



Full wwPDB EM Validation Report ⓘ

Jan 29, 2022 – 08:08 am GMT

PDB ID : 7OTV
EMDB ID : EMD-13067
Title : DNA-PKcs in complex with wortmannin
Authors : Liang, S.; Thomas, S.E.; Blundell, T.L.
Deposited on : 2021-06-10
Resolution : 3.24 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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.0.dev97
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.26

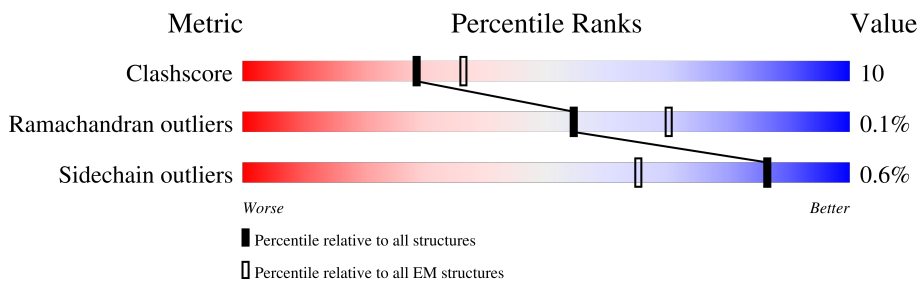
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.24 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	4148	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	KWT	A	6101	-	-	X	-

2 Entry composition [i](#)

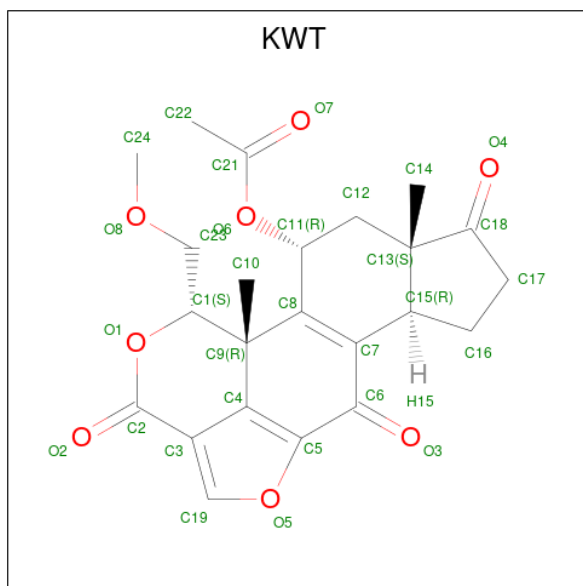
There are 2 unique types of molecules in this entry. The entry contains 29041 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 DNA-dependent protein kinase catalytic subunit,DNA-dependent protein kinase catalytic subunit,DNA-PKcs.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	3656	29010	18609	4903	5307	191	0	0

- Molecule 2 is (1S,6BR,9AS,11R,11BR)-9A,11B-DIMETHYL-1-[(METHYLOXY)METHYL]-3,6,9-TRIOXO-1,6,6B,7,8,9,9A,10,11,11B-DECAHYDRO-3H-FURO[4, 3,2-DE]INDENO[4,5-H][2]BENZOPYRAN-11-YL ACETATE (three-letter code: KWT) (formula: C₂₃H₂₄O₈) (labeled as "Ligand of Interest" by depositor).



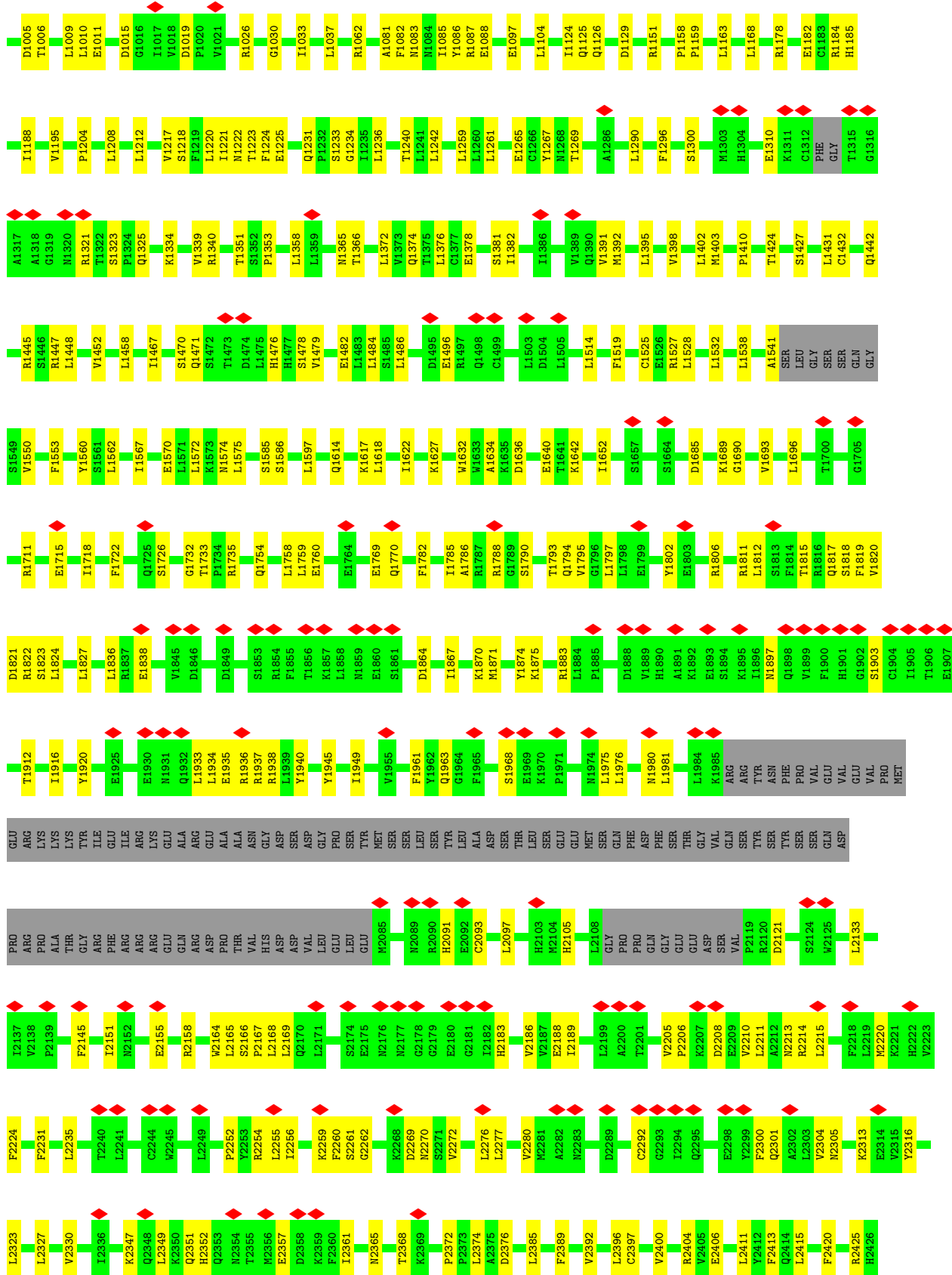
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
2	A	1	31	23	8	0

3 Residue-property plots

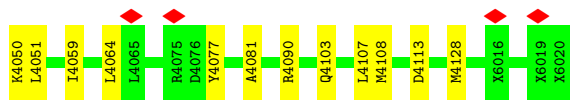
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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





R2427	E2430	R2431	U2432	R2433	V2434	I2439	V2440	K2441	H2442	R2443	I2455	H2456	F2457	E2460	S2463	H2464	E2471	Y2474	H2475	I2476	D2486	F2487	E2488	S2489	E2490	I2498	L2506	L2517	R2522	T2535	L2539	L2542	E2551	L2555	A2558	T2559	F2561	L2562	L2563																																																				
M2568	P2575	M2576	F2577	E2578	HIS	PRO	LEU	LEU	SER	GLU	ASP	CYS	PHE	GLN	GLN	GLY	THR	TYR	THR	ASP	GLY	ASP	ASP	ASP	TRP	ARG	PHE	ARG	THR	LEU	GLN	THR	LEU	THR	ALA	SER	SER	GLY	SER	LEU	LEU	ALA	ALA	ALA	TRP	ARG	PRO	ALA	VAL	ALA																																									
LEU	LYS	SER	VAL	GLY	PRO	ASP	PHE	GLN	GLY	GLN	LEU	SER	LYS	ARG	GLN	LEU	THR	THR	GLN	GLY	THR	THR	THR	PRO	MET	PHE	VAL	GLU	THR	GLN	LEU	THR	LEU	LEU	ALA	ALA	TRP	ALA	ARG	SER	GLY	LEU	VAL	VAL	ALA	GLN	ARG	PRO	ALA	VAL	ALA																																								
ARG	GLY	LYS	ILE	LYS	SER	LEU	LEU	LEU	LYS	LYS	LYS	LYS	LYS	ALA	ALA	ALA	TYR	GLY	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP																																					
S2877	L2884	P2887	R2891	E2895	P2902	ALA	GLU	LEU	PRO	ASP	ALA	VAL	VAL	LEU	VAL	TYR	ARG	GLY	ASP	P2917	D2918	V2920	L2921	R2922	I2783	I2784	I2785	K2786	H2787	S2788	S2789	A2796	R2800	D2801	P2802	I2803	K2806	L2812	E2828	L2832	S2849	E3012	Y3013	C3014	S3015	C2857	C2863	S2863	S2877	K3029																																									
E3033	F3034	F3035	S3047	L3053	L3062	I3065	D3066	K3067	I3077	L3078	L3088	Q3093	D3094	D3095	H3096	D3097	R3098	K3099	K3100	L3103	Q3104	Q3108	M3111	S3116	I3121	E3137	I3138	Q3139	I3142	I3145	L3151	S3152	Q3154	R3167	R3186	C3187	K3192	K3196	L3197	THR	PRO	LEU	VAL	PRO	GLU	ASP	ASN	MET	ASN	VAL	GLN	GLY	ASP	GLN	ASP	GLN	GLY	ASP	PRO	SER	ASP	ASP	GLN	PRO	PRO	PRO	SER	TRP	SER	CYS	GLY	P3405	A3406	V3409	I3410	R3425															
K3196	L3197	THR	PRO	LEU	VAL	PRO	GLU	ASP	ASN	MET	ASN	VAL	GLN	GLY	ASP	PRO	SER	ASP	ASP	ARG	GLY	LYS	TRP	ARG	ALA	ALA	ALA	D3226	I3227	S3228	S3229	R3232	M3238	K3239	I3243	D3244	I3259	R3247	K3257	L3258	K3260	D3271	C3281	S3284	H3285	S3288	R3289	L3298	L3301	E3309	M3310	S3313	S3314	Y3315	L3316	S3317	K3318	L3321	A3322	L3329	T3333	S3343	E3344	P3345	A3346	C3347	L3348	A3349	E3350	I3351	E3353	D3354	K3355	D3369	Q3383	E3387	E3395	A3396	GLN	PRO	PRO	SER	TRP	SER	CYS	GLY	P3405	A3406	V3409	I3410	R3425
E3295	L3298	L3301	E3309	M3310	S3313	S3314	Y3315	L3316	S3317	K3318	L3321	A3322	L3329	T3333	S3343	E3344	P3345	A3346	C3347	L3348	A3349	E3350	I3351	E3353	D3354	K3355	D3369	Q3383	E3387	E3395	A3396	GLN	PRO	PRO	SER	TRP	SER	CYS	GLY	P3405	A3406	V3409	I3410	R3425																																															
N3430	ALA	SER	VAL	ILE	ASP	SER	ALA	L3439	A3444	L3445	V3446	V3447	K3448	K3449	M3450	L3456	R3467	L3468	I3471	E3477	E3478	S3481	L3482	M3483	T3484	F3485	I3496	M3502	L3506	D3507	A3513	Q3515	E3520	T3522	D3523	N3524	Y3525	P3526	Q3527	A3528	S3537	Y3540																																																	
S3543	F3542	N3551	V3555	I3558	K3561	N3583	F3583	E3582	L3583	D3587	M3588	R3593	A3594	E3595	L3596	A3597	K3598	T3599	P3600	V3601	N3602	K3603	K3604	N3605	I3606	E3607	K3608	E3611	R3612	M3613	A3616	L3617	G3618	A3622	L3625	G3626	A3627	F3628	R3629	I3633	F3636	E3639	F3640	H3643																																															
F3644	G3645	K3646	G3647	G3648	S3649	K3650	L3651	L3652	R3653	K3654	K3655	L3656	S3657	D3658	D3661	N3664	K3665	L3666	L3667	L3668	K3669	N3670	N3671	K3672	P3676	L3680	K3681	E3682	C3683	S3684	F3685	W3686	N3687	F3689	L3695	R3696	E3700	K3710	F3711	E3714	R3718	F3722	D3723	E3724	T3727	V3728	M3729																																												
R3733	R3734	K3735	K3736	L3751	V3752	K3753	G3754	G3755	E3756	S3779	A3780	R3789	T3790	Y3791	S3792	V3793	I3803	E3804	V3805	L3806	T3809	V3810	T3811	L3816	T3819	K3845	D3851	G3861	R3864	V3868	E3875	V3878	P3879	A3880	L3881	L3882	L3883	A3886	R3889	E3895	I3911																																																		
G3912	I3913	I3917	D3922	R3923	H3924	L3925	N3926	L3927	F3928	M3929	I3938	G3939	I3940	H3944	L3953	M3959	F3960	F3961	Y3981	A3987	R3992	M4000	S4010	R4014	M4015	F4016	E4017	Q4018	K4019	M4020	L4021	K4022	G4024	G4025	S4026	W4027	L4028	Q4029	E4030	I4031	M4032	W4033	A4034	E4035	K4036																																														



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	64179	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	47.9	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.589	Depositor
Minimum map value	-1.600	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.058	Depositor
Recommended contour level	0.22	Depositor
Map size (Å)	339.04, 339.04, 339.04	wwPDB
Map dimensions	260, 260, 260	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.304, 1.304, 1.304	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: KWT

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	0.33	0/29502	0.46	0/39893

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 [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	29010	0	29193	572	0
2	A	31	0	23	23	0
All	All	29041	0	29216	572	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 10.

All (572) 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:3809:THR:CB	1:A:3929:MET:HE1	1.66	1.25
1:A:3809:THR:CB	1:A:3929:MET:CE	2.16	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3751:LEU:HD13	2:A:6101:KWT:H143	1.15	1.09
1:A:3809:THR:HB	1:A:3929:MET:HE3	1.26	1.08
1:A:3809:THR:CG2	1:A:3929:MET:HE1	1.83	1.07
1:A:3809:THR:HB	1:A:3929:MET:CE	1.82	1.03
1:A:3809:THR:OG1	1:A:3929:MET:HE1	1.59	1.02
1:A:3809:THR:OG1	1:A:3929:MET:CE	2.09	1.01
1:A:3811:THR:HG21	2:A:6101:KWT:H223	1.42	1.00
1:A:3751:LEU:CD1	2:A:6101:KWT:H143	1.90	1.00
1:A:3809:THR:HG21	1:A:3929:MET:HE1	1.45	0.98
1:A:3809:THR:CB	1:A:3929:MET:HE3	1.92	0.93
1:A:3444:ALA:HA	1:A:3482:LEU:CD2	1.99	0.93
1:A:3805:TRP:CE3	2:A:6101:KWT:H141	2.04	0.92
1:A:3811:THR:CG2	2:A:6101:KWT:H223	2.00	0.91
1:A:3803:ILE:CD1	2:A:6101:KWT:C6	2.51	0.88
1:A:3751:LEU:HD13	2:A:6101:KWT:C14	2.04	0.85
1:A:3728:VAL:HG22	1:A:3736:LYS:CD	2.07	0.83
1:A:3803:ILE:HD12	2:A:6101:KWT:O3	1.78	0.83
1:A:3728:VAL:HG22	1:A:3736:LYS:HD2	1.60	0.82
1:A:3618:GLY:H	1:A:3633:ILE:HD12	1.46	0.79
1:A:403:GLY:H	1:A:406:ARG:HH12	1.29	0.78
1:A:3444:ALA:O	1:A:3482:LEU:HD21	1.83	0.78
1:A:3751:LEU:HD12	1:A:3805:TRP:CE3	2.18	0.78
1:A:899:ARG:HE	1:A:2568:MET:HB2	1.48	0.78
1:A:3751:LEU:HD21	2:A:6101:KWT:H101	1.67	0.75
1:A:1212:LEU:HD11	1:A:1217:VAL:HA	1.69	0.74
1:A:2796:ALA:O	1:A:2800:ARG:NH1	2.21	0.74
1:A:3298:LEU:HD12	1:A:3333:THR:HG23	1.69	0.73
1:A:3751:LEU:HD12	1:A:3805:TRP:HE3	1.51	0.73
1:A:3288:SER:O	1:A:3289:ARG:NH1	2.20	0.72
1:A:3444:ALA:CA	1:A:3482:LEU:CD2	2.67	0.72
1:A:4050:LYS:HE3	1:A:4059:ILE:HG21	1.71	0.72
1:A:1933:LEU:HD13	1:A:1936:ARG:HB3	1.72	0.71
1:A:3803:ILE:HD12	2:A:6101:KWT:C6	2.19	0.71
1:A:356:ASN:ND2	1:A:404:ASP:O	2.24	0.70
1:A:3444:ALA:HB1	1:A:3482:LEU:HD22	1.73	0.70
1:A:3809:THR:HG21	1:A:3929:MET:CE	2.19	0.70
1:A:3444:ALA:CB	1:A:3482:LEU:HD22	2.21	0.70
1:A:1240:THR:HG22	1:A:1242:LEU:H	1.56	0.70
1:A:1484:LEU:HD11	1:A:1527:ARG:HH12	1.56	0.70
1:A:2151:ILE:HG21	1:A:2188:GLU:HG2	1.73	0.70
1:A:3187:CYS:SG	1:A:3239:LYS:NZ	2.63	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3186:ARG:HD3	1:A:3238:MET:HE3	1.74	0.70
1:A:3520:GLU:OE2	1:A:3524:ASN:ND2	2.25	0.69
1:A:1097:GLU:OE2	1:A:1151:ARG:NH2	2.25	0.69
1:A:3580:ASN:ND2	1:A:3734:ARG:HB2	2.08	0.69
1:A:899:ARG:NH2	1:A:2568:MET:SD	2.65	0.69
1:A:3803:ILE:CD1	2:A:6101:KWT:O3	2.40	0.69
1:A:3281:CYS:HB2	1:A:3329:LEU:HD23	1.75	0.68
1:A:75:SER:H	1:A:78:PHE:HB3	1.59	0.68
1:A:709:LYS:NZ	1:A:713:GLU:OE2	2.27	0.68
1:A:767:GLU:HG2	1:A:851:ILE:HD11	1.75	0.68
1:A:1083:ASN:ND2	1:A:1126:GLN:OE1	2.26	0.68
1:A:3145:ILE:HD11	1:A:3196:LYS:HD2	1.74	0.68
1:A:1185:HIS:NE2	1:A:1265:GLU:OE2	2.26	0.67
1:A:1225:GLU:HB3	1:A:1236:LEU:HB2	1.76	0.67
1:A:3811:THR:HG21	2:A:6101:KWT:C22	2.23	0.67
1:A:16:GLN:NE2	1:A:17:GLU:OE2	2.27	0.67
1:A:38:LEU:O	1:A:41:GLU:HB3	1.95	0.67
1:A:247:GLU:HG2	1:A:285:CYS:HB3	1.76	0.67
1:A:1334:LYS:NZ	1:A:1382:ILE:O	2.28	0.66
1:A:4064:LEU:HD13	1:A:4077:TYR:HB3	1.78	0.66
1:A:3751:LEU:CD2	2:A:6101:KWT:H101	2.26	0.65
1:A:2365:ASN:HD22	1:A:2396:LEU:HD13	1.63	0.64
1:A:3911:ILE:HD12	1:A:3928:PHE:HE1	1.62	0.64
1:A:3495:PHE:HB3	1:A:3502:MET:HE3	1.77	0.64
1:A:90:CYS:O	1:A:93:LEU:HB3	1.98	0.64
1:A:2169:LEU:HD11	1:A:2215:LEU:HD22	1.80	0.64
1:A:1897:ASN:HB3	1:A:1903:SER:HB2	1.81	0.63
1:A:3448:GLU:HB3	1:A:3482:LEU:HD11	1.81	0.63
1:A:3924:HIS:ND1	1:A:3926:ASN:OD1	2.29	0.63
1:A:463:LYS:HD3	1:A:545:LEU:HD22	1.80	0.63
1:A:1151:ARG:NH1	1:A:1163:LEU:O	2.31	0.63
1:A:3009:LYS:O	1:A:3013:TYR:HB3	1.98	0.63
1:A:2563:LEU:HD13	1:A:2812:LEU:HD11	1.80	0.63
1:A:1432:CYS:HB3	1:A:1486:LEU:HD11	1.79	0.62
1:A:3580:ASN:HD21	1:A:3734:ARG:HB2	1.63	0.62
1:A:3992:ARG:NH1	1:A:4103:GLN:OE1	2.33	0.62
1:A:173:LYS:HA	1:A:176:GLU:HG3	1.81	0.62
1:A:3580:ASN:HD21	1:A:3734:ARG:CB	2.11	0.62
1:A:374:LYS:HD2	1:A:423:TYR:HB3	1.82	0.62
1:A:1754:GLN:HA	1:A:1785:ILE:HD11	1.81	0.62
1:A:2439:ILE:O	1:A:2443:MET:HG3	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3515:GLN:NE2	1:A:3551:ASN:OD1	2.34	0.61
1:A:3477:GLU:HA	1:A:3477:GLU:OE1	2.01	0.61
1:A:93:LEU:O	1:A:97:GLY:N	2.25	0.61
1:A:2155:GLU:OE2	1:A:2158:ARG:NH2	2.34	0.60
1:A:3666:LEU:O	1:A:3670:MET:HG3	2.01	0.60
1:A:3444:ALA:HA	1:A:3482:LEU:HD21	1.82	0.60
1:A:1358:LEU:HD11	1:A:1410:PRO:HG2	1.84	0.60
1:A:3425:ARG:NH1	1:A:4000:ASN:OD1	2.35	0.60
1:A:3723:ASP:OD1	1:A:3724:GLU:N	2.35	0.60
1:A:3864:ARG:NH1	1:A:3868:VAL:HG21	2.17	0.60
1:A:3284:SER:HB3	1:A:3301:LEU:HD12	1.84	0.59
1:A:3295:GLU:OE2	1:A:3295:GLU:N	2.33	0.59
1:A:3444:ALA:CA	1:A:3482:LEU:HD21	2.32	0.59
1:A:3728:VAL:HG22	1:A:3736:LYS:HD3	1.83	0.59
1:A:108:LYS:HZ2	1:A:156:PHE:HZ	1.51	0.59
1:A:203:GLU:O	1:A:206:THR:OG1	2.20	0.59
1:A:2091:HIS:CE1	1:A:2093:CYS:SG	2.96	0.58
1:A:3154:GLN:OE1	1:A:3226:ASP:N	2.36	0.58
1:A:3444:ALA:HB2	1:A:3478:GLU:HG2	1.85	0.58
1:A:1733:THR:HG22	1:A:1735:ARG:H	1.67	0.58
1:A:1819:PHE:O	1:A:1823:SER:OG	2.22	0.58
1:A:1267:TYR:CD2	1:A:1290:LEU:HD22	2.39	0.58
1:A:2357:GLU:HB3	1:A:2385:LEU:HD21	1.85	0.58
1:A:4081:ALA:O	1:A:4090:ARG:NH1	2.36	0.58
1:A:1871:MET:HG2	1:A:1940:TYR:HA	1.84	0.58
1:A:3646:LYS:H	1:A:3650:LYS:HB3	1.68	0.58
1:A:3684:SER:HB2	1:A:3685:PRO:HD3	1.85	0.58
1:A:1104:LEU:HD23	1:A:1168:LEU:HD21	1.86	0.58
1:A:628:GLU:OE2	1:A:631:ARG:NH2	2.37	0.57
1:A:3929:MET:HG3	1:A:3940:ILE:CD1	2.34	0.57
1:A:4090:ARG:NH2	1:A:4113:ASP:OD2	2.37	0.57
1:A:205:LYS:HG2	1:A:249:PHE:HZ	1.70	0.57
1:A:2361:ILE:HD12	1:A:2389:PHE:HE2	1.67	0.57
1:A:3244:ASP:OD1	1:A:3247:ARG:NH1	2.37	0.57
1:A:2224:PHE:HB2	1:A:2272:VAL:HG11	1.87	0.57
1:A:2347:LYS:O	1:A:2351:GLN:NE2	2.37	0.57
1:A:606:SER:OG	1:A:1026:ARG:NH2	2.37	0.57
1:A:3751:LEU:CD1	2:A:6101:KWT:C14	2.73	0.57
1:A:1541:ALA:HB2	1:A:1550:VAL:HG12	1.87	0.57
1:A:1769:GLU:O	1:A:1822:ARG:NH2	2.24	0.57
1:A:1975:LEU:HD12	1:A:1976:LEU:HD12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1125:GLN:NE2	1:A:1129:ASP:OD2	2.37	0.56
1:A:3961:PHE:HE2	1:A:4107:LEU:HD13	1.70	0.56
1:A:1525:CYS:SG	1:A:1574:ASN:ND2	2.78	0.56
1:A:1011:GLU:O	1:A:1015:ASP:N	2.38	0.56
1:A:2406:GLU:OE1	1:A:2441:LYS:NZ	2.34	0.56
1:A:2443:MET:SD	1:A:2476:ILE:HG23	2.46	0.56
1:A:131:LEU:HD22	1:A:173:LYS:HD2	1.85	0.56
1:A:1867:ILE:O	1:A:1871:MET:HG3	2.06	0.56
1:A:3596:LEU:HD12	1:A:3601:VAL:HA	1.88	0.56
1:A:2254:ARG:NH1	1:A:2292:CYS:O	2.39	0.56
1:A:2260:PHE:O	1:A:2270:ASN:ND2	2.38	0.56
1:A:229:SER:HA	1:A:274:LEU:HD13	1.88	0.56
1:A:1754:GLN:HG3	1:A:1785:ILE:HG13	1.88	0.56
1:A:2919:ASP:OD1	1:A:2920:VAL:N	2.38	0.56
1:A:3751:LEU:HD11	2:A:6101:KWT:H101	1.86	0.56
1:A:3803:ILE:HD11	2:A:6101:KWT:C6	2.34	0.56
1:A:1224:PHE:HD2	1:A:1267:TYR:HE1	1.54	0.55
1:A:3406:ALA:O	1:A:3409:VAL:HG12	2.06	0.55
1:A:205:LYS:HG2	1:A:249:PHE:CZ	2.41	0.55
1:A:771:ASN:OD1	1:A:854:ARG:NH2	2.40	0.55
1:A:56:SER:HA	1:A:59:PHE:CD2	2.42	0.55
1:A:1874:TYR:HE2	1:A:1940:TYR:HE1	1.54	0.55
1:A:3710:LYS:HB2	1:A:3711:PRO:HD2	1.88	0.55
1:A:3639:GLU:O	1:A:3643:HIS:N	2.28	0.55
1:A:3680:LEU:HD23	1:A:3682:GLU:H	1.71	0.55
1:A:3751:LEU:HD22	1:A:3803:ILE:HD11	1.88	0.55
1:A:3097:ASP:OD1	1:A:3098:ARG:N	2.37	0.55
1:A:2168:LEU:HD22	1:A:2189:ILE:HD11	1.89	0.55
1:A:13:LEU:HD23	1:A:14:ARG:HE	1.70	0.55
1:A:1812:LEU:O	1:A:1815:THR:N	2.36	0.55
1:A:1442:GLN:HG3	1:A:1445:ARG:HH12	1.71	0.54
1:A:1920:TYR:HE1	1:A:1963:GLN:CB	2.20	0.54
1:A:1961:PHE:O	1:A:1961:PHE:CD1	2.59	0.54
1:A:3735:PRO:HG3	2:A:6101:KWT:H102	1.89	0.54
1:A:4027:TRP:HE3	1:A:4030:GLU:HB3	1.72	0.54
1:A:1267:TYR:HD2	1:A:1290:LEU:HD22	1.72	0.54
1:A:1815:THR:O	1:A:1818:SER:OG	2.25	0.54
1:A:3137:GLU:OE1	1:A:3186:ARG:NH2	2.35	0.54
1:A:3661:ASP:HA	1:A:3664:ASN:HD21	1.72	0.54
1:A:129:ASP:OD1	1:A:129:ASP:N	2.40	0.54
1:A:849:GLU:OE1	1:A:3108:GLN:NE2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3605:ASN:OD1	1:A:3606:ILE:N	2.40	0.54
1:A:3608:LYS:O	1:A:3611:GLU:HG3	2.07	0.54
1:A:1351:THR:HG22	1:A:1353:PRO:HD2	1.90	0.54
1:A:901:MET:SD	1:A:2535:THR:OG1	2.64	0.54
1:A:1920:TYR:CE1	1:A:1963:GLN:CB	2.91	0.54
1:A:1759:LEU:HD12	1:A:1785:ILE:HD13	1.88	0.54
1:A:3495:PHE:HB3	1:A:3502:MET:CE	2.38	0.54
1:A:56:SER:HA	1:A:59:PHE:HD2	1.73	0.53
1:A:59:PHE:HA	1:A:62:ASP:HB2	1.91	0.53
1:A:2999:LEU:HD21	1:A:3015:SER:O	2.09	0.53
1:A:2474:TYR:HD2	1:A:2517:LEU:HD12	1.74	0.53
1:A:2918:PRO:HB2	1:A:2922:ARG:HH22	1.73	0.53
1:A:1634:ALA:O	1:A:1642:LYS:NZ	2.29	0.53
1:A:79:ARG:HA	1:A:82:ARG:HB2	1.90	0.53
1:A:2411:LEU:HD11	1:A:2415:LEU:HD23	1.90	0.53
1:A:2091:HIS:HE1	1:A:2093:CYS:SG	2.32	0.53
1:A:355:ASN:HB3	1:A:358:GLU:HG2	1.90	0.53
1:A:1528:LEU:HD21	1:A:1567:ILE:HG23	1.90	0.53
1:A:131:LEU:O	1:A:135:LEU:HG	2.08	0.53
1:A:301:CYS:O	1:A:309:LYS:NZ	2.38	0.53
1:A:3661:ASP:HA	1:A:3664:ASN:ND2	2.24	0.53
1:A:796:LEU:HD23	1:A:855:VAL:HG13	1.90	0.52
1:A:3033:GLU:HG3	1:A:3034:PRO:HD3	1.91	0.52
1:A:170:VAL:O	1:A:171:LEU:HD22	2.10	0.52
1:A:267:VAL:HG23	1:A:268:PRO:HD3	1.90	0.52
1:A:1484:LEU:HD11	1:A:1527:ARG:NH1	2.22	0.52
1:A:1685:ASP:OD1	1:A:1685:ASP:N	2.42	0.52
1:A:1378:GLU:HG2	1:A:1378:GLU:O	2.10	0.52
1:A:3627:ALA:HB3	1:A:3683:CYS:HB2	1.91	0.52
1:A:3348:LEU:O	1:A:3352:GLU:HG2	2.09	0.52
1:A:3496:ILE:HD11	1:A:3521:ILE:HD11	1.92	0.52
1:A:3791:TYR:CE1	1:A:3940:ILE:HG22	2.45	0.52
1:A:13:LEU:O	1:A:14:ARG:NE	2.43	0.52
1:A:2933:ILE:HD11	1:A:3121:LEU:HD22	1.91	0.52
1:A:3751:LEU:HD11	2:A:6101:KWT:C10	2.39	0.51
1:A:1086:TYR:O	1:A:1087:ARG:HB2	2.11	0.51
1:A:2457:PRO:O	1:A:2460:GLU:HG2	2.10	0.51
1:A:3646:LYS:N	1:A:3650:LYS:HB3	2.25	0.51
1:A:1374:GLN:HE22	1:A:1381:SER:HB3	1.76	0.51
1:A:1575:LEU:H	1:A:1575:LEU:HD23	1.76	0.51
1:A:2205:VAL:HB	1:A:2208:ASP:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2555:LEU:HD11	1:A:2854:PHE:HA	1.91	0.51
1:A:3507:ASP:HB3	1:A:3540:TYR:CD1	2.45	0.51
1:A:1519:PHE:CG	1:A:1570:GLU:HG3	2.45	0.51
1:A:2522:ARG:HG2	1:A:2561:PHE:HE1	1.76	0.51
1:A:967:PRO:HD3	1:A:1010:LEU:HD12	1.93	0.51
1:A:3622:ALA:HB3	1:A:3625:LEU:HB2	1.92	0.51
1:A:2806:LYS:HG3	1:A:2857:CYS:HB2	1.93	0.51
1:A:36:ARG:HH21	1:A:39:GLY:HA3	1.76	0.51
1:A:708:VAL:HG22	1:A:740:ILE:HG23	1.92	0.51
1:A:3053:LEU:HD11	1:A:3088:LEU:HD13	1.92	0.51
1:A:1037:LEU:HD23	1:A:1085:ILE:HB	1.93	0.50
1:A:3243:ILE:HD13	1:A:3259:LEU:HD13	1.92	0.50
1:A:3944:HIS:NE2	1:A:4020:MET:SD	2.84	0.50
1:A:1224:PHE:HD2	1:A:1267:TYR:CE1	2.28	0.50
1:A:2256:ILE:HG22	1:A:2260:PHE:HE2	1.76	0.50
1:A:242:PRO:O	1:A:245:SER:OG	2.24	0.50
1:A:2091:HIS:CE1	1:A:2093:CYS:HG	2.30	0.50
1:A:2828:GLU:O	1:A:2832:ILE:HG12	2.11	0.50
1:A:3629:ARG:O	1:A:3633:ILE:HG12	2.11	0.50
1:A:1818:SER:HA	1:A:1821:ASP:HB3	1.94	0.50
1:A:3596:LEU:HB2	1:A:3601:VAL:HG22	1.94	0.50
1:A:403:GLY:O	1:A:406:ARG:NH1	2.45	0.49
1:A:1782:PHE:HA	1:A:1785:ILE:HG22	1.94	0.49
1:A:23:ASP:HA	1:A:30:ALA:HB1	1.93	0.49
1:A:1234:GLY:HA2	1:A:1259:LEU:HD22	1.93	0.49
1:A:2376:ASP:OD1	1:A:2404:ARG:NE	2.41	0.49
1:A:3751:LEU:CD1	2:A:6101:KWT:H101	2.42	0.49
1:A:3227:ILE:HD12	1:A:3227:ILE:H	1.78	0.49
1:A:3791:TYR:CZ	1:A:3940:ILE:HG22	2.47	0.49
1:A:2097:LEU:HD12	1:A:2145:PHE:HZ	1.77	0.49
1:A:1726:SER:O	1:A:1726:SER:OG	2.27	0.49
1:A:2365:ASN:ND2	1:A:2396:LEU:HD13	2.27	0.49
1:A:3809:THR:CG2	1:A:3929:MET:CE	2.62	0.49
1:A:3911:ILE:CD1	1:A:3928:PHE:HE1	2.25	0.49
1:A:975:ASP:OD1	1:A:976:VAL:N	2.45	0.49
1:A:3929:MET:SD	2:A:6101:KWT:O4	2.70	0.49
1:A:1006:THR:HG22	1:A:1009:LEU:HB2	1.94	0.49
1:A:1339:VAL:HG23	1:A:1398:VAL:HG21	1.95	0.49
1:A:3805:TRP:CE3	2:A:6101:KWT:C14	2.88	0.49
1:A:1864:ASP:HA	1:A:1867:ILE:HG12	1.95	0.49
1:A:3062:LEU:HD13	1:A:3093:GLN:NE2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1208:LEU:HD21	1:A:1220:LEU:HD11	1.94	0.49
1:A:1532:LEU:HD11	1:A:1560:TYR:HB2	1.94	0.49
1:A:1817:GLN:OE1	1:A:1936:ARG:NH2	2.41	0.49
1:A:2269:ASP:OD1	1:A:2269:ASP:N	2.46	0.49
1:A:2313:LYS:HA	1:A:2316:TYR:CE2	2.48	0.49
1:A:2368:THR:HG23	1:A:2372:PRO:HA	1.93	0.49
1:A:2415:LEU:HD12	1:A:2420:PHE:CD1	2.48	0.49
1:A:3151:LEU:HD21	1:A:3197:LEU:HA	1.95	0.49
1:A:59:PHE:HB3	1:A:63:PHE:CE1	2.47	0.48
1:A:3444:ALA:HA	1:A:3482:LEU:HD23	1.92	0.48
1:A:346:TYR:HB3	1:A:350:ARG:HH12	1.78	0.48
1:A:1586:SER:O	1:A:1632:TRP:NE1	2.43	0.48
1:A:1470:SER:HB3	1:A:1476:HIS:CD2	2.48	0.48
1:A:2940:ARG:HG2	1:A:2957:LEU:HD22	1.95	0.48
1:A:3104:GLN:OE1	1:A:3139:GLN:NE2	2.46	0.48
1:A:3444:ALA:C	1:A:3482:LEU:HD21	2.33	0.48
1:A:1933:LEU:HD12	1:A:1937:ARG:HG3	1.95	0.48
1:A:3616:ALA:O	1:A:3629:ARG:NH2	2.47	0.48
1:A:1871:MET:HE1	1:A:1936:ARG:HH21	1.79	0.48
1:A:2259:LYS:HB3	1:A:2272:VAL:HG23	1.94	0.48
1:A:253:LEU:HD11	1:A:271:GLY:HA3	1.95	0.48
1:A:1082:PHE:HA	1:A:1085:ILE:HG12	1.94	0.48
1:A:2304:VAL:HG12	1:A:2323:LEU:HD11	1.96	0.48
1:A:2786:LYS:O	1:A:2788:SER:N	2.47	0.48
1:A:3587:ASP:OD2	1:A:3733:ARG:NH1	2.45	0.48
1:A:2261:SER:OG	1:A:2262:GLY:N	2.46	0.48
1:A:2301:GLN:OE1	1:A:2305:ASN:ND2	2.46	0.48
1:A:2877:SER:OG	1:A:2925:GLU:HB3	2.13	0.48
1:A:3446:VAL:O	1:A:3450:MET:HG2	2.13	0.48
1:A:3728:VAL:HG12	1:A:3734:ARG:HD3	1.96	0.48
1:A:1009:LEU:HD21	1:A:1062:ARG:NH1	2.29	0.47
1:A:1471:GLN:N	1:A:1471:GLN:OE1	2.48	0.47
1:A:2542:LEU:HD21	1:A:2558:ALA:HA	1.95	0.47
1:A:1934:LEU:O	1:A:1938:ARG:N	2.43	0.47
1:A:2206:PRO:O	1:A:2210:VAL:HG23	2.14	0.47
1:A:2432:GLN:OE1	1:A:2464:HIS:NE2	2.45	0.47
1:A:2551:GLU:OE2	1:A:2849:SER:OG	2.28	0.47
1:A:3753:LYS:HD2	1:A:3753:LYS:HA	1.56	0.47
1:A:397:LEU:HD21	1:A:438:LEU:HD22	1.95	0.47
1:A:195:ASN:O	1:A:198:ARG:HG3	2.15	0.47
1:A:540:MET:SD	1:A:540:MET:N	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1572:LEU:HD21	1:A:1618:LEU:HD22	1.96	0.47
1:A:1912:THR:O	1:A:1916:ILE:HG12	2.14	0.47
1:A:3444:ALA:HB2	1:A:3478:GLU:CG	2.44	0.47
1:A:439:VAL:O	1:A:442:GLN:HB3	2.15	0.47
1:A:3729:MET:SD	1:A:3729:MET:N	2.87	0.47
1:A:3733:ARG:HH21	1:A:3755:GLY:C	2.18	0.47
1:A:1323:SER:O	1:A:1325:GLN:N	2.48	0.47
1:A:3809:THR:OG1	1:A:3929:MET:SD	2.73	0.47
1:A:12:LEU:O	1:A:16:GLN:HG2	2.14	0.47
1:A:726:LEU:HD21	1:A:754:MET:SD	2.55	0.47
1:A:1689:LYS:O	1:A:1693:VAL:HG13	2.15	0.47
1:A:2121:ASP:OD1	1:A:2121:ASP:N	2.43	0.47
1:A:3344:GLU:OE2	1:A:3348:LEU:HD23	2.15	0.47
1:A:3803:ILE:CD1	2:A:6101:KWT:C5	2.92	0.47
1:A:63:PHE:O	1:A:66:LEU:HB2	2.15	0.46
1:A:3186:ARG:HD3	1:A:3238:MET:CE	2.44	0.46
1:A:180:LEU:HA	1:A:230:LEU:HD21	1.98	0.46
1:A:3137:GLU:CD	1:A:3186:ARG:HE	2.19	0.46
1:A:3789:ARG:NH2	1:A:3806:LEU:HD11	2.31	0.46
1:A:14:ARG:O	1:A:18:THR:HG23	2.15	0.46
1:A:1793:THR:O	1:A:1797:LEU:HG	2.15	0.46
1:A:2539:LEU:HD13	1:A:2562:LEU:HD11	1.97	0.46
1:A:3066:ASP:OD1	1:A:3067:LYS:N	2.48	0.46
1:A:1300:SER:O	1:A:1300:SER:OG	2.32	0.46
1:A:2785:ILE:O	1:A:2789:SER:HB2	2.16	0.46
1:A:2884:LEU:HD12	1:A:3116:SER:HB2	1.96	0.46
1:A:942:LEU:HD11	1:A:991:LEU:HD21	1.97	0.46
1:A:1711:ARG:NH2	1:A:1760:GLU:OE1	2.48	0.46
1:A:3410:ILE:HD11	1:A:3456:LEU:HB3	1.98	0.46
1:A:3959:MET:HE3	1:A:3959:MET:H	1.81	0.46
1:A:1372:LEU:HD13	1:A:1402:LEU:HD23	1.98	0.46
1:A:1586:SER:O	1:A:1586:SER:OG	2.34	0.46
1:A:2213:ASN:OD1	1:A:2214:ARG:N	2.48	0.46
1:A:586:GLN:HB2	1:A:613:HIS:CD2	2.51	0.46
1:A:1715:GLU:HA	1:A:1718:ILE:HG12	1.98	0.46
1:A:3313:SER:HA	1:A:3316:LEU:HB2	1.96	0.46
1:A:242:PRO:C	1:A:246:ARG:HE	2.20	0.45
1:A:1478:SER:O	1:A:1482:GLU:HG3	2.17	0.45
1:A:1572:LEU:HB3	1:A:1614:GLN:HE21	1.81	0.45
1:A:2183:HIS:CE1	1:A:2186:VAL:HG23	2.52	0.45
1:A:3447:VAL:HG22	1:A:3468:LEU:HD22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3369:ASP:OD1	1:A:3369:ASP:N	2.49	0.45
1:A:3484:THR:HG23	1:A:3513:ALA:HA	1.97	0.45
1:A:1496:GLU:OE1	1:A:1496:GLU:N	2.42	0.45
1:A:225:LYS:HZ3	1:A:253:LEU:HD13	1.81	0.45
1:A:2471:GLU:HA	1:A:2517:LEU:HD11	1.98	0.45
1:A:3636:PHE:CE2	1:A:3670:MET:HG2	2.52	0.45
1:A:189:MET:SD	1:A:189:MET:N	2.90	0.45
1:A:1484:LEU:HD21	1:A:1527:ARG:HH22	1.80	0.45
1:A:2576:MET:HB3	1:A:2787:HIS:CD2	2.52	0.45
1:A:861:SER:O	1:A:3167:ARG:NH1	2.46	0.45
1:A:1188:ILE:HD13	1:A:1269:THR:HG21	1.98	0.45
1:A:1538:LEU:HD12	1:A:1553:PHE:CE1	2.52	0.45
1:A:1935:GLU:OE2	1:A:1938:ARG:NE	2.34	0.45
1:A:154:SER:HA	1:A:157:TYR:HD2	1.82	0.45
1:A:1221:ILE:HD12	1:A:1221:ILE:H	1.82	0.45
1:A:2327:LEU:HA	1:A:2330:VAL:HG12	1.99	0.45
1:A:2930:TYR:HA	1:A:2933:ILE:HG22	1.98	0.45
1:A:100:ILE:HB	1:A:102:PRO:HD3	1.98	0.45
1:A:1158:PRO:N	1:A:1159:PRO:HD2	2.31	0.45
1:A:2361:ILE:HD12	1:A:2389:PHE:CE2	2.51	0.45
1:A:2863:CYS:SG	1:A:2895:GLU:HG3	2.57	0.45
1:A:487:LEU:HD12	1:A:490:ILE:HD11	1.99	0.45
1:A:2372:PRO:O	1:A:2374:LEU:N	2.50	0.45
1:A:3751:LEU:HD21	2:A:6101:KWT:C10	2.42	0.45
1:A:3603:LYS:HB3	1:A:3606:ILE:HG22	1.98	0.44
1:A:849:GLU:OE2	1:A:852:ARG:NH1	2.50	0.44
1:A:3467:ARG:O	1:A:3471:ILE:HG12	2.17	0.44
1:A:3779:SER:OG	1:A:3780:ALA:N	2.50	0.44
1:A:3878:VAL:HG21	1:A:4128:MET:HB3	1.98	0.44
1:A:346:TYR:HD1	1:A:366:TYR:HH	1.63	0.44
1:A:1786:ALA:HB2	1:A:1827:LEU:HD23	1.99	0.44
1:A:221:ALA:O	1:A:225:LYS:HE3	2.18	0.44
1:A:404:ASP:HB2	1:A:1732:GLY:O	2.17	0.44
1:A:1696:LEU:HA	1:A:1696:LEU:HD23	1.81	0.44
1:A:1864:ASP:N	1:A:1864:ASP:OD1	2.50	0.44
1:A:2522:ARG:HG2	1:A:2561:PHE:CE1	2.52	0.44
1:A:2559:THR:O	1:A:2563:LEU:HB2	2.16	0.44
1:A:3088:LEU:HD23	1:A:3088:LEU:HA	1.74	0.44
1:A:3383:GLN:O	1:A:3387:GLU:HG3	2.17	0.44
1:A:3604:LYS:HA	1:A:3607:GLU:HG2	2.00	0.44
1:A:114:VAL:HG12	1:A:130:LEU:HD21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:151:GLU:HB3	1:A:153:PHE:CE1	2.53	0.44
1:A:493:LYS:O	1:A:625:ASN:ND2	2.51	0.44
1:A:2463:SER:O	1:A:2463:SER:OG	2.31	0.44
1:A:2575:PRO:HA	1:A:2786:LYS:H	1.83	0.44
1:A:3588:TRP:CD1	1:A:3613:MET:HB2	2.52	0.44
1:A:1231:GLN:O	1:A:1233:SER:N	2.47	0.44
1:A:1427:SER:O	1:A:1431:LEU:HD23	2.18	0.44
1:A:1770:GLN:N	1:A:1770:GLN:OE1	2.51	0.44
1:A:1458:LEU:HD13	1:A:1467:ILE:HD11	2.00	0.44
1:A:3229:SER:OG	1:A:3232:ARG:NH1	2.43	0.44
1:A:225:LYS:HZ3	1:A:253:LEU:HD22	1.82	0.43
1:A:275:PHE:CZ	1:A:293:LEU:HD21	2.52	0.43
1:A:1019:ASP:HA	1:A:1026:ARG:HH11	1.82	0.43
1:A:1124:ILE:HG23	1:A:1182:GLU:HG2	2.00	0.43
1:A:1690:GLY:HA2	1:A:1693:VAL:HG22	2.00	0.43
1:A:2506:LEU:HD23	1:A:2506:LEU:HA	1.83	0.43
1:A:3285:HIS:HD2	1:A:3298:LEU:HD11	1.83	0.43
1:A:3793:VAL:HG13	1:A:3803:ILE:HG22	1.99	0.43
1:A:3881:ASP:OD1	1:A:3881:ASP:N	2.50	0.43
1:A:3981:TYR:HD1	1:A:4108:MET:HE2	1.83	0.43
1:A:671:SER:O	1:A:675:ARG:HG3	2.18	0.43
1:A:1365:ASN:OD1	1:A:1366:THR:N	2.51	0.43
1:A:1448:LEU:HD21	1:A:1514:LEU:HD11	1.99	0.43
1:A:1585:SER:O	1:A:1585:SER:OG	2.27	0.43
1:A:2945:SER:HB2	1:A:2946:GLU:OE1	2.17	0.43
1:A:59:PHE:O	1:A:63:PHE:N	2.52	0.43
1:A:864:GLY:O	1:A:868:LYS:NZ	2.43	0.43
1:A:1376:LEU:HD13	1:A:1403:MET:HE1	2.00	0.43
1:A:2415:LEU:HD12	1:A:2420:PHE:CG	2.53	0.43
1:A:2877:SER:HG	1:A:2925:GLU:HB3	1.84	0.43
1:A:3095:ASP:N	1:A:3095:ASP:OD1	2.52	0.43
1:A:3587:ASP:CG	1:A:3733:ARG:HH12	2.21	0.43
1:A:923:ASP:C	1:A:925:GLN:H	2.21	0.43
1:A:1802:TYR:O	1:A:1806:ARG:HG2	2.19	0.43
1:A:3714:GLU:N	1:A:3714:GLU:OE1	2.51	0.43
1:A:3789:ARG:HG2	1:A:3938:ILE:HG12	2.01	0.43
1:A:1622:ILE:HG21	1:A:1652:ILE:HD11	2.00	0.43
1:A:1636:ASP:N	1:A:1636:ASP:OD1	2.50	0.43
1:A:3626:GLY:HA3	1:A:3684:SER:O	2.19	0.43
1:A:355:ASN:OD1	1:A:356:ASN:N	2.52	0.43
1:A:770:LEU:HD12	1:A:770:LEU:HA	1.89	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1242:LEU:HA	1:A:1310:GLU:HB2	2.01	0.43
1:A:3449:LYS:HA	1:A:3449:LYS:HD3	1.72	0.43
1:A:12:LEU:HA	1:A:15:LEU:HB3	2.00	0.43
1:A:1086:TYR:C	1:A:1088:GLU:H	2.22	0.43
1:A:1640:GLU:OE1	1:A:1640:GLU:N	2.50	0.43
1:A:2921:LEU:O	1:A:2925:GLU:HG2	2.19	0.43
1:A:3077:ILE:HG13	1:A:3078:LEU:N	2.34	0.43
1:A:3727:THR:HG22	1:A:3729:MET:SD	2.59	0.43
1:A:579:LEU:HD23	1:A:579:LEU:HA	1.88	0.43
1:A:991:LEU:HD23	1:A:991:LEU:HA	1.85	0.43
1:A:1225:GLU:OE2	1:A:1267:TYR:OH	2.27	0.43
1:A:3444:ALA:CA	1:A:3482:LEU:HD22	2.42	0.43
1:A:79:ARG:O	1:A:82:ARG:HB2	2.19	0.42
1:A:131:LEU:HD12	1:A:132:ILE:N	2.33	0.42
1:A:253:LEU:HD12	1:A:254:LYS:N	2.34	0.42
1:A:737:PRO:HD2	1:A:740:ILE:HD12	2.01	0.42
1:A:1195:VAL:HG11	1:A:1204:PRO:HA	2.00	0.42
1:A:1476:HIS:HB3	1:A:1479:VAL:HG22	2.01	0.42
1:A:2887:PRO:HB2	1:A:3895:GLU:HG3	2.00	0.42
1:A:3700:GLU:HA	1:A:3718:ARG:HA	2.00	0.42
1:A:3875:GLU:O	1:A:3878:VAL:HG12	2.19	0.42
1:A:192:ASN:N	1:A:192:ASN:OD1	2.52	0.42
1:A:1627:LYS:HD2	1:A:1627:LYS:HA	1.84	0.42
1:A:236:LYS:HD3	1:A:246:ARG:HH12	1.84	0.42
1:A:466:LEU:HB3	1:A:560:LEU:HD22	2.01	0.42
1:A:1391:VAL:HG13	1:A:1392:MET:SD	2.59	0.42
1:A:3681:LYS:O	1:A:3685:PRO:HD2	2.19	0.42
1:A:3816:LEU:HD21	1:A:3883:LEU:HD13	2.01	0.42
1:A:251:PHE:HA	1:A:254:LYS:HZ2	1.84	0.42
1:A:287:LEU:HG	1:A:326:MET:SD	2.59	0.42
1:A:563:LEU:O	1:A:567:GLU:HG2	2.19	0.42
1:A:1820:VAL:HG12	1:A:1824:LEU:HD23	2.00	0.42
1:A:3065:ILE:HD13	1:A:3065:ILE:HA	1.91	0.42
1:A:3260:LYS:HA	1:A:3260:LYS:HD2	1.83	0.42
1:A:3483:MET:O	1:A:3483:MET:HG3	2.16	0.42
1:A:3582:GLU:HG2	1:A:3583:LEU:N	2.34	0.42
1:A:1358:LEU:HD21	1:A:1410:PRO:HB2	2.01	0.42
1:A:2486:ASP:HB3	1:A:2489:SER:HB2	2.01	0.42
1:A:3012:GLU:HB2	1:A:3047:SER:HB2	2.02	0.42
1:A:3913:ILE:HG21	1:A:3987:ALA:HB3	2.02	0.42
1:A:174:VAL:O	1:A:177:LEU:HG	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:ASN:OD1	1:A:196:LEU:N	2.52	0.42
1:A:1395:LEU:O	1:A:1398:VAL:HG22	2.20	0.42
1:A:3227:ILE:O	1:A:3228:SER:HB3	2.19	0.42
1:A:3819:THR:HG21	1:A:3886:ALA:HB2	2.00	0.42
1:A:3879:PRO:HB2	1:A:3882:LEU:HG	2.01	0.42
1:A:60:SER:OG	1:A:61:ARG:N	2.53	0.42
1:A:1424:THR:HG23	1:A:1427:SER:H	1.85	0.42
1:A:2220:MET:HB3	1:A:2255:LEU:HD22	2.01	0.42
1:A:2576:MET:HB3	1:A:2787:HIS:NE2	2.34	0.42
1:A:3318:LYS:O	1:A:3322:ALA:HB3	2.19	0.42
1:A:3917:ILE:HD13	1:A:4051:LEU:HD21	2.01	0.42
1:A:3922:ASP:O	1:A:3923:ARG:NE	2.49	0.42
1:A:29:LEU:HD13	1:A:32:HIS:HB3	2.02	0.42
1:A:202:GLY:HA2	1:A:205:LYS:HE2	2.02	0.42
1:A:275:PHE:HZ	1:A:293:LEU:HD21	1.84	0.42
1:A:469:ALA:HB2	1:A:479:ILE:HD11	2.02	0.42
1:A:1218:SER:O	1:A:1222:ASN:ND2	2.52	0.42
1:A:1718:ILE:O	1:A:1722:PHE:HB2	2.20	0.42
1:A:42:CYS:HA	1:A:88:PHE:CE1	2.55	0.42
1:A:3542:PHE:HZ	1:A:3555:VAL:HG11	1.84	0.42
1:A:3751:LEU:HD12	1:A:3805:TRP:CZ3	2.52	0.42
1:A:523:THR:HG23	1:A:525:LYS:H	1.85	0.42
1:A:1030:GLY:O	1:A:1033:ILE:HG22	2.20	0.42
1:A:1448:LEU:O	1:A:1452:VAL:HG13	2.20	0.42
1:A:2917:PRO:HB2	1:A:2919:ASP:OD1	2.20	0.42
1:A:3138:ILE:O	1:A:3142:ILE:HG12	2.20	0.42
1:A:3537:SER:HA	1:A:3540:TYR:CE2	2.55	0.42
1:A:4107:LEU:HD23	1:A:4107:LEU:HA	1.79	0.42
1:A:251:PHE:HA	1:A:254:LYS:NZ	2.35	0.41
1:A:2349:LEU:HA	1:A:2352:HIS:CE1	2.56	0.41
1:A:3100:LYS:O	1:A:3103:ILE:HG22	2.20	0.41
1:A:3506:LEU:HD23	1:A:3506:LEU:HA	1.81	0.41
1:A:3929:MET:HE2	1:A:3929:MET:HB3	1.95	0.41
1:A:31:GLY:HA2	1:A:34:LEU:HB2	2.03	0.41
1:A:35:ILE:HG21	1:A:80:GLU:HB3	2.02	0.41
1:A:438:LEU:O	1:A:442:GLN:N	2.49	0.41
1:A:765:LEU:HA	1:A:765:LEU:HD23	1.72	0.41
1:A:853:ILE:HA	1:A:3111:MET:HE1	2.00	0.41
1:A:995:PHE:HB3	1:A:1005:ASP:OD1	2.19	0.41
1:A:1178:ARG:O	1:A:1184:ARG:NH2	2.51	0.41
1:A:2411:LEU:HA	1:A:2411:LEU:HD12	1.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2455:LEU:HD22	1:A:2498:ILE:HG23	2.01	0.41
1:A:109:ASN:OD1	1:A:110:THR:N	2.53	0.41
1:A:296:VAL:HG23	1:A:297:LEU:HD12	2.03	0.41
1:A:2166:SER:OG	1:A:2167:PRO:HD3	2.20	0.41
1:A:2397:CYS:O	1:A:2400:VAL:HG12	2.20	0.41
1:A:36:ARG:NE	1:A:36:ARG:HA	2.36	0.41
1:A:68:PHE:O	1:A:71:LYS:HB2	2.20	0.41
1:A:623:PHE:CE2	1:A:665:GLY:HA3	2.54	0.41
1:A:733:LEU:HD12	1:A:733:LEU:HA	1.85	0.41
1:A:2802:PRO:HG2	1:A:2803:ILE:HD12	2.02	0.41
1:A:3911:ILE:CD1	1:A:3928:PHE:CE1	3.03	0.41
1:A:803:SER:HB3	1:A:852:ARG:HE	1.86	0.41
1:A:2097:LEU:HD23	1:A:2097:LEU:HA	1.81	0.41
1:A:3006:ALA:HB3	1:A:3257:LYS:HE2	2.01	0.41
1:A:2252:PRO:C	1:A:2254:ARG:H	2.23	0.41
1:A:3271:ASP:HB2	1:A:3315:TYR:CE2	2.55	0.41
1:A:220:LEU:O	1:A:224:LEU:HG	2.21	0.41
1:A:240:GLU:HB3	1:A:242:PRO:HD2	2.01	0.41
1:A:1758:LEU:HD23	1:A:1758:LEU:HA	1.84	0.41
1:A:3687:MET:HB3	1:A:3722:PHE:CD1	2.56	0.41
1:A:128:LEU:HD13	1:A:131:LEU:HD21	2.02	0.41
1:A:3953:LEU:HD22	1:A:4026:SER:HB3	2.02	0.41
1:A:363:ILE:HD13	1:A:363:ILE:HA	1.97	0.41
1:A:442:GLN:HG3	1:A:461:ILE:HD11	2.02	0.41
1:A:1081:ALA:O	1:A:1085:ILE:HG23	2.21	0.41
1:A:1220:LEU:O	1:A:1223:THR:OG1	2.27	0.41
1:A:1240:THR:HG23	1:A:1296:PHE:CG	2.56	0.41
1:A:1261:LEU:CD1	1:A:1340:ARG:HG3	2.51	0.41
1:A:1431:LEU:HD11	1:A:1447:ARG:NH2	2.35	0.41
1:A:1795:VAL:HG21	1:A:1838:GLU:HG3	2.03	0.41
1:A:1836:LEU:HD21	1:A:1883:ARG:HH21	1.85	0.41
1:A:2276:LEU:HD23	1:A:2276:LEU:HA	1.92	0.41
1:A:2277:LEU:O	1:A:2280:VAL:HG12	2.21	0.41
1:A:2411:LEU:C	1:A:2413:PHE:H	2.24	0.41
1:A:2425:ARG:HG2	1:A:2460:GLU:OE2	2.21	0.41
1:A:2891:ARG:HD2	1:A:2891:ARG:HA	1.85	0.41
1:A:3011:LEU:O	1:A:3016:THR:OG1	2.21	0.41
1:A:3523:ASP:OD1	1:A:3561:LYS:NZ	2.31	0.41
1:A:3526:PRO:C	1:A:3528:ALA:H	2.23	0.41
1:A:4015:ASN:O	1:A:4018:GLN:HG3	2.20	0.41
1:A:1754:GLN:HE22	1:A:1788:ARG:HD2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1871:MET:O	1:A:1875:LYS:HG3	2.20	0.41
1:A:2133:LEU:HD23	1:A:2164:TRP:CZ3	2.56	0.41
1:A:2392:VAL:O	1:A:2396:LEU:HD23	2.21	0.41
1:A:3728:VAL:CG1	1:A:3734:ARG:HD3	2.51	0.41
1:A:865:GLN:H	1:A:865:GLN:HG2	1.73	0.40
1:A:1374:GLN:HE22	1:A:1381:SER:CB	2.33	0.40
1:A:1980:ASN:OD1	1:A:1981:LEU:N	2.49	0.40
1:A:2165:LEU:HD12	1:A:2165:LEU:HA	1.81	0.40
1:A:2211:LEU:HA	1:A:2214:ARG:HG2	2.02	0.40
1:A:2300:PHE:O	1:A:2304:VAL:HG13	2.21	0.40
1:A:3192:LYS:HE2	1:A:3192:LYS:HB2	1.90	0.40
1:A:313:LEU:HA	1:A:313:LEU:HD23	1.86	0.40
1:A:888:ARG:HB3	1:A:3889:ARG:HH21	1.85	0.40
1:A:1867:ILE:HA	1:A:1870:LYS:HE3	2.03	0.40
1:A:1945:TYR:O	1:A:1949:ILE:HG12	2.21	0.40
1:A:2164:TRP:C	1:A:2167:PRO:HD2	2.42	0.40
1:A:2392:VAL:HG12	1:A:2396:LEU:HD23	2.03	0.40
1:A:3227:ILE:HG22	1:A:3228:SER:N	2.36	0.40
1:A:3521:ILE:HD12	1:A:3521:ILE:HA	1.91	0.40
1:A:3558:ILE:HD13	1:A:3558:ILE:HA	1.96	0.40
1:A:249:PHE:O	1:A:252:VAL:HG12	2.21	0.40
1:A:346:TYR:HB3	1:A:350:ARG:NH1	2.36	0.40
1:A:3153:SER:OG	1:A:3154:GLN:N	2.55	0.40
1:A:165:LYS:HB2	1:A:167:PRO:HD2	2.03	0.40
1:A:1086:TYR:CE2	1:A:1087:ARG:HG3	2.56	0.40
1:A:1575:LEU:HD11	1:A:1617:LYS:HG3	2.03	0.40
1:A:1790:SER:O	1:A:1794:GLN:HG3	2.21	0.40
1:A:2231:PHE:O	1:A:2235:LEU:HD23	2.21	0.40
1:A:2430:GLU:O	1:A:2434:VAL:HG22	2.21	0.40
1:A:2785:ILE:HD12	1:A:2785:ILE:HA	1.96	0.40
1:A:3259:LEU:HD12	1:A:3259:LEU:HA	1.92	0.40
1:A:3756:GLU:HA	1:A:4022:LYS:NZ	2.37	0.40
1:A:3816:LEU:HA	1:A:3816:LEU:HD23	1.86	0.40
1:A:397:LEU:HD22	1:A:437:HIS:HB3	2.03	0.40
1:A:961:LEU:HD23	1:A:961:LEU:HA	1.94	0.40
1:A:1562:LEU:HD23	1:A:1562:LEU:HA	1.85	0.40
1:A:1597:LEU:HD23	1:A:1597:LEU:HA	1.95	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	3602/4148 (87%)	3293 (91%)	305 (8%)	4 (0%)	51 83

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	3481	SER
1	A	2787	HIS
1	A	3406	ALA
1	A	1968	SER

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	3196/3671 (87%)	3178 (99%)	18 (1%)	86 93

All (18) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	246	ARG
1	A	924	ARG
1	A	1321	ARG
1	A	1811	ARG
1	A	2105	HIS
1	A	3355	LYS
1	A	3477	GLU

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Mol	Chain	Res	Type
1	A	3478	GLU
1	A	3483	MET
1	A	3696	ARG
1	A	3729	MET
1	A	3733	ARG
1	A	3752	VAL
1	A	3753	LYS
1	A	3806	LEU
1	A	3864	ARG
1	A	3929	MET
1	A	3940	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1083	ASN
1	A	1374	GLN
1	A	1574	ASN
1	A	2091	HIS
1	A	2305	ASN
1	A	2351	GLN
1	A	2365	ASN
1	A	3139	GLN
1	A	3515	GLN
1	A	3580	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 monosaccharides in this entry.

5.6 Ligand geometry

1 ligand is modelled in this entry.

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	KWT	A	6101	-	30,35,35	3.76	14 (46%)	35,57,57	8.34	13 (37%)

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	KWT	A	6101	-	-	0/7/75/75	0/5/5/5

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	6101	KWT	C9-C4	12.13	1.64	1.53
2	A	6101	KWT	C9-C8	10.58	1.63	1.53
2	A	6101	KWT	O1-C2	5.41	1.43	1.35
2	A	6101	KWT	C15-C7	4.96	1.59	1.52
2	A	6101	KWT	C5-C6	4.19	1.54	1.49
2	A	6101	KWT	C3-C2	3.81	1.58	1.49
2	A	6101	KWT	C10-C9	3.35	1.58	1.53
2	A	6101	KWT	C3-C4	3.27	1.42	1.38
2	A	6101	KWT	C7-C6	3.27	1.54	1.47
2	A	6101	KWT	C8-C7	2.88	1.41	1.35
2	A	6101	KWT	O6-C21	2.71	1.41	1.35
2	A	6101	KWT	C23-C1	2.52	1.56	1.50
2	A	6101	KWT	C12-C11	2.40	1.57	1.52
2	A	6101	KWT	C12-C13	2.16	1.57	1.54

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	6101	KWT	C5-C4-C3	46.16	124.83	107.42
2	A	6101	KWT	C19-C3-C4	13.01	132.11	110.89
2	A	6101	KWT	C12-C13-C15	-5.07	102.98	109.34
2	A	6101	KWT	C11-O6-C21	3.98	123.10	117.06
2	A	6101	KWT	C16-C17-C18	-3.45	102.23	105.70
2	A	6101	KWT	C5-C6-C7	3.02	119.90	118.14
2	A	6101	KWT	C4-C9-C8	3.01	116.45	110.28
2	A	6101	KWT	C14-C13-C15	2.80	117.25	112.08
2	A	6101	KWT	C14-C13-C18	2.54	109.86	105.18
2	A	6101	KWT	C1-O1-C2	2.40	125.86	119.35
2	A	6101	KWT	C17-C18-C13	2.35	110.91	108.59
2	A	6101	KWT	O1-C2-O2	2.30	120.16	117.60
2	A	6101	KWT	O3-C6-C5	-2.22	117.54	121.37

There are no chirality outliers.

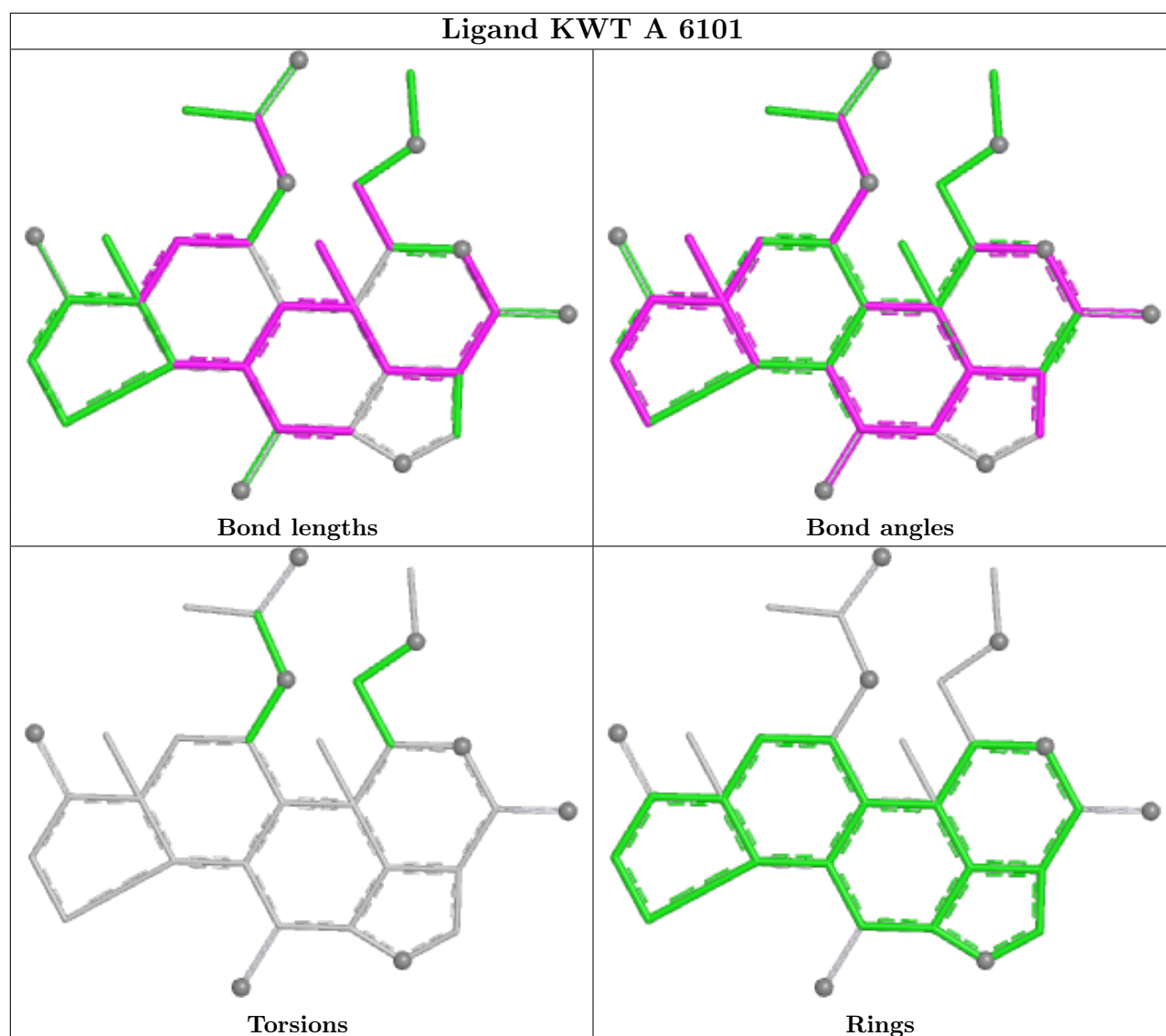
There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 23 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	6101	KWT	23	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 [\(i\)](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	4128:MET	C	6001:UNK	N	84.17

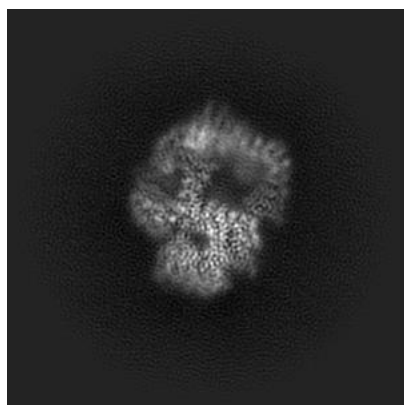
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13067. These allow visual inspection of the internal detail of the map and identification of artifacts.

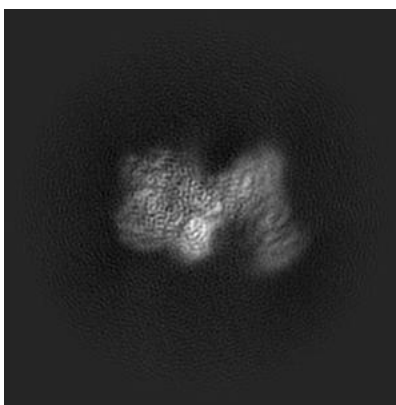
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

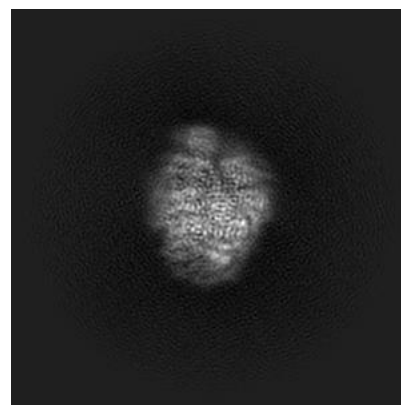
6.1.1 Primary map



X



Y

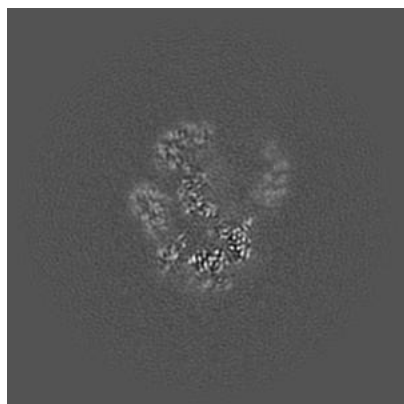


Z

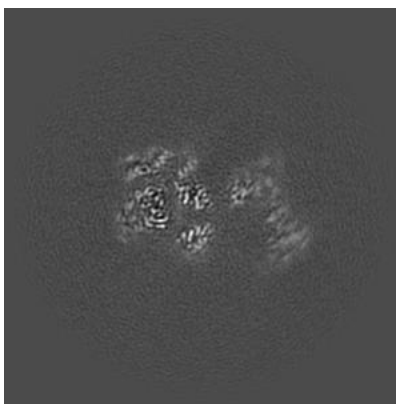
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

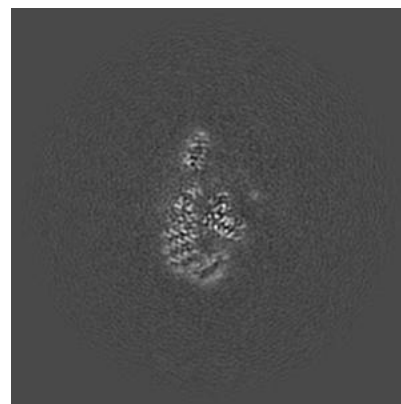
6.2.1 Primary map



X Index: 130



Y Index: 130

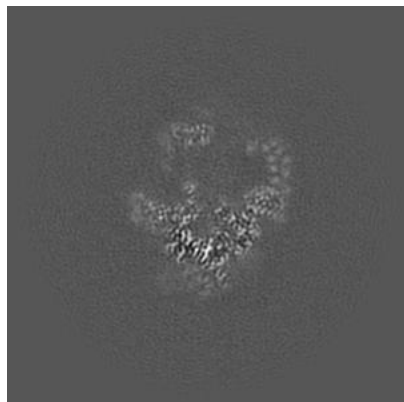


Z Index: 130

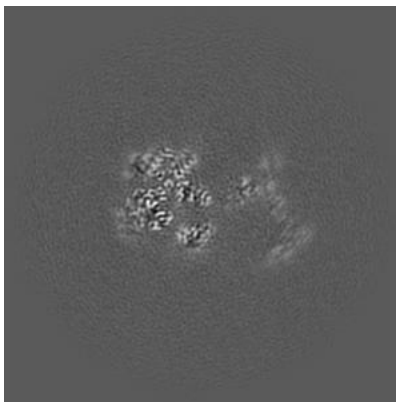
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

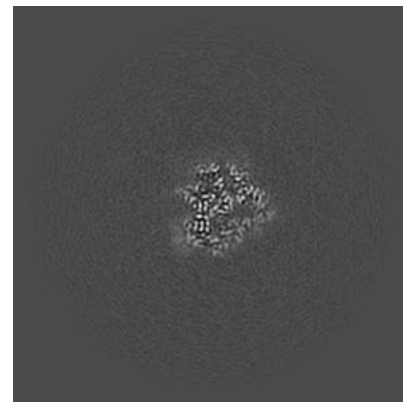
6.3.1 Primary map



X Index: 121



Y Index: 132



Z Index: 101

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

6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.22. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

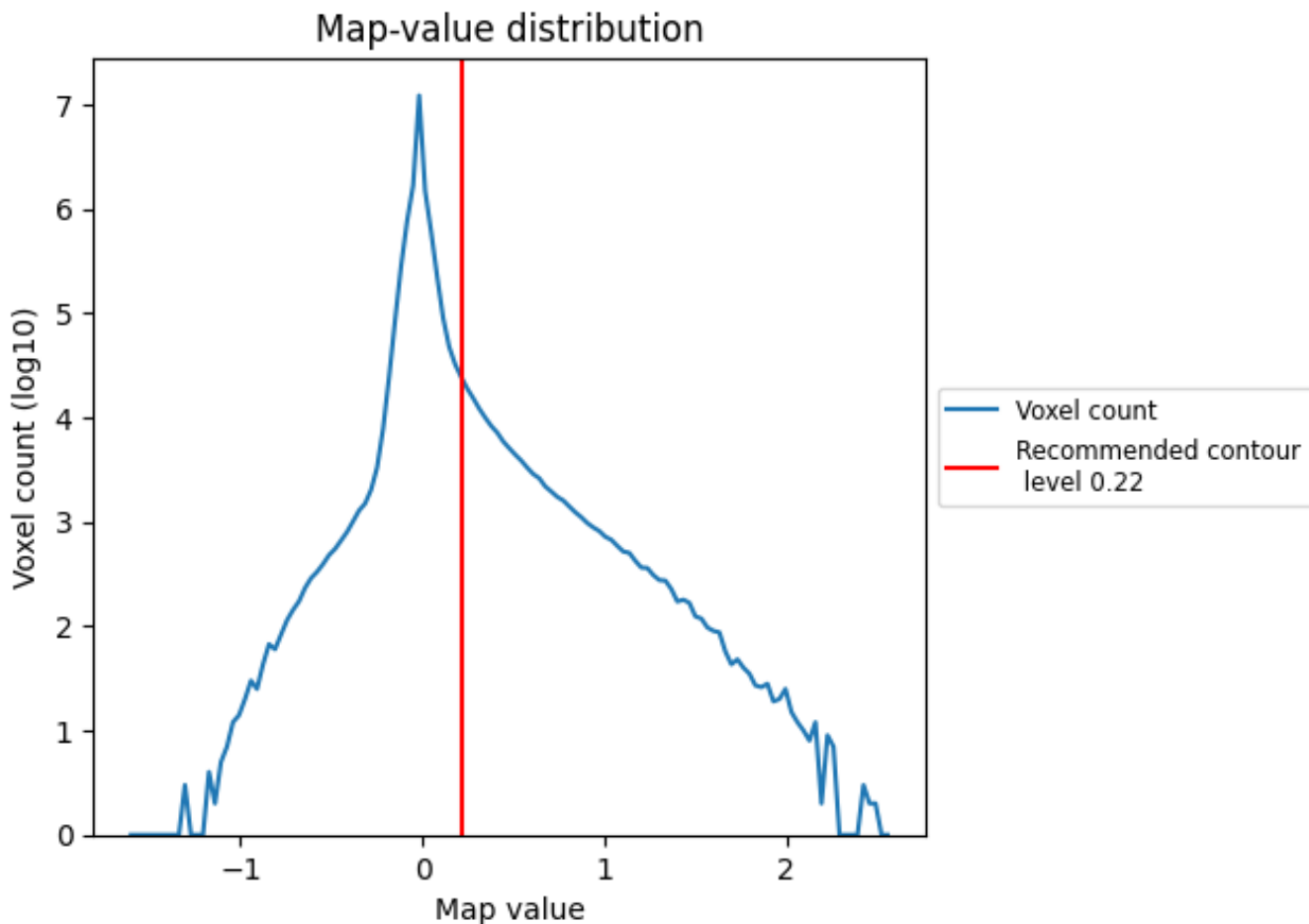
6.5 Mask visualisation

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

7 Map analysis [i](#)

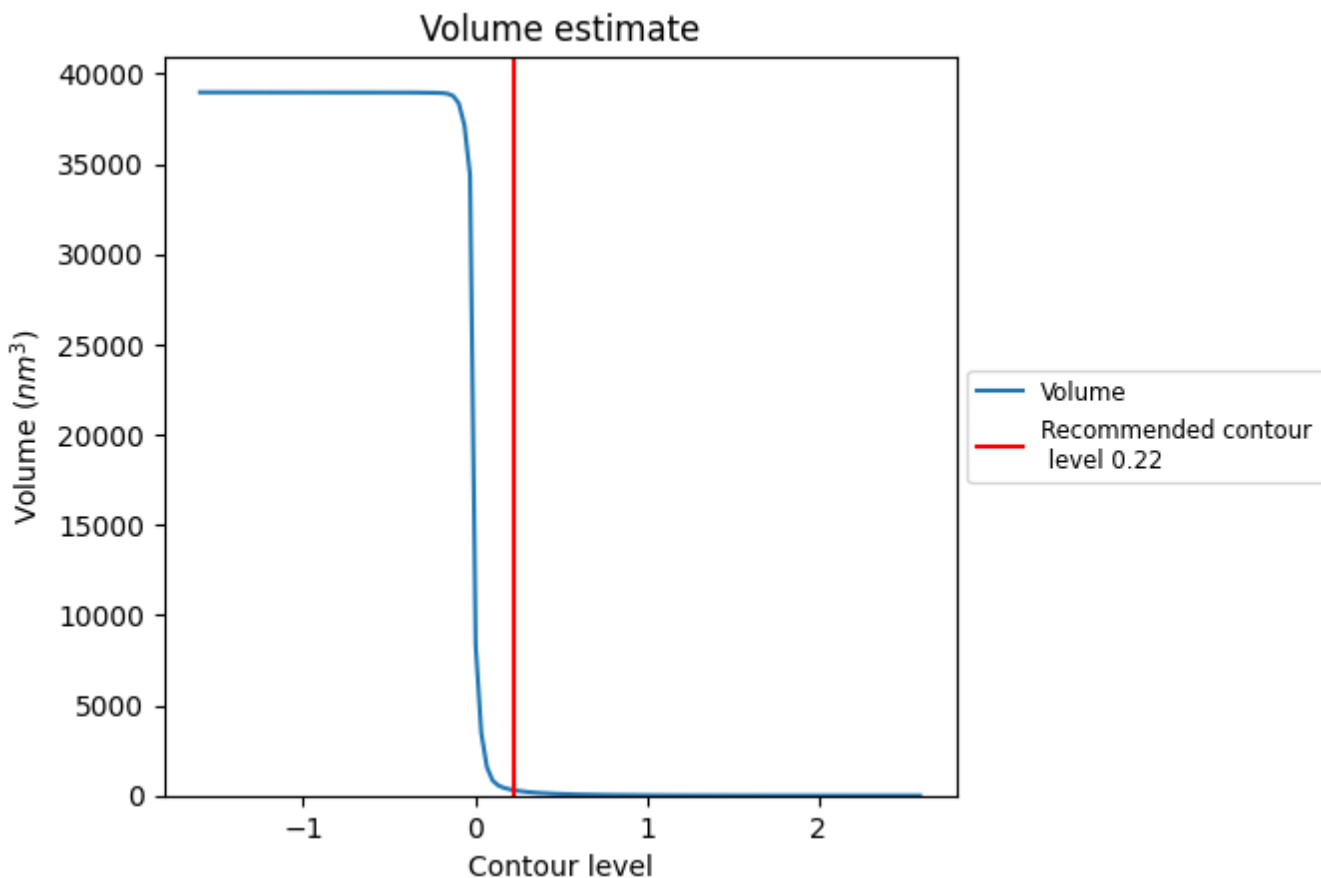
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

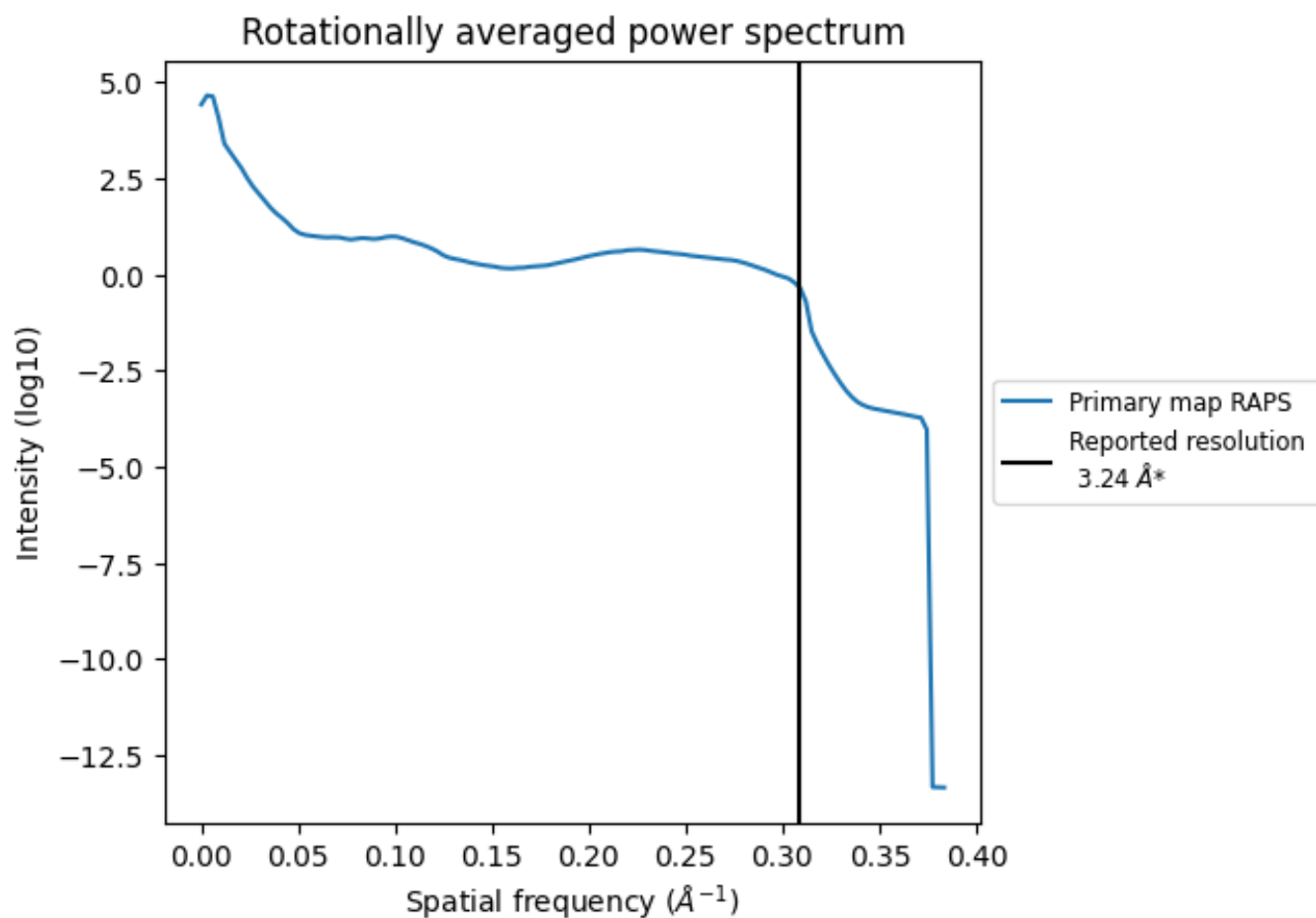
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 311 nm³; this corresponds to an approximate mass of 281 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 0.309 Å⁻¹

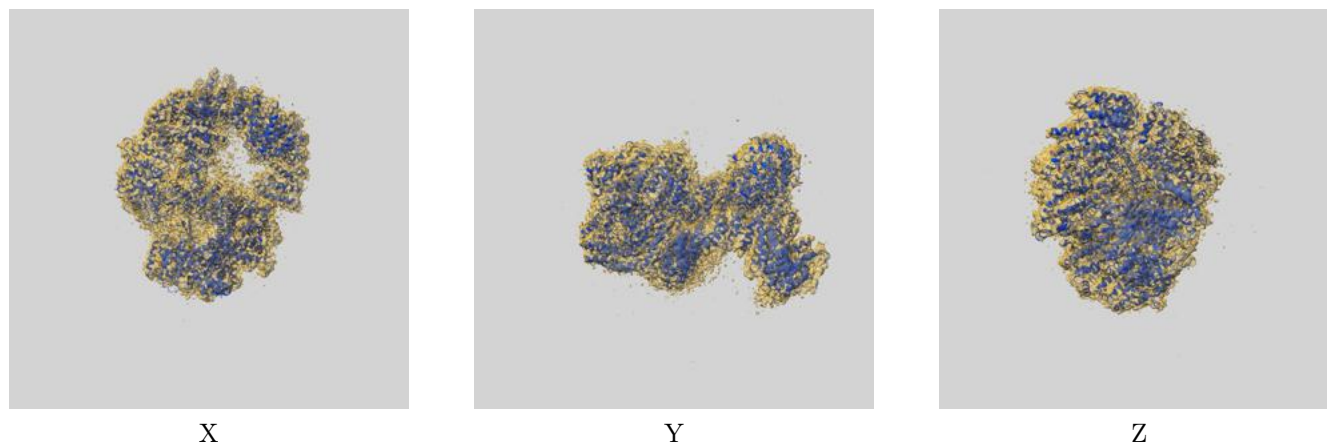
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

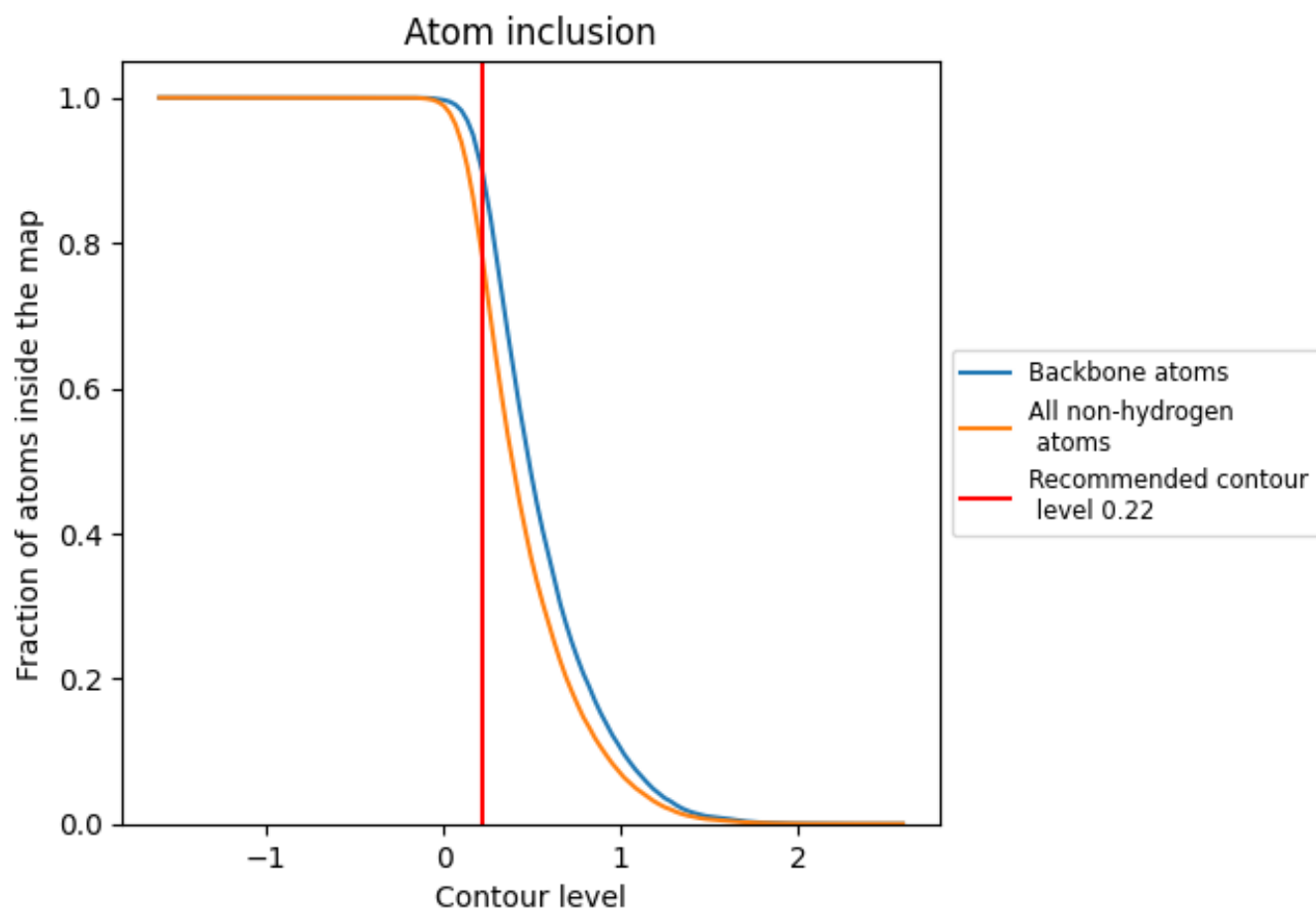
This section contains information regarding the fit between EMDB map EMD-13067 and PDB model 7OTV. Per-residue inclusion information can be found in section [3](#) on page [4](#).

9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.22 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 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 78% of all non-hydrogen atoms, are inside the map.