Full wwPDB EM Validation Report

Mar 9, 2026 – 01:12 PM EDT

PDB ID	:	8SUP / pdb_00008sup
EMDB ID	:	EMD-40774
Title	:	Structure of the 48S translation initiation complex assembled on the encephalomyocarditis virus IRES
Authors	:	Bhattacharjee, S.; Abaeva, I.S.; Brown, Z.P.; Arhab, Y.; Fallah, H.; Jeevan, J.C.; Hellen, C.U.T.; Frank, J.; Pestova, T.V.
Deposited on	:	2023-05-12
Resolution	:	3.10 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the (i) 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 (i)) were used in the production of this report:

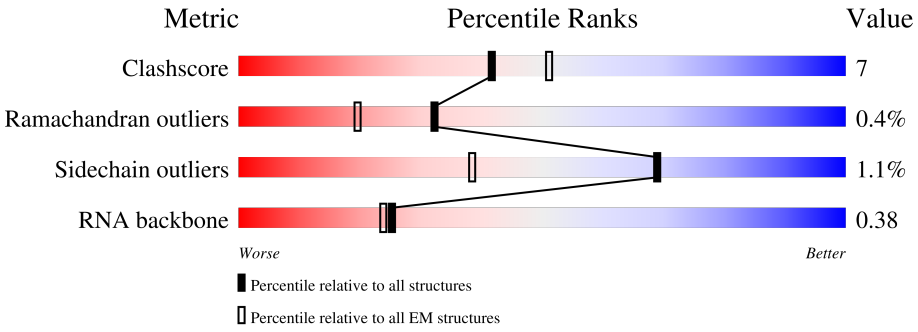
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.48.1

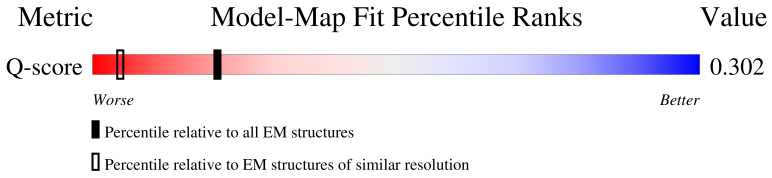
1 Overall quality at a glance

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

The reported resolution of this entry is 3.10 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	14724 (2.60 - 3.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	o	1362	41% 33% 10% • 56%
2	p	843	56% 49% 16% • 34%
3	q	445	92% 68% 24% • 6%

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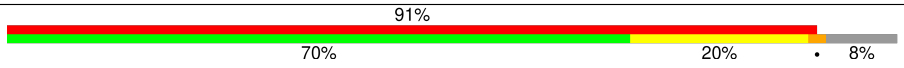
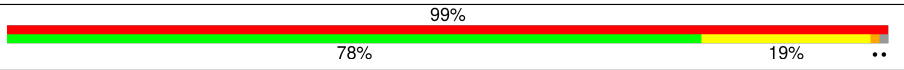
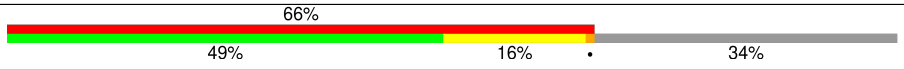
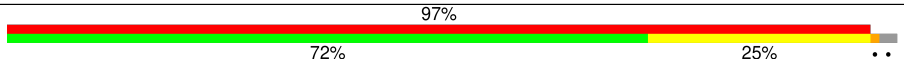
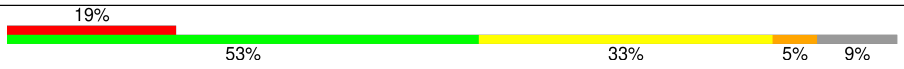
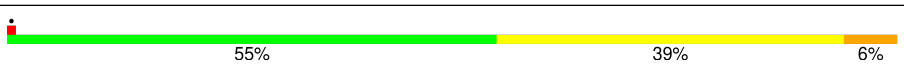
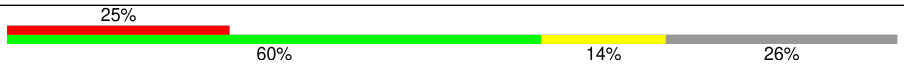
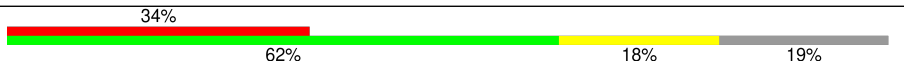
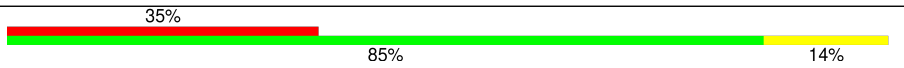
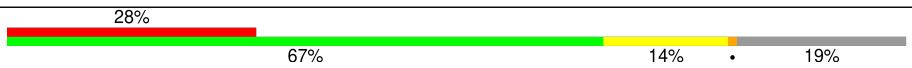
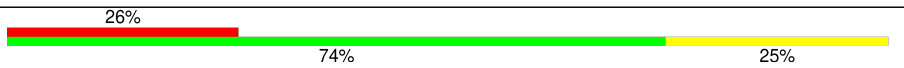
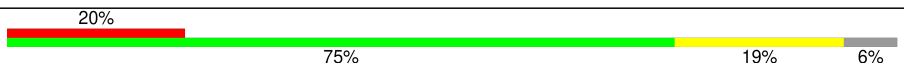
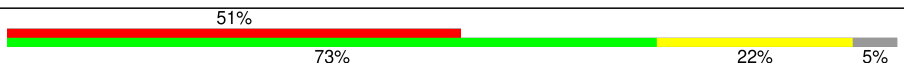
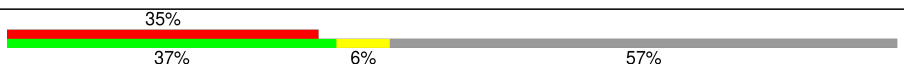
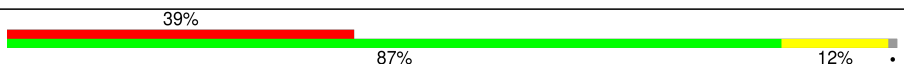
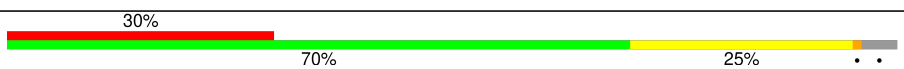
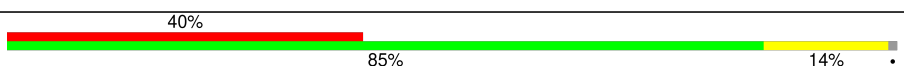
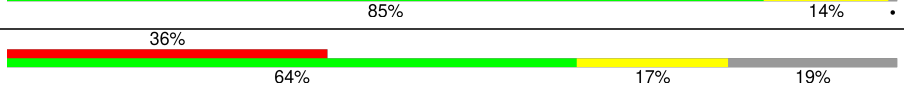
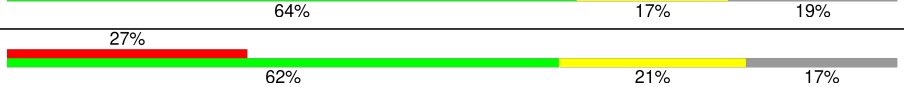
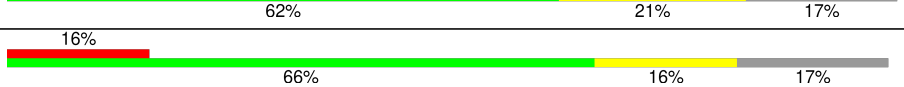
Mol	Chain	Length	Quality of chain
4	r	364	
5	s	352	
6	t	218	
7	u	564	
8	v	374	
9	2	1870	
10	3	89	
11	A	144	
12	B	295	
13	C	264	
14	D	221	
15	E	281	
16	F	263	
17	G	204	
18	H	249	
19	I	432	
20	J	208	
21	K	194	
22	L	149	
23	M	158	
24	N	132	
25	O	151	
26	P	168	
27	Q	145	
28	R	172	

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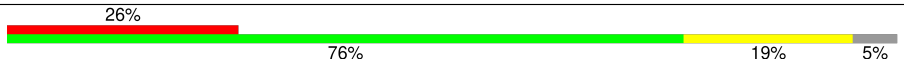
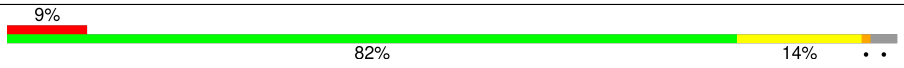
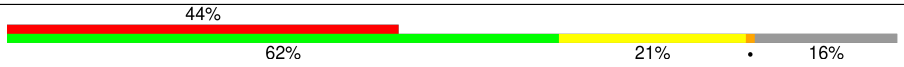
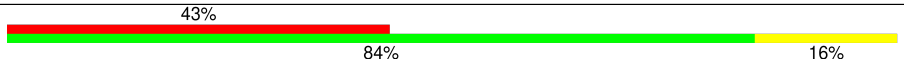
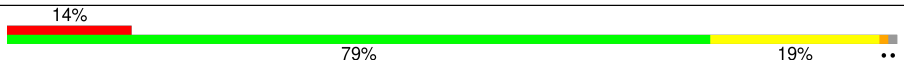
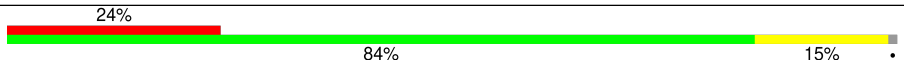
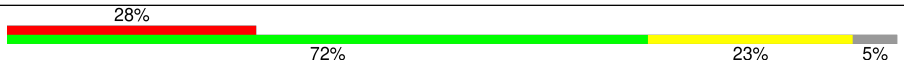
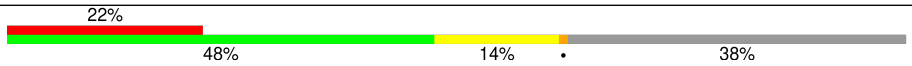
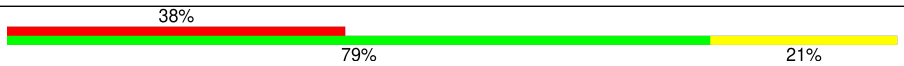
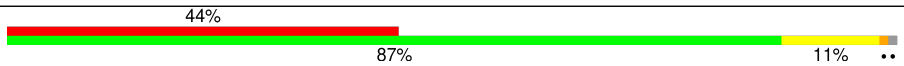
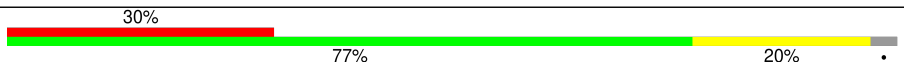
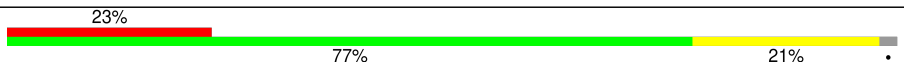
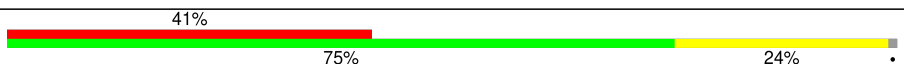
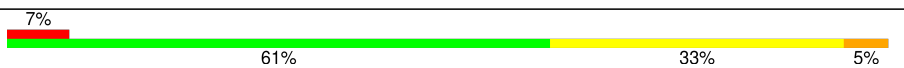
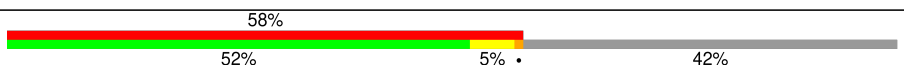
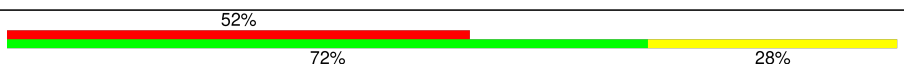
Mol	Chain	Length	Quality of chain
29	S	135	
30	T	152	
31	U	145	
32	V	119	
33	W	83	
34	X	130	
35	Y	143	
36	Z	131	
37	a	124	
38	b	101	
39	c	84	
40	d	69	
41	e	56	
42	f	133	
43	g	188	
44	h	317	
45	i	75	
46	j	315	
47	n	25	

2 Entry composition

There are 48 unique types of molecules in this entry. The entry contains 106317 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Eukaryotic translation initiation factor 3 subunit A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	o	600	4935	3107	893	914	21	0	1

- Molecule 2 is a protein called Eukaryotic translation initiation factor 3 subunit C.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	p	558	4529	2842	805	849	33	0	1

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
p	577	TYR	ALA	conflict	UNP A0A5F9CMJ3

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	q	420	3466	2220	587	639	20	0	1

- Molecule 4 is a protein called Eukaryotic translation initiation factor 3 subunit F.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	r	272	2111	1330	359	410	12	0	0

- Molecule 5 is a protein called Eukaryotic translation initiation factor 3 subunit H.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	s	324	2624	1654	452	503	15	0	0

- Molecule 6 is a protein called Eukaryotic translation initiation factor 3 subunit K.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	t	216	Total	C	N	O	S	0	1
			1738	1109	286	330	13		

- Molecule 7 is a protein called Eukaryotic translation initiation factor 3 subunit L.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	u	373	Total	C	N	O	S	0	1
			3110	2010	520	563	17		

- Molecule 8 is a protein called Eukaryotic translation initiation factor 3 subunit M.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	v	366	Total	C	N	O	S	0	1
			2919	1850	494	558	17		

- Molecule 9 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	2	1697	Total	C	N	O	P	0	0
			36227	16170	6504	11857	1696		

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
2	197	U	C	conflict	GB 2488159015
2	1095	C	U	conflict	GB 2488159015
2	1203	U	-	insertion	GB 2488159015
2	1205	G	A	conflict	GB 2488159015
2	?	-	G	deletion	GB 2488159015

- Molecule 10 is a RNA chain called EMCV mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	3	89	Total	C	N	O	P	0	0
			1897	848	347	613	89		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
3	831	A	-	expression tag	GB 485965777
3	832	A	-	expression tag	GB 485965777
3	833	U	-	expression tag	GB 485965777

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Chain	Residue	Modelled	Actual	Comment	Reference
3	834	A	-	expression tag	GB 485965777
3	835	U	-	expression tag	GB 485965777
3	836	G	-	expression tag	GB 485965777

- Molecule 11 is a protein called Eukaryotic translation initiation factor 1A, X-chromosomal.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	A	99	Total	C	N	O	S	0	0
			798	503	143	148	4		

- Molecule 12 is a protein called uS2 (SA).

Mol	Chain	Residues	Atoms					AltConf	Trace
12	B	217	Total	C	N	O	S	0	0
			1710	1086	300	316	8		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	114	THR	ALA	conflict	UNP G1TLT8

- Molecule 13 is a protein called eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	C	213	Total	C	N	O	S	0	0
			1729	1098	309	308	14		

- Molecule 14 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	D	221	Total	C	N	O	S	0	0
			1716	1111	295	301	9		

- Molecule 15 is a protein called uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	E	228	Total	C	N	O	S	0	0
			1768	1126	318	316	8		

- Molecule 16 is a protein called eS4 (S4 X isoform).

Mol	Chain	Residues	Atoms					AltConf	Trace
16	F	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	25	GLY	SER	conflict	UNP G1TK17
F	51	ARG	LYS	conflict	UNP G1TK17
F	78	THR	ALA	conflict	UNP G1TK17
F	156	VAL	MET	conflict	UNP G1TK17

- Molecule 17 is a protein called uS7.

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

- Molecule 18 is a protein called eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	H	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 19 is a protein called eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	I	185	Total	C	N	O	S	0	0
			1488	952	271	264	1		

- Molecule 20 is a protein called eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	J	206	Total	C	N	O	S	1	0
			1691	1061	333	292	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	47	ARG	GLY	conflict	UNP G1TJW1

- Molecule 21 is a protein called uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	K	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 22 is a protein called eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	L	96	Total	C	N	O	S	0	0
			810	530	143	131	6		

- Molecule 23 is a protein called uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	M	151	Total	C	N	O	S	0	0
			1233	785	231	211	6		

- Molecule 24 is a protein called eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	N	117	Total	C	N	O	S	0	0
			908	570	161	169	8		

- Molecule 25 is a protein called uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	O	149	Total	C	N	O	S	0	0
			1202	770	228	203	1		

- Molecule 26 is a protein called Small ribosomal subunit protein uS11.

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

- Molecule 27 is a protein called uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Q	120	Total	C	N	O	S	0	0
			997	635	187	168	7		

- Molecule 28 is a protein called uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	R	142	Total	C	N	O	S	0	0
			1128	717	213	195	3		

- Molecule 29 is a protein called eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	S	132	Total	C	N	O	S	0	0
			1068	670	199	195	4		

- Molecule 30 is a protein called uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	T	144	Total	C	N	O	S	0	0
			1190	746	241	202	1		

- Molecule 31 is a protein called eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	U	141	Total	C	N	O	S	0	0
			1097	688	211	195	3		

- Molecule 32 is a protein called uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	V	100	Total	C	N	O	S	0	0
			795	498	152	141	4		

- Molecule 33 is a protein called eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	W	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
W	3	ASN	SER	conflict	UNP G1TM82
W	4	ASP	ASN	conflict	UNP G1TM82
W	33	GLN	PRO	conflict	UNP G1TM82
W	50	PHE	SER	conflict	UNP G1TM82
W	75	ALA	SER	conflict	UNP G1TM82
W	76	ASP	HIS	conflict	UNP G1TM82

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Chain	Residue	Modelled	Actual	Comment	Reference
W	81	LYS	GLN	conflict	UNP G1TM82

- Molecule 34 is a protein called uS8.

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

- Molecule 35 is a protein called uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Y	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 36 is a protein called eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Z	124	Total	C	N	O	S	0	0
			1011	640	198	168	5		

- Molecule 37 is a protein called eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	a	77	Total	C	N	O	S	0	0
			614	393	114	106	1		

- Molecule 38 is a protein called eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	b	101	Total	C	N	O	S	0	0
			814	507	170	132	5		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
b	28	ARG	CYS	conflict	UNP G1TFE8
b	56	ALA	VAL	conflict	UNP G1TFE8

- Molecule 39 is a protein called eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	c	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 40 is a protein called eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	d	67	Total	C	N	O	S	0	0
			530	321	108	99	2		

- Molecule 41 is a protein called uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	e	55	Total	C	N	O	S	0	0
			459	286	94	74	5		

- Molecule 42 is a protein called eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	f	57	Total	C	N	O	S	0	0
			457	282	101	73	1		

- Molecule 43 is a protein called eS31.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	g	68	Total	C	N	O	S	0	0
			555	351	103	94	7		

- Molecule 44 is a protein called Receptor for Activated C Kinase 1 (RACK1).

Mol	Chain	Residues	Atoms					AltConf	Trace
44	h	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 45 is a RNA chain called Met-tRNAiMet.

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

- Molecule 46 is a protein called Eukaryotic translation initiation factor 2 subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	j	182	Total	C	N	O	S	0	0
			1245	795	234	213	3		

- Molecule 47 is a protein called eL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	n	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

- Molecule 48 is ZINC ION (CCD ID: ZN) (formula: Zn).

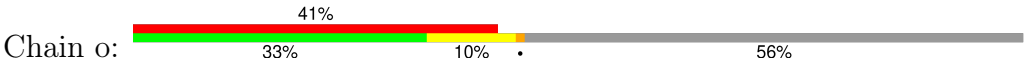
Mol	Chain	Residues	Atoms		AltConf
48	b	1	Total	Zn	0
			1	1	

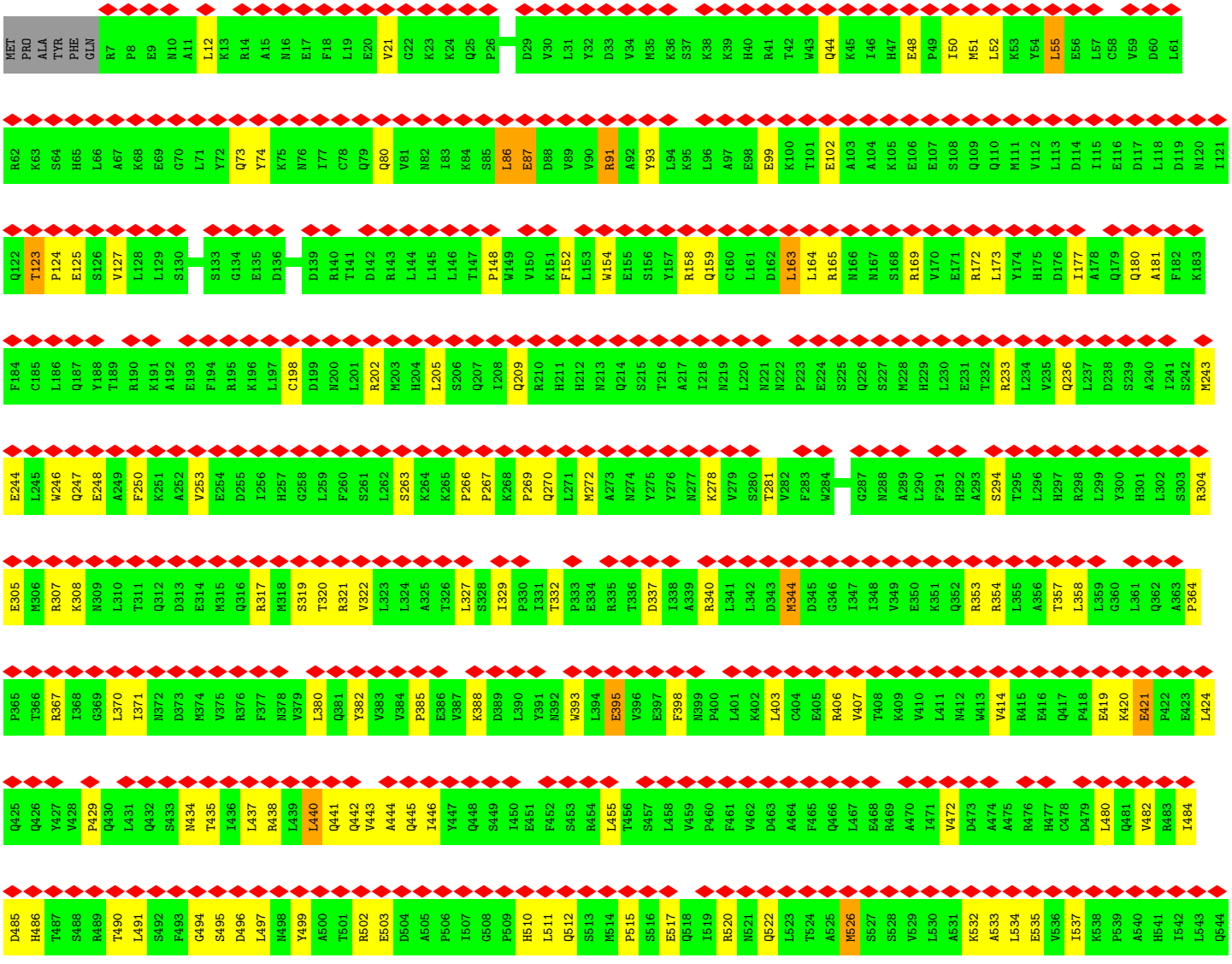
3 Residue-property plots (i)

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: Eukaryotic translation initiation factor 3 subunit A

Chain o:





E545 K546 E547 E548 Q549 H550 Q551 L552 A553 V554 T555 A556 Y557 L558 K559 N560 S561 R562 K563 E564 H565 Q566 R567 I568 L569 A570 R571 R572 Q573 T574 I575 E576 E577 R578 K579 E580 R581 L582 E583 S584 L585 N586 I587 Q588 R589 E590 K591 E592 E593 L594 E595 Q596 R597 E598 A599 E600 L601 Q602 K603 V604

R605 K606 ALA GLU GLU GLU ARG LEU ARG GLN GLU ALA LYS GLU ARG GLU LYS GLU ARG ILE LEU GLN GLU HIS GLU GLN ILE LYS LYS LYS THR VAL ARG GLU ARG LEU GLU GLN ILE LYS LYS THR GLU LEU GLY ALA LYS ALA PHE LYS ASP ILE ASP ILE GLU ASP LEU GLU GLU LEU

ASP PRO ASP PHE ILE MET ALA LYS GLN VAL GLU GLN LEU GLU LYS GLU LYS LYS GLU LEU GLN GLU ARG LEU LYS ASN GLN GLU LYS LYS ILE ASP TYR PHE GLU ARG ALA LYS ARG LEU GLU GLU ILE PRO LEU ILE LYS SER ALA TYR GLU GLU GLN ARG ILE LYS ASP MET ASP LEU

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

GLU GLU ARG HIS ASN ARG LEU GLU GLU ARG LYS ARG GLN ARG LYS GLU GLU ARG ARG ILE THR TYR TYR ARG GLU LYS GLU GLU GLU GLN ARG ARG ALA GLU GLU GLN MET LEU LYS GLU ARG GLU GLU ARG GLU ARG ALA GLU ARG ALA LYS ARG GLU GLU GLU LEU ARG GLU TYR

GLN GLU ARG VAL LYS LYS LEU GLU GLU VAL GLU ARG LYS LYS ARG GLN ARG GLU LEU GLU ILE GLU GLU ARG GLU ARG ARG ARG GLU GLU GLU ARG ARG LEU GLY GLU ASP PRO LEU SER ARG ARG ASP SER ARG TRP GLY ASP ARG ASP SER GLU GLY THR TRP ARG LYS GLY PRO GLU

ALA ASP SER GLU TRP ARG ARG GLY PRO PRO GLU LYS GLU TRP ARG ARG GLY GLU GLY ARG ASP ASP GLU ARG SER HIS ARG ARG ASP GLU GLU ARG PRO ARG ARG VAL GLY ASP ASP GLU ASP ARG GLU SER SER LEU ARG PRO ASP ASP ASP ARG THR LEU ARG ARG GLY MET GLU ASP

ASP ARG GLY PRO ARG ARG GLY PRO ASP GLU GLU ARG PHE SER ARG ARG GLY LEU GLU ASP GLU ARG PRO SER TRP ARG SER THR ASP ASP ASP ARG PRO PRO ARG ILE GLY GLU GLU ASP ARG GLY SER TRP ARG HIS ALA GLU ASP ASP ARG PRO PRO ARG ARG GLY LEU ASP ASP

ASP ARG GLY SER TRP ARG THR ALA ASP GLU ASP ARG GLY PRO ARG ARG MET MET ASP GLU ASP ARG GLY PRO ARG ARG GLY GLY ALA ASP ASP GLU ARG PRO SER TRP ARG SER ALA ASP ASP ASP ARG GLY PRO ARG ARG GLY ILE ASP ASP ASP ARG GLY PRO ARG ARG GLY LEU ASP

ASP ASP ARG GLY PRO TRP ARG ASN ALA ASP ASP ASP ARG ILE PRO ARG ARG GLY ALA ASP ASP ASP ARG GLY PRO TRP ARG ASN MET ASP ASP ASP ARG MET SER ARG ARG ALA ASP ASP ASP ARG ILE SER ARG ARG GLY GLU ASP SER ARG PRO GLY PRO TRP ARG PRO PHE VAL LYS

PRO GLY GLY TRP ARG GLU LYS GLU LYS ALA ARG GLU GLU SER TRP GLY PRO PRO ARG GLU SER ARG PRO PRO GLU GLU ARG GLU TRP GLU ARG GLU ARG ASP ARG ASP ASN PRO ASP ARG GLU GLU ASN ASP LYS ASP PRO GLU ARG GLU ARG ASP ARG GLU ARG ASP GLY ASP ARG GLU

GLU ARG PHE ARG ARG PRO ARG ASP GLU GLY GLY TRP ARG ARG GLY PRO ALA GLU GLU ALA SER SER TRP ARG ASP SER SER ARG ARG ASP ASP ARG ASP ARG ASP ASP ARG ARG ARG GLU ARG ASP ASP ARG ARG ASP LEU ARG ASP ARG ARG ASP LEU ARG ASP ASP ARG ASP ARG ARG

GLY PRO PRO LEU ARG SER GLU ARG ASP GLU VAL SER SER TRP ARG ARG ALA ASP ASP ARG LYS ASP ASP ARG ALA GLU GLU ARG ASP PRO PRO ARG ARG VAL PRO PRO PRO VAL LEU SER ARG ASP ARG ASP ARG ASP ARG ASP ARG ASP ARG ASP ARG ASP ARG GLU ARG GLU ARG GLU

ARG GLU ARG GLU GLY GLU LYS GLU LYS THR SER TRP ARG ALA GLU LYS ASP ARG GLU SER LEU ARG ARG THR LYS ASN GLU THR ASP GLU ASP GLY TRP THR THR VAL ARG ARG

- Molecule 2: Eukaryotic translation initiation factor 3 subunit C

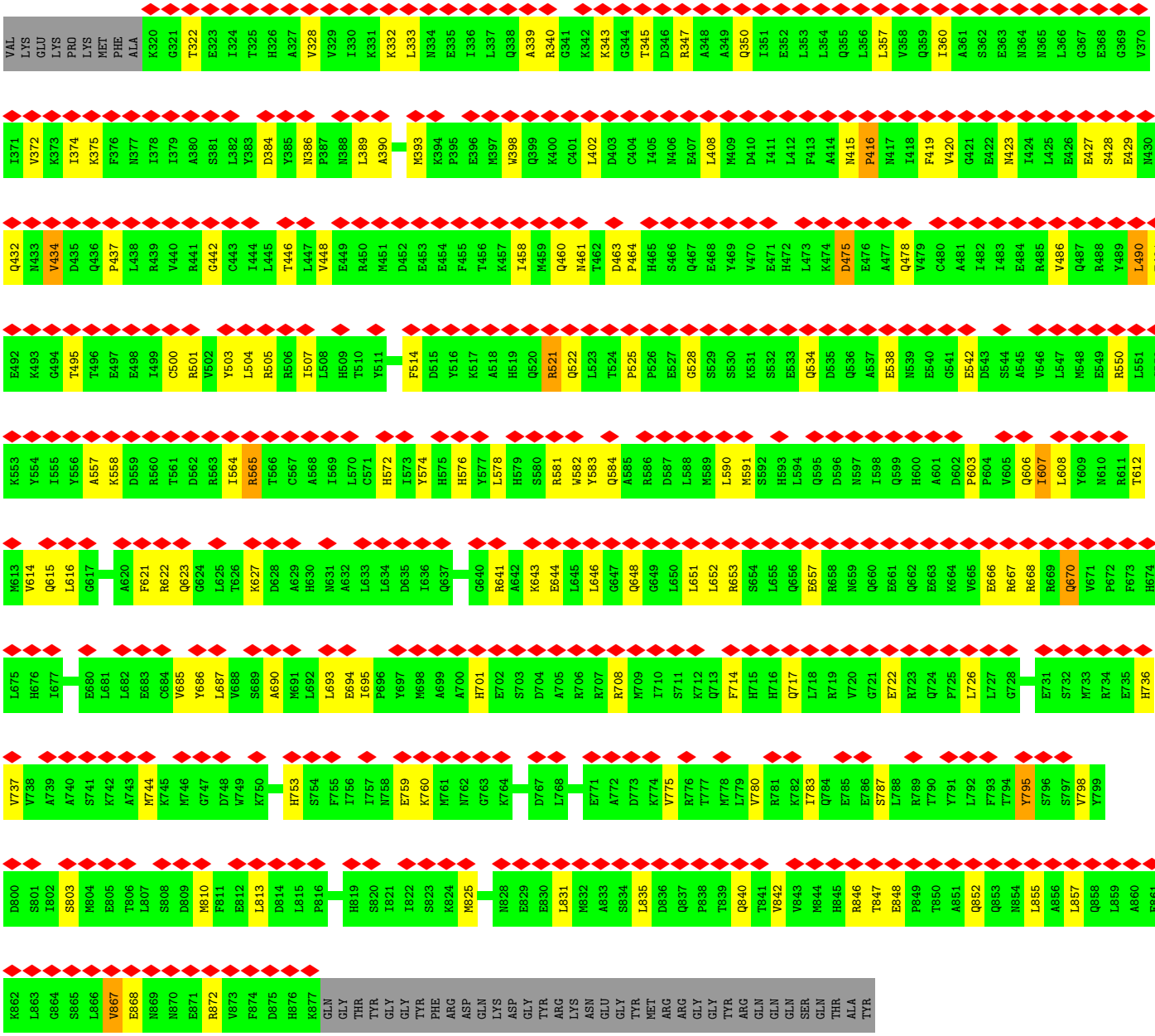
Chain p: 49% 16% • 34%

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

ASN LYS ASN ASN ALA LYS ALA LEU SER THR LEU ARG GLN LYS ILE ARG LYS TYR ASN ARG ASP PHE GLU SER HIS ILE THR ASN TYR LYS GLN ASN PRO GLU GLN SER ALA ASP GLU ASP ALA GLU LYS ASN GLU ASP SER GLU GLY SER SER ASP GLU ASP GLU ASP GLU ASP GLY

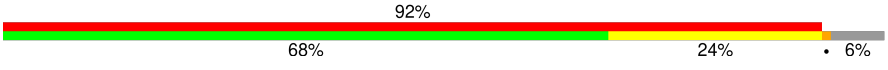
VAL SER ALA ALA ALA PHE LEU LYS LYS LYS ALA GLU ALA PRO SER GLY GLU SER ARG LYS PHE LEU LYS LYS MET GLU ASP GLU ASP GLU ASP SER GLU ASP SER GLU ASP ASP GLU GLU TRP ASP THR GLY SER THR SER SER ASP SER ASP SER GLU GLU GLU GLU GLY LYS GLN THR

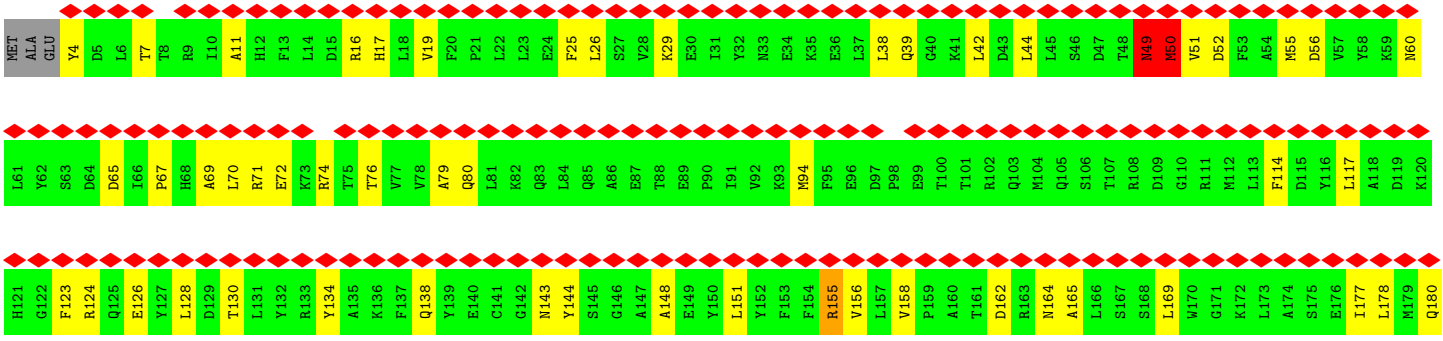
ALA LEU ALA SER ARG PHE LEU LYS LYS ALA PRO THR THR GLU GLU ASP LYS LYS ALA ALA GLU LYS LYS ARG GLU ASP LYS ALA LYS LYS LYS HIS ASP ARG LYS SER LYS ARG LEU ASP GLU GLU GLU GLU ASP ASN GLU GLY GLY GLU TRP GLU ARG VAL ARG GLY GLY VAL PRO LEU

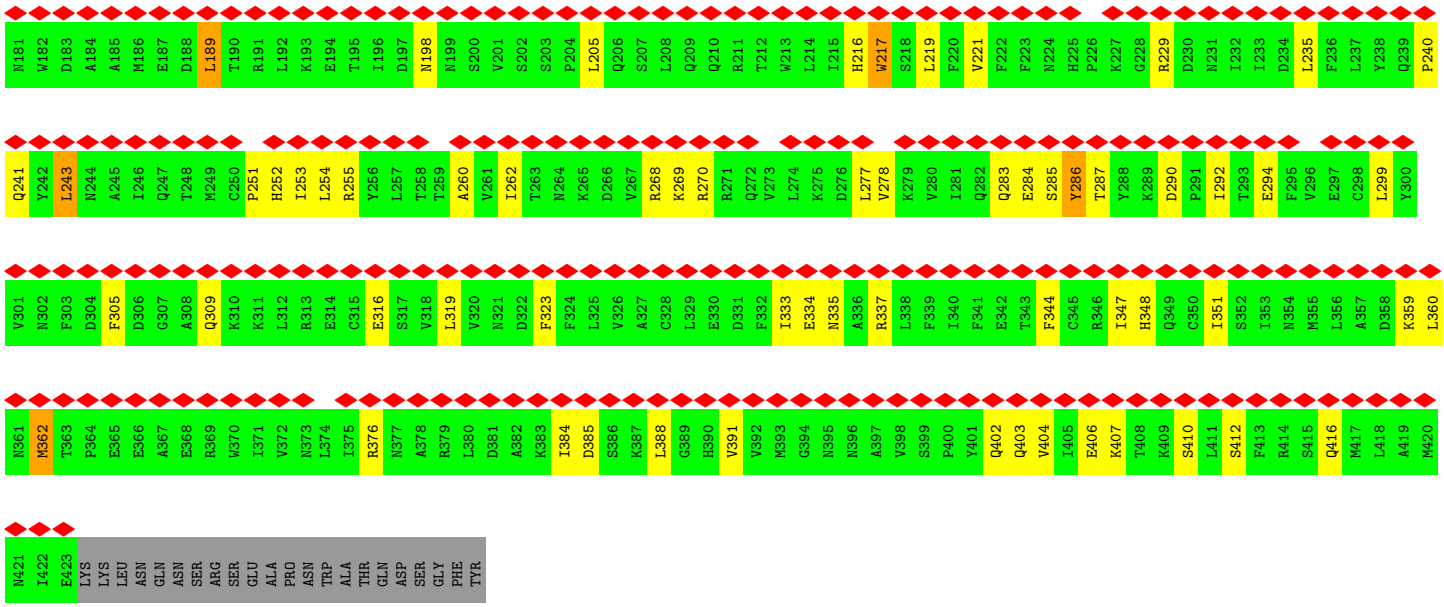


• Molecule 3: Eukaryotic translation initiation factor 3 subunit E

Chain q:

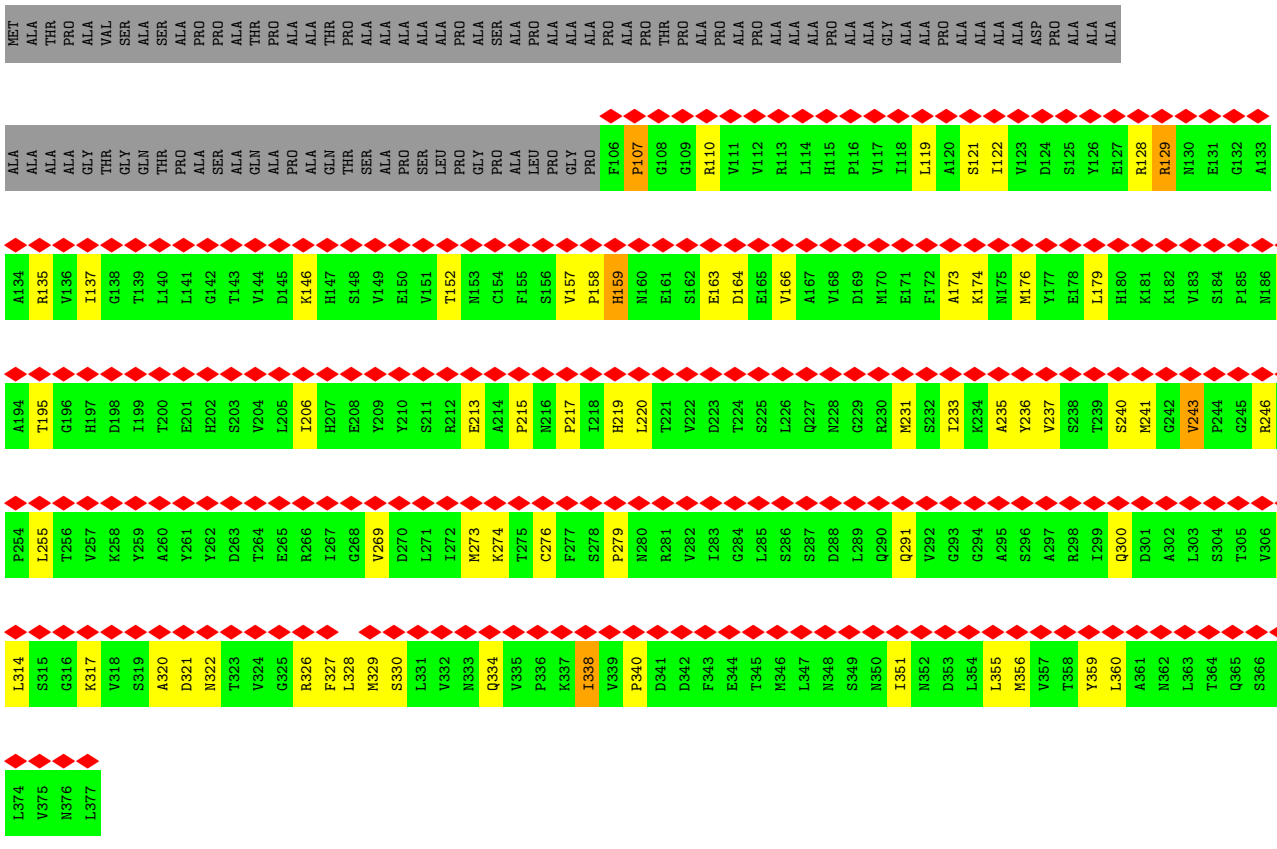






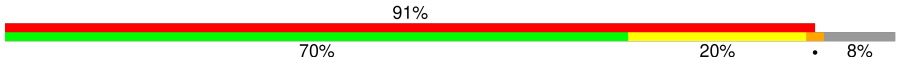
• Molecule 4: Eukaryotic translation initiation factor 3 subunit F

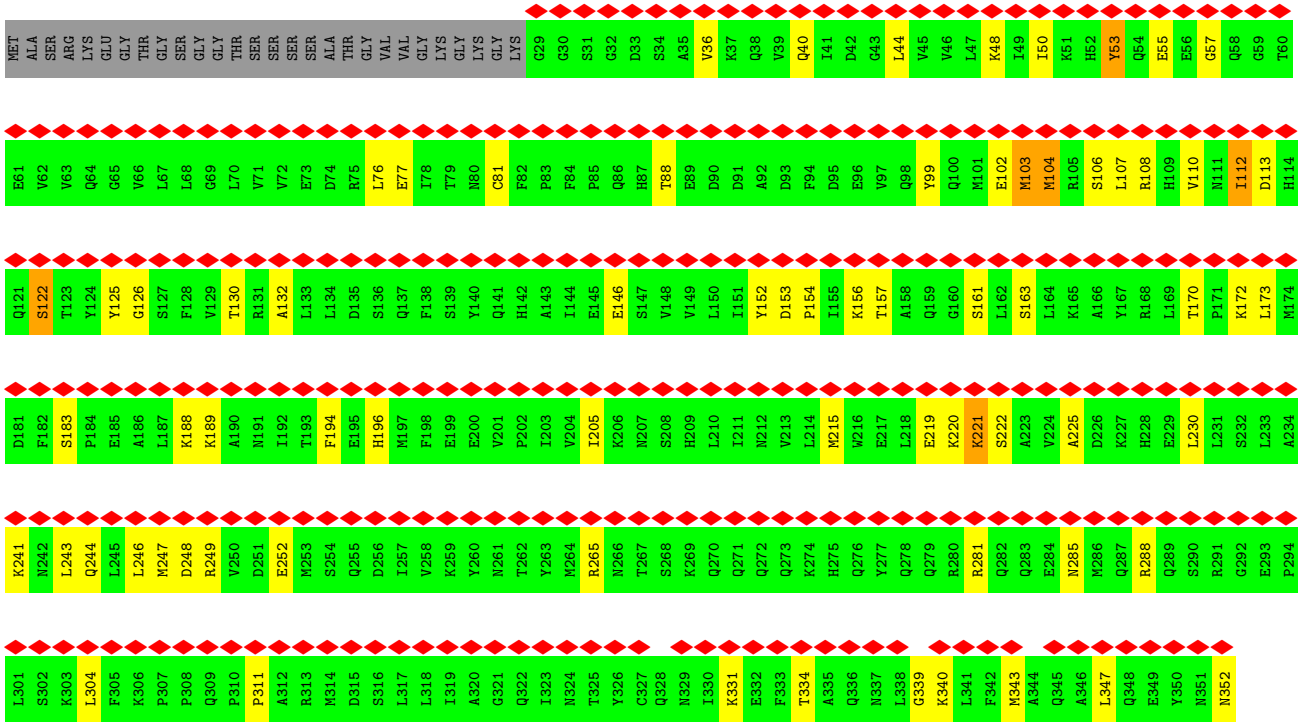
Chain r:



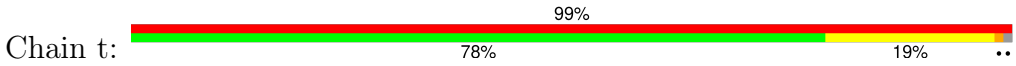
• Molecule 5: Eukaryotic translation initiation factor 3 subunit H

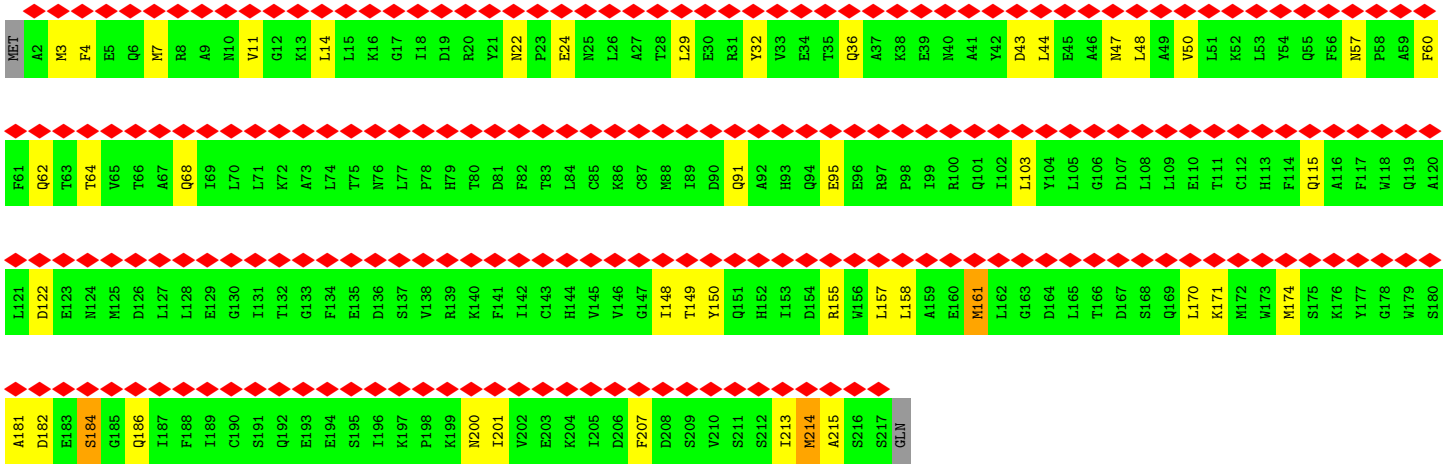
Chain s:



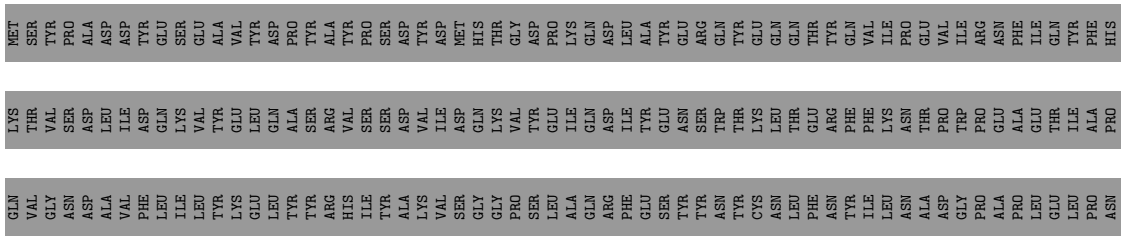


• Molecule 6: Eukaryotic translation initiation factor 3 subunit K





• Molecule 7: Eukaryotic translation initiation factor 3 subunit L



Q181 W182 L183 W184 D185 I186 I187 D188 E189 F190 I191 Y192 Q193 F194 Q195 S196 F197 S198 Q199 Y200 R201 C202 K203 T204 A205 K206 K207 S208 E209 E210 E211 I212 D213 F214 L215 R216 S217 N218 P219 K220 I221 W222 N223 V224 H225 S226 V227 L228 N229 V230 L231 H232 S233 L234 V235 D236 K237 S238 N239 I240

N241 R242 Q243 L244 E245 V246 Y247 T248 S249 G250 G251 D252 P253 E254 S255 V256 A257 G258 E259 Y260 G261 R262 H263 S264 L265 Y266 K267 M268 L269 G270 Y271 F272 S273 L274 V275 G276 L277 L278 R279 L280 H281 S282 L283 L284 G285 D286 Y287 Y288 Q289 A290 I291 K292 V293 L294 E295 N296 I297 E298 L299 N300

K301 K302 S303 M304 Y305 S306 R307 V308 P309 E310 C311 Q312 V313 T314 T315 Y316 Y317 Y318 V319 G320 F321 A322 Y323 L324 M325 M326 R327 R328 Y329 Q330 D331 A332 I333 R334 V335 F336 A337 N338 I339 L340 L341 Y342 I343 Q344 R345 T346 K347 S348 M349 F350 Q351 R352 T353 T354 Y355 K356 Y357 E358 M359 I360

N361 K362 Q363 N364 E365 Q366 M367 H368 A369 L370 L371 A372 I373 A374 L375 T376 M377 Y378 P379 M380 R381 I382 D383 E384 S385 I386 H387 L388 Q389 L390 R391 E392 K393 Y394 G395 D396 K397 M398 L399 R400 M401 Q402 K403 G404 D405 P406 Q407 V408 Y409 E410 E411 L412 F413 S414 Y415 S416 C417 P418 K419 F420

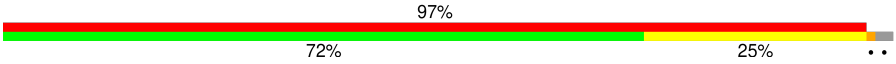
L421 S422 P423 V424 V425 P426 N427 Y428 D429 S430 V431 H432 P433 N434 Y435 H436 K437 E438 P439 F440 L441 Q442 Q443 L444 K445 V446 F447 S448 D449 E450 V451 Q452 Q453 Q454 A455 Q456 L457 S458 T459 I460 R461 S462 F463 L464 K465 L466 Y467 T468 T469 M470 P471 V472 A473 K474 L475 A476 G477 F478 L479 D480

L481 T482 E483 Q484 E485 F486 R487 I488 Q489 L490 L491 V492 F493 K494 H495 K496 M497 K498 N499 L500 V501 W502 T503 S504 G505 I506 S507 A508 L509 D510 G511 E512 F513 Q514 S515 A516 S517 E518 V519 D520 F521 Y522 I523 D524 K525 D526 M527 I528 H529 I530 A531 D532 T533 K534 V535 A536 R537 R538 Y539 G540

D541 F542 F543 I544 R545 Q546 I547 H548 K549 F550 E551 E552 L553 ASN ARG THR LEU LYS LYS MET GLY GLN ARG PRO

• Molecule 8: Eukaryotic translation initiation factor 3 subunit M

Chain v:



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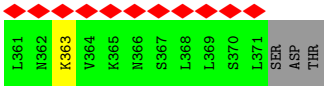
E61 S62 V63 M64 N65 S66 V67 V68 S69 L70 L71 L72 I73 L74 E75 P76 D77 K78 Q79 E80 A81 L82 I83 E84 S85 L86 C87 E88 K89 L90 V91 K92 F93 R94 E95 G96 E97 R98 P99 S100 L101 R102 L103 Q104 L105 L106 S107 N108 L109 F110 H111 G112 M113 D114 K115 N116 T117 P118 V119 R120

Y121 T122 V123 Y124 C125 S126 L127 I128 K129 V130 A131 A132 S133 C134 G135 A136 I137 Q138 Y139 I140 P141 T142 E143 L144 D145 Q146 V147 R148 K149 W150 I151 S152 D153 W154 N155 L156 T157 T158 E159 K160 K161 H162 T163 L164 L165 R166 L167 L168 Y169 E170 A171 L172 V173 D174 C175 K176 K177 S178 D179 A180

A181 S182 K183 V184 M185 V186 E187 L188 L189 G190 S191 Y192 T193 E194 D195 N196 A197 S198 Q199 A200 R201 V202 D203 A204 H205 R206 C207 I208 V209 R210 A211 L212 K213 D214 P215 N216 A217 F218 L219 F220 D221 H222 L223 L224 T225 L226 K227 P228 V229 K230 F231 L232 E233 G234 E235 L236 I237 H238 D239 L240

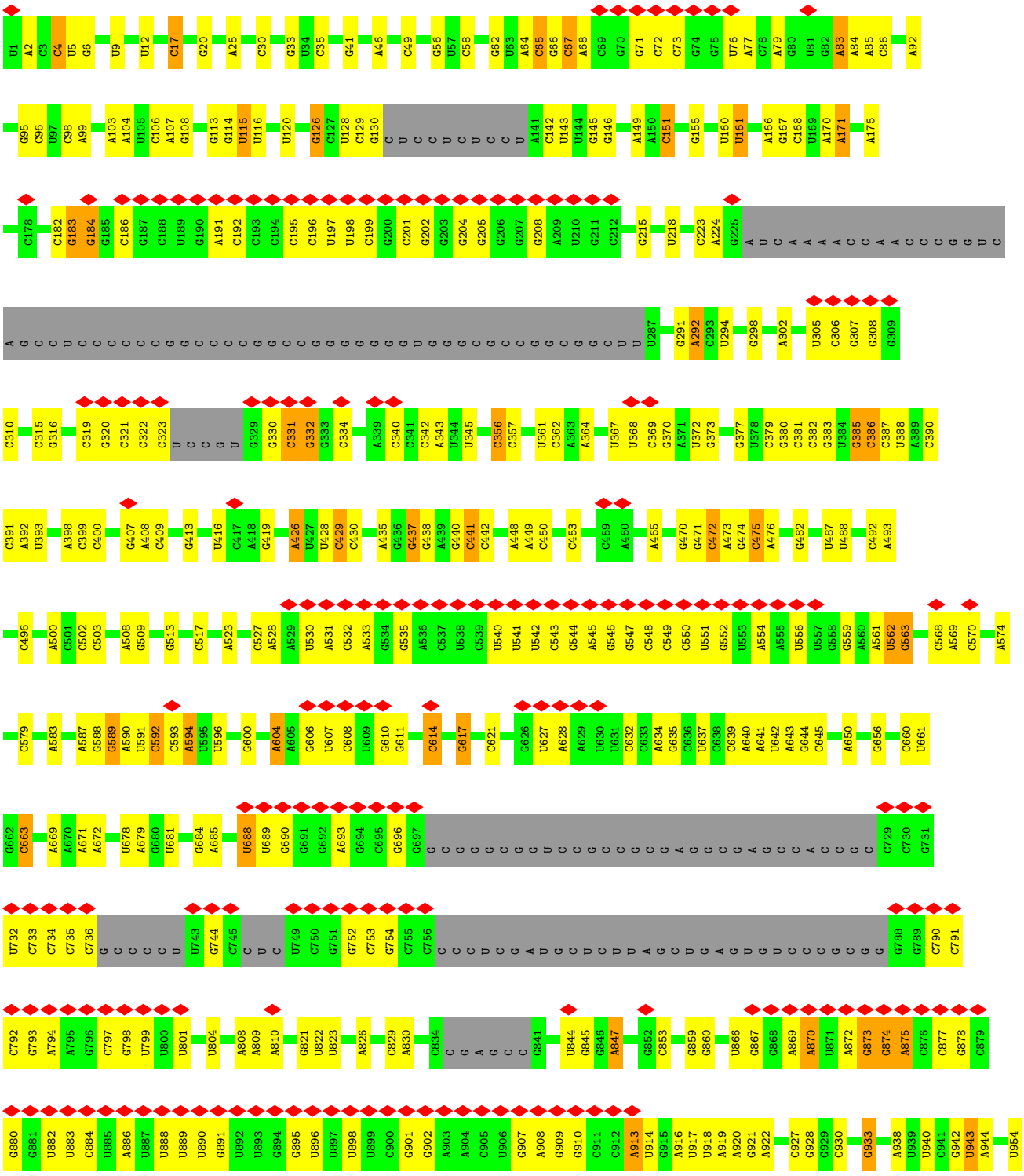
L241 T242 I243 F244 V245 S246 A247 K248 L249 A250 S251 Y252 V253 K254 F255 Y256 Q257 N258 N259 K260 D261 F262 I263 D264 S265 L266 G267 L268 L269 H270 E271 Q272 N273 M274 A275 K276 M277 R278 L279 L280 T281 F282 M283 G284 M285 A286 V287 E288 N289 K290 E291 I292 S293 F294 D295 T296 M297 Q298 Q299 E300

L301 Q302 I303 G304 A305 D306 D307 V308 E309 A310 F311 V312 I313 D314 A315 V316 R317 T318 K319 M320 V321 Y322 C323 K324 I325 D326 Q327 T328 Q329 R330 K331 V332 V333 V334 S335 H336 S337 T338 H339 R340 T341 F342 G343 K344 Q345 Q346 W347 Q348 Q349 L350 Y351 D352 T353 L354 N355 A356 W357 K358 Q359 N360



• Molecule 9: 18S rRNA

Chain 2:

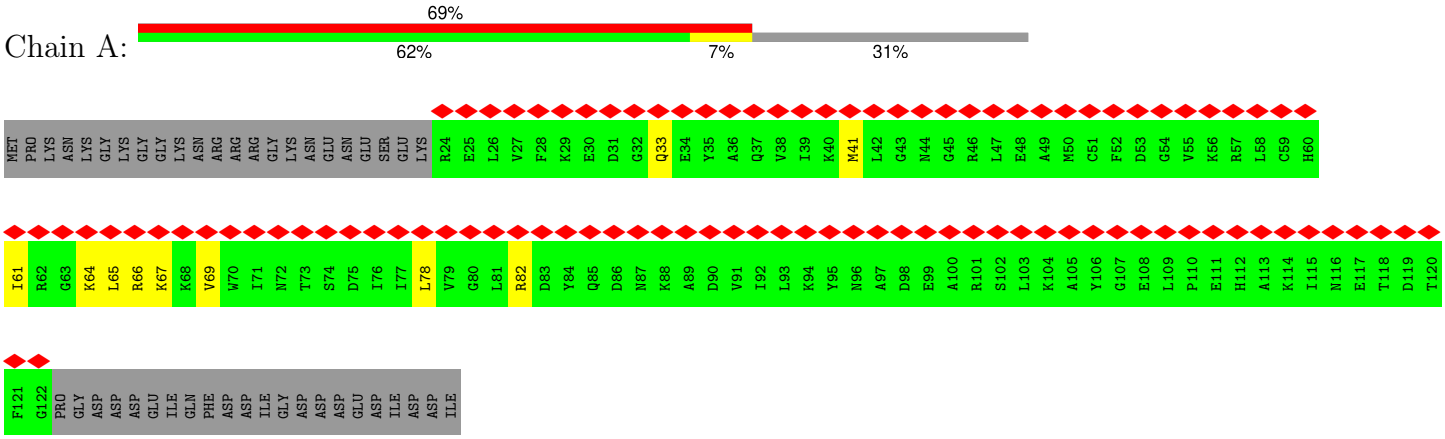


• Molecule 10: EMCV mRNA

Chain 3:

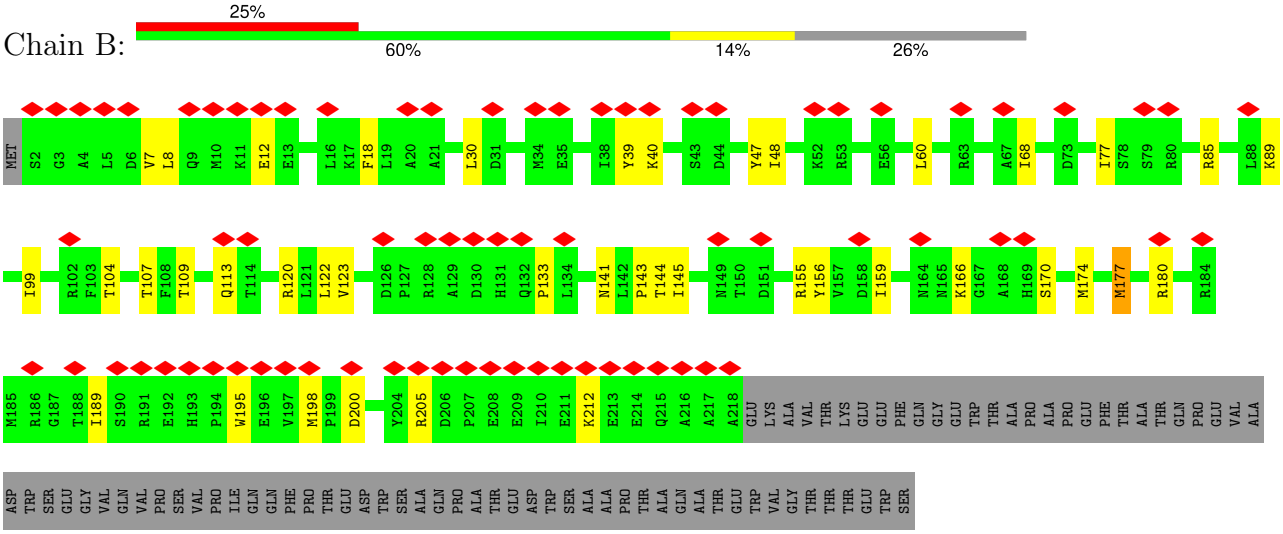
• Molecule 11: Eukaryotic translation initiation factor 1A, X-chromosomal

Chain A:



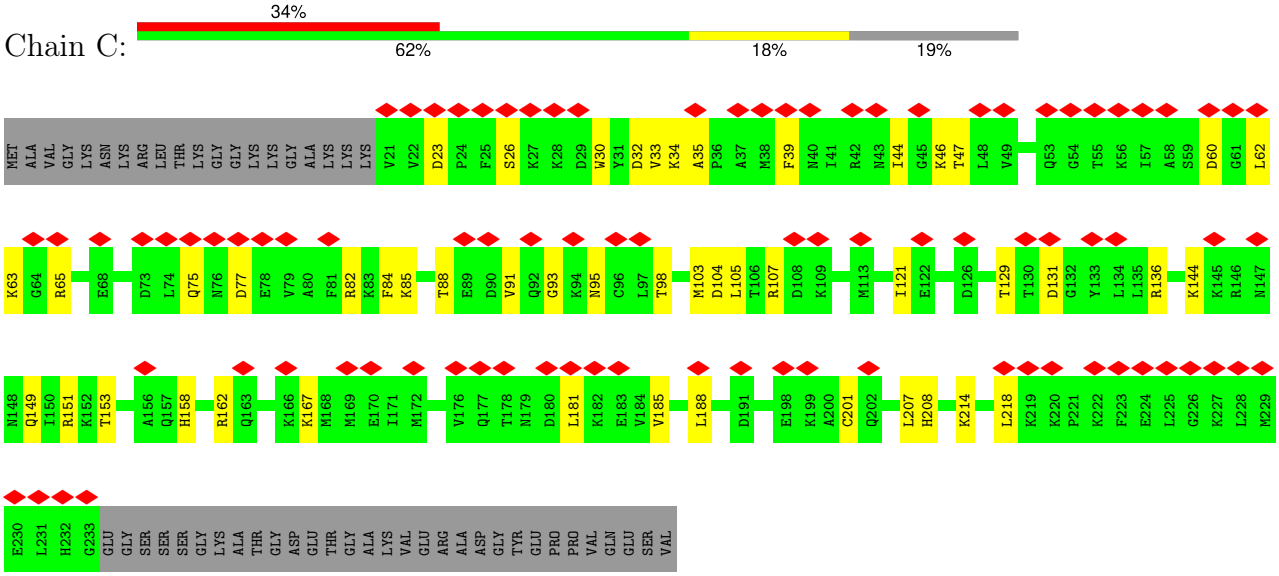
• Molecule 12: uS2 (SA)

Chain B:



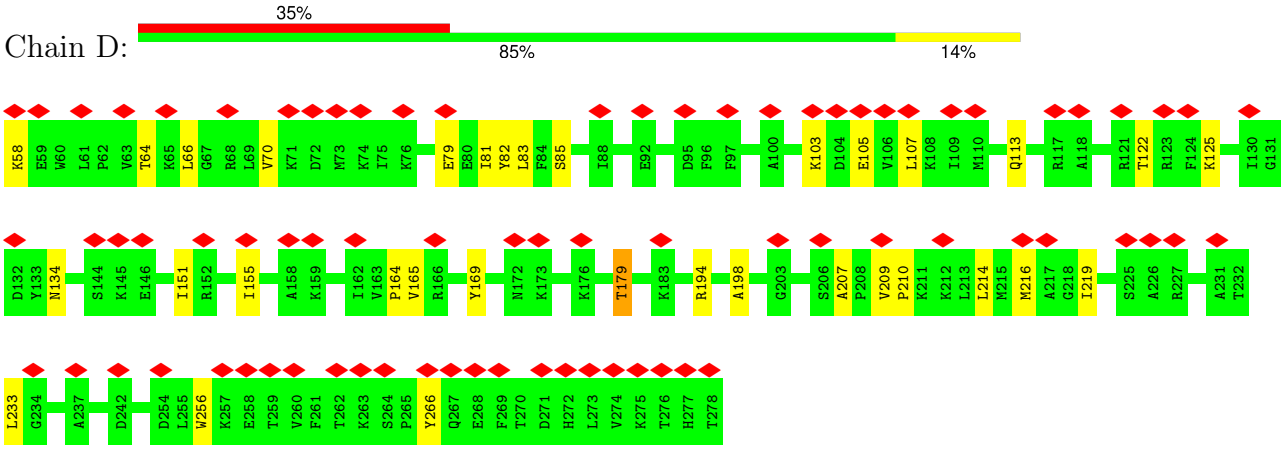
• Molecule 13: eS1

Chain C:



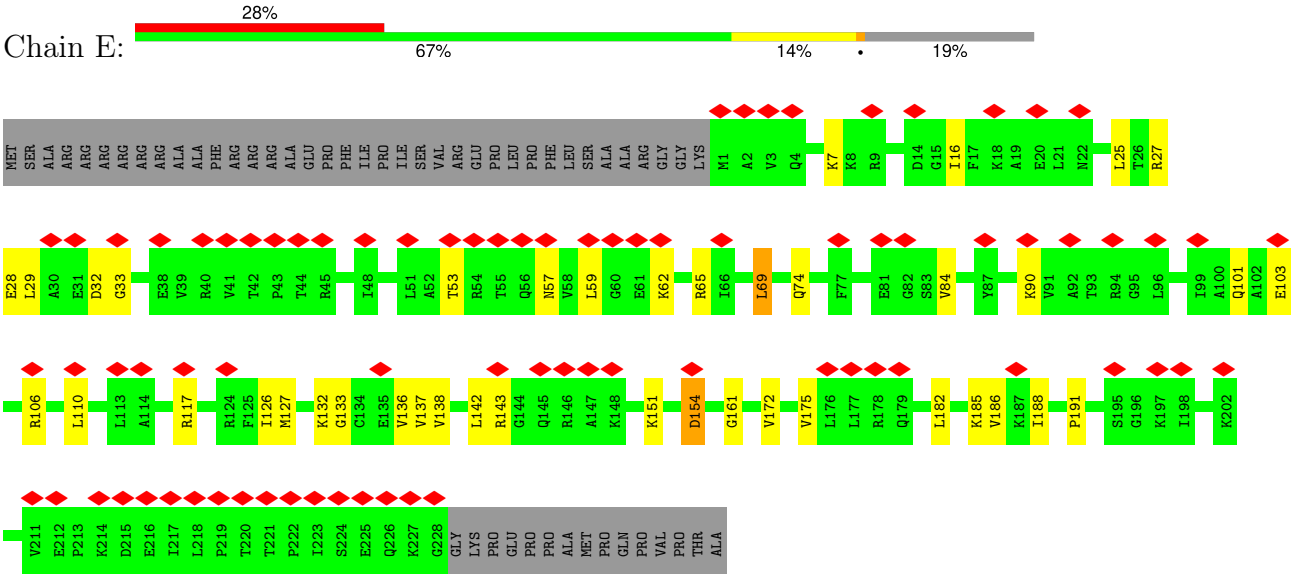
• Molecule 14: 40S ribosomal protein S2

Chain D:



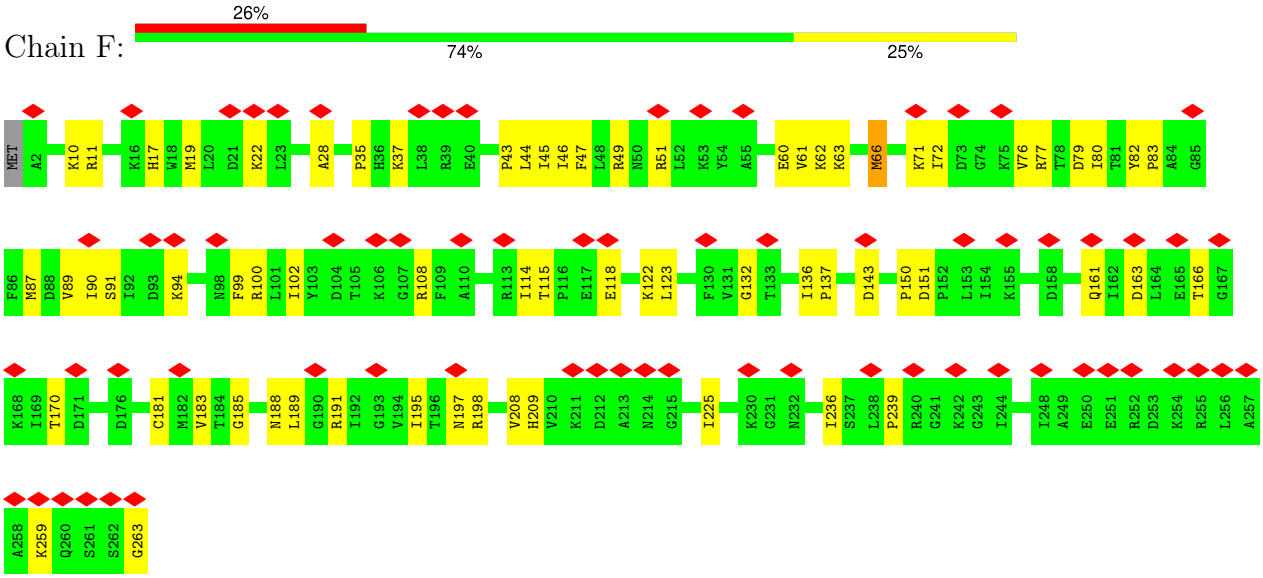
- Molecule 15: uS3

Chain E:



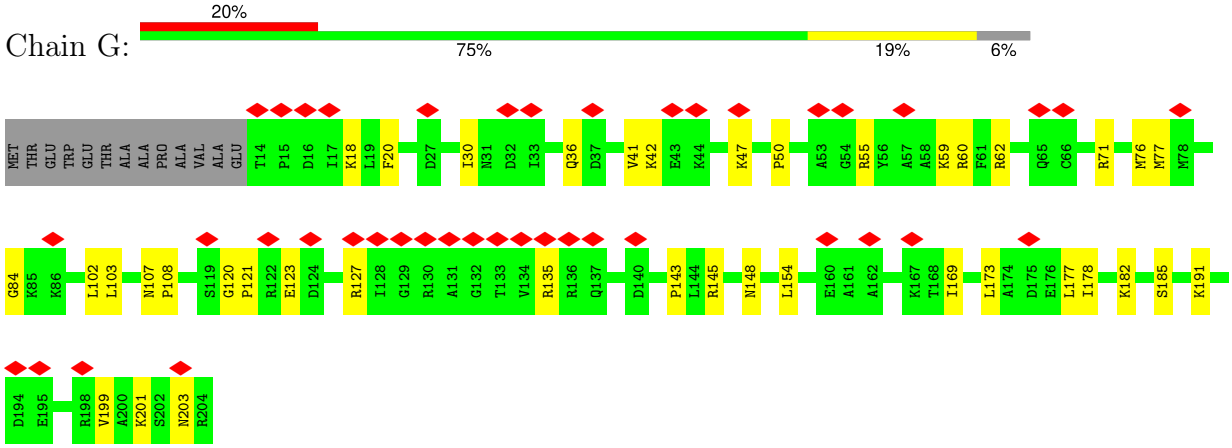
- Molecule 16: eS4 (S4 X isoform)

Chain F:



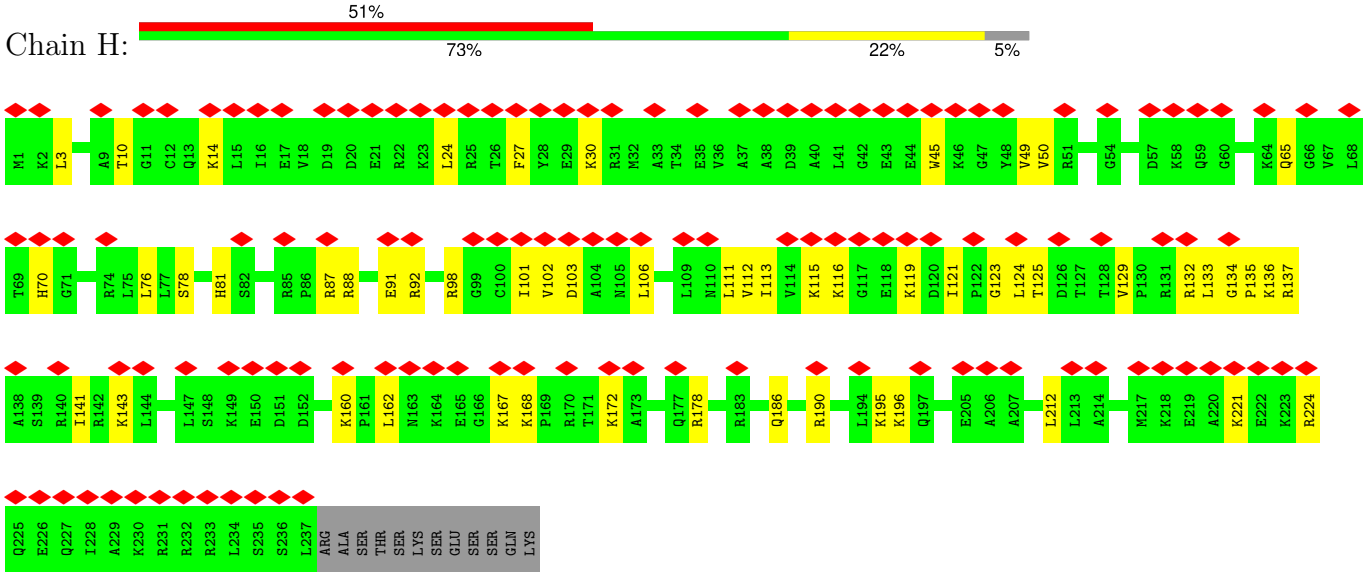
• Molecule 17: uS7

Chain G:



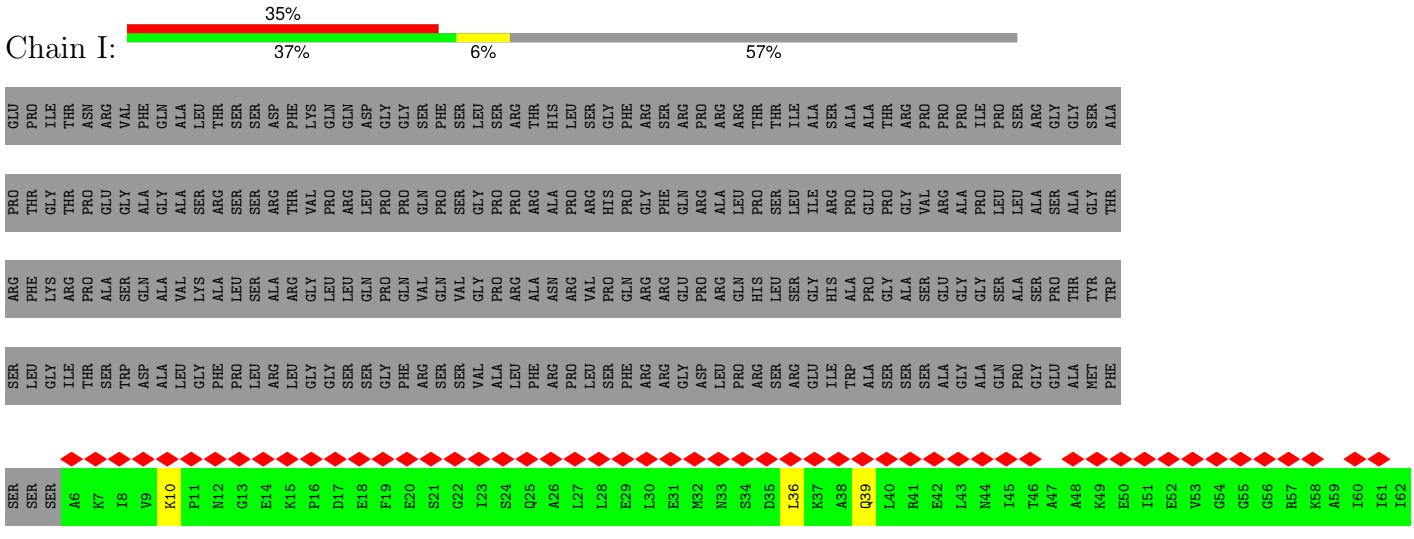
• Molecule 18: eS6

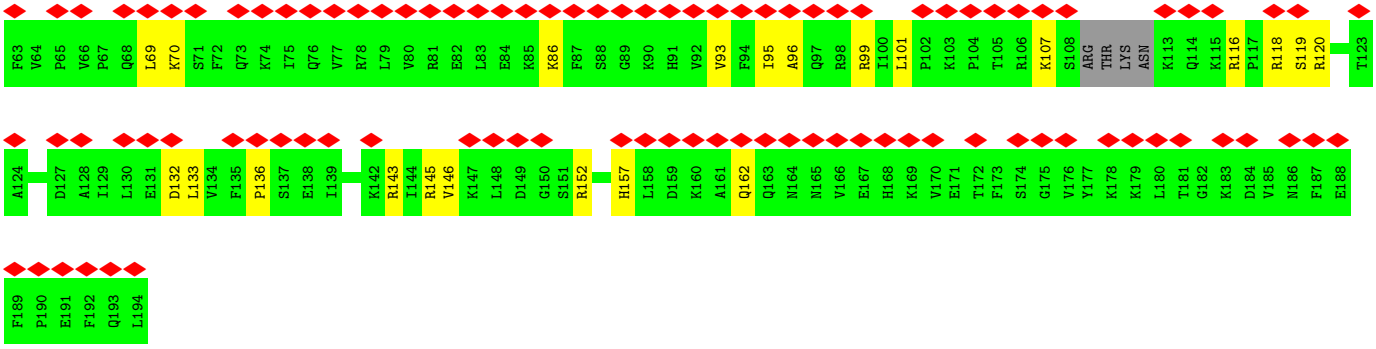
Chain H:



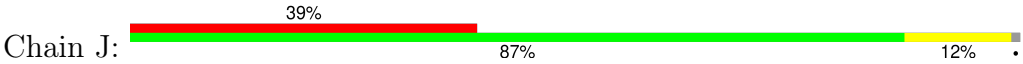
• Molecule 19: eS7

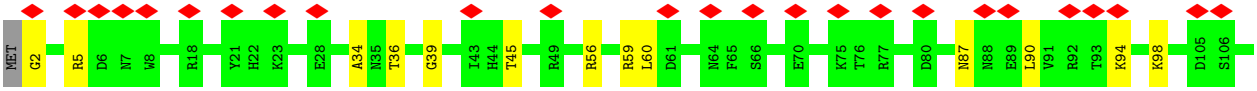
Chain I:

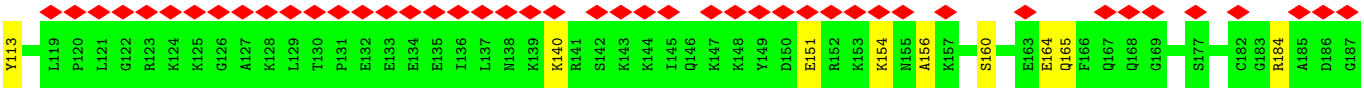


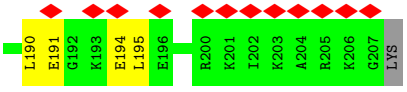


• Molecule 20: eS8

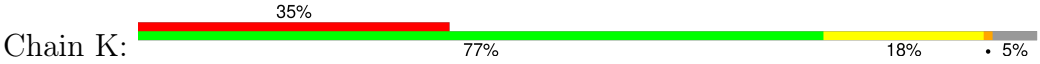


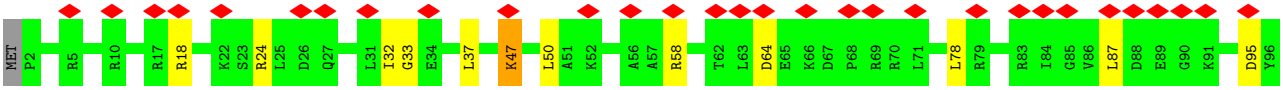


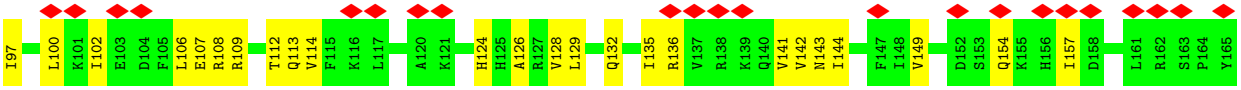


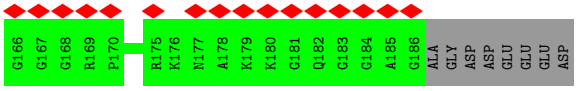


• Molecule 21: uS4

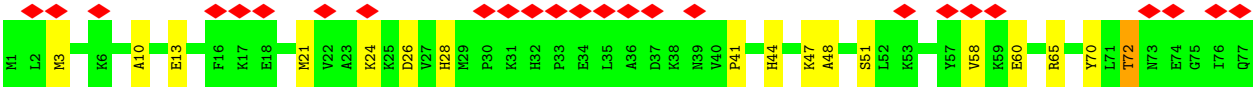


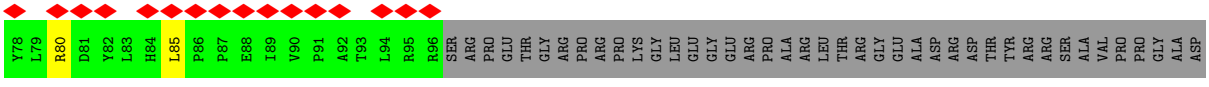


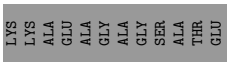




• Molecule 22: eS10

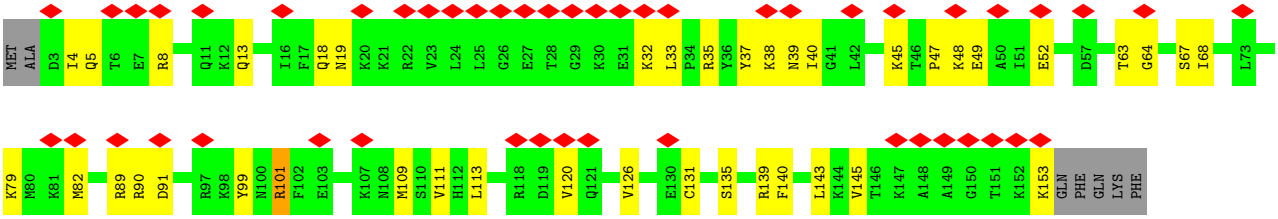






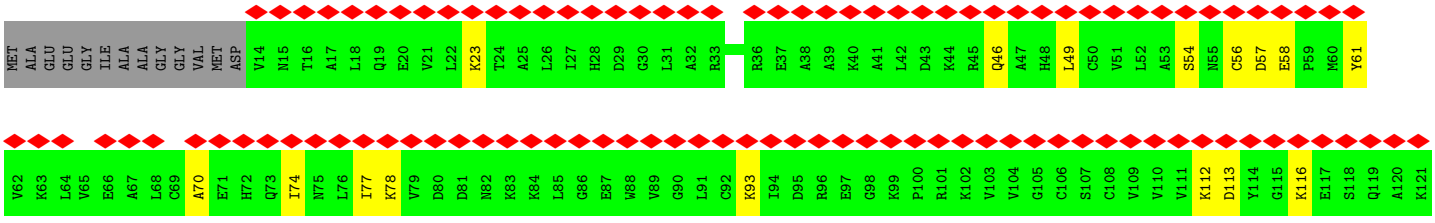
• Molecule 23: uS17

Chain M:



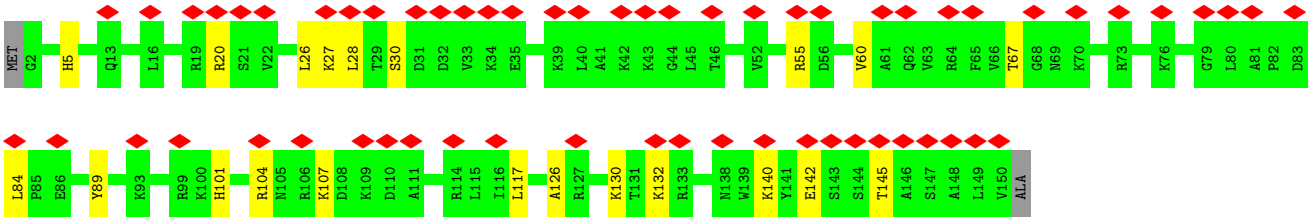
• Molecule 24: eS12

Chain N:



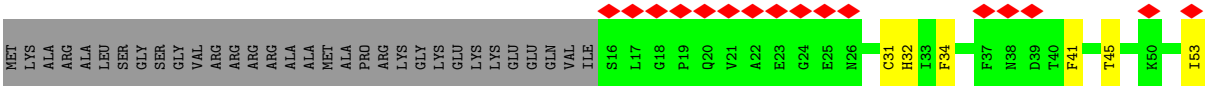
• Molecule 25: uS15

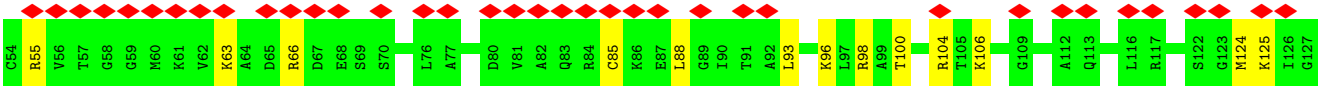
Chain O:

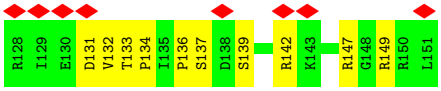


• Molecule 26: Small ribosomal subunit protein uS11

Chain P:

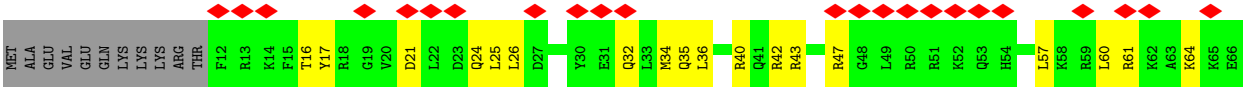


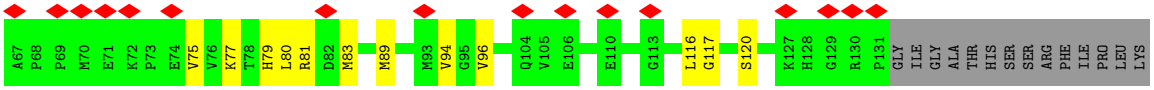




• Molecule 27: uS19

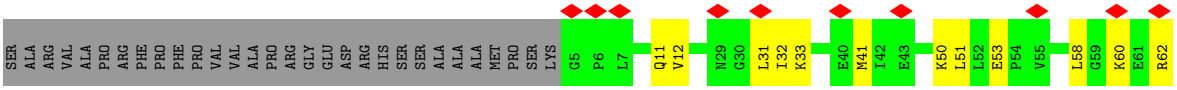
Chain Q:





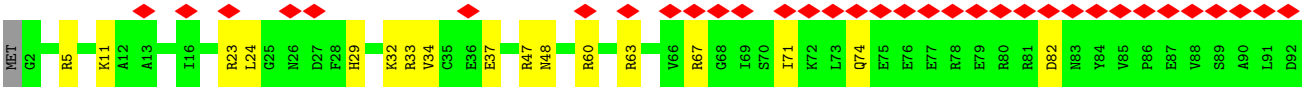
• Molecule 28: uS9

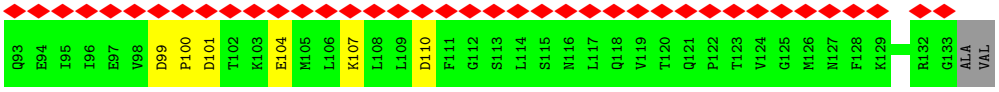
Chain R:



• Molecule 29: eS17

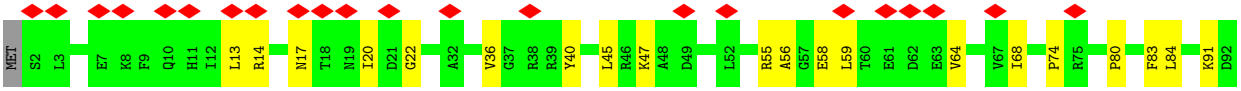
Chain S:

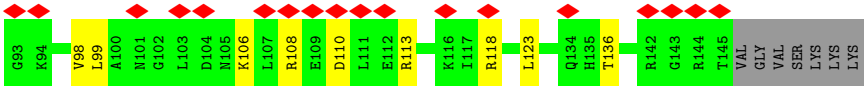




• Molecule 30: uS13

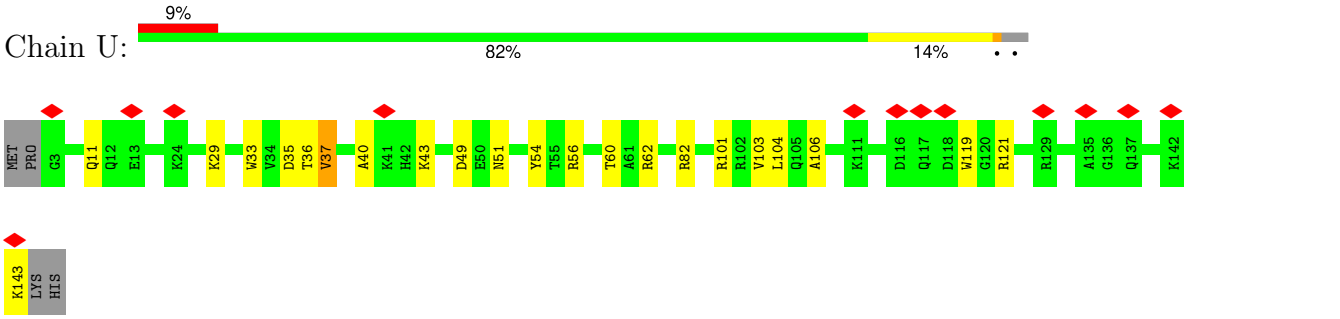
Chain T:





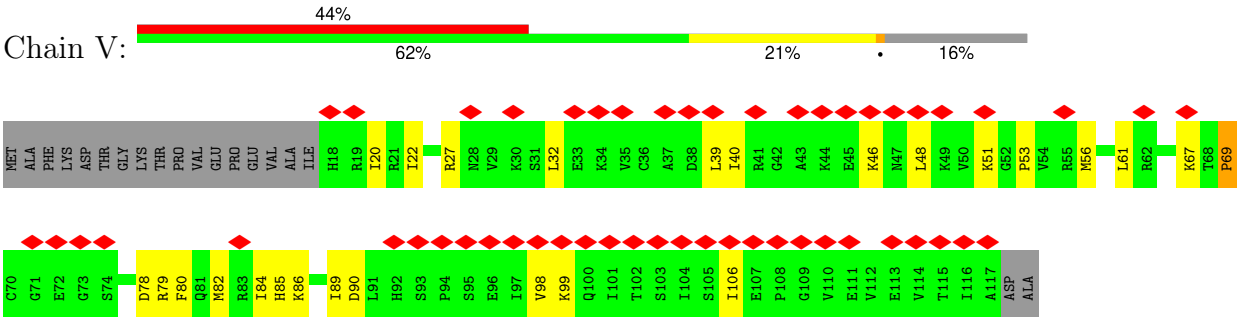
• Molecule 31: eS19

Chain U:



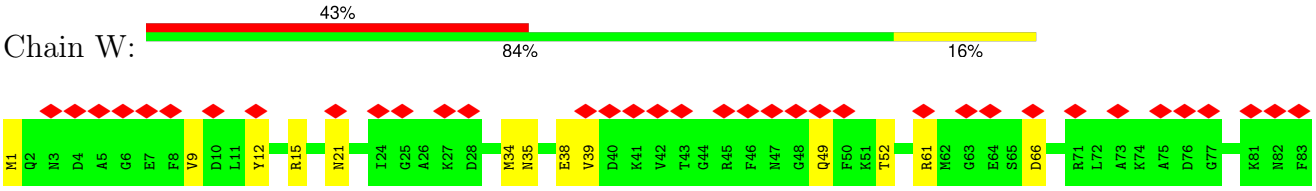
- Molecule 32: uS10

Chain V:



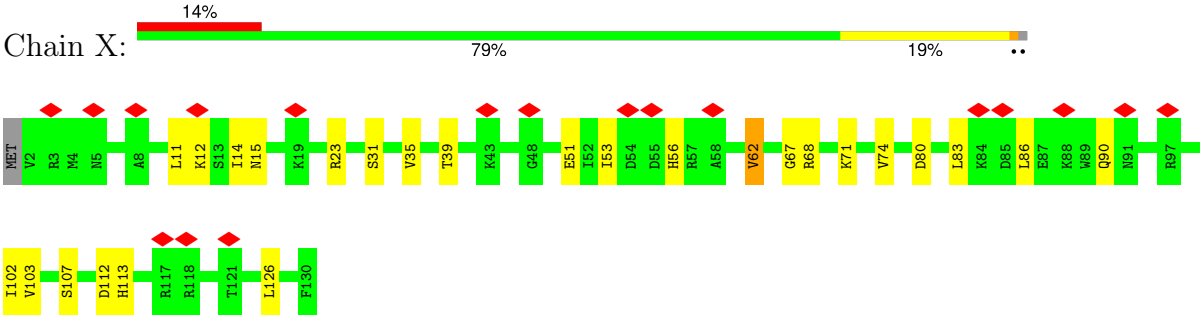
- Molecule 33: eS21

Chain W:



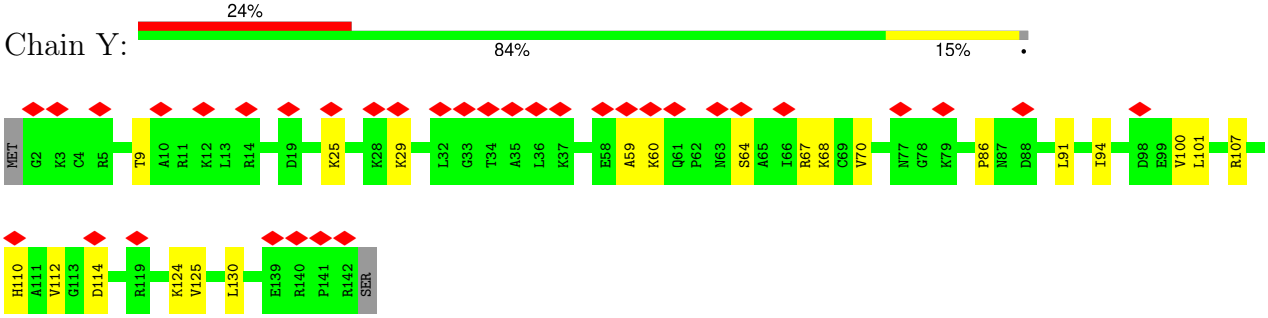
- Molecule 34: uS8

Chain X:



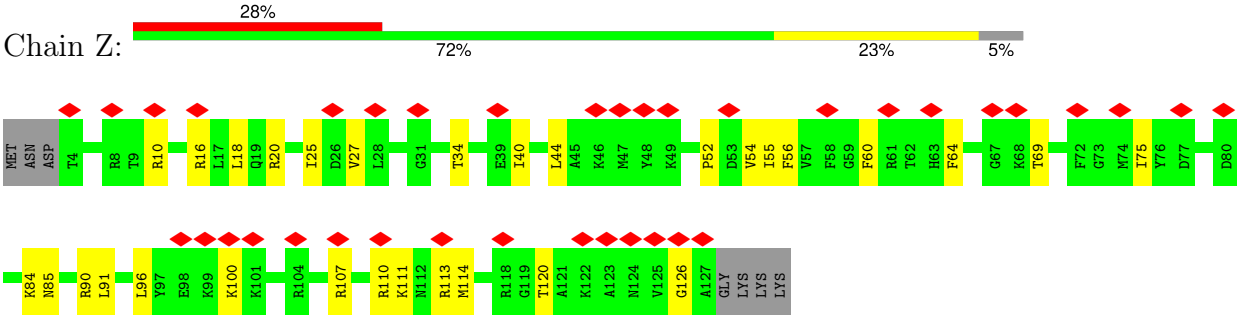
- Molecule 35: uS12

Chain Y:



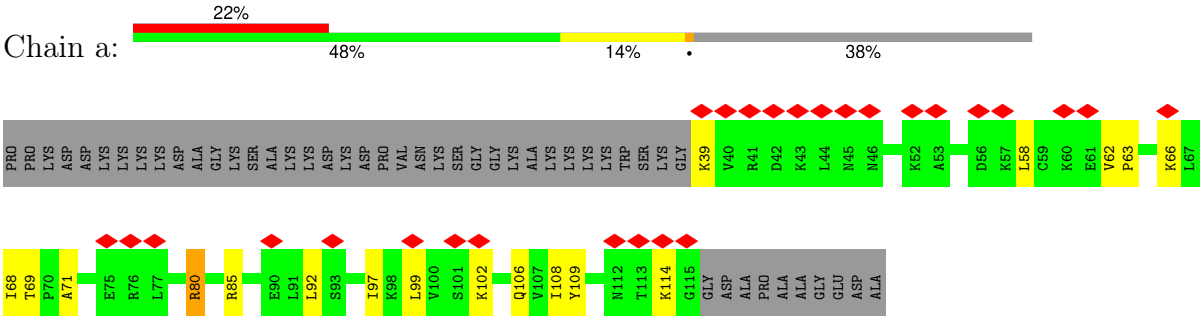
• Molecule 36: eS24

Chain Z:



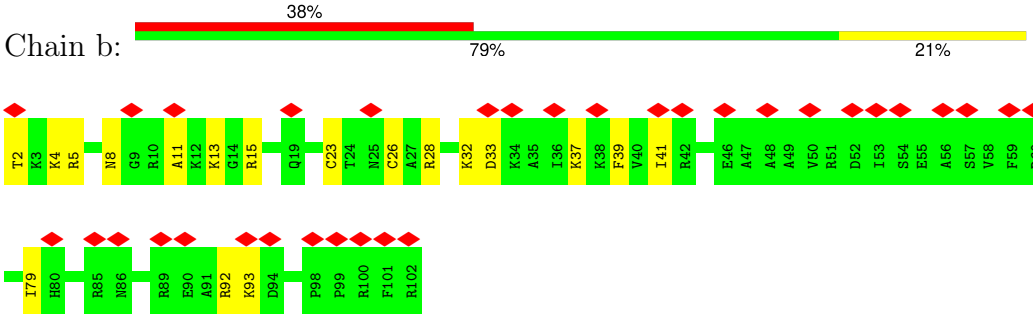
• Molecule 37: eS25

Chain a:



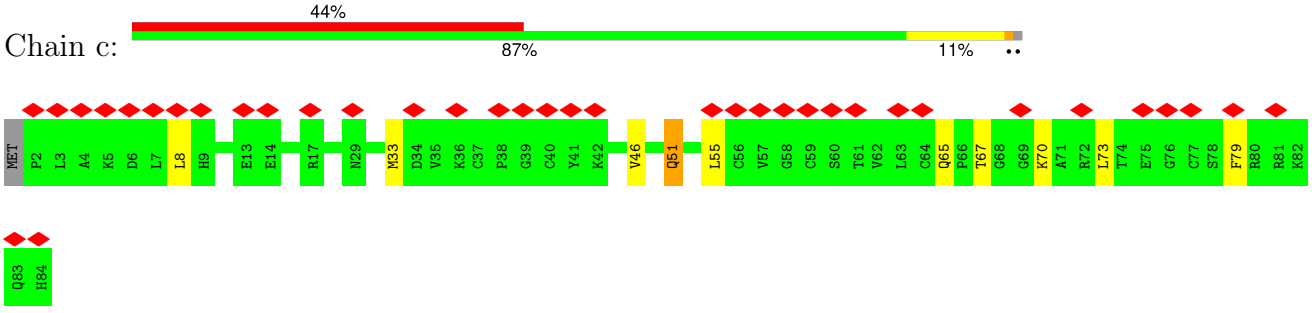
• Molecule 38: eS26

Chain b:



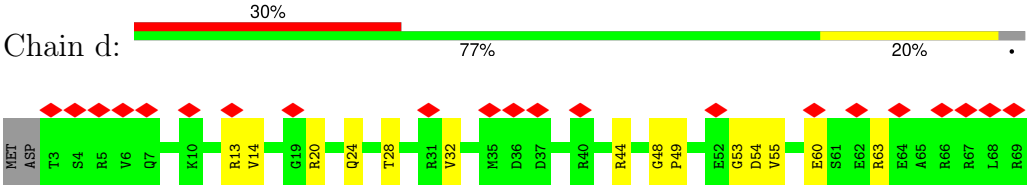
• Molecule 39: eS27

Chain c:



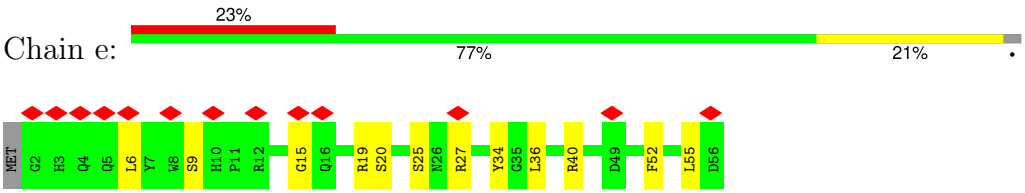
• Molecule 40: eS28

Chain d:



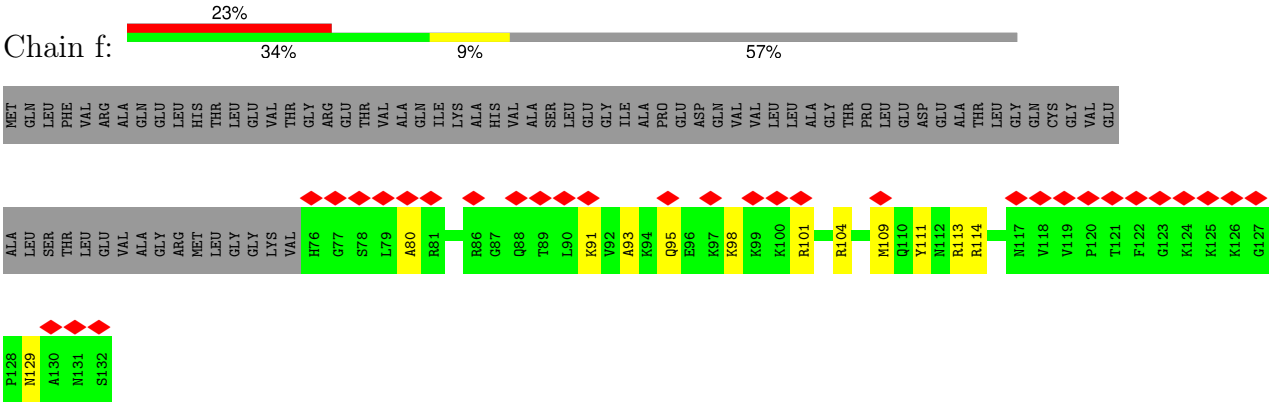
• Molecule 41: uS14

Chain e:



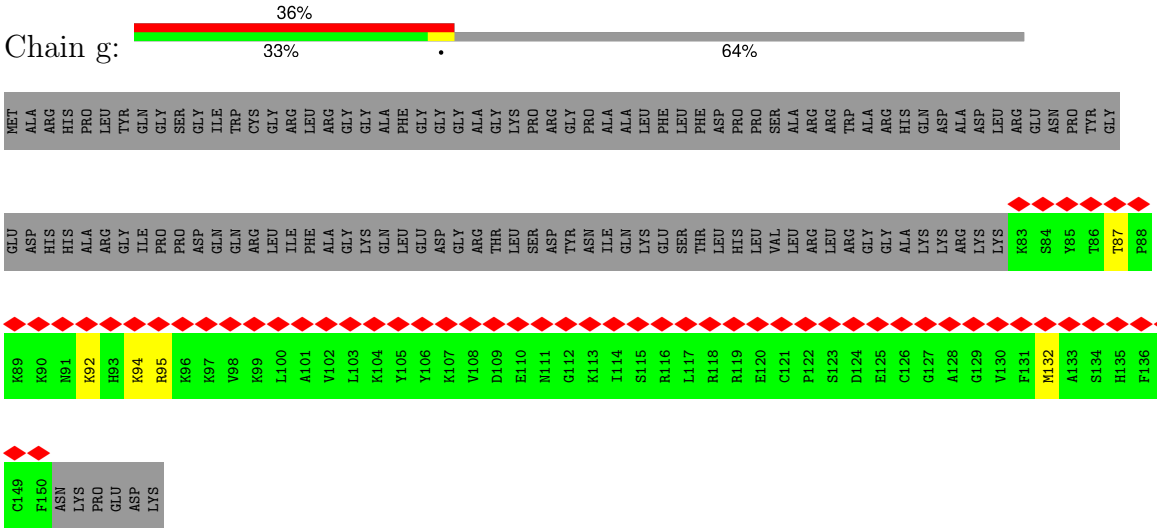
• Molecule 42: eS30

Chain f:



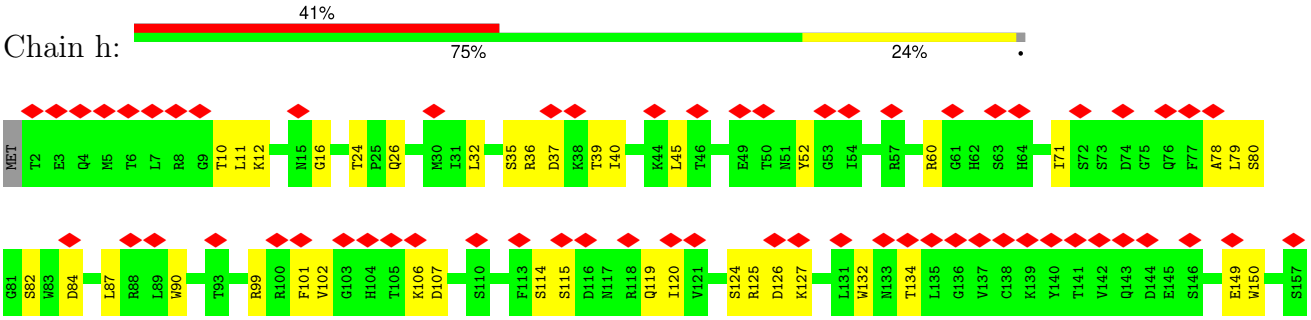
• Molecule 43: eS31

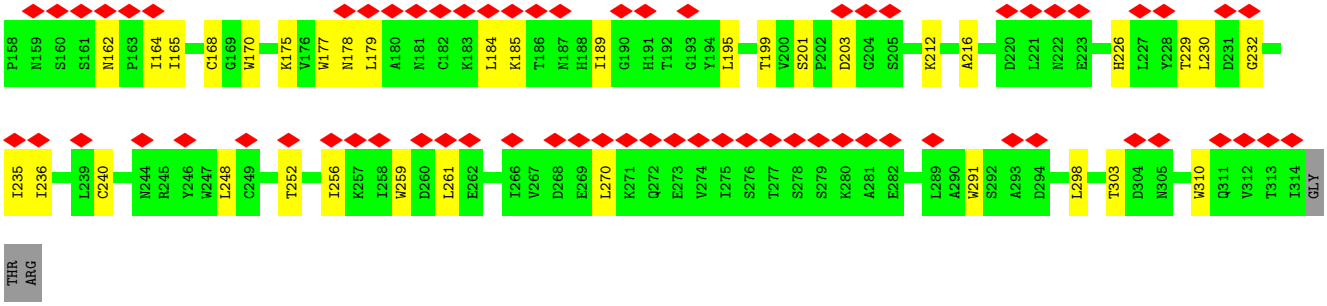
Chain g:



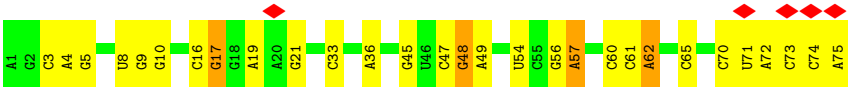
• Molecule 44: Receptor for Activated C Kinase 1 (RACK1)

Chain h:

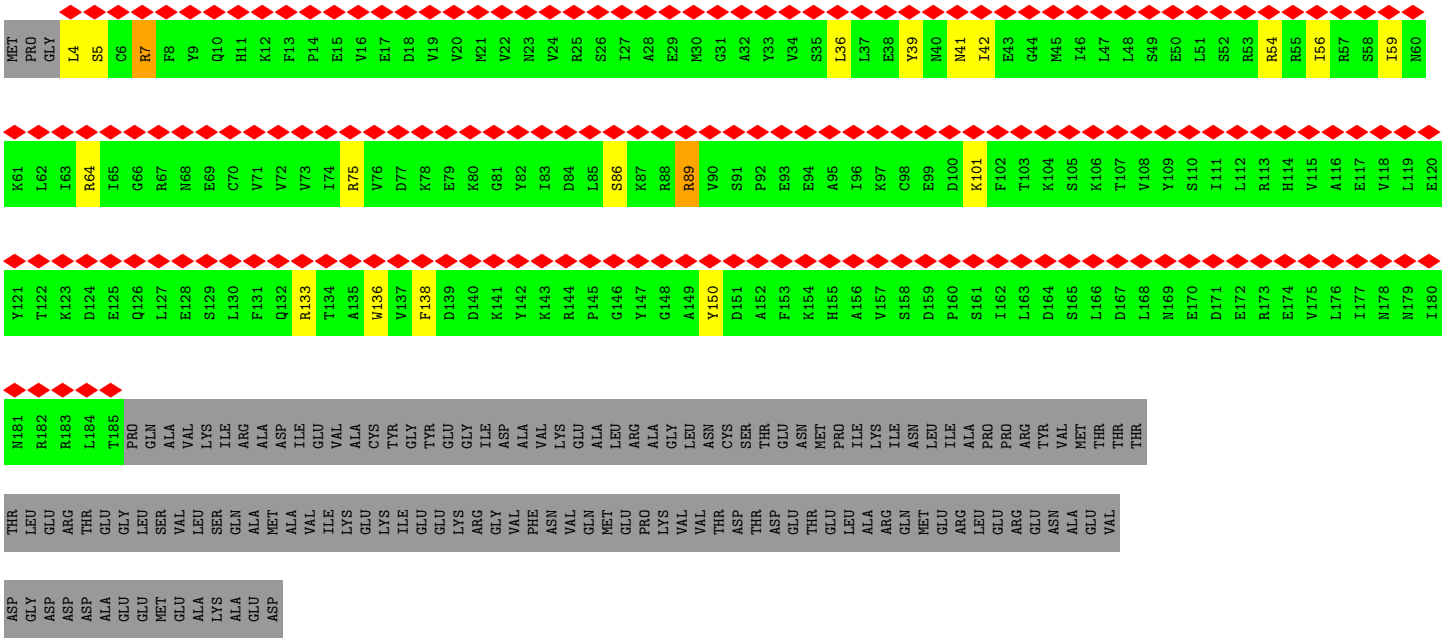




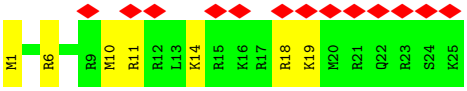
• Molecule 45: Met-tRNAiMet



• Molecule 46: Eukaryotic translation initiation factor 2 subunit 1



• Molecule 47: eL41



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	262752	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	58	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.730	Depositor
Minimum map value	-0.045	Depositor
Average map value	0.008	Depositor
Map value standard deviation	0.036	Depositor
Recommended contour level	0.198	Depositor
Map size (Å)	396.8, 396.8, 396.8	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.24, 1.24, 1.24	Depositor

5 Model quality

5.1 Standard geometry

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

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	o	0.64	5/5021 (0.1%)	0.97	21/6781 (0.3%)
2	p	0.42	1/4608 (0.0%)	0.85	8/6219 (0.1%)
3	q	2.35	8/3539 (0.2%)	0.97	22/4788 (0.5%)
4	r	0.59	3/2149 (0.1%)	0.93	10/2920 (0.3%)
5	s	0.40	0/2675	0.82	3/3609 (0.1%)
6	t	0.35	0/1773	0.78	6/2398 (0.3%)
7	u	0.46	2/3186 (0.1%)	0.96	10/4298 (0.2%)
8	v	0.44	1/2964 (0.0%)	0.94	22/4000 (0.6%)
9	2	0.21	0/40506	0.39	1/63123 (0.0%)
10	3	0.22	0/2120	0.41	0/3299
11	A	0.14	0/809	0.36	0/1083
12	B	0.27	0/1747	0.61	1/2374 (0.0%)
13	C	0.27	0/1756	0.60	0/2350
14	D	0.26	0/1753	0.57	0/2369
15	E	0.31	0/1796	0.66	2/2417 (0.1%)
16	F	0.26	0/2118	0.57	1/2849 (0.0%)
17	G	0.30	0/1531	0.60	1/2059 (0.0%)
18	H	0.24	0/1946	0.53	0/2590
19	I	0.21	0/1510	0.50	0/2022
20	J	0.24	0/1723	0.54	0/2298
21	K	0.24	0/1550	0.55	0/2069
22	L	0.28	0/834	0.61	0/1125
23	M	0.22	0/1254	0.51	0/1677
24	N	0.21	0/918	0.51	0/1233
25	O	0.23	0/1226	0.46	0/1649
26	P	0.24	0/1029	0.51	1/1380 (0.1%)
27	Q	0.27	0/1017	0.65	1/1358 (0.1%)
28	R	0.27	0/1146	0.58	0/1534
29	S	0.23	0/1082	0.51	0/1452
30	T	0.27	0/1208	0.59	0/1618
31	U	0.25	0/1115	0.53	1/1493 (0.1%)
32	V	0.23	0/805	0.58	1/1081 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	W	0.21	0/643	0.59	1/860 (0.1%)
34	X	0.25	0/1051	0.55	0/1406
35	Y	0.21	0/1116	0.46	0/1490
36	Z	0.24	0/1028	0.54	0/1366
37	a	0.26	0/620	0.60	0/831
38	b	0.23	0/828	0.53	0/1109
39	c	0.24	0/665	0.55	1/891 (0.1%)
40	d	0.29	0/532	0.61	0/712
41	e	0.19	0/470	0.46	0/623
42	f	0.23	0/462	0.59	0/607
43	g	0.13	0/567	0.32	0/753
44	h	0.24	0/2493	0.57	0/3394
45	i	0.21	0/1795	0.39	0/2798
46	j	0.31	0/1263	0.52	2/1708 (0.1%)
47	n	0.25	0/240	0.70	0/305
All	All	0.52	20/112187 (0.0%)	0.60	116/160368 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	o	0	1
2	p	0	6
3	q	0	3
4	r	0	5
5	s	0	3
6	t	0	1
7	u	0	5
8	v	0	1
14	D	0	1
16	F	0	1
23	M	0	1
29	S	0	1
37	a	0	1
All	All	0	30

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	q	189	LEU	CB-CG	83.09	3.19	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	q	217	TRP	CE3-CZ3	78.94	3.75	1.38
3	q	217	TRP	CE2-CZ2	40.20	2.24	1.39
3	q	217	TRP	CZ3-CH2	40.04	2.40	1.40
3	q	217	TRP	CZ2-CH2	32.13	1.98	1.37
3	q	217	TRP	CD2-CE2	30.32	1.93	1.41
3	q	217	TRP	CD2-CE3	27.95	1.84	1.40
1	o	148	PRO	CG-CD	-26.06	0.62	1.50
4	r	107	PRO	CG-CD	-17.78	0.90	1.50
1	o	124	PRO	CG-CD	-12.60	1.07	1.50
1	o	148	PRO	N-CD	11.28	1.63	1.47
7	u	439	PRO	CB-CG	-10.91	0.95	1.49
7	u	439	PRO	CG-CD	-10.80	1.14	1.50
1	o	148	PRO	CB-CG	9.32	1.96	1.49
1	o	124	PRO	N-CD	7.61	1.58	1.47
4	r	107	PRO	N-CD	7.34	1.58	1.47
4	r	107	PRO	CB-CG	7.20	1.85	1.49
3	q	189	LEU	CG-CD2	5.50	1.70	1.52
8	v	140	ILE	C-N	5.42	1.40	1.34
2	p	607	ILE	CG1-CD1	-5.12	1.31	1.51

All (116) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	u	439	PRO	CB-CG-CD	23.07	179.93	106.10
1	o	148	PRO	N-CD-CG	-21.46	71.01	103.20
3	q	217	TRP	CE3-CZ3-CH2	-16.22	100.02	121.10
4	r	107	PRO	N-CD-CG	-15.61	79.78	103.20
7	u	439	PRO	N-CD-CG	-14.80	80.99	103.20
7	u	439	PRO	CA-CB-CG	-14.56	76.83	104.50
1	o	124	PRO	N-CD-CG	-13.03	83.66	103.20
8	v	105	LEU	CB-CG-CD2	-12.57	72.99	110.70
1	o	124	PRO	CA-N-CD	-11.68	95.64	112.00
1	o	148	PRO	CA-CB-CG	-10.94	83.71	104.50
3	q	189	LEU	CD1-CG-CD2	-10.70	87.26	110.80
3	q	217	TRP	CD2-CE2-CZ2	10.44	132.84	122.40
1	o	148	PRO	CA-N-CD	-10.26	97.63	112.00
3	q	189	LEU	CA-CB-CG	9.92	151.02	116.30
4	r	251	MET	CB-CG-SD	9.04	139.82	112.70
3	q	189	LEU	CB-CG-CD1	8.90	137.40	110.70
3	q	217	TRP	CH2-CZ2-CE2	8.90	129.07	117.50
3	q	217	TRP	CE2-CD2-CE3	8.60	127.40	118.80
4	r	107	PRO	CA-CB-CG	-8.43	88.47	104.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	u	439	PRO	CA-N-CD	-8.40	100.24	112.00
3	q	50	MET	CA-CB-CG	8.39	130.89	114.10
1	o	124	PRO	CA-CB-CG	-8.35	88.64	104.50
46	j	136	TRP	CD2-CE3-CZ3	8.23	129.30	118.60
3	q	217	TRP	CD2-CE3-CZ3	-7.69	108.60	118.60
8	v	105	LEU	CD1-CG-CD2	-7.64	93.98	110.80
4	r	217	PRO	CA-N-CD	-7.54	101.44	112.00
3	q	65	ASP	CA-C-N	7.50	124.96	120.24
3	q	65	ASP	C-N-CA	7.50	124.96	120.24
32	V	69	PRO	CA-N-CD	-7.47	101.54	112.00
2	p	840	GLN	CA-CB-CG	7.32	128.73	114.10
6	t	200	ASN	CA-C-N	7.29	135.09	121.97
6	t	200	ASN	C-N-CA	7.29	135.09	121.97
8	v	105	LEU	CB-CG-CD1	7.23	132.38	110.70
5	s	103	MET	CG-SD-CE	-7.20	85.07	100.90
1	o	526	MET	CG-SD-CE	-7.18	85.11	100.90
8	v	13	ASP	CA-C-N	7.06	134.40	121.70
8	v	13	ASP	C-N-CA	7.06	134.40	121.70
3	q	49	ASN	CA-C-N	6.94	134.80	121.54
3	q	49	ASN	C-N-CA	6.94	134.80	121.54
8	v	288	GLU	CA-C-N	6.82	133.97	121.70
8	v	288	GLU	C-N-CA	6.82	133.97	121.70
7	u	293	VAL	N-CA-C	6.80	113.48	106.21
7	u	353	THR	CA-C-N	6.74	133.84	121.70
7	u	353	THR	C-N-CA	6.74	133.84	121.70
1	o	80	GLN	CB-CG-CD	6.67	123.93	112.60
15	E	117	ARG	CA-CB-CG	6.61	127.31	114.10
1	o	344	MET	CA-CB-CG	6.56	127.22	114.10
4	r	251	MET	CG-SD-CE	-6.54	86.51	100.90
5	s	205	ILE	N-CA-C	-6.33	106.80	112.12
6	t	214	MET	CA-CB-CG	6.33	126.76	114.10
3	q	189	LEU	CB-CG-CD2	6.29	129.57	110.70
8	v	320	MET	CB-CG-SD	6.26	131.47	112.70
15	E	69	LEU	CA-CB-CG	6.19	137.95	116.30
8	v	195	ASP	CA-C-N	6.18	132.83	121.70
8	v	195	ASP	C-N-CA	6.18	132.83	121.70
1	o	80	GLN	CA-CB-CG	6.16	126.42	114.10
3	q	360	LEU	CB-CG-CD2	6.15	129.15	110.70
46	j	136	TRP	CE2-CD2-CE3	6.14	124.94	118.80
2	p	670	GLN	CA-C-N	6.14	132.75	121.70
2	p	670	GLN	C-N-CA	6.14	132.75	121.70
31	U	37	VAL	CG1-CB-CG2	-6.08	97.43	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	o	125	GLU	N-CA-C	-6.05	105.81	113.43
8	v	99	PRO	CA-N-CD	-6.03	103.56	112.00
1	o	87	GLU	CA-CB-CG	5.95	126.00	114.10
5	s	298	GLU	CA-CB-CG	5.91	125.92	114.10
7	u	434	ASN	CA-C-N	5.87	132.75	121.54
7	u	434	ASN	C-N-CA	5.87	132.75	121.54
8	v	266	LEU	CA-C-N	5.87	132.26	121.70
8	v	266	LEU	C-N-CA	5.87	132.26	121.70
1	o	163	LEU	CA-CB-CG	5.86	136.81	116.30
7	u	497	MET	CB-CG-SD	5.79	130.07	112.70
4	r	251	MET	CA-CB-CG	-5.78	102.54	114.10
3	q	155	ARG	CA-C-N	5.72	132.26	121.97
3	q	155	ARG	C-N-CA	5.72	132.26	121.97
27	Q	26	LEU	CA-CB-CG	5.72	136.31	116.30
1	o	148	PRO	N-CA-CB	-5.71	96.65	102.88
8	v	116	ASN	CA-C-N	5.71	135.72	121.80
8	v	116	ASN	C-N-CA	5.71	135.72	121.80
12	B	177	MET	CG-SD-CE	-5.67	88.44	100.90
3	q	198	ASN	CA-C-N	5.58	131.75	121.70
3	q	198	ASN	C-N-CA	5.58	131.75	121.70
3	q	217	TRP	CE2-CD2-CG	-5.58	100.50	107.20
4	r	107	PRO	N-CA-CB	-5.50	97.60	103.38
2	p	810	MET	CB-CG-SD	-5.50	96.20	112.70
8	v	192	TYR	CA-C-N	5.50	132.05	121.54
8	v	192	TYR	C-N-CA	5.50	132.05	121.54
9	2	688	U	P-O3'-C3'	5.48	128.42	120.20
6	t	161	MET	CB-CG-SD	-5.48	96.27	112.70
17	G	103	LEU	CA-CB-CG	5.48	135.47	116.30
33	W	1	MET	CB-CG-SD	5.43	129.00	112.70
4	r	146	LYS	CA-CB-CG	5.42	124.93	114.10
1	o	526	MET	CA-CB-CG	5.40	124.90	114.10
2	p	542	GLU	CA-CB-CG	5.40	124.89	114.10
1	o	429	PRO	CA-N-CD	-5.36	104.50	112.00
8	v	318	THR	CA-C-N	5.33	135.60	126.32
8	v	318	THR	C-N-CA	5.33	135.60	126.32
4	r	159	HIS	N-CA-C	5.30	116.85	108.96
1	o	272	MET	CA-CB-CG	5.27	124.64	114.10
8	v	114	ASP	CA-C-N	5.24	131.54	121.54
8	v	114	ASP	C-N-CA	5.24	131.54	121.54
3	q	180	GLN	CA-CB-CG	5.21	124.52	114.10
1	o	148	PRO	CB-CG-CD	-5.19	89.49	106.10
1	o	263	SER	CA-C-N	5.16	131.40	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	o	263	SER	C-N-CA	5.16	131.40	121.54
6	t	213	ILE	CA-C-N	-5.14	112.51	122.06
6	t	213	ILE	C-N-CA	-5.14	112.51	122.06
2	p	416	PRO	CA-N-CD	-5.11	104.85	112.00
1	o	526	MET	N-CA-CB	-5.08	102.71	110.33
8	v	319	LYS	CA-CB-CG	5.06	124.22	114.10
2	p	389	LEU	CA-C-N	5.05	131.19	121.54
2	p	389	LEU	C-N-CA	5.05	131.19	121.54
3	q	217	TRP	NE1-CE2-CD2	-5.05	100.83	107.40
4	r	107	PRO	CA-N-CD	-5.05	104.93	112.00
26	P	125	LYS	CB-CG-CD	5.05	122.91	111.30
16	F	198	ARG	CB-CG-CD	5.04	122.90	111.30
39	c	51	GLN	CA-CB-CG	5.02	124.14	114.10

There are no chirality outliers.

All (30) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
14	D	64	THR	Peptide
16	F	66	MET	Peptide
23	M	101	ARG	Sidechain
29	S	33	ARG	Sidechain
37	a	80	ARG	Sidechain
1	o	91	ARG	Sidechain
2	p	390	ALA	Peptide
2	p	415	ASN	Peptide
2	p	434	VAL	Peptide
2	p	490	LEU	Peptide
2	p	521	ARG	Sidechain
2	p	565	ARG	Sidechain
3	q	143	ASN	Peptide
3	q	268	ARG	Peptide
3	q	49	ASN	Peptide
4	r	128	ARG	Peptide
4	r	240	SER	Peptide
4	r	243	VAL	Peptide
4	r	279	PRO	Peptide
4	r	328	LEU	Peptide
5	s	122	SER	Peptide
5	s	221	LYS	Peptide
5	s	297	PRO	Peptide
6	t	184	SER	Peptide

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Mol	Chain	Res	Type	Group
7	u	376	THR	Peptide
7	u	379	PRO	Peptide
7	u	405	ASP	Peptide
7	u	485	GLU	Peptide
7	u	486	PHE	Peptide
8	v	249	LEU	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	o	4935	0	5017	97	0
2	p	4529	0	4533	84	0
3	q	3466	0	3446	91	0
4	r	2111	0	2105	47	0
5	s	2624	0	2592	55	0
6	t	1738	0	1706	27	0
7	u	3110	0	3084	61	0
8	v	2919	0	2950	54	0
9	2	36227	0	18299	237	0
10	3	1897	0	967	13	0
11	A	798	0	807	7	0
12	B	1710	0	1708	30	0
13	C	1729	0	1803	38	0
14	D	1716	0	1806	26	0
15	E	1768	0	1866	26	0
16	F	2076	0	2177	48	0
17	G	1509	0	1563	25	0
18	H	1923	0	2089	44	0
19	I	1488	0	1582	20	0
20	J	1691	0	1778	19	0
21	K	1525	0	1640	22	0
22	L	810	0	836	13	0
23	M	1233	0	1310	28	0
24	N	908	0	939	10	0
25	O	1202	0	1289	15	0
26	P	1016	0	1039	23	0
27	Q	997	0	1045	22	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	R	1128	0	1195	19	0
29	S	1068	0	1121	16	0
30	T	1190	0	1249	19	0
31	U	1097	0	1130	17	0
32	V	795	0	862	17	0
33	W	636	0	637	10	0
34	X	1034	0	1080	21	0
35	Y	1098	0	1167	15	0
36	Z	1011	0	1083	20	0
37	a	614	0	678	13	0
38	b	814	0	863	18	0
39	c	651	0	672	10	0
40	d	530	0	561	12	0
41	e	459	0	452	10	0
42	f	457	0	502	10	0
43	g	555	0	565	6	0
44	h	2436	0	2393	43	0
45	i	1604	0	816	5	0
46	j	1245	0	1024	9	0
47	n	239	0	289	7	0
48	b	1	0	0	0	0
All	All	106317	0	88315	1265	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 7.

All (1265) 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)
3:q:217:TRP:CE3	3:q:217:TRP:CD2	1.85	1.61
3:q:217:TRP:CH2	3:q:217:TRP:CZ2	1.98	1.52
3:q:217:TRP:CD2	3:q:217:TRP:CE2	1.92	1.44
3:q:217:TRP:CZ2	3:q:217:TRP:CE2	2.24	1.25
3:q:217:TRP:CH2	3:q:217:TRP:CZ3	2.40	1.10
3:q:189:LEU:HG	3:q:217:TRP:CH2	2.07	0.89
4:r:269:VAL:O	4:r:273:MET:HB2	1.73	0.87
3:q:189:LEU:HB2	3:q:217:TRP:CE3	2.12	0.85
3:q:189:LEU:HB3	3:q:217:TRP:CZ3	2.12	0.84
1:o:87:GLU:HB2	1:o:91:ARG:HH21	1.47	0.80
9:2:1656:G:H1	9:2:1668:U:H3	1.27	0.79
1:o:353:ARG:HH11	1:o:364:PRO:HD2	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:804:U:H3	9:2:859:G:H1	1.30	0.76
3:q:189:LEU:HG	3:q:217:TRP:CZ2	2.23	0.73
5:s:244:GLN:HG3	5:s:247:MET:HB3	1.71	0.72
3:q:189:LEU:CB	3:q:217:TRP:CE3	2.74	0.71
3:q:189:LEU:CB	3:q:217:TRP:CZ3	2.74	0.71
38:b:11:ALA:H	38:b:33:ASP:HB2	1.56	0.71
5:s:339:GLY:O	5:s:343:MET:HB2	1.90	0.71
14:D:66:LEU:HD11	14:D:81:ILE:HD11	1.73	0.70
44:h:87:LEU:HB2	44:h:101:PHE:HB2	1.74	0.69
3:q:39:GLN:NE2	3:q:56:ASP:OD1	2.25	0.69
4:r:231:MET:HA	5:s:220:LYS:HD3	1.76	0.68
14:D:179:THR:HG21	14:D:198:ALA:H	1.57	0.68
32:V:20:ILE:HG13	32:V:98:VAL:HG21	1.75	0.68
16:F:90:ILE:HB	16:F:99:PHE:HB2	1.75	0.68
1:o:551:GLN:HG3	5:s:219:GLU:HB2	1.76	0.68
7:u:373:ILE:HA	7:u:398:MET:HG3	1.74	0.67
1:o:380:LEU:HD12	1:o:388:LYS:HG3	1.75	0.67
6:t:158:LEU:HD12	6:t:161:MET:HE1	1.75	0.67
2:p:420:VAL:HA	2:p:431:LEU:HB2	1.76	0.67
13:C:167:LYS:NZ	13:C:201:CYS:SG	2.67	0.67
3:q:404:VAL:HA	3:q:407:LYS:HD2	1.76	0.67
3:q:316:GLU:HG2	3:q:333:ILE:HG12	1.77	0.67
15:E:132:LYS:HE3	15:E:191:PRO:HA	1.76	0.67
9:2:1123:C:OP1	13:C:151:ARG:NH2	2.28	0.66
6:t:57:ASN:HB2	6:t:60:PHE:HB2	1.77	0.66
9:2:1864:U:H5'	38:b:79:ILE:HD11	1.76	0.66
8:v:280:LEU:HD13	8:v:301:LEU:HB3	1.78	0.66
1:o:517:GLU:HA	5:s:241:LYS:HG3	1.78	0.66
40:d:60:GLU:HG2	40:d:63:ARG:HG2	1.77	0.66
13:C:39:PHE:HA	13:C:75:GLN:HG3	1.77	0.65
1:o:440:LEU:HD11	1:o:455:LEU:HD21	1.78	0.65
5:s:340:LYS:HD2	6:t:214:MET:HE1	1.77	0.65
12:B:189:ILE:HD12	12:B:195:TRP:HB2	1.79	0.65
23:M:4:ILE:HG23	23:M:5:GLN:HG2	1.79	0.65
7:u:480:ASP:OD1	7:u:484:GLN:NE2	2.29	0.65
17:G:76:MET:HE3	17:G:173:LEU:HD12	1.79	0.64
1:o:158:ARG:HD3	1:o:169:ARG:HH22	1.61	0.64
6:t:4:PHE:HE1	6:t:36:GLN:HG2	1.62	0.64
40:d:13:ARG:HG2	40:d:55:VAL:HG22	1.80	0.64
19:I:146:VAL:HG12	19:I:152:ARG:HG2	1.77	0.64
2:p:460:GLN:NE2	2:p:461:ASN:OD1	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:52:LEU:HD23	1:o:55:LEU:HD12	1.78	0.64
1:o:48:GLU:HA	1:o:51:MET:HE2	1.79	0.64
9:2:1464:C:H4'	29:S:60:ARG:HH21	1.62	0.63
3:q:403:GLN:NE2	7:u:522:TYR:OH	2.31	0.63
8:v:48:ALA:HB1	8:v:73:ILE:HG22	1.81	0.63
8:v:63:VAL:HG11	8:v:101:LEU:HD23	1.80	0.63
44:h:24:THR:HG22	44:h:26:GLN:H	1.63	0.63
12:B:123:VAL:HG22	12:B:145:ILE:HB	1.81	0.63
26:P:142:ARG:NH2	38:b:26:CYS:O	2.31	0.63
2:p:340:ARG:HH22	39:c:55:LEU:HD21	1.64	0.63
9:2:943:U:OP1	13:C:214:LYS:NZ	2.32	0.63
9:2:1748:G:H1	9:2:1786:U:H3	1.45	0.63
9:2:65:C:N4	18:H:134:GLY:O	2.30	0.62
2:p:393:MET:HG2	2:p:398:TRP:HB2	1.81	0.62
44:h:199:THR:HG21	44:h:240:CYS:HA	1.80	0.62
8:v:172:LEU:HD22	8:v:177:LYS:HB3	1.80	0.62
2:p:386:ASN:ND2	2:p:393:MET:SD	2.71	0.62
14:D:107:LEU:HB3	14:D:233:LEU:HD21	1.81	0.62
1:o:414:VAL:HB	1:o:424:LEU:HD21	1.82	0.62
3:q:189:LEU:CG	3:q:217:TRP:CZ3	2.82	0.62
16:F:79:ASP:HB3	16:F:82:TYR:HB2	1.81	0.62
3:q:189:LEU:CG	3:q:217:TRP:CE3	2.83	0.62
3:q:255:ARG:HH22	3:q:319:LEU:HD11	1.64	0.62
3:q:384:ILE:HG23	3:q:391:VAL:HG22	1.81	0.62
1:o:407:VAL:HG11	1:o:435:THR:HG21	1.81	0.62
1:o:44:GLN:HA	1:o:48:GLU:HB2	1.82	0.62
1:o:163:LEU:HD23	1:o:164:LEU:H	1.65	0.62
9:2:218:U:O2	20:J:184:ARG:NH2	2.33	0.61
16:F:100:ARG:HH12	16:F:122:LYS:HA	1.65	0.61
4:r:241:MET:SD	4:r:241:MET:N	2.73	0.61
9:2:1536:G:H2'	9:2:1537:A:H8	1.65	0.61
7:u:248:THR:OG1	7:u:249:SER:N	2.34	0.61
16:F:71:LYS:HG3	16:F:91:SER:HB2	1.83	0.61
36:Z:52:PRO:HA	36:Z:55:ILE:HD12	1.83	0.61
7:u:478:PHE:HA	7:u:481:LEU:HD12	1.83	0.61
44:h:39:THR:HG22	44:h:60:ARG:HG2	1.82	0.61
13:C:151:ARG:NH1	13:C:153:THR:OG1	2.34	0.61
3:q:344:PHE:HA	3:q:347:ILE:HG12	1.82	0.61
2:p:868:GLU:HG2	2:p:872:ARG:HH12	1.65	0.60
9:2:1566:G:N7	31:U:101:ARG:NH2	2.49	0.60
11:A:41:MET:SD	11:A:41:MET:N	2.75	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:331:C:OP1	18:H:196:LYS:NZ	2.35	0.60
9:2:1652:G:H1	9:2:1672:U:H3	1.49	0.60
17:G:185:SER:O	17:G:191:LYS:NZ	2.34	0.60
9:2:334:C:H5	18:H:190:ARG:HH12	1.50	0.60
9:2:1096:G:H1	9:2:1136:U:H3	1.48	0.60
1:o:443:VAL:HA	1:o:446:ILE:HG22	1.84	0.60
1:o:482:VAL:HB	1:o:491:LEU:HD11	1.83	0.60
3:q:351:ILE:HG22	3:q:391:VAL:HB	1.81	0.60
16:F:17:HIS:HB2	16:F:108:ARG:HA	1.83	0.60
16:F:122:LYS:NZ	16:F:143:ASP:OD2	2.34	0.60
9:2:166:A:H5'	18:H:112:VAL:HG11	1.84	0.59
3:q:189:LEU:HG	3:q:217:TRP:CZ3	2.37	0.59
9:2:1341:C:H4'	9:2:1342:U:H5'	1.84	0.59
26:P:45:THR:HA	26:P:53:ILE:H	1.66	0.59
5:s:157:THR:HG21	5:s:163:SER:HA	1.83	0.59
12:B:8:LEU:HD11	33:W:39:VAL:HG11	1.84	0.59
9:2:847:A:OP1	16:F:108:ARG:NH2	2.35	0.59
13:C:88:THR:HG22	13:C:98:THR:HG22	1.83	0.59
44:h:120:ILE:HB	44:h:132:TRP:HB2	1.84	0.59
5:s:103:MET:HA	5:s:106:SER:HB2	1.84	0.59
8:v:193:THR:OG1	8:v:194:GLU:N	2.32	0.59
44:h:79:LEU:HD21	44:h:120:ILE:HG12	1.83	0.59
1:o:472:VAL:HA	1:o:484:ILE:HG12	1.85	0.59
9:2:1335:G:H1	9:2:1492:U:H3	1.50	0.59
6:t:91:GLN:HG3	7:u:445:LYS:HG2	1.85	0.59
16:F:183:VAL:HA	16:F:225:ILE:HA	1.83	0.59
2:p:614:VAL:HG21	2:p:646:LEU:HD21	1.84	0.59
9:2:993:G:N7	38:b:15:ARG:NH1	2.51	0.59
13:C:77:ASP:OD1	13:C:77:ASP:N	2.31	0.59
1:o:472:VAL:O	2:p:795:TYR:OH	2.20	0.58
23:M:126:VAL:HG22	23:M:145:VAL:HG22	1.85	0.58
3:q:283:GLN:NE2	3:q:283:GLN:O	2.37	0.58
16:F:11:ARG:HA	16:F:28:ALA:HB2	1.85	0.58
32:V:67:LYS:HG2	32:V:78:ASP:HB2	1.86	0.58
36:Z:18:LEU:HD13	36:Z:20:ARG:HH21	1.67	0.58
8:v:286:ALA:O	8:v:289:ASN:ND2	2.36	0.58
11:A:65:LEU:HA	11:A:69:VAL:HB	1.85	0.58
16:F:19:MET:SD	16:F:108:ARG:NE	2.70	0.58
16:F:161:GLN:NE2	16:F:170:THR:OG1	2.35	0.58
34:X:103:VAL:HG12	34:X:126:LEU:HD23	1.85	0.58
44:h:80:SER:HB3	44:h:90:TRP:HE1	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:r:158:PRO:HD3	5:s:110:VAL:HG12	1.86	0.58
18:H:121:ILE:HG22	18:H:123:GLY:H	1.67	0.58
9:2:1597:C:OP2	37:a:85:ARG:NH2	2.37	0.58
9:2:1710:C:H42	9:2:1823:A:H62	1.50	0.58
18:H:102:VAL:HG23	18:H:106:LEU:HD22	1.85	0.58
21:K:128:VAL:O	21:K:132:GLN:NE2	2.37	0.58
21:K:50:LEU:HG	21:K:102:ILE:HG22	1.85	0.57
32:V:22:ILE:HD12	32:V:39:LEU:HD21	1.86	0.57
5:s:246:LEU:HA	5:s:249:ARG:HD2	1.86	0.57
8:v:336:HIS:ND1	8:v:336:HIS:O	2.37	0.57
9:2:4:C:H4'	14:D:207:ALA:HB2	1.85	0.57
18:H:162:LEU:O	18:H:167:LYS:NZ	2.35	0.57
40:d:14:VAL:HA	40:d:32:VAL:HA	1.84	0.57
27:Q:81:ARG:NH1	27:Q:120:SER:OG	2.38	0.57
19:I:136:PRO:HB2	19:I:162:GLN:HG3	1.84	0.57
2:p:322:THR:H	2:p:328:VAL:HG21	1.70	0.57
8:v:233:GLU:O	8:v:238:HIS:ND1	2.37	0.57
9:2:476:A:N3	9:2:488:U:O2'	2.34	0.57
2:p:432:GLN:HE21	2:p:437:PRO:HG3	1.69	0.57
23:M:89:ARG:NH1	23:M:91:ASP:OD1	2.32	0.57
4:r:121:SER:HA	5:s:44:LEU:HD11	1.85	0.57
4:r:246:ARG:NH2	8:v:10:SER:O	2.37	0.57
2:p:448:VAL:HG21	2:p:486:VAL:HG21	1.86	0.57
2:p:872:ARG:NH2	3:q:416:GLN:OE1	2.37	0.57
9:2:1536:G:H2'	9:2:1537:A:C8	2.40	0.57
13:C:136:ARG:HE	13:C:218:LEU:HD11	1.70	0.57
8:v:74:LEU:HD22	8:v:79:GLN:HG3	1.87	0.57
9:2:64:A:H2	9:2:83:A:H62	1.52	0.57
9:2:1674:G:H4'	17:G:77:MET:HE1	1.85	0.57
2:p:339:ALA:HB1	2:p:345:THR:HG21	1.87	0.56
3:q:42:LEU:HD22	3:q:216:HIS:HE1	1.69	0.56
5:s:57:GLY:HA3	5:s:88:THR:HB	1.87	0.56
3:q:262:ILE:HG12	3:q:270:ARG:HE	1.70	0.56
7:u:439:PRO:HA	7:u:442:GLN:HG2	1.87	0.56
20:J:39:GLY:HA3	20:J:59:ARG:HD2	1.87	0.56
9:2:1613:G:OP1	27:Q:42:ARG:NH2	2.38	0.56
9:2:1844:U:OP1	47:n:11:ARG:NH2	2.37	0.56
16:F:94:LYS:HG3	36:Z:16:ARG:HB3	1.87	0.56
21:K:18:ARG:O	21:K:24:ARG:NH1	2.38	0.56
23:M:18:GLN:HG2	23:M:33:LEU:HD11	1.86	0.56
30:T:22:GLY:HA2	30:T:56:ALA:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:u:386:ILE:HG13	7:u:391:ARG:HG2	1.87	0.56
8:v:158:THR:HA	8:v:161:LYS:HE2	1.87	0.56
9:2:1380:C:O2	12:B:113:GLN:NE2	2.38	0.56
17:G:55:ARG:NH2	28:R:123:ASP:OD1	2.39	0.56
1:o:164:LEU:HD23	1:o:165:ARG:H	1.70	0.56
1:o:444:ALA:HB2	1:o:480:LEU:HD12	1.87	0.56
4:r:137:ILE:H	4:r:159:HIS:HD2	1.53	0.56
7:u:424:VAL:HG12	7:u:425:VAL:HG23	1.88	0.56
12:B:143:PRO:HB3	33:W:34:MET:HE3	1.86	0.56
7:u:458:SER:HA	7:u:461:ARG:HB2	1.87	0.56
8:v:325:ILE:HG13	8:v:331:LYS:HA	1.87	0.56
30:T:110:ASP:OD1	30:T:113:ARG:NH2	2.39	0.56
9:2:1521:C:OP2	30:T:136:THR:OG1	2.24	0.56
28:R:53:GLU:OE1	28:R:85:ARG:NH1	2.39	0.56
30:T:98:VAL:HG11	30:T:106:LYS:HG3	1.87	0.56
37:a:68:ILE:HB	37:a:109:TYR:HB2	1.87	0.56
8:v:221:ASP:O	8:v:225:THR:OG1	2.21	0.56
15:E:16:ILE:HD11	41:e:36:LEU:HD23	1.87	0.56
23:M:135:SER:O	23:M:139:ARG:NH1	2.38	0.56
24:N:46:GLN:HG3	24:N:112:LYS:HG2	1.86	0.56
1:o:12:LEU:HD12	13:C:77:ASP:HB3	1.88	0.55
3:q:49:ASN:HB3	3:q:52:ASP:HB2	1.88	0.55
4:r:330:SER:O	4:r:334:GLN:NE2	2.38	0.55
4:r:359:TYR:OH	7:u:526:ASP:OD2	2.24	0.55
1:o:340:ARG:HG3	2:p:722:GLU:HG2	1.87	0.55
3:q:284:GLU:HA	3:q:287:THR:HG23	1.88	0.55
3:q:334:GLU:OE1	3:q:337:ARG:NH1	2.37	0.55
8:v:19:ARG:HD2	8:v:69:SER:HA	1.89	0.55
21:K:129:LEU:HB3	21:K:135:ILE:HD11	1.87	0.55
35:Y:100:VAL:HG12	35:Y:125:VAL:HA	1.87	0.55
44:h:212:LYS:HA	44:h:235:ILE:HG23	1.88	0.55
40:d:44:ARG:NH2	40:d:60:GLU:O	2.40	0.55
41:e:6:LEU:HA	41:e:9:SER:HB3	1.87	0.55
2:p:503:TYR:OH	2:p:572:HIS:NE2	2.29	0.55
3:q:189:LEU:CB	3:q:217:TRP:CE2	2.90	0.55
9:2:442:C:H4'	18:H:92:ARG:HH12	1.70	0.55
9:2:1123:C:H4'	13:C:149:GLN:HG3	1.89	0.55
8:v:157:THR:HA	8:v:160:LYS:HD2	1.88	0.55
35:Y:107:ARG:HG3	35:Y:112:VAL:HG22	1.89	0.55
2:p:393:MET:HE2	2:p:398:TRP:HA	1.88	0.55
18:H:70:HIS:O	18:H:98:ARG:NH1	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Z:55:ILE:HG12	36:Z:75:ILE:HG12	1.88	0.55
2:p:825:MET:HG2	2:p:831:LEU:HD12	1.88	0.55
9:2:67:C:N4	18:H:168:LYS:O	2.38	0.55
23:M:13:GLN:NE2	23:M:63:THR:OG1	2.40	0.55
9:2:1199:A:OP1	38:b:2:THR:N	2.40	0.55
9:2:589:G:O2'	42:f:98:LYS:NZ	2.38	0.54
36:Z:91:LEU:HD22	36:Z:96:LEU:HD11	1.89	0.54
9:2:1106:C:H5"	39:c:70:LYS:HE3	1.89	0.54
3:q:38:LEU:HD11	3:q:252:HIS:HB2	1.89	0.54
3:q:309:GLN:HG3	3:q:359:LYS:HD2	1.90	0.54
6:t:29:LEU:HD13	6:t:50:VAL:HG22	1.89	0.54
10:3:550:A:H2	45:i:48:G:H21	1.56	0.54
13:C:62:LEU:HD12	13:C:91:VAL:HG21	1.89	0.54
13:C:85:LYS:NZ	13:C:104:ASP:OD1	2.40	0.54
38:b:4:LYS:HE2	38:b:92:ARG:HH12	1.71	0.54
1:o:395:GLU:OE1	1:o:438:ARG:NH2	2.40	0.54
2:p:332:LYS:HB3	2:p:357:LEU:HD11	1.89	0.54
9:2:1244:U:H3	9:2:1255:G:H1	1.55	0.54
9:2:1834:A:H2	9:2:1837:G:H1	1.54	0.54
13:C:32:ASP:OD1	13:C:46:LYS:NZ	2.41	0.54
2:p:852:GLN:HA	2:p:855:LEU:HD12	1.88	0.54
9:2:1138:C:OP1	12:B:155:ARG:NH2	2.41	0.54
22:L:24:LYS:NZ	22:L:26:ASP:OD2	2.40	0.54
42:f:93:ALA:O	42:f:95:GLN:NE2	2.40	0.54
3:q:17:HIS:HB3	3:q:205:LEU:HD22	1.89	0.54
16:F:45:ILE:HA	16:F:61:VAL:HG11	1.90	0.54
4:r:137:ILE:HB	4:r:159:HIS:CD2	2.42	0.54
9:2:1284:A:N3	9:2:1286:G:N2	2.50	0.54
13:C:107:ARG:NH2	26:P:133:THR:O	2.40	0.54
7:u:472:VAL:HA	7:u:475:LEU:HG	1.89	0.54
9:2:963:A:O2'	46:j:54:ARG:NH1	2.41	0.54
9:2:1263:U:H4'	41:e:27:ARG:HD2	1.89	0.54
5:s:281:ARG:O	5:s:285:ASN:ND2	2.41	0.54
7:u:227:VAL:HG12	7:u:231:LEU:HD23	1.89	0.53
9:2:145:G:O6	18:H:178:ARG:NH2	2.40	0.53
9:2:1228:A:H2'	9:2:1229:G:H8	1.73	0.53
21:K:114:VAL:HG21	21:K:135:ILE:HD12	1.90	0.53
23:M:38:LYS:NZ	23:M:64:GLY:O	2.41	0.53
2:p:835:LEU:HD12	2:p:842:VAL:HB	1.90	0.53
3:q:124:ARG:HD2	3:q:155:ARG:HH22	1.72	0.53
44:h:216:ALA:HB3	44:h:230:LEU:HB2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:t:44:LEU:HB3	7:u:294:LEU:HD21	1.91	0.53
7:u:242:ARG:HA	7:u:427:ASN:HB2	1.91	0.53
10:3:578:U:H2'	10:3:579:G:H8	1.73	0.53
21:K:135:ILE:HG22	21:K:157:ILE:HD11	1.89	0.53
42:f:109:MET:HE2	42:f:113:ARG:HH11	1.72	0.53
1:o:569:LEU:HD12	4:r:129:ARG:HD2	1.89	0.53
7:u:227:VAL:HG22	7:u:352:ARG:HA	1.89	0.53
9:2:681:U:H4'	35:Y:9:THR:HG22	1.89	0.53
14:D:79:GLU:HB2	33:W:12:TYR:HB3	1.90	0.53
34:X:35:VAL:O	34:X:39:THR:OG1	2.25	0.53
44:h:99:ARG:NH1	44:h:134:THR:O	2.41	0.53
46:j:86:SER:HB3	46:j:89:ARG:HB2	1.91	0.53
15:E:154:ASP:OD1	15:E:154:ASP:N	2.41	0.53
19:I:93:VAL:HG21	19:I:133:LEU:HD12	1.91	0.53
26:P:142:ARG:NH2	38:b:23:CYS:O	2.41	0.53
3:q:385:ASP:HB3	3:q:388:LEU:HB2	1.90	0.53
8:v:218:PHE:HZ	8:v:320:MET:HG3	1.72	0.53
12:B:174:MET:HA	12:B:177:MET:HB2	1.89	0.53
34:X:11:LEU:HD12	34:X:74:VAL:HG23	1.89	0.53
4:r:179:LEU:HD21	5:s:102:GLU:HB3	1.90	0.53
7:u:493:PHE:HA	7:u:496:LYS:HD2	1.91	0.53
28:R:146:ARG:NH2	45:i:33:C:OP2	2.42	0.53
44:h:162:ASN:HB2	44:h:164:ILE:HG12	1.90	0.53
1:o:434:ASN:HD22	1:o:437:LEU:HD23	1.74	0.53
5:s:248:ASP:O	5:s:252:GLU:HG2	2.08	0.53
9:2:315:C:H2'	9:2:316:G:H8	1.73	0.53
27:Q:57:LEU:HA	27:Q:83:MET:HE1	1.91	0.53
4:r:276:CYS:HB3	5:s:215:MET:HB2	1.91	0.53
7:u:395:GLY:HA2	7:u:398:MET:HE3	1.91	0.53
10:3:578:U:H2'	10:3:579:G:C8	2.44	0.53
12:B:177:MET:HG2	12:B:180:ARG:HH12	1.73	0.53
13:C:33:VAL:HG23	13:C:44:ILE:HG13	1.91	0.53
44:h:256:ILE:HB	44:h:270:LEU:HD12	1.90	0.53
1:o:246:TRP:HB3	2:p:726:LEU:HD22	1.91	0.52
4:r:173:ALA:HA	4:r:176:MET:HE2	1.91	0.52
9:2:1163:C:H2'	9:2:1164:G:H8	1.74	0.52
18:H:98:ARG:NH2	18:H:101:ILE:O	2.39	0.52
44:h:107:ASP:HB2	44:h:125:ARG:HG3	1.89	0.52
3:q:240:PRO:HG2	3:q:241:GLN:HG3	1.90	0.52
8:v:246:SER:OG	8:v:258:ASN:ND2	2.37	0.52
9:2:1228:A:H2'	9:2:1229:G:C8	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:H:76:LEU:HG	18:H:92:ARG:HG2	1.91	0.52
40:d:14:VAL:HG12	40:d:32:VAL:HG12	1.89	0.52
2:p:695:ILE:HG21	2:p:744:MET:HB3	1.92	0.52
9:2:65:C:OP1	18:H:136:LYS:NZ	2.35	0.52
26:P:34:PHE:HB3	26:P:41:PHE:HB2	1.90	0.52
28:R:90:LYS:HA	28:R:93:VAL:HG22	1.90	0.52
3:q:158:VAL:HG21	3:q:164:ASN:HB2	1.92	0.52
6:t:43:ASP:O	6:t:47:ASN:ND2	2.40	0.52
9:2:379:C:O2	20:J:5:ARG:NH1	2.42	0.52
9:2:1864:U:H3'	38:b:5:ARG:HH21	1.74	0.52
13:C:62:LEU:O	13:C:88:THR:OG1	2.27	0.52
25:O:5:HIS:HB3	25:O:117:LEU:HD13	1.91	0.52
25:O:101:HIS:HA	25:O:104:ARG:HE	1.74	0.52
37:a:63:PRO:HA	37:a:97:ILE:HD11	1.91	0.52
44:h:32:LEU:HB2	44:h:71:ILE:HD11	1.91	0.52
8:v:269:LEU:O	8:v:273:ASN:ND2	2.43	0.52
12:B:145:ILE:HG12	12:B:159:ILE:HB	1.91	0.52
20:J:113:TYR:OH	20:J:156:ALA:O	2.27	0.52
1:o:329:ILE:HG23	1:o:370:LEU:HB3	1.92	0.52
1:o:494:GLY:HA3	1:o:497:LEU:HD12	1.91	0.52
5:s:170:THR:HB	5:s:173:LEU:HG	1.92	0.52
1:o:321:ARG:NH1	1:o:421:GLU:OE2	2.43	0.52
5:s:125:TYR:H	5:s:156:LYS:HD2	1.75	0.52
9:2:641:A:O2'	9:2:645:C:OP1	2.28	0.52
9:2:1354:G:N2	9:2:1357:A:OP2	2.39	0.52
45:i:9:G:O2'	45:i:10:G:N7	2.43	0.52
1:o:438:ARG:HE	1:o:510:HIS:HB3	1.75	0.52
8:v:320:MET:HE3	8:v:337:SER:HB2	1.92	0.52
9:2:1013:U:OP1	9:2:1129:G:O2'	2.28	0.52
17:G:127:ARG:HE	40:d:24:GLN:HE22	1.58	0.52
29:S:71:ILE:HG22	29:S:74:GLN:H	1.75	0.52
43:g:132:MET:HG3	43:g:141:CYS:HA	1.92	0.52
2:p:622:ARG:HG3	2:p:775:VAL:HG22	1.92	0.52
3:q:189:LEU:CB	3:q:217:TRP:CD2	2.93	0.52
9:2:874:G:H2'	9:2:875:A:H8	1.75	0.52
16:F:60:GLU:HA	16:F:63:LYS:HG3	1.91	0.52
2:p:534:GLN:NE2	2:p:538:GLU:OE2	2.43	0.51
2:p:744:MET:HE1	2:p:783:ILE:HG23	1.91	0.51
7:u:449:ASP:N	7:u:449:ASP:OD1	2.42	0.51
9:2:1620:A:H3'	27:Q:40:ARG:HD3	1.91	0.51
16:F:62:LYS:HA	16:F:80:ILE:HD11	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:F:115:THR:HG23	16:F:118:GLU:H	1.75	0.51
29:S:29:HIS:HA	29:S:32:LYS:HG2	1.91	0.51
30:T:14:ARG:NH2	30:T:17:ASN:OD1	2.43	0.51
9:2:496:C:OP1	16:F:49:ARG:NH2	2.34	0.51
9:2:685:A:H5"	34:X:31:SER:HB3	1.91	0.51
9:2:1546:G:N2	9:2:1670:C:O2	2.43	0.51
44:h:165:ILE:HG12	44:h:177:TRP:HB2	1.92	0.51
3:q:287:THR:HA	3:q:294:GLU:HB2	1.92	0.51
8:v:219:LEU:HD21	8:v:275:ALA:HB1	1.92	0.51
17:G:71:ARG:NH2	17:G:148:ASN:OD1	2.43	0.51
18:H:14:LYS:HB2	18:H:124:LEU:HD21	1.92	0.51
4:r:322:ASN:HD21	8:v:344:LYS:HD3	1.74	0.51
9:2:927:C:O2	39:c:51:GLN:NE2	2.39	0.51
9:2:1839:U:O4	38:b:28:ARG:NH2	2.43	0.51
17:G:143:PRO:HG2	40:d:54:ASP:HB2	1.93	0.51
2:p:583:TYR:OH	3:q:285:SER:OG	2.14	0.51
9:2:168:C:H1'	18:H:132:ARG:HB2	1.91	0.51
9:2:1407:U:O2'	28:R:11:GLN:OE1	2.28	0.51
23:M:68:ILE:HD13	23:M:131:CYS:HB3	1.92	0.51
38:b:39:PHE:HD1	38:b:70:LYS:HD2	1.75	0.51
2:p:582:TRP:HD1	2:p:616:LEU:HD22	1.75	0.51
8:v:290:LYS:HB3	8:v:333:VAL:HG12	1.93	0.51
21:K:106:LEU:HD23	21:K:109:ARG:HD3	1.91	0.51
36:Z:100:LYS:HD2	36:Z:107:ARG:HH12	1.75	0.51
3:q:305:PHE:HB2	3:q:348:HIS:HE1	1.75	0.51
7:u:229:ASN:HD21	7:u:275:VAL:HG22	1.75	0.51
15:E:127:MET:HE1	15:E:133:GLY:HA2	1.92	0.51
16:F:72:ILE:HG12	16:F:90:ILE:HD13	1.93	0.51
31:U:29:LYS:HE2	31:U:106:ALA:HA	1.92	0.51
37:a:92:LEU:HD12	37:a:109:TYR:HE1	1.75	0.51
47:n:1:MET:HE3	47:n:6:ARG:HA	1.93	0.51
9:2:1395:C:O2'	9:2:1396:A:N3	2.42	0.51
11:A:66:ARG:HE	11:A:67:LYS:HG2	1.75	0.51
13:C:88:THR:HA	13:C:98:THR:HA	1.93	0.51
9:2:472:C:O2	9:2:475:C:N4	2.41	0.51
9:2:1357:A:H5'	14:D:125:LYS:HZ2	1.75	0.51
16:F:137:PRO:HB2	16:F:150:PRO:HD2	1.92	0.51
28:R:58:LEU:HD22	28:R:108:ILE:HG12	1.92	0.51
2:p:432:GLN:HA	2:p:437:PRO:HD3	1.93	0.51
9:2:5:U:H2'	9:2:6:G:H8	1.75	0.51
9:2:161:U:O3'	18:H:87:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:1565:C:OP2	31:U:101:ARG:NH1	2.44	0.51
9:2:1598:G:H3'	37:a:80:ARG:HD3	1.92	0.51
18:H:135:PRO:HB2	18:H:141:ILE:HG12	1.93	0.51
26:P:147:ARG:HA	38:b:28:ARG:HH11	1.75	0.51
3:q:114:PHE:HA	3:q:117:LEU:HB2	1.92	0.50
44:h:150:TRP:HB2	44:h:170:TRP:CD1	2.46	0.50
3:q:55:MET:HB2	3:q:323:PHE:HB3	1.92	0.50
18:H:88:ARG:HB3	18:H:91:GLU:HB2	1.92	0.50
36:Z:27:VAL:HB	36:Z:69:THR:HB	1.94	0.50
42:f:101:ARG:NH2	42:f:109:MET:SD	2.84	0.50
45:i:17:G:N2	45:i:57:A:OP2	2.43	0.50
8:v:15:ALA:HB1	8:v:72:LEU:HD11	1.93	0.50
9:2:390:C:O2'	23:M:8:ARG:NH1	2.44	0.50
9:2:440:G:OP1	9:2:1798:C:O2'	2.25	0.50
9:2:1075:C:OP1	25:O:107:LYS:NZ	2.44	0.50
16:F:185:GLY:H	16:F:189:LEU:HG	1.76	0.50
5:s:153:ASP:HB3	5:s:157:THR:HB	1.93	0.50
9:2:373:G:OP1	23:M:135:SER:OG	2.26	0.50
9:2:1017:U:O4'	25:O:55:ARG:NH1	2.45	0.50
9:2:1232:U:H2'	9:2:1233:G:H8	1.76	0.50
26:P:31:CYS:HB2	26:P:93:LEU:HD23	1.92	0.50
4:r:355:LEU:HD13	6:t:207:PHE:HD1	1.75	0.50
9:2:292:A:O2'	23:M:39:ASN:O	2.28	0.50
9:2:639:C:OP1	42:f:114:ARG:NH2	2.44	0.50
10:3:528:C:H2'	10:3:529:A:H8	1.76	0.50
19:I:101:LEU:HG	19:I:120:ARG:HB3	1.92	0.50
33:W:38:GLU:HB2	33:W:49:GLN:HB2	1.93	0.50
13:C:23:ASP:HB3	13:C:26:SER:HB3	1.93	0.50
29:S:101:ASP:N	29:S:101:ASP:OD1	2.43	0.50
30:T:80:PRO:HD2	31:U:36:THR:HG21	1.94	0.50
3:q:69:ALA:O	3:q:80:GLN:NE2	2.44	0.50
4:r:213:GLU:HB2	4:r:215:PRO:HD3	1.94	0.50
21:K:142:VAL:HG12	21:K:144:ILE:H	1.77	0.50
39:c:67:THR:OG1	39:c:70:LYS:O	2.29	0.50
4:r:110:ARG:HA	4:r:255:LEU:HD22	1.93	0.50
9:2:1700:C:H5	9:2:1836:G:H1	1.60	0.50
16:F:151:ASP:HB3	18:H:212:LEU:HD21	1.92	0.50
28:R:31:LEU:HD11	28:R:69:ARG:HE	1.75	0.50
32:V:61:LEU:HD13	32:V:82:MET:HB3	1.93	0.50
44:h:37:ASP:OD2	44:h:39:THR:OG1	2.28	0.50
1:o:554:VAL:HG11	5:s:219:GLU:HG2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:t:48:LEU:HG	7:u:292:LYS:HG3	1.94	0.50
1:o:329:ILE:HG22	1:o:371:ILE:HG12	1.94	0.49
2:p:574:TYR:HD2	2:p:612:THR:HG22	1.77	0.49
2:p:701:HIS:NE2	2:p:708:ARG:O	2.44	0.49
8:v:87:CYS:HA	8:v:90:LEU:HD12	1.93	0.49
8:v:140:ILE:HA	8:v:143:GLU:HG2	1.94	0.49
9:2:151:C:OP1	36:Z:120:THR:OG1	2.25	0.49
1:o:522:GLN:O	1:o:526:MET:CB	2.60	0.49
9:2:441:C:OP2	20:J:2:GLY:N	2.45	0.49
26:P:104:ARG:O	26:P:106:LYS:NZ	2.39	0.49
1:o:385:PRO:HA	1:o:388:LYS:HE2	1.93	0.49
2:p:490:LEU:O	2:p:495:THR:OG1	2.29	0.49
2:p:846:ARG:O	2:p:846:ARG:NH1	2.39	0.49
7:u:490:LEU:HD22	7:u:494:LYS:HE3	1.94	0.49
23:M:18:GLN:HE21	23:M:33:LEU:HD21	1.77	0.49
25:O:26:LEU:HD23	25:O:28:LEU:H	1.77	0.49
47:n:6:ARG:HG2	47:n:10:MET:HE1	1.94	0.49
9:2:1375:G:OP1	29:S:67:ARG:NH1	2.44	0.49
19:I:143:ARG:HG2	34:X:53:ILE:HG13	1.94	0.49
7:u:307:ARG:HB3	7:u:312:GLN:HG2	1.94	0.49
8:v:212:LEU:HD22	8:v:268:LEU:HD21	1.95	0.49
9:2:570:C:O2	36:Z:34:THR:OG1	2.29	0.49
16:F:62:LYS:HG3	16:F:66:MET:HE1	1.94	0.49
18:H:49:VAL:HB	18:H:115:LYS:HB3	1.94	0.49
32:V:61:LEU:HD11	32:V:84:ILE:HD12	1.94	0.49
44:h:175:LYS:HB3	44:h:184:LEU:HD11	1.95	0.49
1:o:74:TYR:HH	1:o:154:TRP:CD1	2.31	0.49
3:q:50:MET:HE3	3:q:178:LEU:HG	1.92	0.49
8:v:8:ASP:OD1	8:v:11:GLU:N	2.38	0.49
9:2:940:U:H3	9:2:1002:U:H3	1.59	0.49
22:L:65:ARG:NH2	41:e:25:SER:OG	2.46	0.49
44:h:201:SER:OG	44:h:203:ASP:OD1	2.31	0.49
7:u:309:PRO:HA	7:u:312:GLN:HB2	1.93	0.49
7:u:483:GLU:O	7:u:489:GLN:NE2	2.45	0.49
14:D:107:LEU:HD12	14:D:209:VAL:HG23	1.95	0.49
1:o:354:ARG:O	1:o:357:THR:OG1	2.27	0.49
2:p:590:LEU:O	3:q:4:TYR:N	2.46	0.49
9:2:614:C:HO2'	35:Y:64:SER:HG	1.57	0.49
15:E:126:ILE:HD12	15:E:188:ILE:HD12	1.94	0.49
17:G:199:VAL:O	17:G:203:ASN:ND2	2.46	0.49
27:Q:16:THR:OG1	30:T:91:LYS:O	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:h:32:LEU:HD22	44:h:40:ILE:HG22	1.94	0.49
44:h:236:ILE:HG12	44:h:252:THR:HG22	1.94	0.49
15:E:28:GLU:OE2	15:E:65:ARG:NH2	2.41	0.49
27:Q:32:GLN:OE1	27:Q:35:GLN:NE2	2.46	0.49
32:V:56:MET:HG3	32:V:86:LYS:HD3	1.95	0.49
34:X:80:ASP:OD1	34:X:80:ASP:N	2.40	0.49
36:Z:25:ILE:HG21	36:Z:44:LEU:HD11	1.93	0.49
1:o:99:GLU:HA	1:o:102:GLU:HG3	1.94	0.49
4:r:219:HIS:HB2	4:r:236:TYR:HB2	1.95	0.49
4:r:291:GLN:O	8:v:363:LYS:NZ	2.45	0.49
9:2:1033:G:N1	9:2:1080:A:O2'	2.34	0.49
25:O:30:SER:HB3	25:O:67:THR:HG22	1.95	0.49
25:O:142:GLU:O	25:O:145:THR:OG1	2.25	0.49
3:q:241:GLN:HE21	3:q:254:LEU:HB2	1.78	0.48
6:t:122:ASP:OD1	6:t:122:ASP:N	2.44	0.48
9:2:334:C:OP2	18:H:190:ARG:NH2	2.46	0.48
1:o:233:ARG:NH1	1:o:236:GLN:OE1	2.46	0.48
23:M:47:PRO:HB2	23:M:49:GLU:HG2	1.95	0.48
2:p:333:LEU:HD21	2:p:374:ILE:HG12	1.94	0.48
3:q:19:VAL:HG21	3:q:44:LEU:HB3	1.96	0.48
1:o:535:GLU:OE1	4:r:300:GLN:NE2	2.46	0.48
2:p:521:ARG:HE	2:p:522:GLN:HG3	1.78	0.48
9:2:1152:U:H2'	34:X:12:LYS:HE2	1.95	0.48
9:2:1629:C:O2'	30:T:83:PHE:O	2.27	0.48
17:G:76:MET:HE1	17:G:169:ILE:HD11	1.94	0.48
38:b:32:LYS:O	38:b:37:LYS:NZ	2.44	0.48
44:h:168:CYS:HB2	44:h:195:LEU:HD22	1.95	0.48
9:2:551:U:H2'	9:2:552:G:H8	1.78	0.48
12:B:60:LEU:HD22	12:B:159:ILE:HD13	1.96	0.48
1:o:486:HIS:HB3	1:o:490:THR:H	1.78	0.48
4:r:326:ARG:HH22	8:v:221:ASP:HB3	1.78	0.48
6:t:11:VAL:HA	6:t:14:LEU:HB2	1.96	0.48
8:v:120:ARG:HD3	8:v:146:GLN:HE22	1.78	0.48
10:3:533:G:H2'	10:3:534:A:H8	1.78	0.48
10:3:576:C:H5"	10:3:577:G:H5"	1.95	0.48
27:Q:34:MET:O	27:Q:42:ARG:NH1	2.45	0.48
30:T:55:ARG:HB2	30:T:58:GLU:HG3	1.94	0.48
31:U:11:GLN:HB3	31:U:62:ARG:HD2	1.96	0.48
35:Y:68:LYS:HB3	35:Y:91:LEU:HD13	1.95	0.48
44:h:114:SER:OG	44:h:115:SER:N	2.47	0.48
2:p:475:ASP:OD1	2:p:475:ASP:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:v:166:ARG:HH12	8:v:199:GLN:HE21	1.61	0.48
9:2:1288:U:H5"	43:g:95:ARG:HH22	1.78	0.48
21:K:136:ARG:HA	21:K:141:VAL:HA	1.95	0.48
27:Q:96:VAL:HG11	27:Q:116:LEU:HB3	1.96	0.48
4:r:307:LEU:HB3	4:r:317:LYS:HG3	1.94	0.48
5:s:48:LYS:HE3	5:s:81:CYS:H	1.79	0.48
8:v:238:HIS:HB3	8:v:240:LEU:HD13	1.96	0.48
9:2:332:G:N7	18:H:186:GLN:NE2	2.62	0.48
18:H:10:THR:HG21	18:H:125:THR:HA	1.96	0.48
24:N:129:LYS:HA	24:N:129:LYS:HD3	1.73	0.48
1:o:572:ARG:HA	1:o:575:ILE:HB	1.96	0.48
3:q:72:GLU:OE2	3:q:74:ARG:NH1	2.46	0.48
3:q:286:TYR:CE1	3:q:290:ASP:HB2	2.49	0.48
3:q:402:GLN:HE22	7:u:525:LYS:HB3	1.79	0.48
16:F:87:MET:HE1	16:F:236:ILE:HG21	1.95	0.48
17:G:59:LYS:HB2	17:G:62:ARG:HD2	1.96	0.48
27:Q:47:ARG:HD2	27:Q:47:ARG:HA	1.69	0.48
9:2:1705:C:H2'	9:2:1706:G:C8	2.49	0.48
19:I:143:ARG:HD2	19:I:157:HIS:CE1	2.48	0.48
21:K:78:LEU:HD22	21:K:97:ILE:HD11	1.95	0.48
3:q:189:LEU:CB	3:q:217:TRP:CH2	2.97	0.47
19:I:10:LYS:HB2	19:I:10:LYS:HE2	1.68	0.47
22:L:60:GLU:HG2	22:L:70:TYR:H	1.79	0.47
26:P:85:CYS:HB2	26:P:124:MET:HE1	1.96	0.47
1:o:73:GLN:O	1:o:158:ARG:NH2	2.46	0.47
9:2:1294:G:H2'	9:2:1295:A:H8	1.78	0.47
12:B:156:TYR:OH	33:W:61:ARG:NH1	2.47	0.47
13:C:149:GLN:HE21	13:C:151:ARG:HB3	1.78	0.47
14:D:82:TYR:CD2	14:D:164:PRO:HG3	2.49	0.47
1:o:177:ILE:O	1:o:181:ALA:HB2	2.14	0.47
9:2:1518:C:H5"	9:2:1519:U:H5"	1.96	0.47
12:B:122:LEU:HD21	12:B:133:PRO:HB2	1.95	0.47
25:O:132:LYS:HA	25:O:132:LYS:HD3	1.70	0.47
10:3:561:U:H3	30:T:108:ARG:HH12	1.61	0.47
10:3:595:C:H2'	10:3:596:A:H8	1.79	0.47
9:2:1700:C:O2'	9:2:1834:A:N6	2.47	0.47
19:I:69:LEU:HD13	19:I:96:ALA:HB2	1.96	0.47
40:d:20:ARG:HE	40:d:28:THR:HB	1.79	0.47
9:2:30:C:O2'	9:2:596:U:OP1	2.33	0.47
9:2:167:G:H21	18:H:132:ARG:HG3	1.80	0.47
9:2:1860:A:H3'	38:b:8:ASN:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:C:158:HIS:O	13:C:162:ARG:HG3	2.14	0.47
15:E:33:GLY:HA3	15:E:53:THR:HB	1.96	0.47
19:I:136:PRO:O	19:I:162:GLN:NE2	2.48	0.47
22:L:65:ARG:NH2	41:e:20:SER:OG	2.48	0.47
24:N:49:LEU:HD11	24:N:77:ILE:HD11	1.96	0.47
1:o:522:GLN:O	1:o:526:MET:HB2	2.15	0.47
2:p:627:LYS:HA	2:p:693:LEU:HD11	1.95	0.47
2:p:666:GLU:OE1	2:p:670:GLN:NE2	2.38	0.47
2:p:847:THR:OG1	2:p:848:GLU:N	2.46	0.47
4:r:163:GLU:HA	4:r:164:ASP:HA	1.59	0.47
6:t:170:LEU:O	6:t:174:MET:HB2	2.15	0.47
9:2:95:G:OP1	16:F:10:LYS:NZ	2.48	0.47
9:2:1413:G:H2'	9:2:1414:A:H8	1.79	0.47
13:C:91:VAL:HG12	13:C:93:GLY:H	1.80	0.47
27:Q:96:VAL:HG23	27:Q:120:SER:HB3	1.95	0.47
29:S:23:ARG:NH1	44:h:149:GLU:OE2	2.48	0.47
31:U:40:ALA:HB3	31:U:43:LYS:HG2	1.96	0.47
32:V:27:ARG:HE	32:V:27:ARG:HB2	1.49	0.47
33:W:66:ASP:OD1	33:W:66:ASP:N	2.43	0.47
36:Z:40:ILE:HG21	36:Z:60:PHE:HZ	1.80	0.47
38:b:37:LYS:HB2	38:b:37:LYS:HE2	1.73	0.47
44:h:16:GLY:HA3	44:h:36:ARG:HB2	1.96	0.47
44:h:232:GLY:HA2	44:h:259:TRP:HH2	1.80	0.47
22:L:10:ALA:HA	22:L:13:GLU:HG2	1.97	0.47
25:O:20:ARG:HH21	34:X:56:HIS:HD2	1.63	0.47
44:h:212:LYS:HD2	44:h:235:ILE:HD12	1.97	0.47
2:p:643:LYS:O	2:p:648:GLN:N	2.42	0.47
3:q:262:ILE:HG22	3:q:335:ASN:HB3	1.96	0.47
5:s:40:GLN:HB3	5:s:77:GLU:HA	1.97	0.47
6:t:22:ASN:HD21	6:t:24:GLU:HB2	1.80	0.47
9:2:1507:G:N2	43:g:87:THR:OG1	2.47	0.47
15:E:136:VAL:HG22	15:E:186:VAL:HG22	1.97	0.47
30:T:47:LYS:NZ	31:U:35:ASP:OD2	2.48	0.47
44:h:298:LEU:HB3	44:h:310:TRP:HB2	1.96	0.47
47:n:1:MET:O	47:n:6:ARG:NH2	2.48	0.47
3:q:26:LEU:HG	3:q:29:LYS:HE3	1.96	0.47
3:q:134:TYR:HB3	3:q:151:LEU:HD21	1.96	0.47
6:t:155:ARG:HH22	6:t:171:LYS:HG3	1.79	0.47
9:2:183:G:O2'	9:2:184:G:O4'	2.33	0.47
9:2:1288:U:OP2	43:g:95:ARG:NH1	2.48	0.47
12:B:39:TYR:HB3	12:B:48:ILE:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:H:24:LEU:HA	18:H:27:PHE:HD2	1.80	0.47
18:H:78:SER:H	18:H:81:HIS:HD1	1.63	0.47
32:V:80:PHE:HB3	41:e:52:PHE:HB3	1.97	0.47
37:a:66:LYS:HA	37:a:66:LYS:HD2	1.79	0.47
47:n:14:LYS:HG2	47:n:18:ARG:HH21	1.80	0.47
4:r:166:VAL:HG21	4:r:206:ILE:HG12	1.97	0.46
9:2:870:A:H62	9:2:916:A:H5'	1.80	0.46
13:C:107:ARG:NH1	26:P:131:ASP:OD2	2.48	0.46
22:L:80:ARG:HA	22:L:85:LEU:HD23	1.97	0.46
31:U:49:ASP:OD1	31:U:49:ASP:N	2.39	0.46
1:o:250:PHE:HB3	1:o:358:LEU:HD13	1.96	0.46
2:p:753:HIS:CE1	2:p:780:VAL:HA	2.50	0.46
7:u:233:SER:HB2	7:u:282:SER:HB2	1.97	0.46
21:K:87:LEU:HD13	21:K:100:LEU:HD21	1.96	0.46
25:O:26:LEU:HD11	25:O:60:VAL:HG23	1.96	0.46
29:S:47:ARG:NH1	29:S:48:ASN:OD1	2.48	0.46
1:o:573:GLN:NE2	1:o:577:GLU:OE2	2.48	0.46
2:p:427:GLU:HA	2:p:428:SER:HA	1.63	0.46
2:p:514:PHE:HD1	2:p:578:LEU:HD21	1.80	0.46
2:p:576:HIS:CD2	2:p:584:GLN:HE22	2.34	0.46
3:q:189:LEU:CB	3:q:217:TRP:CZ2	2.98	0.46
10:3:528:C:H2'	10:3:529:A:C8	2.50	0.46
16:F:100:ARG:HB2	16:F:114:ILE:HD13	1.97	0.46
3:q:278:VAL:HA	3:q:283:GLN:HG2	1.96	0.46
8:v:66:SER:HB3	8:v:102:ARG:HH11	1.80	0.46
9:2:944:A:H61	9:2:982:G:H1	1.63	0.46
16:F:47:PHE:O	16:F:51:ARG:HB2	2.14	0.46
26:P:96:LYS:HD2	26:P:132:VAL:HG21	1.96	0.46
35:Y:94:ILE:HD12	35:Y:100:VAL:HG11	1.97	0.46
37:a:106:GLN:HE21	37:a:108:ILE:HG13	1.80	0.46
40:d:14:VAL:HG23	40:d:53:GLY:H	1.81	0.46
3:q:219:LEU:HD11	3:q:253:ILE:HA	1.97	0.46
7:u:544:ILE:HA	7:u:547:ILE:HB	1.96	0.46
7:u:328:ARG:HH22	7:u:330:GLN:HB2	1.81	0.46
29:S:110:ASP:OD1	29:S:110:ASP:N	2.48	0.46
3:q:67:PRO:HA	3:q:70:LEU:HB2	1.97	0.46
3:q:412:SER:HB3	4:r:370:LEU:HD13	1.98	0.46
5:s:194:PHE:HE2	5:s:196:HIS:HB3	1.80	0.46
9:2:1391:C:H4'	41:e:55:LEU:HD13	1.97	0.46
16:F:197:ASN:HB3	16:F:209:HIS:HD2	1.81	0.46
1:o:403:LEU:HD13	1:o:406:ARG:HH11	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:982:G:H2'	9:2:983:A:H8	1.80	0.46
12:B:85:ARG:NH2	29:S:82:ASP:O	2.49	0.46
34:X:86:LEU:HG	34:X:90:GLN:HE21	1.80	0.46
34:X:112:ASP:OD1	34:X:112:ASP:N	2.44	0.46
39:c:73:LEU:HD11	39:c:79:PHE:HD2	1.80	0.46
46:j:7:ARG:H	46:j:7:ARG:HG3	1.44	0.46
7:u:417:CYS:HA	7:u:420:PHE:HB2	1.97	0.46
9:2:12:U:O2'	9:2:1356:G:N3	2.46	0.46
9:2:106:C:H2'	9:2:107:A:H8	1.80	0.46
9:2:107:A:H2'	9:2:108:G:C8	2.51	0.46
13:C:144:LYS:HB2	13:C:208:HIS:HB3	1.97	0.46
1:o:266:PRO:HB2	1:o:269:PRO:HD2	1.98	0.46
2:p:867:VAL:HB	5:s:265:ARG:HH21	1.80	0.46
9:2:223:C:H2'	9:2:224:A:C8	2.50	0.46
9:2:453:C:O2'	18:H:92:ARG:O	2.31	0.46
9:2:1342:U:N3	9:2:1483:A:N1	2.56	0.46
32:V:39:LEU:HD23	32:V:89:ILE:HD13	1.98	0.46
1:o:304:ARG:HA	1:o:307:ARG:HD2	1.97	0.45
17:G:102:LEU:HD13	17:G:102:LEU:HA	1.76	0.45
23:M:113:LEU:HD11	23:M:120:VAL:HG21	1.98	0.45
32:V:99:LYS:HA	32:V:99:LYS:HD3	1.73	0.45
44:h:240:CYS:HG	44:h:291:TRP:CD1	2.34	0.45
2:p:581:ARG:HD2	2:p:623:GLN:HE22	1.82	0.45
2:p:857:LEU:HD13	4:r:360:LEU:HB3	1.98	0.45
4:r:152:THR:OG1	4:r:187:GLU:OE1	2.31	0.45
5:s:99:TYR:O	5:s:103:MET:HE2	2.16	0.45
7:u:330:GLN:HG3	7:u:375:LEU:HD11	1.97	0.45
8:v:318:THR:HG22	8:v:320:MET:HG2	1.98	0.45
9:2:907:G:H2'	9:2:908:A:H8	1.82	0.45
11:A:64:LYS:HB2	11:A:64:LYS:HE2	1.69	0.45
2:p:616:LEU:HD23	2:p:616:LEU:HA	1.82	0.45
3:q:319:LEU:HD23	3:q:319:LEU:HA	1.82	0.45
5:s:221:LYS:HG3	5:s:225:ALA:HB3	1.99	0.45
8:v:120:ARG:HD3	8:v:146:GLN:NE2	2.32	0.45
9:2:960:U:H5"	26:P:149:ARG:HH21	1.80	0.45
17:G:135:ARG:HH11	26:P:66:ARG:HH21	1.64	0.45
23:M:35:ARG:HG2	23:M:37:TYR:HD2	1.81	0.45
31:U:56:ARG:O	31:U:60:THR:OG1	2.31	0.45
2:p:557:ALA:HA	2:p:565:ARG:NH2	2.32	0.45
3:q:128:LEU:HD23	3:q:155:ARG:HD2	1.99	0.45
5:s:76:LEU:HD11	5:s:146:GLU:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:u:384:GLU:HB3	7:u:525:LYS:HG3	1.97	0.45
7:u:465:LYS:HB3	7:u:502:TRP:HZ3	1.80	0.45
9:2:678:U:H2'	9:2:679:A:H8	1.81	0.45
9:2:1351:G:O2'	12:B:109:THR:OG1	2.28	0.45
14:D:113:GLN:HG2	14:D:122:THR:HG23	1.97	0.45
18:H:172:LYS:HD2	18:H:172:LYS:HA	1.83	0.45
3:q:123:PHE:HB3	3:q:126:GLU:HB2	1.98	0.45
3:q:251:PRO:HB2	3:q:286:TYR:CE2	2.51	0.45
8:v:174:ASP:HB3	8:v:177:LYS:HB2	1.98	0.45
9:2:873:G:OP1	23:M:153:LYS:NZ	2.41	0.45
9:2:874:G:H2'	9:2:875:A:C8	2.51	0.45
9:2:1172:U:H2'	9:2:1173:A:C8	2.52	0.45
9:2:1204:G:O2'	9:2:1700:C:OP2	2.34	0.45
13:C:35:ALA:HB1	13:C:39:PHE:HD2	1.82	0.45
19:I:70:LYS:HA	19:I:70:LYS:HD2	1.73	0.45
23:M:32:LYS:HE3	23:M:32:LYS:HB3	1.76	0.45
1:o:152:PHE:CZ	1:o:177:ILE:HA	2.52	0.45
4:r:220:LEU:HD23	4:r:235:ALA:HA	1.98	0.45
8:v:119:VAL:O	8:v:122:THR:OG1	2.26	0.45
10:3:526:G:H3'	10:3:527:G:C8	2.52	0.45
23:M:40:ILE:HD12	23:M:143:LEU:HD22	1.97	0.45
44:h:82:SER:OG	44:h:84:ASP:OD1	2.30	0.45
1:o:52:LEU:HA	1:o:55:LEU:HB2	1.98	0.45
1:o:87:GLU:HB2	1:o:91:ARG:NH2	2.24	0.45
2:p:641:ARG:HG2	2:p:644:GLU:HB3	1.97	0.45
4:r:317:LYS:HA	4:r:320:ALA:HB3	1.99	0.45
9:2:1025:U:O3'	9:2:1089:G:N2	2.50	0.45
46:j:4:LEU:HB3	46:j:5:SER:H	1.52	0.45
1:o:74:TYR:HH	1:o:154:TRP:CG	2.35	0.45
1:o:533:ALA:HB1	5:s:230:LEU:HD22	1.99	0.45
3:q:189:LEU:CG	3:q:217:TRP:CE2	3.00	0.45
4:r:322:ASN:HB3	8:v:225:THR:HA	1.99	0.45
7:u:220:LYS:HB2	7:u:220:LYS:HE3	1.76	0.45
9:2:562:U:H2'	9:2:563:G:C8	2.52	0.45
9:2:1133:A:H4'	38:b:13:LYS:HG2	1.98	0.45
9:2:1732:G:N1	9:2:1803:U:O4	2.50	0.45
13:C:82:ARG:HB3	13:C:84:PHE:HE1	1.81	0.45
16:F:35:PRO:HD2	16:F:83:PRO:HG2	1.98	0.45
28:R:58:LEU:HB2	28:R:63:PHE:HE1	1.82	0.45
35:Y:59:ALA:HB1	35:Y:114:ASP:HB2	1.98	0.45
4:r:237:VAL:HG12	4:r:253:THR:HB	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:u:328:ARG:HD2	7:u:328:ARG:HA	1.71	0.45
9:2:1298:G:OP2	27:Q:77:LYS:NZ	2.49	0.45
16:F:87:MET:HE2	16:F:123:LEU:HB2	1.98	0.45
9:2:1166:G:H1	9:2:1193:U:H3	1.65	0.45
12:B:104:THR:O	12:B:107:THR:OG1	2.35	0.45
13:C:30:TRP:HE3	13:C:46:LYS:HD3	1.82	0.45
15:E:90:LYS:H	15:E:90:LYS:HG2	1.54	0.45
19:I:143:ARG:HD2	19:I:157:HIS:HE1	1.81	0.45
23:M:63:THR:OG1	23:M:63:THR:O	2.29	0.45
40:d:44:ARG:HH22	40:d:63:ARG:HG3	1.82	0.45
1:o:322:VAL:HG11	1:o:382:TYR:HB3	1.99	0.44
1:o:332:THR:O	1:o:367:ARG:NH2	2.50	0.44
1:o:497:LEU:HD23	1:o:497:LEU:HA	1.88	0.44
3:q:402:GLN:NE2	7:u:525:LYS:HB3	2.32	0.44
6:t:150:TYR:HE1	7:u:497:MET:HE2	1.82	0.44
9:2:1275:G:OP2	22:L:47:LYS:NZ	2.47	0.44
16:F:89:VAL:HG23	16:F:114:ILE:HD11	1.99	0.44
18:H:119:LYS:HA	18:H:119:LYS:HD3	1.86	0.44
25:O:20:ARG:HH21	34:X:56:HIS:CD2	2.34	0.44
30:T:13:LEU:HD12	30:T:20:ILE:HB	2.00	0.44
36:Z:56:PHE:HD2	36:Z:90:ARG:HG2	1.82	0.44
1:o:319:SER:HA	1:o:322:VAL:HG12	1.99	0.44
1:o:419:GLU:HG2	1:o:420:LYS:HD2	1.99	0.44
9:2:1673:U:O2'	17:G:84:GLY:O	2.25	0.44
9:2:1797:U:H2'	9:2:1798:C:C6	2.53	0.44
17:G:145:ARG:HG3	40:d:48:GLY:HA3	1.99	0.44
19:I:36:LEU:HB2	19:I:39:GLN:HE21	1.82	0.44
38:b:41:ILE:HG22	38:b:66:LYS:HE2	1.98	0.44
2:p:402:LEU:HD11	2:p:478:GLN:HB3	1.98	0.44
7:u:336:PHE:HB3	7:u:368:HIS:HD2	1.82	0.44
9:2:1498:A:OP2	15:E:27:ARG:NH2	2.51	0.44
9:2:1589:A:H4'	31:U:82:ARG:HB2	1.98	0.44
13:C:30:TRP:HZ2	26:P:88:LEU:HD11	1.83	0.44
18:H:160:LYS:HE2	18:H:160:LYS:HB2	1.66	0.44
21:K:124:HIS:HD2	42:f:104:ARG:HE	1.65	0.44
24:N:70:ALA:HA	24:N:74:ILE:HG13	1.99	0.44
27:Q:36:LEU:HD12	27:Q:36:LEU:HA	1.78	0.44
30:T:56:ALA:HA	30:T:59:LEU:HD23	1.98	0.44
2:p:651:LEU:HB3	2:p:652:LEU:HD12	1.99	0.44
3:q:384:ILE:H	7:u:466:LEU:HD12	1.83	0.44
5:s:53:TYR:HD1	5:s:55:GLU:H	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:s:188:LYS:HA	5:s:188:LYS:HD2	1.81	0.44
7:u:327:ARG:HD2	7:u:450:GLU:HB3	2.00	0.44
8:v:235:GLU:HB3	8:v:241:LEU:HD12	1.99	0.44
9:2:944:A:H5"	26:P:134:PRO:HB3	2.00	0.44
12:B:18:PHE:CZ	12:B:177:MET:HE1	2.52	0.44
1:o:317:ARG:HE	1:o:317:ARG:HB2	1.63	0.44
1:o:393:TRP:HB3	1:o:403:LEU:HD11	2.00	0.44
4:r:338:ILE:HG22	4:r:340:PRO:HD3	2.00	0.44
4:r:370:LEU:HD23	4:r:370:LEU:HA	1.83	0.44
5:s:161:SER:H	5:s:334:THR:HG23	1.82	0.44
5:s:340:LYS:HE3	6:t:215:ALA:HB2	1.99	0.44
7:u:469:THR:HG23	7:u:514:GLN:HG3	1.99	0.44
9:2:1357:A:H5'	14:D:125:LYS:NZ	2.33	0.44
9:2:1514:G:H21	27:Q:79:HIS:HE1	1.64	0.44
18:H:98:ARG:NH1	18:H:103:ASP:OD2	2.50	0.44
21:K:107:GLU:HA	21:K:112:THR:HG21	2.00	0.44
23:M:45:LYS:HA	23:M:45:LYS:HD3	1.67	0.44
24:N:113:ASP:O	24:N:116:LYS:NZ	2.46	0.44
44:h:106:LYS:HB3	44:h:125:ARG:HB2	2.00	0.44
1:o:388:LYS:HE2	1:o:388:LYS:HB3	1.81	0.44
5:s:104:MET:HE3	5:s:108:ARG:HH12	1.83	0.44
5:s:352:ASN:ND2	8:v:357:TRP:HB2	2.33	0.44
9:2:380:G:P	20:J:56:ARG:HH22	2.40	0.44
9:2:1475:G:OP1	28:R:117:ARG:NH2	2.51	0.44
20:J:191:GLU:HG3	23:M:19:ASN:ND2	2.32	0.44
37:a:114:LYS:HA	37:a:114:LYS:HD3	1.83	0.44
15:E:175:VAL:HB	15:E:182:LEU:HB3	2.00	0.44
16:F:87:MET:HE3	16:F:87:MET:HB3	1.91	0.44
28:R:131:LYS:HD3	32:V:79:ARG:HH22	1.83	0.44
29:S:34:VAL:HA	29:S:37:GLU:HG2	2.00	0.44
30:T:74:PRO:HG2	30:T:84:LEU:HD21	2.00	0.44
31:U:56:ARG:HG3	31:U:103:VAL:HG11	1.98	0.44
1:o:445:GLN:HB3	1:o:515:PRO:HB3	1.98	0.44
2:p:460:GLN:HE22	2:p:667:ARG:NH2	2.16	0.44
3:q:229:ARG:HD2	3:q:260:ALA:HB2	1.99	0.44
4:r:135:ARG:HG3	4:r:195:THR:HB	2.00	0.44
5:s:108:ARG:HA	5:s:113:ASP:HA	2.00	0.44
5:s:122:SER:O	5:s:122:SER:OG	2.36	0.44
9:2:1616:U:OP2	27:Q:43:ARG:NH2	2.46	0.44
15:E:185:LYS:HB2	15:E:185:LYS:HE2	1.70	0.44
16:F:181:CYS:HB3	16:F:195:ILE:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:V:32:LEU:HD23	32:V:85:HIS:HB2	2.00	0.44
35:Y:29:LYS:HB2	35:Y:29:LYS:HE2	1.87	0.44
1:o:278:LYS:O	1:o:281:THR:OG1	2.24	0.44
9:2:106:C:H2'	9:2:107:A:C8	2.53	0.44
9:2:1562:C:H2'	9:2:1563:G:C8	2.53	0.44
12:B:40:LYS:HE3	12:B:40:LYS:HB2	1.74	0.44
15:E:172:VAL:HG22	15:E:185:LYS:HG2	1.99	0.44
16:F:259:LYS:NZ	16:F:263:GLY:OXT	2.45	0.44
21:K:143:ASN:HB2	36:Z:64:PHE:CZ	2.53	0.44
29:S:71:ILE:HB	29:S:74:GLN:HB2	2.00	0.44
35:Y:60:LYS:H	35:Y:114:ASP:HB2	1.83	0.44
3:q:49:ASN:HA	3:q:50:MET:HG3	1.99	0.43
3:q:162:ASP:OD1	3:q:162:ASP:N	2.46	0.43
3:q:299:LEU:HD23	3:q:299:LEU:HA	1.81	0.43
6:t:148:ILE:HG22	6:t:149:THR:HG23	1.99	0.43
7:u:493:PHE:O	7:u:497:MET:HG2	2.19	0.43
9:2:429:C:H2'	9:2:430:C:H6	1.82	0.43
9:2:1743:G:H21	9:2:1791:A:H62	1.66	0.43
32:V:46:LYS:HZ2	32:V:48:LEU:HD13	1.83	0.43
33:W:35:ASN:HB3	33:W:52:THR:HG22	2.00	0.43
36:Z:110:ARG:O	36:Z:114:MET:HG3	2.18	0.43
2:p:501:ARG:HB3	2:p:505:ARG:HH21	1.83	0.43
3:q:243:LEU:HD12	3:q:243:LEU:HA	1.85	0.43
3:q:252:HIS:CD2	3:q:255:ARG:HD3	2.53	0.43
4:r:157:VAL:HG22	4:r:176:MET:HE1	1.99	0.43
5:s:36:VAL:HA	5:s:146:GLU:HG3	1.99	0.43
9:2:639:C:H2'	9:2:640:A:C8	2.53	0.43
9:2:1825:A:H62	11:A:61:ILE:HG21	1.83	0.43
13:C:167:LYS:HB3	13:C:167:LYS:HE3	1.62	0.43
14:D:83:LEU:O	33:W:15:ARG:NH1	2.51	0.43
14:D:105:GLU:HB3	14:D:216:MET:HE1	1.98	0.43
1:o:495:SER:HA	1:o:496:ASP:HA	1.68	0.43
2:p:687:LEU:HD22	2:p:714:PHE:HD1	1.84	0.43
3:q:138:GLN:HE21	3:q:148:ALA:HB2	1.83	0.43
3:q:362:MET:HE2	3:q:362:MET:HB3	1.72	0.43
8:v:107:SER:OG	8:v:108:ASN:N	2.48	0.43
9:2:1172:U:H2'	9:2:1173:A:H8	1.83	0.43
9:2:1512:C:H2'	9:2:1513:C:H6	1.82	0.43
10:3:533:G:H2'	10:3:534:A:C8	2.53	0.43
16:F:63:LYS:HE2	36:Z:85:ASN:HA	2.00	0.43
18:H:224:ARG:HD2	18:H:224:ARG:HA	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:O:126:ALA:O	25:O:130:LYS:HG2	2.17	0.43
31:U:143:LYS:HB2	31:U:143:LYS:HE2	1.78	0.43
33:W:21:ASN:HB2	34:X:67:GLY:HA3	1.99	0.43
34:X:23:ARG:HD3	34:X:23:ARG:HA	1.80	0.43
1:o:554:VAL:HG22	5:s:215:MET:SD	2.58	0.43
4:r:356:MET:HA	4:r:359:TYR:CE1	2.52	0.43
9:2:860:G:H21	34:X:107:SER:HB3	1.83	0.43
9:2:1163:C:H2'	9:2:1164:G:C8	2.53	0.43
9:2:1388:A:H61	15:E:161:GLY:HA3	1.82	0.43
13:C:103:MET:HE3	13:C:188:LEU:HD22	2.00	0.43
23:M:111:VAL:HG12	23:M:140:PHE:HB2	2.00	0.43
37:a:39:LYS:HE2	37:a:39:LYS:HB3	1.74	0.43
41:e:15:GLY:O	41:e:19:ARG:NH2	2.51	0.43
1:o:441:GLN:NE2	1:o:503:GLU:O	2.50	0.43
1:o:534:LEU:HB3	4:r:327:PHE:HB3	2.00	0.43
9:2:907:G:H2'	9:2:908:A:C8	2.54	0.43
9:2:1658:G:OP2	9:2:1660:C:N4	2.52	0.43
9:2:1854:U:OP2	26:P:147:ARG:NH2	2.37	0.43
13:C:60:ASP:HA	13:C:63:LYS:HD2	2.00	0.43
13:C:129:THR:OG1	13:C:131:ASP:O	2.31	0.43
14:D:134:ASN:OD1	14:D:134:ASN:N	2.51	0.43
16:F:259:LYS:HA	16:F:259:LYS:HD2	1.75	0.43
17:G:59:LYS:HD3	17:G:59:LYS:HA	1.85	0.43
17:G:120:GLY:HA2	17:G:121:PRO:HD3	1.86	0.43
17:G:154:LEU:HD22	17:G:177:LEU:HD23	2.00	0.43
36:Z:110:ARG:HH21	36:Z:113:ARG:HE	1.66	0.43
7:u:309:PRO:HB3	7:u:344:GLN:HB3	2.01	0.43
9:2:570:C:O2'	36:Z:34:THR:O	2.30	0.43
9:2:1171:G:O2'	9:2:1187:G:O6	2.31	0.43
13:C:136:ARG:HH21	13:C:218:LEU:HD11	1.84	0.43
21:K:32:ILE:HA	21:K:37:LEU:HD12	2.00	0.43
29:S:104:GLU:HA	29:S:107:LYS:HG2	2.00	0.43
1:o:602:GLN:HA	1:o:605:ARG:HG2	2.01	0.43
3:q:50:MET:HE1	3:q:177:ILE:HG22	2.00	0.43
3:q:189:LEU:CG	3:q:217:TRP:CD2	3.02	0.43
6:t:174:MET:HE1	6:t:181:ALA:HB2	2.01	0.43
7:u:394:TYR:HA	7:u:397:LYS:HD3	2.01	0.43
20:J:34:ALA:HB2	20:J:56:ARG:HG2	2.00	0.43
24:N:54:SER:HB2	24:N:78:LYS:HD2	2.00	0.43
27:Q:60:LEU:HD22	27:Q:80:LEU:HD21	1.99	0.43
28:R:50:LYS:HD2	28:R:50:LYS:HA	1.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:T:64:VAL:O	30:T:68:ILE:HG12	2.19	0.43
32:V:40:ILE:HD11	32:V:53:PRO:HD3	1.99	0.43
9:2:126:G:H5"	18:H:195:LYS:HG2	1.99	0.43
9:2:1098:C:H2'	9:2:1099:G:C8	2.54	0.43
9:2:1232:U:H2'	9:2:1233:G:C8	2.52	0.43
9:2:1562:C:H2'	9:2:1563:G:H8	1.84	0.43
9:2:1786:U:H2'	9:2:1787:G:H8	1.84	0.43
14:D:103:LYS:HA	14:D:103:LYS:HD3	1.78	0.43
17:G:60:ARG:HH21	40:d:49:PRO:HA	1.84	0.43
1:o:353:ARG:NH1	1:o:364:PRO:HD2	2.23	0.43
5:s:183:SER:HB3	5:s:311:PRO:HD2	1.99	0.43
8:v:333:VAL:HG23	8:v:334:VAL:HG22	2.00	0.43
9:2:377:G:H5'	20:J:98:LYS:HB3	1.99	0.43
9:2:604:A:N3	9:2:639:C:O2'	2.52	0.43
9:2:610:G:H2'	9:2:611:G:H8	1.83	0.43
9:2:1844:U:H2'	9:2:1845:A:C8	2.53	0.43
19:I:86:LYS:HB2	19:I:86:LYS:HE3	1.87	0.43
20:J:165:GLN:HE22	20:J:195:LEU:HD11	1.84	0.43
22:L:21:MET:HE2	22:L:21:MET:HB3	1.93	0.43
22:L:58:VAL:HB	22:L:72:THR:HG23	2.01	0.43
29:S:99:ASP:HA	29:S:100:PRO:HD3	1.91	0.43
34:X:15:ASN:HD21	34:X:71:LYS:HG3	1.83	0.43
35:Y:70:VAL:HG11	35:Y:94:ILE:HD13	2.01	0.43
43:g:94:LYS:HA	43:g:94:LYS:HD3	1.77	0.43
45:i:61:C:H2'	45:i:62:A:H8	1.84	0.43
1:o:522:GLN:O	1:o:526:MET:HB3	2.19	0.43
2:p:375:LYS:HG3	2:p:408:LEU:HD13	2.01	0.43
2:p:687:LEU:HD21	2:p:717:GLN:HE21	1.82	0.43
6:t:182:ASP:HB3	6:t:186:GLN:HG3	2.01	0.43
9:2:387:C:H2'	9:2:388:U:H6	1.84	0.43
9:2:437:G:N2	9:2:1801:A:OP1	2.42	0.43
9:2:639:C:H2'	9:2:640:A:H8	1.83	0.43
9:2:1083:A:N7	9:2:1841:C:O2'	2.49	0.43
9:2:1096:G:N2	9:2:1136:U:O2	2.42	0.43
9:2:1275:G:N2	9:2:1506:A:OP2	2.35	0.43
9:2:1454:A:H3'	29:S:5:ARG:HH21	1.82	0.43
9:2:1692:U:H2'	9:2:1693:G:C8	2.54	0.43
10:3:528:C:O2	30:T:108:ARG:NH2	2.52	0.43
30:T:36:VAL:HG22	30:T:40:TYR:HD2	1.84	0.43
47:n:19:LYS:HD3	47:n:19:LYS:HA	1.69	0.43
1:o:93:TYR:HE1	1:o:180:GLN:HG2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:398:PHE:HB3	1:o:512:GLN:HE22	1.84	0.42
2:p:687:LEU:HD13	2:p:737:VAL:HG11	1.99	0.42
9:2:17:C:H4'	9:2:1166:G:C8	2.54	0.42
9:2:975:G:H4'	26:P:32:HIS:CE1	2.54	0.42
17:G:47:LYS:HA	17:G:47:LYS:HD3	1.84	0.42
31:U:33:TRP:HE3	31:U:37:VAL:HG21	1.84	0.42
46:j:101:LYS:HA	46:j:101:LYS:HD2	1.82	0.42
1:o:520:ARG:HD2	5:s:244:GLN:OE1	2.19	0.42
2:p:419:PHE:HA	2:p:429:GLU:HG2	2.02	0.42
6:t:32:TYR:O	6:t:36:GLN:HG3	2.19	0.42
9:2:345:U:H5"	16:F:37:LYS:HG2	2.01	0.42
15:E:138:VAL:HG12	15:E:142:LEU:HD11	2.00	0.42
24:N:56:CYS:SG	24:N:57:ASP:N	2.92	0.42
36:Z:110:ARG:NE	36:Z:113:ARG:HH21	2.17	0.42
1:o:576:GLU:HG2	5:s:112:ILE:HG12	2.02	0.42
2:p:603:PRO:HA	2:p:606:GLN:HB2	2.02	0.42
3:q:39:GLN:HA	3:q:42:LEU:HB2	2.00	0.42
3:q:255:ARG:HH21	3:q:292:ILE:HB	1.83	0.42
4:r:122:ILE:HG12	4:r:193:TYR:CE1	2.54	0.42
5:s:50:ILE:HG12	5:s:152:TYR:CE2	2.54	0.42
9:2:640:A:H2'	9:2:641:A:C8	2.54	0.42
9:2:981:A:H2'	9:2:982:G:C8	2.54	0.42
9:2:1179:G:N2	9:2:1182:A:OP2	2.46	0.42
9:2:1406:G:H2'	9:2:1407:U:H6	1.85	0.42
9:2:1854:U:H2'	9:2:1855:G:H8	1.84	0.42
13:C:47:THR:OG1	13:C:65:ARG:NH2	2.42	0.42
15:E:101:GLN:HG3	15:E:126:ILE:HD11	2.01	0.42
18:H:116:LYS:NZ	18:H:119:LYS:O	2.49	0.42
19:I:118:ARG:HD3	19:I:118:ARG:HA	1.79	0.42
21:K:33:GLY:HA3	42:f:111:TYR:CG	2.54	0.42
27:Q:17:TYR:HB3	27:Q:25:LEU:HD11	2.02	0.42
1:o:267:PRO:HA	1:o:270:GLN:HE21	1.85	0.42
4:r:317:LYS:HB3	4:r:321:ASP:HA	2.02	0.42
6:t:62:GLN:OE1	6:t:64:THR:OG1	2.33	0.42
9:2:954:U:O2	26:P:55:ARG:NH2	2.53	0.42
15:E:106:ARG:O	15:E:110:LEU:HB2	2.19	0.42
16:F:44:LEU:HD13	16:F:72:ILE:HD11	2.01	0.42
18:H:3:LEU:HG	18:H:111:LEU:HD21	2.02	0.42
20:J:151:GLU:HA	20:J:154:LYS:HD2	2.01	0.42
20:J:160:SER:O	20:J:164:GLU:HG2	2.19	0.42
21:K:64:ASP:OD1	21:K:64:ASP:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:p:690:ALA:O	2:p:694:GLU:HB2	2.19	0.42
9:2:145:G:H2'	9:2:146:G:C8	2.54	0.42
9:2:637:U:O2	42:f:129:ASN:ND2	2.46	0.42
9:2:1092:G:H2'	9:2:1093:A:H8	1.84	0.42
9:2:1650:A:H5"	28:R:139:ALA:HB2	2.00	0.42
23:M:90:ARG:HD3	23:M:109:MET:SD	2.60	0.42
30:T:118:ARG:HD3	30:T:123:LEU:HD21	2.02	0.42
37:a:99:LEU:HD11	37:a:102:LYS:HB2	2.01	0.42
1:o:86:LEU:HG	1:o:172:ARG:HD2	2.01	0.42
1:o:159:GLN:HB2	1:o:173:LEU:HD22	2.00	0.42
1:o:205:LEU:O	1:o:209:GLN:NE2	2.52	0.42
1:o:442:GLN:HB2	1:o:511:LEU:HD22	2.01	0.42
2:p:423:ASN:ND2	2:p:432:GLN:OE1	2.53	0.42
2:p:578:LEU:HD13	2:p:615:GLN:HE21	1.85	0.42
4:r:237:VAL:HB	4:r:255:LEU:HD11	2.01	0.42
11:A:33:GLN:HB3	11:A:78:LEU:HD11	2.00	0.42
21:K:95:ASP:OD1	21:K:95:ASP:N	2.50	0.42
28:R:60:LYS:HD2	28:R:60:LYS:HA	1.81	0.42
28:R:62:ARG:HD2	28:R:108:ILE:HD11	2.02	0.42
35:Y:86:PRO:HD2	35:Y:130:LEU:HD23	2.00	0.42
38:b:93:LYS:HB3	38:b:93:LYS:HE3	1.81	0.42
44:h:35:SER:OG	44:h:36:ARG:N	2.53	0.42
1:o:532:LYS:HA	1:o:532:LYS:HD3	1.70	0.42
4:r:274:LYS:HA	4:r:274:LYS:HD3	1.81	0.42
6:t:157:LEU:HD21	7:u:494:LYS:HE2	2.02	0.42
7:u:225:HIS:HA	7:u:228:LEU:HD12	2.02	0.42
7:u:458:SER:OG	7:u:461:ARG:NH2	2.52	0.42
9:2:35:C:H5"	9:2:579:C:H5"	2.02	0.42
9:2:913:A:N6	19:I:119:SER:O	2.52	0.42
9:2:927:C:H2'	9:2:928:G:H8	1.84	0.42
9:2:1746:U:H4'	18:H:65:GLN:HE21	1.84	0.42
15:E:25:LEU:O	15:E:29:LEU:HB2	2.19	0.42
24:N:23:LYS:HD2	24:N:23:LYS:HA	1.86	0.42
27:Q:21:ASP:HB3	27:Q:24:GLN:HG3	2.02	0.42
27:Q:25:LEU:HD21	27:Q:36:LEU:HD23	2.02	0.42
44:h:216:ALA:O	44:h:230:LEU:N	2.40	0.42
2:p:402:LEU:HD11	2:p:478:GLN:HE21	1.84	0.42
7:u:486:PHE:O	7:u:489:GLN:N	2.51	0.42
9:2:527:C:H2'	9:2:528:A:C8	2.54	0.42
9:2:594:A:N1	9:2:642:U:O2'	2.48	0.42
9:2:1410:C:H2'	9:2:1411:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:B:68:ILE:HG23	12:B:120:ARG:NH2	2.34	0.42
14:D:81:ILE:HA	14:D:81:ILE:HD13	1.80	0.42
15:E:62:LYS:HD2	15:E:62:LYS:HA	1.77	0.42
16:F:66:MET:SD	16:F:66:MET:N	2.92	0.42
17:G:20:PHE:HZ	17:G:50:PRO:HG3	1.85	0.42
22:L:41:PRO:HD2	22:L:44:HIS:CG	2.55	0.42
31:U:104:LEU:HD13	31:U:121:ARG:HG3	2.02	0.42
1:o:247:GLN:HE21	1:o:247:GLN:HB2	1.66	0.42
1:o:250:PHE:HA	1:o:253:VAL:HG12	2.02	0.42
4:r:119:LEU:HD21	4:r:233:ILE:HB	2.01	0.42
7:u:263:HIS:HA	7:u:266:TYR:HB2	2.02	0.42
7:u:353:THR:HG21	7:u:357:TYR:HB2	2.01	0.42
9:2:1711:U:H2'	9:2:1712:A:C8	2.55	0.42
15:E:143:ARG:HD2	15:E:143:ARG:HA	1.78	0.42
23:M:99:TYR:O	23:M:101:ARG:N	2.52	0.42
26:P:63:LYS:HA	26:P:63:LYS:HD3	1.88	0.42
26:P:136:PRO:HB3	26:P:139:SER:HB3	2.02	0.42
30:T:91:LYS:HD3	30:T:91:LYS:HA	1.91	0.42
31:U:35:ASP:OD1	31:U:35:ASP:N	2.48	0.42
37:a:69:THR:HG22	37:a:71:ALA:H	1.85	0.42
44:h:119:GLN:OE1	44:h:179:LEU:HD21	2.20	0.42
44:h:124:SER:OG	44:h:126:ASP:O	2.38	0.42
1:o:123:THR:O	1:o:127:VAL:HG23	2.19	0.42
2:p:500:CYS:HB3	2:p:564:ILE:HG21	2.01	0.42
2:p:525:PRO:HB2	2:p:528:GLY:H	1.85	0.42
2:p:667:ARG:HD3	2:p:668:ARG:HE	1.85	0.42
5:s:107:LEU:HA	5:s:110:VAL:HG22	2.00	0.42
5:s:126:GLY:HA3	5:s:331:LYS:HD3	2.01	0.42
5:s:239:LEU:HG	5:s:243:LEU:HD12	2.00	0.42
5:s:288:ARG:HD2	5:s:288:ARG:HA	1.78	0.42
9:2:1337:C:H2'	9:2:1338:G:H8	1.84	0.42
15:E:74:GLN:HB3	15:E:84:VAL:HG11	2.02	0.42
16:F:132:GLY:N	16:F:136:ILE:O	2.37	0.42
16:F:188:ASN:HB3	16:F:191:ARG:HD3	2.01	0.42
28:R:32:ILE:HG13	28:R:68:ILE:HD12	2.02	0.42
32:V:69:PRO:O	41:e:40:ARG:NH2	2.52	0.42
44:h:78:ALA:HB3	44:h:90:TRP:HB2	2.02	0.42
3:q:138:GLN:HE22	3:q:144:TYR:HB3	1.85	0.41
3:q:165:ALA:O	3:q:169:LEU:HG	2.19	0.41
9:2:1468:C:H2'	9:2:1469:A:C8	2.55	0.41
9:2:1736:G:H2'	9:2:1737:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:3:526:G:H3'	10:3:527:G:H8	1.85	0.41
12:B:166:LYS:HE2	12:B:166:LYS:HB3	1.75	0.41
14:D:256:TRP:CE2	34:X:68:ARG:HG2	2.55	0.41
16:F:43:PRO:HD2	16:F:46:ILE:HG13	2.01	0.41
19:I:95:ILE:HG23	19:I:132:ASP:HB2	2.02	0.41
25:O:27:LYS:HD3	25:O:27:LYS:HA	1.74	0.41
28:R:130:LYS:NZ	28:R:134:GLY:O	2.48	0.41
32:V:51:LYS:HD3	32:V:90:ASP:HB2	2.02	0.41
43:g:92:LYS:HE2	43:g:92:LYS:HB2	1.72	0.41
2:p:736:HIS:HB2	2:p:760:LYS:HZ3	1.85	0.41
3:q:7:THR:O	3:q:11:ALA:N	2.53	0.41
4:r:107:PRO:HG3	8:v:104:GLN:OE1	2.19	0.41
4:r:174:LYS:HE3	4:r:174:LYS:HB3	1.92	0.41
7:u:334:ARG:HD2	7:u:334:ARG:HA	1.70	0.41
9:2:1662:U:O4	9:2:1663:A:N6	2.52	0.41
12:B:120:ARG:HD3	14:D:266:TYR:HB2	2.01	0.41
13:C:181:LEU:O	13:C:185:VAL:HG23	2.19	0.41
18:H:221:LYS:HA	18:H:221:LYS:HD2	1.83	0.41
20:J:191:GLU:HA	20:J:195:LEU:HD22	2.03	0.41
2:p:347:ARG:HD3	2:p:350:GLN:HE22	1.85	0.41
2:p:558:LYS:HE3	2:p:558:LYS:HB3	1.64	0.41
2:p:653:ARG:NH1	2:p:657:GLU:OE2	2.53	0.41
3:q:25:PHE:HB3	3:q:44:LEU:HD21	2.01	0.41
5:s:180:LYS:HG2	5:s:189:LYS:HD2	2.01	0.41
9:2:1265:A:O2'	9:2:1327:G:OP2	2.30	0.41
14:D:58:LYS:HE2	14:D:58:LYS:HB2	1.87	0.41
21:K:108:ARG:HH22	21:K:154:GLN:HB2	1.85	0.41
25:O:140:LYS:HD2	25:O:140:LYS:HA	1.81	0.41
27:Q:64:LYS:HE3	27:Q:94:VAL:HG22	2.03	0.41
29:S:24:LEU:HD23	29:S:24:LEU:HA	1.93	0.41
44:h:270:LEU:HD13	44:h:310:TRP:CD1	2.56	0.41
1:o:337:ASP:HB3	1:o:340:ARG:HD2	2.02	0.41
1:o:499:TYR:CE1	1:o:503:GLU:HG2	2.55	0.41
2:p:442:GLY:O	2:p:446:THR:HG23	2.20	0.41
2:p:550:ARG:HB3	3:q:16:ARG:HH22	1.84	0.41
6:t:47:ASN:HA	6:t:50:VAL:HG23	2.02	0.41
7:u:284:LEU:HD23	7:u:284:LEU:HA	1.90	0.41
8:v:293:SER:HA	8:v:329:GLN:HA	2.01	0.41
9:2:171:A:OP2	18:H:137:ARG:NH2	2.41	0.41
9:2:974:C:H2'	9:2:975:G:H8	1.85	0.41
9:2:1013:U:H5"	9:2:1129:G:H1'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:1549:U:OP1	41:e:34:TYR:OH	2.31	0.41
15:E:32:ASP:OD1	15:E:57:ASN:ND2	2.53	0.41
16:F:102:ILE:HD13	16:F:239:PRO:HD3	2.01	0.41
20:J:190:LEU:HD22	20:J:194:GLU:HB3	2.02	0.41
22:L:48:ALA:O	22:L:51:SER:OG	2.28	0.41
23:M:79:LYS:HE2	23:M:79:LYS:HB2	1.86	0.41
26:P:98:ARG:NH2	26:P:100:THR:O	2.54	0.41
31:U:82:ARG:HE	31:U:82:ARG:HB3	1.70	0.41
32:V:106:ILE:HD12	32:V:106:ILE:HA	1.89	0.41
39:c:8:LEU:HD12	39:c:8:LEU:HA	1.87	0.41
44:h:10:THR:O	44:h:12:LYS:NZ	2.48	0.41
5:s:76:LEU:HD23	5:s:76:LEU:HA	1.91	0.41
6:t:184:SER:HB2	7:u:509:LEU:HB2	2.02	0.41
9:2:115:U:H2'	9:2:116:U:C6	2.55	0.41
9:2:792:C:H2'	9:2:793:G:C8	2.55	0.41
9:2:1183:A:H2'	9:2:1184:G:H8	1.84	0.41
9:2:1221:G:O2'	9:2:1676:U:O2	2.33	0.41
9:2:1648:G:H5"	28:R:125:ARG:HG2	2.02	0.41
20:J:140:LYS:HD2	20:J:140:LYS:HA	1.77	0.41
44:h:11:LEU:HD21	44:h:52:TYR:HD2	1.85	0.41
1:o:250:PHE:HA	1:o:250:PHE:HD1	1.73	0.41
1:o:305:GLU:HA	1:o:308:LYS:HE2	2.03	0.41
3:q:254:LEU:HD11	3:q:277:LEU:HD13	2.02	0.41
8:v:87:CYS:O	8:v:91:VAL:HG23	2.20	0.41
9:2:656:G:N2	9:2:663:C:H5"	2.35	0.41
12:B:77:ILE:HG12	12:B:99:ILE:HB	2.03	0.41
12:B:170:SER:O	12:B:174:MET:HG3	2.20	0.41
14:D:66:LEU:O	14:D:70:VAL:HG23	2.20	0.41
14:D:207:ALA:HB3	14:D:210:PRO:HD2	2.02	0.41
14:D:214:LEU:HD22	14:D:219:ILE:HD11	2.02	0.41
15:E:7:LYS:HA	15:E:7:LYS:HD3	1.76	0.41
16:F:47:PHE:HA	16:F:51:ARG:HG3	2.02	0.41
16:F:163:ASP:OD2	16:F:166:THR:OG1	2.38	0.41
17:G:178:ILE:O	17:G:182:LYS:HG2	2.20	0.41
24:N:93:LYS:HB2	24:N:93:LYS:HE3	1.82	0.41
27:Q:61:ARG:HH12	27:Q:89:MET:HE3	1.86	0.41
29:S:11:LYS:HB2	29:S:11:LYS:HE2	1.91	0.41
31:U:51:ASN:HB3	31:U:54:TYR:HD2	1.85	0.41
34:X:11:LEU:HA	34:X:14:ILE:HG22	2.01	0.41
35:Y:25:LYS:HD3	35:Y:25:LYS:HA	1.79	0.41
46:j:89:ARG:HB2	46:j:89:ARG:HE	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:p:867:VAL:HB	5:s:265:ARG:HE	1.86	0.41
3:q:376:ARG:HD3	7:u:481:LEU:HD22	2.03	0.41
7:u:277:LEU:HG	7:u:305:TYR:HB3	2.03	0.41
8:v:24:SER:HA	8:v:31:GLU:HB2	2.03	0.41
8:v:218:PHE:CZ	8:v:320:MET:HG3	2.54	0.41
9:2:419:G:N2	9:2:661:U:O2	2.53	0.41
9:2:1062:A:H2'	9:2:1063:C:H6	1.86	0.41
12:B:89:LYS:HA	12:B:89:LYS:HD3	1.87	0.41
12:B:198:MET:HG3	12:B:200:ASP:H	1.85	0.41
16:F:208:VAL:HG21	16:F:225:ILE:HD13	2.02	0.41
18:H:30:LYS:HA	18:H:30:LYS:HD3	1.81	0.41
18:H:45:TRP:HZ3	18:H:113:ILE:HD11	1.86	0.41
18:H:143:LYS:O	18:H:143:LYS:NZ	2.39	0.41
23:M:120:VAL:HG22	23:M:145:VAL:HG21	2.02	0.41
1:o:533:ALA:HA	1:o:537:ILE:HG13	2.03	0.41
5:s:170:THR:HG22	5:s:172:LYS:H	1.85	0.41
8:v:20:ALA:HA	8:v:23:LYS:HG3	2.03	0.41
9:2:5:U:H2'	9:2:6:G:C8	2.54	0.41
9:2:909:G:H2'	9:2:910:G:H8	1.86	0.41
9:2:927:C:H2'	9:2:928:G:C8	2.56	0.41
12:B:141:ASN:ND2	14:D:85:SER:O	2.54	0.41
15:E:25:LEU:HD23	15:E:25:LEU:HA	1.78	0.41
16:F:22:LYS:HB2	16:F:22:LYS:HE3	1.82	0.41
16:F:72:ILE:HB	16:F:77:ARG:HG3	2.03	0.41
36:Z:111:LYS:HE2	36:Z:111:LYS:HB3	1.78	0.41
44:h:226:HIS:NE2	44:h:229:THR:OG1	2.43	0.41
1:o:485:ASP:OD2	2:p:803:SER:N	2.52	0.41
2:p:343:LYS:HB3	39:c:65:GLN:HG2	2.02	0.41
2:p:431:LEU:HD23	2:p:431:LEU:HA	1.85	0.41
2:p:608:LEU:O	2:p:612:THR:HG23	2.21	0.41
2:p:783:ILE:O	2:p:787:SER:HB3	2.21	0.41
4:r:351:ILE:HG21	5:s:347:LEU:HD22	2.01	0.41
7:u:278:LEU:HD23	7:u:278:LEU:HA	1.88	0.41
7:u:405:ASP:HB3	7:u:408:VAL:H	1.86	0.41
8:v:61:GLU:H	8:v:61:GLU:HG2	1.73	0.41
8:v:227:LYS:O	8:v:230:LYS:N	2.53	0.41
9:2:98:C:H2'	9:2:426:A:H4'	2.02	0.41
9:2:104:A:H62	9:2:356:C:H5	1.68	0.41
9:2:382:C:H2'	9:2:383:G:H8	1.86	0.41
9:2:385:G:OP2	9:2:386:C:N4	2.49	0.41
9:2:942:G:N2	26:P:137:SER:O	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:1408:U:H2'	9:2:1409:A:C8	2.56	0.41
9:2:1413:G:H2'	9:2:1414:A:C8	2.56	0.41
9:2:1617:G:N2	9:2:1619:A:H3'	2.36	0.41
11:A:82:ARG:NH1	42:f:80:ALA:O	2.54	0.41
12:B:122:LEU:HB3	12:B:144:THR:HG22	2.03	0.41
12:B:205:ARG:HD3	12:B:205:ARG:HA	1.84	0.41
13:C:105:LEU:HD12	13:C:105:LEU:HA	1.76	0.41
16:F:71:LYS:HA	16:F:76:VAL:HA	2.02	0.41
17:G:30:ILE:HB	17:G:36:GLN:HG3	2.03	0.41
20:J:87:ASN:HB2	20:J:90:LEU:HG	2.03	0.41
22:L:47:LYS:HD2	22:L:47:LYS:HA	1.82	0.41
24:N:58:GLU:HB2	24:N:61:TYR:HB3	2.03	0.41
26:P:106:LYS:HB2	38:b:69:VAL:HG21	2.01	0.41
28:R:51:LEU:HD23	28:R:51:LEU:HA	1.77	0.41
34:X:83:LEU:HD23	34:X:83:LEU:HA	1.92	0.41
34:X:102:ILE:H	34:X:113:HIS:CD2	2.39	0.41
37:a:108:ILE:HD13	37:a:108:ILE:HG21	1.94	0.41
42:f:91:LYS:HA	42:f:91:LYS:HD3	1.80	0.41
44:h:248:LEU:HD23	44:h:261:LEU:HG	2.02	0.41
46:j:39:TYR:HB3	46:j:42:ILE:HG12	2.03	0.41
2:p:463:ASP:HA	2:p:464:PRO:HD3	1.94	0.41
9:2:85:A:H2'	9:2:86:C:H6	1.85	0.41
9:2:587:A:O4'	9:2:592:C:N4	2.53	0.41
9:2:1010:G:H2'	9:2:1011:A:C8	2.56	0.41
9:2:1036:A:N3	9:2:1844:U:O2'	2.52	0.41
17:G:41:VAL:HG13	17:G:42:LYS:HG3	2.03	0.41
19:I:145:ARG:HD3	34:X:51:GLU:HB2	2.02	0.41
23:M:48:LYS:O	23:M:52:GLU:HG3	2.21	0.41
27:Q:60:LEU:O	27:Q:64:LYS:HG2	2.21	0.41
44:h:127:LYS:H	44:h:127:LYS:HG2	1.71	0.41
46:j:64:ARG:HD3	46:j:64:ARG:HA	1.78	0.41
1:o:327:LEU:HA	1:o:327:LEU:HD23	1.82	0.40
2:p:736:HIS:CE1	2:p:759:GLU:HB3	2.56	0.40
3:q:114:PHE:CE2	3:q:130:THR:HA	2.56	0.40
4:r:322:ASN:O	4:r:326:ARG:HG2	2.20	0.40
8:v:143:GLU:O	8:v:146:GLN:HG2	2.22	0.40
8:v:241:LEU:HD23	8:v:241:LEU:HA	1.92	0.40
9:2:928:G:O2'	39:c:67:THR:O	2.35	0.40
9:2:1005:G:OP2	13:C:162:ARG:NH2	2.54	0.40
9:2:1154:U:H6	14:D:194:ARG:HD2	1.85	0.40
12:B:7:VAL:HG23	12:B:8:LEU:HG	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:D:66:LEU:HD12	14:D:66:LEU:HA	1.86	0.40
14:D:151:ILE:O	14:D:155:ILE:HG13	2.21	0.40
20:J:94:LYS:HA	20:J:94:LYS:HD3	1.87	0.40
28:R:131:LYS:HB2	28:R:140:ARG:HH22	1.85	0.40
46:j:36:LEU:H	46:j:41:ASN:HA	1.86	0.40
1:o:244:GLU:O	1:o:248:GLU:HG2	2.21	0.40
1:o:317:ARG:HA	1:o:320:THR:HG22	2.04	0.40
2:p:347:ARG:HD2	2:p:384:ASP:HB3	2.02	0.40
3:q:406:GLU:OE2	3:q:410:SER:OG	2.39	0.40
5:s:130:THR:HG22	5:s:132:ALA:H	1.86	0.40
9:2:617:G:N7	35:Y:67:ARG:NH1	2.69	0.40
9:2:1805:G:H2'	9:2:1806:A:C8	2.56	0.40
13:C:121:ILE:HD12	13:C:207:LEU:HD21	2.03	0.40
15:E:65:ARG:O	15:E:69:LEU:HD12	2.21	0.40
18:H:50:VAL:HG23	18:H:113:ILE:HD13	2.04	0.40
20:J:36:THR:HG21	20:J:60:LEU:HD12	2.02	0.40
20:J:191:GLU:O	23:M:19:ASN:ND2	2.36	0.40
21:K:114:VAL:HG13	21:K:126:ALA:HB1	2.03	0.40
25:O:84:LEU:HD23	25:O:89:TYR:HB2	2.02	0.40
37:a:58:LEU:O	37:a:62:VAL:HB	2.22	0.40
39:c:33:MET:HG3	39:c:46:VAL:HG23	2.03	0.40
1:o:198:CYS:O	1:o:202:ARG:HG3	2.21	0.40
1:o:502:ARG:HH12	2:p:798:VAL:HG12	1.86	0.40
5:s:50:ILE:H	5:s:50:ILE:HG13	1.78	0.40
6:t:115:GLN:NE2	7:u:491:LEU:HD11	2.36	0.40
9:2:84:A:H3'	9:2:85:A:H8	1.86	0.40
9:2:96:C:O2	9:2:473:A:O2'	2.35	0.40
9:2:1579:A:O2'	9:2:1581:C:OP2	2.32	0.40
12:B:30:LEU:HD22	12:B:47:TYR:CZ	2.55	0.40
15:E:137:VAL:HG22	15:E:151:LYS:HG2	2.03	0.40
21:K:113:GLN:HG3	21:K:149:VAL:HG21	2.03	0.40
22:L:3:MET:HE1	22:L:48:ALA:HB2	2.03	0.40
36:Z:110:ARG:NH1	36:Z:126:GLY:O	2.54	0.40
1:o:50:ILE:H	1:o:50:ILE:HG13	1.57	0.40
2:p:621:PHE:CD2	2:p:685:VAL:HG13	2.56	0.40
3:q:76:THR:HB	3:q:79:ALA:HB3	2.03	0.40
3:q:235:LEU:HD12	3:q:235:LEU:HA	1.97	0.40
5:s:304:LEU:HD23	5:s:304:LEU:HA	1.84	0.40
6:t:91:GLN:O	6:t:95:GLU:HG3	2.22	0.40
7:u:267:LYS:HB2	7:u:267:LYS:HE2	1.89	0.40
7:u:339:ILE:H	7:u:339:ILE:HG13	1.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:u:410:GLU:HA	7:u:413:PHE:CE1	2.56	0.40
8:v:292:ILE:HB	8:v:331:LYS:HG2	2.04	0.40
14:D:169:TYR:HE2	33:W:9:VAL:HG21	1.86	0.40
17:G:18:LYS:HD2	17:G:18:LYS:HA	1.95	0.40
17:G:107:ASN:HA	17:G:108:PRO:HD3	1.94	0.40
19:I:107:LYS:HE3	19:I:107:LYS:HB2	1.85	0.40
27:Q:81:ARG:NH2	27:Q:117:GLY:O	2.54	0.40
35:Y:101:LEU:HB3	35:Y:124:LYS:HB2	2.03	0.40
35:Y:107:ARG:HB3	35:Y:110:HIS:HB3	2.04	0.40
44:h:178:ASN:HD21	44:h:185:LYS:HB2	1.86	0.40
1:o:554:VAL:HG21	5:s:219:GLU:HB3	2.04	0.40
1:o:579:LYS:HE2	1:o:579:LYS:HB2	1.94	0.40
3:q:71:ARG:HD3	3:q:71:ARG:HA	1.85	0.40
8:v:56:ASP:N	8:v:56:ASP:OD1	2.53	0.40
9:2:913:A:OP2	19:I:99:ARG:NE	2.50	0.40
9:2:933:G:H1'	9:2:1001:A:H5'	2.04	0.40
9:2:1255:G:OP1	9:2:1256:G:O2'	2.27	0.40
13:C:34:LYS:HD2	13:C:95:ASN:ND2	2.37	0.40
18:H:132:ARG:HB3	18:H:133:LEU:HD12	2.03	0.40
19:I:101:LEU:HD12	19:I:116:ARG:HG3	2.03	0.40
21:K:47:LYS:HD2	21:K:47:LYS:HA	1.94	0.40
34:X:62:VAL:HG11	39:c:8:LEU:HD13	2.02	0.40
47:n:10:MET:HE2	47:n:10:MET:HB2	1.90	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	o	598/1362 (44%)	561 (94%)	35 (6%)	2 (0%)	37 68
2	p	556/843 (66%)	533 (96%)	20 (4%)	3 (0%)	25 58

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	q	418/445 (94%)	387 (93%)	26 (6%)	5 (1%)	11	38
4	r	270/364 (74%)	253 (94%)	13 (5%)	4 (2%)	8	33
5	s	322/352 (92%)	299 (93%)	19 (6%)	4 (1%)	11	38
6	t	214/218 (98%)	206 (96%)	7 (3%)	1 (0%)	25	58
7	u	371/564 (66%)	348 (94%)	18 (5%)	5 (1%)	10	36
8	v	364/374 (97%)	344 (94%)	16 (4%)	4 (1%)	12	39
11	A	97/144 (67%)	96 (99%)	1 (1%)	0	100	100
12	B	215/295 (73%)	204 (95%)	10 (5%)	1 (0%)	25	58
13	C	211/264 (80%)	202 (96%)	9 (4%)	0	100	100
14	D	219/221 (99%)	214 (98%)	5 (2%)	0	100	100
15	E	226/281 (80%)	224 (99%)	2 (1%)	0	100	100
16	F	260/263 (99%)	254 (98%)	6 (2%)	0	100	100
17	G	189/204 (93%)	182 (96%)	7 (4%)	0	100	100
18	H	235/249 (94%)	231 (98%)	4 (2%)	0	100	100
19	I	181/432 (42%)	179 (99%)	2 (1%)	0	100	100
20	J	205/208 (99%)	194 (95%)	11 (5%)	0	100	100
21	K	183/194 (94%)	180 (98%)	3 (2%)	0	100	100
22	L	94/149 (63%)	86 (92%)	8 (8%)	0	100	100
23	M	149/158 (94%)	142 (95%)	7 (5%)	0	100	100
24	N	115/132 (87%)	112 (97%)	3 (3%)	0	100	100
25	O	147/151 (97%)	144 (98%)	3 (2%)	0	100	100
26	P	134/168 (80%)	126 (94%)	8 (6%)	0	100	100
27	Q	118/145 (81%)	111 (94%)	7 (6%)	0	100	100
28	R	140/172 (81%)	135 (96%)	5 (4%)	0	100	100
29	S	130/135 (96%)	130 (100%)	0	0	100	100
30	T	142/152 (93%)	138 (97%)	4 (3%)	0	100	100
31	U	139/145 (96%)	134 (96%)	4 (3%)	1 (1%)	19	51
32	V	98/119 (82%)	97 (99%)	1 (1%)	0	100	100
33	W	81/83 (98%)	80 (99%)	1 (1%)	0	100	100
34	X	127/130 (98%)	123 (97%)	4 (3%)	0	100	100
35	Y	139/143 (97%)	136 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	Z	122/131 (93%)	120 (98%)	2 (2%)	0	100	100
37	a	75/124 (60%)	74 (99%)	1 (1%)	0	100	100
38	b	99/101 (98%)	96 (97%)	3 (3%)	0	100	100
39	c	81/84 (96%)	78 (96%)	3 (4%)	0	100	100
40	d	65/69 (94%)	64 (98%)	1 (2%)	0	100	100
41	e	53/56 (95%)	52 (98%)	1 (2%)	0	100	100
42	f	55/133 (41%)	54 (98%)	1 (2%)	0	100	100
43	g	66/188 (35%)	66 (100%)	0	0	100	100
44	h	311/317 (98%)	298 (96%)	13 (4%)	0	100	100
46	j	180/315 (57%)	178 (99%)	1 (1%)	1 (1%)	22	53
47	n	23/25 (92%)	23 (100%)	0	0	100	100
All	All	8217/10802 (76%)	7888 (96%)	298 (4%)	31 (0%)	32	63

All (31) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	o	21	VAL
2	p	416	PRO
3	q	51	VAL
3	q	269	LYS
4	r	129	ARG
4	r	243	VAL
4	r	338	ILE
5	s	154	PRO
5	s	222	SER
6	t	201	ILE
7	u	486	PHE
7	u	489	GLN
8	v	116	ASN
8	v	117	THR
7	u	380	MET
8	v	334	VAL
12	B	12	GLU
2	p	491	GLU
5	s	112	ILE
31	U	119	TRP
4	r	314	LEU
46	j	59	ILE

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Mol	Chain	Res	Type
3	q	50	MET
3	q	221	VAL
1	o	421	GLU
5	s	53	TYR
7	u	291	ILE
8	v	335	SER
2	p	434	VAL
3	q	156	VAL
7	u	523	ILE

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	o	551/1245 (44%)	543 (98%)	8 (2%)	60	80
2	p	503/750 (67%)	491 (98%)	12 (2%)	44	70
3	q	384/406 (95%)	379 (99%)	5 (1%)	65	82
4	r	239/282 (85%)	238 (100%)	1 (0%)	89	94
5	s	293/311 (94%)	291 (99%)	2 (1%)	81	90
6	t	190/193 (98%)	186 (98%)	4 (2%)	48	72
7	u	342/516 (66%)	340 (99%)	2 (1%)	84	91
8	v	327/335 (98%)	323 (99%)	4 (1%)	67	83
11	A	84/123 (68%)	84 (100%)	0	100	100
12	B	180/245 (74%)	179 (99%)	1 (1%)	84	91
13	C	194/231 (84%)	194 (100%)	0	100	100
14	D	187/187 (100%)	185 (99%)	2 (1%)	70	84
15	E	190/232 (82%)	187 (98%)	3 (2%)	58	79
16	F	224/225 (100%)	224 (100%)	0	100	100
17	G	161/170 (95%)	159 (99%)	2 (1%)	67	83
18	H	207/218 (95%)	206 (100%)	1 (0%)	86	92
19	I	165/360 (46%)	165 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
20	J	179/180 (99%)	178 (99%)	1 (1%)	84 91
21	K	161/168 (96%)	159 (99%)	2 (1%)	67 83
22	L	87/125 (70%)	85 (98%)	2 (2%)	45 70
23	M	136/142 (96%)	134 (98%)	2 (2%)	60 80
24	N	99/108 (92%)	99 (100%)	0	100 100
25	O	130/131 (99%)	130 (100%)	0	100 100
26	P	106/130 (82%)	106 (100%)	0	100 100
27	Q	109/130 (84%)	108 (99%)	1 (1%)	75 88
28	R	117/140 (84%)	114 (97%)	3 (3%)	41 68
29	S	119/121 (98%)	118 (99%)	1 (1%)	79 89
30	T	125/132 (95%)	123 (98%)	2 (2%)	58 79
31	U	111/116 (96%)	111 (100%)	0	100 100
32	V	92/107 (86%)	92 (100%)	0	100 100
33	W	67/67 (100%)	67 (100%)	0	100 100
34	X	112/113 (99%)	111 (99%)	1 (1%)	75 88
35	Y	113/115 (98%)	113 (100%)	0	100 100
36	Z	107/113 (95%)	104 (97%)	3 (3%)	38 66
37	a	68/102 (67%)	68 (100%)	0	100 100
38	b	88/88 (100%)	88 (100%)	0	100 100
39	c	75/76 (99%)	75 (100%)	0	100 100
40	d	60/62 (97%)	60 (100%)	0	100 100
41	e	48/49 (98%)	48 (100%)	0	100 100
42	f	47/106 (44%)	47 (100%)	0	100 100
43	g	61/154 (40%)	61 (100%)	0	100 100
44	h	272/275 (99%)	268 (98%)	4 (2%)	60 80
46	j	90/280 (32%)	83 (92%)	7 (8%)	10 35
47	n	24/24 (100%)	24 (100%)	0	100 100
All	All	7224/9383 (77%)	7148 (99%)	76 (1%)	69 84

All (76) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	o	55	LEU

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Mol	Chain	Res	Type
1	o	86	LEU
1	o	123	THR
1	o	243	MET
1	o	294	SER
1	o	344	MET
1	o	395	GLU
1	o	440	LEU
2	p	360	ILE
2	p	372	VAL
2	p	458	ILE
2	p	475	ASP
2	p	504	LEU
2	p	507	ILE
2	p	591	MET
2	p	607	ILE
2	p	686	TYR
2	p	795	TYR
2	p	813	LEU
2	p	867	VAL
3	q	60	ASN
3	q	94	MET
3	q	243	LEU
3	q	286	TYR
3	q	362	MET
4	r	329	MET
5	s	104	MET
5	s	177	CYS
6	t	3	MET
6	t	7	MET
6	t	68	GLN
6	t	103	LEU
7	u	325	MET
7	u	377	MET
8	v	140	ILE
8	v	151	ILE
8	v	170	GLU
8	v	354	LEU
12	B	212	LYS
14	D	165	VAL
14	D	179	THR
15	E	59	LEU
15	E	103	GLU

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Mol	Chain	Res	Type
15	E	154	ASP
17	G	123	GLU
17	G	201	LYS
18	H	129	VAL
20	J	45	THR
21	K	47	LYS
21	K	58	ARG
22	L	28	HIS
22	L	72	THR
23	M	67	SER
23	M	82	MET
27	Q	75	VAL
28	R	12	VAL
28	R	33	LYS
28	R	41	MET
29	S	63	ARG
30	T	45	LEU
30	T	99	LEU
34	X	62	VAL
36	Z	10	ARG
36	Z	54	VAL
36	Z	84	LYS
44	h	45	LEU
44	h	102	VAL
44	h	189	ILE
44	h	303	THR
46	j	7	ARG
46	j	56	ILE
46	j	75	ARG
46	j	89	ARG
46	j	133	ARG
46	j	138	PHE
46	j	150	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (183) such sidechains are listed below:

Mol	Chain	Res	Type
1	o	79	GLN
1	o	120	ASN
1	o	159	GLN
1	o	166	ASN
1	o	179	GLN

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Mol	Chain	Res	Type
1	o	204	HIS
1	o	207	GLN
1	o	209	GLN
1	o	226	GLN
1	o	247	GLN
1	o	270	GLN
1	o	277	ASN
1	o	309	ASN
1	o	399	ASN
1	o	442	GLN
1	o	521	ASN
1	o	544	GLN
1	o	551	GLN
1	o	560	ASN
1	o	586	ASN
1	o	588	GLN
1	o	596	GLN
2	p	423	ASN
2	p	432	GLN
2	p	433	ASN
2	p	460	GLN
2	p	478	GLN
2	p	576	HIS
2	p	623	GLN
2	p	630	HIS
2	p	716	HIS
2	p	717	GLN
2	p	753	HIS
2	p	845	HIS
2	p	853	GLN
2	p	854	ASN
3	q	60	ASN
3	q	80	GLN
3	q	103	GLN
3	q	125	GLN
3	q	138	GLN
3	q	198	ASN
3	q	252	HIS
3	q	264	ASN
3	q	321	ASN
3	q	390	HIS
3	q	403	GLN

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Mol	Chain	Res	Type
4	r	159	HIS
4	r	160	ASN
4	r	175	ASN
4	r	227	GLN
4	r	300	GLN
4	r	308	GLN
4	r	371	ASN
5	s	100	GLN
5	s	207	ASN
5	s	212	ASN
5	s	228	HIS
5	s	271	GLN
5	s	273	GLN
5	s	276	GLN
5	s	285	ASN
5	s	322	GLN
5	s	352	ASN
6	t	22	ASN
6	t	25	ASN
6	t	94	GLN
6	t	119	GLN
6	t	124	ASN
6	t	200	ASN
7	u	199	GLN
7	u	218	ASN
7	u	229	ASN
7	u	241	ASN
7	u	361	ASN
7	u	368	HIS
7	u	402	GLN
7	u	452	GLN
7	u	453	GLN
7	u	499	ASN
7	u	514	GLN
7	u	546	GLN
8	v	65	ASN
8	v	199	GLN
8	v	258	ASN
8	v	272	GLN
8	v	273	ASN
8	v	298	GLN
8	v	329	GLN

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Mol	Chain	Res	Type
8	v	346	GLN
8	v	348	GLN
8	v	359	GLN
11	A	37	GLN
11	A	44	ASN
11	A	60	HIS
11	A	85	GLN
11	A	96	ASN
12	B	70	ASN
12	B	131	HIS
13	C	40	ASN
13	C	43	ASN
13	C	92	GLN
13	C	95	ASN
13	C	147	ASN
13	C	149	GLN
13	C	157	GLN
13	C	177	GLN
13	C	232	HIS
14	D	113	GLN
14	D	115	GLN
14	D	120	GLN
14	D	277	HIS
15	E	22	ASN
15	E	165	ASN
16	F	98	ASN
16	F	157	ASN
16	F	161	GLN
16	F	188	ASN
16	F	209	HIS
16	F	216	ASN
16	F	232	ASN
17	G	83	ASN
17	G	107	ASN
17	G	114	ASN
17	G	203	ASN
18	H	155	GLN
19	I	25	GLN
19	I	39	GLN
19	I	114	GLN
19	I	157	HIS
20	J	35	ASN

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Mol	Chain	Res	Type
20	J	44	HIS
20	J	52	ASN
20	J	146	GLN
20	J	165	GLN
21	K	75	ASN
21	K	124	HIS
22	L	39	ASN
23	M	18	GLN
23	M	108	ASN
23	M	141	ASN
24	N	28	HIS
25	O	62	GLN
25	O	69	ASN
26	P	38	ASN
26	P	94	HIS
26	P	103	ASN
27	Q	35	GLN
27	Q	79	HIS
28	R	48	GLN
28	R	80	GLN
29	S	62	GLN
30	T	10	GLN
30	T	134	GLN
31	U	10	ASN
32	V	81	GLN
33	W	29	HIS
34	X	5	ASN
34	X	56	HIS
34	X	90	GLN
34	X	113	HIS
35	Y	26	GLN
35	Y	73	GLN
35	Y	87	ASN
35	Y	97	ASN
36	Z	89	HIS
36	Z	106	GLN
36	Z	112	ASN
37	a	112	ASN
38	b	43	ASN
38	b	80	HIS
38	b	86	ASN
39	c	83	GLN

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Mol	Chain	Res	Type
40	d	7	GLN
40	d	29	GLN
41	e	10	HIS
41	e	26	ASN
41	e	45	GLN
42	f	88	GLN
43	g	93	HIS
44	h	159	ASN
44	h	178	ASN
44	h	191	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	3	87/89 (97%)	31 (35%)	0
45	i	74/75 (98%)	25 (33%)	0
9	2	1685/1870 (90%)	490 (29%)	6 (0%)
All	All	1846/2034 (90%)	546 (29%)	6 (0%)

All (546) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
9	2	2	A
9	2	4	C
9	2	9	U
9	2	17	C
9	2	20	G
9	2	25	A
9	2	33	G
9	2	41	G
9	2	46	A
9	2	49	C
9	2	56	G
9	2	58	C
9	2	62	G
9	2	65	C
9	2	66	G
9	2	67	C
9	2	68	A
9	2	71	G
9	2	72	C

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Mol	Chain	Res	Type
9	2	73	C
9	2	76	U
9	2	77	A
9	2	79	A
9	2	83	A
9	2	92	A
9	2	99	A
9	2	103	A
9	2	113	G
9	2	114	G
9	2	115	U
9	2	120	U
9	2	126	G
9	2	128	U
9	2	129	C
9	2	130	G
9	2	142	C
9	2	143	U
9	2	149	A
9	2	151	C
9	2	155	G
9	2	160	U
9	2	161	U
9	2	170	A
9	2	171	A
9	2	175	A
9	2	182	C
9	2	183	G
9	2	184	G
9	2	186	C
9	2	191	A
9	2	192	C
9	2	195	C
9	2	196	C
9	2	197	U
9	2	198	U
9	2	199	C
9	2	201	C
9	2	202	G
9	2	204	G
9	2	205	G
9	2	208	G

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Mol	Chain	Res	Type
9	2	215	G
9	2	291	G
9	2	292	A
9	2	294	U
9	2	298	G
9	2	302	A
9	2	305	U
9	2	306	C
9	2	307	G
9	2	308	G
9	2	310	C
9	2	319	C
9	2	320	G
9	2	321	C
9	2	322	C
9	2	323	C
9	2	330	G
9	2	331	C
9	2	332	G
9	2	340	C
9	2	342	C
9	2	343	A
9	2	356	C
9	2	357	C
9	2	361	U
9	2	362	C
9	2	364	A
9	2	367	U
9	2	368	U
9	2	369	C
9	2	370	G
9	2	372	U
9	2	381	C
9	2	385	G
9	2	386	C
9	2	391	C
9	2	392	A
9	2	393	U
9	2	398	A
9	2	399	C
9	2	400	C
9	2	407	G

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Mol	Chain	Res	Type
9	2	408	A
9	2	409	C
9	2	413	G
9	2	416	U
9	2	426	A
9	2	428	U
9	2	429	C
9	2	435	A
9	2	437	G
9	2	438	G
9	2	441	C
9	2	448	A
9	2	449	A
9	2	450	C
9	2	465	A
9	2	470	G
9	2	471	G
9	2	472	C
9	2	474	G
9	2	475	C
9	2	482	G
9	2	487	U
9	2	492	C
9	2	493	A
9	2	500	A
9	2	502	C
9	2	503	C
9	2	508	A
9	2	509	G
9	2	513	G
9	2	517	C
9	2	523	A
9	2	530	U
9	2	531	A
9	2	532	C
9	2	533	A
9	2	535	G
9	2	540	U
9	2	541	U
9	2	542	U
9	2	543	C
9	2	544	G

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Mol	Chain	Res	Type
9	2	545	A
9	2	546	G
9	2	547	G
9	2	548	C
9	2	549	C
9	2	550	C
9	2	554	A
9	2	556	U
9	2	559	G
9	2	561	A
9	2	562	U
9	2	563	G
9	2	568	C
9	2	569	A
9	2	574	A
9	2	583	A
9	2	588	G
9	2	589	G
9	2	590	A
9	2	591	U
9	2	592	C
9	2	593	C
9	2	594	A
9	2	600	G
9	2	604	A
9	2	606	G
9	2	607	U
9	2	608	C
9	2	614	C
9	2	617	G
9	2	621	C
9	2	627	U
9	2	628	A
9	2	632	C
9	2	634	A
9	2	635	G
9	2	643	A
9	2	644	G
9	2	650	A
9	2	660	C
9	2	663	C
9	2	669	A

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Mol	Chain	Res	Type
9	2	671	A
9	2	672	A
9	2	684	G
9	2	688	U
9	2	689	U
9	2	690	G
9	2	693	A
9	2	696	G
9	2	732	U
9	2	733	C
9	2	734	C
9	2	735	C
9	2	736	C
9	2	744	G
9	2	752	G
9	2	753	C
9	2	754	G
9	2	790	C
9	2	791	C
9	2	794	A
9	2	797	C
9	2	798	G
9	2	799	U
9	2	801	U
9	2	808	A
9	2	809	A
9	2	810	A
9	2	821	G
9	2	822	U
9	2	823	U
9	2	826	A
9	2	829	C
9	2	830	A
9	2	844	U
9	2	845	G
9	2	847	A
9	2	853	C
9	2	866	U
9	2	867	G
9	2	869	A
9	2	870	A
9	2	872	A

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Mol	Chain	Res	Type
9	2	873	G
9	2	874	G
9	2	875	A
9	2	877	C
9	2	878	G
9	2	880	G
9	2	882	U
9	2	883	U
9	2	884	C
9	2	886	A
9	2	888	U
9	2	889	U
9	2	890	U
9	2	891	G
9	2	895	G
9	2	896	U
9	2	898	U
9	2	901	G
9	2	902	G
9	2	913	A
9	2	914	U
9	2	917	U
9	2	918	U
9	2	919	A
9	2	920	A
9	2	921	G
9	2	922	A
9	2	930	C
9	2	933	G
9	2	938	A
9	2	943	U
9	2	955	A
9	2	956	G
9	2	963	A
9	2	970	G
9	2	971	G
9	2	978	G
9	2	985	G
9	2	990	A
9	2	992	A
9	2	999	G
9	2	1008	A

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Mol	Chain	Res	Type
9	2	1016	U
9	2	1017	U
9	2	1019	C
9	2	1021	U
9	2	1023	A
9	2	1049	A
9	2	1056	U
9	2	1061	U
9	2	1062	A
9	2	1067	C
9	2	1080	A
9	2	1082	A
9	2	1083	A
9	2	1084	A
9	2	1085	C
9	2	1087	A
9	2	1088	U
9	2	1099	G
9	2	1109	C
9	2	1114	U
9	2	1116	C
9	2	1126	G
9	2	1133	A
9	2	1138	C
9	2	1149	A
9	2	1150	A
9	2	1151	G
9	2	1153	C
9	2	1154	U
9	2	1155	U
9	2	1157	G
9	2	1170	A
9	2	1207	G
9	2	1212	G
9	2	1215	C
9	2	1217	A
9	2	1224	G
9	2	1242	U
9	2	1244	U
9	2	1251	A
9	2	1253	A
9	2	1256	G

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Mol	Chain	Res	Type
9	2	1257	G
9	2	1259	A
9	2	1271	C
9	2	1272	C
9	2	1273	C
9	2	1274	G
9	2	1275	G
9	2	1277	C
9	2	1278	A
9	2	1283	C
9	2	1284	A
9	2	1285	G
9	2	1286	G
9	2	1287	A
9	2	1288	U
9	2	1290	G
9	2	1292	C
9	2	1293	A
9	2	1294	G
9	2	1298	G
9	2	1299	A
9	2	1300	U
9	2	1302	G
9	2	1304	U
9	2	1305	C
9	2	1306	U
9	2	1307	U
9	2	1308	U
9	2	1310	U
9	2	1311	C
9	2	1313	A
9	2	1314	U
9	2	1315	U
9	2	1330	G
9	2	1341	C
9	2	1348	G
9	2	1358	U
9	2	1363	C
9	2	1364	U
9	2	1367	U
9	2	1371	U
9	2	1372	U

Continued on next page...

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Mol	Chain	Res	Type
9	2	1375	G
9	2	1378	A
9	2	1395	C
9	2	1396	A
9	2	1401	A
9	2	1404	U
9	2	1417	C
9	2	1425	G
9	2	1427	C
9	2	1428	G
9	2	1429	G
9	2	1442	U
9	2	1446	A
9	2	1452	A
9	2	1453	C
9	2	1454	A
9	2	1462	U
9	2	1463	U
9	2	1464	C
9	2	1473	G
9	2	1476	A
9	2	1477	U
9	2	1480	A
9	2	1487	A
9	2	1489	A
9	2	1490	G
9	2	1491	G
9	2	1493	C
9	2	1494	U
9	2	1495	G
9	2	1497	G
9	2	1498	A
9	2	1507	G
9	2	1521	C
9	2	1533	A
9	2	1539	U
9	2	1551	U
9	2	1552	G
9	2	1553	C
9	2	1554	C
9	2	1555	U
9	2	1556	A

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Mol	Chain	Res	Type
9	2	1558	C
9	2	1564	C
9	2	1567	G
9	2	1574	C
9	2	1575	G
9	2	1578	U
9	2	1580	A
9	2	1582	C
9	2	1585	U
9	2	1587	G
9	2	1588	A
9	2	1591	C
9	2	1594	A
9	2	1598	G
9	2	1600	G
9	2	1601	A
9	2	1602	U
9	2	1606	G
9	2	1618	C
9	2	1621	U
9	2	1623	A
9	2	1624	U
9	2	1629	C
9	2	1633	A
9	2	1637	A
9	2	1638	G
9	2	1641	A
9	2	1646	C
9	2	1648	G
9	2	1651	A
9	2	1654	G
9	2	1659	U
9	2	1660	C
9	2	1661	A
9	2	1663	A
9	2	1664	A
9	2	1665	G
9	2	1671	G
9	2	1674	G
9	2	1678	A
9	2	1679	A
9	2	1680	G

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Mol	Chain	Res	Type
9	2	1682	C
9	2	1683	C
9	2	1695	A
9	2	1698	C
9	2	1699	A
9	2	1700	C
9	2	1719	A
9	2	1721	U
9	2	1722	G
9	2	1726	G
9	2	1731	A
9	2	1734	G
9	2	1744	G
9	2	1746	U
9	2	1752	C
9	2	1753	C
9	2	1754	G
9	2	1755	C
9	2	1760	G
9	2	1779	G
9	2	1780	G
9	2	1782	G
9	2	1783	C
9	2	1791	A
9	2	1800	A
9	2	1801	A
9	2	1803	U
9	2	1805	G
9	2	1806	A
9	2	1810	U
9	2	1813	A
9	2	1814	G
9	2	1815	A
9	2	1819	A
9	2	1825	A
9	2	1831	A
9	2	1832	A
9	2	1834	A
9	2	1835	A
9	2	1836	G
9	2	1838	U
9	2	1841	C

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Mol	Chain	Res	Type
9	2	1849	G
9	2	1850	A
9	2	1851	A
9	2	1857	G
9	2	1861	G
9	2	1862	G
9	2	1863	A
9	2	1865	C
9	2	1869	A
10	3	523	G
10	3	526	G
10	3	527	G
10	3	533	G
10	3	536	C
10	3	537	C
10	3	538	C
10	3	540	C
10	3	541	C
10	3	543	C
10	3	547	G
10	3	548	C
10	3	549	G
10	3	550	A
10	3	552	A
10	3	553	G
10	3	557	C
10	3	558	C
10	3	563	C
10	3	564	G
10	3	568	A
10	3	577	G
10	3	584	A
10	3	585	G
10	3	590	A
10	3	591	C
10	3	592	C
10	3	593	U
10	3	600	G
10	3	834	A
10	3	836	G
45	i	3	C
45	i	4	A

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Mol	Chain	Res	Type
45	i	5	G
45	i	8	U
45	i	16	C
45	i	17	G
45	i	19	A
45	i	21	G
45	i	36	A
45	i	45	G
45	i	47	C
45	i	48	G
45	i	49	A
45	i	54	U
45	i	56	G
45	i	57	A
45	i	60	C
45	i	62	A
45	i	65	C
45	i	70	C
45	i	71	U
45	i	72	A
45	i	73	C
45	i	74	C
45	i	75	A

All (6) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
9	2	65	C
9	2	561	A
9	2	688	U
9	2	874	G
9	2	1137	U
9	2	1637	A

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 oligosaccharides in this entry.

5.6 Ligand geometry

Of 1 ligands modelled in this entry, 1 is monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
10	3	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	3	600:G	O3'	831:A	P	118.16

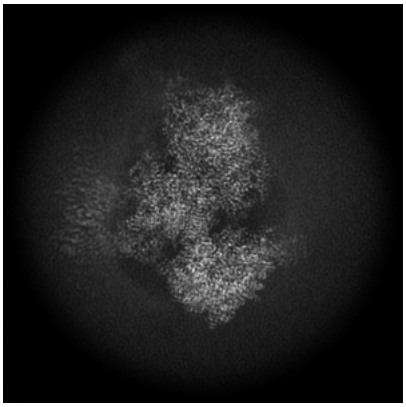
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-40774. These allow visual inspection of the internal detail of the map and identification of artifacts.

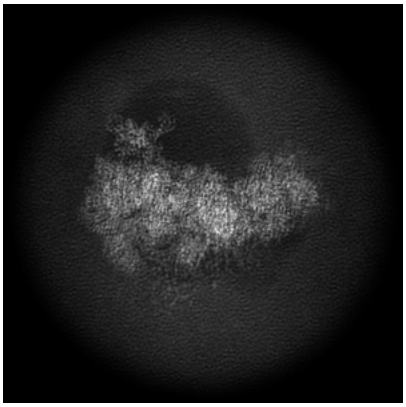
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

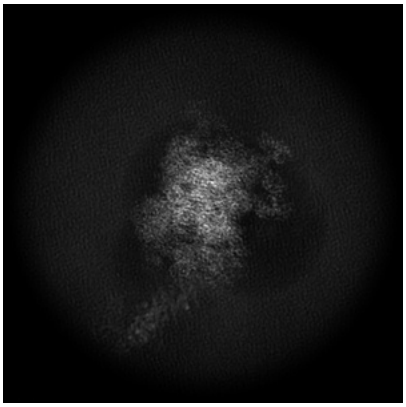
6.1.1 Primary map



X



Y

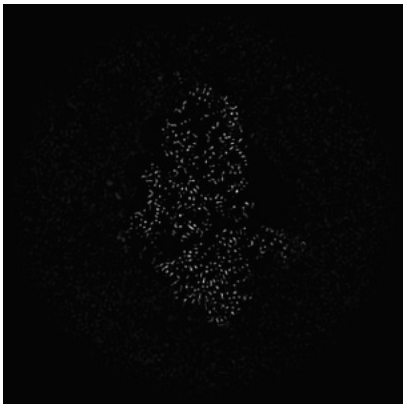


Z

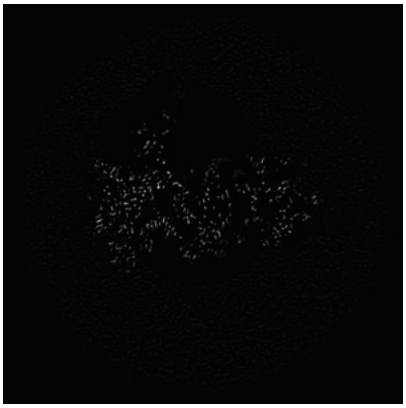
The images above show the map projected in three orthogonal directions.

6.2 Central slices

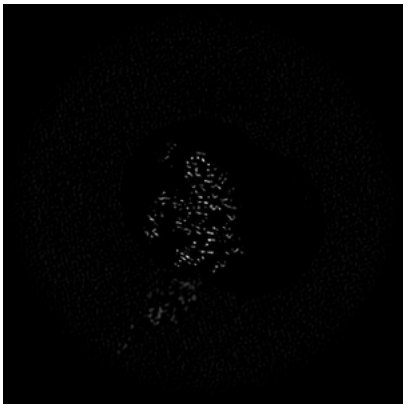
6.2.1 Primary map



X Index: 160



Y Index: 160

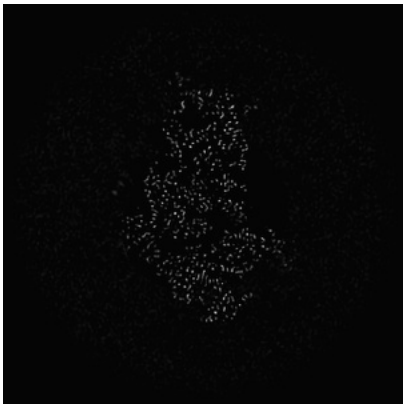


Z Index: 160

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

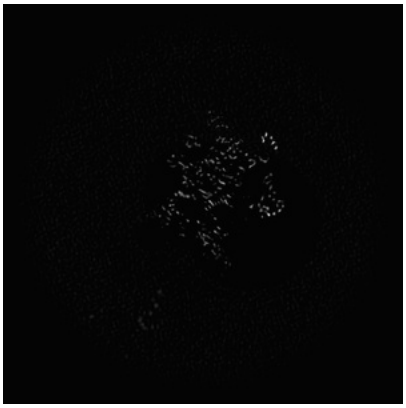
6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 163

Y Index: 152

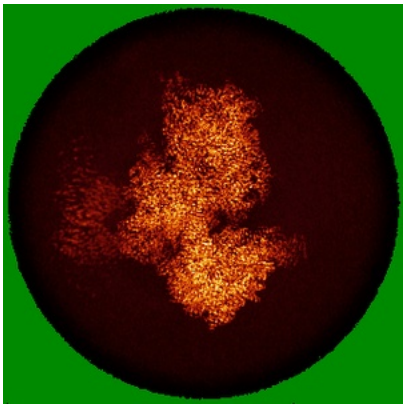


Z Index: 112

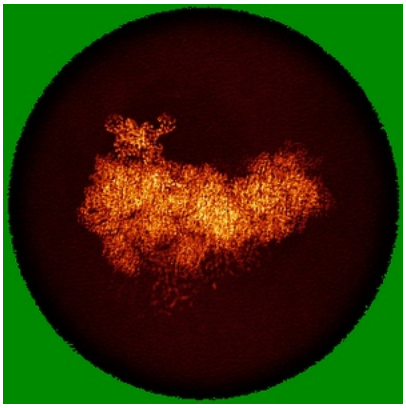
The images above show the largest variance slices of the map in three orthogonal directions.

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

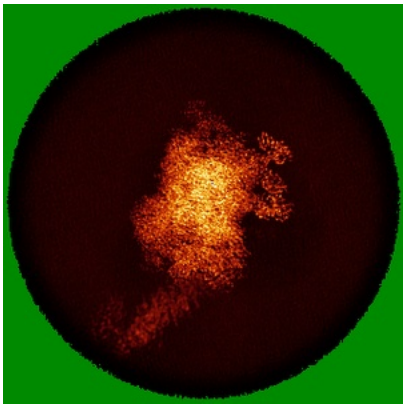
6.4.1 Primary map



X



Y

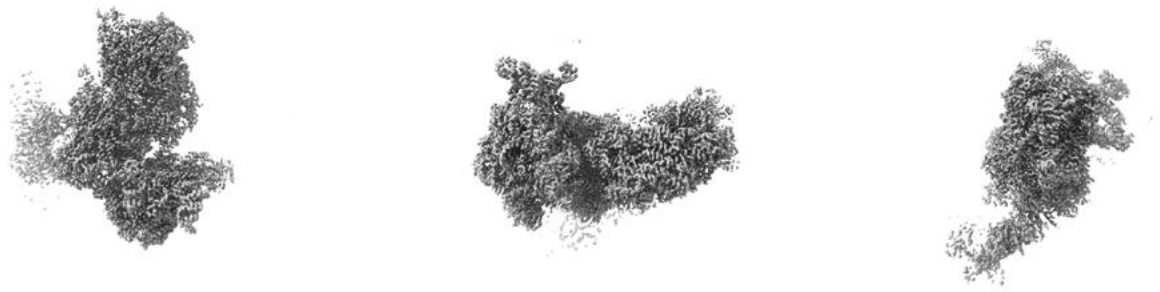


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.198. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

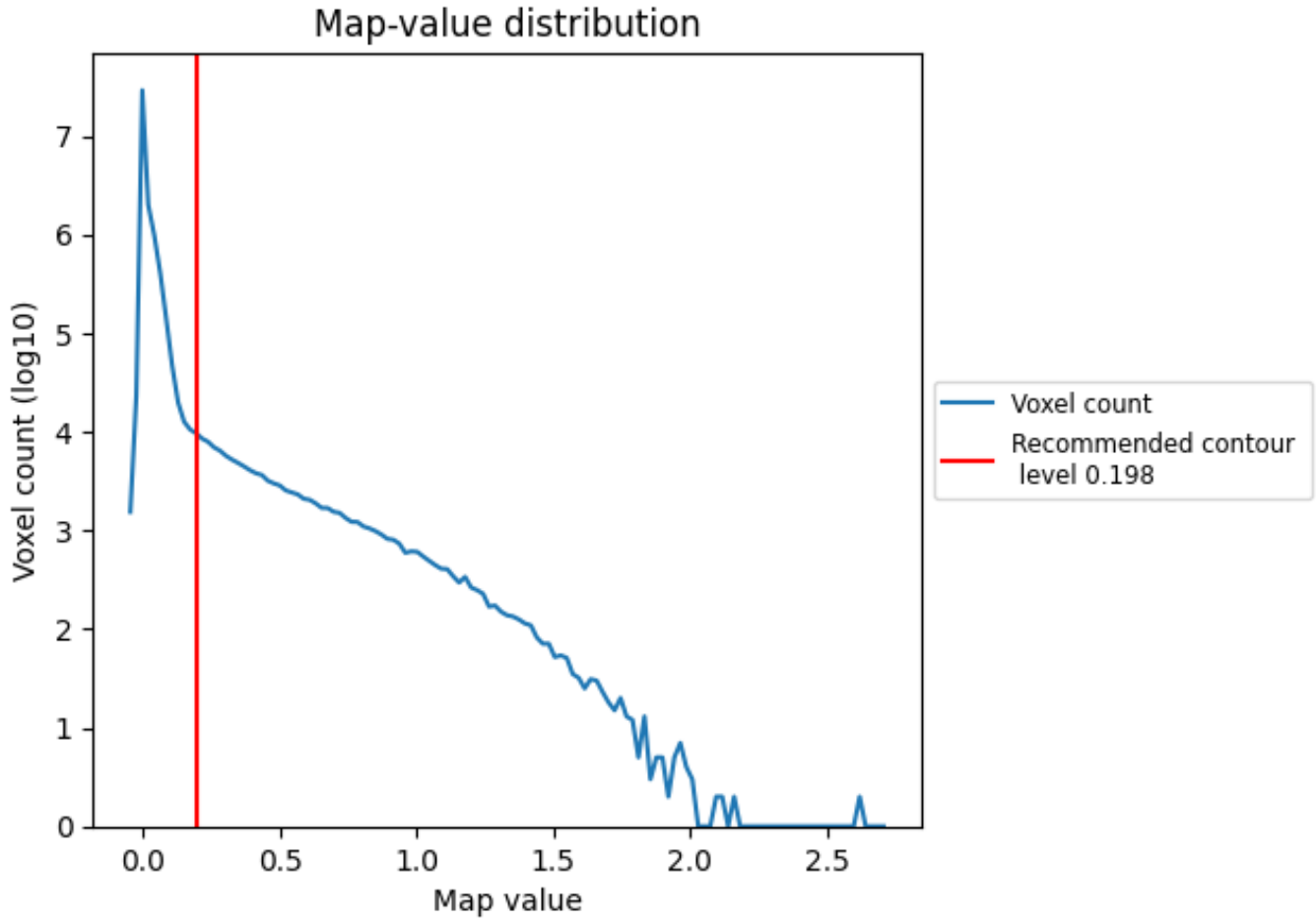
6.6 Mask visualisation (i)

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

7 Map analysis

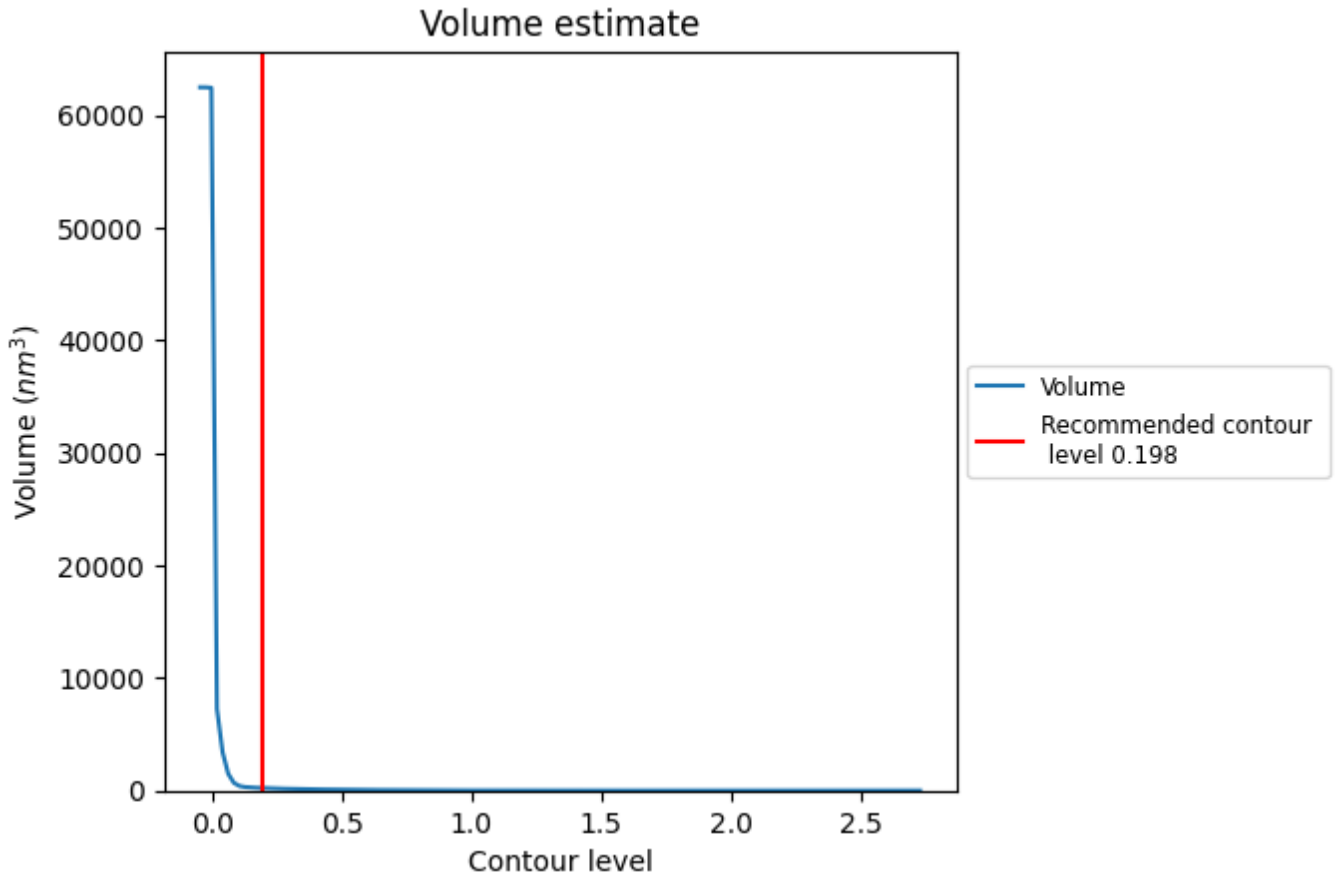
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

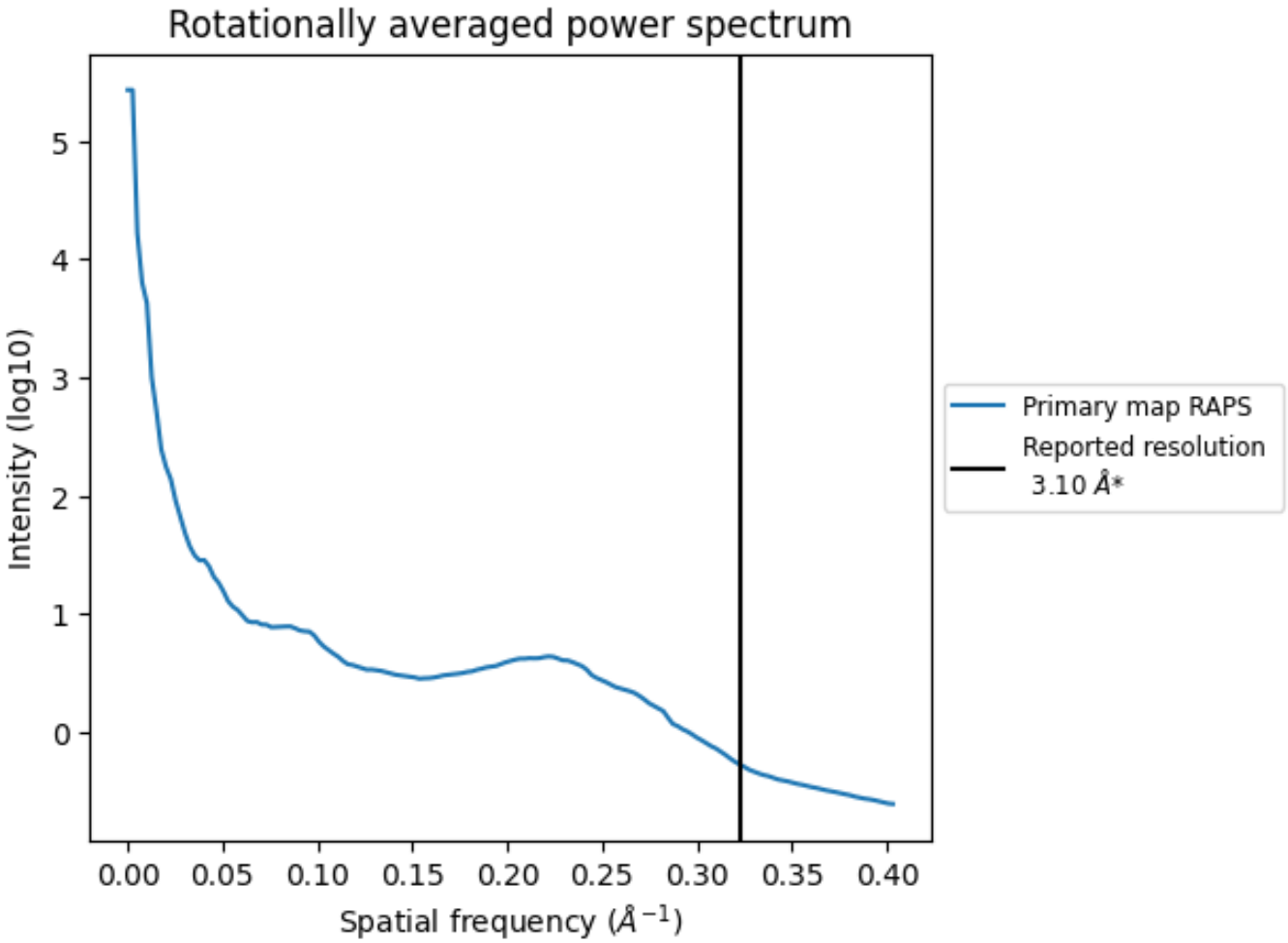
7.2 Volume estimate



The volume at the recommended contour level is 222 nm^3; this corresponds to an approximate mass of 201 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 0.323 Å^{-1}

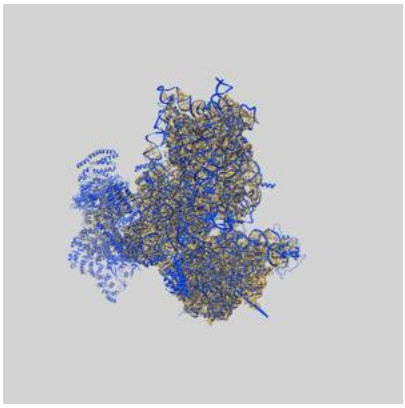
8 Fourier-Shell correlation (i)

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

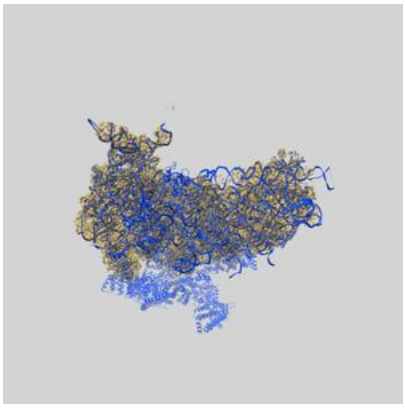
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-40774 and PDB model 8SUP. Per-residue inclusion information can be found in section 3 on page 14.

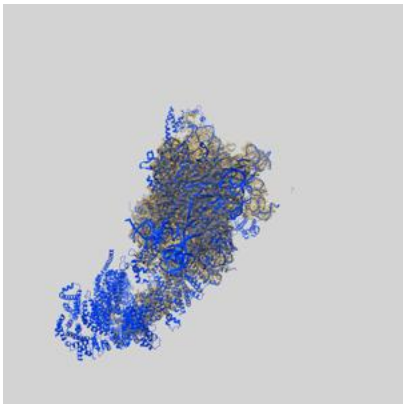
9.1 Map-model overlay



X



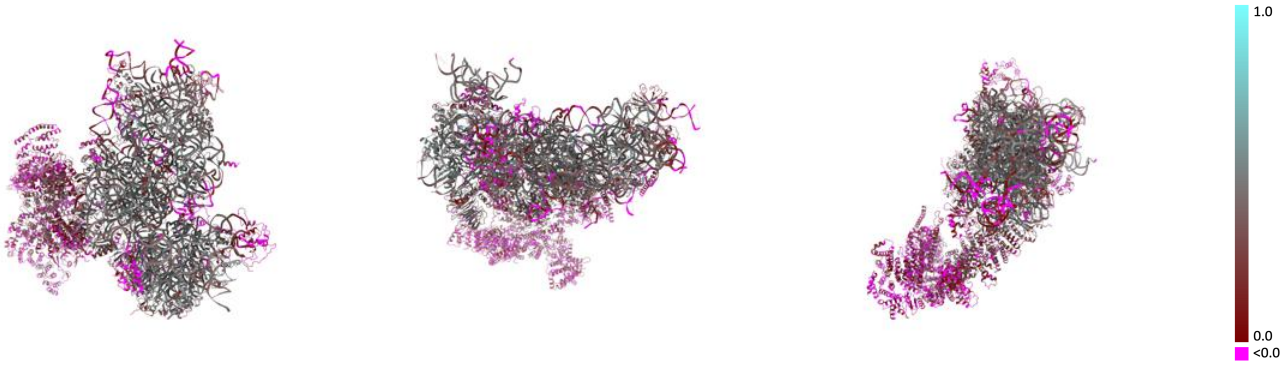
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.198 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

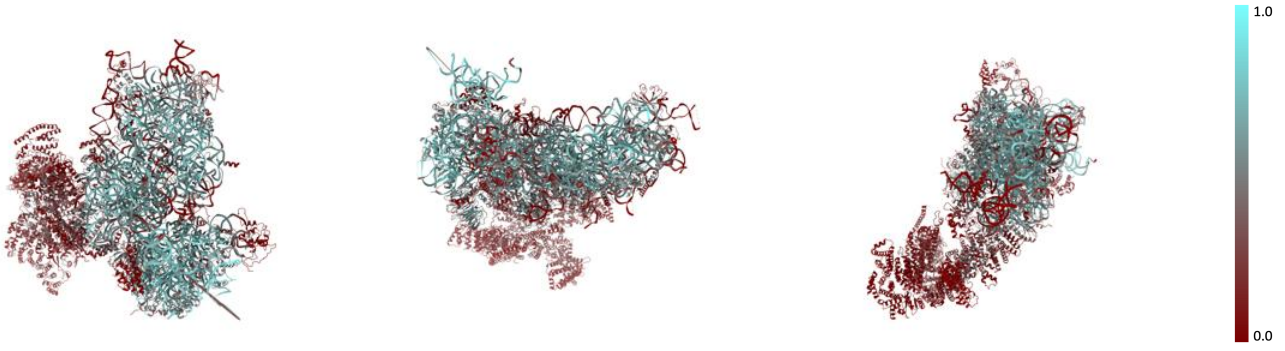
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

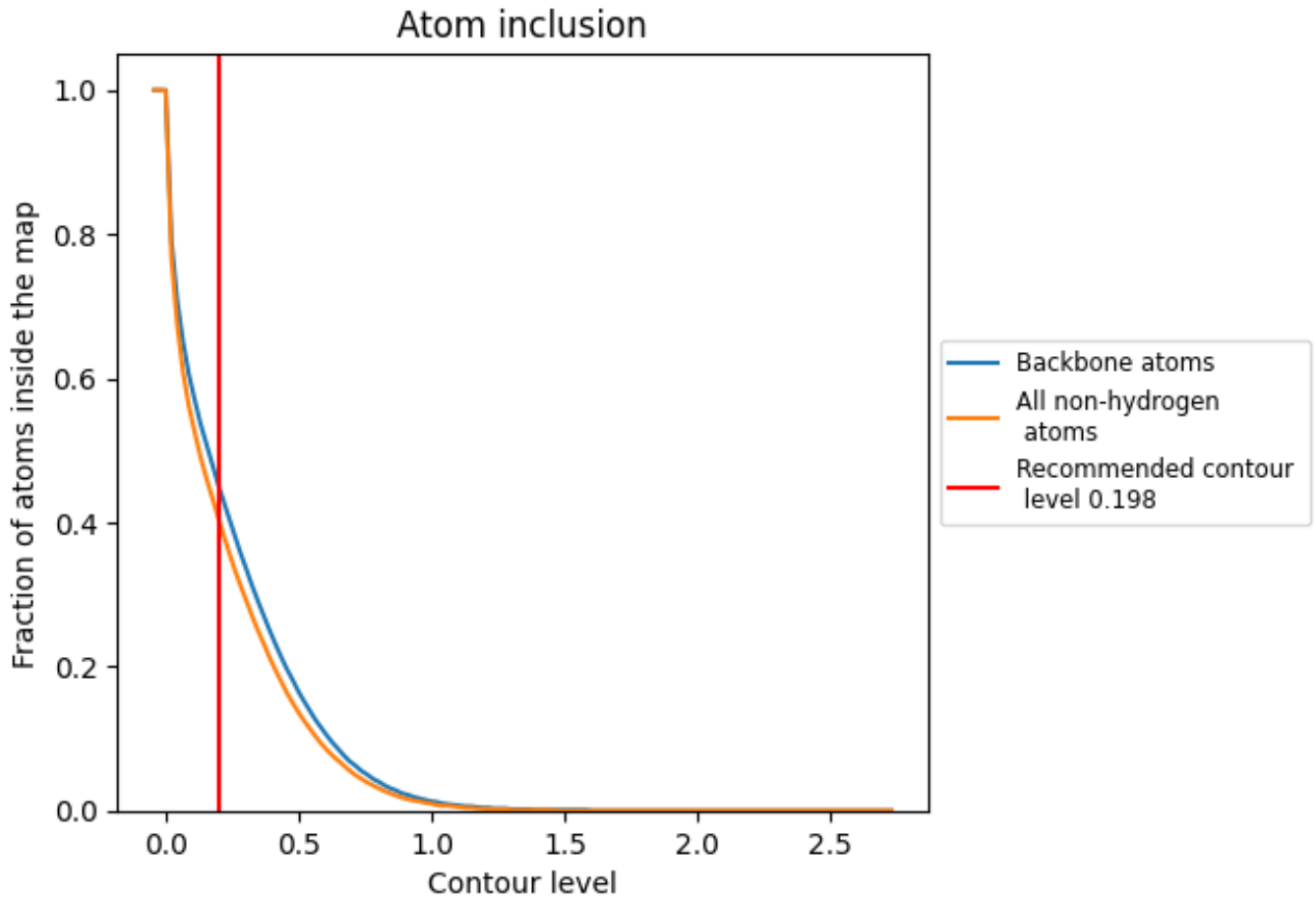
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.198).

9.4 Atom inclusion (i)



At the recommended contour level, 45% of all backbone atoms, 40% 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 (0.198) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4030	0.3020
2	0.5750	0.3870
3	0.6870	0.4240
A	0.0000	-0.0500
B	0.4750	0.3730
C	0.4440	0.3530
D	0.4830	0.4120
E	0.4760	0.3750
F	0.5270	0.4260
G	0.5740	0.4360
H	0.3560	0.2900
I	0.2150	0.2060
J	0.4550	0.3650
K	0.4880	0.3810
L	0.4410	0.2980
M	0.4870	0.3910
N	0.0430	0.0150
O	0.4720	0.3750
P	0.4190	0.3610
Q	0.5130	0.3790
R	0.6130	0.4630
S	0.3430	0.2650
T	0.5330	0.4190
U	0.6620	0.4760
V	0.3760	0.3350
W	0.4530	0.3830
X	0.5750	0.4560
Y	0.5490	0.4400
Z	0.4960	0.3920
a	0.4640	0.3600
b	0.4940	0.4240
c	0.4460	0.3490
d	0.4800	0.3740
e	0.5400	0.4080
f	0.3410	0.2910

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Chain	Atom inclusion	Q-score
g	0.0180	-0.0310
h	0.4440	0.3470
i	0.6570	0.4160
j	0.0020	-0.0240
n	0.4220	0.3240
o	0.1290	0.1530
p	0.1910	0.2180
q	0.0510	0.0770
r	0.0130	0.0520
s	0.0140	0.0670
t	0.0010	-0.0000
u	0.0000	0.0580
v	0.0130	0.0520