



Full wwPDB EM Validation Report ⓘ

Oct 12, 2026 – 04:01 PM EDT

PDB ID : 9YN2 / pdb_00009yn2
EMDB ID : EMD-73134
Title : Structure of mouse RyR1 mutant T4706M (EGTA-only dataset)
Authors : Weninger, G.; Marks, A.R.
Deposited on : 2025-10-10
Resolution : 2.80 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:

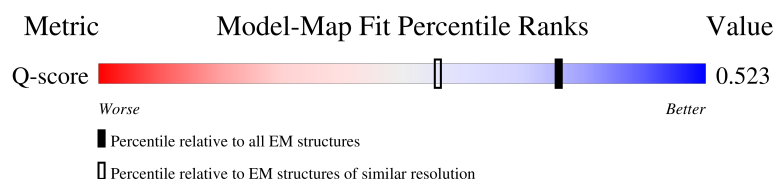
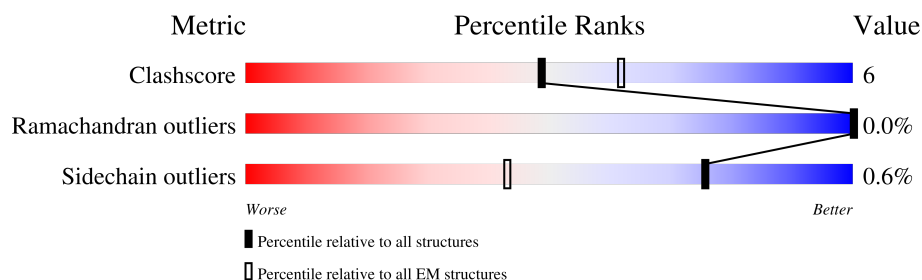
EMDB validation analysis : 0.0.1.dev133
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.2
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.51

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 2.80 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	11806 (2.30 - 3.30)

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	5035	
1	B	5035	
1	C	5035	
1	D	5035	

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Mol	Chain	Length	Quality of chain
2	E	108	81%18%
2	F	108	81%18%
2	G	108	85%14%
2	H	108	85%14%

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 142992 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 Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	4374	Total	C	N	O	S	1	0
			34810	22141	5985	6446	238		
1	B	4374	Total	C	N	O	S	1	0
			34810	22141	5985	6446	238		
1	C	4374	Total	C	N	O	S	1	0
			34810	22141	5985	6446	238		
1	D	4374	Total	C	N	O	S	1	0
			34810	22141	5985	6446	238		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	4706	MET	THR	conflict	UNP E9PZQ0
B	4706	MET	THR	conflict	UNP E9PZQ0
C	4706	MET	THR	conflict	UNP E9PZQ0
D	4706	MET	THR	conflict	UNP E9PZQ0

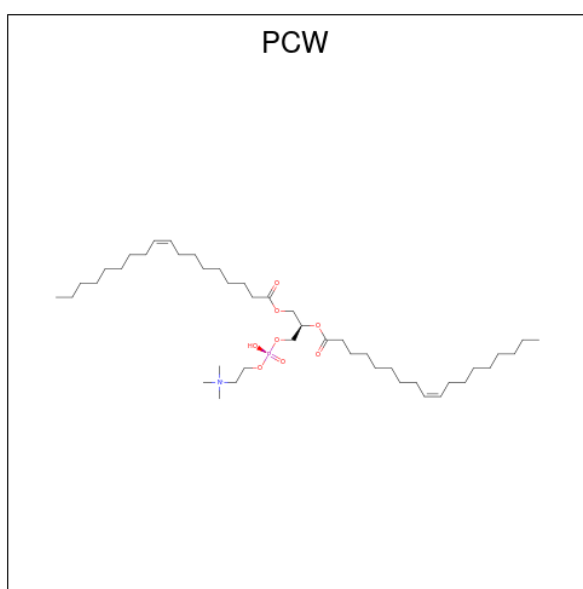
- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	E	107	Total	C	N	O	S	0	0
			829	526	145	155	3		
2	F	107	Total	C	N	O	S	0	0
			829	526	145	155	3		
2	G	107	Total	C	N	O	S	0	0
			829	526	145	155	3		
2	H	107	Total	C	N	O	S	0	0
			829	526	145	155	3		

- Molecule 3 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
3	A	1	Total	Zn	0
			1	1	
3	B	1	Total	Zn	0
			1	1	
3	C	1	Total	Zn	0
			1	1	
3	D	1	Total	Zn	0
			1	1	

- Molecule 4 is 1,2-DIOLEOYL-SN-GLYCERO-3-PHOSPHOCHOLINE (CCD ID: PCW) (formula: $C_{44}H_{85}NO_8P$).



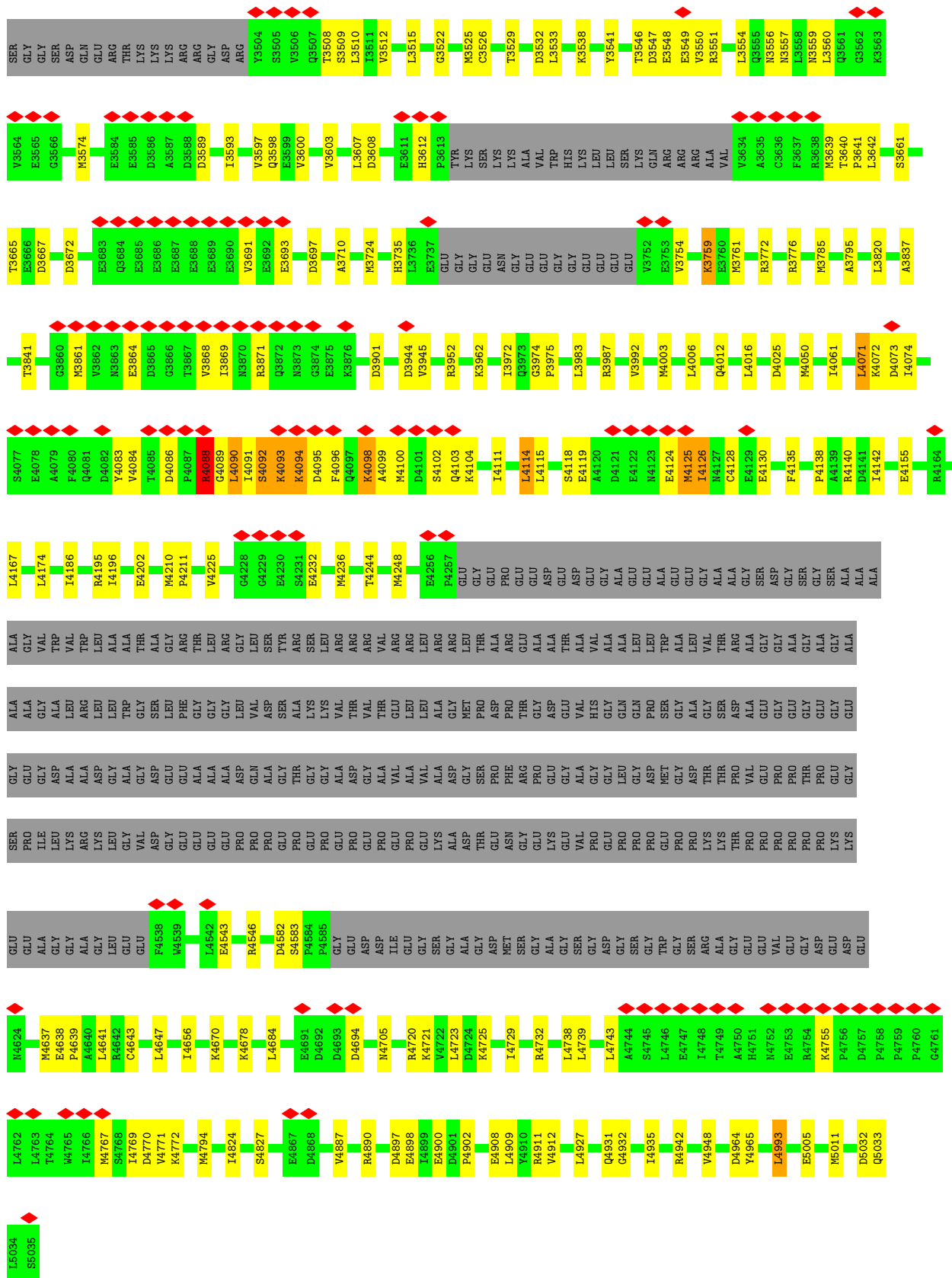
Mol	Chain	Residues	Atoms					AltConf
4	A	1	Total	C	N	O	P	0
			54	44	1	8	1	
4	A	1	Total	C	N	O	P	0
			54	44	1	8	1	
4	B	1	Total	C	N	O	P	0
			54	44	1	8	1	
4	B	1	Total	C	N	O	P	0
			54	44	1	8	1	
4	C	1	Total	C	N	O	P	0
			54	44	1	8	1	
4	C	1	Total	C	N	O	P	0
			54	44	1	8	1	
4	D	1	Total	C	N	O	P	0
			54	44	1	8	1	

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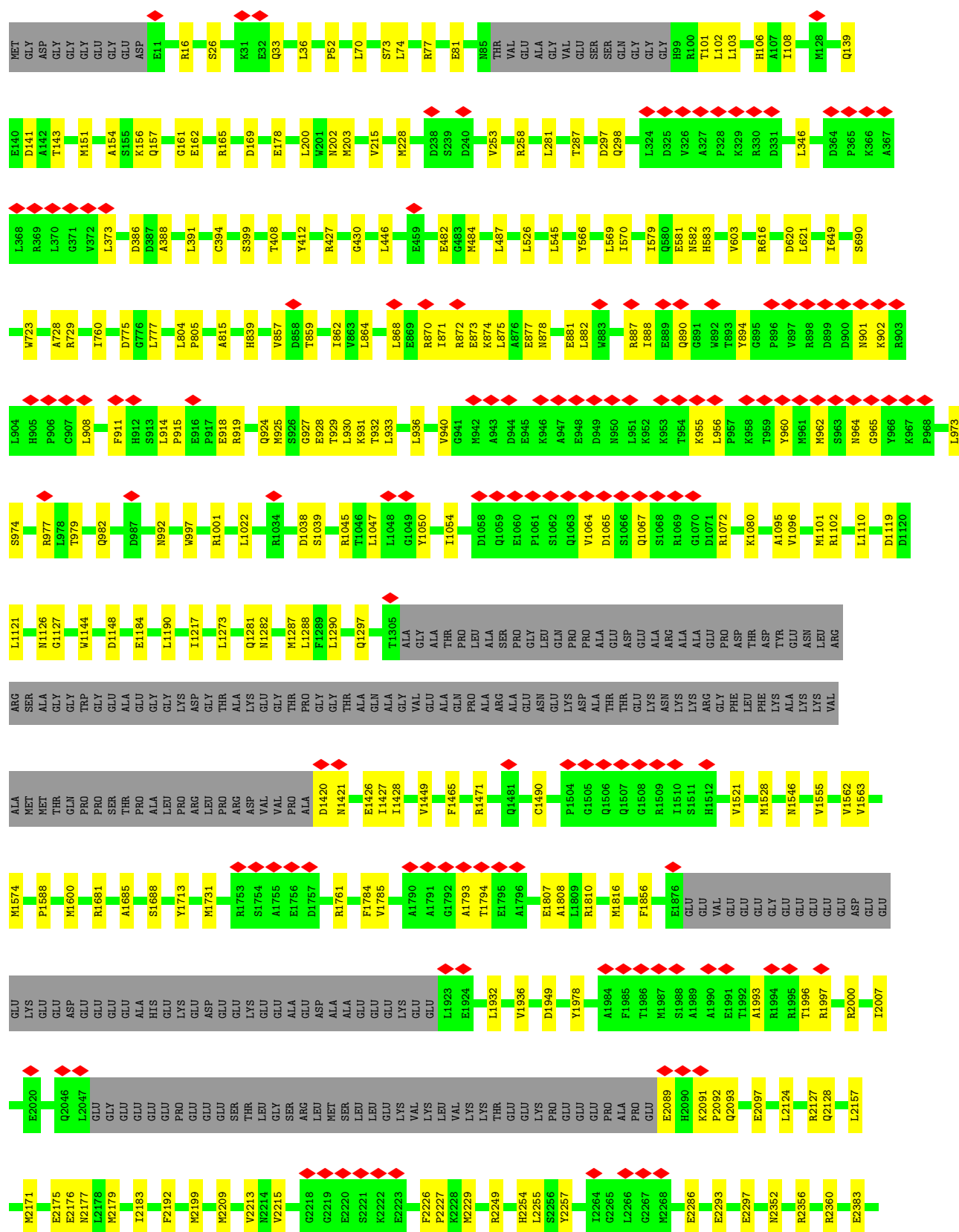
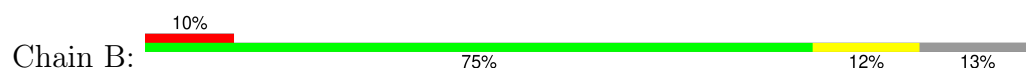
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Mol	Chain	Residues	Atoms					AltConf
4	D	1	Total	C	N	O	P	0
			54	44	1	8	1	

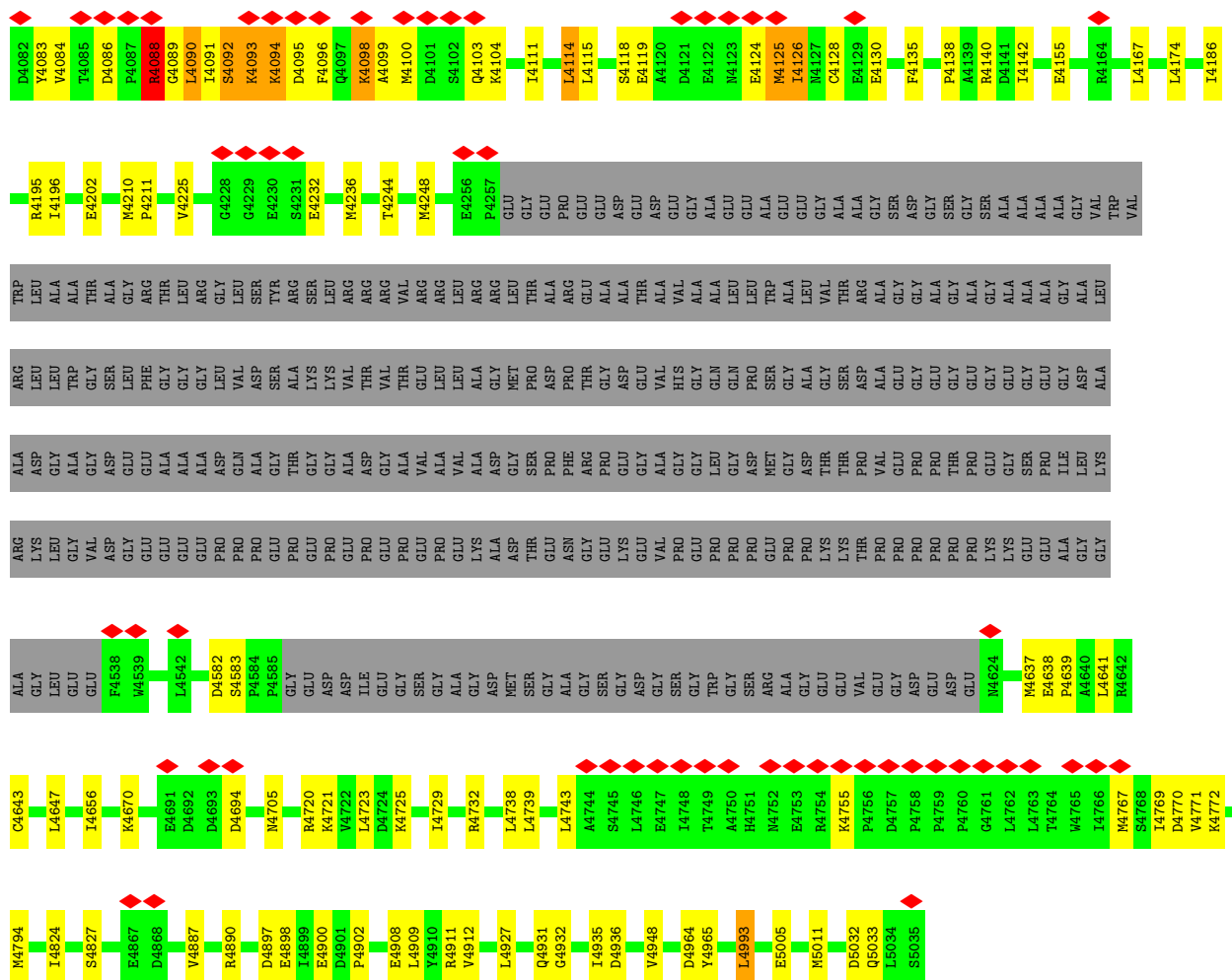




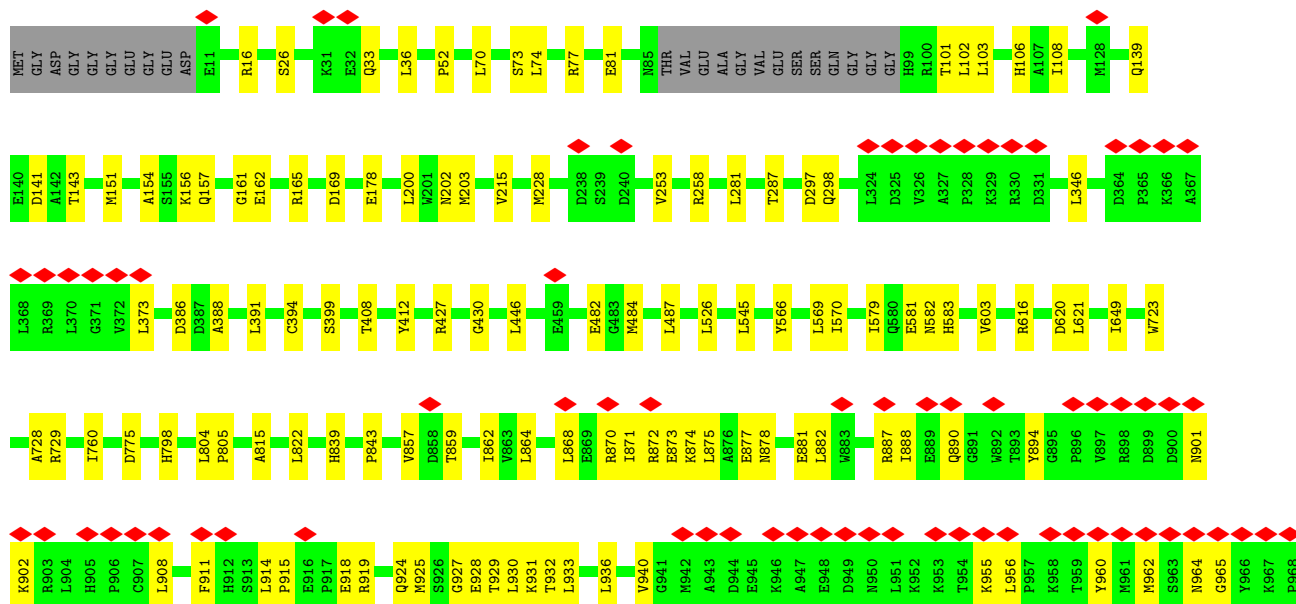
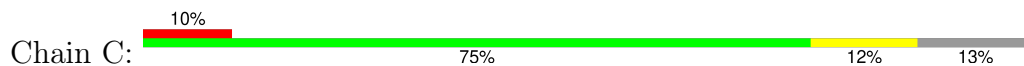
- Molecule 1: Ryanodine receptor 1



G3666	E3686	E3684	A3408	L3250	V2938	Q2878	I2818	K2758	P2391
T3967	E3687	E3584	L3409	L3250	T2939	L2879	A2819	F2759	A2392
V3668	E3688	E3585	ARG	ARG	T2939	A2880	E2820	A2760	R2393
I3669	E3689	E3586	L3412	M3267	G2941	SER	W2821	E2761	
N3670	A3587	L3413	L3413	T3274	G2941	L2942	W2822	Y2762	L2624
R3671	L3588		ALA	ARG	K2943	L2944	T2823	T2763	R2625
S3672	D3589		THR	THR	D2944	H2884	W2824	H2764	R2626
T3673			GLN	VAL	M2945	H2885	E2825	E2765	V2628
V3674	A3593		L3435	L3282	M2945	T2886	W2826	K2766	M2640
W3675	V3597		M3438	W3285	E2946	V2887	K2826	Y2767	P2641
X3676	Q3598		V3439	P3290	D2948	G2888	A2827	A2768	ARG
Y3677	S3595		G3440	E3291	T2949	R2889	E2828	F2769	ARG
Z3678	V3506		A3292	E3291	T2949	K2890	E2829	D2770	GLU
A3679	Q3507		L3442	P3293	S2950	K2891	G2830	E2771	GLY
C3680	T3508		F3443	P3294	E2953	K2892	E2831	K2771	GLU
E3681	S3509			P3295	L2964	Q2893	GLU	I2772	P2411
G3682	L3510		S3447	A3296	L2964	L2895	LYS	O2773	P2412
I3683	V3512		K3448	L3297	S2971	E2896	THR	N2774	E2413
K3684	L3515		S3449	P3298	F2974	L2896	GLU	W2775	E2414
M3685	G3522		H3450	A3299	T2975	E2897	LYS	Y2776	E2415
O3686	L3526		K3453	G3300	F2975	K2898	LYS	S2777	R2416
Q3687	Q3526		R3454	A3301	L2978	E2899	THR	Y2778	
R3688	K3456		E3455	G3306	E2979	G2900	ARG	Q2779	D2432
S3689	Q3457		Q3457	T3306	V2981	S2902	LYS	E2780	R2436
T3690	V3461			L3316	V2982	H2903	GLN	I2781	R2437
V3691	E3464			S3348	S2983	P2904	THR	K2723	E2438
W3692	I3465			L3360	S2984	L2906	ALA	T2724	
X3693	K3466			P3361	S2985	L2907	GLN	E2725	
Y3694	M3467			L3366	G2986	V2907	THR	ASP	
Z3695	M3468			R3367	E2987	P2908	TTR	ALA	
A3696	S3469			K3368	E2988	Y2909	ARG	GLY	
C3697	F3470			R3369	E2989	D2910	GLU	N2735	G2481
E3698	L3471			V3373	S2990	T2911	GLY	D2736	K2482
G3699	T3472			E3377	L3003	L2912	Y2856	F2737	G2484
I3700	ALA			E3378	L3003	L2912	N2857	Y2738	K2485
K3701	ASP			E3379	V3051	L2913	P2858	K2739	L2486
M3702	ASN			E3380	R3052	A2914	P2859	P2740	V2487
O3703	LYS			E3381	H3053	K2915	Q2860	E2741	M2503
Q3704	SER			R3382	E3053	E2916	P2861	E2742	V2510
R3705	LYS			E3383	L3076	K2917	D2862	T2743	V2525
S3706	NET			E3384	D3077	A2918	L2863	L2744	G2526
T3707	ALA			A3384	A3078	D2919	S2864	N2745	T2539
V3708	LYS			K3385	M3082	R2920	V2865	V2746	
W3709	ALA			K3386	M3082	E2921	E2800	I2747	
X3710	GLY			A3387	L3093	E2922	V2866	T2748	
Y3711	ASP			E3388	E3102	K2923	T2867	I2749	
Z3712	VAL			E3389	E3102	A2924	D2802	P2749	M2583
A3713	GLN			E3390	E3105	Q2925	S2869	E2750	L2596
C3714	SER			E3391	K3106	E2926	R2870	K2751	T2597



• Molecule 1: Ryanodine receptor 1



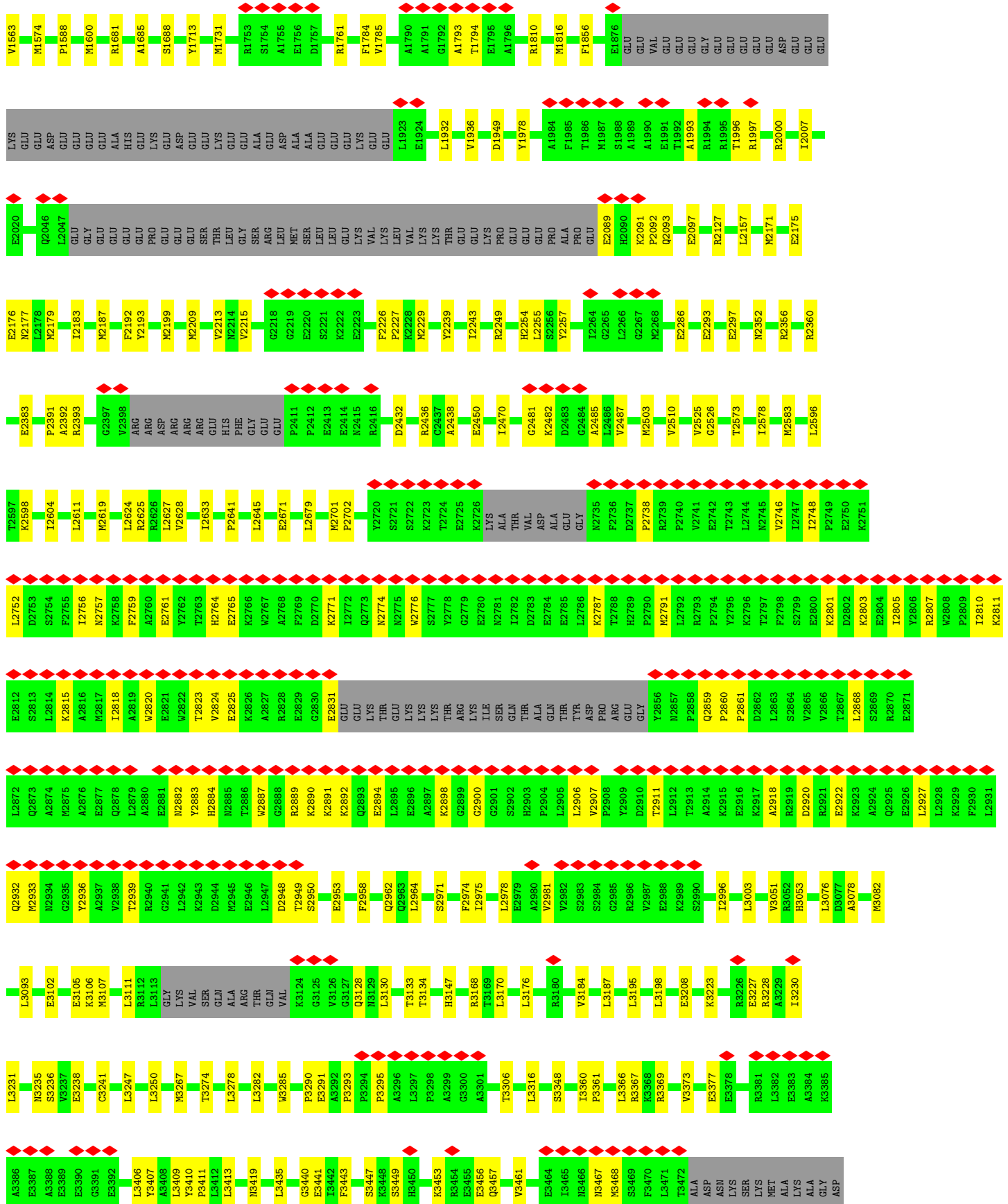


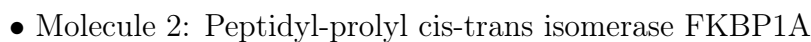


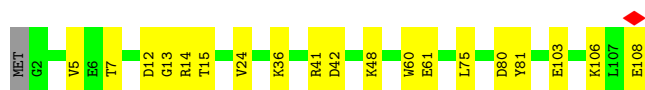


Chain D:

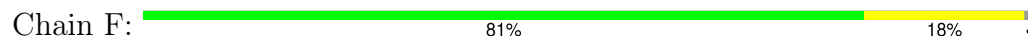




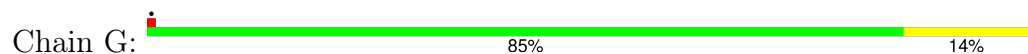




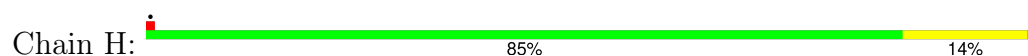
- Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



- Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



- Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	386508	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.639	Depositor
Minimum map value	0.000	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.025	Depositor
Recommended contour level	0.12	Depositor
Map size (Å)	428.032, 428.032, 428.032	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.836, 0.836, 0.836	Depositor

5 Model quality

5.1 Standard geometry

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.30	0/35602	0.41	1/48224 (0.0%)
1	B	0.30	0/35602	0.41	1/48224 (0.0%)
1	C	0.30	0/35602	0.41	1/48224 (0.0%)
1	D	0.30	0/35602	0.41	1/48224 (0.0%)
2	E	0.24	0/847	0.35	0/1142
2	F	0.25	0/847	0.35	0/1142
2	G	0.25	0/847	0.35	0/1142
2	H	0.25	0/847	0.35	0/1142
All	All	0.30	0/145796	0.41	4/197464 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	2
1	C	0	2
1	D	0	2
All	All	0	8

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	3241	CYS	CA-CB-SG	5.84	127.84	114.40
1	D	3241	CYS	CA-CB-SG	5.84	127.83	114.40
1	A	3241	CYS	CA-CB-SG	5.84	127.83	114.40
1	C	3241	CYS	CA-CB-SG	5.84	127.83	114.40

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	4088	ARG	Sidechain
1	A	4732	ARG	Sidechain
1	B	4088	ARG	Sidechain
1	B	4732	ARG	Sidechain
1	C	4088	ARG	Sidechain
1	C	4732	ARG	Sidechain
1	D	4088	ARG	Sidechain
1	D	4732	ARG	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	34810	0	34403	407	0
1	B	34810	0	34403	406	0
1	C	34810	0	34403	400	0
1	D	34810	0	34403	413	0
2	E	829	0	826	14	0
2	F	829	0	826	18	0
2	G	829	0	826	14	0
2	H	829	0	826	13	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	108	0	168	0	0
4	B	108	0	168	0	0
4	C	108	0	168	0	0
4	D	108	0	168	0	0
All	All	142992	0	141588	1645	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 6.

All (1645) 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:C:2215:VAL:HG21	1:C:2229:MET:HE1	1.37	1.02
1:A:2215:VAL:HG21	1:A:2229:MET:HE1	1.37	1.01
1:D:2215:VAL:HG21	1:D:2229:MET:HE1	1.37	1.00
1:B:2215:VAL:HG21	1:B:2229:MET:HE1	1.38	1.00
1:B:1731:MET:HE1	1:B:2157:LEU:HD22	1.45	0.98
1:A:1731:MET:HE1	1:A:2157:LEU:HD22	1.45	0.98
1:D:1731:MET:HE1	1:D:2157:LEU:HD22	1.45	0.97
1:C:1731:MET:HE1	1:C:2157:LEU:HD22	1.45	0.96
1:B:3546:THR:OG1	1:B:3549:GLU:OE1	1.84	0.95
1:C:2825:GLU:O	1:C:2936:TYR:HA	1.67	0.95
1:D:2825:GLU:O	1:D:2936:TYR:HA	1.67	0.94
1:D:3546:THR:OG1	1:D:3549:GLU:OE1	1.84	0.94
1:A:2825:GLU:O	1:A:2936:TYR:HA	1.67	0.94
1:B:2825:GLU:O	1:B:2936:TYR:HA	1.67	0.94
1:C:3546:THR:OG1	1:C:3549:GLU:OE1	1.84	0.94
1:A:3546:THR:OG1	1:A:3549:GLU:OE1	1.84	0.92
1:D:2823:THR:HG1	1:D:2939:THR:HG1	1.11	0.89
1:A:3538:LYS:NZ	1:A:3608:ASP:OD2	2.07	0.88
1:C:3538:LYS:NZ	1:C:3608:ASP:OD2	2.07	0.88
1:D:3538:LYS:NZ	1:D:3608:ASP:OD2	2.07	0.88
1:D:1038:ASP:OD2	1:D:1039:SER:N	2.08	0.87
1:C:1038:ASP:OD2	1:C:1039:SER:N	2.08	0.87
1:A:1038:ASP:OD2	1:A:1039:SER:N	2.08	0.86
1:B:1038:ASP:OD2	1:B:1039:SER:N	2.08	0.86
1:B:3538:LYS:NZ	1:B:3608:ASP:OD2	2.07	0.85
1:B:1794:THR:O	1:B:2177:ASN:ND2	2.10	0.85
1:A:1794:THR:O	1:A:2177:ASN:ND2	2.10	0.84
1:C:1794:THR:O	1:C:2177:ASN:ND2	2.10	0.84
1:D:1794:THR:O	1:D:2177:ASN:ND2	2.10	0.84
1:A:3170:LEU:HD12	1:A:3195:LEU:HD11	1.61	0.82
1:C:3170:LEU:HD12	1:C:3195:LEU:HD11	1.61	0.82
1:A:2765:GLU:OE2	1:A:2859:GLN:N	2.14	0.81
1:B:2765:GLU:OE2	1:B:2859:GLN:N	2.14	0.81
1:C:2765:GLU:OE2	1:C:2859:GLN:N	2.14	0.81
2:E:106:LYS:NZ	2:E:108:GLU:OE1	2.13	0.81
1:D:2765:GLU:OE2	1:D:2859:GLN:N	2.14	0.81
1:D:3170:LEU:HD12	1:D:3195:LEU:HD11	1.61	0.81
1:B:3170:LEU:HD12	1:B:3195:LEU:HD11	1.61	0.80
2:F:88:HIS:HD2	2:F:91:ILE:HD12	1.47	0.79
1:B:4084:VAL:HG13	1:B:4089:GLY:HA2	1.65	0.78
1:A:2215:VAL:CG2	1:A:2229:MET:HE1	2.14	0.78
1:B:2215:VAL:CG2	1:B:2229:MET:HE1	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4084:VAL:HG13	1:D:4089:GLY:HA2	1.65	0.78
1:B:1793:ALA:O	1:B:1794:THR:OG1	2.03	0.77
2:G:88:HIS:HD2	2:G:91:ILE:HD12	1.49	0.77
2:H:88:HIS:HD2	2:H:91:ILE:HD12	1.49	0.77
1:B:3223:LYS:O	1:B:3228:ARG:NH2	2.18	0.77
1:B:3456:GLU:OE2	1:B:3509:SER:OG	2.03	0.77
1:A:4084:VAL:HG13	1:A:4089:GLY:HA2	1.65	0.76
1:A:1793:ALA:O	1:A:1794:THR:OG1	2.03	0.76
1:C:2215:VAL:CG2	1:C:2229:MET:HE1	2.14	0.76
1:C:3223:LYS:O	1:C:3228:ARG:NH2	2.18	0.76
1:D:3223:LYS:O	1:D:3228:ARG:NH2	2.18	0.76
1:C:4084:VAL:HG13	1:C:4089:GLY:HA2	1.65	0.76
1:A:3456:GLU:OE2	1:A:3509:SER:OG	2.03	0.76
1:C:3456:GLU:OE2	1:C:3509:SER:OG	2.03	0.76
1:A:2757:ASN:OD1	1:A:2807:ARG:NH1	2.19	0.76
1:D:2215:VAL:CG2	1:D:2229:MET:HE1	2.14	0.75
1:D:3456:GLU:OE2	1:D:3509:SER:OG	2.03	0.75
1:A:3223:LYS:O	1:A:3228:ARG:NH2	2.18	0.75
2:H:24:VAL:HG22	2:H:48:LYS:HG2	1.68	0.75
1:D:2757:ASN:OD1	1:D:2807:ARG:NH1	2.19	0.75
1:B:2757:ASN:OD1	1:B:2807:ARG:NH1	2.19	0.75
1:C:2757:ASN:OD1	1:C:2807:ARG:NH1	2.19	0.74
1:C:4824:ILE:O	1:C:4827:SER:OG	2.05	0.74
1:D:862:ILE:O	1:D:931:LYS:NZ	2.20	0.74
1:D:1793:ALA:O	1:D:1794:THR:OG1	2.03	0.74
1:B:862:ILE:O	1:B:931:LYS:NZ	2.20	0.74
1:D:2470:ILE:HG21	1:D:2503:MET:HE3	1.70	0.74
1:D:870:ARG:O	1:D:874:LYS:NZ	2.19	0.73
1:A:870:ARG:O	1:A:874:LYS:NZ	2.19	0.73
1:C:862:ILE:O	1:C:931:LYS:NZ	2.20	0.73
1:A:862:ILE:O	1:A:931:LYS:NZ	2.20	0.73
1:D:3962:LYS:NZ	1:D:4025:ASP:OD1	2.21	0.73
1:B:4093:LYS:HB3	1:B:4124:GLU:HB3	1.71	0.72
1:B:2738:PRO:O	1:B:2892:LYS:NZ	2.23	0.72
1:D:868:LEU:HD12	1:D:930:LEU:HD12	1.70	0.72
1:A:2470:ILE:HG21	1:A:2503:MET:HE3	1.70	0.72
1:D:2738:PRO:O	1:D:2892:LYS:NZ	2.23	0.72
1:A:3962:LYS:NZ	1:A:4025:ASP:OD1	2.21	0.72
1:A:4093:LYS:HB3	1:A:4124:GLU:HB3	1.71	0.72
1:B:868:LEU:HD12	1:B:930:LEU:HD12	1.70	0.72
1:B:2470:ILE:HG21	1:B:2503:MET:HE3	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1793:ALA:O	1:C:1794:THR:OG1	2.03	0.72
1:C:868:LEU:HD12	1:C:930:LEU:HD12	1.70	0.72
1:D:4824:ILE:O	1:D:4827:SER:OG	2.05	0.72
1:C:2470:ILE:HG21	1:C:2503:MET:HE3	1.70	0.71
1:B:870:ARG:O	1:B:874:LYS:NZ	2.19	0.71
1:B:3467:ASN:ND2	1:B:3508:THR:O	2.24	0.71
1:A:868:LEU:HD12	1:A:930:LEU:HD12	1.70	0.71
1:A:3467:ASN:ND2	1:A:3508:THR:O	2.24	0.71
2:F:12:ASP:OD1	2:F:13:GLY:N	2.24	0.71
1:C:2738:PRO:O	1:C:2892:LYS:NZ	2.22	0.71
1:A:4824:ILE:O	1:A:4827:SER:OG	2.05	0.71
1:D:2859:GLN:N	1:D:2859:GLN:OE1	2.24	0.71
1:C:3541:TYR:CE2	1:C:3550:VAL:HG21	2.26	0.71
1:A:2831:GLU:N	1:A:2933:MET:O	2.24	0.70
1:B:2596:LEU:HD21	1:B:2604:ILE:HD12	1.73	0.70
1:C:4093:LYS:HB3	1:C:4124:GLU:HB3	1.71	0.70
1:D:4093:LYS:HB3	1:D:4124:GLU:HB3	1.71	0.70
1:A:2738:PRO:O	1:A:2892:LYS:NZ	2.22	0.70
1:C:3467:ASN:ND2	1:C:3508:THR:O	2.24	0.70
1:B:2859:GLN:N	1:B:2859:GLN:OE1	2.24	0.70
1:B:4824:ILE:O	1:B:4827:SER:OG	2.05	0.70
1:C:2859:GLN:N	1:C:2859:GLN:OE1	2.24	0.70
1:D:3467:ASN:ND2	1:D:3508:THR:O	2.24	0.70
1:A:2859:GLN:N	1:A:2859:GLN:OE1	2.24	0.70
1:A:3541:TYR:CE2	1:A:3550:VAL:HG21	2.26	0.70
1:D:2831:GLU:N	1:D:2933:MET:O	2.24	0.70
1:D:3541:TYR:CE2	1:D:3550:VAL:HG21	2.26	0.70
2:G:91:ILE:HD11	1:C:1685:ALA:HA	1.74	0.70
1:B:3541:TYR:CE2	1:B:3550:VAL:HG21	2.26	0.70
1:C:870:ARG:O	1:C:874:LYS:NZ	2.19	0.70
1:C:2831:GLU:N	1:C:2933:MET:O	2.24	0.70
1:C:2596:LEU:HD21	1:C:2604:ILE:HD12	1.73	0.70
1:A:2953:GLU:N	1:A:2953:GLU:OE1	2.25	0.69
2:F:91:ILE:HD11	1:B:1685:ALA:HA	1.73	0.69
1:B:2953:GLU:N	1:B:2953:GLU:OE1	2.25	0.69
1:A:2596:LEU:HD21	1:A:2604:ILE:HD12	1.73	0.69
1:B:2831:GLU:N	1:B:2933:MET:O	2.24	0.69
2:H:91:ILE:HD11	1:D:1685:ALA:HA	1.74	0.69
1:C:2887:TRP:CD1	1:C:2891:LYS:HZ1	2.11	0.69
1:D:2887:TRP:CD1	1:D:2891:LYS:HZ1	2.11	0.69
1:C:3962:LYS:NZ	1:C:4025:ASP:OD1	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:888:ILE:HG22	1:B:962:MET:CE	2.23	0.69
1:B:2887:TRP:CD1	1:B:2891:LYS:HZ1	2.11	0.69
1:D:2596:LEU:HD21	1:D:2604:ILE:HD12	1.73	0.69
1:D:2953:GLU:N	1:D:2953:GLU:OE1	2.25	0.69
1:A:888:ILE:HG22	1:A:962:MET:CE	2.23	0.69
1:C:2953:GLU:OE1	1:C:2953:GLU:N	2.25	0.69
1:B:857:VAL:HG12	1:B:992:ASN:OD1	1.94	0.68
1:B:3962:LYS:NZ	1:B:4025:ASP:OD1	2.21	0.68
1:C:888:ILE:HG22	1:C:962:MET:CE	2.23	0.68
2:G:12:ASP:OD1	2:G:13:GLY:N	2.26	0.68
1:D:857:VAL:HG12	1:D:992:ASN:OD1	1.94	0.68
1:A:2887:TRP:CD1	1:A:2891:LYS:HZ1	2.11	0.68
1:A:3526:CYS:SG	1:A:3600:VAL:HG21	2.34	0.68
1:C:4090:LEU:HB3	1:C:4125:MET:HB3	1.75	0.68
1:D:888:ILE:HG22	1:D:962:MET:CE	2.23	0.68
1:D:4090:LEU:HB3	1:D:4125:MET:HB3	1.75	0.68
1:B:3526:CYS:SG	1:B:3600:VAL:HG21	2.34	0.68
1:C:857:VAL:HG12	1:C:992:ASN:OD1	1.94	0.68
1:D:3526:CYS:SG	1:D:3600:VAL:HG21	2.34	0.68
1:B:2748:ILE:HD12	1:B:2818:ILE:HD11	1.76	0.67
1:A:857:VAL:HG12	1:A:992:ASN:OD1	1.94	0.67
1:B:3105:GLU:OE1	1:B:3168:ARG:NH2	2.28	0.67
1:C:3526:CYS:SG	1:C:3600:VAL:HG21	2.34	0.67
1:B:4090:LEU:HB3	1:B:4125:MET:HB3	1.75	0.67
1:D:2823:THR:OG1	1:D:2939:THR:OG1	1.88	0.67
1:A:102:LEU:HB3	1:A:151:MET:HE1	1.77	0.67
1:C:2748:ILE:HD12	1:C:2818:ILE:HD11	1.76	0.67
1:D:3105:GLU:OE1	1:D:3168:ARG:NH2	2.28	0.67
1:D:3589:ASP:O	1:D:3593:ILE:HD12	1.94	0.67
1:C:70:LEU:HD21	1:C:203:MET:HE1	1.77	0.67
1:D:102:LEU:HB3	1:D:151:MET:HE1	1.77	0.67
1:A:3105:GLU:OE1	1:A:3168:ARG:NH2	2.28	0.67
1:A:3447:SER:O	1:A:3453:LYS:NZ	2.28	0.67
2:G:88:HIS:CD2	2:G:91:ILE:HD12	2.29	0.67
2:H:88:HIS:CD2	2:H:91:ILE:HD12	2.29	0.67
1:B:3589:ASP:O	1:B:3593:ILE:HD12	1.95	0.67
1:D:70:LEU:HD21	1:D:203:MET:HE1	1.77	0.67
1:C:3105:GLU:OE1	1:C:3168:ARG:NH2	2.28	0.67
1:C:3589:ASP:O	1:C:3593:ILE:HD12	1.94	0.67
1:A:871:ILE:HD12	1:A:1050:TYR:HD1	1.60	0.67
2:E:12:ASP:OD1	2:E:13:GLY:N	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3447:SER:O	1:C:3453:LYS:NZ	2.28	0.67
1:A:2748:ILE:HD12	1:A:2818:ILE:HD11	1.77	0.66
1:A:70:LEU:HD21	1:A:203:MET:HE1	1.77	0.66
1:C:3235:ASN:OD1	1:C:3236:SER:N	2.29	0.66
1:B:70:LEU:HD21	1:B:203:MET:HE1	1.77	0.66
1:C:102:LEU:HB3	1:C:151:MET:HE1	1.77	0.66
1:A:4090:LEU:HB3	1:A:4125:MET:HB3	1.75	0.66
1:B:3447:SER:O	1:B:3453:LYS:NZ	2.28	0.66
1:B:3235:ASN:OD1	1:B:3236:SER:N	2.29	0.66
1:A:2171:MET:HE3	1:A:2229:MET:SD	2.36	0.66
1:D:2748:ILE:HD12	1:D:2818:ILE:HD11	1.77	0.66
1:A:3235:ASN:OD1	1:A:3236:SER:N	2.29	0.66
1:A:3589:ASP:O	1:A:3593:ILE:HD12	1.95	0.66
1:D:2171:MET:HE3	1:D:2229:MET:SD	2.36	0.66
1:A:4089:GLY:O	1:A:4091:ILE:N	2.29	0.66
1:A:2249:ARG:NH2	1:A:2286:GLU:OE2	2.29	0.66
2:F:88:HIS:CD2	2:F:91:ILE:HD12	2.31	0.66
1:D:871:ILE:HD12	1:D:1050:TYR:HD1	1.60	0.66
1:C:2249:ARG:NH2	1:C:2286:GLU:OE2	2.29	0.65
1:D:3447:SER:O	1:D:3453:LYS:NZ	2.28	0.65
1:B:102:LEU:HB3	1:B:151:MET:HE1	1.77	0.65
1:B:4089:GLY:O	1:B:4091:ILE:N	2.29	0.65
1:C:4089:GLY:O	1:C:4091:ILE:N	2.29	0.65
1:B:871:ILE:HD12	1:B:1050:TYR:HD1	1.60	0.65
1:D:3235:ASN:OD1	1:D:3236:SER:N	2.29	0.65
1:A:924:GLN:O	1:A:927:GLY:N	2.30	0.65
1:B:2171:MET:HE3	1:B:2229:MET:SD	2.36	0.65
1:C:871:ILE:HD12	1:C:1050:TYR:HD1	1.60	0.65
1:C:2171:MET:HE3	1:C:2229:MET:SD	2.36	0.65
1:D:4089:GLY:O	1:D:4091:ILE:N	2.29	0.65
1:A:427:ARG:NH2	1:A:430:GLY:O	2.30	0.65
1:B:924:GLN:O	1:B:927:GLY:N	2.30	0.65
1:B:2249:ARG:NH2	1:B:2286:GLU:OE2	2.29	0.65
1:B:911:PHE:O	1:B:919:ARG:NH1	2.30	0.65
1:D:2249:ARG:NH2	1:D:2286:GLU:OE2	2.29	0.65
1:D:427:ARG:NH2	1:D:430:GLY:O	2.30	0.65
1:A:2645:LEU:HD13	1:A:2679:LEU:HD21	1.79	0.65
1:D:911:PHE:O	1:D:919:ARG:NH1	2.30	0.65
1:B:427:ARG:NH2	1:B:430:GLY:O	2.30	0.64
1:B:2645:LEU:HD13	1:B:2679:LEU:HD21	1.79	0.64
1:D:924:GLN:O	1:D:927:GLY:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:427:ARG:NH2	1:C:430:GLY:O	2.30	0.64
1:C:911:PHE:O	1:C:919:ARG:NH1	2.30	0.64
1:D:2645:LEU:HD13	1:D:2679:LEU:HD21	1.79	0.64
1:A:911:PHE:O	1:A:919:ARG:NH1	2.30	0.64
1:A:1574:MET:HE2	1:A:1574:MET:HA	1.80	0.64
1:D:1574:MET:HE2	1:D:1574:MET:HA	1.80	0.64
1:D:3864:GLU:O	1:D:3868:VAL:HG22	1.98	0.64
1:A:4093:LYS:HA	1:A:4126:ILE:HD11	1.80	0.64
1:C:2645:LEU:HD13	1:C:2679:LEU:HD21	1.79	0.64
1:C:3864:GLU:O	1:C:3868:VAL:HG22	1.98	0.64
1:D:3556:ASN:OD1	1:D:3557:ASN:N	2.31	0.64
1:C:3556:ASN:OD1	1:C:3557:ASN:N	2.31	0.64
1:A:2383:GLU:OE2	1:A:2393:ARG:NH2	2.31	0.63
1:C:924:GLN:O	1:C:927:GLY:N	2.30	0.63
2:H:12:ASP:OD1	2:H:13:GLY:N	2.32	0.63
1:D:2383:GLU:OE2	1:D:2393:ARG:NH2	2.31	0.63
1:D:4093:LYS:HA	1:D:4126:ILE:HD11	1.80	0.63
1:B:3864:GLU:O	1:B:3868:VAL:HG22	1.98	0.63
1:C:1574:MET:HA	1:C:1574:MET:HE2	1.80	0.63
1:A:3556:ASN:OD1	1:A:3557:ASN:N	2.31	0.63
1:A:3864:GLU:O	1:A:3868:VAL:HG22	1.98	0.63
1:B:1574:MET:HE2	1:B:1574:MET:HA	1.80	0.63
1:B:3556:ASN:OD1	1:B:3557:ASN:N	2.31	0.63
1:D:3250:LEU:HD23	1:D:3278:LEU:HD21	1.81	0.63
1:B:2383:GLU:OE2	1:B:2393:ARG:NH2	2.31	0.62
1:C:4093:LYS:HA	1:C:4126:ILE:HD11	1.80	0.62
1:D:2918:ALA:O	1:D:2922:GLU:OE1	2.17	0.62
1:A:103:LEU:HD12	1:A:161:GLY:O	1.99	0.62
1:A:2801:LYS:O	1:A:2805:ILE:HG23	1.99	0.62
1:C:26:SER:OG	1:C:33:GLN:OE1	2.17	0.62
1:C:3250:LEU:HD23	1:C:3278:LEU:HD21	1.81	0.62
1:D:2215:VAL:HG21	1:D:2229:MET:CE	2.23	0.62
1:B:3250:LEU:HD23	1:B:3278:LEU:HD21	1.81	0.62
1:D:2801:LYS:O	1:D:2805:ILE:HG23	1.99	0.62
1:B:4093:LYS:HA	1:B:4126:ILE:HD11	1.80	0.62
1:C:2801:LYS:O	1:C:2805:ILE:HG23	1.99	0.62
1:D:103:LEU:HD12	1:D:161:GLY:O	1.99	0.62
1:B:103:LEU:HD12	1:B:161:GLY:O	1.99	0.62
1:C:2918:ALA:O	1:C:2922:GLU:OE1	2.17	0.61
1:B:2801:LYS:O	1:B:2805:ILE:HG23	1.99	0.61
1:B:2918:ALA:O	1:B:2922:GLU:OE1	2.17	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2383:GLU:OE2	1:C:2393:ARG:NH2	2.31	0.61
1:D:2213:VAL:HG11	1:D:2257:TYR:OH	2.00	0.61
1:C:103:LEU:HD12	1:C:161:GLY:O	1.99	0.61
1:A:2918:ALA:O	1:A:2922:GLU:OE1	2.17	0.61
1:C:729:ARG:NH2	1:C:1490:CYS:SG	2.74	0.61
1:A:2187:MET:O	1:A:2193:TYR:OH	2.11	0.61
1:B:2213:VAL:HG11	1:B:2257:TYR:OH	2.00	0.61
1:B:26:SER:OG	1:B:33:GLN:OE1	2.17	0.61
1:B:729:ARG:NH2	1:B:1490:CYS:SG	2.74	0.61
1:A:2213:VAL:HG11	1:A:2257:TYR:OH	2.00	0.61
1:D:26:SER:OG	1:D:33:GLN:OE1	2.17	0.61
1:A:3250:LEU:HD23	1:A:3278:LEU:HD21	1.81	0.60
1:B:2583:MET:HE3	1:B:2611:LEU:HD13	1.83	0.60
1:A:26:SER:OG	1:A:33:GLN:OE1	2.17	0.60
1:B:1562:VAL:HG12	1:B:1563:VAL:HG13	1.84	0.60
1:A:2583:MET:HE3	1:A:2611:LEU:HD13	1.83	0.60
1:C:2213:VAL:HG11	1:C:2257:TYR:OH	2.00	0.60
1:D:729:ARG:NH2	1:D:1490:CYS:SG	2.74	0.60
1:D:1562:VAL:HG12	1:D:1563:VAL:HG13	1.83	0.60
1:A:729:ARG:NH2	1:A:1490:CYS:SG	2.74	0.60
1:C:1562:VAL:HG12	1:C:1563:VAL:HG13	1.83	0.60
1:A:3861:MET:SD	1:A:3871:ARG:NH2	2.75	0.60
1:D:3861:MET:SD	1:D:3871:ARG:NH2	2.75	0.60
1:A:1562:VAL:HG12	1:A:1563:VAL:HG13	1.84	0.60
1:A:1281:GLN:O	1:A:1282:ASN:OD1	2.20	0.60
1:B:929:THR:O	1:B:933:LEU:HD23	2.02	0.60
1:C:2971:SER:HA	1:C:2974:PHE:CE1	2.37	0.60
1:A:964:ASN:OD1	1:A:965:GLY:N	2.35	0.60
1:C:3861:MET:SD	1:C:3871:ARG:NH2	2.75	0.60
1:C:929:THR:O	1:C:933:LEU:HD23	2.02	0.59
1:C:1281:GLN:O	1:C:1282:ASN:OD1	2.20	0.59
1:D:929:THR:O	1:D:933:LEU:HD23	2.01	0.59
1:A:1731:MET:CE	1:A:2157:LEU:HD22	2.28	0.59
1:B:859:THR:HG21	1:B:932:THR:HG22	1.84	0.59
1:A:16:ARG:NH1	1:A:101:THR:OG1	2.36	0.59
1:A:2971:SER:HA	1:A:2974:PHE:CE1	2.37	0.59
1:A:4091:ILE:HG23	1:A:4096:PHE:HB2	1.85	0.59
1:B:2971:SER:HA	1:B:2974:PHE:CE1	2.37	0.59
1:D:4091:ILE:HG23	1:D:4096:PHE:HB2	1.85	0.59
1:B:1281:GLN:O	1:B:1282:ASN:OD1	2.20	0.59
1:C:4091:ILE:HG23	1:C:4096:PHE:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:859:THR:HG21	1:A:932:THR:HG22	1.84	0.59
1:B:1731:MET:CE	1:B:2157:LEU:HD22	2.28	0.59
1:B:3861:MET:SD	1:B:3871:ARG:NH2	2.75	0.59
1:B:964:ASN:OD1	1:B:965:GLY:N	2.35	0.59
1:C:2887:TRP:CG	1:C:2891:LYS:HZ1	2.21	0.59
1:D:1281:GLN:O	1:D:1282:ASN:OD1	2.20	0.59
1:A:2887:TRP:CG	1:A:2891:LYS:HZ1	2.20	0.59
1:A:3554:LEU:HD13	1:A:3597:VAL:HG13	1.85	0.59
1:B:2887:TRP:CG	1:B:2891:LYS:HZ1	2.20	0.59
1:C:964:ASN:OD1	1:C:965:GLY:N	2.35	0.59
1:D:2971:SER:HA	1:D:2974:PHE:CE1	2.37	0.59
1:A:929:THR:O	1:A:933:LEU:HD23	2.02	0.59
1:B:4091:ILE:HG23	1:B:4096:PHE:HB2	1.85	0.59
1:C:2583:MET:HE3	1:C:2611:LEU:HD13	1.84	0.59
1:D:582:ASN:OD1	1:D:583:HIS:N	2.36	0.59
1:D:964:ASN:OD1	1:D:965:GLY:N	2.35	0.59
1:C:582:ASN:OD1	1:C:583:HIS:N	2.36	0.59
1:D:2583:MET:HE3	1:D:2611:LEU:HD13	1.83	0.59
1:C:859:THR:HG21	1:C:932:THR:HG22	1.84	0.58
1:B:582:ASN:OD1	1:B:583:HIS:N	2.36	0.58
1:B:2487:VAL:HG23	1:B:2487:VAL:O	2.03	0.58
1:D:16:ARG:NH1	1:D:101:THR:OG1	2.36	0.58
1:D:2487:VAL:HG23	1:D:2487:VAL:O	2.03	0.58
1:C:2215:VAL:HG21	1:C:2229:MET:CE	2.23	0.58
1:D:1428:ILE:HG13	1:D:1574:MET:HE3	1.85	0.58
1:A:1428:ILE:HG13	1:A:1574:MET:HE3	1.85	0.58
1:C:16:ARG:NH1	1:C:101:THR:OG1	2.36	0.58
1:D:859:THR:HG21	1:D:932:THR:HG22	1.84	0.58
1:D:3554:LEU:HD13	1:D:3597:VAL:HG13	1.85	0.58
1:A:2487:VAL:O	1:A:2487:VAL:HG23	2.03	0.58
1:A:2215:VAL:HG21	1:A:2229:MET:CE	2.23	0.58
1:B:3554:LEU:HD13	1:B:3597:VAL:HG13	1.85	0.58
1:A:2948:ASP:OD1	1:A:2949:THR:N	2.37	0.58
1:B:16:ARG:NH1	1:B:101:THR:OG1	2.36	0.57
1:C:888:ILE:HG22	1:C:962:MET:HE2	1.86	0.57
1:D:2887:TRP:CG	1:D:2891:LYS:HZ1	2.22	0.57
1:A:3369:ARG:O	1:A:3373:VAL:HG23	2.05	0.57
1:C:3285:TRP:HB3	1:C:3306:THR:HG21	1.87	0.57
1:C:3369:ARG:O	1:C:3373:VAL:HG23	2.05	0.57
1:A:582:ASN:OD1	1:A:583:HIS:N	2.36	0.57
1:C:2487:VAL:HG23	1:C:2487:VAL:O	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:974:SER:O	1:D:977:ARG:NH1	2.37	0.57
1:D:2187:MET:O	1:D:2193:TYR:OH	2.11	0.57
1:A:888:ILE:HG22	1:A:962:MET:HE2	1.86	0.57
1:A:974:SER:O	1:A:977:ARG:NH1	2.37	0.57
1:A:3053:HIS:O	1:A:3128:GLN:NE2	2.38	0.57
1:C:3554:LEU:HD13	1:C:3597:VAL:HG13	1.85	0.57
1:D:1731:MET:CE	1:D:2157:LEU:HD22	2.28	0.57
1:B:3369:ARG:O	1:B:3373:VAL:HG23	2.05	0.57
1:B:649:ILE:HG23	1:B:815:ALA:HB3	1.87	0.57
1:C:1428:ILE:HG13	1:C:1574:MET:HE3	1.85	0.57
1:B:888:ILE:HG22	1:B:962:MET:HE2	1.86	0.57
1:C:924:GLN:O	1:C:928:GLU:OE1	2.23	0.57
1:D:2890:LYS:O	1:D:2894:GLU:OE1	2.23	0.57
1:D:3369:ARG:O	1:D:3373:VAL:HG23	2.05	0.57
1:B:3285:TRP:HB3	1:B:3306:THR:HG21	1.87	0.56
1:D:4927:LEU:O	1:D:4931:GLN:OE1	2.23	0.56
1:B:974:SER:O	1:B:977:ARG:NH1	2.37	0.56
1:B:3053:HIS:O	1:B:3128:GLN:NE2	2.38	0.56
1:B:924:GLN:O	1:B:928:GLU:OE1	2.23	0.56
1:B:1428:ILE:HG13	1:B:1574:MET:HE3	1.85	0.56
1:C:287:THR:HG21	1:C:482:GLU:OE1	2.06	0.56
1:C:2890:LYS:O	1:C:2894:GLU:OE1	2.23	0.56
1:D:888:ILE:HG22	1:D:962:MET:HE2	1.86	0.56
1:D:3285:TRP:HB3	1:D:3306:THR:HG21	1.87	0.56
1:C:649:ILE:HG23	1:C:815:ALA:HB3	1.87	0.56
1:D:3107:MET:SD	1:D:3133:THR:HG21	2.46	0.56
1:C:3053:HIS:O	1:C:3128:GLN:NE2	2.38	0.56
1:D:914:LEU:O	1:D:919:ARG:NH2	2.39	0.56
1:A:649:ILE:HG23	1:A:815:ALA:HB3	1.87	0.56
1:A:4927:LEU:O	1:A:4931:GLN:OE1	2.23	0.56
1:D:1101:MET:HE3	1:D:1144:TRP:CZ2	2.41	0.56
1:A:3107:MET:SD	1:A:3133:THR:HG21	2.46	0.56
2:H:80:ASP:OD1	2:H:81:TYR:N	2.39	0.56
1:B:2890:LYS:O	1:B:2894:GLU:OE1	2.23	0.56
1:B:4927:LEU:O	1:B:4931:GLN:OE1	2.23	0.56
1:C:1101:MET:HE3	1:C:1144:TRP:CZ2	2.41	0.56
1:C:3176:LEU:HD21	1:C:3184:VAL:HG13	1.88	0.56
1:D:287:THR:HG21	1:D:482:GLU:OE1	2.06	0.56
1:A:924:GLN:O	1:A:928:GLU:OE1	2.23	0.56
2:E:80:ASP:OD1	2:E:81:TYR:N	2.39	0.56
1:B:914:LEU:O	1:B:919:ARG:NH2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2215:VAL:HG21	1:B:2229:MET:CE	2.23	0.56
1:C:974:SER:O	1:C:977:ARG:NH1	2.37	0.56
1:D:924:GLN:O	1:D:928:GLU:OE1	2.23	0.56
1:D:2948:ASP:OD1	1:D:2949:THR:N	2.37	0.56
1:A:2890:LYS:O	1:A:2894:GLU:OE1	2.23	0.56
1:A:3176:LEU:HD21	1:A:3184:VAL:HG13	1.88	0.56
1:C:2948:ASP:OD1	1:C:2949:THR:N	2.37	0.56
1:B:3107:MET:SD	1:B:3133:THR:HG21	2.46	0.55
1:B:4656:ILE:HD11	1:B:4794:MET:HB2	1.89	0.55
1:C:3107:MET:SD	1:C:3133:THR:HG21	2.46	0.55
1:D:1449:VAL:HG22	1:D:1555:VAL:HG23	1.88	0.55
1:A:3285:TRP:HB3	1:A:3306:THR:HG21	1.87	0.55
1:B:2948:ASP:OD1	1:B:2949:THR:N	2.37	0.55
1:C:914:LEU:O	1:C:919:ARG:NH2	2.39	0.55
1:C:4927:LEU:O	1:C:4931:GLN:OE1	2.23	0.55
1:A:914:LEU:O	1:A:919:ARG:NH2	2.39	0.55
2:G:80:ASP:OD1	2:G:81:TYR:N	2.39	0.55
1:C:4656:ILE:HD11	1:C:4794:MET:HB2	1.88	0.55
1:B:1101:MET:HE3	1:B:1144:TRP:CZ2	2.41	0.55
1:D:2746:VAL:HG11	1:D:2815:LYS:O	2.07	0.55
1:A:1101:MET:HE3	1:A:1144:TRP:CZ2	2.41	0.55
1:A:1793:ALA:C	1:A:1794:THR:HG1	2.09	0.55
1:A:4091:ILE:HG12	1:A:4096:PHE:N	2.21	0.55
1:B:3176:LEU:HD21	1:B:3184:VAL:HG13	1.88	0.55
1:D:649:ILE:HG23	1:D:815:ALA:HB3	1.87	0.55
1:A:924:GLN:O	1:A:925:MET:C	2.50	0.55
1:B:287:THR:HG21	1:B:482:GLU:OE1	2.06	0.55
1:D:3176:LEU:HD21	1:D:3184:VAL:HG13	1.88	0.55
2:H:37:PHE:O	1:D:1688:SER:OG	2.23	0.55
1:B:4091:ILE:HG12	1:B:4096:PHE:N	2.21	0.55
1:D:4091:ILE:HG12	1:D:4096:PHE:N	2.21	0.55
1:A:1449:VAL:HG22	1:A:1555:VAL:HG23	1.88	0.55
2:F:80:ASP:OD1	2:F:81:TYR:N	2.40	0.55
1:D:3053:HIS:O	1:D:3128:GLN:NE2	2.38	0.55
1:A:3227:GLU:O	1:A:3228:ARG:HG2	2.07	0.54
1:C:924:GLN:O	1:C:925:MET:C	2.50	0.54
1:A:103:LEU:HB2	1:A:106:HIS:CD2	2.42	0.54
1:A:287:THR:HG21	1:A:482:GLU:OE1	2.06	0.54
1:A:4656:ILE:HD11	1:A:4794:MET:HB2	1.88	0.54
1:B:924:GLN:O	1:B:925:MET:C	2.50	0.54
1:C:1449:VAL:HG22	1:C:1555:VAL:HG23	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2746:VAL:HG11	1:C:2815:LYS:O	2.07	0.54
1:A:620:ASP:OD2	1:A:1681:ARG:NH2	2.41	0.54
1:B:1449:VAL:HG22	1:B:1555:VAL:HG23	1.88	0.54
1:C:2823:THR:OG1	1:C:2939:THR:OG1	1.88	0.54
1:A:162:GLU:HG2	1:D:3987:ARG:NH1	2.22	0.54
1:A:2746:VAL:HG11	1:A:2815:LYS:O	2.07	0.54
1:B:620:ASP:OD2	1:B:1681:ARG:NH2	2.41	0.54
1:C:103:LEU:HB2	1:C:106:HIS:CD2	2.42	0.54
1:C:871:ILE:HD12	1:C:1050:TYR:CD1	2.43	0.54
1:C:4104:LYS:O	1:C:4104:LYS:HG3	2.08	0.54
1:C:4738:LEU:HD23	1:C:4739:LEU:HD23	1.90	0.54
1:D:103:LEU:HB2	1:D:106:HIS:CD2	2.42	0.54
1:D:620:ASP:OD2	1:D:1681:ARG:NH2	2.41	0.54
1:D:924:GLN:O	1:D:925:MET:C	2.50	0.54
1:D:3227:GLU:O	1:D:3228:ARG:HG2	2.07	0.54
1:B:871:ILE:HD12	1:B:1050:TYR:CD1	2.43	0.54
1:B:2746:VAL:HG11	1:B:2815:LYS:O	2.07	0.54
1:C:3227:GLU:O	1:C:3228:ARG:HG2	2.07	0.54
1:A:3366:LEU:HD13	1:A:3406:LEU:HD23	1.90	0.54
1:B:103:LEU:HB2	1:B:106:HIS:CD2	2.42	0.54
1:C:4091:ILE:HG12	1:C:4096:PHE:N	2.21	0.54
1:D:4656:ILE:HD11	1:D:4794:MET:HB2	1.88	0.54
2:E:41:ARG:NH2	2:E:103:GLU:OE1	2.39	0.54
1:B:4738:LEU:HD23	1:B:4739:LEU:HD23	1.90	0.54
2:G:41:ARG:NH2	2:G:103:GLU:OE2	2.38	0.54
2:H:7:THR:HG23	2:H:7:THR:O	2.08	0.54
1:D:3366:LEU:HD13	1:D:3406:LEU:HD23	1.90	0.53
1:A:4104:LYS:HG3	1:A:4104:LYS:O	2.08	0.53
1:C:940:VAL:HG12	1:C:1054:ILE:CD1	2.39	0.53
1:A:4738:LEU:HD23	1:A:4739:LEU:HD23	1.90	0.53
1:B:3366:LEU:HD13	1:B:3406:LEU:HD23	1.90	0.53
1:D:940:VAL:HG12	1:D:1054:ILE:CD1	2.39	0.53
1:A:581:GLU:HG3	1:A:621:LEU:HD22	1.91	0.53
1:A:2627:LEU:HD22	1:A:2641:PRO:HB3	1.91	0.53
1:B:3227:GLU:O	1:B:3228:ARG:HG2	2.08	0.53
1:B:4104:LYS:O	1:B:4104:LYS:HG3	2.08	0.53
1:C:620:ASP:OD2	1:C:1681:ARG:NH2	2.41	0.53
1:D:1978:TYR:CE1	1:D:3639:MET:HE1	2.44	0.53
1:D:4104:LYS:HG3	1:D:4104:LYS:O	2.08	0.53
2:E:12:ASP:OD1	2:E:14:ARG:N	2.34	0.53
1:D:1793:ALA:C	1:D:1794:THR:HG1	2.10	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:839:HIS:CD2	1:A:1096:VAL:HG21	2.44	0.53
1:C:1978:TYR:CE1	1:C:3639:MET:HE1	2.44	0.53
1:A:297:ASP:OD1	1:A:298:GLN:N	2.42	0.53
1:C:3366:LEU:HD13	1:C:3406:LEU:HD23	1.90	0.53
1:D:215:VAL:HG21	1:D:391:LEU:HD12	1.91	0.53
1:A:1978:TYR:CE1	1:A:3639:MET:HE1	2.44	0.52
1:A:2868:LEU:HD23	1:A:2932:GLN:NE2	2.24	0.52
1:B:215:VAL:HG21	1:B:391:LEU:HD12	1.91	0.52
1:C:839:HIS:CD2	1:C:1096:VAL:HG21	2.44	0.52
1:A:940:VAL:HG12	1:A:1054:ILE:CD1	2.39	0.52
1:A:1993:ALA:O	1:A:1997:ARG:HD3	2.10	0.52
1:B:581:GLU:HG3	1:B:621:LEU:HD22	1.91	0.52
1:B:940:VAL:HG12	1:B:1054:ILE:CD1	2.39	0.52
1:B:1184:GLU:OE1	1:B:1184:GLU:N	2.42	0.52
1:B:1978:TYR:CE1	1:B:3639:MET:HE1	2.44	0.52
1:D:839:HIS:CD2	1:D:1096:VAL:HG21	2.44	0.52
1:D:1184:GLU:N	1:D:1184:GLU:OE1	2.42	0.52
1:D:4738:LEU:HD23	1:D:4739:LEU:HD23	1.90	0.52
1:A:1184:GLU:N	1:A:1184:GLU:OE1	2.42	0.52
2:H:41:ARG:NH2	2:H:103:GLU:OE2	2.39	0.52
1:B:1993:ALA:O	1:B:1997:ARG:HD3	2.10	0.52
1:B:3457:GLN:NE2	1:B:3461:VAL:HG11	2.25	0.52
1:B:3987:ARG:NH1	1:C:162:GLU:HG2	2.25	0.52
1:C:297:ASP:OD1	1:C:298:GLN:N	2.42	0.52
1:D:1993:ALA:O	1:D:1997:ARG:HD3	2.10	0.52
1:A:2964:LEU:HD23	1:A:3003:LEU:HD11	1.91	0.52
2:E:12:ASP:OD2	2:E:15:THR:OG1	2.25	0.52
1:B:3102:GLU:HB3	1:B:3106:LYS:NZ	2.25	0.52
1:C:1993:ALA:O	1:C:1997:ARG:HD3	2.10	0.52
1:C:2627:LEU:HD22	1:C:2641:PRO:HB3	1.91	0.52
1:D:581:GLU:HG3	1:D:621:LEU:HD22	1.91	0.52
1:A:1273:LEU:HD22	1:A:1290:LEU:HD11	1.91	0.52
1:A:3102:GLU:HB3	1:A:3106:LYS:NZ	2.25	0.52
1:A:3457:GLN:NE2	1:A:3461:VAL:HG11	2.25	0.52
1:B:839:HIS:CD2	1:B:1096:VAL:HG21	2.44	0.52
1:B:974:SER:O	1:B:977:ARG:NH2	2.42	0.52
1:C:3102:GLU:HB3	1:C:3106:LYS:NZ	2.25	0.52
1:D:1273:LEU:HD22	1:D:1290:LEU:HD11	1.91	0.52
1:D:2627:LEU:HD22	1:D:2641:PRO:HB3	1.91	0.52
1:D:3102:GLU:HB3	1:D:3106:LYS:NZ	2.25	0.52
2:G:24:VAL:HG22	2:G:48:LYS:HG2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1932:LEU:HD13	1:B:1936:VAL:HG11	1.91	0.52
1:C:1731:MET:CE	1:C:2157:LEU:HD22	2.28	0.52
1:C:2868:LEU:HD23	1:C:2932:GLN:NE2	2.24	0.52
1:C:4964:ASP:OD1	1:C:4965:TYR:N	2.43	0.52
1:D:1932:LEU:HD13	1:D:1936:VAL:HG11	1.91	0.52
1:D:3820:LEU:HD21	1:D:3901:ASP:HB3	1.91	0.52
1:B:1273:LEU:HD22	1:B:1290:LEU:HD11	1.91	0.52
1:C:1101:MET:HE3	1:C:1144:TRP:HZ2	1.75	0.52
1:D:297:ASP:OD1	1:D:298:GLN:N	2.42	0.52
1:D:2964:LEU:HD23	1:D:3003:LEU:HD11	1.91	0.52
1:D:4964:ASP:OD1	1:D:4965:TYR:N	2.43	0.52
1:A:141:ASP:OD2	1:A:143:THR:OG1	2.27	0.52
1:C:1067:GLN:OE1	1:C:1072:ARG:HB2	2.10	0.52
1:C:1273:LEU:HD22	1:C:1290:LEU:HD11	1.91	0.52
1:A:974:SER:O	1:A:977:ARG:NH2	2.42	0.52
1:B:297:ASP:OD1	1:B:298:GLN:N	2.42	0.52
1:B:1067:GLN:OE1	1:B:1072:ARG:HB2	2.10	0.52
1:C:1184:GLU:N	1:C:1184:GLU:OE1	2.42	0.52
1:D:2868:LEU:HD23	1:D:2932:GLN:NE2	2.24	0.52
1:A:4964:ASP:OD1	1:A:4965:TYR:N	2.43	0.51
1:B:2868:LEU:HD23	1:B:2932:GLN:NE2	2.24	0.51
1:C:3457:GLN:NE2	1:C:3461:VAL:HG11	2.24	0.51
1:A:215:VAL:HG21	1:A:391:LEU:HD12	1.91	0.51
1:A:1932:LEU:HD13	1:A:1936:VAL:HG11	1.91	0.51
1:A:1949:ASP:OD1	1:A:2127:ARG:NH2	2.43	0.51
1:B:2627:LEU:HD22	1:B:2641:PRO:HB3	1.91	0.51
1:B:4964:ASP:OD1	1:B:4965:TYR:N	2.43	0.51
1:C:1932:LEU:HD13	1:C:1936:VAL:HG11	1.91	0.51
1:A:3820:LEU:HD21	1:A:3901:ASP:HB3	1.91	0.51
1:A:3987:ARG:NH1	1:B:162:GLU:HG2	2.25	0.51
1:B:932:THR:O	1:B:936:LEU:HD23	2.11	0.51
1:C:974:SER:O	1:C:977:ARG:NH2	2.42	0.51
1:A:4016:LEU:HD23	1:A:4135:PHE:CZ	2.46	0.51
1:B:2432:ASP:O	1:B:2436:ARG:HG2	2.11	0.51
1:B:2964:LEU:HD23	1:B:3003:LEU:HD11	1.91	0.51
1:C:3820:LEU:HD21	1:C:3901:ASP:HB3	1.91	0.51
1:C:3987:ARG:NH1	1:D:162:GLU:HG2	2.25	0.51
1:D:141:ASP:OD2	1:D:143:THR:OG1	2.27	0.51
1:C:215:VAL:HG21	1:C:391:LEU:HD12	1.91	0.51
1:C:581:GLU:HG3	1:C:621:LEU:HD22	1.91	0.51
1:D:1101:MET:HE3	1:D:1144:TRP:HZ2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3457:GLN:NE2	1:D:3461:VAL:HG11	2.24	0.51
1:B:1949:ASP:OD1	1:B:2127:ARG:NH2	2.43	0.51
1:C:1949:ASP:OD1	1:C:2127:ARG:NH2	2.43	0.51
1:D:4016:LEU:HD23	1:D:4135:PHE:CZ	2.46	0.51
1:D:4138:PRO:O	1:D:4142:ILE:HD12	2.11	0.51
1:A:871:ILE:O	1:A:872:ARG:C	2.53	0.51
1:A:1067:GLN:OE1	1:A:1072:ARG:HB2	2.10	0.51
1:A:2432:ASP:O	1:A:2436:ARG:HG2	2.11	0.51
2:F:7:THR:HG23	2:F:7:THR:O	2.10	0.51
1:C:871:ILE:O	1:C:872:ARG:C	2.53	0.51
1:D:871:ILE:O	1:D:872:ARG:C	2.53	0.51
1:C:373:LEU:HD23	1:C:373:LEU:H	1.76	0.51
1:D:932:THR:O	1:D:936:LEU:HD23	2.11	0.51
1:D:2774:ASN:O	1:D:2787:LYS:NZ	2.42	0.51
2:F:41:ARG:NH2	2:F:103:GLU:OE2	2.39	0.51
1:C:932:THR:O	1:C:936:LEU:HD23	2.11	0.51
1:C:2964:LEU:HD23	1:C:3003:LEU:HD11	1.91	0.51
1:D:373:LEU:HD23	1:D:373:LEU:H	1.76	0.51
1:A:4138:PRO:O	1:A:4142:ILE:HD12	2.11	0.51
1:C:36:LEU:HD23	1:C:52:PRO:HA	1.93	0.51
1:C:1810:ARG:HG3	1:C:1856:PHE:CE1	2.46	0.51
1:D:2898:LYS:NZ	1:D:2900:GLY:O	2.32	0.51
1:A:932:THR:O	1:A:936:LEU:HD23	2.11	0.50
1:B:873:GLU:O	1:B:877:GLU:OE1	2.29	0.50
1:C:2432:ASP:O	1:C:2436:ARG:HG2	2.11	0.50
1:A:373:LEU:HD23	1:A:373:LEU:H	1.76	0.50
1:A:868:LEU:HD12	1:A:930:LEU:CD1	2.41	0.50
1:A:1810:ARG:HG3	1:A:1856:PHE:CE1	2.46	0.50
1:B:1810:ARG:HG3	1:B:1856:PHE:CE1	2.46	0.50
1:B:4138:PRO:O	1:B:4142:ILE:HD12	2.11	0.50
1:D:2757:ASN:O	1:D:2761:GLU:OE1	2.30	0.50
1:A:2757:ASN:O	1:A:2761:GLU:OE1	2.30	0.50
1:B:141:ASP:OD2	1:B:143:THR:OG1	2.27	0.50
1:B:4210:MET:SD	1:B:4211:PRO:HD2	2.52	0.50
1:D:871:ILE:HD12	1:D:1050:TYR:CD1	2.43	0.50
1:D:2432:ASP:O	1:D:2436:ARG:HG2	2.11	0.50
1:D:3230:ILE:HG13	1:D:3231:LEU:HD12	1.94	0.50
1:D:4083:TYR:CE2	1:D:4098:LYS:HB3	2.47	0.50
1:B:3820:LEU:HD21	1:B:3901:ASP:HB3	1.91	0.50
1:C:4138:PRO:O	1:C:4142:ILE:HD12	2.11	0.50
1:D:1067:GLN:OE1	1:D:1072:ARG:HB2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4210:MET:SD	1:A:4211:PRO:HD2	2.52	0.50
2:G:60:TRP:CZ2	1:C:1785:VAL:HG11	2.47	0.50
1:C:873:GLU:O	1:C:877:GLU:OE1	2.29	0.50
1:C:1761:ARG:NH1	1:C:2093:GLN:O	2.45	0.50
1:C:4093:LYS:CB	1:C:4124:GLU:HB3	2.42	0.50
1:D:974:SER:O	1:D:977:ARG:NH2	2.42	0.50
1:A:3547:ASP:OD1	1:A:3548:GLU:N	2.45	0.50
1:B:3230:ILE:HG13	1:B:3231:LEU:HD12	1.94	0.50
1:C:3230:ILE:HG13	1:C:3231:LEU:HD12	1.94	0.50
1:D:1949:ASP:OD1	1:D:2127:ARG:NH2	2.43	0.50
1:A:394:CYS:SG	1:A:399:SER:OG	2.70	0.50
1:A:3230:ILE:HG13	1:A:3231:LEU:HD12	1.94	0.50
2:F:12:ASP:OD1	2:F:14:ARG:N	2.38	0.50
1:B:373:LEU:H	1:B:373:LEU:HD23	1.76	0.50
1:B:1101:MET:HE3	1:B:1144:TRP:HZ2	1.75	0.50
1:B:3972:ILE:HG21	1:B:3983:LEU:HD12	1.94	0.50
1:C:394:CYS:SG	1:C:399:SER:OG	2.70	0.50
1:C:2757:ASN:O	1:C:2761:GLU:OE1	2.30	0.50
1:C:4083:TYR:CE2	1:C:4098:LYS:HB3	2.47	0.50
1:D:873:GLU:O	1:D:877:GLU:OE1	2.29	0.50
1:D:4225:VAL:HG11	1:D:4948:VAL:HA	1.94	0.50
1:A:36:LEU:HD23	1:A:52:PRO:HA	1.93	0.50
1:A:871:ILE:HD12	1:A:1050:TYR:CD1	2.43	0.50
1:A:4083:TYR:CE2	1:A:4098:LYS:HB3	2.47	0.50
1:A:4225:VAL:HG11	1:A:4948:VAL:HA	1.94	0.50
1:B:929:THR:O	1:B:932:THR:OG1	2.30	0.50
1:D:1810:ARG:HG3	1:D:1856:PHE:CE1	2.46	0.50
1:A:386:ASP:HB3	1:B:157:GLN:OE1	2.12	0.49
2:E:48:LYS:NZ	2:E:108:GLU:OE2	2.34	0.49
1:B:394:CYS:SG	1:B:399:SER:OG	2.70	0.49
1:B:1996:THR:HG22	1:B:2000:ARG:CD	2.42	0.49
1:B:3076:LEU:O	1:B:3147:HIS:NE2	2.41	0.49
1:A:1101:MET:HE3	1:A:1144:TRP:HZ2	1.75	0.49
1:B:871:ILE:O	1:B:872:ARG:C	2.53	0.49
1:B:4016:LEU:HD23	1:B:4135:PHE:CZ	2.46	0.49
1:C:1287:MET:SD	1:C:1465:PHE:HB3	2.53	0.49
1:C:3972:ILE:HG21	1:C:3983:LEU:HD12	1.94	0.49
1:A:873:GLU:O	1:A:877:GLU:OE1	2.29	0.49
1:A:1287:MET:SD	1:A:1465:PHE:HB3	2.53	0.49
1:A:1761:ARG:NH1	1:A:2093:GLN:O	2.45	0.49
1:A:3515:LEU:C	1:A:3515:LEU:HD23	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:36:LEU:HD23	1:B:52:PRO:HA	1.93	0.49
1:B:2757:ASN:O	1:B:2761:GLU:OE1	2.30	0.49
1:C:1996:THR:HG22	1:C:2000:ARG:CD	2.42	0.49
1:C:4016:LEU:HD23	1:C:4135:PHE:CZ	2.46	0.49
1:D:1996:THR:HG22	1:D:2000:ARG:CD	2.42	0.49
1:D:4210:MET:SD	1:D:4211:PRO:HD2	2.52	0.49
1:B:1761:ARG:NH1	1:B:2093:GLN:O	2.45	0.49
1:B:4225:VAL:HG11	1:B:4948:VAL:HA	1.94	0.49
1:C:545:LEU:HD21	1:C:579:ILE:HD13	1.95	0.49
1:C:3547:ASP:OD1	1:C:3548:GLU:N	2.45	0.49
1:C:4210:MET:SD	1:C:4211:PRO:HD2	2.52	0.49
1:C:4225:VAL:HG11	1:C:4948:VAL:HA	1.94	0.49
1:D:1287:MET:SD	1:D:1465:PHE:HB3	2.53	0.49
1:D:4637:MET:O	1:D:4641:LEU:N	2.39	0.49
1:D:2811:LYS:O	1:D:2815:LYS:HG2	2.13	0.49
1:A:1996:THR:HG22	1:A:2000:ARG:CD	2.42	0.49
1:A:3944:ASP:OD1	1:A:3945:VAL:N	2.46	0.49
2:F:60:TRP:CZ2	1:B:1785:VAL:HG11	2.48	0.49
1:B:1287:MET:SD	1:B:1465:PHE:HB3	2.53	0.49
1:B:3515:LEU:C	1:B:3515:LEU:HD23	2.37	0.49
1:B:3547:ASP:OD1	1:B:3548:GLU:N	2.45	0.49
1:D:3547:ASP:OD1	1:D:3548:GLU:N	2.45	0.49
1:A:545:LEU:HD21	1:A:579:ILE:HD13	1.95	0.49
1:B:4083:TYR:CE2	1:B:4098:LYS:HB3	2.47	0.49
1:C:4900:GLU:O	1:C:4911:ARG:NH2	2.43	0.49
1:D:36:LEU:HD23	1:D:52:PRO:HA	1.93	0.49
1:D:545:LEU:HD21	1:D:579:ILE:HD13	1.95	0.49
1:D:1761:ARG:NH1	1:D:2093:GLN:O	2.45	0.49
1:A:1785:VAL:HG11	2:E:60:TRP:CZ2	2.48	0.49
1:D:394:CYS:SG	1:D:399:SER:OG	2.70	0.49
1:A:412:TYR:HB2	1:A:487:LEU:HD21	1.94	0.49
2:H:60:TRP:CZ2	1:D:1785:VAL:HG11	2.47	0.49
1:B:545:LEU:HD21	1:B:579:ILE:HD13	1.95	0.49
1:B:2898:LYS:NZ	1:B:2900:GLY:O	2.32	0.49
1:B:4900:GLU:O	1:B:4911:ARG:NH2	2.43	0.49
1:C:2774:ASN:O	1:C:2787:LYS:NZ	2.42	0.49
1:C:2811:LYS:O	1:C:2815:LYS:HG2	2.13	0.49
1:D:3515:LEU:C	1:D:3515:LEU:HD23	2.37	0.49
1:A:2898:LYS:NZ	1:A:2900:GLY:O	2.32	0.49
1:B:2176:GLU:HG3	1:B:2229:MET:HB2	1.95	0.49
1:B:4093:LYS:CB	1:B:4124:GLU:HB3	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2176:GLU:HG3	1:C:2229:MET:HB2	1.95	0.49
1:C:3559:ASN:OD1	1:C:3560:LEU:HD12	2.13	0.49
1:D:973:LEU:HD13	1:D:1045:ARG:HB3	1.95	0.49
2:E:12:ASP:OD1	2:E:12:ASP:C	2.55	0.48
1:B:3944:ASP:OD1	1:B:3945:VAL:N	2.46	0.48
1:D:412:TYR:HB2	1:D:487:LEU:HD21	1.94	0.48
1:D:3944:ASP:OD1	1:D:3945:VAL:N	2.46	0.48
1:A:973:LEU:HD13	1:A:1045:ARG:HB3	1.95	0.48
1:C:973:LEU:HD13	1:C:1045:ARG:HB3	1.95	0.48
1:C:3944:ASP:OD1	1:C:3945:VAL:N	2.46	0.48
1:A:3236:SER:OG	1:A:3238:GLU:OE1	2.32	0.48
1:A:3972:ILE:HG21	1:A:3983:LEU:HD12	1.94	0.48
2:F:12:ASP:OD1	2:F:12:ASP:C	2.56	0.48
1:B:973:LEU:HD13	1:B:1045:ARG:HB3	1.95	0.48
1:C:141:ASP:OD2	1:C:143:THR:OG1	2.27	0.48
1:C:412:TYR:HB2	1:C:487:LEU:HD21	1.94	0.48
1:C:4723:LEU:HD21	1:C:4743:LEU:HD21	1.94	0.48
1:D:3972:ILE:HG21	1:D:3983:LEU:HD12	1.94	0.48
1:A:2176:GLU:HG3	1:A:2229:MET:HB2	1.95	0.48
1:B:868:LEU:HD12	1:B:930:LEU:CD1	2.41	0.48
1:B:3236:SER:OG	1:B:3238:GLU:OE1	2.32	0.48
1:C:3515:LEU:HD23	1:C:3515:LEU:C	2.37	0.48
1:C:4111:ILE:O	1:C:4115:LEU:N	2.46	0.48
1:C:4186:ILE:CD1	1:C:4196:ILE:HD11	2.44	0.48
1:D:3541:TYR:CD2	1:D:3550:VAL:HG21	2.49	0.48
1:A:4111:ILE:O	1:A:4115:LEU:N	2.46	0.48
1:B:3559:ASN:OD1	1:B:3560:LEU:HD12	2.13	0.48
1:A:2624:LEU:O	1:A:2628:VAL:HG23	2.14	0.48
1:A:4723:LEU:HD21	1:A:4743:LEU:HD21	1.94	0.48
1:B:412:TYR:HB2	1:B:487:LEU:HD21	1.94	0.48
1:D:3250:LEU:HD11	1:D:3274:THR:HG21	1.96	0.48
1:D:5032:ASP:OD1	1:D:5033:GLN:OE1	2.32	0.48
1:A:3198:LEU:C	1:A:3198:LEU:HD23	2.39	0.48
1:A:3541:TYR:CD2	1:A:3550:VAL:HG21	2.49	0.48
1:A:4186:ILE:CD1	1:A:4196:ILE:HD11	2.44	0.48
1:B:70:LEU:HD21	1:B:203:MET:CE	2.43	0.48
1:B:2624:LEU:O	1:B:2628:VAL:HG23	2.14	0.48
1:B:2811:LYS:O	1:B:2815:LYS:HG2	2.13	0.48
1:B:3250:LEU:HD11	1:B:3274:THR:HG21	1.96	0.48
1:B:4186:ILE:CD1	1:B:4196:ILE:HD11	2.44	0.48
1:C:253:VAL:HG23	1:C:258:ARG:HE	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:386:ASP:HB3	1:D:157:GLN:OE1	2.13	0.48
1:C:3236:SER:OG	1:C:3238:GLU:OE1	2.32	0.48
1:D:3407:TYR:CE2	1:D:3510:LEU:HD13	2.49	0.48
1:A:929:THR:O	1:A:932:THR:OG1	2.30	0.48
1:A:2625:ARG:NE	1:A:2911:THR:O	2.47	0.48
1:A:2884:HIS:NE2	1:A:2907:VAL:O	2.47	0.48
1:B:1064:VAL:O	1:B:1065:ASP:OD1	2.32	0.48
1:C:169:ASP:OD1	1:C:202:ASN:ND2	2.47	0.48
1:C:228:MET:SD	1:D:156:LYS:HB2	2.54	0.48
1:C:3541:TYR:CD2	1:C:3550:VAL:HG21	2.49	0.48
1:C:4638:GLU:HB3	1:C:4639:PRO:HD3	1.96	0.48
1:D:2176:GLU:HG3	1:D:2229:MET:HB2	1.95	0.48
1:D:4723:LEU:HD21	1:D:4743:LEU:HD21	1.94	0.48
1:A:1064:VAL:O	1:A:1065:ASP:OD1	2.32	0.48
1:A:4637:MET:O	1:A:4641:LEU:N	2.39	0.48
1:B:386:ASP:HB3	1:C:157:GLN:OE1	2.13	0.48
1:C:165:ARG:HG3	1:C:165:ARG:HH11	1.79	0.48
1:D:165:ARG:HH11	1:D:165:ARG:HG3	1.78	0.48
1:D:3377:GLU:OE1	1:D:3449:SER:OG	2.31	0.48
1:A:2811:LYS:O	1:A:2815:LYS:HG2	2.13	0.48
1:A:3407:TYR:CE2	1:A:3510:LEU:HD13	2.49	0.48
1:B:5032:ASP:OD1	1:B:5033:GLN:OE1	2.32	0.48
1:D:4900:GLU:O	1:D:4911:ARG:NH2	2.43	0.48
1:A:864:LEU:HD12	1:A:864:LEU:O	2.14	0.47
1:B:228:MET:SD	1:C:156:LYS:HB2	2.54	0.47
1:B:3198:LEU:C	1:B:3198:LEU:HD23	2.39	0.47
1:C:3198:LEU:C	1:C:3198:LEU:HD23	2.39	0.47
1:D:875:LEU:HD12	1:D:1047:LEU:HD21	1.96	0.47
1:D:2624:LEU:O	1:D:2628:VAL:HG23	2.14	0.47
1:D:3198:LEU:HD23	1:D:3198:LEU:C	2.39	0.47
1:D:3559:ASN:OD1	1:D:3560:LEU:HD12	2.13	0.47
2:G:12:ASP:OD1	2:G:12:ASP:C	2.56	0.47
1:B:253:VAL:HG23	1:B:258:ARG:HE	1.79	0.47
1:B:864:LEU:HD12	1:B:864:LEU:O	2.14	0.47
1:B:3541:TYR:CD2	1:B:3550:VAL:HG21	2.49	0.47
1:B:3541:TYR:HE2	1:B:3550:VAL:HG21	1.78	0.47
1:B:4723:LEU:HD21	1:B:4743:LEU:HD21	1.94	0.47
1:C:3250:LEU:HD11	1:C:3274:THR:HG21	1.96	0.47
1:D:3236:SER:OG	1:D:3238:GLU:OE1	2.32	0.47
1:C:864:LEU:O	1:C:864:LEU:HD12	2.14	0.47
1:C:2884:HIS:NE2	1:C:2907:VAL:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3407:TYR:CE2	1:C:3510:LEU:HD13	2.49	0.47
1:C:4094:LYS:HD2	1:C:4094:LYS:HA	1.36	0.47
1:D:169:ASP:OD1	1:D:202:ASN:ND2	2.47	0.47
1:D:3593:ILE:O	1:D:3597:VAL:HG12	2.15	0.47
1:A:3076:LEU:O	1:A:3147:HIS:NE2	2.41	0.47
1:A:3250:LEU:HD11	1:A:3274:THR:HG21	1.96	0.47
2:E:7:THR:HG23	2:E:7:THR:O	2.13	0.47
2:F:38:ASP:OD1	2:F:39:SER:N	2.47	0.47
1:B:2625:ARG:NE	1:B:2911:THR:O	2.47	0.47
1:C:875:LEU:HD12	1:C:1047:LEU:HD21	1.96	0.47
1:C:3593:ILE:O	1:C:3597:VAL:HG12	2.15	0.47
1:D:3367:ARG:NH1	1:D:3441:GLU:OE1	2.48	0.47
1:D:4638:GLU:HB3	1:D:4639:PRO:HD3	1.96	0.47
1:A:875:LEU:HD12	1:A:1047:LEU:HD21	1.96	0.47
1:A:2089:GLU:OE1	1:A:2091:LYS:N	2.48	0.47
1:A:3559:ASN:OD1	1:A:3560:LEU:HD12	2.13	0.47
1:A:4935:ILE:HG12	1:B:4932:GLY:HA2	1.96	0.47
1:B:169:ASP:OD1	1:B:202:ASN:ND2	2.47	0.47
1:B:2089:GLU:OE1	1:B:2091:LYS:N	2.48	0.47
1:D:253:VAL:HG23	1:D:258:ARG:HE	1.79	0.47
1:D:2625:ARG:NE	1:D:2911:THR:O	2.47	0.47
1:D:4186:ILE:CD1	1:D:4196:ILE:HD11	2.44	0.47
1:A:1281:GLN:O	1:A:1282:ASN:CG	2.58	0.47
1:A:4091:ILE:HG13	1:A:4095:ASP:HB3	1.97	0.47
1:C:2625:ARG:NE	1:C:2911:THR:O	2.47	0.47
1:D:2883:TYR:OH	1:D:2927:LEU:HD13	2.15	0.47
1:A:1127:GLY:HA3	1:A:1144:TRP:CZ3	2.50	0.47
1:A:3367:ARG:NH1	1:A:3441:GLU:OE1	2.48	0.47
1:A:3377:GLU:OE1	1:A:3449:SER:OG	2.31	0.47
1:A:4638:GLU:HB3	1:A:4639:PRO:HD3	1.96	0.47
1:A:5032:ASP:OD1	1:A:5033:GLN:OE1	2.32	0.47
1:B:165:ARG:HG3	1:B:165:ARG:HH11	1.79	0.47
1:B:940:VAL:HG12	1:B:1054:ILE:HD12	1.96	0.47
1:B:3407:TYR:CE2	1:B:3510:LEU:HD13	2.49	0.47
1:C:1064:VAL:O	1:C:1065:ASP:OD1	2.32	0.47
1:C:2007:ILE:HD11	1:C:3642:LEU:HD21	1.97	0.47
1:C:3837:ALA:O	1:C:3841:THR:HG23	2.15	0.47
1:C:5032:ASP:OD1	1:C:5033:GLN:OE1	2.32	0.47
1:D:864:LEU:HD12	1:D:864:LEU:O	2.14	0.47
1:D:878:ASN:O	1:D:882:LEU:HD23	2.15	0.47
1:D:2859:GLN:O	1:D:2859:GLN:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2884:HIS:NE2	1:D:2907:VAL:O	2.47	0.47
1:D:4091:ILE:HG13	1:D:4095:ASP:HB3	1.97	0.47
1:A:3593:ILE:O	1:A:3597:VAL:HG12	2.15	0.47
1:B:1521:VAL:HG12	1:B:1528:MET:HG2	1.97	0.47
1:B:2883:TYR:OH	1:B:2927:LEU:HD13	2.15	0.47
1:B:3367:ARG:NH1	1:B:3441:GLU:OE1	2.48	0.47
1:B:3593:ILE:O	1:B:3597:VAL:HG12	2.15	0.47
1:B:4091:ILE:HG13	1:B:4095:ASP:HB3	1.97	0.47
1:B:4638:GLU:HB3	1:B:4639:PRO:HD3	1.96	0.47
1:A:157:GLN:OE1	1:D:386:ASP:HB3	2.15	0.47
1:A:165:ARG:HG3	1:A:165:ARG:HH11	1.79	0.47
1:A:878:ASN:O	1:A:882:LEU:HD23	2.15	0.47
1:A:4093:LYS:CB	1:A:4124:GLU:HB3	2.42	0.47
1:B:4935:ILE:HG12	1:C:4932:GLY:HA2	1.97	0.47
1:C:723:TRP:CZ2	1:C:728:ALA:HB2	2.50	0.47
1:C:929:THR:O	1:C:932:THR:OG1	2.30	0.47
1:C:4890:ARG:NH1	1:D:4897:ASP:OD1	2.48	0.47
1:D:1064:VAL:O	1:D:1065:ASP:OD1	2.32	0.47
1:D:2089:GLU:OE1	1:D:2091:LYS:N	2.48	0.47
1:A:70:LEU:HD21	1:A:203:MET:CE	2.43	0.47
1:A:2883:TYR:OH	1:A:2927:LEU:HD13	2.15	0.47
1:A:3360:ILE:HB	1:A:3361:PRO:HD3	1.96	0.47
1:A:4900:GLU:O	1:A:4911:ARG:NH2	2.43	0.47
2:E:24:VAL:HG22	2:E:48:LYS:HG2	1.96	0.47
2:G:5:VAL:HG22	2:G:75:LEU:HD22	1.97	0.47
1:C:4091:ILE:HG13	1:C:4095:ASP:HB3	1.97	0.47
1:D:4111:ILE:O	1:D:4115:LEU:N	2.46	0.47
1:A:253:VAL:HG23	1:A:258:ARG:HE	1.79	0.46
1:B:875:LEU:HD12	1:B:1047:LEU:HD21	1.96	0.46
1:B:2249:ARG:HE	1:B:3869:ILE:HD13	1.80	0.46
1:B:4902:PRO:HB3	1:B:4911:ARG:HG2	1.97	0.46
1:C:878:ASN:O	1:C:882:LEU:HD23	2.15	0.46
1:C:2249:ARG:HE	1:C:3869:ILE:HD13	1.81	0.46
1:C:3367:ARG:NH1	1:C:3441:GLU:OE1	2.48	0.46
1:D:723:TRP:CZ2	1:D:728:ALA:HB2	2.50	0.46
1:D:2007:ILE:HD11	1:D:3642:LEU:HD21	1.97	0.46
1:D:3837:ALA:O	1:D:3841:THR:HG23	2.15	0.46
1:A:228:MET:SD	1:B:156:LYS:HB2	2.56	0.46
1:A:3837:ALA:O	1:A:3841:THR:HG23	2.15	0.46
1:A:4902:PRO:HB3	1:A:4911:ARG:HG2	1.98	0.46
1:B:2859:GLN:O	1:B:2859:GLN:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3282:LEU:HD12	1:B:3316:LEU:HD22	1.98	0.46
1:B:3962:LYS:HG3	1:B:4025:ASP:OD1	2.15	0.46
1:C:1127:GLY:HA3	1:C:1144:TRP:CZ3	2.50	0.46
1:C:3282:LEU:HD12	1:C:3316:LEU:HD22	1.98	0.46
1:D:1127:GLY:HA3	1:D:1144:TRP:CZ3	2.50	0.46
1:D:1281:GLN:O	1:D:1282:ASN:CG	2.58	0.46
1:A:156:LYS:HB2	1:D:228:MET:SD	2.55	0.46
1:A:169:ASP:OD1	1:A:202:ASN:ND2	2.47	0.46
1:A:1521:VAL:HG12	1:A:1528:MET:HG2	1.97	0.46
2:F:12:ASP:OD2	2:F:15:THR:OG1	2.27	0.46
1:B:1127:GLY:HA3	1:B:1144:TRP:CZ3	2.50	0.46
1:D:3076:LEU:O	1:D:3147:HIS:NE2	2.41	0.46
1:A:940:VAL:HG12	1:A:1054:ILE:HD12	1.96	0.46
1:B:3360:ILE:HB	1:B:3361:PRO:HD3	1.96	0.46
1:C:1281:GLN:O	1:C:1282:ASN:CG	2.58	0.46
1:C:1297:GLN:NE2	1:C:1546:ASN:OD1	2.49	0.46
1:C:2859:GLN:HG2	1:C:2859:GLN:O	2.15	0.46
1:C:2883:TYR:OH	1:C:2927:LEU:HD13	2.15	0.46
1:A:2209:MET:HE1	1:A:2254:HIS:CG	2.51	0.46
1:B:878:ASN:O	1:B:882:LEU:HD23	2.15	0.46
1:B:2209:MET:HE1	1:B:2254:HIS:CG	2.51	0.46
1:B:2964:LEU:CD2	1:B:3003:LEU:HD11	2.46	0.46
1:B:3837:ALA:O	1:B:3841:THR:HG23	2.15	0.46
1:D:2209:MET:HE1	1:D:2254:HIS:CG	2.51	0.46
1:D:2249:ARG:HE	1:D:3869:ILE:HD13	1.81	0.46
1:D:3962:LYS:HG3	1:D:4025:ASP:OD1	2.15	0.46
1:A:723:TRP:CZ2	1:A:728:ALA:HB2	2.50	0.46
1:A:2007:ILE:HD11	1:A:3642:LEU:HD21	1.97	0.46
1:A:2092:PRO:O	1:A:2097:GLU:OE1	2.34	0.46
1:A:2286:GLU:OE1	1:A:3871:ARG:HA	2.16	0.46
1:A:2859:GLN:O	1:A:2859:GLN:HG2	2.15	0.46
1:B:723:TRP:CZ2	1:B:728:ALA:HB2	2.50	0.46
1:B:1281:GLN:O	1:B:1282:ASN:CG	2.58	0.46
1:C:1521:VAL:HG12	1:C:1528:MET:HG2	1.97	0.46
1:C:2089:GLU:OE1	1:C:2091:LYS:N	2.48	0.46
1:C:3962:LYS:HG3	1:C:4025:ASP:OD1	2.16	0.46
1:C:4902:PRO:HB3	1:C:4911:ARG:HG2	1.98	0.46
1:D:70:LEU:HD21	1:D:203:MET:CE	2.43	0.46
1:A:2249:ARG:HE	1:A:3869:ILE:HD13	1.81	0.46
1:A:2765:GLU:OE1	1:A:2861:PRO:HD3	2.16	0.46
1:A:2889:ARG:HA	1:A:2892:LYS:NZ	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:24:VAL:HG22	2:F:48:LYS:HG2	1.98	0.46
1:B:2286:GLU:OE1	1:B:3871:ARG:HA	2.16	0.46
1:C:70:LEU:HD21	1:C:203:MET:CE	2.43	0.46
1:C:940:VAL:HG12	1:C:1054:ILE:HD12	1.96	0.46
1:C:956:LEU:HD12	1:C:960:TYR:HD1	1.81	0.46
1:C:1288:LEU:HD11	1:C:1600:MET:HE3	1.98	0.46
1:C:2964:LEU:CD2	1:C:3003:LEU:HD11	2.46	0.46
1:D:3759:LYS:HB2	1:D:3759:LYS:HE2	1.70	0.46
1:D:4902:PRO:HB3	1:D:4911:ARG:HG2	1.98	0.46
1:A:760:ILE:HG23	1:A:760:ILE:O	2.16	0.46
1:A:3639:MET:HE2	1:A:3641:PRO:HG3	1.98	0.46
1:B:956:LEU:HD12	1:B:960:TYR:HD1	1.81	0.46
1:B:1288:LEU:HD11	1:B:1600:MET:HE3	1.98	0.46
1:B:1297:GLN:NE2	1:B:1546:ASN:OD1	2.49	0.46
1:C:868:LEU:HD12	1:C:930:LEU:CD1	2.41	0.46
1:C:2765:GLU:OE1	1:C:2861:PRO:HD3	2.16	0.46
1:C:3972:ILE:CG2	1:C:3983:LEU:HD12	2.46	0.46
1:D:2092:PRO:O	1:D:2097:GLU:OE1	2.34	0.46
1:A:2889:ARG:HA	1:A:2892:LYS:HZ1	1.81	0.46
1:A:3612:HIS:O	1:A:3612:HIS:ND1	2.49	0.46
1:A:4115:LEU:HD23	1:A:4115:LEU:HA	1.78	0.46
1:B:3467:ASN:OD1	1:B:3468:MET:N	2.49	0.46
1:B:3724:MET:CE	1:B:3795:ALA:HB3	2.46	0.46
1:C:2092:PRO:O	1:C:2097:GLU:OE1	2.34	0.46
1:C:2624:LEU:O	1:C:2628:VAL:HG23	2.14	0.46
1:C:3467:ASN:OD1	1:C:3468:MET:N	2.49	0.46
1:C:4935:ILE:HG12	1:D:4932:GLY:HA2	1.97	0.46
1:D:940:VAL:HG12	1:D:1054:ILE:HD12	1.96	0.46
1:D:2286:GLU:OE1	1:D:3871:ARG:HA	2.16	0.46
1:D:3639:MET:HE2	1:D:3641:PRO:HG3	1.98	0.46
1:A:4071:LEU:O	1:A:4072:LYS:C	2.59	0.46
1:C:2286:GLU:OE1	1:C:3871:ARG:HA	2.16	0.46
1:C:3377:GLU:OE1	1:C:3449:SER:OG	2.31	0.46
1:C:3612:HIS:O	1:C:3612:HIS:ND1	2.49	0.46
1:C:3724:MET:CE	1:C:3795:ALA:HB3	2.46	0.46
1:D:3360:ILE:HB	1:D:3361:PRO:HD3	1.96	0.46
1:D:3972:ILE:CG2	1:D:3983:LEU:HD12	2.46	0.46
1:A:3267:MET:O	1:A:3267:MET:HG3	2.16	0.45
1:A:3282:LEU:HD12	1:A:3316:LEU:HD22	1.98	0.45
1:A:3972:ILE:CG2	1:A:3983:LEU:HD12	2.46	0.45
1:B:2765:GLU:OE1	1:B:2861:PRO:HD3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2884:HIS:NE2	1:B:2907:VAL:O	2.47	0.45
1:B:3267:MET:O	1:B:3267:MET:HG3	2.16	0.45
1:C:2771:LYS:O	1:C:2776:TRP:N	2.47	0.45
1:C:3360:ILE:HB	1:C:3361:PRO:HD3	1.96	0.45
1:D:1521:VAL:HG12	1:D:1528:MET:HG2	1.97	0.45
1:D:2765:GLU:OE1	1:D:2861:PRO:HD3	2.16	0.45
1:D:3467:ASN:OD1	1:D:3468:MET:N	2.49	0.45
1:A:1297:GLN:NE2	1:A:1546:ASN:OD1	2.49	0.45
1:A:3293:PRO:O	1:A:3295:PRO:CD	2.64	0.45
1:A:3467:ASN:OD1	1:A:3468:MET:N	2.49	0.45
1:A:4092:SER:O	1:A:4093:LYS:C	2.59	0.45
1:B:2007:ILE:HD11	1:B:3642:LEU:HD21	1.97	0.45
1:B:2889:ARG:HA	1:B:2892:LYS:NZ	2.31	0.45
1:B:3612:HIS:O	1:B:3612:HIS:ND1	2.49	0.45
1:C:760:ILE:HG23	1:C:760:ILE:O	2.16	0.45
1:C:2209:MET:HE1	1:C:2254:HIS:CG	2.51	0.45
1:C:3107:MET:O	1:C:3111:LEU:HD13	2.17	0.45
1:D:3282:LEU:HD12	1:D:3316:LEU:HD22	1.98	0.45
1:A:887:ARG:NH2	1:A:890:GLN:OE1	2.50	0.45
2:G:7:THR:HG23	2:G:7:THR:O	2.16	0.45
1:B:2092:PRO:O	1:B:2097:GLU:OE1	2.34	0.45
1:C:3541:TYR:HE2	1:C:3550:VAL:HG21	1.78	0.45
1:D:804:LEU:HD12	1:D:805:PRO:HD2	1.99	0.45
1:D:868:LEU:HD12	1:D:930:LEU:CD1	2.41	0.45
1:D:1297:GLN:NE2	1:D:1546:ASN:OD1	2.49	0.45
1:D:3107:MET:O	1:D:3111:LEU:HD13	2.17	0.45
1:A:3962:LYS:HG3	1:A:4025:ASP:OD1	2.15	0.45
2:E:36:LYS:NZ	2:E:42:ASP:OD1	2.50	0.45
2:H:5:VAL:HG22	2:H:75:LEU:HD22	1.97	0.45
1:B:887:ARG:NH2	1:B:890:GLN:OE1	2.50	0.45
1:B:1555:VAL:HG21	1:B:1562:VAL:CG1	2.47	0.45
1:B:4890:ARG:NH1	1:C:4897:ASP:OD1	2.49	0.45
1:C:3293:PRO:O	1:C:3295:PRO:CD	2.64	0.45
1:D:3293:PRO:O	1:D:3295:PRO:CD	2.64	0.45
1:D:4643:CYS:O	1:D:4647:LEU:HD13	2.16	0.45
1:A:4643:CYS:O	1:A:4647:LEU:HD13	2.16	0.45
1:B:3107:MET:O	1:B:3111:LEU:HD13	2.17	0.45
1:C:804:LEU:HD12	1:C:805:PRO:HD2	1.99	0.45
1:C:3267:MET:HG3	1:C:3267:MET:O	2.16	0.45
1:B:3293:PRO:O	1:B:3295:PRO:CD	2.64	0.45
1:D:4071:LEU:O	1:D:4072:LYS:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2823:THR:OG1	1:A:2939:THR:OG1	1.88	0.45
1:A:2964:LEU:CD2	1:A:3003:LEU:HD11	2.46	0.45
1:A:3082:MET:SD	1:A:3093:LEU:HD23	2.57	0.45
1:A:3724:MET:CE	1:A:3795:ALA:HB3	2.46	0.45
1:B:3639:MET:HE2	1:B:3641:PRO:HG3	1.98	0.45
1:C:887:ARG:NH2	1:C:890:GLN:OE1	2.50	0.45
1:C:3082:MET:SD	1:C:3093:LEU:HD23	2.57	0.45
1:C:4071:LEU:O	1:C:4072:LYS:C	2.59	0.45
1:C:4637:MET:O	1:C:4641:LEU:N	2.39	0.45
1:D:1288:LEU:HD11	1:D:1600:MET:HE3	1.98	0.45
1:D:3267:MET:O	1:D:3267:MET:HG3	2.16	0.45
1:A:956:LEU:HD12	1:A:960:TYR:HD1	1.81	0.45
1:A:3515:LEU:HD23	1:A:3515:LEU:O	2.17	0.45
1:B:3082:MET:SD	1:B:3093:LEU:HD23	2.57	0.45
1:B:3710:ALA:HB2	1:B:3785:MET:HE2	1.99	0.45
1:B:3972:ILE:CG2	1:B:3983:LEU:HD12	2.46	0.45
1:B:4115:LEU:HA	1:B:4118:SER:HB3	1.99	0.45
1:C:1102:ARG:HG2	1:C:1126:ASN:HB2	1.99	0.45
1:C:2226:PHE:N	1:C:2227:PRO:HD3	2.32	0.45
1:C:2820:TRP:CH2	1:C:2882:ASN:HB2	2.52	0.45
1:C:3515:LEU:HD11	1:C:3603:VAL:HG13	1.99	0.45
1:C:3639:MET:HE2	1:C:3641:PRO:HG3	1.98	0.45
1:C:4643:CYS:O	1:C:4647:LEU:HD13	2.16	0.45
1:D:918:GLU:OE1	1:D:918:GLU:N	2.48	0.45
1:D:2759:PHE:CD2	1:D:2810:ILE:HG12	2.52	0.45
1:D:2889:ARG:HA	1:D:2892:LYS:NZ	2.31	0.45
1:D:3515:LEU:HD23	1:D:3515:LEU:O	2.17	0.45
1:D:3515:LEU:HD11	1:D:3603:VAL:HG13	1.99	0.45
1:D:3724:MET:HE1	1:D:3795:ALA:HB3	1.99	0.45
1:D:4092:SER:O	1:D:4093:LYS:C	2.59	0.45
1:A:1288:LEU:HD11	1:A:1600:MET:HE3	1.98	0.45
1:B:877:GLU:O	1:B:881:GLU:HG2	2.17	0.45
1:B:3515:LEU:HD23	1:B:3515:LEU:O	2.17	0.45
1:B:4643:CYS:O	1:B:4647:LEU:HD13	2.16	0.45
1:C:877:GLU:O	1:C:881:GLU:HG2	2.17	0.45
1:C:955:LYS:C	1:C:956:LEU:HD22	2.42	0.45
1:C:2756:ILE:CG2	1:C:2807:ARG:HB2	2.47	0.45
1:C:2889:ARG:HA	1:C:2892:LYS:NZ	2.31	0.45
1:D:928:GLU:O	1:D:932:THR:HG23	2.17	0.45
1:D:956:LEU:HD12	1:D:960:TYR:HD1	1.81	0.45
1:D:2352:ASN:ND2	1:D:2450:GLU:OE2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1555:VAL:HG21	1:A:1562:VAL:CG1	2.47	0.45
1:A:2254:HIS:O	1:A:2255:LEU:C	2.60	0.45
1:A:2701:MET:HB3	1:A:2702:PRO:HD3	1.99	0.45
1:A:3107:MET:O	1:A:3111:LEU:HD13	2.17	0.45
1:A:3413:LEU:HD11	1:A:3435:LEU:HD21	1.99	0.45
1:A:4694:ASP:OD1	1:A:4694:ASP:O	2.35	0.45
1:B:616:ARG:HG3	1:B:2175:GLU:OE2	2.17	0.45
1:B:2759:PHE:CD2	1:B:2810:ILE:HG12	2.52	0.45
1:B:3377:GLU:OE1	1:B:3449:SER:OG	2.31	0.45
1:B:3724:MET:HE1	1:B:3795:ALA:HB3	1.99	0.45
1:B:3952:ARG:HB3	1:B:3952:ARG:NH1	2.32	0.45
1:B:4099:ALA:O	1:B:4103:GLN:HG2	2.17	0.45
1:B:4140:ARG:NH2	1:B:4202:GLU:OE2	2.50	0.45
1:C:566:TYR:O	1:C:570:ILE:HG12	2.17	0.45
1:C:616:ARG:HG3	1:C:2175:GLU:OE2	2.17	0.45
1:C:4908:GLU:O	1:C:4912:VAL:HG13	2.17	0.45
1:D:1555:VAL:HG21	1:D:1562:VAL:CG1	2.47	0.45
1:D:2820:TRP:CH2	1:D:2882:ASN:HB2	2.52	0.45
1:D:3672:ASP:OD2	1:D:3735:HIS:NE2	2.50	0.45
1:D:4098:LYS:O	1:D:4102:SER:N	2.45	0.45
1:A:877:GLU:O	1:A:881:GLU:HG2	2.17	0.44
1:A:925:MET:HA	1:A:928:GLU:OE2	2.17	0.44
1:A:928:GLU:O	1:A:932:THR:HG23	2.17	0.44
1:B:955:LYS:C	1:B:956:LEU:HD22	2.42	0.44
1:B:2771:LYS:O	1:B:2776:TRP:N	2.47	0.44
1:B:2823:THR:OG1	1:B:2939:THR:OG1	1.88	0.44
1:C:2254:HIS:O	1:C:2255:LEU:C	2.60	0.44
1:C:2759:PHE:CD2	1:C:2810:ILE:HG12	2.52	0.44
1:C:4088:ARG:H	1:C:4088:ARG:HG2	1.56	0.44
1:D:566:TYR:O	1:D:570:ILE:HG12	2.17	0.44
1:D:760:ILE:O	1:D:760:ILE:HG23	2.16	0.44
1:D:877:GLU:O	1:D:881:GLU:HG2	2.17	0.44
1:D:887:ARG:NH2	1:D:890:GLN:OE1	2.50	0.44
1:D:2254:HIS:O	1:D:2255:LEU:C	2.60	0.44
1:D:3082:MET:SD	1:D:3093:LEU:HD23	2.57	0.44
1:D:3612:HIS:O	1:D:3612:HIS:ND1	2.49	0.44
1:D:4093:LYS:CB	1:D:4124:GLU:HB3	2.42	0.44
1:D:4908:GLU:O	1:D:4912:VAL:HG13	2.17	0.44
1:A:804:LEU:HD12	1:A:805:PRO:HD2	1.99	0.44
1:A:2226:PHE:N	1:A:2227:PRO:HD3	2.32	0.44
1:A:2759:PHE:CD2	1:A:2810:ILE:HG12	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3515:LEU:HD22	1:A:3607:LEU:HD21	1.99	0.44
1:A:3710:ALA:HB2	1:A:3785:MET:HE2	1.99	0.44
1:A:3952:ARG:NH1	1:A:3952:ARG:HB3	2.33	0.44
1:B:2701:MET:HB3	1:B:2702:PRO:HD3	1.99	0.44
1:B:2756:ILE:CG2	1:B:2807:ARG:HB2	2.47	0.44
1:B:2820:TRP:CH2	1:B:2882:ASN:HB2	2.52	0.44
1:C:4115:LEU:HA	1:C:4118:SER:HB3	1.99	0.44
1:D:2964:LEU:CD2	1:D:3003:LEU:HD11	2.46	0.44
1:A:914:LEU:HD12	1:A:915:PRO:HD2	2.00	0.44
1:A:3724:MET:HE1	1:A:3795:ALA:HB3	1.99	0.44
1:A:4115:LEU:HA	1:A:4118:SER:HB3	1.99	0.44
1:A:4890:ARG:NH1	1:B:4897:ASP:OD1	2.51	0.44
1:B:804:LEU:HD12	1:B:805:PRO:HD2	1.99	0.44
1:B:2226:PHE:N	1:B:2227:PRO:HD3	2.32	0.44
1:B:3672:ASP:OD2	1:B:3735:HIS:NE2	2.50	0.44
1:B:4071:LEU:O	1:B:4072:LYS:C	2.59	0.44
1:C:1555:VAL:HG21	1:C:1562:VAL:CG1	2.47	0.44
1:C:3667:ASP:OD1	1:C:3667:ASP:O	2.36	0.44
1:C:3724:MET:HE1	1:C:3795:ALA:HB3	1.99	0.44
1:C:4887:VAL:CG1	1:C:4898:GLU:HG3	2.48	0.44
1:D:925:MET:HA	1:D:928:GLU:OE2	2.17	0.44
1:D:4099:ALA:O	1:D:4103:GLN:HG2	2.17	0.44
1:A:616:ARG:HG3	1:A:2175:GLU:OE2	2.17	0.44
1:A:997:TRP:O	1:A:1001:ARG:HG2	2.18	0.44
1:A:2820:TRP:CH2	1:A:2882:ASN:HB2	2.52	0.44
1:B:925:MET:HA	1:B:928:GLU:OE2	2.17	0.44
1:B:3413:LEU:HD11	1:B:3435:LEU:HD21	1.99	0.44
1:C:3515:LEU:HD23	1:C:3515:LEU:O	2.17	0.44
1:C:3515:LEU:HD22	1:C:3607:LEU:HD21	1.99	0.44
1:C:3952:ARG:NH1	1:C:3952:ARG:HB3	2.33	0.44
1:C:4099:ALA:O	1:C:4103:GLN:HG2	2.17	0.44
1:D:1420:ASP:O	1:D:1421:ASN:OD1	2.36	0.44
1:D:3710:ALA:HB2	1:D:3785:MET:HE2	1.99	0.44
1:D:3724:MET:CE	1:D:3795:ALA:HB3	2.46	0.44
1:A:2771:LYS:O	1:A:2776:TRP:N	2.47	0.44
1:A:4887:VAL:CG1	1:A:4898:GLU:HG3	2.48	0.44
1:B:1102:ARG:HG2	1:B:1126:ASN:HB2	1.99	0.44
1:B:2671:GLU:N	1:B:2671:GLU:OE1	2.51	0.44
1:B:3667:ASP:OD1	1:B:3667:ASP:O	2.36	0.44
1:B:4092:SER:O	1:B:4093:LYS:C	2.59	0.44
1:B:4908:GLU:O	1:B:4912:VAL:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:928:GLU:O	1:C:932:THR:HG23	2.17	0.44
1:C:2482:LYS:HD2	1:C:2482:LYS:O	2.18	0.44
1:C:4993:LEU:HD21	1:C:5005:GLU:HB3	1.99	0.44
1:D:901:ASN:OD1	1:D:902:LYS:N	2.51	0.44
1:D:997:TRP:O	1:D:1001:ARG:HG2	2.18	0.44
1:D:2226:PHE:N	1:D:2227:PRO:HD3	2.32	0.44
1:D:3413:LEU:HD11	1:D:3435:LEU:HD21	1.99	0.44
1:D:4140:ARG:NH2	1:D:4202:GLU:OE2	2.50	0.44
1:A:1102:ARG:HG2	1:A:1126:ASN:HB2	1.99	0.44
1:A:3667:ASP:O	1:A:3667:ASP:OD1	2.36	0.44
1:A:4099:ALA:O	1:A:4103:GLN:HG2	2.17	0.44
1:A:4908:GLU:O	1:A:4912:VAL:HG13	2.17	0.44
1:B:1420:ASP:O	1:B:1421:ASN:OD1	2.36	0.44
1:B:4694:ASP:OD1	1:B:4694:ASP:O	2.35	0.44
1:C:997:TRP:O	1:C:1001:ARG:HG2	2.18	0.44
1:C:3413:LEU:HD11	1:C:3435:LEU:HD21	1.99	0.44
1:D:569:LEU:HD12	1:D:603:VAL:HG13	2.00	0.44
1:D:955:LYS:C	1:D:956:LEU:HD22	2.42	0.44
1:D:1022:LEU:HD23	1:D:1022:LEU:O	2.18	0.44
1:D:1420:ASP:OD2	1:D:1421:ASN:ND2	2.51	0.44
1:D:3952:ARG:HB3	1:D:3952:ARG:NH1	2.33	0.44
1:D:4094:LYS:HD2	1:D:4094:LYS:HA	1.36	0.44
1:D:4887:VAL:CG1	1:D:4898:GLU:HG3	2.48	0.44
1:A:566:TYR:O	1:A:570:ILE:HG12	2.17	0.44
1:A:569:LEU:HD12	1:A:603:VAL:HG13	2.00	0.44
1:A:901:ASN:OD1	1:A:902:LYS:N	2.51	0.44
1:A:1420:ASP:O	1:A:1421:ASN:OD1	2.36	0.44
1:B:918:GLU:OE1	1:B:918:GLU:N	2.48	0.44
1:B:1080:LYS:HA	1:B:1190:LEU:HD11	2.00	0.44
1:B:1574:MET:HE1	1:B:1588:PRO:HB3	2.00	0.44
1:B:4887:VAL:CG1	1:B:4898:GLU:HG3	2.48	0.44
1:C:1080:LYS:HA	1:C:1190:LEU:HD11	2.00	0.44
1:C:1420:ASP:OD2	1:C:1421:ASN:ND2	2.51	0.44
1:C:2192:PHE:HA	1:C:2199:MET:HE3	2.00	0.44
1:C:2352:ASN:ND2	1:C:2450:GLU:OE2	2.50	0.44
1:C:3076:LEU:O	1:C:3147:HIS:NE2	2.41	0.44
1:D:2482:LYS:HD2	1:D:2482:LYS:O	2.18	0.44
1:D:3522:GLY:O	1:D:3525:MET:HG2	2.18	0.44
1:A:2949:THR:OG1	1:A:2950:SER:N	2.50	0.44
1:A:3107:MET:CE	1:A:3187:LEU:HD21	2.48	0.44
1:A:3515:LEU:HD11	1:A:3603:VAL:HG13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3672:ASP:OD2	1:A:3735:HIS:NE2	2.50	0.44
1:A:4093:LYS:HE2	1:A:4093:LYS:HB2	1.34	0.44
1:A:4993:LEU:HD23	1:A:4993:LEU:HA	1.78	0.44
1:A:4993:LEU:HD21	1:A:5005:GLU:HB3	1.99	0.44
1:B:914:LEU:HD12	1:B:915:PRO:HD2	2.00	0.44
1:B:3107:MET:CE	1:B:3187:LEU:HD21	2.48	0.44
1:B:3515:LEU:HD11	1:B:3603:VAL:HG13	1.99	0.44
1:C:901:ASN:OD1	1:C:902:LYS:N	2.51	0.44
1:C:2671:GLU:N	1:C:2671:GLU:OE1	2.51	0.44
1:C:2949:THR:OG1	1:C:2950:SER:N	2.50	0.44
1:D:2192:PHE:HA	1:D:2199:MET:HE3	2.00	0.44
1:D:2701:MET:HB3	1:D:2702:PRO:HD3	1.99	0.44
1:D:2756:ILE:CG2	1:D:2807:ARG:HB2	2.47	0.44
1:D:3667:ASP:OD1	1:D:3667:ASP:O	2.36	0.44
1:D:4119:GLU:OE1	1:D:4119:GLU:O	2.36	0.44
1:D:4694:ASP:OD1	1:D:4694:ASP:O	2.35	0.44
1:A:955:LYS:C	1:A:956:LEU:HD22	2.42	0.44
1:A:4140:ARG:NH2	1:A:4202:GLU:OE2	2.50	0.44
1:B:760:ILE:O	1:B:760:ILE:HG23	2.16	0.44
1:B:901:ASN:OD1	1:B:902:LYS:N	2.51	0.44
1:B:997:TRP:O	1:B:1001:ARG:HG2	2.18	0.44
1:C:925:MET:HA	1:C:928:GLU:OE2	2.17	0.44
1:C:1793:ALA:C	1:C:1794:THR:HG1	2.11	0.44
1:C:2360:ARG:NH2	1:D:178:GLU:O	2.51	0.44
1:D:616:ARG:HG3	1:D:2175:GLU:OE2	2.17	0.44
1:D:4115:LEU:HA	1:D:4118:SER:HB3	1.99	0.44
1:A:2764:HIS:CE1	1:A:2791:MET:HG3	2.53	0.43
1:A:4932:GLY:HA2	1:D:4935:ILE:HG12	2.00	0.43
1:B:1793:ALA:C	1:B:1794:THR:HG1	2.13	0.43
1:B:2192:PHE:HA	1:B:2199:MET:HE3	2.00	0.43
1:B:4155:GLU:OE2	1:B:4195:ARG:NH1	2.51	0.43
1:C:4092:SER:O	1:C:4093:LYS:C	2.59	0.43
1:C:4694:ASP:OD1	1:C:4694:ASP:O	2.35	0.43
1:D:1080:LYS:HA	1:D:1190:LEU:HD11	2.00	0.43
1:D:2764:HIS:CE1	1:D:2791:MET:HG3	2.53	0.43
1:A:2192:PHE:HA	1:A:2199:MET:HE3	2.00	0.43
1:A:4167:LEU:HD13	1:A:4174:LEU:HD11	2.00	0.43
2:G:91:ILE:HD13	1:C:1784:PHE:CE1	2.54	0.43
1:B:928:GLU:O	1:B:932:THR:HG23	2.17	0.43
1:B:1420:ASP:OD2	1:B:1421:ASN:ND2	2.51	0.43
1:B:2360:ARG:NH2	1:C:178:GLU:O	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2482:LYS:HD2	1:B:2482:LYS:O	2.18	0.43
1:B:4088:ARG:H	1:B:4088:ARG:HG2	1.56	0.43
1:C:1022:LEU:O	1:C:1022:LEU:HD23	2.18	0.43
1:C:2356:ARG:O	1:C:2360:ARG:HG2	2.18	0.43
1:C:2701:MET:HB3	1:C:2702:PRO:HD3	1.99	0.43
1:C:3522:GLY:O	1:C:3525:MET:HG2	2.18	0.43
1:D:2356:ARG:O	1:D:2360:ARG:HG2	2.18	0.43
1:A:1420:ASP:OD2	1:A:1421:ASN:ND2	2.51	0.43
2:F:37:PHE:O	1:B:1688:SER:OG	2.28	0.43
2:H:91:ILE:HD13	1:D:1784:PHE:CD1	2.53	0.43
1:B:1144:TRP:HB2	1:B:1148:ASP:HB2	2.01	0.43
1:B:3290:PRO:O	1:B:3291:GLU:HB3	2.19	0.43
1:B:3515:LEU:HD22	1:B:3607:LEU:HD21	1.99	0.43
1:B:4167:LEU:HD13	1:B:4174:LEU:HD11	2.00	0.43
1:C:3672:ASP:OD2	1:C:3735:HIS:NE2	2.50	0.43
1:C:3710:ALA:HB2	1:C:3785:MET:HE2	1.99	0.43
1:C:4140:ARG:NH2	1:C:4202:GLU:OE2	2.50	0.43
1:C:5032:ASP:OD1	1:C:5033:GLN:N	2.52	0.43
1:D:929:THR:O	1:D:932:THR:OG1	2.30	0.43
1:D:1038:ASP:OD2	1:D:1038:ASP:C	2.61	0.43
1:D:1102:ARG:HG2	1:D:1126:ASN:HB2	1.99	0.43
1:D:2949:THR:OG1	1:D:2950:SER:N	2.50	0.43
1:A:178:GLU:O	1:D:2360:ARG:NH2	2.51	0.43
1:A:3522:GLY:O	1:A:3525:MET:HG2	2.18	0.43
1:A:4770:ASP:O	1:A:4771:VAL:C	2.61	0.43
1:B:566:TYR:O	1:B:570:ILE:HG12	2.17	0.43
1:B:2352:ASN:ND2	1:B:2450:GLU:OE2	2.50	0.43
1:B:4637:MET:O	1:B:4641:LEU:N	2.39	0.43
1:C:139:GLN:NE2	1:C:141:ASP:O	2.52	0.43
1:C:1420:ASP:O	1:C:1421:ASN:OD1	2.36	0.43
1:C:1574:MET:HE1	1:C:1588:PRO:HB3	2.00	0.43
1:C:2525:VAL:HG23	1:C:2526:GLY:N	2.34	0.43
1:C:2764:HIS:CE1	1:C:2791:MET:HG3	2.53	0.43
1:C:3107:MET:CE	1:C:3187:LEU:HD21	2.48	0.43
1:C:4155:GLU:OE2	1:C:4195:ARG:NH1	2.51	0.43
1:D:3290:PRO:O	1:D:3291:GLU:HB3	2.19	0.43
1:D:4155:GLU:OE2	1:D:4195:ARG:NH1	2.51	0.43
1:A:1574:MET:HE1	1:A:1588:PRO:HB3	2.00	0.43
1:A:1713:TYR:OH	1:A:1816:MET:SD	2.76	0.43
1:A:2482:LYS:HD2	1:A:2482:LYS:O	2.18	0.43
1:A:2756:ILE:CG2	1:A:2807:ARG:HB2	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:91:ILE:HD13	1:C:1784:PHE:CD1	2.53	0.43
1:B:1713:TYR:OH	1:B:1816:MET:SD	2.76	0.43
1:B:2254:HIS:O	1:B:2255:LEU:C	2.60	0.43
1:B:2764:HIS:CE1	1:B:2791:MET:HG3	2.53	0.43
1:B:4093:LYS:HB2	1:B:4093:LYS:HE2	1.33	0.43
1:C:4115:LEU:HA	1:C:4115:LEU:HD23	1.78	0.43
1:D:914:LEU:HD12	1:D:915:PRO:HD2	2.00	0.43
1:D:1144:TRP:HB2	1:D:1148:ASP:HB2	2.01	0.43
1:D:3515:LEU:HD22	1:D:3607:LEU:HD21	1.99	0.43
1:D:4006:LEU:HA	1:D:4012:GLN:NE2	2.34	0.43
1:D:4114:LEU:O	1:D:4118:SER:N	2.52	0.43
1:D:4993:LEU:HD21	1:D:5005:GLU:HB3	1.99	0.43
1:A:2352:ASN:ND2	1:A:2450:GLU:OE2	2.50	0.43
1:A:2671:GLU:N	1:A:2671:GLU:OE1	2.51	0.43
1:A:4114:LEU:O	1:A:4118:SER:N	2.52	0.43
2:H:91:ILE:HD13	1:D:1784:PHE:CE1	2.54	0.43
1:B:77:ARG:O	1:B:81:GLU:HG2	2.19	0.43
1:C:2391:PRO:O	1:C:2392:ALA:HB3	2.19	0.43
1:C:4006:LEU:HA	1:C:4012:GLN:NE2	2.34	0.43
1:D:2671:GLU:OE1	1:D:2671:GLU:N	2.51	0.43
1:D:3107:MET:CE	1:D:3187:LEU:HD21	2.48	0.43
1:D:4093:LYS:HE2	1:D:4093:LYS:HB2	1.34	0.43
1:A:979:THR:OG1	1:A:982:GLN:HG3	2.19	0.43
1:A:1080:LYS:HA	1:A:1190:LEU:HD11	2.00	0.43
1:A:2391:PRO:O	1:A:2392:ALA:HB3	2.19	0.43
1:A:2578:ILE:HD12	1:A:2578:ILE:H	1.84	0.43
1:A:4155:GLU:OE2	1:A:4195:ARG:NH1	2.51	0.43
1:C:446:LEU:HD23	1:C:526:LEU:HD22	2.01	0.43
1:C:3290:PRO:O	1:C:3291:GLU:HB3	2.19	0.43
1:D:875:LEU:HD12	1:D:1047:LEU:CD2	2.49	0.43
1:D:979:THR:OG1	1:D:982:GLN:HG3	2.19	0.43
1:D:2748:ILE:CD1	1:D:2818:ILE:HD11	2.47	0.43
1:A:2824:VAL:CG1	1:A:2936:TYR:HB3	2.49	0.43
1:B:875:LEU:HD12	1:B:1047:LEU:CD2	2.49	0.43
1:B:2949:THR:OG1	1:B:2950:SER:N	2.50	0.43
1:B:4074:ILE:HD13	1:B:4103:GLN:HG3	2.01	0.43
1:B:4114:LEU:O	1:B:4118:SER:N	2.52	0.43
1:B:4115:LEU:O	1:B:4118:SER:OG	2.36	0.43
1:C:569:LEU:HD12	1:C:603:VAL:HG13	2.00	0.43
1:C:2898:LYS:NZ	1:C:2900:GLY:O	2.32	0.43
1:D:139:GLN:NE2	1:D:141:ASP:O	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3410:TYR:N	1:D:3411:PRO:HD2	2.34	0.43
1:D:4115:LEU:HA	1:D:4115:LEU:HD23	1.78	0.43
1:A:346:LEU:HB3	1:A:388:ALA:HB1	2.01	0.43
1:A:2525:VAL:HG23	1:A:2526:GLY:N	2.34	0.43
1:A:2774:ASN:O	1:A:2787:LYS:NZ	2.42	0.43
1:A:3366:LEU:HD11	1:A:3409:LEU:HD13	2.01	0.43
1:B:2391:PRO:O	1:B:2392:ALA:HB3	2.19	0.43
1:B:2971:SER:O	1:B:2975:ILE:HG12	2.19	0.43
1:B:2978:LEU:HA	1:B:2981:VAL:HG22	2.01	0.43
1:B:4090:LEU:HB3	1:B:4125:MET:CB	2.46	0.43
1:B:4993:LEU:HD21	1:B:5005:GLU:HB3	1.99	0.43
1:C:914:LEU:HD12	1:C:915:PRO:HD2	2.00	0.43
1:C:4770:ASP:O	1:C:4771:VAL:C	2.61	0.43
1:D:1574:MET:HE1	1:D:1588:PRO:HB3	2.00	0.43
1:D:3440:GLY:HA2	1:D:3515:LEU:HD12	2.01	0.43
1:D:4993:LEU:HD23	1:D:4993:LEU:HA	1.78	0.43
1:B:569:LEU:HD12	1:B:603:VAL:HG13	2.00	0.43
1:B:2356:ARG:O	1:B:2360:ARG:HG2	2.18	0.43
1:B:3130:LEU:O	1:B:3134:THR:HG22	2.18	0.43
1:C:1127:GLY:HA3	1:C:1144:TRP:CE3	2.54	0.43
1:C:2978:LEU:HA	1:C:2981:VAL:HG22	2.01	0.43
1:C:3130:LEU:O	1:C:3134:THR:HG22	2.19	0.43
1:C:4074:ILE:HD13	1:C:4103:GLN:HG3	2.01	0.43
1:D:346:LEU:HB3	1:D:388:ALA:HB1	2.01	0.43
1:D:1127:GLY:HA3	1:D:1144:TRP:CE3	2.54	0.43
1:D:3130:LEU:O	1:D:3134:THR:HG22	2.19	0.43
1:D:4770:ASP:O	1:D:4771:VAL:C	2.61	0.43
1:A:1022:LEU:O	1:A:1022:LEU:HD23	2.18	0.42
1:A:2887:TRP:O	1:A:2891:LYS:HE2	2.19	0.42
1:B:979:THR:OG1	1:B:982:GLN:HG3	2.19	0.42
1:B:1022:LEU:HD23	1:B:1022:LEU:O	2.18	0.42
1:B:2293:GLU:O	1:B:2297:GLU:HG3	2.19	0.42
1:B:2525:VAL:HG23	1:B:2526:GLY:N	2.34	0.42
1:C:2824:VAL:CG1	1:C:2936:TYR:HB3	2.49	0.42
1:C:2906:LEU:HD23	1:C:2906:LEU:O	2.19	0.42
1:C:2971:SER:O	1:C:2975:ILE:HG12	2.19	0.42
1:C:3410:TYR:N	1:C:3411:PRO:HD2	2.34	0.42
1:D:2481:GLY:O	1:D:2485:ALA:N	2.52	0.42
1:B:446:LEU:HD23	1:B:526:LEU:HD22	2.01	0.42
1:B:888:ILE:HD12	1:B:960:TYR:HB3	2.02	0.42
1:B:3522:GLY:O	1:B:3525:MET:HG2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4114:LEU:HD12	1:B:4114:LEU:HA	1.87	0.42
1:B:4770:ASP:O	1:B:4771:VAL:C	2.61	0.42
1:C:979:THR:OG1	1:C:982:GLN:HG3	2.19	0.42
1:C:2578:ILE:HD12	1:C:2578:ILE:H	1.84	0.42
1:C:4114:LEU:O	1:C:4118:SER:N	2.52	0.42
1:D:2525:VAL:HG23	1:D:2526:GLY:N	2.34	0.42
1:D:2887:TRP:NE1	1:D:2891:LYS:HZ1	2.16	0.42
1:D:2906:LEU:O	1:D:2906:LEU:HD23	2.19	0.42
1:A:875:LEU:HD12	1:A:1047:LEU:CD2	2.49	0.42
1:A:2971:SER:O	1:A:2975:ILE:HG12	2.19	0.42
1:A:3529:THR:HG23	1:A:3574:MET:SD	2.60	0.42
1:A:3759:LYS:HB2	1:A:3759:LYS:HE2	1.70	0.42
1:A:4006:LEU:HA	1:A:4012:GLN:NE2	2.34	0.42
1:A:4119:GLU:OE1	1:A:4119:GLU:O	2.36	0.42
1:A:4244:THR:HG22	1:A:4248:MET:HE3	2.02	0.42
1:B:1127:GLY:HA3	1:B:1144:TRP:CE3	2.54	0.42
1:B:4111:ILE:O	1:B:4115:LEU:N	2.46	0.42
1:B:4119:GLU:O	1:B:4119:GLU:OE1	2.36	0.42
1:C:2293:GLU:O	1:C:2297:GLU:HG3	2.19	0.42
1:C:3529:THR:HG23	1:C:3574:MET:SD	2.60	0.42
1:C:4167:LEU:HD13	1:C:4174:LEU:HD11	2.00	0.42
1:D:2824:VAL:CG1	1:D:2936:TYR:HB3	2.49	0.42
1:D:3992:VAL:HG11	1:D:4050:MET:HE2	2.02	0.42
1:D:4074:ILE:HD13	1:D:4103:GLN:HG3	2.01	0.42
1:A:1038:ASP:OD2	1:A:1038:ASP:C	2.61	0.42
1:A:2438:ALA:HB2	1:A:2510:VAL:HG22	2.01	0.42
1:A:2756:ILE:HG22	1:A:2807:ARG:HB2	2.02	0.42
1:A:4897:ASP:OD1	1:D:4890:ARG:NH1	2.52	0.42
1:B:2481:GLY:O	1:B:2485:ALA:N	2.52	0.42
1:B:2887:TRP:O	1:B:2891:LYS:HE2	2.19	0.42
1:C:888:ILE:HD12	1:C:960:TYR:HB3	2.02	0.42
1:C:2438:ALA:HB2	1:C:2510:VAL:HG22	2.01	0.42
1:A:446:LEU:HD23	1:A:526:LEU:HD22	2.01	0.42
1:A:1144:TRP:HB2	1:A:1148:ASP:HB2	2.01	0.42
1:A:2978:LEU:HA	1:A:2981:VAL:HG22	2.01	0.42
1:A:3130:LEU:O	1:A:3134:THR:HG22	2.19	0.42
1:A:3410:TYR:N	1:A:3411:PRO:HD2	2.34	0.42
1:B:4128:CYS:C	1:B:4130:GLU:N	2.77	0.42
1:C:77:ARG:O	1:C:81:GLU:HG2	2.19	0.42
1:C:408:THR:HG22	1:C:484:MET:HE1	2.02	0.42
1:C:1144:TRP:HB2	1:C:1148:ASP:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3440:GLY:HA2	1:C:3515:LEU:HD12	2.01	0.42
1:D:408:THR:HG22	1:D:484:MET:HE1	2.02	0.42
1:D:2578:ILE:HD12	1:D:2578:ILE:H	1.84	0.42
1:D:2887:TRP:O	1:D:2891:LYS:HE2	2.19	0.42
1:D:4003:MET:HE1	1:D:4061:ILE:HG12	2.02	0.42
1:A:408:THR:HG22	1:A:484:MET:HE1	2.02	0.42
1:A:2481:GLY:O	1:A:2485:ALA:N	2.52	0.42
1:A:3290:PRO:O	1:A:3291:GLU:HB3	2.19	0.42
1:A:4115:LEU:O	1:A:4118:SER:OG	2.35	0.42
2:F:91:ILE:HD13	1:B:1784:PHE:CD1	2.54	0.42
1:B:346:LEU:HB3	1:B:388:ALA:HB1	2.01	0.42
1:B:408:THR:HG22	1:B:484:MET:HE1	2.02	0.42
1:B:2824:VAL:CG1	1:B:2936:TYR:HB3	2.49	0.42
1:B:4006:LEU:HA	1:B:4012:GLN:NE2	2.34	0.42
1:C:2887:TRP:NE1	1:C:2891:LYS:HZ1	2.17	0.42
1:D:2293:GLU:O	1:D:2297:GLU:HG3	2.19	0.42
1:D:2971:SER:O	1:D:2975:ILE:HG12	2.19	0.42
1:D:5032:ASP:OD1	1:D:5033:GLN:N	2.52	0.42
1:A:77:ARG:O	1:A:81:GLU:HG2	2.19	0.42
1:A:1127:GLY:HA3	1:A:1144:TRP:CE3	2.54	0.42
1:A:3691:VAL:HG12	1:A:3693:GLU:H	1.85	0.42
2:E:60:TRP:O	2:E:61:GLU:C	2.61	0.42
1:B:3440:GLY:HA2	1:B:3515:LEU:HD12	2.01	0.42
1:C:875:LEU:HD12	1:C:1047:LEU:CD2	2.49	0.42
1:C:3366:LEU:HD11	1:C:3409:LEU:HD13	2.01	0.42
1:D:888:ILE:HD12	1:D:960:TYR:HB3	2.02	0.42
1:D:2391:PRO:O	1:D:2392:ALA:HB3	2.19	0.42
1:D:3640:THR:HG21	1:D:3864:GLU:OE2	2.20	0.42
1:D:4167:LEU:HD13	1:D:4174:LEU:HD11	2.00	0.42
1:A:1119:ASP:OD2	1:A:1121:LEU:HD12	2.20	0.42
1:A:2906:LEU:O	1:A:2906:LEU:HD23	2.19	0.42
1:A:3541:TYR:HE2	1:A:3550:VAL:HG21	1.78	0.42
1:A:4090:LEU:HB3	1:A:4125:MET:CB	2.46	0.42
2:G:12:ASP:OD1	2:G:14:ARG:N	2.39	0.42
1:B:2887:TRP:NE1	1:B:2891:LYS:HZ1	2.18	0.42
1:B:3078:ALA:O	1:B:3082:MET:HG2	2.20	0.42
1:C:346:LEU:HB3	1:C:388:ALA:HB1	2.01	0.42
1:C:1110:LEU:HA	1:C:1121:LEU:HD13	2.01	0.42
1:C:3992:VAL:HG11	1:C:4050:MET:HE2	2.02	0.42
1:C:4119:GLU:OE1	1:C:4119:GLU:O	2.36	0.42
1:C:4755:LYS:O	1:C:4755:LYS:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2810:ILE:HD12	1:D:2810:ILE:H	1.85	0.42
1:D:4244:THR:HG22	1:D:4248:MET:HE3	2.02	0.42
1:A:154:ALA:HB1	1:A:200:LEU:HD22	2.02	0.42
1:A:888:ILE:HD12	1:A:960:TYR:HB3	2.02	0.42
1:A:2179:MET:HE3	1:A:2183:ILE:HD11	2.02	0.42
1:A:4074:ILE:HD13	1:A:4103:GLN:HG3	2.01	0.42
1:A:5032:ASP:OD1	1:A:5033:GLN:N	2.52	0.42
1:B:894:TYR:HA	1:B:908:LEU:HD12	2.02	0.42
1:B:2438:ALA:HB2	1:B:2510:VAL:HG22	2.01	0.42
1:B:2774:ASN:O	1:B:2787:LYS:NZ	2.42	0.42
1:B:3366:LEU:HD11	1:B:3409:LEU:HD13	2.01	0.42
1:B:4232:GLU:O	1:B:4236:MET:HG3	2.20	0.42
1:C:2810:ILE:HD12	1:C:2810:ILE:H	1.85	0.42
1:D:2756:ILE:HG22	1:D:2807:ARG:HB2	2.02	0.42
1:D:4706:MET:HA	1:D:4707:PRO:HD3	1.92	0.42
1:A:1807:GLU:HG2	1:A:1808:ALA:N	2.35	0.42
1:A:2887:TRP:NE1	1:A:2891:LYS:HZ1	2.18	0.42
1:A:3078:ALA:O	1:A:3082:MET:HG2	2.19	0.42
1:B:2906:LEU:HD23	1:B:2906:LEU:O	2.19	0.42
1:B:3410:TYR:N	1:B:3411:PRO:HD2	2.34	0.42
1:B:3640:THR:HG21	1:B:3864:GLU:OE2	2.20	0.42
1:B:5032:ASP:OD1	1:B:5033:GLN:N	2.52	0.42
1:C:2887:TRP:O	1:C:2891:LYS:HE2	2.19	0.42
1:C:2889:ARG:HA	1:C:2892:LYS:HZ1	1.85	0.42
1:C:3078:ALA:O	1:C:3082:MET:HG2	2.19	0.42
1:C:4232:GLU:O	1:C:4236:MET:HG3	2.20	0.42
1:D:775:ASP:OD2	1:D:1471:ARG:NH2	2.53	0.42
1:D:2179:MET:HE3	1:D:2183:ILE:HD11	2.02	0.42
1:D:4678:LYS:HD2	1:D:4684:LEU:HD22	2.02	0.42
1:A:139:GLN:NE2	1:A:141:ASP:O	2.52	0.41
1:A:2810:ILE:HD12	1:A:2810:ILE:H	1.85	0.41
1:A:3440:GLY:HA2	1:A:3515:LEU:HD12	2.01	0.41
2:E:5:VAL:HG22	2:E:75:LEU:HD22	2.02	0.41
1:B:139:GLN:NE2	1:B:141:ASP:O	2.52	0.41
1:B:775:ASP:OD2	1:B:1471:ARG:NH2	2.53	0.41
1:B:1095:ALA:HB1	1:B:1101:MET:HE1	2.02	0.41
1:B:1807:GLU:HG2	1:B:1808:ALA:N	2.35	0.41
1:B:2179:MET:HE3	1:B:2183:ILE:HD11	2.02	0.41
1:B:2578:ILE:HD12	1:B:2578:ILE:H	1.84	0.41
1:B:4755:LYS:O	1:B:4755:LYS:HG3	2.20	0.41
1:C:154:ALA:HB1	1:C:200:LEU:HD22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3051:VAL:O	1:C:3051:VAL:HG22	2.20	0.41
1:C:3107:MET:HE1	1:C:3187:LEU:HD21	2.02	0.41
1:C:3532:ASP:OD1	1:C:3533:LEU:N	2.53	0.41
1:C:4003:MET:HE1	1:C:4061:ILE:HG12	2.02	0.41
1:C:4706:MET:HA	1:C:4707:PRO:HD3	1.92	0.41
1:D:77:ARG:O	1:D:81:GLU:HG2	2.19	0.41
1:D:108:ILE:CG2	1:D:151:MET:HE2	2.50	0.41
1:D:1119:ASP:OD2	1:D:1121:LEU:HD12	2.20	0.41
1:D:1932:LEU:HD13	1:D:1936:VAL:CG1	2.50	0.41
1:D:3107:MET:HE1	1:D:3187:LEU:HD21	2.02	0.41
1:A:775:ASP:OD2	1:A:1471:ARG:NH2	2.53	0.41
1:A:1932:LEU:HD13	1:A:1936:VAL:CG1	2.50	0.41
1:A:2356:ARG:O	1:A:2360:ARG:HG2	2.18	0.41
1:A:2748:ILE:CD1	1:A:2818:ILE:HD11	2.47	0.41
1:A:4094:LYS:HA	1:A:4094:LYS:HD2	1.36	0.41
1:B:1119:ASP:OD2	1:B:1121:LEU:HD12	2.20	0.41
1:B:1217:ILE:H	1:B:1217:ILE:HD12	1.86	0.41
1:B:2756:ILE:HG22	1:B:2807:ARG:HB2	2.02	0.41
1:B:2810:ILE:H	1:B:2810:ILE:HD12	1.85	0.41
1:B:3869:ILE:HG22	1:B:3872:GLN:H	1.86	0.41
1:B:4244:THR:HG22	1:B:4248:MET:HE3	2.02	0.41
1:C:2179:MET:HE3	1:C:2183:ILE:HD11	2.02	0.41
1:C:2481:GLY:O	1:C:2485:ALA:N	2.52	0.41
1:C:2748:ILE:CD1	1:C:2818:ILE:HD11	2.47	0.41
1:D:2771:LYS:O	1:D:2776:TRP:N	2.47	0.41
1:D:2978:LEU:HA	1:D:2981:VAL:HG22	2.01	0.41
1:D:3078:ALA:O	1:D:3082:MET:HG2	2.19	0.41
1:D:3541:TYR:HE2	1:D:3550:VAL:HG21	1.78	0.41
1:D:3869:ILE:HG22	1:D:3872:GLN:H	1.85	0.41
1:D:4755:LYS:HG3	1:D:4755:LYS:O	2.20	0.41
1:A:2765:GLU:OE1	1:A:2860:PRO:HA	2.20	0.41
1:A:3443:PHE:HE1	1:A:3512:VAL:HG12	1.86	0.41
1:A:4098:LYS:O	1:A:4102:SER:N	2.45	0.41
1:B:3443:PHE:HE1	1:B:3512:VAL:HG12	1.86	0.41
1:B:3759:LYS:HB2	1:B:3759:LYS:HE2	1.70	0.41
1:B:3992:VAL:HG11	1:B:4050:MET:HE2	2.02	0.41
1:C:281:LEU:C	1:C:281:LEU:HD12	2.46	0.41
1:C:2771:LYS:HB3	1:C:2776:TRP:HB2	2.02	0.41
1:C:4016:LEU:HD23	1:C:4135:PHE:CE1	2.55	0.41
1:D:281:LEU:HD12	1:D:281:LEU:C	2.46	0.41
1:D:446:LEU:HD23	1:D:526:LEU:HD22	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1110:LEU:HA	1:D:1121:LEU:HD13	2.01	0.41
1:D:2771:LYS:HB3	1:D:2776:TRP:HB2	2.02	0.41
1:D:3529:THR:HG23	1:D:3574:MET:SD	2.60	0.41
1:D:3593:ILE:HD12	1:D:3593:ILE:H	1.85	0.41
1:D:3974:GLY:N	1:D:3975:PRO:HA	2.35	0.41
1:D:4090:LEU:HB3	1:D:4125:MET:CB	2.46	0.41
1:A:73:SER:C	1:A:74:LEU:HD23	2.46	0.41
1:A:894:TYR:HA	1:A:908:LEU:HD12	2.02	0.41
1:A:2293:GLU:O	1:A:2297:GLU:HG3	2.19	0.41
1:A:3107:MET:HE1	1:A:3187:LEU:HD21	2.02	0.41
1:A:3348:SER:HA	1:A:3419:ASN:OD1	2.20	0.41
1:A:3754:VAL:HG23	1:A:3759:LYS:HD3	2.02	0.41
1:A:3974:GLY:N	1:A:3975:PRO:HA	2.35	0.41
1:B:108:ILE:CG2	1:B:151:MET:HE2	2.50	0.41
1:B:1110:LEU:HA	1:B:1121:LEU:HD13	2.01	0.41
1:C:108:ILE:CG2	1:C:151:MET:HE2	2.50	0.41
1:C:1119:ASP:OD2	1:C:1121:LEU:HD12	2.20	0.41
1:C:1932:LEU:HD13	1:C:1936:VAL:CG1	2.50	0.41
1:C:3107:MET:SD	1:C:3133:THR:CG2	3.08	0.41
1:C:3974:GLY:N	1:C:3975:PRO:HA	2.35	0.41
1:C:4128:CYS:C	1:C:4130:GLU:N	2.77	0.41
1:D:3051:VAL:HG22	1:D:3051:VAL:O	2.20	0.41
1:D:3366:LEU:HD11	1:D:3409:LEU:HD13	2.01	0.41
1:D:3691:VAL:HG12	1:D:3693:GLU:H	1.85	0.41
1:A:1110:LEU:HA	1:A:1121:LEU:HD13	2.01	0.41
1:A:3107:MET:SD	1:A:3133:THR:CG2	3.09	0.41
1:A:3697:ASP:OD2	1:A:3697:ASP:C	2.64	0.41
1:A:4755:LYS:HG3	1:A:4755:LYS:O	2.20	0.41
1:B:16:ARG:HH11	1:B:16:ARG:HG2	1.86	0.41
1:B:1932:LEU:HD13	1:B:1936:VAL:CG1	2.50	0.41
1:B:2598:LYS:HE2	1:B:2598:LYS:HA	2.03	0.41
1:C:1095:ALA:HB1	1:C:1101:MET:HE1	2.02	0.41
1:C:3551:ARG:NH2	1:C:3598:GLN:OE1	2.54	0.41
1:C:4909:LEU:HA	1:C:4912:VAL:HG22	2.02	0.41
1:D:165:ARG:HG3	1:D:165:ARG:NH1	2.36	0.41
1:D:2765:GLU:OE1	1:D:2860:PRO:HA	2.20	0.41
1:A:16:ARG:HH11	1:A:16:ARG:HG2	1.86	0.41
1:A:954:THR:OG1	1:A:970:PRO:O	2.29	0.41
1:A:1978:TYR:CZ	1:A:3639:MET:HE1	2.56	0.41
1:A:3992:VAL:HG11	1:A:4050:MET:HE2	2.02	0.41
1:A:4232:GLU:O	1:A:4236:MET:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4582:ASP:OD1	1:A:4583:SER:N	2.54	0.41
1:A:4909:LEU:HA	1:A:4912:VAL:HG22	2.02	0.41
1:A:4942:ARG:NE	1:B:4936:ASP:OD1	2.51	0.41
1:B:914:LEU:HD23	1:B:919:ARG:HA	2.03	0.41
1:B:3107:MET:HE1	1:B:3187:LEU:HD21	2.02	0.41
1:B:3529:THR:HG23	1:B:3574:MET:SD	2.60	0.41
1:B:4003:MET:HE1	1:B:4061:ILE:HG12	2.02	0.41
1:C:16:ARG:HH11	1:C:16:ARG:HG2	1.86	0.41
1:C:2598:LYS:HA	1:C:2598:LYS:HE2	2.03	0.41
1:C:2633:ILE:HD12	1:C:2633:ILE:H	1.86	0.41
1:C:3640:THR:HG21	1:C:3864:GLU:OE2	2.20	0.41
1:D:3551:ARG:NH2	1:D:3598:GLN:OE1	2.54	0.41
1:A:165:ARG:HG3	1:A:165:ARG:NH1	2.36	0.41
1:A:669:VAL:O	1:A:742:GLU:N	2.50	0.41
1:A:2598:LYS:HA	1:A:2598:LYS:HE2	2.03	0.41
1:A:3661:SER:O	1:A:3665:THR:OG1	2.36	0.41
1:B:154:ALA:HB1	1:B:200:LEU:HD22	2.02	0.41
1:B:3434:GLU:O	1:B:3438:MET:HG3	2.21	0.41
1:B:4115:LEU:HA	1:B:4115:LEU:HD23	1.78	0.41
1:C:3697:ASP:OD2	1:C:3697:ASP:C	2.64	0.41
1:C:4098:LYS:O	1:C:4102:SER:N	2.45	0.41
1:D:16:ARG:HG2	1:D:16:ARG:HH11	1.86	0.41
1:D:2598:LYS:HE2	1:D:2598:LYS:HA	2.03	0.41
1:D:2974:PHE:CD2	1:D:2996:ILE:HG12	2.56	0.41
1:D:3208:GLU:OE2	1:D:3247:LEU:HD22	2.21	0.41
1:D:3697:ASP:OD2	1:D:3697:ASP:C	2.64	0.41
1:D:4083:TYR:HB3	1:D:4091:ILE:HD12	2.02	0.41
1:D:4232:GLU:O	1:D:4236:MET:HG3	2.20	0.41
1:A:281:LEU:C	1:A:281:LEU:HD12	2.46	0.41
1:A:2124:LEU:O	1:A:2128:GLN:HG2	2.21	0.41
1:A:2974:PHE:CD2	1:A:2996:ILE:HG12	2.56	0.41
1:A:3108:VAL:HG23	1:A:3176:LEU:HD12	2.03	0.41
1:A:3593:ILE:HD12	1:A:3593:ILE:H	1.85	0.41
1:A:4016:LEU:HD23	1:A:4135:PHE:CE1	2.55	0.41
1:B:165:ARG:HG3	1:B:165:ARG:NH1	2.36	0.41
1:B:2124:LEU:O	1:B:2128:GLN:HG2	2.21	0.41
1:B:3532:ASP:OD1	1:B:3533:LEU:N	2.53	0.41
1:B:4083:TYR:HB3	1:B:4091:ILE:HD12	2.02	0.41
1:C:894:TYR:HA	1:C:908:LEU:HD12	2.02	0.41
1:C:2756:ILE:HG22	1:C:2807:ARG:HB2	2.02	0.41
1:C:4244:THR:HG22	1:C:4248:MET:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1978:TYR:CZ	1:D:3639:MET:HE1	2.56	0.41
1:D:2438:ALA:HB2	1:D:2510:VAL:HG22	2.01	0.41
1:D:2958:PHE:HE1	1:D:2962:GLN:NE2	2.19	0.41
1:D:3532:ASP:OD1	1:D:3533:LEU:N	2.54	0.41
1:A:1481:GLN:O	1:A:1481:GLN:HG2	2.21	0.41
1:A:3051:VAL:O	1:A:3051:VAL:HG22	2.20	0.41
1:A:3532:ASP:OD1	1:A:3533:LEU:N	2.53	0.41
1:A:3640:THR:HG21	1:A:3864:GLU:OE2	2.20	0.41
1:A:4678:LYS:HD2	1:A:4684:LEU:HD22	2.02	0.41
1:B:1978:TYR:CZ	1:B:3639:MET:HE1	2.56	0.41
1:B:2771:LYS:HB3	1:B:2776:TRP:HB2	2.02	0.41
1:B:3107:MET:SD	1:B:3133:THR:CG2	3.09	0.41
1:B:3348:SER:HA	1:B:3419:ASN:OD1	2.20	0.41
1:B:3691:VAL:HG12	1:B:3693:GLU:H	1.85	0.41
1:B:3754:VAL:HG23	1:B:3759:LYS:HD3	2.02	0.41
1:B:3974:GLY:N	1:B:3975:PRO:HA	2.35	0.41
1:B:4016:LEU:HD23	1:B:4135:PHE:CE1	2.55	0.41
1:B:4094:LYS:HD2	1:B:4094:LYS:HA	1.36	0.41
1:C:73:SER:C	1:C:74:LEU:HD23	2.46	0.41
1:C:165:ARG:HG3	1:C:165:ARG:NH1	2.36	0.41
1:C:798:HIS:CG	1:C:822:LEU:HD23	2.56	0.41
1:C:843:PRO:HG2	1:C:1072:ARG:O	2.21	0.41
1:C:1053:ASN:OD1	1:C:1053:ASN:O	2.39	0.41
1:C:1217:ILE:HD12	1:C:1217:ILE:H	1.86	0.41
1:C:1807:GLU:HG2	1:C:1808:ALA:N	2.35	0.41
1:C:2958:PHE:HE1	1:C:2962:GLN:NE2	2.19	0.41
1:C:3208:GLU:OE2	1:C:3247:LEU:HD22	2.20	0.41
1:D:1713:TYR:OH	1:D:1816:MET:SD	2.76	0.41
1:D:2633:ILE:H	1:D:2633:ILE:HD12	1.86	0.41
1:D:2803:LYS:O	1:D:2807:ARG:HG2	2.21	0.41
1:D:4128:CYS:C	1:D:4130:GLU:N	2.77	0.41
1:A:843:PRO:HG2	1:A:1072:ARG:O	2.21	0.41
1:A:1217:ILE:HD12	1:A:1217:ILE:H	1.86	0.41
1:A:2360:ARG:NH2	1:B:178:GLU:O	2.53	0.41
1:A:3208:GLU:OE2	1:A:3247:LEU:HD22	2.20	0.41
1:A:3220:TYR:HA	1:A:3228:ARG:NH2	2.36	0.41
1:A:3772:ARG:O	1:A:3776:ARG:HD2	2.21	0.41
1:A:4083:TYR:HB3	1:A:4091:ILE:HD12	2.02	0.41
1:B:925:MET:HE2	1:B:928:GLU:OE2	2.21	0.41
1:B:2748:ILE:CD1	1:B:2818:ILE:HD11	2.47	0.41
1:B:3593:ILE:HD12	1:B:3593:ILE:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4091:ILE:CG1	1:B:4095:ASP:HB3	2.51	0.41
1:B:4582:ASP:OD1	1:B:4583:SER:N	2.54	0.41
1:C:1426:GLU:HG2	1:C:1427:ILE:N	2.36	0.41
1:C:3037:LYS:O	1:C:3040:ILE:HG22	2.21	0.41
1:C:3348:SER:HA	1:C:3419:ASN:OD1	2.20	0.41
1:C:3434:GLU:O	1:C:3438:MET:HG3	2.21	0.41
1:C:3869:ILE:HG22	1:C:3872:GLN:H	1.86	0.41
1:D:798:HIS:CG	1:D:822:LEU:HD23	2.56	0.41
1:D:962:MET:HG3	1:D:963:SER:H	1.86	0.41
1:D:2239:TYR:O	1:D:2243:ILE:HG12	2.21	0.41
1:D:2948:ASP:O	1:D:2949:THR:C	2.64	0.41
1:D:3556:ASN:OD1	1:D:3556:ASN:C	2.64	0.41
1:D:4016:LEU:HD23	1:D:4135:PHE:CE1	2.55	0.41
1:D:4091:ILE:CG1	1:D:4095:ASP:HB3	2.51	0.41
1:D:4582:ASP:OD1	1:D:4583:SER:N	2.54	0.41
1:A:576:LEU:CD1	1:A:610:CYS:HB2	2.52	0.40
1:A:2883:TYR:HB2	1:A:2920:ASP:OD2	2.22	0.40
2:F:60:TRP:O	2:F:61:GLU:C	2.64	0.40
1:B:281:LEU:HD12	1:B:281:LEU:C	2.46	0.40
1:B:3220:TYR:HA	1:B:3228:ARG:NH2	2.36	0.40
1:B:3551:ARG:NH2	1:B:3598:GLN:OE1	2.54	0.40
1:C:2573:THR:C	1:C:2619:MET:HE1	2.47	0.40
1:C:4678:LYS:HD2	1:C:4684:LEU:HD22	2.02	0.40
1:D:1426:GLU:HG2	1:D:1427:ILE:N	2.36	0.40
1:D:4909:LEU:HA	1:D:4912:VAL:HG22	2.02	0.40
1:A:108:ILE:CG2	1:A:151:MET:HE2	2.50	0.40
1:A:2633:ILE:HD12	1:A:2633:ILE:H	1.86	0.40
1:A:4088:ARG:H	1:A:4088:ARG:HG2	1.56	0.40
2:F:27:TYR:HB2	2:F:60:TRP:HH2	1.87	0.40
1:B:73:SER:C	1:B:74:LEU:HD23	2.46	0.40
1:B:3293:PRO:HA	1:B:3294:PRO:HD3	1.96	0.40
1:B:3895:CYS:SG	1:B:3906:LEU:HD12	2.62	0.40
1:C:2229:MET:HE2	1:C:2229:MET:HB3	1.98	0.40
1:C:2803:LYS:O	1:C:2807:ARG:HG2	2.21	0.40
1:C:4091:ILE:CG1	1:C:4095:ASP:HB3	2.51	0.40
1:D:154:ALA:HB1	1:D:200:LEU:HD22	2.02	0.40
1:D:366:LYS:HD3	1:D:370:LEU:CD2	2.51	0.40
1:D:843:PRO:HG2	1:D:1072:ARG:O	2.21	0.40
1:D:1095:ALA:HB1	1:D:1101:MET:HE1	2.02	0.40
1:D:2883:TYR:HB2	1:D:2920:ASP:OD2	2.22	0.40
1:D:3348:SER:HA	1:D:3419:ASN:OD1	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4088:ARG:H	1:D:4088:ARG:HG2	1.56	0.40
1:A:1053:ASN:OD1	1:A:1053:ASN:O	2.39	0.40
1:A:4128:CYS:C	1:A:4130:GLU:N	2.77	0.40
2:F:91:ILE:HD13	1:B:1784:PHE:CE1	2.56	0.40
1:B:690:SER:N	1:B:777:LEU:O	2.54	0.40
1:B:2640:MET:HB3	1:B:2641:PRO:HD3	2.04	0.40
1:B:2752:LEU:O	1:B:2756:ILE:HG13	2.22	0.40
1:B:3772:ARG:O	1:B:3776:ARG:HD2	2.21	0.40
1:C:775:ASP:OD2	1:C:1471:ARG:NH2	2.53	0.40
1:C:2124:LEU:O	1:C:2128:GLN:HG2	2.21	0.40
1:C:2765:GLU:OE1	1:C:2860:PRO:HA	2.20	0.40
1:C:3590:PRO:O	1:C:3594:VAL:HG23	2.22	0.40
1:C:4582:ASP:OD1	1:C:4583:SER:N	2.54	0.40
1:D:73:SER:C	1:D:74:LEU:HD23	2.46	0.40
1:D:1217:ILE:HD12	1:D:1217:ILE:H	1.86	0.40
1:D:2229:MET:HE2	1:D:2229:MET:HB3	1.98	0.40
1:D:2573:THR:C	1:D:2619:MET:HE1	2.47	0.40
1:D:3443:PHE:HE1	1:D:3512:VAL:HG12	1.86	0.40
1:A:2803:LYS:O	1:A:2807:ARG:HG2	2.21	0.40
1:A:2958:PHE:HE1	1:A:2962:GLN:NE2	2.19	0.40
1:A:4091:ILE:CG1	1:A:4095:ASP:HB3	2.51	0.40
1:A:4543:GLU:O	1:A:4546:ARG:HG2	2.22	0.40
1:B:1426:GLU:HG2	1:B:1427:ILE:N	2.35	0.40
1:B:2539:THR:HG21	1:B:2900:GLY:HA3	2.04	0.40
1:B:3208:GLU:OE2	1:B:3247:LEU:HD22	2.21	0.40
1:C:2539:THR:HG21	1:C:2900:GLY:HA3	2.04	0.40
1:D:894:TYR:HA	1:D:908:LEU:HD12	2.02	0.40
1:D:4077:SER:O	1:D:4081:GLN:HG2	2.21	0.40
1:A:3551:ARG:NH2	1:A:3598:GLN:OE1	2.54	0.40
1:A:4003:MET:HE1	1:A:4061:ILE:HG12	2.02	0.40
1:B:2765:GLU:OE1	1:B:2860:PRO:HA	2.20	0.40
1:B:3051:VAL:O	1:B:3051:VAL:HG22	2.20	0.40
1:B:3697:ASP:OD2	1:B:3697:ASP:C	2.64	0.40
1:B:4909:LEU:HA	1:B:4912:VAL:HG22	2.02	0.40
1:C:843:PRO:O	1:C:1197:PRO:HA	2.22	0.40
1:C:918:GLU:OE1	1:C:918:GLU:N	2.48	0.40
1:C:1481:GLN:O	1:C:1481:GLN:HG2	2.21	0.40
1:D:2752:LEU:O	1:D:2756:ILE:HG13	2.21	0.40
1:D:3796:MET:HE3	1:D:3796:MET:HB3	1.99	0.40
1:D:4899:ILE:HG13	1:D:4911:ARG:NH2	2.37	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	4347/5035 (86%)	4238 (98%)	108 (2%)	1 (0%)	100	100
1	B	4347/5035 (86%)	4237 (98%)	109 (2%)	1 (0%)	100	100
1	C	4347/5035 (86%)	4239 (98%)	107 (2%)	1 (0%)	100	100
1	D	4347/5035 (86%)	4239 (98%)	107 (2%)	1 (0%)	100	100
2	E	105/108 (97%)	100 (95%)	5 (5%)	0	100	100
2	F	105/108 (97%)	99 (94%)	6 (6%)	0	100	100
2	G	105/108 (97%)	99 (94%)	6 (6%)	0	100	100
2	H	105/108 (97%)	99 (94%)	6 (6%)	0	100	100
All	All	17808/20572 (87%)	17350 (97%)	454 (2%)	4 (0%)	100	100

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	4090	LEU
1	B	4090	LEU
1	C	4090	LEU
1	D	4090	LEU

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	3808/4296 (89%)	3783 (99%)	25 (1%)	76	91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	3808/4296 (89%)	3783 (99%)	25 (1%)	76	91
1	C	3808/4296 (89%)	3783 (99%)	25 (1%)	76	91
1	D	3808/4296 (89%)	3783 (99%)	25 (1%)	76	91
2	E	89/90 (99%)	89 (100%)	0	100	100
2	F	89/90 (99%)	89 (100%)	0	100	100
2	G	89/90 (99%)	89 (100%)	0	100	100
2	H	89/90 (99%)	89 (100%)	0	100	100
All	All	15588/17544 (89%)	15488 (99%)	100 (1%)	76	92

All (100) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3759	LYS
1	A	3761	MET
1	A	4071	LEU
1	A	4073	ASP
1	A	4086	ASP
1	A	4088	ARG
1	A	4092	SER
1	A	4093	LYS
1	A	4094	LYS
1	A	4098	LYS
1	A	4100	MET
1	A	4114	LEU
1	A	4125	MET
1	A	4126	ILE
1	A	4670	LYS
1	A	4705	ASN
1	A	4720	ARG
1	A	4721	LYS
1	A	4725	LYS
1	A	4729	ILE
1	A	4767	MET
1	A	4769	ILE
1	A	4772	LYS
1	A	4993	LEU
1	A	5011	MET
1	B	3759	LYS
1	B	3761	MET
1	B	4071	LEU

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Mol	Chain	Res	Type
1	B	4073	ASP
1	B	4086	ASP
1	B	4088	ARG
1	B	4092	SER
1	B	4093	LYS
1	B	4094	LYS
1	B	4098	LYS
1	B	4100	MET
1	B	4114	LEU
1	B	4125	MET
1	B	4126	ILE
1	B	4670	LYS
1	B	4705	ASN
1	B	4720	ARG
1	B	4721	LYS
1	B	4725	LYS
1	B	4729	ILE
1	B	4767	MET
1	B	4769	ILE
1	B	4772	LYS
1	B	4993	LEU
1	B	5011	MET
1	C	3759	LYS
1	C	3761	MET
1	C	4071	LEU
1	C	4073	ASP
1	C	4086	ASP
1	C	4088	ARG
1	C	4092	SER
1	C	4093	LYS
1	C	4094	LYS
1	C	4098	LYS
1	C	4100	MET
1	C	4114	LEU
1	C	4125	MET
1	C	4126	ILE
1	C	4670	LYS
1	C	4705	ASN
1	C	4720	ARG
1	C	4721	LYS
1	C	4725	LYS
1	C	4729	ILE

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Mol	Chain	Res	Type
1	C	4767	MET
1	C	4769	ILE
1	C	4772	LYS
1	C	4993	LEU
1	C	5011	MET
1	D	3759	LYS
1	D	3761	MET
1	D	4071	LEU
1	D	4073	ASP
1	D	4086	ASP
1	D	4088	ARG
1	D	4092	SER
1	D	4093	LYS
1	D	4094	LYS
1	D	4098	LYS
1	D	4100	MET
1	D	4114	LEU
1	D	4125	MET
1	D	4126	ILE
1	D	4670	LYS
1	D	4705	ASN
1	D	4720	ARG
1	D	4721	LYS
1	D	4725	LYS
1	D	4729	ILE
1	D	4767	MET
1	D	4769	ILE
1	D	4772	LYS
1	D	4993	LEU
1	D	5011	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (159) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	80	GLN
1	A	114	HIS
1	A	152	HIS
1	A	242	GLN
1	A	462	HIS
1	A	594	HIS
1	A	721	HIS
1	A	905	HIS

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Mol	Chain	Res	Type
1	A	924	GLN
1	A	975	HIS
1	A	1012	GLN
1	A	1019	ASN
1	A	1036	ASN
1	A	1126	ASN
1	A	1207	GLN
1	A	1460	GLN
1	A	1559	HIS
1	A	1561	ASN
1	A	1692	GLN
1	A	2096	GLN
1	A	2689	HIS
1	A	2764	HIS
1	A	2925	GLN
1	A	3070	HIS
1	A	3314	ASN
1	A	3431	ASN
1	A	3463	ASN
1	A	3555	GLN
1	A	3561	GLN
1	A	3809	ASN
1	A	3817	GLN
1	A	3930	GLN
1	A	4012	GLN
1	A	4037	ASN
1	A	4103	GLN
1	A	4156	HIS
1	A	4204	ASN
1	A	4226	ASN
1	A	4648	HIS
1	A	4801	HIS
2	F	88	HIS
2	G	88	HIS
2	H	88	HIS
1	B	58	ASN
1	B	80	GLN
1	B	114	HIS
1	B	242	GLN
1	B	462	HIS
1	B	721	HIS
1	B	905	HIS

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Mol	Chain	Res	Type
1	B	975	HIS
1	B	1012	GLN
1	B	1019	ASN
1	B	1036	ASN
1	B	1126	ASN
1	B	1207	GLN
1	B	1460	GLN
1	B	1559	HIS
1	B	1561	ASN
1	B	1692	GLN
1	B	1939	GLN
1	B	2195	HIS
1	B	2689	HIS
1	B	2764	HIS
1	B	2925	GLN
1	B	3314	ASN
1	B	3431	ASN
1	B	3463	ASN
1	B	3555	GLN
1	B	3561	GLN
1	B	3809	ASN
1	B	3817	GLN
1	B	3930	GLN
1	B	4001	HIS
1	B	4012	GLN
1	B	4037	ASN
1	B	4103	GLN
1	B	4156	HIS
1	B	4204	ASN
1	B	4226	ASN
1	B	4648	HIS
1	B	4801	HIS
1	C	58	ASN
1	C	114	HIS
1	C	152	HIS
1	C	242	GLN
1	C	462	HIS
1	C	721	HIS
1	C	839	HIS
1	C	905	HIS
1	C	975	HIS
1	C	1012	GLN

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Mol	Chain	Res	Type
1	C	1019	ASN
1	C	1036	ASN
1	C	1126	ASN
1	C	1207	GLN
1	C	1460	GLN
1	C	1559	HIS
1	C	1561	ASN
1	C	1939	GLN
1	C	2689	HIS
1	C	2764	HIS
1	C	2925	GLN
1	C	3431	ASN
1	C	3463	ASN
1	C	3555	GLN
1	C	3561	GLN
1	C	3809	ASN
1	C	3817	GLN
1	C	3930	GLN
1	C	4001	HIS
1	C	4012	GLN
1	C	4037	ASN
1	C	4103	GLN
1	C	4156	HIS
1	C	4204	ASN
1	C	4226	ASN
1	C	4648	HIS
1	C	4801	HIS
1	D	114	HIS
1	D	152	HIS
1	D	242	GLN
1	D	462	HIS
1	D	594	HIS
1	D	721	HIS
1	D	905	HIS
1	D	924	GLN
1	D	975	HIS
1	D	1012	GLN
1	D	1019	ASN
1	D	1036	ASN
1	D	1063	GLN
1	D	1126	ASN
1	D	1207	GLN

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Mol	Chain	Res	Type
1	D	1299	HIS
1	D	1559	HIS
1	D	1561	ASN
1	D	1939	GLN
1	D	2096	GLN
1	D	2689	HIS
1	D	2764	HIS
1	D	2925	GLN
1	D	3314	ASN
1	D	3431	ASN
1	D	3463	ASN
1	D	3555	GLN
1	D	3561	GLN
1	D	3817	GLN
1	D	3917	ASN
1	D	3930	GLN
1	D	4012	GLN
1	D	4037	ASN
1	D	4103	GLN
1	D	4156	HIS
1	D	4204	ASN
1	D	4212	GLN
1	D	4226	ASN
1	D	4648	HIS
1	D	4801	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	PCW	A	8003	-	53,53,53	1.23	7 (13%)	59,61,61	1.13	4 (6%)
4	PCW	B	8003	-	53,53,53	1.23	6 (11%)	59,61,61	1.13	4 (6%)
4	PCW	D	5103	-	53,53,53	1.22	7 (13%)	59,61,61	1.07	4 (6%)
4	PCW	D	5101	-	53,53,53	1.22	7 (13%)	59,61,61	1.13	4 (6%)
4	PCW	A	8002	-	53,53,53	1.22	7 (13%)	59,61,61	1.07	4 (6%)
4	PCW	C	8002	-	53,53,53	1.22	7 (13%)	59,61,61	1.07	4 (6%)
4	PCW	C	8003	-	53,53,53	1.23	6 (11%)	59,61,61	1.13	4 (6%)
4	PCW	B	8002	-	53,53,53	1.22	7 (13%)	59,61,61	1.07	4 (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
4	PCW	A	8003	-	-	22/57/57/57	-
4	PCW	B	8003	-	-	22/57/57/57	-
4	PCW	D	5103	-	-	27/57/57/57	-
4	PCW	D	5101	-	-	22/57/57/57	-
4	PCW	A	8002	-	-	28/57/57/57	-
4	PCW	C	8002	-	-	28/57/57/57	-
4	PCW	C	8003	-	-	22/57/57/57	-
4	PCW	B	8002	-	-	28/57/57/57	-

All (54) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	8002	PCW	O3-C11	2.93	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	8002	PCW	O3-C11	2.93	1.41	1.33
4	C	8002	PCW	O3-C11	2.93	1.41	1.33
4	D	5103	PCW	O3-C11	2.93	1.41	1.33
4	A	8003	PCW	O3-C11	2.89	1.41	1.33
4	B	8003	PCW	O3-C11	2.89	1.41	1.33
4	D	5101	PCW	O3-C11	2.89	1.41	1.33
4	C	8003	PCW	O3-C11	2.88	1.41	1.33
4	A	8003	PCW	O2-C31	2.80	1.42	1.34
4	B	8003	PCW	O2-C31	2.79	1.42	1.34
4	C	8003	PCW	O2-C31	2.79	1.42	1.34
4	D	5101	PCW	O2-C31	2.79	1.42	1.34
4	A	8002	PCW	O2-C31	2.72	1.42	1.34
4	C	8002	PCW	O2-C31	2.72	1.42	1.34
4	B	8002	PCW	O2-C31	2.70	1.41	1.34
4	D	5103	PCW	O2-C31	2.70	1.41	1.34
4	C	8002	PCW	P-O4P	2.57	1.69	1.59
4	A	8002	PCW	P-O4P	2.55	1.69	1.59
4	D	5103	PCW	P-O4P	2.55	1.69	1.59
4	B	8002	PCW	P-O4P	2.55	1.69	1.59
4	C	8003	PCW	O2-C2	-2.49	1.40	1.46
4	A	8003	PCW	P-O4P	2.48	1.69	1.59
4	B	8003	PCW	P-O4P	2.48	1.69	1.59
4	C	8003	PCW	P-O4P	2.48	1.69	1.59
4	D	5101	PCW	P-O4P	2.48	1.69	1.59
4	A	8003	PCW	O2-C2	-2.46	1.40	1.46
4	B	8003	PCW	O2-C2	-2.46	1.40	1.46
4	D	5101	PCW	O2-C2	-2.46	1.40	1.46
4	A	8002	PCW	O2-C2	-2.38	1.41	1.46
4	C	8002	PCW	O2-C2	-2.38	1.41	1.46
4	D	5103	PCW	O2-C2	-2.38	1.41	1.46
4	B	8002	PCW	O2-C2	-2.33	1.41	1.46
4	A	8002	PCW	C5-C4	2.30	1.58	1.51
4	B	8002	PCW	C5-C4	2.30	1.58	1.51
4	C	8002	PCW	C5-C4	2.30	1.58	1.51
4	D	5103	PCW	C5-C4	2.29	1.58	1.51
4	C	8003	PCW	C5-C4	2.26	1.58	1.51
4	A	8003	PCW	C5-C4	2.25	1.58	1.51
4	B	8003	PCW	C5-C4	2.25	1.58	1.51
4	D	5101	PCW	C5-C4	2.25	1.58	1.51
4	A	8002	PCW	P-O3P	2.22	1.68	1.59
4	B	8002	PCW	P-O3P	2.22	1.68	1.59
4	C	8002	PCW	P-O3P	2.21	1.68	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	5103	PCW	P-O3P	2.20	1.68	1.59
4	B	8002	PCW	C32-C31	2.15	1.56	1.50
4	A	8002	PCW	C32-C31	2.14	1.56	1.50
4	C	8002	PCW	C32-C31	2.14	1.56	1.50
4	D	5103	PCW	C32-C31	2.12	1.56	1.50
4	A	8003	PCW	C32-C31	2.05	1.56	1.50
4	A	8003	PCW	P-O3P	2.03	1.67	1.59
4	C	8003	PCW	C32-C31	2.02	1.56	1.50
4	D	5101	PCW	C32-C31	2.02	1.56	1.50
4	B	8003	PCW	P-O3P	2.01	1.67	1.59
4	D	5101	PCW	P-O3P	2.01	1.67	1.59

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	8003	PCW	C21-C20-C19	4.18	156.16	124.83
4	C	8003	PCW	C21-C20-C19	4.18	156.14	124.83
4	D	5101	PCW	C21-C20-C19	4.18	156.14	124.83
4	B	8003	PCW	C21-C20-C19	4.18	156.12	124.83
4	D	5103	PCW	O2-C31-C32	3.93	119.97	111.48
4	A	8002	PCW	O2-C31-C32	3.92	119.96	111.48
4	B	8002	PCW	O2-C31-C32	3.91	119.95	111.48
4	C	8002	PCW	O2-C31-C32	3.90	119.91	111.48
4	B	8003	PCW	O2-C31-C32	3.63	119.33	111.48
4	C	8003	PCW	O2-C31-C32	3.62	119.30	111.48
4	D	5101	PCW	O2-C31-C32	3.62	119.30	111.48
4	A	8003	PCW	O2-C31-C32	3.61	119.29	111.48
4	C	8002	PCW	C21-C20-C19	3.59	151.70	124.83
4	D	5103	PCW	C21-C20-C19	3.59	151.70	124.83
4	A	8002	PCW	C21-C20-C19	3.58	151.67	124.83
4	B	8002	PCW	C21-C20-C19	3.58	151.64	124.83
4	B	8003	PCW	C18-C19-C20	2.79	145.72	124.83
4	D	5101	PCW	C18-C19-C20	2.78	145.69	124.83
4	A	8003	PCW	C18-C19-C20	2.78	145.66	124.83
4	C	8003	PCW	C18-C19-C20	2.78	145.66	124.83
4	C	8003	PCW	O3-C11-C12	2.73	120.15	111.83
4	A	8003	PCW	O3-C11-C12	2.72	120.12	111.83
4	D	5101	PCW	O3-C11-C12	2.72	120.12	111.83
4	B	8003	PCW	O3-C11-C12	2.71	120.09	111.83
4	C	8002	PCW	O3-C11-C12	2.63	119.86	111.83
4	D	5103	PCW	O3-C11-C12	2.62	119.83	111.83
4	A	8002	PCW	O3-C11-C12	2.62	119.81	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	B	8002	PCW	O3-C11-C12	2.62	119.81	111.83
4	A	8002	PCW	C2-O2-C31	-2.19	112.57	117.80
4	B	8002	PCW	C2-O2-C31	-2.18	112.59	117.80
4	D	5103	PCW	C2-O2-C31	-2.17	112.59	117.80
4	C	8002	PCW	C2-O2-C31	-2.17	112.60	117.80

There are no chirality outliers.

All (199) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	8002	PCW	C32-C31-O2-C2
4	A	8002	PCW	C1-O3P-P-O1P
4	A	8002	PCW	C1-O3P-P-O4P
4	A	8002	PCW	C4-O4P-P-O1P
4	A	8003	PCW	O4P-C4-C5-N
4	A	8003	PCW	C4-O4P-P-O3P
4	B	8002	PCW	C32-C31-O2-C2
4	B	8002	PCW	C1-O3P-P-O1P
4	B	8002	PCW	C1-O3P-P-O4P
4	B	8002	PCW	C4-O4P-P-O1P
4	B	8003	PCW	O4P-C4-C5-N
4	B	8003	PCW	C4-O4P-P-O3P
4	C	8002	PCW	C32-C31-O2-C2
4	C	8002	PCW	C1-O3P-P-O1P
4	C	8002	PCW	C1-O3P-P-O4P
4	C	8002	PCW	C4-O4P-P-O1P
4	C	8003	PCW	O4P-C4-C5-N
4	C	8003	PCW	C4-O4P-P-O3P
4	D	5101	PCW	O4P-C4-C5-N
4	D	5101	PCW	C4-O4P-P-O3P
4	D	5103	PCW	C32-C31-O2-C2
4	D	5103	PCW	C1-O3P-P-O1P
4	D	5103	PCW	C1-O3P-P-O4P
4	D	5103	PCW	C4-O4P-P-O1P
4	A	8002	PCW	O31-C31-O2-C2
4	B	8002	PCW	O31-C31-O2-C2
4	C	8002	PCW	O31-C31-O2-C2
4	D	5103	PCW	O31-C31-O2-C2
4	A	8002	PCW	C31-C32-C33-C34
4	B	8002	PCW	C31-C32-C33-C34
4	C	8002	PCW	C31-C32-C33-C34
4	D	5103	PCW	C31-C32-C33-C34

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Mol	Chain	Res	Type	Atoms
4	A	8003	PCW	C31-C32-C33-C34
4	B	8003	PCW	C31-C32-C33-C34
4	C	8003	PCW	C31-C32-C33-C34
4	D	5101	PCW	C31-C32-C33-C34
4	A	8002	PCW	C15-C16-C17-C18
4	B	8002	PCW	C15-C16-C17-C18
4	C	8002	PCW	C15-C16-C17-C18
4	D	5103	PCW	C15-C16-C17-C18
4	A	8003	PCW	C13-C14-C15-C16
4	B	8003	PCW	C13-C14-C15-C16
4	C	8003	PCW	C13-C14-C15-C16
4	D	5101	PCW	C13-C14-C15-C16
4	A	8003	PCW	C14-C15-C16-C17
4	B	8003	PCW	C14-C15-C16-C17
4	C	8003	PCW	C14-C15-C16-C17
4	D	5101	PCW	C14-C15-C16-C17
4	A	8003	PCW	C32-C31-O2-C2
4	B	8003	PCW	C32-C31-O2-C2
4	C	8003	PCW	C32-C31-O2-C2
4	D	5101	PCW	C32-C31-O2-C2
4	A	8002	PCW	C36-C37-C38-C39
4	B	8002	PCW	C36-C37-C38-C39
4	C	8002	PCW	C36-C37-C38-C39
4	D	5103	PCW	C36-C37-C38-C39
4	A	8002	PCW	C21-C22-C23-C24
4	B	8002	PCW	C21-C22-C23-C24
4	C	8002	PCW	C21-C22-C23-C24
4	D	5103	PCW	C21-C22-C23-C24
4	A	8002	PCW	C34-C35-C36-C37
4	B	8002	PCW	C34-C35-C36-C37
4	C	8002	PCW	C34-C35-C36-C37
4	D	5103	PCW	C34-C35-C36-C37
4	A	8002	PCW	C43-C44-C45-C46
4	B	8002	PCW	C43-C44-C45-C46
4	C	8002	PCW	C43-C44-C45-C46
4	D	5103	PCW	C43-C44-C45-C46
4	A	8002	PCW	C1-C2-C3-O3
4	B	8002	PCW	C1-C2-C3-O3
4	C	8002	PCW	C1-C2-C3-O3
4	D	5103	PCW	C1-C2-C3-O3
4	A	8002	PCW	C16-C17-C18-C19
4	B	8002	PCW	C16-C17-C18-C19

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Mol	Chain	Res	Type	Atoms
4	C	8002	PCW	C16-C17-C18-C19
4	D	5103	PCW	C16-C17-C18-C19
4	D	5103	PCW	C41-C42-C43-C44
4	A	8002	PCW	C41-C42-C43-C44
4	C	8002	PCW	C41-C42-C43-C44
4	B	8002	PCW	C41-C42-C43-C44
4	A	8003	PCW	C12-C11-O3-C3
4	B	8003	PCW	C12-C11-O3-C3
4	C	8003	PCW	C12-C11-O3-C3
4	D	5101	PCW	C12-C11-O3-C3
4	A	8003	PCW	O2-C2-C3-O3
4	B	8003	PCW	O2-C2-C3-O3
4	C	8003	PCW	O2-C2-C3-O3
4	D	5101	PCW	O2-C2-C3-O3
4	A	8002	PCW	C45-C46-C47-C48
4	B	8002	PCW	C45-C46-C47-C48
4	C	8002	PCW	C45-C46-C47-C48
4	D	5103	PCW	C45-C46-C47-C48
4	A	8003	PCW	O31-C31-O2-C2
4	B	8003	PCW	O31-C31-O2-C2
4	C	8003	PCW	O31-C31-O2-C2
4	D	5101	PCW	O31-C31-O2-C2
4	A	8002	PCW	C2-C1-O3P-P
4	B	8002	PCW	C2-C1-O3P-P
4	C	8002	PCW	C2-C1-O3P-P
4	D	5103	PCW	C2-C1-O3P-P
4	A	8003	PCW	O3P-C1-C2-C3
4	B	8003	PCW	O3P-C1-C2-C3
4	C	8003	PCW	O3P-C1-C2-C3
4	D	5101	PCW	O3P-C1-C2-C3
4	A	8002	PCW	C12-C13-C14-C15
4	B	8002	PCW	C12-C13-C14-C15
4	C	8002	PCW	C12-C13-C14-C15
4	D	5103	PCW	C12-C13-C14-C15
4	A	8002	PCW	C42-C43-C44-C45
4	B	8002	PCW	C42-C43-C44-C45
4	C	8002	PCW	C42-C43-C44-C45
4	D	5103	PCW	C42-C43-C44-C45
4	A	8003	PCW	C22-C23-C24-C25
4	C	8003	PCW	C22-C23-C24-C25
4	B	8003	PCW	C22-C23-C24-C25
4	D	5101	PCW	C22-C23-C24-C25

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Mol	Chain	Res	Type	Atoms
4	A	8002	PCW	O2-C2-C3-O3
4	B	8002	PCW	O2-C2-C3-O3
4	C	8002	PCW	O2-C2-C3-O3
4	D	5103	PCW	O2-C2-C3-O3
4	A	8003	PCW	C16-C17-C18-C19
4	B	8003	PCW	C16-C17-C18-C19
4	C	8003	PCW	C16-C17-C18-C19
4	D	5101	PCW	C16-C17-C18-C19
4	A	8003	PCW	C19-C20-C21-C22
4	B	8003	PCW	C19-C20-C21-C22
4	C	8003	PCW	C19-C20-C21-C22
4	D	5101	PCW	C19-C20-C21-C22
4	A	8003	PCW	O11-C11-O3-C3
4	B	8003	PCW	O11-C11-O3-C3
4	C	8003	PCW	O11-C11-O3-C3
4	D	5101	PCW	O11-C11-O3-C3
4	A	8003	PCW	O3P-C1-C2-O2
4	B	8003	PCW	O3P-C1-C2-O2
4	C	8003	PCW	O3P-C1-C2-O2
4	D	5101	PCW	O3P-C1-C2-O2
4	A	8002	PCW	C1-O3P-P-O2P
4	A	8002	PCW	C4-O4P-P-O2P
4	A	8002	PCW	C4-O4P-P-O3P
4	A	8003	PCW	C1-O3P-P-O2P
4	A	8003	PCW	C4-O4P-P-O2P
4	B	8002	PCW	C1-O3P-P-O2P
4	B	8002	PCW	C4-O4P-P-O2P
4	B	8002	PCW	C4-O4P-P-O3P
4	B	8003	PCW	C1-O3P-P-O2P
4	B	8003	PCW	C4-O4P-P-O2P
4	C	8002	PCW	C1-O3P-P-O2P
4	C	8002	PCW	C4-O4P-P-O2P
4	C	8002	PCW	C4-O4P-P-O3P
4	C	8003	PCW	C1-O3P-P-O2P
4	C	8003	PCW	C4-O4P-P-O2P
4	D	5101	PCW	C1-O3P-P-O2P
4	D	5101	PCW	C4-O4P-P-O2P
4	D	5103	PCW	C1-O3P-P-O2P
4	D	5103	PCW	C4-O4P-P-O3P
4	A	8003	PCW	C1-C2-C3-O3
4	B	8003	PCW	C1-C2-C3-O3
4	C	8003	PCW	C1-C2-C3-O3

Continued on next page...

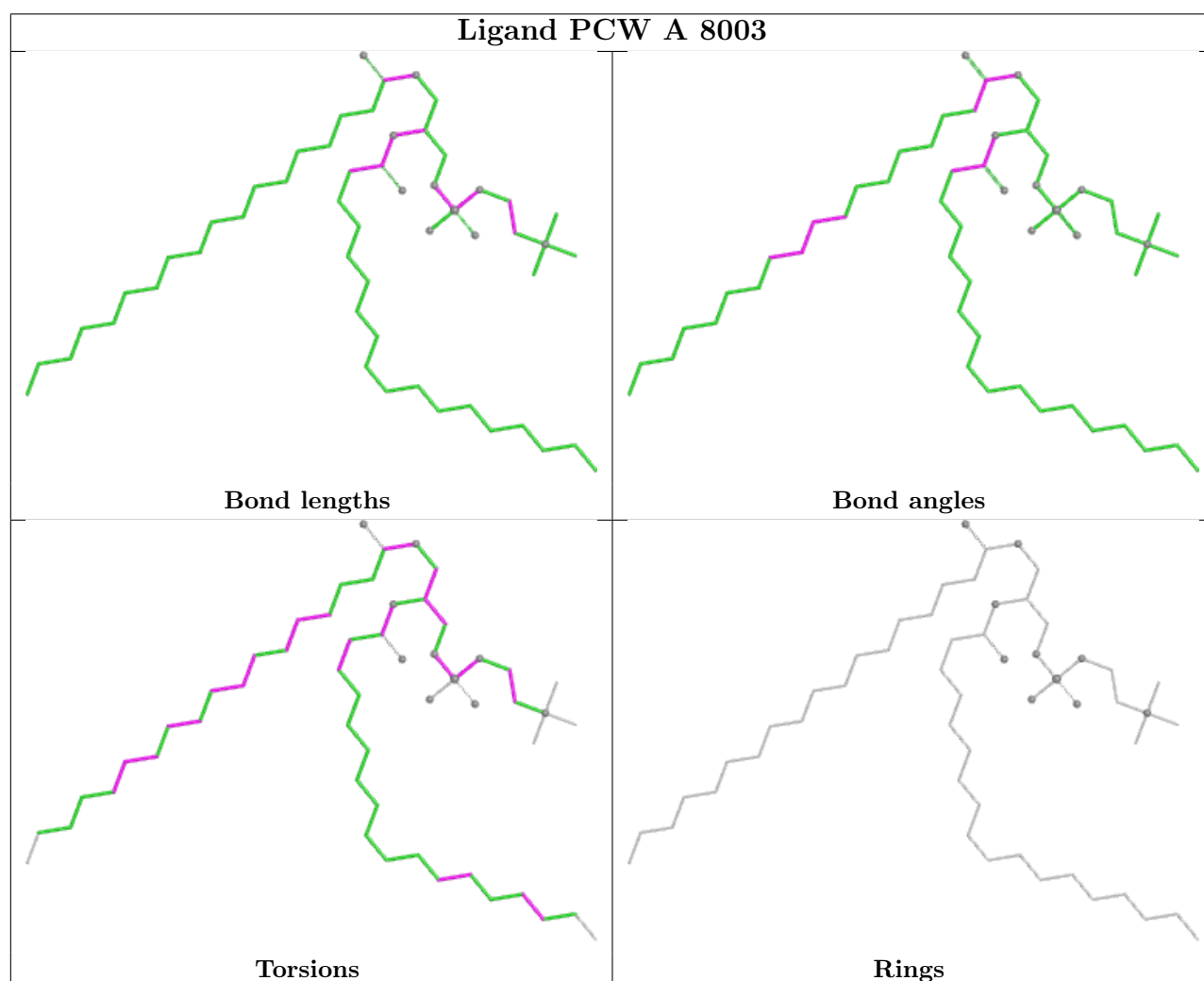
Continued from previous page...

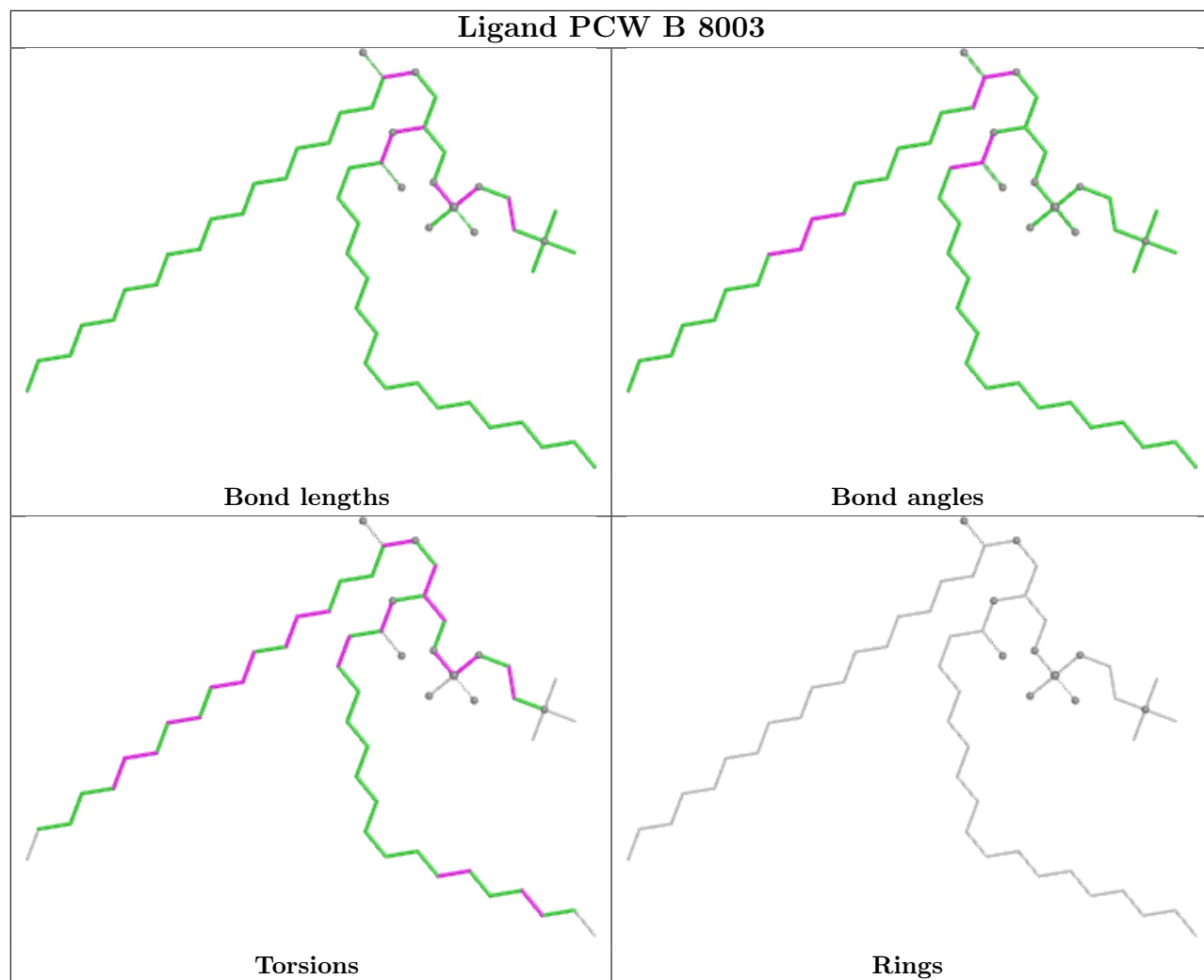
Mol	Chain	Res	Type	Atoms
4	D	5101	PCW	C1-C2-C3-O3
4	A	8003	PCW	C44-C45-C46-C47
4	C	8003	PCW	C44-C45-C46-C47
4	D	5101	PCW	C44-C45-C46-C47
4	B	8003	PCW	C44-C45-C46-C47
4	A	8002	PCW	C25-C26-C27-C28
4	C	8002	PCW	C25-C26-C27-C28
4	B	8002	PCW	C25-C26-C27-C28
4	D	5103	PCW	C25-C26-C27-C28
4	A	8002	PCW	C20-C21-C22-C23
4	B	8002	PCW	C20-C21-C22-C23
4	C	8002	PCW	C20-C21-C22-C23
4	D	5103	PCW	C20-C21-C22-C23
4	A	8003	PCW	C41-C42-C43-C44
4	B	8003	PCW	C41-C42-C43-C44
4	C	8003	PCW	C41-C42-C43-C44
4	D	5101	PCW	C41-C42-C43-C44
4	A	8002	PCW	C17-C18-C19-C20
4	B	8002	PCW	C17-C18-C19-C20
4	C	8002	PCW	C17-C18-C19-C20
4	D	5103	PCW	C17-C18-C19-C20
4	A	8003	PCW	C17-C18-C19-C20
4	B	8003	PCW	C17-C18-C19-C20
4	C	8003	PCW	C17-C18-C19-C20
4	D	5101	PCW	C17-C18-C19-C20
4	A	8003	PCW	C21-C22-C23-C24
4	B	8003	PCW	C21-C22-C23-C24
4	C	8003	PCW	C21-C22-C23-C24
4	D	5101	PCW	C21-C22-C23-C24
4	A	8002	PCW	C4-C5-N-C6
4	B	8002	PCW	C4-C5-N-C6
4	C	8002	PCW	C4-C5-N-C6
4	D	5103	PCW	C4-C5-N-C6
4	A	8002	PCW	C19-C20-C21-C22
4	C	8002	PCW	C19-C20-C21-C22
4	D	5103	PCW	C19-C20-C21-C22
4	B	8002	PCW	C19-C20-C21-C22
4	A	8002	PCW	C4-C5-N-C7
4	B	8002	PCW	C4-C5-N-C7
4	C	8002	PCW	C4-C5-N-C7
4	D	5103	PCW	C4-C5-N-C7

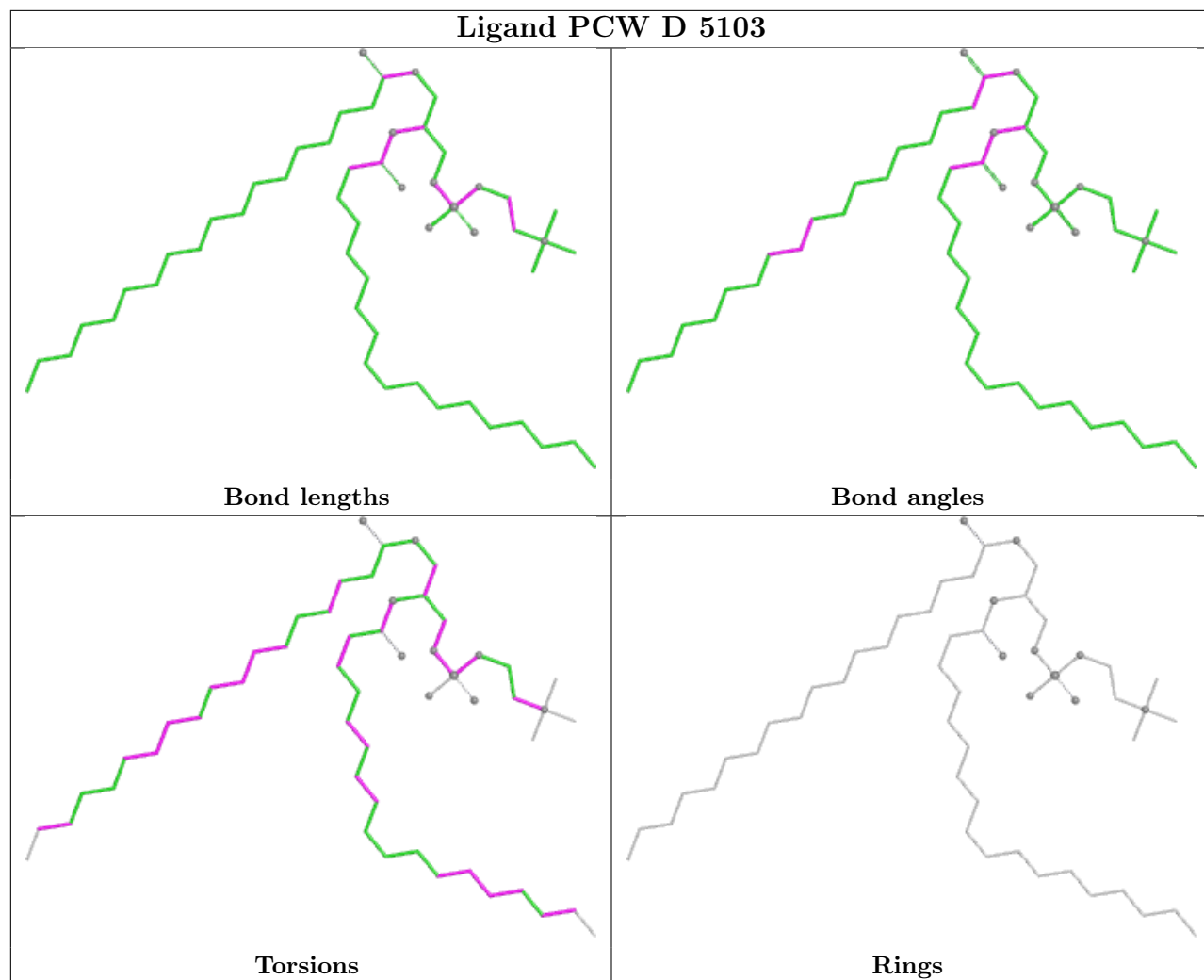
There are no ring outliers.

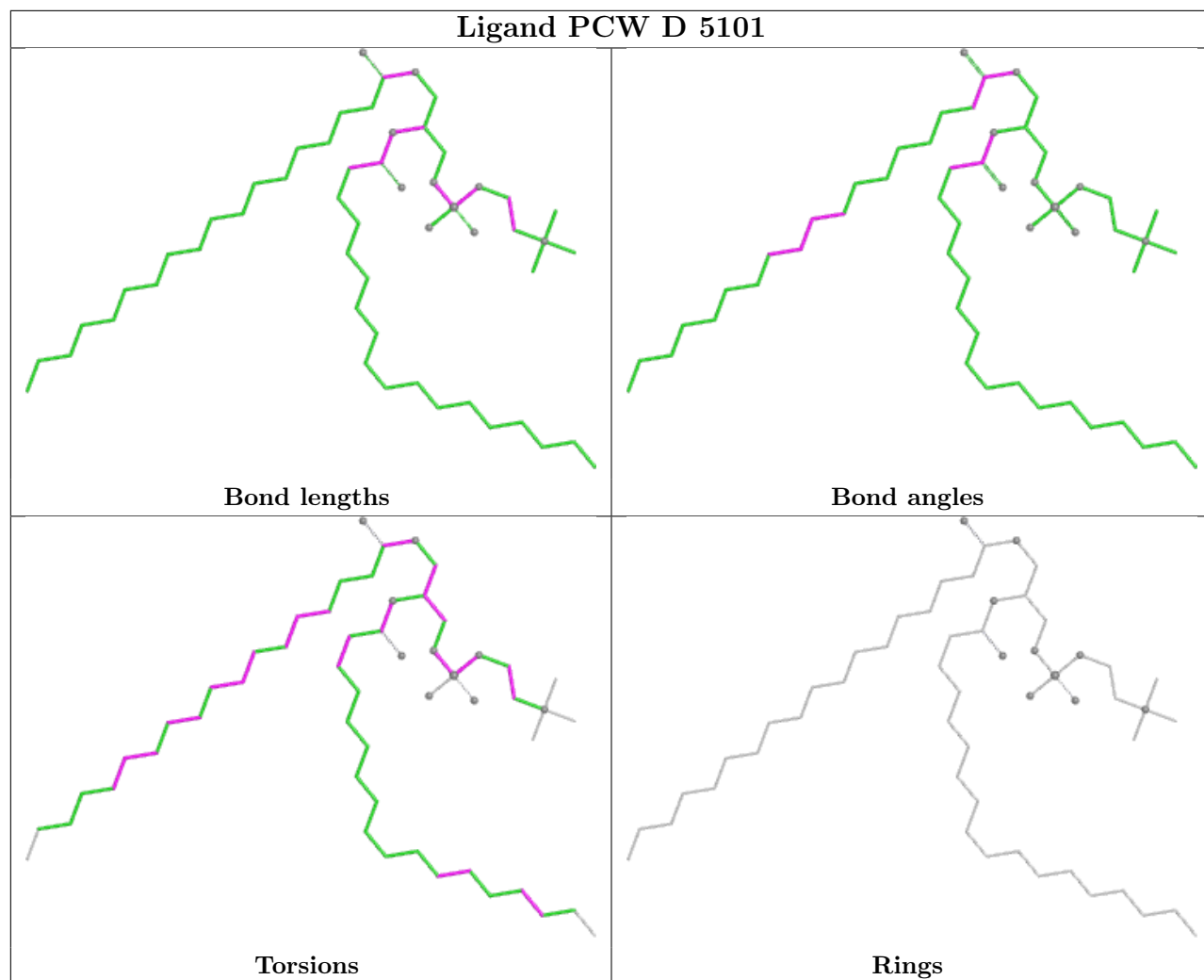
No monomer is involved in short contacts.

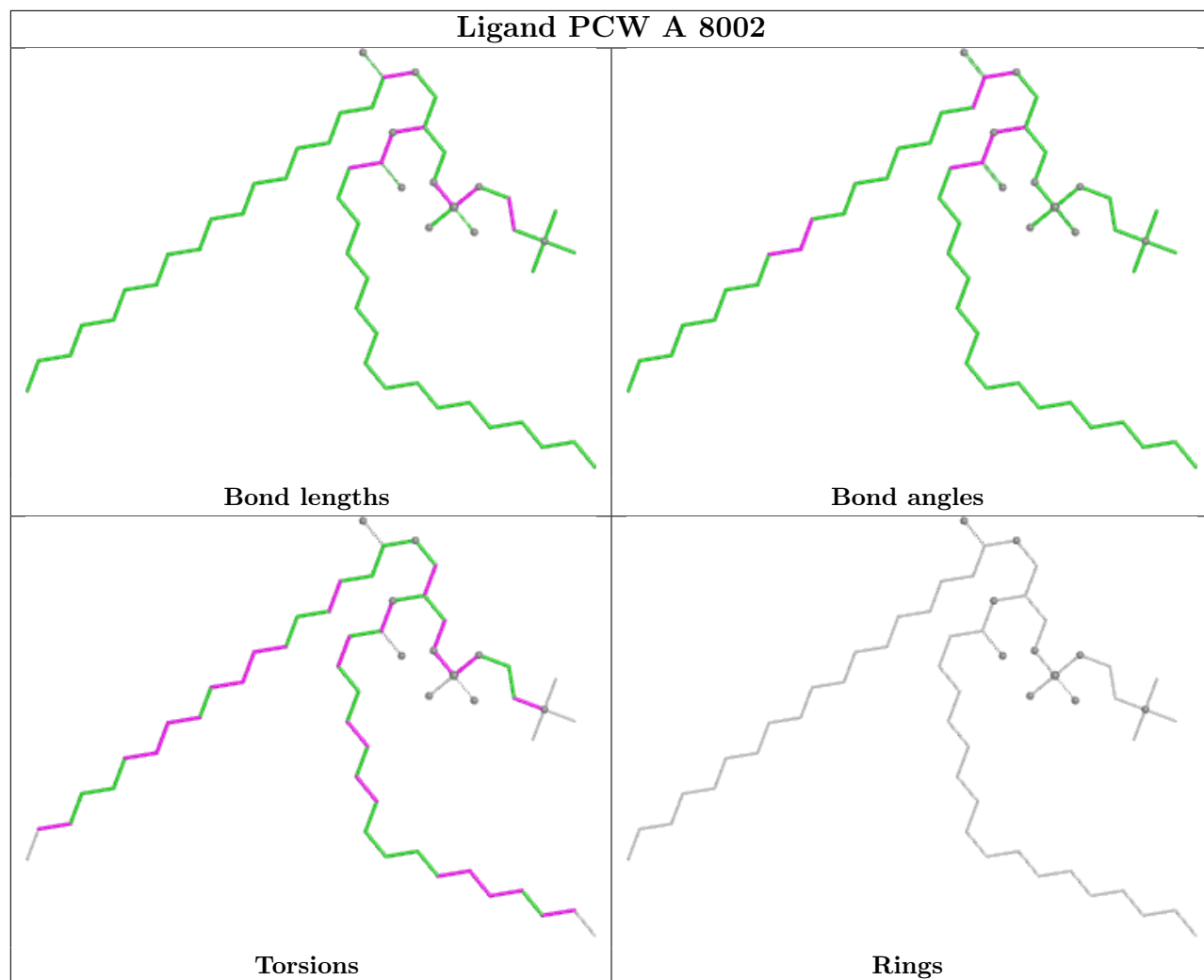
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

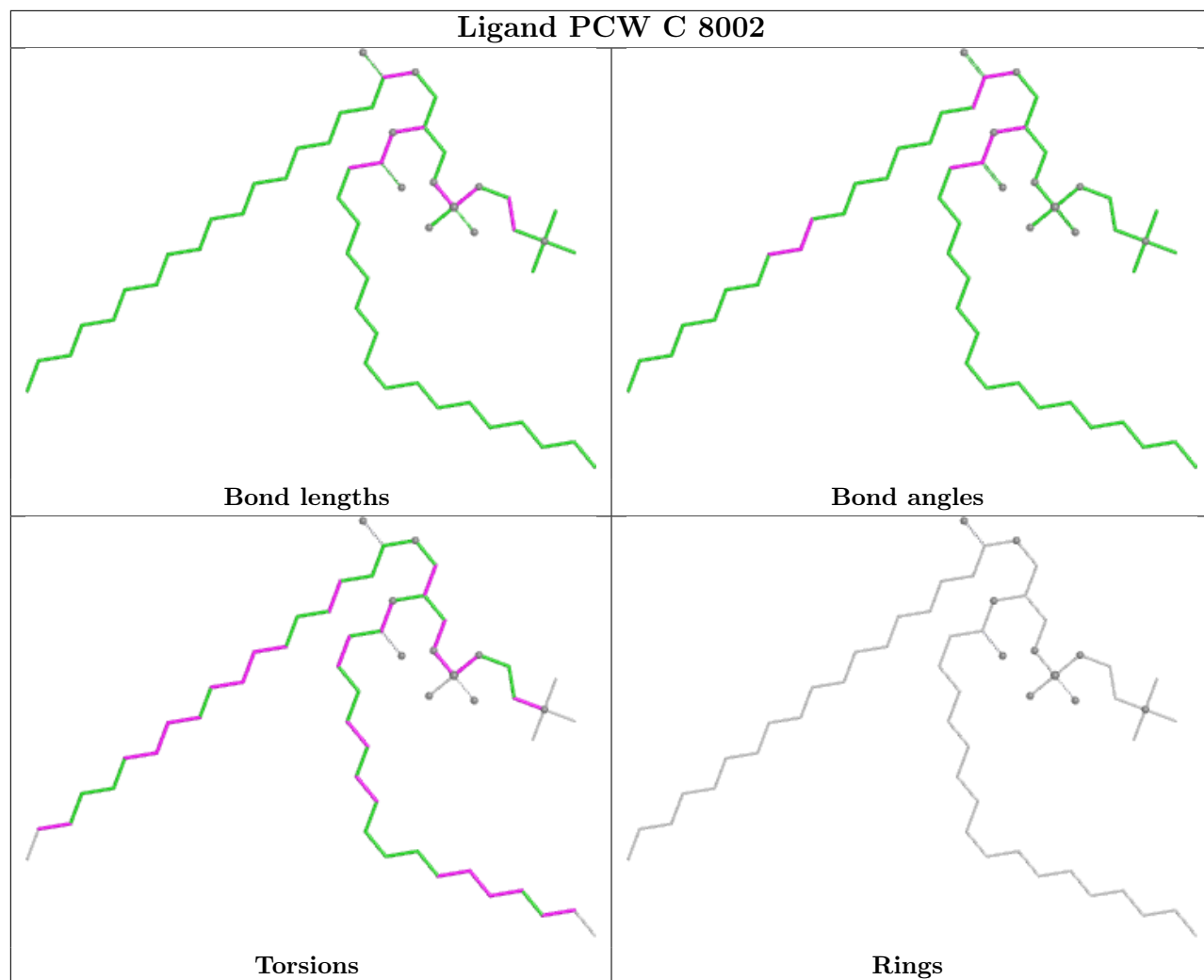


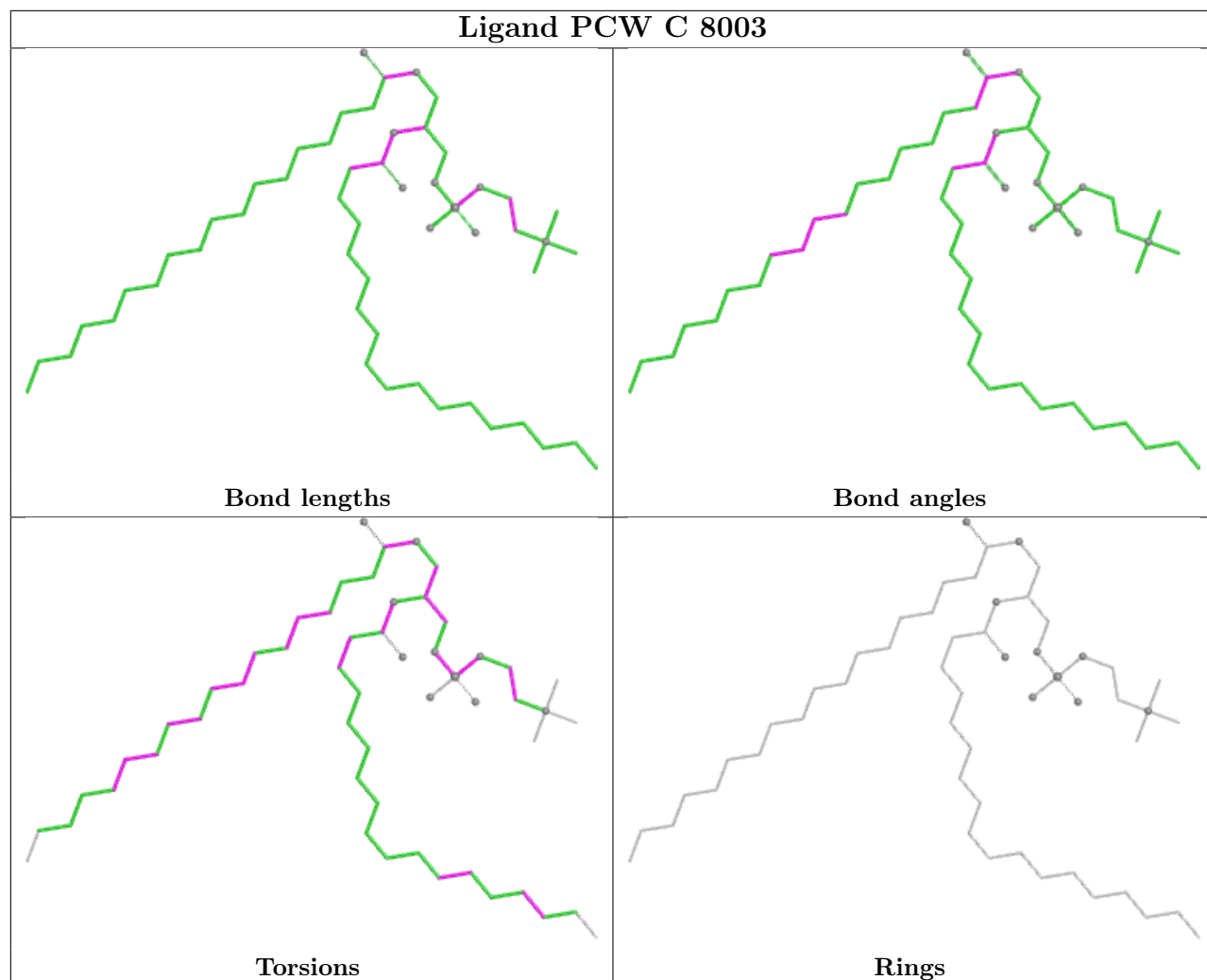


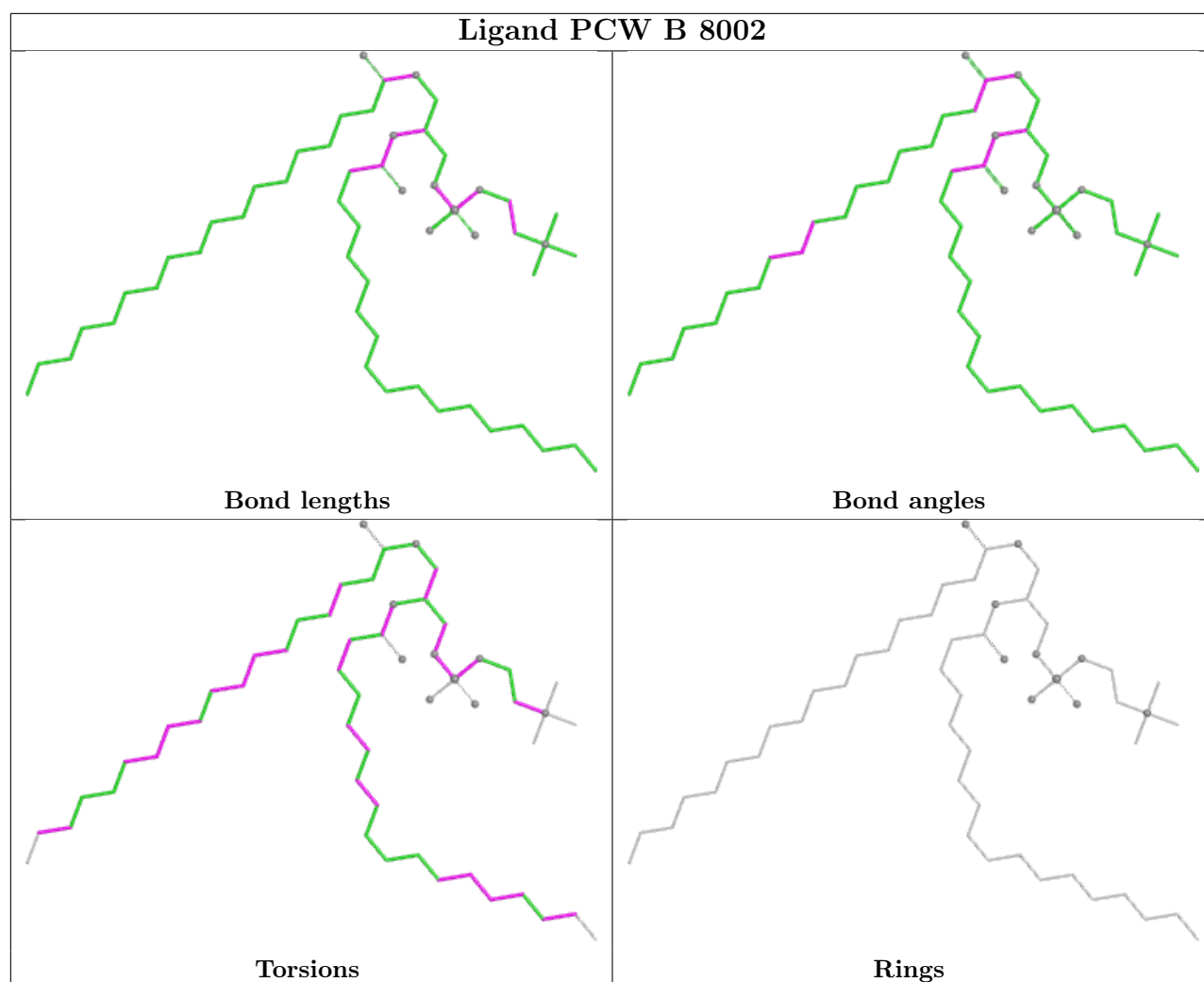












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

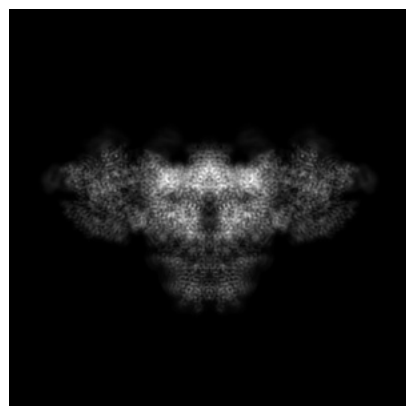
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-73134. These allow visual inspection of the internal detail of the map and identification of artifacts.

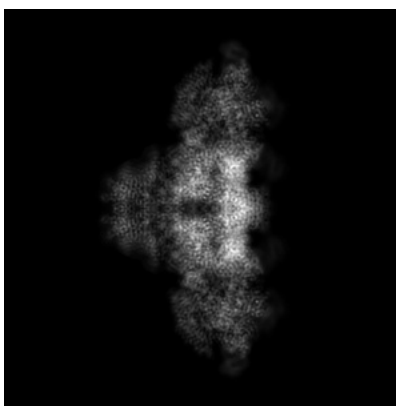
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

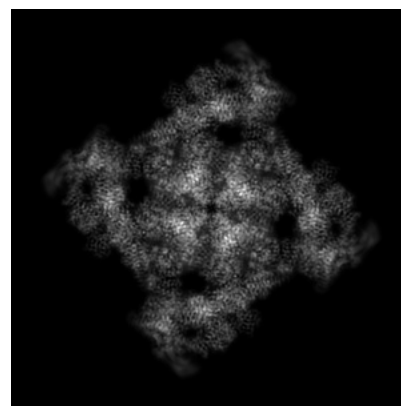
6.1.1 Primary map



X

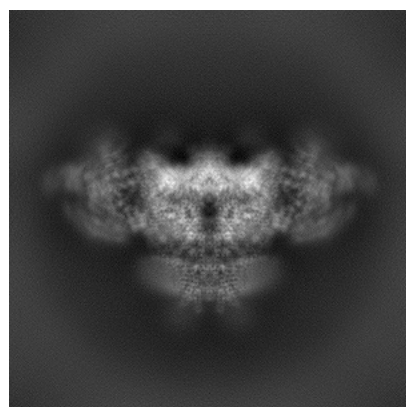


Y

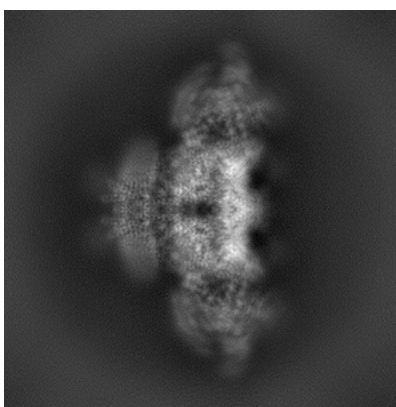


Z

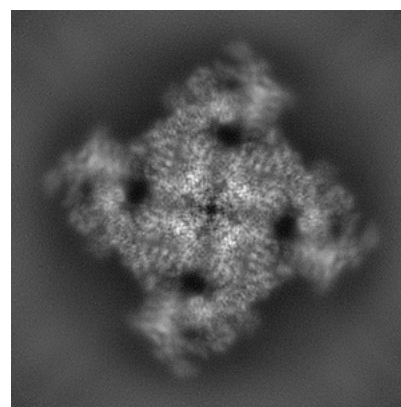
6.1.2 Raw map



X



Y



Z

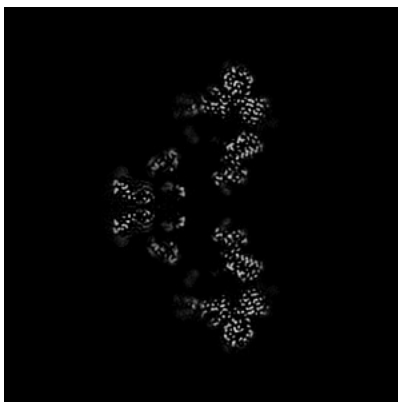
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

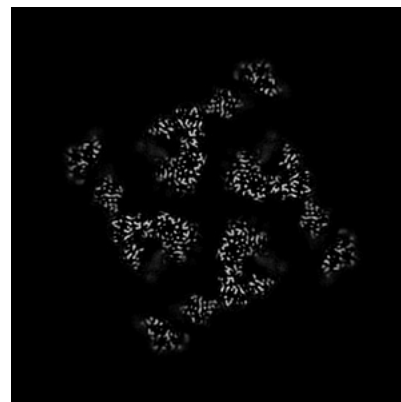
6.2.1 Primary map



X Index: 256

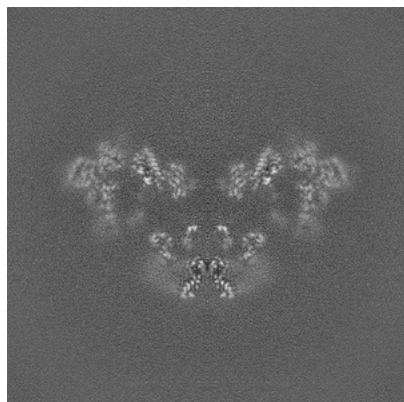


Y Index: 256

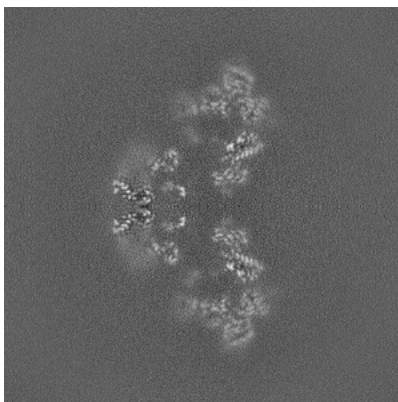


Z Index: 256

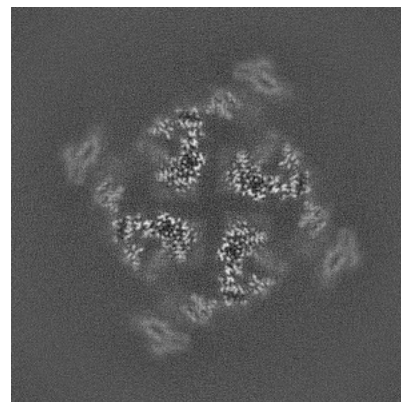
6.2.2 Raw map



X Index: 256



Y Index: 256



Z Index: 256

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

6.3 Largest variance slices [i](#)

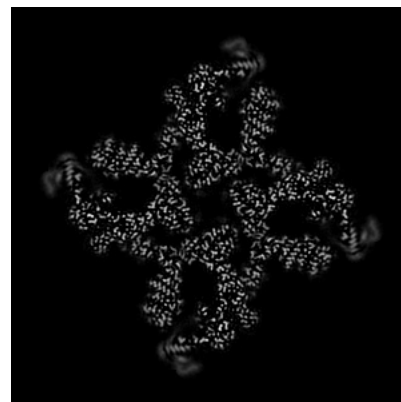
6.3.1 Primary map



X Index: 274

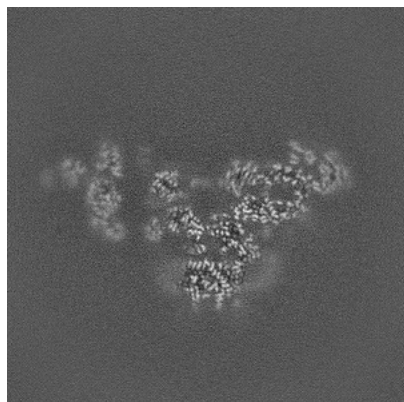


Y Index: 274

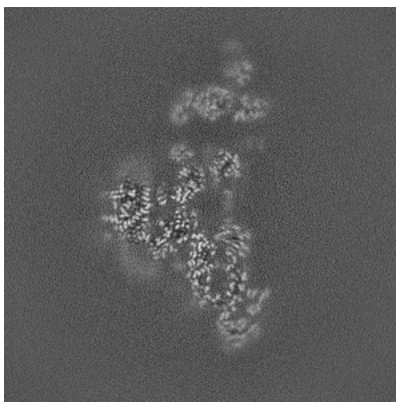


Z Index: 291

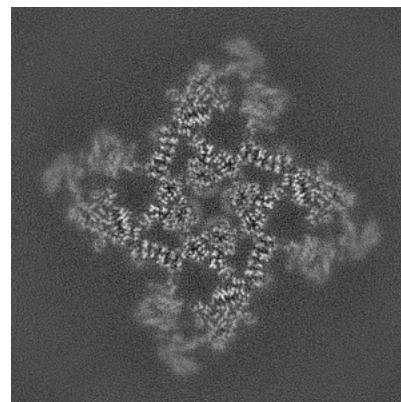
6.3.2 Raw map



X Index: 238



Y Index: 238

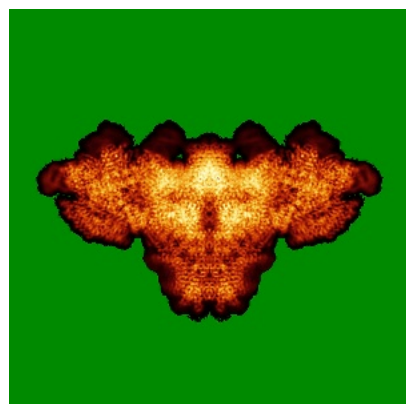


Z Index: 286

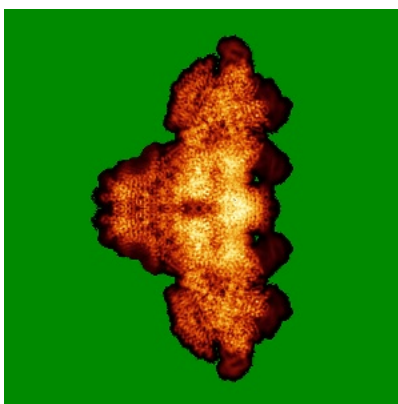
The images above show the largest variance slices of the map in three orthogonal directions.

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

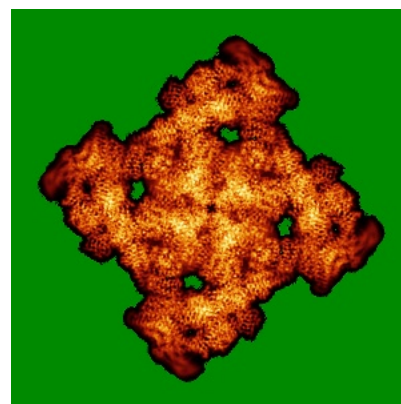
6.4.1 Primary map



X

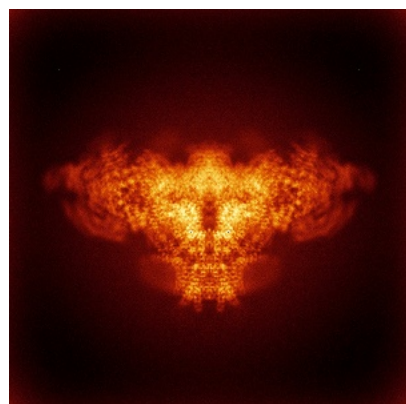


Y

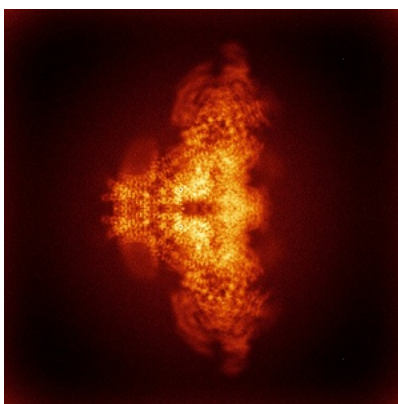


Z

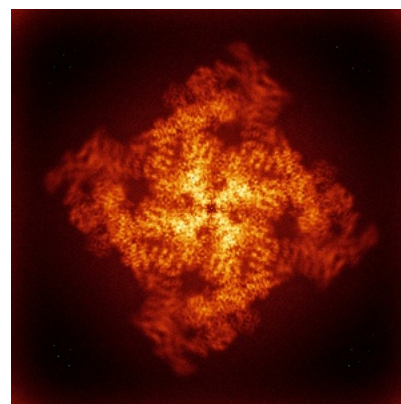
6.4.2 Raw map



X



Y

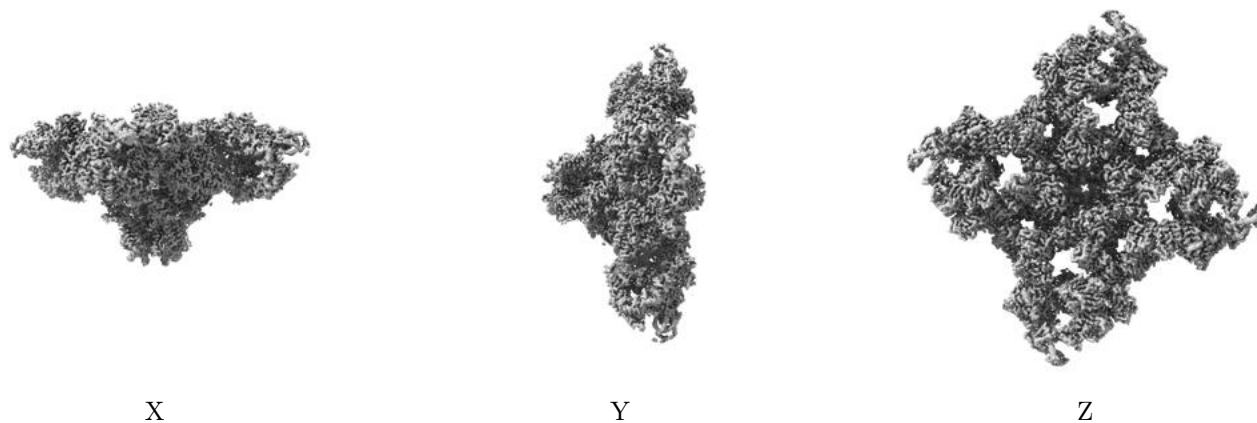


Z

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

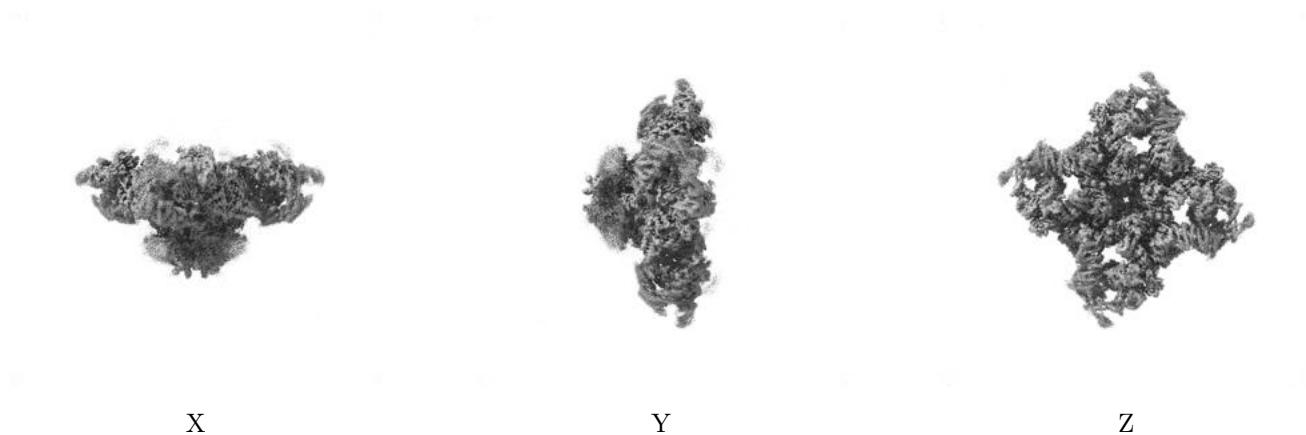
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.12. 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.

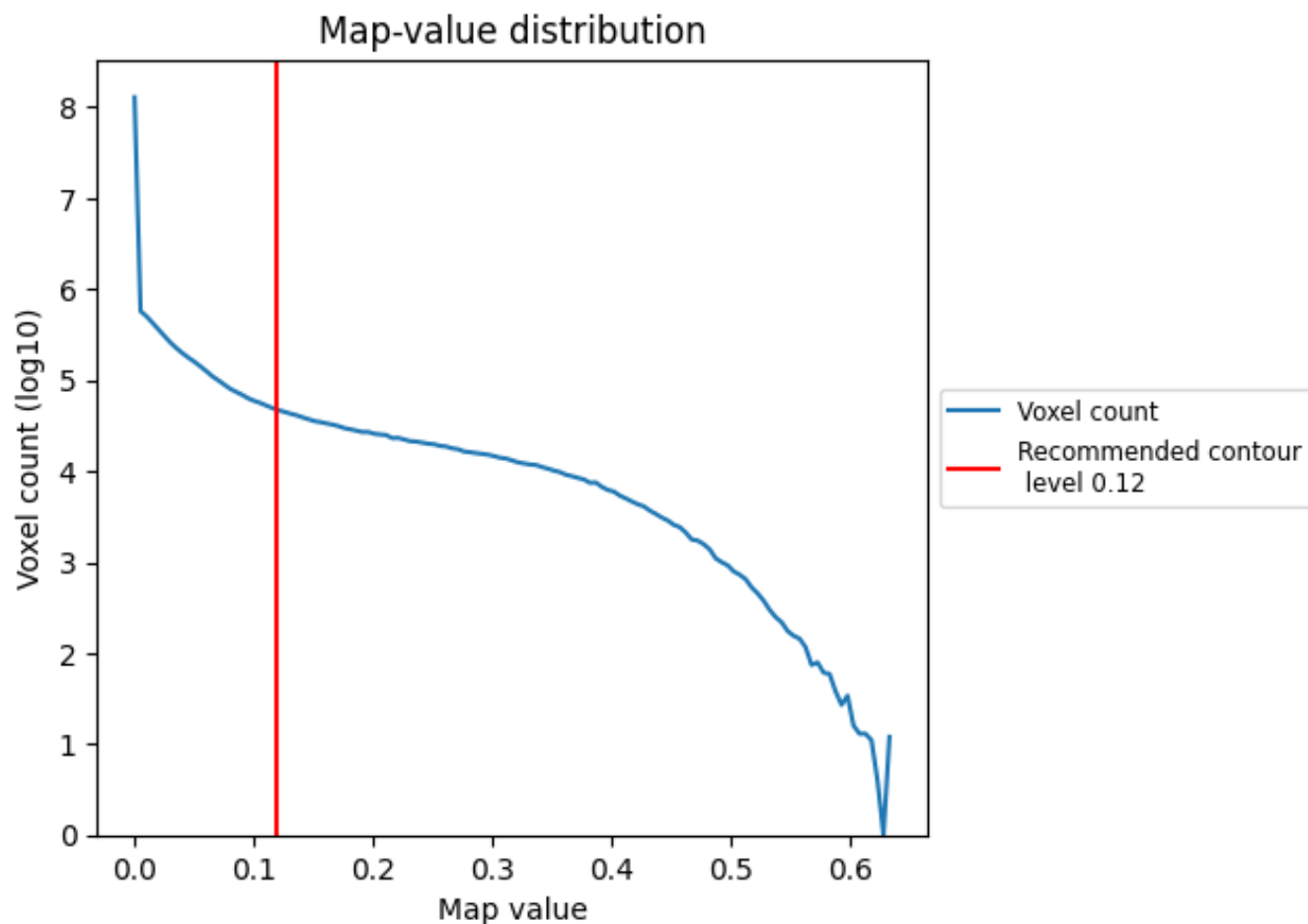
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

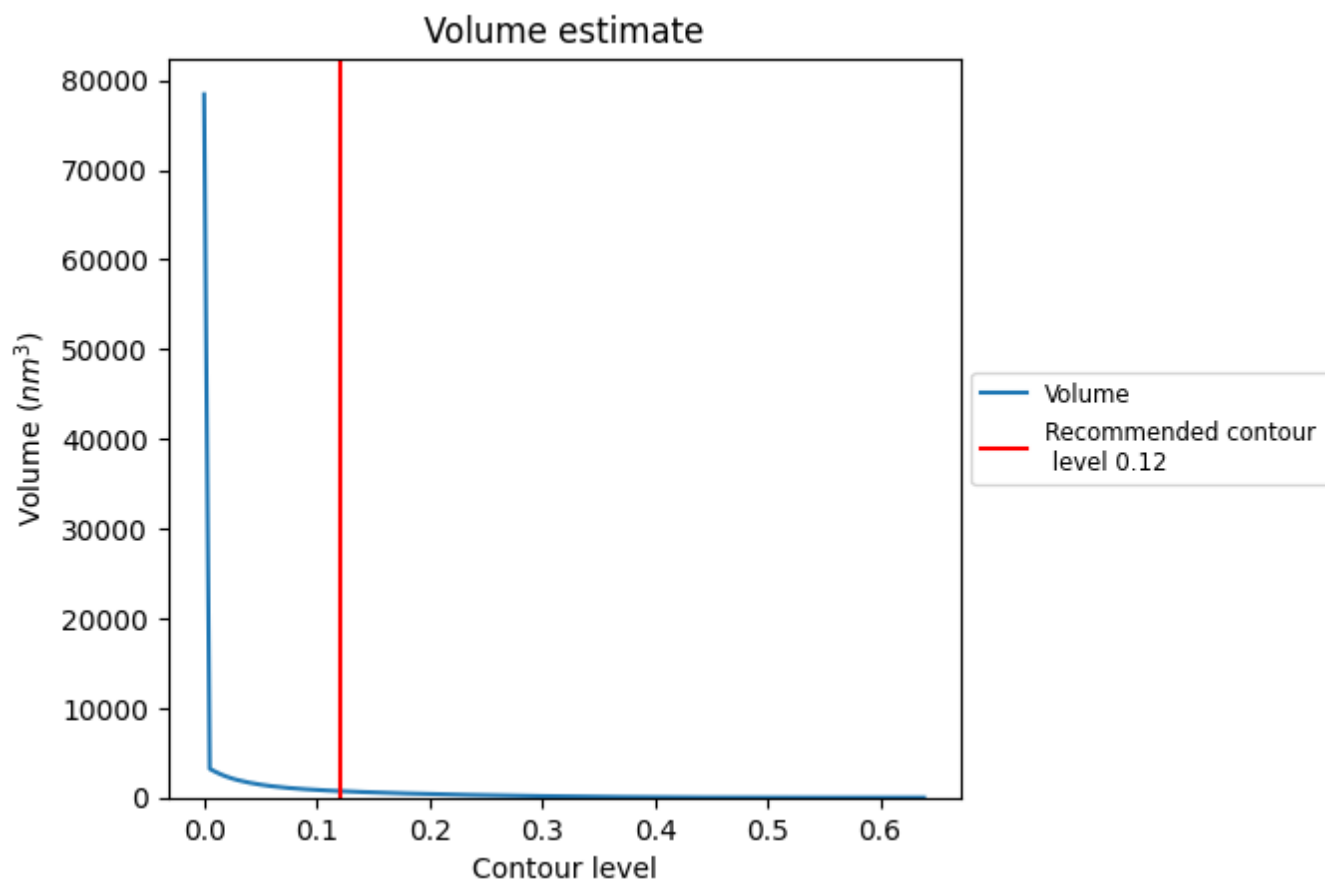
This section contains the results of statistical analysis of the map.

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.

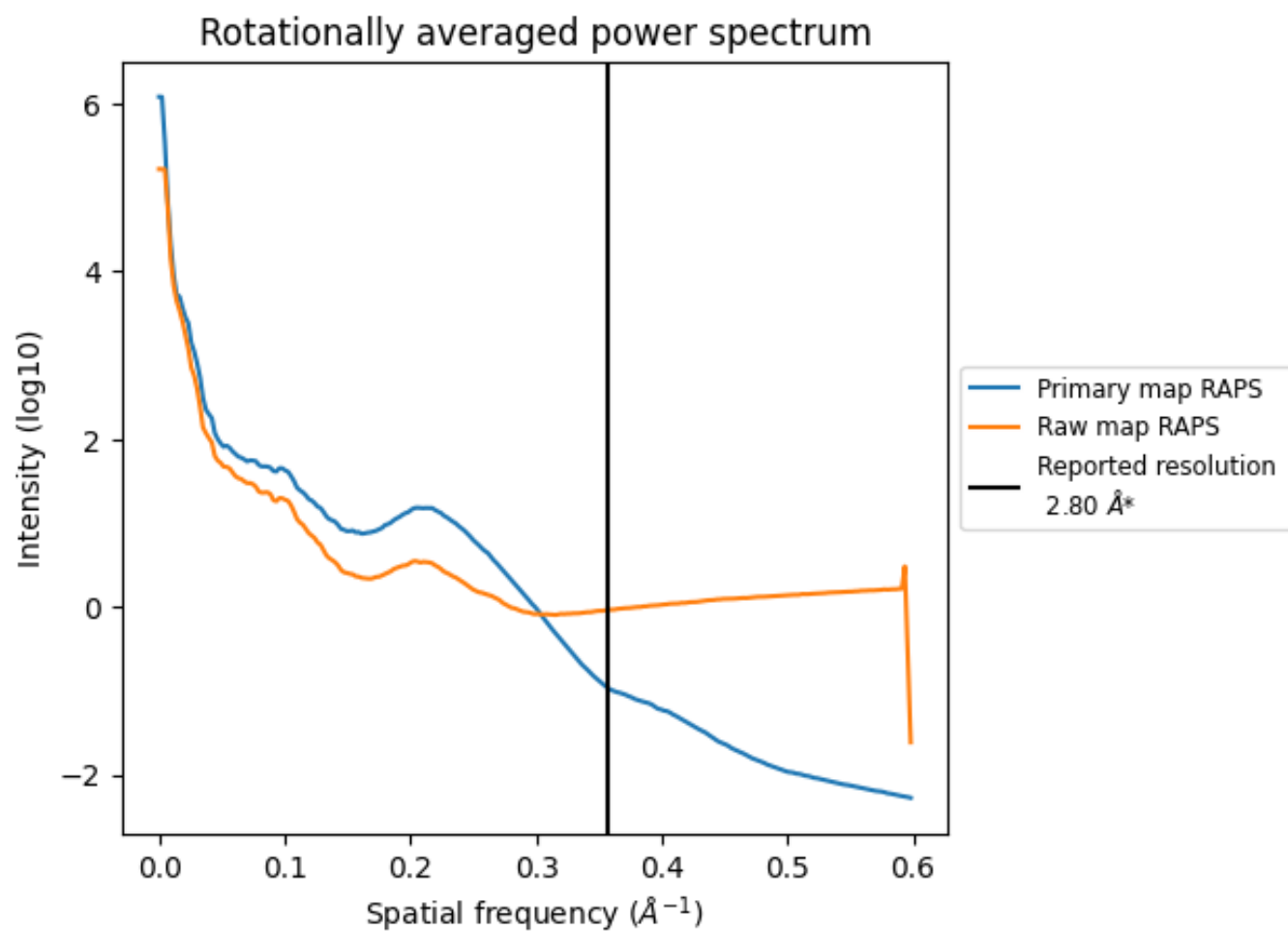
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 723 nm³; this corresponds to an approximate mass of 653 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 ⓘ

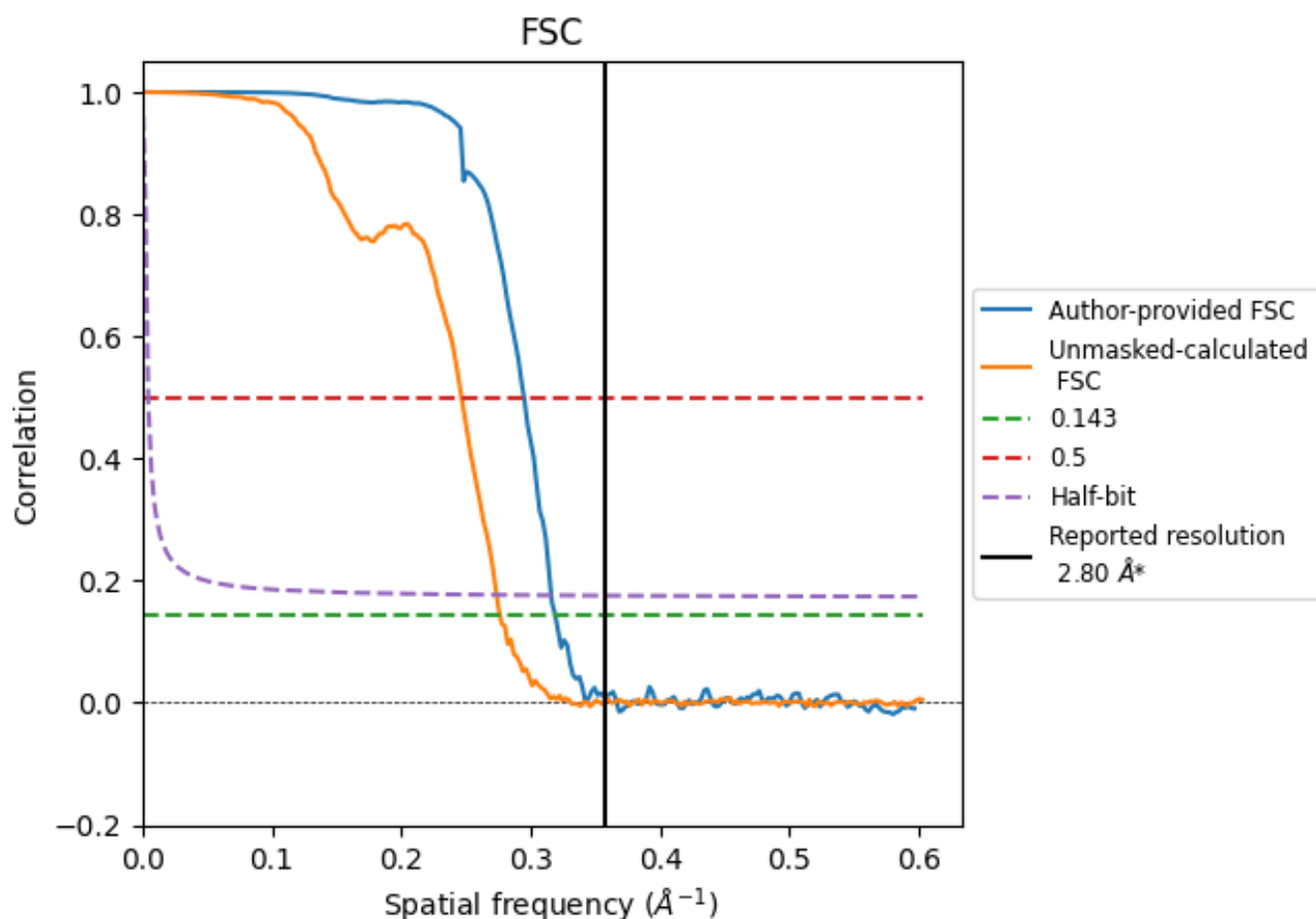


*Reported resolution corresponds to spatial frequency of 0.357 $\text{\AA}^{-1}$

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 0.357 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.80	-	-
Author-provided FSC curve	3.13	3.39	3.16
Unmasked-calculated*	3.62	4.06	3.65

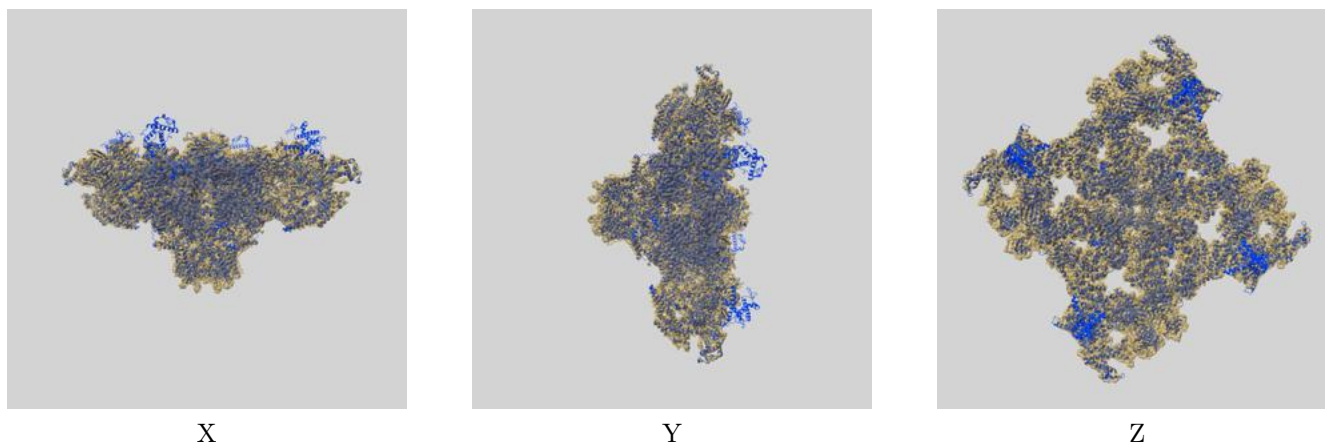
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from author-provided FSC intersecting FSC 0.143 CUT-OFF 3.13 differs from the reported value 2.8 by more than 10 %

The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.62 differs from the reported value 2.8 by more than 10 %

9 Map-model fit [i](#)

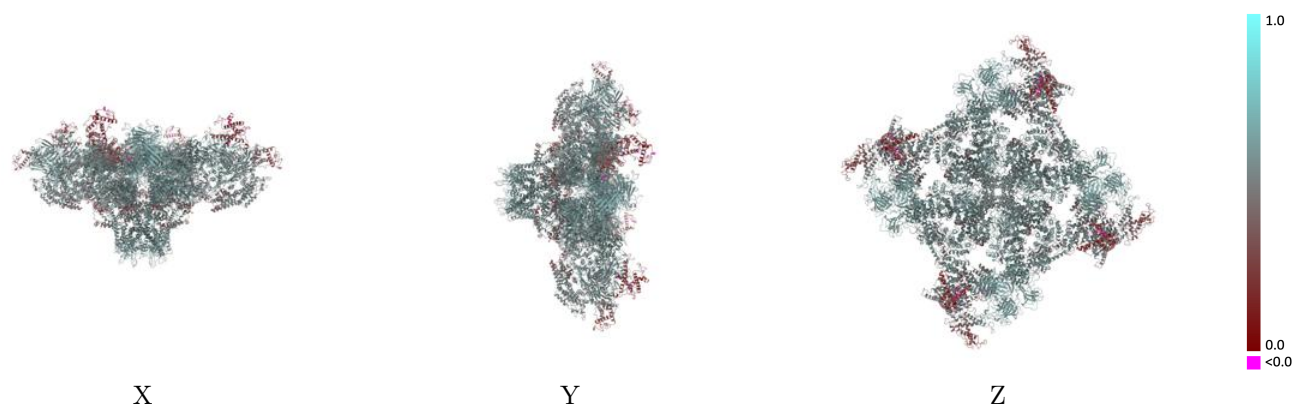
This section contains information regarding the fit between EMDB map EMD-73134 and PDB model 9YN2. Per-residue inclusion information can be found in section [3](#) on page [7](#).

9.1 Map-model overlay [i](#)



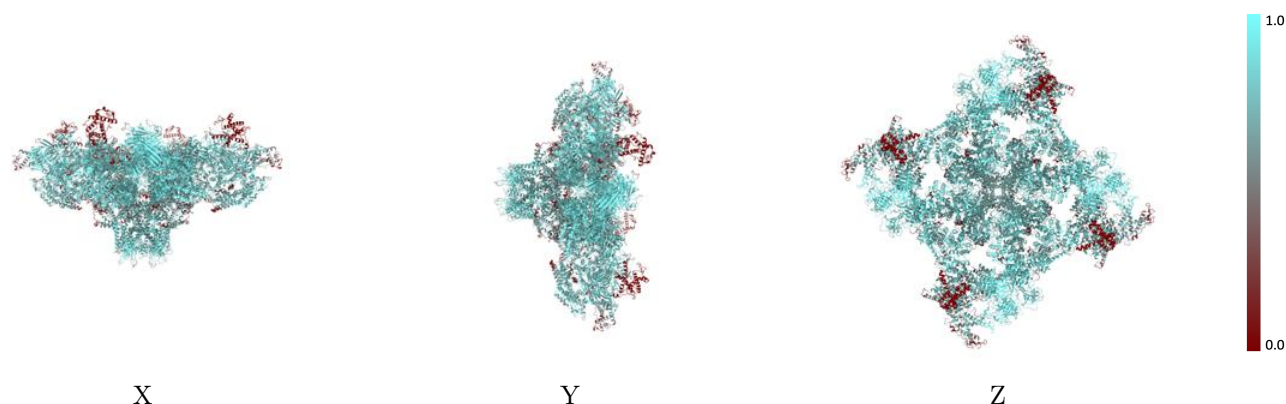
The images above show the 3D surface view of the map at the recommended contour level 0.12 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



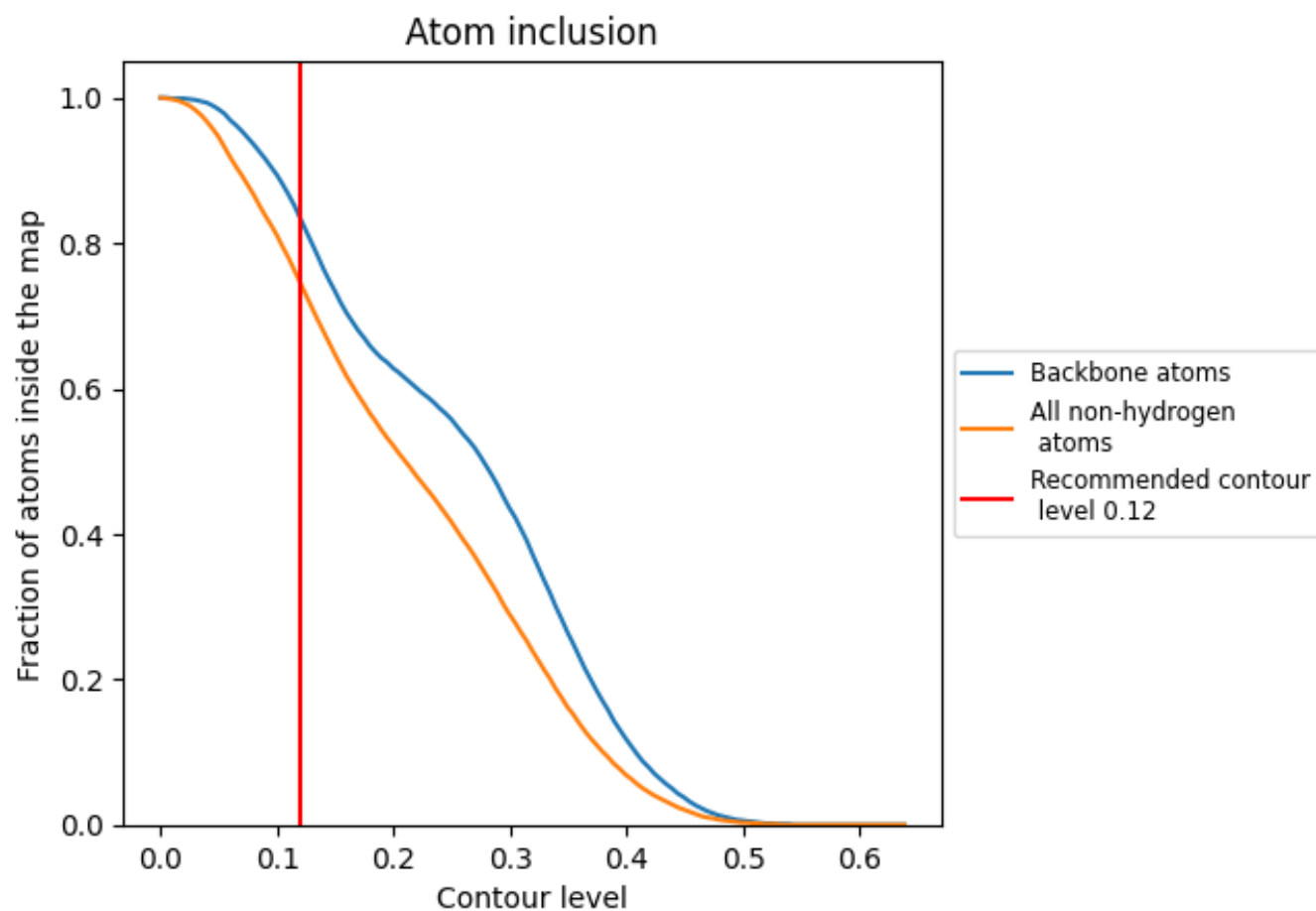
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.12).

9.4 Atom inclusion [i](#)



At the recommended contour level, 83% of all backbone atoms, 74% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7450	0.5230
A	0.7440	0.5220
B	0.7440	0.5210
C	0.7440	0.5220
D	0.7440	0.5220
E	0.7920	0.5800
F	0.7880	0.5780
G	0.7900	0.5790
H	0.7880	0.5780

1.0

0.0

<0.0