Full wwPDB EM Validation Report ⓘ

Jun 30, 2025 – 06:28 PM EDT

PDB ID	:	9DZY / pdb_00009dzy
EMDB ID	:	EMD-47342
Title	:	Cryo-EM structure of Pre-Chi dynein bound to Lis1
Authors	:	Nguyen, K.H.V.; Kendrick, A.A.; Leschziner, A.E.
Deposited on	:	2024-10-17
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 ⓘ symbol.

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

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

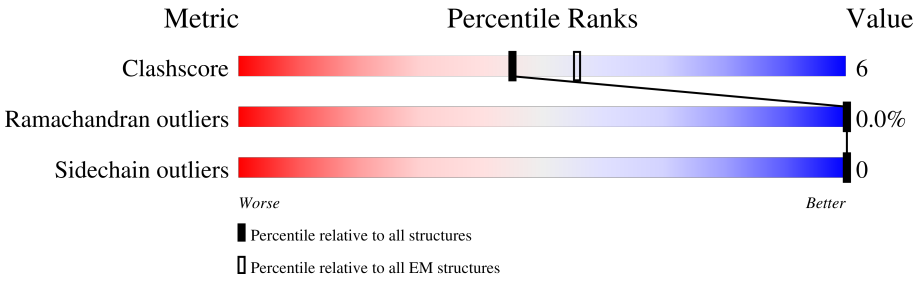
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	A	4843	29% 50% 10% 40%
1	B	4843	18% 51% 9% 40%
2	C	411	54% 63% 11% 26%
2	E	411	10% 64% 14% 22%

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 51122 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 Cytoplasmic dynein 1 heavy chain 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	B	2920	Total 23025	C 14699	N 3982	O 4232	S 112	0	0
1	A	2920	Total 23004	C 14686	N 3978	O 4228	S 112	0	0

There are 396 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-196	GLY	-	expression tag	UNP Q14204
B	-195	ASP	-	expression tag	UNP Q14204
B	-194	TYR	-	expression tag	UNP Q14204
B	-193	ASP	-	expression tag	UNP Q14204
B	-192	ILE	-	expression tag	UNP Q14204
B	-191	PRO	-	expression tag	UNP Q14204
B	-190	THR	-	expression tag	UNP Q14204
B	-189	THR	-	expression tag	UNP Q14204
B	-188	GLU	-	expression tag	UNP Q14204
B	-187	ASN	-	expression tag	UNP Q14204
B	-186	LEU	-	expression tag	UNP Q14204
B	-185	TYR	-	expression tag	UNP Q14204
B	-184	PHE	-	expression tag	UNP Q14204
B	-183	GLN	-	expression tag	UNP Q14204
B	-182	GLY	-	expression tag	UNP Q14204
B	-181	ASP	-	expression tag	UNP Q14204
B	-180	LYS	-	expression tag	UNP Q14204
B	-179	ASP	-	expression tag	UNP Q14204
B	-178	CYS	-	expression tag	UNP Q14204
B	-177	GLU	-	expression tag	UNP Q14204
B	-176	MET	-	expression tag	UNP Q14204
B	-175	LYS	-	expression tag	UNP Q14204
B	-174	ARG	-	expression tag	UNP Q14204
B	-173	THR	-	expression tag	UNP Q14204
B	-172	THR	-	expression tag	UNP Q14204
B	-171	LEU	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-170	ASP	-	expression tag	UNP Q14204
B	-169	SER	-	expression tag	UNP Q14204
B	-168	PRO	-	expression tag	UNP Q14204
B	-167	LEU	-	expression tag	UNP Q14204
B	-166	GLY	-	expression tag	UNP Q14204
B	-165	LYS	-	expression tag	UNP Q14204
B	-164	LEU	-	expression tag	UNP Q14204
B	-163	GLU	-	expression tag	UNP Q14204
B	-162	LEU	-	expression tag	UNP Q14204
B	-161	SER	-	expression tag	UNP Q14204
B	-160	GLY	-	expression tag	UNP Q14204
B	-159	CYS	-	expression tag	UNP Q14204
B	-158	GLU	-	expression tag	UNP Q14204
B	-157	GLN	-	expression tag	UNP Q14204
B	-156	GLY	-	expression tag	UNP Q14204
B	-155	LEU	-	expression tag	UNP Q14204
B	-154	HIS	-	expression tag	UNP Q14204
B	-153	ARG	-	expression tag	UNP Q14204
B	-152	ILE	-	expression tag	UNP Q14204
B	-151	ILE	-	expression tag	UNP Q14204
B	-150	PHE	-	expression tag	UNP Q14204
B	-149	LEU	-	expression tag	UNP Q14204
B	-148	GLY	-	expression tag	UNP Q14204
B	-147	LYS	-	expression tag	UNP Q14204
B	-146	GLY	-	expression tag	UNP Q14204
B	-145	THR	-	expression tag	UNP Q14204
B	-144	SER	-	expression tag	UNP Q14204
B	-143	ALA	-	expression tag	UNP Q14204
B	-142	ALA	-	expression tag	UNP Q14204
B	-141	ASP	-	expression tag	UNP Q14204
B	-140	ALA	-	expression tag	UNP Q14204
B	-139	VAL	-	expression tag	UNP Q14204
B	-138	GLU	-	expression tag	UNP Q14204
B	-137	VAL	-	expression tag	UNP Q14204
B	-136	PRO	-	expression tag	UNP Q14204
B	-135	ALA	-	expression tag	UNP Q14204
B	-134	PRO	-	expression tag	UNP Q14204
B	-133	ALA	-	expression tag	UNP Q14204
B	-132	ALA	-	expression tag	UNP Q14204
B	-131	VAL	-	expression tag	UNP Q14204
B	-130	LEU	-	expression tag	UNP Q14204
B	-129	GLY	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-128	GLY	-	expression tag	UNP Q14204
B	-127	PRO	-	expression tag	UNP Q14204
B	-126	GLU	-	expression tag	UNP Q14204
B	-125	PRO	-	expression tag	UNP Q14204
B	-124	LEU	-	expression tag	UNP Q14204
B	-123	MET	-	expression tag	UNP Q14204
B	-122	GLN	-	expression tag	UNP Q14204
B	-121	ALA	-	expression tag	UNP Q14204
B	-120	THR	-	expression tag	UNP Q14204
B	-119	ALA	-	expression tag	UNP Q14204
B	-118	TRP	-	expression tag	UNP Q14204
B	-117	LEU	-	expression tag	UNP Q14204
B	-116	ASN	-	expression tag	UNP Q14204
B	-115	ALA	-	expression tag	UNP Q14204
B	-114	TYR	-	expression tag	UNP Q14204
B	-113	PHE	-	expression tag	UNP Q14204
B	-112	HIS	-	expression tag	UNP Q14204
B	-111	GLN	-	expression tag	UNP Q14204
B	-110	PRO	-	expression tag	UNP Q14204
B	-109	GLU	-	expression tag	UNP Q14204
B	-108	ALA	-	expression tag	UNP Q14204
B	-107	ILE	-	expression tag	UNP Q14204
B	-106	GLU	-	expression tag	UNP Q14204
B	-105	GLU	-	expression tag	UNP Q14204
B	-104	PHE	-	expression tag	UNP Q14204
B	-103	PRO	-	expression tag	UNP Q14204
B	-102	VAL	-	expression tag	UNP Q14204
B	-101	PRO	-	expression tag	UNP Q14204
B	-100	ALA	-	expression tag	UNP Q14204
B	-99	LEU	-	expression tag	UNP Q14204
B	-98	HIS	-	expression tag	UNP Q14204
B	-97	HIS	-	expression tag	UNP Q14204
B	-96	PRO	-	expression tag	UNP Q14204
B	-95	VAL	-	expression tag	UNP Q14204
B	-94	PHE	-	expression tag	UNP Q14204
B	-93	GLN	-	expression tag	UNP Q14204
B	-92	GLN	-	expression tag	UNP Q14204
B	-91	GLU	-	expression tag	UNP Q14204
B	-90	SER	-	expression tag	UNP Q14204
B	-89	PHE	-	expression tag	UNP Q14204
B	-88	THR	-	expression tag	UNP Q14204
B	-87	ARG	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-86	GLN	-	expression tag	UNP Q14204
B	-85	VAL	-	expression tag	UNP Q14204
B	-84	LEU	-	expression tag	UNP Q14204
B	-83	TRP	-	expression tag	UNP Q14204
B	-82	LYS	-	expression tag	UNP Q14204
B	-81	LEU	-	expression tag	UNP Q14204
B	-80	LEU	-	expression tag	UNP Q14204
B	-79	LYS	-	expression tag	UNP Q14204
B	-78	VAL	-	expression tag	UNP Q14204
B	-77	VAL	-	expression tag	UNP Q14204
B	-76	LYS	-	expression tag	UNP Q14204
B	-75	PHE	-	expression tag	UNP Q14204
B	-74	GLY	-	expression tag	UNP Q14204
B	-73	GLU	-	expression tag	UNP Q14204
B	-72	VAL	-	expression tag	UNP Q14204
B	-71	ILE	-	expression tag	UNP Q14204
B	-70	SER	-	expression tag	UNP Q14204
B	-69	TYR	-	expression tag	UNP Q14204
B	-68	SER	-	expression tag	UNP Q14204
B	-67	HIS	-	expression tag	UNP Q14204
B	-66	LEU	-	expression tag	UNP Q14204
B	-65	ALA	-	expression tag	UNP Q14204
B	-64	ALA	-	expression tag	UNP Q14204
B	-63	LEU	-	expression tag	UNP Q14204
B	-62	ALA	-	expression tag	UNP Q14204
B	-61	GLY	-	expression tag	UNP Q14204
B	-60	ASN	-	expression tag	UNP Q14204
B	-59	PRO	-	expression tag	UNP Q14204
B	-58	ALA	-	expression tag	UNP Q14204
B	-57	ALA	-	expression tag	UNP Q14204
B	-56	THR	-	expression tag	UNP Q14204
B	-55	ALA	-	expression tag	UNP Q14204
B	-54	ALA	-	expression tag	UNP Q14204
B	-53	VAL	-	expression tag	UNP Q14204
B	-52	LYS	-	expression tag	UNP Q14204
B	-51	THR	-	expression tag	UNP Q14204
B	-50	ALA	-	expression tag	UNP Q14204
B	-49	LEU	-	expression tag	UNP Q14204
B	-48	SER	-	expression tag	UNP Q14204
B	-47	GLY	-	expression tag	UNP Q14204
B	-46	ASN	-	expression tag	UNP Q14204
B	-45	PRO	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-44	VAL	-	expression tag	UNP Q14204
B	-43	PRO	-	expression tag	UNP Q14204
B	-42	ILE	-	expression tag	UNP Q14204
B	-41	LEU	-	expression tag	UNP Q14204
B	-40	ILE	-	expression tag	UNP Q14204
B	-39	PRO	-	expression tag	UNP Q14204
B	-38	CYS	-	expression tag	UNP Q14204
B	-37	HIS	-	expression tag	UNP Q14204
B	-36	ARG	-	expression tag	UNP Q14204
B	-35	VAL	-	expression tag	UNP Q14204
B	-34	VAL	-	expression tag	UNP Q14204
B	-33	GLN	-	expression tag	UNP Q14204
B	-32	GLY	-	expression tag	UNP Q14204
B	-31	ASP	-	expression tag	UNP Q14204
B	-30	LEU	-	expression tag	UNP Q14204
B	-29	ASP	-	expression tag	UNP Q14204
B	-28	VAL	-	expression tag	UNP Q14204
B	-27	GLY	-	expression tag	UNP Q14204
B	-26	GLY	-	expression tag	UNP Q14204
B	-25	TYR	-	expression tag	UNP Q14204
B	-24	GLU	-	expression tag	UNP Q14204
B	-23	GLY	-	expression tag	UNP Q14204
B	-22	GLY	-	expression tag	UNP Q14204
B	-21	LEU	-	expression tag	UNP Q14204
B	-20	ALA	-	expression tag	UNP Q14204
B	-19	VAL	-	expression tag	UNP Q14204
B	-18	LYS	-	expression tag	UNP Q14204
B	-17	GLU	-	expression tag	UNP Q14204
B	-16	TRP	-	expression tag	UNP Q14204
B	-15	LEU	-	expression tag	UNP Q14204
B	-14	LEU	-	expression tag	UNP Q14204
B	-13	ALA	-	expression tag	UNP Q14204
B	-12	HIS	-	expression tag	UNP Q14204
B	-11	GLU	-	expression tag	UNP Q14204
B	-10	GLY	-	expression tag	UNP Q14204
B	-9	HIS	-	expression tag	UNP Q14204
B	-8	ARG	-	expression tag	UNP Q14204
B	-7	LEU	-	expression tag	UNP Q14204
B	-6	GLY	-	expression tag	UNP Q14204
B	-5	LYS	-	expression tag	UNP Q14204
B	-4	PRO	-	expression tag	UNP Q14204
B	-3	GLY	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-2	LEU	-	expression tag	UNP Q14204
B	-1	GLY	-	expression tag	UNP Q14204
B	0	GLY	-	expression tag	UNP Q14204
B	1	SER	-	expression tag	UNP Q14204
A	-196	GLY	-	expression tag	UNP Q14204
A	-195	ASP	-	expression tag	UNP Q14204
A	-194	TYR	-	expression tag	UNP Q14204
A	-193	ASP	-	expression tag	UNP Q14204
A	-192	ILE	-	expression tag	UNP Q14204
A	-191	PRO	-	expression tag	UNP Q14204
A	-190	THR	-	expression tag	UNP Q14204
A	-189	THR	-	expression tag	UNP Q14204
A	-188	GLU	-	expression tag	UNP Q14204
A	-187	ASN	-	expression tag	UNP Q14204
A	-186	LEU	-	expression tag	UNP Q14204
A	-185	TYR	-	expression tag	UNP Q14204
A	-184	PHE	-	expression tag	UNP Q14204
A	-183	GLN	-	expression tag	UNP Q14204
A	-182	GLY	-	expression tag	UNP Q14204
A	-181	ASP	-	expression tag	UNP Q14204
A	-180	LYS	-	expression tag	UNP Q14204
A	-179	ASP	-	expression tag	UNP Q14204
A	-178	CYS	-	expression tag	UNP Q14204
A	-177	GLU	-	expression tag	UNP Q14204
A	-176	MET	-	expression tag	UNP Q14204
A	-175	LYS	-	expression tag	UNP Q14204
A	-174	ARG	-	expression tag	UNP Q14204
A	-173	THR	-	expression tag	UNP Q14204
A	-172	THR	-	expression tag	UNP Q14204
A	-171	LEU	-	expression tag	UNP Q14204
A	-170	ASP	-	expression tag	UNP Q14204
A	-169	SER	-	expression tag	UNP Q14204
A	-168	PRO	-	expression tag	UNP Q14204
A	-167	LEU	-	expression tag	UNP Q14204
A	-166	GLY	-	expression tag	UNP Q14204
A	-165	LYS	-	expression tag	UNP Q14204
A	-164	LEU	-	expression tag	UNP Q14204
A	-163	GLU	-	expression tag	UNP Q14204
A	-162	LEU	-	expression tag	UNP Q14204
A	-161	SER	-	expression tag	UNP Q14204
A	-160	GLY	-	expression tag	UNP Q14204
A	-159	CYS	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-158	GLU	-	expression tag	UNP Q14204
A	-157	GLN	-	expression tag	UNP Q14204
A	-156	GLY	-	expression tag	UNP Q14204
A	-155	LEU	-	expression tag	UNP Q14204
A	-154	HIS	-	expression tag	UNP Q14204
A	-153	ARG	-	expression tag	UNP Q14204
A	-152	ILE	-	expression tag	UNP Q14204
A	-151	ILE	-	expression tag	UNP Q14204
A	-150	PHE	-	expression tag	UNP Q14204
A	-149	LEU	-	expression tag	UNP Q14204
A	-148	GLY	-	expression tag	UNP Q14204
A	-147	LYS	-	expression tag	UNP Q14204
A	-146	GLY	-	expression tag	UNP Q14204
A	-145	THR	-	expression tag	UNP Q14204
A	-144	SER	-	expression tag	UNP Q14204
A	-143	ALA	-	expression tag	UNP Q14204
A	-142	ALA	-	expression tag	UNP Q14204
A	-141	ASP	-	expression tag	UNP Q14204
A	-140	ALA	-	expression tag	UNP Q14204
A	-139	VAL	-	expression tag	UNP Q14204
A	-138	GLU	-	expression tag	UNP Q14204
A	-137	VAL	-	expression tag	UNP Q14204
A	-136	PRO	-	expression tag	UNP Q14204
A	-135	ALA	-	expression tag	UNP Q14204
A	-134	PRO	-	expression tag	UNP Q14204
A	-133	ALA	-	expression tag	UNP Q14204
A	-132	ALA	-	expression tag	UNP Q14204
A	-131	VAL	-	expression tag	UNP Q14204
A	-130	LEU	-	expression tag	UNP Q14204
A	-129	GLY	-	expression tag	UNP Q14204
A	-128	GLY	-	expression tag	UNP Q14204
A	-127	PRO	-	expression tag	UNP Q14204
A	-126	GLU	-	expression tag	UNP Q14204
A	-125	PRO	-	expression tag	UNP Q14204
A	-124	LEU	-	expression tag	UNP Q14204
A	-123	MET	-	expression tag	UNP Q14204
A	-122	GLN	-	expression tag	UNP Q14204
A	-121	ALA	-	expression tag	UNP Q14204
A	-120	THR	-	expression tag	UNP Q14204
A	-119	ALA	-	expression tag	UNP Q14204
A	-118	TRP	-	expression tag	UNP Q14204
A	-117	LEU	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-116	ASN	-	expression tag	UNP Q14204
A	-115	ALA	-	expression tag	UNP Q14204
A	-114	TYR	-	expression tag	UNP Q14204
A	-113	PHE	-	expression tag	UNP Q14204
A	-112	HIS	-	expression tag	UNP Q14204
A	-111	GLN	-	expression tag	UNP Q14204
A	-110	PRO	-	expression tag	UNP Q14204
A	-109	GLU	-	expression tag	UNP Q14204
A	-108	ALA	-	expression tag	UNP Q14204
A	-107	ILE	-	expression tag	UNP Q14204
A	-106	GLU	-	expression tag	UNP Q14204
A	-105	GLU	-	expression tag	UNP Q14204
A	-104	PHE	-	expression tag	UNP Q14204
A	-103	PRO	-	expression tag	UNP Q14204
A	-102	VAL	-	expression tag	UNP Q14204
A	-101	PRO	-	expression tag	UNP Q14204
A	-100	ALA	-	expression tag	UNP Q14204
A	-99	LEU	-	expression tag	UNP Q14204
A	-98	HIS	-	expression tag	UNP Q14204
A	-97	HIS	-	expression tag	UNP Q14204
A	-96	PRO	-	expression tag	UNP Q14204
A	-95	VAL	-	expression tag	UNP Q14204
A	-94	PHE	-	expression tag	UNP Q14204
A	-93	GLN	-	expression tag	UNP Q14204
A	-92	GLN	-	expression tag	UNP Q14204
A	-91	GLU	-	expression tag	UNP Q14204
A	-90	SER	-	expression tag	UNP Q14204
A	-89	PHE	-	expression tag	UNP Q14204
A	-88	THR	-	expression tag	UNP Q14204
A	-87	ARG	-	expression tag	UNP Q14204
A	-86	GLN	-	expression tag	UNP Q14204
A	-85	VAL	-	expression tag	UNP Q14204
A	-84	LEU	-	expression tag	UNP Q14204
A	-83	TRP	-	expression tag	UNP Q14204
A	-82	LYS	-	expression tag	UNP Q14204
A	-81	LEU	-	expression tag	UNP Q14204
A	-80	LEU	-	expression tag	UNP Q14204
A	-79	LYS	-	expression tag	UNP Q14204
A	-78	VAL	-	expression tag	UNP Q14204
A	-77	VAL	-	expression tag	UNP Q14204
A	-76	LYS	-	expression tag	UNP Q14204
A	-75	PHE	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-74	GLY	-	expression tag	UNP Q14204
A	-73	GLU	-	expression tag	UNP Q14204
A	-72	VAL	-	expression tag	UNP Q14204
A	-71	ILE	-	expression tag	UNP Q14204
A	-70	SER	-	expression tag	UNP Q14204
A	-69	TYR	-	expression tag	UNP Q14204
A	-68	SER	-	expression tag	UNP Q14204
A	-67	HIS	-	expression tag	UNP Q14204
A	-66	LEU	-	expression tag	UNP Q14204
A	-65	ALA	-	expression tag	UNP Q14204
A	-64	ALA	-	expression tag	UNP Q14204
A	-63	LEU	-	expression tag	UNP Q14204
A	-62	ALA	-	expression tag	UNP Q14204
A	-61	GLY	-	expression tag	UNP Q14204
A	-60	ASN	-	expression tag	UNP Q14204
A	-59	PRO	-	expression tag	UNP Q14204
A	-58	ALA	-	expression tag	UNP Q14204
A	-57	ALA	-	expression tag	UNP Q14204
A	-56	THR	-	expression tag	UNP Q14204
A	-55	ALA	-	expression tag	UNP Q14204
A	-54	ALA	-	expression tag	UNP Q14204
A	-53	VAL	-	expression tag	UNP Q14204
A	-52	LYS	-	expression tag	UNP Q14204
A	-51	THR	-	expression tag	UNP Q14204
A	-50	ALA	-	expression tag	UNP Q14204
A	-49	LEU	-	expression tag	UNP Q14204
A	-48	SER	-	expression tag	UNP Q14204
A	-47	GLY	-	expression tag	UNP Q14204
A	-46	ASN	-	expression tag	UNP Q14204
A	-45	PRO	-	expression tag	UNP Q14204
A	-44	VAL	-	expression tag	UNP Q14204
A	-43	PRO	-	expression tag	UNP Q14204
A	-42	ILE	-	expression tag	UNP Q14204
A	-41	LEU	-	expression tag	UNP Q14204
A	-40	ILE	-	expression tag	UNP Q14204
A	-39	PRO	-	expression tag	UNP Q14204
A	-38	CYS	-	expression tag	UNP Q14204
A	-37	HIS	-	expression tag	UNP Q14204
A	-36	ARG	-	expression tag	UNP Q14204
A	-35	VAL	-	expression tag	UNP Q14204
A	-34	VAL	-	expression tag	UNP Q14204
A	-33	GLN	-	expression tag	UNP Q14204

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-32	GLY	-	expression tag	UNP Q14204
A	-31	ASP	-	expression tag	UNP Q14204
A	-30	LEU	-	expression tag	UNP Q14204
A	-29	ASP	-	expression tag	UNP Q14204
A	-28	VAL	-	expression tag	UNP Q14204
A	-27	GLY	-	expression tag	UNP Q14204
A	-26	GLY	-	expression tag	UNP Q14204
A	-25	TYR	-	expression tag	UNP Q14204
A	-24	GLU	-	expression tag	UNP Q14204
A	-23	GLY	-	expression tag	UNP Q14204
A	-22	GLY	-	expression tag	UNP Q14204
A	-21	LEU	-	expression tag	UNP Q14204
A	-20	ALA	-	expression tag	UNP Q14204
A	-19	VAL	-	expression tag	UNP Q14204
A	-18	LYS	-	expression tag	UNP Q14204
A	-17	GLU	-	expression tag	UNP Q14204
A	-16	TRP	-	expression tag	UNP Q14204
A	-15	LEU	-	expression tag	UNP Q14204
A	-14	LEU	-	expression tag	UNP Q14204
A	-13	ALA	-	expression tag	UNP Q14204
A	-12	HIS	-	expression tag	UNP Q14204
A	-11	GLU	-	expression tag	UNP Q14204
A	-10	GLY	-	expression tag	UNP Q14204
A	-9	HIS	-	expression tag	UNP Q14204
A	-8	ARG	-	expression tag	UNP Q14204
A	-7	LEU	-	expression tag	UNP Q14204
A	-6	GLY	-	expression tag	UNP Q14204
A	-5	LYS	-	expression tag	UNP Q14204
A	-4	PRO	-	expression tag	UNP Q14204
A	-3	GLY	-	expression tag	UNP Q14204
A	-2	LEU	-	expression tag	UNP Q14204
A	-1	GLY	-	expression tag	UNP Q14204
A	0	GLY	-	expression tag	UNP Q14204
A	1	SER	-	expression tag	UNP Q14204

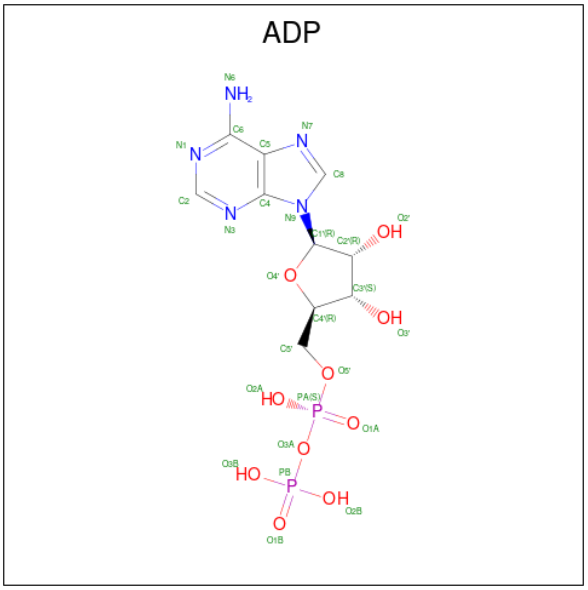
- Molecule 2 is a protein called Platelet-activating factor acetylhydrolase IB subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	E	320	Total	C	N	O	S	0	0
			2493	1570	437	466	20		
2	C	306	Total	C	N	O	S	0	0
			2372	1497	413	442	20		

There are 4 discrepancies between the modelled and reference sequences:

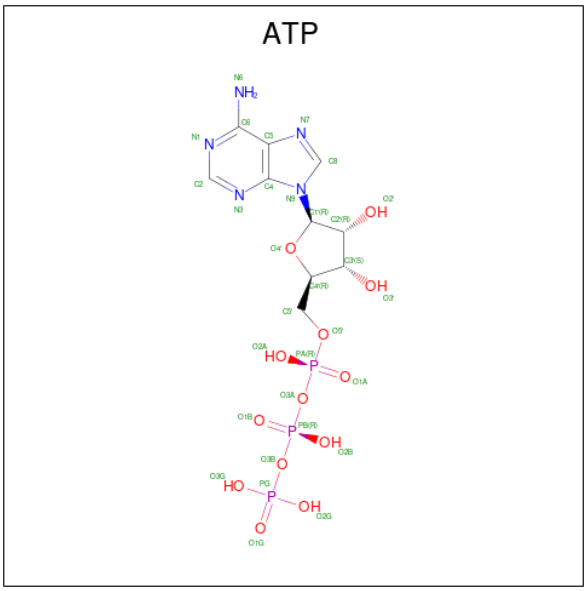
Chain	Residue	Modelled	Actual	Comment	Reference
E	0	GLY	-	expression tag	UNP P43034
E	1	SER	-	expression tag	UNP P43034
C	0	GLY	-	expression tag	UNP P43034
C	1	SER	-	expression tag	UNP P43034

- Molecule 3 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
3	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	A	1	Total	C	N	O	P	0
			27	10	5	10	2	

- Molecule 4 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
4	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	A	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 5 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

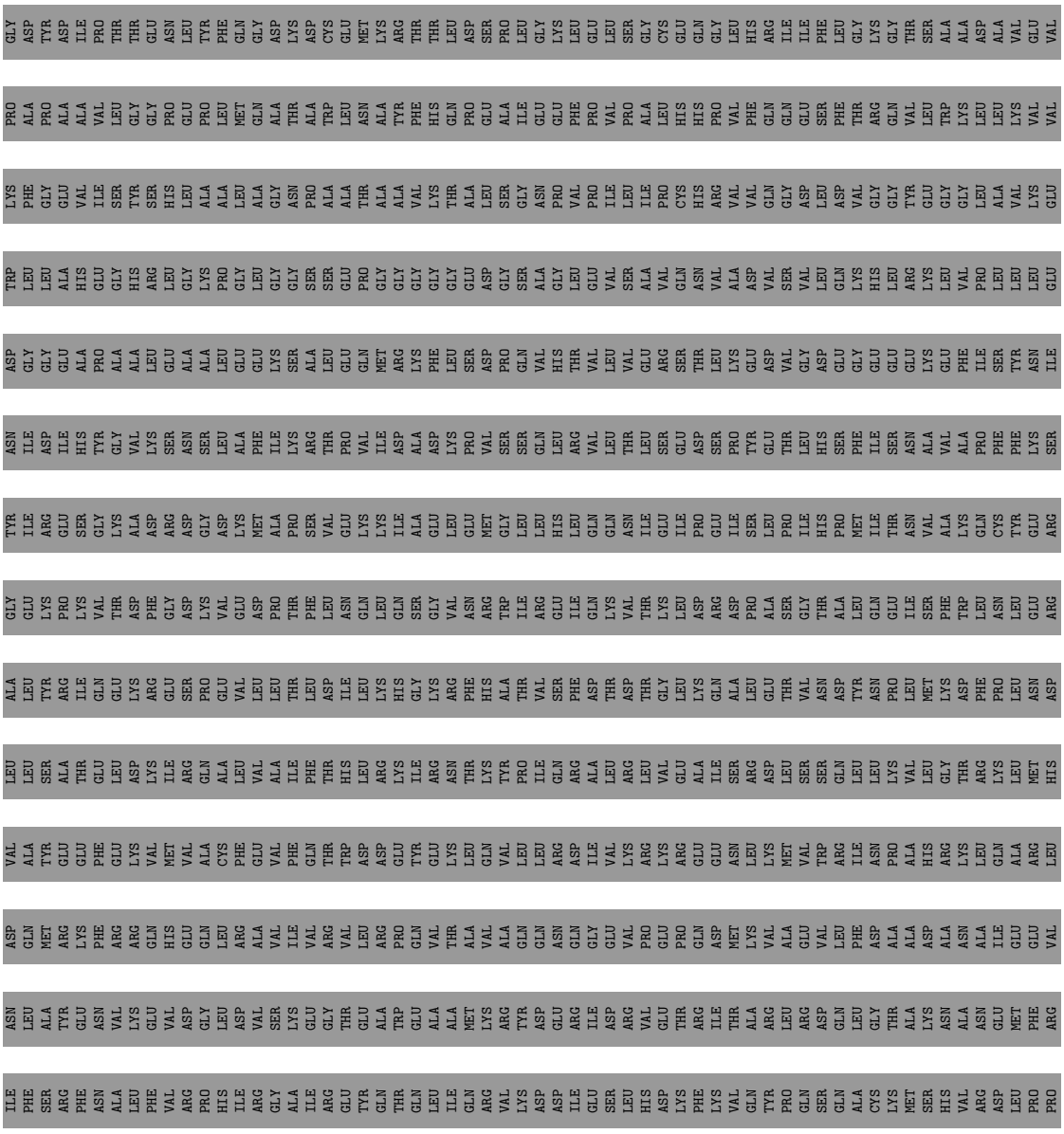
Mol	Chain	Residues	Atoms		AltConf
5	B	2	Total	Mg	0
			2	2	
5	A	2	Total	Mg	0
			2	2	

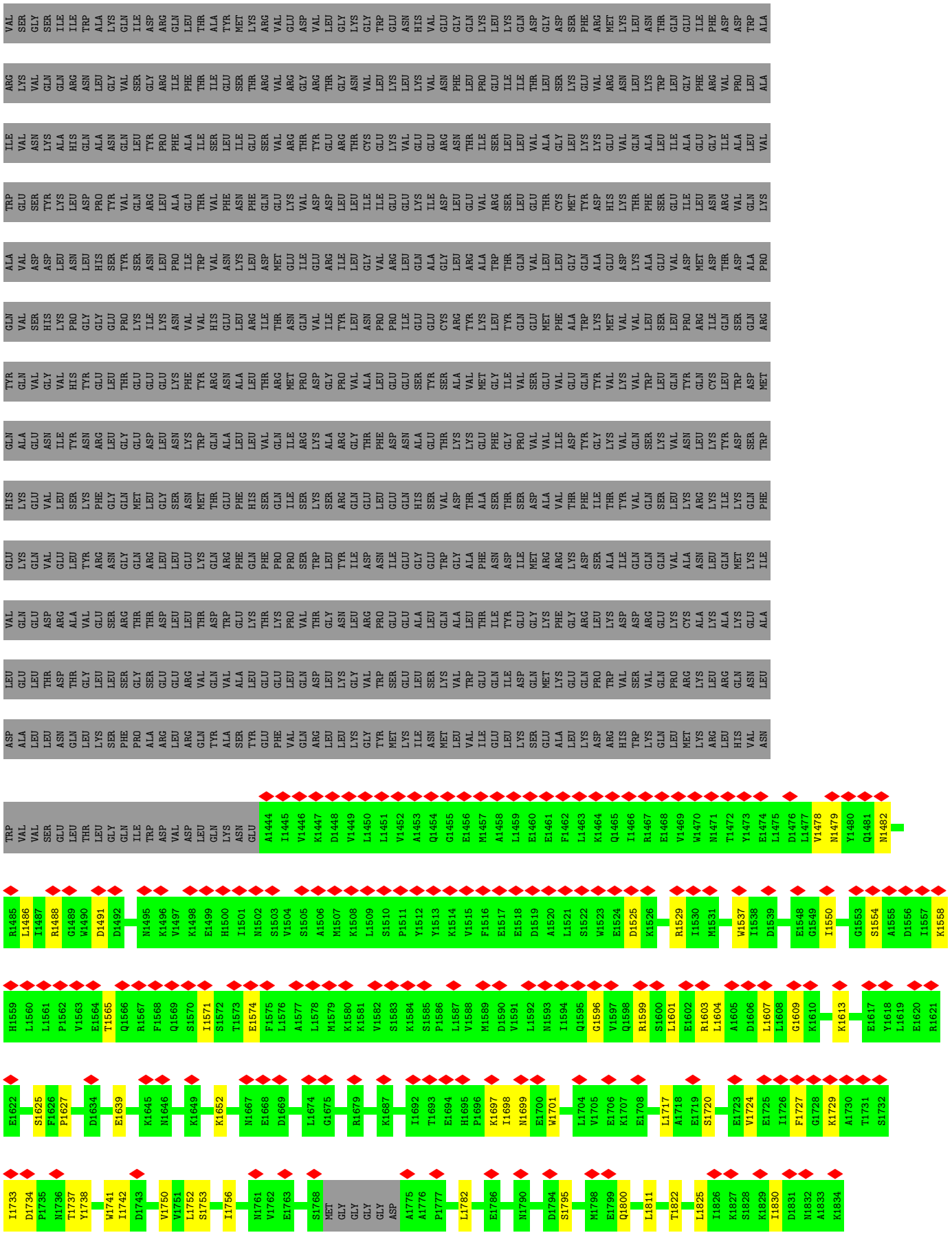
3 Residue-property plots (i)

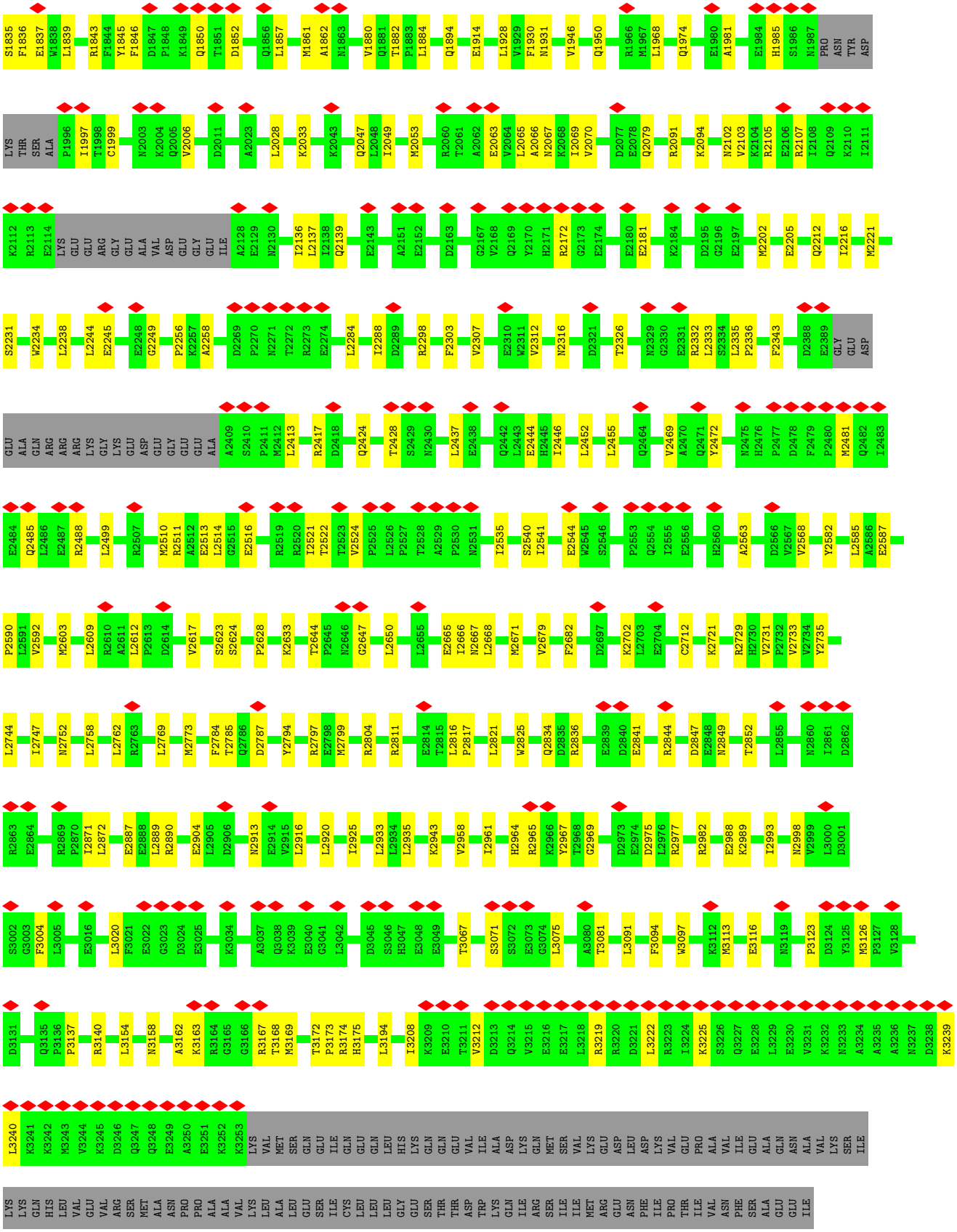
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Cytoplasmic dynein 1 heavy chain 1

Chain B:



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LYS THR SER ALA P1996 I1997 T1998 C1999 N2003 K2004 Q2005 V2006 D2011 A2023 L2028 K2033 K2043 Q2047 L2048 I2049 M2053 R2060 T2061 A2062 E2063 V2064 L2065 A2066 N2067 K2068 I2069 V2070 D2077 E2078 Q2079 R2091 K2094 N2102 V2103 K2104 R2105 E2106 R2107 I2108 Q2109 K2110 I2111
K2112 R2113 E2114 LYS GLU GLU ARG GLY GLU ALA VAL ASP GLU GLY GLU ILE A2128 E2129 N2130 I2136 L2137 I2138 Q2139 E2143 A2151 E2152 D2163 G2167 V2168 Q2169 Y2170 H2171 R2172 G2173 E2174 E2180 E2181 K2184 D2195 G2196 E2197 M2202 E2205 Q2212 I2216 M2221
S2231 W2234 L2238 L2244 E2245 E2248 G2249 P2256 K2257 A2258 D2269 P2270 N2271 T2272 R2273 E2274 L2284 I2288 D2289 R2298 F2303 V2307 E2310 W2311 V2312 N2316 D2321 T2326 N2329 G2330 E2331 R2332 L2333 S2334 L2335 P2336 F2343 D2388 E2389 GLY GLU ASP
GLU ALA GLN ARG ARG ARG LYS GLY LYS GLU ASP GLU GLY GLU GLU ALA A2409 S2410 P2411 M2412 L2413 R2417 D2418 Q2424 T2428 S2429 N2430 L2437 E2438 Q2442 L2443 E2444 H2445 I2446 L2452 L2455 Q2464 V2469 A2470 Q2471 Y2472 N2475 H2476 P2477 D2478 F2479 P2480 M2481 Q2482 I2483
E2484 Q2485 L2486 E2487 R2488 L2499 R2507 M2510 R2511 A2512 E2513 L2514 G2515 E2516 R2519 R2520 I2521 T2522 T2523 V2524 P2525 L2526 P2527 T2528 A2529 P2530 N2531 I2535 S2540 I2541 E2544 W2545 S2546 P2553 Q2554 I2555 E2556 H2560 A2563 D2566 V2567 V2568 Y2582 L2585 A2586 E2587
P2590 L2591 V2592 M2603 L2609 R2610 A2611 L2612 F2613 D2614 V2617 S2623 S2624 P2628 K2633 T2644 P2645 N2646 G2647 L2650 L2655 E2665 I2666 N2667 L2668 M2671 V2679 F2682 D2697 K2702 L2703 E2704 C2712 K2721 R2729 H2730 V2731 P2732 V2733 V2734 Y2735
L2744 I2747 N2752 L2758 L2762 R2763 L2769 M2773 F2784 T2785 Q2786 D2787 Y2794 R2797 E2798 M2799 R2804 R2811 E2814 T2815 L2816 P2817 L2821 W2825 Q2834 D2835 R2836 E2839 D2840 E2841 R2844 D2847 E2848 N2849 T2852 L2855 N2860 I2861 D2862
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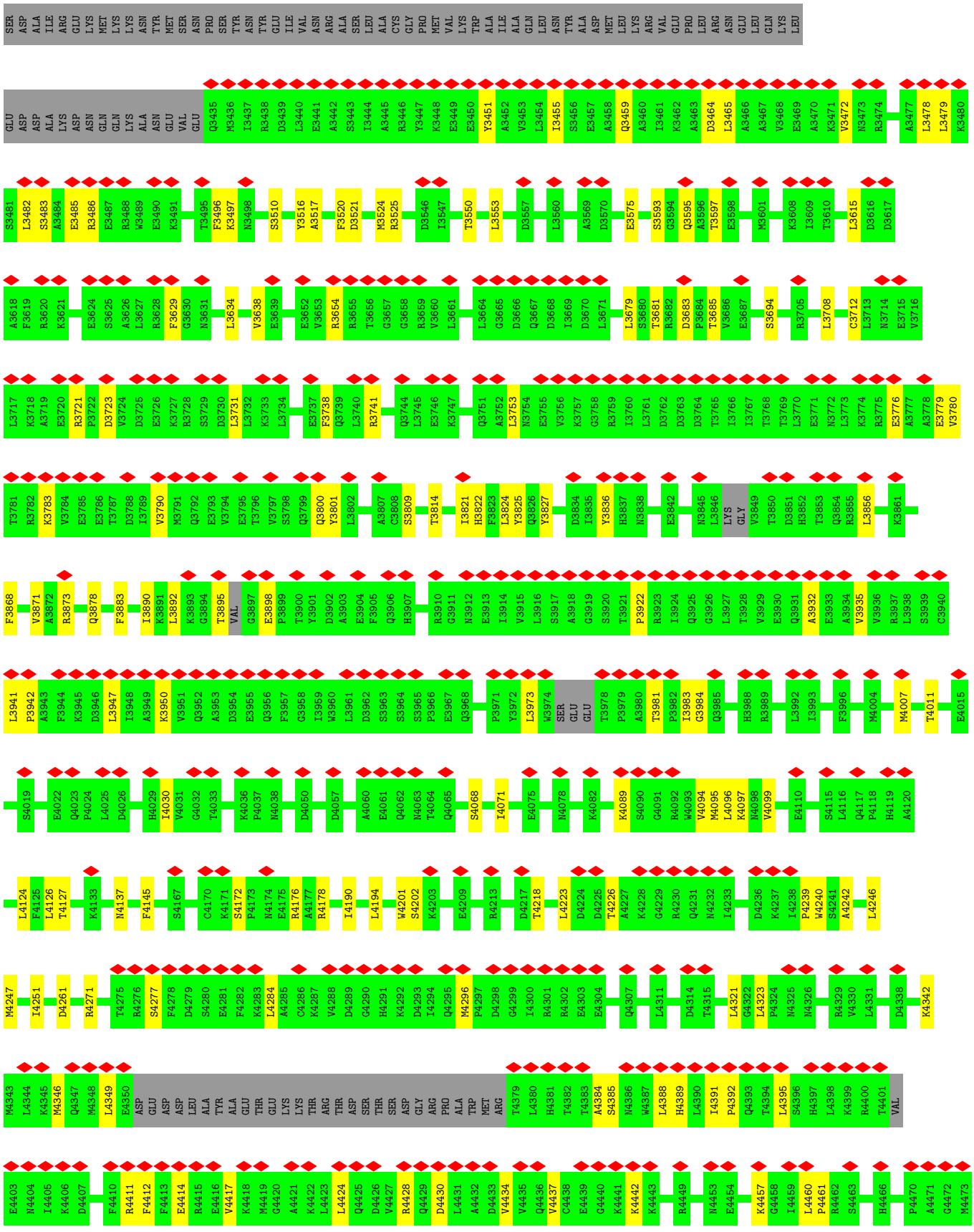
S3002 G3003 F3004 L3005 E3016 L3020 F3021 E3022 G3023 D3024 E3025 K3034 A3037 Q3038 K3039 E3040 G3041 L3042 D3045 S3046 H3047 E3048 E3049 T3067 S3071 S3072 E3073 G3074 L3075 A3080 T3081 L3091 F3094 W3097 K3112 M3113 E3116 N3119 P3123 D3124 Y3125 M3126 P3127 V3128
D3131 Q3135 P3136 P3137 R3140 L3154 N3158 A3162 K3163 R3164 G3165 G3166 R3167 T3168 M3169 T3172 P3173 R3174 H3175 L3194 I3208 K3209 E3210 T3211 V3212 D3213 Q3214 V3215 E3216 E3217 L3218 R3219 R3220 D3221 L3222 R3223 I3224 K3225 S3226 Q3227 E3228 L3229 E3230 V3231 K3232 N3233 A3234 A3235 A3236 N3237 D3238 K3239
L3240 K3241 K3242 M3243 V3244 K3245 D3246 Q3247 Q3248 E3249 A3250 E3251 K3252 K3253 LYS VAL MET SER GLN GLU ILE GLN GLU GLN LEU HIS LYS GLN GLN GLU VAL ILE ALA ASP LYS GLN MET SER VAL LYS GLU ASP LEU ASP LYS VAL GLU PRO ALA VAL ILE GLU ALA GLN ASN ALA VAL LYS SER ILE
LYS LYS GLN HIS LEU VAL GLU VAL ARG SER MET ALA ASN PRO PRO ALA ALA VAL LYS LEU ALA LEU GLU SER ILE CYS LEU LEU LEU GLY GLU SER THR THR ASP TRP LYS GLN ILE ARG SER ILE ILE MET ARG GLU ASN PHE ILE PRO THR ILE VAL ASN PHE SER ALA GLU GLU ILE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GLU ASP ASP ALA LYS ASP ASN GLN GLN LYS ALA ASN GLU VAL GLU
Q3435 M3436 I3437 R3438 D3439 L3440 E3441 A3442 S3443 I3444 A3445 R3446 Y3447 K3448 E3449 E3450 Y3451 A3452 V3453 L3454 I3455 S3456 E3457 A3458 Q3459 A3460 I3461 K3462 A3463 D3464 L3465 A3466 A3467 V3468 E3469 A3470 K3471 V3472 N3473 R3474 A3477 L3478 L3479 K3480
S3481 L3482 S3483 A3484 E3485 R3486 E3487 R3488 W3489 E3490 K3491 T3495 F3496 K3497 M3498 S3510 Y3516 A3517 F3520 D3521 M3524 R3525 D3546 I3547 T3550 L3553 D3557 L3560 A3569 D3570 E3575 S3593 G3594 Q3595 A3596 T3597 E3598 M3601 K3608 I3609 T3610 L3615 D3616 D3617
A3618 F3619 R3620 K3621 E3624 S3625 A3626 L3627 R3628 F3629 G3630 N3631 L3634 V3638 E3639 E3652 V3653 R3654 R3655 T3656 G3657 G3658 R3659 V3660 L3661 L3664 G3665 D3666 Q3667 D3668 I3669 D3670 L3671 L3679 S3680 T3681 R3682 D3683 P3684 T3685 V3686 E3687 S3694 R3705 L3708 C3712 L3713 N3714 E3715 V3716
L3717 K3718 A3719 E3720 R3721 P3722 D3723 V3724 D3725 E3726 K3727 R3728 S3729 D3730 L3731 L3732 K3733 L3734 E3737 F3738 Q3739 L3740 R3741 Q3744 L3745 E3746 K3747 Q3751 A3752 L3753 N3754 E3755 V3756 K3757 G3758 R3759 I3760 L3761 D3762 D3763 D3764 T3765 I3766 I3767 T3768 T3769 L3770 E3771 N3772 L3773 K3774 R3775 E3776 A3777 A3778 E3779 V3780
T3781 R3782 K3783 V3784 E3785 E3786 T3787 D3788 I3789 V3790 M3791 Q3792 E3793 V3794 E3795 T3796 V3797 S3798 Q3799 Q3800 Y3801 L3802 A3807 C3808 S3809 T3814 I3821 H3822 F3823 L3824 Y3825 Q3826 Y3827 D3834 I3835 Y3836 H3837 N3838 E3842 N3845 L3846 LYS GLY V3849 T3850 D3851 H3852 T3853 Q3854 R3855 L3856 K3861
F3868 V3871 A3872 R3873 Q3878 F3883 I3890 K3891 L3892 K3893 G3894 T3895 VAL G3897 E3898 P3899 T3900 Y3901 D3902 A3903 E3904 F3905 Q3906 H3907 R3910 G3911 N3912 E3913 I3914 V3915 L3916 S3917 A3918 G3919 S3920 T3921 P3922 R3923 I3924 Q3925 G3926 L3927 T3928 V3929 E3930 Q3931 A3932 E3933 A3934 V3935 V3936 R3937 L3938 S3939 C3940
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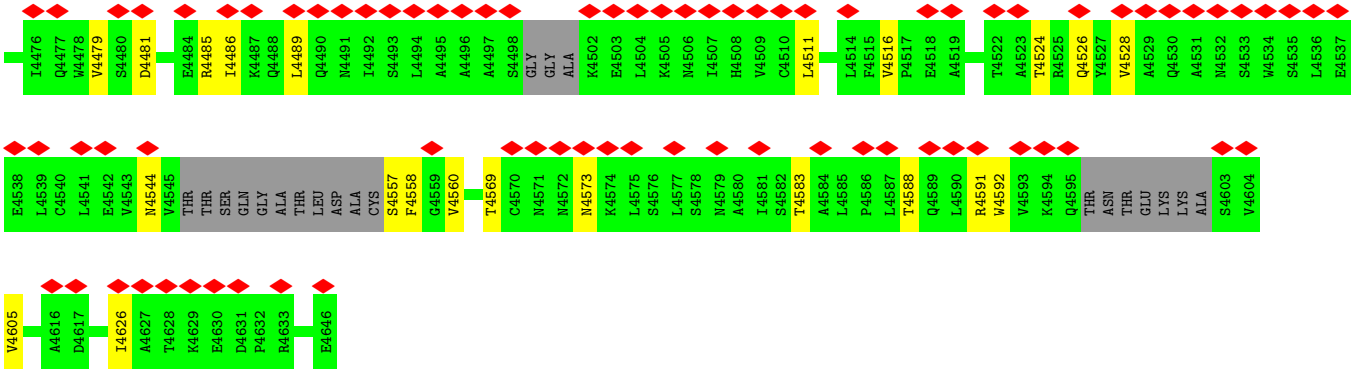
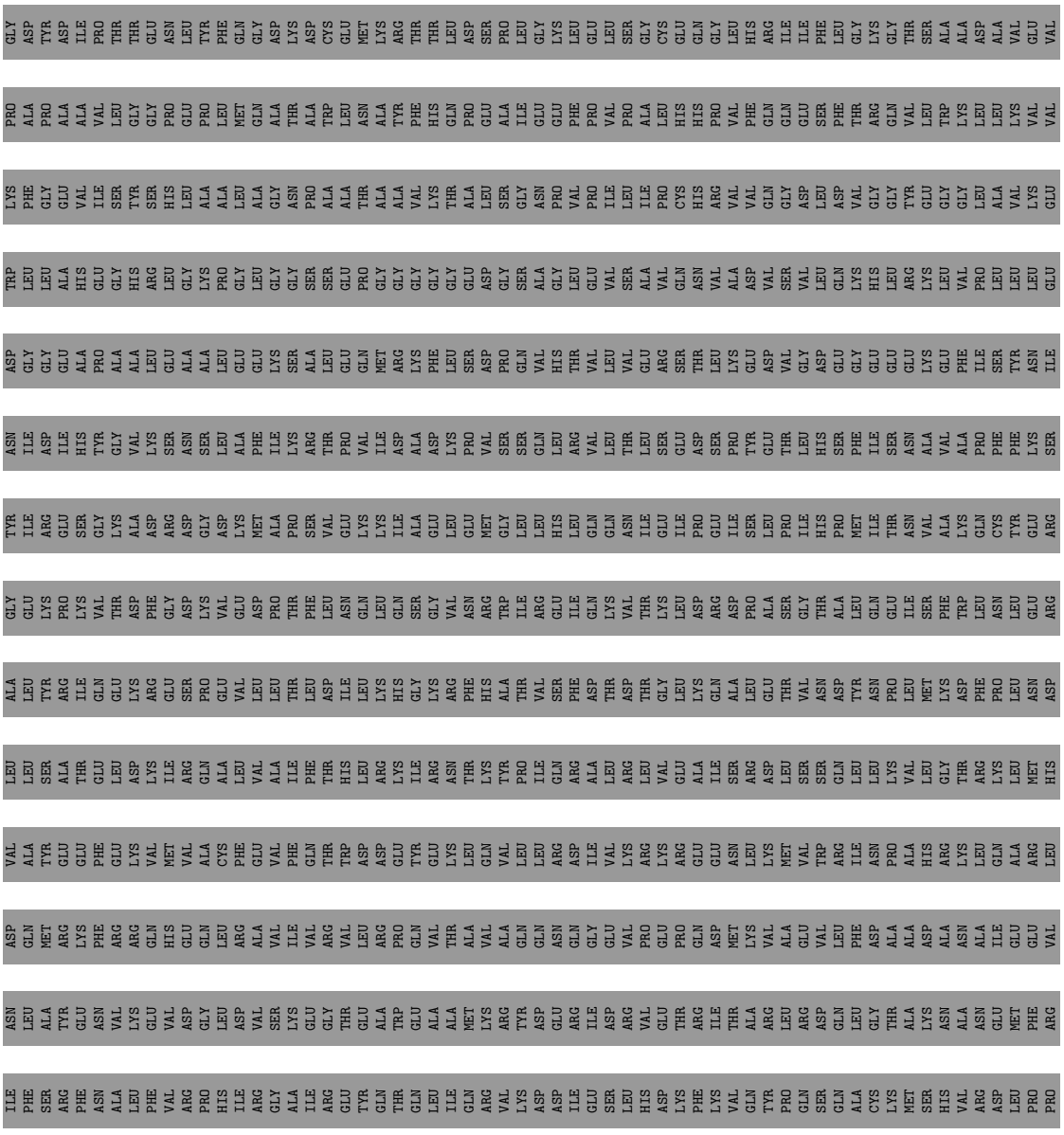
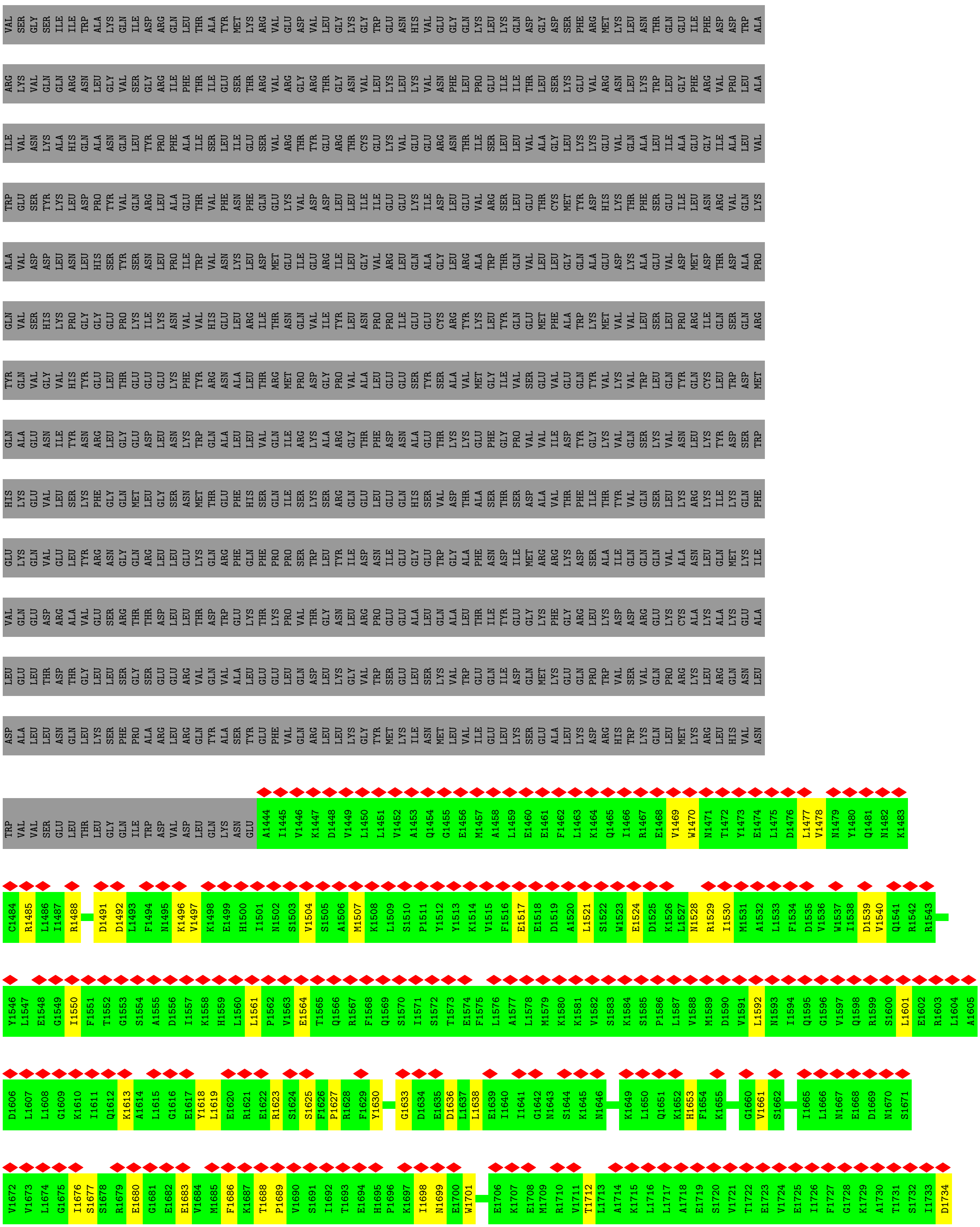
M4343 L4344 K4345 M4346 Q4347 M4348 L4349 E4350 ASP GLU ASP ASP LEU ALA TYR ALA GLU THR GLU LYS LYS THR ARG THR ASP SER THR SER ASP GLY ARG PRO ALA TRP MET ARG T4379 L4380 H4381 T4382 T4383 A4384 S4385 N4386 W4387 L4388 H4389 L4390 I4391 P4392 Q4393 T4394 L4395 S4396 H4397 L4398 K4399 R4400 T4401 VAL
E4403 N4404 I4405 K4406 D4407 F4410 R4411 F4412 F4413 E4414 R4415 E4416 V4417 K4418 M4419 G4420 A4421 K4422 L4423 L4424 Q4425 D4426 V4427 R4428 Q4429 D4430 L4431 A4432 D4433 V4434 V4435 Q4436 V4437 C4438 E4439 G4440 K4441 K4442 K4443 R4449 N4453 E4454 K4457 G4458 I4459 L4460 P4461 R4462 S4463 H4466 P4470 A4471 G4472 M4473



• Molecule 1: Cytoplasmic dynein 1 heavy chain 1

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ARG LYS VAL GLN GLN ARG ASN LEU GLY VAL SER GLY ARG ILE PHE THR ILE GLU SER THR ARG VAL ARG GLY ARG THR GLY ASN VAL LEU LYS LEU LYS VAL ASN PHE LEU PRO GLU ILE ILE THR LEU SER LYS GLU VAL ARG ASN LEU LYS TRP LEU GLY PHE ARG VAL PRO LEU ALA
ILE VAL ASN LYS ALA HIS GLN ALA ASN GLN LEU TYR PRO PHE ALA ILE SER LEU ILE GLU SER VAL ARG THR TYR GLU ARG THR CYS GLU LYS VAL GLU GLU ARG ASN THR ILE SER LEU LEU VAL ALA GLY LEU LYS LYS GLU VAL GLN ALA LEU ILE ALA GLU GLY ILE ALA LEU VAL
TRP GLU SER TYR LYS LEU ASP PRO TYR VAL GLN ARG LEU ALA GLU THR VAL PHE ASN PHE GLN GLU LYS VAL ASP ASP LEU LEU ILE ILE GLU GLU LYS ILE ASP LEU GLU VAL ARG SER LEU GLU THR CYS MET TYR ASP HIS LYS THR PHE SER GLU ILE LEU ASN ARG VAL GLN LYS
ALA VAL ASP ASP LEU ASN LEU HIS SER TYR SER ASN LEU PRO ILE TRP VAL ASN LYS LEU ASP MET GLU ILE GLU ARG ILE LEU GLY VAL ARG LEU GLN ALA GLY LEU ARG ALA TRP THR GLN VAL LEU LEU GLY GLN ALA GLU ASP LYS ALA GLU VAL ASP MET ASP THR ASP ALA PRO
GLN VAL SER HIS LYS PRO GLY GLY GLU PRO LYS ILE LYS ASN VAL VAL HIS GLU LEU ARG ILE THR ASN GLN VAL ILE TYR LEU ASN PRO PRO ILE GLU GLU CYS ARG TYR LYS LEU TYR GLN GLU MET PHE ALA TRP LYS MET VAL VAL LEU SER LEU PRO ARG ILE GLN SER GLN ARG
TYR GLN VAL GLY VAL HIS TYR GLU LEU THR GLU GLU GLU LYS PHE TYR ARG ASN ALA LEU THR ARG MET PRO ASP GLY PRO VAL ALA LEU GLU GLU SER TYR SER ALA VAL MET GLY ILE VAL SER GLU VAL GLU GLN TYR VAL LYS VAL TRP LEU GLN TYR GLN CYS LEU TRP ASP MET
GLN ALA GLU ASN ILE TYR ASN ARG LEU GLY GLU ASP LEU ASN LYS TRP GLN ALA LEU LEU VAL GLN ILE ARG LYS ALA ARG GLY THR PHE ASP ASN ALA GLU THR LYS LYS GLU PHE GLY PRO VAL VAL ILE ASP TYR GLY LYS VAL GLN SER LYS VAL ASN LEU LYS TYR ASP SER TRP
HIS LYS GLU VAL LEU SER LYS PHE GLY GLN MET LEU GLY SER ASN MET THR GLU PHE HIS SER GLN ILE SER LYS SER ARG GLN GLU LEU GLU GLN HIS SER VAL ASP THR ALA SER THR SER ASP ALA VAL THR PHE ILE THR TYR VAL GLN SER LEU LYS ARG LYS ILE LYS GLN PHE
GLU LYS GLN VAL GLU LEU TYR ARG ASN GLY GLN ARG LEU LEU GLU LYS GLN ARG PHE GLN PHE PRO PRO SER TRP LEU TYR ILE ASP ASN ILE GLU GLY GLU TRP GLY ALA PHE ASN ASP ILE MET ARG ARG LYS ASP SER ALA ILE GLN GLN GLN VAL ALA ASN LEU GLN MET LYS ILE
VAL GLN GLU ASP ARG ALA VAL GLU SER ARG THR THR ASP LEU LEU THR ASP TRP GLU LYS THR LYS PRO VAL THR GLY ASN LEU ARG PRO GLU GLU ALA LEU GLN ALA LEU THR ILE TYR GLU GLY LYS PHE GLY ARG LEU LYS ASP ASP ARG GLU LYS CYS ALA LYS ALA LYS GLU ALA
LEU GLU LEU THR ASP THR GLY LEU LEU SER GLY SER GLU GLU ARG VAL GLN VAL ALA LEU GLU GLU LEU GLN ASP LEU LYS GLY VAL TRP SER GLU LEU SER LYS VAL TRP GLU GLN ILE ASP GLN MET LYS GLU GLN PRO TRP VAL SER VAL GLN PRO ARG LYS LEU ARG GLN ASN LEU
ASP ALA LEU LEU ASN GLN LEU LYS SER PHE PRO ALA ARG LEU ARG GLN TYR ALA SER TYR GLU PHE VAL GLN ARG LEU LEU LYS GLY TYR MET LYS ILE ASN MET LEU VAL ILE GLU LEU LYS SER GLU ALA LEU LYS ASP ARG HIS TRP LYS GLN LEU MET LYS ARG LEU HIS VAL ASN
TRP VAL VAL SER GLU LEU THR LEU GLY GLN ILE TRP ASP VAL ASP LEU GLN LYS ASN GLU A1444 I1445 V1446 K1447 D1448 V1449 L1450 L1451 V1452 A1453 Q1454 G1455 E1456 M1457 A1458 L1459 E1460 E1461 F1462 L1463 K1464 Q1465 I1466 R1467 E1468 V1469 W1470 N1471 T1472 Y1473 E1474 L1475 D1476 L1477 V1478 N1479 Y1480 Q1481 N1482 K1483
C1484 R1485 L1486 I1487 R1488 D1491 D1492 L1493 F1494 N1495 K1496 V1497 K1498 E1499 H1500 I1501 N1502 S1503 V1504 S1505 A1506 M1507 K1508 L1509 S1510 P1511 Y1512 Y1513 K1514 V1515 F1516 E1517 E1518 D1519 A1520 L1521 S1522 W1523 E1524 D1525 K1526 L1527 N1528 R1529 I1530 M1531 A1532 L1533 F1534 D1535 V1536 W1537 I1538 D1539 V1540 Q1541 R1542 R1543
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V1672 V1673 L1674 G1675 I1676 S1677 S1678 R1679 E1680 G1681 E1682 E1683 V1684 M1685 F1686 K1687 T1688 P1689 V1690 S1691 I1692 T1693 E1694 H1695 P1696 K1697 I1698 N1699 E1700 W1701 E1706 K1707 E1708 M1709 R1710 V1711 T1712 L1713 A1714 K1715 L1716 L1717 A1718 E1719 S1720 V1721 T1722 E1723 V1724 E1725 I1726 F1727 G1728 K1729 A1730 T1731 S1732 I1733 D1734


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V2103 K2104 R2105 E2106 R2107 I2108 Q2109 K2110 I2111 K2112 R2113 E2114 LYS GLU GLU ARG GLY GLU ALA VAL ASP GLU GLY GLU ILE A2128 E2129 N2130 L2131 P2132 E2133 Q2134 E2135 I2136 L2137 I2138 Q2139 S2140 A2151 E2152 D2153 I2154 L2157 F2158 S2159 L2160 L2161 S2162 D2163 V2164 F2165 P2166 G2167 V2168 Q2169 Y2170 H2171 R2172
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P2270 N2271 T2272 R2273 E2274 W2275 T2276 D2277 G2278 H2282 V2283 L2284 R2285 K2286 I2287 I2288 D2289 R2292 G2293 E2294 L2295 Q2296 K2297 R2298 D2304 G2305 D2306 V2307 D2308 P2309 E2310 V2311 V2312 N2316 D2320 D2321 N2322 K2323 L2324 N2329 G2330 E2331 R2332 L2333 S2334 L2335 P2336 F2343 E2344 V2345 Q2346 D2347 L2348
K2349 A2354 T2355 V2356 S2357 R2358 M2361 S2365 L2379 L2382 I2385 P2386 L2387 D2388 E2389 GLY GLU ASP GLU ALA GLN ARG ARG ARG LYS GLY LYS GLU ASP GLU GLY GLU GLU ALA A2409 S2410 P2411 M2412 L2413 Q2414 I2415 D2418 A2419 A2420 T2421 I2422 M2423 Q2424 P2425 Y2426 F2427 T2428 S2429
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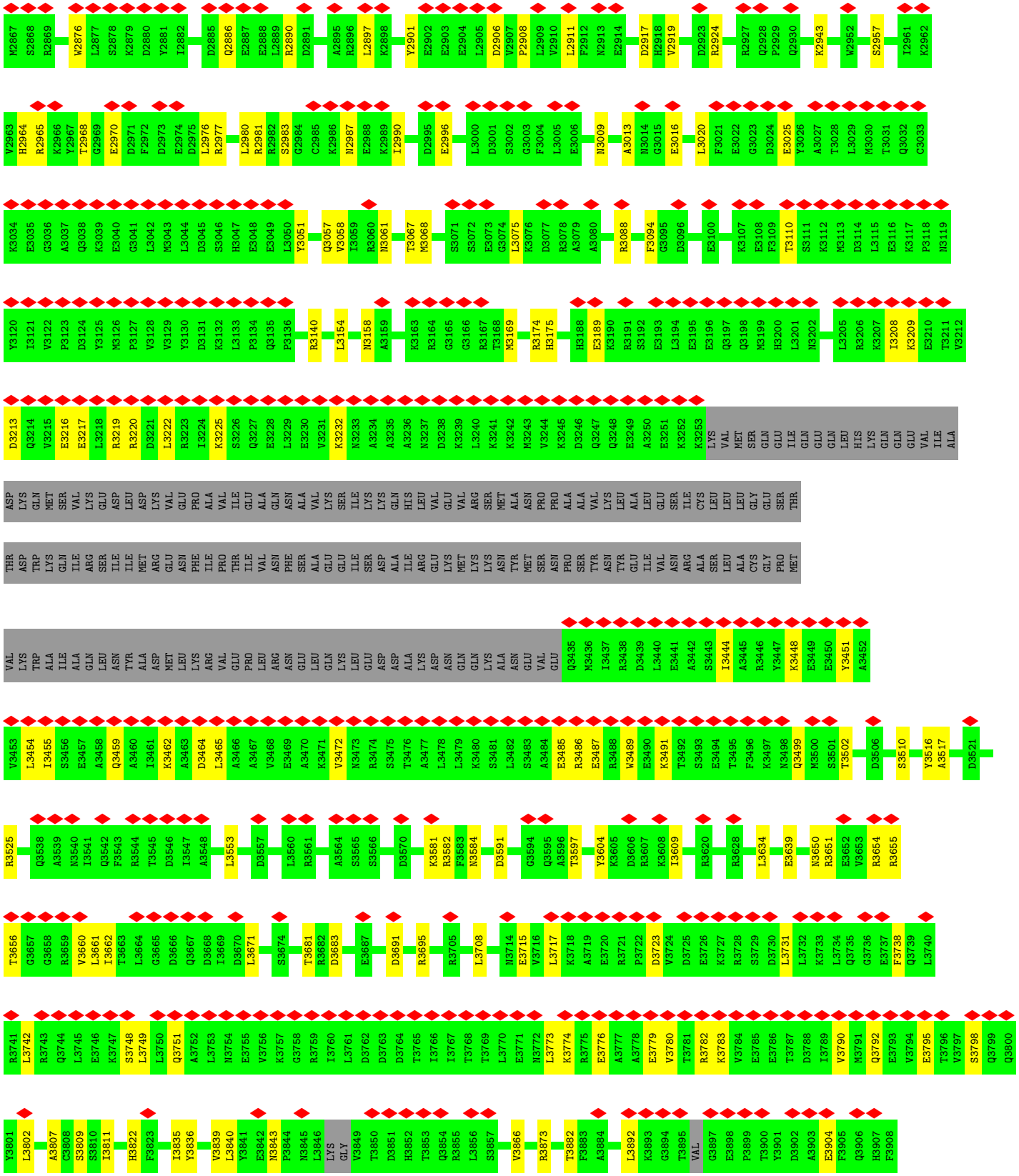
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V2963 H2964 R2965 K2966 Y2967 T2968 G2969 E2970 D2971 F2972 D2973 E2974 D2975 L2976 R2977 L2980 R2981 R2982 S2983 G2984 C2985 K2986 N2987 E2988 K2989 I2990 D2995 E2996 L3000 D3001 S3002 G3003 F3004 L3005 E3006 N3009 A3013 N3014 G3015 E3016 L3020 F3021 E3022 G3023 D3024 E3025 Y3026 A3027 T3028 L3029 M3030 T3031 Q3032 C3033
K3034 E3035 G3036 A3037 Q3038 K3039 E3040 G3041 L3042 M3043 L3044 D3045 S3046 H3047 E3048 E3049 L3050 Y3051 Q3057 V3058 I3059 R3060 N3061 T3067 M3068 S3071 S3072 E3073 G3074 L3075 K3076 D3077 R3078 A3079 A3080 R3088 F3094 G3095 D3096 E3100 K3107 E3108 F3109 T3110 S3111 K3112 M3113 D3114 L3115 E3116 K3117 P3118 N3119
Y3120 I3121 V3122 P3123 D3124 Y3125 M3126 P3127 V3128 V3129 Y3130 D3131 K3132 L3133 P3134 Q3135 P3136 R3140 L3154 N3158 A3159 K3163 R3164 G3165 G3166 R3167 T3168 M3169 R3174 H3175 H3188 E3189 K3190 R3191 S3192 E3193 L3194 E3195 E3196 Q3197 Q3198 M3199 H3200 L3201 N3202 L3205 R3206 K3207 I3208 K3209 E3210 T3211 V3212
D3213 Q3214 V3215 E3216 E3217 L3218 R3219 R3220 D3221 L3222 R3223 I3224 K3225 S3226 Q3227 E3228 L3229 E3230 V3231 K3232 N3233 A3234 A3235 A3236 N3237 D3238 K3239 L3240 K3241 K3242 M3243 V3244 K3245 D3246 Q3247 Q3248 E3249 A3250 E3251 K3252 K3253 LYS VAL MET SER GLN GLU ILE GLN GLU GLN LEU HIS LYS GLN GLN GLU VAL ILE ALA
ASP LYS GLN MET SER VAL LYS GLU ASP LEU ASP LYS VAL GLU PRO ALA VAL ILE GLU ALA GLN ASN ALA VAL LYS SER ILE LYS LYS GLN HIS LEU VAL GLU VAL ARG SER MET ALA ASN PRO PRO ALA ALA VAL LYS LEU ALA LEU GLU SER ILE CYS LEU LEU LEU GLY GLU SER THR
THR ASP TRP LYS GLN ILE ARG SER ILE ILE MET ARG GLU ASN PHE ILE PRO THR ILE VAL ASN PHE SER ALA GLU GLU ILE SER ASP ALA ILE ARG GLU LYS MET LYS LYS ASN TYR MET SER ASN PRO SER TYR ASN TYR GLU ILE VAL ASN ARG ALA SER LEU LEU ALA CYS GLY PRO MET
VAL LYS TRP ALA ILE ALA GLN LEU ASN TYR ALA ASP MET LEU LEU LYS ARG VAL GLU PRO LEU ARG ASN GLU GLU LEU GLN LYS LYS LEU GLU GLU ASP ASP ASP ALA LYS ASP ASN GLN GLN LYS ALA ASN GLU VAL GLU Q3435 M3436 I3437 R3438 D3439 L3440 E3441 A3442 S3443 I3444 A3445 R3446 Y3447 K3448 E3449 E3450 Y3451 A3452
V3453 L3454 I3455 S3456 E3457 A3458 Q3459 A3460 I3461 K3462 A3463 D3464 L3465 A3466 A3467 V3468 E3469 A3470 K3471 V3472 N3473 R3474 S3475 T3476 A3477 L3478 L3479 K3480 S3481 L3482 S3483 A3484 E3485 R3486 E3487 R3488 W3489 E3490 K3491 T3492 S3493 E3494 T3495 F3496 K3497 N3498 Q3499 M3500 S3501 T3502 D3506 S3510 Y3516 A3517 D3521
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R3741 L3742 R3743 Q3744 L3745 E3746 K3747 S3748 L3749 L3750 Q3751 A3752 L3753 N3754 E3755 V3756 K3757 G3758 R3759 I3760 L3761 D3762 D3763 D3764 T3765 I3766 I3767 T3768 T3769 L3770 E3771 N3772 L3773 K3774 R3775 E3776 A3777 A3778 E3779 V3780 T3781 R3782 K3783 V3784 E3785 E3786 T3787 D3788 I3789 V3790 M3791 Q3792 E3793 V3794 E3795 T3796 V3797 S3798 Q3799 Q3800
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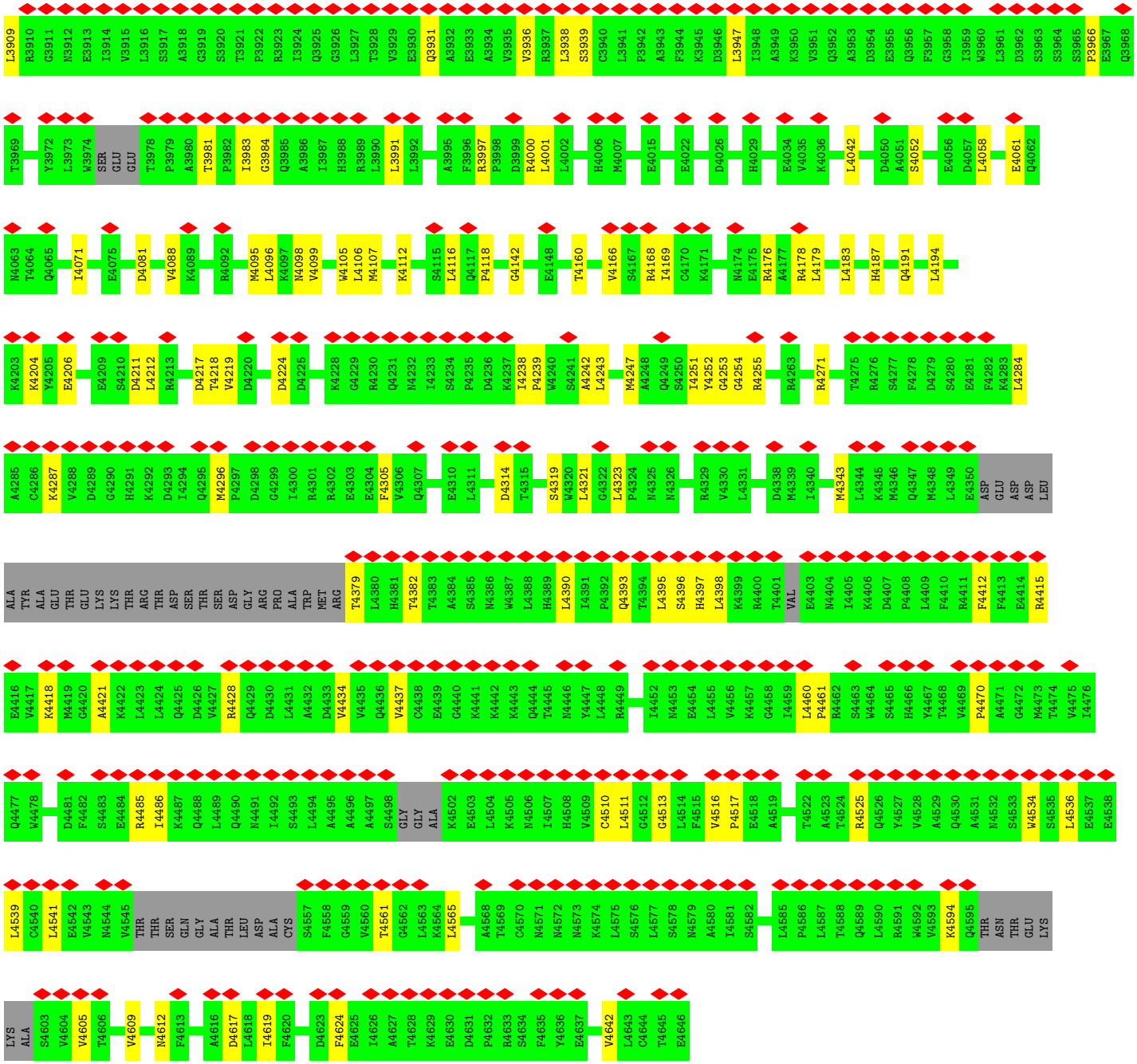
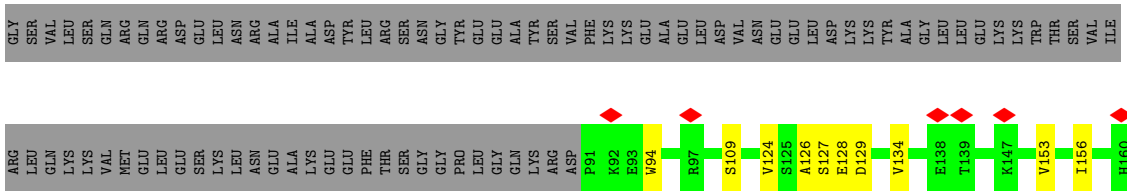
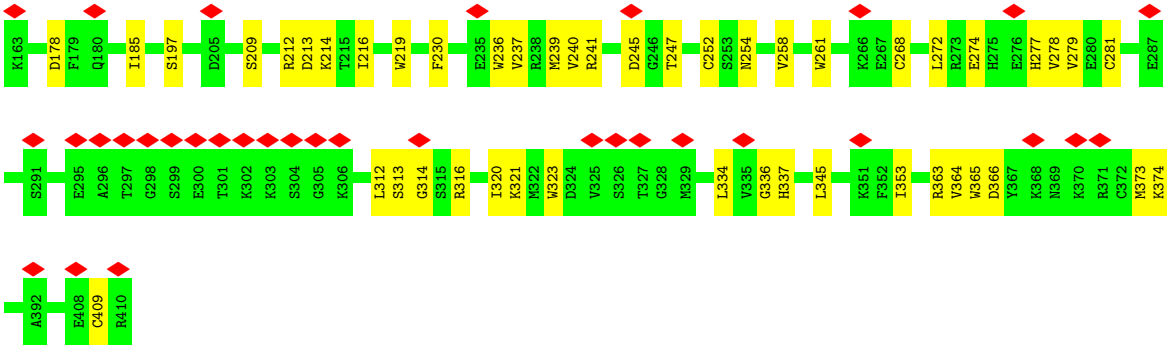


• Molecule 2: Platelet-activating factor acetylhydrolase IB subunit beta

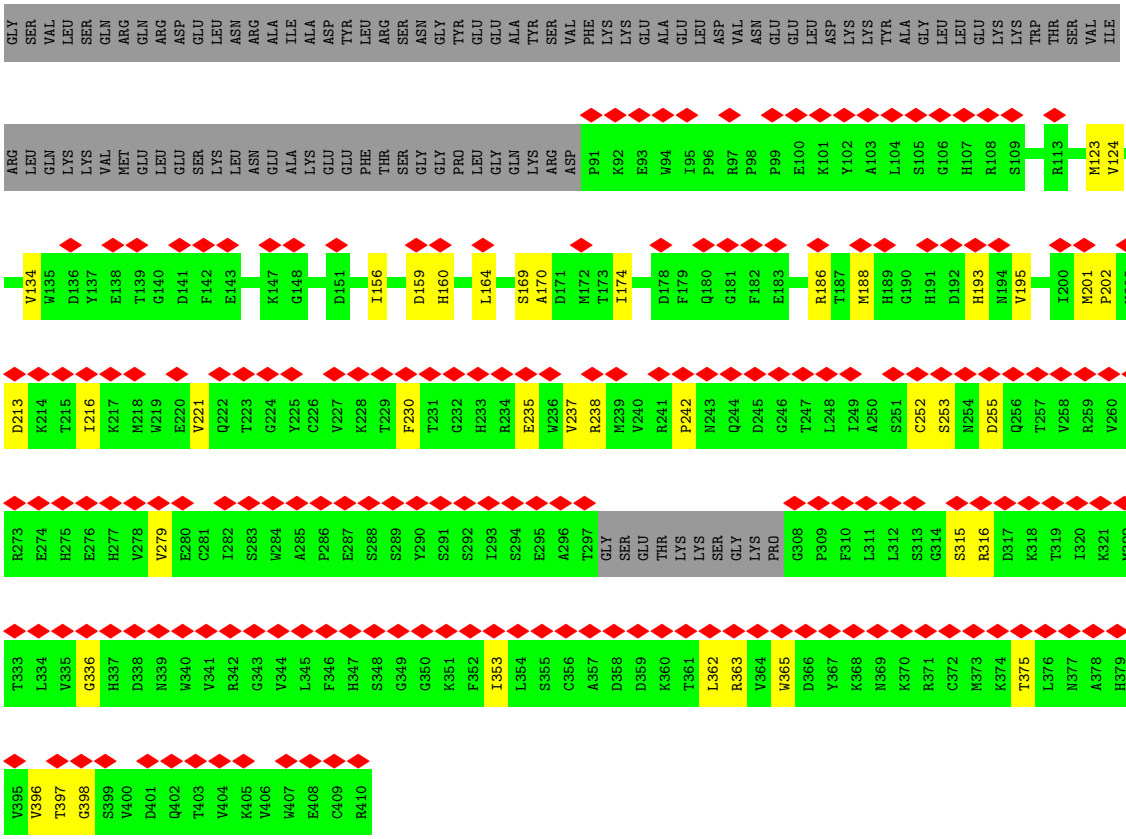
Chain E:





• Molecule 2: Platelet-activating factor acetylhydrolase IB subunit beta

Chain C:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	66880	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	55	Depositor
Minimum defocus (nm)	610	Depositor
Maximum defocus (nm)	3250	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.934	Depositor
Minimum map value	-0.503	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.032	Depositor
Recommended contour level	0.224	Depositor
Map size (Å)	329.12, 329.12, 329.12	wwPDB
Map dimensions	352, 352, 352	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.935, 0.935, 0.935	Depositor

5 Model quality

5.1 Standard geometry

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

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	A	0.16	0/23477	0.34	0/31858
1	B	0.18	0/23499	0.35	0/31886
2	C	0.13	0/2436	0.33	0/3313
2	E	0.21	0/2560	0.43	0/3476
All	All	0.17	0/51972	0.35	0/70533

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	23004	0	22809	292	0
1	B	23025	0	22837	259	0
2	C	2372	0	2224	30	0
2	E	2493	0	2372	35	0
3	A	81	0	36	1	0
3	B	81	0	36	4	0
4	A	31	0	12	1	0
4	B	31	0	12	0	0
5	A	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	B	2	0	0	0	0
All	All	51122	0	50338	615	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 6.

All (615) 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)
1:B:3455:ILE:HG22	1:B:3459:GLN:HE22	1.52	0.74
2:E:313:SER:HB2	2:E:320:ILE:HG23	1.72	0.71
2:E:353:ILE:HB	2:E:365:TRP:HB2	1.71	0.71
2:E:281:CYS:H	2:E:314:GLY:HA2	1.56	0.71
1:A:3731:LEU:HD21	1:A:3790:VAL:HG22	1.73	0.70
1:A:4179:LEU:HD11	1:A:4238:ILE:HD11	1.73	0.70
1:A:4052:SER:HA	1:A:4095:MET:HE1	1.74	0.70
1:B:2965:ARG:HH12	1:B:3615:LEU:HA	1.57	0.68
2:C:201:MET:HE3	2:C:202:PRO:HD2	1.75	0.67
1:A:2307:VAL:HG13	1:A:2312:VAL:HG21	1.74	0.67
1:B:1717:LEU:HD11	1:B:1752:LEU:HD22	1.77	0.67
2:E:320:ILE:HB	2:E:334:LEU:HB2	1.77	0.67
2:C:123:MET:HE3	2:C:396:VAL:HG21	1.76	0.66
1:B:3981:THR:HG23	1:B:3984:GLY:H	1.60	0.66
1:A:4206:GLU:O	1:A:4255:ARG:NH1	2.30	0.65
2:E:258:VAL:HG22	2:E:279:VAL:HG11	1.78	0.65
2:E:254:ASN:HA	2:E:278:VAL:HG13	1.80	0.64
1:B:3731:LEU:HD21	1:B:3790:VAL:HG22	1.80	0.64
1:A:3584:ASN:O	1:A:3651:ARG:NH2	2.31	0.63
1:A:1933:ASP:OD1	1:A:1962:ARG:NH1	2.31	0.63
1:A:3839:VAL:O	1:A:3843:ASN:ND2	2.31	0.63
1:A:3981:THR:HG23	1:A:3984:GLY:H	1.63	0.63
1:B:2221:MET:HG2	1:B:2343:PHE:HB2	1.80	0.62
1:B:3712:CYS:SG	1:B:3836:TYR:OH	2.57	0.62
1:A:3232:LYS:HD2	1:A:3454:LEU:HD22	1.80	0.62
1:A:2245:GLU:OE1	1:A:2298:ARG:NH2	2.33	0.61
1:B:1931:ASN:ND2	1:B:2316:ASN:OD1	2.34	0.61
1:B:3483:SER:HA	1:B:3486:ARG:HG2	1.82	0.61
1:B:3681:THR:HG22	1:B:3683:ASP:H	1.65	0.61
1:A:4525:ARG:NH1	1:A:4536:LEU:O	2.33	0.61
1:B:2028:LEU:HB2	1:B:2033:LYS:HE3	1.82	0.61
1:A:1539:ASP:OD2	1:A:2292:ARG:NH2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3455:ILE:O	1:B:3459:GLN:NE2	2.33	0.61
1:A:1882:THR:HG22	1:A:1884:LEU:H	1.66	0.60
1:B:3801:TYR:HE1	1:B:3856:LEU:HD21	1.66	0.60
1:A:2996:GLU:HB3	1:A:3068:MET:HB3	1.83	0.60
1:A:3517:ALA:HB1	1:A:3525:ARG:HG2	1.81	0.60
1:B:2816:LEU:HD12	1:B:2817:PRO:HD2	1.83	0.60
1:B:3225:LYS:NZ	1:B:3464:ASP:OD2	2.33	0.60
1:A:3158:ASN:ND2	1:A:3169:MET:O	2.34	0.60
1:B:4424:LEU:HD12	1:B:4486:ILE:HD12	1.84	0.60
1:A:2492:ARG:NH1	1:A:2543:GLY:O	2.34	0.60
1:A:4284:LEU:HG	1:A:4296:MET:HB2	1.84	0.60
1:B:3922:PRO:HD2	1:B:3932:ALA:HB1	1.84	0.60
1:B:3941:LEU:HD12	1:B:3942:PRO:HD2	1.84	0.59
2:C:124:VAL:HG12	2:C:134:VAL:HG22	1.85	0.59
1:B:2172:ARG:NH1	1:B:2205:GLU:OE2	2.35	0.59
1:B:3212:VAL:HG22	1:B:3479:LEU:HD21	1.85	0.59
1:A:3604:TYR:HB2	1:A:3609:ILE:HD11	1.84	0.59
1:B:4346:MET:HA	1:B:4349:LEU:HD12	1.84	0.59
1:A:2861:ILE:O	1:A:2863:ARG:NH1	2.35	0.59
1:B:2472:TYR:HB2	1:B:2541:ILE:HD11	1.85	0.58
1:B:4481:ASP:OD2	1:B:4485:ARG:NH1	2.36	0.58
1:A:2272:THR:HG23	1:A:2274:GLU:HG2	1.85	0.58
1:B:3113:MET:O	1:B:3140:ARG:NH2	2.36	0.58
1:B:2413:LEU:HG	1:B:2417:ARG:HE	1.68	0.58
1:B:2469:VAL:HG13	1:B:2481:MET:HG2	1.84	0.58
1:A:1540:VAL:HG11	1:A:1601:LEU:HD12	1.85	0.58
1:A:1661:VAL:HG13	1:A:1676:ILE:HG23	1.85	0.58
1:A:2060:ARG:HH12	1:A:2130:ASN:HA	1.67	0.58
1:A:2278:GLY:O	1:A:2282:HIS:HB3	2.04	0.58
1:B:2665:GLU:HB3	1:B:2668:LEU:HD12	1.86	0.58
1:B:2887:GLU:OE2	1:B:2890:ARG:NH1	2.37	0.58
1:A:2461:MET:HG2	1:A:2583:THR:HG21	1.85	0.58
1:A:1734:ASP:HB2	1:A:1737:THR:HG22	1.85	0.57
1:A:2816:LEU:HD11	1:A:2820:GLY:HA3	1.86	0.57
1:A:3013:ALA:HA	1:A:3088:ARG:HG3	1.85	0.57
1:A:1550:ILE:HD11	1:A:1618:TYR:HE2	1.70	0.57
1:B:1734:ASP:HB3	1:B:1737:THR:HG22	1.86	0.57
1:A:3219:ARG:HH22	1:A:3472:VAL:HG21	1.69	0.57
1:A:2060:ARG:NH2	1:A:2129:GLU:O	2.34	0.57
1:B:1836:PHE:HA	1:B:1839:LEU:HB2	1.86	0.57
1:B:3158:ASN:ND2	1:B:3169:MET:O	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3172:THR:HG22	1:B:3174:ARG:H	1.70	0.57
1:A:2558:GLU:OE2	1:A:2561:LYS:NZ	2.37	0.57
1:A:3966:PRO:HD2	1:A:4000:ARG:HG3	1.87	0.57
1:B:2063:GLU:OE2	1:B:2067:ASN:ND2	2.38	0.56
1:A:2304:ASP:OD1	1:A:2726:ARG:NH2	2.39	0.56
1:A:4187:HIS:ND1	1:A:4252:TYR:OH	2.36	0.56
1:A:4395:LEU:O	1:A:4428:ARG:NH1	2.39	0.56
1:B:3721:ARG:NH1	1:B:3801:TYR:OH	2.39	0.56
1:B:1946:VAL:HG22	1:B:2006:VAL:HG21	1.88	0.56
1:A:1746:GLN:HB2	1:A:1749:LEU:HD23	1.86	0.56
1:A:2831:ARG:NH2	1:A:2917:ASP:OD1	2.39	0.56
1:B:2245:GLU:OE1	1:B:2298:ARG:NH2	2.39	0.56
1:B:3126:MET:HE2	1:B:3137:PRO:HG3	1.87	0.56
2:C:186:ARG:NH1	2:C:221:VAL:O	2.39	0.56
1:A:4510:CYS:HB3	1:A:4561:THR:HG23	1.88	0.56
1:A:1524:GLU:OE2	1:A:1528:ASN:ND2	2.38	0.56
1:A:3597:THR:HG23	1:A:3634:LEU:HD21	1.87	0.56
1:B:2969:GLY:HA2	1:B:3004:PHE:HE1	1.71	0.56
1:B:4385:SER:O	1:B:4389:HIS:ND1	2.39	0.55
1:A:2503:SER:HB3	1:A:2514:LEU:HD23	1.86	0.55
1:A:2694:ARG:NH2	1:A:2697:ASP:OD2	2.39	0.55
1:A:1680:GLU:N	1:A:1680:GLU:OE1	2.39	0.55
1:A:4088:VAL:HG13	1:A:4118:PRO:HA	1.89	0.55
1:B:2107:ARG:NH2	1:B:2139:GLN:OE1	2.40	0.55
1:A:2047:GLN:HA	1:A:2070:VAL:HG21	1.89	0.55
1:B:2102:ASN:OD1	1:B:2105:ARG:NH2	2.39	0.55
2:C:216:ILE:HB	2:C:230:PHE:HB2	1.89	0.55
1:A:1743:ASP:OD2	1:A:1804:ARG:NH1	2.39	0.55
1:A:2068:LYS:HB3	1:A:2165:PHE:HE1	1.71	0.55
1:A:4176:ARG:NH2	1:A:4224:ASP:OD1	2.37	0.55
1:A:4178:ARG:HD2	1:A:4305:PHE:HZ	1.72	0.55
1:A:3174:ARG:NH1	1:A:3650:ASN:OD1	2.40	0.55
1:B:3593:SER:HB2	1:B:3595:GLN:HG2	1.88	0.55
1:A:3110:THR:O	1:A:3140:ARG:NH2	2.40	0.55
1:B:4395:LEU:O	1:B:4428:ARG:NH1	2.40	0.55
2:C:127:SER:OG	2:C:128:GLU:N	2.40	0.55
1:A:2968:THR:HG22	1:A:2970:GLU:H	1.71	0.55
1:B:1639:GLU:OE2	1:B:1652:LYS:NZ	2.40	0.55
1:A:2075:LEU:O	1:A:2079:GLN:HB2	2.07	0.55
1:A:2906:ASP:OD2	1:A:3655:ARG:NH1	2.41	0.54
1:A:3222:LEU:HD12	1:A:3465:LEU:HD22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2666:ILE:HG22	1:B:2712:CYS:HB3	1.89	0.54
1:A:3654:ARG:HG2	1:A:3656:THR:HG23	1.90	0.54
1:A:3776:GLU:O	1:A:3779:GLU:HG3	2.07	0.54
2:C:159:ASP:HB2	2:C:164:LEU:HB3	1.89	0.54
1:B:1862:ALA:O	1:B:1894:GLN:NE2	2.40	0.54
1:B:2065:LEU:HD22	1:B:2137:LEU:HD12	1.89	0.54
2:C:336:GLY:O	2:C:363:ARG:NH1	2.40	0.54
1:B:2563:ALA:HB3	1:B:2804:ARG:HD3	1.90	0.54
1:B:3219:ARG:HD3	1:B:3222:LEU:HD21	1.89	0.54
2:C:211:SER:OG	2:C:213:ASP:OD1	2.26	0.54
1:B:2773:MET:HG2	1:B:2825:TRP:HE1	1.71	0.54
1:A:1633:GLY:N	1:A:2331:GLU:OE1	2.41	0.54
1:A:4211:ASP:OD2	1:A:4255:ARG:NH1	2.41	0.54
1:B:1882:THR:HG22	1:B:1884:LEU:H	1.74	0.53
1:B:3822:HIS:O	1:B:3822:HIS:ND1	2.42	0.53
1:B:4544:ASN:HA	1:B:4573:ASN:HD21	1.74	0.53
2:C:188:MET:HE1	2:C:207:ILE:HD12	1.90	0.53
1:B:2335:LEU:HD12	1:B:2336:PRO:HD2	1.90	0.53
2:E:126:ALA:HB1	2:E:153:VAL:HG13	1.90	0.53
1:A:4398:LEU:HD12	1:A:4486:ILE:HD11	1.89	0.53
1:B:1968:LEU:HD21	1:B:2028:LEU:HD23	1.91	0.53
1:B:2849:ASN:HA	1:B:2852:THR:HG22	1.90	0.53
2:E:245:ASP:OD1	2:E:247:THR:OG1	2.25	0.53
1:A:1636:ASP:OD1	1:A:1653:HIS:NE2	2.41	0.53
1:B:2925:ILE:HG21	1:B:2933:LEU:HG	1.91	0.53
1:A:2099:SER:OG	1:A:2140:SER:OG	2.25	0.53
1:A:3444:ILE:O	1:A:3448:LYS:HG3	2.09	0.53
1:A:3749:LEU:HD12	1:A:3773:LEU:HD23	1.90	0.53
2:E:336:GLY:O	2:E:363:ARG:NH1	2.42	0.53
1:A:2943:LYS:HG2	1:A:3094:PHE:HD2	1.73	0.53
1:B:2511:ARG:HD3	1:B:2535:ILE:HD13	1.90	0.53
1:B:2582:TYR:HD1	1:B:2612:LEU:HD11	1.74	0.53
1:A:1917:LYS:NZ	1:A:2322:ASN:OD1	2.38	0.53
1:B:1741:TRP:CH2	1:B:1750:VAL:HG23	2.44	0.53
1:A:1737:THR:HA	1:A:1740:THR:HG22	1.90	0.53
1:A:1786:GLU:OE2	1:A:1819:ARG:NH1	2.42	0.53
1:B:4437:VAL:HA	1:B:4442:LYS:HB3	1.91	0.52
1:A:2448:ASP:O	1:A:2453:ARG:NH2	2.34	0.52
1:A:2886:GLN:OE1	1:A:2890:ARG:NH2	2.43	0.52
1:A:2987:ASN:OD1	1:A:3057:GLN:NE2	2.42	0.52
1:A:2642:ARG:NH2	1:A:2704:GLU:OE1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2601:LYS:HB3	1:A:2736:VAL:HG21	1.90	0.52
1:A:4470:PRO:HA	1:A:4612:ASN:HD22	1.75	0.52
1:B:3517:ALA:HB1	1:B:3525:ARG:HG2	1.92	0.52
1:A:1529:ARG:HE	1:A:1592:LEU:HD21	1.74	0.52
1:B:2623:SER:OG	1:B:3081:THR:O	2.19	0.52
2:C:252:CYS:HB2	2:C:279:VAL:HG13	1.90	0.52
2:E:124:VAL:HG23	2:E:156:ILE:HD12	1.92	0.51
2:C:363:ARG:HG2	2:C:375:THR:HG22	1.93	0.51
1:A:2983:SER:O	1:A:3061:ASN:ND2	2.38	0.51
1:B:1537:TRP:HE3	1:B:1601:LEU:HD11	1.74	0.51
1:B:3814:THR:HG21	1:B:3890:ILE:HD11	1.92	0.51
1:A:2132:PRO:HB2	1:A:2135:GLU:HB3	1.92	0.51
2:E:127:SER:OG	2:E:129:ASP:OD1	2.21	0.51
1:A:1478:VAL:HG21	1:A:1488:ARG:HH12	1.76	0.51
1:A:1836:PHE:HA	1:A:1839:LEU:HB2	1.93	0.51
1:B:1720:SER:O	1:B:1724:VAL:HG23	2.10	0.51
1:B:3071:SER:O	1:B:3075:LEU:HB2	2.11	0.51
1:A:1795:SER:OG	1:A:1800:GLN:NE2	2.43	0.51
1:A:2957:SER:HB2	1:A:2990:ILE:HD13	1.91	0.51
1:B:1558:LYS:HA	1:B:1565:THR:HG21	1.92	0.51
1:B:3497:LYS:O	1:B:3497:LYS:NZ	2.32	0.51
1:A:1625:SER:OG	1:A:1699:ASN:ND2	2.43	0.51
1:A:3217:GLU:HA	1:A:3220:ARG:HG2	1.92	0.51
1:A:4088:VAL:HG21	1:A:4116:LEU:HD11	1.93	0.51
1:B:2053:MET:HE1	1:B:2094:LYS:HG3	1.91	0.51
2:C:124:VAL:HG23	2:C:156:ILE:HD12	1.93	0.51
2:C:353:ILE:HB	2:C:365:TRP:HB2	1.91	0.51
1:B:4417:VAL:HG23	1:B:4489:LEU:HD12	1.92	0.51
1:A:1775:ALA:O	1:A:1779:HIS:ND1	2.37	0.51
1:A:4412:PHE:HE1	1:A:4516:VAL:HG23	1.76	0.51
1:B:1698:ILE:HA	1:B:1701:TRP:CD1	2.46	0.51
1:B:4434:VAL:HA	1:B:4437:VAL:HG12	1.93	0.50
1:A:1961:ASN:HB3	1:A:2018:MET:HE3	1.92	0.50
1:B:3738:PHE:HB3	1:B:3783:LYS:HE2	1.93	0.50
1:B:3821:ILE:HD13	1:B:4342:LYS:HE3	1.93	0.50
1:A:1469:VAL:HG11	1:A:1496:LYS:HE2	1.94	0.50
1:B:2628:PRO:HD3	1:B:2679:VAL:HG22	1.93	0.50
2:E:209:SER:OG	2:E:219:TRP:NE1	2.40	0.50
1:B:2256:PRO:HG3	1:B:2303:PHE:HD1	1.76	0.50
1:B:2568:VAL:HG22	1:B:2603:MET:HE3	1.93	0.50
1:B:2889:LEU:HD22	1:B:2916:LEU:HG	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2981:ARG:NH2	1:A:3025:GLU:OE1	2.39	0.50
1:B:4414:GLU:HA	1:B:4417:VAL:HG12	1.94	0.50
1:A:2308:ASP:N	1:A:2308:ASP:OD1	2.43	0.50
1:A:2354:ALA:O	1:A:2358:ARG:NH1	2.37	0.50
1:B:1724:VAL:HG21	1:B:1753:SER:HB3	1.94	0.50
1:B:2091:ARG:NH2	3:B:4706:ADP:O3A	2.44	0.50
1:B:3116:GLU:OE2	1:B:3140:ARG:NH1	2.45	0.50
1:A:2412:MET:HE1	1:A:2467:ARG:HD3	1.93	0.50
1:A:2980:LEU:HD22	1:A:3058:VAL:HG21	1.92	0.50
1:A:3499:GLN:HA	1:A:3502:THR:HG22	1.93	0.50
1:A:3779:GLU:HA	1:A:3782:ARG:HG2	1.94	0.50
1:B:3225:LYS:HB3	1:B:3465:LEU:HD21	1.93	0.50
1:A:4194:LEU:O	1:A:4204:LYS:NZ	2.44	0.50
1:B:4271:ARG:NH1	1:B:4284:LEU:O	2.44	0.50
1:B:2437:LEU:HD11	1:B:2455:LEU:HD11	1.92	0.49
1:B:3172:THR:HG21	1:B:3694:SER:HB2	1.93	0.49
1:B:3935:VAL:HG13	1:B:3947:LEU:HD23	1.93	0.49
1:A:1623:ARG:HD3	1:A:1630:TYR:HA	1.94	0.49
1:A:2275:TRP:NE1	1:A:2277:ASP:OD1	2.43	0.49
1:B:2964:HIS:ND1	1:B:2965:ARG:O	2.45	0.49
1:A:2571:THR:H	1:A:2574:THR:HG1	1.60	0.49
1:A:4239:PRO:HB2	1:A:4242:ALA:HB3	1.94	0.49
1:B:3510:SER:HB3	1:B:3553:LEU:HD21	1.95	0.49
2:E:345:LEU:HD11	2:E:387:ASP:HA	1.95	0.49
1:B:2841:GLU:OE1	1:B:2844:ARG:NH2	2.43	0.49
1:B:3629:PHE:HZ	1:A:3661:LEU:HD11	1.78	0.49
2:C:169:SER:OG	2:C:170:ALA:N	2.46	0.49
1:A:3660:VAL:HG12	1:A:3671:LEU:HB3	1.94	0.49
1:B:1914:GLU:HG3	3:B:4706:ADP:H2'	1.95	0.49
1:A:1847:ASP:N	1:A:1847:ASP:OD1	2.45	0.49
1:A:4183:LEU:HD11	1:A:4219:VAL:HG21	1.93	0.49
1:A:1698:ILE:HA	1:A:1701:TRP:CD1	2.47	0.49
1:B:2609:LEU:HD23	1:B:2617:VAL:HG22	1.95	0.49
1:B:2967:TYR:OH	1:B:2975:ASP:OD2	2.30	0.49
1:B:4172:SER:O	1:B:4176:ARG:NH2	2.45	0.49
1:A:1530:ILE:HB	1:A:1592:LEU:HD12	1.95	0.49
1:A:2495:VAL:HA	1:A:2498:ILE:HG22	1.95	0.49
1:B:1894:GLN:HG3	1:B:4246:LEU:HD11	1.95	0.48
1:A:2031:ASN:OD1	1:A:4098:ASN:ND2	2.35	0.48
1:A:3723:ASP:N	1:A:3723:ASP:OD1	2.45	0.48
1:B:1550:ILE:O	1:B:1554:SER:HB2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2356:VAL:HG13	1:A:2361:MET:HE3	1.94	0.48
1:A:2609:LEU:HD13	1:A:2617:VAL:HG22	1.95	0.48
1:A:2964:HIS:ND1	1:A:2965:ARG:O	2.45	0.48
1:B:2834:GLN:NE2	1:B:2847:ASP:OD1	2.47	0.48
1:B:4384:ALA:O	1:B:4388:LEU:HB2	2.12	0.48
1:A:3639:GLU:OE2	1:A:3681:THR:OG1	2.25	0.48
1:A:4617:ASP:OD1	1:A:4617:ASP:N	2.44	0.48
1:B:1571:ILE:HG21	1:B:1607:LEU:HD13	1.94	0.48
1:B:2671:MET:HB2	1:B:2721:LYS:HD3	1.95	0.48
1:B:1525:ASP:O	1:B:1529:ARG:HG3	2.14	0.48
1:B:2499:LEU:HD23	1:B:2514:LEU:HD23	1.95	0.48
1:B:3175:HIS:HB3	1:B:3516:TYR:HE1	1.78	0.48
1:B:3222:LEU:HD23	1:B:3472:VAL:HG21	1.95	0.48
1:A:2527:PRO:HD3	1:A:2545:TRP:CD1	2.49	0.48
1:B:1491:ASP:OD1	1:B:1491:ASP:N	2.47	0.48
1:B:1729:LYS:HD2	1:B:1729:LYS:HA	1.63	0.48
1:B:2872:LEU:HD22	1:B:2920:LEU:HD12	1.95	0.48
1:A:2228:SER:OG	1:A:2365:SER:O	2.30	0.48
1:A:4081:ASP:OD1	1:A:4112:LYS:NZ	2.46	0.48
1:A:3175:HIS:HB3	1:A:3516:TYR:HE1	1.79	0.48
1:A:3225:LYS:HE2	1:A:3464:ASP:HB3	1.96	0.47
1:A:3742:LEU:HD11	1:A:3780:VAL:HG11	1.96	0.47
2:E:337:HIS:CE1	2:E:363:ARG:HG3	2.49	0.47
1:A:4166:VAL:HA	1:A:4169:ILE:HG22	1.95	0.47
1:A:4517:PRO:HB2	1:A:4619:ILE:HG21	1.96	0.47
1:B:2889:LEU:HD11	1:B:2920:LEU:HD21	1.95	0.47
1:B:3162:ALA:HB2	1:B:3168:THR:HG21	1.96	0.47
1:B:4178:ARG:HE	1:B:4296:MET:HE2	1.79	0.47
1:A:1888:CYS:O	1:A:1892:MET:HG2	2.15	0.47
1:A:2791:HIS:NE2	1:A:2836:ARG:O	2.46	0.47
1:A:2635:PHE:HE1	1:A:2661:LEU:HD11	1.79	0.47
1:B:2836:ARG:HG3	1:B:3091:LEU:HD23	1.97	0.47
1:A:3189:GLU:OE1	1:A:3582:ARG:NH2	2.46	0.47
1:B:1756:ILE:HD11	1:B:1857:LEU:HD13	1.97	0.47
1:B:1861:MET:HG3	1:B:1862:ALA:H	1.79	0.47
1:B:2485:GLN:HA	1:B:2488:ARG:HG2	1.97	0.47
1:B:3683:ASP:OD2	1:B:4137:ASN:ND2	2.48	0.47
1:A:2453:ARG:NH1	1:A:2505:ASP:OD2	2.44	0.47
1:A:2592:VAL:HG22	1:A:2710:GLY:HA3	1.96	0.47
1:A:2622:PHE:HB2	1:A:2665:GLU:HB2	1.96	0.47
1:B:4202:SER:OG	1:B:4261:ASP:OD2	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:109:SER:HB3	2:E:128:GLU:HB2	1.97	0.47
1:A:2623:SER:HB3	1:A:3009:ASN:HD22	1.79	0.47
1:A:3016:GLU:HG3	1:A:3051:TYR:HE2	1.79	0.47
1:A:3591:ASP:N	1:A:3591:ASP:OD1	2.48	0.47
1:A:3209:LYS:HA	1:A:3209:LYS:HD2	1.74	0.47
1:B:3776:GLU:O	1:B:3779:GLU:HG3	2.14	0.47
1:A:2275:TRP:HB2	1:A:2329:ASN:HD21	1.80	0.47
1:A:4485:ARG:NH1	1:A:4513:GLY:O	2.48	0.47
1:B:1625:SER:OG	1:B:1699:ASN:ND2	2.48	0.47
1:B:1756:ILE:HD13	1:B:1846:PHE:HB2	1.97	0.47
1:B:1782:LEU:HD12	1:B:1822:THR:HG22	1.97	0.47
1:B:2231:SER:HA	1:B:2234:TRP:CD1	2.49	0.47
1:B:2667:ASN:OD1	1:B:2712:CYS:HB2	2.15	0.47
1:B:2961:ILE:HD11	1:B:2998:ASN:HB3	1.96	0.47
1:A:2977:ARG:NH1	1:A:3020:LEU:O	2.40	0.47
1:A:3708:LEU:HD23	1:A:3809:SER:HA	1.97	0.47
1:A:3715:GLU:HB3	1:A:3836:TYR:HE2	1.80	0.47
1:A:3938:LEU:HD11	1:A:3991:LEU:HB3	1.97	0.47
1:B:2424:GLN:HE21	1:B:2428:THR:HB	1.79	0.46
1:B:4524:THR:HG23	1:B:4558:PHE:CE1	2.50	0.46
1:B:2787:ASP:N	1:B:2787:ASP:OD1	2.48	0.46
1:B:4457:LYS:HB2	1:B:4457:LYS:HE3	1.80	0.46
2:C:362:LEU:HD11	2:C:397:THR:HG21	1.97	0.46
1:A:3798:SER:O	1:A:3802:LEU:HB2	2.15	0.46
1:B:2650:LEU:N	1:B:2702:LYS:O	2.49	0.46
1:A:1619:LEU:HD11	1:A:1638:LEU:HG	1.97	0.46
1:A:4398:LEU:HD22	1:A:4421:ALA:HB2	1.96	0.46
1:B:2958:VAL:HG13	1:B:2993:ILE:HD12	1.97	0.46
1:B:3550:THR:HG22	1:B:3575:GLU:HG3	1.96	0.46
1:B:4218:THR:HG21	1:B:4251:ILE:HD11	1.97	0.46
2:C:235:GLU:N	2:C:255:ASP:OD2	2.49	0.46
1:A:2231:SER:OG	1:A:2344:GLU:OE1	2.33	0.46
1:B:2797:ARG:HG2	3:B:4705:ADP:H4'	1.98	0.46
1:A:1491:ASP:N	1:A:1491:ASP:OD1	2.48	0.46
1:A:2288:ILE:HD11	1:A:2336:PRO:HD3	1.98	0.46
1:A:3738:PHE:HD2	1:A:3783:LYS:HE2	1.80	0.46
1:B:1850:GLN:HG3	1:B:1852:ASP:H	1.80	0.46
1:A:2740:GLY:O	1:A:2744:LEU:HB2	2.15	0.46
1:A:4168:ARG:NH2	1:A:4217:ASP:OD1	2.49	0.46
1:B:4569:THR:HB	1:B:4583:THR:HG21	1.97	0.46
2:E:261:TRP:HB3	2:E:268:CYS:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4321:LEU:HD12	1:A:4323:LEU:HD12	1.98	0.46
1:B:2623:SER:OG	1:B:2624:SER:N	2.48	0.46
1:B:3827:TYR:CZ	1:B:3871:VAL:HG13	2.51	0.46
1:A:2231:SER:HA	1:A:2234:TRP:CD1	2.50	0.46
1:B:3097:TRP:CD2	1:B:3173:PRO:HB3	2.51	0.46
1:B:3708:LEU:HD23	1:B:3809:SER:HA	1.98	0.46
1:A:2316:ASN:O	1:A:2320:ASP:HB2	2.16	0.46
1:A:2387:LEU:HD23	1:A:2467:ARG:HH21	1.80	0.46
1:A:3966:PRO:HG2	1:A:3997:ARG:HD3	1.96	0.46
1:A:4379:THR:O	1:A:4382:THR:OG1	2.32	0.46
1:B:2522:THR:HG22	1:B:2524:VAL:HG23	1.98	0.46
1:A:2485:GLN:NE2	1:A:2541:ILE:O	2.49	0.46
1:B:4460:LEU:HD12	1:B:4461:PRO:HD2	1.96	0.45
2:E:124:VAL:HG12	2:E:134:VAL:HG22	1.98	0.45
1:A:3451:TYR:CZ	1:A:3455:ILE:HD11	2.51	0.45
1:A:4565:LEU:HD23	1:A:4642:VAL:HG22	1.97	0.45
1:A:4187:HIS:HD1	1:A:4252:TYR:HH	1.60	0.45
2:E:313:SER:HA	2:E:321:LYS:H	1.81	0.45
2:E:214:LYS:HA	2:E:237:VAL:HG23	1.98	0.45
1:A:1805:ARG:O	1:A:1809:GLU:HG2	2.16	0.45
1:A:2943:LYS:HD2	1:A:3067:THR:HG23	1.97	0.45
1:B:1627:PRO:HB3	1:B:1950:GLN:HB3	1.99	0.45
1:B:1880:VAL:HG11	1:B:2049:ILE:HA	1.98	0.45
1:B:3208:ILE:HD11	1:B:3753:LEU:HD21	1.98	0.45
1:A:1804:ARG:O	1:A:1808:LEU:HG	2.16	0.45
1:B:3521:ASP:OD1	1:B:3521:ASP:N	2.44	0.45
2:E:197:SER:HB3	2:E:239:MET:HA	1.97	0.45
2:C:127:SER:OG	2:C:129:ASP:OD1	2.23	0.45
1:A:2518:ILE:HA	1:A:2521:ILE:HG22	1.98	0.45
1:A:3748:SER:HA	1:A:3751:GLN:HG2	1.99	0.45
1:A:4534:TRP:HB3	1:A:4594:LYS:HE3	1.97	0.45
1:B:1835:SER:OG	1:B:1837:GLU:OE1	2.35	0.45
1:B:4430:ASP:O	1:B:4434:VAL:HG23	2.16	0.45
1:A:2644:THR:OG1	1:A:2647:GLY:O	2.26	0.45
1:A:4287:LYS:O	1:A:4319:SER:OG	2.30	0.45
1:B:4239:PRO:HB2	1:B:4242:ALA:HB3	1.98	0.45
1:B:1604:LEU:HD12	1:B:1607:LEU:HD11	1.99	0.45
2:E:94:TRP:HB2	2:E:409:CYS:HB3	1.99	0.45
2:E:274:GLU:HB2	2:E:323:TRP:HH2	1.82	0.45
2:C:315:SER:OG	2:C:316:ARG:N	2.50	0.45
1:A:2221:MET:HB3	1:A:2343:PHE:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3776:GLU:O	1:A:3780:VAL:HG23	2.16	0.45
1:B:2202:MET:HE3	1:B:2202:MET:HB2	1.89	0.45
2:E:212:ARG:HG2	2:E:236:TRP:CD2	2.52	0.45
1:A:1822:THR:O	1:A:1826:ILE:HG12	2.17	0.45
1:B:4094:VAL:HG13	1:B:4124:LEU:HD13	1.98	0.44
2:E:277:HIS:CE1	2:E:316:ARG:HD2	2.52	0.44
1:A:2419:ALA:O	1:A:2423:MET:HG2	2.17	0.44
1:A:2596:PRO:O	1:A:2601:LYS:NZ	2.49	0.44
1:A:2665:GLU:HB3	1:A:2668:LEU:HD12	1.99	0.44
1:A:2697:ASP:OD1	1:A:2697:ASP:N	2.48	0.44
1:B:1930:PHE:HA	1:B:2326:THR:HG21	1.99	0.44
1:B:3520:PHE:HB3	1:B:3524:MET:HB3	1.98	0.44
1:A:1941:MET:HE2	1:A:1941:MET:HB2	1.81	0.44
1:A:2897:LEU:HD12	1:A:2911:LEU:HD21	1.99	0.44
1:B:2540:SER:OG	1:B:2544:GLU:O	2.30	0.44
1:B:2977:ARG:NH1	1:B:3020:LEU:O	2.48	0.44
1:B:4557:SER:HB3	1:B:4591:ARG:HG2	2.00	0.44
1:A:2533:PRO:HB2	1:A:2535:ILE:HG12	1.99	0.44
1:A:3683:ASP:OD1	1:A:3683:ASP:N	2.51	0.44
1:A:3936:VAL:O	1:A:3939:SER:OG	2.34	0.44
1:A:4218:THR:HG21	1:A:4251:ILE:HD11	1.99	0.44
1:B:2799:MET:HE3	1:B:2799:MET:HB3	1.91	0.44
2:E:240:VAL:O	2:E:241:ARG:NH1	2.50	0.44
2:E:364:VAL:HB	2:E:374:LYS:HB3	1.99	0.44
1:A:4187:HIS:NE2	1:A:4191:GLN:OE1	2.50	0.44
2:C:159:ASP:OD1	2:C:160:HIS:N	2.49	0.44
2:C:193:HIS:ND1	2:C:212:ARG:HD2	2.33	0.44
1:A:1561:LEU:HB3	1:A:1564:GLU:HB2	1.99	0.44
1:A:4609:VAL:HG22	1:A:4642:VAL:HB	1.98	0.44
1:B:2103:VAL:HG23	1:B:2136:ILE:HG23	2.00	0.44
1:B:4194:LEU:HA	1:B:4201:TRP:HD1	1.82	0.44
1:A:1852:ASP:HB3	1:A:1855:GLN:HB2	2.00	0.44
1:A:1887:ARG:NH2	1:A:4253:GLY:O	2.51	0.44
1:A:4106:LEU:HD23	1:A:4106:LEU:HA	1.86	0.44
2:C:237:VAL:HA	2:C:253:SER:HA	2.00	0.44
1:A:2492:ARG:HH21	1:A:2525:PRO:HB2	1.83	0.44
1:A:2763:ARG:HD2	1:A:2763:ARG:HA	1.78	0.44
1:B:2982:ARG:NH1	1:B:2988:GLU:OE2	2.51	0.44
1:B:4030:ILE:HG21	1:B:4145:PHE:HZ	1.83	0.44
1:A:2257:LYS:HA	1:A:2257:LYS:HD2	1.83	0.44
1:A:2324:LEU:HD11	1:A:2332:ARG:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1958:ASP:HA	1:A:2017:THR:HB	1.99	0.44
1:A:3581:LYS:HE3	1:A:3582:ARG:HG2	2.00	0.44
1:B:1727:PHE:HB3	1:B:1733:ILE:HD11	2.00	0.43
1:B:2307:VAL:HG13	1:B:2312:VAL:HG11	2.00	0.43
1:B:2446:ILE:HG13	1:B:2735:TYR:CD1	2.53	0.43
1:B:2633:LYS:HB2	1:B:2633:LYS:HE3	1.78	0.43
1:B:2904:GLU:O	1:B:3654:ARG:NE	2.36	0.43
1:B:1738:TYR:O	1:B:1742:ILE:HG12	2.18	0.43
1:B:3478:LEU:HG	1:B:3482:LEU:HD13	2.00	0.43
1:B:4099:VAL:HG11	1:B:4126:LEU:HD23	1.98	0.43
1:A:4096:LEU:HD13	1:A:4105:TRP:HH2	1.82	0.43
1:B:3163:LYS:HE3	1:B:3163:LYS:HB3	1.90	0.43
2:C:385:SER:O	2:C:398:GLY:N	2.46	0.43
1:A:1627:PRO:HB3	1:A:1950:GLN:HB3	2.00	0.43
1:A:2677:GLN:HB2	1:A:2680:ILE:HB	2.00	0.43
1:A:3691:ASP:HB2	1:A:3695:ARG:HH21	1.83	0.43
1:A:4160:THR:HG23	1:A:4212:LEU:HD21	2.00	0.43
1:B:2585:LEU:HD13	1:B:2609:LEU:HD13	2.00	0.43
1:B:4528:VAL:HG11	1:B:4592:TRP:CD1	2.54	0.43
1:A:1686:PHE:HA	1:A:1712:THR:HG21	2.01	0.43
1:A:3154:LEU:HD22	1:A:3516:TYR:CG	2.54	0.43
1:A:3822:HIS:O	1:A:3822:HIS:ND1	2.52	0.43
1:A:4418:LYS:HA	1:A:4418:LYS:HD3	1.72	0.43
1:B:4412:PHE:HE1	1:B:4516:VAL:HG23	1.84	0.43
1:A:1829:LYS:HA	1:A:1829:LYS:HD2	1.81	0.43
1:A:2831:ARG:HD3	1:A:2831:ARG:HA	1.74	0.43
1:A:4396:SER:O	1:A:4397:HIS:ND1	2.51	0.43
1:B:1981:ALA:HB2	1:B:1999:CYS:HB3	2.00	0.43
2:C:201:MET:HE1	2:C:242:PRO:HB3	2.01	0.43
1:A:2346:GLN:HB2	1:A:2726:ARG:HD2	2.01	0.43
1:A:4460:LEU:HD12	1:A:4461:PRO:HD2	2.01	0.43
1:B:1985:HIS:HA	1:B:1997:ILE:HD13	2.00	0.43
1:B:2452:LEU:HD23	1:B:2452:LEU:HA	1.84	0.43
1:B:3873:ARG:HD3	1:B:3873:ARG:HA	1.81	0.43
2:C:216:ILE:HD11	2:C:237:VAL:HG11	2.00	0.43
2:C:238:ARG:HA	2:C:238:ARG:HD2	1.85	0.43
1:A:1504:VAL:HA	1:A:1507:MET:HE2	2.01	0.43
1:B:2181:GLU:HG3	1:B:2244:LEU:HG	2.00	0.43
1:B:4560:VAL:O	1:B:4588:THR:OG1	2.36	0.43
1:A:1899:ARG:HG3	1:A:1983:ARG:HG2	2.01	0.43
1:A:2138:ILE:HG23	1:A:2161:LEU:HD21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2719:GLY:O	1:A:2721:LYS:NZ	2.41	0.43
1:A:3873:ARG:HD3	1:A:3873:ARG:HA	1.81	0.43
1:B:2444:GLU:HG2	1:B:2510:MET:HE3	2.00	0.43
1:A:1517:GLU:O	1:A:1521:LEU:HG	2.19	0.43
1:A:1914:GLU:HG3	3:A:4706:ADP:H2'	2.00	0.43
1:A:2065:LEU:HD22	1:A:2137:LEU:HD22	2.00	0.43
1:A:2239:LYS:HD2	1:A:2239:LYS:HA	1.74	0.43
1:A:2347:ASP:OD1	1:A:2347:ASP:N	2.52	0.43
1:A:4434:VAL:HA	1:A:4437:VAL:HG12	2.00	0.43
1:B:1609:GLY:O	1:B:1613:LYS:HG3	2.19	0.43
1:B:2079:GLN:NE2	1:B:4526:GLN:OE1	2.47	0.43
1:B:2258:ALA:HB1	1:B:2682:PHE:HD1	1.84	0.43
1:B:2284:LEU:HD12	1:B:2284:LEU:HA	1.86	0.43
1:B:3194:LEU:HG	1:B:3496:PHE:HD1	1.84	0.43
1:B:4068:SER:HA	1:B:4095:MET:HB3	2.01	0.43
1:B:4321:LEU:HD12	1:B:4323:LEU:HD12	2.00	0.43
1:A:1879:LEU:HD11	1:A:1914:GLU:HB3	2.01	0.43
1:A:2726:ARG:NH1	4:A:4701:ATP:O3G	2.52	0.43
1:A:2816:LEU:HD12	1:A:2817:PRO:HD2	2.00	0.43
1:B:1596:GLY:H	1:B:1599:ARG:HH21	1.66	0.42
1:B:4391:ILE:HD12	1:B:4479:VAL:HG11	2.01	0.42
1:B:1795:SER:O	1:B:1800:GLN:NE2	2.45	0.42
1:B:2943:LYS:HG2	1:B:3094:PHE:HD2	1.85	0.42
1:B:3123:PRO:HG2	1:B:3126:MET:HB2	2.01	0.42
2:E:279:VAL:HG13	2:E:314:GLY:O	2.19	0.42
1:A:3662:ILE:HG12	1:A:3671:LEU:HB2	2.00	0.42
1:B:2066:ALA:HA	1:B:2069:ILE:HG22	2.00	0.42
2:E:366:ASP:HB2	2:E:373:MET:HG2	2.01	0.42
1:A:2379:LEU:HD13	1:A:2424:GLN:HG2	2.02	0.42
1:A:4042:LEU:HG	1:A:4142:GLY:HA3	2.01	0.42
1:A:4314:ASP:N	1:A:4314:ASP:OD1	2.51	0.42
1:A:4541:LEU:HD12	1:A:4541:LEU:HA	1.90	0.42
1:B:1811:LEU:HD23	1:B:1811:LEU:HA	1.88	0.42
1:B:2752:ASN:HD21	1:B:2773:MET:HE2	1.83	0.42
1:B:2758:LEU:HD13	1:B:2811:ARG:HA	2.01	0.42
1:B:3638:VAL:HG21	1:B:3679:LEU:HD23	2.00	0.42
1:A:1904:PRO:HD2	1:A:2016:ILE:O	2.20	0.42
1:A:3208:ILE:HG21	1:A:3486:ARG:HE	1.84	0.42
1:A:3459:GLN:HA	1:A:3462:LYS:HB2	2.01	0.42
1:B:2047:GLN:HA	1:B:2070:VAL:HG21	2.00	0.42
1:B:2238:LEU:HD11	1:B:2249:GLY:HA3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2644:THR:OG1	1:B:2647:GLY:O	2.28	0.42
1:A:2194:GLY:H	1:A:2204:VAL:HG21	1.84	0.42
1:A:3738:PHE:CD2	1:A:3783:LYS:HE2	2.55	0.42
1:B:2603:MET:HE1	3:B:4705:ADP:C6	2.55	0.42
1:B:2762:LEU:HD13	1:B:2821:LEU:HD22	2.02	0.42
1:B:3822:HIS:O	1:B:3824:LEU:N	2.53	0.42
1:B:4388:LEU:O	1:B:4392:PRO:HD3	2.18	0.42
1:A:2828:GLU:OE2	1:A:2924:ARG:NH2	2.52	0.42
1:B:1478:VAL:O	1:B:1486:LEU:N	2.53	0.42
1:B:3482:LEU:HA	1:B:3485:GLU:HG3	2.01	0.42
1:B:3892:LEU:HD13	1:B:3983:ILE:HG21	2.01	0.42
1:B:4007:MET:O	1:B:4011:THR:HG23	2.20	0.42
1:A:1766:LEU:HD22	1:A:1778:LEU:HD21	2.01	0.42
1:A:2050:ALA:HA	1:A:2097:LEU:HD21	2.02	0.42
1:A:3840:LEU:HD23	1:A:3840:LEU:HA	1.90	0.42
1:A:3892:LEU:HD11	1:A:3983:ILE:HG21	2.02	0.42
1:A:3904:GLU:HB2	1:A:3991:LEU:HD11	2.02	0.42
1:A:3947:LEU:HD23	1:A:3947:LEU:HA	1.88	0.42
1:B:2989:LYS:HB2	1:B:2989:LYS:HE3	1.75	0.42
1:B:3868:PHE:HA	1:B:3883:PHE:HE2	1.85	0.42
1:B:4071:ILE:HD11	1:B:4096:LEU:HD22	2.01	0.42
1:B:4097:LYS:HA	1:B:4127:THR:HB	2.02	0.42
1:A:1688:THR:HA	1:A:1689:PRO:HD3	1.91	0.42
1:A:2285:ARG:HG3	1:A:2333:LEU:HD21	2.01	0.42
1:B:3723:ASP:OD1	1:B:3723:ASP:N	2.50	0.42
1:B:4511:LEU:HD12	1:B:4511:LEU:HA	1.88	0.42
2:E:252:CYS:HB2	2:E:279:VAL:HG12	2.01	0.42
1:A:4390:LEU:O	1:A:4393:GLN:NE2	2.44	0.42
1:B:2784:PHE:HB2	1:B:2794:TYR:HE2	1.84	0.42
1:B:2890:ARG:NH2	1:B:2913:ASN:OD1	2.52	0.42
1:B:3154:LEU:HA	1:B:3154:LEU:HD12	1.72	0.42
1:A:2103:VAL:HG23	1:A:2136:ILE:HG13	2.02	0.42
1:A:2670:ASP:N	1:A:2670:ASP:OD1	2.53	0.42
1:A:4412:PHE:HD1	1:A:4415:ARG:HH21	1.67	0.42
1:A:4605:VAL:O	1:A:4624:PHE:N	2.51	0.41
1:B:1574:GLU:OE1	1:B:1603:ARG:NH2	2.46	0.41
1:B:2744:LEU:HA	1:B:2747:ILE:HG22	2.01	0.41
1:A:1686:PHE:HD1	1:A:1712:THR:HG21	1.85	0.41
1:A:3487:GLU:O	1:A:3491:LYS:NZ	2.43	0.41
1:A:3774:LYS:HA	1:A:3774:LYS:HD3	1.72	0.41
1:B:1488:ARG:HD3	1:B:1488:ARG:HA	1.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2592:VAL:HB	1:B:2733:VAL:HG22	2.02	0.41
1:B:3167:ARG:HH12	1:B:3685:THR:HB	1.86	0.41
1:B:3451:TYR:O	1:B:3455:ILE:HG12	2.21	0.41
1:B:3895:THR:HG23	1:B:3898:GLU:HB2	2.03	0.41
1:B:4089:LYS:HD2	1:B:4089:LYS:HA	1.81	0.41
1:A:4071:ILE:HG13	1:A:4099:VAL:HG12	2.03	0.41
1:B:1928:LEU:HD23	1:B:2332:ARG:CZ	2.51	0.41
1:B:2590:PRO:HB2	1:B:2731:VAL:HG12	2.02	0.41
1:B:3721:ARG:HH12	1:B:3800:GLN:HG2	1.86	0.41
2:C:213:ASP:OD1	2:C:213:ASP:N	2.53	0.41
1:A:1613:LYS:HB3	1:A:1613:LYS:HE2	1.88	0.41
1:A:2577:HIS:O	1:A:2581:LEU:HG	2.19	0.41
1:A:2590:PRO:HB2	1:A:2731:VAL:HG12	2.03	0.41
1:A:3717:LEU:HD23	1:A:3717:LEU:HA	1.94	0.41
1:B:1697:LYS:HD2	1:B:1697:LYS:HA	1.88	0.41
1:B:3239:LYS:HE2	1:B:3451:TYR:HB2	2.03	0.41
2:C:279:VAL:HA	2:C:315:SER:HB2	2.02	0.41
1:A:3882:THR:HG23	1:A:4343:MET:HG3	2.02	0.41
1:A:4107:MET:HE2	1:A:4107:MET:HB3	1.85	0.41
1:B:2513:GLU:O	1:B:2516:GLU:HG3	2.20	0.41
1:B:2587:GLU:OE2	1:B:2587:GLU:N	2.53	0.41
1:B:3741:ARG:HD2	1:B:3741:ARG:HA	1.76	0.41
1:B:3825:TYR:HB2	1:B:3827:TYR:CZ	2.55	0.41
1:B:4605:VAL:HG21	1:B:4626:ILE:HD13	2.01	0.41
1:A:2218:HIS:NE2	1:A:2335:LEU:HD23	2.35	0.41
1:A:2452:LEU:HD12	1:A:2729:ARG:HH21	1.85	0.41
1:A:2680:ILE:HD13	1:A:2680:ILE:HA	1.88	0.41
1:B:2212:GLN:O	1:B:2216:ILE:HG12	2.20	0.41
1:A:1477:LEU:HB3	1:A:1485:ARG:HG2	2.01	0.41
1:A:2876:TRP:HH2	1:A:2919:VAL:HG12	1.86	0.41
1:A:2901:TYR:CZ	1:A:2908:PRO:HA	2.55	0.41
1:A:3075:LEU:HD23	1:A:3075:LEU:HA	1.94	0.41
1:A:3213:ASP:O	1:A:3216:GLU:HG3	2.21	0.41
1:A:4058:LEU:HA	1:A:4061:GLU:HG2	2.02	0.41
1:B:1479:ASN:HD21	1:B:1482:ASN:HA	1.86	0.41
2:E:216:ILE:HB	2:E:230:PHE:HB2	2.02	0.41
2:E:272:LEU:HD13	2:E:323:TRP:CG	2.55	0.41
1:A:3792:GLN:O	1:A:3795:GLU:HG3	2.21	0.41
1:A:4243:LEU:O	1:A:4247:MET:HG3	2.21	0.41
1:B:2288:ILE:HD12	1:B:2333:LEU:HD23	2.03	0.41
1:B:2452:LEU:HD13	1:B:2729:ARG:HH11	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2769:LEU:O	1:B:2773:MET:HG3	2.21	0.41
1:B:2785:THR:OG1	1:B:2787:ASP:OD1	2.33	0.41
1:B:3597:THR:HG23	1:B:3634:LEU:HD21	2.03	0.41
1:B:3878:GLN:H	1:B:3878:GLN:HG2	1.68	0.41
1:B:3950:LYS:NZ	1:B:3973:LEU:O	2.54	0.41
1:B:4223:LEU:HA	1:B:4226:THR:HG22	2.01	0.41
2:E:178:ASP:HB2	2:E:185:ILE:HD11	2.03	0.41
2:E:272:LEU:HD13	2:E:323:TRP:CD2	2.56	0.41
2:E:312:LEU:HD21	2:E:353:ILE:HG23	2.02	0.41
1:A:1963:LEU:O	1:A:1964:GLU:HG2	2.20	0.41
1:A:3232:LYS:HD3	1:A:3232:LYS:HA	1.82	0.41
1:B:3240:LEU:HD12	1:B:3240:LEU:HA	1.87	0.41
1:B:4411:ARG:O	1:B:4414:GLU:HG3	2.21	0.41
2:E:213:ASP:OD1	2:E:213:ASP:N	2.53	0.41
1:A:1470:TRP:HZ2	1:A:1497:VAL:HG22	1.86	0.41
1:A:1857:LEU:HD23	1:A:1868:TYR:HB2	2.02	0.41
1:A:2211:TYR:HB2	1:A:2237:LEU:HD11	2.02	0.41
1:A:2453:ARG:HB2	1:A:2729:ARG:HA	2.03	0.41
1:A:3510:SER:HB3	1:A:3553:LEU:HD21	2.03	0.41
1:A:3909:LEU:HD21	1:A:4343:MET:HE2	2.01	0.41
1:B:2452:LEU:HD13	1:B:2729:ARG:HD2	2.03	0.40
1:B:2935:LEU:HD12	1:B:3067:THR:HG22	2.02	0.40
1:B:4240:TRP:HH2	1:B:4277:SER:HA	1.87	0.40
1:A:1677:SER:HA	1:A:1683:GLU:HG2	2.03	0.40
1:A:3485:GLU:OE2	1:A:3489:TRP:NE1	2.54	0.40
1:B:1825:LEU:HD12	1:B:1830:ILE:HG13	2.02	0.40
1:B:1843:ARG:HG3	1:B:1845:TYR:HE1	1.86	0.40
1:A:1492:ASP:OD1	1:A:1492:ASP:N	2.52	0.40
1:A:1550:ILE:HD11	1:A:1618:TYR:CE2	2.51	0.40
1:A:2598:GLY:HA3	1:A:2795:SER:HB2	2.03	0.40
1:A:3835:ILE:HG23	1:A:3866:VAL:HG12	2.03	0.40
1:A:4001:LEU:HD12	1:A:4001:LEU:HA	1.89	0.40
1:A:4511:LEU:HD22	1:A:4517:PRO:HB3	2.03	0.40
1:A:4539:LEU:HD23	1:A:4539:LEU:HA	1.91	0.40
1:B:2499:LEU:HD23	1:B:2499:LEU:HA	1.93	0.40
1:B:4247:MET:HA	1:B:4251:ILE:HD12	2.04	0.40
2:C:174:ILE:HD11	2:C:195:VAL:HG11	2.02	0.40
1:A:2284:LEU:HD12	1:A:2284:LEU:HA	1.91	0.40
1:A:2419:ALA:HA	1:A:2422:ILE:HG12	2.03	0.40
1:A:3219:ARG:HH21	1:A:3222:LEU:HD22	1.86	0.40
1:A:3807:ALA:O	1:A:3811:ILE:HG12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3931:GLN:H	1:A:3931:GLN:HG2	1.70	0.40
1:B:3776:GLU:O	1:B:3780:VAL:HG23	2.21	0.40
1:B:4190:ILE:HD12	1:B:4201:TRP:HZ2	1.86	0.40
1:A:2039:LEU:HD12	1:A:4254:GLY:HA2	2.02	0.40
1:B:1974:GLN:H	1:B:1974:GLN:HG2	1.74	0.40
1:B:2521:ILE:HG13	1:B:2522:THR:N	2.36	0.40
2:C:384:THR:OG1	2:C:398:GLY:O	2.34	0.40
1:A:2976:LEU:HD12	1:A:2976:LEU:HA	1.87	0.40
1:A:4271:ARG:HA	1:A:4271:ARG:HD2	2.00	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	A	2892/4843 (60%)	2801 (97%)	91 (3%)	0	100	100
1	B	2892/4843 (60%)	2790 (96%)	101 (4%)	1 (0%)	100	100
2	C	300/411 (73%)	283 (94%)	17 (6%)	0	100	100
2	E	318/411 (77%)	295 (93%)	23 (7%)	0	100	100
All	All	6402/10508 (61%)	6169 (96%)	232 (4%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	2871	ILE

5.3.2 Protein sidechains (i)

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

entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2473/4279 (58%)	2473 (100%)	0	100	100
1	B	2477/4279 (58%)	2477 (100%)	0	100	100
2	C	257/364 (71%)	257 (100%)	0	100	100
2	E	272/364 (75%)	272 (100%)	0	100	100
All	All	5479/9286 (59%)	5479 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	1541	GLN
1	B	1593	ASN
1	B	1643	ASN
1	B	1695	HIS
1	B	1790	ASN
1	B	1856	GLN
1	B	2067	ASN
1	B	2263	HIS
1	B	2464	GLN
1	B	2471	GLN
1	B	2646	ASN
1	B	2707	GLN
1	B	2752	ASN
1	B	3069	ASN
1	B	3145	ASN
1	B	3237	ASN
1	B	3459	GLN
1	B	3526	GLN
1	B	3602	ASN
1	B	3744	GLN
1	B	3837	HIS
1	B	3852	HIS
1	B	4266	ASN
1	B	4326	ASN
1	B	4429	GLN
1	B	4477	GLN

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Mol	Chain	Res	Type
2	E	160	HIS
1	A	1471	ASN
1	A	1651	GLN
1	A	1931	ASN
1	A	2079	GLN
1	A	2083	GLN
1	A	2085	HIS
1	A	2346	GLN
1	A	2377	ASN
1	A	2677	GLN
1	A	2960	GLN
1	A	3009	ASN
1	A	3014	ASN
1	A	3237	ASN
1	A	3523	GLN
1	A	3526	GLN
1	A	3527	ASN
1	A	3535	HIS
1	A	3595	GLN
1	A	3622	ASN
1	A	3877	HIS
1	A	4012	ASN
1	A	4156	ASN
1	A	4386	ASN
1	A	4389	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 12 ligands modelled in this entry, 4 are monoatomic - leaving 8 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	ADP	A	4706	5	24,29,29	0.88	0	29,45,45	1.21	2 (6%)
3	ADP	B	4701	-	24,29,29	0.83	0	29,45,45	1.19	2 (6%)
3	ADP	A	4703	-	24,29,29	0.87	0	29,45,45	1.18	2 (6%)
4	ATP	A	4701	-	28,33,33	0.77	0	34,52,52	0.62	1 (2%)
3	ADP	A	4702	-	24,29,29	0.88	0	29,45,45	1.23	2 (6%)
3	ADP	B	4705	-	24,29,29	0.83	0	29,45,45	1.29	2 (6%)
4	ATP	B	4702	5	28,33,33	0.80	0	34,52,52	0.65	1 (2%)
3	ADP	B	4706	5	24,29,29	0.87	0	29,45,45	1.23	2 (6%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ADP	A	4706	5	-	2/12/32/32	0/3/3/3
3	ADP	B	4701	-	-	3/12/32/32	0/3/3/3
3	ADP	A	4703	-	-	0/12/32/32	0/3/3/3
4	ATP	A	4701	-	-	2/18/38/38	0/3/3/3
3	ADP	A	4702	-	-	2/12/32/32	0/3/3/3
3	ADP	B	4705	-	-	0/12/32/32	0/3/3/3
4	ATP	B	4702	5	-	3/18/38/38	0/3/3/3
3	ADP	B	4706	5	-	6/12/32/32	0/3/3/3

There are no bond length outliers.

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	B	4705	ADP	N3-C2-N1	-4.09	123.12	128.67
3	A	4702	ADP	N3-C2-N1	-3.91	123.37	128.67
3	B	4706	ADP	N3-C2-N1	-3.75	123.58	128.67
3	A	4706	ADP	N3-C2-N1	-3.67	123.69	128.67
3	B	4701	ADP	N3-C2-N1	-3.64	123.73	128.67
3	A	4703	ADP	N3-C2-N1	-3.51	123.90	128.67
3	B	4701	ADP	C4-C5-N7	-2.56	106.63	109.34
3	B	4706	ADP	C4-C5-N7	-2.54	106.65	109.34
3	A	4703	ADP	C4-C5-N7	-2.48	106.72	109.34
3	A	4706	ADP	C4-C5-N7	-2.48	106.72	109.34
3	A	4702	ADP	C4-C5-N7	-2.43	106.77	109.34
4	A	4701	ATP	C5-C6-N6	2.30	123.81	120.31
4	B	4702	ATP	C5-C6-N6	2.29	123.79	120.31
3	B	4705	ADP	C4-C5-N7	-2.10	107.12	109.34

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	4706	ADP	PA-O3A-PB-O3B
3	B	4706	ADP	C5'-O5'-PA-O1A
3	A	4706	ADP	C5'-O5'-PA-O1A
4	B	4702	ATP	C3'-C4'-C5'-O5'
4	B	4702	ATP	O4'-C4'-C5'-O5'
3	B	4701	ADP	C3'-C4'-C5'-O5'
3	B	4701	ADP	O4'-C4'-C5'-O5'
4	A	4701	ATP	PA-O3A-PB-O1B
3	B	4706	ADP	O4'-C4'-C5'-O5'
3	A	4706	ADP	O4'-C4'-C5'-O5'
3	B	4701	ADP	C5'-O5'-PA-O1A
3	B	4706	ADP	C5'-O5'-PA-O2A
3	B	4706	ADP	C5'-O5'-PA-O3A
3	B	4706	ADP	PA-O3A-PB-O1B
3	A	4702	ADP	PB-O3A-PA-O2A
4	B	4702	ATP	PG-O3B-PB-O2B
4	A	4701	ATP	PA-O3A-PB-O2B
3	A	4702	ADP	O4'-C4'-C5'-O5'

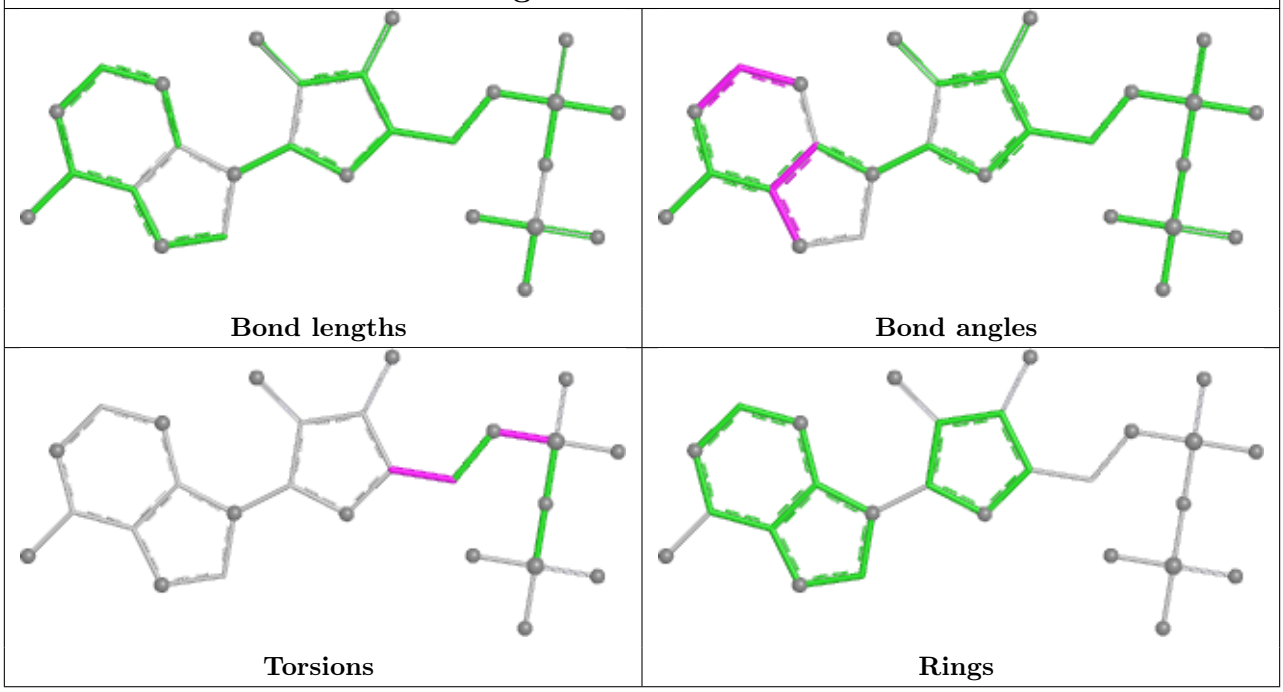
There are no ring outliers.

4 monomers are involved in 6 short contacts:

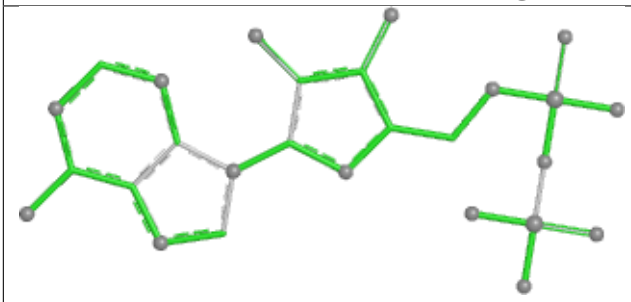
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	4706	ADP	1	0
4	A	4701	ATP	1	0
3	B	4705	ADP	2	0
3	B	4706	ADP	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

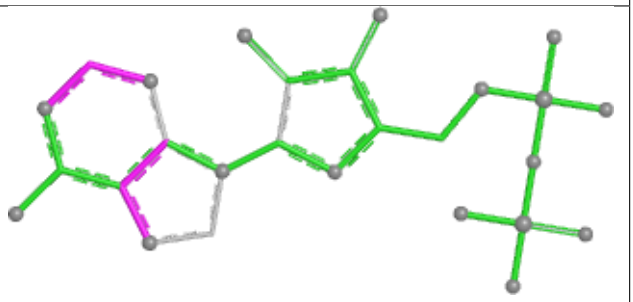
Ligand ADP A 4706



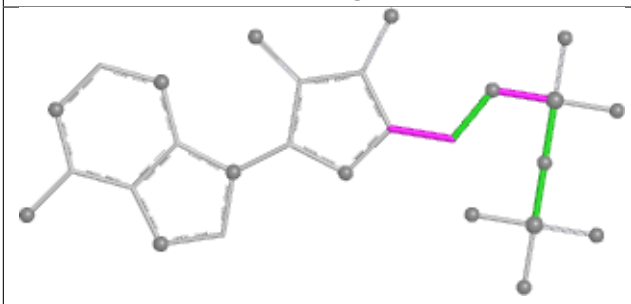
Ligand ADP B 4701



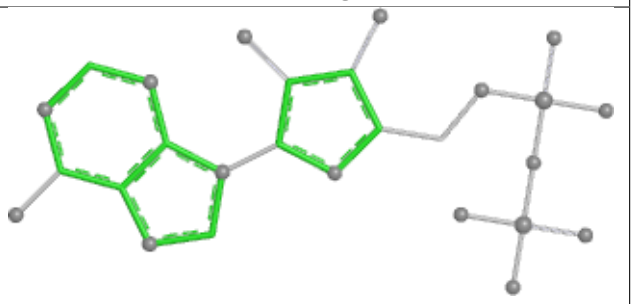
Bond lengths



Bond angles

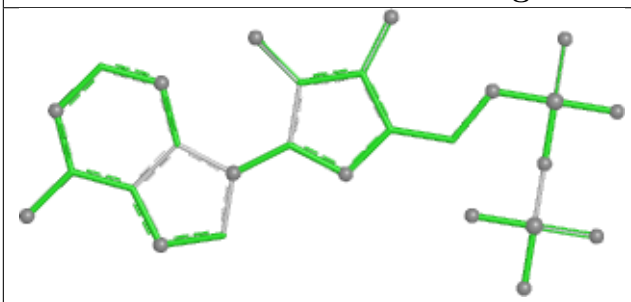


Torsions

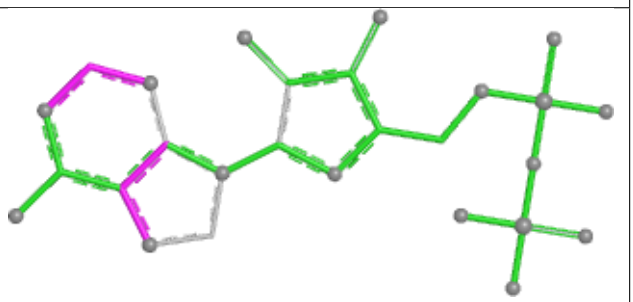


Rings

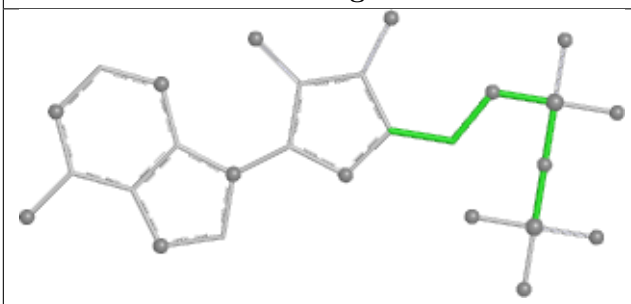
Ligand ADP A 4703



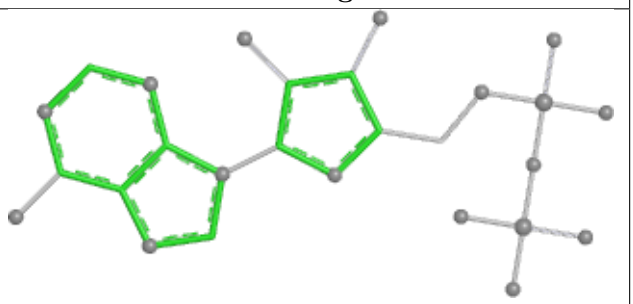
Bond lengths



Bond angles

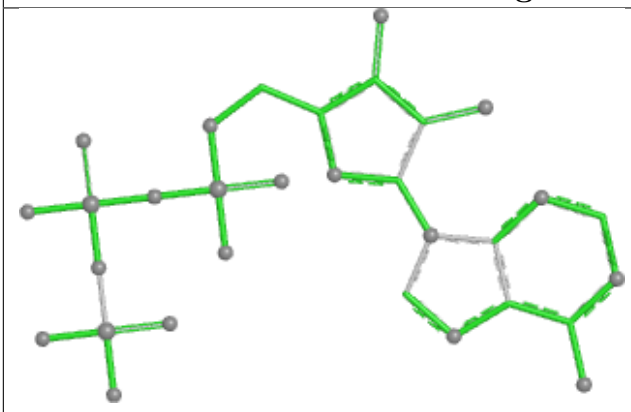


Torsions

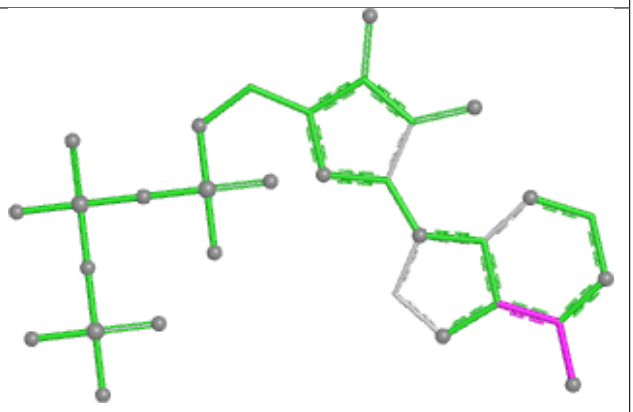


Rings

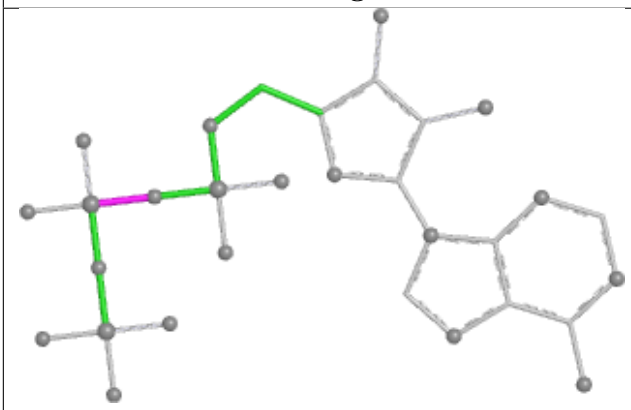
Ligand ATP A 4701



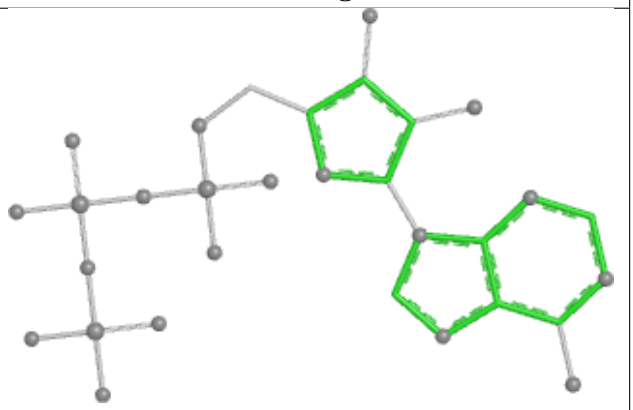
Bond lengths



Bond angles

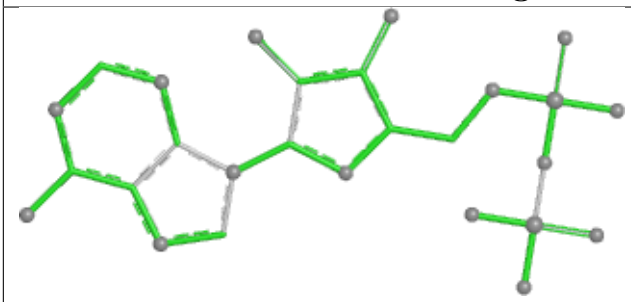


Torsions

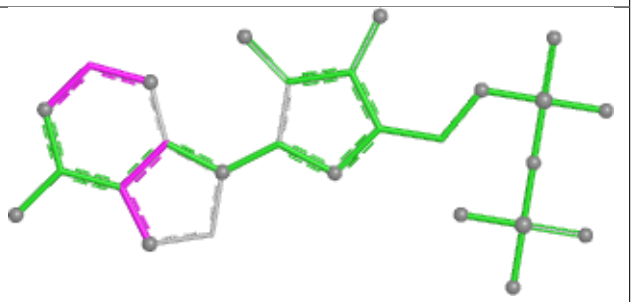


Rings

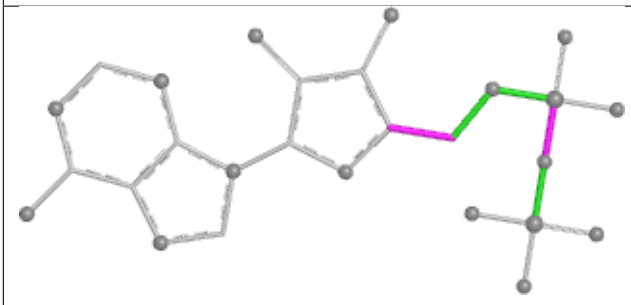
Ligand ADP A 4702



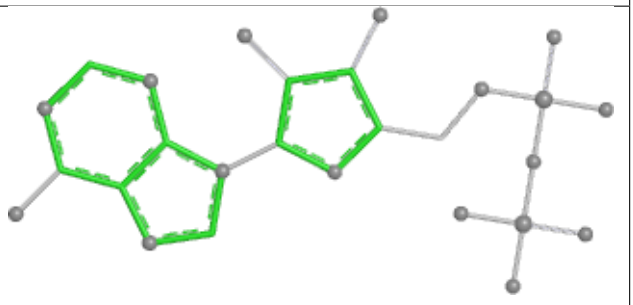
Bond lengths



Bond angles

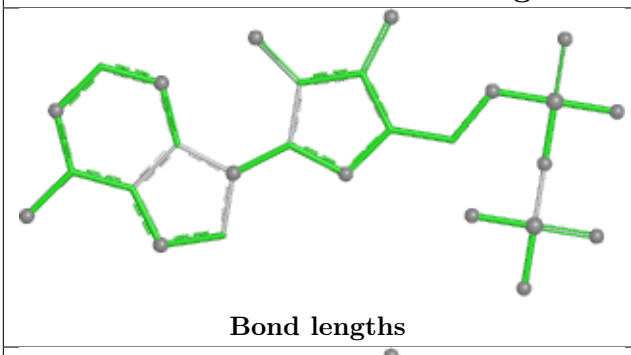


Torsions

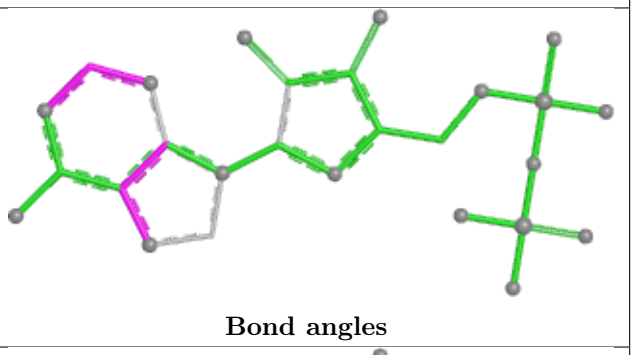


Rings

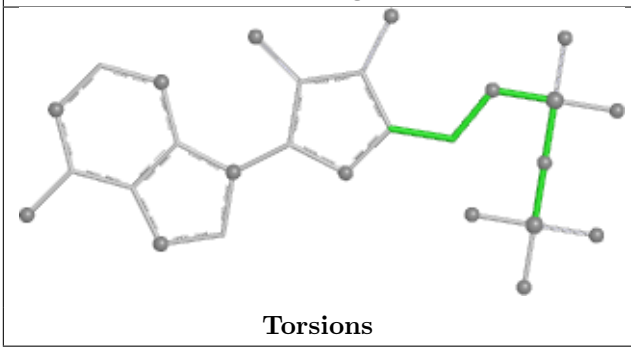
Ligand ADP B 4705



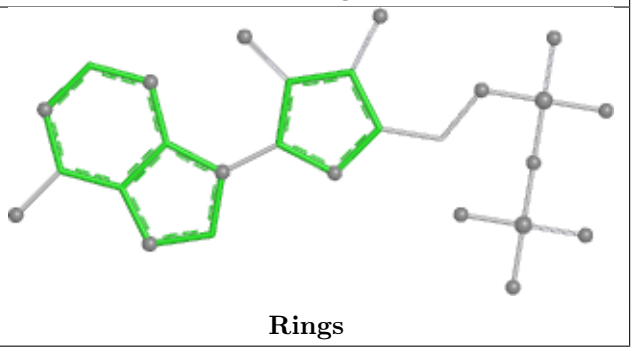
Bond lengths



Bond angles

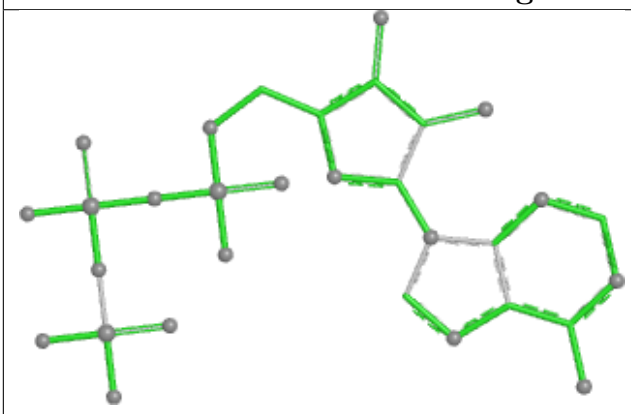


Torsions

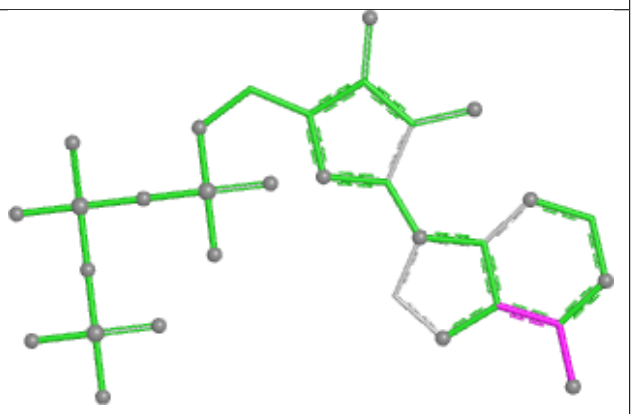


Rings

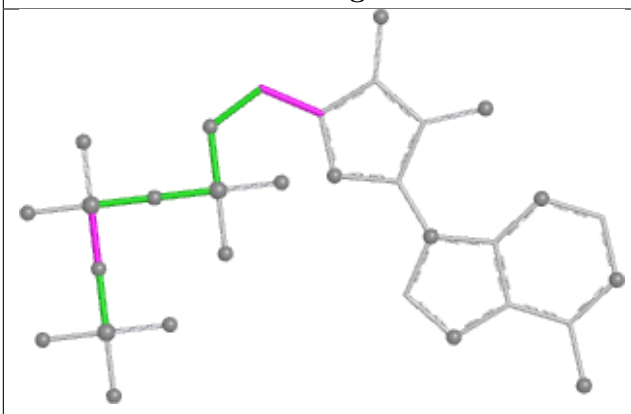
Ligand ATP B 4702



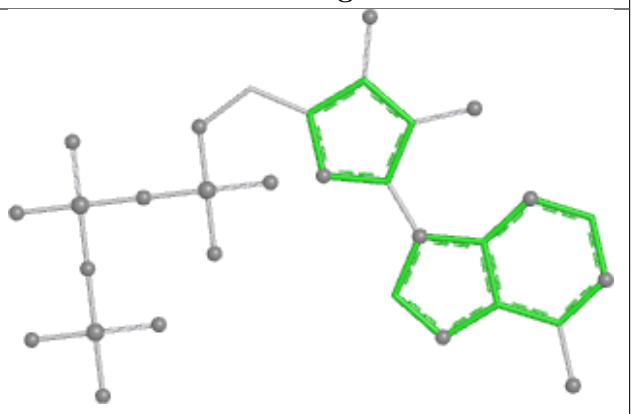
Bond lengths



Bond angles

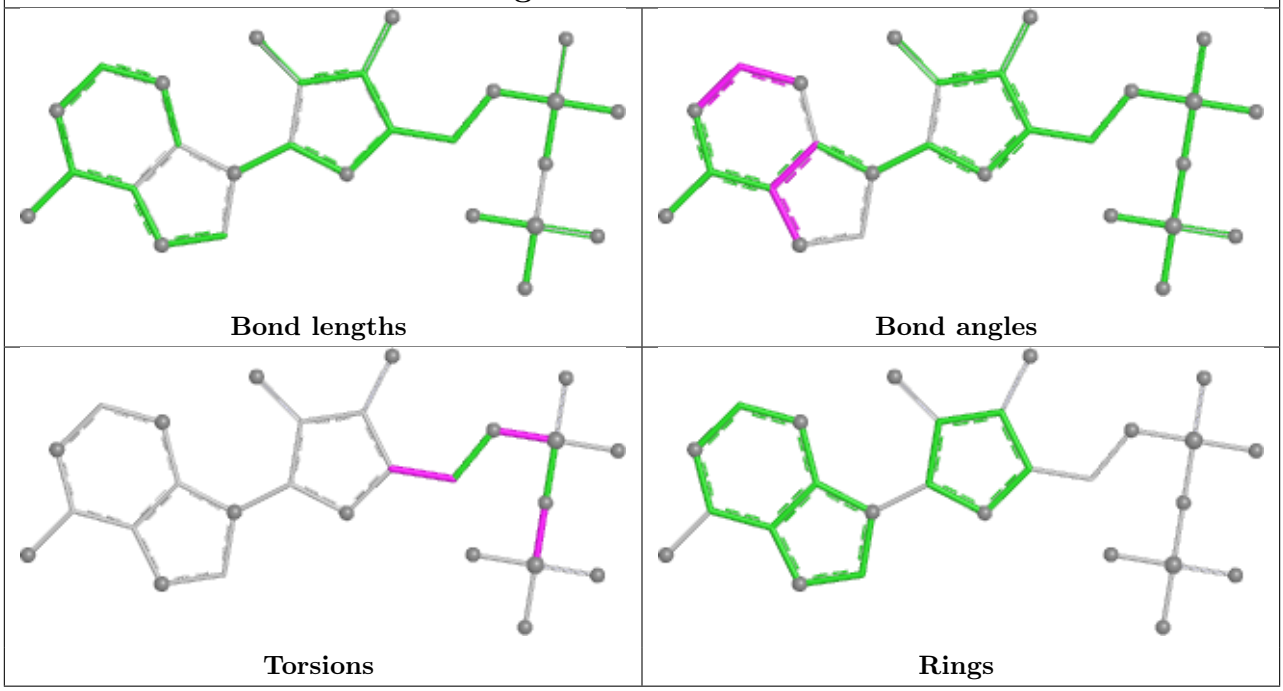


Torsions



Rings

Ligand ADP B 4706



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

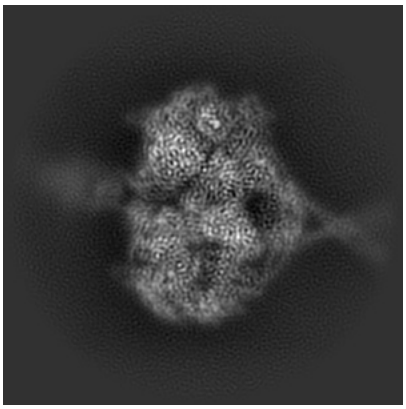
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-47342. These allow visual inspection of the internal detail of the map and identification of artifacts.

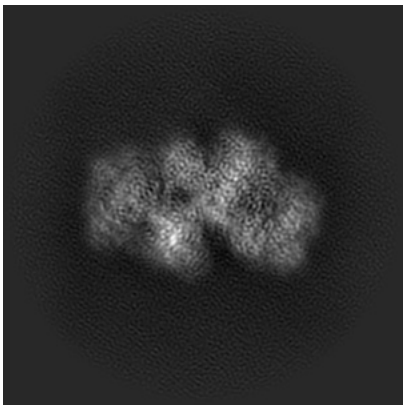
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

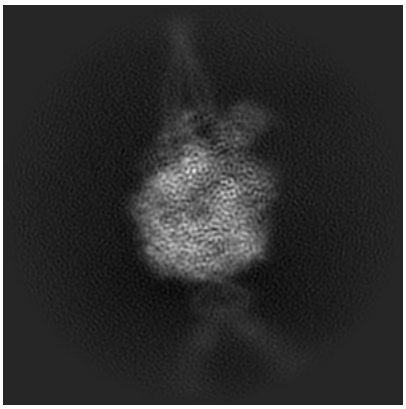
6.1.1 Primary map



X

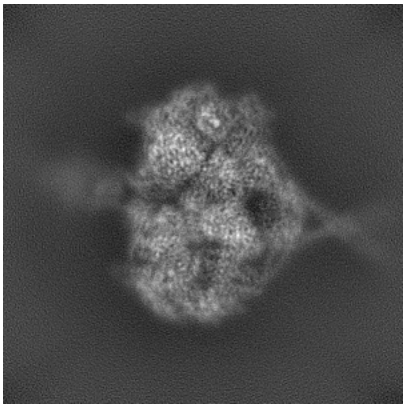


Y

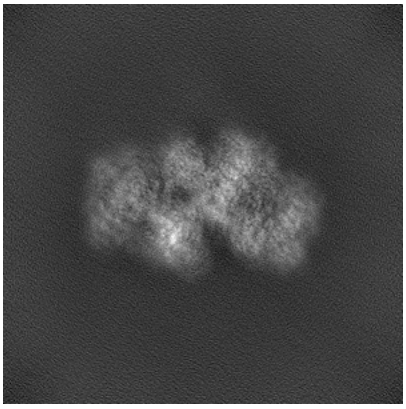


Z

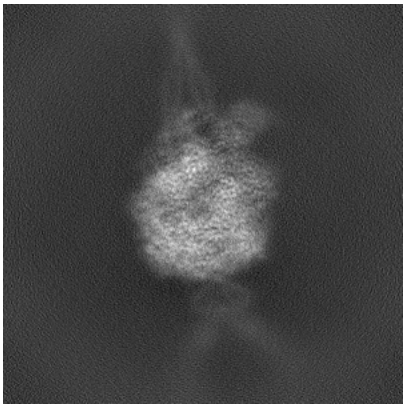
6.1.2 Raw map



X



Y

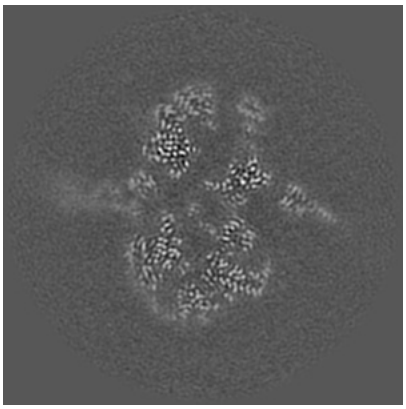


Z

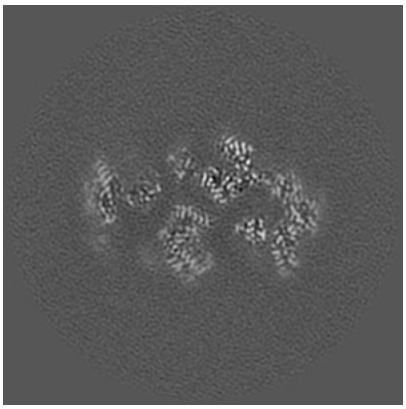
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

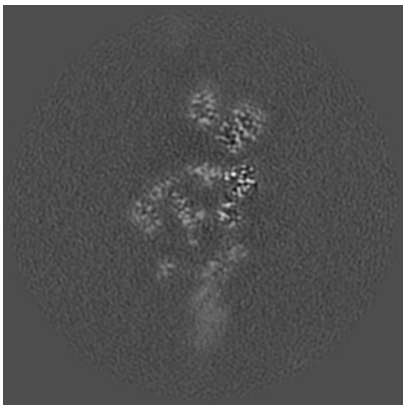
6.2.1 Primary map



X Index: 176

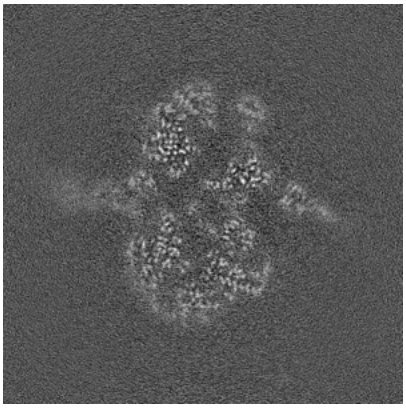


Y Index: 176

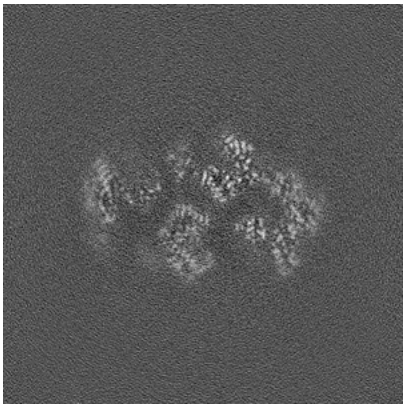


Z Index: 176

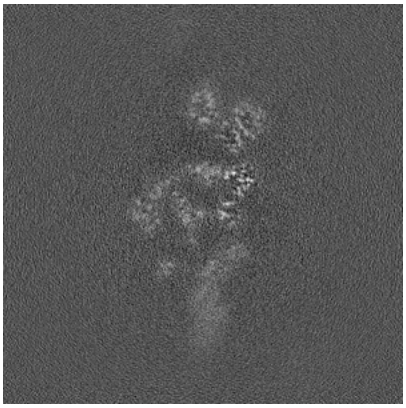
6.2.2 Raw map



X Index: 176



Y Index: 176

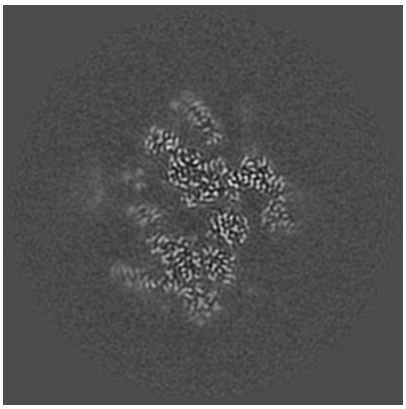


Z Index: 176

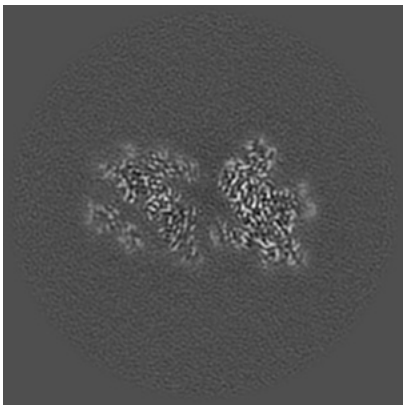
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

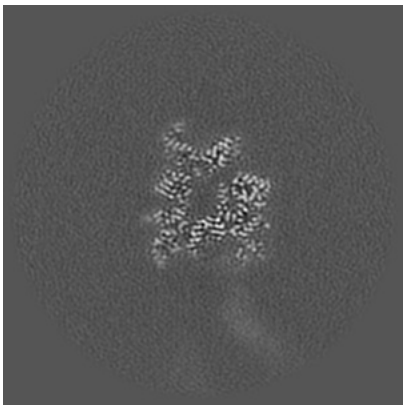
6.3.1 Primary map



X Index: 192

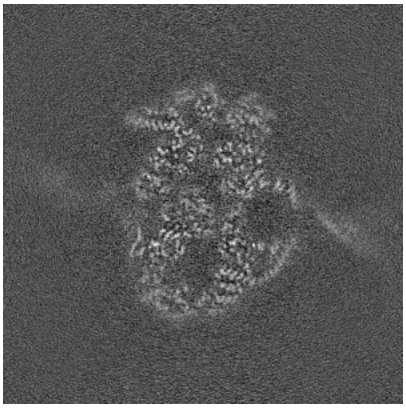


Y Index: 151

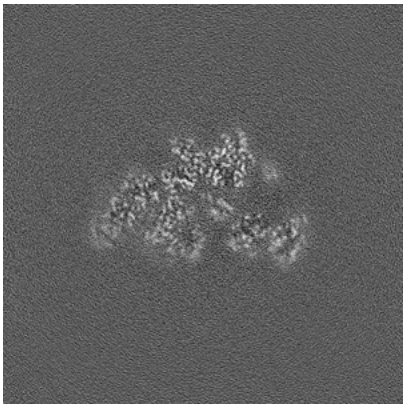


Z Index: 212

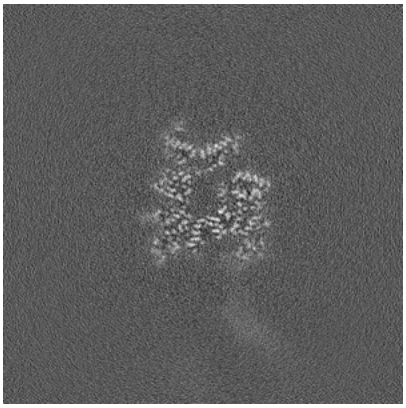
6.3.2 Raw map



X Index: 164



Y Index: 195

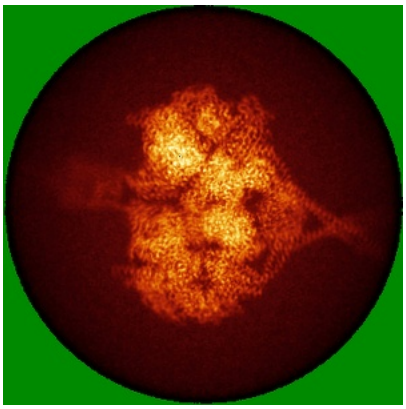


Z Index: 213

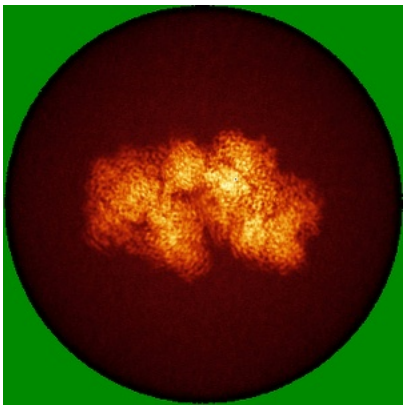
The images above show the largest variance slices of the map in three orthogonal directions.

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

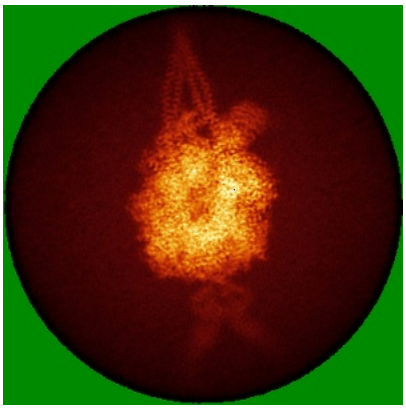
6.4.1 Primary map



X

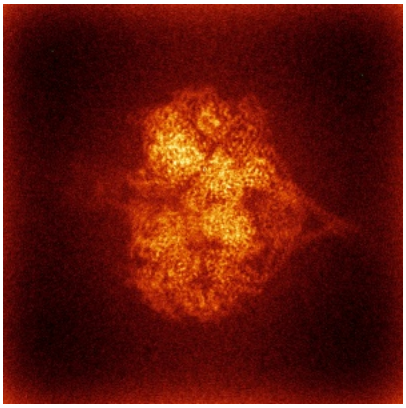


Y

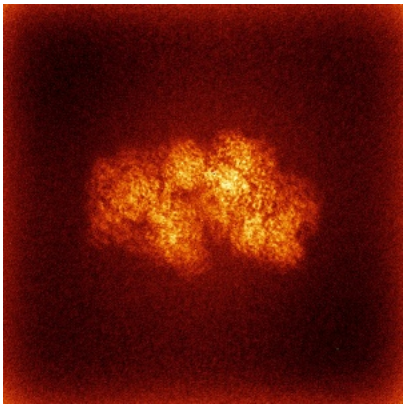


Z

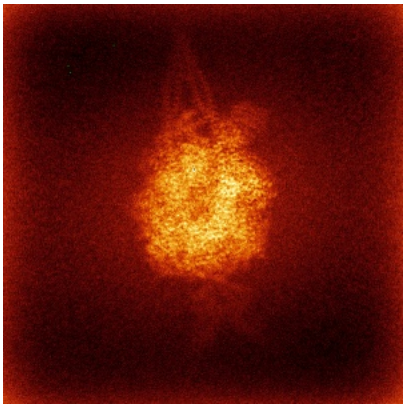
6.4.2 Raw map



X



Y

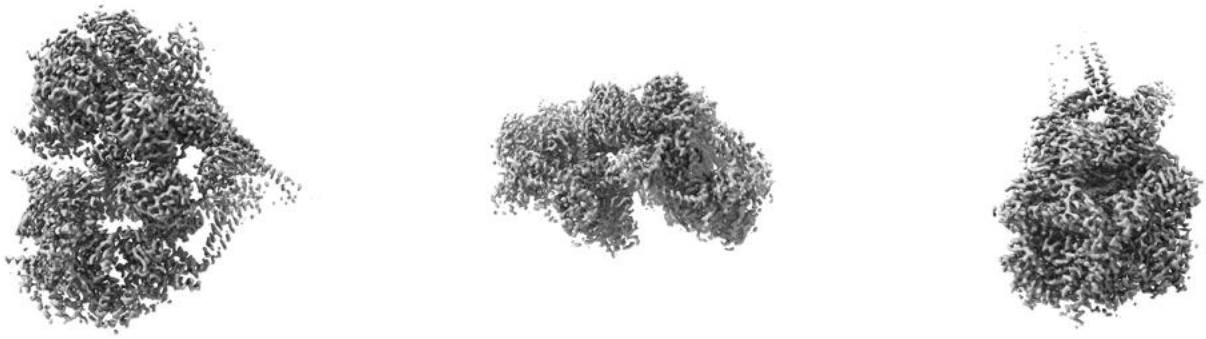


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.224. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

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

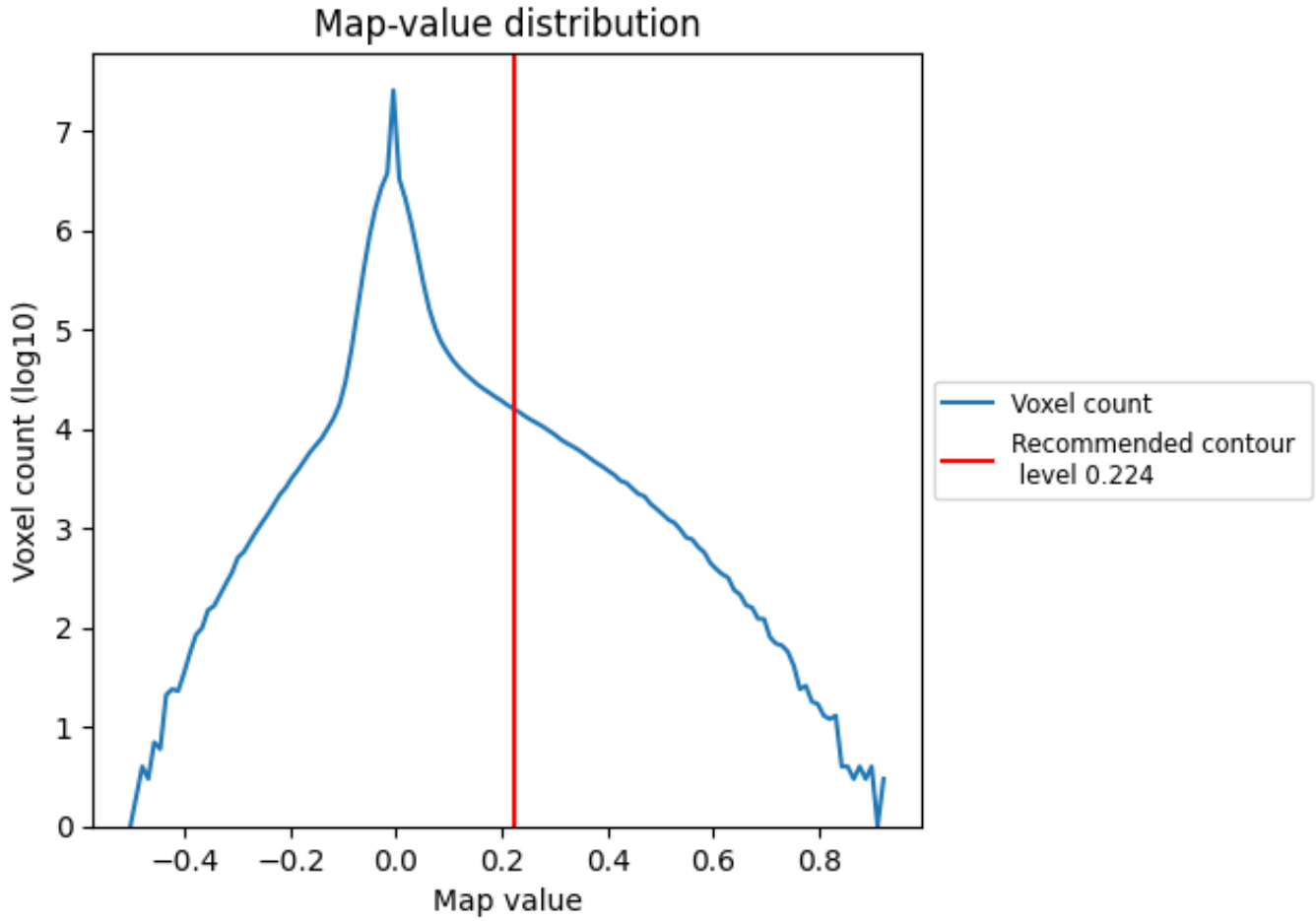
6.6 Mask visualisation (i)

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

7 Map analysis

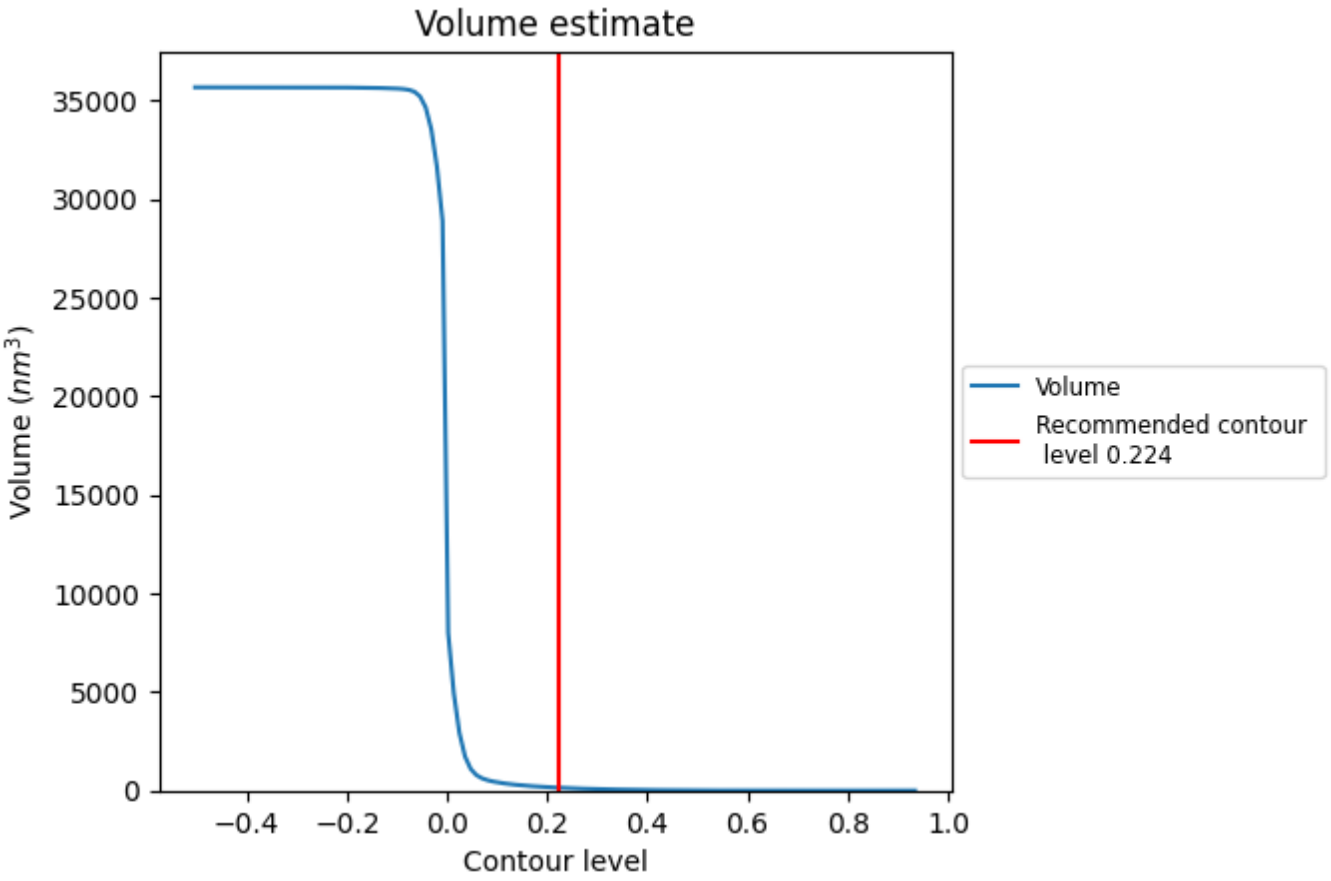
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

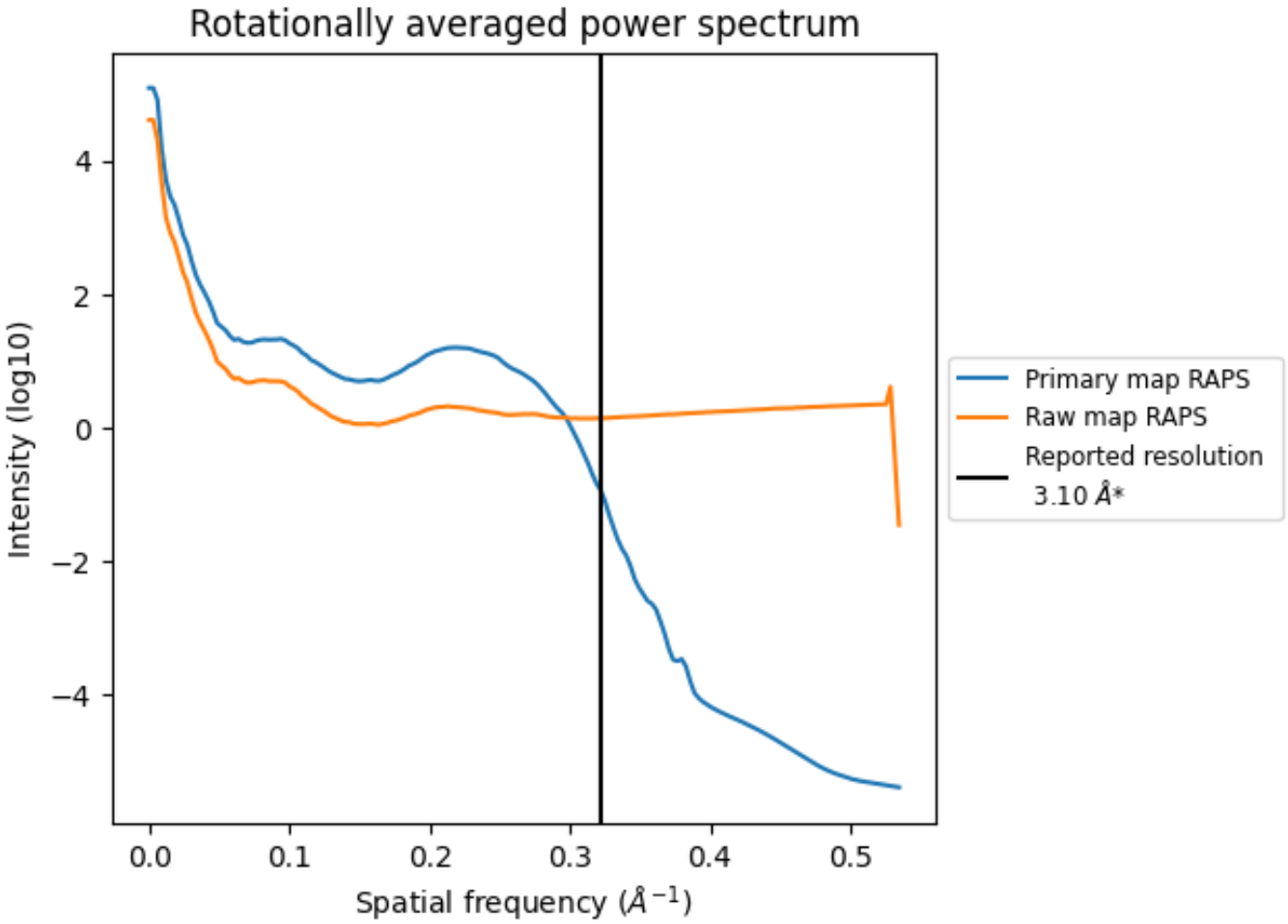
7.2 Volume estimate



The volume at the recommended contour level is 142 nm^3; this corresponds to an approximate mass of 128 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)

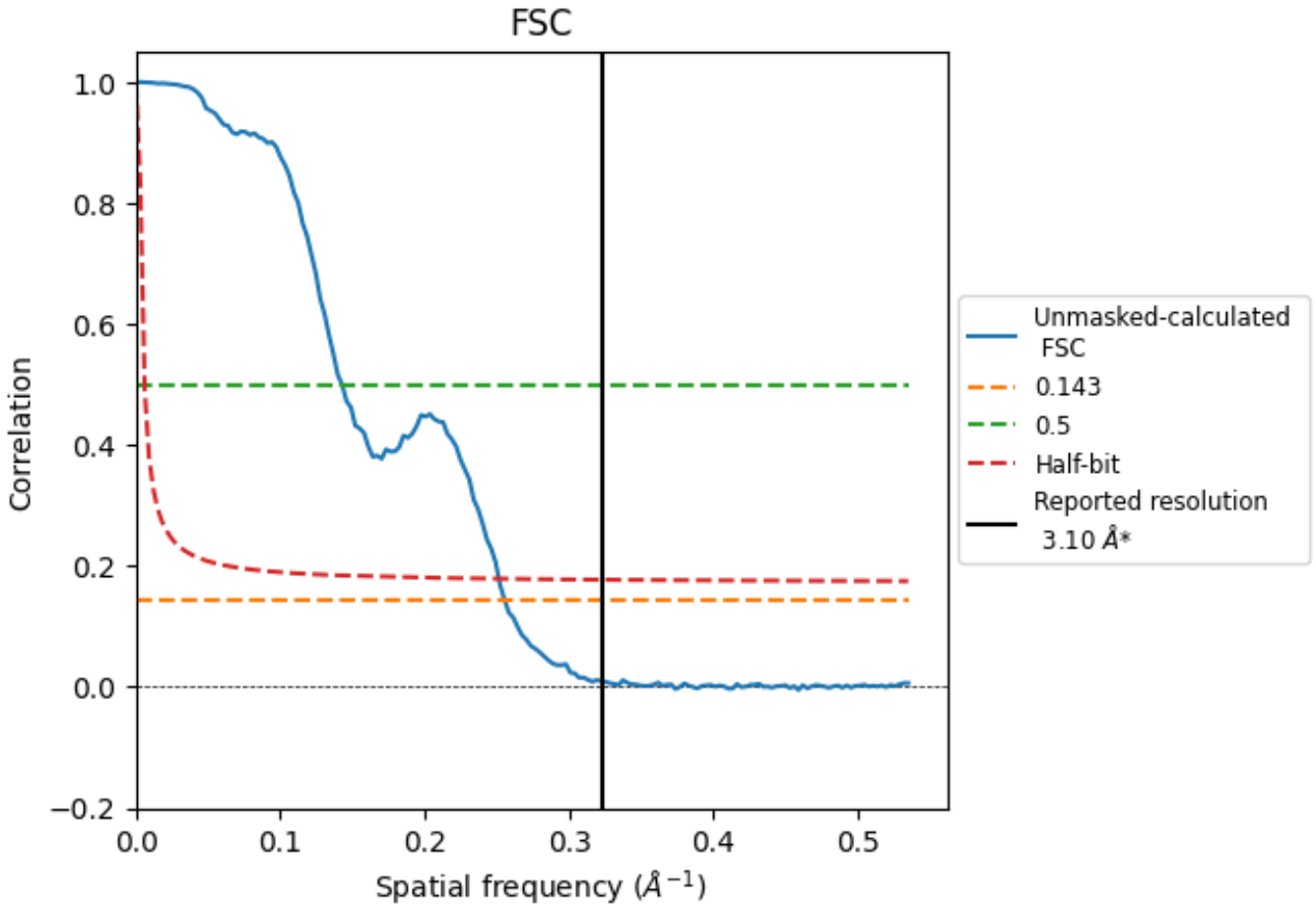


*Reported resolution corresponds to spatial frequency of 0.323 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.323 Å^{-1}

8.2 Resolution estimates (i)

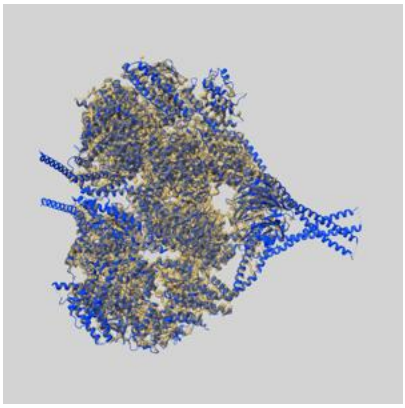
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.10	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.92	7.00	3.98

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.92 differs from the reported value 3.1 by more than 10 %

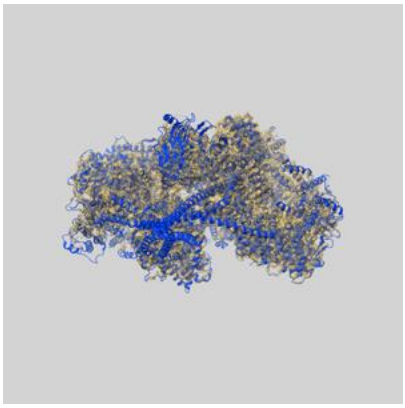
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-47342 and PDB model 9DZY. Per-residue inclusion information can be found in section 3 on page 15.

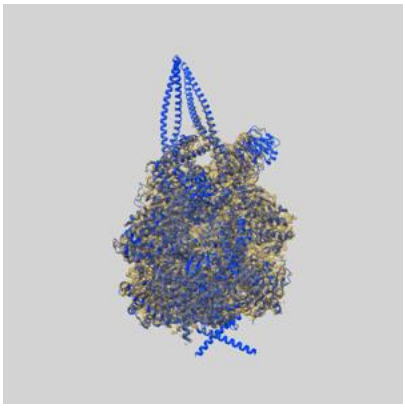
9.1 Map-model overlay



X



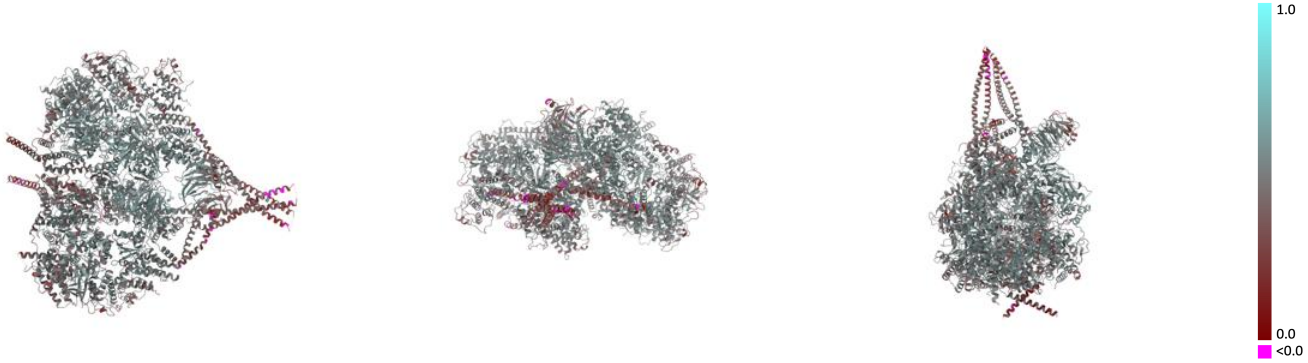
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.224 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.

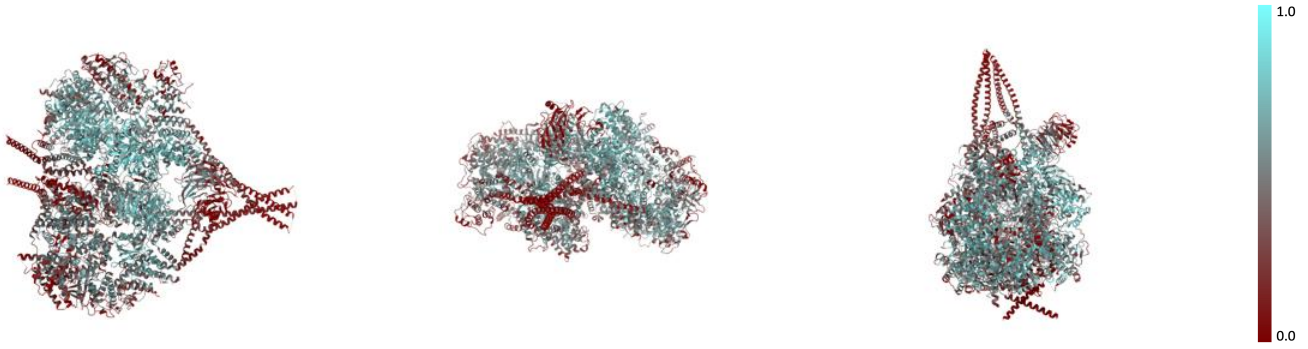
9.2 Q-score mapped to coordinate model (i)



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.

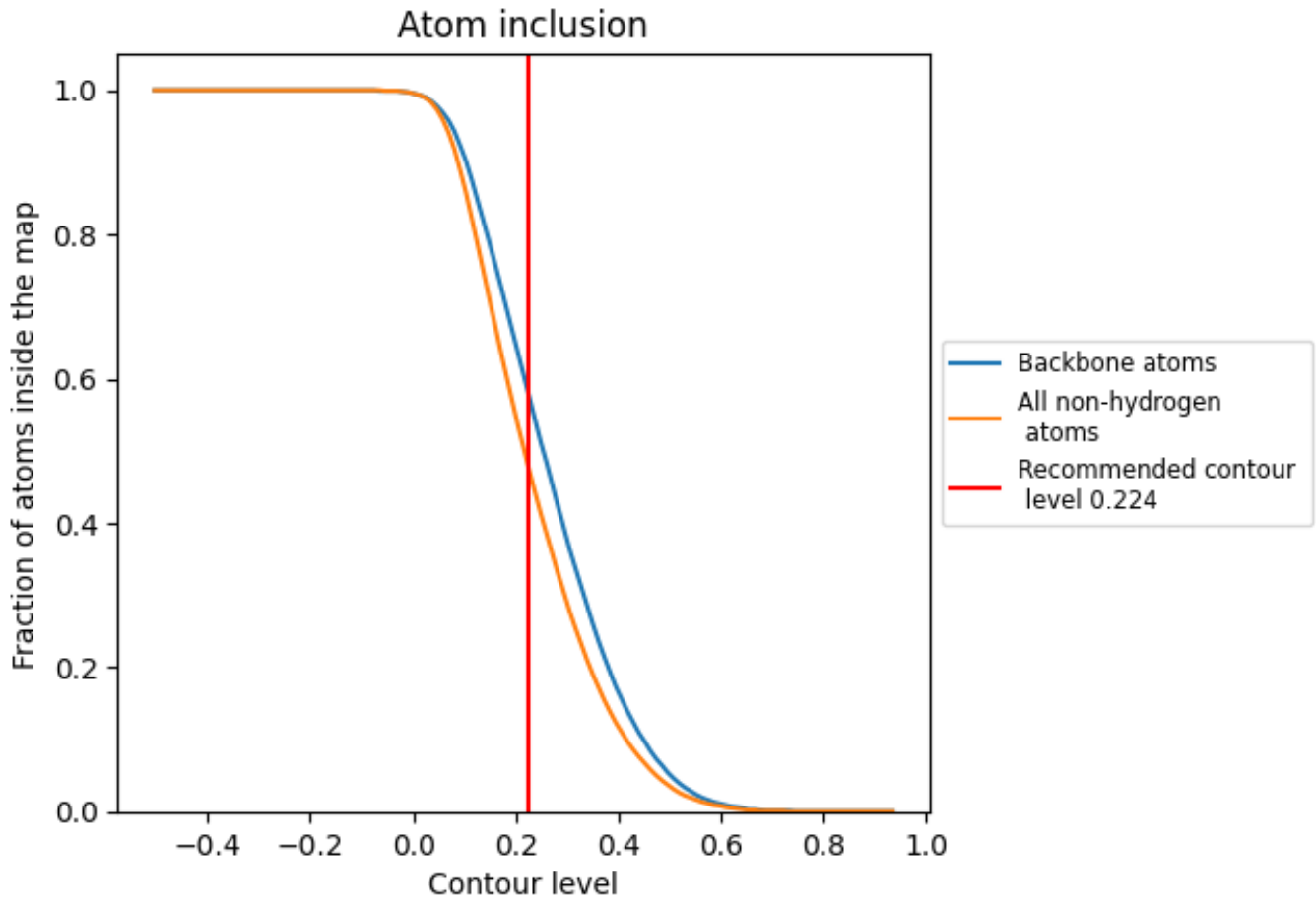
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.224).

9.4 Atom inclusion (i)



At the recommended contour level, 58% of all backbone atoms, 48% 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 (0.224) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4800	0.4860
A	0.4150	0.4710
B	0.5470	0.4980
C	0.2550	0.4600
E	0.6630	0.5360