



wwPDB EM Validation Summary Report ⓘ

Dec 18, 2022 – 04:56 am GMT

PDB ID : 7A5P
EMDB ID : EMD-11570
Title : Human C Complex Spliceosome - Medium-resolution PERIPHERY
Authors : Bertram, K.; Kastner, B.
Deposited on : 2020-08-21
Resolution : 5.00 Å(reported)

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/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:

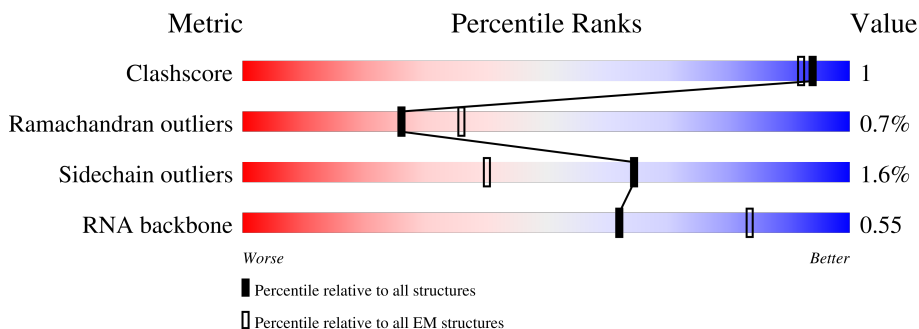
EMDB validation analysis : 0.0.1.dev43
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

1 Overall quality at a glance i

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

The reported resolution of this entry is 5.00 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 $\leq 5\%$. 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	2	975	 14% 8% 6% 84%
2	5	116	 15% 14% 66%
3	6	106	 8% 7% 85%
4	8	204	 37% 37% 63%
5	A	2335	 10% 20% 79%
6	C	536	 97%
7	E	579	 50% 47%

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Mol	Chain	Length	Quality of chain
8	G	504	26% 25% 74%
8	H	504	27% 25% 73%
8	I	504	26% 25% 74%
8	J	504	22% 22% 78%
9	K	225	61% 57% 39%
10	L	802	13% 14% 86%
11	M	855	79% 78% 21%
12	N	243	5% 28% 70%
13	O	848	29% 29% 69%
14	P	420	21% 79%
15	S	2752	98%
16	T	908	8% 28% 72%
17	U	1485	87% 87% 13%
18	W	255	68% 68% 32%
19	X	225	41% 41% 59%
20	Y	324	5% 5% 91%
21	a	126	57% 43%
21	l	126	66% 65% 34%
22	b	240	28% 72%
22	m	240	29% 29% 71%
23	c	119	68% 32%
23	n	119	65% 69% 31%
24	d	118	68% 31%
24	h	118	70% 70% 29%
25	e	92	85% 14%

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Mol	Chain	Length	Quality of chain
25	j	92	85% 84% 15%
26	f	86	85% 83% 14%
26	i	86	83% 83% 17%
27	g	76	13% 93% 96%
27	k	76	96% 96%
28	o	301	26% 26% 74%
29	p	654	9% 90%
30	q	2136	89% 88% 11%
31	r	1227	48% 48% 52%
32	s	285	9% 27% 73%
33	u	323	10% 13% 87%
34	v	146	82% 99%
35	w	174	26% 52% 48%
36	x	258	16% 48% 52%
37	y	411	44% 95% 5%
38	z	646	47% 70% 29%

2 Entry composition [i](#)

There are 38 unique types of molecules in this entry. The entry contains 52703 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 U2 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	2	155	2854	1258	396	1045	155	0	0

- Molecule 2 is a RNA chain called U5 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	5	40	718	316	93	269	40	0	0

- Molecule 3 is a RNA chain called U6 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	6	16	296	130	42	108	16	0	0

- Molecule 4 is a protein called UNKNOWN.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
4	8	76	376	224	76	76	0	0

- Molecule 5 is a protein called Pre-mRNA-processing-splicing factor 8.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	A	491	2485	1496	497	492	0	0

- Molecule 6 is a protein called SNW domain-containing protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
6	C	15	75	45	15	15	0	0

- Molecule 7 is a protein called Pre-mRNA-processing factor 17.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
7	E	305	1525	915	305	305	0	0

- Molecule 8 is a protein called Pre-mRNA-processing factor 19.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
8	G	132	679	415	132	132	0	0
8	H	135	696	426	135	135	0	0
8	I	133	684	418	133	133	0	0
8	J	110	561	341	110	110	0	0

- Molecule 9 is a protein called Pre-mRNA-splicing factor SPF27.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
9	K	138	689	413	138	138	0	0

- Molecule 10 is a protein called Cell division cycle 5-like protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
10	L	115	573	343	115	115	0	0

- Molecule 11 is a protein called Pre-mRNA-splicing factor SYF1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
11	M	672	3387	2043	672	672	0	0

- Molecule 12 is a protein called Pre-mRNA-splicing factor SYF2.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
12	N	73	369	223	73	73	0	0

- Molecule 13 is a protein called Crooked neck-like protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
13	O	261	1320	798	261	261	0	0

- Molecule 14 is a protein called Pre-mRNA-splicing factor RBM22.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
14	P	90	452	271	90	91	0	0

- Molecule 15 is a protein called Serine/arginine repetitive matrix protein 2.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
15	S	46	229	137	46	46	0	0

- Molecule 16 is a protein called Pre-mRNA-splicing factor CWC22 homolog.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
16	T	253	1271	765	253	253	0	0

- Molecule 17 is a protein called Intron-binding protein aquarius.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
17	U	1293	6546	3960	1293	1293	0	0

- Molecule 18 is a protein called U2 small nuclear ribonucleoprotein A'.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
18	W	174	874	526	174	174	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
W	89	ASP	CYS	conflict	UNP P09661
W	119	CYS	SER	conflict	UNP P09661

- Molecule 19 is a protein called U2 small nuclear ribonucleoprotein B'.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
19	X	93	466	280	93	93	0	0

- Molecule 20 is a RNA chain called pre-mRNA.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	O	P		
20	Y	29	348	145	174	29	0	0

- Molecule 21 is a protein called Small nuclear ribonucleoprotein Sm D3.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
21	a	72	358	214	72	72	0	0
21	l	83	415	249	83	83	0	0

- Molecule 22 is a protein called Small nuclear ribonucleoprotein-associated proteins B and B'.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
22	b	66	327	195	66	66	0	0
22	m	70	351	211	70	70	0	0

- Molecule 23 is a protein called Small nuclear ribonucleoprotein Sm D1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
23	c	81	407	245	81	81	0	0
23	n	82	412	248	82	82	0	0

- Molecule 24 is a protein called Small nuclear ribonucleoprotein Sm D2.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
24	d	81	406	244	81	81	0	0
24	h	84	421	253	84	84	0	0

- Molecule 25 is a protein called Small nuclear ribonucleoprotein E.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	e	79	Total	C	N	O	0	0
			393	235	79	79		
25	j	78	Total	C	N	O	0	0
			388	232	78	78		

- Molecule 26 is a protein called Small nuclear ribonucleoprotein F.

Mol	Chain	Residues	Atoms				AltConf	Trace
26	f	74	Total	C	N	O	0	0
			369	221	74	74		
26	i	71	Total	C	N	O	0	0
			352	210	71	71		

- Molecule 27 is a protein called Small nuclear ribonucleoprotein G.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	g	74	Total	C	N	O	0	0
			369	221	74	74		
27	k	73	Total	C	N	O	0	0
			364	218	73	73		

- Molecule 28 is a protein called Peptidyl-prolyl cis-trans isomerase E.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	o	77	Total	C	N	O	0	0
			384	230	77	77		

- Molecule 29 is a protein called WD repeat-containing protein 70.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	p	68	Total	C	N	O	0	0
			333	197	68	68		

- Molecule 30 is a protein called U5 small nuclear ribonucleoprotein 200 kDa helicase.

Mol	Chain	Residues	Atoms				AltConf	Trace
30	q	1896	Total	C	N	O	0	0
			9558	5766	1896	1896		

- Molecule 31 is a protein called Pre-mRNA-splicing factor ATP-dependent RNA helicase PRP16.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
31	r	593	2982	1796	593	593	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
r	855	ASN	GLY	conflict	UNP Q92620

- Molecule 32 is a protein called Pre-mRNA-splicing factor ISY1 homolog.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
32	s	76	376	224	76	76	0	0

- Molecule 33 is a protein called Splicing factor YJU2.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
33	u	43	216	129	43	44	0	0

- Molecule 34 is a protein called Protein mago nashi homolog.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
34	v	144	723	435	144	144	0	0

- Molecule 35 is a protein called RNA-binding protein 8A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
35	w	91	453	271	91	91	0	0

- Molecule 36 is a protein called Protein FRG1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
36	x	125	621	371	125	125	0	0

- Molecule 37 is a protein called Eukaryotic initiation factor 4A-III.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
37	y	390	1951	1171	390	390	0	0

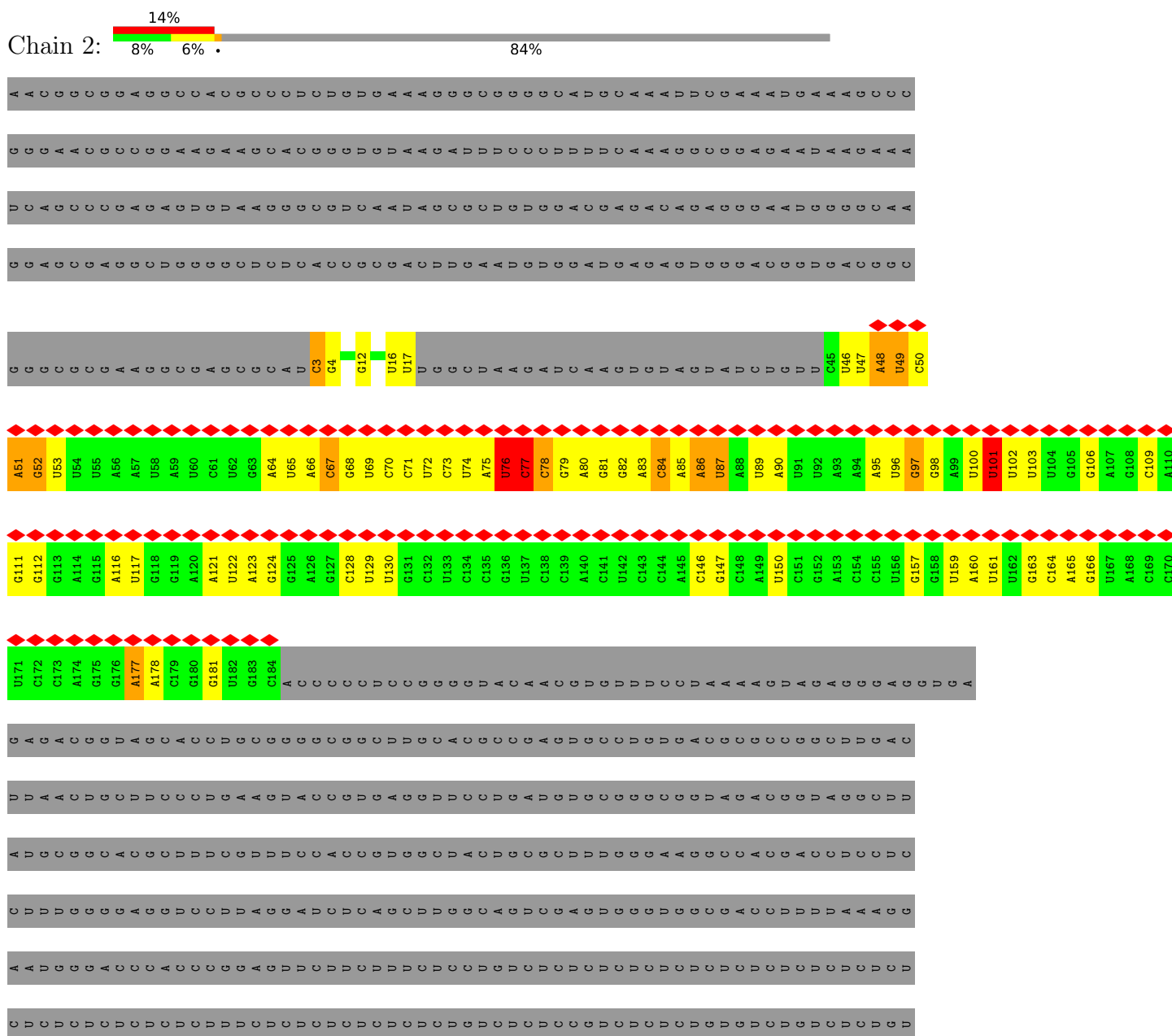
- Molecule 38 is a protein called Peptidylprolyl isomerase domain and WD repeat-containing protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
38	z	460	2301	1381	460	460	0	0

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: U2 snRNA



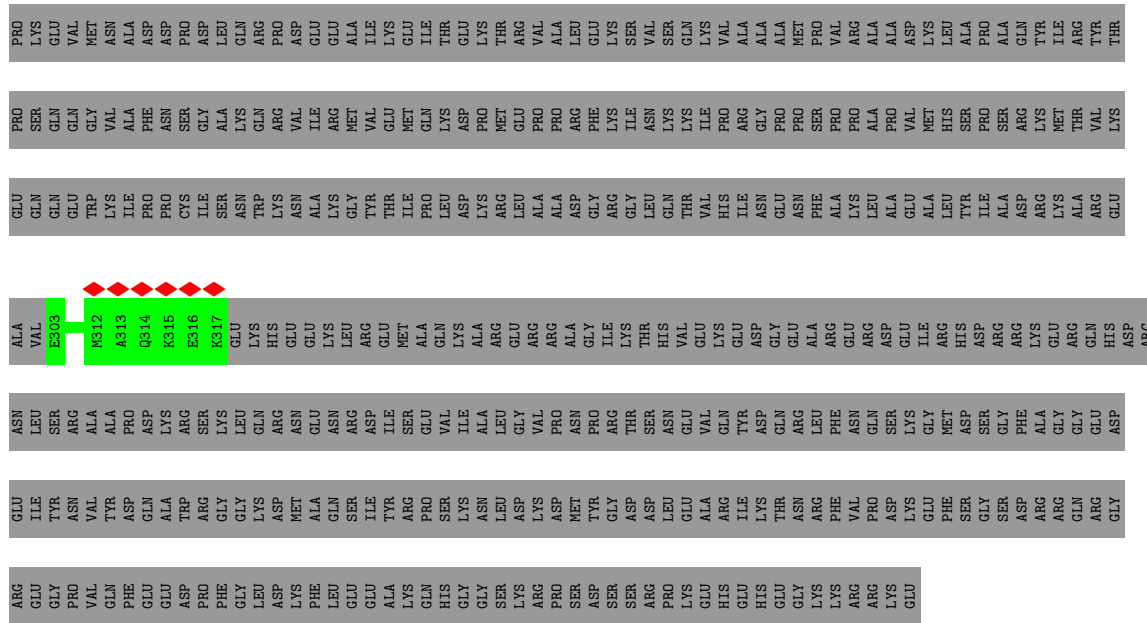
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ASP	PHE	LYS	ASN	GLY	TRP	VAL	GLN	LEU	TRP	ASP	GLY	VAL	TRP	ASP	GLY	LEU	ASP	GLY	VAL	GLY	LEU	ASP	GLY	TRP	ARG	VAL	THR																																
LEU	PHE	TRP	ASP	VAL	ALA	GLY	LEU	TRP	ASP	GLY	VAL	TRP	ASP	GLY	LEU	ASP	GLY	VAL	GLY	LEU	ASP	GLY	TRP	ARG	VAL	THR																																	
PHE	MET	HIS	GLY	SER	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL																																
LYS	MET	ASN	SER	VAL	ASP	TRP	GLY	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP																																
ARG	ALA	LYS	PHE	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN																																
TYR	VAL	LEU	ARG	GLU	ARG	ILE	ASP	TRP	THR	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP																																
ILE	SER	ALA	PRO	SER	GLN	ARG	GLN	ARG	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN	LEU	TRP	ASP	GLY	VAL	GLN																																
R2076	A2077	I2078	S2079	A2080	A2081	N2082	L2083	H2084	L2085	R2086	T2087	N2088	H2089	I2090	Y2091	V2092	S2093	S2094	D2095	D2096	L2097	K2098	E2099	T2100	G2101	Y2102	T2103	Y2104	I2105	L2106	P2107	K2108	N2109	V2110	L2111	M2112	K2113	F2114	I2115	C2116	I2117	S2118	D2119	L2120	R2121	A2122	Q2123	I2124	A2125	G2126	Y2127	L2128	Y2129	G2130	V2131	S2132	PRO	PRO	ASP
ASN	PRO	Q2133	V2139	K2140	E2141	I2142	R2143	C2144	I2145	V2146	M2147	V2148	P2149	Q2150	W2151	G2152	T2153	H2154	Q2155	T2156	V2157	H2158	L2159	P2160	G2161	Q2162	L2163	P2164	Q2165	H2166	E2167	Y2168	L2169	K2170	E2171	M2172	E2173	P2174	L2175	G2176	W2177	I2178	H2179	T2180	Q2181	P2182	M2183	E2184	S2185	P2186	Q2187	L2188	S2189	P2190	Q2191	D2192	V2193	T2194	T2195
H2196	A2197	K2198	I2199	M2200	A2201	D2202	W2203	S2205	W2206	D2207	G2208	E2209	K2210	T2211	I2212	I2213	I2214	T2215	C2216	S2217	F2218	THR	PRO	GLY	SER	CYS	T2224	L2225	T2226	A2227	Y2228	K2229	L2230	T2231	P2232	S2233	G2234	Y2235	E2236	W2237	G2238	R2239	Q2240	N2241	T2242	D2243	K2244	G2245	N2246	W2247	P2248	K2249	G2250	Y2251	L2252	P2253	S2254	H2255	
Y2256	E2257	R2258	V2259	Q2260	M2261	L2262	L2263	S2264	D2265	R2266	F2267	L2268	G2269	F2270	F2271	M2272	V2273	P2274	A2275	Q2276	S2277	S2278	W2279	N2280	Y2281	N2282	F2283	M2284	G2285	V2286	R2287	H2288	D2289	P2290	N2291	M2292	K2293	Y2294	E2295	L2296	Q2297	L2298	A2299	N2300	P2301	K2302	E2303	F2304	Y2305	H2306	E2307	V2308	H2309	R2310	P2311	S2312	H2313	F2314	L2315
H2316	PHE	ALA	LEU	LEU	GLN	GLY	VAL	TRP	SER	ALA	ASP	ARG	GLU	ASP	LEU	TYR	ALA																																										

● Molecule 6: SNW domain-containing protein 1

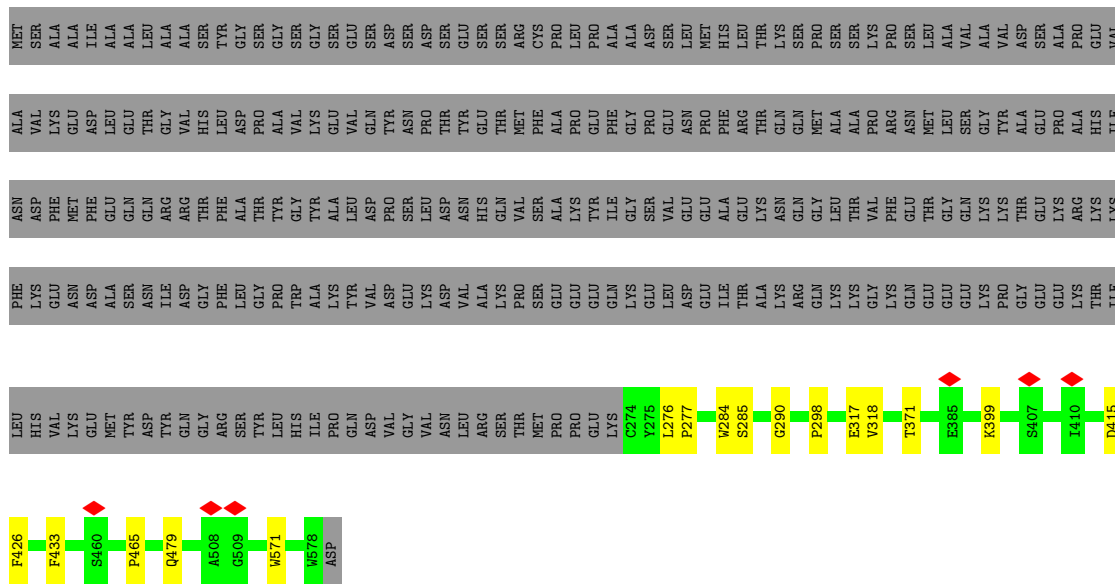
Chain C: . 97%

MET	ALA	LEU	THR	SER	PHE	LEU	PRO	LEU	ALA	ALA	THR	GLN	PRO	TRP	GLN	ASP	GLN	ASP	GLN	ASP	GLN	GLU	THR	SER	THR	SER	GLY	LEU	VAL	SER	LEU	SER	VAL	ARG	ARG	GLU	PRO	PRO	PRO	PRO	TYR	GLY	TYR	ARG	ARG	LYS	LYS	GLY	TRP	ILE	PRO	ARG	LEU	LEU	GLY	ASP	PHE	ASP	GLY	ASP	VAL		
GLY	GLY	ALA	PHE	PRO	GLU	ILE	HIS	VAL	ALA	GLN	TRP	GLN	PRO	LEU	LEU	ASP	GLN	ASP	MET	GLY	ARG	LYS	LYS	ALA	LEU	ALA	ILE	GLN	VAL	ASP	SER	GLY	ILE	ARG	GLN	ARG	GLY	ALA	ALA	ALA	GLN	GLY	GLN	SER	ARG	ASP	LYS	VAL	ILE	ILE	THR	SER	TRP	VAL	LEU	LEU	THR	ASP	PHE	ASP	GLY	LEU	VAL





• Molecule 7: Pre-mRNA-processing factor 17



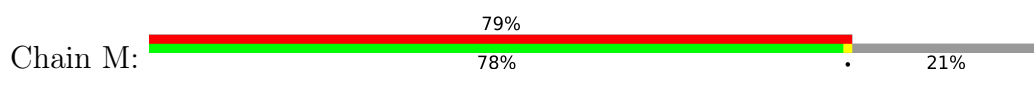
• Molecule 8: Pre-mRNA-processing factor 19



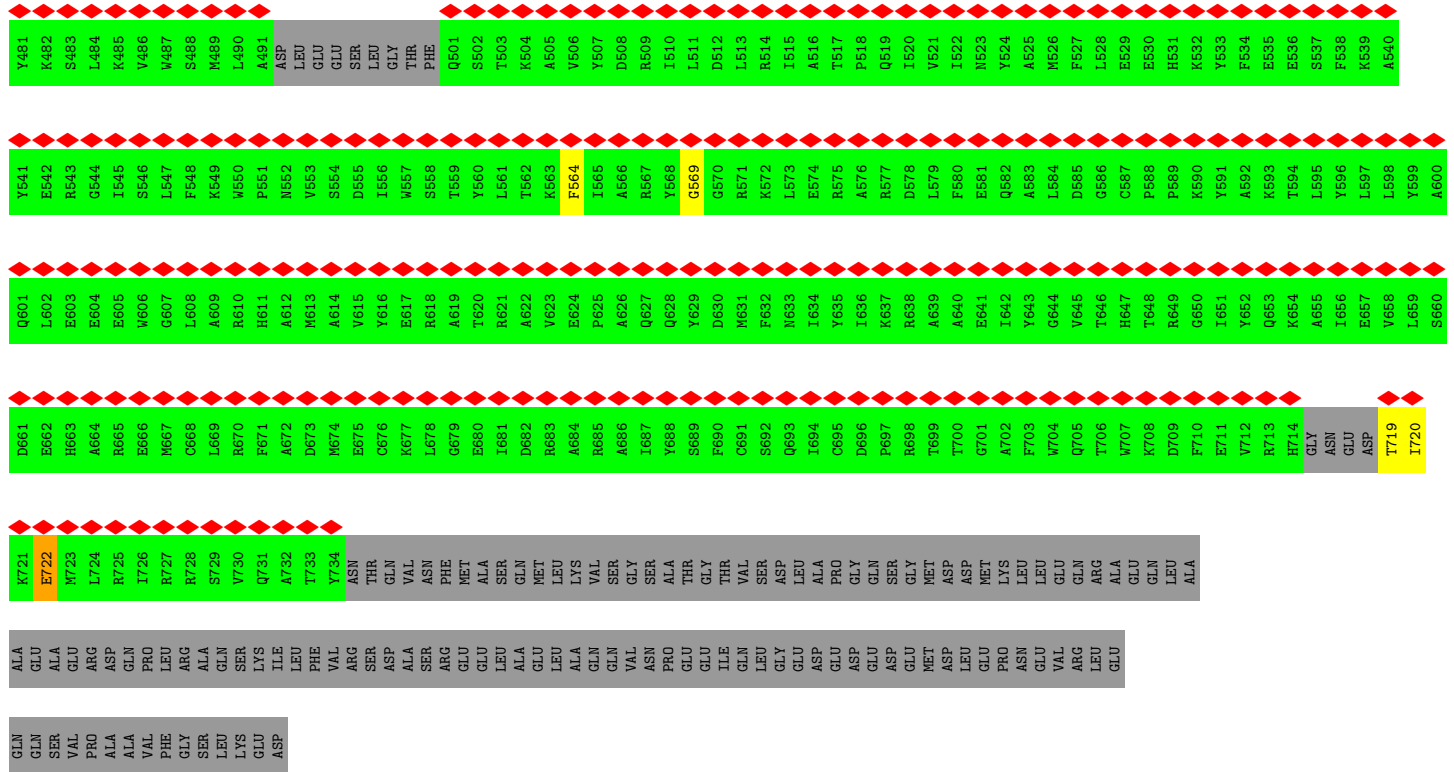
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PRO	ARG	PRO	SER	GLU	VAL	VAL	ASN	THR	LEU	LEU	ARG	PRO	GLU	VAL	PRO	GLU	LEU	ASP	GLN	THR	ASP	GLY	GLN	ALA	GLY	ASP
GLY	THR	ASN	ASN	SER	GLU	HIS	ILE	THR	TYR	LEU	THR	GLU	ASN	THR	GLY	PRO	SER	ILE	ALA	VAL	VAL	GLN	ALA	TYR	GLY	
SER	GLN	VAL	LEU	TYR	LEU	PRO	GLY	GLY	ARG	ARG	THR	THR	ARG	ALA	ASP	ALA	VAL	LEU	VAL	VAL	VAL	VAL	VAL	VAL	VAL	
S726	R727	A728	M729	G730	L731	M732	K733	Q734	L735	M736	D737	L738	M739	D740	Q741	I742	E743	Q744	A745	H746	L747	E748	L749	R750	T751	
F752	E753	E754	L755	K756	K757	H758	E759	D760	S761	A762	I763	P764	R765	R766	L767	E768	C769	L770	K771	E772	D773	V774	Q775	R776	Q777	
Y724	Q725																									

H786	R787	D790	L791	L792	L793	K795
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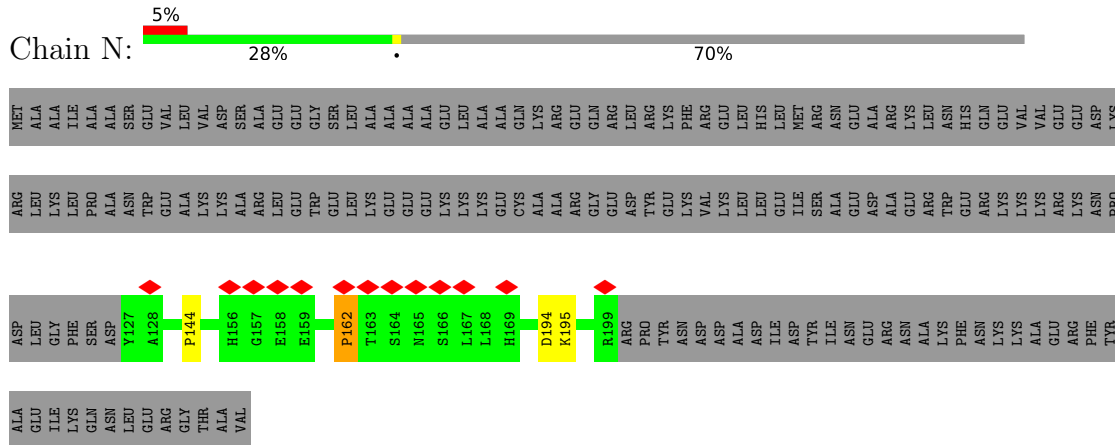
Molecule 11: Pre-mRNA-splicing factor SYF1



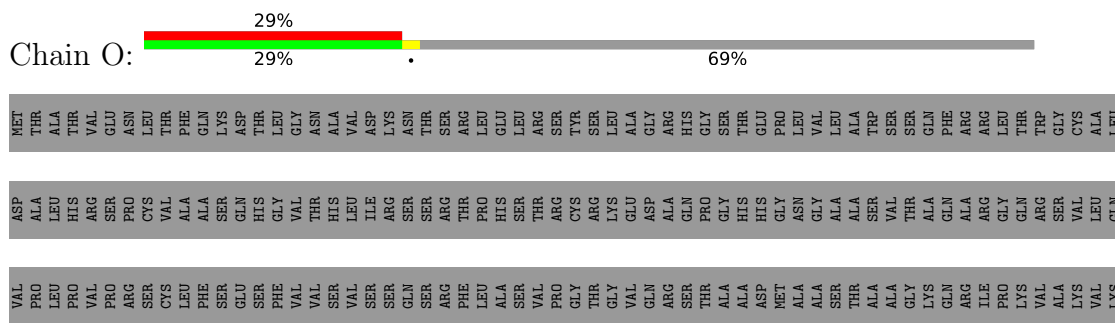
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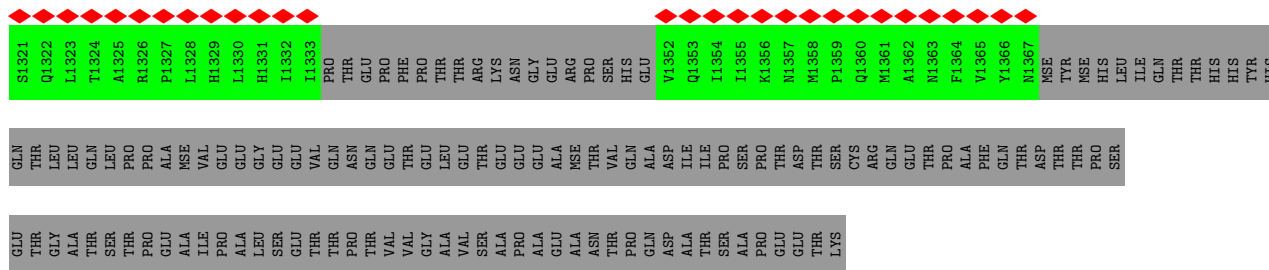
• Molecule 12: Pre-mRNA-splicing factor SYF2



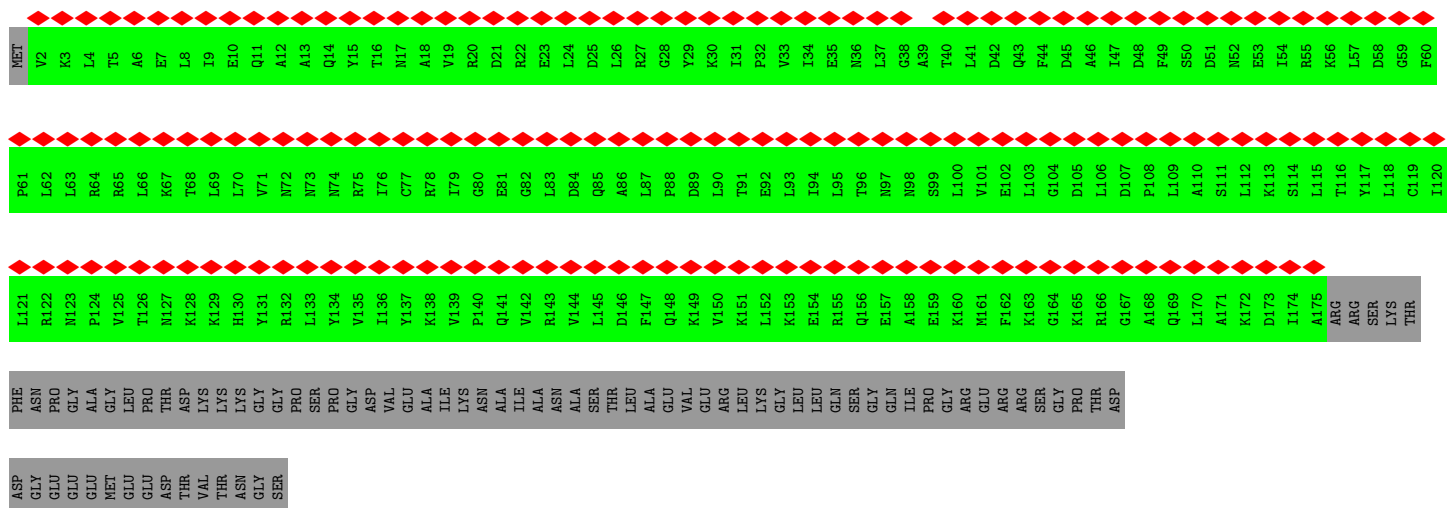
• Molecule 13: Crooked neck-like protein 1



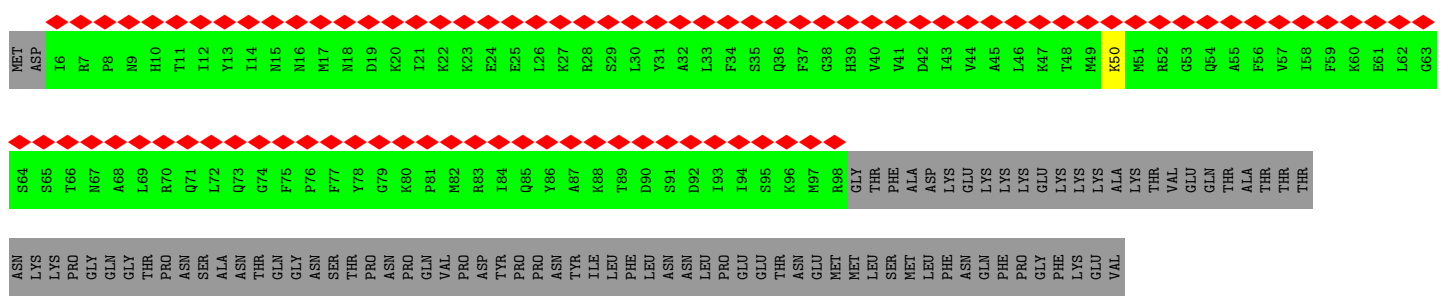
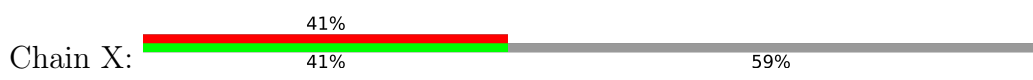
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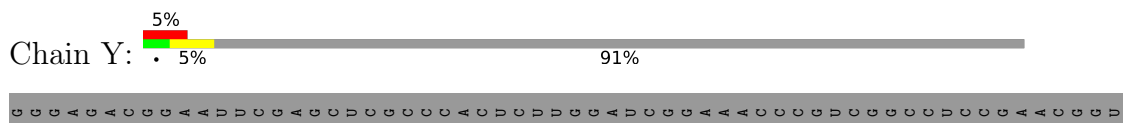
• Molecule 18: U2 small nuclear ribonucleoprotein A'



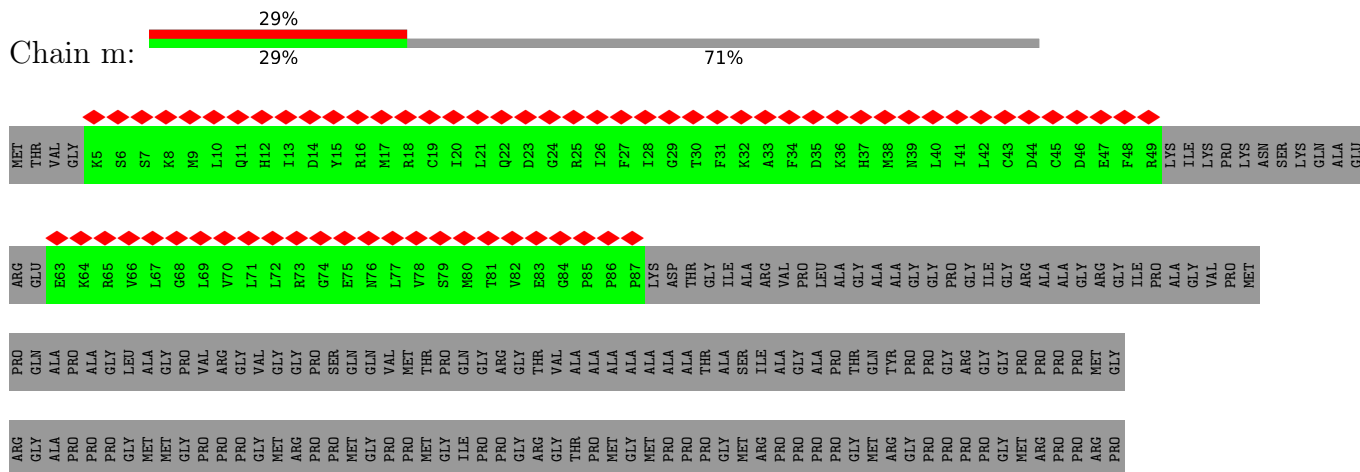
• Molecule 19: U2 small nuclear ribonucleoprotein B''



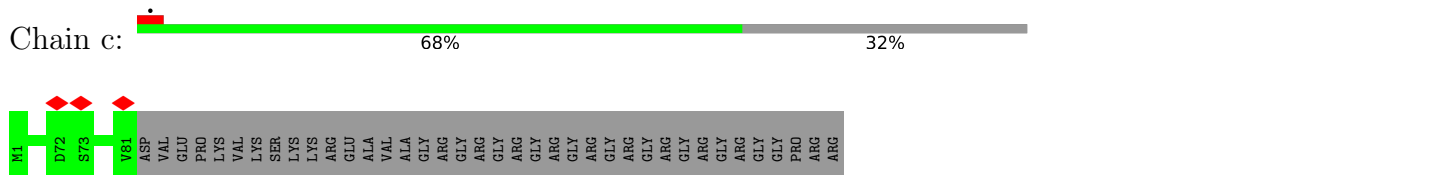
• Molecule 20: pre-mRNA



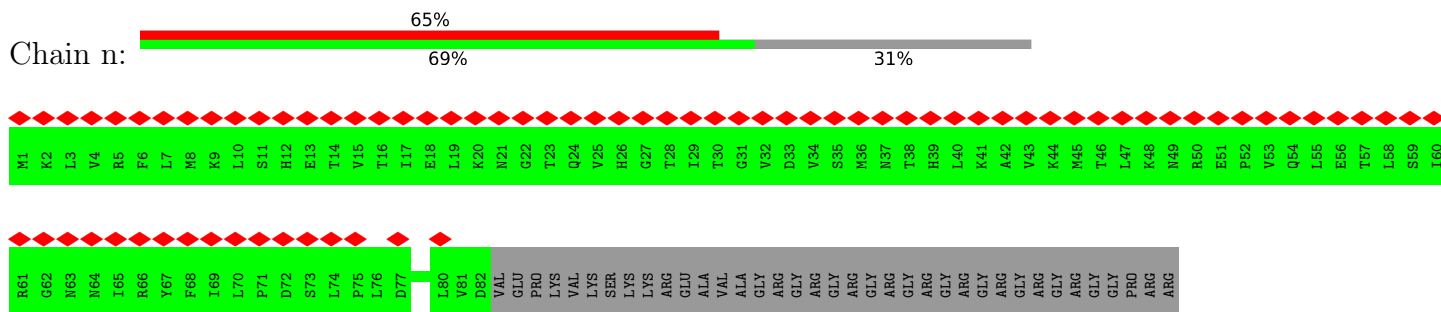
• Molecule 22: Small nuclear ribonucleoprotein-associated proteins B and B'



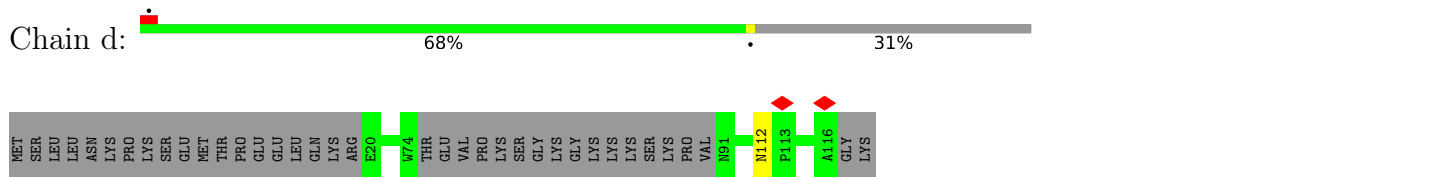
• Molecule 23: Small nuclear ribonucleoprotein Sm D1



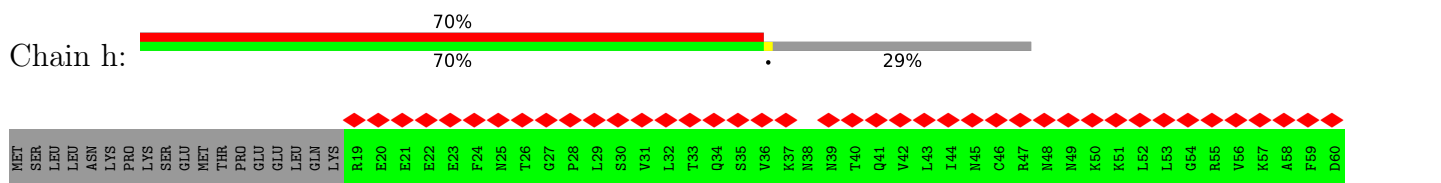
• Molecule 23: Small nuclear ribonucleoprotein Sm D1

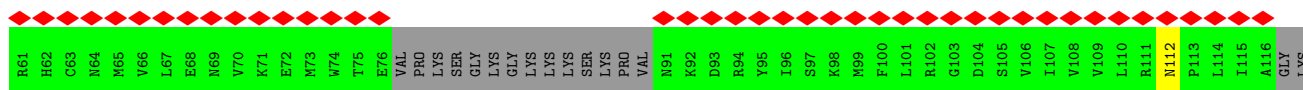


• Molecule 24: Small nuclear ribonucleoprotein Sm D2

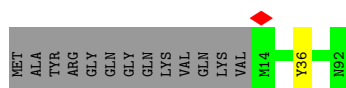
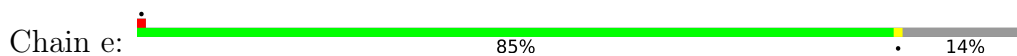


• Molecule 24: Small nuclear ribonucleoprotein Sm D2

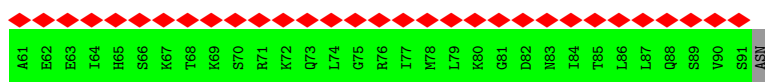
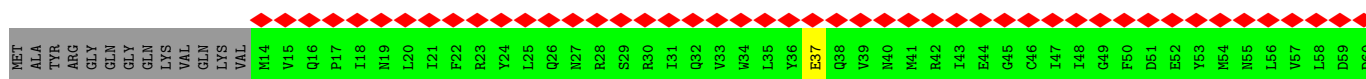
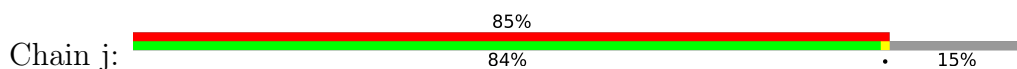




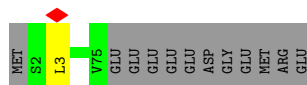
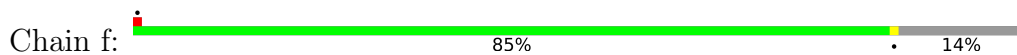
- Molecule 25: Small nuclear ribonucleoprotein E



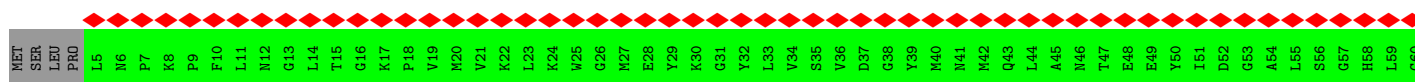
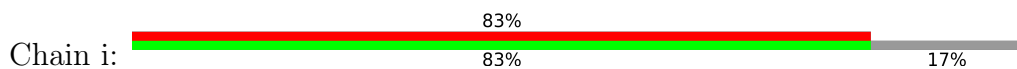
- Molecule 25: Small nuclear ribonucleoprotein E



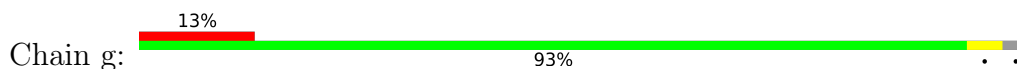
- Molecule 26: Small nuclear ribonucleoprotein F



- Molecule 26: Small nuclear ribonucleoprotein F

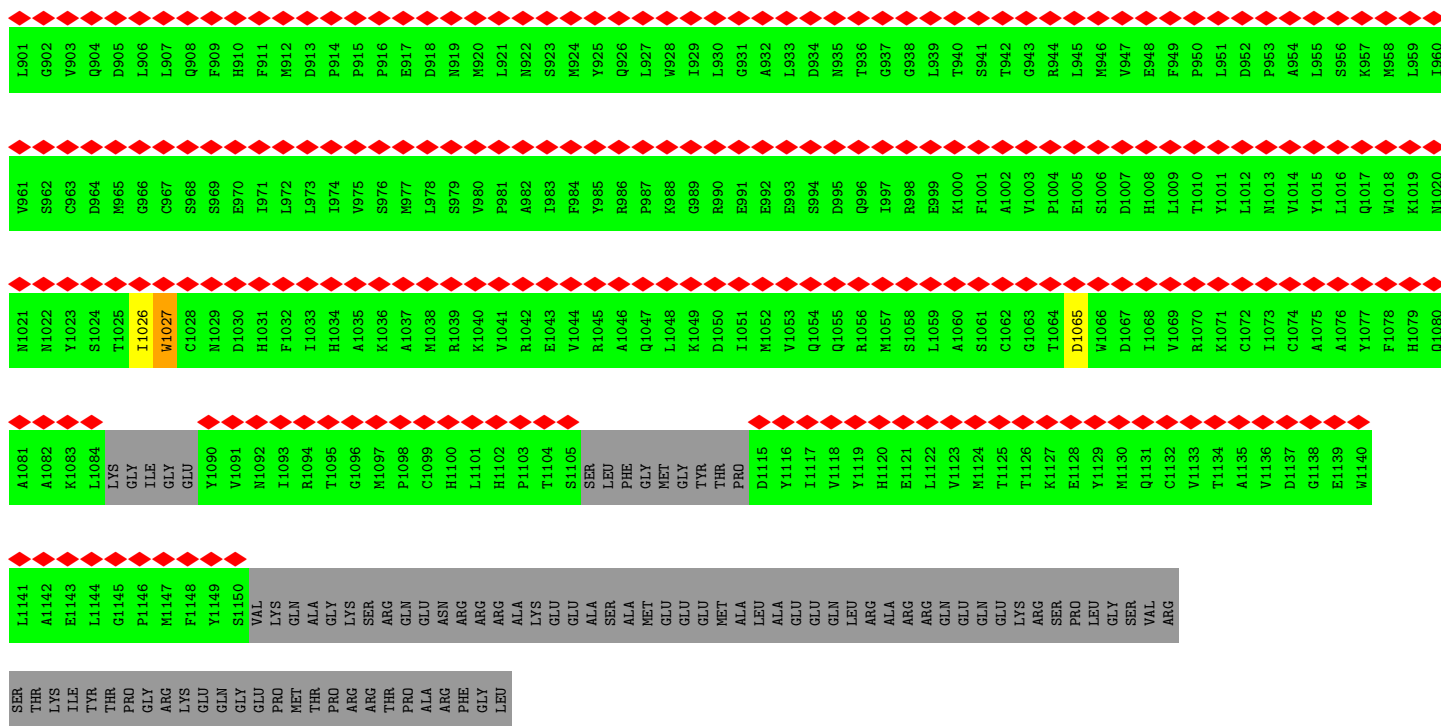


- Molecule 27: Small nuclear ribonucleoprotein G

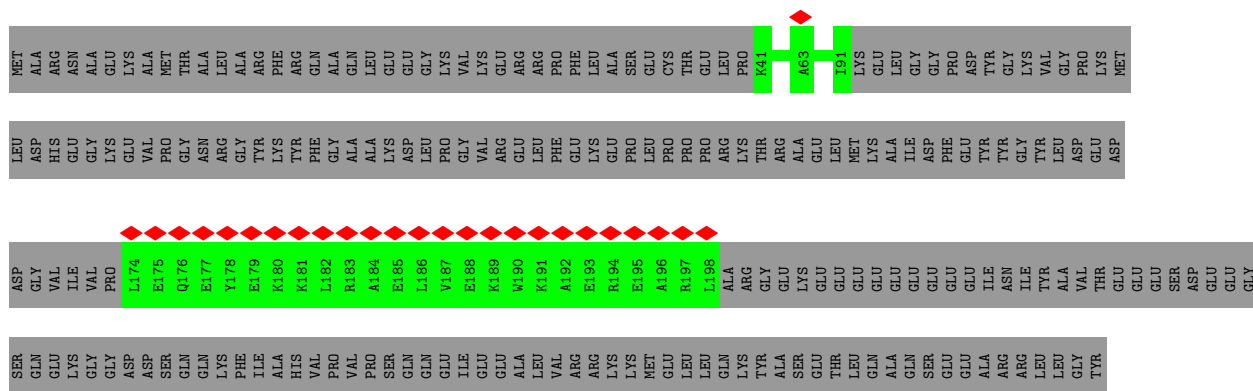


- Molecule 27: Small nuclear ribonucleoprotein G

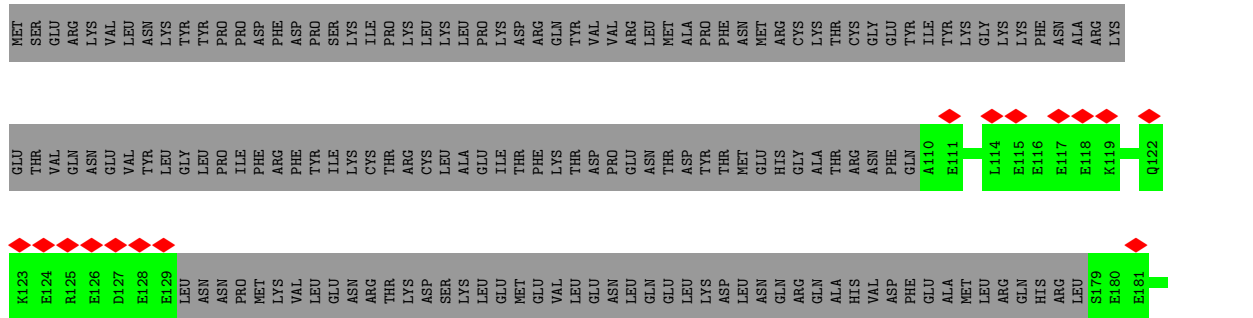
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A961	L962	M963	L964	P965	K966	N967	N968	L969	V970	K971	Y972	D973	K974	K975	T976	G977	N978	F979	Q980	V981	E982	E983	L984	G985	R986	I987	A988	S989	H990	Y991	Y992	R993	T994	N995	D996	T997	V998	Q999	T1000	Y1001	M1002	Q1003	L1004	L1005	K1006	P1007	T1008	L1009	S1010	E1011	I1012	E1013	L1014	F1015	R1016	V1017	L1018	S1019	L1020
L901	N902	A903	E904	I905	V906	L907	G908	N909	V910	Q911	N912	A913	K914	D915	A916	N917	N918	N919	L920	G921	Y922	A923	Y924	L925	Y926	I927	R928	N929	L930	R931	S932	H933	G934	E935	L936	G937	I938	S939	H940	D941	D942	L943	K944	G945	D946	P947	L948	L949	D950	Q951	R952	R953	L954	D955	L956	Y957	H958	T959	A960
W841	T842	E843	L844	G845	A846	L847	D848	I849	L850	Q851	M852	L853	G854	R855	A856	G857	R858	P859	Q860	H861	D862	T863	K864	G865	E866	G867	I868	L869	I870	T871	S872	H873	A874	E875	L876	Q877	G878	Y879	L880	S881	L882	L883	N884	T885	Q886	L887	P888	I889	K890	S891	Q892	M893	V894	S895	K896	L897	R898	D899	N900
G781	F782	A783	I784	H785	H786	A787	G788	M789	T790	R791	V792	D793	K794	T795	L796	V797	E798	D799	L800	M801	A802	D803	K804	H805	I806	Q807	V808	L809	V810	S811	T812	R813	T814	L815	A816	W817	G818	V819	N820	L821	R822	A823	H824	T825	V826	I827	I828	K829	G830	T831	Q832	R833	V834	S835	P836	E837	L838	G839	R840
V721	L722	V723	F724	H725	H726	S727	R728	K729	E730	T731	G732	K733	T734	A735	R736	A737	I738	R739	D740	M741	A742	L743	E744	K745	D746	T747	L748	G749	L750	F751	I752	R753	E754	G755	S756	A757	S758	T759	E760	V761	L762	R763	T764	E765	V766	E767	Q768	C769	K770	M771	L772	L773	E774	K775	D776	L777	L778	P779	Y780
V661	A662	T663	F664	L665	R666	V667	D668	P669	A670	K671	G672	L673	F674	Y675	F676	D677	N678	S679	F680	R681	P682	V683	P684	L685	E686	Q687	T688	Y689	V690	G691	I692	T693	R694	K695	K696	A697	I698	K699	R700	F701	Q702	I703	M704	N705	E706	I707	V708	Y709	E710	K711	I712	M713	E714	H715	A716	G717	L718	N719	Q720
G601	E602	R603	T604	Y605	T606	Q607	L608	V609	R610	L611	I612	L613	L614	D615	E616	I617	H618	L619	L620	H621	D622	D623	R624	G625	P626	V627	L628	E629	A630	L631	V632	A633	R634	A635	I636	R637	N638	I639	E640	M641	T642	Q643	E644	D645	V646	R647	L648	L649	G650	L651	S652	A653	T654	L655	P656	N657	Y658	E659	D660

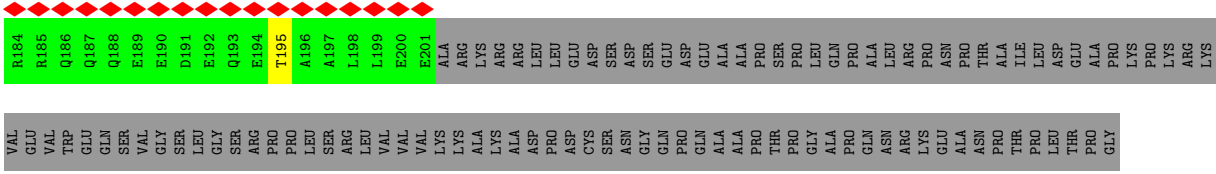


• Molecule 32: Pre-mRNA-splicing factor ISY1 homolog

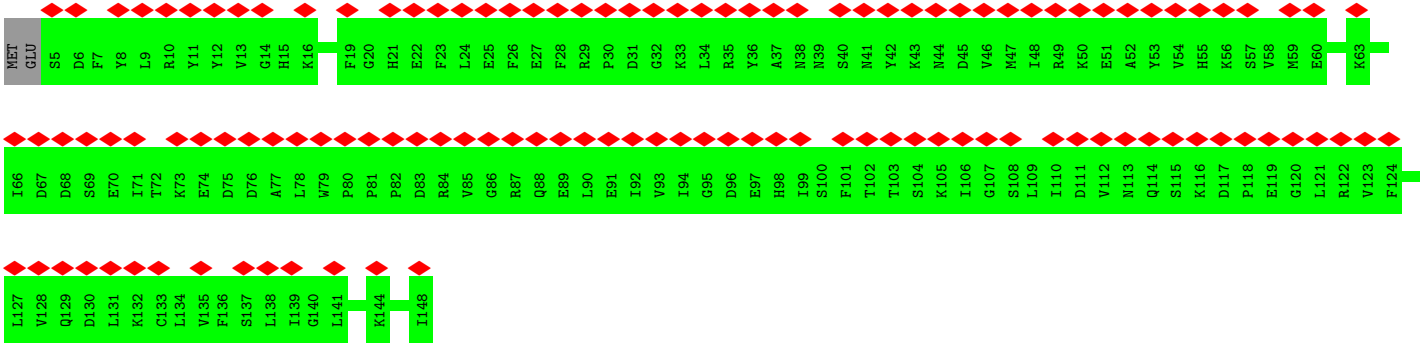
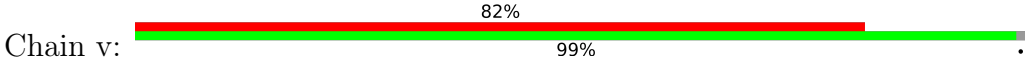


• Molecule 33: Splicing factor YJU2

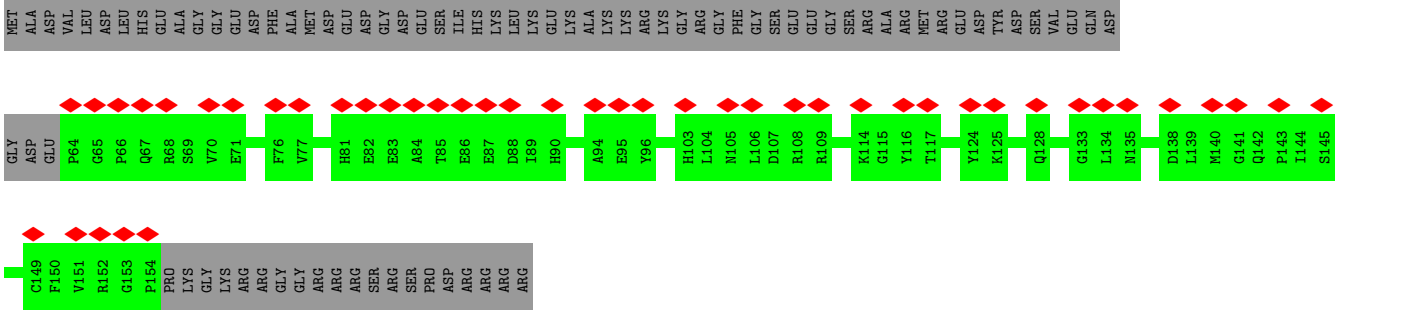




Molecule 34: Protein mago nashi homolog



Molecule 35: RNA-binding protein 8A



Molecule 36: Protein FRG1

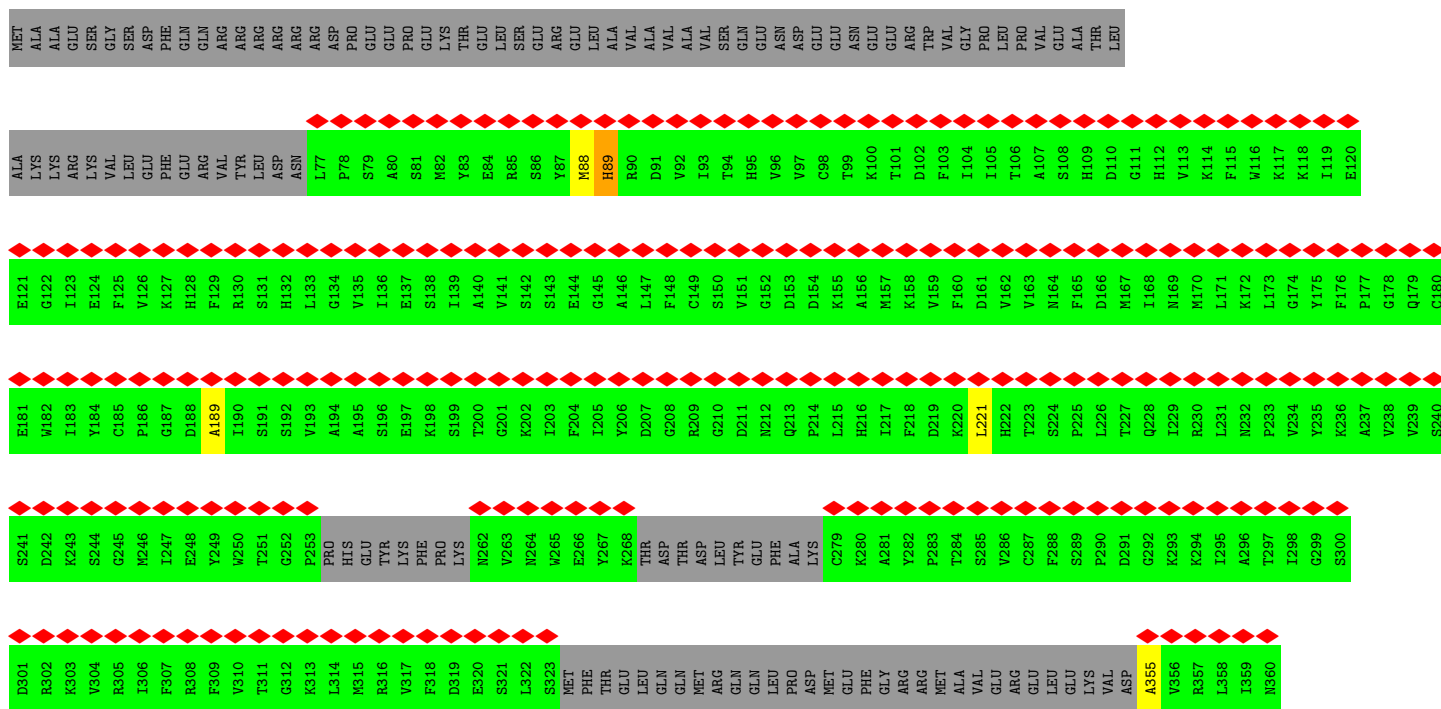


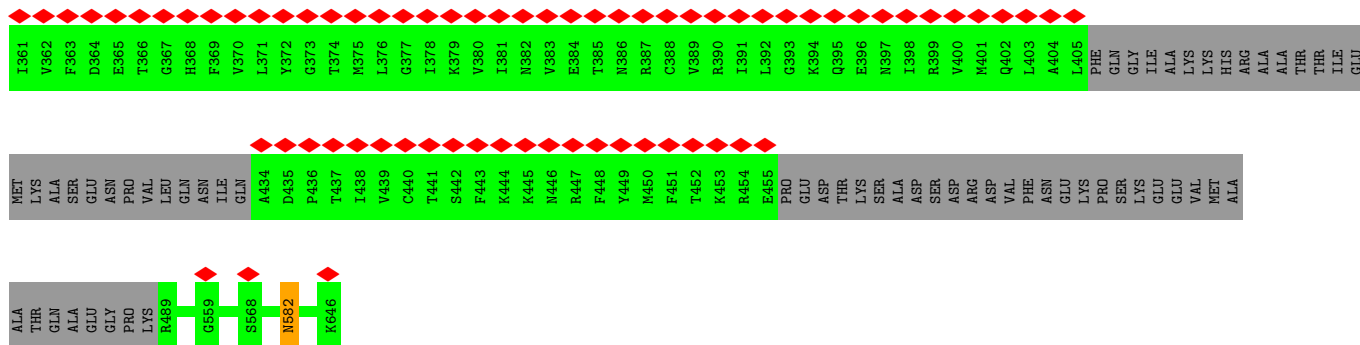
ALA
LYS
LEU
THR
LYS
ALA
ASP
ARG
TYR
CYS
LYS

• Molecule 37: Eukaryotic initiation factor 4A-III



• Molecule 38: Peptidylprolyl isomerase domain and WD repeat-containing protein 1





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	69000	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	6	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.109	Depositor
Minimum map value	-0.033	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.018	Depositor
Map size (Å)	466.39996, 466.39996, 466.39996	wwPDB
Map dimensions	440, 440, 440	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.06, 1.06, 1.06	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	2	0.53	5/3166 (0.2%)	1.38	51/4915 (1.0%)
2	5	1.92	11/794 (1.4%)	2.31	42/1228 (3.4%)
3	6	0.28	0/328	1.10	1/508 (0.2%)
5	A	0.30	0/2500	0.59	0/3491
6	C	0.24	0/74	0.27	0/102
7	E	0.32	0/1534	0.69	1/2142 (0.0%)
8	G	0.47	1/688 (0.1%)	0.76	2/969 (0.2%)
8	H	0.39	0/706	0.76	1/995 (0.1%)
8	I	0.32	0/693	0.69	1/976 (0.1%)
8	J	0.32	0/565	0.74	1/792 (0.1%)
9	K	0.32	0/686	0.59	1/953 (0.1%)
10	L	0.24	0/572	0.46	0/796
11	M	0.30	0/3406	0.50	2/4767 (0.0%)
12	N	0.46	0/371	0.75	0/519
13	O	0.33	0/1325	0.66	2/1850 (0.1%)
14	P	0.29	0/454	0.74	0/633
15	S	0.30	0/228	0.47	0/317
16	T	0.24	0/1278	0.41	0/1788
17	U	0.28	0/6574	0.46	1/9159 (0.0%)
18	W	0.27	0/879	0.55	0/1229
19	X	0.33	0/468	0.56	0/653
20	Y	0.43	0/375	1.29	1/572 (0.2%)
21	a	0.28	0/359	0.55	0/499
21	l	0.44	0/417	0.67	1/581 (0.2%)
22	b	0.26	0/326	0.55	0/451
22	m	0.27	0/352	0.56	0/489
23	c	0.27	0/409	0.55	0/571
23	n	0.28	0/414	0.56	0/578
24	d	0.25	0/406	0.52	0/565
24	h	0.32	0/421	0.70	0/586
25	e	0.29	0/393	0.61	0/547
25	j	0.26	0/388	0.55	0/540
26	f	0.36	0/372	0.57	0/517
26	i	0.40	0/354	0.59	0/491

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
27	g	0.56	0/371	0.81	2/516 (0.4%)
27	k	0.36	0/366	0.64	0/509
28	o	0.27	0/385	0.54	0/536
29	p	0.54	0/332	1.17	3/459 (0.7%)
30	q	0.28	0/9636	0.53	5/13498 (0.0%)
31	r	0.33	1/3001 (0.0%)	0.58	2/4192 (0.0%)
32	s	0.25	0/374	0.38	0/518
33	u	0.36	0/214	0.60	0/296
34	v	0.28	0/728	0.49	0/1017
35	w	0.24	0/456	0.50	0/633
36	x	0.32	0/622	0.55	0/860
37	y	0.27	0/1962	0.49	0/2741
38	z	0.34	0/2313	0.66	1/3222 (0.0%)
All	All	0.40	18/53035 (0.0%)	0.73	121/74766 (0.2%)

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	5	1	0
5	A	0	5
7	E	0	3
8	G	0	3
8	H	0	4
8	I	0	1
8	J	0	1
9	K	0	1
11	M	0	2
12	N	0	1
13	O	0	3
17	U	0	2
24	d	0	1
24	h	0	1
25	e	0	1
26	f	0	1
27	g	0	1
29	p	0	3
30	q	0	12
31	r	0	5
33	u	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
37	y	0	1
38	z	0	5
All	All	1	58

The worst 5 of 18 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	5	86	C	P-O5'	37.94	1.97	1.59
2	5	86	C	P-OP1	19.20	1.81	1.49
2	5	86	C	C4'-C3'	-12.92	1.39	1.53
2	5	86	C	C5'-C4'	12.66	1.66	1.51
2	5	86	C	C3'-C2'	11.01	1.65	1.52

The worst 5 of 121 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	5	89	U	C4-C5-C6	24.47	134.38	119.70
2	5	96	A	C8-N9-C4	20.51	114.00	105.80
2	5	92	U	N3-C2-O2	-19.27	108.71	122.20
1	2	165	A	C2-N3-C4	18.01	119.60	110.60
2	5	96	A	N9-C4-C5	-17.39	98.85	105.80

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	5	86	C	C4'

5 of 58 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	A	1757	GLU	Peptide,Mainchain
5	A	1759	THR	Peptide
5	A	1760	GLU	Mainchain
5	A	1773	SER	Peptide
7	E	284	TRP	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	2	2854	0	1442	14	0
2	5	718	0	363	6	0
3	6	296	0	149	1	0
4	8	376	0	82	0	0
5	A	2485	0	1164	8	0
6	C	75	0	35	0	0
7	E	1525	0	724	5	0
8	G	679	0	356	2	0
8	H	696	0	367	3	0
8	I	684	0	358	3	0
8	J	561	0	285	0	0
9	K	689	0	315	5	0
10	L	573	0	264	0	0
11	M	3387	0	1651	3	0
12	N	369	0	171	0	0
13	O	1320	0	635	4	0
14	P	452	0	229	2	0
15	S	229	0	95	1	0
16	T	1271	0	594	0	0
17	U	6546	0	3178	0	0
18	W	874	0	421	0	0
19	X	466	0	220	1	0
20	Y	348	0	176	1	0
21	a	358	0	168	0	0
21	l	415	0	198	0	0
22	b	327	0	143	0	0
22	m	351	0	161	0	0
23	c	407	0	186	0	0
23	n	412	0	188	0	0
24	d	406	0	179	0	0
24	h	421	0	185	0	0
25	e	393	0	169	0	0
25	j	388	0	167	0	0
26	f	369	0	182	0	0
26	i	352	0	171	0	0
27	g	369	0	177	0	0
27	k	364	0	176	0	0
28	o	384	0	198	0	0
29	p	333	0	153	0	0
30	q	9558	0	4623	0	0
31	r	2982	0	1461	0	0
32	s	376	0	172	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	u	216	0	96	0	0
34	v	723	0	335	0	0
35	w	453	0	227	0	0
36	x	621	0	315	0	0
37	y	1951	0	928	0	0
38	z	2301	0	1090	0	0
All	All	52703	0	25322	52	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 1.

The worst 5 of 52 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)
2:5:86:C:P	2:5:86:C:O5'	1.97	1.22
2:5:86:C:P	2:5:86:C:C5'	2.82	0.66
1:2:101:U:H5''	1:2:102:U:H5'	1.77	0.66
8:G:66:PRO:HG3	8:I:63:PRO:HD2	1.81	0.63
8:H:87:LEU:HA	8:H:90:PHE:H	1.67	0.59

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	A	483/2335 (21%)	418 (86%)	58 (12%)	7 (1%)	11 46
6	C	13/536 (2%)	13 (100%)	0	0	100 100
7	E	303/579 (52%)	275 (91%)	26 (9%)	2 (1%)	22 62
8	G	130/504 (26%)	115 (88%)	10 (8%)	5 (4%)	3 26
8	H	133/504 (26%)	115 (86%)	15 (11%)	3 (2%)	6 36

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	I	131/504 (26%)	122 (93%)	8 (6%)	1 (1%)	19	60
8	J	106/504 (21%)	102 (96%)	4 (4%)	0	100	100
9	K	130/225 (58%)	119 (92%)	7 (5%)	4 (3%)	4	30
10	L	111/802 (14%)	110 (99%)	1 (1%)	0	100	100
11	M	662/855 (77%)	590 (89%)	71 (11%)	1 (0%)	47	81
12	N	71/243 (29%)	58 (82%)	10 (14%)	3 (4%)	3	25
13	O	249/848 (29%)	214 (86%)	27 (11%)	8 (3%)	4	30
14	P	88/420 (21%)	70 (80%)	18 (20%)	0	100	100
15	S	44/2752 (2%)	41 (93%)	3 (7%)	0	100	100
16	T	251/908 (28%)	245 (98%)	6 (2%)	0	100	100
17	U	1281/1485 (86%)	1258 (98%)	21 (2%)	2 (0%)	47	81
18	W	172/255 (68%)	162 (94%)	10 (6%)	0	100	100
19	X	91/225 (40%)	87 (96%)	4 (4%)	0	100	100
21	a	70/126 (56%)	68 (97%)	2 (3%)	0	100	100
21	l	81/126 (64%)	80 (99%)	1 (1%)	0	100	100
22	b	62/240 (26%)	61 (98%)	1 (2%)	0	100	100
22	m	66/240 (28%)	65 (98%)	1 (2%)	0	100	100
23	c	79/119 (66%)	78 (99%)	1 (1%)	0	100	100
23	n	80/119 (67%)	79 (99%)	1 (1%)	0	100	100
24	d	77/118 (65%)	75 (97%)	2 (3%)	0	100	100
24	h	80/118 (68%)	77 (96%)	3 (4%)	0	100	100
25	e	77/92 (84%)	75 (97%)	2 (3%)	0	100	100
25	j	76/92 (83%)	75 (99%)	0	1 (1%)	12	48
26	f	72/86 (84%)	70 (97%)	2 (3%)	0	100	100
26	i	69/86 (80%)	68 (99%)	1 (1%)	0	100	100
27	g	72/76 (95%)	72 (100%)	0	0	100	100
27	k	71/76 (93%)	71 (100%)	0	0	100	100
28	o	75/301 (25%)	74 (99%)	1 (1%)	0	100	100
29	p	66/654 (10%)	38 (58%)	20 (30%)	8 (12%)	0	6
30	q	1888/2136 (88%)	1796 (95%)	80 (4%)	12 (1%)	25	65
31	r	581/1227 (47%)	544 (94%)	33 (6%)	4 (1%)	22	62

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	s	72/285 (25%)	68 (94%)	4 (6%)	0	100	100
33	u	39/323 (12%)	36 (92%)	3 (8%)	0	100	100
34	v	142/146 (97%)	141 (99%)	1 (1%)	0	100	100
35	w	89/174 (51%)	88 (99%)	1 (1%)	0	100	100
36	x	117/258 (45%)	109 (93%)	8 (7%)	0	100	100
37	y	388/411 (94%)	382 (98%)	6 (2%)	0	100	100
38	z	448/646 (69%)	411 (92%)	34 (8%)	3 (1%)	22	62
All	All	9386/22759 (41%)	8815 (94%)	507 (5%)	64 (1%)	26	62

5 of 64 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	A	1758	PRO
5	A	1760	GLU
5	A	1762	TYR
7	E	318	VAL
8	G	57	VAL

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	A	20/2108 (1%)	19 (95%)	1 (5%)	24	50
7	E	10/502 (2%)	10 (100%)	0	100	100
8	G	10/435 (2%)	8 (80%)	2 (20%)	1	8
8	H	11/435 (2%)	11 (100%)	0	100	100
8	I	10/435 (2%)	10 (100%)	0	100	100
8	J	6/435 (1%)	6 (100%)	0	100	100
9	K	1/196 (0%)	1 (100%)	0	100	100
10	L	1/709 (0%)	1 (100%)	0	100	100
11	M	24/749 (3%)	24 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	N	3/209 (1%)	2 (67%)	1 (33%)	0	2
13	O	11/751 (2%)	10 (91%)	1 (9%)	9	31
14	P	4/361 (1%)	4 (100%)	0	100	100
16	T	8/838 (1%)	8 (100%)	0	100	100
17	U	68/1297 (5%)	68 (100%)	0	100	100
18	W	6/218 (3%)	6 (100%)	0	100	100
19	X	3/195 (2%)	3 (100%)	0	100	100
21	a	2/101 (2%)	2 (100%)	0	100	100
21	l	3/101 (3%)	3 (100%)	0	100	100
22	b	1/177 (1%)	1 (100%)	0	100	100
22	m	3/177 (2%)	3 (100%)	0	100	100
23	c	3/101 (3%)	3 (100%)	0	100	100
23	n	3/101 (3%)	3 (100%)	0	100	100
24	d	2/110 (2%)	2 (100%)	0	100	100
24	h	2/110 (2%)	2 (100%)	0	100	100
25	e	1/84 (1%)	1 (100%)	0	100	100
25	j	1/84 (1%)	1 (100%)	0	100	100
26	f	4/74 (5%)	4 (100%)	0	100	100
26	i	3/74 (4%)	3 (100%)	0	100	100
27	g	3/66 (4%)	3 (100%)	0	100	100
27	k	3/66 (4%)	3 (100%)	0	100	100
28	o	2/252 (1%)	2 (100%)	0	100	100
30	q	82/1908 (4%)	81 (99%)	1 (1%)	71	84
31	r	25/1075 (2%)	25 (100%)	0	100	100
33	u	1/289 (0%)	1 (100%)	0	100	100
34	v	6/134 (4%)	6 (100%)	0	100	100
35	w	4/143 (3%)	4 (100%)	0	100	100
36	x	5/223 (2%)	5 (100%)	0	100	100
37	y	12/361 (3%)	12 (100%)	0	100	100
38	z	18/572 (3%)	18 (100%)	0	100	100
All	All	385/16256 (2%)	379 (98%)	6 (2%)	64	79

5 of 6 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
12	N	162	PRO
13	O	208	PRO
30	q	128	PRO
8	G	63	PRO
5	A	1787	ARG

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	2	153/975 (15%)	53 (34%)	0
2	5	38/116 (32%)	18 (47%)	0
20	Y	27/324 (8%)	17 (62%)	0
3	6	15/106 (14%)	5 (33%)	0
All	All	233/1521 (15%)	93 (39%)	0

5 of 93 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	16	U
1	2	17	U
1	2	46	U
1	2	47	U
1	2	48	A

There are no RNA pucker outliers to report.

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](#)

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 [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
4	8	3

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	8	70:UNK	C	92:UNK	N	23.10
1	8	34:UNK	C	42:UNK	N	21.26
1	8	51:UNK	C	55:UNK	N	10.71

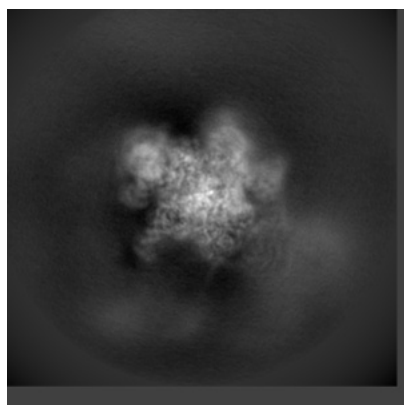
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-11570. These allow visual inspection of the internal detail of the map and identification of artifacts.

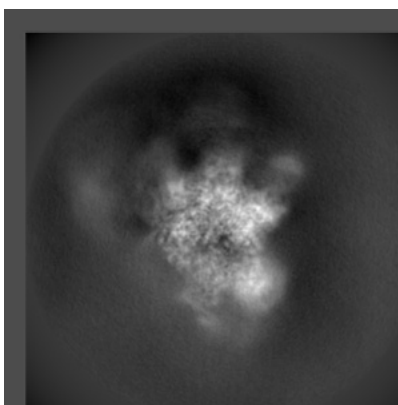
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

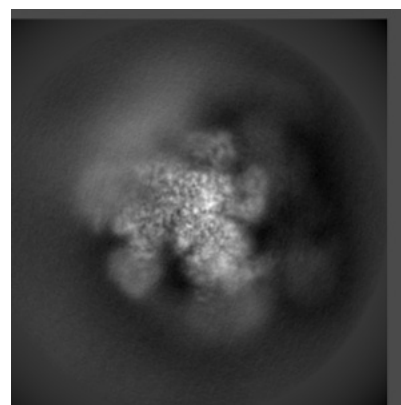
6.1.1 Primary map



X



Y

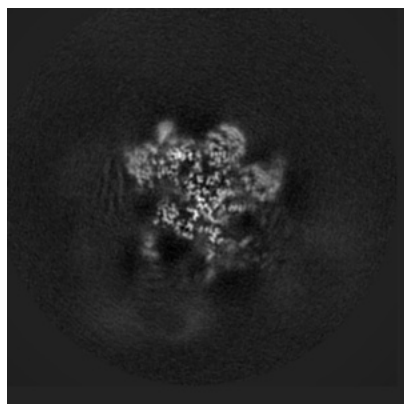


Z

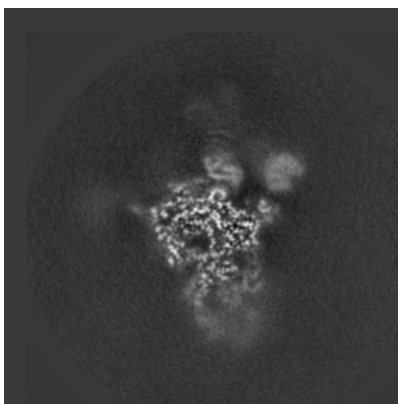
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

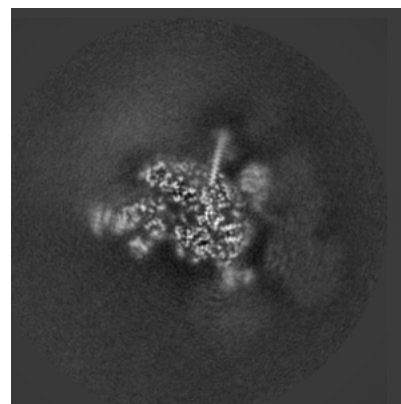
6.2.1 Primary map



X Index: 220



Y Index: 220

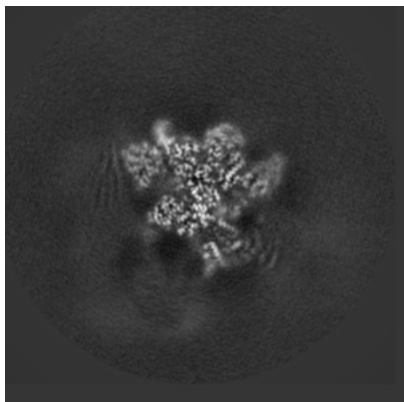


Z Index: 220

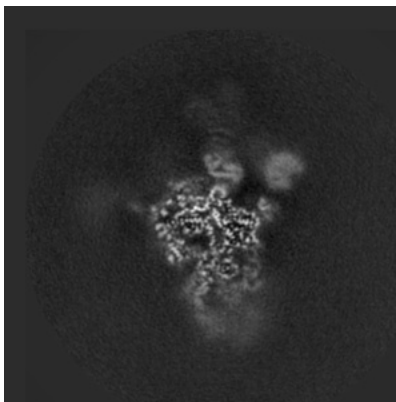
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

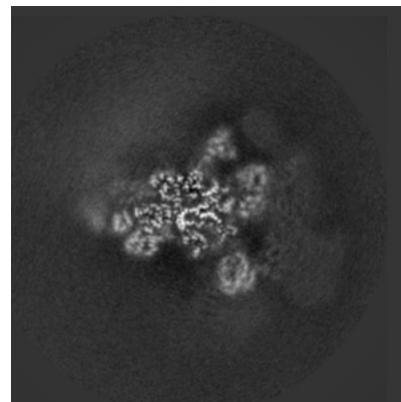
6.3.1 Primary map



X Index: 215



Y Index: 219



Z Index: 231

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

6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.018. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

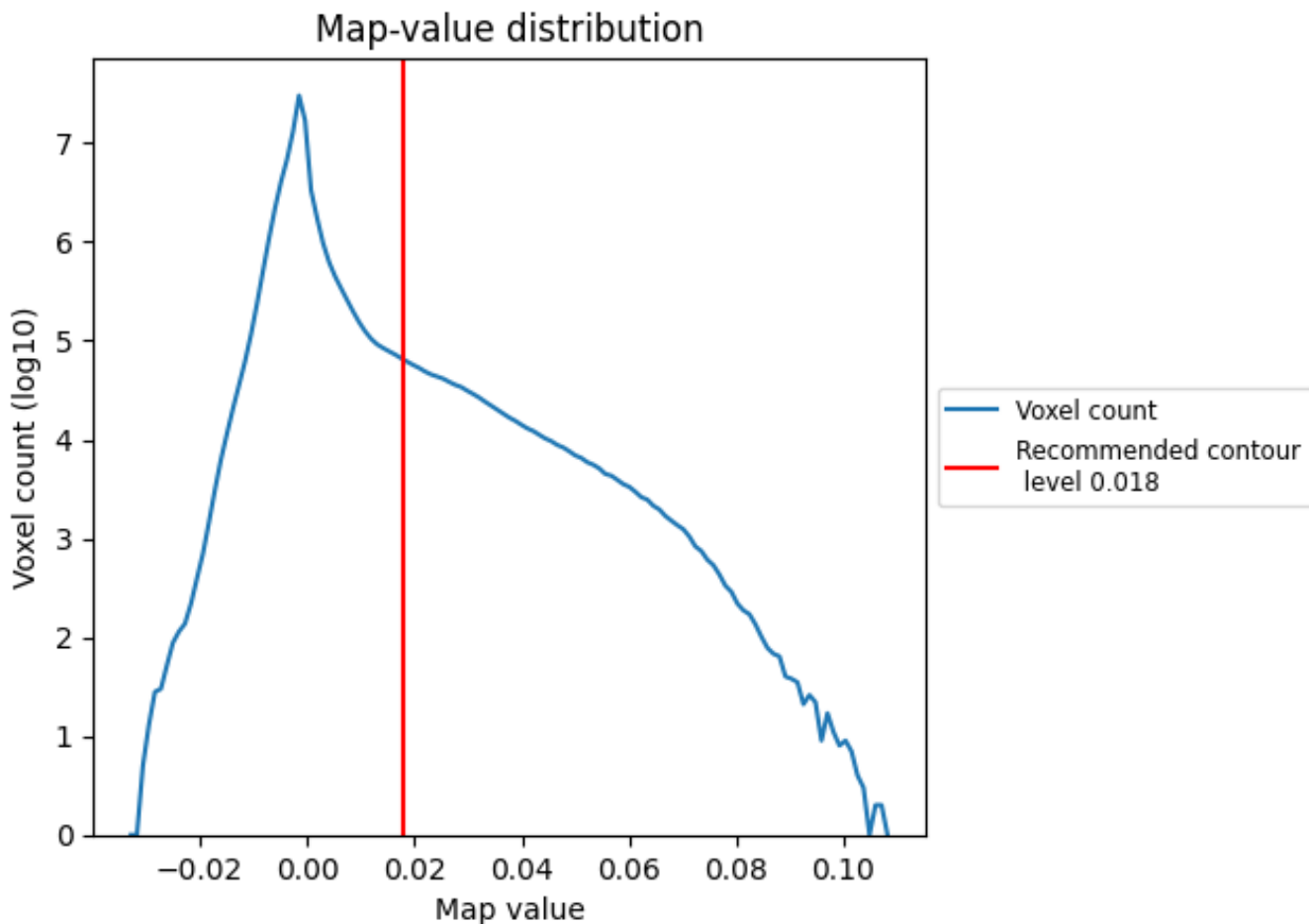
6.5 Mask visualisation

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

7 Map analysis [i](#)

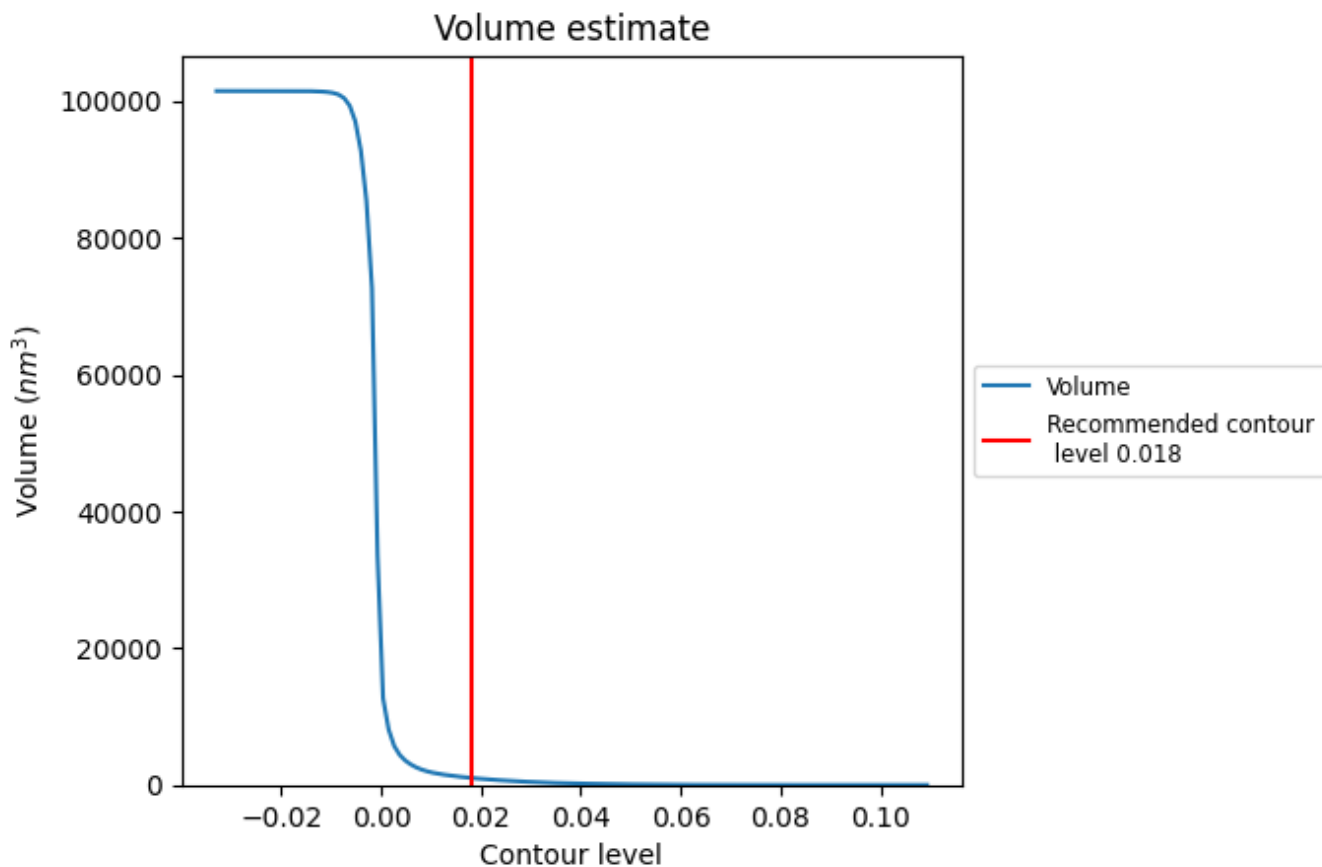
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

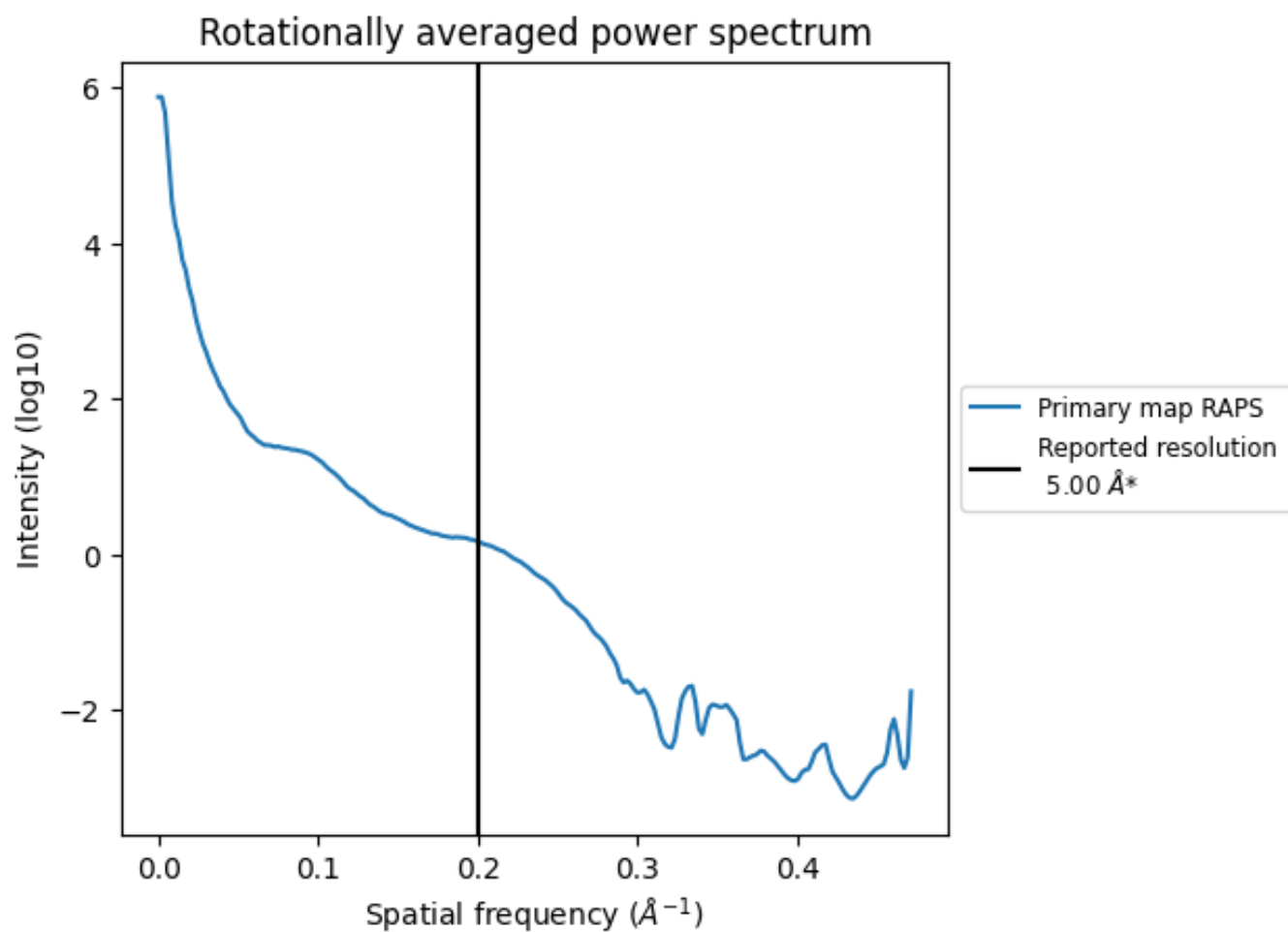
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1034 nm^3 ; this corresponds to an approximate mass of 934 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 0.200\AA^{-1}

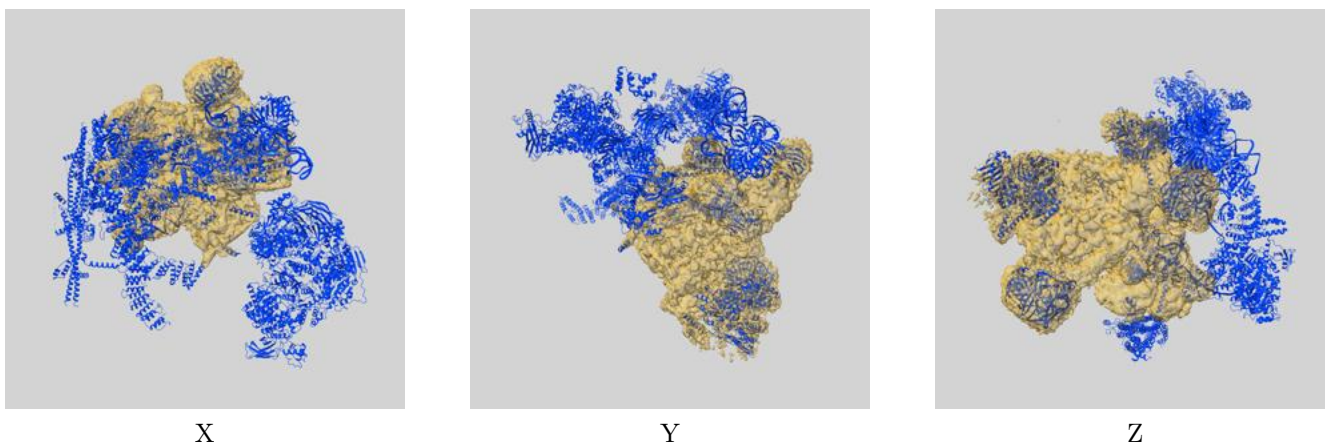
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

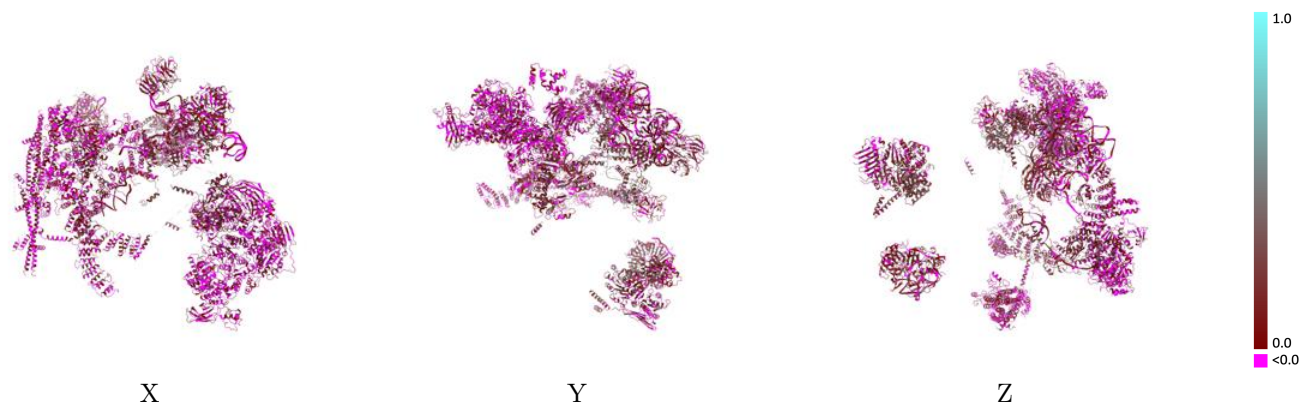
This section contains information regarding the fit between EMDB map EMD-11570 and PDB model 7A5P. Per-residue inclusion information can be found in section 3 on page 12.

9.1 Map-model overlay [i](#)



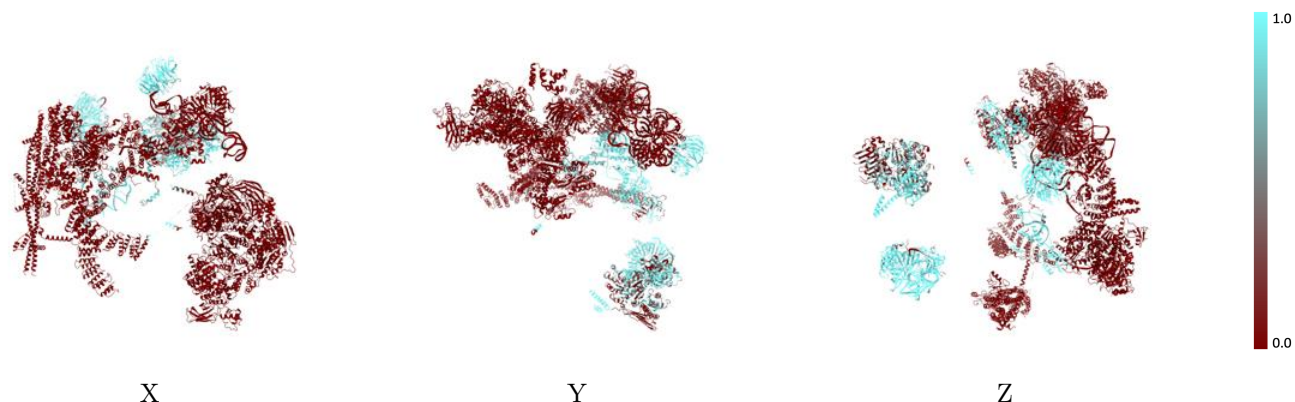
The images above show the 3D surface view of the map at the recommended contour level 0.018 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



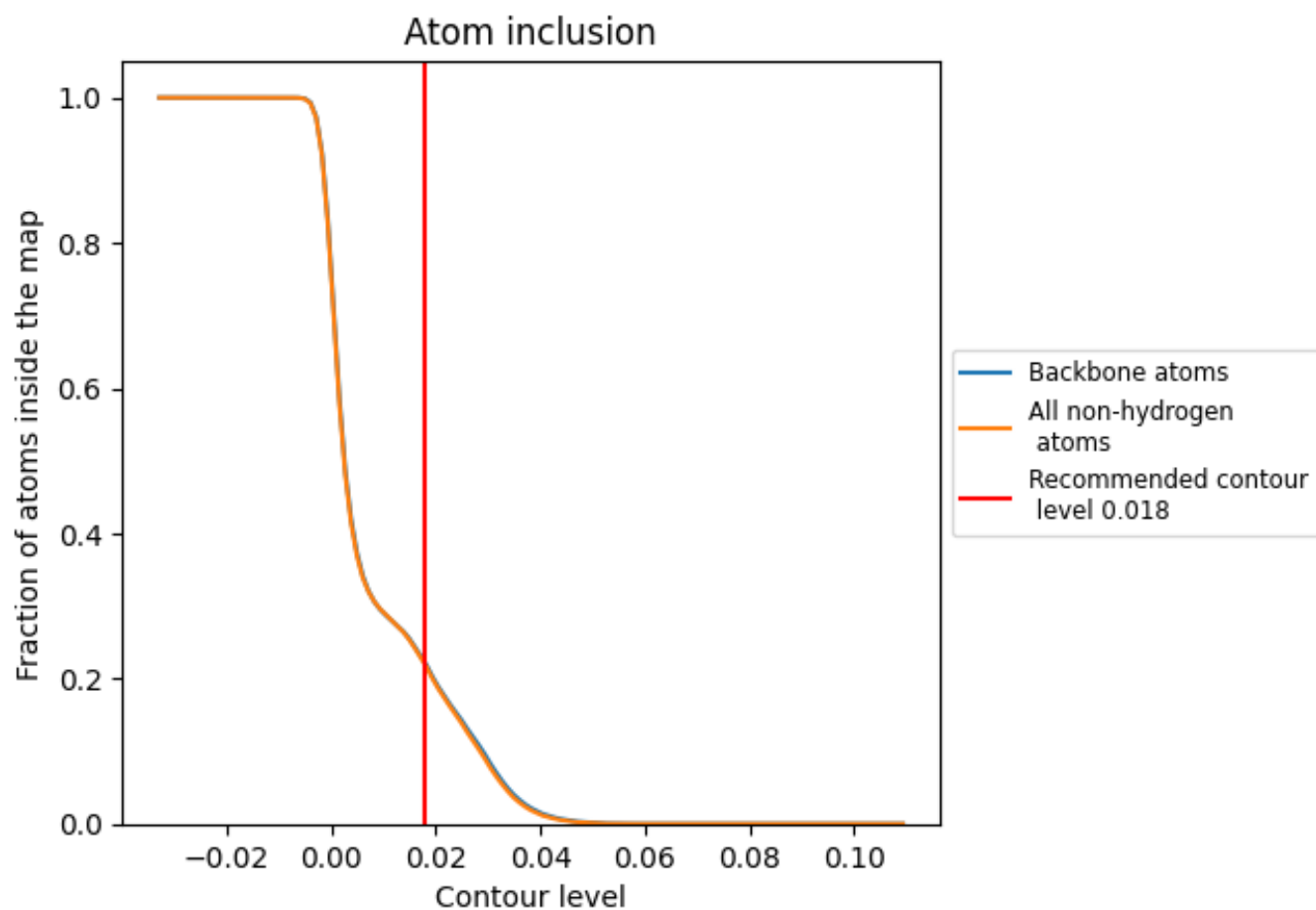
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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](#)



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 (0.018).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 22% of all backbone atoms, 22% 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 (0.018) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.2185	 0.0900
2	 0.1118	 0.0670
5	 0.9248	 0.1000
6	 0.8446	 0.1020
8	 0.0000	 0.0250
A	 0.4879	 0.1660
C	 0.6000	 0.1890
E	 0.9659	 0.1410
G	 0.0000	 0.0170
H	 0.0000	 -0.0120
I	 0.0000	 0.0270
J	 0.0000	 0.0530
K	 0.0015	 0.0950
L	 0.0873	 0.1010
M	 0.0006	 0.0910
N	 0.8103	 0.2420
O	 0.0530	 0.0600
P	 0.9226	 0.2320
S	 1.0000	 0.2050
T	 0.6452	 0.1840
U	 0.0003	 0.0620
W	 0.0069	 0.0270
X	 0.0000	 0.1030
Y	 0.4454	 0.1130
a	 0.9413	 0.1320
b	 0.9450	 0.1530
c	 0.9558	 0.2580
d	 0.9458	 0.1890
e	 0.9873	 0.1260
f	 0.9810	 0.0910
g	 0.8808	 0.0980
h	 0.0071	 0.1890
i	 0.0000	 0.1530
j	 0.0000	 0.1070
k	 0.0000	 0.0930



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Chain	Atom inclusion	Q-score
l	 0.0000	 0.1030
m	 0.0000	 0.1420
n	 0.0607	 0.1550
o	 0.0000	 0.1650
p	 0.6877	 0.2740
q	 0.0000	 0.0070
r	 0.0013	 0.1540
s	 0.6569	 0.2240
u	 0.2639	 0.1360
v	 0.1770	 0.0500
w	 0.4547	 0.0820
x	 0.6232	 0.1030
y	 0.4941	 0.1930
z	 0.3286	 0.0870