



Full wwPDB EM Validation Report ⓘ

Dec 7, 2022 – 05:00 PM JST

PDB ID : 7VMQ
EMDB ID : EMD-33940
Title : Structure of recombinant RyR2 (Ca²⁺ dataset, class 3, open state)
Authors : Kobayashi, T.; Tsutsumi, A.; Kurebayashi, N.; Kodama, M.; Kikkawa, M.;
Murayama, T.; Ogawa, H.
Deposited on : 2021-10-09
Resolution : 3.70 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:

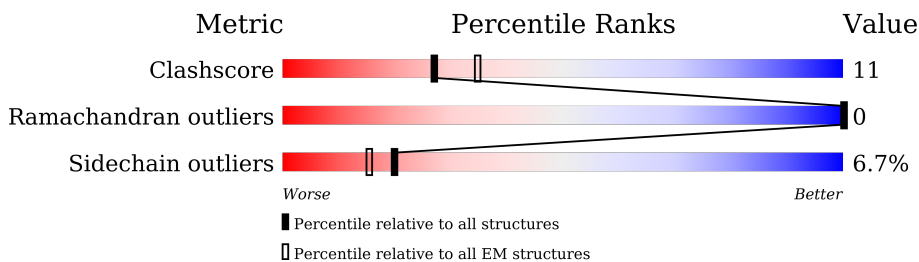
EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.70 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	4966	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">29%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 29%, orange 29%, yellow 29%, green 60%, grey 60%);"></div> <div style="text-align: center;">60%</div> <div style="text-align: center;">19%</div> <div style="text-align: center;">•</div> <div style="text-align: center;">20%</div> </div>
1	B	4966	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">29%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 29%, orange 29%, yellow 29%, green 60%, grey 60%);"></div> <div style="text-align: center;">60%</div> <div style="text-align: center;">19%</div> <div style="text-align: center;">•</div> <div style="text-align: center;">20%</div> </div>
1	C	4966	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">29%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 29%, orange 29%, yellow 29%, green 60%, grey 60%);"></div> <div style="text-align: center;">60%</div> <div style="text-align: center;">19%</div> <div style="text-align: center;">•</div> <div style="text-align: center;">20%</div> </div>
1	D	4966	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">29%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 29%, orange 29%, yellow 29%, green 60%, grey 60%);"></div> <div style="text-align: center;">60%</div> <div style="text-align: center;">18%</div> <div style="text-align: center;">•</div> <div style="text-align: center;">20%</div> </div>
2	G	176	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">9%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 9%, orange 9%, yellow 45%, green 45%, grey 45%);"></div> <div style="text-align: center;">45%</div> <div style="text-align: center;">16%</div> <div style="text-align: center;">39%</div> </div>
2	H	176	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">10%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 10%, orange 10%, yellow 44%, green 44%, grey 44%);"></div> <div style="text-align: center;">44%</div> <div style="text-align: center;">17%</div> <div style="text-align: center;">39%</div> </div>
2	I	176	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">9%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 9%, orange 9%, yellow 46%, green 46%, grey 46%);"></div> <div style="text-align: center;">46%</div> <div style="text-align: center;">15%</div> <div style="text-align: center;">39%</div> </div>
2	J	176	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">8%</div> <div style="width: 100%; height: 15px; background: linear-gradient(to right, red 8%, orange 8%, yellow 44%, green 44%, grey 44%);"></div> <div style="text-align: center;">44%</div> <div style="text-align: center;">16%</div> <div style="text-align: center;">39%</div> </div>

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 122036 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
			Total	C	N	O	S		
1	A	3991	29688	18782	5180	5553	173	0	0
1	B	3991	29688	18782	5180	5553	173	0	0
1	C	3991	29688	18782	5180	5553	173	0	0
1	D	3991	29688	18782	5180	5553	173	0	0

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

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

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 (three-letter code: 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

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

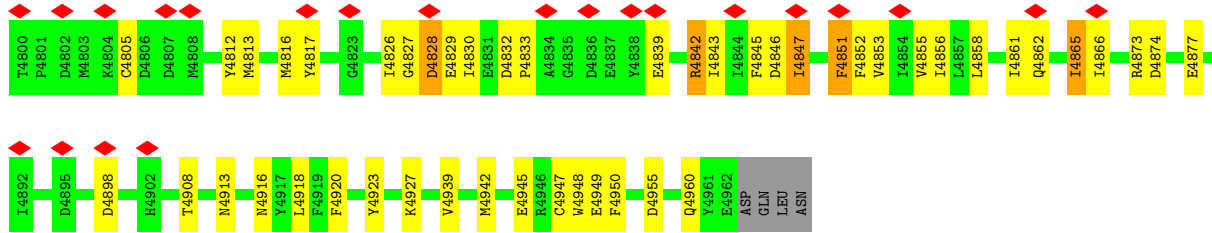
Mol	Chain	Residues	Atoms		AltConf
4	A	1	Total 1	Ca 1	0
4	B	1	Total 1	Ca 1	0
4	C	1	Total 1	Ca 1	0
4	D	1	Total 1	Ca 1	0

3 Residue-property plots

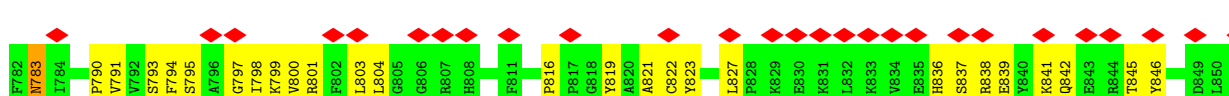
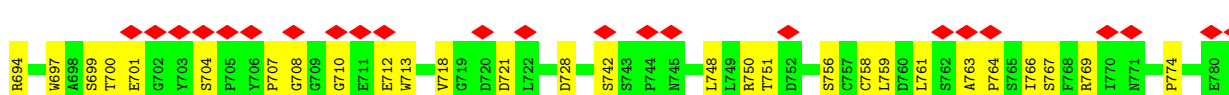
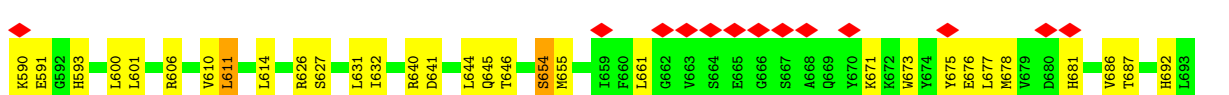
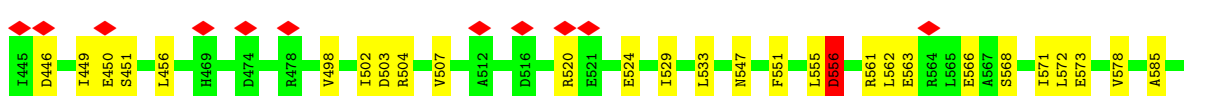
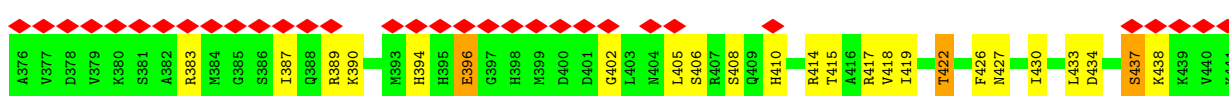
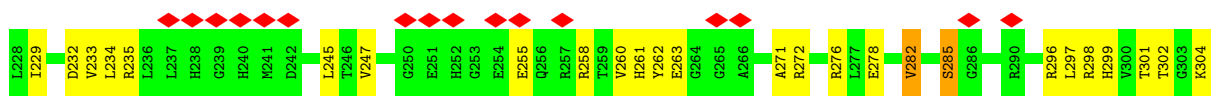
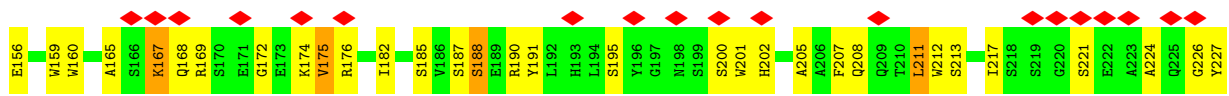
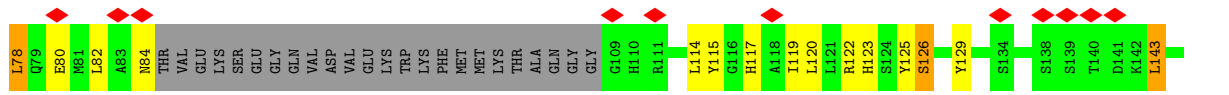
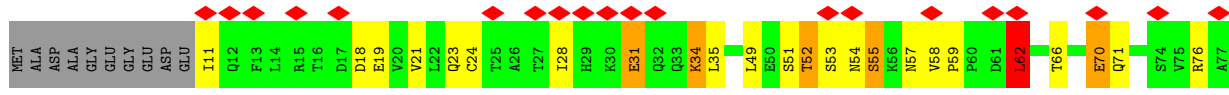
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

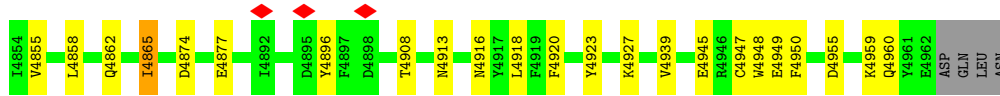
• Molecule 1: Ryanodine receptor 2



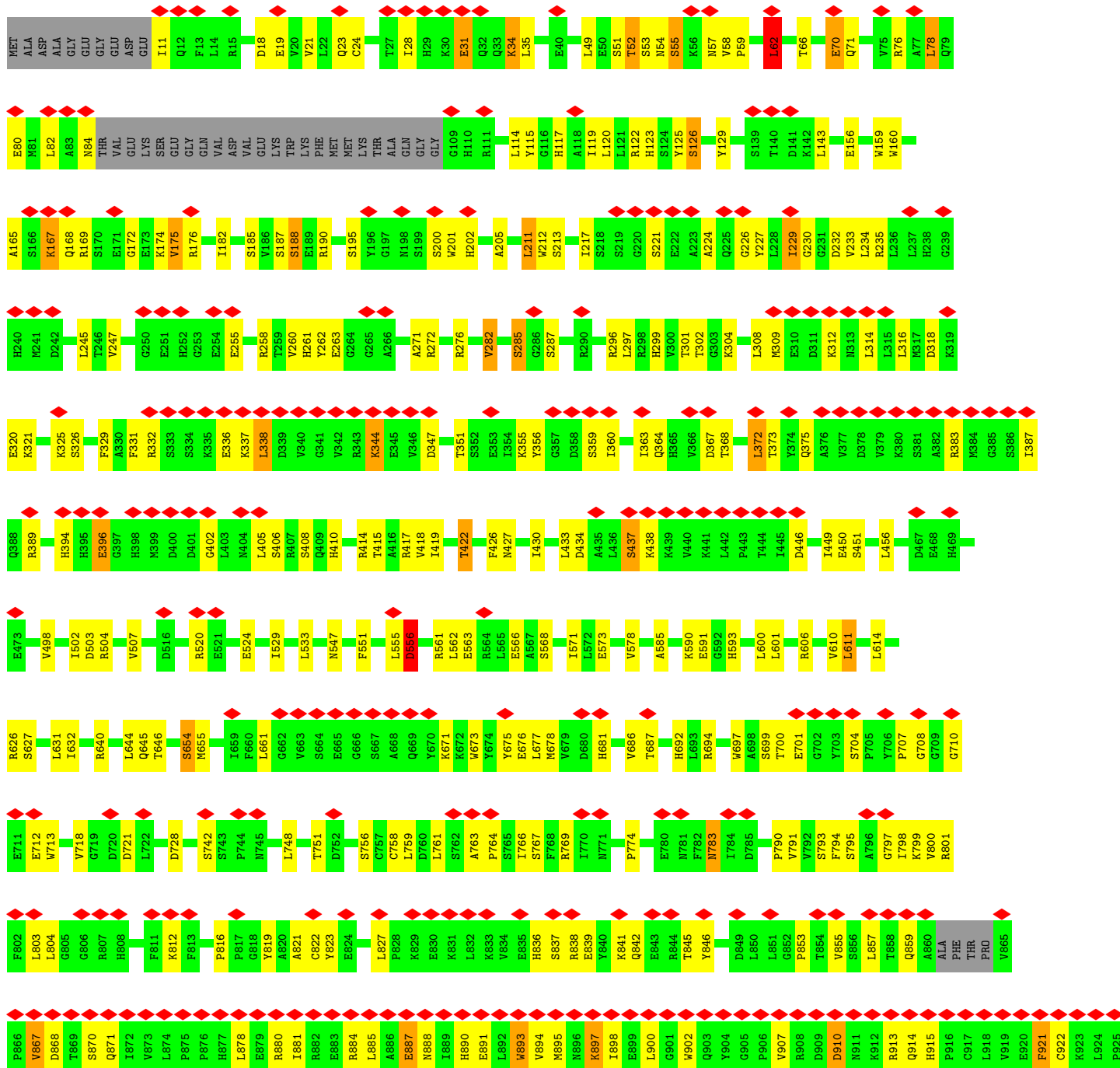


• Molecule 1: Ryanodine receptor 2

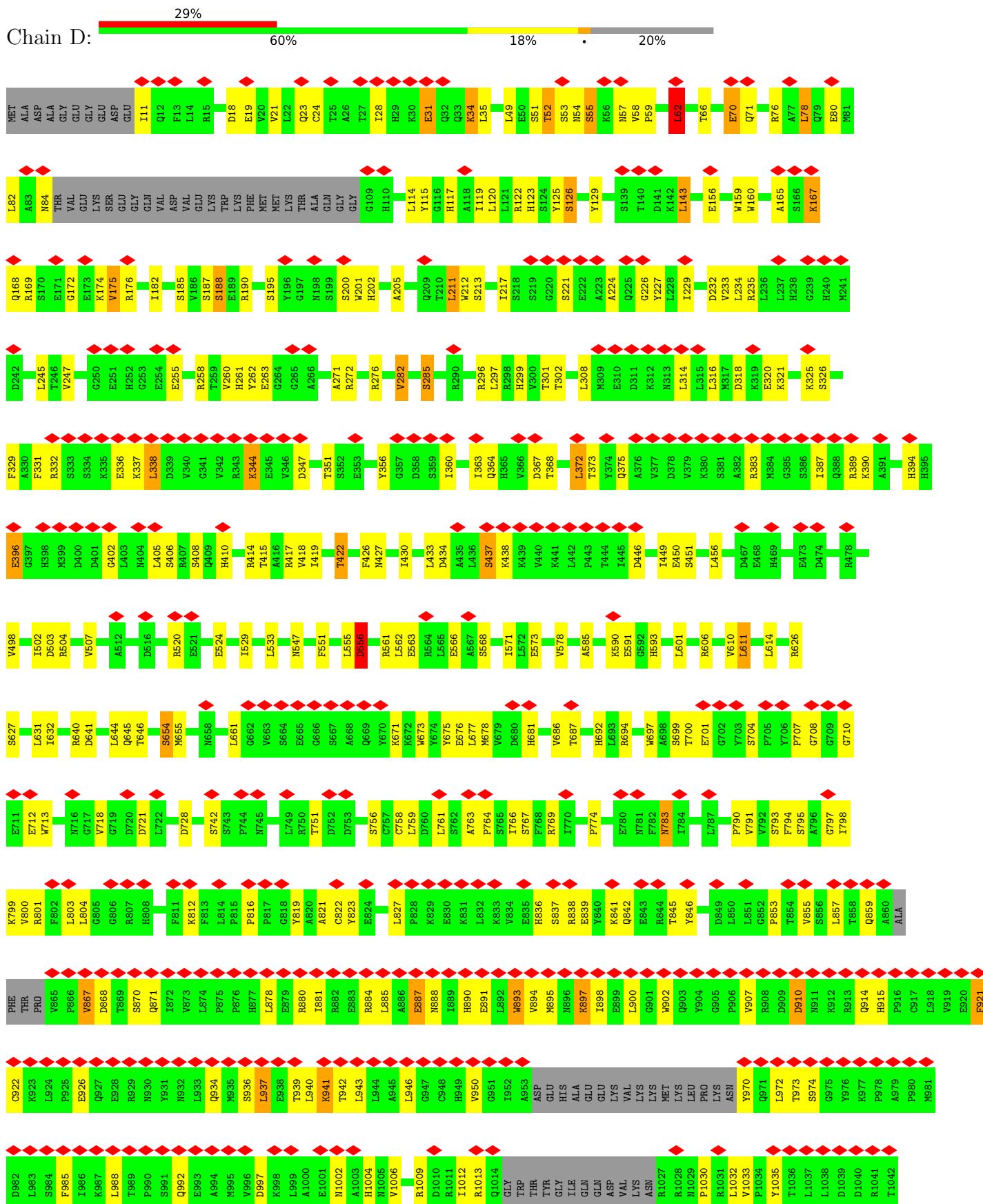


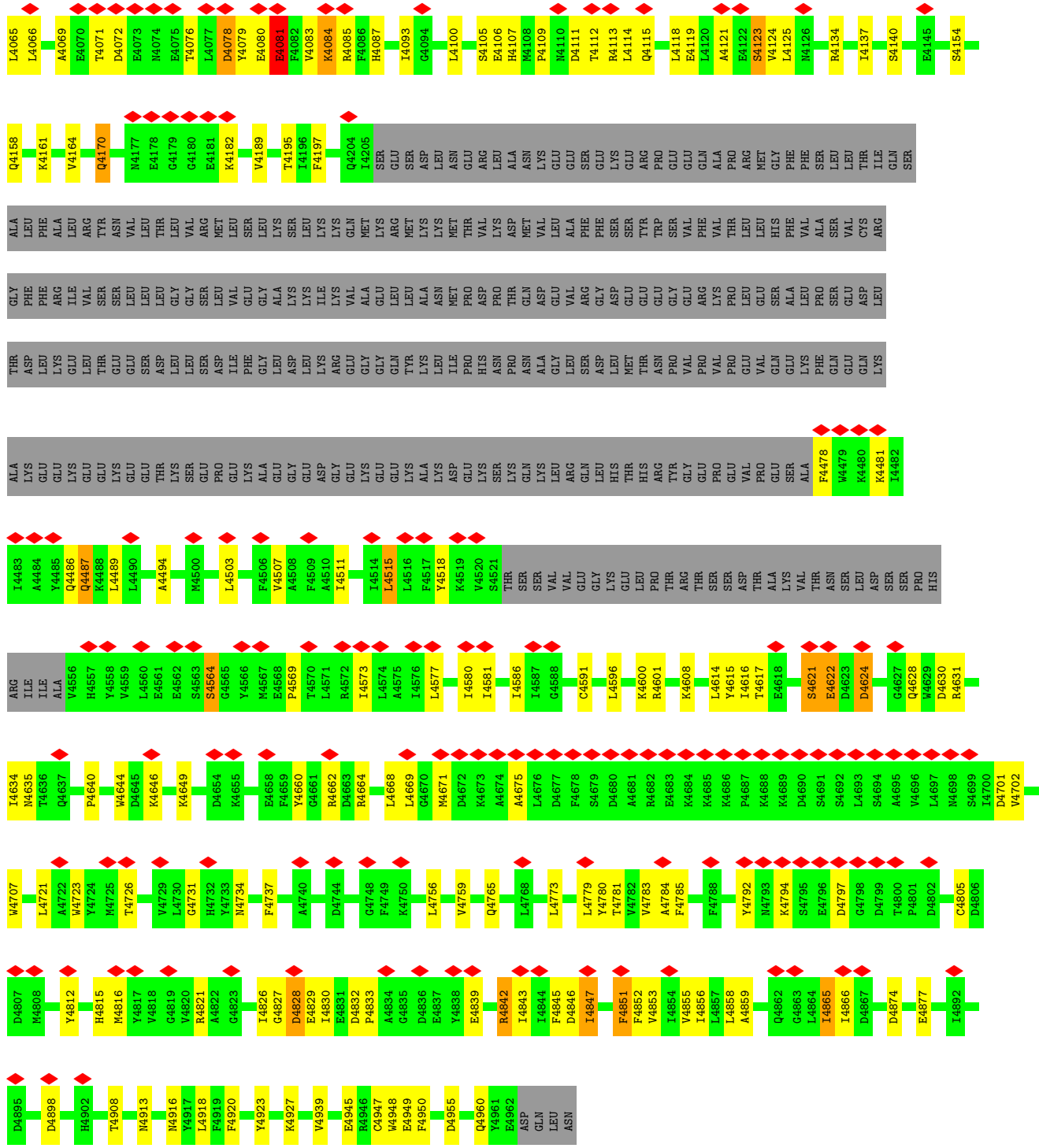


• Molecule 1: Ryanodine receptor 2



R3729	I3640	X3509	X3327	X3147	X3027	X2967
L3750	E3641	X3510	X3328	X3148	X3028	X2968
D3642	D3642	X3511	X3329	X3149	X3029	X2969
H3731	D3643	X3512	X3330	X3150	UNK	X2970
R3733	X3572	X3513	X3331	X3151	UNK	X2971
	X3573	X3514	X3332	X3152	UNK	X2972
	X3574	X3515	X3333	X3153	UNK	X2973
	X3575	X3516	X3334	X3154	UNK	X2974
	X3576	X3517	X3335	X3155	UNK	X2975
	X3577	X3518	X3336	X3156	UNK	X2976
	X3578	X3519	X3337	X3157	UNK	X2977
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	UNK	X3524	X3342	X3162	UNK	X2982
	UNK	X3525	X3343	X3163	UNK	X2983
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	UNK	X3531	X3349	X3169	UNK	X2989
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	UNK	X3534	X3352	X3172	UNK	X2992
	UNK	X3535	X3353	X3173	UNK	X2993
	UNK	X3536	X3354	X3174	UNK	X2994
	UNK	X3537	X3355	X3175	UNK	X2995
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	UNK	X3547	X3365	X3185	UNK	X3005
	UNK	X3548	X3366	X3186	UNK	X3006
	UNK	X3549	X3367	X3187	UNK	X3007
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	UNK	X3551	X3369	X3189	UNK	X3009
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	UNK	X3553	X3371	X3191	UNK	X3011
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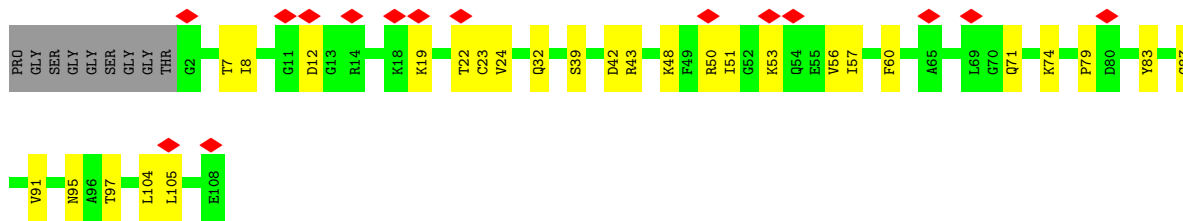




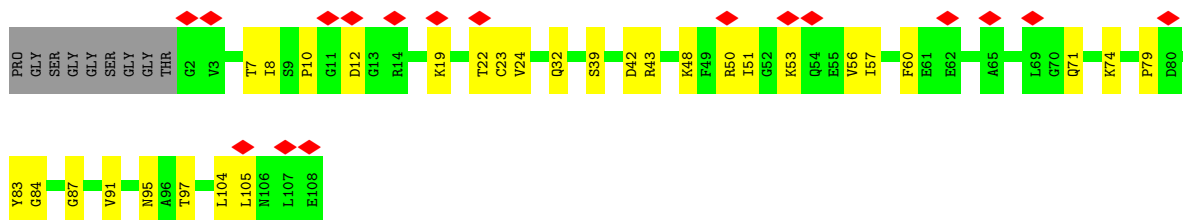
● Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



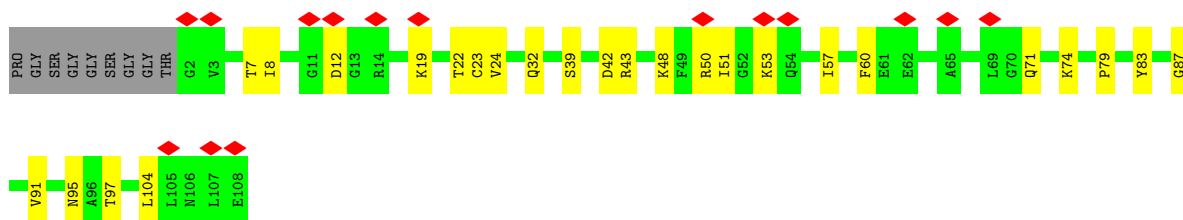
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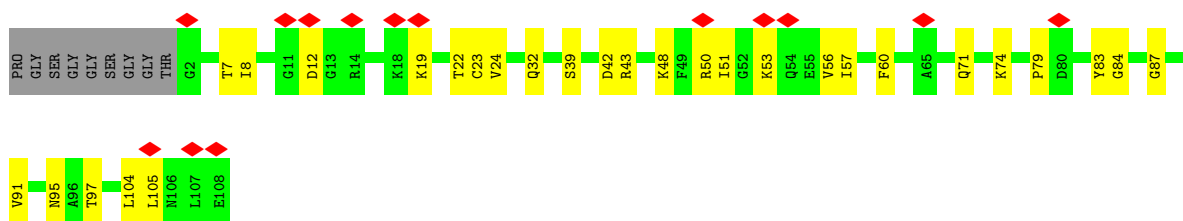
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



• 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	40665	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 ($e^-/\text{\AA}^2$)	60	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	0.119	Depositor
Minimum map value	-0.084	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.021	Depositor
Map size (Å)	421.25998, 421.25998, 421.25998	wwPDB
Map dimensions	340, 340, 340	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.239, 1.239, 1.239	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, CA

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	0.27	1/26573 (0.0%)	0.47	6/35881 (0.0%)
1	B	0.27	1/26573 (0.0%)	0.47	6/35881 (0.0%)
1	C	0.27	1/26573 (0.0%)	0.47	6/35881 (0.0%)
1	D	0.27	1/26573 (0.0%)	0.47	6/35881 (0.0%)
2	G	0.27	0/835	0.51	1/1123 (0.1%)
2	H	0.27	0/835	0.51	1/1123 (0.1%)
2	I	0.27	0/835	0.51	1/1123 (0.1%)
2	J	0.27	0/835	0.51	1/1123 (0.1%)
All	All	0.27	4/109632 (0.0%)	0.47	28/148016 (0.0%)

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	2866	ASN	C-N	5.61	1.47	1.34
1	A	2866	ASN	C-N	5.61	1.47	1.34
1	B	2866	ASN	C-N	5.59	1.47	1.34
1	D	2866	ASN	C-N	5.58	1.46	1.34

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	556	ASP	CB-CG-OD1	7.22	124.79	118.30
1	C	556	ASP	CB-CG-OD1	7.20	124.78	118.30
1	B	556	ASP	CB-CG-OD1	7.17	124.75	118.30
1	D	556	ASP	CB-CG-OD1	7.16	124.75	118.30
1	B	2776	GLU	CA-CB-CG	6.34	127.36	113.40
1	A	2776	GLU	CA-CB-CG	6.34	127.34	113.40
1	C	2776	GLU	CA-CB-CG	6.33	127.31	113.40
1	D	2776	GLU	CA-CB-CG	6.32	127.31	113.40
1	B	4081	GLU	CA-CB-CG	6.30	127.27	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	4081	GLU	CA-CB-CG	6.30	127.25	113.40
1	C	4081	GLU	CA-CB-CG	6.29	127.25	113.40
1	D	4081	GLU	CA-CB-CG	6.29	127.23	113.40
1	C	4828	ASP	CB-CG-OD1	5.85	123.57	118.30
1	D	4828	ASP	CB-CG-OD1	5.83	123.55	118.30
1	A	4828	ASP	CB-CG-OD1	5.80	123.52	118.30
1	B	4828	ASP	CB-CG-OD1	5.76	123.49	118.30
1	B	62	LEU	CA-CB-CG	5.65	128.30	115.30
1	C	62	LEU	CA-CB-CG	5.64	128.28	115.30
1	A	62	LEU	CA-CB-CG	5.62	128.24	115.30
1	D	62	LEU	CA-CB-CG	5.62	128.22	115.30
2	H	12	ASP	CB-CG-OD1	5.22	123.00	118.30
2	G	12	ASP	CB-CG-OD1	5.19	122.97	118.30
2	J	12	ASP	CB-CG-OD1	5.14	122.93	118.30
2	I	12	ASP	CB-CG-OD1	5.13	122.92	118.30
1	A	3923	ILE	CB-CA-C	-5.05	101.49	111.60
1	B	3923	ILE	CB-CA-C	-5.04	101.53	111.60
1	D	3923	ILE	CB-CA-C	-5.03	101.53	111.60
1	C	3923	ILE	CB-CA-C	-5.02	101.56	111.60

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	29688	0	26384	631	0
1	B	29688	0	26384	640	0
1	C	29688	0	26384	637	0
1	D	29688	0	26384	619	0
2	G	819	0	821	18	0
2	H	819	0	821	21	0
2	I	819	0	821	19	0
2	J	819	0	821	17	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
All	All	122036	0	108820	2518	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 11.

All (2518) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1629:MET:SD	1:B:1685:GLN:NE2	2.43	0.92
1:D:1629:MET:SD	1:D:1685:GLN:NE2	2.43	0.91
1:B:4003:VAL:HG11	1:B:4113:ARG:HD2	1.53	0.90
1:A:1629:MET:SD	1:A:1685:GLN:NE2	2.43	0.90
1:A:4003:VAL:HG11	1:A:4113:ARG:HD2	1.53	0.89
1:C:1629:MET:SD	1:C:1685:GLN:NE2	2.43	0.89
1:A:143:LEU:HD11	1:B:2425:LEU:HD12	1.55	0.89
1:D:4003:VAL:HG11	1:D:4113:ARG:HD2	1.53	0.88
1:C:4003:VAL:HG11	1:C:4113:ARG:HD2	1.53	0.88
1:B:156:GLU:HG3	1:C:2417:ARG:HH11	1.40	0.85
1:A:2406:HIS:HA	1:A:2409:HIS:HB3	1.59	0.85
1:B:1682:ASP:HB2	1:B:1685:GLN:HB3	1.59	0.85
1:A:1682:ASP:HB2	1:A:1685:GLN:HB3	1.59	0.85
1:B:2406:HIS:HA	1:B:2409:HIS:HB3	1.59	0.84
1:C:1682:ASP:HB2	1:C:1685:GLN:HB3	1.59	0.83
1:C:2406:HIS:HA	1:C:2409:HIS:HB3	1.59	0.83
1:D:1682:ASP:HB2	1:D:1685:GLN:HB3	1.59	0.83
1:D:2406:HIS:HA	1:D:2409:HIS:HB3	1.59	0.82
1:D:1741:PRO:HB3	1:D:1746:LYS:HE3	1.62	0.82
1:B:1741:PRO:HB3	1:B:1746:LYS:HE3	1.62	0.82
1:C:1775:ASP:OD1	1:C:1776:CYS:N	2.13	0.82
1:A:1741:PRO:HB3	1:A:1746:LYS:HE3	1.62	0.81
1:B:1775:ASP:OD1	1:B:1776:CYS:N	2.13	0.81
1:D:1775:ASP:OD1	1:D:1776:CYS:N	2.13	0.81
1:C:1741:PRO:HB3	1:C:1746:LYS:HE3	1.62	0.81
1:A:1775:ASP:OD1	1:A:1776:CYS:N	2.13	0.81
1:B:143:LEU:HD11	1:C:2425:LEU:HD12	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:28:ILE:O	1:B:31:GLU:HB2	1.82	0.79
1:D:4105:SER:HB2	1:D:4118:LEU:HD21	1.64	0.79
1:B:4105:SER:HB2	1:B:4118:LEU:HD21	1.64	0.79
1:A:4817:TYR:HE1	1:D:4846:ASP:HB2	1.48	0.79
1:C:28:ILE:O	1:C:31:GLU:HB2	1.82	0.79
1:A:28:ILE:O	1:A:31:GLU:HB2	1.82	0.79
1:A:4105:SER:HB2	1:A:4118:LEU:HD21	1.64	0.78
1:A:4078:ASP:N	1:A:4078:ASP:OD1	2.17	0.78
1:D:2501:LEU:HD21	1:D:2505:ALA:HB2	1.66	0.78
1:C:2501:LEU:HD21	1:C:2505:ALA:HB2	1.66	0.78
1:A:2501:LEU:HD21	1:A:2505:ALA:HB2	1.66	0.78
1:C:748:LEU:HD13	2:I:8:ILE:HG23	1.64	0.78
1:C:4078:ASP:OD1	1:C:4078:ASP:N	2.17	0.78
1:B:2501:LEU:HD21	1:B:2505:ALA:HB2	1.66	0.78
1:C:4105:SER:HB2	1:C:4118:LEU:HD21	1.64	0.77
1:D:28:ILE:O	1:D:31:GLU:HB2	1.82	0.77
1:A:1609:VAL:HG12	1:A:1620:VAL:HG12	1.67	0.76
1:B:1609:VAL:HG12	1:B:1620:VAL:HG12	1.67	0.76
1:C:1609:VAL:HG12	1:C:1620:VAL:HG12	1.67	0.76
1:D:1609:VAL:HG12	1:D:1620:VAL:HG12	1.67	0.76
1:C:3843:GLN:HG3	1:C:3921:GLU:HG3	1.68	0.76
1:B:156:GLU:HG3	1:C:2417:ARG:NH1	2.00	0.75
1:B:686:VAL:HG12	1:B:687:THR:HG23	1.67	0.75
1:D:4078:ASP:N	1:D:4078:ASP:OD1	2.17	0.75
1:A:4813:MET:HG3	1:D:4843:ILE:HD12	1.68	0.75
1:B:4078:ASP:N	1:B:4078:ASP:OD1	2.17	0.75
1:D:3843:GLN:HG3	1:D:3921:GLU:HG3	1.68	0.75
1:D:686:VAL:HG12	1:D:687:THR:HG23	1.67	0.75
1:A:686:VAL:HG12	1:A:687:THR:HG23	1.67	0.74
1:C:686:VAL:HG12	1:C:687:THR:HG23	1.67	0.74
1:A:336:GLU:HG3	1:A:338:LEU:HD22	1.70	0.74
1:B:336:GLU:HG3	1:B:338:LEU:HD22	1.69	0.74
1:C:336:GLU:HG3	1:C:338:LEU:HD22	1.70	0.73
1:A:3843:GLN:HG3	1:A:3921:GLU:HG3	1.68	0.73
1:B:3843:GLN:HG3	1:B:3921:GLU:HG3	1.68	0.73
1:D:2731:TRP:O	1:D:2735:LYS:HG3	1.88	0.73
1:B:2731:TRP:O	1:B:2735:LYS:HG3	1.88	0.73
1:A:1681:VAL:HG23	1:A:1682:ASP:H	1.54	0.73
1:B:1681:VAL:HG23	1:B:1682:ASP:H	1.54	0.73
1:A:2731:TRP:O	1:A:2735:LYS:HG3	1.88	0.72
1:D:1681:VAL:HG23	1:D:1682:ASP:H	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2731:TRP:O	1:C:2735:LYS:HG3	1.88	0.72
1:A:2484:LEU:O	1:A:2488:GLU:HG2	1.89	0.72
1:C:1052:GLU:HA	1:C:1055:ARG:HD2	1.72	0.72
1:D:2484:LEU:O	1:D:2488:GLU:HG2	1.89	0.72
1:D:336:GLU:HG3	1:D:338:LEU:HD22	1.69	0.72
1:D:1052:GLU:HA	1:D:1055:ARG:HD2	1.72	0.72
1:B:320:GLU:HG3	1:B:321:LYS:HG3	1.73	0.71
1:B:2484:LEU:O	1:B:2488:GLU:HG2	1.89	0.71
1:C:320:GLU:HG3	1:C:321:LYS:HG3	1.73	0.71
1:A:1262:PRO:HG2	1:A:1265:HIS:HB2	1.72	0.71
1:B:611:LEU:HD23	1:B:1661:LEU:HD13	1.73	0.71
1:C:1681:VAL:HG23	1:C:1682:ASP:H	1.54	0.71
1:C:2484:LEU:O	1:C:2488:GLU:HG2	1.89	0.71
1:D:1262:PRO:HG2	1:D:1265:HIS:HB2	1.72	0.71
1:A:3773:GLN:OE1	1:A:3850:ASN:ND2	2.24	0.71
1:B:3773:GLN:OE1	1:B:3850:ASN:ND2	2.24	0.71
1:C:1262:PRO:HG2	1:C:1265:HIS:HB2	1.72	0.71
1:C:611:LEU:HD23	1:C:1661:LEU:HD13	1.73	0.70
1:A:611:LEU:HD23	1:A:1661:LEU:HD13	1.73	0.70
1:D:433:LEU:O	1:D:437:SER:OG	2.10	0.70
1:D:320:GLU:HG3	1:D:321:LYS:HG3	1.73	0.70
1:A:320:GLU:HG3	1:A:321:LYS:HG3	1.73	0.70
1:A:1052:GLU:HA	1:A:1055:ARG:HD2	1.72	0.70
1:A:1700:ARG:NH1	1:A:1817:PHE:O	2.25	0.70
1:B:1052:GLU:HA	1:B:1055:ARG:HD2	1.71	0.70
1:C:1684:PRO:HD3	2:I:42:ASP:HB3	1.72	0.70
1:C:3773:GLN:OE1	1:C:3850:ASN:ND2	2.24	0.70
1:B:2880:GLU:HA	1:B:2883:LYS:HD2	1.74	0.70
1:D:3773:GLN:OE1	1:D:3850:ASN:ND2	2.24	0.70
1:B:1262:PRO:HG2	1:B:1265:HIS:HB2	1.72	0.70
1:C:433:LEU:O	1:C:437:SER:OG	2.10	0.69
1:A:2880:GLU:HA	1:A:2883:LYS:HD2	1.74	0.69
1:B:1700:ARG:NH1	1:B:1817:PHE:O	2.25	0.69
1:C:1700:ARG:NH1	1:C:1817:PHE:O	2.25	0.69
1:D:611:LEU:HD23	1:D:1661:LEU:HD13	1.73	0.69
1:A:433:LEU:O	1:A:437:SER:OG	2.10	0.69
1:A:1251:LEU:HD23	1:A:1600:MET:HE2	1.75	0.69
1:A:895:MET:HA	1:A:898:ILE:HG12	1.75	0.69
1:B:895:MET:HA	1:B:898:ILE:HG12	1.75	0.69
1:A:3639:LEU:HD12	1:A:3643:LEU:HD13	1.75	0.69
1:A:4843:ILE:HD13	1:B:4817:TYR:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2873:TYR:HA	1:B:2876:LEU:HD12	1.74	0.69
1:C:2084:PHE:O	1:C:3690:TYR:OH	2.11	0.69
1:B:433:LEU:O	1:B:437:SER:OG	2.09	0.69
1:B:759:LEU:HD13	1:B:766:ILE:HG22	1.75	0.69
1:B:4843:ILE:O	1:B:4847:ILE:HG13	1.93	0.69
2:I:57:ILE:HG13	2:I:60:PHE:HB2	1.75	0.69
1:D:211:LEU:HD23	1:D:211:LEU:H	1.58	0.69
1:D:895:MET:HA	1:D:898:ILE:HG12	1.75	0.69
1:D:3639:LEU:HD12	1:D:3643:LEU:HD13	1.75	0.69
1:C:2880:GLU:HA	1:C:2883:LYS:HD2	1.74	0.68
1:C:3639:LEU:HD12	1:C:3643:LEU:HD13	1.75	0.68
1:D:1700:ARG:NH1	1:D:1817:PHE:O	2.25	0.68
1:A:2873:TYR:HA	1:A:2876:LEU:HD12	1.74	0.68
1:C:211:LEU:HD23	1:C:211:LEU:H	1.59	0.68
1:B:2084:PHE:O	1:B:3690:TYR:OH	2.11	0.68
2:H:57:ILE:HG13	2:H:60:PHE:HB2	1.75	0.68
1:C:2873:TYR:HA	1:C:2876:LEU:HD12	1.75	0.68
1:A:992:GLN:HG3	1:A:1058:LEU:HD11	1.75	0.68
1:C:4843:ILE:O	1:C:4847:ILE:HG13	1.93	0.68
1:D:2084:PHE:O	1:D:3690:TYR:OH	2.11	0.68
1:A:4843:ILE:O	1:A:4847:ILE:HG13	1.93	0.68
1:D:992:GLN:HG3	1:D:1058:LEU:HD11	1.75	0.68
1:D:4843:ILE:O	1:D:4847:ILE:HG13	1.93	0.68
1:A:156:GLU:HG3	1:B:2417:ARG:HH11	1.59	0.68
1:A:3613:HIS:O	1:A:3617:ASN:ND2	2.27	0.68
1:D:1251:LEU:HD23	1:D:1600:MET:HE2	1.75	0.68
1:C:759:LEU:HD13	1:C:766:ILE:HG22	1.75	0.68
1:C:3613:HIS:O	1:C:3617:ASN:ND2	2.27	0.68
1:D:2873:TYR:HA	1:D:2876:LEU:HD12	1.75	0.68
1:C:895:MET:HA	1:C:898:ILE:HG12	1.75	0.68
1:D:2880:GLU:HA	1:D:2883:LYS:HD2	1.74	0.68
1:B:1196:ASP:OD1	1:B:1196:ASP:N	2.26	0.68
1:C:80:GLU:O	1:C:84:ASN:HB3	1.94	0.68
1:A:211:LEU:HD23	1:A:211:LEU:H	1.59	0.68
1:B:363:ILE:HD11	1:B:372:LEU:HB3	1.76	0.68
1:D:3613:HIS:O	1:D:3617:ASN:ND2	2.27	0.68
1:B:3639:LEU:HD12	1:B:3643:LEU:HD13	1.75	0.67
1:B:80:GLU:O	1:B:84:ASN:HB3	1.94	0.67
1:A:418:VAL:O	1:A:422:THR:HG23	1.95	0.67
1:A:2084:PHE:O	1:A:3690:TYR:OH	2.11	0.67
1:D:590:LYS:H	1:D:593:HIS:HD2	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1196:ASP:OD1	1:A:1196:ASP:N	2.26	0.67
1:D:418:VAL:O	1:D:422:THR:HG23	1.95	0.67
2:G:57:ILE:HG13	2:G:60:PHE:HB2	1.75	0.67
1:B:211:LEU:H	1:B:211:LEU:HD23	1.59	0.67
1:B:992:GLN:HG3	1:B:1058:LEU:HD11	1.75	0.67
2:J:57:ILE:HG13	2:J:60:PHE:HB2	1.75	0.67
1:B:169:ARG:HH22	1:B:176:ARG:HE	1.41	0.67
1:C:169:ARG:HH22	1:C:176:ARG:HE	1.41	0.67
1:D:363:ILE:HD11	1:D:372:LEU:HB3	1.76	0.67
1:D:2414:GLU:OE1	1:D:2417:ARG:NH2	2.28	0.67
1:B:418:VAL:O	1:B:422:THR:HG23	1.95	0.67
1:B:1720:LEU:HD21	1:B:1831:ILE:HD13	1.77	0.67
1:C:1720:LEU:HD21	1:C:1831:ILE:HD13	1.77	0.67
1:D:80:GLU:O	1:D:84:ASN:HB3	1.94	0.67
1:A:590:LYS:H	1:A:593:HIS:HD2	1.42	0.67
1:A:759:LEU:HD13	1:A:766:ILE:HG22	1.75	0.67
1:C:590:LYS:H	1:C:593:HIS:HD2	1.42	0.67
1:A:169:ARG:HH22	1:A:176:ARG:HE	1.41	0.67
1:A:676:GLU:HB2	1:A:803:LEU:HB2	1.77	0.67
1:A:1989:GLU:HA	1:A:1992:ARG:HD3	1.77	0.67
1:C:418:VAL:O	1:C:422:THR:HG23	1.95	0.67
1:C:992:GLN:HG3	1:C:1058:LEU:HD11	1.75	0.67
1:D:759:LEU:HD13	1:D:766:ILE:HG22	1.75	0.67
1:A:80:GLU:O	1:A:84:ASN:HB3	1.94	0.66
1:A:644:LEU:HD13	1:A:1631:LEU:HD21	1.77	0.66
1:A:677:LEU:HD11	1:A:800:VAL:HG13	1.78	0.66
1:D:169:ARG:HH22	1:D:176:ARG:HE	1.41	0.66
1:A:2414:GLU:OE1	1:A:2417:ARG:NH2	2.28	0.66
1:B:654:SER:HG	1:B:837:SER:HG	1.42	0.66
1:B:1989:GLU:HA	1:B:1992:ARG:HD3	1.77	0.66
1:C:363:ILE:HD11	1:C:372:LEU:HB3	1.75	0.66
1:B:644:LEU:HD13	1:B:1631:LEU:HD21	1.77	0.66
1:B:1144:ARG:NH2	1:B:1150:GLU:OE1	2.29	0.66
1:A:363:ILE:HD11	1:A:372:LEU:HB3	1.75	0.66
1:B:677:LEU:HD11	1:B:800:VAL:HG13	1.78	0.66
1:B:853:PRO:HG2	1:B:1209:VAL:HA	1.78	0.66
1:D:644:LEU:HD13	1:D:1631:LEU:HD21	1.77	0.66
1:D:677:LEU:HD11	1:D:800:VAL:HG13	1.78	0.66
1:B:676:GLU:HB2	1:B:803:LEU:HB2	1.77	0.66
1:B:3613:HIS:O	1:B:3617:ASN:ND2	2.27	0.66
1:C:853:PRO:HG2	1:C:1209:VAL:HA	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3728:ALA:HA	1:D:3731:HIS:CE1	2.31	0.66
1:A:2500:SER:O	1:A:2500:SER:OG	2.14	0.66
1:B:3728:ALA:HA	1:B:3731:HIS:CE1	2.31	0.66
1:D:1720:LEU:HD21	1:D:1831:ILE:HD13	1.77	0.66
1:A:1720:LEU:HD21	1:A:1831:ILE:HD13	1.77	0.65
1:B:783:ASN:OD1	1:B:783:ASN:N	2.28	0.65
1:D:3802:LEU:HD11	1:D:3908:ALA:HB2	1.79	0.65
1:A:156:GLU:HG3	1:B:2417:ARG:NH1	2.10	0.65
1:B:2414:GLU:OE1	1:B:2417:ARG:NH2	2.28	0.65
1:C:1989:GLU:HA	1:C:1992:ARG:HD3	1.78	0.65
1:D:676:GLU:HB2	1:D:803:LEU:HB2	1.77	0.65
1:A:217:ILE:HD12	1:A:285:SER:HB2	1.78	0.65
1:A:1144:ARG:NH2	1:A:1150:GLU:OE1	2.29	0.65
1:C:644:LEU:HD13	1:C:1631:LEU:HD21	1.77	0.65
1:C:677:LEU:HD11	1:C:800:VAL:HG13	1.78	0.65
1:D:1989:GLU:HA	1:D:1992:ARG:HD3	1.78	0.65
1:A:3802:LEU:HD11	1:A:3908:ALA:HB2	1.79	0.65
1:B:590:LYS:H	1:B:593:HIS:HD2	1.42	0.65
1:D:1167:ASP:HB3	1:D:1172:THR:HG23	1.79	0.65
1:B:1266:GLU:O	1:B:1267:HIS:ND1	2.30	0.65
1:C:1719:ARG:O	1:C:1723:ASN:HB2	1.97	0.65
1:A:3727:GLN:OE1	1:A:3769:ASN:ND2	2.30	0.65
1:C:1144:ARG:NH2	1:C:1150:GLU:OE1	2.29	0.65
1:C:3728:ALA:HA	1:C:3731:HIS:CE1	2.31	0.65
1:C:4833:PRO:HD3	1:C:4842:ARG:HE	1.62	0.65
1:B:217:ILE:HD12	1:B:285:SER:HB2	1.78	0.65
1:C:1167:ASP:HB3	1:C:1172:THR:HG23	1.79	0.65
1:C:3727:GLN:OE1	1:C:3769:ASN:ND2	2.30	0.65
1:D:853:PRO:HG2	1:D:1209:VAL:HA	1.78	0.65
1:D:1266:GLU:O	1:D:1267:HIS:ND1	2.30	0.65
1:D:1144:ARG:NH2	1:D:1150:GLU:OE1	2.29	0.65
1:D:4833:PRO:HD3	1:D:4842:ARG:HE	1.62	0.65
1:A:1266:GLU:O	1:A:1267:HIS:ND1	2.30	0.64
1:D:217:ILE:HD12	1:D:285:SER:HB2	1.78	0.64
1:D:1719:ARG:O	1:D:1723:ASN:HB2	1.97	0.64
1:A:1167:ASP:HB3	1:A:1172:THR:HG23	1.79	0.64
1:A:3728:ALA:HA	1:A:3731:HIS:CE1	2.31	0.64
1:C:654:SER:HG	1:C:837:SER:HG	1.45	0.64
1:C:676:GLU:HB2	1:C:803:LEU:HB2	1.77	0.64
1:A:1789:LYS:HG3	1:A:1835:PHE:CE1	2.32	0.64
1:C:1251:LEU:HD23	1:C:1600:MET:HE2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3802:LEU:HD11	1:C:3908:ALA:HB2	1.79	0.64
1:C:4111:ASP:O	1:C:4115:GLN:N	2.31	0.64
1:D:1789:LYS:HG3	1:D:1835:PHE:CE1	2.32	0.64
1:D:4111:ASP:O	1:D:4115:GLN:N	2.31	0.64
1:A:853:PRO:HG2	1:A:1209:VAL:HA	1.78	0.64
1:B:4833:PRO:HD3	1:B:4842:ARG:HE	1.62	0.64
1:C:217:ILE:HD12	1:C:285:SER:HB2	1.78	0.64
1:C:1266:GLU:O	1:C:1267:HIS:ND1	2.30	0.64
1:B:1789:LYS:HG3	1:B:1835:PHE:CE1	2.32	0.64
1:B:3802:LEU:HD11	1:B:3908:ALA:HB2	1.79	0.64
1:D:2500:SER:O	1:D:2500:SER:OG	2.15	0.64
1:D:3727:GLN:OE1	1:D:3769:ASN:ND2	2.30	0.64
1:A:1738:THR:HG22	1:A:1926:ALA:HB1	1.80	0.64
1:B:1251:LEU:HD23	1:B:1600:MET:HE2	1.78	0.64
1:B:1719:ARG:O	1:B:1723:ASN:HB2	1.97	0.64
1:B:1738:THR:HG22	1:B:1926:ALA:HB1	1.80	0.64
1:D:783:ASN:N	1:D:783:ASN:OD1	2.28	0.64
1:C:671:LYS:HA	1:C:761:LEU:HD12	1.80	0.64
1:C:1789:LYS:HG3	1:C:1835:PHE:CE1	2.32	0.64
1:B:3919:LEU:O	1:B:3923:ILE:HG12	1.98	0.64
1:C:2414:GLU:OE1	1:C:2417:ARG:NH2	2.28	0.64
1:C:2735:LYS:HD3	1:C:2756:MET:HE2	1.79	0.64
1:D:4829:GLU:OE1	1:D:4830:ILE:HG23	1.98	0.64
1:B:1929:ASP:OD1	1:B:3612:ARG:NH2	2.31	0.64
1:B:2258:GLU:HG3	1:B:2258:GLU:O	1.98	0.64
1:D:3919:LEU:O	1:D:3923:ILE:HG12	1.98	0.64
1:A:4833:PRO:HD3	1:A:4842:ARG:HE	1.62	0.64
1:C:3919:LEU:O	1:C:3923:ILE:HG12	1.98	0.64
1:D:2258:GLU:HG3	1:D:2258:GLU:O	1.98	0.64
1:A:2258:GLU:HG3	1:A:2258:GLU:O	1.98	0.63
1:A:3919:LEU:O	1:A:3923:ILE:HG12	1.98	0.63
1:B:1167:ASP:HB3	1:B:1172:THR:HG23	1.79	0.63
1:C:2258:GLU:O	1:C:2258:GLU:HG3	1.98	0.63
1:D:694:ARG:HG2	1:D:728:ASP:HB3	1.81	0.63
1:A:1719:ARG:O	1:A:1723:ASN:HB2	1.97	0.63
1:B:3611:PRO:HD2	1:B:3614:ARG:HD3	1.80	0.63
1:B:4111:ASP:O	1:B:4115:GLN:N	2.31	0.63
1:B:4829:GLU:OE1	1:B:4830:ILE:HG23	1.99	0.63
1:C:4808:MET:HE3	1:D:4518:TYR:CD2	2.33	0.63
1:B:748:LEU:HD13	2:H:8:ILE:HG23	1.80	0.63
1:C:694:ARG:HG2	1:C:728:ASP:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:783:ASN:OD1	1:C:783:ASN:N	2.28	0.63
1:A:3611:PRO:HD2	1:A:3614:ARG:HD3	1.79	0.63
1:C:4824:GLY:O	1:D:4821:ARG:NH2	2.32	0.63
1:A:783:ASN:OD1	1:A:783:ASN:N	2.28	0.63
1:A:4111:ASP:O	1:A:4115:GLN:N	2.31	0.63
1:B:671:LYS:HA	1:B:761:LEU:HD12	1.80	0.63
1:B:2735:LYS:HD3	1:B:2756:MET:HE2	1.80	0.63
1:B:4048:HIS:HB2	1:B:4066:LEU:HD11	1.81	0.63
1:C:1738:THR:HG22	1:C:1926:ALA:HB1	1.80	0.63
1:C:1929:ASP:OD1	1:C:3612:ARG:NH2	2.31	0.63
1:C:2007:GLY:HA2	1:C:2058:GLN:HE22	1.64	0.63
1:C:4829:GLU:OE1	1:C:4830:ILE:HG23	1.98	0.63
1:D:1929:ASP:OD1	1:D:3612:ARG:NH2	2.31	0.63
1:D:2735:LYS:HD3	1:D:2756:MET:HE2	1.79	0.63
1:C:2500:SER:O	1:C:2500:SER:OG	2.15	0.63
1:C:4048:HIS:HB2	1:C:4066:LEU:HD11	1.81	0.63
1:C:1680:HIS:CE1	2:I:91:VAL:HG22	2.33	0.62
1:A:671:LYS:HA	1:A:761:LEU:HD12	1.80	0.62
1:C:1196:ASP:OD1	1:C:1196:ASP:N	2.26	0.62
1:C:3611:PRO:HD2	1:C:3614:ARG:HD3	1.80	0.62
1:A:1929:ASP:OD1	1:A:3612:ARG:NH2	2.31	0.62
1:A:694:ARG:HG2	1:A:728:ASP:HB3	1.81	0.62
1:A:2735:LYS:HD3	1:A:2756:MET:HE2	1.79	0.62
1:A:4829:GLU:OE1	1:A:4830:ILE:HG23	1.99	0.62
1:D:1738:THR:HG22	1:D:1926:ALA:HB1	1.80	0.62
1:C:857:LEU:HD12	1:C:859:GLN:HE21	1.65	0.62
2:I:32:GLN:NE2	2:I:97:THR:OG1	2.33	0.62
1:D:671:LYS:HA	1:D:761:LEU:HD12	1.80	0.62
1:A:2007:GLY:HA2	1:A:2058:GLN:HE22	1.64	0.62
1:B:191:TYR:CE2	1:C:2325:ARG:HD2	2.35	0.62
1:B:1684:PRO:HD3	2:H:42:ASP:HB3	1.79	0.62
1:D:857:LEU:HD12	1:D:859:GLN:HE21	1.65	0.62
1:D:2007:GLY:HA2	1:D:2058:GLN:HE22	1.64	0.62
2:H:32:GLN:NE2	2:H:97:THR:OG1	2.33	0.62
1:C:262:TYR:HB2	1:C:389:ARG:HG3	1.82	0.62
1:D:3611:PRO:HD2	1:D:3614:ARG:HD3	1.79	0.62
1:B:363:ILE:HG12	1:B:372:LEU:HD13	1.82	0.62
1:B:694:ARG:HG2	1:B:728:ASP:HB3	1.81	0.62
1:A:262:TYR:HB2	1:A:389:ARG:HG3	1.82	0.62
1:D:2081:ARG:HG3	1:D:3686:LEU:HD22	1.81	0.62
1:C:997:ASP:HA	1:C:1047:LYS:HD2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:28:ILE:O	1:D:31:GLU:CB	2.48	0.61
2:G:32:GLN:NE2	2:G:97:THR:OG1	2.33	0.61
1:B:262:TYR:HB2	1:B:389:ARG:HG3	1.82	0.61
1:C:1190:LEU:HD11	1:C:1193:LYS:HD3	1.83	0.61
1:A:28:ILE:O	1:A:31:GLU:CB	2.48	0.61
1:C:308:LEU:O	1:C:326:SER:OG	2.19	0.61
1:C:2081:ARG:HG3	1:C:3686:LEU:HD22	1.81	0.61
1:A:363:ILE:HG12	1:A:372:LEU:HD13	1.82	0.61
1:A:4830:ILE:HG13	1:A:4842:ARG:HH22	1.65	0.61
1:A:997:ASP:HA	1:A:1047:LYS:HD2	1.82	0.61
1:A:4608:LYS:HD3	1:A:4614:LEU:HD22	1.82	0.61
1:D:262:TYR:HB2	1:D:389:ARG:HG3	1.82	0.61
1:D:997:ASP:HA	1:D:1047:LYS:HD2	1.82	0.61
1:D:1190:LEU:HD11	1:D:1193:LYS:HD3	1.83	0.61
1:D:4608:LYS:HD3	1:D:4614:LEU:HD22	1.82	0.61
1:A:1030:PRO:O	1:A:1033:VAL:HG12	2.01	0.61
1:B:857:LEU:HD12	1:B:859:GLN:HE21	1.65	0.61
1:B:4830:ILE:HG13	1:B:4842:ARG:HH22	1.65	0.61
1:D:308:LEU:O	1:D:326:SER:OG	2.19	0.61
1:B:2081:ARG:HG3	1:B:3686:LEU:HD22	1.81	0.61
1:D:4048:HIS:HB2	1:D:4066:LEU:HD11	1.81	0.61
2:J:32:GLN:NE2	2:J:97:THR:OG1	2.33	0.61
1:B:28:ILE:O	1:B:31:GLU:CB	2.48	0.61
1:B:3727:GLN:OE1	1:B:3769:ASN:ND2	2.30	0.61
1:C:4608:LYS:HD3	1:C:4614:LEU:HD22	1.82	0.61
1:A:1684:PRO:HD3	2:G:42:ASP:HB3	1.82	0.61
1:A:2081:ARG:HG3	1:A:3686:LEU:HD22	1.81	0.61
1:A:4048:HIS:HB2	1:A:4066:LEU:HD11	1.81	0.61
1:B:4608:LYS:HD3	1:B:4614:LEU:HD22	1.82	0.61
1:C:1030:PRO:O	1:C:1033:VAL:HG12	2.01	0.61
1:D:654:SER:HG	1:D:837:SER:HG	1.48	0.61
1:A:655:MET:SD	1:A:836:HIS:ND1	2.74	0.60
1:A:1190:LEU:HD11	1:A:1193:LYS:HD3	1.83	0.60
1:B:2007:GLY:HA2	1:B:2058:GLN:HE22	1.64	0.60
1:B:1174:MET:HG2	1:B:1190:LEU:HA	1.84	0.60
1:D:4830:ILE:HG13	1:D:4842:ARG:HH22	1.65	0.60
1:A:857:LEU:HD12	1:A:859:GLN:HE21	1.65	0.60
1:B:308:LEU:O	1:B:326:SER:OG	2.19	0.60
1:B:655:MET:SD	1:B:836:HIS:ND1	2.74	0.60
1:A:308:LEU:O	1:A:326:SER:OG	2.19	0.60
1:C:28:ILE:O	1:C:31:GLU:CB	2.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:52:THR:HG22	1:B:282:VAL:HG11	1.83	0.60
1:B:997:ASP:HA	1:B:1047:LYS:HD2	1.82	0.60
1:C:363:ILE:HG12	1:C:372:LEU:HD13	1.82	0.60
1:D:655:MET:SD	1:D:836:HIS:ND1	2.74	0.60
1:D:1030:PRO:O	1:D:1033:VAL:HG12	2.01	0.60
1:A:1174:MET:HG2	1:A:1190:LEU:HA	1.84	0.60
1:A:1166:VAL:HG22	1:A:1173:MET:HG2	1.84	0.60
1:B:2500:SER:O	1:B:2500:SER:OG	2.15	0.60
1:C:1166:VAL:HG22	1:C:1173:MET:HG2	1.84	0.60
1:D:363:ILE:HG12	1:D:372:LEU:HD13	1.82	0.60
1:B:1166:VAL:HG22	1:B:1173:MET:HG2	1.84	0.60
1:B:1789:LYS:HG3	1:B:1835:PHE:HE1	1.67	0.60
1:B:2145:LEU:HD23	1:B:2148:ILE:HD11	1.84	0.60
1:C:4830:ILE:HG13	1:C:4842:ARG:HH22	1.65	0.60
1:D:1353:HIS:CE1	1:D:1367:LYS:HE3	2.37	0.60
1:D:4829:GLU:CD	1:D:4830:ILE:HG23	2.22	0.60
1:A:1789:LYS:HG3	1:A:1835:PHE:HE1	1.67	0.60
1:B:1272:ARG:NH2	1:B:1583:CYS:SG	2.75	0.60
1:B:4829:GLU:CD	1:B:4830:ILE:HG23	2.22	0.60
1:C:4829:GLU:CD	1:C:4830:ILE:HG23	2.22	0.60
1:C:655:MET:SD	1:C:836:HIS:ND1	2.74	0.60
1:A:1353:HIS:CE1	1:A:1367:LYS:HE3	2.37	0.59
1:A:2145:LEU:HD23	1:A:2148:ILE:HD11	1.84	0.59
1:B:1030:PRO:O	1:B:1033:VAL:HG12	2.01	0.59
1:D:1166:VAL:HG22	1:D:1173:MET:HG2	1.84	0.59
1:D:1723:ASN:O	1:D:1918:ARG:NH2	2.35	0.59
1:A:1272:ARG:NH2	1:A:1583:CYS:SG	2.75	0.59
1:A:4829:GLU:CD	1:A:4830:ILE:HG23	2.23	0.59
1:C:1272:ARG:NH2	1:C:1583:CYS:SG	2.75	0.59
1:B:1272:ARG:NH2	1:B:1584:PRO:O	2.35	0.59
1:D:1272:ARG:NH2	1:D:1583:CYS:SG	2.75	0.59
1:C:1174:MET:HG2	1:C:1190:LEU:HA	1.84	0.59
1:C:1723:ASN:O	1:C:1918:ARG:NH2	2.35	0.59
1:A:4923:TYR:O	1:A:4927:LYS:HB2	2.02	0.59
1:D:52:THR:HG22	1:D:282:VAL:HG11	1.83	0.59
1:A:1272:ARG:NH2	1:A:1584:PRO:O	2.35	0.59
1:B:1190:LEU:HD11	1:B:1193:LYS:HD3	1.83	0.59
1:B:1353:HIS:CE1	1:B:1367:LYS:HE3	2.37	0.59
1:C:2003:MET:HB3	1:C:2008:ILE:HD11	1.85	0.59
1:A:52:THR:HG22	1:A:282:VAL:HG11	1.83	0.59
1:A:902:TRP:HE3	1:A:915:HIS:HB2	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4923:TYR:O	1:B:4927:LYS:HB2	2.02	0.59
1:C:1294:ASN:ND2	1:C:1296:ASN:O	2.36	0.59
1:C:1789:LYS:HG3	1:C:1835:PHE:HE1	1.67	0.59
1:D:2003:MET:HB3	1:D:2008:ILE:HD11	1.85	0.59
1:C:52:THR:HG22	1:C:282:VAL:HG11	1.83	0.59
1:C:156:GLU:HG2	1:C:187:SER:HB3	1.84	0.59
1:C:1715:TYR:CZ	1:C:1762:MET:HB3	2.38	0.59
1:D:1174:MET:HG2	1:D:1190:LEU:HA	1.84	0.59
1:A:1294:ASN:ND2	1:A:1296:ASN:O	2.36	0.59
1:B:1793:ILE:HG12	1:B:1843:ILE:HD11	1.84	0.59
1:C:1353:HIS:CE1	1:C:1367:LYS:HE3	2.37	0.59
1:A:156:GLU:HG2	1:A:187:SER:HB3	1.84	0.59
1:A:1715:TYR:CZ	1:A:1762:MET:HB3	2.38	0.59
1:A:1723:ASN:O	1:A:1918:ARG:NH2	2.35	0.59
1:B:1723:ASN:O	1:B:1918:ARG:NH2	2.35	0.59
1:C:902:TRP:HE3	1:C:915:HIS:HB2	1.68	0.59
1:C:2145:LEU:HD23	1:C:2148:ILE:HD11	1.84	0.59
1:B:902:TRP:HE3	1:B:915:HIS:HB2	1.68	0.58
1:C:1793:ILE:HG12	1:C:1843:ILE:HD11	1.84	0.58
1:C:4923:TYR:O	1:C:4927:LYS:HB2	2.02	0.58
1:D:2145:LEU:HD23	1:D:2148:ILE:HD11	1.84	0.58
1:A:934:GLN:HA	1:A:937:LEU:HD23	1.85	0.58
1:B:2003:MET:HB3	1:B:2008:ILE:HD11	1.85	0.58
1:D:3933:SER:O	1:D:3937:SER:OG	2.22	0.58
1:A:4862:GLN:HG3	1:D:4855:VAL:O	2.04	0.58
1:B:4039:LYS:HG3	1:B:4040:GLY:H	1.68	0.58
1:D:1789:LYS:HG3	1:D:1835:PHE:HE1	1.67	0.58
1:B:156:GLU:HG2	1:B:187:SER:HB3	1.84	0.58
1:D:247:VAL:O	1:D:272:ARG:NH1	2.37	0.58
1:D:902:TRP:HE3	1:D:915:HIS:HB2	1.68	0.58
1:A:2003:MET:HB3	1:A:2008:ILE:HD11	1.85	0.58
1:C:247:VAL:O	1:C:272:ARG:NH1	2.37	0.58
1:C:3933:SER:O	1:C:3937:SER:OG	2.22	0.58
1:D:1272:ARG:NH2	1:D:1584:PRO:O	2.36	0.58
1:D:1294:ASN:ND2	1:D:1296:ASN:O	2.36	0.58
1:D:1715:TYR:CZ	1:D:1762:MET:HB3	2.38	0.58
1:A:35:LEU:HD13	1:A:49:LEU:HD13	1.85	0.58
1:D:1655:HIS:HA	1:D:1658:THR:HG22	1.86	0.58
1:D:1793:ILE:HG12	1:D:1843:ILE:HD11	1.84	0.58
1:A:4843:ILE:HD13	1:B:4817:TYR:CB	2.32	0.58
1:B:934:GLN:HA	1:B:937:LEU:HD23	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4659:PHE:HA	1:C:4055:LYS:HD3	1.86	0.58
1:D:156:GLU:HG2	1:D:187:SER:HB3	1.84	0.58
1:D:3840:ARG:HH21	1:D:3844:LEU:HD21	1.69	0.58
1:D:4923:TYR:O	1:D:4927:LYS:HB2	2.02	0.58
2:G:23:CYS:SG	2:G:104:LEU:HD11	2.44	0.58
1:B:3840:ARG:HH21	1:B:3844:LEU:HD21	1.69	0.58
2:I:23:CYS:SG	2:I:104:LEU:HD11	2.44	0.58
1:D:70:GLU:HG3	1:D:129:TYR:HE2	1.69	0.58
1:D:934:GLN:HA	1:D:937:LEU:HD23	1.85	0.58
1:A:3933:SER:O	1:A:3937:SER:OG	2.22	0.58
1:B:1294:ASN:ND2	1:B:1296:ASN:O	2.36	0.58
2:H:23:CYS:SG	2:H:104:LEU:HD11	2.44	0.58
1:C:934:GLN:HA	1:C:937:LEU:HD23	1.85	0.58
1:C:4039:LYS:HG3	1:C:4040:GLY:H	1.68	0.58
1:D:4081:GLU:OE1	1:D:4085:ARG:NH2	2.37	0.58
1:A:3860:GLN:NE2	1:A:3867:VAL:H	2.02	0.57
1:A:4081:GLU:OE1	1:A:4085:ARG:NH2	2.37	0.57
1:C:70:GLU:HG3	1:C:129:TYR:HE2	1.69	0.57
1:D:4039:LYS:HG3	1:D:4040:GLY:H	1.68	0.57
2:J:23:CYS:SG	2:J:104:LEU:HD11	2.44	0.57
1:A:1793:ILE:HG12	1:A:1843:ILE:HD11	1.84	0.57
1:B:35:LEU:HD13	1:B:49:LEU:HD13	1.85	0.57
1:C:3860:GLN:NE2	1:C:3867:VAL:H	2.02	0.57
1:D:1989:GLU:HG2	1:D:1992:ARG:HD3	1.87	0.57
1:A:247:VAL:O	1:A:272:ARG:NH1	2.37	0.57
1:A:3840:ARG:HH21	1:A:3844:LEU:HD21	1.69	0.57
1:B:70:GLU:HG3	1:B:129:TYR:HE2	1.69	0.57
1:B:247:VAL:O	1:B:272:ARG:NH1	2.37	0.57
1:B:1609:VAL:HG22	1:B:1611:ARG:HH12	1.69	0.57
1:C:35:LEU:HD13	1:C:49:LEU:HD13	1.85	0.57
1:C:1588:HIS:HE1	1:C:1590:GLN:HE21	1.52	0.57
1:B:1715:TYR:CZ	1:B:1762:MET:HB3	2.38	0.57
1:B:2502:ASP:OD1	1:B:2503:THR:N	2.38	0.57
1:B:3860:GLN:NE2	1:B:3867:VAL:H	2.02	0.57
1:B:4081:GLU:OE1	1:B:4085:ARG:NH2	2.37	0.57
1:C:4081:GLU:OE1	1:C:4085:ARG:NH2	2.37	0.57
1:D:2000:GLU:O	1:D:2004:THR:HG22	2.05	0.57
1:D:3860:GLN:NE2	1:D:3867:VAL:H	2.02	0.57
1:A:1655:HIS:HA	1:A:1658:THR:HG22	1.86	0.57
1:A:4044:LYS:HZ1	1:A:4071:THR:H	1.52	0.57
1:B:1655:HIS:HA	1:B:1658:THR:HG22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4785:PHE:HE2	1:C:4518:TYR:HE2	1.51	0.57
1:C:3840:ARG:HH21	1:C:3844:LEU:HD21	1.69	0.57
1:A:2000:GLU:O	1:A:2004:THR:HG22	2.05	0.57
1:B:4121:ALA:O	1:B:4125:LEU:HG	2.05	0.57
1:B:4137:ILE:HG23	1:B:4950:PHE:HB2	1.87	0.57
1:D:35:LEU:HD13	1:D:49:LEU:HD13	1.85	0.57
1:D:1609:VAL:HG22	1:D:1611:ARG:HH12	1.69	0.57
1:A:4039:LYS:HG3	1:A:4040:GLY:H	1.68	0.57
1:B:233:VAL:O	1:B:408:SER:OG	2.23	0.57
1:C:1272:ARG:NH2	1:C:1584:PRO:O	2.35	0.57
1:C:4621:SER:OG	1:C:4622:GLU:N	2.37	0.57
1:D:258:ARG:NH1	1:D:316:LEU:O	2.38	0.57
1:A:4121:ALA:O	1:A:4125:LEU:HG	2.05	0.57
1:B:3933:SER:O	1:B:3937:SER:OG	2.22	0.57
1:C:4137:ILE:HG23	1:C:4950:PHE:HB2	1.87	0.57
1:D:233:VAL:O	1:D:408:SER:OG	2.23	0.57
1:D:1588:HIS:HE1	1:D:1590:GLN:HE21	1.52	0.57
1:A:2502:ASP:OD1	1:A:2503:THR:N	2.38	0.56
1:C:1962:ARG:O	1:C:1966:SER:OG	2.23	0.56
1:C:2091:TYR:CD2	1:C:3639:LEU:HD13	2.40	0.56
1:D:1051:ARG:HG2	1:D:1055:ARG:HE	1.70	0.56
1:D:2091:TYR:CD2	1:D:3639:LEU:HD13	2.40	0.56
1:A:645:GLN:OE1	1:A:645:GLN:N	2.39	0.56
1:A:1962:ARG:O	1:A:1966:SER:OG	2.23	0.56
1:A:4621:SER:OG	1:A:4622:GLU:N	2.37	0.56
1:C:707:PRO:O	1:C:838:ARG:NH1	2.33	0.56
1:C:1810:PRO:HB3	1:C:1818:LEU:HD22	1.87	0.56
1:C:4121:ALA:O	1:C:4125:LEU:HG	2.05	0.56
1:D:2502:ASP:OD1	1:D:2503:THR:N	2.38	0.56
1:A:708:GLY:O	1:A:838:ARG:NH1	2.39	0.56
1:A:1989:GLU:HG2	1:A:1992:ARG:HD3	1.87	0.56
1:B:123:HIS:HD2	1:B:126:SER:H	1.54	0.56
1:B:708:GLY:O	1:B:838:ARG:NH1	2.39	0.56
1:B:1588:HIS:HE1	1:B:1590:GLN:HE21	1.52	0.56
1:C:1051:ARG:HG2	1:C:1055:ARG:HE	1.70	0.56
1:C:1655:HIS:HA	1:C:1658:THR:HG22	1.86	0.56
1:D:1035:TYR:HE2	1:D:1047:LYS:HZ3	1.53	0.56
1:A:2775:LYS:O	1:A:2779:LYS:HG2	2.05	0.56
1:B:258:ARG:NH1	1:B:316:LEU:O	2.38	0.56
1:C:258:ARG:NH1	1:C:316:LEU:O	2.38	0.56
1:C:2502:ASP:OD1	1:C:2503:THR:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1962:ARG:O	1:D:1966:SER:OG	2.23	0.56
1:A:1051:ARG:HG2	1:A:1055:ARG:HE	1.70	0.56
1:A:1731:THR:O	1:A:1734:THR:OG1	2.24	0.56
1:A:4478:PHE:HA	1:A:4481:LYS:HE2	1.87	0.56
1:B:1810:PRO:HB3	1:B:1818:LEU:HD22	1.87	0.56
1:C:1609:VAL:HG22	1:C:1611:ARG:HH12	1.69	0.56
1:D:123:HIS:HD2	1:D:126:SER:H	1.54	0.56
1:D:707:PRO:O	1:D:838:ARG:NH1	2.33	0.56
1:D:708:GLY:O	1:D:838:ARG:NH1	2.39	0.56
1:A:125:TYR:HE1	1:A:414:ARG:HA	1.71	0.56
1:B:143:LEU:CD1	1:C:2425:LEU:HD12	2.34	0.56
1:B:645:GLN:N	1:B:645:GLN:OE1	2.39	0.56
1:B:1989:GLU:HG2	1:B:1992:ARG:HD3	1.86	0.56
1:C:4478:PHE:HA	1:C:4481:LYS:HE2	1.87	0.56
1:A:4137:ILE:HG23	1:A:4950:PHE:HB2	1.87	0.56
1:B:125:TYR:HE1	1:B:414:ARG:HA	1.71	0.56
1:B:1962:ARG:O	1:B:1966:SER:OG	2.23	0.56
1:C:503:ASP:HA	1:C:561:ARG:HH12	1.71	0.56
1:C:1731:THR:O	1:C:1734:THR:OG1	2.24	0.56
1:D:4121:ALA:O	1:D:4125:LEU:HG	2.05	0.56
1:A:123:HIS:HD2	1:A:126:SER:H	1.54	0.56
1:A:1359:ILE:HG13	1:A:1360:ASP:H	1.71	0.56
1:B:4621:SER:OG	1:B:4622:GLU:N	2.37	0.56
1:C:2775:LYS:O	1:C:2779:LYS:HG2	2.05	0.56
1:D:4621:SER:OG	1:D:4622:GLU:N	2.37	0.56
1:A:70:GLU:HG3	1:A:129:TYR:HE2	1.69	0.56
1:A:1609:VAL:HG22	1:A:1611:ARG:HH12	1.69	0.56
1:D:645:GLN:OE1	1:D:645:GLN:N	2.39	0.56
1:D:2775:LYS:O	1:D:2779:LYS:HG2	2.05	0.56
1:D:4137:ILE:HG23	1:D:4950:PHE:HB2	1.87	0.56
1:A:233:VAL:O	1:A:408:SER:OG	2.23	0.56
1:B:4478:PHE:HA	1:B:4481:LYS:HE2	1.87	0.56
1:C:123:HIS:HD2	1:C:126:SER:H	1.54	0.56
1:C:910:ASP:OD1	1:C:910:ASP:N	2.39	0.56
1:D:119:ILE:N	1:D:160:TRP:O	2.39	0.56
1:D:503:ASP:HA	1:D:561:ARG:HH12	1.71	0.56
1:A:1810:PRO:HB3	1:A:1818:LEU:HD22	1.87	0.55
2:G:39:SER:O	2:G:43:ARG:NH1	2.39	0.55
1:B:799:LYS:HG2	1:B:1621:GLN:HG3	1.88	0.55
1:B:1731:THR:O	1:B:1734:THR:OG1	2.24	0.55
1:B:2775:LYS:O	1:B:2779:LYS:HG2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:39:SER:O	2:H:43:ARG:NH1	2.39	0.55
1:C:119:ILE:N	1:C:160:TRP:O	2.39	0.55
1:C:125:TYR:HE1	1:C:414:ARG:HA	1.71	0.55
1:C:233:VAL:O	1:C:408:SER:OG	2.23	0.55
1:C:271:ALA:O	1:C:301:THR:OG1	2.24	0.55
1:C:2000:GLU:O	1:C:2004:THR:HG22	2.05	0.55
1:A:845:THR:HG22	1:A:846:TYR:H	1.71	0.55
1:A:4817:TYR:HB2	1:D:4843:ILE:HD13	1.88	0.55
1:B:2091:TYR:CD2	1:B:3639:LEU:HD13	2.40	0.55
1:D:125:TYR:HE1	1:D:414:ARG:HA	1.71	0.55
1:D:1810:PRO:HB3	1:D:1818:LEU:HD22	1.87	0.55
1:D:2344:ALA:O	1:D:2348:GLU:HG3	2.07	0.55
1:A:1588:HIS:HE1	1:A:1590:GLN:HE21	1.52	0.55
1:B:394:HIS:HD2	1:B:396:GLU:OE2	1.90	0.55
2:I:39:SER:O	2:I:43:ARG:NH1	2.39	0.55
1:D:1359:ILE:HG13	1:D:1360:ASP:H	1.71	0.55
1:D:1731:THR:O	1:D:1734:THR:OG1	2.24	0.55
1:D:4013:LEU:HD22	1:D:4124:VAL:HG21	1.89	0.55
1:D:4478:PHE:HA	1:D:4481:LYS:HE2	1.87	0.55
2:J:39:SER:O	2:J:43:ARG:NH1	2.39	0.55
1:A:271:ALA:O	1:A:301:THR:OG1	2.24	0.55
1:A:503:ASP:HA	1:A:561:ARG:HH12	1.71	0.55
1:A:2201:TYR:HB2	1:A:2204:ARG:HH21	1.72	0.55
1:A:2344:ALA:O	1:A:2348:GLU:HG3	2.07	0.55
1:A:4013:LEU:HD22	1:A:4124:VAL:HG21	1.89	0.55
1:B:2000:GLU:O	1:B:2004:THR:HG22	2.05	0.55
1:B:2344:ALA:O	1:B:2348:GLU:HG3	2.07	0.55
1:C:708:GLY:O	1:C:838:ARG:NH1	2.39	0.55
1:C:1118:SER:HB3	1:C:1204:VAL:HG11	1.89	0.55
1:A:258:ARG:NH1	1:A:316:LEU:O	2.38	0.55
1:B:3957:LEU:HD11	1:B:3966:LEU:HD23	1.89	0.55
1:C:645:GLN:OE1	1:C:645:GLN:N	2.39	0.55
1:C:1989:GLU:HG2	1:C:1992:ARG:HD3	1.87	0.55
1:C:4947:CYS:SG	1:C:4949:GLU:HG3	2.47	0.55
1:D:415:THR:O	1:D:419:ILE:HG13	2.07	0.55
1:D:2201:TYR:HB2	1:D:2204:ARG:HH21	1.72	0.55
1:D:2328:GLU:HA	1:D:2335:ARG:HH21	1.72	0.55
1:A:4195:THR:HB	1:A:4918:LEU:HD11	1.89	0.55
1:B:692:HIS:HB3	1:B:795:SER:HB3	1.89	0.55
1:C:3957:LEU:HD11	1:C:3966:LEU:HD23	1.89	0.55
1:D:845:THR:HG22	1:D:846:TYR:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4947:CYS:SG	1:D:4949:GLU:HG3	2.47	0.55
1:A:119:ILE:N	1:A:160:TRP:O	2.40	0.55
1:A:190:ARG:HH12	1:B:2421:ILE:HG12	1.72	0.55
1:A:1680:HIS:CE1	2:G:91:VAL:HG22	2.42	0.55
1:B:415:THR:O	1:B:419:ILE:HG13	2.07	0.55
1:B:845:THR:HG22	1:B:846:TYR:H	1.71	0.55
1:B:1051:ARG:HG2	1:B:1055:ARG:HE	1.70	0.55
1:B:3961:SER:OG	1:B:3962:SER:N	2.40	0.55
1:C:332:ARG:NH1	1:C:364:GLN:OE1	2.40	0.55
1:C:845:THR:HG22	1:C:846:TYR:H	1.71	0.55
1:D:2107:ILE:HG13	1:D:2108:ASN:H	1.72	0.55
1:D:3961:SER:OG	1:D:3962:SER:N	2.40	0.55
2:H:83:TYR:HB3	2:H:87:GLY:HA2	1.89	0.55
1:C:748:LEU:CD1	2:I:8:ILE:HG23	2.36	0.55
1:D:1118:SER:HB3	1:D:1204:VAL:HG11	1.89	0.55
1:D:4195:THR:HB	1:D:4918:LEU:HD11	1.88	0.55
1:A:394:HIS:HD2	1:A:396:GLU:OE2	1.90	0.55
2:G:83:TYR:HB3	2:G:87:GLY:HA2	1.89	0.55
1:B:601:LEU:HB2	1:B:610:VAL:HG11	1.89	0.55
1:B:1118:SER:HB3	1:B:1204:VAL:HG11	1.89	0.55
1:C:893:TRP:O	1:C:897:LYS:HD3	2.07	0.55
1:C:2344:ALA:O	1:C:2348:GLU:HG3	2.07	0.55
1:D:601:LEU:HB2	1:D:610:VAL:HG11	1.89	0.55
1:A:207:PHE:CZ	1:B:2324:ILE:HD12	2.42	0.55
1:A:707:PRO:O	1:A:838:ARG:NH1	2.33	0.55
1:B:271:ALA:O	1:B:301:THR:OG1	2.24	0.55
1:B:893:TRP:O	1:B:897:LYS:HD3	2.07	0.55
1:B:1359:ILE:HG13	1:B:1360:ASP:H	1.71	0.55
1:B:2107:ILE:HG13	1:B:2108:ASN:H	1.72	0.55
1:B:4808:MET:HE3	1:C:4518:TYR:HD2	1.72	0.55
1:C:1359:ILE:HG13	1:C:1360:ASP:H	1.71	0.55
1:D:271:ALA:O	1:D:301:THR:OG1	2.24	0.55
1:A:3999:VAL:O	1:A:4003:VAL:HG13	2.08	0.54
1:B:119:ILE:N	1:B:160:TRP:O	2.39	0.54
1:B:191:TYR:HE2	1:C:2325:ARG:HD2	1.70	0.54
1:B:332:ARG:NH1	1:B:364:GLN:OE1	2.40	0.54
1:C:3961:SER:OG	1:C:3962:SER:N	2.40	0.54
1:D:394:HIS:HD2	1:D:396:GLU:OE2	1.90	0.54
1:D:4029:ASP:OD2	1:D:4054:HIS:NE2	2.40	0.54
1:A:332:ARG:NH1	1:A:364:GLN:OE1	2.40	0.54
1:A:601:LEU:HB2	1:A:610:VAL:HG11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:893:TRP:O	1:A:897:LYS:HD3	2.07	0.54
1:A:2091:TYR:CD2	1:A:3639:LEU:HD13	2.40	0.54
1:B:4029:ASP:OD2	1:B:4054:HIS:NE2	2.40	0.54
1:B:4947:CYS:SG	1:B:4949:GLU:HG3	2.47	0.54
1:C:799:LYS:HG2	1:C:1621:GLN:HG3	1.88	0.54
1:C:4029:ASP:OD2	1:C:4054:HIS:NE2	2.40	0.54
1:D:125:TYR:CE1	1:D:414:ARG:HA	2.42	0.54
1:A:692:HIS:HB3	1:A:795:SER:HB3	1.89	0.54
1:A:2328:GLU:HA	1:A:2335:ARG:HH21	1.72	0.54
1:B:2201:TYR:HB2	1:B:2204:ARG:HH21	1.72	0.54
1:B:4195:THR:HB	1:B:4918:LEU:HD11	1.88	0.54
1:C:394:HIS:HD2	1:C:396:GLU:OE2	1.90	0.54
1:C:2328:GLU:HA	1:C:2335:ARG:HH21	1.72	0.54
1:D:799:LYS:HG2	1:D:1621:GLN:HG3	1.88	0.54
1:A:4826:ILE:O	1:A:4829:GLU:HG3	2.07	0.54
1:B:503:ASP:HA	1:B:561:ARG:HH12	1.71	0.54
1:B:2328:GLU:HA	1:B:2335:ARG:HH21	1.72	0.54
1:C:125:TYR:CE1	1:C:414:ARG:HA	2.42	0.54
1:D:692:HIS:HB3	1:D:795:SER:HB3	1.89	0.54
1:A:125:TYR:CE1	1:A:414:ARG:HA	2.42	0.54
1:A:1118:SER:HB3	1:A:1204:VAL:HG11	1.89	0.54
1:B:2890:ASP:O	1:B:2893:LYS:HB2	2.08	0.54
1:C:1609:VAL:HG23	1:C:1610:SER:H	1.73	0.54
1:C:4826:ILE:O	1:C:4829:GLU:HG3	2.08	0.54
1:D:893:TRP:O	1:D:897:LYS:HD3	2.07	0.54
1:D:3999:VAL:O	1:D:4003:VAL:HG13	2.07	0.54
1:A:2890:ASP:O	1:A:2893:LYS:HB2	2.08	0.54
1:C:415:THR:O	1:C:419:ILE:HG13	2.07	0.54
1:C:678:MET:HG3	1:C:801:ARG:HB3	1.90	0.54
1:C:1800:VAL:O	1:C:1804:SER:OG	2.25	0.54
1:C:4042:ILE:HG22	1:C:4044:LYS:H	1.73	0.54
2:I:83:TYR:HB3	2:I:87:GLY:HA2	1.89	0.54
1:D:1800:VAL:O	1:D:1804:SER:OG	2.25	0.54
1:D:2442:PRO:HG3	1:D:2454:ASP:HB2	1.90	0.54
1:D:3957:LEU:HD11	1:D:3966:LEU:HD23	1.89	0.54
1:D:4826:ILE:O	1:D:4829:GLU:HG3	2.08	0.54
2:J:83:TYR:HB3	2:J:87:GLY:HA2	1.89	0.54
1:A:415:THR:O	1:A:419:ILE:HG13	2.07	0.54
1:A:1986:PRO:HB2	1:A:1988:PRO:HD2	1.89	0.54
1:A:2107:ILE:HG13	1:A:2108:ASN:H	1.72	0.54
1:A:3957:LEU:HD11	1:A:3966:LEU:HD23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3961:SER:OG	1:A:3962:SER:N	2.40	0.54
1:B:1800:VAL:O	1:B:1804:SER:OG	2.25	0.54
1:C:601:LEU:HB2	1:C:610:VAL:HG11	1.89	0.54
1:C:1986:PRO:HB2	1:C:1988:PRO:HD2	1.89	0.54
1:C:4013:LEU:HD22	1:C:4124:VAL:HG21	1.89	0.54
1:C:4660:TYR:HB3	1:C:4664:ARG:HH21	1.73	0.54
1:A:799:LYS:HG2	1:A:1621:GLN:HG3	1.88	0.54
1:A:1157:GLN:N	1:A:1160:ASP:OD2	2.31	0.54
1:B:4042:ILE:HG22	1:B:4044:LYS:H	1.73	0.54
1:D:678:MET:HG3	1:D:801:ARG:HB3	1.90	0.54
1:D:2890:ASP:O	1:D:2893:LYS:HB2	2.08	0.54
1:D:4660:TYR:HB3	1:D:4664:ARG:HH21	1.73	0.54
1:A:4947:CYS:SG	1:A:4949:GLU:HG3	2.47	0.54
1:C:4195:THR:HB	1:C:4918:LEU:HD11	1.88	0.54
1:D:332:ARG:NH1	1:D:364:GLN:OE1	2.40	0.54
1:B:200:SER:HG	1:B:202:HIS:HD1	1.51	0.54
1:B:2839:MET:O	1:B:2839:MET:HG3	2.08	0.54
1:B:3860:GLN:HE22	1:B:3867:VAL:H	1.55	0.54
1:C:1257:GLN:HA	1:C:1384:LEU:HD23	1.90	0.54
1:C:2201:TYR:HB2	1:C:2204:ARG:HH21	1.72	0.54
1:D:1715:TYR:CE2	1:D:1719:ARG:HD2	2.43	0.54
1:A:1641:ASP:HB2	1:A:1644:GLU:HG3	1.90	0.53
1:A:4042:ILE:HG22	1:A:4044:LYS:H	1.73	0.53
1:B:70:GLU:O	1:B:71:GLN:HG2	2.08	0.53
1:B:1641:ASP:HB2	1:B:1644:GLU:HG3	1.90	0.53
1:B:1715:TYR:CE2	1:B:1719:ARG:HD2	2.43	0.53
1:C:2242:ALA:O	1:C:2246:VAL:HG23	2.09	0.53
1:C:3999:VAL:O	1:C:4003:VAL:HG13	2.08	0.53
1:D:70:GLU:O	1:D:71:GLN:HG2	2.08	0.53
1:A:143:LEU:CD1	1:B:2425:LEU:HD12	2.35	0.53
1:A:4029:ASP:OD2	1:A:4054:HIS:NE2	2.40	0.53
1:A:4817:TYR:CE1	1:D:4846:ASP:HB2	2.38	0.53
1:B:125:TYR:CE1	1:B:414:ARG:HA	2.42	0.53
1:B:3999:VAL:O	1:B:4003:VAL:HG13	2.07	0.53
1:C:1715:TYR:CE2	1:C:1719:ARG:HD2	2.43	0.53
1:D:1609:VAL:HG23	1:D:1610:SER:H	1.73	0.53
1:D:2242:ALA:O	1:D:2246:VAL:HG23	2.09	0.53
1:D:2328:GLU:HA	1:D:2335:ARG:NH2	2.23	0.53
1:A:678:MET:HG3	1:A:801:ARG:HB3	1.90	0.53
1:A:1257:GLN:HA	1:A:1384:LEU:HD23	1.90	0.53
1:A:1609:VAL:HG23	1:A:1610:SER:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3975:LYS:HB2	1:A:4093:ILE:HG13	1.90	0.53
1:B:678:MET:HG3	1:B:801:ARG:HB3	1.90	0.53
1:B:804:LEU:HD22	1:B:822:CYS:HB2	1.90	0.53
1:B:4826:ILE:O	1:B:4829:GLU:HG3	2.08	0.53
1:D:59:PRO:HB3	1:D:296:ARG:NH1	2.24	0.53
1:D:4042:ILE:HG22	1:D:4044:LYS:H	1.73	0.53
1:A:59:PRO:HB3	1:A:296:ARG:NH1	2.24	0.53
1:A:1715:TYR:CE2	1:A:1719:ARG:HD2	2.43	0.53
1:A:2425:LEU:HD12	1:D:143:LEU:HD11	1.90	0.53
1:B:59:PRO:HB3	1:B:296:ARG:NH1	2.24	0.53
1:B:1682:ASP:HB3	1:B:1684:PRO:HD2	1.91	0.53
1:B:4013:LEU:HD22	1:B:4124:VAL:HG21	1.89	0.53
1:B:4660:TYR:HB3	1:B:4664:ARG:HH21	1.73	0.53
1:C:2107:ILE:HG13	1:C:2108:ASN:H	1.72	0.53
1:D:1682:ASP:HB3	1:D:1684:PRO:HD2	1.91	0.53
1:B:1609:VAL:HG23	1:B:1610:SER:H	1.73	0.53
1:D:3975:LYS:HB2	1:D:4093:ILE:HG13	1.91	0.53
1:A:2735:LYS:HD3	1:A:2756:MET:HG3	1.91	0.53
1:B:2441:MET:HE1	1:B:2501:LEU:HD12	1.90	0.53
1:B:2442:PRO:HG3	1:B:2454:ASP:HB2	1.90	0.53
1:C:2839:MET:HG3	1:C:2839:MET:O	2.08	0.53
1:D:125:TYR:OH	1:D:417:ARG:HB3	2.09	0.53
1:D:804:LEU:HD22	1:D:822:CYS:HB2	1.90	0.53
1:D:1986:PRO:HB2	1:D:1988:PRO:HD2	1.89	0.53
1:D:2735:LYS:HD3	1:D:2756:MET:HG3	1.91	0.53
1:A:70:GLU:O	1:A:71:GLN:HG2	2.08	0.53
1:A:125:TYR:OH	1:A:417:ARG:HB3	2.09	0.53
1:A:2242:ALA:O	1:A:2246:VAL:HG23	2.09	0.53
1:A:2442:PRO:HG3	1:A:2454:ASP:HB2	1.90	0.53
1:B:1986:PRO:HB2	1:B:1988:PRO:HD2	1.89	0.53
1:C:70:GLU:O	1:C:71:GLN:HG2	2.08	0.53
1:C:125:TYR:OH	1:C:417:ARG:HB3	2.09	0.53
1:C:692:HIS:HB3	1:C:795:SER:HB3	1.89	0.53
1:C:1641:ASP:HB2	1:C:1644:GLU:HG3	1.90	0.53
1:C:4850:PHE:CD2	1:D:4821:ARG:HG2	2.44	0.53
1:A:1682:ASP:HB3	1:A:1684:PRO:HD2	1.91	0.53
1:A:2328:GLU:HA	1:A:2335:ARG:NH2	2.23	0.53
1:B:23:GLN:HE21	1:B:52:THR:HG21	1.74	0.53
1:B:2328:GLU:HA	1:B:2335:ARG:NH2	2.23	0.53
1:C:1682:ASP:HB3	1:C:1684:PRO:HD2	1.91	0.53
1:C:2442:PRO:HG3	1:C:2454:ASP:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1257:GLN:HA	1:D:1384:LEU:HD23	1.90	0.53
1:A:2441:MET:HE1	1:A:2501:LEU:HD12	1.90	0.53
1:A:4660:TYR:HB3	1:A:4664:ARG:HH21	1.73	0.53
1:B:1257:GLN:HA	1:B:1384:LEU:HD23	1.90	0.53
1:C:23:GLN:HE21	1:C:52:THR:HG21	1.74	0.53
1:C:2890:ASP:O	1:C:2893:LYS:HB2	2.07	0.53
1:C:3727:GLN:C	1:C:3731:HIS:HD1	2.13	0.53
1:C:3860:GLN:HE22	1:C:3867:VAL:H	1.55	0.53
1:D:1641:ASP:HB2	1:D:1644:GLU:HG3	1.90	0.53
1:B:910:ASP:OD1	1:B:910:ASP:N	2.39	0.53
1:D:1157:GLN:N	1:D:1160:ASP:OD2	2.31	0.53
1:A:804:LEU:HD22	1:A:822:CYS:HB2	1.90	0.52
1:A:1800:VAL:O	1:A:1804:SER:OG	2.25	0.52
1:A:3860:GLN:HE22	1:A:3867:VAL:H	1.55	0.52
1:C:2328:GLU:HA	1:C:2335:ARG:NH2	2.23	0.52
1:D:1152:TYR:HD1	1:D:1184:ASP:HB3	1.74	0.52
1:D:1245:ARG:NH1	1:D:1809:ASP:O	2.42	0.52
1:A:191:TYR:HE2	1:B:2325:ARG:HD2	1.74	0.52
1:B:2242:ALA:O	1:B:2246:VAL:HG23	2.09	0.52
1:C:59:PRO:HB3	1:C:296:ARG:NH1	2.24	0.52
1:C:671:LYS:HB3	1:C:761:LEU:HB2	1.92	0.52
1:C:2441:MET:HE1	1:C:2501:LEU:HD12	1.91	0.52
1:C:3975:LYS:HB2	1:C:4093:ILE:HG13	1.90	0.52
1:D:2128:LEU:HD11	1:D:2140:LEU:HB3	1.92	0.52
1:A:427:ASN:HA	1:A:430:ILE:HG22	1.91	0.52
1:A:907:VAL:HB	1:A:914:GLN:HE22	1.74	0.52
1:B:2876:LEU:HD22	1:B:2880:GLU:OE1	2.10	0.52
1:D:115:TYR:CE2	1:D:175:VAL:HG12	2.45	0.52
1:D:3727:GLN:C	1:D:3731:HIS:HD1	2.13	0.52
1:A:503:ASP:O	1:A:507:VAL:HG13	2.10	0.52
1:A:1708:ILE:HD12	1:A:1828:THR:HG21	1.92	0.52
1:A:2839:MET:HG3	1:A:2839:MET:O	2.08	0.52
1:B:907:VAL:HB	1:B:914:GLN:HE22	1.74	0.52
1:C:1152:TYR:HD1	1:C:1184:ASP:HB3	1.74	0.52
1:C:1631:LEU:HD22	1:C:1645:LEU:HD11	1.92	0.52
1:C:2128:LEU:HD11	1:C:2140:LEU:HB3	1.91	0.52
1:D:1631:LEU:HD22	1:D:1645:LEU:HD11	1.92	0.52
1:B:1152:TYR:HD1	1:B:1184:ASP:HB3	1.74	0.52
1:A:3889:TRP:CZ3	1:D:80:GLU:HG3	2.44	0.52
1:B:125:TYR:OH	1:B:417:ARG:HB3	2.09	0.52
1:C:394:HIS:CD2	1:C:396:GLU:OE2	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1708:ILE:HD12	1:C:1828:THR:HG21	1.92	0.52
1:D:712:GLU:OE2	1:D:841:LYS:HD2	2.10	0.52
1:D:868:ASP:HB2	1:D:871:GLN:HG2	1.92	0.52
1:D:2876:LEU:HD22	1:D:2880:GLU:OE1	2.10	0.52
1:D:3860:GLN:HE22	1:D:3867:VAL:H	1.55	0.52
1:A:78:LEU:O	1:A:82:LEU:HG	2.10	0.52
1:A:555:LEU:HD11	1:A:585:ALA:HB1	1.92	0.52
1:A:2128:LEU:HD11	1:A:2140:LEU:HB3	1.91	0.52
1:A:2217:LEU:HA	1:A:2220:LEU:HG	1.92	0.52
1:B:394:HIS:CD2	1:B:396:GLU:OE2	2.63	0.52
1:B:2735:LYS:HD3	1:B:2756:MET:HG3	1.91	0.52
1:B:3975:LYS:HB2	1:B:4093:ILE:HG13	1.91	0.52
1:C:804:LEU:HD22	1:C:822:CYS:HB2	1.90	0.52
1:C:1035:TYR:HE2	1:C:1047:LYS:HZ3	1.58	0.52
1:C:2735:LYS:HD3	1:C:2756:MET:HG3	1.91	0.52
1:C:2876:LEU:HD22	1:C:2880:GLU:OE1	2.10	0.52
1:C:4845:PHE:HD2	1:C:4846:ASP:OD1	1.93	0.52
1:D:394:HIS:CD2	1:D:396:GLU:OE2	2.63	0.52
1:A:1035:TYR:HE2	1:A:1047:LYS:HZ3	1.58	0.52
1:A:3802:LEU:HB2	1:A:3883:SER:HB2	1.92	0.52
1:B:671:LYS:HB3	1:B:761:LEU:HB2	1.92	0.52
1:B:712:GLU:OE2	1:B:841:LYS:HD2	2.10	0.52
1:C:115:TYR:CE2	1:C:175:VAL:HG12	2.45	0.52
1:C:555:LEU:HD11	1:C:585:ALA:HB1	1.92	0.52
1:D:200:SER:HG	1:D:202:HIS:CE1	2.27	0.52
1:D:1708:ILE:HD12	1:D:1828:THR:HG21	1.92	0.52
1:D:2217:LEU:HA	1:D:2220:LEU:HG	1.92	0.52
1:A:868:ASP:HB2	1:A:871:GLN:HG2	1.92	0.52
1:C:868:ASP:HB2	1:C:871:GLN:HG2	1.92	0.52
1:C:1719:ARG:NE	1:C:1831:ILE:O	2.43	0.52
1:C:2478:GLU:HG2	1:C:2479:VAL:HG13	1.92	0.52
1:C:4564:SER:O	1:C:4564:SER:OG	2.28	0.52
1:D:2723:TYR:HD2	1:D:2771:ARG:HH12	1.58	0.52
1:A:394:HIS:CD2	1:A:396:GLU:OE2	2.63	0.52
1:A:712:GLU:OE2	1:A:841:LYS:HD2	2.10	0.52
1:A:1012:ILE:HG13	1:A:1013:ARG:HD2	1.92	0.52
1:A:2876:LEU:HD22	1:A:2880:GLU:OE1	2.10	0.52
1:B:76:ARG:O	1:B:80:GLU:HG2	2.10	0.52
1:B:78:LEU:O	1:B:82:LEU:HG	2.10	0.52
1:B:555:LEU:HD11	1:B:585:ALA:HB1	1.92	0.52
1:B:1629:MET:HE2	1:B:1642:ILE:HG21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1631:LEU:HD22	1:B:1645:LEU:HD11	1.92	0.52
1:C:427:ASN:HA	1:C:430:ILE:HG22	1.91	0.52
1:C:2217:LEU:HA	1:C:2220:LEU:HG	1.92	0.52
1:B:115:TYR:CE2	1:B:175:VAL:HG12	2.45	0.51
1:B:503:ASP:O	1:B:507:VAL:HG13	2.10	0.51
1:B:2478:GLU:HG2	1:B:2479:VAL:HG13	1.92	0.51
1:B:2774:ILE:HG23	1:B:2891:ILE:HD11	1.92	0.51
1:D:23:GLN:HE21	1:D:52:THR:HG21	1.74	0.51
1:D:4845:PHE:HD2	1:D:4846:ASP:OD1	1.93	0.51
1:A:23:GLN:HE21	1:A:52:THR:HG21	1.74	0.51
1:A:1629:MET:HE2	1:A:1642:ILE:HG21	1.91	0.51
1:A:1727:ILE:HD11	1:A:2164:LEU:HD21	1.93	0.51
1:A:4873:ARG:HH11	1:D:4765:GLN:HE22	1.58	0.51
1:C:78:LEU:O	1:C:82:LEU:HG	2.10	0.51
1:D:2774:ILE:HG23	1:D:2891:ILE:HD11	1.92	0.51
1:B:2217:LEU:HA	1:B:2220:LEU:HG	1.92	0.51
1:B:3727:GLN:C	1:B:3731:HIS:HD1	2.13	0.51
1:C:200:SER:HG	1:C:202:HIS:CE1	2.28	0.51
1:C:426:PHE:HZ	1:C:456:LEU:HD21	1.76	0.51
1:C:2774:ILE:HG23	1:C:2891:ILE:HD11	1.92	0.51
1:C:3611:PRO:HD2	1:C:3614:ARG:HH21	1.76	0.51
1:C:3712:SER:OG	1:C:3716:LYS:NZ	2.36	0.51
1:D:555:LEU:HD11	1:D:585:ALA:HB1	1.92	0.51
1:D:671:LYS:HB3	1:D:761:LEU:HB2	1.91	0.51
1:D:2839:MET:HG3	1:D:2839:MET:O	2.08	0.51
1:D:3611:PRO:HD2	1:D:3614:ARG:HH21	1.76	0.51
1:A:3727:GLN:C	1:A:3731:HIS:HD1	2.13	0.51
1:B:3802:LEU:HB2	1:B:3883:SER:HB2	1.92	0.51
1:D:427:ASN:HA	1:D:430:ILE:HG22	1.91	0.51
1:D:503:ASP:O	1:D:507:VAL:HG13	2.10	0.51
1:A:115:TYR:CE2	1:A:175:VAL:HG12	2.45	0.51
1:A:1152:TYR:HD1	1:A:1184:ASP:HB3	1.74	0.51
1:A:1631:LEU:HD22	1:A:1645:LEU:HD11	1.92	0.51
1:A:1712:LEU:HD22	1:A:1832:MET:SD	2.51	0.51
1:A:2723:TYR:HD2	1:A:2771:ARG:HH12	1.58	0.51
1:A:4649:LYS:NZ	1:A:4669:LEU:O	2.44	0.51
1:A:4817:TYR:HB2	1:D:4843:ILE:HG23	1.91	0.51
1:B:427:ASN:HA	1:B:430:ILE:HG22	1.91	0.51
1:B:1719:ARG:NE	1:B:1831:ILE:O	2.43	0.51
1:B:2723:TYR:HD2	1:B:2771:ARG:HH12	1.58	0.51
1:C:76:ARG:O	1:C:80:GLU:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:503:ASP:O	1:C:507:VAL:HG13	2.10	0.51
1:C:907:VAL:HB	1:C:914:GLN:HE22	1.74	0.51
1:C:1712:LEU:HD22	1:C:1832:MET:SD	2.51	0.51
1:D:76:ARG:O	1:D:80:GLU:HG2	2.10	0.51
1:D:907:VAL:HB	1:D:914:GLN:HE22	1.74	0.51
1:D:910:ASP:OD1	1:D:910:ASP:N	2.39	0.51
1:D:2441:MET:HE1	1:D:2501:LEU:HD12	1.93	0.51
1:A:1245:ARG:NH1	1:A:1809:ASP:O	2.42	0.51
1:B:19:GLU:HB3	1:B:217:ILE:HB	1.93	0.51
1:B:868:ASP:HB2	1:B:871:GLN:HG2	1.92	0.51
1:B:1012:ILE:HG13	1:B:1013:ARG:HD2	1.92	0.51
1:B:1245:ARG:NH1	1:B:1809:ASP:O	2.42	0.51
1:B:4845:PHE:HD2	1:B:4846:ASP:OD1	1.93	0.51
1:B:4955:ASP:OD2	1:B:4960:GLN:NE2	2.44	0.51
1:C:1358:ARG:HB2	1:C:1567:LEU:HD21	1.92	0.51
1:C:2397:LEU:O	1:C:2401:CYS:HB3	2.10	0.51
1:D:78:LEU:O	1:D:82:LEU:HG	2.10	0.51
1:D:1362:ASP:OD1	1:D:1362:ASP:N	2.44	0.51
1:A:2397:LEU:O	1:A:2401:CYS:HB3	2.11	0.51
1:B:1727:ILE:HD11	1:B:2164:LEU:HD21	1.93	0.51
1:B:2397:LEU:O	1:B:2401:CYS:HB3	2.11	0.51
1:C:1273:ILE:HD11	1:C:1287:GLN:HB2	1.93	0.51
1:C:4955:ASP:OD2	1:C:4960:GLN:NE2	2.44	0.51
1:D:1294:ASN:O	1:D:1348:LYS:NZ	2.38	0.51
1:A:1754:LEU:HG	1:A:1756:THR:HG23	1.93	0.51
1:B:4112:THR:HA	1:B:4115:GLN:HB2	1.93	0.51
1:C:1730:MET:HE1	1:C:1929:ASP:HB2	1.93	0.51
1:D:426:PHE:HZ	1:D:456:LEU:HD21	1.76	0.51
1:D:1754:LEU:HG	1:D:1756:THR:HG23	1.93	0.51
1:D:2397:LEU:O	1:D:2401:CYS:HB3	2.11	0.51
1:D:4044:LYS:NZ	1:D:4071:THR:H	2.09	0.51
1:A:1719:ARG:NE	1:A:1831:ILE:O	2.43	0.51
1:A:4112:THR:HA	1:A:4115:GLN:HB2	1.93	0.51
1:A:4873:ARG:CD	1:D:4765:GLN:HE22	2.24	0.51
1:B:1708:ILE:HD12	1:B:1828:THR:HG21	1.92	0.51
1:B:1712:LEU:HD22	1:B:1832:MET:SD	2.51	0.51
1:B:2128:LEU:HD11	1:B:2140:LEU:HB3	1.91	0.51
1:B:4044:LYS:NZ	1:B:4071:THR:H	2.09	0.51
1:C:712:GLU:OE2	1:C:841:LYS:HD2	2.10	0.51
1:D:19:GLU:HB3	1:D:217:ILE:HB	1.93	0.51
1:D:3964:ILE:HD11	1:D:3968:LYS:HE2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:21:VAL:HG12	1:A:23:GLN:HG3	1.93	0.51
1:A:1358:ARG:HB2	1:A:1567:LEU:HD21	1.92	0.51
1:A:2201:TYR:HA	1:A:2204:ARG:HE	1.76	0.51
1:A:2774:ILE:HG23	1:A:2891:ILE:HD11	1.91	0.51
1:B:1362:ASP:N	1:B:1362:ASP:OD1	2.44	0.51
1:B:3989:VAL:HG12	1:B:3990:VAL:H	1.76	0.51
1:C:19:GLU:HB3	1:C:217:ILE:HB	1.93	0.51
1:C:884:ARG:HD2	1:C:885:LEU:N	2.26	0.51
1:C:1754:LEU:HG	1:C:1756:THR:HG23	1.93	0.51
1:D:712:GLU:HG3	1:D:713:TRP:N	2.26	0.51
1:D:1273:ILE:HD11	1:D:1287:GLN:HB2	1.93	0.51
1:D:1730:MET:HE1	1:D:1929:ASP:HB2	1.93	0.51
1:D:4601:ARG:HD3	1:D:4707:TRP:CZ2	2.46	0.51
1:A:671:LYS:HB3	1:A:761:LEU:HB2	1.92	0.50
1:A:712:GLU:HG3	1:A:713:TRP:N	2.26	0.50
1:A:3832:ASP:N	1:A:3832:ASP:OD1	2.44	0.50
1:A:4845:PHE:HD2	1:A:4846:ASP:OD1	1.93	0.50
1:B:426:PHE:HZ	1:B:456:LEU:HD21	1.76	0.50
1:B:1358:ARG:HB2	1:B:1567:LEU:HD21	1.92	0.50
1:C:3964:ILE:HD11	1:C:3968:LYS:HE2	1.93	0.50
1:D:884:ARG:HD2	1:D:885:LEU:N	2.26	0.50
1:D:1012:ILE:HG13	1:D:1013:ARG:HD2	1.92	0.50
1:A:884:ARG:HD2	1:A:885:LEU:N	2.26	0.50
1:A:3611:PRO:HD2	1:A:3614:ARG:HH21	1.76	0.50
1:B:1294:ASN:O	1:B:1348:LYS:NZ	2.38	0.50
1:B:1754:LEU:HG	1:B:1756:THR:HG23	1.93	0.50
1:B:3611:PRO:HD2	1:B:3614:ARG:HH21	1.76	0.50
1:D:498:VAL:HG13	1:D:533:LEU:HD22	1.94	0.50
1:B:884:ARG:HD2	1:B:885:LEU:N	2.26	0.50
1:C:1629:MET:HE2	1:C:1642:ILE:HG21	1.92	0.50
1:C:4601:ARG:HD3	1:C:4707:TRP:CZ2	2.47	0.50
1:C:4649:LYS:NZ	1:C:4669:LEU:O	2.44	0.50
1:D:3686:LEU:HD12	1:D:3690:TYR:CE2	2.47	0.50
1:D:3802:LEU:HB2	1:D:3883:SER:HB2	1.92	0.50
1:A:76:ARG:O	1:A:80:GLU:HG2	2.10	0.50
1:A:498:VAL:HG13	1:A:533:LEU:HD22	1.94	0.50
1:A:1750:PRO:HG3	1:A:2057:LEU:HD22	1.94	0.50
1:B:2201:TYR:HA	1:B:2204:ARG:HE	1.76	0.50
1:C:4044:LYS:NZ	1:C:4071:THR:H	2.09	0.50
1:D:2201:TYR:HA	1:D:2204:ARG:HE	1.76	0.50
1:D:2478:GLU:HG2	1:D:2479:VAL:HG13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3832:ASP:N	1:D:3832:ASP:OD1	2.44	0.50
1:D:4601:ARG:HD3	1:D:4707:TRP:HZ2	1.77	0.50
1:D:4649:LYS:NZ	1:D:4669:LEU:O	2.44	0.50
1:A:19:GLU:HB3	1:A:217:ILE:HB	1.93	0.50
1:B:1397:UNK:HA	1:B:1412:UNK:HA	1.94	0.50
1:B:1730:MET:HE1	1:B:1929:ASP:HB2	1.93	0.50
1:B:3686:LEU:HD12	1:B:3690:TYR:CE2	2.47	0.50
1:B:4601:ARG:HD3	1:B:4707:TRP:HZ2	1.77	0.50
1:C:446:ASP:OD1	1:C:446:ASP:N	2.42	0.50
1:C:498:VAL:HG13	1:C:533:LEU:HD22	1.94	0.50
1:C:3832:ASP:N	1:C:3832:ASP:OD1	2.44	0.50
1:C:3943:VAL:HA	1:C:3946:PHE:HB2	1.94	0.50
1:C:3989:VAL:HG12	1:C:3990:VAL:H	1.76	0.50
1:C:4601:ARG:HD3	1:C:4707:TRP:HZ2	1.77	0.50
1:D:721:ASP:N	1:D:721:ASP:OD1	2.45	0.50
1:D:1712:LEU:HD22	1:D:1832:MET:SD	2.51	0.50
1:D:1719:ARG:NE	1:D:1831:ILE:O	2.43	0.50
1:B:62:LEU:O	1:B:66:THR:HG23	2.12	0.50
1:B:591:GLU:HG3	1:B:631:LEU:HD22	1.94	0.50
1:B:712:GLU:HG3	1:B:713:TRP:N	2.26	0.50
1:B:836:HIS:NE2	1:B:842:GLN:OE1	2.41	0.50
1:B:1273:ILE:HD11	1:B:1287:GLN:HB2	1.93	0.50
1:C:887:GLU:HG3	1:C:888:ASN:N	2.26	0.50
1:C:1572:PHE:HZ	1:C:1587:LEU:HD11	1.77	0.50
1:C:2428:LEU:O	1:C:2432:VAL:HG23	2.12	0.50
1:D:4112:THR:HA	1:D:4115:GLN:HB2	1.93	0.50
1:D:4955:ASP:OD2	1:D:4960:GLN:NE2	2.44	0.50
1:A:62:LEU:O	1:A:66:THR:HG23	2.12	0.50
1:A:426:PHE:HZ	1:A:456:LEU:HD21	1.76	0.50
1:A:1144:ARG:NH1	1:A:1191:ALA:O	2.45	0.50
1:A:1273:ILE:HD11	1:A:1287:GLN:HB2	1.93	0.50
1:A:1611:ARG:HA	1:A:1611:ARG:NE	2.27	0.50
1:A:2206:SER:OG	1:A:2207:ARG:N	2.45	0.50
1:A:3989:VAL:HG12	1:A:3990:VAL:H	1.76	0.50
1:A:4079:TYR:O	1:A:4083:VAL:HG22	2.12	0.50
1:B:4079:TYR:O	1:B:4083:VAL:HG22	2.12	0.50
1:C:62:LEU:O	1:C:66:THR:HG23	2.12	0.50
1:C:1012:ILE:HG13	1:C:1013:ARG:HD2	1.92	0.50
1:C:4079:TYR:O	1:C:4083:VAL:HG22	2.12	0.50
1:D:169:ARG:HH22	1:D:176:ARG:NE	2.09	0.50
1:D:2428:LEU:O	1:D:2432:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:114:LEU:HB3	1:A:117:HIS:CD2	2.47	0.50
1:A:1362:ASP:OD1	1:A:1362:ASP:N	2.44	0.50
1:A:1730:MET:HE1	1:A:1929:ASP:HB2	1.93	0.50
1:A:2478:GLU:HG2	1:A:2479:VAL:HG13	1.92	0.50
1:A:3686:LEU:HD12	1:A:3690:TYR:CE2	2.47	0.50
1:A:4955:ASP:OD2	1:A:4960:GLN:NE2	2.44	0.50
1:B:1750:PRO:HG3	1:B:2057:LEU:HD22	1.94	0.50
1:C:712:GLU:HG3	1:C:713:TRP:N	2.26	0.50
1:C:1144:ARG:NH1	1:C:1191:ALA:O	2.45	0.50
1:C:1985:CYS:SG	1:C:1992:ARG:NH1	2.85	0.50
1:C:2723:TYR:HD2	1:C:2771:ARG:HH12	1.58	0.50
1:C:4044:LYS:HZ3	1:C:4069:ALA:HB1	1.77	0.50
1:D:1144:ARG:NH1	1:D:1191:ALA:O	2.45	0.50
1:D:3943:VAL:HA	1:D:3946:PHE:HB2	1.94	0.50
1:A:1985:CYS:SG	1:A:1992:ARG:NH1	2.85	0.50
1:A:3943:VAL:HA	1:A:3946:PHE:HB2	1.94	0.50
1:A:3964:ILE:HD11	1:A:3968:LYS:HE2	1.93	0.50
1:A:4044:LYS:NZ	1:A:4071:THR:H	2.09	0.50
1:A:4601:ARG:HD3	1:A:4707:TRP:HZ2	1.77	0.50
1:B:21:VAL:HG12	1:B:23:GLN:HG3	1.94	0.50
1:B:114:LEU:HB3	1:B:117:HIS:CD2	2.47	0.50
1:B:4832:ASP:OD1	1:B:4832:ASP:N	2.44	0.50
1:C:21:VAL:HG12	1:C:23:GLN:HG3	1.94	0.50
1:C:245:LEU:HD11	1:C:260:VAL:HG13	1.94	0.50
1:C:1397:UNK:HA	1:C:1412:UNK:HA	1.94	0.50
1:C:4112:THR:HA	1:C:4115:GLN:HB2	1.93	0.50
1:D:591:GLU:HG3	1:D:631:LEU:HD22	1.94	0.50
1:D:1750:PRO:HG3	1:D:2057:LEU:HD22	1.94	0.50
1:D:2249:ASN:HB3	1:D:2252:LEU:HB2	1.94	0.50
1:A:191:TYR:CE2	1:B:2325:ARG:HD2	2.46	0.49
1:A:2428:LEU:O	1:A:2432:VAL:HG23	2.12	0.49
1:A:4601:ARG:HD3	1:A:4707:TRP:CZ2	2.46	0.49
1:A:4624:ASP:O	1:A:4628:GLN:NE2	2.45	0.49
1:B:1144:ARG:NH1	1:B:1191:ALA:O	2.45	0.49
1:B:1572:PHE:HZ	1:B:1587:LEU:HD11	1.77	0.49
1:B:1985:CYS:SG	1:B:1992:ARG:NH1	2.85	0.49
1:B:4601:ARG:HD3	1:B:4707:TRP:CZ2	2.47	0.49
1:C:1727:ILE:HD11	1:C:2164:LEU:HD21	1.93	0.49
1:C:2201:TYR:HA	1:C:2204:ARG:HE	1.76	0.49
1:C:3802:LEU:HB2	1:C:3883:SER:HB2	1.92	0.49
1:D:1358:ARG:HB2	1:D:1567:LEU:HD21	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1727:ILE:HD11	1:D:2164:LEU:HD21	1.93	0.49
1:A:200:SER:HG	1:A:202:HIS:CE1	2.29	0.49
1:A:1397:UNK:HA	1:A:1412:UNK:HA	1.94	0.49
1:B:641:ASP:OD1	1:B:641:ASP:N	2.42	0.49
1:B:699:SER:OG	1:B:700:THR:N	2.45	0.49
1:B:1611:ARG:NE	1:B:1611:ARG:HA	2.27	0.49
1:B:2317:ASN:O	1:B:2321:ARG:HG2	2.12	0.49
1:C:1361:LYS:HA	1:C:1566:PRO:HA	1.95	0.49
1:C:2249:ASN:HB3	1:C:2252:LEU:HB2	1.94	0.49
1:C:3686:LEU:HD12	1:C:3690:TYR:CE2	2.47	0.49
1:D:3989:VAL:HG12	1:D:3990:VAL:H	1.76	0.49
1:B:498:VAL:HG13	1:B:533:LEU:HD22	1.94	0.49
1:B:1004:HIS:HB3	1:B:1035:TYR:HB2	1.94	0.49
1:B:1678:CYS:SG	1:B:1679:SER:N	2.86	0.49
1:B:3943:VAL:HA	1:B:3946:PHE:HB2	1.94	0.49
1:B:3964:ILE:HD11	1:B:3968:LYS:HE2	1.93	0.49
1:C:2206:SER:OG	1:C:2207:ARG:N	2.45	0.49
2:I:24:VAL:HG22	2:I:48:LYS:HG2	1.95	0.49
1:D:1611:ARG:HA	1:D:1611:ARG:NE	2.27	0.49
1:A:798:ILE:HG13	1:A:800:VAL:HG23	1.95	0.49
1:A:891:GLU:HA	1:A:894:VAL:HG22	1.95	0.49
1:A:2081:ARG:NH1	1:A:3684:ASP:OD1	2.44	0.49
1:B:891:GLU:HA	1:B:894:VAL:HG22	1.95	0.49
1:B:3832:ASP:OD1	1:B:3832:ASP:N	2.44	0.49
1:C:4859:ALA:HB1	1:D:4866:ILE:HD11	1.94	0.49
1:D:1004:HIS:HB3	1:D:1035:TYR:HB2	1.95	0.49
1:D:2343:LEU:HD21	1:D:2433:GLY:HA3	1.95	0.49
1:A:169:ARG:HH2	1:A:176:ARG:NE	2.09	0.49
1:B:1361:LYS:HA	1:B:1566:PRO:HA	1.95	0.49
1:C:721:ASP:OD1	1:C:721:ASP:N	2.45	0.49
1:C:1004:HIS:HB3	1:C:1035:TYR:HB2	1.95	0.49
1:C:1362:ASP:N	1:C:1362:ASP:OD1	2.44	0.49
1:C:4182:LYS:HE3	1:D:4898:ASP:OD1	2.11	0.49
1:D:1985:CYS:SG	1:D:1992:ARG:NH1	2.85	0.49
1:A:59:PRO:HB3	1:A:296:ARG:HH12	1.77	0.49
1:A:2712:ILE:HG13	1:A:2713:PRO:HD2	1.95	0.49
1:A:2885:ARG:HH21	1:A:2889:GLN:HB2	1.78	0.49
1:A:4564:SER:O	1:A:4564:SER:OG	2.28	0.49
1:B:207:PHE:CZ	1:C:2324:ILE:HD12	2.47	0.49
1:B:2206:SER:OG	1:B:2207:ARG:N	2.45	0.49
1:B:4649:LYS:NZ	1:B:4669:LEU:O	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:591:GLU:HG3	1:C:631:LEU:HD22	1.94	0.49
1:C:4624:ASP:O	1:C:4628:GLN:NE2	2.45	0.49
1:D:62:LEU:O	1:D:66:THR:HG23	2.12	0.49
1:D:1397:UNK:HA	1:D:1412:UNK:HA	1.94	0.49
1:D:2857:LEU:O	1:D:2861:SER:OG	2.26	0.49
1:D:4624:ASP:O	1:D:4628:GLN:NE2	2.45	0.49
1:A:721:ASP:N	1:A:721:ASP:OD1	2.45	0.49
1:A:1004:HIS:HB3	1:A:1035:TYR:HB2	1.95	0.49
1:A:1102:TYR:HD1	1:A:1165:MET:HG3	1.78	0.49
1:A:1572:PHE:HZ	1:A:1587:LEU:HD11	1.77	0.49
1:A:2317:ASN:O	1:A:2321:ARG:HG2	2.12	0.49
1:B:245:LEU:HD11	1:B:260:VAL:HG13	1.94	0.49
1:C:59:PRO:HB3	1:C:296:ARG:HH12	1.77	0.49
1:C:4701:ASP:OD1	1:C:4701:ASP:N	2.45	0.49
1:D:21:VAL:HG12	1:D:23:GLN:HG3	1.93	0.49
1:D:641:ASP:OD1	1:D:641:ASP:N	2.42	0.49
1:A:591:GLU:HG3	1:A:631:LEU:HD22	1.94	0.49
1:A:1678:CYS:SG	1:A:1679:SER:N	2.86	0.49
1:A:2430:ASP:O	1:A:2434:VAL:HG23	2.13	0.49
1:A:4022:LEU:HD12	1:A:4065:LEU:HD13	1.95	0.49
1:B:4022:LEU:HD12	1:B:4065:LEU:HD13	1.95	0.49
1:C:2430:ASP:O	1:C:2434:VAL:HG23	2.13	0.49
1:B:169:ARG:HH22	1:B:176:ARG:NE	2.09	0.49
1:B:721:ASP:OD1	1:B:721:ASP:N	2.45	0.49
1:C:606:ARG:NH1	1:C:1635:GLU:OE2	2.46	0.49
1:C:891:GLU:HA	1:C:894:VAL:HG22	1.95	0.49
1:C:2342:LEU:HG	1:C:2434:VAL:HG21	1.95	0.49
1:D:114:LEU:HB3	1:D:117:HIS:CD2	2.47	0.49
1:D:798:ILE:HG13	1:D:800:VAL:HG23	1.95	0.49
1:D:1196:ASP:OD1	1:D:1196:ASP:N	2.25	0.49
1:D:2206:SER:OG	1:D:2207:ARG:N	2.45	0.49
1:D:2712:ILE:HG13	1:D:2713:PRO:HD2	1.95	0.49
1:A:699:SER:OG	1:A:700:THR:N	2.45	0.49
1:B:2712:ILE:HG13	1:B:2713:PRO:HD2	1.95	0.49
1:B:2885:ARG:HH21	1:B:2889:GLN:HB2	1.78	0.49
1:B:4624:ASP:O	1:B:4628:GLN:NE2	2.45	0.49
1:C:1611:ARG:NE	1:C:1611:ARG:HA	2.27	0.49
1:C:1750:PRO:HG3	1:C:2057:LEU:HD22	1.94	0.49
1:C:4022:LEU:HD12	1:C:4065:LEU:HD13	1.95	0.49
1:D:59:PRO:HB3	1:D:296:ARG:HH12	1.77	0.49
1:D:1361:LYS:HA	1:D:1566:PRO:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1678:CYS:SG	1:D:1679:SER:N	2.86	0.49
1:D:2430:ASP:O	1:D:2434:VAL:HG23	2.13	0.49
1:D:4079:TYR:O	1:D:4083:VAL:HG22	2.12	0.49
2:J:24:VAL:HG22	2:J:48:LYS:HG2	1.95	0.49
1:A:55:SER:O	1:A:296:ARG:NH2	2.39	0.48
1:A:245:LEU:HD11	1:A:260:VAL:HG13	1.94	0.48
1:A:2342:LEU:HG	1:A:2434:VAL:HG21	1.95	0.48
1:B:55:SER:O	1:B:296:ARG:NH2	2.39	0.48
1:B:2249:ASN:HB3	1:B:2252:LEU:HB2	1.94	0.48
2:H:24:VAL:HG22	2:H:48:LYS:HG2	1.95	0.48
1:C:2712:ILE:HG13	1:C:2713:PRO:HD2	1.95	0.48
1:D:1102:TYR:HD1	1:D:1165:MET:HG3	1.78	0.48
1:D:1120:PRO:HG3	1:D:1202:ILE:HD11	1.95	0.48
1:A:1719:ARG:HD3	1:A:1832:MET:HA	1.96	0.48
1:A:2249:ASN:HB3	1:A:2252:LEU:HB2	1.94	0.48
1:A:4920:PHE:HE2	1:A:4939:VAL:HG11	1.79	0.48
1:B:606:ARG:NH1	1:B:1635:GLU:OE2	2.46	0.48
1:C:1245:ARG:NH1	1:C:1809:ASP:O	2.42	0.48
1:C:1678:CYS:SG	1:C:1679:SER:N	2.86	0.48
1:C:2343:LEU:HD21	1:C:2433:GLY:HA3	1.95	0.48
1:D:4044:LYS:HZ3	1:D:4069:ALA:HB1	1.78	0.48
1:A:687:THR:OG1	1:A:1627:GLN:NE2	2.46	0.48
1:A:4662:ARG:NH2	1:A:4675:ALA:O	2.46	0.48
1:B:1102:TYR:HD1	1:B:1165:MET:HG3	1.78	0.48
1:B:2343:LEU:HD21	1:B:2433:GLY:HA3	1.95	0.48
1:D:55:SER:O	1:D:296:ARG:NH2	2.39	0.48
1:D:687:THR:OG1	1:D:1627:GLN:NE2	2.47	0.48
1:D:891:GLU:HA	1:D:894:VAL:HG22	1.95	0.48
1:D:1572:PHE:HZ	1:D:1587:LEU:HD11	1.77	0.48
1:D:2342:LEU:HG	1:D:2434:VAL:HG21	1.95	0.48
1:D:3420:UNK:HA	1:D:3421:UNK:HA	1.65	0.48
1:D:3920:THR:HG22	1:D:3980:MET:HA	1.96	0.48
1:B:881:ILE:HG23	1:B:884:ARG:HE	1.78	0.48
1:B:887:GLU:HG3	1:B:888:ASN:N	2.25	0.48
1:B:4044:LYS:HZ1	1:B:4071:THR:H	1.60	0.48
1:C:114:LEU:HB3	1:C:117:HIS:CD2	2.47	0.48
1:C:687:THR:OG1	1:C:1627:GLN:NE2	2.47	0.48
1:C:836:HIS:NE2	1:C:842:GLN:OE1	2.41	0.48
1:C:2172:GLU:O	1:C:2176:ASN:HB2	2.14	0.48
1:C:3763:ALA:HA	1:C:3766:ASN:ND2	2.28	0.48
1:C:4662:ARG:NH2	1:C:4675:ALA:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2885:ARG:HH21	1:D:2889:GLN:HB2	1.78	0.48
1:D:4701:ASP:OD1	1:D:4701:ASP:N	2.45	0.48
1:A:1361:LYS:HA	1:A:1566:PRO:HA	1.94	0.48
1:A:4106:GLU:OE2	1:A:4134:ARG:NH1	2.47	0.48
1:B:59:PRO:HB3	1:B:296:ARG:HH12	1.77	0.48
1:B:707:PRO:O	1:B:838:ARG:NH1	2.33	0.48
1:B:3763:ALA:HA	1:B:3766:ASN:ND2	2.28	0.48
1:C:881:ILE:HG23	1:C:884:ARG:HE	1.78	0.48
1:C:4111:ASP:HB2	1:C:4114:LEU:HB3	1.95	0.48
1:C:4832:ASP:N	1:C:4832:ASP:OD1	2.44	0.48
1:D:699:SER:OG	1:D:700:THR:N	2.45	0.48
1:D:881:ILE:HG23	1:D:884:ARG:HE	1.78	0.48
1:D:1719:ARG:HD3	1:D:1832:MET:HA	1.95	0.48
1:D:2172:GLU:O	1:D:2176:ASN:HB2	2.14	0.48
1:A:2334:LEU:HD13	1:A:2342:LEU:HB2	1.96	0.48
1:A:4846:ASP:HB2	1:B:4817:TYR:HE1	1.79	0.48
1:B:1120:PRO:HG3	1:B:1202:ILE:HD11	1.95	0.48
1:B:2428:LEU:O	1:B:2432:VAL:HG23	2.12	0.48
1:B:3920:THR:HG22	1:B:3980:MET:HA	1.96	0.48
1:B:4662:ARG:NH2	1:B:4675:ALA:O	2.46	0.48
1:D:245:LEU:HD11	1:D:260:VAL:HG13	1.94	0.48
1:D:2317:ASN:O	1:D:2321:ARG:HG2	2.12	0.48
1:D:3712:SER:OG	1:D:3716:LYS:NZ	2.36	0.48
1:A:1120:PRO:HG3	1:A:1202:ILE:HD11	1.95	0.48
1:A:4832:ASP:N	1:A:4832:ASP:OD1	2.44	0.48
1:B:3712:SER:OG	1:B:3716:LYS:NZ	2.36	0.48
1:C:4920:PHE:HE2	1:C:4939:VAL:HG11	1.79	0.48
1:D:4662:ARG:NH2	1:D:4675:ALA:O	2.46	0.48
1:A:233:VAL:HA	1:A:276:ARG:HA	1.95	0.48
1:A:606:ARG:NH1	1:A:1635:GLU:OE2	2.46	0.48
1:A:2172:GLU:O	1:A:2176:ASN:HB2	2.14	0.48
1:A:4861:ILE:HG21	1:D:4851:PHE:CZ	2.48	0.48
2:G:24:VAL:HG22	2:G:48:LYS:HG2	1.95	0.48
1:B:798:ILE:HG13	1:B:800:VAL:HG23	1.95	0.48
1:B:1719:ARG:HD3	1:B:1832:MET:HA	1.95	0.48
1:C:748:LEU:HD13	2:I:8:ILE:CG2	2.38	0.48
1:C:798:ILE:HG13	1:C:800:VAL:HG23	1.95	0.48
1:C:2317:ASN:O	1:C:2321:ARG:HG2	2.12	0.48
1:C:2885:ARG:HH21	1:C:2889:GLN:HB2	1.78	0.48
1:D:188:SER:HB2	1:D:190:ARG:HD2	1.96	0.48
1:D:4029:ASP:OD1	1:D:4029:ASP:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4106:GLU:OE2	1:D:4134:ARG:NH1	2.47	0.48
1:D:4487:GLN:HA	1:D:4487:GLN:OE1	2.14	0.48
1:D:4920:PHE:HE2	1:D:4939:VAL:HG11	1.79	0.48
1:A:188:SER:HB2	1:A:190:ARG:HD2	1.96	0.48
1:A:2091:TYR:CE2	1:A:3639:LEU:HD13	2.49	0.48
1:A:3920:THR:HG22	1:A:3980:MET:HA	1.96	0.48
1:B:233:VAL:HA	1:B:276:ARG:HA	1.95	0.48
1:B:2334:LEU:HD13	1:B:2342:LEU:HB2	1.96	0.48
1:B:2342:LEU:HG	1:B:2434:VAL:HG21	1.95	0.48
1:B:3698:CYS:SG	1:B:3730:LEU:HD21	2.54	0.48
1:B:4106:GLU:OE2	1:B:4134:ARG:NH1	2.47	0.48
1:C:1165:MET:HB3	1:C:1236:TYR:CE2	2.49	0.48
1:C:1294:ASN:O	1:C:1348:LYS:NZ	2.38	0.48
1:D:3698:CYS:SG	1:D:3730:LEU:HD21	2.54	0.48
1:A:881:ILE:HG23	1:A:884:ARG:HE	1.79	0.48
1:A:3889:TRP:CD1	1:D:76:ARG:HD3	2.49	0.48
1:A:4813:MET:HG3	1:D:4843:ILE:CD1	2.41	0.48
1:B:430:ILE:HG13	1:B:504:ARG:HD2	1.96	0.48
1:B:4487:GLN:OE1	1:B:4487:GLN:HA	2.14	0.48
1:B:4920:PHE:HE2	1:B:4939:VAL:HG11	1.79	0.48
1:C:699:SER:OG	1:C:700:THR:N	2.45	0.48
1:D:2091:TYR:CE2	1:D:3639:LEU:HD13	2.49	0.48
1:D:3763:ALA:HA	1:D:3766:ASN:ND2	2.28	0.48
1:A:821:ALA:HB3	1:A:823:TYR:CE1	2.49	0.47
1:A:2343:LEU:HD21	1:A:2433:GLY:HA3	1.95	0.47
1:A:3763:ALA:HA	1:A:3766:ASN:ND2	2.28	0.47
1:A:4843:ILE:HG23	1:B:4817:TYR:CD1	2.48	0.47
1:B:156:GLU:CG	1:C:2417:ARG:HH11	2.21	0.47
1:B:2154:PHE:CD1	1:B:2161:MET:HG3	2.49	0.47
1:B:2430:ASP:O	1:B:2434:VAL:HG23	2.13	0.47
1:B:3420:UNK:HA	1:B:3421:UNK:HA	1.65	0.47
1:C:169:ARG:HH22	1:C:176:ARG:NE	2.09	0.47
1:C:1102:TYR:HD1	1:C:1165:MET:HG3	1.78	0.47
1:C:1173:MET:O	1:C:1191:ALA:N	2.35	0.47
1:C:1719:ARG:HD3	1:C:1832:MET:HA	1.96	0.47
1:C:2334:LEU:HD13	1:C:2342:LEU:HB2	1.96	0.47
1:D:430:ILE:HG13	1:D:504:ARG:HD2	1.96	0.47
1:D:4022:LEU:HD12	1:D:4065:LEU:HD13	1.95	0.47
1:D:4503:LEU:HG	1:D:4581:ILE:HD13	1.96	0.47
1:A:4843:ILE:HA	1:B:4817:TYR:CE1	2.49	0.47
1:B:383:ARG:O	1:B:387:ILE:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:687:THR:OG1	1:B:1627:GLN:NE2	2.47	0.47
1:B:1165:MET:HB3	1:B:1236:TYR:CE2	2.49	0.47
1:C:821:ALA:HB3	1:C:823:TYR:CE1	2.49	0.47
1:C:1120:PRO:HG3	1:C:1202:ILE:HD11	1.95	0.47
1:C:2091:TYR:CE2	1:C:3639:LEU:HD13	2.49	0.47
1:D:606:ARG:NH1	1:D:1635:GLU:OE2	2.46	0.47
1:A:2154:PHE:CD1	1:A:2161:MET:HG3	2.49	0.47
1:A:4111:ASP:HB2	1:A:4114:LEU:HB3	1.95	0.47
1:A:4507:VAL:O	1:A:4511:ILE:HG13	2.15	0.47
1:B:4029:ASP:OD1	1:B:4029:ASP:N	2.47	0.47
1:C:2081:ARG:NH1	1:C:3684:ASP:OD1	2.44	0.47
1:C:2154:PHE:CD1	1:C:2161:MET:HG3	2.49	0.47
1:C:3698:CYS:SG	1:C:3730:LEU:HD21	2.54	0.47
1:D:520:ARG:O	1:D:524:GLU:HG2	2.15	0.47
1:A:943:LEU:HA	1:A:946:LEU:HD12	1.96	0.47
1:B:190:ARG:HH12	1:C:2421:ILE:HG12	1.79	0.47
1:B:1683:GLU:HB3	2:H:42:ASP:HB3	1.96	0.47
1:B:2321:ARG:O	1:B:2325:ARG:HG2	2.14	0.47
1:B:2464:LYS:O	1:B:2468:VAL:HG23	2.14	0.47
1:C:3920:THR:HG22	1:C:3980:MET:HA	1.96	0.47
1:C:4106:GLU:OE2	1:C:4134:ARG:NH1	2.47	0.47
1:D:836:HIS:NE2	1:D:842:GLN:OE1	2.41	0.47
1:D:2334:LEU:HD13	1:D:2342:LEU:HB2	1.96	0.47
1:D:4111:ASP:HB2	1:D:4114:LEU:HB3	1.95	0.47
1:A:383:ARG:O	1:A:387:ILE:HG23	2.14	0.47
1:C:235:ARG:HB2	1:C:406:SER:OG	2.15	0.47
1:C:430:ILE:HG13	1:C:504:ARG:HD2	1.96	0.47
1:C:520:ARG:O	1:C:524:GLU:HG2	2.15	0.47
1:A:430:ILE:HG13	1:A:504:ARG:HD2	1.96	0.47
1:A:1095:ALA:HB1	1:A:1200:GLY:HA3	1.97	0.47
1:A:3698:CYS:SG	1:A:3730:LEU:HD21	2.54	0.47
1:A:4503:LEU:HG	1:A:4581:ILE:HD13	1.96	0.47
1:B:208:GLN:HE22	1:C:2327:PRO:HG3	1.79	0.47
1:B:712:GLU:HG3	1:B:713:TRP:H	1.80	0.47
1:B:2076:ASP:HB3	1:B:2079:LEU:HB3	1.96	0.47
1:B:2091:TYR:CE2	1:B:3639:LEU:HD13	2.49	0.47
1:D:383:ARG:O	1:D:387:ILE:HG23	2.14	0.47
1:D:821:ALA:HB3	1:D:823:TYR:CE1	2.49	0.47
1:A:54:ASN:HD21	1:A:57:ASN:HD21	1.63	0.47
1:A:661:LEU:HD13	1:A:673:TRP:CD1	2.50	0.47
1:A:2321:ARG:O	1:A:2325:ARG:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3974:GLN:O	1:A:3978:VAL:HG23	2.15	0.47
1:B:1095:ALA:HB1	1:B:1200:GLY:HA3	1.97	0.47
1:B:4111:ASP:HB2	1:B:4114:LEU:HB3	1.95	0.47
1:B:4494:ALA:HB2	1:B:4591:CYS:SG	2.55	0.47
1:B:4507:VAL:O	1:B:4511:ILE:HG13	2.14	0.47
1:B:4701:ASP:OD1	1:B:4701:ASP:N	2.45	0.47
1:C:188:SER:HB2	1:C:190:ARG:HD2	1.96	0.47
1:C:1270:VAL:HG21	1:C:1589:VAL:HG21	1.97	0.47
1:C:1311:ALA:HA	1:C:1312:UNK:HA	1.51	0.47
1:C:1935:LEU:HD11	1:C:1975:LEU:HD13	1.97	0.47
1:C:2776:GLU:O	1:C:2780:THR:HG23	2.15	0.47
1:D:54:ASN:HD21	1:D:57:ASN:HD21	1.63	0.47
1:D:167:LYS:HB2	1:D:167:LYS:HE2	1.71	0.47
1:D:226:GLY:O	1:D:356:TYR:N	2.36	0.47
1:D:235:ARG:HB2	1:D:406:SER:OG	2.15	0.47
1:D:1829:LEU:HB3	1:D:1834:ILE:HD11	1.97	0.47
1:D:1935:LEU:HD11	1:D:1975:LEU:HD13	1.97	0.47
1:D:4507:VAL:O	1:D:4511:ILE:HG13	2.15	0.47
1:A:520:ARG:O	1:A:524:GLU:HG2	2.15	0.47
1:A:556:ASP:C	1:A:556:ASP:OD1	2.53	0.47
1:A:887:GLU:HG3	1:A:888:ASN:N	2.26	0.47
1:A:2076:ASP:HB3	1:A:2079:LEU:HB3	1.97	0.47
1:B:188:SER:HB2	1:B:190:ARG:HD2	1.96	0.47
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.50	0.47
1:B:821:ALA:HB3	1:B:823:TYR:CE1	2.49	0.47
1:B:1829:LEU:HB3	1:B:1834:ILE:HD11	1.97	0.47
1:C:1829:LEU:HB3	1:C:1834:ILE:HD11	1.97	0.47
1:C:2464:LYS:O	1:C:2468:VAL:HG23	2.14	0.47
1:C:3731:HIS:CD2	1:C:3772:VAL:HG22	2.50	0.47
1:D:1165:MET:HB3	1:D:1236:TYR:CE2	2.49	0.47
1:D:2321:ARG:O	1:D:2325:ARG:HG2	2.14	0.47
1:D:2506:LEU:HD23	1:D:2506:LEU:H	1.80	0.47
1:D:2776:GLU:O	1:D:2780:THR:HG23	2.15	0.47
1:A:1827:TYR:CZ	1:A:1831:ILE:HD11	2.50	0.47
1:A:2776:GLU:O	1:A:2780:THR:HG23	2.15	0.47
1:A:4898:ASP:OD1	1:D:4182:LYS:HE3	2.14	0.47
1:B:234:LEU:HD12	1:B:405:LEU:HB3	1.97	0.47
1:B:235:ARG:HB2	1:B:406:SER:OG	2.15	0.47
1:B:4839:GLU:O	1:B:4843:ILE:HG13	2.15	0.47
1:D:1270:VAL:HG21	1:D:1589:VAL:HG21	1.97	0.47
1:A:2464:LYS:O	1:A:2468:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4817:TYR:HE1	1:D:4846:ASP:CB	2.24	0.47
1:B:556:ASP:C	1:B:556:ASP:OD1	2.53	0.47
1:B:2172:GLU:O	1:B:2176:ASN:HB2	2.14	0.47
1:C:383:ARG:O	1:C:387:ILE:HG23	2.14	0.47
1:C:921:PHE:H	1:C:921:PHE:HD1	1.62	0.47
1:C:2506:LEU:HD23	1:C:2506:LEU:H	1.80	0.47
1:C:3919:LEU:HD22	1:C:3934:LEU:HD21	1.97	0.47
1:A:1829:LEU:HB3	1:A:1834:ILE:HD11	1.97	0.46
1:A:2853:LYS:O	1:A:2857:LEU:HD13	2.16	0.46
1:A:4487:GLN:OE1	1:A:4487:GLN:HA	2.14	0.46
1:A:4839:GLU:O	1:A:4843:ILE:HG13	2.15	0.46
1:B:2060:LEU:O	1:B:2064:THR:HG23	2.15	0.46
1:B:3731:HIS:CD2	1:B:3772:VAL:HG22	2.50	0.46
1:C:309:MET:HB2	1:C:312:LYS:HZ2	1.81	0.46
1:C:2076:ASP:HB3	1:C:2079:LEU:HB3	1.96	0.46
1:C:4494:ALA:HB2	1:C:4591:CYS:SG	2.55	0.46
1:C:4507:VAL:O	1:C:4511:ILE:HG13	2.15	0.46
1:D:1713:SER:O	1:D:1717:THR:HG23	2.15	0.46
1:D:2154:PHE:CD1	1:D:2161:MET:HG3	2.49	0.46
1:D:2464:LYS:O	1:D:2468:VAL:HG23	2.14	0.46
1:D:2774:ILE:HD12	1:D:2891:ILE:HD12	1.98	0.46
1:A:758:CYS:SG	1:A:767:SER:HB3	2.56	0.46
1:A:794:PHE:CD1	1:A:798:ILE:HG21	2.51	0.46
1:A:4029:ASP:OD1	1:A:4029:ASP:N	2.47	0.46
1:B:794:PHE:CD1	1:B:798:ILE:HG21	2.51	0.46
1:B:1935:LEU:HD11	1:B:1975:LEU:HD13	1.97	0.46
1:B:2175:VAL:HG12	1:B:2219:TYR:CE2	2.51	0.46
1:C:233:VAL:HA	1:C:276:ARG:HA	1.95	0.46
1:C:712:GLU:HG3	1:C:713:TRP:H	1.80	0.46
1:C:2321:ARG:O	1:C:2325:ARG:HG2	2.14	0.46
1:C:2330:PHE:HD1	1:C:2394:LEU:HD21	1.80	0.46
1:C:3978:VAL:HG13	1:C:4100:LEU:HD22	1.98	0.46
1:D:758:CYS:SG	1:D:767:SER:HB3	2.56	0.46
1:D:763:ALA:HB3	1:D:764:PRO:HD3	1.97	0.46
1:A:18:ASP:OD1	1:A:18:ASP:N	2.49	0.46
1:A:4659:PHE:HA	1:B:4055:LYS:HD3	1.97	0.46
1:B:520:ARG:O	1:B:524:GLU:HG2	2.15	0.46
1:B:2776:GLU:O	1:B:2780:THR:HG23	2.15	0.46
1:B:4615:TYR:CE1	1:B:4631:ARG:HB2	2.50	0.46
1:C:756:SER:OG	1:C:769:ARG:HB2	2.15	0.46
1:C:943:LEU:HA	1:C:946:LEU:HD12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1157:GLN:N	1:C:1160:ASP:OD2	2.31	0.46
1:C:1713:SER:O	1:C:1717:THR:HG23	2.15	0.46
1:C:2062:SER:OG	1:C:2091:TYR:OH	2.33	0.46
1:D:233:VAL:HA	1:D:276:ARG:HA	1.96	0.46
1:D:661:LEU:HD13	1:D:673:TRP:CD1	2.50	0.46
1:D:1972:ILE:HA	1:D:1975:LEU:HG	1.97	0.46
1:D:2175:VAL:HG12	1:D:2219:TYR:CE2	2.51	0.46
1:D:3731:HIS:CD2	1:D:3772:VAL:HG22	2.50	0.46
1:D:4494:ALA:HB2	1:D:4591:CYS:SG	2.55	0.46
1:D:4615:TYR:CE1	1:D:4631:ARG:HB2	2.51	0.46
1:A:235:ARG:HB2	1:A:406:SER:OG	2.15	0.46
1:A:1006:VAL:HG23	1:A:1009:ARG:HH12	1.81	0.46
1:A:1165:MET:HB3	1:A:1236:TYR:CE2	2.49	0.46
1:A:1936:GLN:O	1:A:1939:GLN:HG3	2.16	0.46
1:A:1972:ILE:HA	1:A:1975:LEU:HG	1.97	0.46
1:B:54:ASN:HD21	1:B:57:ASN:HD21	1.63	0.46
1:B:57:ASN:OD1	1:B:58:VAL:N	2.49	0.46
1:B:114:LEU:HD11	1:B:172:GLY:O	2.16	0.46
1:B:2260:ASP:N	1:B:2260:ASP:OD1	2.49	0.46
1:B:3905:PHE:O	1:B:3909:ILE:HG12	2.16	0.46
1:B:3974:GLN:HE22	1:B:4012:ILE:HG21	1.80	0.46
1:C:18:ASP:OD1	1:C:18:ASP:N	2.49	0.46
1:C:234:LEU:HD12	1:C:405:LEU:HB3	1.97	0.46
1:D:2343:LEU:HG	1:D:2430:ASP:OD1	2.16	0.46
1:D:2853:LYS:O	1:D:2857:LEU:HD13	2.16	0.46
1:A:165:ALA:HB2	1:A:182:ILE:HG12	1.98	0.46
1:A:712:GLU:HG3	1:A:713:TRP:H	1.80	0.46
1:A:756:SER:OG	1:A:769:ARG:HB2	2.15	0.46
1:A:1270:VAL:HG21	1:A:1589:VAL:HG21	1.97	0.46
1:A:2506:LEU:HD23	1:A:2506:LEU:H	1.80	0.46
1:A:2774:ILE:HD12	1:A:2891:ILE:HD12	1.97	0.46
1:A:4494:ALA:HB2	1:A:4591:CYS:SG	2.55	0.46
1:B:165:ALA:HB2	1:B:182:ILE:HG12	1.98	0.46
1:B:226:GLY:O	1:B:356:TYR:N	2.36	0.46
1:B:756:SER:OG	1:B:769:ARG:HB2	2.15	0.46
1:B:1827:TYR:CZ	1:B:1831:ILE:HD11	2.50	0.46
1:B:1936:GLN:O	1:B:1939:GLN:HG3	2.16	0.46
1:B:2330:PHE:HD1	1:B:2394:LEU:HD21	1.80	0.46
1:B:3919:LEU:HD22	1:B:3934:LEU:HD21	1.97	0.46
1:B:3978:VAL:HG13	1:B:4100:LEU:HD22	1.98	0.46
1:C:54:ASN:HD21	1:C:57:ASN:HD21	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1095:ALA:HB1	1:C:1200:GLY:HA3	1.97	0.46
1:C:2060:LEU:O	1:C:2064:THR:HG23	2.16	0.46
1:C:4503:LEU:HG	1:C:4581:ILE:HD13	1.96	0.46
1:D:165:ALA:HB2	1:D:182:ILE:HG12	1.98	0.46
1:D:168:GLN:HG3	1:D:169:ARG:HG3	1.98	0.46
1:D:681:HIS:H	1:D:799:LYS:HB2	1.80	0.46
1:D:712:GLU:HG3	1:D:713:TRP:H	1.80	0.46
1:D:921:PHE:H	1:D:921:PHE:HD1	1.62	0.46
1:D:1006:VAL:HG23	1:D:1009:ARG:HH12	1.81	0.46
1:D:2342:LEU:HD21	1:D:2467:MET:HE3	1.98	0.46
1:D:3919:LEU:HD22	1:D:3934:LEU:HD21	1.97	0.46
1:D:3974:GLN:HE22	1:D:4012:ILE:HG21	1.80	0.46
1:D:3978:VAL:HG13	1:D:4100:LEU:HD22	1.98	0.46
1:A:910:ASP:OD1	1:A:910:ASP:N	2.39	0.46
1:A:2852:ALA:HA	1:A:2855:LYS:HG2	1.98	0.46
1:A:3974:GLN:HE22	1:A:4012:ILE:HG21	1.80	0.46
1:B:207:PHE:CE2	1:C:2324:ILE:HB	2.50	0.46
1:B:758:CYS:SG	1:B:767:SER:HB3	2.56	0.46
1:B:3974:GLN:O	1:B:3978:VAL:HG23	2.15	0.46
1:C:232:ASP:OD1	1:C:233:VAL:N	2.49	0.46
1:C:710:GLY:O	1:C:1255:LEU:HD22	2.16	0.46
1:C:4487:GLN:OE1	1:C:4487:GLN:HA	2.14	0.46
1:D:756:SER:OG	1:D:769:ARG:HB2	2.16	0.46
1:D:2330:PHE:HD1	1:D:2394:LEU:HD21	1.80	0.46
1:A:2087:LEU:HD21	1:A:3643:LEU:HD11	1.98	0.46
1:A:4044:LYS:NZ	1:A:4069:ALA:HB1	2.31	0.46
1:A:4785:PHE:HA	1:A:4805:CYS:SG	2.55	0.46
1:B:168:GLN:HG3	1:B:169:ARG:HG3	1.98	0.46
1:B:763:ALA:HB3	1:B:764:PRO:HD3	1.97	0.46
1:B:1157:GLN:N	1:B:1160:ASP:OD2	2.31	0.46
1:B:1769:PHE:O	2:H:83:TYR:OH	2.33	0.46
1:B:2855:LYS:HG3	1:B:2856:LYS:N	2.31	0.46
1:C:168:GLN:HG3	1:C:169:ARG:HG3	1.98	0.46
1:C:661:LEU:HD13	1:C:673:TRP:CD1	2.50	0.46
1:C:681:HIS:H	1:C:799:LYS:HB2	1.80	0.46
1:C:2175:VAL:HG12	1:C:2219:TYR:CE2	2.51	0.46
1:C:3974:GLN:HE22	1:C:4012:ILE:HG21	1.80	0.46
1:C:4615:TYR:CE1	1:C:4631:ARG:HB2	2.51	0.46
1:D:3799:CYS:SG	1:D:3800:SER:N	2.89	0.46
1:D:3974:GLN:O	1:D:3978:VAL:HG23	2.15	0.46
1:D:4785:PHE:HA	1:D:4805:CYS:SG	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:763:ALA:HB3	1:A:764:PRO:HD3	1.97	0.46
1:A:1713:SER:O	1:A:1717:THR:HG23	2.15	0.46
1:A:2060:LEU:O	1:A:2064:THR:HG23	2.16	0.46
1:A:2260:ASP:OD1	1:A:2260:ASP:N	2.49	0.46
1:A:3727:GLN:O	1:A:3731:HIS:ND1	2.34	0.46
1:A:3905:PHE:O	1:A:3909:ILE:HG12	2.16	0.46
1:A:3971:MET:HB3	1:A:4093:ILE:HD13	1.98	0.46
1:A:3978:VAL:HG13	1:A:4100:LEU:HD22	1.97	0.46
1:B:1006:VAL:HG23	1:B:1009:ARG:HH12	1.81	0.46
1:B:1972:ILE:HA	1:B:1975:LEU:HG	1.97	0.46
1:C:57:ASN:OD1	1:C:58:VAL:N	2.49	0.46
1:C:3799:CYS:SG	1:C:3800:SER:N	2.89	0.46
1:D:794:PHE:CD1	1:D:798:ILE:HG21	2.51	0.46
1:D:943:LEU:HA	1:D:946:LEU:HD12	1.97	0.46
1:D:2231:PRO:HG3	1:D:2381:ILE:HG12	1.98	0.46
1:D:4839:GLU:O	1:D:4843:ILE:HG13	2.15	0.46
1:A:57:ASN:OD1	1:A:58:VAL:N	2.49	0.46
1:A:168:GLN:HG3	1:A:169:ARG:HG3	1.98	0.46
1:A:2175:VAL:HG12	1:A:2219:TYR:CE2	2.51	0.46
1:A:3919:LEU:HD22	1:A:3934:LEU:HD21	1.97	0.46
1:B:2087:LEU:HD21	1:B:3643:LEU:HD11	1.98	0.46
1:B:2506:LEU:HD23	1:B:2506:LEU:H	1.80	0.46
1:B:3965:GLU:O	1:B:3969:GLU:HG2	2.16	0.46
1:B:4503:LEU:HG	1:B:4581:ILE:HD13	1.96	0.46
1:C:226:GLY:O	1:C:356:TYR:N	2.36	0.46
1:C:1600:MET:HE2	1:C:1600:MET:HB2	1.85	0.46
1:C:2343:LEU:HG	1:C:2430:ASP:OD1	2.16	0.46
1:C:3420:UNK:HA	1:C:3421:UNK:HA	1.65	0.46
1:C:4029:ASP:OD1	1:C:4029:ASP:N	2.47	0.46
1:C:4044:LYS:NZ	1:C:4069:ALA:HB1	2.31	0.46
1:C:4839:GLU:O	1:C:4843:ILE:HG13	2.15	0.46
1:D:1827:TYR:CZ	1:D:1831:ILE:HD11	2.50	0.46
1:D:2855:LYS:HG3	1:D:2856:LYS:N	2.31	0.46
1:A:1935:LEU:HD11	1:A:1975:LEU:HD13	1.97	0.46
1:A:2092:ASP:OD1	1:A:2095:GLY:N	2.47	0.46
1:A:2330:PHE:HD1	1:A:2394:LEU:HD21	1.80	0.46
1:A:4615:TYR:C	1:A:4616:ILE:HD13	2.36	0.46
1:B:2343:LEU:HG	1:B:2430:ASP:OD1	2.16	0.46
1:B:4785:PHE:HA	1:B:4805:CYS:SG	2.56	0.46
1:C:1936:GLN:O	1:C:1939:GLN:HG3	2.16	0.46
1:C:1976:LEU:HD11	1:C:3619:PHE:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2260:ASP:N	1:C:2260:ASP:OD1	2.49	0.46
1:C:2774:ILE:HD12	1:C:2891:ILE:HD12	1.97	0.46
1:C:2852:ALA:HA	1:C:2855:LYS:HG2	1.98	0.46
1:D:57:ASN:OD1	1:D:58:VAL:N	2.49	0.46
1:D:556:ASP:C	1:D:556:ASP:OD1	2.53	0.46
1:D:1095:ALA:HB1	1:D:1200:GLY:HA3	1.97	0.46
1:D:1675:HIS:CD2	1:D:1777:TYR:HB2	2.51	0.46
1:D:4617:THR:HG22	1:D:4660:TYR:CZ	2.51	0.46
1:A:1311:ALA:HA	1:A:1312:UNK:HA	1.51	0.45
1:A:3731:HIS:CD2	1:A:3772:VAL:HG22	2.50	0.45
1:A:4617:THR:HG22	1:A:4660:TYR:CZ	2.51	0.45
1:B:232:ASP:OD1	1:B:233:VAL:N	2.49	0.45
1:B:943:LEU:HA	1:B:946:LEU:HD12	1.97	0.45
1:B:1955:ALA:O	1:B:1959:ARG:HG2	2.16	0.45
1:B:3971:MET:HB3	1:B:4093:ILE:HD13	1.98	0.45
1:C:556:ASP:C	1:C:556:ASP:OD1	2.53	0.45
1:C:867:VAL:HG22	1:C:1002:ASN:ND2	2.31	0.45
1:C:2087:LEU:HD21	1:C:3643:LEU:HD11	1.98	0.45
1:C:2231:PRO:HG3	1:C:2381:ILE:HG12	1.98	0.45
1:C:3905:PHE:O	1:C:3909:ILE:HG12	2.16	0.45
1:C:3974:GLN:O	1:C:3978:VAL:HG23	2.15	0.45
1:D:234:LEU:HD12	1:D:405:LEU:HB3	1.97	0.45
1:D:1936:GLN:O	1:D:1939:GLN:HG3	2.16	0.45
1:D:2260:ASP:OD1	1:D:2260:ASP:N	2.49	0.45
1:D:4615:TYR:C	1:D:4616:ILE:HD13	2.36	0.45
1:A:1955:ALA:O	1:A:1959:ARG:HG2	2.16	0.45
1:B:681:HIS:H	1:B:799:LYS:HB2	1.80	0.45
1:B:1270:VAL:HG21	1:B:1589:VAL:HG21	1.97	0.45
1:B:1713:SER:O	1:B:1717:THR:HG23	2.15	0.45
1:B:2231:PRO:HG3	1:B:2381:ILE:HG12	1.98	0.45
1:B:3639:LEU:HD23	1:B:3693:ILE:HG21	1.99	0.45
1:C:165:ALA:HB2	1:C:182:ILE:HG12	1.98	0.45
1:C:1827:TYR:CZ	1:C:1831:ILE:HD11	2.50	0.45
1:C:2184:LYS:HG3	1:C:2185:GLU:H	1.82	0.45
1:C:4785:PHE:HA	1:C:4805:CYS:SG	2.55	0.45
1:D:2076:ASP:HB3	1:D:2079:LEU:HB3	1.97	0.45
1:A:640:ARG:HB3	1:A:645:GLN:HE21	1.82	0.45
1:A:4615:TYR:CE1	1:A:4631:ARG:HB2	2.51	0.45
1:B:503:ASP:CG	1:B:561:ARG:HH22	2.19	0.45
1:B:4615:TYR:C	1:B:4616:ILE:HD13	2.36	0.45
1:C:2853:LYS:O	1:C:2857:LEU:HD13	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4161:LYS:O	1:C:4164:VAL:HG22	2.17	0.45
1:D:867:VAL:HG22	1:D:1002:ASN:ND2	2.31	0.45
1:D:2184:LYS:HG3	1:D:2185:GLU:H	1.82	0.45
1:D:4161:LYS:O	1:D:4164:VAL:HG22	2.17	0.45
1:D:4731:GLY:HA2	1:D:4734:ASN:O	2.17	0.45
1:A:3898:ASP:OD1	1:A:3898:ASP:N	2.49	0.45
1:A:3934:LEU:HD23	1:A:3939:LEU:HD22	1.99	0.45
1:B:2092:ASP:OD1	1:B:2095:GLY:N	2.47	0.45
1:B:3799:CYS:SG	1:B:3800:SER:N	2.89	0.45
1:B:4044:LYS:NZ	1:B:4069:ALA:HB1	2.31	0.45
1:B:4756:LEU:O	1:B:4759:VAL:HG12	2.16	0.45
1:C:297:LEU:HD12	1:C:329:PHE:HD2	1.81	0.45
1:C:355:LYS:O	1:C:359:SER:OG	2.25	0.45
1:C:1677:LEU:HA	1:C:1680:HIS:HB2	1.98	0.45
1:C:2855:LYS:HG3	1:C:2856:LYS:N	2.31	0.45
1:C:3965:GLU:O	1:C:3969:GLU:HG2	2.16	0.45
1:C:4756:LEU:O	1:C:4759:VAL:HG12	2.17	0.45
1:D:114:LEU:HD11	1:D:172:GLY:O	2.16	0.45
1:D:297:LEU:HD12	1:D:329:PHE:HD2	1.81	0.45
1:D:503:ASP:CG	1:D:561:ARG:HH22	2.20	0.45
1:D:2060:LEU:O	1:D:2064:THR:HG23	2.16	0.45
1:D:2522:UNK:C	1:D:2524:UNK:H	2.30	0.45
1:D:4044:LYS:NZ	1:D:4069:ALA:HB1	2.31	0.45
1:A:1675:HIS:CD2	1:A:1777:TYR:HB2	2.52	0.45
1:A:2187:THR:HG23	1:A:2188:PHE:CD2	2.52	0.45
1:A:2231:PRO:HG3	1:A:2381:ILE:HG12	1.98	0.45
1:A:3639:LEU:HD23	1:A:3693:ILE:HG21	1.99	0.45
1:A:4731:GLY:HA2	1:A:4734:ASN:O	2.17	0.45
1:C:1675:HIS:CD2	1:C:1777:TYR:HB2	2.51	0.45
1:C:4569:PRO:O	1:C:4573:ILE:HG13	2.16	0.45
1:D:1608:ASP:OD1	1:D:1608:ASP:N	2.50	0.45
1:D:2092:ASP:OD1	1:D:2095:GLY:N	2.47	0.45
1:D:3898:ASP:OD1	1:D:3898:ASP:N	2.49	0.45
1:D:4515:LEU:HD13	1:D:4515:LEU:HA	1.83	0.45
1:D:4569:PRO:O	1:D:4573:ILE:HG13	2.16	0.45
1:A:1608:ASP:OD1	1:A:1608:ASP:N	2.50	0.45
1:A:2855:LYS:HG3	1:A:2856:LYS:N	2.31	0.45
1:A:3965:GLU:O	1:A:3969:GLU:HG2	2.16	0.45
1:A:4161:LYS:O	1:A:4164:VAL:HG22	2.17	0.45
1:B:4569:PRO:O	1:B:4573:ILE:HG13	2.16	0.45
1:C:763:ALA:HB3	1:C:764:PRO:HD3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1677:LEU:O	1:C:1681:VAL:HG22	2.17	0.45
1:C:3639:LEU:HD23	1:C:3693:ILE:HG21	1.99	0.45
1:C:4118:LEU:HD23	1:C:4118:LEU:HA	1.78	0.45
1:D:769:ARG:HA	1:D:774:PRO:HA	1.99	0.45
1:D:3934:LEU:HD23	1:D:3939:LEU:HD22	1.99	0.45
1:D:4189:VAL:HG21	1:D:4948:TRP:CD1	2.52	0.45
1:A:114:LEU:HD11	1:A:172:GLY:O	2.16	0.45
1:A:748:LEU:HD13	2:G:8:ILE:HG23	1.99	0.45
1:A:769:ARG:HA	1:A:774:PRO:HA	1.99	0.45
1:A:1677:LEU:O	1:A:1681:VAL:HG22	2.17	0.45
1:B:640:ARG:HB3	1:B:645:GLN:HE21	1.82	0.45
1:B:2343:LEU:O	1:B:2347:GLU:HG2	2.17	0.45
1:B:2774:ILE:HD12	1:B:2891:ILE:HD12	1.97	0.45
1:B:2852:ALA:HA	1:B:2855:LYS:HG2	1.98	0.45
1:B:2853:LYS:O	1:B:2857:LEU:HD13	2.16	0.45
1:B:3898:ASP:OD1	1:B:3898:ASP:N	2.49	0.45
1:C:70:GLU:HG3	1:C:129:TYR:CE2	2.51	0.45
1:C:114:LEU:HD11	1:C:172:GLY:O	2.16	0.45
1:C:794:PHE:CD1	1:C:798:ILE:HG21	2.51	0.45
1:C:1955:ALA:O	1:C:1959:ARG:HG2	2.16	0.45
1:C:4731:GLY:HA2	1:C:4734:ASN:O	2.17	0.45
1:D:710:GLY:O	1:D:1255:LEU:HD22	2.16	0.45
1:D:1955:ALA:O	1:D:1959:ARG:HG2	2.16	0.45
1:D:3639:LEU:HD23	1:D:3693:ILE:HG21	1.99	0.45
1:D:3905:PHE:O	1:D:3909:ILE:HG12	2.16	0.45
1:A:503:ASP:CG	1:A:561:ARG:HH22	2.20	0.45
1:A:681:HIS:H	1:A:799:LYS:HB2	1.80	0.45
1:A:4050:ALA:O	1:A:4054:HIS:ND1	2.50	0.45
1:B:1395:UNK:HA	1:B:1415:UNK:HA	1.99	0.45
1:B:1675:HIS:CD2	1:B:1777:TYR:HB2	2.51	0.45
1:B:1677:LEU:HA	1:B:1680:HIS:HB2	1.98	0.45
1:C:758:CYS:SG	1:C:767:SER:HB3	2.56	0.45
1:C:942:THR:O	1:C:946:LEU:HG	2.17	0.45
1:C:1006:VAL:HG23	1:C:1009:ARG:HH12	1.81	0.45
1:C:1395:UNK:HA	1:C:1415:UNK:HA	1.99	0.45
1:C:1972:ILE:HA	1:C:1975:LEU:HG	1.97	0.45
1:C:4050:ALA:O	1:C:4054:HIS:ND1	2.50	0.45
1:C:4615:TYR:C	1:C:4616:ILE:HD13	2.37	0.45
1:D:18:ASP:OD1	1:D:18:ASP:N	2.49	0.45
1:D:2087:LEU:HD21	1:D:3643:LEU:HD11	1.98	0.45
1:D:3965:GLU:O	1:D:3969:GLU:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:234:LEU:HD12	1:A:405:LEU:HB3	1.97	0.45
1:A:3799:CYS:SG	1:A:3800:SER:N	2.89	0.45
1:A:4569:PRO:O	1:A:4573:ILE:HG13	2.16	0.45
1:B:701:GLU:HG3	1:B:704:SER:HB2	1.99	0.45
1:B:1677:LEU:O	1:B:1681:VAL:HG22	2.17	0.45
1:B:2081:ARG:NH1	1:B:3684:ASP:OD1	2.44	0.45
1:B:2522:UNK:C	1:B:2524:UNK:H	2.30	0.45
1:B:3731:HIS:HB3	1:B:3764:ILE:HD11	1.99	0.45
1:C:701:GLU:HG3	1:C:704:SER:HB2	1.99	0.45
1:C:3971:MET:HB3	1:C:4093:ILE:HD13	1.98	0.45
1:D:1609:VAL:HA	1:D:1620:VAL:HA	1.99	0.45
1:D:2187:THR:HG23	1:D:2188:PHE:CD2	2.52	0.45
1:D:2325:ARG:HA	1:D:2325:ARG:HD3	1.82	0.45
1:B:710:GLY:O	1:B:1255:LEU:HD22	2.16	0.45
1:B:867:VAL:HG22	1:B:1002:ASN:ND2	2.31	0.45
1:B:1311:ALA:HA	1:B:1312:UNK:HA	1.51	0.45
1:B:2316:ALA:O	1:B:2320:VAL:HG23	2.17	0.45
1:B:4617:THR:HG22	1:B:4660:TYR:CZ	2.51	0.45
1:B:4630:ASP:O	1:B:4634:ILE:HG23	2.17	0.45
1:B:4833:PRO:HD3	1:B:4842:ARG:NE	2.31	0.45
1:C:503:ASP:CG	1:C:561:ARG:HH22	2.20	0.45
1:C:2316:ALA:O	1:C:2320:VAL:HG23	2.17	0.45
1:D:299:HIS:HD2	1:D:302:THR:HG22	1.82	0.45
1:D:1395:UNK:HA	1:D:1415:UNK:HA	1.99	0.45
1:D:1684:PRO:HD3	2:J:42:ASP:HB3	1.98	0.45
1:D:1976:LEU:HD11	1:D:3619:PHE:CE2	2.52	0.45
1:A:232:ASP:OD1	1:A:233:VAL:N	2.49	0.44
1:A:297:LEU:HD12	1:A:329:PHE:HD2	1.81	0.44
1:A:299:HIS:HD2	1:A:302:THR:HG22	1.82	0.44
1:A:1395:UNK:HA	1:A:1415:UNK:HA	1.99	0.44
1:A:2184:LYS:HG3	1:A:2185:GLU:H	1.82	0.44
1:A:2343:LEU:HG	1:A:2430:ASP:OD1	2.16	0.44
1:B:1819:PHE:O	1:B:1823:ILE:HG12	2.18	0.44
1:B:1976:LEU:HD11	1:B:3619:PHE:CE2	2.52	0.44
1:C:318:ASP:N	1:C:318:ASP:OD1	2.51	0.44
1:C:3731:HIS:HB3	1:C:3764:ILE:HD11	1.99	0.44
1:C:4617:THR:HG22	1:C:4660:TYR:CZ	2.51	0.44
1:D:942:THR:O	1:D:946:LEU:HG	2.17	0.44
1:D:2081:ARG:NH1	1:D:3684:ASP:OD1	2.44	0.44
1:A:49:LEU:HD12	1:A:201:TRP:HB3	1.99	0.44
1:A:318:ASP:N	1:A:318:ASP:OD1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:712:GLU:HG2	1:A:713:TRP:CE2	2.53	0.44
1:A:1976:LEU:HD11	1:A:3619:PHE:CE2	2.52	0.44
1:A:2343:LEU:O	1:A:2347:GLU:HG2	2.17	0.44
1:A:2522:UNK:C	1:A:2524:UNK:H	2.30	0.44
1:B:18:ASP:N	1:B:18:ASP:OD1	2.49	0.44
1:B:373:THR:O	1:B:375:GLN:NE2	2.48	0.44
1:B:646:THR:HB	1:B:1685:GLN:HE22	1.82	0.44
1:B:1207:LEU:HB3	1:B:1211:GLN:HB2	1.99	0.44
1:B:2404:GLU:HG3	1:B:2405:MET:H	1.83	0.44
1:B:3868:ASN:HB3	1:B:3871:ILE:HB	1.99	0.44
1:B:4794:LYS:HA	1:B:4794:LYS:HD2	1.78	0.44
1:C:712:GLU:HG2	1:C:713:TRP:CE2	2.53	0.44
1:C:1730:MET:SD	1:C:2106:THR:OG1	2.71	0.44
1:C:1819:PHE:O	1:C:1823:ILE:HG12	2.17	0.44
1:C:2187:THR:HG23	1:C:2188:PHE:CD2	2.52	0.44
1:C:3618:LEU:HA	1:C:3618:LEU:HD23	1.77	0.44
1:C:3864:ASN:OD1	1:C:3865:THR:N	2.50	0.44
1:A:2417:ARG:NH1	1:D:156:GLU:HG3	2.32	0.44
1:A:4942:MET:HE1	1:A:4949:GLU:HB2	1.99	0.44
1:B:318:ASP:OD1	1:B:318:ASP:N	2.51	0.44
1:B:446:ASP:OD1	1:B:446:ASP:N	2.42	0.44
1:B:2184:LYS:HG3	1:B:2185:GLU:H	1.82	0.44
1:B:2187:THR:HG23	1:B:2188:PHE:CD2	2.52	0.44
1:B:3686:LEU:O	1:B:3690:TYR:HD2	2.00	0.44
1:B:4189:VAL:HG21	1:B:4948:TRP:CD1	2.52	0.44
1:B:4731:GLY:HA2	1:B:4734:ASN:O	2.17	0.44
1:B:4731:GLY:HA2	1:B:4737:PHE:HB2	1.99	0.44
1:C:299:HIS:HD2	1:C:302:THR:HG22	1.82	0.44
1:C:344:LYS:HD3	1:C:344:LYS:N	2.32	0.44
1:C:1207:LEU:HB3	1:C:1211:GLN:HB2	1.99	0.44
1:C:1608:ASP:N	1:C:1608:ASP:OD1	2.50	0.44
1:C:2522:UNK:C	1:C:2524:UNK:H	2.30	0.44
1:C:4189:VAL:HG21	1:C:4948:TRP:CD1	2.52	0.44
1:D:701:GLU:HG3	1:D:704:SER:HB2	1.99	0.44
1:D:2353:ALA:HB2	1:D:2384:GLY:HA3	1.99	0.44
1:A:701:GLU:HG3	1:A:704:SER:HB2	1.99	0.44
1:A:710:GLY:O	1:A:1255:LEU:HD22	2.16	0.44
1:A:836:HIS:NE2	1:A:842:GLN:OE1	2.41	0.44
1:A:942:THR:O	1:A:946:LEU:HG	2.17	0.44
1:A:2316:ALA:O	1:A:2320:VAL:HG23	2.17	0.44
1:A:3731:HIS:HB3	1:A:3764:ILE:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3951:ALA:O	1:A:3954:GLN:HG2	2.18	0.44
1:A:4731:GLY:HA2	1:A:4737:PHE:HB2	1.99	0.44
1:B:49:LEU:HD12	1:B:201:TRP:HB3	1.99	0.44
1:B:3934:LEU:HD23	1:B:3939:LEU:HD22	1.99	0.44
1:C:640:ARG:HB3	1:C:645:GLN:HE21	1.82	0.44
1:C:3868:ASN:HB3	1:C:3871:ILE:HB	1.99	0.44
1:D:49:LEU:HD12	1:D:201:TRP:HB3	1.99	0.44
1:D:232:ASP:OD1	1:D:233:VAL:N	2.49	0.44
1:D:1677:LEU:HA	1:D:1680:HIS:HB2	1.98	0.44
1:D:4756:LEU:O	1:D:4759:VAL:HG12	2.16	0.44
1:D:4794:LYS:HA	1:D:4794:LYS:HD2	1.78	0.44
1:A:646:THR:HB	1:A:1685:GLN:HE22	1.82	0.44
1:A:867:VAL:HG22	1:A:1002:ASN:ND2	2.31	0.44
1:A:3712:SER:OG	1:A:3716:LYS:NZ	2.36	0.44
1:A:4023:LYS:HG2	1:A:4087:HIS:CE1	2.53	0.44
2:G:79:PRO:HB3	2:G:95:ASN:HA	1.99	0.44
1:B:712:GLU:HG2	1:B:713:TRP:CE2	2.53	0.44
1:B:1609:VAL:HA	1:B:1620:VAL:HA	1.99	0.44
1:B:1666:CYS:SG	1:B:1710:ILE:HG22	2.57	0.44
1:C:49:LEU:HD12	1:C:201:TRP:HB3	1.99	0.44
1:D:640:ARG:HB3	1:D:645:GLN:HE21	1.82	0.44
1:D:646:THR:HB	1:D:1685:GLN:HE22	1.82	0.44
1:D:1666:CYS:SG	1:D:1710:ILE:HG22	2.57	0.44
1:D:1901:VAL:O	1:D:1905:MET:HG2	2.17	0.44
1:D:2316:ALA:O	1:D:2320:VAL:HG23	2.17	0.44
1:D:3951:ALA:O	1:D:3954:GLN:HG2	2.18	0.44
1:D:3971:MET:HB3	1:D:4093:ILE:HD13	1.98	0.44
1:A:70:GLU:HG3	1:A:129:TYR:CE2	2.51	0.44
1:A:1666:CYS:SG	1:A:1710:ILE:HG22	2.57	0.44
1:A:2893:LYS:O	1:A:2897:ILE:HG12	2.18	0.44
1:A:3686:LEU:O	1:A:3690:TYR:HD2	2.00	0.44
1:A:4756:LEU:O	1:A:4759:VAL:HG12	2.17	0.44
1:A:4794:LYS:HA	1:A:4794:LYS:HD2	1.78	0.44
1:B:208:GLN:NE2	1:C:2327:PRO:HG3	2.33	0.44
1:B:1173:MET:O	1:B:1191:ALA:N	2.35	0.44
1:B:1951:ASN:HD22	1:B:1951:ASN:N	2.16	0.44
1:B:2220:LEU:HD11	1:B:2242:ALA:HB2	2.00	0.44
1:B:4050:ALA:O	1:B:4054:HIS:ND1	2.50	0.44
1:B:4161:LYS:O	1:B:4164:VAL:HG22	2.17	0.44
1:C:640:ARG:O	1:C:645:GLN:NE2	2.51	0.44
1:C:1609:VAL:HA	1:C:1620:VAL:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2102:PRO:HD3	1:C:3624:GLU:HG3	2.00	0.44
1:C:2353:ALA:HB2	1:C:2384:GLY:HA3	1.99	0.44
1:C:4833:PRO:HD3	1:C:4842:ARG:NE	2.31	0.44
1:D:1311:ALA:HA	1:D:1312:UNK:HA	1.51	0.44
1:D:4023:LYS:HG2	1:D:4087:HIS:CE1	2.53	0.44
1:D:4050:ALA:O	1:D:4054:HIS:ND1	2.50	0.44
1:A:1740:PHE:CD1	1:A:1923:ALA:HB1	2.53	0.44
1:A:2065:MET:SD	1:A:2083:MET:HG3	2.58	0.44
1:A:2171:MET:O	1:A:2175:VAL:HG13	2.18	0.44
1:A:2228:LEU:HD22	1:A:2296:ARG:HG3	1.99	0.44
1:A:2353:ALA:HB2	1:A:2384:GLY:HA3	1.99	0.44
1:A:4189:VAL:HG21	1:A:4948:TRP:CD1	2.52	0.44
1:B:942:THR:O	1:B:946:LEU:HG	2.17	0.44
1:B:1608:ASP:N	1:B:1608:ASP:OD1	2.50	0.44
1:B:1901:VAL:O	1:B:1905:MET:HG2	2.18	0.44
2:H:79:PRO:HB3	2:H:95:ASN:HA	1.99	0.44
1:C:1704:TYR:O	1:C:1708:ILE:HG12	2.18	0.44
1:C:1951:ASN:HD22	1:C:1951:ASN:N	2.16	0.44
1:C:3898:ASP:N	1:C:3898:ASP:OD1	2.49	0.44
1:D:1207:LEU:HB3	1:D:1211:GLN:HB2	1.99	0.44
1:D:1951:ASN:HD22	1:D:1951:ASN:N	2.16	0.44
1:D:2852:ALA:HA	1:D:2855:LYS:HG2	1.98	0.44
1:D:2893:LYS:O	1:D:2897:ILE:HG12	2.18	0.44
2:J:104:LEU:HD12	2:J:104:LEU:HA	1.80	0.44
1:A:344:LYS:HD3	1:A:344:LYS:N	2.33	0.44
1:A:1704:TYR:O	1:A:1708:ILE:HG12	2.18	0.44
1:A:2404:GLU:HG3	1:A:2405:MET:H	1.83	0.44
1:A:4596:LEU:HG	1:A:4600:LYS:HE3	2.00	0.44
2:G:7:THR:HG23	2:G:71:GLN:HE21	1.82	0.44
1:B:35:LEU:HD23	1:B:51:SER:HA	2.00	0.44
1:B:769:ARG:HA	1:B:774:PRO:HA	1.99	0.44
1:B:2065:MET:SD	1:B:2083:MET:HG3	2.58	0.44
1:B:2171:MET:HE2	1:B:2220:LEU:HD23	1.99	0.44
1:B:4596:LEU:HG	1:B:4600:LYS:HE3	2.00	0.44
1:C:2342:LEU:HD21	1:C:2467:MET:HE3	2.00	0.44
1:C:2404:GLU:HG3	1:C:2405:MET:H	1.83	0.44
1:C:4084:LYS:HE3	1:C:4084:LYS:HB3	1.29	0.44
1:C:4630:ASP:O	1:C:4634:ILE:HG23	2.18	0.44
2:I:79:PRO:HB3	2:I:95:ASN:HA	1.99	0.44
1:D:224:ALA:HB3	1:D:227:TYR:HD2	1.83	0.44
1:D:881:ILE:HA	1:D:884:ARG:HG3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:887:GLU:HG3	1:D:888:ASN:N	2.26	0.44
1:D:1173:MET:O	1:D:1191:ALA:N	2.35	0.44
1:D:1677:LEU:O	1:D:1681:VAL:HG22	2.17	0.44
1:D:2343:LEU:O	1:D:2347:GLU:HG2	2.17	0.44
1:D:3795:LEU:HD22	1:D:3834:PHE:HZ	1.83	0.44
1:A:1677:LEU:HA	1:A:1680:HIS:HB2	1.98	0.44
1:A:3795:LEU:HD22	1:A:3834:PHE:HZ	1.83	0.44
1:A:3868:ASN:HB3	1:A:3871:ILE:HB	1.99	0.44
1:B:344:LYS:HD3	1:B:344:LYS:N	2.33	0.44
1:B:2221:LEU:HD23	1:B:2221:LEU:HA	1.87	0.44
2:H:7:THR:HG23	2:H:71:GLN:HE21	1.82	0.44
1:C:120:LEU:HB2	1:C:159:TRP:CE3	2.53	0.44
1:C:881:ILE:HA	1:C:884:ARG:HG3	2.00	0.44
1:C:3686:LEU:O	1:C:3690:TYR:HD2	2.00	0.44
1:C:3934:LEU:HD23	1:C:3939:LEU:HD22	1.99	0.44
1:D:2065:MET:SD	1:D:2083:MET:HG3	2.58	0.44
1:D:3731:HIS:HB3	1:D:3764:ILE:HD11	1.99	0.44
1:D:4832:ASP:N	1:D:4832:ASP:OD1	2.44	0.44
2:J:79:PRO:HB3	2:J:95:ASN:HA	1.99	0.44
1:A:224:ALA:HB3	1:A:227:TYR:HD2	1.83	0.43
1:A:1819:PHE:O	1:A:1823:ILE:HG12	2.17	0.43
1:A:2102:PRO:HD3	1:A:3624:GLU:HG3	2.00	0.43
1:A:4630:ASP:O	1:A:4634:ILE:HG23	2.18	0.43
1:A:4855:VAL:O	1:B:4862:GLN:HG3	2.18	0.43
1:B:224:ALA:HB3	1:B:227:TYR:HD2	1.83	0.43
1:B:1740:PHE:CD1	1:B:1923:ALA:HB1	2.53	0.43
1:C:769:ARG:HA	1:C:774:PRO:HA	1.99	0.43
1:C:2228:LEU:HD22	1:C:2296:ARG:HG3	1.99	0.43
1:C:2343:LEU:O	1:C:2347:GLU:HG2	2.17	0.43
1:C:2436:SER:HB3	1:C:2489:VAL:HG12	2.00	0.43
1:D:562:LEU:HA	1:D:571:ILE:HD13	2.00	0.43
1:D:1819:PHE:O	1:D:1823:ILE:HG12	2.18	0.43
1:D:2171:MET:O	1:D:2175:VAL:HG13	2.18	0.43
1:D:4197:PHE:HB2	1:D:4644:TRP:HZ3	1.83	0.43
1:D:4833:PRO:HD3	1:D:4842:ARG:NE	2.31	0.43
1:A:1600:MET:HE2	1:A:1600:MET:HB2	1.91	0.43
1:A:1609:VAL:HA	1:A:1620:VAL:HA	1.99	0.43
1:A:1901:VAL:O	1:A:1905:MET:HG2	2.17	0.43
1:A:2342:LEU:HD21	1:A:2467:MET:HE3	2.00	0.43
1:B:427:ASN:O	1:B:430:ILE:HG22	2.19	0.43
1:B:1000:ALA:HB3	1:B:1047:LYS:HZ3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4723:TRP:HA	1:B:4726:THR:HG22	2.00	0.43
1:C:167:LYS:HE2	1:C:167:LYS:HB2	1.71	0.43
1:C:646:THR:HB	1:C:1685:GLN:HE22	1.82	0.43
1:C:4023:LYS:HG2	1:C:4087:HIS:CE1	2.53	0.43
1:D:1704:TYR:O	1:D:1708:ILE:HG12	2.18	0.43
1:D:1740:PHE:CD1	1:D:1923:ALA:HB1	2.53	0.43
1:D:2228:LEU:HD22	1:D:2296:ARG:HG3	1.99	0.43
1:D:2409:HIS:NE2	1:D:2416:ILE:HG12	2.33	0.43
1:A:1951:ASN:HD22	1:A:1951:ASN:N	2.16	0.43
1:A:3805:ASN:HD22	1:A:3805:ASN:HA	1.60	0.43
1:B:297:LEU:HD12	1:B:329:PHE:HD2	1.81	0.43
1:B:881:ILE:HA	1:B:884:ARG:HG3	2.00	0.43
1:B:1358:ARG:HB2	1:B:1567:LEU:CD2	2.49	0.43
1:B:1704:TYR:O	1:B:1708:ILE:HG12	2.18	0.43
1:C:718:VAL:HG13	1:C:793:SER:OG	2.19	0.43
1:C:2065:MET:SD	1:C:2083:MET:HG3	2.58	0.43
1:D:344:LYS:HD3	1:D:344:LYS:N	2.33	0.43
1:D:626:ARG:NH2	1:D:1669:GLY:O	2.52	0.43
1:D:1358:ARG:HB2	1:D:1567:LEU:CD2	2.49	0.43
1:D:4630:ASP:O	1:D:4634:ILE:HG23	2.18	0.43
1:A:718:VAL:HG13	1:A:793:SER:OG	2.19	0.43
1:A:2279:LEU:HB3	1:A:2284:TYR:HB2	2.01	0.43
1:A:3728:ALA:HA	1:A:3731:HIS:ND1	2.33	0.43
1:B:547:ASN:O	1:B:551:PHE:CD2	2.72	0.43
1:B:1052:GLU:OE1	1:B:1056:THR:HG23	2.19	0.43
1:B:2101:LEU:O	1:B:2104:THR:HG22	2.18	0.43
1:C:35:LEU:HD23	1:C:51:SER:HA	2.00	0.43
1:C:562:LEU:HA	1:C:571:ILE:HD13	2.00	0.43
1:C:2220:LEU:HD11	1:C:2242:ALA:HB2	2.00	0.43
1:C:4596:LEU:HG	1:C:4600:LYS:HE3	2.00	0.43
1:D:712:GLU:HG2	1:D:713:TRP:CE2	2.53	0.43
1:D:3686:LEU:O	1:D:3690:TYR:HD2	2.00	0.43
1:D:4596:LEU:HG	1:D:4600:LYS:HE3	2.00	0.43
1:D:4723:TRP:HA	1:D:4726:THR:HG22	2.00	0.43
1:A:190:ARG:NH1	1:B:2421:ILE:HG12	2.33	0.43
1:A:427:ASN:O	1:A:430:ILE:HG22	2.19	0.43
1:A:890:HIS:O	1:A:894:VAL:HG13	2.19	0.43
1:A:1052:GLU:OE1	1:A:1056:THR:HG23	2.19	0.43
1:A:2101:LEU:O	1:A:2104:THR:HG22	2.18	0.43
1:A:2352:ILE:HD12	1:A:2358:ARG:HG3	2.01	0.43
1:A:2409:HIS:NE2	1:A:2416:ILE:HG12	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2441:MET:CE	1:A:2501:LEU:HD12	2.49	0.43
1:A:2492:LEU:HD23	1:A:2492:LEU:HA	1.89	0.43
1:A:4197:PHE:HB2	1:A:4644:TRP:HZ3	1.83	0.43
1:A:4640:PRO:HG2	1:A:4646:LYS:HA	2.01	0.43
1:A:4861:ILE:HG21	1:D:4851:PHE:HZ	1.82	0.43
1:B:120:LEU:HB2	1:B:159:TRP:CE3	2.53	0.43
1:B:890:HIS:O	1:B:894:VAL:HG13	2.19	0.43
1:B:921:PHE:H	1:B:921:PHE:HD1	1.62	0.43
1:B:2436:SER:HB3	1:B:2489:VAL:HG12	2.00	0.43
1:B:2441:MET:CE	1:B:2501:LEU:HD12	2.49	0.43
1:C:224:ALA:HB3	1:C:227:TYR:HD2	1.83	0.43
1:C:1683:GLU:HG3	2:I:43:ARG:HB3	2.00	0.43
1:C:4197:PHE:HB2	1:C:4644:TRP:HZ3	1.83	0.43
1:D:640:ARG:O	1:D:645:GLN:NE2	2.51	0.43
1:D:1044:LYS:HB2	1:D:1044:LYS:HE2	1.88	0.43
1:D:2352:ILE:HD12	1:D:2358:ARG:HG3	2.01	0.43
1:D:4874:ASP:HA	1:D:4877:GLU:HG3	2.01	0.43
1:A:35:LEU:HD23	1:A:51:SER:HA	2.00	0.43
1:A:555:LEU:HD21	1:A:578:VAL:HG11	2.01	0.43
1:A:640:ARG:O	1:A:645:GLN:NE2	2.51	0.43
1:A:937:LEU:HD12	1:A:941:LYS:HD3	2.00	0.43
1:A:1207:LEU:HB3	1:A:1211:GLN:HB2	1.99	0.43
1:A:2223:ASN:O	1:A:2226:VAL:HG22	2.19	0.43
1:A:4017:ASP:OD2	1:A:4123:SER:OG	2.37	0.43
1:A:4154:SER:O	1:A:4158:GLN:HG2	2.19	0.43
1:A:4723:TRP:HA	1:A:4726:THR:HG22	2.00	0.43
1:B:299:HIS:HD2	1:B:302:THR:HG22	1.82	0.43
1:B:2223:ASN:O	1:B:2226:VAL:HG22	2.19	0.43
1:B:2353:ALA:HB2	1:B:2384:GLY:HA3	1.99	0.43
1:B:2893:LYS:O	1:B:2897:ILE:HG12	2.18	0.43
1:B:4017:ASP:OD2	1:B:4123:SER:OG	2.37	0.43
1:B:4023:LYS:HG2	1:B:4087:HIS:CE1	2.53	0.43
1:B:4640:PRO:HG2	1:B:4646:LYS:HA	2.01	0.43
1:C:427:ASN:O	1:C:430:ILE:HG22	2.19	0.43
1:C:547:ASN:O	1:C:551:PHE:CD2	2.72	0.43
1:C:1680:HIS:CE1	2:I:91:VAL:HA	2.54	0.43
1:C:1740:PHE:CD1	1:C:1923:ALA:HB1	2.53	0.43
1:C:2099:ARG:O	1:C:2103:LYS:NZ	2.42	0.43
1:C:2409:HIS:NE2	1:C:2416:ILE:HG12	2.33	0.43
1:C:2893:LYS:O	1:C:2897:ILE:HG12	2.18	0.43
1:C:3951:ALA:O	1:C:3954:GLN:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:7:THR:HG23	2:I:71:GLN:HE21	1.82	0.43
1:D:1052:GLU:OE1	1:D:1056:THR:HG23	2.19	0.43
1:D:2240:ASP:OD2	1:D:2296:ARG:NH2	2.52	0.43
1:D:2404:GLU:HG3	1:D:2405:MET:H	1.83	0.43
1:D:2463:HIS:O	1:D:2467:MET:HG2	2.18	0.43
1:D:3728:ALA:HA	1:D:3731:HIS:ND1	2.33	0.43
1:D:4154:SER:O	1:D:4158:GLN:HG2	2.19	0.43
1:D:4564:SER:O	1:D:4564:SER:OG	2.28	0.43
2:J:7:THR:HG23	2:J:71:GLN:HE21	1.82	0.43
1:A:24:CYS:HB3	1:A:212:TRP:CE3	2.54	0.43
1:A:308:LEU:HD13	1:A:314:LEU:HD12	2.01	0.43
1:A:373:THR:O	1:A:375:GLN:NE2	2.48	0.43
1:A:881:ILE:HA	1:A:884:ARG:HG3	2.00	0.43
1:A:3950:PHE:HZ	1:A:3973:LEU:HG	1.83	0.43
1:A:3989:VAL:HG12	1:A:3990:VAL:N	2.34	0.43
1:B:167:LYS:HE2	1:B:167:LYS:HB2	1.71	0.43
1:B:308:LEU:HD13	1:B:314:LEU:HD12	2.01	0.43
1:B:626:ARG:NH2	1:B:1669:GLY:O	2.52	0.43
1:B:937:LEU:HD12	1:B:941:LYS:HD3	2.00	0.43
1:B:2171:MET:O	1:B:2175:VAL:HG13	2.18	0.43
1:B:2228:LEU:HD22	1:B:2296:ARG:HG3	1.99	0.43
1:B:4773:LEU:HD11	1:B:4853:VAL:HG13	2.01	0.43
1:C:230:GLY:N	1:C:287:SER:O	2.46	0.43
1:C:1666:CYS:SG	1:C:1710:ILE:HG22	2.57	0.43
1:C:1901:VAL:O	1:C:1905:MET:HG2	2.18	0.43
1:C:3728:ALA:HA	1:C:3731:HIS:ND1	2.33	0.43
1:D:2279:LEU:HB3	1:D:2284:TYR:HB2	2.00	0.43
1:A:2463:HIS:O	1:A:2467:MET:HG2	2.18	0.43
1:A:4781:THR:HG21	1:A:4812:TYR:HB2	2.01	0.43
1:B:360:ILE:HG23	1:B:402:GLY:HA2	2.01	0.43
1:B:640:ARG:O	1:B:645:GLN:NE2	2.51	0.43
1:B:2342:LEU:HD21	1:B:2467:MET:HE3	2.01	0.43
1:B:3950:PHE:HZ	1:B:3973:LEU:HG	1.83	0.43
1:B:3989:VAL:HG12	1:B:3990:VAL:N	2.34	0.43
1:B:4808:MET:HE3	1:C:4518:TYR:CD2	2.51	0.43
2:H:79:PRO:O	2:H:84:GLY:N	2.38	0.43
1:C:331:PHE:HE1	1:C:363:ILE:HG22	1.84	0.43
1:C:937:LEU:HD12	1:C:941:LYS:HD3	2.00	0.43
1:C:4731:GLY:HA2	1:C:4737:PHE:HB2	1.99	0.43
1:D:2007:GLY:HA2	1:D:2058:GLN:NE2	2.32	0.43
1:D:3868:ASN:HB3	1:D:3871:ILE:HB	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4017:ASP:OD2	1:D:4123:SER:OG	2.37	0.43
1:D:4084:LYS:HE3	1:D:4084:LYS:HB3	1.29	0.43
1:A:360:ILE:HG23	1:A:402:GLY:HA2	2.01	0.43
1:A:718:VAL:HG11	1:A:791:VAL:HG13	2.01	0.43
1:A:1358:ARG:HB2	1:A:1567:LEU:CD2	2.48	0.43
1:A:1972:ILE:HD13	1:A:1975:LEU:HD21	2.01	0.43
1:B:555:LEU:HD21	1:B:578:VAL:HG11	2.01	0.43
1:B:816:PRO:HB2	1:B:819:TYR:CD1	2.54	0.43
1:B:1680:HIS:CE1	2:H:91:VAL:HA	2.54	0.43
1:B:2463:HIS:O	1:B:2467:MET:HG2	2.18	0.43
1:B:3951:ALA:O	1:B:3954:GLN:HG2	2.18	0.43
1:C:812:LYS:HE2	1:C:812:LYS:HB2	1.70	0.43
1:C:1052:GLU:OE1	1:C:1056:THR:HG23	2.19	0.43
1:C:2240:ASP:OD2	1:C:2296:ARG:NH2	2.52	0.43
1:C:3989:VAL:HG12	1:C:3990:VAL:N	2.34	0.43
1:C:4017:ASP:OD2	1:C:4123:SER:OG	2.37	0.43
1:C:4723:TRP:HA	1:C:4726:THR:HG22	2.00	0.43
1:D:937:LEU:HD12	1:D:941:LYS:HD3	2.00	0.43
1:D:2101:LEU:O	1:D:2104:THR:HG22	2.18	0.43
1:D:2223:ASN:O	1:D:2226:VAL:HG22	2.19	0.43
1:D:2441:MET:CE	1:D:2501:LEU:HD12	2.49	0.43
1:D:3950:PHE:HZ	1:D:3973:LEU:HG	1.83	0.43
1:A:230:GLY:N	1:A:287:SER:O	2.46	0.43
1:A:338:LEU:H	1:A:338:LEU:HD23	1.84	0.43
1:A:2436:SER:HB3	1:A:2489:VAL:HG12	2.00	0.43
1:A:3761:GLY:O	1:A:3764:ILE:HG22	2.19	0.43
1:A:4773:LEU:HD11	1:A:4853:VAL:HG13	2.01	0.43
1:B:1730:MET:SD	1:B:2106:THR:OG1	2.71	0.43
1:B:1752:ILE:HA	1:B:1837:ASN:OD1	2.19	0.43
1:B:2062:SER:O	1:B:2066:VAL:HG23	2.19	0.43
1:B:2102:PRO:HD3	1:B:3624:GLU:HG3	2.00	0.43
1:B:2240:ASP:OD2	1:B:2296:ARG:NH2	2.52	0.43
1:B:2275:SER:O	1:B:2275:SER:OG	2.36	0.43
1:B:2409:HIS:NE2	1:B:2416:ILE:HG12	2.33	0.43
1:C:24:CYS:HB3	1:C:212:TRP:CE3	2.54	0.43
1:C:338:LEU:HD23	1:C:338:LEU:H	1.84	0.43
1:C:555:LEU:HD21	1:C:578:VAL:HG11	2.01	0.43
1:C:816:PRO:HB2	1:C:819:TYR:CD1	2.54	0.43
1:C:1914:ASP:OD1	1:C:2089:ARG:NH1	2.52	0.43
1:C:2265:VAL:HG12	1:C:2326:ARG:HD2	2.01	0.43
1:C:2351:LYS:HE3	1:C:2351:LYS:HB2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4154:SER:O	1:C:4158:GLN:HG2	2.19	0.43
1:C:4577:LEU:HA	1:C:4580:ILE:HG12	2.01	0.43
1:D:308:LEU:HD13	1:D:314:LEU:HD12	2.01	0.43
1:D:547:ASN:O	1:D:551:PHE:CD2	2.72	0.43
1:D:2264:VAL:HG21	1:D:2300:PHE:HE2	1.84	0.43
1:D:4784:ALA:HB1	1:D:4792:TYR:HE2	1.83	0.43
1:A:547:ASN:O	1:A:551:PHE:CD2	2.72	0.42
1:B:562:LEU:HA	1:B:571:ILE:HD13	2.00	0.42
1:B:614:LEU:HD13	1:B:632:ILE:HD12	2.02	0.42
1:B:4577:LEU:HA	1:B:4580:ILE:HG12	2.01	0.42
1:B:4781:THR:HG21	1:B:4812:TYR:HB2	2.01	0.42
1:B:4785:PHE:CE2	1:C:4518:TYR:HE2	2.33	0.42
1:C:2101:LEU:O	1:C:2104:THR:HG22	2.18	0.42
1:C:2171:MET:O	1:C:2175:VAL:HG13	2.18	0.42
1:C:3761:GLY:O	1:C:3764:ILE:HG22	2.19	0.42
1:C:4700:ILE:H	1:C:4700:ILE:HG13	1.70	0.42
1:D:35:LEU:HD23	1:D:51:SER:HA	2.00	0.42
1:D:120:LEU:HB2	1:D:159:TRP:CE3	2.53	0.42
1:D:338:LEU:HD23	1:D:338:LEU:H	1.84	0.42
1:D:718:VAL:HG11	1:D:791:VAL:HG13	2.01	0.42
1:D:2102:PRO:HD3	1:D:3624:GLU:HG3	2.00	0.42
1:D:3641:GLU:OE1	1:D:3729:ARG:NH1	2.52	0.42
1:D:4044:LYS:HZ1	1:D:4071:THR:H	1.66	0.42
1:A:2007:GLY:HA2	1:A:2058:GLN:NE2	2.32	0.42
1:B:1680:HIS:CE1	2:H:91:VAL:HG22	2.53	0.42
1:B:2343:LEU:HG	1:B:2430:ASP:HA	2.01	0.42
1:B:3761:GLY:O	1:B:3764:ILE:HG22	2.19	0.42
1:C:156:GLU:HG3	1:D:2417:ARG:HH11	1.84	0.42
1:C:308:LEU:HD13	1:C:314:LEU:HD12	2.01	0.42
1:C:718:VAL:HG11	1:C:791:VAL:HG13	2.01	0.42
1:C:1752:ILE:HA	1:C:1837:ASN:OD1	2.19	0.42
1:C:2343:LEU:HG	1:C:2430:ASP:HA	2.01	0.42
1:C:2352:ILE:HD12	1:C:2358:ARG:HG3	2.01	0.42
1:C:3795:LEU:HD22	1:C:3834:PHE:HZ	1.83	0.42
1:C:3839:PHE:HE1	1:C:3873:THR:HG23	1.84	0.42
1:C:4794:LYS:HD2	1:C:4794:LYS:HA	1.78	0.42
1:C:4874:ASP:HA	1:C:4877:GLU:HG3	2.01	0.42
1:D:23:GLN:O	1:D:213:SER:N	2.53	0.42
1:D:555:LEU:HD21	1:D:578:VAL:HG11	2.01	0.42
1:D:1914:ASP:OD1	1:D:2089:ARG:NH1	2.52	0.42
1:D:2492:LEU:HD23	1:D:2492:LEU:HA	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4781:THR:HG21	1:D:4812:TYR:HB2	2.01	0.42
1:A:120:LEU:HB2	1:A:159:TRP:CE3	2.53	0.42
1:A:375:GLN:NE2	1:A:390:LYS:O	2.49	0.42
1:A:2062:SER:O	1:A:2066:VAL:HG23	2.19	0.42
1:A:2343:LEU:HG	1:A:2430:ASP:HA	2.01	0.42
1:B:24:CYS:HB3	1:B:212:TRP:CE3	2.54	0.42
1:B:325:LYS:HE3	1:B:367:ASP:OD2	2.19	0.42
1:B:502:ILE:HD11	1:B:533:LEU:HB3	2.01	0.42
1:B:718:VAL:HG13	1:B:793:SER:OG	2.19	0.42
1:B:2201:TYR:O	1:B:2205:ILE:HG22	2.19	0.42
1:B:2264:VAL:HG21	1:B:2300:PHE:HE2	1.84	0.42
1:B:3795:LEU:HD22	1:B:3834:PHE:HZ	1.83	0.42
1:B:3812:LYS:HE2	1:B:3812:LYS:HB3	1.83	0.42
1:B:4827:GLY:HA3	1:B:4846:ASP:OD2	2.20	0.42
1:C:626:ARG:NH2	1:C:1669:GLY:O	2.52	0.42
1:C:4759:VAL:HG23	1:C:4865:ILE:HD11	2.01	0.42
1:C:4784:ALA:HB1	1:C:4792:TYR:HE2	1.83	0.42
1:D:718:VAL:HG13	1:D:793:SER:OG	2.19	0.42
1:D:2201:TYR:O	1:D:2205:ILE:HG22	2.19	0.42
1:D:2343:LEU:HG	1:D:2430:ASP:HA	2.01	0.42
1:D:3989:VAL:HG12	1:D:3990:VAL:N	2.34	0.42
1:D:4731:GLY:HA2	1:D:4737:PHE:HB2	1.99	0.42
1:A:626:ARG:NH2	1:A:1669:GLY:O	2.52	0.42
1:A:3864:ASN:OD1	1:A:3865:THR:N	2.50	0.42
1:B:2887:LYS:HA	1:B:2890:ASP:HB2	2.02	0.42
1:B:4154:SER:O	1:B:4158:GLN:HG2	2.19	0.42
1:C:373:THR:O	1:C:375:GLN:NE2	2.48	0.42
1:C:913:ARG:HA	1:C:913:ARG:HD3	1.84	0.42
1:C:1792:THR:HG21	1:C:1829:LEU:HD12	2.01	0.42
1:C:2463:HIS:O	1:C:2467:MET:HG2	2.18	0.42
1:C:3950:PHE:HZ	1:C:3973:LEU:HG	1.83	0.42
1:D:502:ILE:HD11	1:D:533:LEU:HB3	2.01	0.42
1:D:2265:VAL:HG12	1:D:2326:ARG:HD2	2.01	0.42
1:D:4759:VAL:HG23	1:D:4865:ILE:HD11	2.01	0.42
1:A:434:ASP:OD1	1:A:438:LYS:HG2	2.20	0.42
1:A:4827:GLY:HA3	1:A:4846:ASP:OD2	2.20	0.42
1:A:4874:ASP:HA	1:A:4877:GLU:HG3	2.01	0.42
1:B:718:VAL:HG11	1:B:791:VAL:HG13	2.01	0.42
1:B:2352:ILE:HD12	1:B:2358:ARG:HG3	2.01	0.42
1:B:3618:LEU:HA	1:B:3618:LEU:HD23	1.77	0.42
1:B:3641:GLU:OE1	1:B:3729:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3728:ALA:HA	1:B:3731:HIS:ND1	2.33	0.42
1:B:4197:PHE:HB2	1:B:4644:TRP:HZ3	1.83	0.42
1:C:360:ILE:HG23	1:C:402:GLY:HA2	2.01	0.42
1:C:1051:ARG:HD2	1:C:1055:ARG:HH21	1.84	0.42
1:C:3727:GLN:O	1:C:3731:HIS:ND1	2.34	0.42
1:C:4781:THR:HG21	1:C:4812:TYR:HB2	2.01	0.42
1:D:24:CYS:HB3	1:D:212:TRP:CE3	2.54	0.42
1:D:70:GLU:HG3	1:D:129:TYR:CE2	2.51	0.42
1:D:325:LYS:HE3	1:D:367:ASP:OD2	2.20	0.42
1:D:1051:ARG:HD2	1:D:1055:ARG:HH21	1.83	0.42
1:D:2436:SER:HB3	1:D:2489:VAL:HG12	2.00	0.42
1:A:562:LEU:HA	1:A:571:ILE:HD13	2.00	0.42
1:A:614:LEU:HD13	1:A:632:ILE:HD12	2.01	0.42
1:A:1752:ILE:HA	1:A:1837:ASN:OD1	2.19	0.42
1:A:2201:TYR:O	1:A:2205:ILE:HG22	2.19	0.42
1:A:2220:LEU:HD11	1:A:2242:ALA:HB2	2.00	0.42
1:A:4049:LYS:O	1:A:4052:GLU:HG2	2.19	0.42
1:A:4577:LEU:HA	1:A:4580:ILE:HG12	2.01	0.42
1:B:331:PHE:HE1	1:B:363:ILE:HG22	1.84	0.42
1:B:1348:LYS:HD2	1:B:1348:LYS:HA	1.92	0.42
1:B:3805:ASN:HD22	1:B:3805:ASN:HA	1.60	0.42
1:B:3864:ASN:OD1	1:B:3865:THR:N	2.50	0.42
1:C:614:LEU:HD13	1:C:632:ILE:HD12	2.02	0.42
1:C:1358:ARG:HB2	1:C:1567:LEU:CD2	2.49	0.42
1:C:1596:LEU:HD23	1:C:1596:LEU:HA	1.93	0.42
1:C:3641:GLU:OE1	1:C:3729:ARG:NH1	2.52	0.42
1:C:4049:LYS:O	1:C:4052:GLU:HG2	2.19	0.42
1:C:4827:GLY:HA3	1:C:4846:ASP:OD2	2.20	0.42
1:D:427:ASN:O	1:D:430:ILE:HG22	2.19	0.42
1:D:1629:MET:HB3	1:D:1629:MET:HE2	1.97	0.42
1:D:1972:ILE:HD13	1:D:1975:LEU:HD21	2.01	0.42
1:D:2220:LEU:HD11	1:D:2242:ALA:HB2	2.00	0.42
1:D:2894:PHE:HA	1:D:2897:ILE:HD11	2.02	0.42
1:D:3839:PHE:HE1	1:D:3873:THR:HG23	1.84	0.42
1:D:4049:LYS:O	1:D:4052:GLU:HG2	2.19	0.42
1:A:502:ILE:HD11	1:A:533:LEU:HB3	2.01	0.42
1:A:921:PHE:H	1:A:921:PHE:HD1	1.62	0.42
1:A:1841:LYS:O	1:A:1845:GLN:HG2	2.20	0.42
1:B:572:LEU:HA	1:B:572:LEU:HD12	1.84	0.42
1:B:839:GLU:OE2	1:B:841:LYS:HG3	2.20	0.42
1:B:2279:LEU:HB3	1:B:2284:TYR:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3839:PHE:HE1	1:B:3873:THR:HG23	1.84	0.42
1:B:3923:ILE:HG12	1:B:3923:ILE:H	1.65	0.42
1:B:4049:LYS:O	1:B:4052:GLU:HG2	2.19	0.42
1:C:502:ILE:HD11	1:C:533:LEU:HB3	2.01	0.42
1:C:1972:ILE:HD13	1:C:1975:LEU:HD21	2.01	0.42
1:C:2062:SER:O	1:C:2066:VAL:HG23	2.19	0.42
1:C:2279:LEU:HB3	1:C:2284:TYR:HB2	2.00	0.42
1:C:2441:MET:CE	1:C:2501:LEU:HD12	2.49	0.42
1:D:816:PRO:HB2	1:D:819:TYR:CD1	2.54	0.42
2:J:19:LYS:HD3	2:J:51:ILE:HG22	2.02	0.42
1:A:23:GLN:O	1:A:213:SER:N	2.53	0.42
1:A:1253:LYS:HZ3	1:A:1257:GLN:HG3	1.85	0.42
1:A:1823:ILE:HD12	1:A:1904:GLN:HB2	2.01	0.42
1:A:2264:VAL:HG21	1:A:2300:PHE:HE2	1.84	0.42
1:A:2894:PHE:HA	1:A:2897:ILE:HD11	2.02	0.42
1:A:3641:GLU:OE1	1:A:3729:ARG:NH1	2.52	0.42
1:B:338:LEU:HD23	1:B:338:LEU:H	1.84	0.42
1:B:1253:LYS:HZ3	1:B:1257:GLN:HG3	1.85	0.42
1:B:2265:VAL:HG12	1:B:2326:ARG:HD2	2.01	0.42
1:B:4784:ALA:HB1	1:B:4792:TYR:HE2	1.83	0.42
1:C:55:SER:O	1:C:296:ARG:NH2	2.39	0.42
1:C:1823:ILE:HD12	1:C:1904:GLN:HB2	2.02	0.42
1:C:2092:ASP:OD1	1:C:2095:GLY:N	2.47	0.42
1:C:2264:VAL:HG21	1:C:2300:PHE:HE2	1.84	0.42
1:C:2887:LYS:HA	1:C:2890:ASP:HB2	2.02	0.42
2:I:8:ILE:HD11	2:I:74:LYS:HB2	2.01	0.42
1:D:360:ILE:HG23	1:D:402:GLY:HA2	2.01	0.42
1:D:1752:ILE:HA	1:D:1837:ASN:OD1	2.19	0.42
1:D:3761:GLY:O	1:D:3764:ILE:HG22	2.19	0.42
1:D:4721:LEU:HD23	1:D:4721:LEU:HA	1.88	0.42
1:A:572:LEU:HD12	1:A:572:LEU:HA	1.84	0.42
1:A:1914:ASP:OD1	1:A:2089:ARG:NH1	2.52	0.42
1:A:2240:ASP:OD2	1:A:2296:ARG:NH2	2.52	0.42
1:A:2885:ARG:NH2	1:A:2889:GLN:OE1	2.53	0.42
1:A:4784:ALA:HB1	1:A:4792:TYR:HE2	1.83	0.42
1:B:23:GLN:O	1:B:213:SER:N	2.53	0.42
1:B:4851:PHE:HA	1:B:4855:VAL:HG22	2.02	0.42
2:H:50:ARG:HB3	2:H:53:LYS:HG3	2.02	0.42
1:C:890:HIS:O	1:C:894:VAL:HG13	2.19	0.42
1:C:2201:TYR:O	1:C:2205:ILE:HG22	2.19	0.42
1:C:2223:ASN:O	1:C:2226:VAL:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4640:PRO:HG2	1:C:4646:LYS:HA	2.00	0.42
2:I:50:ARG:HB3	2:I:53:LYS:HG3	2.02	0.42
1:D:2885:ARG:NH2	1:D:2889:GLN:OE1	2.53	0.42
1:D:4640:PRO:HG2	1:D:4646:LYS:HA	2.01	0.42
1:D:4913:ASN:HB3	1:D:4916:ASN:HB2	2.02	0.42
1:A:816:PRO:HB2	1:A:819:TYR:CD1	2.54	0.42
1:A:1012:ILE:HA	1:A:1032:LEU:HD11	2.02	0.42
1:A:1051:ARG:HD2	1:A:1055:ARG:HH21	1.84	0.42
1:A:1217:PHE:O	1:A:1240:ALA:N	2.49	0.42
1:A:1587:LEU:HD23	1:A:1587:LEU:HA	1.95	0.42
1:A:4851:PHE:HA	1:A:4855:VAL:HG22	2.02	0.42
2:G:8:ILE:HD11	2:G:74:LYS:HB2	2.01	0.42
1:B:797:GLY:HA2	1:B:1623:LEU:HA	2.02	0.42
1:B:1012:ILE:HA	1:B:1032:LEU:HD11	2.02	0.42
1:B:1138:ASP:OD1	1:B:1139:GLY:N	2.53	0.42
1:C:23:GLN:O	1:C:213:SER:N	2.53	0.42
1:C:122:ARG:HD3	1:C:129:TYR:CZ	2.55	0.42
1:C:325:LYS:HE3	1:C:367:ASP:OD2	2.20	0.42
1:C:839:GLU:OE2	1:C:841:LYS:HG3	2.20	0.42
1:C:1012:ILE:HA	1:C:1032:LEU:HD11	2.02	0.42
1:C:1124:PRO:HB2	1:C:1252:SER:OG	2.20	0.42
1:C:3827:LYS:HE3	1:C:3827:LYS:HB3	1.88	0.42
1:C:4785:PHE:CE2	1:D:4518:TYR:HE2	2.37	0.42
2:I:19:LYS:HD3	2:I:51:ILE:HG22	2.02	0.42
1:D:261:HIS:CD2	1:D:263:GLU:HG3	2.55	0.42
1:D:1124:PRO:HB2	1:D:1252:SER:OG	2.20	0.42
1:D:2062:SER:O	1:D:2066:VAL:HG23	2.19	0.42
1:D:3864:ASN:OD1	1:D:3865:THR:N	2.50	0.42
1:D:4773:LEU:HD11	1:D:4853:VAL:HG13	2.01	0.42
1:A:309:MET:HB2	1:A:312:LYS:HZ2	1.84	0.41
1:A:449:ILE:HG23	1:A:529:ILE:HD11	2.02	0.41
1:A:697:TRP:HD1	1:A:766:ILE:HD12	1.85	0.41
1:A:839:GLU:OE2	1:A:841:LYS:HG3	2.20	0.41
1:A:988:LEU:HD11	1:A:1054:VAL:HG12	2.02	0.41
1:A:2265:VAL:HG12	1:A:2326:ARG:HD2	2.01	0.41
1:A:2417:ARG:HH11	1:D:156:GLU:HG3	1.84	0.41
1:A:4107:HIS:O	1:A:4109:PRO:HD3	2.20	0.41
1:B:2894:PHE:HA	1:B:2897:ILE:HD11	2.02	0.41
1:B:3964:ILE:CD1	1:B:3968:LYS:HE2	2.50	0.41
1:B:4631:ARG:O	1:B:4634:ILE:HG12	2.20	0.41
1:B:4798:GLY:HA3	1:B:4799:ASP:HA	1.76	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4913:ASN:HB3	1:B:4916:ASN:HB2	2.02	0.41
1:C:988:LEU:HD11	1:C:1054:VAL:HG12	2.02	0.41
1:C:1841:LYS:O	1:C:1845:GLN:HG2	2.20	0.41
1:C:2894:PHE:HA	1:C:2897:ILE:HD11	2.02	0.41
1:C:4851:PHE:HA	1:C:4855:VAL:HG22	2.02	0.41
1:D:331:PHE:HE1	1:D:363:ILE:HG22	1.84	0.41
1:D:1138:ASP:OD1	1:D:1139:GLY:N	2.53	0.41
1:D:1841:LYS:O	1:D:1845:GLN:HG2	2.20	0.41
1:D:4107:HIS:O	1:D:4109:PRO:HD3	2.20	0.41
1:D:4577:LEU:HA	1:D:4580:ILE:HG12	2.01	0.41
1:A:190:ARG:HD3	1:A:205:ALA:O	2.21	0.41
1:A:797:GLY:HA2	1:A:1623:LEU:HA	2.02	0.41
1:A:3839:PHE:HE1	1:A:3873:THR:HG23	1.84	0.41
1:B:1221:VAL:HA	1:B:1224:LEU:HB2	2.02	0.41
1:B:2099:ARG:O	1:B:2103:LYS:NZ	2.42	0.41
1:C:449:ILE:HG23	1:C:529:ILE:HD11	2.02	0.41
1:C:697:TRP:HD1	1:C:766:ILE:HD12	1.85	0.41
1:C:2197:ARG:HB2	1:C:2236:SER:OG	2.21	0.41
1:C:4798:GLY:HA3	1:C:4799:ASP:HA	1.76	0.41
1:D:318:ASP:OD1	1:D:318:ASP:N	2.51	0.41
1:D:988:LEU:HD11	1:D:1054:VAL:HG12	2.02	0.41
1:D:1680:HIS:CE1	2:J:91:VAL:HG22	2.54	0.41
1:D:1758:LEU:HD23	1:D:1758:LEU:HA	1.80	0.41
1:D:2197:ARG:HB2	1:D:2236:SER:OG	2.21	0.41
1:D:4060:SER:O	1:D:4063:GLU:HG3	2.20	0.41
1:A:122:ARG:HD3	1:A:129:TYR:CZ	2.55	0.41
1:A:2197:ARG:HB2	1:A:2236:SER:OG	2.21	0.41
1:A:3964:ILE:CD1	1:A:3968:LYS:HE2	2.50	0.41
1:A:4913:ASN:HB3	1:A:4916:ASN:HB2	2.02	0.41
1:B:434:ASP:OD1	1:B:438:LYS:HG2	2.20	0.41
1:B:697:TRP:HD1	1:B:766:ILE:HD12	1.85	0.41
1:B:1124:PRO:HB2	1:B:1252:SER:OG	2.20	0.41
1:B:1838:GLU:OE1	1:B:1838:GLU:N	2.48	0.41
1:B:1841:LYS:O	1:B:1845:GLN:HG2	2.20	0.41
1:B:4060:SER:O	1:B:4063:GLU:HG3	2.20	0.41
1:B:4107:HIS:O	1:B:4109:PRO:HD3	2.20	0.41
1:B:4874:ASP:HA	1:B:4877:GLU:HG3	2.01	0.41
2:H:8:ILE:HD11	2:H:74:LYS:HB2	2.01	0.41
1:C:646:THR:CB	1:C:1685:GLN:HE22	2.34	0.41
1:C:4044:LYS:HZ1	1:C:4071:THR:H	1.67	0.41
1:D:1823:ILE:HD12	1:D:1904:GLN:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:8:ILE:HD11	2:J:74:LYS:HB2	2.01	0.41
1:A:200:SER:O	1:A:202:HIS:ND1	2.43	0.41
1:A:641:ASP:OD1	1:A:641:ASP:N	2.43	0.41
1:A:646:THR:CB	1:A:1685:GLN:HE22	2.33	0.41
1:A:812:LYS:HB2	1:A:812:LYS:HE2	1.70	0.41
1:A:1173:MET:O	1:A:1191:ALA:N	2.35	0.41
1:A:1595:VAL:HG23	1:A:1595:VAL:O	2.21	0.41
1:A:2846:ASN:O	1:A:2850:ILE:HG12	2.20	0.41
1:A:4048:HIS:HE1	1:A:4059:GLN:HE22	1.68	0.41
2:G:56:VAL:HG23	2:G:57:ILE:N	2.35	0.41
1:B:750:ARG:NH2	2:H:10:PRO:HD2	2.35	0.41
1:B:2280:VAL:HG12	1:B:2286:ASP:HB2	2.03	0.41
1:B:4668:LEU:HD23	1:B:4669:LEU:HD22	2.02	0.41
1:C:434:ASP:OD1	1:C:438:LYS:HG2	2.20	0.41
1:C:797:GLY:HA2	1:C:1623:LEU:HA	2.02	0.41
1:C:1739:LEU:HD23	1:C:1740:PHE:H	1.86	0.41
1:D:375:GLN:NE2	1:D:390:LYS:O	2.49	0.41
1:D:434:ASP:OD1	1:D:438:LYS:HG2	2.20	0.41
1:D:446:ASP:N	1:D:446:ASP:OD1	2.42	0.41
1:D:890:HIS:O	1:D:894:VAL:HG13	2.19	0.41
1:D:2095:GLY:HA2	1:D:2098:VAL:HG12	2.02	0.41
1:D:3827:LYS:HE3	1:D:3827:LYS:HB3	1.88	0.41
1:D:4852:PHE:HD1	1:D:4856:ILE:HD12	1.86	0.41
1:A:331:PHE:HE1	1:A:363:ILE:HG22	1.84	0.41
1:A:1031:ARG:HA	1:A:1031:ARG:HD3	1.87	0.41
1:A:4170:GLN:OE1	1:A:4170:GLN:HA	2.21	0.41
1:A:4668:LEU:HD23	1:A:4669:LEU:HD22	2.02	0.41
1:B:122:ARG:HD3	1:B:129:TYR:CZ	2.55	0.41
1:B:646:THR:CB	1:B:1685:GLN:HE22	2.34	0.41
1:B:1256:PRO:HB2	1:B:1592:LEU:HD21	2.03	0.41
1:B:3878:LEU:HD22	1:B:3938:ARG:HE	1.86	0.41
1:C:190:ARG:HD3	1:C:205:ALA:O	2.21	0.41
1:C:1138:ASP:OD1	1:C:1139:GLY:N	2.53	0.41
1:C:2280:VAL:HG12	1:C:2286:ASP:HB2	2.03	0.41
1:C:3964:ILE:CD1	1:C:3968:LYS:HE2	2.50	0.41
1:C:4605:VAL:O	1:C:4609:LEU:HD13	2.21	0.41
1:C:4635:ASN:HB3	1:C:4668:LEU:O	2.21	0.41
1:C:4773:LEU:HD11	1:C:4853:VAL:HG13	2.01	0.41
1:D:3661:ASP:OD2	1:D:3733:ARG:NH2	2.54	0.41
2:J:24:VAL:HG12	2:J:105:LEU:HB3	2.03	0.41
2:J:56:VAL:HG23	2:J:57:ILE:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:123:HIS:CD2	1:A:126:SER:H	2.36	0.41
1:A:325:LYS:HE3	1:A:367:ASP:OD2	2.20	0.41
1:A:1792:THR:HG21	1:A:1829:LEU:HD12	2.01	0.41
1:A:3661:ASP:OD2	1:A:3733:ARG:NH2	2.54	0.41
1:A:3731:HIS:CB	1:A:3764:ILE:HD11	2.51	0.41
1:A:4651:LYS:HE3	1:A:4651:LYS:HB2	1.90	0.41
1:A:4866:ILE:HD11	1:D:4859:ALA:HB1	2.03	0.41
1:B:562:LEU:HD21	1:B:600:LEU:HD22	2.03	0.41
1:B:1595:VAL:HG23	1:B:1595:VAL:O	2.21	0.41
1:B:2095:GLY:HA2	1:B:2098:VAL:HG12	2.02	0.41
1:B:2197:ARG:HB2	1:B:2236:SER:OG	2.21	0.41
1:B:2846:ASN:O	1:B:2850:ILE:HG12	2.20	0.41
1:B:3727:GLN:O	1:B:3731:HIS:ND1	2.34	0.41
1:B:4605:VAL:O	1:B:4609:LEU:HD13	2.21	0.41
1:B:4635:ASN:HB3	1:B:4668:LEU:O	2.21	0.41
1:B:4759:VAL:HG23	1:B:4865:ILE:HD11	2.01	0.41
1:C:4668:LEU:HD23	1:C:4669:LEU:HD22	2.02	0.41
2:I:104:LEU:HD12	2:I:104:LEU:HA	1.80	0.41
1:D:614:LEU:HD13	1:D:632:ILE:HD12	2.02	0.41
1:D:697:TRP:HD1	1:D:766:ILE:HD12	1.85	0.41
1:D:839:GLU:OE2	1:D:841:LYS:HG3	2.20	0.41
1:D:1012:ILE:HA	1:D:1032:LEU:HD11	2.02	0.41
1:D:1221:VAL:HA	1:D:1224:LEU:HB2	2.02	0.41
1:D:1792:THR:HG21	1:D:1829:LEU:HD12	2.01	0.41
1:D:2846:ASN:O	1:D:2850:ILE:HG12	2.20	0.41
1:D:4827:GLY:HA3	1:D:4846:ASP:OD2	2.20	0.41
1:D:4851:PHE:HA	1:D:4855:VAL:HG22	2.02	0.41
1:A:229:ILE:HA	1:A:229:ILE:HD12	1.64	0.41
1:A:410:HIS:CE1	1:A:414:ARG:HH21	2.39	0.41
1:A:1138:ASP:OD1	1:A:1139:GLY:N	2.53	0.41
1:A:1680:HIS:CE1	2:G:91:VAL:HA	2.55	0.41
1:A:2315:ASN:O	1:A:2319:VAL:HG23	2.21	0.41
1:A:2735:LYS:CD	1:A:2756:MET:HE2	2.50	0.41
1:A:4759:VAL:HG23	1:A:4865:ILE:HD11	2.02	0.41
1:A:4779:LEU:HD12	1:A:4779:LEU:HA	1.93	0.41
1:A:4817:TYR:CB	1:D:4843:ILE:HD13	2.50	0.41
2:G:19:LYS:HD3	2:G:51:ILE:HG22	2.02	0.41
1:B:190:ARG:HD3	1:B:205:ALA:O	2.21	0.41
1:B:278:GLU:OE2	1:B:298:ARG:HD2	2.21	0.41
1:B:1051:ARG:HD2	1:B:1055:ARG:HH21	1.84	0.41
1:B:1607:VAL:HG23	1:B:1622:CYS:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1792:THR:HG21	1:B:1829:LEU:HD12	2.01	0.41
1:B:1823:ILE:HD12	1:B:1904:GLN:HB2	2.02	0.41
1:B:3661:ASP:OD2	1:B:3733:ARG:NH2	2.54	0.41
1:B:3919:LEU:HD23	1:B:3919:LEU:HA	1.91	0.41
1:B:4044:LYS:HZ3	1:B:4069:ALA:HB1	1.84	0.41
1:C:24:CYS:O	1:C:34:LYS:HE3	2.21	0.41
1:C:229:ILE:HD12	1:C:229:ILE:HA	1.64	0.41
1:C:1217:PHE:O	1:C:1240:ALA:N	2.49	0.41
1:C:1843:ILE:O	1:C:1846:LEU:HG	2.21	0.41
1:C:2221:LEU:HA	1:C:2221:LEU:HD23	1.87	0.41
1:C:2885:ARG:NH2	1:C:2889:GLN:OE1	2.53	0.41
1:C:4500:MET:HB3	1:C:4585:CYS:SG	2.61	0.41
1:C:4709:LEU:HD12	1:C:4709:LEU:HA	1.96	0.41
1:D:122:ARG:HD3	1:D:129:TYR:CZ	2.55	0.41
1:A:278:GLU:OE2	1:A:298:ARG:HD2	2.21	0.41
1:A:1843:ILE:O	1:A:1846:LEU:HG	2.21	0.41
1:A:2887:LYS:HA	1:A:2890:ASP:HB2	2.02	0.41
1:A:3878:LEU:HD22	1:A:3938:ARG:HE	1.86	0.41
2:G:50:ARG:HB3	2:G:53:LYS:HG3	2.02	0.41
1:B:34:LYS:HB2	1:B:53:SER:OG	2.21	0.41
1:B:309:MET:HB2	1:B:312:LYS:HZ2	1.86	0.41
1:B:2315:ASN:O	1:B:2319:VAL:HG23	2.21	0.41
1:B:4843:ILE:HG23	1:C:4817:TYR:CD1	2.56	0.41
1:C:80:GLU:O	1:C:84:ASN:CB	2.67	0.41
1:C:562:LEU:HD21	1:C:600:LEU:HD22	2.03	0.41
1:C:1607:VAL:HG23	1:C:1622:CYS:HB2	2.03	0.41
1:C:2325:ARG:HA	1:C:2325:ARG:HD3	1.82	0.41
1:C:2461:PRO:O	1:C:2464:LYS:HG3	2.21	0.41
1:C:3871:ILE:HA	1:C:3874:VAL:HG12	2.03	0.41
1:D:190:ARG:HD3	1:D:205:ALA:O	2.21	0.41
1:D:1595:VAL:O	1:D:1595:VAL:HG23	2.21	0.41
1:D:2315:ASN:O	1:D:2319:VAL:HG23	2.21	0.41
1:D:4048:HIS:HE1	1:D:4059:GLN:HE22	1.69	0.41
1:D:4780:TYR:HA	1:D:4783:VAL:HG12	2.03	0.41
2:J:79:PRO:O	2:J:84:GLY:N	2.38	0.41
1:A:261:HIS:CD2	1:A:263:GLU:HG3	2.55	0.41
1:A:446:ASP:N	1:A:446:ASP:OD1	2.42	0.41
1:A:1256:PRO:HB2	1:A:1592:LEU:HD21	2.03	0.41
1:A:1294:ASN:O	1:A:1348:LYS:NZ	2.38	0.41
1:A:1764:PHE:HD1	1:A:1780:SER:HB2	1.86	0.41
1:A:2234:ARG:HA	1:A:2234:ARG:HD2	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3871:ILE:HA	1:A:3874:VAL:HG12	2.03	0.41
1:A:3919:LEU:HD23	1:A:3919:LEU:HA	1.90	0.41
1:A:4500:MET:HB3	1:A:4585:CYS:SG	2.61	0.41
1:A:4780:TYR:HA	1:A:4783:VAL:HG12	2.03	0.41
1:A:4798:GLY:HA3	1:A:4799:ASP:HA	1.76	0.41
1:A:4833:PRO:HD3	1:A:4842:ARG:NE	2.31	0.41
1:A:4852:PHE:HD1	1:A:4856:ILE:HD12	1.85	0.41
2:G:24:VAL:HG12	2:G:105:LEU:HB3	2.03	0.41
1:B:261:HIS:CD2	1:B:263:GLU:HG3	2.55	0.41
1:B:1031:ARG:HD3	1:B:1031:ARG:HA	1.87	0.41
1:B:1972:ILE:HD13	1:B:1975:LEU:HD21	2.01	0.41
1:B:2084:PHE:CZ	1:B:3666:LEU:HB2	2.56	0.41
1:B:2885:ARG:NH2	1:B:2889:GLN:OE1	2.53	0.41
1:B:3871:ILE:HA	1:B:3874:VAL:HG12	2.03	0.41
1:B:4500:MET:HB3	1:B:4585:CYS:SG	2.61	0.41
1:C:34:LYS:HB2	1:C:53:SER:OG	2.21	0.41
1:C:261:HIS:CD2	1:C:263:GLU:HG3	2.55	0.41
1:C:675:TYR:CE1	1:C:790:PRO:HB3	2.56	0.41
1:C:1044:LYS:HB2	1:C:1044:LYS:HE2	1.89	0.41
1:C:1256:PRO:HB2	1:C:1592:LEU:HD21	2.03	0.41
1:C:1595:VAL:O	1:C:1595:VAL:HG23	2.21	0.41
1:C:1729:PRO:HB2	1:C:1731:THR:HG23	2.03	0.41
1:C:2007:GLY:HA2	1:C:2058:GLN:NE2	2.32	0.41
1:C:2084:PHE:CZ	1:C:3666:LEU:HB2	2.56	0.41
1:C:3878:LEU:HD22	1:C:3938:ARG:HE	1.86	0.41
1:C:3923:ILE:HG12	1:C:3923:ILE:H	1.66	0.41
1:C:4060:SER:O	1:C:4063:GLU:HG3	2.20	0.41
1:C:4193:GLU:CD	1:C:4607:ARG:HH22	2.24	0.41
1:C:4631:ARG:O	1:C:4634:ILE:HG12	2.20	0.41
1:D:675:TYR:CE1	1:D:790:PRO:HB3	2.56	0.41
1:D:812:LYS:HE2	1:D:812:LYS:HB2	1.70	0.41
1:D:1255:LEU:HA	1:D:1256:PRO:HD3	1.94	0.41
1:D:2887:LYS:HA	1:D:2890:ASP:HB2	2.02	0.41
1:D:3727:GLN:O	1:D:3731:HIS:ND1	2.34	0.41
1:D:3731:HIS:CB	1:D:3764:ILE:HD11	2.51	0.41
1:D:3878:LEU:HD22	1:D:3938:ARG:HE	1.86	0.41
1:D:3964:ILE:CD1	1:D:3968:LYS:HE2	2.50	0.41
1:D:4170:GLN:OE1	1:D:4170:GLN:HA	2.21	0.41
1:D:4631:ARG:O	1:D:4634:ILE:HG12	2.20	0.41
1:D:4635:ASN:HB3	1:D:4668:LEU:O	2.21	0.41
1:A:675:TYR:CE1	1:A:790:PRO:HB3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2084:PHE:CZ	1:A:3666:LEU:HB2	2.56	0.41
1:A:4048:HIS:CG	1:A:4066:LEU:HD11	2.56	0.41
1:B:70:GLU:HG3	1:B:129:TYR:CE2	2.51	0.41
1:B:207:PHE:HB3	1:C:2325:ARG:HA	2.02	0.41
1:B:304:LYS:HB2	1:B:316:LEU:HD23	2.03	0.41
1:B:375:GLN:NE2	1:B:390:LYS:O	2.49	0.41
1:B:2062:SER:OG	1:B:2091:TYR:OH	2.33	0.41
1:B:2461:PRO:O	1:B:2464:LYS:HG3	2.20	0.41
1:B:3802:LEU:HD23	1:B:3829:LEU:HD13	2.03	0.41
1:B:4048:HIS:HE1	1:B:4059:GLN:HE22	1.69	0.41
1:B:4048:HIS:CG	1:B:4066:LEU:HD11	2.56	0.41
2:H:24:VAL:HG12	2:H:105:LEU:HB3	2.03	0.41
1:C:3661:ASP:OD2	1:C:3733:ARG:NH2	2.54	0.41
1:C:4852:PHE:HD1	1:C:4856:ILE:HD12	1.86	0.41
1:D:410:HIS:CE1	1:D:414:ARG:HH21	2.39	0.41
1:D:1729:PRO:HB2	1:D:1731:THR:HG23	2.03	0.41
1:D:1843:ILE:O	1:D:1846:LEU:HG	2.21	0.41
1:D:2162:ARG:HH21	1:D:2208:GLN:HE21	1.69	0.41
1:D:2238:PRO:HA	1:D:2241:VAL:HG12	2.03	0.41
1:D:2280:VAL:HG12	1:D:2286:ASP:HB2	2.03	0.41
2:J:50:ARG:HB3	2:J:53:LYS:HG3	2.02	0.41
1:A:226:GLY:O	1:A:356:TYR:N	2.36	0.40
1:A:2280:VAL:HG12	1:A:2286:ASP:HB2	2.03	0.40
1:B:675:TYR:CE1	1:B:790:PRO:HB3	2.56	0.40
1:B:913:ARG:HA	1:B:913:ARG:HD3	1.84	0.40
1:B:1729:PRO:HB2	1:B:1731:THR:HG23	2.03	0.40
1:B:1739:LEU:HD23	1:B:1740:PHE:H	1.86	0.40
1:B:2735:LYS:HD3	1:B:2756:MET:CE	2.48	0.40
1:B:3731:HIS:CB	1:B:3764:ILE:HD11	2.51	0.40
1:C:1221:VAL:HA	1:C:1224:LEU:HB2	2.02	0.40
1:C:1257:GLN:HA	1:C:1384:LEU:CD2	2.51	0.40
1:C:1764:PHE:HD1	1:C:1780:SER:HB2	1.86	0.40
1:C:4780:TYR:HA	1:C:4783:VAL:HG12	2.03	0.40
1:D:80:GLU:O	1:D:84:ASN:CB	2.67	0.40
1:D:373:THR:O	1:D:375:GLN:NE2	2.48	0.40
1:D:449:ILE:HG23	1:D:529:ILE:HD11	2.02	0.40
1:D:797:GLY:HA2	1:D:1623:LEU:HA	2.02	0.40
1:D:1128:LEU:HG	1:D:1136:ALA:HB2	2.03	0.40
1:D:1359:ILE:HG12	1:D:1363:LYS:HD2	2.03	0.40
1:D:2234:ARG:HD2	1:D:2234:ARG:HA	1.89	0.40
1:D:4080:GLU:O	1:D:4084:LYS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:24:CYS:O	1:A:34:LYS:HE3	2.20	0.40
1:A:4048:HIS:O	1:A:4051:MET:HG2	2.22	0.40
1:A:4060:SER:O	1:A:4063:GLU:HG3	2.20	0.40
1:B:24:CYS:O	1:B:34:LYS:HE3	2.21	0.40
1:B:1681:VAL:HG23	1:B:1682:ASP:N	2.30	0.40
2:H:19:LYS:HD3	2:H:51:ILE:HG22	2.02	0.40
1:C:1050:LEU:HD23	1:C:1050:LEU:HA	1.83	0.40
1:C:2231:PRO:HD3	1:C:2381:ILE:HD11	2.04	0.40
1:C:4048:HIS:HE1	1:C:4059:GLN:HE22	1.68	0.40
1:C:4721:LEU:HD23	1:C:4721:LEU:HA	1.88	0.40
1:D:24:CYS:O	1:D:34:LYS:HE3	2.21	0.40
1:D:438:LYS:HD2	1:D:438:LYS:HA	1.79	0.40
1:D:646:THR:CB	1:D:1685:GLN:HE22	2.34	0.40
1:D:1050:LEU:HD23	1:D:1050:LEU:HA	1.83	0.40
1:D:1764:PHE:HD1	1:D:1780:SER:HB2	1.86	0.40
1:D:4048:HIS:CG	1:D:4066:LEU:HD11	2.56	0.40
1:A:669:GLN:HB3	1:A:673:TRP:HZ2	1.86	0.40
1:A:1683:GLU:HB3	2:G:42:ASP:HB3	2.03	0.40
1:A:1838:GLU:OE1	1:A:1838:GLU:N	2.48	0.40
1:A:2461:PRO:O	1:A:2464:LYS:HG3	2.20	0.40
1:A:3716:LYS:O	1:A:3719:GLU:HG3	2.22	0.40
1:A:4635:ASN:HB3	1:A:4668:LEU:O	2.21	0.40
1:B:449:ILE:HG23	1:B:529:ILE:HD11	2.02	0.40
1:B:988:LEU:HD11	1:B:1054:VAL:HG12	2.02	0.40
1:B:1643:LEU:HD22	1:B:1694:TYR:O	2.22	0.40
2:H:56:VAL:HG23	2:H:57:ILE:N	2.35	0.40
1:C:555:LEU:HD23	1:C:555:LEU:HA	1.93	0.40
1:C:2238:PRO:HA	1:C:2241:VAL:HG12	2.03	0.40
1:C:2846:ASN:O	1:C:2850:ILE:HG12	2.20	0.40
1:C:3731:HIS:CB	1:C:3764:ILE:HD11	2.51	0.40
1:C:4107:HIS:O	1:C:4109:PRO:HD3	2.20	0.40
1:C:4621:SER:OG	1:C:4623:ASP:OD1	2.40	0.40
1:C:4913:ASN:HB3	1:C:4916:ASN:HB2	2.02	0.40
1:D:1739:LEU:HD23	1:D:1740:PHE:H	1.86	0.40
1:D:1838:GLU:OE1	1:D:1838:GLU:N	2.48	0.40
1:D:2084:PHE:CZ	1:D:3666:LEU:HB2	2.56	0.40
1:D:4048:HIS:O	1:D:4051:MET:HG2	2.22	0.40
1:D:4668:LEU:HD23	1:D:4669:LEU:HD22	2.02	0.40
1:A:1758:LEU:HD23	1:A:1758:LEU:HA	1.80	0.40
1:B:123:HIS:CD2	1:B:126:SER:H	2.36	0.40
1:B:555:LEU:HD23	1:B:555:LEU:HA	1.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1035:TYR:HE2	1:B:1047:LYS:HZ3	1.70	0.40
1:B:1758:LEU:HD23	1:B:1758:LEU:HA	1.80	0.40
1:B:4170:GLN:OE1	1:B:4170:GLN:HA	2.21	0.40
1:B:4896:TYR:CZ	1:B:4959:LYS:HG2	2.57	0.40
1:C:304:LYS:HB2	1:C:316:LEU:HD23	2.03	0.40
1:C:410:HIS:CE1	1:C:414:ARG:HH21	2.39	0.40
1:C:410:HIS:HE1	1:C:414:ARG:HH21	1.70	0.40
1:C:1970:GLU:O	1:C:1974:MET:HG3	2.22	0.40
1:C:3802:LEU:HD23	1:C:3829:LEU:HD13	2.03	0.40
1:C:4048:HIS:O	1:C:4051:MET:HG2	2.22	0.40
1:C:4170:GLN:OE1	1:C:4170:GLN:HA	2.21	0.40
1:D:2231:PRO:HD3	1:D:2381:ILE:HD11	2.03	0.40
1:D:2461:PRO:O	1:D:2464:LYS:HG3	2.20	0.40
1:D:3831:ASP:HB2	1:D:3834:PHE:HB3	2.04	0.40
1:D:4792:TYR:HH	1:D:4815:HIS:HE2	1.70	0.40
1:A:191:TYR:OH	1:B:2325:ARG:NH1	2.51	0.40
1:A:1050:LEU:HD23	1:A:1050:LEU:HA	1.83	0.40
1:A:1970:GLU:O	1:A:1974:MET:HG3	2.22	0.40
1:A:2238:PRO:HA	1:A:2241:VAL:HG12	2.03	0.40
1:A:2335:ARG:HD2	1:A:2336:GLY:N	2.37	0.40
1:A:2739:GLY:O	1:A:2751:LYS:HD3	2.22	0.40
1:A:3686:LEU:HD12	1:A:3690:TYR:HE2	1.87	0.40
1:A:4631:ARG:O	1:A:4634:ILE:HG12	2.20	0.40
1:B:410:HIS:HE1	1:B:414:ARG:HH21	1.70	0.40
1:B:626:ARG:HH21	1:B:2131:VAL:HG21	1.87	0.40
1:B:1257:GLN:HA	1:B:1384:LEU:CD2	2.51	0.40
1:B:1914:ASP:OD1	1:B:2089:ARG:NH1	2.52	0.40
1:B:4721:LEU:HD23	1:B:4721:LEU:HA	1.88	0.40
1:C:4779:LEU:HD12	1:C:4779:LEU:HA	1.93	0.40
1:D:34:LYS:HB2	1:D:53:SER:OG	2.21	0.40
1:D:626:ARG:HH21	1:D:2131:VAL:HG21	1.87	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3218/4966 (65%)	2997 (93%)	221 (7%)	0	100	100
1	B	3218/4966 (65%)	2996 (93%)	222 (7%)	0	100	100
1	C	3218/4966 (65%)	2996 (93%)	222 (7%)	0	100	100
1	D	3218/4966 (65%)	2996 (93%)	222 (7%)	0	100	100
2	G	105/176 (60%)	99 (94%)	6 (6%)	0	100	100
2	H	105/176 (60%)	99 (94%)	6 (6%)	0	100	100
2	I	105/176 (60%)	99 (94%)	6 (6%)	0	100	100
2	J	105/176 (60%)	99 (94%)	6 (6%)	0	100	100
All	All	13292/20568 (65%)	12381 (93%)	911 (7%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2827/3387 (84%)	2632 (93%)	195 (7%)	15	46
1	B	2827/3387 (84%)	2632 (93%)	195 (7%)	15	46
1	C	2827/3387 (84%)	2632 (93%)	195 (7%)	15	46
1	D	2827/3387 (84%)	2632 (93%)	195 (7%)	15	46
2	G	88/140 (63%)	87 (99%)	1 (1%)	73	85
2	H	88/140 (63%)	87 (99%)	1 (1%)	73	85
2	I	88/140 (63%)	87 (99%)	1 (1%)	73	85
2	J	88/140 (63%)	87 (99%)	1 (1%)	73	85
All	All	11660/14108 (83%)	10876 (93%)	784 (7%)	20	47

All (784) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	11	ILE
1	A	31	GLU
1	A	34	LYS
1	A	52	THR
1	A	55	SER
1	A	62	LEU
1	A	70	GLU
1	A	78	LEU
1	A	126	SER
1	A	143	LEU
1	A	167	LYS
1	A	174	LYS
1	A	175	VAL
1	A	185	SER
1	A	188	SER
1	A	195	SER
1	A	211	LEU
1	A	221	SER
1	A	229	ILE
1	A	255	GLU
1	A	282	VAL
1	A	285	SER
1	A	337	LYS
1	A	338	LEU
1	A	344	LYS
1	A	347	ASP
1	A	351	THR
1	A	368	THR
1	A	372	LEU
1	A	396	GLU
1	A	422	THR
1	A	437	SER
1	A	450	GLU
1	A	451	SER
1	A	556	ASP
1	A	563	GLU
1	A	566	GLU
1	A	568	SER
1	A	573	GLU
1	A	611	LEU
1	A	627	SER
1	A	654	SER
1	A	742	SER

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Mol	Chain	Res	Type
1	A	751	THR
1	A	783	ASN
1	A	827	LEU
1	A	855	VAL
1	A	867	VAL
1	A	870	SER
1	A	878	LEU
1	A	880	ARG
1	A	887	GLU
1	A	893	TRP
1	A	897	LYS
1	A	900	LEU
1	A	910	ASP
1	A	921	PHE
1	A	922	CYS
1	A	926	GLU
1	A	936	SER
1	A	937	LEU
1	A	939	THR
1	A	940	LEU
1	A	941	LYS
1	A	950	VAL
1	A	970	TYR
1	A	972	LEU
1	A	973	THR
1	A	974	SER
1	A	985	PHE
1	A	1048	ASP
1	A	1058	LEU
1	A	1092	LYS
1	A	1118	SER
1	A	1131	ASP
1	A	1172	THR
1	A	1193	LYS
1	A	1196	ASP
1	A	1221	VAL
1	A	1293	GLN
1	A	1342	ASP
1	A	1600	MET
1	A	1608	ASP
1	A	1611	ARG
1	A	1624	ASP

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Mol	Chain	Res	Type
1	A	1663	SER
1	A	1734	THR
1	A	1736	SER
1	A	1739	LEU
1	A	1804	SER
1	A	1930	ASP
1	A	1951	ASN
1	A	1960	LYS
1	A	1962	ARG
1	A	1966	SER
1	A	2004	THR
1	A	2112	VAL
1	A	2128	LEU
1	A	2184	LYS
1	A	2205	ILE
1	A	2218	SER
1	A	2225	SER
1	A	2277	GLN
1	A	2281	SER
1	A	2351	LYS
1	A	2401	CYS
1	A	2406	HIS
1	A	2464	LYS
1	A	2488	GLU
1	A	2495	LEU
1	A	2500	SER
1	A	2501	LEU
1	A	2502	ASP
1	A	2507	SER
1	A	2714	GLU
1	A	2716	LEU
1	A	2722	LYS
1	A	2730	LYS
1	A	2732	SER
1	A	2733	MET
1	A	2741	ILE
1	A	2763	SER
1	A	2775	LYS
1	A	2776	GLU
1	A	2778	LEU
1	A	2782	LEU
1	A	2835	ASP

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Mol	Chain	Res	Type
1	A	2839	MET
1	A	2842	MET
1	A	2843	MET
1	A	2853	LYS
1	A	2857	LEU
1	A	2858	GLU
1	A	2862	LYS
1	A	2866	ASN
1	A	2867	HIS
1	A	2875	THR
1	A	2877	THR
1	A	2887	LYS
1	A	2897	ILE
1	A	2900	TYR
1	A	2902	VAL
1	A	3630	THR
1	A	3631	GLU
1	A	3676	THR
1	A	3732	ASP
1	A	3739	VAL
1	A	3746	SER
1	A	3805	ASN
1	A	3833	GLU
1	A	3851	SER
1	A	3865	THR
1	A	3892	SER
1	A	3923	ILE
1	A	3937	SER
1	A	3943	VAL
1	A	3957	LEU
1	A	3960	ASP
1	A	3964	ILE
1	A	3972	ASP
1	A	4005	SER
1	A	4026	THR
1	A	4041	VAL
1	A	4055	LYS
1	A	4072	ASP
1	A	4076	THR
1	A	4078	ASP
1	A	4081	GLU
1	A	4084	LYS

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Mol	Chain	Res	Type
1	A	4119	GLU
1	A	4123	SER
1	A	4140	SER
1	A	4170	GLN
1	A	4486	GLN
1	A	4487	GLN
1	A	4489	LEU
1	A	4515	LEU
1	A	4564	SER
1	A	4586	ILE
1	A	4621	SER
1	A	4622	GLU
1	A	4624	ASP
1	A	4671	MET
1	A	4702	VAL
1	A	4779	LEU
1	A	4797	ASP
1	A	4816	MET
1	A	4828	ASP
1	A	4842	ARG
1	A	4847	ILE
1	A	4851	PHE
1	A	4858	LEU
1	A	4865	ILE
1	A	4908	THR
1	A	4945	GLU
2	G	22	THR
1	B	11	ILE
1	B	31	GLU
1	B	34	LYS
1	B	52	THR
1	B	55	SER
1	B	62	LEU
1	B	70	GLU
1	B	78	LEU
1	B	126	SER
1	B	143	LEU
1	B	167	LYS
1	B	174	LYS
1	B	175	VAL
1	B	185	SER
1	B	188	SER

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Mol	Chain	Res	Type
1	B	195	SER
1	B	211	LEU
1	B	221	SER
1	B	229	ILE
1	B	255	GLU
1	B	282	VAL
1	B	285	SER
1	B	337	LYS
1	B	338	LEU
1	B	344	LYS
1	B	347	ASP
1	B	351	THR
1	B	368	THR
1	B	372	LEU
1	B	396	GLU
1	B	422	THR
1	B	437	SER
1	B	450	GLU
1	B	451	SER
1	B	556	ASP
1	B	563	GLU
1	B	566	GLU
1	B	568	SER
1	B	573	GLU
1	B	611	LEU
1	B	627	SER
1	B	654	SER
1	B	742	SER
1	B	751	THR
1	B	783	ASN
1	B	827	LEU
1	B	855	VAL
1	B	867	VAL
1	B	870	SER
1	B	878	LEU
1	B	880	ARG
1	B	887	GLU
1	B	893	TRP
1	B	897	LYS
1	B	900	LEU
1	B	910	ASP
1	B	921	PHE

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Mol	Chain	Res	Type
1	B	922	CYS
1	B	926	GLU
1	B	936	SER
1	B	937	LEU
1	B	939	THR
1	B	940	LEU
1	B	941	LYS
1	B	950	VAL
1	B	970	TYR
1	B	972	LEU
1	B	973	THR
1	B	974	SER
1	B	985	PHE
1	B	1048	ASP
1	B	1058	LEU
1	B	1092	LYS
1	B	1118	SER
1	B	1131	ASP
1	B	1172	THR
1	B	1193	LYS
1	B	1196	ASP
1	B	1221	VAL
1	B	1293	GLN
1	B	1342	ASP
1	B	1600	MET
1	B	1608	ASP
1	B	1611	ARG
1	B	1624	ASP
1	B	1663	SER
1	B	1734	THR
1	B	1736	SER
1	B	1739	LEU
1	B	1804	SER
1	B	1930	ASP
1	B	1951	ASN
1	B	1960	LYS
1	B	1962	ARG
1	B	1966	SER
1	B	2004	THR
1	B	2112	VAL
1	B	2128	LEU
1	B	2184	LYS

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Mol	Chain	Res	Type
1	B	2205	ILE
1	B	2218	SER
1	B	2225	SER
1	B	2277	GLN
1	B	2281	SER
1	B	2351	LYS
1	B	2401	CYS
1	B	2406	HIS
1	B	2464	LYS
1	B	2488	GLU
1	B	2495	LEU
1	B	2500	SER
1	B	2501	LEU
1	B	2502	ASP
1	B	2507	SER
1	B	2714	GLU
1	B	2716	LEU
1	B	2722	LYS
1	B	2730	LYS
1	B	2732	SER
1	B	2733	MET
1	B	2741	ILE
1	B	2763	SER
1	B	2775	LYS
1	B	2776	GLU
1	B	2778	LEU
1	B	2782	LEU
1	B	2835	ASP
1	B	2839	MET
1	B	2842	MET
1	B	2843	MET
1	B	2853	LYS
1	B	2857	LEU
1	B	2858	GLU
1	B	2862	LYS
1	B	2866	ASN
1	B	2867	HIS
1	B	2875	THR
1	B	2877	THR
1	B	2887	LYS
1	B	2897	ILE
1	B	2900	TYR

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Mol	Chain	Res	Type
1	B	2902	VAL
1	B	3630	THR
1	B	3631	GLU
1	B	3676	THR
1	B	3732	ASP
1	B	3739	VAL
1	B	3746	SER
1	B	3805	ASN
1	B	3833	GLU
1	B	3851	SER
1	B	3865	THR
1	B	3892	SER
1	B	3923	ILE
1	B	3937	SER
1	B	3943	VAL
1	B	3957	LEU
1	B	3960	ASP
1	B	3964	ILE
1	B	3972	ASP
1	B	4005	SER
1	B	4026	THR
1	B	4041	VAL
1	B	4055	LYS
1	B	4072	ASP
1	B	4076	THR
1	B	4078	ASP
1	B	4081	GLU
1	B	4084	LYS
1	B	4119	GLU
1	B	4123	SER
1	B	4140	SER
1	B	4170	GLN
1	B	4486	GLN
1	B	4487	GLN
1	B	4489	LEU
1	B	4515	LEU
1	B	4564	SER
1	B	4586	ILE
1	B	4621	SER
1	B	4622	GLU
1	B	4624	ASP
1	B	4671	MET

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Mol	Chain	Res	Type
1	B	4702	VAL
1	B	4779	LEU
1	B	4797	ASP
1	B	4816	MET
1	B	4828	ASP
1	B	4842	ARG
1	B	4847	ILE
1	B	4851	PHE
1	B	4858	LEU
1	B	4865	ILE
1	B	4908	THR
1	B	4945	GLU
2	H	22	THR
1	C	11	ILE
1	C	31	GLU
1	C	34	LYS
1	C	52	THR
1	C	55	SER
1	C	62	LEU
1	C	70	GLU
1	C	78	LEU
1	C	126	SER
1	C	143	LEU
1	C	167	LYS
1	C	174	LYS
1	C	175	VAL
1	C	185	SER
1	C	188	SER
1	C	195	SER
1	C	211	LEU
1	C	221	SER
1	C	229	ILE
1	C	255	GLU
1	C	282	VAL
1	C	285	SER
1	C	337	LYS
1	C	338	LEU
1	C	344	LYS
1	C	347	ASP
1	C	351	THR
1	C	368	THR
1	C	372	LEU

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Mol	Chain	Res	Type
1	C	396	GLU
1	C	422	THR
1	C	437	SER
1	C	450	GLU
1	C	451	SER
1	C	556	ASP
1	C	563	GLU
1	C	566	GLU
1	C	568	SER
1	C	573	GLU
1	C	611	LEU
1	C	627	SER
1	C	654	SER
1	C	742	SER
1	C	751	THR
1	C	783	ASN
1	C	827	LEU
1	C	855	VAL
1	C	867	VAL
1	C	870	SER
1	C	878	LEU
1	C	880	ARG
1	C	887	GLU
1	C	893	TRP
1	C	897	LYS
1	C	900	LEU
1	C	910	ASP
1	C	921	PHE
1	C	922	CYS
1	C	926	GLU
1	C	936	SER
1	C	937	LEU
1	C	939	THR
1	C	940	LEU
1	C	941	LYS
1	C	950	VAL
1	C	970	TYR
1	C	972	LEU
1	C	973	THR
1	C	974	SER
1	C	985	PHE
1	C	1048	ASP

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Mol	Chain	Res	Type
1	C	1058	LEU
1	C	1092	LYS
1	C	1118	SER
1	C	1131	ASP
1	C	1172	THR
1	C	1193	LYS
1	C	1196	ASP
1	C	1221	VAL
1	C	1293	GLN
1	C	1342	ASP
1	C	1600	MET
1	C	1608	ASP
1	C	1611	ARG
1	C	1624	ASP
1	C	1663	SER
1	C	1734	THR
1	C	1736	SER
1	C	1739	LEU
1	C	1804	SER
1	C	1930	ASP
1	C	1951	ASN
1	C	1960	LYS
1	C	1962	ARG
1	C	1966	SER
1	C	2004	THR
1	C	2112	VAL
1	C	2128	LEU
1	C	2184	LYS
1	C	2205	ILE
1	C	2218	SER
1	C	2225	SER
1	C	2277	GLN
1	C	2281	SER
1	C	2351	LYS
1	C	2401	CYS
1	C	2406	HIS
1	C	2464	LYS
1	C	2488	GLU
1	C	2495	LEU
1	C	2500	SER
1	C	2501	LEU
1	C	2502	ASP

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Mol	Chain	Res	Type
1	C	2507	SER
1	C	2714	GLU
1	C	2716	LEU
1	C	2722	LYS
1	C	2730	LYS
1	C	2732	SER
1	C	2733	MET
1	C	2741	ILE
1	C	2763	SER
1	C	2775	LYS
1	C	2776	GLU
1	C	2778	LEU
1	C	2782	LEU
1	C	2835	ASP
1	C	2839	MET
1	C	2842	MET
1	C	2843	MET
1	C	2853	LYS
1	C	2857	LEU
1	C	2858	GLU
1	C	2862	LYS
1	C	2866	ASN
1	C	2867	HIS
1	C	2875	THR
1	C	2877	THR
1	C	2887	LYS
1	C	2897	ILE
1	C	2900	TYR
1	C	2902	VAL
1	C	3630	THR
1	C	3631	GLU
1	C	3676	THR
1	C	3732	ASP
1	C	3739	VAL
1	C	3746	SER
1	C	3805	ASN
1	C	3833	GLU
1	C	3851	SER
1	C	3865	THR
1	C	3892	SER
1	C	3923	ILE
1	C	3937	SER

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Mol	Chain	Res	Type
1	C	3943	VAL
1	C	3957	LEU
1	C	3960	ASP
1	C	3964	ILE
1	C	3972	ASP
1	C	4005	SER
1	C	4026	THR
1	C	4041	VAL
1	C	4055	LYS
1	C	4072	ASP
1	C	4076	THR
1	C	4078	ASP
1	C	4081	GLU
1	C	4084	LYS
1	C	4119	GLU
1	C	4123	SER
1	C	4140	SER
1	C	4170	GLN
1	C	4486	GLN
1	C	4487	GLN
1	C	4489	LEU
1	C	4515	LEU
1	C	4564	SER
1	C	4586	ILE
1	C	4621	SER
1	C	4622	GLU
1	C	4624	ASP
1	C	4671	MET
1	C	4702	VAL
1	C	4779	LEU
1	C	4797	ASP
1	C	4816	MET
1	C	4828	ASP
1	C	4842	ARG
1	C	4847	ILE
1	C	4851	PHE
1	C	4858	LEU
1	C	4865	ILE
1	C	4908	THR
1	C	4945	GLU
2	I	22	THR
1	D	11	ILE

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Mol	Chain	Res	Type
1	D	31	GLU
1	D	34	LYS
1	D	52	THR
1	D	55	SER
1	D	62	LEU
1	D	70	GLU
1	D	78	LEU
1	D	126	SER
1	D	143	LEU
1	D	167	LYS
1	D	174	LYS
1	D	175	VAL
1	D	185	SER
1	D	188	SER
1	D	195	SER
1	D	211	LEU
1	D	221	SER
1	D	229	ILE
1	D	255	GLU
1	D	282	VAL
1	D	285	SER
1	D	337	LYS
1	D	338	LEU
1	D	344	LYS
1	D	347	ASP
1	D	351	THR
1	D	368	THR
1	D	372	LEU
1	D	396	GLU
1	D	422	THR
1	D	437	SER
1	D	450	GLU
1	D	451	SER
1	D	556	ASP
1	D	563	GLU
1	D	566	GLU
1	D	568	SER
1	D	573	GLU
1	D	611	LEU
1	D	627	SER
1	D	654	SER
1	D	742	SER

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Mol	Chain	Res	Type
1	D	751	THR
1	D	783	ASN
1	D	827	LEU
1	D	855	VAL
1	D	867	VAL
1	D	870	SER
1	D	878	LEU
1	D	880	ARG
1	D	887	GLU
1	D	893	TRP
1	D	897	LYS
1	D	900	LEU
1	D	910	ASP
1	D	921	PHE
1	D	922	CYS
1	D	926	GLU
1	D	936	SER
1	D	937	LEU
1	D	939	THR
1	D	940	LEU
1	D	941	LYS
1	D	950	VAL
1	D	970	TYR
1	D	972	LEU
1	D	973	THR
1	D	974	SER
1	D	985	PHE
1	D	1048	ASP
1	D	1058	LEU
1	D	1092	LYS
1	D	1118	SER
1	D	1131	ASP
1	D	1172	THR
1	D	1193	LYS
1	D	1196	ASP
1	D	1221	VAL
1	D	1293	GLN
1	D	1342	ASP
1	D	1600	MET
1	D	1608	ASP
1	D	1611	ARG
1	D	1624	ASP

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Mol	Chain	Res	Type
1	D	1663	SER
1	D	1734	THR
1	D	1736	SER
1	D	1739	LEU
1	D	1804	SER
1	D	1930	ASP
1	D	1951	ASN
1	D	1960	LYS
1	D	1962	ARG
1	D	1966	SER
1	D	2004	THR
1	D	2112	VAL
1	D	2128	LEU
1	D	2184	LYS
1	D	2205	ILE
1	D	2218	SER
1	D	2225	SER
1	D	2277	GLN
1	D	2281	SER
1	D	2351	LYS
1	D	2401	CYS
1	D	2406	HIS
1	D	2464	LYS
1	D	2488	GLU
1	D	2495	LEU
1	D	2500	SER
1	D	2501	LEU
1	D	2502	ASP
1	D	2507	SER
1	D	2714	GLU
1	D	2716	LEU
1	D	2722	LYS
1	D	2730	LYS
1	D	2732	SER
1	D	2733	MET
1	D	2741	ILE
1	D	2763	SER
1	D	2775	LYS
1	D	2776	GLU
1	D	2778	LEU
1	D	2782	LEU
1	D	2835	ASP

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Mol	Chain	Res	Type
1	D	2839	MET
1	D	2842	MET
1	D	2843	MET
1	D	2853	LYS
1	D	2857	LEU
1	D	2858	GLU
1	D	2862	LYS
1	D	2866	ASN
1	D	2867	HIS
1	D	2875	THR
1	D	2877	THR
1	D	2887	LYS
1	D	2897	ILE
1	D	2900	TYR
1	D	2902	VAL
1	D	3630	THR
1	D	3631	GLU
1	D	3676	THR
1	D	3732	ASP
1	D	3739	VAL
1	D	3746	SER
1	D	3805	ASN
1	D	3833	GLU
1	D	3851	SER
1	D	3865	THR
1	D	3892	SER
1	D	3923	ILE
1	D	3937	SER
1	D	3943	VAL
1	D	3957	LEU
1	D	3960	ASP
1	D	3964	ILE
1	D	3972	ASP
1	D	4005	SER
1	D	4026	THR
1	D	4041	VAL
1	D	4055	LYS
1	D	4072	ASP
1	D	4076	THR
1	D	4078	ASP
1	D	4081	GLU
1	D	4084	LYS

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Mol	Chain	Res	Type
1	D	4119	GLU
1	D	4123	SER
1	D	4140	SER
1	D	4170	GLN
1	D	4486	GLN
1	D	4487	GLN
1	D	4489	LEU
1	D	4515	LEU
1	D	4564	SER
1	D	4586	ILE
1	D	4621	SER
1	D	4622	GLU
1	D	4624	ASP
1	D	4671	MET
1	D	4702	VAL
1	D	4779	LEU
1	D	4797	ASP
1	D	4816	MET
1	D	4828	ASP
1	D	4842	ARG
1	D	4847	ILE
1	D	4851	PHE
1	D	4858	LEU
1	D	4865	ILE
1	D	4908	THR
1	D	4945	GLU
2	J	22	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (210) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	23	GLN
1	A	54	ASN
1	A	79	GLN
1	A	123	HIS
1	A	240	HIS
1	A	299	HIS
1	A	394	HIS
1	A	398	HIS
1	A	410	HIS
1	A	472	HIS
1	A	476	GLN

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Mol	Chain	Res	Type
1	A	487	ASN
1	A	496	ASN
1	A	593	HIS
1	A	629	GLN
1	A	645	GLN
1	A	651	HIS
1	A	1005	ASN
1	A	1029	ASN
1	A	1046	ASN
1	A	1265	HIS
1	A	1294	ASN
1	A	1590	GLN
1	A	1627	GLN
1	A	1653	GLN
1	A	1675	HIS
1	A	1685	GLN
1	A	1711	HIS
1	A	1774	ASN
1	A	1951	ASN
1	A	1999	HIS
1	A	2277	GLN
1	A	2317	ASN
1	A	2721	ASN
1	A	2837	HIS
1	A	2848	HIS
1	A	2896	GLN
1	A	3633	HIS
1	A	3721	GLN
1	A	3766	ASN
1	A	3805	ASN
1	A	3860	GLN
1	A	3932	GLN
1	A	3959	GLN
1	A	3974	GLN
1	A	4059	GLN
1	A	4096	ASN
1	A	4158	GLN
1	A	4628	GLN
1	A	4741	HIS
1	A	4862	GLN
2	G	32	GLN
1	B	23	GLN

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Mol	Chain	Res	Type
1	B	54	ASN
1	B	79	GLN
1	B	123	HIS
1	B	299	HIS
1	B	394	HIS
1	B	398	HIS
1	B	410	HIS
1	B	472	HIS
1	B	476	GLN
1	B	487	ASN
1	B	496	ASN
1	B	593	HIS
1	B	629	GLN
1	B	645	GLN
1	B	651	HIS
1	B	1005	ASN
1	B	1029	ASN
1	B	1046	ASN
1	B	1265	HIS
1	B	1294	ASN
1	B	1590	GLN
1	B	1621	GLN
1	B	1627	GLN
1	B	1653	GLN
1	B	1675	HIS
1	B	1685	GLN
1	B	1711	HIS
1	B	1774	ASN
1	B	1951	ASN
1	B	1999	HIS
1	B	2159	ASN
1	B	2277	GLN
1	B	2317	ASN
1	B	2721	ASN
1	B	2837	HIS
1	B	2848	HIS
1	B	2896	GLN
1	B	3633	HIS
1	B	3721	GLN
1	B	3766	ASN
1	B	3805	ASN
1	B	3860	GLN

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Mol	Chain	Res	Type
1	B	3932	GLN
1	B	3959	GLN
1	B	3974	GLN
1	B	4059	GLN
1	B	4096	ASN
1	B	4158	GLN
1	B	4628	GLN
1	B	4637	GLN
1	B	4741	HIS
2	H	32	GLN
1	C	23	GLN
1	C	54	ASN
1	C	79	GLN
1	C	123	HIS
1	C	293	GLN
1	C	299	HIS
1	C	394	HIS
1	C	398	HIS
1	C	410	HIS
1	C	472	HIS
1	C	476	GLN
1	C	487	ASN
1	C	496	ASN
1	C	593	HIS
1	C	629	GLN
1	C	645	GLN
1	C	651	HIS
1	C	1005	ASN
1	C	1029	ASN
1	C	1046	ASN
1	C	1265	HIS
1	C	1294	ASN
1	C	1590	GLN
1	C	1627	GLN
1	C	1653	GLN
1	C	1675	HIS
1	C	1685	GLN
1	C	1711	HIS
1	C	1774	ASN
1	C	1951	ASN
1	C	1999	HIS
1	C	2157	HIS

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Mol	Chain	Res	Type
1	C	2277	GLN
1	C	2317	ASN
1	C	2721	ASN
1	C	2848	HIS
1	C	2896	GLN
1	C	3633	HIS
1	C	3721	GLN
1	C	3766	ASN
1	C	3805	ASN
1	C	3860	GLN
1	C	3932	GLN
1	C	3959	GLN
1	C	3974	GLN
1	C	4059	GLN
1	C	4096	ASN
1	C	4158	GLN
1	C	4628	GLN
1	C	4741	HIS
1	C	4765	GLN
1	C	4960	GLN
2	I	32	GLN
1	D	23	GLN
1	D	54	ASN
1	D	79	GLN
1	D	123	HIS
1	D	299	HIS
1	D	394	HIS
1	D	398	HIS
1	D	410	HIS
1	D	472	HIS
1	D	476	GLN
1	D	487	ASN
1	D	496	ASN
1	D	593	HIS
1	D	629	GLN
1	D	645	GLN
1	D	651	HIS
1	D	1005	ASN
1	D	1029	ASN
1	D	1046	ASN
1	D	1265	HIS
1	D	1294	ASN

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Mol	Chain	Res	Type
1	D	1590	GLN
1	D	1627	GLN
1	D	1653	GLN
1	D	1675	HIS
1	D	1685	GLN
1	D	1711	HIS
1	D	1774	ASN
1	D	1951	ASN
1	D	1999	HIS
1	D	2277	GLN
1	D	2317	ASN
1	D	2721	ASN
1	D	2837	HIS
1	D	2848	HIS
1	D	2896	GLN
1	D	3633	HIS
1	D	3721	GLN
1	D	3766	ASN
1	D	3805	ASN
1	D	3860	GLN
1	D	3932	GLN
1	D	3959	GLN
1	D	3974	GLN
1	D	4059	GLN
1	D	4096	ASN
1	D	4158	GLN
1	D	4628	GLN
1	D	4637	GLN
1	D	4741	HIS
1	D	4765	GLN
2	J	32	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 8 ligands modelled in this entry, 8 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 [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

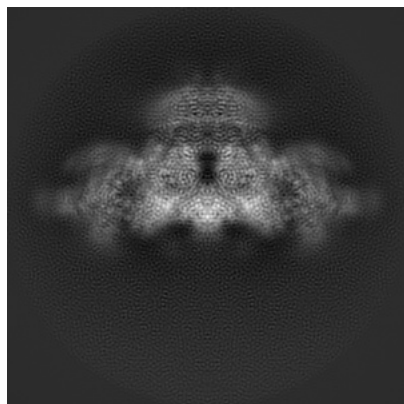
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-33940. These allow visual inspection of the internal detail of the map and identification of artifacts.

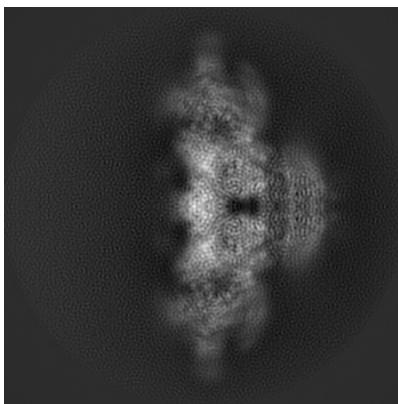
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

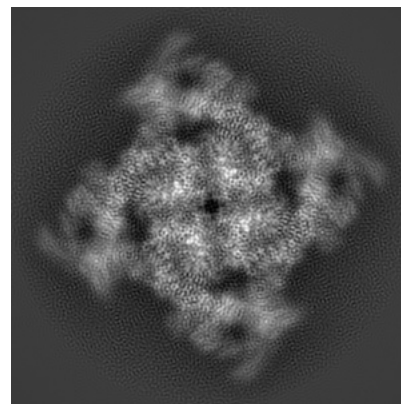
6.1.1 Primary map



X

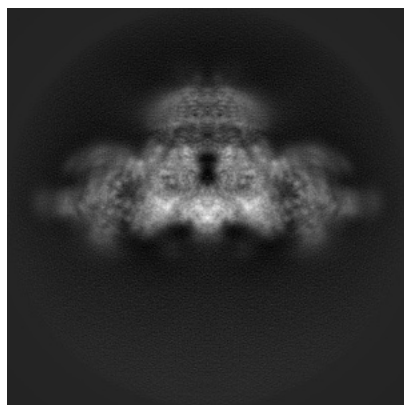


Y

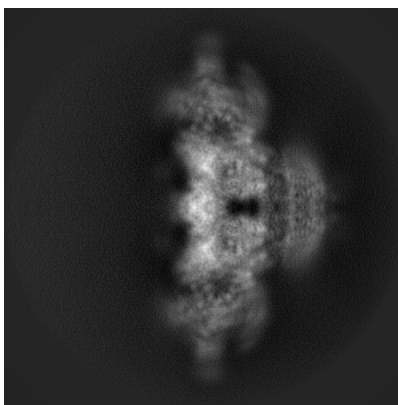


Z

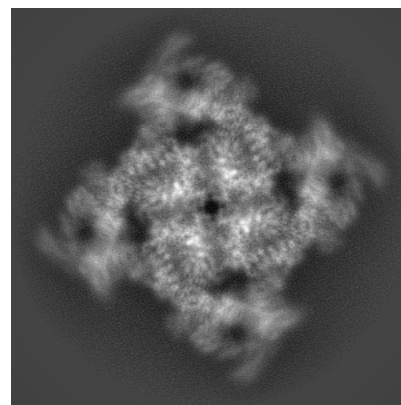
6.1.2 Raw map



X



Y

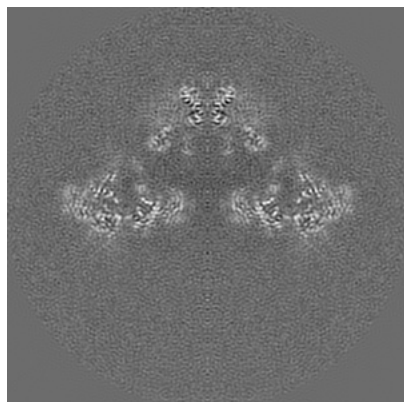


Z

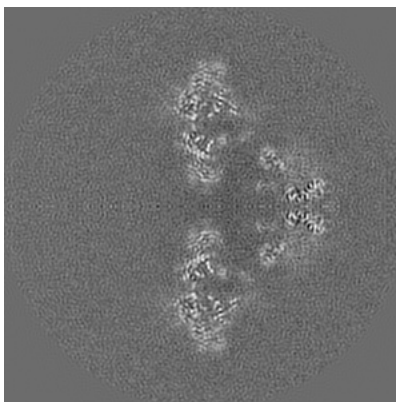
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

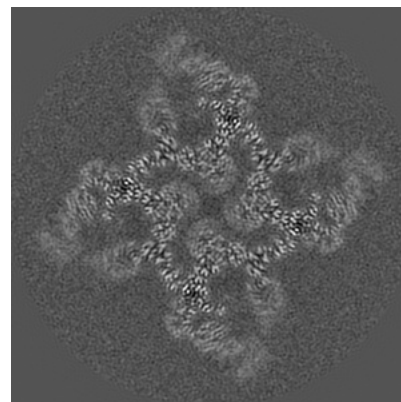
6.2.1 Primary map



X Index: 170

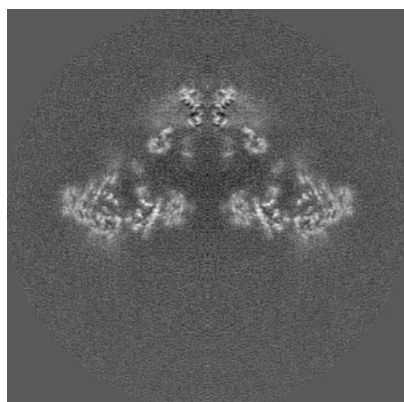


Y Index: 170

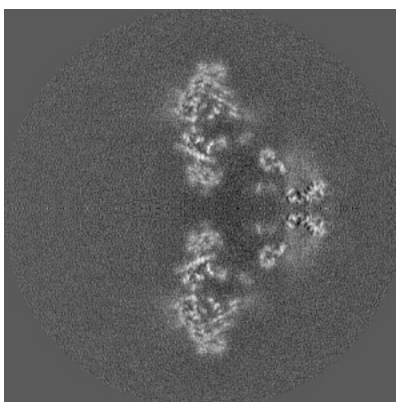


Z Index: 170

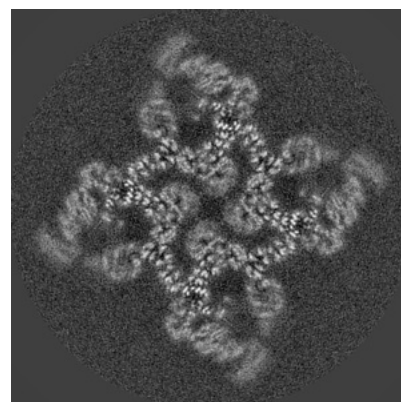
6.2.2 Raw map



X Index: 170



Y Index: 170

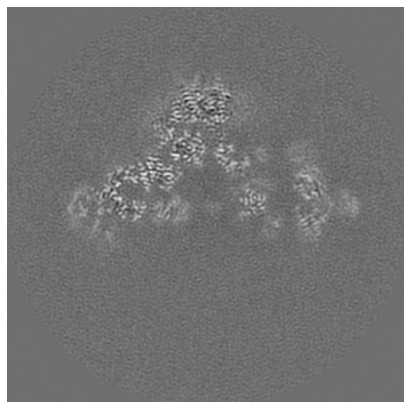


Z Index: 170

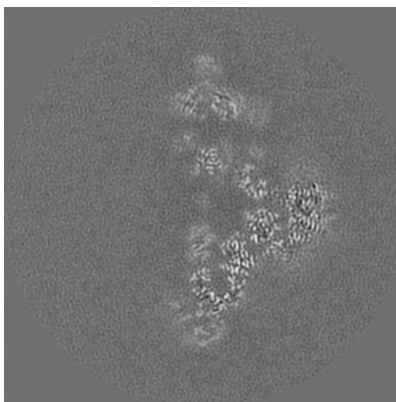
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

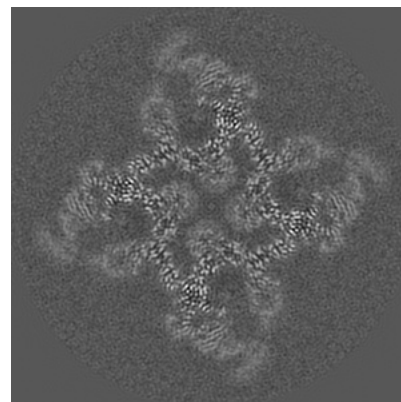
6.3.1 Primary map



X Index: 158

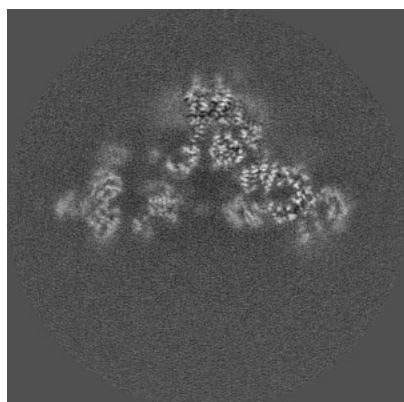


Y Index: 182

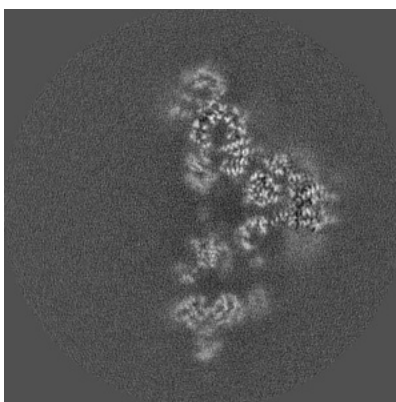


Z Index: 171

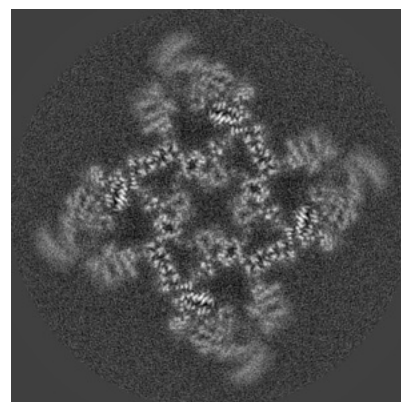
6.3.2 Raw map



X Index: 181



Y Index: 159

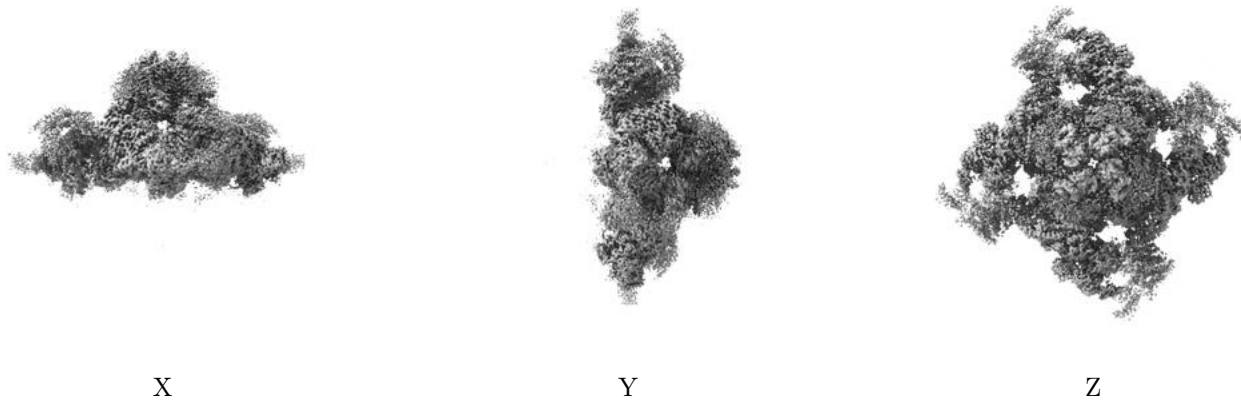


Z Index: 175

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

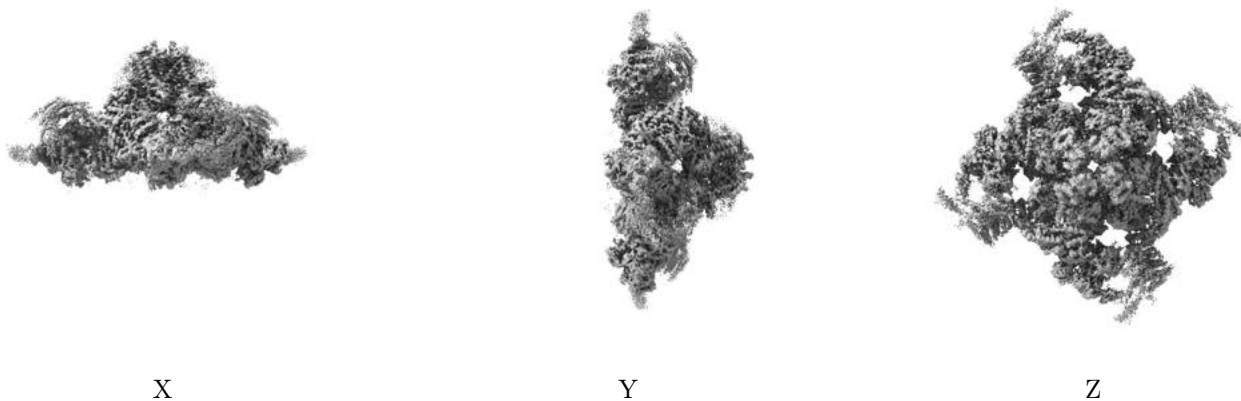
6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.021. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.4.2 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.

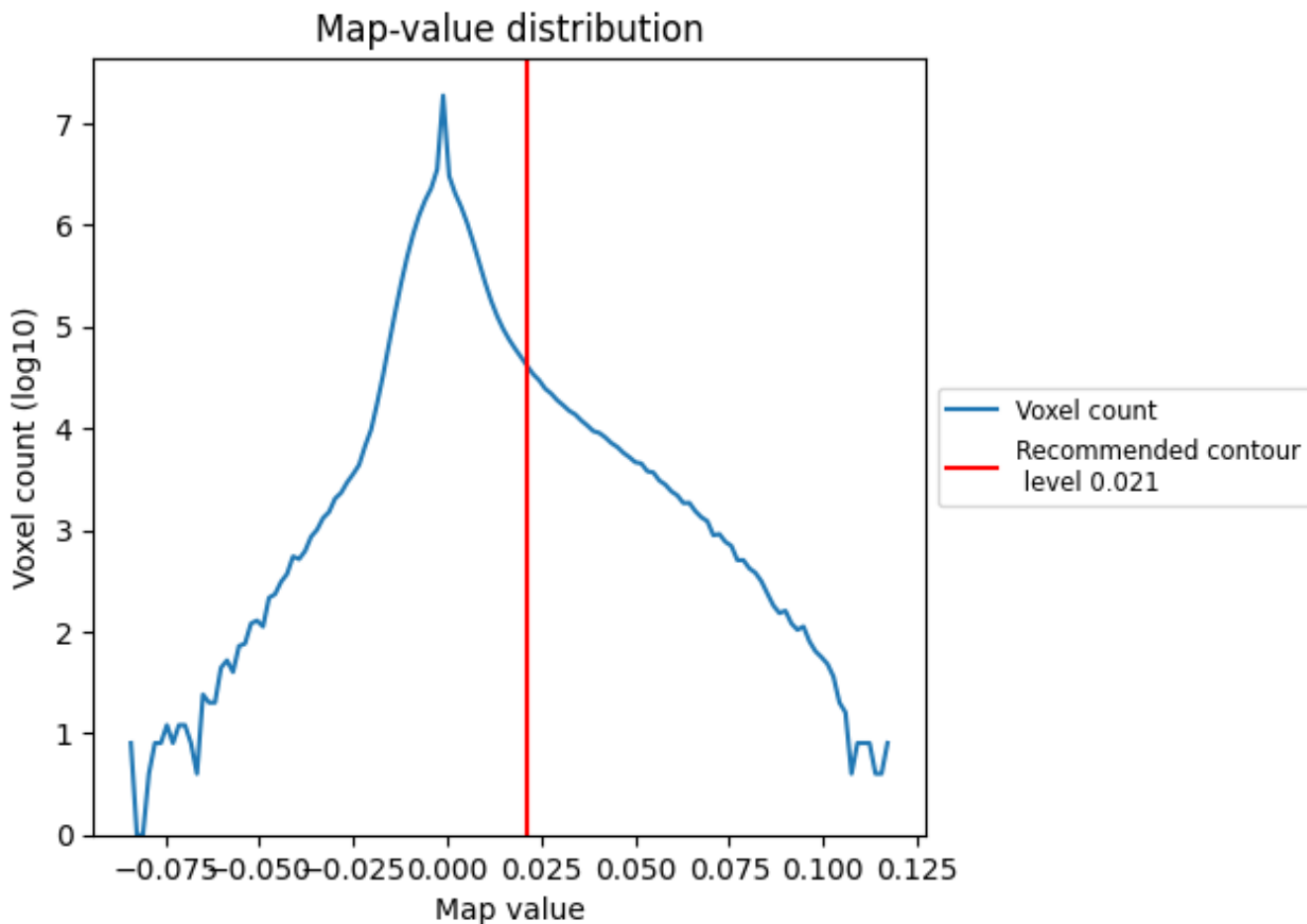
6.5 Mask visualisation [i](#)

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

7 Map analysis [i](#)

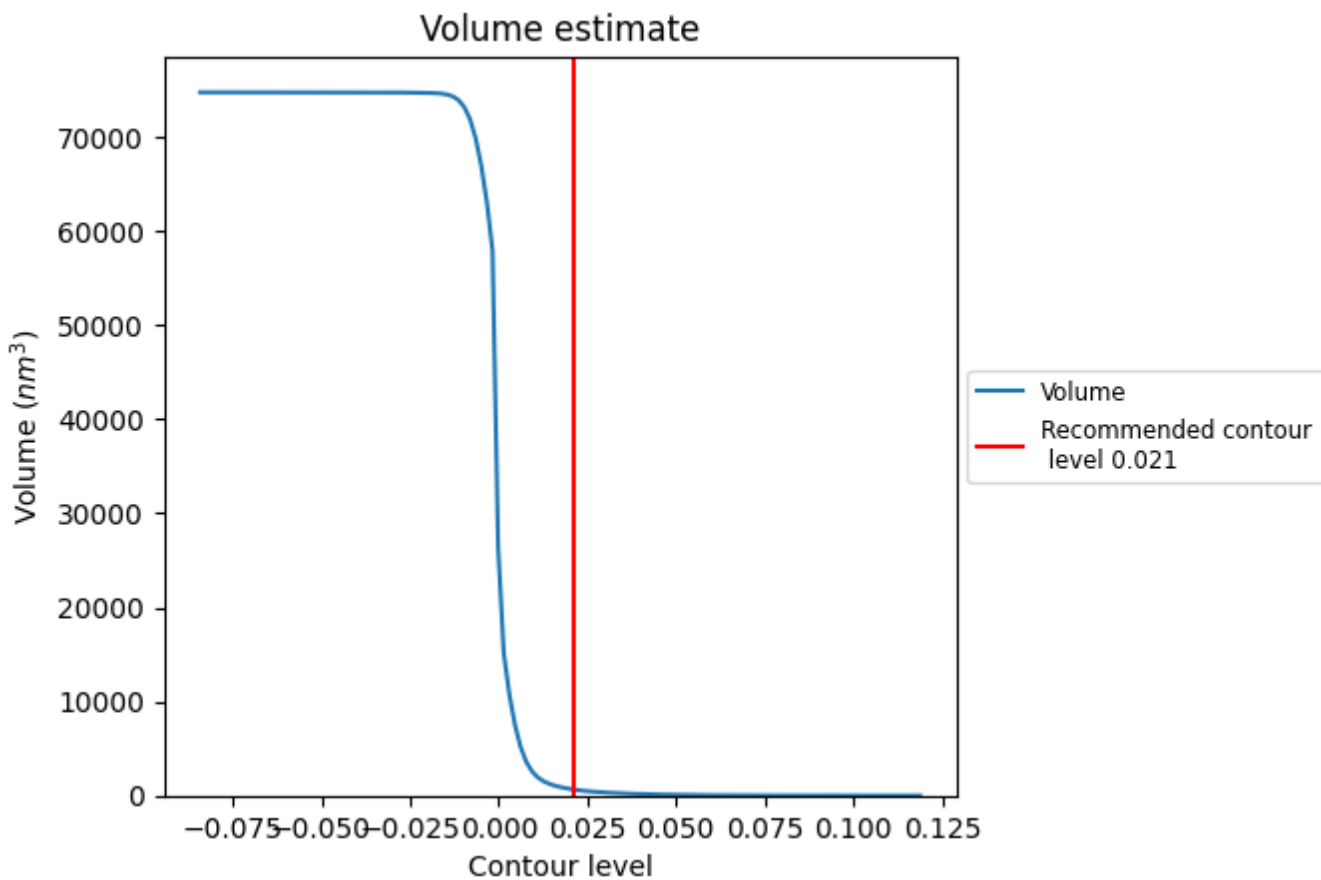
This section contains the results of statistical analysis of the map.

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.

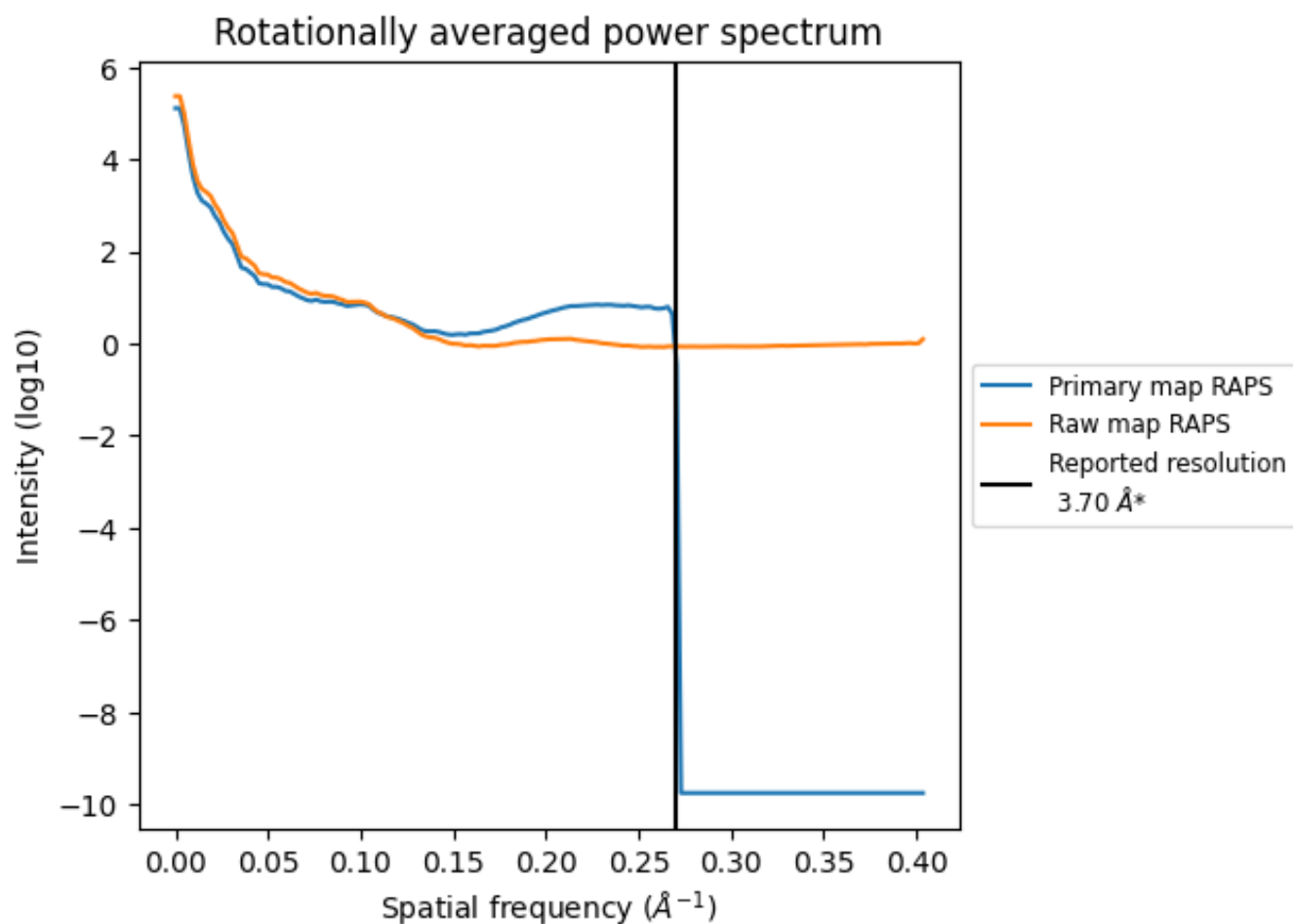
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 646 nm³; this corresponds to an approximate mass of 584 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum [i](#)

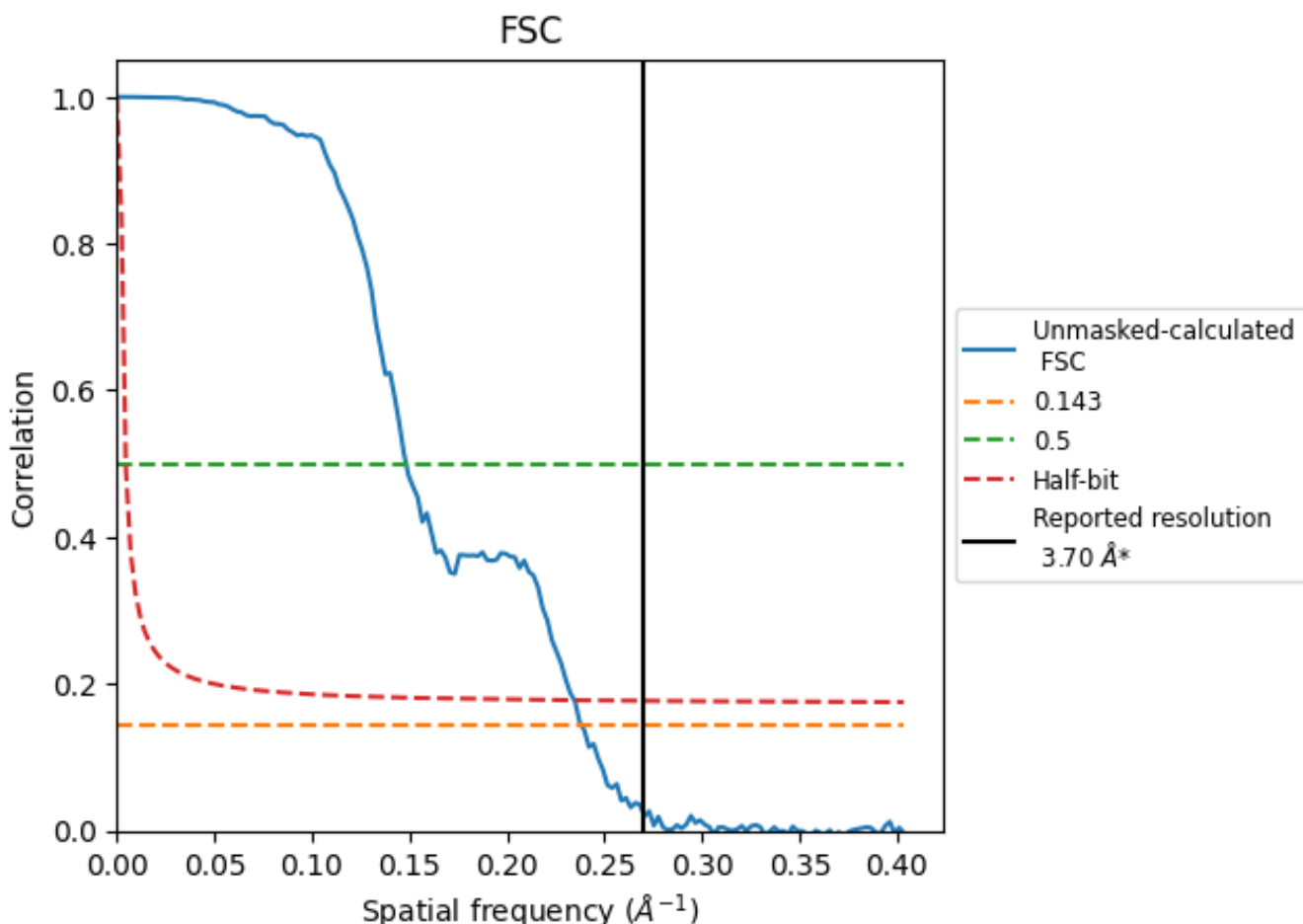


*Reported resolution corresponds to spatial frequency of 0.270 Å⁻¹

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 0.270 Å⁻¹

8.2 Resolution estimates [i](#)

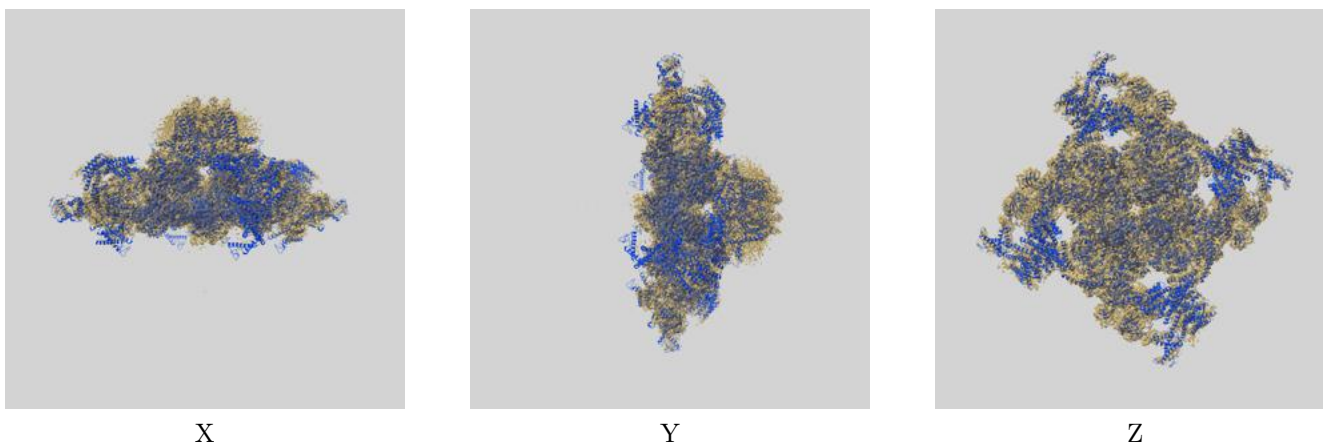
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.20	6.74	4.26

*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 4.20 differs from the reported value 3.7 by more than 10 %

9 Map-model fit [i](#)

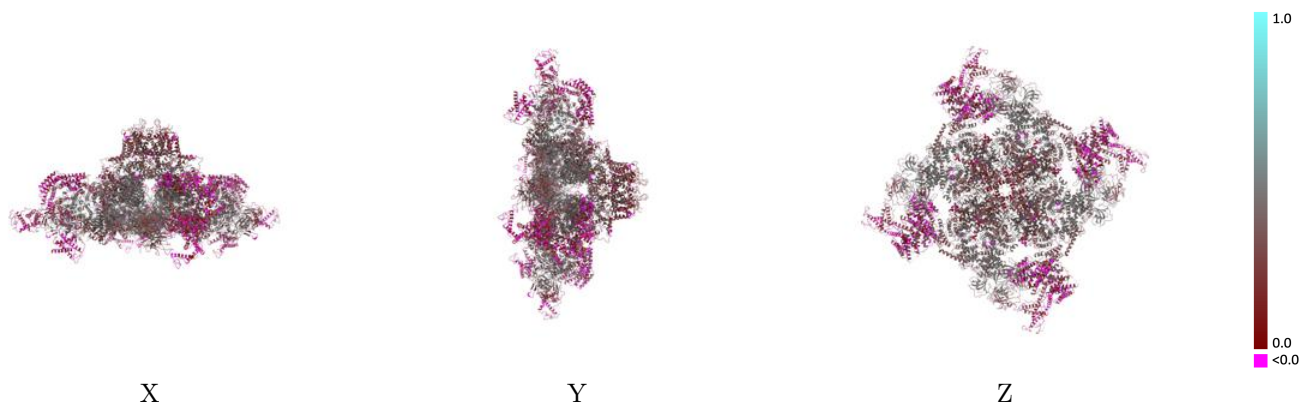
This section contains information regarding the fit between EMDB map EMD-33940 and PDB model 7VMQ. Per-residue inclusion information can be found in section 3 on page 11.

9.1 Map-model overlay [i](#)



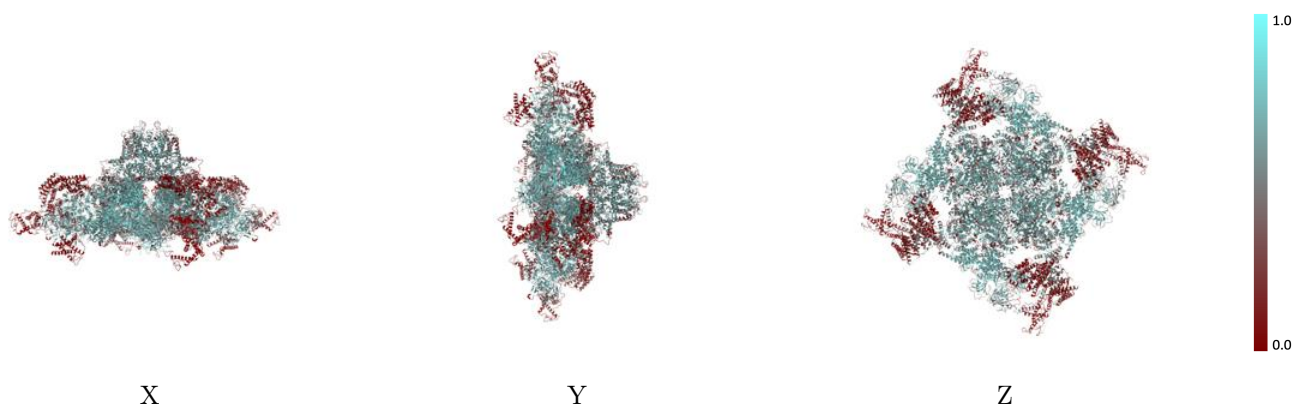
The images above show the 3D surface view of the map at the recommended contour level 0.021 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



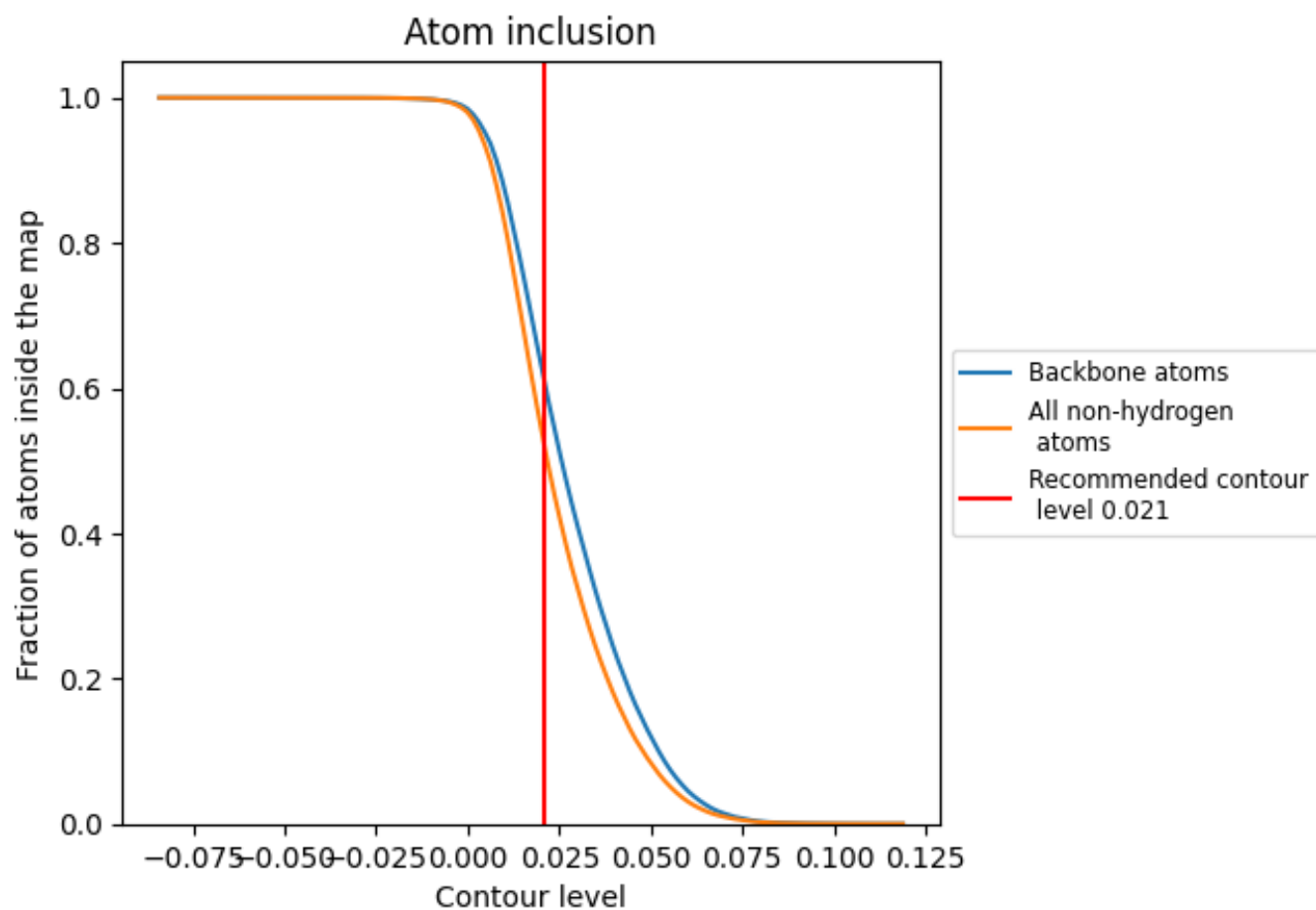
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.021).



















9.4 Atom inclusion [i](#)



At the recommended contour level, 61% of all backbone atoms, 52% 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 (0.021) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5185	 0.3060
A	 0.5166	 0.3040
B	 0.5156	 0.3050
C	 0.5145	 0.3020
D	 0.5153	 0.3030
G	 0.6245	 0.4110
H	 0.6245	 0.4140
I	 0.6320	 0.4170
J	 0.6332	 0.4150

