Full wwPDB EM Validation Report ⓘ

Jan 3, 2023 – 10:30 AM EST

PDB ID	:	7TZO
EMDB ID	:	EMD-26213
Title	:	The apo structure of human mTORC2 complex
Authors	:	Yu, Z.; Chen, J.; Pearce, D.
Deposited on	:	2022-02-16
Resolution	:	3.28 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:

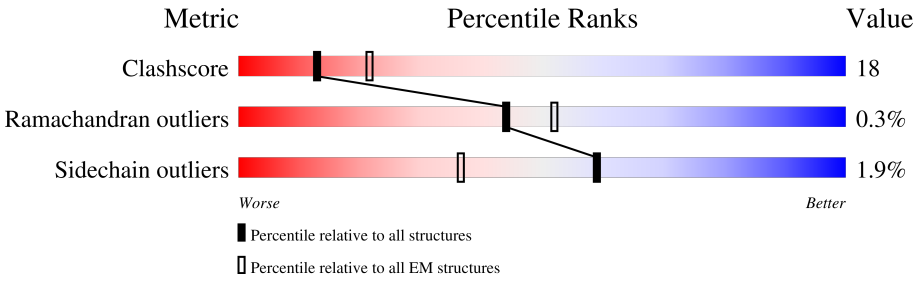
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

1 Overall quality at a glance

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

The reported resolution of this entry is 3.28 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 <=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	2674	14% 57% 24% 18%
1	B	2674	14% 58% 24% 18%
2	C	347	5% 52% 40% 8%
2	D	347	5% 54% 38% 8%
3	E	1720	38% 26% 35%
3	F	1720	38% 26% 35%
4	G	538	13% 5% 78%
4	H	538	13% 5% 78%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 57117 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 Serine/threonine-protein kinase mTOR.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	2184	Total 16337	C 10356	N 2906	O 2977	S 98	0	0
1	B	2185	Total 16304	C 10330	N 2904	O 2972	S 98	0	0

There are 250 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-124	MET	-	initiating methionine	UNP P42345
A	-123	VAL	-	expression tag	UNP P42345
A	-122	THR	-	expression tag	UNP P42345
A	-121	THR	-	expression tag	UNP P42345
A	-120	LEU	-	expression tag	UNP P42345
A	-119	SER	-	expression tag	UNP P42345
A	-118	GLY	-	expression tag	UNP P42345
A	-117	LEU	-	expression tag	UNP P42345
A	-116	SER	-	expression tag	UNP P42345
A	-115	GLY	-	expression tag	UNP P42345
A	-114	GLU	-	expression tag	UNP P42345
A	-113	GLN	-	expression tag	UNP P42345
A	-112	GLY	-	expression tag	UNP P42345
A	-111	PRO	-	expression tag	UNP P42345
A	-110	SER	-	expression tag	UNP P42345
A	-109	GLY	-	expression tag	UNP P42345
A	-108	ASP	-	expression tag	UNP P42345
A	-107	MET	-	expression tag	UNP P42345
A	-106	THR	-	expression tag	UNP P42345
A	-105	THR	-	expression tag	UNP P42345
A	-104	GLU	-	expression tag	UNP P42345
A	-103	GLU	-	expression tag	UNP P42345
A	-102	ASP	-	expression tag	UNP P42345
A	-101	SER	-	expression tag	UNP P42345
A	-100	ALA	-	expression tag	UNP P42345
A	-99	THR	-	expression tag	UNP P42345

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-98	HIS	-	expression tag	UNP P42345
A	-97	ILE	-	expression tag	UNP P42345
A	-96	LYS	-	expression tag	UNP P42345
A	-95	PHE	-	expression tag	UNP P42345
A	-94	SER	-	expression tag	UNP P42345
A	-93	LYS	-	expression tag	UNP P42345
A	-92	ARG	-	expression tag	UNP P42345
A	-91	ASP	-	expression tag	UNP P42345
A	-90	GLU	-	expression tag	UNP P42345
A	-89	ASP	-	expression tag	UNP P42345
A	-88	GLY	-	expression tag	UNP P42345
A	-87	ARG	-	expression tag	UNP P42345
A	-86	GLU	-	expression tag	UNP P42345
A	-85	LEU	-	expression tag	UNP P42345
A	-84	ALA	-	expression tag	UNP P42345
A	-83	GLY	-	expression tag	UNP P42345
A	-82	ALA	-	expression tag	UNP P42345
A	-81	THR	-	expression tag	UNP P42345
A	-80	MET	-	expression tag	UNP P42345
A	-79	GLU	-	expression tag	UNP P42345
A	-78	LEU	-	expression tag	UNP P42345
A	-77	ARG	-	expression tag	UNP P42345
A	-76	ASP	-	expression tag	UNP P42345
A	-75	SER	-	expression tag	UNP P42345
A	-74	SER	-	expression tag	UNP P42345
A	-73	GLY	-	expression tag	UNP P42345
A	-72	LYS	-	expression tag	UNP P42345
A	-71	THR	-	expression tag	UNP P42345
A	-70	ILE	-	expression tag	UNP P42345
A	-69	SER	-	expression tag	UNP P42345
A	-68	THR	-	expression tag	UNP P42345
A	-67	TRP	-	expression tag	UNP P42345
A	-66	ILE	-	expression tag	UNP P42345
A	-65	SER	-	expression tag	UNP P42345
A	-64	ASP	-	expression tag	UNP P42345
A	-63	GLY	-	expression tag	UNP P42345
A	-62	HIS	-	expression tag	UNP P42345
A	-61	VAL	-	expression tag	UNP P42345
A	-60	LYS	-	expression tag	UNP P42345
A	-59	ASP	-	expression tag	UNP P42345
A	-58	PHE	-	expression tag	UNP P42345
A	-57	TYR	-	expression tag	UNP P42345

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-56	LEU	-	expression tag	UNP P42345
A	-55	TYR	-	expression tag	UNP P42345
A	-54	PRO	-	expression tag	UNP P42345
A	-53	GLY	-	expression tag	UNP P42345
A	-52	LYS	-	expression tag	UNP P42345
A	-51	TYR	-	expression tag	UNP P42345
A	-50	THR	-	expression tag	UNP P42345
A	-49	PHE	-	expression tag	UNP P42345
A	-48	VAL	-	expression tag	UNP P42345
A	-47	GLU	-	expression tag	UNP P42345
A	-46	THR	-	expression tag	UNP P42345
A	-45	ALA	-	expression tag	UNP P42345
A	-44	ALA	-	expression tag	UNP P42345
A	-43	PRO	-	expression tag	UNP P42345
A	-42	ASP	-	expression tag	UNP P42345
A	-41	GLY	-	expression tag	UNP P42345
A	-40	TYR	-	expression tag	UNP P42345
A	-39	GLU	-	expression tag	UNP P42345
A	-38	VAL	-	expression tag	UNP P42345
A	-37	ALA	-	expression tag	UNP P42345
A	-36	THR	-	expression tag	UNP P42345
A	-35	PRO	-	expression tag	UNP P42345
A	-34	ILE	-	expression tag	UNP P42345
A	-33	GLU	-	expression tag	UNP P42345
A	-32	PHE	-	expression tag	UNP P42345
A	-31	THR	-	expression tag	UNP P42345
A	-30	VAL	-	expression tag	UNP P42345
A	-29	ASN	-	expression tag	UNP P42345
A	-28	GLU	-	expression tag	UNP P42345
A	-27	ASP	-	expression tag	UNP P42345
A	-26	GLY	-	expression tag	UNP P42345
A	-25	GLN	-	expression tag	UNP P42345
A	-24	VAL	-	expression tag	UNP P42345
A	-23	THR	-	expression tag	UNP P42345
A	-22	VAL	-	expression tag	UNP P42345
A	-21	ASP	-	expression tag	UNP P42345
A	-20	GLY	-	expression tag	UNP P42345
A	-19	GLU	-	expression tag	UNP P42345
A	-18	ALA	-	expression tag	UNP P42345
A	-17	THR	-	expression tag	UNP P42345
A	-16	GLU	-	expression tag	UNP P42345
A	-15	GLY	-	expression tag	UNP P42345

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-14	ASP	-	expression tag	UNP P42345
A	-13	ALA	-	expression tag	UNP P42345
A	-12	HIS	-	expression tag	UNP P42345
A	-11	THR	-	expression tag	UNP P42345
A	-10	GLY	-	expression tag	UNP P42345
A	-9	SER	-	expression tag	UNP P42345
A	-8	SER	-	expression tag	UNP P42345
A	-7	GLY	-	expression tag	UNP P42345
A	-6	SER	-	expression tag	UNP P42345
A	-5	GLY	-	expression tag	UNP P42345
A	-4	SER	-	expression tag	UNP P42345
A	-3	GLY	-	expression tag	UNP P42345
A	-2	THR	-	expression tag	UNP P42345
A	-1	GLY	-	expression tag	UNP P42345
A	0	SER	-	expression tag	UNP P42345
B	-124	MET	-	initiating methionine	UNP P42345
B	-123	VAL	-	expression tag	UNP P42345
B	-122	THR	-	expression tag	UNP P42345
B	-121	THR	-	expression tag	UNP P42345
B	-120	LEU	-	expression tag	UNP P42345
B	-119	SER	-	expression tag	UNP P42345
B	-118	GLY	-	expression tag	UNP P42345
B	-117	LEU	-	expression tag	UNP P42345
B	-116	SER	-	expression tag	UNP P42345
B	-115	GLY	-	expression tag	UNP P42345
B	-114	GLU	-	expression tag	UNP P42345
B	-113	GLN	-	expression tag	UNP P42345
B	-112	GLY	-	expression tag	UNP P42345
B	-111	PRO	-	expression tag	UNP P42345
B	-110	SER	-	expression tag	UNP P42345
B	-109	GLY	-	expression tag	UNP P42345
B	-108	ASP	-	expression tag	UNP P42345
B	-107	MET	-	expression tag	UNP P42345
B	-106	THR	-	expression tag	UNP P42345
B	-105	THR	-	expression tag	UNP P42345
B	-104	GLU	-	expression tag	UNP P42345
B	-103	GLU	-	expression tag	UNP P42345
B	-102	ASP	-	expression tag	UNP P42345
B	-101	SER	-	expression tag	UNP P42345
B	-100	ALA	-	expression tag	UNP P42345
B	-99	THR	-	expression tag	UNP P42345
B	-98	HIS	-	expression tag	UNP P42345

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-97	ILE	-	expression tag	UNP P42345
B	-96	LYS	-	expression tag	UNP P42345
B	-95	PHE	-	expression tag	UNP P42345
B	-94	SER	-	expression tag	UNP P42345
B	-93	LYS	-	expression tag	UNP P42345
B	-92	ARG	-	expression tag	UNP P42345
B	-91	ASP	-	expression tag	UNP P42345
B	-90	GLU	-	expression tag	UNP P42345
B	-89	ASP	-	expression tag	UNP P42345
B	-88	GLY	-	expression tag	UNP P42345
B	-87	ARG	-	expression tag	UNP P42345
B	-86	GLU	-	expression tag	UNP P42345
B	-85	LEU	-	expression tag	UNP P42345
B	-84	ALA	-	expression tag	UNP P42345
B	-83	GLY	-	expression tag	UNP P42345
B	-82	ALA	-	expression tag	UNP P42345
B	-81	THR	-	expression tag	UNP P42345
B	-80	MET	-	expression tag	UNP P42345
B	-79	GLU	-	expression tag	UNP P42345
B	-78	LEU	-	expression tag	UNP P42345
B	-77	ARG	-	expression tag	UNP P42345
B	-76	ASP	-	expression tag	UNP P42345
B	-75	SER	-	expression tag	UNP P42345
B	-74	SER	-	expression tag	UNP P42345
B	-73	GLY	-	expression tag	UNP P42345
B	-72	LYS	-	expression tag	UNP P42345
B	-71	THR	-	expression tag	UNP P42345
B	-70	ILE	-	expression tag	UNP P42345
B	-69	SER	-	expression tag	UNP P42345
B	-68	THR	-	expression tag	UNP P42345
B	-67	TRP	-	expression tag	UNP P42345
B	-66	ILE	-	expression tag	UNP P42345
B	-65	SER	-	expression tag	UNP P42345
B	-64	ASP	-	expression tag	UNP P42345
B	-63	GLY	-	expression tag	UNP P42345
B	-62	HIS	-	expression tag	UNP P42345
B	-61	VAL	-	expression tag	UNP P42345
B	-60	LYS	-	expression tag	UNP P42345
B	-59	ASP	-	expression tag	UNP P42345
B	-58	PHE	-	expression tag	UNP P42345
B	-57	TYR	-	expression tag	UNP P42345
B	-56	LEU	-	expression tag	UNP P42345

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-55	TYR	-	expression tag	UNP P42345
B	-54	PRO	-	expression tag	UNP P42345
B	-53	GLY	-	expression tag	UNP P42345
B	-52	LYS	-	expression tag	UNP P42345
B	-51	TYR	-	expression tag	UNP P42345
B	-50	THR	-	expression tag	UNP P42345
B	-49	PHE	-	expression tag	UNP P42345
B	-48	VAL	-	expression tag	UNP P42345
B	-47	GLU	-	expression tag	UNP P42345
B	-46	THR	-	expression tag	UNP P42345
B	-45	ALA	-	expression tag	UNP P42345
B	-44	ALA	-	expression tag	UNP P42345
B	-43	PRO	-	expression tag	UNP P42345
B	-42	ASP	-	expression tag	UNP P42345
B	-41	GLY	-	expression tag	UNP P42345
B	-40	TYR	-	expression tag	UNP P42345
B	-39	GLU	-	expression tag	UNP P42345
B	-38	VAL	-	expression tag	UNP P42345
B	-37	ALA	-	expression tag	UNP P42345
B	-36	THR	-	expression tag	UNP P42345
B	-35	PRO	-	expression tag	UNP P42345
B	-34	ILE	-	expression tag	UNP P42345
B	-33	GLU	-	expression tag	UNP P42345
B	-32	PHE	-	expression tag	UNP P42345
B	-31	THR	-	expression tag	UNP P42345
B	-30	VAL	-	expression tag	UNP P42345
B	-29	ASN	-	expression tag	UNP P42345
B	-28	GLU	-	expression tag	UNP P42345
B	-27	ASP	-	expression tag	UNP P42345
B	-26	GLY	-	expression tag	UNP P42345
B	-25	GLN	-	expression tag	UNP P42345
B	-24	VAL	-	expression tag	UNP P42345
B	-23	THR	-	expression tag	UNP P42345
B	-22	VAL	-	expression tag	UNP P42345
B	-21	ASP	-	expression tag	UNP P42345
B	-20	GLY	-	expression tag	UNP P42345
B	-19	GLU	-	expression tag	UNP P42345
B	-18	ALA	-	expression tag	UNP P42345
B	-17	THR	-	expression tag	UNP P42345
B	-16	GLU	-	expression tag	UNP P42345
B	-15	GLY	-	expression tag	UNP P42345
B	-14	ASP	-	expression tag	UNP P42345

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-13	ALA	-	expression tag	UNP P42345
B	-12	HIS	-	expression tag	UNP P42345
B	-11	THR	-	expression tag	UNP P42345
B	-10	GLY	-	expression tag	UNP P42345
B	-9	SER	-	expression tag	UNP P42345
B	-8	SER	-	expression tag	UNP P42345
B	-7	GLY	-	expression tag	UNP P42345
B	-6	SER	-	expression tag	UNP P42345
B	-5	GLY	-	expression tag	UNP P42345
B	-4	SER	-	expression tag	UNP P42345
B	-3	GLY	-	expression tag	UNP P42345
B	-2	THR	-	expression tag	UNP P42345
B	-1	GLY	-	expression tag	UNP P42345
B	0	SER	-	expression tag	UNP P42345

- Molecule 2 is a protein called Target of rapamycin complex subunit LST8.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	319	Total	C	N	O	S	0	0
			2465	1533	437	477	18		
2	D	319	Total	C	N	O	S	0	0
			2465	1533	437	477	18		

There are 42 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	-20	MET	-	initiating methionine	UNP Q9BVC4
C	-19	GLY	-	expression tag	UNP Q9BVC4
C	-18	TYR	-	expression tag	UNP Q9BVC4
C	-17	PRO	-	expression tag	UNP Q9BVC4
C	-16	TYR	-	expression tag	UNP Q9BVC4
C	-15	ASP	-	expression tag	UNP Q9BVC4
C	-14	VAL	-	expression tag	UNP Q9BVC4
C	-13	PRO	-	expression tag	UNP Q9BVC4
C	-12	ASP	-	expression tag	UNP Q9BVC4
C	-11	TYR	-	expression tag	UNP Q9BVC4
C	-10	ALA	-	expression tag	UNP Q9BVC4
C	-9	ASP	-	expression tag	UNP Q9BVC4
C	-8	LEU	-	expression tag	UNP Q9BVC4
C	-7	ASN	-	expression tag	UNP Q9BVC4
C	-6	GLY	-	expression tag	UNP Q9BVC4
C	-5	GLY	-	expression tag	UNP Q9BVC4

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Chain	Residue	Modelled	Actual	Comment	Reference
C	-4	GLY	-	expression tag	UNP Q9BVC4
C	-3	GLY	-	expression tag	UNP Q9BVC4
C	-2	GLY	-	expression tag	UNP Q9BVC4
C	-1	SER	-	expression tag	UNP Q9BVC4
C	0	THR	-	expression tag	UNP Q9BVC4
D	-20	MET	-	initiating methionine	UNP Q9BVC4
D	-19	GLY	-	expression tag	UNP Q9BVC4
D	-18	TYR	-	expression tag	UNP Q9BVC4
D	-17	PRO	-	expression tag	UNP Q9BVC4
D	-16	TYR	-	expression tag	UNP Q9BVC4
D	-15	ASP	-	expression tag	UNP Q9BVC4
D	-14	VAL	-	expression tag	UNP Q9BVC4
D	-13	PRO	-	expression tag	UNP Q9BVC4
D	-12	ASP	-	expression tag	UNP Q9BVC4
D	-11	TYR	-	expression tag	UNP Q9BVC4
D	-10	ALA	-	expression tag	UNP Q9BVC4
D	-9	ASP	-	expression tag	UNP Q9BVC4
D	-8	LEU	-	expression tag	UNP Q9BVC4
D	-7	ASN	-	expression tag	UNP Q9BVC4
D	-6	GLY	-	expression tag	UNP Q9BVC4
D	-5	GLY	-	expression tag	UNP Q9BVC4
D	-4	GLY	-	expression tag	UNP Q9BVC4
D	-3	GLY	-	expression tag	UNP Q9BVC4
D	-2	GLY	-	expression tag	UNP Q9BVC4
D	-1	SER	-	expression tag	UNP Q9BVC4
D	0	THR	-	expression tag	UNP Q9BVC4

- Molecule 3 is a protein called Rapamycin-insensitive companion of mTOR.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	E	1117	Total	C	N	O	S	0	0
			8931	5689	1584	1611	47		
3	F	1117	Total	C	N	O	S	0	0
			8931	5689	1584	1611	47		

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	-11	MET	-	initiating methionine	UNP Q6R327
E	-10	ASP	-	expression tag	UNP Q6R327
E	-9	TYR	-	expression tag	UNP Q6R327
E	-8	LYS	-	expression tag	UNP Q6R327

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Chain	Residue	Modelled	Actual	Comment	Reference
E	-7	ASP	-	expression tag	UNP Q6R327
E	-6	ASP	-	expression tag	UNP Q6R327
E	-5	ASP	-	expression tag	UNP Q6R327
E	-4	ASP	-	expression tag	UNP Q6R327
E	-3	LYS	-	expression tag	UNP Q6R327
E	-2	GLY	-	expression tag	UNP Q6R327
E	-1	SER	-	expression tag	UNP Q6R327
E	0	THR	-	expression tag	UNP Q6R327
F	-11	MET	-	initiating methionine	UNP Q6R327
F	-10	ASP	-	expression tag	UNP Q6R327
F	-9	TYR	-	expression tag	UNP Q6R327
F	-8	LYS	-	expression tag	UNP Q6R327
F	-7	ASP	-	expression tag	UNP Q6R327
F	-6	ASP	-	expression tag	UNP Q6R327
F	-5	ASP	-	expression tag	UNP Q6R327
F	-4	ASP	-	expression tag	UNP Q6R327
F	-3	LYS	-	expression tag	UNP Q6R327
F	-2	GLY	-	expression tag	UNP Q6R327
F	-1	SER	-	expression tag	UNP Q6R327
F	0	THR	-	expression tag	UNP Q6R327

- Molecule 4 is a protein called Target of rapamycin complex 2 subunit MAPKAP1.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	G	120	Total	C	N	O	S	0	0
			842	518	158	162	4		
4	H	120	Total	C	N	O	S	0	0
			842	518	158	162	4		

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	523	ALA	-	expression tag	UNP Q9BPZ7
G	524	ALA	-	expression tag	UNP Q9BPZ7
G	525	ALA	-	expression tag	UNP Q9BPZ7
G	526	GLY	-	expression tag	UNP Q9BPZ7
G	527	GLY	-	expression tag	UNP Q9BPZ7
G	528	GLY	-	expression tag	UNP Q9BPZ7
G	529	GLY	-	expression tag	UNP Q9BPZ7
G	530	TYR	-	expression tag	UNP Q9BPZ7
G	531	PRO	-	expression tag	UNP Q9BPZ7
G	532	TYR	-	expression tag	UNP Q9BPZ7

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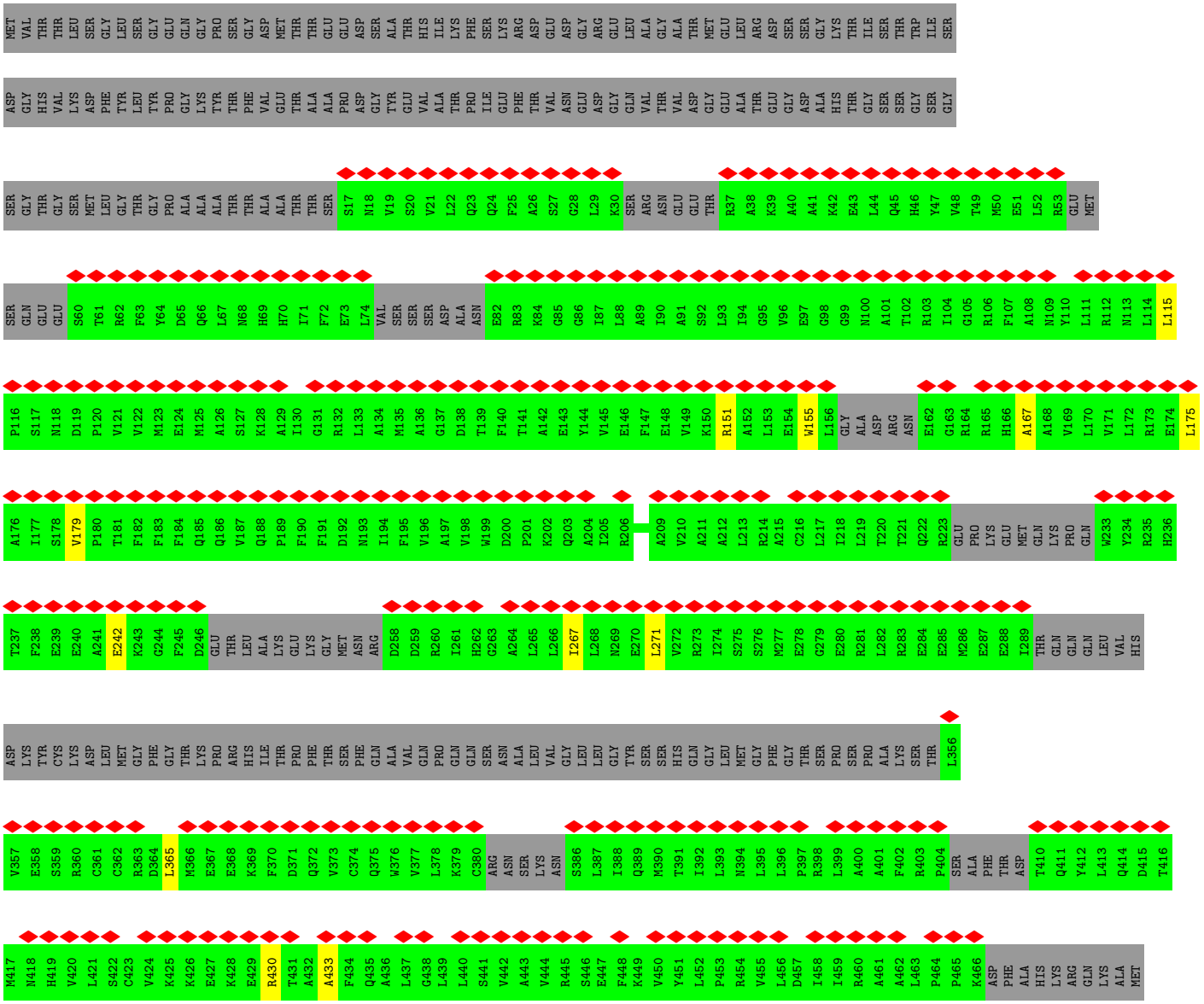
Chain	Residue	Modelled	Actual	Comment	Reference
G	533	ASP	-	expression tag	UNP Q9BPZ7
G	534	VAL	-	expression tag	UNP Q9BPZ7
G	535	PRO	-	expression tag	UNP Q9BPZ7
G	536	ASP	-	expression tag	UNP Q9BPZ7
G	537	TYR	-	expression tag	UNP Q9BPZ7
G	538	ALA	-	expression tag	UNP Q9BPZ7
H	523	ALA	-	expression tag	UNP Q9BPZ7
H	524	ALA	-	expression tag	UNP Q9BPZ7
H	525	ALA	-	expression tag	UNP Q9BPZ7
H	526	GLY	-	expression tag	UNP Q9BPZ7
H	527	GLY	-	expression tag	UNP Q9BPZ7
H	528	GLY	-	expression tag	UNP Q9BPZ7
H	529	GLY	-	expression tag	UNP Q9BPZ7
H	530	TYR	-	expression tag	UNP Q9BPZ7
H	531	PRO	-	expression tag	UNP Q9BPZ7
H	532	TYR	-	expression tag	UNP Q9BPZ7
H	533	ASP	-	expression tag	UNP Q9BPZ7
H	534	VAL	-	expression tag	UNP Q9BPZ7
H	535	PRO	-	expression tag	UNP Q9BPZ7
H	536	ASP	-	expression tag	UNP Q9BPZ7
H	537	TYR	-	expression tag	UNP Q9BPZ7
H	538	ALA	-	expression tag	UNP Q9BPZ7

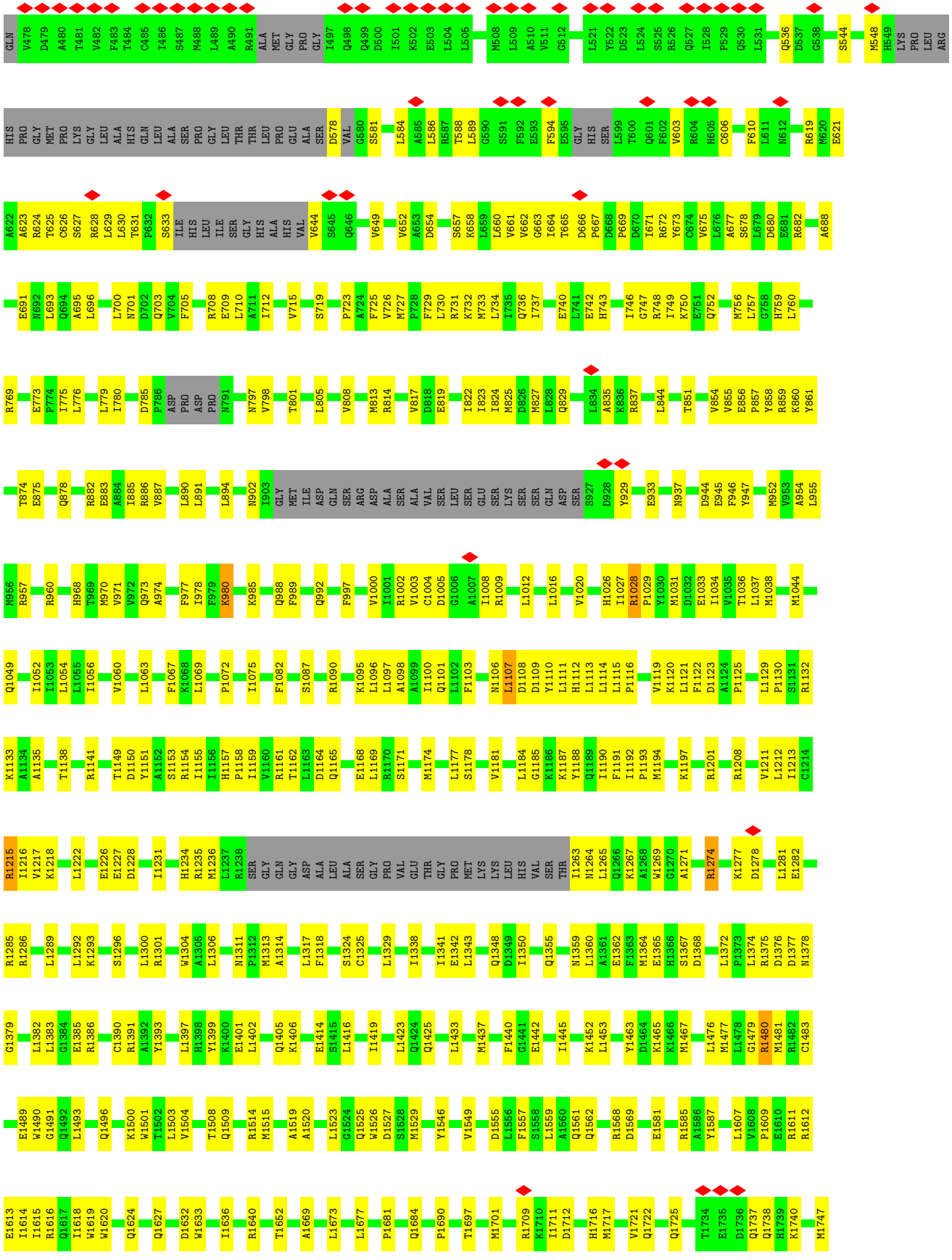
3 Residue-property plots (i)

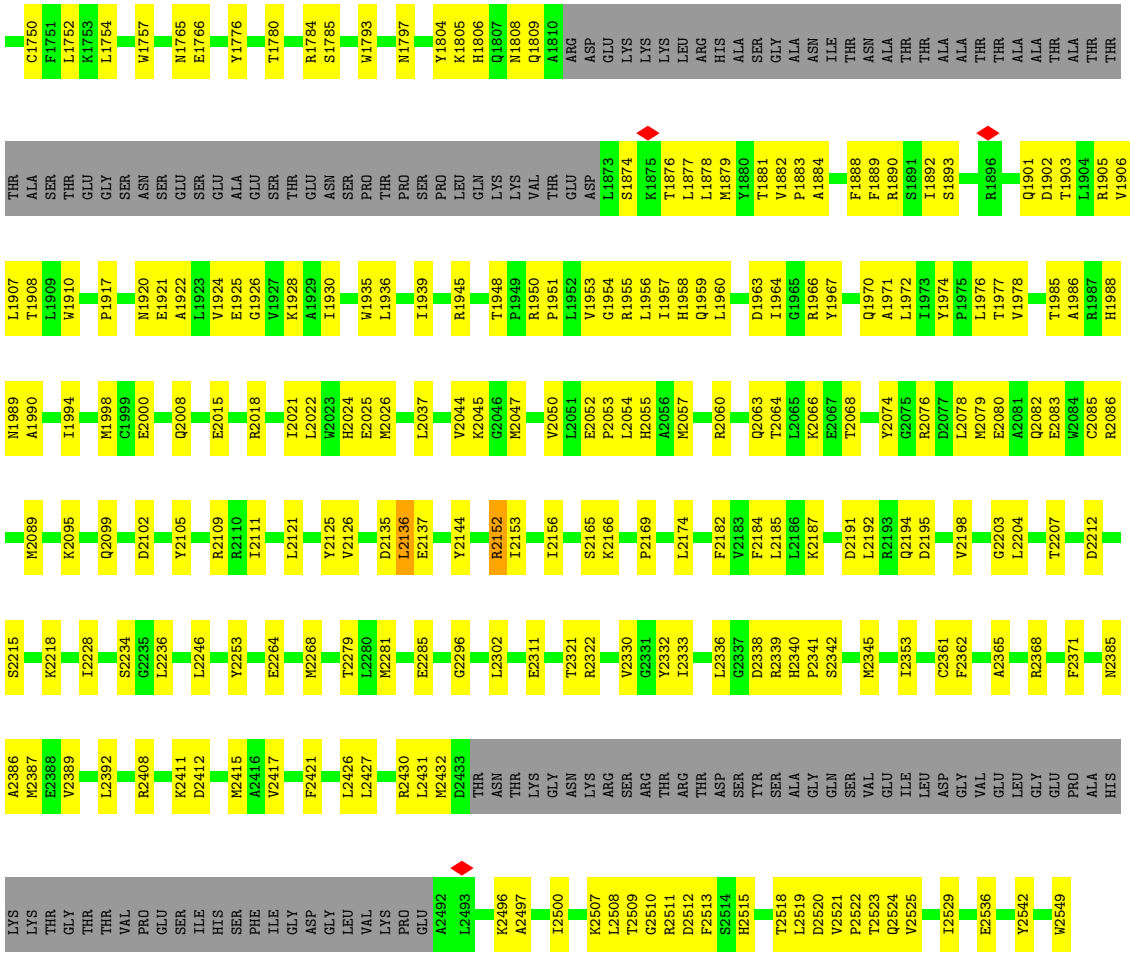
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

Chain A:

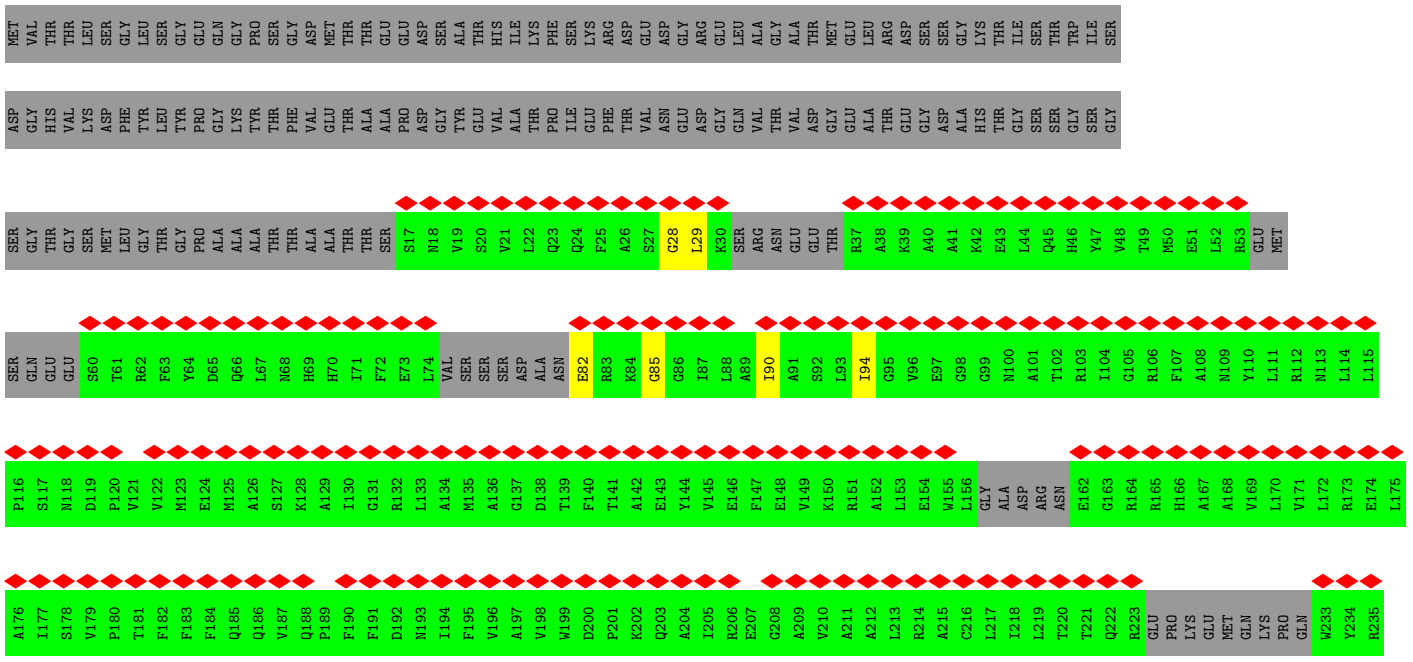


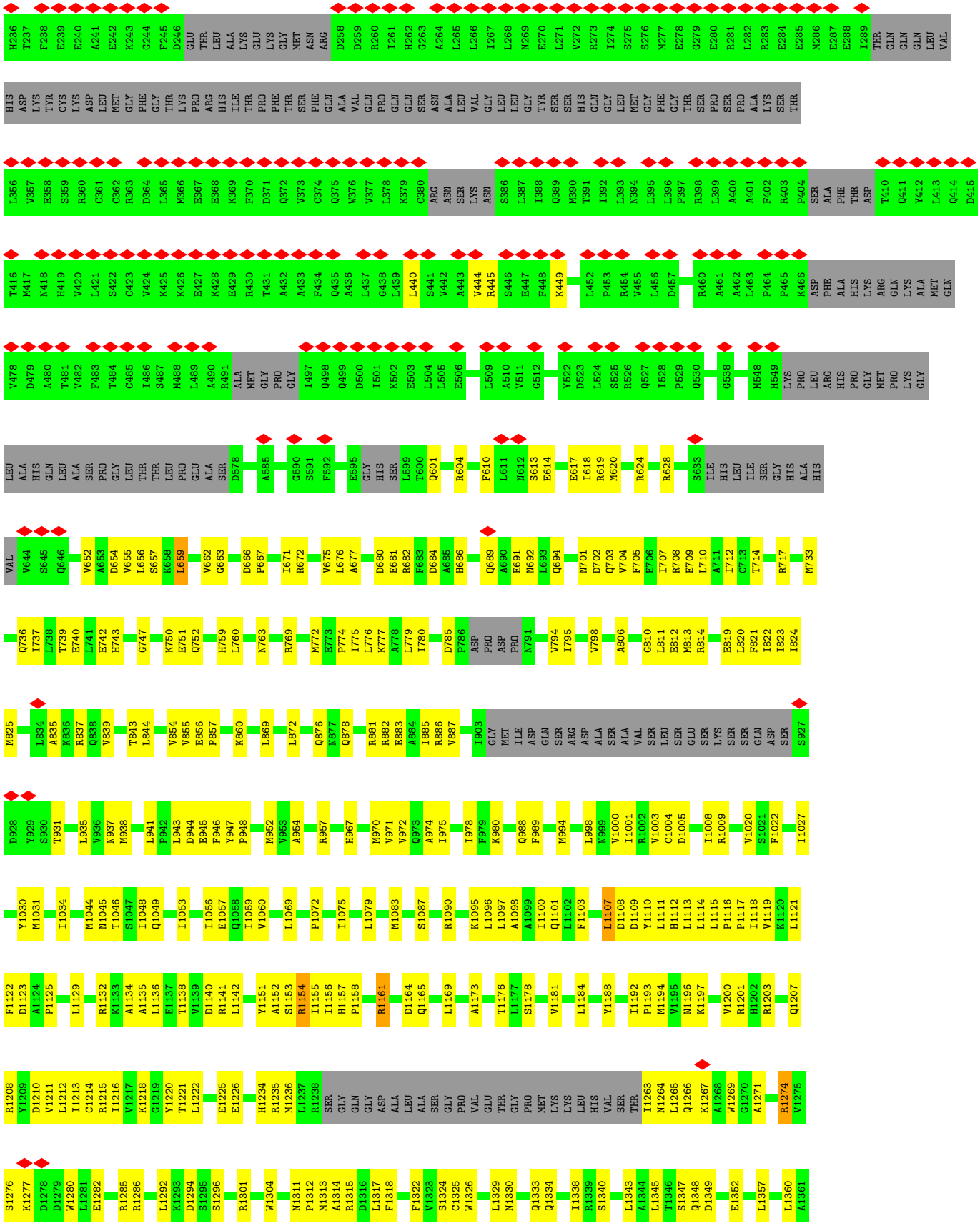

GLN V478 D479 A480 T481 V482 F483 T484 C485 I486 S487 M488 L489 A490 R491 ALA MET GLY PRO GLY I497 Q498 Q499 D500 I501 K502 E503 L504 L505 M508 L509 A510 V511 G512 L521 Y522 D523 L524 S525 R526 Q527 I528 P529 Q530 L531 Q536 D537 G538 S544 M548 H549 LYS PRO LEU ARG
HIS PRO GLY MET PRO LYS GLY LEU ALA HIS GLN LEU ALA SER PRO GLY LEU THR THR LEU PRO GLU ALA SER D578 VAL G580 S581 L584 A585 L586 R587 T588 L589 G590 S591 F592 E593 F594 E595 GLY HIS SER L599 T600 Q601 F602 V603 R604 H605 C606 F610 L611 N612 R619 W620 E621
A622 A623 R624 T625 C626 S627 R628 L629 L630 T631 P632 S633 ILE HIS LEU ILE SER GLY HIS ALA HIS VAL V644 S645 Q646 V649 V652 A653 D654 S657 K658 L659 L660 V661 V662 G663 I664 T665 D666 P667 D668 P669 D670 I671 R672 Y673 C674 V675 L676 A677 S678 L679 D680 E681 R682 A688
E691 N692 L693 Q694 A695 L696 L700 N701 D702 Q703 V704 F705 R708 E709 L710 A711 I712 V715 S719 P723 A724 F725 V726 M727 P728 F729 L730 R731 K732 M733 L734 I735 Q736 I737 E740 L741 E742 H743 I746 G747 R748 I749 K750 E751 Q752 M756 L757 G758 H759 L760
R769 E773 P774 I775 L776 L779 I780 D785 P786 ASP PRO ASP PRO N791 N797 V798 T801 L805 V808 M813 R814 V817 D818 E819 I822 I823 I824 M825 D826 M827 L828 Q829 L834 A835 K836 R837 L844 T851 V854 V855 E856 P857 Y858 R859 K860 Y861
T874 E875 Q878 R882 E883 A884 I885 R886 V887 L890 L891 L894 N902 I903 GLY MET ILE ASP GLN SER ARG ASP ALA SER ALA VAL SER LEU SER GLU SER LYS SER SER GLN ASP SER S927 D928 Y929 E933 N937 D944 E945 F946 Y947 M952 V953 A954 L955
M956 R957 R960 H968 T969 M970 V971 V972 Q973 A974 F977 I978 F979 K980 K985 Q988 F989 Q992 F997 V1000 I1001 R1002 V1003 C1004 D1005 G1006 A1007 I1008 R1009 L1012 L1016 V1020 H1026 I1027 R1028 P1029 Y1030 M1031 D1032 E1033 I1034 V1035 T1036 L1037 M1038 M1044
Q1049 I1052 I1053 L1054 L1055 I1056 V1060 L1063 F1067 K1068 L1069 P1072 I1075 F1082 S1087 R1090 K1095 L1096 L1097 A1098 A1099 I1100 Q1101 L1102 F1103 N1106 L1107 D1108 D1109 Y1110 L1111 H1112 L1113 L1114 L1115 P1116 V1119 K1120 L1121 F1122 D1123 A1124 P1125 L1129 P1130 S1131 R1132
K1133 A1134 A1135 T1138 R1141 T1149 D1150 Y1151 A1152 S1153 R1154 I1155 T1156 H1157 P1158 I1159 V1160 R1161 T1162 L1163 D1164 Q1165 E1168 L1169 R1170 S1171 M1174 L1177 S1178 V1181 L1184 G1185 K1186 K1187 Y1188 Q1189 I1190 F1191 I1192 P1193 M1194 K1197 R1201 R1208 V1211 L1212 I1213 C1214
R1215 I1216 V1217 K1218 L1222 E1226 E1227 D1228 I1231 H1234 R1235 M1236 L1237 R1238 SER GLY GLN GLY ASP ALA LEU ALA SER GLY PRO VAL GLU THR GLY PRO MET LYS LYS LEU HIS VAL SER THR I1263 N1264 L1265 Q1266 K1267 A1268 W1269 G1270 A1271 R1274 K1277 D1278 L1281 E1282
R1285 R1286 L1289 L1292 K1293 S1296 L1300 R1301 W1304 A1305 L1306 N1311 P1312 M1313 A1314 L1317 F1318 S1324 C1325 L1329 I1338 I1341 E1342 L1343 Q1348 D1349 I1350 Q1355 N1359 L1360 A1361 E1362 F1363 M1364 E1365 H1366 S1367 D1368 L1372 P1373 L1374 R1375 D1376 D1377 N1378
G1379 L1382 L1383 G1384 E1385 R1386 C1390 R1391 A1392 Y1393 L1397 H1398 Y1399 K1400 E1401 L1402 Q1405 K1406 E1414 S1415 L1416 I1419 L1423 Q1424 Q1425 L1433 M1437 F1440 G1441 E1442 I1445 K1452 L1453 Y1463 D1464 K1465 K1466 M1467 L1476 M1477 L1478 G1479 R1480 M1481 R1482 C1483
E1489 W1490 G1491 Q1492 L1493 Q1496 K1500 W1501 T1502 L1503 V1504 T1508 Q1509 R1514 M1515 A1519 A1520 L1523 G1524 Q1525 W1526 D1527 S1528 M1529 Y1546 V1549 D1555 L1556 F1557 S1558 L1559 A1560 Q1561 Q1562 R1568 D1569 E1581 R1585 A1586 Y1587 L1607 Y1608 P1609 E1610 R1611 R1612
E1613 I1614 I1615 R1616 Q1617 I1618 W1619 W1620 Q1624 Q1627 D1632 W1633 I1636 R1640 T1652 A1669 L1673 L1677 P1681 Q1684 P1690 T1697 M1701 R1709 K1710 I1711 D1712 H1716 M1717 V1721 Q1722 Q1725 T1734 E1735 D1736 Q1737 Q1738 H1739 K1740 M1747

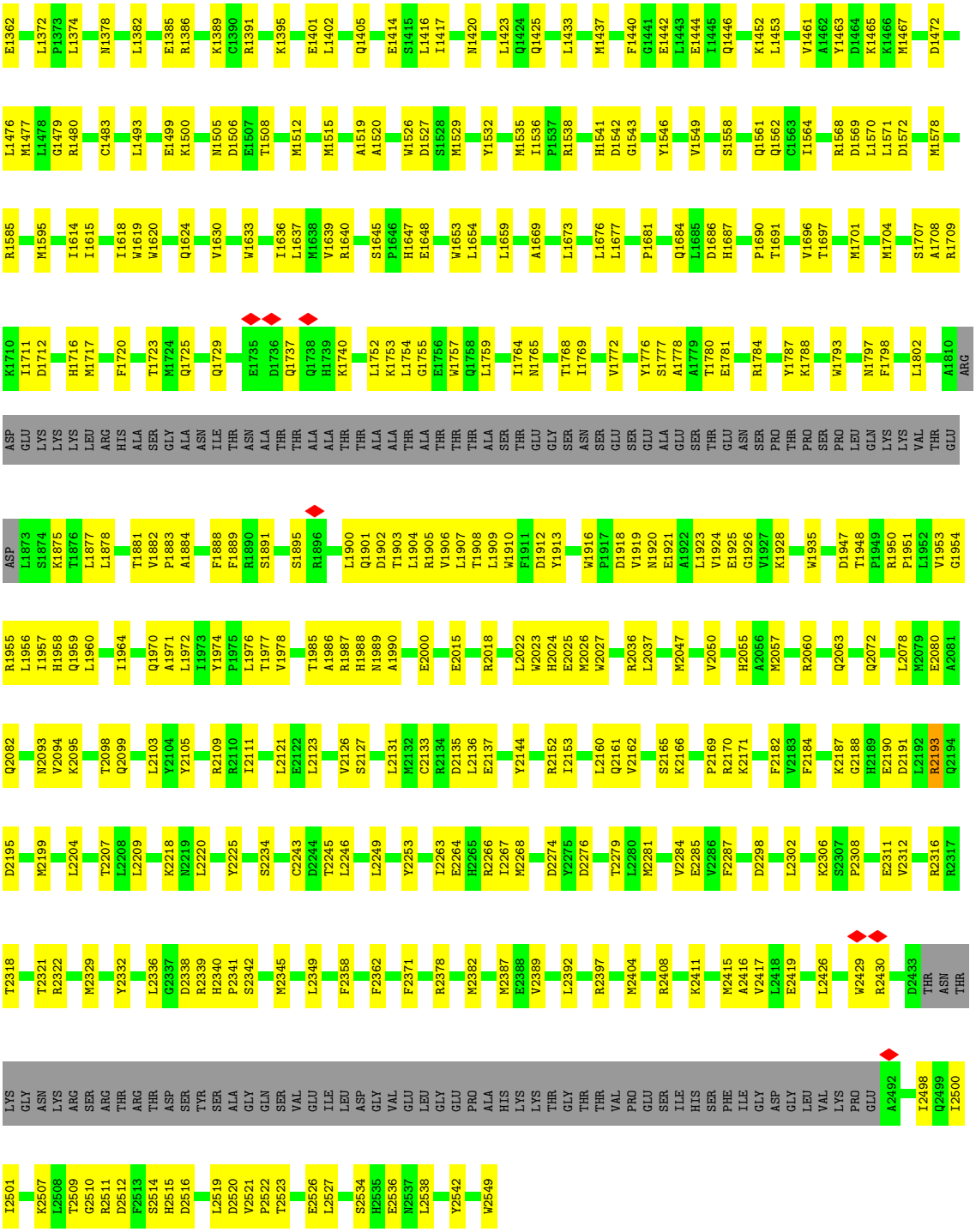


• Molecule 1: Serine/threonine-protein kinase mTOR

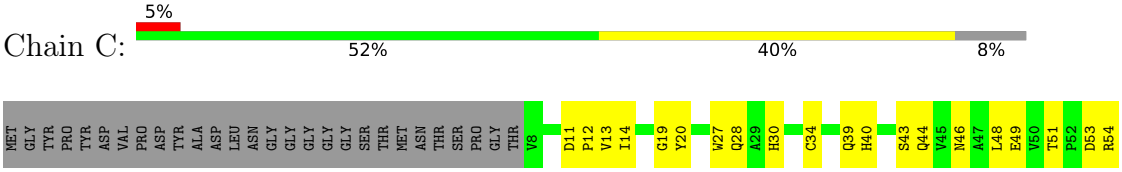
Chain B:

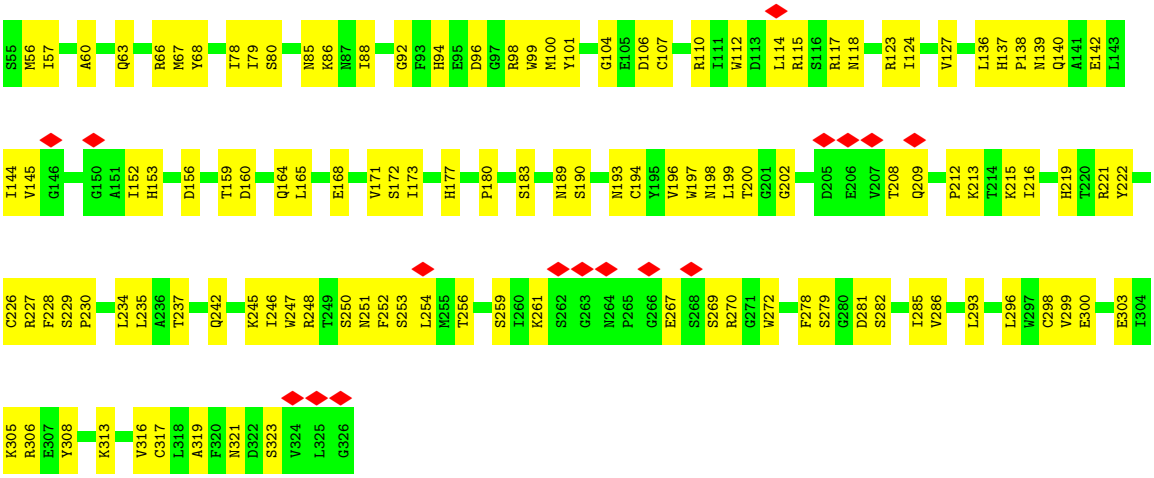






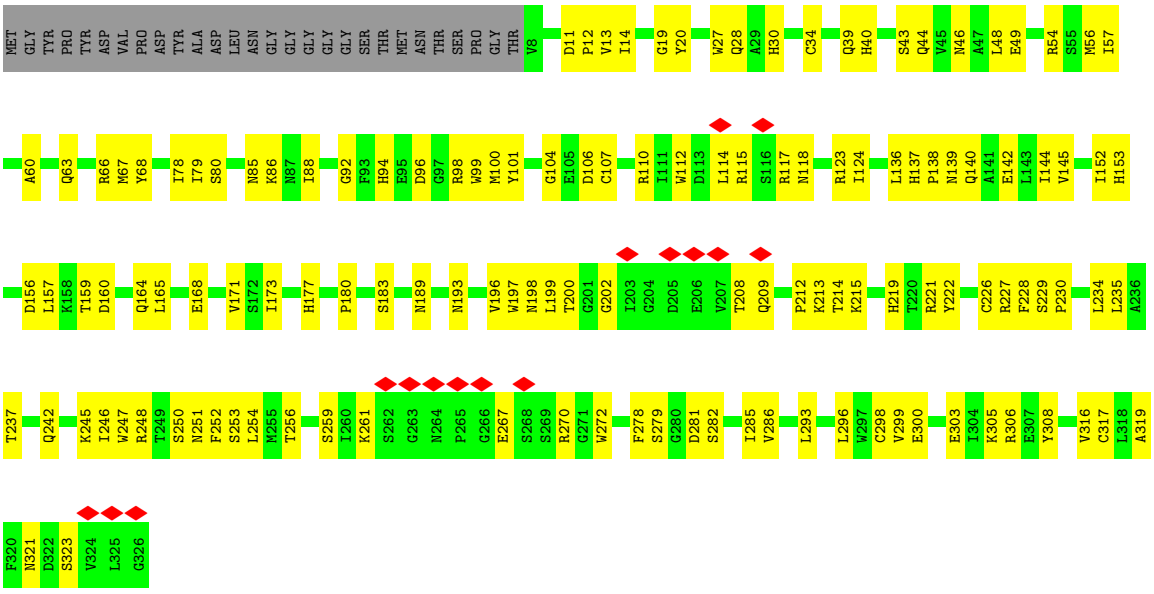
• Molecule 2: Target of rapamycin complex subunit LST8





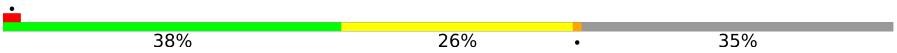
• Molecule 2: Target of rapamycin complex subunit LST8

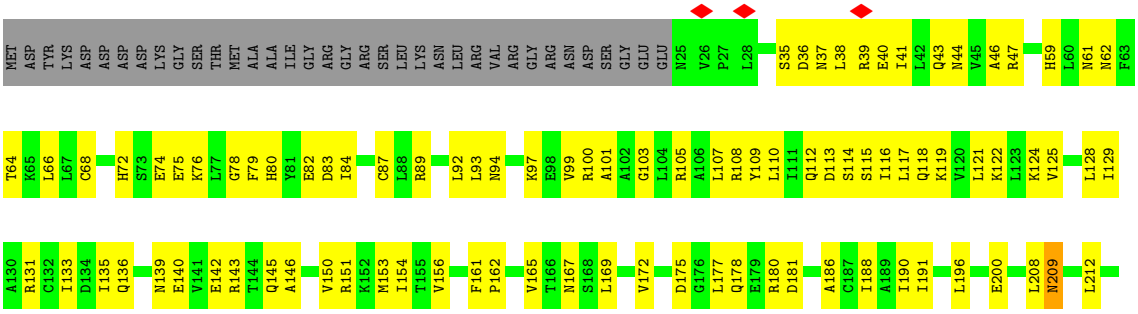
Chain D:

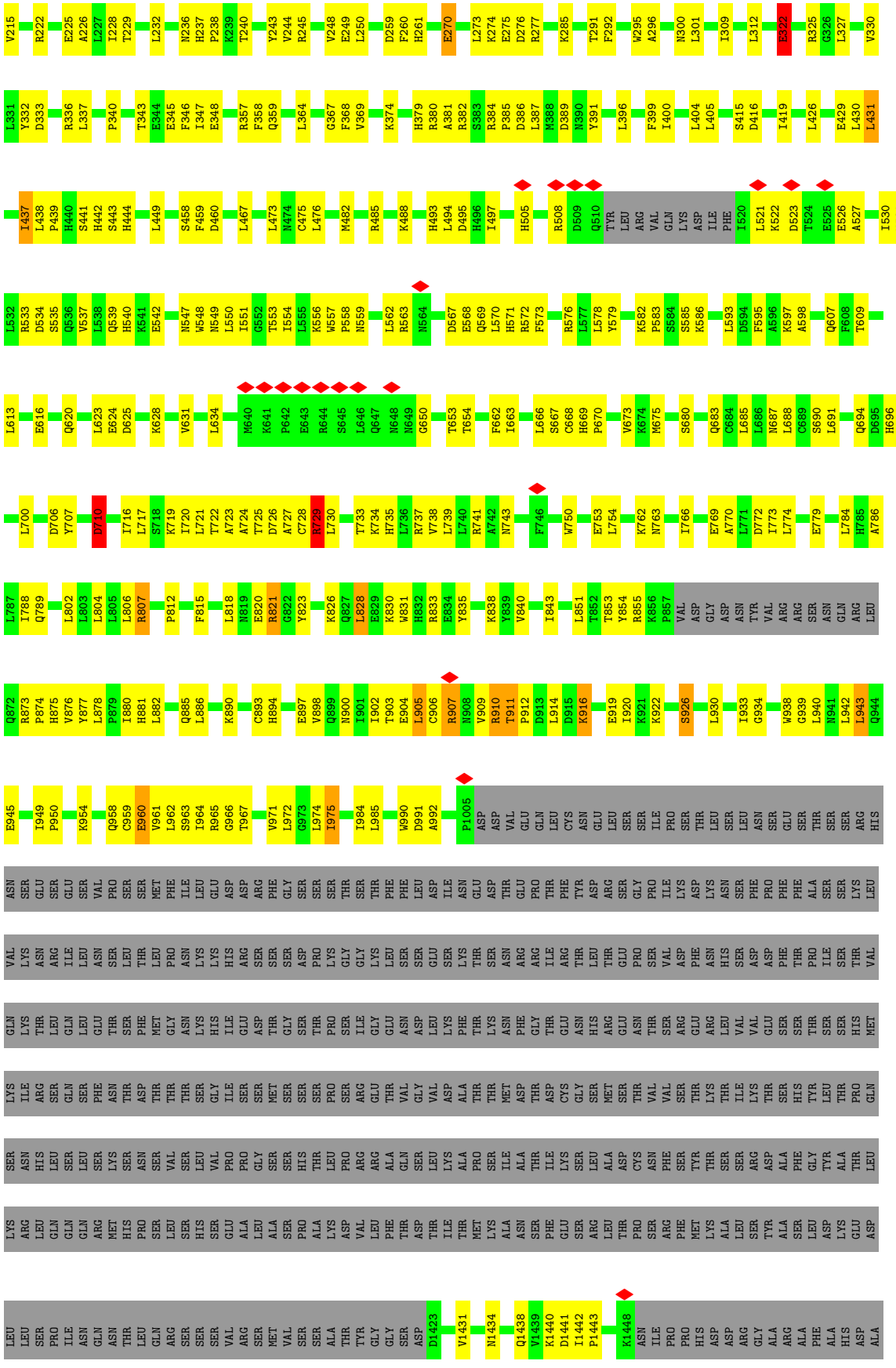


• Molecule 3: Rapamycin-insensitive companion of mTOR

Chain E:



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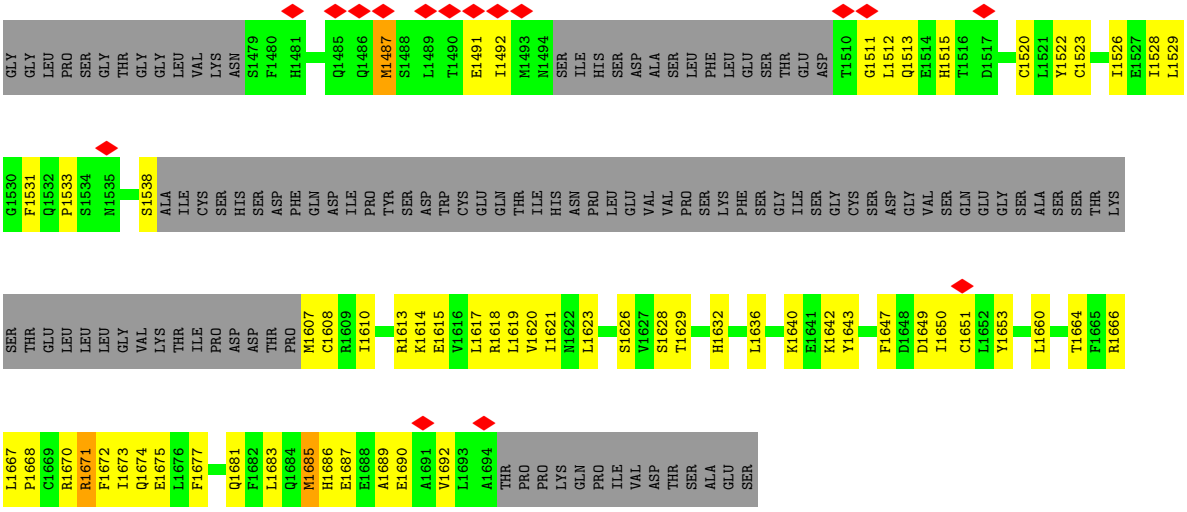
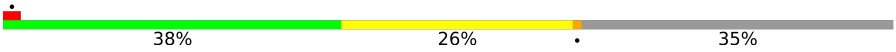
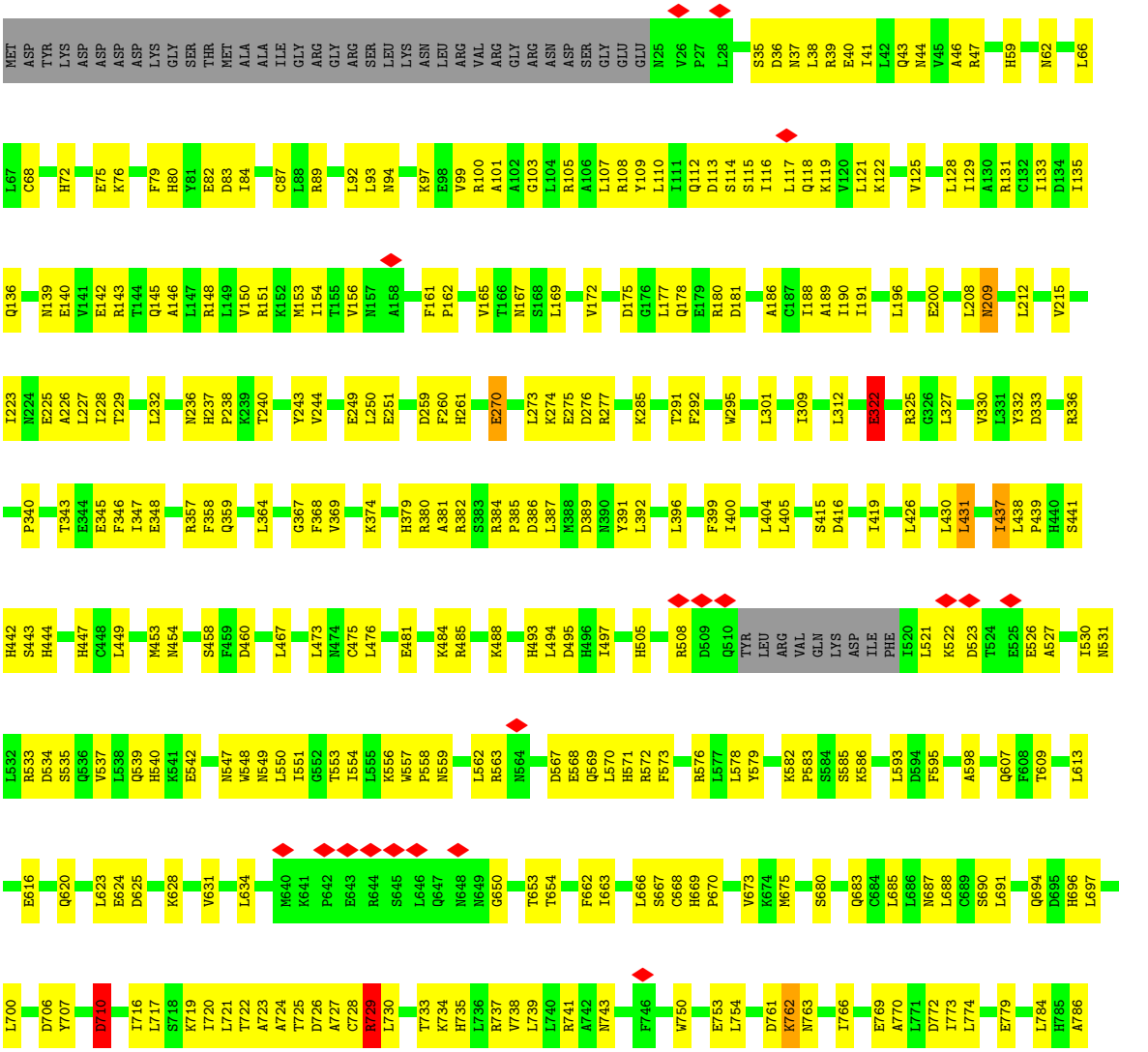
L331 Y332 D333 R336 L337 P340 T343 E344 E345 F346 I347 E348 R357 F358 Q359 L364 G367 F368 V369 K374 H379 R380 A381 R382 S383 R384 P385 D386 L387 M388 D389 N390 Y391 L396 F399 I400 L404 L405 S415 D416 I419 L426 E429 L430 L431
I437 L438 P439 H440 S441 H442 S443 H444 L449 S458 F459 D460 L467 L473 N474 C475 L476 M482 R485 K488 H493 L494 D495 H496 I497 H505 R508 D509 Q510 TYR LEU ARG VAL GLN LYS ASP ILE PHE I520 L521 K522 D523 T524 E525 E526 A527 I530 N531
L532 R533 D534 S535 Q536 V537 L538 Q539 H540 K541 E542 N547 W548 N549 L550 I551 Q552 T553 I554 L555 K556 W557 P558 N559 L562 R563 N564 D567 E568 Q569 L570 H571 R572 F573 R576 L577 L578 Y579 K582 P583 S584 S585 K586 L593 D594 F595 A596 K597 A598 Q607 F608 T609
L613 E616 Q620 L623 E624 D625 K628 V631 L634 M640 K641 P642 E643 R644 S645 L646 Q647 N648 N649 C650 T653 T654 F662 I663 L666 S667 C668 H669 P670 V673 K674 M675 S680 Q683 C684 L685 L686 N687 L688 C689 S690 L691 Q694 D695 H696 L697
L700 D706 Y707 D710 I716 L717 S718 K719 I720 L721 T722 A723 A724 T725 D726 A727 C728 R729 L730 T733 K734 H735 L736 R737 V738 L739 L740 R741 A742 N743 F746 W750 E753 L754 K762 N763 I766 E769 A770 L771 D772 I773 L774 E779 L784 H785 A786
L787 I788 Q789 L802 L803 L804 L805 L806 R807 P812 F815 L818 N819 E820 R821 G822 Y823 K826 Q827 L828 E829 K830 W831 H832 R833 E834 Y835 K838 Y839 V840 I843 L851 T852 T853 Y854 R855 K856 P857 VAL ASP GLY ASP ASN TYR VAL ARG ARG SER ASN GLN ARG LEU
Q872 R873 P874 H875 V876 Y877 L878 P879 I880 H881 L882 Q885 L886 K890 C893 H894 E897 V898 Q899 N900 I901 I902 T903 E904 L905 C906 R907 N908 V909 R910 T911 P912 D913 L914 D915 K916 E919 I920 K921 K922 S926 L930 I933 G934 W938 G939 L940 N941 L942 L943 Q944
E945 I949 P950 K954 Q958 C959 E960 V961 L962 S963 I964 R965 G966 T967 V971 L972 G973 L974 I975 I984 L985 W990 D991 A992 P1005 ASP ASP VAL GLU GLN LEU CYS ASN GLU LEU SER SER ILE PRO SER THR LEU SER LEU ASP PRO PHE PHE ALA SER SER LYS LEU
ASN SER GLU SER GLU SER VAL PRO SER THR SER SER MET PHE LEU ASP ILE ASN GLU ASP THR GLU PRO THR PHE TYR ASP ARG SER GLY PRO ILE LYS ASP LYS ASN SER LEU PHE PRO PHE PHE ALA SER SER LYS LEU
VAL LYS ASN ARG ILE LEU LEU ASN SER LEU THR LEU PRO ASN LYS LYS HIS ARG SER SER ASP PRO LYS GLY GLY LYS LEU SER THR GLU SER LYS THR SER ASN ARG ARG ILE ARG THR LEU THR GLU PRO SER VAL ASP PHE ASN HIS SER LEU ASP ASP PHE THR PRO ILE SER THR VAL
GLN LYS THR LEU GLN LEU GLU THR SER PHE MET GLY ASN LYS HIS ILE GLU ASP THR GLY SER THR PRO SER ILE GLY GLU ASN ASP LEU LYS PHE THR LYS ASN PHE GLY THR GLU ASN HIS ARG GLU ASN THR SER ARG GLU ARG LEU VAL VAL GLU SER SER THR SER HIS MET
LYS ILE ARG SER GLN SER PHE ASN THR ASP THR THR THR ASP SER GLY VAL ASP ALA THR THR MET ASP THR ASP CYS GLY SER MET SER THR VAL VAL SER THR LYS THR SER HIS TYR LEU THR PRO GLN
SER ASN HIS LEU SER LEU SER ASN SER VAL SER LEU VAL PRO PRO GLY SER SER HIS THR SER LEU PRO ARG ARG ALA GLN SER LEU LYS ALA PRO SER ILE ALA ALA THR ILE LYS SER LEU ALA ASP CYS ASN PHE SER TYR THR THR SER LEU ASP ARG PHE MET LYS ALA LEU SER ARG ASP ALA PHE GLY TYR ALA THR LEU
LYS ARG LEU GLN GLN ARG MET HIS PRO SER LEU SER HIS SER GLU ALA LEU LYS ASP VAL LEU PHE THR ASP THR THR MET LYS ALA ASN SER PHE GLU SER ARG LEU THR PRO SER ARG PHE MET LYS ALA LEU SER ARG TYR ALA SER LEU ASP PHE
LEU LEU SER PRO ILE ASN THR LEU GLN ARG SER SER SER VAL ARG SER MET VAL SER SER ALA THR TYR GLY GLY SER ASP D1423 V1431 N1434 Q1438 V1439 K1440 D1441 I1442 P1443 K1448 ASN ILE PRO PRO HIS ASP ASP ARG GLY ALA ARG ALA PHE ALA HIS ASP ALA

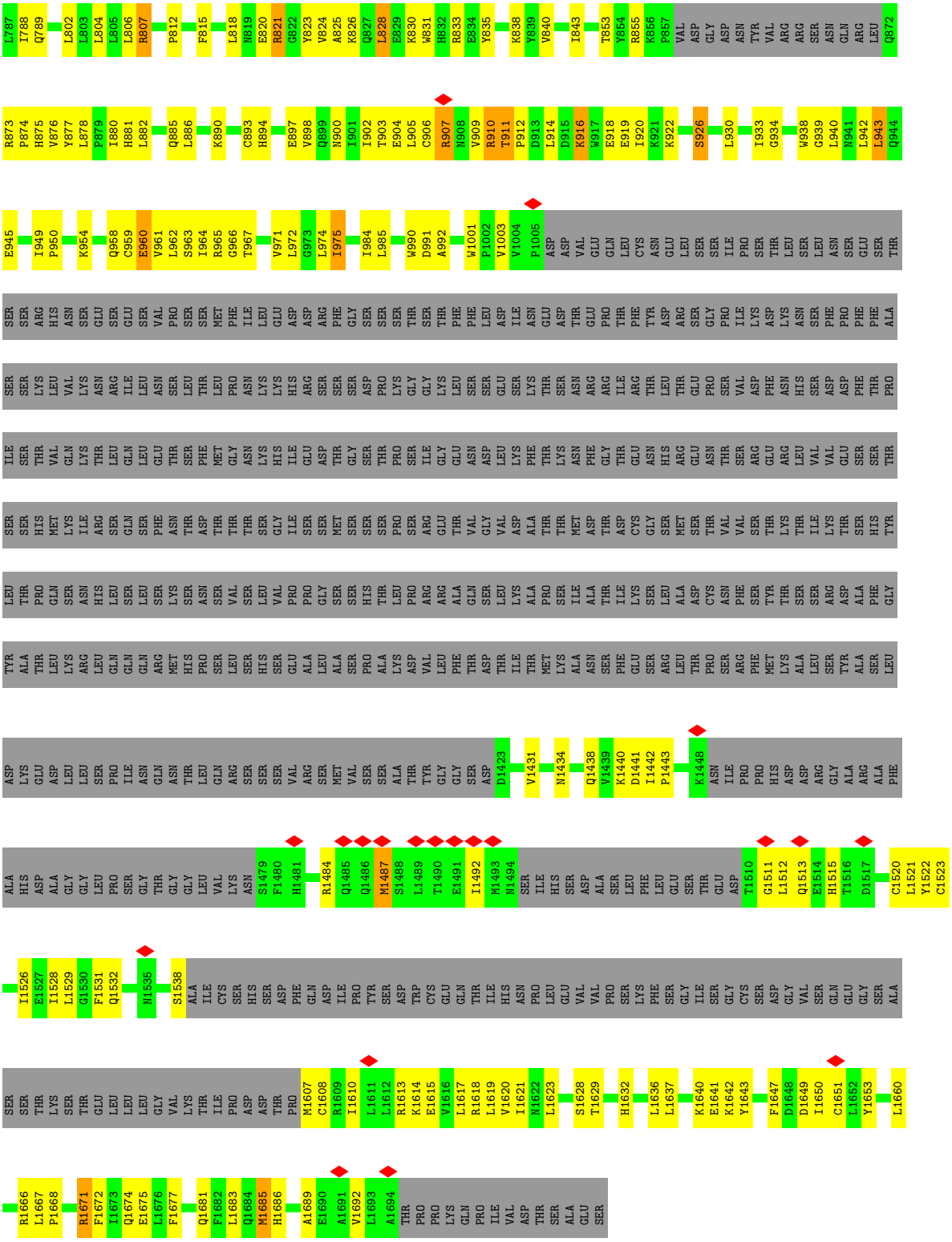


• Molecule 3: Rapamycin-insensitive companion of mTOR

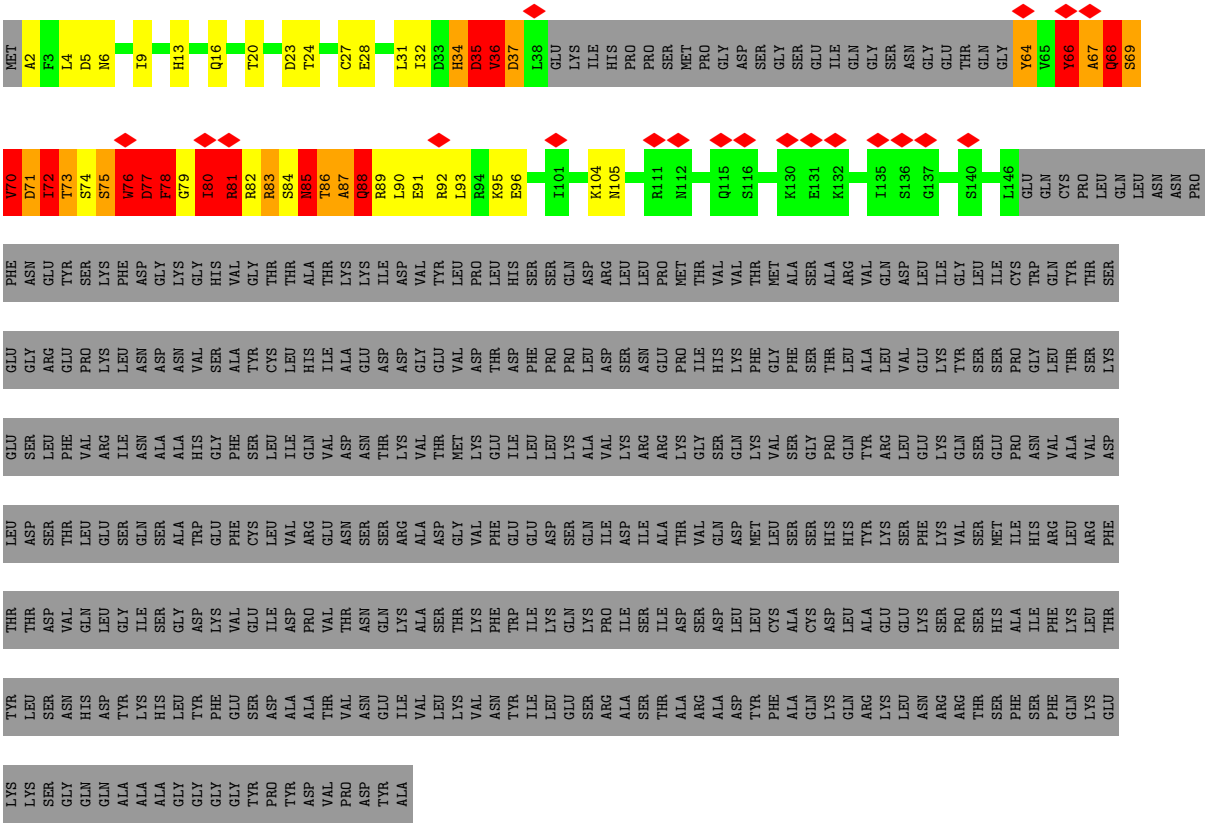
Chain F:





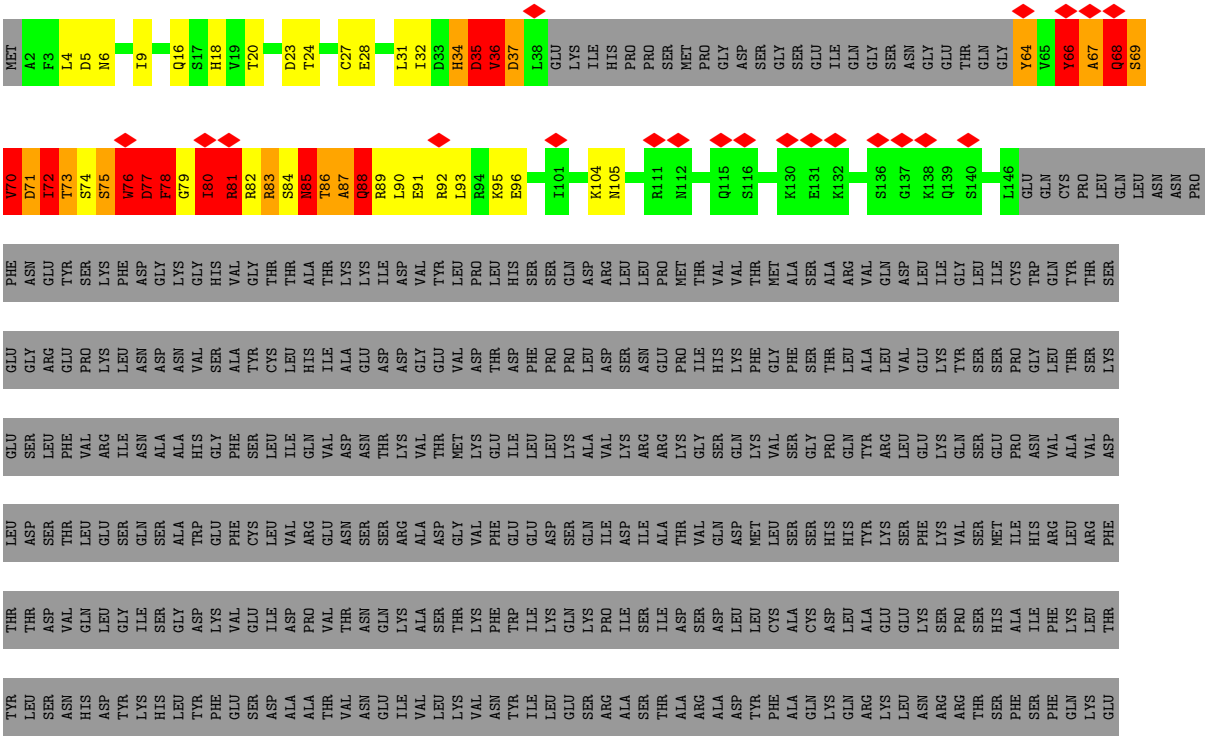


• Molecule 4: Target of rapamycin complex 2 subunit MAPKAP1



• Molecule 4: Target of rapamycin complex 2 subunit MAPKAP1

Chain H:



LYS
LYS
SER
GLY
GLN
GLN
ALA
ALA
ALA
GLY
GLY
GLY
GLY
TYR
PRO
TYR
ASP
VAL
PRO
ASP
TYR
ALA

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	288538	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	22.607	Depositor
Minimum map value	-11.647	Depositor
Average map value	0.026	Depositor
Map value standard deviation	1.029	Depositor
Recommended contour level	2.64	Depositor
Map size (Å)	356.4, 356.4, 356.4	wwPDB
Map dimensions	324, 324, 324	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.1, 1.1, 1.1	Depositor

5 Model quality

5.1 Standard geometry

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	0.31	0/16632	0.50	3/22593 (0.0%)
1	B	0.31	0/16598	0.50	3/22552 (0.0%)
2	C	0.28	0/2523	0.54	0/3438
2	D	0.28	0/2523	0.54	0/3438
3	E	0.31	1/9092 (0.0%)	0.54	8/12300 (0.1%)
3	F	0.31	1/9092 (0.0%)	0.54	8/12300 (0.1%)
4	G	1.95	39/852 (4.6%)	2.07	51/1161 (4.4%)
4	H	1.95	39/852 (4.6%)	2.07	51/1161 (4.4%)
All	All	0.45	80/58164 (0.1%)	0.62	124/78943 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	E	0	1
3	F	0	1
4	G	2	6
4	H	2	6
All	All	4	14

All (80) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	77	ASP	CB-CG	-11.57	1.27	1.51
4	H	77	ASP	CB-CG	-11.54	1.27	1.51
4	G	86	THR	C-O	11.16	1.44	1.23
4	H	86	THR	C-O	11.13	1.44	1.23
4	H	88	GLN	CG-CD	-10.90	1.25	1.51
4	G	88	GLN	CG-CD	-10.89	1.26	1.51
4	G	83	ARG	CZ-NH2	-10.57	1.19	1.33
4	H	84	SER	CB-OG	-10.56	1.28	1.42

Continued on next page...

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	84	SER	CB-OG	-10.54	1.28	1.42
4	H	83	ARG	CZ-NH2	-10.52	1.19	1.33
4	H	87	ALA	N-CA	-10.49	1.25	1.46
4	G	87	ALA	N-CA	-10.47	1.25	1.46
4	G	85	ASN	C-O	-10.05	1.04	1.23
4	H	85	ASN	C-O	-9.99	1.04	1.23
4	H	85	ASN	CA-C	-9.47	1.28	1.52
4	G	85	ASN	CA-C	-9.43	1.28	1.52
4	H	77	ASP	CG-OD2	-9.24	1.04	1.25
4	G	77	ASP	CG-OD2	-9.24	1.04	1.25
4	H	76	TRP	CB-CG	-9.22	1.33	1.50
4	G	76	TRP	CB-CG	-9.22	1.33	1.50
4	H	84	SER	CA-CB	-9.14	1.39	1.52
4	G	84	SER	CA-CB	-9.11	1.39	1.52
4	G	83	ARG	C-O	-8.30	1.07	1.23
4	H	83	ARG	C-O	-8.31	1.07	1.23
4	H	81	ARG	CZ-NH1	-7.77	1.23	1.33
4	G	81	ARG	CZ-NH1	-7.75	1.23	1.33
4	G	85	ASN	CG-ND2	-7.39	1.14	1.32
4	H	85	ASN	CG-ND2	-7.39	1.14	1.32
4	G	88	GLN	CD-NE2	-7.21	1.14	1.32
4	H	88	GLN	CD-NE2	-7.19	1.14	1.32
4	G	85	ASN	N-CA	-7.11	1.32	1.46
4	H	76	TRP	CE3-CZ3	-7.02	1.26	1.38
4	H	85	ASN	N-CA	-6.99	1.32	1.46
4	G	76	TRP	CE3-CZ3	-6.96	1.26	1.38
4	G	79	GLY	C-O	-6.87	1.12	1.23
4	H	79	GLY	C-O	-6.86	1.12	1.23
4	G	86	THR	CB-CG2	-6.82	1.29	1.52
4	H	86	THR	CB-CG2	-6.77	1.29	1.52
4	H	83	ARG	CD-NE	-6.41	1.35	1.46
4	H	81	ARG	C-O	-6.37	1.11	1.23
4	G	81	ARG	C-O	-6.37	1.11	1.23
4	G	83	ARG	CD-NE	-6.35	1.35	1.46
4	G	85	ASN	CA-CB	-6.29	1.36	1.53
4	H	85	ASN	CA-CB	-6.26	1.36	1.53
4	H	77	ASP	CG-OD1	-6.18	1.11	1.25
4	G	77	ASP	CG-OD1	-6.17	1.11	1.25
4	G	80	ILE	CB-CG2	6.14	1.72	1.52
4	H	80	ILE	CB-CG2	6.13	1.71	1.52
4	H	82	ARG	CZ-NH1	-6.03	1.25	1.33
4	G	80	ILE	C-O	-6.03	1.11	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	80	ILE	C-O	-6.01	1.11	1.23
4	H	85	ASN	C-N	-6.00	1.20	1.34
4	G	85	ASN	C-N	-5.99	1.20	1.34
4	G	82	ARG	CZ-NH1	-5.98	1.25	1.33
4	H	75	SER	CB-OG	-5.96	1.34	1.42
4	G	75	SER	CB-OG	-5.92	1.34	1.42
4	G	83	ARG	CA-CB	-5.92	1.41	1.53
4	H	77	ASP	CA-CB	-5.91	1.41	1.53
4	G	77	ASP	CA-CB	-5.91	1.41	1.53
4	H	83	ARG	CA-CB	-5.89	1.41	1.53
4	H	84	SER	C-N	-5.89	1.20	1.34
4	H	87	ALA	CA-C	-5.88	1.37	1.52
4	G	87	ALA	CA-C	-5.87	1.37	1.52
4	G	84	SER	C-N	-5.83	1.20	1.34
4	G	81	ARG	CZ-NH2	-5.71	1.25	1.33
4	H	81	ARG	CZ-NH2	-5.70	1.25	1.33
4	H	78	PHE	CE1-CZ	-5.69	1.26	1.37
4	G	78	PHE	CE1-CZ	-5.66	1.26	1.37
4	G	83	ARG	N-CA	-5.55	1.35	1.46
4	H	83	ARG	CA-C	-5.54	1.38	1.52
3	F	270	GLU	CB-CG	5.52	1.62	1.52
4	G	83	ARG	CA-C	-5.50	1.38	1.52
3	E	270	GLU	CB-CG	5.47	1.62	1.52
4	H	83	ARG	N-CA	-5.47	1.35	1.46
4	H	75	SER	CA-CB	-5.45	1.44	1.52
4	G	75	SER	CA-CB	-5.45	1.44	1.52
4	H	66	TYR	CE2-CZ	-5.37	1.31	1.38
4	G	66	TYR	CE2-CZ	-5.22	1.31	1.38
4	H	86	THR	CB-OG1	-5.22	1.32	1.43
4	G	86	THR	CB-OG1	-5.21	1.32	1.43

All (124) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	G	35	ASP	CB-CG-OD1	19.25	135.62	118.30
4	H	35	ASP	CB-CG-OD1	19.16	135.54	118.30
4	H	77	ASP	N-CA-C	16.71	156.12	111.00
4	G	77	ASP	N-CA-C	16.70	156.08	111.00
4	G	77	ASP	CB-CA-C	-16.17	78.05	110.40
4	H	77	ASP	CB-CA-C	-16.14	78.12	110.40
4	H	77	ASP	CB-CG-OD1	-15.18	104.64	118.30
4	G	77	ASP	CB-CG-OD1	-15.15	104.66	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	G	83	ARG	NE-CZ-NH1	14.25	127.42	120.30
4	H	83	ARG	NE-CZ-NH1	14.16	127.38	120.30
4	H	88	GLN	C-N-CA	-11.63	92.61	121.70
4	G	88	GLN	C-N-CA	-11.63	92.63	121.70
4	H	86	THR	CA-C-N	-11.00	92.99	117.20
4	G	86	THR	CA-C-N	-11.00	93.00	117.20
4	H	84	SER	CA-C-N	-9.24	96.88	117.20
4	G	84	SER	CA-C-N	-9.20	96.95	117.20
3	E	710	ASP	CB-CG-OD1	8.95	126.36	118.30
3	F	710	ASP	CB-CG-OD1	8.90	126.31	118.30
4	H	72	ILE	N-CA-C	8.57	134.14	111.00
4	G	72	ILE	N-CA-C	8.57	134.13	111.00
4	G	84	SER	CA-C-O	8.48	137.90	120.10
4	H	79	GLY	N-CA-C	8.46	134.25	113.10
4	G	79	GLY	N-CA-C	8.46	134.24	113.10
4	H	84	SER	CB-CA-C	-8.45	94.04	110.10
4	H	84	SER	CA-C-O	8.44	137.83	120.10
4	G	84	SER	CB-CA-C	-8.44	94.06	110.10
4	H	77	ASP	N-CA-CB	-8.33	95.60	110.60
4	G	77	ASP	N-CA-CB	-8.29	95.67	110.60
4	G	72	ILE	CB-CA-C	-8.16	95.28	111.60
4	H	72	ILE	CB-CA-C	-8.13	95.34	111.60
4	G	77	ASP	CB-CG-OD2	8.01	125.51	118.30
4	H	77	ASP	CB-CG-OD2	7.97	125.47	118.30
4	G	80	ILE	CG1-CB-CG2	7.91	128.79	111.40
4	H	80	ILE	CG1-CB-CG2	7.89	128.76	111.40
4	H	70	VAL	CB-CA-C	7.35	125.37	111.40
4	G	70	VAL	CB-CA-C	7.35	125.36	111.40
4	H	80	ILE	CA-C-N	7.32	133.29	117.20
4	G	80	ILE	CA-C-N	7.31	133.28	117.20
4	H	79	GLY	C-N-CA	7.17	139.64	121.70
4	G	79	GLY	C-N-CA	7.16	139.60	121.70
4	G	86	THR	CA-C-O	7.11	135.02	120.10
4	H	86	THR	CA-C-O	7.10	135.02	120.10
4	G	36	VAL	CA-CB-CG1	6.76	121.03	110.90
4	H	36	VAL	CA-CB-CG1	6.75	121.03	110.90
1	A	667	PRO	C-N-CA	-6.70	104.95	121.70
4	H	88	GLN	N-CA-C	-6.70	92.91	111.00
4	G	88	GLN	N-CA-C	-6.70	92.92	111.00
4	G	67	ALA	C-N-CA	-6.67	105.03	121.70
4	H	67	ALA	C-N-CA	-6.65	105.07	121.70
3	E	729	ARG	CA-CB-CG	6.65	128.03	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	F	729	ARG	CA-CB-CG	6.61	127.94	113.40
4	H	77	ASP	OD1-CG-OD2	-6.58	110.81	123.30
4	G	77	ASP	OD1-CG-OD2	-6.57	110.82	123.30
4	H	81	ARG	NE-CZ-NH1	6.36	123.48	120.30
4	G	81	ARG	NE-CZ-NH1	6.25	123.43	120.30
4	H	35	ASP	CB-CG-OD2	-6.22	112.70	118.30
4	G	87	ALA	N-CA-CB	-6.19	101.44	110.10
4	H	88	GLN	CA-C-N	-6.18	103.61	117.20
4	G	88	GLN	CA-C-N	-6.17	103.63	117.20
4	G	35	ASP	CB-CG-OD2	-6.17	112.75	118.30
4	G	35	ASP	OD1-CG-OD2	-6.15	111.61	123.30
4	H	87	ALA	N-CA-CB	-6.14	101.50	110.10
4	H	70	VAL	CG1-CB-CG2	-6.13	101.10	110.90
4	G	70	VAL	CG1-CB-CG2	-6.11	101.13	110.90
3	F	1685	MET	CA-CB-CG	6.10	123.67	113.30
3	E	1685	MET	CA-CB-CG	6.08	123.64	113.30
4	H	35	ASP	OD1-CG-OD2	-6.08	111.74	123.30
4	G	36	VAL	CA-C-N	-6.07	103.85	117.20
4	H	36	VAL	CA-C-N	-6.06	103.86	117.20
4	H	84	SER	C-N-CA	-6.03	106.62	121.70
4	G	73	THR	C-N-CA	6.03	136.78	121.70
4	H	73	THR	C-N-CA	6.01	136.73	121.70
4	G	84	SER	C-N-CA	-5.99	106.72	121.70
4	H	84	SER	N-CA-C	5.98	127.14	111.00
4	G	84	SER	N-CA-C	5.97	127.13	111.00
3	E	270	GLU	CA-CB-CG	5.91	126.41	113.40
4	G	83	ARG	NH1-CZ-NH2	-5.91	112.90	119.40
3	F	322	GLU	CA-CB-CG	5.90	126.39	113.40
3	E	322	GLU	CA-CB-CG	5.90	126.38	113.40
3	F	270	GLU	CA-CB-CG	5.90	126.37	113.40
4	H	83	ARG	NH1-CZ-NH2	-5.90	112.91	119.40
4	H	87	ALA	O-C-N	5.88	132.12	122.70
4	G	87	ALA	O-C-N	5.87	132.09	122.70
1	B	659	LEU	CA-CB-CG	5.76	128.55	115.30
1	B	1107	LEU	CA-CB-CG	5.67	128.34	115.30
4	H	88	GLN	CA-CB-CG	5.66	125.84	113.40
4	G	88	GLN	CA-CB-CG	5.65	125.83	113.40
4	H	67	ALA	CA-C-O	5.62	131.91	120.10
4	G	67	ALA	CA-C-O	5.62	131.89	120.10
4	H	86	THR	N-CA-C	5.61	126.13	111.00
4	G	86	THR	N-CA-C	5.58	126.07	111.00
4	H	76	TRP	CB-CA-C	-5.56	99.28	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	G	76	TRP	CB-CA-C	-5.55	99.29	110.40
4	G	36	VAL	N-CA-C	5.48	125.79	111.00
4	H	36	VAL	N-CA-C	5.48	125.79	111.00
4	H	80	ILE	CB-CA-C	5.42	122.44	111.60
4	H	71	ASP	N-CA-C	-5.41	96.39	111.00
4	G	71	ASP	N-CA-C	-5.41	96.39	111.00
4	H	82	ARG	CA-CB-CG	-5.41	101.51	113.40
4	H	86	THR	N-CA-CB	-5.41	100.03	110.30
4	G	81	ARG	C-N-CA	5.40	135.19	121.70
4	H	81	ARG	C-N-CA	5.40	135.19	121.70
4	G	80	ILE	CB-CA-C	5.39	122.39	111.60
1	A	2136	LEU	CB-CG-CD1	-5.39	101.83	111.00
4	G	82	ARG	CA-CB-CG	-5.39	101.54	113.40
4	G	86	THR	N-CA-CB	-5.35	100.13	110.30
3	E	437	ILE	C-N-CA	-5.32	108.41	121.70
4	H	88	GLN	CA-C-O	5.31	131.25	120.10
4	G	88	GLN	CA-C-O	5.29	131.21	120.10
3	F	437	ILE	C-N-CA	-5.29	108.48	121.70
3	E	437	ILE	CG1-CB-CG2	-5.23	99.89	111.40
3	F	437	ILE	CG1-CB-CG2	-5.23	99.90	111.40
4	H	86	THR	O-C-N	5.21	131.04	122.70
4	G	86	THR	O-C-N	5.20	131.01	122.70
1	B	1154	ARG	NE-CZ-NH2	-5.17	117.72	120.30
3	E	1685	MET	CB-CG-SD	-5.15	96.96	112.40
3	F	1685	MET	CB-CG-SD	-5.15	96.96	112.40
4	G	75	SER	CB-CA-C	-5.11	100.39	110.10
4	H	75	SER	CB-CA-C	-5.11	100.40	110.10
4	H	81	ARG	N-CA-C	5.09	124.73	111.00
4	G	81	ARG	N-CA-C	5.08	124.72	111.00
4	G	68	GLN	CA-CB-CG	5.08	124.58	113.40
4	H	68	GLN	CA-CB-CG	5.05	124.52	113.40
1	A	1107	LEU	CA-CB-CG	5.00	126.81	115.30

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
4	G	80	ILE	CA
4	G	85	ASN	CA
4	H	80	ILE	CA
4	H	85	ASN	CA

All (14) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	E	367	GLY	Peptide
3	F	367	GLY	Peptide
4	G	34	HIS	Mainchain
4	G	36	VAL	Mainchain
4	G	69	SER	Mainchain
4	G	70	VAL	Mainchain
4	G	77	ASP	Sidechain
4	G	85	ASN	Mainchain
4	H	34	HIS	Mainchain
4	H	36	VAL	Mainchain
4	H	69	SER	Mainchain
4	H	70	VAL	Mainchain
4	H	77	ASP	Sidechain
4	H	85	ASN	Mainchain

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	16337	0	15369	521	0
1	B	16304	0	15298	477	0
2	C	2465	0	2351	106	0
2	D	2465	0	2351	105	0
3	E	8931	0	9083	369	0
3	F	8931	0	9083	382	0
4	G	842	0	695	83	0
4	H	842	0	695	96	0
All	All	57117	0	54925	2072	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 18.

All (2072) 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)
4:H:67:ALA:O	4:H:68:GLN:CG	1.78	1.31
4:G:67:ALA:O	4:G:68:GLN:CG	1.78	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:87:ALA:O	4:H:90:LEU:N	1.71	1.21
4:G:87:ALA:O	4:G:90:LEU:N	1.71	1.21
4:G:32:ILE:HD12	4:G:34:HIS:CD2	1.79	1.17
4:H:32:ILE:HD12	4:H:34:HIS:CD2	1.79	1.17
4:G:67:ALA:O	4:G:68:GLN:CD	1.86	1.13
4:H:67:ALA:O	4:H:68:GLN:CD	1.86	1.13
3:F:68:CYS:SG	4:H:67:ALA:HA	1.89	1.11
4:H:67:ALA:O	4:H:68:GLN:NE2	1.84	1.10
4:G:67:ALA:O	4:G:68:GLN:NE2	1.84	1.09
3:F:151:ARG:HH12	4:H:31:LEU:HA	1.21	1.06
4:G:67:ALA:O	4:G:68:GLN:CB	1.94	1.05
4:G:32:ILE:HD12	4:G:34:HIS:HD2	1.18	0.99
3:F:1619:LEU:HD22	3:F:1636:LEU:HG	1.46	0.98
4:H:32:ILE:HD12	4:H:34:HIS:HD2	1.18	0.98
4:H:67:ALA:O	4:H:68:GLN:CB	1.94	0.98
3:E:1619:LEU:HD22	3:E:1636:LEU:HG	1.46	0.98
4:G:36:VAL:CG1	4:G:37:ASP:H	1.77	0.96
4:G:70:VAL:HG12	4:G:72:ILE:HD11	1.48	0.95
4:H:36:VAL:CG1	4:H:37:ASP:H	1.77	0.94
1:A:1480:ARG:NH1	1:A:1481:MET:SD	2.41	0.93
4:H:70:VAL:HG12	4:H:72:ILE:HD11	1.48	0.93
1:A:1097:LEU:HG	1:A:1138:THR:HG21	1.53	0.91
3:E:828:LEU:HD11	3:E:886:LEU:HD11	1.53	0.91
3:F:322:GLU:OE1	3:F:322:GLU:N	2.06	0.89
1:B:779:LEU:HD12	1:B:798:VAL:HG23	1.55	0.88
3:F:828:LEU:HD11	3:F:886:LEU:HD11	1.53	0.88
3:E:322:GLU:OE1	3:E:322:GLU:N	2.06	0.88
4:H:88:GLN:OE1	4:H:88:GLN:N	2.08	0.87
4:H:68:GLN:O	4:H:71:ASP:N	2.07	0.87
1:A:1925:GLU:HA	1:A:1928:LYS:HE2	1.57	0.87
4:G:68:GLN:O	4:G:71:ASP:N	2.07	0.86
1:A:2057:MET:HA	1:A:2060:ARG:HE	1.37	0.86
4:G:36:VAL:HG13	4:G:37:ASP:H	1.41	0.86
4:H:67:ALA:O	4:H:68:GLN:HG2	1.74	0.86
4:G:87:ALA:O	4:G:91:GLU:N	2.10	0.85
3:E:68:CYS:SG	4:G:67:ALA:HA	2.15	0.85
4:G:88:GLN:OE1	4:G:88:GLN:N	2.08	0.85
4:H:87:ALA:O	4:H:91:GLU:N	2.10	0.84
4:G:77:ASP:OD1	4:G:77:ASP:N	2.08	0.84
3:E:972:LEU:HD11	3:E:985:LEU:HD11	1.60	0.84
3:F:972:LEU:HD11	3:F:985:LEU:HD11	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:1522:TYR:HB2	3:F:1650:ILE:HD13	1.59	0.84
4:H:77:ASP:OD1	4:H:77:ASP:N	2.08	0.84
4:G:67:ALA:O	4:G:68:GLN:HG2	1.74	0.83
4:H:36:VAL:HG13	4:H:37:ASP:H	1.40	0.83
3:E:1522:TYR:HB2	3:E:1650:ILE:HD13	1.59	0.83
1:B:1764:ILE:HG23	1:B:1769:ILE:HD11	1.60	0.83
2:C:27:TRP:HB3	2:C:34:CYS:HA	1.61	0.83
4:H:88:GLN:O	4:H:89:ARG:C	2.07	0.83
1:A:1130:PRO:HA	1:A:1133:LYS:HD2	1.59	0.82
4:H:36:VAL:HG13	4:H:37:ASP:N	1.93	0.82
4:G:36:VAL:HG13	4:G:37:ASP:N	1.93	0.82
4:H:68:GLN:HG3	4:H:72:ILE:H	1.44	0.82
4:H:68:GLN:CG	4:H:72:ILE:H	1.92	0.82
4:G:68:GLN:CG	4:G:72:ILE:H	1.92	0.81
1:A:631:THR:HA	1:A:682:ARG:HE	1.45	0.81
1:B:1101:GLN:HA	1:B:1141:ARG:NH1	1.95	0.81
4:G:68:GLN:HG3	4:G:72:ILE:H	1.44	0.81
2:D:27:TRP:HB3	2:D:34:CYS:HA	1.61	0.81
1:B:676:LEU:HB3	1:B:710:LEU:HD22	1.62	0.81
3:E:151:ARG:HH12	4:G:31:LEU:HA	1.46	0.80
1:A:779:LEU:HD12	1:A:798:VAL:HG23	1.63	0.80
1:A:662:VAL:O	1:A:672:ARG:NH2	2.14	0.80
4:G:88:GLN:O	4:G:89:ARG:C	2.07	0.80
1:A:1184:LEU:HD11	1:A:1187:LYS:HB2	1.64	0.79
4:H:36:VAL:CG1	4:H:37:ASP:N	2.46	0.79
3:F:385:PRO:HG2	3:F:878:LEU:HD12	1.65	0.79
1:B:666:ASP:O	1:B:672:ARG:NH1	2.16	0.78
3:F:724:ALA:H	3:F:729:ARG:NH2	1.81	0.78
3:F:1623:LEU:HD13	3:F:1632:HIS:HB2	1.65	0.78
3:E:724:ALA:H	3:E:729:ARG:NH2	1.81	0.78
3:E:1666:ARG:HG3	3:E:1668:PRO:HD2	1.66	0.78
2:D:303:GLU:O	2:D:305:LYS:NZ	2.17	0.78
3:E:1434:ASN:O	3:E:1438:GLN:NE2	2.16	0.78
3:F:151:ARG:NH2	4:H:32:ILE:O	2.17	0.78
3:F:1434:ASN:O	3:F:1438:GLN:NE2	2.16	0.78
1:B:686:HIS:O	1:B:689:GLN:NE2	2.18	0.77
1:A:957:ARG:HH22	1:A:960:ARG:HD3	1.49	0.77
3:E:807:ARG:HD2	3:E:880:ILE:HG13	1.66	0.77
2:C:303:GLU:O	2:C:305:LYS:NZ	2.17	0.77
1:B:2072:GLN:HE22	3:F:251:GLU:HG3	1.48	0.77
3:E:1623:LEU:HD13	3:E:1632:HIS:HB2	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1123:ASP:HA	1:A:1161:ARG:NH2	2.00	0.76
3:E:385:PRO:HG2	3:E:878:LEU:HD12	1.66	0.76
3:F:1666:ARG:HG3	3:F:1668:PRO:HD2	1.66	0.76
1:B:1444:GLU:O	1:B:1446:GLN:NE2	2.19	0.76
1:B:1266:GLN:HA	1:B:1269:TRP:HB2	1.67	0.76
1:B:1709:ARG:HH22	1:B:1711:ILE:HB	1.48	0.76
1:A:2511:ARG:HB3	1:A:2515:HIS:HA	1.67	0.76
3:F:131:ARG:NH2	3:F:1653:TYR:OH	2.18	0.76
3:E:721:LEU:HD12	3:E:722:THR:HG23	1.68	0.75
1:A:2024:HIS:HB2	1:A:2111:ILE:HD11	1.68	0.75
1:A:1296:SER:H	1:A:1301:ARG:HH22	1.33	0.75
1:B:1097:LEU:HD11	1:B:1135:ALA:HA	1.69	0.75
3:F:807:ARG:HD2	3:F:880:ILE:HG13	1.66	0.75
1:A:824:ILE:HG21	1:A:844:LEU:HD21	1.68	0.75
3:F:779:GLU:HA	3:F:807:ARG:HH22	1.51	0.75
3:E:721:LEU:HD21	3:E:754:LEU:HD12	1.69	0.74
3:E:438:LEU:HD12	3:E:439:PRO:HD2	1.68	0.74
4:H:87:ALA:O	4:H:90:LEU:CA	2.36	0.74
1:A:2296:GLY:O	1:A:2385:ASN:ND2	2.20	0.74
1:B:1423:LEU:O	1:B:1425:GLN:NE2	2.21	0.74
3:F:721:LEU:HD12	3:F:722:THR:HG23	1.68	0.74
1:B:709:GLU:OE1	1:B:759:HIS:ND1	2.20	0.74
3:F:438:LEU:HD12	3:F:439:PRO:HD2	1.69	0.73
3:E:779:GLU:HA	3:E:807:ARG:HH22	1.51	0.73
1:B:1717:MET:HG3	1:B:1754:LEU:HD13	1.69	0.73
3:E:131:ARG:NH2	3:E:1653:TYR:OH	2.18	0.73
3:E:537:VAL:O	3:E:576:ARG:NH2	2.22	0.73
1:A:1954:GLY:O	1:A:1958:HIS:ND1	2.21	0.73
4:H:34:HIS:C	4:H:36:VAL:H	1.92	0.73
3:F:721:LEU:HD21	3:F:754:LEU:HD12	1.69	0.72
4:G:87:ALA:O	4:G:90:LEU:CA	2.36	0.72
1:B:747:GLY:HA2	1:B:750:LYS:HE2	1.70	0.72
3:F:537:VAL:O	3:F:576:ARG:NH2	2.22	0.72
4:H:32:ILE:CD1	4:H:34:HIS:HD2	1.99	0.72
1:A:1227:GLU:HB3	1:A:1231:ILE:HD11	1.71	0.72
1:B:742:GLU:OE2	1:B:743:HIS:ND1	2.23	0.72
3:F:634:LEU:HD21	3:F:688:LEU:HD11	1.72	0.72
1:A:2253:TYR:HB2	1:A:2302:LEU:HD13	1.71	0.72
3:E:343:THR:HG22	3:E:345:GLU:H	1.55	0.72
3:E:384:ARG:NH2	3:E:878:LEU:O	2.23	0.72
3:E:634:LEU:HD21	3:E:688:LEU:HD11	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1211:VAL:HG22	3:E:553:THR:HG21	1.72	0.72
1:B:1737:GLN:HA	1:B:1740:LYS:HE2	1.72	0.72
1:A:2015:GLU:OE1	1:A:2018:ARG:NH1	2.24	0.71
1:A:1955:ARG:O	1:A:1959:GLN:NE2	2.23	0.71
1:B:1141:ARG:HD2	1:B:1141:ARG:C	2.11	0.71
3:F:384:ARG:NH2	3:F:878:LEU:O	2.23	0.71
1:A:2136:LEU:HD23	1:A:2153:ILE:HD11	1.71	0.71
4:G:34:HIS:C	4:G:36:VAL:H	1.92	0.71
1:A:736:GLN:OE1	1:B:1112:HIS:NE2	2.23	0.71
1:A:1712:ASP:OD2	1:A:1716:HIS:NE2	2.23	0.71
1:B:1044:MET:O	1:B:1049:GLN:NE2	2.23	0.71
1:A:2431:LEU:HD12	1:A:2432:MET:HG2	1.73	0.71
3:F:691:LEU:HD21	3:F:694:GLN:HB2	1.72	0.71
1:B:2332:TYR:O	1:B:2507:LYS:NZ	2.23	0.70
3:F:343:THR:HG22	3:F:345:GLU:H	1.55	0.70
1:B:2137:GLU:HA	1:B:2152:ARG:HD3	1.72	0.70
3:E:916:LYS:HE3	3:E:919:GLU:OE2	1.91	0.70
4:G:32:ILE:CD1	4:G:34:HIS:HD2	1.99	0.70
1:A:1087:SER:O	1:A:1090:ARG:NH1	2.23	0.70
3:F:548:TRP:HA	3:F:551:ILE:HD12	1.73	0.70
3:E:579:TYR:HA	3:E:582:LYS:HD3	1.73	0.70
3:F:916:LYS:HE3	3:F:919:GLU:OE2	1.91	0.70
2:D:46:ASN:ND2	2:D:88:ILE:O	2.24	0.70
3:F:379:HIS:HD2	3:F:381:ALA:H	1.39	0.70
2:C:137:HIS:HD1	2:C:139:ASN:H	1.40	0.70
1:A:1002:ARG:HG2	1:A:1037:LEU:HD11	1.73	0.69
3:E:379:HIS:HD2	3:E:381:ALA:H	1.39	0.69
3:E:959:CYS:SG	3:E:960:GLU:N	2.65	0.69
3:F:579:TYR:HA	3:F:582:LYS:HD3	1.73	0.69
3:E:1440:LYS:NZ	3:E:1441:ASP:O	2.23	0.69
3:E:1520:CYS:HB3	3:E:1523:CYS:HB2	1.74	0.69
4:H:23:ASP:OD1	4:H:24:THR:N	2.25	0.69
3:F:40:GLU:OE1	3:F:59:HIS:ND1	2.26	0.69
3:F:151:ARG:NH1	4:H:31:LEU:HA	2.03	0.69
1:B:662:VAL:O	1:B:672:ARG:NH2	2.25	0.69
1:B:1955:ARG:O	1:B:1959:GLN:NE2	2.25	0.69
1:B:2249:LEU:HD12	1:B:2302:LEU:HD21	1.74	0.69
3:E:101:ALA:HB2	3:E:142:GLU:HG3	1.74	0.69
3:E:691:LEU:HD21	3:E:694:GLN:HB2	1.72	0.69
3:E:548:TRP:HA	3:E:551:ILE:HD12	1.73	0.69
4:G:23:ASP:OD1	4:G:24:THR:N	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1185:GLY:N	1:A:1226:GLU:OE1	2.26	0.69
3:F:101:ALA:HB2	3:F:142:GLU:HG3	1.74	0.69
3:F:567:ASP:O	3:F:571:HIS:ND1	2.25	0.69
3:F:959:CYS:SG	3:F:960:GLU:N	2.65	0.69
3:F:1520:CYS:HB3	3:F:1523:CYS:HB2	1.74	0.69
1:B:1211:VAL:HG22	3:F:553:THR:HG21	1.75	0.69
3:E:172:VAL:HA	3:E:1667:LEU:HD11	1.74	0.69
1:B:1141:ARG:HD2	1:B:1142:LEU:N	2.08	0.69
1:B:1282:GLU:HG3	1:B:1286:ARG:HE	1.58	0.69
3:E:812:PRO:HA	3:E:815:PHE:HB3	1.73	0.69
3:F:172:VAL:HA	3:F:1667:LEU:HD11	1.74	0.69
2:D:137:HIS:HD1	2:D:139:ASN:H	1.40	0.68
3:F:82:GLU:HG2	3:F:1528:ILE:HD11	1.76	0.68
1:A:1000:VAL:O	1:A:1004:CYS:N	2.26	0.68
1:B:2264:GLU:O	1:B:2268:MET:HG3	1.93	0.68
2:C:46:ASN:ND2	2:C:88:ILE:O	2.24	0.68
3:E:46:ALA:O	3:E:47:ARG:HG2	1.94	0.68
3:F:535:SER:HA	3:F:547:ASN:HD21	1.59	0.68
3:F:812:PRO:HA	3:F:815:PHE:HB3	1.73	0.68
4:H:85:ASN:O	4:H:85:ASN:ND2	2.27	0.68
1:A:693:LEU:HD11	1:A:725:PHE:HD1	1.58	0.68
1:B:1677:LEU:HD21	1:B:1690:PRO:HG3	1.76	0.68
1:B:885:ILE:HD11	1:B:1568:ARG:HB3	1.76	0.68
3:E:535:SER:HA	3:E:547:ASN:HD21	1.59	0.68
1:B:1499:GLU:HG3	1:B:1500:LYS:HG2	1.75	0.68
4:G:85:ASN:ND2	4:G:85:ASN:O	2.27	0.68
1:B:2191:ASP:OD1	1:B:2193:ARG:NE	2.27	0.68
1:A:624:ARG:HB3	1:A:628:ARG:HH22	1.58	0.67
1:B:1924:VAL:O	1:B:1928:LYS:NZ	2.22	0.67
2:D:12:PRO:HB3	2:D:323:SER:HB3	1.77	0.67
3:E:40:GLU:OE1	3:E:59:HIS:ND1	2.26	0.67
4:G:87:ALA:C	4:G:89:ARG:N	2.34	0.67
1:A:970:MET:HG3	1:A:1306:LEU:HD13	1.75	0.67
1:B:772:MET:HG2	1:B:776:LEU:HD23	1.75	0.67
1:B:1345:LEU:HD21	1:B:1386:ARG:HG3	1.77	0.67
3:F:238:PRO:HD3	3:F:960:GLU:OE1	1.95	0.67
1:A:1133:LYS:HZ2	1:A:1169:LEU:HD21	1.59	0.67
3:E:82:GLU:HG2	3:E:1528:ILE:HD11	1.76	0.67
3:E:322:GLU:HA	3:E:325:ARG:HG2	1.76	0.67
3:E:364:LEU:HD11	3:E:700:LEU:HD11	1.77	0.67
1:B:1558:SER:O	1:B:1561:GLN:NE2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:G:34:HIS:O	4:G:36:VAL:N	2.28	0.67
1:A:1737:GLN:HA	1:A:1740:LYS:HE2	1.75	0.67
1:B:1315:ARG:NH2	1:B:1352:GLU:OE2	2.27	0.67
3:F:1440:LYS:NZ	3:F:1441:ASP:O	2.23	0.67
4:H:34:HIS:O	4:H:36:VAL:N	2.28	0.67
1:A:1264:ASN:O	1:A:1267:LYS:NZ	2.26	0.67
1:B:1263:ILE:O	1:B:1267:LYS:NZ	2.27	0.67
3:E:238:PRO:HD3	3:E:960:GLU:OE1	1.95	0.67
1:A:954:ALA:HB2	1:A:1317:LEU:HD21	1.77	0.66
1:A:1026:HIS:HA	1:A:1028:ARG:HH11	1.59	0.66
1:B:702:ASP:HB3	1:B:708:ARG:HH12	1.60	0.66
1:B:1096:LEU:O	1:B:1100:ILE:HG12	1.95	0.66
3:E:567:ASP:O	3:E:571:HIS:ND1	2.25	0.66
3:F:46:ALA:O	3:F:47:ARG:HG2	1.94	0.66
3:F:322:GLU:HA	3:F:325:ARG:HG2	1.76	0.66
4:H:91:GLU:OE1	4:H:95:LYS:NZ	2.28	0.66
1:A:1004:CYS:O	1:A:1009:ARG:NH2	2.28	0.66
4:H:86:THR:O	4:H:90:LEU:N	2.29	0.66
4:H:87:ALA:C	4:H:89:ARG:N	2.34	0.66
1:A:1069:LEU:HD13	3:E:467:LEU:HD12	1.77	0.66
1:A:1627:GLN:NE2	1:A:1632:ASP:OD2	2.28	0.66
1:A:2008:GLN:HB3	1:A:2136:LEU:HD11	1.77	0.66
3:F:719:LYS:O	3:F:723:ALA:N	2.25	0.66
4:G:86:THR:O	4:G:90:LEU:N	2.29	0.66
4:H:85:ASN:C	4:H:86:THR:CG2	2.60	0.66
1:A:630:LEU:HD12	1:A:652:VAL:HG23	1.78	0.66
1:B:440:LEU:O	1:B:444:VAL:N	2.28	0.66
1:A:1072:PRO:HA	1:A:1075:ILE:HD12	1.77	0.66
1:A:1103:PHE:HD2	1:A:1107:LEU:HD23	1.60	0.66
2:C:12:PRO:HB3	2:C:323:SER:HB3	1.76	0.66
1:A:1044:MET:O	1:A:1049:GLN:NE2	2.28	0.66
1:B:2246:LEU:HD22	1:B:2341:PRO:HB3	1.78	0.66
4:G:91:GLU:OE1	4:G:95:LYS:NZ	2.28	0.66
1:B:2057:MET:HA	1:B:2060:ARG:HE	1.61	0.65
1:B:2338:ASP:OD1	1:B:2340:HIS:ND1	2.26	0.65
1:B:1115:LEU:HA	1:B:1118:ILE:HD12	1.78	0.65
1:B:2511:ARG:NH2	1:B:2515:HIS:O	2.28	0.65
3:F:364:LEU:HD11	3:F:700:LEU:HD11	1.77	0.65
1:A:1493:LEU:HD23	1:A:1519:ALA:HB2	1.79	0.65
4:G:85:ASN:C	4:G:86:THR:CG2	2.60	0.65
3:E:582:LYS:O	3:E:585:SER:OG	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:719:LYS:O	3:E:723:ALA:N	2.25	0.65
1:B:1318:PHE:HE2	1:B:1360:LEU:HD22	1.61	0.65
2:C:279:SER:OG	2:C:281:ASP:OD1	2.14	0.65
3:F:68:CYS:SG	4:H:67:ALA:CA	2.78	0.65
1:A:1877:LEU:O	1:A:1881:THR:HG23	1.97	0.65
1:A:2204:LEU:HD22	1:A:2417:VAL:HG21	1.78	0.65
1:B:2037:LEU:HD11	1:B:2047:MET:HB3	1.79	0.65
3:E:188:ILE:HA	3:E:191:ILE:HG22	1.79	0.65
2:D:279:SER:OG	2:D:281:ASP:OD1	2.14	0.65
1:A:680:ASP:OD2	1:A:682:ARG:NH1	2.30	0.65
1:B:1647:HIS:NE2	1:B:1676:LEU:O	2.30	0.65
2:D:48:LEU:HG	2:D:319:ALA:HB2	1.79	0.64
3:F:569:GLN:HG2	3:F:572:ARG:HH21	1.62	0.64
4:G:77:ASP:O	4:G:78:PHE:HB2	1.97	0.64
3:E:212:LEU:O	3:E:215:VAL:HG22	1.97	0.64
1:A:1467:MET:HE3	1:A:1476:LEU:HB3	1.79	0.64
1:A:1501:TRP:O	1:A:1509:GLN:NE2	2.25	0.64
1:B:1005:ASP:HA	1:B:1009:ARG:HH12	1.61	0.64
3:E:41:ILE:HB	3:E:87:CYS:SG	2.37	0.64
3:E:531:ASN:HB3	3:E:554:ILE:HD11	1.79	0.64
3:F:188:ILE:HA	3:F:191:ILE:HG22	1.78	0.64
4:G:34:HIS:C	4:G:36:VAL:N	2.51	0.64
4:H:77:ASP:O	4:H:78:PHE:HB2	1.97	0.64
3:E:959:CYS:H	3:E:965:ARG:NH1	1.96	0.64
4:H:85:ASN:C	4:H:86:THR:HG23	2.17	0.64
3:F:212:LEU:O	3:F:215:VAL:HG22	1.96	0.64
4:G:85:ASN:C	4:G:86:THR:HG23	2.17	0.64
1:A:885:ILE:HD11	1:A:1568:ARG:HB3	1.79	0.64
3:F:41:ILE:HB	3:F:87:CYS:SG	2.37	0.64
3:F:531:ASN:HB3	3:F:554:ILE:HD11	1.79	0.64
1:A:1028:ARG:HD3	1:A:1029:PRO:HD3	1.80	0.64
1:A:1101:GLN:HB3	1:A:1141:ARG:HH11	1.63	0.64
1:A:1523:LEU:O	1:A:1525:GLN:NE2	2.30	0.64
1:A:1613:GLU:OE1	1:A:1616:ARG:NH2	2.30	0.64
3:F:68:CYS:HG	4:H:67:ALA:HA	1.61	0.64
3:F:959:CYS:H	3:F:965:ARG:NH1	1.96	0.64
1:B:1285:ARG:NH1	1:B:1311:ASN:OD1	2.29	0.64
1:B:2253:TYR:HB2	1:B:2302:LEU:HD13	1.80	0.64
1:A:1467:MET:CE	1:A:1476:LEU:HB3	2.29	0.63
2:C:48:LEU:HG	2:C:319:ALA:HB2	1.79	0.63
1:B:1271:ALA:HB3	1:B:1274:ARG:HH11	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:569:GLN:HG2	3:E:572:ARG:HH21	1.62	0.63
3:E:893:CYS:HB2	3:E:942:LEU:HD21	1.81	0.63
3:F:533:ARG:NH1	3:F:534:ASP:OD1	2.31	0.63
1:A:732:LYS:O	1:A:736:GLN:HG2	1.98	0.63
1:B:878:GLN:NE2	1:B:1569:ASP:OD2	2.31	0.63
1:B:998:LEU:HA	1:B:1001:ILE:HG22	1.81	0.63
3:F:694:GLN:HB3	3:F:697:LEU:HD13	1.81	0.63
1:A:2536:GLU:OE1	1:A:2536:GLU:N	2.29	0.63
1:B:2318:THR:O	1:B:2322:ARG:HG3	1.99	0.63
1:B:2519:LEU:HB3	1:B:2523:THR:HB	1.81	0.63
3:E:694:GLN:HB3	3:E:697:LEU:HD13	1.81	0.63
4:H:34:HIS:C	4:H:36:VAL:N	2.51	0.63
1:A:1096:LEU:O	1:A:1100:ILE:HG12	1.99	0.62
1:A:1375:ARG:HH12	1:A:1382:LEU:HD22	1.63	0.62
3:E:533:ARG:NH1	3:E:534:ASP:OD1	2.31	0.62
1:A:747:GLY:HA2	1:A:750:LYS:HD2	1.81	0.62
1:A:2512:ASP:OD1	1:A:2513:PHE:N	2.31	0.62
3:E:36:ASP:OD1	3:E:39:ARG:NH1	2.32	0.62
3:E:332:TYR:HE2	3:E:340:PRO:HD3	1.64	0.62
3:F:875:HIS:HB3	3:F:877:TYR:HE2	1.64	0.62
1:A:733:MET:O	1:A:736:GLN:N	2.32	0.62
1:B:1031:MET:HA	1:B:1034:ILE:HD12	1.81	0.62
3:F:893:CYS:HB2	3:F:942:LEU:HD21	1.81	0.62
1:A:727:MET:SD	3:F:447:HIS:NE2	2.73	0.62
1:A:2246:LEU:HD22	1:A:2341:PRO:HB3	1.81	0.62
1:B:601:GLN:HB2	1:B:604:ARG:HH21	1.63	0.62
1:B:1877:LEU:O	1:B:1881:THR:HG23	1.99	0.62
2:C:198:ASN:HB2	2:C:213:LYS:HD3	1.81	0.62
3:F:562:LEU:HD13	3:F:570:LEU:HD22	1.82	0.62
3:F:971:VAL:O	3:F:975:ILE:HG12	1.99	0.62
2:C:296:LEU:HB2	2:C:306:ARG:HB2	1.81	0.62
3:E:971:VAL:O	3:E:975:ILE:HG12	1.99	0.62
1:A:2333:ILE:HD11	1:A:2508:LEU:HD22	1.82	0.62
4:H:86:THR:C	4:H:89:ARG:H	2.03	0.62
4:H:88:GLN:O	4:H:89:ARG:O	2.18	0.62
1:A:1890:ARG:O	1:A:1893:SER:OG	2.14	0.62
1:B:1087:SER:O	1:B:1090:ARG:NH1	2.32	0.62
3:F:582:LYS:O	3:F:585:SER:OG	2.13	0.62
1:A:1072:PRO:HG3	1:A:1110:TYR:OH	2.00	0.61
3:F:36:ASP:OD1	3:F:39:ARG:NH1	2.32	0.61
1:A:1581:GLU:OE1	1:A:1585:ARG:NE	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1776:TYR:O	1:A:1780:THR:HG23	2.00	0.61
1:B:839:VAL:O	1:B:843:THR:HG23	2.00	0.61
3:E:724:ALA:H	3:E:729:ARG:HH22	1.49	0.61
3:F:442:HIS:NE2	3:F:1431:VAL:O	2.27	0.61
1:B:1265:LEU:HB3	1:B:1269:TRP:CD1	2.35	0.61
3:F:332:TYR:HE2	3:F:340:PRO:HD3	1.64	0.61
3:F:907:ARG:HA	3:F:910:ARG:HE	1.66	0.61
4:G:88:GLN:O	4:G:89:ARG:O	2.18	0.61
1:A:1318:PHE:HE2	1:A:1360:LEU:HD22	1.66	0.61
1:A:1966:ARG:HG3	1:A:1967:TYR:HD2	1.64	0.61
1:B:759:HIS:O	1:B:763:ASN:ND2	2.28	0.61
1:B:954:ALA:HB2	1:B:1317:LEU:HD21	1.81	0.61
3:E:668:CYS:SG	3:E:669:HIS:N	2.74	0.61
3:F:148:ARG:HE	4:H:32:ILE:HD11	1.66	0.61
1:A:2311:GLU:OE1	1:A:2311:GLU:N	2.26	0.61
1:B:980:LYS:HA	1:B:1022:PHE:HE1	1.65	0.61
2:C:63:GLN:NE2	2:C:85:ASN:O	2.32	0.61
3:E:505:HIS:NE2	3:E:743:ASN:O	2.32	0.61
3:F:249:GLU:OE1	3:F:249:GLU:N	2.33	0.61
3:F:563:ARG:HH11	3:F:616:GLU:H	1.47	0.61
3:F:1650:ILE:HD12	3:F:1685:MET:HE2	1.81	0.61
1:A:752:GLN:O	1:A:756:MET:HG2	2.01	0.61
1:A:1082:PHE:HB3	1:A:1121:LEU:HD21	1.83	0.61
1:A:1271:ALA:HB3	1:A:1274:ARG:HH11	1.65	0.61
1:A:2137:GLU:HA	1:A:2152:ARG:HH11	1.66	0.61
1:B:2018:ARG:NH2	1:B:2063:GLN:OE1	2.34	0.61
3:E:442:HIS:NE2	3:E:1431:VAL:O	2.27	0.61
1:B:1164:ASP:OD2	1:B:1201:ARG:NH1	2.33	0.61
3:F:118:GLN:NE2	3:F:119:LYS:HG3	2.15	0.61
1:A:1005:ASP:HA	1:A:1009:ARG:HH12	1.65	0.61
1:A:1709:ARG:HE	1:A:1711:ILE:HB	1.66	0.61
1:B:601:GLN:OE1	1:B:604:ARG:NH2	2.33	0.61
1:B:2397:ARG:NH1	1:B:2526:GLU:OE2	2.33	0.61
3:F:72:HIS:NE2	3:F:112:GLN:HG3	2.16	0.61
1:A:1375:ARG:HH22	1:A:1382:LEU:HB2	1.65	0.61
2:D:296:LEU:HB2	2:D:306:ARG:HB2	1.82	0.61
3:F:128:LEU:HD22	3:F:131:ARG:HH12	1.66	0.61
1:B:2072:GLN:NE2	3:F:251:GLU:HG3	2.15	0.60
2:D:198:ASN:HB2	2:D:213:LYS:HD3	1.82	0.60
2:D:248:ARG:NE	2:D:250:SER:OG	2.34	0.60
3:F:668:CYS:SG	3:F:669:HIS:N	2.74	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:726:ASP:OD1	3:F:727:ALA:N	2.35	0.60
3:E:118:GLN:NE2	3:E:119:LYS:HG3	2.15	0.60
3:E:563:ARG:HH11	3:E:616:GLU:H	1.47	0.60
1:A:1793:TRP:O	1:A:1797:ASN:ND2	2.34	0.60
1:A:2080:GLU:O	1:A:2083:GLU:HG3	2.01	0.60
1:B:1777:SER:O	1:B:1780:THR:OG1	2.16	0.60
1:B:2161:GLN:OE1	1:B:2162:VAL:N	2.34	0.60
3:E:72:HIS:NE2	3:E:112:GLN:HG3	2.16	0.60
3:E:875:HIS:HB3	3:E:877:TYR:HE2	1.64	0.60
1:A:2018:ARG:NH2	1:A:2063:GLN:OE1	2.35	0.60
2:D:63:GLN:NE2	2:D:85:ASN:O	2.32	0.60
2:D:197:TRP:CD1	2:D:212:PRO:HA	2.37	0.60
3:E:128:LEU:HD22	3:E:131:ARG:HH12	1.65	0.60
3:E:562:LEU:HD13	3:E:570:LEU:HD22	1.82	0.60
1:A:1031:MET:O	1:A:1034:ILE:HB	2.02	0.60
1:B:1440:PHE:HB3	1:B:1442:GLU:OE1	2.02	0.60
3:E:249:GLU:OE1	3:E:249:GLU:N	2.33	0.60
3:E:726:ASP:OD1	3:E:727:ALA:N	2.34	0.60
3:F:1637:LEU:HD21	4:H:93:LEU:HD21	1.82	0.60
1:B:2298:ASP:H	1:B:2382:MET:HE1	1.66	0.60
2:C:248:ARG:NE	2:C:250:SER:OG	2.34	0.60
3:E:369:VAL:HG13	3:E:494:LEU:HD11	1.84	0.60
3:E:1538:SER:O	3:E:1607:MET:N	2.35	0.60
3:F:733:THR:HG21	3:F:766:ILE:HG23	1.84	0.60
1:A:2187:LYS:O	1:A:2234:SER:OG	2.14	0.60
1:B:1889:PHE:CE2	1:B:1926:GLY:HA3	2.36	0.60
2:C:173:ILE:HA	2:C:189:ASN:HA	1.84	0.60
3:F:109:TYR:O	3:F:112:GLN:NE2	2.34	0.60
4:H:5:ASP:OD1	4:H:6:ASN:N	2.34	0.60
4:H:81:ARG:HH11	4:H:81:ARG:CG	2.15	0.60
1:A:1950:ARG:HB3	1:A:1953:VAL:HG12	1.83	0.59
3:F:1538:SER:O	3:F:1607:MET:N	2.35	0.59
1:B:2279:THR:OG1	1:B:2281:MET:SD	2.51	0.59
4:G:86:THR:C	4:G:89:ARG:H	2.03	0.59
1:B:1338:ILE:HG12	1:B:1372:LEU:HD21	1.83	0.59
3:E:733:THR:HG21	3:E:766:ILE:HG23	1.84	0.59
3:E:1650:ILE:HD12	3:E:1685:MET:HE2	1.82	0.59
4:G:81:ARG:HH11	4:G:81:ARG:CG	2.15	0.59
1:A:1921:GLU:HG2	1:A:1922:ALA:N	2.17	0.59
1:B:957:ARG:HA	1:B:957:ARG:CZ	2.31	0.59
1:B:1004:CYS:O	1:B:1009:ARG:NH2	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:937:ASN:HB2	1:A:946:PHE:CE2	2.38	0.59
1:A:1805:LYS:HA	1:A:1808:ASN:HD21	1.67	0.59
1:B:1787:TYR:CE1	1:B:1895:SER:HB3	2.37	0.59
2:C:197:TRP:CD1	2:C:212:PRO:HA	2.37	0.59
2:D:80:SER:OG	4:H:105:ASN:OD1	2.20	0.59
2:D:246:ILE:HB	2:D:256:THR:HB	1.84	0.59
3:E:907:ARG:HA	3:E:910:ARG:HE	1.66	0.59
3:F:505:HIS:NE2	3:F:743:ASN:O	2.32	0.59
1:A:952:MET:HE1	1:A:989:PHE:HB3	1.84	0.59
1:A:2338:ASP:OD1	1:A:2340:HIS:ND1	2.31	0.59
3:E:109:TYR:O	3:E:112:GLN:NE2	2.34	0.59
3:E:415:SER:OG	3:E:416:ASP:N	2.35	0.59
3:E:663:ILE:H	3:E:663:ILE:HD12	1.66	0.59
3:F:415:SER:OG	3:F:416:ASP:N	2.36	0.59
3:F:663:ILE:H	3:F:663:ILE:HD12	1.66	0.59
4:G:5:ASP:OD1	4:G:6:ASN:N	2.34	0.59
1:B:2024:HIS:HB2	1:B:2111:ILE:HD11	1.84	0.59
2:D:173:ILE:HA	2:D:189:ASN:HA	1.84	0.59
3:F:332:TYR:HE1	3:F:426:LEU:HB2	1.68	0.59
1:A:709:GLU:OE1	1:A:759:HIS:ND1	2.36	0.59
1:A:757:LEU:HD12	1:A:760:LEU:HD11	1.85	0.59
1:A:1889:PHE:CE1	1:A:1906:VAL:HG21	2.38	0.59
2:C:39:GLN:O	2:C:68:TYR:OH	2.21	0.59
3:E:332:TYR:HE1	3:E:426:LEU:HB2	1.68	0.59
1:A:1477:MET:O	1:A:1480:ARG:HD3	2.03	0.58
1:A:2121:LEU:HD12	1:A:2126:VAL:HG21	1.85	0.58
1:A:1901:GLN:HE21	1:A:1905:ARG:HH12	1.50	0.58
1:B:1416:LEU:O	1:B:1420:ASN:ND2	2.36	0.58
3:F:724:ALA:H	3:F:729:ARG:HH22	1.49	0.58
4:H:68:GLN:HG3	4:H:72:ILE:N	2.16	0.58
1:A:1382:LEU:O	1:A:1385:GLU:HB3	2.04	0.58
3:E:175:ASP:HB2	3:E:1666:ARG:HH21	1.69	0.58
3:E:854:TYR:HD1	4:G:13:HIS:HD1	1.51	0.58
4:H:68:GLN:O	4:H:68:GLN:HG2	2.03	0.58
2:C:299:VAL:HG13	2:C:300:GLU:HG2	1.85	0.58
1:A:1215:ARG:NH2	1:A:1216:ILE:HG23	2.19	0.58
1:B:1905:ARG:O	1:B:1908:THR:OG1	2.19	0.58
2:C:246:ILE:HB	2:C:256:THR:HB	1.84	0.58
3:F:148:ARG:NE	4:H:32:ILE:HD11	2.19	0.58
3:F:175:ASP:HB2	3:F:1666:ARG:HH21	1.69	0.58
3:F:369:VAL:HG13	3:F:494:LEU:HD11	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:890:LYS:HD2	3:F:938:TRP:CE2	2.39	0.58
1:A:662:VAL:HA	1:A:665:THR:HG22	1.86	0.58
1:A:1950:ARG:HD3	1:A:1951:PRO:HD2	1.86	0.58
2:D:299:VAL:HG13	2:D:300:GLU:HG2	1.85	0.58
4:G:68:GLN:O	4:G:69:SER:C	2.42	0.58
4:H:68:GLN:O	4:H:69:SER:C	2.42	0.58
1:A:671:ILE:O	1:A:675:VAL:HG12	2.03	0.58
1:A:1615:ILE:HA	1:A:1618:ILE:HG12	1.86	0.58
1:A:1892:ILE:HG23	1:A:1902:ASP:OD2	2.04	0.58
1:B:2209:LEU:HD11	1:B:2220:LEU:HB2	1.86	0.58
1:A:1282:GLU:HG2	1:A:1286:ARG:HE	1.69	0.57
1:B:1212:LEU:O	1:B:1216:ILE:HG12	2.04	0.57
3:E:890:LYS:HD2	3:E:938:TRP:CE2	2.39	0.57
4:H:68:GLN:HG2	4:H:72:ILE:H	1.67	0.57
1:B:1970:GLN:HB2	1:B:2144:TYR:CZ	2.40	0.57
4:G:68:GLN:O	4:G:68:GLN:HG2	2.04	0.57
1:A:2182:PHE:HB3	1:A:2184:PHE:HE1	1.68	0.57
2:D:13:VAL:HG13	2:D:28:GLN:HG3	1.86	0.57
3:F:716:ILE:O	3:F:720:ILE:HG12	2.05	0.57
1:B:1382:LEU:O	1:B:1385:GLU:HG3	2.05	0.57
3:F:537:VAL:HG11	3:F:573:PHE:CD1	2.40	0.57
4:G:68:GLN:O	4:G:71:ASP:CB	2.52	0.57
1:A:1097:LEU:HD21	1:A:1135:ALA:HA	1.85	0.57
1:B:2195:ASP:OD1	1:B:2358:PHE:HB2	2.04	0.57
2:C:123:ARG:NH1	2:C:160:ASP:OD1	2.37	0.57
2:D:123:ARG:NH1	2:D:160:ASP:OD1	2.37	0.57
2:D:137:HIS:ND1	2:D:139:ASN:OD1	2.37	0.57
3:E:722:THR:C	3:E:729:ARG:HH12	2.08	0.57
3:F:784:LEU:O	3:F:788:ILE:HG12	2.05	0.57
3:F:893:CYS:SG	3:F:894:HIS:N	2.78	0.57
4:H:4:LEU:HA	4:H:9:ILE:HD11	1.87	0.57
1:A:586:LEU:HD12	1:A:625:THR:HG21	1.86	0.57
1:A:1377:ASP:OD1	1:A:1406:LYS:NZ	2.37	0.57
2:C:13:VAL:HG13	2:C:28:GLN:HG3	1.86	0.57
3:E:527:ALA:HA	3:E:530:ILE:HD12	1.87	0.57
1:A:1213:ILE:HA	1:A:1216:ILE:HG12	1.86	0.57
1:B:1788:LYS:H	1:B:1788:LYS:HD2	1.69	0.57
2:C:242:GLN:NE2	2:C:267:GLU:OE2	2.29	0.57
3:E:959:CYS:H	3:E:965:ARG:HH12	1.51	0.57
4:H:68:GLN:O	4:H:71:ASP:CB	2.53	0.57
3:F:737:ARG:NH1	3:F:772:ASP:OD1	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:584:LEU:O	1:A:588:THR:HG23	2.04	0.57
1:A:874:THR:OG1	1:A:875:GLU:OE1	2.21	0.57
1:A:1921:GLU:HA	1:A:1924:VAL:HG22	1.86	0.57
1:A:2332:TYR:O	1:A:2507:LYS:NZ	2.37	0.57
1:B:1101:GLN:HA	1:B:1141:ARG:HH11	1.67	0.57
3:E:151:ARG:NH2	4:G:32:ILE:O	2.38	0.57
3:E:537:VAL:HG11	3:E:573:PHE:CD1	2.40	0.57
3:E:737:ARG:NH1	3:E:772:ASP:OD1	2.31	0.57
3:F:115:SER:O	3:F:118:GLN:NE2	2.38	0.57
1:A:1153:SER:OG	1:B:701:ASN:O	2.23	0.57
1:A:2408:ARG:HH12	1:A:2509:THR:HA	1.70	0.57
1:B:1954:GLY:O	1:B:1958:HIS:ND1	2.38	0.57
3:E:115:SER:O	3:E:118:GLN:NE2	2.38	0.57
4:G:68:GLN:HG3	4:G:72:ILE:N	2.17	0.57
1:A:857:PRO:HA	1:A:860:LYS:HB2	1.86	0.56
1:A:1414:GLU:OE2	1:A:1452:LYS:NZ	2.37	0.56
1:B:1116:PRO:HB2	1:B:1117:PRO:HD3	1.87	0.56
3:F:722:THR:C	3:F:729:ARG:HH12	2.08	0.56
1:A:1190:ILE:HG13	1:A:1191:PHE:HD1	1.70	0.56
1:A:589:LEU:HD21	1:A:629:LEU:HD11	1.85	0.56
1:A:854:VAL:HG22	1:A:855:VAL:HG13	1.87	0.56
1:B:1194:MET:N	1:B:1194:MET:SD	2.79	0.56
2:C:171:VAL:HG21	2:C:189:ASN:HD22	1.70	0.56
3:E:396:LEU:O	3:E:400:ILE:HG12	2.05	0.56
3:E:539:GLN:OE1	3:E:539:GLN:N	2.38	0.56
3:E:680:SER:HA	3:E:683:GLN:NE2	2.21	0.56
3:E:687:ASN:O	3:E:690:SER:OG	2.23	0.56
3:E:939:GLY:O	3:E:943:LEU:HD12	2.06	0.56
3:E:1512:LEU:HD23	3:E:1515:HIS:HB2	1.87	0.56
3:E:1615:GLU:OE1	3:E:1618:ARG:NH2	2.38	0.56
4:H:64:TYR:O	4:H:64:TYR:HD1	1.88	0.56
1:A:2044:VAL:HG23	1:A:2045:LYS:HD2	1.87	0.56
1:B:2169:PRO:HB3	1:B:2187:LYS:HD2	1.87	0.56
3:E:557:TRP:CD2	3:E:558:PRO:HD2	2.41	0.56
3:F:527:ALA:HA	3:F:530:ILE:HD12	1.87	0.56
1:A:779:LEU:CD1	1:A:798:VAL:HG23	2.35	0.56
1:A:1000:VAL:HA	1:A:1003:VAL:HG12	1.88	0.56
1:A:1112:HIS:CE1	1:A:1113:LEU:HD23	2.41	0.56
1:A:2037:LEU:HD22	1:A:2047:MET:HB3	1.87	0.56
1:B:974:ALA:O	1:B:978:ILE:HG12	2.06	0.56
1:B:1645:SER:HB3	1:B:1648:GLU:HG3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:247:TRP:HZ3	2:C:254:LEU:HG	1.71	0.56
3:E:784:LEU:O	3:E:788:ILE:HG12	2.04	0.56
1:A:1360:LEU:O	1:A:1364:MET:HG2	2.05	0.56
1:A:1633:TRP:HA	1:A:1636:ILE:HD12	1.87	0.56
1:A:2024:HIS:NE2	1:A:2025:GLU:OE2	2.39	0.56
1:B:1505:ASN:OD1	1:B:1506:ASP:N	2.35	0.56
3:E:893:CYS:SG	3:E:894:HIS:N	2.77	0.56
3:E:904:GLU:O	3:E:907:ARG:HD3	2.05	0.56
3:F:151:ARG:NH1	4:H:31:LEU:HD23	2.20	0.56
3:F:939:GLY:O	3:F:943:LEU:HD12	2.06	0.56
1:A:2497:ALA:O	1:A:2500:ILE:HG12	2.06	0.56
1:B:1122:PHE:HA	1:B:1132:ARG:HG2	1.88	0.56
1:B:1140:ASP:HA	1:B:1176:THR:HG23	1.88	0.56
1:B:1463:TYR:HE2	1:B:1479:GLY:HA3	1.71	0.56
2:C:137:HIS:ND1	2:C:139:ASN:OD1	2.38	0.56
3:E:737:ARG:HG2	3:E:773:ILE:HD12	1.87	0.56
1:A:1681:PRO:HA	1:A:1684:GLN:HG3	1.87	0.56
1:B:1103:PHE:HD2	1:B:1107:LEU:HD23	1.71	0.56
3:E:716:ILE:O	3:E:720:ILE:HG12	2.05	0.56
3:E:724:ALA:O	3:E:729:ARG:NH2	2.39	0.56
1:A:1806:HIS:O	1:A:1809:GLN:NE2	2.39	0.56
1:B:1119:VAL:HA	1:B:1122:PHE:CE1	2.40	0.56
2:D:247:TRP:HZ3	2:D:254:LEU:HG	1.71	0.56
3:E:568:GLU:OE1	3:E:568:GLU:N	2.37	0.56
3:F:680:SER:HA	3:F:683:GLN:NE2	2.21	0.56
4:G:4:LEU:HA	4:G:9:ILE:HD11	1.87	0.56
1:A:1108:ASP:OD1	1:A:1109:ASP:N	2.40	0.55
1:A:1111:LEU:HD22	1:A:1151:TYR:CD2	2.41	0.55
1:B:1463:TYR:O	1:B:1467:MET:HG2	2.05	0.55
3:F:556:LYS:HE3	3:F:607:GLN:HE22	1.71	0.55
3:F:557:TRP:CD2	3:F:558:PRO:HD2	2.41	0.55
4:G:68:GLN:HG2	4:G:72:ILE:H	1.67	0.55
1:A:2204:LEU:O	1:A:2207:THR:OG1	2.15	0.55
3:F:687:ASN:O	3:F:690:SER:OG	2.23	0.55
1:A:712:ILE:HA	1:A:715:VAL:HG22	1.88	0.55
1:A:1164:ASP:OD2	1:A:1201:ARG:NH1	2.39	0.55
1:A:1191:PHE:HA	1:A:1194:MET:HE1	1.88	0.55
1:A:1892:ILE:HD11	1:A:1930:ILE:HG21	1.87	0.55
3:E:228:ILE:HG13	3:E:232:LEU:HD23	1.89	0.55
3:E:958:GLN:N	3:E:965:ARG:HH12	2.04	0.55
3:F:904:GLU:O	3:F:907:ARG:HD3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:G:64:TYR:O	4:G:64:TYR:HD1	1.88	0.55
1:B:1712:ASP:O	1:B:1716:HIS:ND1	2.40	0.55
2:D:39:GLN:O	2:D:68:TYR:OH	2.21	0.55
3:F:396:LEU:O	3:F:400:ILE:HG12	2.05	0.55
3:F:724:ALA:O	3:F:729:ARG:NH2	2.39	0.55
3:F:830:LYS:HA	3:F:833:ARG:HG2	1.89	0.55
1:A:633:SER:O	1:A:644:VAL:N	2.40	0.55
1:A:819:GLU:OE2	1:A:819:GLU:N	2.35	0.55
1:A:1397:LEU:O	1:A:1401:GLU:HG2	2.06	0.55
1:A:2074:TYR:HB3	1:A:2078:LEU:HD23	1.88	0.55
3:E:940:LEU:HD21	3:E:984:ILE:HD11	1.89	0.55
1:A:673:TYR:HE1	1:A:710:LEU:HD22	1.71	0.55
1:A:1889:PHE:CE2	1:A:1926:GLY:HA3	2.42	0.55
3:E:118:GLN:HA	3:E:121:LEU:HG	1.89	0.55
1:A:1433:LEU:HD22	1:A:1453:LEU:HD13	1.87	0.55
1:A:2361:CYS:HG	1:A:2362:PHE:HD1	1.52	0.55
1:B:1200:VAL:HG12	1:B:1203:ARG:HH22	1.71	0.55
1:A:1888:PHE:HD1	1:A:1902:ASP:OD1	1.89	0.55
1:B:2027:TRP:CZ2	1:B:2078:LEU:HD22	2.41	0.55
2:D:193:ASN:HB3	2:D:215:LYS:HE2	1.89	0.55
3:F:128:LEU:O	3:F:131:ARG:HG2	2.07	0.55
3:F:958:GLN:N	3:F:965:ARG:HH12	2.04	0.55
3:F:1512:LEU:HD23	3:F:1515:HIS:HB2	1.87	0.55
1:B:702:ASP:H	1:B:708:ARG:CZ	2.19	0.55
2:D:136:LEU:HD21	2:D:140:GLN:HG3	1.89	0.55
3:E:438:LEU:HD23	3:E:443:SER:HB2	1.89	0.55
3:F:437:ILE:O	3:F:437:ILE:HG22	2.07	0.55
3:F:737:ARG:HG2	3:F:773:ILE:HD12	1.87	0.55
3:F:911:THR:O	3:F:911:THR:OG1	2.25	0.55
1:A:2520:ASP:OD1	1:A:2523:THR:OG1	2.20	0.55
3:E:556:LYS:HE3	3:E:607:GLN:HE22	1.71	0.55
3:E:911:THR:O	3:E:911:THR:OG1	2.25	0.55
3:F:136:GLN:NE2	3:F:181:ASP:OD1	2.39	0.55
1:A:1129:LEU:HD23	1:A:1168:GLU:OE2	2.08	0.54
1:A:1375:ARG:HG3	1:A:1376:ASP:N	2.23	0.54
1:B:2024:HIS:NE2	1:B:2025:GLU:OE2	2.40	0.54
2:D:94:HIS:ND1	2:D:140:GLN:HG2	2.22	0.54
3:F:332:TYR:CE1	3:F:426:LEU:HD12	2.42	0.54
3:F:959:CYS:H	3:F:965:ARG:HH12	1.51	0.54
1:A:1489:GLU:OE1	1:A:1491:GLY:N	2.40	0.54
3:E:332:TYR:CE1	3:E:426:LEU:HD12	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:228:ILE:HG13	3:F:232:LEU:HD23	1.89	0.54
1:A:769:ARG:NH2	1:A:808:VAL:O	2.41	0.54
1:A:1193:PRO:HG2	1:A:1194:MET:SD	2.47	0.54
1:A:1970:GLN:HB2	1:A:2144:TYR:CZ	2.43	0.54
1:A:2408:ARG:NH1	1:A:2508:LEU:O	2.40	0.54
1:A:2426:LEU:HG	1:A:2427:LEU:HD22	1.90	0.54
2:C:106:ASP:OD1	2:C:107:CYS:N	2.39	0.54
3:E:136:GLN:NE2	3:E:181:ASP:OD1	2.39	0.54
3:F:94:ASN:HD21	3:F:99:VAL:HG11	1.71	0.54
1:B:769:ARG:NH2	1:B:812:GLU:OE2	2.38	0.54
1:B:820:LEU:O	1:B:824:ILE:HG12	2.07	0.54
1:B:1444:GLU:OE2	1:B:1446:GLN:NE2	2.40	0.54
3:E:62:ASN:O	3:E:66:LEU:HG	2.08	0.54
3:F:62:ASN:O	3:F:66:LEU:HG	2.08	0.54
3:F:336:ARG:HH12	3:F:874:PRO:HD3	1.73	0.54
3:F:387:LEU:H	3:F:387:LEU:HD12	1.72	0.54
3:E:387:LEU:HD12	3:E:387:LEU:H	1.72	0.54
3:E:628:LYS:HA	3:E:631:VAL:HG12	1.89	0.54
3:F:399:PHE:HB3	3:F:404:LEU:HD13	1.89	0.54
1:A:1271:ALA:HB3	1:A:1274:ARG:NH1	2.22	0.54
1:A:1383:LEU:HB3	1:A:1399:TYR:HE1	1.73	0.54
1:B:819:GLU:HA	1:B:822:ILE:HG12	1.88	0.54
1:B:931:THR:HB	1:B:935:LEU:HD12	1.90	0.54
1:B:1615:ILE:HA	1:B:1618:ILE:HG12	1.90	0.54
2:C:94:HIS:ND1	2:C:140:GLN:HG2	2.22	0.54
1:A:1889:PHE:CD2	1:A:1926:GLY:HA3	2.42	0.54
1:B:1633:TRP:HA	1:B:1636:ILE:HG22	1.88	0.54
1:B:2285:GLU:HG3	2:D:272:TRP:CZ2	2.43	0.54
3:E:437:ILE:HG22	3:E:437:ILE:O	2.07	0.54
3:E:912:PRO:HG2	3:E:914:LEU:HD11	1.90	0.54
3:F:568:GLU:OE1	3:F:568:GLU:N	2.37	0.54
3:F:940:LEU:HD21	3:F:984:ILE:HD11	1.89	0.54
1:B:2000:GLU:OE1	1:B:2000:GLU:N	2.40	0.54
1:B:2204:LEU:HD22	1:B:2417:VAL:HG21	1.90	0.54
3:F:628:LYS:HA	3:F:631:VAL:HG12	1.89	0.54
1:A:2279:THR:OG1	1:A:2281:MET:SD	2.60	0.54
1:B:1181:VAL:HG23	1:B:1212:LEU:HD13	1.89	0.54
1:B:1401:GLU:HG3	1:B:1405:GLN:NE2	2.23	0.54
1:B:2321:THR:HG23	1:B:2387:MET:HE2	1.90	0.54
3:E:225:GLU:O	3:E:229:THR:HG23	2.07	0.54
3:E:807:ARG:HG3	3:E:880:ILE:HG21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:820:GLU:OE2	3:F:821:ARG:HD3	2.08	0.54
3:F:912:PRO:HG2	3:F:914:LEU:HD11	1.90	0.54
1:A:2000:GLU:OE1	1:A:2000:GLU:N	2.41	0.54
3:E:485:ARG:HH12	3:E:488:LYS:HE3	1.73	0.54
3:F:118:GLN:HA	3:F:121:LEU:HG	1.89	0.54
3:F:807:ARG:HG3	3:F:880:ILE:HG21	1.90	0.54
1:A:700:LEU:O	1:A:708:ARG:NE	2.25	0.53
1:A:1348:GLN:O	1:A:1386:ARG:NH2	2.40	0.53
2:C:136:LEU:HD21	2:C:140:GLN:HG3	1.89	0.53
3:E:526:GLU:HG2	3:E:527:ALA:H	1.73	0.53
3:F:225:GLU:O	3:F:229:THR:HG23	2.07	0.53
3:F:438:LEU:HD23	3:F:443:SER:HB2	1.90	0.53
1:A:2426:LEU:HD23	1:A:2426:LEU:H	1.72	0.53
1:B:2316:ARG:NE	1:B:2349:LEU:O	2.38	0.53
2:C:193:ASN:HB3	2:C:215:LYS:HE2	1.90	0.53
2:D:171:VAL:HG21	2:D:189:ASN:HD22	1.70	0.53
3:E:830:LYS:HA	3:E:833:ARG:HG2	1.88	0.53
3:E:961:VAL:HB	3:E:964:ILE:HD12	1.90	0.53
3:F:916:LYS:NZ	3:F:918:GLU:OE1	2.29	0.53
1:A:1440:PHE:HB3	1:A:1442:GLU:OE1	2.09	0.53
1:B:938:MET:SD	1:B:2306:LYS:HA	2.49	0.53
1:B:1508:THR:O	1:B:1512:MET:HG2	2.09	0.53
1:B:1948:THR:HG21	1:B:1953:VAL:HG13	1.90	0.53
1:B:1960:LEU:O	1:B:1964:ILE:HG12	2.08	0.53
1:B:2392:LEU:HD23	1:B:2392:LEU:H	1.73	0.53
3:E:94:ASN:HD21	3:E:99:VAL:HG11	1.71	0.53
1:A:2165:SER:OG	1:A:2166:LYS:N	2.41	0.53
3:E:128:LEU:O	3:E:131:ARG:HG2	2.07	0.53
3:E:151:ARG:HA	3:E:154:ILE:HG12	1.89	0.53
3:E:473:LEU:HA	3:E:476:LEU:HD12	1.90	0.53
3:E:820:GLU:OE2	3:E:821:ARG:HD3	2.08	0.53
3:E:1623:LEU:HD11	3:E:1629:THR:HG23	1.90	0.53
1:A:1111:LEU:HD22	1:A:1151:TYR:CE2	2.43	0.53
1:A:1402:LEU:HA	1:A:1405:GLN:OE1	2.08	0.53
3:E:357:ARG:NH2	3:E:358:PHE:O	2.41	0.53
3:E:399:PHE:HB3	3:E:404:LEU:HD13	1.89	0.53
3:F:473:LEU:HA	3:F:476:LEU:HD12	1.91	0.53
3:F:526:GLU:HG2	3:F:527:ALA:H	1.73	0.53
4:G:66:TYR:C	4:G:66:TYR:CD2	2.81	0.53
4:H:86:THR:C	4:H:89:ARG:N	2.60	0.53
1:B:751:GLU:HB2	1:B:794:VAL:HG12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:980:LYS:HA	1:B:1022:PHE:CE1	2.43	0.53
1:B:1115:LEU:HD21	1:B:1155:ILE:HD11	1.90	0.53
1:B:1235:ARG:HD2	1:B:1236:MET:SD	2.48	0.53
1:B:1950:ARG:HD3	1:B:1951:PRO:HD2	1.90	0.53
3:E:521:LEU:HB3	3:E:557:TRP:HZ2	1.74	0.53
3:F:1615:GLU:OE1	3:F:1618:ARG:NH2	2.38	0.53
4:H:66:TYR:C	4:H:66:TYR:CD2	2.81	0.53
1:A:725:PHE:HE2	3:F:1001:TRP:CD2	2.27	0.53
1:A:1901:GLN:NE2	1:A:1905:ARG:HH22	2.06	0.53
1:B:1296:SER:HA	1:B:1301:ARG:HH22	1.74	0.53
1:B:2204:LEU:O	1:B:2207:THR:OG1	2.18	0.53
3:E:240:THR:HA	3:E:243:TYR:CD2	2.44	0.53
3:E:540:HIS:HB2	3:E:542:GLU:OE1	2.08	0.53
4:H:93:LEU:HA	4:H:96:GLU:HG3	1.91	0.53
1:A:1876:THR:HA	1:A:1879:MET:HG3	1.90	0.53
1:B:654:ASP:O	1:B:657:SER:OG	2.24	0.53
3:E:309:ILE:HD11	3:E:399:PHE:HE1	1.74	0.53
3:E:537:VAL:HG11	3:E:573:PHE:HD1	1.74	0.53
3:F:151:ARG:HA	3:F:154:ILE:HG12	1.90	0.53
3:F:259:ASP:OD1	3:F:261:HIS:N	2.40	0.53
3:F:309:ILE:HD11	3:F:399:PHE:HE1	1.74	0.53
3:F:540:HIS:HB2	3:F:542:GLU:OE1	2.08	0.53
3:F:830:LYS:HE2	3:F:835:TYR:CE2	2.44	0.53
4:G:69:SER:O	4:G:71:ASP:N	2.41	0.53
4:H:69:SER:O	4:H:71:ASP:N	2.41	0.53
1:A:1269:TRP:O	1:A:1271:ALA:N	2.42	0.53
3:E:1649:ASP:OD1	3:E:1649:ASP:N	2.42	0.53
1:A:1585:ARG:HH11	1:A:1585:ARG:HG2	1.74	0.53
1:B:970:MET:SD	1:B:970:MET:N	2.75	0.53
3:E:186:ALA:O	3:E:190:ILE:HG12	2.08	0.53
3:F:357:ARG:NH2	3:F:358:PHE:O	2.41	0.53
3:F:971:VAL:HA	3:F:974:LEU:HD12	1.91	0.53
3:F:1513:GLN:HG2	3:F:1614:LYS:HE3	1.91	0.53
1:B:1000:VAL:HA	1:B:1003:VAL:HG22	1.91	0.52
1:B:1046:THR:HG23	1:B:1048:ILE:H	1.74	0.52
1:B:2105:TYR:CE1	1:B:2109:ARG:HD2	2.44	0.52
3:E:273:LEU:O	3:E:276:ASP:HB2	2.10	0.52
3:E:1513:GLN:HG2	3:E:1614:LYS:HE3	1.91	0.52
3:F:105:ARG:HA	3:F:108:ARG:NH1	2.24	0.52
3:F:521:LEU:HB3	3:F:557:TRP:HZ2	1.74	0.52
1:A:1804:TYR:O	1:A:1808:ASN:ND2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1950:ARG:HB3	1:B:1953:VAL:HG12	1.91	0.52
3:F:556:LYS:HE3	3:F:607:GLN:OE1	2.10	0.52
3:F:1649:ASP:OD1	3:F:1649:ASP:N	2.42	0.52
4:G:27:CYS:O	4:G:31:LEU:HG	2.08	0.52
1:A:2511:ARG:NH1	1:A:2518:THR:OG1	2.42	0.52
3:F:151:ARG:HH12	4:H:31:LEU:HD23	1.74	0.52
3:F:485:ARG:HH12	3:F:488:LYS:HE3	1.73	0.52
4:H:87:ALA:C	4:H:90:LEU:H	2.13	0.52
1:A:693:LEU:HD11	1:A:725:PHE:CD1	2.42	0.52
1:A:705:PHE:HA	1:A:708:ARG:HG2	1.91	0.52
1:A:974:ALA:O	1:A:978:ILE:HG12	2.09	0.52
1:A:2392:LEU:HD23	1:A:2392:LEU:H	1.73	0.52
1:B:1889:PHE:CE1	1:B:1906:VAL:HG21	2.44	0.52
3:E:105:ARG:HA	3:E:108:ARG:CZ	2.40	0.52
3:F:186:ALA:O	3:F:190:ILE:HG12	2.08	0.52
4:H:27:CYS:O	4:H:31:LEU:HG	2.08	0.52
1:A:1960:LEU:O	1:A:1964:ILE:HG12	2.08	0.52
3:E:259:ASP:OD1	3:E:261:HIS:N	2.40	0.52
3:E:894:HIS:O	3:E:898:VAL:HG13	2.10	0.52
3:F:961:VAL:HB	3:F:964:ILE:HD12	1.90	0.52
1:A:1049:GLN:HA	1:A:1052:ILE:HG22	1.92	0.52
1:B:1402:LEU:HA	1:B:1405:GLN:OE1	2.10	0.52
1:B:1546:TYR:HA	1:B:1549:VAL:HG12	1.91	0.52
3:F:249:GLU:HG2	3:F:250:LEU:N	2.25	0.52
1:B:1001:ILE:HD12	1:B:1004:CYS:SG	2.50	0.52
1:B:1108:ASP:OD1	1:B:1109:ASP:N	2.42	0.52
1:B:1654:LEU:HD21	1:B:1696:VAL:HG12	1.92	0.52
1:B:2136:LEU:HG	1:B:2137:GLU:H	1.75	0.52
1:B:2340:HIS:CD2	1:B:2342:SER:HB2	2.44	0.52
2:D:219:HIS:NE2	2:D:237:THR:OG1	2.26	0.52
3:E:249:GLU:HG2	3:E:250:LEU:N	2.25	0.52
3:E:336:ARG:HH12	3:E:874:PRO:HD3	1.73	0.52
3:E:556:LYS:HE3	3:E:607:GLN:OE1	2.10	0.52
3:F:75:GLU:HG2	3:F:76:LYS:H	1.74	0.52
3:F:240:THR:HA	3:F:243:TYR:CD2	2.44	0.52
3:F:537:VAL:HG11	3:F:573:PHE:HD1	1.74	0.52
4:G:86:THR:C	4:G:89:ARG:N	2.60	0.52
1:A:878:GLN:O	1:A:882:ARG:HG3	2.10	0.52
1:A:1222:LEU:HB2	3:E:495:ASP:OD2	2.10	0.52
3:E:105:ARG:HA	3:E:108:ARG:NH1	2.24	0.52
3:F:105:ARG:HA	3:F:108:ARG:CZ	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:536:GLN:HA	1:A:594:PHE:HE1	1.74	0.52
1:A:2076:ARG:HB2	3:E:248:VAL:HB	1.92	0.52
1:B:681:GLU:HG2	1:B:684:ASP:HB2	1.92	0.52
1:B:1072:PRO:HG3	1:B:1110:TYR:OH	2.10	0.52
1:B:1620:TRP:O	1:B:1624:GLN:HG2	2.10	0.52
1:B:2371:PHE:CD2	1:B:2542:TYR:HD1	2.28	0.52
3:E:696:HIS:O	3:E:700:LEU:HD12	2.10	0.52
3:F:724:ALA:N	3:F:729:ARG:NH2	2.57	0.52
1:A:1765:ASN:OD1	1:A:1766:GLU:N	2.40	0.51
1:B:736:GLN:O	1:B:739:THR:OG1	2.19	0.51
1:B:1060:VAL:HG21	1:B:1103:PHE:HE1	1.74	0.51
2:C:40:HIS:NE2	2:C:66:ARG:HD3	2.25	0.51
3:E:971:VAL:HA	3:E:974:LEU:HD12	1.91	0.51
3:F:37:ASN:O	3:F:41:ILE:HG12	2.10	0.51
3:F:696:HIS:O	3:F:700:LEU:HD12	2.10	0.51
1:A:2371:PHE:CD2	1:A:2542:TYR:HD1	2.28	0.51
1:B:733:MET:O	1:B:737:ILE:HD12	2.10	0.51
1:B:1114:LEU:O	1:B:1117:PRO:HD2	2.10	0.51
1:B:1955:ARG:HG2	1:B:1959:GLN:HE22	1.75	0.51
2:C:286:VAL:HG22	2:C:296:LEU:HG	1.92	0.51
3:E:116:ILE:HA	3:E:119:LYS:HE2	1.91	0.51
3:E:493:HIS:O	3:E:497:ILE:HG12	2.10	0.51
3:E:830:LYS:HE2	3:E:835:TYR:CE2	2.44	0.51
3:E:1668:PRO:O	3:E:1671:ARG:HD3	2.11	0.51
3:F:273:LEU:O	3:F:276:ASP:HB2	2.10	0.51
3:F:493:HIS:O	3:F:497:ILE:HG12	2.10	0.51
3:F:919:GLU:H	3:F:919:GLU:CD	2.13	0.51
4:G:93:LEU:HA	4:G:96:GLU:HG3	1.91	0.51
1:A:654:ASP:O	1:A:657:SER:OG	2.28	0.51
1:A:727:MET:HA	1:A:730:LEU:HD12	1.92	0.51
1:A:1161:ARG:CZ	1:A:1162:THR:HB	2.40	0.51
1:B:1112:HIS:CE1	1:B:1113:LEU:HD23	2.46	0.51
1:B:2037:LEU:HD21	1:B:2050:VAL:HG21	1.93	0.51
2:C:92:GLY:HA3	2:C:101:TYR:CZ	2.46	0.51
3:E:526:GLU:OE1	3:E:526:GLU:N	2.26	0.51
1:A:1709:ARG:HH21	1:A:1711:ILE:HB	1.75	0.51
1:B:947:TYR:CE1	1:B:1324:SER:HB2	2.45	0.51
1:B:1110:TYR:O	1:B:1113:LEU:HG	2.10	0.51
1:B:1129:LEU:HD11	1:B:1169:LEU:HD21	1.92	0.51
1:B:1221:THR:OG1	3:F:495:ASP:OD1	2.28	0.51
1:B:1921:GLU:O	1:B:1924:VAL:HG22	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2426:LEU:O	1:B:2429:TRP:NE1	2.43	0.51
3:E:37:ASN:O	3:E:41:ILE:HG12	2.10	0.51
3:F:44:ASN:ND2	3:F:59:HIS:HB3	2.26	0.51
3:F:209:ASN:C	3:F:209:ASN:OD1	2.48	0.51
1:A:1619:TRP:HB3	1:A:1640:ARG:NH1	2.25	0.51
1:A:2105:TYR:CE2	1:A:2109:ARG:HD2	2.45	0.51
1:A:2362:PHE:CD2	1:A:2500:ILE:HD12	2.46	0.51
1:B:684:ASP:OD1	1:B:717:ARG:NH1	2.43	0.51
1:B:1765:ASN:H	1:B:1768:THR:HG22	1.76	0.51
2:C:86:LYS:HD2	2:C:106:ASP:HB3	1.93	0.51
3:E:878:LEU:HD11	3:E:974:LEU:HD21	1.93	0.51
3:F:1623:LEU:HD11	3:F:1629:THR:HG23	1.90	0.51
1:A:992:GLN:OE1	1:A:992:GLN:N	2.41	0.51
1:A:1112:HIS:ND1	1:B:740:GLU:OE2	2.43	0.51
1:B:1343:LEU:O	1:B:1347:SER:OG	2.16	0.51
1:B:1985:THR:HA	1:B:1988:HIS:CE1	2.46	0.51
1:B:2318:THR:HG22	1:B:2322:ARG:HD2	1.93	0.51
2:D:40:HIS:NE2	2:D:66:ARG:HD3	2.25	0.51
3:E:75:GLU:HG2	3:E:76:LYS:H	1.75	0.51
3:F:539:GLN:OE1	3:F:539:GLN:N	2.38	0.51
3:F:706:ASP:OD1	3:F:707:TYR:N	2.44	0.51
1:A:1129:LEU:HB3	1:A:1133:LYS:NZ	2.26	0.51
1:A:1490:TRP:HE3	1:A:1519:ALA:HA	1.75	0.51
1:A:2105:TYR:O	1:A:2109:ARG:HG3	2.10	0.51
1:B:613:SER:O	1:B:619:ARG:NH1	2.36	0.51
1:B:1069:LEU:HD22	3:F:467:LEU:HD12	1.91	0.51
1:B:1107:LEU:HD12	1:B:1107:LEU:O	2.11	0.51
1:B:1920:ASN:O	1:B:1924:VAL:HG13	2.11	0.51
2:C:20:TYR:HA	2:C:44:GLN:NE2	2.26	0.51
3:E:1628:SER:O	3:E:1628:SER:OG	2.29	0.51
3:F:116:ILE:HA	3:F:119:LYS:HE2	1.92	0.51
3:F:894:HIS:O	3:F:898:VAL:HG13	2.10	0.51
4:H:28:GLU:HA	4:H:31:LEU:HB2	1.93	0.51
1:A:719:SER:HA	1:A:726:VAL:HG11	1.92	0.51
1:A:1921:GLU:HG2	1:A:1922:ALA:H	1.74	0.51
1:B:703:GLN:HG2	1:B:704:VAL:HG13	1.93	0.51
1:B:742:GLU:HG2	3:E:459:PHE:CE2	2.46	0.51
1:B:775:ILE:O	1:B:779:LEU:HD23	2.11	0.51
1:B:1222:LEU:HB2	3:F:495:ASP:OD2	2.11	0.51
1:B:1330:ASN:H	1:B:1333:GLN:NE2	2.09	0.51
1:B:1921:GLU:O	1:B:1925:GLU:OE1	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:20:TYR:HA	2:D:44:GLN:NE2	2.26	0.51
2:D:92:GLY:HA3	2:D:101:TYR:CZ	2.46	0.51
3:E:131:ARG:HB2	3:E:1674:GLN:NE2	2.26	0.51
3:E:1487:MET:HG3	3:E:1492:ILE:HD13	1.92	0.51
3:F:274:LYS:O	3:F:277:ARG:N	2.44	0.51
4:G:87:ALA:C	4:G:90:LEU:H	2.13	0.51
1:A:2340:HIS:CD2	1:A:2342:SER:HB2	2.46	0.51
1:B:666:ASP:HB3	1:B:672:ARG:HH12	1.75	0.51
1:B:1075:ILE:O	1:B:1079:LEU:HG	2.11	0.51
1:B:1098:ALA:HA	1:B:1101:GLN:HG3	1.94	0.51
1:B:1637:LEU:HD21	1:B:1653:TRP:CE2	2.46	0.51
2:C:145:VAL:O	2:C:152:ILE:HD12	2.11	0.51
3:E:209:ASN:C	3:E:209:ASN:OD1	2.48	0.51
3:F:1668:PRO:O	3:F:1671:ARG:HD3	2.11	0.51
1:A:1218:LYS:HE2	3:E:556:LYS:HD2	1.94	0.50
1:A:1480:ARG:HA	1:A:1483:CYS:SG	2.51	0.50
1:A:2509:THR:HB	1:A:2511:ARG:HG3	1.92	0.50
2:C:219:HIS:NE2	2:C:237:THR:OG1	2.27	0.50
3:E:119:LYS:HA	3:E:122:LYS:HZ2	1.76	0.50
3:E:706:ASP:OD1	3:E:707:TYR:N	2.44	0.50
4:G:28:GLU:HA	4:G:31:LEU:HB2	1.93	0.50
1:A:2285:GLU:HG3	2:C:272:TRP:CZ2	2.46	0.50
1:B:2094:VAL:O	1:B:2098:THR:HG23	2.11	0.50
3:E:663:ILE:O	3:E:667:SER:N	2.44	0.50
3:E:1689:ALA:HA	3:E:1692:VAL:HG22	1.92	0.50
1:A:955:LEU:HD22	1:A:971:VAL:HG23	1.93	0.50
1:A:957:ARG:NE	1:A:957:ARG:HA	2.26	0.50
1:A:2169:PRO:HB3	1:A:2187:LYS:HD2	1.93	0.50
1:A:2519:LEU:HB3	1:A:2523:THR:HB	1.93	0.50
1:A:1546:TYR:HA	1:A:1549:VAL:HG12	1.93	0.50
1:A:1985:THR:HA	1:A:1988:HIS:CE1	2.46	0.50
2:D:80:SER:O	4:H:105:ASN:HA	2.10	0.50
2:D:106:ASP:OD1	2:D:107:CYS:N	2.39	0.50
3:F:875:HIS:HB3	3:F:877:TYR:CE2	2.46	0.50
3:F:878:LEU:HD11	3:F:974:LEU:HD21	1.93	0.50
3:F:1641:GLU:HB3	4:H:90:LEU:HD11	1.94	0.50
1:A:1190:ILE:HG13	1:A:1191:PHE:CD1	2.47	0.50
1:A:1697:THR:O	1:A:1701:MET:HG2	2.12	0.50
1:A:2156:ILE:HG12	1:A:2174:LEU:HD22	1.93	0.50
1:B:677:ALA:HA	1:B:710:LEU:HD11	1.93	0.50
1:B:822:ILE:HG13	1:B:823:ILE:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2284:VAL:O	1:B:2287:PHE:N	2.44	0.50
2:C:43:SER:OG	2:C:44:GLN:N	2.45	0.50
3:F:547:ASN:ND2	3:F:550:LEU:HD22	2.26	0.50
3:F:945:GLU:OE1	3:F:945:GLU:N	2.43	0.50
3:F:1689:ALA:HA	3:F:1692:VAL:HG22	1.92	0.50
1:A:1924:VAL:HG12	1:A:1956:LEU:HD11	1.93	0.50
1:B:1765:ASN:O	1:B:1769:ILE:HG12	2.12	0.50
2:D:43:SER:OG	2:D:44:GLN:N	2.45	0.50
2:D:286:VAL:HG22	2:D:296:LEU:HG	1.92	0.50
3:E:547:ASN:ND2	3:E:550:LEU:HD22	2.26	0.50
3:E:919:GLU:CD	3:E:919:GLU:H	2.13	0.50
3:F:275:GLU:H	3:F:275:GLU:CD	2.15	0.50
3:F:831:TRP:CD1	3:F:882:LEU:HD13	2.47	0.50
1:A:151:ARG:O	1:A:155:TRP:N	2.43	0.50
1:A:578:ASP:O	1:A:581:SER:N	2.44	0.50
1:A:729:PHE:HB3	1:A:733:MET:HE1	1.94	0.50
1:A:1110:TYR:HD1	1:A:1113:LEU:HD21	1.76	0.50
1:A:2195:ASP:HA	1:A:2198:VAL:HG22	1.94	0.50
1:B:810:GLY:O	1:B:811:LEU:HG	2.12	0.50
1:B:957:ARG:HA	1:B:957:ARG:NE	2.27	0.50
1:B:1526:TRP:HA	1:B:1529:MET:HB2	1.93	0.50
1:B:1776:TYR:O	1:B:1780:THR:HG23	2.12	0.50
1:B:2182:PHE:HB3	1:B:2184:PHE:HE1	1.77	0.50
3:E:831:TRP:CD1	3:E:882:LEU:HD13	2.47	0.50
3:F:131:ARG:HB2	3:F:1674:GLN:NE2	2.26	0.50
3:F:663:ILE:O	3:F:667:SER:N	2.44	0.50
4:G:92:ARG:HH22	4:G:93:LEU:HB3	1.77	0.50
1:A:1107:LEU:HD12	1:A:1107:LEU:O	2.11	0.50
1:A:1367:SER:OG	1:A:1368:ASP:N	2.45	0.50
1:A:1561:GLN:OE1	1:A:1561:GLN:N	2.45	0.50
1:B:814:ARG:HG2	1:B:814:ARG:HH11	1.77	0.50
1:B:1759:LEU:HD21	1:B:1772:VAL:HG11	1.94	0.50
2:C:110:ARG:HB3	2:C:124:ILE:HG22	1.94	0.50
3:E:44:ASN:ND2	3:E:59:HIS:HB3	2.26	0.50
3:F:357:ARG:NH2	3:F:359:GLN:OE1	2.45	0.50
1:A:610:PHE:HA	1:A:619:ARG:HG2	1.93	0.50
1:A:957:ARG:HA	1:A:957:ARG:CZ	2.42	0.50
1:A:1277:LYS:NZ	1:A:1281:LEU:HD11	2.26	0.50
1:A:2074:TYR:O	1:A:2078:LEU:HD23	2.11	0.50
1:B:785:ASP:OD1	1:B:785:ASP:N	2.45	0.50
1:B:1326:TRP:O	1:B:1334:GLN:NE2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1912:ASP:OD1	1:B:1913:TYR:N	2.44	0.50
1:B:2266:ARG:HH11	1:B:2266:ARG:HG3	1.77	0.50
2:D:145:VAL:O	2:D:152:ILE:HD12	2.11	0.50
3:E:357:ARG:NH2	3:E:359:GLN:OE1	2.45	0.50
3:E:386:ASP:HA	3:E:876:VAL:O	2.12	0.50
4:H:16:GLN:O	4:H:20:THR:HG22	2.12	0.50
1:A:624:ARG:O	1:A:627:SER:OG	2.20	0.49
1:B:2520:ASP:CG	1:B:2522:PRO:HD2	2.32	0.49
2:D:110:ARG:HB3	2:D:124:ILE:HG22	1.94	0.49
2:D:298:CYS:H	2:D:305:LYS:NZ	2.10	0.49
3:E:1511:GLY:HA2	3:E:1610:ILE:HG12	1.94	0.49
3:F:1511:GLY:HA2	3:F:1610:ILE:HG12	1.94	0.49
1:B:1401:GLU:OE1	1:B:2389:VAL:HB	2.12	0.49
1:B:2022:LEU:HB3	1:B:2025:GLU:OE1	2.12	0.49
3:E:274:LYS:O	3:E:277:ARG:N	2.44	0.49
3:E:802:LEU:O	3:E:806:LEU:HD23	2.12	0.49
3:E:830:LYS:HE2	3:E:835:TYR:CZ	2.47	0.49
3:E:853:THR:HA	3:E:855:ARG:NH1	2.27	0.49
3:F:103:GLY:O	3:F:107:LEU:HD23	2.12	0.49
3:F:766:ILE:O	3:F:769:GLU:HG3	2.12	0.49
3:F:774:LEU:HD22	3:F:804:LEU:HD21	1.94	0.49
4:G:16:GLN:O	4:G:20:THR:HG22	2.12	0.49
1:A:1087:SER:HB3	1:A:1090:ARG:HA	1.94	0.49
1:A:1292:LEU:HG	1:A:1304:TRP:HB2	1.92	0.49
1:A:2194:GLN:HG3	1:A:2421:PHE:HZ	1.77	0.49
1:B:1903:THR:O	1:B:1907:LEU:HD23	2.12	0.49
3:E:774:LEU:HD22	3:E:804:LEU:HD21	1.94	0.49
3:E:903:THR:HA	3:E:906:CYS:SG	2.52	0.49
3:F:1487:MET:HG3	3:F:1492:ILE:HD13	1.92	0.49
1:A:1285:ARG:NE	1:A:1311:ASN:OD1	2.37	0.49
1:A:1465:LYS:HD3	1:A:1465:LYS:C	2.33	0.49
1:B:620:MET:O	1:B:624:ARG:HG2	2.13	0.49
1:B:1053:ILE:O	1:B:1057:GLU:HG3	2.12	0.49
1:B:2025:GLU:OE1	1:B:2025:GLU:N	2.44	0.49
2:C:19:GLY:O	2:C:44:GLN:NE2	2.38	0.49
2:D:86:LYS:HD2	2:D:106:ASP:HB3	1.93	0.49
2:D:229:SER:HA	2:D:278:PHE:HD2	1.77	0.49
3:E:129:ILE:O	3:E:133:ILE:HG13	2.13	0.49
3:E:786:ALA:O	3:E:789:GLN:HG3	2.12	0.49
3:E:1607:MET:SD	3:E:1608:CYS:N	2.86	0.49
3:F:236:ASN:HD21	3:F:961:VAL:HG13	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:332:TYR:HE1	3:F:426:LEU:HD12	1.77	0.49
3:F:830:LYS:HE2	3:F:835:TYR:CZ	2.47	0.49
1:A:677:ALA:HA	1:A:710:LEU:HD21	1.93	0.49
1:A:705:PHE:CE1	1:A:752:GLN:HB3	2.47	0.49
1:A:824:ILE:HG21	1:A:844:LEU:CD2	2.41	0.49
1:A:2022:LEU:HD21	1:A:2066:LYS:HE3	1.94	0.49
1:B:1910:TRP:HZ2	1:B:1956:LEU:HB3	1.76	0.49
1:B:2245:THR:HA	1:B:2345:MET:HG2	1.95	0.49
2:C:298:CYS:H	2:C:305:LYS:NZ	2.10	0.49
3:F:386:ASP:HA	3:F:876:VAL:O	2.12	0.49
3:F:724:ALA:HB1	3:F:728:CYS:HB2	1.94	0.49
3:F:853:THR:HA	3:F:855:ARG:NH1	2.28	0.49
1:A:1677:LEU:HD11	1:A:1690:PRO:HG2	1.94	0.49
1:B:774:PRO:HA	1:B:777:LYS:HG2	1.94	0.49
1:B:882:ARG:HA	1:B:885:ILE:HG12	1.95	0.49
2:C:229:SER:HA	2:C:278:PHE:HD2	1.77	0.49
3:E:236:ASN:HD21	3:E:961:VAL:HG13	1.76	0.49
3:E:717:LEU:HD23	3:E:721:LEU:HD23	1.94	0.49
3:F:903:THR:HA	3:F:906:CYS:SG	2.52	0.49
3:F:991:ASP:OD1	3:F:992:ALA:N	2.45	0.49
1:A:1008:ILE:HD12	1:A:1008:ILE:H	1.78	0.49
1:A:1359:ASN:HA	1:A:1362:GLU:HG2	1.94	0.49
1:A:2330:VAL:O	1:A:2333:ILE:HG22	2.12	0.49
1:B:821:PHE:O	1:B:825:MET:HG2	2.12	0.49
1:B:1135:ALA:O	1:B:1138:THR:HG22	2.13	0.49
1:B:1527:ASP:N	1:B:1527:ASP:OD1	2.46	0.49
2:D:19:GLY:O	2:D:44:GLN:NE2	2.38	0.49
3:E:1442:ILE:HD12	3:E:1443:PRO:HD2	1.95	0.49
3:F:129:ILE:O	3:F:133:ILE:HG13	2.12	0.49
3:F:1607:MET:SD	3:F:1608:CYS:N	2.86	0.49
4:G:87:ALA:C	4:G:90:LEU:N	2.61	0.49
1:A:825:MET:O	1:A:829:GLN:N	2.43	0.49
1:A:1921:GLU:O	1:A:1924:VAL:N	2.45	0.49
1:B:1707:SER:OG	1:B:1708:ALA:N	2.45	0.49
3:E:150:VAL:HA	3:E:153:MET:HG2	1.95	0.49
3:E:726:ASP:HA	3:E:729:ARG:HG2	1.95	0.49
1:A:1119:VAL:HA	1:A:1122:PHE:CE1	2.48	0.49
1:A:1277:LYS:HZ1	1:A:1281:LEU:HD11	1.78	0.49
1:B:1020:VAL:HG13	1:B:1027:ILE:HD13	1.94	0.49
2:C:189:ASN:ND2	2:C:193:ASN:HB2	2.27	0.49
3:E:766:ILE:O	3:E:769:GLU:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:802:LEU:O	3:F:806:LEU:HD23	2.12	0.49
1:A:658:LYS:HB3	1:A:658:LYS:HZ3	1.77	0.49
1:A:1971:ALA:HB2	1:A:2144:TYR:HE2	1.78	0.49
1:B:886:ARG:NH1	1:B:1568:ARG:HH22	2.11	0.49
1:B:1417:ILE:HD12	1:B:1453:LEU:HD11	1.93	0.49
1:B:1971:ALA:HB2	1:B:2144:TYR:HE2	1.78	0.49
2:D:94:HIS:HD1	2:D:140:GLN:HG2	1.78	0.49
3:E:103:GLY:O	3:E:107:LEU:HD23	2.12	0.49
3:F:726:ASP:HA	3:F:729:ARG:HG2	1.95	0.49
4:H:87:ALA:C	4:H:90:LEU:N	2.61	0.49
4:H:92:ARG:HH22	4:H:93:LEU:HB3	1.77	0.49
1:A:663:GLY:O	1:A:672:ARG:NH1	2.46	0.48
1:A:856:GLU:N	1:A:857:PRO:HD2	2.28	0.48
1:A:1049:GLN:O	1:A:1052:ILE:HG22	2.12	0.48
1:A:1374:LEU:HD12	1:A:1379:GLY:HA3	1.95	0.48
1:A:1587:TYR:HE2	1:A:1627:GLN:NE2	2.11	0.48
1:A:1948:THR:HG21	1:A:1953:VAL:HG13	1.95	0.48
1:B:1267:LYS:H	1:B:1267:LYS:HD2	1.77	0.48
1:B:1349:ASP:HA	1:B:1386:ARG:HH22	1.78	0.48
3:F:522:LYS:O	3:F:559:ASN:HB2	2.13	0.48
1:A:727:MET:O	1:A:730:LEU:N	2.46	0.48
1:A:878:GLN:NE2	1:A:1569:ASP:OD2	2.46	0.48
1:A:1374:LEU:HB2	1:A:1378:ASN:C	2.33	0.48
1:B:1184:LEU:HD23	1:B:1188:TYR:HB2	1.94	0.48
1:B:1218:LYS:HD2	3:F:556:LYS:HD2	1.95	0.48
3:F:786:ALA:O	3:F:789:GLN:HG3	2.12	0.48
1:A:859:ARG:HB3	1:A:902:ASN:ND2	2.27	0.48
1:A:1296:SER:H	1:A:1301:ARG:NH2	2.07	0.48
1:A:1614:ILE:O	1:A:1618:ILE:HG23	2.13	0.48
1:B:1101:GLN:CA	1:B:1141:ARG:NH1	2.71	0.48
1:B:1294:ASP:OD1	1:B:1294:ASP:N	2.42	0.48
1:B:2243:CYS:SG	1:B:2345:MET:HB3	2.53	0.48
2:C:100:MET:SD	2:C:112:TRP:HB2	2.53	0.48
2:C:200:THR:HG22	2:C:202:GLY:H	1.78	0.48
2:D:189:ASN:ND2	2:D:193:ASN:HB2	2.28	0.48
3:E:275:GLU:H	3:E:275:GLU:CD	2.15	0.48
3:E:332:TYR:HE1	3:E:426:LEU:HD12	1.76	0.48
3:E:547:ASN:HB2	3:E:550:LEU:HD13	1.94	0.48
3:E:724:ALA:N	3:E:729:ARG:NH2	2.57	0.48
1:A:1889:PHE:HE1	1:A:1906:VAL:HG21	1.78	0.48
3:E:730:LEU:O	3:E:734:LYS:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:309:ILE:HD11	3:F:399:PHE:CE1	2.49	0.48
1:B:1056:ILE:HA	1:B:1059:ILE:HG12	1.94	0.48
1:B:1097:LEU:HD22	1:B:1134:ALA:HB1	1.96	0.48
2:D:100:MET:SD	2:D:112:TRP:HB2	2.53	0.48
2:D:200:THR:HG22	2:D:202:GLY:H	1.78	0.48
3:E:522:LYS:O	3:E:559:ASN:HB2	2.13	0.48
3:F:150:VAL:HA	3:F:153:MET:HG2	1.95	0.48
3:F:523:ASP:OD1	3:F:527:ALA:HB3	2.13	0.48
1:A:661:VAL:O	1:A:665:THR:HG22	2.14	0.48
1:A:2082:GLN:HA	1:A:2085:CYS:SG	2.54	0.48
1:B:952:MET:SD	1:B:989:PHE:HB3	2.53	0.48
1:B:2199:MET:HE2	1:B:2225:TYR:H	1.77	0.48
2:D:78:ILE:HG13	2:D:79:ILE:HD12	1.95	0.48
3:E:115:SER:HA	3:E:118:GLN:HE21	1.78	0.48
3:E:325:ARG:HB3	3:E:419:ILE:CD1	2.43	0.48
1:A:742:GLU:HG3	1:A:743:HIS:N	2.29	0.48
1:A:977:PHE:O	1:A:980:LYS:HG3	2.13	0.48
1:A:1181:VAL:HG23	1:A:1212:LEU:HD23	1.95	0.48
1:A:1263:ILE:N	1:A:1265:LEU:HD22	2.28	0.48
1:B:1619:TRP:HB3	1:B:1640:ARG:NH1	2.29	0.48
1:B:2362:PHE:HD1	1:B:2500:ILE:HG21	1.79	0.48
3:E:309:ILE:HD11	3:E:399:PHE:CE1	2.49	0.48
3:E:523:ASP:OD1	3:E:527:ALA:HB3	2.13	0.48
3:E:945:GLU:N	3:E:945:GLU:OE1	2.43	0.48
3:F:118:GLN:HE22	3:F:119:LYS:HG3	1.79	0.48
3:F:345:GLU:OE1	3:F:347:ILE:HG22	2.14	0.48
3:F:547:ASN:HB2	3:F:550:LEU:HD13	1.94	0.48
3:F:1526:ILE:HA	3:F:1531:PHE:HB2	1.96	0.48
1:A:1132:ARG:NH2	1:A:1162:THR:OG1	2.47	0.48
1:A:1192:ILE:HG13	1:A:1193:PRO:HD3	1.96	0.48
1:B:1111:LEU:HG	1:B:1151:TYR:HE2	1.77	0.48
1:B:1152:ALA:O	1:B:1156:ILE:HG12	2.14	0.48
1:B:1374:LEU:H	1:B:1378:ASN:HA	1.79	0.48
1:B:2411:LYS:O	1:B:2415:MET:HB2	2.14	0.48
2:C:293:LEU:HB2	2:C:308:TYR:O	2.14	0.48
3:E:557:TRP:CG	3:E:558:PRO:HD2	2.49	0.48
3:E:724:ALA:HB1	3:E:728:CYS:HB2	1.95	0.48
3:F:730:LEU:O	3:F:734:LYS:HG2	2.13	0.48
3:F:750:TRP:O	3:F:753:GLU:HG2	2.14	0.48
3:F:975:ILE:HG12	3:F:975:ILE:H	1.33	0.48
1:B:856:GLU:N	1:B:857:PRO:HD2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1112:HIS:HB3	1:B:1151:TYR:OH	2.14	0.48
1:B:1953:VAL:O	1:B:1957:ILE:HG13	2.14	0.48
1:B:2311:GLU:HG2	1:B:2312:VAL:N	2.28	0.48
2:D:177:HIS:CD2	2:D:227:ARG:HH22	2.32	0.48
3:E:875:HIS:HB3	3:E:877:TYR:CE2	2.46	0.48
3:E:991:ASP:OD1	3:E:992:ALA:N	2.45	0.48
3:E:1526:ILE:HA	3:E:1531:PHE:HB2	1.96	0.48
3:F:250:LEU:HD23	3:F:301:LEU:HD21	1.96	0.48
1:A:1559:LEU:HA	1:A:1562:GLN:NE2	2.29	0.48
1:A:1936:LEU:HA	1:A:1939:ILE:HD11	1.95	0.48
1:A:2228:ILE:HG13	1:A:2228:ILE:O	2.13	0.48
1:B:1345:LEU:HD22	1:B:1382:LEU:HD21	1.95	0.48
1:B:2191:ASP:HB3	1:B:2430:ARG:HH12	1.79	0.48
3:E:650:GLY:O	3:E:654:THR:OG1	2.18	0.48
3:E:1640:LYS:HA	3:E:1647:PHE:CE2	2.49	0.48
3:F:115:SER:HA	3:F:118:GLN:HE21	1.78	0.48
3:F:325:ARG:HB3	3:F:419:ILE:CD1	2.43	0.48
1:B:1889:PHE:CD2	1:B:1926:GLY:HA3	2.49	0.47
1:B:2341:PRO:HG2	1:B:2549:TRP:HE3	1.79	0.47
2:C:19:GLY:HA2	2:C:316:VAL:HG12	1.95	0.47
3:E:345:GLU:OE1	3:E:347:ILE:HG22	2.14	0.47
3:F:717:LEU:HD23	3:F:721:LEU:HD23	1.94	0.47
3:F:1442:ILE:HD12	3:F:1443:PRO:HD2	1.95	0.47
1:B:1701:MET:O	1:B:1704:MET:HG2	2.14	0.47
1:B:1888:PHE:O	1:B:1891:SER:OG	2.28	0.47
1:B:2093:ASN:ND2	1:B:2095:LYS:HE2	2.29	0.47
2:C:94:HIS:HD1	2:C:140:GLN:HG2	1.78	0.47
2:D:242:GLN:NE2	2:D:267:GLU:OE2	2.29	0.47
3:E:505:HIS:HB3	3:E:508:ARG:HH22	1.78	0.47
3:F:167:ASN:ND2	3:F:1660:LEU:O	2.47	0.47
3:F:557:TRP:CG	3:F:558:PRO:HD2	2.49	0.47
4:H:68:GLN:HG2	4:H:71:ASP:H	1.79	0.47
1:B:854:VAL:HG22	1:B:855:VAL:HG13	1.97	0.47
1:B:1910:TRP:NE1	1:B:1953:VAL:HG23	2.29	0.47
1:B:1974:TYR:O	1:B:1978:VAL:HG23	2.15	0.47
3:E:89:ARG:HA	3:E:92:LEU:HD13	1.96	0.47
3:E:1642:LYS:NZ	3:E:1643:TYR:OH	2.48	0.47
1:A:669:PRO:HA	1:A:672:ARG:CG	2.44	0.47
1:B:1276:SER:OG	1:B:1277:LYS:N	2.47	0.47
2:C:57:ILE:HG22	2:C:68:TYR:O	2.15	0.47
2:C:230:PRO:HG2	2:C:282:SER:OG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:19:GLY:HA2	2:D:316:VAL:HG12	1.95	0.47
3:F:668:CYS:HG	3:F:669:HIS:CG	2.33	0.47
3:F:1640:LYS:HA	3:F:1647:PHE:CE2	2.49	0.47
1:A:733:MET:O	1:A:737:ILE:HD12	2.15	0.47
1:A:1966:ARG:HG3	1:A:1967:TYR:CD2	2.47	0.47
1:B:691:GLU:O	1:B:694:GLN:HG2	2.14	0.47
1:B:705:PHE:CE2	1:B:752:GLN:HB3	2.50	0.47
1:B:1222:LEU:HD23	1:B:1225:GLU:OE2	2.14	0.47
1:B:1313:MET:SD	1:B:1314:ALA:N	2.87	0.47
2:C:138:PRO:HB3	2:C:180:PRO:HA	1.97	0.47
2:D:138:PRO:HB3	2:D:180:PRO:HA	1.97	0.47
2:D:177:HIS:CG	2:D:227:ARG:HH12	2.33	0.47
2:D:293:LEU:HB2	2:D:308:TYR:O	2.14	0.47
3:E:125:VAL:HG23	3:E:128:LEU:HD12	1.96	0.47
3:F:80:HIS:HB3	3:F:82:GLU:OE1	2.15	0.47
3:F:89:ARG:HA	3:F:92:LEU:HD13	1.96	0.47
3:F:119:LYS:HA	3:F:122:LYS:HZ2	1.80	0.47
3:F:1668:PRO:O	3:F:1671:ARG:NH1	2.48	0.47
4:G:81:ARG:CG	4:G:81:ARG:NH1	2.76	0.47
1:A:968:HIS:HA	1:A:971:VAL:HG12	1.96	0.47
1:A:1994:ILE:O	1:A:1998:MET:HG3	2.14	0.47
1:A:2057:MET:O	1:A:2060:ARG:HG2	2.14	0.47
1:A:2520:ASP:CG	1:A:2522:PRO:HD2	2.35	0.47
1:B:29:LEU:O	1:B:82:GLU:N	2.47	0.47
1:B:1132:ARG:HH22	1:B:1165:GLN:NE2	2.12	0.47
1:B:2308:PRO:HG2	1:B:2312:VAL:HG21	1.96	0.47
2:C:78:ILE:HG13	2:C:79:ILE:HD12	1.96	0.47
3:E:1668:PRO:O	3:E:1671:ARG:NH1	2.48	0.47
3:F:108:ARG:HH21	3:F:145:GLN:HB3	1.80	0.47
3:F:505:HIS:HB3	3:F:508:ARG:HH22	1.78	0.47
3:F:894:HIS:HA	3:F:897:GLU:HG3	1.97	0.47
1:A:701:ASN:HA	1:A:708:ARG:NH2	2.29	0.47
1:A:775:ILE:O	1:A:779:LEU:HD23	2.14	0.47
1:A:2321:THR:HG23	1:A:2387:MET:SD	2.54	0.47
1:B:663:GLY:C	1:B:672:ARG:HH21	2.18	0.47
1:B:1798:PHE:CE2	1:B:1802:LEU:HD11	2.48	0.47
1:B:1798:PHE:CE1	1:B:1909:LEU:HD21	2.49	0.47
1:B:1901:GLN:O	1:B:1905:ARG:HG3	2.13	0.47
1:B:2123:LEU:HD21	1:B:2160:LEU:HG	1.96	0.47
1:B:2329:MET:HE1	1:B:2404:MET:HB2	1.97	0.47
2:D:230:PRO:HG2	2:D:282:SER:OG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:118:GLN:HE22	3:E:119:LYS:HG3	1.79	0.47
3:E:625:ASP:HA	3:E:628:LYS:NZ	2.30	0.47
3:E:750:TRP:O	3:E:753:GLU:HG2	2.14	0.47
3:F:374:LYS:HA	3:F:741:ARG:HH12	1.79	0.47
1:A:1391:ARG:HA	1:A:1393:TYR:CZ	2.49	0.47
1:A:1905:ARG:HA	1:A:1908:THR:HG22	1.96	0.47
1:A:2054:LEU:O	1:A:2057:MET:HE3	2.15	0.47
1:A:2264:GLU:O	1:A:2268:MET:HG3	2.15	0.47
3:E:374:LYS:HA	3:E:741:ARG:HH12	1.78	0.47
3:E:894:HIS:HA	3:E:897:GLU:HG3	1.97	0.47
3:F:125:VAL:HG23	3:F:128:LEU:HD12	1.96	0.47
1:B:795:ILE:HA	1:B:798:VAL:HG12	1.97	0.47
1:B:1541:HIS:NE2	1:B:1571:LEU:HB2	2.29	0.47
1:B:1725:GLN:O	1:B:1729:GLN:NE2	2.48	0.47
1:B:1753:LYS:HB3	1:B:1757:TRP:CH2	2.49	0.47
1:B:2509:THR:HG23	1:B:2511:ARG:HG3	1.96	0.47
2:C:177:HIS:CD2	2:C:227:ARG:HH22	2.32	0.47
2:C:245:LYS:HE2	2:C:247:TRP:CH2	2.50	0.47
3:E:83:ASP:OD1	3:E:84:ILE:N	2.48	0.47
3:E:250:LEU:HD23	3:E:301:LEU:HD21	1.96	0.47
3:E:730:LEU:HA	3:E:733:THR:HG22	1.96	0.47
3:F:625:ASP:HA	3:F:628:LYS:NZ	2.30	0.47
1:A:1445:ILE:O	1:A:1445:ILE:HG13	2.15	0.47
1:A:1611:ARG:O	1:A:1615:ILE:HG12	2.14	0.47
1:B:944:ASP:OD1	1:B:944:ASP:N	2.45	0.47
1:B:1001:ILE:HA	1:B:1004:CYS:SG	2.55	0.47
2:C:117:ARG:CZ	2:C:118:ASN:H	2.28	0.47
2:D:57:ILE:HG22	2:D:68:TYR:O	2.15	0.47
3:E:167:ASN:ND2	3:E:1660:LEU:O	2.47	0.47
3:F:549:ASN:O	3:F:553:THR:HG23	2.14	0.47
1:A:703:GLN:HE22	1:B:1157:HIS:HB2	1.80	0.46
1:A:2021:ILE:HG12	1:A:2026:MET:HB2	1.97	0.46
2:C:267:GLU:O	2:C:270:ARG:HG3	2.15	0.46
3:E:244:VAL:CG2	3:E:249:GLU:HG3	2.45	0.46
3:E:259:ASP:OD1	3:E:260:PHE:N	2.48	0.46
3:F:75:GLU:HG2	3:F:76:LYS:N	2.31	0.46
3:F:189:ALA:HB2	4:H:18:HIS:ND1	2.29	0.46
3:F:1641:GLU:CB	4:H:90:LEU:HD11	2.45	0.46
1:A:1526:TRP:HA	1:A:1529:MET:HB2	1.97	0.46
1:A:1921:GLU:O	1:A:1924:VAL:HG22	2.15	0.46
1:B:663:GLY:CA	1:B:672:ARG:HH21	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:672:ARG:O	1:B:676:LEU:HD23	2.15	0.46
1:B:881:ARG:HD3	1:B:1572:ASP:OD2	2.15	0.46
3:E:108:ARG:HH21	3:E:145:GLN:HB3	1.80	0.46
3:E:738:VAL:HG13	3:E:739:LEU:HD22	1.97	0.46
3:E:1668:PRO:HA	3:E:1671:ARG:NE	2.30	0.46
3:E:1672:PHE:O	3:E:1675:GLU:HG3	2.15	0.46
3:F:83:ASP:OD1	3:F:84:ILE:N	2.48	0.46
3:F:1668:PRO:HA	3:F:1671:ARG:NE	2.30	0.46
1:B:937:ASN:HB2	1:B:946:PHE:CE1	2.50	0.46
2:C:94:HIS:HB2	2:C:99:TRP:CE2	2.50	0.46
2:C:177:HIS:CG	2:C:227:ARG:HH12	2.33	0.46
3:E:905:LEU:H	3:E:905:LEU:HG	1.34	0.46
3:F:840:VAL:HA	3:F:843:ILE:HG22	1.98	0.46
4:G:67:ALA:O	4:G:68:GLN:HB3	2.05	0.46
1:A:819:GLU:HA	1:A:822:ILE:HG12	1.97	0.46
1:A:1882:VAL:N	1:A:1883:PRO:HD2	2.31	0.46
1:A:2191:ASP:OD1	1:A:2192:LEU:N	2.48	0.46
1:A:2427:LEU:HD12	1:A:2430:ARG:HH22	1.79	0.46
1:B:624:ARG:HG2	1:B:624:ARG:HH11	1.79	0.46
1:B:1564:ILE:O	1:B:1568:ARG:HG2	2.15	0.46
1:B:1918:ASP:O	1:B:1921:GLU:HG3	2.15	0.46
3:E:549:ASN:O	3:E:553:THR:HG23	2.15	0.46
3:E:972:LEU:HD23	3:E:990:TRP:CZ3	2.51	0.46
4:G:68:GLN:HG2	4:G:71:ASP:H	1.79	0.46
1:A:1986:ALA:HA	1:A:1989:ASN:HD21	1.80	0.46
1:B:1691:THR:HG21	1:B:1723:THR:HG21	1.97	0.46
1:B:1902:ASP:OD1	1:B:1903:THR:N	2.48	0.46
1:B:2121:LEU:HB3	1:B:2126:VAL:HG21	1.98	0.46
2:C:183:SER:O	2:C:199:LEU:HB3	2.15	0.46
3:E:80:HIS:HB3	3:E:82:GLU:OE1	2.14	0.46
4:H:81:ARG:CG	4:H:81:ARG:NH1	2.76	0.46
1:A:1463:TYR:CE2	1:A:1479:GLY:HA3	2.51	0.46
1:A:1559:LEU:HA	1:A:1562:GLN:HE22	1.81	0.46
1:A:2427:LEU:HD12	1:A:2430:ARG:NH2	2.31	0.46
1:B:2023:TRP:O	1:B:2026:MET:HG2	2.15	0.46
1:B:2408:ARG:HH12	1:B:2510:GLY:N	2.13	0.46
3:F:259:ASP:OD1	3:F:260:PHE:N	2.48	0.46
4:H:87:ALA:O	4:H:89:ARG:C	2.49	0.46
1:A:673:TYR:CE1	1:A:710:LEU:HD22	2.51	0.46
1:A:1433:LEU:HG	1:A:1437:MET:CE	2.45	0.46
1:B:886:ARG:HG3	1:B:886:ARG:HH11	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:227:ARG:O	2:C:235:LEU:HA	2.16	0.46
2:D:28:GLN:O	2:D:30:HIS:ND1	2.49	0.46
2:D:267:GLU:O	2:D:270:ARG:HG3	2.15	0.46
3:E:710:ASP:C	3:E:710:ASP:OD1	2.54	0.46
3:E:1653:TYR:HD1	3:E:1677:PHE:CD2	2.34	0.46
3:F:244:VAL:CG2	3:F:249:GLU:HG3	2.45	0.46
1:A:1194:MET:HA	1:A:1197:LYS:HZ1	1.81	0.46
1:B:1215:ARG:HH22	1:B:1225:GLU:CB	2.28	0.46
1:B:1614:ILE:O	1:B:1618:ILE:HG23	2.15	0.46
1:B:1947:ASP:OD1	1:B:1987:ARG:NH2	2.37	0.46
2:D:117:ARG:CZ	2:D:118:ASN:H	2.28	0.46
3:E:119:LYS:HA	3:E:122:LYS:NZ	2.31	0.46
3:E:178:GLN:O	3:E:180:ARG:NH1	2.49	0.46
3:F:131:ARG:HB2	3:F:1674:GLN:HE21	1.81	0.46
3:F:556:LYS:HE3	3:F:607:GLN:NE2	2.31	0.46
3:F:1642:LYS:NZ	3:F:1643:TYR:OH	2.48	0.46
3:F:1672:PHE:O	3:F:1675:GLU:HG3	2.15	0.46
1:A:1125:PRO:HB3	1:A:1165:GLN:NE2	2.31	0.46
1:B:1207:GLN:H	1:B:1207:GLN:CD	2.18	0.46
1:B:1561:GLN:NE2	1:B:1562:GLN:HG3	2.31	0.46
1:B:2133:CYS:C	1:B:2135:ASP:H	2.20	0.46
1:B:2276:ASP:OD1	1:B:2276:ASP:N	2.48	0.46
2:C:60:ALA:HB1	2:C:88:ILE:HG21	1.97	0.46
2:D:48:LEU:H	2:D:48:LEU:HD23	1.81	0.46
3:F:178:GLN:O	3:F:180:ARG:NH1	2.49	0.46
3:F:730:LEU:HA	3:F:733:THR:HG22	1.96	0.46
1:A:785:ASP:OD2	1:A:785:ASP:N	2.49	0.46
1:A:997:PHE:HE2	1:A:1016:LEU:HD22	1.79	0.46
1:A:1754:LEU:HA	1:A:1754:LEU:HD23	1.80	0.46
1:B:90:ILE:O	1:B:94:ILE:N	2.35	0.46
1:B:1208:ARG:NH1	1:B:1212:LEU:HG	2.31	0.46
2:C:196:VAL:HG11	2:C:252:PHE:CZ	2.51	0.46
3:E:840:VAL:HA	3:E:843:ILE:HG22	1.98	0.46
3:F:710:ASP:C	3:F:710:ASP:OD1	2.54	0.46
1:A:1067:PHE:HB3	1:A:1106:ASN:OD1	2.15	0.45
1:A:2432:MET:SD	1:A:2496:LYS:HE3	2.56	0.45
1:B:652:VAL:HA	1:B:655:VAL:HG22	1.97	0.45
1:B:972:VAL:O	1:B:975:ILE:HG22	2.16	0.45
1:B:1904:LEU:O	1:B:1908:THR:HG23	2.16	0.45
1:B:2162:VAL:HG22	1:B:2170:ARG:HG3	1.98	0.45
1:B:2498:ILE:O	1:B:2501:ILE:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:28:GLN:O	2:C:30:HIS:ND1	2.49	0.45
2:D:94:HIS:HB2	2:D:99:TRP:CE2	2.50	0.45
2:D:183:SER:O	2:D:199:LEU:HB3	2.15	0.45
2:D:227:ARG:O	2:D:235:LEU:HA	2.16	0.45
2:D:245:LYS:HE2	2:D:247:TRP:CH2	2.50	0.45
3:E:140:GLU:N	3:E:140:GLU:OE1	2.49	0.45
3:E:505:HIS:HB3	3:E:508:ARG:NH2	2.31	0.45
3:F:119:LYS:HA	3:F:122:LYS:NZ	2.31	0.45
4:H:64:TYR:O	4:H:64:TYR:CD1	2.68	0.45
1:A:669:PRO:HA	1:A:672:ARG:HG3	1.97	0.45
1:A:1171:SER:HA	1:A:1174:MET:HG2	1.98	0.45
1:A:1265:LEU:HG	1:A:1269:TRP:HZ3	1.80	0.45
1:A:1477:MET:C	1:A:1481:MET:HE1	2.36	0.45
1:A:1701:MET:HG3	1:A:1717:MET:HE1	1.98	0.45
1:B:737:ILE:HA	1:B:740:GLU:OE1	2.16	0.45
1:B:1125:PRO:HA	1:B:1132:ARG:NH1	2.31	0.45
1:B:2218:LYS:HE3	1:B:2322:ARG:HH21	1.81	0.45
1:B:2521:VAL:HB	1:B:2522:PRO:HD3	1.98	0.45
3:E:556:LYS:HE3	3:E:607:GLN:NE2	2.31	0.45
3:F:738:VAL:HG13	3:F:739:LEU:HD22	1.97	0.45
1:B:1098:ALA:HA	1:B:1101:GLN:NE2	2.31	0.45
1:B:1178:SER:HA	1:B:1181:VAL:HG22	1.98	0.45
1:B:2536:GLU:H	1:B:2536:GLU:CD	2.19	0.45
3:E:108:ARG:NH2	3:E:145:GLN:HB3	2.32	0.45
3:F:133:ILE:O	3:F:143:ARG:NE	2.50	0.45
3:F:140:GLU:OE1	3:F:140:GLU:N	2.49	0.45
1:A:985:LYS:HE2	1:A:985:LYS:HA	1.98	0.45
1:B:445:ARG:O	1:B:449:LYS:N	2.49	0.45
1:B:689:GLN:HB2	1:B:692:ASN:OD1	2.16	0.45
1:B:869:LEU:HA	1:B:872:LEU:HD13	1.98	0.45
1:B:2340:HIS:HD2	1:B:2342:SER:HB2	1.81	0.45
2:C:48:LEU:HD23	2:C:48:LEU:H	1.81	0.45
3:E:226:ALA:O	3:E:229:THR:OG1	2.29	0.45
3:E:458:SER:OG	3:E:460:ASP:OD1	2.35	0.45
3:F:526:GLU:OE1	3:F:526:GLU:N	2.26	0.45
3:F:972:LEU:HD23	3:F:990:TRP:CZ3	2.51	0.45
4:G:78:PHE:HD2	4:G:78:PHE:HA	1.50	0.45
1:A:746:ILE:HB	1:A:749:ILE:HD13	1.98	0.45
1:A:801:THR:O	1:A:805:LEU:HD23	2.16	0.45
1:A:1115:LEU:HG	1:A:1154:ARG:HH21	1.82	0.45
1:A:2341:PRO:HG2	1:A:2549:TRP:HE3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2525:VAL:O	1:A:2529:ILE:HG12	2.17	0.45
1:B:656:LEU:HA	1:B:659:LEU:HD23	1.98	0.45
2:D:60:ALA:HB1	2:D:88:ILE:HG21	1.97	0.45
3:E:930:LEU:HD13	3:E:933:ILE:HD11	1.99	0.45
3:F:118:GLN:O	3:F:122:LYS:NZ	2.50	0.45
3:F:165:VAL:O	3:F:169:LEU:HD23	2.17	0.45
3:F:1653:TYR:HD1	3:F:1677:PHE:CD2	2.34	0.45
1:A:700:LEU:HD11	1:A:715:VAL:HG11	1.98	0.45
1:A:857:PRO:O	1:A:861:TYR:N	2.47	0.45
1:A:1401:GLU:OE1	1:A:2389:VAL:HB	2.16	0.45
1:A:2510:GLY:HA2	1:A:2524:GLN:OE1	2.17	0.45
2:D:200:THR:HG21	2:D:208:THR:HA	1.98	0.45
2:D:200:THR:HG23	2:D:209:GLN:OE1	2.16	0.45
3:E:75:GLU:HG2	3:E:76:LYS:N	2.31	0.45
3:E:292:PHE:O	3:E:391:TYR:OH	2.35	0.45
3:E:578:LEU:O	3:E:582:LYS:HG3	2.16	0.45
3:F:439:PRO:HB2	3:F:991:ASP:OD2	2.17	0.45
3:F:1515:HIS:CD2	3:F:1651:CYS:HG	2.33	0.45
4:H:76:TRP:CD1	4:H:76:TRP:C	2.85	0.45
1:A:666:ASP:H	1:A:672:ARG:NH2	2.15	0.45
1:B:1461:VAL:O	1:B:1465:LYS:HG2	2.17	0.45
1:B:1480:ARG:HA	1:B:1483:CYS:SG	2.56	0.45
1:B:2187:LYS:O	1:B:2234:SER:OG	2.29	0.45
1:B:2329:MET:CE	1:B:2404:MET:HB2	2.47	0.45
3:E:368:PHE:CD2	3:E:369:VAL:HG23	2.52	0.45
3:E:724:ALA:HB1	3:E:728:CYS:CB	2.47	0.45
3:E:750:TRP:O	3:E:754:LEU:HD23	2.17	0.45
3:E:954:LYS:NZ	3:E:958:GLN:HG3	2.32	0.45
3:E:1681:GLN:OE1	3:E:1683:LEU:N	2.50	0.45
3:F:368:PHE:CD2	3:F:369:VAL:HG23	2.52	0.45
3:F:670:PRO:O	3:F:673:VAL:HG12	2.17	0.45
3:F:724:ALA:HB1	3:F:728:CYS:CB	2.47	0.45
3:F:1617:LEU:HA	3:F:1620:VAL:HG12	1.98	0.45
4:G:66:TYR:HD2	4:G:66:TYR:O	2.00	0.45
4:H:80:ILE:HD12	4:H:81:ARG:H	1.82	0.45
1:A:1129:LEU:HB3	1:A:1133:LYS:HZ1	1.80	0.45
1:A:1228:ASP:O	1:A:1231:ILE:HG12	2.16	0.45
1:A:1669:ALA:O	1:A:1673:LEU:HD23	2.17	0.45
1:B:1472:ASP:HB2	1:B:1476:LEU:HD22	1.98	0.45
1:B:1520:ALA:HB3	1:B:1529:MET:SD	2.56	0.45
1:B:1561:GLN:HE22	1:B:1562:GLN:HG3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2188:GLY:O	1:B:2190:GLU:HG3	2.17	0.45
1:B:2416:ALA:HA	1:B:2419:GLU:HG2	1.98	0.45
2:C:200:THR:HG23	2:C:209:GLN:OE1	2.16	0.45
3:E:439:PRO:HB2	3:E:991:ASP:OD2	2.17	0.45
1:A:175:LEU:O	1:A:179:VAL:N	2.49	0.45
1:A:603:VAL:O	1:A:606:CYS:HB2	2.17	0.45
1:A:669:PRO:O	1:A:672:ARG:HB2	2.17	0.45
1:A:1350:ILE:H	1:A:1350:ILE:HD12	1.82	0.45
1:A:1423:LEU:O	1:A:1425:GLN:HG2	2.16	0.45
1:A:1901:GLN:HE22	1:A:2412:ASP:HB3	1.81	0.45
1:A:1974:TYR:O	1:A:1978:VAL:HG23	2.17	0.45
1:B:811:LEU:O	1:B:814:ARG:HG3	2.16	0.45
1:B:1916:TRP:O	1:B:1919:VAL:N	2.50	0.45
1:B:1986:ALA:HA	1:B:1989:ASN:HD21	1.81	0.45
2:C:200:THR:HG21	2:C:208:THR:HA	1.98	0.45
2:D:196:VAL:HG11	2:D:252:PHE:CZ	2.52	0.45
3:F:285:LYS:HG3	3:F:330:VAL:HG22	1.99	0.45
3:F:292:PHE:O	3:F:391:TYR:OH	2.35	0.45
4:G:81:ARG:HH11	4:G:81:ARG:HG3	1.80	0.45
1:A:1113:LEU:HD12	1:A:1114:LEU:N	2.32	0.45
1:B:994:MET:HE1	1:B:1030:TYR:HB3	1.99	0.45
2:C:94:HIS:HB2	2:C:99:TRP:CD2	2.52	0.45
3:E:118:GLN:O	3:E:122:LYS:NZ	2.50	0.45
3:E:131:ARG:HB2	3:E:1674:GLN:HE21	1.81	0.45
3:E:165:VAL:O	3:E:169:LEU:HD23	2.17	0.45
3:E:1515:HIS:CD2	3:E:1651:CYS:HG	2.33	0.45
3:E:1617:LEU:HA	3:E:1620:VAL:HG12	1.98	0.45
3:F:108:ARG:NH2	3:F:145:GLN:HB3	2.32	0.45
3:F:114:SER:O	3:F:117:LEU:HG	2.18	0.45
3:F:578:LEU:O	3:F:582:LYS:HG3	2.16	0.45
3:F:583:PRO:O	3:F:586:LYS:HD2	2.17	0.45
1:A:1285:ARG:O	1:A:1289:LEU:HG	2.17	0.44
1:A:2008:GLN:OE1	1:A:2137:GLU:HB2	2.16	0.44
1:A:2095:LYS:HE2	1:A:2095:LYS:HB3	1.69	0.44
1:B:702:ASP:CG	1:B:703:GLN:H	2.19	0.44
1:B:1265:LEU:HB3	1:B:1269:TRP:HD1	1.78	0.44
1:B:1282:GLU:HG3	1:B:1286:ARG:NE	2.28	0.44
1:B:1542:ASP:OD1	1:B:1543:GLY:N	2.51	0.44
1:B:1709:ARG:HH11	1:B:1709:ARG:HA	1.82	0.44
1:B:1768:THR:O	1:B:1772:VAL:HG23	2.16	0.44
1:B:1910:TRP:CD1	1:B:1953:VAL:HG23	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:20:TYR:HA	2:C:44:GLN:HE22	1.81	0.44
2:C:172:SER:HG	2:C:190:SER:HG	1.65	0.44
3:E:583:PRO:O	3:E:586:LYS:HD2	2.18	0.44
3:F:1628:SER:O	3:F:1628:SER:OG	2.29	0.44
1:A:725:PHE:HE2	3:F:1001:TRP:CE3	2.35	0.44
1:A:1901:GLN:HG2	1:A:1905:ARG:NH2	2.32	0.44
1:B:601:GLN:O	1:B:604:ARG:NH2	2.50	0.44
1:B:776:LEU:HD12	1:B:777:LYS:N	2.33	0.44
1:B:857:PRO:HA	1:B:860:LYS:HG2	1.99	0.44
1:B:1000:VAL:O	1:B:1004:CYS:N	2.47	0.44
1:B:1193:PRO:HG2	1:B:1194:MET:SD	2.58	0.44
2:C:51:THR:OG1	2:C:53:ASP:OD1	2.27	0.44
2:D:20:TYR:HA	2:D:44:GLN:HE22	1.81	0.44
2:D:94:HIS:HB2	2:D:99:TRP:CD2	2.52	0.44
3:E:906:CYS:O	3:E:909:VAL:HG12	2.17	0.44
3:F:379:HIS:CD2	3:F:381:ALA:H	2.28	0.44
3:F:593:LEU:HD22	3:F:653:THR:HA	2.00	0.44
3:F:954:LYS:NZ	3:F:958:GLN:HG3	2.32	0.44
1:A:693:LEU:HA	1:A:696:LEU:HB2	2.00	0.44
1:B:1974:TYR:O	1:B:1977:THR:HG22	2.17	0.44
1:B:2015:GLU:OE1	1:B:2127:SER:OG	2.35	0.44
3:F:240:THR:HA	3:F:243:TYR:HD2	1.81	0.44
3:F:458:SER:OG	3:F:460:ASP:OD1	2.35	0.44
3:F:750:TRP:O	3:F:754:LEU:HD23	2.17	0.44
3:F:1681:GLN:OE1	3:F:1683:LEU:N	2.50	0.44
4:G:76:TRP:C	4:G:76:TRP:CD1	2.85	0.44
1:A:2385:ASN:OD1	1:A:2386:ALA:N	2.51	0.44
1:B:1907:LEU:HD21	1:B:1935:TRP:HZ3	1.83	0.44
1:B:2024:HIS:HB2	1:B:2111:ILE:CD1	2.45	0.44
2:C:168:GLU:HG3	2:C:171:VAL:HG11	1.99	0.44
2:D:137:HIS:CG	2:D:138:PRO:HD2	2.52	0.44
3:E:114:SER:O	3:E:117:LEU:HG	2.18	0.44
3:E:325:ARG:HB3	3:E:419:ILE:HD11	1.99	0.44
3:F:161:PHE:CD1	3:F:162:PRO:HD2	2.52	0.44
4:G:64:TYR:O	4:G:64:TYR:CD1	2.69	0.44
4:H:81:ARG:HH11	4:H:81:ARG:HG3	1.80	0.44
1:A:691:GLU:CD	1:A:691:GLU:H	2.20	0.44
1:A:952:MET:CE	1:A:989:PHE:HB3	2.48	0.44
1:A:1313:MET:SD	1:A:1314:ALA:N	2.90	0.44
1:A:1921:GLU:O	1:A:1922:ALA:C	2.56	0.44
1:A:1974:TYR:O	1:A:1977:THR:HG22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:937:ASN:ND2	1:B:941:LEU:O	2.43	0.44
1:B:1004:CYS:HB2	1:B:1008:ILE:HD11	2.00	0.44
1:B:1136:LEU:HD21	1:B:1173:ALA:HA	2.00	0.44
1:B:1414:GLU:OE2	1:B:1452:LYS:NZ	2.49	0.44
1:B:1972:LEU:O	1:B:1976:LEU:HG	2.17	0.44
2:C:80:SER:OG	4:G:105:ASN:OD1	2.34	0.44
2:D:136:LEU:HD12	2:D:142:GLU:O	2.18	0.44
3:E:133:ILE:O	3:E:143:ARG:NE	2.50	0.44
3:E:346:PHE:CZ	3:E:475:CYS:HB3	2.53	0.44
3:E:668:CYS:HG	3:E:669:HIS:CG	2.35	0.44
3:E:949:ILE:HB	3:E:950:PRO:HD3	2.00	0.44
3:F:93:LEU:HD13	3:F:1686:HIS:CE1	2.52	0.44
3:F:505:HIS:HB3	3:F:508:ARG:NH2	2.32	0.44
3:F:623:LEU:HD23	3:F:675:MET:HG2	1.99	0.44
4:G:80:ILE:HD12	4:G:81:ARG:H	1.82	0.44
1:A:701:ASN:O	1:B:1153:SER:OG	2.36	0.44
1:A:1721:VAL:O	1:A:1725:GLN:HG2	2.17	0.44
1:A:2336:LEU:HD21	1:A:2339:ARG:NH1	2.32	0.44
1:A:2408:ARG:HH12	1:A:2509:THR:CA	2.31	0.44
1:B:1924:VAL:HG12	1:B:1956:LEU:HD11	1.98	0.44
1:B:2093:ASN:HD21	1:B:2095:LYS:HE2	1.83	0.44
2:C:137:HIS:CG	2:C:138:PRO:HD2	2.52	0.44
2:D:259:SER:OG	2:D:261:LYS:HE2	2.18	0.44
3:E:295:TRP:CE2	3:E:966:GLY:HA3	2.53	0.44
3:E:332:TYR:CE1	3:E:426:LEU:HB2	2.51	0.44
3:E:441:SER:O	3:E:444:HIS:ND1	2.48	0.44
3:F:295:TRP:CE2	3:F:966:GLY:HA3	2.53	0.44
4:H:81:ARG:H	4:H:81:ARG:HG2	1.59	0.44
1:A:723:PRO:HA	1:A:726:VAL:HG12	1.98	0.44
1:A:988:GLN:HG3	1:A:989:PHE:CE1	2.52	0.44
1:A:1194:MET:HA	1:A:1197:LYS:NZ	2.33	0.44
1:A:1216:ILE:HG13	1:A:1217:VAL:N	2.32	0.44
1:A:1277:LYS:O	1:A:1281:LEU:HG	2.17	0.44
1:B:671:ILE:O	1:B:675:VAL:HG12	2.18	0.44
1:B:733:MET:O	1:B:736:GLN:N	2.49	0.44
1:B:1157:HIS:C	1:B:1161:ARG:HE	2.20	0.44
1:B:1312:PRO:HA	1:B:1315:ARG:HG3	2.00	0.44
1:B:1669:ALA:O	1:B:1673:LEU:HD23	2.18	0.44
1:B:1878:LEU:O	1:B:1882:VAL:HG23	2.17	0.44
1:B:1882:VAL:N	1:B:1883:PRO:HD2	2.32	0.44
1:B:2105:TYR:O	1:B:2109:ARG:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:94:HIS:CD2	2:D:98:ARG:HG3	2.53	0.44
2:D:168:GLU:HG3	2:D:171:VAL:HG11	1.99	0.44
3:E:593:LEU:HD22	3:E:653:THR:HA	2.00	0.44
3:F:82:GLU:OE1	3:F:82:GLU:N	2.48	0.44
3:F:325:ARG:HB3	3:F:419:ILE:HD11	1.99	0.44
1:A:1101:GLN:O	1:A:1141:ARG:NH1	2.48	0.44
1:A:1433:LEU:HG	1:A:1437:MET:HE1	2.00	0.44
1:A:2079:MET:HE3	3:E:245:ARG:HD3	1.98	0.44
1:B:742:GLU:HG2	3:E:459:PHE:HE2	1.82	0.44
1:B:1362:GLU:OE1	1:B:1395:LYS:NZ	2.51	0.44
1:B:1433:LEU:HG	1:B:1437:MET:HE1	2.00	0.44
1:B:1755:GLY:O	1:B:1759:LEU:HD23	2.17	0.44
2:C:11:ASP:OD1	2:C:28:GLN:NE2	2.51	0.44
2:C:259:SER:OG	2:C:261:LYS:HE2	2.18	0.44
3:E:37:ASN:OD1	3:E:38:LEU:N	2.51	0.44
3:E:151:ARG:HH12	4:G:31:LEU:HD23	1.83	0.44
3:E:237:HIS:HB3	3:E:240:THR:HG23	2.00	0.44
3:F:382:ARG:HG2	3:F:382:ARG:HH11	1.83	0.44
1:A:703:GLN:NE2	1:B:1158:PRO:HD3	2.33	0.44
1:A:2022:LEU:HB3	1:A:2025:GLU:OE1	2.18	0.44
1:B:806:ALA:HA	1:B:813:MET:SD	2.58	0.44
1:B:1196:ASN:O	1:B:1200:VAL:HG13	2.18	0.44
2:C:94:HIS:CD2	2:C:98:ARG:HG3	2.53	0.44
2:C:114:LEU:HB3	2:C:115:ARG:NH2	2.33	0.44
2:D:114:LEU:HB3	2:D:115:ARG:NH2	2.33	0.44
3:E:550:LEU:O	3:E:553:THR:OG1	2.26	0.44
3:E:623:LEU:HD23	3:E:675:MET:HG2	1.99	0.44
3:F:37:ASN:OD1	3:F:38:LEU:N	2.51	0.44
4:G:68:GLN:O	4:G:70:VAL:N	2.51	0.44
4:H:91:GLU:HB3	4:H:95:LYS:NZ	2.33	0.44
1:A:822:ILE:HG13	1:A:823:ILE:N	2.32	0.43
1:A:883:GLU:O	1:A:887:VAL:HG23	2.18	0.43
1:A:937:ASN:HB2	1:A:946:PHE:HE2	1.83	0.43
1:A:2365:ALA:O	1:A:2368:ARG:HG2	2.18	0.43
1:B:624:ARG:NH2	1:B:675:VAL:HA	2.32	0.43
1:B:947:TYR:HB2	1:B:948:PRO:HD3	2.00	0.43
1:B:1214:CYS:SG	3:F:553:THR:HG22	2.58	0.43
1:B:1788:LYS:HD2	1:B:1788:LYS:N	2.33	0.43
1:B:2080:GLU:OE2	1:B:2103:LEU:HD13	2.18	0.43
2:D:11:ASP:OD1	2:D:28:GLN:NE2	2.51	0.43
3:E:74:GLU:O	3:E:78:GLY:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:161:PHE:CD1	3:E:162:PRO:HD2	2.52	0.43
3:E:382:ARG:HG2	3:E:382:ARG:HH11	1.83	0.43
3:F:38:LEU:HB2	3:F:79:PHE:CZ	2.53	0.43
3:F:650:GLY:O	3:F:654:THR:OG1	2.18	0.43
3:F:930:LEU:HD13	3:F:933:ILE:HD11	1.99	0.43
1:A:115:LEU:HA	1:A:167:ALA:HB1	2.00	0.43
1:A:734:LEU:HD11	3:F:453:MET:HE3	2.00	0.43
1:A:1155:ILE:O	1:A:1159:ILE:HG12	2.17	0.43
1:A:2055:HIS:NE2	1:A:2082:GLN:HB2	2.32	0.43
2:C:267:GLU:CG	2:C:270:ARG:H	2.31	0.43
3:E:902:ILE:HD12	3:E:902:ILE:H	1.84	0.43
3:F:226:ALA:O	3:F:229:THR:OG1	2.29	0.43
3:F:763:ASN:HB3	3:F:766:ILE:HD12	2.00	0.43
3:F:949:ILE:HB	3:F:950:PRO:HD3	2.00	0.43
1:A:1098:ALA:HA	1:A:1101:GLN:HE21	1.83	0.43
1:A:1151:TYR:O	1:A:1155:ILE:HD13	2.19	0.43
1:A:1293:LYS:HE2	1:A:1304:TRP:CZ2	2.54	0.43
1:A:1963:ASP:HA	1:A:1966:ARG:HG2	1.99	0.43
1:B:1116:PRO:HG3	1:B:1154:ARG:HH22	1.83	0.43
2:D:145:VAL:HB	2:D:153:HIS:HB2	2.01	0.43
3:E:35:SER:O	3:E:39:ARG:HG2	2.18	0.43
3:E:200:GLU:OE2	3:E:243:TYR:HE1	2.01	0.43
4:H:66:TYR:O	4:H:66:TYR:HD2	2.00	0.43
4:H:68:GLN:O	4:H:70:VAL:N	2.51	0.43
1:A:2099:GLN:NE2	3:E:1664:THR:HG23	2.33	0.43
1:B:610:PHE:HA	1:B:613:SER:HB3	1.99	0.43
1:B:1778:ALA:HA	1:B:1781:GLU:CD	2.38	0.43
1:B:1875:LYS:HD3	1:B:1875:LYS:N	2.33	0.43
2:C:142:GLU:OE1	2:C:142:GLU:N	2.51	0.43
2:C:145:VAL:HB	2:C:153:HIS:HB2	2.00	0.43
3:E:228:ILE:O	3:E:232:LEU:HD23	2.18	0.43
3:E:670:PRO:O	3:E:673:VAL:HG12	2.17	0.43
3:E:963:SER:O	3:E:967:THR:HG23	2.18	0.43
3:F:200:GLU:OE2	3:F:243:TYR:HE1	2.01	0.43
3:F:906:CYS:O	3:F:909:VAL:HG12	2.17	0.43
3:F:963:SER:O	3:F:967:THR:HG23	2.18	0.43
1:A:748:ARG:NH1	1:A:749:ILE:HG13	2.34	0.43
1:A:773:GLU:OE2	3:F:454:ASN:ND2	2.44	0.43
1:A:805:LEU:HA	1:A:808:VAL:HG12	2.00	0.43
1:A:813:MET:O	1:A:817:VAL:HG13	2.17	0.43
1:A:1747:MET:HA	1:A:1750:CYS:SG	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1234:HIS:NE2	3:F:348:GLU:OE1	2.46	0.43
1:B:1477:MET:SD	1:B:1477:MET:N	2.90	0.43
1:B:1569:ASP:HA	1:B:1572:ASP:HB3	2.01	0.43
1:B:1578:MET:SD	1:B:1585:ARG:NH2	2.92	0.43
1:B:2274:ASP:OD1	1:B:2274:ASP:N	2.49	0.43
2:D:142:GLU:OE1	2:D:142:GLU:N	2.51	0.43
3:E:38:LEU:HB2	3:E:79:PHE:CZ	2.52	0.43
3:E:770:ALA:HA	3:E:773:ILE:HG22	2.00	0.43
3:F:237:HIS:HB3	3:F:240:THR:HG23	2.00	0.43
3:F:920:ILE:HD12	3:F:964:ILE:HD11	2.00	0.43
1:B:1697:THR:HG23	1:B:1720:PHE:HZ	1.84	0.43
2:D:153:HIS:CD2	2:D:164:GLN:HB3	2.54	0.43
2:D:189:ASN:OD1	2:D:193:ASN:N	2.52	0.43
3:E:93:LEU:HD13	3:E:1686:HIS:CE1	2.53	0.43
3:E:685:LEU:HD23	3:E:688:LEU:HD12	2.01	0.43
3:F:228:ILE:O	3:F:232:LEU:HD23	2.18	0.43
3:F:346:PHE:CZ	3:F:475:CYS:HB3	2.53	0.43
1:A:824:ILE:CG2	1:A:844:LEU:HD21	2.44	0.43
1:A:1878:LEU:O	1:A:1882:VAL:HG23	2.18	0.43
1:A:1901:GLN:HG2	1:A:1905:ARG:HH22	1.83	0.43
1:A:1910:TRP:HZ2	1:A:1956:LEU:HB3	1.83	0.43
1:A:2218:LYS:HB3	1:A:2322:ARG:HH21	1.84	0.43
1:B:28:GLY:O	1:B:85:GLY:N	2.52	0.43
1:B:1207:GLN:O	1:B:1211:VAL:HG23	2.18	0.43
2:C:153:HIS:CD2	2:C:164:GLN:HB3	2.54	0.43
3:E:285:LYS:HG3	3:E:330:VAL:HG22	1.99	0.43
3:F:521:LEU:HB3	3:F:557:TRP:CZ2	2.54	0.43
4:G:87:ALA:O	4:G:89:ARG:C	2.48	0.43
4:G:88:GLN:OE1	4:G:88:GLN:CA	2.65	0.43
1:A:626:CYS:O	1:A:630:LEU:HD23	2.18	0.43
1:A:1555:ASP:HA	1:A:1557:PHE:CE1	2.54	0.43
1:B:876:GLN:OE1	1:B:876:GLN:N	2.51	0.43
1:B:988:GLN:HG3	1:B:989:PHE:CE1	2.54	0.43
2:C:144:ILE:CG2	2:C:152:ILE:HD11	2.49	0.43
3:E:851:LEU:HD11	4:G:2:ALA:HB2	2.01	0.43
4:G:6:ASN:OD1	4:G:9:ILE:HG12	2.19	0.43
1:A:677:ALA:CA	1:A:710:LEU:HD21	2.48	0.43
1:A:957:ARG:NH2	1:A:960:ARG:HH11	2.17	0.43
1:A:1809:GLN:OE1	1:A:1809:GLN:N	2.47	0.43
1:B:714:THR:HG23	1:B:717:ARG:NH2	2.34	0.43
1:B:1292:LEU:HG	1:B:1304:TRP:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:136:LEU:HD12	2:C:142:GLU:O	2.18	0.43
2:C:165:LEU:HD22	2:C:197:TRP:HH2	1.84	0.43
2:D:144:ILE:CG2	2:D:152:ILE:HD11	2.49	0.43
2:D:156:ASP:OD1	2:D:159:THR:OG1	2.34	0.43
3:E:146:ALA:O	3:E:150:VAL:HG23	2.19	0.43
3:E:374:LYS:HA	3:E:741:ARG:NH1	2.34	0.43
3:F:685:LEU:HD23	3:F:688:LEU:HD12	2.01	0.43
4:G:83:ARG:NH2	4:G:83:ARG:HG3	2.34	0.43
1:A:1009:ARG:HA	1:A:1012:LEU:HD12	1.99	0.43
1:A:1116:PRO:HA	1:A:1119:VAL:HG12	2.00	0.43
1:A:1903:THR:O	1:A:1907:LEU:HD23	2.19	0.43
1:B:1098:ALA:HA	1:B:1101:GLN:HE21	1.84	0.43
1:B:1157:HIS:HB2	1:B:1158:PRO:HD3	2.01	0.43
1:B:1752:LEU:HD12	1:B:1776:TYR:CE1	2.54	0.43
1:B:2099:GLN:O	1:B:2103:LEU:HG	2.19	0.43
1:B:2218:LYS:HE3	1:B:2322:ARG:NH2	2.34	0.43
3:E:97:LYS:HA	3:E:100:ARG:HH21	1.84	0.43
3:E:567:ASP:C	3:E:571:HIS:HD1	2.20	0.43
3:F:384:ARG:HA	3:F:385:PRO:HD3	1.89	0.43
4:H:83:ARG:NH2	4:H:83:ARG:HG3	2.34	0.43
1:A:1184:LEU:HD23	1:A:1188:TYR:HB2	2.01	0.42
1:A:1355:GLN:NE2	1:A:1390:CYS:SG	2.91	0.42
1:A:1500:LYS:HB3	1:A:1500:LYS:HE2	1.80	0.42
1:B:624:ARG:HG2	1:B:624:ARG:NH1	2.33	0.42
1:B:2161:GLN:HB3	1:B:2171:LYS:HD3	2.01	0.42
1:B:2263:ILE:O	1:B:2267:ILE:HG12	2.18	0.42
2:C:200:THR:CG2	2:C:208:THR:HA	2.49	0.42
3:E:431:LEU:HD11	3:E:449:LEU:HD21	2.01	0.42
3:E:521:LEU:HB3	3:E:557:TRP:CZ2	2.54	0.42
3:E:920:ILE:HD12	3:E:964:ILE:HD11	2.00	0.42
3:F:189:ALA:HB2	4:H:18:HIS:CE1	2.54	0.42
3:F:902:ILE:H	3:F:902:ILE:HD12	1.83	0.42
1:A:688:ALA:HB1	3:F:1003:VAL:HG21	2.01	0.42
1:A:1033:GLU:O	1:A:1036:THR:HG22	2.19	0.42
1:A:1095:LYS:HE2	1:A:1095:LYS:HB3	1.88	0.42
1:A:1119:VAL:HG23	1:A:1122:PHE:CE1	2.54	0.42
1:A:1177:LEU:O	1:A:1181:VAL:HG13	2.19	0.42
1:A:1282:GLU:HG2	1:A:1286:ARG:NE	2.34	0.42
1:A:1989:ASN:OD1	1:A:1990:ALA:N	2.52	0.42
1:A:2411:LYS:O	1:A:2415:MET:HB2	2.19	0.42
1:B:617:GLU:OE2	1:B:618:ILE:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1119:VAL:HA	1:B:1122:PHE:CD1	2.53	0.42
2:D:200:THR:CG2	2:D:208:THR:HA	2.49	0.42
3:F:312:LEU:HD12	3:F:327:LEU:HD11	2.01	0.42
3:F:374:LYS:HA	3:F:741:ARG:NH1	2.34	0.42
3:F:531:ASN:CB	3:F:554:ILE:HD11	2.47	0.42
3:F:550:LEU:O	3:F:553:THR:OG1	2.26	0.42
3:F:726:ASP:O	3:F:729:ARG:HB2	2.19	0.42
3:F:1666:ARG:HD3	3:F:1666:ARG:HA	1.84	0.42
1:A:623:ALA:HA	1:A:626:CYS:SG	2.58	0.42
1:A:886:ARG:O	1:A:890:LEU:HD23	2.20	0.42
1:A:944:ASP:OD1	1:A:945:GLU:N	2.50	0.42
1:A:1101:GLN:HB3	1:A:1141:ARG:NH1	2.32	0.42
1:A:1178:SER:O	1:A:1181:VAL:HG22	2.18	0.42
1:A:1920:ASN:O	1:A:1924:VAL:HG13	2.19	0.42
1:A:2182:PHE:HB3	1:A:2184:PHE:CE1	2.50	0.42
1:B:1477:MET:HA	1:B:1480:ARG:HG2	2.01	0.42
1:B:1532:TYR:O	1:B:1535:MET:HE2	2.19	0.42
1:B:2055:HIS:NE2	1:B:2082:GLN:HB2	2.34	0.42
2:C:298:CYS:H	2:C:305:LYS:HZ1	1.67	0.42
3:E:110:LEU:O	3:E:112:GLN:HG2	2.19	0.42
3:E:240:THR:HA	3:E:243:TYR:HD2	1.81	0.42
3:F:146:ALA:O	3:F:150:VAL:HG23	2.19	0.42
3:F:291:THR:HG23	3:F:292:PHE:HD2	1.84	0.42
3:F:735:HIS:ND1	3:F:735:HIS:O	2.52	0.42
1:A:1098:ALA:HA	1:A:1101:GLN:HG3	2.00	0.42
1:A:1119:VAL:HA	1:A:1122:PHE:HE1	1.84	0.42
1:A:1235:ARG:NH2	1:A:1236:MET:SD	2.89	0.42
1:A:2184:PHE:HB3	1:A:2236:LEU:HD11	2.01	0.42
2:D:123:ARG:NH1	2:D:157:LEU:O	2.46	0.42
3:E:735:HIS:ND1	3:E:735:HIS:O	2.52	0.42
3:E:763:ASN:HB3	3:E:766:ILE:HD12	2.00	0.42
3:F:364:LEU:HA	3:F:368:PHE:CD1	2.54	0.42
4:G:4:LEU:HD23	4:G:9:ILE:HD12	2.01	0.42
4:H:6:ASN:OD1	4:H:9:ILE:HG12	2.19	0.42
1:A:1362:GLU:HA	1:A:1365:GLU:HG2	2.01	0.42
1:B:835:ALA:O	1:B:837:ARG:N	2.53	0.42
2:C:189:ASN:OD1	2:C:193:ASN:N	2.52	0.42
2:D:94:HIS:CD2	2:D:96:ASP:H	2.38	0.42
2:D:226:CYS:O	2:D:227:ARG:HD2	2.20	0.42
3:E:222:ARG:NH1	4:G:20:THR:HG21	2.35	0.42
3:E:225:GLU:O	3:E:228:ILE:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:1528:ILE:HG12	3:E:1529:LEU:HD22	2.02	0.42
3:F:380:ARG:NH1	3:F:743:ASN:OD1	2.52	0.42
3:F:926:SER:O	3:F:930:LEU:HD23	2.20	0.42
3:F:934:GLY:HA2	3:F:943:LEU:HD13	2.00	0.42
3:F:1528:ILE:HG12	3:F:1529:LEU:HD22	2.02	0.42
1:A:1480:ARG:HH22	1:A:1496:GLN:HE21	1.67	0.42
1:B:620:MET:O	1:B:624:ARG:NH1	2.53	0.42
1:B:1193:PRO:O	1:B:1197:LYS:HG2	2.20	0.42
1:B:2209:LEU:HD21	1:B:2220:LEU:HB3	2.00	0.42
2:D:267:GLU:CG	2:D:270:ARG:H	2.31	0.42
3:E:113:ASP:H	3:E:116:ILE:HD12	1.85	0.42
3:E:934:GLY:HA2	3:E:943:LEU:HD13	2.00	0.42
3:F:35:SER:O	3:F:39:ARG:HG2	2.18	0.42
3:F:441:SER:O	3:F:444:HIS:ND1	2.48	0.42
1:A:824:ILE:HA	1:A:827:MET:HE3	2.01	0.42
1:A:947:TYR:CE1	1:A:1324:SER:HB3	2.55	0.42
1:A:1120:LYS:HA	1:A:1123:ASP:OD2	2.20	0.42
1:A:1157:HIS:HB2	1:A:1158:PRO:HD3	2.01	0.42
1:A:1945:ARG:HG3	1:A:1945:ARG:O	2.19	0.42
1:B:943:LEU:HD12	1:B:944:ASP:N	2.34	0.42
1:B:1226:GLU:O	3:F:485:ARG:NE	2.53	0.42
1:B:2298:ASP:N	1:B:2382:MET:HE1	2.33	0.42
2:D:165:LEU:HD22	2:D:197:TRP:HH2	1.84	0.42
3:E:526:GLU:HG2	3:E:527:ALA:N	2.34	0.42
3:F:332:TYR:CE1	3:F:426:LEU:HB2	2.51	0.42
4:G:91:GLU:HB3	4:G:95:LYS:NZ	2.33	0.42
4:H:66:TYR:CD2	4:H:66:TYR:O	2.73	0.42
4:H:67:ALA:O	4:H:68:GLN:HB3	2.05	0.42
1:A:929:TYR:O	1:A:933:GLU:HG2	2.20	0.42
1:A:970:MET:O	1:A:973:GLN:HG2	2.20	0.42
1:A:1520:ALA:HB3	1:A:1529:MET:HG2	2.02	0.42
1:A:1972:LEU:O	1:A:1976:LEU:HG	2.19	0.42
1:A:2021:ILE:HG23	1:A:2021:ILE:O	2.20	0.42
1:B:705:PHE:O	1:B:708:ARG:HB2	2.19	0.42
1:B:1192:ILE:HG13	1:B:1193:PRO:HD3	2.01	0.42
3:E:61:ASN:O	3:E:64:THR:OG1	2.36	0.42
3:E:291:THR:HG23	3:E:292:PHE:HD2	1.84	0.42
3:E:312:LEU:HD12	3:E:327:LEU:HD11	2.01	0.42
3:E:907:ARG:O	3:E:911:THR:HG23	2.20	0.42
3:E:926:SER:O	3:E:930:LEU:HD23	2.20	0.42
3:F:526:GLU:HG2	3:F:527:ALA:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:609:THR:HG21	3:F:662:PHE:CD1	2.55	0.42
1:A:1500:LYS:HD2	1:A:1503:LEU:HD21	2.02	0.42
1:A:1527:ASP:N	1:A:1527:ASP:OD1	2.51	0.42
1:A:1752:LEU:HD12	1:A:1776:TYR:CE1	2.54	0.42
1:B:1709:ARG:NH2	1:B:1711:ILE:HB	2.26	0.42
1:B:1793:TRP:O	1:B:1797:ASN:ND2	2.53	0.42
1:B:1900:LEU:O	1:B:1903:THR:OG1	2.29	0.42
2:D:221:ARG:HG3	2:D:222:TYR:H	1.85	0.42
3:E:296:ALA:O	3:E:300:ASN:ND2	2.38	0.42
3:E:726:ASP:HA	3:E:729:ARG:CG	2.49	0.42
3:F:135:ILE:HG21	3:F:139:ASN:HD21	1.85	0.42
3:F:770:ALA:HA	3:F:773:ILE:HG22	2.00	0.42
1:A:731:ARG:HB3	3:F:453:MET:HE1	2.01	0.42
1:A:773:GLU:HA	1:A:776:LEU:HG	2.02	0.42
1:A:1038:MET:SD	1:A:1056:ILE:HD11	2.59	0.42
1:A:1234:HIS:NE2	3:E:348:GLU:OE1	2.50	0.42
1:A:1293:LYS:HA	1:A:1304:TRP:CG	2.55	0.42
1:A:1620:TRP:HE3	1:A:1652:THR:HG22	1.85	0.42
1:A:1785:SER:O	1:A:1785:SER:OG	2.29	0.42
1:A:1884:ALA:O	1:A:1888:PHE:CD2	2.73	0.42
1:A:1921:GLU:O	1:A:1925:GLU:OE1	2.38	0.42
1:A:2203:GLY:O	1:A:2207:THR:HG23	2.19	0.42
1:B:704:VAL:CG2	1:B:707:ILE:HD12	2.49	0.42
1:B:1569:ASP:OD1	1:B:1570:LEU:N	2.53	0.42
1:B:1697:THR:HG23	1:B:1720:PHE:CZ	2.55	0.42
1:B:2015:GLU:OE1	1:B:2018:ARG:NH1	2.53	0.42
1:B:2512:ASP:OD1	1:B:2512:ASP:N	2.52	0.42
2:C:94:HIS:CD2	2:C:96:ASP:H	2.38	0.42
2:D:12:PRO:C	2:D:54:ARG:HH12	2.23	0.42
2:D:48:LEU:HD22	2:D:317:CYS:SG	2.60	0.42
3:E:150:VAL:O	3:E:153:MET:HG2	2.19	0.42
3:E:336:ARG:NH1	3:E:874:PRO:HD3	2.35	0.42
3:E:364:LEU:HA	3:E:368:PHE:CD1	2.54	0.42
3:F:225:GLU:O	3:F:228:ILE:HG22	2.20	0.42
3:F:389:ASP:HB3	3:F:437:ILE:HG21	2.02	0.42
3:F:663:ILE:HA	3:F:666:LEU:HB3	2.01	0.42
4:H:66:TYR:CE2	4:H:67:ALA:HB3	2.55	0.42
1:A:627:SER:HB2	1:A:678:SER:HB2	2.02	0.41
1:A:712:ILE:HG21	1:A:756:MET:HE3	2.02	0.41
1:A:1114:LEU:HD12	1:A:1114:LEU:HA	1.83	0.41
1:A:1215:ARG:HH21	1:A:1216:ILE:HG23	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1514:ARG:HG3	1:A:1515:MET:N	2.35	0.41
1:A:1910:TRP:NE1	1:A:1953:VAL:HG23	2.35	0.41
1:A:1986:ALA:HA	1:A:1989:ASN:ND2	2.35	0.41
1:A:1990:ALA:O	1:A:1994:ILE:HG22	2.20	0.41
1:A:2078:LEU:HA	1:A:2078:LEU:HD13	1.83	0.41
1:B:712:ILE:HD11	1:B:760:LEU:HD21	2.02	0.41
1:B:945:GLU:C	1:B:948:PRO:HD2	2.40	0.41
1:B:1072:PRO:HA	1:B:1075:ILE:HG12	2.02	0.41
1:B:1536:ILE:O	1:B:1538:ARG:NH1	2.53	0.41
1:B:1686:ASP:OD1	1:B:1687:HIS:N	2.52	0.41
2:D:199:LEU:H	2:D:199:LEU:HD23	1.85	0.41
3:E:380:ARG:NH1	3:E:743:ASN:OD1	2.52	0.41
3:E:818:LEU:HD21	3:E:823:TYR:HD2	1.84	0.41
3:E:881:HIS:O	3:E:885:GLN:HG2	2.20	0.41
3:F:150:VAL:O	3:F:153:MET:HG2	2.19	0.41
3:F:906:CYS:HA	3:F:909:VAL:HG12	2.02	0.41
3:F:919:GLU:HA	3:F:922:LYS:NZ	2.35	0.41
4:G:81:ARG:H	4:G:81:ARG:HG2	1.59	0.41
1:A:1155:ILE:C	1:A:1158:PRO:HD2	2.40	0.41
1:A:1208:ARG:O	1:A:1212:LEU:HD13	2.21	0.41
1:A:1265:LEU:HG	1:A:1269:TRP:CZ3	2.54	0.41
1:A:1277:LYS:HG3	1:A:1278:ASP:N	2.35	0.41
1:A:1416:LEU:HA	1:A:1419:ILE:HG22	2.02	0.41
1:A:2047:MET:HA	1:A:2050:VAL:HB	2.03	0.41
1:A:2086:ARG:HA	1:A:2089:MET:HG3	2.02	0.41
1:B:1515:MET:HE2	1:B:1515:MET:HB3	1.86	0.41
2:C:12:PRO:C	2:C:54:ARG:HH12	2.23	0.41
2:C:48:LEU:HD22	2:C:317:CYS:SG	2.60	0.41
2:C:248:ARG:HG2	2:C:250:SER:H	1.86	0.41
3:E:971:VAL:O	3:E:974:LEU:HB2	2.21	0.41
3:F:97:LYS:HA	3:F:100:ARG:HH21	1.84	0.41
3:F:151:ARG:HH22	4:H:31:LEU:C	2.23	0.41
3:F:153:MET:HA	3:F:156:VAL:HG12	2.02	0.41
3:F:881:HIS:O	3:F:885:GLN:HG2	2.20	0.41
3:F:907:ARG:O	3:F:911:THR:HG23	2.20	0.41
3:F:962:LEU:O	3:F:965:ARG:HB2	2.19	0.41
4:G:66:TYR:CE2	4:G:67:ALA:HB3	2.55	0.41
1:A:621:GLU:OE2	1:A:624:ARG:NH1	2.50	0.41
1:A:737:ILE:O	1:A:740:GLU:HB3	2.19	0.41
1:A:1020:VAL:HG13	1:A:1027:ILE:HD13	2.03	0.41
1:A:1607:LEU:HD23	1:A:1607:LEU:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1069:LEU:HD13	3:F:467:LEU:HD12	2.02	0.41
3:E:82:GLU:OE1	3:E:82:GLU:N	2.48	0.41
3:E:556:LYS:CE	3:E:607:GLN:HE22	2.34	0.41
3:F:336:ARG:NH1	3:F:874:PRO:HD3	2.34	0.41
3:F:431:LEU:HD11	3:F:449:LEU:HD21	2.01	0.41
3:F:726:ASP:HA	3:F:729:ARG:CG	2.49	0.41
3:F:900:ASN:O	3:F:903:THR:HG22	2.20	0.41
4:H:80:ILE:HD12	4:H:81:ARG:N	2.35	0.41
1:A:660:LEU:O	1:A:664:ILE:HG12	2.20	0.41
1:A:854:VAL:HG13	1:A:855:VAL:N	2.35	0.41
1:A:1717:MET:HG3	1:A:1757:TRP:HZ3	1.85	0.41
1:A:2052:GLU:HB3	1:A:2053:PRO:HD3	2.03	0.41
1:A:2169:PRO:HB2	1:A:2185:LEU:HD11	2.02	0.41
1:B:1322:PHE:CD2	1:B:1360:LEU:HD11	2.55	0.41
2:C:248:ARG:NH1	2:C:253:SER:OG	2.53	0.41
2:D:34:CYS:HB3	2:D:308:TYR:OH	2.21	0.41
2:D:248:ARG:NH1	2:D:253:SER:OG	2.53	0.41
3:E:115:SER:CA	3:E:118:GLN:HE21	2.33	0.41
3:E:663:ILE:HA	3:E:666:LEU:HB3	2.01	0.41
3:E:726:ASP:O	3:E:729:ARG:HB2	2.19	0.41
3:E:900:ASN:O	3:E:903:THR:HG22	2.20	0.41
3:E:962:LEU:O	3:E:965:ARG:HB2	2.19	0.41
3:F:620:GLN:O	3:F:624:GLU:HG3	2.21	0.41
3:F:971:VAL:O	3:F:974:LEU:HB2	2.21	0.41
4:H:4:LEU:HD23	4:H:9:ILE:HD12	2.01	0.41
1:A:1154:ARG:HG2	1:B:702:ASP:HA	2.01	0.41
1:A:1609:PRO:HA	1:A:1612:ARG:NE	2.36	0.41
1:A:2345:MET:O	1:A:2353:ILE:HD12	2.20	0.41
1:B:967:HIS:O	1:B:971:VAL:HG23	2.20	0.41
1:B:1031:MET:O	1:B:1034:ILE:HB	2.20	0.41
1:B:1117:PRO:O	1:B:1121:LEU:HD23	2.20	0.41
1:B:1753:LYS:HB3	1:B:1757:TRP:CZ3	2.55	0.41
1:B:2153:ILE:O	1:B:2153:ILE:HG13	2.20	0.41
2:C:199:LEU:HD23	2:C:199:LEU:H	1.85	0.41
2:C:278:PHE:CD1	2:C:285:ILE:HG22	2.56	0.41
3:E:389:ASP:HB3	3:E:437:ILE:HG21	2.03	0.41
3:E:1526:ILE:HD11	3:E:1533:PRO:HA	2.03	0.41
3:F:382:ARG:HG2	3:F:382:ARG:NH1	2.35	0.41
3:F:818:LEU:HD21	3:F:823:TYR:HD2	1.84	0.41
1:A:664:ILE:HG13	1:A:695:ALA:HB1	2.03	0.41
1:A:1060:VAL:HG21	1:A:1103:PHE:HE1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1325:CYS:O	1:A:1329:LEU:HG	2.21	0.41
1:A:2212:ASP:HB3	1:A:2215:SER:OG	2.21	0.41
1:B:886:ARG:NH1	1:B:886:ARG:HG3	2.34	0.41
1:B:1389:LYS:O	1:B:1391:ARG:NH1	2.54	0.41
1:B:1681:PRO:HA	1:B:1684:GLN:HG3	2.02	0.41
1:B:2036:ARG:HG3	1:B:2037:LEU:N	2.36	0.41
1:B:2131:LEU:HD23	1:B:2131:LEU:H	1.85	0.41
1:B:2527:LEU:HD23	1:B:2527:LEU:HA	1.78	0.41
1:B:2534:SER:OG	1:B:2536:GLU:OE1	2.36	0.41
2:C:226:CYS:O	2:C:227:ARG:HD2	2.20	0.41
2:D:242:GLN:O	2:D:261:LYS:NZ	2.49	0.41
2:D:278:PHE:CD1	2:D:285:ILE:HG22	2.56	0.41
3:E:379:HIS:CD2	3:E:381:ALA:H	2.28	0.41
3:E:382:ARG:HG2	3:E:382:ARG:NH1	2.35	0.41
3:F:623:LEU:CD2	3:F:675:MET:HG2	2.51	0.41
3:F:628:LYS:O	3:F:631:VAL:HG12	2.21	0.41
3:F:761:ASP:OD1	3:F:762:LYS:N	2.44	0.41
4:G:68:GLN:O	4:G:69:SER:O	2.38	0.41
1:A:835:ALA:O	1:A:837:ARG:N	2.54	0.41
1:A:1031:MET:SD	1:A:1063:LEU:HD11	2.60	0.41
1:A:1098:ALA:HA	1:A:1101:GLN:NE2	2.36	0.41
1:A:1236:MET:SD	1:A:1236:MET:N	2.94	0.41
1:A:1391:ARG:HA	1:A:1393:TYR:CE1	2.56	0.41
1:A:1620:TRP:O	1:A:1624:GLN:HG2	2.20	0.41
1:A:2026:MET:HE2	1:A:2026:MET:HB3	1.85	0.41
1:B:708:ARG:O	1:B:712:ILE:HG22	2.21	0.41
1:B:883:GLU:O	1:B:887:VAL:HG23	2.21	0.41
1:B:1220:TYR:CD2	1:B:1221:THR:HG22	2.56	0.41
1:B:1264:ASN:HA	1:B:1267:LYS:NZ	2.36	0.41
1:B:1989:ASN:OD1	1:B:1990:ALA:N	2.52	0.41
2:C:14:ILE:HG13	2:C:321:ASN:H	1.86	0.41
2:C:34:CYS:HB3	2:C:308:TYR:OH	2.20	0.41
2:C:88:ILE:HD12	2:C:104:GLY:HA2	2.03	0.41
2:C:194:CYS:HB2	2:C:216:ILE:CG2	2.51	0.41
3:E:609:THR:HG21	3:E:662:PHE:CD1	2.55	0.41
3:F:43:GLN:OE1	3:F:59:HIS:NE2	2.54	0.41
3:F:110:LEU:O	3:F:112:GLN:HG2	2.19	0.41
4:G:66:TYR:CD2	4:G:66:TYR:O	2.73	0.41
4:G:80:ILE:HD12	4:G:81:ARG:N	2.35	0.41
4:H:68:GLN:O	4:H:69:SER:O	2.38	0.41
1:A:1212:LEU:HG	1:A:1215:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1083:MET:SD	1:B:1083:MET:N	2.94	0.41
1:B:1200:VAL:HA	1:B:1203:ARG:NH2	2.36	0.41
1:B:1493:LEU:HD23	1:B:1519:ALA:HB2	2.03	0.41
1:B:2339:ARG:O	1:B:2378:ARG:HD3	2.21	0.41
1:B:2387:MET:HE2	1:B:2387:MET:HB2	1.89	0.41
2:C:98:ARG:HA	2:C:115:ARG:NH2	2.36	0.41
2:C:156:ASP:OD1	2:C:159:THR:OG1	2.34	0.41
2:D:177:HIS:ND1	2:D:228:PHE:HD2	2.19	0.41
3:E:336:ARG:NH1	3:E:873:ARG:HA	2.36	0.41
3:E:548:TRP:CD1	3:E:597:LYS:HE3	2.56	0.41
3:E:613:LEU:HA	3:E:616:GLU:OE2	2.20	0.41
3:F:249:GLU:H	3:F:249:GLU:CD	2.21	0.41
3:F:481:GLU:O	3:F:484:LYS:HG2	2.21	0.41
3:F:824:VAL:HG23	3:F:825:ALA:H	1.86	0.41
1:A:242:GLU:HA	1:A:365:LEU:HA	2.02	0.41
1:A:664:ILE:CA	1:A:672:ARG:HH12	2.34	0.41
1:A:858:TYR:CD1	1:A:894:LEU:HD22	2.56	0.41
1:A:1208:ARG:H	1:A:1208:ARG:HG2	1.63	0.41
1:A:1504:VAL:HG22	1:A:1508:THR:OG1	2.21	0.41
1:A:1874:SER:HA	1:A:1877:LEU:HD12	2.02	0.41
1:A:1917:PRO:HA	1:A:1920:ASN:OD1	2.21	0.41
1:A:1953:VAL:O	1:A:1957:ILE:HG13	2.21	0.41
1:A:2102:ASP:OD1	3:E:1626:SER:OG	2.31	0.41
1:A:2137:GLU:O	1:A:2152:ARG:HD2	2.21	0.41
1:B:680:ASP:OD2	1:B:682:ARG:HD3	2.20	0.41
1:B:777:LYS:HA	1:B:780:ILE:HG12	2.03	0.41
1:B:1123:ASP:OD1	1:B:1123:ASP:N	2.52	0.41
1:B:1280:TRP:CE2	1:B:1348:GLN:HB3	2.56	0.41
1:B:1374:LEU:HB2	1:B:1378:ASN:C	2.41	0.41
1:B:1797:ASN:HB3	1:B:1884:ALA:HB2	2.01	0.41
1:B:2171:LYS:O	1:B:2171:LYS:HG3	2.21	0.41
2:C:177:HIS:ND1	2:C:228:PHE:HD2	2.19	0.41
2:C:248:ARG:NH2	2:C:251:ASN:OD1	2.53	0.41
2:C:305:LYS:HB2	2:C:305:LYS:HE2	1.78	0.41
2:D:46:ASN:N	2:D:60:ALA:O	2.37	0.41
2:D:196:VAL:HB	2:D:214:THR:HB	2.03	0.41
2:D:248:ARG:NH2	2:D:251:ASN:OD1	2.53	0.41
2:D:248:ARG:HG2	2:D:250:SER:H	1.86	0.41
2:D:305:LYS:HE2	2:D:305:LYS:HB2	1.79	0.41
3:E:482:MET:O	3:E:485:ARG:HB3	2.21	0.41
3:E:628:LYS:O	3:E:631:VAL:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:779:GLU:HA	3:E:807:ARG:NH2	2.29	0.41
3:E:890:LYS:HD2	3:E:938:TRP:CD2	2.56	0.41
3:E:907:ARG:HA	3:E:910:ARG:NE	2.33	0.41
3:E:1491:GLU:OE1	3:E:1491:GLU:N	2.52	0.41
3:E:1613:ARG:HH22	3:E:1651:CYS:HB2	1.86	0.41
3:F:567:ASP:C	3:F:571:HIS:HD1	2.20	0.41
3:F:595:PHE:HB3	3:F:598:ALA:HB2	2.03	0.41
3:F:613:LEU:HA	3:F:616:GLU:OE2	2.20	0.41
3:F:725:THR:O	3:F:729:ARG:HG2	2.21	0.41
3:F:1637:LEU:CD2	4:H:93:LEU:HD21	2.49	0.41
4:H:35:ASP:OD1	4:H:35:ASP:C	2.60	0.41
1:A:858:TYR:OH	1:A:891:LEU:HB3	2.21	0.41
1:A:1054:LEU:HD12	1:A:1054:LEU:HA	1.90	0.41
1:A:1149:THR:OG1	1:A:1150:ASP:N	2.54	0.41
1:A:2064:THR:O	1:A:2068:THR:OG1	2.28	0.41
1:B:666:ASP:CG	1:B:667:PRO:HD2	2.41	0.41
1:B:1210:ASP:HA	1:B:1213:ILE:HG12	2.02	0.41
1:B:1919:VAL:O	1:B:1923:LEU:HG	2.21	0.41
1:B:1971:ALA:HB2	1:B:2144:TYR:CE2	2.55	0.41
1:B:2165:SER:OG	1:B:2166:LYS:N	2.54	0.41
3:E:249:GLU:H	3:E:249:GLU:CD	2.21	0.41
3:E:818:LEU:HA	3:E:821:ARG:HH21	1.86	0.41
3:E:1636:LEU:HD23	3:E:1636:LEU:HA	1.92	0.41
3:E:1687:GLU:HA	3:E:1690:GLU:HG3	2.03	0.41
3:F:1613:ARG:HH22	3:F:1651:CYS:HB2	1.86	0.41
4:H:87:ALA:O	4:H:90:LEU:C	2.59	0.41
1:A:544:SER:O	1:A:548:MET:CB	2.69	0.40
1:A:708:ARG:HG3	1:A:708:ARG:HH11	1.86	0.40
1:A:814:ARG:NH1	1:A:851:THR:O	2.54	0.40
1:A:1123:ASP:HA	1:A:1161:ARG:HH22	1.79	0.40
1:A:1907:LEU:HD21	1:A:1935:TRP:HZ3	1.86	0.40
1:A:2521:VAL:HB	1:A:2522:PRO:HD3	2.02	0.40
1:B:824:ILE:HG21	1:B:844:LEU:HB2	2.02	0.40
1:B:1095:LYS:HE2	1:B:1095:LYS:HB3	1.91	0.40
1:B:1340:SER:O	1:B:1343:LEU:HG	2.22	0.40
1:B:2285:GLU:HG3	2:D:272:TRP:CE2	2.56	0.40
2:D:14:ILE:HD11	2:D:321:ASN:HB2	2.03	0.40
2:D:88:ILE:HD12	2:D:104:GLY:HA2	2.03	0.40
3:E:36:ASP:HA	3:E:39:ARG:CZ	2.51	0.40
3:E:43:GLN:OE1	3:E:59:HIS:NE2	2.54	0.40
3:E:124:LYS:HA	3:E:124:LYS:HD2	1.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:1619:LEU:HD21	3:E:1632:HIS:HB3	2.03	0.40
3:E:1670:ARG:O	3:E:1673:ILE:HG22	2.21	0.40
3:F:115:SER:CA	3:F:118:GLN:HE21	2.33	0.40
3:F:907:ARG:HA	3:F:910:ARG:NE	2.33	0.40
3:F:1484:ARG:HA	3:F:1484:ARG:HD2	1.87	0.40
3:F:1522:TYR:OH	3:F:1532:GLN:O	2.24	0.40
4:H:78:PHE:HD2	4:H:78:PHE:HA	1.50	0.40
1:A:430:ARG:HA	1:A:433:ALA:HB3	2.04	0.40
1:A:736:GLN:HB3	1:B:1112:HIS:NE2	2.36	0.40
1:A:1338:ILE:HG22	1:A:1372:LEU:HD21	2.02	0.40
1:A:1613:GLU:N	1:A:1613:GLU:OE2	2.54	0.40
1:A:2085:CYS:O	1:A:2089:MET:HG3	2.21	0.40
1:B:614:GLU:OE1	1:B:614:GLU:N	2.53	0.40
1:B:1325:CYS:O	1:B:1329:LEU:HG	2.21	0.40
2:C:49:GLU:OE1	2:C:92:GLY:HA2	2.21	0.40
2:C:221:ARG:HG3	2:C:222:TYR:H	1.85	0.40
2:C:267:GLU:HG2	2:C:269:SER:N	2.37	0.40
3:E:135:ILE:HG21	3:E:139:ASN:HD21	1.85	0.40
3:E:595:PHE:HB3	3:E:598:ALA:HB2	2.03	0.40
3:E:919:GLU:HA	3:E:922:LYS:NZ	2.35	0.40
3:F:336:ARG:NH1	3:F:873:ARG:HA	2.36	0.40
3:F:1521:LEU:HB3	3:F:1650:ILE:HD11	2.03	0.40
1:A:701:ASN:OD1	1:A:708:ARG:NH2	2.54	0.40
1:A:776:LEU:O	1:A:780:ILE:HG12	2.22	0.40
1:A:1217:VAL:HG13	1:A:1218:LYS:HG2	2.03	0.40
1:A:1300:LEU:HD23	1:A:1300:LEU:HA	1.93	0.40
1:A:2066:LYS:HD3	1:A:2125:TYR:CE2	2.57	0.40
1:A:2135:ASP:OD1	1:A:2136:LEU:N	2.55	0.40
1:A:2191:ASP:O	1:A:2192:LEU:HD12	2.20	0.40
1:B:1097:LEU:O	1:B:1101:GLN:HG3	2.21	0.40
1:B:1595:MET:SD	1:B:1639:VAL:HG11	2.61	0.40
1:B:2538:LEU:HD23	1:B:2538:LEU:HA	1.90	0.40
2:C:107:CYS:HB3	2:C:127:VAL:O	2.21	0.40
2:D:20:TYR:HD2	2:D:44:GLN:NE2	2.20	0.40
3:E:337:LEU:HD21	3:E:429:GLU:HG2	2.04	0.40
3:E:620:GLN:O	3:E:624:GLU:HG3	2.21	0.40
3:F:36:ASP:HA	3:F:39:ARG:CZ	2.51	0.40
3:F:113:ASP:H	3:F:116:ILE:HD12	1.85	0.40
4:H:92:ARG:NH2	4:H:93:LEU:HB3	2.36	0.40
1:A:2228:ILE:CG1	1:A:2236:LEU:HB3	2.50	0.40
1:B:1442:GLU:OE1	1:B:1442:GLU:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1630:VAL:HG22	1:B:1659:LEU:HD12	2.03	0.40
1:B:2336:LEU:HD21	1:B:2339:ARG:NH1	2.37	0.40
1:B:2514:SER:OG	1:B:2516:ASP:OD1	2.24	0.40
2:D:49:GLU:OE1	2:D:92:GLY:HA2	2.21	0.40
3:E:623:LEU:CD2	3:E:675:MET:HG2	2.51	0.40
3:E:725:THR:O	3:E:729:ARG:HG2	2.21	0.40
3:F:392:LEU:HD23	3:F:392:LEU:HA	1.82	0.40
3:F:890:LYS:HD2	3:F:938:TRP:CD2	2.56	0.40
4:G:35:ASP:OD1	4:G:35:ASP:C	2.60	0.40
1:A:267:ILE:O	1:A:271:LEU:N	2.44	0.40
1:A:649:VAL:HA	1:A:652:VAL:HG12	2.03	0.40
1:A:797:ASN:O	1:A:801:THR:HG23	2.22	0.40
1:A:1338:ILE:HA	1:A:1341:ILE:HG22	2.02	0.40
1:A:1342:GLU:OE1	1:A:1343:LEU:HD22	2.21	0.40
1:B:663:GLY:HA2	1:B:672:ARG:HH21	1.87	0.40
1:B:1357:LEU:HD13	1:B:1357:LEU:HA	1.94	0.40
2:C:20:TYR:HB2	2:C:313:LYS:CB	2.52	0.40
3:E:153:MET:HA	3:E:156:VAL:HG12	2.02	0.40
3:E:906:CYS:HA	3:E:909:VAL:HG12	2.02	0.40
3:F:223:ILE:O	3:F:227:LEU:HG	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	2143/2674 (80%)	2026 (94%)	117 (6%)	0	100	100
1	B	2145/2674 (80%)	2012 (94%)	133 (6%)	0	100	100
2	C	317/347 (91%)	292 (92%)	25 (8%)	0	100	100
2	D	317/347 (91%)	292 (92%)	25 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	E	1103/1720 (64%)	1027 (93%)	76 (7%)	0	100	100
3	F	1103/1720 (64%)	1027 (93%)	76 (7%)	0	100	100
4	G	116/538 (22%)	87 (75%)	17 (15%)	12 (10%)	0	3
4	H	116/538 (22%)	87 (75%)	17 (15%)	12 (10%)	0	3
All	All	7360/10558 (70%)	6850 (93%)	486 (7%)	24 (0%)	44	72

All (24) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	G	35	ASP
4	G	37	ASP
4	G	72	ILE
4	G	74	SER
4	G	78	PHE
4	G	80	ILE
4	G	85	ASN
4	H	35	ASP
4	H	37	ASP
4	H	72	ILE
4	H	74	SER
4	H	78	PHE
4	H	80	ILE
4	H	85	ASN
4	G	36	VAL
4	G	68	GLN
4	H	36	VAL
4	H	68	GLN
4	G	75	SER
4	G	76	TRP
4	H	75	SER
4	H	76	TRP
4	G	70	VAL
4	H	70	VAL

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	1563/2319 (67%)	1554 (99%)	9 (1%)	86 91
1	B	1552/2319 (67%)	1546 (100%)	6 (0%)	91 95
2	C	269/290 (93%)	266 (99%)	3 (1%)	73 85
2	D	269/290 (93%)	266 (99%)	3 (1%)	73 85
3	E	987/1550 (64%)	957 (97%)	30 (3%)	41 68
3	F	987/1550 (64%)	957 (97%)	30 (3%)	41 68
4	G	70/479 (15%)	57 (81%)	13 (19%)	1 7
4	H	70/479 (15%)	57 (81%)	13 (19%)	1 7
All	All	5767/9276 (62%)	5660 (98%)	107 (2%)	59 77

All (107) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	980	LYS
1	A	1028	ARG
1	A	1215	ARG
1	A	1274	ARG
1	A	1480	ARG
1	A	1722	GLN
1	A	1738	GLN
1	A	1784	ARG
1	A	2152	ARG
1	B	628	ARG
1	B	1045	ASN
1	B	1161	ARG
1	B	1274	ARG
1	B	1784	ARG
1	B	2193	ARG
2	C	56	MET
2	C	67	MET
2	C	234	LEU
2	D	56	MET
2	D	67	MET
2	D	234	LEU
3	E	177	LEU
3	E	196	LEU
3	E	208	LEU
3	E	209	ASN

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Mol	Chain	Res	Type
3	E	270	GLU
3	E	322	GLU
3	E	333	ASP
3	E	405	LEU
3	E	430	LEU
3	E	431	LEU
3	E	710	ASP
3	E	729	ARG
3	E	762	LYS
3	E	807	ARG
3	E	821	ARG
3	E	826	LYS
3	E	828	LEU
3	E	838	LYS
3	E	905	LEU
3	E	907	ARG
3	E	910	ARG
3	E	911	THR
3	E	916	LYS
3	E	926	SER
3	E	943	LEU
3	E	960	GLU
3	E	975	ILE
3	E	1487	MET
3	E	1621	ILE
3	E	1671	ARG
3	F	177	LEU
3	F	196	LEU
3	F	208	LEU
3	F	209	ASN
3	F	270	GLU
3	F	322	GLU
3	F	333	ASP
3	F	405	LEU
3	F	430	LEU
3	F	431	LEU
3	F	710	ASP
3	F	729	ARG
3	F	762	LYS
3	F	807	ARG
3	F	821	ARG
3	F	826	LYS

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Mol	Chain	Res	Type
3	F	828	LEU
3	F	838	LYS
3	F	905	LEU
3	F	907	ARG
3	F	910	ARG
3	F	911	THR
3	F	916	LYS
3	F	926	SER
3	F	943	LEU
3	F	960	GLU
3	F	975	ILE
3	F	1487	MET
3	F	1621	ILE
3	F	1671	ARG
4	G	35	ASP
4	G	36	VAL
4	G	64	TYR
4	G	66	TYR
4	G	68	GLN
4	G	70	VAL
4	G	73	THR
4	G	77	ASP
4	G	78	PHE
4	G	80	ILE
4	G	81	ARG
4	G	88	GLN
4	G	104	LYS
4	H	35	ASP
4	H	36	VAL
4	H	64	TYR
4	H	66	TYR
4	H	68	GLN
4	H	70	VAL
4	H	73	THR
4	H	77	ASP
4	H	78	PHE
4	H	80	ILE
4	H	81	ARG
4	H	88	GLN
4	H	104	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1101	GLN
1	A	1627	GLN
1	A	1722	GLN
1	A	1808	ASN
1	A	1959	GLN
1	A	2099	GLN
1	B	1049	GLN
1	B	1165	GLN
1	B	1729	GLN
1	B	1901	GLN
1	B	1959	GLN
1	B	2072	GLN
3	E	94	ASN
3	E	379	HIS
3	F	94	ASN
3	F	379	HIS
3	F	607	GLN
3	F	1438	GLN
4	G	34	HIS
4	G	85	ASN
4	H	34	HIS
4	H	85	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
4	G	1
4	H	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	G	85:ASN	C	86:THR	N	1.20
1	H	85:ASN	C	86:THR	N	1.20

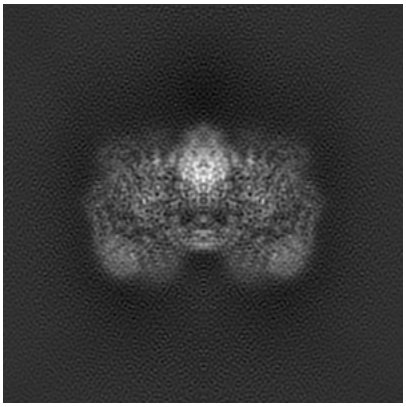
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-26213. These allow visual inspection of the internal detail of the map and identification of artifacts.

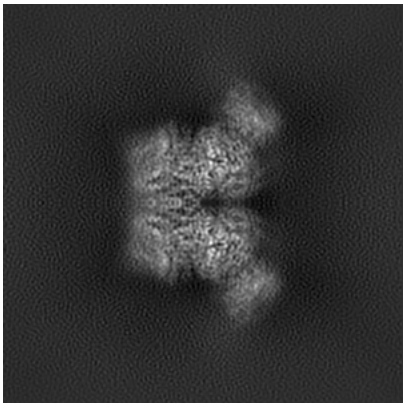
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

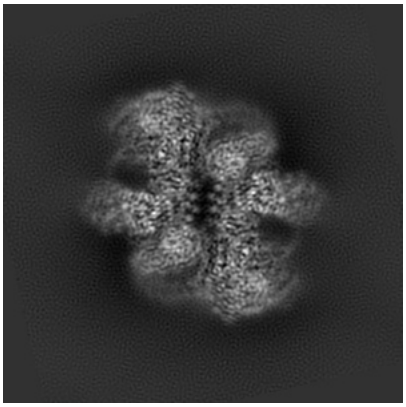
6.1.1 Primary map



X



Y



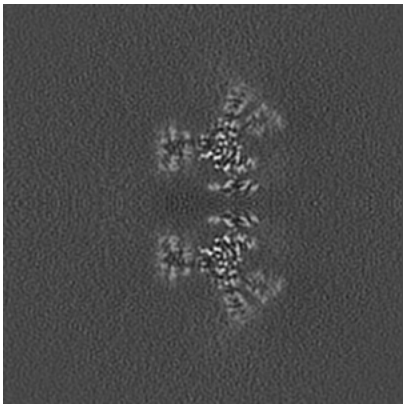
Z

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

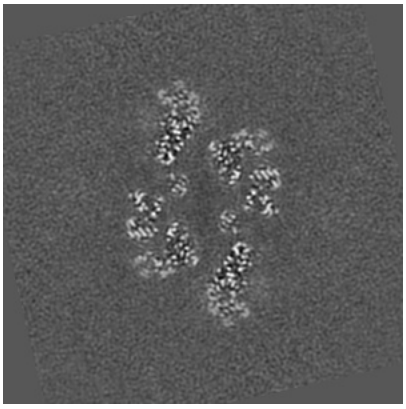
6.2 Central slices

6.2.1 Primary map

X Index: 162



Y Index: 162

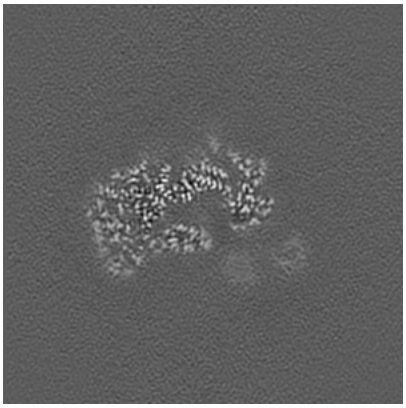


Z Index: 162

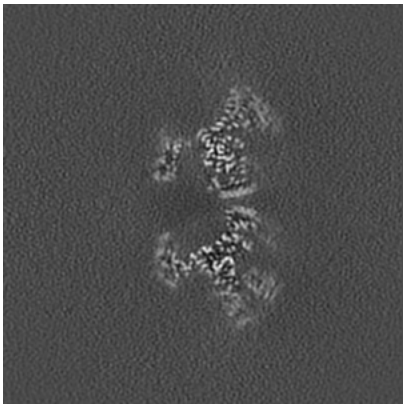
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

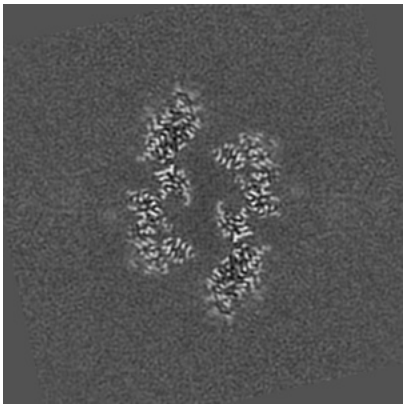
6.3.1 Primary map



X Index: 190



Y Index: 157

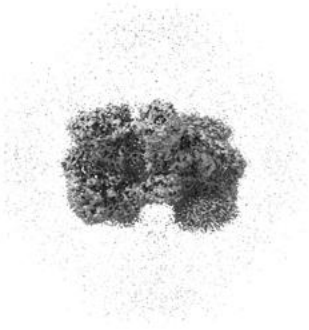


Z Index: 167

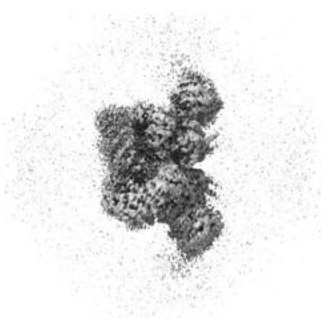
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

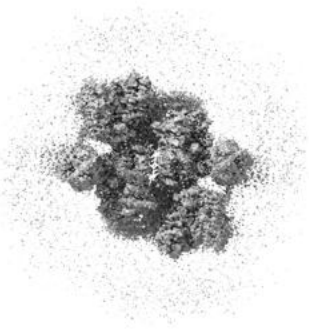
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 2.64. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

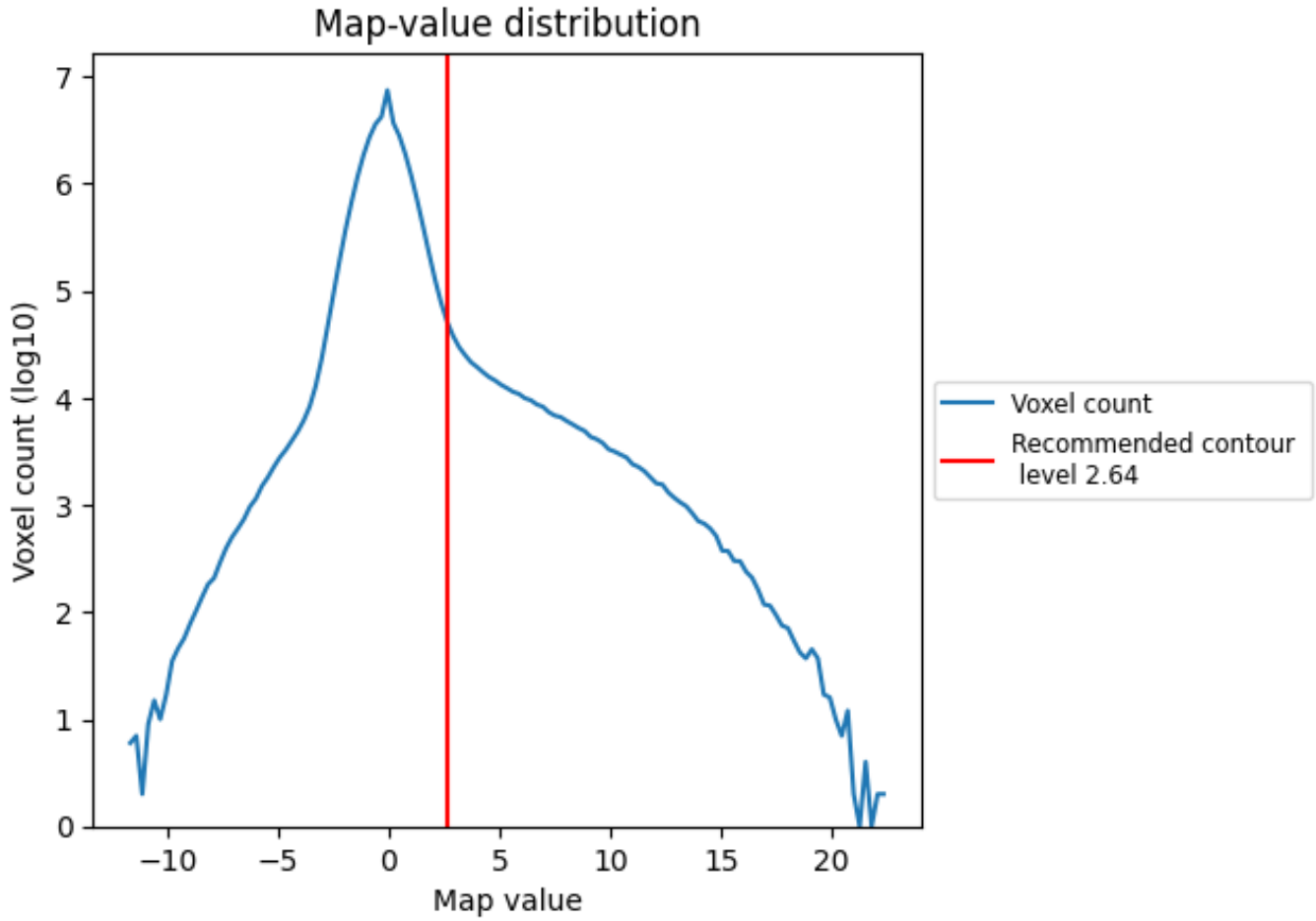
6.5 Mask visualisation (i)

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

7 Map analysis

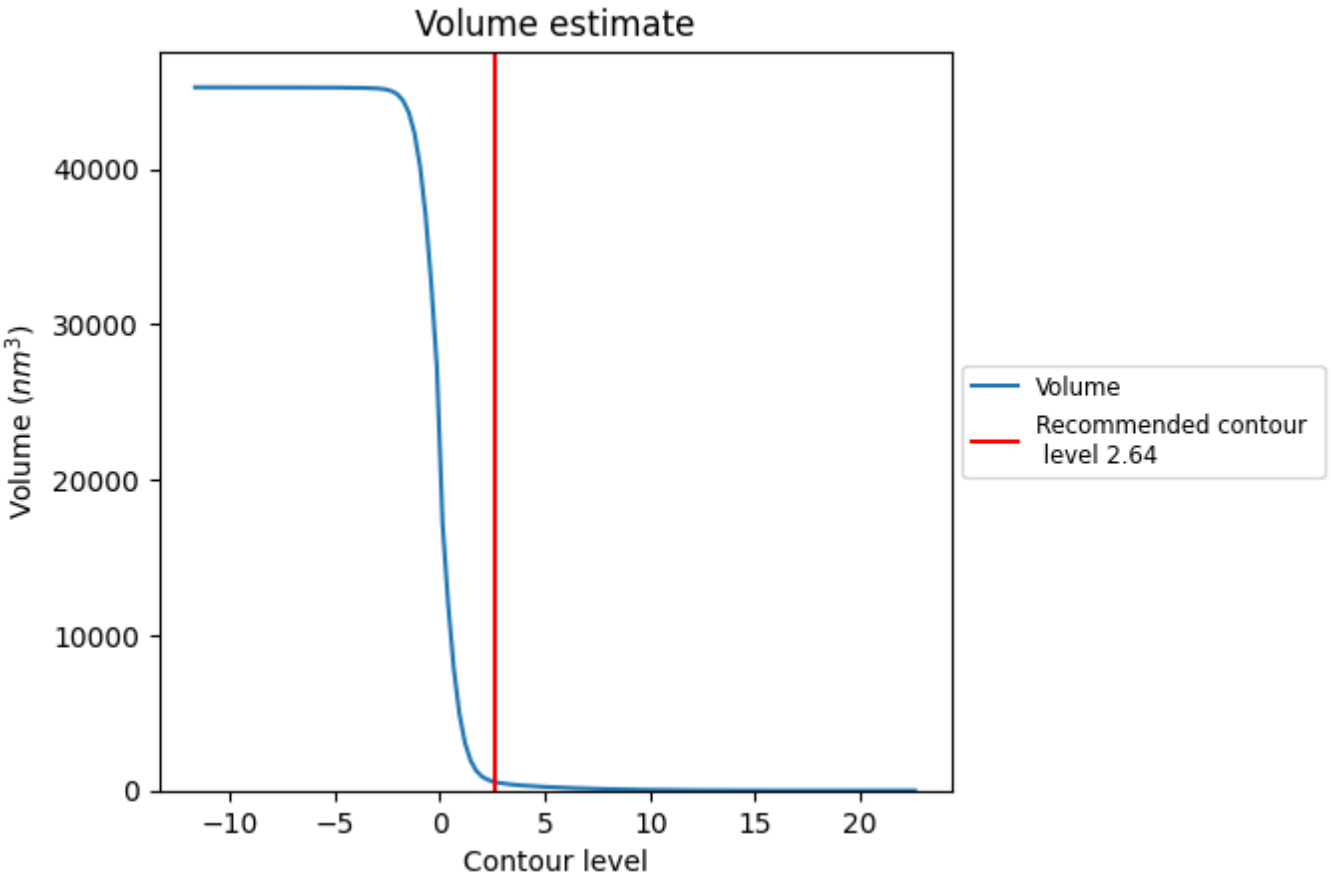
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

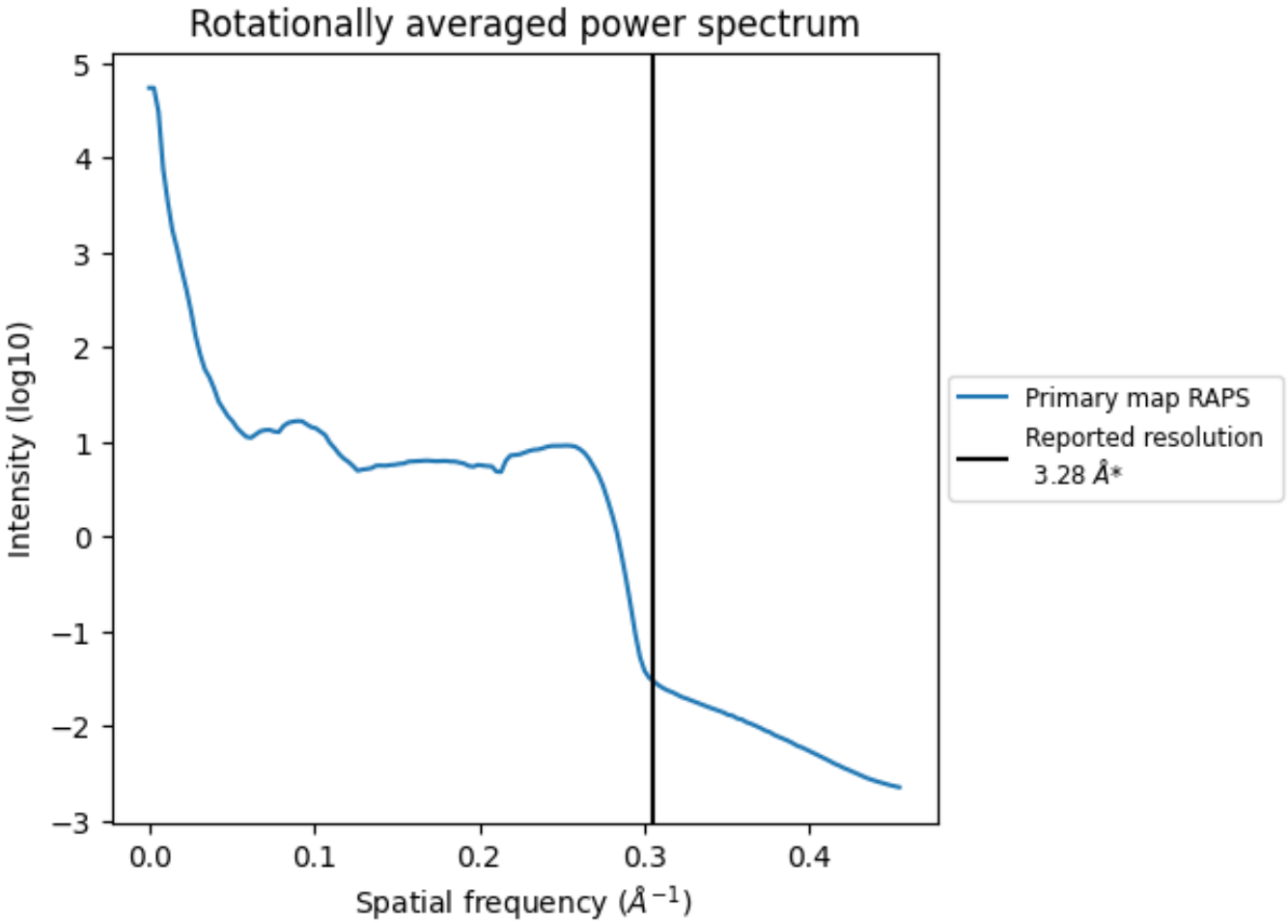
7.2 Volume estimate



The volume at the recommended contour level is 548 nm^3; this corresponds to an approximate mass of 495 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 0.305 Å^{-1}

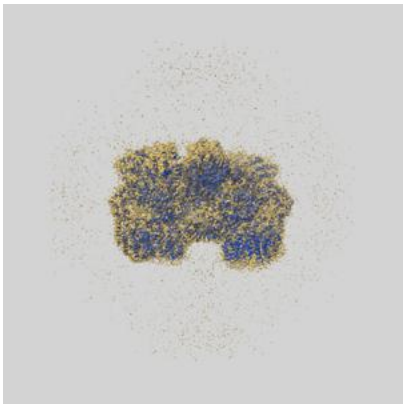
8 Fourier-Shell correlation

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

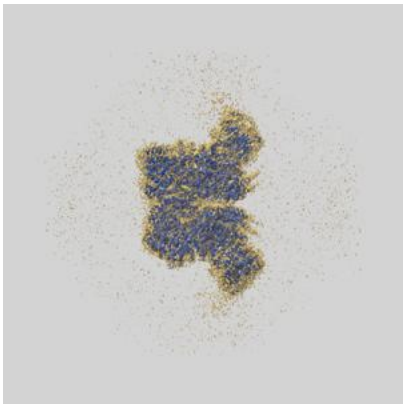
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-26213 and PDB model 7TZO. Per-residue inclusion information can be found in section 3 on page 13.

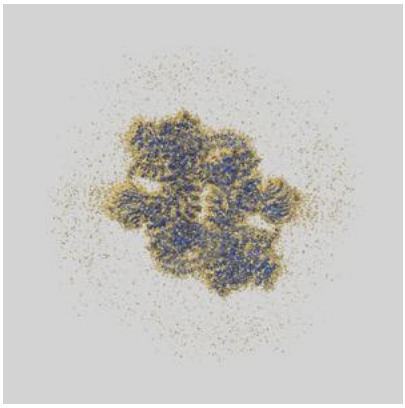
9.1 Map-model overlay



X



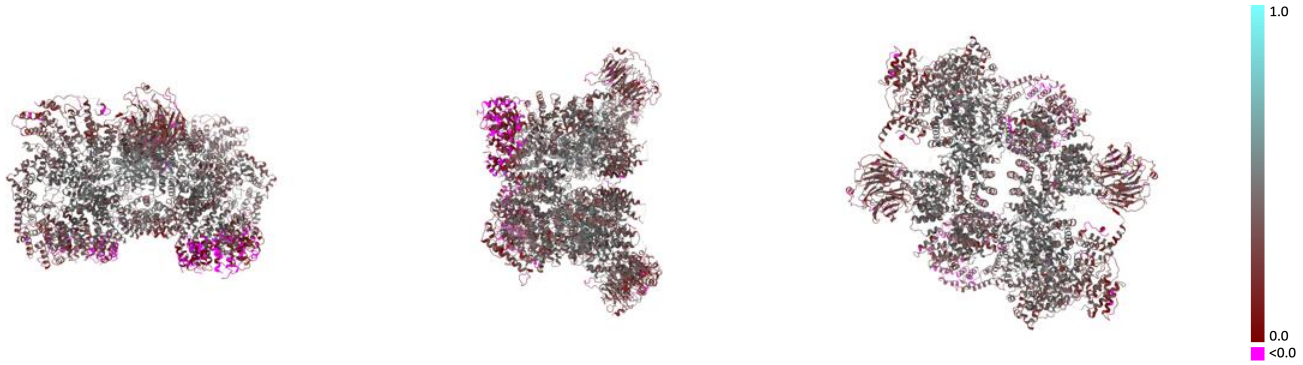
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 2.64 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.

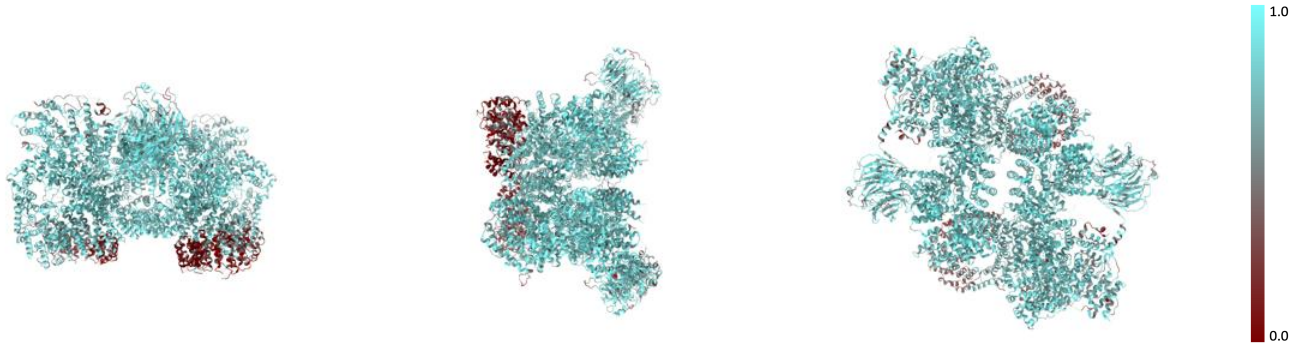
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

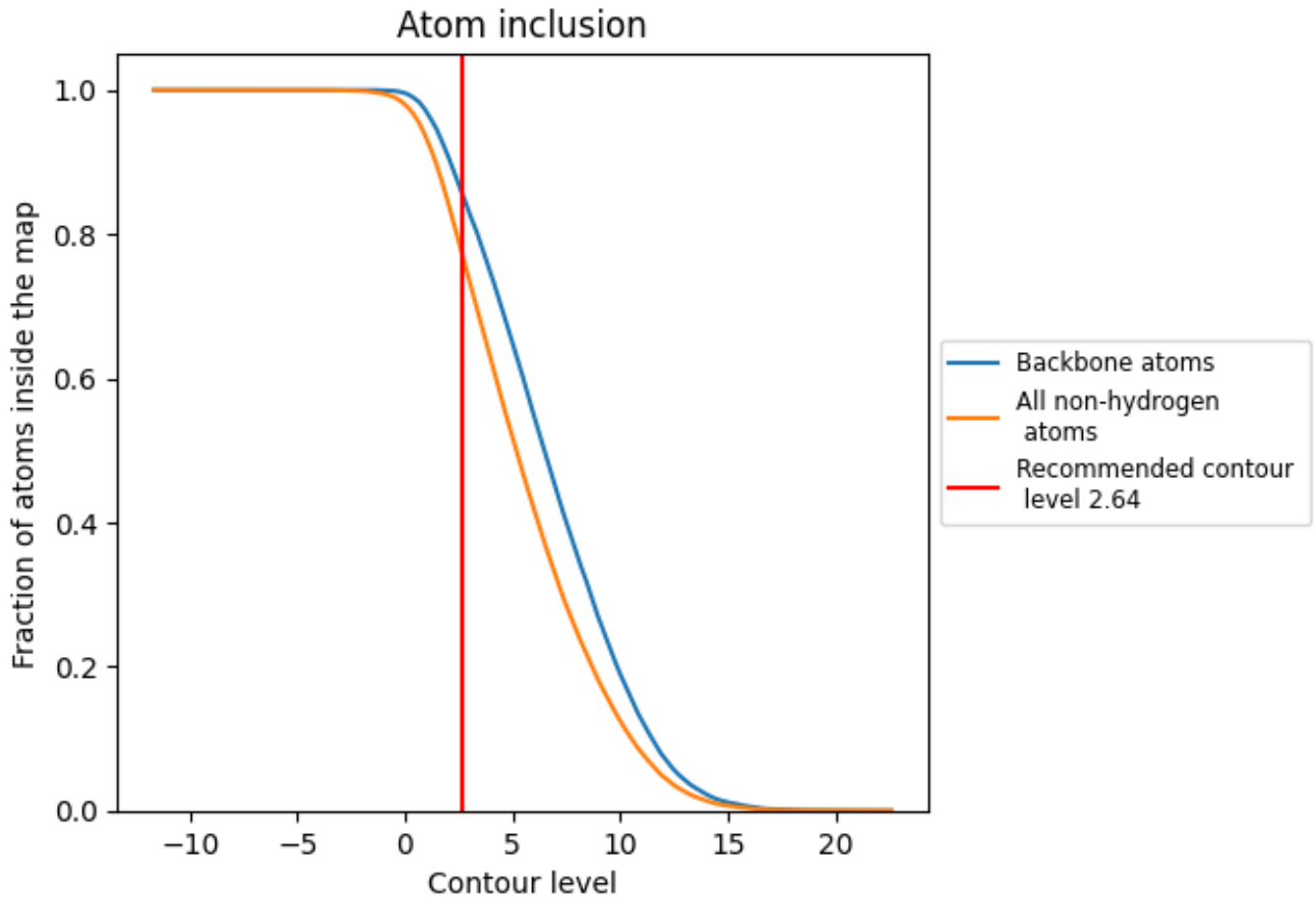
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (2.64).

9.4 Atom inclusion (i)



At the recommended contour level, 86% of all backbone atoms, 77% 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 (2.64) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7741	0.3530
A	0.7622	0.3570
B	0.7660	0.3630
C	0.7690	0.2750
D	0.7724	0.2860
E	0.8006	0.3650
F	0.7980	0.3600
G	0.7112	0.3150
H	0.7100	0.3180