Full wwPDB EM Validation Report ⓘ

Dec 7, 2022 – 04:16 PM JST

PDB ID	:	7VMO
EMDB ID	:	EMD-33938
Title	:	Structure of recombinant RyR2 (Ca2+ dataset, class 1, open state)
Authors	:	Kobayashi, T.; Tsutsumi, A.; Kurebayashi, N.; Kodama, M.; Kikkawa, M.; Murayama, T.; Ogawa, H.
Deposited on	:	2021-10-09
Resolution	:	3.50 Å(reported)

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

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

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

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

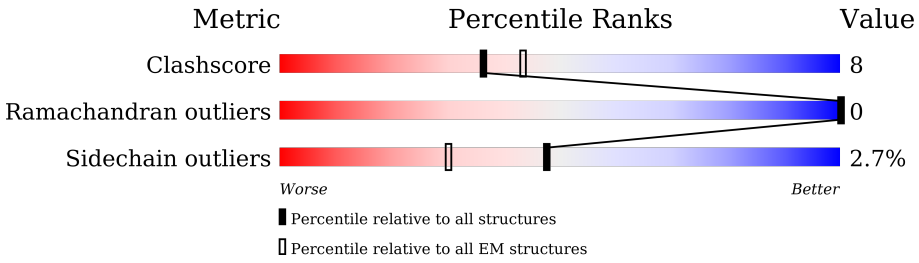
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance

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

The reported resolution of this entry is 3.50 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	4966	26% 65% 15% • 20%
1	B	4966	26% 65% 15% • 20%
1	C	4966	26% 65% 15% • 20%
1	D	4966	26% 65% 15% • 20%
2	G	176	6% 48% 13% 39%
2	H	176	• 48% 13% 39%
2	I	176	5% 46% 15% 39%
2	J	176	5% 48% 13% 39%

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 122036 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3991	Total	C	N	O	S	0	0
			29688	18782	5180	5553	173		
1	B	3991	Total	C	N	O	S	0	0
			29688	18782	5180	5553	173		
1	C	3991	Total	C	N	O	S	0	0
			29688	18782	5180	5553	173		
1	D	3991	Total	C	N	O	S	0	0
			29688	18782	5180	5553	173		

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

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

There are 276 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

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

- Molecule 3 is ZINC ION (three-letter code: 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 (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

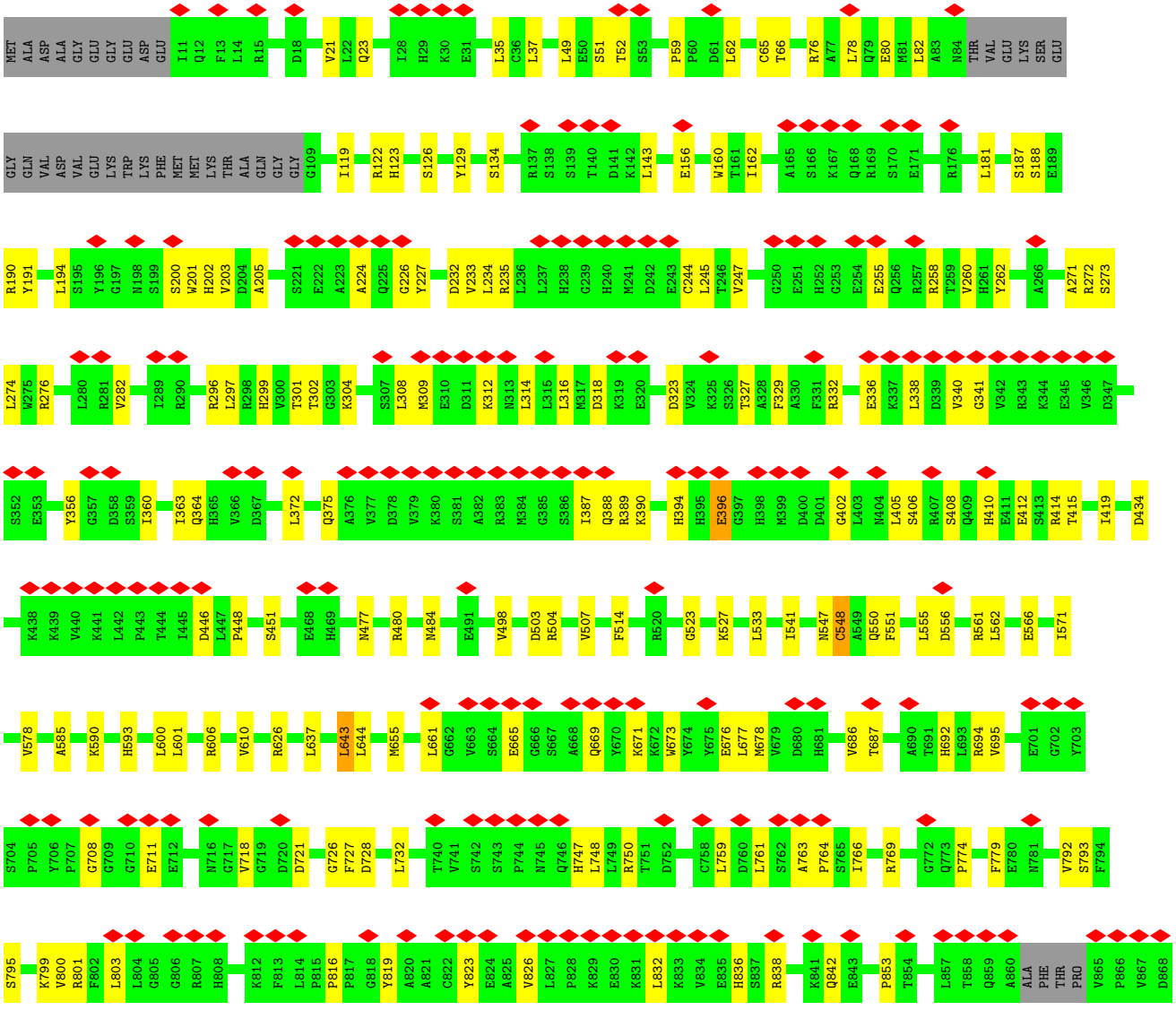
Mol	Chain	Residues	Atoms	AltConf
4	A	1	Total Ca 1 1	0
4	B	1	Total Ca 1 1	0
4	C	1	Total Ca 1 1	0
4	D	1	Total Ca 1 1	0

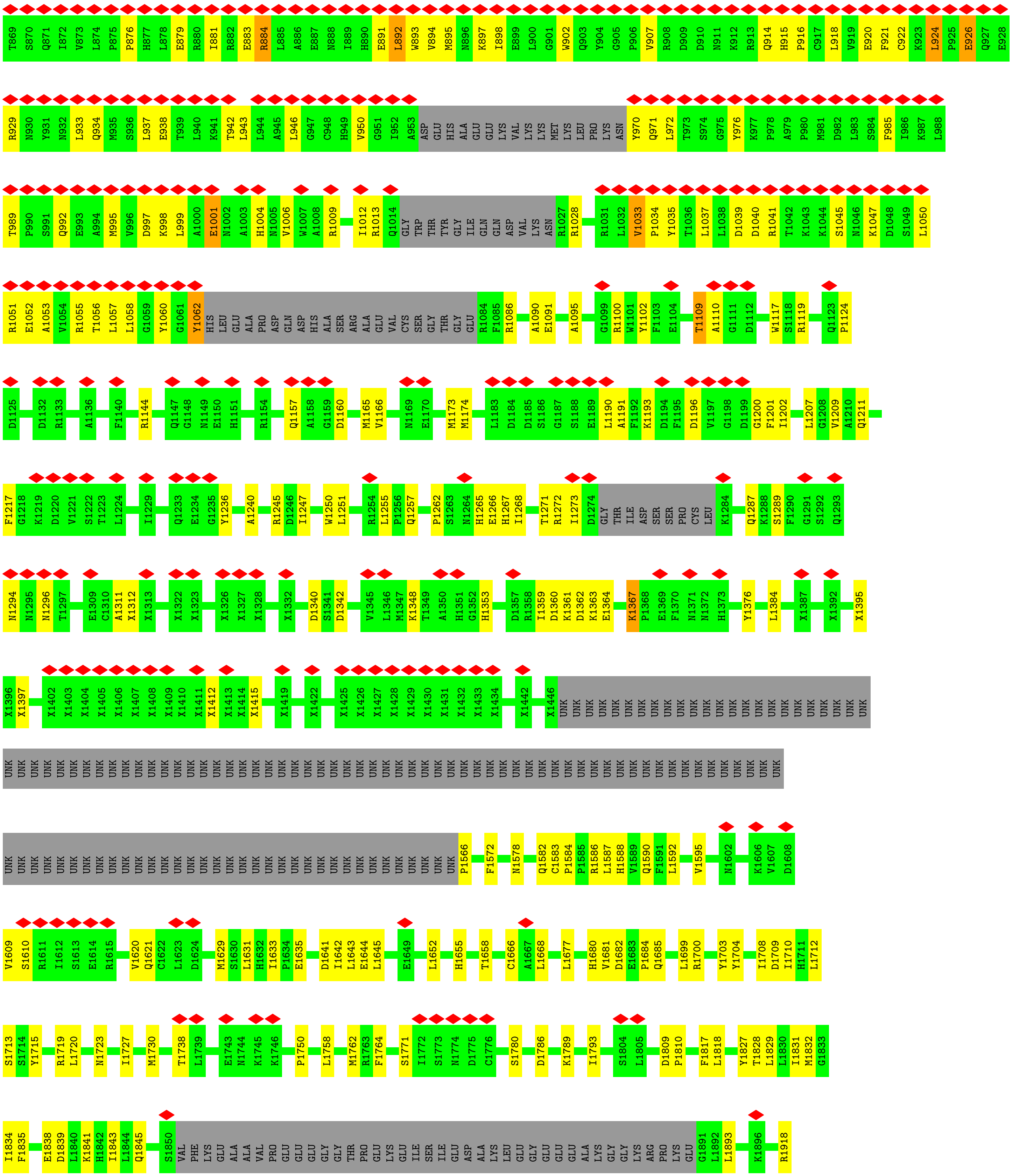
3 Residue-property plots (i)

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:




T869 S870 Q871 I872 V873 L874 P875 P876 H877 L878 E879 R880 I881 R882 E883 R884 L885 A886 E887 N888 I889 H890 E891 L892 W893 V894 M895 N896 K897 I898 E899 L900 G901 W902 Q903 Y904 G905 P906 V907 R908 D909 D910 N911 K912 R913 Q914 H915 P916 C917 L918 V919 E920 F921 C922 K923 L924 P925 E926 Q927 E928
R929 N930 Y931 N932 L933 Q934 M935 S936 L937 E938 T939 L940 K941 T942 L943 L944 A945 L946 G947 C948 H949 V950 G951 I952 A953 ASP GLU HIS ALA GLU GLU LYS VAL LYS LYS MET LYS LEU PRO LYS ASN Y970 Q971 L972 T973 S974 G975 Y976 K977 P978 A979 P980 M981 D982 L983 S984 F985 I986 K987 L988
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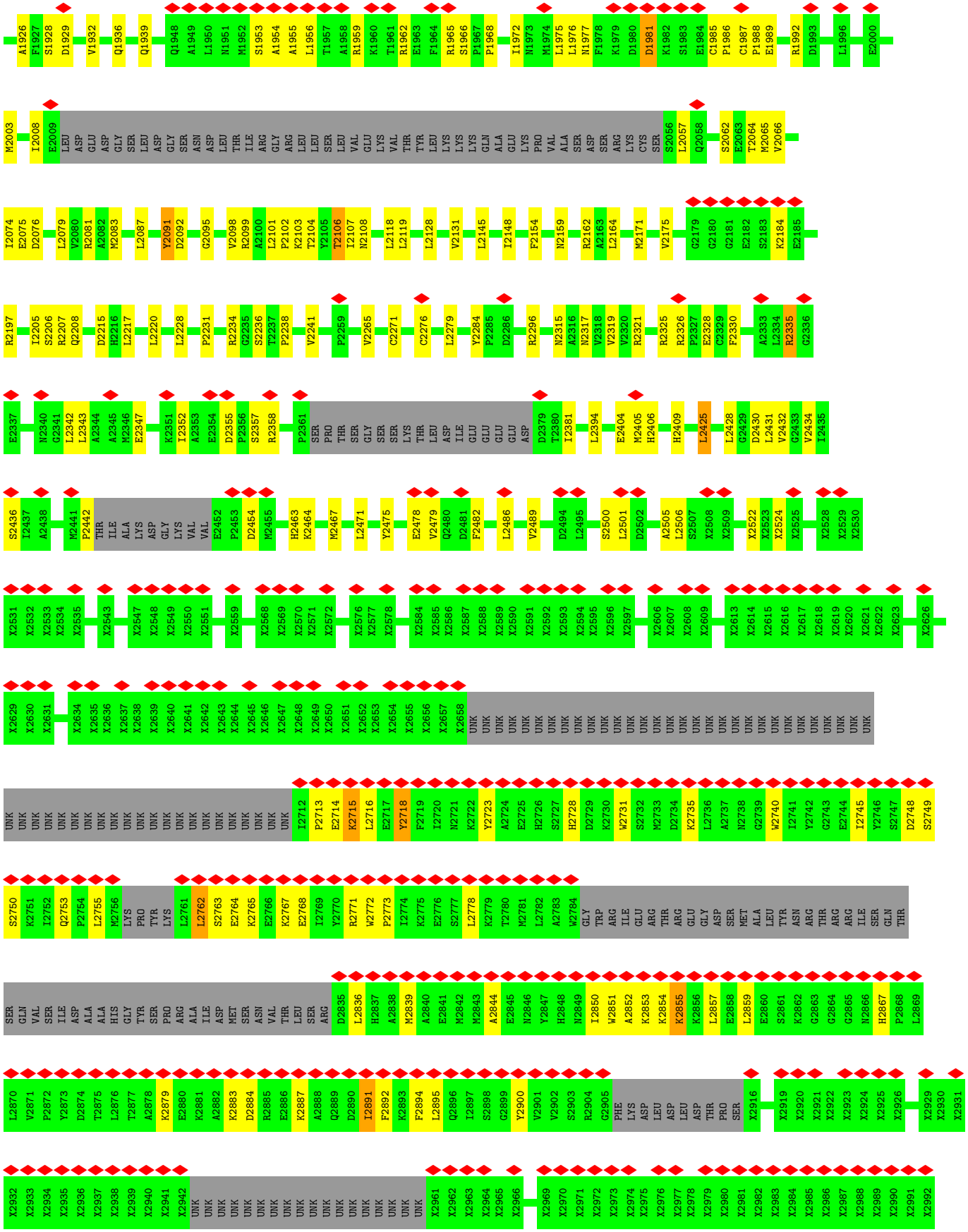

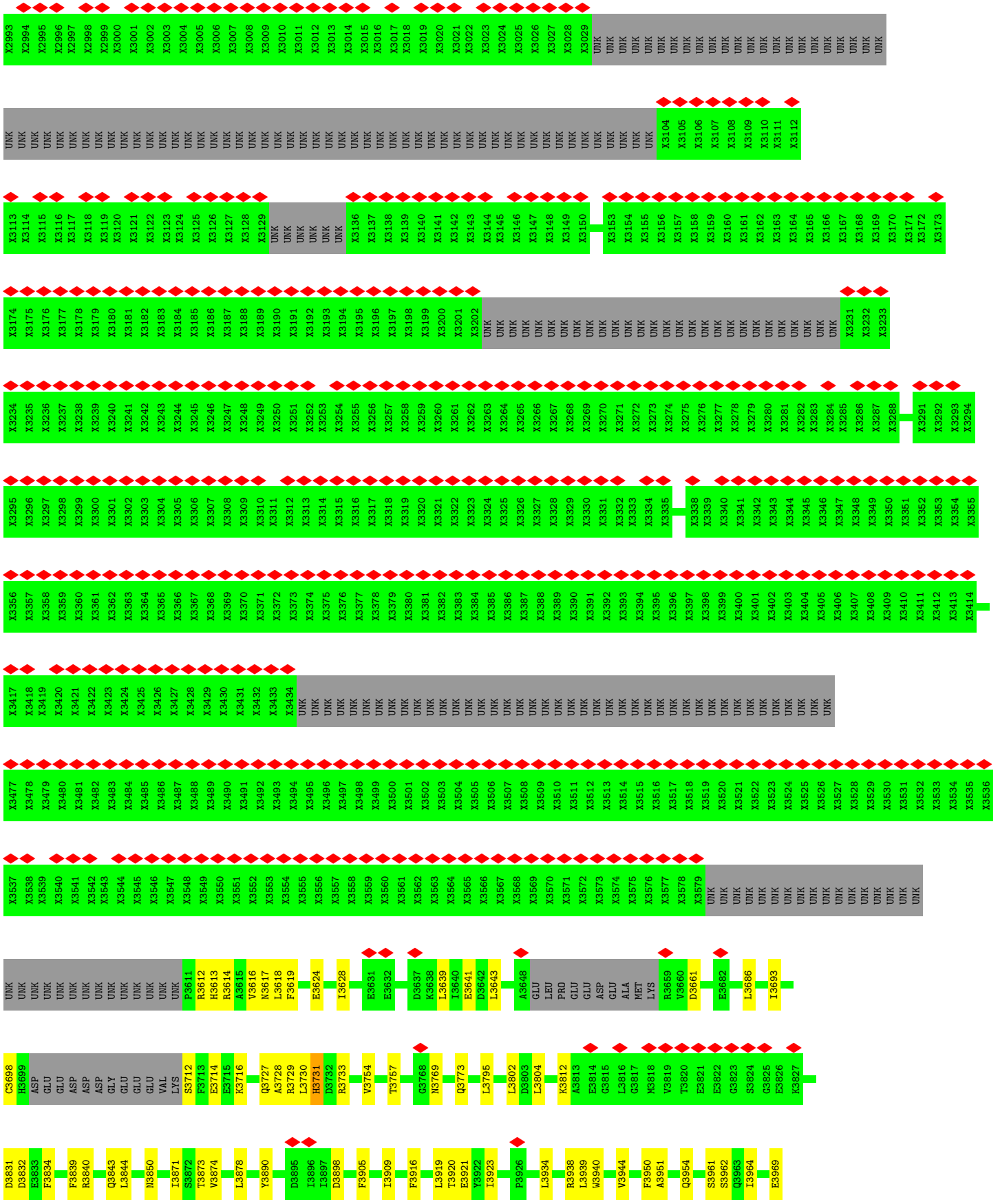
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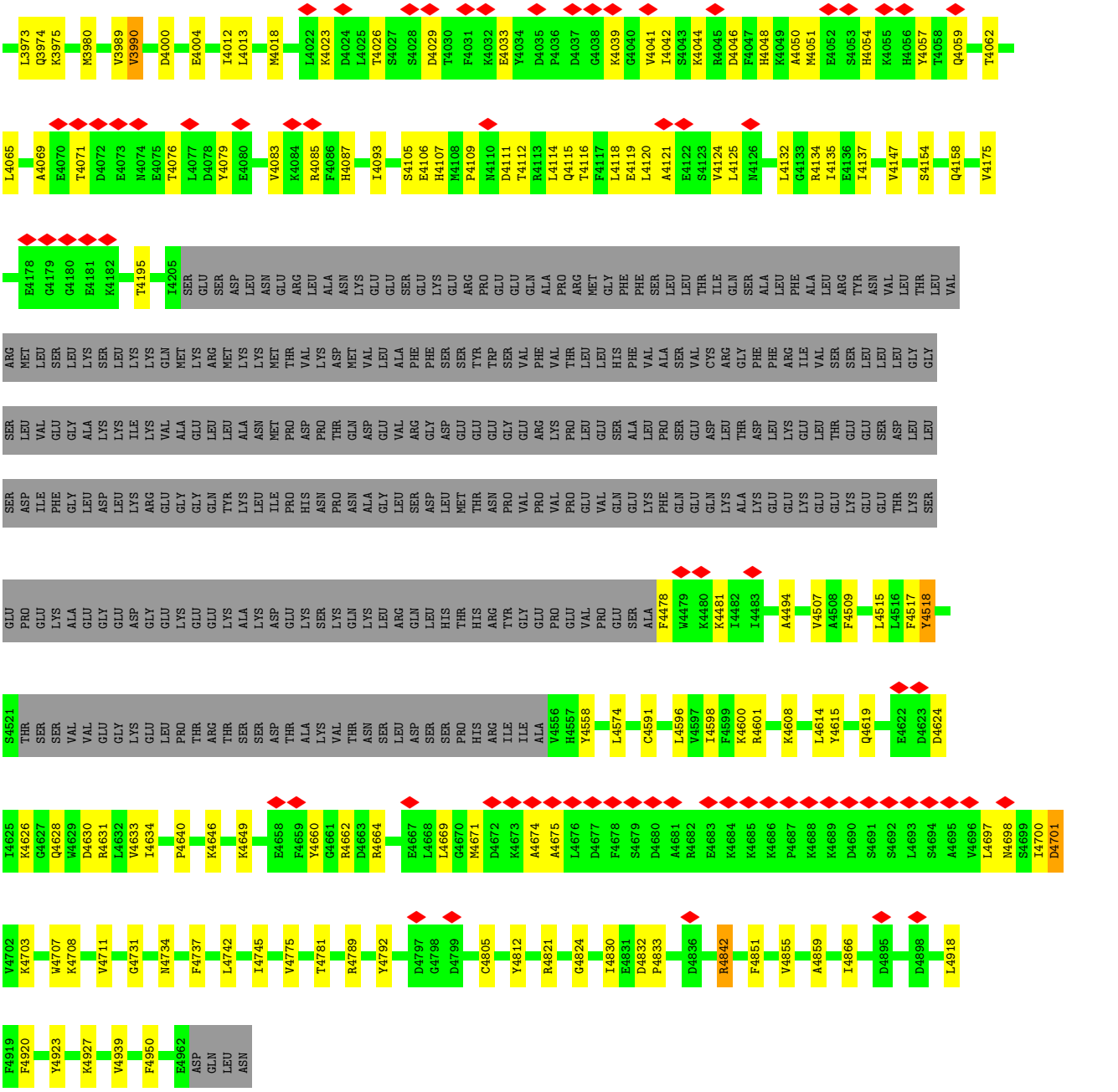
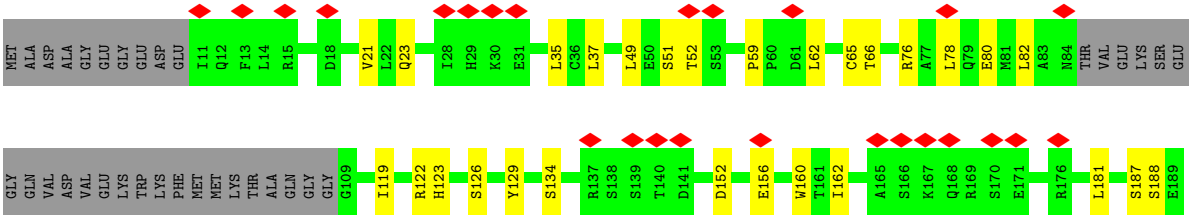
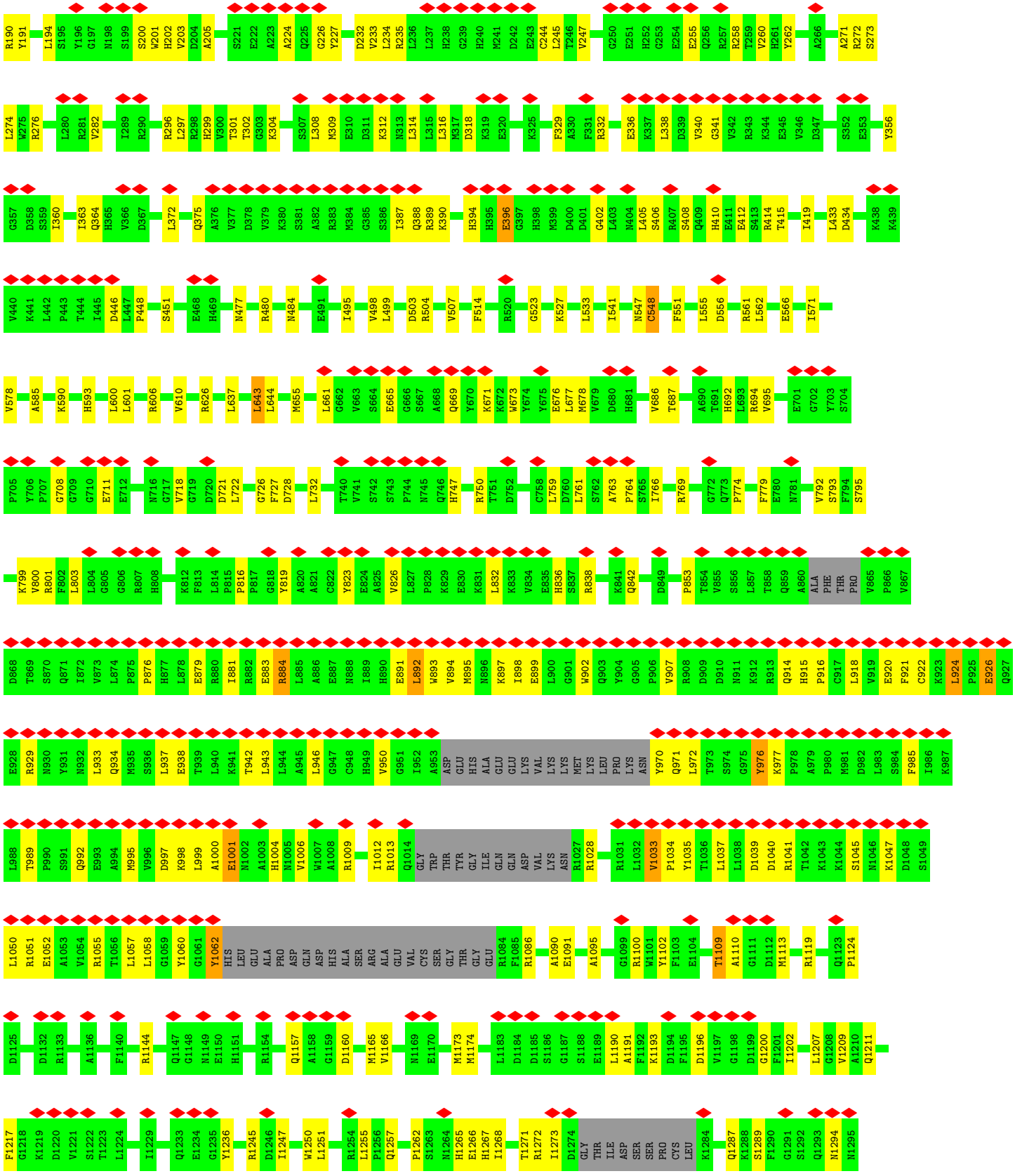


• Molecule 1: Ryanodine receptor 2

Chain B:

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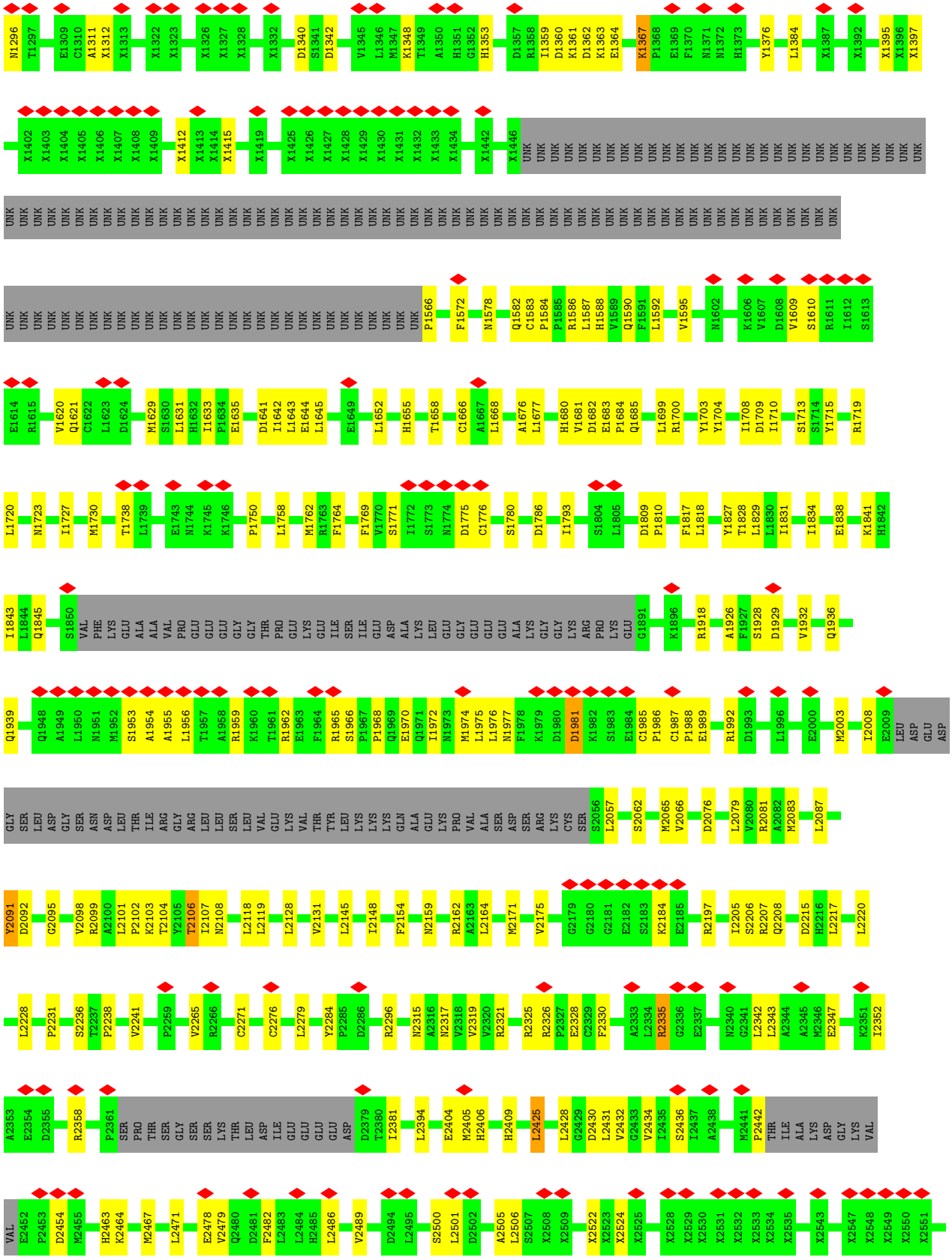
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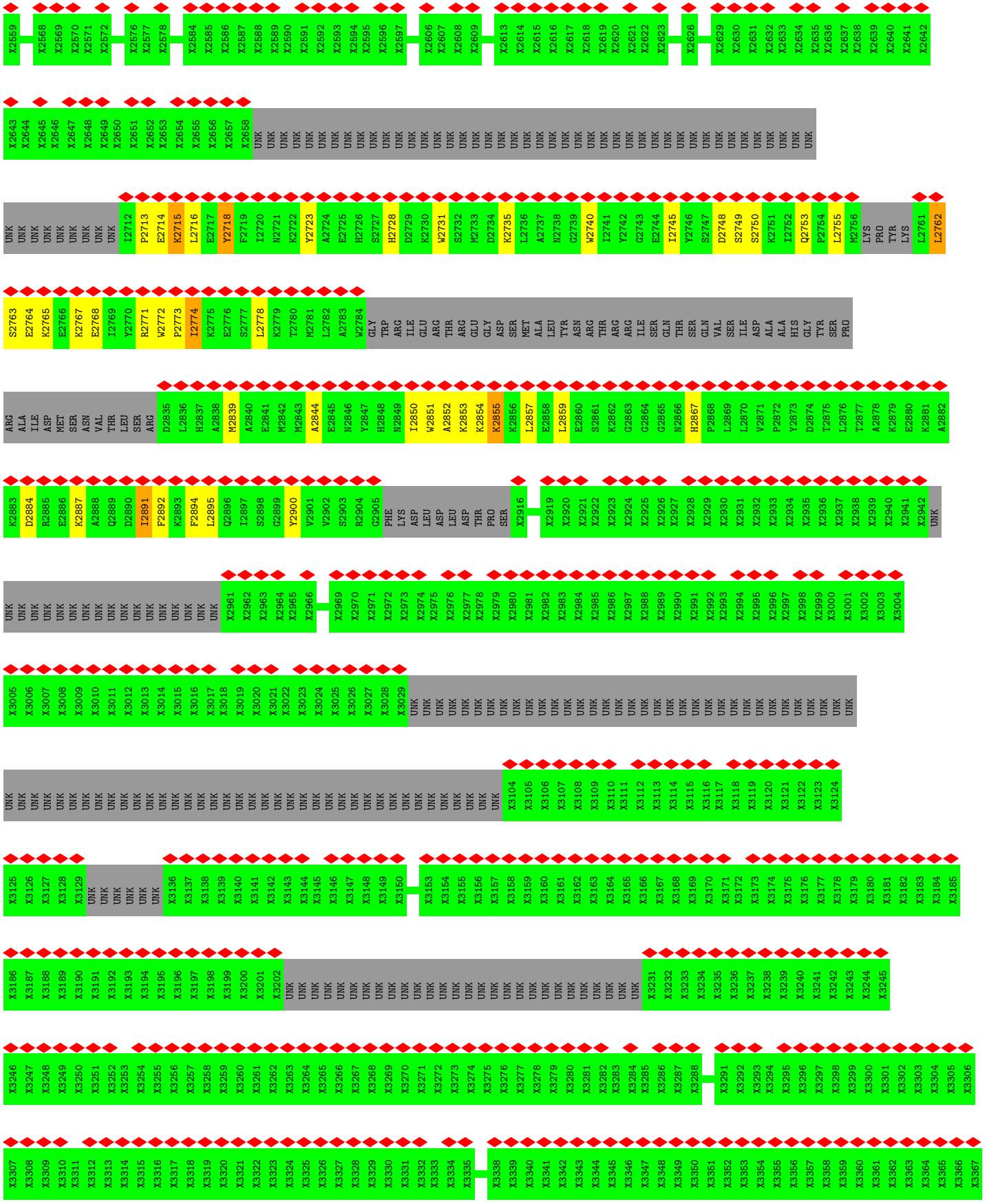
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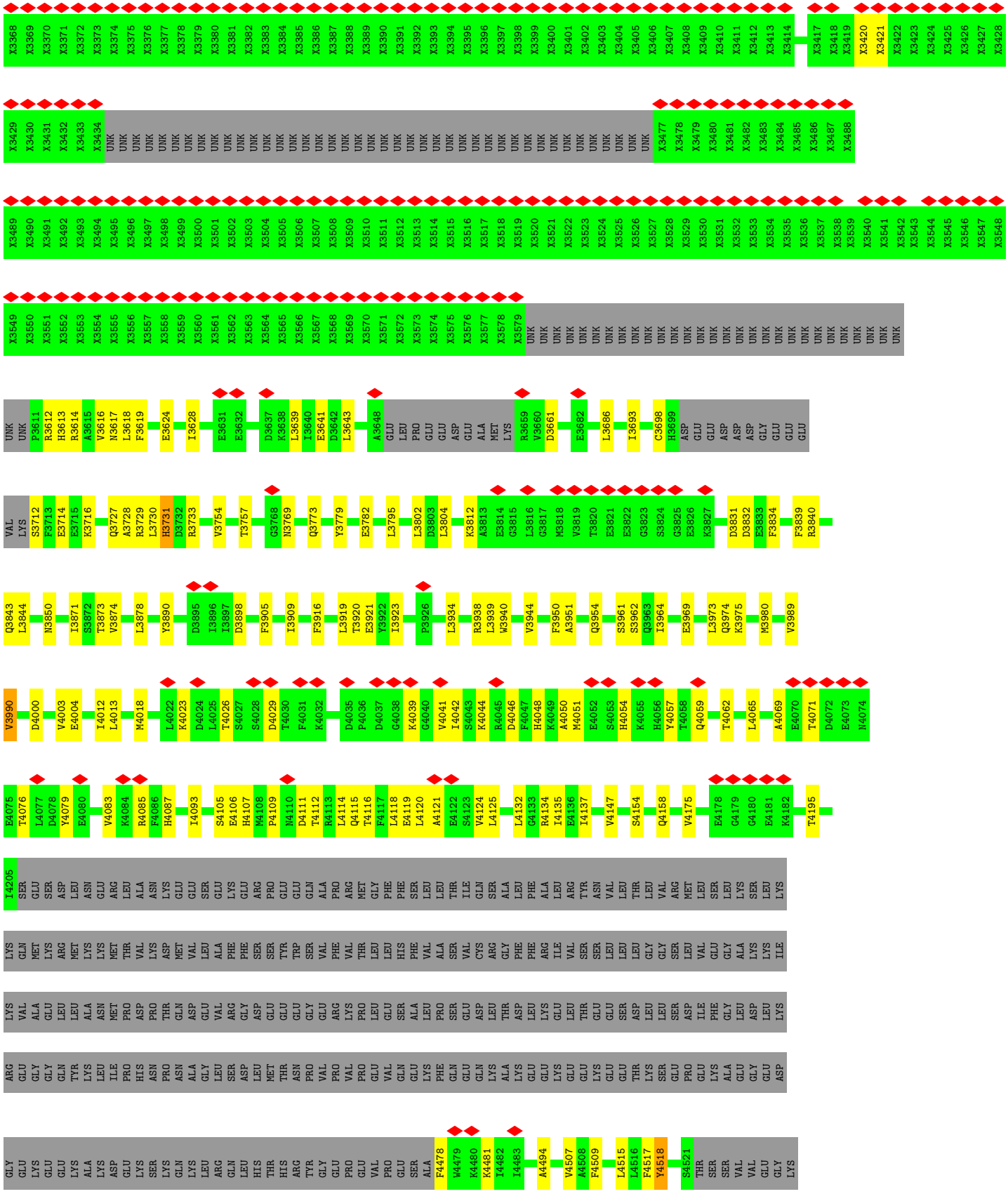
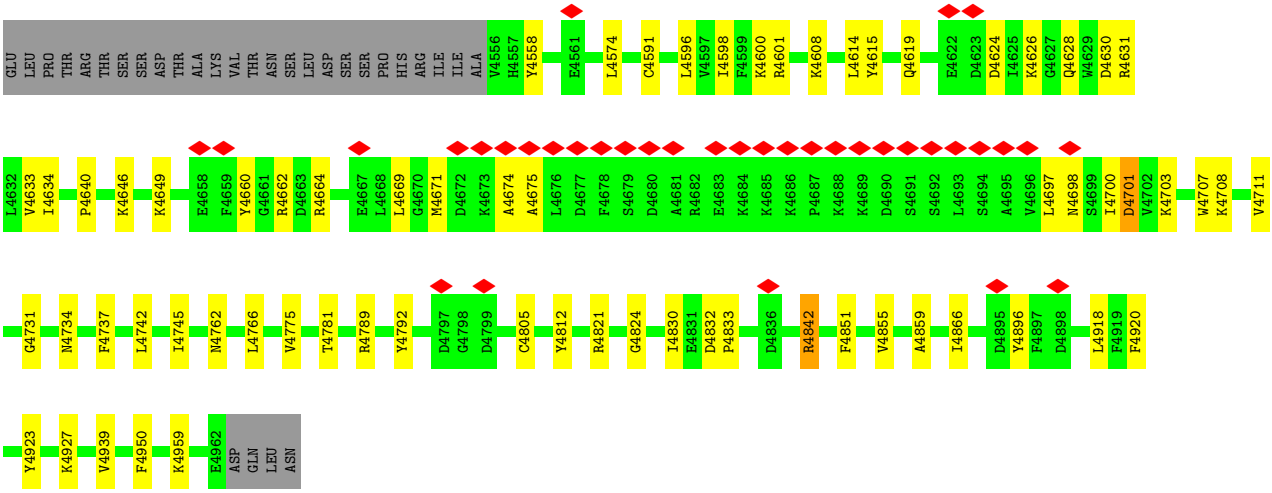
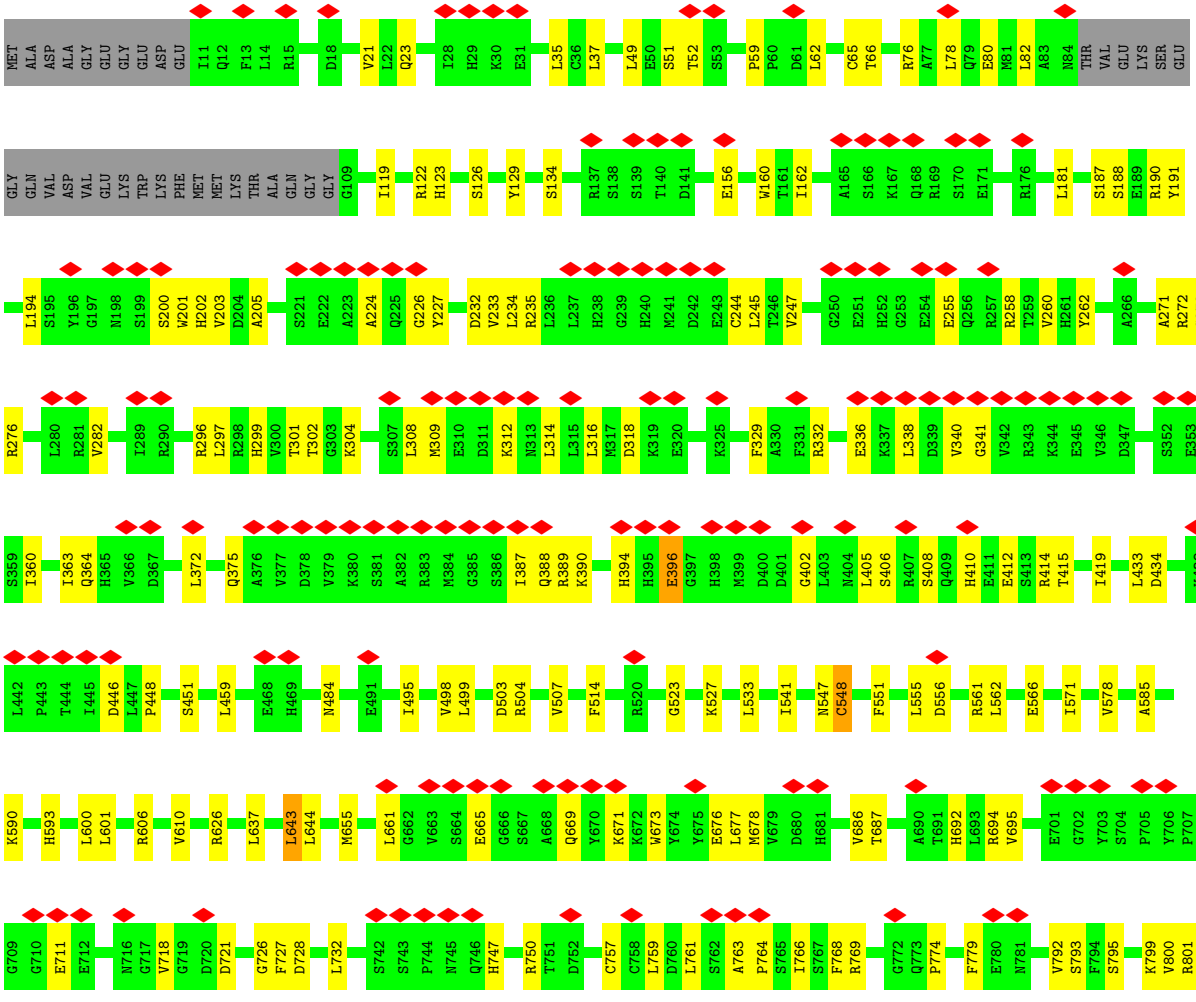
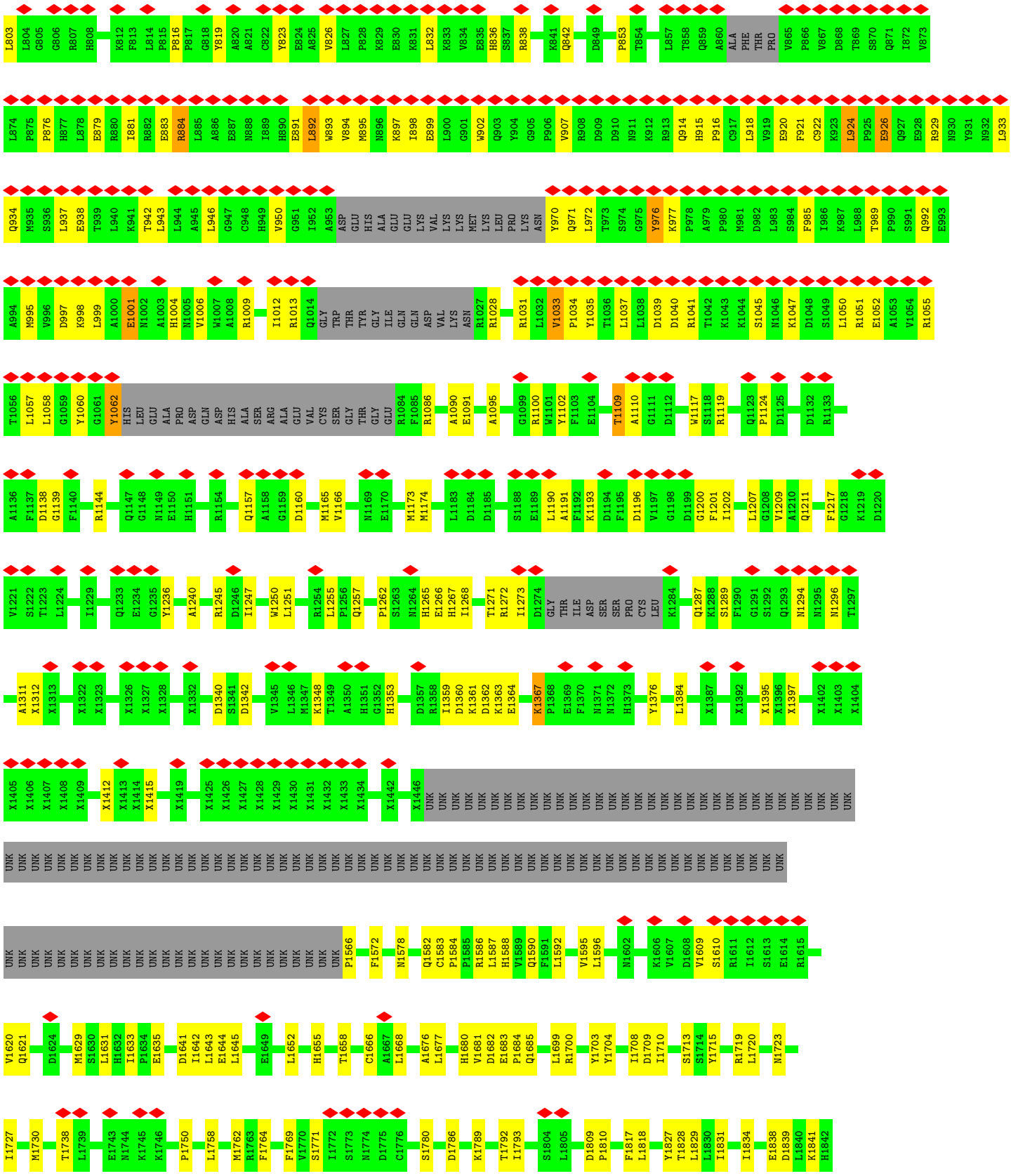




• Molecule 1: Ryanodine receptor 2

Chain C:

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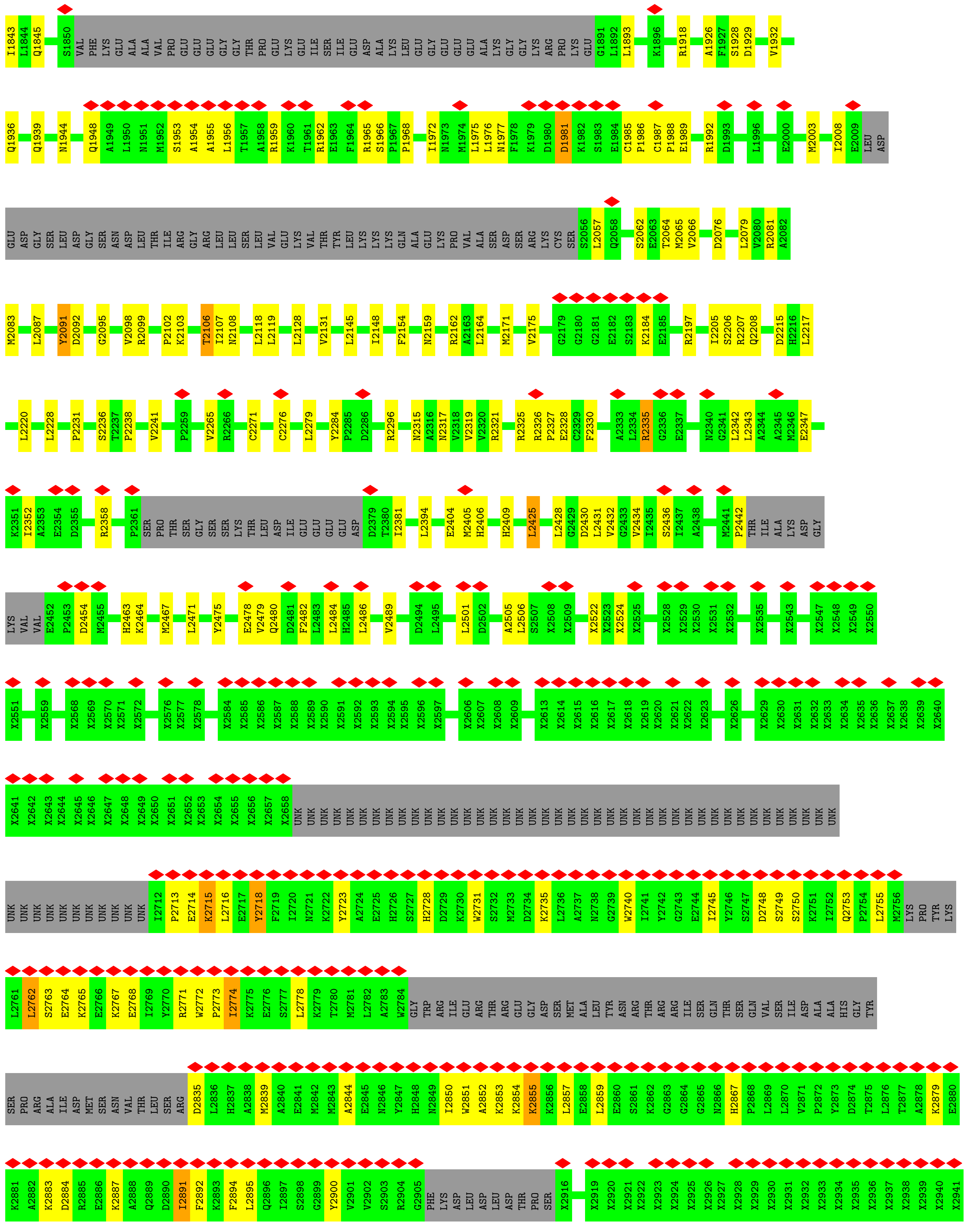
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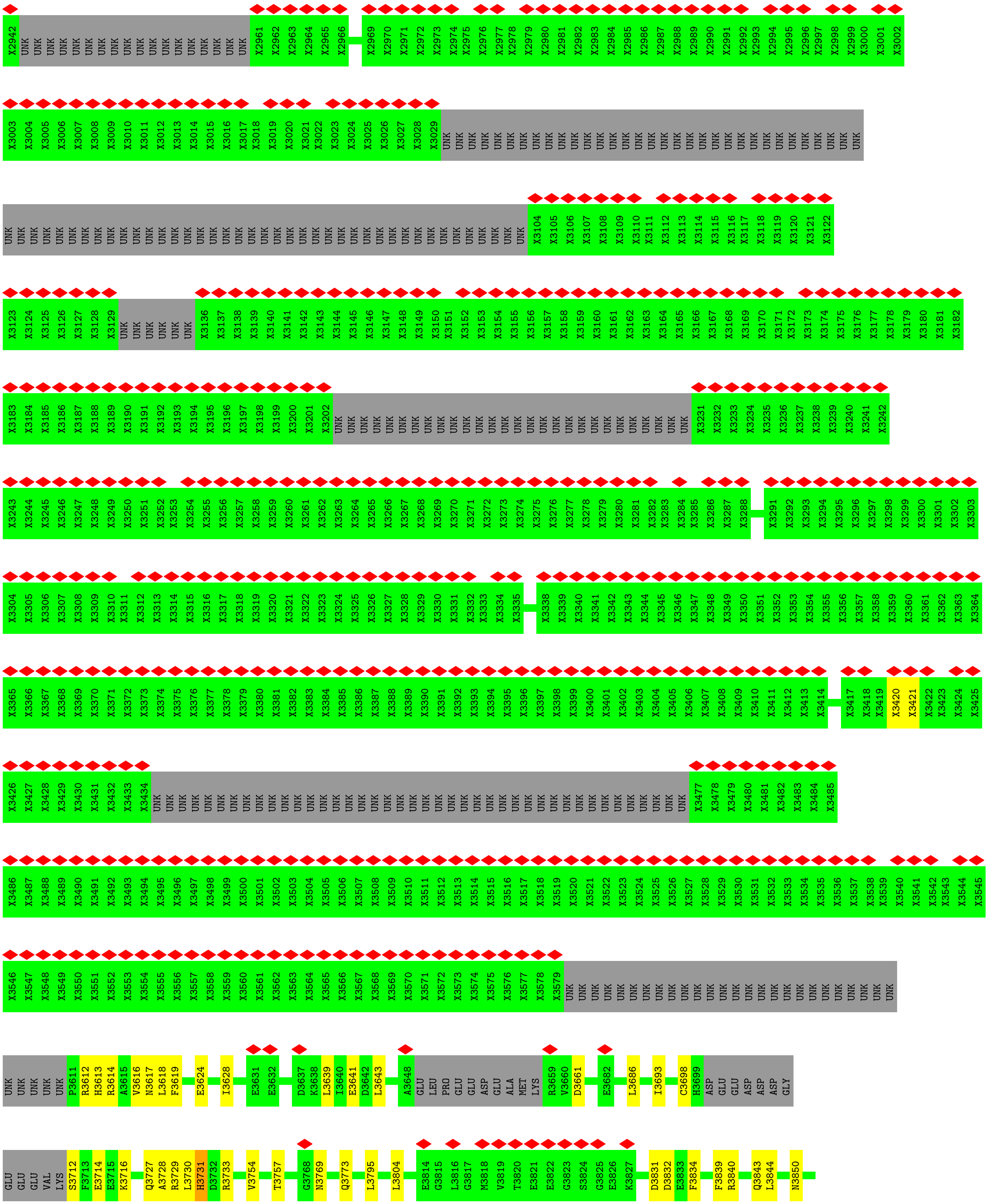
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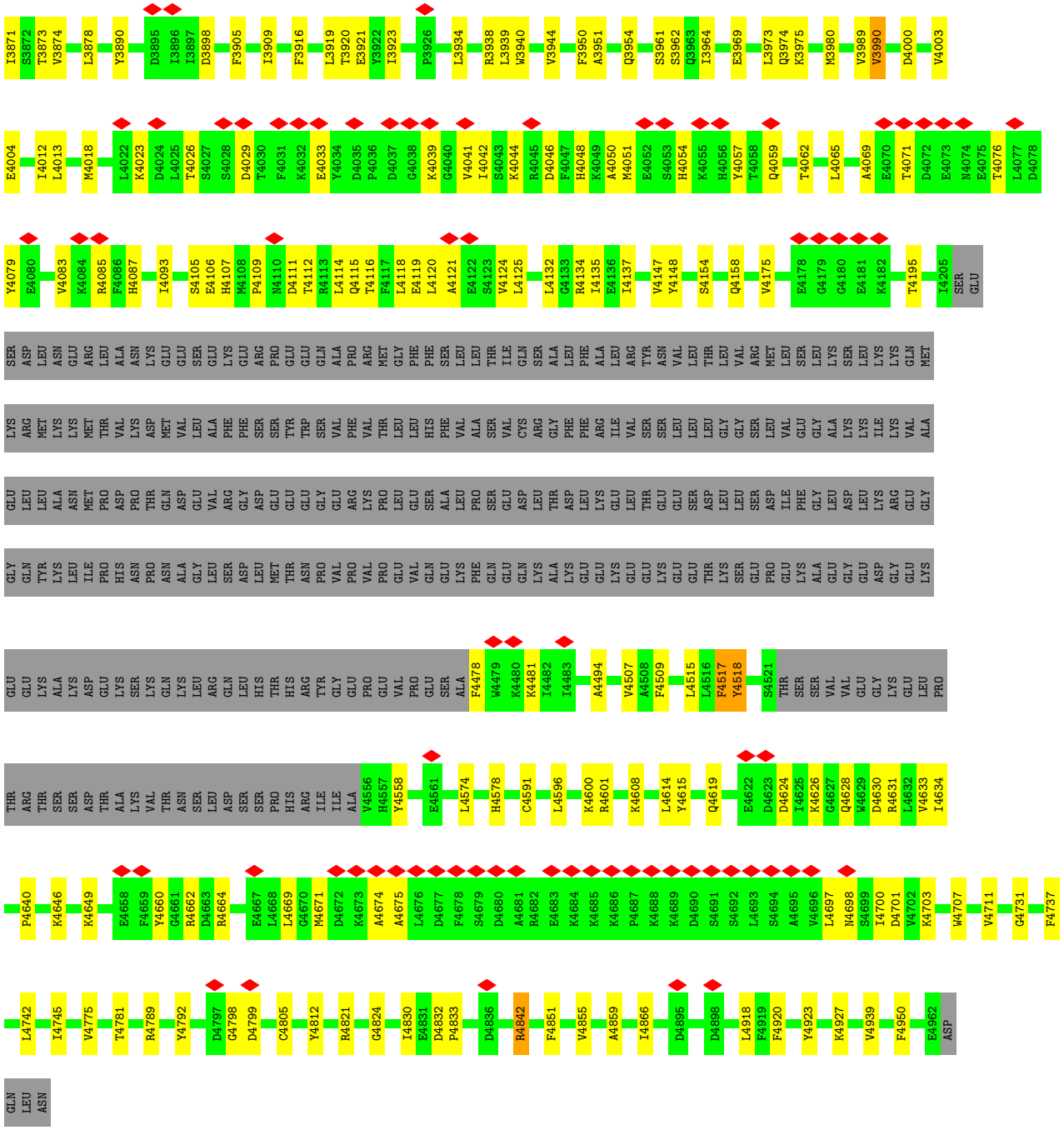
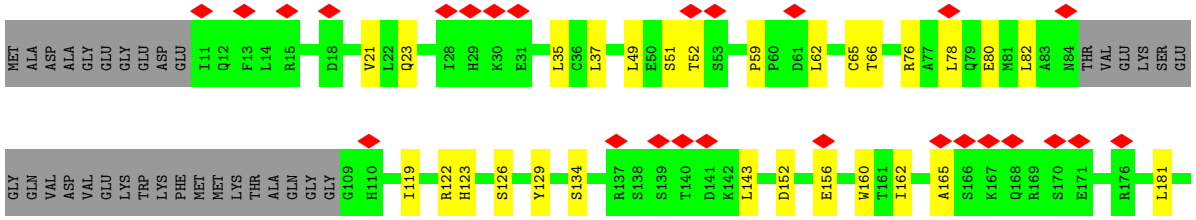
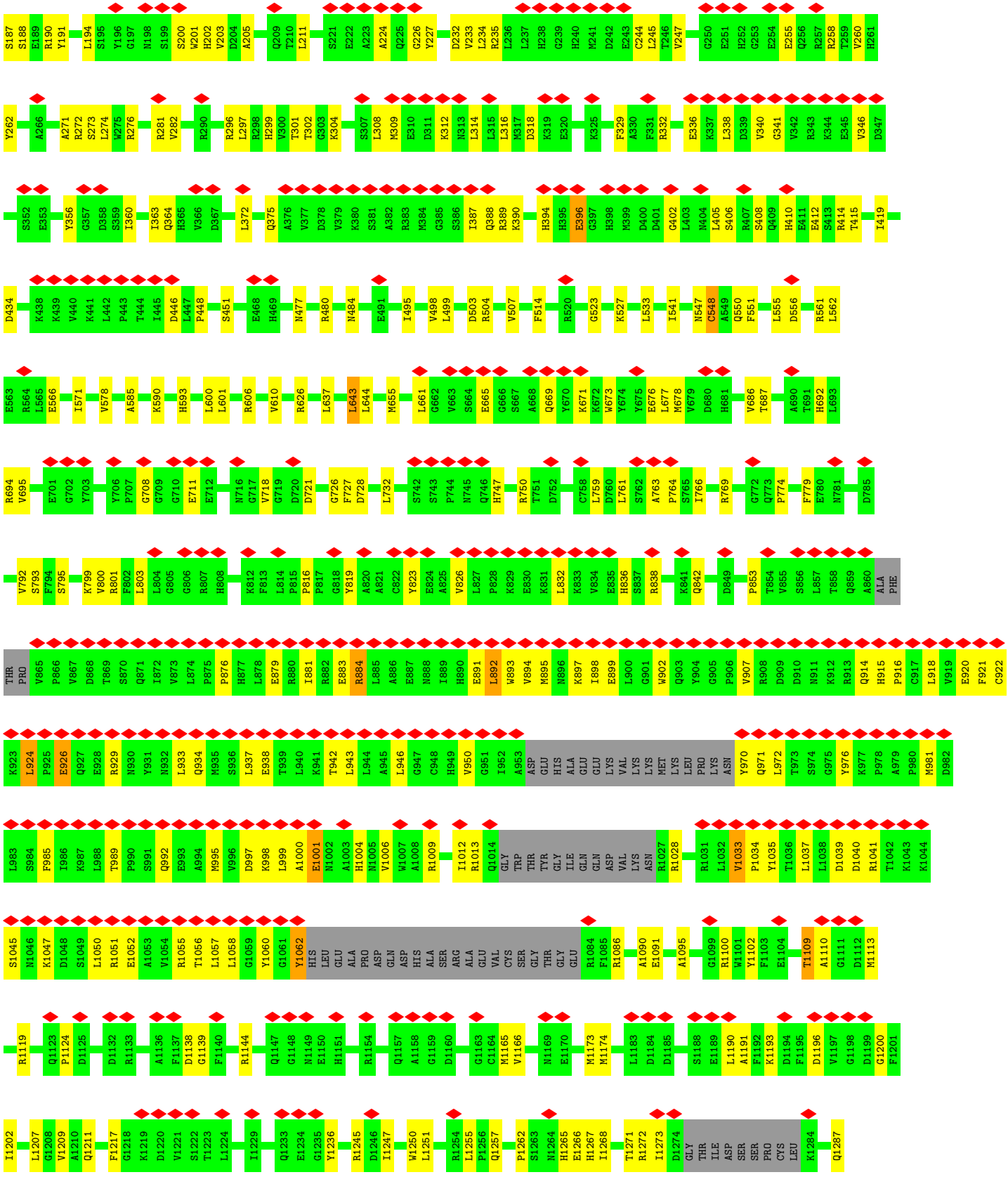


• Molecule 1: Ryanodine receptor 2

Chain D:

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S352 E353 Y356 G357 D358 S359 I360 I363 Q364 H365 V366 D367 L372 Q375 A376 V377 D378 V379 K380 S381 A382 R383 M384 G385 S386 I387 Q388 R389 K390 H394 H395 E396 G397 H398 M399 D400 D401 G402 L403 N404 L405 S406 R407 S408 Q409 H410 E411 E412 S413 R414 T415 I419
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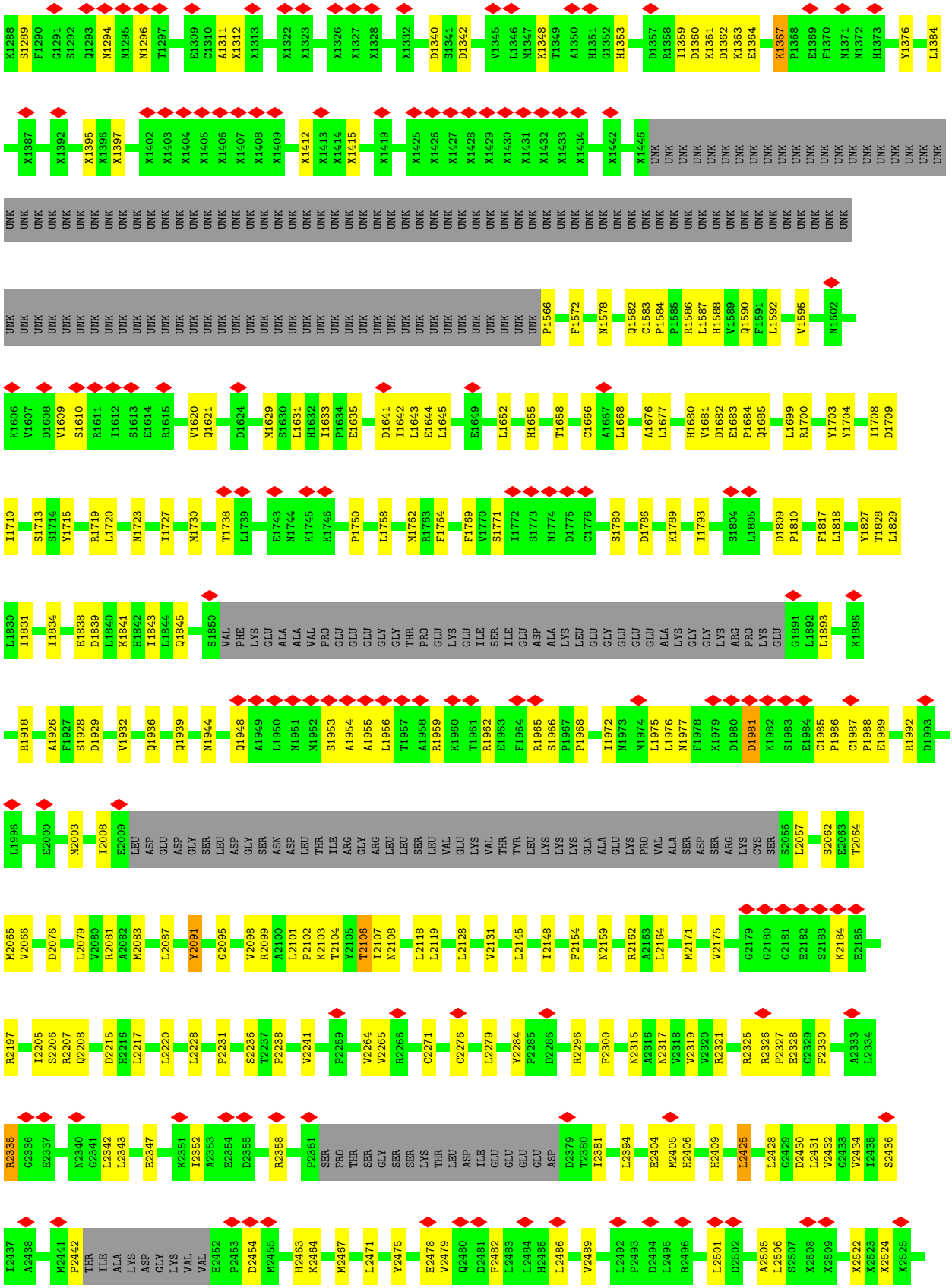
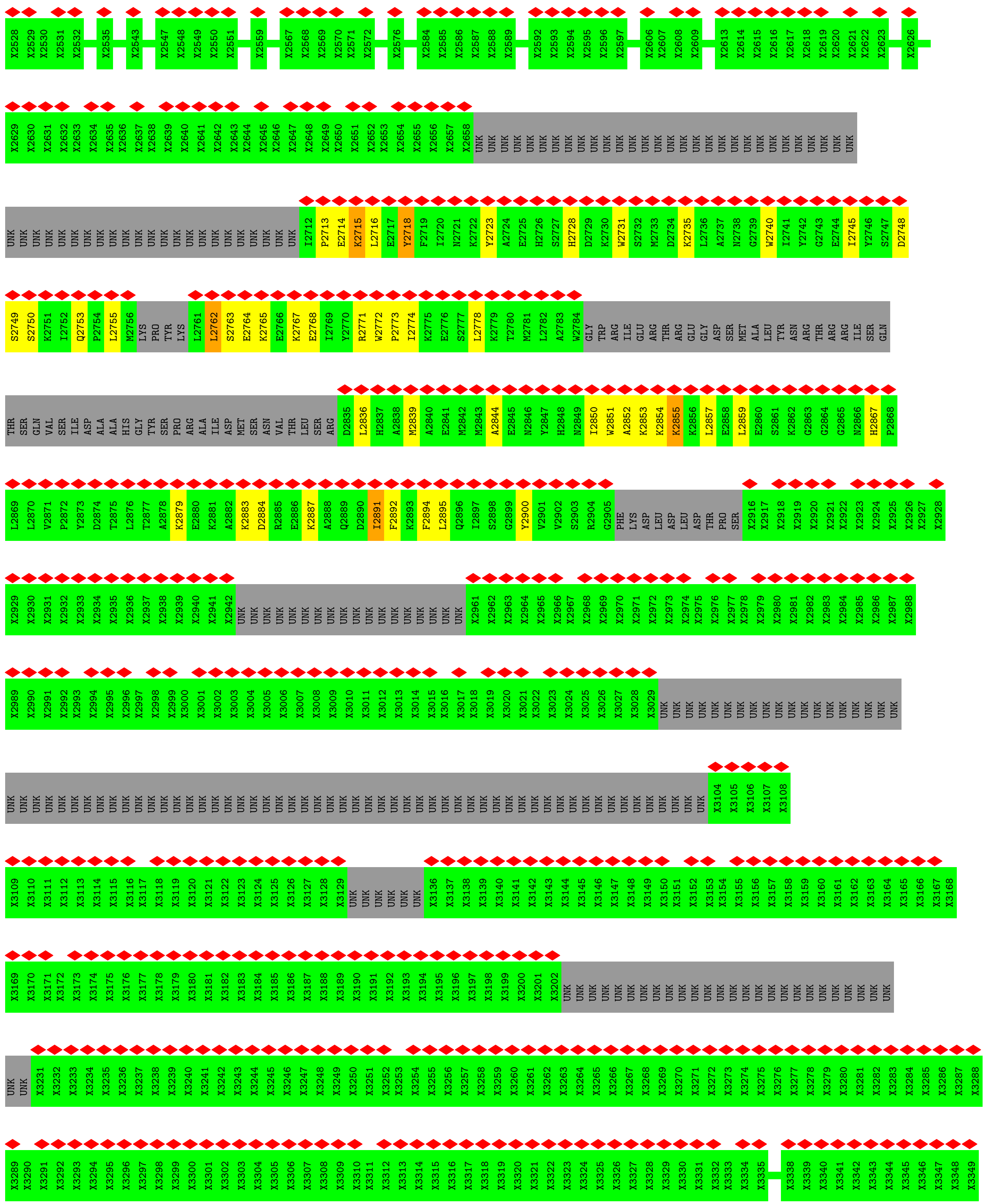
E563 R564 L565 E566 I571 V578 A585 K590 H593 L600 L601 R606 V610 R626 L637 L643 L644 M655 L661 G662 V663 S664 E665 G666 S667 A668 Q669 Y670 K671 K672 W673 Y674 Y675 E676 L677 M678 V679 D680 H681 V686 T687 A690 T691 H692 L693
R694 V695 E701 G702 Y703 Y706 P707 G708 G709 G710 E711 E712 N716 G717 V718 G719 D720 D721 G726 F727 D728 L732 S742 S743 P744 N745 Q746 H747 R750 T751 D752 C758 L759 D760 L761 S762 A763 P764 S765 I766 R769 G772 Q773 P774 F779 E780 N781 D785
V792 S793 F794 S795 K799 V800 R801 F802 L803 L804 G805 G806 R807 H808 K812 F813 L814 P815 P816 P817 G818 Y819 A820 A821 C822 Y823 E824 A825 V826 L827 P828 K829 E830 K831 L832 K833 V834 E835 H836 S837 R838 K841 Q842 D849 P853 T854 V855 S856 L857 T858 Q859 A860 ALA PHE
THR PRO V865 P866 V867 D868 T869 S870 Q871 I872 V873 L874 P875 P876 H877 L878 E879 R880 I881 R882 E883 R884 L885 A886 E887 N888 I889 H890 E891 L892 W893 V894 M895 N896 K897 I898 E899 L900 G901 W902 Q903 Y904 G905 P906 V907 R908 D909 D910 N911 K912 R913 Q914 H915 P916 C917 L918 V919 E920 F921 C922
K923 L924 P925 E926 Q927 E928 R929 N930 Y931 N932 L933 Q934 M935 S936 L937 E938 T939 L940 K941 T942 L943 L944 A945 L946 G947 C948 H949 V950 G951 I952 A953 ASP GLU HIS ALA GLU GLU LYS VAL LYS LYS MET LYS LEU PRO LYS ASN Y970 Q971 L972 T973 S974 G975 Y976 K977 P978 A979 P980 M981 D982
L983 S984 F985 I986 K987 L988 T989 P990 S991 Q992 E993 A994 M995 V996 D997 K998 L999 A1000 E1001 N1002 A1003 H1004 N1005 V1006 W1007 A1008 R1009 I1012 R1013 Q1014 GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 R1028 R1031 L1032 V1033 P1034 Y1035 T1036 L1037 L1038 D1039 D1040 R1041 T1042 K1043 K1044
S1045 N1046 K1047 D1048 S1049 L1050 R1051 E1052 A1053 V1054 R1055 T1056 L1057 L1058 G1059 Y1060 G1061 Y1062 HIS LEU GLU ALA PRO ASP GLN ASP HIS ALA SER ARG ALA GLU VAL CYS SER GLY THR GLY GLU R1084 F1085 R1086 A1090 E1091 A1095 G1099 R1100 W1101 Y1102 F1103 E1104 T1109 A1110 G1111 D1112 M1113
R1119 Q1123 P1124 D1125 D1132 R1133 A1136 F1137 D1138 G1139 F1140 R1144 Q1147 G1148 N1149 E1150 H1151 R1154 Q1157 A1158 G1159 D1160 G1163 C1164 M1165 V1166 W1169 E1170 M1173 M1174 L1183 D1184 D1185 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 G1200 F1201
I1202 L1207 G1208 V1209 A1210 Q1211 F1217 G1218 K1219 D1220 V1221 S1222 T1223 L1224 I1229 Q1233 E1234 G1235 Y1236 R1245 D1246 I1247 W1250 L1251 R1254 L1255 P1256 Q1257 P1262 S1263 N1264 H1265 E1266 H1267 I1268 T1271 R1272 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU K1284 Q1287

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S2749 S2750 K2751 I2752 Q2753 P2754 L2755 M2756 LYS PRO TYR LYS L2761 L2762 S2763 E2764 K2765 E2766 K2767 E2768 I2769 Y2770 R2771 W2772 P2773 I2774 K2775 E2776 S2777 L2778 K2779 T2780 M2781 L2782 A2783 W2784 GLY TRP ARG ILE GLU ARG THR ARG GLU GLY ASP SER MET ALA LEU TYR ASN ARG THR ARG ARG ILE SER GLN
THR SER GLN VAL SER ILE ASP ALA ALA HIS GLY TYR SER PRO ARG ALA ILE ASP MET SER ASN VAL THR LEU SER ARG D2835 L2836 H2837 A2838 M2839 A2840 E2841 M2842 M2843 A2844 E2845 N2846 Y2847 H2848 N2849 I2850 W2851 A2852 K2853 K2854 K2855 K2856 L2857 E2858 L2859 E2860 S2861 K2862 G2863 G2864 G2865 N2866 H2867 P2868
L2869 L2870 V2871 P2872 Y2873 D2874 T2875 L2876 T2877 A2878 K2879 E2880 K2881 A2882 K2883 D2884 R2885 E2886 K2887 A2888 Q2889 D2890 I2891 F2892 K2893 F2894 L2895 Q2896 I2897 S2898 G2899 Y2900 V2901 V2902 S2903 R2904 G2905 PHE LYS ASP LEU ASP LEU ASP THR PRO SER X2916 X2917 X2918 X2919 X2920 X2921 X2922 X2923 X2924 X2925 X2926 X2927 X2928
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X3109 X3110 X3111 X3112 X3113 X3114 X3115 X3116 X3117 X3118 X3119 X3120 X3121 X3122 X3123 X3124 X3125 X3126 X3127 X3128 X3129 UNK UNK UNK UNK UNK UNK X3136 X3137 X3138 X3139 X3140 X3141 X3142 X3143 X3144 X3145 X3146 X3147 X3148 X3149 X3150 X3151 X3152 X3153 X3154 X3155 X3156 X3157 X3158 X3159 X3160 X3161 X3162 X3163 X3164 X3165 X3166 X3167 X3168
X3169 X3170 X3171 X3172 X3173 X3174 X3175 X3176 X3177 X3178 X3179 X3180 X3181 X3182 X3183 X3184 X3185 X3186 X3187 X3188 X3189 X3190 X3191 X3192 X3193 X3194 X3195 X3196 X3197 X3198 X3199 X3200 X3201 X3202 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
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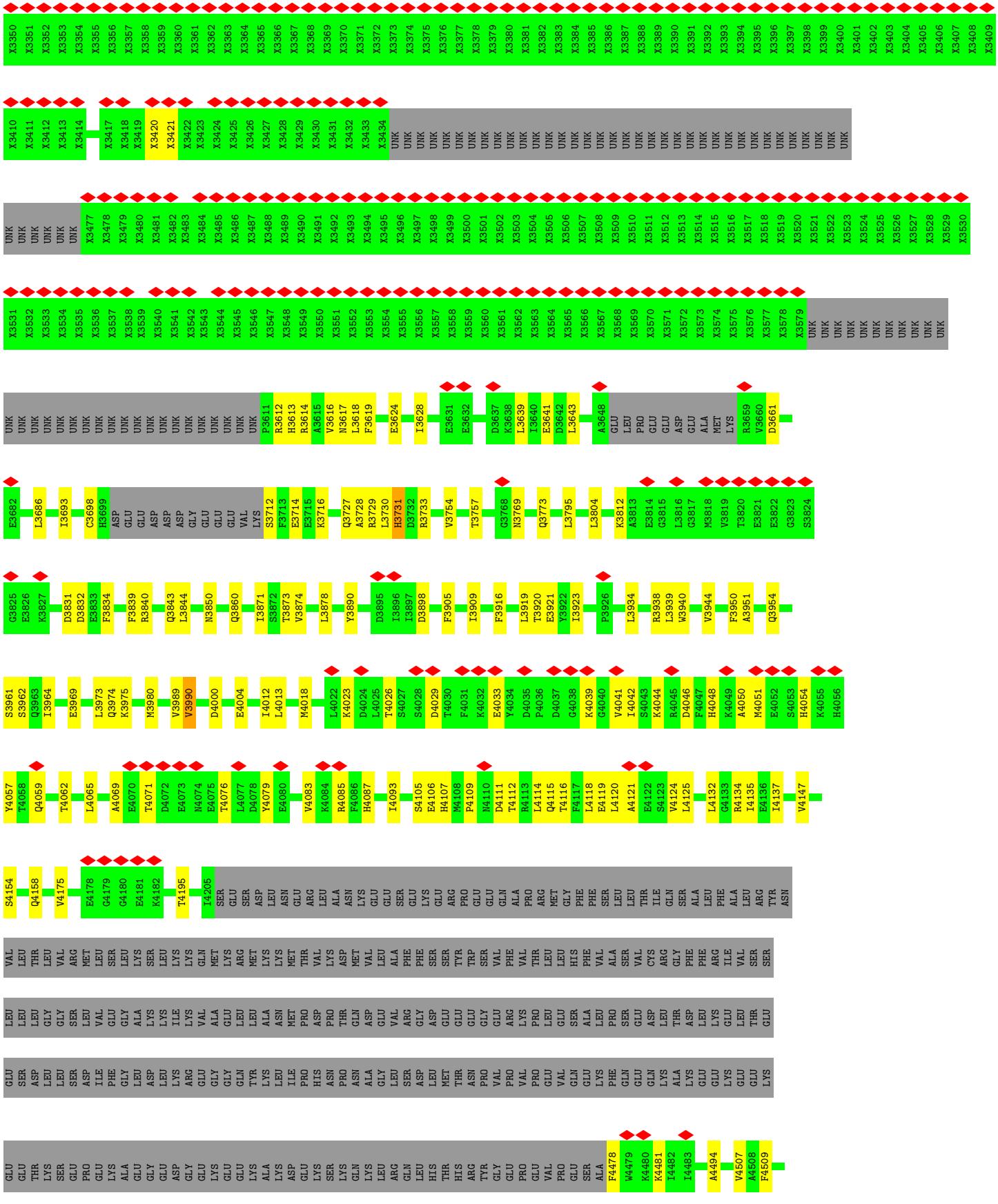
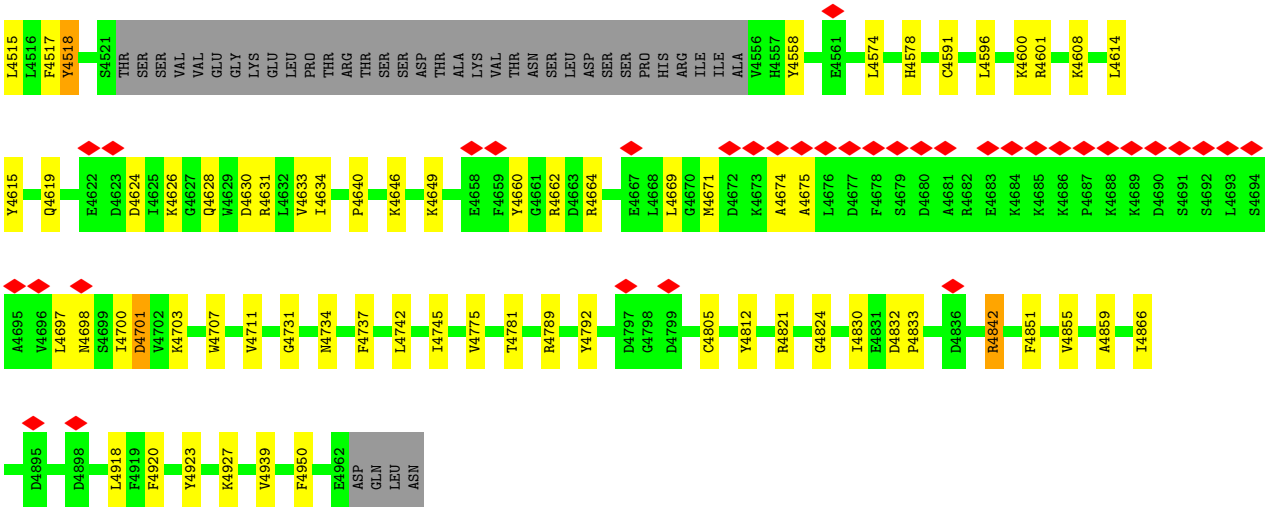
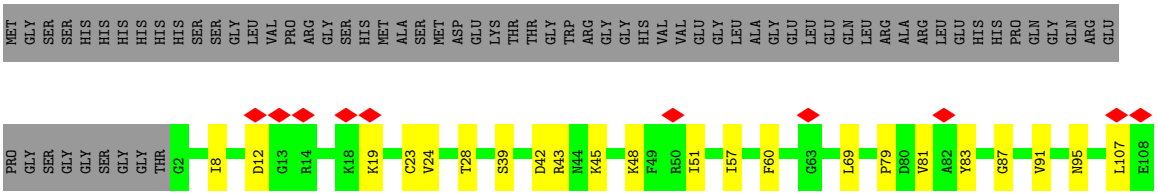




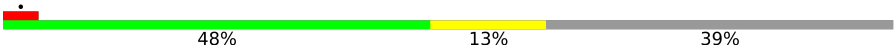
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

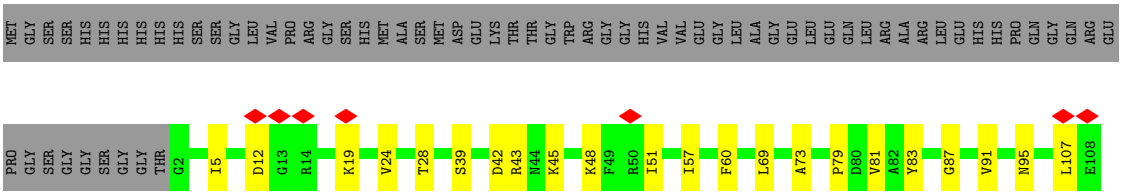
Chain G:



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

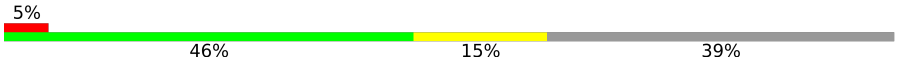
Chain H:

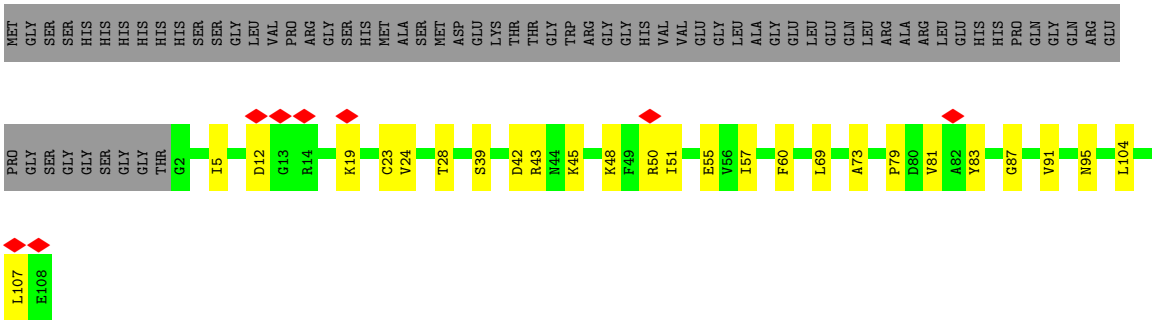




• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

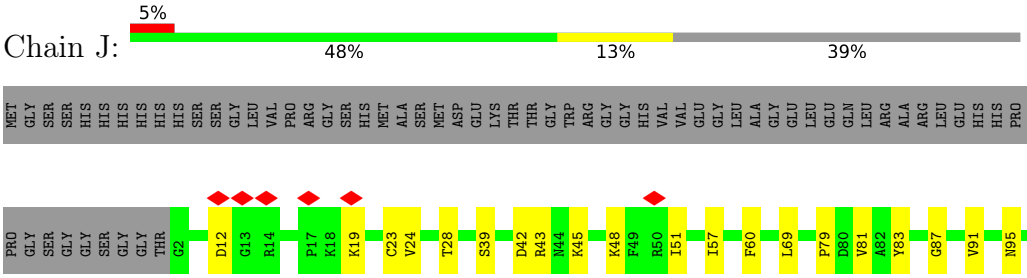
Chain I:





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

Chain J: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48%
13%
39%
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PRO GLY SER GLY GLY SER GLY GLY THR G2 D12 G13 R14 P17 K18 K19 C23 V24 T28 S39 D42 R43 N44 K45 K48 F49 R50 I51 I57 F60 L69 P79 D80 V81 A82 Y83 G87 V91 N95 L104 L107 E108

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	45432	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)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.205	Depositor
Minimum map value	-0.110	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.021	Depositor
Map size (Å)	421.25998, 421.25998, 421.25998	wwPDB
Map dimensions	340, 340, 340	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.239, 1.239, 1.239	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.24	0/26573	0.41	0/35881
1	B	0.24	0/26573	0.41	0/35881
1	C	0.25	0/26573	0.41	0/35881
1	D	0.25	0/26573	0.41	0/35881
2	G	0.26	0/835	0.49	1/1123 (0.1%)
2	H	0.26	0/835	0.49	1/1123 (0.1%)
2	I	0.26	0/835	0.49	1/1123 (0.1%)
2	J	0.26	0/835	0.49	1/1123 (0.1%)
All	All	0.25	0/109632	0.42	4/148016 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	I	12	ASP	CB-CG-OD1	5.10	122.89	118.30
2	J	12	ASP	CB-CG-OD1	5.08	122.87	118.30
2	G	12	ASP	CB-CG-OD1	5.04	122.84	118.30
2	H	12	ASP	CB-CG-OD1	5.00	122.80	118.30

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	29688	0	26383	476	0
1	B	29688	0	26383	479	0
1	C	29688	0	26383	482	0
1	D	29688	0	26383	480	0
2	G	819	0	821	13	0
2	H	819	0	821	15	0
2	I	819	0	821	19	0
2	J	819	0	821	16	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	122036	0	108816	1939	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 8.

All (1939) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1682:ASP:HB2	1:A:1685:GLN:HB3	1.60	0.82
1:C:1682:ASP:HB2	1:C:1685:GLN:HB3	1.60	0.82
1:B:1682:ASP:HB2	1:B:1685:GLN:HB3	1.60	0.82
1:D:1682:ASP:HB2	1:D:1685:GLN:HB3	1.60	0.81
1:D:4105:SER:HB2	1:D:4118:LEU:HD21	1.64	0.80
1:C:4105:SER:HB2	1:C:4118:LEU:HD21	1.64	0.80
1:A:4105:SER:HB2	1:A:4118:LEU:HD21	1.64	0.79
1:B:4105:SER:HB2	1:B:4118:LEU:HD21	1.64	0.78
1:C:1052:GLU:HA	1:C:1055:ARG:HD2	1.65	0.78
1:D:1052:GLU:HA	1:D:1055:ARG:HD2	1.65	0.77
1:B:1052:GLU:HA	1:B:1055:ARG:HD2	1.65	0.77
1:D:3843:GLN:HG3	1:D:3921:GLU:HG3	1.67	0.76
1:C:3843:GLN:HG3	1:C:3921:GLU:HG3	1.67	0.76
1:A:2406:HIS:HA	1:A:2409:HIS:HB3	1.69	0.76
1:A:3843:GLN:HG3	1:A:3921:GLU:HG3	1.67	0.76
1:A:1052:GLU:HA	1:A:1055:ARG:HD2	1.65	0.75
1:B:2406:HIS:HA	1:B:2409:HIS:HB3	1.68	0.75
1:B:3843:GLN:HG3	1:B:3921:GLU:HG3	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2406:HIS:HA	1:C:2409:HIS:HB3	1.69	0.75
1:D:2406:HIS:HA	1:D:2409:HIS:HB3	1.68	0.74
1:C:2342:LEU:HG	1:C:2434:VAL:HG21	1.71	0.72
1:B:2342:LEU:HG	1:B:2434:VAL:HG21	1.71	0.71
1:A:2342:LEU:HG	1:A:2434:VAL:HG21	1.71	0.71
1:A:1700:ARG:NH1	1:A:1817:PHE:O	2.24	0.71
1:D:2342:LEU:HG	1:D:2434:VAL:HG21	1.71	0.71
1:B:1700:ARG:NH1	1:B:1817:PHE:O	2.24	0.71
1:B:759:LEU:HD13	1:B:766:ILE:HG22	1.73	0.70
1:C:1700:ARG:NH1	1:C:1817:PHE:O	2.24	0.69
1:A:644:LEU:HD13	1:A:1631:LEU:HD21	1.75	0.69
1:D:1700:ARG:NH1	1:D:1817:PHE:O	2.24	0.69
1:C:759:LEU:HD13	1:C:766:ILE:HG22	1.73	0.69
1:D:644:LEU:HD13	1:D:1631:LEU:HD21	1.75	0.69
1:C:992:GLN:HG3	1:C:1058:LEU:HD11	1.75	0.69
1:B:644:LEU:HD13	1:B:1631:LEU:HD21	1.74	0.68
1:D:759:LEU:HD13	1:D:766:ILE:HG22	1.73	0.68
1:A:676:GLU:HB2	1:A:803:LEU:HB2	1.76	0.68
1:D:156:GLU:HG2	1:D:187:SER:HB3	1.76	0.68
1:D:992:GLN:HG3	1:D:1058:LEU:HD11	1.75	0.68
1:A:759:LEU:HD13	1:A:766:ILE:HG22	1.73	0.68
1:B:992:GLN:HG3	1:B:1058:LEU:HD11	1.75	0.68
1:C:644:LEU:HD13	1:C:1631:LEU:HD21	1.74	0.68
1:A:1262:PRO:HG2	1:A:1265:HIS:HB2	1.75	0.67
1:A:1684:PRO:HD3	2:G:42:ASP:HB3	1.75	0.67
1:D:1262:PRO:HG2	1:D:1265:HIS:HB2	1.75	0.67
1:D:676:GLU:HB2	1:D:803:LEU:HB2	1.76	0.67
1:A:992:GLN:HG3	1:A:1058:LEU:HD11	1.75	0.67
1:A:1680:HIS:CE1	2:G:91:VAL:HG22	2.28	0.67
1:B:676:GLU:HB2	1:B:803:LEU:HB2	1.76	0.67
1:C:1262:PRO:HG2	1:C:1265:HIS:HB2	1.75	0.67
1:A:156:GLU:HG2	1:A:187:SER:HB3	1.76	0.67
1:A:1255:LEU:HD21	1:A:1384:LEU:HD13	1.78	0.67
1:C:4824:GLY:O	1:D:4821:ARG:NH2	2.28	0.67
1:D:2735:LYS:HA	1:D:2740:TRP:HE3	1.60	0.66
1:C:2735:LYS:HA	1:C:2740:TRP:HE3	1.60	0.66
1:B:1262:PRO:HG2	1:B:1265:HIS:HB2	1.75	0.66
1:B:1266:GLU:O	1:B:1267:HIS:ND1	2.29	0.66
1:D:3727:GLN:OE1	1:D:3769:ASN:ND2	2.28	0.66
1:C:676:GLU:HB2	1:C:803:LEU:HB2	1.76	0.66
1:B:1255:LEU:HD21	1:B:1384:LEU:HD13	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1266:GLU:O	1:D:1267:HIS:ND1	2.29	0.66
1:B:156:GLU:HG2	1:B:187:SER:HB3	1.76	0.66
1:B:2735:LYS:HA	1:B:2740:TRP:HE3	1.60	0.66
1:A:1266:GLU:O	1:A:1267:HIS:ND1	2.29	0.65
1:A:2735:LYS:HA	1:A:2740:TRP:HE3	1.60	0.65
1:B:943:LEU:HA	1:B:946:LEU:HD12	1.78	0.65
1:D:590:LYS:H	1:D:593:HIS:HD2	1.44	0.65
1:C:1255:LEU:HD21	1:C:1384:LEU:HD13	1.77	0.65
1:C:1266:GLU:O	1:C:1267:HIS:ND1	2.29	0.65
1:D:943:LEU:HA	1:D:946:LEU:HD12	1.78	0.65
1:A:943:LEU:HA	1:A:946:LEU:HD12	1.78	0.65
1:C:943:LEU:HA	1:C:946:LEU:HD12	1.78	0.65
1:C:1124:PRO:HD2	1:C:1595:VAL:HG23	1.78	0.65
2:I:24:VAL:HG22	2:I:48:LYS:HG2	1.78	0.65
1:B:1124:PRO:HD2	1:B:1595:VAL:HG23	1.78	0.65
1:A:590:LYS:H	1:A:593:HIS:HD2	1.44	0.65
1:C:156:GLU:HG2	1:C:187:SER:HB3	1.76	0.65
1:C:590:LYS:H	1:C:593:HIS:HD2	1.44	0.65
1:A:1102:TYR:HD1	1:A:1165:MET:HG2	1.62	0.65
1:D:1255:LEU:HD21	1:D:1384:LEU:HD13	1.78	0.65
2:G:24:VAL:HG22	2:G:48:LYS:HG2	1.78	0.64
1:D:1723:ASN:O	1:D:1918:ARG:NH2	2.31	0.64
1:A:1359:ILE:HG12	1:A:1363:LYS:HD2	1.79	0.64
1:C:1723:ASN:O	1:C:1918:ARG:NH2	2.31	0.64
1:B:62:LEU:HA	1:B:65:CYS:HB3	1.80	0.64
1:C:1359:ILE:HG12	1:C:1363:LYS:HD2	1.79	0.64
1:D:671:LYS:HA	1:D:761:LEU:HD12	1.79	0.64
1:D:1102:TYR:HD1	1:D:1165:MET:HG2	1.62	0.64
1:D:1124:PRO:HD2	1:D:1595:VAL:HG23	1.79	0.64
1:A:671:LYS:HA	1:A:761:LEU:HD12	1.80	0.64
2:H:24:VAL:HG22	2:H:48:LYS:HG2	1.78	0.64
1:C:62:LEU:HA	1:C:65:CYS:HB3	1.80	0.64
1:C:2850:ILE:O	1:C:2854:LYS:HG3	1.98	0.64
1:A:1124:PRO:HD2	1:A:1595:VAL:HG23	1.78	0.64
1:B:3727:GLN:OE1	1:B:3769:ASN:ND2	2.28	0.64
1:B:1001:GLU:OE2	1:B:1047:LYS:NZ	2.31	0.64
1:A:1723:ASN:O	1:A:1918:ARG:NH2	2.31	0.64
1:B:671:LYS:HA	1:B:761:LEU:HD12	1.79	0.63
1:B:1102:TYR:HD1	1:B:1165:MET:HG2	1.62	0.63
1:B:2850:ILE:O	1:B:2854:LYS:HG3	1.98	0.63
2:J:24:VAL:HG22	2:J:48:LYS:HG2	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:62:LEU:HA	1:A:65:CYS:HB3	1.80	0.63
1:A:1001:GLU:OE2	1:A:1047:LYS:NZ	2.31	0.63
1:A:2850:ILE:O	1:A:2854:LYS:HG3	1.98	0.63
1:C:1001:GLU:OE2	1:C:1047:LYS:NZ	2.31	0.63
1:C:4111:ASP:O	1:C:4115:GLN:N	2.32	0.63
1:D:4111:ASP:O	1:D:4115:GLN:N	2.32	0.63
1:B:590:LYS:H	1:B:593:HIS:HD2	1.44	0.63
1:B:1359:ILE:HG12	1:B:1363:LYS:HD2	1.79	0.63
1:C:4018:MET:HB3	1:C:4065:LEU:HD21	1.80	0.63
1:D:62:LEU:HA	1:D:65:CYS:HB3	1.80	0.63
1:D:2850:ILE:O	1:D:2854:LYS:HG3	1.98	0.63
1:D:4018:MET:HB3	1:D:4065:LEU:HD21	1.80	0.63
1:C:671:LYS:HA	1:C:761:LEU:HD12	1.79	0.63
1:A:3727:GLN:OE1	1:A:3769:ASN:ND2	2.28	0.63
1:C:548:CYS:HB3	1:C:578:VAL:HG23	1.81	0.63
1:B:1723:ASN:O	1:B:1918:ARG:NH2	2.31	0.63
1:C:1102:TYR:HD1	1:C:1165:MET:HG2	1.62	0.63
1:A:548:CYS:HB3	1:A:578:VAL:HG23	1.81	0.62
1:B:4018:MET:HB3	1:B:4065:LEU:HD21	1.80	0.62
1:A:894:VAL:O	1:A:898:ILE:HG13	2.00	0.62
1:C:2107:ILE:HG13	1:C:2108:ASN:H	1.64	0.62
1:D:258:ARG:NH1	1:D:316:LEU:O	2.33	0.62
1:A:4111:ASP:O	1:A:4115:GLN:N	2.32	0.62
1:D:1001:GLU:OE2	1:D:1047:LYS:NZ	2.31	0.62
1:D:1359:ILE:HG12	1:D:1363:LYS:HD2	1.79	0.62
1:D:2107:ILE:HG13	1:D:2108:ASN:H	1.64	0.62
1:D:548:CYS:HB3	1:D:578:VAL:HG23	1.81	0.62
1:D:415:THR:O	1:D:419:ILE:HG13	2.00	0.62
1:D:894:VAL:O	1:D:898:ILE:HG13	2.00	0.62
1:B:601:LEU:HB2	1:B:610:VAL:HG11	1.82	0.62
1:C:894:VAL:O	1:C:898:ILE:HG13	2.00	0.62
1:A:4018:MET:HB3	1:A:4065:LEU:HD21	1.80	0.62
1:B:2107:ILE:HG13	1:B:2108:ASN:H	1.64	0.62
1:B:415:THR:O	1:B:419:ILE:HG13	2.00	0.62
1:A:258:ARG:NH1	1:A:316:LEU:O	2.33	0.62
1:A:2107:ILE:HG13	1:A:2108:ASN:H	1.64	0.62
1:B:1144:ARG:NH1	1:B:1191:ALA:O	2.33	0.62
1:C:601:LEU:HB2	1:C:610:VAL:HG11	1.82	0.62
1:D:601:LEU:HB2	1:D:610:VAL:HG11	1.82	0.62
1:A:601:LEU:HB2	1:A:610:VAL:HG11	1.82	0.61
1:A:1144:ARG:NH1	1:A:1191:ALA:O	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:548:CYS:HB3	1:B:578:VAL:HG23	1.81	0.61
1:B:894:VAL:O	1:B:898:ILE:HG13	2.00	0.61
1:C:258:ARG:NH1	1:C:316:LEU:O	2.33	0.61
1:A:415:THR:O	1:A:419:ILE:HG13	2.00	0.61
1:C:1144:ARG:NH1	1:C:1191:ALA:O	2.33	0.61
1:B:4111:ASP:O	1:B:4115:GLN:N	2.32	0.61
1:C:2081:ARG:HG3	1:C:3686:LEU:HD22	1.82	0.61
1:D:1144:ARG:NH1	1:D:1191:ALA:O	2.33	0.61
1:C:4697:LEU:O	1:C:4698:ASN:ND2	2.34	0.61
1:A:1629:MET:HE3	1:A:1642:ILE:HG21	1.82	0.61
1:D:4478:PHE:HA	1:D:4481:LYS:HE2	1.82	0.61
1:A:3613:HIS:O	1:A:3617:ASN:ND2	2.34	0.61
1:A:4824:GLY:O	1:B:4821:ARG:NH2	2.33	0.61
1:B:258:ARG:NH1	1:B:316:LEU:O	2.33	0.61
2:G:39:SER:O	2:G:43:ARG:NH1	2.33	0.61
1:C:1629:MET:HE3	1:C:1642:ILE:HG21	1.83	0.61
1:C:1681:VAL:HG23	1:C:1682:ASP:H	1.66	0.61
1:A:4478:PHE:HA	1:A:4481:LYS:HE2	1.82	0.61
2:H:39:SER:O	2:H:43:ARG:NH1	2.34	0.61
1:C:308:LEU:HD13	1:C:314:LEU:HG	1.83	0.61
1:C:4478:PHE:HA	1:C:4481:LYS:HE2	1.82	0.61
1:A:123:HIS:HD2	1:A:126:SER:H	1.49	0.61
1:A:708:GLY:O	1:A:838:ARG:NH1	2.34	0.61
1:B:4697:LEU:O	1:B:4698:ASN:ND2	2.34	0.61
1:C:415:THR:O	1:C:419:ILE:HG13	2.00	0.61
1:C:853:PRO:HG2	1:C:1209:VAL:HA	1.83	0.61
1:C:3613:HIS:O	1:C:3617:ASN:ND2	2.34	0.61
1:D:3613:HIS:O	1:D:3617:ASN:ND2	2.34	0.61
1:B:123:HIS:HD2	1:B:126:SER:H	1.49	0.60
1:B:4137:ILE:HG23	1:B:4950:PHE:HB2	1.83	0.60
1:D:4697:LEU:O	1:D:4698:ASN:ND2	2.34	0.60
2:J:39:SER:O	2:J:43:ARG:NH1	2.34	0.60
1:C:247:VAL:O	1:C:272:ARG:NH1	2.35	0.60
1:A:2081:ARG:HG3	1:A:3686:LEU:HD22	1.82	0.60
1:B:708:GLY:O	1:B:838:ARG:NH1	2.34	0.60
1:B:2145:LEU:HD23	1:B:2148:ILE:HD11	1.83	0.60
1:C:3727:GLN:OE1	1:C:3769:ASN:ND2	2.28	0.60
1:D:308:LEU:HD13	1:D:314:LEU:HG	1.83	0.60
1:A:35:LEU:HD13	1:A:49:LEU:HD13	1.82	0.60
1:A:2145:LEU:HD23	1:A:2148:ILE:HD11	1.83	0.60
1:A:4701:ASP:OD1	1:A:4701:ASP:N	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:360:ILE:HG23	1:B:402:GLY:HA2	1.83	0.60
1:C:4137:ILE:HG23	1:C:4950:PHE:HB2	1.84	0.60
1:D:247:VAL:O	1:D:272:ARG:NH1	2.35	0.60
1:A:360:ILE:HG23	1:A:402:GLY:HA2	1.83	0.60
1:B:1681:VAL:HG23	1:B:1682:ASP:H	1.66	0.60
1:C:708:GLY:O	1:C:838:ARG:NH1	2.34	0.60
2:I:39:SER:O	2:I:43:ARG:NH1	2.33	0.60
1:A:1681:VAL:HG23	1:A:1682:ASP:H	1.66	0.60
1:A:4697:LEU:O	1:A:4698:ASN:ND2	2.34	0.60
1:B:853:PRO:HG2	1:B:1209:VAL:HA	1.83	0.60
1:B:2081:ARG:HG3	1:B:3686:LEU:HD22	1.82	0.60
1:B:4478:PHE:HA	1:B:4481:LYS:HE2	1.82	0.60
1:D:363:ILE:HG22	1:D:372:LEU:HD22	1.84	0.60
1:D:708:GLY:O	1:D:838:ARG:NH1	2.34	0.60
1:D:35:LEU:HD13	1:D:49:LEU:HD13	1.83	0.60
1:D:1682:ASP:HB3	1:D:1684:PRO:HD2	1.84	0.60
1:D:1719:ARG:O	1:D:1723:ASN:HB2	2.02	0.60
1:C:4789:ARG:NH1	1:D:4558:TYR:OH	2.35	0.60
1:D:1681:VAL:HG23	1:D:1682:ASP:H	1.66	0.60
1:B:4624:ASP:O	1:B:4628:GLN:NE2	2.35	0.60
1:A:363:ILE:HG22	1:A:372:LEU:HD22	1.84	0.60
1:A:4624:ASP:O	1:A:4628:GLN:NE2	2.35	0.60
1:B:4824:GLY:O	1:C:4821:ARG:NH2	2.34	0.60
1:C:1682:ASP:HB3	1:C:1684:PRO:HD2	1.84	0.60
1:A:247:VAL:O	1:A:272:ARG:NH1	2.35	0.59
1:B:1682:ASP:HB3	1:B:1684:PRO:HD2	1.84	0.59
1:C:35:LEU:HD13	1:C:49:LEU:HD13	1.83	0.59
1:D:4624:ASP:O	1:D:4628:GLN:NE2	2.35	0.59
1:A:191:TYR:OH	1:B:2325:ARG:NH1	2.34	0.59
1:A:412:GLU:OE2	1:A:484:ASN:ND2	2.36	0.59
1:B:247:VAL:O	1:B:272:ARG:NH1	2.35	0.59
1:C:123:HIS:HD2	1:C:126:SER:H	1.49	0.59
1:C:1719:ARG:O	1:C:1723:ASN:HB2	2.02	0.59
1:C:4624:ASP:O	1:C:4628:GLN:NE2	2.35	0.59
1:D:1680:HIS:CE1	2:J:91:VAL:HG22	2.37	0.59
1:A:308:LEU:HD13	1:A:314:LEU:HG	1.83	0.59
1:A:1051:ARG:HG2	1:A:1055:ARG:HE	1.67	0.59
1:A:853:PRO:HG2	1:A:1209:VAL:HA	1.83	0.59
1:A:4042:ILE:HG22	1:A:4044:LYS:H	1.68	0.59
1:C:2145:LEU:HD23	1:C:2148:ILE:HD11	1.83	0.59
1:A:4821:ARG:NH2	1:D:4824:GLY:O	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:412:GLU:OE2	1:B:484:ASN:ND2	2.36	0.59
1:C:1006:VAL:HG23	1:C:1009:ARG:HH12	1.68	0.59
1:D:853:PRO:HG2	1:D:1209:VAL:HA	1.83	0.59
1:D:2081:ARG:HG3	1:D:3686:LEU:HD22	1.82	0.59
1:C:1051:ARG:HG2	1:C:1055:ARG:HE	1.68	0.59
1:D:1051:ARG:HG2	1:D:1055:ARG:HE	1.67	0.59
1:B:191:TYR:OH	1:C:2325:ARG:NH1	2.35	0.59
1:C:360:ILE:HG23	1:C:402:GLY:HA2	1.83	0.59
1:C:412:GLU:OE2	1:C:484:ASN:ND2	2.35	0.59
1:D:2145:LEU:HD23	1:D:2148:ILE:HD11	1.83	0.59
1:A:1682:ASP:HB3	1:A:1684:PRO:HD2	1.84	0.59
1:A:4137:ILE:HG23	1:A:4950:PHE:HB2	1.83	0.59
1:A:4923:TYR:O	1:A:4927:LYS:HB2	2.02	0.59
1:B:1719:ARG:O	1:B:1723:ASN:HB2	2.02	0.59
1:C:1609:VAL:HG23	1:C:1610:SER:H	1.68	0.59
1:D:123:HIS:HD2	1:D:126:SER:H	1.49	0.59
1:D:360:ILE:HG23	1:D:402:GLY:HA2	1.83	0.59
1:B:35:LEU:HD13	1:B:49:LEU:HD13	1.83	0.59
1:B:308:LEU:HD13	1:B:314:LEU:HG	1.83	0.59
1:B:4789:ARG:NH1	1:C:4558:TYR:OH	2.36	0.59
1:B:4923:TYR:O	1:B:4927:LYS:HB2	2.02	0.59
1:C:4923:TYR:O	1:C:4927:LYS:HB2	2.02	0.58
1:D:412:GLU:OE2	1:D:484:ASN:ND2	2.35	0.58
1:D:4137:ILE:HG23	1:D:4950:PHE:HB2	1.84	0.58
1:B:2855:LYS:HD3	1:B:2867:HIS:HD2	1.68	0.58
1:B:2887:LYS:O	1:B:2891:ILE:HG22	2.03	0.58
1:B:3773:GLN:OE1	1:B:3850:ASN:ND2	2.36	0.58
1:B:4121:ALA:O	1:B:4125:LEU:HG	2.04	0.58
1:C:363:ILE:HG22	1:C:372:LEU:HD22	1.84	0.58
1:C:1641:ASP:HB3	1:C:1644:GLU:HG3	1.85	0.58
1:C:2887:LYS:O	1:C:2891:ILE:HG22	2.03	0.58
1:C:3773:GLN:OE1	1:C:3850:ASN:ND2	2.36	0.58
1:D:1641:ASP:HB3	1:D:1644:GLU:HG3	1.85	0.58
1:D:2887:LYS:O	1:D:2891:ILE:HG22	2.03	0.58
1:A:2855:LYS:HD3	1:A:2867:HIS:HD2	1.68	0.58
1:D:1272:ARG:NH2	1:D:1584:PRO:O	2.35	0.58
1:A:1006:VAL:HG23	1:A:1009:ARG:HH12	1.68	0.58
1:A:1641:ASP:HB3	1:A:1644:GLU:HG3	1.85	0.58
1:A:1719:ARG:O	1:A:1723:ASN:HB2	2.02	0.58
1:B:1641:ASP:HB3	1:B:1644:GLU:HG3	1.85	0.58
1:C:4042:ILE:HG22	1:C:4044:LYS:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3773:GLN:OE1	1:D:3850:ASN:ND2	2.36	0.58
1:D:4042:ILE:HG22	1:D:4044:LYS:H	1.68	0.58
1:D:4923:TYR:O	1:D:4927:LYS:HB2	2.02	0.58
1:A:1989:GLU:HA	1:A:1992:ARG:HD3	1.85	0.58
1:B:4042:ILE:HG22	1:B:4044:LYS:H	1.68	0.58
1:A:3773:GLN:OE1	1:A:3850:ASN:ND2	2.36	0.58
1:A:4121:ALA:O	1:A:4125:LEU:HG	2.04	0.58
1:B:329:PHE:HB3	1:B:363:ILE:HD11	1.85	0.58
1:B:921:PHE:HA	1:B:924:LEU:HD23	1.86	0.58
1:B:1684:PRO:HD3	2:H:42:ASP:HB3	1.84	0.58
1:C:4121:ALA:O	1:C:4125:LEU:HG	2.04	0.58
1:B:363:ILE:HG22	1:B:372:LEU:HD22	1.84	0.58
1:B:3613:HIS:O	1:B:3617:ASN:ND2	2.34	0.58
1:A:836:HIS:NE2	1:A:842:GLN:OE1	2.35	0.58
1:A:4106:GLU:OE1	1:A:4134:ARG:NH1	2.37	0.58
1:A:4789:ARG:NH1	1:B:4558:TYR:OH	2.37	0.58
1:B:1006:VAL:HG23	1:B:1009:ARG:HH12	1.68	0.58
1:C:188:SER:HB3	1:C:190:ARG:HD2	1.86	0.58
1:D:1609:VAL:HG23	1:D:1610:SER:H	1.68	0.58
1:B:226:GLY:O	1:B:356:TYR:N	2.33	0.58
1:B:1989:GLU:HA	1:B:1992:ARG:HD3	1.85	0.58
1:C:2855:LYS:HD3	1:C:2867:HIS:HD2	1.68	0.58
1:D:188:SER:HB3	1:D:190:ARG:HD2	1.86	0.58
1:D:4106:GLU:OE1	1:D:4134:ARG:NH1	2.37	0.58
1:A:329:PHE:HB3	1:A:363:ILE:HD11	1.85	0.58
1:B:1051:ARG:HG2	1:B:1055:ARG:HE	1.68	0.58
1:C:1272:ARG:NH2	1:C:1584:PRO:O	2.35	0.58
1:D:1684:PRO:HD3	2:J:42:ASP:HB3	1.85	0.58
1:D:2855:LYS:HD3	1:D:2867:HIS:HD2	1.68	0.58
1:A:1986:PRO:HB2	1:A:1988:PRO:HD2	1.86	0.57
1:A:2887:LYS:O	1:A:2891:ILE:HG22	2.03	0.57
1:C:329:PHE:HB3	1:C:363:ILE:HD11	1.85	0.57
1:D:1006:VAL:HG23	1:D:1009:ARG:HH12	1.68	0.57
1:A:1272:ARG:NH2	1:A:1584:PRO:O	2.35	0.57
1:B:188:SER:HB3	1:B:190:ARG:HD2	1.86	0.57
1:B:4106:GLU:OE1	1:B:4134:ARG:NH1	2.37	0.57
1:A:188:SER:HB3	1:A:190:ARG:HD2	1.86	0.57
1:B:1272:ARG:NH2	1:B:1584:PRO:O	2.35	0.57
1:B:1609:VAL:HG23	1:B:1610:SER:H	1.68	0.57
1:C:921:PHE:HA	1:C:924:LEU:HD23	1.86	0.57
1:C:694:ARG:HG2	1:C:728:ASP:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:694:ARG:HG2	1:D:728:ASP:HB3	1.87	0.57
1:A:694:ARG:HG2	1:A:728:ASP:HB3	1.87	0.57
1:A:921:PHE:HA	1:A:924:LEU:HD23	1.86	0.57
1:A:1730:MET:SD	1:A:2106:THR:OG1	2.63	0.57
1:B:799:LYS:HG2	1:B:1621:GLN:HG3	1.86	0.57
1:B:1730:MET:SD	1:B:2106:THR:OG1	2.63	0.57
1:C:226:GLY:O	1:C:356:TYR:N	2.33	0.57
1:C:799:LYS:HG2	1:C:1621:GLN:HG3	1.86	0.57
1:C:1730:MET:SD	1:C:2106:THR:OG1	2.63	0.57
1:C:4106:GLU:OE1	1:C:4134:ARG:NH1	2.37	0.57
1:D:329:PHE:HB3	1:D:363:ILE:HD11	1.85	0.57
1:D:799:LYS:HG2	1:D:1621:GLN:HG3	1.86	0.57
1:A:2343:LEU:O	1:A:2347:GLU:HG3	2.05	0.57
1:B:694:ARG:HG2	1:B:728:ASP:HB3	1.87	0.57
1:B:1060:TYR:HB2	1:B:1062:TYR:CE1	2.40	0.57
1:D:1060:TYR:HB2	1:D:1062:TYR:CE1	2.40	0.57
1:D:4121:ALA:O	1:D:4125:LEU:HG	2.04	0.57
1:B:2343:LEU:O	1:B:2347:GLU:HG3	2.05	0.57
1:C:1986:PRO:HB2	1:C:1988:PRO:HD2	1.86	0.57
1:C:2343:LEU:O	1:C:2347:GLU:HG3	2.05	0.57
1:D:271:ALA:O	1:D:301:THR:OG1	2.23	0.57
1:D:921:PHE:HA	1:D:924:LEU:HD23	1.86	0.57
1:D:2343:LEU:O	1:D:2347:GLU:HG3	2.05	0.57
1:A:1609:VAL:HG23	1:A:1610:SER:H	1.68	0.56
1:B:1986:PRO:HB2	1:B:1988:PRO:HD2	1.86	0.56
1:C:1060:TYR:HB2	1:C:1062:TYR:CE1	2.40	0.56
1:D:4195:THR:HB	1:D:4918:LEU:HD11	1.87	0.56
1:A:1060:TYR:HB2	1:A:1062:TYR:CE1	2.40	0.56
1:A:4195:THR:HB	1:A:4918:LEU:HD11	1.88	0.56
1:B:262:TYR:HB2	1:B:389:ARG:HG3	1.87	0.56
1:C:262:TYR:HB2	1:C:389:ARG:HG3	1.87	0.56
1:D:3831:ASP:HB2	1:D:3834:PHE:HB3	1.88	0.56
1:A:262:TYR:HB2	1:A:389:ARG:HG3	1.87	0.56
1:A:271:ALA:O	1:A:301:THR:OG1	2.23	0.56
1:B:332:ARG:NH1	1:B:364:GLN:OE1	2.38	0.56
1:C:332:ARG:NH1	1:C:364:GLN:OE1	2.39	0.56
1:A:226:GLY:O	1:A:356:TYR:N	2.33	0.56
1:B:1629:MET:HE3	1:B:1642:ILE:HG21	1.87	0.56
1:B:4195:THR:HB	1:B:4918:LEU:HD11	1.88	0.56
1:C:1588:HIS:HE1	1:C:1590:GLN:HE21	1.53	0.56
1:A:2723:TYR:HD1	1:A:2894:PHE:HD2	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1989:GLU:HA	1:C:1992:ARG:HD3	1.85	0.56
1:D:1986:PRO:HB2	1:D:1988:PRO:HD2	1.86	0.56
1:C:3831:ASP:HB2	1:C:3834:PHE:HB3	1.88	0.56
1:D:1989:GLU:HA	1:D:1992:ARG:HD3	1.85	0.56
1:B:836:HIS:NE2	1:B:842:GLN:OE1	2.35	0.56
1:D:2723:TYR:HD1	1:D:2894:PHE:HD2	1.53	0.56
1:A:655:MET:SD	1:A:836:HIS:ND1	2.79	0.56
1:C:271:ALA:O	1:C:301:THR:OG1	2.23	0.56
1:C:933:LEU:HD23	1:C:937:LEU:HD23	1.87	0.56
1:C:4195:THR:HB	1:C:4918:LEU:HD11	1.88	0.56
1:D:2159:ASN:HD22	1:D:2162:ARG:HH22	1.54	0.56
1:D:3840:ARG:HH21	1:D:3844:LEU:HD21	1.71	0.56
1:A:1272:ARG:NH2	1:A:1583:CYS:SG	2.79	0.56
1:B:271:ALA:O	1:B:301:THR:OG1	2.23	0.56
1:B:933:LEU:HD23	1:B:937:LEU:HD23	1.87	0.56
1:B:1272:ARG:NH2	1:B:1583:CYS:SG	2.79	0.56
1:A:3831:ASP:HB2	1:A:3834:PHE:HB3	1.88	0.56
1:B:655:MET:SD	1:B:836:HIS:ND1	2.79	0.56
1:B:1294:ASN:O	1:B:1348:LYS:NZ	2.35	0.56
1:B:2723:TYR:HD1	1:B:2894:PHE:HD2	1.53	0.56
1:C:1272:ARG:NH2	1:C:1583:CYS:SG	2.79	0.56
1:B:503:ASP:HA	1:B:561:ARG:HH12	1.71	0.55
1:B:1588:HIS:HE1	1:B:1590:GLN:HE21	1.53	0.55
1:B:3840:ARG:HH21	1:B:3844:LEU:HD21	1.71	0.55
1:C:655:MET:SD	1:C:836:HIS:ND1	2.79	0.55
1:D:387:ILE:O	1:D:388:GLN:NE2	2.39	0.55
1:D:1730:MET:SD	1:D:2106:THR:OG1	2.63	0.55
1:A:340:VAL:HG23	1:A:341:GLY:H	1.71	0.55
1:A:799:LYS:HG2	1:A:1621:GLN:HG3	1.86	0.55
1:A:2003:MET:HB3	1:A:2008:ILE:HD11	1.88	0.55
1:A:3840:ARG:HH21	1:A:3844:LEU:HD21	1.71	0.55
1:B:2003:MET:HB3	1:B:2008:ILE:HD11	1.88	0.55
1:D:655:MET:SD	1:D:836:HIS:ND1	2.79	0.55
1:D:1272:ARG:NH2	1:D:1583:CYS:SG	2.79	0.55
1:A:891:GLU:HA	1:A:894:VAL:HG22	1.88	0.55
1:C:340:VAL:HG23	1:C:341:GLY:H	1.71	0.55
1:A:332:ARG:NH1	1:A:364:GLN:OE1	2.39	0.55
1:A:503:ASP:HA	1:A:561:ARG:HH12	1.72	0.55
1:A:933:LEU:HD23	1:A:937:LEU:HD23	1.87	0.55
1:A:938:GLU:O	1:A:942:THR:HG23	2.07	0.55
1:A:999:LEU:HD21	1:A:1050:LEU:HD12	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3831:ASP:HB2	1:B:3834:PHE:HB3	1.88	0.55
1:C:2159:ASN:HD22	1:C:2162:ARG:HH22	1.54	0.55
1:D:938:GLU:O	1:D:942:THR:HG23	2.07	0.55
1:B:938:GLU:O	1:B:942:THR:HG23	2.07	0.55
1:D:262:TYR:HB2	1:D:389:ARG:HG3	1.87	0.55
1:D:332:ARG:NH1	1:D:364:GLN:OE1	2.39	0.55
1:D:1294:ASN:O	1:D:1348:LYS:NZ	2.34	0.55
1:D:1588:HIS:HE1	1:D:1590:GLN:HE21	1.53	0.55
1:B:2087:LEU:HD21	1:B:3643:LEU:HD11	1.88	0.55
1:B:2159:ASN:HD22	1:B:2162:ARG:HH22	1.54	0.55
1:C:498:VAL:HG13	1:C:533:LEU:HD22	1.89	0.55
1:D:226:GLY:O	1:D:356:TYR:N	2.33	0.55
1:D:933:LEU:HD23	1:D:937:LEU:HD23	1.87	0.55
1:B:387:ILE:O	1:B:388:GLN:NE2	2.40	0.55
1:B:498:VAL:HG13	1:B:533:LEU:HD22	1.89	0.55
1:B:1680:HIS:CE1	2:H:91:VAL:HG22	2.41	0.55
1:C:1294:ASN:ND2	1:C:1296:ASN:O	2.40	0.55
1:C:1684:PRO:HD3	2:I:42:ASP:HB3	1.87	0.55
1:A:498:VAL:HG13	1:A:533:LEU:HD22	1.89	0.55
1:C:503:ASP:HA	1:C:561:ARG:HH12	1.71	0.55
1:C:1985:CYS:SG	1:C:1992:ARG:NH1	2.80	0.55
1:C:3840:ARG:HH21	1:C:3844:LEU:HD21	1.71	0.55
1:A:1166:VAL:HG22	1:A:1173:MET:HG2	1.89	0.55
1:A:1708:ILE:HD12	1:A:1828:THR:HG21	1.89	0.55
1:B:891:GLU:HA	1:B:894:VAL:HG22	1.88	0.55
1:B:999:LEU:HD21	1:B:1050:LEU:HD12	1.89	0.55
1:B:1166:VAL:HG22	1:B:1173:MET:HG2	1.89	0.55
1:B:1985:CYS:SG	1:B:1992:ARG:NH1	2.80	0.55
1:C:938:GLU:O	1:C:942:THR:HG23	2.07	0.55
1:C:2442:PRO:HG2	1:C:2506:LEU:HD21	1.89	0.55
1:A:387:ILE:O	1:A:388:GLN:NE2	2.40	0.55
1:A:1985:CYS:SG	1:A:1992:ARG:NH1	2.80	0.55
1:B:4608:LYS:HD3	1:B:4614:LEU:HD22	1.89	0.55
1:D:503:ASP:HA	1:D:561:ARG:HH12	1.72	0.55
1:D:1985:CYS:SG	1:D:1992:ARG:NH1	2.80	0.55
1:A:2087:LEU:HD21	1:A:3643:LEU:HD11	1.89	0.54
1:A:2159:ASN:HD22	1:A:2162:ARG:HH22	1.54	0.54
1:C:1166:VAL:HG22	1:C:1173:MET:HG2	1.89	0.54
1:C:2723:TYR:HD1	1:C:2894:PHE:HD2	1.53	0.54
1:C:4608:LYS:HD3	1:C:4614:LEU:HD22	1.89	0.54
1:D:2087:LEU:HD21	1:D:3643:LEU:HD11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2442:PRO:HG2	1:D:2506:LEU:HD21	1.89	0.54
1:A:1588:HIS:HE1	1:A:1590:GLN:HE21	1.54	0.54
1:C:1708:ILE:HD12	1:C:1828:THR:HG21	1.89	0.54
1:C:2087:LEU:HD21	1:C:3643:LEU:HD11	1.89	0.54
1:D:836:HIS:NE2	1:D:842:GLN:OE1	2.35	0.54
1:B:2442:PRO:HG2	1:B:2506:LEU:HD21	1.89	0.54
1:A:3975:LYS:HB2	1:A:4093:ILE:HG13	1.89	0.54
1:B:2099:ARG:O	1:B:2103:LYS:NZ	2.39	0.54
1:B:3975:LYS:HB2	1:B:4093:ILE:HG13	1.89	0.54
1:C:387:ILE:O	1:C:388:GLN:NE2	2.39	0.54
1:D:1166:VAL:HG22	1:D:1173:MET:HG2	1.89	0.54
1:B:1609:VAL:HG12	1:B:1620:VAL:HG23	1.89	0.54
1:C:1769:PHE:O	2:I:83:TYR:OH	2.26	0.54
1:D:340:VAL:HG23	1:D:341:GLY:H	1.71	0.54
1:A:1953:SER:HB3	1:A:1956:LEU:HD23	1.90	0.54
1:B:915:HIS:HD2	1:B:916:PRO:HD2	1.73	0.54
1:C:1810:PRO:HB3	1:C:1818:LEU:HD22	1.89	0.54
1:D:2003:MET:HB3	1:D:2008:ILE:HD11	1.88	0.54
1:A:1294:ASN:ND2	1:A:1296:ASN:O	2.40	0.54
1:B:340:VAL:HG23	1:B:341:GLY:H	1.71	0.54
1:C:3975:LYS:HB2	1:C:4093:ILE:HG13	1.89	0.54
1:D:891:GLU:HA	1:D:894:VAL:HG22	1.88	0.54
1:C:678:MET:HG3	1:C:801:ARG:HB3	1.90	0.54
1:C:2003:MET:HB3	1:C:2008:ILE:HD11	1.88	0.54
1:D:1294:ASN:ND2	1:D:1296:ASN:O	2.40	0.54
1:D:3975:LYS:HB2	1:D:4093:ILE:HG13	1.89	0.54
1:A:2442:PRO:HG2	1:A:2506:LEU:HD21	1.89	0.54
1:B:1810:PRO:HB3	1:B:1818:LEU:HD22	1.89	0.54
1:C:836:HIS:NE2	1:C:842:GLN:OE1	2.35	0.54
1:C:999:LEU:HD21	1:C:1050:LEU:HD12	1.89	0.54
1:D:498:VAL:HG13	1:D:533:LEU:HD22	1.89	0.54
1:A:915:HIS:HD2	1:A:916:PRO:HD2	1.73	0.54
1:B:1294:ASN:ND2	1:B:1296:ASN:O	2.40	0.54
1:B:1929:ASP:OD1	1:B:3612:ARG:NH2	2.41	0.54
1:D:678:MET:HG3	1:D:801:ARG:HB3	1.90	0.54
1:D:999:LEU:HD21	1:D:1050:LEU:HD12	1.89	0.54
1:A:1609:VAL:HG12	1:A:1620:VAL:HG23	1.89	0.53
1:D:1708:ILE:HD12	1:D:1828:THR:HG21	1.89	0.53
1:D:1953:SER:HB3	1:D:1956:LEU:HD23	1.90	0.53
1:A:678:MET:HG3	1:A:801:ARG:HB3	1.90	0.53
1:B:503:ASP:O	1:B:507:VAL:HG13	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:678:MET:HG3	1:B:801:ARG:HB3	1.90	0.53
1:C:891:GLU:HA	1:C:894:VAL:HG22	1.88	0.53
1:C:1929:ASP:OD1	1:C:3612:ARG:NH2	2.41	0.53
1:A:1294:ASN:O	1:A:1348:LYS:NZ	2.35	0.53
1:A:1968:PRO:HB2	1:A:3618:LEU:HD13	1.91	0.53
1:A:4608:LYS:HD3	1:A:4614:LEU:HD22	1.89	0.53
1:B:1174:MET:HG2	1:B:1190:LEU:HA	1.90	0.53
1:B:1708:ILE:HD12	1:B:1828:THR:HG21	1.89	0.53
1:C:1609:VAL:HG12	1:C:1620:VAL:HG23	1.89	0.53
1:D:1609:VAL:HG12	1:D:1620:VAL:HG23	1.89	0.53
1:D:1968:PRO:HB2	1:D:3618:LEU:HD13	1.90	0.53
1:D:4608:LYS:HD3	1:D:4614:LEU:HD22	1.89	0.53
1:A:1810:PRO:HB3	1:A:1818:LEU:HD22	1.89	0.53
1:C:915:HIS:HD2	1:C:916:PRO:HD2	1.73	0.53
1:C:1968:PRO:HB2	1:C:3618:LEU:HD13	1.91	0.53
1:A:4558:TYR:OH	1:D:4789:ARG:NH1	2.42	0.53
1:B:2731:TRP:O	1:B:2735:LYS:HG2	2.09	0.53
1:C:1294:ASN:O	1:C:1348:LYS:NZ	2.35	0.53
1:A:503:ASP:O	1:A:507:VAL:HG13	2.09	0.53
1:A:1119:ARG:NH2	1:A:1196:ASP:OD1	2.42	0.53
1:B:1968:PRO:HB2	1:B:3618:LEU:HD13	1.91	0.53
1:C:757:CYS:HG	1:C:768:PHE:HD1	1.56	0.53
1:C:2731:TRP:O	1:C:2735:LYS:HG2	2.09	0.53
1:D:915:HIS:HD2	1:D:916:PRO:HD2	1.73	0.53
1:D:1810:PRO:HB3	1:D:1818:LEU:HD22	1.89	0.53
1:C:997:ASP:HA	1:C:1047:LYS:HD2	1.91	0.53
1:C:4633:VAL:HG12	1:C:4703:LYS:HG2	1.91	0.53
1:D:62:LEU:O	1:D:66:THR:HG23	2.09	0.53
1:D:503:ASP:O	1:D:507:VAL:HG13	2.09	0.53
1:A:2325:ARG:NH1	1:D:191:TYR:OH	2.39	0.53
1:C:1119:ARG:NH2	1:C:1196:ASP:OD1	2.42	0.53
1:C:1174:MET:HG2	1:C:1190:LEU:HA	1.90	0.53
1:B:1119:ARG:NH2	1:B:1196:ASP:OD1	2.42	0.53
1:C:503:ASP:O	1:C:507:VAL:HG13	2.09	0.53
1:D:997:ASP:HA	1:D:1047:LYS:HD2	1.91	0.53
1:D:4633:VAL:HG12	1:D:4703:LYS:HG2	1.91	0.53
1:A:78:LEU:O	1:A:82:LEU:HG	2.09	0.53
1:A:1174:MET:HG2	1:A:1190:LEU:HA	1.90	0.53
1:B:62:LEU:O	1:B:66:THR:HG23	2.09	0.53
1:B:4494:ALA:HB2	1:B:4591:CYS:SG	2.49	0.53
1:C:4494:ALA:HB2	1:C:4591:CYS:SG	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1119:ARG:NH2	1:D:1196:ASP:OD1	2.42	0.53
1:D:1629:MET:HE3	1:D:1642:ILE:HG21	1.91	0.53
1:A:62:LEU:O	1:A:66:THR:HG23	2.09	0.52
1:A:4494:ALA:HB2	1:A:4591:CYS:SG	2.49	0.52
1:D:1929:ASP:OD1	1:D:3612:ARG:NH2	2.41	0.52
1:B:78:LEU:O	1:B:82:LEU:HG	2.09	0.52
1:B:1953:SER:HB3	1:B:1956:LEU:HD23	1.90	0.52
1:B:3728:ALA:HA	1:B:3731:HIS:HD1	1.75	0.52
1:C:1680:HIS:CE1	2:I:91:VAL:HG22	2.45	0.52
1:A:1012:ILE:HG13	1:A:1013:ARG:HD2	1.91	0.52
1:C:78:LEU:O	1:C:82:LEU:HG	2.09	0.52
1:C:1953:SER:HB3	1:C:1956:LEU:HD23	1.90	0.52
1:A:2853:LYS:O	1:A:2857:LEU:HG	2.10	0.52
1:B:997:ASP:HA	1:B:1047:LYS:HD2	1.91	0.52
1:B:2853:LYS:O	1:B:2857:LEU:HG	2.10	0.52
1:D:4494:ALA:HB2	1:D:4591:CYS:SG	2.49	0.52
1:A:4671:MET:HG3	1:A:4674:ALA:HB3	1.91	0.52
1:C:1245:ARG:NH1	1:C:1809:ASP:O	2.43	0.52
1:D:2731:TRP:O	1:D:2735:LYS:HG2	2.09	0.52
1:A:2731:TRP:O	1:A:2735:LYS:HG2	2.09	0.52
1:C:2853:LYS:O	1:C:2857:LEU:HG	2.10	0.52
1:D:3728:ALA:HA	1:D:3731:HIS:HD1	1.75	0.52
1:A:997:ASP:HA	1:A:1047:LYS:HD2	1.91	0.52
1:A:1929:ASP:OD1	1:A:3612:ARG:NH2	2.41	0.52
1:B:1245:ARG:NH1	1:B:1809:ASP:O	2.43	0.52
1:C:989:THR:HG23	1:C:992:GLN:H	1.75	0.52
1:D:1174:MET:HG2	1:D:1190:LEU:HA	1.90	0.52
1:A:3919:LEU:O	1:A:3923:ILE:HG12	2.10	0.52
1:B:4671:MET:HG3	1:B:4674:ALA:HB3	1.91	0.52
1:C:4013:LEU:HD22	1:C:4124:VAL:HG21	1.91	0.52
1:D:1257:GLN:HA	1:D:1384:LEU:HD23	1.92	0.52
1:D:1578:ASN:HD22	1:D:1582:GLN:HE22	1.58	0.52
1:B:4633:VAL:HG12	1:B:4703:LYS:HG2	1.91	0.52
1:A:3728:ALA:HA	1:A:3731:HIS:HD1	1.75	0.51
1:C:62:LEU:O	1:C:66:THR:HG23	2.09	0.51
1:C:1012:ILE:HG13	1:C:1013:ARG:HD2	1.92	0.51
1:C:1257:GLN:HA	1:C:1384:LEU:HD23	1.92	0.51
1:D:49:LEU:HD12	1:D:201:TRP:HB3	1.92	0.51
1:A:671:LYS:HB3	1:A:761:LEU:HB2	1.92	0.51
1:A:1245:ARG:NH1	1:A:1809:ASP:O	2.43	0.51
1:A:4920:PHE:HE2	1:A:4939:VAL:HG11	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3728:ALA:HA	1:C:3731:HIS:ND1	2.25	0.51
1:D:2853:LYS:O	1:D:2857:LEU:HG	2.10	0.51
1:D:3728:ALA:HA	1:D:3731:HIS:ND1	2.25	0.51
1:D:4671:MET:HG3	1:D:4674:ALA:HB3	1.91	0.51
1:A:1578:ASN:HD22	1:A:1582:GLN:HE22	1.58	0.51
1:A:4013:LEU:HD22	1:A:4124:VAL:HG21	1.91	0.51
1:C:1578:ASN:HD22	1:C:1582:GLN:HE22	1.58	0.51
1:C:3728:ALA:HA	1:C:3731:HIS:HD1	1.75	0.51
1:C:4833:PRO:HD3	1:C:4842:ARG:HE	1.76	0.51
1:D:3919:LEU:O	1:D:3923:ILE:HG12	2.10	0.51
1:D:4044:LYS:NZ	1:D:4071:THR:H	2.09	0.51
1:A:989:THR:HG23	1:A:992:GLN:H	1.75	0.51
1:A:2315:ASN:O	1:A:2319:VAL:HG23	2.11	0.51
1:A:3878:LEU:HD22	1:A:3938:ARG:HE	1.76	0.51
1:D:78:LEU:O	1:D:82:LEU:HG	2.09	0.51
1:D:3878:LEU:HD22	1:D:3938:ARG:HE	1.76	0.51
1:A:926:GLU:HA	1:A:929:ARG:HB3	1.92	0.51
1:A:1257:GLN:HA	1:A:1384:LEU:HD23	1.92	0.51
1:A:4633:VAL:HG12	1:A:4703:LYS:HG2	1.91	0.51
1:B:1257:GLN:HA	1:B:1384:LEU:HD23	1.92	0.51
1:B:3878:LEU:HD22	1:B:3938:ARG:HE	1.76	0.51
1:B:4044:LYS:NZ	1:B:4071:THR:H	2.09	0.51
1:B:4920:PHE:HE2	1:B:4939:VAL:HG11	1.76	0.51
1:C:671:LYS:HB3	1:C:761:LEU:HB2	1.92	0.51
1:D:671:LYS:HB3	1:D:761:LEU:HB2	1.92	0.51
1:D:989:THR:HG23	1:D:992:GLN:H	1.75	0.51
1:D:1245:ARG:NH1	1:D:1809:ASP:O	2.43	0.51
1:D:4046:ASP:OD1	1:D:4046:ASP:N	2.43	0.51
1:D:4640:PRO:HG2	1:D:4646:LYS:HA	1.92	0.51
1:B:1012:ILE:HG13	1:B:1013:ARG:HD2	1.91	0.51
1:B:2315:ASN:O	1:B:2319:VAL:HG23	2.11	0.51
1:B:4013:LEU:HD22	1:B:4124:VAL:HG21	1.91	0.51
1:C:4671:MET:HG3	1:C:4674:ALA:HB3	1.91	0.51
1:D:2315:ASN:O	1:D:2319:VAL:HG23	2.11	0.51
1:D:4013:LEU:HD22	1:D:4124:VAL:HG21	1.91	0.51
1:D:4833:PRO:HD3	1:D:4842:ARG:HE	1.76	0.51
1:A:1586:ARG:NH2	1:A:1635:GLU:OE1	2.44	0.51
1:A:3989:VAL:HG12	1:A:3990:VAL:H	1.75	0.51
1:B:1578:ASN:HD22	1:B:1582:GLN:HE22	1.58	0.51
1:B:4640:PRO:HG2	1:B:4646:LYS:HA	1.92	0.51
1:C:3989:VAL:HG12	1:C:3990:VAL:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:49:LEU:HD12	1:A:201:TRP:HB3	1.92	0.51
1:C:926:GLU:HA	1:C:929:ARG:HB3	1.92	0.51
1:C:3919:LEU:O	1:C:3923:ILE:HG12	2.10	0.51
1:D:1012:ILE:HG13	1:D:1013:ARG:HD2	1.91	0.51
1:D:3989:VAL:HG12	1:D:3990:VAL:H	1.75	0.51
1:A:2099:ARG:O	1:A:2103:LYS:NZ	2.39	0.51
1:A:3728:ALA:HA	1:A:3731:HIS:ND1	2.25	0.51
1:B:1631:LEU:HD22	1:B:1645:LEU:HD11	1.93	0.51
1:B:3728:ALA:HA	1:B:3731:HIS:ND1	2.25	0.51
1:B:3919:LEU:O	1:B:3923:ILE:HG12	2.10	0.51
1:C:1586:ARG:NH2	1:C:1635:GLU:OE1	2.44	0.51
1:C:3878:LEU:HD22	1:C:3938:ARG:HE	1.76	0.51
1:D:119:ILE:N	1:D:160:TRP:O	2.44	0.51
1:D:1586:ARG:NH2	1:D:1635:GLU:OE1	2.44	0.51
1:D:1953:SER:OG	1:D:1954:ALA:N	2.44	0.51
1:A:1631:LEU:HD22	1:A:1645:LEU:HD11	1.93	0.50
1:B:4833:PRO:HD3	1:B:4842:ARG:HE	1.76	0.50
1:C:1090:ALA:HB3	1:C:1202:ILE:HG23	1.93	0.50
1:C:1631:LEU:HD22	1:C:1645:LEU:HD11	1.93	0.50
1:C:4044:LYS:NZ	1:C:4071:THR:H	2.09	0.50
1:B:989:THR:HG23	1:B:992:GLN:H	1.75	0.50
1:C:49:LEU:HD12	1:C:201:TRP:HB3	1.92	0.50
1:C:4046:ASP:OD1	1:C:4046:ASP:N	2.43	0.50
1:D:1631:LEU:HD22	1:D:1645:LEU:HD11	1.93	0.50
1:D:4920:PHE:HE2	1:D:4939:VAL:HG11	1.76	0.50
1:A:661:LEU:HD13	1:A:673:TRP:CD1	2.47	0.50
1:B:671:LYS:HB3	1:B:761:LEU:HB2	1.92	0.50
1:B:1090:ALA:HB3	1:B:1202:ILE:HG23	1.93	0.50
1:B:1586:ARG:NH2	1:B:1635:GLU:OE1	2.44	0.50
1:C:1086:ARG:HH21	1:C:1251:LEU:HD13	1.77	0.50
1:C:4029:ASP:OD2	1:C:4054:HIS:NE2	2.45	0.50
1:C:4920:PHE:HE2	1:C:4939:VAL:HG11	1.76	0.50
1:A:119:ILE:N	1:A:160:TRP:O	2.45	0.50
1:B:1086:ARG:HH21	1:B:1251:LEU:HD13	1.77	0.50
1:C:119:ILE:N	1:C:160:TRP:O	2.44	0.50
1:C:1838:GLU:OE1	1:C:1838:GLU:N	2.43	0.50
1:D:4029:ASP:OD2	1:D:4054:HIS:NE2	2.45	0.50
1:A:1829:LEU:HB3	1:A:1834:ILE:HD11	1.94	0.50
1:A:4046:ASP:OD1	1:A:4046:ASP:N	2.43	0.50
1:A:4649:LYS:NZ	1:A:4669:LEU:O	2.45	0.50
1:B:2753:GLN:HG2	1:B:2755:LEU:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3989:VAL:HG12	1:B:3990:VAL:H	1.76	0.50
1:B:4046:ASP:N	1:B:4046:ASP:OD1	2.43	0.50
1:C:1829:LEU:HB3	1:C:1834:ILE:HD11	1.94	0.50
1:C:2315:ASN:O	1:C:2319:VAL:HG23	2.11	0.50
1:C:4640:PRO:HG2	1:C:4646:LYS:HA	1.92	0.50
1:C:4830:ILE:HG13	1:C:4842:ARG:HH22	1.77	0.50
1:D:926:GLU:HA	1:D:929:ARG:HB3	1.92	0.50
1:D:1829:LEU:HB3	1:D:1834:ILE:HD11	1.94	0.50
1:A:1362:ASP:OD1	1:A:1362:ASP:N	2.45	0.50
1:A:4830:ILE:HG13	1:A:4842:ARG:HH22	1.77	0.50
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.47	0.50
1:B:926:GLU:HA	1:B:929:ARG:HB3	1.92	0.50
1:C:934:GLN:O	1:C:937:LEU:HG	2.12	0.50
1:D:1362:ASP:OD1	1:D:1362:ASP:N	2.45	0.50
1:A:934:GLN:O	1:A:937:LEU:HG	2.12	0.50
1:A:4640:PRO:HG2	1:A:4646:LYS:HA	1.92	0.50
1:B:1609:VAL:HA	1:B:1620:VAL:HA	1.94	0.50
1:C:2753:GLN:HG2	1:C:2755:LEU:H	1.77	0.50
1:C:4649:LYS:NZ	1:C:4669:LEU:O	2.45	0.50
1:D:4830:ILE:HG13	1:D:4842:ARG:HH22	1.77	0.50
1:A:1090:ALA:HB3	1:A:1202:ILE:HG23	1.93	0.50
1:A:4044:LYS:NZ	1:A:4071:THR:H	2.09	0.50
1:B:1953:SER:OG	1:B:1954:ALA:N	2.44	0.50
1:B:4029:ASP:OD2	1:B:4054:HIS:NE2	2.45	0.50
1:B:4051:MET:HG3	1:B:4062:THR:HG22	1.94	0.50
1:D:1838:GLU:OE1	1:D:1838:GLU:N	2.43	0.50
1:D:2753:GLN:HG2	1:D:2755:LEU:H	1.77	0.50
1:B:49:LEU:HD12	1:B:201:TRP:HB3	1.92	0.50
1:B:1829:LEU:HB3	1:B:1834:ILE:HD11	1.94	0.50
1:B:4830:ILE:HG13	1:B:4842:ARG:HH22	1.77	0.50
1:A:2206:SER:OG	1:A:2207:ARG:N	2.45	0.49
1:A:3831:ASP:N	1:A:3831:ASP:OD1	2.45	0.49
1:A:3898:ASP:OD1	1:A:3898:ASP:N	2.45	0.49
1:B:2478:GLU:HG2	1:B:2479:VAL:HG13	1.95	0.49
1:C:1397:UNK:HA	1:C:1412:UNK:HA	1.94	0.49
1:C:1786:ASP:OD1	1:C:1786:ASP:N	2.45	0.49
1:D:661:LEU:HD13	1:D:673:TRP:CD1	2.47	0.49
1:D:1090:ALA:HB3	1:D:1202:ILE:HG23	1.93	0.49
1:D:2839:MET:HB2	1:D:2892:PHE:HE2	1.77	0.49
1:A:4833:PRO:HD3	1:A:4842:ARG:HE	1.76	0.49
1:B:1397:UNK:HA	1:B:1412:UNK:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1953:SER:OG	1:A:1954:ALA:N	2.44	0.49
1:A:4029:ASP:OD2	1:A:4054:HIS:NE2	2.45	0.49
1:A:4051:MET:HG3	1:A:4062:THR:HG22	1.94	0.49
1:B:119:ILE:N	1:B:160:TRP:O	2.44	0.49
1:B:2839:MET:HB2	1:B:2892:PHE:HE2	1.77	0.49
1:B:4507:VAL:HG23	1:B:4574:LEU:HD22	1.94	0.49
1:B:4832:ASP:OD1	1:B:4832:ASP:N	2.45	0.49
1:C:2478:GLU:HG2	1:C:2479:VAL:HG13	1.95	0.49
1:C:4660:TYR:HB3	1:C:4664:ARG:HH21	1.78	0.49
1:D:934:GLN:O	1:D:937:LEU:HG	2.12	0.49
1:D:1786:ASP:OD1	1:D:1786:ASP:N	2.45	0.49
1:D:1972:ILE:HD13	1:D:1975:LEU:HD21	1.94	0.49
1:D:2206:SER:OG	1:D:2207:ARG:N	2.45	0.49
1:D:4660:TYR:HB3	1:D:4664:ARG:HH21	1.77	0.49
1:A:1972:ILE:HD13	1:A:1975:LEU:HD21	1.95	0.49
1:B:408:SER:O	1:B:408:SER:OG	2.31	0.49
1:C:1953:SER:OG	1:C:1954:ALA:N	2.44	0.49
1:C:4051:MET:HG3	1:C:4062:THR:HG22	1.94	0.49
1:D:200:SER:HG	1:D:202:HIS:CE1	2.30	0.49
1:D:1086:ARG:HH21	1:D:1251:LEU:HD13	1.77	0.49
1:D:2478:GLU:HG2	1:D:2479:VAL:HG13	1.94	0.49
1:D:4051:MET:HG3	1:D:4062:THR:HG22	1.94	0.49
1:A:2352:ILE:HD12	1:A:2358:ARG:HG3	1.95	0.49
1:B:1362:ASP:N	1:B:1362:ASP:OD1	2.45	0.49
1:B:1720:LEU:HD21	1:B:1831:ILE:HD13	1.95	0.49
1:C:191:TYR:OH	1:D:2325:ARG:NH1	2.45	0.49
1:C:661:LEU:HD13	1:C:673:TRP:CD1	2.47	0.49
1:C:4120:LEU:O	1:C:4124:VAL:HG23	2.13	0.49
1:C:4775:VAL:HG21	1:D:4745:ILE:HD11	1.94	0.49
1:D:1609:VAL:HA	1:D:1620:VAL:HA	1.94	0.49
1:A:52:THR:OG1	1:A:282:VAL:HG11	2.13	0.49
1:A:1086:ARG:HH21	1:A:1251:LEU:HD13	1.77	0.49
1:A:1397:UNK:HA	1:A:1412:UNK:HA	1.94	0.49
1:A:1677:LEU:O	1:A:1681:VAL:HG22	2.13	0.49
1:B:3898:ASP:OD1	1:B:3898:ASP:N	2.45	0.49
1:C:1715:TYR:CZ	1:C:1762:MET:HB3	2.48	0.49
1:C:3712:SER:OG	1:C:3716:LYS:NZ	2.38	0.49
1:D:3898:ASP:OD1	1:D:3898:ASP:N	2.45	0.49
1:A:1609:VAL:HA	1:A:1620:VAL:HA	1.94	0.49
1:A:1715:TYR:CZ	1:A:1762:MET:HB3	2.48	0.49
1:A:1720:LEU:HD21	1:A:1831:ILE:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2478:GLU:HG2	1:A:2479:VAL:HG13	1.95	0.49
1:A:2753:GLN:HG2	1:A:2755:LEU:H	1.77	0.49
1:A:2839:MET:HB2	1:A:2892:PHE:HE2	1.77	0.49
1:B:2428:LEU:HD21	1:B:2482:PHE:CE1	2.48	0.49
1:B:4120:LEU:O	1:B:4124:VAL:HG23	2.13	0.49
1:B:4660:TYR:HB3	1:B:4664:ARG:HH21	1.77	0.49
1:C:200:SER:HG	1:C:202:HIS:CE1	2.30	0.49
1:C:408:SER:O	1:C:408:SER:OG	2.31	0.49
1:C:1720:LEU:HD21	1:C:1831:ILE:HD13	1.95	0.49
1:C:2839:MET:HB2	1:C:2892:PHE:HE2	1.77	0.49
1:D:1677:LEU:O	1:D:1681:VAL:HG22	2.13	0.49
1:D:1720:LEU:HD21	1:D:1831:ILE:HD13	1.95	0.49
1:D:2352:ILE:HD12	1:D:2358:ARG:HG3	1.95	0.49
1:A:4660:TYR:HB3	1:A:4664:ARG:HH21	1.78	0.49
1:B:934:GLN:O	1:B:937:LEU:HG	2.12	0.49
1:C:2428:LEU:HD21	1:C:2482:PHE:CE1	2.48	0.49
1:D:946:LEU:HD21	1:D:998:LYS:HB3	1.95	0.49
1:D:3831:ASP:OD1	1:D:3831:ASP:N	2.45	0.49
1:D:4649:LYS:NZ	1:D:4669:LEU:O	2.45	0.49
1:B:200:SER:HG	1:B:202:HIS:CE1	2.30	0.49
1:B:1727:ILE:HG22	1:B:1758:LEU:HD23	1.95	0.49
1:B:2895:LEU:HD11	1:B:2900:TYR:CD1	2.48	0.49
1:B:4775:VAL:HG21	1:C:4745:ILE:HD11	1.94	0.49
1:C:2206:SER:OG	1:C:2207:ARG:N	2.45	0.49
1:C:2352:ILE:HD12	1:C:2358:ARG:HG3	1.95	0.49
1:A:408:SER:O	1:A:408:SER:OG	2.31	0.49
1:A:677:LEU:HD11	1:A:800:VAL:HG13	1.95	0.49
1:A:2895:LEU:HD11	1:A:2900:TYR:CD1	2.48	0.49
1:B:763:ALA:HB3	1:B:764:PRO:HD3	1.94	0.49
1:B:1677:LEU:O	1:B:1681:VAL:HG22	2.13	0.49
1:C:946:LEU:HD21	1:C:998:LYS:HB3	1.95	0.49
1:D:1989:GLU:HG2	1:D:1992:ARG:HD3	1.95	0.49
1:A:2428:LEU:HD21	1:A:2482:PHE:CE1	2.48	0.48
1:B:1572:PHE:HZ	1:B:1587:LEU:HD11	1.77	0.48
1:B:2442:PRO:HG3	1:B:2454:ASP:HB2	1.95	0.48
1:C:763:ALA:HB3	1:C:764:PRO:HD3	1.94	0.48
1:C:1572:PHE:HZ	1:C:1587:LEU:HD11	1.78	0.48
1:C:1727:ILE:HG22	1:C:1758:LEU:HD23	1.95	0.48
1:C:2317:ASN:O	1:C:2321:ARG:HG2	2.13	0.48
1:D:763:ALA:HB3	1:D:764:PRO:HD3	1.94	0.48
1:D:1572:PHE:HZ	1:D:1587:LEU:HD11	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1727:ILE:HG22	1:D:1758:LEU:HD23	1.95	0.48
1:D:2428:LEU:HD21	1:D:2482:PHE:CE1	2.48	0.48
1:D:4507:VAL:HG23	1:D:4574:LEU:HD22	1.94	0.48
1:D:4832:ASP:N	1:D:4832:ASP:OD1	2.45	0.48
1:B:677:LEU:HD11	1:B:800:VAL:HG13	1.96	0.48
1:B:4649:LYS:NZ	1:B:4669:LEU:O	2.45	0.48
1:C:1609:VAL:HA	1:C:1620:VAL:HA	1.94	0.48
1:C:4111:ASP:HB2	1:C:4114:LEU:HB3	1.95	0.48
1:D:2317:ASN:O	1:D:2321:ARG:HG2	2.13	0.48
1:D:4120:LEU:O	1:D:4124:VAL:HG23	2.13	0.48
1:A:76:ARG:O	1:A:80:GLU:HG2	2.14	0.48
1:A:1989:GLU:HG2	1:A:1992:ARG:HD3	1.95	0.48
1:A:4112:THR:HA	1:A:4115:GLN:HB2	1.95	0.48
1:A:4775:VAL:HG21	1:B:4745:ILE:HD11	1.95	0.48
1:B:1000:ALA:HB3	1:B:1047:LYS:HZ3	1.78	0.48
1:B:2206:SER:OG	1:B:2207:ARG:N	2.45	0.48
1:B:2352:ILE:HD12	1:B:2358:ARG:HG3	1.95	0.48
1:C:76:ARG:O	1:C:80:GLU:HG2	2.14	0.48
1:C:2442:PRO:HG3	1:C:2454:ASP:HB2	1.95	0.48
1:A:763:ALA:HB3	1:A:764:PRO:HD3	1.94	0.48
1:A:1572:PHE:HZ	1:A:1587:LEU:HD11	1.77	0.48
1:A:1727:ILE:HG22	1:A:1758:LEU:HD23	1.95	0.48
1:A:2442:PRO:HG3	1:A:2454:ASP:HB2	1.95	0.48
1:B:76:ARG:O	1:B:80:GLU:HG2	2.14	0.48
1:B:4112:THR:HA	1:B:4115:GLN:HB2	1.95	0.48
1:C:1362:ASP:N	1:C:1362:ASP:OD1	2.45	0.48
1:D:76:ARG:O	1:D:80:GLU:HG2	2.14	0.48
1:D:1715:TYR:CZ	1:D:1762:MET:HB3	2.48	0.48
1:D:4111:ASP:HB2	1:D:4114:LEU:HB3	1.95	0.48
1:A:1827:TYR:CZ	1:A:1831:ILE:HD11	2.49	0.48
1:A:4116:THR:O	1:A:4119:GLU:HG2	2.14	0.48
2:G:79:PRO:HB3	2:G:95:ASN:HA	1.95	0.48
1:B:1972:ILE:HD13	1:B:1975:LEU:HD21	1.95	0.48
1:B:4116:THR:O	1:B:4119:GLU:HG2	2.14	0.48
1:C:1273:ILE:HD11	1:C:1287:GLN:HB2	1.96	0.48
1:C:1677:LEU:HA	1:C:1680:HIS:HB2	1.95	0.48
1:C:3898:ASP:N	1:C:3898:ASP:OD1	2.45	0.48
1:C:3961:SER:OG	1:C:3962:SER:N	2.47	0.48
1:D:721:ASP:N	1:D:721:ASP:OD1	2.46	0.48
1:A:200:SER:HG	1:A:202:HIS:CE1	2.31	0.48
1:A:4507:VAL:HG23	1:A:4574:LEU:HD22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:52:THR:OG1	1:B:282:VAL:HG11	2.13	0.48
1:B:3420:UNK:HA	1:B:3421:UNK:HA	1.65	0.48
1:C:1972:ILE:HD13	1:C:1975:LEU:HD21	1.95	0.48
1:C:2895:LEU:HD11	1:C:2900:TYR:CD1	2.48	0.48
1:D:1397:UNK:HA	1:D:1412:UNK:HA	1.94	0.48
1:B:234:LEU:HD12	1:B:405:LEU:HB3	1.96	0.48
1:B:1578:ASN:OD1	1:B:1578:ASN:N	2.46	0.48
1:B:1715:TYR:CZ	1:B:1762:MET:HB3	2.48	0.48
1:B:1989:GLU:HG2	1:B:1992:ARG:HD3	1.95	0.48
2:H:79:PRO:HB3	2:H:95:ASN:HA	1.95	0.48
1:C:3831:ASP:OD1	1:C:3831:ASP:N	2.45	0.48
1:C:4026:THR:HG21	1:C:4083:VAL:HG11	1.96	0.48
1:A:1750:PRO:HG3	1:A:2057:LEU:HD22	1.96	0.48
1:A:3961:SER:OG	1:A:3962:SER:N	2.47	0.48
1:A:4832:ASP:N	1:A:4832:ASP:OD1	2.45	0.48
1:B:1683:GLU:HB3	2:H:42:ASP:HB3	1.96	0.48
2:H:83:TYR:HB3	2:H:87:GLY:HA2	1.96	0.48
1:C:1207:LEU:HB3	1:C:1211:GLN:HB2	1.96	0.48
1:C:2851:TRP:HA	1:C:2854:LYS:HE2	1.96	0.48
1:C:4044:LYS:HZ3	1:C:4069:ALA:HB1	1.79	0.48
1:D:52:THR:OG1	1:D:282:VAL:HG11	2.13	0.48
1:D:3961:SER:OG	1:D:3962:SER:N	2.47	0.48
1:D:4515:LEU:O	1:D:4518:TYR:HB2	2.14	0.48
1:A:4120:LEU:O	1:A:4124:VAL:HG23	2.13	0.48
2:G:57:ILE:HG13	2:G:60:PHE:HB2	1.96	0.48
1:B:3934:LEU:HD23	1:B:3939:LEU:HD22	1.96	0.48
1:C:950:VAL:HG11	1:C:1057:LEU:HD21	1.96	0.48
1:C:1677:LEU:O	1:C:1681:VAL:HG22	2.13	0.48
1:D:1273:ILE:HD11	1:D:1287:GLN:HB2	1.96	0.48
1:D:1677:LEU:HA	1:D:1680:HIS:HB2	1.95	0.48
1:D:2895:LEU:HD11	1:D:2900:TYR:CD1	2.48	0.48
2:J:79:PRO:HB3	2:J:95:ASN:HA	1.95	0.48
1:A:2432:VAL:HG12	1:A:2486:LEU:HD13	1.96	0.48
2:G:83:TYR:HB3	2:G:87:GLY:HA2	1.96	0.48
1:B:721:ASP:OD1	1:B:721:ASP:N	2.46	0.48
1:B:1709:ASP:HA	1:B:1713:SER:HB2	1.96	0.48
1:B:4111:ASP:HB2	1:B:4114:LEU:HB3	1.94	0.48
1:C:1685:GLN:NE2	1:C:1703:TYR:OH	2.47	0.48
1:C:1727:ILE:HD12	1:C:2119:LEU:HD11	1.95	0.48
1:C:3934:LEU:HD23	1:C:3939:LEU:HD22	1.96	0.48
1:C:4832:ASP:N	1:C:4832:ASP:OD1	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:57:ILE:HG13	2:J:60:PHE:HB2	1.96	0.48
1:A:2317:ASN:O	1:A:2321:ARG:HG2	2.13	0.47
1:A:3950:PHE:HZ	1:A:3973:LEU:HG	1.79	0.47
1:A:4111:ASP:HB2	1:A:4114:LEU:HB3	1.95	0.47
1:B:1677:LEU:HA	1:B:1680:HIS:HB2	1.95	0.47
1:B:1827:TYR:CZ	1:B:1831:ILE:HD11	2.49	0.47
1:B:3905:PHE:O	1:B:3909:ILE:HG12	2.14	0.47
2:I:79:PRO:HB3	2:I:95:ASN:HA	1.95	0.47
1:D:677:LEU:HD11	1:D:800:VAL:HG13	1.95	0.47
1:D:2184:LYS:HE2	1:D:2184:LYS:HB3	1.75	0.47
1:D:2442:PRO:HG3	1:D:2454:ASP:HB2	1.95	0.47
1:A:721:ASP:N	1:A:721:ASP:OD1	2.46	0.47
1:A:946:LEU:HD21	1:A:998:LYS:HB3	1.95	0.47
1:A:1727:ILE:HD12	1:A:2119:LEU:HD11	1.95	0.47
1:A:2765:LYS:O	1:A:2765:LYS:HD3	2.14	0.47
1:B:946:LEU:HD21	1:B:998:LYS:HB3	1.95	0.47
1:B:950:VAL:HG11	1:B:1057:LEU:HD21	1.96	0.47
1:B:2432:VAL:HG12	1:B:2486:LEU:HD13	1.96	0.47
1:B:3961:SER:OG	1:B:3962:SER:N	2.47	0.47
2:H:57:ILE:HG13	2:H:60:PHE:HB2	1.96	0.47
1:C:52:THR:OG1	1:C:282:VAL:HG11	2.13	0.47
1:C:677:LEU:HD11	1:C:800:VAL:HG13	1.95	0.47
2:I:83:TYR:HB3	2:I:87:GLY:HA2	1.96	0.47
1:D:950:VAL:HG11	1:D:1057:LEU:HD21	1.96	0.47
1:D:1685:GLN:NE2	1:D:1703:TYR:OH	2.47	0.47
1:D:4112:THR:HA	1:D:4115:GLN:HB2	1.95	0.47
1:D:4116:THR:O	1:D:4119:GLU:HG2	2.14	0.47
2:J:83:TYR:HB3	2:J:87:GLY:HA2	1.96	0.47
1:A:946:LEU:HD13	1:A:995:MET:HB3	1.97	0.47
1:B:1207:LEU:HB3	1:B:1211:GLN:HB2	1.96	0.47
1:B:1655:HIS:HB3	1:B:1699:LEU:HD11	1.97	0.47
1:B:2851:TRP:HA	1:B:2854:LYS:HE2	1.96	0.47
1:B:3950:PHE:HZ	1:B:3973:LEU:HG	1.79	0.47
1:C:304:LYS:HB2	1:C:316:LEU:HD23	1.96	0.47
1:C:1655:HIS:HB3	1:C:1699:LEU:HD11	1.96	0.47
1:C:1827:TYR:CZ	1:C:1831:ILE:HD11	2.49	0.47
1:C:4507:VAL:HG23	1:C:4574:LEU:HD22	1.94	0.47
1:A:1655:HIS:HB3	1:A:1699:LEU:HD11	1.97	0.47
1:A:1677:LEU:HA	1:A:1680:HIS:HB2	1.95	0.47
1:A:1786:ASP:OD1	1:A:1786:ASP:N	2.45	0.47
1:A:3905:PHE:O	1:A:3909:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4044:LYS:HZ3	1:A:4069:ALA:HB1	1.78	0.47
1:C:4112:THR:HA	1:C:4115:GLN:HB2	1.95	0.47
1:C:4116:THR:O	1:C:4119:GLU:HG2	2.14	0.47
1:C:4515:LEU:O	1:C:4518:TYR:HB2	2.14	0.47
1:D:1827:TYR:CZ	1:D:1831:ILE:HD11	2.49	0.47
1:A:2159:ASN:HD22	1:A:2162:ARG:NH2	2.13	0.47
1:B:1217:PHE:HD2	1:B:1247:ILE:HG13	1.80	0.47
1:C:1704:TYR:O	1:C:1708:ILE:HG12	2.15	0.47
1:D:946:LEU:HD13	1:D:995:MET:HB3	1.97	0.47
1:D:1655:HIS:HB3	1:D:1699:LEU:HD11	1.96	0.47
1:A:1207:LEU:HB3	1:A:1211:GLN:HB2	1.96	0.47
1:A:4026:THR:HG21	1:A:4083:VAL:HG11	1.96	0.47
1:A:4630:ASP:O	1:A:4634:ILE:HG23	2.15	0.47
1:B:2159:ASN:HD22	1:B:2162:ARG:NH2	2.13	0.47
1:B:4630:ASP:O	1:B:4634:ILE:HG23	2.15	0.47
1:C:1709:ASP:HA	1:C:1713:SER:HB2	1.96	0.47
1:C:1750:PRO:HG3	1:C:2057:LEU:HD22	1.96	0.47
1:C:2404:GLU:HG3	1:C:2405:MET:H	1.79	0.47
1:D:1578:ASN:OD1	1:D:1578:ASN:N	2.46	0.47
1:A:59:PRO:HB3	1:A:296:ARG:NH1	2.29	0.47
1:A:1685:GLN:NE2	1:A:1703:TYR:OH	2.47	0.47
1:B:1273:ILE:HD11	1:B:1287:GLN:HB2	1.96	0.47
1:B:1750:PRO:HG3	1:B:2057:LEU:HD22	1.96	0.47
1:B:1965:ARG:O	1:B:1966:SER:OG	2.33	0.47
1:B:3909:ILE:HG21	1:B:3969:GLU:HB3	1.96	0.47
1:B:4135:ILE:HB	1:B:4147:VAL:HG22	1.96	0.47
1:C:946:LEU:HD13	1:C:995:MET:HB3	1.97	0.47
1:C:4859:ALA:HB1	1:D:4866:ILE:HD11	1.97	0.47
1:D:234:LEU:HD12	1:D:405:LEU:HB3	1.96	0.47
1:D:304:LYS:HB2	1:D:316:LEU:HD23	1.96	0.47
1:D:2404:GLU:HG3	1:D:2405:MET:H	1.79	0.47
1:D:2851:TRP:HA	1:D:2854:LYS:HE2	1.96	0.47
1:D:3934:LEU:HD23	1:D:3939:LEU:HD22	1.96	0.47
1:D:3950:PHE:HZ	1:D:3973:LEU:HG	1.78	0.47
1:A:950:VAL:HG11	1:A:1057:LEU:HD21	1.96	0.47
1:A:1965:ARG:O	1:A:1966:SER:OG	2.33	0.47
1:A:4515:LEU:O	1:A:4518:TYR:HB2	2.14	0.47
1:B:946:LEU:HD13	1:B:995:MET:HB3	1.97	0.47
1:B:4026:THR:HG21	1:B:4083:VAL:HG11	1.96	0.47
1:C:1578:ASN:OD1	1:C:1578:ASN:N	2.46	0.47
1:C:4135:ILE:HB	1:C:4147:VAL:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4601:ARG:HD2	1:C:4711:VAL:HG21	1.97	0.47
2:I:57:ILE:HG13	2:I:60:PHE:HB2	1.96	0.47
1:D:1727:ILE:HD12	1:D:2119:LEU:HD11	1.95	0.47
1:A:304:LYS:HB2	1:A:316:LEU:HD23	1.96	0.47
1:A:1704:TYR:O	1:A:1708:ILE:HG12	2.15	0.47
1:A:3934:LEU:HD23	1:A:3939:LEU:HD22	1.96	0.47
1:B:1727:ILE:HD12	1:B:2119:LEU:HD11	1.95	0.47
1:C:234:LEU:HD12	1:C:405:LEU:HB3	1.96	0.47
1:C:2330:PHE:HD1	1:C:2394:LEU:HD21	1.80	0.47
1:C:3905:PHE:O	1:C:3909:ILE:HG12	2.14	0.47
1:D:1207:LEU:HB3	1:D:1211:GLN:HB2	1.96	0.47
1:D:2765:LYS:O	1:D:2765:LYS:HD3	2.14	0.47
1:A:234:LEU:HA	1:A:408:SER:HB3	1.97	0.47
1:A:4135:ILE:HB	1:A:4147:VAL:HG22	1.96	0.47
1:B:2404:GLU:HG3	1:B:2405:MET:H	1.79	0.47
1:C:2265:VAL:HG12	1:C:2326:ARG:HD2	1.97	0.47
1:C:4601:ARG:HD3	1:C:4707:TRP:CZ2	2.50	0.47
1:D:59:PRO:HB3	1:D:296:ARG:NH1	2.29	0.47
1:D:1676:ALA:HB1	2:J:91:VAL:CG2	2.45	0.47
1:D:1704:TYR:O	1:D:1708:ILE:HG12	2.15	0.47
1:D:1709:ASP:HA	1:D:1713:SER:HB2	1.97	0.47
1:D:3661:ASP:OD2	1:D:3733:ARG:NH2	2.48	0.47
1:D:4135:ILE:HB	1:D:4147:VAL:HG22	1.96	0.47
1:D:4630:ASP:O	1:D:4634:ILE:HG23	2.15	0.47
1:A:1217:PHE:HD2	1:A:1247:ILE:HG13	1.80	0.46
1:A:1273:ILE:HD11	1:A:1287:GLN:HB2	1.96	0.46
1:A:1972:ILE:HA	1:A:1975:LEU:HG	1.97	0.46
1:A:2404:GLU:HG3	1:A:2405:MET:H	1.79	0.46
1:A:2735:LYS:HD3	1:A:2740:TRP:CE3	2.51	0.46
1:B:304:LYS:HB2	1:B:316:LEU:HD23	1.96	0.46
1:B:1311:ALA:HA	1:B:1312:UNK:HA	1.50	0.46
1:B:1685:GLN:NE2	1:B:1703:TYR:OH	2.47	0.46
1:B:4515:LEU:O	1:B:4518:TYR:HB2	2.14	0.46
1:C:1361:LYS:HA	1:C:1566:PRO:HA	1.98	0.46
1:C:1989:GLU:HG2	1:C:1992:ARG:HD3	1.95	0.46
1:C:2184:LYS:HE2	1:C:2184:LYS:HB3	1.75	0.46
1:C:3950:PHE:HZ	1:C:3973:LEU:HG	1.79	0.46
1:C:4630:ASP:O	1:C:4634:ILE:HG23	2.15	0.46
1:D:1750:PRO:HG3	1:D:2057:LEU:HD22	1.96	0.46
1:D:2154:PHE:HD2	1:D:2205:ILE:HD11	1.81	0.46
1:D:2330:PHE:HD1	1:D:2394:LEU:HD21	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2432:VAL:HG12	1:D:2486:LEU:HD13	1.96	0.46
1:D:4026:THR:HG21	1:D:4083:VAL:HG11	1.96	0.46
1:A:336:GLU:HG3	1:A:338:LEU:HD22	1.98	0.46
1:A:2851:TRP:HA	1:A:2854:LYS:HE2	1.96	0.46
1:B:59:PRO:HB3	1:B:296:ARG:NH1	2.29	0.46
1:B:1361:LYS:HA	1:B:1566:PRO:HA	1.98	0.46
1:B:2735:LYS:HD3	1:B:2740:TRP:CE3	2.51	0.46
1:C:1217:PHE:HD2	1:C:1247:ILE:HG13	1.80	0.46
1:C:2159:ASN:HD22	1:C:2162:ARG:NH2	2.13	0.46
1:C:2432:VAL:HG12	1:C:2486:LEU:HD13	1.96	0.46
1:C:3909:ILE:HG21	1:C:3969:GLU:HB3	1.96	0.46
1:D:1972:ILE:HA	1:D:1975:LEU:HG	1.97	0.46
1:D:2159:ASN:HD22	1:D:2162:ARG:NH2	2.13	0.46
1:D:3909:ILE:HG21	1:D:3969:GLU:HB3	1.96	0.46
1:D:4079:TYR:O	1:D:4083:VAL:HG22	2.16	0.46
1:A:2522:UNK:C	1:A:2524:UNK:H	2.29	0.46
1:B:336:GLU:HG3	1:B:338:LEU:HD22	1.98	0.46
1:B:2184:LYS:HE2	1:B:2184:LYS:HB3	1.75	0.46
1:B:3661:ASP:OD2	1:B:3733:ARG:NH2	2.48	0.46
1:B:4044:LYS:HZ1	1:B:4071:THR:H	1.63	0.46
1:B:4601:ARG:HD3	1:B:4707:TRP:CZ2	2.50	0.46
1:C:1965:ARG:O	1:C:1966:SER:OG	2.33	0.46
1:C:3661:ASP:OD2	1:C:3733:ARG:NH2	2.48	0.46
1:D:2522:UNK:C	1:D:2524:UNK:H	2.29	0.46
1:A:232:ASP:OD1	1:A:233:VAL:N	2.49	0.46
1:A:718:VAL:HG13	1:A:793:SER:HB3	1.98	0.46
1:B:234:LEU:HA	1:B:408:SER:HB3	1.98	0.46
1:B:2317:ASN:O	1:B:2321:ARG:HG2	2.13	0.46
1:B:2330:PHE:HD1	1:B:2394:LEU:HD21	1.80	0.46
1:B:3831:ASP:OD1	1:B:3831:ASP:N	2.45	0.46
1:B:4601:ARG:HD2	1:B:4711:VAL:HG21	1.97	0.46
1:C:200:SER:HG	1:C:202:HIS:HD1	1.56	0.46
1:C:2839:MET:HB2	1:C:2892:PHE:CE2	2.51	0.46
1:C:4079:TYR:O	1:C:4083:VAL:HG22	2.16	0.46
1:D:1361:LYS:HA	1:D:1566:PRO:HA	1.97	0.46
1:D:2321:ARG:O	1:D:2325:ARG:HG2	2.15	0.46
1:A:234:LEU:HD12	1:A:405:LEU:HB3	1.96	0.46
1:A:2154:PHE:HD1	1:A:2205:ILE:HD11	1.81	0.46
1:A:3909:ILE:HG21	1:A:3969:GLU:HB3	1.96	0.46
1:B:1786:ASP:OD1	1:B:1786:ASP:N	2.45	0.46
1:B:2265:VAL:HG12	1:B:2326:ARG:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2765:LYS:O	1:B:2765:LYS:HD3	2.14	0.46
1:C:59:PRO:HB3	1:C:296:ARG:NH1	2.29	0.46
1:C:232:ASP:OD1	1:C:233:VAL:N	2.49	0.46
1:C:336:GLU:HG3	1:C:338:LEU:HD22	1.98	0.46
1:D:234:LEU:HA	1:D:408:SER:HB3	1.98	0.46
1:D:336:GLU:HG3	1:D:338:LEU:HD22	1.98	0.46
1:D:718:VAL:HG13	1:D:793:SER:HB3	1.98	0.46
1:D:2265:VAL:HG12	1:D:2326:ARG:HD2	1.97	0.46
1:D:3905:PHE:O	1:D:3909:ILE:HG12	2.14	0.46
1:D:4029:ASP:N	1:D:4029:ASP:OD1	2.49	0.46
1:A:1709:ASP:HA	1:A:1713:SER:HB2	1.96	0.46
1:A:4050:ALA:O	1:A:4054:HIS:ND1	2.49	0.46
1:A:4601:ARG:HD2	1:A:4711:VAL:HG21	1.97	0.46
1:B:1738:THR:HG22	1:B:1926:ALA:HB1	1.98	0.46
2:H:28:THR:HA	2:H:39:SER:HA	1.98	0.46
1:C:134:SER:O	1:C:134:SER:OG	2.34	0.46
1:C:1683:GLU:HB3	2:I:42:ASP:HB3	1.97	0.46
1:C:2321:ARG:O	1:C:2325:ARG:HG2	2.15	0.46
1:C:2425:LEU:HD13	1:C:2425:LEU:HA	1.85	0.46
1:C:2735:LYS:HD3	1:C:2740:TRP:CE3	2.51	0.46
1:D:2735:LYS:HD3	1:D:2740:TRP:CE3	2.51	0.46
1:A:2430:ASP:O	1:A:2434:VAL:HG23	2.15	0.46
1:C:721:ASP:OD1	1:C:721:ASP:N	2.46	0.46
1:C:2099:ARG:O	1:C:2103:LYS:NZ	2.39	0.46
1:D:408:SER:O	1:D:408:SER:OG	2.31	0.46
1:D:4601:ARG:HD2	1:D:4711:VAL:HG21	1.97	0.46
1:A:233:VAL:O	1:A:408:SER:OG	2.31	0.46
1:A:1361:LYS:HA	1:A:1566:PRO:HA	1.97	0.46
1:A:2355:ASP:OD2	1:A:2357:SER:OG	2.30	0.46
1:A:2425:LEU:HD13	1:A:2425:LEU:HA	1.85	0.46
1:A:3639:LEU:HD23	1:A:3693:ILE:HG21	1.98	0.46
1:A:3661:ASP:OD2	1:A:3733:ARG:NH2	2.48	0.46
1:B:2430:ASP:O	1:B:2434:VAL:HG23	2.15	0.46
1:B:4050:ALA:O	1:B:4054:HIS:ND1	2.49	0.46
1:C:3420:UNK:HA	1:C:3421:UNK:HA	1.65	0.46
1:D:274:LEU:HD22	1:D:408:SER:HB2	1.98	0.46
1:D:1359:ILE:HG13	1:D:1360:ASP:H	1.81	0.46
1:D:4601:ARG:HD3	1:D:4707:TRP:CZ2	2.50	0.46
1:B:232:ASP:OD1	1:B:233:VAL:N	2.49	0.46
1:B:233:VAL:O	1:B:408:SER:OG	2.31	0.46
1:B:555:LEU:HD11	1:B:585:ALA:HB1	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2321:ARG:O	1:B:2325:ARG:HG2	2.15	0.46
1:C:2430:ASP:O	1:C:2434:VAL:HG23	2.15	0.46
1:D:134:SER:O	1:D:134:SER:OG	2.34	0.46
1:D:2430:ASP:O	1:D:2434:VAL:HG23	2.15	0.46
1:A:1359:ILE:HG13	1:A:1360:ASP:H	1.81	0.46
1:A:1981:ASP:OD1	1:A:1981:ASP:N	2.49	0.46
1:A:4745:ILE:HD11	1:D:4775:VAL:HG21	1.97	0.46
1:B:1704:TYR:O	1:B:1708:ILE:HG12	2.15	0.46
1:B:2522:UNK:C	1:B:2524:UNK:H	2.29	0.46
1:B:2715:LYS:O	1:B:2718:TYR:HB3	2.16	0.46
1:B:4731:GLY:HA2	1:B:4737:PHE:HB2	1.98	0.46
1:C:1738:THR:HG22	1:C:1926:ALA:HB1	1.98	0.46
2:I:28:THR:HA	2:I:39:SER:HA	1.98	0.46
1:D:4023:LYS:HG2	1:D:4087:HIS:CE1	2.51	0.46
2:J:28:THR:HA	2:J:39:SER:HA	1.98	0.46
1:A:2265:VAL:HG12	1:A:2326:ARG:HD2	1.97	0.45
1:A:4731:GLY:HA2	1:A:4737:PHE:HB2	1.97	0.45
1:C:1100:ARG:HB3	1:C:1236:TYR:CD2	2.51	0.45
1:C:1359:ILE:HG13	1:C:1360:ASP:H	1.81	0.45
1:C:2765:LYS:O	1:C:2765:LYS:HD3	2.14	0.45
1:A:1738:THR:HG22	1:A:1926:ALA:HB1	1.98	0.45
1:A:2091:TYR:CD2	1:A:3639:LEU:HD13	2.52	0.45
1:A:2839:MET:HB2	1:A:2892:PHE:CE2	2.51	0.45
1:B:541:ILE:HG22	1:B:547:ASN:HB3	1.98	0.45
1:B:3639:LEU:HD23	1:B:3693:ILE:HG21	1.98	0.45
1:C:234:LEU:HA	1:C:408:SER:HB3	1.98	0.45
1:C:2325:ARG:HA	1:C:2325:ARG:HD3	1.77	0.45
1:C:4050:ALA:O	1:C:4054:HIS:ND1	2.49	0.45
1:D:232:ASP:OD1	1:D:233:VAL:N	2.49	0.45
1:D:1100:ARG:HB3	1:D:1236:TYR:CD2	2.52	0.45
1:D:2171:MET:HE2	1:D:2220:LEU:HD23	1.98	0.45
1:D:4044:LYS:HZ3	1:D:4069:ALA:HB1	1.81	0.45
1:A:2321:ARG:O	1:A:2325:ARG:HG2	2.15	0.45
1:A:2330:PHE:HD1	1:A:2394:LEU:HD21	1.80	0.45
2:G:28:THR:HA	2:G:39:SER:HA	1.98	0.45
1:C:541:ILE:HG22	1:C:547:ASN:HB3	1.98	0.45
1:D:1217:PHE:HD2	1:D:1247:ILE:HG13	1.80	0.45
1:D:2715:LYS:O	1:D:2718:TYR:HB3	2.16	0.45
1:D:2839:MET:HB2	1:D:2892:PHE:CE2	2.51	0.45
1:D:2855:LYS:O	1:D:2859:LEU:HG	2.17	0.45
1:D:3712:SER:OG	1:D:3716:LYS:NZ	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4596:LEU:HG	1:D:4600:LYS:HE3	1.98	0.45
1:A:1936:GLN:O	1:A:1939:GLN:HG3	2.17	0.45
1:A:2728:HIS:HA	1:A:2767:LYS:HZ1	1.81	0.45
1:B:606:ARG:NH1	1:B:1635:GLU:OE2	2.50	0.45
1:B:1936:GLN:O	1:B:1939:GLN:HG3	2.17	0.45
1:B:1981:ASP:OD1	1:B:1981:ASP:N	2.49	0.45
1:B:2091:TYR:CD2	1:B:3639:LEU:HD13	2.52	0.45
1:B:3712:SER:OG	1:B:3716:LYS:NZ	2.38	0.45
1:C:244:CYS:SG	1:C:273:SER:HB2	2.56	0.45
1:C:718:VAL:HG13	1:C:793:SER:HB3	1.98	0.45
1:D:245:LEU:HD11	1:D:260:VAL:HG12	1.99	0.45
1:A:2238:PRO:O	1:A:2241:VAL:HG12	2.17	0.45
1:A:2715:LYS:O	1:A:2718:TYR:HB3	2.16	0.45
1:A:2718:TYR:O	1:A:2718:TYR:HD1	2.00	0.45
1:A:4079:TYR:O	1:A:4083:VAL:HG22	2.16	0.45
1:B:244:CYS:SG	1:B:273:SER:HB2	2.56	0.45
1:B:274:LEU:HD22	1:B:408:SER:HB2	1.98	0.45
1:B:718:VAL:HG13	1:B:793:SER:HB3	1.98	0.45
1:B:1095:ALA:HB1	1:B:1200:GLY:HA3	1.99	0.45
1:C:375:GLN:NE2	1:C:390:LYS:O	2.49	0.45
1:C:555:LEU:HD11	1:C:585:ALA:HB1	1.98	0.45
1:D:1190:LEU:HD11	1:D:1193:LYS:HE3	1.98	0.45
1:D:1738:THR:HG22	1:D:1926:ALA:HB1	1.98	0.45
1:D:1981:ASP:N	1:D:1981:ASP:OD1	2.49	0.45
1:D:3420:UNK:HA	1:D:3421:UNK:HA	1.65	0.45
1:D:3639:LEU:HD23	1:D:3693:ILE:HG21	1.98	0.45
1:A:1100:ARG:HB3	1:A:1236:TYR:CD2	2.51	0.45
1:A:1190:LEU:HD11	1:A:1193:LYS:HE3	1.98	0.45
1:A:4023:LYS:HG2	1:A:4087:HIS:CE1	2.51	0.45
1:A:4029:ASP:OD1	1:A:4029:ASP:N	2.49	0.45
1:A:4601:ARG:HD3	1:A:4707:TRP:CZ2	2.50	0.45
1:B:2217:LEU:HA	1:B:2220:LEU:HG	1.98	0.45
1:B:2753:GLN:HE22	1:B:2762:LEU:HD12	1.82	0.45
1:B:3974:GLN:HE22	1:B:4012:ILE:HG21	1.81	0.45
1:B:4023:LYS:HG2	1:B:4087:HIS:CE1	2.51	0.45
1:C:122:ARG:HD3	1:C:129:TYR:CZ	2.52	0.45
1:C:606:ARG:NH1	1:C:1635:GLU:OE2	2.50	0.45
1:C:1972:ILE:HA	1:C:1975:LEU:HG	1.97	0.45
1:C:2154:PHE:HD1	1:C:2205:ILE:HD11	1.81	0.45
1:C:2522:UNK:C	1:C:2524:UNK:H	2.29	0.45
1:D:2718:TYR:O	1:D:2718:TYR:HD1	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4048:HIS:CE1	1:D:4059:GLN:HE22	2.35	0.45
1:A:881:ILE:O	1:A:884:ARG:HG3	2.17	0.45
1:A:4118:LEU:HD23	1:A:4118:LEU:HA	1.81	0.45
1:B:2238:PRO:O	1:B:2241:VAL:HG12	2.17	0.45
1:B:4619:GLN:OE1	1:B:4631:ARG:NH2	2.50	0.45
1:C:692:HIS:HB3	1:C:795:SER:HB3	1.99	0.45
1:D:244:CYS:SG	1:D:273:SER:HB2	2.57	0.45
1:D:1769:PHE:O	2:J:83:TYR:OH	2.35	0.45
1:D:2217:LEU:HA	1:D:2220:LEU:HG	1.98	0.45
1:D:4050:ALA:O	1:D:4054:HIS:ND1	2.49	0.45
1:A:21:VAL:HG12	1:A:23:GLN:HG3	1.99	0.45
1:A:375:GLN:NE2	1:A:390:LYS:O	2.49	0.45
1:A:555:LEU:HD11	1:A:585:ALA:HB1	1.98	0.45
1:A:1311:ALA:HA	1:A:1312:UNK:HA	1.50	0.45
1:A:2753:GLN:HE22	1:A:2762:LEU:HD12	1.82	0.45
1:B:1972:ILE:HA	1:B:1975:LEU:HG	1.97	0.45
1:B:4079:TYR:O	1:B:4083:VAL:HG22	2.16	0.45
1:D:1965:ARG:O	1:D:1966:SER:OG	2.33	0.45
1:D:3974:GLN:HE22	1:D:4012:ILE:HG21	1.81	0.45
1:A:274:LEU:HD22	1:A:408:SER:HB2	1.98	0.45
1:A:4044:LYS:NZ	1:A:4069:ALA:HB1	2.32	0.45
1:B:122:ARG:HD3	1:B:129:TYR:CZ	2.52	0.45
1:B:1100:ARG:HB3	1:B:1236:TYR:CD2	2.51	0.45
1:B:1769:PHE:O	2:H:83:TYR:OH	2.34	0.45
1:B:2718:TYR:O	1:B:2718:TYR:HD1	2.00	0.45
1:C:1190:LEU:HD11	1:C:1193:LYS:HE3	1.98	0.45
1:C:1936:GLN:O	1:C:1939:GLN:HG3	2.17	0.45
1:C:1981:ASP:OD1	1:C:1981:ASP:N	2.49	0.45
1:C:2091:TYR:CD2	1:C:3639:LEU:HD13	2.52	0.45
1:C:2718:TYR:HD1	1:C:2718:TYR:O	2.00	0.45
1:C:2753:GLN:HE22	1:C:2762:LEU:HD12	1.82	0.45
1:C:4596:LEU:HG	1:C:4600:LYS:HE3	1.98	0.45
1:D:1668:LEU:HD23	1:D:2131:VAL:HG12	1.99	0.45
1:A:122:ARG:HD3	1:A:129:TYR:CZ	2.52	0.45
1:A:244:CYS:SG	1:A:273:SER:HB2	2.57	0.45
1:A:245:LEU:HD11	1:A:260:VAL:HG12	1.99	0.45
1:A:1095:ALA:HB1	1:A:1200:GLY:HA3	1.99	0.45
1:A:2217:LEU:HA	1:A:2220:LEU:HG	1.98	0.45
1:A:3974:GLN:HE22	1:A:4012:ILE:HG21	1.81	0.45
1:B:556:ASP:N	1:B:556:ASP:OD1	2.50	0.45
1:B:692:HIS:HB3	1:B:795:SER:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:907:VAL:HB	1:B:914:GLN:HE22	1.82	0.45
1:B:1359:ILE:HG13	1:B:1360:ASP:H	1.81	0.45
1:B:2839:MET:HB2	1:B:2892:PHE:CE2	2.51	0.45
1:B:3964:ILE:HG21	1:B:4085:ARG:HD2	1.99	0.45
1:B:4118:LEU:HD23	1:B:4118:LEU:HA	1.80	0.45
1:C:35:LEU:HD23	1:C:51:SER:HA	1.99	0.45
1:D:1165:MET:HB3	1:D:1236:TYR:CE2	2.52	0.45
1:D:3951:ALA:O	1:D:3954:GLN:HG2	2.17	0.45
1:A:2171:MET:HE2	1:A:2220:LEU:HD23	2.00	0.44
1:B:35:LEU:HD23	1:B:51:SER:HA	1.99	0.44
1:B:1190:LEU:HD11	1:B:1193:LYS:HE3	1.99	0.44
1:B:2855:LYS:O	1:B:2859:LEU:HG	2.17	0.44
1:C:274:LEU:HD22	1:C:408:SER:HB2	1.98	0.44
1:C:686:VAL:HG13	1:C:687:THR:H	1.82	0.44
1:C:2855:LYS:O	1:C:2859:LEU:HG	2.17	0.44
1:C:4048:HIS:CE1	1:C:4059:GLN:HE22	2.35	0.44
1:D:881:ILE:O	1:D:884:ARG:HG3	2.17	0.44
1:D:4619:GLN:OE1	1:D:4631:ARG:NH2	2.50	0.44
1:A:299:HIS:HD2	1:A:302:THR:HG22	1.82	0.44
1:A:2735:LYS:HA	1:A:2740:TRP:CE3	2.47	0.44
1:A:3951:ALA:O	1:A:3954:GLN:HG2	2.18	0.44
1:B:1666:CYS:SG	1:B:1710:ILE:HG22	2.57	0.44
1:B:2735:LYS:HA	1:B:2740:TRP:CE3	2.47	0.44
1:B:3698:CYS:SG	1:B:3730:LEU:HD21	2.58	0.44
1:B:3871:ILE:HA	1:B:3874:VAL:HG12	1.99	0.44
1:B:4662:ARG:NH2	1:B:4675:ALA:O	2.51	0.44
1:C:1165:MET:HB3	1:C:1236:TYR:CE2	2.52	0.44
1:C:2238:PRO:O	1:C:2241:VAL:HG12	2.17	0.44
1:C:2715:LYS:O	1:C:2718:TYR:HB3	2.16	0.44
1:C:3639:LEU:HD23	1:C:3693:ILE:HG21	1.98	0.44
1:C:3974:GLN:HE22	1:C:4012:ILE:HG21	1.81	0.44
1:D:122:ARG:HD3	1:D:129:TYR:CZ	2.52	0.44
1:D:541:ILE:HG22	1:D:547:ASN:HB3	1.98	0.44
1:D:555:LEU:HD11	1:D:585:ALA:HB1	1.98	0.44
1:D:686:VAL:HG13	1:D:687:THR:H	1.82	0.44
1:D:2091:TYR:CD2	1:D:3639:LEU:HD13	2.52	0.44
1:A:1666:CYS:SG	1:A:1710:ILE:HG22	2.57	0.44
1:A:4048:HIS:CE1	1:A:4059:GLN:HE22	2.35	0.44
1:A:4662:ARG:NH2	1:A:4675:ALA:O	2.50	0.44
1:B:686:VAL:HG13	1:B:687:THR:H	1.82	0.44
1:B:4044:LYS:NZ	1:B:4069:ALA:HB1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:556:ASP:OD1	1:C:556:ASP:N	2.50	0.44
1:C:2774:ILE:H	1:C:2774:ILE:HG12	1.57	0.44
1:C:4044:LYS:NZ	1:C:4069:ALA:HB1	2.32	0.44
1:C:4619:GLN:OE1	1:C:4631:ARG:NH2	2.50	0.44
2:I:19:LYS:HD3	2:I:51:ILE:HG22	1.99	0.44
1:D:907:VAL:HB	1:D:914:GLN:HE22	1.83	0.44
1:D:1936:GLN:O	1:D:1939:GLN:HG3	2.17	0.44
1:D:2238:PRO:O	1:D:2241:VAL:HG12	2.17	0.44
1:D:2753:GLN:HE22	1:D:2762:LEU:HD12	1.82	0.44
1:D:3964:ILE:HG21	1:D:4085:ARG:HD2	1.99	0.44
1:D:4044:LYS:NZ	1:D:4069:ALA:HB1	2.32	0.44
1:D:4731:GLY:HA2	1:D:4737:PHE:HB2	1.98	0.44
2:J:19:LYS:HD3	2:J:51:ILE:HG22	1.99	0.44
1:A:606:ARG:NH1	1:A:1635:GLU:OE2	2.50	0.44
1:A:1217:PHE:O	1:A:1240:ALA:N	2.50	0.44
1:A:2855:LYS:O	1:A:2859:LEU:HG	2.17	0.44
1:A:4619:GLN:OE1	1:A:4631:ARG:NH2	2.50	0.44
1:B:881:ILE:O	1:B:884:ARG:HG3	2.17	0.44
1:C:299:HIS:HD2	1:C:302:THR:HG22	1.82	0.44
1:C:881:ILE:O	1:C:884:ARG:HG3	2.17	0.44
1:C:3698:CYS:SG	1:C:3730:LEU:HD21	2.58	0.44
1:D:297:LEU:HD12	1:D:329:PHE:HD2	1.82	0.44
1:D:299:HIS:HD2	1:D:302:THR:HG22	1.82	0.44
1:D:3698:CYS:SG	1:D:3730:LEU:HD21	2.58	0.44
1:A:35:LEU:HD23	1:A:51:SER:HA	1.99	0.44
1:A:123:HIS:CD2	1:A:126:SER:H	2.32	0.44
1:A:695:VAL:HG12	1:A:792:VAL:HG23	2.00	0.44
1:B:562:LEU:HD21	1:B:600:LEU:HD22	2.00	0.44
1:B:816:PRO:HB2	1:B:819:TYR:CD1	2.53	0.44
2:H:19:LYS:HD3	2:H:51:ILE:HG22	1.99	0.44
1:C:245:LEU:HD11	1:C:260:VAL:HG12	1.99	0.44
1:C:893:TRP:O	1:C:897:LYS:HD3	2.18	0.44
1:C:2217:LEU:HA	1:C:2220:LEU:HG	1.98	0.44
1:C:4662:ARG:NH2	1:C:4675:ALA:O	2.51	0.44
1:C:4731:GLY:HA2	1:C:4737:PHE:HB2	1.98	0.44
1:D:233:VAL:O	1:D:408:SER:OG	2.31	0.44
1:D:892:LEU:HA	1:D:895:MET:HG3	2.00	0.44
1:D:1652:LEU:HD12	1:D:1699:LEU:HD13	2.00	0.44
1:D:2231:PRO:HG3	1:D:2381:ILE:HG12	2.00	0.44
1:D:4112:THR:O	1:D:4116:THR:HG23	2.18	0.44
1:D:4701:ASP:OD1	1:D:4701:ASP:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4781:THR:HG21	1:D:4812:TYR:HB2	2.00	0.44
1:A:233:VAL:HA	1:A:276:ARG:HA	2.00	0.44
1:A:686:VAL:HG13	1:A:687:THR:H	1.82	0.44
1:A:1793:ILE:HG12	1:A:1843:ILE:HD11	1.99	0.44
1:B:514:PHE:HD2	1:B:523:GLY:HA2	1.82	0.44
1:B:1977:ASN:N	1:B:1977:ASN:OD1	2.51	0.44
1:B:2154:PHE:HD1	1:B:2205:ILE:HD11	1.81	0.44
1:C:514:PHE:HD2	1:C:523:GLY:HA2	1.82	0.44
1:C:555:LEU:HD21	1:C:578:VAL:HG11	2.00	0.44
1:C:606:ARG:HH22	1:C:1633:ILE:HG23	1.83	0.44
1:C:907:VAL:HB	1:C:914:GLN:HE22	1.83	0.44
1:C:1039:ASP:OD1	1:C:1039:ASP:N	2.51	0.44
1:C:2231:PRO:HG3	1:C:2381:ILE:HG12	2.00	0.44
1:C:3951:ALA:O	1:C:3954:GLN:HG2	2.18	0.44
1:C:4023:LYS:HG2	1:C:4087:HIS:CE1	2.51	0.44
1:D:606:ARG:HH22	1:D:1633:ILE:HG23	1.83	0.44
1:D:1666:CYS:SG	1:D:1710:ILE:HG22	2.57	0.44
1:D:1977:ASN:N	1:D:1977:ASN:OD1	2.51	0.44
1:D:2728:HIS:HA	1:D:2767:LYS:HZ1	1.82	0.44
1:A:2431:LEU:HD13	1:A:2471:LEU:HG	2.00	0.44
1:B:233:VAL:HA	1:B:276:ARG:HA	2.00	0.44
1:B:477:ASN:OD1	1:B:480:ARG:NH2	2.51	0.44
1:B:1165:MET:HB3	1:B:1236:TYR:CE2	2.52	0.44
1:C:309:MET:HB2	1:C:312:LYS:HZ2	1.83	0.44
1:C:562:LEU:HD21	1:C:600:LEU:HD22	2.00	0.44
1:C:1095:ALA:HB1	1:C:1200:GLY:HA3	1.99	0.44
1:C:3871:ILE:HA	1:C:3874:VAL:HG12	1.99	0.44
1:D:695:VAL:HG12	1:D:792:VAL:HG23	2.00	0.44
1:D:1095:ALA:HB1	1:D:1200:GLY:HA3	1.99	0.44
1:D:1395:UNK:HA	1:D:1415:UNK:HA	2.00	0.44
1:A:541:ILE:HG22	1:A:547:ASN:HB3	1.98	0.44
1:A:892:LEU:HA	1:A:895:MET:HG3	2.00	0.44
1:A:1165:MET:HB3	1:A:1236:TYR:CE2	2.52	0.44
1:A:3920:THR:HG22	1:A:3980:MET:HA	2.00	0.44
1:A:3964:ILE:HG21	1:A:4085:ARG:HD2	1.99	0.44
1:A:4154:SER:O	1:A:4158:GLN:HG2	2.18	0.44
2:G:19:LYS:HD3	2:G:51:ILE:HG22	1.99	0.44
1:B:892:LEU:HA	1:B:895:MET:HG3	2.00	0.44
1:B:2231:PRO:HG3	1:B:2381:ILE:HG12	2.00	0.44
1:B:2728:HIS:HA	1:B:2767:LYS:HZ1	1.82	0.44
1:C:235:ARG:HB2	1:C:406:SER:OG	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:816:PRO:HB2	1:C:819:TYR:CD1	2.53	0.44
1:C:1652:LEU:HD12	1:C:1699:LEU:HD13	2.00	0.44
1:C:2431:LEU:HD13	1:C:2471:LEU:HG	2.00	0.44
1:C:4781:THR:HG21	1:C:4812:TYR:HB2	2.00	0.44
1:D:606:ARG:NH1	1:D:1635:GLU:OE2	2.50	0.44
1:D:893:TRP:O	1:D:897:LYS:HD3	2.18	0.44
1:D:4662:ARG:NH2	1:D:4675:ALA:O	2.50	0.44
1:A:606:ARG:HH22	1:A:1633:ILE:HG23	1.83	0.44
1:A:2062:SER:O	1:A:2066:VAL:HG22	2.18	0.44
1:A:3871:ILE:HA	1:A:3874:VAL:HG12	1.99	0.44
1:A:4596:LEU:HG	1:A:4600:LYS:HE3	1.98	0.44
1:B:695:VAL:HG12	1:B:792:VAL:HG23	2.00	0.44
1:B:1395:UNK:HA	1:B:1415:UNK:HA	2.00	0.44
1:B:1668:LEU:HD23	1:B:2131:VAL:HG12	1.99	0.44
1:B:1793:ILE:HG12	1:B:1843:ILE:HD11	2.00	0.44
1:B:1838:GLU:OE1	1:B:1838:GLU:N	2.43	0.44
1:B:2107:ILE:HG13	1:B:2108:ASN:N	2.33	0.44
1:B:2118:LEU:HD12	1:B:2148:ILE:HG22	2.00	0.44
1:B:4048:HIS:CE1	1:B:4059:GLN:HE22	2.35	0.44
1:C:892:LEU:HA	1:C:895:MET:HG3	2.00	0.44
1:C:1666:CYS:SG	1:C:1710:ILE:HG22	2.57	0.44
1:C:1668:LEU:HD23	1:C:2131:VAL:HG12	1.99	0.44
1:A:323:ASP:O	1:A:327:THR:OG1	2.28	0.43
1:A:555:LEU:HD21	1:A:578:VAL:HG11	2.00	0.43
1:A:1395:UNK:HA	1:A:1415:UNK:HA	2.00	0.43
1:A:1928:SER:O	1:A:1932:VAL:HG12	2.18	0.43
1:A:3698:CYS:SG	1:A:3730:LEU:HD21	2.58	0.43
1:A:4859:ALA:HB1	1:B:4866:ILE:HD11	2.00	0.43
1:B:21:VAL:HG12	1:B:23:GLN:HG3	1.99	0.43
1:B:1004:HIS:HB3	1:B:1035:TYR:HB2	2.00	0.43
1:B:3802:LEU:HD23	1:B:3802:LEU:HA	1.89	0.43
1:B:4107:HIS:O	1:B:4109:PRO:HD3	2.18	0.43
1:C:1928:SER:O	1:C:1932:VAL:HG12	2.18	0.43
1:C:4154:SER:O	1:C:4158:GLN:HG2	2.18	0.43
1:D:1004:HIS:HB3	1:D:1035:TYR:HB2	2.00	0.43
1:A:1652:LEU:HD12	1:A:1699:LEU:HD13	2.00	0.43
1:A:2231:PRO:HG3	1:A:2381:ILE:HG12	2.00	0.43
1:A:2463:HIS:O	1:A:2467:MET:HG2	2.19	0.43
1:B:245:LEU:HD11	1:B:260:VAL:HG12	1.99	0.43
1:B:555:LEU:HD21	1:B:578:VAL:HG11	2.00	0.43
1:B:2128:LEU:HA	1:B:2131:VAL:HG22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2431:LEU:HD13	1:B:2471:LEU:HG	2.00	0.43
1:C:2718:TYR:CD1	1:C:2718:TYR:C	2.92	0.43
1:C:2844:ALA:HB1	1:C:2884:ASP:OD1	2.18	0.43
1:C:3964:ILE:HG21	1:C:4085:ARG:HD2	1.99	0.43
1:D:555:LEU:HD21	1:D:578:VAL:HG11	2.00	0.43
1:D:1034:PRO:HD2	1:D:1037:LEU:HD13	2.01	0.43
1:D:2062:SER:O	1:D:2066:VAL:HG22	2.18	0.43
1:D:2844:ALA:HB1	1:D:2884:ASP:OD1	2.19	0.43
1:D:3920:THR:HG22	1:D:3980:MET:HA	2.00	0.43
2:J:43:ARG:HG3	2:J:45:LYS:HG2	2.00	0.43
1:A:626:ARG:HH21	1:A:2131:VAL:HG11	1.83	0.43
1:A:907:VAL:HB	1:A:914:GLN:HE22	1.83	0.43
1:A:1838:GLU:OE1	1:A:1838:GLU:N	2.43	0.43
1:A:2118:LEU:HD12	1:A:2148:ILE:HG22	2.00	0.43
1:A:4112:THR:O	1:A:4116:THR:HG23	2.18	0.43
2:G:69:LEU:HD12	2:G:107:LEU:HB2	2.00	0.43
1:B:299:HIS:HD2	1:B:302:THR:HG22	1.82	0.43
1:B:2197:ARG:HB2	1:B:2236:SER:HB3	2.00	0.43
1:B:2844:ALA:HB1	1:B:2884:ASP:OD1	2.18	0.43
1:B:4596:LEU:HG	1:B:4600:LYS:HE3	1.98	0.43
1:C:21:VAL:HG12	1:C:23:GLN:HG3	1.99	0.43
1:C:1395:UNK:HA	1:C:1415:UNK:HA	2.00	0.43
1:C:2092:ASP:OD1	1:C:2095:GLY:N	2.49	0.43
1:C:2197:ARG:HB2	1:C:2236:SER:HB3	2.00	0.43
1:C:4029:ASP:OD1	1:C:4029:ASP:N	2.49	0.43
1:D:35:LEU:HD23	1:D:51:SER:HA	1.99	0.43
1:D:514:PHE:HD2	1:D:523:GLY:HA2	1.82	0.43
1:D:692:HIS:HB3	1:D:795:SER:HB3	1.99	0.43
1:D:1311:ALA:HA	1:D:1312:UNK:HA	1.50	0.43
1:D:2718:TYR:CD1	1:D:2718:TYR:C	2.92	0.43
1:D:4154:SER:O	1:D:4158:GLN:HG2	2.18	0.43
1:A:816:PRO:HB2	1:A:819:TYR:CD1	2.53	0.43
1:A:1668:LEU:HD23	1:A:2131:VAL:HG12	1.99	0.43
1:A:2279:LEU:HB3	1:A:2284:TYR:HB2	2.00	0.43
1:A:2718:TYR:CD1	1:A:2718:TYR:C	2.92	0.43
1:A:2844:ALA:HB1	1:A:2884:ASP:OD1	2.18	0.43
1:B:2335:ARG:HE	1:B:2335:ARG:HB3	1.67	0.43
1:B:3832:ASP:OD1	1:B:3832:ASP:N	2.52	0.43
1:B:4154:SER:O	1:B:4158:GLN:HG2	2.18	0.43
1:C:1004:HIS:HB3	1:C:1035:TYR:HB2	2.00	0.43
1:C:1157:GLN:N	1:C:1160:ASP:OD2	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2171:MET:HE2	1:C:2220:LEU:HD23	2.01	0.43
1:C:2735:LYS:HA	1:C:2740:TRP:CE3	2.47	0.43
1:C:4112:THR:O	1:C:4116:THR:HG23	2.18	0.43
2:I:69:LEU:HD12	2:I:107:LEU:HB2	2.00	0.43
1:D:816:PRO:HB2	1:D:819:TYR:CD1	2.53	0.43
1:D:1793:ILE:HG12	1:D:1843:ILE:HD11	1.99	0.43
1:D:2431:LEU:HD13	1:D:2471:LEU:HG	2.00	0.43
1:D:4107:HIS:O	1:D:4109:PRO:HD3	2.18	0.43
1:A:1977:ASN:OD1	1:A:1977:ASN:N	2.51	0.43
1:A:2500:SER:O	1:A:2500:SER:OG	2.35	0.43
1:A:2852:ALA:O	1:A:2855:LYS:HG3	2.19	0.43
1:A:3916:PHE:O	1:A:3920:THR:HG23	2.19	0.43
1:B:200:SER:HG	1:B:202:HIS:HD1	1.60	0.43
1:B:606:ARG:HH22	1:B:1633:ILE:HG23	1.83	0.43
1:B:1928:SER:O	1:B:1932:VAL:HG12	2.18	0.43
1:B:2171:MET:O	1:B:2175:VAL:HG13	2.19	0.43
1:B:4029:ASP:OD1	1:B:4029:ASP:N	2.49	0.43
1:B:4051:MET:O	1:B:4057:TYR:HB2	2.19	0.43
1:B:4859:ALA:HB1	1:C:4866:ILE:HD11	2.01	0.43
1:C:695:VAL:HG12	1:C:792:VAL:HG23	2.00	0.43
1:D:152:ASP:N	1:D:152:ASP:OD1	2.52	0.43
1:D:477:ASN:OD1	1:D:480:ARG:NH2	2.51	0.43
1:D:769:ARG:HA	1:D:774:PRO:HA	2.01	0.43
1:D:1928:SER:O	1:D:1932:VAL:HG12	2.18	0.43
1:D:2197:ARG:HB2	1:D:2236:SER:HB3	2.00	0.43
1:A:235:ARG:HB2	1:A:406:SER:OG	2.18	0.43
1:A:297:LEU:HD12	1:A:329:PHE:HD2	1.82	0.43
1:A:4107:HIS:O	1:A:4109:PRO:HD3	2.18	0.43
1:B:297:LEU:HD12	1:B:329:PHE:HD2	1.82	0.43
1:B:1006:VAL:HG23	1:B:1009:ARG:NH1	2.34	0.43
1:B:1034:PRO:HD2	1:B:1037:LEU:HD13	2.00	0.43
1:B:2076:ASP:HB3	1:B:2079:LEU:HB3	2.01	0.43
1:B:2718:TYR:C	1:B:2718:TYR:CD1	2.92	0.43
1:B:3920:THR:HG22	1:B:3980:MET:HA	2.00	0.43
1:C:1977:ASN:OD1	1:C:1977:ASN:N	2.51	0.43
1:C:3916:PHE:O	1:C:3920:THR:HG23	2.19	0.43
1:C:4107:HIS:O	1:C:4109:PRO:HD3	2.18	0.43
1:D:1683:GLU:HB3	2:J:42:ASP:HB3	2.00	0.43
1:D:2118:LEU:HD12	1:D:2148:ILE:HG22	2.00	0.43
1:A:49:LEU:HD11	1:A:194:LEU:HD11	2.01	0.43
1:A:562:LEU:HD21	1:A:600:LEU:HD22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:692:HIS:HB3	1:A:795:SER:HB3	1.99	0.43
1:A:1004:HIS:HB3	1:A:1035:TYR:HB2	2.00	0.43
1:A:1039:ASP:OD1	1:A:1039:ASP:N	2.51	0.43
1:A:2128:LEU:HA	1:A:2131:VAL:HG22	2.00	0.43
1:A:2171:MET:O	1:A:2175:VAL:HG13	2.19	0.43
1:A:2197:ARG:HB2	1:A:2236:SER:HB3	2.00	0.43
1:A:4781:THR:HG21	1:A:4812:TYR:HB2	2.00	0.43
1:B:49:LEU:HD11	1:B:194:LEU:HD11	2.01	0.43
1:B:1173:MET:O	1:B:1191:ALA:N	2.37	0.43
1:B:1652:LEU:HD12	1:B:1699:LEU:HD13	2.00	0.43
1:B:3951:ALA:O	1:B:3954:GLN:HG2	2.18	0.43
1:B:4112:THR:O	1:B:4116:THR:HG23	2.18	0.43
1:C:2062:SER:O	1:C:2066:VAL:HG22	2.18	0.43
1:D:1039:ASP:OD1	1:D:1039:ASP:N	2.51	0.43
1:D:2463:HIS:O	1:D:2467:MET:HG2	2.19	0.43
1:D:3832:ASP:OD1	1:D:3832:ASP:N	2.52	0.43
1:D:3871:ILE:HA	1:D:3874:VAL:HG12	2.00	0.43
2:J:69:LEU:HD12	2:J:107:LEU:HB2	2.00	0.43
1:A:769:ARG:HA	1:A:774:PRO:HA	2.00	0.43
1:A:4615:TYR:CE1	1:A:4631:ARG:HB2	2.54	0.43
1:B:235:ARG:HB2	1:B:406:SER:OG	2.18	0.43
1:B:893:TRP:O	1:B:897:LYS:HD3	2.18	0.43
1:B:997:ASP:HA	1:B:1047:LYS:HZ2	1.84	0.43
2:H:43:ARG:HG3	2:H:45:LYS:HG2	2.00	0.43
2:H:69:LEU:HD12	2:H:107:LEU:HB2	2.00	0.43
1:C:3832:ASP:OD1	1:C:3832:ASP:N	2.51	0.43
1:C:3920:THR:HG22	1:C:3980:MET:HA	2.00	0.43
1:D:2128:LEU:HA	1:D:2131:VAL:HG22	2.00	0.43
1:D:4615:TYR:CE1	1:D:4631:ARG:HB2	2.54	0.43
1:A:514:PHE:HD2	1:A:523:GLY:HA2	1.82	0.43
1:A:1173:MET:O	1:A:1191:ALA:N	2.37	0.43
1:B:123:HIS:CD2	1:B:126:SER:H	2.32	0.43
1:B:2092:ASP:OD1	1:B:2095:GLY:N	2.49	0.43
1:B:4615:TYR:CE1	1:B:4631:ARG:HB2	2.54	0.43
1:B:4781:THR:HG21	1:B:4812:TYR:HB2	2.00	0.43
1:C:1676:ALA:HB1	2:I:91:VAL:CG2	2.48	0.43
1:D:21:VAL:HG12	1:D:23:GLN:HG3	1.99	0.43
1:D:562:LEU:HD21	1:D:600:LEU:HD22	2.00	0.43
1:D:2774:ILE:H	1:D:2774:ILE:HG12	1.57	0.43
1:D:4044:LYS:HZ1	1:D:4071:THR:H	1.65	0.43
1:A:893:TRP:O	1:A:897:LYS:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1034:PRO:HD2	1:A:1037:LEU:HD13	2.00	0.43
1:A:1758:LEU:HD13	1:A:1758:LEU:HA	1.89	0.43
1:A:1764:PHE:HD1	1:A:1780:SER:HB2	1.84	0.43
1:A:3812:LYS:HB3	1:A:3812:LYS:HE2	1.81	0.43
1:B:309:MET:HB2	1:B:312:LYS:HZ1	1.84	0.43
1:B:626:ARG:HH21	1:B:2131:VAL:HG11	1.83	0.43
1:B:1039:ASP:OD1	1:B:1039:ASP:N	2.51	0.43
1:C:297:LEU:HD12	1:C:329:PHE:HD2	1.82	0.43
1:C:318:ASP:N	1:C:318:ASP:OD1	2.52	0.43
1:C:1793:ILE:HG12	1:C:1843:ILE:HD11	1.99	0.43
1:C:2728:HIS:HA	1:C:2767:LYS:HZ1	1.83	0.43
1:A:318:ASP:N	1:A:318:ASP:OD1	2.52	0.42
1:A:876:PRO:HA	1:A:879:GLU:HG2	2.01	0.42
1:B:2062:SER:O	1:B:2066:VAL:HG22	2.18	0.42
1:B:2859:LEU:HD11	1:B:2867:HIS:CD2	2.54	0.42
1:C:123:HIS:CD2	1:C:126:SER:H	2.32	0.42
1:C:1034:PRO:HD2	1:C:1037:LEU:HD13	2.01	0.42
1:C:2118:LEU:HD12	1:C:2148:ILE:HG22	2.00	0.42
1:C:3839:PHE:HE1	1:C:3873:THR:HG23	1.84	0.42
1:C:4615:TYR:CE1	1:C:4631:ARG:HB2	2.54	0.42
2:I:43:ARG:HG3	2:I:45:LYS:HG2	2.00	0.42
1:D:224:ALA:HB3	1:D:227:TYR:HD2	1.84	0.42
1:D:2425:LEU:HD13	1:D:2425:LEU:HA	1.85	0.42
1:D:2859:LEU:HD11	1:D:2867:HIS:CD2	2.54	0.42
1:A:477:ASN:OD1	1:A:480:ARG:NH2	2.51	0.42
1:A:556:ASP:N	1:A:556:ASP:OD1	2.50	0.42
1:A:2107:ILE:HG13	1:A:2108:ASN:N	2.33	0.42
1:B:224:ALA:HB3	1:B:227:TYR:HD2	1.84	0.42
1:B:876:PRO:HA	1:B:879:GLU:HG2	2.01	0.42
1:B:2463:HIS:O	1:B:2467:MET:HG2	2.19	0.42
1:C:233:VAL:HA	1:C:276:ARG:HA	2.00	0.42
1:C:2107:ILE:HG13	1:C:2108:ASN:N	2.33	0.42
1:C:2279:LEU:HB3	1:C:2284:TYR:HB2	2.00	0.42
1:D:235:ARG:HB2	1:D:406:SER:OG	2.18	0.42
1:D:626:ARG:HH21	1:D:2131:VAL:HG11	1.83	0.42
1:A:1006:VAL:HG23	1:A:1009:ARG:NH1	2.34	0.42
1:A:2859:LEU:HD11	1:A:2867:HIS:CD2	2.54	0.42
1:A:4065:LEU:HD13	1:A:4065:LEU:HA	1.90	0.42
1:B:318:ASP:OD1	1:B:318:ASP:N	2.52	0.42
1:B:643:LEU:HD12	1:B:1658:THR:OG1	2.20	0.42
1:B:2501:LEU:HD11	1:B:2505:ALA:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2852:ALA:O	1:B:2855:LYS:HG3	2.19	0.42
1:B:3916:PHE:O	1:B:3920:THR:HG23	2.19	0.42
1:C:224:ALA:HB3	1:C:227:TYR:HD2	1.84	0.42
1:C:410:HIS:HE1	1:C:414:ARG:HH21	1.68	0.42
1:C:1028:ARG:NH2	1:C:1033:VAL:HG23	2.35	0.42
1:C:2171:MET:O	1:C:2175:VAL:HG13	2.19	0.42
1:C:2463:HIS:O	1:C:2467:MET:HG2	2.19	0.42
1:C:2852:ALA:O	1:C:2855:LYS:HG3	2.19	0.42
1:C:4051:MET:O	1:C:4057:TYR:HB2	2.19	0.42
1:D:233:VAL:HA	1:D:276:ARG:HA	2.00	0.42
1:D:1000:ALA:HB3	1:D:1047:LYS:HZ3	1.85	0.42
1:D:1028:ARG:NH2	1:D:1033:VAL:HG23	2.34	0.42
1:A:224:ALA:HB3	1:A:227:TYR:HD2	1.85	0.42
1:A:1932:VAL:HG11	1:A:3616:VAL:HB	2.02	0.42
1:A:2076:ASP:HB3	1:A:2079:LEU:HB3	2.01	0.42
1:A:2215:ASP:N	1:A:2215:ASP:OD1	2.52	0.42
1:A:2895:LEU:HD11	1:A:2900:TYR:HD1	1.84	0.42
1:B:1642:ILE:HG23	1:B:1643:LEU:HD23	2.01	0.42
1:C:626:ARG:HH21	1:C:2131:VAL:HG11	1.83	0.42
1:C:1764:PHE:HD1	1:C:1780:SER:HB2	1.84	0.42
1:C:2501:LEU:HD11	1:C:2505:ALA:HB2	2.02	0.42
1:D:556:ASP:OD1	1:D:556:ASP:N	2.50	0.42
1:D:2171:MET:O	1:D:2175:VAL:HG13	2.19	0.42
1:D:2852:ALA:O	1:D:2855:LYS:HG3	2.19	0.42
1:D:4051:MET:O	1:D:4057:TYR:HB2	2.19	0.42
1:A:1028:ARG:NH2	1:A:1033:VAL:HG23	2.35	0.42
1:A:1955:ALA:O	1:A:1959:ARG:HG2	2.19	0.42
1:B:769:ARG:HA	1:B:774:PRO:HA	2.01	0.42
1:B:1676:ALA:HB1	2:H:91:VAL:CG2	2.50	0.42
1:B:2065:MET:SD	1:B:2083:MET:HG3	2.60	0.42
1:B:2436:SER:OG	1:B:2489:VAL:HG12	2.20	0.42
1:C:162:ILE:HG22	1:C:181:LEU:HD13	2.02	0.42
1:C:562:LEU:HA	1:C:571:ILE:HD13	2.01	0.42
1:C:2076:ASP:HB3	1:C:2079:LEU:HB3	2.01	0.42
1:C:2128:LEU:HA	1:C:2131:VAL:HG22	2.00	0.42
1:C:4132:LEU:HD11	1:C:4134:ARG:HH21	1.85	0.42
1:D:318:ASP:OD1	1:D:318:ASP:N	2.52	0.42
1:D:550:GLN:HE21	1:D:550:GLN:HB2	1.73	0.42
1:D:997:ASP:HA	1:D:1047:LYS:HZ2	1.85	0.42
1:D:1764:PHE:HD1	1:D:1780:SER:HB2	1.84	0.42
1:D:1955:ALA:O	1:D:1959:ARG:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2099:ARG:O	1:D:2103:LYS:NZ	2.39	0.42
1:D:2215:ASP:OD1	1:D:2215:ASP:N	2.52	0.42
1:D:3916:PHE:O	1:D:3920:THR:HG23	2.19	0.42
1:D:4132:LEU:HD11	1:D:4134:ARG:HH21	1.85	0.42
1:A:434:ASP:OD2	1:A:504:ARG:NH1	2.53	0.42
1:A:2065:MET:SD	1:A:2083:MET:HG3	2.60	0.42
1:A:2425:LEU:HD22	1:D:143:LEU:HD11	2.02	0.42
1:C:3804:LEU:HD21	1:C:3890:TYR:HB2	2.02	0.42
1:D:3624:GLU:HA	1:D:3628:ILE:HD11	2.02	0.42
1:A:550:GLN:HE21	1:A:550:GLN:HB2	1.73	0.42
1:A:907:VAL:O	1:A:914:GLN:NE2	2.53	0.42
1:A:2234:ARG:HD2	1:A:2234:ARG:HA	1.91	0.42
1:A:4051:MET:O	1:A:4057:TYR:HB2	2.19	0.42
1:B:410:HIS:HE1	1:B:414:ARG:HH21	1.68	0.42
1:C:718:VAL:HG23	1:C:726:GLY:HA3	2.02	0.42
1:C:2215:ASP:OD1	1:C:2215:ASP:N	2.52	0.42
1:D:123:HIS:CD2	1:D:126:SER:H	2.32	0.42
1:D:562:LEU:HA	1:D:571:ILE:HD13	2.01	0.42
1:D:718:VAL:HG23	1:D:726:GLY:HA3	2.02	0.42
1:D:2162:ARG:HH21	1:D:2208:GLN:HE21	1.68	0.42
1:D:2279:LEU:HB3	1:D:2284:TYR:HB2	2.00	0.42
2:J:23:CYS:HB2	2:J:51:ILE:HD11	2.02	0.42
1:A:562:LEU:HA	1:A:571:ILE:HD13	2.01	0.42
1:A:2772:TRP:N	1:A:2773:PRO:HD2	2.35	0.42
1:A:4132:LEU:HD11	1:A:4134:ARG:HH21	1.85	0.42
1:B:1955:ALA:O	1:B:1959:ARG:HG2	2.19	0.42
1:B:2279:LEU:HB3	1:B:2284:TYR:HB2	2.00	0.42
1:B:4132:LEU:HD11	1:B:4134:ARG:HH21	1.85	0.42
1:C:49:LEU:HD11	1:C:194:LEU:HD11	2.01	0.42
1:C:1642:ILE:HG23	1:C:1643:LEU:HD23	2.01	0.42
1:C:1955:ALA:O	1:C:1959:ARG:HG2	2.19	0.42
1:D:3839:PHE:HE1	1:D:3873:THR:HG23	1.84	0.42
1:D:4792:TYR:HB2	1:D:4805:CYS:HB2	2.02	0.42
1:A:643:LEU:HD12	1:A:1658:THR:OG1	2.20	0.42
1:A:1196:ASP:OD1	1:A:1196:ASP:N	2.53	0.42
1:B:1157:GLN:N	1:B:1160:ASP:OD2	2.41	0.42
1:B:1296:ASN:OD1	1:B:1296:ASN:N	2.53	0.42
1:B:2325:ARG:HA	1:B:2325:ARG:HD3	1.77	0.42
1:B:2895:LEU:HD11	1:B:2900:TYR:HD1	1.84	0.42
1:C:434:ASP:OD2	1:C:504:ARG:NH1	2.53	0.42
1:C:643:LEU:HD12	1:C:1658:THR:OG1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:769:ARG:HA	1:C:774:PRO:HA	2.01	0.42
1:C:1196:ASP:OD1	1:C:1196:ASP:N	2.53	0.42
1:C:2772:TRP:N	1:C:2773:PRO:HD2	2.35	0.42
1:D:410:HIS:HE1	1:D:414:ARG:HH21	1.68	0.42
1:D:643:LEU:HD12	1:D:1658:THR:OG1	2.20	0.42
1:D:1006:VAL:HG23	1:D:1009:ARG:NH1	2.33	0.42
1:D:1196:ASP:OD1	1:D:1196:ASP:N	2.53	0.42
1:D:1932:VAL:HG11	1:D:3616:VAL:HB	2.01	0.42
1:D:2065:MET:SD	1:D:2083:MET:HG3	2.60	0.42
1:A:410:HIS:HE1	1:A:414:ARG:HH21	1.68	0.42
1:A:1053:ALA:O	1:A:1056:THR:OG1	2.35	0.42
1:A:1353:HIS:CE1	1:A:1367:LYS:HE3	2.55	0.42
1:A:4792:TYR:HB2	1:A:4805:CYS:HB2	2.02	0.42
1:A:4866:ILE:HD11	1:D:4859:ALA:HB1	2.02	0.42
2:G:43:ARG:HG3	2:G:45:LYS:HG2	2.00	0.42
1:B:434:ASP:OD2	1:B:504:ARG:NH1	2.53	0.42
1:B:1196:ASP:OD1	1:B:1196:ASP:N	2.53	0.42
1:B:2774:ILE:H	1:B:2774:ILE:HG12	1.57	0.42
1:B:3804:LEU:HD21	1:B:3890:TYR:HB2	2.02	0.42
1:B:3839:PHE:HE1	1:B:3873:THR:HG23	1.84	0.42
1:B:4601:ARG:NH2	1:B:4626:LYS:HG3	2.35	0.42
1:B:4701:ASP:OD1	1:B:4701:ASP:N	2.31	0.42
1:C:1109:THR:OG1	1:C:1110:ALA:N	2.53	0.42
1:C:2102:PRO:HD3	1:C:3624:GLU:HG3	2.01	0.42
1:C:2335:ARG:HE	1:C:2335:ARG:HB3	1.67	0.42
1:D:434:ASP:OD2	1:D:504:ARG:NH1	2.53	0.42
1:D:1047:LYS:HG3	1:D:1051:ARG:NH1	2.35	0.42
1:D:1289:SER:HA	1:D:1353:HIS:HB3	2.02	0.42
1:D:1642:ILE:HG23	1:D:1643:LEU:HD23	2.01	0.42
1:D:2735:LYS:HA	1:D:2735:LYS:HD3	1.96	0.42
1:A:1051:ARG:HD2	1:A:1055:ARG:HH21	1.84	0.41
1:A:1289:SER:HA	1:A:1353:HIS:HB3	2.02	0.41
1:A:2162:ARG:HH21	1:A:2208:GLN:HE21	1.68	0.41
1:A:3839:PHE:HE1	1:A:3873:THR:HG23	1.84	0.41
1:B:527:LYS:HE2	1:B:566:GLU:HG2	2.02	0.41
1:B:562:LEU:HA	1:B:571:ILE:HD13	2.01	0.41
1:B:1028:ARG:NH2	1:B:1033:VAL:HG23	2.35	0.41
1:B:1047:LYS:HG3	1:B:1051:ARG:NH1	2.35	0.41
1:B:1758:LEU:HD13	1:B:1758:LEU:HA	1.89	0.41
1:B:1841:LYS:O	1:B:1845:GLN:HG2	2.20	0.41
1:B:2102:PRO:HD3	1:B:3624:GLU:HG3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4042:ILE:O	1:B:4076:THR:HA	2.20	0.41
1:D:49:LEU:HD11	1:D:194:LEU:HD11	2.01	0.41
1:D:375:GLN:NE2	1:D:390:LYS:O	2.49	0.41
1:D:2335:ARG:HE	1:D:2335:ARG:HB3	1.67	0.41
1:D:2895:LEU:HD11	1:D:2900:TYR:HD1	1.84	0.41
1:A:826:VAL:HG21	1:A:832:LEU:HB2	2.02	0.41
1:A:1047:LYS:HG3	1:A:1051:ARG:NH1	2.35	0.41
1:A:1091:GLU:HG3	1:A:1250:TRP:NE1	2.35	0.41
1:A:1109:THR:OG1	1:A:1110:ALA:N	2.53	0.41
1:A:2102:PRO:HD3	1:A:3624:GLU:HG3	2.01	0.41
1:A:2228:LEU:HD22	1:A:2296:ARG:HG3	2.01	0.41
1:A:3712:SER:OG	1:A:3716:LYS:NZ	2.38	0.41
1:B:732:LEU:HB3	1:B:779:PHE:CE1	2.56	0.41
1:B:1353:HIS:CE1	1:B:1367:LYS:HE3	2.55	0.41
1:B:1764:PHE:HD1	1:B:1780:SER:HB2	1.84	0.41
1:C:233:VAL:O	1:C:408:SER:OG	2.31	0.41
1:C:907:VAL:O	1:C:914:GLN:NE2	2.53	0.41
1:C:1841:LYS:O	1:C:1845:GLN:HG2	2.20	0.41
1:C:2065:MET:SD	1:C:2083:MET:HG3	2.60	0.41
1:C:2735:LYS:HA	1:C:2735:LYS:HD3	1.96	0.41
1:C:2859:LEU:HD11	1:C:2867:HIS:CD2	2.55	0.41
2:I:50:ARG:N	2:I:55:GLU:OE2	2.35	0.41
1:D:200:SER:HG	1:D:202:HIS:HD1	1.60	0.41
1:D:448:PRO:HB2	1:D:451:SER:HB3	2.02	0.41
1:D:826:VAL:HG21	1:D:832:LEU:HB2	2.03	0.41
1:A:1727:ILE:HD11	1:A:2164:LEU:HD21	2.03	0.41
1:A:2501:LEU:HD11	1:A:2505:ALA:HB2	2.02	0.41
1:A:3624:GLU:HA	1:A:3628:ILE:HD11	2.02	0.41
1:A:3802:LEU:HD23	1:A:3802:LEU:HA	1.89	0.41
1:A:4601:ARG:NH2	1:A:4626:LYS:HG3	2.35	0.41
1:B:907:VAL:O	1:B:914:GLN:NE2	2.53	0.41
1:B:3940:TRP:O	1:B:3944:VAL:HG23	2.20	0.41
1:B:4792:TYR:HB2	1:B:4805:CYS:HB2	2.02	0.41
1:C:459:LEU:HD12	1:C:459:LEU:HA	1.90	0.41
1:C:527:LYS:HE2	1:C:566:GLU:HG2	2.02	0.41
1:C:747:HIS:CD2	1:C:750:ARG:HG2	2.55	0.41
1:C:876:PRO:HA	1:C:879:GLU:HG2	2.01	0.41
1:C:902:TRP:HE3	1:C:915:HIS:HB2	1.85	0.41
1:C:1051:ARG:HD2	1:C:1055:ARG:HH21	1.85	0.41
1:C:1102:TYR:CD1	1:C:1165:MET:HG2	2.50	0.41
1:C:1976:LEU:HD11	1:C:3619:PHE:CE2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3624:GLU:HA	1:C:3628:ILE:HD11	2.02	0.41
1:D:309:MET:HB2	1:D:312:LYS:HZ2	1.85	0.41
1:D:2772:TRP:N	1:D:2773:PRO:HD2	2.35	0.41
1:A:309:MET:HB2	1:A:312:LYS:HZ2	1.84	0.41
1:A:2092:ASP:OD1	1:A:2095:GLY:N	2.49	0.41
1:A:2713:PRO:HG2	1:A:2716:LEU:HD12	2.02	0.41
1:A:3832:ASP:N	1:A:3832:ASP:OD1	2.51	0.41
1:B:162:ILE:HG22	1:B:181:LEU:HD13	2.02	0.41
1:B:433:LEU:HD12	1:B:433:LEU:HA	1.93	0.41
1:B:718:VAL:HG23	1:B:726:GLY:HA3	2.02	0.41
1:B:1091:GLU:HG3	1:B:1250:TRP:NE1	2.35	0.41
1:B:1265:HIS:CD2	1:B:1268:ILE:HD12	2.56	0.41
1:B:1727:ILE:HD11	1:B:2164:LEU:HD21	2.03	0.41
1:B:1976:LEU:HD11	1:B:3619:PHE:CE2	2.55	0.41
1:B:2500:SER:O	1:B:2500:SER:OG	2.35	0.41
1:B:2718:TYR:HD1	1:B:2718:TYR:C	2.24	0.41
1:B:4044:LYS:HZ3	1:B:4069:ALA:HB1	1.83	0.41
1:C:1893:LEU:HD13	1:C:2064:THR:HG21	2.03	0.41
1:C:2162:ARG:HH21	1:C:2208:GLN:HE21	1.68	0.41
1:C:3940:TRP:O	1:C:3944:VAL:HG23	2.20	0.41
1:C:4792:TYR:HB2	1:C:4805:CYS:HB2	2.02	0.41
1:D:895:MET:O	1:D:899:GLU:HG3	2.21	0.41
1:D:907:VAL:O	1:D:914:GLN:NE2	2.53	0.41
1:D:2076:ASP:HB3	1:D:2079:LEU:HB3	2.01	0.41
1:D:2735:LYS:HA	1:D:2740:TRP:CE3	2.47	0.41
1:A:1265:HIS:CD2	1:A:1268:ILE:HD12	2.56	0.41
1:A:1841:LYS:O	1:A:1845:GLN:HG2	2.20	0.41
1:A:2335:ARG:HE	1:A:2335:ARG:HB3	1.67	0.41
1:A:3641:GLU:OE1	1:A:3729:ARG:NH1	2.54	0.41
1:A:4042:ILE:O	1:A:4076:THR:HA	2.20	0.41
1:B:375:GLN:NE2	1:B:390:LYS:O	2.49	0.41
1:B:1289:SER:HA	1:B:1353:HIS:HB3	2.02	0.41
1:B:1775:ASP:OD1	1:B:1776:CYS:N	2.51	0.41
1:B:1843:ILE:HD13	1:B:1843:ILE:HA	1.93	0.41
1:B:2101:LEU:O	1:B:2104:THR:HG22	2.21	0.41
1:B:2713:PRO:HG2	1:B:2716:LEU:HD12	2.02	0.41
1:C:732:LEU:HB3	1:C:779:PHE:CE1	2.56	0.41
1:C:1353:HIS:CE1	1:C:1367:LYS:HE3	2.55	0.41
1:C:1680:HIS:CE1	2:I:91:VAL:HA	2.55	0.41
1:C:2436:SER:OG	1:C:2489:VAL:HG12	2.20	0.41
1:C:2713:PRO:HG2	1:C:2716:LEU:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:606:ARG:HH22	1:D:1635:GLU:HG2	1.86	0.41
1:D:876:PRO:HA	1:D:879:GLU:HG2	2.01	0.41
1:D:1102:TYR:CD1	1:D:1165:MET:HG2	2.50	0.41
1:D:1841:LYS:O	1:D:1845:GLN:HG2	2.20	0.41
1:D:2436:SER:OG	1:D:2489:VAL:HG12	2.20	0.41
1:D:2735:LYS:HD3	1:D:2740:TRP:HE3	1.85	0.41
1:A:394:HIS:HD2	1:A:396:GLU:HG3	1.86	0.41
1:A:747:HIS:CD2	1:A:750:ARG:HG2	2.55	0.41
1:A:898:ILE:HG13	1:A:898:ILE:H	1.73	0.41
1:A:2101:LEU:O	1:A:2104:THR:HG22	2.21	0.41
2:G:23:CYS:HB2	2:G:51:ILE:HD11	2.02	0.41
1:B:394:HIS:HD2	1:B:396:GLU:HG3	1.86	0.41
1:B:1342:ASP:OD1	1:B:1342:ASP:N	2.53	0.41
1:B:2207:ARG:HD2	1:B:2207:ARG:HA	1.92	0.41
1:B:2215:ASP:OD1	1:B:2215:ASP:N	2.52	0.41
1:B:3795:LEU:HD22	1:B:3834:PHE:HZ	1.85	0.41
1:C:2895:LEU:HD11	1:C:2900:TYR:HD1	1.84	0.41
1:C:3795:LEU:HD22	1:C:3834:PHE:HZ	1.85	0.41
1:C:4517:PHE:HD1	1:C:4517:PHE:HA	1.72	0.41
1:D:1353:HIS:CE1	1:D:1367:LYS:HE3	2.55	0.41
1:D:2102:PRO:HD3	1:D:3624:GLU:HG3	2.01	0.41
1:D:2228:LEU:HD22	1:D:2296:ARG:HG3	2.01	0.41
1:D:2501:LEU:HD11	1:D:2505:ALA:HB2	2.02	0.41
1:D:4000:ASP:O	1:D:4004:GLU:HG2	2.21	0.41
1:D:4042:ILE:O	1:D:4076:THR:HA	2.20	0.41
1:A:162:ILE:HG22	1:A:181:LEU:HD13	2.02	0.41
1:A:732:LEU:HB3	1:A:779:PHE:CE1	2.56	0.41
1:A:748:LEU:HD13	2:G:8:ILE:HG23	2.03	0.41
1:A:1893:LEU:HD13	1:A:2064:THR:HG21	2.03	0.41
1:A:3754:VAL:HA	1:A:3757:THR:HG22	2.03	0.41
1:A:4851:PHE:HA	1:A:4855:VAL:HG22	2.03	0.41
1:C:1311:ALA:HA	1:C:1312:UNK:HA	1.50	0.41
1:C:1342:ASP:N	1:C:1342:ASP:OD1	2.53	0.41
1:C:2228:LEU:HD22	1:C:2296:ARG:HG3	2.01	0.41
1:C:2479:VAL:HG23	1:C:2482:PHE:H	1.86	0.41
1:C:2879:LYS:O	1:C:2883:LYS:HG3	2.21	0.41
1:C:4042:ILE:O	1:C:4076:THR:HA	2.20	0.41
1:C:4044:LYS:HZ1	1:C:4071:THR:H	1.67	0.41
1:C:4106:GLU:OE2	1:C:4148:TYR:OH	2.33	0.41
1:C:4601:ARG:NH2	1:C:4626:LYS:HG3	2.35	0.41
2:I:23:CYS:HB2	2:I:51:ILE:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:37:LEU:HD13	1:D:203:VAL:HG21	2.03	0.41
1:D:902:TRP:HE3	1:D:915:HIS:HB2	1.85	0.41
1:D:1091:GLU:HG3	1:D:1250:TRP:NE1	2.35	0.41
1:D:1265:HIS:CD2	1:D:1268:ILE:HD12	2.56	0.41
1:D:1296:ASN:OD1	1:D:1296:ASN:N	2.53	0.41
1:D:3754:VAL:HA	1:D:3757:THR:HG22	2.03	0.41
1:D:3804:LEU:HD21	1:D:3890:TYR:HB2	2.02	0.41
1:A:37:LEU:HD13	1:A:203:VAL:HG21	2.03	0.41
1:A:718:VAL:HG23	1:A:726:GLY:HA3	2.02	0.41
1:A:2325:ARG:HD3	1:A:2325:ARG:HA	1.77	0.41
1:A:2735:LYS:HD3	1:A:2740:TRP:HE3	1.85	0.41
1:B:898:ILE:HG13	1:B:898:ILE:H	1.74	0.41
1:B:1932:VAL:HG11	1:B:3616:VAL:HB	2.02	0.41
1:B:2772:TRP:N	1:B:2773:PRO:HD2	2.35	0.41
1:B:3624:GLU:HA	1:B:3628:ILE:HD11	2.02	0.41
1:B:4631:ARG:O	1:B:4634:ILE:HG12	2.21	0.41
1:B:4851:PHE:HA	1:B:4855:VAL:HG22	2.03	0.41
1:C:826:VAL:HG21	1:C:832:LEU:HB2	2.02	0.41
1:C:1289:SER:HA	1:C:1353:HIS:HB3	2.02	0.41
1:C:2095:GLY:HA2	1:C:2098:VAL:HG22	2.02	0.41
1:C:4851:PHE:HA	1:C:4855:VAL:HG22	2.03	0.41
1:D:162:ILE:HG22	1:D:181:LEU:HD13	2.02	0.41
1:D:165:ALA:HB1	1:D:211:LEU:HD22	2.03	0.41
1:D:527:LYS:HE2	1:D:566:GLU:HG2	2.02	0.41
1:D:2107:ILE:HG13	1:D:2108:ASN:N	2.33	0.41
1:D:4601:ARG:NH2	1:D:4626:LYS:HG3	2.35	0.41
1:A:134:SER:O	1:A:134:SER:OG	2.34	0.41
1:A:448:PRO:HB2	1:A:451:SER:HB3	2.02	0.41
1:A:527:LYS:HE2	1:A:566:GLU:HG2	2.02	0.41
1:A:727:PHE:HD1	1:A:732:LEU:HD23	1.86	0.41
1:A:1342:ASP:OD1	1:A:1342:ASP:N	2.53	0.41
1:A:2184:LYS:HE2	1:A:2184:LYS:HB3	1.75	0.41
1:A:2436:SER:OG	1:A:2489:VAL:HG12	2.20	0.41
1:A:2718:TYR:HD1	1:A:2718:TYR:C	2.24	0.41
1:A:3795:LEU:HD22	1:A:3834:PHE:HZ	1.85	0.41
1:A:3804:LEU:HD21	1:A:3890:TYR:HB2	2.02	0.41
1:B:533:LEU:HD23	1:B:533:LEU:HA	1.95	0.41
1:B:606:ARG:HH22	1:B:1635:GLU:HG2	1.86	0.41
1:B:895:MET:O	1:B:899:GLU:HG3	2.21	0.41
1:B:902:TRP:HE3	1:B:915:HIS:HB2	1.85	0.41
1:B:1587:LEU:HD23	1:B:1587:LEU:HA	1.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2162:ARG:HH21	1:B:2208:GLN:HE21	1.68	0.41
1:B:3812:LYS:HB3	1:B:3812:LYS:HE2	1.81	0.41
1:B:4000:ASP:O	1:B:4003:VAL:HG12	2.21	0.41
2:H:5:ILE:HG13	2:H:73:ALA:HB1	2.03	0.41
1:C:394:HIS:HD2	1:C:396:GLU:HG3	1.86	0.41
1:C:495:ILE:O	1:C:499:LEU:HG	2.21	0.41
1:C:606:ARG:HH22	1:C:1635:GLU:HG2	1.86	0.41
1:C:686:VAL:HG22	1:C:687:THR:HG23	2.03	0.41
1:C:976:TYR:HD1	1:C:977:LYS:N	2.19	0.41
1:C:1031:ARG:HA	1:C:1031:ARG:HD3	1.93	0.41
1:C:1047:LYS:HD3	1:C:1047:LYS:HA	1.91	0.41
1:C:3754:VAL:HA	1:C:3757:THR:HG22	2.03	0.41
1:C:4000:ASP:O	1:C:4003:VAL:HG12	2.21	0.41
1:D:495:ILE:O	1:D:499:LEU:HG	2.21	0.41
1:D:669:GLN:HB3	1:D:673:TRP:HZ2	1.86	0.41
1:D:727:PHE:HD1	1:D:732:LEU:HD23	1.86	0.41
1:D:747:HIS:CD2	1:D:750:ARG:HG2	2.55	0.41
1:D:981:MET:HE1	1:D:1056:THR:HA	2.02	0.41
1:D:1051:ARG:HD2	1:D:1055:ARG:HH21	1.85	0.41
1:D:1113:MET:HG2	1:D:1207:LEU:HD22	2.03	0.41
1:D:1727:ILE:HD11	1:D:2164:LEU:HD21	2.03	0.41
1:D:1758:LEU:HD13	1:D:1758:LEU:HA	1.89	0.41
1:D:1789:LYS:HD3	1:D:1839:ASP:OD2	2.21	0.41
1:D:2101:LEU:O	1:D:2104:THR:HG22	2.21	0.41
1:D:2718:TYR:HD1	1:D:2718:TYR:C	2.24	0.41
1:D:3641:GLU:OE1	1:D:3729:ARG:NH1	2.54	0.41
1:D:3795:LEU:HD22	1:D:3834:PHE:HZ	1.85	0.41
1:D:3940:TRP:O	1:D:3944:VAL:HG23	2.20	0.41
2:J:104:LEU:HD12	2:J:104:LEU:HA	1.88	0.41
1:A:190:ARG:HD3	1:A:205:ALA:O	2.21	0.41
1:A:997:ASP:HA	1:A:1047:LYS:HZ2	1.86	0.41
1:A:1712:LEU:HD22	1:A:1832:MET:SD	2.61	0.41
1:A:2095:GLY:HA2	1:A:2098:VAL:HG22	2.02	0.41
1:A:4000:ASP:O	1:A:4004:GLU:HG2	2.21	0.41
1:A:4598:ILE:HD13	1:A:4708:LYS:HE3	2.03	0.41
1:B:37:LEU:HD13	1:B:203:VAL:HG21	2.03	0.41
1:B:134:SER:O	1:B:134:SER:OG	2.34	0.41
1:B:747:HIS:CD2	1:B:750:ARG:HG2	2.55	0.41
1:B:826:VAL:HG21	1:B:832:LEU:HB2	2.03	0.41
1:B:1051:ARG:HD2	1:B:1055:ARG:HH21	1.85	0.41
1:B:1113:MET:HG2	1:B:1207:LEU:HD22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2171:MET:HE2	1:B:2220:LEU:HD23	2.03	0.41
1:B:2228:LEU:HD22	1:B:2296:ARG:HG3	2.01	0.41
1:C:448:PRO:HB2	1:C:451:SER:HB3	2.02	0.41
1:C:1091:GLU:HG3	1:C:1250:TRP:NE1	2.35	0.41
1:C:1265:HIS:CD2	1:C:1268:ILE:HD12	2.56	0.41
1:C:1596:LEU:HD23	1:C:1596:LEU:HA	1.96	0.41
1:C:4631:ARG:O	1:C:4634:ILE:HG12	2.21	0.41
1:D:394:HIS:HD2	1:D:396:GLU:HG3	1.86	0.41
1:D:1109:THR:OG1	1:D:1110:ALA:N	2.53	0.41
1:D:1173:MET:O	1:D:1191:ALA:N	2.37	0.41
1:D:1893:LEU:HD13	1:D:2064:THR:HG21	2.03	0.41
1:D:2713:PRO:HG2	1:D:2716:LEU:HD12	2.03	0.41
1:D:4631:ARG:O	1:D:4634:ILE:HG12	2.21	0.41
1:D:4851:PHE:HA	1:D:4855:VAL:HG22	2.03	0.41
1:A:902:TRP:HE3	1:A:915:HIS:HB2	1.85	0.40
1:A:1364:GLU:HG3	1:A:1364:GLU:O	2.21	0.40
1:A:1642:ILE:HG23	1:A:1643:LEU:HD23	2.01	0.40
1:B:1109:THR:OG1	1:B:1110:ALA:N	2.53	0.40
1:B:3641:GLU:OE1	1:B:3729:ARG:NH1	2.54	0.40
1:C:669:GLN:HB3	1:C:673:TRP:HZ2	1.86	0.40
1:C:1047:LYS:HG3	1:C:1051:ARG:NH1	2.35	0.40
1:C:1117:TRP:HB3	1:C:1201:PHE:HB3	2.03	0.40
1:C:1789:LYS:HD3	1:C:1839:ASP:OD2	2.21	0.40
1:C:1932:VAL:HG11	1:C:3616:VAL:HB	2.01	0.40
1:C:2327:PRO:HB2	1:C:2335:ARG:HD3	2.02	0.40
1:C:2859:LEU:HD21	1:C:2867:HIS:NE2	2.36	0.40
1:C:4798:GLY:HA3	1:C:4799:ASP:HA	1.77	0.40
1:D:281:ARG:NH1	1:D:346:VAL:O	2.37	0.40
1:D:686:VAL:HG22	1:D:687:THR:HG23	2.03	0.40
1:D:1364:GLU:HG3	1:D:1364:GLU:O	2.21	0.40
1:D:3613:HIS:HA	1:D:3616:VAL:HG12	2.03	0.40
1:D:3812:LYS:HB3	1:D:3812:LYS:HE2	1.81	0.40
1:A:669:GLN:HB3	1:A:673:TRP:HZ2	1.86	0.40
1:A:3940:TRP:O	1:A:3944:VAL:HG23	2.20	0.40
1:A:4731:GLY:HA2	1:A:4734:ASN:O	2.22	0.40
1:B:152:ASP:OD1	1:B:152:ASP:N	2.52	0.40
1:B:686:VAL:HG22	1:B:687:THR:HG23	2.03	0.40
1:B:727:PHE:HD1	1:B:732:LEU:HD23	1.86	0.40
1:B:1364:GLU:HG3	1:B:1364:GLU:O	2.21	0.40
1:B:4598:ILE:HD13	1:B:4708:LYS:HE3	2.03	0.40
1:C:37:LEU:HD13	1:C:203:VAL:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:190:ARG:HD3	1:C:205:ALA:O	2.21	0.40
1:C:2735:LYS:HD3	1:C:2740:TRP:HE3	1.85	0.40
1:C:3613:HIS:HA	1:C:3616:VAL:HG12	2.03	0.40
1:D:190:ARG:HD3	1:D:205:ALA:O	2.21	0.40
1:D:1944:ASN:O	1:D:1948:GLN:HG2	2.22	0.40
1:D:2095:GLY:HA2	1:D:2098:VAL:HG22	2.02	0.40
1:D:2428:LEU:HD12	1:D:2475:TYR:CD1	2.56	0.40
1:D:2879:LYS:O	1:D:2883:LYS:HG3	2.21	0.40
1:A:410:HIS:CE1	1:A:414:ARG:HH21	2.40	0.40
1:A:1587:LEU:HD23	1:A:1587:LEU:HA	1.96	0.40
1:A:2859:LEU:HD21	1:A:2867:HIS:NE2	2.36	0.40
1:A:4033:GLU:OE1	1:A:4033:GLU:N	2.54	0.40
1:B:448:PRO:HB2	1:B:451:SER:HB3	2.02	0.40
1:B:976:TYR:HD1	1:B:977:LYS:N	2.19	0.40
1:B:2095:GLY:HA2	1:B:2098:VAL:HG22	2.02	0.40
1:B:4000:ASP:O	1:B:4004:GLU:HG2	2.21	0.40
1:C:433:LEU:HD12	1:C:433:LEU:HA	1.93	0.40
1:C:997:ASP:HA	1:C:1047:LYS:HZ2	1.86	0.40
1:C:1727:ILE:HD11	1:C:2164:LEU:HD21	2.03	0.40
1:C:1758:LEU:HD13	1:C:1758:LEU:HA	1.89	0.40
1:C:1944:ASN:O	1:C:1948:GLN:HG2	2.22	0.40
1:C:2428:LEU:HD12	1:C:2475:TYR:CD1	2.56	0.40
1:C:2480:GLN:HG3	1:C:2484:LEU:HD23	2.04	0.40
1:C:3641:GLU:OE1	1:C:3729:ARG:NH1	2.54	0.40
1:C:4000:ASP:O	1:C:4004:GLU:HG2	2.21	0.40
1:C:4033:GLU:OE1	1:C:4033:GLU:N	2.54	0.40
1:D:732:LEU:HB3	1:D:779:PHE:CE1	2.56	0.40
1:D:2327:PRO:HB2	1:D:2335:ARG:HD3	2.03	0.40
1:D:3860:GLN:N	1:D:3860:GLN:OE1	2.54	0.40
1:D:4507:VAL:HG13	1:D:4578:HIS:HD2	1.86	0.40
1:D:4731:GLY:HA2	1:D:4734:ASN:O	2.22	0.40
1:A:200:SER:OG	1:A:202:HIS:ND1	2.47	0.40
1:A:396:GLU:HG3	1:A:396:GLU:H	1.66	0.40
1:A:1157:GLN:N	1:A:1160:ASP:OD2	2.41	0.40
1:A:1789:LYS:HG3	1:A:1835:PHE:HE1	1.86	0.40
1:A:1789:LYS:HD3	1:A:1839:ASP:OD2	2.21	0.40
1:A:1976:LEU:HD11	1:A:3619:PHE:CE2	2.55	0.40
1:A:2428:LEU:HD12	1:A:2475:TYR:CD1	2.56	0.40
1:A:2836:LEU:H	1:A:2836:LEU:HD12	1.87	0.40
1:A:2879:LYS:O	1:A:2883:LYS:HG3	2.21	0.40
1:B:190:ARG:HD3	1:B:205:ALA:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:495:ILE:O	1:B:499:LEU:HG	2.21	0.40
1:B:669:GLN:HB3	1:B:673:TRP:HZ2	1.86	0.40
1:B:722:LEU:HD13	1:B:722:LEU:HA	1.96	0.40
1:B:3754:VAL:HA	1:B:3757:THR:HG22	2.03	0.40
1:B:4896:TYR:CZ	1:B:4959:LYS:HG2	2.56	0.40
1:C:895:MET:O	1:C:899:GLU:HG3	2.21	0.40
1:C:2207:ARG:HD2	1:C:2207:ARG:HA	1.92	0.40
1:C:2835:ASP:O	1:C:2839:MET:HG2	2.22	0.40
2:I:104:LEU:HD12	2:I:104:LEU:HA	1.88	0.40
1:D:1342:ASP:OD1	1:D:1342:ASP:N	2.53	0.40
1:D:1956:LEU:HD13	1:D:1956:LEU:HA	1.98	0.40
1:D:2264:VAL:HG21	1:D:2300:PHE:HE2	1.87	0.40
1:D:2836:LEU:H	1:D:2836:LEU:HD12	1.87	0.40
1:A:143:LEU:HD11	1:B:2425:LEU:HD22	2.04	0.40
1:A:606:ARG:HH22	1:A:1635:GLU:HG2	1.86	0.40
1:A:1117:TRP:HB3	1:A:1201:PHE:HB3	2.03	0.40
1:A:2074:ILE:HG22	1:A:2075:GLU:O	2.22	0.40
1:A:2479:VAL:HG23	1:A:2482:PHE:H	1.86	0.40
1:B:1970:GLU:O	1:B:1974:MET:HG3	2.22	0.40
1:B:3613:HIS:HA	1:B:3616:VAL:HG12	2.03	0.40
1:B:3779:TYR:HA	1:B:3782:GLU:HG2	2.04	0.40
1:B:4731:GLY:HA2	1:B:4734:ASN:O	2.22	0.40
1:B:4762:ASN:O	1:B:4766:LEU:HB2	2.22	0.40
1:C:410:HIS:CE1	1:C:414:ARG:HH21	2.40	0.40
1:C:727:PHE:HD1	1:C:732:LEU:HD23	1.86	0.40
1:C:1138:ASP:OD1	1:C:1139:GLY:N	2.54	0.40
1:C:1217:PHE:O	1:C:1240:ALA:N	2.50	0.40
1:C:1364:GLU:O	1:C:1364:GLU:HG3	2.21	0.40
1:C:1792:THR:HG21	1:C:1829:LEU:HD12	2.03	0.40
1:C:4507:VAL:HG13	1:C:4578:HIS:HD2	1.86	0.40
2:I:5:ILE:HG13	2:I:73:ALA:HB1	2.03	0.40
1:D:410:HIS:CE1	1:D:414:ARG:HH21	2.39	0.40
1:D:1138:ASP:OD1	1:D:1139:GLY:N	2.54	0.40
1:D:1976:LEU:HD11	1:D:3619:PHE:CE2	2.55	0.40
1:D:4033:GLU:OE1	1:D:4033:GLU:N	2.54	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	3218/4966 (65%)	3005 (93%)	213 (7%)	0	100	100
1	B	3218/4966 (65%)	3005 (93%)	213 (7%)	0	100	100
1	C	3218/4966 (65%)	3005 (93%)	213 (7%)	0	100	100
1	D	3218/4966 (65%)	3006 (93%)	212 (7%)	0	100	100
2	G	105/176 (60%)	98 (93%)	7 (7%)	0	100	100
2	H	105/176 (60%)	97 (92%)	8 (8%)	0	100	100
2	I	105/176 (60%)	98 (93%)	7 (7%)	0	100	100
2	J	105/176 (60%)	98 (93%)	7 (7%)	0	100	100
All	All	13292/20568 (65%)	12412 (93%)	880 (7%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2827/3387 (84%)	2751 (97%)	76 (3%)	44	73
1	B	2827/3387 (84%)	2750 (97%)	77 (3%)	44	73
1	C	2827/3387 (84%)	2750 (97%)	77 (3%)	44	73
1	D	2827/3387 (84%)	2751 (97%)	76 (3%)	44	73
2	G	88/140 (63%)	87 (99%)	1 (1%)	73	88
2	H	88/140 (63%)	87 (99%)	1 (1%)	73	88

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	I	88/140 (63%)	87 (99%)	1 (1%)	73 88
2	J	88/140 (63%)	87 (99%)	1 (1%)	73 88
All	All	11660/14108 (83%)	11350 (97%)	310 (3%)	48 73

All (310) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	255	GLU
1	A	396	GLU
1	A	446	ASP
1	A	548	CYS
1	A	551	PHE
1	A	637	LEU
1	A	643	LEU
1	A	665	GLU
1	A	711	GLU
1	A	823	TYR
1	A	883	GLU
1	A	884	ARG
1	A	892	LEU
1	A	918	LEU
1	A	920	GLU
1	A	922	CYS
1	A	924	LEU
1	A	926	GLU
1	A	970	TYR
1	A	971	GLN
1	A	972	LEU
1	A	976	TYR
1	A	985	PHE
1	A	1001	GLU
1	A	1033	VAL
1	A	1040	ASP
1	A	1041	ARG
1	A	1045	SER
1	A	1062	TYR
1	A	1109	THR
1	A	1271	THR
1	A	1340	ASP
1	A	1367	LYS
1	A	1376	TYR

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Mol	Chain	Res	Type
1	A	1592	LEU
1	A	1771	SER
1	A	1962	ARG
1	A	1981	ASP
1	A	1987	CYS
1	A	2091	TYR
1	A	2106	THR
1	A	2271	CYS
1	A	2276	CYS
1	A	2328	GLU
1	A	2335	ARG
1	A	2425	LEU
1	A	2464	LYS
1	A	2714	GLU
1	A	2715	LYS
1	A	2718	TYR
1	A	2745	ILE
1	A	2748	ASP
1	A	2749	SER
1	A	2750	SER
1	A	2762	LEU
1	A	2763	SER
1	A	2764	GLU
1	A	2768	GLU
1	A	2771	ARG
1	A	2778	LEU
1	A	2855	LYS
1	A	2891	ILE
1	A	3614	ARG
1	A	3714	GLU
1	A	3731	HIS
1	A	3990	VAL
1	A	4039	LYS
1	A	4041	VAL
1	A	4175	VAL
1	A	4509	PHE
1	A	4517	PHE
1	A	4518	TYR
1	A	4700	ILE
1	A	4701	ASP
1	A	4742	LEU
1	A	4842	ARG

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Mol	Chain	Res	Type
2	G	81	VAL
1	B	255	GLU
1	B	396	GLU
1	B	446	ASP
1	B	548	CYS
1	B	551	PHE
1	B	637	LEU
1	B	643	LEU
1	B	665	GLU
1	B	711	GLU
1	B	823	TYR
1	B	883	GLU
1	B	884	ARG
1	B	892	LEU
1	B	918	LEU
1	B	920	GLU
1	B	922	CYS
1	B	924	LEU
1	B	926	GLU
1	B	970	TYR
1	B	971	GLN
1	B	972	LEU
1	B	976	TYR
1	B	985	PHE
1	B	1001	GLU
1	B	1033	VAL
1	B	1040	ASP
1	B	1041	ARG
1	B	1045	SER
1	B	1062	TYR
1	B	1109	THR
1	B	1271	THR
1	B	1340	ASP
1	B	1367	LYS
1	B	1376	TYR
1	B	1592	LEU
1	B	1771	SER
1	B	1962	ARG
1	B	1981	ASP
1	B	1987	CYS
1	B	2091	TYR
1	B	2106	THR

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Mol	Chain	Res	Type
1	B	2271	CYS
1	B	2276	CYS
1	B	2328	GLU
1	B	2335	ARG
1	B	2425	LEU
1	B	2464	LYS
1	B	2714	GLU
1	B	2715	LYS
1	B	2718	TYR
1	B	2745	ILE
1	B	2748	ASP
1	B	2749	SER
1	B	2750	SER
1	B	2762	LEU
1	B	2763	SER
1	B	2764	GLU
1	B	2768	GLU
1	B	2771	ARG
1	B	2774	ILE
1	B	2778	LEU
1	B	2855	LYS
1	B	2891	ILE
1	B	3614	ARG
1	B	3714	GLU
1	B	3731	HIS
1	B	3990	VAL
1	B	4039	LYS
1	B	4041	VAL
1	B	4175	VAL
1	B	4509	PHE
1	B	4517	PHE
1	B	4518	TYR
1	B	4700	ILE
1	B	4701	ASP
1	B	4742	LEU
1	B	4842	ARG
2	H	81	VAL
1	C	255	GLU
1	C	396	GLU
1	C	446	ASP
1	C	548	CYS
1	C	551	PHE

Continued on next page...

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Mol	Chain	Res	Type
1	C	637	LEU
1	C	643	LEU
1	C	665	GLU
1	C	711	GLU
1	C	823	TYR
1	C	883	GLU
1	C	884	ARG
1	C	892	LEU
1	C	918	LEU
1	C	920	GLU
1	C	922	CYS
1	C	924	LEU
1	C	926	GLU
1	C	970	TYR
1	C	971	GLN
1	C	972	LEU
1	C	976	TYR
1	C	985	PHE
1	C	1001	GLU
1	C	1033	VAL
1	C	1040	ASP
1	C	1041	ARG
1	C	1045	SER
1	C	1062	TYR
1	C	1109	THR
1	C	1271	THR
1	C	1340	ASP
1	C	1367	LYS
1	C	1376	TYR
1	C	1592	LEU
1	C	1771	SER
1	C	1962	ARG
1	C	1981	ASP
1	C	1987	CYS
1	C	2091	TYR
1	C	2106	THR
1	C	2271	CYS
1	C	2276	CYS
1	C	2328	GLU
1	C	2335	ARG
1	C	2425	LEU
1	C	2464	LYS

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Mol	Chain	Res	Type
1	C	2714	GLU
1	C	2715	LYS
1	C	2718	TYR
1	C	2745	ILE
1	C	2748	ASP
1	C	2749	SER
1	C	2750	SER
1	C	2762	LEU
1	C	2763	SER
1	C	2764	GLU
1	C	2768	GLU
1	C	2771	ARG
1	C	2774	ILE
1	C	2778	LEU
1	C	2855	LYS
1	C	2891	ILE
1	C	3614	ARG
1	C	3714	GLU
1	C	3731	HIS
1	C	3990	VAL
1	C	4039	LYS
1	C	4041	VAL
1	C	4175	VAL
1	C	4509	PHE
1	C	4517	PHE
1	C	4518	TYR
1	C	4700	ILE
1	C	4701	ASP
1	C	4742	LEU
1	C	4842	ARG
2	I	81	VAL
1	D	255	GLU
1	D	396	GLU
1	D	446	ASP
1	D	548	CYS
1	D	551	PHE
1	D	637	LEU
1	D	643	LEU
1	D	665	GLU
1	D	711	GLU
1	D	823	TYR
1	D	883	GLU

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Mol	Chain	Res	Type
1	D	884	ARG
1	D	892	LEU
1	D	918	LEU
1	D	920	GLU
1	D	922	CYS
1	D	924	LEU
1	D	926	GLU
1	D	970	TYR
1	D	971	GLN
1	D	972	LEU
1	D	976	TYR
1	D	985	PHE
1	D	1001	GLU
1	D	1033	VAL
1	D	1040	ASP
1	D	1041	ARG
1	D	1045	SER
1	D	1062	TYR
1	D	1109	THR
1	D	1271	THR
1	D	1340	ASP
1	D	1367	LYS
1	D	1376	TYR
1	D	1592	LEU
1	D	1771	SER
1	D	1962	ARG
1	D	1981	ASP
1	D	1987	CYS
1	D	2091	TYR
1	D	2106	THR
1	D	2271	CYS
1	D	2276	CYS
1	D	2328	GLU
1	D	2335	ARG
1	D	2425	LEU
1	D	2464	LYS
1	D	2714	GLU
1	D	2715	LYS
1	D	2718	TYR
1	D	2745	ILE
1	D	2748	ASP
1	D	2749	SER

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Mol	Chain	Res	Type
1	D	2750	SER
1	D	2762	LEU
1	D	2763	SER
1	D	2764	GLU
1	D	2768	GLU
1	D	2771	ARG
1	D	2778	LEU
1	D	2855	LYS
1	D	2891	ILE
1	D	3614	ARG
1	D	3714	GLU
1	D	3731	HIS
1	D	3990	VAL
1	D	4039	LYS
1	D	4041	VAL
1	D	4175	VAL
1	D	4509	PHE
1	D	4517	PHE
1	D	4518	TYR
1	D	4700	ILE
1	D	4701	ASP
1	D	4742	LEU
1	D	4842	ARG
2	J	81	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (199) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	12	GLN
1	A	23	GLN
1	A	79	GLN
1	A	123	HIS
1	A	293	GLN
1	A	299	HIS
1	A	394	HIS
1	A	410	HIS
1	A	476	GLN
1	A	484	ASN
1	A	487	ASN
1	A	496	ASN
1	A	550	GLN
1	A	593	HIS

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Mol	Chain	Res	Type
1	A	629	GLN
1	A	903	GLN
1	A	914	GLN
1	A	915	HIS
1	A	1005	ASN
1	A	1029	ASN
1	A	1265	HIS
1	A	1582	GLN
1	A	1590	GLN
1	A	1627	GLN
1	A	1653	GLN
1	A	1685	GLN
1	A	1711	HIS
1	A	1774	ASN
1	A	1999	HIS
1	A	2157	HIS
1	A	2159	ASN
1	A	2317	ASN
1	A	2485	HIS
1	A	2753	GLN
1	A	2867	HIS
1	A	3633	HIS
1	A	3721	GLN
1	A	3805	ASN
1	A	3932	GLN
1	A	3959	GLN
1	A	3974	GLN
1	A	4048	HIS
1	A	4096	ASN
1	A	4170	GLN
1	A	4496	ASN
1	A	4628	GLN
1	A	4698	ASN
1	A	4786	ASN
1	A	4960	GLN
1	B	12	GLN
1	B	23	GLN
1	B	79	GLN
1	B	123	HIS
1	B	293	GLN
1	B	299	HIS
1	B	394	HIS

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Mol	Chain	Res	Type
1	B	410	HIS
1	B	476	GLN
1	B	484	ASN
1	B	487	ASN
1	B	496	ASN
1	B	550	GLN
1	B	593	HIS
1	B	629	GLN
1	B	903	GLN
1	B	914	GLN
1	B	915	HIS
1	B	1005	ASN
1	B	1029	ASN
1	B	1265	HIS
1	B	1582	GLN
1	B	1590	GLN
1	B	1627	GLN
1	B	1653	GLN
1	B	1685	GLN
1	B	1711	HIS
1	B	1774	ASN
1	B	1999	HIS
1	B	2157	HIS
1	B	2159	ASN
1	B	2317	ASN
1	B	2485	HIS
1	B	2753	GLN
1	B	2867	HIS
1	B	3633	HIS
1	B	3721	GLN
1	B	3805	ASN
1	B	3932	GLN
1	B	3959	GLN
1	B	3974	GLN
1	B	4048	HIS
1	B	4096	ASN
1	B	4170	GLN
1	B	4491	ASN
1	B	4496	ASN
1	B	4628	GLN
1	B	4637	GLN
1	B	4698	ASN

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Mol	Chain	Res	Type
1	B	4786	ASN
1	B	4960	GLN
1	C	12	GLN
1	C	23	GLN
1	C	79	GLN
1	C	123	HIS
1	C	293	GLN
1	C	299	HIS
1	C	394	HIS
1	C	410	HIS
1	C	476	GLN
1	C	484	ASN
1	C	487	ASN
1	C	496	ASN
1	C	550	GLN
1	C	593	HIS
1	C	629	GLN
1	C	903	GLN
1	C	914	GLN
1	C	915	HIS
1	C	1005	ASN
1	C	1029	ASN
1	C	1265	HIS
1	C	1582	GLN
1	C	1590	GLN
1	C	1627	GLN
1	C	1653	GLN
1	C	1685	GLN
1	C	1711	HIS
1	C	1774	ASN
1	C	1999	HIS
1	C	2157	HIS
1	C	2159	ASN
1	C	2317	ASN
1	C	2485	HIS
1	C	2753	GLN
1	C	2867	HIS
1	C	3633	HIS
1	C	3721	GLN
1	C	3805	ASN
1	C	3932	GLN
1	C	3959	GLN

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Mol	Chain	Res	Type
1	C	3974	GLN
1	C	4048	HIS
1	C	4096	ASN
1	C	4170	GLN
1	C	4496	ASN
1	C	4628	GLN
1	C	4698	ASN
1	C	4786	ASN
1	C	4960	GLN
1	D	12	GLN
1	D	23	GLN
1	D	79	GLN
1	D	123	HIS
1	D	293	GLN
1	D	299	HIS
1	D	394	HIS
1	D	410	HIS
1	D	476	GLN
1	D	484	ASN
1	D	487	ASN
1	D	496	ASN
1	D	550	GLN
1	D	593	HIS
1	D	629	GLN
1	D	903	GLN
1	D	914	GLN
1	D	915	HIS
1	D	1005	ASN
1	D	1029	ASN
1	D	1265	HIS
1	D	1582	GLN
1	D	1590	GLN
1	D	1627	GLN
1	D	1653	GLN
1	D	1685	GLN
1	D	1711	HIS
1	D	1774	ASN
1	D	1999	HIS
1	D	2157	HIS
1	D	2159	ASN
1	D	2317	ASN
1	D	2485	HIS

Continued on next page...

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Mol	Chain	Res	Type
1	D	2753	GLN
1	D	2867	HIS
1	D	3633	HIS
1	D	3721	GLN
1	D	3805	ASN
1	D	3932	GLN
1	D	3959	GLN
1	D	3974	GLN
1	D	4048	HIS
1	D	4096	ASN
1	D	4170	GLN
1	D	4496	ASN
1	D	4628	GLN
1	D	4637	GLN
1	D	4698	ASN
1	D	4786	ASN
1	D	4960	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

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.

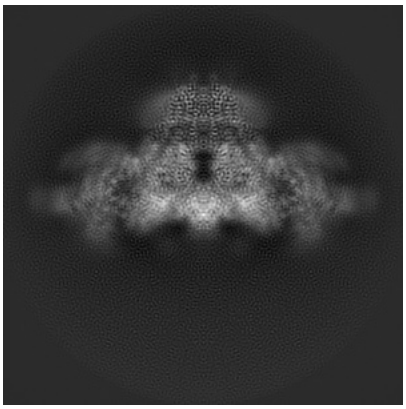
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-33938. These allow visual inspection of the internal detail of the map and identification of artifacts.

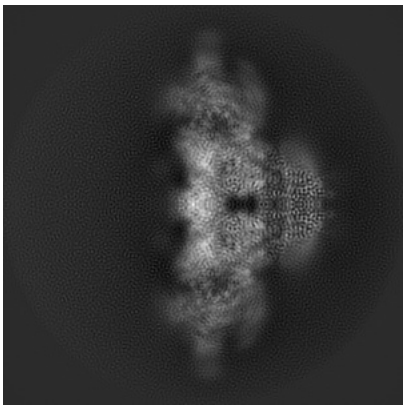
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

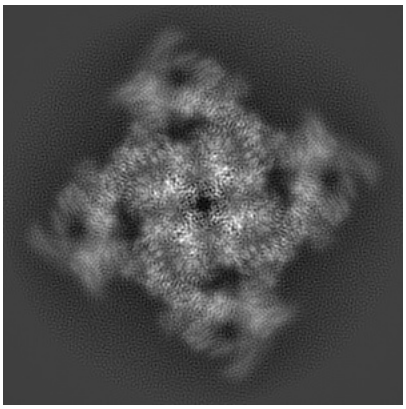
6.1.1 Primary map



X

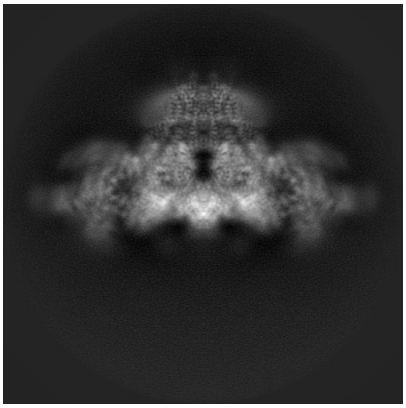


Y

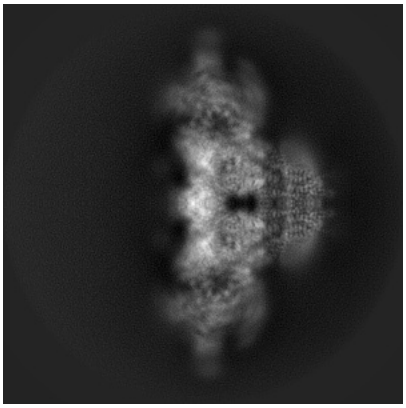


Z

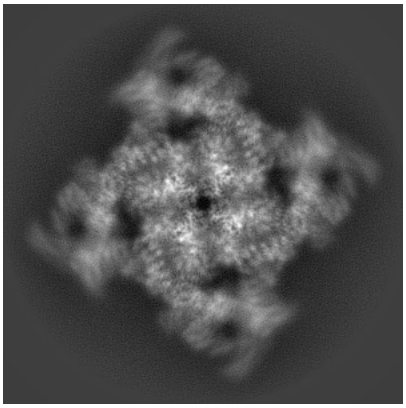
6.1.2 Raw map



X



Y

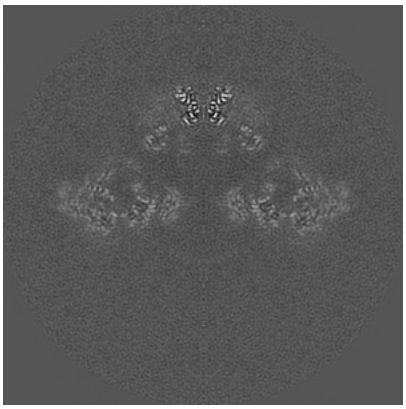


Z

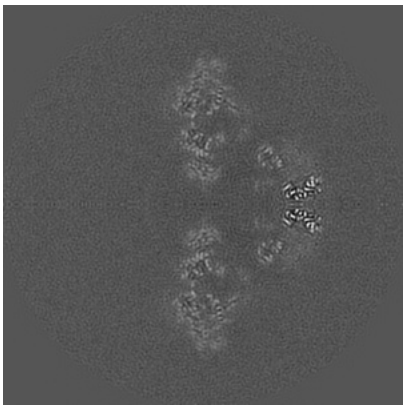
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

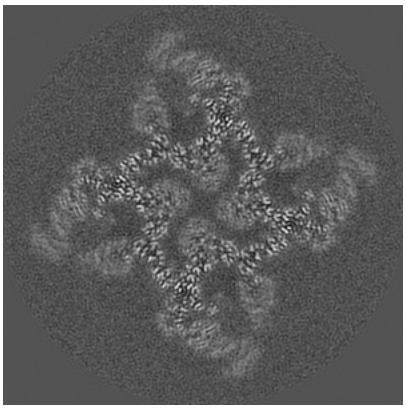
6.2.1 Primary map



X Index: 170

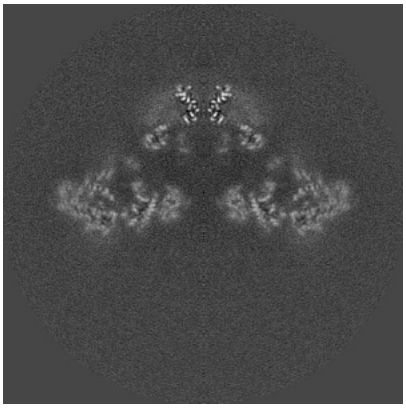


Y Index: 170

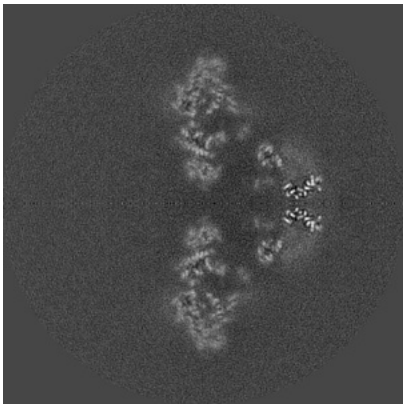


Z Index: 170

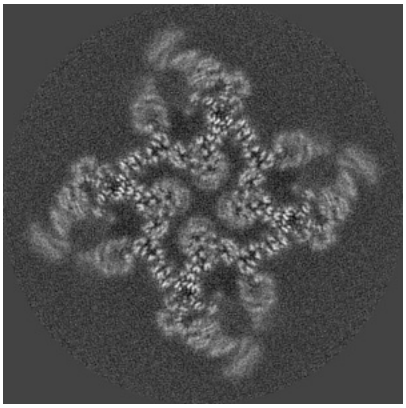
6.2.2 Raw map



X Index: 170



Y Index: 170

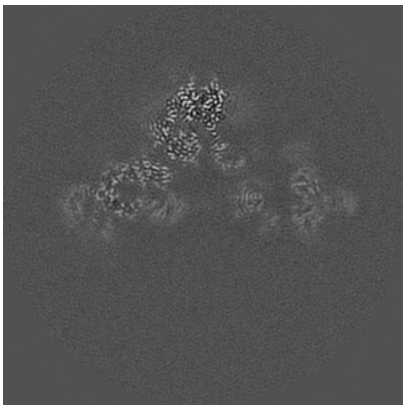


Z Index: 170

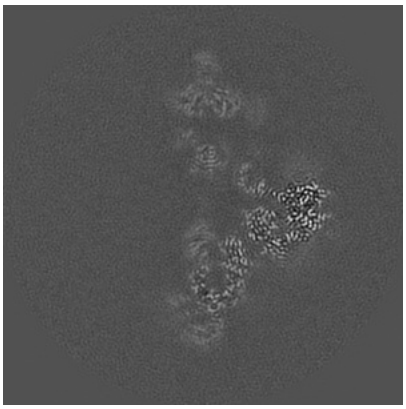
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

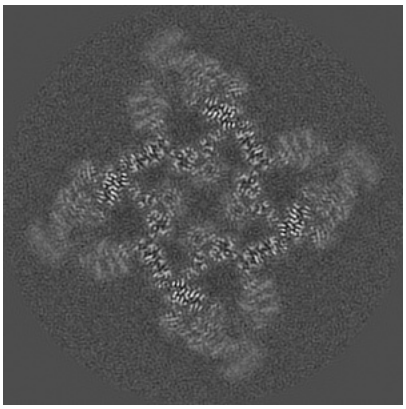
6.3.1 Primary map



X Index: 159

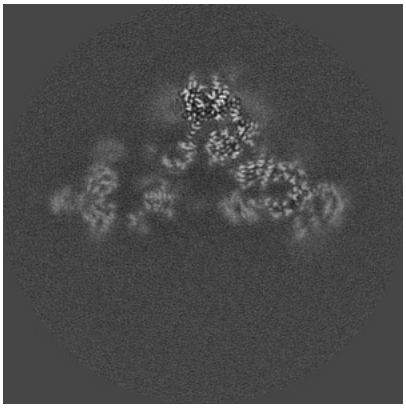


Y Index: 181

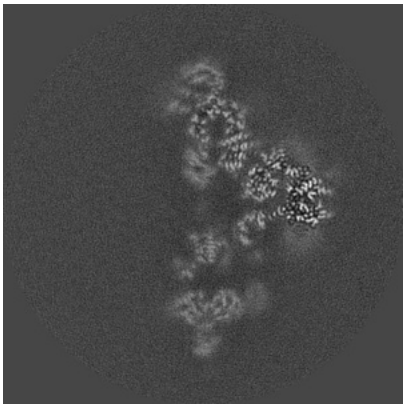


Z Index: 174

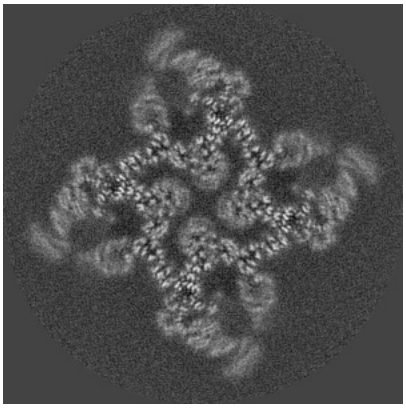
6.3.2 Raw map



X Index: 181



Y Index: 159

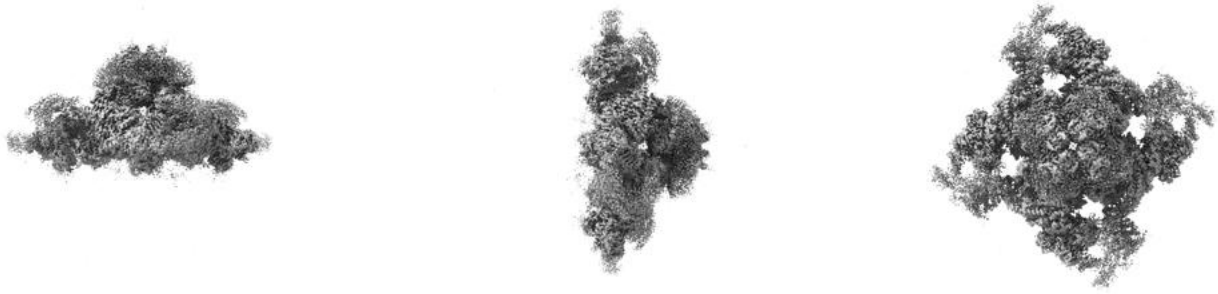


Z Index: 170

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

6.4 Orthogonal surface views (i)

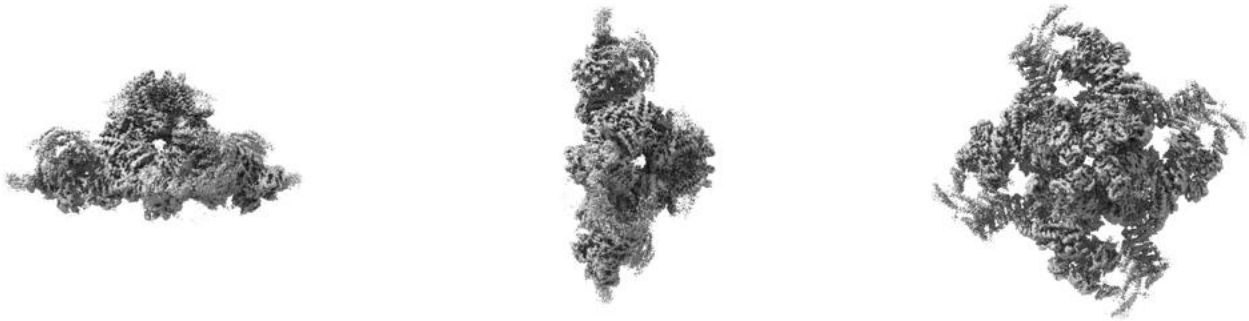
6.4.1 Primary map



X Y Z

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

6.4.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

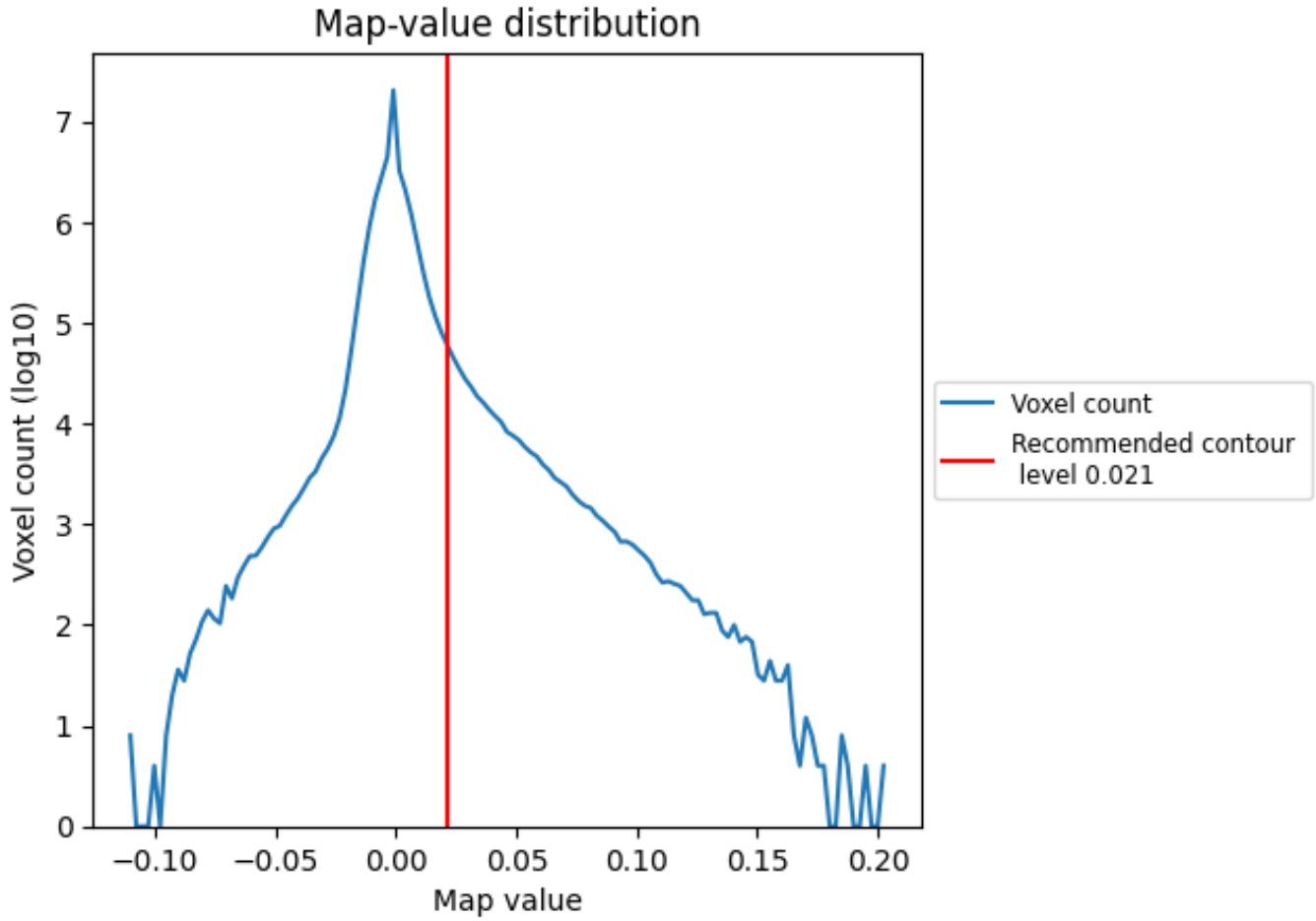
6.5 Mask visualisation (i)

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

7 Map analysis

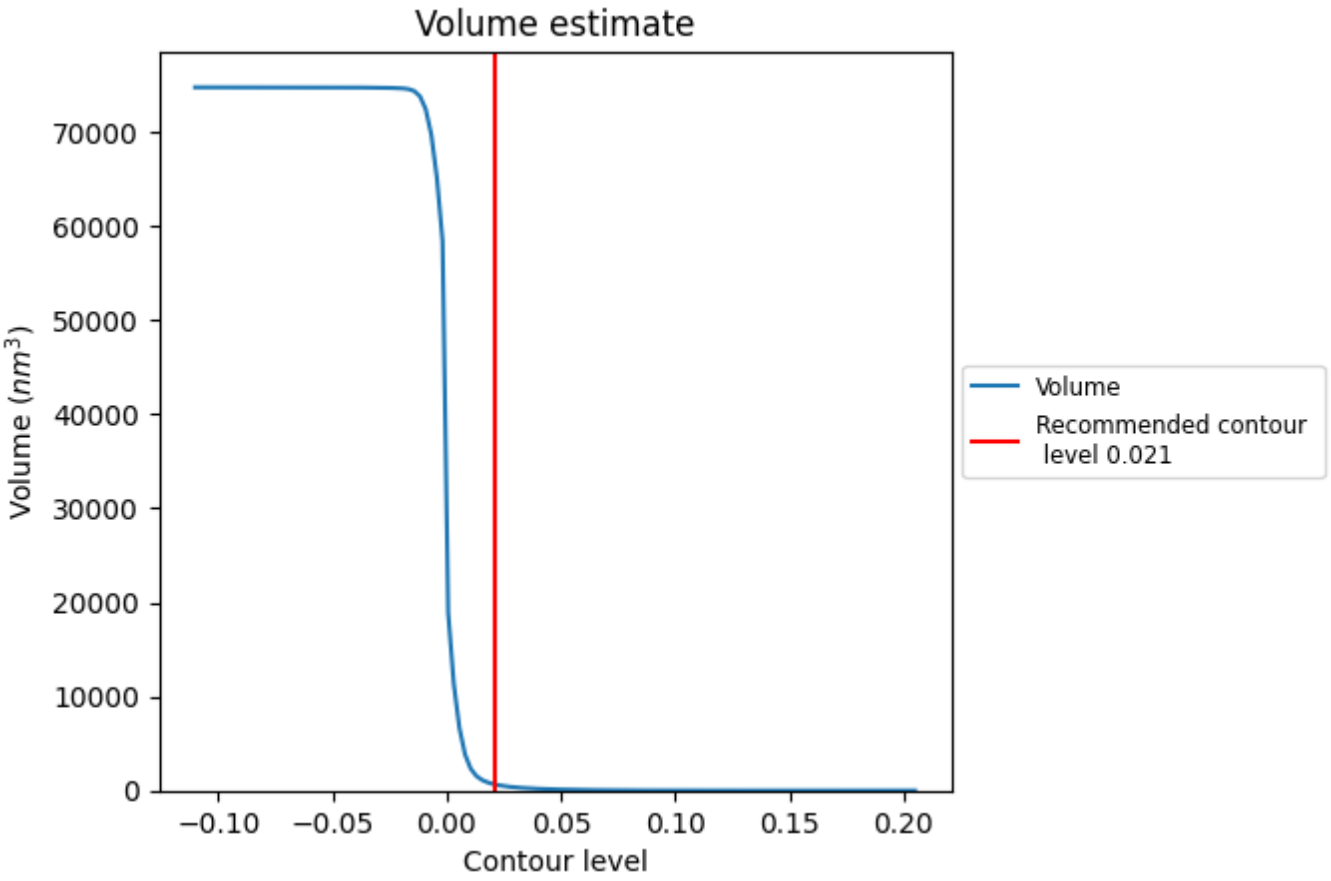
This section contains the results of statistical analysis of the map.

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.

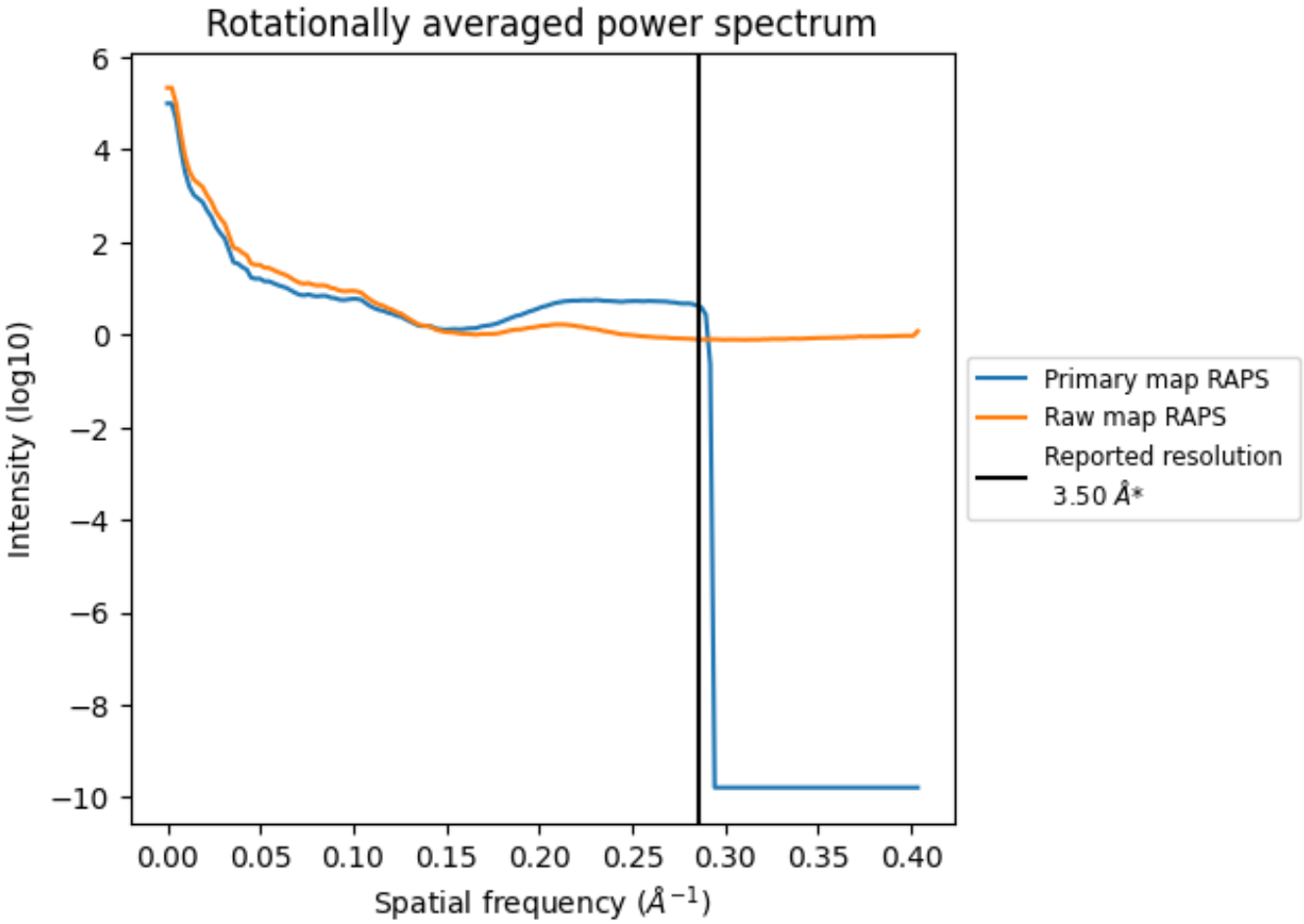
7.2 Volume estimate



The volume at the recommended contour level is 659 nm^3; this corresponds to an approximate mass of 596 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)

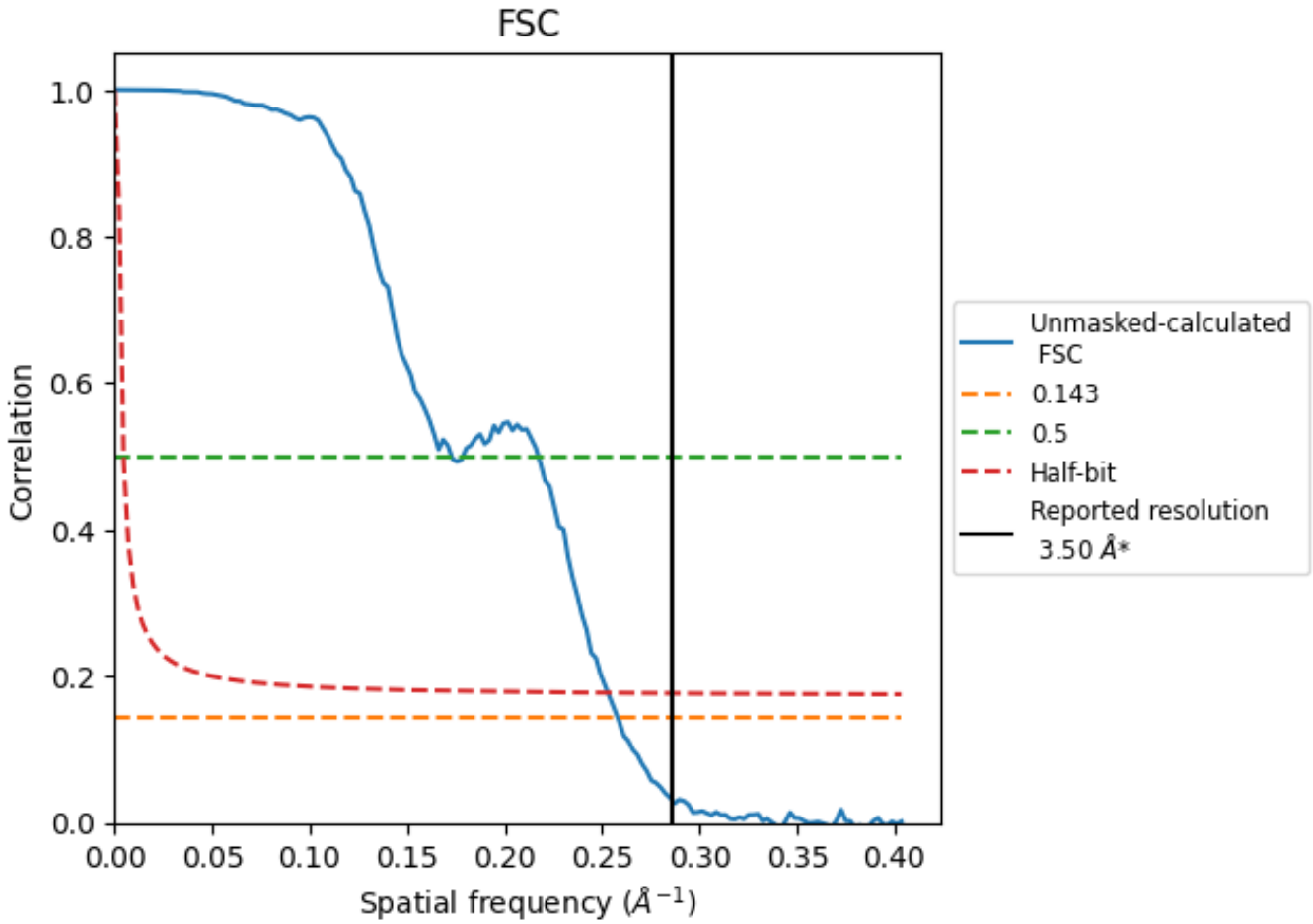


*Reported resolution corresponds to spatial frequency of 0.286 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.286 Å^{-1}

8.2 Resolution estimates (i)

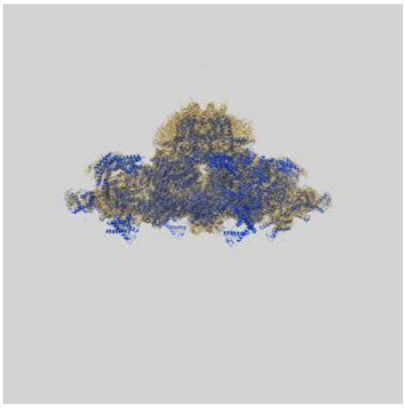
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.50	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.87	5.79	3.95

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.87 differs from the reported value 3.5 by more than 10 %

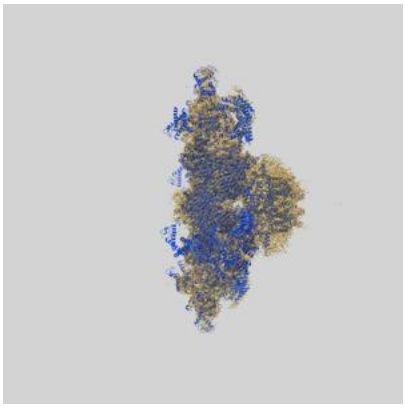
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-33938 and PDB model 7VMO. Per-residue inclusion information can be found in section 3 on page 11.

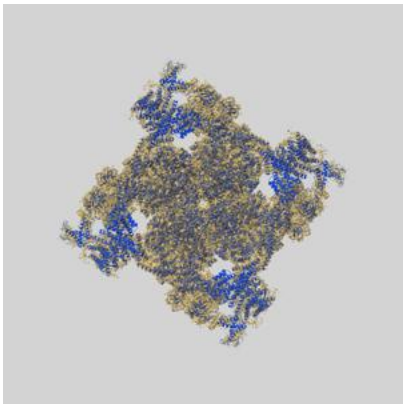
9.1 Map-model overlay



X



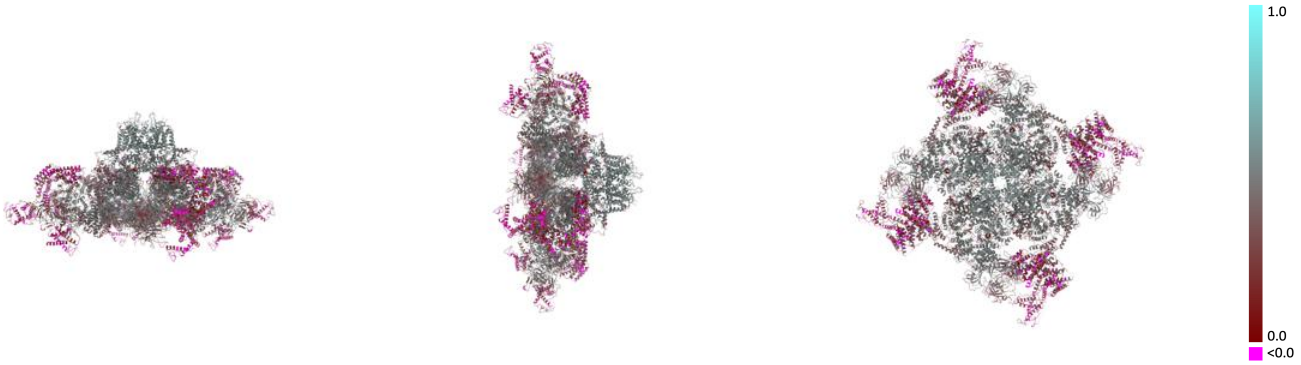
Y



Z

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

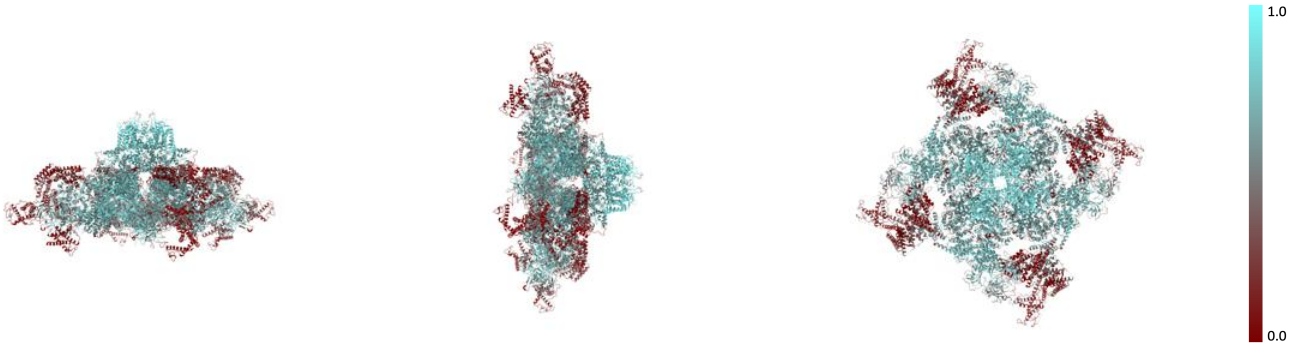
9.2 Q-score mapped to coordinate model



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.

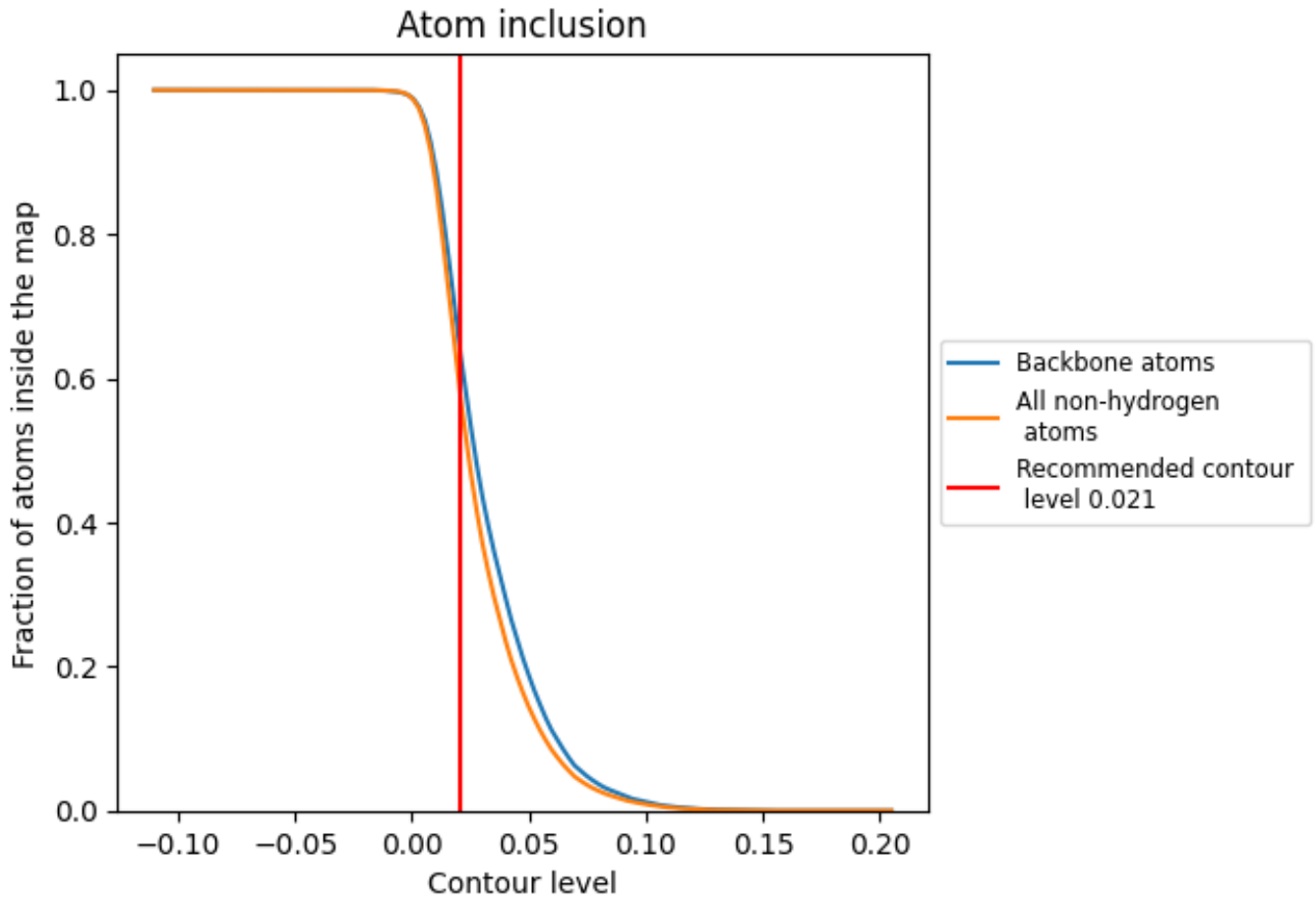
9.3 Atom inclusion mapped to coordinate model



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 (0.021).

9.4 Atom inclusion (i)



At the recommended contour level, 63% of all backbone atoms, 57% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.021) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5680	0.3790
A	0.5656	0.3770
B	0.5658	0.3770
C	0.5655	0.3770
D	0.5654	0.3770
G	0.6568	0.4500
H	0.6555	0.4520
I	0.6530	0.4540
J	0.6580	0.4500