



Full wwPDB EM Validation Report ⓘ

Aug 14, 2025 – 01:13 PM EDT

PDB ID : 9BMB / pdb_00009bmb
EMDB ID : EMD-44694
Title : Post-1 motor domain from full-length human dynein-1 bound to microtubules
in 5mM ADP condition
Authors : Chai, P.; Zhang, K.
Deposited on : 2024-05-02
Resolution : 3.60 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.dev126
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) : 2.45.1

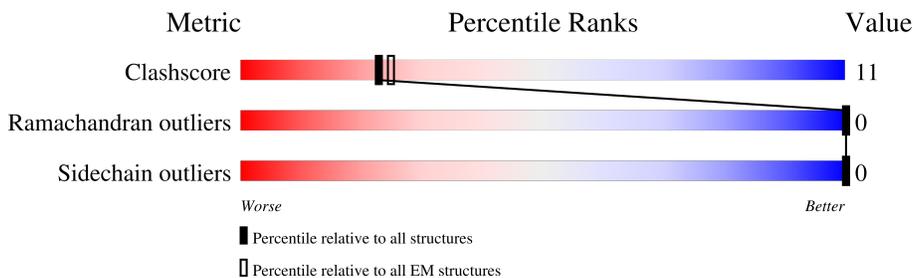
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	4646	

2 Entry composition [i](#)

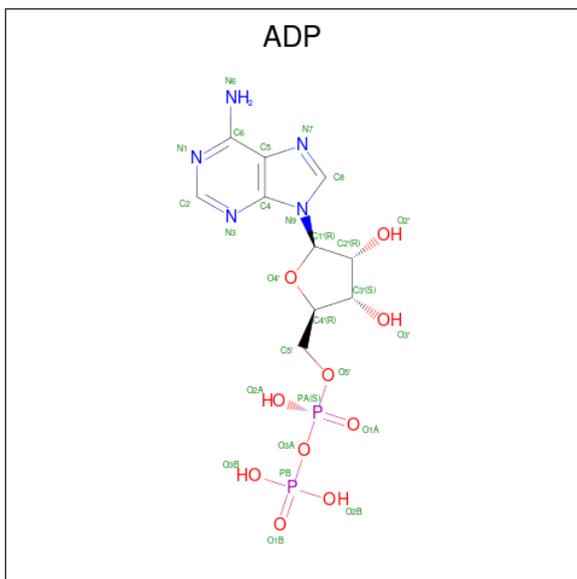
There are 4 unique types of molecules in this entry. The entry contains 24617 atoms, of which 0 are hydrogens and 0 are deuteriums.

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
			Total	C	N	O	S		
1	A	3043	24503	15606	4234	4541	122	0	0

- Molecule 2 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
			Total	C	N	O	P	
2	A	1	27	10	5	10	2	0
2	A	1	27	10	5	10	2	0
2	A	1	27	10	5	10	2	0

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).

E4583	E4584	S4557	V4560	K4564	N4571	K4574	L4577	I4581	L4590	V4591	V4592	V4593	K4594	Q4595	T4596	N4597	T4598	E4599	K4600	P4608	V4609	V4610	L4611	N4612	L4619	V4622	A4627	T4628	K4629	E4637	R4638	V4642	E4646	C4438	E4439	G4440	K4441	K4442	K4443	Q4444	T4445	N4446	Y4447	L4448	R4449	L4460	P4461	R4462	H4466	P4470	V4475	I4476	S4480	D4481	F4482	S4483	F4484	R4485	I4486	L4489	I4492	A4496	G4499	G4500	A4501	K4502	E4503	L4504	L4511	G4512	G4513	V4528	L4541	E4542	V4543	S4548	Q4549	G4550	A4551	T4552	M4343	L4344	K4345	M4346	Q4347	M4348	L4349	GLU	ASP	GLU	GLU	ASP	ASP	LEU	ALA	TYR	ALA	GLU	THR	THR	GLU	LYS	LYS	THR	THR	THR	ASP	SER	THR	SER	SER	ASP	GLY	ARG	PRO	A4375	R4378	H4381	T4391	Q4392	T4394	L4398	K4399	E4403	M4404	F4413	V4417	L4423	R4428	Q4429	Q4436	V4437	M4174	L4183	A4188	L4189	R4193	L4194	K4204	Y4205	D4211	L4212	A4215	G4216	D4217	L4243	M4247	I4251	R4255	V4256	F4260	L4264	L4265	N4266	T4267	L4269	E4270	S4277	F4282	K4287	H4291	W4308	V4309	L4312	P4313	D4314	T4315	P4324	L4332	M4042	M4043	C4044	D4050	A4051	V4055	E4056	D4057	L4058	E4061	S4073	A4074	E4075	A4087	V4088	K4089	S4090	G4091	R4092	M4095	L4096	K4097	M4099	W4105	L4106	L4113	H4114	S4115	L4116	Q4117	P4118	R4123	L4124	T4127	K4133	L4138	L4139	R4140	F4145	M4156	M4157	T4160	R4168	E3913	I3914	V3915	L3916	A3918	Q3919	S3920	R3923	T3928	Q3931	A3932	E3933	R3937	F3944	K3945	D3946	A3949	K3950	D3954	E3955	P3966	E3967	Y3972	L3973	M3974	S3975	E3976	E3977	L3990	L3991	L3992	R4000	M4004	M4021	L4025	D4026	L4027	L4030	V4031	M4038	T4039	V4041	R3782	K3783	V3784	E3785	E3786	T3787	D3788	M3791	Q3792	T3796	S3809	S3810	I3811	T3814	S3817	L3818	L3824	S3828	I3835	V3839	L3846	R3855	I3859	L3863	F3864	Q3865	V3866	N3869	R3870	V3871	A3872	R3873	G3874	M3875	H3880	L3886	G3897	D3902	L3909	R3910	T3681	R3682	V3686	C3693	S3694	R3695	N3700	F3701	R3611	F3614	D3617	A3618	F3619	R3620	K3621	N3622	L3627	R3628	F3629	G3630	N3631	P3632	L3633	L3634	V3635	Q3636	D3637	V3638	E3639	D3642	P3647	N3650	R3651	E3652	V3653	R3654	R3655	R3656	D3657	V3658	L3760	D3762	D3763	D3764	T3765	I3766	I3767	T3768	T3769	L3770	E3771	N3772	L3773	K3774	R3775	V3780	T3781	T3597	M3601	E3603	D3606	K3607	K3608	R3611	F3614	D3617	A3618	F3619	R3620	K3621	N3622	L3627	R3628	F3629	G3630	N3631	P3632	L3633	L3634	V3635	Q3636	D3637	V3638	E3639	D3642	P3647	N3650	R3651	E3652	V3653	R3654	R3655	R3656	D3657	V3658	L3760	D3762	D3763	D3764	T3765	I3766	I3767	T3768	T3769	L3770	E3771	N3772	L3773	K3774	R3775	V3780	T3781	E3490	K3491	F3496	Q3499	T3502	L3508	S3510	A3511	I3514	F3520	M3524	R3525	W3532	L3536	I3541	D3546	R3549	T3550	E3551	Y3552	L3553	D3557	E3558	R3559	L3560	R3561	W3562	L3567	E3575	N3576	M3579	L3580	K3581	R3582	R3585	I3590	D3591	G3594	Q3595	A3470	K3471	V3472	R3473	R3474	S3475	T3476	A3477	K3480	S3481	S3483	A3484	R3486	K3489
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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	139709	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS GLACIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	45000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.327	Depositor
Minimum map value	-0.840	Depositor
Average map value	-0.003	Depositor
Map value standard deviation	0.026	Depositor
Recommended contour level	0.2	Depositor
Map size (Å)	444.4032, 444.4032, 444.4032	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.1573, 1.1573, 1.1573	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.15	0/25022	0.32	1/33900 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1410	ASP	N-CA-C	-5.01	108.19	114.56

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	24503	0	24574	539	0
2	A	81	0	36	5	0
3	A	31	0	12	1	0
4	A	2	0	0	0	0
All	All	24617	0	24622	539	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 11.

All (539) 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:A:3618:ALA:O	1:A:3621:LYS:HB3	1.61	0.98
1:A:1698:ILE:HD13	1:A:1701:TRP:HE1	1.48	0.79
1:A:2039:LEU:HD22	1:A:2041:MET:HE2	1.67	0.77
1:A:1407:ALA:HA	1:A:1457:MET:HE3	1.66	0.77
1:A:2593:LEU:HD12	1:A:2605:LEU:HD12	1.67	0.75
1:A:1857:LEU:HD22	1:A:1868:TYR:HB2	1.69	0.74
1:A:1978:ILE:HD11	1:A:2001:LEU:HD11	1.70	0.74
1:A:3659:ARG:HE	1:A:3661:LEU:HD11	1.52	0.74
1:A:3481:SER:HB2	1:A:3770:LEU:HD11	1.70	0.74
1:A:3103:TYR:OH	1:A:3141:GLU:OE1	2.06	0.73
1:A:3638:VAL:HG12	1:A:3681:THR:HB	1.70	0.73
1:A:2834:GLN:HA	1:A:2837:LEU:HD13	1.69	0.72
1:A:2473:ASN:HB2	1:A:2481:MET:HE1	1.69	0.72
1:A:2593:LEU:HD23	1:A:2734:VAL:HB	1.72	0.71
1:A:3928:THR:OG1	1:A:3931:GLN:OE1	2.09	0.71
1:A:4193:ARG:NH2	1:A:4637:GLU:O	2.24	0.70
1:A:2221:MET:HE1	1:A:2348:LEU:HD21	1.72	0.70
1:A:4574:LYS:HB3	1:A:4627:ALA:HB2	1.74	0.70
1:A:3576:ASN:ND2	1:A:3700:ASN:O	2.26	0.69
1:A:2112:LYS:HG3	1:A:2122:VAL:HG11	1.73	0.69
1:A:2290:SER:HB3	1:A:2295:LEU:HD23	1.74	0.68
1:A:1912:LYS:HG2	1:A:2041:MET:HG3	1.76	0.67
1:A:1888:CYS:HB2	1:A:2041:MET:HE1	1.76	0.67
1:A:1332:VAL:HB	1:A:1377:LEU:HD22	1.76	0.66
1:A:3576:ASN:HA	1:A:3579:MET:HG3	1.78	0.66
1:A:2943:LYS:HE2	1:A:3067:THR:HB	1.77	0.66
1:A:2999:VAL:HG13	1:A:3005:LEU:HD21	1.77	0.65
1:A:3113:MET:O	1:A:3140:ARG:NH2	2.30	0.65
1:A:3622:ASN:HB3	1:A:3633:LEU:HD11	1.78	0.65
1:A:3763:ASP:OD2	1:A:3765:THR:OG1	2.14	0.65
1:A:4113:LEU:HD13	1:A:4116:LEU:HD13	1.78	0.65
1:A:1499:GLU:HA	1:A:3621:LYS:HE2	1.77	0.65
1:A:4595:GLN:NE2	1:A:4596:THR:O	2.29	0.65
1:A:3553:LEU:O	1:A:3582:ARG:NH1	2.30	0.65
1:A:4099:VAL:HB	1:A:4106:LEU:HD21	1.77	0.65
1:A:1406:GLU:HG3	1:A:3658:GLY:HA3	1.79	0.64
1:A:2933:LEU:HB3	1:A:3065:VAL:HG22	1.79	0.64
1:A:3546:ASP:O	1:A:3735:GLN:NE2	2.22	0.64
1:A:1798:MET:HG2	1:A:2124:GLU:HG3	1.81	0.63
1:A:2897:LEU:HD21	1:A:2909:LEU:HB2	1.80	0.63
1:A:2901:TYR:OH	1:A:2909:LEU:N	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2453:ARG:NH1	1:A:2505:ASP:OD2	2.29	0.63
1:A:2590:PRO:HB2	1:A:2731:VAL:HG12	1.80	0.62
1:A:2620:LEU:HD12	1:A:2630:LEU:HD21	1.81	0.62
1:A:3074:GLY:O	1:A:3078:ARG:HG2	1.99	0.62
1:A:2581:LEU:HD13	1:A:2591:LEU:HD13	1.81	0.62
1:A:1979:GLN:HB3	1:A:2035:LEU:HD13	1.81	0.62
1:A:2830:LEU:HD22	1:A:2850:ILE:HD13	1.79	0.62
1:A:4031:VAL:O	1:A:4123:ARG:NH1	2.33	0.62
1:A:1939:GLN:N	1:A:1939:GLN:OE1	2.33	0.61
1:A:4168:ARG:NH2	1:A:4217:ASP:OD1	2.33	0.61
1:A:2790:PRO:HB3	1:A:3076:LYS:HE2	1.83	0.61
1:A:1959:GLU:OE2	1:A:2019:ASN:ND2	2.31	0.61
1:A:3204:GLY:HA2	1:A:3750:LEU:HD21	1.83	0.61
1:A:2444:GLU:H	1:A:2510:MET:HE1	1.64	0.61
1:A:1800:GLN:OE1	1:A:1804:ARG:NH1	2.34	0.60
1:A:4528:VAL:HG11	1:A:4592:TRP:HB2	1.82	0.60
1:A:2387:LEU:HD21	1:A:2463:HIS:HB3	1.83	0.60
1:A:2684:ARG:HH12	1:A:2726:ARG:HE	1.49	0.60
1:A:2874:SER:HB3	1:A:2920:LEU:HD21	1.82	0.60
1:A:2671:MET:HB2	1:A:2675:GLY:HA2	1.83	0.60
1:A:3914:ILE:H	1:A:3937:ARG:HH12	1.49	0.60
1:A:3043:MET:HA	1:A:3043:MET:HE2	1.84	0.60
1:A:2644:THR:OG1	1:A:2647:GLY:O	2.20	0.59
1:A:2536:ASP:OD1	1:A:2576:ARG:NH1	2.35	0.59
1:A:3044:LEU:HD22	1:A:3049:GLU:HG2	1.82	0.59
1:A:3508:LEU:HD23	1:A:3536:LEU:HD21	1.83	0.59
1:A:2816:LEU:HD12	1:A:2817:PRO:HD2	1.85	0.59
1:A:1415:GLN:O	1:A:1419:ARG:HG2	2.02	0.59
1:A:2910:VAL:N	2:A:4704:ADP:N1	2.44	0.59
1:A:2660:VAL:HG22	1:A:2707:GLN:HB2	1.84	0.59
1:A:2324:LEU:HD21	1:A:2332:ARG:HD3	1.84	0.58
1:A:3839:VAL:HG21	1:A:3863:LEU:HA	1.83	0.58
1:A:2769:LEU:HG	1:A:2773:MET:HE3	1.85	0.58
1:A:2387:LEU:HB2	1:A:2412:MET:HE2	1.85	0.58
1:A:2413:LEU:HA	1:A:2416:GLN:HE21	1.67	0.58
1:A:4511:LEU:HD23	1:A:4560:VAL:HG13	1.86	0.58
1:A:2939:SER:OG	1:A:3069:ASN:OD1	2.20	0.58
1:A:4042:LEU:HD11	1:A:4138:LEU:HG	1.86	0.58
1:A:2419:ALA:O	1:A:2423:MET:HG2	2.03	0.58
1:A:2965:ARG:HD3	1:A:2966:LYS:H	1.69	0.58
1:A:4445:THR:O	1:A:4449:ARG:N	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2983:SER:HB3	1:A:2990:ILE:HD12	1.85	0.58
1:A:3756:VAL:HG13	1:A:3757:LYS:H	1.68	0.57
1:A:2131:LEU:HD12	1:A:2132:PRO:HD2	1.86	0.57
1:A:2643:ARG:NH1	1:A:2644:THR:O	2.37	0.57
1:A:3511:ALA:HA	1:A:3514:ILE:HG22	1.85	0.57
1:A:4445:THR:H	1:A:4448:LEU:HB2	1.69	0.57
1:A:1403:LEU:HD23	1:A:1450:LEU:HD21	1.85	0.57
1:A:2963:VAL:HB	1:A:2998:ASN:HB3	1.86	0.57
1:A:3736:GLY:O	1:A:3740:LEU:N	2.32	0.57
1:A:3008:MET:HE1	1:A:3064:VAL:HG11	1.86	0.57
1:A:3755:GLU:OE2	1:A:3759:ARG:NH1	2.37	0.57
1:A:1652:LYS:O	1:A:1655:LYS:NZ	2.38	0.57
1:A:1678:SER:HB2	1:A:1872:TYR:HE2	1.69	0.57
1:A:3130:TYR:CZ	1:A:3132:LYS:HB2	2.39	0.57
1:A:1579:MET:HA	1:A:1582:VAL:HG12	1.86	0.57
1:A:1510:SER:O	1:A:1512:TYR:N	2.37	0.57
1:A:3489:TRP:NE1	1:A:3746:GLU:OE1	2.37	0.57
1:A:3739:GLN:O	1:A:3743:ARG:HD3	2.05	0.57
1:A:2083:GLN:HB2	1:A:2086:TYR:CD2	2.40	0.56
1:A:2297:LYS:O	1:A:2338:ASN:ND2	2.38	0.56
1:A:2465:ALA:HB2	1:A:2493:TYR:CE2	2.39	0.56
1:A:4460:LEU:HA	1:A:4475:VAL:HG22	1.86	0.56
1:A:2584:TRP:HB2	1:A:2591:LEU:HD12	1.86	0.56
1:A:1440:GLN:HA	1:A:1443:GLU:HG3	1.86	0.56
1:A:2325:LEU:HB3	1:A:2333:LEU:HB2	1.87	0.56
1:A:3835:ILE:HG23	1:A:3866:VAL:HG12	1.87	0.56
1:A:4043:MET:HE3	1:A:4127:THR:HG22	1.88	0.56
1:A:2325:LEU:HD23	1:A:2333:LEU:HD12	1.87	0.56
1:A:1351:TRP:H	1:A:1430:THR:HA	1.70	0.56
1:A:3525:ARG:NH1	1:A:3576:ASN:OD1	2.38	0.56
1:A:3767:ILE:O	1:A:3771:GLU:HG3	2.05	0.56
1:A:3871:VAL:HG12	1:A:3875:MET:HE2	1.88	0.56
1:A:1498:LYS:HA	1:A:1501:ILE:HG12	1.88	0.56
1:A:1336:LEU:HD11	1:A:1386:VAL:HG21	1.88	0.56
1:A:1429:LEU:HD11	1:A:1434:ILE:HD11	1.86	0.56
1:A:1511:PRO:O	1:A:1514:LYS:HG2	2.06	0.56
1:A:2925:ILE:HD12	1:A:3090:VAL:HG11	1.86	0.56
1:A:1882:THR:HA	1:A:2048:LEU:HD23	1.88	0.55
1:A:2925:ILE:HG21	1:A:2933:LEU:HD13	1.87	0.55
1:A:3601:MET:HE2	1:A:3634:LEU:HD23	1.88	0.55
1:A:1625:SER:OG	1:A:1699:ASN:OD1	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3154:LEU:HD22	1:A:3171:ILE:HG12	1.88	0.55
1:A:2039:LEU:HD23	1:A:2040:ALA:N	2.21	0.55
1:A:2308:ASP:HB2	1:A:2674:TYR:HD2	1.71	0.55
1:A:2666:ILE:HB	1:A:2712:CYS:SG	2.46	0.55
1:A:3178:ASP:OD1	1:A:3585:ARG:NE	2.39	0.55
1:A:3761:LEU:HD22	1:A:3764:ASP:OD1	2.07	0.55
1:A:1927:VAL:HG22	1:A:1954:TRP:HB2	1.87	0.55
1:A:2491:GLN:HB3	1:A:2524:VAL:HG21	1.88	0.55
1:A:4564:LYS:HG3	1:A:4646:GLU:HG3	1.88	0.55
1:A:2386:PRO:HG3	1:A:2413:LEU:HD21	1.89	0.55
1:A:2686:MET:HE2	1:A:2708:PHE:HZ	1.71	0.54
1:A:2838:VAL:HG13	1:A:3093:TRP:CZ2	2.43	0.54
1:A:1959:GLU:OE1	1:A:1962:ARG:NH1	2.40	0.54
1:A:2174:GLU:HB2	1:A:2179:ARG:HH21	1.71	0.54
1:A:3096:ASP:OD2	1:A:3097:TRP:N	2.40	0.54
1:A:3661:LEU:HD23	1:A:3668:ASP:HB2	1.90	0.54
1:A:1405:SER:HB2	1:A:3658:GLY:HA2	1.89	0.54
1:A:2961:ILE:HD13	1:A:2975:ASP:CG	2.33	0.54
1:A:3143:ILE:HD13	1:A:3541:ILE:HD13	1.88	0.54
1:A:3966:PRO:HD2	1:A:4000:ARG:HG3	1.88	0.54
1:A:2987:ASN:OD1	1:A:3057:GLN:NE2	2.28	0.54
1:A:3499:GLN:HA	1:A:3502:THR:HG22	1.89	0.54
1:A:1661:VAL:HG22	1:A:1676:ILE:HG21	1.88	0.54
1:A:1717:LEU:HB2	1:A:1749:LEU:HD22	1.90	0.54
1:A:2393:GLU:O	1:A:2397:ARG:NH1	2.40	0.54
1:A:3486:ARG:O	1:A:3490:GLU:HG2	2.08	0.53
1:A:3913:GLU:HG3	1:A:4476:ILE:HG21	1.90	0.53
1:A:2291:VAL:HG23	1:A:2292:ARG:HG2	1.89	0.53
1:A:2577:HIS:CE1	1:A:2736:VAL:HG22	2.44	0.53
1:A:2102:ASN:OD1	1:A:2105:ARG:NH2	2.37	0.53
1:A:3973:LEU:HB2	1:A:3992:LEU:HD11	1.90	0.53
1:A:2448:ASP:OD2	1:A:2725:HIS:NE2	2.41	0.53
1:A:2519:ARG:HH21	1:A:2534:ILE:HD11	1.73	0.53
1:A:4160:THR:HG23	1:A:4212:LEU:HD21	1.91	0.53
1:A:3481:SER:HB2	1:A:3770:LEU:CD1	2.38	0.53
1:A:3909:LEU:HB3	1:A:4344:LEU:HD13	1.90	0.52
1:A:2585:LEU:HD21	1:A:2709:VAL:HG21	1.92	0.52
1:A:2744:LEU:HA	1:A:2747:ILE:HG22	1.91	0.52
1:A:2386:PRO:HA	1:A:2416:GLN:HE22	1.74	0.52
1:A:2784:PHE:HB3	1:A:2792:TYR:CD1	2.44	0.52
1:A:1626:PHE:HB2	1:A:1699:ASN:ND2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1816:VAL:HG11	1:A:2052:VAL:HG22	1.92	0.52
1:A:3520:PHE:HB3	1:A:3524:MET:HB3	1.92	0.52
1:A:2464:GLN:HG3	1:A:2583:THR:HG23	1.91	0.52
1:A:2558:GLU:HA	1:A:2757:ARG:HH21	1.75	0.52
1:A:2789:GLN:HB2	1:A:2792:TYR:HE2	1.75	0.52
1:A:2461:MET:HG2	1:A:2493:TYR:HE2	1.75	0.52
1:A:3207:LYS:NZ	1:A:3210:GLU:OE1	2.42	0.52
1:A:3514:ILE:HD11	1:A:3582:ARG:HB2	1.92	0.52
1:A:1539:ASP:OD1	1:A:1542:ARG:NH2	2.43	0.52
1:A:2762:LEU:HD21	1:A:2821:LEU:HD22	1.91	0.52
1:A:2962:LYS:HD2	1:A:3647:PRO:HG3	1.92	0.52
1:A:3731:LEU:HD21	1:A:3791:MET:HG2	1.92	0.52
1:A:3967:GLU:HB2	1:A:4004:MET:HE2	1.92	0.52
1:A:4398:LEU:HG	1:A:4417:VAL:HG21	1.92	0.52
1:A:1536:VAL:HG12	1:A:1601:LEU:HG	1.91	0.52
1:A:2465:ALA:HB2	1:A:2493:TYR:CD2	2.44	0.52
1:A:4324:PRO:HB3	1:A:4638:ARG:HH11	1.74	0.51
1:A:1914:GLU:HG3	2:A:4701:ADP:H3'	1.91	0.51
1:A:2623:SER:HA	1:A:2668:LEU:HB3	1.91	0.51
1:A:2258:ALA:HB1	1:A:2682:PHE:HD1	1.74	0.51
1:A:3008:MET:HE3	1:A:3012:LEU:HG	1.92	0.51
1:A:1452:VAL:HA	1:A:1512:TYR:CE1	2.46	0.51
1:A:1864:ALA:HB2	1:A:1897:GLU:HB2	1.92	0.51
1:A:1946:VAL:HG13	1:A:2006:VAL:HG21	1.93	0.51
1:A:3026:TYR:O	1:A:3030:MET:HG2	2.11	0.51
1:A:2309:PRO:HA	1:A:2312:VAL:HG12	1.92	0.51
1:A:2354:ALA:HB1	1:A:2358:ARG:HH21	1.75	0.51
1:A:2797:ARG:HA	1:A:2800:THR:HG22	1.93	0.51
1:A:2831:ARG:HH21	1:A:2921:ARG:HH21	1.58	0.51
1:A:3113:MET:SD	1:A:3184:ALA:HA	2.51	0.51
1:A:2965:ARG:HE	1:A:2965:ARG:HA	1.76	0.51
1:A:3650:ASN:OD1	1:A:3695:ARG:NH1	2.43	0.51
1:A:4183:LEU:HD11	1:A:4215:ALA:HB1	1.93	0.51
1:A:4541:LEU:HD11	1:A:4590:LEU:HB3	1.93	0.51
1:A:2265:TYR:CZ	1:A:2314:ASN:HB2	2.46	0.51
1:A:2527:PRO:HD3	1:A:2545:TRP:CE2	2.45	0.51
1:A:3865:GLN:NE2	1:A:3869:ASN:OD1	2.44	0.51
1:A:4030:ILE:HG21	1:A:4145:PHE:HZ	1.76	0.51
1:A:1451:LEU:HG	1:A:3673:PRO:HG2	1.93	0.51
1:A:3596:ALA:HB2	1:A:3701:PHE:CD2	2.46	0.51
1:A:1626:PHE:HB2	1:A:1699:ASN:HD22	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3601:MET:HE1	1:A:3611:ARG:HE	1.75	0.50
1:A:1466:ILE:HD11	1:A:1527:LEU:HD11	1.91	0.50
1:A:1501:ILE:HG22	1:A:1527:LEU:HB3	1.93	0.50
1:A:1582:VAL:HG23	1:A:1591:VAL:HG22	1.92	0.50
1:A:2569:VAL:HB	1:A:2747:ILE:HD12	1.93	0.50
1:A:2789:GLN:HB2	1:A:2792:TYR:CE2	2.47	0.50
1:A:4609:VAL:HG22	1:A:4642:VAL:HB	1.93	0.50
1:A:2315:LEU:HA	1:A:2318:VAL:HG12	1.93	0.50
1:A:4031:VAL:HG21	1:A:4058:LEU:HD21	1.93	0.50
1:A:3780:VAL:O	1:A:3784:VAL:HG23	2.11	0.50
1:A:4423:LEU:HD13	1:A:4466:HIS:CD2	2.47	0.50
1:A:4480:SER:O	1:A:4483:SER:OG	2.22	0.50
1:A:2843:ARG:HH21	1:A:3093:TRP:HD1	1.60	0.49
1:A:3030:MET:HE3	1:A:3050:LEU:HD11	1.93	0.49
1:A:3910:ARG:NE	1:A:4344:LEU:HD11	2.27	0.49
1:A:2503:SER:HB3	1:A:2514:LEU:HD22	1.93	0.49
1:A:2623:SER:OG	1:A:3006:GLU:OE1	2.28	0.49
1:A:2646:ASN:OD1	1:A:2647:GLY:N	2.45	0.49
1:A:2296:GLN:N	1:A:2296:GLN:OE1	2.45	0.49
1:A:3886:LEU:HD11	1:A:4346:MET:HG3	1.93	0.49
1:A:2995:ASP:OD1	1:A:3067:THR:OG1	2.28	0.49
1:A:4460:LEU:HD12	1:A:4461:PRO:HD2	1.94	0.49
1:A:1343:ILE:HA	1:A:1346:MET:HE2	1.93	0.49
1:A:1785:VAL:HG13	1:A:1815:LEU:HD12	1.95	0.49
1:A:3017:VAL:O	1:A:3020:LEU:HD22	2.12	0.49
1:A:3561:ARG:NH2	1:A:3603:GLU:OE2	2.46	0.49
1:A:3576:ASN:HB2	1:A:3701:PHE:HE1	1.77	0.49
1:A:2346:GLN:HB2	1:A:2726:ARG:HD2	1.94	0.49
1:A:3162:ALA:HB2	1:A:3168:THR:HG21	1.94	0.49
1:A:3620:ARG:HH21	1:A:3665:GLY:HA3	1.78	0.49
1:A:1469:VAL:HG21	1:A:1500:HIS:HE1	1.78	0.49
1:A:2254:ILE:HG23	1:A:2279:LEU:HD23	1.94	0.49
1:A:4050:ASP:OD1	1:A:4051:ALA:N	2.45	0.49
1:A:1812:ILE:HG21	1:A:2056:SER:HA	1.95	0.49
1:A:2720:ARG:NH2	1:A:3083:PRO:HG3	2.27	0.49
1:A:4381:HIS:HB2	1:A:4438:CYS:HB3	1.93	0.49
1:A:3594:GLY:HA3	1:A:3682:ARG:HH12	1.78	0.48
1:A:3828:SER:HB3	1:A:4140:ARG:HG2	1.94	0.48
1:A:4277:SER:HA	1:A:4282:PHE:CG	2.48	0.48
1:A:4596:THR:HG23	1:A:4598:THR:H	1.78	0.48
1:A:2242:GLU:HG3	1:A:2248:GLU:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2584:TRP:HE3	1:A:2591:LEU:HG	1.78	0.48
1:A:4087:ALA:O	1:A:4091:GLY:N	2.45	0.48
1:A:3525:ARG:HH22	1:A:3576:ASN:HD21	1.61	0.48
1:A:1721:VAL:HA	1:A:1724:VAL:HG12	1.95	0.48
1:A:1806:ARG:NH2	1:A:1877:ASP:OD1	2.42	0.48
1:A:2083:GLN:HB2	1:A:2086:TYR:HD2	1.78	0.48
1:A:4391:ILE:O	1:A:4428:ARG:NH2	2.47	0.48
1:A:2635:PHE:CZ	1:A:2650:LEU:HD22	2.48	0.48
1:A:3021:PHE:CD2	1:A:3029:LEU:HD22	2.48	0.48
1:A:3846:LEU:HD21	1:A:3859:ILE:HG13	1.96	0.48
1:A:2506:SER:OG	1:A:2507:ARG:N	2.46	0.48
1:A:3549:ARG:NH2	1:A:3575:GLU:OE2	2.38	0.48
1:A:3590:ILE:HD11	1:A:3700:ASN:ND2	2.28	0.48
1:A:1388:ARG:HA	1:A:1391:LYS:HE2	1.95	0.48
1:A:1547:LEU:HD11	1:A:1612:GLN:HB2	1.94	0.48
1:A:1571:ILE:HG23	1:A:1604:LEU:HD22	1.96	0.48
1:A:1349:GLN:O	1:A:1430:THR:OG1	2.31	0.48
1:A:2203:TRP:CH2	1:A:2236:VAL:HG11	2.49	0.48
1:A:2631:LEU:O	1:A:2635:PHE:HB2	2.13	0.48
1:A:3756:VAL:HG13	1:A:3757:LYS:N	2.29	0.48
1:A:1920:GLY:HA3	1:A:1927:VAL:HG21	1.96	0.48
1:A:4247:MET:HA	1:A:4251:ILE:HB	1.94	0.48
1:A:3008:MET:HE2	1:A:3066:PHE:CZ	2.48	0.48
1:A:1626:PHE:CE2	1:A:1628:ARG:HB2	2.49	0.47
1:A:1891:THR:HB	1:A:2039:LEU:HD12	1.96	0.47
1:A:2265:TYR:OH	1:A:2311:TRP:O	2.20	0.47
1:A:2395:GLN:HB3	1:A:2398:ARG:HH22	1.79	0.47
1:A:1844:PHE:CD2	1:A:1859:ILE:HG12	2.49	0.47
1:A:3788:ASP:N	1:A:3788:ASP:OD1	2.47	0.47
1:A:1466:ILE:HG13	1:A:1500:HIS:ND1	2.28	0.47
1:A:1509:LEU:HB2	1:A:3608:LYS:NZ	2.30	0.47
1:A:2275:TRP:NE1	1:A:2277:ASP:OD1	2.47	0.47
1:A:3591:ASP:N	1:A:3591:ASP:OD1	2.47	0.47
1:A:2231:SER:HA	1:A:2234:TRP:CD1	2.49	0.47
1:A:2396:ARG:NH1	1:A:2406:GLU:OE2	2.48	0.47
1:A:2599:SER:OG	1:A:2737:ASP:O	2.32	0.47
1:A:2729:ARG:HE	1:A:2730:HIS:CD2	2.33	0.47
1:A:3817:SER:HB2	1:A:4346:MET:HE1	1.97	0.47
1:A:1356:PRO:HB3	1:A:1401:ILE:HG12	1.97	0.47
1:A:1571:ILE:HG21	1:A:1608:LEU:HG	1.97	0.47
1:A:2514:LEU:O	1:A:2518:ILE:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2224:GLY:H	1:A:2230:LYS:HD3	1.79	0.47
1:A:4043:MET:HE1	1:A:4055:VAL:HG21	1.96	0.47
1:A:1403:LEU:HD21	1:A:1446:VAL:HG13	1.96	0.46
1:A:1657:MET:HE1	1:A:1702:LEU:HD21	1.97	0.46
1:A:2915:VAL:HG21	2:A:4704:ADP:HN61	1.80	0.46
1:A:3873:ARG:NH1	1:A:4025:LEU:HB3	2.30	0.46
1:A:4313:PRO:HB2	1:A:4315:THR:HG22	1.97	0.46
1:A:1374:PRO:HD2	1:A:1377:LEU:HD12	1.98	0.46
1:A:2912:PHE:CE1	1:A:2915:VAL:HG23	2.50	0.46
1:A:3009:ASN:HD21	1:A:3083:PRO:HD2	1.79	0.46
1:A:3190:LYS:HE3	1:A:3552:TYR:CE2	2.51	0.46
1:A:1599:ARG:HA	1:A:1599:ARG:NE	2.29	0.46
1:A:1892:MET:SD	1:A:1902:GLY:HA3	2.55	0.46
1:A:2145:MET:HE2	1:A:2145:MET:HB2	1.81	0.46
1:A:2591:LEU:HD23	1:A:2592:VAL:N	2.30	0.46
1:A:2683:ILE:HA	1:A:2686:MET:HG2	1.97	0.46
1:A:2921:ARG:O	1:A:2925:ILE:HG12	2.16	0.46
1:A:3211:THR:HG21	1:A:3753:LEU:HD21	1.96	0.46
1:A:3562:TRP:HZ2	1:A:3581:LYS:HD3	1.81	0.46
1:A:1477:LEU:HB3	1:A:1485:ARG:HG2	1.98	0.46
1:A:2666:ILE:O	1:A:2669:PRO:HD2	2.15	0.46
1:A:4485:ARG:NH1	1:A:4513:GLY:O	2.48	0.46
1:A:1855:GLN:HG3	1:A:1867:ASN:HD21	1.81	0.46
1:A:2335:LEU:HD23	1:A:2336:PRO:O	2.16	0.46
1:A:2755:MET:SD	1:A:2807:PHE:HB2	2.56	0.46
1:A:2831:ARG:HB3	1:A:2924:ARG:NH2	2.31	0.46
1:A:2094:LYS:HE2	1:A:2094:LYS:HB3	1.78	0.46
1:A:3202:ASN:O	1:A:3206:ARG:HG3	2.15	0.46
1:A:3627:LEU:HD21	1:A:3662:ILE:HG21	1.98	0.46
1:A:3990:LEU:HA	1:A:4004:MET:HG2	1.97	0.46
1:A:4628:THR:C	1:A:4629:LYS:HD2	2.41	0.46
1:A:1396:ILE:O	1:A:1400:VAL:HG23	2.16	0.46
1:A:2382:LEU:HD23	1:A:2420:ALA:HB2	1.98	0.46
1:A:3720:GLU:OE1	1:A:3855:ARG:HD3	2.15	0.46
1:A:3756:VAL:HG23	1:A:3760:ILE:HB	1.98	0.46
1:A:1408:LEU:HD12	1:A:1413:TRP:CE3	2.51	0.46
1:A:1587:LEU:HD23	1:A:1589:MET:H	1.81	0.46
1:A:2492:ARG:HD2	1:A:2545:TRP:CE2	2.51	0.46
1:A:3008:MET:HG2	1:A:3066:PHE:HZ	1.80	0.46
1:A:2488:ARG:O	1:A:2492:ARG:HG2	2.16	0.45
1:A:2652:PRO:HD2	1:A:2705:ARG:HH11	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4042:LEU:HD12	1:A:4139:LEU:HD23	1.98	0.45
1:A:4343:MET:HE3	1:A:4343:MET:HB2	1.62	0.45
1:A:1507:MET:HG3	1:A:3629:PHE:CE1	2.52	0.45
1:A:2791:HIS:CD2	1:A:3091:LEU:HD11	2.52	0.45
1:A:2999:VAL:HG12	1:A:3078:ARG:NH1	2.30	0.45
1:A:3175:HIS:CE1	1:A:3585:ARG:HH12	2.35	0.45
1:A:2205:GLU:O	1:A:2209:GLN:HG3	2.17	0.45
1:A:2054:LEU:HD21	1:A:2097:LEU:HD12	1.99	0.45
1:A:2065:LEU:HD22	1:A:2137:LEU:HD23	1.98	0.45
1:A:3639:GLU:HB3	1:A:3686:VAL:HG21	1.98	0.45
1:A:2323:LYS:HB3	1:A:2335:LEU:HB3	1.99	0.45
1:A:3811:ILE:HD11	1:A:3864:PHE:CE1	2.52	0.45
1:A:3946:ASP:O	1:A:3950:LYS:HG2	2.16	0.45
1:A:2982:ARG:HE	1:A:2988:GLU:CD	2.25	0.45
1:A:3814:THR:O	1:A:3818:LEU:HG	2.16	0.45
1:A:4096:LEU:HD13	1:A:4105:TRP:HH2	1.82	0.45
1:A:2065:LEU:HD23	1:A:2065:LEU:HA	1.83	0.45
1:A:2221:MET:HG2	1:A:2343:PHE:HB2	1.98	0.45
1:A:3611:ARG:HH11	1:A:3636:GLN:HE22	1.64	0.45
1:A:4040:PRO:HB3	1:A:4124:LEU:HD23	1.97	0.45
1:A:1406:GLU:H	1:A:3658:GLY:HA3	1.82	0.45
1:A:2076:CYS:HB3	1:A:2088:PHE:CZ	2.51	0.45
1:A:2481:MET:SD	1:A:2481:MET:N	2.90	0.45
1:A:3725:ASP:OD1	1:A:3728:ARG:NH2	2.50	0.45
1:A:4577:LEU:HD22	1:A:4638:ARG:HD2	1.99	0.45
1:A:2304:ASP:OD1	1:A:2726:ARG:NH2	2.50	0.45
1:A:2412:MET:O	1:A:2416:GLN:HG2	2.17	0.45
1:A:4393:GLN:OE1	1:A:4393:GLN:N	2.37	0.45
1:A:1724:VAL:HA	1:A:1727:PHE:HB2	1.99	0.44
1:A:3880:HIS:CE1	1:A:4021:MET:HE2	2.52	0.44
1:A:2066:ALA:HA	1:A:2069:ILE:HG22	2.00	0.44
1:A:2666:ILE:HG22	1:A:2723:LEU:HD21	1.97	0.44
1:A:2845:TRP:O	1:A:2848:GLU:HG3	2.17	0.44
1:A:4038:ASN:HB3	1:A:4118:PRO:HG3	2.00	0.44
1:A:1431:LEU:HD21	1:A:1435:TRP:CZ2	2.52	0.44
1:A:1769:MET:HE2	1:A:1775:ALA:HA	2.00	0.44
1:A:2406:GLU:HG2	1:A:2409:ALA:HB2	2.00	0.44
1:A:2093:LEU:O	1:A:2097:LEU:HD23	2.17	0.44
1:A:4088:VAL:HG23	1:A:4118:PRO:HA	2.00	0.44
1:A:2224:GLY:N	1:A:2230:LYS:HD3	2.33	0.44
1:A:2686:MET:HE2	1:A:2708:PHE:CZ	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2798:GLU:OE1	1:A:2836:ARG:NH2	2.50	0.44
1:A:4470:PRO:HG3	1:A:4612:ASN:HD22	1.83	0.44
1:A:3627:LEU:HD11	1:A:3662:ILE:HG21	1.99	0.44
1:A:3824:LEU:HD11	1:A:4044:CYS:SG	2.58	0.44
1:A:2890:ARG:O	1:A:2894:LYS:HG2	2.18	0.44
1:A:3708:LEU:HD23	1:A:3809:SER:HA	1.99	0.44
1:A:2054:LEU:HD23	1:A:2054:LEU:HA	1.80	0.44
1:A:3945:LYS:HB2	1:A:3945:LYS:HE2	1.75	0.44
1:A:2307:VAL:HA	1:A:2311:TRP:CZ2	2.53	0.44
1:A:2684:ARG:HH11	1:A:2726:ARG:HB3	1.83	0.44
1:A:2793:ILE:O	1:A:2793:ILE:HG13	2.17	0.44
1:A:2823:ARG:HH12	1:A:2868:SER:HB3	1.83	0.44
1:A:3562:TRP:HB3	1:A:3567:LEU:HD22	1.99	0.44
1:A:4097:LYS:HA	1:A:4127:THR:OG1	2.17	0.44
1:A:4413:PHE:HD2	1:A:4504:LEU:HD13	1.83	0.44
1:A:1425:VAL:HB	1:A:1428:GLU:HB2	2.00	0.43
1:A:2222:MET:HG2	1:A:2364:PHE:HE1	1.81	0.43
1:A:2609:LEU:HD22	1:A:2617:VAL:HG23	1.99	0.43
1:A:3496:PHE:HE1	1:A:3743:ARG:NH2	2.15	0.43
1:A:3654:ARG:NH2	1:A:3661:LEU:HD22	2.33	0.43
1:A:4543:VAL:HG21	1:A:4622:VAL:HG12	2.00	0.43
1:A:2464:GLN:HG3	1:A:2583:THR:HA	1.98	0.43
1:A:2837:LEU:HD23	1:A:2842:GLU:CB	2.48	0.43
1:A:1539:ASP:HB3	1:A:1543:ARG:NH1	2.33	0.43
1:A:1571:ILE:HD11	1:A:1607:LEU:HD12	1.99	0.43
1:A:1607:LEU:O	1:A:1611:ILE:HG12	2.18	0.43
1:A:2285:ARG:HA	1:A:2288:ILE:HG22	2.00	0.43
1:A:1678:SER:OG	1:A:1679:ARG:N	2.50	0.43
1:A:2605:LEU:HD11	1:A:2709:VAL:HG12	1.99	0.43
1:A:2818:VAL:O	1:A:2822:ILE:HG12	2.17	0.43
1:A:3097:TRP:HE3	1:A:3102:LEU:HD23	1.83	0.43
1:A:3175:HIS:CG	1:A:3585:ARG:HH12	2.36	0.43
1:A:3618:ALA:C	1:A:3621:LYS:HB3	2.40	0.43
1:A:4211:ASP:CG	1:A:4255:ARG:HH12	2.27	0.43
1:A:1803:LEU:HD11	1:A:1875:VAL:HG21	2.00	0.43
1:A:2169:GLN:OE1	1:A:2171:HIS:NE2	2.50	0.43
1:A:1391:LYS:O	1:A:1395:LYS:HG2	2.18	0.43
1:A:1486:LEU:HB3	1:A:1541:GLN:NE2	2.34	0.43
1:A:1661:VAL:HG13	1:A:1676:ILE:HG23	2.00	0.43
1:A:1671:SER:O	1:A:1692:ILE:HG22	2.19	0.43
1:A:1991:ASP:CG	1:A:1993:THR:HG1	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2943:LYS:HG2	1:A:3094:PHE:CZ	2.53	0.43
1:A:2976:LEU:HA	1:A:2979:VAL:HG12	2.00	0.43
1:A:1391:LYS:HE2	1:A:1391:LYS:HB3	1.82	0.43
1:A:1475:LEU:HD13	1:A:1487:ILE:HD13	2.01	0.43
1:A:1750:VAL:HG12	1:A:1811:LEU:HD21	2.00	0.43
1:A:2762:LEU:HD12	1:A:2765:TYR:CD2	2.53	0.43
1:A:3792:GLN:O	1:A:3796:THR:HG23	2.19	0.43
1:A:2478:ASP:OD1	1:A:2479:PHE:N	2.52	0.43
1:A:1463:LEU:O	1:A:1466:ILE:HG22	2.19	0.43
1:A:2138:ILE:HG13	1:A:2161:LEU:HD21	2.00	0.43
1:A:3614:PHE:HE2	1:A:3642:ASP:H	1.66	0.43
1:A:1738:TYR:HE2	1:A:1792:LEU:HD21	1.84	0.42
1:A:2965:ARG:O	1:A:2966:LYS:HG3	2.19	0.42
1:A:2826:ALA:O	1:A:2830:LEU:HD23	2.19	0.42
1:A:2972:PHE:HD1	1:A:3004:PHE:CD1	2.37	0.42
1:A:4027:LEU:O	1:A:4031:VAL:HG22	2.19	0.42
1:A:1393:TYR:HA	1:A:1396:ILE:HG12	2.01	0.42
1:A:1925:ARG:HG2	1:A:1954:TRP:CD1	2.54	0.42
1:A:2123:ASP:O	1:A:2127:ILE:HG13	2.20	0.42
1:A:2499:LEU:HD21	1:A:2515:GLY:HA2	2.01	0.42
1:A:3597:THR:O	1:A:3601:MET:HG3	2.19	0.42
1:A:3944:PHE:CE1	1:A:3974:TRP:HB3	2.54	0.42
1:A:2834:GLN:HE21	1:A:2843:ARG:HB3	1.84	0.42
1:A:3044:LEU:HD13	1:A:3049:GLU:HG3	2.01	0.42
1:A:4611:LEU:HB2	1:A:4619:ILE:HD11	2.00	0.42
1:A:2484:GLU:O	1:A:2487:GLU:HG3	2.19	0.42
1:A:3122:VAL:HG11	1:A:3136:PRO:HB2	2.01	0.42
1:A:3872:ALA:O	1:A:3880:HIS:NE2	2.52	0.42
1:A:4205:TYR:HE2	1:A:4256:VAL:HA	1.84	0.42
1:A:4393:GLN:HG2	1:A:4394:THR:HG22	2.00	0.42
1:A:3608:LYS:HE2	1:A:3631:ASN:HB3	2.02	0.42
1:A:2265:TYR:OH	1:A:2315:LEU:HG	2.20	0.42
1:A:2522:THR:HG21	1:A:2526:LEU:HD11	2.02	0.42
1:A:2596:PRO:O	1:A:2601:LYS:NZ	2.53	0.42
1:A:3743:ARG:HA	1:A:3746:GLU:HG2	2.01	0.42
1:A:4189:ILE:O	1:A:4193:ARG:N	2.52	0.42
1:A:2091:ARG:NH2	2:A:4701:ADP:O3'	2.52	0.42
1:A:2437:LEU:HD21	1:A:2451:ARG:HG3	2.01	0.42
1:A:2534:ILE:HD12	1:A:2534:ILE:H	1.85	0.42
1:A:3916:LEU:HD12	1:A:3933:GLU:HG3	2.02	0.42
1:A:4174:ASN:N	1:A:4174:ASN:OD1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1662:SER:HB2	1:A:1679:ARG:HG3	2.01	0.42
1:A:3510:SER:HB3	1:A:3553:LEU:HD11	2.01	0.42
1:A:1544:TRP:HE1	1:A:1572:SER:HA	1.85	0.42
1:A:2065:LEU:HD21	1:A:2134:GLN:HG2	2.02	0.42
1:A:2079:GLN:HB2	1:A:2160:LEU:HD11	2.02	0.42
1:A:2461:MET:HG2	1:A:2493:TYR:CE2	2.54	0.42
1:A:4496:ALA:HB2	1:A:4504:LEU:HD21	2.01	0.42
1:A:1486:LEU:HA	1:A:1579:MET:HE2	2.02	0.41
1:A:1495:ASN:HA	1:A:1498:LYS:NZ	2.35	0.41
1:A:1658:PHE:HB2	1:A:1661:VAL:HB	2.02	0.41
1:A:2606:PHE:CE1	1:A:2617:VAL:HG21	2.55	0.41
1:A:2976:LEU:O	1:A:2980:LEU:HD23	2.20	0.41
1:A:4157:MET:HE3	1:A:4309:VAL:HG22	2.02	0.41
1:A:4489:LEU:HA	1:A:4492:ILE:HG22	2.00	0.41
1:A:1949:CYS:HB3	1:A:2007:LYS:O	2.20	0.41
1:A:1980:GLU:O	1:A:1984:GLU:HG2	2.20	0.41
1:A:2308:ASP:OD1	1:A:2311:TRP:NE1	2.53	0.41
1:A:2718:PRO:HB2	1:A:3080:ALA:HB2	2.02	0.41
1:A:3772:ASN:HA	1:A:3775:ARG:HE	1.85	0.41
1:A:4269:LEU:HD23	1:A:4269:LEU:HA	1.90	0.41
1:A:1412:HIS:CE1	1:A:1453:ALA:HA	2.55	0.41
1:A:1499:GLU:HG2	1:A:3621:LYS:HD2	2.02	0.41
1:A:1623:ARG:HE	1:A:1637:LEU:HD22	1.85	0.41
1:A:1797:LEU:HD21	1:A:2128:ALA:HB2	2.01	0.41
1:A:1855:GLN:HG3	1:A:1867:ASN:ND2	2.35	0.41
1:A:3551:GLU:OE2	1:A:3559:ARG:NH2	2.53	0.41
1:A:4332:LEU:HD23	1:A:4332:LEU:HA	1.87	0.41
1:A:2182:LEU:HD11	1:A:2207:VAL:HG11	2.02	0.41
1:A:2446:ILE:HG22	1:A:2505:ASP:HB3	2.02	0.41
1:A:4260:PHE:CE2	1:A:4608:PRO:HB3	2.55	0.41
1:A:4554:ASP:N	1:A:4557:SER:OG	2.52	0.41
1:A:2220:LEU:O	1:A:2342:MET:HA	2.20	0.41
1:A:2275:TRP:CZ2	1:A:2327:LEU:HD12	2.56	0.41
1:A:2395:GLN:HB3	1:A:2398:ARG:NH2	2.35	0.41
1:A:3197:GLN:HG2	1:A:3496:PHE:CZ	2.56	0.41
1:A:3596:ALA:HB2	1:A:3701:PHE:CE2	2.55	0.41
1:A:1397:ASN:O	1:A:1401:ILE:HG13	2.21	0.41
1:A:2227:GLY:H	3:A:4702:ATP:PG	2.44	0.41
1:A:2387:LEU:HD23	1:A:2467:ARG:NH2	2.36	0.41
1:A:2839:GLU:HB2	1:A:2842:GLU:OE1	2.20	0.41
1:A:3782:ARG:O	1:A:3786:GLU:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4423:LEU:HD13	1:A:4466:HIS:HD2	1.86	0.41
1:A:2253:ILE:HG21	1:A:2689:HIS:CE1	2.56	0.41
1:A:4594:LYS:HE3	1:A:4594:LYS:HB2	1.97	0.41
1:A:1626:PHE:HB3	1:A:1629:PHE:CD2	2.56	0.41
1:A:1841:GLN:O	1:A:1843:ARG:HG3	2.21	0.41
1:A:1947:GLY:O	1:A:1951:VAL:HG12	2.21	0.41
1:A:2072:PHE:CZ	1:A:2161:LEU:HD13	2.56	0.41
1:A:2231:SER:HA	1:A:2234:TRP:NE1	2.36	0.41
1:A:2704:GLU:O	1:A:2706:ILE:HG12	2.21	0.41
1:A:2987:ASN:OD1	1:A:3061:ASN:ND2	2.54	0.41
1:A:4156:ASN:ND2	1:A:4188:ALA:HA	2.35	0.41
1:A:4308:TRP:CH2	1:A:4312:LEU:HD21	2.56	0.41
1:A:4482:PHE:CE2	1:A:4486:ILE:HG13	2.56	0.41
1:A:1407:ALA:O	1:A:1453:ALA:HB1	2.21	0.41
1:A:2086:TYR:OH	1:A:2149:LEU:HD13	2.22	0.41
1:A:2181:GLU:HG3	1:A:2244:LEU:HB2	2.03	0.41
1:A:2775:GLU:O	1:A:2778:THR:OG1	2.29	0.41
1:A:2784:PHE:HB3	1:A:2792:TYR:HD1	1.84	0.41
1:A:3009:ASN:HD21	1:A:3083:PRO:CD	2.33	0.41
1:A:3766:ILE:HD12	1:A:3766:ILE:HA	1.91	0.41
1:A:4243:LEU:O	1:A:4247:MET:HE3	2.20	0.41
1:A:4264:LEU:O	1:A:4267:THR:OG1	2.32	0.41
1:A:4266:ASN:O	1:A:4270:GLU:HG2	2.21	0.41
1:A:3150:VAL:HG22	1:A:3532:TRP:CD1	2.56	0.40
1:A:3652:GLU:O	1:A:3652:GLU:HG3	2.21	0.40
1:A:3972:TYR:O	1:A:3973:LEU:HD23	2.21	0.40
1:A:4095:MET:HE2	1:A:4127:THR:HG21	2.01	0.40
1:A:4194:LEU:HD11	1:A:4204:LYS:HA	2.03	0.40
1:A:1445:ILE:O	1:A:1449:VAL:HG23	2.22	0.40
1:A:3178:ASP:OD2	1:A:3182:HIS:ND1	2.54	0.40
1:A:2069:ILE:HD12	1:A:2069:ILE:HA	1.95	0.40
1:A:2584:TRP:CZ3	1:A:2732:PRO:HB2	2.56	0.40
1:A:1763:GLU:OE2	1:A:1845:TYR:OH	2.32	0.40
1:A:1961:ASN:ND2	1:A:2019:ASN:H	2.19	0.40
1:A:2220:LEU:HD11	1:A:2342:MET:SD	2.62	0.40
1:A:2797:ARG:HH12	1:A:3088:ARG:HH12	1.69	0.40
1:A:3016:GLU:N	1:A:3016:GLU:OE2	2.55	0.40
1:A:3038:GLN:HG2	1:A:3043:MET:HE1	2.04	0.40
1:A:3474:ARG:HB3	1:A:3764:ASP:HB3	2.04	0.40
1:A:4324:PRO:HD3	1:A:4638:ARG:HG3	2.02	0.40
1:A:1414:LYS:HB2	1:A:1414:LYS:HE2	1.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1424:TRP:NE1	1:A:1433:GLN:HB3	2.36	0.40
1:A:1478:VAL:HG21	1:A:1488:ARG:NH2	2.36	0.40
1:A:2281:THR:HG21	1:A:2327:LEU:HD11	2.02	0.40
1:A:2747:ILE:HD11	2:A:4703:ADP:N1	2.36	0.40
1:A:2965:ARG:HA	1:A:2965:ARG:NE	2.36	0.40
1:A:3169:MET:HB3	1:A:3693:CYS:SG	2.61	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	3035/4646 (65%)	2952 (97%)	83 (3%)	0	100 100

There are no Ramachandran outliers to report.

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	2706/4125 (66%)	2706 (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 (40) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1397	ASN
1	A	1479	ASN
1	A	1495	ASN
1	A	1566	GLN
1	A	1755	GLN
1	A	1784	ASN
1	A	1876	GLN
1	A	1894	GLN
1	A	1922	GLN
1	A	1931	ASN
1	A	2282	HIS
1	A	2299	GLN
1	A	2377	ASN
1	A	2414	GLN
1	A	2416	GLN
1	A	2475	ASN
1	A	2667	ASN
1	A	2677	GLN
1	A	2698	GLN
1	A	2886	GLN
1	A	2932	HIS
1	A	3009	ASN
1	A	3061	ASN
1	A	3063	HIS
1	A	3087	ASN
1	A	3202	ASN
1	A	3523	GLN
1	A	3535	HIS
1	A	3709	GLN
1	A	3822	HIS
1	A	3845	ASN
1	A	3865	GLN
1	A	3869	ASN
1	A	3956	GLN
1	A	4156	ASN
1	A	4262	GLN
1	A	4291	HIS
1	A	4397	HIS
1	A	4526	GLN
1	A	4571	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 6 ligands modelled in this entry, 2 are monoatomic - leaving 4 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
2	ADP	A	4704	-	24,29,29	0.84	0	29,45,45	1.24	2 (6%)
3	ATP	A	4702	4	28,33,33	0.72	0	34,52,52	0.59	1 (2%)
2	ADP	A	4703	-	24,29,29	0.87	0	29,45,45	1.24	2 (6%)
2	ADP	A	4701	4	24,29,29	0.89	0	29,45,45	1.20	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
2	ADP	A	4704	-	-	2/12/32/32	0/3/3/3
3	ATP	A	4702	4	-	4/18/38/38	0/3/3/3
2	ADP	A	4703	-	-	5/12/32/32	0/3/3/3
2	ADP	A	4701	4	-	3/12/32/32	0/3/3/3

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	4703	ADP	N3-C2-N1	-3.76	123.57	128.67
2	A	4701	ADP	N3-C2-N1	-3.72	123.62	128.67
2	A	4704	ADP	N3-C2-N1	-3.59	123.80	128.67
2	A	4704	ADP	C4-C5-N7	-2.55	106.64	109.34
2	A	4703	ADP	C4-C5-N7	-2.40	106.81	109.34
3	A	4702	ATP	C5-C6-N6	2.35	123.89	120.31
2	A	4701	ADP	C4-C5-N7	-2.23	106.98	109.34

There are no chirality outliers.

All (14) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	4703	ADP	C5'-O5'-PA-O1A
2	A	4703	ADP	C5'-O5'-PA-O3A
2	A	4704	ADP	C5'-O5'-PA-O2A
2	A	4704	ADP	C5'-O5'-PA-O3A
2	A	4703	ADP	O4'-C4'-C5'-O5'
3	A	4702	ATP	PB-O3B-PG-O1G
2	A	4703	ADP	C3'-C4'-C5'-O5'
3	A	4702	ATP	PB-O3B-PG-O3G
3	A	4702	ATP	PA-O3A-PB-O1B
2	A	4703	ADP	C5'-O5'-PA-O2A
2	A	4701	ADP	O4'-C4'-C5'-O5'
2	A	4701	ADP	PB-O3A-PA-O2A
2	A	4701	ADP	PB-O3A-PA-O1A
3	A	4702	ATP	PA-O3A-PB-O2B

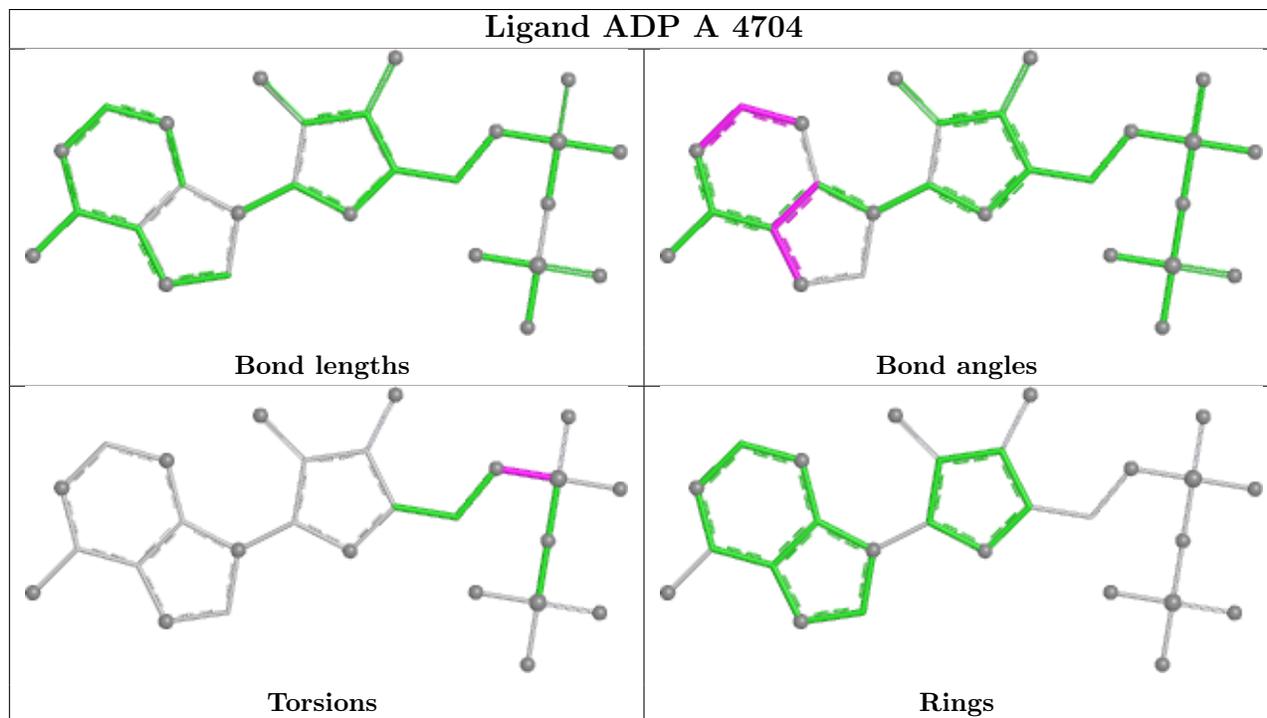
There are no ring outliers.

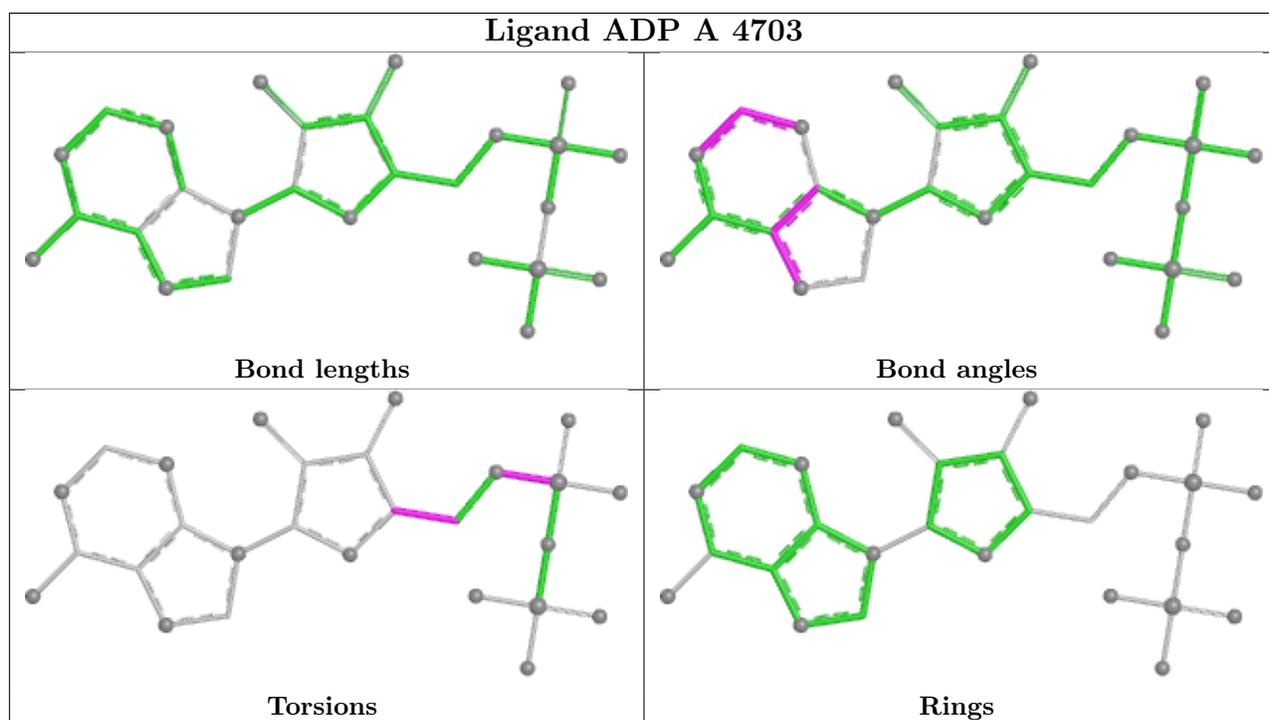
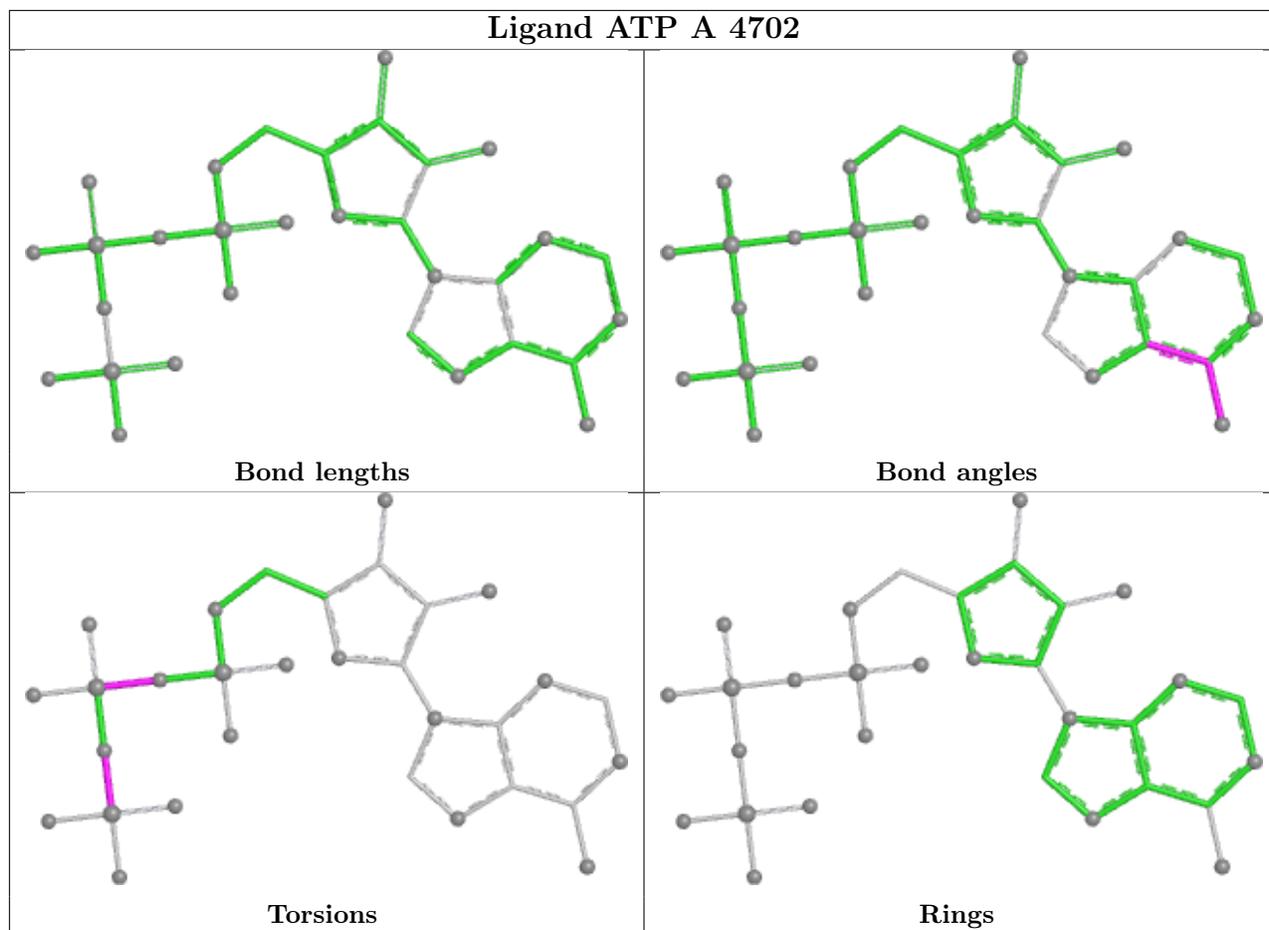
4 monomers are involved in 6 short contacts:

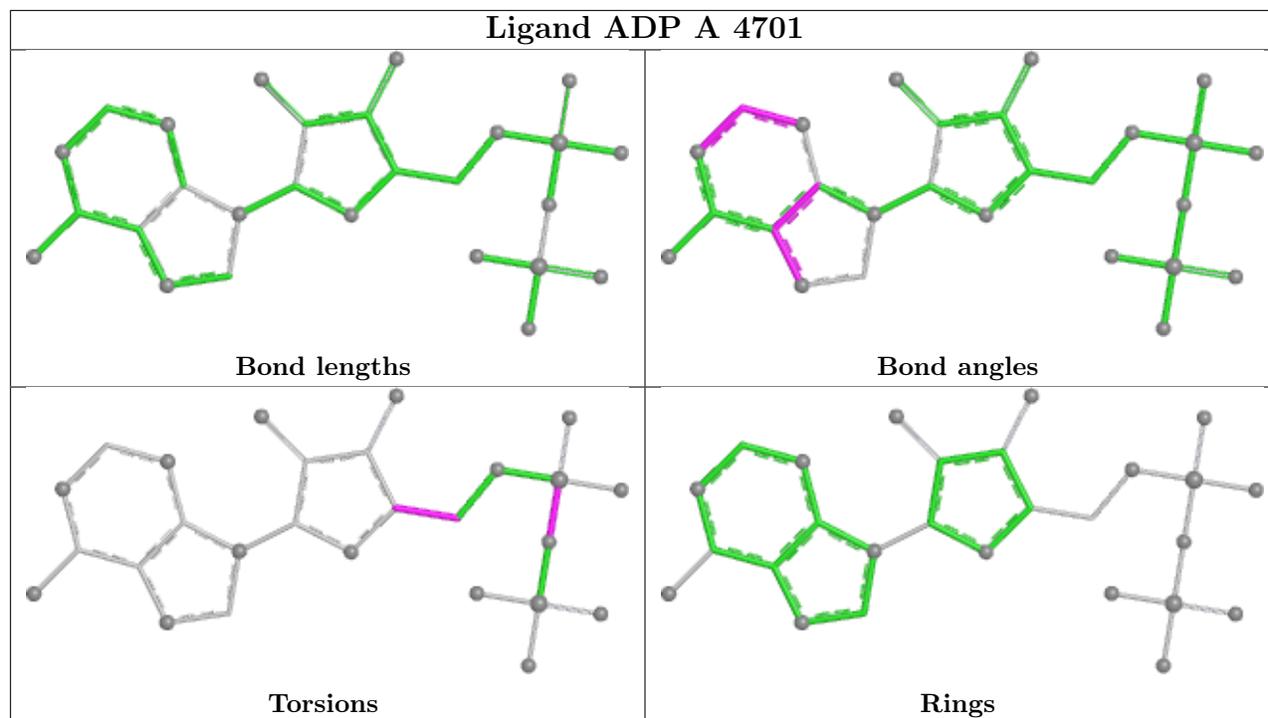
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	4704	ADP	2	0
3	A	4702	ATP	1	0
2	A	4703	ADP	1	0
2	A	4701	ADP	2	0

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 than 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.







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.

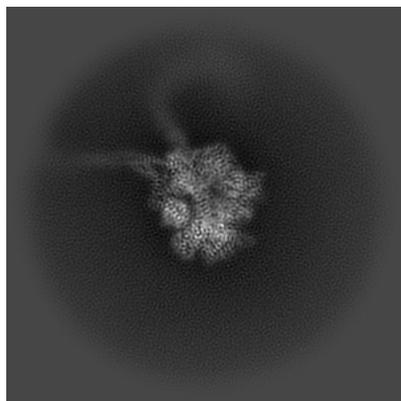
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-44694. These allow visual inspection of the internal detail of the map and identification of artifacts.

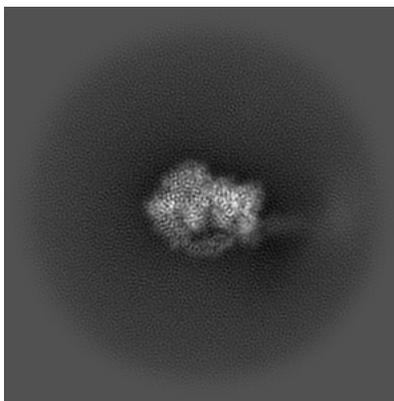
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

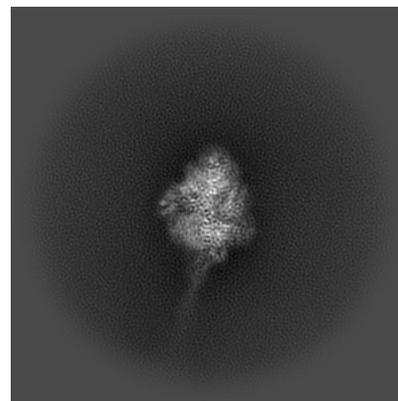
6.1.1 Primary map



X

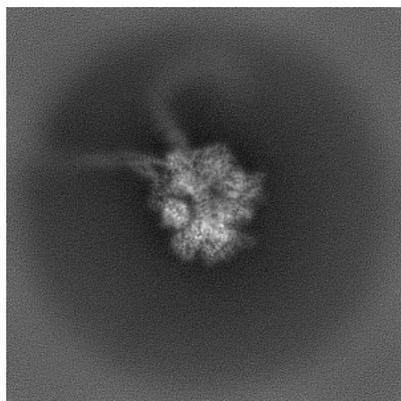


Y

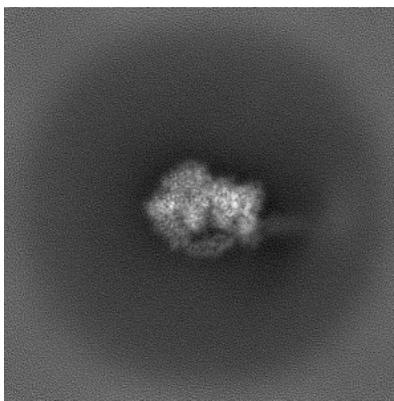


Z

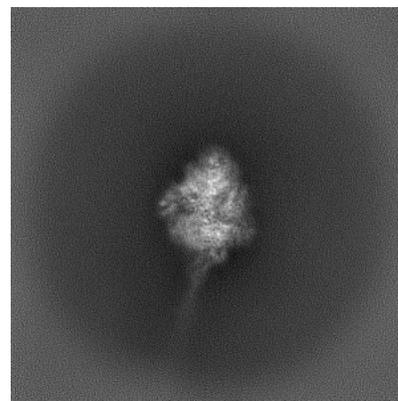
6.1.2 Raw map



X



Y

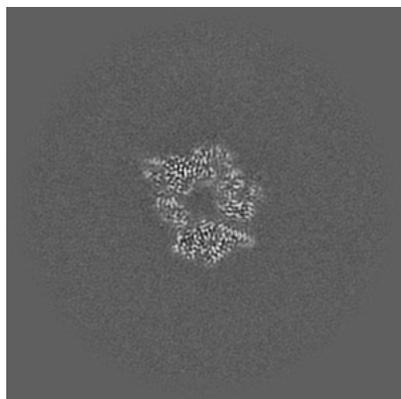


Z

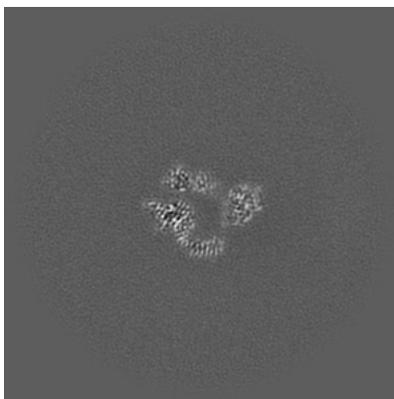
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

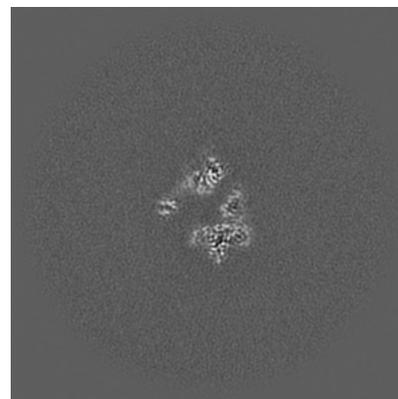
6.2.1 Primary map



X Index: 192

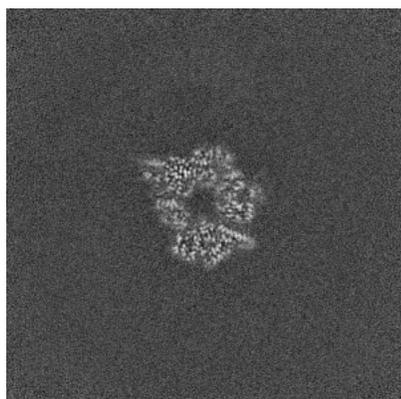


Y Index: 192

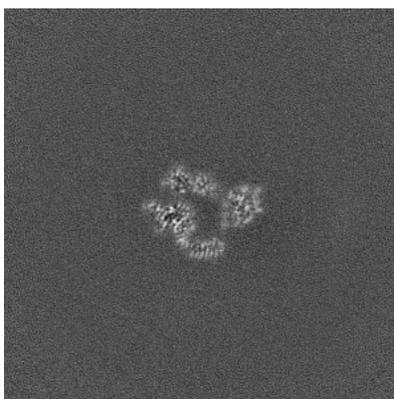


Z Index: 192

6.2.2 Raw map



X Index: 192



Y Index: 192

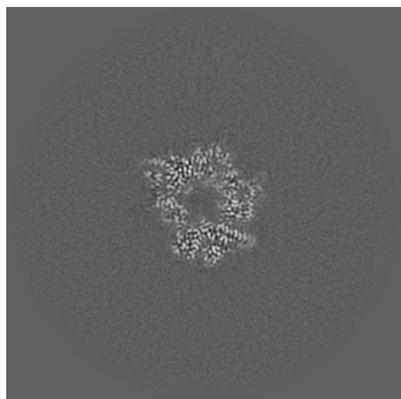


Z Index: 192

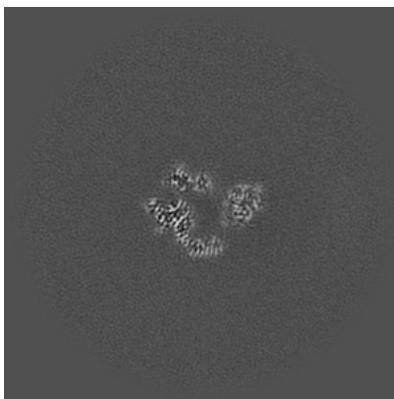
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

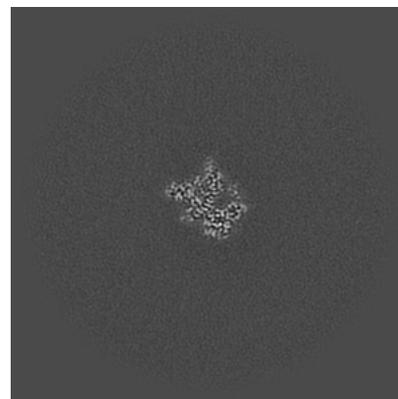
6.3.1 Primary map



X Index: 193

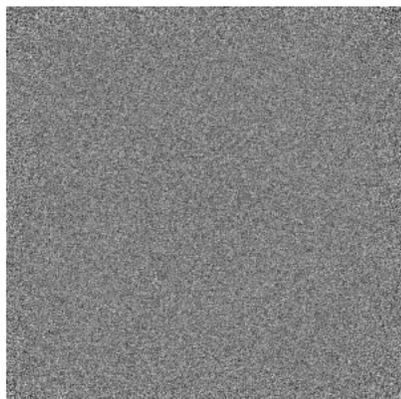


Y Index: 193

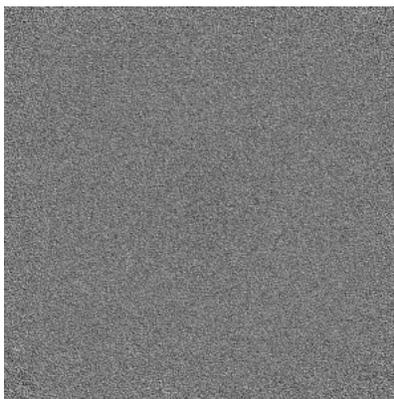


Z Index: 162

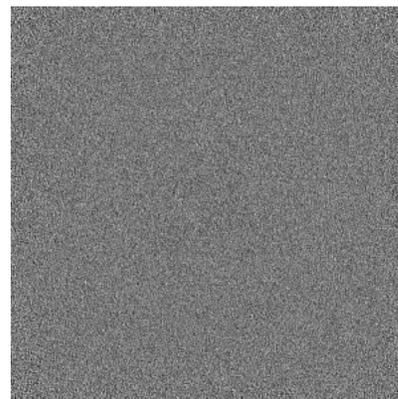
6.3.2 Raw map



X Index: 0



Y Index: 0

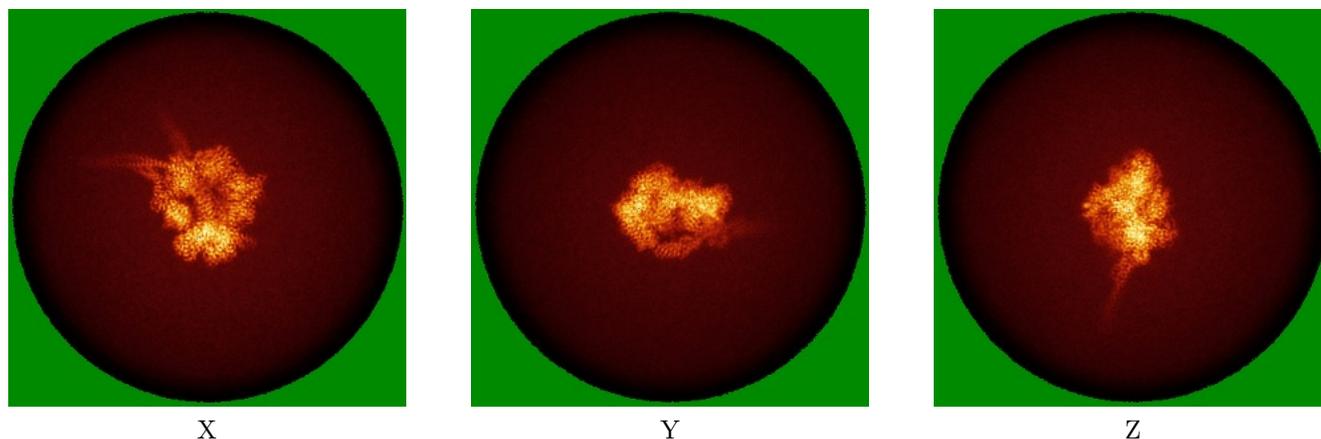


Z Index: 0

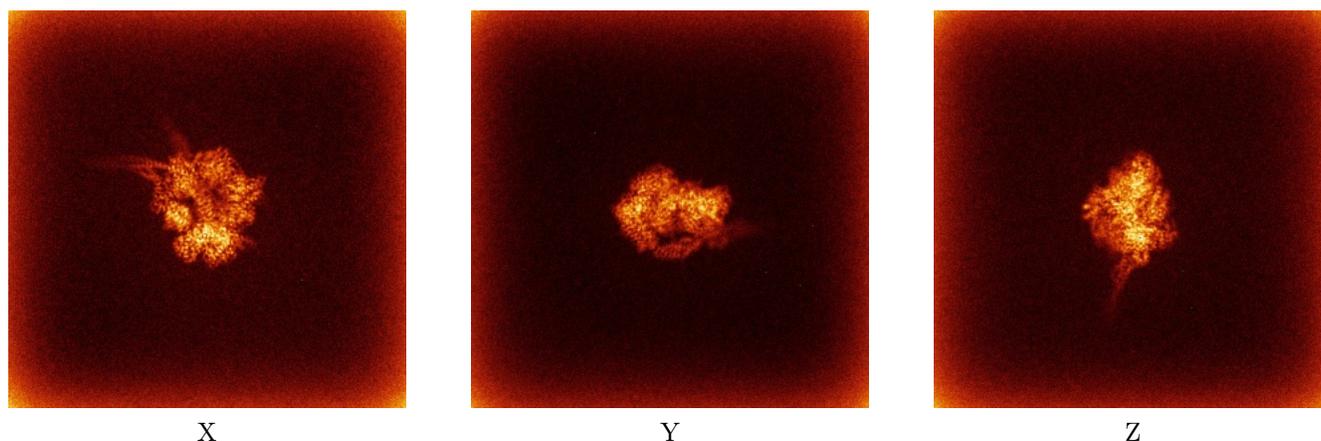
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

6.4.1 Primary map



6.4.2 Raw map



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.

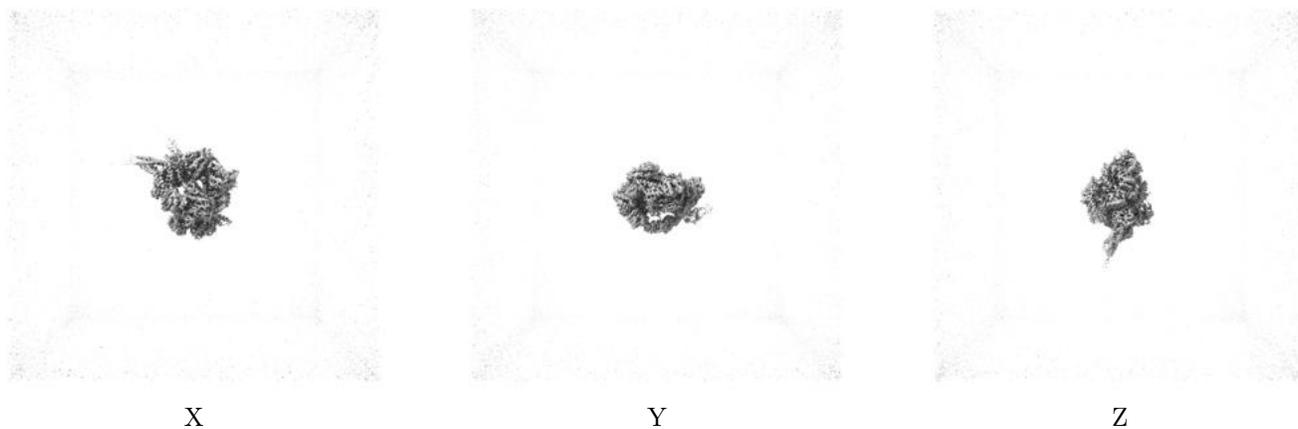
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.2. 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



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.

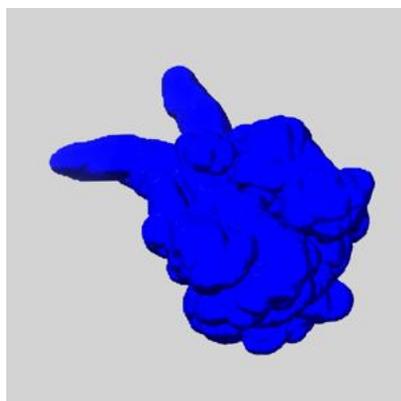
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

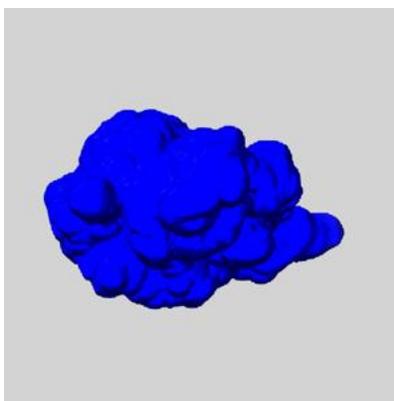
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

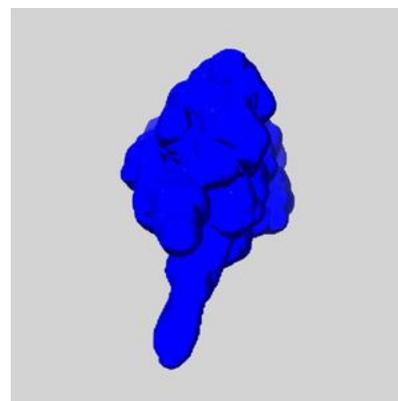
6.6.1 emd_44694_msk_1.map [i](#)



X



Y

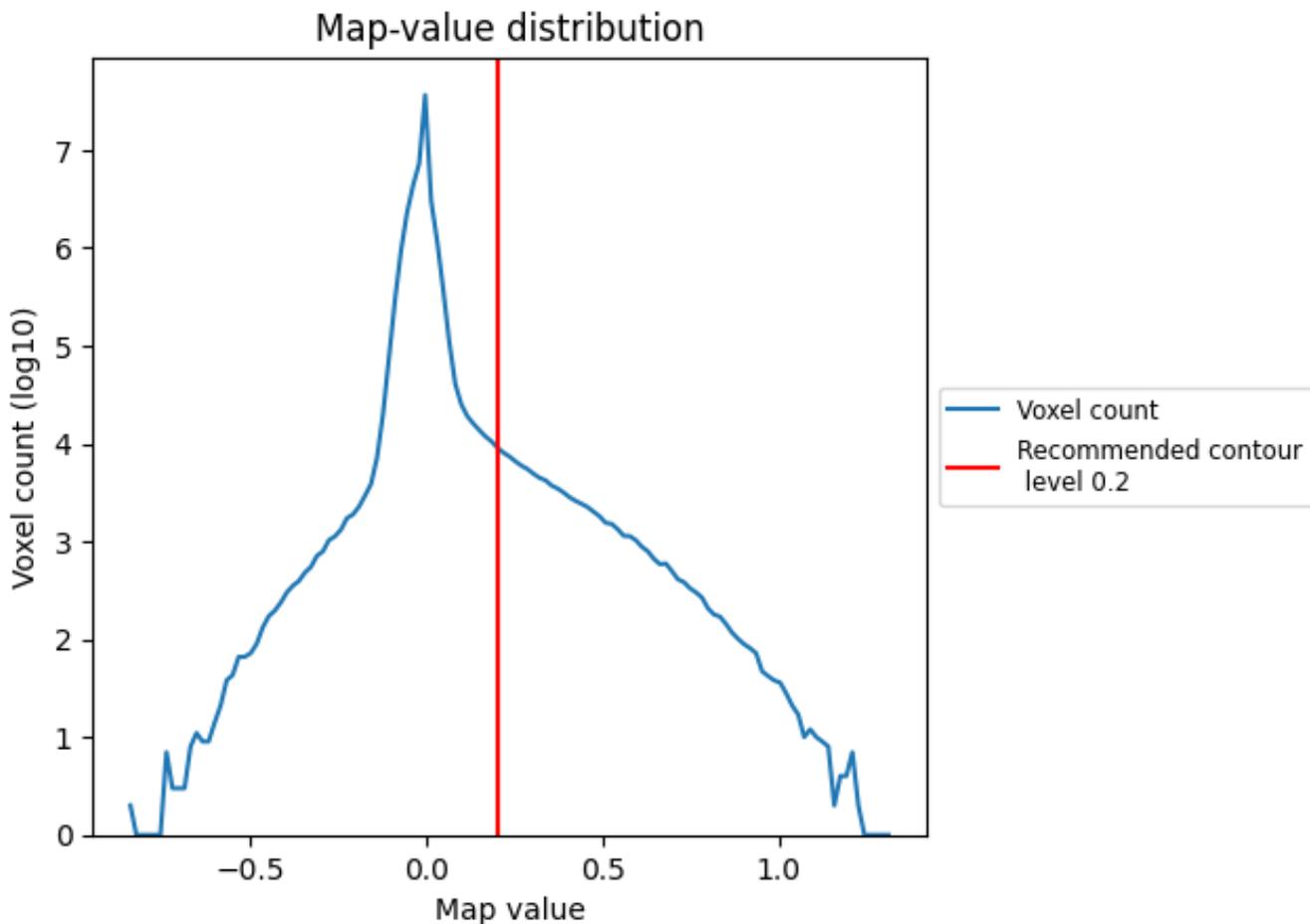


Z

7 Map analysis [i](#)

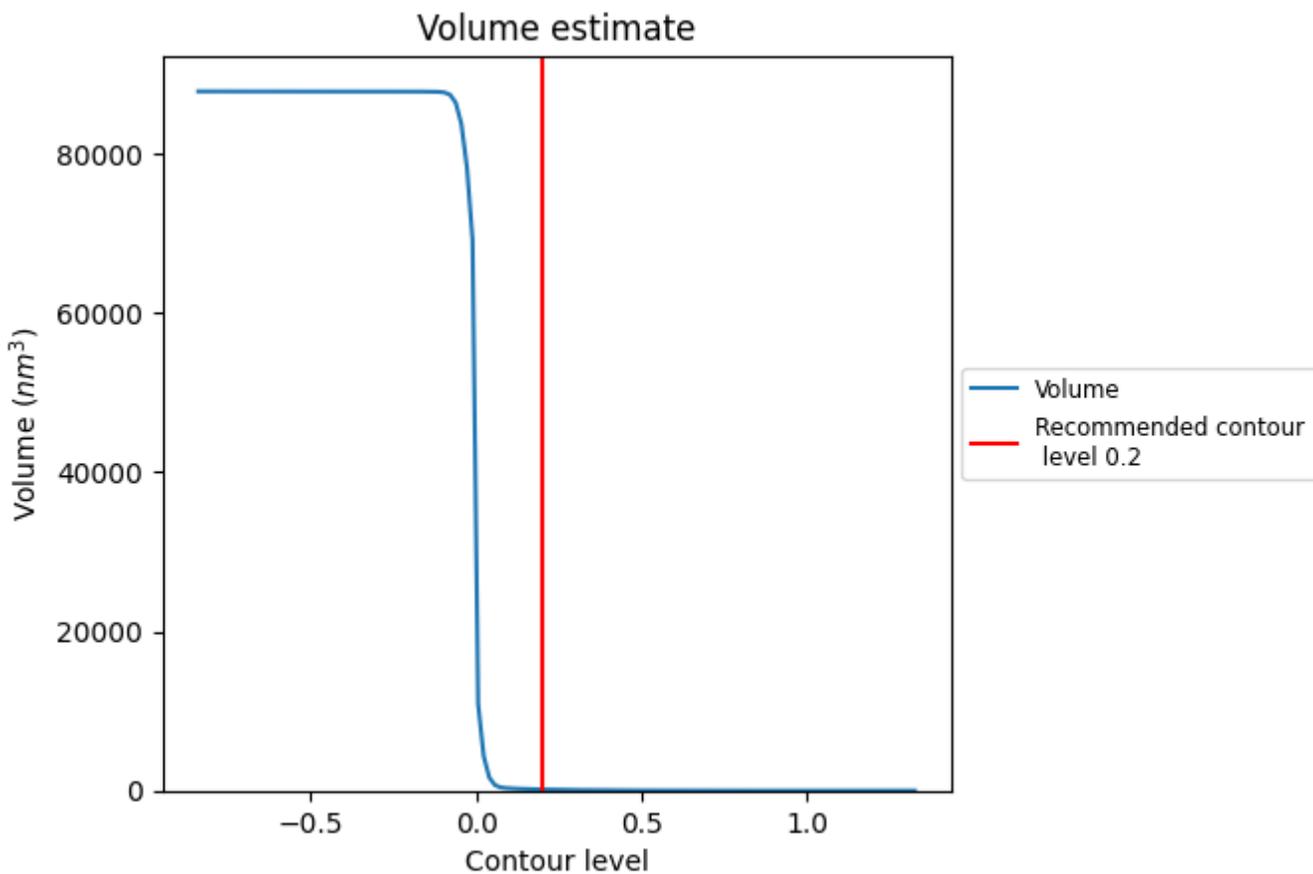
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

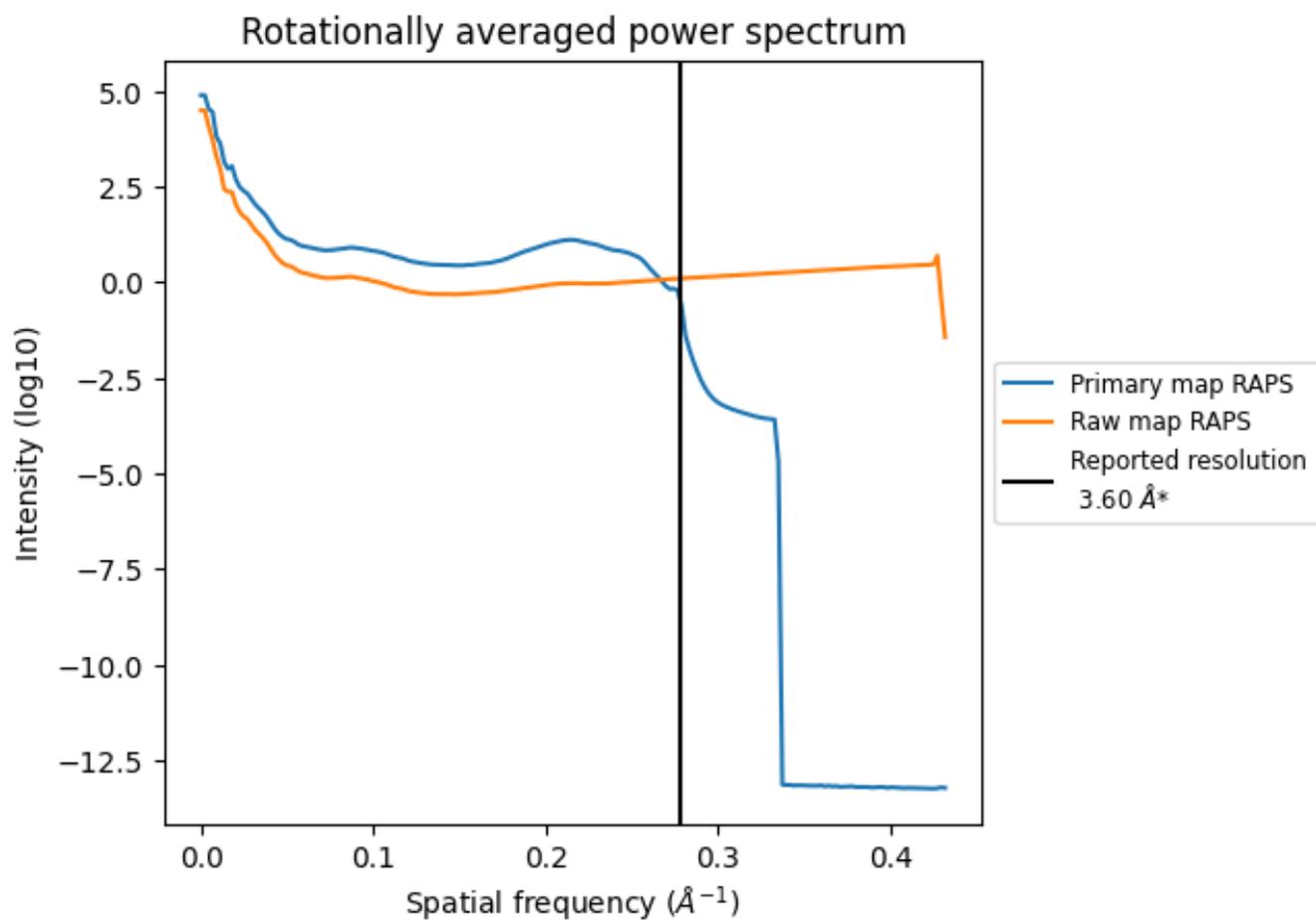
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 149 nm³; this corresponds to an approximate mass of 134 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](#)

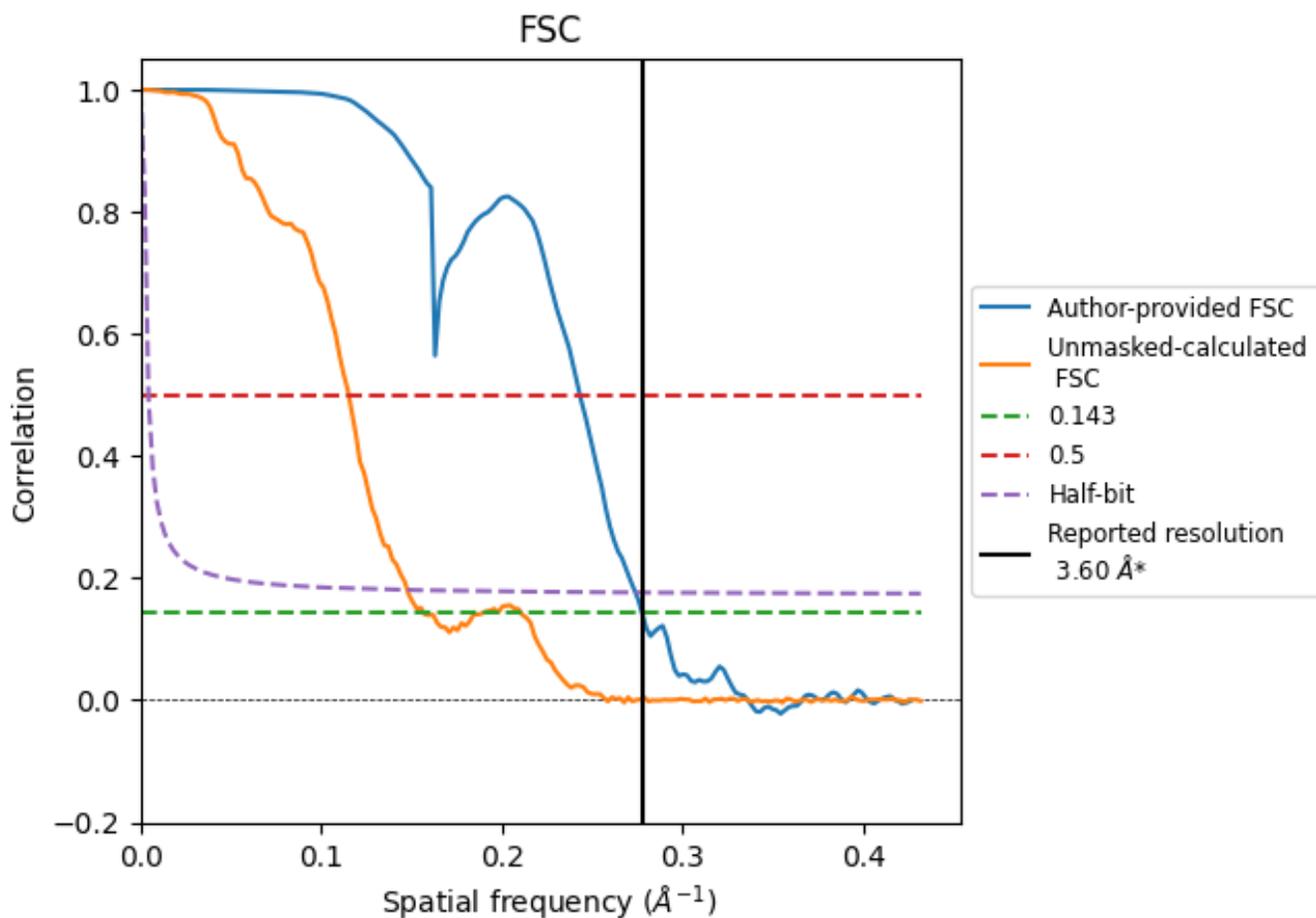


*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8.2 Resolution estimates [i](#)

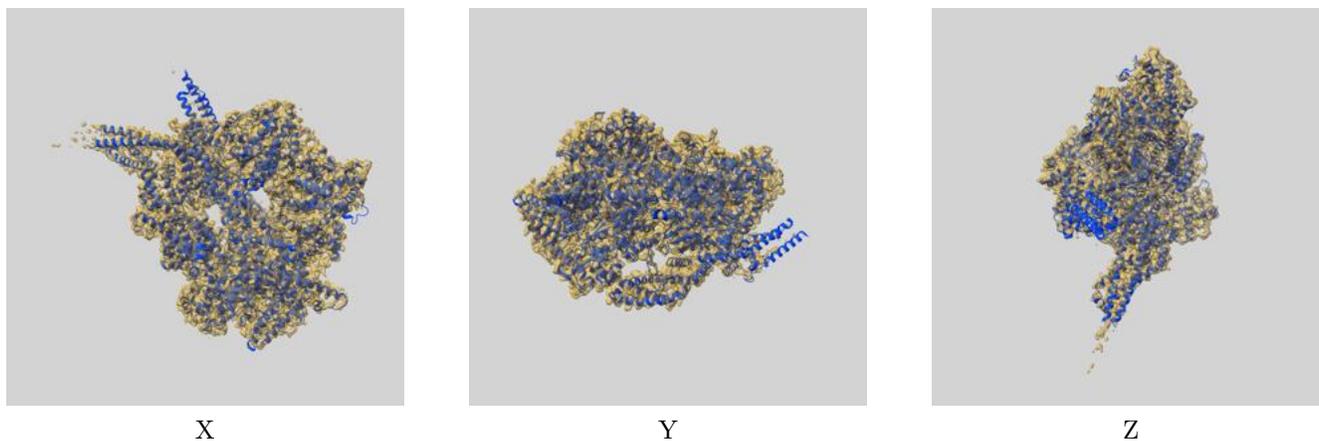
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.60	-	-
Author-provided FSC curve	3.60	4.11	3.65
Unmasked-calculated*	6.37	8.67	6.77

*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 6.37 differs from the reported value 3.6 by more than 10 %

9 Map-model fit [i](#)

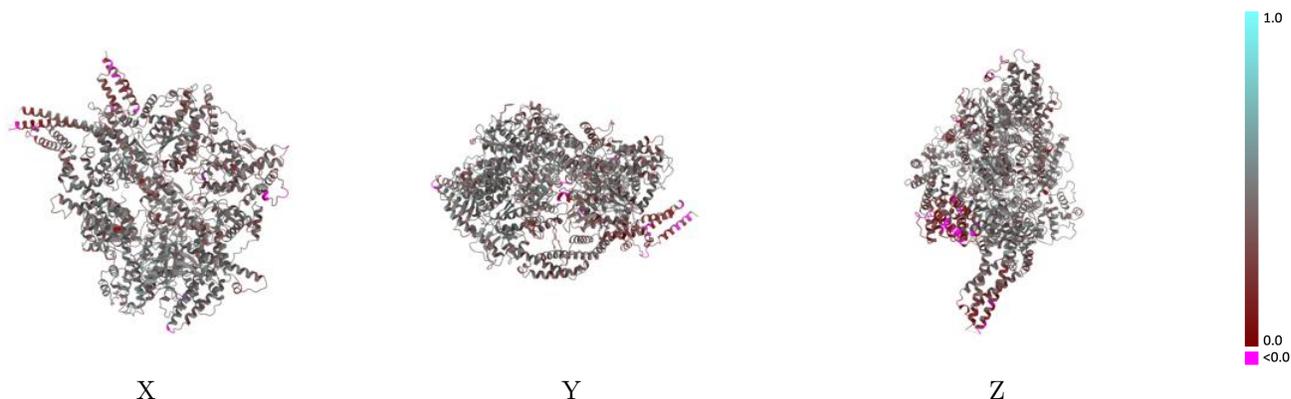
This section contains information regarding the fit between EMDB map EMD-44694 and PDB model 9BMB. Per-residue inclusion information can be found in section [3](#) on page [5](#).

9.1 Map-model overlay [i](#)



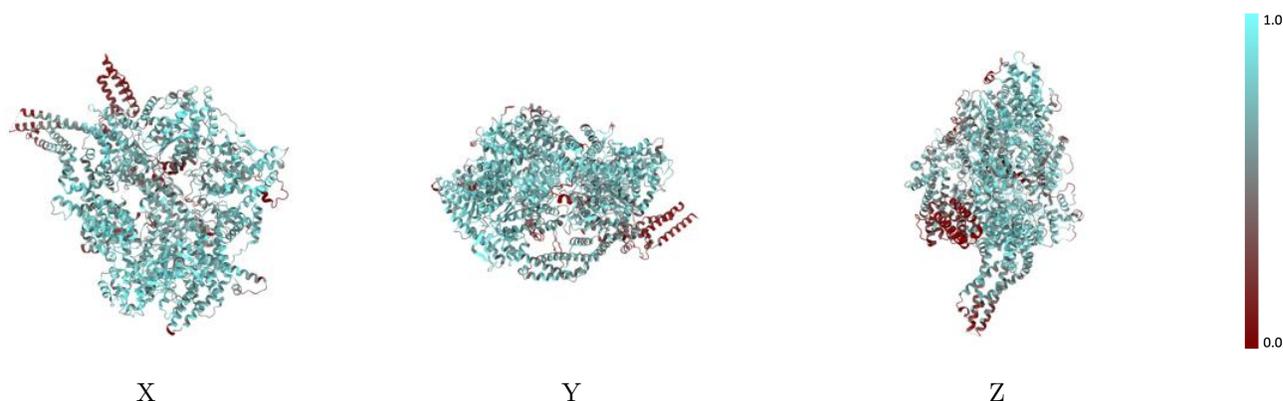
The images above show the 3D surface view of the map at the recommended contour level 0.2 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



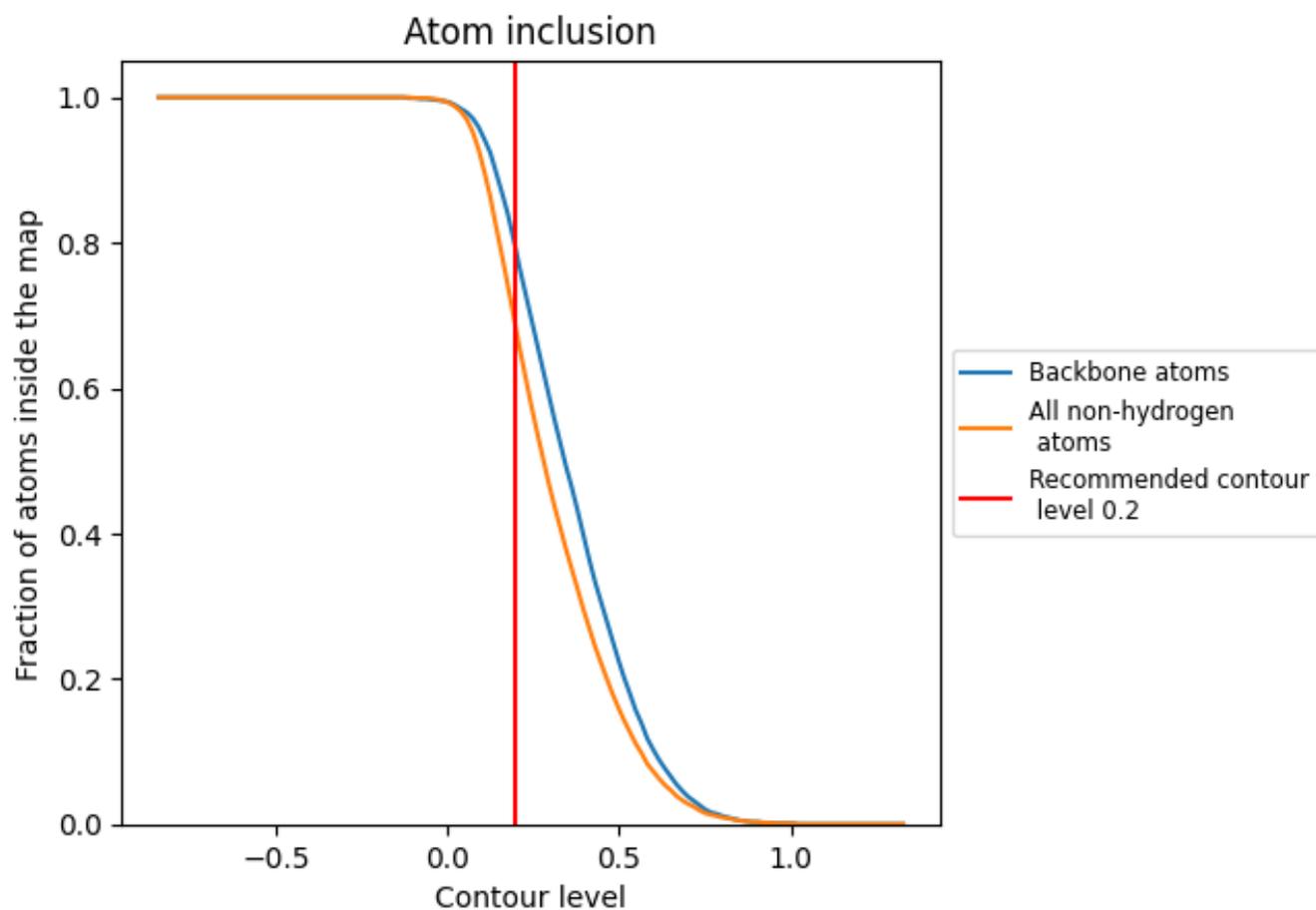
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [\(i\)](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.2).

9.4 Atom inclusion [i](#)



At the recommended contour level, 79% of all backbone atoms, 68% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6810	 0.4140
A	 0.6810	 0.4140

