222	U
1	A23S	227	G
1	A23S	228	C
1	A23S	231	C
1	A23S	241	G
1	A23S	242	A
1	A23S	243	C
1	A23S	244	A
1	A23S	245	G
1	A23S	246	C
1	A23S	247	C
1	A23S	255	A
1	A23S	256	A

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Mol	Chain	Res	Type
1	A23S	257	C
1	A23S	267	A
1	A23S	268	U
1	A23S	269	A
1	A23S	281	A
1	A23S	282	U
1	A23S	283	G
1	A23S	285	G
1	A23S	289	U
1	A23S	290	U
1	A23S	292	C
1	A23S	293	G
1	A23S	303	C
1	A23S	304	U
1	A23S	313	A
1	A23S	316	U
1	A23S	327	A
1	A23S	336	A
1	A23S	337	G
1	A23S	338	C
1	A23S	341	A
1	A23S	343	C
1	A23S	344	U
1	A23S	345	C
1	A23S	351	G
1	A23S	352	A
1	A23S	354	C
1	A23S	364	U
1	A23S	368	G
1	A23S	372	G
1	A23S	373	A
1	A23S	375	A
1	A23S	376	G
1	A23S	391	G
1	A23S	402	A
1	A23S	403	G
1	A23S	405	G
1	A23S	416	G
1	A23S	417	A
1	A23S	418	G
1	A23S	419	U
1	A23S	433	U

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Mol	Chain	Res	Type
1	A23S	434	U
1	A23S	444	A
1	A23S	446	G
1	A23S	447	U
1	A23S	448	U
1	A23S	449	A
1	A23S	450	G
1	A23S	451	G
1	A23S	454	A
1	A23S	455	C
1	A23S	456	A
1	A23S	466	A
1	A23S	467	A
1	A23S	468	G
1	A23S	469	G
1	A23S	470	C
1	A23S	475	U
1	A23S	476	A
1	A23S	478	G
1	A23S	479	U
1	A23S	481	C
1	A23S	490	A
1	A23S	491	U
1	A23S	494	C
1	A23S	495	A
1	A23S	496	A
1	A23S	498	C
1	A23S	499	U
1	A23S	501	A
1	A23S	502	G
1	A23S	509	G
1	A23S	511	G
1	A23S	515	A
1	A23S	517	G
1	A23S	518	C
1	A23S	519	U
1	A23S	521	A
1	A23S	522	A
1	A23S	524	A
1	A23S	525	G
1	A23S	527	A
1	A23S	528	C

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Mol	Chain	Res	Type
1	A23S	530	C
1	A23S	533	G
1	A23S	534	A
1	A23S	535	A
1	A23S	536	G
1	A23S	537	G
1	A23S	539	G
1	A23S	540	G
1	A23S	542	G
1	A23S	547	A
1	A23S	548	A
1	A23S	549	G
1	A23S	550	A
1	A23S	551	G
1	A23S	552	C
1	A23S	553	C
1	A23S	555	G
1	A23S	559	C
1	A23S	569	A
1	A23S	570	U
1	A23S	572	C
1	A23S	573	A
1	A23S	574	G
1	A23S	575	G
1	A23S	577	U
1	A23S	578	G
1	A23S	583	U
1	A23S	585	G
1	A23S	586	A
1	A23S	587	A
1	A23S	588	A
1	A23S	589	G
1	A23S	590	A
1	A23S	592	G
1	A23S	593	U
1	A23S	594	G
1	A23S	595	A
1	A23S	598	C
1	A23S	618	C
1	A23S	620	A
1	A23S	621	G
1	A23S	628	G

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Mol	Chain	Res	Type
1	A23S	629	U
1	A23S	633	A
1	A23S	635	G
1	A23S	637	A
1	A23S	638	G
1	A23S	643	A
1	A23S	644	U
1	A23S	651	C
1	A23S	658	U
1	A23S	659	U
1	A23S	660	C
1	A23S	661	G
1	A23S	662	U
1	A23S	663	C
1	A23S	664	U
1	A23S	665	U
1	A23S	667	A
1	A23S	668	A
1	A23S	669	A
1	A23S	670	C
1	A23S	671	A
1	A23S	675	G
1	A23S	676	C
1	A23S	682	A
1	A23S	683	G
1	A23S	684	U
1	A23S	688	C
1	A23S	695	G
1	A23S	699	A
1	A23S	700	G
1	A23S	712	U
1	A23S	713	A
1	A23S	714	U
1	A23S	718	C
1	A23S	720	A
1	A23S	721	A
1	A23S	726	U
1	A23S	727	A
1	A23S	728	G
1	A23S	732	A
1	A23S	733	A
1	A23S	734	C

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Mol	Chain	Res	Type
1	A23S	737	A
1	A23S	738	G
1	A23S	740	G
1	A23S	741	C
1	A23S	744	G
1	A23S	753	U
1	A23S	755	U
1	A23S	758	A
1	A23S	762	G
1	A23S	763	A
1	A23S	769	A
1	A23S	777	U
1	A23S	778	C
1	A23S	780	G
1	A23S	788	A
1	A23S	801	A
1	A23S	802	G
1	A23S	808	A
1	A23S	809	A
1	A23S	816	C
1	A23S	817	G
1	A23S	819	U
1	A23S	820	C
1	A23S	821	U
1	A23S	822	A
1	A23S	828	G
1	A23S	838	A
1	A23S	843	G
1	A23S	846	G
1	A23S	847	G
1	A23S	848	A
1	A23S	850	A
1	A23S	851	C
1	A23S	859	G
1	A23S	860	A
1	A23S	862	G
1	A23S	863	G
1	A23S	866	G
1	A23S	868	A
1	A23S	869	U
1	A23S	875	U
1	A23S	878	U

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Mol	Chain	Res	Type
1	A23S	883	U
1	A23S	884	G
1	A23S	886	A
1	A23S	888	U
1	A23S	889	U
1	A23S	893	U
1	A23S	894	C
1	A23S	898	U
1	A23S	899	G
1	A23S	900	A
1	A23S	901	C
1	A23S	911	G
1	A23S	912	G
1	A23S	915	C
1	A23S	917	A
1	A23S	918	A
1	A23S	919	A
1	A23S	920	G
1	A23S	925	A
1	A23S	927	C
1	A23S	929	A
1	A23S	930	G
1	A23S	937	G
1	A23S	948	C
1	A23S	957	A
1	A23S	963	C
1	A23S	964	C
1	A23S	966	A
1	A23S	967	G
1	A23S	969	G
1	A23S	981	A
1	A23S	982	A
1	A23S	988	C
1	A23S	993	G
1	A23S	996	G
1	A23S	1001	G
1	A23S	1002	U
1	A23S	1003	G
1	A23S	1004	A
1	A23S	1007	G
1	A23S	1008	A
1	A23S	1011	G

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Mol	Chain	Res	Type
1	A23S	1020	A
1	A23S	1030	C
1	A23S	1043	U
1	A23S	1044	C
1	A23S	1046	A
1	A23S	1047	A
1	A23S	1048	C
1	A23S	1050	C
1	A23S	1051	C
1	A23S	1069	A
1	A23S	1070	G
1	A23S	1072	A
1	A23S	1073	G
1	A23S	1084	G
1	A23S	1090	C
1	A23S	1091	G
1	A23S	1094	G
1	A23S	1095	U
1	A23S	1097	A
1	A23S	1098	G
1	A23S	1099	G
1	A23S	1102	G
1	A23S	1103	G
1	A23S	1106	G
1	A23S	1111	A
1	A23S	1113	G
1	A23S	1117	A
1	A23S	1119	C
1	A23S	1120	A
1	A23S	1122	C
1	A23S	1126	G
1	A23S	1127	A
1	A23S	1128	C
1	A23S	1133	G
1	A23S	1135	U
1	A23S	1144	A
1	A23S	1145	A
1	A23S	1147	G
1	A23S	1148	U
1	A23S	1149	C
1	A23S	1153	G
1	A23S	1156	A

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Mol	Chain	Res	Type
1	A23S	1157	A
1	A23S	1158	G
1	A23S	1160	G
1	A23S	1162	C
1	A23S	1165	C
1	A23S	1166	G
1	A23S	1172	G
1	A23S	1173	C
1	A23S	1174	G
1	A23S	1175	U
1	A23S	1178	C
1	A23S	1184	U
1	A23S	1185	U
1	A23S	1186	A
1	A23S	1187	G
1	A23S	1188	A
1	A23S	1189	C
1	A23S	1190	A
1	A23S	1191	G
1	A23S	1192	C
1	A23S	1193	G
1	A23S	1197	A
1	A23S	1199	G
1	A23S	1200	U
1	A23S	1202	G
1	A23S	1203	G
1	A23S	1205	C
1	A23S	1206	C
1	A23S	1207	A
1	A23S	1208	G
1	A23S	1210	A
1	A23S	1211	G
1	A23S	1212	C
1	A23S	1213	A
1	A23S	1214	G
1	A23S	1215	C
1	A23S	1219	C
1	A23S	1221	U
1	A23S	1222	C
1	A23S	1225	A
1	A23S	1227	G
1	A23S	1228	A

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Mol	Chain	Res	Type
1	A23S	1229	G
1	A23S	1230	U
1	A23S	1231	G
1	A23S	1234	U
1	A23S	1235	A
1	A23S	1242	C
1	A23S	1243	A
1	A23S	1245	C
1	A23S	1250	G
1	A23S	1251	A
1	A23S	1252	G
1	A23S	1257	G
1	A23S	1260	G
1	A23S	1268	G
1	A23S	1270	U
1	A23S	1271	U
1	A23S	1272	G
1	A23S	1273	G
1	A23S	1274	U
1	A23S	1275	C
1	A23S	1277	G
1	A23S	1278	G
1	A23S	1282	C
1	A23S	1283	A
1	A23S	1284	A
1	A23S	1289	G
1	A23S	1294	C
1	A23S	1296	A
1	A23S	1297	G
1	A23S	1298	A
1	A23S	1309	G
1	A23S	1310	G
1	A23S	1312	C
1	A23S	1316	A
1	A23S	1317	C
1	A23S	1318	U
1	A23S	1323	A
1	A23S	1324	U
1	A23S	1325	C
1	A23S	1330	G
1	A23S	1331	G
1	A23S	1336	G

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Mol	Chain	Res	Type
1	A23S	1347	A
1	A23S	1348	U
1	A23S	1349	G
1	A23S	1350	G
1	A23S	1354	A
1	A23S	1355	G
1	A23S	1356	A
1	A23S	1368	G
1	A23S	1370	G
1	A23S	1379	G
1	A23S	1380	A
1	A23S	1381	C
1	A23S	1390	G
1	A23S	1392	U
1	A23S	1393	G
1	A23S	1394	C
1	A23S	1395	A
1	A23S	1396	G
1	A23S	1397	A
1	A23S	1398	U
1	A23S	1399	C
1	A23S	1406	G
1	A23S	1408	A
1	A23S	1409	G
1	A23S	1412	A
1	A23S	1416	C
1	A23S	1417	G
1	A23S	1419	A
1	A23S	1420	G
1	A23S	1428	A
1	A23S	1429	G
1	A23S	1432	U
1	A23S	1433	C
1	A23S	1444	G
1	A23S	1445	A
1	A23S	1446	A
1	A23S	1447	G
1	A23S	1448	G
1	A23S	1452	A
1	A23S	1455	G
1	A23S	1456	U
1	A23S	1458	U

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Mol	Chain	Res	Type
1	A23S	1465	A
1	A23S	1466	A
1	A23S	1467	C
1	A23S	1468	G
1	A23S	1469	U
1	A23S	1470	U
1	A23S	1474	C
1	A23S	1475	A
1	A23S	1485	U
1	A23S	1487	G
1	A23S	1489	C
1	A23S	1493	C
1	A23S	1498	G
1	A23S	1501	A
1	A23S	1503	G
1	A23S	1504	G
1	A23S	1505	C
1	A23S	1506	C
1	A23S	1507	U
1	A23S	1508	A
1	A23S	1515	A
1	A23S	1516	C
1	A23S	1521	C
1	A23S	1523	A
1	A23S	1524	A
1	A23S	1525	A
1	A23S	1528	G
1	A23S	1529	A
1	A23S	1530	A
1	A23S	1531	A
1	A23S	1532	G
1	A23S	1533	G
1	A23S	1534	G
1	A23S	1538	A
1	A23S	1539	A
1	A23S	1541	A
1	A23S	1542	U
1	A23S	1549	G
1	A23S	1558	G
1	A23S	1560	A
1	A23S	1564	G
1	A23S	1565	C

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Mol	Chain	Res	Type
1	A23S	1566	G
1	A23S	1568	U
1	A23S	1569	A
1	A23S	1571	C
1	A23S	1574	A
1	A23S	1575	A
1	A23S	1576	G
1	A23S	1577	C
1	A23S	1580	G
1	A23S	1582	C
1	A23S	1583	U
1	A23S	1584	C
1	A23S	1585	C
1	A23S	1587	G
1	A23S	1588	A
1	A23S	1589	C
1	A23S	1598	G
1	A23S	1601	G
1	A23S	1602	G
1	A23S	1604	A
1	A23S	1609	A
1	A23S	1610	G
1	A23S	1615	A
1	A23S	1616	C
1	A23S	1617	C
1	A23S	1618	G
1	A23S	1619	U
1	A23S	1625	C
1	A23S	1626	C
1	A23S	1627	A
1	A23S	1628	A
1	A23S	1633	U
1	A23S	1634	C
1	A23S	1635	A
1	A23S	1636	A
1	A23S	1642	U
1	A23S	1644	G
1	A23S	1645	A
1	A23S	1647	A
1	A23S	1648	G
1	A23S	1652	U
1	A23S	1653	A

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Mol	Chain	Res	Type
1	A23S	1654	A
1	A23S	1656	G
1	A23S	1657	G
1	A23S	1659	G
1	A23S	1660	A
1	A23S	1661	G
1	A23S	1662	A
1	A23S	1666	G
1	A23S	1667	G
1	A23S	1671	A
1	A23S	1674	G
1	A23S	1676	G
1	A23S	1677	U
1	A23S	1680	U
1	A23S	1681	G
1	A23S	1682	G
1	A23S	1683	G
1	A23S	1684	C
1	A23S	1687	U
1	A23S	1690	G
1	A23S	1692	U
1	A23S	1693	A
1	A23S	1694	G
1	A23S	1697	G
1	A23S	1701	U
1	A23S	1702	C
1	A23S	1704	C
1	A23S	1705	C
1	A23S	1707	G
1	A23S	1708	A
1	A23S	1710	C
1	A23S	1713	U
1	A23S	1714	A
1	A23S	1715	G
1	A23S	1720	C
1	A23S	1721	A
1	A23S	1722	U
1	A23S	1723	G
1	A23S	1724	A
1	A23S	1725	A
1	A23S	1727	A
1	A23S	1728	G

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Mol	Chain	Res	Type
1	A23S	1729	G
1	A23S	1734	C
1	A23S	1735	U
1	A23S	1738	A
1	A23S	1739	A
1	A23S	1740	C
1	A23S	1741	G
1	A23S	1743	U
1	A23S	1744	C
1	A23S	1751	G
1	A23S	1752	A
1	A23S	1756	U
1	A23S	1757	A
1	A23S	1763	A
1	A23S	1764	A
1	A23S	1768	A
1	A23S	1769	C
1	A23S	1770	A
1	A23S	1771	C
1	A23S	1772	U
1	A23S	1776	G
1	A23S	1785	U
1	A23S	1786	G
1	A23S	1789	A
1	A23S	1795	A
1	A23S	1796	A
1	A23S	1797	G
1	A23S	1801	U
1	A23S	1802	C
1	A23S	1803	U
1	A23S	1804	G
1	A23S	1809	G
1	A23S	1810	U
1	A23S	1811	A
1	A23S	1817	G
1	A23S	1820	U
1	A23S	1821	A
1	A23S	1825	A
1	A23S	1829	C
1	A23S	1831	G
1	A23S	1832	C
1	A23S	1833	A

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Mol	Chain	Res	Type
1	A23S	1834	A
1	A23S	1835	A
1	A23S	1836	U
1	A23S	1837	U
1	A23S	1838	A
1	A23S	1847	A
1	A23S	1850	U
1	A23S	1855	A
1	A23S	1856	G
1	A23S	1857	A
1	A23S	1864	G
1	A23S	1868	A
1	A23S	1872	U
1	A23S	1877	U
1	A23S	1879	A
1	A23S	1880	C
1	A23S	1882	A
1	A23S	1885	C
1	A23S	1900	G
1	A23S	1903	A
1	A23S	1904	C
1	A23S	1905	C
1	A23S	1906	A
1	A23S	1907	G
1	A23S	1908	A
1	A23S	1917	A
1	A23S	1918	C
1	A23S	1924	A
1	A23S	1925	A
1	A23S	1927	A
1	A23S	1928	A
1	A23S	1931	A
1	A23S	1935	A
1	A23S	1942	C
1	A23S	1944	C
1	A23S	1945	U
1	A23S	1953	A
1	A23S	1955	G
1	A23S	1959	G
1	A23S	1964	C
1	A23S	1969	G
1	A23S	1971	U

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Mol	Chain	Res	Type
1	A23S	1972	A
1	A23S	1973	A
1	A23S	1974	A
1	A23S	1975	U
1	A23S	1979	G
1	A23S	1982	C
1	A23S	1998	A
1	A23S	2000	U
1	A23S	2001	C
1	A23S	2002	C
1	A23S	2004	G
1	A23S	2005	G
1	A23S	2007	U
1	A23S	2010	A
1	A23S	2011	C
1	A23S	2012	C
1	A23S	2013	G
1	A23S	2014	G
1	A23S	2015	G
1	A23S	2016	C
1	A23S	2017	G
1	A23S	2018	A
1	A23S	2019	A
1	A23S	2022	C
1	A23S	2028	G
1	A23S	2029	A
1	A23S	2030	A
1	A23S	2032	G
1	A23S	2035	G
1	A23S	2036	G
1	A23S	2037	G
1	A23S	2038	G
1	A23S	2041	A
1	A23S	2042	A
1	A23S	2043	C
1	A23S	2044	U
1	A23S	2045	C
1	A23S	2047	G
1	A23S	2048	A
1	A23S	2053	C
1	A23S	2056	A
1	A23S	2057	A

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Mol	Chain	Res	Type
1	A23S	2059	G
1	A23S	2060	U
1	A23S	2061	A
1	A23S	2062	G
1	A23S	2066	A
1	A23S	2080	U
1	A23S	2081	A
1	A23S	2082	A
1	A23S	2084	U
1	A23S	2093	G
1	A23S	2096	U
1	A23S	2098	A
1	A23S	2099	A
1	A23S	2100	U
1	A23S	2101	G
1	A23S	2105	C
1	A23S	2108	C
1	A23S	2111	G
1	A23S	2120	U
1	A23S	2121	G
1	A23S	2124	C
1	A23S	2125	C
1	A23S	2126	A
1	A23S	2127	G
1	A23S	2133	G
1	A23S	2137	U
1	A23S	2141	G
1	A23S	2143	A
1	A23S	2147	C
1	A23S	2148	C
1	A23S	2149	U
1	A23S	2150	G
1	A23S	2151	A
1	A23S	2152	G
1	A23S	2160	A
1	A23S	2161	C
1	A23S	2162	A
1	A23S	2163	G
1	A23S	2165	C
1	A23S	2169	C
1	A23S	2170	A
1	A23S	2172	C

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Mol	Chain	Res	Type
1	A23S	2180	A
1	A23S	2181	C
1	A23S	2184	A
1	A23S	2185	G
1	A23S	2189	A
1	A23S	2190	G
1	A23S	2191	A
1	A23S	2198	G
1	A23S	2199	G
1	A23S	2206	A
1	A23S	2209	G
1	A23S	2219	G
1	A23S	2221	U
1	A23S	2222	G
1	A23S	2227	U
1	A23S	2232	C
1	A23S	2234	U
1	A23S	2235	U
1	A23S	2236	U
1	A23S	2237	A
1	A23S	2239	G
1	A23S	2240	C
1	A23S	2241	G
1	A23S	2243	A
1	A23S	2244	G
1	A23S	2245	A
1	A23S	2246	G
1	A23S	2247	U
1	A23S	2248	A
1	A23S	2249	G
1	A23S	2255	A
1	A23S	2256	G
1	A23S	2257	G
1	A23S	2259	G
1	A23S	2260	U
1	A23S	2261	C
1	A23S	2262	G
1	A23S	2263	A
1	A23S	2265	C
1	A23S	2268	G
1	A23S	2270	C
1	A23S	2271	C

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Mol	Chain	Res	Type
1	A23S	2272	U
1	A23S	2273	U
1	A23S	2274	U
1	A23S	2276	G
1	A23S	2277	G
1	A23S	2278	G
1	A23S	2279	G
1	A23S	2280	G
1	A23S	2282	A
1	A23S	2283	G
1	A23S	2284	G
1	A23S	2285	G
1	A23S	2286	G
1	A23S	2287	A
1	A23S	2290	C
1	A23S	2291	G
1	A23S	2292	A
1	A23S	2295	G
1	A23S	2298	A
1	A23S	2299	A
1	A23S	2300	A
1	A23S	2301	C
1	A23S	2302	A
1	A23S	2304	C
1	A23S	2305	A
1	A23S	2308	C
1	A23S	2309	A
1	A23S	2310	U
1	A23S	2311	G
1	A23S	2312	G
1	A23S	2313	A
1	A23S	2315	G
1	A23S	2324	A
1	A23S	2327	A
1	A23S	2328	A
1	A23S	2334	C
1	A23S	2336	A
1	A23S	2339	G
1	A23S	2340	A
1	A23S	2341	G
1	A23S	2346	A
1	A23S	2359	G

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Mol	Chain	Res	Type
1	A23S	2367	G
1	A23S	2370	U
1	A23S	2371	G
1	A23S	2372	G
1	A23S	2373	G
1	A23S	2376	G
1	A23S	2377	G
1	A23S	2379	A
1	A23S	2380	C
1	A23S	2385	G
1	A23S	2390	A
1	A23S	2391	A
1	A23S	2393	A
1	A23S	2400	G
1	A23S	2401	G
1	A23S	2402	G
1	A23S	2404	G
1	A23S	2405	C
1	A23S	2406	C
1	A23S	2408	A
1	A23S	2409	A
1	A23S	2422	G
1	A23S	2424	G
1	A23S	2427	A
1	A23S	2428	C
1	A23S	2429	A
1	A23S	2430	G
1	A23S	2432	A
1	A23S	2433	C
1	A23S	2434	G
1	A23S	2435	C
1	A23S	2442	A
1	A23S	2443	G
1	A23S	2444	A
1	A23S	2449	A
1	A23S	2455	A
1	A23S	2467	G
1	A23S	2473	A
1	A23S	2476	C
1	A23S	2477	U
1	A23S	2481	A
1	A23S	2482	A

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Mol	Chain	Res	Type
1	A23S	2483	G
1	A23S	2485	A
1	A23S	2489	G
1	A23S	2492	C
1	A23S	2493	A
1	A23S	2497	C
1	A23S	2501	A
1	A23S	2502	A
1	A23S	2503	A
1	A23S	2505	C
1	A23S	2508	G
1	A23S	2510	C
1	A23S	2515	C
1	A23S	2517	A
1	A23S	2523	C
1	A23S	2527	C
1	A23S	2531	C
1	A23S	2532	A
1	A23S	2533	C
1	A23S	2539	G
1	A23S	2543	C
1	A23S	2545	G
1	A23S	2550	U
1	A23S	2551	G
1	A23S	2552	A
1	A23S	2553	C
1	A23S	2554	A
1	A23S	2555	G
1	A23S	2556	A
1	A23S	2557	A
1	A23S	2559	A
1	A23S	2565	C
1	A23S	2571	G
1	A23S	2572	A
1	A23S	2573	U
1	A23S	2574	A
1	A23S	2578	G
1	A23S	2583	G
1	A23S	2593	A
1	A23S	2594	G
1	A23S	2596	G
1	A23S	2597	C

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Mol	Chain	Res	Type
1	A23S	2599	C
1	A23S	2600	A
1	A23S	2602	A
1	A23S	2605	G
1	A23S	2608	C
1	A23S	2609	C
1	A23S	2613	G
1	A23S	2615	U
1	A23S	2618	G
1	A23S	2621	A
1	A23S	2624	U
1	A23S	2625	C
1	A23S	2626	G
1	A23S	2627	A
1	A23S	2630	U
1	A23S	2631	C
1	A23S	2632	G
1	A23S	2636	C
1	A23S	2637	U
1	A23S	2638	U
1	A23S	2639	C
1	A23S	2642	A
1	A23S	2643	C
1	A23S	2644	C
1	A23S	2653	G
1	A23S	2654	C
1	A23S	2655	A
1	A23S	2656	G
1	A23S	2657	C
1	A23S	2658	U
1	A23S	2659	G
1	A23S	2671	A
1	A23S	2675	C
1	A23S	2676	U
1	A23S	2677	G
1	A23S	2678	C
1	A23S	2680	C
1	A23S	2686	U
1	A23S	2687	U
1	A23S	2688	A
1	A23S	2690	A
1	A23S	2691	G

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Mol	Chain	Res	Type
1	A23S	2693	G
1	A23S	2694	G
1	A23S	2696	G
1	A23S	2697	C
1	A23S	2698	G
1	A23S	2700	G
1	A23S	2702	G
1	A23S	2704	U
1	A23S	2705	G
1	A23S	2706	G
1	A23S	2709	U
1	A23S	2710	U
1	A23S	2721	G
1	A23S	2723	G
1	A23S	2725	C
1	A23S	2726	A
1	A23S	2727	G
1	A23S	2731	G
1	A23S	2732	G
1	A23S	2733	A
1	A23S	2734	C
1	A23S	2735	U
1	A23S	2737	U
1	A23S	2738	A
1	A23S	2745	G
1	A23S	2749	G
1	A23S	2750	U
1	A23S	2751	G
1	A23S	2752	C
1	A23S	2753	G
1	A23S	2754	G
1	A23S	2755	A
1	A23S	2757	C
1	A23S	2760	U
1	A23S	2761	U
1	A23S	2762	G
1	A23S	2763	A
1	A23S	2764	G
1	A23S	2766	G
1	A23S	2768	A
1	A23S	2769	A
1	A23S	2770	G

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Mol	Chain	Res	Type
1	A23S	2776	C
1	A23S	2779	A
1	A23S	2780	G
1	A23S	2781	U
1	A23S	2786	G
1	A23S	2790	A
1	A23S	2791	A
1	A23S	2792	C
1	A23S	2793	A
1	A23S	2794	G
1	A23S	2807	U
1	A23S	2814	U
1	A23S	2815	A
1	A23S	2825	C
1	A23S	2826	G
1	A23S	2835	A
1	A23S	2836	U
1	A23S	2837	G
1	A23S	2838	C
1	A23S	2846	C
1	A23S	2847	C
1	A23S	2848	G
1	A23S	2849	C
1	A23S	2850	G
1	A23S	2855	G
1	A23S	2856	A
1	A23S	2866	G
1	A23S	2870	A
1	A23S	2873	G
1	A23S	2874	C
1	A23S	2877	C
1	A23S	2879	A
1	A23S	2880	A
1	A23S	2882	C
1	A23S	2886	A
1	A23S	2887	A
1	A23S	2888	C
1	A23S	2891	C
1	A23S	2896	C
1	A23S	2897	U
1	A23S	2898	A
1	A23S	2899	A

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Mol	Chain	Res	Type
1	A23S	2900	A
1	A23S	2901	A
1	A23S	2902	G
1	A23S	2903	A
1	A23S	2904	G
1	A23S	2911	A
1	A23S	2912	G
1	A23S	2913	G
1	A23S	2924	G
1	A23S	2927	C
1	A23S	2934	U
1	A23S	2935	A
1	A23S	2937	A
1	A23S	2939	G
1	A23S	2940	A
1	A23S	2946	U
1	A23S	2947	U
1	A23S	2948	G
1	A23S	2949	A
1	A23S	2954	G
1	A23S	2959	G
1	A23S	2961	U
1	A23S	2963	U
1	A23S	2965	A
1	A23S	2970	C
1	A23S	2973	G
1	A23S	2976	U
1	A23S	2978	U
1	A23S	2979	A
1	A23S	2983	C
1	A23S	2993	U
1	A23S	2994	A
1	A23S	2995	G
1	A23S	2999	G
1	A23S	3000	C
1	A23S	3005	C
1	A23S	3006	C
1	A23S	3011	C
1	A23S	3015	C
1	A23S	3019	C
1	A23S	3020	C
2	A16S	9	U

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Mol	Chain	Res	Type
2	A16S	11	C
2	A16S	18	A
2	A16S	28	A
2	A16S	32	G
2	A16S	37	C
2	A16S	39	A
2	A16S	41	C
2	A16S	45	G
2	A16S	46	U
2	A16S	47	A
2	A16S	48	G
2	A16S	49	G
2	A16S	50	G
2	A16S	51	A
2	A16S	52	U
2	A16S	53	A
2	A16S	54	A
2	A16S	55	G
2	A16S	60	G
2	A16S	61	G
2	A16S	62	G
2	A16S	67	U
2	A16S	69	A
2	A16S	72	C
2	A16S	74	C
2	A16S	78	G
2	A16S	79	G
2	A16S	80	U
2	A16S	81	A
2	A16S	82	A
2	A16S	83	G
2	A16S	84	G
2	A16S	85	G
2	A16S	86	A
2	A16S	87	G
2	A16S	96	A
2	A16S	103	A
2	A16S	104	G
2	A16S	105	U
2	A16S	106	A
2	A16S	107	A
2	A16S	108	C

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Mol	Chain	Res	Type
2	A16S	109	A
2	A16S	111	G
2	A16S	112	U
2	A16S	113	G
2	A16S	114	G
2	A16S	117	A
2	A16S	118	A
2	A16S	119	C
2	A16S	120	C
2	A16S	121	U
2	A16S	122	A
2	A16S	124	C
2	A16S	130	G
2	A16S	131	A
2	A16S	132	C
2	A16S	139	A
2	A16S	144	C
2	A16S	145	G
2	A16S	146	G
2	A16S	148	A
2	A16S	149	A
2	A16S	150	A
2	A16S	151	C
2	A16S	152	U
2	A16S	159	A
2	A16S	166	G
2	A16S	167	A
2	A16S	168	U
2	A16S	173	A
2	A16S	178	G
2	A16S	181	C
2	A16S	183	G
2	A16S	184	G
2	A16S	185	A
2	A16S	186	A
2	A16S	187	U
2	A16S	197	C
2	A16S	198	C
2	A16S	200	A
2	A16S	201	A
2	A16S	202	A
2	A16S	203	G

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Mol	Chain	Res	Type
2	A16S	211	G
2	A16S	212	G
2	A16S	214	U
2	A16S	215	A
2	A16S	216	U
2	A16S	217	U
2	A16S	218	U
2	A16S	219	C
2	A16S	220	C
2	A16S	221	C
2	A16S	222	G
2	A16S	224	U
2	A16S	225	U
2	A16S	226	G
2	A16S	230	C
2	A16S	231	C
2	A16S	232	G
2	A16S	233	C
2	A16S	240	A
2	A16S	247	U
2	A16S	252	C
2	A16S	256	U
2	A16S	257	C
2	A16S	259	G
2	A16S	260	G
2	A16S	263	G
2	A16S	269	G
2	A16S	271	G
2	A16S	272	G
2	A16S	274	A
2	A16S	275	A
2	A16S	276	A
2	A16S	277	G
2	A16S	278	G
2	A16S	279	C
2	A16S	282	A
2	A16S	286	A
2	A16S	287	A
2	A16S	289	C
2	A16S	292	U
2	A16S	293	A
2	A16S	294	A

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Mol	Chain	Res	Type
2	A16S	300	A
2	A16S	301	G
2	A16S	302	G
2	A16S	310	G
2	A16S	311	A
2	A16S	312	A
2	A16S	313	G
2	A16S	315	G
2	A16S	318	A
2	A16S	319	G
2	A16S	320	C
2	A16S	323	C
2	A16S	328	U
2	A16S	337	A
2	A16S	339	A
2	A16S	340	C
2	A16S	341	A
2	A16S	342	A
2	A16S	344	G
2	A16S	345	G
2	A16S	346	C
2	A16S	357	C
2	A16S	359	G
2	A16S	362	C
2	A16S	363	G
2	A16S	364	C
2	A16S	365	A
2	A16S	366	C
2	A16S	367	C
2	A16S	369	G
2	A16S	377	A
2	A16S	378	C
2	A16S	379	G
2	A16S	380	U
2	A16S	381	C
2	A16S	382	C
2	A16S	385	A
2	A16S	388	G
2	A16S	395	A
2	A16S	400	G
2	A16S	401	A
2	A16S	404	G

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Mol	Chain	Res	Type
2	A16S	406	G
2	A16S	410	C
2	A16S	418	G
2	A16S	419	C
2	A16S	420	C
2	A16S	428	G
2	A16S	435	U
2	A16S	436	U
2	A16S	437	U
2	A16S	438	C
2	A16S	443	C
2	A16S	445	C
2	A16S	446	U
2	A16S	447	A
2	A16S	448	A
2	A16S	449	A
2	A16S	450	A
2	A16S	451	A
2	A16S	452	G
2	A16S	454	C
2	A16S	455	G
2	A16S	456	G
2	A16S	457	G
2	A16S	458	G
2	A16S	460	A
2	A16S	461	A
2	A16S	463	A
2	A16S	465	G
2	A16S	472	G
2	A16S	473	C
2	A16S	474	A
2	A16S	475	A
2	A16S	476	G
2	A16S	477	U
2	A16S	479	U
2	A16S	484	U
2	A16S	485	C
2	A16S	487	G
2	A16S	488	C
2	A16S	490	G
2	A16S	493	G
2	A16S	494	C

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Mol	Chain	Res	Type
2	A16S	495	G
2	A16S	496	G
2	A16S	497	U
2	A16S	499	A
2	A16S	500	U
2	A16S	511	C
2	A16S	513	A
2	A16S	514	G
2	A16S	517	G
2	A16S	524	U
2	A16S	525	G
2	A16S	526	A
2	A16S	530	C
2	A16S	532	G
2	A16S	538	A
2	A16S	539	A
2	A16S	540	A
2	A16S	541	G
2	A16S	542	C
2	A16S	543	G
2	A16S	554	G
2	A16S	562	A
2	A16S	570	C
2	A16S	573	A
2	A16S	576	G
2	A16S	586	C
2	A16S	593	G
2	A16S	594	G
2	A16S	597	C
2	A16S	598	U
2	A16S	599	G
2	A16S	600	G
2	A16S	615	G
2	A16S	619	A
2	A16S	620	G
2	A16S	627	G
2	A16S	631	A
2	A16S	635	G
2	A16S	641	U
2	A16S	647	C
2	A16S	653	A
2	A16S	654	G

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Mol	Chain	Res	Type
2	A16S	659	G
2	A16S	660	A
2	A16S	661	A
2	A16S	663	U
2	A16S	667	U
2	A16S	668	A
2	A16S	669	G
2	A16S	684	A
2	A16S	685	C
2	A16S	689	U
2	A16S	690	G
2	A16S	694	G
2	A16S	695	A
2	A16S	697	G
2	A16S	700	C
2	A16S	706	U
2	A16S	707	A
2	A16S	714	G
2	A16S	717	C
2	A16S	719	A
2	A16S	721	G
2	A16S	725	A
2	A16S	731	G
2	A16S	733	A
2	A16S	736	C
2	A16S	737	C
2	A16S	738	G
2	A16S	740	G
2	A16S	742	C
2	A16S	743	A
2	A16S	747	A
2	A16S	748	A
2	A16S	756	A
2	A16S	759	U
2	A16S	760	A
2	A16S	767	U
2	A16S	771	C
2	A16S	774	G
2	A16S	779	U
2	A16S	781	A
2	A16S	782	A
2	A16S	783	C

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Mol	Chain	Res	Type
2	A16S	784	G
2	A16S	785	A
2	A16S	786	U
2	A16S	787	G
2	A16S	794	A
2	A16S	795	G
2	A16S	798	G
2	A16S	799	U
2	A16S	810	U
2	A16S	811	A
2	A16S	812	G
2	A16S	813	A
2	A16S	825	G
2	A16S	827	C
2	A16S	829	C
2	A16S	838	C
2	A16S	841	U
2	A16S	842	A
2	A16S	846	C
2	A16S	848	G
2	A16S	861	U
2	A16S	869	C
2	A16S	870	A
2	A16S	872	G
2	A16S	873	A
2	A16S	884	A
2	A16S	891	U
2	A16S	895	G
2	A16S	896	G
2	A16S	902	C
2	A16S	904	C
2	A16S	905	C
2	A16S	916	G
2	A16S	921	U
2	A16S	926	C
2	A16S	927	U
2	A16S	930	A
2	A16S	931	U
2	A16S	932	U
2	A16S	933	G
2	A16S	936	G
2	A16S	937	U

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Mol	Chain	Res	Type
2	A16S	938	C
2	A16S	940	A
2	A16S	941	C
2	A16S	942	G
2	A16S	943	C
2	A16S	945	U
2	A16S	946	G
2	A16S	947	G
2	A16S	948	A
2	A16S	949	A
2	A16S	950	U
2	A16S	952	U
2	A16S	953	U
2	A16S	955	C
2	A16S	959	G
2	A16S	961	G
2	A16S	962	A
2	A16S	963	G
2	A16S	969	A
2	A16S	970	G
2	A16S	971	U
2	A16S	972	A
2	A16S	973	U
2	A16S	974	G
2	A16S	975	A
2	A16S	976	C
2	A16S	977	G
2	A16S	981	A
2	A16S	982	G
2	A16S	986	A
2	A16S	987	A
2	A16S	988	C
2	A16S	989	G
2	A16S	990	A
2	A16S	995	G
2	A16S	998	U
2	A16S	1000	A
2	A16S	1001	C
2	A16S	1002	U
2	A16S	1004	G
2	A16S	1005	C
2	A16S	1010	A

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Mol	Chain	Res	Type
2	A16S	1014	G
2	A16S	1017	G
2	A16S	1018	C
2	A16S	1019	A
2	A16S	1023	C
2	A16S	1024	C
2	A16S	1032	G
2	A16S	1033	C
2	A16S	1038	G
2	A16S	1042	U
2	A16S	1043	G
2	A16S	1044	A
2	A16S	1045	A
2	A16S	1047	U
2	A16S	1048	G
2	A16S	1049	U
2	A16S	1050	C
2	A16S	1056	A
2	A16S	1057	A
2	A16S	1058	G
2	A16S	1059	U
2	A16S	1062	G
2	A16S	1064	C
2	A16S	1065	A
2	A16S	1066	A
2	A16S	1069	A
2	A16S	1070	G
2	A16S	1073	A
2	A16S	1074	G
2	A16S	1075	A
2	A16S	1076	C
2	A16S	1081	A
2	A16S	1082	C
2	A16S	1083	C
2	A16S	1088	G
2	A16S	1089	U
2	A16S	1090	U
2	A16S	1091	G
2	A16S	1092	G
2	A16S	1093	U
2	A16S	1094	A
2	A16S	1095	U

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Mol	Chain	Res	Type
2	A16S	1097	C
2	A16S	1098	U
2	A16S	1099	G
2	A16S	1101	A
2	A16S	1102	C
2	A16S	1105	C
2	A16S	1107	G
2	A16S	1109	C
2	A16S	1110	C
2	A16S	1111	A
2	A16S	1112	G
2	A16S	1113	A
2	A16S	1115	C
2	A16S	1117	A
2	A16S	1118	C
2	A16S	1119	A
2	A16S	1121	U
2	A16S	1123	G
2	A16S	1128	A
2	A16S	1129	C
2	A16S	1130	U
2	A16S	1131	G
2	A16S	1135	G
2	A16S	1136	C
2	A16S	1137	G
2	A16S	1138	U
2	A16S	1139	A
2	A16S	1148	G
2	A16S	1149	A
2	A16S	1151	G
2	A16S	1152	G
2	A16S	1153	A
2	A16S	1154	G
2	A16S	1155	G
2	A16S	1156	G
2	A16S	1157	G
2	A16S	1158	G
2	A16S	1159	C
2	A16S	1160	C
2	A16S	1161	A
2	A16S	1163	G
2	A16S	1166	A

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Mol	Chain	Res	Type
2	A16S	1171	A
2	A16S	1172	G
2	A16S	1175	U
2	A16S	1181	G
2	A16S	1182	A
2	A16S	1183	A
2	A16S	1186	U
2	A16S	1187	C
2	A16S	1188	C
2	A16S	1189	C
2	A16S	1191	G
2	A16S	1193	C
2	A16S	1195	G
2	A16S	1196	C
2	A16S	1197	A
2	A16S	1198	C
2	A16S	1200	C
2	A16S	1206	A
2	A16S	1207	C
2	A16S	1208	A
2	A16S	1209	A
2	A16S	1211	G
2	A16S	1212	G
2	A16S	1213	C
2	A16S	1214	A
2	A16S	1215	G
2	A16S	1217	G
2	A16S	1218	A
2	A16S	1219	C
2	A16S	1223	G
2	A16S	1224	G
2	A16S	1225	G
2	A16S	1226	A
2	A16S	1228	G
2	A16S	1230	U
2	A16S	1237	A
2	A16S	1238	A
2	A16S	1239	A
2	A16S	1240	G
2	A16S	1244	G
2	A16S	1248	C
2	A16S	1249	A

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Mol	Chain	Res	Type
2	A16S	1250	A
2	A16S	1251	U
2	A16S	1252	C
2	A16S	1253	C
2	A16S	1254	U
2	A16S	1255	U
2	A16S	1256	A
2	A16S	1259	C
2	A16S	1268	A
2	A16S	1269	G
2	A16S	1270	U
2	A16S	1271	U
2	A16S	1272	G
2	A16S	1274	G
2	A16S	1277	C
2	A16S	1280	G
2	A16S	1282	G
2	A16S	1285	G
2	A16S	1286	A
2	A16S	1287	A
2	A16S	1288	A
2	A16S	1289	C
2	A16S	1290	C
2	A16S	1292	G
2	A16S	1293	C
2	A16S	1294	C
2	A16S	1295	C
2	A16S	1296	U
2	A16S	1298	G
2	A16S	1299	U
2	A16S	1300	G
2	A16S	1309	A
2	A16S	1314	U
2	A16S	1316	G
2	A16S	1317	U
2	A16S	1326	G
2	A16S	1327	U
2	A16S	1328	C
2	A16S	1329	A
2	A16S	1330	A
2	A16S	1331	C
2	A16S	1336	C

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Mol	Chain	Res	Type
2	A16S	1343	A
2	A16S	1346	A
2	A16S	1347	C
2	A16S	1348	G
2	A16S	1350	C
2	A16S	1351	C
2	A16S	1352	C
2	A16S	1353	U
2	A16S	1354	G
2	A16S	1356	U
2	A16S	1363	A
2	A16S	1364	C
2	A16S	1366	C
2	A16S	1367	A
2	A16S	1368	C
2	A16S	1369	C
2	A16S	1370	G
2	A16S	1372	C
2	A16S	1373	C
2	A16S	1375	U
2	A16S	1377	G
2	A16S	1378	C
2	A16S	1379	U
2	A16S	1388	G
2	A16S	1390	G
2	A16S	1394	A
2	A16S	1399	G
2	A16S	1401	G
2	A16S	1402	A
2	A16S	1414	A
2	A16S	1415	U
2	A16S	1416	A
2	A16S	1417	A
2	A16S	1419	U
2	A16S	1451	A
2	A16S	1452	G
2	A16S	1453	A
2	A16S	1454	A
2	A16S	1455	G
2	A16S	1458	G
2	A16S	1463	A
2	A16S	1464	A

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Mol	Chain	Res	Type
2	A16S	1465	G
2	A16S	1466	G
2	A16S	1468	A
2	A16S	1478	G
2	A16S	1479	A
2	A16S	1480	A
2	A16S	1481	C
2	A16S	1490	G
2	A16S	1491	G
2	A16S	1493	U
2	A16S	1494	C
2	A16S	1495	A
2	A16S	1496	C
2	A16S	1497	C
2	A16S	1498	U
2	A16S	1499	C
2	A16S	1500	A
3	AATN	7	A
3	AATN	8	U
3	AATN	10	G
3	AATN	11	C
3	AATN	16	U
3	AATN	18	G
3	AATN	19	G
3	AATN	20	U
3	AATN	21	A
3	AATN	24	G
3	AATN	25	C
3	AATN	26	A
3	AATN	27	G
3	AATN	37	A
3	AATN	41	C
3	AATN	45	U
3	AATN	46	G
3	AATN	47	U
3	AATN	48	C
3	AATN	50	U
3	AATN	52	G
3	AATN	56	C
3	AATN	57	G
3	AATN	58	A
3	AATN	59	U

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Mol	Chain	Res	Type
3	AATN	60	U
3	AATN	61	C
3	AATN	64	A
3	AATN	65	G
3	AATN	70	G
3	AATN	73	A
3	AATN	74	C
3	AATN	75	C
4	A5S	4	C
4	A5S	5	C
4	A5S	10	G
4	A5S	14	A
4	A5S	15	U
4	A5S	17	G
4	A5S	25	G
4	A5S	30	A
4	A5S	34	G
4	A5S	36	A
4	A5S	41	U
4	A5S	42	U
4	A5S	43	U
4	A5S	46	A
4	A5S	47	A
4	A5S	49	C
4	A5S	52	G
4	A5S	53	A
4	A5S	55	G
4	A5S	56	U
4	A5S	58	A
4	A5S	59	A
4	A5S	60	G
4	A5S	72	A
4	A5S	80	C
4	A5S	86	A
4	A5S	87	U
4	A5S	95	G
4	A5S	101	C
4	A5S	102	A
4	A5S	103	G
4	A5S	107	C
4	A5S	113	G
4	A5S	114	C

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Mol	Chain	Res	Type
4	A5S	117	G
4	A5S	118	G
4	A5S	119	A
4	A5S	120	U
3	APTN	7	A
3	APTN	8	U
3	APTN	17	C
3	APTN	18	G
3	APTN	19	G
3	APTN	20	U
3	APTN	21	A
3	APTN	22	G
3	APTN	23	A
3	APTN	30	G
3	APTN	42	C
3	APTN	48	C
3	APTN	49	C
3	APTN	50	U
3	APTN	52	G
3	APTN	58	A
3	APTN	59	U
3	APTN	61	C
3	APTN	64	A
3	APTN	65	G
3	APTN	66	U
3	APTN	67	C
3	APTN	74	C
3	APTN	76	A
3	AETN	2	C
3	AETN	3	C
3	AETN	7	A
3	AETN	8	U
3	AETN	9	A
3	AETN	10	G
3	AETN	13	C
3	AETN	14	A
3	AETN	15	G
3	AETN	16	U
3	AETN	17	C
3	AETN	19	G
3	AETN	20	U
3	AETN	21	A

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Mol	Chain	Res	Type
3	AETN	22	G
3	AETN	26	A
3	AETN	32	U
3	AETN	34	G
3	AETN	39	U
3	AETN	43	C
3	AETN	44	G
3	AETN	45	U
3	AETN	46	G
3	AETN	47	U
3	AETN	48	C
3	AETN	49	C
3	AETN	54	U
3	AETN	59	U
3	AETN	60	U
3	AETN	61	C
3	AETN	65	G
3	AETN	67	C
3	AETN	68	C
3	AETN	70	G
3	AETN	74	C
3	AETN	76	A
67	AMRN	4	U

All (124) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A23S	73	G
1	A23S	127	U
1	A23S	280	G
1	A23S	303	C
1	A23S	336	A
1	A23S	402	A
1	A23S	466	A
1	A23S	523	A
1	A23S	534	A
1	A23S	573	A
1	A23S	587	A
1	A23S	667	A
1	A23S	736	A
1	A23S	740	G
1	A23S	987	G

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Mol	Chain	Res	Type
1	A23S	1003	G
1	A23S	1177	U
1	A23S	1198	G
1	A23S	1244	C
1	A23S	1249	C
1	A23S	1256	G
1	A23S	1270	U
1	A23S	1271	U
1	A23S	1389	A
1	A23S	1466	A
1	A23S	1500	U
1	A23S	1506	C
1	A23S	1529	A
1	A23S	1530	A
1	A23S	1538	A
1	A23S	1586	U
1	A23S	1646	G
1	A23S	1689	C
1	A23S	1691	U
1	A23S	1750	A
1	A23S	1796	A
1	A23S	1833	A
1	A23S	1837	U
1	A23S	1879	A
1	A23S	1905	C
1	A23S	1972	A
1	A23S	2014	G
1	A23S	2017	G
1	A23S	2081	A
1	A23S	2125	C
1	A23S	2148	C
1	A23S	2291	G
1	A23S	2308	C
1	A23S	2403	A
1	A23S	2433	C
1	A23S	2504	G
1	A23S	2572	A
1	A23S	2629	G
1	A23S	2635	U
1	A23S	2670	U
1	A23S	2677	G
1	A23S	2679	C

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Mol	Chain	Res	Type
1	A23S	2732	G
1	A23S	2761	U
1	A23S	2878	U
1	A23S	2899	A
2	A16S	47	A
2	A16S	78	G
2	A16S	108	C
2	A16S	120	C
2	A16S	138	U
2	A16S	149	A
2	A16S	182	U
2	A16S	186	A
2	A16S	214	U
2	A16S	217	U
2	A16S	220	C
2	A16S	231	C
2	A16S	262	U
2	A16S	394	A
2	A16S	446	U
2	A16S	484	U
2	A16S	541	G
2	A16S	653	A
2	A16S	742	C
2	A16S	758	A
2	A16S	759	U
2	A16S	770	U
2	A16S	778	G
2	A16S	883	A
2	A16S	929	A
2	A16S	936	G
2	A16S	961	G
2	A16S	973	U
2	A16S	987	A
2	A16S	989	G
2	A16S	1065	A
2	A16S	1074	G
2	A16S	1098	U
2	A16S	1111	A
2	A16S	1138	U
2	A16S	1151	G
2	A16S	1152	G
2	A16S	1165	C

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Mol	Chain	Res	Type
2	A16S	1171	A
2	A16S	1185	C
2	A16S	1212	G
2	A16S	1227	U
2	A16S	1254	U
2	A16S	1287	A
2	A16S	1315	A
2	A16S	1325	G
2	A16S	1329	A
2	A16S	1349	U
2	A16S	1351	C
2	A16S	1478	G
2	A16S	1498	U
3	AATN	9	A
3	AATN	10	G
3	AATN	19	G
3	AATN	69	G
4	A5S	45	G
4	A5S	86	A
3	APTN	19	G
3	AETN	2	C
3	AETN	8	U
3	AETN	44	G
3	AETN	58	A
3	AETN	59	U

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 57 ligands modelled in this entry, 57 are unknown - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

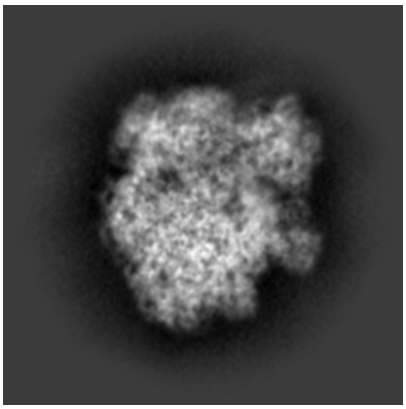
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-34863. These allow visual inspection of the internal detail of the map and identification of artifacts.

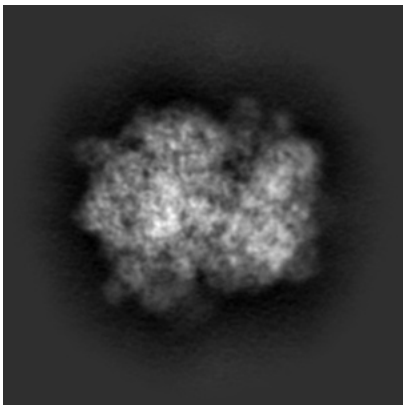
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

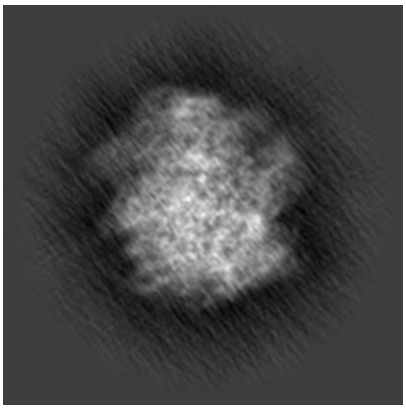
6.1.1 Primary map



X

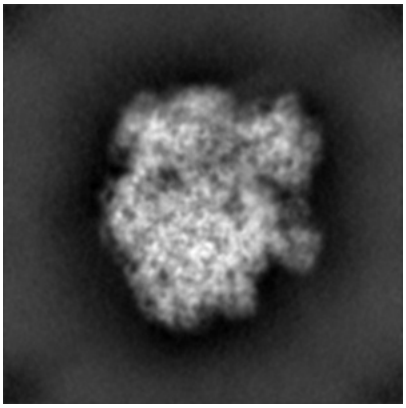


Y

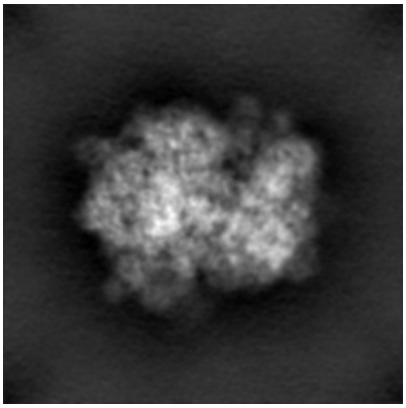


Z

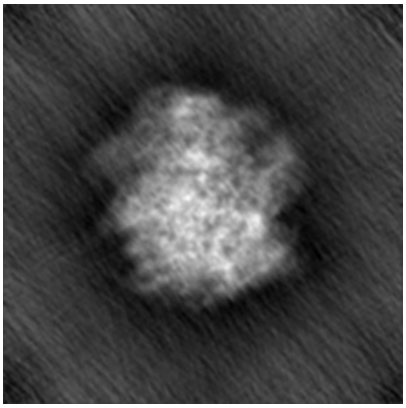
6.1.2 Raw map



X



Y

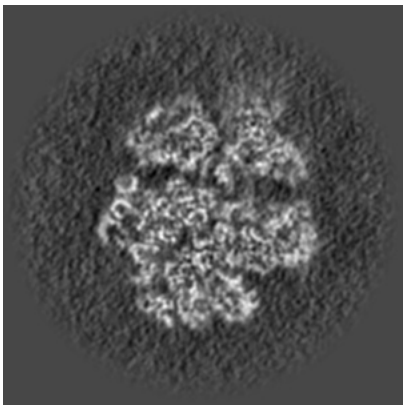


Z

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

6.2 Central slices (i)

6.2.1 Primary map



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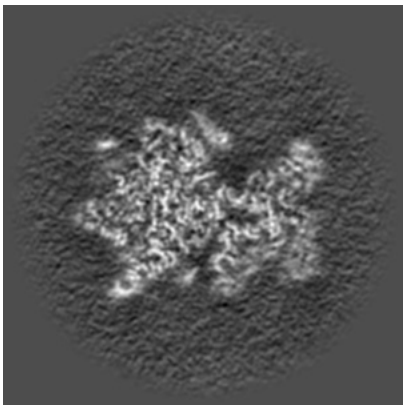
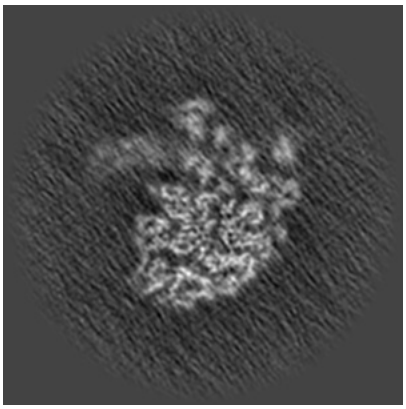
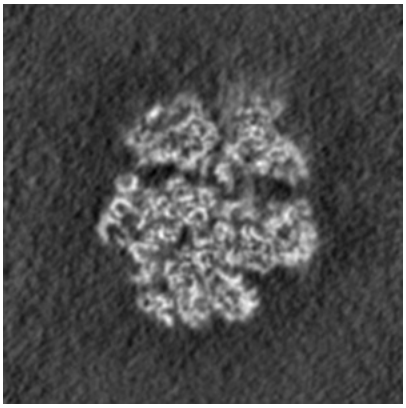


Y Index: 190

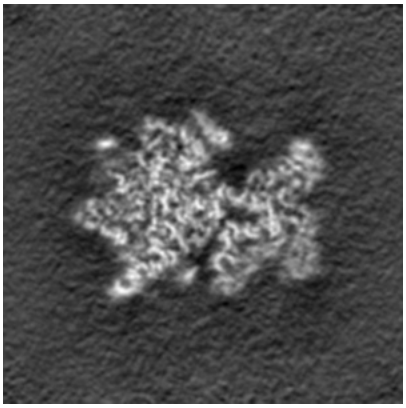


Z Index: 190

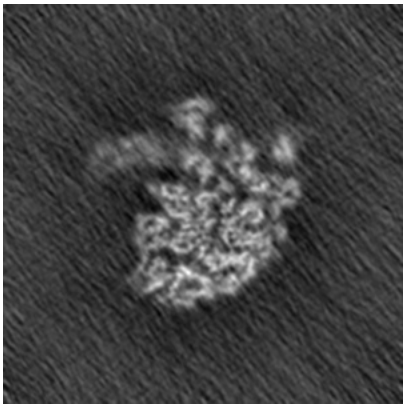
6.2.2 Raw map



X Index: 190



Y Index: 190

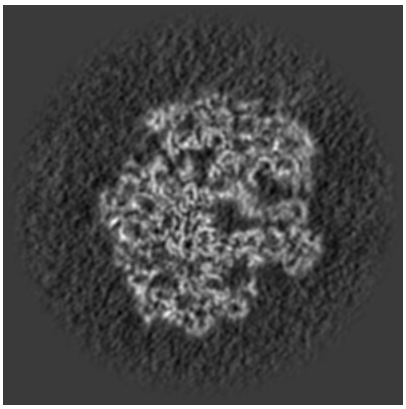


Z Index: 190

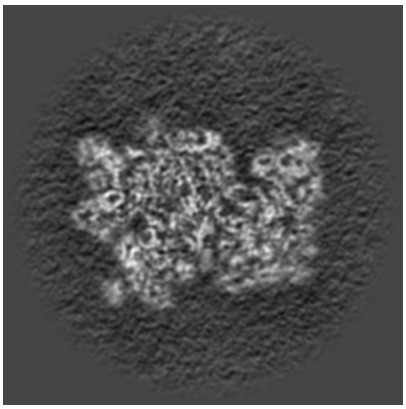
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

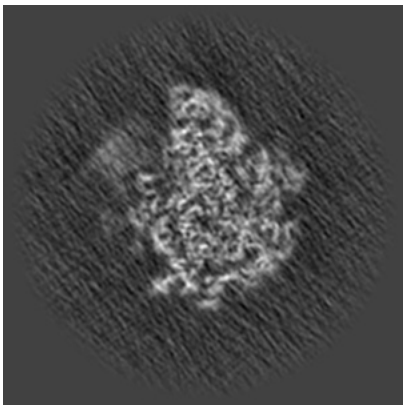
6.3.1 Primary map



X Index: 176

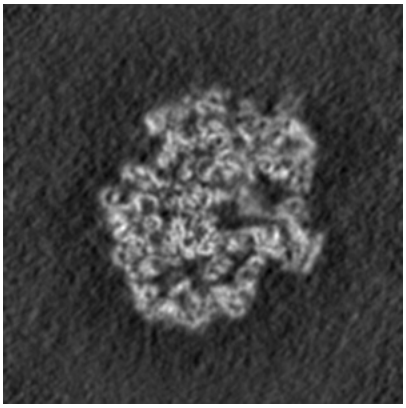


Y Index: 178

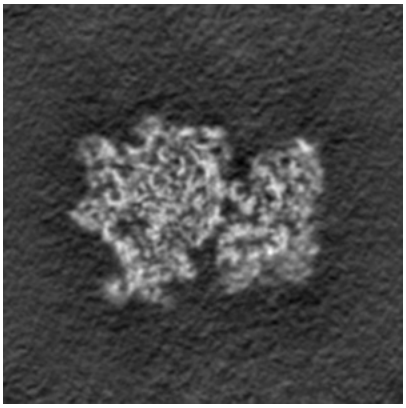


Z Index: 159

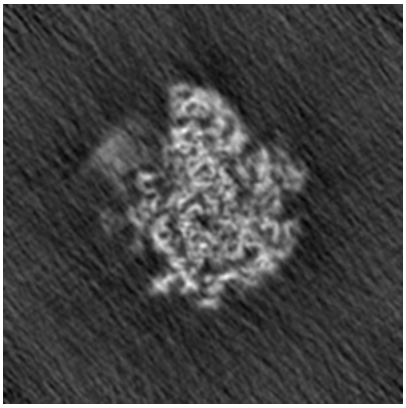
6.3.2 Raw map



X Index: 172



Y Index: 182

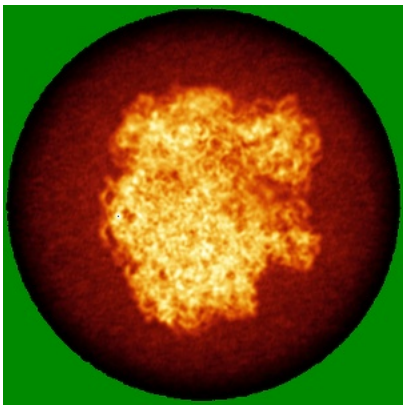


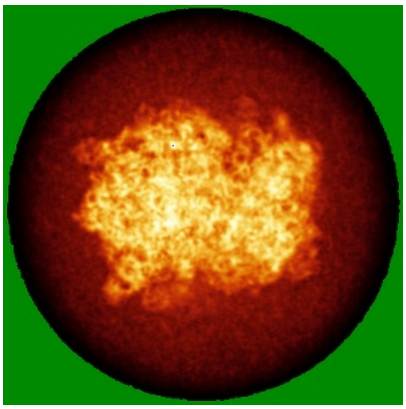
Z Index: 159

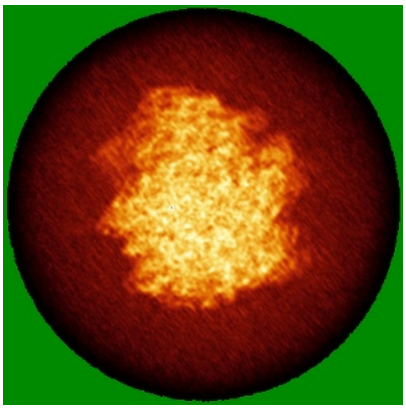
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

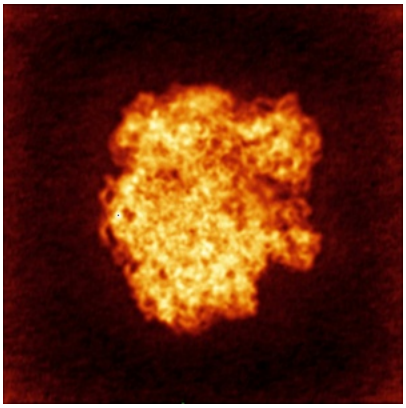
6.4.1 Primary map

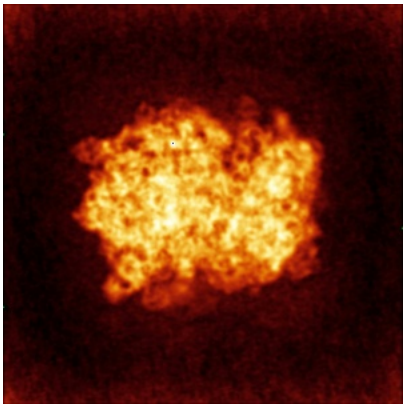

X

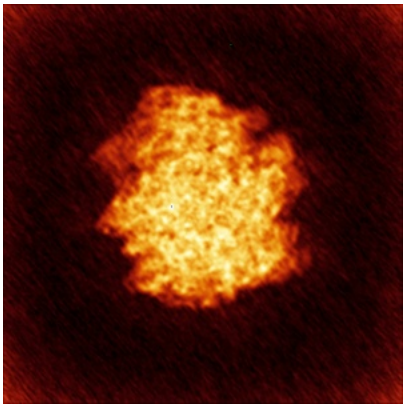

Y


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.

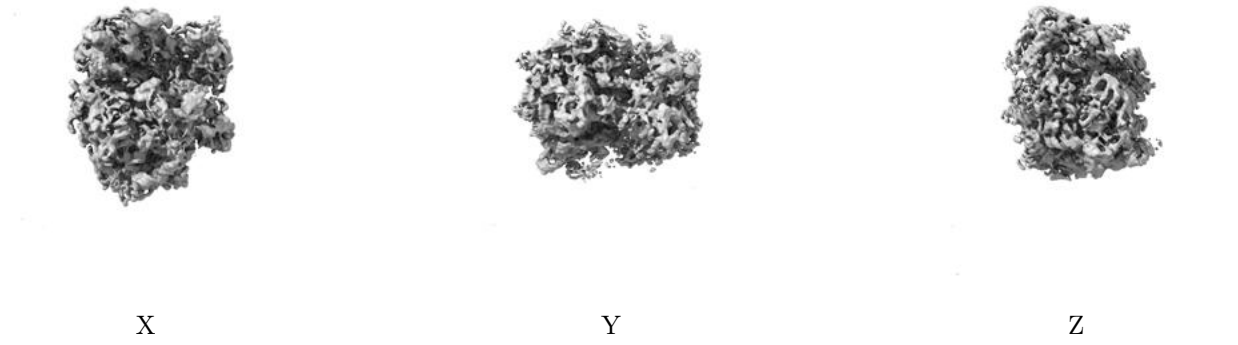
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.33. 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.

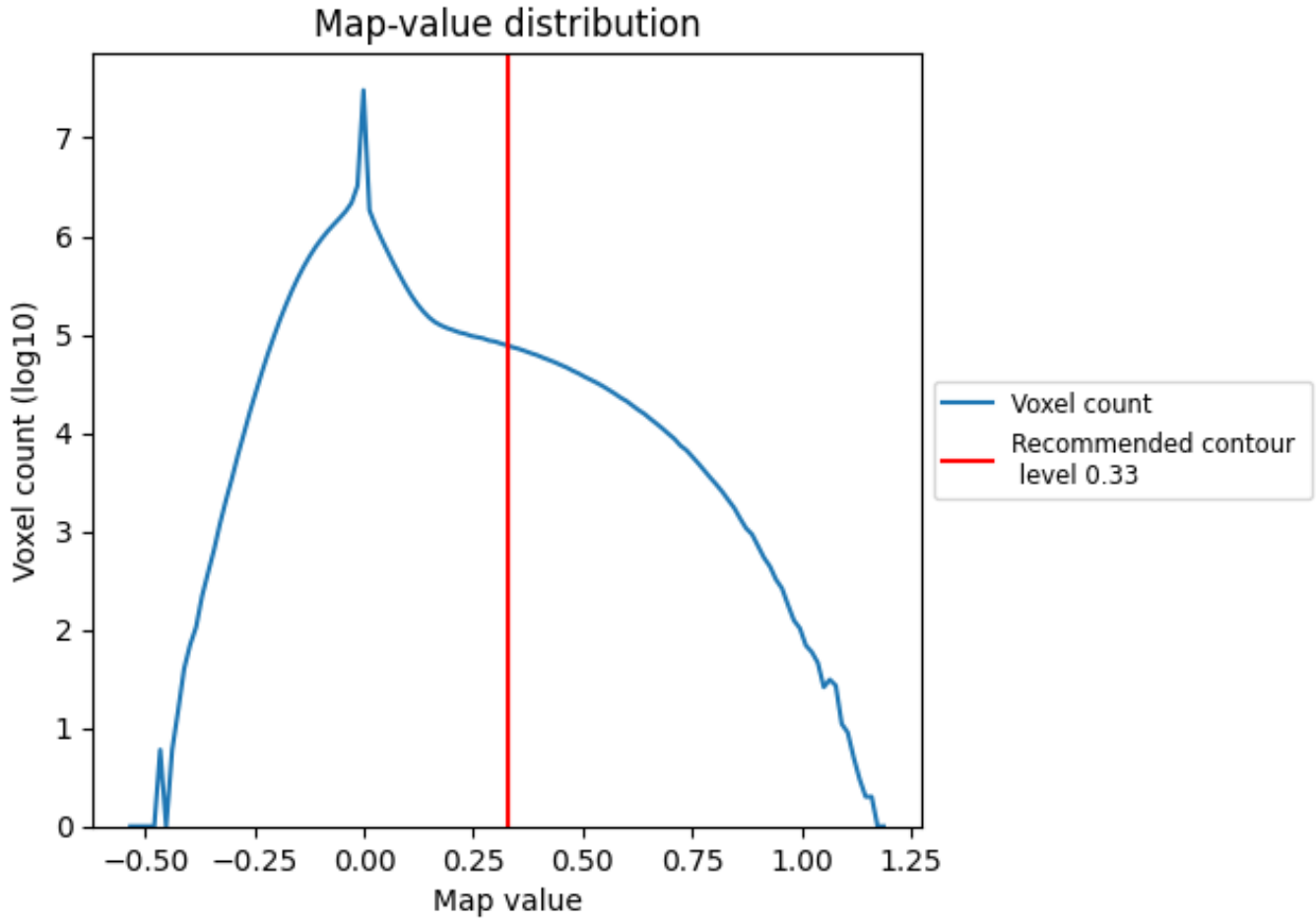
6.6 Mask visualisation (i)

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

7 Map analysis

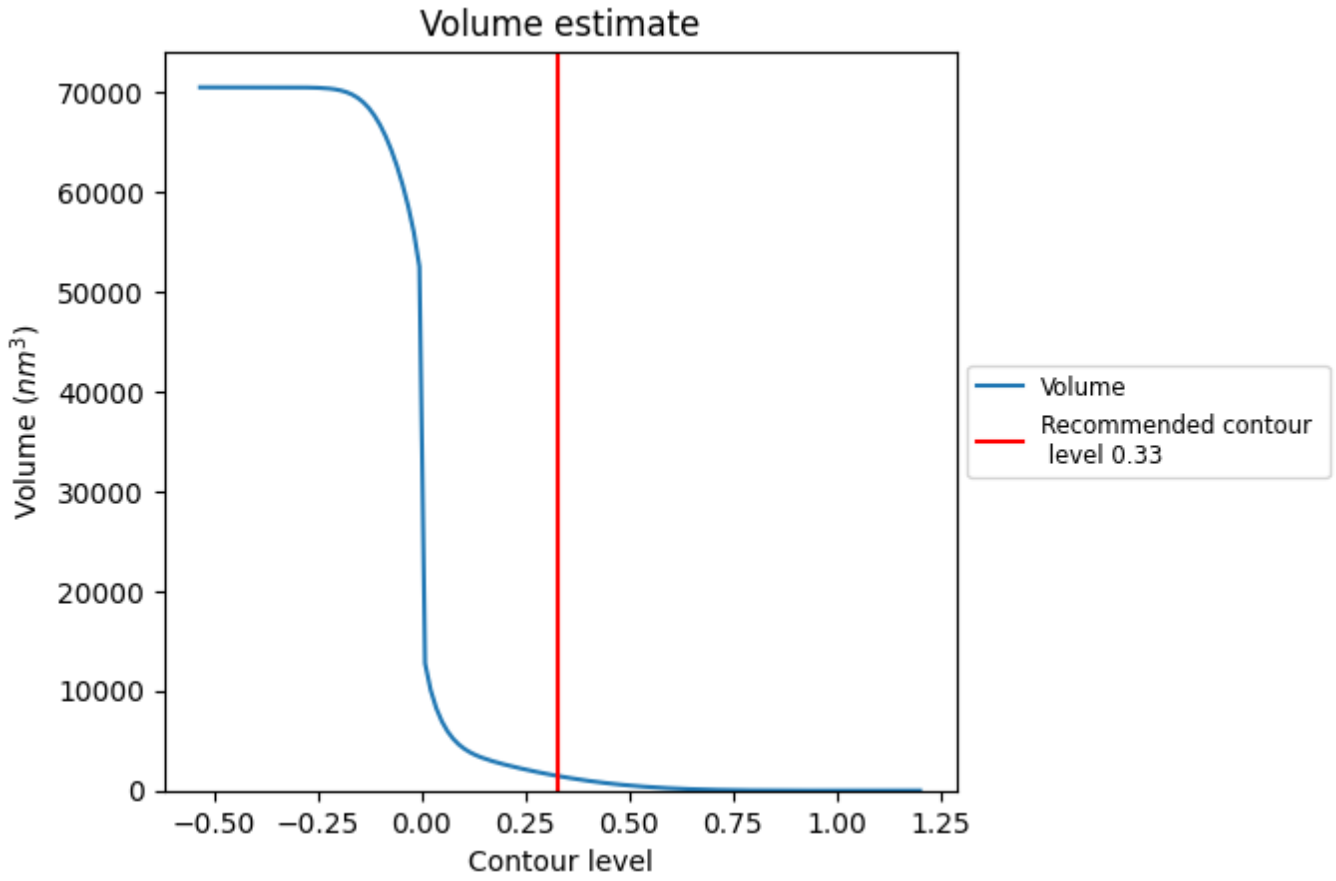
This section contains the results of statistical analysis of the map.

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.

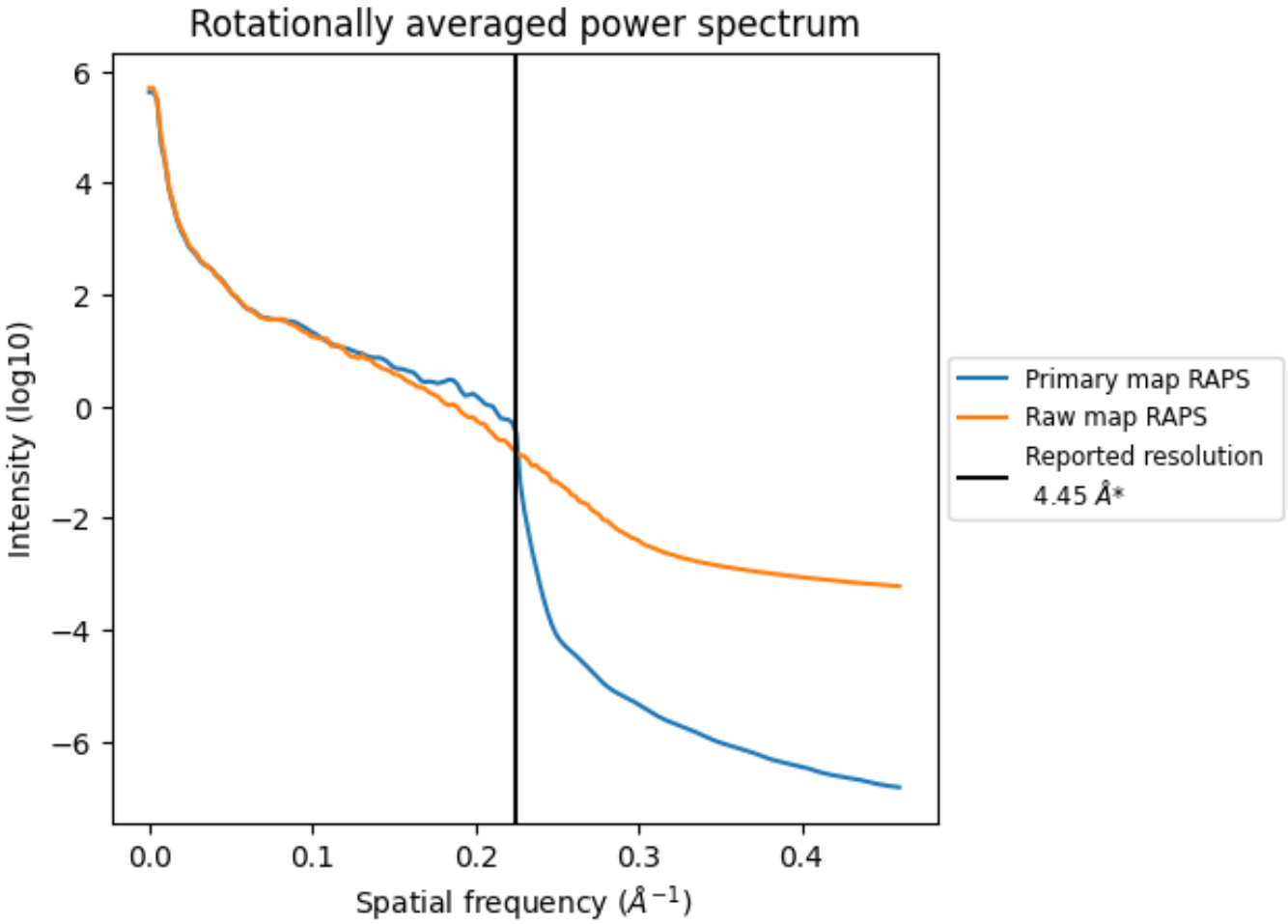
7.2 Volume estimate



The volume at the recommended contour level is 1452 nm^3; this corresponds to an approximate mass of 1311 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 (i)

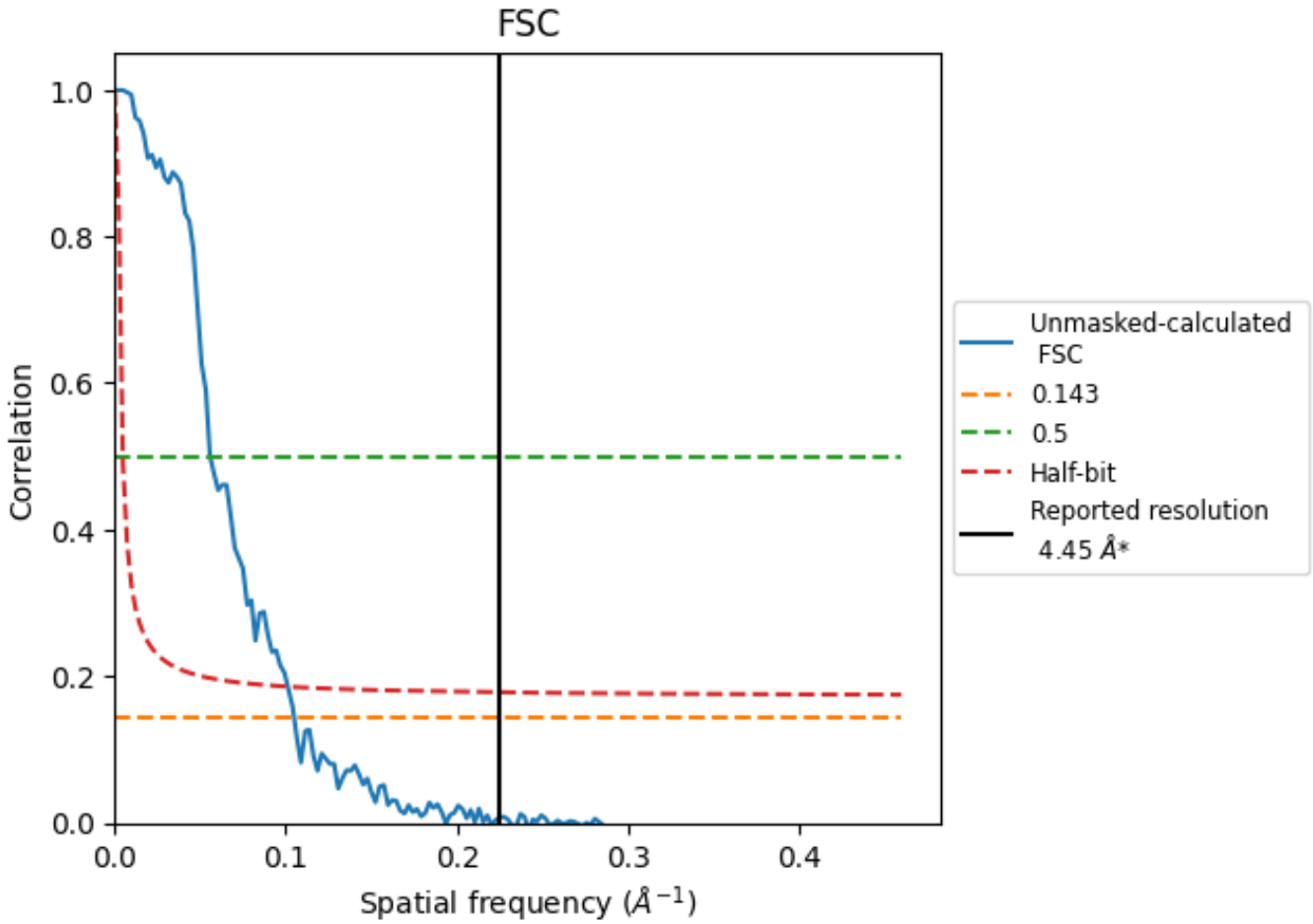


*Reported resolution corresponds to spatial frequency of 0.225 Å^{-1}

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 0.225 Å^{-1}

8.2 Resolution estimates (i)

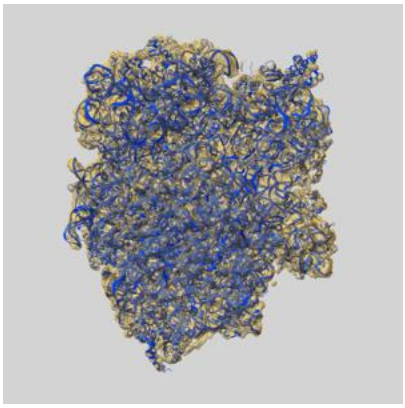
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.45	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	9.53	17.95	9.88

*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 9.53 differs from the reported value 4.45 by more than 10 %

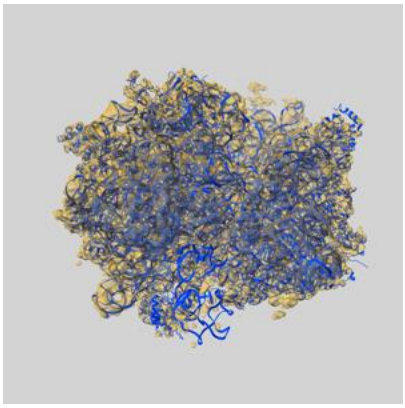
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-34863 and PDB model 8HKY. Per-residue inclusion information can be found in section 3 on page 17.

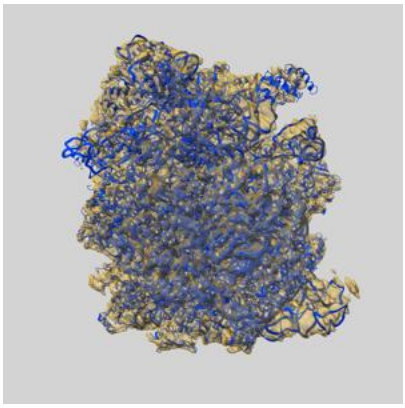
9.1 Map-model overlay



X



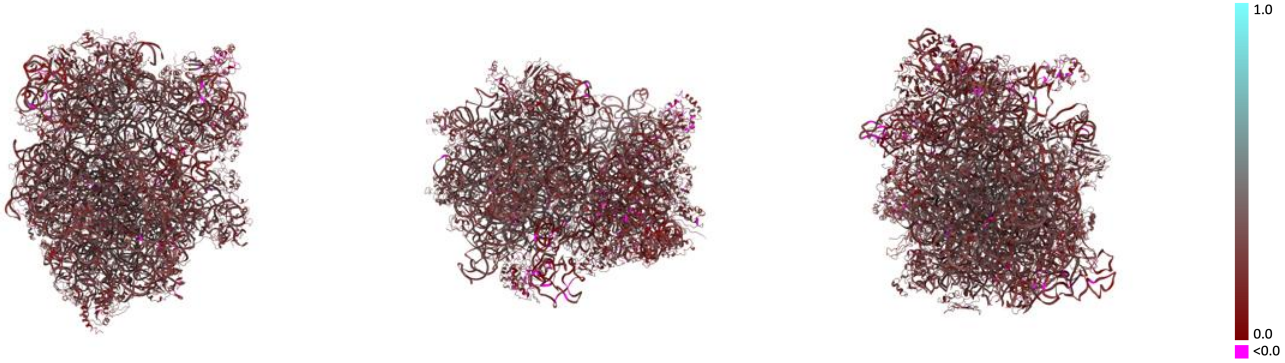
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.33 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.

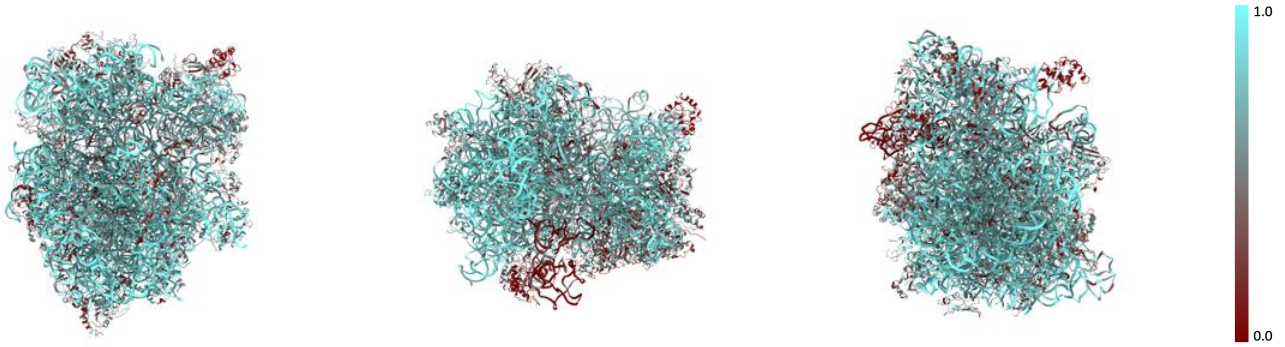
9.2 Q-score mapped to coordinate model (i)



X Y Z

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.

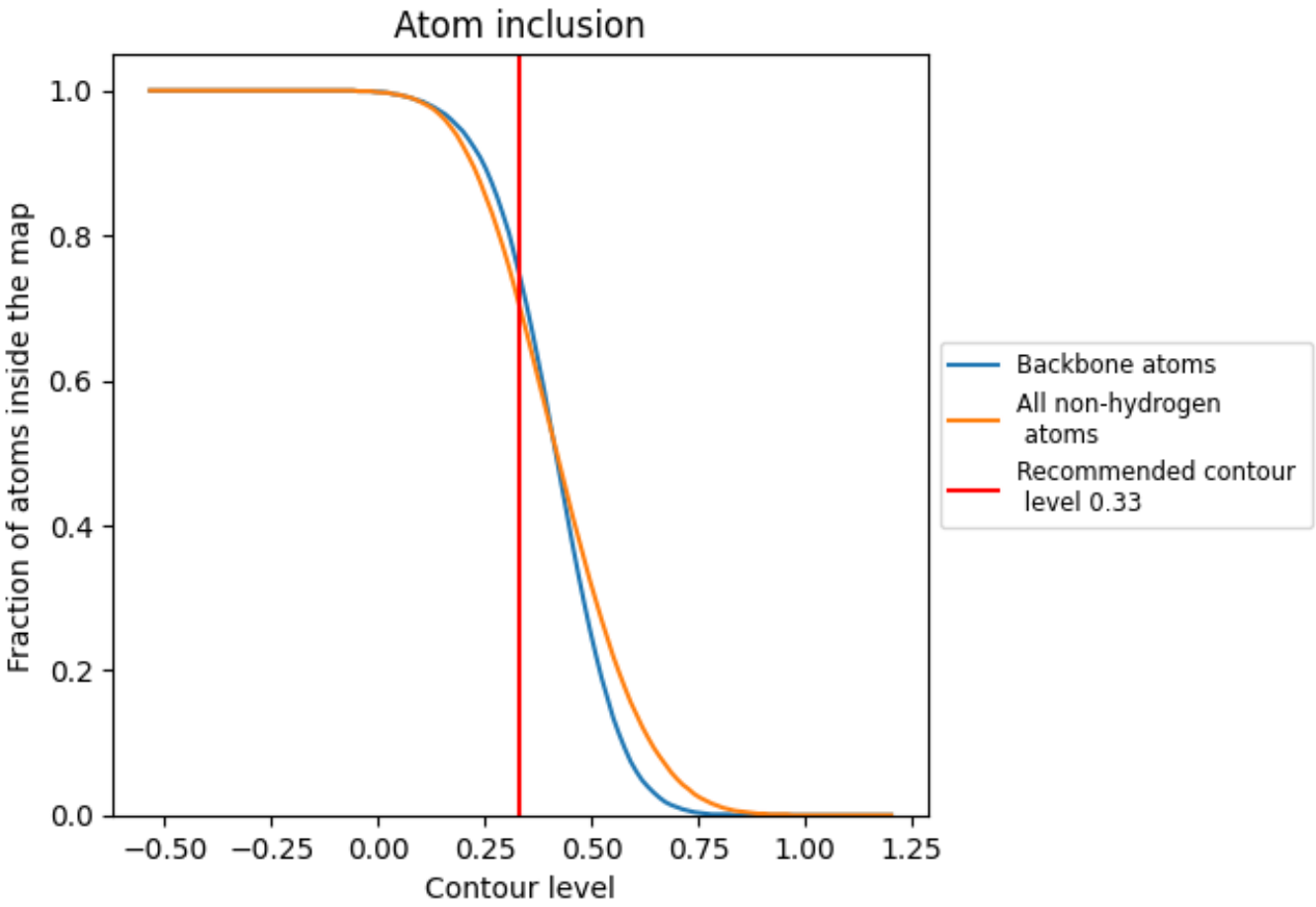
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.33).

9.4 Atom inclusion (i)



At the recommended contour level, 75% of all backbone atoms, 70% 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 (0.33) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7050	0.2700
A16S	0.8390	0.2620
A23S	0.8540	0.2930
A5S	0.9230	0.2840
AATN	0.6020	0.2530
AETN	0.1230	0.1350
AL1P	0.0780	0.1850
AL2P	0.5090	0.3170
AL3P	0.5220	0.2660
AL4P	0.6140	0.3010
AL5P	0.5130	0.2590
AL6P	0.4860	0.2600
ALX0	0.5740	0.2380
AMRN	0.7390	0.3130
APTN	0.7230	0.2360
APTP	0.0300	0.1860
AS2P	0.3820	0.2380
AS3P	0.3950	0.2640
AS4E	0.5590	0.2280
AS4P	0.5700	0.2480
AS5P	0.5710	0.2970
AS6E	0.3180	0.2040
AS7P	0.4060	0.2410
AS8E	0.4930	0.2440
AS8P	0.6580	0.2720
AS9P	0.5260	0.2330
L10E	0.5900	0.2860
L13P	0.5410	0.2450
L141	0.5100	0.2630
L142	0.4660	0.2270
L14P	0.4670	0.2940
L15E	0.5500	0.2900
L15P	0.5890	0.2770
L18E	0.6540	0.2840
L18P	0.5990	0.2580

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Chain	Atom inclusion	Q-score
L19E	0.6350	0.2780
L21E	0.5350	0.2860
L22P	0.5260	0.3020
L23P	0.5510	0.2710
L24E	0.5920	0.2720
L24P	0.6610	0.2730
L29P	0.5950	0.2620
L30E	0.6670	0.2800
L30P	0.5830	0.2520
L31E	0.5430	0.2780
L32E	0.4760	0.2850
L34E	0.5190	0.2350
L37A	0.5960	0.2930
L37E	0.6140	0.3100
L39E	0.6560	0.2590
L40E	0.1760	0.2080
L44E	0.6320	0.2940
L45A	0.5390	0.2680
L46A	0.3980	0.2810
L47A	0.0780	0.1970
L7A1	0.4230	0.2670
L7A2	0.4470	0.2280
S10P	0.3930	0.2280
S11P	0.4700	0.2580
S12P	0.3550	0.2790
S13P	0.4330	0.2080
S14P	0.5480	0.2500
S15P	0.6190	0.2460
S17E	0.2460	0.2090
S17P	0.5450	0.2850
S19E	0.4350	0.1840
S19P	0.5930	0.2320
S24E	0.4530	0.2430
S27A	0.6680	0.1690
S27E	0.6440	0.2390
S28E	0.3540	0.2380
S3AE	0.4420	0.2370
SL7A	0.1520	0.1760