Full wwPDB EM Validation Report ⓘ

Jun 25, 2025 – 12:10 AM JST

PDB ID	:	7VMS / pdb_00007vms
EMDB ID	:	EMD-32037
Title	:	Structure of recombinant RyR2 mutant K4593A (Ca2+ dataset)
Authors	:	Kobayashi, T.; Tsutsumi, A.; Kurebayashi, N.; Kodama, M.; Kikkawa, M.; Murayama, T.; Ogawa, H.
Deposited on	:	2021-10-09
Resolution	:	3.80 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

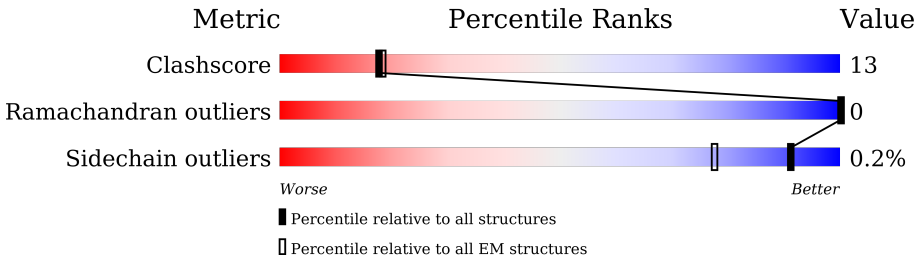
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

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 3.80 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	4966	41% 61% 20% 19%
1	B	4966	41% 61% 20% 19%
1	C	4966	41% 61% 20% 19%
1	D	4966	41% 61% 20% 19%
2	G	176	28% 39% 22% 39%
2	H	176	28% 39% 22% 39%
2	I	176	28% 39% 22% 39%
2	J	176	28% 39% 22% 39%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 123552 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	4044	Total 30067	C 19032	N 5242	O 5617	S 176	0	0
1	B	4044	Total 30067	C 19032	N 5242	O 5617	S 176	0	0
1	C	4044	Total 30067	C 19032	N 5242	O 5617	S 176	0	0
1	D	4044	Total 30067	C 19032	N 5242	O 5617	S 176	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	4593	ALA	LYS	engineered mutation	UNP E9Q401
B	4593	ALA	LYS	engineered mutation	UNP E9Q401
C	4593	ALA	LYS	engineered mutation	UNP E9Q401
D	4593	ALA	LYS	engineered mutation	UNP E9Q401

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

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

There are 276 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	-67	MET	-	initiating methionine	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
G	-66	GLY	-	expression tag	UNP P68106
G	-65	SER	-	expression tag	UNP P68106
G	-64	SER	-	expression tag	UNP P68106
G	-63	HIS	-	expression tag	UNP P68106
G	-62	HIS	-	expression tag	UNP P68106
G	-61	HIS	-	expression tag	UNP P68106
G	-60	HIS	-	expression tag	UNP P68106
G	-59	HIS	-	expression tag	UNP P68106
G	-58	HIS	-	expression tag	UNP P68106
G	-57	SER	-	expression tag	UNP P68106
G	-56	SER	-	expression tag	UNP P68106
G	-55	GLY	-	expression tag	UNP P68106
G	-54	LEU	-	expression tag	UNP P68106
G	-53	VAL	-	expression tag	UNP P68106
G	-52	PRO	-	expression tag	UNP P68106
G	-51	ARG	-	expression tag	UNP P68106
G	-50	GLY	-	expression tag	UNP P68106
G	-49	SER	-	expression tag	UNP P68106
G	-48	HIS	-	expression tag	UNP P68106
G	-47	MET	-	expression tag	UNP P68106
G	-46	ALA	-	expression tag	UNP P68106
G	-45	SER	-	expression tag	UNP P68106
G	-44	MET	-	expression tag	UNP P68106
G	-43	ASP	-	expression tag	UNP P68106
G	-42	GLU	-	expression tag	UNP P68106
G	-41	LYS	-	expression tag	UNP P68106
G	-40	THR	-	expression tag	UNP P68106
G	-39	THR	-	expression tag	UNP P68106
G	-38	GLY	-	expression tag	UNP P68106
G	-37	TRP	-	expression tag	UNP P68106
G	-36	ARG	-	expression tag	UNP P68106
G	-35	GLY	-	expression tag	UNP P68106
G	-34	GLY	-	expression tag	UNP P68106
G	-33	HIS	-	expression tag	UNP P68106
G	-32	VAL	-	expression tag	UNP P68106
G	-31	VAL	-	expression tag	UNP P68106
G	-30	GLU	-	expression tag	UNP P68106
G	-29	GLY	-	expression tag	UNP P68106
G	-28	LEU	-	expression tag	UNP P68106
G	-27	ALA	-	expression tag	UNP P68106
G	-26	GLY	-	expression tag	UNP P68106
G	-25	GLU	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
G	-24	LEU	-	expression tag	UNP P68106
G	-23	GLU	-	expression tag	UNP P68106
G	-22	GLN	-	expression tag	UNP P68106
G	-21	LEU	-	expression tag	UNP P68106
G	-20	ARG	-	expression tag	UNP P68106
G	-19	ALA	-	expression tag	UNP P68106
G	-18	ARG	-	expression tag	UNP P68106
G	-17	LEU	-	expression tag	UNP P68106
G	-16	GLU	-	expression tag	UNP P68106
G	-15	HIS	-	expression tag	UNP P68106
G	-14	HIS	-	expression tag	UNP P68106
G	-13	PRO	-	expression tag	UNP P68106
G	-12	GLN	-	expression tag	UNP P68106
G	-11	GLY	-	expression tag	UNP P68106
G	-10	GLN	-	expression tag	UNP P68106
G	-9	ARG	-	expression tag	UNP P68106
G	-8	GLU	-	expression tag	UNP P68106
G	-7	PRO	-	expression tag	UNP P68106
G	-6	GLY	-	expression tag	UNP P68106
G	-5	SER	-	expression tag	UNP P68106
G	-4	GLY	-	expression tag	UNP P68106
G	-3	GLY	-	expression tag	UNP P68106
G	-2	SER	-	expression tag	UNP P68106
G	-1	GLY	-	expression tag	UNP P68106
G	0	GLY	-	expression tag	UNP P68106
G	1	THR	-	expression tag	UNP P68106
H	-67	MET	-	initiating methionine	UNP P68106
H	-66	GLY	-	expression tag	UNP P68106
H	-65	SER	-	expression tag	UNP P68106
H	-64	SER	-	expression tag	UNP P68106
H	-63	HIS	-	expression tag	UNP P68106
H	-62	HIS	-	expression tag	UNP P68106
H	-61	HIS	-	expression tag	UNP P68106
H	-60	HIS	-	expression tag	UNP P68106
H	-59	HIS	-	expression tag	UNP P68106
H	-58	HIS	-	expression tag	UNP P68106
H	-57	SER	-	expression tag	UNP P68106
H	-56	SER	-	expression tag	UNP P68106
H	-55	GLY	-	expression tag	UNP P68106
H	-54	LEU	-	expression tag	UNP P68106
H	-53	VAL	-	expression tag	UNP P68106
H	-52	PRO	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
H	-51	ARG	-	expression tag	UNP P68106
H	-50	GLY	-	expression tag	UNP P68106
H	-49	SER	-	expression tag	UNP P68106
H	-48	HIS	-	expression tag	UNP P68106
H	-47	MET	-	expression tag	UNP P68106
H	-46	ALA	-	expression tag	UNP P68106
H	-45	SER	-	expression tag	UNP P68106
H	-44	MET	-	expression tag	UNP P68106
H	-43	ASP	-	expression tag	UNP P68106
H	-42	GLU	-	expression tag	UNP P68106
H	-41	LYS	-	expression tag	UNP P68106
H	-40	THR	-	expression tag	UNP P68106
H	-39	THR	-	expression tag	UNP P68106
H	-38	GLY	-	expression tag	UNP P68106
H	-37	TRP	-	expression tag	UNP P68106
H	-36	ARG	-	expression tag	UNP P68106
H	-35	GLY	-	expression tag	UNP P68106
H	-34	GLY	-	expression tag	UNP P68106
H	-33	HIS	-	expression tag	UNP P68106
H	-32	VAL	-	expression tag	UNP P68106
H	-31	VAL	-	expression tag	UNP P68106
H	-30	GLU	-	expression tag	UNP P68106
H	-29	GLY	-	expression tag	UNP P68106
H	-28	LEU	-	expression tag	UNP P68106
H	-27	ALA	-	expression tag	UNP P68106
H	-26	GLY	-	expression tag	UNP P68106
H	-25	GLU	-	expression tag	UNP P68106
H	-24	LEU	-	expression tag	UNP P68106
H	-23	GLU	-	expression tag	UNP P68106
H	-22	GLN	-	expression tag	UNP P68106
H	-21	LEU	-	expression tag	UNP P68106
H	-20	ARG	-	expression tag	UNP P68106
H	-19	ALA	-	expression tag	UNP P68106
H	-18	ARG	-	expression tag	UNP P68106
H	-17	LEU	-	expression tag	UNP P68106
H	-16	GLU	-	expression tag	UNP P68106
H	-15	HIS	-	expression tag	UNP P68106
H	-14	HIS	-	expression tag	UNP P68106
H	-13	PRO	-	expression tag	UNP P68106
H	-12	GLN	-	expression tag	UNP P68106
H	-11	GLY	-	expression tag	UNP P68106
H	-10	GLN	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
H	-9	ARG	-	expression tag	UNP P68106
H	-8	GLU	-	expression tag	UNP P68106
H	-7	PRO	-	expression tag	UNP P68106
H	-6	GLY	-	expression tag	UNP P68106
H	-5	SER	-	expression tag	UNP P68106
H	-4	GLY	-	expression tag	UNP P68106
H	-3	GLY	-	expression tag	UNP P68106
H	-2	SER	-	expression tag	UNP P68106
H	-1	GLY	-	expression tag	UNP P68106
H	0	GLY	-	expression tag	UNP P68106
H	1	THR	-	expression tag	UNP P68106
I	-67	MET	-	initiating methionine	UNP P68106
I	-66	GLY	-	expression tag	UNP P68106
I	-65	SER	-	expression tag	UNP P68106
I	-64	SER	-	expression tag	UNP P68106
I	-63	HIS	-	expression tag	UNP P68106
I	-62	HIS	-	expression tag	UNP P68106
I	-61	HIS	-	expression tag	UNP P68106
I	-60	HIS	-	expression tag	UNP P68106
I	-59	HIS	-	expression tag	UNP P68106
I	-58	HIS	-	expression tag	UNP P68106
I	-57	SER	-	expression tag	UNP P68106
I	-56	SER	-	expression tag	UNP P68106
I	-55	GLY	-	expression tag	UNP P68106
I	-54	LEU	-	expression tag	UNP P68106
I	-53	VAL	-	expression tag	UNP P68106
I	-52	PRO	-	expression tag	UNP P68106
I	-51	ARG	-	expression tag	UNP P68106
I	-50	GLY	-	expression tag	UNP P68106
I	-49	SER	-	expression tag	UNP P68106
I	-48	HIS	-	expression tag	UNP P68106
I	-47	MET	-	expression tag	UNP P68106
I	-46	ALA	-	expression tag	UNP P68106
I	-45	SER	-	expression tag	UNP P68106
I	-44	MET	-	expression tag	UNP P68106
I	-43	ASP	-	expression tag	UNP P68106
I	-42	GLU	-	expression tag	UNP P68106
I	-41	LYS	-	expression tag	UNP P68106
I	-40	THR	-	expression tag	UNP P68106
I	-39	THR	-	expression tag	UNP P68106
I	-38	GLY	-	expression tag	UNP P68106
I	-37	TRP	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
I	-36	ARG	-	expression tag	UNP P68106
I	-35	GLY	-	expression tag	UNP P68106
I	-34	GLY	-	expression tag	UNP P68106
I	-33	HIS	-	expression tag	UNP P68106
I	-32	VAL	-	expression tag	UNP P68106
I	-31	VAL	-	expression tag	UNP P68106
I	-30	GLU	-	expression tag	UNP P68106
I	-29	GLY	-	expression tag	UNP P68106
I	-28	LEU	-	expression tag	UNP P68106
I	-27	ALA	-	expression tag	UNP P68106
I	-26	GLY	-	expression tag	UNP P68106
I	-25	GLU	-	expression tag	UNP P68106
I	-24	LEU	-	expression tag	UNP P68106
I	-23	GLU	-	expression tag	UNP P68106
I	-22	GLN	-	expression tag	UNP P68106
I	-21	LEU	-	expression tag	UNP P68106
I	-20	ARG	-	expression tag	UNP P68106
I	-19	ALA	-	expression tag	UNP P68106
I	-18	ARG	-	expression tag	UNP P68106
I	-17	LEU	-	expression tag	UNP P68106
I	-16	GLU	-	expression tag	UNP P68106
I	-15	HIS	-	expression tag	UNP P68106
I	-14	HIS	-	expression tag	UNP P68106
I	-13	PRO	-	expression tag	UNP P68106
I	-12	GLN	-	expression tag	UNP P68106
I	-11	GLY	-	expression tag	UNP P68106
I	-10	GLN	-	expression tag	UNP P68106
I	-9	ARG	-	expression tag	UNP P68106
I	-8	GLU	-	expression tag	UNP P68106
I	-7	PRO	-	expression tag	UNP P68106
I	-6	GLY	-	expression tag	UNP P68106
I	-5	SER	-	expression tag	UNP P68106
I	-4	GLY	-	expression tag	UNP P68106
I	-3	GLY	-	expression tag	UNP P68106
I	-2	SER	-	expression tag	UNP P68106
I	-1	GLY	-	expression tag	UNP P68106
I	0	GLY	-	expression tag	UNP P68106
I	1	THR	-	expression tag	UNP P68106
J	-67	MET	-	initiating methionine	UNP P68106
J	-66	GLY	-	expression tag	UNP P68106
J	-65	SER	-	expression tag	UNP P68106
J	-64	SER	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
J	-63	HIS	-	expression tag	UNP P68106
J	-62	HIS	-	expression tag	UNP P68106
J	-61	HIS	-	expression tag	UNP P68106
J	-60	HIS	-	expression tag	UNP P68106
J	-59	HIS	-	expression tag	UNP P68106
J	-58	HIS	-	expression tag	UNP P68106
J	-57	SER	-	expression tag	UNP P68106
J	-56	SER	-	expression tag	UNP P68106
J	-55	GLY	-	expression tag	UNP P68106
J	-54	LEU	-	expression tag	UNP P68106
J	-53	VAL	-	expression tag	UNP P68106
J	-52	PRO	-	expression tag	UNP P68106
J	-51	ARG	-	expression tag	UNP P68106
J	-50	GLY	-	expression tag	UNP P68106
J	-49	SER	-	expression tag	UNP P68106
J	-48	HIS	-	expression tag	UNP P68106
J	-47	MET	-	expression tag	UNP P68106
J	-46	ALA	-	expression tag	UNP P68106
J	-45	SER	-	expression tag	UNP P68106
J	-44	MET	-	expression tag	UNP P68106
J	-43	ASP	-	expression tag	UNP P68106
J	-42	GLU	-	expression tag	UNP P68106
J	-41	LYS	-	expression tag	UNP P68106
J	-40	THR	-	expression tag	UNP P68106
J	-39	THR	-	expression tag	UNP P68106
J	-38	GLY	-	expression tag	UNP P68106
J	-37	TRP	-	expression tag	UNP P68106
J	-36	ARG	-	expression tag	UNP P68106
J	-35	GLY	-	expression tag	UNP P68106
J	-34	GLY	-	expression tag	UNP P68106
J	-33	HIS	-	expression tag	UNP P68106
J	-32	VAL	-	expression tag	UNP P68106
J	-31	VAL	-	expression tag	UNP P68106
J	-30	GLU	-	expression tag	UNP P68106
J	-29	GLY	-	expression tag	UNP P68106
J	-28	LEU	-	expression tag	UNP P68106
J	-27	ALA	-	expression tag	UNP P68106
J	-26	GLY	-	expression tag	UNP P68106
J	-25	GLU	-	expression tag	UNP P68106
J	-24	LEU	-	expression tag	UNP P68106
J	-23	GLU	-	expression tag	UNP P68106
J	-22	GLN	-	expression tag	UNP P68106

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Chain	Residue	Modelled	Actual	Comment	Reference
J	-21	LEU	-	expression tag	UNP P68106
J	-20	ARG	-	expression tag	UNP P68106
J	-19	ALA	-	expression tag	UNP P68106
J	-18	ARG	-	expression tag	UNP P68106
J	-17	LEU	-	expression tag	UNP P68106
J	-16	GLU	-	expression tag	UNP P68106
J	-15	HIS	-	expression tag	UNP P68106
J	-14	HIS	-	expression tag	UNP P68106
J	-13	PRO	-	expression tag	UNP P68106
J	-12	GLN	-	expression tag	UNP P68106
J	-11	GLY	-	expression tag	UNP P68106
J	-10	GLN	-	expression tag	UNP P68106
J	-9	ARG	-	expression tag	UNP P68106
J	-8	GLU	-	expression tag	UNP P68106
J	-7	PRO	-	expression tag	UNP P68106
J	-6	GLY	-	expression tag	UNP P68106
J	-5	SER	-	expression tag	UNP P68106
J	-4	GLY	-	expression tag	UNP P68106
J	-3	GLY	-	expression tag	UNP P68106
J	-2	SER	-	expression tag	UNP P68106
J	-1	GLY	-	expression tag	UNP P68106
J	0	GLY	-	expression tag	UNP P68106
J	1	THR	-	expression tag	UNP P68106

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

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

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

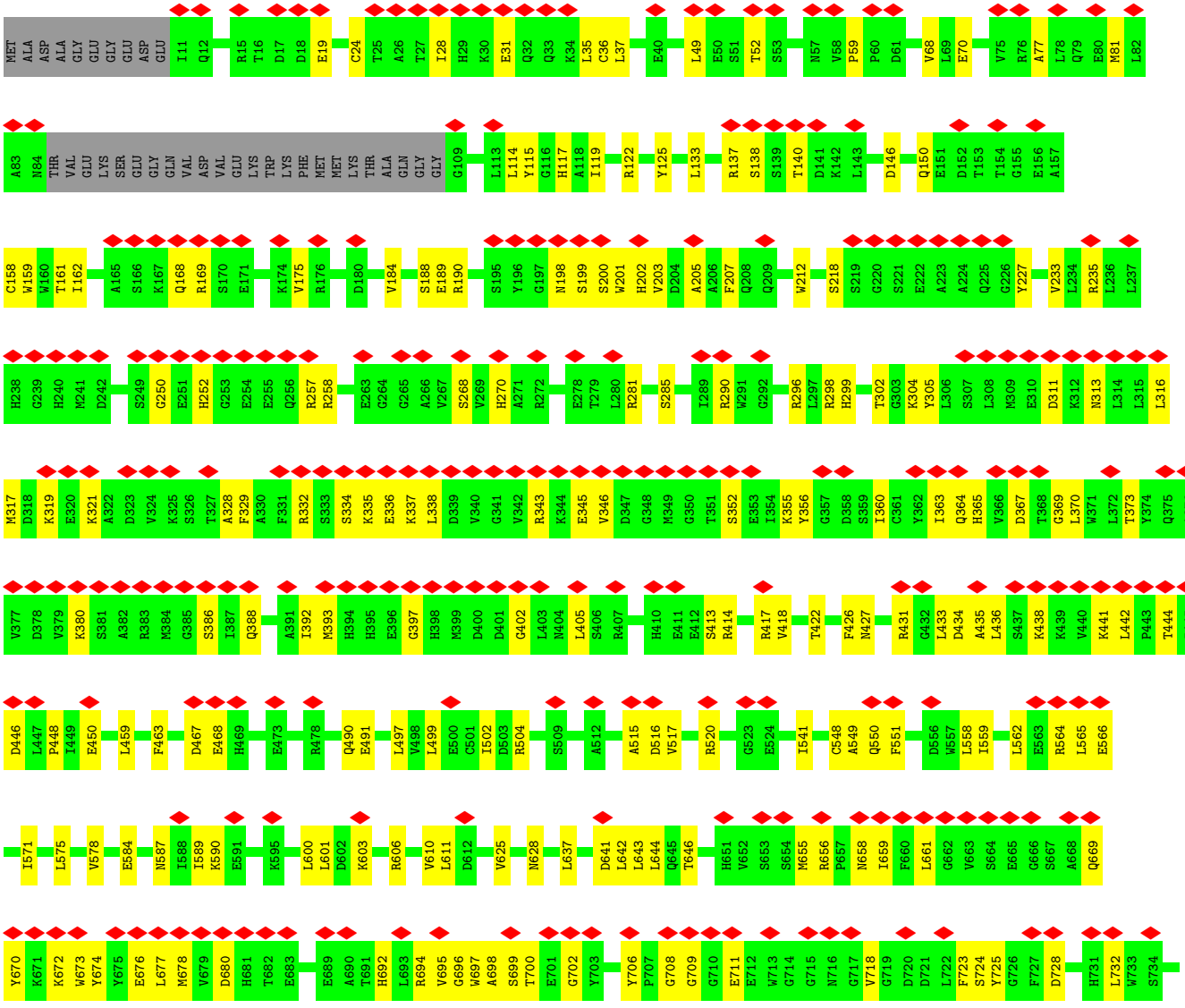
Mol	Chain	Residues	Atoms	AltConf
4	A	1	Total Ca 1 1	0
4	B	1	Total Ca 1 1	0
4	C	1	Total Ca 1 1	0
4	D	1	Total Ca 1 1	0

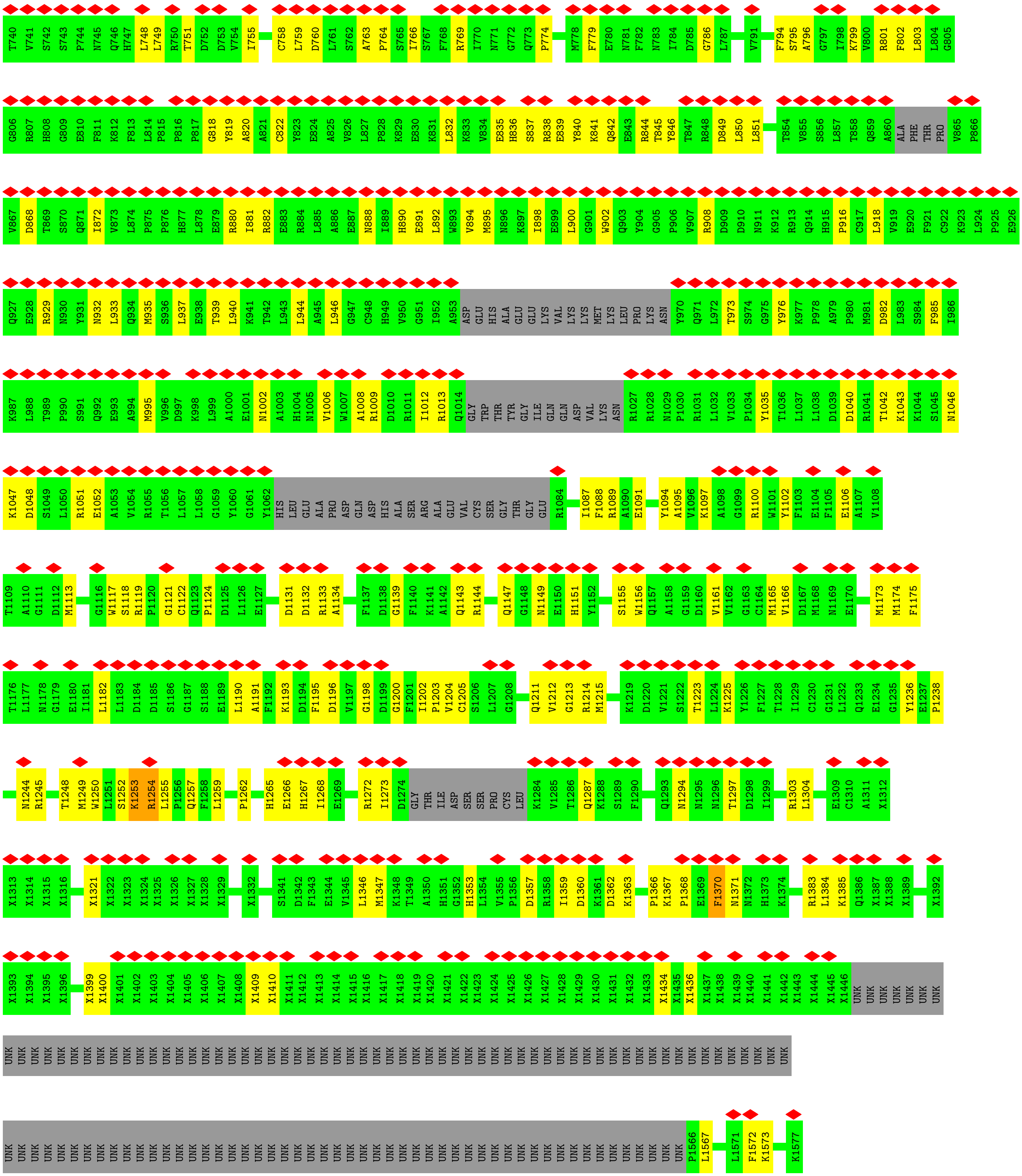
3 Residue-property plots (i)

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: Ryanodine receptor 2

Chain A:

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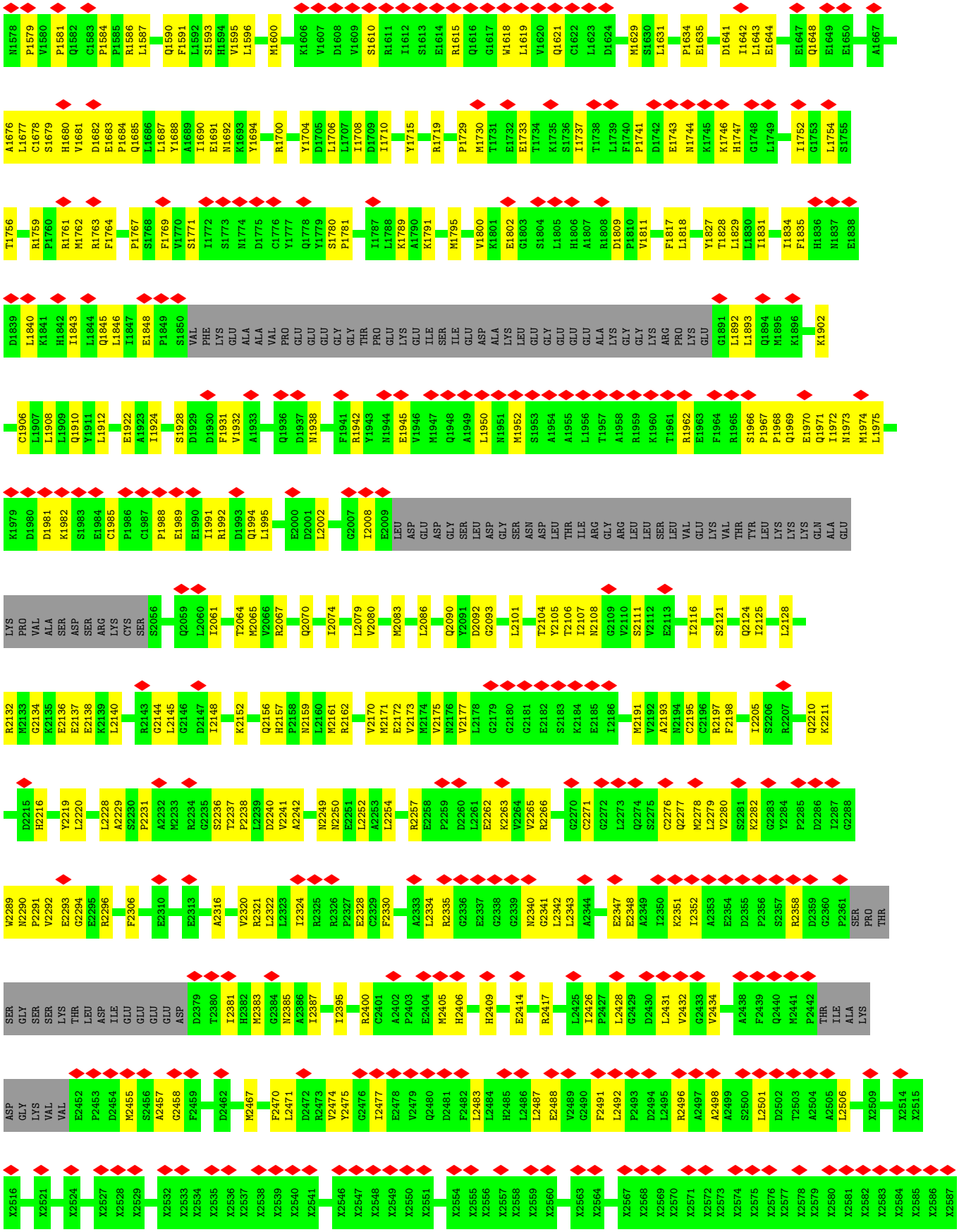
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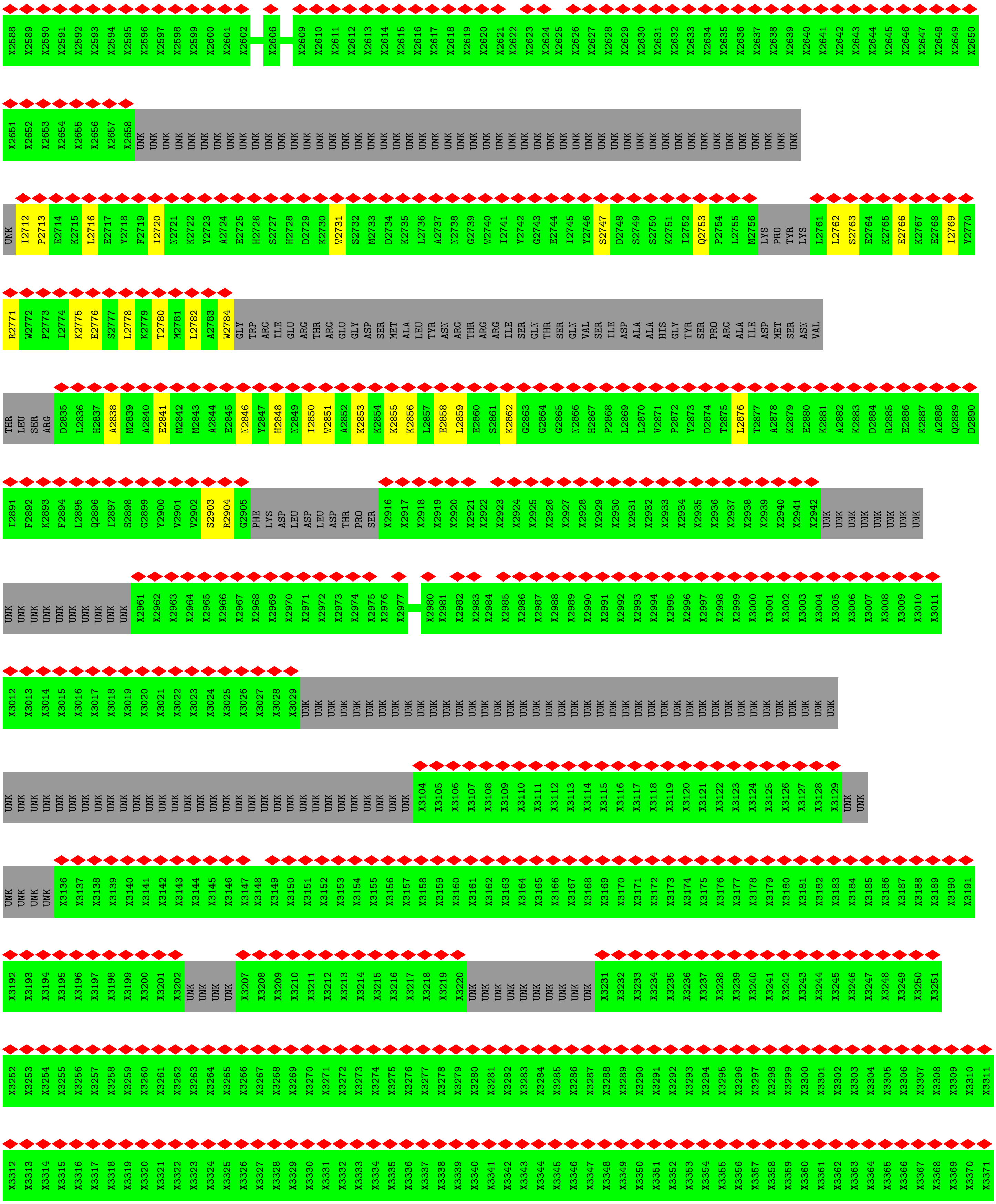
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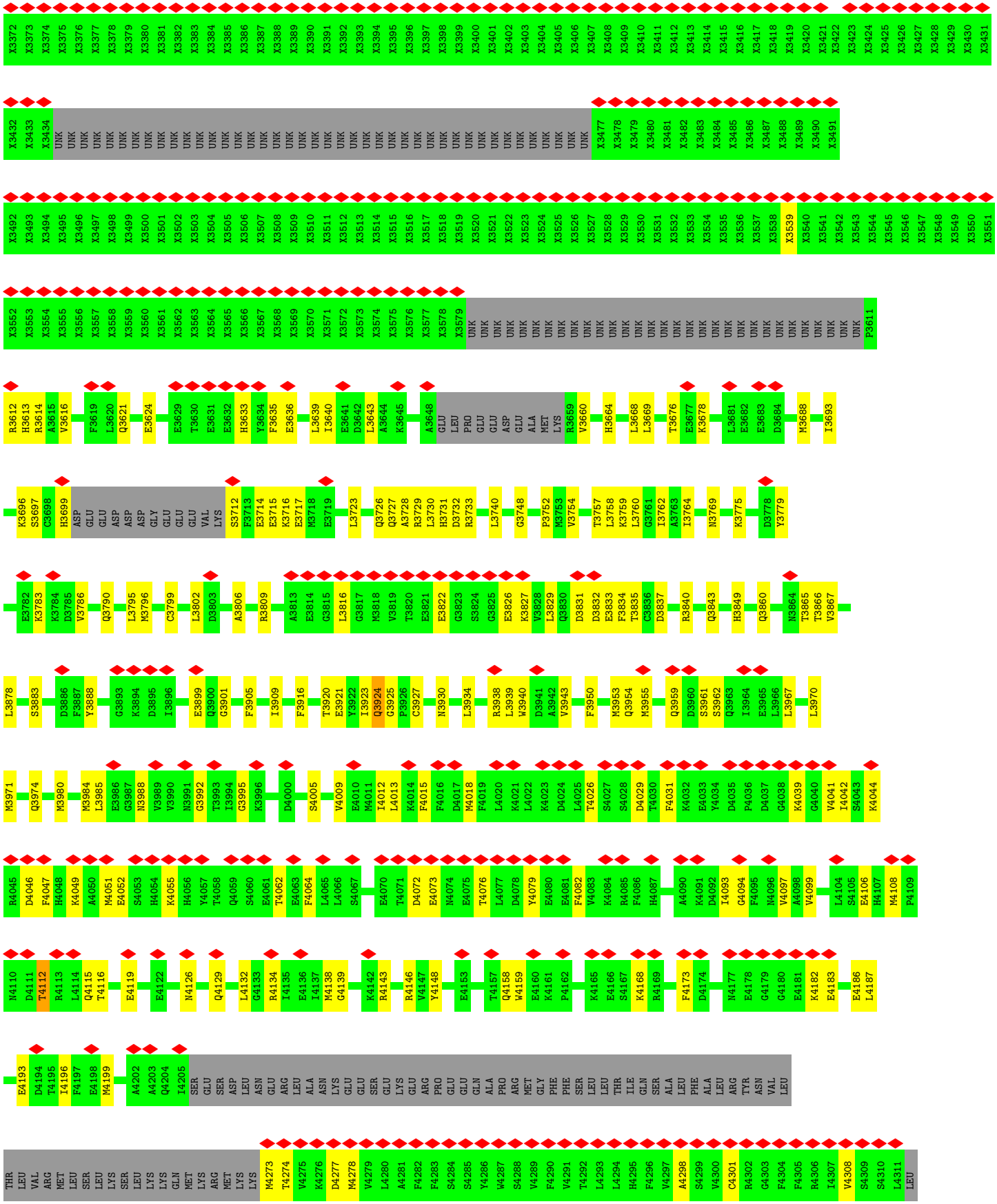
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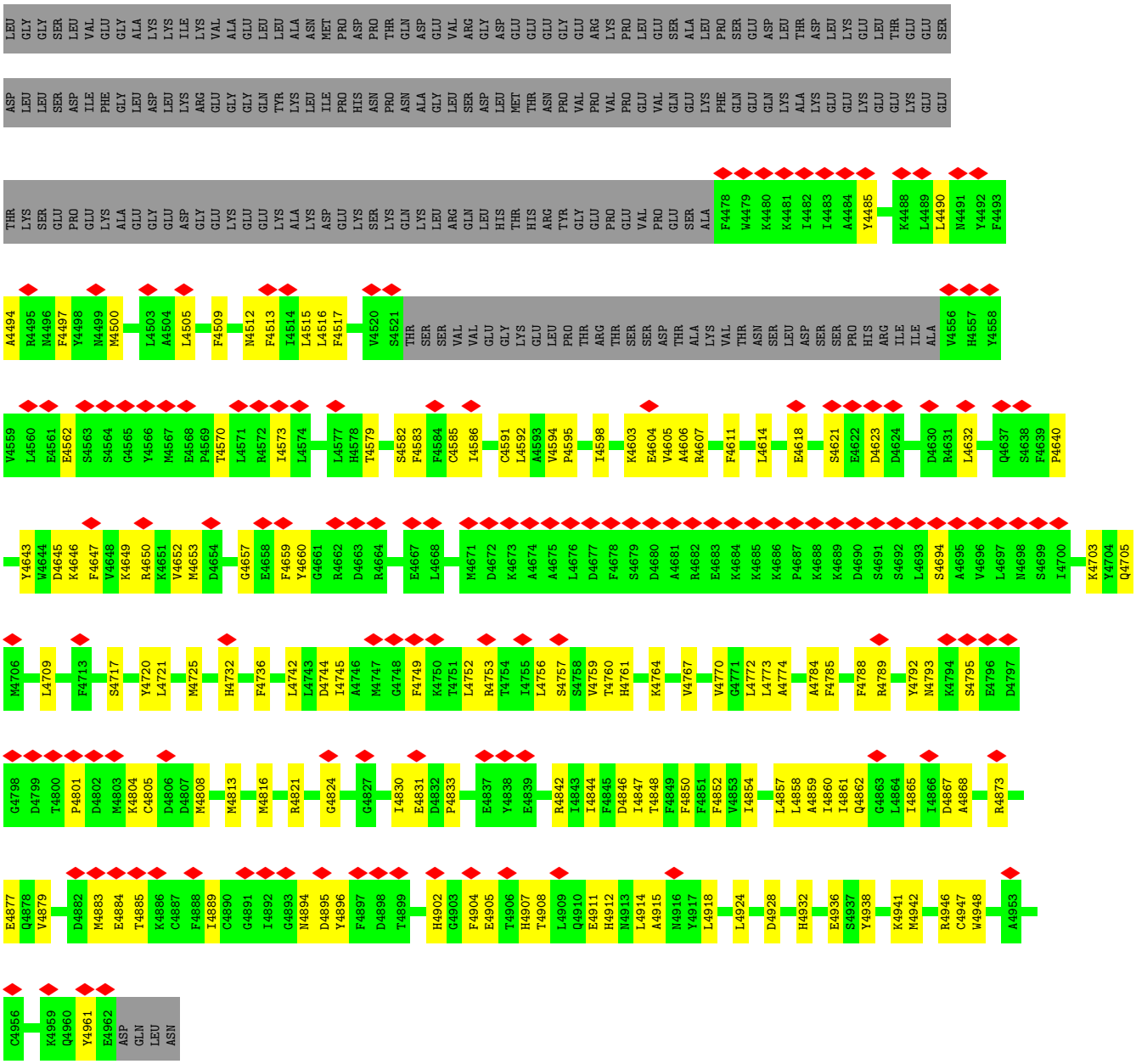
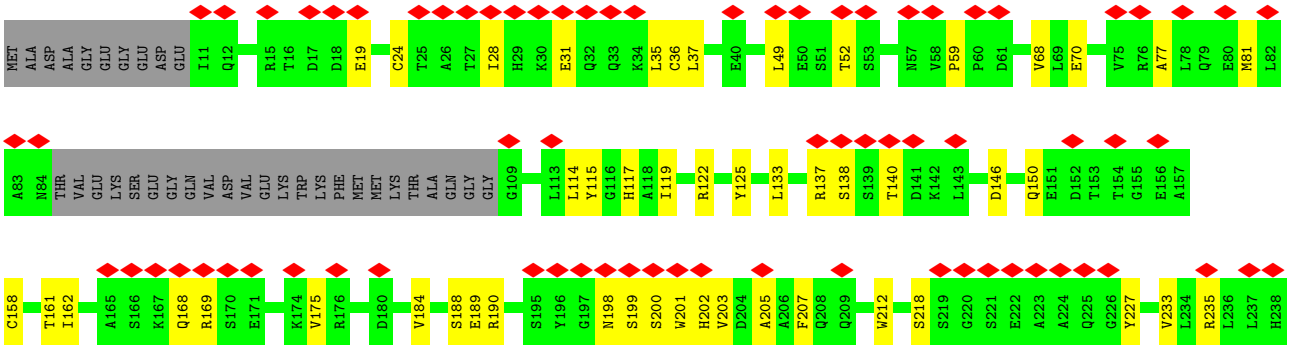
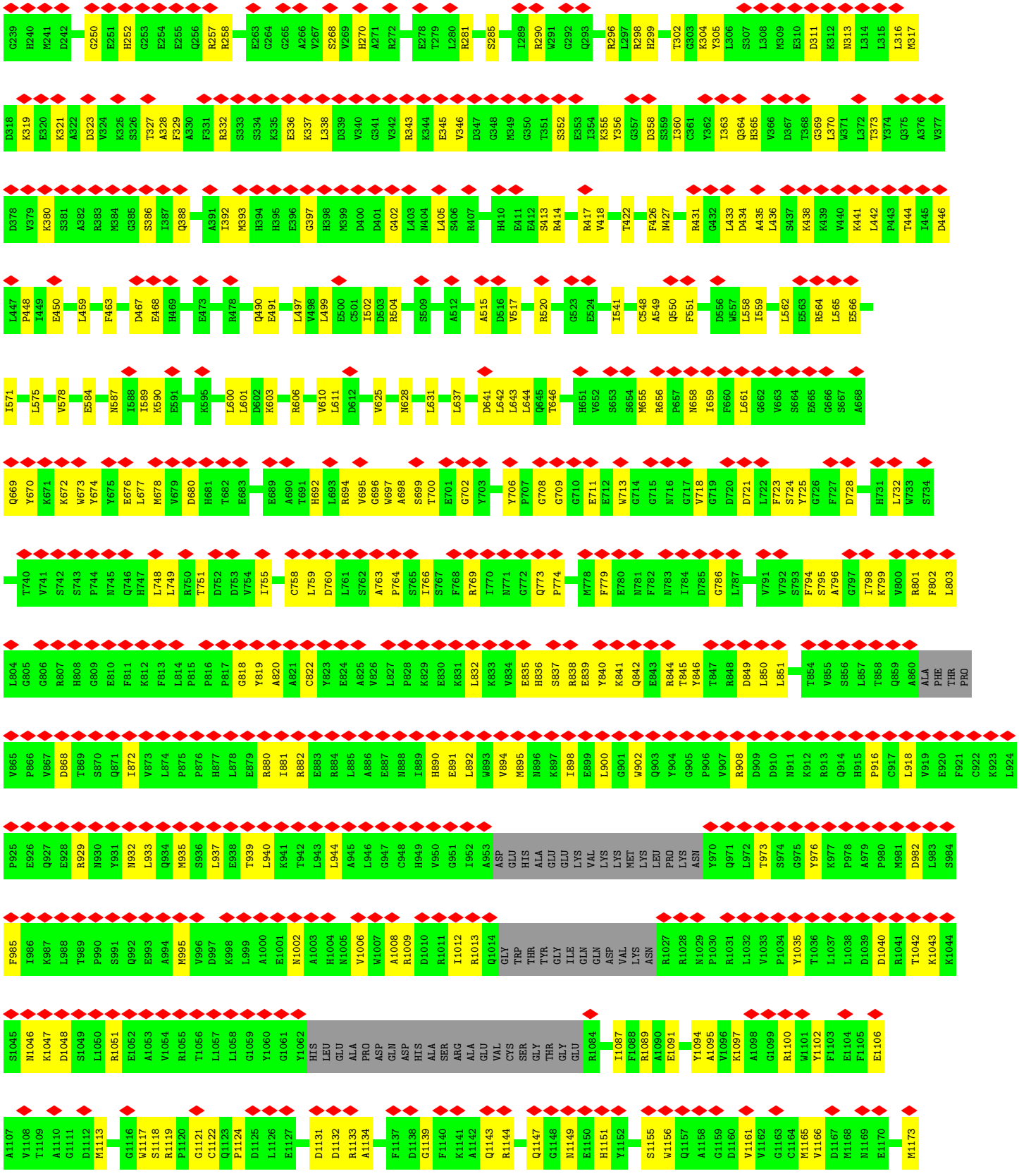


• Molecule 1: Ryanodine receptor 2

Chain B:

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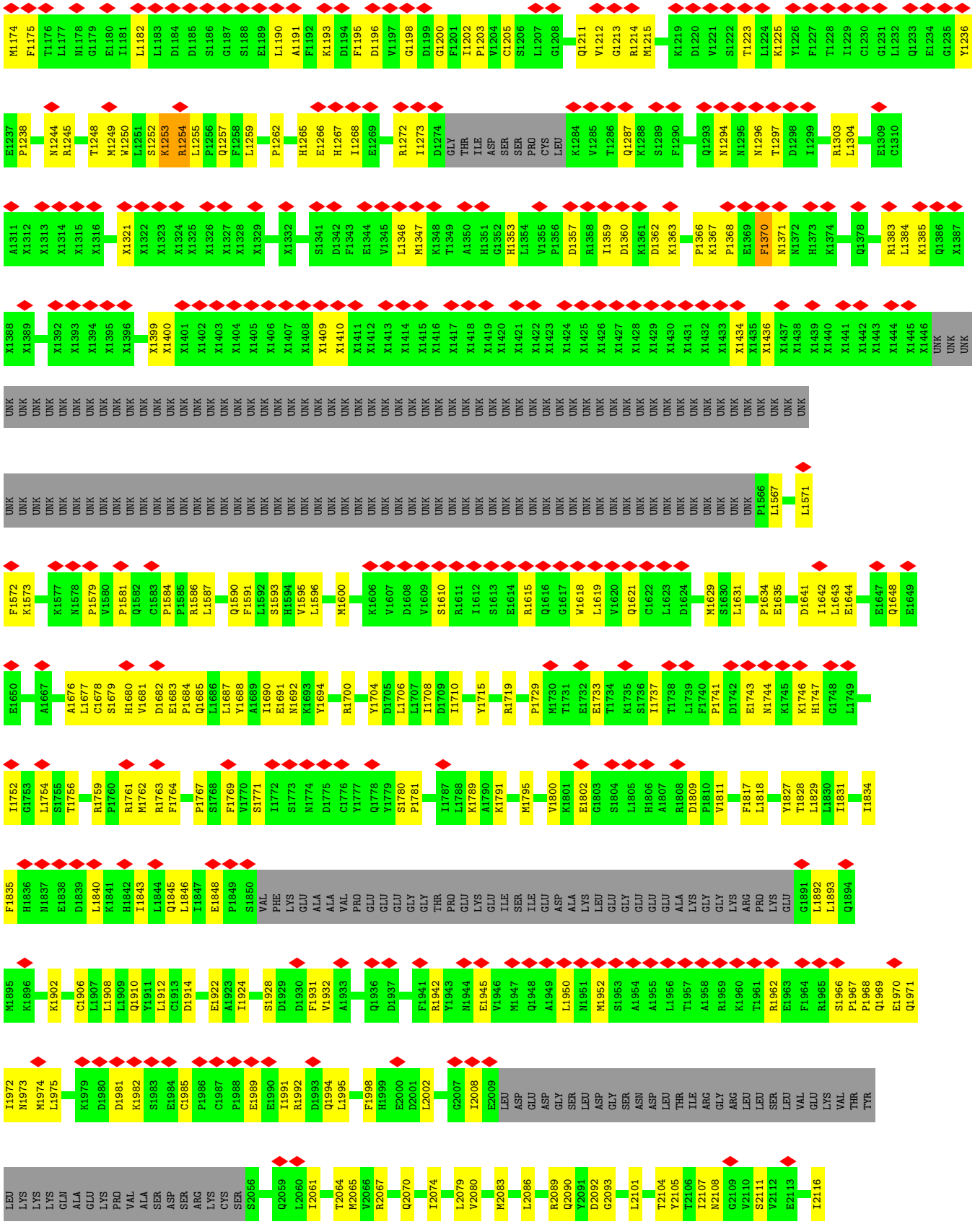
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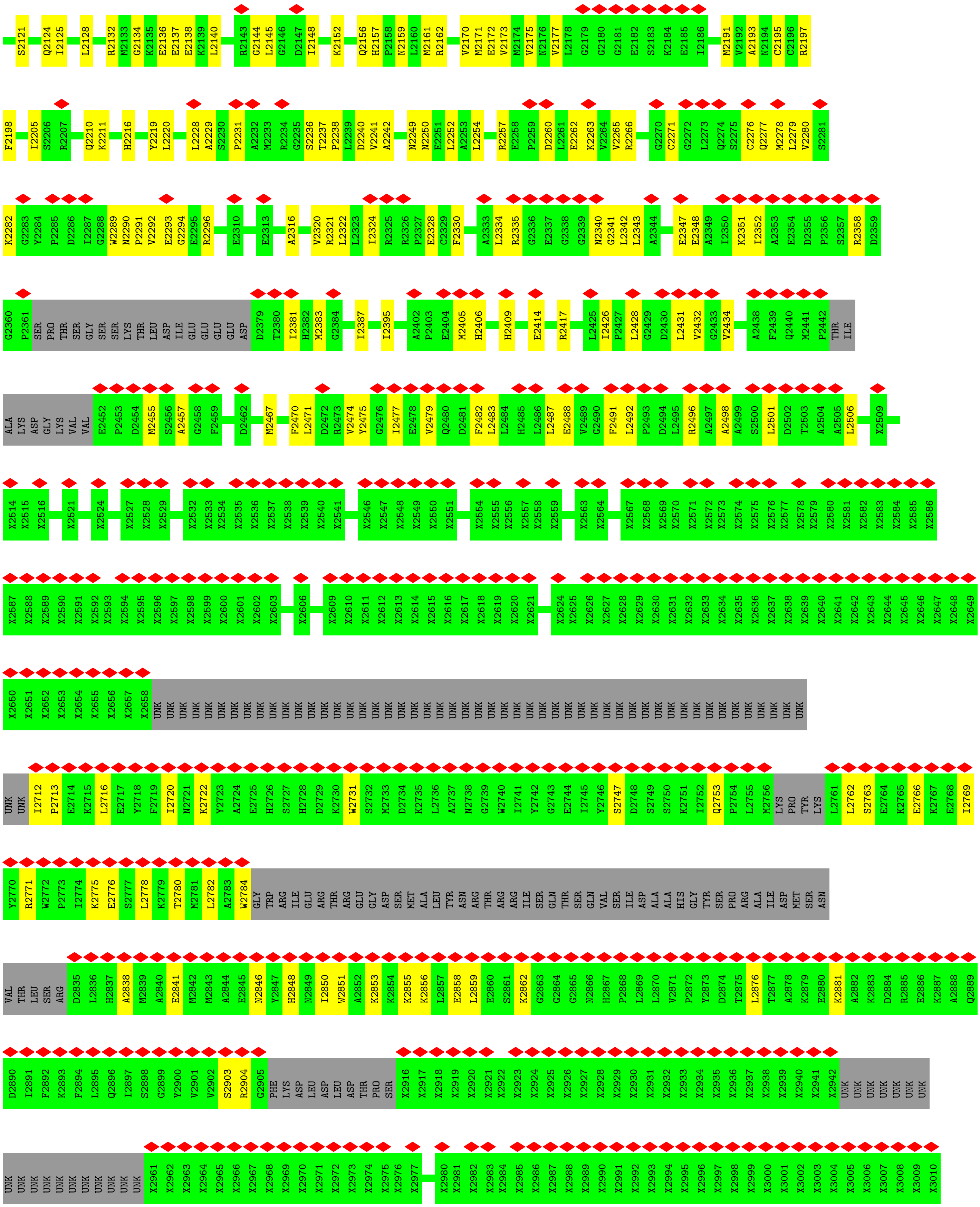
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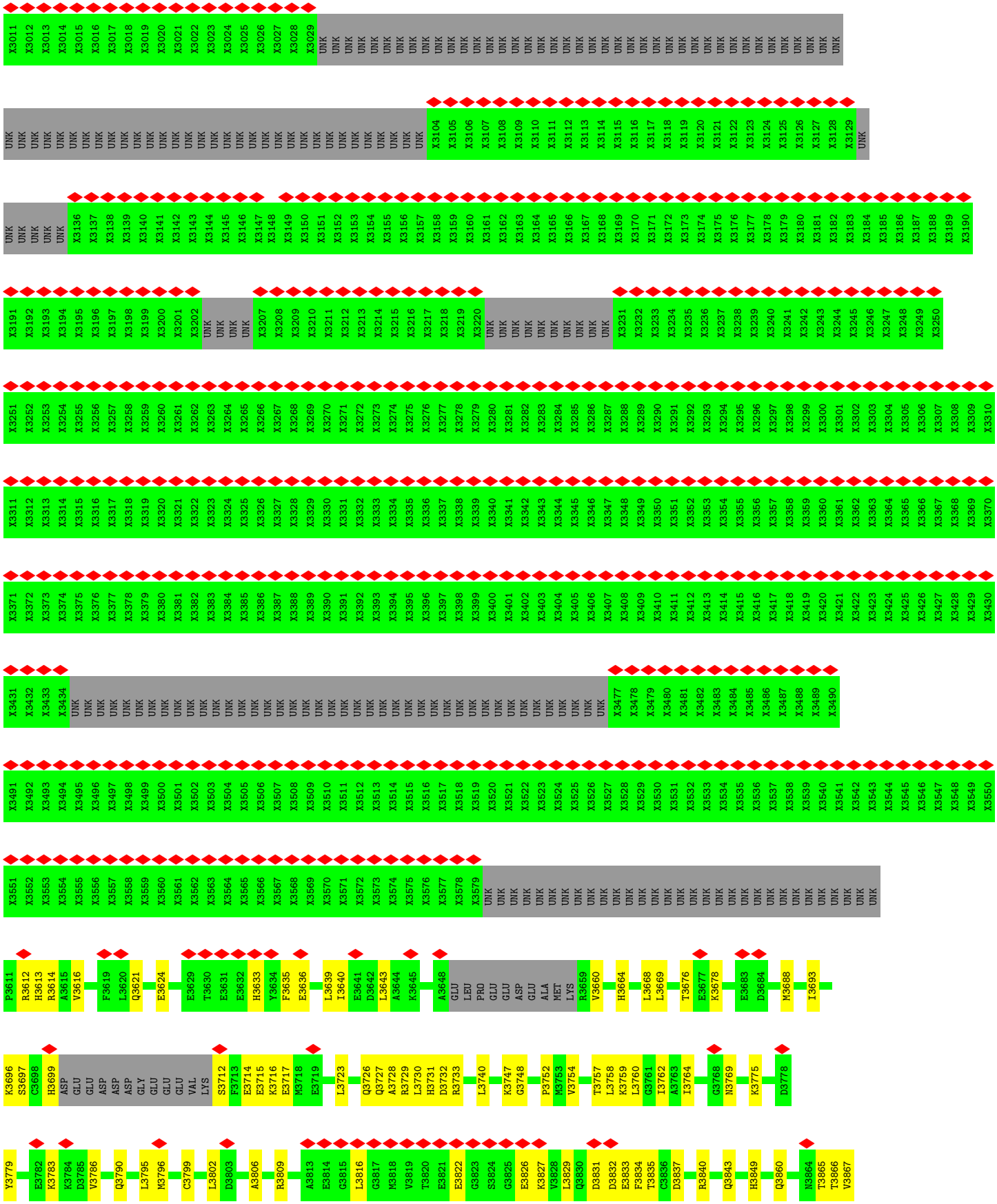
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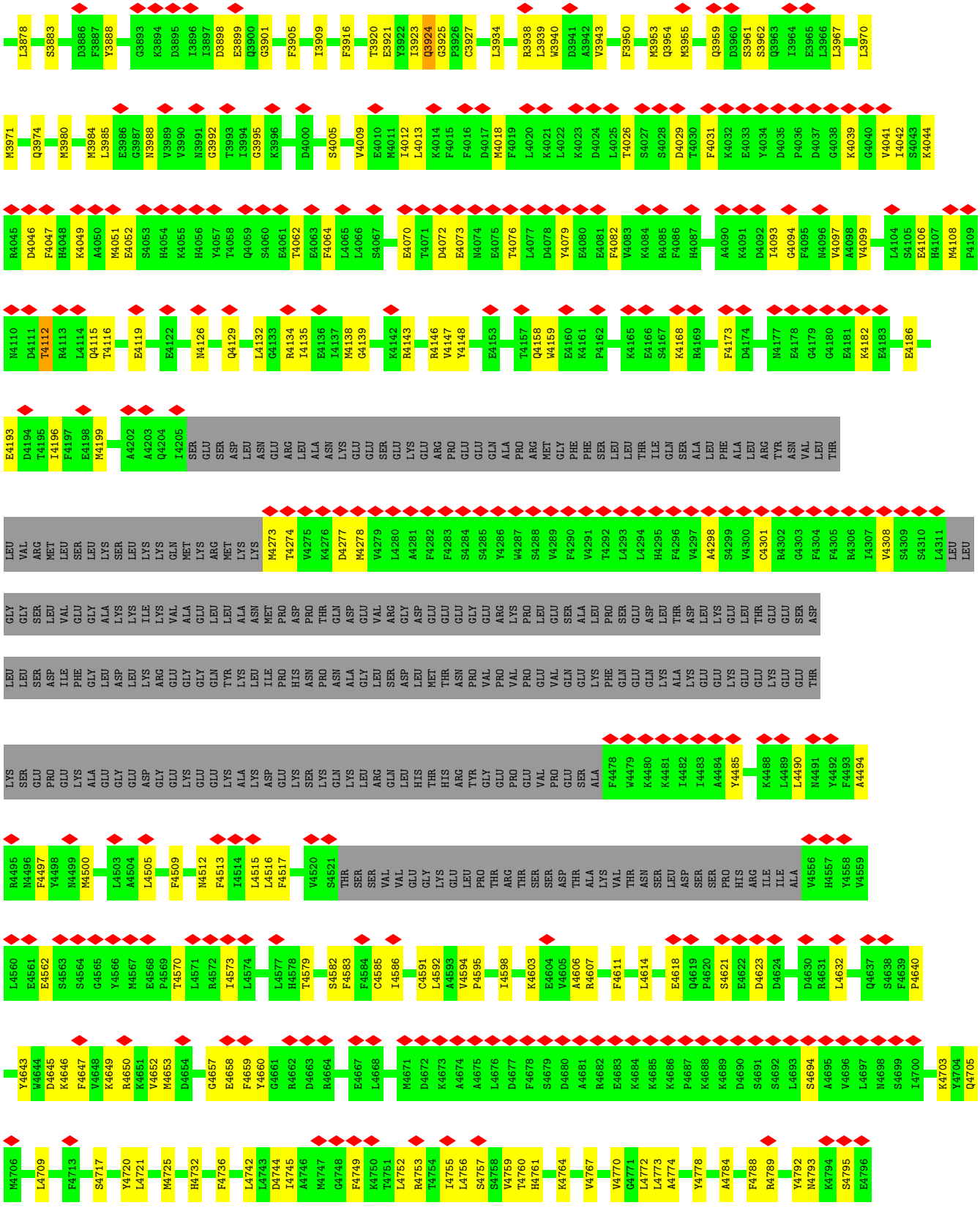

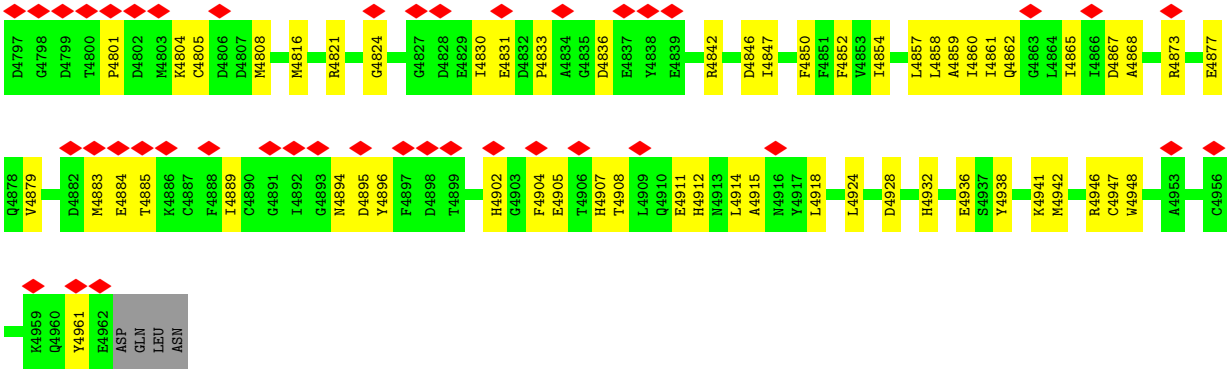

• Molecule 1: Ryanodine receptor 2

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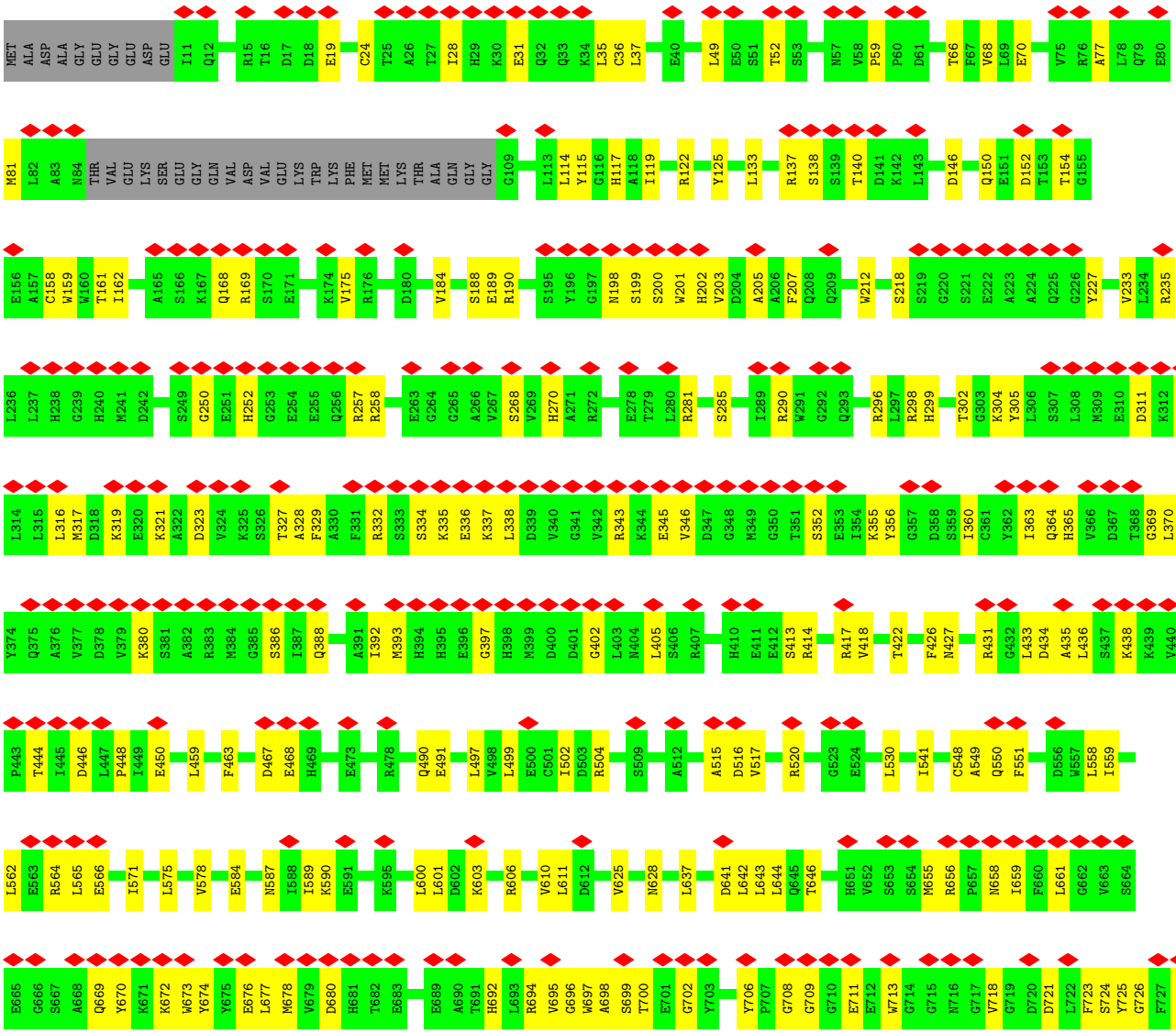

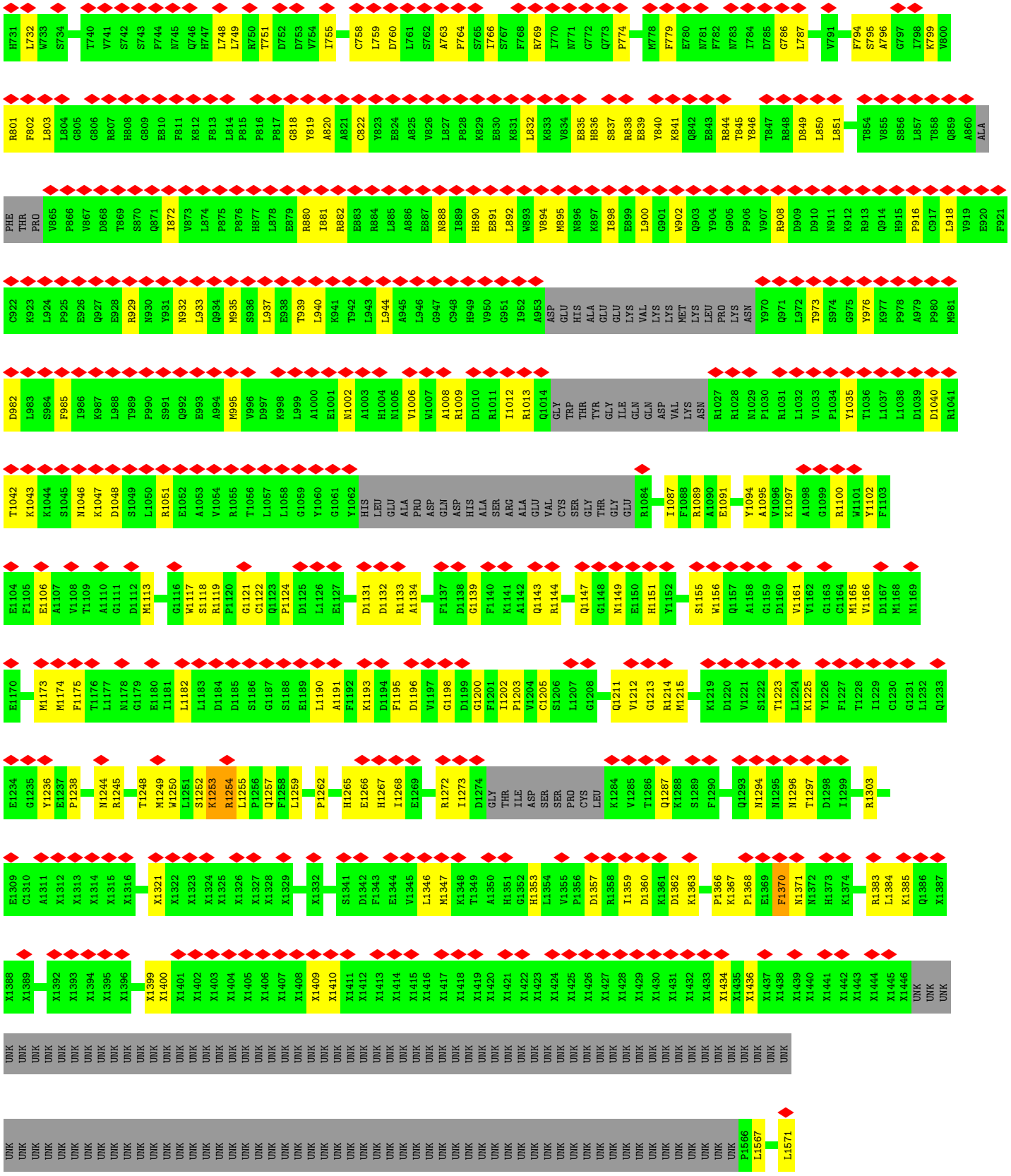
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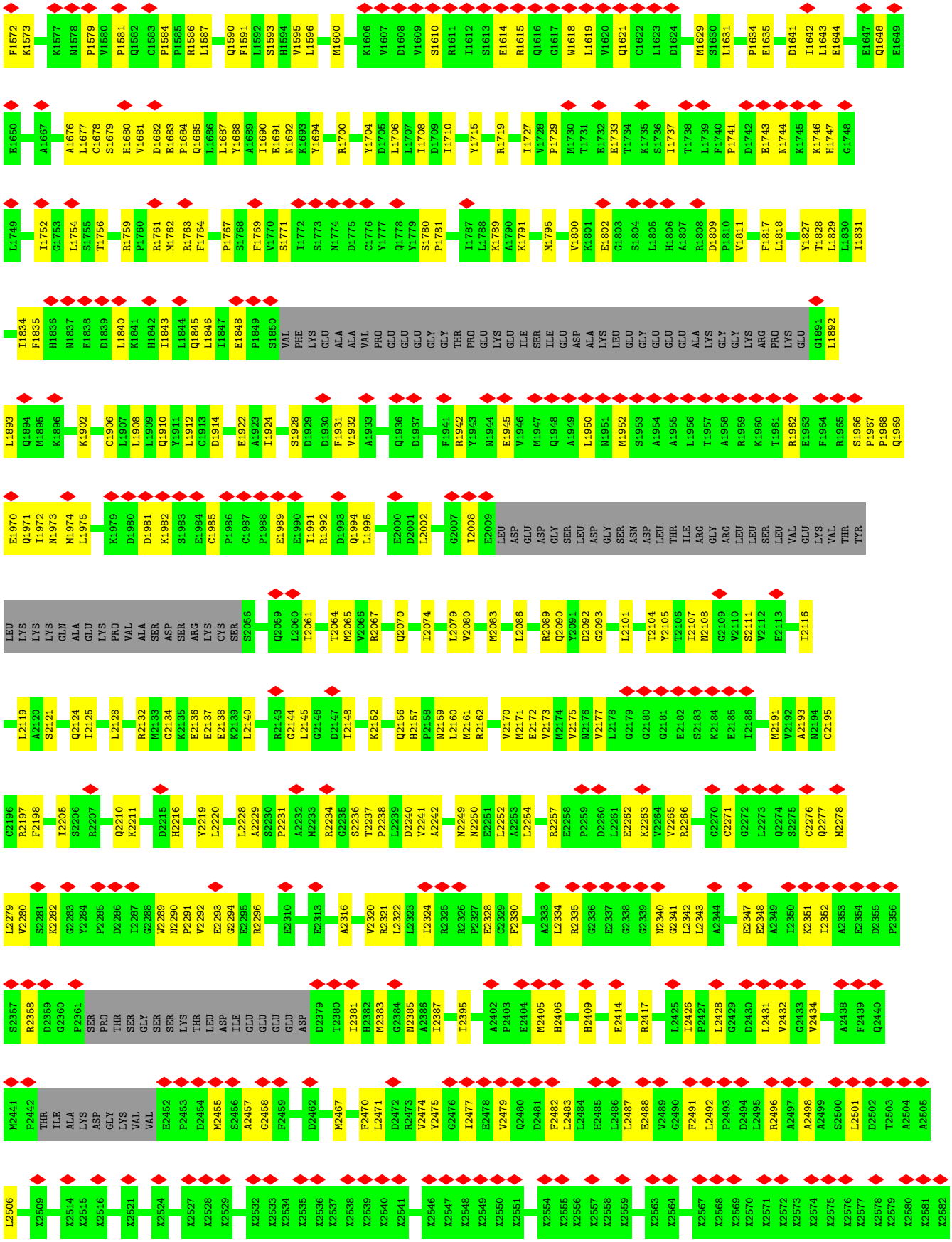
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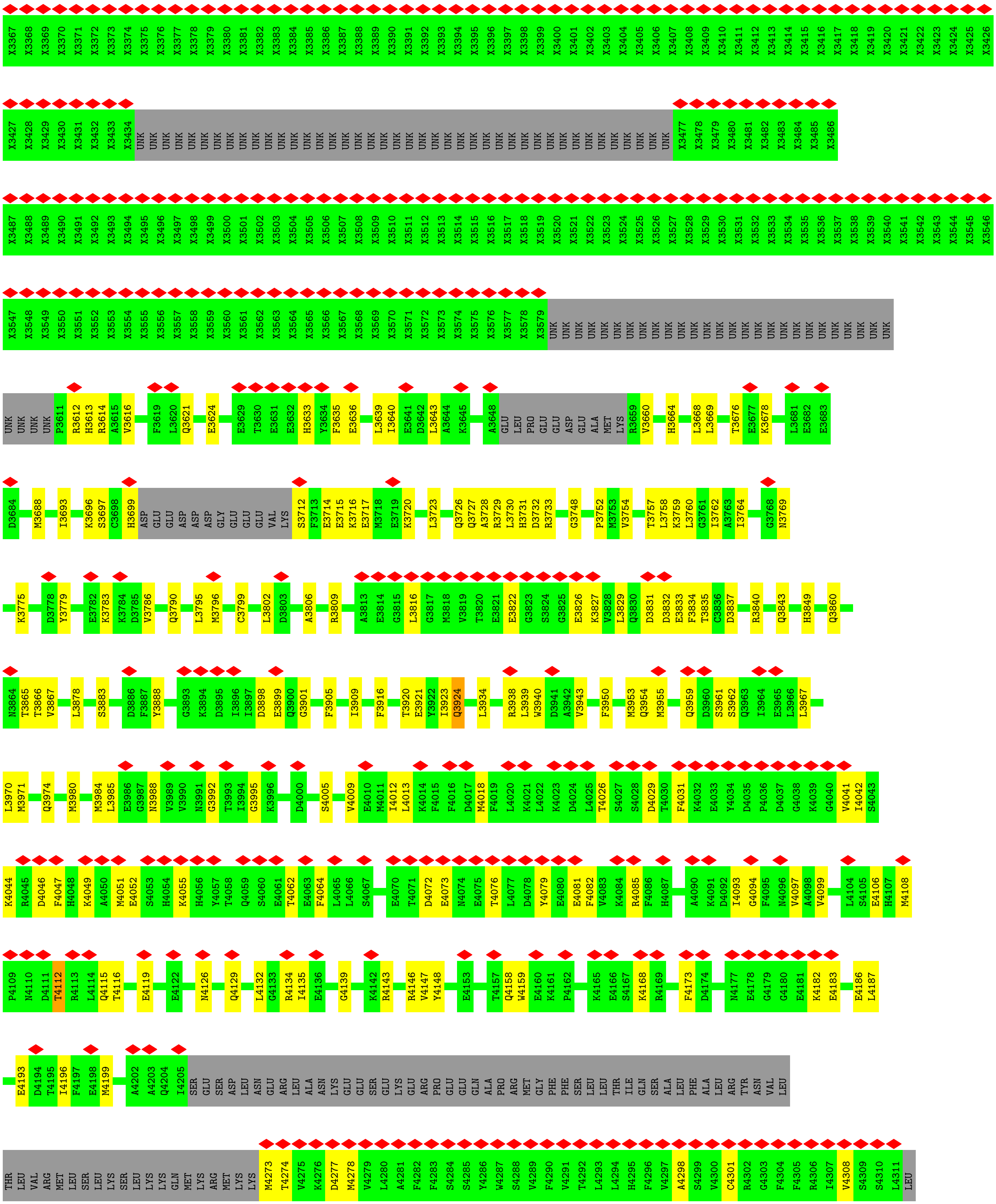
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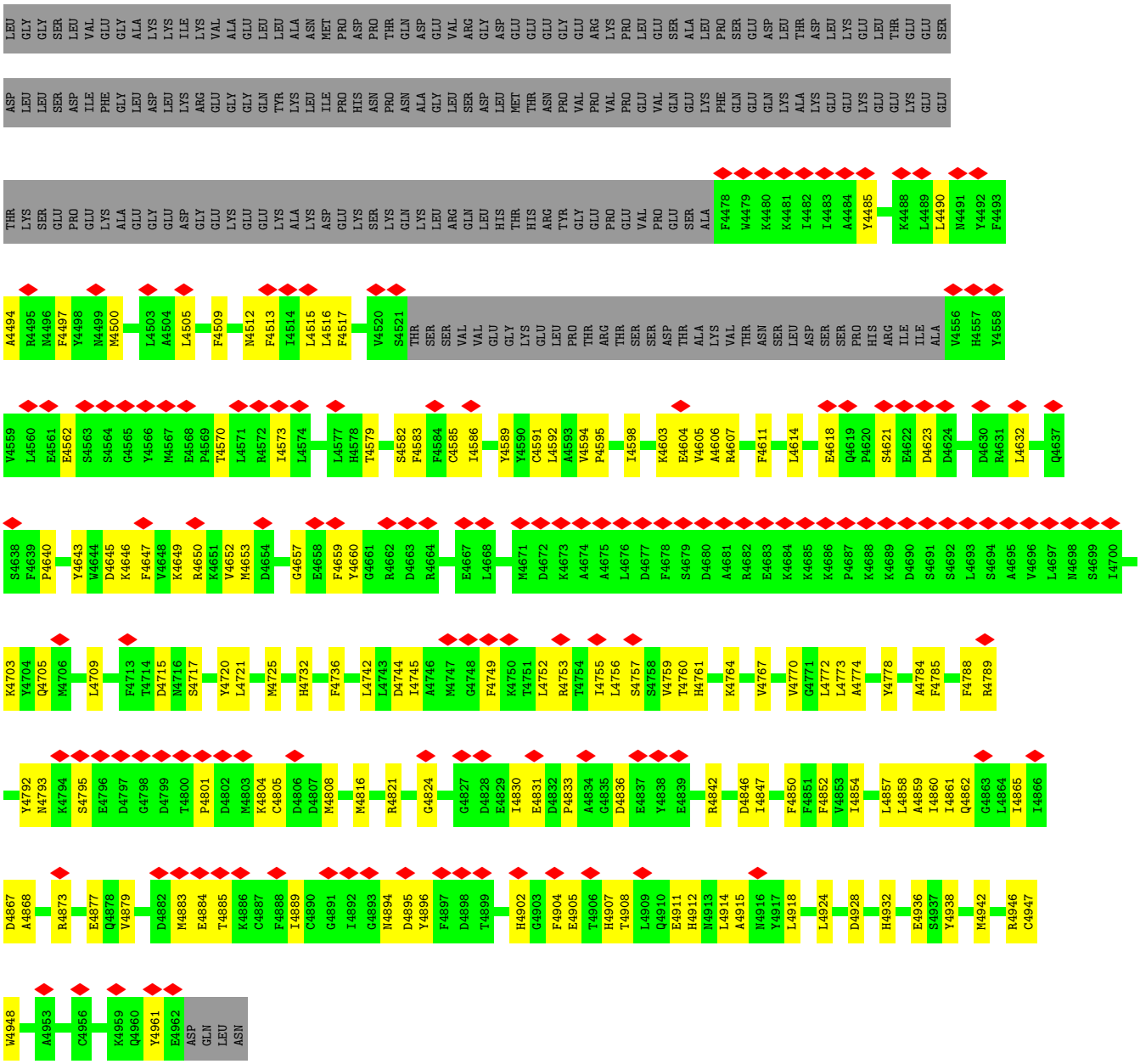

• Molecule 1: Ryanodine receptor 2

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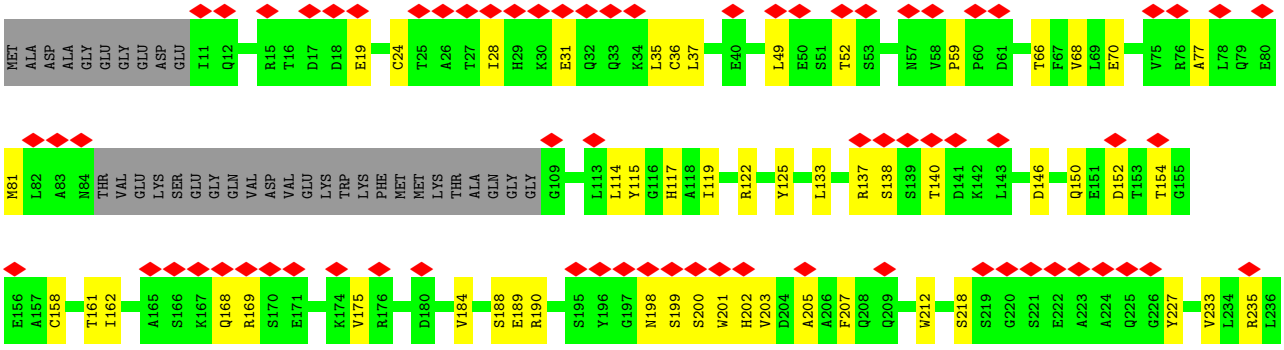

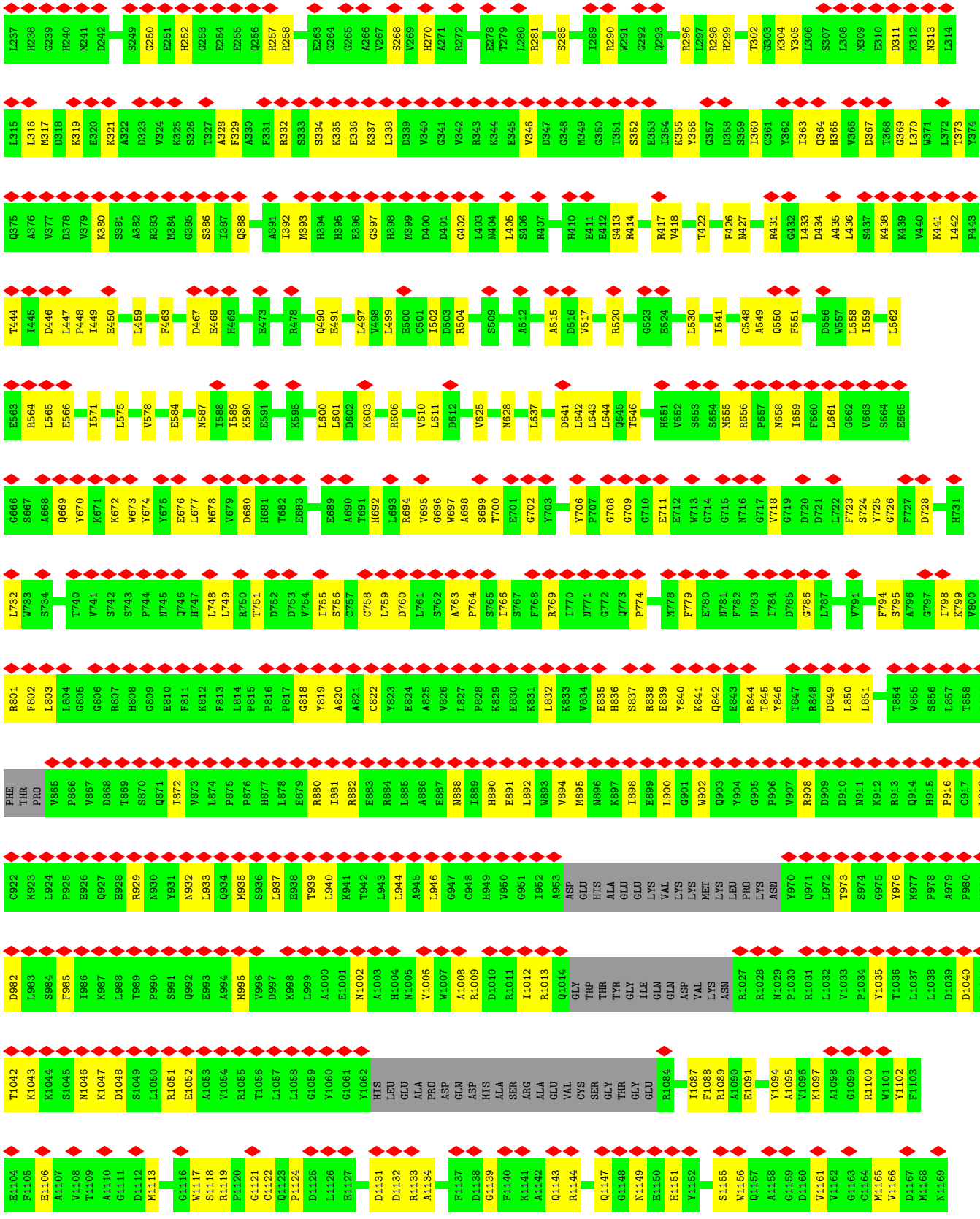
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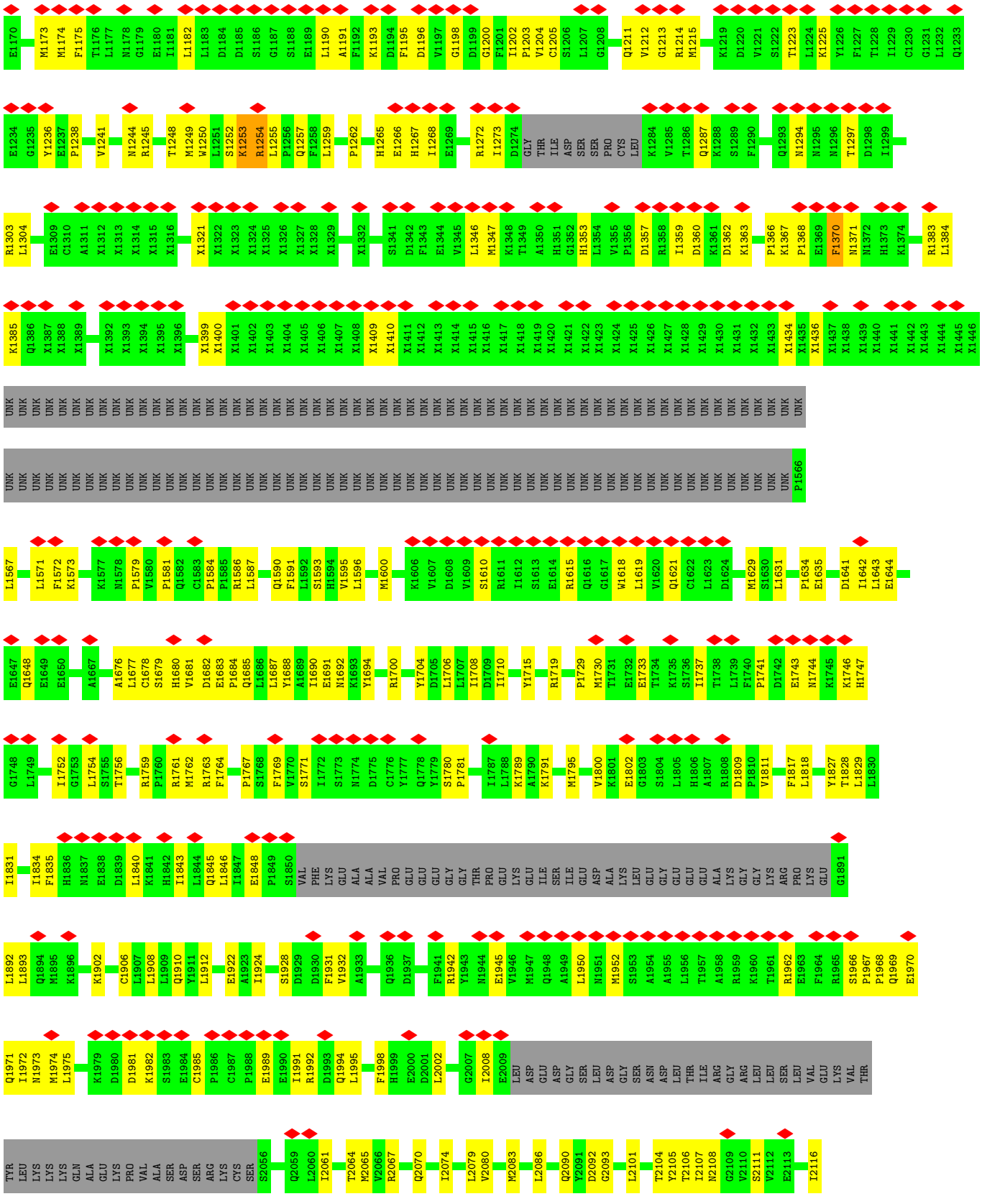

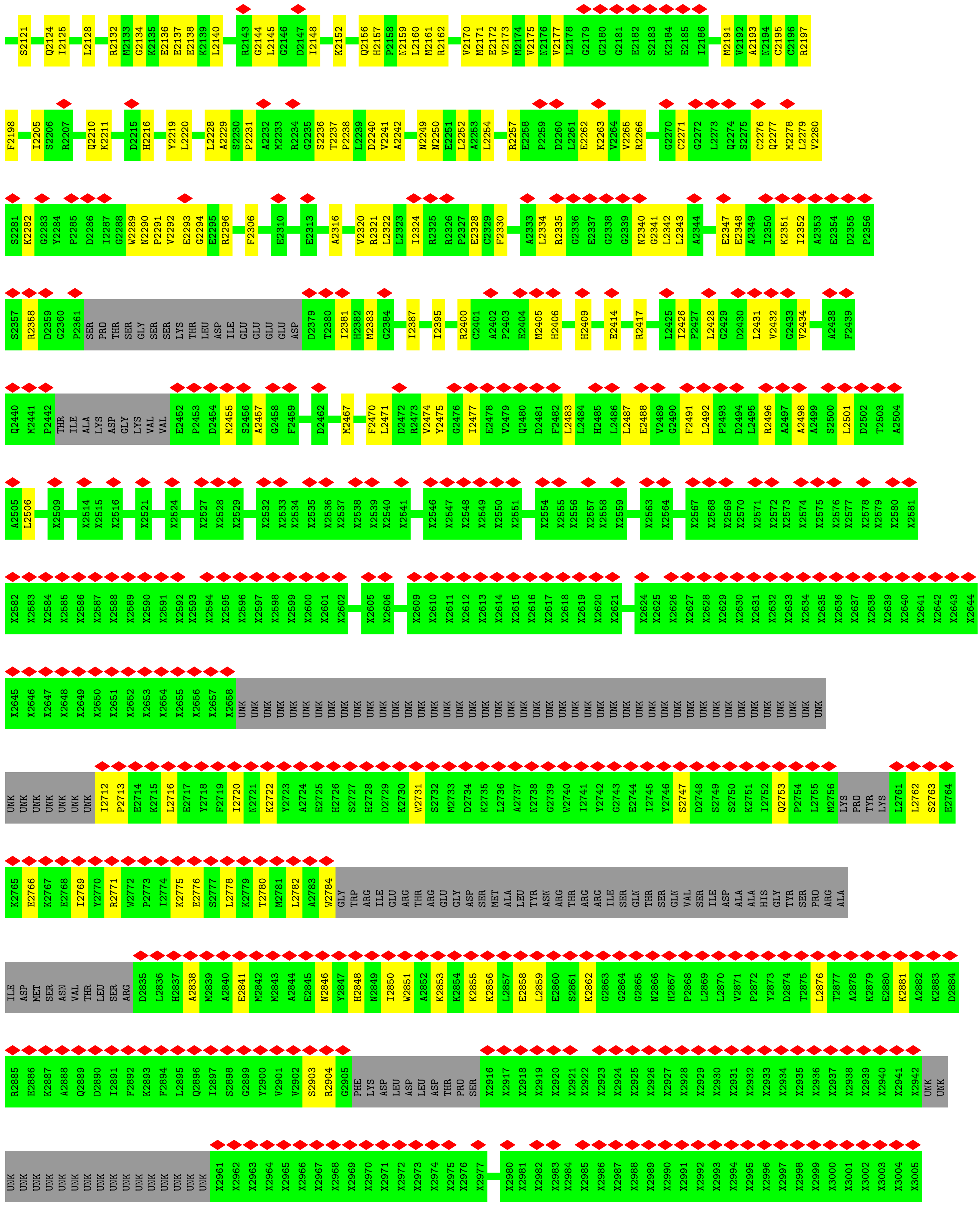
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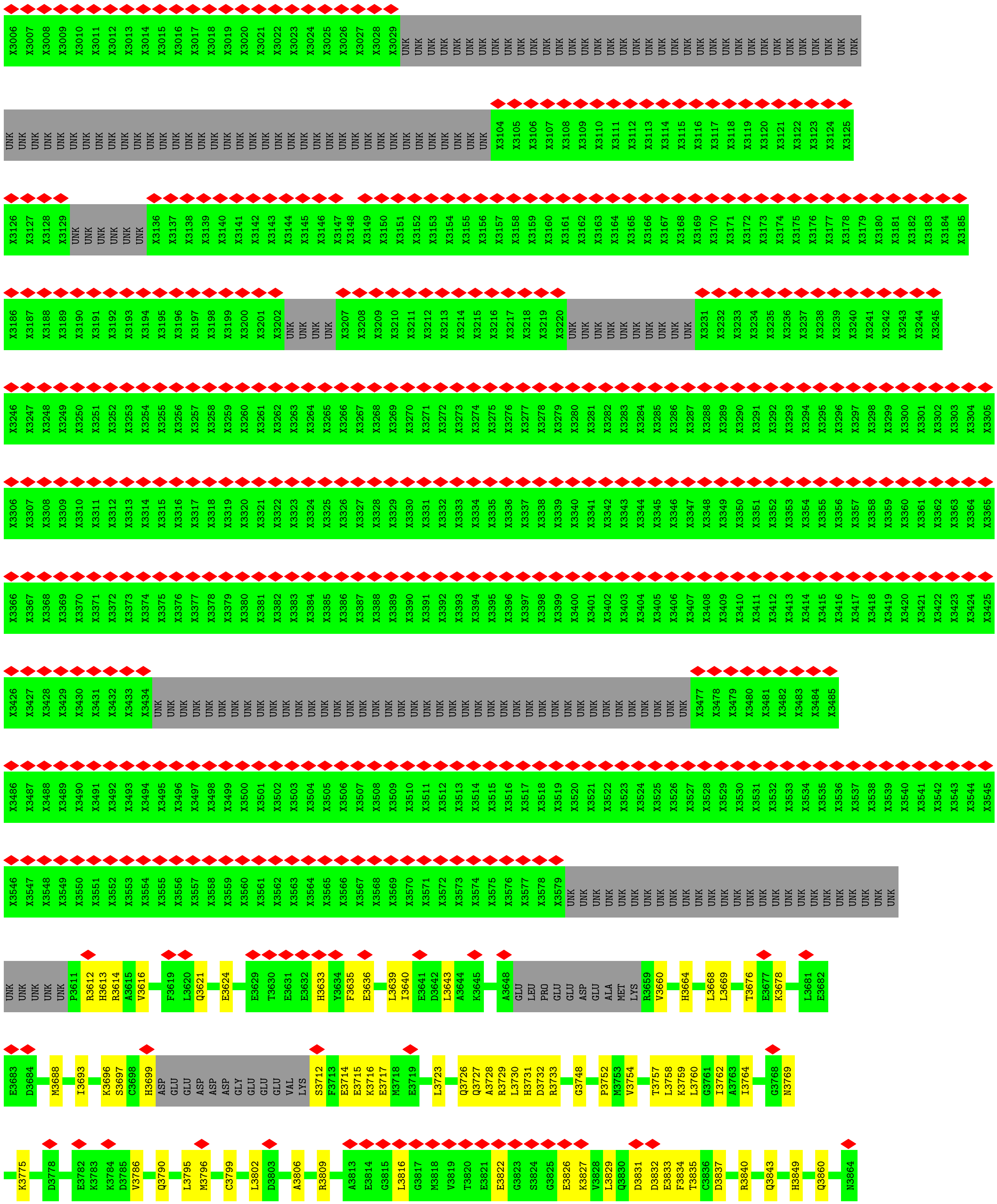
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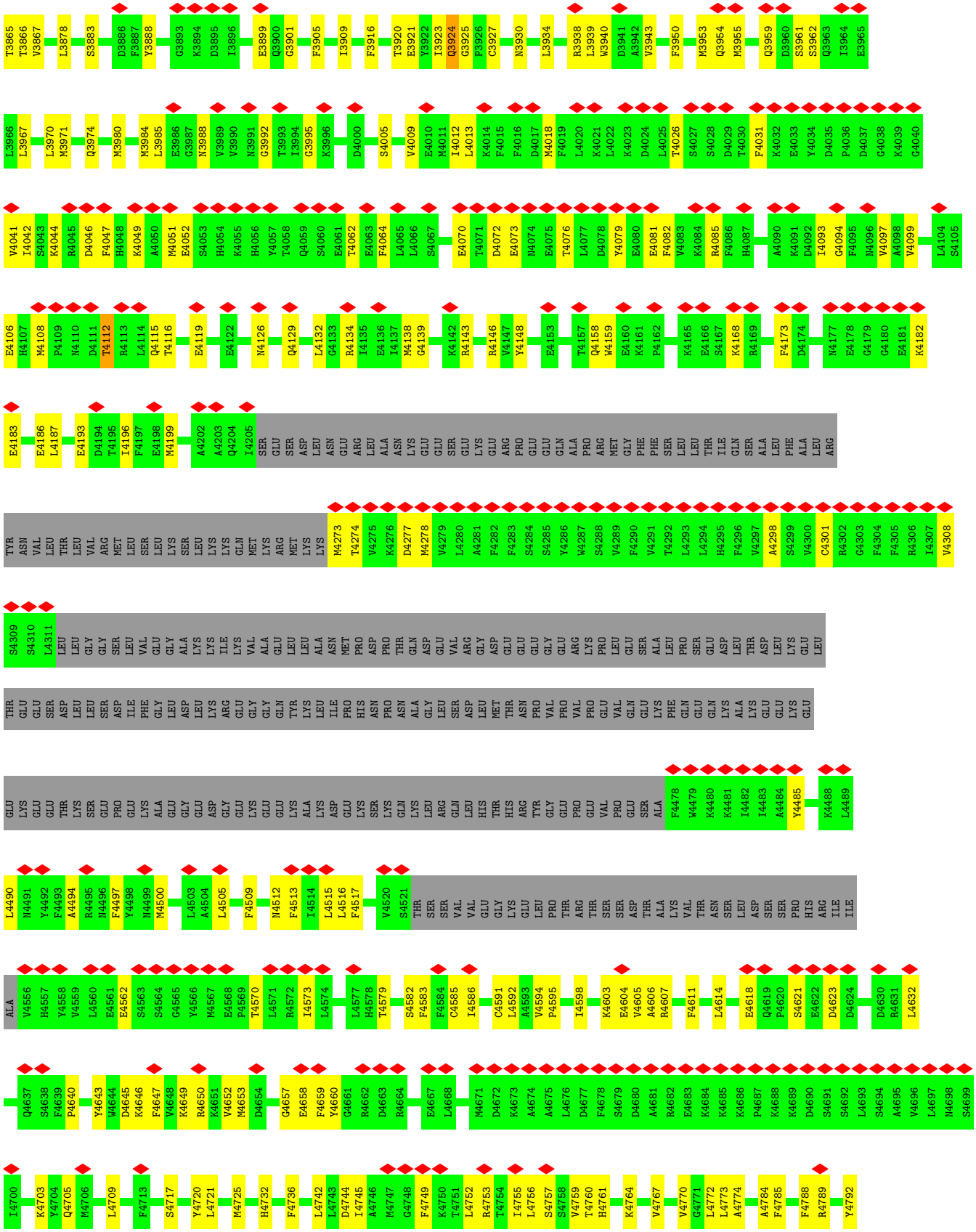
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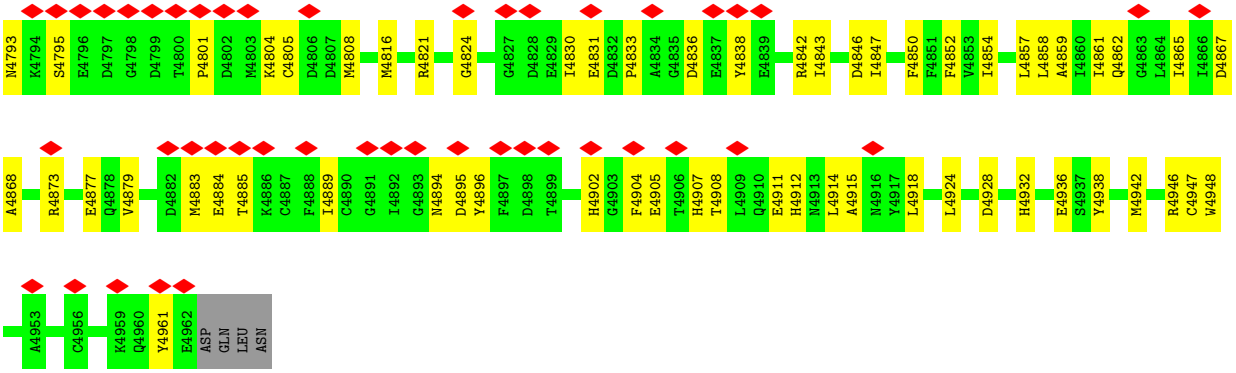
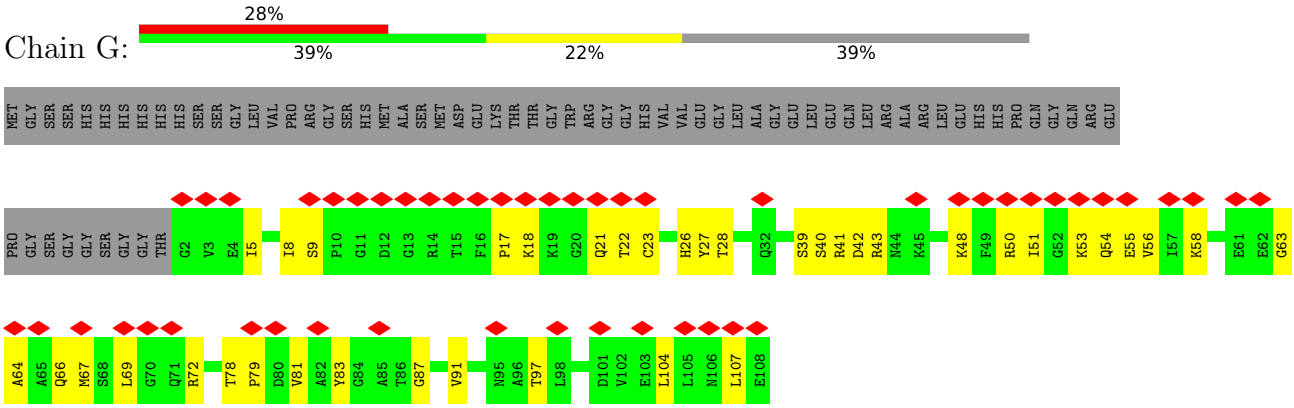
E4183 E4186 L4187 E4193 D4194 T4195 I4196 F4197 E4198 M4199 A4202 A4203 Q4204 I4205 SER GLU SER ASP LEU ASN GLU ARG LEU ALA ASN LYS GLU GLU SER GLU LYS GLU ARG PRO GLU GLU GLN ALA PRO ARG MET GLY PHE PHE SER LEU LEU THR ILE GLN SER ALA LEU PHE ALA LEU ARG
TYR ASN VAL LEU THR LEU VAL ARG MET LEU SER LEU LYS SER LEU LYS LYS GLN MET LYS ARG MET LYS LYS M4273 T4274 V4275 K4276 D4277 M4278 V4279 L4280 A4281 F4282 F4283 S4284 S4285 Y4286 W4287 S4288 V4289 F4290 V4291 T4292 L4293 L4294 H4295 F4296 V4297 A4298 S4299 V4300 C4301 R4302 G4303 F4304 F4305 R4306 I4307 V4308
S4309 S4310 L4311 LEU LEU GLY GLY SER LEU VAL GLU GLY ALA LYS LYS ILE LYS VAL ALA GLU LEU LEU ALA ASN MET PRO ASP PRO THR GLN ASP GLU VAL ARG GLY ASP GLU GLU GLU GLY GLU ARG LYS PRO LEU GLU SER ALA LEU PRO SER GLU GLN ASP LEU THR ASP LEU LYS GLU LEU
THR GLU GLU SER ASP LEU LEU SER ASP ILE PHE GLY LEU ASP LEU LYS ARG GLU GLY GLY GLN TYR LYS LEU ILE PRO HIS ASN PRO PRO ASN ALA GLY LEU SER ASP LEU MET THR ASN PRO VAL PRO VAL PRO GLU VAL GLN GLU LYS PHE GLN GLU GLN LYS ALA LYS GLU GLU LYS
GLU LYS GLU GLU THR LYS SER GLU PRO GLU LYS ALA GLU GLY GLU GLU GLU ASP GLY GLU LYS GLU GLU LYS ALA LYS ASP GLU LYS SER LYS GLN LYS LEU ARG GLN LEU HIS THR HIS ARG TYR GLY GLU PRO GLU VAL PRO GLU GLN SER ALA F4478 W4479 K4480 K4481 I4482 I4483 A4484 Y4485 K4488 L4489
L4490 N4491 Y4492 F4493 A4494 R4495 N4496 F4497 Y4498 N4499 M4500 L4503 A4504 L4505 F4509 N4512 F4513 I4514 L4515 L4516 F4517 V4520 S4521 THR SER SER VAL VAL GLU GLY LYS GLU LEU PRO THR ARG THR SER SER ASP THR ALA LYS VAL THR ASN SER LEU ASP SER PRO HIS ARG ILE ILE
ALA V4556 H4557 Y4558 V4559 L4560 E4561 E4562 S4563 S4564 G4565 Y4566 M4567 E4568 P4569 T4570 L4571 R4572 I4573 L4574 L4577 H4578 T4579 S4582 F4583 F4584 C4585 I4586 C4591 L4592 A4593 V4594 P4595 I4598 K4603 E4604 V4605 A4606 R4607 F4611 L4614 E4618 Q4619 P4620 S4621 E4622 D4623 D4624 D4630 R4631 L4632
Q4637 S4638 F4639 P4640 Y4643 W4644 D4645 K4646 F4647 V4648 K4649 R4650 K4651 V4652 M4653 D4654 G4657 E4658 F4659 Y4660 G4661 R4662 D4663 R4664 E4667 L4668 M4671 D4672 K4673 A4674 A4675 L4676 D4677 F4678 S4679 D4680 A4681 R4682 E4683 K4684 K4685 K4686 P4687 K4688 K4689 D4690 S4691 S4692 L4693 S4694 A4695 V4696 L4697 N4698 S4699
I4700 K4703 Y4704 Q4705 M4706 L4709 F4713 S4717 Y4720 L4721 M4725 H4732 F4736 L4742 L4743 D4744 I4745 A4746 M4747 G4748 F4749 K4750 T4751 L4752 R4753 T4754 I4755 L4756 S4757 S4758 V4759 T4760 H4761 K4764 V4767 V4770 G4771 L4772 L4773 A4774 A4784 F4785 F4788 R4789 Y4792



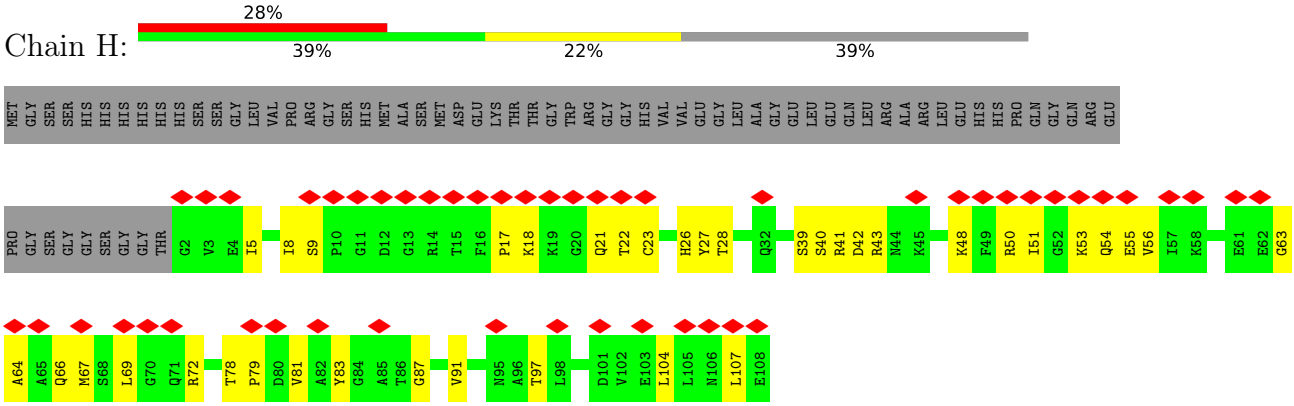
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain G:



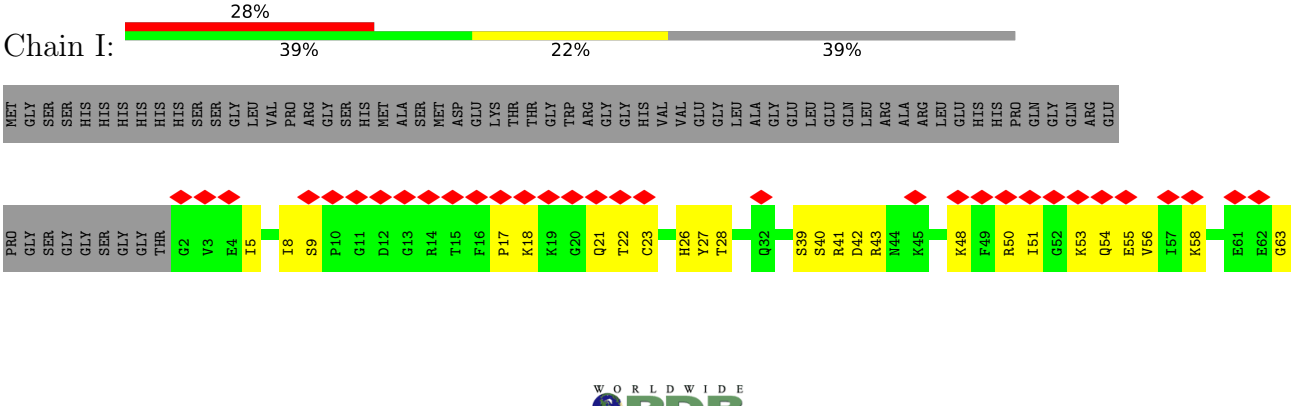
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

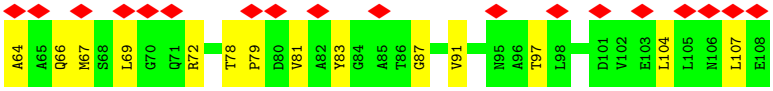
Chain H:



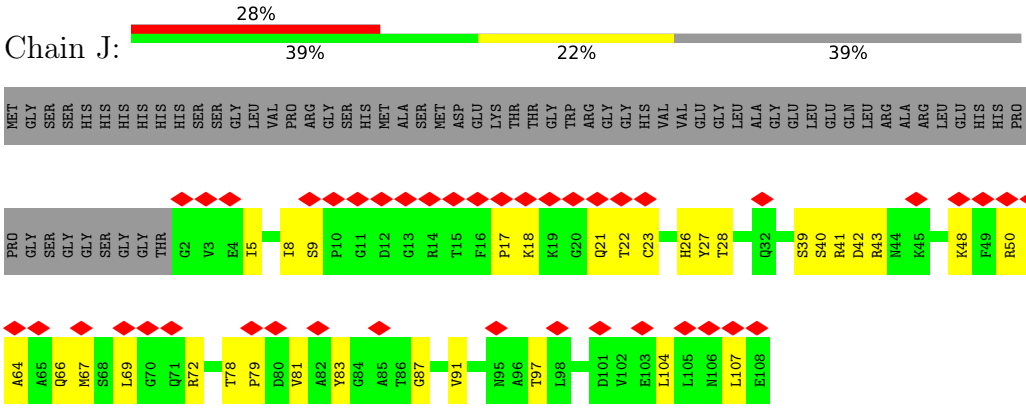
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain I:





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



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	10879	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.123	Depositor
Minimum map value	-0.065	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.034	Depositor
Map size (Å)	424.96, 424.96, 424.96	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.328, 1.328, 1.328	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.14	1/26891 (0.0%)	0.37	0/36312
1	B	0.15	1/26891 (0.0%)	0.38	0/36312
1	C	0.15	1/26891 (0.0%)	0.38	0/36312
1	D	0.15	1/26891 (0.0%)	0.38	0/36312
2	G	0.13	0/835	0.41	0/1123
2	H	0.13	0/835	0.42	0/1123
2	I	0.13	0/835	0.42	0/1123
2	J	0.13	0/835	0.41	0/1123
All	All	0.15	4/110904 (0.0%)	0.38	0/149740

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	4606	ALA	C-N	5.67	1.41	1.33
1	A	4606	ALA	C-N	5.64	1.41	1.33
1	D	4606	ALA	C-N	5.64	1.41	1.33
1	B	4606	ALA	C-N	5.60	1.41	1.33

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	30067	0	26705	756	0
1	B	30067	0	26706	754	0
1	C	30067	0	26705	759	0
1	D	30067	0	26705	760	0
2	G	819	0	821	29	0
2	H	819	0	821	28	0
2	I	819	0	821	31	0
2	J	819	0	821	29	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
All	All	123552	0	110105	3081	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 13.

All (3081) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1629:MET:HE3	1:C:1685:GLN:HE21	1.35	0.92
1:D:1629:MET:HE3	1:D:1685:GLN:HE21	1.34	0.92
1:B:1629:MET:HE3	1:B:1685:GLN:HE21	1.35	0.92
1:A:1629:MET:HE3	1:A:1685:GLN:HE21	1.35	0.90
1:A:2276:CYS:HB2	1:A:2279:LEU:HD23	1.55	0.88
1:B:1811:VAL:H	1:B:1818:LEU:HD12	1.38	0.88
1:A:4517:PHE:HB3	1:A:4562:GLU:HG3	1.56	0.88
1:C:1811:VAL:H	1:C:1818:LEU:HD12	1.39	0.88
1:B:4517:PHE:HB3	1:B:4562:GLU:HG3	1.56	0.88
1:D:2276:CYS:HB2	1:D:2279:LEU:HD23	1.55	0.87
1:A:1811:VAL:H	1:A:1818:LEU:HD12	1.38	0.87
1:C:4517:PHE:HB3	1:C:4562:GLU:HG3	1.56	0.87
1:D:1811:VAL:H	1:D:1818:LEU:HD12	1.38	0.86
1:D:4517:PHE:HB3	1:D:4562:GLU:HG3	1.56	0.86
1:B:2276:CYS:HB2	1:B:2279:LEU:HD23	1.55	0.86
1:C:2276:CYS:HB2	1:C:2279:LEU:HD23	1.55	0.86
2:G:67:MET:HE3	2:G:104:LEU:HB2	1.58	0.86
2:H:67:MET:HE3	2:H:104:LEU:HB2	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:67:MET:HE3	2:J:104:LEU:HB2	1.58	0.85
1:C:642:LEU:HD12	1:C:643:LEU:HA	1.60	0.84
2:I:67:MET:HE3	2:I:104:LEU:HB2	1.58	0.84
1:D:642:LEU:HD12	1:D:643:LEU:HA	1.61	0.83
1:B:642:LEU:HD12	1:B:643:LEU:HA	1.60	0.83
2:J:69:LEU:HA	2:J:104:LEU:HD22	1.61	0.82
1:A:642:LEU:HD12	1:A:643:LEU:HA	1.60	0.82
1:C:3934:LEU:HD12	1:C:3939:LEU:HD22	1.62	0.82
1:B:678:MET:HE2	1:B:801:ARG:HD3	1.62	0.81
1:D:3934:LEU:HD12	1:D:3939:LEU:HD22	1.62	0.81
1:D:678:MET:HE2	1:D:801:ARG:HD3	1.62	0.81
1:A:3934:LEU:HD12	1:A:3939:LEU:HD22	1.63	0.81
1:C:678:MET:HE2	1:C:801:ARG:HD3	1.62	0.81
2:I:69:LEU:HA	2:I:104:LEU:HD22	1.61	0.81
2:G:69:LEU:HA	2:G:104:LEU:HD22	1.61	0.81
1:B:3934:LEU:HD12	1:B:3939:LEU:HD22	1.63	0.81
2:H:69:LEU:HA	2:H:104:LEU:HD22	1.61	0.81
1:B:4042:ILE:HG22	1:B:4044:LYS:H	1.46	0.80
1:A:678:MET:HE2	1:A:801:ARG:HD3	1.62	0.80
1:A:4042:ILE:HG22	1:A:4044:LYS:H	1.46	0.80
1:D:2406:HIS:HA	1:D:2409:HIS:HB3	1.64	0.80
1:B:2406:HIS:HA	1:B:2409:HIS:HB3	1.64	0.80
1:C:2406:HIS:HA	1:C:2409:HIS:HB3	1.63	0.80
1:C:373:THR:HG22	1:C:397:GLY:HA2	1.64	0.80
1:D:709:GLY:O	1:D:1255:LEU:HD11	1.81	0.80
1:C:802:PHE:HB2	1:C:1618:TRP:HB2	1.64	0.80
1:A:802:PHE:HB2	1:A:1618:TRP:HB2	1.64	0.79
1:C:709:GLY:O	1:C:1255:LEU:HD11	1.81	0.79
1:B:373:THR:HG22	1:B:397:GLY:HA2	1.64	0.79
1:D:802:PHE:HB2	1:D:1618:TRP:HB2	1.64	0.79
1:A:373:THR:HG22	1:A:397:GLY:HA2	1.64	0.79
1:A:709:GLY:O	1:A:1255:LEU:HD11	1.81	0.79
1:B:802:PHE:HB2	1:B:1618:TRP:HB2	1.64	0.79
1:D:373:THR:HG22	1:D:397:GLY:HA2	1.64	0.79
1:A:4650:ARG:HA	1:A:4653:MET:SD	2.23	0.79
1:B:709:GLY:O	1:B:1255:LEU:HD11	1.81	0.79
1:B:4650:ARG:HA	1:B:4653:MET:SD	2.23	0.79
1:C:4650:ARG:HA	1:C:4653:MET:SD	2.23	0.79
1:D:4650:ARG:HA	1:D:4653:MET:SD	2.23	0.79
1:A:2406:HIS:HA	1:A:2409:HIS:HB3	1.64	0.78
1:C:4042:ILE:HG22	1:C:4044:LYS:H	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4042:ILE:HG22	1:D:4044:LYS:H	1.46	0.78
1:A:1800:VAL:HG21	1:A:1846:LEU:HD11	1.65	0.78
1:C:1800:VAL:HG21	1:C:1846:LEU:HD11	1.65	0.78
1:B:1800:VAL:HG21	1:B:1846:LEU:HD11	1.65	0.78
1:A:3971:MET:HE3	1:A:4093:ILE:HD12	1.66	0.77
1:D:1800:VAL:HG21	1:D:1846:LEU:HD11	1.65	0.77
1:B:3971:MET:HE3	1:B:4093:ILE:HD12	1.66	0.77
1:A:1254:ARG:HB3	1:A:1254:ARG:HH11	1.50	0.76
1:D:1254:ARG:HB3	1:D:1254:ARG:HH11	1.50	0.76
1:D:1684:PRO:HD3	2:J:42:ASP:HB2	1.68	0.76
2:J:23:CYS:HB2	2:J:51:ILE:HD11	1.67	0.76
1:B:1684:PRO:HD3	2:H:42:ASP:HB2	1.68	0.76
2:I:23:CYS:HB2	2:I:51:ILE:HD11	1.67	0.76
1:D:3971:MET:HE3	1:D:4093:ILE:HD12	1.66	0.76
1:A:1684:PRO:HD3	2:G:42:ASP:HB2	1.68	0.76
1:C:1262:PRO:HG2	1:C:1265:HIS:HB2	1.67	0.76
1:C:1254:ARG:HB3	1:C:1254:ARG:HH11	1.50	0.76
1:C:3971:MET:HE3	1:C:4093:ILE:HD12	1.66	0.75
1:D:1262:PRO:HG2	1:D:1265:HIS:HB2	1.67	0.75
1:C:1684:PRO:HD3	2:I:42:ASP:HB2	1.68	0.75
1:C:4042:ILE:HG21	1:C:4047:PHE:HB2	1.68	0.75
1:B:4833:PRO:HB3	1:B:4842:ARG:HD3	1.69	0.75
1:D:1259:LEU:HD11	1:D:1596:LEU:HD21	1.68	0.75
1:A:4042:ILE:HG21	1:A:4047:PHE:HB2	1.68	0.75
1:B:1117:TRP:CD1	1:B:1203:PRO:HA	2.22	0.75
2:H:23:CYS:HB2	2:H:51:ILE:HD11	1.67	0.75
1:C:1254:ARG:HB3	1:C:1254:ARG:NH1	2.01	0.75
1:C:4833:PRO:HB3	1:C:4842:ARG:HD3	1.68	0.75
1:A:1681:VAL:HG23	1:A:1682:ASP:H	1.52	0.74
1:B:1254:ARG:NH1	1:B:1254:ARG:HB3	2.01	0.74
1:B:1259:LEU:HD11	1:B:1596:LEU:HD21	1.68	0.74
1:A:1117:TRP:CD1	1:A:1203:PRO:HA	2.22	0.74
1:D:1681:VAL:HG23	1:D:1682:ASP:H	1.52	0.74
1:A:365:HIS:HB2	1:A:393:MET:HE1	1.70	0.74
1:A:1254:ARG:HB3	1:A:1254:ARG:NH1	2.01	0.74
2:G:23:CYS:HB2	2:G:51:ILE:HD11	1.67	0.74
1:C:3727:GLN:OE1	1:C:3769:ASN:ND2	2.21	0.74
1:B:365:HIS:HB2	1:B:393:MET:HE1	1.70	0.74
1:D:1254:ARG:HB3	1:D:1254:ARG:NH1	2.01	0.74
1:B:4042:ILE:HG21	1:B:4047:PHE:HB2	1.68	0.74
1:C:1117:TRP:CD1	1:C:1203:PRO:HA	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1117:TRP:CD1	1:D:1203:PRO:HA	2.22	0.74
1:B:1262:PRO:HG2	1:B:1265:HIS:HB2	1.67	0.74
1:A:3727:GLN:OE1	1:A:3769:ASN:ND2	2.20	0.74
1:D:2713:PRO:HD3	1:D:2782:LEU:HD11	1.70	0.74
1:D:365:HIS:HB2	1:D:393:MET:HE1	1.70	0.74
1:D:4042:ILE:HG21	1:D:4047:PHE:HB2	1.68	0.74
1:A:4833:PRO:HB3	1:A:4842:ARG:HD3	1.69	0.74
1:B:3843:GLN:HG3	1:B:3921:GLU:HG3	1.70	0.74
1:A:1262:PRO:HG2	1:A:1265:HIS:HB2	1.67	0.73
1:C:3843:GLN:HG3	1:C:3921:GLU:HG3	1.70	0.73
1:B:1254:ARG:HB3	1:B:1254:ARG:HH11	1.50	0.73
1:C:1681:VAL:HG23	1:C:1682:ASP:H	1.52	0.73
1:B:1681:VAL:HG23	1:B:1682:ASP:H	1.52	0.73
1:D:3843:GLN:HG3	1:D:3921:GLU:HG3	1.70	0.73
1:A:1259:LEU:HD11	1:A:1596:LEU:HD21	1.68	0.73
1:A:2713:PRO:HD3	1:A:2782:LEU:HD11	1.70	0.73
1:C:365:HIS:HB2	1:C:393:MET:HE1	1.70	0.73
1:A:1610:SER:HB3	1:A:1619:LEU:HB3	1.70	0.73
1:A:3843:GLN:HG3	1:A:3921:GLU:HG3	1.70	0.72
1:D:4833:PRO:HB3	1:D:4842:ARG:HD3	1.69	0.72
1:C:1741:PRO:HB3	1:C:1746:LYS:HE3	1.71	0.72
1:C:1610:SER:HB3	1:C:1619:LEU:HB3	1.71	0.72
1:A:1741:PRO:HB3	1:A:1746:LYS:HE3	1.71	0.72
1:C:1259:LEU:HD11	1:C:1596:LEU:HD21	1.68	0.72
1:A:1744:ASN:HD21	1:A:1746:LYS:HE2	1.54	0.72
1:B:562:LEU:HD21	1:B:600:LEU:HD22	1.72	0.72
1:B:3727:GLN:OE1	1:B:3769:ASN:ND2	2.20	0.72
1:D:1741:PRO:HB3	1:D:1746:LYS:HE3	1.71	0.72
1:D:1744:ASN:HD21	1:D:1746:LYS:HE2	1.55	0.72
1:B:1741:PRO:HB3	1:B:1746:LYS:HE3	1.71	0.72
1:B:2713:PRO:HD3	1:B:2782:LEU:HD11	1.70	0.72
1:C:562:LEU:HD21	1:C:600:LEU:HD22	1.72	0.72
1:C:2220:LEU:HD11	1:C:2242:ALA:HB2	1.71	0.72
1:D:2220:LEU:HD11	1:D:2242:ALA:HB2	1.71	0.72
1:D:3727:GLN:OE1	1:D:3769:ASN:ND2	2.20	0.72
1:C:839:GLU:HG2	1:C:840:TYR:H	1.55	0.72
1:A:562:LEU:HD21	1:A:600:LEU:HD22	1.72	0.72
1:B:2352:ILE:HD12	1:B:2358:ARG:HG2	1.72	0.72
1:D:839:GLU:HG2	1:D:840:TYR:H	1.55	0.72
1:B:711:GLU:HA	1:B:1255:LEU:HD12	1.72	0.71
1:C:2713:PRO:HD3	1:C:2782:LEU:HD11	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2352:ILE:HD12	1:A:2358:ARG:HG2	1.72	0.71
1:B:1610:SER:HB3	1:B:1619:LEU:HB3	1.70	0.71
1:A:839:GLU:HG2	1:A:840:TYR:H	1.55	0.71
1:C:1744:ASN:HD21	1:C:1746:LYS:HE2	1.54	0.71
1:B:188:SER:HB2	1:B:190:ARG:HH11	1.56	0.71
1:C:4774:ALA:HA	1:C:4816:MET:HE1	1.73	0.71
1:D:1610:SER:HB3	1:D:1619:LEU:HB3	1.71	0.71
1:A:973:THR:OG1	1:A:976:TYR:O	2.07	0.71
1:B:4774:ALA:HA	1:B:4816:MET:HE1	1.73	0.71
1:D:562:LEU:HD21	1:D:600:LEU:HD22	1.72	0.71
1:A:4854:ILE:HA	1:A:4858:LEU:HD23	1.73	0.71
1:C:1265:HIS:HD2	1:C:1268:ILE:HB	1.55	0.71
1:C:188:SER:HB2	1:C:190:ARG:HH11	1.56	0.71
1:A:2159:ASN:OD1	1:A:2162:ARG:NH2	2.24	0.71
1:B:2159:ASN:OD1	1:B:2162:ARG:NH2	2.24	0.71
1:D:188:SER:HB2	1:D:190:ARG:HH11	1.56	0.71
1:A:711:GLU:HA	1:A:1255:LEU:HD12	1.73	0.70
1:B:2220:LEU:HD11	1:B:2242:ALA:HB2	1.71	0.70
1:C:4603:LYS:HD2	1:C:4607:ARG:NH1	2.06	0.70
1:D:4774:ALA:HA	1:D:4816:MET:HE1	1.73	0.70
1:D:2352:ILE:HD12	1:D:2358:ARG:HG2	1.72	0.70
1:B:233:VAL:HG21	1:B:413:SER:HB3	1.73	0.70
1:D:711:GLU:HA	1:D:1255:LEU:HD12	1.73	0.70
1:D:973:THR:OG1	1:D:976:TYR:O	2.07	0.70
1:D:1989:GLU:HG2	1:D:1992:ARG:HD3	1.74	0.70
1:D:2159:ASN:OD1	1:D:2162:ARG:NH2	2.24	0.70
1:A:1265:HIS:HD2	1:A:1268:ILE:HB	1.55	0.70
1:C:2352:ILE:HD12	1:C:2358:ARG:HG2	1.72	0.70
1:D:4854:ILE:HA	1:D:4858:LEU:HD23	1.73	0.70
1:A:3639:LEU:HD23	1:A:3693:ILE:HG21	1.74	0.70
1:B:370:LEU:HB2	1:B:393:MET:HG2	1.74	0.70
1:B:1744:ASN:HD21	1:B:1746:LYS:HE2	1.54	0.70
1:C:370:LEU:HB2	1:C:393:MET:HG2	1.74	0.70
1:C:711:GLU:HA	1:C:1255:LEU:HD12	1.73	0.70
1:C:2159:ASN:OD1	1:C:2162:ARG:NH2	2.24	0.70
1:A:2220:LEU:HD11	1:A:2242:ALA:HB2	1.71	0.70
1:B:839:GLU:HG2	1:B:840:TYR:H	1.55	0.70
1:B:1265:HIS:HD2	1:B:1268:ILE:HB	1.55	0.70
1:C:233:VAL:HG21	1:C:413:SER:HB3	1.73	0.70
1:C:3639:LEU:HD23	1:C:3693:ILE:HG21	1.74	0.70
1:C:4772:LEU:HD22	1:D:4752:LEU:HD21	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:370:LEU:HB2	1:D:393:MET:HG2	1.74	0.70
1:D:4603:LYS:HD2	1:D:4607:ARG:NH1	2.06	0.70
1:C:655:MET:HE1	1:C:836:HIS:HD1	1.57	0.70
1:D:233:VAL:HG21	1:D:413:SER:HB3	1.73	0.70
1:A:370:LEU:HB2	1:A:393:MET:HG2	1.74	0.70
1:B:4854:ILE:HA	1:B:4858:LEU:HD23	1.73	0.70
1:C:1254:ARG:HH11	1:C:1254:ARG:CB	2.05	0.70
1:C:3955:MET:O	1:C:3959:GLN:NE2	2.25	0.70
1:A:1989:GLU:HG2	1:A:1992:ARG:HD3	1.73	0.69
1:B:3639:LEU:HD23	1:B:3693:ILE:HG21	1.74	0.69
1:D:1254:ARG:HH11	1:D:1254:ARG:CB	2.05	0.69
1:D:3639:LEU:HD23	1:D:3693:ILE:HG21	1.74	0.69
1:A:233:VAL:HG21	1:A:413:SER:HB3	1.73	0.69
1:A:4774:ALA:HA	1:A:4816:MET:HE1	1.73	0.69
1:B:973:THR:OG1	1:B:976:TYR:O	2.07	0.69
1:C:973:THR:OG1	1:C:976:TYR:O	2.07	0.69
1:A:1829:LEU:HB3	1:A:1834:ILE:HD11	1.74	0.69
1:C:4854:ILE:HA	1:C:4858:LEU:HD23	1.73	0.69
1:D:1265:HIS:HD2	1:D:1268:ILE:HB	1.55	0.69
1:B:4603:LYS:HD2	1:B:4607:ARG:NH1	2.06	0.69
1:C:1989:GLU:HG2	1:C:1992:ARG:HD3	1.73	0.69
1:A:3955:MET:O	1:A:3959:GLN:NE2	2.25	0.69
1:A:4603:LYS:HD2	1:A:4607:ARG:NH1	2.06	0.69
1:C:150:GLN:HE21	1:C:158:CYS:HB3	1.58	0.69
1:D:1829:LEU:HB3	1:D:1834:ILE:HD11	1.74	0.69
1:A:188:SER:HB2	1:A:190:ARG:HH11	1.56	0.69
1:B:3955:MET:O	1:B:3959:GLN:NE2	2.25	0.69
1:D:4051:MET:HE1	1:D:4062:THR:HA	1.75	0.69
1:B:150:GLN:HE21	1:B:158:CYS:HB3	1.58	0.69
1:D:3955:MET:O	1:D:3959:GLN:NE2	2.25	0.69
1:A:298:ARG:HH12	1:A:319:LYS:HD3	1.58	0.69
1:C:4784:ALA:HA	1:C:4788:PHE:HD2	1.58	0.68
1:B:880:ARG:HG3	1:B:881:ILE:HD12	1.75	0.68
1:B:1989:GLU:HG2	1:B:1992:ARG:HD3	1.73	0.68
1:A:1117:TRP:HD1	1:A:1203:PRO:HA	1.57	0.68
1:B:1254:ARG:HH11	1:B:1254:ARG:CB	2.05	0.68
1:A:4051:MET:HE1	1:A:4062:THR:HA	1.75	0.68
1:B:1829:LEU:HB3	1:B:1834:ILE:HD11	1.74	0.68
1:C:298:ARG:HH12	1:C:319:LYS:HD3	1.58	0.68
1:B:1117:TRP:HD1	1:B:1203:PRO:HA	1.57	0.68
1:D:150:GLN:HE21	1:D:158:CYS:HB3	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1117:TRP:HD1	1:D:1203:PRO:HA	1.57	0.68
1:A:1254:ARG:HH11	1:A:1254:ARG:CB	2.05	0.68
1:B:4051:MET:HE1	1:B:4062:THR:HA	1.75	0.68
2:J:26:HIS:CD2	2:J:41:ARG:HG2	2.29	0.68
1:B:4772:LEU:HD22	1:C:4752:LEU:HD21	1.75	0.68
1:A:520:ARG:NH1	1:A:520:ARG:HA	2.09	0.68
1:A:2092:ASP:OD1	1:A:2093:GLY:N	2.27	0.68
1:A:3822:GLU:HG2	1:A:3827:LYS:HE2	1.76	0.68
1:A:3924:GLN:HA	1:A:3924:GLN:HE21	1.59	0.68
1:B:1303:ARG:NH2	1:B:1590:GLN:OE1	2.27	0.68
1:B:4784:ALA:HA	1:B:4788:PHE:HD2	1.58	0.68
1:C:2092:ASP:OD1	1:C:2093:GLY:N	2.27	0.68
1:C:3924:GLN:HA	1:C:3924:GLN:HE21	1.59	0.68
1:D:520:ARG:NH1	1:D:520:ARG:HA	2.09	0.68
1:D:1303:ARG:NH2	1:D:1590:GLN:OE1	2.27	0.68
1:A:4784:ALA:HA	1:A:4788:PHE:HD2	1.58	0.68
1:B:2092:ASP:OD1	1:B:2093:GLY:N	2.27	0.68
1:B:2340:ASN:OD1	1:B:2341:GLY:N	2.26	0.68
1:C:1303:ARG:NH2	1:C:1590:GLN:OE1	2.27	0.68
1:D:4784:ALA:HA	1:D:4788:PHE:HD2	1.58	0.68
1:A:150:GLN:HE21	1:A:158:CYS:HB3	1.58	0.68
1:B:3924:GLN:HE21	1:B:3924:GLN:HA	1.59	0.68
1:D:3822:GLU:HG2	1:D:3827:LYS:HE2	1.76	0.68
1:A:1303:ARG:NH2	1:A:1590:GLN:OE1	2.27	0.67
2:G:26:HIS:CD2	2:G:41:ARG:HG2	2.29	0.67
1:C:694:ARG:HG2	1:C:728:ASP:HB3	1.77	0.67
2:H:26:HIS:CD2	2:H:41:ARG:HG2	2.29	0.67
1:C:1829:LEU:HB3	1:C:1834:ILE:HD11	1.75	0.67
1:C:4051:MET:HE1	1:C:4062:THR:HA	1.75	0.67
2:I:26:HIS:CD2	2:I:41:ARG:HG2	2.29	0.67
1:C:520:ARG:NH1	1:C:520:ARG:HA	2.09	0.67
1:C:880:ARG:HG3	1:C:881:ILE:HD12	1.75	0.67
1:A:880:ARG:HG3	1:A:881:ILE:HD12	1.75	0.67
1:D:298:ARG:HH12	1:D:319:LYS:HD3	1.58	0.67
1:B:4497:PHE:HA	1:B:4500:MET:HE2	1.77	0.67
1:D:35:LEU:HD13	1:D:49:LEU:HD13	1.76	0.67
1:D:3924:GLN:HA	1:D:3924:GLN:HE21	1.59	0.67
1:B:520:ARG:HA	1:B:520:ARG:NH1	2.09	0.67
1:B:694:ARG:HG2	1:B:728:ASP:HB3	1.77	0.67
1:C:4497:PHE:HA	1:C:4500:MET:HE2	1.77	0.67
1:C:603:LYS:HG2	1:C:1573:LYS:HZ1	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1117:TRP:HD1	1:C:1203:PRO:HA	1.57	0.67
1:D:2092:ASP:OD1	1:D:2093:GLY:N	2.27	0.67
1:B:603:LYS:HG2	1:B:1573:LYS:HZ1	1.60	0.67
1:B:3822:GLU:HG2	1:B:3827:LYS:HE2	1.76	0.67
1:C:2340:ASN:OD1	1:C:2341:GLY:N	2.26	0.66
1:D:694:ARG:HG2	1:D:728:ASP:HB3	1.77	0.66
1:C:3822:GLU:HG2	1:C:3827:LYS:HE2	1.76	0.66
1:D:880:ARG:HG3	1:D:881:ILE:HD12	1.75	0.66
1:B:298:ARG:HH12	1:B:319:LYS:HD3	1.58	0.66
1:C:35:LEU:HD13	1:C:49:LEU:HD13	1.76	0.66
1:A:35:LEU:HD13	1:A:49:LEU:HD13	1.76	0.66
1:B:4009:VAL:O	1:B:4013:LEU:HG	1.96	0.66
1:C:4009:VAL:O	1:C:4013:LEU:HG	1.96	0.66
1:A:760:ASP:HB3	1:A:764:PRO:HG2	1.78	0.66
1:B:760:ASP:HB3	1:B:764:PRO:HG2	1.78	0.66
1:A:1106:GLU:HB3	1:A:1214:ARG:HB2	1.77	0.66
1:A:4497:PHE:HA	1:A:4500:MET:HE2	1.77	0.66
1:B:1144:ARG:NH1	1:B:1191:ALA:O	2.29	0.66
1:D:4009:VAL:O	1:D:4013:LEU:HG	1.96	0.66
1:A:2340:ASN:OD1	1:A:2341:GLY:N	2.26	0.66
1:A:4146:ARG:HH12	1:A:4911:GLU:HG3	1.61	0.66
1:B:35:LEU:HD13	1:B:49:LEU:HD13	1.76	0.66
1:C:1106:GLU:HB3	1:C:1214:ARG:HB2	1.77	0.66
1:C:1144:ARG:NH1	1:C:1191:ALA:O	2.29	0.66
1:D:4497:PHE:HA	1:D:4500:MET:HE2	1.77	0.66
1:A:4009:VAL:O	1:A:4013:LEU:HG	1.96	0.65
1:A:694:ARG:HG2	1:A:728:ASP:HB3	1.77	0.65
1:D:603:LYS:HG2	1:D:1573:LYS:HZ1	1.59	0.65
1:D:198:ASN:OD1	1:D:199:SER:N	2.29	0.65
1:D:1144:ARG:NH1	1:D:1191:ALA:O	2.29	0.65
1:D:760:ASP:HB3	1:D:764:PRO:HG2	1.78	0.65
1:A:1266:GLU:O	1:A:1267:HIS:ND1	2.30	0.65
1:C:760:ASP:HB3	1:C:764:PRO:HG2	1.78	0.65
1:D:1106:GLU:HB3	1:D:1214:ARG:HB2	1.77	0.65
1:A:4772:LEU:HD22	1:B:4752:LEU:HD21	1.78	0.65
1:A:520:ARG:HA	1:A:520:ARG:HH11	1.62	0.65
1:A:198:ASN:OD1	1:A:199:SER:N	2.29	0.65
1:A:1144:ARG:NH1	1:A:1191:ALA:O	2.29	0.65
1:B:851:LEU:HB3	1:B:1212:VAL:HG12	1.79	0.65
1:D:520:ARG:HA	1:D:520:ARG:HH11	1.62	0.65
1:A:4752:LEU:HD21	1:D:4772:LEU:HD22	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:851:LEU:HB3	1:C:1212:VAL:HG12	1.79	0.65
1:C:1266:GLU:O	1:C:1267:HIS:ND1	2.30	0.65
1:A:851:LEU:HB3	1:A:1212:VAL:HG12	1.79	0.65
1:D:2340:ASN:OD1	1:D:2341:GLY:N	2.26	0.65
1:C:4146:ARG:HH12	1:C:4911:GLU:HG3	1.61	0.64
1:D:851:LEU:HB3	1:D:1212:VAL:HG12	1.79	0.64
1:B:1932:VAL:HG21	1:B:3616:VAL:HA	1.80	0.64
1:B:4885:THR:HA	1:B:4894:ASN:HB2	1.79	0.64
1:B:1106:GLU:HB3	1:B:1214:ARG:HB2	1.77	0.64
1:C:1091:GLU:HB2	1:C:1094:TYR:HD2	1.62	0.64
1:D:1266:GLU:O	1:D:1267:HIS:ND1	2.30	0.64
1:A:4072:ASP:O	1:A:4073:GLU:HG3	1.98	0.64
1:C:1932:VAL:HG21	1:C:3616:VAL:HA	1.79	0.64
1:C:4824:GLY:O	1:D:4821:ARG:NH1	2.30	0.64
1:A:1091:GLU:HB2	1:A:1094:TYR:HD2	1.62	0.64
1:B:299:HIS:HD2	1:B:302:THR:H	1.46	0.64
1:B:1266:GLU:O	1:B:1267:HIS:ND1	2.30	0.64
1:B:4824:GLY:O	1:C:4821:ARG:NH1	2.31	0.64
1:D:1924:ILE:HD11	1:D:2002:LEU:HD22	1.79	0.64
1:A:299:HIS:HD2	1:A:302:THR:H	1.46	0.64
1:C:1924:ILE:HD11	1:C:2002:LEU:HD22	1.79	0.64
1:D:4146:ARG:HH12	1:D:4911:GLU:HG3	1.62	0.64
1:D:759:LEU:HD13	1:D:766:ILE:HG12	1.80	0.64
1:D:4168:LYS:HE3	1:D:4914:LEU:HD12	1.80	0.64
1:C:4168:LYS:HE3	1:C:4914:LEU:HD12	1.80	0.63
1:D:4072:ASP:O	1:D:4073:GLU:HG3	1.98	0.63
1:D:2145:LEU:HD23	1:D:2148:ILE:HD11	1.81	0.63
1:A:1932:VAL:HG21	1:A:3616:VAL:HA	1.79	0.63
1:A:4821:ARG:NH1	1:D:4824:GLY:O	2.31	0.63
1:B:4072:ASP:O	1:B:4073:GLU:HG3	1.98	0.63
1:B:4146:ARG:HH12	1:B:4911:GLU:HG3	1.61	0.63
1:B:1924:ILE:HD11	1:B:2002:LEU:HD22	1.79	0.63
1:B:198:ASN:OD1	1:B:199:SER:N	2.29	0.63
1:B:520:ARG:HA	1:B:520:ARG:HH11	1.62	0.63
1:A:1924:ILE:HD11	1:A:2002:LEU:HD22	1.79	0.63
1:A:4885:THR:HA	1:A:4894:ASN:HB2	1.79	0.63
1:B:2145:LEU:HD23	1:B:2148:ILE:HD11	1.81	0.63
1:C:198:ASN:OD1	1:C:199:SER:N	2.29	0.63
1:A:2145:LEU:HD23	1:A:2148:ILE:HD11	1.81	0.63
1:B:1091:GLU:HB2	1:B:1094:TYR:HD2	1.62	0.63
1:C:520:ARG:HA	1:C:520:ARG:HH11	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:759:LEU:HD13	1:C:766:ILE:HG12	1.80	0.63
1:C:4885:THR:HA	1:C:4894:ASN:HB2	1.79	0.63
1:D:1257:GLN:HA	1:D:1384:LEU:HD22	1.80	0.63
1:A:709:GLY:O	1:A:1255:LEU:CD1	2.47	0.63
1:B:759:LEU:HD13	1:B:766:ILE:HG12	1.80	0.63
1:C:2145:LEU:HD23	1:C:2148:ILE:HD11	1.81	0.63
1:C:4072:ASP:O	1:C:4073:GLU:HG3	1.98	0.63
1:D:1932:VAL:HG21	1:D:3616:VAL:HA	1.79	0.63
1:A:1091:GLU:HB2	1:A:1094:TYR:CD2	2.34	0.63
1:C:2107:ILE:HG13	1:C:2108:ASN:H	1.64	0.63
1:C:2290:ASN:HD22	1:C:2291:PRO:HD2	1.64	0.63
1:D:1091:GLU:HB2	1:D:1094:TYR:HD2	1.62	0.63
1:D:4885:THR:HA	1:D:4894:ASN:HB2	1.79	0.63
1:A:759:LEU:HD13	1:A:766:ILE:HG12	1.80	0.62
1:A:4168:LYS:HE3	1:A:4914:LEU:HD12	1.80	0.62
1:B:19:GLU:OE1	1:B:19:GLU:N	2.32	0.62
1:D:2290:ASN:HD22	1:D:2291:PRO:HD2	1.64	0.62
1:C:1257:GLN:HA	1:C:1384:LEU:HD22	1.80	0.62
1:A:19:GLU:N	1:A:19:GLU:OE1	2.32	0.62
1:B:1257:GLN:HA	1:B:1384:LEU:HD22	1.80	0.62
1:A:1097:LYS:NZ	1:A:1198:GLY:O	2.33	0.62
1:A:2107:ILE:HG13	1:A:2108:ASN:H	1.64	0.62
1:B:4168:LYS:HE3	1:B:4914:LEU:HD12	1.80	0.62
1:D:1682:ASP:OD2	1:D:1684:PRO:HD2	2.00	0.62
1:A:3633:HIS:HD2	1:A:3635:PHE:HD1	1.48	0.62
1:B:709:GLY:O	1:B:1255:LEU:CD1	2.47	0.62
1:B:3899:GLU:OE1	1:B:3899:GLU:N	2.31	0.62
1:C:19:GLU:OE1	1:C:19:GLU:N	2.32	0.62
1:C:1682:ASP:OD2	1:C:1684:PRO:HD2	2.00	0.62
2:J:28:THR:HA	2:J:39:SER:HA	1.82	0.62
1:B:1091:GLU:HB2	1:B:1094:TYR:CD2	2.34	0.62
1:B:4018:MET:HE1	1:B:4064:PHE:HB3	1.81	0.62
1:D:1091:GLU:HB2	1:D:1094:TYR:CD2	2.34	0.62
1:A:1143:GLN:OE1	1:A:1149:ASN:ND2	2.32	0.62
1:A:1257:GLN:HA	1:A:1384:LEU:HD22	1.80	0.62
1:C:709:GLY:O	1:C:1255:LEU:CD1	2.47	0.62
1:A:603:LYS:HG2	1:A:1573:LYS:HZ1	1.65	0.62
1:A:4808:MET:HG2	1:B:4516:LEU:HA	1.81	0.62
1:B:2107:ILE:HG13	1:B:2108:ASN:H	1.64	0.62
1:C:299:HIS:HD2	1:C:302:THR:H	1.46	0.62
1:D:137:ARG:NH1	1:D:200:SER:OG	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4018:MET:HE1	1:A:4064:PHE:HB3	1.81	0.62
1:B:137:ARG:NH1	1:B:200:SER:OG	2.33	0.62
1:B:2431:LEU:HB3	1:B:2471:LEU:HD21	1.82	0.62
1:C:3899:GLU:OE1	1:C:3899:GLU:N	2.31	0.62
1:D:3633:HIS:HD2	1:D:3635:PHE:HD1	1.48	0.62
1:A:2197:ARG:HB3	1:A:2236:SER:OG	2.00	0.61
1:A:2431:LEU:HB3	1:A:2471:LEU:HD21	1.82	0.61
1:A:3899:GLU:OE1	1:A:3899:GLU:N	2.31	0.61
2:G:28:THR:HA	2:G:39:SER:HA	1.82	0.61
1:D:2107:ILE:HG13	1:D:2108:ASN:H	1.64	0.61
1:D:2431:LEU:HB3	1:D:2471:LEU:HD21	1.82	0.61
1:A:2290:ASN:HD22	1:A:2291:PRO:HD2	1.64	0.61
1:C:1091:GLU:HB2	1:C:1094:TYR:CD2	2.34	0.61
1:C:2197:ARG:HB3	1:C:2236:SER:OG	2.01	0.61
1:D:299:HIS:HD2	1:D:302:THR:H	1.46	0.61
1:D:709:GLY:O	1:D:1255:LEU:CD1	2.47	0.61
1:D:2197:ARG:HB3	1:D:2236:SER:OG	2.01	0.61
1:A:1733:GLU:HG3	1:A:1754:LEU:HD21	1.82	0.61
1:A:1682:ASP:OD2	1:A:1684:PRO:HD2	2.00	0.61
1:D:19:GLU:OE1	1:D:19:GLU:N	2.32	0.61
1:A:137:ARG:NH1	1:A:200:SER:OG	2.33	0.61
1:D:1097:LYS:NZ	1:D:1198:GLY:O	2.33	0.61
1:A:2228:LEU:HD21	1:A:2237:THR:HG21	1.83	0.61
1:B:1097:LYS:NZ	1:B:1198:GLY:O	2.33	0.61
1:B:1682:ASP:OD2	1:B:1684:PRO:HD2	2.00	0.61
1:B:3633:HIS:HD2	1:B:3635:PHE:HD1	1.48	0.61
1:C:137:ARG:NH1	1:C:200:SER:OG	2.33	0.61
1:C:1097:LYS:NZ	1:C:1198:GLY:O	2.33	0.61
1:C:2470:PHE:O	1:C:2474:VAL:HG12	2.01	0.61
1:D:1684:PRO:HA	1:D:1687:LEU:HD12	1.82	0.61
1:D:4018:MET:HE1	1:D:4064:PHE:HB3	1.81	0.61
1:A:59:PRO:HB3	1:A:296:ARG:HH12	1.66	0.61
1:C:2431:LEU:HB3	1:C:2471:LEU:HD21	1.82	0.61
2:I:28:THR:HA	2:I:39:SER:HA	1.81	0.61
1:B:59:PRO:HB3	1:B:296:ARG:HH12	1.66	0.61
1:B:1902:LYS:HG3	1:B:2079:LEU:HD11	1.82	0.61
1:C:1733:GLU:HG3	1:C:1754:LEU:HD21	1.82	0.61
1:C:4018:MET:HE1	1:C:4064:PHE:HB3	1.81	0.61
1:D:386:SER:HB3	1:D:388:GLN:HE22	1.66	0.61
1:D:606:ARG:NH2	1:D:1635:GLU:OE1	2.30	0.61
1:D:2229:ALA:HA	1:D:2292:VAL:HG11	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1139:GLY:O	1:B:1155:SER:OG	2.16	0.61
1:B:1684:PRO:HA	1:B:1687:LEU:HD12	1.82	0.61
1:B:2197:ARG:HB3	1:B:2236:SER:OG	2.01	0.61
1:B:2290:ASN:HD22	1:B:2291:PRO:HD2	1.64	0.61
1:C:2228:LEU:HD21	1:C:2237:THR:HG21	1.83	0.61
1:D:2470:PHE:O	1:D:2474:VAL:HG12	2.01	0.61
1:A:4193:GLU:CD	1:A:4607:ARG:HH22	2.09	0.61
1:B:235:ARG:NH1	1:B:268:SER:O	2.34	0.61
1:C:646:THR:OG1	1:C:1685:GLN:NE2	2.33	0.61
1:D:1143:GLN:OE1	1:D:1149:ASN:ND2	2.32	0.61
1:A:2470:PHE:O	1:A:2474:VAL:HG12	2.01	0.60
1:B:1733:GLU:HG3	1:B:1754:LEU:HD21	1.82	0.60
1:B:4049:LYS:HA	1:B:4052:GLU:HG2	1.83	0.60
1:A:119:ILE:HD13	1:A:162:ILE:HD11	1.84	0.60
1:B:2470:PHE:O	1:B:2474:VAL:HG12	2.01	0.60
2:H:28:THR:HA	2:H:39:SER:HA	1.81	0.60
1:C:1902:LYS:HG3	1:C:2079:LEU:HD11	1.82	0.60
1:D:3728:ALA:HA	1:D:3731:HIS:CE1	2.36	0.60
1:D:3759:LYS:NZ	1:D:3837:ASP:OD2	2.34	0.60
1:D:4049:LYS:HA	1:D:4052:GLU:HG2	1.83	0.60
1:C:3633:HIS:HD2	1:C:3635:PHE:HD1	1.48	0.60
1:A:4824:GLY:O	1:B:4821:ARG:NH1	2.34	0.60
1:C:933:LEU:O	1:C:937:LEU:HG	2.01	0.60
1:C:3728:ALA:HA	1:C:3731:HIS:CE1	2.36	0.60
1:D:119:ILE:HD13	1:D:162:ILE:HD11	1.84	0.60
1:D:933:LEU:O	1:D:937:LEU:HG	2.01	0.60
1:A:933:LEU:O	1:A:937:LEU:HG	2.01	0.60
1:B:4193:GLU:CD	1:B:4607:ARG:HH22	2.09	0.60
1:C:1761:ARG:HE	1:C:2116:ILE:HG21	1.67	0.60
1:C:2229:ALA:HA	1:C:2292:VAL:HG11	1.83	0.60
1:D:1733:GLU:HG3	1:D:1754:LEU:HD21	1.82	0.60
1:D:1761:ARG:HH12	1:D:1763:ARG:HH12	1.50	0.60
1:B:646:THR:OG1	1:B:1685:GLN:NE2	2.33	0.60
1:D:1006:VAL:HG13	1:D:1009:ARG:HH21	1.67	0.60
1:A:1684:PRO:HA	1:A:1687:LEU:HD12	1.82	0.60
1:A:1761:ARG:HH12	1:A:1763:ARG:HH12	1.50	0.60
1:A:3728:ALA:HA	1:A:3731:HIS:CE1	2.36	0.60
1:A:3759:LYS:NZ	1:A:3837:ASP:OD2	2.34	0.60
1:A:4049:LYS:HA	1:A:4052:GLU:HG2	1.83	0.60
1:B:2228:LEU:HD21	1:B:2237:THR:HG21	1.83	0.60
1:C:59:PRO:HB3	1:C:296:ARG:HH12	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:59:PRO:HB3	1:D:296:ARG:HH12	1.66	0.60
1:A:1761:ARG:HE	1:A:2116:ILE:HG21	1.67	0.60
1:D:235:ARG:NH1	1:D:268:SER:O	2.34	0.60
1:D:1359:ILE:HG13	1:D:1360:ASP:H	1.67	0.60
1:D:1902:LYS:HG3	1:D:2079:LEU:HD11	1.82	0.60
1:D:4883:MET:SD	1:D:4884:GLU:HG2	2.42	0.60
1:A:1902:LYS:HG3	1:A:2079:LEU:HD11	1.82	0.60
1:C:235:ARG:NH1	1:C:268:SER:O	2.34	0.60
1:C:4193:GLU:CD	1:C:4607:ARG:HH22	2.09	0.60
1:A:4883:MET:SD	1:A:4884:GLU:HG2	2.42	0.60
1:B:386:SER:HB3	1:B:388:GLN:HE22	1.66	0.60
1:B:2229:ALA:HA	1:B:2292:VAL:HG11	1.83	0.60
1:B:3728:ALA:HA	1:B:3731:HIS:CE1	2.36	0.60
2:H:50:ARG:HE	2:H:53:LYS:HG3	1.67	0.60
1:C:386:SER:HB3	1:C:388:GLN:HE22	1.66	0.60
1:C:4049:LYS:HA	1:C:4052:GLU:HG2	1.84	0.60
1:A:1006:VAL:HG13	1:A:1009:ARG:HH21	1.67	0.59
1:A:2229:ALA:HA	1:A:2292:VAL:HG11	1.83	0.59
1:C:676:GLU:HB2	1:C:803:LEU:HB2	1.84	0.59
1:C:1006:VAL:HG13	1:C:1009:ARG:HH21	1.67	0.59
1:C:1359:ILE:HG13	1:C:1360:ASP:H	1.67	0.59
1:D:1761:ARG:HE	1:D:2116:ILE:HG21	1.67	0.59
1:D:2228:LEU:HD21	1:D:2237:THR:HG21	1.83	0.59
1:D:4193:GLU:CD	1:D:4607:ARG:HH22	2.09	0.59
1:A:235:ARG:NH1	1:A:268:SER:O	2.34	0.59
1:B:1761:ARG:HE	1:B:2116:ILE:HG21	1.67	0.59
1:C:1684:PRO:HA	1:C:1687:LEU:HD12	1.83	0.59
1:D:646:THR:OG1	1:D:1685:GLN:NE2	2.33	0.59
1:A:386:SER:HB3	1:A:388:GLN:HE22	1.66	0.59
1:B:119:ILE:HD13	1:B:162:ILE:HD11	1.84	0.59
1:B:601:LEU:HG	1:B:642:LEU:HD21	1.84	0.59
1:C:1048:ASP:HA	1:C:1051:ARG:HD2	1.84	0.59
1:B:2240:ASP:OD1	1:B:2296:ARG:NH2	2.36	0.59
1:C:4883:MET:SD	1:C:4884:GLU:HG2	2.42	0.59
1:A:125:TYR:OH	1:A:414:ARG:HA	2.03	0.59
1:A:606:ARG:NH2	1:A:1635:GLU:OE1	2.30	0.59
1:A:1048:ASP:HA	1:A:1051:ARG:HD2	1.84	0.59
1:B:1248:THR:HG1	1:B:1250:TRP:CD1	2.21	0.59
1:B:3633:HIS:HD2	1:B:3635:PHE:CD1	2.21	0.59
1:B:4883:MET:SD	1:B:4884:GLU:HG2	2.42	0.59
1:C:3759:LYS:NZ	1:C:3837:ASP:OD2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3831:ASP:HB3	1:C:3834:PHE:HB3	1.84	0.59
1:B:1682:ASP:HB3	1:B:1685:GLN:HB3	1.85	0.59
1:C:125:TYR:OH	1:C:414:ARG:HA	2.03	0.59
2:I:50:ARG:HE	2:I:53:LYS:HG3	1.67	0.59
1:D:3899:GLU:OE1	1:D:3899:GLU:N	2.30	0.59
1:A:646:THR:OG1	1:A:1685:GLN:NE2	2.33	0.59
2:G:50:ARG:HE	2:G:53:LYS:HG3	1.67	0.59
1:B:125:TYR:OH	1:B:414:ARG:HA	2.02	0.59
1:B:933:LEU:O	1:B:937:LEU:HG	2.01	0.59
1:B:1761:ARG:HH12	1:B:1763:ARG:HH12	1.50	0.59
1:C:1248:THR:HG1	1:C:1250:TRP:CD1	2.21	0.59
1:D:3831:ASP:HB3	1:D:3834:PHE:HB3	1.84	0.59
1:C:119:ILE:HD13	1:C:162:ILE:HD11	1.84	0.59
1:C:3633:HIS:HD2	1:C:3635:PHE:CD1	2.21	0.59
1:D:601:LEU:HG	1:D:642:LEU:HD21	1.84	0.59
1:D:1048:ASP:HA	1:D:1051:ARG:HD2	1.84	0.59
1:A:1359:ILE:HG13	1:A:1360:ASP:H	1.67	0.59
1:B:1006:VAL:HG13	1:B:1009:ARG:HH21	1.67	0.59
1:B:3636:GLU:HG2	1:B:3696:LYS:HE3	1.84	0.59
1:C:4873:ARG:O	1:C:4877:GLU:HG2	2.03	0.59
1:D:676:GLU:HB2	1:D:803:LEU:HB2	1.85	0.59
1:B:1048:ASP:HA	1:B:1051:ARG:HD2	1.84	0.59
1:B:1143:GLN:OE1	1:B:1149:ASN:ND2	2.32	0.59
1:C:601:LEU:HG	1:C:642:LEU:HD21	1.84	0.59
1:D:3688:MET:HE3	1:D:3752:PRO:HB2	1.85	0.59
1:A:329:PHE:HB3	1:A:363:ILE:HD11	1.85	0.58
1:A:1682:ASP:HB3	1:A:1685:GLN:HB3	1.85	0.58
1:B:1359:ILE:HG13	1:B:1360:ASP:H	1.67	0.58
1:B:3759:LYS:NZ	1:B:3837:ASP:OD2	2.34	0.58
1:A:601:LEU:HG	1:A:642:LEU:HD21	1.84	0.58
1:A:2240:ASP:OD1	1:A:2296:ARG:NH2	2.36	0.58
1:A:3831:ASP:HB3	1:A:3834:PHE:HB3	1.84	0.58
1:A:4186:GLU:HG3	1:A:4948:TRP:CZ3	2.38	0.58
1:B:329:PHE:HB3	1:B:363:ILE:HD11	1.85	0.58
1:B:4186:GLU:HG3	1:B:4948:TRP:CZ3	2.38	0.58
1:C:844:ARG:HE	1:C:845:THR:H	1.52	0.58
1:C:2240:ASP:OD1	1:C:2296:ARG:NH2	2.36	0.58
1:C:3636:GLU:HG2	1:C:3696:LYS:HE3	1.84	0.58
1:A:3633:HIS:HD2	1:A:3635:PHE:CD1	2.21	0.58
2:G:79:PRO:HD3	2:G:97:THR:HG22	1.85	0.58
1:B:676:GLU:HB2	1:B:803:LEU:HB2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1682:ASP:HB3	1:C:1685:GLN:HB3	1.85	0.58
1:A:2747:SER:O	1:A:2753:GLN:NE2	2.36	0.58
1:A:4873:ARG:O	1:A:4877:GLU:HG2	2.03	0.58
1:B:844:ARG:HE	1:B:845:THR:H	1.51	0.58
1:B:4873:ARG:O	1:B:4877:GLU:HG2	2.03	0.58
1:C:1173:MET:O	1:C:1174:MET:HE2	2.03	0.58
1:D:329:PHE:HB3	1:D:363:ILE:HD11	1.85	0.58
1:A:3636:GLU:HG2	1:A:3696:LYS:HE3	1.84	0.58
1:A:4134:ARG:HG2	1:A:4146:ARG:HH11	1.68	0.58
1:C:1761:ARG:NH1	1:C:1761:ARG:HB2	2.19	0.58
1:D:1248:THR:HG1	1:D:1250:TRP:CD1	2.21	0.58
1:B:3688:MET:HE3	1:B:3752:PRO:HB2	1.85	0.58
1:C:2747:SER:O	1:C:2753:GLN:NE2	2.36	0.58
1:D:1273:ILE:HD11	1:D:1287:GLN:HB3	1.86	0.58
1:D:4139:GLY:HA2	1:D:4938:TYR:CE2	2.39	0.58
1:D:4186:GLU:HG3	1:D:4948:TRP:CZ3	2.38	0.58
1:A:4139:GLY:HA2	1:A:4938:TYR:CE2	2.39	0.58
1:B:1273:ILE:HD11	1:B:1287:GLN:HB3	1.86	0.58
1:B:4134:ARG:HG2	1:B:4146:ARG:HH11	1.68	0.58
1:C:606:ARG:NH2	1:C:1635:GLU:OE1	2.30	0.58
1:C:1273:ILE:HD11	1:C:1287:GLN:HB3	1.86	0.58
1:D:1682:ASP:HB3	1:D:1685:GLN:HB3	1.85	0.58
1:A:844:ARG:HE	1:A:845:THR:H	1.51	0.58
1:A:1173:MET:O	1:A:1174:MET:HE2	2.03	0.58
1:A:1248:THR:HG1	1:A:1250:TRP:CD1	2.21	0.58
1:C:1040:ASP:HA	1:C:1043:LYS:HG3	1.86	0.58
1:A:3688:MET:HE3	1:A:3752:PRO:HB2	1.85	0.58
1:C:1143:GLN:OE1	1:C:1149:ASN:ND2	2.32	0.58
1:D:3633:HIS:HD2	1:D:3635:PHE:CD1	2.21	0.58
1:A:676:GLU:HB2	1:A:803:LEU:HB2	1.85	0.58
1:A:2101:LEU:O	1:A:2104:THR:HG22	2.04	0.58
1:A:4196:ILE:HG23	1:A:4918:LEU:HD12	1.86	0.58
1:B:1173:MET:O	1:B:1174:MET:HE2	2.03	0.58
1:D:125:TYR:OH	1:D:414:ARG:HA	2.03	0.58
1:D:1761:ARG:NH1	1:D:1761:ARG:HB2	2.19	0.58
1:D:4196:ILE:HG23	1:D:4918:LEU:HD12	1.86	0.58
2:J:79:PRO:HD3	2:J:97:THR:HG22	1.85	0.58
1:A:2434:VAL:HG11	1:A:2467:MET:HE3	1.86	0.57
2:H:79:PRO:HD3	2:H:97:THR:HG22	1.85	0.57
1:C:908:ARG:HG2	1:C:916:PRO:HG3	1.86	0.57
1:C:4186:GLU:HG3	1:C:4948:TRP:CZ3	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:79:PRO:HD3	2:I:97:THR:HG22	1.85	0.57
1:D:908:ARG:HG2	1:D:916:PRO:HG3	1.86	0.57
1:D:2134:GLY:H	1:D:2137:GLU:HB2	1.69	0.57
2:J:50:ARG:HE	2:J:53:LYS:HG3	1.67	0.57
1:A:1273:ILE:HD11	1:A:1287:GLN:HB3	1.86	0.57
1:A:1761:ARG:NH1	1:A:1761:ARG:HB2	2.19	0.57
1:A:4889:ILE:HD13	1:A:4912:HIS:HB3	1.86	0.57
1:B:1761:ARG:HB2	1:B:1761:ARG:NH1	2.19	0.57
1:B:1840:LEU:HA	1:B:1843:ILE:HG12	1.86	0.57
1:B:4889:ILE:HD13	1:B:4912:HIS:HB3	1.86	0.57
1:C:3688:MET:HE3	1:C:3752:PRO:HB2	1.85	0.57
1:C:4139:GLY:HA2	1:C:4938:TYR:CE2	2.39	0.57
1:D:3636:GLU:HG2	1:D:3696:LYS:HE3	1.84	0.57
1:A:1009:ARG:O	1:A:1013:ARG:NH1	2.38	0.57
1:A:1840:LEU:HA	1:A:1843:ILE:HG12	1.86	0.57
1:A:2134:GLY:H	1:A:2137:GLU:HB2	1.70	0.57
1:A:2210:GLN:OE1	1:A:2249:ASN:ND2	2.37	0.57
1:B:2210:GLN:OE1	1:B:2249:ASN:ND2	2.37	0.57
1:C:1761:ARG:HH12	1:C:1763:ARG:HH12	1.50	0.57
1:D:2210:GLN:OE1	1:D:2249:ASN:ND2	2.37	0.57
1:A:748:LEU:HD12	1:A:749:LEU:H	1.69	0.57
1:A:2488:GLU:HA	1:A:2492:LEU:HD12	1.85	0.57
1:B:4938:TYR:CZ	1:B:4942:MET:HE1	2.40	0.57
1:C:748:LEU:HD12	1:C:749:LEU:H	1.69	0.57
1:C:2488:GLU:HA	1:C:2492:LEU:HD12	1.85	0.57
1:D:844:ARG:HE	1:D:845:THR:H	1.51	0.57
1:D:4852:PHE:O	1:D:4857:LEU:HD23	2.04	0.57
1:D:4873:ARG:O	1:D:4877:GLU:HG2	2.03	0.57
1:A:1272:ARG:NH2	1:A:1584:PRO:O	2.38	0.57
1:B:748:LEU:HD12	1:B:749:LEU:H	1.69	0.57
1:B:3729:ARG:O	1:B:3733:ARG:NH1	2.38	0.57
1:B:4885:THR:O	1:B:4894:ASN:N	2.38	0.57
1:C:329:PHE:HB3	1:C:363:ILE:HD11	1.85	0.57
1:C:4889:ILE:HD13	1:C:4912:HIS:HB3	1.86	0.57
1:D:1040:ASP:HA	1:D:1043:LYS:HG3	1.86	0.57
1:D:1173:MET:O	1:D:1174:MET:HE2	2.03	0.57
1:D:4134:ARG:HG2	1:D:4146:ARG:HH11	1.68	0.57
1:B:1244:ASN:ND2	1:B:1802:GLU:OE2	2.37	0.57
1:B:1677:LEU:HA	1:B:1680:HIS:HB2	1.87	0.57
1:B:2134:GLY:H	1:B:2137:GLU:HB2	1.70	0.57
1:B:3831:ASP:HB3	1:B:3834:PHE:HB3	1.84	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1244:ASN:ND2	1:C:1802:GLU:OE2	2.37	0.57
1:C:1297:THR:OG1	1:C:1346:LEU:O	2.18	0.57
1:C:2101:LEU:O	1:C:2104:THR:HG22	2.04	0.57
1:C:4907:HIS:HA	1:C:4911:GLU:OE1	2.05	0.57
1:D:2240:ASP:OD1	1:D:2296:ARG:NH2	2.36	0.57
1:D:4042:ILE:H	1:D:4076:THR:HG23	1.69	0.57
1:D:4938:TYR:CZ	1:D:4942:MET:HE1	2.40	0.57
1:A:1244:ASN:ND2	1:A:1802:GLU:OE2	2.37	0.57
1:A:4938:TYR:CZ	1:A:4942:MET:HE1	2.40	0.57
1:B:799:LYS:HG2	1:B:1621:GLN:HE22	1.70	0.57
1:B:1009:ARG:O	1:B:1013:ARG:NH1	2.38	0.57
1:B:2101:LEU:O	1:B:2104:THR:HG22	2.04	0.57
1:C:799:LYS:HG2	1:C:1621:GLN:HE22	1.70	0.57
1:C:1259:LEU:HD13	1:C:1593:SER:HB3	1.87	0.57
1:D:1009:ARG:O	1:D:1013:ARG:NH1	2.38	0.57
1:D:1719:ARG:NH2	1:D:1759:ARG:HE	2.03	0.57
1:D:1840:LEU:HA	1:D:1843:ILE:HG12	1.86	0.57
1:C:4808:MET:HG2	1:D:4516:LEU:HA	1.86	0.57
1:D:748:LEU:HD12	1:D:749:LEU:H	1.69	0.57
1:A:1040:ASP:HA	1:A:1043:LYS:HG3	1.86	0.57
1:A:2426:ILE:HG21	1:A:2470:PHE:CE2	2.40	0.57
1:B:2426:ILE:HG21	1:B:2470:PHE:CE2	2.40	0.57
1:C:4134:ARG:HG2	1:C:4146:ARG:HH11	1.68	0.57
1:D:1259:LEU:HD13	1:D:1593:SER:HB3	1.87	0.57
1:D:2101:LEU:O	1:D:2104:THR:HG22	2.04	0.57
1:D:2488:GLU:HA	1:D:2492:LEU:HD12	1.85	0.57
1:B:1297:THR:OG1	1:B:1346:LEU:O	2.18	0.57
1:C:1009:ARG:O	1:C:1013:ARG:NH1	2.38	0.57
1:C:3754:VAL:HA	1:C:3757:THR:HG22	1.87	0.57
1:C:4196:ILE:HG23	1:C:4918:LEU:HD12	1.86	0.57
1:C:4938:TYR:CZ	1:C:4942:MET:HE1	2.40	0.57
1:D:4907:HIS:HA	1:D:4911:GLU:OE1	2.05	0.57
1:A:28:ILE:O	1:A:31:GLU:HG3	2.05	0.56
1:A:1094:TYR:OH	1:A:1809:ASP:OD2	2.16	0.56
1:A:1267:HIS:HB2	1:A:1294:ASN:HB2	1.87	0.56
1:A:4902:HIS:CD2	1:D:4182:LYS:HA	2.40	0.56
1:B:2488:GLU:HA	1:B:2492:LEU:HD12	1.85	0.56
1:B:4852:PHE:O	1:B:4857:LEU:HD23	2.04	0.56
1:C:2067:ARG:HA	1:C:2070:GLN:HG2	1.87	0.56
1:D:2426:ILE:HG21	1:D:2470:PHE:CE2	2.40	0.56
1:D:4885:THR:O	1:D:4894:ASN:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2074:ILE:HD12	1:A:2083:MET:HE1	1.88	0.56
1:A:4885:THR:O	1:A:4894:ASN:N	2.38	0.56
1:B:28:ILE:O	1:B:31:GLU:HG3	2.05	0.56
1:B:908:ARG:HG2	1:B:916:PRO:HG3	1.86	0.56
1:B:1113:MET:HB2	1:B:1156:TRP:HZ2	1.70	0.56
1:B:2330:PHE:O	1:B:2335:ARG:NE	2.38	0.56
1:B:4139:GLY:HA2	1:B:4938:TYR:CE2	2.39	0.56
1:B:4196:ILE:HG23	1:B:4918:LEU:HD12	1.86	0.56
1:C:1719:ARG:NH2	1:C:1759:ARG:HE	2.03	0.56
1:C:1827:TYR:CZ	1:C:1831:ILE:HD11	2.41	0.56
1:A:1113:MET:HB2	1:A:1156:TRP:HZ2	1.70	0.56
1:A:1677:LEU:HA	1:A:1680:HIS:HB2	1.87	0.56
1:B:844:ARG:HE	1:B:845:THR:HG22	1.71	0.56
1:B:1040:ASP:HA	1:B:1043:LYS:HG3	1.86	0.56
1:B:1267:HIS:HB2	1:B:1294:ASN:HB2	1.87	0.56
1:B:2074:ILE:HD12	1:B:2083:MET:HE1	1.88	0.56
1:B:2434:VAL:HG11	1:B:2467:MET:HE3	1.86	0.56
1:B:4808:MET:HG2	1:C:4516:LEU:HA	1.86	0.56
1:B:4907:HIS:HA	1:B:4911:GLU:OE1	2.05	0.56
1:C:1008:ALA:O	1:C:1012:ILE:HG23	2.06	0.56
1:C:2210:GLN:OE1	1:C:2249:ASN:ND2	2.37	0.56
1:C:4852:PHE:O	1:C:4857:LEU:HD23	2.04	0.56
1:C:4885:THR:O	1:C:4894:ASN:N	2.38	0.56
1:D:1113:MET:HB2	1:D:1156:TRP:HZ2	1.70	0.56
1:D:1244:ASN:ND2	1:D:1802:GLU:OE2	2.37	0.56
1:D:1267:HIS:HB2	1:D:1294:ASN:HB2	1.87	0.56
1:D:3754:VAL:HA	1:D:3757:THR:HG22	1.88	0.56
1:D:4889:ILE:HD13	1:D:4912:HIS:HB3	1.86	0.56
1:A:125:TYR:OH	1:A:417:ARG:HB3	2.05	0.56
1:A:799:LYS:HG2	1:A:1621:GLN:HE22	1.70	0.56
1:A:908:ARG:HG2	1:A:916:PRO:HG3	1.86	0.56
1:A:1008:ALA:O	1:A:1012:ILE:HG23	2.06	0.56
1:A:1719:ARG:NH2	1:A:1759:ARG:HE	2.03	0.56
1:A:4852:PHE:O	1:A:4857:LEU:HD23	2.04	0.56
1:B:4186:GLU:HG3	1:B:4948:TRP:HZ3	1.71	0.56
1:C:1267:HIS:HB2	1:C:1294:ASN:HB2	1.87	0.56
1:C:2426:ILE:HG21	1:C:2470:PHE:CE2	2.40	0.56
1:D:1008:ALA:O	1:D:1012:ILE:HG23	2.06	0.56
1:D:1272:ARG:NH2	1:D:1584:PRO:O	2.38	0.56
1:D:1827:TYR:CZ	1:D:1831:ILE:HD11	2.41	0.56
1:D:2330:PHE:O	1:D:2335:ARG:NE	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3729:ARG:O	1:A:3733:ARG:NH1	2.38	0.56
1:B:3754:VAL:HA	1:B:3757:THR:HG22	1.87	0.56
1:C:1113:MET:HB2	1:C:1156:TRP:HZ2	1.70	0.56
1:C:2434:VAL:HG11	1:C:2467:MET:HE3	1.86	0.56
1:D:2074:ILE:HD12	1:D:2083:MET:HE1	1.88	0.56
1:A:844:ARG:HE	1:A:845:THR:HG22	1.71	0.56
1:A:2067:ARG:HA	1:A:2070:GLN:HG2	1.87	0.56
1:A:4042:ILE:H	1:A:4076:THR:HG23	1.69	0.56
1:B:1715:TYR:CZ	1:B:1762:MET:HB3	2.41	0.56
1:B:2067:ARG:HA	1:B:2070:GLN:HG2	1.87	0.56
1:C:356:TYR:HA	1:C:405:LEU:HB2	1.88	0.56
1:C:844:ARG:HE	1:C:845:THR:HG22	1.71	0.56
1:C:2074:ILE:HD12	1:C:2083:MET:HE1	1.88	0.56
1:D:290:ARG:NH1	1:D:346:VAL:HG21	2.21	0.56
1:D:799:LYS:HG2	1:D:1621:GLN:HE22	1.70	0.56
1:B:1827:TYR:CZ	1:B:1831:ILE:HD11	2.41	0.56
1:C:1840:LEU:HA	1:C:1843:ILE:HG12	1.86	0.56
1:B:125:TYR:OH	1:B:417:ARG:HB3	2.05	0.56
1:C:258:ARG:NH1	1:C:316:LEU:O	2.39	0.56
1:C:1272:ARG:NH2	1:C:1584:PRO:O	2.38	0.56
1:D:2271:CYS:SG	1:D:2293:GLU:HB2	2.46	0.56
1:A:1715:TYR:CZ	1:A:1762:MET:HB3	2.41	0.56
1:B:1259:LEU:HD13	1:B:1593:SER:HB3	1.87	0.56
1:C:2134:GLY:H	1:C:2137:GLU:HB2	1.69	0.56
1:D:28:ILE:O	1:D:31:GLU:HG3	2.05	0.56
1:D:2434:VAL:HG11	1:D:2467:MET:HE3	1.86	0.56
1:D:3729:ARG:O	1:D:3733:ARG:NH1	2.38	0.56
1:A:2271:CYS:SG	1:A:2293:GLU:HB2	2.46	0.56
1:B:290:ARG:NH1	1:B:346:VAL:HG21	2.21	0.56
1:B:356:TYR:HA	1:B:405:LEU:HB2	1.88	0.56
1:B:3731:HIS:O	1:B:3775:LYS:NZ	2.39	0.56
1:C:1715:TYR:CZ	1:C:1762:MET:HB3	2.41	0.56
1:C:3731:HIS:O	1:C:3775:LYS:NZ	2.39	0.56
1:C:4042:ILE:H	1:C:4076:THR:HG23	1.69	0.56
1:C:4186:GLU:HG3	1:C:4948:TRP:HZ3	1.71	0.56
1:D:844:ARG:HE	1:D:845:THR:HG22	1.71	0.56
1:A:3754:VAL:HA	1:A:3757:THR:HG22	1.88	0.55
1:A:4846:ASP:OD1	1:A:4847:ILE:N	2.39	0.55
2:G:50:ARG:N	2:G:55:GLU:OE2	2.39	0.55
1:B:258:ARG:NH1	1:B:316:LEU:O	2.39	0.55
1:B:4042:ILE:H	1:B:4076:THR:HG23	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1677:LEU:HA	1:C:1680:HIS:HB2	1.87	0.55
1:C:2271:CYS:SG	1:C:2293:GLU:HB2	2.46	0.55
1:D:125:TYR:OH	1:D:417:ARG:HB3	2.05	0.55
1:D:258:ARG:NH1	1:D:316:LEU:O	2.39	0.55
1:D:2067:ARG:HA	1:D:2070:GLN:HG2	1.87	0.55
1:A:290:ARG:NH1	1:A:346:VAL:HG21	2.21	0.55
1:A:4907:HIS:HA	1:A:4911:GLU:OE1	2.05	0.55
1:C:28:ILE:O	1:C:31:GLU:HG3	2.05	0.55
1:C:3729:ARG:O	1:C:3733:ARG:NH1	2.38	0.55
1:D:70:GLU:OE2	1:D:122:ARG:NE	2.33	0.55
1:D:625:VAL:HG23	1:D:628:ASN:HB2	1.88	0.55
1:D:1835:PHE:O	1:D:1840:LEU:HG	2.07	0.55
1:A:2330:PHE:O	1:A:2335:ARG:NE	2.38	0.55
1:A:4801:PRO:HB2	1:A:4804:LYS:HD2	1.89	0.55
1:C:77:ALA:O	1:C:81:MET:HG2	2.06	0.55
1:C:2330:PHE:O	1:C:2335:ARG:NE	2.38	0.55
1:A:1259:LEU:HD13	1:A:1593:SER:HB3	1.87	0.55
1:C:290:ARG:NH1	1:C:346:VAL:HG21	2.21	0.55
1:D:77:ALA:O	1:D:81:MET:HG2	2.06	0.55
1:D:2747:SER:O	1:D:2753:GLN:NE2	2.36	0.55
1:B:2271:CYS:SG	1:B:2293:GLU:HB2	2.46	0.55
1:B:2747:SER:O	1:B:2753:GLN:NE2	2.36	0.55
2:H:50:ARG:N	2:H:55:GLU:OE2	2.40	0.55
1:C:2455:MET:HE2	1:C:2457:ALA:HB3	1.89	0.55
1:D:2455:MET:HE2	1:D:2457:ALA:HB3	1.89	0.55
1:A:1297:THR:OG1	1:A:1346:LEU:O	2.18	0.55
1:A:1827:TYR:CZ	1:A:1831:ILE:HD11	2.41	0.55
1:B:706:TYR:OH	1:B:851:LEU:HD11	2.07	0.55
1:C:3699:HIS:HB2	1:C:3723:LEU:HD12	1.89	0.55
1:D:1677:LEU:HA	1:D:1680:HIS:HB2	1.87	0.55
1:D:3731:HIS:O	1:D:3775:LYS:NZ	2.39	0.55
1:A:4186:GLU:HG3	1:A:4948:TRP:HZ3	1.71	0.55
2:I:50:ARG:N	2:I:55:GLU:OE2	2.39	0.55
1:B:1008:ALA:O	1:B:1012:ILE:HG23	2.06	0.55
1:B:1835:PHE:O	1:B:1840:LEU:HG	2.07	0.55
1:B:4846:ASP:OD1	1:B:4847:ILE:N	2.39	0.55
1:C:125:TYR:OH	1:C:417:ARG:HB3	2.05	0.55
1:C:706:TYR:OH	1:C:851:LEU:HD11	2.07	0.55
1:C:1835:PHE:O	1:C:1840:LEU:HG	2.07	0.55
1:C:2498:ALA:O	1:C:2501:LEU:HD23	2.07	0.55
1:D:356:TYR:HA	1:D:405:LEU:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1715:TYR:CZ	1:D:1762:MET:HB3	2.41	0.55
1:D:4846:ASP:OD1	1:D:4847:ILE:N	2.39	0.55
1:A:1205:CYS:HB3	1:A:1215:MET:HE1	1.89	0.55
1:A:1835:PHE:O	1:A:1840:LEU:HG	2.07	0.55
1:B:1719:ARG:NH2	1:B:1759:ARG:HE	2.03	0.55
1:B:2263:LYS:HG2	1:B:2266:ARG:HH21	1.72	0.55
1:B:4500:MET:HE3	1:B:4585:CYS:HA	1.89	0.55
1:C:625:VAL:HG23	1:C:628:ASN:HB2	1.88	0.55
1:C:3613:HIS:HA	1:C:3616:VAL:HG12	1.89	0.55
1:C:4846:ASP:OD1	1:C:4847:ILE:N	2.39	0.55
1:D:4801:PRO:HB2	1:D:4804:LYS:HD2	1.89	0.55
1:A:258:ARG:NH1	1:A:316:LEU:O	2.39	0.55
1:A:2474:VAL:HG13	1:A:2475:TYR:CD2	2.42	0.55
1:B:1119:ARG:NH2	1:B:1196:ASP:O	2.35	0.55
1:B:3699:HIS:HB2	1:B:3723:LEU:HD12	1.89	0.55
1:C:2263:LYS:HG2	1:C:2266:ARG:HH21	1.72	0.55
1:C:2474:VAL:HG13	1:C:2475:TYR:CD2	2.42	0.55
1:D:706:TYR:OH	1:D:851:LEU:HD11	2.07	0.55
1:A:427:ASN:HB3	1:A:431:ARG:NH1	2.22	0.54
1:B:2455:MET:HE2	1:B:2457:ALA:HB3	1.89	0.54
1:A:77:ALA:O	1:A:81:MET:HG2	2.06	0.54
1:A:644:LEU:H	1:A:644:LEU:HD12	1.73	0.54
1:A:1641:ASP:OD1	1:A:1641:ASP:N	2.40	0.54
1:B:606:ARG:NH2	1:B:1635:GLU:OE1	2.30	0.54
1:C:70:GLU:OE2	1:C:122:ARG:NE	2.34	0.54
1:A:299:HIS:CD2	1:A:302:THR:HG23	2.43	0.54
1:A:356:TYR:HA	1:A:405:LEU:HB2	1.88	0.54
1:A:702:GLY:O	1:A:786:GLY:HA2	2.07	0.54
1:A:3920:THR:HG22	1:A:3980:MET:HA	1.90	0.54
1:B:427:ASN:HB3	1:B:431:ARG:NH1	2.22	0.54
1:B:1205:CYS:HB3	1:B:1215:MET:HE1	1.89	0.54
1:B:1972:ILE:HA	1:B:1975:LEU:HG	1.89	0.54
1:D:427:ASN:HB3	1:D:431:ARG:NH1	2.23	0.54
1:D:2080:VAL:HG13	1:D:3669:LEU:HD22	1.90	0.54
1:D:2498:ALA:O	1:D:2501:LEU:HD23	2.07	0.54
1:D:4026:THR:O	1:D:4031:PHE:HB3	2.08	0.54
1:A:114:LEU:HB2	1:A:117:HIS:CD2	2.43	0.54
1:A:2080:VAL:HG13	1:A:3669:LEU:HD22	1.90	0.54
1:A:2455:MET:HE2	1:A:2457:ALA:HB3	1.89	0.54
1:B:299:HIS:CD2	1:B:302:THR:HG23	2.43	0.54
1:C:680:ASP:O	1:C:751:THR:OG1	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:702:GLY:O	1:C:786:GLY:HA2	2.07	0.54
1:C:2506:LEU:HD23	1:C:2506:LEU:H	1.73	0.54
1:C:4047:PHE:O	1:C:4051:MET:HG3	2.08	0.54
1:D:114:LEU:HB2	1:D:117:HIS:CD2	2.43	0.54
1:D:644:LEU:H	1:D:644:LEU:HD12	1.73	0.54
1:D:1124:PRO:HD2	1:D:1595:VAL:HG23	1.89	0.54
1:D:1845:GLN:HA	1:D:1848:GLU:HG2	1.89	0.54
1:D:2152:LYS:HG3	1:D:2156:GLN:HE22	1.72	0.54
1:D:2291:PRO:HB3	1:D:2387:ILE:HD13	1.89	0.54
1:D:4186:GLU:HG3	1:D:4948:TRP:HZ3	1.71	0.54
1:A:1119:ARG:NH2	1:A:1196:ASP:O	2.35	0.54
1:A:2506:LEU:HD23	1:A:2506:LEU:H	1.73	0.54
1:A:3613:HIS:HA	1:A:3616:VAL:HG12	1.89	0.54
1:B:77:ALA:O	1:B:81:MET:HG2	2.06	0.54
1:B:644:LEU:H	1:B:644:LEU:HD12	1.73	0.54
1:B:1769:PHE:O	2:H:83:TYR:OH	2.26	0.54
1:B:2474:VAL:HG13	1:B:2475:TYR:CD2	2.42	0.54
1:B:2498:ALA:O	1:B:2501:LEU:HD23	2.07	0.54
1:B:4182:LYS:HA	1:C:4902:HIS:CD2	2.42	0.54
1:C:299:HIS:CD2	1:C:302:THR:HG23	2.43	0.54
1:C:2080:VAL:HG13	1:C:3669:LEU:HD22	1.90	0.54
1:C:2291:PRO:HB3	1:C:2387:ILE:HD13	1.89	0.54
1:D:3920:THR:HG22	1:D:3980:MET:HA	1.90	0.54
1:A:426:PHE:HB3	1:A:497:LEU:HD21	1.90	0.54
1:A:625:VAL:HG23	1:A:628:ASN:HB2	1.88	0.54
1:A:2263:LYS:HG2	1:A:2266:ARG:HH21	1.72	0.54
1:A:4026:THR:O	1:A:4031:PHE:HB3	2.08	0.54
1:B:3730:LEU:HD11	1:B:3764:ILE:HD11	1.90	0.54
1:B:4801:PRO:HB2	1:B:4804:LYS:HD2	1.89	0.54
1:C:114:LEU:HB2	1:C:117:HIS:CD2	2.43	0.54
1:C:317:MET:HE1	1:C:321:LYS:C	2.33	0.54
1:C:3920:THR:HG22	1:C:3980:MET:HA	1.90	0.54
1:D:677:LEU:HD12	1:D:695:VAL:HG21	1.90	0.54
1:D:2474:VAL:HG13	1:D:2475:TYR:CD2	2.42	0.54
1:A:317:MET:HE1	1:A:321:LYS:C	2.33	0.54
1:A:677:LEU:HD12	1:A:695:VAL:HG21	1.90	0.54
1:A:2498:ALA:O	1:A:2501:LEU:HD23	2.07	0.54
1:B:1124:PRO:HD2	1:B:1595:VAL:HG23	1.89	0.54
1:B:1845:GLN:HA	1:B:1848:GLU:HG2	1.89	0.54
1:B:2231:PRO:HD3	1:B:2381:ILE:HD11	1.89	0.54
1:B:3613:HIS:HA	1:B:3616:VAL:HG12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4026:THR:O	1:B:4031:PHE:HB3	2.08	0.54
1:B:4047:PHE:O	1:B:4051:MET:HG3	2.08	0.54
1:D:2124:GLN:HE22	1:D:2140:LEU:HB3	1.73	0.54
1:D:4632:LEU:HB2	1:D:4703:LYS:HE2	1.90	0.54
1:A:2152:LYS:HG3	1:A:2156:GLN:HE22	1.73	0.54
1:A:3730:LEU:HD11	1:A:3764:ILE:HD11	1.90	0.54
1:A:4186:GLU:OE1	1:A:4186:GLU:N	2.40	0.54
1:A:4500:MET:HE3	1:A:4585:CYS:HA	1.89	0.54
1:B:70:GLU:OE2	1:B:122:ARG:NE	2.33	0.54
1:B:1272:ARG:NH2	1:B:1584:PRO:O	2.38	0.54
1:B:2506:LEU:HD23	1:B:2506:LEU:H	1.73	0.54
1:B:4632:LEU:HB2	1:B:4703:LYS:HE2	1.90	0.54
1:C:1691:GLU:HG2	1:C:1791:LYS:HE2	1.90	0.54
1:C:4570:THR:HA	1:C:4573:ILE:HG12	1.89	0.54
1:D:2506:LEU:HD23	1:D:2506:LEU:H	1.73	0.54
1:D:4570:THR:HA	1:D:4573:ILE:HG12	1.89	0.54
1:A:1972:ILE:HA	1:A:1975:LEU:HG	1.89	0.54
1:A:2172:GLU:HA	1:A:2175:VAL:HG12	1.90	0.54
1:A:4632:LEU:HB2	1:A:4703:LYS:HE2	1.90	0.54
1:B:426:PHE:HB3	1:B:497:LEU:HD21	1.90	0.54
1:B:702:GLY:O	1:B:786:GLY:HA2	2.07	0.54
1:C:1124:PRO:HD2	1:C:1595:VAL:HG23	1.89	0.54
1:C:2172:GLU:HA	1:C:2175:VAL:HG12	1.90	0.54
1:C:4026:THR:O	1:C:4031:PHE:HB3	2.08	0.54
1:C:4182:LYS:HA	1:D:4902:HIS:CD2	2.42	0.54
1:D:317:MET:HE1	1:D:321:LYS:C	2.33	0.54
1:D:702:GLY:O	1:D:786:GLY:HA2	2.07	0.54
1:D:1769:PHE:O	2:J:83:TYR:OH	2.26	0.54
1:D:3699:HIS:HB2	1:D:3723:LEU:HD12	1.89	0.54
1:A:706:TYR:OH	1:A:851:LEU:HD11	2.07	0.54
1:A:2231:PRO:HD3	1:A:2381:ILE:HD11	1.89	0.54
1:A:3731:HIS:O	1:A:3775:LYS:NZ	2.39	0.54
1:B:935:MET:O	1:B:939:THR:HG23	2.08	0.54
1:B:1641:ASP:N	1:B:1641:ASP:OD1	2.40	0.54
1:B:1691:GLU:HG2	1:B:1791:LYS:HE2	1.90	0.54
1:B:2291:PRO:HB3	1:B:2387:ILE:HD13	1.89	0.54
1:B:4570:THR:HA	1:B:4573:ILE:HG12	1.89	0.54
1:C:725:TYR:HB3	1:C:779:PHE:CD2	2.43	0.54
1:C:935:MET:O	1:C:939:THR:HG23	2.09	0.54
1:C:4632:LEU:HB2	1:C:4703:LYS:HE2	1.90	0.54
1:D:1205:CYS:HB3	1:D:1215:MET:HE1	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2008:ILE:HG13	1:A:3633:HIS:ND1	2.23	0.53
1:B:601:LEU:HB2	1:B:610:VAL:HG11	1.90	0.53
1:C:2124:GLN:HE22	1:C:2140:LEU:HB3	1.73	0.53
1:C:4792:TYR:HE1	1:C:4830:ILE:HD13	1.73	0.53
1:D:725:TYR:HB3	1:D:779:PHE:CD2	2.43	0.53
1:D:1139:GLY:O	1:D:1155:SER:OG	2.15	0.53
1:D:1347:MET:SD	1:D:1371:ASN:HB3	2.49	0.53
1:D:1641:ASP:OD1	1:D:1641:ASP:N	2.40	0.53
1:D:2263:LYS:HG2	1:D:2266:ARG:HH21	1.72	0.53
2:J:50:ARG:N	2:J:55:GLU:OE2	2.39	0.53
1:A:1124:PRO:HD2	1:A:1595:VAL:HG23	1.89	0.53
1:A:4902:HIS:CD2	1:D:4182:LYS:HD2	2.43	0.53
1:C:601:LEU:HB2	1:C:610:VAL:HG11	1.90	0.53
1:C:718:VAL:HG23	1:C:724:SER:HB3	1.90	0.53
1:C:1845:GLN:HA	1:C:1848:GLU:HG2	1.89	0.53
1:C:3730:LEU:HD11	1:C:3764:ILE:HD11	1.90	0.53
1:C:4500:MET:HE3	1:C:4585:CYS:HA	1.89	0.53
1:C:4767:VAL:HA	1:C:4770:VAL:HG22	1.90	0.53
1:D:1094:TYR:OH	1:D:1809:ASP:OD2	2.16	0.53
1:D:1691:GLU:HG2	1:D:1791:LYS:HE2	1.90	0.53
1:D:2172:GLU:HA	1:D:2175:VAL:HG12	1.90	0.53
1:D:3613:HIS:HA	1:D:3616:VAL:HG12	1.89	0.53
1:A:718:VAL:HG23	1:A:724:SER:HB3	1.90	0.53
1:A:1122:CYS:HA	1:A:1133:ARG:HD3	1.91	0.53
1:A:1845:GLN:HA	1:A:1848:GLU:HG2	1.89	0.53
1:B:625:VAL:HG23	1:B:628:ASN:HB2	1.89	0.53
1:B:725:TYR:HB3	1:B:779:PHE:CD2	2.43	0.53
1:B:1353:HIS:CE1	1:B:1367:LYS:HB3	2.44	0.53
1:B:2080:VAL:HG13	1:B:3669:LEU:HD22	1.90	0.53
1:B:3920:THR:HG22	1:B:3980:MET:HA	1.90	0.53
1:C:1769:PHE:O	2:I:83:TYR:OH	2.26	0.53
1:C:2231:PRO:HD3	1:C:2381:ILE:HD11	1.89	0.53
1:D:37:LEU:HD13	1:D:203:VAL:HG21	1.90	0.53
1:D:299:HIS:CD2	1:D:302:THR:HG23	2.43	0.53
1:D:4500:MET:HE3	1:D:4585:CYS:HA	1.89	0.53
1:A:601:LEU:HB2	1:A:610:VAL:HG11	1.90	0.53
1:B:677:LEU:HD12	1:B:695:VAL:HG21	1.90	0.53
1:B:1643:LEU:HD21	1:B:1692:ASN:ND2	2.24	0.53
1:B:2172:GLU:HA	1:B:2175:VAL:HG12	1.90	0.53
1:B:4186:GLU:OE1	1:B:4186:GLU:N	2.40	0.53
1:B:4792:TYR:HE1	1:B:4830:ILE:HD13	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:427:ASN:HB3	1:C:431:ARG:NH1	2.22	0.53
1:C:1972:ILE:HA	1:C:1975:LEU:HG	1.89	0.53
1:C:4801:PRO:HB2	1:C:4804:LYS:HD2	1.89	0.53
1:D:2231:PRO:HD3	1:D:2381:ILE:HD11	1.89	0.53
1:A:935:MET:O	1:A:939:THR:HG23	2.09	0.53
1:A:1347:MET:SD	1:A:1371:ASN:HB3	2.49	0.53
1:A:2124:GLN:HE22	1:A:2140:LEU:HB3	1.73	0.53
1:A:2291:PRO:HB3	1:A:2387:ILE:HD13	1.89	0.53
1:A:3699:HIS:HB2	1:A:3723:LEU:HD12	1.89	0.53
1:C:1122:CYS:HA	1:C:1133:ARG:HD3	1.91	0.53
1:C:1353:HIS:CE1	1:C:1367:LYS:HB3	2.44	0.53
1:C:2171:MET:HG2	1:C:2216:HIS:CD2	2.44	0.53
1:D:1643:LEU:HD21	1:D:1692:ASN:ND2	2.24	0.53
1:A:725:TYR:HB3	1:A:779:PHE:CD2	2.43	0.53
1:A:1121:GLY:O	1:A:1133:ARG:NH1	2.42	0.53
1:A:4047:PHE:O	1:A:4051:MET:HG3	2.08	0.53
1:A:4182:LYS:HA	1:B:4902:HIS:CD2	2.44	0.53
1:B:1122:CYS:HA	1:B:1133:ARG:HD3	1.90	0.53
1:B:2008:ILE:HG13	1:B:3633:HIS:ND1	2.23	0.53
1:C:426:PHE:HB3	1:C:497:LEU:HD21	1.90	0.53
1:C:2152:LYS:HG3	1:C:2156:GLN:HE22	1.73	0.53
1:D:1165:MET:HB3	1:D:1236:TYR:CD2	2.44	0.53
1:D:2008:ILE:HG13	1:D:3633:HIS:ND1	2.23	0.53
1:A:836:HIS:HE2	1:A:842:GLN:HG2	1.74	0.53
1:A:1165:MET:HB3	1:A:1236:TYR:CD2	2.44	0.53
1:A:1769:PHE:O	2:G:83:TYR:OH	2.26	0.53
1:B:114:LEU:HB2	1:B:117:HIS:CD2	2.43	0.53
1:B:2171:MET:HG2	1:B:2216:HIS:CD2	2.44	0.53
1:B:2763:SER:H	1:B:2766:GLU:HB2	1.74	0.53
1:B:4767:VAL:HA	1:B:4770:VAL:HG22	1.90	0.53
2:H:26:HIS:NE2	2:H:41:ARG:HG2	2.24	0.53
1:C:252:HIS:O	1:C:257:ARG:NH1	2.42	0.53
1:D:2171:MET:HG2	1:D:2216:HIS:CD2	2.44	0.53
1:D:4047:PHE:O	1:D:4051:MET:HG3	2.08	0.53
1:A:1691:GLU:HG2	1:A:1791:LYS:HE2	1.90	0.53
1:A:4570:THR:HA	1:A:4573:ILE:HG12	1.89	0.53
1:A:4792:TYR:HE1	1:A:4830:ILE:HD13	1.73	0.53
1:B:252:HIS:O	1:B:257:ARG:NH1	2.42	0.53
1:B:317:MET:HE1	1:B:321:LYS:C	2.33	0.53
1:B:490:GLN:NE2	1:B:550:GLN:HG2	2.24	0.53
1:C:1121:GLY:O	1:C:1133:ARG:NH1	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1165:MET:HB3	1:C:1236:TYR:CD2	2.44	0.53
1:C:1205:CYS:HB3	1:C:1215:MET:HE1	1.89	0.53
1:D:426:PHE:HB3	1:D:497:LEU:HD21	1.90	0.53
1:A:252:HIS:O	1:A:257:ARG:NH1	2.42	0.53
1:A:672:LYS:HB3	1:A:819:TYR:HA	1.91	0.53
1:A:4767:VAL:HA	1:A:4770:VAL:HG22	1.90	0.53
1:B:672:LYS:HB3	1:B:819:TYR:HA	1.91	0.53
1:B:840:TYR:CE2	1:B:850:LEU:HA	2.44	0.53
1:B:2152:LYS:HG3	1:B:2156:GLN:HE22	1.72	0.53
1:C:1139:GLY:O	1:C:1155:SER:OG	2.15	0.53
2:I:42:ASP:OD1	2:I:42:ASP:N	2.42	0.53
1:D:373:THR:OG1	1:D:392:ILE:O	2.21	0.53
1:D:1042:THR:O	1:D:1046:ASN:ND2	2.42	0.53
1:D:4792:TYR:HE1	1:D:4830:ILE:HD13	1.73	0.53
1:B:2124:GLN:HE22	1:B:2140:LEU:HB3	1.73	0.53
1:C:490:GLN:NE2	1:C:550:GLN:HG2	2.24	0.53
1:C:677:LEU:HD12	1:C:695:VAL:HG21	1.90	0.53
1:D:672:LYS:HB3	1:D:819:TYR:HA	1.91	0.53
1:D:1121:GLY:O	1:D:1133:ARG:NH1	2.42	0.53
1:D:1353:HIS:CE1	1:D:1367:LYS:HB3	2.44	0.53
1:D:1972:ILE:HA	1:D:1975:LEU:HG	1.89	0.53
1:D:3730:LEU:HD11	1:D:3764:ILE:HD11	1.90	0.53
1:A:490:GLN:NE2	1:A:550:GLN:HG2	2.24	0.52
1:A:1139:GLY:O	1:A:1155:SER:OG	2.15	0.52
1:A:2171:MET:HG2	1:A:2216:HIS:CD2	2.44	0.52
2:G:42:ASP:OD1	2:G:42:ASP:N	2.42	0.52
1:B:836:HIS:HE2	1:B:842:GLN:HG2	1.74	0.52
1:B:1165:MET:HB3	1:B:1236:TYR:CD2	2.44	0.52
1:C:644:LEU:HD12	1:C:644:LEU:H	1.73	0.52
1:C:1641:ASP:N	1:C:1641:ASP:OD1	2.40	0.52
1:D:601:LEU:HB2	1:D:610:VAL:HG11	1.90	0.52
1:D:1122:CYS:HA	1:D:1133:ARG:HD3	1.90	0.52
1:A:680:ASP:O	1:A:751:THR:OG1	2.26	0.52
1:A:1042:THR:O	1:A:1046:ASN:ND2	2.42	0.52
1:B:168:GLN:NE2	1:B:169:ARG:HG3	2.25	0.52
1:B:1359:ILE:HG13	1:B:1360:ASP:N	2.24	0.52
1:B:1791:LYS:NZ	1:B:1795:MET:SD	2.79	0.52
1:B:2079:LEU:HD23	1:B:2083:MET:HE2	1.91	0.52
2:H:42:ASP:OD1	2:H:42:ASP:N	2.42	0.52
1:C:763:ALA:HB3	1:C:764:PRO:HD3	1.91	0.52
1:C:840:TYR:CE2	1:C:850:LEU:HA	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:26:HIS:NE2	2:I:41:ARG:HG2	2.24	0.52
1:D:490:GLN:NE2	1:D:550:GLN:HG2	2.24	0.52
1:D:1366:PRO:O	1:D:1368:PRO:HD3	2.09	0.52
1:D:2716:LEU:O	1:D:2720:ILE:HG12	2.10	0.52
1:A:70:GLU:OE2	1:A:122:ARG:NE	2.33	0.52
1:A:168:GLN:NE2	1:A:169:ARG:HG3	2.25	0.52
1:A:840:TYR:CE2	1:A:850:LEU:HA	2.44	0.52
1:A:2254:LEU:O	1:A:3809:ARG:HD3	2.10	0.52
1:A:2716:LEU:O	1:A:2720:ILE:HG12	2.10	0.52
1:A:4055:LYS:NZ	1:D:4658:GLU:O	2.40	0.52
1:B:37:LEU:HD13	1:B:203:VAL:HG21	1.90	0.52
1:B:763:ALA:HB3	1:B:764:PRO:HD3	1.91	0.52
1:B:1972:ILE:HD12	1:B:1975:LEU:HD11	1.91	0.52
1:C:1166:VAL:HG22	1:C:1173:MET:HG2	1.92	0.52
1:C:1366:PRO:O	1:C:1368:PRO:HD3	2.09	0.52
1:C:2716:LEU:O	1:C:2720:ILE:HG12	2.10	0.52
1:D:718:VAL:HG23	1:D:724:SER:HB3	1.90	0.52
1:D:836:HIS:HE2	1:D:842:GLN:HG2	1.74	0.52
1:D:935:MET:O	1:D:939:THR:HG23	2.09	0.52
1:D:3961:SER:OG	1:D:3962:SER:N	2.42	0.52
1:A:1213:GLY:O	1:A:1214:ARG:HG2	2.10	0.52
2:G:26:HIS:NE2	2:G:41:ARG:HG2	2.24	0.52
1:C:677:LEU:HD23	1:C:802:PHE:HA	1.91	0.52
1:C:1347:MET:SD	1:C:1371:ASN:HB3	2.49	0.52
1:C:2254:LEU:O	1:C:3809:ARG:HD3	2.10	0.52
1:D:763:ALA:HB3	1:D:764:PRO:HD3	1.92	0.52
1:A:1643:LEU:HD21	1:A:1692:ASN:ND2	2.24	0.52
1:A:1972:ILE:HD12	1:A:1975:LEU:HD11	1.91	0.52
1:C:2079:LEU:HD23	1:C:2083:MET:HE2	1.91	0.52
1:D:252:HIS:O	1:D:257:ARG:NH1	2.42	0.52
1:A:763:ALA:HB3	1:A:764:PRO:HD3	1.91	0.52
1:A:1353:HIS:CE1	1:A:1367:LYS:HB3	2.44	0.52
1:B:1121:GLY:O	1:B:1133:ARG:NH1	2.42	0.52
1:B:2716:LEU:O	1:B:2720:ILE:HG12	2.10	0.52
1:B:3961:SER:OG	1:B:3962:SER:N	2.42	0.52
1:C:168:GLN:NE2	1:C:169:ARG:HG3	2.25	0.52
1:D:840:TYR:CE2	1:D:850:LEU:HA	2.44	0.52
1:A:37:LEU:HD13	1:A:203:VAL:HG21	1.90	0.52
1:A:1359:ILE:HG13	1:A:1360:ASP:N	2.25	0.52
1:A:2079:LEU:HD23	1:A:2083:MET:HE2	1.91	0.52
1:A:2763:SER:H	1:A:2766:GLU:HB2	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:718:VAL:HG23	1:B:724:SER:HB3	1.90	0.52
1:B:1190:LEU:HD21	1:B:1193:LYS:HB3	1.92	0.52
1:B:1347:MET:SD	1:B:1371:ASN:HB3	2.49	0.52
1:B:2136:GLU:O	1:B:2140:LEU:HG	2.10	0.52
1:B:2254:LEU:O	1:B:3809:ARG:HD3	2.10	0.52
1:C:3796:MET:HA	1:C:3799:CYS:SG	2.50	0.52
1:D:677:LEU:HD23	1:D:802:PHE:HA	1.91	0.52
1:D:1166:VAL:HG22	1:D:1173:MET:HG2	1.92	0.52
1:D:1761:ARG:HH12	1:D:1763:ARG:NH1	2.08	0.52
1:D:2079:LEU:HD23	1:D:2083:MET:HE2	1.91	0.52
1:A:3796:MET:HA	1:A:3799:CYS:SG	2.50	0.52
1:B:427:ASN:HB3	1:B:431:ARG:HH12	1.75	0.52
1:B:4621:SER:OG	1:B:4623:ASP:OD1	2.19	0.52
1:C:37:LEU:HD13	1:C:203:VAL:HG21	1.90	0.52
1:D:168:GLN:NE2	1:D:169:ARG:HG3	2.25	0.52
1:D:1213:GLY:O	1:D:1214:ARG:HG2	2.10	0.52
1:A:427:ASN:HB3	1:A:431:ARG:HH12	1.75	0.52
1:A:2136:GLU:O	1:A:2140:LEU:HG	2.10	0.52
1:B:637:LEU:HD12	1:B:637:LEU:O	2.10	0.52
1:B:2328:GLU:O	1:B:2335:ARG:NH2	2.43	0.52
1:C:1213:GLY:O	1:C:1214:ARG:HG2	2.10	0.52
1:C:2008:ILE:HG13	1:C:3633:HIS:ND1	2.23	0.52
1:C:2136:GLU:O	1:C:2140:LEU:HG	2.10	0.52
1:D:611:LEU:HD11	1:D:643:LEU:HD21	1.92	0.52
1:D:4767:VAL:HA	1:D:4770:VAL:HG22	1.90	0.52
1:A:611:LEU:HD11	1:A:643:LEU:HD21	1.92	0.52
1:B:1042:THR:O	1:B:1046:ASN:ND2	2.42	0.52
1:C:515:ALA:HB1	1:C:520:ARG:NH1	2.25	0.52
1:C:1400:UNK:O	1:C:1409:UNK:N	2.43	0.52
1:C:1643:LEU:HD21	1:C:1692:ASN:ND2	2.24	0.52
1:C:1972:ILE:HD12	1:C:1975:LEU:HD11	1.91	0.52
1:C:1985:CYS:SG	1:C:1992:ARG:HD2	2.50	0.52
1:D:427:ASN:HB3	1:D:431:ARG:HH12	1.75	0.52
1:D:2763:SER:H	1:D:2766:GLU:HB2	1.74	0.52
1:D:3786:VAL:HG11	1:D:3865:THR:HG23	1.92	0.52
1:D:3796:MET:HA	1:D:3799:CYS:SG	2.50	0.52
2:J:26:HIS:NE2	2:J:41:ARG:HG2	2.24	0.52
1:A:1400:UNK:O	1:A:1409:UNK:N	2.43	0.51
1:A:3961:SER:OG	1:A:3962:SER:N	2.42	0.51
1:A:4792:TYR:HD2	1:A:4805:CYS:HB3	1.76	0.51
1:B:1366:PRO:O	1:B:1368:PRO:HD3	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1761:ARG:HH12	1:B:1763:ARG:NH1	2.08	0.51
1:B:1985:CYS:SG	1:B:1992:ARG:HD2	2.50	0.51
1:B:3822:GLU:HB2	1:B:3826:GLU:HA	1.92	0.51
1:B:4115:GLN:O	1:B:4119:GLU:HG2	2.10	0.51
1:C:1042:THR:O	1:C:1046:ASN:ND2	2.42	0.51
1:C:2108:ASN:HD21	1:C:2111:SER:HB3	1.75	0.51
1:C:4830:ILE:HG22	1:C:4831:GLU:H	1.75	0.51
1:C:4895:ASP:OD1	1:C:4896:TYR:N	2.44	0.51
1:D:2136:GLU:O	1:D:2140:LEU:HG	2.10	0.51
1:A:441:LYS:HG2	1:A:442:LEU:HD23	1.92	0.51
1:A:3786:VAL:HG11	1:A:3865:THR:HG23	1.92	0.51
1:B:680:ASP:O	1:B:751:THR:OG1	2.26	0.51
1:B:1166:VAL:HG22	1:B:1173:MET:HG2	1.92	0.51
1:C:672:LYS:HB3	1:C:819:TYR:HA	1.91	0.51
1:D:1683:GLU:HB3	1:D:1684:PRO:HD3	1.92	0.51
1:A:1366:PRO:O	1:A:1368:PRO:HD3	2.09	0.51
1:A:1743:GLU:CD	1:A:1744:ASN:HD22	2.19	0.51
1:A:2108:ASN:HD21	1:A:2111:SER:HB3	1.75	0.51
1:B:3786:VAL:HG11	1:B:3865:THR:HG23	1.93	0.51
1:C:637:LEU:HD12	1:C:637:LEU:O	2.10	0.51
1:C:837:SER:H	1:C:841:LYS:HZ1	1.59	0.51
1:C:1761:ARG:HH12	1:C:1763:ARG:NH1	2.08	0.51
1:C:3822:GLU:HB2	1:C:3826:GLU:HA	1.93	0.51
1:D:698:ALA:HA	1:D:724:SER:HA	1.92	0.51
1:D:1190:LEU:HD21	1:D:1193:LYS:HB3	1.92	0.51
1:D:1985:CYS:SG	1:D:1992:ARG:HD2	2.50	0.51
2:G:104:LEU:HD11	2:G:107:LEU:HD12	1.93	0.51
1:B:1683:GLU:HB3	1:B:1684:PRO:HD3	1.92	0.51
1:B:2211:LYS:HD2	1:B:2252:LEU:HD11	1.93	0.51
1:B:3796:MET:HA	1:B:3799:CYS:SG	2.50	0.51
2:H:104:LEU:HD11	2:H:107:LEU:HD12	1.93	0.51
1:C:1683:GLU:HB3	1:C:1684:PRO:HD3	1.92	0.51
1:C:2211:LYS:HD2	1:C:2252:LEU:HD11	1.93	0.51
1:D:1972:ILE:HD12	1:D:1975:LEU:HD11	1.91	0.51
2:J:104:LEU:HD11	2:J:107:LEU:HD12	1.93	0.51
1:A:677:LEU:HD23	1:A:802:PHE:HA	1.91	0.51
1:A:1683:GLU:HB3	1:A:1684:PRO:HD3	1.92	0.51
1:A:4516:LEU:HA	1:D:4808:MET:HG2	1.92	0.51
1:A:4895:ASP:OD1	1:A:4896:TYR:N	2.44	0.51
1:B:677:LEU:HD23	1:B:802:PHE:HA	1.91	0.51
1:B:4583:PHE:O	1:B:4586:ILE:HG22	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:995:MET:HE3	1:C:995:MET:O	2.11	0.51
1:C:1743:GLU:CD	1:C:1744:ASN:HD22	2.19	0.51
1:C:2763:SER:H	1:C:2766:GLU:HB2	1.74	0.51
1:C:4830:ILE:HG22	1:C:4831:GLU:N	2.26	0.51
1:D:641:ASP:OD1	1:D:642:LEU:N	2.44	0.51
1:D:2254:LEU:O	1:D:3809:ARG:HD3	2.10	0.51
1:D:4792:TYR:HD2	1:D:4805:CYS:HB3	1.76	0.51
1:A:3664:HIS:O	1:A:3668:LEU:HD23	2.10	0.51
1:B:1743:GLU:CD	1:B:1744:ASN:HD22	2.19	0.51
1:B:3664:HIS:O	1:B:3668:LEU:HD23	2.10	0.51
1:B:4830:ILE:HG22	1:B:4831:GLU:H	1.75	0.51
1:C:1131:ASP:HB3	1:C:1133:ARG:HG2	1.93	0.51
1:C:1811:VAL:N	1:C:1818:LEU:HD12	2.18	0.51
1:C:4115:GLN:O	1:C:4119:GLU:HG2	2.10	0.51
1:D:515:ALA:HB1	1:D:520:ARG:NH1	2.25	0.51
1:D:1297:THR:OG1	1:D:1346:LEU:O	2.18	0.51
1:D:1743:GLU:CD	1:D:1744:ASN:HD22	2.19	0.51
1:D:3860:GLN:NE2	1:D:3867:VAL:H	2.08	0.51
1:D:4583:PHE:O	1:D:4586:ILE:HG22	2.11	0.51
2:J:22:THR:HB	2:J:48:LYS:HE3	1.93	0.51
1:A:36:CYS:HB2	1:A:52:THR:HG23	1.93	0.51
1:A:637:LEU:HD12	1:A:637:LEU:O	2.10	0.51
1:A:4830:ILE:HG22	1:A:4831:GLU:H	1.75	0.51
1:B:1400:UNK:O	1:B:1409:UNK:N	2.43	0.51
1:B:2064:THR:HG22	1:B:2067:ARG:HH12	1.76	0.51
1:B:3924:GLN:HA	1:B:3924:GLN:NE2	2.26	0.51
1:C:611:LEU:HD11	1:C:643:LEU:HD21	1.92	0.51
1:C:1119:ARG:NH2	1:C:1196:ASP:O	2.35	0.51
1:C:1190:LEU:HD21	1:C:1193:LYS:HB3	1.92	0.51
1:C:1708:ILE:HD12	1:C:1828:THR:HG21	1.93	0.51
1:C:3664:HIS:O	1:C:3668:LEU:HD23	2.10	0.51
1:C:4792:TYR:HD2	1:C:4805:CYS:HB3	1.76	0.51
1:D:2064:THR:HG22	1:D:2067:ARG:HH12	1.76	0.51
1:D:4186:GLU:OE1	1:D:4186:GLU:N	2.40	0.51
1:A:1985:CYS:SG	1:A:1992:ARG:HD2	2.50	0.51
1:A:4583:PHE:O	1:A:4586:ILE:HG22	2.11	0.51
1:A:4862:GLN:OE1	1:D:4859:ALA:HB2	2.11	0.51
1:B:515:ALA:HB1	1:B:520:ARG:NH1	2.25	0.51
1:B:995:MET:O	1:B:995:MET:HE3	2.11	0.51
1:C:337:LYS:NZ	1:C:369:GLY:O	2.38	0.51
1:C:441:LYS:HG2	1:C:442:LEU:HD23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3786:VAL:HG11	1:C:3865:THR:HG23	1.93	0.51
1:D:4830:ILE:HG22	1:D:4831:GLU:H	1.75	0.51
1:A:892:LEU:HA	1:A:895:MET:HB2	1.93	0.51
1:A:1708:ILE:HD12	1:A:1828:THR:HG21	1.93	0.51
1:A:2107:ILE:HG13	1:A:2108:ASN:N	2.26	0.51
1:A:4830:ILE:HG22	1:A:4831:GLU:N	2.26	0.51
1:B:1213:GLY:O	1:B:1214:ARG:HG2	2.10	0.51
1:B:1893:LEU:O	1:B:2067:ARG:NH2	2.44	0.51
1:B:4182:LYS:HD2	1:C:4902:HIS:CD2	2.46	0.51
1:C:641:ASP:OD1	1:C:642:LEU:N	2.44	0.51
1:C:2395:ILE:HG21	1:C:2467:MET:SD	2.51	0.51
2:I:22:THR:HB	2:I:48:LYS:HE3	1.93	0.51
1:D:1131:ASP:HB3	1:D:1133:ARG:HG2	1.93	0.51
1:D:1359:ILE:HG13	1:D:1360:ASP:N	2.24	0.51
1:D:1400:UNK:O	1:D:1409:UNK:N	2.43	0.51
1:A:1166:VAL:HG22	1:A:1173:MET:HG2	1.92	0.51
1:A:1761:ARG:HH12	1:A:1763:ARG:NH1	2.08	0.51
1:A:2211:LYS:HD2	1:A:2252:LEU:HD11	1.93	0.51
1:B:442:LEU:HG	1:B:444:THR:HG22	1.93	0.51
1:B:3860:GLN:NE2	1:B:3867:VAL:H	2.08	0.51
1:B:3916:PHE:O	1:B:3920:THR:HG23	2.11	0.51
2:H:22:THR:HB	2:H:48:LYS:HE3	1.93	0.51
1:C:36:CYS:HB2	1:C:52:THR:HG23	1.93	0.51
1:C:158:CYS:HG	1:C:159:TRP:CD1	2.29	0.51
1:C:442:LEU:HG	1:C:444:THR:HG22	1.93	0.51
1:C:1359:ILE:HG13	1:C:1360:ASP:N	2.24	0.51
1:C:1893:LEU:O	1:C:2067:ARG:NH2	2.44	0.51
1:C:3860:GLN:NE2	1:C:3867:VAL:H	2.08	0.51
1:C:4182:LYS:HD2	1:D:4902:HIS:CD2	2.46	0.51
2:I:104:LEU:HD11	2:I:107:LEU:HD12	1.93	0.51
1:D:2108:ASN:HD21	1:D:2111:SER:HB3	1.75	0.51
1:D:2211:LYS:HD2	1:D:2252:LEU:HD11	1.93	0.51
1:D:4115:GLN:O	1:D:4119:GLU:HG2	2.10	0.51
1:D:4830:ILE:HG22	1:D:4831:GLU:N	2.26	0.51
1:A:1190:LEU:HD21	1:A:1193:LYS:HB3	1.92	0.50
1:A:3639:LEU:O	1:A:3643:LEU:HB2	2.11	0.50
1:A:4182:LYS:HD2	1:B:4902:HIS:CD2	2.46	0.50
1:B:2395:ILE:HG21	1:B:2467:MET:SD	2.51	0.50
1:B:3762:ILE:HD12	1:B:3840:ARG:HG3	1.93	0.50
1:B:4792:TYR:HD2	1:B:4805:CYS:HB3	1.76	0.50
1:B:4895:ASP:OD1	1:B:4896:TYR:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:281:ARG:O	1:C:285:SER:OG	2.29	0.50
1:C:2107:ILE:HG13	1:C:2108:ASN:N	2.26	0.50
1:A:1893:LEU:O	1:A:2067:ARG:NH2	2.44	0.50
1:A:3924:GLN:HA	1:A:3924:GLN:NE2	2.26	0.50
1:A:4046:ASP:OD1	1:A:4046:ASP:N	2.44	0.50
1:B:611:LEU:HD11	1:B:643:LEU:HD21	1.92	0.50
1:B:641:ASP:OD1	1:B:642:LEU:N	2.44	0.50
1:B:1761:ARG:HB2	1:B:1761:ARG:HH11	1.76	0.50
1:C:1761:ARG:HB2	1:C:1761:ARG:HH11	1.76	0.50
1:D:3916:PHE:O	1:D:3920:THR:HG23	2.11	0.50
2:J:42:ASP:OD1	2:J:42:ASP:N	2.42	0.50
1:A:4115:GLN:O	1:A:4119:GLU:HG2	2.10	0.50
1:B:36:CYS:HB2	1:B:52:THR:HG23	1.93	0.50
1:B:2277:GLN:HA	1:B:2280:VAL:HG12	1.94	0.50
1:C:1682:ASP:CG	1:C:1684:PRO:HD2	2.37	0.50
1:C:2328:GLU:O	1:C:2335:ARG:NH2	2.43	0.50
1:D:637:LEU:HD12	1:D:637:LEU:O	2.10	0.50
1:D:3822:GLU:HB2	1:D:3826:GLU:HA	1.93	0.50
1:A:995:MET:O	1:A:995:MET:HE3	2.11	0.50
1:A:2395:ILE:HG21	1:A:2467:MET:SD	2.51	0.50
1:A:3860:GLN:NE2	1:A:3867:VAL:H	2.08	0.50
1:B:698:ALA:HA	1:B:724:SER:HA	1.92	0.50
1:B:732:LEU:HB3	1:B:779:PHE:CZ	2.47	0.50
1:B:1131:ASP:HB3	1:B:1133:ARG:HG2	1.93	0.50
1:B:2065:MET:HE1	1:B:2083:MET:CB	2.42	0.50
1:B:2108:ASN:HD21	1:B:2111:SER:HB3	1.75	0.50
1:B:3639:LEU:O	1:B:3643:LEU:HB2	2.11	0.50
1:B:4830:ILE:HG22	1:B:4831:GLU:N	2.26	0.50
1:C:427:ASN:HB3	1:C:431:ARG:HH12	1.75	0.50
1:C:892:LEU:HA	1:C:895:MET:HB2	1.93	0.50
1:C:1567:LEU:HD22	1:C:1581:PRO:HB3	1.93	0.50
1:C:2320:VAL:O	1:C:2324:ILE:HG12	2.12	0.50
1:C:3916:PHE:O	1:C:3920:THR:HG23	2.11	0.50
1:C:4041:VAL:HG23	1:C:4076:THR:HG21	1.94	0.50
1:C:4186:GLU:OE1	1:C:4186:GLU:N	2.40	0.50
1:D:36:CYS:HB2	1:D:52:THR:HG23	1.93	0.50
1:D:1893:LEU:O	1:D:2067:ARG:NH2	2.44	0.50
1:D:2107:ILE:HG13	1:D:2108:ASN:N	2.26	0.50
1:D:4867:ASP:OD1	1:D:4868:ALA:N	2.45	0.50
1:D:4947:CYS:SG	1:D:4948:TRP:N	2.85	0.50
1:A:698:ALA:HA	1:A:724:SER:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2265:VAL:HG21	1:A:2322:LEU:HB3	1.93	0.50
2:G:22:THR:HB	2:G:48:LYS:HE3	1.93	0.50
1:B:2289:TRP:CZ2	1:B:2387:ILE:HD12	2.47	0.50
1:C:698:ALA:HA	1:C:724:SER:HA	1.93	0.50
1:C:2065:MET:HE1	1:C:2083:MET:CB	2.42	0.50
1:C:2289:TRP:CZ2	1:C:2387:ILE:HD12	2.47	0.50
1:C:4583:PHE:O	1:C:4586:ILE:HG22	2.11	0.50
1:D:441:LYS:HG2	1:D:442:LEU:HD23	1.92	0.50
1:D:2265:VAL:HG21	1:D:2322:LEU:HB3	1.93	0.50
1:D:2289:TRP:CZ2	1:D:2387:ILE:HD12	2.47	0.50
1:D:3664:HIS:O	1:D:3668:LEU:HD23	2.10	0.50
1:D:4621:SER:OG	1:D:4623:ASP:OD1	2.20	0.50
1:D:4895:ASP:OD1	1:D:4896:TYR:N	2.44	0.50
1:A:435:ALA:HA	1:A:438:LYS:HE3	1.93	0.50
1:A:732:LEU:HB3	1:A:779:PHE:CZ	2.47	0.50
1:A:1131:ASP:HB3	1:A:1133:ARG:HG2	1.93	0.50
1:A:2289:TRP:CZ2	1:A:2387:ILE:HD12	2.47	0.50
1:A:3822:GLU:HB2	1:A:3826:GLU:HA	1.93	0.50
1:C:3639:LEU:O	1:C:3643:LEU:HB2	2.12	0.50
1:D:281:ARG:O	1:D:285:SER:OG	2.29	0.50
1:D:995:MET:O	1:D:995:MET:HE3	2.11	0.50
1:D:1708:ILE:HD12	1:D:1828:THR:HG21	1.93	0.50
1:D:1761:ARG:HB2	1:D:1761:ARG:HH11	1.77	0.50
1:D:3924:GLN:HA	1:D:3924:GLN:NE2	2.25	0.50
1:A:1981:ASP:OD1	1:A:1982:LYS:N	2.45	0.50
1:A:2064:THR:HG22	1:A:2067:ARG:HH12	1.76	0.50
1:B:1615:ARG:HD3	1:B:1615:ARG:N	2.27	0.50
1:B:4308:VAL:HG12	1:B:4485:TYR:HE1	1.77	0.50
1:C:1359:ILE:HG23	1:C:1363:LYS:NZ	2.27	0.50
1:C:2277:GLN:HA	1:C:2280:VAL:HG12	1.94	0.50
1:C:3961:SER:OG	1:C:3962:SER:N	2.42	0.50
1:C:4517:PHE:HB3	1:C:4562:GLU:CG	2.37	0.50
1:C:4867:ASP:OD1	1:C:4868:ALA:N	2.45	0.50
1:D:2328:GLU:O	1:D:2335:ARG:NH2	2.43	0.50
1:D:4594:VAL:O	1:D:4598:ILE:HG13	2.12	0.50
1:A:158:CYS:HG	1:A:159:TRP:CD1	2.29	0.50
1:B:441:LYS:HG2	1:B:442:LEU:HD23	1.92	0.50
1:B:4947:CYS:SG	1:B:4948:TRP:N	2.85	0.50
1:C:732:LEU:HB3	1:C:779:PHE:CZ	2.47	0.50
1:C:2265:VAL:HG21	1:C:2322:LEU:HB3	1.93	0.50
1:D:2320:VAL:O	1:D:2324:ILE:HG12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:515:ALA:HB1	1:A:520:ARG:NH1	2.25	0.50
1:A:1362:ASP:OD1	1:A:1362:ASP:N	2.45	0.50
1:A:2320:VAL:O	1:A:2324:ILE:HG12	2.12	0.50
1:A:4005:SER:O	1:A:4009:VAL:HG12	2.12	0.50
1:B:1682:ASP:CG	1:B:1684:PRO:HD2	2.37	0.50
1:B:1811:VAL:N	1:B:1818:LEU:HD12	2.18	0.50
1:B:2320:VAL:O	1:B:2324:ILE:HG12	2.12	0.50
1:B:4005:SER:O	1:B:4009:VAL:HG12	2.12	0.50
1:B:4928:ASP:O	1:B:4932:HIS:NE2	2.45	0.50
1:C:3762:ILE:HD12	1:C:3840:ARG:HG3	1.93	0.50
1:D:1704:TYR:O	1:D:1708:ILE:HG12	2.12	0.50
1:D:3639:LEU:O	1:D:3643:LEU:HB2	2.11	0.50
1:D:4041:VAL:HG23	1:D:4076:THR:HG21	1.94	0.50
1:D:4308:VAL:HG12	1:D:4485:TYR:HE1	1.77	0.50
1:A:1117:TRP:CZ3	1:A:1166:VAL:HB	2.47	0.49
1:A:1567:LEU:HD22	1:A:1581:PRO:HB3	1.93	0.49
1:A:2328:GLU:O	1:A:2335:ARG:NH2	2.43	0.49
1:B:892:LEU:HA	1:B:895:MET:HB2	1.93	0.49
1:B:2107:ILE:HG13	1:B:2108:ASN:N	2.26	0.49
1:C:373:THR:OG1	1:C:392:ILE:O	2.21	0.49
1:C:890:HIS:O	1:C:894:VAL:HG23	2.12	0.49
1:C:1043:LYS:HE3	1:C:1047:LYS:NZ	2.27	0.49
1:D:1359:ILE:HG23	1:D:1363:LYS:NZ	2.27	0.49
1:D:1981:ASP:OD1	1:D:1982:LYS:N	2.45	0.49
1:A:298:ARG:NH1	1:A:319:LYS:HD3	2.26	0.49
1:A:1615:ARG:N	1:A:1615:ARG:HD3	2.27	0.49
1:A:1682:ASP:CG	1:A:1684:PRO:HD2	2.37	0.49
1:B:190:ARG:HG2	1:B:207:PHE:CE1	2.47	0.49
1:B:3954:GLN:NE2	1:B:3974:GLN:OE1	2.46	0.49
1:C:1704:TYR:O	1:C:1708:ILE:HG12	2.12	0.49
1:C:2064:THR:HG22	1:C:2067:ARG:HH12	1.76	0.49
1:D:2065:MET:HE1	1:D:2083:MET:CB	2.42	0.49
1:D:2395:ILE:HG21	1:D:2467:MET:SD	2.51	0.49
1:D:2848:HIS:NE2	1:D:2876:LEU:HD21	2.27	0.49
1:D:3995:GLY:HA3	1:D:4108:MET:HE3	1.94	0.49
1:D:4861:ILE:O	1:D:4865:ILE:HG12	2.13	0.49
1:A:641:ASP:OD1	1:A:642:LEU:N	2.44	0.49
1:A:890:HIS:O	1:A:894:VAL:HG23	2.12	0.49
1:A:3762:ILE:HD12	1:A:3840:ARG:HG3	1.93	0.49
1:A:3860:GLN:HE22	1:A:3867:VAL:H	1.61	0.49
1:B:837:SER:H	1:B:841:LYS:HZ1	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:890:HIS:O	1:B:894:VAL:HG23	2.12	0.49
1:C:1981:ASP:OD1	1:C:1982:LYS:N	2.45	0.49
1:C:3860:GLN:HE22	1:C:3867:VAL:H	1.61	0.49
1:C:4861:ILE:O	1:C:4865:ILE:HG12	2.13	0.49
1:D:732:LEU:HB3	1:D:779:PHE:CZ	2.47	0.49
1:D:1043:LYS:HE3	1:D:1047:LYS:NZ	2.28	0.49
1:D:2175:VAL:HG23	1:D:2219:TYR:OH	2.12	0.49
1:A:442:LEU:HG	1:A:444:THR:HG22	1.93	0.49
1:A:929:ARG:HG2	1:A:933:LEU:HG	1.95	0.49
1:A:1132:ASP:OD1	1:A:1147:GLN:NE2	2.45	0.49
1:A:2065:MET:HE1	1:A:2083:MET:CB	2.42	0.49
1:A:2080:VAL:HA	1:A:2083:MET:HE3	1.95	0.49
1:A:3916:PHE:O	1:A:3920:THR:HG23	2.11	0.49
1:A:3954:GLN:NE2	1:A:3974:GLN:OE1	2.46	0.49
1:A:3995:GLY:HA3	1:A:4108:MET:HE3	1.94	0.49
1:A:4594:VAL:O	1:A:4598:ILE:HG13	2.12	0.49
1:B:435:ALA:HA	1:B:438:LYS:HE3	1.94	0.49
1:B:1095:ALA:HB1	1:B:1200:GLY:HA3	1.95	0.49
1:B:1117:TRP:CZ3	1:B:1166:VAL:HB	2.47	0.49
1:B:1132:ASP:OD1	1:B:1147:GLN:NE2	2.46	0.49
1:B:1950:LEU:HD21	1:B:1952:MET:HG2	1.95	0.49
1:B:4792:TYR:CD2	1:B:4805:CYS:HB3	2.48	0.49
1:B:4867:ASP:OD1	1:B:4868:ALA:N	2.45	0.49
1:C:190:ARG:HG2	1:C:207:PHE:CE1	2.47	0.49
1:C:433:LEU:HD11	1:C:504:ARG:HD3	1.94	0.49
1:C:674:TYR:N	1:C:820:ALA:O	2.46	0.49
1:C:1950:LEU:HD21	1:C:1952:MET:HG2	1.95	0.49
1:C:4594:VAL:O	1:C:4598:ILE:HG13	2.12	0.49
1:C:4947:CYS:SG	1:C:4948:TRP:N	2.85	0.49
1:D:442:LEU:HG	1:D:444:THR:HG22	1.93	0.49
1:D:1095:ALA:HB1	1:D:1200:GLY:HA3	1.95	0.49
1:D:1682:ASP:CG	1:D:1684:PRO:HD2	2.37	0.49
1:D:1950:LEU:HD21	1:D:1952:MET:HG2	1.95	0.49
1:A:674:TYR:N	1:A:820:ALA:O	2.46	0.49
1:A:1704:TYR:O	1:A:1708:ILE:HG12	2.12	0.49
1:A:2175:VAL:HG23	1:A:2219:TYR:OH	2.12	0.49
1:A:2277:GLN:HA	1:A:2280:VAL:HG12	1.93	0.49
1:A:4041:VAL:HG23	1:A:4076:THR:HG21	1.94	0.49
1:A:4947:CYS:SG	1:A:4948:TRP:N	2.85	0.49
1:B:227:TYR:HA	1:B:355:LYS:HA	1.93	0.49
1:B:2080:VAL:HA	1:B:2083:MET:HE3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4041:VAL:HG23	1:B:4076:THR:HG21	1.94	0.49
1:C:1615:ARG:HD3	1:C:1615:ARG:N	2.27	0.49
1:C:4005:SER:O	1:C:4009:VAL:HG12	2.12	0.49
1:C:4046:ASP:OD1	1:C:4046:ASP:N	2.44	0.49
1:D:417:ARG:HG2	1:D:417:ARG:HH11	1.78	0.49
1:D:433:LEU:HD11	1:D:504:ARG:HD3	1.94	0.49
1:A:227:TYR:HA	1:A:355:LYS:HA	1.93	0.49
1:A:433:LEU:HD11	1:A:504:ARG:HD3	1.94	0.49
1:A:1190:LEU:HD11	1:A:1193:LYS:HB3	1.95	0.49
1:A:2487:LEU:HD12	1:A:2491:PHE:HB2	1.94	0.49
1:A:2848:HIS:NE2	1:A:2876:LEU:HD21	2.27	0.49
1:B:59:PRO:HG2	1:B:319:LYS:HD2	1.94	0.49
1:B:281:ARG:O	1:B:285:SER:OG	2.29	0.49
1:B:674:TYR:N	1:B:820:ALA:O	2.46	0.49
1:B:1704:TYR:O	1:B:1708:ILE:HG12	2.12	0.49
1:B:1708:ILE:HD12	1:B:1828:THR:HG21	1.93	0.49
1:B:2265:VAL:HG21	1:B:2322:LEU:HB3	1.93	0.49
1:C:929:ARG:HG2	1:C:933:LEU:HG	1.95	0.49
1:D:427:ASN:HB3	1:D:431:ARG:NH2	2.28	0.49
1:D:799:LYS:HG2	1:D:1621:GLN:NE2	2.28	0.49
1:D:4005:SER:O	1:D:4009:VAL:HG12	2.12	0.49
1:A:427:ASN:HB3	1:A:431:ARG:NH2	2.28	0.49
1:A:1095:ALA:HB1	1:A:1200:GLY:HA3	1.95	0.49
1:A:1678:CYS:SG	1:A:1679:SER:N	2.86	0.49
1:A:1950:LEU:HD21	1:A:1952:MET:HG2	1.95	0.49
1:B:433:LEU:HD11	1:B:504:ARG:HD3	1.94	0.49
1:B:1043:LYS:HE3	1:B:1047:LYS:NZ	2.28	0.49
1:B:1245:ARG:NH2	1:B:1809:ASP:OD1	2.46	0.49
1:B:2848:HIS:NE2	1:B:2876:LEU:HD21	2.27	0.49
1:B:3988:ASN:O	1:B:4143:ARG:NH2	2.46	0.49
1:C:1095:ALA:HB1	1:C:1200:GLY:HA3	1.95	0.49
1:C:2713:PRO:HG2	1:C:2716:LEU:HD12	1.95	0.49
1:C:2848:HIS:NE2	1:C:2876:LEU:HD21	2.27	0.49
1:C:2903:SER:OG	1:C:2904:ARG:N	2.46	0.49
1:C:3954:GLN:NE2	1:C:3974:GLN:OE1	2.46	0.49
1:C:3988:ASN:O	1:C:4143:ARG:NH2	2.46	0.49
1:D:1615:ARG:N	1:D:1615:ARG:HD3	2.27	0.49
1:D:2277:GLN:HA	1:D:2280:VAL:HG12	1.94	0.49
1:D:2903:SER:OG	1:D:2904:ARG:N	2.46	0.49
1:D:3762:ILE:HD12	1:D:3840:ARG:HG3	1.93	0.49
1:A:190:ARG:HG2	1:A:207:PHE:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3988:ASN:O	1:A:4143:ARG:NH2	2.46	0.49
1:B:1991:ILE:HA	1:B:1994:GLN:HG2	1.95	0.49
1:B:3995:GLY:HA3	1:B:4108:MET:HE3	1.94	0.49
1:C:2175:VAL:HG23	1:C:2219:TYR:OH	2.12	0.49
1:C:4308:VAL:HG12	1:C:4485:TYR:HE1	1.77	0.49
1:D:190:ARG:HG2	1:D:207:PHE:CE1	2.47	0.49
1:D:227:TYR:HA	1:D:355:LYS:HA	1.93	0.49
1:D:674:TYR:HD2	1:D:758:CYS:SG	2.36	0.49
1:D:1362:ASP:OD1	1:D:1362:ASP:N	2.46	0.49
1:D:1942:ARG:O	1:D:1945:GLU:HG3	2.13	0.49
1:D:2173:VAL:O	1:D:2177:VAL:HG23	2.12	0.49
1:D:3860:GLN:HE22	1:D:3867:VAL:H	1.61	0.49
1:D:3954:GLN:NE2	1:D:3974:GLN:OE1	2.46	0.49
1:A:1043:LYS:HE3	1:A:1047:LYS:NZ	2.27	0.49
1:B:929:ARG:HG2	1:B:933:LEU:HG	1.95	0.49
1:B:1567:LEU:HD22	1:B:1581:PRO:HB3	1.93	0.49
1:B:1687:LEU:HA	1:B:1690:ILE:HG12	1.94	0.49
1:B:2487:LEU:HD12	1:B:2491:PHE:HB2	1.94	0.49
1:B:4046:ASP:N	1:B:4046:ASP:OD1	2.44	0.49
1:C:1100:ARG:HB3	1:C:1236:TYR:CD2	2.48	0.49
1:C:1245:ARG:NH2	1:C:1809:ASP:OD1	2.46	0.49
1:C:1687:LEU:HA	1:C:1690:ILE:HG12	1.94	0.49
1:C:2080:VAL:HA	1:C:2083:MET:HE3	1.95	0.49
1:C:3995:GLY:HA3	1:C:4108:MET:HE3	1.94	0.49
1:D:892:LEU:HA	1:D:895:MET:HB2	1.93	0.49
1:D:1100:ARG:HB3	1:D:1236:TYR:CD2	2.48	0.49
1:D:1119:ARG:NH2	1:D:1196:ASP:O	2.35	0.49
1:D:4928:ASP:O	1:D:4932:HIS:NE2	2.45	0.49
1:A:373:THR:OG1	1:A:392:ILE:O	2.21	0.49
1:A:708:GLY:H	1:A:723:PHE:HD2	1.60	0.49
1:A:1223:THR:O	1:A:1225:LYS:HD3	2.13	0.49
1:A:1399:UNK:HA	1:A:1410:UNK:HA	1.95	0.49
1:A:2713:PRO:HG2	1:A:2716:LEU:HD12	1.95	0.49
1:A:4106:GLU:OE1	1:A:4148:TYR:OH	2.31	0.49
1:A:4308:VAL:HG12	1:A:4485:TYR:HE1	1.77	0.49
1:B:1223:THR:O	1:B:1225:LYS:HD3	2.13	0.49
1:B:3860:GLN:HE22	1:B:3867:VAL:H	1.61	0.49
1:B:3940:TRP:HA	1:B:3943:VAL:HG12	1.95	0.49
1:C:227:TYR:HA	1:C:355:LYS:HA	1.93	0.49
1:C:894:VAL:HG13	1:C:918:LEU:HD22	1.95	0.49
1:C:1002:ASN:O	1:C:1006:VAL:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3940:TRP:HA	1:C:3943:VAL:HG12	1.95	0.49
1:D:674:TYR:N	1:D:820:ALA:O	2.46	0.49
1:D:929:ARG:HG2	1:D:933:LEU:HG	1.95	0.49
1:D:1132:ASP:OD1	1:D:1147:GLN:NE2	2.46	0.49
1:D:1567:LEU:HD22	1:D:1581:PRO:HB3	1.93	0.49
1:D:2487:LEU:HD12	1:D:2491:PHE:HB2	1.95	0.49
1:A:417:ARG:HG2	1:A:417:ARG:HH11	1.78	0.48
1:A:1245:ARG:NH2	1:A:1809:ASP:OD1	2.46	0.48
1:A:1359:ILE:HG23	1:A:1363:LYS:NZ	2.27	0.48
1:A:1754:LEU:HG	1:A:1756:THR:HG23	1.95	0.48
1:A:1991:ILE:HA	1:A:1994:GLN:HG2	1.95	0.48
1:A:4928:ASP:O	1:A:4932:HIS:NE2	2.45	0.48
1:B:1981:ASP:OD1	1:B:1982:LYS:N	2.45	0.48
1:B:2713:PRO:HG2	1:B:2716:LEU:HD12	1.95	0.48
1:B:4594:VAL:O	1:B:4598:ILE:HG13	2.12	0.48
1:C:59:PRO:HG2	1:C:319:LYS:HD2	1.94	0.48
1:C:708:GLY:H	1:C:723:PHE:HD2	1.60	0.48
1:C:1942:ARG:O	1:C:1945:GLU:HG3	2.13	0.48
1:D:708:GLY:H	1:D:723:PHE:HD2	1.60	0.48
1:D:890:HIS:O	1:D:894:VAL:HG23	2.12	0.48
1:D:894:VAL:HG13	1:D:918:LEU:HD22	1.95	0.48
1:D:1245:ARG:NH2	1:D:1809:ASP:OD1	2.46	0.48
1:D:2080:VAL:HA	1:D:2083:MET:HE3	1.95	0.48
1:A:674:TYR:HD2	1:A:758:CYS:SG	2.36	0.48
1:A:1791:LYS:NZ	1:A:1795:MET:SD	2.79	0.48
1:A:2173:VAL:O	1:A:2177:VAL:HG23	2.12	0.48
1:A:4158:GLN:HB3	1:A:4199:MET:HG2	1.95	0.48
1:A:4515:LEU:HD11	1:A:4736:PHE:CE1	2.48	0.48
1:A:4867:ASP:OD1	1:A:4868:ALA:N	2.45	0.48
1:B:427:ASN:HB3	1:B:431:ARG:NH2	2.28	0.48
1:B:699:SER:OG	1:B:700:THR:N	2.46	0.48
1:B:1002:ASN:O	1:B:1006:VAL:HG23	2.13	0.48
1:B:1362:ASP:N	1:B:1362:ASP:OD1	2.45	0.48
1:B:2173:VAL:O	1:B:2177:VAL:HG23	2.12	0.48
1:C:4928:ASP:O	1:C:4932:HIS:NE2	2.45	0.48
1:D:1173:MET:HE3	1:D:1195:PHE:CE2	2.48	0.48
1:D:1687:LEU:HA	1:D:1690:ILE:HG12	1.94	0.48
1:D:1928:SER:OG	1:D:3616:VAL:HG23	2.13	0.48
1:A:699:SER:OG	1:A:700:THR:N	2.46	0.48
1:A:1100:ARG:HB3	1:A:1236:TYR:CD2	2.48	0.48
1:A:1173:MET:HE3	1:A:1195:PHE:CE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4861:ILE:O	1:A:4865:ILE:HG12	2.13	0.48
1:B:1253:LYS:HE2	1:B:1253:LYS:HB2	1.63	0.48
1:C:435:ALA:HA	1:C:438:LYS:HE3	1.94	0.48
1:C:700:THR:HG1	1:C:787:LEU:H	1.60	0.48
1:C:1223:THR:O	1:C:1225:LYS:HD3	2.13	0.48
1:C:2173:VAL:O	1:C:2177:VAL:HG23	2.12	0.48
1:C:4106:GLU:OE1	1:C:4148:TYR:OH	2.31	0.48
1:D:298:ARG:NH1	1:D:319:LYS:HD3	2.26	0.48
1:D:1190:LEU:HD11	1:D:1193:LYS:HB3	1.95	0.48
1:D:1399:UNK:HA	1:D:1410:UNK:HA	1.95	0.48
1:D:3988:ASN:O	1:D:4143:ARG:NH2	2.46	0.48
1:A:281:ARG:O	1:A:285:SER:OG	2.29	0.48
1:B:337:LYS:NZ	1:B:369:GLY:O	2.38	0.48
1:B:417:ARG:HG2	1:B:417:ARG:HH11	1.78	0.48
1:B:1175:PHE:HB2	1:B:1182:LEU:HD22	1.96	0.48
1:B:1249:MET:HB3	1:B:1600:MET:HE2	1.96	0.48
1:B:1359:ILE:HG23	1:B:1363:LYS:NZ	2.27	0.48
1:B:1678:CYS:SG	1:B:1679:SER:N	2.86	0.48
1:B:4158:GLN:HB3	1:B:4199:MET:HG2	1.95	0.48
1:C:427:ASN:HB3	1:C:431:ARG:NH2	2.28	0.48
1:C:674:TYR:HD2	1:C:758:CYS:SG	2.36	0.48
1:C:845:THR:OG1	1:C:846:TYR:N	2.46	0.48
1:C:1754:LEU:HG	1:C:1756:THR:HG23	1.96	0.48
1:C:2487:LEU:HD12	1:C:2491:PHE:HB2	1.94	0.48
1:D:1117:TRP:CZ3	1:D:1166:VAL:HB	2.47	0.48
1:D:3660:VAL:HG13	1:D:3664:HIS:ND1	2.28	0.48
1:D:3758:LEU:O	1:D:3762:ILE:HG12	2.14	0.48
1:A:304:LYS:HB2	1:A:316:LEU:HD12	1.96	0.48
1:A:1942:ARG:O	1:A:1945:GLU:HG3	2.13	0.48
1:A:2903:SER:OG	1:A:2904:ARG:N	2.46	0.48
1:A:3660:VAL:HG13	1:A:3664:HIS:ND1	2.28	0.48
1:B:298:ARG:NH1	1:B:319:LYS:HD3	2.26	0.48
1:B:1928:SER:OG	1:B:3616:VAL:HG23	2.13	0.48
1:B:2175:VAL:HG23	1:B:2219:TYR:OH	2.12	0.48
1:B:3758:LEU:O	1:B:3762:ILE:HG12	2.14	0.48
1:B:4658:GLU:O	1:C:4055:LYS:NZ	2.40	0.48
1:C:304:LYS:HB2	1:C:316:LEU:HD12	1.96	0.48
1:C:799:LYS:HG2	1:C:1621:GLN:NE2	2.28	0.48
1:C:1362:ASP:N	1:C:1362:ASP:OD1	2.45	0.48
1:C:4792:TYR:CD2	1:C:4805:CYS:HB3	2.48	0.48
1:D:304:LYS:HB2	1:D:316:LEU:HD12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:680:ASP:O	1:D:751:THR:OG1	2.26	0.48
1:A:799:LYS:HG2	1:A:1621:GLN:NE2	2.28	0.48
1:A:1928:SER:OG	1:A:3616:VAL:HG23	2.13	0.48
1:A:4792:TYR:CD2	1:A:4805:CYS:HB3	2.48	0.48
2:G:83:TYR:HB3	2:G:87:GLY:HA2	1.96	0.48
1:B:313:ASN:HD21	1:B:392:ILE:HA	1.79	0.48
1:B:799:LYS:HG2	1:B:1621:GLN:NE2	2.28	0.48
1:B:2766:GLU:HA	1:B:2769:ILE:HG23	1.95	0.48
1:B:4861:ILE:O	1:B:4865:ILE:HG12	2.13	0.48
1:C:1132:ASP:OD1	1:C:1147:GLN:NE2	2.46	0.48
1:C:1678:CYS:SG	1:C:1679:SER:N	2.86	0.48
1:C:1928:SER:OG	1:C:3616:VAL:HG23	2.13	0.48
1:C:4515:LEU:HD11	1:C:4736:PHE:CE1	2.48	0.48
1:D:59:PRO:HG2	1:D:319:LYS:HD2	1.94	0.48
1:D:298:ARG:NH1	1:D:305:TYR:OH	2.46	0.48
1:D:435:ALA:HA	1:D:438:LYS:HE3	1.94	0.48
1:D:845:THR:OG1	1:D:846:TYR:N	2.46	0.48
1:D:1643:LEU:HD21	1:D:1692:ASN:HD21	1.79	0.48
1:D:1678:CYS:SG	1:D:1679:SER:N	2.86	0.48
1:D:1681:VAL:O	1:D:1682:ASP:HB2	2.14	0.48
1:D:3967:LEU:O	1:D:3971:MET:HG2	2.14	0.48
1:B:298:ARG:NH1	1:B:305:TYR:OH	2.46	0.48
1:B:304:LYS:HB2	1:B:316:LEU:HD12	1.96	0.48
1:B:1173:MET:HE3	1:B:1195:PHE:CE2	2.48	0.48
1:B:2903:SER:OG	1:B:2904:ARG:N	2.46	0.48
1:B:3660:VAL:HG13	1:B:3664:HIS:ND1	2.28	0.48
1:C:417:ARG:HG2	1:C:417:ARG:HH11	1.78	0.48
1:C:1117:TRP:CZ3	1:C:1166:VAL:HB	2.47	0.48
1:C:1249:MET:HB3	1:C:1600:MET:HE2	1.96	0.48
1:C:1265:HIS:CD2	1:C:1268:ILE:HB	2.44	0.48
1:C:1399:UNK:HA	1:C:1410:UNK:HA	1.95	0.48
1:C:1643:LEU:HD21	1:C:1692:ASN:HD21	1.79	0.48
1:C:4158:GLN:HB3	1:C:4199:MET:HG2	1.95	0.48
1:A:1761:ARG:HB2	1:A:1761:ARG:HH11	1.76	0.48
1:A:4924:LEU:HD21	1:A:4936:GLU:HB3	1.96	0.48
1:B:1190:LEU:HD11	1:B:1193:LYS:HB3	1.95	0.48
1:B:2426:ILE:HG21	1:B:2470:PHE:HE2	1.78	0.48
1:C:1321:UNK:HA	1:C:1436:UNK:HA	1.96	0.48
1:C:4029:ASP:OD1	1:C:4029:ASP:N	2.47	0.48
1:D:1791:LYS:NZ	1:D:1795:MET:SD	2.79	0.48
1:D:2713:PRO:HG2	1:D:2716:LEU:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4515:LEU:HD11	1:D:4736:PHE:CE1	2.48	0.48
1:D:4792:TYR:CD2	1:D:4805:CYS:HB3	2.48	0.48
1:D:4858:LEU:O	1:D:4862:GLN:HG2	2.14	0.48
1:A:1687:LEU:HA	1:A:1690:ILE:HG12	1.94	0.48
1:A:2766:GLU:HA	1:A:2769:ILE:HG23	1.95	0.48
1:B:845:THR:OG1	1:B:846:TYR:N	2.46	0.48
1:C:699:SER:OG	1:C:700:THR:N	2.46	0.48
1:C:3660:VAL:HG13	1:C:3664:HIS:ND1	2.28	0.48
1:C:3924:GLN:HA	1:C:3924:GLN:NE2	2.26	0.48
1:D:711:GLU:HA	1:D:1255:LEU:CD1	2.43	0.48
1:A:692:HIS:HB3	1:A:795:SER:HB3	1.96	0.48
1:A:1002:ASN:O	1:A:1006:VAL:HG23	2.13	0.48
1:A:1966:SER:O	1:A:1966:SER:OG	2.31	0.48
1:A:2138:GLU:HG3	1:A:2191:MET:HB2	1.96	0.48
1:A:3905:PHE:O	1:A:3909:ILE:HG12	2.14	0.48
1:B:59:PRO:HB3	1:B:296:ARG:NH1	2.29	0.48
1:B:692:HIS:HB3	1:B:795:SER:HB3	1.96	0.48
1:C:1173:MET:HE3	1:C:1195:PHE:CE2	2.48	0.48
1:C:1991:ILE:HA	1:C:1994:GLN:HG2	1.95	0.48
1:C:2138:GLU:HG3	1:C:2191:MET:HB2	1.96	0.48
1:D:1223:THR:O	1:D:1225:LYS:HD3	2.13	0.48
1:D:3940:TRP:HA	1:D:3943:VAL:HG12	1.95	0.48
1:A:548:CYS:HA	1:A:551:PHE:CE1	2.49	0.47
1:A:1175:PHE:HB2	1:A:1182:LEU:HD22	1.96	0.47
1:A:1643:LEU:HD21	1:A:1692:ASN:HD21	1.79	0.47
1:A:1681:VAL:O	1:A:1682:ASP:HB2	2.14	0.47
1:A:2766:GLU:O	1:A:2769:ILE:HG12	2.14	0.47
1:A:3967:LEU:O	1:A:3971:MET:HG2	2.14	0.47
1:B:150:GLN:NE2	1:B:158:CYS:HB3	2.28	0.47
1:B:1942:ARG:O	1:B:1945:GLU:HG3	2.13	0.47
1:B:2138:GLU:HG3	1:B:2191:MET:HB2	1.96	0.47
1:B:2838:ALA:O	1:B:2841:GLU:HG3	2.14	0.47
1:B:3905:PHE:O	1:B:3909:ILE:HG12	2.14	0.47
1:C:270:HIS:NE2	1:C:491:GLU:HB3	2.29	0.47
1:C:298:ARG:NH1	1:C:305:TYR:OH	2.46	0.47
1:C:1190:LEU:HD11	1:C:1193:LYS:HB3	1.95	0.47
1:C:1966:SER:O	1:C:1966:SER:OG	2.31	0.47
1:C:2838:ALA:O	1:C:2841:GLU:HG3	2.14	0.47
1:C:4632:LEU:HD23	1:C:4632:LEU:H	1.79	0.47
1:C:4858:LEU:O	1:C:4862:GLN:HG2	2.14	0.47
2:I:26:HIS:HD2	2:I:41:ARG:NH1	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:PRO:HG2	1:A:319:LYS:HD2	1.94	0.47
1:A:150:GLN:NE2	1:A:158:CYS:HB3	2.28	0.47
1:A:894:VAL:HG13	1:A:918:LEU:HD22	1.95	0.47
1:A:3940:TRP:HA	1:A:3943:VAL:HG12	1.95	0.47
1:A:4808:MET:CG	1:B:4516:LEU:HA	2.44	0.47
1:B:270:HIS:NE2	1:B:491:GLU:HB3	2.29	0.47
1:B:708:GLY:H	1:B:723:PHE:HD2	1.60	0.47
1:B:2260:ASP:HA	1:B:2263:LYS:HZ3	1.79	0.47
1:C:548:CYS:HA	1:C:551:PHE:CE1	2.49	0.47
1:C:692:HIS:HB3	1:C:795:SER:HB3	1.96	0.47
1:C:2065:MET:HE1	1:C:2083:MET:HB3	1.96	0.47
1:C:2766:GLU:O	1:C:2769:ILE:HG12	2.14	0.47
1:D:1002:ASN:O	1:D:1006:VAL:HG23	2.13	0.47
1:D:2766:GLU:HA	1:D:2769:ILE:HG23	1.95	0.47
1:D:2838:ALA:O	1:D:2841:GLU:HG3	2.14	0.47
2:J:83:TYR:HB3	2:J:87:GLY:HA2	1.96	0.47
1:A:313:ASN:HD21	1:A:392:ILE:HA	1.79	0.47
1:B:1321:UNK:HA	1:B:1436:UNK:HA	1.96	0.47
1:C:711:GLU:HA	1:C:1255:LEU:CD1	2.43	0.47
1:C:2342:LEU:HB3	1:C:2434:VAL:HG21	1.97	0.47
1:C:2766:GLU:HA	1:C:2769:ILE:HG23	1.95	0.47
1:C:3758:LEU:O	1:C:3762:ILE:HG12	2.14	0.47
1:C:3905:PHE:O	1:C:3909:ILE:HG12	2.14	0.47
1:D:59:PRO:HB3	1:D:296:ARG:NH1	2.29	0.47
1:D:1991:ILE:HA	1:D:1994:GLN:HG2	1.95	0.47
1:D:4924:LEU:HD21	1:D:4936:GLU:HB3	1.96	0.47
1:A:2426:ILE:HG21	1:A:2470:PHE:HE2	1.78	0.47
1:A:3758:LEU:O	1:A:3762:ILE:HG12	2.14	0.47
1:B:548:CYS:HA	1:B:551:PHE:CE1	2.49	0.47
1:B:1754:LEU:HG	1:B:1756:THR:HG23	1.96	0.47
1:B:2065:MET:HE1	1:B:2083:MET:HB3	1.97	0.47
1:B:2731:TRP:CE2	1:B:2762:LEU:HD12	2.49	0.47
1:C:1681:VAL:O	1:C:1682:ASP:HB2	2.14	0.47
1:C:2426:ILE:HG21	1:C:2470:PHE:HE2	1.78	0.47
1:C:3714:GLU:OE2	1:C:4646:LYS:HB2	2.15	0.47
1:D:1249:MET:HB3	1:D:1600:MET:HE2	1.96	0.47
1:D:3832:ASP:OD1	1:D:3833:GLU:N	2.47	0.47
1:D:4106:GLU:OE1	1:D:4148:TYR:OH	2.31	0.47
1:D:4158:GLN:HB3	1:D:4199:MET:HG2	1.95	0.47
1:A:760:ASP:OD2	1:A:764:PRO:HD2	2.15	0.47
2:G:26:HIS:HD2	2:G:41:ARG:NH1	2.11	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:674:TYR:HD2	1:B:758:CYS:SG	2.36	0.47
1:B:1643:LEU:HD21	1:B:1692:ASN:HD21	1.79	0.47
1:B:2771:ARG:HH22	1:B:2775:LYS:HD2	1.80	0.47
1:B:3748:GLY:HA2	1:B:3795:LEU:HG	1.97	0.47
1:B:4079:TYR:HA	1:B:4082:PHE:HB3	1.96	0.47
2:H:83:TYR:HB3	2:H:87:GLY:HA2	1.96	0.47
1:C:2238:PRO:HA	1:C:2241:VAL:HG12	1.96	0.47
1:C:3967:LEU:O	1:C:3971:MET:HG2	2.14	0.47
1:D:1321:UNK:HA	1:D:1436:UNK:HA	1.96	0.47
1:D:2343:LEU:HD23	1:D:2434:VAL:HG23	1.97	0.47
1:D:3714:GLU:OE2	1:D:4646:LYS:HB2	2.15	0.47
1:A:298:ARG:NH1	1:A:305:TYR:OH	2.46	0.47
1:A:2238:PRO:HA	1:A:2241:VAL:HG12	1.96	0.47
1:A:4079:TYR:HA	1:A:4082:PHE:HB3	1.96	0.47
1:B:133:LEU:N	1:B:146:ASP:O	2.47	0.47
1:B:1681:VAL:O	1:B:1682:ASP:HB2	2.14	0.47
1:C:59:PRO:HB3	1:C:296:ARG:NH1	2.29	0.47
1:C:133:LEU:N	1:C:146:ASP:O	2.47	0.47
1:C:150:GLN:NE2	1:C:158:CYS:HB3	2.28	0.47
1:C:1175:PHE:HB2	1:C:1182:LEU:HD22	1.96	0.47
1:D:1966:SER:O	1:D:1966:SER:OG	2.31	0.47
1:D:4273:MET:HE2	1:D:4273:MET:HA	1.97	0.47
2:J:26:HIS:HD2	2:J:41:ARG:NH1	2.11	0.47
1:A:133:LEU:N	1:A:146:ASP:O	2.47	0.47
1:A:2262:GLU:O	1:A:2266:ARG:NE	2.48	0.47
1:A:4632:LEU:H	1:A:4632:LEU:HD23	1.79	0.47
1:A:4844:ILE:O	1:A:4848:THR:OG1	2.25	0.47
1:B:587:ASN:HA	1:B:2132:ARG:HH12	1.80	0.47
1:B:894:VAL:HG13	1:B:918:LEU:HD22	1.95	0.47
1:B:1399:UNK:HA	1:B:1410:UNK:HA	1.96	0.47
1:B:1767:PRO:HG3	1:B:1781:PRO:HB3	1.97	0.47
1:B:2766:GLU:O	1:B:2769:ILE:HG12	2.14	0.47
1:B:4106:GLU:OE1	1:B:4148:TYR:OH	2.31	0.47
2:H:78:THR:HB	2:H:81:VAL:HG22	1.96	0.47
1:C:760:ASP:OD2	1:C:764:PRO:HD2	2.15	0.47
1:C:2778:LEU:O	1:C:2782:LEU:HG	2.15	0.47
1:C:3727:GLN:C	1:C:3731:HIS:HD1	2.23	0.47
2:I:83:TYR:HB3	2:I:87:GLY:HA2	1.96	0.47
1:D:137:ARG:CZ	1:D:202:HIS:HB2	2.45	0.47
1:D:548:CYS:HA	1:D:551:PHE:CE1	2.49	0.47
1:D:692:HIS:HB3	1:D:795:SER:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1754:LEU:HG	1:D:1756:THR:HG23	1.96	0.47
1:D:2771:ARG:HH22	1:D:2775:LYS:HD2	1.80	0.47
1:D:3905:PHE:O	1:D:3909:ILE:HG12	2.14	0.47
1:A:59:PRO:HB3	1:A:296:ARG:NH1	2.29	0.47
1:A:1174:MET:HE1	1:A:1190:LEU:HA	1.97	0.47
1:A:2343:LEU:HD23	1:A:2434:VAL:HG23	1.97	0.47
1:A:3748:GLY:HA2	1:A:3795:LEU:HG	1.97	0.47
1:A:4273:MET:HE2	1:A:4273:MET:HA	1.97	0.47
2:H:26:HIS:HD2	2:H:41:ARG:NH1	2.12	0.47
1:C:2343:LEU:HD23	1:C:2434:VAL:HG23	1.97	0.47
1:C:2731:TRP:CE2	1:C:2762:LEU:HD12	2.49	0.47
1:C:4182:LYS:HD3	1:D:4905:GLU:OE2	2.15	0.47
2:I:54:GLN:N	2:I:54:GLN:OE1	2.48	0.47
1:D:2138:GLU:HG3	1:D:2191:MET:HB2	1.96	0.47
1:D:2205:ILE:HG13	1:D:2205:ILE:O	2.15	0.47
1:D:2731:TRP:CE2	1:D:2762:LEU:HD12	2.49	0.47
1:D:3717:GLU:HG2	1:D:4647:PHE:CE2	2.50	0.47
1:A:1118:SER:HA	1:A:1134:ALA:HA	1.97	0.47
1:A:1249:MET:HB3	1:A:1600:MET:HE2	1.96	0.47
1:A:2771:ARG:HH22	1:A:2775:LYS:HD2	1.80	0.47
1:B:1118:SER:HA	1:B:1134:ALA:HA	1.97	0.47
1:B:1908:LEU:O	1:B:1912:LEU:HD23	2.15	0.47
1:B:4515:LEU:HD11	1:B:4736:PHE:CE1	2.48	0.47
1:B:4836:ASP:OD2	1:D:4273:MET:N	2.48	0.47
1:B:4858:LEU:O	1:B:4862:GLN:HG2	2.14	0.47
1:C:587:ASN:HA	1:C:2132:ARG:HH12	1.80	0.47
1:C:1767:PRO:HG3	1:C:1781:PRO:HB3	1.97	0.47
1:C:2205:ILE:HG13	1:C:2205:ILE:O	2.15	0.47
1:C:2771:ARG:HH22	1:C:2775:LYS:HD2	1.80	0.47
2:I:78:THR:HB	2:I:81:VAL:HG22	1.96	0.47
1:D:587:ASN:HA	1:D:2132:ARG:HH12	1.80	0.47
1:D:760:ASP:OD2	1:D:764:PRO:HD2	2.15	0.47
1:D:2238:PRO:HA	1:D:2241:VAL:HG12	1.96	0.47
1:D:2342:LEU:HB3	1:D:2434:VAL:HG21	1.97	0.47
1:D:2778:LEU:O	1:D:2782:LEU:HG	2.15	0.47
1:A:587:ASN:HA	1:A:2132:ARG:HH12	1.80	0.47
1:A:758:CYS:SG	1:A:769:ARG:NH1	2.81	0.47
1:A:1631:LEU:HD11	1:A:1642:ILE:HD12	1.96	0.47
1:A:3714:GLU:OE2	1:A:4646:LYS:HB2	2.15	0.47
1:A:3832:ASP:OD1	1:A:3833:GLU:N	2.47	0.47
2:G:78:THR:HB	2:G:81:VAL:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1631:LEU:HD11	1:B:1642:ILE:HD12	1.97	0.47
1:B:3714:GLU:OE2	1:B:4646:LYS:HB2	2.15	0.47
1:B:3727:GLN:C	1:B:3731:HIS:HD1	2.23	0.47
2:H:54:GLN:OE1	2:H:54:GLN:N	2.48	0.47
1:C:313:ASN:HD21	1:C:392:ILE:HA	1.79	0.47
1:C:637:LEU:HD11	1:C:1680:HIS:ND1	2.30	0.47
1:C:4094:GLY:HA2	1:C:4097:VAL:HG22	1.97	0.47
1:D:313:ASN:HD21	1:D:392:ILE:HA	1.79	0.47
1:D:699:SER:OG	1:D:700:THR:N	2.46	0.47
1:D:1811:VAL:N	1:D:1818:LEU:HD12	2.18	0.47
1:D:2766:GLU:O	1:D:2769:ILE:HG12	2.14	0.47
1:D:4632:LEU:HD23	1:D:4632:LEU:H	1.79	0.47
1:A:250:GLY:HA2	1:A:257:ARG:HH11	1.81	0.46
1:A:270:HIS:NE2	1:A:491:GLU:HB3	2.29	0.46
1:A:380:LYS:HD2	1:A:380:LYS:HA	1.76	0.46
1:A:2065:MET:HE1	1:A:2083:MET:HB3	1.96	0.46
2:G:54:GLN:OE1	2:G:54:GLN:N	2.48	0.46
1:B:711:GLU:HA	1:B:1255:LEU:CD1	2.43	0.46
1:B:1174:MET:HE1	1:B:1190:LEU:HA	1.97	0.46
1:B:3717:GLU:HG2	1:B:4647:PHE:CE2	2.50	0.46
1:B:3967:LEU:O	1:B:3971:MET:HG2	2.14	0.46
1:C:1908:LEU:O	1:C:1912:LEU:HD23	2.15	0.46
1:D:270:HIS:NE2	1:D:491:GLU:HB3	2.29	0.46
1:D:1175:PHE:HB2	1:D:1182:LEU:HD22	1.96	0.46
1:D:2426:ILE:HG21	1:D:2470:PHE:HE2	1.78	0.46
1:D:4193:GLU:OE2	1:D:4607:ARG:NH2	2.47	0.46
2:J:78:THR:HB	2:J:81:VAL:HG22	1.96	0.46
1:A:1321:UNK:HA	1:A:1436:UNK:HA	1.96	0.46
1:A:1908:LEU:O	1:A:1912:LEU:HD23	2.15	0.46
1:B:1255:LEU:CD2	1:B:1384:LEU:HB2	2.46	0.46
1:B:2778:LEU:O	1:B:2782:LEU:HG	2.15	0.46
1:B:4517:PHE:HB3	1:B:4562:GLU:CG	2.37	0.46
1:C:298:ARG:NH1	1:C:319:LYS:HD3	2.26	0.46
1:C:3832:ASP:OD1	1:C:3833:GLU:N	2.47	0.46
1:C:4924:LEU:HD21	1:C:4936:GLU:HB3	1.96	0.46
1:D:1908:LEU:O	1:D:1912:LEU:HD23	2.15	0.46
1:D:4914:LEU:O	1:D:4918:LEU:HD23	2.16	0.46
2:J:54:GLN:OE1	2:J:54:GLN:N	2.48	0.46
1:A:137:ARG:CZ	1:A:202:HIS:HB2	2.45	0.46
1:A:1752:ILE:HD11	1:A:1840:LEU:HB2	1.98	0.46
1:A:4582:SER:C	1:A:4725:MET:HE1	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:760:ASP:OD2	1:B:764:PRO:HD2	2.15	0.46
1:B:1100:ARG:HB3	1:B:1236:TYR:CD2	2.48	0.46
1:B:2205:ILE:O	1:B:2205:ILE:HG13	2.15	0.46
1:B:2238:PRO:HA	1:B:2241:VAL:HG12	1.96	0.46
1:B:3832:ASP:OD1	1:B:3833:GLU:N	2.47	0.46
1:B:4632:LEU:HD23	1:B:4632:LEU:H	1.79	0.46
1:C:1089:ARG:HD2	1:C:1202:ILE:HD12	1.98	0.46
1:C:3717:GLU:HG2	1:C:4647:PHE:CE2	2.50	0.46
1:C:4273:MET:HA	1:C:4273:MET:HE2	1.97	0.46
1:C:4621:SER:OG	1:C:4623:ASP:OD1	2.19	0.46
1:D:1118:SER:HA	1:D:1134:ALA:HA	1.97	0.46
1:D:1631:LEU:HD11	1:D:1642:ILE:HD12	1.96	0.46
1:D:4046:ASP:OD1	1:D:4046:ASP:N	2.44	0.46
1:A:2731:TRP:CE2	1:A:2762:LEU:HD12	2.49	0.46
1:B:1629:MET:HE3	1:B:1685:GLN:NE2	2.17	0.46
1:B:1752:ILE:HD11	1:B:1840:LEU:HB2	1.98	0.46
1:B:2074:ILE:HG21	1:B:2079:LEU:HD22	1.98	0.46
1:B:4094:GLY:HA2	1:B:4097:VAL:HG22	1.97	0.46
1:B:4182:LYS:HD3	1:C:4905:GLU:OE2	2.15	0.46
1:C:1118:SER:HA	1:C:1134:ALA:HA	1.97	0.46
1:C:1174:MET:HE1	1:C:1190:LEU:HA	1.97	0.46
1:C:1255:LEU:CD2	1:C:1384:LEU:HB2	2.46	0.46
1:C:1631:LEU:HD11	1:C:1642:ILE:HD12	1.96	0.46
1:D:337:LYS:NZ	1:D:369:GLY:O	2.38	0.46
1:D:1767:PRO:HG3	1:D:1781:PRO:HB3	1.97	0.46
1:D:2074:ILE:HG21	1:D:2079:LEU:HD22	1.98	0.46
1:D:4009:VAL:HA	1:D:4012:ILE:HG22	1.98	0.46
1:A:696:GLY:HA3	1:A:725:TYR:O	2.16	0.46
1:A:1800:VAL:HG12	1:A:1892:LEU:HD13	1.98	0.46
1:A:4858:LEU:O	1:A:4862:GLN:HG2	2.14	0.46
1:B:370:LEU:CB	1:B:393:MET:HG2	2.45	0.46
1:B:450:GLU:H	1:B:450:GLU:CD	2.24	0.46
1:B:1089:ARG:HD2	1:B:1202:ILE:HD12	1.98	0.46
1:B:1567:LEU:HD11	1:B:1579:PRO:C	2.41	0.46
1:B:2156:GLN:O	1:B:3614:ARG:NH2	2.49	0.46
1:B:2342:LEU:HB3	1:B:2434:VAL:HG21	1.97	0.46
1:B:4582:SER:C	1:B:4725:MET:HE1	2.40	0.46
1:C:1035:TYR:OH	1:C:1046:ASN:HB2	2.16	0.46
2:I:58:LYS:HB2	2:I:58:LYS:HE2	1.77	0.46
1:D:250:GLY:HA2	1:D:257:ARG:HH11	1.81	0.46
1:D:1253:LYS:HE2	1:D:1253:LYS:HB2	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2784:TRP:HH2	1:D:2846:ASN:HB2	1.81	0.46
1:A:882:ARG:HD2	1:A:937:LEU:HD23	1.98	0.46
1:A:2205:ILE:HG13	1:A:2205:ILE:O	2.15	0.46
1:A:2778:LEU:O	1:A:2782:LEU:HG	2.15	0.46
1:A:3717:GLU:HG2	1:A:4647:PHE:CE2	2.50	0.46
1:B:882:ARG:HD2	1:B:937:LEU:HD23	1.98	0.46
1:C:137:ARG:CZ	1:C:202:HIS:HB2	2.45	0.46
1:C:2074:ILE:HG21	1:C:2079:LEU:HD22	1.98	0.46
1:C:4193:GLU:OE2	1:C:4607:ARG:NH2	2.47	0.46
1:C:4579:THR:OG1	1:C:4732:HIS:NE2	2.44	0.46
1:C:4582:SER:C	1:C:4725:MET:HE1	2.40	0.46
1:D:882:ARG:HD2	1:D:937:LEU:HD23	1.98	0.46
1:A:711:GLU:HA	1:A:1255:LEU:CD1	2.43	0.46
1:A:1035:TYR:OH	1:A:1046:ASN:HB2	2.16	0.46
1:A:1143:GLN:HG2	1:A:1151:HIS:HA	1.98	0.46
1:A:2784:TRP:HH2	1:A:2846:ASN:HB2	1.81	0.46
1:A:4029:ASP:OD1	1:A:4029:ASP:N	2.47	0.46
1:A:4193:GLU:OE2	1:A:4607:ARG:NH2	2.47	0.46
1:A:4517:PHE:HB3	1:A:4562:GLU:CG	2.37	0.46
1:B:137:ARG:CZ	1:B:202:HIS:HB2	2.45	0.46
1:C:4914:LEU:O	1:C:4918:LEU:HD23	2.16	0.46
1:D:1035:TYR:OH	1:D:1046:ASN:HB2	2.16	0.46
1:D:1752:ILE:HD11	1:D:1840:LEU:HB2	1.98	0.46
1:D:2065:MET:HE1	1:D:2083:MET:HB3	1.96	0.46
1:D:2348:GLU:HA	1:D:2351:LYS:HE3	1.98	0.46
1:D:3712:SER:O	1:D:3712:SER:OG	2.34	0.46
1:D:4582:SER:C	1:D:4725:MET:HE1	2.40	0.46
1:A:1767:PRO:HG3	1:A:1781:PRO:HB3	1.97	0.46
1:A:2074:ILE:HG21	1:A:2079:LEU:HD22	1.98	0.46
1:A:4757:SER:O	1:A:4761:HIS:HB2	2.16	0.46
1:B:1265:HIS:CD2	1:B:1268:ILE:HB	2.44	0.46
1:B:2343:LEU:HD23	1:B:2434:VAL:HG23	1.97	0.46
1:B:4029:ASP:OD1	1:B:4029:ASP:N	2.47	0.46
1:B:4273:MET:N	1:D:4836:ASP:OD2	2.48	0.46
1:C:882:ARG:HD2	1:C:937:LEU:HD23	1.98	0.46
1:C:1752:ILE:HD11	1:C:1840:LEU:HB2	1.98	0.46
1:C:1800:VAL:HG12	1:C:1892:LEU:HD13	1.98	0.46
1:D:499:LEU:HD23	1:D:502:ILE:HD11	1.97	0.46
1:D:1174:MET:HE1	1:D:1190:LEU:HA	1.97	0.46
1:D:1800:VAL:HG12	1:D:1892:LEU:HD13	1.98	0.46
1:D:4757:SER:O	1:D:4761:HIS:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:637:LEU:HD11	1:A:1680:HIS:ND1	2.30	0.46
1:A:2342:LEU:HB3	1:A:2434:VAL:HG21	1.96	0.46
1:A:2405:MET:C	1:A:2406:HIS:HD1	2.24	0.46
1:A:4298:ALA:HA	1:A:4301:CYS:SG	2.56	0.46
1:A:4905:GLU:OE2	1:D:4182:LYS:HD3	2.15	0.46
1:B:4273:MET:HE2	1:B:4273:MET:HA	1.97	0.46
1:B:4808:MET:CG	1:C:4516:LEU:HA	2.46	0.46
1:C:450:GLU:H	1:C:450:GLU:CD	2.24	0.46
1:C:732:LEU:HB3	1:C:779:PHE:CE1	2.51	0.46
1:C:2156:GLN:O	1:C:3614:ARG:NH2	2.49	0.46
1:C:4079:TYR:HA	1:C:4082:PHE:HB3	1.96	0.46
1:C:4298:ALA:HA	1:C:4301:CYS:SG	2.56	0.46
1:C:4757:SER:O	1:C:4761:HIS:HB2	2.16	0.46
1:D:637:LEU:HD11	1:D:1680:HIS:ND1	2.31	0.46
1:D:1910:GLN:HG2	1:D:2086:LEU:HD13	1.98	0.46
1:D:2156:GLN:O	1:D:3614:ARG:NH2	2.49	0.46
1:D:4079:TYR:HA	1:D:4082:PHE:HB3	1.96	0.46
1:D:4579:THR:OG1	1:D:4732:HIS:NE2	2.44	0.46
1:A:337:LYS:NZ	1:A:369:GLY:O	2.38	0.46
1:A:1255:LEU:CD2	1:A:1384:LEU:HB2	2.46	0.46
1:A:1265:HIS:CD2	1:A:1268:ILE:HB	2.44	0.46
1:A:2838:ALA:O	1:A:2841:GLU:HG3	2.14	0.46
1:A:4094:GLY:HA2	1:A:4097:VAL:HG22	1.97	0.46
2:G:17:PRO:HG2	2:G:64:ALA:O	2.16	0.46
1:B:250:GLY:HA2	1:B:257:ARG:HH11	1.80	0.46
1:B:758:CYS:SG	1:B:769:ARG:NH1	2.81	0.46
1:B:1357:ASP:HB3	1:B:1363:LYS:CE	2.47	0.46
1:B:1704:TYR:OH	1:B:1795:MET:HE1	2.16	0.46
1:B:4298:ALA:HA	1:B:4301:CYS:SG	2.56	0.46
1:B:4757:SER:O	1:B:4761:HIS:HB2	2.16	0.46
2:H:17:PRO:HG2	2:H:64:ALA:O	2.17	0.46
1:C:328:ALA:O	1:C:365:HIS:ND1	2.49	0.46
1:C:1910:GLN:HG2	1:C:2086:LEU:HD13	1.98	0.46
1:C:3748:GLY:HA2	1:C:3795:LEU:HG	1.97	0.46
1:C:4009:VAL:HA	1:C:4012:ILE:HG22	1.98	0.46
1:C:4717:SER:O	1:C:4721:LEU:HD23	2.16	0.46
1:D:328:ALA:O	1:D:365:HIS:ND1	2.49	0.46
1:A:1089:ARG:HD2	1:A:1202:ILE:HD12	1.98	0.45
1:A:1383:ARG:NH2	1:A:1385:LYS:HB2	2.32	0.45
1:A:1629:MET:HE3	1:A:1685:GLN:NE2	2.17	0.45
1:B:380:LYS:HD2	1:B:380:LYS:HA	1.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:732:LEU:HB3	1:B:779:PHE:CE1	2.51	0.45
1:B:1113:MET:HE3	1:B:1211:GLN:HB3	1.98	0.45
1:B:2405:MET:C	1:B:2406:HIS:HD1	2.24	0.45
1:B:3786:VAL:HG12	1:B:3790:GLN:HG3	1.98	0.45
1:B:4914:LEU:O	1:B:4918:LEU:HD23	2.16	0.45
1:C:2262:GLU:O	1:C:2266:ARG:NE	2.48	0.45
1:C:4808:MET:CG	1:D:4516:LEU:HA	2.46	0.45
1:D:732:LEU:HB3	1:D:779:PHE:CE1	2.51	0.45
1:D:1089:ARG:HD2	1:D:1202:ILE:HD12	1.98	0.45
1:D:3748:GLY:HA2	1:D:3795:LEU:HG	1.97	0.45
1:A:3640:ILE:HD12	1:A:3697:SER:HB3	1.98	0.45
1:A:4717:SER:O	1:A:4721:LEU:HD23	2.16	0.45
1:B:1035:TYR:OH	1:B:1046:ASN:HB2	2.16	0.45
1:B:1910:GLN:HG2	1:B:2086:LEU:HD13	1.98	0.45
1:C:380:LYS:HA	1:C:380:LYS:HD2	1.76	0.45
1:C:696:GLY:HA3	1:C:725:TYR:O	2.16	0.45
1:C:2784:TRP:HH2	1:C:2846:ASN:HB2	1.81	0.45
1:C:3760:LEU:O	1:C:3764:ILE:HG12	2.17	0.45
1:D:133:LEU:N	1:D:146:ASP:O	2.47	0.45
1:D:1255:LEU:CD2	1:D:1384:LEU:HB2	2.46	0.45
1:D:1704:TYR:OH	1:D:1795:MET:HE1	2.16	0.45
1:D:3715:GLU:OE2	1:D:3716:LYS:NZ	2.49	0.45
1:D:4298:ALA:HA	1:D:4301:CYS:SG	2.56	0.45
1:A:732:LEU:HB3	1:A:779:PHE:CE1	2.51	0.45
1:A:4694:SER:O	1:A:4694:SER:OG	2.33	0.45
1:B:499:LEU:HD23	1:B:502:ILE:HD11	1.97	0.45
1:B:696:GLY:HA3	1:B:725:TYR:O	2.16	0.45
1:B:2784:TRP:HH2	1:B:2846:ASN:HB2	1.81	0.45
1:B:4009:VAL:HA	1:B:4012:ILE:HG22	1.98	0.45
1:C:1704:TYR:OH	1:C:1795:MET:HE1	2.16	0.45
1:C:1715:TYR:OH	1:C:1719:ARG:NH1	2.47	0.45
1:D:2262:GLU:O	1:D:2266:ARG:NE	2.48	0.45
1:D:3727:GLN:C	1:D:3731:HIS:HD1	2.23	0.45
1:A:450:GLU:H	1:A:450:GLU:CD	2.24	0.45
1:A:845:THR:OG1	1:A:846:TYR:N	2.46	0.45
1:A:1253:LYS:HE2	1:A:1253:LYS:HB2	1.63	0.45
1:A:1704:TYR:OH	1:A:1795:MET:HE1	2.16	0.45
1:A:1811:VAL:N	1:A:1818:LEU:HD12	2.18	0.45
1:A:3786:VAL:HG12	1:A:3790:GLN:HG3	1.98	0.45
1:B:637:LEU:HD11	1:B:1680:HIS:ND1	2.30	0.45
1:B:1143:GLN:HG2	1:B:1151:HIS:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3640:ILE:HD12	1:B:3697:SER:HB3	1.98	0.45
1:B:4273:MET:HG3	1:B:4277:ASP:OD2	2.16	0.45
1:C:4611:PHE:CZ	1:C:4946:ARG:HG3	2.52	0.45
1:D:150:GLN:NE2	1:D:158:CYS:HB3	2.28	0.45
1:D:1087:ILE:HD12	1:D:1124:PRO:HA	1.99	0.45
1:D:1245:ARG:NH1	1:D:1809:ASP:O	2.46	0.45
1:D:2414:GLU:OE2	1:D:2417:ARG:NH2	2.50	0.45
1:A:1910:GLN:HG2	1:A:2086:LEU:HD13	1.98	0.45
1:A:2156:GLN:O	1:A:3614:ARG:NH2	2.49	0.45
1:A:3727:GLN:C	1:A:3731:HIS:HD1	2.23	0.45
1:A:4611:PHE:CZ	1:A:4946:ARG:HG3	2.52	0.45
1:A:4914:LEU:O	1:A:4918:LEU:HD23	2.16	0.45
1:B:336:GLU:HG3	1:B:338:LEU:HD22	1.98	0.45
1:B:559:ILE:HD11	1:B:575:LEU:HD13	1.99	0.45
1:B:1094:TYR:OH	1:B:1809:ASP:OD2	2.16	0.45
1:B:1629:MET:HG2	1:B:1688:TYR:CE2	2.52	0.45
1:B:1800:VAL:HG12	1:B:1892:LEU:HD13	1.98	0.45
1:C:250:GLY:HA2	1:C:257:ARG:HH11	1.81	0.45
1:C:499:LEU:HD23	1:C:502:ILE:HD11	1.97	0.45
1:C:1113:MET:HE3	1:C:1211:GLN:HB3	1.98	0.45
1:C:4112:THR:HA	1:C:4115:GLN:HB2	1.99	0.45
2:I:18:LYS:HG3	2:I:21:GLN:OE1	2.17	0.45
2:J:17:PRO:HG2	2:J:64:ALA:O	2.16	0.45
1:A:499:LEU:HD23	1:A:502:ILE:HD11	1.97	0.45
1:A:1370:PHE:N	1:A:1370:PHE:CD1	2.85	0.45
1:A:1729:PRO:HD2	1:A:1756:THR:O	2.17	0.45
1:A:1744:ASN:ND2	1:A:1746:LYS:HE2	2.27	0.45
1:A:2414:GLU:OE2	1:A:2417:ARG:NH2	2.50	0.45
1:A:3760:LEU:O	1:A:3764:ILE:HG12	2.17	0.45
1:B:838:ARG:H	1:B:841:LYS:NZ	2.15	0.45
1:B:872:ILE:HD13	1:B:944:LEU:HD22	1.99	0.45
1:B:2282:LYS:HA	1:B:2282:LYS:HD2	1.86	0.45
1:B:4717:SER:O	1:B:4721:LEU:HD23	2.16	0.45
1:C:1567:LEU:HD11	1:C:1579:PRO:C	2.41	0.45
1:C:2853:LYS:HA	1:C:2856:LYS:HG2	1.99	0.45
1:C:4859:ALA:HB2	1:D:4862:GLN:OE1	2.17	0.45
1:D:433:LEU:HD12	1:D:434:ASP:N	2.32	0.45
1:D:3760:LEU:O	1:D:3764:ILE:HG12	2.17	0.45
1:D:4094:GLY:HA2	1:D:4097:VAL:HG22	1.97	0.45
1:A:328:ALA:O	1:A:365:HIS:ND1	2.49	0.45
1:A:1166:VAL:CG2	1:A:1173:MET:HG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:328:ALA:O	1:B:365:HIS:ND1	2.49	0.45
1:B:433:LEU:HD12	1:B:434:ASP:N	2.32	0.45
1:B:1729:PRO:HD2	1:B:1756:THR:O	2.17	0.45
1:B:1737:ILE:HD11	1:B:1922:GLU:HB3	1.98	0.45
1:B:2105:TYR:HE1	1:B:2157:HIS:ND1	2.15	0.45
1:B:2414:GLU:OE2	1:B:2417:ARG:NH2	2.50	0.45
1:B:4099:VAL:HB	1:B:4132:LEU:HD21	1.99	0.45
1:B:4611:PHE:CZ	1:B:4946:ARG:HG3	2.52	0.45
1:B:4924:LEU:HD21	1:B:4936:GLU:HB3	1.96	0.45
1:C:1087:ILE:HD12	1:C:1124:PRO:HA	1.99	0.45
1:C:3715:GLU:OE2	1:C:3716:LYS:NZ	2.49	0.45
1:D:872:ILE:HD13	1:D:944:LEU:HD22	1.99	0.45
1:D:1113:MET:HE3	1:D:1211:GLN:HB3	1.98	0.45
1:D:2405:MET:C	1:D:2406:HIS:HD1	2.24	0.45
1:D:3726:GLN:HG2	1:D:3729:ARG:NH2	2.32	0.45
1:D:4273:MET:HG3	1:D:4277:ASP:OD2	2.17	0.45
1:A:427:ASN:HB3	1:A:431:ARG:HH22	1.82	0.45
1:A:677:LEU:N	1:A:755:ILE:O	2.50	0.45
1:A:872:ILE:HD13	1:A:944:LEU:HD22	1.99	0.45
1:A:1629:MET:HG2	1:A:1688:TYR:CE2	2.52	0.45
1:A:3726:GLN:HG2	1:A:3729:ARG:NH2	2.32	0.45
1:B:1245:ARG:NH1	1:B:1809:ASP:O	2.46	0.45
1:C:872:ILE:HD13	1:C:944:LEU:HD22	1.99	0.45
1:C:1124:PRO:HB2	1:C:1252:SER:OG	2.17	0.45
1:C:1357:ASP:HB3	1:C:1363:LYS:CE	2.46	0.45
1:C:2348:GLU:HA	1:C:2351:LYS:HE3	1.98	0.45
1:C:2428:LEU:O	1:C:2432:VAL:HG23	2.16	0.45
1:D:838:ARG:H	1:D:841:LYS:NZ	2.15	0.45
1:D:1383:ARG:NH2	1:D:1385:LYS:HB2	2.32	0.45
1:D:1729:PRO:HD2	1:D:1756:THR:O	2.17	0.45
1:D:3786:VAL:HG12	1:D:3790:GLN:HG3	1.98	0.45
1:D:4138:MET:HE2	1:D:4138:MET:HB2	1.86	0.45
1:D:4717:SER:O	1:D:4721:LEU:HD23	2.16	0.45
1:A:838:ARG:H	1:A:841:LYS:NZ	2.15	0.45
1:A:1245:ARG:NH1	1:A:1809:ASP:O	2.46	0.45
1:A:1737:ILE:HD11	1:A:1922:GLU:HB3	1.98	0.45
1:A:1942:ARG:HA	1:A:1945:GLU:HG3	1.99	0.45
1:A:2254:LEU:O	1:A:3809:ARG:NH1	2.50	0.45
1:A:2428:LEU:O	1:A:2432:VAL:HG23	2.17	0.45
1:A:3676:THR:OG1	1:A:3678:LYS:NZ	2.50	0.45
1:A:3712:SER:O	1:A:3712:SER:OG	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4009:VAL:HA	1:A:4012:ILE:HG22	1.98	0.45
1:B:606:ARG:HH12	1:B:1635:GLU:CD	2.24	0.45
1:B:1165:MET:HB3	1:B:1236:TYR:CE2	2.52	0.45
1:B:1383:ARG:NH2	1:B:1385:LYS:HB2	2.32	0.45
1:B:2170:VAL:HG21	1:B:2198:PHE:CD2	2.52	0.45
1:B:2348:GLU:HA	1:B:2351:LYS:HE3	1.98	0.45
1:B:3760:LEU:O	1:B:3764:ILE:HG12	2.17	0.45
1:B:4193:GLU:OE2	1:B:4607:ARG:NH2	2.47	0.45
1:C:606:ARG:HH12	1:C:1635:GLU:CD	2.24	0.45
1:C:1931:PHE:CE1	1:C:1995:LEU:HB2	2.52	0.45
1:C:1967:PRO:HD2	1:C:1970:GLU:OE2	2.17	0.45
1:C:2257:ARG:HH21	1:C:3806:ALA:HB1	1.82	0.45
1:C:2405:MET:C	1:C:2406:HIS:HD1	2.24	0.45
1:D:427:ASN:HB3	1:D:431:ARG:HH22	1.82	0.45
1:D:450:GLU:CD	1:D:450:GLU:H	2.24	0.45
1:D:606:ARG:HH12	1:D:1635:GLU:CD	2.24	0.45
1:D:1166:VAL:CG2	1:D:1173:MET:HG2	2.47	0.45
1:D:1368:PRO:HD2	1:D:1434:UNK:C	2.47	0.45
1:D:1967:PRO:HD2	1:D:1970:GLU:OE2	2.17	0.45
1:D:2257:ARG:HH21	1:D:3806:ALA:HB1	1.82	0.45
1:D:3802:LEU:HD23	1:D:3829:LEU:HD13	1.99	0.45
1:A:1117:TRP:HZ3	1:A:1166:VAL:HB	1.82	0.45
1:A:2105:TYR:HE1	1:A:2157:HIS:ND1	2.15	0.45
1:B:1166:VAL:CG2	1:B:1173:MET:HG2	2.47	0.45
1:B:1966:SER:O	1:B:1966:SER:OG	2.31	0.45
1:B:3676:THR:OG1	1:B:3678:LYS:NZ	2.50	0.45
2:H:18:LYS:HG3	2:H:21:GLN:OE1	2.17	0.45
1:C:559:ILE:HD11	1:C:575:LEU:HD13	1.99	0.45
1:C:1791:LYS:NZ	1:C:1795:MET:SD	2.79	0.45
1:C:2414:GLU:OE2	1:C:2417:ARG:NH2	2.50	0.45
1:C:3640:ILE:HD12	1:C:3697:SER:HB3	1.98	0.45
1:C:3802:LEU:HD23	1:C:3829:LEU:HD13	1.99	0.45
1:C:4273:MET:HG3	1:C:4277:ASP:OD2	2.16	0.45
1:D:1143:GLN:HG2	1:D:1151:HIS:HA	1.98	0.45
1:D:1357:ASP:HB3	1:D:1363:LYS:CE	2.46	0.45
1:D:1737:ILE:HD11	1:D:1922:GLU:HB3	1.98	0.45
2:J:18:LYS:HG3	2:J:21:GLN:OE1	2.17	0.45
1:A:370:LEU:CB	1:A:393:MET:HG2	2.45	0.44
1:A:661:LEU:HD13	1:A:673:TRP:CD1	2.52	0.44
1:A:1644:GLU:OE1	1:A:1648:GLN:NE2	2.50	0.44
1:A:2170:VAL:HG21	1:A:2198:PHE:CD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3901:GLY:O	1:A:3905:PHE:HD2	2.00	0.44
1:B:1942:ARG:HA	1:B:1945:GLU:HG3	1.99	0.44
1:B:2428:LEU:O	1:B:2432:VAL:HG23	2.16	0.44
1:C:323:ASP:O	1:C:327:THR:OG1	2.30	0.44
1:C:1143:GLN:HG2	1:C:1151:HIS:HA	1.98	0.44
1:C:1253:LYS:HB2	1:C:1253:LYS:HE2	1.63	0.44
1:C:1644:GLU:OE1	1:C:1648:GLN:NE2	2.50	0.44
1:D:115:TYR:CE2	1:D:175:VAL:HG22	2.52	0.44
1:D:587:ASN:HA	1:D:2132:ARG:NH1	2.32	0.44
1:D:696:GLY:HA3	1:D:725:TYR:O	2.16	0.44
1:D:1370:PHE:N	1:D:1370:PHE:CD1	2.85	0.44
1:D:2853:LYS:HA	1:D:2856:LYS:HG2	1.99	0.44
1:D:2858:GLU:O	1:D:2862:LYS:HG2	2.18	0.44
1:D:3676:THR:OG1	1:D:3678:LYS:NZ	2.50	0.44
1:D:4643:TYR:HD2	1:D:4645:ASP:OD1	2.00	0.44
1:A:587:ASN:HA	1:A:2132:ARG:NH1	2.32	0.44
1:A:837:SER:H	1:A:841:LYS:HZ1	1.64	0.44
1:A:1165:MET:HB3	1:A:1236:TYR:CE2	2.52	0.44
1:A:1567:LEU:HD11	1:A:1579:PRO:C	2.41	0.44
1:A:1931:PHE:CE1	1:A:1995:LEU:HB2	2.52	0.44
1:A:3715:GLU:OE2	1:A:3716:LYS:NZ	2.49	0.44
1:A:4643:TYR:HD2	1:A:4645:ASP:OD1	2.00	0.44
1:A:4859:ALA:HB2	1:B:4862:GLN:OE1	2.18	0.44
2:G:18:LYS:HG3	2:G:21:GLN:OE1	2.17	0.44
2:G:39:SER:O	2:G:43:ARG:NH1	2.51	0.44
1:B:427:ASN:HB3	1:B:431:ARG:HH22	1.82	0.44
1:B:2061:ILE:O	1:B:2065:MET:HG2	2.18	0.44
1:B:2262:GLU:O	1:B:2266:ARG:NE	2.48	0.44
1:B:2348:GLU:O	1:B:2352:ILE:HG12	2.17	0.44
1:B:3898:ASP:OD1	1:B:3898:ASP:N	2.45	0.44
1:B:4640:PRO:O	1:B:4646:LYS:NZ	2.43	0.44
1:B:4759:VAL:HG13	1:B:4760:THR:HG23	1.99	0.44
1:C:436:LEU:HD21	1:C:517:VAL:HG12	2.00	0.44
1:C:1629:MET:HG2	1:C:1688:TYR:CE2	2.52	0.44
1:C:3676:THR:OG1	1:C:3678:LYS:NZ	2.50	0.44
1:C:3786:VAL:HG12	1:C:3790:GLN:HG3	1.98	0.44
1:C:4759:VAL:HG13	1:C:4760:THR:HG23	1.99	0.44
1:D:1124:PRO:HB2	1:D:1252:SER:OG	2.17	0.44
1:D:1567:LEU:HD11	1:D:1579:PRO:C	2.41	0.44
1:D:2290:ASN:HD22	1:D:2291:PRO:CD	2.30	0.44
1:A:1113:MET:HE3	1:A:1211:GLN:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2061:ILE:O	1:A:2065:MET:HG2	2.18	0.44
1:A:2321:ARG:NH2	1:D:189:GLU:OE2	2.49	0.44
1:B:35:LEU:HB3	1:B:49:LEU:HD22	1.99	0.44
1:B:1124:PRO:HB2	1:B:1252:SER:OG	2.17	0.44
1:B:2254:LEU:O	1:B:3809:ARG:NH1	2.50	0.44
1:B:2858:GLU:O	1:B:2862:LYS:HG2	2.17	0.44
1:B:4112:THR:HA	1:B:4115:GLN:HB2	1.99	0.44
1:B:4643:TYR:HD2	1:B:4645:ASP:OD1	2.00	0.44
2:H:39:SER:O	2:H:43:ARG:NH1	2.51	0.44
1:C:1572:PHE:HZ	1:C:1587:LEU:HD11	1.83	0.44
1:C:4643:TYR:HD2	1:C:4645:ASP:OD1	2.00	0.44
1:D:336:GLU:HG3	1:D:338:LEU:HD22	1.98	0.44
1:D:1931:PHE:CE1	1:D:1995:LEU:HB2	2.52	0.44
1:D:2061:ILE:O	1:D:2065:MET:HG2	2.18	0.44
1:D:2254:LEU:O	1:D:3809:ARG:NH1	2.50	0.44
1:A:115:TYR:CE2	1:A:175:VAL:HG22	2.52	0.44
1:A:882:ARG:HG2	1:A:940:LEU:HD22	2.00	0.44
1:A:1087:ILE:HD12	1:A:1124:PRO:HA	1.99	0.44
1:A:4759:VAL:HG13	1:A:4760:THR:HG23	1.99	0.44
1:B:549:ALA:HA	1:B:584:GLU:OE2	2.18	0.44
1:B:1370:PHE:N	1:B:1370:PHE:CD1	2.85	0.44
1:B:1572:PHE:HZ	1:B:1587:LEU:HD11	1.83	0.44
1:B:3802:LEU:HD23	1:B:3829:LEU:HD13	1.99	0.44
1:B:4512:ASN:HD22	1:B:4742:LEU:HD21	1.83	0.44
1:C:587:ASN:HA	1:C:2132:ARG:NH1	2.32	0.44
1:C:661:LEU:HD13	1:C:673:TRP:CD1	2.52	0.44
1:C:670:TYR:HE2	1:C:818:GLY:O	2.00	0.44
1:C:838:ARG:H	1:C:841:LYS:NZ	2.15	0.44
1:C:1368:PRO:HD2	1:C:1434:UNK:C	2.47	0.44
1:C:2121:SER:O	1:C:2125:ILE:HG12	2.18	0.44
1:C:3712:SER:O	1:C:3712:SER:OG	2.34	0.44
2:I:17:PRO:HG2	2:I:64:ALA:O	2.17	0.44
1:D:190:ARG:HD3	1:D:205:ALA:O	2.18	0.44
1:D:549:ALA:HA	1:D:584:GLU:OE2	2.18	0.44
1:D:1165:MET:HB3	1:D:1236:TYR:CE2	2.52	0.44
1:D:1629:MET:HG2	1:D:1688:TYR:CE2	2.52	0.44
1:D:3640:ILE:HD12	1:D:3697:SER:HB3	1.98	0.44
1:D:4512:ASN:HD22	1:D:4742:LEU:HD21	1.83	0.44
1:D:4517:PHE:HB3	1:D:4562:GLU:CG	2.37	0.44
1:A:433:LEU:HD12	1:A:434:ASP:N	2.32	0.44
1:A:1357:ASP:HB3	1:A:1363:LYS:CE	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2858:GLU:O	1:A:2862:LYS:HG2	2.18	0.44
1:A:3802:LEU:HD23	1:A:3829:LEU:HD13	1.99	0.44
1:A:4099:VAL:HB	1:A:4132:LEU:HD21	1.99	0.44
1:A:4512:ASN:HD22	1:A:4742:LEU:HD21	1.83	0.44
1:B:115:TYR:CE2	1:B:175:VAL:HG22	2.52	0.44
1:B:311:ASP:OD1	1:B:311:ASP:N	2.51	0.44
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.52	0.44
1:B:670:TYR:HE2	1:B:818:GLY:O	2.00	0.44
1:B:837:SER:N	1:B:841:LYS:HZ1	2.16	0.44
1:B:1967:PRO:HD2	1:B:1970:GLU:OE2	2.17	0.44
1:B:2257:ARG:HH21	1:B:3806:ALA:HB1	1.82	0.44
1:B:4859:ALA:HB2	1:C:4862:GLN:OE1	2.17	0.44
1:C:311:ASP:OD1	1:C:311:ASP:N	2.51	0.44
1:C:336:GLU:HG3	1:C:338:LEU:HD22	1.98	0.44
1:C:2061:ILE:O	1:C:2065:MET:HG2	2.18	0.44
2:I:39:SER:O	2:I:43:ARG:NH1	2.51	0.44
1:D:1572:PHE:HZ	1:D:1587:LEU:HD11	1.83	0.44
1:D:1789:LYS:HB2	1:D:1835:PHE:HE1	1.83	0.44
1:D:2105:TYR:HE1	1:D:2157:HIS:ND1	2.15	0.44
1:A:670:TYR:HE2	1:A:818:GLY:O	2.00	0.44
1:A:1255:LEU:HD22	1:A:1384:LEU:HB2	2.00	0.44
1:A:1368:PRO:HD2	1:A:1434:UNK:C	2.47	0.44
1:A:2271:CYS:SG	1:A:2294:GLY:N	2.91	0.44
1:A:2348:GLU:HA	1:A:2351:LYS:HE3	1.98	0.44
1:A:2348:GLU:O	1:A:2352:ILE:HG12	2.17	0.44
1:A:4273:MET:HG3	1:A:4277:ASP:OD2	2.16	0.44
1:A:4789:ARG:NH2	1:A:4805:CYS:O	2.51	0.44
1:B:1644:GLU:OE1	1:B:1648:GLN:NE2	2.50	0.44
1:B:3621:GLN:O	1:B:3624:GLU:HG3	2.18	0.44
1:B:3715:GLU:OE2	1:B:3716:LYS:NZ	2.49	0.44
1:C:549:ALA:HA	1:C:584:GLU:OE2	2.18	0.44
1:C:1383:ARG:NH2	1:C:1385:LYS:HB2	2.32	0.44
1:C:2105:TYR:HE1	1:C:2157:HIS:ND1	2.15	0.44
1:C:2335:ARG:O	1:C:2335:ARG:HG3	2.18	0.44
1:C:2348:GLU:O	1:C:2352:ILE:HG12	2.17	0.44
1:C:2712:ILE:HD13	1:C:2775:LYS:HE2	2.00	0.44
1:C:3901:GLY:O	1:C:3905:PHE:HD2	2.01	0.44
1:C:4099:VAL:HB	1:C:4132:LEU:HD21	1.99	0.44
1:D:641:ASP:O	1:D:1634:PRO:HG2	2.18	0.44
1:D:837:SER:H	1:D:841:LYS:HZ1	1.63	0.44
1:D:839:GLU:HG2	1:D:840:TYR:N	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1249:MET:HE2	1:D:1249:MET:HB2	1.84	0.44
1:D:1370:PHE:N	1:D:1370:PHE:HD1	2.16	0.44
1:D:4611:PHE:CZ	1:D:4946:ARG:HG3	2.52	0.44
1:A:641:ASP:O	1:A:1634:PRO:HG2	2.18	0.44
1:A:1967:PRO:HD2	1:A:1970:GLU:OE2	2.17	0.44
1:A:2065:MET:HE1	1:A:2083:MET:CG	2.48	0.44
1:A:2121:SER:O	1:A:2125:ILE:HG12	2.18	0.44
1:A:2335:ARG:O	1:A:2335:ARG:HG3	2.18	0.44
1:A:2343:LEU:O	1:A:2347:GLU:HG2	2.18	0.44
1:A:3621:GLN:O	1:A:3624:GLU:HG3	2.18	0.44
1:B:587:ASN:HA	1:B:2132:ARG:NH1	2.32	0.44
1:B:769:ARG:HA	1:B:774:PRO:HA	1.99	0.44
1:B:839:GLU:HG2	1:B:840:TYR:N	2.29	0.44
1:B:4143:ARG:NH1	1:B:4961:TYR:OH	2.51	0.44
1:C:115:TYR:CE2	1:C:175:VAL:HG22	2.52	0.44
1:C:433:LEU:HD12	1:C:434:ASP:N	2.32	0.44
1:C:1165:MET:HB3	1:C:1236:TYR:CE2	2.52	0.44
1:C:1729:PRO:HD2	1:C:1756:THR:O	2.17	0.44
1:C:1737:ILE:HD11	1:C:1922:GLU:HB3	1.98	0.44
1:C:1744:ASN:ND2	1:C:1746:LYS:HE2	2.27	0.44
1:C:1747:HIS:O	1:C:1747:HIS:ND1	2.51	0.44
1:C:1942:ARG:HA	1:C:1945:GLU:HG3	1.98	0.44
1:D:670:TYR:HE2	1:D:818:GLY:O	2.00	0.44
1:D:882:ARG:HG2	1:D:940:LEU:HD22	2.00	0.44
1:D:3901:GLY:O	1:D:3905:PHE:HD2	2.00	0.44
1:A:336:GLU:HG3	1:A:338:LEU:HD22	1.98	0.44
1:A:436:LEU:HD21	1:A:517:VAL:HG12	2.00	0.44
1:A:2712:ILE:HD13	1:A:2775:LYS:HE2	2.00	0.44
1:A:4112:THR:HA	1:A:4115:GLN:HB2	1.99	0.44
1:B:1087:ILE:HD12	1:B:1124:PRO:HA	1.99	0.44
1:B:1117:TRP:HZ3	1:B:1166:VAL:HB	1.82	0.44
1:B:1255:LEU:HD22	1:B:1384:LEU:HB2	2.00	0.44
1:B:1931:PHE:CE1	1:B:1995:LEU:HB2	2.52	0.44
1:B:3730:LEU:HD11	1:B:3764:ILE:CD1	2.48	0.44
1:B:4138:MET:HE2	1:B:4138:MET:HB2	1.86	0.44
1:C:35:LEU:HB3	1:C:49:LEU:HD22	1.99	0.44
1:C:659:ILE:HG13	1:C:822:CYS:HB3	2.00	0.44
1:C:769:ARG:HA	1:C:774:PRO:HA	1.99	0.44
1:C:1643:LEU:HD22	1:C:1694:TYR:O	2.18	0.44
1:C:2856:LYS:HA	1:C:2859:LEU:HG	2.00	0.44
1:D:559:ILE:HD11	1:D:575:LEU:HD13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:758:CYS:SG	1:D:769:ARG:NH1	2.81	0.44
1:D:4126:ASN:HA	1:D:4129:GLN:HG2	2.00	0.44
1:A:541:ILE:HG22	1:A:541:ILE:O	2.18	0.44
1:A:2853:LYS:HA	1:A:2856:LYS:HG2	1.99	0.44
1:A:4653:MET:O	1:A:4657:GLY:N	2.51	0.44
1:B:436:LEU:HD21	1:B:517:VAL:HG12	2.00	0.44
1:B:4274:THR:OG1	1:B:4278:MET:HE3	2.18	0.44
1:C:677:LEU:CD1	1:C:695:VAL:HG21	2.48	0.44
1:C:2858:GLU:O	1:C:2862:LYS:HG2	2.18	0.44
1:D:589:ILE:C	1:D:590:LYS:HE2	2.43	0.44
1:D:661:LEU:HD13	1:D:673:TRP:CD1	2.52	0.44
1:D:1644:GLU:OE1	1:D:1648:GLN:NE2	2.50	0.44
1:D:2170:VAL:HG21	1:D:2198:PHE:CD2	2.52	0.44
1:D:2348:GLU:O	1:D:2352:ILE:HG12	2.17	0.44
1:A:559:ILE:HD11	1:A:575:LEU:HD13	1.99	0.43
1:A:1124:PRO:HB2	1:A:1252:SER:OG	2.17	0.43
1:A:1789:LYS:HB2	1:A:1835:PHE:HE1	1.83	0.43
1:A:4579:THR:OG1	1:A:4732:HIS:NE2	2.44	0.43
1:B:659:ILE:HG13	1:B:822:CYS:HB3	2.00	0.43
1:C:758:CYS:SG	1:C:769:ARG:NH1	2.81	0.43
1:C:1370:PHE:N	1:C:1370:PHE:CD1	2.85	0.43
1:C:4143:ARG:NH1	1:C:4961:TYR:OH	2.51	0.43
2:I:28:THR:O	2:I:28:THR:OG1	2.35	0.43
1:D:1117:TRP:HZ3	1:D:1166:VAL:HB	1.82	0.43
1:D:4112:THR:HA	1:D:4115:GLN:HB2	1.99	0.43
1:D:4274:THR:OG1	1:D:4278:MET:HE3	2.18	0.43
1:A:446:ASP:O	1:A:448:PRO:HD3	2.18	0.43
1:A:1370:PHE:N	1:A:1370:PHE:HD1	2.16	0.43
1:A:1572:PHE:HZ	1:A:1587:LEU:HD11	1.83	0.43
2:G:27:TYR:O	2:G:40:SER:N	2.45	0.43
1:B:900:LEU:HD23	1:B:902:TRP:HE1	1.84	0.43
1:B:1370:PHE:N	1:B:1370:PHE:HD1	2.16	0.43
1:B:2271:CYS:SG	1:B:2294:GLY:N	2.91	0.43
1:B:3726:GLN:HG2	1:B:3729:ARG:NH2	2.32	0.43
1:B:4773:LEU:HD12	1:B:4857:LEU:HB3	2.00	0.43
1:C:1091:GLU:HG2	1:C:1248:THR:OG1	2.18	0.43
1:C:1370:PHE:N	1:C:1370:PHE:HD1	2.16	0.43
1:C:4512:ASN:HD22	1:C:4742:LEU:HD21	1.83	0.43
1:C:4773:LEU:HD12	1:C:4857:LEU:HB3	2.00	0.43
1:C:4789:ARG:NH2	1:C:4805:CYS:O	2.51	0.43
1:D:541:ILE:O	1:D:541:ILE:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1942:ARG:HA	1:D:1945:GLU:HG3	1.99	0.43
1:D:2856:LYS:HA	1:D:2859:LEU:HG	2.00	0.43
1:D:4182:LYS:HA	1:D:4182:LYS:HD2	1.85	0.43
1:D:4789:ARG:NH2	1:D:4805:CYS:O	2.51	0.43
1:A:190:ARG:HD3	1:A:205:ALA:O	2.18	0.43
1:A:418:VAL:O	1:A:422:THR:HG22	2.19	0.43
1:A:656:ARG:NH2	1:A:835:GLU:OE2	2.52	0.43
1:A:2257:ARG:HH21	1:A:3806:ALA:HB1	1.82	0.43
1:A:3612:ARG:O	1:A:3612:ARG:NH1	2.51	0.43
1:A:4274:THR:OG1	1:A:4278:MET:HE3	2.18	0.43
1:B:323:ASP:O	1:B:327:THR:OG1	2.30	0.43
1:B:589:ILE:C	1:B:590:LYS:HE2	2.43	0.43
1:B:882:ARG:HG2	1:B:940:LEU:HD22	2.00	0.43
1:B:1368:PRO:HD2	1:B:1434:UNK:C	2.47	0.43
1:B:2121:SER:O	1:B:2125:ILE:HG12	2.18	0.43
1:C:418:VAL:O	1:C:422:THR:HG22	2.19	0.43
1:C:589:ILE:C	1:C:590:LYS:HE2	2.43	0.43
1:C:882:ARG:HG2	1:C:940:LEU:HD22	2.00	0.43
1:C:1681:VAL:HG23	1:C:1682:ASP:N	2.28	0.43
1:C:1970:GLU:HA	1:C:1973:ASN:HB2	2.00	0.43
1:C:4614:LEU:HA	1:C:4618:GLU:HG3	2.00	0.43
1:D:19:GLU:CD	1:D:218:SER:HB3	2.44	0.43
1:D:558:LEU:HG	1:D:571:ILE:HG23	2.01	0.43
1:D:1691:GLU:HG2	1:D:1791:LYS:CE	2.48	0.43
1:D:1715:TYR:OH	1:D:1719:ARG:NH1	2.47	0.43
1:D:1968:PRO:HA	1:D:1971:GLN:HB3	2.00	0.43
1:D:2121:SER:O	1:D:2125:ILE:HG12	2.18	0.43
1:D:2343:LEU:O	1:D:2347:GLU:HG2	2.18	0.43
1:D:2428:LEU:O	1:D:2432:VAL:HG23	2.17	0.43
1:A:4143:ARG:NH1	1:A:4961:TYR:OH	2.51	0.43
1:B:1744:ASN:ND2	1:B:1746:LYS:HE2	2.27	0.43
1:B:1962:ARG:HB3	1:B:1974:MET:HE1	2.00	0.43
1:B:1970:GLU:HA	1:B:1973:ASN:HB2	2.00	0.43
1:B:2065:MET:HE1	1:B:2083:MET:CG	2.48	0.43
1:B:2722:LYS:HD2	1:B:2722:LYS:HA	1.88	0.43
1:B:2853:LYS:HA	1:B:2856:LYS:HG2	1.99	0.43
1:C:641:ASP:O	1:C:1634:PRO:HG2	2.18	0.43
1:C:1914:ASP:OD1	1:C:2089:ARG:NH2	2.48	0.43
1:C:2278:MET:HE3	1:C:2278:MET:HB3	1.92	0.43
1:C:2455:MET:HE3	1:C:2455:MET:HB2	1.87	0.43
1:C:4889:ILE:HD11	1:C:4914:LEU:HD23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1970:GLU:HA	1:D:1973:ASN:HB2	2.00	0.43
1:D:4640:PRO:HG2	1:D:4646:LYS:HA	2.00	0.43
1:D:4789:ARG:NE	1:D:4805:CYS:SG	2.87	0.43
1:A:360:ILE:HG23	1:A:402:GLY:HA2	2.00	0.43
1:A:4640:PRO:HG2	1:A:4646:LYS:HA	2.00	0.43
1:A:4793:ASN:O	1:A:4795:SER:N	2.49	0.43
1:B:575:LEU:HA	1:B:578:VAL:HG12	2.01	0.43
1:B:3954:GLN:OE1	1:B:4012:ILE:HG13	2.19	0.43
1:B:4764:LYS:O	1:B:4767:VAL:HG22	2.19	0.43
1:B:4789:ARG:NH2	1:B:4805:CYS:O	2.51	0.43
1:B:4850:PHE:CD1	1:B:4854:ILE:HD11	2.54	0.43
1:C:446:ASP:O	1:C:448:PRO:HD3	2.18	0.43
1:C:1166:VAL:CG2	1:C:1173:MET:HG2	2.47	0.43
1:C:1968:PRO:HA	1:C:1971:GLN:HB3	2.00	0.43
1:C:2170:VAL:HG21	1:C:2198:PHE:CD2	2.52	0.43
1:C:2271:CYS:SG	1:C:2294:GLY:N	2.91	0.43
1:C:2282:LYS:HA	1:C:2282:LYS:HD2	1.86	0.43
1:C:2776:GLU:O	1:C:2780:THR:HG23	2.19	0.43
1:C:3726:GLN:HG2	1:C:3729:ARG:NH2	2.32	0.43
1:D:3621:GLN:O	1:D:3624:GLU:HG3	2.18	0.43
1:A:35:LEU:HB3	1:A:49:LEU:HD22	1.99	0.43
1:A:900:LEU:HD23	1:A:902:TRP:HE1	1.83	0.43
1:A:1091:GLU:HG2	1:A:1248:THR:OG1	2.18	0.43
1:A:1970:GLU:HA	1:A:1973:ASN:HB2	2.01	0.43
1:A:2290:ASN:HD22	1:A:2291:PRO:CD	2.30	0.43
1:A:3925:GLY:O	1:A:3927:CYS:N	2.51	0.43
1:A:3974:GLN:NE2	1:A:4012:ILE:HD11	2.34	0.43
1:B:541:ILE:O	1:B:541:ILE:HG22	2.18	0.43
1:B:1091:GLU:HG2	1:B:1248:THR:OG1	2.18	0.43
1:C:49:LEU:HD12	1:C:201:TRP:HB3	2.00	0.43
1:C:190:ARG:HD3	1:C:205:ALA:O	2.18	0.43
1:C:837:SER:N	1:C:841:LYS:HZ1	2.16	0.43
1:C:4789:ARG:NE	1:C:4805:CYS:SG	2.87	0.43
1:D:1091:GLU:HG2	1:D:1248:THR:OG1	2.18	0.43
1:D:1744:ASN:ND2	1:D:1746:LYS:HE2	2.27	0.43
1:D:2271:CYS:SG	1:D:2294:GLY:N	2.91	0.43
1:D:2712:ILE:HD13	1:D:2775:LYS:HE2	2.00	0.43
1:D:4759:VAL:HG13	1:D:4760:THR:HG23	1.99	0.43
1:A:549:ALA:HA	1:A:584:GLU:OE2	2.18	0.43
1:A:603:LYS:O	1:A:1586:ARG:HG3	2.19	0.43
1:A:2385:ASN:ND2	1:A:2458:GLY:O	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:58:LYS:HB2	2:G:58:LYS:HE2	1.77	0.43
1:B:49:LEU:HD12	1:B:201:TRP:HB3	2.00	0.43
1:B:360:ILE:HG23	1:B:402:GLY:HA2	2.00	0.43
1:B:656:ARG:NH2	1:B:835:GLU:OE2	2.52	0.43
1:B:695:VAL:HG11	1:B:755:ILE:HD12	2.01	0.43
1:B:1643:LEU:HD22	1:B:1694:TYR:O	2.18	0.43
1:B:1691:GLU:HG2	1:B:1791:LYS:CE	2.48	0.43
1:B:2191:MET:HE2	1:B:2195:CYS:SG	2.59	0.43
1:B:4126:ASN:HA	1:B:4129:GLN:HG2	2.00	0.43
1:B:4653:MET:O	1:B:4657:GLY:N	2.51	0.43
1:C:1962:ARG:HB3	1:C:1974:MET:HE1	2.00	0.43
1:C:2343:LEU:O	1:C:2347:GLU:HG2	2.18	0.43
1:C:3730:LEU:HD11	1:C:3764:ILE:CD1	2.48	0.43
1:C:3860:GLN:NE2	1:C:3866:THR:HA	2.34	0.43
1:C:4850:PHE:CD1	1:C:4854:ILE:HD11	2.54	0.43
1:D:3730:LEU:HD11	1:D:3764:ILE:CD1	2.48	0.43
1:D:4099:VAL:HB	1:D:4132:LEU:HD21	1.99	0.43
1:D:4764:LYS:O	1:D:4767:VAL:HG22	2.19	0.43
2:J:27:TYR:O	2:J:40:SER:N	2.45	0.43
2:J:58:LYS:HE2	2:J:58:LYS:HB2	1.77	0.43
1:A:19:GLU:CD	1:A:218:SER:HB3	2.44	0.43
1:A:575:LEU:HA	1:A:578:VAL:HG12	2.01	0.43
1:A:589:ILE:C	1:A:590:LYS:HE2	2.43	0.43
1:A:1643:LEU:HD22	1:A:1694:TYR:O	2.18	0.43
1:B:641:ASP:O	1:B:1634:PRO:HG2	2.18	0.43
1:B:3974:GLN:NE2	1:B:4012:ILE:HD11	2.34	0.43
1:C:427:ASN:HB3	1:C:431:ARG:CZ	2.49	0.43
1:C:575:LEU:HA	1:C:578:VAL:HG12	2.01	0.43
1:C:656:ARG:NH2	1:C:835:GLU:OE2	2.52	0.43
1:C:695:VAL:HG11	1:C:755:ILE:HD12	2.01	0.43
1:C:697:TRP:HB2	1:C:766:ILE:HD13	2.01	0.43
1:C:900:LEU:HD23	1:C:902:TRP:HE1	1.84	0.43
1:C:1117:TRP:HZ3	1:C:1166:VAL:HB	1.82	0.43
1:C:1255:LEU:HD22	1:C:1384:LEU:HD12	2.00	0.43
1:C:2191:MET:HE2	1:C:2195:CYS:SG	2.59	0.43
1:C:4199:MET:HE3	1:C:4199:MET:HB3	1.91	0.43
1:C:4640:PRO:HG2	1:C:4646:LYS:HA	2.00	0.43
1:C:4649:LYS:HA	1:C:4652:VAL:HG12	2.01	0.43
1:D:1255:LEU:HD22	1:D:1384:LEU:HB2	2.00	0.43
1:D:1643:LEU:HD22	1:D:1694:TYR:O	2.18	0.43
1:D:3860:GLN:NE2	1:D:3866:THR:HA	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3950:PHE:CD1	1:D:3970:LEU:HD21	2.54	0.43
2:J:39:SER:O	2:J:43:ARG:NH1	2.51	0.43
1:A:769:ARG:HA	1:A:774:PRO:HA	1.99	0.43
1:A:3730:LEU:HD11	1:A:3764:ILE:CD1	2.48	0.43
1:A:4182:LYS:HD3	1:B:4905:GLU:OE2	2.18	0.43
1:A:4889:ILE:HD11	1:A:4914:LEU:HD23	2.00	0.43
1:B:370:LEU:HB2	1:B:393:MET:HE2	2.01	0.43
1:B:1747:HIS:O	1:B:1747:HIS:ND1	2.51	0.43
1:B:2712:ILE:HD13	1:B:2775:LYS:HE2	2.00	0.43
1:B:3860:GLN:NE2	1:B:3866:THR:HA	2.34	0.43
1:B:4659:PHE:HD2	1:B:4660:TYR:CE1	2.37	0.43
1:C:360:ILE:HG23	1:C:402:GLY:HA2	2.00	0.43
1:C:558:LEU:HG	1:C:571:ILE:HG23	2.01	0.43
1:C:1255:LEU:HD22	1:C:1384:LEU:HB2	2.00	0.43
1:C:1789:LYS:HB2	1:C:1835:PHE:HE1	1.83	0.43
1:C:4653:MET:O	1:C:4657:GLY:N	2.51	0.43
1:D:311:ASP:N	1:D:311:ASP:OD1	2.51	0.43
1:D:677:LEU:CD1	1:D:695:VAL:HG21	2.48	0.43
1:D:695:VAL:HG11	1:D:755:ILE:HD12	2.01	0.43
1:D:900:LEU:HD23	1:D:902:TRP:HE1	1.83	0.43
1:D:1255:LEU:HD22	1:D:1384:LEU:HD12	2.00	0.43
1:D:2335:ARG:O	1:D:2335:ARG:HG3	2.18	0.43
1:D:4044:LYS:HE2	1:D:4044:LYS:HB3	1.91	0.43
1:D:4143:ARG:NH1	1:D:4961:TYR:OH	2.51	0.43
1:D:4614:LEU:HA	1:D:4618:GLU:HG3	2.00	0.43
1:A:2191:MET:HE2	1:A:2195:CYS:SG	2.59	0.43
1:A:4126:ASN:HA	1:A:4129:GLN:HG2	2.00	0.43
1:A:4773:LEU:HD12	1:A:4857:LEU:HB3	2.00	0.43
1:B:190:ARG:HD3	1:B:205:ALA:O	2.18	0.43
1:B:603:LYS:O	1:B:1586:ARG:HG3	2.19	0.43
1:B:2335:ARG:O	1:B:2335:ARG:HG3	2.18	0.43
1:B:4793:ASN:O	1:B:4795:SER:N	2.49	0.43
1:C:541:ILE:HG22	1:C:541:ILE:O	2.18	0.43
1:C:2234:ARG:HA	1:C:2234:ARG:HD2	1.87	0.43
1:C:3954:GLN:OE1	1:C:4012:ILE:HG13	2.19	0.43
1:C:3992:GLY:N	1:C:4108:MET:HE1	2.34	0.43
1:C:4274:THR:OG1	1:C:4278:MET:HE3	2.18	0.43
1:D:659:ILE:HG13	1:D:822:CYS:HB3	2.00	0.43
1:D:769:ARG:HA	1:D:774:PRO:HA	1.99	0.43
1:D:1962:ARG:HB3	1:D:1974:MET:HE1	2.00	0.43
1:D:4850:PHE:CD1	1:D:4854:ILE:HD11	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4889:ILE:HD11	1:D:4914:LEU:HD23	2.00	0.43
1:A:370:LEU:HB2	1:A:393:MET:HE2	2.01	0.42
1:A:1255:LEU:HD22	1:A:1384:LEU:HD12	2.00	0.42
1:A:1906:CYS:O	1:A:1910:GLN:HG3	2.19	0.42
1:A:1962:ARG:HB3	1:A:1974:MET:HE1	2.00	0.42
1:A:2776:GLU:O	1:A:2780:THR:HG23	2.19	0.42
1:A:2856:LYS:HA	1:A:2859:LEU:HG	2.00	0.42
1:A:4850:PHE:CD1	1:A:4854:ILE:HD11	2.54	0.42
1:B:446:ASP:O	1:B:448:PRO:HD3	2.18	0.42
1:B:677:LEU:CD1	1:B:695:VAL:HG21	2.48	0.42
1:B:1706:LEU:O	1:B:1710:ILE:HG13	2.19	0.42
1:B:2343:LEU:O	1:B:2347:GLU:HG2	2.18	0.42
1:B:2776:GLU:O	1:B:2780:THR:HG23	2.19	0.42
1:B:4614:LEU:HA	1:B:4618:GLU:HG3	2.00	0.42
1:C:189:GLU:OE2	1:D:2321:ARG:NH2	2.52	0.42
1:C:427:ASN:HB3	1:C:431:ARG:HH22	1.82	0.42
1:C:839:GLU:HG2	1:C:840:TYR:N	2.29	0.42
1:C:3621:GLN:O	1:C:3624:GLU:HG3	2.18	0.42
1:C:4116:THR:HA	1:C:4119:GLU:HG2	2.01	0.42
1:D:446:ASP:O	1:D:448:PRO:HD3	2.18	0.42
1:D:530:LEU:HD23	1:D:530:LEU:HA	1.87	0.42
1:D:603:LYS:O	1:D:1586:ARG:HG3	2.19	0.42
1:D:669:GLN:HB3	1:D:673:TRP:HZ2	1.84	0.42
1:D:2383:MET:O	1:D:2387:ILE:HG12	2.19	0.42
1:D:4773:LEU:HD12	1:D:4857:LEU:HB3	2.00	0.42
1:A:49:LEU:HD12	1:A:201:TRP:HB3	2.00	0.42
1:A:677:LEU:CD1	1:A:695:VAL:HG21	2.48	0.42
1:A:1249:MET:HE2	1:A:1249:MET:HB2	1.84	0.42
1:A:1629:MET:HE2	1:A:1642:ILE:HD13	2.01	0.42
1:A:4494:ALA:HB1	1:A:4592:LEU:HD13	2.01	0.42
1:B:655:MET:HE1	1:B:836:HIS:ND1	2.35	0.42
1:B:798:ILE:HD12	1:B:798:ILE:HA	1.92	0.42
1:B:1906:CYS:O	1:B:1910:GLN:HG3	2.20	0.42
1:B:4649:LYS:HA	1:B:4652:VAL:HG12	2.01	0.42
1:B:4889:ILE:HD11	1:B:4914:LEU:HD23	2.00	0.42
1:C:1629:MET:HE3	1:C:1685:GLN:NE2	2.17	0.42
1:C:1906:CYS:O	1:C:1910:GLN:HG3	2.19	0.42
1:C:2065:MET:HE1	1:C:2083:MET:CG	2.48	0.42
1:C:2477:ILE:HG21	1:C:2483:LEU:HD13	2.01	0.42
1:C:3950:PHE:CD1	1:C:3970:LEU:HD21	2.54	0.42
1:C:4126:ASN:HA	1:C:4129:GLN:HG2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4659:PHE:HD2	1:C:4660:TYR:CE1	2.37	0.42
1:D:49:LEU:HD12	1:D:201:TRP:HB3	2.00	0.42
1:D:418:VAL:O	1:D:422:THR:HG22	2.19	0.42
1:D:1771:SER:HA	2:J:56:VAL:HA	2.02	0.42
1:D:2065:MET:HE1	1:D:2083:MET:CG	2.48	0.42
1:D:3992:GLY:N	1:D:4108:MET:HE1	2.34	0.42
1:D:4640:PRO:O	1:D:4646:LYS:NZ	2.43	0.42
1:D:4649:LYS:HA	1:D:4652:VAL:HG12	2.01	0.42
1:A:1102:TYR:O	1:A:1238:PRO:HA	2.20	0.42
1:A:2383:MET:O	1:A:2387:ILE:HG12	2.19	0.42
1:A:4614:LEU:HA	1:A:4618:GLU:HG3	2.00	0.42
1:B:418:VAL:O	1:B:422:THR:HG22	2.19	0.42
1:B:427:ASN:HB3	1:B:431:ARG:CZ	2.49	0.42
1:B:1700:ARG:NH1	1:B:1817:PHE:O	2.53	0.42
1:B:2856:LYS:HA	1:B:2859:LEU:HG	2.00	0.42
1:B:3901:GLY:O	1:B:3905:PHE:HD2	2.01	0.42
1:B:4494:ALA:HB1	1:B:4592:LEU:HD13	2.02	0.42
1:B:4694:SER:O	1:B:4694:SER:OG	2.33	0.42
1:C:669:GLN:HB3	1:C:673:TRP:HZ2	1.84	0.42
1:C:2128:LEU:HD11	1:C:2140:LEU:HB2	2.01	0.42
1:C:4764:LYS:O	1:C:4767:VAL:HG22	2.19	0.42
1:D:35:LEU:HB3	1:D:49:LEU:HD22	1.99	0.42
1:D:370:LEU:CB	1:D:393:MET:HG2	2.45	0.42
1:D:436:LEU:HD21	1:D:517:VAL:HG12	2.00	0.42
1:D:697:TRP:HB2	1:D:766:ILE:HD13	2.01	0.42
1:D:1906:CYS:O	1:D:1910:GLN:HG3	2.19	0.42
1:D:2191:MET:HE2	1:D:2195:CYS:SG	2.59	0.42
1:A:946:LEU:HD23	1:A:946:LEU:HA	1.90	0.42
1:A:1968:PRO:HA	1:A:1971:GLN:HB3	2.00	0.42
1:A:3732:ASP:HA	1:A:3775:LYS:HZ1	1.85	0.42
1:A:3878:LEU:HD21	1:A:3938:ARG:HH21	1.85	0.42
1:A:3954:GLN:OE1	1:A:4012:ILE:HG13	2.19	0.42
1:A:4659:PHE:HD2	1:A:4660:TYR:CE1	2.37	0.42
1:A:4764:LYS:O	1:A:4767:VAL:HG22	2.19	0.42
1:B:697:TRP:HB2	1:B:766:ILE:HD13	2.01	0.42
1:B:773:GLN:H	1:B:773:GLN:HG2	1.70	0.42
1:B:1789:LYS:HB2	1:B:1835:PHE:HE1	1.83	0.42
1:B:2850:ILE:HG13	1:B:2851:TRP:N	2.35	0.42
1:B:4753:ARG:HH11	1:B:4756:LEU:HD22	1.85	0.42
1:C:24:CYS:HB3	1:C:212:TRP:CE3	2.55	0.42
1:C:1706:LEU:O	1:C:1710:ILE:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2850:ILE:HG13	1:C:2851:TRP:N	2.34	0.42
1:C:4645:ASP:OD1	1:C:4645:ASP:C	2.62	0.42
1:D:370:LEU:HB2	1:D:393:MET:HE2	2.01	0.42
1:D:427:ASN:HB3	1:D:431:ARG:CZ	2.49	0.42
1:D:575:LEU:HA	1:D:578:VAL:HG12	2.01	0.42
1:D:655:MET:HE1	1:D:836:HIS:ND1	2.34	0.42
1:D:656:ARG:NH2	1:D:835:GLU:OE2	2.52	0.42
1:D:1747:HIS:O	1:D:1747:HIS:ND1	2.51	0.42
1:D:2161:MET:HE2	1:D:2161:MET:N	2.34	0.42
1:D:3612:ARG:NH1	1:D:3612:ARG:O	2.51	0.42
1:D:3878:LEU:HD21	1:D:3938:ARG:HH21	1.85	0.42
1:D:3925:GLY:O	1:D:3927:CYS:N	2.51	0.42
1:D:3954:GLN:OE1	1:D:4012:ILE:HG13	2.19	0.42
1:D:4494:ALA:HB1	1:D:4592:LEU:HD13	2.01	0.42
1:D:4653:MET:O	1:D:4657:GLY:N	2.51	0.42
1:A:695:VAL:HG11	1:A:755:ILE:HD12	2.01	0.42
1:A:4138:MET:HE2	1:A:4138:MET:HB2	1.86	0.42
2:G:8:ILE:HD12	2:G:72:ARG:HG2	2.02	0.42
1:B:1771:SER:HA	2:H:56:VAL:HA	2.02	0.42
1:B:2128:LEU:HD11	1:B:2140:LEU:HB2	2.01	0.42
1:B:3950:PHE:CD1	1:B:3970:LEU:HD21	2.54	0.42
1:B:3992:GLY:N	1:B:4108:MET:HE1	2.34	0.42
1:B:4116:THR:HA	1:B:4119:GLU:HG2	2.01	0.42
1:B:4778:TYR:OH	1:C:4515:LEU:HD23	2.20	0.42
1:C:603:LYS:O	1:C:1586:ARG:HG3	2.19	0.42
1:C:2161:MET:HE2	1:C:2161:MET:N	2.34	0.42
1:C:2254:LEU:O	1:C:3809:ARG:NH1	2.50	0.42
1:C:3720:LYS:HE3	1:C:3720:LYS:HB2	1.87	0.42
1:C:3898:ASP:OD1	1:C:3898:ASP:N	2.45	0.42
1:C:4494:ALA:HB1	1:C:4592:LEU:HD13	2.01	0.42
1:C:4778:TYR:OH	1:D:4515:LEU:HD23	2.19	0.42
1:D:24:CYS:HB3	1:D:212:TRP:CE3	2.55	0.42
1:D:360:ILE:HG23	1:D:402:GLY:HA2	2.00	0.42
1:D:3974:GLN:NE2	1:D:4012:ILE:HD11	2.34	0.42
1:A:659:ILE:HG13	1:A:822:CYS:HB3	2.00	0.42
1:A:1591:PHE:CZ	1:A:1593:SER:HB2	2.55	0.42
1:A:1706:LEU:O	1:A:1710:ILE:HG13	2.19	0.42
1:A:1715:TYR:OH	1:A:1719:ARG:NH1	2.47	0.42
1:A:2161:MET:HE2	1:A:2161:MET:N	2.34	0.42
1:A:3950:PHE:CD1	1:A:3970:LEU:HD21	2.54	0.42
1:A:4753:ARG:HH11	1:A:4756:LEU:HD22	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:868:ASP:OD1	1:B:868:ASP:N	2.53	0.42
1:B:1715:TYR:OH	1:B:1719:ARG:NH1	2.47	0.42
1:B:2492:LEU:O	1:B:2496:ARG:HG3	2.19	0.42
1:B:3712:SER:O	1:B:3712:SER:OG	2.34	0.42
1:B:4159:TRP:NE1	1:B:4915:ALA:HB2	2.35	0.42
1:C:19:GLU:CD	1:C:218:SER:HB3	2.44	0.42
1:C:370:LEU:HB2	1:C:393:MET:HE2	2.01	0.42
1:C:1102:TYR:O	1:C:1238:PRO:HA	2.20	0.42
1:C:2492:LEU:O	1:C:2496:ARG:HG3	2.19	0.42
1:C:2722:LYS:HD2	1:C:2722:LYS:HA	1.88	0.42
1:D:447:LEU:HD23	1:D:447:LEU:HA	1.93	0.42
1:D:2492:LEU:O	1:D:2496:ARG:HG3	2.19	0.42
1:A:558:LEU:HG	1:A:571:ILE:HG23	2.01	0.42
1:A:2477:ILE:HG21	1:A:2483:LEU:HD13	2.01	0.42
1:A:3992:GLY:N	1:A:4108:MET:HE1	2.34	0.42
1:B:19:GLU:CD	1:B:218:SER:HB3	2.44	0.42
1:B:250:GLY:HA2	1:B:257:ARG:HD3	2.02	0.42
1:B:1968:PRO:HA	1:B:1971:GLN:HB3	2.00	0.42
1:C:2144:GLY:O	1:C:2148:ILE:HG12	2.20	0.42
1:D:137:ARG:NH1	1:D:138:SER:OG	2.53	0.42
1:D:1102:TYR:O	1:D:1238:PRO:HA	2.20	0.42
1:D:1700:ARG:NH1	1:D:1817:PHE:O	2.53	0.42
1:A:2316:ALA:O	1:A:2320:VAL:HG23	2.20	0.42
1:A:3860:GLN:NE2	1:A:3866:THR:HA	2.34	0.42
1:A:4273:MET:N	1:C:4836:ASP:OD2	2.53	0.42
1:A:4513:PHE:O	1:A:4516:LEU:HB2	2.20	0.42
1:B:558:LEU:HG	1:B:571:ILE:HG23	2.01	0.42
1:B:1100:ARG:HB3	1:B:1236:TYR:CG	2.55	0.42
1:B:2161:MET:HE2	1:B:2161:MET:N	2.34	0.42
1:B:2334:LEU:HA	1:B:2341:GLY:HA2	2.02	0.42
1:B:4173:PHE:CD1	1:B:4879:VAL:HG21	2.55	0.42
2:H:8:ILE:HD12	2:H:72:ARG:HG2	2.02	0.42
1:C:692:HIS:O	1:C:794:PHE:HA	2.20	0.42
1:C:1106:GLU:HG2	1:C:1161:VAL:HG12	2.02	0.42
1:C:1691:GLU:HG2	1:C:1791:LYS:CE	2.48	0.42
1:C:2278:MET:O	1:C:2282:LYS:HG2	2.20	0.42
1:C:3802:LEU:HB2	1:C:3883:SER:OG	2.20	0.42
1:C:4159:TRP:NE1	1:C:4915:ALA:HB2	2.35	0.42
1:C:4490:LEU:HG	1:C:4591:CYS:SG	2.60	0.42
1:C:4793:ASN:O	1:C:4795:SER:N	2.49	0.42
1:D:692:HIS:O	1:D:794:PHE:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2776:GLU:O	1:D:2780:THR:HG23	2.19	0.42
1:D:2850:ILE:HG13	1:D:2851:TRP:N	2.35	0.42
1:A:137:ARG:NH1	1:A:138:SER:OG	2.53	0.42
1:A:189:GLU:OE2	1:B:2321:ARG:NH2	2.51	0.42
1:A:669:GLN:HB3	1:A:673:TRP:HZ2	1.84	0.42
1:A:1254:ARG:NH1	1:A:1254:ARG:CB	2.73	0.42
1:A:1691:GLU:HG2	1:A:1791:LYS:CE	2.48	0.42
1:A:1771:SER:HA	2:G:56:VAL:HA	2.02	0.42
1:A:2334:LEU:HA	1:A:2341:GLY:HA2	2.02	0.42
1:A:2850:ILE:HG13	1:A:2851:TRP:N	2.34	0.42
1:A:3802:LEU:HB2	1:A:3883:SER:OG	2.20	0.42
1:A:4116:THR:HA	1:A:4119:GLU:HG2	2.01	0.42
1:A:4159:TRP:NE1	1:A:4915:ALA:HB2	2.35	0.42
1:B:189:GLU:OE2	1:C:2321:ARG:NH2	2.52	0.42
1:B:459:LEU:HG	1:B:463:PHE:HE2	1.85	0.42
1:B:894:VAL:O	1:B:898:ILE:HG13	2.20	0.42
1:B:1106:GLU:HG2	1:B:1161:VAL:HG12	2.02	0.42
1:B:1294:ASN:ND2	1:B:1296:ASN:OD1	2.52	0.42
1:B:2250:ASN:OD1	1:B:3816:LEU:HD12	2.20	0.42
1:B:3888:TYR:CD1	1:B:3953:MET:HE1	2.55	0.42
1:B:4640:PRO:HG2	1:B:4646:LYS:HA	2.00	0.42
1:B:4941:LYS:HE2	1:B:4941:LYS:HB3	1.90	0.42
1:C:801:ARG:NH1	1:C:1614:GLU:OE2	2.48	0.42
1:C:929:ARG:HA	1:C:932:ASN:HD21	1.85	0.42
1:C:1679:SER:HB3	1:C:1769:PHE:CE2	2.55	0.42
1:C:1700:ARG:NH1	1:C:1817:PHE:O	2.53	0.42
1:C:3732:ASP:HA	1:C:3775:LYS:HZ1	1.85	0.42
1:C:3878:LEU:HD21	1:C:3938:ARG:HH21	1.85	0.42
1:C:4594:VAL:N	1:C:4595:PRO:HD2	2.35	0.42
1:D:19:GLU:HG3	1:D:68:VAL:HG22	2.02	0.42
1:D:837:SER:N	1:D:841:LYS:HZ1	2.17	0.42
1:D:982:ASP:OD2	1:D:985:PHE:HB2	2.20	0.42
1:D:1043:LYS:HE3	1:D:1047:LYS:HZ1	1.83	0.42
1:D:2086:LEU:O	1:D:2090:GLN:HG2	2.20	0.42
1:D:4645:ASP:OD1	1:D:4645:ASP:C	2.62	0.42
1:A:24:CYS:HB3	1:A:212:TRP:CE3	2.55	0.42
1:A:427:ASN:HB3	1:A:431:ARG:CZ	2.49	0.42
1:A:837:SER:N	1:A:841:LYS:HZ1	2.17	0.42
1:A:1100:ARG:HB3	1:A:1236:TYR:CG	2.55	0.42
1:A:1679:SER:HB3	1:A:1769:PHE:CE2	2.55	0.42
1:A:2492:LEU:O	1:A:2496:ARG:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4594:VAL:N	1:A:4595:PRO:HD2	2.35	0.42
1:B:19:GLU:HG3	1:B:68:VAL:HG22	2.02	0.42
1:B:467:ASP:OD1	1:B:468:GLU:N	2.53	0.42
1:B:669:GLN:HB3	1:B:673:TRP:HZ2	1.84	0.42
1:B:1255:LEU:HD22	1:B:1384:LEU:HD12	2.00	0.42
1:B:2144:GLY:O	1:B:2148:ILE:HG12	2.20	0.42
1:B:2477:ILE:HG21	1:B:2483:LEU:HD13	2.01	0.42
1:C:161:THR:HG23	1:C:184:VAL:HB	2.02	0.42
1:C:250:GLY:HA2	1:C:257:ARG:HD3	2.02	0.42
1:C:677:LEU:N	1:C:755:ILE:O	2.50	0.42
1:C:1100:ARG:HB3	1:C:1236:TYR:CG	2.55	0.42
1:C:1100:ARG:HB2	1:C:1236:TYR:HA	2.02	0.42
1:C:2079:LEU:CD2	1:C:2083:MET:HE2	2.50	0.42
1:C:2383:MET:O	1:C:2387:ILE:HG12	2.20	0.42
1:C:3974:GLN:NE2	1:C:4012:ILE:HD11	2.34	0.42
1:D:1591:PHE:CZ	1:D:1593:SER:HB2	2.55	0.42
1:D:1679:SER:HB3	1:D:1769:PHE:CE2	2.55	0.42
1:D:2722:LYS:HD2	1:D:2722:LYS:HA	1.88	0.42
1:D:4513:PHE:O	1:D:4516:LEU:HB2	2.20	0.42
1:A:250:GLY:HA2	1:A:257:ARG:HD3	2.02	0.41
1:A:459:LEU:HG	1:A:463:PHE:HE2	1.85	0.41
1:A:606:ARG:HH12	1:A:1635:GLU:CD	2.24	0.41
1:A:655:MET:HE1	1:A:836:HIS:ND1	2.35	0.41
1:A:982:ASP:OD2	1:A:985:PHE:HB2	2.20	0.41
1:A:1700:ARG:NH1	1:A:1817:PHE:O	2.53	0.41
1:A:2079:LEU:CD2	1:A:2083:MET:HE2	2.50	0.41
1:A:2128:LEU:HD11	1:A:2140:LEU:HB2	2.01	0.41
1:A:3985:LEU:HD22	1:A:3988:ASN:ND2	2.35	0.41
1:A:4813:MET:SD	1:D:4843:ILE:HD11	2.60	0.41
1:B:24:CYS:HB3	1:B:212:TRP:CE3	2.55	0.41
1:B:677:LEU:N	1:B:755:ILE:O	2.50	0.41
1:B:1100:ARG:HB2	1:B:1236:TYR:HA	2.02	0.41
1:B:1591:PHE:CZ	1:B:1593:SER:HB2	2.55	0.41
1:B:2316:ALA:O	1:B:2320:VAL:HG23	2.20	0.41
1:B:3612:ARG:O	1:B:3612:ARG:NH1	2.51	0.41
1:B:3878:LEU:HD21	1:B:3938:ARG:HH21	1.85	0.41
1:B:4490:LEU:HG	1:B:4591:CYS:SG	2.60	0.41
1:B:4645:ASP:OD1	1:B:4645:ASP:C	2.63	0.41
1:C:137:ARG:NH1	1:C:138:SER:OG	2.53	0.41
1:C:516:ASP:OD1	1:C:516:ASP:N	2.53	0.41
1:C:894:VAL:O	1:C:898:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3664:HIS:HD2	1:C:3733:ARG:O	2.03	0.41
1:C:4173:PHE:CD1	1:C:4879:VAL:HG21	2.55	0.41
1:C:4753:ARG:HH11	1:C:4756:LEU:HD22	1.85	0.41
1:D:459:LEU:HG	1:D:463:PHE:HE2	1.85	0.41
1:D:801:ARG:NH1	1:D:1619:LEU:HB2	2.35	0.41
1:D:1789:LYS:HB2	1:D:1835:PHE:CE1	2.55	0.41
1:D:4159:TRP:NE1	1:D:4915:ALA:HB2	2.35	0.41
1:D:4173:PHE:CD1	1:D:4879:VAL:HG21	2.55	0.41
1:A:227:TYR:CD2	1:A:352:SER:HB2	2.55	0.41
1:A:692:HIS:O	1:A:794:PHE:HA	2.20	0.41
1:A:894:VAL:O	1:A:898:ILE:HG13	2.20	0.41
1:A:900:LEU:HD23	1:A:902:TRP:NE1	2.36	0.41
1:A:1730:MET:SD	1:A:2106:THR:OG1	2.77	0.41
1:A:2250:ASN:OD1	1:A:3816:LEU:HD12	2.20	0.41
1:A:4173:PHE:CD1	1:A:4879:VAL:HG21	2.55	0.41
1:A:4649:LYS:HA	1:A:4652:VAL:HG12	2.01	0.41
1:B:138:SER:HB3	1:B:140:THR:HG22	2.03	0.41
1:B:358:ASP:OD1	1:B:358:ASP:N	2.46	0.41
1:B:3802:LEU:HB2	1:B:3883:SER:OG	2.20	0.41
1:C:1629:MET:HE2	1:C:1642:ILE:HD13	2.02	0.41
1:D:658:ASN:HB2	1:D:832:LEU:HD12	2.03	0.41
1:D:2144:GLY:O	1:D:2148:ILE:HG12	2.20	0.41
1:A:795:SER:OG	1:A:796:ALA:N	2.54	0.41
1:A:2086:LEU:O	1:A:2090:GLN:HG2	2.20	0.41
1:B:658:ASN:HB2	1:B:832:LEU:HD12	2.03	0.41
1:B:929:ARG:HA	1:B:932:ASN:HD21	1.85	0.41
1:B:2290:ASN:HD22	1:B:2291:PRO:CD	2.30	0.41
1:B:2383:MET:O	1:B:2387:ILE:HG12	2.19	0.41
1:C:564:ARG:O	1:C:565:LEU:HB3	2.21	0.41
1:C:795:SER:OG	1:C:796:ALA:N	2.54	0.41
1:C:1571:LEU:HD23	1:C:1571:LEU:HA	1.87	0.41
1:C:2086:LEU:O	1:C:2090:GLN:HG2	2.20	0.41
1:C:2250:ASN:OD1	1:C:3816:LEU:HD12	2.20	0.41
1:C:4505:LEU:HD22	1:C:4749:PHE:CE2	2.55	0.41
1:C:4513:PHE:O	1:C:4516:LEU:HB2	2.20	0.41
1:D:250:GLY:HA2	1:D:257:ARG:HD3	2.02	0.41
1:D:894:VAL:O	1:D:898:ILE:HG13	2.20	0.41
1:D:900:LEU:HD23	1:D:902:TRP:NE1	2.36	0.41
1:D:2316:ALA:O	1:D:2320:VAL:HG23	2.20	0.41
1:D:4659:PHE:HD2	1:D:4660:TYR:CE1	2.37	0.41
1:D:4753:ARG:HH11	1:D:4756:LEU:HD22	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3923:ILE:HD12	1:A:3984:MET:HG2	2.03	0.41
1:A:4604:GLU:HG3	1:A:4605:VAL:N	2.36	0.41
1:A:4941:LYS:HE2	1:A:4941:LYS:HB3	1.90	0.41
1:B:373:THR:OG1	1:B:392:ILE:O	2.21	0.41
1:B:721:ASP:OD1	1:B:724:SER:HB2	2.21	0.41
1:B:982:ASP:OD2	1:B:985:PHE:HB2	2.20	0.41
1:B:1764:PHE:HD1	1:B:1780:SER:HB2	1.86	0.41
1:B:2086:LEU:O	1:B:2090:GLN:HG2	2.20	0.41
1:B:2278:MET:O	1:B:2282:LYS:HG2	2.20	0.41
1:B:3925:GLY:O	1:B:3927:CYS:N	2.51	0.41
1:B:4009:VAL:O	1:B:4012:ILE:HG22	2.20	0.41
1:B:4505:LEU:HD22	1:B:4749:PHE:CE2	2.55	0.41
1:C:370:LEU:CB	1:C:393:MET:HG2	2.45	0.41
1:C:459:LEU:HG	1:C:463:PHE:HE2	1.85	0.41
1:C:530:LEU:HD23	1:C:530:LEU:HA	1.86	0.41
1:C:1969:GLN:O	1:C:1972:ILE:HG22	2.21	0.41
1:C:4042:ILE:CG2	1:C:4047:PHE:HB2	2.46	0.41
2:I:43:ARG:H	2:I:43:ARG:HG2	1.71	0.41
1:D:1629:MET:HE2	1:D:1642:ILE:HD13	2.02	0.41
1:D:4009:VAL:O	1:D:4012:ILE:HG22	2.20	0.41
1:D:4116:THR:HA	1:D:4119:GLU:HG2	2.01	0.41
1:D:4490:LEU:HG	1:D:4591:CYS:SG	2.60	0.41
1:D:4594:VAL:N	1:D:4595:PRO:HD2	2.35	0.41
1:A:467:ASP:OD1	1:A:468:GLU:N	2.53	0.41
1:A:697:TRP:HB2	1:A:766:ILE:HD13	2.01	0.41
1:A:801:ARG:NH1	1:A:1619:LEU:HB2	2.35	0.41
1:A:929:ARG:HA	1:A:932:ASN:HD21	1.85	0.41
1:A:1969:GLN:O	1:A:1972:ILE:HG22	2.21	0.41
1:A:2278:MET:O	1:A:2282:LYS:HG2	2.20	0.41
1:A:4039:LYS:HB2	1:A:4039:LYS:HE2	1.88	0.41
1:A:4720:TYR:OH	1:A:4744:ASP:HA	2.21	0.41
1:B:161:THR:HG23	1:B:184:VAL:HB	2.02	0.41
1:B:332:ARG:NH1	1:B:364:GLN:OE1	2.54	0.41
1:B:564:ARG:O	1:B:565:LEU:HB3	2.20	0.41
1:B:692:HIS:O	1:B:794:PHE:HA	2.20	0.41
1:B:1629:MET:HE2	1:B:1642:ILE:HD13	2.01	0.41
1:B:1969:GLN:O	1:B:1972:ILE:HG22	2.21	0.41
1:B:4509:PHE:HZ	1:B:4745:ILE:HD12	1.86	0.41
1:B:4513:PHE:O	1:B:4516:LEU:HB2	2.20	0.41
1:C:1294:ASN:ND2	1:C:1296:ASN:OD1	2.52	0.41
1:C:2193:ALA:HA	1:C:2236:SER:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3888:TYR:CD1	1:C:3953:MET:HE1	2.55	0.41
1:C:3923:ILE:HD12	1:C:3984:MET:HG2	2.03	0.41
1:C:4604:GLU:HG3	1:C:4605:VAL:N	2.36	0.41
1:C:4860:ILE:HD13	1:D:4755:ILE:CG2	2.50	0.41
2:I:63:GLY:O	2:I:66:GLN:HG3	2.20	0.41
1:D:4070:GLU:OE1	1:D:4070:GLU:N	2.51	0.41
1:A:161:THR:HG23	1:A:184:VAL:HB	2.02	0.41
1:A:3888:TYR:CD1	1:A:3953:MET:HE1	2.55	0.41
1:A:4621:SER:OG	1:A:4623:ASP:OD1	2.19	0.41
1:B:137:ARG:NH1	1:B:138:SER:OG	2.53	0.41
1:B:801:ARG:NH1	1:B:1619:LEU:HB2	2.35	0.41
1:B:1571:LEU:HD23	1:B:1571:LEU:HA	1.87	0.41
1:B:3664:HIS:HD2	1:B:3733:ARG:O	2.03	0.41
1:C:837:SER:HB3	1:C:841:LYS:NZ	2.35	0.41
1:C:900:LEU:HD23	1:C:902:TRP:NE1	2.36	0.41
1:C:1676:ALA:HB1	1:C:1680:HIS:CE1	2.56	0.41
1:C:3985:LEU:HD22	1:C:3988:ASN:ND2	2.35	0.41
1:C:4720:TYR:OH	1:C:4744:ASP:HA	2.21	0.41
1:D:467:ASP:OD1	1:D:468:GLU:N	2.53	0.41
1:D:1706:LEU:O	1:D:1710:ILE:HG13	2.19	0.41
2:J:8:ILE:HD12	2:J:72:ARG:HG2	2.02	0.41
1:A:1681:VAL:HG23	1:A:1682:ASP:N	2.28	0.41
1:A:2144:GLY:O	1:A:2148:ILE:HG12	2.20	0.41
1:A:3539:UNK:HA	1:D:1241:VAL:HG21	2.01	0.41
1:B:343:ARG:HH21	1:B:345:GLU:H	1.69	0.41
1:B:3923:ILE:HD12	1:B:3984:MET:HG2	2.03	0.41
1:B:4579:THR:OG1	1:B:4732:HIS:NE2	2.44	0.41
1:B:4720:TYR:OH	1:B:4744:ASP:HA	2.21	0.41
2:H:27:TYR:O	2:H:40:SER:N	2.45	0.41
2:H:28:THR:O	2:H:28:THR:OG1	2.35	0.41
1:C:152:ASP:OD2	1:C:154:THR:OG1	2.39	0.41
1:C:801:ARG:NH1	1:C:1619:LEU:HB2	2.35	0.41
1:C:982:ASP:OD2	1:C:985:PHE:HB2	2.20	0.41
1:C:2479:VAL:HB	1:C:2482:PHE:HB3	2.03	0.41
1:C:3799:CYS:HB3	1:C:3835:THR:OG1	2.21	0.41
1:C:4182:LYS:HA	1:C:4182:LYS:HD2	1.85	0.41
1:D:161:THR:HG23	1:D:184:VAL:HB	2.02	0.41
1:D:1764:PHE:HD1	1:D:1780:SER:HB2	1.86	0.41
1:D:2278:MET:O	1:D:2282:LYS:HG2	2.20	0.41
1:D:3732:ASP:HA	1:D:3775:LYS:HZ1	1.86	0.41
1:D:4505:LEU:HD22	1:D:4749:PHE:CE2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4720:TYR:OH	1:D:4744:ASP:HA	2.21	0.41
2:J:63:GLY:O	2:J:66:GLN:HG3	2.20	0.41
1:A:138:SER:HB3	1:A:140:THR:HG22	2.03	0.41
1:A:564:ARG:HD2	1:A:566:GLU:OE2	2.21	0.41
1:A:658:ASN:HB2	1:A:832:LEU:HD12	2.03	0.41
1:A:837:SER:HB3	1:A:841:LYS:NZ	2.35	0.41
1:A:868:ASP:OD1	1:A:868:ASP:N	2.53	0.41
1:A:1676:ALA:HB1	1:A:1680:HIS:CE1	2.56	0.41
1:A:2193:ALA:HA	1:A:2236:SER:HB3	2.03	0.41
1:B:2479:VAL:HB	1:B:2482:PHE:HB3	2.03	0.41
1:B:3740:LEU:HD23	1:B:3740:LEU:HA	1.94	0.41
2:H:5:ILE:HG12	2:H:66:GLN:HE21	1.86	0.41
1:C:19:GLU:HG3	1:C:68:VAL:HG22	2.02	0.41
1:C:658:ASN:HB2	1:C:832:LEU:HD12	2.03	0.41
1:C:1771:SER:HA	2:I:56:VAL:HA	2.02	0.41
1:C:3849:HIS:HE1	1:C:3924:GLN:HG3	1.86	0.41
1:D:332:ARG:NH1	1:D:364:GLN:OE1	2.54	0.41
1:D:380:LYS:HD2	1:D:380:LYS:HA	1.76	0.41
1:D:696:GLY:HA3	1:D:726:GLY:HA2	2.03	0.41
1:D:1676:ALA:HB1	1:D:1680:HIS:CE1	2.56	0.41
1:D:2193:ALA:HA	1:D:2236:SER:HB3	2.03	0.41
1:D:2455:MET:HE3	1:D:2455:MET:HB2	1.86	0.41
1:D:2876:LEU:HB2	1:D:2881:LYS:HE3	2.03	0.41
1:D:3923:ILE:HD12	1:D:3984:MET:HG2	2.03	0.41
1:D:4604:GLU:HG3	1:D:4605:VAL:N	2.36	0.41
1:A:19:GLU:HG3	1:A:68:VAL:HG22	2.02	0.41
1:A:365:HIS:CD2	1:A:367:ASP:HB3	2.56	0.41
1:A:849:ASP:HA	1:A:1213:GLY:O	2.21	0.41
1:A:1719:ARG:CZ	1:A:1759:ARG:HE	2.34	0.41
1:A:1747:HIS:O	1:A:1747:HIS:ND1	2.51	0.41
1:A:3664:HIS:HD2	1:A:3733:ARG:O	2.03	0.41
1:A:3930:ASN:O	1:A:3934:LEU:HD23	2.21	0.41
1:A:4490:LEU:HG	1:A:4591:CYS:SG	2.60	0.41
1:A:4505:LEU:HD22	1:A:4749:PHE:CE2	2.55	0.41
1:A:4785:PHE:CG	1:A:4808:MET:HE1	2.56	0.41
1:A:4860:ILE:HD13	1:B:4755:ILE:CG2	2.51	0.41
2:G:63:GLY:O	2:G:66:GLN:HG3	2.20	0.41
1:B:795:SER:OG	1:B:796:ALA:N	2.54	0.41
1:B:837:SER:HB3	1:B:841:LYS:NZ	2.35	0.41
1:B:1102:TYR:O	1:B:1238:PRO:HA	2.20	0.41
1:B:1254:ARG:NH1	1:B:1254:ARG:CB	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1303:ARG:HG2	1:B:1304:LEU:N	2.36	0.41
1:B:1681:VAL:HG23	1:B:1682:ASP:N	2.28	0.41
1:B:2193:ALA:HA	1:B:2236:SER:HB3	2.03	0.41
1:B:3985:LEU:HD22	1:B:3988:ASN:ND2	2.35	0.41
1:B:4705:GLN:O	1:B:4709:LEU:HD23	2.21	0.41
1:B:4860:ILE:HD13	1:C:4755:ILE:CG2	2.50	0.41
2:H:63:GLY:O	2:H:66:GLN:HG3	2.20	0.41
1:C:138:SER:HB3	1:C:140:THR:HG22	2.02	0.41
1:C:227:TYR:CD2	1:C:352:SER:HB2	2.55	0.41
1:C:343:ARG:HH21	1:C:345:GLU:H	1.69	0.41
1:C:721:ASP:OD1	1:C:724:SER:HB2	2.21	0.41
1:C:1591:PHE:CZ	1:C:1593:SER:HB2	2.55	0.41
1:C:2316:ALA:O	1:C:2320:VAL:HG23	2.20	0.41
1:C:2328:GLU:HA	1:C:2335:ARG:CZ	2.51	0.41
1:C:2876:LEU:HB2	1:C:2881:LYS:HE3	2.03	0.41
1:C:4051:MET:HE1	1:C:4062:THR:HG22	2.03	0.41
1:C:4904:PHE:O	1:C:4908:THR:HG23	2.21	0.41
1:D:138:SER:HB3	1:D:140:THR:HG22	2.03	0.41
1:D:334:SER:OG	1:D:335:LYS:N	2.54	0.41
1:D:677:LEU:N	1:D:755:ILE:O	2.50	0.41
1:D:798:ILE:HD12	1:D:798:ILE:HA	1.92	0.41
1:D:1100:ARG:HB3	1:D:1236:TYR:CG	2.55	0.41
1:D:1303:ARG:HG2	1:D:1304:LEU:N	2.36	0.41
1:D:1680:HIS:HE2	2:J:91:VAL:HG22	1.86	0.41
1:D:2128:LEU:HD11	1:D:2140:LEU:HB2	2.01	0.41
1:D:2250:ASN:OD1	1:D:3816:LEU:HD12	2.20	0.41
1:D:2328:GLU:HA	1:D:2335:ARG:CZ	2.51	0.41
1:D:3664:HIS:HD2	1:D:3733:ARG:O	2.03	0.41
1:D:3849:HIS:HE1	1:D:3924:GLN:HG3	1.86	0.41
1:D:3888:TYR:CD1	1:D:3953:MET:HE1	2.55	0.41
1:D:3985:LEU:HD22	1:D:3988:ASN:ND2	2.35	0.41
1:D:4793:ASN:O	1:D:4795:SER:N	2.49	0.41
1:D:4904:PHE:O	1:D:4908:THR:HG23	2.21	0.41
1:A:1359:ILE:HG23	1:A:1363:LYS:HZ2	1.85	0.41
1:A:1680:HIS:HE2	2:G:91:VAL:HG22	1.86	0.41
1:A:1764:PHE:HD1	1:A:1780:SER:HB2	1.86	0.41
1:A:1789:LYS:HB2	1:A:1835:PHE:CE1	2.55	0.41
1:A:2762:LEU:HD23	1:A:2762:LEU:HA	1.93	0.41
1:A:4009:VAL:O	1:A:4012:ILE:HG22	2.20	0.41
1:A:4645:ASP:OD1	1:A:4645:ASP:C	2.63	0.41
1:A:4904:PHE:O	1:A:4908:THR:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1676:ALA:HB1	1:B:1680:HIS:CE1	2.56	0.41
1:B:1761:ARG:HH11	1:B:1761:ARG:CB	2.34	0.41
1:B:4051:MET:HE1	1:B:4062:THR:HG22	2.03	0.41
1:C:564:ARG:HD2	1:C:566:GLU:OE2	2.21	0.41
1:C:849:ASP:HA	1:C:1213:GLY:O	2.21	0.41
1:C:1764:PHE:HD1	1:C:1780:SER:HB2	1.86	0.41
1:C:1789:LYS:HB2	1:C:1835:PHE:CE1	2.55	0.41
1:C:1970:GLU:O	1:C:1974:MET:HG2	2.21	0.41
1:C:2334:LEU:HA	1:C:2341:GLY:HA2	2.02	0.41
1:C:4183:GLU:O	1:C:4187:LEU:HG	2.21	0.41
2:I:5:ILE:HG12	2:I:66:GLN:HE21	1.86	0.41
2:I:8:ILE:HD12	2:I:72:ARG:HG2	2.02	0.41
1:D:365:HIS:CD2	1:D:367:ASP:HB3	2.56	0.41
1:D:849:ASP:HA	1:D:1213:GLY:O	2.21	0.41
1:D:888:ASN:HA	1:D:891:GLU:HG2	2.02	0.41
1:D:1571:LEU:HD23	1:D:1571:LEU:HA	1.87	0.41
1:D:1969:GLN:O	1:D:1972:ILE:HG22	2.21	0.41
1:D:2477:ILE:HG21	1:D:2483:LEU:HD13	2.01	0.41
1:D:3799:CYS:HB3	1:D:3835:THR:OG1	2.21	0.41
1:D:3802:LEU:HB2	1:D:3883:SER:OG	2.20	0.41
1:D:4183:GLU:O	1:D:4187:LEU:HG	2.21	0.41
1:D:4509:PHE:HZ	1:D:4745:ILE:HD12	1.86	0.41
1:A:311:ASP:OD1	1:A:311:ASP:N	2.51	0.40
1:A:332:ARG:NH1	1:A:364:GLN:OE1	2.54	0.40
1:A:851:LEU:CB	1:A:1212:VAL:HG12	2.50	0.40
1:A:1035:TYR:CE2	1:A:1043:LYS:HD2	2.57	0.40
1:A:1088:PHE:O	1:A:1204:VAL:HA	2.21	0.40
1:A:1100:ARG:HB2	1:A:1236:TYR:HA	2.02	0.40
1:A:1106:GLU:HG2	1:A:1161:VAL:HG12	2.02	0.40
1:A:3740:LEU:HD23	1:A:3740:LEU:HA	1.94	0.40
1:A:4126:ASN:O	1:A:4129:GLN:HG2	2.22	0.40
1:B:1680:HIS:NE2	2:H:91:VAL:HG22	2.36	0.40
1:B:1914:ASP:OD1	1:B:2089:ARG:NH2	2.48	0.40
1:B:1924:ILE:HD13	1:B:1998:PHE:CE2	2.56	0.40
1:B:2079:LEU:CD2	1:B:2083:MET:HE2	2.50	0.40
1:B:2328:GLU:HA	1:B:2335:ARG:CZ	2.51	0.40
1:B:3732:ASP:HA	1:B:3775:LYS:HZ1	1.85	0.40
1:C:1680:HIS:NE2	2:I:91:VAL:HG22	2.36	0.40
1:C:1761:ARG:HH11	1:C:1761:ARG:CB	2.34	0.40
1:C:2290:ASN:HD22	1:C:2291:PRO:CD	2.31	0.40
1:C:3779:TYR:CE1	1:C:3783:LYS:HD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4009:VAL:O	1:C:4012:ILE:HG22	2.20	0.40
1:C:4509:PHE:HZ	1:C:4745:ILE:HD12	1.86	0.40
1:C:4589:TYR:OH	1:C:4715:ASP:OD2	2.36	0.40
1:D:152:ASP:OD2	1:D:154:THR:OG1	2.39	0.40
1:D:227:TYR:CD2	1:D:352:SER:HB2	2.56	0.40
1:D:313:ASN:ND2	1:D:392:ILE:HA	2.36	0.40
1:A:564:ARG:O	1:A:565:LEU:HB3	2.21	0.40
1:A:888:ASN:HA	1:A:891:GLU:HG2	2.02	0.40
1:A:1680:HIS:NE2	2:G:91:VAL:HG22	2.36	0.40
1:A:2306:PHE:CD1	1:A:2400:ARG:HB3	2.57	0.40
1:A:3779:TYR:CE1	1:A:3783:LYS:HD2	2.56	0.40
1:A:4051:MET:HE1	1:A:4062:THR:HG22	2.03	0.40
1:A:4705:GLN:O	1:A:4709:LEU:HD23	2.21	0.40
1:B:891:GLU:HG3	1:B:892:LEU:HD12	2.03	0.40
1:B:1679:SER:HB3	1:B:1769:PHE:CE2	2.55	0.40
1:B:3747:LYS:HE3	1:B:3747:LYS:HB3	1.93	0.40
1:B:3799:CYS:HB3	1:B:3835:THR:OG1	2.21	0.40
1:B:4126:ASN:O	1:B:4129:GLN:HG2	2.22	0.40
1:B:4594:VAL:N	1:B:4595:PRO:HD2	2.35	0.40
1:B:4924:LEU:HD23	1:B:4924:LEU:HA	1.87	0.40
1:C:19:GLU:HB3	1:C:66:THR:CG2	2.52	0.40
1:C:332:ARG:NH1	1:C:364:GLN:OE1	2.54	0.40
1:C:4705:GLN:O	1:C:4709:LEU:HD23	2.21	0.40
1:D:449:ILE:HD13	1:D:449:ILE:HA	1.95	0.40
1:D:676:GLU:HA	1:D:756:SER:HA	2.03	0.40
1:D:839:GLU:CG	1:D:840:TYR:H	2.30	0.40
1:D:929:ARG:HA	1:D:932:ASN:HD21	1.85	0.40
1:D:1035:TYR:CE2	1:D:1043:LYS:HD2	2.57	0.40
1:D:2334:LEU:HA	1:D:2341:GLY:HA2	2.02	0.40
1:D:2763:SER:N	1:D:2766:GLU:HB2	2.36	0.40
1:D:2855:LYS:HE3	1:D:2859:LEU:HD23	2.03	0.40
1:D:4705:GLN:O	1:D:4709:LEU:HD23	2.21	0.40
1:A:313:ASN:ND2	1:A:392:ILE:HA	2.36	0.40
1:A:892:LEU:HD22	1:A:1052:GLU:HG2	2.03	0.40
1:A:1303:ARG:HG2	1:A:1304:LEU:N	2.36	0.40
1:A:2763:SER:N	1:A:2766:GLU:HB2	2.36	0.40
1:A:4509:PHE:HZ	1:A:4745:ILE:HD12	1.86	0.40
2:G:5:ILE:HG12	2:G:66:GLN:HE21	1.86	0.40
1:B:564:ARG:HD2	1:B:566:GLU:OE2	2.21	0.40
1:B:631:LEU:HD23	1:B:631:LEU:HA	1.92	0.40
1:B:713:TRP:NE1	1:B:841:LYS:HG2	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:900:LEU:HD23	1:B:902:TRP:NE1	2.36	0.40
1:B:1719:ARG:CZ	1:B:1759:ARG:HE	2.34	0.40
1:B:2876:LEU:HB2	1:B:2881:LYS:HE3	2.03	0.40
1:B:4070:GLU:OE1	1:B:4070:GLU:N	2.51	0.40
1:C:696:GLY:HA3	1:C:726:GLY:HA2	2.03	0.40
1:C:1245:ARG:NH1	1:C:1809:ASP:O	2.46	0.40
1:C:2348:GLU:HA	1:C:2351:LYS:HG2	2.03	0.40
1:C:2385:ASN:ND2	1:C:2458:GLY:O	2.48	0.40
1:C:2762:LEU:HD23	1:C:2762:LEU:HA	1.93	0.40
1:C:3612:ARG:O	1:C:3612:ARG:NH1	2.51	0.40
1:C:4081:GLU:HG3	1:C:4085:ARG:HE	1.87	0.40
1:C:4135:ILE:O	1:C:4147:VAL:HG12	2.22	0.40
1:C:4785:PHE:CG	1:C:4808:MET:HE1	2.56	0.40
2:I:27:TYR:O	2:I:40:SER:N	2.45	0.40
1:D:19:GLU:HB3	1:D:66:THR:CG2	2.52	0.40
1:D:892:LEU:HD22	1:D:1052:GLU:HG2	2.03	0.40
1:D:1106:GLU:HG2	1:D:1161:VAL:HG12	2.02	0.40
1:D:2079:LEU:CD2	1:D:2083:MET:HE2	2.50	0.40
1:D:2282:LYS:HA	1:D:2282:LYS:HD2	1.86	0.40
1:D:4081:GLU:HG3	1:D:4085:ARG:HE	1.87	0.40
1:D:4785:PHE:CG	1:D:4808:MET:HE1	2.56	0.40
1:A:343:ARG:HH21	1:A:345:GLU:H	1.69	0.40
1:A:516:ASP:OD1	1:A:516:ASP:N	2.53	0.40
1:A:2348:GLU:HA	1:A:2351:LYS:HG2	2.03	0.40
1:A:3849:HIS:HE1	1:A:3924:GLN:HG3	1.86	0.40
1:A:3954:GLN:HB3	1:A:4015:PHE:CE2	2.57	0.40
1:A:4789:ARG:NE	1:A:4805:CYS:SG	2.87	0.40
1:B:227:TYR:CD2	1:B:352:SER:HB2	2.55	0.40
1:B:2855:LYS:HE3	1:B:2859:LEU:HD23	2.04	0.40
1:B:4039:LYS:HB2	1:B:4039:LYS:HE2	1.88	0.40
1:B:4135:ILE:O	1:B:4147:VAL:HG12	2.22	0.40
1:B:4904:PHE:O	1:B:4908:THR:HG23	2.21	0.40
1:C:467:ASP:OD1	1:C:468:GLU:N	2.53	0.40
1:C:713:TRP:NE1	1:C:841:LYS:HG2	2.37	0.40
1:C:1727:ILE:HD12	1:C:2119:LEU:HD11	2.04	0.40
1:C:2105:TYR:CG	1:C:2160:LEU:HD13	2.57	0.40
1:D:564:ARG:O	1:D:565:LEU:HB3	2.21	0.40
1:D:564:ARG:HD2	1:D:566:GLU:OE2	2.21	0.40
1:D:837:SER:HB3	1:D:841:LYS:NZ	2.35	0.40
1:D:946:LEU:HD23	1:D:946:LEU:HA	1.91	0.40
1:D:1629:MET:HE3	1:D:1685:GLN:NE2	2.17	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1719:ARG:CZ	1:D:1759:ARG:HE	2.34	0.40
1:D:1970:GLU:O	1:D:1974:MET:HG2	2.21	0.40
1:D:2105:TYR:CG	1:D:2160:LEU:HD13	2.57	0.40
1:D:2289:TRP:CH2	1:D:2387:ILE:HD12	2.57	0.40
1:D:3930:ASN:O	1:D:3934:LEU:HD23	2.21	0.40
1:D:4836:ASP:C	1:D:4838:TYR:H	2.29	0.40
2:J:5:ILE:HG12	2:J:66:GLN:HE21	1.86	0.40
1:A:334:SER:OG	1:A:335:LYS:N	2.54	0.40
1:A:1213:GLY:C	1:A:1214:ARG:HG2	2.47	0.40
1:A:1938:ASN:ND2	1:A:1988:PRO:HB3	2.36	0.40
1:A:1970:GLU:O	1:A:1974:MET:HG2	2.21	0.40
1:A:2855:LYS:HE3	1:A:2859:LEU:HD23	2.04	0.40
1:A:3799:CYS:HB3	1:A:3835:THR:OG1	2.21	0.40
1:A:4183:GLU:O	1:A:4187:LEU:HG	2.21	0.40
1:B:849:ASP:HA	1:B:1213:GLY:O	2.21	0.40
1:B:1035:TYR:CE2	1:B:1043:LYS:HD2	2.57	0.40
1:B:3779:TYR:CE1	1:B:3783:LYS:HD2	2.56	0.40
1:B:3849:HIS:HE1	1:B:3924:GLN:HG3	1.86	0.40
1:C:334:SER:OG	1:C:335:LYS:N	2.54	0.40
1:C:888:ASN:HA	1:C:891:GLU:HG2	2.02	0.40
1:C:2855:LYS:HE3	1:C:2859:LEU:HD23	2.04	0.40
2:I:104:LEU:HD21	2:I:107:LEU:HB2	2.04	0.40
1:D:1088:PHE:O	1:D:1204:VAL:HA	2.21	0.40
1:D:1213:GLY:C	1:D:1214:ARG:HG2	2.47	0.40
1:D:1680:HIS:NE2	2:J:91:VAL:HG22	2.36	0.40
1:D:1730:MET:SD	1:D:2106:THR:OG1	2.77	0.40
1:D:1924:ILE:HD13	1:D:1998:PHE:CE2	2.56	0.40
1:D:2306:PHE:CD1	1:D:2400:ARG:HB3	2.57	0.40
1:D:2352:ILE:HG23	1:D:2358:ARG:HB3	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3255/4966 (66%)	3052 (94%)	203 (6%)	0	100	100
1	B	3255/4966 (66%)	3051 (94%)	204 (6%)	0	100	100
1	C	3255/4966 (66%)	3052 (94%)	203 (6%)	0	100	100
1	D	3255/4966 (66%)	3053 (94%)	202 (6%)	0	100	100
2	G	105/176 (60%)	100 (95%)	5 (5%)	0	100	100
2	H	105/176 (60%)	100 (95%)	5 (5%)	0	100	100
2	I	105/176 (60%)	100 (95%)	5 (5%)	0	100	100
2	J	105/176 (60%)	100 (95%)	5 (5%)	0	100	100
All	All	13440/20568 (65%)	12608 (94%)	832 (6%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2861/3386 (84%)	2856 (100%)	5 (0%)	92	94
1	B	2861/3386 (84%)	2856 (100%)	5 (0%)	92	94
1	C	2861/3386 (84%)	2856 (100%)	5 (0%)	92	94
1	D	2861/3386 (84%)	2856 (100%)	5 (0%)	92	94
2	G	88/140 (63%)	87 (99%)	1 (1%)	70	79
2	H	88/140 (63%)	87 (99%)	1 (1%)	70	79
2	I	88/140 (63%)	87 (99%)	1 (1%)	70	79
2	J	88/140 (63%)	87 (99%)	1 (1%)	70	79
All	All	11796/14104 (84%)	11772 (100%)	24 (0%)	91	94

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1253	LYS
1	A	1254	ARG

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Mol	Chain	Res	Type
1	A	1370	PHE
1	A	3924	GLN
1	A	4112	THR
2	G	9	SER
1	B	1253	LYS
1	B	1254	ARG
1	B	1370	PHE
1	B	3924	GLN
1	B	4112	THR
2	H	9	SER
1	C	1253	LYS
1	C	1254	ARG
1	C	1370	PHE
1	C	3924	GLN
1	C	4112	THR
2	I	9	SER
1	D	1253	LYS
1	D	1254	ARG
1	D	1370	PHE
1	D	3924	GLN
1	D	4112	THR
2	J	9	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (156) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	12	GLN
1	A	23	GLN
1	A	44	ASN
1	A	150	GLN
1	A	238	HIS
1	A	299	HIS
1	A	394	HIS
1	A	487	ASN
1	A	531	ASN
1	A	776	GLN
1	A	971	GLN
1	A	1002	ASN
1	A	1151	HIS
1	A	1242	ASN
1	A	1265	HIS
1	A	1287	GLN

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Mol	Chain	Res	Type
1	A	1351	HIS
1	A	1386	GLN
1	A	1616	GLN
1	A	1621	GLN
1	A	1685	GLN
1	A	1711	HIS
1	A	1744	ASN
1	A	2124	GLN
1	A	2151	ASN
1	A	2156	GLN
1	A	2216	HIS
1	A	2308	ASN
1	A	3633	HIS
1	A	3773	GLN
1	A	3850	ASN
1	A	3860	GLN
1	A	3924	GLN
1	A	3954	GLN
1	A	3974	GLN
1	A	4735	ASN
1	A	4761	HIS
1	A	4762	ASN
1	A	4875	GLN
2	G	26	HIS
1	B	12	GLN
1	B	23	GLN
1	B	44	ASN
1	B	150	GLN
1	B	238	HIS
1	B	299	HIS
1	B	313	ASN
1	B	394	HIS
1	B	487	ASN
1	B	531	ASN
1	B	776	GLN
1	B	971	GLN
1	B	1002	ASN
1	B	1151	HIS
1	B	1265	HIS
1	B	1287	GLN
1	B	1351	HIS
1	B	1386	GLN

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Mol	Chain	Res	Type
1	B	1616	GLN
1	B	1621	GLN
1	B	1685	GLN
1	B	1711	HIS
1	B	1744	ASN
1	B	1806	HIS
1	B	2124	GLN
1	B	2151	ASN
1	B	2156	GLN
1	B	2216	HIS
1	B	2308	ASN
1	B	2889	GLN
1	B	3633	HIS
1	B	3773	GLN
1	B	3850	ASN
1	B	3854	GLN
1	B	3860	GLN
1	B	3924	GLN
1	B	3954	GLN
1	B	3974	GLN
1	B	4761	HIS
1	B	4786	ASN
1	B	4875	GLN
2	H	26	HIS
1	C	12	GLN
1	C	23	GLN
1	C	44	ASN
1	C	150	GLN
1	C	238	HIS
1	C	299	HIS
1	C	394	HIS
1	C	487	ASN
1	C	531	ASN
1	C	1002	ASN
1	C	1265	HIS
1	C	1287	GLN
1	C	1351	HIS
1	C	1386	GLN
1	C	1621	GLN
1	C	1685	GLN
1	C	1711	HIS
1	C	1744	ASN

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Mol	Chain	Res	Type
1	C	1806	HIS
1	C	1842	HIS
1	C	2124	GLN
1	C	2151	ASN
1	C	2156	GLN
1	C	2216	HIS
1	C	2249	ASN
1	C	2308	ASN
1	C	3633	HIS
1	C	3860	GLN
1	C	3924	GLN
1	C	3954	GLN
1	C	3974	GLN
1	C	4761	HIS
1	C	4875	GLN
2	I	26	HIS
1	D	12	GLN
1	D	23	GLN
1	D	44	ASN
1	D	150	GLN
1	D	238	HIS
1	D	299	HIS
1	D	394	HIS
1	D	487	ASN
1	D	531	ASN
1	D	776	GLN
1	D	808	HIS
1	D	971	GLN
1	D	1002	ASN
1	D	1151	HIS
1	D	1265	HIS
1	D	1287	GLN
1	D	1351	HIS
1	D	1386	GLN
1	D	1616	GLN
1	D	1621	GLN
1	D	1685	GLN
1	D	1711	HIS
1	D	1744	ASN
1	D	2124	GLN
1	D	2151	ASN
1	D	2156	GLN

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Mol	Chain	Res	Type
1	D	2216	HIS
1	D	2308	ASN
1	D	3633	HIS
1	D	3773	GLN
1	D	3830	GLN
1	D	3850	ASN
1	D	3860	GLN
1	D	3924	GLN
1	D	3954	GLN
1	D	3974	GLN
1	D	4735	ASN
1	D	4761	HIS
1	D	4762	ASN
2	J	26	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

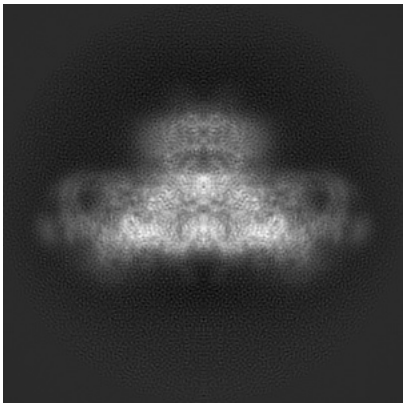
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-32037. These allow visual inspection of the internal detail of the map and identification of artifacts.

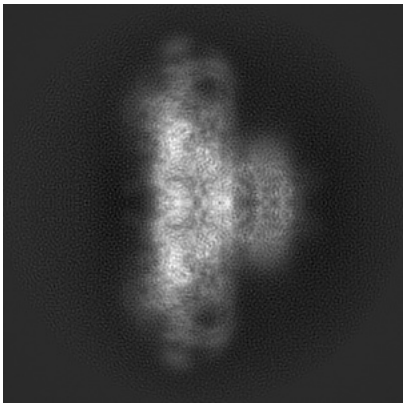
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

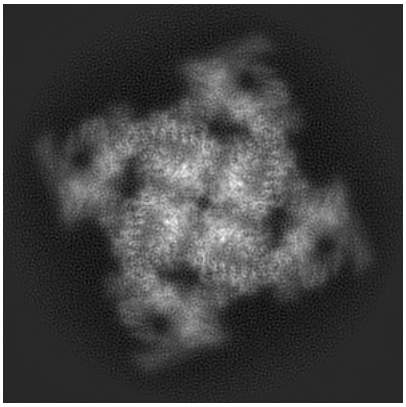
6.1.1 Primary map



X



Y

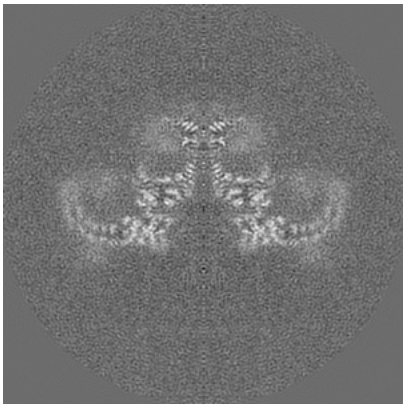


Z

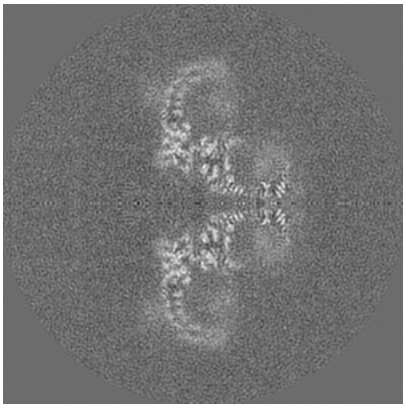
The images above show the map projected in three orthogonal directions.

6.2 Central slices

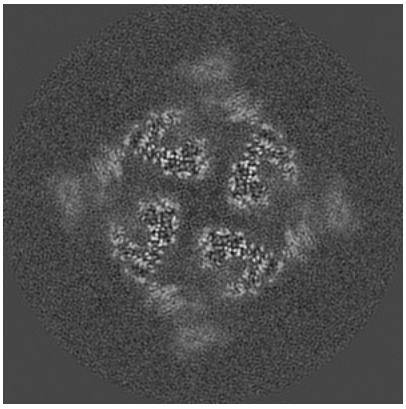
6.2.1 Primary map



X Index: 160



Y Index: 160

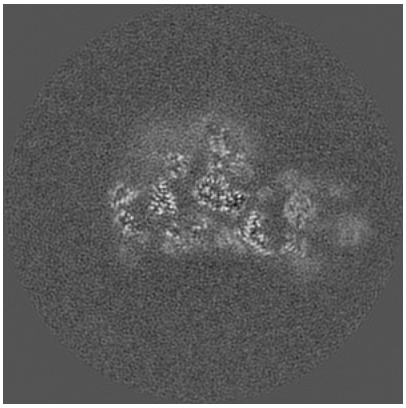


Z Index: 160

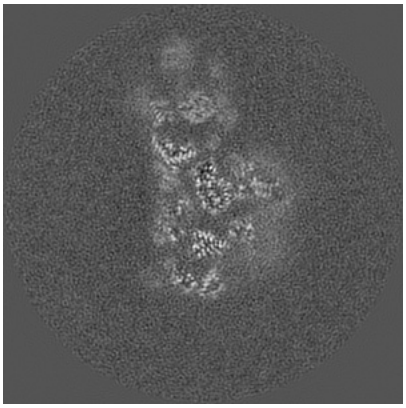
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

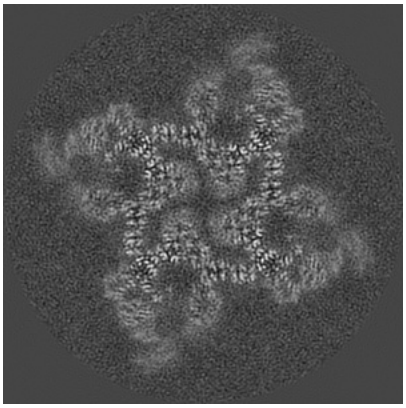
6.3.1 Primary map



X Index: 189



Y Index: 131

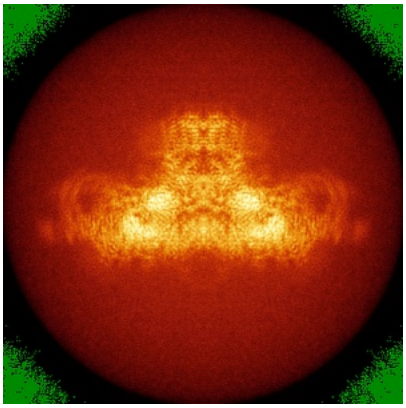


Z Index: 136

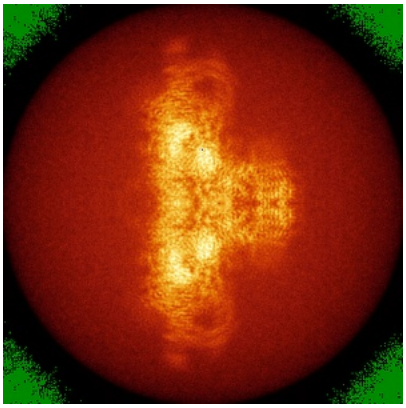
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

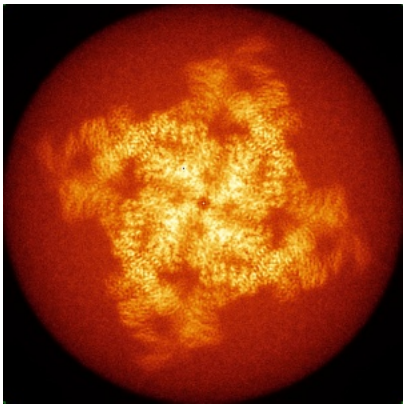
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.034. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

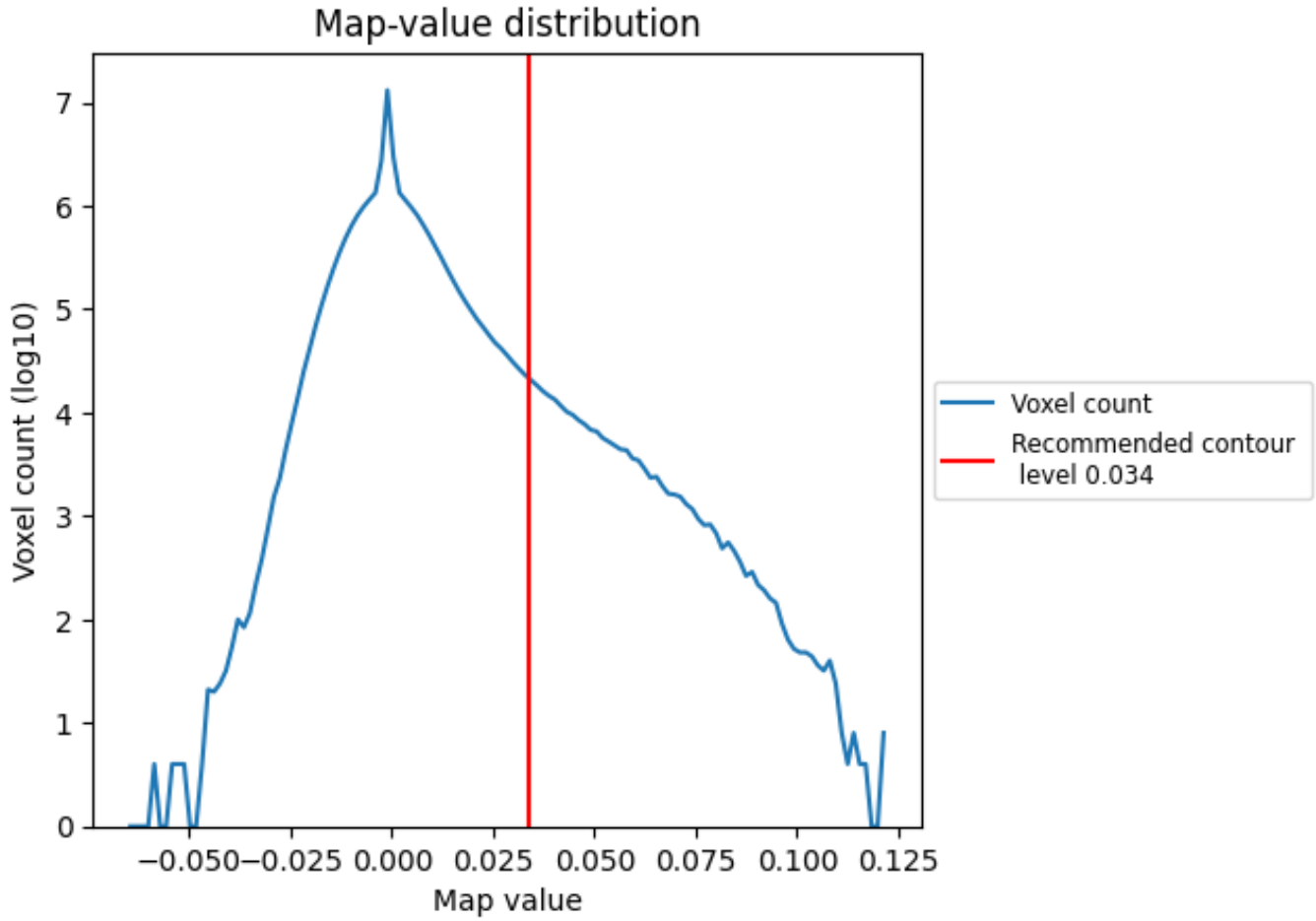
6.6 Mask visualisation (i)

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

7 Map analysis

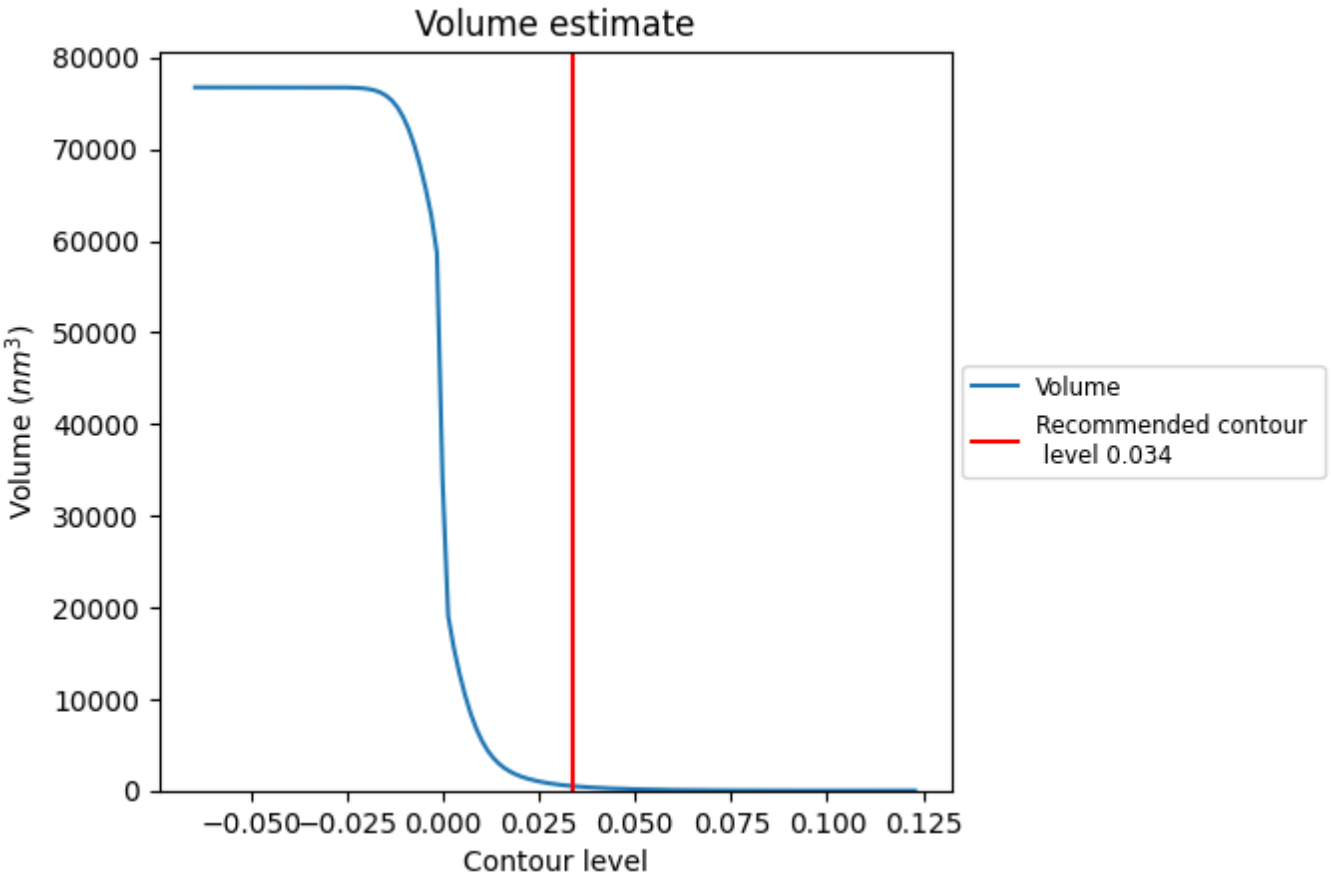
This section contains the results of statistical analysis of the map.

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.

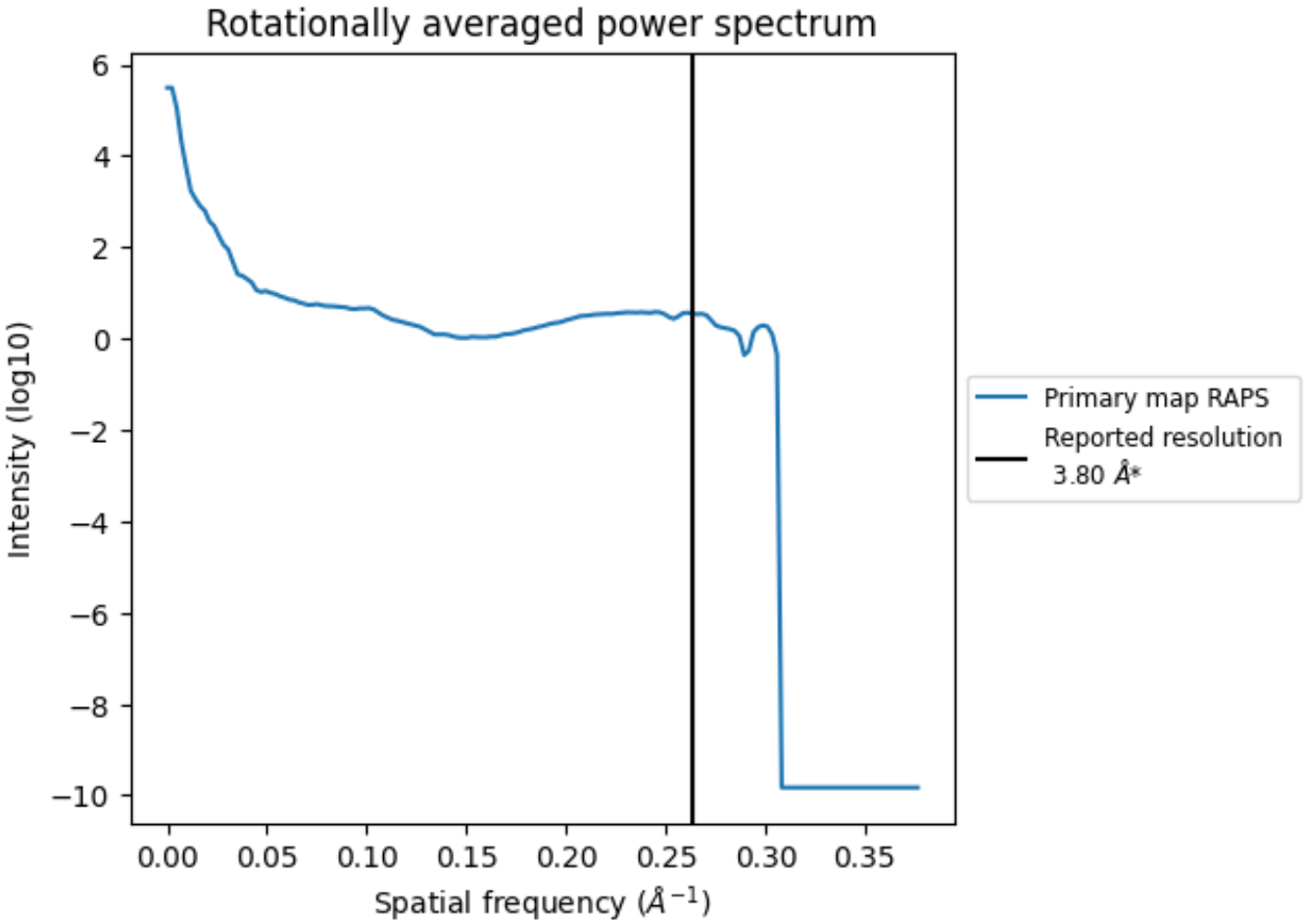
7.2 Volume estimate



The volume at the recommended contour level is 478 nm^3; this corresponds to an approximate mass of 432 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 0.263 Å^{-1}

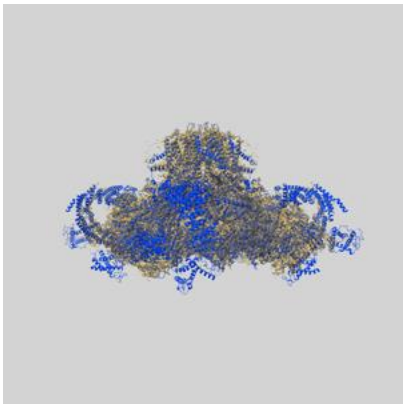
8 Fourier-Shell correlation (i)

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

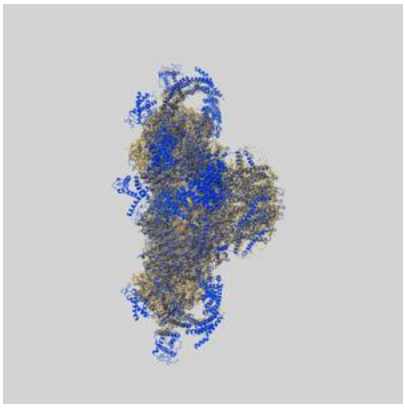
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-32037 and PDB model 7VMS. Per-residue inclusion information can be found in section 3 on page 12.

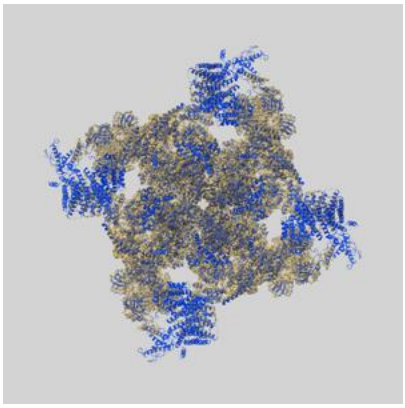
9.1 Map-model overlay



X



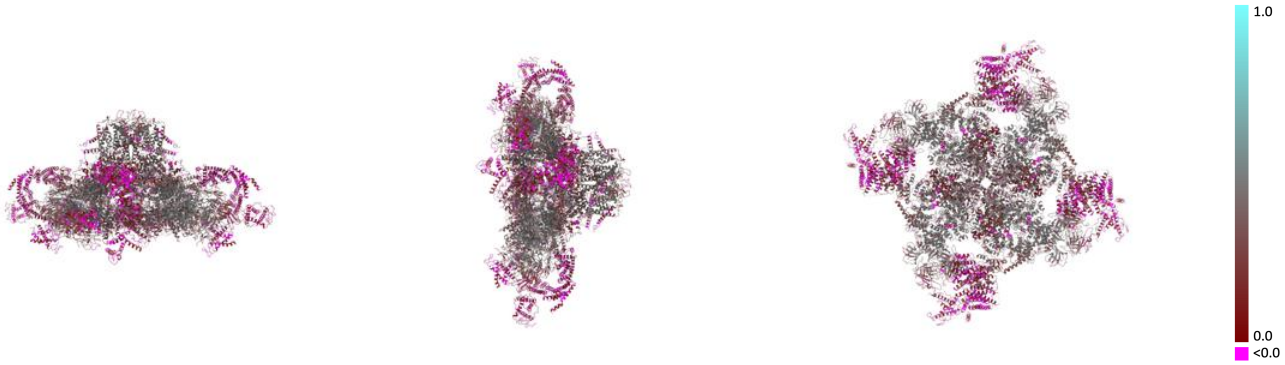
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.034 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.

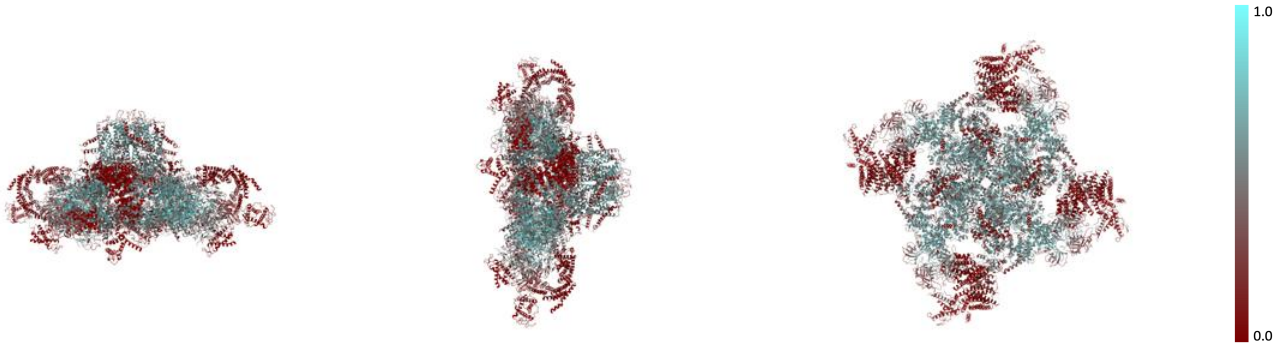
9.2 Q-score mapped to coordinate model



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.

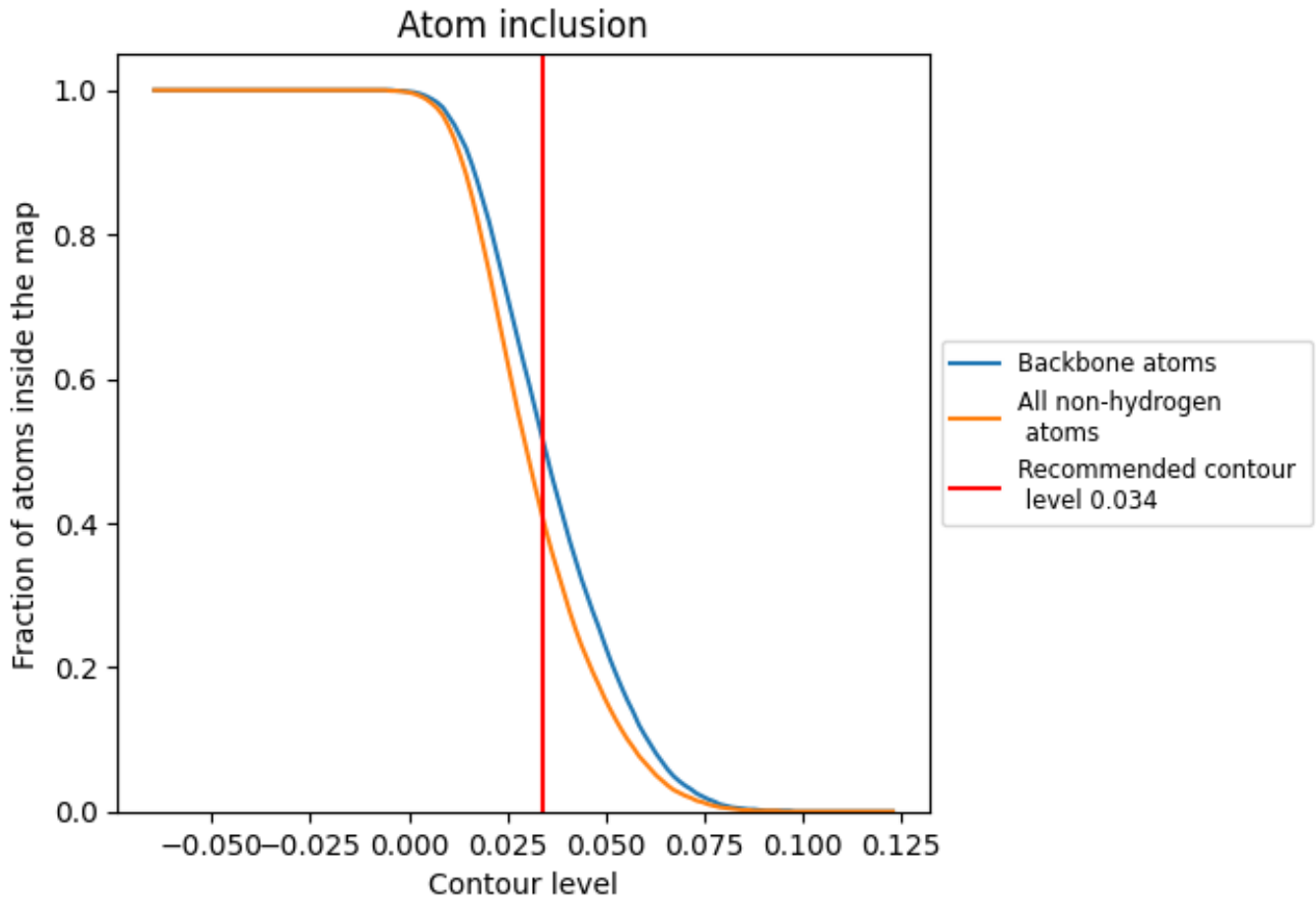
9.3 Atom inclusion mapped to coordinate model



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 (0.034).

9.4 Atom inclusion (i)



At the recommended contour level, 52% of all backbone atoms, 41% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.034) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4070	0.2990
A	0.4070	0.2980
B	0.4070	0.2980
C	0.4070	0.2970
D	0.4070	0.2980
G	0.4160	0.3720
H	0.4180	0.3690
I	0.4150	0.3670
J	0.4160	0.3690