



## wwPDB/EMDataBank EM Map/Model Validation Summary Report ⓘ

Jul 24, 2017 – 02:12 AM EDT

PDB ID : 5K0Y  
EMDB ID: : EMD-8190  
Title : m48S late-stage initiation complex, purified from rabbit reticulocytes lysates, displaying eIF2 ternary complex and eIF3 i and g subunits relocated to the intersubunit face  
Authors : Simonetti, A.; Brito Querido, J.; Myasnikov, A.G.; Mancera-Martinez, E.; Renaud, A.; Kuhn, L.; Hashem, Y.  
Deposited on : unknown  
Resolution : 5.80 Å(reported)  
Based on PDB ID : 4KZY

This is a wwPDB/EMDataBank EM Map/Model Validation Summary Report for a publicly released PDB/EMDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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MolProbity : 4.02b-467  
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : rb-20029824

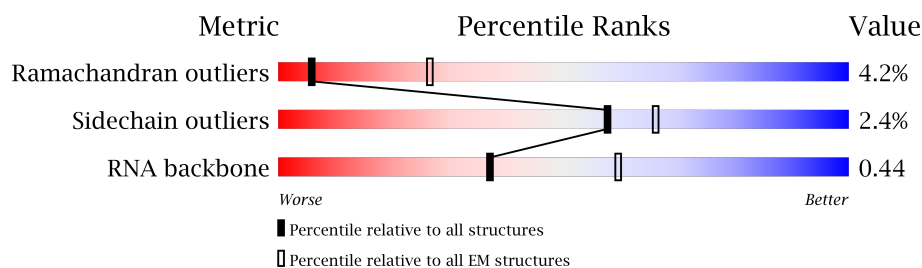
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 5.80 Å.

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




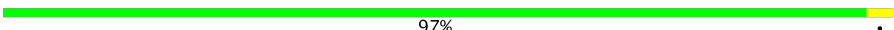
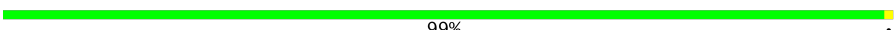







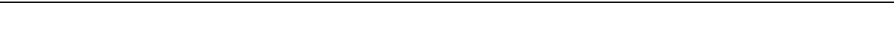

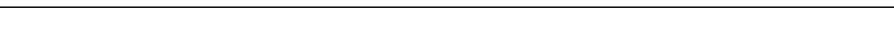
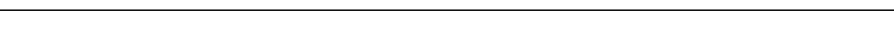
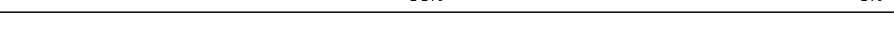

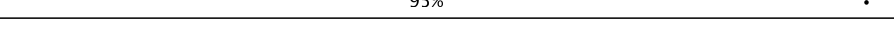
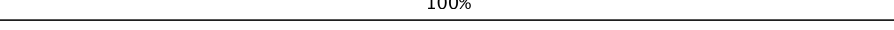
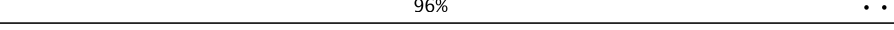
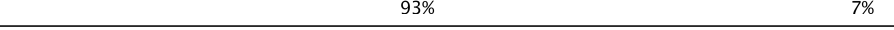
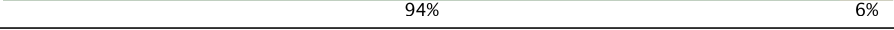

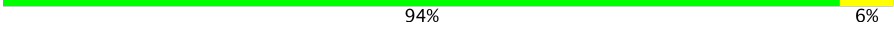


Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ .

Mol	Chain	Length	Quality of chain
1	N	75	
2	A	1776	
3	F	30	
4	P	266	
5	G	158	
6	H	141	
7	I	263	
8	J	53	
9	K	182	

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Mol	Chain	Length	Quality of chain
10	L	137	 91% 8% .
11	M	38	 97% .
12	O	77	 99% .
13	Q	142	 94% 6%
14	R	141	 92% 7% .
15	S	422	 92% 7% .
16	T	329	 94% 5%
17	U	191	 93% 6% .
18	V	59	 92% 8%
19	W	75	 93% 7%
20	X	190	 89% 9% ..
21	Y	84	 88% 11% .
22	Z	150	 97% .
23	a	129	 95% 5%
24	b	82	 82% 17% .
25	c	226	 95% .
26	d	17	 100%
27	e	126	 96% . .
28	f	208	 93% 7%
29	g	227	 94% 6%
30	h	104	 88% 12%
31	i	215	 94% 6%
32	j	136	 93% 5% .
33	k	99	 92% 8%
34	l	64	 97% .

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Mol	Chain	Length	Quality of chain
35	m	313	 92% 7% •
36	n	127	 84% 13% •
37	o	206	 94% 6%
38	p	71	 80% 17% •
39	q	237	 94% 6%
40	r	124	 90% 10%
41	s	131	 89% 10% •
42	t	98	 81% 17% •

## 2 Entry composition [i](#)

There are 42 unique types of molecules in this entry. The entry contains 88157 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 RNA (75-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
1	N	75	Total	C	N	O	P	0	0
			1604	717	298	515	74		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
N	73	C	-	expression tag	REF 655840029
N	74	C	-	expression tag	REF 655840029
N	75	A	-	expression tag	REF 655840029

- Molecule 2 is a RNA chain called Oryctolagus cuniculus 18S ribosomal RNA (RN18S), ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	1776	Total	C	N	O	P	0	0
			37881	16910	6782	12414	1775		

There are 685 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	U	-	expression tag	REF 283837872
A	2	A	-	expression tag	REF 283837872
A	3	C	-	expression tag	REF 283837872
A	4	C	-	expression tag	REF 283837872
A	5	U	-	expression tag	REF 283837872
A	6	G	-	expression tag	REF 283837872
A	7	G	-	expression tag	REF 283837872
A	8	U	-	expression tag	REF 283837872
A	9	U	-	expression tag	REF 283837872
A	10	G	-	expression tag	REF 283837872
A	11	A	-	expression tag	REF 283837872
A	12	U	-	expression tag	REF 283837872
A	13	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	14	C	-	expression tag	REF 283837872
A	15	U	-	expression tag	REF 283837872
A	16	G	-	expression tag	REF 283837872
A	17	C	-	expression tag	REF 283837872
A	18	C	-	expression tag	REF 283837872
A	19	A	-	expression tag	REF 283837872
A	20	G	-	expression tag	REF 283837872
A	21	U	-	expression tag	REF 283837872
A	22	A	-	expression tag	REF 283837872
A	23	G	-	expression tag	REF 283837872
A	24	C	-	expression tag	REF 283837872
A	25	A	-	expression tag	REF 283837872
A	26	U	-	expression tag	REF 283837872
A	27	A	-	expression tag	REF 283837872
A	28	U	-	expression tag	REF 283837872
A	29	G	-	expression tag	REF 283837872
A	30	C	-	expression tag	REF 283837872
A	31	U	-	expression tag	REF 283837872
A	32	U	-	expression tag	REF 283837872
A	33	G	-	expression tag	REF 283837872
A	34	U	-	expression tag	REF 283837872
A	35	C	-	expression tag	REF 283837872
A	36	U	-	expression tag	REF 283837872
A	37	C	-	expression tag	REF 283837872
A	38	A	-	expression tag	REF 283837872
A	39	A	-	expression tag	REF 283837872
A	40	A	-	expression tag	REF 283837872
A	41	G	-	expression tag	REF 283837872
A	42	A	-	expression tag	REF 283837872
A	43	U	-	expression tag	REF 283837872
A	44	U	-	expression tag	REF 283837872
A	45	A	-	expression tag	REF 283837872
A	46	A	-	expression tag	REF 283837872
A	47	G	-	expression tag	REF 283837872
A	48	C	-	expression tag	REF 283837872
A	49	C	-	expression tag	REF 283837872
A	50	A	-	expression tag	REF 283837872
A	51	U	-	expression tag	REF 283837872
A	52	G	-	expression tag	REF 283837872
A	53	C	-	expression tag	REF 283837872
A	54	A	-	expression tag	REF 283837872
A	55	U	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	56	G	-	expression tag	REF 283837872
A	57	U	-	expression tag	REF 283837872
A	58	C	-	expression tag	REF 283837872
A	59	U	-	expression tag	REF 283837872
A	60	A	-	expression tag	REF 283837872
A	61	A	-	expression tag	REF 283837872
A	62	G	-	expression tag	REF 283837872
A	63	U	-	expression tag	REF 283837872
A	64	A	-	expression tag	REF 283837872
A	65	C	-	expression tag	REF 283837872
A	66	G	-	expression tag	REF 283837872
A	67	C	-	expression tag	REF 283837872
A	68	A	-	expression tag	REF 283837872
A	69	C	-	expression tag	REF 283837872
A	70	G	-	expression tag	REF 283837872
A	71	G	-	expression tag	REF 283837872
A	72	C	-	expression tag	REF 283837872
A	73	C	-	expression tag	REF 283837872
A	74	G	-	expression tag	REF 283837872
A	75	G	-	expression tag	REF 283837872
A	76	U	-	expression tag	REF 283837872
A	77	A	-	expression tag	REF 283837872
A	78	C	-	expression tag	REF 283837872
A	79	A	-	expression tag	REF 283837872
A	80	G	-	expression tag	REF 283837872
A	81	U	-	expression tag	REF 283837872
A	82	G	-	expression tag	REF 283837872
A	83	A	-	expression tag	REF 283837872
A	84	A	-	expression tag	REF 283837872
A	85	A	-	expression tag	REF 283837872
A	86	C	-	expression tag	REF 283837872
A	87	U	-	expression tag	REF 283837872
A	88	G	-	expression tag	REF 283837872
A	89	C	-	expression tag	REF 283837872
A	90	G	-	expression tag	REF 283837872
A	91	A	-	expression tag	REF 283837872
A	92	A	-	expression tag	REF 283837872
A	93	U	-	expression tag	REF 283837872
A	94	G	-	expression tag	REF 283837872
A	95	G	-	expression tag	REF 283837872
A	96	C	-	expression tag	REF 283837872
A	97	U	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	98	C	-	expression tag	REF 283837872
A	99	A	-	expression tag	REF 283837872
A	100	U	-	expression tag	REF 283837872
A	101	U	-	expression tag	REF 283837872
A	102	A	-	expression tag	REF 283837872
A	103	A	-	expression tag	REF 283837872
A	104	A	-	expression tag	REF 283837872
A	105	U	-	expression tag	REF 283837872
A	106	C	-	expression tag	REF 283837872
A	107	A	-	expression tag	REF 283837872
A	108	G	-	expression tag	REF 283837872
A	109	U	-	expression tag	REF 283837872
A	110	U	-	expression tag	REF 283837872
A	111	A	-	expression tag	REF 283837872
A	112	U	-	expression tag	REF 283837872
A	113	G	-	expression tag	REF 283837872
A	114	G	-	expression tag	REF 283837872
A	115	U	-	expression tag	REF 283837872
A	116	U	-	expression tag	REF 283837872
A	117	C	-	expression tag	REF 283837872
A	118	C	-	expression tag	REF 283837872
A	119	U	-	expression tag	REF 283837872
A	120	U	-	expression tag	REF 283837872
A	121	U	-	expression tag	REF 283837872
A	122	G	-	expression tag	REF 283837872
A	123	G	-	expression tag	REF 283837872
A	124	U	-	expression tag	REF 283837872
A	125	C	-	expression tag	REF 283837872
A	126	G	-	expression tag	REF 283837872
A	127	C	-	expression tag	REF 283837872
A	128	U	-	expression tag	REF 283837872
A	129	C	-	expression tag	REF 283837872
A	130	G	-	expression tag	REF 283837872
A	131	C	-	expression tag	REF 283837872
A	132	U	-	expression tag	REF 283837872
A	133	C	-	expression tag	REF 283837872
A	134	C	-	expression tag	REF 283837872
A	135	U	-	expression tag	REF 283837872
A	136	C	-	expression tag	REF 283837872
A	137	U	-	expression tag	REF 283837872
A	138	C	-	expression tag	REF 283837872
A	139	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	140	U	-	expression tag	REF 283837872
A	141	A	-	expression tag	REF 283837872
A	142	C	-	expression tag	REF 283837872
A	143	U	-	expression tag	REF 283837872
A	144	U	-	expression tag	REF 283837872
A	145	G	-	expression tag	REF 283837872
A	146	G	-	expression tag	REF 283837872
A	147	A	-	expression tag	REF 283837872
A	148	U	-	expression tag	REF 283837872
A	149	A	-	expression tag	REF 283837872
A	150	A	-	expression tag	REF 283837872
A	151	C	-	expression tag	REF 283837872
A	152	U	-	expression tag	REF 283837872
A	153	G	-	expression tag	REF 283837872
A	154	U	-	expression tag	REF 283837872
A	155	G	-	expression tag	REF 283837872
A	156	G	-	expression tag	REF 283837872
A	157	U	-	expression tag	REF 283837872
A	158	A	-	expression tag	REF 283837872
A	159	A	-	expression tag	REF 283837872
A	160	U	-	expression tag	REF 283837872
A	161	U	-	expression tag	REF 283837872
A	162	C	-	expression tag	REF 283837872
A	163	U	-	expression tag	REF 283837872
A	164	A	-	expression tag	REF 283837872
A	165	G	-	expression tag	REF 283837872
A	166	A	-	expression tag	REF 283837872
A	167	G	-	expression tag	REF 283837872
A	168	C	-	expression tag	REF 283837872
A	169	U	-	expression tag	REF 283837872
A	170	A	-	expression tag	REF 283837872
A	171	A	-	expression tag	REF 283837872
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A	174	C	-	expression tag	REF 283837872
A	175	A	-	expression tag	REF 283837872
A	176	U	-	expression tag	REF 283837872
A	177	G	-	expression tag	REF 283837872
A	178	C	-	expression tag	REF 283837872
A	179	C	-	expression tag	REF 283837872
A	180	G	-	expression tag	REF 283837872
A	181	A	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	182	C	-	expression tag	REF 283837872
A	183	G	-	expression tag	REF 283837872
A	184	G	-	expression tag	REF 283837872
A	185	C	-	expression tag	REF 283837872
A	186	G	-	expression tag	REF 283837872
A	187	C	-	expression tag	REF 283837872
A	188	U	-	expression tag	REF 283837872
A	189	G	-	expression tag	REF 283837872
A	190	A	-	expression tag	REF 283837872
A	191	C	-	expression tag	REF 283837872
A	192	U	-	expression tag	REF 283837872
A	193	C	-	expression tag	REF 283837872
A	194	C	-	expression tag	REF 283837872
A	195	C	-	expression tag	REF 283837872
A	196	U	-	expression tag	REF 283837872
A	197	U	-	expression tag	REF 283837872
A	198	U	-	expression tag	REF 283837872
A	199	G	-	expression tag	REF 283837872
A	200	U	-	expression tag	REF 283837872
A	201	G	-	expression tag	REF 283837872
A	202	U	-	expression tag	REF 283837872
A	203	G	-	expression tag	REF 283837872
A	204	G	-	expression tag	REF 283837872
A	205	G	-	expression tag	REF 283837872
A	206	A	-	expression tag	REF 283837872
A	207	U	-	expression tag	REF 283837872
A	208	G	-	expression tag	REF 283837872
A	209	C	-	expression tag	REF 283837872
A	210	G	-	expression tag	REF 283837872
A	211	U	-	expression tag	REF 283837872
A	212	G	-	expression tag	REF 283837872
A	213	C	-	expression tag	REF 283837872
A	214	A	-	expression tag	REF 283837872
A	215	U	-	expression tag	REF 283837872
A	216	U	-	expression tag	REF 283837872
A	217	U	-	expression tag	REF 283837872
A	218	A	-	expression tag	REF 283837872
A	219	U	-	expression tag	REF 283837872
A	220	C	-	expression tag	REF 283837872
A	221	A	-	expression tag	REF 283837872
A	222	G	-	expression tag	REF 283837872
A	223	A	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
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A	225	C	-	expression tag	REF 283837872
A	226	A	-	expression tag	REF 283837872
A	227	A	-	expression tag	REF 283837872
A	228	A	-	expression tag	REF 283837872
A	229	A	-	expression tag	REF 283837872
A	230	C	-	expression tag	REF 283837872
A	231	C	-	expression tag	REF 283837872
A	232	A	-	expression tag	REF 283837872
A	233	A	-	expression tag	REF 283837872
A	234	C	-	expression tag	REF 283837872
A	235	C	-	expression tag	REF 283837872
A	236	C	-	expression tag	REF 283837872
A	237	G	-	expression tag	REF 283837872
A	238	G	-	expression tag	REF 283837872
A	239	U	-	expression tag	REF 283837872
A	240	C	-	expression tag	REF 283837872
A	241	A	-	expression tag	REF 283837872
A	242	G	-	expression tag	REF 283837872
A	243	C	-	expression tag	REF 283837872
A	267	G	-	expression tag	REF 283837872
A	268	G	-	expression tag	REF 283837872
A	269	C	-	expression tag	REF 283837872
A	270	G	-	expression tag	REF 283837872
A	271	G	-	expression tag	REF 283837872
A	272	C	-	expression tag	REF 283837872
A	273	G	-	expression tag	REF 283837872
A	274	G	-	expression tag	REF 283837872
A	275	C	-	expression tag	REF 283837872
A	276	U	-	expression tag	REF 283837872
A	277	U	-	expression tag	REF 283837872
A	278	U	-	expression tag	REF 283837872
A	279	G	-	expression tag	REF 283837872
A	280	G	-	expression tag	REF 283837872
A	281	U	-	expression tag	REF 283837872
A	282	G	-	expression tag	REF 283837872
A	283	A	-	expression tag	REF 283837872
A	284	C	-	expression tag	REF 283837872
A	285	U	-	expression tag	REF 283837872
A	286	C	-	expression tag	REF 283837872
A	287	U	-	expression tag	REF 283837872
A	288	A	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	289	G	-	expression tag	REF 283837872
A	290	A	-	expression tag	REF 283837872
A	291	U	-	expression tag	REF 283837872
A	292	A	-	expression tag	REF 283837872
A	293	A	-	expression tag	REF 283837872
A	294	C	-	expression tag	REF 283837872
A	295	C	-	expression tag	REF 283837872
A	296	U	-	expression tag	REF 283837872
A	297	C	-	expression tag	REF 283837872
A	298	G	-	expression tag	REF 283837872
A	299	G	-	expression tag	REF 283837872
A	300	G	-	expression tag	REF 283837872
A	301	C	-	expression tag	REF 283837872
A	302	C	-	expression tag	REF 283837872
A	303	G	-	expression tag	REF 283837872
A	304	A	-	expression tag	REF 283837872
A	305	U	-	expression tag	REF 283837872
A	306	C	-	expression tag	REF 283837872
A	307	G	-	expression tag	REF 283837872
A	308	C	-	expression tag	REF 283837872
A	309	A	-	expression tag	REF 283837872
A	310	G	-	expression tag	REF 283837872
A	311	C	-	expression tag	REF 283837872
A	312	C	-	expression tag	REF 283837872
A	313	C	-	expression tag	REF 283837872
A	314	U	-	expression tag	REF 283837872
A	315	C	-	expression tag	REF 283837872
A	316	C	-	expression tag	REF 283837872
A	317	G	-	expression tag	REF 283837872
A	318	U	-	expression tag	REF 283837872
A	319	G	-	expression tag	REF 283837872
A	320	G	-	expression tag	REF 283837872
A	321	C	-	expression tag	REF 283837872
A	322	G	-	expression tag	REF 283837872
A	323	G	-	expression tag	REF 283837872
A	324	C	-	expression tag	REF 283837872
A	325	G	-	expression tag	REF 283837872
A	326	A	-	expression tag	REF 283837872
A	327	C	-	expression tag	REF 283837872
A	328	G	-	expression tag	REF 283837872
A	329	A	-	expression tag	REF 283837872
A	330	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	331	C	-	expression tag	REF 283837872
A	332	C	-	expression tag	REF 283837872
A	333	A	-	expression tag	REF 283837872
A	334	U	-	expression tag	REF 283837872
A	335	U	-	expression tag	REF 283837872
A	336	C	-	expression tag	REF 283837872
A	337	G	-	expression tag	REF 283837872
A	338	A	-	expression tag	REF 283837872
A	339	A	-	expression tag	REF 283837872
A	340	C	-	expression tag	REF 283837872
A	341	G	-	expression tag	REF 283837872
A	342	U	-	expression tag	REF 283837872
A	343	C	-	expression tag	REF 283837872
A	344	U	-	expression tag	REF 283837872
A	345	G	-	expression tag	REF 283837872
A	346	C	-	expression tag	REF 283837872
A	347	C	-	expression tag	REF 283837872
A	348	C	-	expression tag	REF 283837872
A	349	U	-	expression tag	REF 283837872
A	350	A	-	expression tag	REF 283837872
A	351	U	-	expression tag	REF 283837872
A	352	C	-	expression tag	REF 283837872
A	353	A	-	expression tag	REF 283837872
A	354	A	-	expression tag	REF 283837872
A	355	C	-	expression tag	REF 283837872
A	356	U	-	expression tag	REF 283837872
A	357	U	-	expression tag	REF 283837872
A	358	U	-	expression tag	REF 283837872
A	359	C	-	expression tag	REF 283837872
A	360	G	-	expression tag	REF 283837872
A	361	A	-	expression tag	REF 283837872
A	362	U	-	expression tag	REF 283837872
A	363	G	-	expression tag	REF 283837872
A	364	G	-	expression tag	REF 283837872
A	365	U	-	expression tag	REF 283837872
A	366	A	-	expression tag	REF 283837872
A	367	G	-	expression tag	REF 283837872
A	368	U	-	expression tag	REF 283837872
A	369	C	-	expression tag	REF 283837872
A	370	G	-	expression tag	REF 283837872
A	371	C	-	expression tag	REF 283837872
A	372	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	373	G	-	expression tag	REF 283837872
A	374	U	-	expression tag	REF 283837872
A	375	G	-	expression tag	REF 283837872
A	376	C	-	expression tag	REF 283837872
A	377	C	-	expression tag	REF 283837872
A	378	U	-	expression tag	REF 283837872
A	379	A	-	expression tag	REF 283837872
A	380	C	-	expression tag	REF 283837872
A	381	C	-	expression tag	REF 283837872
A	382	A	-	expression tag	REF 283837872
A	383	U	-	expression tag	REF 283837872
A	384	G	-	expression tag	REF 283837872
A	385	G	-	expression tag	REF 283837872
A	386	U	-	expression tag	REF 283837872
A	387	G	-	expression tag	REF 283837872
A	388	A	-	expression tag	REF 283837872
A	389	C	-	expression tag	REF 283837872
A	390	C	-	expression tag	REF 283837872
A	391	A	-	expression tag	REF 283837872
A	392	C	-	expression tag	REF 283837872
A	393	G	-	expression tag	REF 283837872
A	394	G	-	expression tag	REF 283837872
A	395	G	-	expression tag	REF 283837872
A	396	U	-	expression tag	REF 283837872
A	397	G	-	expression tag	REF 283837872
A	398	A	-	expression tag	REF 283837872
A	399	C	-	expression tag	REF 283837872
A	400	G	-	expression tag	REF 283837872
A	401	G	-	expression tag	REF 283837872
A	402	G	-	expression tag	REF 283837872
A	403	G	-	expression tag	REF 283837872
A	404	A	-	expression tag	REF 283837872
A	405	A	-	expression tag	REF 283837872
A	406	U	-	expression tag	REF 283837872
A	407	C	-	expression tag	REF 283837872
A	408	A	-	expression tag	REF 283837872
A	409	G	-	expression tag	REF 283837872
A	410	G	-	expression tag	REF 283837872
A	411	G	-	expression tag	REF 283837872
A	412	U	-	expression tag	REF 283837872
A	413	U	-	expression tag	REF 283837872
A	414	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	415	G	-	expression tag	REF 283837872
A	416	A	-	expression tag	REF 283837872
A	417	U	-	expression tag	REF 283837872
A	418	U	-	expression tag	REF 283837872
A	419	C	-	expression tag	REF 283837872
A	420	C	-	expression tag	REF 283837872
A	421	G	-	expression tag	REF 283837872
A	422	G	-	expression tag	REF 283837872
A	423	A	-	expression tag	REF 283837872
A	424	G	-	expression tag	REF 283837872
A	425	A	-	expression tag	REF 283837872
A	426	G	-	expression tag	REF 283837872
A	427	G	-	expression tag	REF 283837872
A	428	G	-	expression tag	REF 283837872
A	429	A	-	expression tag	REF 283837872
A	430	G	-	expression tag	REF 283837872
A	431	C	-	expression tag	REF 283837872
A	432	C	-	expression tag	REF 283837872
A	433	U	-	expression tag	REF 283837872
A	434	G	-	expression tag	REF 283837872
A	435	A	-	expression tag	REF 283837872
A	436	G	-	expression tag	REF 283837872
A	437	A	-	expression tag	REF 283837872
A	438	A	-	expression tag	REF 283837872
A	439	A	-	expression tag	REF 283837872
A	440	C	-	expression tag	REF 283837872
A	441	G	-	expression tag	REF 283837872
A	442	G	-	expression tag	REF 283837872
A	443	C	-	expression tag	REF 283837872
A	444	U	-	expression tag	REF 283837872
A	445	A	-	expression tag	REF 283837872
A	446	C	-	expression tag	REF 283837872
A	447	C	-	expression tag	REF 283837872
A	448	A	-	expression tag	REF 283837872
A	449	C	-	expression tag	REF 283837872
A	450	A	-	expression tag	REF 283837872
A	451	U	-	expression tag	REF 283837872
A	452	C	-	expression tag	REF 283837872
A	453	C	-	expression tag	REF 283837872
A	454	A	-	expression tag	REF 283837872
A	455	A	-	expression tag	REF 283837872
A	456	G	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	457	G	-	expression tag	REF 283837872
A	458	A	-	expression tag	REF 283837872
A	459	A	-	expression tag	REF 283837872
A	460	G	-	expression tag	REF 283837872
A	461	G	-	expression tag	REF 283837872
A	462	C	-	expression tag	REF 283837872
A	463	A	-	expression tag	REF 283837872
A	464	G	-	expression tag	REF 283837872
A	465	C	-	expression tag	REF 283837872
A	466	A	-	expression tag	REF 283837872
A	467	G	-	expression tag	REF 283837872
A	468	G	-	expression tag	REF 283837872
A	469	C	-	expression tag	REF 283837872
A	470	G	-	expression tag	REF 283837872
A	471	C	-	expression tag	REF 283837872
A	472	G	-	expression tag	REF 283837872
A	473	C	-	expression tag	REF 283837872
A	474	A	-	expression tag	REF 283837872
A	475	A	-	expression tag	REF 283837872
A	476	A	-	expression tag	REF 283837872
A	477	U	-	expression tag	REF 283837872
A	478	U	-	expression tag	REF 283837872
A	479	A	-	expression tag	REF 283837872
A	480	C	-	expression tag	REF 283837872
A	481	C	-	expression tag	REF 283837872
A	482	C	-	expression tag	REF 283837872
A	483	A	-	expression tag	REF 283837872
A	484	C	-	expression tag	REF 283837872
A	485	U	-	expression tag	REF 283837872
A	486	C	-	expression tag	REF 283837872
A	487	C	-	expression tag	REF 283837872
A	488	C	-	expression tag	REF 283837872
A	489	G	-	expression tag	REF 283837872
A	490	A	-	expression tag	REF 283837872
A	491	C	-	expression tag	REF 283837872
A	492	C	-	expression tag	REF 283837872
A	493	C	-	expression tag	REF 283837872
A	494	G	-	expression tag	REF 283837872
A	495	G	-	expression tag	REF 283837872
A	496	G	-	expression tag	REF 283837872
A	497	G	-	expression tag	REF 283837872
A	498	A	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	499	G	-	expression tag	REF 283837872
A	500	G	-	expression tag	REF 283837872
A	501	U	-	expression tag	REF 283837872
A	502	A	-	expression tag	REF 283837872
A	503	G	-	expression tag	REF 283837872
A	504	U	-	expression tag	REF 283837872
A	505	G	-	expression tag	REF 283837872
A	506	A	-	expression tag	REF 283837872
A	507	C	-	expression tag	REF 283837872
A	508	G	-	expression tag	REF 283837872
A	509	A	-	expression tag	REF 283837872
A	510	A	-	expression tag	REF 283837872
A	511	A	-	expression tag	REF 283837872
A	512	A	-	expression tag	REF 283837872
A	513	A	-	expression tag	REF 283837872
A	514	U	-	expression tag	REF 283837872
A	515	A	-	expression tag	REF 283837872
A	516	A	-	expression tag	REF 283837872
A	517	C	-	expression tag	REF 283837872
A	518	A	-	expression tag	REF 283837872
A	519	A	-	expression tag	REF 283837872
A	520	U	-	expression tag	REF 283837872
A	521	A	-	expression tag	REF 283837872
A	522	C	-	expression tag	REF 283837872
A	523	A	-	expression tag	REF 283837872
A	524	G	-	expression tag	REF 283837872
A	525	G	-	expression tag	REF 283837872
A	526	A	-	expression tag	REF 283837872
A	527	C	-	expression tag	REF 283837872
A	528	U	-	expression tag	REF 283837872
A	529	C	-	expression tag	REF 283837872
A	530	U	-	expression tag	REF 283837872
A	531	U	-	expression tag	REF 283837872
A	532	U	-	expression tag	REF 283837872
A	533	C	-	expression tag	REF 283837872
A	534	G	-	expression tag	REF 283837872
A	535	A	-	expression tag	REF 283837872
A	536	G	-	expression tag	REF 283837872
A	537	G	-	expression tag	REF 283837872
A	538	C	-	expression tag	REF 283837872
A	539	C	-	expression tag	REF 283837872
A	540	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	541	U	-	expression tag	REF 283837872
A	542	G	-	expression tag	REF 283837872
A	543	U	-	expression tag	REF 283837872
A	544	A	-	expression tag	REF 283837872
A	545	A	-	expression tag	REF 283837872
A	546	U	-	expression tag	REF 283837872
A	547	U	-	expression tag	REF 283837872
A	548	G	-	expression tag	REF 283837872
A	549	G	-	expression tag	REF 283837872
A	550	A	-	expression tag	REF 283837872
A	551	A	-	expression tag	REF 283837872
A	552	U	-	expression tag	REF 283837872
A	553	G	-	expression tag	REF 283837872
A	554	A	-	expression tag	REF 283837872
A	555	G	-	expression tag	REF 283837872
A	556	U	-	expression tag	REF 283837872
A	557	C	-	expression tag	REF 283837872
A	558	C	-	expression tag	REF 283837872
A	559	A	-	expression tag	REF 283837872
A	560	C	-	expression tag	REF 283837872
A	561	U	-	expression tag	REF 283837872
A	562	U	-	expression tag	REF 283837872
A	563	U	-	expression tag	REF 283837872
A	564	A	-	expression tag	REF 283837872
A	565	A	-	expression tag	REF 283837872
A	566	A	-	expression tag	REF 283837872
A	567	U	-	expression tag	REF 283837872
A	568	C	-	expression tag	REF 283837872
A	569	C	-	expression tag	REF 283837872
A	570	U	-	expression tag	REF 283837872
A	571	U	-	expression tag	REF 283837872
A	572	U	-	expression tag	REF 283837872
A	573	A	-	expression tag	REF 283837872
A	574	A	-	expression tag	REF 283837872
A	575	C	-	expression tag	REF 283837872
A	576	G	-	expression tag	REF 283837872
A	577	A	-	expression tag	REF 283837872
A	578	G	-	expression tag	REF 283837872
A	579	G	-	expression tag	REF 283837872
A	580	A	-	expression tag	REF 283837872
A	581	U	-	expression tag	REF 283837872
A	582	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	583	C	-	expression tag	REF 283837872
A	584	A	-	expression tag	REF 283837872
A	585	U	-	expression tag	REF 283837872
A	586	U	-	expression tag	REF 283837872
A	587	G	-	expression tag	REF 283837872
A	588	G	-	expression tag	REF 283837872
A	589	A	-	expression tag	REF 283837872
A	590	G	-	expression tag	REF 283837872
A	591	G	-	expression tag	REF 283837872
A	592	G	-	expression tag	REF 283837872
A	593	C	-	expression tag	REF 283837872
A	594	A	-	expression tag	REF 283837872
A	595	A	-	expression tag	REF 283837872
A	596	G	-	expression tag	REF 283837872
A	597	U	-	expression tag	REF 283837872
A	598	C	-	expression tag	REF 283837872
A	599	U	-	expression tag	REF 283837872
A	600	G	-	expression tag	REF 283837872
A	601	G	-	expression tag	REF 283837872
A	602	U	-	expression tag	REF 283837872
A	603	C	-	expression tag	REF 283837872
A	604	G	-	expression tag	REF 283837872
A	605	C	-	expression tag	REF 283837872
A	606	A	-	expression tag	REF 283837872
A	607	G	-	expression tag	REF 283837872
A	608	C	-	expression tag	REF 283837872
A	609	A	-	expression tag	REF 283837872
A	610	G	-	expression tag	REF 283837872
A	611	C	-	expression tag	REF 283837872
A	612	C	-	expression tag	REF 283837872
A	613	G	-	expression tag	REF 283837872
A	614	C	-	expression tag	REF 283837872
A	615	G	-	expression tag	REF 283837872
A	616	G	-	expression tag	REF 283837872
A	617	U	-	expression tag	REF 283837872
A	618	A	-	expression tag	REF 283837872
A	619	A	-	expression tag	REF 283837872
A	620	U	-	expression tag	REF 283837872
A	621	U	-	expression tag	REF 283837872
A	622	C	-	expression tag	REF 283837872
A	623	C	-	expression tag	REF 283837872
A	624	A	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	625	G	-	expression tag	REF 283837872
A	626	C	-	expression tag	REF 283837872
A	627	U	-	expression tag	REF 283837872
A	628	C	-	expression tag	REF 283837872
A	629	C	-	expression tag	REF 283837872
A	630	A	-	expression tag	REF 283837872
A	631	A	-	expression tag	REF 283837872
A	632	U	-	expression tag	REF 283837872
A	633	A	-	expression tag	REF 283837872
A	634	G	-	expression tag	REF 283837872
A	635	C	-	expression tag	REF 283837872
A	636	G	-	expression tag	REF 283837872
A	637	U	-	expression tag	REF 283837872
A	638	A	-	expression tag	REF 283837872
A	639	U	-	expression tag	REF 283837872
A	640	A	-	expression tag	REF 283837872
A	641	U	-	expression tag	REF 283837872
A	642	U	-	expression tag	REF 283837872
A	643	A	-	expression tag	REF 283837872
A	644	A	-	expression tag	REF 283837872
A	645	A	-	expression tag	REF 283837872
A	646	G	-	expression tag	REF 283837872
A	647	U	-	expression tag	REF 283837872
A	648	U	-	expression tag	REF 283837872
A	649	G	-	expression tag	REF 283837872
A	650	C	-	expression tag	REF 283837872
A	651	U	-	expression tag	REF 283837872
A	652	G	-	expression tag	REF 283837872
A	653	C	-	expression tag	REF 283837872
A	654	A	-	expression tag	REF 283837872
A	655	G	-	expression tag	REF 283837872
A	656	U	-	expression tag	REF 283837872
A	657	U	-	expression tag	REF 283837872
A	658	A	-	expression tag	REF 283837872
A	659	A	-	expression tag	REF 283837872
A	660	A	-	expression tag	REF 283837872
A	661	A	-	expression tag	REF 283837872
A	662	A	-	expression tag	REF 283837872
A	663	G	-	expression tag	REF 283837872
A	664	C	-	expression tag	REF 283837872
A	665	U	-	expression tag	REF 283837872
A	666	C	-	expression tag	REF 283837872

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Chain	Residue	Modelled	Actual	Comment	Reference
A	667	G	-	expression tag	REF 283837872
A	668	U	-	expression tag	REF 283837872
A	669	A	-	expression tag	REF 283837872
A	670	G	-	expression tag	REF 283837872
A	671	U	-	expression tag	REF 283837872
A	672	U	-	expression tag	REF 283837872
A	673	G	-	expression tag	REF 283837872
A	674	G	-	expression tag	REF 283837872
A	675	A	-	expression tag	REF 283837872
A	676	U	-	expression tag	REF 283837872
A	677	C	-	expression tag	REF 283837872
A	678	U	-	expression tag	REF 283837872
A	679	U	-	expression tag	REF 283837872
A	683	G	-	expression tag	REF 283837872
A	684	A	-	expression tag	REF 283837872
A	685	G	-	expression tag	REF 283837872
A	686	G	-	expression tag	REF 283837872
A	687	G	-	expression tag	REF 283837872
A	730	C	-	expression tag	REF 283837872
A	731	C	-	expression tag	REF 283837872
A	732	C	-	expression tag	REF 283837872
A	733	G	-	expression tag	REF 283837872
A	734	C	-	expression tag	REF 283837872
A	735	C	-	expression tag	REF 283837872
A	736	C	-	expression tag	REF 283837872
A	744	C	-	expression tag	REF 283837872
A	745	U	-	expression tag	REF 283837872
A	746	C	-	expression tag	REF 283837872
A	747	G	-	expression tag	REF 283837872
A	748	G	-	expression tag	REF 283837872
A	749	C	-	expression tag	REF 283837872
A	750	G	-	expression tag	REF 283837872
A	751	C	-	expression tag	REF 283837872
A	752	C	-	expression tag	REF 283837872
A	753	C	-	expression tag	REF 283837872
A	754	C	-	expression tag	REF 283837872
A	755	C	-	expression tag	REF 283837872
A	756	U	-	expression tag	REF 283837872
A	757	C	-	expression tag	REF 283837872
A	758	G	-	expression tag	REF 283837872
A	759	A	-	expression tag	REF 283837872
A	760	U	-	expression tag	REF 283837872

- Molecule 3 is a RNA chain called RNA (30-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
3	F	30	Total	C	N	O	P	0	0
			635	285	115	206	29		

- Molecule 4 is a protein called Eukaryotic translation initiation factor 2 subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	P	266	Total	C	N	O	S	0	0
			2147	1354	376	406	11		

- Molecule 5 is a protein called ribosomal protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	G	158	Total	C	N	O	S	0	0
			1296	827	241	221	7		

- Molecule 6 is a protein called ribosomal protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	H	141	Total	C	N	O	S	0	0
			1124	715	212	194	3		

- Molecule 7 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I	263	Total	C	N	O	S	0	0
			2083	1329	385	359	10		

- Molecule 8 is a protein called ribosomal protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	J	53	Total	C	N	O	S	0	0
			445	278	90	72	5		

- Molecule 9 is a protein called Ribosomal protein S9 (Predicted).

Mol	Chain	Residues	Atoms					AltConf	Trace
9	K	182	Total	C	N	O	S	0	0
			1499	952	300	245	2		

- Molecule 10 is a protein called ribosomal protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	137	Total	C	N	O	S	0	0
			1140	714	231	194	1		

- Molecule 11 is a protein called Eukaryotic translation initiation factor 3 subunit G.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	M	38	Total	C	N	O	S	0	0
			288	177	45	64	2		

- Molecule 12 is a protein called Eukaryotic translation initiation factor 3 subunit G.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	O	77	Total	C	N	O	S	0	0
			614	388	110	116			

- Molecule 13 is a protein called ribosomal protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Q	142	Total	C	N	O	S	0	0
			1107	698	220	185	4		

- Molecule 14 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	R	141	Total	C	N	O	S	0	0
			1113	701	213	196	3		

- Molecule 15 is a protein called eukaryotic initiation factor 2 Gamma subunit (eIF2-Gamma).

Mol	Chain	Residues	Atoms					AltConf	Trace
15	S	422	Total	C	N	O	S	0	0
			3214	2044	561	592	17		

- Molecule 16 is a protein called Eukaryotic translation initiation factor 3 subunit I.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	T	329	Total	C	N	O	S	0	0
			2605	1640	447	503	15		

- Molecule 17 is a protein called ribosomal protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	U	191	Total	C	N	O	S	0	0
			1509	943	286	273	7		

- Molecule 18 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	V	59	Total	C	N	O	S	0	0
			473	293	104	75	1		

- Molecule 19 is a protein called ribosomal protein eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	W	75	Total	C	N	O	S	0	0
			599	382	111	105	1		

- Molecule 20 is a protein called ribosomal protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	X	190	Total	C	N	O	S	0	0
			1530	975	281	273	1		

- Molecule 21 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	Y	84	Total	C	N	O	S	0	0
			659	413	122	116	8		

- Molecule 22 is a protein called ribosomal protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	Z	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 23 is a protein called ribosomal protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	a	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 24 is a protein called 40S ribosomal protein S21.



Mol	Chain	Residues	Atoms					AltConf	Trace
24	b	82	Total	C	N	O	S	0	0
			620	378	117	120	5		

- Molecule 25 is a protein called ribosomal protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	c	226	Total	C	N	O	S	0	0
			1743	1127	300	307	9		

- Molecule 26 is a protein called eukaryotic initiation factor 2 subunit Beta (eIF2-Beta).

Mol	Chain	Residues	Atoms					AltConf	Trace
26	d	17	Total	C	N	O	S	0	0
			147	94	22	30	1		

- Molecule 27 is a protein called ribosomal protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	e	126	Total	C	N	O	S	0	0
			1020	639	188	188	5		

- Molecule 28 is a protein called ribosomal protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	f	208	Total	C	N	O	S	0	0
			1643	1045	289	301	8		

- Molecule 29 is a protein called ribosomal protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	g	227	Total	C	N	O	S	0	0
			1765	1124	317	316	8		

- Molecule 30 is a protein called ribosomal protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	h	104	Total	C	N	O	S	0	0
			822	514	156	148	4		

- Molecule 31 is a protein called ribosomal protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	i	215	Total	C	N	O	S	0	0
			1742	1107	309	311	15		

- Molecule 32 is a protein called ribosomal protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	j	136	Total	C	N	O	S	0	0
			1016	621	199	190	6		

- Molecule 33 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	k	99	Total	C	N	O	S	0	0
			790	491	162	131	6		

- Molecule 34 is a protein called ribosomal protein eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	l	64	Total	C	N	O	S	0	0
			507	308	102	95	2		

- Molecule 35 is a protein called ribosomal protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	m	313	Total	C	N	O	S	0	0
			2437	1535	424	466	12		

- Molecule 36 is a protein called ribosomal protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	n	127	Total	C	N	O	S	0	0
			1061	673	201	180	7		

- Molecule 37 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	o	206	Total	C	N	O	S	0	0
			1680	1054	329	292	5		

- Molecule 38 is a protein called ribosomal protein eS31.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	p	71	Total	C	N	O	S	0	0
			582	367	109	99	7		

- Molecule 39 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	q	237	Total	C	N	O	S	0	0
			1924	1200	387	330	7		

- Molecule 40 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	r	124	Total	C	N	O	S	0	0
			958	600	170	179	9		

- Molecule 41 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	s	131	Total	C	N	O	S	0	0
			1065	673	206	181	5		

- Molecule 42 is a protein called Uncharacterized protein.

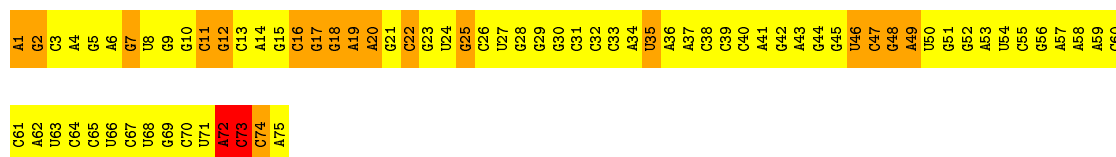
Mol	Chain	Residues	Atoms					AltConf	Trace
42	t	98	Total	C	N	O	S	0	0
			828	539	148	135	6		

### 3 Residue-property plots

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

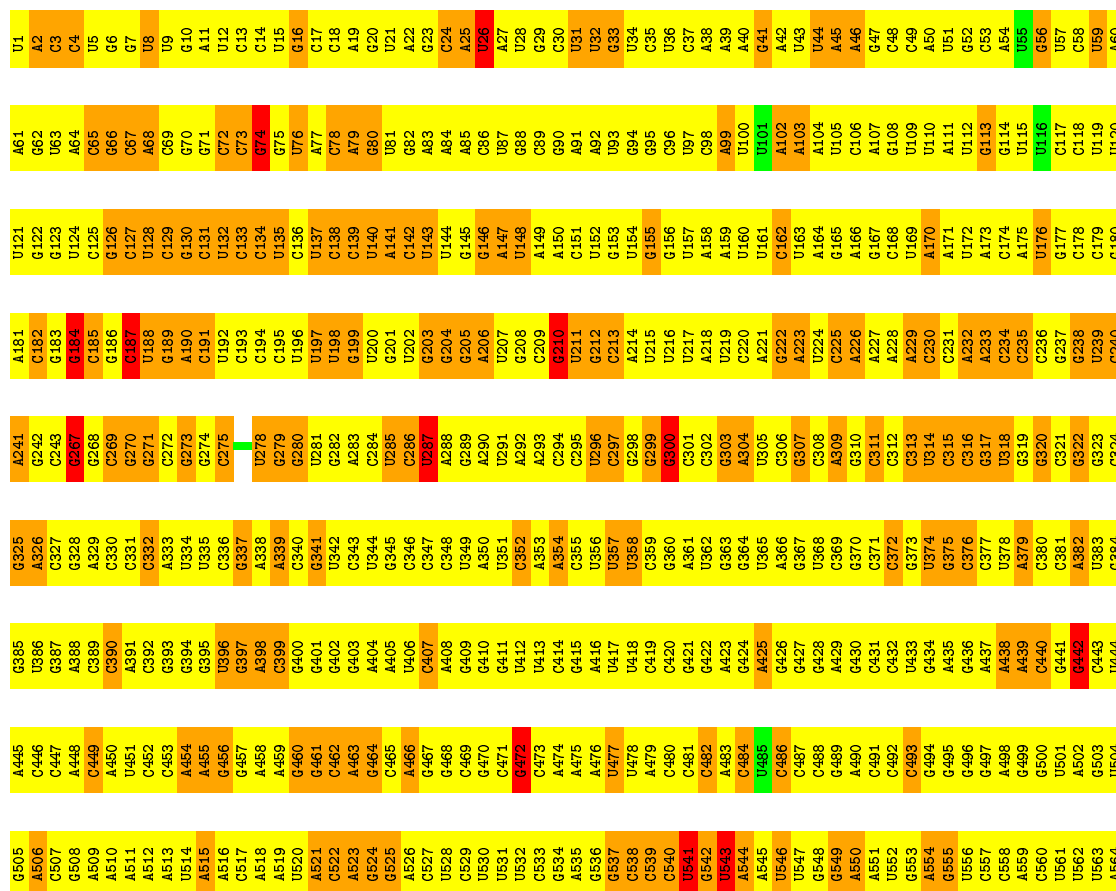
- Molecule 1: RNA (75-MER)

Chain N: 

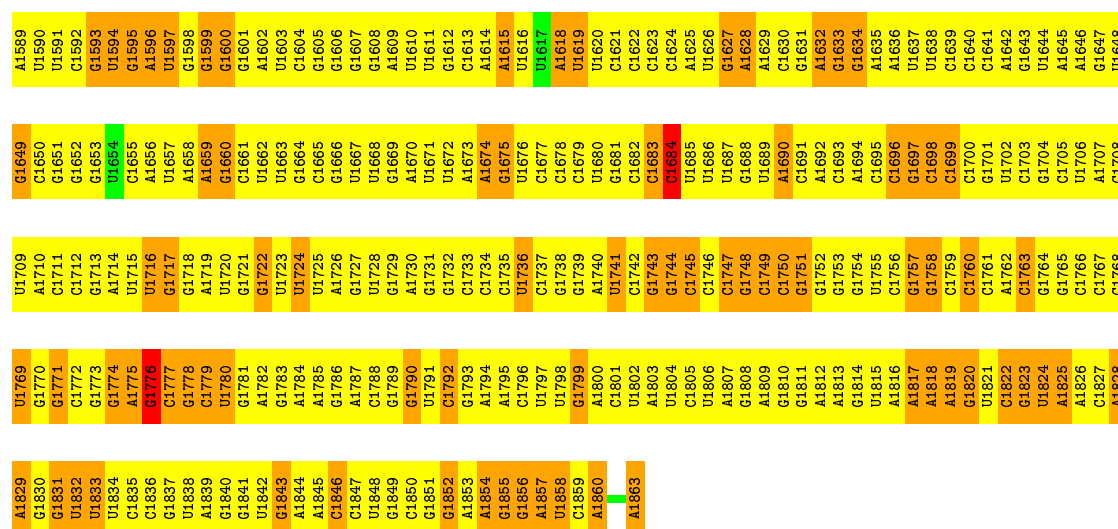


- Molecule 2: *Oryctolagus cuniculus* 18S ribosomal RNA (RN18S), ribosomal RNA

Chain A: 

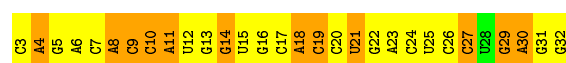


G1529	G1469	G1409	A1349	A1289	G1229	A1169	A1109	G1049	G989	G929	G869	A809	C730	G625	A565
U1530	A1470	A1410	G1350	G1290	C1230	U1170	U1110	G1050	C990	G930	G870	U840	C731	C626	A566
G1531	G1471	C1411	C1351	A1291	G1231	G1171	C1111	A1051	G991	G931	A871	U811	C732	U627	C567
A1532	A1472	C1412	G1352	U1292	G1232	G1172	C1112	U1052	A992	G932	C872	A812	G733	C628	C568
C1533	U1473	A1413	A1353	G1293	C1233	U1173	C1113	C1053	A993	C933	C873	G813	C734	C629	C569
U1534	U1474	C1414	G1354	U1294	U1234	U1174	C1114	A1054	A994	A934	G874	A814	C735	A630	U570
G1535	G1475	C1415	U1355	A1295	U1235	G1175	A1115	G1055	G995	U935	C875	G815	C736	A631	U571
G1536	A1476	G1416	U1356	U1296	A1236	C1176	U1116	A1056	C996	U936	G876	U816	C737	U632	U572
C1537	G1477	A1417	G1357	A1297	A1237	A1177	G1117	U1057	A997	C937	G877	U817	U745	U633	A573
U1538	A1478	G1418	U1358	G1298	U1238	A1178	A1118	A1058	U998	G938	U878	U818	C746	G634	A574
C1539	C1479	C1419	A1359	U1299	U1239	A1179	C1119	C1059	U999	U939	U879	U819	C747	C635	C575
A1540	U1480	U1360	U1360	U1300	U1240	G1180	C1120	C1060	U1000	A940	C880	G820	C748	G636	G576
G1541	U1481	G1361	G1361	C1301	G1241	C1181	C1121	G1061	G1001	U941	U881	A821	C749	U637	A577
C1542	A1482	U1422	G1362	U1302	A1242	U1182	G1122	U1062	C1002	U942	A882	A822	G750	A638	G578
G1543	A1483	C1423	U1363	U1303	C1243	G1183	C1123	C1063	C1003	G943	U883	A823	C751	U639	G579
U1544	C1484	G1424	A1364	U1304	U1244	A1184	C1124	G1064	A1004	C944	U884	G824	C752	A640	A580
G1545	A1485	G1425	A1365	C1305	C1245	A1185	G1125	U1065	A1005	G945	U885	C825	C753	U641	U581
U1546	G1486	C1426	A1366	U1306	A1246	A1186	G1126	A1066	G1006	C946	U886	A826	C754	U642	C582
G1547	G1487	G1427	U1367	C1307	A1247	C1187	G1127	G1067	A1007	C947	G887	G827	C755	A643	C583
C1548	U1488	U1428	U1368	G1308	C1248	U1188	C1128	U1068	A1008	G948	U888	G828	U756	A644	A584
U1549	C1489	C1429	A1369	A1309	A1249	U1189	C1129	U1069	U1009	C949	U889	C829	C757	A645	U585
U1550	U1490	C1430	C1370	U1310	C1250	A1190	G1130	C1070	G1010	U950	G890	C830	C758	G646	U586
A1551	G1491	C1431	G1371	U1311	G1251	A1191	C1131	C1071	U1011	A951	G891	C831	A759	U647	C587
C1552	U1492	C1432	A1372	C1312	G1252	A1192	U1132	G1072	U1012	G952	U892	U760	C760	U648	G588
G1553	G1493	C1433	U1373	U1313	G1253	G1193	U1133	A1073	U1013	A953	U893	A833	C761	G649	A589
A1494	A1494	A1434	A1374	G1314	A1254	G1194	C1134	C1074	U1014	G954	U894	G834	U774	C650	G590
U1555	U1495	A1435	A1375	U1315	A1255	A1195	C1135	C1075	C1015	G955	U895	C835	C775	U651	G591
A1556	G1496	C1436	C1376	G1316	A1256	A1196	G1136	A1076	A1016	U956	C896	C836	U776	G652	G592
C1557	U1497	U1437	G1377	G1317	C1257	U1197	C1137	U1077	U1017	G957	G897	G837	C777	C653	C593
G1558	C1498	A1438	A1378	G1318	C1258	U1198	G1138	A1078	U1018	A958	G898	C838	C778	A654	A594
C1559	A1499	C1439	A1379	U1319	U1259	G1199	A1139	A1079	A1019	A959	A899	C839	C779	G655	A595
U1560	U1500	U1440	C1380	G1320	C1260	A1200	A1140	A1080	A1020	U960	A900	U840	C780	U656	G596
G1561	U1501	U1441	G1381	G1321	A1261	C1201	A1141	C1081	U1021	U961	C901	G841	C781	U657	U597
G1562	A1502	A1442	A1382	U1322	C1262	G1202	C1142	G1082	C1022	U962	U902	G842	C782	A658	C598
C1563	G1503	G1443	G1383	G1323	C1263	G1203	C1143	A1083	A1023	C963	G903	A843	G783	A659	U599
A1564	A1504	A1444	A1384	G1324	C1264	A1204	U1144	U1084	A1024	U964	A904	U844	G784	A660	G600
G1565	U1505	G1445	C1385	U1325	G1265	A1205	A1145	G1085	G1025	U965	G905	A845	C785	A661	G601
G1566	U1506	G1446	U1386	G1326	G1266	G1206	A1146	C1086	A1026	G966	G906	C846	C786	A662	U602
C1567	G1507	G1447	C1387	C1327	C1267	G1207	G1147	C1087	A1027	G967	C907	C847	C787	G663	C603
G1568	U1508	A1448	U1388	A1328	C1268	G1208	U1148	G1088	C1028	A968	C908	G848	C788	C664	G604
C1569	G1509	C1449	G1389	U1329	C1269	C1209	U1149	A1089	G1029	C969	A909	C849	G789	U665	C605
G1570	U1510	A1450	G1390	G1330	G1270	A1210	U1150	C1090	A1030	C970	U910	A850	A790	C666	A606
G1571	G1511	A1451	C1391	G1331	G1271	C1211	U1151	U1091	A1031	G971	G911	G851	A791	G667	G607
C1572	G1512	G1452	A1392	C1332	A1272	C1212	U1152	G1092	A1032	G972	A912	C852	C792	U668	C608
U1573	C1513	U1453	C1393	C1333	C1273	A1213	G1153	G1093	G1033	C973	U913	U853	C793	A669	A609
A1574	U1514	G1454	G1394	G1334	A1274	C1214	G1154	C1094	U1034	C974	U914	A854	G794	G670	G610
C1575	G1515	G1455	C1395	U1335	C1275	C1215	G1155	G1095	C1035	C975	A915	G855	U795	U671	C611
C1576	C1516	C1456	U1396	U1336	G1276	A1216	U1156	A1096	G1036	A976	A916	G856	U796	U672	C612
G1577	A1517	G1457	A1397	U1337	G1277	G1217	U1157	U1097	G1037	A977	G917	A857	U797	G673	G613
C1578	G1518	U1458	A1398	U1338	A1278	G1218	U1158	G1098	A1038	G978	A918	A858	A798	G674	C614
G1579	G1519	U1459	U1399	U1339	C1279	A1219	C1159	C1099	G1039	A979	G919	U859	C799	A675	G615
U1580	U1520	U1460	U1400	A1340	C1280	G1220	G1160	G1100	G1040	C980	G920	U860	U800	U676	G616
U1581	G1521	A1461	G1341	G1341	G1281	U1221	G1161	G1101	U1041	G981	G921	A861	U801	C677	U617
G1582	C1522	G1462	U1342	U1342	G1282	G1222	G1162	C1102	U1042	G982	A922	U862	U802	U678	A618
A1583	G1523	C1463	U1343	G1343	A1283	G1223	G1163	C1103	C1043	A983	C923	U863	U803	G679	A619
U1584	C1524	C1464	U1404	G1344	U1284	A1224	G1164	G1104	G1044	C984	G924	G864	A804	G683	U620
C1585	U1525	A1465	A1405	G1345	U1285	G1225	G1165	C1105	A1045	C985	G925	A865	A805	A684	U621
U1586	A1526	C1466	U1346	U1346	G1286	C1226	A1166	G1106	A1046	A986	C926	A866	A806	G685	C622
C1587	G1527	G1467	G1347	G1347	A1287	C1227	U1167	U1107	G1047	G987	C927	U867	A807	G686	C623
C1588	A1528	C1468	C1408	G1348	C1288	U1228	U1168	U1108	A1048	A988	G928	A868	A808	G687	A624



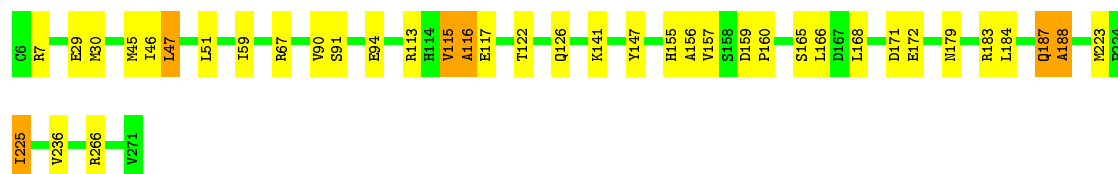
• Molecule 3: RNA (30-MER)

Chain F: 57% 40%



• Molecule 4: Eukaryotic translation initiation factor 2 subunit 1

Chain P: 85% 12%



• Molecule 5: ribosomal protein uS17

Chain G: 93% 7%



• Molecule 6: ribosomal protein uS9

Chain H: 91% 8%



• Molecule 7: 40S ribosomal protein S4

Chain I: 92% 7%



- Molecule 8: ribosomal protein uS14

Chain J: 96%



- Molecule 9: Ribosomal protein S9 (Predicted)

Chain K: 94%



- Molecule 10: ribosomal protein uS13

Chain L: 91%



- Molecule 11: Eukaryotic translation initiation factor 3 subunit G

Chain M: 97%



- Molecule 12: Eukaryotic translation initiation factor 3 subunit G

Chain O: 99%



- Molecule 13: ribosomal protein uS12

Chain Q: 94%

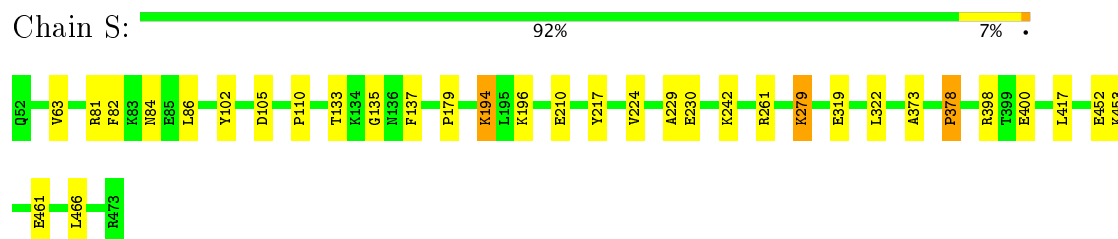


- Molecule 14: Uncharacterized protein

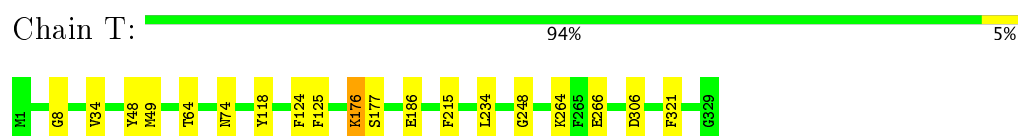
Chain R: 92%



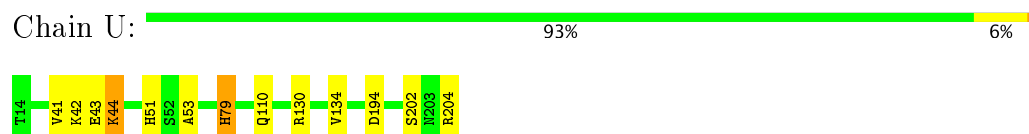
- Molecule 15: eukaryotic initiation factor 2 Gamma subunit (eIF2-Gamma)



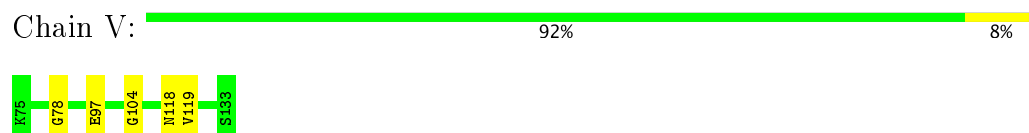
- Molecule 16: Eukaryotic translation initiation factor 3 subunit I



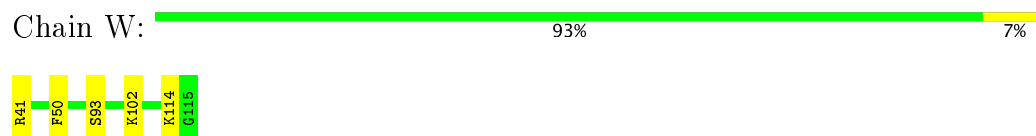
- Molecule 17: ribosomal protein uS7



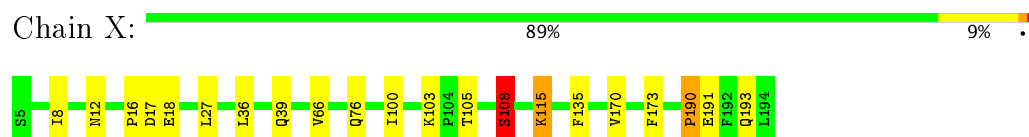
- Molecule 18: Uncharacterized protein



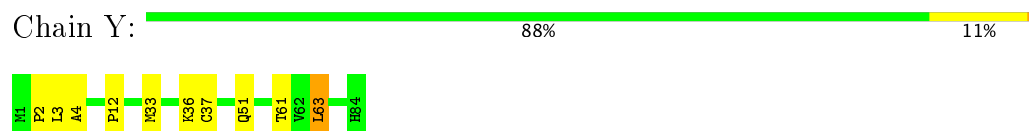
- Molecule 19: ribosomal protein eS25



- Molecule 20: ribosomal protein eS7



- Molecule 21: 40S ribosomal protein S27





- Molecule 22: ribosomal protein uS15

Chain Z:  97% .




- Molecule 23: ribosomal protein uS8

Chain a:  95% 5%



- Molecule 24: 40S ribosomal protein S21

Chain b:  82% 17% .



- Molecule 25: ribosomal protein uS5

Chain c:  95% .



- Molecule 26: eukaryotic initiation factor 2 subunit Beta (eIF2-Beta)

Chain d:  100%

There are no outlier residues recorded for this chain.

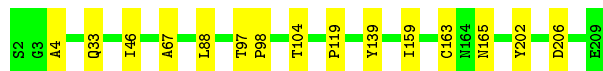
- Molecule 27: ribosomal protein eS17

Chain e:  96% . .



- Molecule 28: ribosomal protein uS2

Chain f:  93% 7%



- Molecule 29: ribosomal protein uS3

Chain g:  94% 6%



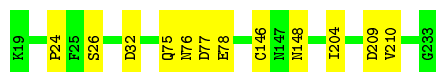
- Molecule 30: ribosomal protein uS10

Chain h: 88% 12%



- Molecule 31: ribosomal protein eS1

Chain i: 94% 6%



- Molecule 32: ribosomal protein uS11

Chain j: 93% 5%



- Molecule 33: Uncharacterized protein

Chain k: 92% 8%



- Molecule 34: ribosomal protein eS28

Chain l: 97% 3%



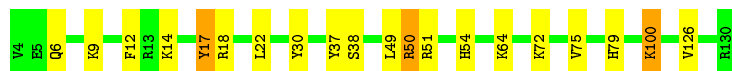
- Molecule 35: ribosomal protein RACK1

Chain m: 92% 7%

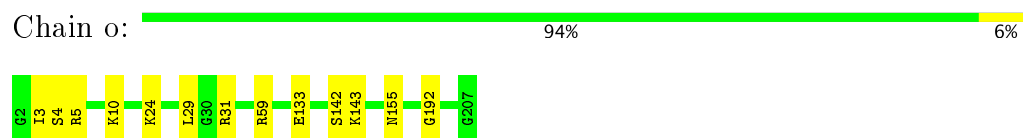


- Molecule 36: ribosomal protein uS19

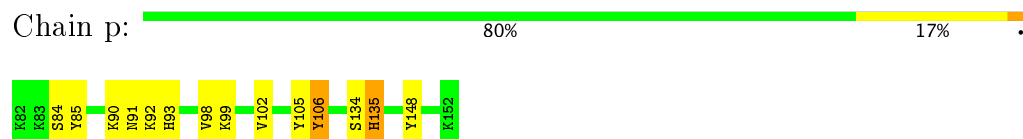
Chain n: 84% 13%



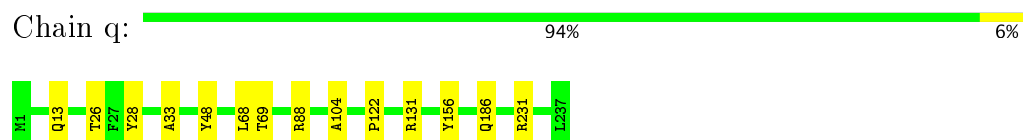
- Molecule 37: 40S ribosomal protein S8



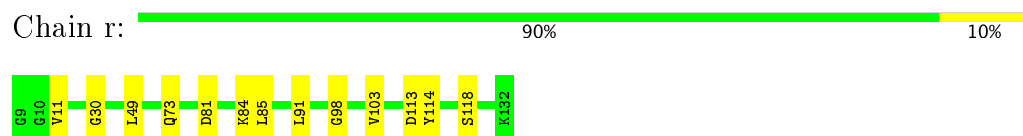
- Molecule 38: ribosomal protein eS31



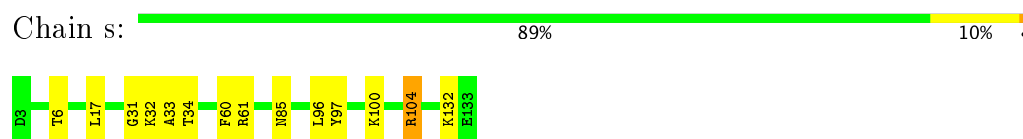
- Molecule 39: 40S ribosomal protein S6



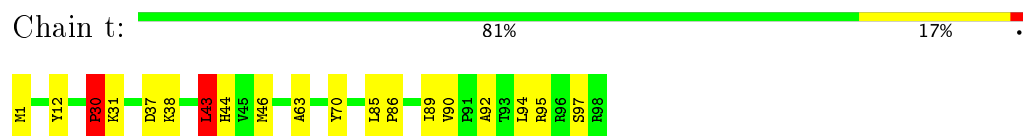
- Molecule 40: 40S ribosomal protein S12



- Molecule 41: 40S ribosomal protein S24



- Molecule 42: Uncharacterized protein



## 4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	475000	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 ( $e^-/\text{\AA}^2$ )	24	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	4500	Depositor
Magnification	59000	Depositor
Image detector	FEI FALCON II (4k x 4k)	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	$\# Z  > 2$	RMSZ	$\# Z  > 2$
1	N	1.68	9/1795 (0.5%)	2.61	215/2798 (7.7%)
10	L	1.06	0/1158	1.04	1/1548 (0.1%)
11	M	0.81	0/293	0.94	0/396
12	O	1.03	0/626	1.01	0/842
13	Q	0.99	0/1125	0.98	0/1500
14	R	0.99	0/1133	1.05	5/1517 (0.3%)
15	S	0.91	0/3267	1.01	2/4415 (0.0%)
16	T	0.96	0/2669	1.07	8/3608 (0.2%)
17	U	0.99	0/1531	0.98	0/2059
18	V	1.10	0/478	1.04	1/628 (0.2%)
19	W	0.97	0/605	1.04	0/810
2	A	1.62	35/42353 (0.1%)	2.56	5098/66010 (7.7%)
20	X	0.96	0/1553	1.04	4/2079 (0.2%)
21	Y	0.94	0/673	1.01	0/902
22	Z	0.98	0/1232	0.94	0/1656
23	a	1.01	0/1051	0.98	0/1406
24	b	0.98	0/627	1.08	0/839
25	c	0.91	0/1779	1.02	3/2399 (0.1%)
26	d	0.98	0/149	0.79	0/197
27	e	0.99	0/1032	1.03	0/1383
28	f	0.96	0/1680	1.05	2/2283 (0.1%)
29	g	0.99	0/1793	1.04	2/2412 (0.1%)
3	F	1.59	0/709	2.51	91/1103 (8.3%)
30	h	0.99	0/832	1.08	0/1117
31	i	0.91	0/1770	1.02	0/2367
32	j	1.04	0/1029	1.08	0/1380
33	k	1.07	0/803	1.06	1/1076 (0.1%)
34	l	1.13	0/509	1.05	0/680
35	m	0.92	0/2494	1.13	3/3394 (0.1%)
36	n	1.03	0/1080	1.04	0/1437
37	o	1.04	0/1709	1.05	1/2278 (0.0%)
38	p	0.99	0/594	1.09	1/786 (0.1%)
39	q	1.07	0/1947	1.08	4/2590 (0.2%)
4	P	1.00	0/2178	1.08	3/2935 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
40	r	0.89	0/968	1.04	2/1296 (0.2%)
41	s	0.99	0/1083	1.10	0/1437
42	t	0.96	0/852	1.13	4/1147 (0.3%)
5	G	1.02	0/1319	1.01	0/1761
6	H	1.04	0/1142	1.07	3/1528 (0.2%)
7	I	0.98	0/2125	1.06	5/2856 (0.2%)
8	J	1.12	0/455	0.98	0/603
9	K	1.08	0/1523	1.00	2/2031 (0.1%)
All	All	1.33	44/93723 (0.0%)	1.98	5461/135489 (4.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	N	0	6
10	L	0	6
14	R	0	1
15	S	0	5
16	T	0	1
17	U	0	3
18	V	0	1
19	W	0	2
2	A	1	68
20	X	0	6
21	Y	0	3
23	a	0	1
24	b	0	5
25	c	0	1
27	e	0	3
28	f	0	2
29	g	0	1
30	h	0	5
31	i	0	3
32	j	0	1
35	m	0	7
36	n	0	3
37	o	0	4
38	p	0	7
4	P	0	17
40	r	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
41	s	1	4
42	t	0	7
5	G	0	4
6	H	0	2
7	I	1	2
9	K	0	3
All	All	3	185

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	211	U	C2-N3	6.75	1.42	1.37
2	A	524	G	O3'-P	-6.71	1.53	1.61
2	A	1186	A	N7-C5	-6.68	1.35	1.39
2	A	749	C	O3'-P	-6.62	1.53	1.61
1	N	14	A	N7-C5	-6.52	1.35	1.39

The worst 5 of 5461 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	730	C	P-O3'-C3'	22.13	146.25	119.70
2	A	883	U	P-O3'-C3'	21.96	146.05	119.70
2	A	748	G	P-O3'-C3'	21.66	145.69	119.70
2	A	524	G	P-O3'-C3'	21.53	145.53	119.70
2	A	1627	G	P-O3'-C3'	21.22	145.16	119.70

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	A	794	G	C4'
7	I	171	ASP	CA
41	s	86	GLU	CA

5 of 185 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	N	1	A	Sidechain
1	N	12	G	Sidechain
1	N	2	G	Sidechain
1	N	22	C	Sidechain
1	N	72	A	Sidechain

## 5.2 Too-close contacts ⓘ

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	N	1604	0	816	0	0
2	A	37881	0	19145	0	0
3	F	635	0	327	0	0
4	P	2147	0	2191	0	0
5	G	1296	0	1374	0	0
6	H	1124	0	1193	0	0
7	I	2083	0	2189	0	0
8	J	445	0	442	0	0
9	K	1499	0	1608	0	0
10	L	1140	0	1191	0	0
11	M	288	0	269	0	0
12	O	614	0	599	0	0
13	Q	1107	0	1179	0	0
14	R	1113	0	1149	0	0
15	S	3214	0	3354	0	0
16	T	2605	0	2474	0	0
17	U	1509	0	1563	0	0
18	V	473	0	524	0	0
19	W	599	0	656	0	0
20	X	1530	0	1627	0	0
21	Y	659	0	683	0	0
22	Z	1208	0	1294	0	0
23	a	1034	0	1080	0	0
24	b	620	0	622	0	0
25	c	1743	0	1836	0	0
26	d	147	0	146	0	0
27	e	1020	0	1075	0	0
28	f	1643	0	1646	0	0
29	g	1765	0	1863	0	0
30	h	822	0	887	0	0
31	i	1742	0	1815	0	0
32	j	1016	0	1039	0	0
33	k	790	0	839	0	0
34	l	507	0	536	0	0
35	m	2437	0	2393	0	0
36	n	1061	0	1120	0	0
37	o	1680	0	1762	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	p	582	0	599	0	0
39	q	1924	0	2089	0	0
40	r	958	0	993	0	0
41	s	1065	0	1137	0	0
42	t	828	0	854	0	0
All	All	88157	0	70178	0	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). Clashscore could not be calculated for this entry.

There are no clashes within the asymmetric unit.

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	P	264/266 (99%)	220 (83%)	26 (10%)	18 (7%)	1	20
5	G	156/158 (99%)	135 (86%)	17 (11%)	4 (3%)	6	41
6	H	139/141 (99%)	125 (90%)	7 (5%)	7 (5%)	2	27
7	I	261/263 (99%)	235 (90%)	14 (5%)	12 (5%)	3	28
8	J	51/53 (96%)	45 (88%)	4 (8%)	2 (4%)	3	31
9	K	180/182 (99%)	156 (87%)	18 (10%)	6 (3%)	4	36
10	L	135/137 (98%)	118 (87%)	11 (8%)	6 (4%)	3	29
11	M	36/38 (95%)	31 (86%)	5 (14%)	0	100	100
12	O	75/77 (97%)	70 (93%)	5 (7%)	0	100	100
13	Q	140/142 (99%)	119 (85%)	15 (11%)	6 (4%)	3	30
14	R	139/141 (99%)	130 (94%)	7 (5%)	2 (1%)	13	53
15	S	420/422 (100%)	364 (87%)	41 (10%)	15 (4%)	4	34
16	T	327/329 (99%)	292 (89%)	29 (9%)	6 (2%)	10	49

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	U	189/191 (99%)	169 (89%)	13 (7%)	7 (4%)	4	33
18	V	57/59 (97%)	46 (81%)	8 (14%)	3 (5%)	2	25
19	W	73/75 (97%)	61 (84%)	11 (15%)	1 (1%)	13	53
20	X	188/190 (99%)	163 (87%)	11 (6%)	14 (7%)	1	18
21	Y	82/84 (98%)	71 (87%)	5 (6%)	6 (7%)	1	18
22	Z	148/150 (99%)	137 (93%)	9 (6%)	2 (1%)	13	53
23	a	127/129 (98%)	118 (93%)	6 (5%)	3 (2%)	7	42
24	b	80/82 (98%)	65 (81%)	6 (8%)	9 (11%)	0	8
25	c	224/226 (99%)	209 (93%)	9 (4%)	6 (3%)	6	40
26	d	15/17 (88%)	15 (100%)	0	0	100	100
27	e	124/126 (98%)	110 (89%)	11 (9%)	3 (2%)	7	42
28	f	206/208 (99%)	174 (84%)	24 (12%)	8 (4%)	3	31
29	g	225/227 (99%)	203 (90%)	14 (6%)	8 (4%)	4	34
30	h	102/104 (98%)	86 (84%)	12 (12%)	4 (4%)	3	31
31	i	213/215 (99%)	188 (88%)	17 (8%)	8 (4%)	4	32
32	j	134/136 (98%)	107 (80%)	19 (14%)	8 (6%)	2	22
33	k	97/99 (98%)	87 (90%)	7 (7%)	3 (3%)	5	37
34	l	62/64 (97%)	57 (92%)	5 (8%)	0	100	100
35	m	311/313 (99%)	278 (89%)	23 (7%)	10 (3%)	5	36
36	n	125/127 (98%)	103 (82%)	10 (8%)	12 (10%)	1	12
37	o	204/206 (99%)	182 (89%)	14 (7%)	8 (4%)	3	31
38	p	69/71 (97%)	47 (68%)	14 (20%)	8 (12%)	0	8
39	q	235/237 (99%)	211 (90%)	16 (7%)	8 (3%)	4	35
40	r	122/124 (98%)	103 (84%)	12 (10%)	7 (6%)	2	24
41	s	129/131 (98%)	113 (88%)	7 (5%)	9 (7%)	1	19
42	t	96/98 (98%)	76 (79%)	10 (10%)	10 (10%)	0	10
All	All	5960/6038 (99%)	5219 (88%)	492 (8%)	249 (4%)	6	30

5 of 249 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	P	115	VAL
4	P	166	LEU

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Mol	Chain	Res	Type
4	P	172	GLU
4	P	223	MET
6	H	19	ALA

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	P	238/238 (100%)	231 (97%)	7 (3%)	48	73
5	G	142/142 (100%)	139 (98%)	3 (2%)	59	80
6	H	117/117 (100%)	113 (97%)	4 (3%)	42	70
7	I	225/225 (100%)	219 (97%)	6 (3%)	50	74
8	J	47/47 (100%)	47 (100%)	0	100	100
9	K	157/157 (100%)	154 (98%)	3 (2%)	62	82
10	L	119/119 (100%)	119 (100%)	0	100	100
11	M	35/35 (100%)	34 (97%)	1 (3%)	48	73
12	O	63/63 (100%)	62 (98%)	1 (2%)	68	85
13	Q	114/114 (100%)	111 (97%)	3 (3%)	51	75
14	R	113/113 (100%)	107 (95%)	6 (5%)	26	59
15	S	354/354 (100%)	340 (96%)	14 (4%)	36	65
16	T	281/281 (100%)	273 (97%)	8 (3%)	49	74
17	U	161/161 (100%)	156 (97%)	5 (3%)	45	71
18	V	49/49 (100%)	49 (100%)	0	100	100
19	W	66/66 (100%)	64 (97%)	2 (3%)	46	72
20	X	170/170 (100%)	168 (99%)	2 (1%)	75	88
21	Y	76/76 (100%)	74 (97%)	2 (3%)	51	75
22	Z	130/130 (100%)	128 (98%)	2 (2%)	70	85
23	a	112/112 (100%)	110 (98%)	2 (2%)	64	84
24	b	67/67 (100%)	65 (97%)	2 (3%)	46	72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	c	187/187 (100%)	184 (98%)	3 (2%)	68	85
26	d	17/17 (100%)	17 (100%)	0	100	100
27	e	114/114 (100%)	113 (99%)	1 (1%)	82	91
28	f	174/174 (100%)	171 (98%)	3 (2%)	66	84
29	g	190/190 (100%)	187 (98%)	3 (2%)	68	85
30	h	94/94 (100%)	91 (97%)	3 (3%)	44	71
31	i	196/196 (100%)	195 (100%)	1 (0%)	91	95
32	j	106/106 (100%)	104 (98%)	2 (2%)	62	82
33	k	87/87 (100%)	83 (95%)	4 (5%)	31	63
34	l	57/57 (100%)	55 (96%)	2 (4%)	41	69
35	m	272/272 (100%)	265 (97%)	7 (3%)	51	75
36	n	116/116 (100%)	108 (93%)	8 (7%)	18	51
37	o	177/177 (100%)	177 (100%)	0	100	100
38	p	64/64 (100%)	64 (100%)	0	100	100
39	q	207/207 (100%)	203 (98%)	4 (2%)	62	82
40	r	104/104 (100%)	100 (96%)	4 (4%)	38	67
41	s	113/113 (100%)	111 (98%)	2 (2%)	64	84
42	t	89/89 (100%)	85 (96%)	4 (4%)	32	63
All	All	5200/5200 (100%)	5076 (98%)	124 (2%)	58	77

5 of 124 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
17	U	110	GLN
23	a	57	ARG
40	r	49	LEU
17	U	130	ARG
19	W	102	LYS

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

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	N	74/75 (98%)	16 (21%)	3 (4%)
2	A	1772/1776 (99%)	499 (28%)	113 (6%)
3	F	29/30 (96%)	11 (37%)	2 (6%)
All	All	1875/1881 (99%)	526 (28%)	118 (6%)

5 of 526 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	N	7	G
1	N	11	C
1	N	16	C
1	N	17	G
1	N	18	G

5 of 118 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	A	780	G
2	A	1111	U
2	A	1763	C
2	A	781	C
2	A	829	C

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	A	5

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	736:C	O3'	744:C	P	29.45
1	A	679:U	O3'	683:G	P	18.26
1	A	761:G	O3'	774:U	P	17.60
1	A	687:G	O3'	730:C	P	14.44
1	A	243:C	O3'	267:G	P	13.79