



Full wwPDB EM Validation Report ⓘ

Mar 15, 2026 – 11:23 AM UTC

PDB ID : 7VML / pdb_00007vml
EMDB ID : EMD-33935
Title : Structure of recombinant RyR2 (EGTA dataset, class 1&2, closed state)
Authors : Kobayashi, T.; Tsutsumi, A.; Kurebayashi, N.; Kodama, M.; Kikkawa, M.;
Murayama, T.; Ogawa, H.
Deposited on : 2021-10-09
Resolution : 3.30 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.dev132
MolProbity : 4-5-2 with Phenix2.0
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) : 2.49

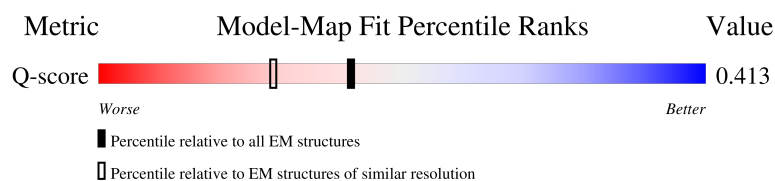
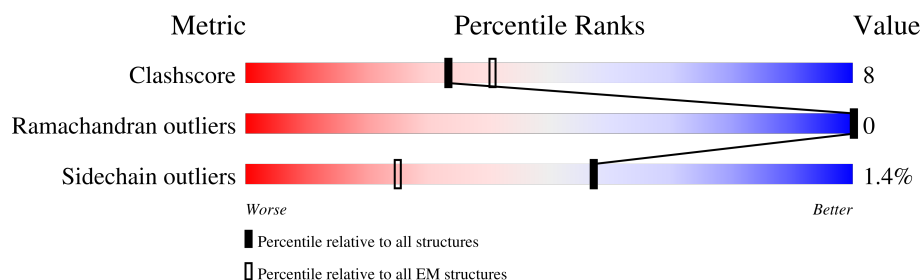
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 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	15087 (2.80 - 3.80)

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	4966	<div> <div>29%</div> <div>66%</div> <div>15%</div> <div>19%</div> </div>
1	B	4966	<div> <div>29%</div> <div>66%</div> <div>15%</div> <div>19%</div> </div>
1	C	4966	<div> <div>29%</div> <div>66%</div> <div>15%</div> <div>19%</div> </div>
1	D	4966	<div> <div>29%</div> <div>66%</div> <div>15%</div> <div>19%</div> </div>

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Mol	Chain	Length	Quality of chain
2	G	176	<div><div><div>7%</div><div>43%</div><div>18%</div><div>39%</div></div></div>
2	H	176	<div><div><div>7%</div><div>43%</div><div>18%</div><div>39%</div></div></div>
2	I	176	<div><div><div>7%</div><div>44%</div><div>17%</div><div>39%</div></div></div>
2	J	176	<div><div><div>7%</div><div>44%</div><div>17%</div><div>39%</div></div></div>

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 123564 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 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	4044	Total	C	N	O	S	0	0
			30071	19035	5243	5617	176		
1	B	4044	Total	C	N	O	S	0	0
			30071	19035	5243	5617	176		
1	C	4044	Total	C	N	O	S	0	0
			30071	19035	5243	5617	176		
1	D	4044	Total	C	N	O	S	0	0
			30071	19035	5243	5617	176		

- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	G	107	Total	C	N	O	S	0	0
			819	516	144	155	4		
2	H	107	Total	C	N	O	S	0	0
			819	516	144	155	4		
2	I	107	Total	C	N	O	S	0	0
			819	516	144	155	4		
2	J	107	Total	C	N	O	S	0	0
			819	516	144	155	4		

There are 276 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	-67	MET	-	initiating methionine	UNP P68106
G	-66	GLY	-	expression tag	UNP P68106
G	-65	SER	-	expression tag	UNP P68106
G	-64	SER	-	expression tag	UNP P68106
G	-63	HIS	-	expression tag	UNP P68106
G	-62	HIS	-	expression tag	UNP P68106
G	-61	HIS	-	expression tag	UNP P68106
G	-60	HIS	-	expression tag	UNP P68106
G	-59	HIS	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
G	-58	HIS	-	expression tag	UNP P68106
G	-57	SER	-	expression tag	UNP P68106
G	-56	SER	-	expression tag	UNP P68106
G	-55	GLY	-	expression tag	UNP P68106
G	-54	LEU	-	expression tag	UNP P68106
G	-53	VAL	-	expression tag	UNP P68106
G	-52	PRO	-	expression tag	UNP P68106
G	-51	ARG	-	expression tag	UNP P68106
G	-50	GLY	-	expression tag	UNP P68106
G	-49	SER	-	expression tag	UNP P68106
G	-48	HIS	-	expression tag	UNP P68106
G	-47	MET	-	expression tag	UNP P68106
G	-46	ALA	-	expression tag	UNP P68106
G	-45	SER	-	expression tag	UNP P68106
G	-44	MET	-	expression tag	UNP P68106
G	-43	ASP	-	expression tag	UNP P68106
G	-42	GLU	-	expression tag	UNP P68106
G	-41	LYS	-	expression tag	UNP P68106
G	-40	THR	-	expression tag	UNP P68106
G	-39	THR	-	expression tag	UNP P68106
G	-38	GLY	-	expression tag	UNP P68106
G	-37	TRP	-	expression tag	UNP P68106
G	-36	ARG	-	expression tag	UNP P68106
G	-35	GLY	-	expression tag	UNP P68106
G	-34	GLY	-	expression tag	UNP P68106
G	-33	HIS	-	expression tag	UNP P68106
G	-32	VAL	-	expression tag	UNP P68106
G	-31	VAL	-	expression tag	UNP P68106
G	-30	GLU	-	expression tag	UNP P68106
G	-29	GLY	-	expression tag	UNP P68106
G	-28	LEU	-	expression tag	UNP P68106
G	-27	ALA	-	expression tag	UNP P68106
G	-26	GLY	-	expression tag	UNP P68106
G	-25	GLU	-	expression tag	UNP P68106
G	-24	LEU	-	expression tag	UNP P68106
G	-23	GLU	-	expression tag	UNP P68106
G	-22	GLN	-	expression tag	UNP P68106
G	-21	LEU	-	expression tag	UNP P68106
G	-20	ARG	-	expression tag	UNP P68106
G	-19	ALA	-	expression tag	UNP P68106
G	-18	ARG	-	expression tag	UNP P68106
G	-17	LEU	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
G	-16	GLU	-	expression tag	UNP P68106
G	-15	HIS	-	expression tag	UNP P68106
G	-14	HIS	-	expression tag	UNP P68106
G	-13	PRO	-	expression tag	UNP P68106
G	-12	GLN	-	expression tag	UNP P68106
G	-11	GLY	-	expression tag	UNP P68106
G	-10	GLN	-	expression tag	UNP P68106
G	-9	ARG	-	expression tag	UNP P68106
G	-8	GLU	-	expression tag	UNP P68106
G	-7	PRO	-	expression tag	UNP P68106
G	-6	GLY	-	expression tag	UNP P68106
G	-5	SER	-	expression tag	UNP P68106
G	-4	GLY	-	expression tag	UNP P68106
G	-3	GLY	-	expression tag	UNP P68106
G	-2	SER	-	expression tag	UNP P68106
G	-1	GLY	-	expression tag	UNP P68106
G	0	GLY	-	expression tag	UNP P68106
G	1	THR	-	expression tag	UNP P68106
H	-67	MET	-	initiating methionine	UNP P68106
H	-66	GLY	-	expression tag	UNP P68106
H	-65	SER	-	expression tag	UNP P68106
H	-64	SER	-	expression tag	UNP P68106
H	-63	HIS	-	expression tag	UNP P68106
H	-62	HIS	-	expression tag	UNP P68106
H	-61	HIS	-	expression tag	UNP P68106
H	-60	HIS	-	expression tag	UNP P68106
H	-59	HIS	-	expression tag	UNP P68106
H	-58	HIS	-	expression tag	UNP P68106
H	-57	SER	-	expression tag	UNP P68106
H	-56	SER	-	expression tag	UNP P68106
H	-55	GLY	-	expression tag	UNP P68106
H	-54	LEU	-	expression tag	UNP P68106
H	-53	VAL	-	expression tag	UNP P68106
H	-52	PRO	-	expression tag	UNP P68106
H	-51	ARG	-	expression tag	UNP P68106
H	-50	GLY	-	expression tag	UNP P68106
H	-49	SER	-	expression tag	UNP P68106
H	-48	HIS	-	expression tag	UNP P68106
H	-47	MET	-	expression tag	UNP P68106
H	-46	ALA	-	expression tag	UNP P68106
H	-45	SER	-	expression tag	UNP P68106
H	-44	MET	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
H	-43	ASP	-	expression tag	UNP P68106
H	-42	GLU	-	expression tag	UNP P68106
H	-41	LYS	-	expression tag	UNP P68106
H	-40	THR	-	expression tag	UNP P68106
H	-39	THR	-	expression tag	UNP P68106
H	-38	GLY	-	expression tag	UNP P68106
H	-37	TRP	-	expression tag	UNP P68106
H	-36	ARG	-	expression tag	UNP P68106
H	-35	GLY	-	expression tag	UNP P68106
H	-34	GLY	-	expression tag	UNP P68106
H	-33	HIS	-	expression tag	UNP P68106
H	-32	VAL	-	expression tag	UNP P68106
H	-31	VAL	-	expression tag	UNP P68106
H	-30	GLU	-	expression tag	UNP P68106
H	-29	GLY	-	expression tag	UNP P68106
H	-28	LEU	-	expression tag	UNP P68106
H	-27	ALA	-	expression tag	UNP P68106
H	-26	GLY	-	expression tag	UNP P68106
H	-25	GLU	-	expression tag	UNP P68106
H	-24	LEU	-	expression tag	UNP P68106
H	-23	GLU	-	expression tag	UNP P68106
H	-22	GLN	-	expression tag	UNP P68106
H	-21	LEU	-	expression tag	UNP P68106
H	-20	ARG	-	expression tag	UNP P68106
H	-19	ALA	-	expression tag	UNP P68106
H	-18	ARG	-	expression tag	UNP P68106
H	-17	LEU	-	expression tag	UNP P68106
H	-16	GLU	-	expression tag	UNP P68106
H	-15	HIS	-	expression tag	UNP P68106
H	-14	HIS	-	expression tag	UNP P68106
H	-13	PRO	-	expression tag	UNP P68106
H	-12	GLN	-	expression tag	UNP P68106
H	-11	GLY	-	expression tag	UNP P68106
H	-10	GLN	-	expression tag	UNP P68106
H	-9	ARG	-	expression tag	UNP P68106
H	-8	GLU	-	expression tag	UNP P68106
H	-7	PRO	-	expression tag	UNP P68106
H	-6	GLY	-	expression tag	UNP P68106
H	-5	SER	-	expression tag	UNP P68106
H	-4	GLY	-	expression tag	UNP P68106
H	-3	GLY	-	expression tag	UNP P68106
H	-2	SER	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
H	-1	GLY	-	expression tag	UNP P68106
H	0	GLY	-	expression tag	UNP P68106
H	1	THR	-	expression tag	UNP P68106
I	-67	MET	-	initiating methionine	UNP P68106
I	-66	GLY	-	expression tag	UNP P68106
I	-65	SER	-	expression tag	UNP P68106
I	-64	SER	-	expression tag	UNP P68106
I	-63	HIS	-	expression tag	UNP P68106
I	-62	HIS	-	expression tag	UNP P68106
I	-61	HIS	-	expression tag	UNP P68106
I	-60	HIS	-	expression tag	UNP P68106
I	-59	HIS	-	expression tag	UNP P68106
I	-58	HIS	-	expression tag	UNP P68106
I	-57	SER	-	expression tag	UNP P68106
I	-56	SER	-	expression tag	UNP P68106
I	-55	GLY	-	expression tag	UNP P68106
I	-54	LEU	-	expression tag	UNP P68106
I	-53	VAL	-	expression tag	UNP P68106
I	-52	PRO	-	expression tag	UNP P68106
I	-51	ARG	-	expression tag	UNP P68106
I	-50	GLY	-	expression tag	UNP P68106
I	-49	SER	-	expression tag	UNP P68106
I	-48	HIS	-	expression tag	UNP P68106
I	-47	MET	-	expression tag	UNP P68106
I	-46	ALA	-	expression tag	UNP P68106
I	-45	SER	-	expression tag	UNP P68106
I	-44	MET	-	expression tag	UNP P68106
I	-43	ASP	-	expression tag	UNP P68106
I	-42	GLU	-	expression tag	UNP P68106
I	-41	LYS	-	expression tag	UNP P68106
I	-40	THR	-	expression tag	UNP P68106
I	-39	THR	-	expression tag	UNP P68106
I	-38	GLY	-	expression tag	UNP P68106
I	-37	TRP	-	expression tag	UNP P68106
I	-36	ARG	-	expression tag	UNP P68106
I	-35	GLY	-	expression tag	UNP P68106
I	-34	GLY	-	expression tag	UNP P68106
I	-33	HIS	-	expression tag	UNP P68106
I	-32	VAL	-	expression tag	UNP P68106
I	-31	VAL	-	expression tag	UNP P68106
I	-30	GLU	-	expression tag	UNP P68106
I	-29	GLY	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
I	-28	LEU	-	expression tag	UNP P68106
I	-27	ALA	-	expression tag	UNP P68106
I	-26	GLY	-	expression tag	UNP P68106
I	-25	GLU	-	expression tag	UNP P68106
I	-24	LEU	-	expression tag	UNP P68106
I	-23	GLU	-	expression tag	UNP P68106
I	-22	GLN	-	expression tag	UNP P68106
I	-21	LEU	-	expression tag	UNP P68106
I	-20	ARG	-	expression tag	UNP P68106
I	-19	ALA	-	expression tag	UNP P68106
I	-18	ARG	-	expression tag	UNP P68106
I	-17	LEU	-	expression tag	UNP P68106
I	-16	GLU	-	expression tag	UNP P68106
I	-15	HIS	-	expression tag	UNP P68106
I	-14	HIS	-	expression tag	UNP P68106
I	-13	PRO	-	expression tag	UNP P68106
I	-12	GLN	-	expression tag	UNP P68106
I	-11	GLY	-	expression tag	UNP P68106
I	-10	GLN	-	expression tag	UNP P68106
I	-9	ARG	-	expression tag	UNP P68106
I	-8	GLU	-	expression tag	UNP P68106
I	-7	PRO	-	expression tag	UNP P68106
I	-6	GLY	-	expression tag	UNP P68106
I	-5	SER	-	expression tag	UNP P68106
I	-4	GLY	-	expression tag	UNP P68106
I	-3	GLY	-	expression tag	UNP P68106
I	-2	SER	-	expression tag	UNP P68106
I	-1	GLY	-	expression tag	UNP P68106
I	0	GLY	-	expression tag	UNP P68106
I	1	THR	-	expression tag	UNP P68106
J	-67	MET	-	initiating methionine	UNP P68106
J	-66	GLY	-	expression tag	UNP P68106
J	-65	SER	-	expression tag	UNP P68106
J	-64	SER	-	expression tag	UNP P68106
J	-63	HIS	-	expression tag	UNP P68106
J	-62	HIS	-	expression tag	UNP P68106
J	-61	HIS	-	expression tag	UNP P68106
J	-60	HIS	-	expression tag	UNP P68106
J	-59	HIS	-	expression tag	UNP P68106
J	-58	HIS	-	expression tag	UNP P68106
J	-57	SER	-	expression tag	UNP P68106
J	-56	SER	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
J	-55	GLY	-	expression tag	UNP P68106
J	-54	LEU	-	expression tag	UNP P68106
J	-53	VAL	-	expression tag	UNP P68106
J	-52	PRO	-	expression tag	UNP P68106
J	-51	ARG	-	expression tag	UNP P68106
J	-50	GLY	-	expression tag	UNP P68106
J	-49	SER	-	expression tag	UNP P68106
J	-48	HIS	-	expression tag	UNP P68106
J	-47	MET	-	expression tag	UNP P68106
J	-46	ALA	-	expression tag	UNP P68106
J	-45	SER	-	expression tag	UNP P68106
J	-44	MET	-	expression tag	UNP P68106
J	-43	ASP	-	expression tag	UNP P68106
J	-42	GLU	-	expression tag	UNP P68106
J	-41	LYS	-	expression tag	UNP P68106
J	-40	THR	-	expression tag	UNP P68106
J	-39	THR	-	expression tag	UNP P68106
J	-38	GLY	-	expression tag	UNP P68106
J	-37	TRP	-	expression tag	UNP P68106
J	-36	ARG	-	expression tag	UNP P68106
J	-35	GLY	-	expression tag	UNP P68106
J	-34	GLY	-	expression tag	UNP P68106
J	-33	HIS	-	expression tag	UNP P68106
J	-32	VAL	-	expression tag	UNP P68106
J	-31	VAL	-	expression tag	UNP P68106
J	-30	GLU	-	expression tag	UNP P68106
J	-29	GLY	-	expression tag	UNP P68106
J	-28	LEU	-	expression tag	UNP P68106
J	-27	ALA	-	expression tag	UNP P68106
J	-26	GLY	-	expression tag	UNP P68106
J	-25	GLU	-	expression tag	UNP P68106
J	-24	LEU	-	expression tag	UNP P68106
J	-23	GLU	-	expression tag	UNP P68106
J	-22	GLN	-	expression tag	UNP P68106
J	-21	LEU	-	expression tag	UNP P68106
J	-20	ARG	-	expression tag	UNP P68106
J	-19	ALA	-	expression tag	UNP P68106
J	-18	ARG	-	expression tag	UNP P68106
J	-17	LEU	-	expression tag	UNP P68106
J	-16	GLU	-	expression tag	UNP P68106
J	-15	HIS	-	expression tag	UNP P68106
J	-14	HIS	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
J	-13	PRO	-	expression tag	UNP P68106
J	-12	GLN	-	expression tag	UNP P68106
J	-11	GLY	-	expression tag	UNP P68106
J	-10	GLN	-	expression tag	UNP P68106
J	-9	ARG	-	expression tag	UNP P68106
J	-8	GLU	-	expression tag	UNP P68106
J	-7	PRO	-	expression tag	UNP P68106
J	-6	GLY	-	expression tag	UNP P68106
J	-5	SER	-	expression tag	UNP P68106
J	-4	GLY	-	expression tag	UNP P68106
J	-3	GLY	-	expression tag	UNP P68106
J	-2	SER	-	expression tag	UNP P68106
J	-1	GLY	-	expression tag	UNP P68106
J	0	GLY	-	expression tag	UNP P68106
J	1	THR	-	expression tag	UNP P68106

- Molecule 3 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

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

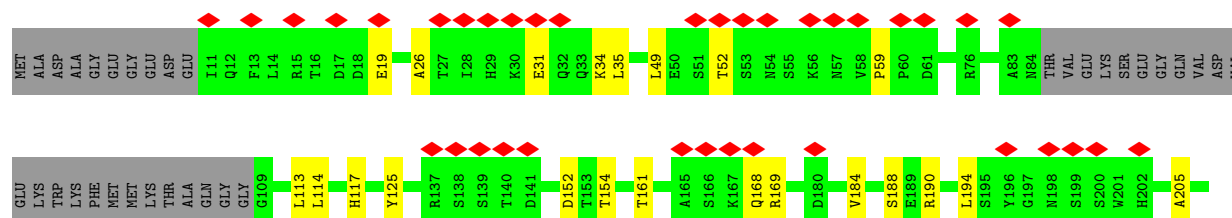








Chain B: 



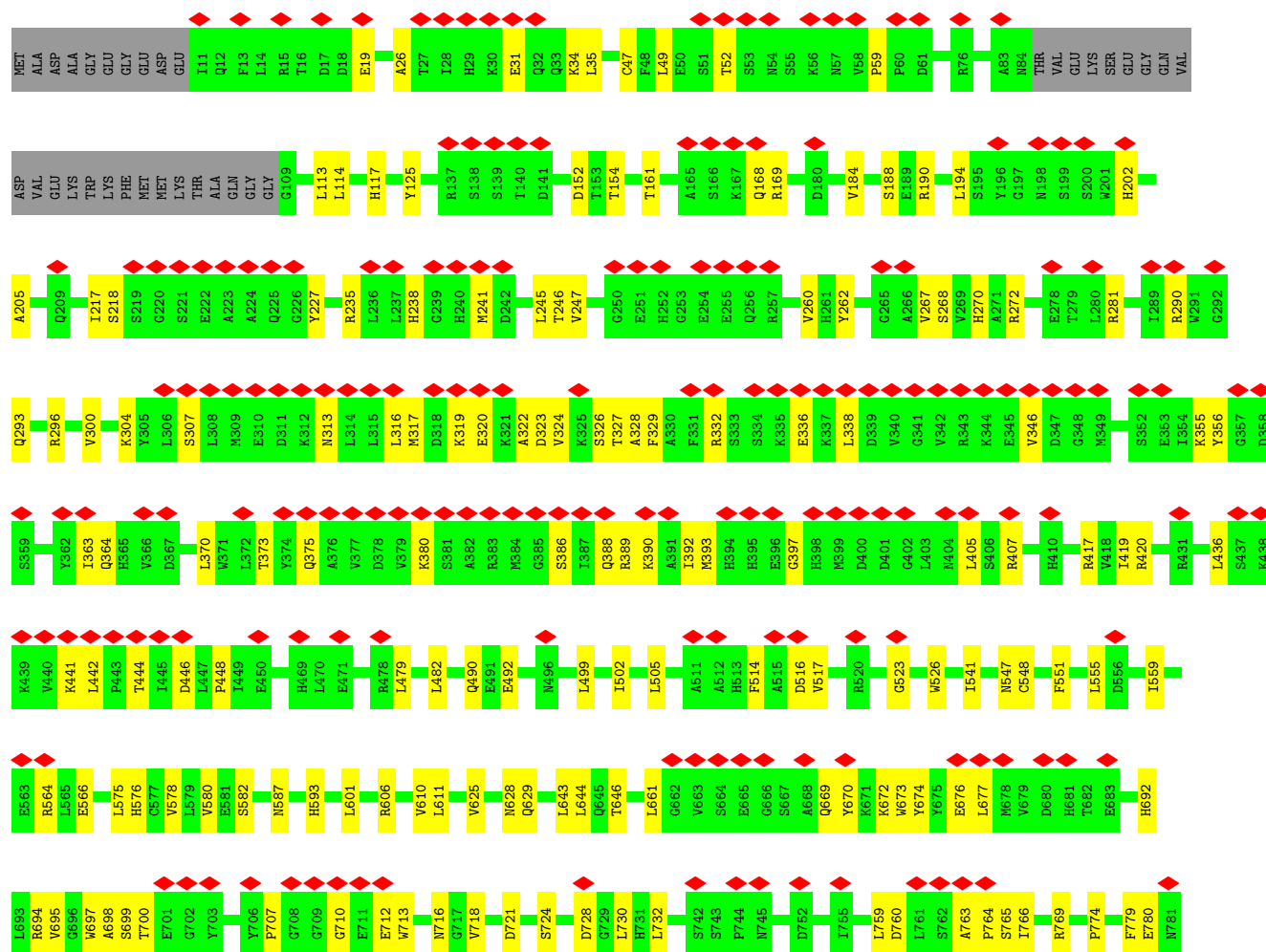






PRO	THR	D4277	LYS	T4076	T3993	S3824	L3686	UNK	X3528	UNK	X3477	UNK	X3408	X3348
ASN	GLN	M4278	GLU	L4077	Q3997	G3825	UNK	UNK	X3529	UNK	X3478	UNK	X3409	X3349
ALA	ASP	V4279	GLU	D4078	UNK	E3826	UNK	UNK	X3530	UNK	X3479	UNK	X3410	X3350
LEU	VAL	L4280	GLU	Y4079	D4000	E3827	UNK	UNK	X3531	UNK	X3480	UNK	X3411	X3351
SER	ARG	A4281	GLU	E4080	M4001	V3828	UNK	UNK	X3532	UNK	X3481	UNK	X3412	X3352
ASP	GLY	F4282	GLU	F4081	L4002	L3829	UNK	UNK	X3533	UNK	X3482	UNK	X3413	X3353
LEU	ASP	F4283	ARG	F4082	V4003	Q3830	UNK	UNK	X3534	UNK	X3483	UNK	X3414	X3354
MET	GLU	S4284	PRO	V4083	E4004	D3831	UNK	UNK	X3535	UNK	X3484	UNK	X3415	X3355
THR	GLU	K4084	GLU	K4084	V4009	D3832	UNK	UNK	X3536	UNK	X3485	UNK	X3416	X3356
ASN	GLU	E4106	GLU	E4106	UNK	E3833	UNK	UNK	X3537	UNK	X3486	UNK	X3417	X3357
PRO	GLN	UNK	ALA	UNK	I4012	F3834	UNK	UNK	X3538	UNK	X3487	UNK	X3418	X3358
VAL	ARG	M4110	PRO	M4110	UNK	R3840	UNK	UNK	X3539	UNK	X3488	UNK	X3419	X3359
ARG	LYS	D4111	ARG	D4111	UNK	Q3843	UNK	UNK	X3540	UNK	X3489	UNK	X3420	X3360
LYS	PRO	T4112	MET	T4112	UNK	UNK	UNK	UNK	X3541	UNK	X3490	UNK	X3421	X3361
GLU	GLY	R4113	PHE	R4113	UNK	UNK	UNK	UNK	X3542	UNK	X3491	UNK	X3422	X3362
VAL	GLU	L4114	PHE	L4114	UNK	N3864	UNK	UNK	X3543	UNK	X3492	UNK	X3423	X3363
GLN	SER	Q4115	PHE	Q4115	UNK	T3865	UNK	UNK	X3544	UNK	X3493	UNK	X3424	X3364
GLU	ALA	T4116	SER	T4116	UNK	I3869	UNK	UNK	X3545	UNK	X3494	UNK	X3425	X3365
LEU	LEU	E4119	THR	E4119	UNK	UNK	UNK	UNK	X3546	UNK	X3495	UNK	X3426	X3366
THR	THR	M4138	ILE	M4138	UNK	S3883	UNK	UNK	X3547	UNK	X3496	UNK	X3427	X3367
GLN	GLN	K4142	SER	K4142	UNK	Y3891	UNK	UNK	X3548	UNK	X3497	UNK	X3428	X3368
LEU	ALA	UNK	ALA	UNK	UNK	UNK	UNK	UNK	X3549	UNK	X3498	UNK	X3429	X3369
ASP	LEU	Y4148	PHE	Y4148	UNK	I3896	UNK	UNK	X3550	UNK	X3499	UNK	X3430	X3370
LEU	LEU	S4152	ALA	S4152	UNK	I3897	UNK	UNK	X3551	UNK	X3500	UNK	X3431	X3371
LYS	LYS	F4171	LEU	F4171	UNK	D3898	UNK	UNK	X3552	UNK	X3501	UNK	X3432	X3372
GLU	GLU	UNK	ARG	UNK	UNK	E3899	UNK	UNK	X3553	UNK	X3502	UNK	X3433	X3373
LEU	LEU	V4175	THR	V4175	UNK	Q3900	UNK	UNK	X3554	UNK	X3503	UNK	X3434	X3374
GLU	GLU	V4176	VAL	V4176	UNK	R3903	UNK	UNK	X3555	UNK	X3504	UNK	X3435	X3375
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LYS	LEU	F4305	LEU	F4305	UNK	T3920	UNK	UNK	X3557	UNK	X3506	UNK	UNK	X3377
SER	LEU	R4306	VAL	R4306	UNK	E3921	UNK	UNK	X3558	UNK	X3507	UNK	UNK	X3378
GLU	SER	T4307	ARG	T4307	UNK	Y3922	UNK	UNK	X3559	UNK	X3508	UNK	UNK	X3379
PRO	ASP	V4308	LEU	V4308	UNK	Q3924	UNK	UNK	X3560	UNK	X3509	UNK	UNK	X3380
ILE	ILE	S4309	LEU	S4309	UNK	P3926	UNK	UNK	X3561	UNK	X3510	UNK	UNK	X3381
LYS	PHE	S4310	SER	S4310	UNK	C3927	UNK	UNK	X3562	UNK	X3511	UNK	UNK	X3382
ALA	GLY	E4186	LEU	E4186	UNK	L3934	UNK	UNK	X3563	UNK	X3512	UNK	UNK	X3383
GLU	LEU	L4187	LYS	L4187	UNK	W3940	UNK	UNK	X3564	UNK	X3513	UNK	UNK	X3384
GLY	ASP	F4188	LEU	F4188	UNK	V3943	UNK	UNK	X3565	UNK	X3514	UNK	UNK	X3385
ASP	ASP	V4189	LEU	V4189	UNK	Q3954	UNK	UNK	X3566	UNK	X3515	UNK	UNK	X3386
LYS	LYS	E4193	LYS	E4193	UNK	R3955	UNK	UNK	X3567	UNK	X3516	UNK	UNK	X3387
GLY	ARG	UNK	GLN	UNK	UNK	K3956	UNK	UNK	X3568	UNK	X3517	UNK	UNK	X3388
GLY	GLY	T4205	MET	T4205	UNK	S3961	UNK	UNK	X3569	UNK	X3518	UNK	UNK	X3389
LEU	LEU	SER	LYS	SER	UNK	S3962	UNK	UNK	X3570	UNK	X3519	UNK	UNK	X3390
VAL	VAL	GLU	ARG	GLU	UNK	M3971	UNK	UNK	X3571	UNK	X3520	UNK	UNK	X3391
GLN	GLY	GLU	ASP	GLU	UNK	Q3974	UNK	UNK	X3572	UNK	X3521	UNK	UNK	X3392
LYS	LYS	ALA	LYS	ALA	UNK	UNK	UNK	UNK	X3573	UNK	X3522	UNK	UNK	X3393
ILE	ILE	LYS	LYS	LYS	UNK	UNK	UNK	UNK	X3574	UNK	X3523	UNK	UNK	X3394
PRO	PRO	ILE	PRO	ILE	UNK	UNK	UNK	UNK	X3575	UNK	X3524	UNK	UNK	X3395
GLY	GLY	VAL	ASN	VAL	UNK	UNK	UNK	UNK	X3576	UNK	X3525	UNK	UNK	X3396
LEU	LEU	ALA	ALA	ALA	UNK	UNK	UNK	UNK	X3577	UNK	X3526	UNK	UNK	X3397
LEU	LEU	GLU	GLU	GLU	UNK	UNK	UNK	UNK	X3578	UNK	X3527	UNK	UNK	X3398
LEU	LEU	LEU	LEU	LEU	UNK	UNK	UNK	UNK	X3579	UNK	UNK	UNK	UNK	X3399
ALA	ALA	ASN	ASN	ASN	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	X3400
ASN	ASN	PRO	PRO	PRO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	X3401
SER	SER	PRO	PRO	PRO	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	X3402
					UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	X3403
					UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	X3404
					UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	X3405
					UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	X3406
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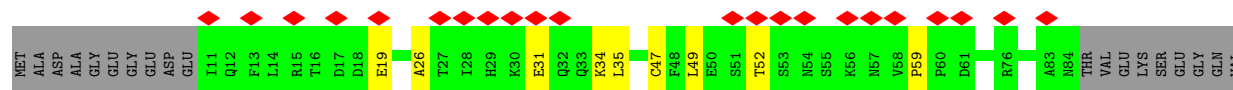
- Molecule 1: Ryanodine receptor 2









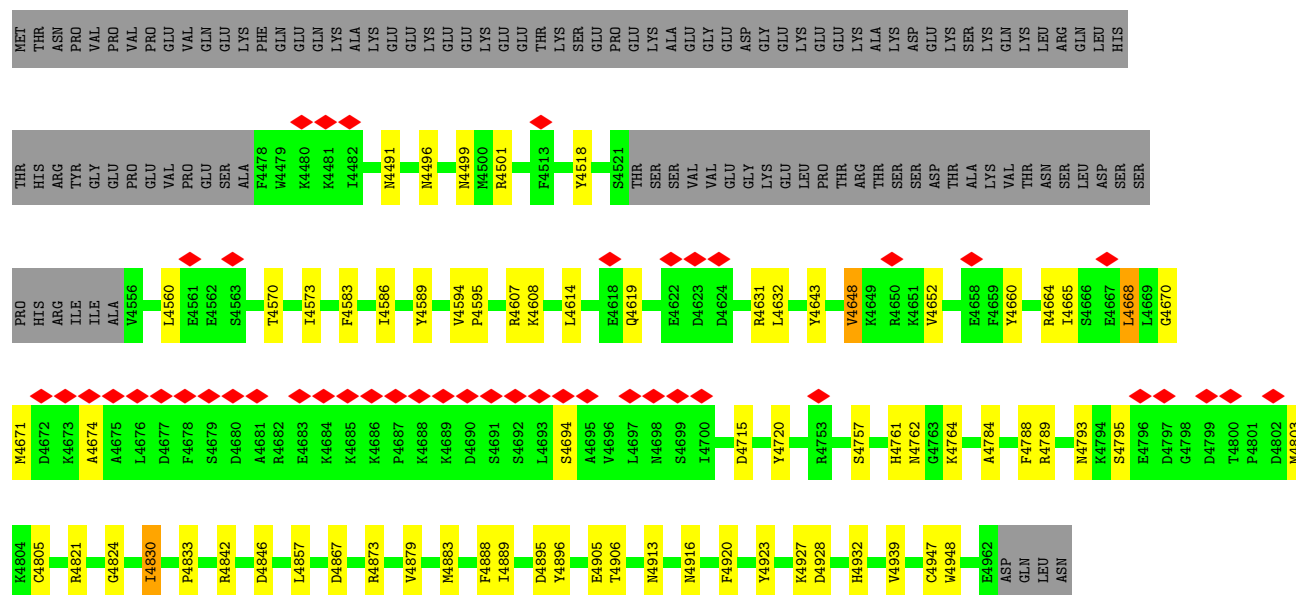




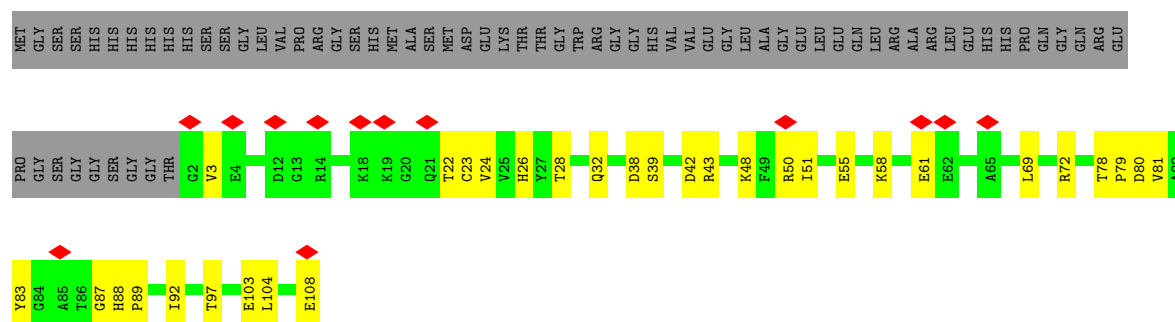
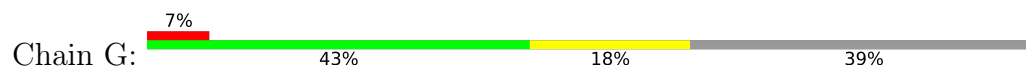
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	F1343	L1346	M1347	T1348	A1349	H1353	D1357	R1358	I1359	D1360	K1361	M1362	K1363	K1367	F1370	N1371	H1372	H1373	Y1376	R1383	L1384	K1385	Q1386	X1387	X1392	X1397	X1401	X1402	X1403	X1404	X1405	X1406	X1407	X1408	X1409	X1410	X1411	X1412	X1417	X1418	X1419	X1424	X1425	X1426	X1427	X1428	X1429	X1430	X1431	X1432	X1433	X1436	X1442	X1446	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK



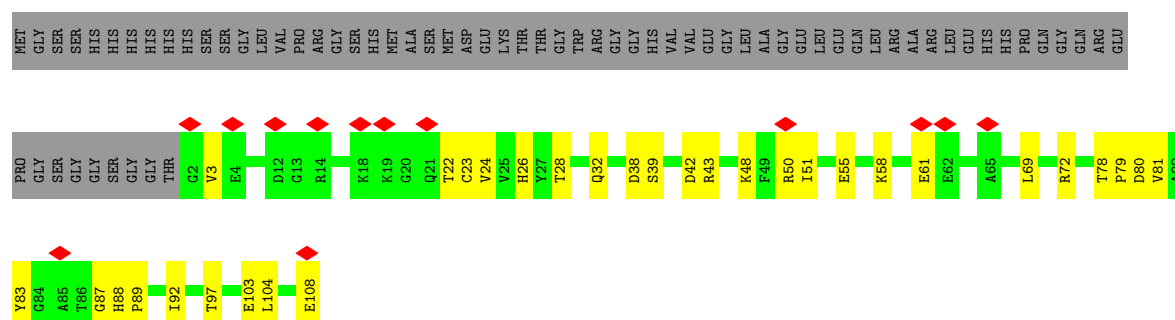
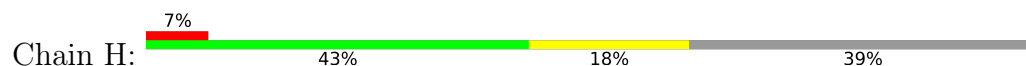




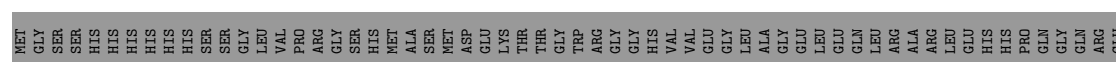
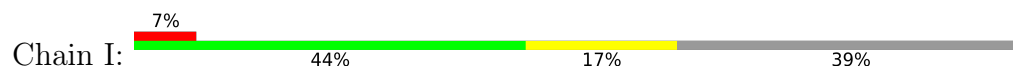
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

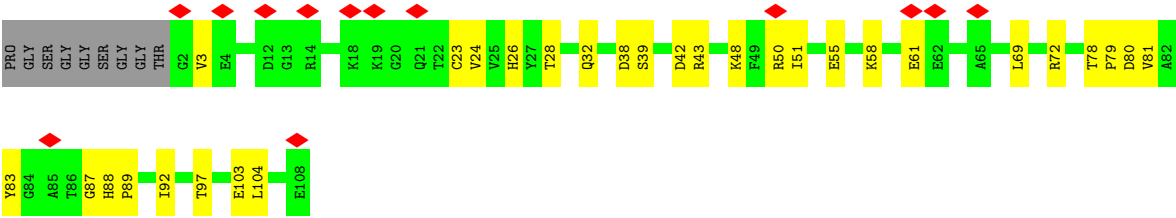


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

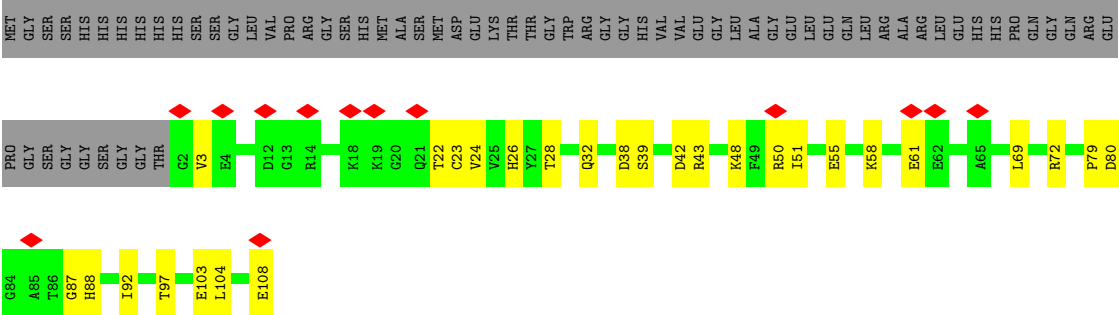


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B





• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	264902	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.151	Depositor
Minimum map value	-0.091	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.023	Depositor
Map size (Å)	513.60004, 513.60004, 513.60004	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.284, 1.284, 1.284	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.12	0/26895	0.33	0/36316
1	B	0.12	0/26895	0.33	0/36316
1	C	0.12	0/26895	0.33	0/36316
1	D	0.12	0/26895	0.33	0/36316
2	G	0.10	0/835	0.34	0/1123
2	H	0.10	0/835	0.34	0/1123
2	I	0.10	0/835	0.34	0/1123
2	J	0.10	0/835	0.34	0/1123
All	All	0.12	0/110920	0.33	0/149756

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	30071	0	26715	470	0
1	B	30071	0	26715	471	0
1	C	30071	0	26714	475	0
1	D	30071	0	26715	461	0
2	G	819	0	821	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	H	819	0	821	19	0
2	I	819	0	821	18	0
2	J	819	0	821	17	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
All	All	123564	0	110143	1935	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 8.

All (1935) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:838:ARG:H	1:A:841:LYS:HZ1	1.23	0.87
1:C:838:ARG:H	1:C:841:LYS:HZ1	1.24	0.85
1:B:838:ARG:H	1:B:841:LYS:HZ1	1.24	0.84
1:D:2406:HIS:HA	1:D:2409:HIS:HB3	1.62	0.82
1:C:2406:HIS:HA	1:C:2409:HIS:HB3	1.62	0.81
1:D:838:ARG:H	1:D:841:LYS:HZ1	1.28	0.80
1:B:2406:HIS:HA	1:B:2409:HIS:HB3	1.62	0.80
1:A:2406:HIS:HA	1:A:2409:HIS:HB3	1.62	0.80
1:C:317:MET:HE3	1:C:322:ALA:HA	1.67	0.77
1:A:317:MET:HE3	1:A:322:ALA:HA	1.68	0.76
1:A:4042:ILE:HG22	1:A:4044:LYS:H	1.50	0.76
1:C:4042:ILE:HG22	1:C:4044:LYS:H	1.50	0.76
1:B:317:MET:HE3	1:B:322:ALA:HA	1.67	0.76
1:B:4042:ILE:HG22	1:B:4044:LYS:H	1.50	0.76
1:D:317:MET:HE3	1:D:322:ALA:HA	1.67	0.76
1:A:1741:PRO:HB3	1:A:1746:LYS:HE3	1.68	0.76
1:D:1741:PRO:HB3	1:D:1746:LYS:HE3	1.68	0.76
1:D:4042:ILE:HG22	1:D:4044:LYS:H	1.50	0.75
1:C:1741:PRO:HB3	1:C:1746:LYS:HE3	1.68	0.75
1:B:1741:PRO:HB3	1:B:1746:LYS:HE3	1.68	0.75
1:C:4833:PRO:HB3	1:C:4842:ARG:HD3	1.69	0.74
1:B:3843:GLN:HG3	1:B:3921:GLU:HG3	1.70	0.74
1:A:4833:PRO:HB3	1:A:4842:ARG:HD3	1.69	0.73
1:A:3843:GLN:HG3	1:A:3921:GLU:HG3	1.70	0.73
1:D:3843:GLN:HG3	1:D:3921:GLU:HG3	1.70	0.73
1:B:4833:PRO:HB3	1:B:4842:ARG:HD3	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3843:GLN:HG3	1:C:3921:GLU:HG3	1.70	0.73
1:D:2771:ARG:HH22	1:D:2775:LYS:HD2	1.55	0.72
1:D:4833:PRO:HB3	1:D:4842:ARG:HD3	1.69	0.72
1:B:2771:ARG:HH22	1:B:2775:LYS:HD2	1.55	0.72
1:B:694:ARG:HG2	1:B:728:ASP:HB3	1.72	0.72
1:A:694:ARG:HG2	1:A:728:ASP:HB3	1.72	0.71
1:C:2771:ARG:HH22	1:C:2775:LYS:HD2	1.55	0.71
1:A:880:ARG:HG3	1:A:881:ILE:HD12	1.73	0.71
1:A:2771:ARG:HH22	1:A:2775:LYS:HD2	1.54	0.71
1:D:880:ARG:HG3	1:D:881:ILE:HD12	1.73	0.70
1:B:880:ARG:HG3	1:B:881:ILE:HD12	1.73	0.69
1:D:694:ARG:HG2	1:D:728:ASP:HB3	1.72	0.69
1:C:694:ARG:HG2	1:C:728:ASP:HB3	1.72	0.69
1:A:1744:ASN:HD21	1:A:1746:LYS:HE2	1.58	0.69
1:C:880:ARG:HG3	1:C:881:ILE:HD12	1.73	0.69
1:D:2732:SER:HA	1:D:2735:LYS:HG2	1.75	0.69
1:D:1744:ASN:HD21	1:D:1746:LYS:HE2	1.58	0.68
1:B:1744:ASN:HD21	1:B:1746:LYS:HE2	1.58	0.68
1:C:2732:SER:HA	1:C:2735:LYS:HG2	1.75	0.68
1:B:2732:SER:HA	1:B:2735:LYS:HG2	1.75	0.68
1:C:1744:ASN:HD21	1:C:1746:LYS:HE2	1.58	0.68
1:C:1262:PRO:HG2	1:C:1265:HIS:HB2	1.77	0.67
1:A:1262:PRO:HG2	1:A:1265:HIS:HB2	1.77	0.67
1:C:4003:VAL:HG11	1:C:4113:ARG:HG2	1.76	0.67
1:C:4042:ILE:HG21	1:C:4047:PHE:HB2	1.77	0.67
1:B:1847:ILE:HG23	1:B:1892:LEU:HB3	1.77	0.67
1:A:2732:SER:HA	1:A:2735:LYS:HG2	1.75	0.67
1:C:1681:VAL:HG23	1:C:1682:ASP:H	1.60	0.67
1:D:1262:PRO:HG2	1:D:1265:HIS:HB2	1.77	0.67
1:B:1262:PRO:HG2	1:B:1265:HIS:HB2	1.77	0.66
1:C:1613:SER:O	1:C:1615:ARG:NH2	2.28	0.66
1:C:1682:ASP:HB2	1:C:1685:GLN:HB3	1.78	0.66
1:B:4003:VAL:HG11	1:B:4113:ARG:HG2	1.76	0.66
1:D:1682:ASP:HB2	1:D:1685:GLN:HB3	1.78	0.66
1:D:4003:VAL:HG11	1:D:4113:ARG:HG2	1.76	0.66
1:A:1682:ASP:HB2	1:A:1685:GLN:HB3	1.78	0.66
1:A:4003:VAL:HG11	1:A:4113:ARG:HG2	1.76	0.66
1:C:1006:VAL:HG13	1:C:1009:ARG:HH21	1.61	0.66
1:C:1847:ILE:HG23	1:C:1892:LEU:HB3	1.77	0.66
1:B:1613:SER:O	1:B:1615:ARG:NH2	2.28	0.66
1:C:1266:GLU:O	1:C:1267:HIS:ND1	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1266:GLU:O	1:B:1267:HIS:ND1	2.29	0.65
1:B:1682:ASP:HB2	1:B:1685:GLN:HB3	1.78	0.65
1:D:1613:SER:O	1:D:1615:ARG:NH2	2.28	0.65
1:A:1681:VAL:HG23	1:A:1682:ASP:H	1.60	0.65
1:A:4873:ARG:NH1	1:D:4867:ASP:OD1	2.28	0.65
1:D:1681:VAL:HG23	1:D:1682:ASP:H	1.60	0.65
1:A:1847:ILE:HG23	1:A:1892:LEU:HB3	1.77	0.65
1:B:1681:VAL:HG23	1:B:1682:ASP:H	1.60	0.65
1:C:4824:GLY:O	1:D:4821:ARG:NH2	2.30	0.65
2:G:24:VAL:HG22	2:G:48:LYS:HG2	1.79	0.65
1:D:1006:VAL:HG13	1:D:1009:ARG:HH21	1.61	0.65
1:A:1613:SER:O	1:A:1615:ARG:NH2	2.28	0.65
1:D:1847:ILE:HG23	1:D:1892:LEU:HB3	1.77	0.65
1:D:4042:ILE:HG21	1:D:4047:PHE:HB2	1.77	0.65
1:B:4042:ILE:HG21	1:B:4047:PHE:HB2	1.77	0.65
1:A:4042:ILE:HG21	1:A:4047:PHE:HB2	1.77	0.65
1:A:4821:ARG:NH2	1:D:4824:GLY:O	2.29	0.65
1:B:2488:GLU:HA	1:B:2492:LEU:HD12	1.79	0.65
1:A:1266:GLU:O	1:A:1267:HIS:ND1	2.29	0.65
1:D:3727:GLN:OE1	1:D:3769:ASN:ND2	2.30	0.65
1:B:4867:ASP:OD1	1:C:4873:ARG:NH1	2.30	0.65
2:I:23:CYS:HB2	2:I:51:ILE:HD11	1.79	0.65
1:A:2488:GLU:HA	1:A:2492:LEU:HD12	1.79	0.65
1:D:2488:GLU:HA	1:D:2492:LEU:HD12	1.79	0.65
1:A:1006:VAL:HG13	1:A:1009:ARG:HH21	1.61	0.64
1:C:4867:ASP:OD1	1:D:4873:ARG:NH1	2.30	0.64
1:D:1266:GLU:O	1:D:1267:HIS:ND1	2.29	0.64
2:J:24:VAL:HG22	2:J:48:LYS:HG2	1.78	0.64
1:A:3954:GLN:NE2	1:A:3974:GLN:OE1	2.31	0.64
2:G:23:CYS:HB2	2:G:51:ILE:HD11	1.79	0.64
1:A:4789:ARG:NH2	1:A:4805:CYS:O	2.31	0.64
1:B:4789:ARG:NH2	1:B:4805:CYS:O	2.31	0.64
2:H:24:VAL:HG22	2:H:48:LYS:HG2	1.78	0.64
1:A:4842:ARG:NH1	1:A:4846:ASP:OD2	2.31	0.64
1:B:3954:GLN:NE2	1:B:3974:GLN:OE1	2.31	0.64
1:B:1265:HIS:HD2	1:B:1268:ILE:HB	1.62	0.64
1:B:4619:GLN:HE22	1:B:4631:ARG:HH12	1.44	0.64
1:C:3954:GLN:NE2	1:C:3974:GLN:OE1	2.31	0.64
1:B:1006:VAL:HG13	1:B:1009:ARG:HH21	1.61	0.64
1:B:4842:ARG:NH1	1:B:4846:ASP:OD2	2.31	0.64
2:I:24:VAL:HG22	2:I:48:LYS:HG2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4842:ARG:NH1	1:D:4846:ASP:OD2	2.31	0.64
1:C:1265:HIS:HD2	1:C:1268:ILE:HB	1.62	0.64
1:C:1989:GLU:HG2	1:C:1992:ARG:HD3	1.79	0.64
1:C:2488:GLU:HA	1:C:2492:LEU:HD12	1.79	0.64
1:A:4867:ASP:OD1	1:B:4873:ARG:NH1	2.31	0.64
2:H:23:CYS:HB2	2:H:51:ILE:HD11	1.79	0.64
1:D:1265:HIS:HD2	1:D:1268:ILE:HB	1.62	0.64
1:D:4619:GLN:HE22	1:D:4631:ARG:HH12	1.44	0.63
1:B:1359:ILE:HG12	1:B:1363:LYS:HD2	1.80	0.63
1:D:1989:GLU:HG2	1:D:1992:ARG:HD3	1.79	0.63
1:A:1265:HIS:HD2	1:A:1268:ILE:HB	1.62	0.63
1:B:1989:GLU:HG2	1:B:1992:ARG:HD3	1.79	0.63
1:C:4789:ARG:NH2	1:C:4805:CYS:O	2.31	0.63
1:A:3727:GLN:OE1	1:A:3769:ASN:ND2	2.30	0.63
1:D:3954:GLN:NE2	1:D:3974:GLN:OE1	2.31	0.63
1:D:4789:ARG:NH2	1:D:4805:CYS:O	2.31	0.63
1:C:4842:ARG:NH1	1:C:4846:ASP:OD2	2.31	0.63
1:A:1989:GLU:HG2	1:A:1992:ARG:HD3	1.79	0.63
1:A:4619:GLN:HE22	1:A:4631:ARG:HH12	1.44	0.63
1:C:1684:PRO:HD3	2:I:42:ASP:HB3	1.80	0.63
1:B:3727:GLN:OE1	1:B:3769:ASN:ND2	2.30	0.63
1:C:4619:GLN:HE22	1:C:4631:ARG:HH12	1.44	0.63
1:D:1359:ILE:HG12	1:D:1363:LYS:HD2	1.80	0.63
1:A:1610:SER:HB3	1:A:1619:LEU:HB3	1.81	0.62
2:J:23:CYS:HB2	2:J:51:ILE:HD11	1.79	0.62
1:C:760:ASP:HB3	1:C:764:PRO:HG2	1.81	0.62
1:D:1040:ASP:HA	1:D:1043:LYS:HG3	1.80	0.62
1:D:2141:MET:HE2	1:D:2173:VAL:HG11	1.80	0.62
1:B:1040:ASP:HA	1:B:1043:LYS:HG3	1.80	0.62
1:A:1040:ASP:HA	1:A:1043:LYS:HG3	1.80	0.62
1:B:4824:GLY:O	1:C:4821:ARG:NH2	2.33	0.62
1:C:1040:ASP:HA	1:C:1043:LYS:HG3	1.80	0.62
1:D:2275:SER:OG	1:D:2287:ILE:O	2.16	0.62
1:A:1359:ILE:HG12	1:A:1363:LYS:HD2	1.80	0.62
1:C:3727:GLN:OE1	1:C:3769:ASN:ND2	2.30	0.62
1:A:4824:GLY:O	1:B:4821:ARG:NH2	2.33	0.62
1:B:760:ASP:HB3	1:B:764:PRO:HG2	1.81	0.62
1:B:1610:SER:HB3	1:B:1619:LEU:HB3	1.81	0.62
1:B:672:LYS:HB3	1:B:819:TYR:HA	1.82	0.62
2:G:32:GLN:NE2	2:G:97:THR:OG1	2.31	0.62
1:C:2141:MET:HE2	1:C:2173:VAL:HG11	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2141:MET:HE2	1:A:2173:VAL:HG11	1.80	0.61
1:A:672:LYS:HB3	1:A:819:TYR:HA	1.82	0.61
1:C:1359:ILE:HG12	1:C:1363:LYS:HD2	1.80	0.61
1:A:1708:ILE:HD12	1:A:1828:THR:HG21	1.83	0.61
1:B:1684:PRO:HD3	2:H:42:ASP:HB3	1.80	0.61
1:D:1708:ILE:HD12	1:D:1828:THR:HG21	1.83	0.61
2:J:32:GLN:NE2	2:J:97:THR:OG1	2.31	0.61
1:A:676:GLU:HB2	1:A:803:LEU:HB2	1.82	0.61
1:A:760:ASP:HB3	1:A:764:PRO:HG2	1.81	0.61
1:D:760:ASP:HB3	1:D:764:PRO:HG2	1.81	0.61
1:B:2141:MET:HE2	1:B:2173:VAL:HG11	1.80	0.61
1:C:2275:SER:OG	1:C:2287:ILE:O	2.16	0.61
1:D:1610:SER:HB3	1:D:1619:LEU:HB3	1.81	0.61
1:A:707:PRO:O	1:A:838:ARG:NH1	2.34	0.60
1:A:1730:MET:SD	1:A:2106:THR:OG1	2.58	0.60
1:B:707:PRO:O	1:B:838:ARG:NH1	2.34	0.60
1:D:707:PRO:O	1:D:838:ARG:NH1	2.34	0.60
1:D:759:LEU:HD13	1:D:766:ILE:HG12	1.83	0.60
1:C:672:LYS:HB3	1:C:819:TYR:HA	1.82	0.60
1:C:1610:SER:HB3	1:C:1619:LEU:HB3	1.81	0.60
1:C:1708:ILE:HD12	1:C:1828:THR:HG21	1.83	0.60
1:C:1730:MET:SD	1:C:2106:THR:OG1	2.58	0.60
1:C:2145:LEU:HD23	1:C:2148:ILE:HD11	1.83	0.60
1:C:676:GLU:HB2	1:C:803:LEU:HB2	1.82	0.60
1:D:2145:LEU:HD23	1:D:2148:ILE:HD11	1.84	0.60
1:A:188:SER:HB2	1:A:190:ARG:HH21	1.67	0.60
1:A:759:LEU:HD13	1:A:766:ILE:HG12	1.83	0.60
1:A:2747:SER:O	1:A:2753:GLN:NE2	2.33	0.60
1:D:1248:THR:HG1	1:D:1250:TRP:CD1	2.19	0.60
1:C:707:PRO:O	1:C:838:ARG:NH1	2.34	0.60
1:C:1248:THR:HG1	1:C:1250:TRP:CD1	2.19	0.60
1:B:1708:ILE:HD12	1:B:1828:THR:HG21	1.83	0.60
1:B:2145:LEU:HD23	1:B:2148:ILE:HD11	1.83	0.60
1:C:188:SER:HB2	1:C:190:ARG:HH21	1.67	0.60
1:D:672:LYS:HB3	1:D:819:TYR:HA	1.82	0.60
1:A:2145:LEU:HD23	1:A:2148:ILE:HD11	1.83	0.60
1:B:1122:CYS:HA	1:B:1133:ARG:HD3	1.85	0.59
1:C:1267:HIS:HB2	1:C:1294:ASN:HB2	1.85	0.59
1:C:2747:SER:O	1:C:2753:GLN:NE2	2.33	0.59
1:A:1122:CYS:HA	1:A:1133:ARG:HD3	1.85	0.59
1:A:933:LEU:O	1:A:937:LEU:HG	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2903:SER:OG	1:B:2904:ARG:N	2.35	0.59
1:D:1267:HIS:HB2	1:D:1294:ASN:HB2	1.85	0.59
1:B:676:GLU:HB2	1:B:803:LEU:HB2	1.82	0.59
1:D:676:GLU:HB2	1:D:803:LEU:HB2	1.82	0.59
1:A:1267:HIS:HB2	1:A:1294:ASN:HB2	1.85	0.59
1:B:290:ARG:H	1:B:293:GLN:HE21	1.50	0.59
1:D:3754:VAL:HA	1:D:3757:THR:HG22	1.85	0.59
1:C:1122:CYS:HA	1:C:1133:ARG:HD3	1.85	0.59
1:B:188:SER:HB2	1:B:190:ARG:HH21	1.67	0.59
2:H:32:GLN:NE2	2:H:97:THR:OG1	2.31	0.59
1:C:933:LEU:O	1:C:937:LEU:HG	2.03	0.59
1:D:933:LEU:O	1:D:937:LEU:HG	2.03	0.59
1:D:1122:CYS:HA	1:D:1133:ARG:HD3	1.84	0.59
1:C:759:LEU:HD13	1:C:766:ILE:HG12	1.83	0.59
1:C:3754:VAL:HA	1:C:3757:THR:HG22	1.85	0.59
1:A:235:ARG:NH1	1:A:268:SER:O	2.36	0.59
1:A:290:ARG:H	1:A:293:GLN:HE21	1.50	0.58
1:D:290:ARG:H	1:D:293:GLN:HE21	1.50	0.58
1:A:629:GLN:HE21	1:A:1670:ASN:HD22	1.51	0.58
1:B:629:GLN:HE21	1:B:1670:ASN:HD22	1.51	0.58
1:B:1267:HIS:HB2	1:B:1294:ASN:HB2	1.85	0.58
1:A:3754:VAL:HA	1:A:3757:THR:HG22	1.85	0.58
1:B:759:LEU:HD13	1:B:766:ILE:HG12	1.83	0.58
1:A:1684:PRO:HD3	2:G:42:ASP:HB3	1.83	0.58
1:B:235:ARG:NH1	1:B:268:SER:O	2.36	0.58
1:D:188:SER:HB2	1:D:190:ARG:HH21	1.67	0.58
1:A:1248:THR:HG1	1:A:1250:TRP:CD1	2.21	0.58
1:B:933:LEU:O	1:B:937:LEU:HG	2.03	0.58
1:C:235:ARG:NH1	1:C:268:SER:O	2.36	0.58
1:C:625:VAL:HG23	1:C:628:ASN:HB2	1.86	0.58
1:B:625:VAL:HG23	1:B:628:ASN:HB2	1.86	0.58
1:A:625:VAL:HG23	1:A:628:ASN:HB2	1.86	0.58
1:A:2160:LEU:HB3	1:A:2161:MET:HE2	1.86	0.58
1:B:3754:VAL:HA	1:B:3757:THR:HG22	1.85	0.57
1:A:2903:SER:OG	1:A:2904:ARG:N	2.35	0.57
1:C:1273:ILE:HD11	1:C:1287:GLN:HB2	1.86	0.57
1:D:235:ARG:NH1	1:D:268:SER:O	2.36	0.57
2:G:50:ARG:N	2:G:55:GLU:OE2	2.37	0.57
1:B:921:PHE:O	1:B:929:ARG:NH1	2.36	0.57
1:C:290:ARG:H	1:C:293:GLN:HE21	1.50	0.57
2:I:32:GLN:NE2	2:I:97:THR:OG1	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:625:VAL:HG23	1:D:628:ASN:HB2	1.86	0.57
1:D:1273:ILE:HD11	1:D:1287:GLN:HB2	1.86	0.57
1:C:987:LYS:HZ1	1:C:990:PRO:HD3	1.69	0.57
1:D:59:PRO:HB3	1:D:296:ARG:HH12	1.70	0.57
1:B:3796:MET:HE1	1:B:3869:ILE:HG23	1.87	0.57
1:B:2160:LEU:HB3	1:B:2161:MET:HE2	1.86	0.57
1:C:629:GLN:HE21	1:C:1670:ASN:HD22	1.51	0.57
2:J:50:ARG:N	2:J:55:GLU:OE2	2.37	0.57
1:C:59:PRO:HB3	1:C:296:ARG:HH12	1.69	0.57
1:D:629:GLN:HE21	1:D:1670:ASN:HD22	1.51	0.57
1:D:2160:LEU:HB3	1:D:2161:MET:HE2	1.87	0.57
1:D:908:ARG:HG2	1:D:916:PRO:HG3	1.87	0.57
1:B:1248:THR:HG1	1:B:1250:TRP:CD1	2.23	0.56
1:C:2160:LEU:HB3	1:C:2161:MET:HE2	1.86	0.56
1:A:2275:SER:OG	1:A:2287:ILE:O	2.16	0.56
1:D:2275:SER:HA	1:D:2290:ASN:HB2	1.87	0.56
1:A:908:ARG:HG2	1:A:916:PRO:HG3	1.87	0.56
1:A:1272:ARG:NH2	1:A:1584:PRO:O	2.39	0.56
1:B:59:PRO:HB3	1:B:296:ARG:HH12	1.70	0.56
1:B:1273:ILE:HD11	1:B:1287:GLN:HB2	1.86	0.56
1:B:1730:MET:SD	1:B:2106:THR:OG1	2.58	0.56
1:D:2228:LEU:HD22	1:D:2296:ARG:HG3	1.87	0.56
1:D:3796:MET:HE1	1:D:3869:ILE:HG23	1.87	0.56
1:A:59:PRO:HB3	1:A:296:ARG:HH12	1.70	0.56
1:D:1272:ARG:NH2	1:D:1584:PRO:O	2.38	0.56
1:A:1273:ILE:HD11	1:A:1287:GLN:HB2	1.86	0.56
1:C:1769:PHE:O	2:I:83:TYR:OH	2.24	0.56
1:D:2903:SER:OG	1:D:2904:ARG:N	2.35	0.56
1:A:2228:LEU:HD22	1:A:2296:ARG:HG3	1.87	0.56
1:B:677:LEU:HD22	1:B:695:VAL:HG21	1.88	0.56
1:B:987:LYS:HZ1	1:B:990:PRO:HD3	1.70	0.56
1:C:908:ARG:HG2	1:C:916:PRO:HG3	1.87	0.56
1:C:2275:SER:HA	1:C:2290:ASN:HB2	1.87	0.56
1:D:1730:MET:SD	1:D:2106:THR:OG1	2.58	0.56
1:A:4049:LYS:HA	1:A:4052:GLU:HG2	1.88	0.56
1:C:3796:MET:HE1	1:C:3869:ILE:HG23	1.87	0.56
1:D:1769:PHE:O	2:J:83:TYR:OH	2.24	0.56
1:A:677:LEU:HD22	1:A:695:VAL:HG21	1.88	0.56
2:H:50:ARG:N	2:H:55:GLU:OE2	2.37	0.56
1:D:1902:LYS:HG3	1:D:2079:LEU:HD11	1.88	0.56
1:A:3796:MET:HE1	1:A:3869:ILE:HG23	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1272:ARG:NH2	1:B:1584:PRO:O	2.39	0.56
1:B:2747:SER:O	1:B:2753:GLN:NE2	2.33	0.56
1:B:4049:LYS:HA	1:B:4052:GLU:HG2	1.88	0.56
2:I:50:ARG:N	2:I:55:GLU:OE2	2.37	0.56
1:D:973:THR:OG1	1:D:976:TYR:O	2.18	0.56
1:C:2903:SER:OG	1:C:2904:ARG:N	2.35	0.55
1:D:3729:ARG:O	1:D:3733:ARG:NH1	2.40	0.55
1:B:973:THR:OG1	1:B:976:TYR:O	2.18	0.55
1:B:1902:LYS:HG3	1:B:2079:LEU:HD11	1.88	0.55
1:B:3891:TYR:O	1:B:3956:LYS:NZ	2.37	0.55
1:C:1902:LYS:HG3	1:C:2079:LEU:HD11	1.88	0.55
1:A:1902:LYS:HG3	1:A:2079:LEU:HD11	1.88	0.55
1:A:2275:SER:HA	1:A:2290:ASN:HB2	1.87	0.55
1:B:2275:SER:OG	1:B:2287:ILE:O	2.16	0.55
1:C:844:ARG:HE	1:C:845:THR:H	1.54	0.55
1:A:987:LYS:HZ1	1:A:990:PRO:HD3	1.71	0.55
1:B:908:ARG:HG2	1:B:916:PRO:HG3	1.87	0.55
1:B:1769:PHE:O	2:H:83:TYR:OH	2.24	0.55
1:B:2275:SER:HA	1:B:2290:ASN:HB2	1.87	0.55
1:C:677:LEU:HD22	1:C:695:VAL:HG21	1.88	0.55
1:D:227:TYR:HA	1:D:355:LYS:HA	1.88	0.55
1:B:2228:LEU:HD22	1:B:2296:ARG:HG3	1.87	0.55
1:C:1090:ALA:HB3	1:C:1202:ILE:HD11	1.88	0.55
1:C:3728:ALA:HA	1:C:3731:HIS:ND1	2.22	0.55
1:A:1769:PHE:O	2:G:83:TYR:OH	2.24	0.55
1:C:2228:LEU:HD22	1:C:2296:ARG:HG3	1.87	0.55
1:B:677:LEU:HD12	1:B:802:PHE:HA	1.89	0.55
1:C:1272:ARG:NH2	1:C:1584:PRO:O	2.39	0.55
1:C:1793:ILE:HG12	1:C:1843:ILE:HD11	1.89	0.55
1:D:943:LEU:HB2	1:D:995:MET:HE1	1.89	0.55
1:D:1684:PRO:HD3	2:J:42:ASP:HB3	1.89	0.55
1:C:677:LEU:HD12	1:C:802:PHE:HA	1.89	0.55
1:D:677:LEU:HD22	1:D:695:VAL:HG21	1.88	0.55
1:D:2747:SER:O	1:D:2753:GLN:NE2	2.33	0.55
1:A:227:TYR:HA	1:A:355:LYS:HA	1.88	0.55
1:B:3728:ALA:HA	1:B:3731:HIS:ND1	2.22	0.55
1:C:1829:LEU:HB3	1:C:1834:ILE:HD11	1.89	0.55
1:D:4049:LYS:HA	1:D:4052:GLU:HG2	1.88	0.55
1:A:943:LEU:HB2	1:A:995:MET:HE1	1.89	0.54
1:A:677:LEU:HD12	1:A:802:PHE:HA	1.89	0.54
1:A:1090:ALA:HB3	1:A:1202:ILE:HD11	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1588:HIS:HE1	1:A:1590:GLN:HE21	1.54	0.54
1:B:1793:ILE:HG12	1:B:1843:ILE:HD11	1.89	0.54
1:C:601:LEU:HB2	1:C:610:VAL:HG11	1.90	0.54
1:C:3891:TYR:O	1:C:3956:LYS:NZ	2.37	0.54
1:B:601:LEU:HB2	1:B:610:VAL:HG11	1.90	0.54
1:B:3729:ARG:O	1:B:3733:ARG:NH1	2.40	0.54
1:A:3891:TYR:O	1:A:3956:LYS:NZ	2.37	0.54
1:C:4049:LYS:HA	1:C:4052:GLU:HG2	1.88	0.54
1:D:677:LEU:HD12	1:D:802:PHE:HA	1.89	0.54
1:A:3729:ARG:O	1:A:3733:ARG:NH1	2.40	0.54
1:B:1090:ALA:HB3	1:B:1202:ILE:HD11	1.88	0.54
1:C:3729:ARG:O	1:C:3733:ARG:NH1	2.40	0.54
1:D:386:SER:HB3	1:D:388:GLN:HE22	1.73	0.54
1:D:921:PHE:O	1:D:929:ARG:NH1	2.36	0.54
1:A:1793:ILE:HG12	1:A:1843:ILE:HD11	1.89	0.54
1:A:1829:LEU:HB3	1:A:1834:ILE:HD11	1.89	0.54
1:A:4029:ASP:OD2	1:A:4054:HIS:NE2	2.39	0.54
1:C:373:THR:HG22	1:C:397:GLY:HA2	1.90	0.54
2:I:58:LYS:HA	2:I:61:GLU:HG2	1.90	0.54
1:A:973:THR:OG1	1:A:976:TYR:O	2.18	0.54
1:A:3728:ALA:HA	1:A:3731:HIS:ND1	2.22	0.54
1:B:227:TYR:HA	1:B:355:LYS:HA	1.88	0.54
1:B:732:LEU:HB3	1:B:779:PHE:CZ	2.43	0.54
1:C:386:SER:HB3	1:C:388:GLN:HE22	1.73	0.54
1:C:1588:HIS:HE1	1:C:1590:GLN:HE21	1.54	0.54
1:D:844:ARG:HE	1:D:845:THR:H	1.54	0.54
1:D:4029:ASP:OD2	1:D:4054:HIS:NE2	2.39	0.54
1:B:168:GLN:HG3	1:B:169:ARG:HG3	1.90	0.54
1:B:373:THR:HG22	1:B:397:GLY:HA2	1.90	0.54
1:B:386:SER:HB3	1:B:388:GLN:HE22	1.73	0.54
1:B:844:ARG:HE	1:B:845:THR:H	1.54	0.54
1:B:943:LEU:HB2	1:B:995:MET:HE1	1.89	0.54
1:D:373:THR:HG22	1:D:397:GLY:HA2	1.90	0.54
1:D:1090:ALA:HB3	1:D:1202:ILE:HD11	1.88	0.54
1:D:1829:LEU:HB3	1:D:1834:ILE:HD11	1.89	0.54
1:A:35:LEU:HD13	1:A:49:LEU:HD13	1.90	0.54
1:A:373:THR:HG22	1:A:397:GLY:HA2	1.90	0.54
1:A:2136:GLU:O	1:A:2140:LEU:HG	2.08	0.54
1:C:227:TYR:HA	1:C:355:LYS:HA	1.88	0.54
1:C:1814:THR:OG1	1:C:1815:THR:N	2.41	0.54
1:C:4029:ASP:OD2	1:C:4054:HIS:NE2	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3802:LEU:HB2	1:A:3883:SER:OG	2.08	0.54
1:D:900:LEU:HD23	1:D:902:TRP:HE1	1.73	0.54
2:J:58:LYS:HA	2:J:61:GLU:HG2	1.90	0.54
1:A:168:GLN:HG3	1:A:169:ARG:HG3	1.90	0.53
1:A:844:ARG:HE	1:A:845:THR:H	1.54	0.53
1:B:35:LEU:HD13	1:B:49:LEU:HD13	1.90	0.53
1:B:900:LEU:HD23	1:B:902:TRP:HE1	1.73	0.53
1:D:35:LEU:HD13	1:D:49:LEU:HD13	1.90	0.53
1:D:732:LEU:HB3	1:D:779:PHE:CZ	2.43	0.53
1:D:1814:THR:OG1	1:D:1815:THR:N	2.41	0.53
1:D:3728:ALA:HA	1:D:3731:HIS:ND1	2.22	0.53
1:B:1397:UNK:HA	1:B:1412:UNK:HA	1.90	0.53
1:D:601:LEU:HB2	1:D:610:VAL:HG11	1.90	0.53
1:D:1793:ILE:HG12	1:D:1843:ILE:HD11	1.89	0.53
2:H:58:LYS:HA	2:H:61:GLU:HG2	1.90	0.53
1:C:1397:UNK:HA	1:C:1412:UNK:HA	1.90	0.53
1:D:1397:UNK:HA	1:D:1412:UNK:HA	1.90	0.53
2:J:79:PRO:HD3	2:J:97:THR:HG22	1.90	0.53
1:A:386:SER:HB3	1:A:388:GLN:HE22	1.73	0.53
1:A:900:LEU:HD23	1:A:902:TRP:HE1	1.73	0.53
1:A:1704:TYR:O	1:A:1708:ILE:HG12	2.09	0.53
1:B:2136:GLU:O	1:B:2140:LEU:HG	2.08	0.53
2:H:79:PRO:HD3	2:H:97:THR:HG22	1.90	0.53
1:D:1588:HIS:HE1	1:D:1590:GLN:HE21	1.54	0.53
1:D:3802:LEU:HB2	1:D:3883:SER:OG	2.08	0.53
1:A:732:LEU:HB3	1:A:779:PHE:CZ	2.43	0.53
1:A:982:ASP:OD2	1:A:985:PHE:HB2	2.09	0.53
2:G:79:PRO:HD3	2:G:97:THR:HG22	1.90	0.53
1:B:2716:LEU:O	1:B:2720:ILE:HG12	2.08	0.53
1:C:168:GLN:HG3	1:C:169:ARG:HG3	1.90	0.53
1:C:943:LEU:HB2	1:C:995:MET:HE1	1.89	0.53
1:C:2434:VAL:HG11	1:C:2467:MET:HE3	1.91	0.53
1:D:1704:TYR:O	1:D:1708:ILE:HG12	2.09	0.53
1:D:2716:LEU:O	1:D:2720:ILE:HG12	2.08	0.53
1:D:4193:GLU:CD	1:D:4607:ARG:HH22	2.16	0.53
1:A:4115:GLN:O	1:A:4119:GLU:HG2	2.09	0.53
1:B:890:HIS:O	1:B:894:VAL:HG23	2.09	0.53
1:B:1829:LEU:HB3	1:B:1834:ILE:HD11	1.89	0.53
1:C:3802:LEU:HB2	1:C:3883:SER:OG	2.08	0.53
1:C:4115:GLN:O	1:C:4119:GLU:HG2	2.09	0.53
1:D:168:GLN:HG3	1:D:169:ARG:HG3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:606:ARG:NH2	1:D:1635:GLU:OE1	2.35	0.53
1:D:890:HIS:O	1:D:894:VAL:HG23	2.09	0.53
1:D:2434:VAL:HG11	1:D:2467:MET:HE3	1.91	0.53
1:A:601:LEU:HB2	1:A:610:VAL:HG11	1.90	0.53
1:A:606:ARG:NH2	1:A:1635:GLU:OE1	2.35	0.53
1:A:2716:LEU:O	1:A:2720:ILE:HG12	2.08	0.53
1:B:499:LEU:HD23	1:B:502:ILE:HD11	1.90	0.53
1:B:1588:HIS:HE1	1:B:1590:GLN:HE21	1.54	0.53
1:B:3802:LEU:HB2	1:B:3883:SER:OG	2.08	0.53
1:C:441:LYS:HG2	1:C:442:LEU:HD23	1.90	0.53
1:C:732:LEU:HB3	1:C:779:PHE:CZ	2.43	0.53
1:C:1131:ASP:HB3	1:C:1133:ARG:HG2	1.91	0.53
1:A:1131:ASP:HB3	1:A:1133:ARG:HG2	1.91	0.53
1:A:2434:VAL:HG11	1:A:2467:MET:HE3	1.91	0.53
1:B:3728:ALA:HA	1:B:3731:HIS:HD1	1.74	0.53
1:C:35:LEU:HD13	1:C:49:LEU:HD13	1.90	0.53
1:C:59:PRO:HG2	1:C:319:LYS:HD2	1.91	0.53
1:C:304:LYS:HB2	1:C:316:LEU:HD12	1.91	0.53
2:I:79:PRO:HD3	2:I:97:THR:HG22	1.90	0.53
1:A:2712:ILE:HD13	1:A:2775:LYS:HE2	1.91	0.53
1:A:4193:GLU:CD	1:A:4607:ARG:HH22	2.16	0.53
1:B:59:PRO:HG2	1:B:319:LYS:HD2	1.91	0.53
1:B:304:LYS:HB2	1:B:316:LEU:HD12	1.91	0.53
1:B:4115:GLN:O	1:B:4119:GLU:HG2	2.09	0.53
1:D:4115:GLN:O	1:D:4119:GLU:HG2	2.09	0.53
2:G:58:LYS:HA	2:G:61:GLU:HG2	1.90	0.52
1:B:1704:TYR:O	1:B:1708:ILE:HG12	2.09	0.52
1:B:1814:THR:OG1	1:B:1815:THR:N	2.41	0.52
1:B:2278:MET:O	1:B:2282:LYS:HG2	2.09	0.52
1:B:2712:ILE:HD13	1:B:2775:LYS:HE2	1.91	0.52
1:B:4029:ASP:OD2	1:B:4054:HIS:NE2	2.39	0.52
1:C:900:LEU:HD23	1:C:902:TRP:HE1	1.73	0.52
1:D:499:LEU:HD23	1:D:502:ILE:HD11	1.90	0.52
1:D:851:LEU:HB3	1:D:1212:VAL:HG12	1.91	0.52
1:D:982:ASP:OD2	1:D:985:PHE:HB2	2.09	0.52
1:D:1091:GLU:HB3	1:D:1094:TYR:HD2	1.74	0.52
1:A:1091:GLU:HB3	1:A:1094:TYR:HD2	1.74	0.52
1:A:2159:ASN:OD1	1:A:2162:ARG:NH2	2.33	0.52
1:B:1009:ARG:O	1:B:1013:ARG:NH1	2.43	0.52
1:C:763:ALA:HB3	1:C:764:PRO:HD3	1.92	0.52
1:C:890:HIS:O	1:C:894:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2136:GLU:O	1:C:2140:LEU:HG	2.08	0.52
1:C:2712:ILE:HD13	1:C:2775:LYS:HE2	1.91	0.52
1:C:2716:LEU:O	1:C:2720:ILE:HG12	2.08	0.52
1:D:59:PRO:HG2	1:D:319:LYS:HD2	1.91	0.52
1:D:1131:ASP:HB3	1:D:1133:ARG:HG2	1.91	0.52
1:A:300:VAL:O	1:A:420:ARG:NH1	2.37	0.52
1:B:1131:ASP:HB3	1:B:1133:ARG:HG2	1.91	0.52
1:C:1704:TYR:O	1:C:1708:ILE:HG12	2.09	0.52
1:C:4193:GLU:CD	1:C:4607:ARG:HH22	2.16	0.52
1:D:441:LYS:HG2	1:D:442:LEU:HD23	1.90	0.52
1:A:1397:UNK:HA	1:A:1412:UNK:HA	1.90	0.52
1:A:4670:GLY:O	1:A:4671:MET:HG2	2.10	0.52
1:B:2434:VAL:HG11	1:B:2467:MET:HE3	1.91	0.52
1:C:894:VAL:HG13	1:C:918:LEU:HB3	1.91	0.52
1:C:2395:ILE:HG21	1:C:2467:MET:SD	2.50	0.52
1:C:4928:ASP:O	1:C:4932:HIS:NE2	2.43	0.52
1:D:2278:MET:O	1:D:2282:LYS:HG2	2.09	0.52
1:A:763:ALA:HB3	1:A:764:PRO:HD3	1.92	0.52
1:A:851:LEU:HB3	1:A:1212:VAL:HG12	1.92	0.52
1:A:4928:ASP:O	1:A:4932:HIS:NE2	2.43	0.52
1:A:1009:ARG:O	1:A:1013:ARG:NH1	2.43	0.52
1:A:2152:LYS:HZ2	1:A:2156:GLN:HG3	1.75	0.52
1:B:982:ASP:OD2	1:B:985:PHE:HB2	2.09	0.52
1:C:1190:LEU:HD21	1:C:1193:LYS:HB3	1.92	0.52
1:D:763:ALA:HB3	1:D:764:PRO:HD3	1.92	0.52
1:D:2136:GLU:O	1:D:2140:LEU:HG	2.08	0.52
1:A:304:LYS:HB2	1:A:316:LEU:HD12	1.91	0.52
1:B:441:LYS:HG2	1:B:442:LEU:HD23	1.90	0.52
1:C:499:LEU:HD23	1:C:502:ILE:HD11	1.90	0.52
1:C:2254:LEU:O	1:C:3809:ARG:HD3	2.10	0.52
1:C:2278:MET:O	1:C:2282:LYS:HG2	2.09	0.52
1:A:890:HIS:O	1:A:894:VAL:HG23	2.09	0.52
1:A:2278:MET:O	1:A:2282:LYS:HG2	2.09	0.52
1:B:4193:GLU:CD	1:B:4607:ARG:HH22	2.16	0.52
1:B:4670:GLY:O	1:B:4671:MET:HG2	2.10	0.52
1:C:4670:GLY:O	1:C:4671:MET:HG2	2.10	0.52
1:D:4928:ASP:O	1:D:4932:HIS:NE2	2.43	0.52
1:A:499:LEU:HD23	1:A:502:ILE:HD11	1.90	0.52
1:A:844:ARG:HE	1:A:845:THR:HG22	1.75	0.52
1:A:4947:CYS:SG	1:A:4948:TRP:N	2.83	0.52
1:B:375:GLN:NE2	1:B:390:LYS:O	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:763:ALA:HB3	1:B:764:PRO:HD3	1.92	0.52
1:B:1190:LEU:HD21	1:B:1193:LYS:HB3	1.91	0.52
1:B:4928:ASP:O	1:B:4932:HIS:NE2	2.43	0.52
1:B:4947:CYS:SG	1:B:4948:TRP:N	2.83	0.52
1:C:982:ASP:OD2	1:C:985:PHE:HB2	2.09	0.52
1:C:1009:ARG:O	1:C:1013:ARG:NH1	2.43	0.52
1:D:4947:CYS:SG	1:D:4948:TRP:N	2.83	0.52
1:A:441:LYS:HG2	1:A:442:LEU:HD23	1.90	0.52
1:B:1091:GLU:HB3	1:B:1094:TYR:HD2	1.74	0.52
1:C:844:ARG:HE	1:C:845:THR:HG22	1.75	0.52
1:D:844:ARG:HE	1:D:845:THR:HG22	1.75	0.52
1:D:2763:SER:H	1:D:2766:GLU:HB2	1.75	0.52
1:A:875:PRO:O	1:A:882:ARG:NH2	2.38	0.51
1:B:2152:LYS:HZ2	1:B:2156:GLN:HG3	1.75	0.51
1:C:851:LEU:HB3	1:C:1212:VAL:HG12	1.91	0.51
1:D:2395:ILE:HG21	1:D:2467:MET:SD	2.50	0.51
1:A:894:VAL:HG13	1:A:918:LEU:HB3	1.91	0.51
1:B:2395:ILE:HG21	1:B:2467:MET:SD	2.50	0.51
1:C:1121:GLY:O	1:C:1133:ARG:NH1	2.43	0.51
1:C:4047:PHE:O	1:C:4051:MET:HG2	2.11	0.51
1:D:304:LYS:HB2	1:D:316:LEU:HD12	1.91	0.51
1:D:894:VAL:HG13	1:D:918:LEU:HB3	1.91	0.51
1:D:2254:LEU:O	1:D:3809:ARG:HD3	2.10	0.51
1:A:1190:LEU:HD21	1:A:1193:LYS:HB3	1.91	0.51
1:B:894:VAL:HG13	1:B:918:LEU:HB3	1.91	0.51
1:D:1009:ARG:O	1:D:1013:ARG:NH1	2.43	0.51
1:D:2712:ILE:HD13	1:D:2775:LYS:HE2	1.91	0.51
1:D:4046:ASP:OD1	1:D:4046:ASP:N	2.43	0.51
1:A:3786:VAL:HG11	1:A:3865:THR:HG23	1.93	0.51
1:A:4047:PHE:O	1:A:4051:MET:HG2	2.11	0.51
1:A:4298:ALA:HA	1:A:4301:CYS:SG	2.51	0.51
1:B:4047:PHE:O	1:B:4051:MET:HG2	2.10	0.51
1:C:375:GLN:NE2	1:C:390:LYS:O	2.43	0.51
1:C:1091:GLU:HB3	1:C:1094:TYR:HD2	1.74	0.51
1:D:1121:GLY:O	1:D:1133:ARG:NH1	2.43	0.51
1:A:1814:THR:OG1	1:A:1815:THR:N	2.41	0.51
1:A:2254:LEU:O	1:A:3809:ARG:HD3	2.10	0.51
1:B:643:LEU:HD13	1:B:1658:THR:HG23	1.93	0.51
1:C:2763:SER:H	1:C:2766:GLU:HB2	1.75	0.51
1:C:4947:CYS:SG	1:C:4948:TRP:N	2.83	0.51
1:D:4298:ALA:HA	1:D:4301:CYS:SG	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4670:GLY:O	1:D:4671:MET:HG2	2.10	0.51
1:B:3786:VAL:HG11	1:B:3865:THR:HG23	1.93	0.51
1:B:4298:ALA:HA	1:B:4301:CYS:SG	2.51	0.51
1:C:921:PHE:O	1:C:929:ARG:NH1	2.36	0.51
1:C:4570:THR:HA	1:C:4573:ILE:HG12	1.93	0.51
1:D:3891:TYR:O	1:D:3956:LYS:NZ	2.37	0.51
1:A:921:PHE:O	1:A:929:ARG:NH1	2.36	0.51
1:A:926:GLU:O	1:A:930:ASN:ND2	2.44	0.51
1:A:1121:GLY:O	1:A:1133:ARG:NH1	2.43	0.51
1:A:2121:SER:O	1:A:2125:ILE:HG12	2.11	0.51
1:A:2766:GLU:O	1:A:2769:ILE:HG12	2.11	0.51
1:B:1121:GLY:O	1:B:1133:ARG:NH1	2.43	0.51
1:C:2121:SER:O	1:C:2125:ILE:HG12	2.11	0.51
1:C:3961:SER:OG	1:C:3962:SER:N	2.44	0.51
2:I:69:LEU:HA	2:I:104:LEU:HD22	1.92	0.51
1:A:59:PRO:HG2	1:A:319:LYS:HD2	1.91	0.51
1:A:2395:ILE:HG21	1:A:2467:MET:SD	2.50	0.51
1:B:2159:ASN:OD1	1:B:2162:ARG:NH2	2.34	0.51
1:C:2766:GLU:O	1:C:2769:ILE:HG12	2.11	0.51
1:C:4298:ALA:HA	1:C:4301:CYS:SG	2.51	0.51
1:D:1190:LEU:HD21	1:D:1193:LYS:HB3	1.91	0.51
1:D:2121:SER:O	1:D:2125:ILE:HG12	2.11	0.51
1:D:2766:GLU:O	1:D:2769:ILE:HG12	2.11	0.51
1:B:3961:SER:OG	1:B:3962:SER:N	2.44	0.51
2:H:69:LEU:HA	2:H:104:LEU:HD22	1.93	0.51
1:C:629:GLN:NE2	1:C:1670:ASN:HD22	2.09	0.51
1:C:1199:ASP:OD1	1:C:1199:ASP:N	2.44	0.51
1:C:3728:ALA:HA	1:C:3731:HIS:HD1	1.74	0.51
1:D:375:GLN:NE2	1:D:390:LYS:O	2.43	0.51
1:D:4047:PHE:O	1:D:4051:MET:HG2	2.11	0.51
1:A:1048:ASP:HA	1:A:1051:ARG:HD2	1.93	0.50
1:B:851:LEU:HB3	1:B:1212:VAL:HG12	1.92	0.50
1:B:926:GLU:O	1:B:930:ASN:ND2	2.44	0.50
1:B:2121:SER:O	1:B:2125:ILE:HG12	2.11	0.50
1:B:3805:ASN:OD1	1:B:3806:ALA:N	2.44	0.50
1:D:1048:ASP:HA	1:D:1051:ARG:HD2	1.93	0.50
1:A:935:MET:O	1:A:939:THR:HG23	2.12	0.50
1:B:1124:PRO:HD2	1:B:1595:VAL:HG23	1.94	0.50
1:A:4671:MET:HA	1:A:4674:ALA:HB3	1.94	0.50
1:B:629:GLN:NE2	1:B:1670:ASN:HD22	2.09	0.50
1:B:892:LEU:HA	1:B:895:MET:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1265:HIS:CD2	1:B:1268:ILE:HB	2.45	0.50
1:B:2254:LEU:O	1:B:3809:ARG:HD3	2.10	0.50
1:B:4589:TYR:OH	1:B:4715:ASP:OD2	2.28	0.50
1:B:4671:MET:HA	1:B:4674:ALA:HB3	1.94	0.50
1:C:548:CYS:SG	1:C:582:SER:HB3	2.52	0.50
1:C:2107:ILE:HG13	1:C:2108:ASN:H	1.77	0.50
1:D:548:CYS:SG	1:D:582:SER:HB3	2.52	0.50
1:D:935:MET:O	1:D:939:THR:HG23	2.12	0.50
1:A:838:ARG:N	1:A:841:LYS:HZ1	2.02	0.50
1:A:2763:SER:H	1:A:2766:GLU:HB2	1.75	0.50
1:A:3961:SER:OG	1:A:3962:SER:N	2.44	0.50
1:A:4607:ARG:NE	1:A:4643:TYR:OH	2.45	0.50
1:B:699:SER:OG	1:B:700:THR:N	2.45	0.50
1:B:844:ARG:HE	1:B:845:THR:HG22	1.75	0.50
1:B:1048:ASP:HA	1:B:1051:ARG:HD2	1.93	0.50
1:B:1845:GLN:NE2	1:B:1848:GLU:OE2	2.45	0.50
1:B:4607:ARG:NE	1:B:4643:TYR:OH	2.45	0.50
1:C:926:GLU:O	1:C:930:ASN:ND2	2.44	0.50
1:C:935:MET:O	1:C:939:THR:HG23	2.12	0.50
1:D:1845:GLN:NE2	1:D:1848:GLU:OE2	2.45	0.50
1:A:2081:ARG:HG3	1:A:3686:LEU:HD22	1.94	0.50
1:B:935:MET:O	1:B:939:THR:HG23	2.12	0.50
1:B:2107:ILE:HG13	1:B:2108:ASN:H	1.77	0.50
1:B:2455:MET:HG3	1:B:2457:ALA:H	1.77	0.50
1:C:1845:GLN:NE2	1:C:1848:GLU:OE2	2.45	0.50
1:D:629:GLN:NE2	1:D:1670:ASN:HD22	2.09	0.50
1:D:769:ARG:HA	1:D:774:PRO:HA	1.94	0.50
1:D:2081:ARG:HG3	1:D:3686:LEU:HD22	1.94	0.50
1:D:2152:LYS:HZ2	1:D:2156:GLN:HG3	1.75	0.50
2:J:88:HIS:H	2:J:92:ILE:HB	1.77	0.50
1:A:643:LEU:HD13	1:A:1658:THR:HG23	1.93	0.50
1:A:2784:TRP:HH2	1:A:2846:ASN:HB2	1.77	0.50
2:G:88:HIS:H	2:G:92:ILE:HB	1.77	0.50
1:B:2784:TRP:HH2	1:B:2846:ASN:HB2	1.77	0.50
1:A:892:LEU:HA	1:A:895:MET:HB2	1.94	0.50
1:A:1845:GLN:NE2	1:A:1848:GLU:OE2	2.45	0.50
1:A:2340:ASN:OD1	1:A:2340:ASN:N	2.45	0.50
1:B:2766:GLU:O	1:B:2769:ILE:HG12	2.11	0.50
1:B:4570:THR:HA	1:B:4573:ILE:HG12	1.93	0.50
2:H:88:HIS:H	2:H:92:ILE:HB	1.77	0.50
1:C:3786:VAL:HG11	1:C:3865:THR:HG23	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3786:VAL:HG11	1:D:3865:THR:HG23	1.93	0.50
1:D:4607:ARG:NE	1:D:4643:TYR:OH	2.45	0.50
1:A:2107:ILE:HG13	1:A:2108:ASN:H	1.77	0.50
1:C:1265:HIS:CD2	1:C:1268:ILE:HB	2.46	0.50
1:D:300:VAL:O	1:D:420:ARG:NH1	2.37	0.50
1:D:926:GLU:O	1:D:930:ASN:ND2	2.44	0.50
1:A:1144:ARG:NH1	1:A:1191:ALA:O	2.45	0.50
1:A:1359:ILE:HG13	1:A:1360:ASP:H	1.77	0.50
1:A:3805:ASN:OD1	1:A:3806:ALA:N	2.44	0.50
2:I:88:HIS:H	2:I:92:ILE:HB	1.77	0.50
1:D:2784:TRP:HH2	1:D:2846:ASN:HB2	1.77	0.50
1:D:4671:MET:HA	1:D:4674:ALA:HB3	1.94	0.50
1:A:629:GLN:NE2	1:A:1670:ASN:HD22	2.09	0.49
2:G:69:LEU:HA	2:G:104:LEU:HD22	1.93	0.49
1:B:606:ARG:NH2	1:B:1635:GLU:OE1	2.35	0.49
1:B:1008:ALA:O	1:B:1012:ILE:HG23	2.12	0.49
1:C:895:MET:O	1:C:899:GLU:HG2	2.12	0.49
1:C:2784:TRP:HH2	1:C:2846:ASN:HB2	1.77	0.49
1:D:643:LEU:HD13	1:D:1658:THR:HG23	1.93	0.49
1:D:1932:VAL:HG21	1:D:3616:VAL:HA	1.94	0.49
1:B:2763:SER:H	1:B:2766:GLU:HB2	1.75	0.49
1:B:3832:ASP:OD1	1:B:3833:GLU:N	2.45	0.49
1:C:973:THR:OG1	1:C:976:TYR:O	2.18	0.49
1:C:1048:ASP:HA	1:C:1051:ARG:HD2	1.93	0.49
1:C:1124:PRO:HD2	1:C:1595:VAL:HG23	1.94	0.49
1:C:1144:ARG:NH1	1:C:1191:ALA:O	2.45	0.49
1:C:1359:ILE:HG13	1:C:1360:ASP:H	1.78	0.49
1:C:1567:LEU:HD22	1:C:1581:PRO:HB3	1.94	0.49
1:C:2455:MET:HG3	1:C:2457:ALA:H	1.77	0.49
1:C:4046:ASP:OD1	1:C:4046:ASP:N	2.43	0.49
1:C:4671:MET:HA	1:C:4674:ALA:HB3	1.94	0.49
1:D:892:LEU:HA	1:D:895:MET:HB2	1.94	0.49
1:D:1102:TYR:HB2	1:D:1165:MET:HG3	1.94	0.49
1:A:548:CYS:SG	1:A:582:SER:HB3	2.52	0.49
1:A:699:SER:OG	1:A:700:THR:N	2.45	0.49
1:A:1265:HIS:CD2	1:A:1268:ILE:HB	2.46	0.49
1:A:4570:THR:HA	1:A:4573:ILE:HG12	1.93	0.49
1:B:700:THR:HG1	1:B:787:LEU:H	1.59	0.49
1:B:1991:ILE:HA	1:B:1994:GLN:HG2	1.93	0.49
1:B:2343:LEU:O	1:B:2347:GLU:HG2	2.13	0.49
1:C:1931:PHE:CE1	1:C:1995:LEU:HB2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1567:LEU:HD22	1:D:1581:PRO:HB3	1.94	0.49
1:D:1966:SER:O	1:D:1966:SER:OG	2.31	0.49
1:D:2159:ASN:OD1	1:D:2162:ARG:NH2	2.34	0.49
1:D:3832:ASP:OD1	1:D:3833:GLU:N	2.45	0.49
1:D:3961:SER:OG	1:D:3962:SER:N	2.44	0.49
2:J:69:LEU:HA	2:J:104:LEU:HD22	1.93	0.49
1:A:375:GLN:NE2	1:A:390:LYS:O	2.43	0.49
1:B:548:CYS:SG	1:B:582:SER:HB3	2.52	0.49
1:B:1359:ILE:HG13	1:B:1360:ASP:H	1.77	0.49
1:B:4106:GLU:OE1	1:B:4148:TYR:OH	2.27	0.49
1:C:643:LEU:HD13	1:C:1658:THR:HG23	1.93	0.49
1:C:2159:ASN:OD1	1:C:2162:ARG:NH2	2.33	0.49
1:C:4607:ARG:NE	1:C:4643:TYR:OH	2.45	0.49
1:D:1931:PHE:CE1	1:D:1995:LEU:HB2	2.48	0.49
1:D:1991:ILE:HA	1:D:1994:GLN:HG2	1.93	0.49
1:D:3805:ASN:OD1	1:D:3806:ALA:N	2.44	0.49
1:A:769:ARG:HA	1:A:774:PRO:HA	1.94	0.49
1:B:1678:CYS:SG	1:B:1679:SER:N	2.86	0.49
1:C:2778:LEU:O	1:C:2782:LEU:HG	2.13	0.49
1:D:419:ILE:HD13	1:D:492:GLU:HG3	1.95	0.49
1:D:1124:PRO:HD2	1:D:1595:VAL:HG23	1.94	0.49
1:D:1144:ARG:NH1	1:D:1191:ALA:O	2.45	0.49
1:D:2271:CYS:SG	1:D:2294:GLY:N	2.86	0.49
1:D:2343:LEU:O	1:D:2347:GLU:HG2	2.13	0.49
1:D:4000:ASP:O	1:D:4004:GLU:HG3	2.13	0.49
1:D:4570:THR:HA	1:D:4573:ILE:HG12	1.93	0.49
1:A:19:GLU:HG3	1:A:218:SER:HB3	1.95	0.49
1:A:1008:ALA:O	1:A:1012:ILE:HG23	2.12	0.49
1:A:2257:ARG:HH21	1:A:3806:ALA:HB1	1.78	0.49
1:A:2331:GLY:HA3	1:A:2391:TYR:HE1	1.78	0.49
1:B:2257:ARG:HH21	1:B:3806:ALA:HB1	1.78	0.49
1:B:4608:LYS:HG3	1:B:4614:LEU:HB2	1.95	0.49
1:C:1932:VAL:HG21	1:C:3616:VAL:HA	1.94	0.49
1:C:2271:CYS:SG	1:C:2294:GLY:N	2.86	0.49
1:C:3940:TRP:HA	1:C:3943:VAL:HG22	1.94	0.49
1:C:4044:LYS:HB2	1:C:4075:GLU:HG2	1.95	0.49
1:D:1199:ASP:OD1	1:D:1199:ASP:N	2.44	0.49
1:D:1362:ASP:OD1	1:D:1362:ASP:N	2.46	0.49
1:A:4496:ASN:HD22	1:A:4499:ASN:HD22	1.61	0.49
1:B:769:ARG:HA	1:B:774:PRO:HA	1.94	0.49
1:B:1102:TYR:HB2	1:B:1165:MET:HG3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3832:ASP:OD1	1:C:3833:GLU:N	2.45	0.49
1:C:4496:ASN:HD22	1:C:4499:ASN:HD22	1.61	0.49
1:C:4608:LYS:HG3	1:C:4614:LEU:HB2	1.95	0.49
1:D:2092:ASP:OD1	1:D:2093:GLY:N	2.46	0.49
1:D:2331:GLY:HA3	1:D:2391:TYR:HE1	1.78	0.49
1:D:4589:TYR:OH	1:D:4715:ASP:OD2	2.28	0.49
1:A:1715:TYR:CZ	1:A:1762:MET:HB3	2.48	0.49
1:A:2455:MET:HG3	1:A:2457:ALA:H	1.77	0.49
1:A:4000:ASP:O	1:A:4004:GLU:HG3	2.13	0.49
1:B:2070:GLN:O	1:B:3659:ARG:NH1	2.43	0.49
1:B:2092:ASP:OD1	1:B:2093:GLY:N	2.46	0.49
1:B:2487:LEU:HA	1:B:2491:PHE:HB2	1.95	0.49
1:C:3805:ASN:OD1	1:C:3806:ALA:N	2.44	0.49
1:D:1265:HIS:CD2	1:D:1268:ILE:HB	2.45	0.49
1:D:2778:LEU:O	1:D:2782:LEU:HG	2.13	0.49
1:A:1678:CYS:SG	1:A:1679:SER:N	2.86	0.49
1:A:3923:ILE:HD13	1:A:3934:LEU:HD12	1.95	0.49
1:B:895:MET:O	1:B:899:GLU:HG2	2.12	0.49
1:B:1932:VAL:HG21	1:B:3616:VAL:HA	1.94	0.49
1:B:4000:ASP:O	1:B:4004:GLU:HG3	2.13	0.49
1:B:4496:ASN:HD22	1:B:4499:ASN:HD22	1.61	0.49
1:C:1362:ASP:OD1	1:C:1362:ASP:N	2.46	0.49
1:C:1935:LEU:HD21	1:C:1975:LEU:HD11	1.95	0.49
1:C:2487:LEU:HA	1:C:2491:PHE:HB2	1.95	0.49
1:D:895:MET:O	1:D:899:GLU:HG2	2.12	0.49
1:D:2107:ILE:HG13	1:D:2108:ASN:H	1.77	0.49
1:D:2257:ARG:HH21	1:D:3806:ALA:HB1	1.78	0.49
1:D:3940:TRP:HA	1:D:3943:VAL:HG22	1.94	0.49
1:D:4044:LYS:HB2	1:D:4075:GLU:HG2	1.95	0.49
1:A:246:THR:HG21	1:A:267:VAL:HG11	1.95	0.49
1:A:760:ASP:OD2	1:A:764:PRO:HD2	2.13	0.49
1:A:894:VAL:HA	1:A:918:LEU:HD22	1.95	0.49
1:A:1567:LEU:HD22	1:A:1581:PRO:HB3	1.94	0.49
1:A:3940:TRP:HA	1:A:3943:VAL:HG22	1.94	0.49
1:B:356:TYR:HA	1:B:405:LEU:HB2	1.95	0.49
1:B:2081:ARG:HG3	1:B:3686:LEU:HD22	1.94	0.49
1:C:769:ARG:HA	1:C:774:PRO:HA	1.94	0.49
1:C:892:LEU:HA	1:C:895:MET:HB2	1.94	0.49
1:C:2331:GLY:HA3	1:C:2391:TYR:HE1	1.78	0.49
1:C:4112:THR:O	1:C:4116:THR:HG23	2.13	0.49
1:D:4496:ASN:HD22	1:D:4499:ASN:HD22	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:611:LEU:HD11	1:A:643:LEU:HD21	1.95	0.48
1:A:1931:PHE:CE1	1:A:1995:LEU:HB2	2.48	0.48
1:A:3832:ASP:OD1	1:A:3833:GLU:N	2.45	0.48
1:A:4106:GLU:OE1	1:A:4148:TYR:OH	2.27	0.48
1:B:1144:ARG:NH1	1:B:1191:ALA:O	2.45	0.48
1:B:3940:TRP:HA	1:B:3943:VAL:HG22	1.94	0.48
1:B:4112:THR:O	1:B:4116:THR:HG23	2.13	0.48
1:C:875:PRO:O	1:C:882:ARG:NH2	2.38	0.48
1:C:1710:ILE:HG13	1:C:1711:HIS:CD2	2.48	0.48
1:C:2257:ARG:HH21	1:C:3806:ALA:HB1	1.78	0.48
1:D:19:GLU:HG3	1:D:218:SER:HB3	1.95	0.48
1:D:356:TYR:HA	1:D:405:LEU:HB2	1.95	0.48
1:D:699:SER:OG	1:D:700:THR:N	2.45	0.48
1:D:1008:ALA:O	1:D:1012:ILE:HG23	2.12	0.48
1:D:1678:CYS:SG	1:D:1679:SER:N	2.86	0.48
1:A:1102:TYR:HB2	1:A:1165:MET:HG3	1.94	0.48
1:A:1935:LEU:HD21	1:A:1975:LEU:HD11	1.95	0.48
1:A:2271:CYS:SG	1:A:2294:GLY:N	2.86	0.48
1:A:2778:LEU:O	1:A:2782:LEU:HG	2.13	0.48
1:A:4079:TYR:O	1:A:4083:VAL:HG22	2.13	0.48
1:B:611:LEU:HD11	1:B:643:LEU:HD21	1.95	0.48
1:B:1567:LEU:HD22	1:B:1581:PRO:HB3	1.94	0.48
1:B:3923:ILE:HD13	1:B:3934:LEU:HD12	1.95	0.48
1:B:4079:TYR:O	1:B:4083:VAL:HG22	2.13	0.48
1:C:760:ASP:OD2	1:C:764:PRO:HD2	2.13	0.48
1:C:1991:ILE:HA	1:C:1994:GLN:HG2	1.93	0.48
1:D:1359:ILE:HG13	1:D:1360:ASP:H	1.78	0.48
1:D:2340:ASN:OD1	1:D:2340:ASN:N	2.45	0.48
1:A:587:ASN:OD1	1:A:2132:ARG:NH1	2.46	0.48
1:A:1362:ASP:OD1	1:A:1362:ASP:N	2.46	0.48
1:A:1991:ILE:HA	1:A:1994:GLN:HG2	1.93	0.48
1:A:2092:ASP:OD1	1:A:2093:GLY:N	2.46	0.48
1:A:2343:LEU:O	1:A:2347:GLU:HG2	2.13	0.48
1:B:894:VAL:HA	1:B:918:LEU:HD22	1.95	0.48
1:B:1710:ILE:HG13	1:B:1711:HIS:CD2	2.48	0.48
1:B:4694:SER:O	1:B:4694:SER:OG	2.31	0.48
1:C:246:THR:HG21	1:C:267:VAL:HG11	1.95	0.48
1:C:2231:PRO:HD3	1:C:2381:ILE:HD11	1.95	0.48
1:D:1710:ILE:HG13	1:D:1711:HIS:CD2	2.48	0.48
1:D:1981:ASP:OD1	1:D:1982:LYS:N	2.46	0.48
1:D:2455:MET:HG3	1:D:2457:ALA:H	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:710:GLY:HA3	1:A:716:ASN:HD22	1.78	0.48
1:A:924:LEU:HB2	1:A:929:ARG:HD3	1.96	0.48
1:B:760:ASP:OD2	1:B:764:PRO:HD2	2.13	0.48
1:B:4789:ARG:NH2	1:B:4805:CYS:SG	2.86	0.48
1:C:114:LEU:HB2	1:C:117:HIS:CD2	2.49	0.48
1:C:587:ASN:OD1	1:C:2132:ARG:NH1	2.46	0.48
1:C:699:SER:OG	1:C:700:THR:N	2.45	0.48
1:C:721:ASP:OD1	1:C:721:ASP:N	2.46	0.48
1:C:1102:TYR:HB2	1:C:1165:MET:HG3	1.94	0.48
1:C:1715:TYR:CZ	1:C:1762:MET:HB3	2.48	0.48
1:C:1981:ASP:OD1	1:C:1982:LYS:N	2.46	0.48
1:C:2081:ARG:HG3	1:C:3686:LEU:HD22	1.94	0.48
1:C:3898:ASP:OD1	1:C:3898:ASP:N	2.44	0.48
1:C:4079:TYR:O	1:C:4083:VAL:HG22	2.13	0.48
1:D:611:LEU:HD11	1:D:643:LEU:HD21	1.95	0.48
1:D:710:GLY:HA3	1:D:716:ASN:HD22	1.78	0.48
1:D:875:PRO:O	1:D:882:ARG:NH2	2.38	0.48
1:D:4112:THR:O	1:D:4116:THR:HG23	2.13	0.48
1:A:1932:VAL:HG21	1:A:3616:VAL:HA	1.94	0.48
1:B:924:LEU:HB2	1:B:929:ARG:HD3	1.96	0.48
1:B:2231:PRO:HD3	1:B:2381:ILE:HD11	1.95	0.48
1:B:2271:CYS:SG	1:B:2294:GLY:N	2.86	0.48
1:B:2331:GLY:HA3	1:B:2391:TYR:HE1	1.78	0.48
1:B:2866:ASN:HD22	1:B:2867:HIS:N	2.12	0.48
1:C:238:HIS:HB2	1:C:241:MET:HB2	1.96	0.48
1:C:356:TYR:HA	1:C:405:LEU:HB2	1.95	0.48
1:C:3923:ILE:HD13	1:C:3934:LEU:HD12	1.95	0.48
1:D:262:TYR:HB2	1:D:389:ARG:HG3	1.96	0.48
1:A:419:ILE:HD13	1:A:492:GLU:HG3	1.95	0.48
1:B:114:LEU:HB2	1:B:117:HIS:CD2	2.49	0.48
1:B:575:LEU:HA	1:B:578:VAL:HG12	1.95	0.48
1:B:721:ASP:OD1	1:B:721:ASP:N	2.46	0.48
1:B:1362:ASP:N	1:B:1362:ASP:OD1	2.46	0.48
1:B:1966:SER:O	1:B:1966:SER:OG	2.31	0.48
1:C:1986:PRO:HB2	1:C:1988:PRO:HD2	1.96	0.48
1:C:2092:ASP:OD1	1:C:2093:GLY:N	2.46	0.48
1:D:987:LYS:NZ	1:D:990:PRO:HD3	2.29	0.48
1:D:2231:PRO:HD3	1:D:2381:ILE:HD11	1.95	0.48
1:D:2385:ASN:HA	1:D:2388:MET:HE3	1.95	0.48
1:D:2866:ASN:HD22	1:D:2867:HIS:N	2.12	0.48
1:D:3923:ILE:HD13	1:D:3934:LEU:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:895:MET:O	1:A:899:GLU:HG2	2.12	0.48
1:A:2487:LEU:HA	1:A:2491:PHE:HB2	1.95	0.48
1:A:4044:LYS:HB2	1:A:4075:GLU:HG2	1.95	0.48
1:B:1935:LEU:HD21	1:B:1975:LEU:HD11	1.95	0.48
1:B:1981:ASP:OD1	1:B:1982:LYS:N	2.46	0.48
1:B:1986:PRO:HB2	1:B:1988:PRO:HD2	1.96	0.48
1:B:2238:PRO:O	1:B:2241:VAL:HG12	2.14	0.48
1:C:611:LEU:HD11	1:C:643:LEU:HD21	1.95	0.48
1:C:838:ARG:N	1:C:841:LYS:HZ1	2.04	0.48
1:C:1678:CYS:SG	1:C:1679:SER:N	2.86	0.48
1:C:4789:ARG:NH2	1:C:4805:CYS:SG	2.86	0.48
1:D:2487:LEU:HA	1:D:2491:PHE:HB2	1.95	0.48
1:A:1124:PRO:HD2	1:A:1595:VAL:HG23	1.94	0.48
1:B:19:GLU:HG3	1:B:218:SER:HB3	1.95	0.48
1:B:246:THR:HG21	1:B:267:VAL:HG11	1.95	0.48
1:B:587:ASN:OD1	1:B:2132:ARG:NH1	2.46	0.48
1:B:710:GLY:HA3	1:B:716:ASN:HD22	1.78	0.48
1:B:1715:TYR:CZ	1:B:1762:MET:HB3	2.48	0.48
1:B:1931:PHE:CE1	1:B:1995:LEU:HB2	2.48	0.48
1:C:2343:LEU:O	1:C:2347:GLU:HG2	2.13	0.48
1:C:2866:ASN:HD22	1:C:2867:HIS:N	2.12	0.48
1:C:4000:ASP:O	1:C:4004:GLU:HG3	2.13	0.48
1:D:238:HIS:HB2	1:D:241:MET:HB2	1.96	0.48
1:D:760:ASP:OD2	1:D:764:PRO:HD2	2.13	0.48
1:D:1986:PRO:HB2	1:D:1988:PRO:HD2	1.96	0.48
1:D:4789:ARG:NH2	1:D:4805:CYS:SG	2.86	0.48
1:A:878:LEU:HD22	1:A:881:ILE:HD13	1.96	0.48
1:A:4762:ASN:O	1:A:4764:LYS:N	2.47	0.48
1:A:4789:ARG:NH2	1:A:4805:CYS:SG	2.86	0.48
1:B:1811:VAL:HB	1:B:1818:LEU:HD13	1.96	0.48
1:C:419:ILE:HD13	1:C:492:GLU:HG3	1.95	0.48
1:C:575:LEU:HA	1:C:578:VAL:HG12	1.95	0.48
1:C:710:GLY:HA3	1:C:716:ASN:HD22	1.78	0.48
1:C:1008:ALA:O	1:C:1012:ILE:HG23	2.12	0.48
1:C:2238:PRO:O	1:C:2241:VAL:HG12	2.14	0.48
1:C:4106:GLU:OE1	1:C:4148:TYR:OH	2.27	0.48
1:D:924:LEU:HB2	1:D:929:ARG:HD3	1.96	0.48
1:D:1348:LYS:HA	1:D:1348:LYS:HD2	1.54	0.48
1:D:2887:LYS:O	1:D:2891:ILE:HG23	2.14	0.48
1:A:356:TYR:HA	1:A:405:LEU:HB2	1.95	0.48
1:A:721:ASP:N	1:A:721:ASP:OD1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1710:ILE:HG13	1:A:1711:HIS:CD2	2.48	0.48
1:A:1767:PRO:HG3	1:A:1781:PRO:HB3	1.96	0.48
1:A:1981:ASP:OD1	1:A:1982:LYS:N	2.46	0.48
1:A:2231:PRO:HD3	1:A:2381:ILE:HD11	1.95	0.48
1:A:4608:LYS:HG3	1:A:4614:LEU:HB2	1.95	0.48
1:B:419:ILE:HD13	1:B:492:GLU:HG3	1.95	0.48
1:B:2778:LEU:O	1:B:2782:LEU:HG	2.13	0.48
1:B:2887:LYS:O	1:B:2891:ILE:HG23	2.14	0.48
1:B:4046:ASP:N	1:B:4046:ASP:OD1	2.43	0.48
1:C:576:HIS:O	1:C:580:VAL:HG23	2.14	0.48
1:D:2238:PRO:O	1:D:2241:VAL:HG12	2.14	0.48
1:D:4608:LYS:HG3	1:D:4614:LEU:HB2	1.95	0.48
1:A:114:LEU:HB2	1:A:117:HIS:CD2	2.49	0.47
1:A:238:HIS:HB2	1:A:241:MET:HB2	1.96	0.47
1:A:246:THR:OG1	1:A:247:VAL:N	2.47	0.47
1:A:4112:THR:O	1:A:4116:THR:HG23	2.13	0.47
1:B:878:LEU:HD22	1:B:881:ILE:HD13	1.96	0.47
1:B:987:LYS:NZ	1:B:990:PRO:HD3	2.29	0.47
1:D:587:ASN:OD1	1:D:2132:ARG:NH1	2.46	0.47
1:A:262:TYR:HB2	1:A:389:ARG:HG3	1.95	0.47
1:A:313:ASN:HD21	1:A:392:ILE:HA	1.79	0.47
1:A:575:LEU:HA	1:A:578:VAL:HG12	1.95	0.47
1:A:2385:ASN:HA	1:A:2388:MET:HE3	1.95	0.47
1:A:2887:LYS:O	1:A:2891:ILE:HG23	2.14	0.47
1:B:246:THR:OG1	1:B:247:VAL:N	2.47	0.47
1:B:2385:ASN:HA	1:B:2388:MET:HE3	1.95	0.47
1:C:4905:GLU:HG3	1:C:4906:THR:N	2.29	0.47
1:D:114:LEU:HB2	1:D:117:HIS:CD2	2.49	0.47
1:D:878:LEU:HD22	1:D:881:ILE:HD13	1.96	0.47
1:D:894:VAL:HA	1:D:918:LEU:HD22	1.95	0.47
1:D:1715:TYR:CZ	1:D:1762:MET:HB3	2.48	0.47
1:A:1199:ASP:OD1	1:A:1199:ASP:N	2.44	0.47
1:A:2838:ALA:O	1:A:2841:GLU:HG3	2.14	0.47
1:B:313:ASN:HD21	1:B:392:ILE:HA	1.80	0.47
2:H:39:SER:O	2:H:43:ARG:NH1	2.48	0.47
1:C:313:ASN:HD21	1:C:392:ILE:HA	1.79	0.47
1:C:1257:GLN:HA	1:C:1384:LEU:HD22	1.96	0.47
1:C:1383:ARG:HE	1:C:1385:LYS:HE2	1.79	0.47
1:C:1811:VAL:HB	1:C:1818:LEU:HD13	1.96	0.47
1:D:246:THR:OG1	1:D:247:VAL:N	2.47	0.47
1:D:576:HIS:O	1:D:580:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1935:LEU:HD21	1:D:1975:LEU:HD11	1.95	0.47
1:D:2838:ALA:O	1:D:2841:GLU:HG3	2.14	0.47
1:A:2866:ASN:HD22	1:A:2867:HIS:N	2.12	0.47
1:A:4029:ASP:OD1	1:A:4029:ASP:N	2.47	0.47
1:B:238:HIS:HB2	1:B:241:MET:HB2	1.96	0.47
1:C:19:GLU:HG3	1:C:218:SER:HB3	1.95	0.47
1:C:894:VAL:HA	1:C:918:LEU:HD22	1.95	0.47
1:C:1767:PRO:HG3	1:C:1781:PRO:HB3	1.96	0.47
1:C:4029:ASP:OD1	1:C:4029:ASP:N	2.47	0.47
2:I:39:SER:O	2:I:43:ARG:NH1	2.48	0.47
1:D:246:THR:HG21	1:D:267:VAL:HG11	1.95	0.47
1:D:721:ASP:N	1:D:721:ASP:OD1	2.46	0.47
1:D:4079:TYR:O	1:D:4083:VAL:HG22	2.13	0.47
2:J:39:SER:O	2:J:43:ARG:NH1	2.48	0.47
1:A:987:LYS:NZ	1:A:990:PRO:HD3	2.29	0.47
1:A:1827:TYR:CZ	1:A:1831:ILE:HD11	2.49	0.47
1:A:2128:LEU:HD11	1:A:2140:LEU:HD12	1.96	0.47
1:B:34:LYS:O	1:B:52:THR:OG1	2.33	0.47
1:B:576:HIS:O	1:B:580:VAL:HG23	2.15	0.47
1:B:1257:GLN:HA	1:B:1384:LEU:HD22	1.96	0.47
1:B:1972:ILE:HA	1:B:1975:LEU:HG	1.96	0.47
1:B:2134:GLY:H	1:B:2137:GLU:HB2	1.80	0.47
1:B:4044:LYS:HB2	1:B:4075:GLU:HG2	1.95	0.47
1:A:1642:ILE:HD11	1:A:1699:LEU:HD23	1.97	0.47
1:A:1972:ILE:HA	1:A:1975:LEU:HG	1.96	0.47
1:A:1986:PRO:HB2	1:A:1988:PRO:HD2	1.96	0.47
1:B:1383:ARG:HE	1:B:1385:LYS:HE2	1.79	0.47
1:B:2128:LEU:HD11	1:B:2140:LEU:HD12	1.97	0.47
1:C:924:LEU:HB2	1:C:929:ARG:HD3	1.96	0.47
1:C:2385:ASN:HA	1:C:2388:MET:HE3	1.95	0.47
1:D:575:LEU:HA	1:D:578:VAL:HG12	1.95	0.47
1:A:407:ARG:HH21	1:A:3864:ASN:HB3	1.80	0.47
1:A:1811:VAL:HB	1:A:1818:LEU:HD13	1.96	0.47
1:A:2134:GLY:H	1:A:2137:GLU:HB2	1.80	0.47
1:A:4287:TRP:O	1:A:4291:VAL:HG13	2.15	0.47
2:G:39:SER:O	2:G:43:ARG:NH1	2.48	0.47
1:B:1642:ILE:HD11	1:B:1699:LEU:HD23	1.97	0.47
1:B:1767:PRO:HG3	1:B:1781:PRO:HB3	1.96	0.47
1:B:3621:GLN:O	1:B:3624:GLU:HG3	2.15	0.47
1:B:4287:TRP:O	1:B:4291:VAL:HG13	2.15	0.47
1:C:246:THR:OG1	1:C:247:VAL:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1321:UNK:HA	1:C:1436:UNK:HA	1.97	0.47
1:C:1591:PHE:CZ	1:C:1593:SER:HB2	2.50	0.47
1:C:1972:ILE:HA	1:C:1975:LEU:HG	1.96	0.47
1:C:2070:GLN:O	1:C:3659:ARG:NH1	2.43	0.47
1:C:2134:GLY:H	1:C:2137:GLU:HB2	1.80	0.47
1:D:313:ASN:HD21	1:D:392:ILE:HA	1.80	0.47
1:D:1677:LEU:O	1:D:1681:VAL:HG22	2.15	0.47
1:D:2128:LEU:HD11	1:D:2140:LEU:HD12	1.96	0.47
1:D:4106:GLU:OE1	1:D:4148:TYR:OH	2.27	0.47
1:A:2238:PRO:O	1:A:2241:VAL:HG12	2.14	0.47
1:B:262:TYR:HB2	1:B:389:ARG:HG3	1.96	0.47
1:B:300:VAL:O	1:B:420:ARG:NH1	2.36	0.47
1:B:1002:ASN:O	1:B:1006:VAL:HG23	2.15	0.47
1:B:1827:TYR:CZ	1:B:1831:ILE:HD11	2.49	0.47
1:B:3636:GLU:HG3	1:B:3693:ILE:HG23	1.97	0.47
1:C:2838:ALA:O	1:C:2841:GLU:HG3	2.14	0.47
1:D:1767:PRO:HG3	1:D:1781:PRO:HB3	1.96	0.47
1:A:1383:ARG:HE	1:A:1385:LYS:HE2	1.79	0.47
1:B:407:ARG:HH21	1:B:3864:ASN:HB3	1.80	0.47
1:B:559:ILE:HD13	1:B:593:HIS:HB3	1.97	0.47
1:B:875:PRO:O	1:B:882:ARG:NH2	2.38	0.47
1:B:2838:ALA:O	1:B:2841:GLU:HG3	2.14	0.47
1:C:300:VAL:O	1:C:420:ARG:NH1	2.37	0.47
1:C:505:LEU:HD22	1:C:526:TRP:HD1	1.80	0.47
1:C:559:ILE:HD13	1:C:593:HIS:HB3	1.97	0.47
1:C:712:GLU:OE2	1:C:838:ARG:NE	2.47	0.47
1:C:2340:ASN:OD1	1:C:2340:ASN:N	2.45	0.47
1:D:1257:GLN:HA	1:D:1384:LEU:HD22	1.96	0.47
1:D:1591:PHE:CZ	1:D:1593:SER:HB2	2.50	0.47
1:A:1343:PHE:HB2	1:A:1376:TYR:HD2	1.80	0.47
1:C:262:TYR:HB2	1:C:389:ARG:HG3	1.95	0.47
1:C:1968:PRO:HA	1:C:1971:GLN:HB3	1.97	0.47
1:C:3621:GLN:O	1:C:3624:GLU:HG3	2.15	0.47
1:C:4518:TYR:HE1	1:C:4560:LEU:HB2	1.80	0.47
1:D:407:ARG:HH21	1:D:3864:ASN:HB3	1.80	0.47
1:D:1972:ILE:HA	1:D:1975:LEU:HG	1.96	0.47
1:A:2064:THR:HG22	1:A:2067:ARG:HH12	1.80	0.46
1:A:2439:PHE:HB3	1:A:2459:PHE:CD2	2.50	0.46
1:B:872:ILE:HD13	1:B:944:LEU:HD22	1.97	0.46
1:C:878:LEU:HD22	1:C:881:ILE:HD13	1.96	0.46
1:D:872:ILE:HD13	1:D:944:LEU:HD22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1642:ILE:HD11	1:D:1699:LEU:HD23	1.97	0.46
1:A:4905:GLU:HG3	1:A:4906:THR:N	2.29	0.46
1:C:34:LYS:O	1:C:52:THR:OG1	2.33	0.46
1:C:407:ARG:HH21	1:C:3864:ASN:HB3	1.80	0.46
1:C:987:LYS:NZ	1:C:990:PRO:HD3	2.29	0.46
1:C:4589:TYR:OH	1:C:4715:ASP:OD2	2.29	0.46
1:D:559:ILE:HD13	1:D:593:HIS:HB3	1.97	0.46
1:D:1321:UNK:HA	1:D:1436:UNK:HA	1.97	0.46
1:D:1811:VAL:HB	1:D:1818:LEU:HD13	1.96	0.46
1:D:2134:GLY:H	1:D:2137:GLU:HB2	1.80	0.46
1:D:2858:GLU:O	1:D:2862:LYS:HG2	2.16	0.46
1:B:380:LYS:HD2	1:B:380:LYS:HA	1.77	0.46
1:B:1321:UNK:HA	1:B:1436:UNK:HA	1.97	0.46
1:B:1677:LEU:O	1:B:1681:VAL:HG22	2.15	0.46
1:B:2064:THR:HG22	1:B:2067:ARG:HH12	1.80	0.46
1:B:3919:LEU:O	1:B:3923:ILE:HG12	2.16	0.46
1:B:4518:TYR:HE1	1:B:4560:LEU:HB2	1.81	0.46
1:C:2766:GLU:HA	1:C:2769:ILE:HG23	1.97	0.46
1:C:4287:TRP:O	1:C:4291:VAL:HG13	2.15	0.46
1:D:4762:ASN:O	1:D:4764:LYS:N	2.47	0.46
1:A:559:ILE:HD13	1:A:593:HIS:HB3	1.97	0.46
1:A:576:HIS:O	1:A:580:VAL:HG23	2.14	0.46
1:A:2070:GLN:O	1:A:3659:ARG:NH1	2.44	0.46
1:A:4518:TYR:HE1	1:A:4560:LEU:HB2	1.80	0.46
1:B:555:LEU:HD21	1:B:578:VAL:HG11	1.98	0.46
1:B:1591:PHE:CZ	1:B:1593:SER:HB2	2.50	0.46
1:C:1677:LEU:O	1:C:1681:VAL:HG22	2.15	0.46
1:D:1827:TYR:CZ	1:D:1831:ILE:HD11	2.49	0.46
1:D:2064:THR:HG22	1:D:2067:ARG:HH12	1.80	0.46
1:D:3919:LEU:O	1:D:3923:ILE:HG12	2.16	0.46
1:A:1257:GLN:HA	1:A:1384:LEU:HD22	1.96	0.46
1:A:1609:VAL:HG12	1:A:1611:ARG:H	1.81	0.46
1:A:3636:GLU:HG3	1:A:3693:ILE:HG23	1.97	0.46
1:B:505:LEU:HD22	1:B:526:TRP:HD1	1.80	0.46
1:B:2439:PHE:HB3	1:B:2459:PHE:CD2	2.50	0.46
1:B:2858:GLU:O	1:B:2862:LYS:HG2	2.16	0.46
1:C:1827:TYR:CZ	1:C:1831:ILE:HD11	2.49	0.46
1:C:2858:GLU:O	1:C:2862:LYS:HG2	2.16	0.46
1:C:2887:LYS:O	1:C:2891:ILE:HG23	2.14	0.46
1:C:3919:LEU:O	1:C:3923:ILE:HG12	2.16	0.46
1:D:1002:ASN:O	1:D:1006:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1343:PHE:HB2	1:D:1376:TYR:HD2	1.80	0.46
1:D:1383:ARG:HE	1:D:1385:LYS:HE2	1.79	0.46
1:D:2058:GLN:HG3	1:D:2090:GLN:NE2	2.31	0.46
1:A:1677:LEU:O	1:A:1681:VAL:HG22	2.15	0.46
1:A:2343:LEU:HD23	1:A:2343:LEU:HA	1.76	0.46
1:A:4051:MET:HE2	1:A:4062:THR:HG22	1.97	0.46
1:B:3801:VAL:HG13	1:B:3883:SER:HB2	1.98	0.46
1:B:3818:MET:SD	1:B:3818:MET:N	2.77	0.46
1:C:1289:SER:HA	1:C:1353:HIS:HB3	1.98	0.46
1:C:1609:VAL:HG12	1:C:1611:ARG:H	1.81	0.46
1:C:1898:PRO:O	1:C:1902:LYS:HG2	2.16	0.46
1:C:1977:ASN:OD1	1:C:1977:ASN:N	2.49	0.46
1:C:2058:GLN:HA	1:C:2090:GLN:HE21	1.81	0.46
1:C:4694:SER:O	1:C:4694:SER:OG	2.31	0.46
1:D:4905:GLU:HG3	1:D:4906:THR:N	2.29	0.46
1:A:490:GLN:O	1:A:490:GLN:NE2	2.47	0.46
1:A:555:LEU:HD21	1:A:578:VAL:HG11	1.98	0.46
1:A:2858:GLU:O	1:A:2862:LYS:HG2	2.15	0.46
1:A:3919:LEU:O	1:A:3923:ILE:HG12	2.16	0.46
1:B:1968:PRO:HA	1:B:1971:GLN:HB3	1.97	0.46
1:B:4051:MET:HE2	1:B:4062:THR:HG22	1.97	0.46
1:B:4621:SER:OG	1:B:4623:ASP:OD1	2.29	0.46
1:C:1002:ASN:O	1:C:1006:VAL:HG23	2.15	0.46
1:C:1642:ILE:HD11	1:C:1699:LEU:HD23	1.97	0.46
1:C:2439:PHE:HB3	1:C:2459:PHE:CD2	2.50	0.46
1:C:3636:GLU:HG3	1:C:3693:ILE:HG23	1.97	0.46
1:C:4883:MET:HE1	1:C:4888:PHE:HD1	1.81	0.46
1:D:712:GLU:OE2	1:D:838:ARG:NE	2.47	0.46
1:D:718:VAL:HG23	1:D:724:SER:HB2	1.98	0.46
1:D:2839:MET:HE2	1:D:2902:VAL:HG11	1.98	0.46
1:A:3822:GLU:OE1	1:A:3827:LYS:N	2.49	0.46
1:A:4009:VAL:HA	1:A:4012:ILE:HG12	1.98	0.46
1:B:1898:PRO:O	1:B:1902:LYS:HG2	2.16	0.46
1:B:2058:GLN:HG3	1:B:2090:GLN:NE2	2.31	0.46
1:B:4905:GLU:HG3	1:B:4906:THR:N	2.29	0.46
1:C:555:LEU:HD21	1:C:578:VAL:HG11	1.98	0.46
1:C:718:VAL:HG23	1:C:724:SER:HB2	1.98	0.46
1:C:872:ILE:HD13	1:C:944:LEU:HD22	1.97	0.46
1:A:34:LYS:O	1:A:52:THR:OG1	2.33	0.46
1:A:718:VAL:HG23	1:A:724:SER:HB2	1.98	0.46
1:A:807:ARG:O	1:A:1615:ARG:NE	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:872:ILE:HD13	1:A:944:LEU:HD22	1.97	0.46
1:A:1591:PHE:CZ	1:A:1593:SER:HB2	2.50	0.46
1:A:2839:MET:HE2	1:A:2902:VAL:HG11	1.98	0.46
1:A:3621:GLN:O	1:A:3624:GLU:HG3	2.15	0.46
1:B:2058:GLN:HA	1:B:2090:GLN:HE21	1.81	0.46
1:B:2766:GLU:HA	1:B:2769:ILE:HG23	1.97	0.46
1:C:2064:THR:HG22	1:C:2067:ARG:HH12	1.80	0.46
1:C:2839:MET:HE2	1:C:2902:VAL:HG11	1.98	0.46
1:C:3801:VAL:HG13	1:C:3883:SER:HB2	1.98	0.46
1:D:34:LYS:O	1:D:52:THR:OG1	2.33	0.46
1:D:2439:PHE:HB3	1:D:2459:PHE:CD2	2.50	0.46
1:D:3621:GLN:O	1:D:3624:GLU:HG3	2.15	0.46
1:A:1002:ASN:O	1:A:1006:VAL:HG23	2.15	0.46
1:A:2059:GLN:O	1:A:2063:GLU:HG2	2.16	0.46
1:B:1289:SER:HA	1:B:1353:HIS:HB3	1.98	0.46
1:B:4009:VAL:HA	1:B:4012:ILE:HG12	1.98	0.46
1:C:2128:LEU:HD11	1:C:2140:LEU:HD12	1.96	0.46
1:D:1898:PRO:O	1:D:1902:LYS:HG2	2.16	0.46
1:D:1968:PRO:HA	1:D:1971:GLN:HB3	1.97	0.46
1:D:4518:TYR:HE1	1:D:4560:LEU:HB2	1.80	0.46
1:A:2058:GLN:HG3	1:A:2090:GLN:NE2	2.31	0.45
1:B:718:VAL:HG23	1:B:724:SER:HB2	1.98	0.45
1:B:1118:SER:HA	1:B:1134:ALA:HA	1.98	0.45
1:D:1609:VAL:HG12	1:D:1611:ARG:H	1.81	0.45
1:D:2766:GLU:HA	1:D:2769:ILE:HG23	1.97	0.45
1:A:436:LEU:HD21	1:A:517:VAL:HG12	1.99	0.45
1:A:1321:UNK:HA	1:A:1436:UNK:HA	1.97	0.45
1:A:1898:PRO:O	1:A:1902:LYS:HG2	2.16	0.45
1:A:3818:MET:SD	1:A:3818:MET:N	2.77	0.45
1:B:838:ARG:N	1:B:841:LYS:HZ1	2.02	0.45
1:B:1343:PHE:HB2	1:B:1376:TYR:HD2	1.80	0.45
1:B:1641:ASP:HB3	1:B:1644:GLU:HG3	1.98	0.45
1:B:1743:GLU:CD	1:B:1744:ASN:HD22	2.24	0.45
1:B:2839:MET:HE2	1:B:2902:VAL:HG11	1.98	0.45
1:D:3636:GLU:HG3	1:D:3693:ILE:HG23	1.96	0.45
1:D:4051:MET:HE2	1:D:4062:THR:HG22	1.97	0.45
1:A:1289:SER:HA	1:A:1353:HIS:HB3	1.98	0.45
1:A:3831:ASP:HB3	1:A:3834:PHE:HB3	1.98	0.45
1:A:4046:ASP:OD1	1:A:4046:ASP:N	2.43	0.45
1:A:4883:MET:HE1	1:A:4888:PHE:HD1	1.81	0.45
1:B:329:PHE:HB3	1:B:363:ILE:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2059:GLN:O	1:C:2063:GLU:HG2	2.16	0.45
1:C:4665:ILE:O	1:C:4668:LEU:HD23	2.17	0.45
1:D:765:SER:HB3	1:D:780:GLU:HA	1.99	0.45
1:D:2058:GLN:HA	1:D:2090:GLN:HE21	1.81	0.45
1:D:2059:GLN:O	1:D:2063:GLU:HG2	2.16	0.45
1:D:2853:LYS:HA	1:D:2856:LYS:HG2	1.99	0.45
1:D:3822:GLU:OE1	1:D:3827:LYS:N	2.49	0.45
1:D:4665:ILE:O	1:D:4668:LEU:HD23	2.17	0.45
1:A:712:GLU:OE2	1:A:838:ARG:NE	2.47	0.45
1:A:1743:GLU:CD	1:A:1744:ASN:HD22	2.24	0.45
1:A:2197:ARG:HB3	1:A:2236:SER:OG	2.17	0.45
1:B:4665:ILE:O	1:B:4668:LEU:HD23	2.17	0.45
1:C:850:LEU:HD23	1:C:850:LEU:H	1.81	0.45
1:D:4009:VAL:HA	1:D:4012:ILE:HG12	1.98	0.45
1:A:850:LEU:HD23	1:A:850:LEU:H	1.81	0.45
1:A:1641:ASP:HB3	1:A:1644:GLU:HG3	1.99	0.45
1:A:2766:GLU:HA	1:A:2769:ILE:HG23	1.97	0.45
1:A:4589:TYR:OH	1:A:4715:ASP:OD2	2.28	0.45
1:A:4784:ALA:HA	1:A:4788:PHE:HD2	1.82	0.45
1:B:2197:ARG:HB3	1:B:2236:SER:OG	2.17	0.45
1:B:3831:ASP:HB3	1:B:3834:PHE:HB3	1.98	0.45
1:D:436:LEU:HD21	1:D:517:VAL:HG12	1.99	0.45
1:D:555:LEU:HD21	1:D:578:VAL:HG11	1.98	0.45
1:D:4287:TRP:O	1:D:4291:VAL:HG13	2.15	0.45
1:A:329:PHE:HB3	1:A:363:ILE:HD11	1.98	0.45
1:A:1118:SER:HA	1:A:1134:ALA:HA	1.98	0.45
1:A:1977:ASN:OD1	1:A:1977:ASN:N	2.49	0.45
1:A:3801:VAL:HG13	1:A:3883:SER:HB2	1.98	0.45
1:B:4784:ALA:HA	1:B:4788:PHE:HD2	1.82	0.45
1:C:1743:GLU:CD	1:C:1744:ASN:HD22	2.24	0.45
1:C:3822:GLU:OE1	1:C:3827:LYS:N	2.49	0.45
1:C:3831:ASP:HB3	1:C:3834:PHE:HB3	1.98	0.45
1:D:417:ARG:NH1	1:D:420:ARG:HH22	2.15	0.45
1:D:1786:ASP:HA	1:D:1789:LYS:HD3	1.99	0.45
1:D:2197:ARG:HB3	1:D:2236:SER:OG	2.17	0.45
1:A:1643:LEU:HD22	1:A:1694:TYR:O	2.17	0.45
1:A:2058:GLN:HA	1:A:2090:GLN:HE21	1.81	0.45
1:B:4182:LYS:HD2	1:B:4182:LYS:HA	1.80	0.45
1:B:4660:TYR:HB3	1:B:4664:ARG:HH21	1.82	0.45
1:B:4883:MET:HE1	1:B:4888:PHE:HD1	1.81	0.45
1:C:697:TRP:HB2	1:C:766:ILE:HD13	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1320:UNK:HA	1:C:1325:UNK:HA	1.99	0.45
1:C:1643:LEU:HD22	1:C:1694:TYR:O	2.17	0.45
1:C:4051:MET:HE2	1:C:4062:THR:HG22	1.97	0.45
1:C:4762:ASN:O	1:C:4764:LYS:N	2.47	0.45
1:D:1289:SER:HA	1:D:1353:HIS:HB3	1.98	0.45
1:D:1641:ASP:OD1	1:D:1642:ILE:N	2.50	0.45
1:D:3801:VAL:HG13	1:D:3883:SER:HB2	1.98	0.45
1:D:3831:ASP:HB3	1:D:3834:PHE:HB3	1.98	0.45
1:A:669:GLN:HB3	1:A:673:TRP:HZ2	1.82	0.45
1:B:1985:CYS:SG	1:B:1992:ARG:HD2	2.57	0.45
1:B:3822:GLU:OE1	1:B:3827:LYS:N	2.49	0.45
1:C:1987:CYS:N	1:C:1988:PRO:HD2	2.32	0.45
1:C:2152:LYS:HZ2	1:C:2156:GLN:HG3	1.82	0.45
1:C:2197:ARG:HB3	1:C:2236:SER:OG	2.17	0.45
1:D:505:LEU:HD22	1:D:526:TRP:HD1	1.80	0.45
1:D:669:GLN:HB3	1:D:673:TRP:HZ2	1.82	0.45
1:D:850:LEU:HD23	1:D:850:LEU:H	1.81	0.45
1:D:1165:MET:HB3	1:D:1236:TYR:CE2	2.52	0.45
1:D:2141:MET:HG2	1:D:2191:MET:HE1	1.99	0.45
1:D:4883:MET:HE1	1:D:4888:PHE:HD1	1.81	0.45
1:A:765:SER:HB3	1:A:780:GLU:HA	1.99	0.45
1:A:1968:PRO:HA	1:A:1971:GLN:HB3	1.97	0.45
1:B:697:TRP:HB2	1:B:766:ILE:HD13	1.99	0.45
1:C:26:ALA:HB2	1:C:194:LEU:HD21	1.99	0.45
1:C:669:GLN:HB3	1:C:673:TRP:HZ2	1.82	0.45
1:C:2058:GLN:HG3	1:C:2090:GLN:NE2	2.31	0.45
1:C:3712:SER:O	1:C:3712:SER:OG	2.34	0.45
1:C:4009:VAL:HA	1:C:4012:ILE:HG12	1.98	0.45
1:D:1743:GLU:CD	1:D:1744:ASN:HD22	2.24	0.45
1:A:1031:ARG:HD3	1:A:1031:ARG:HA	1.85	0.45
1:A:1165:MET:HB3	1:A:1236:TYR:CE2	2.52	0.45
1:A:1985:CYS:SG	1:A:1992:ARG:HD2	2.57	0.45
1:A:2853:LYS:HA	1:A:2856:LYS:HG2	1.99	0.45
1:A:4665:ILE:O	1:A:4668:LEU:HD23	2.17	0.45
1:A:4694:SER:O	1:A:4694:SER:OG	2.31	0.45
1:B:644:LEU:HD11	1:B:1651:LEU:HD22	1.99	0.45
1:B:799:LYS:HG2	1:B:1621:GLN:NE2	2.32	0.45
1:B:1845:GLN:HA	1:B:1848:GLU:HG2	1.98	0.45
1:B:1987:CYS:N	1:B:1988:PRO:HD2	2.32	0.45
1:C:894:VAL:O	1:C:898:ILE:HG13	2.17	0.45
1:D:799:LYS:HG2	1:D:1621:GLN:NE2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1118:SER:HA	1:D:1134:ALA:HA	1.98	0.45
1:D:1643:LEU:HD22	1:D:1694:TYR:O	2.17	0.45
1:D:4784:ALA:HA	1:D:4788:PHE:HD2	1.82	0.45
1:A:1095:ALA:HB1	1:A:1200:GLY:HA3	1.99	0.44
1:A:2141:MET:HG2	1:A:2191:MET:HE1	1.99	0.44
1:A:2844:ALA:HB1	1:A:2884:ASP:OD1	2.17	0.44
1:A:3712:SER:O	1:A:3712:SER:OG	2.34	0.44
1:B:1095:ALA:HB1	1:B:1200:GLY:HA3	1.99	0.44
1:B:4762:ASN:O	1:B:4764:LYS:N	2.47	0.44
1:C:1343:PHE:HB2	1:C:1376:TYR:HD2	1.80	0.44
1:D:987:LYS:HZ1	1:D:990:PRO:HD3	1.80	0.44
1:D:4080:GLU:O	1:D:4084:LYS:HD3	2.17	0.44
1:A:417:ARG:NH1	1:A:420:ARG:HH22	2.15	0.44
1:A:799:LYS:HG2	1:A:1621:GLN:NE2	2.32	0.44
1:B:2844:ALA:HB1	1:B:2884:ASP:OD1	2.18	0.44
1:C:417:ARG:NH1	1:C:420:ARG:HH22	2.15	0.44
1:C:2853:LYS:HA	1:C:2856:LYS:HG2	1.99	0.44
1:C:4080:GLU:O	1:C:4084:LYS:HD3	2.17	0.44
1:D:1320:UNK:HA	1:D:1325:UNK:HA	1.99	0.44
1:D:2070:GLN:O	1:D:3659:ARG:NH1	2.44	0.44
1:A:1641:ASP:OD1	1:A:1642:ILE:N	2.50	0.44
1:B:1165:MET:HB3	1:B:1236:TYR:CE2	2.52	0.44
1:B:1709:ASP:HA	1:B:1713:SER:HB3	2.00	0.44
1:B:3925:GLY:O	1:B:3927:CYS:N	2.50	0.44
1:B:4080:GLU:O	1:B:4084:LYS:HD3	2.17	0.44
1:C:799:LYS:HG2	1:C:1621:GLN:NE2	2.32	0.44
1:C:1118:SER:HA	1:C:1134:ALA:HA	1.98	0.44
1:C:1845:GLN:HA	1:C:1848:GLU:HG2	1.98	0.44
1:C:2844:ALA:HB1	1:C:2884:ASP:OD1	2.17	0.44
1:D:2428:LEU:O	1:D:2432:VAL:HG23	2.18	0.44
1:D:4660:TYR:HB3	1:D:4664:ARG:HH21	1.82	0.44
1:D:4694:SER:O	1:D:4694:SER:OG	2.31	0.44
1:B:336:GLU:HG3	1:B:338:LEU:HD22	1.99	0.44
1:B:765:SER:HB3	1:B:780:GLU:HA	1.99	0.44
1:B:1609:VAL:HG12	1:B:1611:ARG:H	1.81	0.44
1:C:436:LEU:HD21	1:C:517:VAL:HG12	1.99	0.44
1:C:606:ARG:NH2	1:C:1635:GLU:OE1	2.35	0.44
1:C:1641:ASP:OD1	1:C:1642:ILE:N	2.50	0.44
1:C:1641:ASP:HB3	1:C:1644:GLU:HG3	1.99	0.44
1:C:1985:CYS:SG	1:C:1992:ARG:HD2	2.57	0.44
1:C:2428:LEU:O	1:C:2432:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4660:TYR:HB3	1:C:4664:ARG:HH21	1.82	0.44
1:B:26:ALA:HB2	1:B:194:LEU:HD21	1.99	0.44
1:B:692:HIS:HB3	1:B:795:SER:HB3	2.00	0.44
1:B:850:LEU:HD23	1:B:850:LEU:H	1.81	0.44
1:B:900:LEU:HD23	1:B:902:TRP:NE1	2.33	0.44
1:C:900:LEU:HD23	1:C:902:TRP:NE1	2.33	0.44
1:C:943:LEU:HD11	1:C:948:CYS:HB3	1.99	0.44
1:C:1709:ASP:HA	1:C:1713:SER:HB3	2.00	0.44
1:C:2331:GLY:HA3	1:C:2391:TYR:CE1	2.53	0.44
1:C:4205:ILE:HG23	1:C:4491:ASN:HB3	2.00	0.44
1:D:697:TRP:HB2	1:D:766:ILE:HD13	1.99	0.44
1:A:894:VAL:O	1:A:898:ILE:HG13	2.17	0.44
1:A:1353:HIS:CE1	1:A:1367:LYS:HE3	2.53	0.44
1:A:1700:ARG:NH1	1:A:1817:PHE:O	2.51	0.44
1:A:1786:ASP:HA	1:A:1789:LYS:HD3	1.99	0.44
1:A:4185:MET:HE1	1:A:4889:ILE:HA	2.00	0.44
1:B:281:ARG:NH1	1:B:346:VAL:O	2.37	0.44
1:B:669:GLN:HB3	1:B:673:TRP:HZ2	1.82	0.44
1:B:1641:ASP:OD1	1:B:1642:ILE:N	2.50	0.44
1:B:1970:GLU:HA	1:B:1973:ASN:HB2	2.00	0.44
1:B:2343:LEU:HA	1:B:2343:LEU:HD23	1.76	0.44
1:C:329:PHE:HB3	1:C:363:ILE:HD11	1.98	0.44
1:C:644:LEU:HD11	1:C:1651:LEU:HD22	1.99	0.44
1:C:1970:GLU:HA	1:C:1973:ASN:HB2	2.00	0.44
1:D:329:PHE:HB3	1:D:363:ILE:HD11	1.98	0.44
1:D:336:GLU:HG3	1:D:338:LEU:HD22	1.99	0.44
1:D:1985:CYS:SG	1:D:1992:ARG:HD2	2.57	0.44
1:D:2337:GLU:OE1	1:D:2337:GLU:N	2.51	0.44
1:A:661:LEU:HD13	1:A:673:TRP:CD1	2.53	0.44
1:B:1643:LEU:HD22	1:B:1694:TYR:O	2.17	0.44
1:B:2059:GLN:O	1:B:2063:GLU:HG2	2.16	0.44
1:B:2343:LEU:HD21	1:B:2433:GLY:C	2.43	0.44
1:C:332:ARG:NH1	1:C:364:GLN:OE1	2.51	0.44
1:C:4183:GLU:O	1:C:4187:LEU:HG	2.18	0.44
1:C:4784:ALA:HA	1:C:4788:PHE:HD2	1.82	0.44
1:D:2085:VAL:HG12	1:D:3686:LEU:HD13	1.99	0.44
1:D:2331:GLY:HA3	1:D:2391:TYR:CE1	2.53	0.44
1:A:152:ASP:OD2	1:A:154:THR:OG1	2.36	0.44
1:A:644:LEU:HD11	1:A:1651:LEU:HD22	1.99	0.44
1:A:697:TRP:HB2	1:A:766:ILE:HD13	1.99	0.44
1:A:900:LEU:HD23	1:A:902:TRP:NE1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:943:LEU:HD11	1:A:948:CYS:HB3	1.99	0.44
1:A:2343:LEU:HD21	1:A:2433:GLY:C	2.43	0.44
1:B:436:LEU:HD21	1:B:517:VAL:HG12	1.99	0.44
1:B:1320:UNK:HA	1:B:1325:UNK:HA	1.99	0.44
1:B:1786:ASP:HA	1:B:1789:LYS:HD3	1.99	0.44
1:B:2853:LYS:HA	1:B:2856:LYS:HG2	1.99	0.44
1:B:4183:GLU:O	1:B:4187:LEU:HG	2.18	0.44
1:C:320:GLU:OE2	1:C:320:GLU:N	2.51	0.44
1:C:692:HIS:HB3	1:C:795:SER:HB3	2.00	0.44
1:C:1165:MET:HB3	1:C:1236:TYR:CE2	2.52	0.44
2:I:38:ASP:OD1	2:I:39:SER:N	2.51	0.44
1:D:1641:ASP:HB3	1:D:1644:GLU:HG3	1.99	0.44
1:D:2220:LEU:HD11	1:D:2242:ALA:HB2	2.00	0.44
1:D:4205:ILE:HG23	1:D:4491:ASN:HB3	2.00	0.44
1:A:26:ALA:HB2	1:A:194:LEU:HD21	1.99	0.44
1:A:845:THR:OG1	1:A:846:TYR:N	2.51	0.44
1:A:2085:VAL:HG12	1:A:3686:LEU:HD13	1.99	0.44
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.53	0.44
1:B:2331:GLY:HA3	1:B:2391:TYR:CE1	2.53	0.44
1:C:1095:ALA:HB1	1:C:1200:GLY:HA3	1.99	0.44
1:C:1747:HIS:O	1:C:1747:HIS:ND1	2.51	0.44
1:D:644:LEU:HD11	1:D:1651:LEU:HD22	1.99	0.44
1:D:1747:HIS:O	1:D:1747:HIS:ND1	2.51	0.44
1:D:2844:ALA:HB1	1:D:2884:ASP:OD1	2.17	0.44
1:D:4185:MET:HE1	1:D:4889:ILE:HA	2.00	0.44
1:A:1970:GLU:HA	1:A:1973:ASN:HB2	2.00	0.43
1:A:3925:GLY:O	1:A:3927:CYS:N	2.50	0.43
1:B:152:ASP:OD2	1:B:154:THR:OG1	2.36	0.43
1:B:674:TYR:N	1:B:820:ALA:O	2.51	0.43
1:B:840:TYR:CE2	1:B:850:LEU:HA	2.53	0.43
1:B:1652:LEU:HD12	1:B:1699:LEU:HD13	2.01	0.43
1:C:646:THR:HG21	1:C:1685:GLN:HE22	1.83	0.43
1:C:674:TYR:N	1:C:820:ALA:O	2.51	0.43
1:C:1786:ASP:HA	1:C:1789:LYS:HD3	1.99	0.43
1:C:2337:GLU:N	1:C:2337:GLU:OE1	2.51	0.43
1:C:2343:LEU:HD21	1:C:2433:GLY:C	2.43	0.43
1:C:4026:THR:O	1:C:4031:PHE:HB3	2.18	0.43
1:D:290:ARG:H	1:D:293:GLN:NE2	2.16	0.43
1:D:894:VAL:O	1:D:898:ILE:HG13	2.17	0.43
1:D:943:LEU:HD11	1:D:948:CYS:HB3	1.99	0.43
1:D:1845:GLN:HA	1:D:1848:GLU:HG2	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1987:CYS:N	1:D:1988:PRO:HD2	2.32	0.43
1:D:4501:ARG:HH12	1:D:4720:TYR:HE2	1.66	0.43
1:A:712:GLU:HG3	1:A:713:TRP:CD1	2.53	0.43
1:A:929:ARG:HA	1:A:932:ASN:HD21	1.83	0.43
1:A:1709:ASP:HA	1:A:1713:SER:HB3	2.00	0.43
1:A:1987:CYS:N	1:A:1988:PRO:HD2	2.32	0.43
1:A:2337:GLU:OE1	1:A:2337:GLU:N	2.51	0.43
1:A:4080:GLU:O	1:A:4084:LYS:HD3	2.17	0.43
1:B:417:ARG:NH1	1:B:420:ARG:HH22	2.15	0.43
1:B:2141:MET:HG2	1:B:2191:MET:HE1	1.99	0.43
1:B:2428:LEU:O	1:B:2432:VAL:HG23	2.18	0.43
1:B:4185:MET:HE1	1:B:4889:ILE:HA	2.00	0.43
1:B:4205:ILE:HG23	1:B:4491:ASN:HB3	2.00	0.43
1:C:1353:HIS:CE1	1:C:1367:LYS:HE3	2.53	0.43
1:C:2085:VAL:HG12	1:C:3686:LEU:HD13	1.99	0.43
1:C:2876:LEU:HB2	1:C:2881:LYS:HE3	2.00	0.43
1:C:4185:MET:HE1	1:C:4889:ILE:HA	2.00	0.43
1:D:332:ARG:NH1	1:D:364:GLN:OE1	2.51	0.43
1:D:661:LEU:HD13	1:D:673:TRP:CD1	2.53	0.43
1:D:712:GLU:HG3	1:D:713:TRP:CD1	2.53	0.43
1:D:2108:ASN:HD21	1:D:2111:SER:HB3	1.83	0.43
1:D:2343:LEU:HD21	1:D:2433:GLY:C	2.43	0.43
1:D:2776:GLU:O	1:D:2780:THR:HG23	2.19	0.43
1:D:4026:THR:O	1:D:4031:PHE:HB3	2.18	0.43
1:A:505:LEU:HD22	1:A:526:TRP:HD1	1.80	0.43
1:A:1006:VAL:HG13	1:A:1009:ARG:NH2	2.31	0.43
1:A:1845:GLN:HA	1:A:1848:GLU:HG2	1.99	0.43
1:A:2086:LEU:O	1:A:2090:GLN:HG2	2.19	0.43
1:A:4205:ILE:HG23	1:A:4491:ASN:HB3	2.00	0.43
1:A:4660:TYR:HB3	1:A:4664:ARG:HH21	1.82	0.43
1:A:4830:ILE:HB	1:A:4842:ARG:HH21	1.83	0.43
1:B:646:THR:HG21	1:B:1685:GLN:HE22	1.83	0.43
1:B:2085:VAL:HG12	1:B:3686:LEU:HD13	1.99	0.43
1:B:2337:GLU:OE1	1:B:2337:GLU:N	2.51	0.43
1:B:4830:ILE:HB	1:B:4842:ARG:HH21	1.83	0.43
2:H:38:ASP:OD1	2:H:39:SER:N	2.51	0.43
1:C:2776:GLU:O	1:C:2780:THR:HG23	2.18	0.43
1:D:1095:ALA:HB1	1:D:1200:GLY:HA3	1.99	0.43
1:D:1353:HIS:CE1	1:D:1367:LYS:HE3	2.53	0.43
1:D:4608:LYS:HG2	1:D:4614:LEU:HD22	2.01	0.43
1:A:281:ARG:NH1	1:A:346:VAL:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1320:UNK:HA	1:A:1325:UNK:HA	1.99	0.43
1:A:1652:LEU:HD12	1:A:1699:LEU:HD13	2.00	0.43
1:A:2876:LEU:HB2	1:A:2881:LYS:HE3	2.00	0.43
1:B:894:VAL:O	1:B:898:ILE:HG13	2.17	0.43
1:B:1353:HIS:CE1	1:B:1367:LYS:HE3	2.53	0.43
1:B:1977:ASN:N	1:B:1977:ASN:OD1	2.49	0.43
1:B:2193:ALA:O	1:B:2236:SER:HB3	2.19	0.43
1:B:2776:GLU:O	1:B:2780:THR:HG23	2.19	0.43
1:C:2108:ASN:HD21	1:C:2111:SER:HB3	1.83	0.43
1:D:152:ASP:OD2	1:D:154:THR:OG1	2.36	0.43
1:D:2166:MET:HE3	1:D:2166:MET:HB2	1.94	0.43
1:A:840:TYR:CE2	1:A:850:LEU:HA	2.53	0.43
1:A:2765:LYS:O	1:A:2769:ILE:HG23	2.19	0.43
1:B:490:GLN:O	1:B:490:GLN:NE2	2.47	0.43
1:B:1700:ARG:NH1	1:B:1817:PHE:O	2.51	0.43
1:B:4029:ASP:OD1	1:B:4029:ASP:N	2.47	0.43
1:C:661:LEU:HD13	1:C:673:TRP:CD1	2.53	0.43
1:C:4632:LEU:HD23	1:C:4632:LEU:H	1.84	0.43
1:D:840:TYR:CE2	1:D:850:LEU:HA	2.53	0.43
1:D:1297:THR:OG1	1:D:1346:LEU:O	2.27	0.43
1:D:2276:CYS:O	1:D:2280:VAL:HG13	2.19	0.43
1:D:2765:LYS:O	1:D:2769:ILE:HG23	2.19	0.43
1:A:692:HIS:HB3	1:A:795:SER:HB3	2.00	0.43
1:B:1086:ARG:HH21	1:B:1251:LEU:HD13	1.84	0.43
1:B:2471:LEU:HD23	1:B:2471:LEU:HA	1.83	0.43
1:B:4648:VAL:O	1:B:4652:VAL:HG12	2.19	0.43
1:C:1700:ARG:NH1	1:C:1817:PHE:O	2.51	0.43
1:C:2086:LEU:O	1:C:2090:GLN:HG2	2.19	0.43
1:C:2220:LEU:HD11	1:C:2242:ALA:HB2	2.00	0.43
1:C:4138:MET:HE1	1:C:4142:LYS:H	1.84	0.43
1:C:4648:VAL:O	1:C:4652:VAL:HG12	2.19	0.43
1:D:323:ASP:O	1:D:327:THR:OG1	2.34	0.43
1:D:490:GLN:O	1:D:490:GLN:NE2	2.47	0.43
1:D:646:THR:HG21	1:D:1685:GLN:HE22	1.83	0.43
1:D:1709:ASP:HA	1:D:1713:SER:HB3	2.00	0.43
1:D:1744:ASN:ND2	1:D:1746:LYS:HE2	2.31	0.43
1:D:2439:PHE:HB3	1:D:2459:PHE:HD2	1.82	0.43
1:D:4183:GLU:O	1:D:4187:LEU:HG	2.18	0.43
1:D:4830:ILE:HB	1:D:4842:ARG:HH21	1.84	0.43
1:A:332:ARG:NH1	1:A:364:GLN:OE1	2.51	0.43
1:A:336:GLU:HG3	1:A:338:LEU:HD22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2068:TRP:HE3	1:A:2083:MET:HE2	1.84	0.43
1:A:2193:ALA:O	1:A:2236:SER:HB3	2.19	0.43
2:G:38:ASP:OD1	2:G:39:SER:N	2.51	0.43
1:B:943:LEU:HD11	1:B:948:CYS:HB3	1.99	0.43
1:B:2220:LEU:HD11	1:B:2242:ALA:HB2	2.00	0.43
1:C:336:GLU:HG3	1:C:338:LEU:HD22	1.99	0.43
1:C:802:PHE:HB2	1:C:1618:TRP:HB2	2.00	0.43
1:C:929:ARG:HA	1:C:932:ASN:HD21	1.83	0.43
1:C:1086:ARG:HH21	1:C:1251:LEU:HD13	1.84	0.43
1:C:4304:PHE:O	1:C:4308:VAL:HG22	2.19	0.43
1:C:4501:ARG:HH12	1:C:4720:TYR:HE2	1.66	0.43
1:D:802:PHE:HB2	1:D:1618:TRP:HB2	2.00	0.43
1:D:2086:LEU:O	1:D:2090:GLN:HG2	2.19	0.43
1:D:3803:ASP:OD1	1:D:3806:ALA:HB3	2.19	0.43
1:D:4594:VAL:N	1:D:4595:PRO:HD2	2.34	0.43
1:A:646:THR:HG21	1:A:1685:GLN:HE22	1.83	0.43
1:A:2108:ASN:HD21	1:A:2111:SER:HB3	1.83	0.43
1:A:2220:LEU:HD11	1:A:2242:ALA:HB2	2.00	0.43
1:A:2471:LEU:HD23	1:A:2471:LEU:HA	1.83	0.43
1:A:4079:TYR:HA	1:A:4082:PHE:HB3	2.01	0.43
1:A:4648:VAL:O	1:A:4652:VAL:HG12	2.19	0.43
1:B:1006:VAL:HG13	1:B:1009:ARG:NH2	2.31	0.43
1:B:2108:ASN:HD21	1:B:2111:SER:HB3	1.83	0.43
1:B:4304:PHE:O	1:B:4308:VAL:HG22	2.19	0.43
1:C:845:THR:OG1	1:C:846:TYR:N	2.51	0.43
1:C:2276:CYS:O	1:C:2280:VAL:HG13	2.19	0.43
1:C:3954:GLN:NE2	1:C:3971:MET:SD	2.92	0.43
1:C:4594:VAL:N	1:C:4595:PRO:HD2	2.34	0.43
1:D:1977:ASN:OD1	1:D:1977:ASN:N	2.49	0.43
1:D:2243:ALA:O	1:D:2247:MET:HB2	2.19	0.43
1:D:2839:MET:HE3	1:D:2892:PHE:CE1	2.54	0.43
1:D:4304:PHE:O	1:D:4308:VAL:HG22	2.19	0.43
1:D:4830:ILE:HB	1:D:4842:ARG:NH2	2.34	0.43
1:A:802:PHE:HB2	1:A:1618:TRP:HB2	2.00	0.43
1:A:2191:MET:HA	1:A:2191:MET:HE3	2.00	0.43
1:A:2839:MET:HE3	1:A:2892:PHE:CE1	2.54	0.43
1:A:4304:PHE:O	1:A:4308:VAL:HG22	2.19	0.43
1:A:4608:LYS:HG2	1:A:4614:LEU:HD22	2.01	0.43
1:B:332:ARG:NH1	1:B:364:GLN:OE1	2.51	0.43
1:B:2246:VAL:HG21	1:B:2256:LEU:HD22	2.01	0.43
1:B:2316:ALA:O	1:B:2320:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4608:LYS:HG2	1:B:4614:LEU:HD22	2.01	0.43
1:C:442:LEU:HG	1:C:444:THR:HG22	2.01	0.43
1:C:765:SER:HB3	1:C:780:GLU:HA	1.99	0.43
1:C:1789:LYS:HB2	1:C:1835:PHE:HE1	1.84	0.43
1:C:2765:LYS:O	1:C:2769:ILE:HG23	2.19	0.43
1:C:4830:ILE:HB	1:C:4842:ARG:NH2	2.34	0.43
1:C:4920:PHE:HE2	1:C:4939:VAL:HG11	1.84	0.43
1:D:26:ALA:HB2	1:D:194:LEU:HD21	1.99	0.43
1:D:674:TYR:N	1:D:820:ALA:O	2.51	0.43
1:D:1652:LEU:HD12	1:D:1699:LEU:HD13	2.01	0.43
1:D:1700:ARG:NH1	1:D:1817:PHE:O	2.51	0.43
1:D:1970:GLU:HA	1:D:1973:ASN:HB2	2.00	0.43
1:D:2246:VAL:HG21	1:D:2256:LEU:HD22	2.01	0.43
1:A:307:SER:HB3	1:A:317:MET:HE2	2.01	0.43
1:A:380:LYS:HD2	1:A:380:LYS:HA	1.77	0.43
1:A:1789:LYS:HB2	1:A:1835:PHE:HE1	1.84	0.43
1:A:2276:CYS:O	1:A:2280:VAL:HG13	2.19	0.43
1:A:2331:GLY:HA3	1:A:2391:TYR:CE1	2.53	0.43
1:A:2428:LEU:O	1:A:2432:VAL:HG23	2.18	0.43
1:A:2439:PHE:HB3	1:A:2459:PHE:HD2	1.83	0.43
1:A:3803:ASP:OD1	1:A:3806:ALA:HB3	2.19	0.43
1:A:4183:GLU:O	1:A:4187:LEU:HG	2.18	0.43
1:B:307:SER:HB3	1:B:317:MET:HE2	2.01	0.43
1:B:845:THR:OG1	1:B:846:TYR:N	2.51	0.43
1:B:2243:ALA:O	1:B:2247:MET:HB2	2.19	0.43
1:B:2260:ASP:N	1:B:2260:ASP:OD1	2.52	0.43
1:B:2276:CYS:O	1:B:2280:VAL:HG13	2.19	0.43
1:B:4079:TYR:HA	1:B:4082:PHE:HB3	2.01	0.43
1:C:1652:LEU:HD12	1:C:1699:LEU:HD13	2.01	0.43
1:C:2141:MET:HG2	1:C:2191:MET:HE1	1.99	0.43
1:C:4079:TYR:HA	1:C:4082:PHE:HB3	2.01	0.43
1:D:692:HIS:HB3	1:D:795:SER:HB3	2.00	0.43
1:D:929:ARG:HA	1:D:932:ASN:HD21	1.83	0.43
1:D:2876:LEU:HB2	1:D:2881:LYS:HE3	2.00	0.43
1:D:4632:LEU:HD23	1:D:4632:LEU:H	1.84	0.43
2:J:38:ASP:OD1	2:J:39:SER:N	2.51	0.43
1:A:2316:ALA:O	1:A:2320:VAL:HG23	2.19	0.42
1:A:4594:VAL:N	1:A:4595:PRO:HD2	2.34	0.42
1:B:2191:MET:HA	1:B:2191:MET:HE3	2.00	0.42
1:B:2439:PHE:HB3	1:B:2459:PHE:HD2	1.82	0.42
1:B:2876:LEU:HB2	1:B:2881:LYS:HE3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4923:TYR:CZ	1:B:4927:LYS:HD2	2.54	0.42
1:C:840:TYR:CE2	1:C:850:LEU:HA	2.53	0.42
1:C:2191:MET:HA	1:C:2191:MET:HE3	2.00	0.42
1:C:2260:ASP:N	1:C:2260:ASP:OD1	2.52	0.42
1:C:2439:PHE:HB3	1:C:2459:PHE:HD2	1.82	0.42
1:D:47:CYS:O	1:D:202:HIS:NE2	2.51	0.42
1:D:2057:LEU:O	1:D:2060:LEU:HD23	2.19	0.42
1:D:2193:ALA:O	1:D:2236:SER:HB3	2.19	0.42
1:D:2316:ALA:O	1:D:2320:VAL:HG23	2.19	0.42
1:D:3954:GLN:NE2	1:D:3971:MET:SD	2.92	0.42
1:D:4920:PHE:HE2	1:D:4939:VAL:HG11	1.84	0.42
1:A:1928:SER:OG	1:A:3616:VAL:HG23	2.20	0.42
1:A:4501:ARG:HH12	1:A:4720:TYR:HE2	1.66	0.42
1:A:4923:TYR:CZ	1:A:4927:LYS:HD2	2.54	0.42
1:B:2498:ALA:O	1:B:2501:LEU:HD23	2.20	0.42
1:B:3612:ARG:O	1:B:3612:ARG:NH1	2.52	0.42
1:B:4594:VAL:N	1:B:4595:PRO:HD2	2.34	0.42
1:C:152:ASP:OD2	1:C:154:THR:OG1	2.36	0.42
1:C:2316:ALA:O	1:C:2320:VAL:HG23	2.19	0.42
1:C:2498:ALA:O	1:C:2501:LEU:HD23	2.20	0.42
1:C:4830:ILE:HB	1:C:4842:ARG:HH21	1.83	0.42
1:D:442:LEU:HG	1:D:444:THR:HG22	2.01	0.42
1:D:900:LEU:HD23	1:D:902:TRP:NE1	2.33	0.42
1:D:2260:ASP:OD1	1:D:2260:ASP:N	2.52	0.42
1:A:674:TYR:N	1:A:820:ALA:O	2.51	0.42
1:A:2246:VAL:HG21	1:A:2256:LEU:HD22	2.01	0.42
1:A:2276:CYS:HB2	1:A:2279:LEU:HG	2.02	0.42
1:A:3954:GLN:NE2	1:A:3971:MET:SD	2.92	0.42
1:A:4026:THR:O	1:A:4031:PHE:HB3	2.18	0.42
1:A:4138:MET:HE1	1:A:4142:LYS:H	1.84	0.42
2:G:28:THR:HA	2:G:39:SER:HA	2.01	0.42
1:B:161:THR:HG23	1:B:184:VAL:HB	2.01	0.42
1:B:245:LEU:HD11	1:B:260:VAL:HG12	2.01	0.42
1:B:712:GLU:HG3	1:B:713:TRP:CD1	2.53	0.42
1:B:773:GLN:H	1:B:773:GLN:HG2	1.69	0.42
1:B:2086:LEU:O	1:B:2090:GLN:HG2	2.19	0.42
1:B:3803:ASP:OD1	1:B:3806:ALA:HB3	2.18	0.42
1:B:3954:GLN:NE2	1:B:3971:MET:SD	2.92	0.42
2:H:83:TYR:HB3	2:H:87:GLY:HA2	2.01	0.42
1:C:712:GLU:HG3	1:C:713:TRP:CD1	2.53	0.42
1:C:2057:LEU:O	1:C:2060:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2243:ALA:O	1:C:2247:MET:HB2	2.19	0.42
1:C:3900:GLN:OE1	1:C:3903:ARG:NH1	2.52	0.42
1:C:3925:GLY:O	1:C:3927:CYS:N	2.50	0.42
1:D:245:LEU:HD11	1:D:260:VAL:HG12	2.01	0.42
1:D:845:THR:OG1	1:D:846:TYR:N	2.51	0.42
1:D:2498:ALA:O	1:D:2501:LEU:HD23	2.20	0.42
1:D:3925:GLY:O	1:D:3927:CYS:N	2.50	0.42
1:A:1629:MET:HG2	1:A:1688:TYR:CE2	2.55	0.42
1:A:1744:ASN:ND2	1:A:1746:LYS:HE2	2.31	0.42
1:A:2260:ASP:OD1	1:A:2260:ASP:N	2.52	0.42
1:A:3762:ILE:HD12	1:A:3840:ARG:HG3	2.00	0.42
1:A:4171:PHE:CE1	1:A:4175:VAL:HG21	2.55	0.42
1:B:2276:CYS:HB2	1:B:2279:LEU:HG	2.02	0.42
1:B:2340:ASN:OD1	1:B:2340:ASN:N	2.45	0.42
1:B:3900:GLN:OE1	1:B:3903:ARG:NH1	2.52	0.42
1:B:4920:PHE:HE2	1:B:4939:VAL:HG11	1.84	0.42
1:C:307:SER:HB3	1:C:317:MET:HE2	2.01	0.42
1:C:807:ARG:O	1:C:1615:ARG:NE	2.47	0.42
1:C:2193:ALA:O	1:C:2236:SER:HB3	2.19	0.42
1:C:2197:ARG:HB3	1:C:2197:ARG:HE	1.64	0.42
1:C:2246:VAL:HG21	1:C:2256:LEU:HD22	2.01	0.42
1:C:3758:LEU:O	1:C:3762:ILE:HG12	2.20	0.42
1:C:3803:ASP:OD1	1:C:3806:ALA:HB3	2.18	0.42
1:C:4193:GLU:OE2	1:C:4943:TYR:OH	2.33	0.42
1:D:320:GLU:OE2	1:D:320:GLU:N	2.51	0.42
1:D:1006:VAL:HG13	1:D:1009:ARG:NH2	2.31	0.42
1:D:1928:SER:OG	1:D:3616:VAL:HG23	2.20	0.42
1:D:2122:LEU:HD22	1:D:2166:MET:HE2	2.02	0.42
1:D:3758:LEU:O	1:D:3762:ILE:HG12	2.20	0.42
1:D:4176:VAL:HG11	1:D:4879:VAL:HA	2.01	0.42
1:D:4648:VAL:O	1:D:4652:VAL:HG12	2.19	0.42
1:A:479:LEU:HD23	1:A:482:LEU:HD21	2.02	0.42
1:A:1086:ARG:HH21	1:A:1251:LEU:HD13	1.84	0.42
1:A:2057:LEU:O	1:A:2060:LEU:HD23	2.19	0.42
1:A:4857:LEU:HD23	1:A:4857:LEU:HA	1.94	0.42
1:B:479:LEU:HD23	1:B:482:LEU:HD21	2.01	0.42
1:B:712:GLU:OE2	1:B:838:ARG:NE	2.47	0.42
1:B:802:PHE:HB2	1:B:1618:TRP:HB2	2.00	0.42
1:B:1789:LYS:HB2	1:B:1835:PHE:HE1	1.84	0.42
1:B:3802:LEU:HD23	1:B:3829:LEU:HD13	2.01	0.42
1:B:4026:THR:O	1:B:4031:PHE:HB3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4171:PHE:CE1	1:B:4175:VAL:HG21	2.55	0.42
1:B:4632:LEU:HD23	1:B:4632:LEU:H	1.84	0.42
1:C:799:LYS:HG2	1:C:1621:GLN:HE22	1.85	0.42
1:C:2166:MET:HE3	1:C:2166:MET:HB2	1.94	0.42
1:C:4923:TYR:CZ	1:C:4927:LYS:HD2	2.54	0.42
1:D:479:LEU:HD23	1:D:482:LEU:HD21	2.01	0.42
1:D:919:VAL:HG22	1:D:920:GLU:H	1.85	0.42
1:D:1308:ILE:HG12	1:D:1572:PHE:HD2	1.84	0.42
1:D:4138:MET:HE1	1:D:4142:LYS:H	1.84	0.42
1:A:799:LYS:HG2	1:A:1621:GLN:HE22	1.85	0.42
1:A:1747:HIS:ND1	1:A:1747:HIS:O	2.51	0.42
1:A:2243:ALA:O	1:A:2247:MET:HB2	2.19	0.42
1:A:2776:GLU:O	1:A:2780:THR:HG23	2.19	0.42
1:A:4632:LEU:H	1:A:4632:LEU:HD23	1.84	0.42
1:B:929:ARG:HA	1:B:932:ASN:HD21	1.83	0.42
1:B:1308:ILE:HG12	1:B:1572:PHE:HD2	1.84	0.42
1:B:2765:LYS:O	1:B:2769:ILE:HG23	2.19	0.42
1:B:3671:SER:OG	1:B:3741:GLN:OE1	2.23	0.42
1:B:3758:LEU:O	1:B:3762:ILE:HG12	2.20	0.42
1:C:479:LEU:HD23	1:C:482:LEU:HD21	2.01	0.42
1:C:919:VAL:HG22	1:C:920:GLU:H	1.85	0.42
1:C:2080:VAL:HG13	1:C:3669:LEU:HD22	2.02	0.42
1:C:2839:MET:HE3	1:C:2892:PHE:CE1	2.54	0.42
1:C:3762:ILE:HD12	1:C:3840:ARG:HG3	2.00	0.42
1:D:307:SER:HB3	1:D:317:MET:HE2	2.01	0.42
1:D:2735:LYS:HE2	1:D:2740:TRP:HB2	2.02	0.42
1:D:3762:ILE:HD12	1:D:3840:ARG:HG3	2.00	0.42
1:D:3900:GLN:OE1	1:D:3903:ARG:NH1	2.52	0.42
1:D:3993:THR:O	1:D:3997:GLN:HG2	2.20	0.42
1:D:4079:TYR:HA	1:D:4082:PHE:HB3	2.01	0.42
1:A:125:TYR:CE1	1:A:417:ARG:HD3	2.55	0.42
1:A:190:ARG:HD3	1:A:205:ALA:O	2.20	0.42
1:A:290:ARG:H	1:A:293:GLN:NE2	2.16	0.42
1:A:2498:ALA:O	1:A:2501:LEU:HD23	2.20	0.42
2:G:28:THR:O	2:G:28:THR:OG1	2.34	0.42
2:G:83:TYR:HB3	2:G:87:GLY:HA2	2.01	0.42
1:B:3712:SER:O	1:B:3712:SER:OG	2.34	0.42
1:B:4501:ARG:HH12	1:B:4720:TYR:HE2	1.66	0.42
1:B:4913:ASN:HB3	1:B:4916:ASN:HB2	2.02	0.42
1:C:3993:THR:O	1:C:3997:GLN:HG2	2.20	0.42
1:C:4171:PHE:CE1	1:C:4175:VAL:HG21	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4895:ASP:OD1	1:C:4896:TYR:N	2.53	0.42
1:D:1629:MET:HG2	1:D:1688:TYR:CE2	2.55	0.42
1:D:2068:TRP:HE3	1:D:2083:MET:HE2	1.84	0.42
1:D:4171:PHE:CE1	1:D:4175:VAL:HG21	2.55	0.42
1:D:4923:TYR:CZ	1:D:4927:LYS:HD2	2.54	0.42
1:A:320:GLU:OE2	1:A:320:GLU:N	2.51	0.42
1:A:595:LYS:HE2	1:A:595:LYS:HB3	1.91	0.42
1:A:919:VAL:HG22	1:A:920:GLU:H	1.85	0.42
1:A:2122:LEU:HD22	1:A:2166:MET:HE2	2.02	0.42
1:A:3993:THR:O	1:A:3997:GLN:HG2	2.20	0.42
1:A:4920:PHE:HE2	1:A:4939:VAL:HG11	1.84	0.42
2:G:80:ASP:OD1	2:G:81:VAL:N	2.53	0.42
1:B:919:VAL:HG22	1:B:920:GLU:H	1.85	0.42
1:B:1629:MET:HG2	1:B:1688:TYR:CE2	2.55	0.42
1:B:1752:ILE:HD11	1:B:1840:LEU:HB3	2.02	0.42
1:B:1928:SER:OG	1:B:3616:VAL:HG23	2.20	0.42
1:B:2068:TRP:HE3	1:B:2083:MET:HE2	1.84	0.42
1:B:3993:THR:O	1:B:3997:GLN:HG2	2.20	0.42
1:B:4757:SER:O	1:B:4761:HIS:HB2	2.20	0.42
1:C:125:TYR:CE1	1:C:417:ARG:HD3	2.55	0.42
1:C:868:ASP:OD1	1:C:868:ASP:N	2.52	0.42
1:C:1928:SER:OG	1:C:3616:VAL:HG23	2.20	0.42
1:C:2735:LYS:HE2	1:C:2740:TRP:HB2	2.02	0.42
1:D:1571:LEU:HD23	1:D:1571:LEU:HA	1.91	0.42
1:D:1789:LYS:HB2	1:D:1835:PHE:HE1	1.84	0.42
1:D:2755:LEU:HD21	1:D:2764:GLU:OE2	2.20	0.42
1:D:3943:VAL:HG23	1:D:4001:MET:HE3	2.02	0.42
1:D:4895:ASP:OD1	1:D:4896:TYR:N	2.53	0.42
2:J:80:ASP:OD1	2:J:81:VAL:N	2.53	0.42
1:A:161:THR:HG23	1:A:184:VAL:HB	2.01	0.42
1:A:1677:LEU:HA	1:A:1680:HIS:HB2	2.01	0.42
1:A:3900:GLN:OE1	1:A:3903:ARG:NH1	2.52	0.42
1:B:868:ASP:OD1	1:B:868:ASP:N	2.52	0.42
1:B:2755:LEU:HD21	1:B:2764:GLU:OE2	2.20	0.42
1:B:2839:MET:HE3	1:B:2892:PHE:CE1	2.54	0.42
1:B:4830:ILE:HB	1:B:4842:ARG:NH2	2.34	0.42
1:C:290:ARG:HH11	1:C:346:VAL:HG21	1.85	0.42
1:C:4182:LYS:HD2	1:C:4182:LYS:HA	1.80	0.42
1:C:4608:LYS:HG2	1:C:4614:LEU:HD22	2.01	0.42
1:C:4913:ASN:HB3	1:C:4916:ASN:HB2	2.02	0.42
1:D:564:ARG:HD2	1:D:566:GLU:OE1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:799:LYS:HG2	1:D:1621:GLN:HE22	1.85	0.42
1:D:807:ARG:O	1:D:1615:ARG:NE	2.47	0.42
1:D:1086:ARG:HH21	1:D:1251:LEU:HD13	1.84	0.42
1:D:2716:LEU:HD22	1:D:2778:LEU:HD21	2.02	0.42
1:D:4029:ASP:OD1	1:D:4029:ASP:N	2.47	0.42
1:D:4583:PHE:O	1:D:4586:ILE:HG22	2.20	0.42
1:A:1308:ILE:HG12	1:A:1572:PHE:HD2	1.84	0.42
1:A:4583:PHE:O	1:A:4586:ILE:HG22	2.20	0.42
1:B:313:ASN:ND2	1:B:392:ILE:HD13	2.35	0.42
1:B:442:LEU:HG	1:B:444:THR:HG22	2.01	0.42
1:B:1747:HIS:O	1:B:1747:HIS:ND1	2.51	0.42
1:B:3762:ILE:HD12	1:B:3840:ARG:HG3	2.00	0.42
1:B:4138:MET:HE1	1:B:4142:LYS:H	1.84	0.42
1:B:4176:VAL:HG11	1:B:4879:VAL:HA	2.01	0.42
1:C:370:LEU:HB2	1:C:393:MET:HB2	2.02	0.42
1:C:564:ARG:HD2	1:C:566:GLU:OE1	2.20	0.42
1:C:1100:ARG:HB3	1:C:1236:TYR:CD2	2.55	0.42
1:C:2728:HIS:O	1:C:2732:SER:OG	2.28	0.42
1:C:2850:ILE:HG13	1:C:2851:TRP:N	2.35	0.42
1:C:4176:VAL:HG11	1:C:4879:VAL:HA	2.01	0.42
1:D:125:TYR:CE1	1:D:417:ARG:HD3	2.55	0.42
1:D:190:ARG:HD3	1:D:205:ALA:O	2.20	0.42
1:D:370:LEU:HB2	1:D:393:MET:HB2	2.02	0.42
1:D:868:ASP:OD1	1:D:868:ASP:N	2.52	0.42
1:D:878:LEU:HD11	1:D:951:GLY:HA2	2.02	0.42
1:D:2062:SER:O	1:D:2066:VAL:HG22	2.20	0.42
1:D:2276:CYS:HB2	1:D:2279:LEU:HG	2.02	0.42
1:D:3802:LEU:HD23	1:D:3829:LEU:HD13	2.02	0.42
2:J:28:THR:HA	2:J:39:SER:HA	2.01	0.42
1:A:446:ASP:O	1:A:448:PRO:HD3	2.20	0.41
1:A:1348:LYS:HA	1:A:1348:LYS:HD2	1.54	0.41
1:B:4895:ASP:OD1	1:B:4896:TYR:N	2.53	0.41
1:B:4941:LYS:HE2	1:B:4941:LYS:HB3	1.89	0.41
1:C:446:ASP:O	1:C:448:PRO:HD3	2.20	0.41
1:C:547:ASN:OD1	1:C:547:ASN:N	2.53	0.41
1:C:1006:VAL:HG13	1:C:1009:ARG:NH2	2.31	0.41
1:C:1308:ILE:HG12	1:C:1572:PHE:HD2	1.84	0.41
1:C:1629:MET:HG2	1:C:1688:TYR:CE2	2.54	0.41
1:C:1752:ILE:HD11	1:C:1840:LEU:HB3	2.02	0.41
1:C:3612:ARG:NH1	1:C:3612:ARG:O	2.52	0.41
1:C:3818:MET:SD	1:C:3818:MET:N	2.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3943:VAL:HG23	1:C:4001:MET:HE3	2.02	0.41
1:D:516:ASP:OD1	1:D:516:ASP:N	2.53	0.41
1:D:2722:LYS:HD2	1:D:2722:LYS:HA	1.87	0.41
1:A:245:LEU:HD11	1:A:260:VAL:HG12	2.01	0.41
1:A:2080:VAL:HG13	1:A:3669:LEU:HD22	2.02	0.41
1:A:2755:LEU:HD21	1:A:2764:GLU:OE2	2.20	0.41
1:A:3943:VAL:HG23	1:A:4001:MET:HE3	2.02	0.41
1:B:290:ARG:HH11	1:B:346:VAL:HG21	1.85	0.41
1:B:370:LEU:HB2	1:B:393:MET:HB2	2.02	0.41
1:B:547:ASN:OD1	1:B:547:ASN:N	2.53	0.41
1:B:2080:VAL:HG13	1:B:3669:LEU:HD22	2.02	0.41
1:B:2428:LEU:HA	1:B:2431:LEU:HD12	2.02	0.41
1:B:3943:VAL:HG23	1:B:4001:MET:HE3	2.02	0.41
1:C:190:ARG:HD3	1:C:205:ALA:O	2.20	0.41
1:C:490:GLN:O	1:C:490:GLN:NE2	2.47	0.41
1:C:514:PHE:HD2	1:C:523:GLY:HA2	1.85	0.41
1:C:516:ASP:OD1	1:C:516:ASP:N	2.53	0.41
1:C:878:LEU:HD11	1:C:951:GLY:HA2	2.02	0.41
1:C:1124:PRO:HB2	1:C:1252:SER:OG	2.20	0.41
1:C:2348:GLU:O	1:C:2352:ILE:HG12	2.20	0.41
1:D:1677:LEU:HA	1:D:1680:HIS:HB2	2.01	0.41
1:D:2191:MET:HA	1:D:2191:MET:HE3	2.00	0.41
1:D:2348:GLU:O	1:D:2352:ILE:HG12	2.20	0.41
1:A:290:ARG:HH11	1:A:346:VAL:HG21	1.85	0.41
1:A:324:VAL:O	1:A:328:ALA:HB2	2.21	0.41
1:A:334:SER:OG	1:A:335:LYS:N	2.53	0.41
1:A:894:VAL:HG22	1:A:918:LEU:HA	2.02	0.41
1:A:1752:ILE:HD11	1:A:1840:LEU:HB3	2.02	0.41
1:A:2716:LEU:HD22	1:A:2778:LEU:HD21	2.02	0.41
1:A:2735:LYS:HE2	1:A:2740:TRP:HB2	2.02	0.41
1:A:4830:ILE:HB	1:A:4842:ARG:NH2	2.34	0.41
1:B:190:ARG:HD3	1:B:205:ALA:O	2.20	0.41
1:B:514:PHE:HD2	1:B:523:GLY:HA2	1.85	0.41
1:B:808:HIS:CE1	1:B:832:LEU:HD23	2.56	0.41
1:B:894:VAL:HG22	1:B:918:LEU:HA	2.02	0.41
1:B:2317:ASN:HB3	1:B:2321:ARG:NH2	2.35	0.41
1:B:3898:ASP:OD1	1:B:3898:ASP:N	2.44	0.41
2:H:80:ASP:OD1	2:H:81:VAL:N	2.53	0.41
1:C:323:ASP:HB3	1:C:326:SER:HB3	2.02	0.41
2:I:80:ASP:OD1	2:I:81:VAL:N	2.53	0.41
1:D:894:VAL:HG22	1:D:918:LEU:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2317:ASN:HB3	1:D:2321:ARG:NH2	2.35	0.41
1:A:313:ASN:ND2	1:A:392:ILE:HD13	2.35	0.41
1:A:514:PHE:HD2	1:A:523:GLY:HA2	1.85	0.41
1:A:564:ARG:HD2	1:A:566:GLU:OE1	2.20	0.41
1:B:334:SER:OG	1:B:335:LYS:N	2.53	0.41
1:C:245:LEU:HD11	1:C:260:VAL:HG12	2.01	0.41
1:C:247:VAL:O	1:C:272:ARG:NH1	2.51	0.41
1:C:1091:GLU:HB3	1:C:1094:TYR:CD2	2.55	0.41
1:C:2428:LEU:HA	1:C:2431:LEU:HD12	2.02	0.41
1:C:2755:LEU:HD21	1:C:2764:GLU:OE2	2.20	0.41
1:C:4583:PHE:O	1:C:4586:ILE:HG22	2.20	0.41
1:D:712:GLU:OE1	1:D:841:LYS:HD3	2.21	0.41
1:D:1967:PRO:HD2	1:D:1970:GLU:OE2	2.20	0.41
1:D:4757:SER:O	1:D:4761:HIS:HB2	2.20	0.41
1:D:4913:ASN:HB3	1:D:4916:ASN:HB2	2.02	0.41
1:A:442:LEU:HG	1:A:444:THR:HG22	2.01	0.41
1:A:808:HIS:CE1	1:A:832:LEU:HD23	2.56	0.41
1:A:1967:PRO:HD2	1:A:1970:GLU:OE2	2.20	0.41
1:A:2317:ASN:HB3	1:A:2321:ARG:NH2	2.35	0.41
1:A:4176:VAL:HG11	1:A:4879:VAL:HA	2.01	0.41
1:B:125:TYR:CE1	1:B:417:ARG:HD3	2.55	0.41
1:B:564:ARG:HD2	1:B:566:GLU:OE1	2.20	0.41
1:B:799:LYS:HG2	1:B:1621:GLN:HE22	1.85	0.41
1:B:1091:GLU:HB3	1:B:1094:TYR:CD2	2.55	0.41
1:C:2317:ASN:HB3	1:C:2321:ARG:NH2	2.35	0.41
1:C:2722:LYS:HD2	1:C:2722:LYS:HA	1.87	0.41
1:D:290:ARG:HH11	1:D:346:VAL:HG21	1.85	0.41
1:D:547:ASN:OD1	1:D:547:ASN:N	2.53	0.41
1:D:2492:LEU:O	1:D:2496:ARG:HG3	2.21	0.41
1:D:2850:ILE:HG13	1:D:2851:TRP:N	2.35	0.41
1:A:47:CYS:O	1:A:202:HIS:NE2	2.51	0.41
1:A:2405:MET:SD	1:A:2407:LEU:HB2	2.61	0.41
1:A:2492:LEU:O	1:A:2496:ARG:HG3	2.21	0.41
1:A:3802:LEU:HD23	1:A:3829:LEU:HD13	2.02	0.41
1:A:4757:SER:O	1:A:4761:HIS:HB2	2.20	0.41
1:A:4830:ILE:HG22	1:A:4831:GLU:H	1.86	0.41
1:A:4895:ASP:OD1	1:A:4896:TYR:N	2.53	0.41
1:A:4913:ASN:HB3	1:A:4916:ASN:HB2	2.02	0.41
1:B:446:ASP:O	1:B:448:PRO:HD3	2.20	0.41
1:B:800:VAL:HB	1:B:1620:VAL:HG23	2.03	0.41
1:B:1100:ARG:HB3	1:B:1236:TYR:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2057:LEU:O	1:B:2060:LEU:HD23	2.19	0.41
1:B:2348:GLU:O	1:B:2352:ILE:HG12	2.20	0.41
1:B:2492:LEU:O	1:B:2496:ARG:HG3	2.21	0.41
1:B:2713:PRO:HG2	1:B:2716:LEU:HD12	2.03	0.41
1:B:2850:ILE:HG13	1:B:2851:TRP:N	2.35	0.41
1:C:217:ILE:HD13	1:C:217:ILE:HA	1.95	0.41
1:C:1567:LEU:HD11	1:C:1579:PRO:C	2.46	0.41
1:C:2062:SER:O	1:C:2066:VAL:HG22	2.20	0.41
1:C:2068:TRP:HE3	1:C:2083:MET:HE2	1.84	0.41
1:C:2405:MET:SD	1:C:2407:LEU:HB2	2.61	0.41
1:C:2713:PRO:HD3	1:C:2782:LEU:HD11	2.03	0.41
1:C:4757:SER:O	1:C:4761:HIS:HB2	2.20	0.41
2:I:83:TYR:HB3	2:I:87:GLY:HA2	2.01	0.41
1:D:323:ASP:HB3	1:D:326:SER:HB3	2.02	0.41
1:D:446:ASP:O	1:D:448:PRO:HD3	2.20	0.41
1:D:514:PHE:HD2	1:D:523:GLY:HA2	1.85	0.41
1:D:798:ILE:HD12	1:D:798:ILE:HA	1.93	0.41
1:D:1733:GLU:O	1:D:1736:SER:OG	2.30	0.41
1:D:2405:MET:SD	1:D:2407:LEU:HB2	2.61	0.41
1:D:4793:ASN:O	1:D:4795:SER:N	2.51	0.41
2:J:83:TYR:HB3	2:J:87:GLY:HA2	2.01	0.41
1:A:1100:ARG:HB3	1:A:1236:TYR:CD2	2.55	0.41
1:A:1966:SER:O	1:A:1966:SER:OG	2.31	0.41
1:A:2850:ILE:HG13	1:A:2851:TRP:N	2.35	0.41
1:A:3758:LEU:O	1:A:3762:ILE:HG12	2.20	0.41
1:B:1124:PRO:HB2	1:B:1252:SER:OG	2.20	0.41
2:H:28:THR:HA	2:H:39:SER:HA	2.01	0.41
2:H:72:ARG:HG2	2:H:103:GLU:HB2	2.03	0.41
1:C:380:LYS:HD2	1:C:380:LYS:HA	1.77	0.41
1:C:890:HIS:CE1	1:C:924:LEU:HD11	2.56	0.41
1:C:1009:ARG:O	1:C:1012:ILE:HG12	2.21	0.41
1:C:2122:LEU:HD22	1:C:2166:MET:HE2	2.02	0.41
1:C:2276:CYS:HB2	1:C:2279:LEU:HG	2.02	0.41
1:C:2894:PHE:O	1:C:2897:ILE:HG22	2.21	0.41
1:C:4039:LYS:HB2	1:C:4039:LYS:HE2	1.88	0.41
1:D:161:THR:HG23	1:D:184:VAL:HB	2.01	0.41
1:D:2713:PRO:HG2	1:D:2716:LEU:HD12	2.03	0.41
1:D:4070:GLU:OE1	1:D:4070:GLU:N	2.50	0.41
1:A:882:ARG:CG	1:A:940:LEU:HD22	2.51	0.41
1:A:2282:LYS:HA	1:A:2282:LYS:HD2	1.90	0.41
1:A:2348:GLU:O	1:A:2352:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:698:ALA:HA	1:B:724:SER:HA	2.03	0.41
1:B:888:ASN:O	1:B:891:GLU:HG2	2.21	0.41
1:B:2122:LEU:HD22	1:B:2166:MET:HE2	2.02	0.41
1:B:2713:PRO:HD3	1:B:2782:LEU:HD11	2.03	0.41
1:B:2716:LEU:HD22	1:B:2778:LEU:HD21	2.02	0.41
1:C:281:ARG:NH1	1:C:346:VAL:O	2.37	0.41
1:C:323:ASP:O	1:C:327:THR:OG1	2.34	0.41
1:C:3802:LEU:HD23	1:C:3829:LEU:HD13	2.02	0.41
1:C:4165:LYS:HB2	1:C:4165:LYS:HE3	1.84	0.41
2:I:72:ARG:HG2	2:I:103:GLU:HB2	2.03	0.41
1:D:313:ASN:ND2	1:D:392:ILE:HD13	2.35	0.41
1:D:1009:ARG:O	1:D:1012:ILE:HG12	2.21	0.41
1:D:1100:ARG:HB3	1:D:1236:TYR:CD2	2.55	0.41
1:A:323:ASP:HB3	1:A:326:SER:HB3	2.02	0.41
1:A:712:GLU:OE1	1:A:841:LYS:HD3	2.21	0.41
1:A:1009:ARG:O	1:A:1012:ILE:HG12	2.21	0.41
1:A:1124:PRO:HB2	1:A:1252:SER:OG	2.20	0.41
1:A:1682:ASP:HB3	1:A:1684:PRO:HD2	2.02	0.41
1:A:2062:SER:O	1:A:2066:VAL:HG22	2.20	0.41
1:A:2278:MET:N	1:A:2278:MET:SD	2.94	0.41
1:A:3612:ARG:O	1:A:3612:ARG:NH1	2.52	0.41
1:A:3671:SER:OG	1:A:3741:GLN:OE1	2.23	0.41
2:G:78:THR:HB	2:G:81:VAL:HG12	2.03	0.41
1:B:290:ARG:H	1:B:293:GLN:NE2	2.16	0.41
1:B:712:GLU:OE1	1:B:841:LYS:HD3	2.21	0.41
1:B:882:ARG:CG	1:B:940:LEU:HD22	2.51	0.41
1:B:890:HIS:CE1	1:B:924:LEU:HD11	2.55	0.41
1:B:1567:LEU:HD11	1:B:1579:PRO:C	2.46	0.41
1:B:1677:LEU:HA	1:B:1680:HIS:HB2	2.01	0.41
1:B:1967:PRO:HD2	1:B:1970:GLU:OE2	2.20	0.41
1:B:2278:MET:SD	1:B:2278:MET:N	2.94	0.41
1:B:4280:LEU:HD23	1:B:4280:LEU:HA	1.97	0.41
1:B:4830:ILE:HG22	1:B:4831:GLU:H	1.86	0.41
2:H:78:THR:HB	2:H:81:VAL:HG12	2.03	0.41
1:C:161:THR:HG23	1:C:184:VAL:HB	2.01	0.41
1:C:313:ASN:ND2	1:C:392:ILE:HD13	2.35	0.41
1:C:670:TYR:CE2	1:C:672:LYS:HD2	2.56	0.41
1:C:894:VAL:HG22	1:C:918:LEU:HA	2.02	0.41
1:C:1031:ARG:HA	1:C:1031:ARG:HD3	1.85	0.41
1:C:1682:ASP:HB3	1:C:1684:PRO:HD2	2.02	0.41
1:C:1967:PRO:HD2	1:C:1970:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2713:PRO:HG2	1:C:2716:LEU:HD12	2.03	0.41
1:C:3802:LEU:HB2	1:C:3883:SER:HG	1.84	0.41
2:I:28:THR:HA	2:I:39:SER:HA	2.01	0.41
1:D:324:VAL:O	1:D:328:ALA:HB2	2.21	0.41
1:D:808:HIS:CE1	1:D:832:LEU:HD23	2.56	0.41
1:D:1217:PHE:O	1:D:1240:ALA:N	2.54	0.41
1:D:4001:MET:HE2	1:D:4001:MET:HB2	1.95	0.41
1:D:4189:VAL:HG21	1:D:4948:TRP:CZ2	2.56	0.41
1:D:4857:LEU:HD23	1:D:4857:LEU:HA	1.94	0.41
1:A:800:VAL:HB	1:A:1620:VAL:HG23	2.03	0.41
1:A:2713:PRO:HD3	1:A:2782:LEU:HD11	2.03	0.41
2:G:88:HIS:HD2	2:G:89:PRO:HD2	1.86	0.41
1:B:323:ASP:HB3	1:B:326:SER:HB3	2.02	0.41
1:B:1050:LEU:HD13	1:B:1050:LEU:HA	1.94	0.41
1:B:2144:GLY:O	1:B:2148:ILE:HG12	2.21	0.41
1:C:882:ARG:HD2	1:C:937:LEU:HD23	2.03	0.41
1:C:1160:ASP:HB3	1:C:1178:ASN:HD21	1.86	0.41
1:C:1677:LEU:HA	1:C:1680:HIS:HB2	2.01	0.41
1:C:1744:ASN:ND2	1:C:1746:LYS:HE2	2.31	0.41
1:C:1829:LEU:O	1:C:1834:ILE:HG12	2.21	0.41
1:C:4830:ILE:HG22	1:C:4831:GLU:H	1.86	0.41
1:D:2080:VAL:HG13	1:D:3669:LEU:HD22	2.02	0.41
1:A:370:LEU:HB2	1:A:393:MET:HB2	2.02	0.40
1:A:547:ASN:OD1	1:A:547:ASN:N	2.53	0.40
1:B:324:VAL:O	1:B:328:ALA:HB2	2.21	0.40
1:B:1682:ASP:HB3	1:B:1684:PRO:HD2	2.02	0.40
1:B:4189:VAL:HG21	1:B:4948:TRP:CZ2	2.56	0.40
2:H:88:HIS:HD2	2:H:89:PRO:HD2	1.86	0.40
1:C:47:CYS:O	1:C:202:HIS:NE2	2.51	0.40
1:C:800:VAL:HB	1:C:1620:VAL:HG23	2.03	0.40
1:C:808:HIS:CE1	1:C:832:LEU:HD23	2.56	0.40
1:C:888:ASN:O	1:C:891:GLU:HG2	2.21	0.40
1:C:2716:LEU:HD22	1:C:2778:LEU:HD21	2.02	0.40
1:C:4189:VAL:HG21	1:C:4948:TRP:CZ2	2.56	0.40
2:I:78:THR:HB	2:I:81:VAL:HG12	2.03	0.40
1:D:882:ARG:HD2	1:D:937:LEU:HD23	2.03	0.40
1:D:2156:GLN:O	1:D:3614:ARG:NH1	2.54	0.40
1:D:2471:LEU:HD23	1:D:2471:LEU:HA	1.83	0.40
1:A:398:HIS:C	1:A:399:MET:HE2	2.46	0.40
1:A:795:SER:OG	1:A:796:ALA:N	2.54	0.40
1:A:890:HIS:CE1	1:A:924:LEU:HD11	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1106:GLU:HG2	1:A:1161:VAL:HG12	2.04	0.40
1:A:2713:PRO:HG2	1:A:2716:LEU:HD12	2.03	0.40
1:A:2858:GLU:O	1:A:2862:LYS:HE3	2.22	0.40
1:B:1057:LEU:HD12	1:B:1062:TYR:HB2	2.04	0.40
1:B:2062:SER:O	1:B:2066:VAL:HG22	2.20	0.40
1:B:2156:GLN:O	1:B:3614:ARG:NH1	2.54	0.40
1:B:4583:PHE:O	1:B:4586:ILE:HG22	2.20	0.40
1:C:324:VAL:O	1:C:328:ALA:HB2	2.21	0.40
1:C:2156:GLN:O	1:C:3614:ARG:NH1	2.54	0.40
1:D:655:MET:HE3	1:D:834:VAL:HG12	2.03	0.40
1:D:882:ARG:CG	1:D:940:LEU:HD22	2.51	0.40
1:D:1752:ILE:HD11	1:D:1840:LEU:HB3	2.02	0.40
1:D:2428:LEU:HA	1:D:2431:LEU:HD12	2.02	0.40
1:D:2858:GLU:O	1:D:2862:LYS:HE3	2.22	0.40
2:J:22:THR:HG23	2:J:108:GLU:HB2	2.04	0.40
1:A:878:LEU:HD11	1:A:951:GLY:HA2	2.02	0.40
1:A:2144:GLY:O	1:A:2148:ILE:HG12	2.21	0.40
1:A:2428:LEU:HA	1:A:2431:LEU:HD12	2.02	0.40
1:A:2763:SER:N	1:A:2766:GLU:HB2	2.36	0.40
1:A:4182:LYS:HD2	1:A:4182:LYS:HA	1.80	0.40
2:G:22:THR:HG23	2:G:108:GLU:HB2	2.03	0.40
1:B:642:LEU:HD12	1:B:642:LEU:HA	1.90	0.40
1:B:878:LEU:HD11	1:B:951:GLY:HA2	2.02	0.40
1:B:2735:LYS:HE2	1:B:2740:TRP:HB2	2.02	0.40
1:B:2763:SER:N	1:B:2766:GLU:HB2	2.36	0.40
1:C:698:ALA:HA	1:C:724:SER:HA	2.03	0.40
1:C:1057:LEU:HD12	1:C:1062:TYR:HB2	2.04	0.40
1:C:1304:LEU:HD12	1:C:1340:ASP:HB2	2.03	0.40
1:D:698:ALA:HA	1:D:724:SER:HA	2.03	0.40
1:D:890:HIS:CE1	1:D:924:LEU:HD11	2.56	0.40
1:D:1106:GLU:HG2	1:D:1161:VAL:HG12	2.04	0.40
1:D:1567:LEU:HD11	1:D:1579:PRO:C	2.46	0.40
1:D:4830:ILE:HD12	1:D:4842:ARG:HH21	1.87	0.40
2:J:72:ARG:HG2	2:J:103:GLU:HB2	2.03	0.40
1:A:674:TYR:CE2	1:A:756:SER:HB2	2.57	0.40
1:A:1217:PHE:O	1:A:1240:ALA:N	2.54	0.40
1:A:2156:GLN:O	1:A:3614:ARG:NH1	2.54	0.40
1:A:2894:PHE:O	1:A:2897:ILE:HG22	2.21	0.40
1:A:4193:GLU:OE2	1:A:4943:TYR:OH	2.33	0.40
2:G:72:ARG:HG2	2:G:103:GLU:HB2	2.03	0.40
1:B:398:HIS:C	1:B:399:MET:HE2	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:670:TYR:CE2	1:B:672:LYS:HD2	2.56	0.40
1:B:674:TYR:CE2	1:B:756:SER:HB2	2.57	0.40
1:B:1106:GLU:HG2	1:B:1161:VAL:HG12	2.04	0.40
1:B:2314:GLU:O	1:B:2318:VAL:HG22	2.22	0.40
2:H:22:THR:HG23	2:H:108:GLU:HB2	2.04	0.40
1:C:625:VAL:HG21	1:C:628:ASN:HD22	1.86	0.40
1:C:4055:LYS:HE3	1:C:4055:LYS:HB2	1.92	0.40
1:D:2278:MET:N	1:D:2278:MET:SD	2.94	0.40
1:A:888:ASN:O	1:A:891:GLU:HG2	2.21	0.40
1:A:1733:GLU:O	1:A:1736:SER:OG	2.30	0.40
1:A:2107:ILE:HG22	1:A:2157:HIS:CD2	2.57	0.40
1:A:3842:LEU:HD23	1:A:3842:LEU:HA	1.96	0.40
1:B:1595:VAL:O	1:B:1595:VAL:HG13	2.22	0.40
1:B:2405:MET:SD	1:B:2407:LEU:HB2	2.61	0.40
1:B:2728:HIS:O	1:B:2732:SER:OG	2.28	0.40
1:B:2858:GLU:O	1:B:2862:LYS:HE3	2.22	0.40
1:C:882:ARG:CG	1:C:940:LEU:HD22	2.51	0.40
1:C:2144:GLY:O	1:C:2148:ILE:HG12	2.21	0.40
1:C:2278:MET:SD	1:C:2278:MET:N	2.94	0.40
1:C:2471:LEU:HD23	1:C:2471:LEU:HA	1.83	0.40
2:I:88:HIS:HD2	2:I:89:PRO:HD2	1.86	0.40
1:D:380:LYS:HA	1:D:380:LYS:HD2	1.77	0.40
1:D:1682:ASP:HB3	1:D:1684:PRO:HD2	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3255/4966 (66%)	3049 (94%)	206 (6%)	0	100	100
1	B	3255/4966 (66%)	3053 (94%)	202 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C	3255/4966 (66%)	3051 (94%)	204 (6%)	0	100	100
1	D	3255/4966 (66%)	3050 (94%)	205 (6%)	0	100	100
2	G	105/176 (60%)	103 (98%)	2 (2%)	0	100	100
2	H	105/176 (60%)	103 (98%)	2 (2%)	0	100	100
2	I	105/176 (60%)	103 (98%)	2 (2%)	0	100	100
2	J	105/176 (60%)	103 (98%)	2 (2%)	0	100	100
All	All	13440/20568 (65%)	12615 (94%)	825 (6%)	0	100	100

There are no Ramachandran outliers to report.

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	2862/3387 (84%)	2823 (99%)	39 (1%)	59	73
1	B	2862/3387 (84%)	2823 (99%)	39 (1%)	59	73
1	C	2862/3387 (84%)	2823 (99%)	39 (1%)	59	73
1	D	2862/3387 (84%)	2823 (99%)	39 (1%)	59	73
2	G	88/140 (63%)	86 (98%)	2 (2%)	44	66
2	H	88/140 (63%)	86 (98%)	2 (2%)	44	66
2	I	88/140 (63%)	86 (98%)	2 (2%)	44	66
2	J	88/140 (63%)	86 (98%)	2 (2%)	44	66
All	All	11800/14108 (84%)	11636 (99%)	164 (1%)	57	73

All (164) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	31	GLU
1	A	113	LEU
1	A	270	HIS
1	A	541	ILE

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Mol	Chain	Res	Type
1	A	551	PHE
1	A	730	LEU
1	A	851	LEU
1	A	995	MET
1	A	1050	LEU
1	A	1162	VAL
1	A	1261	VAL
1	A	1348	LYS
1	A	1673	VAL
1	A	1677	LEU
1	A	1728	VAL
1	A	1814	THR
1	A	1843	ILE
1	A	1846	LEU
1	A	2089	ARG
1	A	2215	ASP
1	A	2220	LEU
1	A	2241	VAL
1	A	2280	VAL
1	A	2425	LEU
1	A	2761	LEU
1	A	2890	ASP
1	A	2897	ILE
1	A	2901	VAL
1	A	2903	SER
1	A	3616	VAL
1	A	3676	THR
1	A	3828	VAL
1	A	3865	THR
1	A	4152	SER
1	A	4187	LEU
1	A	4648	VAL
1	A	4668	LEU
1	A	4803	MET
1	A	4830	ILE
2	G	3	VAL
2	G	26	HIS
1	B	31	GLU
1	B	113	LEU
1	B	270	HIS
1	B	541	ILE
1	B	551	PHE

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Mol	Chain	Res	Type
1	B	730	LEU
1	B	851	LEU
1	B	995	MET
1	B	1050	LEU
1	B	1162	VAL
1	B	1261	VAL
1	B	1348	LYS
1	B	1673	VAL
1	B	1677	LEU
1	B	1728	VAL
1	B	1814	THR
1	B	1843	ILE
1	B	1846	LEU
1	B	2089	ARG
1	B	2215	ASP
1	B	2220	LEU
1	B	2241	VAL
1	B	2280	VAL
1	B	2425	LEU
1	B	2761	LEU
1	B	2890	ASP
1	B	2897	ILE
1	B	2901	VAL
1	B	2903	SER
1	B	3616	VAL
1	B	3676	THR
1	B	3828	VAL
1	B	3865	THR
1	B	4152	SER
1	B	4187	LEU
1	B	4648	VAL
1	B	4668	LEU
1	B	4803	MET
1	B	4830	ILE
2	H	3	VAL
2	H	26	HIS
1	C	31	GLU
1	C	113	LEU
1	C	270	HIS
1	C	541	ILE
1	C	551	PHE
1	C	730	LEU

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Mol	Chain	Res	Type
1	C	851	LEU
1	C	995	MET
1	C	1050	LEU
1	C	1162	VAL
1	C	1261	VAL
1	C	1348	LYS
1	C	1673	VAL
1	C	1677	LEU
1	C	1728	VAL
1	C	1814	THR
1	C	1843	ILE
1	C	1846	LEU
1	C	2089	ARG
1	C	2215	ASP
1	C	2220	LEU
1	C	2241	VAL
1	C	2280	VAL
1	C	2425	LEU
1	C	2761	LEU
1	C	2890	ASP
1	C	2897	ILE
1	C	2901	VAL
1	C	2903	SER
1	C	3616	VAL
1	C	3676	THR
1	C	3828	VAL
1	C	3865	THR
1	C	4152	SER
1	C	4187	LEU
1	C	4648	VAL
1	C	4668	LEU
1	C	4803	MET
1	C	4830	ILE
2	I	3	VAL
2	I	26	HIS
1	D	31	GLU
1	D	113	LEU
1	D	270	HIS
1	D	541	ILE
1	D	551	PHE
1	D	730	LEU
1	D	851	LEU

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Mol	Chain	Res	Type
1	D	995	MET
1	D	1050	LEU
1	D	1162	VAL
1	D	1261	VAL
1	D	1348	LYS
1	D	1673	VAL
1	D	1677	LEU
1	D	1728	VAL
1	D	1814	THR
1	D	1843	ILE
1	D	1846	LEU
1	D	2089	ARG
1	D	2215	ASP
1	D	2220	LEU
1	D	2241	VAL
1	D	2280	VAL
1	D	2425	LEU
1	D	2761	LEU
1	D	2890	ASP
1	D	2897	ILE
1	D	2901	VAL
1	D	2903	SER
1	D	3616	VAL
1	D	3676	THR
1	D	3828	VAL
1	D	3865	THR
1	D	4152	SER
1	D	4187	LEU
1	D	4648	VAL
1	D	4668	LEU
1	D	4803	MET
1	D	4830	ILE
2	J	3	VAL
2	J	26	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (269) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	12	GLN
1	A	117	HIS
1	A	123	HIS
1	A	150	GLN

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Mol	Chain	Res	Type
1	A	193	HIS
1	A	238	HIS
1	A	293	GLN
1	A	313	ASN
1	A	487	ASN
1	A	544	ASN
1	A	550	GLN
1	A	576	HIS
1	A	593	HIS
1	A	645	GLN
1	A	669	GLN
1	A	681	HIS
1	A	716	ASN
1	A	808	HIS
1	A	888	ASN
1	A	932	ASN
1	A	934	GLN
1	A	971	GLN
1	A	1178	ASN
1	A	1265	HIS
1	A	1351	HIS
1	A	1590	GLN
1	A	1670	ASN
1	A	1744	ASN
1	A	1944	ASN
1	A	1973	ASN
1	A	2088	HIS
1	A	2090	GLN
1	A	2117	ASN
1	A	2150	ASN
1	A	2151	ASN
1	A	2157	HIS
1	A	2208	GLN
1	A	2274	GLN
1	A	2290	ASN
1	A	2308	ASN
1	A	2317	ASN
1	A	2480	GLN
1	A	2849	ASN
1	A	2866	ASN
1	A	3665	GLN
1	A	3699	HIS

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Mol	Chain	Res	Type
1	A	3952	HIS
1	A	3954	GLN
1	A	3959	GLN
1	A	3974	GLN
1	A	4008	ASN
1	A	4491	ASN
1	A	4496	ASN
1	A	4619	GLN
1	A	4641	ASN
1	A	4642	ASN
1	A	4765	GLN
1	A	4786	ASN
1	A	4926	ASN
2	G	26	HIS
2	G	32	GLN
2	G	88	HIS
1	B	12	GLN
1	B	117	HIS
1	B	123	HIS
1	B	150	GLN
1	B	193	HIS
1	B	238	HIS
1	B	293	GLN
1	B	313	ASN
1	B	487	ASN
1	B	544	ASN
1	B	550	GLN
1	B	576	HIS
1	B	593	HIS
1	B	628	ASN
1	B	645	GLN
1	B	669	GLN
1	B	716	ASN
1	B	776	GLN
1	B	808	HIS
1	B	888	ASN
1	B	932	ASN
1	B	934	GLN
1	B	971	GLN
1	B	1046	ASN
1	B	1169	ASN
1	B	1178	ASN

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Mol	Chain	Res	Type
1	B	1233	GLN
1	B	1265	HIS
1	B	1351	HIS
1	B	1590	GLN
1	B	1670	ASN
1	B	1675	HIS
1	B	1744	ASN
1	B	1944	ASN
1	B	1973	ASN
1	B	2088	HIS
1	B	2090	GLN
1	B	2117	ASN
1	B	2150	ASN
1	B	2151	ASN
1	B	2157	HIS
1	B	2208	GLN
1	B	2274	GLN
1	B	2290	ASN
1	B	2308	ASN
1	B	2317	ASN
1	B	2480	GLN
1	B	2849	ASN
1	B	2866	ASN
1	B	2889	GLN
1	B	3665	GLN
1	B	3952	HIS
1	B	3954	GLN
1	B	3959	GLN
1	B	3974	GLN
1	B	4008	ASN
1	B	4200	GLN
1	B	4491	ASN
1	B	4496	ASN
1	B	4619	GLN
1	B	4641	ASN
1	B	4642	ASN
1	B	4765	GLN
1	B	4786	ASN
1	B	4894	ASN
1	B	4935	GLN
2	H	26	HIS
2	H	32	GLN

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Mol	Chain	Res	Type
2	H	88	HIS
1	C	12	GLN
1	C	117	HIS
1	C	123	HIS
1	C	150	GLN
1	C	193	HIS
1	C	238	HIS
1	C	270	HIS
1	C	293	GLN
1	C	313	ASN
1	C	487	ASN
1	C	544	ASN
1	C	550	GLN
1	C	576	HIS
1	C	593	HIS
1	C	645	GLN
1	C	669	GLN
1	C	681	HIS
1	C	716	ASN
1	C	776	GLN
1	C	808	HIS
1	C	888	ASN
1	C	932	ASN
1	C	934	GLN
1	C	971	GLN
1	C	1046	ASN
1	C	1169	ASN
1	C	1178	ASN
1	C	1265	HIS
1	C	1353	HIS
1	C	1590	GLN
1	C	1670	ASN
1	C	1744	ASN
1	C	1944	ASN
1	C	1973	ASN
1	C	2088	HIS
1	C	2090	GLN
1	C	2117	ASN
1	C	2150	ASN
1	C	2151	ASN
1	C	2157	HIS
1	C	2208	GLN

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Mol	Chain	Res	Type
1	C	2274	GLN
1	C	2290	ASN
1	C	2308	ASN
1	C	2317	ASN
1	C	2480	GLN
1	C	2849	ASN
1	C	2866	ASN
1	C	3931	GLN
1	C	3932	GLN
1	C	3952	HIS
1	C	3954	GLN
1	C	3959	GLN
1	C	3974	GLN
1	C	4008	ASN
1	C	4491	ASN
1	C	4496	ASN
1	C	4619	GLN
1	C	4641	ASN
1	C	4642	ASN
1	C	4765	GLN
1	C	4786	ASN
1	C	4926	ASN
2	I	26	HIS
2	I	32	GLN
2	I	88	HIS
1	D	12	GLN
1	D	117	HIS
1	D	123	HIS
1	D	150	GLN
1	D	193	HIS
1	D	238	HIS
1	D	270	HIS
1	D	293	GLN
1	D	313	ASN
1	D	394	HIS
1	D	487	ASN
1	D	544	ASN
1	D	550	GLN
1	D	576	HIS
1	D	593	HIS
1	D	628	ASN
1	D	645	GLN

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Mol	Chain	Res	Type
1	D	669	GLN
1	D	681	HIS
1	D	716	ASN
1	D	808	HIS
1	D	888	ASN
1	D	932	ASN
1	D	934	GLN
1	D	971	GLN
1	D	1046	ASN
1	D	1169	ASN
1	D	1178	ASN
1	D	1265	HIS
1	D	1351	HIS
1	D	1590	GLN
1	D	1670	ASN
1	D	1675	HIS
1	D	1744	ASN
1	D	1944	ASN
1	D	1973	ASN
1	D	2088	HIS
1	D	2090	GLN
1	D	2117	ASN
1	D	2150	ASN
1	D	2151	ASN
1	D	2157	HIS
1	D	2208	GLN
1	D	2274	GLN
1	D	2290	ASN
1	D	2308	ASN
1	D	2317	ASN
1	D	2480	GLN
1	D	2726	HIS
1	D	2849	ASN
1	D	2866	ASN
1	D	2889	GLN
1	D	3665	GLN
1	D	3773	GLN
1	D	3850	ASN
1	D	3952	HIS
1	D	3954	GLN
1	D	3959	GLN
1	D	3974	GLN

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Mol	Chain	Res	Type
1	D	4008	ASN
1	D	4491	ASN
1	D	4496	ASN
1	D	4619	GLN
1	D	4641	ASN
1	D	4642	ASN
1	D	4765	GLN
1	D	4786	ASN
1	D	4926	ASN
1	D	4935	GLN
2	J	26	HIS
2	J	32	GLN
2	J	88	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

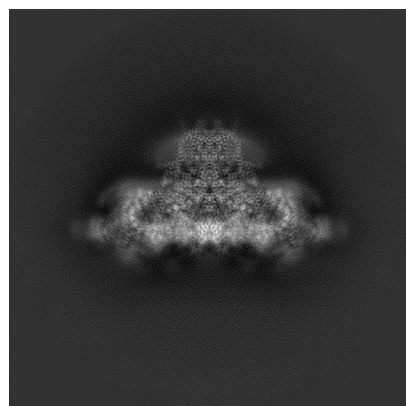
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-33935. These allow visual inspection of the internal detail of the map and identification of artifacts.

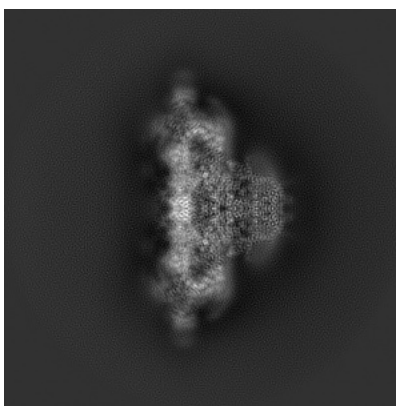
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

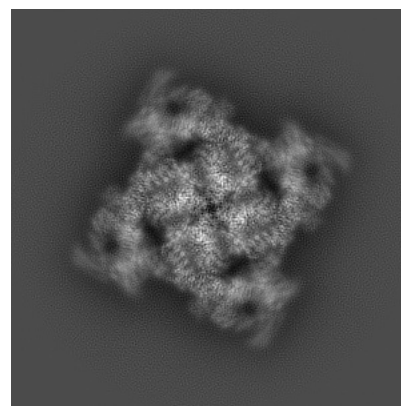
6.1.1 Primary map



X

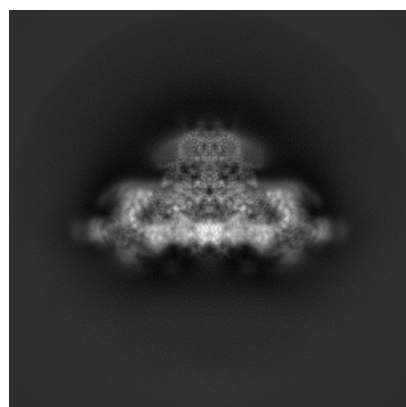


Y

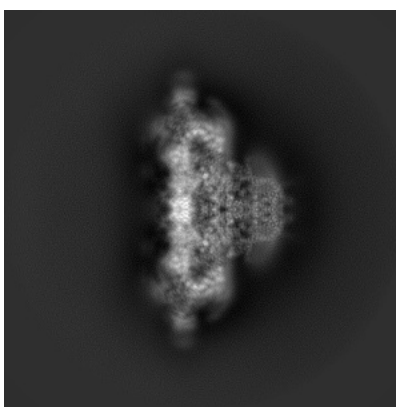


Z

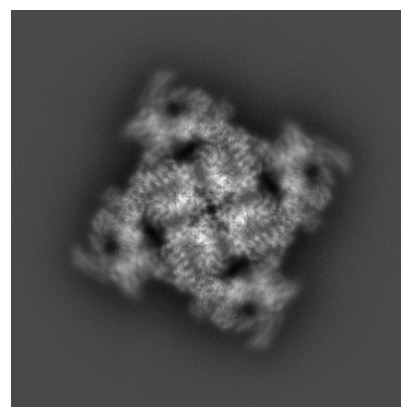
6.1.2 Raw map



X



Y

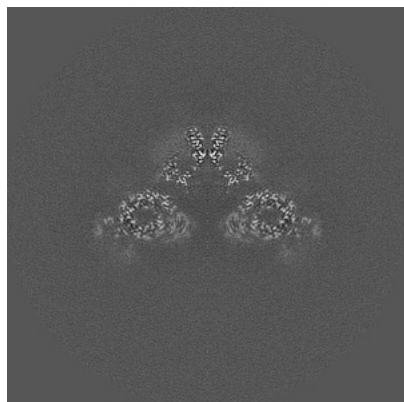


Z

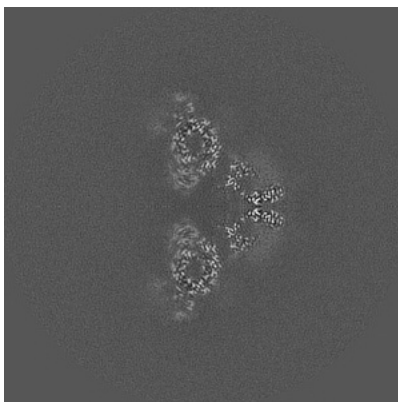
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

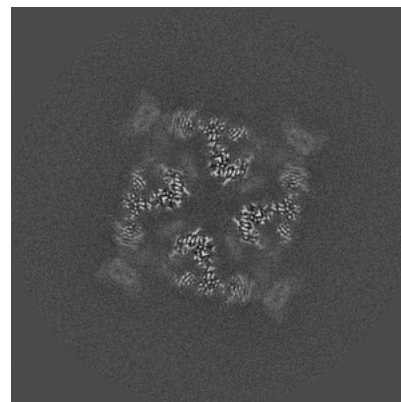
6.2.1 Primary map



X Index: 200

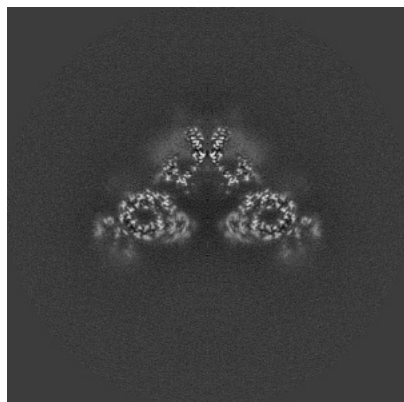


Y Index: 200

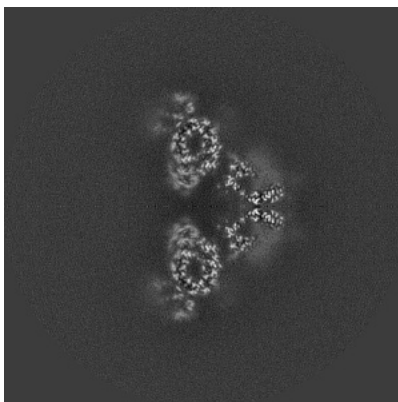


Z Index: 200

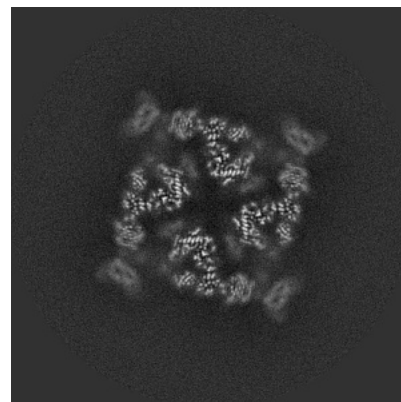
6.2.2 Raw map



X Index: 200



Y Index: 200

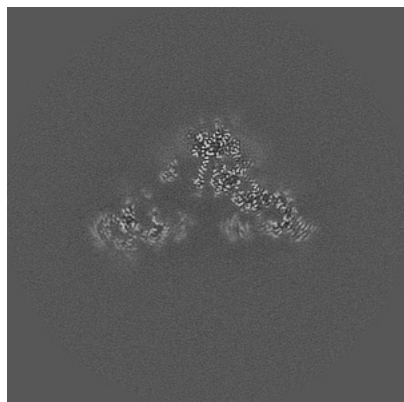


Z Index: 200

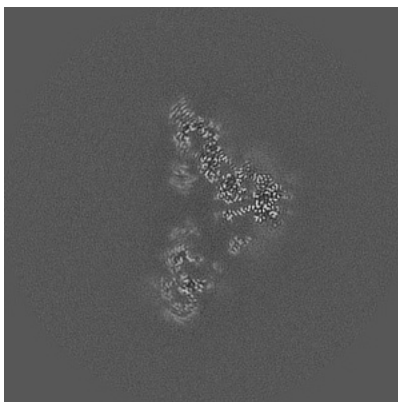
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

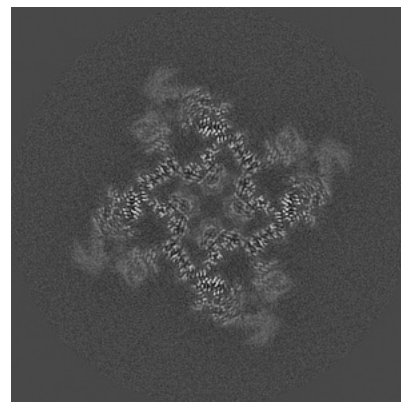
6.3.1 Primary map



X Index: 207

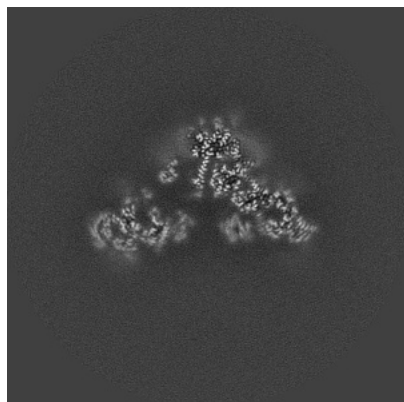


Y Index: 193

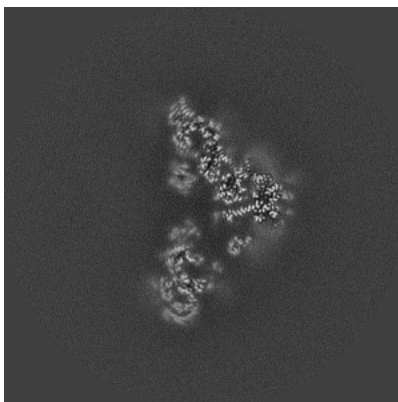


Z Index: 183

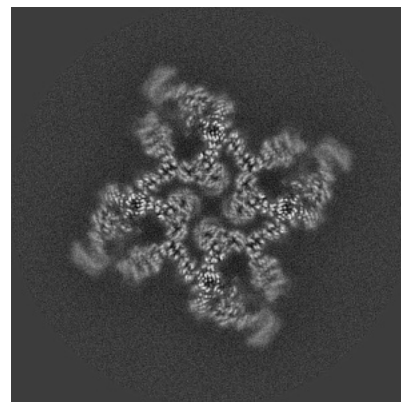
6.3.2 Raw map



X Index: 207



Y Index: 193

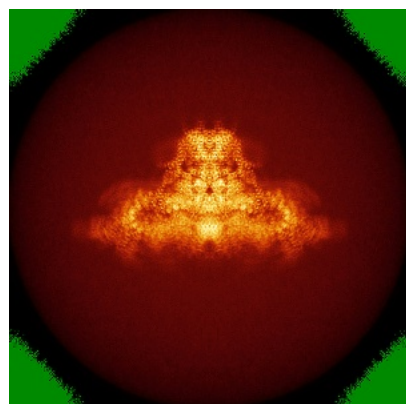


Z Index: 180

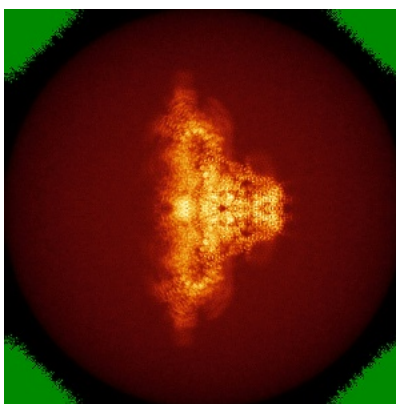
The images above show the largest variance slices of the map in three orthogonal directions.

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

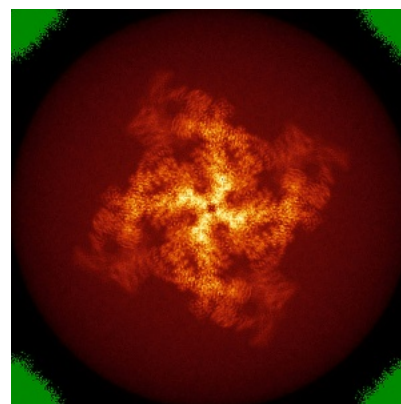
6.4.1 Primary map



X

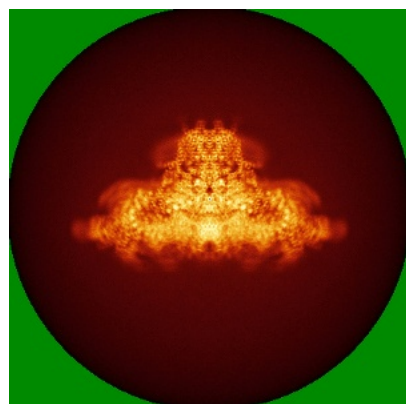


Y

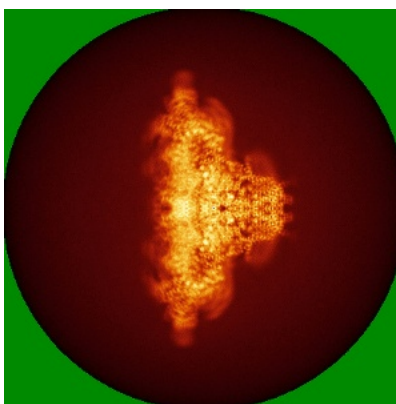


Z

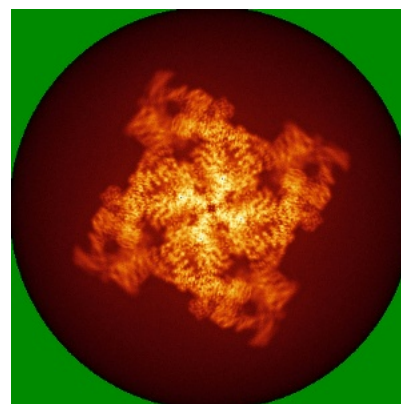
6.4.2 Raw map



X



Y

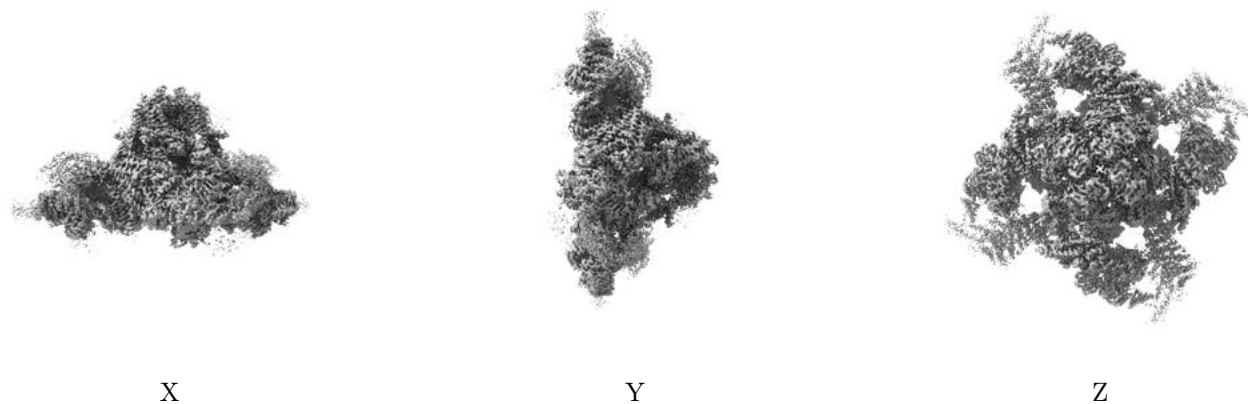


Z

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.

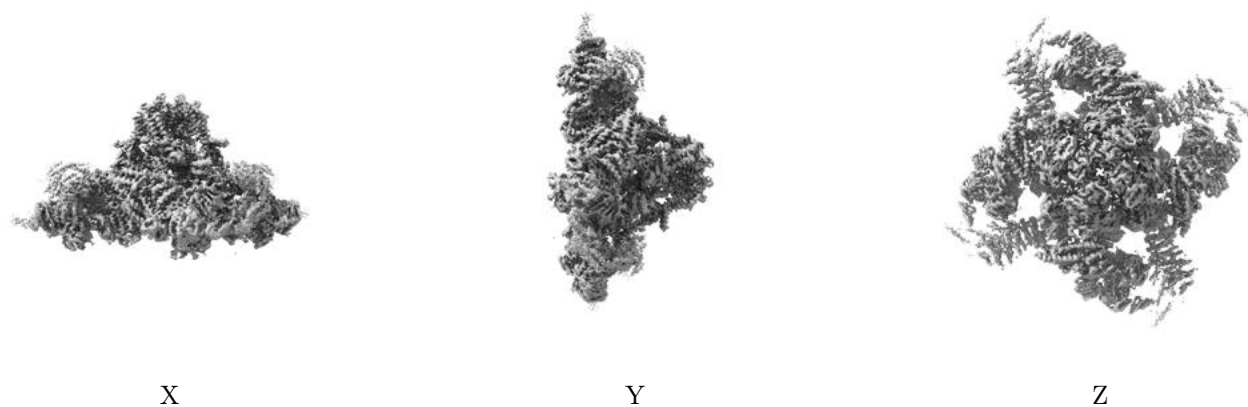
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.023. 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.

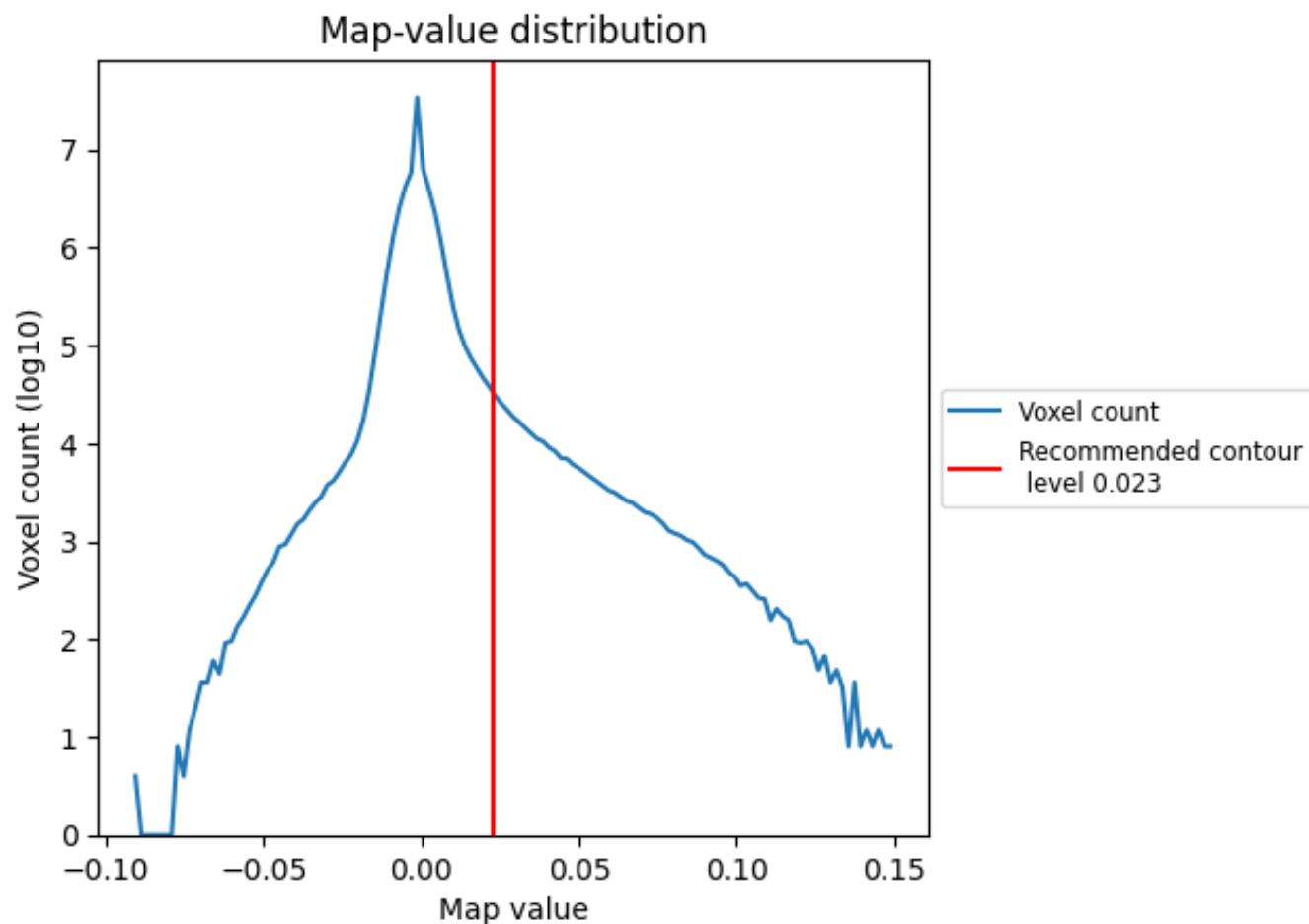
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

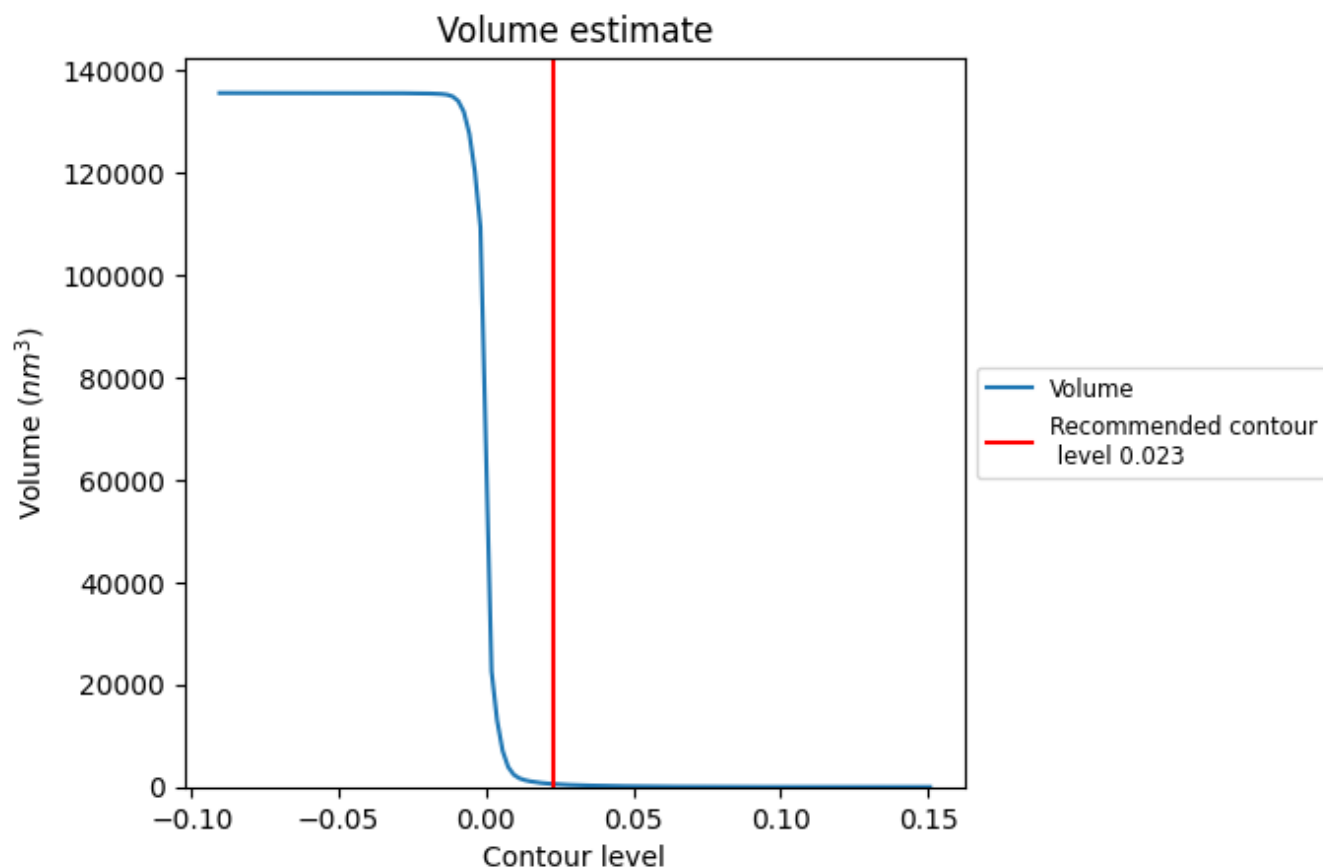
This section contains the results of statistical analysis of the map.

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.

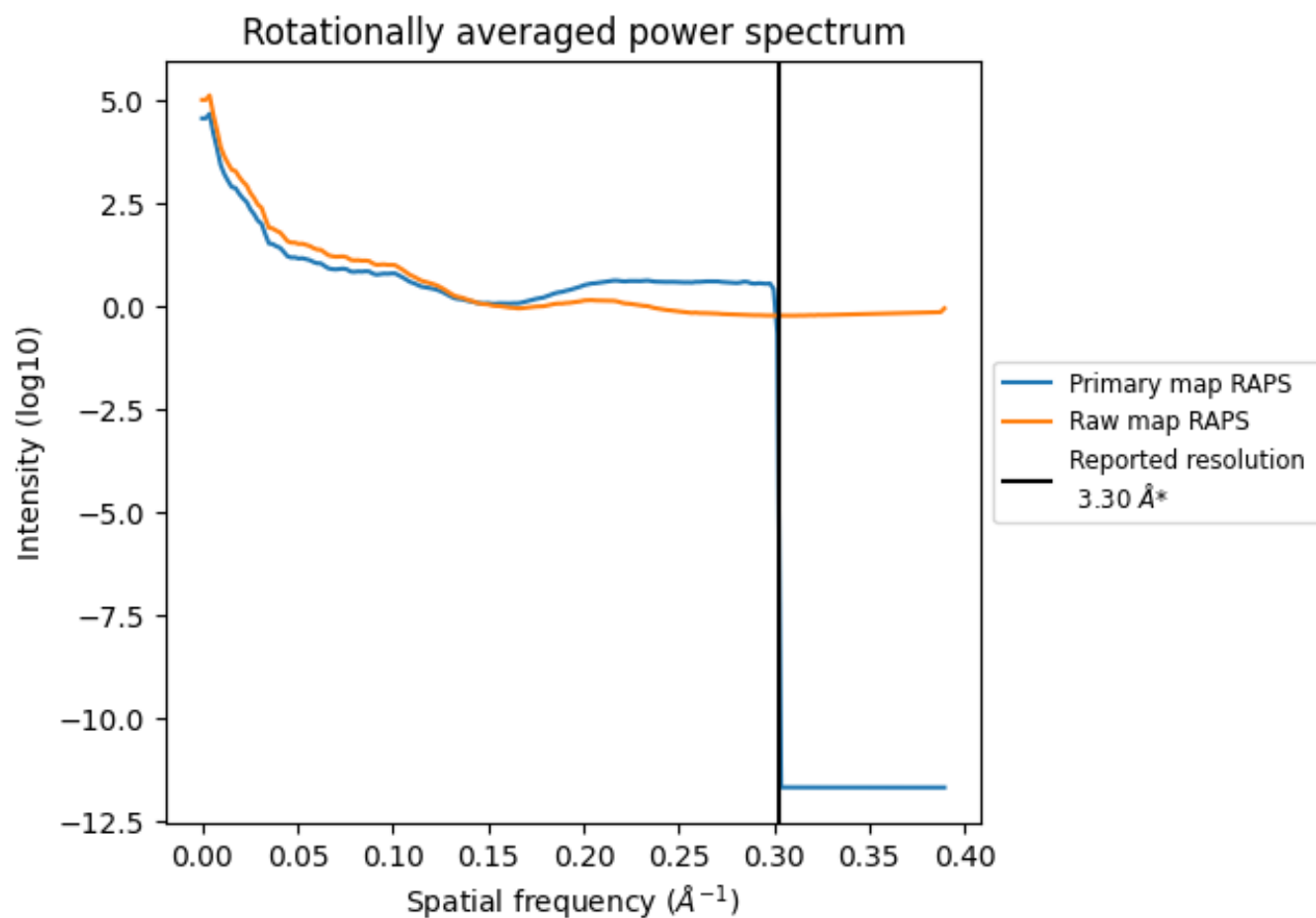
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 568 nm³; this corresponds to an approximate mass of 513 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 ⓘ

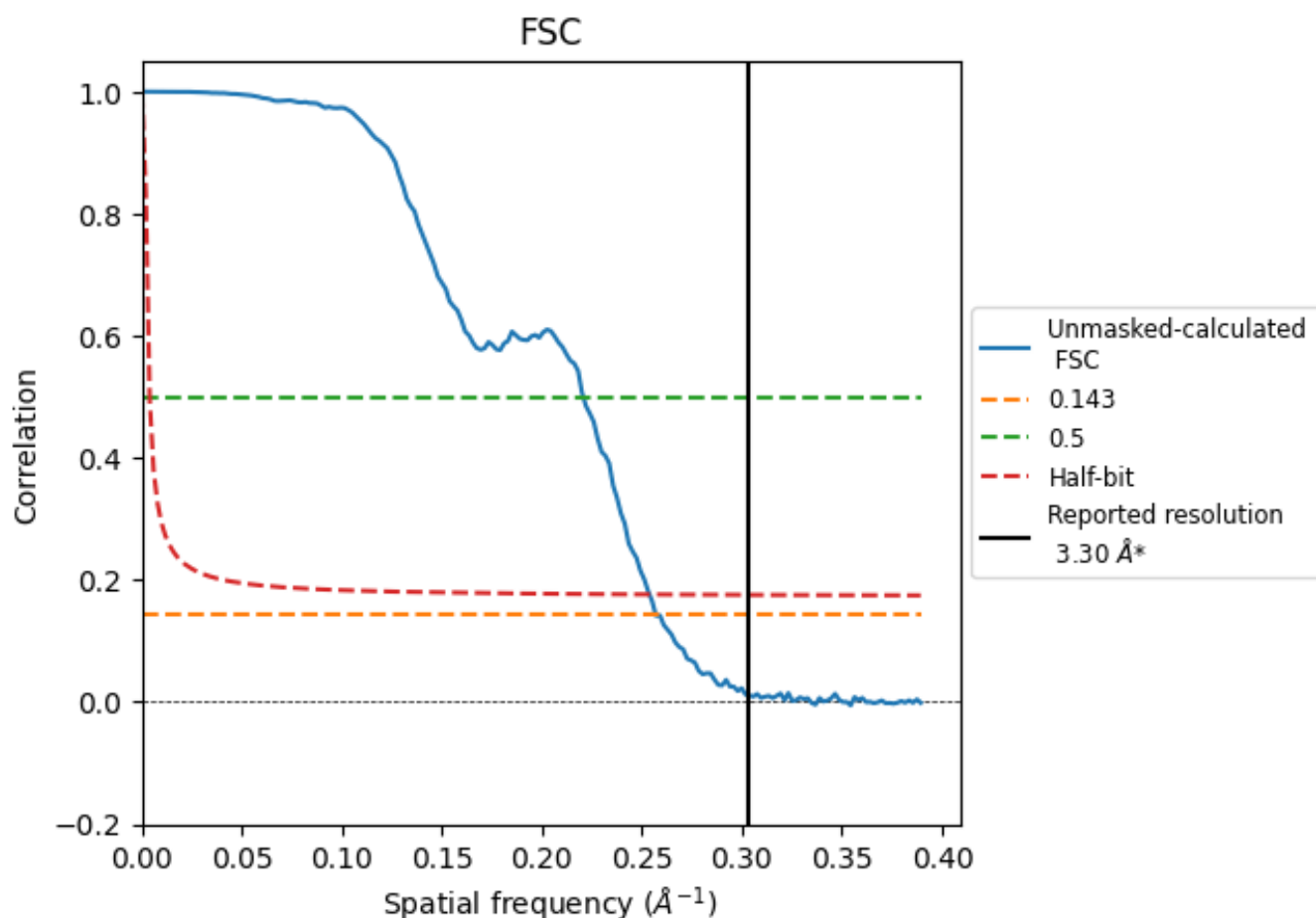


*Reported resolution corresponds to spatial frequency of 0.303 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.303 \AA^{-1}

8.2 Resolution estimates [i](#)

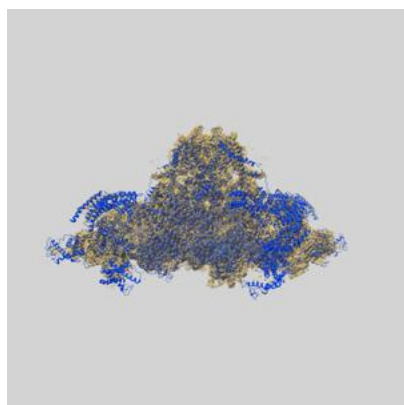
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.30	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.89	4.53	3.94

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.89 differs from the reported value 3.3 by more than 10 %

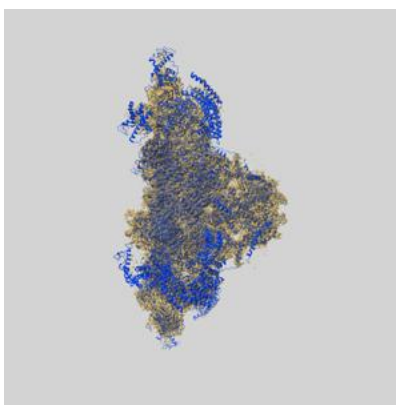
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-33935 and PDB model 7VML. Per-residue inclusion information can be found in [section 3](#) on [page 12](#).

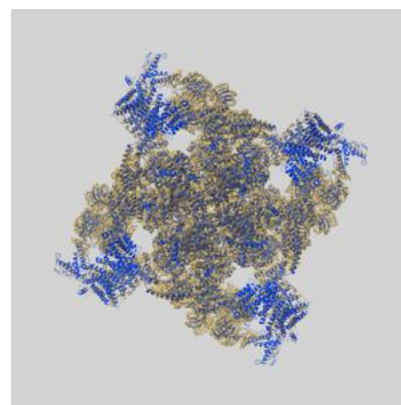
9.1 Map-model overlay [i](#)



X



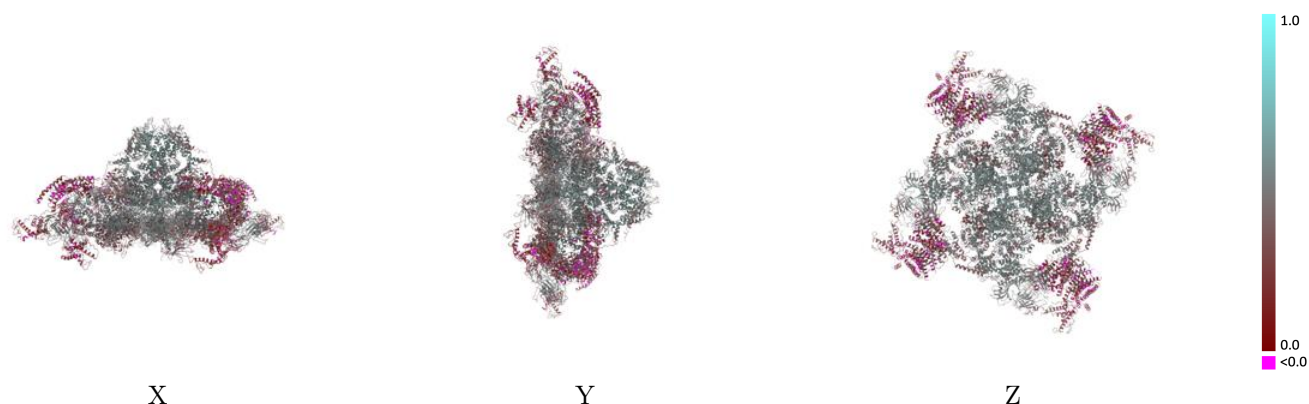
Y



Z

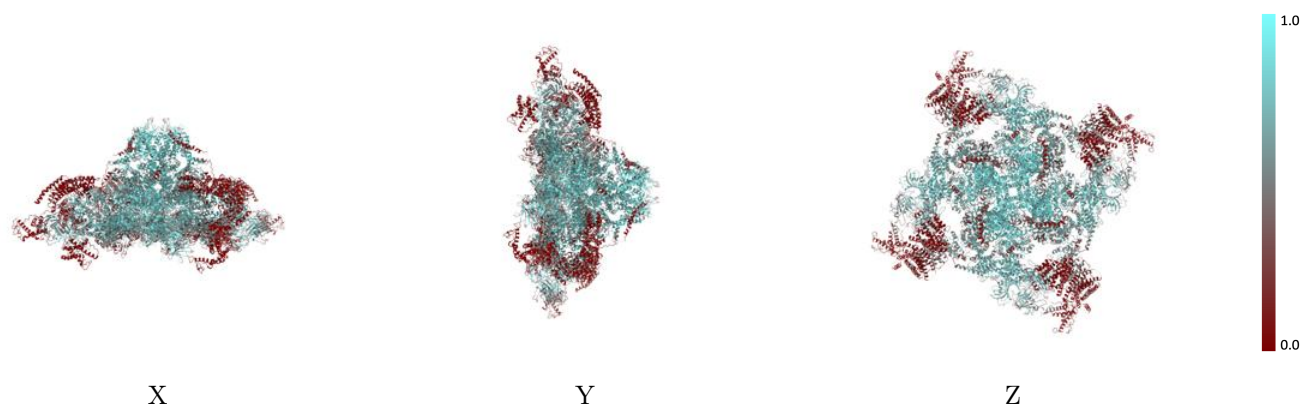
The images above show the 3D surface view of the map at the recommended contour level 0.023 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



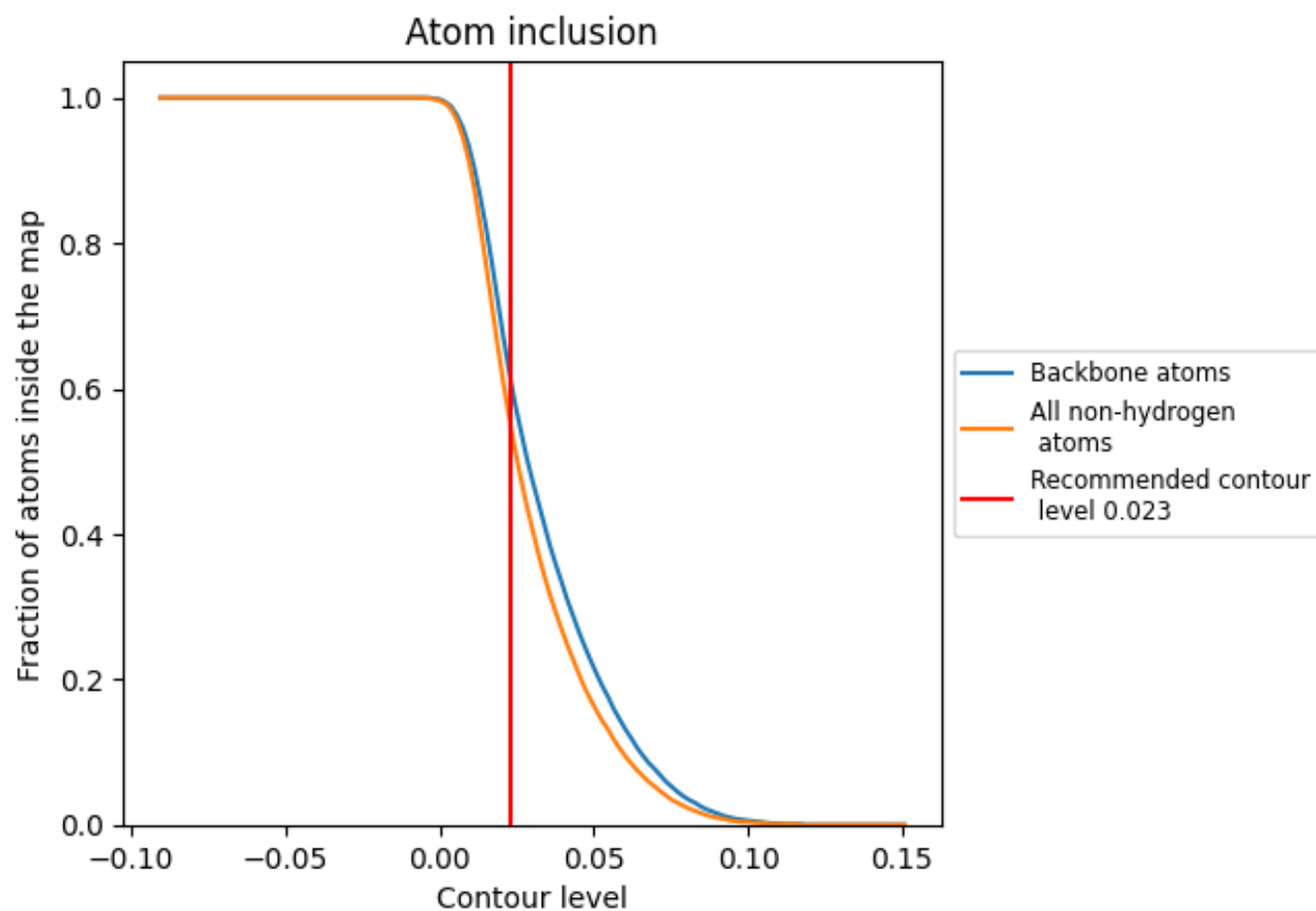
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.023).

9.4 Atom inclusion [i](#)



At the recommended contour level, 61% of all backbone atoms, 55% 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 (0.023) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div><div></div></div> 0.5490	<div><div></div></div> 0.4130
A	<div><div></div></div> 0.5470	<div><div></div></div> 0.4110
B	<div><div></div></div> 0.5460	<div><div></div></div> 0.4120
C	<div><div></div></div> 0.5460	<div><div></div></div> 0.4110
D	<div><div></div></div> 0.5460	<div><div></div></div> 0.4110
G	<div><div></div></div> 0.6550	<div><div></div></div> 0.4790
H	<div><div></div></div> 0.6490	<div><div></div></div> 0.4800
I	<div><div></div></div> 0.6480	<div><div></div></div> 0.4770
J	<div><div></div></div> 0.6520	<div><div></div></div> 0.4770

1.0

0.0

<0.0